

DXKEEPER 17.9.9

Prerequisites	2
Logging and Managing QSOs	3
Logging new QSOs using the Main window	7
Logging New QSOs with the Capture window.....	14
Audio Recording Configuration	22
QSO Initialization	23
Double-clicking on Item Textboxes	27
Logging Completed QSOs Using the Main window.....	28
Viewing, Modifying, and Deleting Logged QSOs.....	34
Configuring the Log Page Display	39
Sorting the Log Page Display	41
Filtering the Log Page Display	42
Filtering the Log Page Display with SQL	50
Modifying Multiple QSOs <i>En Masse</i>	55
Filtering, Modifying, and Reporting with Scripts	59
Updating QSOs in the Log Page Display with Callbook, DXCC Database, and RDA Database Information	68
Editing QSL Information.....	70
Keyboard Shortcuts	71
QSLing	78
LotW Procedures	118
QSL Cards, Reply Cards, QSL Labels, Envelopes, and Address Labels	119
Log Integrity	122
DXing Award Families and their Information Requirements.....	124
Checking and Managing Award Progress	129
Importing ADIF and Tab-delimited Files	176
Managing Multiple QTHs	186
Contesting	189
Configuration.....	197
QSL Configuration	241
Backing Up and Recovering Your Log.....	259
Log Items	260
Capture Window Items.....	296

Prerequisites

To use DXKeeper, you need

- a PC running Windows NT, Windows 2000, Windows XP, Windows 7, Windows 8, Windows 10, or Windows 11 with CPU performance and RAM sufficient to satisfy Microsoft's prerequisites for the Windows version you are running
- an XGA-resolution (1024 x 768) display or better

If you plan to run other members of the DXLab Suite in parallel with DXKeeper, additional memory and a faster processor may be required for satisfactory performance.

Logging and Managing QSOs

DXKeeper allows you to capture and manage more than 100 items of information about each QSO. Some, like the station's callsign or the QSO's start time, will always be of interest. Others, like the station's grid square, may never be utilized. The awards for which DXKeeper provides progress reporting have differing requirements as to what items must be recorded with a QSO in order to properly determine credit; a table describing the requirements for each supported award is provided on page 124. The Main window's **Log QSOs** tab provides access to all of these items, for

- logging new QSOs
- logging already completed QSOs
- viewing logged QSOs
- modifying and deleting logged QSOs

Since your hands will generally be on the keyboard while logging QSOs, DXKeeper provides keyboard shortcuts for rapidly navigation from item to item.

The distinction between logging new QSOs in "real time" as they're made, and logging already completed QSOs is important. When you log a QSO in real time, the QSO's frequency, band, and mode can be obtained from your transceiver if Commander is running. When you're logging QSOs from a paper logbook or from notes taken during an operating session, the frequency, band and mode should be set to the frequency and mode of the last logged QSO; these won't always be correct, but even if you QSY'd between QSOs its often easier to "adjust" the frequency than type it in from scratch. Similarly, when you log a QSO in real time, the QSO's start time is *now*, but when you log an already completed QSO the QSO's start time will be after the last logged QSO's end time. The **Log QSOs** tab of DXKeeper's Main window can be optimized for either logging new QSOs, or for logging already completed QSOs, as described in logging new QSOs and logging already completed QSOs.

Given the importance of having the correct date and time, DXKeeper informs you on startup if based on the last date and time you started DXKeeper, the current date and time might not be correct.

New QSOs can also be logged via the **Capture** window, a smaller window that can be used to record the most commonly-used items; keyboard shortcuts are provided for rapid navigation among Capture window items. By logging via the Capture window, the Main window's **Log QSOs** tab is available for viewing previous contacts with your QSO partner, or for mining other information from your log while you're in QSO.

If the first letter of the callsign you enter is an exclamation point, DXKeeper assumes that you are logging a CQ, an unsuccessful call, a test, or some other transmission that you wish to record but does not represent a QSO. Such log entries are not assigned a DXCC entity, do not initiate a Callbook database lookup, and are not included in award tracking statistics.

On the Main window's **Log QSOs** tab, DXKeeper organizes items into 9 groups, each associated with a panel:

- QSO items
- Auxiliary items
- QSL items
- Online QSL items
- Award items
- Contest items
- Propagation items
- Details items
- User-defined items

The **QSO** panel is always present; you can independently control the presence of the **Auxiliary, QSL, Online QSL, Award, Contest, Propagation, Details, and User-defined** panels using the Log Panel checkboxes in the Configuration window's **Log** tab or using the eight checkboxes to the right of the **QSO** panel. Enabling the Display panels in two columns option will display these panels side-by-side in two columns rather than stacked in a single column - a format more suitable for widescreen monitors. All information items are stored with each QSO, whether or not the panels displaying them are visible. This allows you to adjust DXKeeper's consumption of screen real estate to meet your needs.

Located at the bottom of the **Main** window's **Log QSOs** tab, the Log Page Display contains one entry for each QSO in the current Log file. Each entry in the Log Paged Display corresponds to one QSO in your log. The visibility of each entry is subject to settings in the Filter panel; for example, you can filter the Log Page Display to show only QSOs made with Albania during 2003.

Clicking an entry in the Log Page Display selects its associated QSO; the panels above the Log Page Display will show the items recorded for that QSO. The **QSO** panel's caption displays the name of the selected QSO's DXCC entity; if the selected QSO's duration is non-zero, the **QSO** panel's caption parenthetically displays the QSO's duration in mm:ss notation; the **QSO** panel also displays the full name of the station's DXCC entity, as well as the DXCC prefix and country code assigned to this entity by the ARRL. These items can also be shown in the Log Page Display; the caption at the top of each column identifies the information item in the cells below it.

- **Configuring the Log Page Display**
- **Sorting the Log Page Display**
- **Filtering the Log Page Display**
- **Filtering the Log Page Display with SQL**
- **Viewing, Modifying, and Deleting Logged QSOs**
- **Modifying QSOs *En Masse***
- **Filtering, Modifying, and Reporting with Scripts**
- **Updating QSOs in the Log Page Display with Callbook and DXCC Database Information**
- **Tracking Award Progress**

Receiving and Tracking QSLs

On receiving a QSL card, you can use the Call filter to quickly locate its associated QSO, and then click the QSL panel's CFM button to set the QSO's QSL Rcvd item to 'Y' and set its QSL date received to the current UTC date; keyboard shortcuts for these functions can be used to rapidly process a stack of received QSL cards. If a newly-confirmed QSO's is needed for DXCC and the DXCC Submission reminder option is enabled, DXKeeper will display a dialog box suggesting that the card be submitted to the DXCC desk.

You can optionally assign the QSL card a unique QSL number, and record this in the QSO's QSL# item. Rather than risk defacing the QSL card by writing the assigned QSL number directly on its surface, the use of post-it notes or equivalent is suggested. Storing received QSL cards sorted in QSL number order makes it easy to locate them for award submission. Assigning a unique QSL number to a QSO also enables DXKeeper's Create Card Record Sheet function to automatically sort QSOs having identical QSL# items at the end of the generated report; if this is the only reason that QSL# items are being assigned, then they only need be assigned to QSL cards that confirm more than one QSO.

Generating Log Reports

The **Report** button generates a log report with one entry for each QSO in the Log Page Display, and places that report in a file in DXKeeper's *Reports* subfolder. This report's sort order and layout are those of the Log Page Display with one exception: if the Log Page Display includes the country code, the report appends the full DXCC entity name to the country code. You can create a layout optimized for this report and save it in a file for later recall.

Checking the Include Entity name with DXCC prefix box will expand the Log Report's DXCC Prefix column to include both the DXCC prefix and full DXCC entity name for each QSO.

Plotting QSOs

If DXView is running, the **Plot** button conveys all QSOs in the Log Page Display to DXView for display on the world map(s) it manages. Depressing the CTRL, SHIFT, or ALT key while clicking the Plot button filters the Log Page Display to contain QSOs made during a specific time interval, and directs DXView to display them:

Modifier Key	Time Interval
CTRL	last 24 hours
SHIFT	last 7 days
ALT	last 30 days

Log files

QSOs and their information items are stored in a log file. When you run DXKeeper for the first time after installing it, you will be prompted for your callsign. DXKeeper uses your callsign to create a log file in the `databases` subfolder of its DXKeeper folder, and automatically opens that log. If you installed DXKeeper in the folder `c:\DXLab\DXKeeper` and your callsign is AA6YQ/KH6, for example, DXKeeper will create and open the file `c:\DXLab\DXKeeper\aa6yq-kh6.mdb`.

One log file may be all you ever need. DXKeeper assumes that all QSOs in a log are valid for ARRL DXCC, RSGB Islands On the Air (IOTA), CQ DX Marathon, CQ Worked All Zones (WAZ), and CQ Worked All Prefixes (WPX) awards -- so if you operate from multiple countries, you should use a separate log file for the QSO made from each country. Controls in the Configuration window's Log File panel support this mode of operation by enabling you to

- create an empty new log and then open it
- select an existing log by navigating with a Windows file selector or by typing its pathname, and then open it

A log file also contains realtime award tracking information for the DXCC and Top List awards. You can configure DXKeeper to maintain realtime award tracking information for IOTA, Marathon, ARRL VHF/UHF Century Club (VUCC), ARRL Worked All States (WAS), WAZ, and WPX awards.

If you start DXKeeper with a command line argument that specifies a valid pathname, DXKeeper will attempt to open the designated file as a log.

If you operate from multiple QTHs and wish to automatically generate QSL cards or labels that correctly reflect the QTH from which you were operating, DXKeeper allows you to specify the details of each QTH (e.g. city, country, state, grid) and assign each QTH a unique identifier that can be logged with a QSO.

While most of DXKeeper's settings are stored between operating sessions in the Windows Registry, some settings are for convenience stored in the current log file's Settings table, for example Club Log settings, eQSL settings, LoTW settings, QRZ logbook settings, and user-defined item settings. You can optionally configure DXKeeper to maintain the Station Callsign, Operator Callsign, and Owner Callsign settings in the current log file's Settings table. When a log file is opened, DXKeeper's settings are updated with the settings maintained in that log file's Settings table.

Main Window Title Bar

DXKeeper's Main window's title bar displays

- the version of DXKeeper you're running
- if Contest mode is enabled, the current Contest ID
- abbreviations for each of the DXLab applications with which DXKeeper is interoperating, enclosed in square brackets:
 - CC - Commander
 - DXV - DXView
 - SC - SpotCollector
 - PC - PropView
 - PF - Pathfinder
 - WW - WinWarbler
- the number of QSO present in the filtered Log Page Display
- the number of QSOs present in the QSL queue (if greater than 0)
- the default station callsign, enclosed in curly brackets

Logging Completed QSOs Using the Main window

When manually entering already-completed QSOs, e.g. from a paper logbook, use the Main window's **Log QSOs** tab and un-check the optimize for realtime QSO entry box in the **Options** panel on the Configuration window's **General** tab. The three basic steps for logging a QSO are the same as for logging a new QSO:

1. create a new QSO record by clicking the **New** button
2. record the information items you care about
3. save the QSO record by clicking the **Log** button

On the Main window's **Log QSOs** tab, DXKeeper organizes items into 9 groups, each associated with a panel:

- QSO items
- Auxiliary items
- QSL items
- Online QSL items
- Award items
- Contest items
- Propagation items
- Details items
- User-defined items

The **QSO** panel is always present; you can independently control the presence of the **Auxiliary**, **QSL**, **Online QSL**, **Award**, **Contest**, **Propagation**, **Details**, and **User-defined** panels using the Log Panel checkboxes in the Configuration window's **Log** tab or using the eight checkboxes to the right of the **QSO** panel. Enabling the Display panels in two columns option will display these panels side-by-side in two columns rather than stacked in a single column - a format more suitable for widescreen monitors. All information items are stored with each QSO, whether or not the panels displaying them are visible. This allows you to adjust DXKeeper's consumption of screen real estate by displaying only the panels containing the items you care about.

With optimize for realtime QSO entry unchecked,

- the begin and end items will be initialized to the QSO end time logged in the last manually-entered QSO incremented by 1 second unless Optimize for roundtable QSOs is checked, in which case the begin item will be initialized to the QSO begin time logged in the last manually-entered QSO incremented by 1 second
- the tx freq item will be initialized to the transmit frequency in the last logged QSO (ignoring the current transceiver frequency if Commander is running)
- the rx freq item will be initialized to the transmit frequency in the last logged QSO unless the propagation mode item in the last logged QSO was **sat**, in which case the rx freq item will be initialized to the receive frequency in the last logged QSO (ignoring the current transceiver frequency if Commander is running)
- the band item will be initialized to the band in the last logged QSO (ignoring the current transceiver frequency if Commander is running)
- the mode item will be initialized to the mode in the last logged QSO (ignoring the current transceiver mode if Commander is running)
- the myQTH ID item will be initialized to that of the last logged QSO
- the propagation mode item will be initialized to that of the last logged QSO
- the satellite name item will be initialized to that of the last logged QSO
- the satellite mode item will be initialized to that of the last logged QSO
- the meteor scatter shower item will be initialized to that of the last logged QSO
- the SFI item will be initialized to that of the last logged QSO
- the A index item will be initialized to that of the last logged QSO
- the K index item will be initialized to that of the last logged QSO
- the TX power item will be initialized to that of the last logged QSO
- the antenna path item will be initialized to that of the last logged QSO
- the station callsign item will be initialized to that of the last logged QSO

- the operator callsign item will be initialized to that of the last logged QSO
- the owner callsign item will be initialized to that of the last logged QSO
- setting the QSL Sent, item to 'Y' will not set the Date Sent item to the current date
- setting the QSL Rcvd, item to 'Y' will not set the Date Rcvd item to the current date
- setting the eQSL.cc Rcvd item to 'Y' will not set the eQSL.cc Date Rcvd item to the current date
- setting the LotW QSL Rcvd item to 'Y' will not set the LotW Date Rcvd item to the current date
- if the USAP database is installed, it will be queried for a US State if the callsign is located in the continental United States, Alaska, or Hawaii
- if the RDA database is installed, it will be queried for a Russian Oblast and District if the callsign is located in Asiatic Russia, European Russia, Franz Josef Lane, or Kaliningrad, or if the callsign was assigned to the USSR and the QSO was conducted prior to 1994-01-01.
- clicking the **CBA** button will populate QSO items with information from the selected callbook, DXCC database, USAP database (if installed), and RDA database (if installed)
- double-clicking the end field will copy the contents of the begin field into the end field
- if the end item remains unspecified when the QSO is saved, the contents of the begin field will be copied into the end field
- in QSOs with DXCC entities that specify Primary and Secondary subdivisions, these subdivision items can be directly entered and edited
- if the LotW database is installed, the LotW membership selector will be set to **Y** if the callsign is a known participant in the ARRL's Logbook of the World, subject to the Maximum age of most recent LotW upload setting
- if the eQSL AG database is installed, the eQSL.cc membership selector will be set to **A** if the callsign is an Authenticity-Guaranteed member of eQSL.cc

Un-capitalized first letters of each word entered into the Name or QTH items will be automatically capitalized unless the word contains a capitalized letter.

If you don't wish to record a frequency with a QSO, set its value to 0.

Changing the tx freq item in a simplex QSO and striking the Enter or Tab key or subsequently moving cursor focus to the rx freq item will update the rx freq item to match the tx freq.

Un-checking the optimize for realtime QSO entry box will also uncheck the Contest Mode box.

If a callsign is found to be a known participant of LotW but not an Authenticity-Guaranteed member of eQSL.cc, the callsign's background color is set to yellow. If a callsign is found to be an Authenticity-Guaranteed member of eQSL.cc but not a known participant of LotW, the callsign's background color is set to pink. If a callsign is found to be a known participant of LotW and an Authenticity-Guaranteed member of eQSL.cc, the callsign's background color is set to cyan (light blue). If SpotCollector is installed, however, the background colors specified on the **Spot Database Display** tab of SpotCollector's **Configuration** window - if not too dark - are used in place of yellow, pink, and cyan. The eQSL AG and LotW databases can be installed via the **Databases** tab of DXView's Configuration window.

You can set any of the remaining items manually. Double-clicking several items immediately performs useful actions.

In determining the DXCC entity from the callsign, DXKeeper uses the current ITU Prefix Allocations. If you are logging an older QSO, you should verify that that DXKeeper has deduced the correct DXCC entity by inspecting the Aux panel's entity item. If you log a 1990 QSO with UP1BZO, for example, DXKeeper will set the QSO's DXCC entity to Kazakhstan, which is incorrect. You can correct this by selecting the correct DXCC entity -- in this case, Lithuania -- in the Aux panel's entity item.

If the first letter of the callsign you enter is an exclamation point, DXKeeper assumes that you are logging a CQ, an unsuccessful call, a test, or some other transmission that you wish to record but does not represent a QSO. Such log entries are not assigned a DXCC entity, do not initiate a Callbook database lookup, and are not included in award tracking statistics.

If you attempt to save a QSO whose Grid 1, Grid 2, Grid 3, or Grid 4 item specifies a valid two-character Maidenhead Field, 00aa will be appended to the item to make it a valid Maidenhead Grid Square.

When any item is modified, the panel labels are rendered in blue as a reminder to save the information. To do so, click the **Log** button; this resets the panel labels to black. If you plan to immediately log another QSO, you can instead click the **New** button, which will both save the current QSO's information and create a new QSO record. With the cursor in any item textbox, you can perform the **Log** or **New** operations without lifting your hands from the keyboard by striking **Ctrl-L** or **Ctrl-J** respectively.

After a QSO is recorded by clicking the **Log** or **New** buttons (or striking their keyboard shortcuts), the Require Edit to modify logged QSOs setting determines whether the **Edit** button must be clicked before subsequent modifications to that QSO are permitted. If Require Edit to modify logged QSOs is enabled and the **Edit** button has not been clicked, any attempt to change an item in the current QSO is ignored. If the **Edit** button is clicked, changes are permitted, and the **Edit** button is replaced by a **Save** button that can be clicked to record the changes. If Require Edit to modify logged QSOs is not enabled, changes to items in the current QSO can be made at any time; such changes can be recorded by clicking the **Save** button. Changes are also recorded by taking any action that causes another QSO become selected.

Un-checking the optimize for realtime QSO entry box sorts the Log Page Display in ascending order of Unique QSO number; this order places QSOs in the order they were logged (or imported), rather than in the order that they occurred.

If the Provide audible feedback box is checked, successfully logging a QSO via the **New** or **Log** buttons will play the "Windows Default Beep" sound.

If an item contains an invalid value, or if a required item is missing, clicking the **Log** or **New** buttons or attempting to select another QSO flashes the labels of any such items in red, but does not enter the QSO into the current log; if the Provide audible feedback box is checked, the "Windows Default Beep" will play each time the labels flash. Frequencies not falling within a defined band are considered invalid. Callsign validity checking can be enabled or disabled via the Flag Invalid Callsigns setting. If an item's data exceeds its specified maximum length, its label will be flashing in red and the **Log** button will not enter the QSO into the current log. Until you correct the error(s) causing the item labels to flash, the **New**, **Log**, and **Delete** buttons will not function, nor will you be able to select another QSO.

If a non-critical item is missing or contains an inappropriate value, clicking the **Log** or **New** buttons or attempting to select another QSO will enter the QSO into the current log but flashes the labels of any such items in blue (if the panel's that contain them are visible). Examples of non-critical errors include:

- missing Operator
- have an End date/time that occurs before their Begin date/time
- include a Satellite name but do not have Propagation Mode set to SAT
- have an empty myQTH field in a Log for which multiple QTHs have been defined
- have an invalid Iota item
- an invalid grid 1 item
- an invalid latitude or longitude item

Iota items that are valid but not in standard format will be placed in standard format when you click the **Log** or **New** buttons. For example, AF1 will be changed to AF-001.

If you modify one or more items and then change your mind, clicking the **Undo** button will restore them to their last saved state.

Double-clicking the caption of an unselected item will *select* that item:

- the item immediately receives keyboard focus (which means that keys you strike will be directed to the selected item)
- the item's caption is rendered in underlined font
- selecting another QSO in the Log Page Display will set the keyboard focus in the selected item of that QSO

Double-clicking the underlined caption of a selected item will de-select that item, setting keyboard focus in the **Filter** panel textbox.

If an item has a default value, Ctrl-double-clicking the caption of that item will display the Configuration window and place the mouse cursor in the default value.

In fields containing dates, the year must be 1930 or later, if you do not include time separators in the begin or end fields, DXKeeper will insert them appropriately:

Time	Result
1	01:00:00
12	12:00:00
123	1:23:00
1234	12:34:00
12345	1:23:45
123456	12:34:56

If you have configured Windows to use a time separator other than colon, DXKeeper will use the time separator you have specified.

With the mouse cursor in the begin or end fields, you can incrementally change the specified date and time using the up and down arrow keys:

Modifier	Effect of Up or Down Arrow keys
none	increases or decreases the date and time by 1 minute
Ctrl	increases or decreases the date and time by 10 minutes
Shift	increases or decreases the date and time by 1 hour
Alt	increases or decreases the date and time by 1 day

Uncapitalized first letters of each word entered into the Name or QTH items will be automatically capitalized unless the word contains a capitalized letter.

Striking the **Enter** key in the QTH item initiates a word-by-word inspection of the QSL field.

- If the QTH item contains a valid grid square and the QSO's, then the QSO's Grid 1 item will be set to the Grid Square found in the QTH item
- If the QTH item contains a valid US State abbreviation, and the QSO's DXCC entity is USA or Alaska or Hawaii, then the QSO's State item will be set to the State found in the QTH item
- If the QTH item contains a valid Canadian Province abbreviation, and the QSO's DXCC entity is Canada, then the QSO's Province item will be set to the Province found in the QTH item
- If the QTH item contains a valid ARRL Section abbreviation, and the QSO's DXCC entity is USA or Alaska or Hawaii or US Virgin Islands or Puerto Rico or US Pacific possessions, or Canada, then the QSO's ARRL Section item will be set to the ARRL Section found in the QTH item

- If the State, Province, ARRL Section, and Grid Square items found in the QTH item unambiguously identify a CQ Zone, then the QSO's CQ zone item will be derived from the information found in the QTH item
- If the State, Province, ARRL Section, and Grid Square items found in the QTH item unambiguously identify an ITU Zone, then the QSO's ITU zone item will be derived from the information found in the QTH item

To make it easy to copy QSL route information into a QSO record, the address item supports drag and drop from OLE sources such as Pathfinder or Microsoft Internet Explorer. To use this feature, first select the QSL route text in the source; then drag the selected text to the address item and drop it there. Semicolons in the selected text will be converted to newline sequences in the address item. The drag and drop action replaces any pre-existing address item contents with the selected source text. You can also invoke the Address Editor by double-clicking the address item or the via item.

Double-clicking the comment or QSLMsg item will invoke a Field editor that makes it easier to edit their content. You can include substitution commands in the QSLMsg item to include information determined by your current location.

To allow operation without removing one's hands from the keyboard, DXKeeper provides keyboard shortcuts for navigating among the items on the Main window's **Log QSOs** tab..

Logging Information Needed for Award Tracking

To track progress towards awards like WAS, USA-CA, RDA, WAJA, JCC, JCG, and AJA, DXKeeper provides items in its **Awards** panel that let you record a callsign's Primary Administrative Subdivision and its Secondary Administrative Subdivision. Some DXCC entities formally define a set of Primary Administrative Subdivisions, e.g. States in the United States, Oblasts in European and Asiatic Russia, and Prefectures in Japan; unique abbreviations or codes are used to identify these primary subdivisions. When you log a QSO with one of these entities, DXKeeper provides an appropriately-labeled (e.g. state, oblast, prefecture) selector that lets you choose from among the valid codes for that entity; if you click the ? button to the right of this selector, DXKeeper's **Main Administrative Subdivision Selector** window will appear, which provides a cross-reference between codes or abbreviations and full names, and lets you choose a primary subdivision by clicking in either the window's **Code** or **Name** selector.

- If a country contains multiple DXCC entities, then when you select one of these entities the selector will provide choices valid for the selected entity; if a QSO's DXCC entity is Asiatic Russia, for example, the subyeht selector will only offer Oblasts located in Asiatic Russia.
- ADIF defines the District of Columbia (DC) as a Primary Administrative Entity of the United States. DXKeeper's WAS report treats QSOs with stations in the District of Columbia as being in Maryland; its Worked All Counties report treats QSOs with stations in the District of Columbia as being in Maryland's Washington County.
- ADIF defines Newfoundland and Labrador (NL) as a Primary Administrative Entity of Canada, replacing the previous separate provinces of Newfoundland and Labrador

Some of the DXCC entities that define a set of Primary Administrative Subdivisions formally define a set of Secondary Administrative Subdivisions for each of their Primary Administrative Subdivision, e.g. Counties in the United States, Districts in Russia, and Cities and Guns in Japan; unique abbreviations or codes are used to identify these secondary subdivisions. For such entities, DXKeeper provides an appropriately-labeled (e.g. county, district, city/gun) selector lets you choose from among the valid codes; if you click the ? button to the right of this selector, DXKeeper's **Main Administrative Subdivision Selector** window will appear, which provides a cross-reference between codes or abbreviations and full names, and lets you choose a secondary subdivision by clicking in either the window's **Code** or **Name** selector.

- ADIF defines 28 Alaskan Counties; DXKeeper expect these to be logged with Alaskan QSOs. The Worked All Counties report automatically maps these counties to the correct Judicial District and reports your County progress accordingly.

If the Allow direct Subdivision entry setting is enabled, you can directly enter and edit abbreviations or codes in the Primary and Secondary Administrative Subdivisions rather than be restricted to making selections.

For entities that do not define Primary or Secondary Subdivisions, DXKeeper provides **pri sub** and **sec sub** textboxes with which any subdivision name can be recorded; you can use this to capture a subdivision name for QSO with a country that does not formally define its subdivisions, but this information may not be accepted by other logging applications when they import an ADIF file that you export.

The Main window's **Log QSOs** tab also provides region and DOK items to record entity-specific information required for certain awards.

For a summary of what information to record in what item for each supported award, see the table on page 124.

Logging New QSOs with the Capture window

To facilitate rapid real-time logging with minimum screen space consumption, DXKeeper provides a QSO Capture window, activated by clicking the **Capture** button located on the **Log QSOs** tab. The QSO Capture Window records 48 items, all but four of which (call, DXCC, tx frequency, and mode) are optional. By dragging the Capture window's lower border up or down, the Capture window can be configured to display from as few as two items to all items. Clicking the **Cfg** button in the Capture window's upper-right corner displays the Capture Layout window, which provides row-by-row control over which Capture window items are visible.

Clicking the **Lookup** button, or striking the **Enter** key in the Call textbox, or striking the **Tab** key in the Call textbox results in the following actions:

- if the **Shift** key is depressed when striking the <enter> key in the Call textbox, the name, QTH, Address, Continent, Primary Administrative Subdivision, Secondary Administrative Subdivision, Comment, CQ, ITU, Grid 1, Grid 2, Grid 3, Grid 4, IOTA, SOTA, Sent Via, User-defined, LotW membership, and eQSL.cc membership items are cleared
- if the **Ctrl** or **Shift** key is depressed when the **Lookup** button is clicked, the name, QTH, Address, Continent, Primary Administrative Subdivision, Secondary Administrative Subdivision, Comment, CQ, ITU, Grid 1, Grid 2, Grid 3, Grid 4, IOTA, SOTA, Sent Via, User-defined, LotW membership, and eQSL.cc membership items are cleared
- if the **Alt** key is depressed when the **Lookup** button is clicked, all location-based Capture items are cleared, and the Capture window's items are then populated from an override (if present) and the selected callbook; information from previously-logged QSOs is not utilized
- if the LotW database is installed, checks the LotW membership box if the callsign in the Call textbox is a known participant in the ARRL's Logbook of the World, subject to the Maximum age of most recent LotW upload setting
- if the eQSL AG database is installed, checks the eQSL.cc membership box if the callsign in the Call textbox is an Authenticity-Guaranteed member of eQSL.cc
- the callsign's font colored is set to indicate its DXCC/Challenge/Toplist, IOTA, CQ DX Marathon, VUCC, WAS, CQ WAZ, and CQ WPX award progress (for those awards for which realtime award tracking is enabled), as specified in the Capture Callsign font colors panel on the Capture and Log Page Display Colors window
 - if the award progress is *Unworked DX Band or Mode*, *Unworked DX Counter*, *Unconfirmed DX*, *Tagged Special Callsign*, or *Verified DX*, then the callsign is rendered in bold font
 - if the award progress is *Unneeded DX*, then the callsign is rendered in regular font
- the callsign's background color is set to indicate its participation in LoTW and Authenticity-Guaranteed eQSL.cc, as specified in the Capture Callsign and Log Page Display background colors panel on the Capture and Log Page Display Colors window.
- if the Display Previous QSOs on Lookup box is checked and the **Alt** key was not depressed when Lookup button is clicked,
 - filters the log page display to show only previous QSOs with the Call or a variant of the Call (e.g. with a portable, QRP, or mobile designator), and displays a **last QSO** section at the bottom of the Capture window with the date, time, frequency, and mode of the most recent QSO
 - unless an override for the callsign is defined in DXView or SpotCollector,
 - initializes the DXCC entity, Region, name, QSL via, QTH, Grid 1, IOTA, QSL address, email, web, Primary Administrative Subdivision, Secondary Administrative Subdivision, ITU, CQ, continent, IOTA, ARRL Section, DOK, eQSL.cc member and LotW member items using information found in previous QSOs, with priority given to information extracted from the most recent QSOs (the QSL address is not visible in the Capture window, but will be logged with the other items)
 - if a User-defined item's Init box is checked, initializes the item using information found in previous QSOs, with priority given to information extracted from the most recent QSOs
 - if the Display callsign progress on Lookup box is checked, displays the Callsign Progress window, which shows the bands and modes on which previous QSOs were made

- if Display previous comments on Lookup box is checked, displays a scrollable window containing comments extracted from previous QSOs with the same base callsign, each preceded by the QSO's start time and terminated by the QSO's callsign
- updates the DXCC item, if not already set, based on the Call's prefix, and updates the Continent, Primary Administrative Subdivision, CQ, ITU, and IOTA items if they can be unambiguously determined from the Callsign; DXView's Main window will be updated with this information
- if the USAP database is installed and the DXCC item is K, KH6, or KL7, updates the Continent, Primary Administrative Subdivision (US State) and CQ items, and updates the ITU item if it is unambiguously determinable from the US State; DXView's Main window will be updated with this information
- if the RDA database is installed and the DXCC item is R1F, UA, UA0, or UA2, updates the DXCC, Continent, Primary Administrative Subdivision (Russian Oblast) and Secondary Administrative Subdivision (Russian District) items, and updates the CQ, ITU, and IOTA items if they can be unambiguously determinable from the Oblast
- if a Callbook is installed, selected, and configured for automatic initialization, it's database is queried to set the name, QTH, Continent, Primary Administrative Subdivision, Secondary Administrative Subdivision, CQ, ITU, IOTA, Address, QSL Via, and Grid 1 items, if not already set (the Address item is not visible in the Capture window, but it will be logged with the other items)
- updates the az(imuth) and path items to the values used in the last rotator control command issued by DXView if running with rotator control enabled, or from their previous value if DXView is either not running or is running with rotator control disabled
- updates the IOTA item, if not already set, if it can be determined from the Call's prefix
- updates the ARRL section, continent, ITU, and CQ items, if not already set, if they are determinable from the prefix (these items are not visible in the Capture window, but will be logged with the other items)
- sets the tx frequency, rx frequency, and mode items from your transceiver's current settings (if Commander is running) or from their previous values (if Commander isn't running); if Commander is running and interoperating with a Satellite Tracking application,
 - sets the tx frequency item to the active satellite's uplink frequency reported by the Satellite Tracking application for the active satellite
 - sets the rx frequency item to the active satellite's downlink frequency reported by the Satellite Tracking application for the active satellite
 - sets the mode item to the transceiver mode reported by the Satellite Tracking application for the active satellite
- if Commander is running and interoperating with a Satellite Tracking application, sets the sat name and sat mode items reported by the Satellite Tracking application for the active satellite
- sets the RST sent and RST rcvd items if either the run-mode box or the Initialize RST fields box is checked
- sets the transmit pwr item based on the default transmit power settings
- if the Log Special Callsign Tags box is checked, Special Callsign Tags provided by DXView and SpotCollector will be appended to the Comment item
- if the Capture callsign generates prop forecast box is checked with DXView and PropView both running, directs PropView to generate a propagation forecast for the station's location on the captured TX frequency.

The eQSL AG and LoTW databases used to determine participation in these services can be installed via the **Databases** tab of DXView's Configuration window.

Allowing the mouse cursor to linger over the DXCC item when it contains a DXCC entity prefix will prompt DXKeeper to display a popup window containing the full name of the DXCC entity. Similarly, allowing the mouse cursor to linger over a State or Province item will prompt DXKeeper to display a popup window containing the full name of the state or province.

Typing a question mark (?) character in the Call textbox starts a timer and display a red line above the Call textbox.. When the timer expires after the specified number of seconds, the red line will disappear, and the next character you type into the Call textbox that isn't a question mark character will replace the left-most question mark character. Typing a space character while the red line is visible will cause the timer to immediately expire and the red line to disappear, so the next character you type into the Call textbox that isn't a question mark character will replace the left-most question mark character.

If the first letter of the callsign you enter is an exclamation point, DXKeeper assumes that you are logging a CQ, an unsuccessful call, a test, or some other transmission that you wish to record but does not represent a QSO. Such log entries are not assigned a DXCC prefix, do not initiate a Callbook database lookup, and are not included in award tracking statistics.

Double-clicking or striking the **Enter** key in the Grid 1 textbox updates DXView's display to show the specified grid square as its current position. Depressing the **CTRL** key while double-clicking the Grid 1 textbox updates DXView's display and rotates the antenna to the short-path heading; depressing the **ALT** key while double-clicking the Grid 1 textbox updates DXView's display and rotates the antenna to the long-path heading.

Clicking the **Begin** button, striking Alt-B in any Capture window field, or striking CTRL-B in any Capture window field

- sets the QSO start time
- hides the **Begin** button until the QSO is logged or cleared, or the **End** button is clicked
- displays the QSO start time
- displays the **End** button

If the QSO's start time has not already been set, typing a received signal report into the **RST rcvd** textbox with the Set QSO start when RST Rcvd box checked will also perform the above 4 actions.

Clicking the **End** button or striking CTRL-E in any Capture window item

- sets the QSO end time
- hides the **End** button until the **Begin** button is clicked
- displays the QSO end time
- displays the **Begin** button

Checking the **QSL Requested** box indicates that a QSL card or label should be sent and a confirmation requested. If logged, the QSO's QSL Sent and QSL Rcvd items will be set to '**R**' (for *requested*); when you later run the QSL Workflow, the Add Requested button will automatically generate a QSL card or label for this QSO; printed cards and 2-column labels will bear a "please!" in their QSL? column.

Checking the **use bureau** box indicates that the QSL should be sent via the QSL bureau. If logged, the QSO's QSL Sent Via item will be set to '**B**'.

Checking the **LotW member** box indicates that the callsign participates in the ARRL's Logbook of the World. If logged, the QSO's LotW Member item will be set to '**Y**'.

Checking the **eQSL.cc member** box indicates that the callsign is an Authenticity Guaranteed member of eQSL.cc . If logged, the QSO's eQSL.cc Member item will be set to '**A**'.

Checking or unchecking the **contest-mode** box enables or disables Contest-mode.

Double-clicking the RST_Sent or RST_Rcvd item with a Mode selected will set the item to 59 (if the selected mode is a phone mode) or 599 (if the selected mode is not a phone mode).

Double-clicking the **QSL Via** item invokes the Address Editor .

Double-clicking the **Comment** item will invoke a **Comment editor** window that makes it easier to enter or modify lengthy content; click the **Save** button to preserve your changes, or the **Cancel** button to abandon them.

Double-clicking an item's label will filter the Log Page Display to show all QSOs whose item matches the value in the Capture window. If the Capture window's **IOTA** item contains OC-005, for example, double-clicking the **IOTA** label will filter the Log Page Display to show all QSOs whose **IOTA** item is OC-005.

If an item has a default value, Ctrl-double-clicking that item's label will display the Configuration window and place the mouse cursor in the default value,

Uncapitalized first letters of each word entered into the **Name** or **QTH** items will be automatically capitalized unless the word contains a capitalized letter.

Striking the **Enter** key in the **QTH** item initiates a word-by-word inspection of the QTH item.

- If the QTH item contains a valid grid square and the QSO's, then the QSO's Grid 1 item will be set to the Grid Square found in the QTH item
- If the QTH item contains a valid US State abbreviation, and the QSO's DXCC entity is USA or Alaska or Hawaii, then the QSO's State item will be set to the State found in the QTH item
- If the QTH item contains a valid Canadian Province abbreviation, and the QSO's DXCC entity is Canada, then the QSO's Province item will be set to the Province found in the QTH item
- If the QTH item contains a valid ARRL Section abbreviation, and the QSO's DXCC entity is USA or Alaska or Hawaii or US Virgin Islands or Puerto Rico or US Pacific possessions, or Canada, then the QSO's ARRL Section item will be set to the ARRL Section found in the QTH item
- If the State, Province, ARRL Section, and Grid Square items found in the QTH item unambiguously identify a CQ Zone, then the QSO's CQ zone item will be derived from the information found in the QTH item
- If the State, Province, ARRL Section, and Grid Square items found in the QTH item unambiguously identify an ITU Zone, then the QSO's ITU zone item will be derived from the information found in the QTH item

Clicking the **Clear** button with Contest-mode unchecked requests confirmation (if Prompt on Capture Clear is enabled) and then clears all Capture items, presents the **Begin** button, clears the Log Page Display filter, and selects the last QSO in the Log Page Display; if Contest-mode checked, the TX# item is not cleared.

- depressing the **Alt** key while clicking the **Clear** button eliminates the request for confirmation even if Prompt on Capture Clear is enabled
- if Audio Recording is enabled with the Automatically start and stop recording option also enabled, clicking the **Clear** button will stop audio recording and abandon the recorded audio file

Clicking the **Log** button

- verifies that all required items are present
- computes the DX station's latitude and longitude if the Grid 1 item is populated
- computes the antenna azimuth if
 - the antenna path selector is set to shortpath or longpath
 - your QTH latitude and longitude is provided by the specified myQTH, or by a default QTH latitude and longitude
- computes the QSO distance if the antenna azimuth was computed and
 - the computed antenna azimuth lies within 10 degrees of the specified antenna azimuth
 - or
 - no antenna azimuth is specified
- if the Grid 1, Grid 2, Grid 3, or Grid 4 item specifies a valid two-character Maidenhead Field, appends 00aa to the item to make it a valid Maidenhead Grid Square
- places the Iota item in standard format (e.g. AF1 will be changed to AF-001)
- clears the log filter, if set
- notes the time at which the QSO ended
- if the sat name selector is not empty, records the QSO with its Propagation mode item set to **SAT**

- if the **CTRL** key was depressed when the **Log** button was clicked, or if the Upload an eQSL... box is checked, uploads the QSO to eQSL.cc; if this upload is successful,
 - the QSO's eQSL sent item is set to **Y**
 - the QSO's eQSL date sent item is set to the current UTC date
 - the QSO's eQSL rcvd item is set to **R**

If you have multiple operator callsigns and multiple eQSL.cc accounts, you can prevent the upload of QSOs whose operator callsigns don't match the currently specified eQSL.cc username by checking the Don't upload QSOs whose operator callsign isn't the specified Username box.
- if the Upload each QSO logged via the Capture window to LotW box is checked, uploads the QSO to LotW; if this upload is successful,
 - the QSO's LotW sent item is set to **U**
 - the QSO's LotW date sent item is set to the current UTC date
 - the QSO's LotW rcvd item is set to **R**
- enters the QSO into the current log (if Contest-mode is disabled and the Don't log Capture window Contest, TX#, RX# if contest mode disabled option is enabled, the Capture window's Contest ID, TX#, and RX# items are not included with the logged information)
- plays the "Windows Default Beep" sound If the Provide audible feedback box is checked
- if the Generate local spot on Capture log option is enabled and SpotCollector is running, an outgoing local spot will be generated
- if Audio Recording is enabled,
 - if the **Shift** key was depressed when the **Log** button was clicked or if Automatically start and stop recording is enabled,
 1. the word Audio in the recorded audio filename is replaced with the Call specified in the Capture window, e.g. P5DX-2016-04-01 01:02:03
 2. the recorded audio filename is placed in the QSO's audio file item, accessible via the **Details** panel on the Main window's **Log QSOs** tab
 - if the **Alt** key was depressed when the **Log** button was clicked, any recorded audio or audio file is discarded
- clears all items
- presents the **Begin** button

Note that striking CTRL-<enter> or CTRL-L in any Capture Window item is equivalent to clicking the **Log** button.

If the Log Page Display is filtered to show previous QSOs with the station in the Call item, the number of previous QSOs is parenthetically appended to the Call item's label, whether or not the main log window is visible. Clicking on the Call item's label will display the main log window, should it be minimized. Information about the most recent QSO -- date, time, frequency, mode, and QSL status -- is displayed in the Capture window is appropriately resized; click the window maximize button on the right side of the title bar to expand the Capture window enough to show all information.

With Contest Mode disabled, a Log Page Display entry will be rendered in red font if its Callsign, Band, and Mode match those in the Capture window; this can help avoid duplicate QSOs; with Contest Mode enabled, a Log Page Display entry will be rendered in red font if its Callsign, Band, Mode and Contest ID match those in the Capture window.

If required items are missing or contain invalid values, clicking the **Log** button highlights the labels of these items in red, but does not enter the QSO into the current log. Frequencies not falling within a defined band are considered invalid. Callsign validity checking can be enabled or disabled via the Flag Invalid Callsigns setting. If a Capture item's data exceeds its specified maximum length, its label will be highlighted in red and the **Log** button will not enter the QSO into the current log.

You can include substitution commands in the QSL msg item to include information determined by your current location.

Uncapitalized first letters of each word entered into the *Name* or *QTH* items will be automatically capitalized unless the word contains a capitalized letter.

To allow operation without removing one's hands from the keyboard, DXKeeper provides keyboard shortcuts for navigating among the Capture Window's items.

Clicking in the **call** box or **tx freq** box with the middle mouse button will direct Commander to activate its Bandsread window.

Generating an Outgoing Spot with Information from the Capture window

If SpotCollector is running and has been configured to generate cluster spots, then clicking the **Spot** button will use the Capture window's Call, TX frequency, and Mode items to generate a DX spot,

- if the Mode is not CW or SSB, it will be included as a spot note
- if the Spot split frequency setting is enabled, outgoing spot notes will include the difference between the Capture window's TX and RX frequencies unless that difference exceeds 9.9 KHz, in which case the full TX frequency will be included
- If the band is 6m or above and a Grid 1 item has been captured, it will also be included as a spot note; if the operator's gridsquare is specified in the current myQTH, then it will also be included in the spot note
- if the SOTA item is specified, it will be included in the spot note
- if the Spot POTA, SOTA, & WWFF tags option is enabled and a user-defined item whose caption is *POTA* is defined, the tag it specifies will be included in the spot note
- if the Spot POTA, SOTA, & WWFF tags option is enabled and a user-defined item whose caption is *WWFF* is defined, the tag it specifies will be included in the spot note

While clicking the **Spot** button,

- Depressing the **CTRL** key while clicking the **Spot** button will display a dialog box that lets you specify notes to be included in the spot; in this case, you must manually include the mode and or gridsquare in the notes should that be appropriate.
- Depressing the **ALT** key while clicking the **Spot** button will direct SpotCollector to generate a "local spot", meaning that a spot database entry is created but the no spot is sent to the spotting network.
- Depressing both the **CTRL** and **ALT** keys while clicking the **Spot** button combines both of the above actions: you'll be prompted to specify notes for a local spot.

If WinWarbler is running and Capture window F-Keys via WW is checked, then striking the function keys **F5** through **F12** in a Capture window textbox will invoke a WinWarbler macro, with **Shift** key and **Alt** key modifiers functioning as they would within WinWarbler. Striking the **Esc** key in a Capture window textbox will abort any active WinWarbler transmission.

Logging Information Required for Award Tracking

To track progress towards awards like WAS, USA-CA, RDA, WAJA, JCC, JCG, and AJA, DXKeeper provides items in its Capture window that let you record a callsign's Primary Administrative Entity and its Secondary Administrative Entity. Some DXCC entities formally define a set of Primary Administrative Subdivisions, e.g. States in the United States, Oblasts in Russia, and Prefectures in Japan; unique abbreviations or codes are used to identify these primary subdivisions. For such entities, DXKeeper provides an appropriately-labeled (e.g. state, oblast, prefecture) selector lets you choose from among the valid codes; if you click the **?** button to the left of this selector, DXKeeper's **Capture Administrative Subdivision Selector** window will appear, which provides a cross-reference between code or abbreviation and full name, and lets you choose a primary subdivision by clicking in either the window's **Code** or **Name** selector.

- If a country contains multiple DXCC entities, then when you select one of these entities the selector will provide choices valid for the selected entity; if a QSO's DXCC entity is Asiatic Russia, for example, the subyekt selector will only offer Oblasts located in Asiatic Russia.
- ADIF defines the District of Columbia (DC) as a Primary Administrative Entity of the United States. DXKeeper's WAS report treats QSOs with stations in the District of Columbia as being in Maryland; its Worked All Counties report treats QSOs with stations in the District of Columbia as being in Maryland's Washington County.

- ADIF defines Newfoundland and Labrador (NL) as a Primary Administrative Entity of Canada, replacing the previous separate provinces of Newfoundland and Labrador

Some of the DXCC entities that define a set of Primary Administrative Subdivisions formally define a set of Secondary Administrative Subdivisions for each of their Primary Administrative Subdivision, e.g. Counties in the United States, Districts in Russia, and Cities and Guns in Japan; unique abbreviations or codes are used to identify these secondary subdivisions. For such entities, DXKeeper provides an appropriately-labeled (e.g. county, district, city/gun) selector lets you choose from among the valid codes; if you click the ? button to the left of this selector, DXKeeper's **Capture Administrative Subdivision Selector** window will appear, which lets you choose a secondary subdivision by clicking in either the window's **Code** or **Name** selector.

- ADIF defines 28 Alaskan Counties; DXKeeper expect these to be logged with Alaskan QSOs. The Worked All Counties report automatically maps these counties to the correct Judicial District and reports your County progress accordingly.

For entities that do not define Primary or Secondary Subdivisions, DXKeeper provides **pri sub** and **sec sub** textboxes with which any subdivision name can be recorded; you could use this to capture a subdivision name for QSO with a country that does not formally define its subdivisions.

The Capture window also provides region and DOK items to record entity-specific information required for certain awards.

For a summary of what information to record in what item for each supported award, see the table here.

Recording Audio




If you have a soundcard whose input is connected to your transceiver's audio output, you can use the Capture window to initiate and terminate the recording of an audio file in .wav format at 6K bytes per second.

- the audio file's name will be `Audio-YYYY-MM-DD-HH-NN-SS.wav` (where YYYY-MM-DD-HH-NN-SS is a date-and-timestamp specifying the moment at which recording began)
- the audio file will be saved in the folder `MyDocuments\DXLab\QSOAudio`, which will be automatically created if it does not yet exist; clicking the Audio Recording Configuration window's Display button will direct **Windows Explorer** to display the contents of this folder

The Capture window provides an **Audio** button between its Clear and Log buttons. The icon present on this button indicates the current state of audio recording, and the action that will be taken when the button is next clicked:

Audio button icon	current state	action when clicked	action when CTRL-clicked	action when Shift-clicked	action when Alt-clicked
	<i>Disabled</i>		display the Audio Recording Configuration window		
	<i>Ready</i>	start recording, new state: <i>Recording</i>	display the Audio Recording Configuration window	start recording, new state: <i>Recording</i>	start recording, new state: <i>Recording</i>
	<i>Recording</i>	stop and save audio to file, new state: <i>Recorded</i>	stop and save audio to file, new state: <i>Recorded</i>	stop and save audio to file, new state: <i>Ready</i>	stop and discard, new state: <i>Ready</i>
	<i>Recorded</i>	start playing the last recorded audio file	stop playback	new state: <i>Ready</i>	discard recorded audio file, new state: <i>Ready</i>

To enable audio recording,

1. depress the CTRL key while clicking the Capture window's  button.
2. In the **Audio Recording Configuration** window that appears, check the **Enable** box; this will set the state of audio recording to *Ready*, replacing the Capture window's  button with its  button.

In the *Recording* or *Recorded* states,



- Shift-clicking the Capture window's Log button will log the QSO and
 1. replace the word *Audio* in the recorded audio filename with the Call specified in the Capture window, e.g. P5DX-2016-04-01 01:02:03
 2. place the recorded audio filename in the QSO's audio file item, accessible via the **Details** panel on the Main window's **Log QSOs** tab
- Alt-clicking the Capture window's Log button will log the QSO and discard any recorded audio or audio file

To play the audio in a logged QSO's audio file item, either click in the item (in the **Details** panel on the Main window's **Log QSOs** tab), or right-click the QSO's entry in the **Log Page Display** and select the **Play Audio** command at the bottom.

Enabling the Audio Recording Configuration window's Automatically start and stop recording option will automatically record each QSO's audio and include the audio filename with the logged QSO:

- inserting a character into the Capture window's Call item either directly or by the action of an another application (other than WinWarbler) in any state other than *Recording* will start audio recording and set the state to *Recording*
- invoking the Capture window's Log function by button click or keyboard shortcut will log the QSO and
 1. replace the word *Audio* in the recorded audio filename with the Call specified in the Capture window
 2. place the recorded audio filename in the QSO's audio file item, accessible via the **Details** panel on the Main window's **Log QSOs** tab
 3. set the state to *Recorded* (so the most recent audio file can be played)
- invoking the Capture window's Clear function by button click, keyboard shortcut, or directive from another application will stop audio recording and abandons the recorded audio file

If the Audio Recording Configuration window's Automatically delete QSO Audio file option is enabled, deleting a QSO that specifies an audio file will automatically delete that audio file.

To display the Audio Recording Configuration window, depress the CTRL key while clicking the Capture window's  or  buttons, or click the Audio Recording Config button at the bottom of the **Configuration** window's **General** tab.

Audio Recording Configuration

DXKeeper can record audio using a soundcard connected to your transceiver's audio output. The Audio Recording Configuration window provides settings that

- enable or disable the Capture window's Audio button, which is used to initiate audio recording, terminate audio recording, and save or discard recorded audio
- enable automatic initiation and termination of recording based on actions in the Capture window
- enable the automatic deletion of an audio file specified by a QSO being deleted
- select the Soundcard with which audio will be recorded

Enable	When checked, the Capture window's Audio button enables you to start and stop audio recording
Automatically start and stop recording	<p>when checked,</p> <ul style="list-style-type: none"> • inserting a character into the Capture window's Call item either directly or by the action of an another application (other than WinWarbler) will start audio recording and set the audio recording state to <i>Recording</i> • invoking the Capture window's Log function by button click or keyboard shortcut will log the QSO and <ol style="list-style-type: none"> 1. replace the word Audio in the recorded audio filename with the Call specified in the Capture window 2. place the recorded audio filename in the QSO's audio file item, accessible via the Details panel on the Main window's Log QSOs tab 3. set the audio recording state to <i>Recorded</i> (so the most recently recorded audio file can be played) • invoking the Capture window's Clear function by button click, keyboard shortcut, or directive from another application will stop audio recording and abandons the recorded audio file
Automatically delete QSO Audio file	when checked, deleting a QSO that specifies an audio file will delete that audio file.
Soundcard	selects the Soundcard with which audio will be recorded
QSOAudio folder	<p>pathname of the folder in which audio files are saved</p> <ul style="list-style-type: none"> • this pathname cannot be changed • clicking the Display button will direct Windows Explorer to display the contents of this folder • clicking the Select button enables selection of an existing folder into which QSO Audio files will be stored

QSO Initialization

If, after entering or modifying a callsign in the call textbox on the Main window's **Log QSOs** tab, you strike the **Enter** or **Tab** key or immediately click the mode item selector, DXKeeper will automatically initialize the any of the following information items that you haven't manually set:

Panel	Item	Automatic Initialization
QSO	freq	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked and Commander is running, this item is set to your transceiver's current frequency if Optimize for realtime QSO entry is unchecked or Commander is not running, this item is set to the frequency of the last logged QSO
QSO	band	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked and Commander is running, this item is set to the band for your transceiver's current frequency if Optimize for realtime QSO entry is unchecked or Commander is not running, this item is set to the band of the last logged QSO
QSO	rx freq	<ul style="list-style-type: none"> this item is set to the receive frequency of the last logged QSO
QSO	rx band	<ul style="list-style-type: none"> this item is set to the receive band of the last logged QSO
QSO	mode	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked and Commander is running, this item is set to your transceiver's current mode if Optimize for realtime QSO entry is unchecked or Commander is not running, this item is set to the mode of the last logged QSO
QSO	begin	<ul style="list-style-type: none"> if the Optimize for realtime QSO entry is checked, this item is set to the current UTC time
QSO	DXCC	<ul style="list-style-type: none"> if DXView is running, this item is set to the prefix for the DXCC entity associated with callsign in the call textbox
QSO	sent	<ul style="list-style-type: none"> if the Run-mode box or the Initialize RST fields box in the Configuration screen's General panel is checked, this item is set to 59 (if the mode textbox contains SSB or FM) or 599 (if the mode textbox contains CW, RTTY, or PSK)
QSO	rcvd	<ul style="list-style-type: none"> if the Run-mode box or the Initialize RST fields box in the Configuration screen's General panel is checked, this item is set to to 59 (if the mode textbox contains SSB or FM) or 599 (if the mode textbox contains CW, RTTY, or PSK)
QSO	name	<ul style="list-style-type: none"> if a Callbook is installed, selected, and configured for automatic initialization, this item is set to the name returned by a successful Callbook query
QSO	QTH	<ul style="list-style-type: none"> if a Callbook is installed, selected, and configured for automatic initialization, this item is set to the city returned by a successful Callbook query

QSO	power	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked, this item is set to the contents of the Transmit power textbox in the Defaults panel on the Configuration screen's General panel if Optimize for realtime QSO entry is not checked, this item is set to the transmit power of the last logged QSO
Auxiliary	stn call	<ul style="list-style-type: none"> this item is set to the contents of the Station Callsign textbox in the Defaults panel on the Configuration screen's General panel
Auxiliary	op call	<ul style="list-style-type: none"> this item is set to the contents of the Operator Callsign textbox in the Defaults panel on the Configuration screen's General panel
Auxiliary	own call	<ul style="list-style-type: none"> this item is set to the contents of the Owner Callsign textbox in the Defaults panel on the Configuration screen's General panel
Auxiliary	<u>sub mode</u>	<ul style="list-style-type: none"> set to the sub mode of the last logged QSO
Auxiliary	code	<ul style="list-style-type: none"> this item is set to the ARRL country code for the DXCC entity associated with callsign in the call textbox
QSL	myQTH	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked, this item is set to the contents of the default myQTH ID textbox in the Defaults panel on the Configuration screen's General panel if Optimize for realtime QSO entry is not checked, this item is set to the myQTH ID of the last logged QSO
QSL	msg	<ul style="list-style-type: none"> this item is set to the contents of the QSL msg textbox in the Defaults panel on the Configuration screen's General panel
Awards	continent	<ul style="list-style-type: none"> this item is set to the continent associated with the callsign in the call textbox
Awards	CQ	<ul style="list-style-type: none"> this item is set to the CQ zone associated with the callsign in the call textbox
Awards	ITU	<ul style="list-style-type: none"> this item is set to the International Telecommunications Union zone associated with the callsign in the call textbox
Awards	state	<ul style="list-style-type: none"> if a Callbook is installed, selected, and configured for automatic initialization or if the USAP database is installed, this item is set to the US state associated with the callsign in the call textbox. if the RDA database is installed, this item is set to the Russian Oblast returned by a successful database query for the callsign in the call textbox.
Awards	province	<ul style="list-style-type: none"> if a Callbook is installed, selected, and configured for automatic initialization, this item is set to the Canadian province returned by a successful Callbook query for the callsign in the call textbox.
Awards	cnty	<ul style="list-style-type: none"> if a Callbook is installed, selected, and configured for automatic initialization, this item is set to the US county returned by a successful Callbook query for the callsign in the call textbox. if a if the RDA database is installed, this item is set to the Russian District returned by a successful database query for the callsign in the call textbox.

Awards	grid 1	<ul style="list-style-type: none"> if a Callbook is installed, selected, and configured for automatic initialization, this item is set to the Maidenhead gridsquare returned by a successful Callbook query, or computed from the latitude and longitude returned by a successful Callbook query for the callsign in the call textbox.
Awards	IOTA	<ul style="list-style-type: none"> if a Callbook is installed, selected, and configured for automatic initialization, this item is set to the IOTA reference returned by a successful Callbook query for the callsign in the call textbox.
Contest	ID	<ul style="list-style-type: none"> if Contest-mode is enabled, this item is set to the Contest name
Contest	tx #	<ul style="list-style-type: none"> if Contest-mode is enabled, this item is set to the Contest TX serial#
Propagation	prop mode	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked, <ul style="list-style-type: none"> if Commander is running and interoperating with a Satellite Tracking application that reports an active satellite name, this item is set to SAT otherwise, this item is set to the contents of the Propagation mode setting in the Defaults panel on the Configuration screen's General panel if Optimize for realtime QSO entry is not checked, this item is set to the propagation mode of the last logged QSO
Propagation	Satellite name	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked, <ul style="list-style-type: none"> if Commander is running and interoperating with a Satellite Tracking application, this item is set to the active satellite's name otherwise, this item is set to the contents of the Satellite name setting in the Defaults panel on the Configuration screen's General panel if Optimize for realtime QSO entry is not checked, this item is set to the satellite name of the last logged QSO
Propagation	Satellite mode	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked, <ul style="list-style-type: none"> if Commander is running and interoperating with a Satellite Tracking application, this item is set to the active satellite's mode otherwise, this item is set to the contents of the Satellite mode setting in the Defaults panel on the Configuration screen's General panel if Optimize for realtime QSO entry is not checked, this item is set to the satellite mode of the last logged QSO
Propagation	Meteor Scatter shower	<ul style="list-style-type: none"> if Optimize for realtime QSO entry is checked, this item is set to the contents of the Meteor Shower setting in the Defaults panel on the Configuration screen's General panel if Optimize for realtime QSO entry is not checked, this item is set to the meteor scatter shower name of the last logged QSO
Propagation	Antenna az	<ul style="list-style-type: none"> if DXView is running with rotator control enabled, this item is set to the heading last sent to the rotator
Propagation	Antenna path	<ul style="list-style-type: none"> if DXView is running with rotator control enabled, this item is set to the path selected when a heading was last sent to the rotator

Propagation	Condition SFI	<ul style="list-style-type: none"> • if Optimize for realtime QSO entry is checked, this item is set to the contents of the SFI setting in the Defaults panel on the Configuration screen's General panel • if Optimize for realtime QSO entry is not checked, this item is set to the Solar Flux of the last logged QSO
Propagation	Condition A	<ul style="list-style-type: none"> • if Optimize for realtime QSO entry is checked, this item is set to the contents of the A setting in the Defaults panel on the Configuration screen's General panel • if Optimize for realtime QSO entry is not checked, this item is set to the A-index of the last logged QSO
Propagation	Condition K	<ul style="list-style-type: none"> • if Optimize for realtime QSO entry is checked, this item is set to the contents of the K setting in the Defaults panel on the Configuration screen's General panel • if Optimize for realtime QSO entry is not checked, this item is set to the K-index of the last logged QSO
Details	Comment	<ul style="list-style-type: none"> • If Log Special Callsign Tags is checked, then Special Callsign Tags provided by DXView and SpotCollector will be appended to the Comment item
User-defined	user-defined items 0 through 7	<ul style="list-style-type: none"> • if Optimize for realtime QSO entry is checked, this item is set to the items default value as specified on the Config window's User Items tab

Double-clicking on Item Textboxes

Double-clicking on the following Log items immediately performs the following actions:

Panel	Item	Double-click result
QSO	call	the log page display is filtered to show only QSOs with this station (including variants of the callsign for portable, mobile, or QRP operation)
QSO	begin	the item is set to the current UTC date and time
QSO	end	<ul style="list-style-type: none"> if the optimize for realtime QSO entry box is checked, the item is set to the current UTC date and time if the optimize for realtime QSO entry box is not checked, the item is set to contents of the begin field
QSO	power	if Default Transmit power by band is enabled and the QSO specifies a band for which a default power is specified, then the QSO's power item is set to this band-specific default power; otherwise, the QSO's power item is set to the default Transmit power
QSO	sent	the item is set to 59 (if the mode textbox contains SSB or FM) or 599 (if the mode textbox contains CW, RTTY, or PSK)
QSO	rcvd	the item is set to 59 (if the mode textbox contains SSB or FM) or 599 (if the mode textbox contains CW, RTTY, or PSK)
QSO	rx freq	the item is set to the value of the tx freq item
QSL	date sent	the item is set to the current UTC date, and QSL sent is set to Y
Aux	operator	the item is set to the default operator callsign
QSL	date rcvd	the item is set to the current UTC date
Awards	grid	<p>the specified grid square is conveyed to DXView, which updates its current position accordingly</p> <ul style="list-style-type: none"> if the CTRL key is depressed, the antenna is also rotated to the short-path heading if the ALT key is depressed, the antenna is also rotated to the long-path heading
Details	email	the specified email address is conveyed to the default email client to create an email message
Details	file	<ul style="list-style-type: none"> if no filename is specified, a file selector is displayed if a filename is specified, the file is displayed by the default "viewer" application associated with the file type by Windows if a filename is specified, depressing the CTRL key while double-clicking will display a file selector
Details	web	the specified URL is displayed in the web browser specified on the Config window's Guidance panel
User-defined	user-defined items 0 through 7	the item is set to its specified default value

Logging Completed QSOs Using the Main window

When manually entering already-completed QSOs, e.g. from a paper logbook, use the Main window's **Log QSOs** tab and un-check the optimize for realtime QSO entry box. The three basic steps for logging a QSO are the same as for logging a new QSO:

1. create a new QSO record by clicking the **New** button
2. record the information items you care about
3. save the QSO record by clicking the **Log** button

On the Main window's **Log QSOs** tab, DXKeeper organizes items into 9 groups, each associated with a panel:

- QSO items
- Auxiliary items
- QSL items
- Online QSL items
- Award items
- Contest items
- Propagation items
- Details items
- User-defined items

The **QSO** panel is always present; you can independently control the presence of the **Auxiliary**, **QSL**, **Online QSL**, **Award**, **Contest**, **Propagation**, **Details**, and **User-defined** panels using the Log Panel checkboxes in the Configuration window's **Log** tab or using the eight checkboxes to the right of the **QSO** panel. Enabling the Display panels in two columns option will display these panels side-by-side in two columns rather than stacked in a single column - a format more suitable for widescreen monitors. All information items are stored with each QSO, whether or not the panels displaying them are visible. This allows you to adjust DXKeeper's consumption of screen real estate by displaying only the panels containing the items you care about.

With optimize for realtime QSO entry unchecked,

- the begin and end items will be initialized to the QSO end time logged in the last manually-entered QSO incremented by 1 second unless Optimize for roundtable QSOs is checked, in which case the begin item will be initialized to the QSO begin time logged in the last manually-entered QSO incremented by 1 second
- the tx freq item will be initialized to the transmit frequency in the last logged QSO (ignoring the current transceiver frequency if Commander is running)
- the rx freq item will be initialized to the transmit frequency in the last logged QSO unless the propagation mode item in the last logged QSO was **sat**, in which case the rx freq item will be initialized to the receive frequency in the last logged QSO (ignoring the current transceiver frequency if Commander is running)
- the band item will be initialized to the band in the last logged QSO (ignoring the current transceiver frequency if Commander is running)
- the mode item will be initialized to the mode in the last logged QSO (ignoring the current transceiver mode if Commander is running)
- the myQTH ID item will be initialized to that of the last logged QSO
- the propagation mode item will be initialized to that of the last logged QSO
- the satellite name item will be initialized to that of the last logged QSO
- the satellite mode item will be initialized to that of the last logged QSO
- the meteor scatter shower item will be initialized to that of the last logged QSO
- the SFI item will be initialized to that of the last logged QSO
- the A index item will be initialized to that of the last logged QSO
- the K index item will be initialized to that of the last logged QSO
- the TX power item will be initialized to that of the last logged QSO
- the antenna path item will be initialized to that of the last logged QSO
- the station callsign item will be initialized to that of the last logged QSO

- the operator callsign item will be initialized to that of the last logged QSO
- the owner callsign item will be initialized to that of the last logged QSO
- setting the QSL Sent, item to 'Y' will not set the Date Sent item to the current date
- setting the QSL Rcvd, item to 'Y' will not set the Date Rcvd item to the current date
- setting the eQSL.cc Rcvd item to 'Y' will not set the eQSL.cc Date Rcvd item to the current date
- setting the LotW QSL Rcvd item to 'Y' will not set the LotW Date Rcvd item to the current date
- if the USAP database is installed, it will be queried for a US State if the callsign is located in the continental United States, Alaska, or Hawaii
- if the RDA database is installed, it will be queried for a Russian Oblast and District if the callsign is located in Asiatic Russia, European Russia, Franz Josef Lane, or Kaliningrad, or if the callsign was assigned to the USSR and the QSO was conducted prior to 1994-01-01.
- clicking the **CBA** button will populate QSO items with information from the selected callbook, DXCC database, USAP database (if installed), and RDA database (if installed)
- double-clicking the end field will copy the contents of the begin field into the end field
- if the end item remains unspecified when the QSO is saved, the contents of the begin field will be copied into the end field
- in QSOs with DXCC entities that specify Primary and Secondary subdivisions, these subdivision items can be directly entered and edited
- if the LotW database is installed, the LotW membership selector will be set to **Y** if the callsign is a known participant in the ARRL's Logbook of the World, subject to the Maximum age of most recent LotW upload setting
- if the eQSL AG database is installed, the eQSL.cc membership selector will be set to **A** if the callsign is an Authenticity-Guaranteed member of eQSL.cc

Un-capitalized first letters of each word entered into the Name or QTH items will be automatically capitalized unless the word contains a capitalized letter.

If you don't wish to record a frequency with a QSO, set its value to 0.

Changing the tx freq item in a simplex QSO and striking the Enter or Tab key or subsequently moving cursor focus to the rx freq item will update the rx freq item to match the tx freq.

Un-checking the optimize for realtime QSO entry box will also uncheck the Contest Mode box.

If a callsign is found to be a known participant of LotW but not an Authenticity-Guaranteed member of eQSL.cc, the callsign's background color is set to yellow. If a callsign is found to be an Authenticity-Guaranteed member of eQSL.cc but not a known participant of LotW, the callsign's background color is set to pink. If a callsign is found to be a known participant of LotW and an Authenticity-Guaranteed member of eQSL.cc, the callsign's background color is set to cyan (light blue). If SpotCollector is installed, however, the background colors specified on the **Spot Database Display** tab of SpotCollector's **Configuration** window - if not too dark - are used in place of yellow, pink, and cyan. The eQSL AG and LotW databases can be installed via the **Databases** tab of DXView's Configuration window.

You can set any of the remaining items manually. Double-clicking several items immediately performs useful actions.

In determining the DXCC entity from the callsign, DXKeeper uses the current ITU Prefix Allocations. If you are logging an older QSO, you should verify that that DXKeeper has deduced the correct DXCC entity by inspecting the Aux panel's entity item. If you log a 1990 QSO with UP1BZO, for example, DXKeeper will set the QSO's DXCC entity to Kazakhstan, which is incorrect. You can correct this by selecting the correct DXCC entity -- in this case, Lithuania -- in the Aux panel's entity item.

If the first letter of the callsign you enter is an exclamation point, DXKeeper assumes that you are logging a CQ, an unsuccessful call, a test, or some other transmission that you wish to record but does not represent a QSO. Such log entries are not assigned a DXCC entity, do not initiate a Callbook database lookup, and are not included in award tracking statistics.

If you attempt to save a QSO whose Grid 1, Grid 2, Grid 3, or Grid 4 item specifies a valid two-character Maidenhead Field, 00aa will be appended to the item to make it a valid Maidenhead Grid Square.

When any item is modified, the panel labels are rendered in blue as a reminder to save the information. To do so, click the **Log** button; this resets the panel labels to black. If you plan to immediately log another QSO, you can instead click the **New** button, which will both save the current QSO's information and create a new QSO record. With the cursor in any item textbox, you can perform the **Log** or **New** operations without lifting your hands from the keyboard by striking **Ctrl-L** or **Ctrl-J** respectively.

After a QSO is recorded by clicking the **Log** or **New** buttons (or striking their keyboard shortcuts), the Require Edit to modify logged QSOs setting determines whether the **Edit** button must be clicked before subsequent modifications to that QSO are permitted. If Require Edit to modify logged QSOs is enabled and the **Edit** button has not been clicked, any attempt to change an item in the current QSO is ignored. If the **Edit** button is clicked, changes are permitted, and the **Edit** button is replaced by a **Save** button that can be clicked to record the changes. If Require Edit to modify logged QSOs is not enabled, changes to items in the current QSO can be made at any time; such changes can be recorded by clicking the **Save** button. Changes are also recorded by taking any action that causes another QSO become selected.

Un-checking the optimize for realtime QSO entry box sorts the Log Page Display in ascending order of Unique QSO number; this order places QSOs in the order they were logged (or imported), rather than in the order that they occurred.

If the Provide audible feedback box is checked, successfully logging a QSO via the **New** or **Log** buttons will play the "Windows Default Beep" sound.

If an item contains an invalid value, or if a required item is missing, clicking the **Log** or **New** buttons or attempting to select another QSO flashes the labels of any such items in red, but does not enter the QSO into the current log; if the Provide audible feedback box is checked, the "Windows Default Beep" will play each time the labels flash. Frequencies not falling within a defined band are considered invalid. Callsign validity checking can be enabled or disabled via the Flag Invalid Callsigns setting. If an item's data exceeds its specified maximum length, its label will be flashing in red and the **Log** button will not enter the QSO into the current log. Until you correct the error(s) causing item labels to flash, the **New**, **Log**, and **Delete** buttons will not function, nor will you be able to select another QSO.

If a non-critical item is missing or contains an inappropriate value, clicking the **Log** or **New** buttons or attempting to select another QSO will enter the QSO into the current log but flashes the labels of any such items in blue (if the panel's that contain them are visible). Examples of non-critical errors include:

- missing Operator
- have an End date/time that occurs before their Begin date/time
- include a Satellite name but do not have Propagation Mode set to SAT
- have an empty myQTH field in a Log for which multiple QTHs have been defined
- have an invalid Iota item
- an invalid grid 1 item
- an invalid latitude or longitude item

Iota items that are valid but not in standard format will be placed in standard format when you click the **Log** or **New** buttons. For example, AF1 will be changed to AF-001.

If you modify one or more items and then change your mind, clicking the **Undo** button will restore them to their last saved state.

Double-clicking the caption of an unselected item will *select* that item:

- the item immediately receives keyboard focus (which means that keys you strike will be directed to the selected item)
- the item's caption is rendered in underlined font
- selecting another QSO in the Log Page Display will set the keyboard focus in the selected item of that QSO

Double-clicking the underlined caption of a selected item will de-select that item, setting keyboard focus in the **Filter** panel textbox.

If an item has a default value, Ctrl-double-clicking the caption of that item will display the Configuration window and place the mouse cursor in the default value.

In fields containing dates, the year must be 1930 or later.

If you do not include time separators in the begin or end fields, DXKeeper will insert them appropriately:

Time	Result
1	01:00:00
12	12:00:00
123	1:23:00
1234	12:34:00
12345	1:23:45
123456	12:34:56

If you have configured Windows to use a time separator other than colon, DXKeeper will use the time separator you have specified.

With the mouse cursor in the begin or end fields, you can incrementally change the specified date and time using the up and down arrow keys:

Modifier	Effect of Up or Down Arrow keys
none	increases or decreases the date and time by 1 minute
Ctrl	increases or decreases the date and time by 10 minutes
Shift	increases or decreases the date and time by 1 hour
Alt	increases or decreases the date and time by 1 day

Uncapitalized first letters of each word entered into the Name or QTH items will be automatically capitalized unless the word contains a capitalized letter.

Striking the **Enter** key in the QTH item initiates a word-by-word inspection of the QSL field.

- If the QTH item contains a valid grid square and the QSO's, then the QSO's Grid 1 item will be set to the Grid Square found in the QTH item
- If the QTH item contains a valid US State abbreviation, and the QSO's DXCC entity is USA or Alaska or Hawaii, then the QSO's State item will be set to the State found in the QTH item
- If the QTH item contains a valid Canadian Province abbreviation, and the QSO's DXCC entity is Canada, then the QSO's Province item will be set to the Province found in the QTH item
- If the QTH item contains a valid ARRL Section abbreviation, and the QSO's DXCC entity is USA or Alaska or Hawaii or US Virgin Islands or Puerto Rico or US Pacific possessions, or Canada, then the QSO's ARRL Section item will be set to the ARRL Section found in the QTH item
- If the State, Province, ARRL Section, and Grid Square items found in the QTH item unambiguously identify a CQ Zone, then the QSO's CQ zone item will be derived from the information found in the QTH item
- If the State, Province, ARRL Section, and Grid Square items found in the QTH item unambiguously identify an ITU Zone, then the QSO's ITU zone item will be derived from the information found in the QTH item

To make it easy to copy QSL route information into a QSO record, the address item supports drag and drop from OLE sources such as Pathfinder or Microsoft Internet Explorer. To use this feature, first select the QSL route text in the source; then drag the selected text to the address item and drop it there. Semicolons in the selected text will be converted to newline sequences in the address item. The drag and drop action replaces any pre-existing address item contents with the selected source text. You can also invoke the Address Editor by double-clicking the address item or the via item.

Double-clicking the comment or QSLMsg item will invoke a Field editor that makes it easier to edit their content. You can include substitution commands in the QSLMsg item to include information determined by your current location.

To allow operation without removing one's hands from the keyboard, DXKeeper provides keyboard shortcuts for navigating among the items on the Main window's **Log QSOs** tab.

Logging Information Needed for Award Tracking

To track progress towards awards like WAS, USA-CA, RDA, WAJA, JCC, JCG, and AJA, DXKeeper provides items in its **Awards** panel that let you record a callsign's Primary Administrative Subdivision and its Secondary Administrative Subdivision. Some DXCC entities formally define a set of Primary Administrative Subdivisions, e.g. States in the United States, Oblasts in European and Asiatic Russia, and Prefectures in Japan; unique abbreviations or codes are used to identify these primary subdivisions. When you log a QSO with one of these entities, DXKeeper provides an appropriately-labeled (e.g. state, oblast, prefecture) selector that lets you choose from among the valid codes for that entity; if you click the ? button to the right of this selector, DXKeeper's **Main Administrative Subdivision Selector** window will appear, which provides a cross-reference between codes or abbreviations and full names, and lets you choose a primary subdivision by clicking in either the window's **Code** or **Name** selector.

- If a country contains multiple DXCC entities, then when you select one of these entities the selector will provide choices valid for the selected entity; if a QSO's DXCC entity is Asiatic Russia, for example, the subyekt selector will only offer Oblasts located in Asiatic Russia.
- ADIF defines the District of Columbia (DC) as a Primary Administrative Entity of the United States. DXKeeper's WAS report treats QSOs with stations in the District of Columbia as being in Maryland; its Worked All Counties report treats QSOs with stations in the District of Columbia as being in Maryland's Washington County.
- ADIF defines Newfoundland and Labrador (NL) as a Primary Administrative Entity of Canada, replacing the previous separate provinces of Newfoundland and Labrador

Some of the DXCC entities that define a set of Primary Administrative Subdivisions formally define a set of Secondary Administrative Subdivisions for each of their Primary Administrative Subdivision, e.g. Counties in the United States, Districts in Russia, and Cities and Guns in Japan; unique abbreviations or codes are used to identify these secondary subdivisions. For such entities, DXKeeper provides an appropriately-labeled (e.g. county, district, city/gun) selector lets you choose from among the valid codes; if you click the ? button to the right of this selector, DXKeeper's **Main Administrative Subdivision Selector** window will appear, which provides a cross-reference between codes or abbreviations and full names, and lets you choose a secondary subdivision by clicking in either the window's **Code** or **Name** selector.

- ADIF defines 28 Alaskan Counties; DXKeeper expect these to be logged with Alaskan QSOs. The Worked All Counties report automatically maps these counties to the correct Judicial District and reports your County progress accordingly.

If the Allow direct Subdivision entry setting is enabled, you can directly enter and edit abbreviations or codes in the Primary and Secondary Administrative Subdivisions rather than be restricted to making selections.

For entities that do not define Primary or Secondary Subdivisions, DXKeeper provides **pri sub** and **sec sub** textboxes with which any subdivision name can be recorded; you can use this to capture a subdivision name for QSO with a country that does not formally define its subdivisions, but this information may not be accepted by other logging applications when they import an ADIF file that you export.

The Main window's **Log QSOs** tab also provides region and DOK items to record entity-specific information required for certain awards.

For a summary of what information to record in what item for each supported award, see the table on page 124.

Viewing, Modifying, and Deleting Logged QSOs

DXKeeper allows you to display and modify more than 100 items of information about each QSO. Some, like the station's callsign or the QSO's start time, will always be of interest. Others, like the station's grid square, may never be utilized. DXKeeper organizes these items into 9 groups:

- QSO items
- Auxiliary items
- QSL items
- Online QSL items
- Award items
- Contest items
- Propagation items
- Details items
- User-defined items

Each of these groups is associated with a panel on the **Log QSOs** tabbed dialog. The **QSO** panel is always present; you can independently control the presence of the **Auxiliary**, **QSL**, **Online QSL**, **Award**, **Contest**, **Propagation**, **Details**, and **User-defined** panels using the Log Panel checkboxes in the Configuration window's **Log** tab or using the eight checkboxes to the right of the **QSO** panel. All information items are stored with each QSO, whether or not the panels displaying them are visible. This allows you to adjust DXKeeper's consumption of screen real estate to meet your operating needs of the moment.

Dates displayed in the above panels follow the *short date format* specified in the Windows Control Panel's **Regional and Language Options** applet's **Regional Options** tab.

Double-clicking the caption of an unselected item will select that item:

- the item immediately receives keyboard focus (which means that keys you strike will be directed to the selected item)
- the item's caption is rendered in underlined font
- selecting another QSO in the Log Page Display will set the keyboard focus in the selected item of that QSO

Double-clicking the underlined caption of a selected item will de-select that item, setting keyboard focus in the **Filter** panel textbox.

Viewing QSOs

Located at the bottom of the **Main** window's **Log QSOs** tab, the **Log Page Display** contains one entry for each QSO in the current Log file, subject to settings in the Filter panel. Each entry in the Log Paged Display corresponds to one QSO in your log. If you **select a QSO** by clicking it's entry in the Log Page Display, the panels above will display the information items stored for that QSO. If the QSO's duration is non-zero, the **QSO** panel displays the duration in mm:ss notation; the **QSO** panel also displays the full name of the station's DXCC entity, as well as the DXCC prefix and country code assigned to this entity by the ARRL. Some of these items are also shown in the Log Page Display; the caption at the top of each column identifies the information item in the cells below it.

If you select a QSO that contains one or more items that contain an invalid value, or select a QSO that is missing a required item, clicking the **Log** or **New** buttons or attempting to select another QSO will flash the labels of any such items in red font, and the QSO will remain selected; if the Provide audible feedback box is checked, the "Windows Default Beep" will play each time the labels flash. Frequencies not falling within a defined band are considered invalid. Callsign validity checking can be enabled or disabled via the Flag Invalid Callsigns setting. If an item's data exceeds its specified maximum length, its label will be flashing in red and the **Log** button will not enter the QSO into the current log. Until you correct the error(s) causing the item labels to flash or until you delete the QSO, the **New**, and **Log** buttons will not function, and you will be unable to select another QSO. Disabling the Flag Invalid Callsigns option will immediately stop an invalid callsign from being considered invalid.

When first installed, DXKeeper's Log Page Display is configured to show 8 of items stored with each QSO. You can add or remove items from the Log Page Display using the **Log page fields** control in the **Log Layout** panel on the **Configuration** window's Log tab. You can also change the order in which the columns appear.

Whether all items in the Log Page Display will be simultaneously visible as columns depends on their number and width, the width of the Main window, and the font selected for use. If all items are not simultaneously visible in columns, a horizontal scrollbar will be displayed along the bottom of the Log Page Display; you can use this scrollbar to select the items you wish to see. The small black rectangle to the left of the horizontal scrollbar can be dragged to the right to split the Log Page Display into two independently scrollable sets of columns. You can adjust the boundary between the two sets by dragging the black rectangle to the left of the horizontal scrollbar at the bottom of the right-hand set of columns; to eliminate the right-hand set of columns, drag its black rectangle all the way to the left.

To change the height of each row in the Log Page Display, position the cursor over a horizontal line in the left-most column; when properly positioned, the cursor will change to the Windows border adjustment cursor, allowing you to click and drag the row border to either expand or contract the row height as desired. Clicking the **Reset** button in the **Log Page Display** panel on the Configuration window's **Log** tab will set the Log Page Display's row height and column width to match the Log Page Display's selected font.

Dates displayed in the Log Page Display follow the *short date format* specified in the Windows Control Panel's **Regional and Language Options** section. The format selected *must* specify a 4-digit year.

A Log Page Display entry will be rendered in red font if its Callsign, Band, and Mode match those in the Capture window; this can help avoid making duplicate QSOs.

With the **Log QSOs** tabbed dialog selected, resizing DXKeeper's window allows you to vertically and horizontally expand or contract the Log Page Display. Vertical and horizontal scrollbars allow you to view all cells of all rows in the log page display.

The left-most column of the Log Page Display is shaded, and has no column caption. Click in this selector column *selects* the associated QSO:

- all information items for this QSO are placed in the log textboxes
- if DXView is running, it's earth map and information fields are updated to reflect the selected QSO's call item and grid 1 item
- if Pathfinder is running, it's callsign textbox will be populated with the call item; if an automatic search has been configured, it will be activated.
- if an item has been selected, it will receive keyboard focus

The four VCR-like control buttons on the **Log QSOs** tab allow you to select the first, previous, next, or last QSO in the Log Page Display. You can similarly navigate the Log Page Display using the **CTRL-Home**, **PageUp**, **PageDown**, and **CTRL-End** keys respectively. The number displayed between these control buttons indicates the position of the currently-selected QSO in the Log Page Display as it is presently sorted. Note that the Auxiliary panel's QSO# item does not represent the QSO's order -- beyond the fact that a QSO with a smaller QSO# was logged before a QSO with a larger QSO#.

Right-clicking a Log Page Display entry provides menu containing commands for frequently-used functions:

- **Set Select to Y: sets the QSO's Select item to Y**
- **QSY**: if Commander is running, changes your transceiver's frequency and mode to that of the selected QSO
- **Spot**: if SpotCollector is running, generates an outgoing spot of the selected QSO's callsign, frequency, rx frequency (if spot split frequency is enabled), mode, and SOTA tag; if the Spot POTA, SOTA, & WWFF tags option is enabled and user-defined items with Captions set to *POTA* or *WWFF* are specified, the tags they contain will also be included in the spot notes

- **Spot: with Notes:** if SpotCollector is running, prompts you to specify spot notes, and then generates an outgoing spot of the selected QSO's callsign, frequency, rx frequency (if spot split frequency is enabled), and the notes you specified
 - if you specify spot notes, it is up to you to include the mode in those spot notes
 - if you do not specify spot notes and the mode is neither CW nor SSB, the outgoing spot notes will specify the mode
- **Display Progress:** displays the Callsign Progress window, whose grid shows the bands and modes on which previous QSOs have been logged with the selected QSO's callsign
- **Add Entry to QSL Queue:** immediately adds the entry's QSO to the QSL Queue
- **Print QSL Card:** immediately prints a QSL card for the entry's QSO
- **Print Address on Envelope:** immediately prints the entry's address on an Envelope
- **Print self-addressed Envelope:** immediately prints a self-addressed Envelope
- **Upload to LotW: SL(SC):** immediately uploads entry's QSO to the ARRL's Logbook of the World using the Station Location **SL**. If **SL** does not specify a Station Callsign, the QSO's Station Callsign item will be used, and will be shown in the menu command as **(SC)**.
- **Upload to eQSL.cc:** immediately uploads the entry's QSO to eQSL.cc
- **Upload to Club Log:** immediately uploads the entry's QSO to Club Log
- **Delete from Club Log:** immediately deletes the entry's QSO from Club Log
- **Display File:** if the entry's QSO specifies a file item, display the contents of the specified file using the default file viewer for the file's extension
- **Display eQSL:** if the entry's QSO is confirmed via eQSL and if an eQSL.cc username and password have been specified; displays the previously-downloaded QSL image for this QSO (if present) or displays a QSL image downloaded from eQSL.
- **Play Audio:** if the entry's QSO specifies an audio file item, directs Windows to play the contents of that audio file
- **Copy to Windows Clipboard:** copy the entry's callsign, frequency (or frequencies), mode, date, time, DXCC prefix, and DXCC country to the Windows clipboard

Double-clicking an entry in the Log Page Display filters the Log Page Display to show only QSOs with that entry's callsign; Double-clicking an entry in the Log Page Display while depressing the **Ctrl** button filters the Log Page Display to show only QSOs with that entry's DXCC entity

If the Highlight duplicate QSOs box is checked, then entries in the Log Page Display whose callsign, band, and mode match those of the Capture window will be highlighted in red font.

If the Indicate LotW & eQSL AG status box is checked, then the background colors of entries in the Log Page Display will indicate whether the entry's callsign is a known participant of LotW and/or an Authenticity-Guaranteed member of eQSL.cc, as specified in the Capture Callsign and Log Page Display background colors panel on the Capture and Log Page Display Colors window.

Viewing Previous QSO Information

The **Callsign Progress** window's grid shows the bands and modes on which previous QSOs have been logged with a selected callsign:

- the callsign of the Log Page Display entry selected by right-clicking and executing the Display Progress function
- the callsign in the Capture window when its Lookup function is executed with the Display callsign progress on Lookup box checked
- the callsign in the Main window's Log QSO tab when, after entering or modifying a callsign in the call item, you strike the **Enter** key or the **Tab** key with the Display callsign progress on Lookup box checked

The Callsign Progress window's title bar shows the callsign for which information is displayed. Cells in the Callsign Progress window's grid show the status of band-mode combinations using these codes:

- **W** worked
- **R** a QSL card has been sent requesting a confirmation
- **C** confirmed via QSL card or LotW (or via eQSL.cc if the Include eQSL.cc confirmations... box is checked)
- **V** verified (award credit granted) by the ARRL

Information shown in the Callsign Progress window's grid is automatically updated when a new QSO is logged with the selected callsign, or when existing QSOs with the selected callsign are modified.

Cells in the Callsign Progress window's grid are *live* -- you can navigate from them to your log by double-clicking:

- double-clicking a column heading in the Callsign Progress grid
 - filters the Log Page display to show all QSOs with the callsign on the band associated with the selected column
 - shows the Log Page display
- double-clicking a row heading in the Callsign Progress grid
 - filters the Log Page display to show all QSOs with the callsign in the mode associated with the selected row
 - shows the Log Page display
- double-clicking a cell in the Callsign Progress grid
 - filters the Log Page display to show all QSOs with the callsign on the band associated with the selected column and in the mode associated with the selected row
 - shows the Log Page display

Modifying QSOs

You can modify items in the currently selected QSO by directly modifying the item textboxes. After a QSO is recorded by clicking the **Log** or **New** buttons on the **Main** window's **Log QSOs** tab or by clicking the **Log** button on the **Capture** window, the Require Edit to modify logged QSOs setting determines whether the **Edit** button must be clicked before making changes to that QSO. If Require Edit to modify logged QSOs is enabled, then attempted changes will be ignored until the **Edit** button is clicked, after which changes are permitted, and the **Edit** button is replaced by a **Save** button that can be clicked to record the changes. If Require Edit to modify logged QSOs is not enabled, changes to items in the current QSO can be made at any time; such changes can be recorded by clicking the **Save** button. Changes are also recorded by taking any action that causes another QSO become selected.

If your modification to one or more critical items in a QSO makes those items invalid, clicking the **Log** or **New** buttons or attempting to select another QSO will flash the labels of any such items in red font, and the QSO will remain selected; if the Provide audible feedback box is checked, the "Windows Default Beep" will play each time the labels flash. Frequencies not falling within a defined band are considered invalid. Callsign validity checking can be enabled or disabled via the Flag Invalid Callsigns setting. If an item's data exceeds its specified maximum length, its label will be flashing in red font and the **Log** button will not enter the QSO into the current log. Until you correct the error(s) causing the item labels to flash or until you delete the QSO, the **New**, and **Log** buttons will not function, and you will be unable to select another QSO. Disabling the Flag Invalid Callsigns option will immediately stop an invalid callsign from being considered invalid.

Within an item textbox

- the **Home** key moves the cursor to the beginning of the item
- the **End** key moves the cursor to the end of the item
- the **SHIFT-Home** key selects all characters from the cursor to the beginning of the item
- the **SHIFT-End** key selects all characters from the cursor to the end of the item

Changing the tx freq item in a simplex QSO and striking the Enter or Tab key or subsequently moving cursor focus to the rx freq item will update the rx freq item to match the tx freq.

You can make your changes permanent by clicking the **Save** button, or back out your changes using the **Undo** button.

If the optimize for realtime QSO entry setting is checked,

- setting the QSL Sent, item to 'Y' will set the Date Sent item to the current UTC date
- setting the QSL Rcvd, item to 'Y' will set the Date Rcvd item to the current UTC date
- setting the eQSL.cc Rcvd item to 'Y' will set the eQSL.cc Date Rcvd item to the current UTC date
- setting the LotW QSL Rcvd item to 'Y' will set the LotW Date Rcvd item to the current UTC date

The **OQRS** button in the QSL panel updates a QSO to indicate that you have requested its confirmation via an electronic QSLing service like OQRS:

- QSL Sent is set to 'Y'
- Date Sent is set to the current UTC date
- QSL Sent Via is set to 'E'
- QSL Rcvd is set to 'R'

The **CFM** button in the QSL panel makes it easy to process an incoming QSL card for the currently selected QSO. Clicking this button

- sets QSL received to "Y" (yes)
- sets QSL date received to the current UTC date
- if a card was not previous sent, sets QSL sent to "R" (requested)

If an item has a default value, Ctrl-double-clicking the caption of that item will display the Configuration window and place the mouse cursor in the default value.

DXKeeper also provides the ability to modify multiple QSOs *en masse*.

Deleting QSOs

You can delete the currently selected QSO by clicking the **Delete** button. If either the Confirm QSO deletion or Require Edit to modify logged QSOs settings are enabled, you will be prompted to confirm the action. You can delete all QSOs in the **Log Page Display** by depressing the CTRL key while clicking the **Delete** button; this action always requires confirmation. There is no undo operation for a confirmed delete operation.

if Audio Recording is enabled with the Automatically delete QSO Audio file option also enabled, deleting a QSO that specifies an audio file will automatically delete that audio file.

Configuring the Log Page Display

Dates displayed in the Log Page Display follow the *short date format* specified in the Windows Control Panel's **Regional and Language Options** section. The format selected *must* specify a 4-digit year.

When first installed, DXKeeper's Log Page Display is configured to show 8 of the more than 100 items associated with each QSO. You can add or remove items from the Log Page Display using the table in the **Log Page Display** panel on the **Configuration** window's **Log** tab. This table also lets you modify the Log Page Display's column captions, change column widths, and change the column order.

To add a column to the Log Page Display that displays a specified item,

- scroll to the last row of the table in the **Log Page Display panel**; this row is distinguished by an asterisk in its leftmost cell
- in the **Item** cell of this last row, click the pulldown icon (a small black triangle) and choose the item to be displayed from the resulting list (the pulldown contains ADIF field names - to correlate with the field captions, consult the cross reference)
- in the **Caption** cell of the newly added row, enter the text to appear at the top of the item's column in the Log Page Display, followed by the enter key
- in the **Align** cell of the newly added row, select the desired alignment (left or right)
- click in any cell of any other row

Note that to see the newly added field, you may need to horizontally scroll the log page display or increase the width of DXKeeper's Main window.

Checking the Include Entity name with DXCC prefix box will expand the Log Page Display's DXCC Prefix column to include both the DXCC prefix and full DXCC entity name for each QSO.

To remove a column from the Log Page Display,

- in the table in the **Log Page Display panel**, select the row corresponding to the column to be removed by clicking in row's leftmost cell (this cell is shaded)
- strike the **Delete** key on your keyboard

To change the text that appears at the top of an item's column in the Log Page Display,

- in the table in the **Log Page Display panel**, select the row corresponding to the Log Page Display column
- modify the row's **Caption** cell
- click in any cell of any other row

To change the alignment of any item in the Log Page Display,

- in the table in the **Log Page Display panel**, select the row corresponding to the Log Page Display column
- modify the row's **Align** cell
- click in any cell of any other row

To change the width of a column in the Log Page Display, position the cursor over the vertical line to the left or right of the column's caption; when properly positioned, the cursor will change to the Windows border adjustment cursor, allowing you to click and drag the column border to either expand or contract the column width as desired. Clicking the **Log Page Display** panel's Reset button will set the Log Page Displays' row height and column width to match the Log Page Display's font size.

To change the order of columns in the Log Page Display, click on the caption of a column you wish to relocate. Then click-and-drag the column until the two red positioning triangles indicate the desired new location.

To change the height of a row in the Log Page Display, position the cursor over a horizontal line in the left-most column; when properly positioned, the cursor will change to the Windows border adjustment cursor, allowing you to click and drag the row border to either expand or contract the row height as desired. Clicking the **Log Page Display** panel's Reset button will set the Log Page Displays' row height and column width to match the Log Page Display's font size.

To split the Log Page Display into two independently scrollable sets of columns, use the black rectangle to the left of the horizontal scroll bar. Using the left mouse button to click-and-drag this rectangle to the right will create a second set of columns. To eliminate this second set of columns, click-and-drag this rectangle back to the left margin.

You can save the Log Page Display's current layout to a file, and you can restore a layout stored a previously saved file. The Automatically update layout file box, when checked, causes the specified Log Page Display layout file to automatically be updated to reflect changes made to the Log Page Display's layout without your approval of each such update.

If the Highlight duplicate QSOs box is checked (Configuration window, **General** tab, **Options** panel), then entries in the Log Page Display whose callsign, band, and mode match those of the Capture window will be highlighted in red font.

In the **Log Page Display** panel at the bottom of the Configuration window's **Log** tab,

- If the Indicate LotW & eQSL AG status box is checked,
 - If SpotCollector has been installed and run, the settings in the **Background Colors** panel on SpotCollector's Configuration window's **Spot Database Display** tab specify the Log Page Display background colors that indicate whether an entry's callsign is a known participant in LotW and/or an Authenticity-Guaranteed member of eQSL.cc,
 - If SpotCollector has not been installed and run, clicking the Colors button displays the **DXKeeper Capture and Log Page Display Colors** window, which enables you to specify the Log Page Display background colors.
- The Fonts button enables you to specify the font and font metrics (size, bold, italic) used in the Log Page Display.
- The Reset button sets the Log Page Displays' row height and column width to match the Log Page Display's font size.
- The Frequency precision box specifies the number of decimal digits shown in transmit frequencies and receive frequencies appearing in the Log Page Display; the valid range is 3 to 6.
- The Power precision box specifies the number of decimal digits shown in the transmit power appearing in the Log Page Display; the valid range is 0 to 6.
- The Chronological Sort Order panel determines whether the Sort panel's UTC button, the Sync eQSL.cc QSLs operation, and the Sync LotW QSLs operation will sort the Log Page Display in ascending or descending order of QSO Begin time, eQSL Date Rcvd, or LotW Date Rcvd respectively. If the **Sort** panel's UTC sort is active, a change to the sort order is immediately effected

Sorting the Log Page Display

To view the Log Page Display in order of each QSO's begin time, click the **UTC** button in the **Sort** panel below the log page display; you can specify whether the order is ascending or descending. To view the Log Page Display in callsign order, click the **Call** button in the **Sort** panel below the log page display.

You can sort by any column in the Log Page Display by double-clicking on its caption. The first time you do this, the Log Page Display will be sorted in ascending order of the selected column; if you double-click the caption again, the Log Page will be sorted in descending order. The **Sort** panel's caption will indicate how the Log Page Display is being sorted by displaying the caption of the Log Page Display column you double-clicked, followed by the word **desc** if the order is descending.

For more sophisticated sorts, click the **Adv** button above the Log Page Display to show DXKeeper's **Advanced Logs Sorts, Filter, and Modifiers** window; you can also display this window by clicking the **Adv** button at the bottom of the **Main** window's **Check Progress** tab. In this window's **User-defined Sorts** panel, you can compose four different sorts, each containing multiple sort items. To compose a sort, select the first item to be sorted in the **First item** sub-panel; if the first item is to be sorted in ascending order, click the **First item** sub-panel's **Ascend** button, otherwise click the **Descend** button. If there is a second item to be sorted, select it in the **Second item** sub-panel; if there is a third item to be sorted, specify it in the **Third item** sub-panel. Double-clicking in one of the four sort textboxes at the bottom of the **User-defined Sort** panel will assemble the specified sort in that textbox. To apply a sort, click the **Select** radio button to its right, and click the **User** button in the **Main** window's **Sort** panel. You can directly edit a user-defined sort; doing so will reset the **Select** radio button to its right. Clicking a user-defined sort's **Select** radio button with the **User** button in the **Main** window's **Sort** panel already selected will immediately sort the Log Page Display.

The DXCC field is defined with a String data type, so sorting the Log Page Display in DXCC field order will produce the sequence 1, 10, 11, 12, ...19, 100, 101, 102 ... To numerically sort the Log Page Display in DXCC field order, specify `ABS (DXCC)` in the expression assembled in the sort textbox.

Depressing the **CTRL** key while clicking the **Filter** panel's **X** button both resets the Log Page Display filter and sorts the Log Page Display in ascending or descending order of each QSO's begin time.

Invoking a Sync eQSL.cc QSLs or Sync LotW QSLs operation sorts the Log Page Display in order of eQSL date rcvd or LotW date rcvd respectively. Similarly, Invoking a Sync Club Log QSLs or Sync QRZ QSLs operation sorts the Log Page Display in order of Club Log date rcvd or QRZ date rcvd respectively.

The four VCR-like control buttons on the **Main** window's **Log QSOs** tab allow you to select the first, previous, next, or last QSO in the Log Page Display. You can similarly navigate the Log Page Display using the **CTRL-Home**, **PageUp**, **PageDown**, and **CTRL-End** keys respectively. The number displayed between these control buttons indicates the position of the currently-selected QSO in the Log Page Display as it is presently sorted. Note that the Auxiliary panel's QSO# item does not represent the QSO's order -- beyond the fact that a QSO with a smaller QSO# was logged before a QSO with a larger QSO#.

Filtering the Log Page Display

Contents

- Advanced Filters
- Broke Filter
- Call Filter
- Clearing the Log Page Display Filter
- DXCC Filter
- Filtering for Time Intervals
- Filtering for Previous QSOs
- Filtering the Log Page Display with Structured Query Language (SQL)
- Invoking SQL Query Filters from the Main window's Filter panel
- Identifying Duplicate QSOs
- Keyboard actions and shortcuts in the Filter panel textbox
- Keyboard shortcuts in the Filter Panel textbox
- Logbook of the World Filter
- Need Filter
- QTH Filter
- Running Scripts from the Main window's Filter panel
- Selection Filter

DXKeeper provides the ability to control which subset of your logged QSOs appear in the Log Page Display; this capability is referred to as *filtering*, and is entirely non-destructive; at any time, all filtering can quickly be removed.

- Controls in the **Filter** panel, located at the bottom of the **Main** window's **Log QSOs** tab, enable you to quickly filter by callsign, DXCC entity, date, selection, LoTW status, and the presence of errors; this panel includes a **textbox** that can be used to specify a callsign, DXCC prefix, date, etc.
- Panels on the Advanced Logs Sorts, Filter, and Modifiers window provide the ability to quickly filter by date range, band, mode, or contest.

For complete control over the subset of your logged QSOs appear in the Log Page Display, you can filter by specifying a Structured Query Language (SQL) expression - either using the Filter panel textbox, or using the Advanced Logs Sorts, Filter, and Modifiers window's SQL Query Filters. This SQL expression, for example, will populate the Log Page Display with all RTTY QSOs made with North Korea during the year 2002:

- (DXCCPREFIX = 'P5') and (MODE='RTTY') and (YEAR(QSO_BEGIN) = 2002)

Many operations -- log reporting, award progress reporting, QSLing and Exporting -- act only upon QSOs appearing in the Log Page Display, so you can use filtering to limit these operations to a specific subset of the QSOs in your log. For example, you could produce a single-band WPX progress report, or export only those QSOs made during last year's ARRL DX contest. Filtering can also be used to quickly see all previous QSOs with a station you're about to work, or all QSOs made during a specified day.

At startup, the Log Page Display Filter is cleared, so the Filter panel's caption is **Filter: None**; thus the Log Page Display contains entries for every QSO in the current log file. If you activate a Log Page Display filter, it will be shown in the Filter panel's caption, e.g.

- **Filter: Call=7O1DX**
- **Filter: QSL begin between 7/26/2008 00:00 and 7/27/2008 00:00**
- **Filter: (Mode = 'RTTY') and (Band = '160m') and (QSL_RCVD = 'Y')**

The Filter panel displays a textbox and a bank of 9 filter buttons:

Button	Function
X	<ul style="list-style-type: none"> clears the Log Page Display filter CTRL-X clears the Log Page Display filter and sets the Sort panel to UTC
Call	<ul style="list-style-type: none"> filters the Log Page Display by the callsign specified in the textbox; if the textbox is empty, filters the Log Page Display by the currently-selected QSO's callsign
DXCC	<ul style="list-style-type: none"> filters the Log Page Display by the DXCC entity specified in the textbox; if the textbox is empty, filters the Log Page Display by the current-selected QSO's DXCC entity
Need	<ul style="list-style-type: none"> filters the Log Page Display to contain QSOs in the Log Page Display whose Needed item is set to Y; if you've changed your award objectives, or if the confirmation status of any logged QSO has changed since you last invoked CTRL-Need, you must first invoke CTRL-Need to accurate results. CTRL-Need examines each QSO in the Log Page Display and sets its Needed item to Y if confirmation of this QSO would advance award progress towards the DXCC, IOTA, VUCC, WAS, WAZ, or WPX awards on the bands and modes you're pursuing them, and sets its Needed item to N if confirmation of this QSO would not advance progress towards those award; then it filters the Log Page Display to contain QSOs in the Log Page Display whose Needed items are set to Y Alt-Need sets the Needed item to N in each QSO in the Log Page Display
Date	<ul style="list-style-type: none"> filters the Log Page Display to show only QSOs that started on the Date specified in the textbox CTRL-Date updates and invokes the Advanced Sorts, Filters, and Modifiers window's UTC filter
Since	<ul style="list-style-type: none"> filters the Log Page Display to show only QSOs that started on or after the Date and time specified in the textbox CTRL-Since shows only QSOs that started on or after the date and time that the Since filter was last invoked
Sel	<ul style="list-style-type: none"> filters the Log Page Display to show only QSOs whose Select items are set to Y CTRL-Sel sets the Select items of all logged QSOs to N

LotW	<ul style="list-style-type: none"> filters the Log Page Display to show only QSOs uploaded but not yet accepted by LotW CTRL-LotW filters the Log Page Display to show all QSOs not confirmed via LotW with stations that have subsequently uploaded to LotW and sets the Select item in each such QSO to Y. QSOs with stations whose LotW Sent items are set to X will not have their Select items set to Y. This functionality required the LotW database to be present in DXView's Databases folder or in DXKeeper's Databases folder. .ALT-LoTW filters the Log Page Display to show all unconfirmed QSOs with stations that have subsequently uploaded to LotW and whose confirmation would advance your award progress; it sets the Select item in each such QSO to Y. QSOs with stations whose LotW Sent items are set to X will not have their Select items set to Y. This functionality required the LotW database to be present in DXView's Databases folder or in DXKeeper's Databases folder.
Broke	<ul style="list-style-type: none"> filters the Log Page Display to show only QSOs that are missing critical information or contain invalid information; if Subdivision validity checking is enabled, QSOs that specify invalid primary administrative subdivisions or invalid secondary administrative subdivisions will also be shown
~	<ul style="list-style-type: none"> displays the next active <i>bank</i> of filter buttons

Clearing the Log Page Display filter

To clear the Log Page Display filter so that all QSOs are visible, click the **Filter** panel's **X** button. Depressing the **CTRL** key while clicking the **Filter** panel's **X** button both clears the Log Page Display filter and sorts the Log Page Display in ascending order of .QSO Begin date-and-time.

Call filter

If you type a callsign into the **Filter textbox** and click the **Filter** panel's **Call** button, the Log Page Display hides entries for any QSOs whose call item does not match the Filter callsign. Similarly, entering a callsign into the Filter textbox and clicking the **Filter** panel's **DXCC** button removes entries for any QSOs whose DXCC entity does not match that of the Filter callsign. If the contents of the Filter textbox cannot be mapped to a DXCC Entity, then it is assumed that these contents are DXCC Prefix rather than a callsign, and the Log Page Display is filtered by this DXCC Prefix. For example.

Filter textbox contents	Clicking the Filter panel's DXCC button filters for all QSOs with
3B8IK	Mauritius Island (DXCC = 3B8)
UN1DX	Kazakhstan (DXCC = UN)
UL1DX	Uzbekistan (DXCC = UJ)
Y	German Democratic Republic (DXCC = Y)

You can use * (asterisk) as a wildcard character in Filter callsigns. For example,

K6MI*

will match K6MI, K6MIO, and K6MIO/KH6.

When you invoke the **Call** filter on a callsign that doesn't contain a wildcard character, DXKeeper automatically uses a search expression that will match prepended or appended prefixes or designators. For example

K6AB

will match K6AB, KH6/K6AB, K6AB/QRP, and KH6/K6AB/P but will not match K6ABC or ZK6AB.

DXCC filter

If you type a callsign or callsign fragment into the **Filter textbox** and click the **Filter** panel's **DXCC** button, DXKeeper will determine the DXCC entity associated with the callsign or callsign fragment, and filter the Log Page Display to show all QSOs with this DXCC entity.

Depressing the **CTRL** key while clicking the **Filter** panel's **DXCC** button displays only QSOs whose DXCC entity prefix matches the DXCC entity prefix specified in the **Filter** panel textbox

To use the **DXCC** button to locate QSOs with a deleted DXCC entity, type the deleted entity's DXCC prefix into the Filter textbox preceded by the ~ character. To locate QSOs with Serrana Bank, for example, type ~~~HK~~OS into the Filter textbox and click the **DXCC** button.

Both the **Call** and **DXCC** filters select the appropriate DXCC entity in the Progress Grid and provide detailed award status in the Progress Details Grid.

Need filter

Depressing the CTRL key while clicking the **Filter** panel's **Need** button examines each QSO in the Log Page Display and sets its Needed item to **Y** if confirmation of the QSO would advance award progress towards the DXCC, IOTA, VUCC, WAS, WAZ, or WPX awards on the bands and modes you're pursuing them; it then filters the Log Page Display to contain only QSOs whose Needed items are set to **Y**. This operation does not exclude QSOs that you've marked invalid for awards, or QSOs that you've indicated cannot be confirmed; if you want such QSOs excluded, appropriately filter the Log Page Display before invoking **CTRL-Need**.

Clicking the **Filter** panel's **Need** button displays only QSOs in the Log Page Display whose Needed items are set to **Y**.

Depressing the Alt key while clicking the **Filter** panel's **Need** button sets the Needed item to **N** in each QSO in the Log Page Display.

Note that logging a new QSO, marking a QSO as confirmed, importing QSOs, or deleting QSOs have no effect on the Needed items of any logged QSOs. The **Need** filters and Needed item provide a toolset for identifying specific sets of currently-needed QSOs - for example, all currently-needed QSOs made during the year 2020. To ensure that Needed items are up-to-date, depressing the CTRL key while clicking the **Need** button should always be the first step in such an exercise.

Filtering for Time Intervals

The **Date** filter limits the Log Page Display to QSOs that began during the interval specified in the Filter panel's textbox. Date-and-time parameters can be specified using any of these formats:

- your locale's standard date or date-and-time formats, as specified in the **Windows Control Panel's Regional and Language Options** settings
- dd-mm-yy hh:mm:ss
- yyyy-mm-dd hh:mm:ss

If in the Filter panel's textbox you specify

- a day, e.g. 2008-01-25, then only QSOs that started during that day will be displayed
- a day and time, then the interval depends on the specified hour, minute, and second:
 - 2008-01-25 16:00 - displays only QSOs that began between 16:00 and 17:00 on 2008-01-25
 - 2008-01-25 16:03 - displays only QSOs that began between 16:03 and 16:04 on 2008-01-25
 - 2008-01-25 16:03:15 - displays only QSOs that began at 16:03:15 on 2008-01-25

Clicking the **Filter** panel's **Since** button limits the Log Page Display to QSOs that began any time after the date or date and time specified in the **Filter** panel's textbox. Depressing the **CTRL** key while clicking the **Since** button limits the Log Page Display to QSOs that began any time after the date and time at which the **Since** filter was last invoked.

Depressing the **CTRL** key while clicking the **Filter** panel's **Date** button updates and then invokes the **Advanced Logs Sorts, Filter, and Modifiers** window's **UTC** filter, which allows you to restrict the Log Page Display to those QSOs starting within a range specified in one of two ways:

- **within** a specified number of minutes of a specified date-and-time (useful for locating QSOs for which the callsign may have been incorrectly logged), or
- **after** one specified date-and-time and **before** another specified date- and-time; if an **after/before** range is selected but not **before** date-and-time is specified when the **UTC** filter is invoked, the current date-and-time is used for this parameter.

If the **Advanced Logs Sorts, Filter, and Modifiers** window's **UTC** panel specifies a **within** range, then typing a valid date-and-time in the **Filter** panel textbox and then clicking the **Filter** panel's **Date** button while depressing the **CTRL** key will set the center of the range to that date-and-time and activate the **UTC filter**. If the **Advanced Logs Sorts, Filter, and Modifiers** window's **UTC** panel specifies an **after/before** range, then typing a valid date-and-time in the **Filter** panel textbox and then clicking the **Filter** panel's **Date** button while depressing the **CTRL** key will set the beginning of the range to that date-and-time and activate the **UTC filter**.

Selection filter

Clicking the **Filter** panel's **Sel** button displays all QSOs whose Select items are set to **Y**. Every QSO's Select item can be manually set to **N** or **Y**, so this provides a means of specifying and selecting an arbitrary group of QSOs. You can also configure DXKeeper to set the Select item of each imported QSO to **Y**; with this option enabled and the Select items of all logged QSOs were set to **N** before the import operation, the **Sel** filter will show only newly-imported QSOs after the import operation completes.

To set the Select item of all QSOs in the Log Page Display to **N**, depress the **CTRL** key while clicking the **Sel** button. Note that this only affects QSOs in the Log Page Display; to set the Select item of all QSOs in the current log to **N**, either reset the Log Page Display filter before invoking **CTRL-Sel**, or click the Set all Select to N button on the Main window's Import QSOs tab.

Logbook of the World (LotW) filter

Clicking the **LotW** button displays all QSOs whose LotW Sent items are set to **U**, meaning that their acceptance by LotW has not been verified.

If the LotW database is present in DXView's Databases folder or in DXKeeper's Databases folder,

- Depressing the **CTRL** key while clicking the **LotW** button filters the Log Page Display to show all QSOs not confirmed via LotW with stations that have subsequently uploaded to LotW and sets the Select item in each such QSO to **Y**. QSOs with stations whose LotW Sent items are set to **X** will not have their Select items set to **Y**.
- Depressing the **Alt** key while clicking the **LotW** button filters the Log Page Display to show all QSOs not confirmed via LotW with stations that have subsequently uploaded to LotW and whose confirmation would advance award progress towards the DXCC/IOTA/VUCC/WAS/WAZ/WPX awards; the Select item of each such QSO is set to **Y**. QSOs with stations whose LotW Sent items are set to **X** are ignored.

Broke filter

Clicking the **Broke** button filters the Log Page Display to display only QSOs that

- are missing required information:
 - Band
 - Begin date/time
 - Callsign
 - Country code
 - DXCC prefix
 - Mode
 - Operator
- have a Begin date/time prior to 1/1/1930
- have an End date/time that occurs before their Begin date/time
- do not contain a valid callsign
- specify a Satellite name but do not specify a Propagation Mode of SAT
- specify a Propagation Mode of SAT, but do not specify a Satellite name
- have an empty myQTH field in a Log for which multiple QTHs have been defined

If the Subdivision validity checking box is checked in the **Other Awards** panel on the **Config** window's **Awards** tab, the **Broke** filter also displays QSOs that

- have PrimaryInvalid set to **Y**, which means that the specified Primary Administrative Subdivision code or abbreviation is not formally defined by the QSO's DXCC entity
- have SecondaryInvalid set to **Y**, which means that the specified Secondary Administrative Subdivision code or abbreviation is not formally defined by the QSO's DXCC entity and Primary Administrative Subdivision

QTH filter

You can filter the Log Page Display to show only QSOs made from the currently-selected QTH.

Filtering with Structured Query Language (SQL) expressions

SQL lets you limit the display of logged QSOs to a subset described by a logical expression that references items in each QSO, for example

```
(CALL='VK9NS') AND (QSO_Begin > #1997-06-01 12:00#)
```

SQL filtering can be accomplished via the Filter panel at the bottom of the Main window's Log QSOs tab, or via the **Advanced Sorts, Filters, and Modifiers** window's SQL Query Filters panel. Though assembling an SQL filter requires more effort than invoking one of the pre-fabricated filters described above, doing so provides complete control over the subset of QSOs present in the Log Page Display.

Advanced filters

DXKeeper's **Advanced Logs Sorts, Filter, and Modifiers** window, which appears when you click the **Adv** button located above the Log Page Display on the **Main** window's **Log QSOs** tab or when you click the **Advanced** button at the bottom of the **Main** window's **Check Progress** tab, enables you to

- specify a **within** or **after/before** date-and-time range, and click the **UTC Filter** panel's **Filter** button to display only QSOs that began within that range; double-clicking a textbox in this panel will set its contents to the current date and time
- specify one or more bands, and click the **Band Filter** panel's **Filter** button to display only QSOs made on the specified bands
- specify one or more modes and click the **Mode Filter** panel's **Filter** button to display only QSOs made in the specified modes
- specify a Contest ID and optionally a 4-digit year; if no Contest ID is specified, the Log Page Display will contain QSOs made in the specified year that specify any Contest ID
- specify up to 16 SQL Query Filters in 4 **banks** of 4, and invoke them as filters

- locate duplicate QSOs in the Log Page Display by clicking the **Duplicates** panel's Filter button, which
 - clears the Select item of each QSO in the Log
 - checks each QSO in the Log Page Display to see whether any other QSO in the Log Page Display exactly matches its Callsign, Band, Mode, QSO Begin Date and Time, and sets the Select item of such duplicate QSO to **Y**
 - the **range** (in minutes) defines a duplicate QSO
 - 0 means another QSO must exactly match the QSO's begin date/time to be considered a duplicate
 - a number larger than 0 specifies a range before and after the QSO's begin date/time; if another QSO's begin date/time falls in this range, the QSO will be considered a duplicate
 - if the **Merge** box is checked, information present in items of each duplicate QSO is placed into empty items in the original QSO that it duplicates
 - during this phase,
 - progress is shown in a **Checking for duplicate QSOs** panel to the left of the **Duplicates** panel
 - checking can be immediately terminated by clicking the **Checking for duplicate QSOs** panel's **Abort** button.
 - displays all QSOs whose Select item is set to **Y**
- run a script file containing **Filter**, **Retain Filter**, **Report**, **Sort**, and **Modify** commands
- set Select items to specified values; in the **Set Select** panel,
 - clicking the **Set Select to N** button in the **All QSOs in Log** subpanel will set the Select item to **N** in every QSO in the current log - independent of Log Page Display filtering
 - clicking the **Set Select to** button in the **QSOs in Log Page Display** subpanel will set the Select item to the chosen **New value** in every QSO in the Log Page Display
 - clicking the **From Callsign File** button in the **QSOs in Log Page Display** subpanel will display a **Select Callsign File** window with which the text file can be chosen
 - each line in the chosen text file should specify a callsign as its first (or only) word; delimiters are the space, comma, semicolon, vertical bar, and tab characters
 - Select items of QSOs in the Log Page Display with each callsign so specified will be set to **Y**
 - the **Sel** button in the **Filter** panel on the **Main** window's **Log QSOs** tab will filter the Log Page Display to contain all QSOs whose Select items are set to **Y**

Depressing the **Ctrl** key while clicking the **UTC**, **Band**, **Mode**, or **SQL** panel's **Filter** buttons *refines* the existing Log Page Display filter by applying the new filter to those QSOs visible in the Log Page Display.

To save all 16 SQL Query Filters to a text file, click the **Save** button; to restore all SQL Query Filters from a text file, click the **Restore** button. These functions can be used as a backup mechanism before making significant changes to an SQL expression, or to maintain multiple sets of SQL filters optimized for different operating conditions.

Invoking SQL Query Filters from the Filter panel

SQL Query Filters can also be invoked from the **Filter** panel textbox on the **Main** window's **Log QSOs** tab. A bank of SQL Query filters is considered **active** if at least one caption is specified. Allowing the mouse cursor to hover over an SQL Query filter button for a few seconds will produce a popup window that displays the SQL expression associated with the filter. By clicking the ~ button in the **Filter** panel textbox, buttons for each filter in the next active bank of SQL Query filters will appear in the **Filter** panel textbox, each bearing its specified caption. If buttons for the last active bank of SQL Query filter are being displayed in the **Filter** panel textbox, then clicking the ~ button will display the **Call**, **DXCC**, **Date**, **Since**, **Sel**, **LotW**, and **Broke** filter buttons.

Depressing the **CTRL** key while clicking one of the **Filter** panel's SQL Query filter buttons will display the **Advanced Logs Sorts, Filter, and Modifiers** window, with the appropriate bank of SQL Query filters made visible.

If the Display panels in two columns option is enabled, the **Call**, **DXCC**, **Date**, **Since**, **Sel**, **LotW**, and **Broke** filter buttons will always be visible. Clicking the ~ button will toggle between displaying eight filter buttons for SQL Query Filter banks 1 and 2, and eight filter buttons for SQL Query Filter banks 3 and 4.

An SQL expression typed directly into the **Filter** panel textbox can be used to filter Log Page Display by striking **Ctrl-S**.

Running Scripts from the Filter panel

Clicking the ~ button in the **Filter** panel textbox displays buttons for each filter in the next active bank of **SQL Query Filters** in the **Filter** panel textbox and a **Script** button that when clicked prompts you to specify a script file for execution. If no bank of SQL Query Filters is active, clicking the ~ button will still display the first bank of SQL Query Filters and a **Script** button.

If the Display panels in two columns option is enabled, the **Script** button will always be visible.

Keyboard actions and shortcuts in the Filter panel textbox

Filters can also be invoked by striking control keys in the filter textbox.

To facilitate sequential filter operations, striking the **Enter** key with the cursor in the filter textbox invokes the last filter operation. For example to quickly check for previous QSOs with JY4NE, IK4VYX, and YV1DIG, one would

1. enter JY4NE in the filter textbox
2. click the **Call** button in the filter panel to see previous QSOs with Ali
3. enter IK4VYX in the filter text box and strike the **Enter** key to see previous QSOs with Fab
4. enter YV1DIG in the filter text box and strike the **Enter** key to see previous QSOs with Paul

Double-clicking an item's label in the Capture window will filter the Log Page Display to show all QSOs whose item matches the value in the Capture window. If the Capture window's **IOTA** item contains OC-005, for example, double-clicking the **IOTA** label will filter the Log Page Display to show all QSOs whose **IOTA** item is OC-005.

Depressing the **ALT** key while clicking the **Log** button will reset the Log Page Display filter; if the **Sort** panel is set to **UTC**, the most recent QSO will be made current.

DXKeeper's title bar shows the number of QSOs visible in the Log Page Display, taking any specified filtering into account.

QSL and Export operations only apply to QSOs visible in the Log Page Display, thus you can use filtering to choose a specific subset of QSOs to which these activities apply.

Filtering for Previous QSOs

Double-clicking on a callsign in the Call field in the **Main** window's **Log QSOs** tab filters the Log Page Display to show previous QSOs with that callsign; if Contest-mode is checked, then only QSOs whose recorded Contest IDs match the current Contest ID setting are shown. Double-clicking on an entry in the Log Page Display filters the Log Page Display to show previous QSO's with that entry's callsign; if Contest-mode is checked, then only QSOs matching the current Contest ID are shown. Double-clicking on an entry in the Log Page Display while depressing the **Ctrl** key filters the Log Page Display to show all QSO's with that entry's DXCC entity. If Display previous comments on Lookup is checked, these operations will display a scrollable window containing comments extracted from previous QSOs with the same base callsign, each preceded by the QSO's start time and terminated by the QSO's callsign.

Filtering the Log Page Display with SQL

To create more sophisticated filters by using SQL (Structured Query Language), click the **Adv** button located above the Log Page Display on the **Main** window's **Log QSOs** tab; this will display the DXKeeper's **Advanced Log Sorts and Filter** window. Using the **SQL Query Filters** panel, you can compose and activate up to 16 different SQL Queries (displayed as four **banks** of four filters); these filters are automatically saved between DXKeeper sessions.

The **SQL Query Filters** panel contains four query textboxes that display one of four filter banks:

- SQL Query Filters 1 to 4
- SQL Query Queries 5 to 8
- SQL Query Queries 9 to 12
- SQL Query Queries 13 to 16

Clicking the ~ button in the panel's upper right corner causes the panel to display the next bank of filters.

SQL queries can reference any of the items present in each logged QSO.

To create a Query, enter the appropriate **SQL expression** in one of the panel's four query textboxes; to use that query as a log filter, click the **Filter** button to immediate right of the query text box. If you have enough screen space, arranging things so you can see both the **Advanced Log Sorts and Filter** window and the **Main** window's **Log QSOs** tab makes it easy to compose queries and immediately see their results.

SQL Query Filters can also be invoked from the **Filter** panel textbox on the **Main** window's **Log QSOs** tab -- but only if you specify a **caption** in the textbox to the left of the **SQL expression** in the **SQL Query Filters** panel. A bank of SQL Query filters is considered **active** if at least one caption is specified. By clicking the ~ button in the **Filter** panel textbox, buttons for each filter in the next active bank of SQL Query filters will appear in the **Filter** panel textbox, each bearing its specified caption. Allowing the mouse cursor to hover over an SQL Filter button in the **Filter** panel textbox will produce an explanatory popup showing the SQL expression associated with the button; starting each SQL expression with a comment describing its function will make these popups more useful.

An SQL expression typed directly into the **Filter** panel textbox can be used to immediately filter Log Page Display by striking **Ctrl-S**.

Constructing SQL Queries

The database schema for logs contains one record for each QSO, and each record contains an identical set of fields that store that QSO's items. Use each field's specified Item Name when constructing a query.

In the top-right of the **SQL Query Filters** panel, you'll find a pull-down list containing all valid field names. Having selected a field name in this list, double-clicking in one of the four query textboxes in the **SQL Query Filters** panel will append the field name to the query.

A simple SQL query that shows only your QSOs with VK9NS would be

```
CALL= 'VK9NS '
```

We could have simply used the main window's Call filter to accomplish that query, but

```
(CALL='VK9NS') AND (QSO_Begin > #1997-06-01 12:00#)
```

shows how to incorporate a constraint on the QSO's begin time, in this case showing only QSOs occurring after noon UTC on June 1, 1997. Notice the use of the ISO date format, which is YYYY-MM-DD HH:MM:SS . In SQL, dates must be enclosed between # symbols.

```
(CALL='VK9NS') AND (QSO_Begin BETWEEN #1997-06-01 12:00# and #1999-12-01#)
```

illustrates the use of the BETWEEN operator to find QSOs within a specified date/time range.

```
(CALL='VK9NS') OR (CALL='VK9NL')
```

shows all QSOs with the Smith family, illustrating the use of the OR operator.

To show only QSOs made in PSK, you could combine a set equal tests, e.g.

```
(MODE='PSK31') OR (MODE='PSK63') OR (MODE='PSK125') OR (MODE='PSK250')
```

but an equivalent expression using the IN operator is more readable, as well as less typing:

```
MODE IN ('PSK31','PSK63','PSK125','PSK250')
```

If you're searching for an item that contains an apostrophe (single quote), use double quotes to surround the item, e.g.

```
CNTY="IA,O'BRIEN"
```

Data Types

Items are representing using one of four data types:

- String (a sequence of alphanumeric characters)
- Date
- Integer (a number without a decimal separator)
- Number (with or without a decimal separator)

As shown in the above examples, items whose data type is String must be enclosed by single or double apostrophes, e.g.

```
CALL='VK9NS'
```

and

```
CNTY="IA,O'BRIEN"
```

Items whose data type is Date must be enclosed by a # symbol, e.g.

```
QSO_Begin BETWEEN #1997-06-01 12:00# and #1999-12-01#
```

Items whose data type is Number are not enclosed by symbols, e.g.

```
(Freq > 7.0) and (Freq < 7.025)
```

Note that in items of type Number, the period character is used as a decimal separator -- even in locales where a different character is used for this purpose.

Each item's data type is specified here.

Len Operator

The LEN operator is applied to a string data type to determine the number of characters it contains. For example,

```
LEN(NAME) > 5
```

would filter the Log Page Display to contain only QSOs whose NAME item is of length 5 or greater.

Empty Values

For a new QSO to be logged, it's Call, Band, Mode, Begin, DXCC Prefix, and DXCC Country Code items must all contain valid values. DXKeeper can be configured to automatically set some of a new QSO's items - like Station Callsign or myQTH -- to default values. The remaining items are initialized to an *empty* value as a function of their data type:

Data Type	Empty Value
String	a string containing no characters
Date	4000-01-01
Integer	0
Number	0

In the Log Page Display and in the panels on the Main window's Log QSOs tab, an item containing an empty value is not displayed.

Thus in SQL expressions, items of type Date like QSLSDATE, QSLRDATE, APP_DXKEEPER_EQSL_QSLSDATE, APP_DXKEEPER_EQSL_QSLRDATE, APP_DXKEEPER_LOTW_QSLSDATE, and APP_DXKEEPER_LOTW_QSLRDATE must be appropriately qualified; for example (QSL_SENT = 'Y') and (QSLSDATE > #2006-01-01#)

Without the (QSL_SENT = 'Y') qualifier, (QSLSDATE > #2006-01-01#) would select all QSOs whose QSL Sent Date is unspecified.

Wildcard Characters

SQL provides the LIKE operator and wildcard characters to enable broader searches by specifying a pattern, for example

```
CALL LIKE 'VK9*'
```

which shows all QSOs with callsigns whose first three characters are VK9. The Asterisk wildcard character matches 0 or more characters. The Question Mark wildcard character matches exactly one character. Thus

```
CALL LIKE 'VK9?'
```

shows all QSOs VK9X, but not those with VK9NS or VK9NL.

```
(DXCCPrefix='VK9-N') AND NOT (CALL='VK9NS')
```

uses the NOT operator to show all Norfolk QSOs not involving Jim.

Besides the Asterisk and Question Mark, the LIKE operator provides wildcard characters that let you specify a single digit, or a range of characters, as illustrated in the table below:

To match...	Example	Samples that match	Samples that don't match
one or more characters	VU4*W	VU4CW, VU4WWW, VU41W	VU2CW, VU4DY
one or more characters	*YV1DIG*	YV1DIG, YV0/YV1DIG, YV0/YV1DIG/QRP	YV0/YV1DX
one character	OX1VHF/?	OX1VHF/P, OX1VHF/5, OX1VHF/M	OX1VHF, OX1VHF/MM
one digit	A6#AJ	A61AJ, A64JA	A6JA, C61AJ
a range of characters	A[A-L]6DX	AA6DX, AF6DX	AM6DX, A6DX, AA6DY
outside a range of characters	K[!G-H]4DX	KC4DX, KK4DX, K\$4DX	KG4DX, KC4DY
outside the range of digits	K5[!0-9]	K5K, K5%	K50
a pattern composed of several sub-patterns	A[A-L]#[A-Z]*	AA6YQ, AL7X	AM4DX, KH6/AL7X, AA6
characters that are wildcard characters	[*]Footnote	*Footnote	Footnote, -Footnote

Note that you can combine multiple wildcards to specify more complex patterns.
In summary, you can use the following comparison and logical operators to create filters:

Comparison Operator	Meaning	Example
=	equal to	PROP_MODE='F2'
<	less than	QSO_BEGIN < #2003-12-31 12:00#
<=	less than or equal to	QSO_END <= #2003-12-31 12:00#
>	greater than	QSO_BEGIN > #2003-12-31 12:00#
>=	greater than or equal to	QSO_END >= #2003-12-31 12:00#
<>	not equal to	MODE <> 'SSB'
LIKE	used to match a pattern	QTH LIKE '*Pittsburgh*'
BETWEEN...AND	used to specify a range of values	QSO_BEGIN BETWEEN #2003-12-31 12:00# and #2004-01-01 12:00#
IN	used to specify a set of values	MODE IN ('PSK31','PSK63','MFK8','MFSK16')

Logical Operator	Meaning	Example
AND	both conditions must be true	(PROP_MODE='F2') AND (MODE <> 'SSB')
OR	either condition can be true	(QTH LIKE '*Pittsburgh*') OR (QTH LIKE '*Philadelphia*')
NOT	logical inversion	(STATE='PA') AND NOT (QTH LIKE '*Philadelphia*')

Referencing the contents of the Filter panel textbox

If the character string <filtertext> is found in an SQL Query being executed, it is replaced by the contents of the Filter textbox. Thus the query

QTH like '*<filtertext>*'

with the **Filter textbox** set to

Philadelphia

results in execution of the query

QTH like '*Philadelphia*'

If you then change the contents of the **Filter textbox** to

Pittsburgh

and invoke the query,

QTH like '*Pittsburgh*'

will be executed.

Referencing the ARRL Country Code of the callsign specified in the Filter panel textbox

If the character string <filtertext>dxccid is found in an SQL Query being executed, it is replaced by ARRL Country Code of the callsign or callsign fragment specified in the **Filter textbox**. Thus the query

DXCCID = '<filtertext>dxccid'

with the **Filter textbox** set to

KH3DX

results in execution of the query

DXCCID = '123'

where 123 is the ARRL Country Code for Johnston Island.

If DXView is running, then "callsign to country code" lookup will reference any relevant Override.

Referencing the Transceiver's current transmit band and receive band

<XCVRTXBAND>

Comments

Any characters between // and // are ignored, and thus can be used as explanatory comments, e.g.

//Find QTH // QTH like '*<filtertextbox>*'

Abbreviations

If the character string Deleted_Entity is found in an SQL Query being executed, DXKeeper replaces this character string with an expression that evaluates to TRUE if the QSO's DXCC entity is deleted. Thus the SQL expression

Deleted_Entity AND (BAND='40m')

would filter the Log Page Display to contain only 40m QSOs made with deleted DXCC entities.

If the character string USER_X is found in an SQL Query being executed, DXKeeper inspects each user-defined item definition seeking one whose caption is X; it then replaces USER_X with the ADIF name of the user-defined item. Thus if user-defined item #2 has a caption of 10-10, the SQL expression

USER_10-10='123.45'

would be converted to

APP_DXKEEPER_USER_DEFINED_2='123.45'

before execution.

The following abbreviations are replaced by a list of comma-separated mode names, each enclosed mode name enclosed by single apostrophes and the entire list enclosed by parenthesis:

Abbreviation	Modes in list
<PHONEMODES>	Modes specified as eligible for DXCC Phone award credit
<DXCCDIGIMODES>	Modes specified as eligible for DXCC Digital award credit
<WAZDIGIMODES>	Modes specified as eligible for CQ WAZ Digital award credit
<WPXDIGIMODES>	Modes specified as eligible for CQ WPX Digital award credit
<PSKMODES>	Modes specified to be PSK modes
<USERDIGIMODES1>	Modes in the current log's User-specified digital mode family

These abbreviations enable the use of convenient SQL expressions like

MODE IN <DXCCDIGIMODES>

References

An online reference for SQL as supported by the Microsoft Jet engine, which is incorporated in both DXKeeper and Microsoft Access, is available at <http://www.devgyru.com/content/technologies/jetsql/home.html>.

Functions that can be used in SQL expressions are described in <http://www.techonthenet.com/access/functions/>

Modifying Multiple QSOs *En Masse*

Changes can be applied to all QSOs in the Log Page Display in a single operation by

- using the **Advanced Logs Sorts, Filter, and Modifiers** window's **Modify QSOs** panel
- running a Script
- filling in or replacing the information in each QSO by performing a Callbook Update

Like all power tools, these can be dangerous if not carefully applied. It is a good idea to make a backup copy of your log before using them, as doing so enables a quick recovery if after inspection the change you specified turns out to be incorrect.

Using the Modify QSOs panel

To display the **Advanced Logs Sorts, Filter, and Modifiers** window, click the **Adv** button at the bottom of the **Main** window's **Log QSOs** tab, or click the **Advanced** button at the bottom of the **Main** window's **Awards** tab.

The **Modify QSOs** panel lets you designate an item and provide a new value for that item. When you click the panel's **Modify** button, the designated item of each QSO in the Log Page Display will be set to the specified value. To designate an item, use the panel's **Item's ADIF field name** selector to choose the item's name. Enter the desired new value in the panel's **New item value** setting. Clicking the panel's **Modify** button applies the change to every QSO in the Log Page Display; if you intend to change only some of the QSOs in your log, first filter the Log Page Display so that only the QSOs to be modified are present.

- If you set the **Item name** selector to **DXCCPrefix** and click the panel's **Modify** button, DXKeeper will automatically set the **DXCCID** item of each modified QSO to the country code corresponding to the DXCC prefix you selected in **New item value**. Conversely, if you set the **Item name** selector to **DXCCID** and click the panel's **Modify** button, DXKeeper will automatically set the **DXCCPrefix** item of each modified QSO to the DXCC prefix corresponding to the country code you selected in **Item new value**. In this way, consistency between **DXCCPrefix** and **DXCCID** is maintained.
- If you set the **Item name** selector to **GridSquare** and click the panel's **Modify** button, DXKeeper will automatically set the lat and lon items of each modified QSO to match the specified **GridSquare**; in any modified QSO that specifies an antenna path, the dist item will also be updated based on the operator's QTH, as specified by a myQTHID item that specifies a QTH that includes a valid latitude and longitude, or as specified in the default QTH latitude and longitude.
- If you set the **Item name** selector to **Lat** or **Lon** and click the panel's **Modify** button, DXKeeper will automatically set the grid 1 items of each modified QSO to match its lat and lon items; in any modified QSO that specifies an antenna path, the dist item will also be updated based on the operator's QTH, as specified by a myQTHID item that specifies a QTH that includes a valid latitude and longitude, or as specified in the default QTH latitude and longitude.
- If you set the **Item name** selector to **Ant_Path** and click the panel's **Modify** button, DXKeeper will automatically set the dist items of each modified QSO based on its lat and lon items and the operator's QTH, as specified by a myQTHID item that specifies a QTH that includes a valid latitude and longitude, or as specified in the default QTH latitude and longitude.
- You can use **<current>** in the **New item value** to represent the item's current value in the logged QSO; thus an **Item name** of **Call** and an **Item new value** of **<current>/KH6** will change AA6YQ to AA6YQ/KH6 and K4IK to K4IK/KH6.
- You can use **<capitalized>** in the **New item value** to represent the item's current value in the logged QSO with its first letter capitalized; thus an **Item name** of **QTH** and an **Item new value** of **<capitalized>** will change paris to Paris and will change new london to New london.
- You can use **<AppendUDI>** in the **New item value** to append information to the item's current value in the logged QSO with information from other user-defined items in that QSO specified by user-defined item number, in comma-delimited format.
 - Suppose, for example, you've been recording QSOs with stations in multiple COTA identifiers

User-defined Item number	Caption	Contents
0	WCA-1	C-008
1	WCA-2	C-110
2	WCA-3	F-052
3	WCA-4	F-072

- To append the contents of user-defined items 1, 2, and 3 to the contents of user-defined item 0,
 1. change the Style of user-defined item 0 to Comma-delimited List
 2. In the **Modify QSOs** panel,
 - set the **Item name** selector to APP_DXKEEPER_USER_DEFINED_0
 - set the **Item new value** to <AppendUDI 1,2,3>
 - click the **Mod** button
- the results:

User-defined Item number	Caption	Contents
0	WCA-1	C-008, C-110, F-052, F-072
1	WCA-2	C-110
2	WCA-3	F-052
3	WCA-4	F-072

- You can then clear user-defined items 1, 2, and 3, or use them to record other information.
- If the **Item name** selector is set to APP_DXKEEPER_FILE, you can use <filename> in the **New item value** to represent the filename component of the pathname in the logged QSO's file item; thus an **Item ADIF field name** of APP_DXKEEPER_FILE and an **Item new value** of c:\dxlab\files\<filename> will change
 c:\program files\dxlab suite\files\701DX_license.jpg
 to
 c:\dxlab\files\701DX_license.jpg
- You can use <compute> in the **Item new value** to compute the value of certain items from other items in the QSO. If the **Item name** selector is tx band or rx band, <compute> is available as the last choice in the **Item new value** selector.

Item	Computation	Prerequisite
antenna az	compute antenna azimuth from grid 1 or latitude and longitude	<ul style="list-style-type: none"> • valid grid 1 or latitude and longitude • antenna path set to short or long • myQTHID specifies a QTH that includes a valid latitude and longitude, or default QTH latitude and longitude is specified

dist	compute distance from grid 1 or latitude and longitude	<ul style="list-style-type: none"> • valid grid 1 or latitude and longitude • antenna path set to short or long • myQTHID specifies a QTH that includes a valid latitude and longitude, or default QTH latitude and longitude is specified
grid 1	compute grid 1 from latitude and longitude	<ul style="list-style-type: none"> • valid latitude and longitude
lat	compute latitude and longitude from grid 1	<ul style="list-style-type: none"> • valid grid 1
lon	compute latitude and longitude from grid 1	<ul style="list-style-type: none"> • valid grid 1
rx band	determine rx band from rx frequency	<ul style="list-style-type: none"> • valid rx frequency
state	determine the primary administrative subdivision from the secondary administrative subdivision	<ul style="list-style-type: none"> • valid secondary administrative subdivision
tx band	determine tx band from tx frequency	<ul style="list-style-type: none"> • valid tx frequency
WPX	compute the WPX prefix from the callsign	<ul style="list-style-type: none"> • valid callsign

- You can adjust the contents of a QSO's QSO_Begin or QSO_End item with a **Item new value** that begins with a + (to add a time interval) or - (to subtract a time interval). For example,

Item new value	Effect
+1y	adds one year
-1m	subtracts one month
+3d	adds 3 days
-2h	subtracts 2 hours
+5n	adds 5 minutes
+3s	adds 3 seconds

Neither fractions nor combinations are permitted; if you want to add 3 hours and 30 minutes to each QSO's start time, for example, use +210n.

- You can adjust the contents of a QSO's freq or rx_freq item with a **Item new value** that begins with a + (to add a frequency offset in MHz), - (to subtract a frequency offset in MHz), x (to multiply by a number), or / (to divide by a number). For example,

Item new value Effect	
+ 36	adds 36 MHz
- .1	subtracts 100 KHz
x 1000	multiplies by 1000
/ 1000	divides by 1000

- Changing the contents of a QSO's freq or rx_freq item automatically updates its tx band or rx band item respectively
- You can reduce the precision of a gridsquare item to 4 characters by setting the **Item New Value** to <ShortGrid>
- You can use <Item name> in the **Item new value** to represent the value of the designated item in the current QSO. If the **Item name** is set to Comment and the **Item new value** is

worked <Name> on <Band>

then a 20m QSO with ON4UN will have its **comment** item set to

worked John on 20m

- Each instance of <newline> in the **Item new value** will be replaced by a newline character. You could use this to insert a QSO's callsign into the first line of its address by setting the **Item name** selector to address and setting the **Item new value** to

<call><newline><address>

You can prevent DXKeeper from interpreting a word between angle brackets as a "command" by preceding it with a backslash character (\). For example, setting the **Item new value** to \<call> would replace the **Item name** in each QSO with <call> rather than with the contents of each QSO's callsign item. Note that \<filename> in a **File** or **AudioFile** item does not result in removal of the backslash.

Modifications to some items can require that the current log's Realtime Award Progress and the current Spot Database (if SpotCollector is running) be updated via recomputation. If recomputation is required, DXKeeper will notify you, and offer to initiate the process. If you are planning more modifications, complete all modifications; then initiate recomputation after the last change has been made.

Changes that if made manually would change a QSO's Club Log Status item from **Y** to **M** do not result in the **Modify QSOs** panel changing a QSO's Club Log Status item from **Y** to **M**. You can accomplish this by using the **Modify QSOs** panel to change the Club Log Status item in the selected QSOs.

If the Subdivisions box is checked on the **Config** window's **Awards** tab and your modification results in one or more QSOs with DXCC entities that formally specify Primary or Secondary Administrative Subdivisions specifying an invalid primary or secondary administrative entity, a message window informing you of this situation will appear at the conclusion of the operation. You can invoke the Broke filter to display QSOs specifying invalid primary or secondary administrative entities.

Filtering, Modifying, and Reporting with Scripts

A **Script** is a text file containing lines of commands that

- filter the Log Page Display using structured query language (SQL) expressions
- sort the Log Page Display using SQL expressions
- modify QSOs in the Log Page Display
- specify the layout of the Log Page Display
- generate log reports and award progress reports
- export QSOs from the Log Page Display to a file in ADIF, tab-delimited, or Cabrillo format

SQL expressions used when filtering or sorting can reference any of the items present in each logged QSO. Scripts thus enable you to automate frequently-invoked sequences of operations, like this one:

```
Filter (Band='6m') and (Mode = 'RTTY')
Report Grids C:\Program Files\DXKeeper\Reports\6M RTTY grids.txt
Filter (Band='2m') and (Mode = 'RTTY')
Report Grids C:\Program Files\DXKeeper\Reports\2M RTTY grids.txt
```

Any characters between `//` and `//` on a line are ignored, and thus can be used as explanatory comments.

You can run a script by

- clicking the **Script** button in the **Filter** panel on the **Main** window's **Log QSOs** tab; if the Script button is not visible in this panel, click the ~ button at the right end of the panel and the Script button will become visible.
- clicking the **Script** button on the **Main** window's **Check Progress** tab
- clicking the **Run** button in the **Advanced Sorts, Filters, and Modifiers** window

In each case, you will be prompted to select a file containing the script you wish to run. Script filename extensions can be either `.txt` or `.scp`. By default, you'll be prompted to select a script file from DXKeeper's Scripts folder, but if you select a script from a different folder, you'll be prompted to select a script file from that folder the next time you take one of the above actions.

When you direct DXKeeper to run a script it determines whether that script will modify your log; if so, it offers to create a backup copy of your log (highly recommended!). DXKeeper then executes each of the script's commands in sequence, displaying them in a **Script Progress** window. Each executed command is recorded in a script log file with an indication as to its success or failure; when script execution is complete, DXKeeper displays the script log file.

The script log file is created in the folder in which the script file resides; its filename is constructed by appending `_Log_YYYY_MMM_DD` to the script log's filename, where YYYY is the current year, MMM is the current month, and DD is the current day, and its filename extension is `.log`.

Script Commands

Export

The **Export** command exports sets the Options panel on the Main window's Exports tab and then exports QSOs in the Log Page Display to a specified filename. Its generic format is

```
Export Options ExportFilename
```

Options can be **ADIF**, **TDF**, or **CABRILLO** to set the Options panel to ADIF, tab-delimited, or Cabrillo respectively.

If the specified ExportFilename already exists, its contents will be replaced.

ExportFilename supports the Filename Substitution Commands described below

Delete

The **Delete** command deletes the specified filename; its format is

```
Delete Filename
```

The **Filename** can contain Filename Substitution Commands.

AppendText

The **AppendText** command appends the specified text to the specified filename, creating the file if it doesn't already exist; its format is

```
AppendText "some text" ReportFilename
```

The text to be appended must be enclosed by double-quotes, and may not contain a double-quote.

The **Filename** can contain Filename Substitution Commands.

Display

The **Display** command displays the contents of the specified filename; its format is

```
Display Filename
```

The **Filename** can contain Filename Substitution Commands.

Filter

The **Filter** command specifies a structured query language (SQL) expression that is used to filter the Log Page Display. The number of QSOs present in the Log Page Display after executing the **Filter** command is recorded in the script log file. This **Filter** command, for example,

```
Filter (QSO_Begin < #1/1/1979#) and (call like '*KB6*')
```

selects all QSOs with Baker and Howland Islands prior to January 1, 1979.

Ordinarily, DXKeeper remembers the Log Page Display Filter in effect before you initiated script execution, and restores this filter after script execution has completed. If the selected script contains the command **Retain Filter**, however, DXKeeper does not restore the original Log Page Display Filter; the Log Page Display Filter will be established by the last **Filter** command executed by the script. This allows script files to be used purely to filter the Log Page Display.

RefineFilter

The **RefineFilter** command functions like the **Filter** command but "refines" the Log Page Display filter in force at the time the script containing the **RefineFilter** command was invoked. If when the script is invoked, the Log Page Display is filtered with the SQL expression

```
MODE='CW'
```

the command

```
RefineFilter ( QSO_Begin < #1/1/1979#) and ( call like '*KB6*')
```

will filter the Log Page Display with the SQL expression

```
(MODE='CW') and ( QSO_Begin < #1/1/1979#) and ( call like '*KB6*')
```

ClearNeeded

The **ClearNeeded** command sets the Needed item to **N** in each QSO in the Log Page Display

SetNeeded

The **SetNeeded** command examines each QSO in the Log Page Display and sets its Needed item to **Y** if confirmation of the QSO would advance award progress towards the DXCC, IOTA, VUCC, WAS, WAZ, or WPX awards on the bands and modes you're pursuing them; it then filters the Log Page Display to contain only QSOs whose Needed items are set to **Y**. This operation does not exclude QSOs that you've marked invalid for awards, or QSOs that you've indicated cannot be confirmed; if you want such QSOs excluded, appropriately filter the Log Page Display before invoking **SetNeeded**.

LoadLayout

The **LoadLayout** command specifies a filename containing a Log Page Display layout file, which is loaded and applied. This allows a layout optimized for a particular report to be instituted, the report generated, and the normal Log Page Display layout restored:

```
LoadLayout C:\Program Files\DXKeeper\Configurations\GridReport.txt
Filter Band='6m'
Report Grids C:\Program Files\DXKeeper\Reports\<operator>6M grids.txt
LoadLayout C:\Program Files\DXKeeper\Configurations\Primary.txt
```

Modify, ModifyWithoutBackup

The **Modify** command designates an item and provides a new value for that item. The **ModifyWithoutBackup** command is functionally identical, but does not cause DXKeeper to offer to backup your log before running your script. Consider the following **Modify** commands:

```
Modify DXCCid 20
Modify DXCCprefix KH1
Modify CQZ 31
Modify ITUz 61
```

These commands will change the DXCCid, DXCCprefix, CQZ, and ITUz items of each QSO in the Log Page Display. If placed after the above **Filter** command, these four **Modify** commands would update all pre-1979 QSOs with Baker and Howland Islands to contain the correct country code, DXCC prefix, CQ zone, and ITU zone.

Within the new value, the character sequence **<current>** represents the item's current value. Thus the commands

```
Filter (QSO_Begin > #6/21/2003#) and QSO_Begin < #6/22/2003#)
Modify COMMENT <current> (solar flux = 144)
will append (solar flux = 144) to the comment item of every QSO logged on 21-Jun-2003.
```

Within the new value, the character sequence **' '** means "clear the designated item". Thus the commands

```
Filter Band='6m'
Modify PROP_MODE ''
will clear the propagation mode item logged with every 6m QSO.
```

Within the new value, the character sequence **<today>** is replaced the current UTC date in YYYY-MM-DD format..

Within the new value, the character sequence **<capitalized>** represents the item's current value with its first letter capitalized. Thus the commands

```
Filter DXCCprefix = 'F'
Modify QTH <capitalized>
will change a QTH containing paris to Paris in all QSOs with French stations.
```

Within the new value of a file item, the character sequence **<filename>** represents the simple filename component of the pathname specified in the current value. Thus the commands

```
Filter DXCCprefix = 'F'
Modify APP_DXKEEPER_FILE c:\HamRadio\QSO_Files\French\<filename>
```

will change a QSO's file item from

```
c:\dxlab\dxkeeper\QSO_Files\F5IN_Transceiver_Schematic.jpg
```

to

```
c:\HamRadio\QSO_Files\French\F5IN_Transceiver_Schematic.jpg
```

Within the new value, you can reference the contents of any other item in the QSO by enclosing that item's item name in angle brackets. Thus the commands

```
Filter true
```

```
Modify PROP_MODE <COMMENT>
```

would set every QSO's propagation mode to the contents of its **comment** item.

Each instance of <newline> will be replaced by a newline character. Thus the commands

```
Filter true
```

```
Modify ADDRESS <CALL><NEWLINE><ADDRESS>
```

will insert each QSO's callsign into the first line of its address.

You can use the new value field to add or subtract a time interval from the QSO_Begin or QSO_End item of each selected QSO by beginning the new value with + or - and ending the new value with y, m, d, h, n, or s - as illustrated in the table below:

New item value	Effect
+1y	adds one year
-1m	subtracts one month
+3d	adds 3 days
-2h	subtracts 2 hours
+5n	adds 5 minutes
+3s	adds 3 seconds

Neither fractions nor combinations are permitted; if you want to add 3 hours and 30 minutes to each QSO's start time, for example, use +210n.

You can use the new value field to computationally modify a QSO's freq or rx_freq item by specifying a new value that begins with +, -, x, or / - as illustrated in the table below:

New item value	Effect
+ 36	adds 36 MHz
- .1	subtracts 100 kHz
x 1000	multiplies by 1000
/ 1000	divides by 1000

- modifying a QSO's freq item automatically updates its band item
- modifying a QSO's [rx_freq](#) item automatically updates its rx band item

You can prevent DXKeeper from interpreting a word between square brackets as a "command" by preceding it with a backslash character (\). For example, setting the new value to \<call> would replace the item in each QSO with <call> rather than with the contents of each QSO's callsign item. Note that \<filename> in a **File** or **AudioFile** item does not result in removal of the backslash.

A **Modify** command will only be executed if the most recent **Filter** command succeeded; thus the first command in a script file must be a **Filter** command. After a **Modify** command is executed, the number of QSOs modified is recorded in the script log file, and then the most recent **Filter** command is re-executed; this ensures that any subsequent **Modify** commands are applied to the intended subset of logged QSOs. Prior to execution, the **Modify** command verifies that the designated item is valid, and that the specified new value for

that item is appropriate; any error will prevent the `Modify` command from being executed, and will be recorded in the script log file.

Modifications made by script execution to any of the following items can require that the current log's Realtime Award Progress and the current Spot Database (if SpotCollector is running) be updated via recomputation:

- Band
- Call
- CQ
- DXCC Prefix
- eQSL Rcvd
- LotW Rcvd
- Mode
- PropMode
- QSL Rcvd
- SatName

If recomputation might be required, DXKeeper will notify you, and offer to initiate the process. If you are planning to execute more scripts that modify logged QSOs, complete those modifications; then initiate recomputation after the last change has been made.

Changes that if made manually would change a QSO's Club Log Status item from **Y** to **M** do not result in the `Modify` or `ModifyWithoutBackup` commands changing a QSO's Club Log Status item from **Y** to **M**. You can accomplish this by using a second `Modify` or `ModifyWithoutBackup` command to change the Club Log Status item in the selected QSOs.

DXKeeper's `/Scripts` folder contains several preconstructed scripts for updating older QSOs to reflect up-to-date DXCC country codes, DXCC prefixes, CQ zones, and ITU zones. These can be used to correct QSOs that were imported without DXCCID tags, and as examples of script construction.

Plot

The `Plot` command conveys all QSOs in the Log Page Display to DXView for display on the world maps(s) it manages.

Report and AppendReport

The **Report** and **AppendReport** commands direct the generation of a log or progress report into a specified filename. Their generic formats are

Report Kind ReportFilename

AppendReport Kind ReportFilename

Kind can be one of the following values

Kind	Report Format	Description
AJA	text	All Japan (AJA) progress report
ARRL_entities_progress	text	progress report showing worked/confirmed status for each entity defined by the ARRL <ul style="list-style-type: none">can be used to generate progress reports for a variety of entity-based awards, e.g. BARTGthe filename component of ReportFilename is used as the generated report's title
ARRL_entities_submission	text	submission report showing confirmed entities defined by the ARRL <ul style="list-style-type: none">can be used to generate submission reports for a variety of entity-based awards, e.g. BARTGthe filename component of ReportFilename is used as the generated report's title
Canadian_Provinces	text	RAC Canadaward progress report
CQDX	text	CQ DX progress report
DDFM	text	REF Diplôme des Départements Français de la Métropole progress report
DOK	text	DARC DOK progress report
DXCC	text	DXCC progress report
Fields	text	CQ Field progress report
Grids	text	Maidenhead Grid Squares progress report
GridChase	text	ARRL International Grid Chase progress report
IOTA	text	Islands On The Air progress report
JCC	text	Japan Century Cities (JCC) progress report
JCG	text	Japan Century Guns (JCG) progress report
Holyland	text	Holyland progress report
KDN	text	Korean District Number progress report
KDN_submission	text	Korean District Number submission report
Log	text	one entry for each QSO visible in the Log Page Display

Marathon	text	CQ DX Marathon progress report for the current year
NPOTA	text	National Parks On The Air progress report
RDA	text	RDA Russian District Award progress report
RDA_submission	text	RDA Russian District Award submission report
QRZ-DX-World	text	QRZ DX World progress report
QRZ-United-States	text	QRZ United States progress report
SOTA	text	Summits on the Air Chaser progress report
SOTA_Activator	text	Summits on the Air Activator progress report
SRR	text	SRR Russian Oblast Award progress report
SRR_submission	text	SRR Russian Oblast Award submission report
Uniques_BandTotal	text	Unique Callsigns report in descending order of Bands worked
Uniques_Callsign	text	Unique Callsigns report in Callsign order
Uniques_QSO	text	Unique Callsigns report in descending order of Mixed QSO count
User0	text	User item 0 progress report
User1	text	User item 1 progress report
User2	text	User item 2 progress report
User3	text	User item 3 progress report
User4	text	User item 4 progress report
User5	text	User item 5 progress report
User6	text	User item 6 progress report
User7	text	User item 7 progress report
US_States	text	US, Alaskan, and Hawaiian States progress report
US_Counties	text	CQ United States of America Counties progress report
VUCC	text	VUCC progress report (governed by the VUCC Bands & Modes panel)
WAB	text	Worked All Britain progress report
WABP	text	Worked All Belgian Provinces progress report
WABP_submission	text	Worked All Belgian Provinces submission report
WAC	text	ARRL Worked All Continents progress report
WAE	text	DARC Worked All Europe progress report
WAJA	text	Worked All Japan Prefectures (WAJA) progress report
WAHUC	text	Worked All Hungarian Counties progress report
WAIP	text	Worked All Italian Provinces progress report

WAS	text	ARRL Worked All States multi-band, multi-mode progress report (governed by the WAS Bands & Modes panel)
WIA	text	Wireless Institute of Australia's DXCC Award progress report
WITU	HTML	Worked ITU Zones progress report
WAZ	HTML	CQ Worked All Zones progress report (governed by the WAZ Bands & Modes panel)
WAZ-summary	text	CQ Worked All Zones summary report
WPX	text	CQ Worked All Prefixes progress report (governed by the WPX Bands & Modes panel)
WPX-summary	HTML	CQ Worked All Prefixes summary report
WPX-submission	text	CQ Worked All Prefixes submission report
YASME	text	Worked All YASME Operations progress report

Both commands supports the Filename Substitution Commands described below. For example, the commands

```
Filter Band='6m'
```

```
Report Grids C:\DXLab\DXKeeper\Reports\<operator>6M grids.txt
```

will produce a 6 meter Maidenhead Gridsquare progress report in the file

```
AA6YQ 6M grids.txt
```

in the folder

```
C:\DXLab\DXKeeper\Reports.
```

The log report's sort order and layout are those of the Log Page Display with one exception: if the Log Page Display includes the country code, the report appends the full DXCC entity name to the country code. You can create a layout optimized for this report and save it in a file for later recall.

If the specified ReportFilename already exists, the Report command will clear it before populating it with the generated report, whereas the AppendReport command will append the generated report to the existing file; therefore, the AppendReport command can only be used to generate text reports. At its completion, the Report command displays the generated report, whereas the AppendReport command does not. In conjunction with the Delete and Display commands, the AppendReport command can be used to place several reports into a single file and then display them, e.g.

```
delete c:\program files\dxlab suite\dxkeeper\reports\us_states.txt
```

```
filter true
```

```
appendreport us_states C:\DXLab\DXKeeper\Reports\us_states.txt
```

```
filter Mode='SSB'
```

```
appendreport us_states C:\DXLab\DXKeeper\Reports\us_states.txt
```

```
filter Mode='CW'
```

```
appendreport us_states C:\DXLab\DXKeeper\Reports\us_states.txt
```

```
filter Mode='RTTY'
```

```
appendreport us_states C:\DXLab\DXKeeper\Reports\us_states.txt
```

```
display C:\DXLab\DXKeeper\Reports\us_states.txt
```

Sort

The **Sort** command specifies an expression which is used to sort the Log Page Display. The expression specifies the items by which the log is to be sorted, with each item's ADIF field name separated by comma's. The keyword **DESC** is appended if an item is to be placed in descending rather than ascending order. Thus

`Sort Band DESC, Call`

will sort the Log Page Display by band in descending order, and then by callsign in ascending order. Executing a script containing a **Sort** command will clear the Sort panel on the Main window's Log QSOs tab.

Filename Substitution Commands

The substitution commands can be used in the AppendReport, AppendText, Delete, Display, Export, and Report script commands:

Substitution command	Replacement
<stationcallsign>	the Default station callsign
<operator>	the Default operator callsign
<ownercallsign>	the Default owner callsign
<date>	the current UTC date in the format dd-mmm-yyyy (e.g., 25-JAN-1952)
<ISOdate>	the current UTC date in the format yyyy-mm-dd (e.g., 1952-01-25)
<ReportsFolder>	the pathname of DXKeeper's Reports folder followed by a \

Exploiting <ReportsFolder> the script above used to illustrate the use of `appendreport` can be simplified to

```
delete <ReportsFolder>us_states.txt
```

```
filter true
appendreport us_states <ReportsFolder>us_states.txt
```

```
filter Mode='SSB'
appendreport us_states <ReportsFolder>us_states.txt
```

```
filter Mode='CW'
appendreport us_states <ReportsFolder>us_states.txt
```

```
filter Mode='RTTY'
appendreport us_states <ReportsFolder>us_states.txt
```

```
display <ReportsFolder>us_states.txt
```

In addition to being simpler, this script can be exchanged among users without modification to compensate for DXKeeper being installed in different folders from one PC to another.

Updating QSOs in the Log Page Display with Callbook, DXCC Database, and RDA Database Information

With a QSO selected on the **Main** window's **Log QSOs** tab, clicking the **CBA** button queries the selected Callbook for information about the QSO's callsign, such as name, QTH, address, CQ zone, ITU zone, and grid square - but only information missing from the QSO is populated. After the Callbook is queried,

- if DXView is running, it will be directed to query the DXCC database for additional information unambiguously determinable from the current QSO's callsign and DXCC entity
- if DXView is not running, the DXCC database will be queried for additional information unambiguously determinable from the current QSO's callsign and DXCC entity
- If the RDA database is installed, it will be queried to provide the Districts of Russian callsigns on the date of the QSO

This CBA function operation should only be applied to recent QSOs, as information extracted from a Callbook or the DXCC database may not be correct for older QSOs.

If the Require Edit to modify logged QSOs setting is enabled and you have not clicked the **Edit** button before invoking the CBA function, you will be prompted to confirm your action.

The behavior of the CBA function can be modified in two ways:

- Depressing the **Ctrl** key while clicking the **CBA** button means that information obtained from the Callbook, DXCC database, and RDA database will replace information present in the current QSO; for example, if the QSO's Name item currently contains *Dave* and the Callbook returns a Name of *David*, the QSO's Name item will be updated to *David*. However, award-specific information will not be updated if the QSO is considered *confirmed* for that award:
 - DXCC prefix - will not be changed if the QSO is confirmed via QSL card or LoTW, or if DXCC award credit has been granted
 - CQ Zone - will not be changed if the QSO is confirmed via QSL card or authenticity-guaranteed eQSL.cc or LoTW, or if WAZ award credit has been granted
 - Gridsquare - will not be changed if the QSO is confirmed via QSL card or LoTW, or if VUCC award credit has been granted
 - IOTA - will not be changed if the QSO is confirmed via QSL card, or if IOTA award credit has been granted
 - Canadian Province - will not be changed if the QSO is confirmed via QSL card
 - Russian Oblast - will not be changed if the QSO is confirmed via QSL card
 - Russian District - will not be changed if the QSO is confirmed via QSL card
 - US State - will not be changed if the QSO is confirmed via QSL card or LoTW, or if WAS award credit has been granted
 - US County - will not be changed if the QSO is confirmed via QSL card or authenticity-guaranteed eQSL.cc
- Depressing the **Alt** key while clicking the **CBA** button applies the above-described operation to every QSO in the Log Page Display.
 - DXKeeper will offer to create a backup copy of your log before proceeding with the update; accepting this offer is highly recommended.
 - Applying the CBA operation to a large number of QSOs can take significant time, particularly if you haven't copied your Callbook's database from CDROM to a hard drive, and even more so if you're using an internet-accessible service as a callbook.
 - If the QRZ.com via Pathfinder option is selected, the rate is limited by QRZ policy to one lookup per every 4 seconds; if the operation will take longer than 1 minute to complete, DXKeeper will inform you of the expected duration, and ask whether it should proceed.

Depressing both the **Alt** and **Ctrl** keys while clicking the **CBA** button combines both modifications: information in all QSOs in the Log Page Display will be replaced by information obtained from the database queries.

There are three scenarios in which the Callbook and DXCC lookup operation can alter an unconfirmed QSO's DXCC entity:

1. The unconfirmed QSO's DXCC entity is Alaska, Hawaii, or the US, but the state returned by the Callbook does not match the entity; if the **Ctrl** key depressed when the **CBA** button was clicked, DXKeeper will correct the QSO's DXCC entity to match the state returned by the Callbook.
2. The unconfirmed QSO's DXCC entity is unspecified and the callsign is not an aeronautical or maritime mobile stations, and is not preceded by an exclamation point; if the DXCC database can unambiguously determine the entity from the callsign, DXKeeper will update the QSO with this DXCC entity.
3. If the **Ctrl** key was depressed when the **CBA** button was clicked and the RDA database indicates that on the date of an unconfirmed QSO with a Russian callsign, that callsign was active from a different Russian DXCC entity than what is logged in the QSO, the logged DXCC entity will be corrected

If a QSO specifies a DXCC entity that formally defines a set of Primary Administrative Subdivisions, the Callbook returns a Primary Administrative Subdivision code or abbreviation, and if the Subdivisions box is checked on the **Config** window's **Awards** tab, then DXKeeper will determine whether that code or abbreviation is valid. If the QSO's DXCC entity also formally defines a set of Secondary Administrative Subdivisions, the Callbook returns a Secondary Administrative Subdivision code or abbreviation, and if the Subdivisions box is checked on the **Config** window's **Awards** tab, then DXKeeper will also determine whether that code or abbreviation is valid. If either subdivision is found to be invalid and the **Alt** key was not depressed, then DXKeeper will display a message and leave the QSO's subdivision unmodified. If either subdivision is found to be invalid and the **Alt** key was depressed, then the QSO's subdivision will be updated with the invalid code or abbreviation, the QSO's PrimaryInvalid or SecondaryInvalid item will be set to **Y**, and when the **Alt-CBA** operation has updated all QSOs a message will be displayed indicating that one or more QSOs were imported with invalid subdivisions. The Broke filter can be used to filter the Log Page Display to show QSOs whose PrimaryInvalid or SecondaryInvalid items are set to **Y**.

If enabled, the CBA function generates a **Callbook Lookup Actions Report** listing each change made to each QSO, and places the report in DXKeeper's Reports folder.

Editing QSL Information

The **QSL Editor** window appears when you double-click on the Address item in DXKeeper's main window, when you double click on the Via item in the Capture window, or when you double-click on an entry in the QSL queue. In each case, the QSL editor displays

- the station's **Callsign** (cannot be modified in this window)
- the **QSO Date and Time** (cannot be modified in this window)
- the **QSL Message** (from the QSL msg item)
- the **QSL Manager** (from the Via item)
- the **Address**
- the **Sent Via** (from the Sent Via item)

If a Callbook is installed and selected, the **Callbook lookup** panel will contain two buttons:

- the **Callsign** button performs a callbook lookup on the station's callsign, placing the results in the **Address**
- the **Manager** button performs a callbook lookup on the QSL Manager's callsign, placing the results in the **Address**

Double-clicking in the **Callsign** box will invoke Pathfinder (if running) and pre-configure it to perform QSL lookups on the callsign; similarly, double-clicking on the **QSL Manager** box will pre-configure Pathfinder to locate an address for the QSL manager's callsign. When you locate an address, copy it to the windows clipboard (select it and then strike Ctrl-C), drag it to the **QSL Editor's Address** box, and drop it there. Note that performing a Radio Amateur's Callbook (RAC) search in Pathfinder automatically places the result into the Windows clipboard; to copy this information into the **QSL Editor**, click in the **Address** box and strike Ctrl-V.

Changing the contents of the **QSL Manager**, **Address**, **QSL Message**, or **Sent Via** boxes enables the **Save** button; clicking Save updates the appropriate Log items, as well as the information in the QSL queue (if that's where you invoked the QSL editor). To discard changes, click the **Cancel** button.

If the **QSL Editor** window was activated by double-clicking an entry in the QSL queue, a set of QSL Queue navigation buttons will appear above the **Save** and **Cancel** buttons; these buttons let you select the first, previous, next, or last QSL Queue entry and update the **QSL Editor** window to reflect its contents. If the information displayed in the **QSL Editor** window is modified and you click one of these navigation buttons, a window will appear asking if the modified information should be saved before selecting the new QSL Queue entry and updating the **QSL Editor** window. If the QSL Queue contains more than one QSO with the callsign whose entry you've modified, clicking the **Save** button will result in DXKeeper asking if you want the *QSO information* for the other QSL Queue entries with this callsign to also be updated; *QSO information* means the **Address**, **QSL Manager (Via)**, and **Sent Via** items, but not the **QSL Msg** item.

Keyboard shortcuts are available for use in this window.

Keyboard Shortcuts

To allow operation without removing one's hands from the keyboard, DXKeeper provides the following keyboard shortcuts for navigation among the Main window and Capture window fields.

Main window Log QSOs tab shortcuts

The following shortcuts are effective within all items in panels on the Main window's Log QSOs tab, and within the Filter panel's Filter textbox; if the panel containing the destination item is not visible, then the shortcut will have no effect.

Alt Key Shortcut	Effect
Alt-A	moves the mouse cursor to the <i>Primary Administrative Subdivision</i> item
Alt-B	moves the mouse cursor to the <i>QSO begin</i> item
Alt-C	moves the mouse cursor to the <i>Call</i> item
Alt-D	moves the mouse cursor to the <i>DXCC</i> item
Alt-E	moves the mouse cursor to the <i>Comments</i> item
Alt-F	moves the mouse cursor to the <i>TX Freq</i> item
Alt-G	moves the mouse cursor to the <i>Grid 1</i> item
Alt-H	moves the mouse cursor to the <i>QSL Message</i> item
Alt-I	moves the mouse cursor to the <i>Iota</i> item
Alt-J	saves the QSO and creates a new QSO record (equivalent to clicking the New button)
Alt-K	moves the mouse cursor to the <i>Address</i> item
Alt-L	saves the QSO (equivalent to clicking the Log button)
Alt-M	moves the mouse cursor to the <i>Mode</i> item
Alt-N	moves the mouse cursor to the <i>Name</i> item
Alt-O	moves the mouse cursor to the <i>Secondary Administrative Subdivision</i> item (Allow direct Subdivision entry must be enabled to directly specify the subdivision instead of using the selector)
Alt-P	moves the mouse cursor to the <i>Primary Administrative Subdivision</i> item (Allow direct Subdivision entry must be enabled to directly specify the subdivision instead of using the selector)
Alt-Q	moves the mouse cursor to the <i>QTH</i> item
Alt-R	moves the mouse cursor to the <i>RST rcvd</i> item
Alt-S	moves the mouse cursor to the <i>RST sent</i> item
Alt-T	moves the mouse cursor to the <i>Contest</i> item
Alt-U	moves the mouse cursor to the <i>QSL_Sent</i> item
Alt-V	moves the mouse cursor to the <i>QSL Via</i> item
Alt-W	moves the mouse cursor to the <i>TX serial#</i> item
Alt-X	moves the mouse cursor to the <i>Band</i> item
Alt-Y	moves the mouse cursor to the <i>Satellite Name</i> item
Alt-Z	moves the mouse cursor to the <i>RX serial#</i> text box
Alt-=	moves the mouse cursor to the <i>ARRL, region, or DOK</i> item (if visible)

Alt-n	moves the mouse cursor to user-defined field n, where n is a digit from 0 to 7
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The following shortcuts are effective within items in panels on the Main window's Log QSOs tab:

Ctrl Key Shortcut	Effect
Ctrl-1 through Ctrl-9	in the <i>RST sent</i> or <i>RST rcvd</i> item, sets the signal report to 51 through 59 if the QSO's mode is a phone mode, or to 519 through 599 if the mode is not a phone mode
Ctrl-A	selects the field's contents
Ctrl-C	copies the selected text to the Windows clipboard
Ctrl-F	moves the mouse cursor to the Filter textbox
Ctrl-G	saves the QSO (equivalent to clicking the Log button)
Ctrl-J	saves the QSO and creates a new QSO record (equivalent to clicking the New button)
Ctrl-L	saves the QSO (equivalent to clicking the Log button)
Ctrl-N	moves the mouse cursor to the QSL# item
Ctrl-P	if no DXCC prefix has been selected, performs a lookup (equivalent to striking the Enter key in the Call item); then saves the QSO
Ctrl-R	sets the <i>QSL Rcvd</i> item to Y
Ctrl-S	sets the <i>QSL Sent</i> item to Y
Ctrl-V	pastes the text contents of the Windows clipboard
Ctrl-X	copies the selected text to the Windows clipboard and then deletes the selected text
Ctrl-Z	performs an "undo" operation
Ctrl-Left Arrow	moves the mouse cursor to the beginning of the current word in the current item
Ctrl-Right Arrow	moves the mouse cursor to end of the current word in the current item
Ctrl-Alt-B	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • if an outgoing QSL card was not previously sent, sets the current QSO's QSL sent item to "R" (requested) • sets the current QSO's QSL rcvd via to B (bureau) • saves the current QSO
Ctrl-Alt-C	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • if an outgoing QSL card was not previously sent, sets the current QSO's QSL sent item to "R" (requested) • saves the current QSO
Ctrl-Alt-D	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • if an outgoing QSL card was not previously sent, sets the current QSO's QSL sent item to "R" (requested) • sets the current QSO's QSL rcvd via to D (direct) • saves the current QSO

Ctrl-Alt-E	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • if an outgoing QSL card was not previously sent, sets the current QSO's QSL sent item to "R" (requested) • set current QSO's QSL rcvd via to E (electronic) • saves the current QSO
Home	moves the mouse cursor to the beginning of the item (text controls only)
End	moves the mouse cursor to the end of the item (text controls only)

The following shortcuts are effective within all items in panels on the Main window's Log QSOs tab:

Key Shortcut	Effect
Ctrl-Home	selects the first QSO in the Log Page Display
Ctrl-End	selects the last QSO in the Log Page Display
PageUp	selects the previous QSO in the Log Page Display
PageDown	selects the next QSO in the Log Page Display
Alt-Shift-E	if the Edit button is visible, allows the current QSO to be modified

The following shortcuts are effective within the Log Page Display on the Main window's Log QSOs tab:

Key Shortcut	Effect
Up Arrow	selects the previous QSO in the Log Page Display
Down Arrow	selects the next QSO in the Log Page Display
PageUp	scrolls the Log Page Display up by the number of visible QSOs
PageDown	scrolls the Log Page Display down by the number of visible QSOs

The following shortcuts are effective within the Filter panel's Filter textbox:

Ctrl Key Shortcut	Effect
Ctrl-1	executes SQL filter 1 as defined in the Advanced window's SQL Query Filters panel
Ctrl-2	executes SQL filter 2 as defined in the Advanced window's SQL Query Filters panel
Ctrl-3	executes SQL filter 3 as defined in the Advanced window's SQL Query Filters panel
Ctrl-4	executes SQL filter 4 as defined in the Advanced window's SQL Query Filters panel
Ctrl-A	selects the Filter textbox's contents
Ctrl-B	filters the Log Page Display for broken QSOs
Ctrl-C	filters the Log Page Display for QSOs with the specified Callsign
Ctrl-D	filters the Log Page Display for QSOs with the specified Callsign's DXCC entity
Ctrl-G	saves the QSO (equivalent to clicking the Log button)
Ctrl-J	saves the QSO and creates a new QSO record (equivalent to clicking the New button)
Ctrl-L	saves the QSO (equivalent to clicking the Log button)

Ctrl-S	filters the Log Page Display with the SQL expression in the Filter Panel textbox
Ctrl-U	filters the Log Page Display for QSOs that occurred within the specified time range
Ctrl-V	pastes the text contents of the Windows clipboard
Ctrl-X	resets the Log page filter so that all QSOs are visible there
Ctrl-Z	performs an "undo" operation
Home	move mouse cursor before the first character
End	move mouse cursor after the last character
Ctrl-Left Arrow	move mouse cursor to the beginning of the current word
Ctrl-Right Arrow	move mouse cursor to end of the current word
Ctrl-Alt-B	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • if an outgoing QSL card was not previously sent, sets the current QSO's QSL sent item to "R" (requested) • sets the current QSO's QSL rcvd via to B (bureau) • saves the current QSO
Ctrl-Alt-C	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • if an outgoing QSL card was not previously sent, sets the current QSO's QSL sent item to "R" (requested) • saves the current QSO
Ctrl-Alt-D	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • if an outgoing QSL card was not previously sent, sets the current QSO's QSL sent item to "R" (requested) • sets the current QSO's QSL rcvd via to D (direct) • saves the current QSO
Ctrl-Alt-E	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • if an outgoing QSL card was not previously sent, sets the current QSO's QSL sent item to "R" (requested) • sets the current QSO's QSL rcvd via to E (electronic) • saves the current QSO
Ctrl-Alt-F	<ul style="list-style-type: none"> • sets the current QSO's QSL received item to Y (yes) • sets the current QSO's QSL date received item to the current UTC date • saves the current QSO
Ctrl-Home	selects the first QSO in the Log Page Display
PageUp	selects the previous QSO in the Log Page Display
PageDown	selects the next QSO in the Log Page Display
Ctrl-End	selects the last QSO in the Log Page Display
Alt-Shift-E	if the Edit button is visible, allows the current QSO to be modified

Capture window shortcuts

The following shortcuts are effective within all items on the Capture window:

Alt Key Shortcut	Effect
Alt-A	moves the mouse cursor to the <i>Primary Administrative Subdivision</i> item
Alt-B	<ul style="list-style-type: none">designates the QSO start timehides the Begin button until the QSO is logged or cleareddisplays the QSO start time
Alt-C	moves the mouse cursor to the <i>Call</i> item
Alt-D	moves the mouse cursor to the <i>DXCC</i> item
Alt-E	moves the mouse cursor to the <i>Comments</i> item
Alt-F	moves the mouse cursor to the <i>Freq</i> item
Alt-G	moves the mouse cursor to the <i>Grid 1</i> item
Alt-H	moves the mouse cursor to the <i>QSL Message</i> item
Alt-I	moves the mouse cursor to the <i>Iota</i> item
Alt-J	saves the QSO and clears the Capture window (equivalent to clicking the Log button)
Alt-K	moves the mouse cursor to the <i>Pwr</i> item
Alt-L	saves the QSO and clears the Capture window (equivalent to clicking the Log button)
Alt-M	moves the mouse cursor to the <i>Mode</i> item
Alt-N	moves the mouse cursor to the <i>Name</i> item
Alt-O	moves the mouse cursor to the <i>Secondary Administrative Subdivision</i> item
Alt-P	moves the mouse cursor to the <i>Primary Administrative Subdivision</i> item
Alt-Q	moves the mouse cursor to the <i>QTH</i> item
Alt-R	moves the mouse cursor to the <i>RST rcvd</i> item
Alt-S	moves the mouse cursor to the <i>RST sent</i> item
Alt-T	moves the mouse cursor to the <i>Contest</i> item
Alt-U	toggles the <i>QSL request</i> checkbox
Alt-V	moves the mouse cursor to the <i>QSL Via</i> item
Alt-W	moves the mouse cursor to the <i>TX serial#</i> item
Alt-X	moves the mouse cursor to the <i>CQ</i> item
Alt-Y	moves the mouse cursor to the <i>ITU</i> item
Alt-Z	moves the mouse cursor to the <i>RX serial#</i> text box
Alt-=	moves the mouse cursor to the <i>ARRL</i> , <i>region</i> , or <i>DOK</i> item (if visible)
Alt-n	moves the mouse cursor to user-defined field n, where n is a digit from 0 to 7

The following shortcuts are effective within all items on the Capture window:

Ctrl Key Shortcut	Effect
Ctrl-1 through Ctrl-9	in the <i>RST sent</i> or <i>RST rcvd</i> item, sets the signal report to 51 through 59 if the QSO's mode is a phone mode, or to 519 through 599 if the mode is not a phone mode
Ctrl-A	selects the field's contents
Ctrl-B	<ul style="list-style-type: none"> designates the QSO start time hides the Begin button until the QSO is logged or cleared displays the QSO start time
Ctrl-C	copies the selected text to the Windows clipboard
Ctrl-E	<ul style="list-style-type: none"> designates the QSO end time hides the End button until the QSO is logged or cleared displays the QSO end time
Ctrl-F	invokes the Capture window's Lookup function
Ctrl-G	saves the QSO and clears the Capture window (equivalent to clicking the Log button)
Ctrl-J	saves the QSO and clears the Capture window (equivalent to clicking the Log button)
Ctrl-L	saves the QSO and clears the Capture window (equivalent to clicking the Log button)
Ctrl-N	invokes the Capture Notes editor
Ctrl-P	if no DXCC prefix has been selected, performs a lookup (equivalent to striking the Enter key in the Call item); then saves the QSO and clears the Capture window
Ctrl-Q	clears all Capture window fields, and places the cursor in the Call field
Ctrl-S	send an outgoing spot without notes
Ctrl-T	prompt for notes and then send an outgoing spot
Ctrl-U	invokes the Capture QSL Msg editor
Ctrl-V	pastes the text contents of the Windows clipboard
Ctrl-W	clears all Capture window fields, places the cursor in the Call field, clears the Log Page Display filter, and scrolls the Log Page Display to show the last entry
Ctrl-X	copies the selected text to the Windows clipboard and then deletes the selected text
Ctrl-Z	performs an "undo" operation
Ctrl-Left Arrow	move mouse cursor to the beginning of the current word in the current item
Ctrl-Right Arrow	move mouse cursor to end of the current word in the current item

QSL Editor window shortcuts

The following shortcuts are effective within all items on the QSL Editor window:

Shortcut	Effect
Alt-C	performs a callbook lookup on the station's callsign, placing the results in the Address
Alt-L	invokes Pathfinder (if running) and pre-configures it to locate an address for the QSL manager's callsign
Alt-M	performs a callbook lookup on the QSL Manager's callsign, placing the results in the Address
Alt-P	invokes Pathfinder (if running) and pre-configures it to perform QSL lookups on the callsign
Alt-S	updates the appropriate Log items, as well as the information in the QSL Queue
Escape	discards changes and hides the Address Editor window
Alt-PageUp or Alt-Up-Arrow	if the QSL Editor was invoked from the QSL Queue, selects the previous entry in the QSL Queue and updates the QSL Editor with its contents
Alt-PageDown or Alt-Down-Arrow	if the QSL Editor was invoked from the QSL Queue, selects the next entry in the QSL Queue and updates the QSL Editor with its contents
Alt-Home or Alt-Left-Arrow	if the QSL Editor was invoked from the QSL Queue, selects the first entry in the QSL Queue and updates the QSL Editor with its contents
Alt-End or Alt-Right-Arrow	if the QSL Editor was invoked from the QSL Queue, selects the last entry in the QSL Queue and updates the QSL Editor with its contents

QSLing

A confirmation is the last courtesy of a QSO. Many hams pursue awards that require proof that a submitted QSO actually happened; confirmations provide that proof.

Before the internet, hams sent each other paper QSL cards via postal mail; QSL cards are accepted as proof of contact by all amateur radio award sponsors. When sending a QSL card to request a QSL card in return, a self-addressed stamped envelope was often included; if the recipient resided in a different country, a self-addressed envelope and sufficient funds to cover the postage were included. QSL bureaus eliminated the cost of postage and envelopes, but greatly increased the time delay from request to receipt.

In the early 2000s, two "electronic" QSLing services became available: the ARRL's Logbook of the World (LoTW), and eQSL.cc.

- LoTW confirmations are valid for
 - the ARRL's DXCC, VUCC, and WAS awards
 - CQ's WAZ and WPX awards
 - RSGB's IOTA awards
 - the WAIP (Worked All Italian Provinces) award
- eQSL.cc confirmations are valid for
 - CQ's USA-CA (worked all US Counties), WAZ and WPX awards
 - eQSL's awards

Club Log introduced its Online QSL Request Service (OQRS), which enables DXers to request confirmation of a QSO uploaded to Club Log without mailing an outgoing QSL accompanied by a self-addressed stamped envelope and funds for return postage. Unless you're located in a rare DXCC Entity, CQ Zone, or administrative subdivision, QSL Managers for DXpeditions and rare DX stations are not interested in your QSL card; having to open thousands of incoming envelopes bearing small bills and self-addressed envelopes can consume large amounts of QSL Manager time. OQRS eliminates this overhead by enabling a DXer to electronically convey a request for confirmation to the QSL Manager; the DXer can optionally include funds (using PayPal) for postage and a return envelope for QSL card delivery via direct mail, or the DXer can instead request that the QSL card be delivered at no cost via the QSL buro.

If a QSO you've uploaded to Club Log matches what your QSO partner uploaded, you can through Club Log request a confirmation, either via the QSL buro or, with via direct mail using PayPal to fund the return postage. Club Log did not initially provide confirmations, but now does so; they are accepted for RSGB's IOTA awards.

QRZ has expanded its callbook service to offer an online logbook within which QSOs can be confirmed. Such confirmations are valid for QRZ's awards.

DXKeeper supports six independent kinds of QSLing:

- via paper QSL cards, Reply cards, or QSL labels that you can print on card stock or labels, or that are printed by sending an ADIF or tab-delimited file to an external QSL-generating application - like DXQSL, QSLCardCreator, or Microsoft Word, and are then inserted into envelopes or address labels printed with postal addresses
- via paper QSL cards or QSL labels that confirm reports from Shortwave Listeners (SWLs).
- via eQSL.cc
- via LoTW
- via Club Log
- via QRZ

You can choose to confirm a QSO by any one or more of these QSL kinds.

Paper QSL cards, Reply cards, QSL labels affixed to cards, and SWL confirmations can be routed by postal mail directly to your QSO partner, directly to the SWL, or to a QSL bureau.

QSLing Overview

QSL Queue

Traditionally, the need to load your printer with index stock or labels has made QSLing a batch workflow, rather than an activity accomplished at the time you log a QSO. After accumulating some number of QSOs for which confirmation is desired, you identify the QSOs, load the printer with index stock or blank QSL labels, print QSL cards or Reply cards or labels for each designated QSO, reload the printer with envelopes or blank address labels, print addresses for each QSL, and finally update the original QSOs to indicate that QSLs have been sent. DXKeeper thus provides a **QSL Queue** in which to assemble a batch of QSOs from which QSL card or labels will be generated, and from which envelopes and envelope labels will be printed with destination postal addresses.

Dedicated label printers make it possible to print a QSL label or address label without first loading a printer with the appropriate media, so DXKeeper provides the ability to immediately print a label from a logged QSO without going through the QSL Queue.

Given the inability to modify submitted QSOs in eQSL.cc or LoTW, the batch upload functions for these two confirmation services first populate the QSL Queue with QSOs to be submitted so that you can review them before uploading them. Club Log, and QRZ permit the deletion of submitted QSOs, so QSOs are submitted to these services in a single step, bypassing the QSL Queue.

You can modify a QSL Queue entry's callsign, date and time, QSL Manager, Sent Via, QSL Message, or postal address items; completing the modification updates the logged QSO from which the QSL Queue entry was created.

The QSL Queue is displayed on the Main window's **QSL** tab, which is both vertically and horizontally resizable. The QSL Queue is stored in each log file, so if you switch log files, you will also switch QSL Queues.

Batch QSLing

For printing a batch of QSL cards, QSL labels, envelopes, and address labels, these operations are provided:

- populate the QSL Queue with a set of QSOs of your choosing for your review
 - QSOs indicating that your QSO partner requested a QSL (can be made the default for all QSOs)
 - QSOs that if confirmed would advance your progress towards the awards you are pursuing
 - a set of QSOs that you filtered the Log Page Display to contain
- create a text file showing the postal addresses to which each QSO in the QSL Queue will be sent, for your review
- print QSL cards or QSL Reply cards or QSL labels, or generate an entry in an ADIF or tab-delimited file for each QSO in the QSL Queue
- print addresses on envelopes or labels for each QSO in the QSL Queue
- update each QSO with an entry in the QSL Queue to reflect the outgoing confirmation generated, and remove that entry from the QSL Queue

For submitting a batch of QSOs to eQSL.cc, LoTW, Club Log, and QRZ, these operations are supported:

- upload a batch of logged QSOs that haven't already been submitted to the service
- automatically upload QSOs to the service in real time as they are logged via the Capture window on the Main window's **Log QSOs** tab
- automatically upload QSOs to the service in real time if so directed by an external application that has conveyed a QSO to be logged
- upload a selected logged QSO to the service
- synchronize: download confirmation information from the service, and update each logged QSO that has been confirmed by the service to reflect that confirmation

Batch Uploading

The workflows for batch uploading via eQSL.cc or LoTW are similar:

1. choose the QSL kind (eQSL or LoTW)
2. populate the QSL Queue with the QSOs to be uploaded, for your review
3. upload the QSOs from the QSL Queue, update each QSO to reflect successful uploading, and remove it from the QSL Queue

If you intend to upload a large number of QSOs to eQSL, the following workflow will be faster than populating the QSL Queue and uploading from there:

1. filter the Log Page Display so that all QSOs to be uploaded are visible
2. use the Main window's Export to eQSL function to generate an ADIF file that can be uploaded to eQSL.

The exact threshold depends on your computer's performance, as well as on the bandwidth of your internet connection, but more than a few hundred QSOs is a good guideline for using the Export functions rather than the Upload functions.

Similarly, uploading more than 1000 QSOs to LoTW is best accomplished with the following workflow:

1. filter the Log Page Display so that all QSOs to be uploaded are visible
2. use the Main window's Export to LoTW function to generate an ADIF file that can be processed by the ARRL's TQSL program to produce a file that can be uploaded to LoTW

The workflows for uploading a batch of logged QSOs to Club Log and QRZ are similar:

1. choose the QSL kind (Club Log or QRZ)
2. upload QSOs not already uploaded to the service, update each QSO to reflect successful uploading, and remove it from the QSL Queue

Club Log's Online QSL Request Service (OQRS) enables DXers to request confirmation of a QSO uploaded to Club Log without mailing an outgoing QSL accompanied by a self-addressed stamped envelope and funds for return postage.

Immediate Operations

DXKeeper provides a set of immediate QSLing operations that act on the QSO currently selected in the Log Page Display.

If the QSL Queue is empty, right-clicking on a QSO in the Log Page Display will produce a popup menu containing the following commands

- Print QSL card
- Print Address on Envelope or Print Address on Single Label (depending upon which is selected in the Address Via panel)
- Print Self-addressed Envelope or Print Self-addressed Single Label (depending upon which is selected in the Self-addressed panel)
- Upload to LoTW - if the selected QSO doesn't begin with an exclamation point (!) or if the Upload QSOs whose callsigns begin with ! box is checked
- Upload to eQSL.cc - if the selected QSO doesn't begin with an exclamation point (!) or if the Upload QSOs whose callsigns begin with ! box is checked

Whether the QSL Queue is empty or not, the popup menu will include these commands

- **Add entry to QSL Queue** - If the selected QSO doesn't begin with an exclamation point (!) or if the Upload QSOs whose callsigns begin with ! box is checked
- Upload to Club Log - if the selected QSO doesn't begin with an exclamation point (!) or if the Upload QSOs whose callsigns begin with ! box is checked
- Delete from Club Log
- Upload to QRZ - if the selected QSO doesn't begin with an exclamation point (!) or if the Upload QSOs whose callsigns begin with ! box is checked
- Delete from QRZ

Selecting one of these commands in the popup menu by left-clicking will immediately perform the action; before selecting Print QSL card, Print Address on Envelope or Print Self-addressed Envelope, load your printer with the appropriate media. Note that selecting Print QSL card will uncheck the Print Preview option.

Synchronization

DXKeeper can update your logged QSOs to reflect confirmations, whether in the form of QSL cards received via postal mail or via the electronic confirmation services eQSL.cc, LoTW, Club Log, or QRZ; the process of updating your log to reflect confirmations received from an electronic confirmation service is referred to as *Synchronization*.

DXKeeper provides a Sync All function that can be configured to synchronize with eQSL.cc, synchronize with LoTW, upload updated QSOs to Club Log, upload updated QSOs to QRZ, synchronize with Club Log, and/or synchronize with QRZ - all in a single user-initiated action.

QSL Status items

Responding to requests for confirmation, soliciting confirmations, and tracking confirmation received require status information to be recorded with each QSO. DXKeeper separately tracks the confirmation of each QSO by QSL card, eQSL.cc, LoTW, Club Log, and QRZ. For each of these *kinds* of QSLing, there are four items stored with each QSO: outgoing status, outgoing date, confirmation status, and confirmation date:

QSO Item	QSL Cards & Labels	eQSL.cc	LoTW	Club Log	QRZ	Meaning
outgoing status	QSL sent	eQSL sent	LoTW sent	Club Log Sent	QRZ Sent	<ul style="list-style-type: none"> • N - no outgoing QSL should be sent or uploaded • R - an outgoing QSL should be printed or uploaded (QSL cards & labels, LoTW, and eQSL.cc only) • U - the outgoing QSL has been uploaded but acceptance is unknown (LoTW only) • Y - the outgoing QSL has been printed, or uploaded and accepted • M - the QSO has been modified since last being uploaded (Club Log and QRZ only) • I - no outgoing QSL should be sent or uploaded (QSL cards & labels, LoTW, and eQSL.cc only)
outgoing date	QSL date sent	eQSL date sent	LoTW date sent	Club Log date sent	QRZ date sent	date on which the outgoing QSL was printed or uploaded and accepted

confirmation status	QSL rcvd	eQSL rcvd	LoTW rcvd	Club Log rcvd	QRZ rcvd	<ul style="list-style-type: none"> • R - the outgoing QSL should (or did) include a request for a confirming QSL • Y - confirmation has been received • S - confirmation has been submitted to the ARRL for verification (QSL cards & LoTW only) • V - DXCC award progress has been granted by the ARRL (QSL cards & labels, and LoTW only) • E - Entity-only confirmation has been verified by the ARRL (QSL cards & labels only) • B - Entity-and-Entity-Band-only confirmation has been verified by the ARRL (QSL cards & labels only) • M - Entity-and-Entity-Mode-only confirmation has been verified by the ARRL (QSL cards & labels only) • I - this QSO is invalid for award purposes <ul style="list-style-type: none"> ○ QSL rcvd: invalid for DXCC awards and Marathon country credit ○ LoTW rcvd: invalid for DXCC awards ○ eQSL rcvd: invalid for eQSL.cc awards ○ IOTAVerified: invalid for IOTA awards ○ VUCCVerified: invalid for WAS awards ○ WASVerified: invalid for WAS awards
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						<ul style="list-style-type: none"> ○ WAZVerified: invalid for WAZ and Marathon awards ○ WPXVerified: invalid for WPX awards • x - this QSO can't be confirmed
confirmation date	QSL date rcvd	eQSL date rcvd	LoTW date rcvd	Club Log date rcvd	QRZ date rcvd	date on which the incoming QSL was received

For the QSO currently selected in the Log Page Display,

- all four QSL status items for **QSL Cards & Labels** are accessible via the QSL panel on the Main window's **Log QSOs** tab
- the four **eQSL status** and the four **LoTW status** items are accessible via the Online QSL panel on the Main window's **Log QSOs** tab
- with the Club & QRZ box checked, the four **Club Log status** and the four **QRZ status items** are also accessible via the Online QSL panel on the Main window's **Log QSOs** tab

Choosing the QSL kind: cards/labels, eQSL.cc, LoTW, Club Log, QRZ, ADIF files, or tab-delimited files

When initiating QSL operations, start by choosing the QSL *kind* by making a selection in the **QSL Via** panel on the Main window's **QSL** tab:

Selection	Meaning
QSL cards	print QSL cards, 4 per page
Reply cards	print Reply cards, 4 per page
single labels	print QSL labels via a label printer
2-column labels	print QSL labels, typically 20 per page
3-column labels	print QSL labels, typically 30 per page
eQSL.cc	upload QSOs to eQSL, synchronize with eQSL
LoTW	upload QSOs to LoTW, synchronize with LoTW
Club Log	upload QSOs to Club Log, synchronize with Club Log
QRZ	upload QSOs to QRZ, synchronize with QRZ
ADIF file	save QSO information in a specified file using ADIF format for QSL generation by another application
tab-delimited file	save QSO information in a specified file using tab-delimited format for QSL generation by another application

QSL cards, Reply cards, QSL labels, ADIF files, and tab-delimited files are all used to produce hardcopy QSL cards that are physically conveyed to the station you worked; these kinds are therefore collectively referred to as QSLs.

Constraints

After you populate the QSL Queue with one or more entries, your ability to change the **QSL Via** panel's selection becomes limited. You can switch among QSL cards, Reply cards, QSL labels, ADIF files, and tab-delimited files, but you cannot switch from any of these to the LoTW or eQSL.cc selections, or vice versa. You also can't switch between LoTW and eQSL.cc. If you've populated the QSL Queue and decide you must change the **QSL Via** panel's selection, either complete the current QSLing operation first, or clear the QSL Queue. Neither Club Log nor QRZ upload operations utilize the QSL Queue

Populating the QSL Queue with QSOs to be Printed on Cards or Labels, or Uploaded to eQSL or LoTW

To print QSL cards or labels from QSOs, or to submit QSOs to eQSL or LoTW, start by adding those QSOs to the QSL Queue.

After choosing the QSL kind, you can place an individual QSO in the QSL Queue by right-clicking on its entry in the Log Page Display; in the pop-up menu that appears, left-click the **Add to QSL Queue** command.

With QSL Via panel set to cards or labels, you can add a Shortwave Listener (SWL) confirmation for a QSO to the QSL Queue by right-clicking that QSO's entry in the Log Page Display and then left-clicking the pop-up menu's **Add SWL Entry to QSL Queue** command.

You can direct DXKeeper to populate the QSL Queue with multiple QSOs in order to

- respond to all requests for confirmation from QSO partners, including those received via Club Log Inbound OQRS
- solicit confirmation of all worked but un-confirmed and un-requested QSOs needed to achieve your DXCC/Challenge/Toplist, CQ DX Marathon, IOTA, VUCC, WAS, WAZ or WPX objectives
- solicit confirmation of all QSOs shown in a CQ DX, CQ Field, or USA-CA progress report as worked but un-confirmed and un-requested
- solicit confirmation of all QSOs in the Log Page Display, which you can filter to contain a desired subset of your logged QSOs

To designate a QSO for which an outgoing QSL should be printed or uploaded, set the appropriate outgoing status item in that QSO to **R**. If you'd like the QSO confirmed, also set the appropriate confirmation status item in that QSO to **R**; in the case of QSL cards and 2-column QSL labels, this will result in the a "please!" being printed in the card's or label's **QSL?** column. To have every outgoing QSL card or label print "please!" in its **QSL?** column unless its QSO is already confirmed, enable the Outgoing QSLs request confirmation unless already confirmed option.

To designate a QSO for which no outgoing QSL card or label should be generated, set its QSL sent item to **N**.

The Main window's QSL and Online QSL panels provide full access to the outgoing status fields for QSL Card, eQSL.cc, and LoTW. The QSL panel also provides an **RR** button, which when clicked simultaneously sets the outgoing status to **R** and the confirmation status to **R**.

While we may only send a QSL card if asked or if needed to solicit a confirmation, there is good reason to upload every logged QSO to eQSL.cc and LoTW, assuming you have accounts with each; by doing so, you provide confirmation of your QSO to those in need. Thus DXKeeper provides an Initialize eQSL sent to 'R' box that when checked will automatically set the eQSL.cc outgoing status to **R** whenever you log a QSO, and an Initialize LoTW sent to 'R' box that when checked will automatically set the LoTW outgoing status to **R** whenever you log a QSO. Even if you have no immediate plans to use eQSL.cc or LoTW, leaving these boxes in their default checked setting is a good idea; if you eventually change your mind, your QSOs will already be flagged for uploading.

With DXKeeper configured to always designate QSOs for upload to eQSL.cc and LoTW, the only decision you must make is whether to send a paper QSL. If you are logging QSOs from the Capture window and decide that you'd like a QSL card -- or are asked for a card by your QSO partner -- check the Capture window's **QSL Requested** box; if you log the QSO with this box checked, both the QSL outgoing status and confirmation status will be recorded as **R**. If you are logging QSO's via the Main window, clicking the QSL panel's **RR** will have the same effect.

Add Requested

The **Add Requested** function on the Main window's QSL tab responds to requests for confirmation from a QSO partner; it

- notes the QSL kind you have selected
- scans all QSOs in the Log Page Display in reverse chronological order for any QSO whose outgoing status for the selected QSL kind is set to **R** (you can terminate the scan by clicking the **Stop** button)
- creates an entry in the QSL Queue for each such QSO it locates, and optionally specifies routing by setting QSL Via to 'B' or 'D' or 'E'

LoTW requires that only QSOs made with the same station callsign be uploaded together. When the QSL Via panel is set to LoTW, the **Add Requested** operation enforces this by ignoring any QSO whose station callsign does not match the station callsign specified in the current LoTW station location; a message will be displayed if one or more QSOs have not been added to the QSL Queue for this reason. When the QSL Via panel is set to LoTW, the **Add Requested** operation also ignores QSOs that specify a Propagation Mode not supported by LoTW; QSOs that specify no Propagation Mode, or a Propagation Mode of AUE, AUR, BS, EME, ES, F2, FAI, ION, MS, RS, SAT, TEP, or TR *will* be added to the QSL Queue.

If the Add Requested no dup band-modes option is enabled, the **Add Requested** function will not create a QSL Queue entry unless doing so would give the receiving station a new band or mode, or unless the QSL Via panel is set to LoTW or eQSL.cc .

If the Upload QSOs whose callsigns begin with ! box is unchecked, QSOs with callsigns that begin with an exclamation point (!) will not be added the QSL Queue. If the Upload QSOs whose callsigns begin with ! box is checked, QSOs with callsigns that begin with an exclamation point (!) will be added the QSL Queue; the exclamation point (!) will be removed from such callsigns when they are printed or when they are uploaded to eQSL or LoTW.

The **Add Requested** function is governed by options on the Add Requested panel (Configuration window, General tab).

Add Needed

Besides memorializing memorable QSOs, we send QSLs to solicit QSO confirmations needed to achieve our DXing objectives. DXKeeper provides the **Add Needed** function to automate this process for the following awards:

- ARRL DX Century Club (DXCC), based on settings in the DXCC/TOP Bands & Modes panel
- ARRL DX Century Club Challenge, based on settings in the DXCC/TOP Bands & Modes panel
- ARRL VHF UHF Century Club (VUCC)
- ARRL Worked All States (WAS)
- Top List, based on settings in the DXCC/TOP Bands & Modes panel
- CQ DX
- CQ Field
- CQ United States Counties Award (USA-CA)
- CQ Worked All Zones (WAZ), based on settings in the WAZ Bands & Modes panel
- CQ Worked All Prefixes (WPX), based on settings in the WPX Bands & Modes panel
- Fred Fish Memorial Award
- IARU Worked All Continents (WAC)
- Islands On the Air (IOTA)

The **Add Needed** function scans all QSOs in the Log Page Display in descending date order for QSOs whose confirmations are required for the awards you've selected, considering the DXing objectives you have specified - but ignoring any QSO whose QSL sent item is set to **N** or **I**; for each such QSO, the **Add Needed** function

- sets the QSO's QSL outgoing status and confirmation status to **R**
- sets the QSO's Select item to **Y**
- creates an entry in the QSL Queue for each such QSO it locates

If more than one unconfirmed QSO is available for an award objective, only the most recent QSO is added to the QSL Queue.

On the assumption that all QSOs will be uploaded to LoTW and/or eQSL.cc, the **Add Needed** function is only available when the QSL kind is QSL cards, Reply cards, QSL labels, ADIF files, or tab-delimited files. When **Add Needed** finds a QSO whose confirmation is required, it adds this QSO to the QSL Queue.

- If the Add Needed requests all with same call box is checked, it **Add Needed** locates all other QSOs with the same station that haven't been confirmed via QSL card, and adds these to the QSL Queue.
- If the Add Needed requests all with same mgr box is checked, **Add Needed** locates all other QSOs with the same QSL manager that haven't been confirmed via QSL card, and adds these to the QSL Queue.

Add Needed can optionally specify routing by setting QSL Via to 'B' or 'D' or 'E' for each QSO it adds to the QSL Queue.

The **Add Needed** function is governed by options on the Add Needed panel (Configuration window, General tab).

Add All

The **Add All** function creates an entry in the QSL Queue for each QSO in the Log Page Display - independent of whether its needed and/or requested. By filtering the Log Page Display before invoking **Add All**, you can choose only those QSOs within a date range, or with a particular DXCC entity, or on a specified band.

LoTW requires that only QSOs made with the same station callsign be uploaded together. If the QSL Via panel is set to LoTW, the **Add Requested** operation enforces this by ignoring any QSO whose station callsign does not match the station callsign specified in the current LoTW station location; a message will be displayed if one or more QSOs have not been added to the QSL Queue for this reason.

If you are just starting with LoTW, **Add All** is an efficient way to select all of a log's QSOs for uploading; because eQSL.cc uploading is optimized for interactivity, it will be faster to upload a large number of QSOs by using Export to eQSL.cc.

The **Add All** function will ignore any QSO

- whose QSL sent item is set to **N** or **I** (QSL Via panel is set to QSL cards, Reply cards, QSL labels, ADIF file, or tab-delimited file)
- whose LoTW sent item is set to **N** or **I** (QSL Via panel is set to LoTW)
- whose eQSL sent item is set to **N** or **I** (QSL Via panel is set to eQSL.cc)
- whose Club Log Sent is set to **N** (QSL Via panel is set to Club Log)
- whose QRZ Sent is set to **N** (QSL Via panel is set to QRZ)

If the Upload QSOs whose callsigns begin with ! box is unchecked, QSOs with callsigns that begin with an exclamation point (!) will not be added the QSL Queue. If the Upload QSOs whose callsigns begin with ! box is checked, QSOs with callsigns that begin with an exclamation point (!) will be added the the QSL Queue; the exclamation point (!) will be removed from such callsigns when they are printed or when they are uploaded to eQSL or LoTW.

For other awards -- like ARRL Worked All Continents or Worked All Japan Prefectures (WAJA), you must designate needed confirmations by clicking the **RR** button on the Main window's QSL panel, and then click **Add Requested**; reports generated from the Main window's Check Progress tab do indicate which confirmations are required for these awards.

Routing: Direct, via the QSL bureau, or via Electronic File Transfer (EFT)

Each **QSL Queue** entry's **Sent Via** item indicates how the QSL should be sent:

Routing	Sent_Via
- by postal mail directly to your QSO partner	D
- by postal mail to a QSL bureau	B
- by electronic conveyance (EFT), e.g. email or file transfer	E

To change a **QSL Queue** entry's routing, click in it's entry's **Sent Via** cell, and a down-facing black triangle will appear. Click the triangle, and a dropdown selector will appear that lets you choose the desired routing; the entry's left-most column will display a pencil icon, indicating that the entry has been modified but not saved. Click any other QSL Queue entry to save the modified entry; DXKeeper will propagate the modified **Sent Via** item to the QSO from which the QSL Queue entry was generated. Note: if the QSL Queue contains a single entry that you've modified, save it by clicking the right-facing arrow button and then the left-facing arrow button in the group of VCR-like buttons below the QSL Queue's lower-right corner. When the **Update Log** function is initiated, each QSO's Sent Via item will be updated from its QSL Queue entry's **Sent Via** item.

QSL Queue Operations

You can sort the QSL Queue in ascending or descending order of any of its columns: double-clicking on a column's caption sort's the QSL Queue in ascending order of that column. Double-clicking on the same column's caption again sorts the QSL Queue in descending order of that column.

With the QSL Via panel set to QSL cards, Reply cards; 2-column labels; 3-column labels; ADIF file; or tab-delimited file, QSL Queue entries that are missing an **Address** item and have a **Sent Via** item not set to buro are highlighted in red font.

To specify or modify the **Address** item of a entry in the QSL Queue, to change its **Sent Via**, **QSL Manager**, or **QSL Msg** items, double-click its entry to display DXKeeper's QSL Editor window; from this window, you can direct Pathfinder (if running) to perform a QSL route lookup on the callsign, or on the QSL manager's callsign. When you click the QSL Editor's **Save** button, any changes you've made to the **Address**, **QSL Manager**, or **QSL Msg** items will update both the QSL Queue entry and the logged QSO; any change made to the **Sent Via** item will update the QSL Queue entry only. If the **Alt** key is depressed when the entry is double-clicked, DXKeeper will also direct DXView (if running) to display information about the entry's callsign, including DXCC progress by band and mode.

Double-clicking a QSL Queue entry while depressing the **Ctrl** key will locate the log entry from which the QSL Queue entry was created, and display it in the Main window's Log QSOs tab.

Each entry in the QSL Queue contains a **QSL** box. By default, each entry's box is checked, which *enables* the entry for QSL Queue operations. A QSL Queue entry whose **QSL** box is not checked will be ignored by all operations except clearing the QSL Queue. You can use the **EnableAll** and **DisableAll** function to quickly enable or disable all QSL Queue entries. Disabling a QSL Queue entry is useful when you're not yet ready to send a QSL card or label, perhaps because you expect to make additional QSOs with the station and want to print them all on a single card or label.

Click the QSL Queue panel's **Clear** button will remove each QSO from the QSL Queue:

- if the QSL Via panel is set to QSL cards, QSL labels, 2-column labels, 3-column labels, ADIF file, or tab-delimited file, each QSO's QSL Rcvd item is set to its value at the time the QSO was added to the QSL Queue
- if the QSL Via panel is set to eQSL.cc and the QSO's eQSL Rcvd item is set to R, its eQSL Rcvd item is cleared
- if the QSL Via panel is set to LoTW and the QSO's LoTW Rcvd item is set to R, its LoTW Rcvd item is cleared

QSLing with Paper: Printing QSL cards, Reply cards, QSL labels, Envelopes, and Address Labels

Printing Cards, Labels, Envelopes and Address Labels from the QSL Queue

QSL cards and Reply cards can be printed either one card per page, or four cards per page, with dimensions you specify; a printer capable of handling card stock is recommended. Information to be printed on each QSL card can be specified on the configuration window's QSL Cards tab; you can optionally specify a background image to be printed on each QSL card. QSL cards and Reply cards are sorted in DXCC prefix order. Cards for stations within the continental US (DXCC prefix K) are additionally sorted in call district order, with 1-letter prefix 4 area callsigns preceding 2-letter prefix 4 area callsigns. When printed four cards per page, each page can be thought of as having four quadrants, with quadrant1 in the upper left, quadrant 2 in the upper right, quadrant 3 in the lower left, and quadrant4 in the lower right. DXKeeper places QSL cards and Reply cards into quadrants in a specific order that, if maintained, avoids the need to sort the final deck by DXCC prefix after the cards are separated with a paper cutter. To achieve this order, start with the cards in quadrant 1, then append the cards in quadrant 2, then quadrant 3, and finally those in quadrant 4. If the QSL Via item contains a valid callsign, its DXCC prefix will be used for sorting purposes.

Most printers cannot print right to an edge; each printer imposes a set of margins. If the QSL card or Reply card dimensions you specify will not fit within these margins or would produce a card that is too small to contain the minimum information, DXKeeper will so inform you. Your printer's margins are depicted in the Print Preview window as shaded areas. You can optionally direct DXKeeper to ignore the printer imposed margins; this could damage your printer, so do so at your own risk.

Single labels, two-column labels, and three-column labels can be printed with QSL information and with addresses; Dimensions of each can be specified on the configuration window's QSL Labels tab and Address Labels tab. On installation, DXKeeper is pre-configured to support

- 1.1" x 3.2" (Dymo 30252) single labels
- 1" x 4" (Avery 8161 for inkjet printers, Avery 5961 for laser printers) 2-column labels.
- 1" x 2.625" (Avery 8160 for inkjet printers, Avery 5960 for laser printers) 3-column labels

You can specify QSL label dimensions in either inches or millimeters. QSL labels are also sorted in DXCC prefix order, starting with the top row of labels and proceeding down the page. As with QSL cards, If the QSL Via item contains a valid callsign, its DXCC prefix will be used for sorting purposes.

- Setting column 2 offset to 0 reduces the number of label columns per page to one
- Setting column 2 offset to 0 and setting labels per column to 1 produces one label per page; this can be used to print label information directly onto pre-printed QSL cards,

The Station Callsign printed on a QSL card, Reply card, or QSL label is taken from the QSO's station callsign item, which should specify the callsign you used over the air.

Dates are printed on QSL cards and labels using a format you specify.

While a RST_Sent item can contain up to 8 characters, QSL cards, Reply cards, Single labels, and 2-column labels only print the first 4 characters of the signal report; 3-column labels print all 8 characters of the signal report. Reply cards only print the first 4 characters of the received signal report.

When QSLing via QSL cards, Reply cards, or QSL labels, DXKeeper will by default confirm multiple QSOs with the same station on the same card or label if

- the station callsign items of each such QSO are identical
- the Via item of each such QSO are identical
- if multiple QTH's are in use, the QTH components, e.g. street, city, state, country, and postal code, of each such QSO are identical
- there is space on the cards or labels
- the Confirm Multiple QSOs per QSL box is checked

If desired, you can restrict QSL cards, Reply cards, or QSL labels to confirm exactly one QSO -- uncheck the Confirm Multiple QSOs per QSL box.

If you want outgoing QSL cards or QSL labels to bear the word "thanks!" if the QSO is already confirmed in LoTW, then check the Consider LoTW confirmations in outgoing card/label QSL? "please/thanks" decisions box.

If you want QSL cards to include a background image, select and enable an appropriate bitmap image file.

If you want QSL cards to include the QSL manager (from the QSO's Via item if this contains a valid callsign) in the confirmation line, then check the Include QSL Mgr in confirmation box. An example of a confirmation line including a QSL manager is

confirming a 2X QSO with YV1DIG via FJ/AA6YQ

If you want single labels or 2-column labels to include the QSL manager (from the QSO's Via item if this contains a valid callsign) in the confirmation line, then check the Include QSL Mgr in confirmation box. An example of a confirmation line including a QSL manager is

701NU confirms 2X QSO with AA6YQ via F6FNU

If you want 3-column labels to display the QSL manager (from the QSO's Via item if this contains a valid callsign) and the words 'pse QSL!' (unless every QSO on the card is confirmed, in which case the words 'tnx QSL!') along each label's bottom edge, then check the Include QSL Mgr & pse/tnx QSL box. To have every outgoing 3-column label display the words 'pse QSL!' unless all QSOs on the label are confirmed, enable the Outgoing QSLs request confirmation unless already confirmed option.

For QSLs to be sent via the QSL bureau, you can configure QSL cards, single labels, 2-wide labels, and 3-wide labels to include the designation [x buro] (where x is the DXCC prefix for the destination QSL bureau).

QSL substitution commands found in a QSO's QSL message item will be replaced before printing on QSL cards, Reply cards, or QSL labels. This allows you to personalize the QSL message with information about you, your QSO partner, your equipment, or conditions during the QSO..

Each **QSL Queue** entry's Sent Via item indicates whether the QSL should be sent via the QSL bureau, direct, or via EFT. You can change this routing. To print only cards or labels with a specified routing, check or uncheck the appropriate boxes in the **Process QSLs and Addresses** panel on the Main window's **QSL** tab:

- **Include QSLs to be sent via the QSL Bureau**
- **Include QSLs to be sent via Direct mail**
- **Include QSLs to be sent via Electronic File Transfer**
- **Include QSLs to be sent via Reply Card**

If you print a Reply Card for a QSO, the **Update Log** function will set that QSO's Sent Via item to 'R'. You can select different printers to be used for printing QSL cards, Reply cards, labels, and envelopes - or perform all printing with the same printer.

If you are printing QSL cards or Reply cards, then

- make sure that dimensions and QSL Information textboxes have been properly specified on the QSL Configuration window's QSL Cards tab; you can customize the QSL Information textboxes with QSL substitution commands
- on the QSL Configuration window's Printer tab, select and configure the desired printer
- load the appropriate paper into the selected printer
- on the Main window's QSL tab
 - disable any QSL Queue entries for which you don't want cards generated
 - check the **Print Preview** box in the **Process QSLs and Addresses** panel
 - click the **Print QSL Cards** or **Print Reply Cards** button
 - the **Print Preview** window displays a **Sheets** panel in the upper-right that shows the current sheet, and the total number of sheets to be printed
 - clicking the **Print Preview** window's **Copy to Clipboard** button copies the previewed image to the Windows Clipboard
 - inspect the cards to be printed by clicking the **Print Preview** window's **Next** button; if satisfied click its **Print** button

If you are printing QSL labels, then

- make sure that dimensions and fixed information have been properly specified on the QSL Configuration window's QSL Labels tab
- on the QSL Configuration window's Printer tab, select and configure the desired printer
- load the appropriate paper or labels into the selected printer
- on the Main window's QSL tab
 - disable any QSL Queue entries for which you don't want labels generated
 - if print 2-column or 3-column labels, specify the number of labels missing from the first sheet in the **Missing Labels** box
 - check the **Print Preview** box in the **Process QSLs and Addresses** panel
 - click the **Print QSL Labels** button
 - the **Print Preview** window displays a **Sheets** panel in the upper-right that shows the current sheet, and the total number of sheets to be printed
 - clicking the **Print Preview** window's **Copy to Clipboard** button copies the previewed image to the Windows Clipboard
 - inspect the labels to be printed by clicking the **Print Preview** window's **Next** button; if satisfied click its **Print** button

If the previewed QSL cards, Reply cards or QSL labels are unsatisfactory, you can make corrections to settings on the QSL Configuration window's QSL Cards tab or QSL Labels tab and then repeat the **Print QSL Cards**, **Print Reply Cards** or **Print QSL Labels** operation. If incorrect logged data **other than callsign or begin time** has been printed on any cards or labels, correct the erroneous logged data by double-clicking on a QSL Queue entry to display the associated QSO in the Main window, where you can correct the error and click the **Log** button. If a QSO has been logged with the wrong callsign or begin time,

- clear the QSL Queue by clicking the QSL tab's Clear button
- correct the erroneous logged data
- repeat the **Add Requested** and/or **Add Needed** operations you originally used to load the **QSL Queue**
- repeat the **Print QSL Cards**, **Print Reply Cards**, or **Print QSL Labels** operation.

If you intend to print envelopes or address labels, you should verify that an address is available for each entry in the **QSL Queue**. Entries shown in red font are missing an address; to specify or modify the address of a station in the **QSL queue**, double-click its entry to display DXKeeper's QSL Editor window. When you click the QSL Editor's **Save** button, any changes you've made will update both the QSL Queue entry and the logged QSO.

Click the **Create Address File** button on the Main window's QSL tab to generate a report showing the address for each station that will receive a QSL. This report can be used to double-check the addresses, and later to ensure that the correct card is placed in the correct envelope. The Report one address per callsign option determines whether the generated report will include one address for each entry in the QSL Queue, or one address for each unique callsign in the QSL Queue.

The **Address via** panel on the Main window's QSL tab determines whether addresses will be printed on envelopes, single labels, 2-column labels, or 3-column labels.

If you are printing addresses on envelopes, then

- make sure that dimensions and fixed information have been properly specified on the QSL Configuration window's Envelope tab
- indicate whether the DX station's callsign should be appended to the first line of the address
- indicate whether the DX address should be printed in upper case
- on the QSL Configuration window's Printer tab, select and configure the desired printer
- load the appropriate envelopes into the selected printer
- on the Main window's QSL tab, click the **Address Envelopes** button

If you are printing addresses on labels, then

- make sure that dimensions and fixed information have been properly specified on the QSL Configuration window's Address Labels tab
- indicate whether the DX station's callsign should be appended to the first line of the address
- indicate whether the DX address should be printed in upper case
- on the QSL Configuration window's Printer tab, select and configure the desired printer
- load the appropriate labels into the selected printer
- on the Main window's QSL tab
 - if printing 2-column or 3-column labels, specify the number of labels missing from the first sheet in the **Missing labels** box
 - click the **Address Labels** button

When you have completed the printing of all QSL cards, Reply cards, QSL labels, envelopes, and/or address labels, click the **Update Log** button on the Main window's QSL tab. For each entry in the QSL Queue, this function will locate the logged QSO from which it was generated and

- set the logged QSO's QSL sent to **Y**
- set the logged QSO's QSL date sent to the current UTC date
- if the outgoing QSL included a request for confirmation, then the logged QSO's QSL rcvd will be set to **R** unless its already set to **Y** or **V**
- remove the entry from the QSL Queue

Printing Cards, Envelopes, and Address Labels by Right-Clicking a Log Page Display Entry

If the QSL Queue is empty, right-clicking a QSO's entry in the Log Page Display and selecting the **Print QSL Card** command from the pop-up menu will immediately print a QSL card from the information in that QSO.

If the QSL Queue is empty and the Address via panel is set to Envelopes, right-clicking a QSO's entry in the Log Page Display and selecting the **Print Address on Envelope** command from the pop-up menu will immediately print that QSO's address on an envelope, along with the specified return address and airmail indicator.

If the QSL Queue is empty and the Address via panel is set to Single Labels, right-clicking a QSO's entry in the Log Page Display and selecting the **Print Address on Single Label** command from the pop-up menu will immediately print that QSO's address on a single label.

Printing Self-Addressed Envelopes and Address Labels

The **Self-addressed** panel on the Main window's QSL tab provides a **Print** button that when clicked produces a batch of self-addressed envelopes, single labels, 2-column labels, or 3-column labels. Envelopes are addressed to the return address specified on the QSL Configuration window's **Envelopes** tab using 14-point Arial font. Labels are addressed to the return address specified on the QSL Configuration window's **Address Labels** tab using 10-point Arial font. The **Count** box specifies the number of self-addressed envelopes or labels that will be printed.

- If printing self-addressed envelopes, check the airmail indication box if you want "Airmail, Par Avion" printed on these envelopes
- if printing on sheets of 2-column or 3-column labels, the **Skip** box specifies the number of labels missing from the first sheet

When you receive a QSL card, you can use the Call filter to quickly locate the logged QSO; if the QSO parameters match, click the QSO panel's **CFM** button; this will set the logged QSO's QSL card QSL rcvd to **Y** and, if Optimize for Realtime QSO Entry is checked, set its QSL card QSL date rcvd to the current UTC date.

- depressing the CTRL key while clicking the **CFM** button will also set the logged QSO's rcvd via item to **D**, meaning "received directly"
- depressing the ALT key while clicking the **CFM** button will also set the logged QSO's rcvd via item to **B**, meaning "received via the QSL bureau"

If the Self-addressed panel is set to Envelopes, right-clicking a QSO's entry in the Log Page Display and selecting the **Print Self-addressed Envelope** command from the pop-up menu will print one self-addressed envelope.

If the Self-addressed panel is set to Single labels, right-clicking a QSO's entry in the Log Page Display and selecting the **Print Self-addressed Single Label** command from the pop-up menu will print one self-addressed label.

Managing Images of Received QSL Cards

While an image of a QSL card - whether received electronically or generated by scanning a card - is typically not valid for awards, you can save it to a file, and record its pathname in the associated QSO's file item, which is accessible in the Details panel on the Main windows **Log QSOs** tab.

- If a logged QSO's file item is empty, double-clicking it will display a **Select this file** window that will enable you to navigate to the file containing the image, and select it; the pathname of the selected file will be recorded with the QSO when you click the **Save** button below the Log Page Display
- If a logged QSO's file item contains a pathname, double-clicking it will direct Windows to display the file using the application associated with the file's *type*, as indicated by its *filename extension* (e.g. .bmp or .jpg or .png)

QSLing via ADIF or tab-delimited files: Generating QSL cards via an external application or service by way of the QSL Queue

While DXKeeper can generate QSL cards, their design is utilitarian, optimized for soliciting a confirmation at the lowest cost. There are applications that allow you to design more attractive QSL cards and print them with QSL information extracted from a file of QSO data in ADIF format:

- DXQSL
- QSLCardCreator
- QSL Wizard

There may also be services that accept your uploaded QSO data in ef=<https://www.dxlabsuite.com/ADIF.htm> > ADIF format, print QSL cards using a design you create, and distribute these cards via QSL bureaus. Setting the QSL kind to ADIF file allows you to generate QSL cards using such applications and services. You can also use mail merge techniques with applications like Microsoft Word to produce QSO cards; setting the QSL kind to **tab-delimited file** allows you to generate QSL cards using such applications.

Each QSL Queue entry's Sent Via item indicates whether the QSL should be sent via the QSL bureau, direct, or via electronic file transfer. You can change this routing. To print only cards or labels with a specified routing, check or uncheck the appropriate boxes in the **Process QSLs and Addresses** panel on the Main window's **QSL** tab:

- **Include QSLs to be sent via the QSL Bureau**
- **Include QSLs to be sent via Direct mail**
- **Include QSLs to be sent via Electronic File Transfer**
- **Include QSLs to be sent via Reply Card**

To generate a file containing ADIF data for each entry in the QSL Queue,

- disable any QSL Queue entries that you don't want to include in the generated file
- set the QSL Via panel to ADIF file and click the **Save ADIF file** button on the Main window's QSL tab; in the resulting **Save ADIF QSL records** dialog, specify a folder and filename, and then click the dialog's **Save** button

The following replacements are made for each character in an exported tab-delimited field

- tab (ASCII 9) => space (ASCII 32)
- carriage return (ASCII 13) => |
- line feed (ASCII 10) => ^

DXKeeper stores the following ADIF information for each QSL Queue entry:

- Callsign of the station worked
- DXCC country code for the station worked
- UTC date at which the QSO began
- UTC time at which the QSO began
- UTC time at which the QSO ended
- QSO Frequency at specified precision
- QSO Band
- QSO Mode
- Operator Name
- RST sent
- RST rcvd
- QSL_rcvd
- QSL_via (if the Don't save non-callsign 'QSL Via' items to ADIF or tab-delimited files option is disabled, or if that option is enabled and the QSL_via item specifies a callsign)
- QSL message
- QSL route
- Satellite name
- Satellite mode
- Propagation mode
- QSO receive frequency at specified precision
- QSO receive band
- Address
- QSL_SENT_VIA
- STATION_CALLSIGN
- APP_DXKEEPER_DESTINATION_PREFIX (if QSL_via specifies a callsign, the DXCC Prefix for that callsign; otherwise, the DXCC Prefix for Callsign)
- App_DXKeeper_My_QTHID

If a QSL Queue entry's App_DXKeeper_My_QTHID specifies a valid my QTH, information from the my QTH is included in the exported ADIF record using these fields:

- MY_CITY
- MY_CNTY
- MY_CQ_ZONE
- MY_COUNTRY
- MY_GRIDSQUARE
- MY_IOTA
- MY_ITU_ZONE
- MY_LAT
- MY_LON
- MY_POSTAL_CODE
- MY_STATE
- MY_STREET
- MY_NAME
- MY_RIG
- MY_SIG
- MY_SIG_INFO
- MY_DXCC
- MY_STATE
- MY_CNTY
- APP_DXKEEPER_MY_ANT (if an antenna configuration is specified, the antenna description for the current band is exported)
- APP_DXKEEPER_MY_EMAIL fields

QSL substitution commands in a QSO's QSL message item will be replaced before being placed in the ADIF file. This allows you to personalize the QSL message with information about you, your QSO partner, your equipment, or the conditions.

To generate a file containing tab-delimited data for each entry in the QSL Queue,

- set the QSL Via panel to tab-delimited file
- disable any QSL Queue entries that you don't want to include in the generated file
- if you want the first record of the generated file to specify the caption for each field, check the **Include a header in the tab-delimited file** box in the **Process QSLs and Addresses** panel
- click the **Save TDF file** button on the Main window's QSL tab; in the resulting **Save Tab-delimited QSL records** dialog, specify a folder and filename, and then click the dialog's **Save** button.

DXKeeper stores the following tab-delimited information in the following order for each QSL Queue entry:

- Callsign of the station worked
- UTC date at which the QSO began, in the specified format
- UTC time at which the QSO began
- QSO Frequency at specified precision
- QSO Band
- QSO Mode
- RST sent
- RST received
- QSL_via (if the Don't save non-callsign 'QSL Via' items to ADIF or tab-delimited files option is disabled, or if that option is enabled and the QSL_via item specifies a callsign)
- QSL message
- QSO receive frequency at specified precision
- QSO receive band
- Propagation mode
- Satellite name
- Satellite mode
- DXCC entity name (derived from the country code)
- Name
- Transmitter power
- QTH
- Contest identifier
- Station callsign
- QSL_SENT
- QSL_RCVD
- SRX
- STX
- Station's QTH street address
- Station's QTH city
- Station's QTH county
- Station's QTH state
- Station's QTH postal code
- Station's QTH country
- Station's QTH latitude
- Station's QTH longitude
- Station's QTH grid square
- Station's QTH lota tag
- Station's QTH CQ zone
- Station's QTH ITU zone
- Station's name
- Station's rig

- Station's email address
- QSL_SENT_VIA
- STATION_CALLSIGN
- APP_DXKEEPER_DESTINATION_PREFIX (if QSL_via specifies a callsign, the DXCC Prefix for that callsign; otherwise, the DXCC Prefix for Callsign)
- Station's antenna
- Primary Administrative Subdivision
- Secondary Administrative Subdivision
- UTC time at which the QSO ended

QSL substitution commands found in a QSO's QSL message item will be replaced before being placed in the tab-delimited file. This allows you to personalize the QSL message with information about you, your QSO partner, your equipment, or the conditions.

After the ADIF or tab-delimited file has been created and processed, click the **Update Log** button on the Main window's QSL tab. This will do following for each successfully-processed entry in the QSL Queue:

- set the logged QSO's QSL sent to **Y**
- set the logged QSO's QSL date sent to the current UTC date
- if the outgoing QSL included a request for confirmation, then the logged QSO's QSL rcvd will be set to **R** unless its already set to **Y** or **V**.
- remove the entry from the QSL Queue

Any unsuccessfully-processed entries - denoted by an unchecked QSL box - will remain in the QSL Queue. Remove these by clearing the QSL Queue; their logged QSOs will continue to indicate that no outgoing QSL has been generate, so you can use an alternative QSLing strategy (e.g. printing cards or labels for direct mail).

When you receive a QSL card, you can use the Call filter to quickly locate the logged QSO; if the QSO parameters match, click the QSO panel's **CFM** button; this will set the logged QSO's QSL card QSL rcvd to **Y** and, if Optimize for Realtime QSO Entry is checked, its QSL card QSL date rcvd to the current UTC date.

- depressing the CTRL key while clicking the **CFM** button will also set the logged QSO's rcvd via item to **D**, meaning "received directly"
- depressing the ALT key while clicking the **CFM** button will also set the logged QSO's rcvd via item to **B**, meaning "received via the QSL bureau"

While reviewing your ARRL DXCC status report, you can also use the Call filter to quickly locate newly-verified QSOs, and then click the QSO panel's VFY button to set the QSL rcvd to **V**.

Confirming Reports from Shortwave Listeners (SWLs)

DXKeeper can generate QSL cards or labels that confirm reports from SWLs. To confirm such a report for a QSO, first, set the QSL Via panel to Cards, 2-column labels, or 3-column labels as desired. Then right-click on the QSO in the Log Page Display; in the popup menu, choose the **Add SWL entry to QSL Queue** option. DXKeeper will display a small **SWL Confirmation** window that prompts you for the SWL station's callsign and, optionally, a message that will appear on a QSL card or 2-column label. After you enter the SWL callsign, optionally enter the message, and click the window's **OK** button, the **SWL Confirmation** window will close, and an entry will be added to the QSL Queue. Such entries will generate QSL cards or labels when you invoke the Print QSL Cards or **Print QSL Labels** functions, as described above. Note that the QSL Queue can simultaneously contain entries that generate confirmations for QSO partners and entries that generate confirmations for SWLs.

Clicking the **SWL Confirmation** window's **Cancel** button will close the **SWL Confirmation** window without adding an entry to the QSL Queue.

While DXKeeper's **SWL Confirmation** window is visible, its Main window is locked.

QSLing via eQSL.cc: uploading QSLs from the QSL Queue, and synchronizing confirmed QSLs, and downloading eQSL images

The functions described in this section are available on the Main window's QSL tab when you set the the QSL Via panel to eQSL.cc.

Uploading QSOs to eQSL.cc via the QSL Queue

To upload the contents of the QSL Queue to eQSL.cc

- disable any QSL Queue entries that you don't want uploaded
- if you operate from more than one location, verify that the correct QTH Nickname is specified (or enable the Use each QSO's myQTHID as its QTH Nickname when uploading or exporting option)
- connect to the Internet and then click the **Upload to eQSL.cc** button on the Main window's QSL tab.

If you've specified a QTH Nickname, that QTH Nickname is displayed beneath the last date and time of upload; clicking this QTH Nickname will display the QSL Setup window's eQSL tab, where the QTH Nickname setting can be modified.

DXKeeper transmits the following information to eQSL.cc for each entry in the QSL Queue:

- Callsign of the station worked
- UTC date at which the QSO began
- UTC time at which the QSO began
- QSO Frequency
- QSO Band
- QSO Mode
- RST sent
- QSL message (the contents of this field will appear on the eQSL card)
- Propagation mode
- Satellite name
- Satellite mode

QSL substitution commands found in a QSO's QSL message item will be replaced before uploading to eQSL.cc. This allows you to personalize the QSL message with information about you, your QSO partner, your equipment, or the conditions.

If you have multiple station callsigns and multiple eQSL.cc accounts, you can prevent the upload of QSOs whose station callsigns don't match the currently specified eQSL.cc username by checking the Don't upload QSOs whose station callsign isn't the specified Username box. You can optionally specify an eQSL.cc QTH Nickname to select a QTH in your eQSL.cc profile for each uploaded QSO, or you can specify that each QSO's myQTHID be used to as an eQSL.cc nickname to select a QTH in your eQSL.cc profile. If not needed, leave the QTH Nickname textbox empty.

Any uploaded QSO rejected by eQSL.cc as a duplicate is treated as if it had been uploaded successfully.

After this operation completes, DXKeeper will display an **eQSL.cc Upload Report** in a browser window; any QSLs rejected by eQSL.cc will be noted in this window. The current UTC date and time will appear under the **Upload to eQSL.cc** button to remind you when you last invoked this function; this information is stored in the current log. You can now disconnect from the Internet.

For each successfully uploaded QSL Queue entry, DXKeeper will perform the following for each enabled entry in the QSL Queue:

- set the associated logged QSO's eQSL sent to **Y**
- set the associated logged QSO's eQSL date sent to the current UTC date
- set the associated logged QSO's eQSL rcvd to **R**
- remove the entry from the QSL Queue

QSLs that were disabled or not successfully uploaded will remain in the QSL Queue after the **Upload to eQSL.cc** operation. If incorrect logged data **other than callsign or begin time** is at fault, double-clicking on the QSL Queue entry to display its associated QSO in the Main window, where you can correct the error and click the **Log** button. If an incorrect callsign or begin time was logged,

- empty the QSL Queue by clicking the QSL tab's Clear button
- correct the logged data
- repeat the **Add Requested** operations you originally used to load the **QSL Queue**
- reconnect to the Internet and repeat the **Upload to eQSL.cc** operation

If you need to convey more than a few hundred QSOs to eQSL.cc, using Export to eQSL.cc will likely be faster.

Uploading QSOs to eQSL.cc by Right-clicking a Log Page Display entry

Right-clicking a QSO's entry in the Log Page Display and selecting the **Upload to eQSL.cc command** from the pop-up menu immediately uploads that QSO to eQSL.cc; if a QTH Nickname is specified, it will be conveyed with the uploaded QSO.

The **Upload to eQSL.cc** command will be disabled if the selected QSO begins with an exclamation point (!) and the Upload QSOs whose callsigns begin with ! box is unchecked.

Uploading QSOs to eQSL.cc when Logging via the Capture window

With the Upload each QSO logged via the Capture window to eQSL option enabled, logging a QSO via the Capture window immediately uploads that QSO to eQSL.cc; if a QTH Nickname is specified, it will be conveyed with each uploaded QSO.

Synchronizing: Updating Logged QSOs to Reflect Confirmation via eQSL.cc

To synchronize your log with eQSL.cc by downloading QSLs and matching them with logged QSOs,

- if desired, specify an eQSL.cc QTH Nickname to limit the downloaded QSLs to those made from a specific QTH in your eQSL.cc profile
- verify that the setting that establishes the maximum time variance for a match is correct
- click the **Sync eQSL.cc QSLs** button on the Main window's QSL tab; DXKeeper will download the eQSL.cc Inbox for the specified username and update each confirmed QSO's eQSL rcvd item.

Under certain circumstances, you may wish to manually download an eQSL.cc Inbox and use the **Sync eQSL.cc QSLs** function to process its contents; to do so, check the Prompt the user to specify a file containing the already-downloaded contents of an eQSL.cc Inbox box before invoking **Sync eQSL.cc QSLs**. To manually download an eQSL.cc Inbox, log in to eQSL.cc and then navigate to <http://www.eqsl.cc/qslcard/DownloadInbox.cfm>.

The **Sync eQSL.cc QSLs** function remembers the date and time at which the last QSL reported was uploaded to eQSL.cc; this date and time is stored in the current log and shown beneath the **Sync eQSL.cc QSLs** button. When activated, this function directs eQSL.cc to supply only newly-arrived QSLs, thereby minimizing the amount of information to be downloaded and inspected. You can modify this date and time by double-clicking it; you'll be prompted to specify a new date and time, which will default to the date and time before the most recent invocation of the **Sync eQSL.cc QSLs** function after starting DXKeeper. Alternatively, you can force all QSLs to be downloaded and inspected by depressing the **CTRL** key while clicking the **Sync eQSL.cc QSLs** button.

A logged QSO will be confirmed if it matches a downloaded QSL:

- the callsigns are identical
- the bands are identical
- the modes are identical
- the difference between start times must be less than the maximum time variance for a match setting

For each confirmed QSL, DXKeeper will set the logged QSO's eQSL rcvd to **Y** and its eQSL date rcvd to the current UTC date. Any errors encountered while inspecting the downloaded QSLs -- including QSLs that match no QSO in the current log -- will be displayed in an error report.

Each logged QSO's eQSL Member item indicates how the QSO's callsign participates in eQSL:

- **N** - not known to participate
- **Y** - known to participate
- **A** - known to participate, authenticity guaranteed

You can direct DXKeeper to update the eQSL Member item of each QSO in the Log Page Display.

When the **Sync eQSL.cc QSLs** function completes, DXKeeper displays a report showing

- any errors encountered while inspecting the downloaded QSLs; each is preceded by Error:
- any confirmations of desired (per your specified WAZ award objectives) but previously unconfirmed CQ zones, CQ zone-modes, or CQ zone-bands

If reports from Shortwave Listeners (SWLs) were received, a report containing them will be displayed.

After all logged QSOs have been updated, the Log Page Display is filtered to show only QSOs confirmed via eQSL.cc, and sorted in ascending or descending order of eQSL date rcvd ; the QSOs most recently confirmed via eQSL.cc will thus appear at the bottom of the Log Page Display. The **Filter** and **Sort** panel's captions will indicate how the Log Page Display is being filtered and sorted respectively. Depressing the **CTRL** key while clicking the **Filter** panel's **X** button both resets the Log Page Display filter and sorts the Log Page Display in ascending or descending order of each QSO's Begin time.

If you modify the callsign, QSO begin, band, mode, or submode item of a logged QSO that has already been uploaded to eQSL, the **Sync eQSL.cc QSLs** function will be unable to locate the QSO in your log to update it; to correct this situation,

1. right-click the Log Page Display entry for the QSO, and select **Upload to eQSL.cc** from the popup menu
2. wait a few minutes for eQSL.cc to process your submitted QSO
3. on the Main window's **QSL** tab,
 - set the **QSL Via** panel to **eQSL.cc**
 - click the **Sync eQSL.cc QSLs** button

To be prompted when you modify the callsign, QSO begin, band, mode, or submode item of a logged QSO that has already been uploaded to eQSL, enable the Prompt on change to logged QSO already uploaded to eQSL.cc and/or LoTW option.

If a QSO has been confirmed via eQSL.cc, you can display an image of the QSL by clicking the **Display** button in the **eQSL.cc** sub-panel on the **Online QSL** panel on the **Main** window's **Log QSOs** tab. If the Retain eQSL images option is enabled, then DXKeeper will save downloaded images in its **eQSL Images** folder; when you click the Display button, DXKeeper will check for an already-downloaded image and display it if present, rather than download the image from eQSL.cc. Depressing the **CTRL** key while clicking the Display button directs DXKeeper to download a new image, replacing the already-downloaded image if one exists.

- eQSL.cc can be configured to provide QSL images in JPG or PNG format; DXKeeper will place the downloaded image in a file whose extension is .jpg or .png as a function of the URL provided by eQSL.cc.
- if Retain eQSL images is enabled, when you click the Display button, DXKeeper will check for an already-downloaded .jpg file and display its contents if present; if no .jpg issue is found, DXKeeper will check for an already-downloaded .png file and display its contents if present.

Clicking the **b>Download Images** button will enable Retain eQSL images, and download QSL images for all QSOs in the Log Page Display that have been confirmed via eQSL.cc and for which no QSL image is present in DXKeeper's **eQSL Images** folder. Depressing the **CTRL** key while clicking **Download Images** will download QSL images for all QSOs in the Log Page Display that have been confirmed via eQSL.cc whether or not a QSL image is already present in DXKeeper's **eQSL Images** folder. At the request of eQSL.cc management, images will be downloaded at the rate of 4 per minute; if there are more than 5 QSOs in the Log Page Display, DXKeeper will display the estimated time required and ask you to confirm before proceeding to download images.

QSLing via LoTW: uploading QSLs from the QSL Queue, verifying uploads, and synchronizing confirmed QSLs

The functions described in this section are available on the Main window's QSL tab when you set the QSL Via panel to LoTW.

When configured for use with LoTW and connected to the internet with TQSL version 2.0 or later installed, DXKeeper will on startup inform you if

- your Callsign Certificate will expire within the next 60 days, in which case you should Run TQSL and request a renewal
- a new Configuration Data file is available, in which case you should Run TQSL and initiate an update
- a new version of TQSL is available

Each QSO uploaded to LoTW must at minimum include a Callsign, Band, Mode, and Begin date and time; satellite QSOs must specify a Propagation mode of **SAT**, as well as a Satellite Name. The following information is uploaded:

- Callsign of the station worked
- UTC date at which the QSO began
- UTC time at which the QSO began
- QSO Mode (mapped to modes accepted by LoTW)
- QSO Frequency
- QSO Band
- QSO receive frequency
- QSO receive band
- Satellite name
- Propagation mode

LoTW accepts only QSOs with specified modes; before uploading QSOs with a data mode not yet accepted by LoTW, configure TQSL to map this mode to DATA.

There are three ways to upload QSOs to LoTW:

1. Add QSOs to the QSL Queue, and then invoke the Upload to LoTW function.
2. Right-click an entry in the Log Page Display, and select the Upload to LoTW command
3. With the Upload each QSO logged via the Capture window to LoTW option enabled, log a QSO via the Capture window

Uploading QSOs to LoTW via the QSL Queue

Because QSOs submitted to LoTW QSOs must be digitally encrypted before transmission to the ARRL, it is more efficient wait until a batch of QSLs are needed before uploading them. Batches of outgoing QSLs can be automatically assembled in the QSL Queue. From there, they can be uploaded, and then used to update your log to indicate the operation's success. You can optionally enable automatic uploading of QSOs logged via the Capture window by checking the Upload each QSO logged via the Capture window to LoTW box. You can also upload a QSO to LoTW by right-clicking its entry in the Log Page Display and selecting the Upload to LoTW command.

To upload QSOs in the QSL Queue to LoTW,

- disable any QSL Queue entries that you don't want uploaded
- confirm that the LoTW station location and station callsign shown beneath the **Upload to LoTW** button on the Main window's **QSL** tab are consistent with the geographic location from which you made each of the QSOs in the QSL queue, and the callsign that you used over the air when making those QSOs; if not, select the appropriate station location and station callsign in the **TQSL** panel on the QSL Configuration window's **LoTW** tab before proceeding.
- click the **Upload to LoTW** button on the Main window's **QSL** tab; if TQSL version 2.0 or later is installed, DXKeeper will create an ADIF file containing the enabled QSL Queue entries, invoke TQSL using the specified TQSL full pathname and TQSL station location, and direct TQSL to digitally sign (encrypt) your QSOs and upload them over the internet to LoTW.
 - if the callsign certificate associated with the selected LoTW station location is password-protected, TQSL's **Enter password** dialog box will appear; enter the password that unlocks the certificate's private key, and then click the **OK** button; to remove the password from a callsign certificate so that TQSL does not prompt you for a password each time you upload QSOs to LoTW, see Removing Password Protection from a Callsign Certificate.
 - DXKeeper's **LoTW Upload** dialog box will report progress as each QSO in the QSL Queue is processed

The **Upload to LoTW** function will not submit QSOs that would be rejected by LoTW or that are inconsistent with the selected LoTW station location; the QSL Queue entries of such QSOs will be disabled, and will remain in the QSL Queue at the completion of the **Upload to LoTW** operation:

- Any QSO whose Propagation Mode item is set to **SAT** but whose Satellite Name item is unspecified
- Any QSO that specifies a Satellite Name item but whose Propagation Mode item is not set to **SAT**
- Any QSO whose Station Callsign item is inconsistent with the Station Callsign specified in the selected LoTW station location
- Any QSO that references a myQTH that specifies an LoTW Station Location that doesn't match the selected LoTW station location

If the selected LoTW station location specifies a station callsign of [NONE], the **Upload to LoTW** operation will not upload any of the entries in the QSL Queue; it will disable every entry in the QSL Queue.

The UTC date and time shown immediately below the **Upload to LoTW** button indicate when you last uploaded QSOs to LoTW; this information is stored in the current log.

At the completion of the **Upload to LoTW** operation, DXKeeper will display

- a report listing any QSL Queue entries not submitted to LoTW with an explanation for this inaction.
- an **LoTW Upload** dialog box bearing the response from TQSL for those QSOs that were submitted to LoTW. If this response is not "all QSOs submitted were signed and uploaded", inspect the associated message to understand the problem, correct it, and invoke **Upload to LoTW** again.

DXKeeper will perform the following actions for each enabled entry in the QSL Queue that was successfully uploaded to LoTW:

- set the associated logged QSO's LoTW sent to **U**, reflecting the fact that the QSO has been uploaded, but its individual acceptance by LoTW is unknown.
- set the associated logged QSO's LoTW date sent to the current UTC date
- set the associated logged QSO's LoTW rcvd to **R**
- remove the entry from the QSL Queue

QSOs that were disabled or not successfully uploaded will remain in the QSL Queue after the **Upload to LoTW** operation.

If you've configured DXKeeper to use TQSL version 1.14 or later, QSOs that have already been uploaded to LoTW and not subsequently changed (e.g. by correcting the band or by specifying a Gridsquare in your Station Location) will not be uploaded to LoTW, and will prevent any other QSOs in the QSL Queue from being uploaded. TQSL refers to such QSOs as **duplicates**, by which it means "QSOs already uploaded to LoTW". If you have good reason to re-upload a QSO that's already been uploaded but not subsequently changed, enabled the Permit upload of QSOs already uploaded to LoTW option before initiating an upload.

Depressing the **CTRL** key while clicking the **Upload to LoTW** button will direct DXKeeper to invoke the Check LoTW Queue function after QSOs have been submitted to LoTW.

Uploading QSOs to LoTW by Right-clicking a Log Page Display entry

Right-clicking a QSO's entry in the Log Page Display and selecting the **Upload to LoTW** command from the pop-up menu immediately uploads that QSO to LoTW using the Station Location specified by the QSO's myQTH ID item; if the myQTH doesn't specify a Station Location, or if the QSO doesn't specify a myQTH ID item, then the QSO is uploaded using the LoTW station location and station callsign specified in the **TQSL** panel on the QSL Configuration window's **LoTW** tab.

The **Upload to LoTW** command will be disabled if the selected QSO begins with an exclamation point (!) and the Upload QSOs whose callsigns begin with ! box is unchecked.

Uploading QSOs to LoTW when Logging via the Capture window

With the Upload each QSO logged via the Capture window to LoTW option enabled, logging a QSO via the Capture window immediately uploads that QSO to LoTW using the Station Location specified by the QSO's myQTH ID item; if the myQTH doesn't specify a Station Location, or if the QSO doesn't specify a myQTH ID item, then the QSO is uploaded using the LoTW station location and station callsign specified in the **TQSL** panel on the QSL Configuration window's **LoTW** tab.

Synchronizing: Updating Logged QSOs to Reflect Their Acceptance and Confirmation by LoTW

LoTW places submitted QSOs in a Queue that is processed in "first-come, first-served" order, typically successfully within a few minutes unless a contest has recently been completed. The ARRL provides a web page that displays the approximate duration of the LoTW Queue as of the beginning of the current hour and each of the 11 previous hours. Clicking the **Check LoTW Queue** button will download this web page, extract the estimated queue duration for the current hour, and display it immediately beneath the **Check LoTW Queue** button for the remainder of the current hour; letting the mouse cursor hover over this estimated duration for a second or three will display an explanatory popup containing both the estimated duration and the time at which it was estimated. At the end of the current hour, the displayed duration estimate will be cleared. Depressing the CTRL key while clicking the Check LoTW Queue button will direct your default web browser to display the entire LoTW Queue Status web page.

After waiting an appropriate interval, verify that the uploaded QSLs were accepted by connecting to the Internet and clicking the **Sync LoTW QSOs** button. This will direct LoTW to download all *newly-accepted* QSOs, where *newly-accepted* is with respect to the last time you invoked **Sync LoTW QSOs**; this date and time is stored in the current log and shown beneath the **Sync LoTW QSOs** button. Logged QSOs whose LoTW sent is set to **U** will have that status update to **Y**, reflecting acceptance by LoTW. The UTC date and time that the last uploaded QSO was accepted will appear under the **Sync LoTW QSOs** button; this information is stored in the current log.

QSOs not accepted by LoTW will remain in the log with their LoTW sent set to **U**; you can filter the Log Page Display to show such QSOs by clicking the LoTW button in the Main window's **Filter** panel.

If you find such QSOs, check your LoTW account to determine whether they've simply not yet been processed, or been processed and generated errors. After correcting any erroneous QSOs

- set each QSO's LoTW sent to **R**
- repeat the **Add Requested** operations you originally used to load the QSL Queue
- connect to the Internet and repeat the **Upload to LoTW** operation
- repeat the **Sync LoTW QSOs** operation

You can modify the date and time shown beneath the **Sync LoTW QSOs** button double-clicking it; you'll be prompted to specify a new date and time. The next invocation of **Sync LoTW QSOs** will then direct LoTW to download all QSOs *newly-accepted* after the date and time you specified.

If you depress the CTRL key while invoking the **Sync LoTW QSOs** operation, DXKeeper will direct LoTW to download *all* accepted QSOs, and the update logged QSOs to reflect their acceptance as described above. If you depress the ALT key while invoking the **Sync LoTW QSOs** operation, DXKeeper will set the Select item of each accepted QSO to 'Y'. This can be used to identify any QSOs in your log that are not shown as accepted by LoTW. The ALT and CTRL keys can be simultaneously depressed while invoking the **Sync LoTW QSOs** to check for acceptance of all QSOs.

LoTW marks an uploaded QSO as confirmed if your QSO partner also uploads his or her QSO information to LoTW, and

- the callsign in each uploaded QSO matches the station callsign of the other, including portable identifiers
- the modes in each upload QSO belong to the same Mode Group (CW, DATA, IMAGE, PHONE)
- the dates and times in each uploaded QSO are within 30 minutes of each other
- for terrestrial QSOs, each uploaded QSO's band and RX band must match the values of the other QSO (band = band, RX band = RX band), or must match the opposite values of the other QSO (band = RX band, RX band = band)
- for satellite QSOs, the propagation mode in each uploaded QSO must be SAT, and the satellite names must be identical

If more than one copy of a QSO reported by LoTW in response to the **Sync LoTW QSOs** operation is present in your log, each duplicate QSO's Select item will be set to Y.

To synchronize your log with LoTW by downloading confirmations (QSLs) and matching them with logged QSOs, click the **Sync LoTW QSLs** button on the Main window's QSL tab.

The **Sync LoTW QSLs** function remembers the date and time at which the last QSL reported was uploaded to LoTW; this date and time is stored in the current log and shown beneath the **Sync LoTW QSLs** button. When activated, **Sync LoTW QSLs** directs LoTW to supply only newly-arrived QSLs, thereby minimizing the amount of information to be downloaded and inspected. You can modify this date and time by double-clicking it; you'll be prompted to specify a new date and time, which will default to the date and time before the most recent invocation of the **Sync LoTW QSLs** function after starting DXKeeper. Alternatively, you can force all LoTW confirmations to be downloaded and inspected by depressing the **CTRL** key while clicking the **Sync LoTW QSLs** button. A logged QSO will be marked as "confirmed via LoTW" if it matches a QSL downloaded from LoTW:

- the callsigns are identical
- the bands are identical
- the modes are identical
- the start times fall within the same minute
- the station callsigns are identical (this requirement can optionally be eliminated, as discussed below)

All QSLs reported by LoTW specify a DXCC entity; QSLs downloaded from LoTW may include additional information provided by the QSLing station:

- Continent
- CQ zone
- ITU zone
- IOTA tag
- Grid 1
- Grid 2
- Grid 3
- Grid 4
- State
- County

Each logged QSO that matches a QSL downloaded from LoTW will be updated to reflect its confirmation:

- the QSO's LoTW rcvd item will be set to **Y**
- the QSO's LoTW date rcvd item will be set to the current UTC date
- the QSO's LoTW cfm item will be set to indicate additional WAS, WAZ, VUCC, and NPOTA confirmations
 - an **S** in the LoTW cfm item means that the LoTW QSL specifies a valid US state that matches the US state specified in the logged QSO (required for WAS award credit)
 - an **M** in the LoTW cfm item means that the QSO's mode exactly matches the mode uploaded to LoTW by your QSO partner (required for CQ Worked All Zones (WAZ) awards, and some ARRL Worked All States and CQ Worked All Prefixes Endorsements)
 - a **D** in the LoTW cfm item means that the QSO's mode and the mode uploaded to LoTW by your QSO partner don't exactly match, but are both considered to be digital modes for CQ Worked All Zones(WAZ
 - a **G** in the LoTW cfm item means that the LoTW QSL specifies a valid grid square that matches the grid 1 item specified in the logged QSO (required for VUCC award credit)
 - a **2** in the LoTW cfm item means that the LoTW QSL specifies a valid grid square that matches the grid 2 item specified in the logged QSO (required for VUCC award credit)
 - a **3** in the LoTW cfm item means that the LoTW QSL specifies a valid grid square that matches the grid 3 item specified in the logged QSO (required for VUCC award credit)
 - a **4** in the LoTW cfm item means that the LoTW QSL specifies a valid grid square that matches the grid 4 item specified in the logged QSO (required for VUCC award credit)
 - an **I** in the LoTW cfm item means that the LoTW QSL specifies a valid IOTA designator that matches the IOTA item specified in the logged QSO
 - an **N** in the LoTW cfm item means that the LoTW QSL specifies park codes that match each of the park codes specified in the logged QSO's user item whose caption is NPOTA (required for NPOTA award credit)
 - a **Z** in the LoTW cfm item means that the LoTW QSL specifies a valid CQ zone that matches the CQ zone item specified in the logged QSO (required for WAZ award credit)

Right-clicking a QSO in the Log Page Display and selecting the **Update from LoTW** menu item performs the Sync LoTW QSLs operation on the selected QSO; this provides a quick way to update a QSO's LoTW cfm item after your QSO partner has re-uploaded the QSO with additional or corrected mode, US State, grid square, national park, or CQ zone information.

Clicking the **Update from LoTW** button on the Main window's QSL tab performs the Sync LoTW QSLs operation on every QSO in the Log Page Display. This operation should only be invoked after re-uploading QSOs that LoTW may not consider "new", and thus would not be updated by the **Sync LoTW QSOs** or **Sync LoTW QSLs** operation -- for example, uploading QSOs with the Permit uploaded of QSOs already uploaded to LoTW option enabled. **Update from LoTW** should not be used when the Log Page Display contains more than 100 QSOs; instead, depress the CTRL key and invoke **Sync LoTW QSLs**, as this will complete more rapidly.

If the Sync LoTW QSLs or Update from LoTW function encounter a QSO with one or more items that don't match the information reported by LoTW, that QSO's Select item will be set to 'Y'.

Any errors encountered while inspecting the downloaded QSLs will be displayed in a results report. QSLs that match no QSO in the current log are reported as errors if the Report unmatched QSLs as errors box is checked; this setting defaults to unchecked, and is maintained independently for each log.

If the Subdivisions box is checked, any LoTW confirmation with a station in the US, Hawaii, or Alaska that does not specify a valid US state will be reported.

If band or Sat boxes are checked in the VUCC Panel, any LoTW confirmation with a station on a band sought for VUCC (or with a propagation mode set to Satellite if the Sat box is checked) will be reported under any of these conditions:

- the LoTW QSL does not specify a grid square, or specifies one or more invalid grid squares
- the LoTW QSL specifies one or more grid squares that don't match any grid square specified in the logged QSO
- the LoTW QSL does not specify one or more grid squares specified in the logged QSO

Each LoTW QSL is compared with its matching logged QSO. Information reported by LoTW that is not present in the logged QSO will be automatically added unless it is inconsistent with the call sign; for example, a logged QSO missing a lota tag will be updated with the lota tag contained in its matching QSL, but a QSO with AA6YQ missing a CQ zone will not be updated with a CQ zone of 6. The comparison process compensates for syntactic differences; `eu1` and `EU-001` are considered identical, for example. If the a logged 4-character gridsquare matches the first 4 characters of the matching QSL's 6-character gridsquare, then the logged QSO will be updated with the 6-character gridsquare. When information reported by LoTW is inconsistent with the information contained in the QSO's matching QSL, however, the conflict is resolved as specified in the Handling of LoTW detail inconsistencies setting, which provides four choices

- always replace the logged data with the LoTW QSL data
- always preserve the logged data, ignoring the LoTW QSL data
- always preserve the logged data, ignoring the LoTW QSL data, and describe each inconsistency in the report displayed when the Sync LoTW QSLs or Update from LoTW operation completes
- display a dialog presenting the logged data and the LoTW QSL data so that the user can choose (the default setting)

If either the LoTW QSL or the logged QSO specifies more than one grid square, the Sync LoTW QSLs will as described above report logged grids that are not specified in the QSL, and grids specified in the QSL that are not logged in the QSO, but will not modify the logged grids with LoTW QSL data regardless of the Handling of LoTW detail inconsistencies setting.

If you submit a DXCC application using LoTW, the QSOs confirmed via LoTW to which DXCC credit is newly granted will **not** be reported the next time that you invoke the **Sync LoTW QSLs** function unless a newly-confirmed QSO has already been granted DXCC award credit.. The **Update from LoTW** function will update your logged QSOs to reflect the granting of DXCC credit by setting their LoTW rcvd items to **V**. If a confirmed QSO to which DXCC award credit has been granted is reported by the **Sync LoTW QSLs** function, that QSO's LoTW rcvd item will be set to **V**

When the Sync LoTW QSLs or Update from LoTW function completes, DXKeeper displays a report showing

- any errors encountered while inspecting the downloaded QSLs; each is preceded by Error:
- any confirmations of desired (per your specified DXCC award objectives) but previously unconfirmed entities, entity-modes, or entity-bands
- any granting of DXCC award credit to desired (per your specified DXCC award objectives) entities, entity-modes, or entity-bands for which DXCC credit had not been previously granted
- any changes to logged QSOs made as a result of
 - resolving inconsistencies
 - adding location information newly reported by LoTW, e.g. a CQ zone
 - deducing location information from location information newly reported by LoTW, e.g. an ARRL Section from a newly reported state and county

If the resolution of inconsistencies between LoTW QSL data and logged data resulted in changes to logged data that impact Realtime Award Tracking and SpotCollector is running, DXKeeper will offer to direct SpotCollector to recompute (update the Realtime Award Tracking information for each Spot Database Entry).

After logged QSOs have been updated, the **Sync LoTW QSLs** function filters the Log Page Display to show only QSOs confirmed via LoTW, and sorts it in ascending or descending order of LoTW date rcvd. The **Filter** and **Sort** panel's captions will indicate how the Log Page Display is being filtered and sorted respectively. Depressing the **CTRL** key while clicking the **Filter** panel's **X** button both resets the Log Page Display filter and sorts the Log Page Display in ascending or descending order of each QSO's Begin time.

If you modify the callsign, QSO begin, band, mode, submode or station callsign item of a logged QSO that has already been uploaded to LoTW, the **Sync LoTW QSLs** function will be unable to locate the QSO in your log to update it; to correct this situation,

1. right-click the Log Page Display entry for the QSO, and select **Upload to LoTW** from the popup menu
2. wait a few minutes for LoTW to process the uploaded QSO
3. right-click the Log Page Display entry for the QSO, and select **Update to LoTW** from the popup menu

To be prompted when you modify the callsign, QSO begin, band, mode, submode or station callsign item of a logged QSO that has already been uploaded to LoTW, enable the Prompt on change to logged QSO already uploaded to eQSL.cc and/or LoTW option.

The **Sync LoTW QSOs** and **Sync LoTW QSLs** functions remember the acceptance and confirmation dates and times of the most-recently processed QSO and QSL respectively; these times are shown beneath their buttons. When activated, these functions direct LoTW to supply only newly-arrived QSOs or QSLs, thereby minimizing the amount of information to be downloaded and inspected. You can, however, force all QSOs or QSLs to be downloaded and inspected by depressing the CTRL key while clicking the buttons that activate these functions.

If DXKeeper is unable to download uploaded QSOs or QSLs, verify that the ARRL's LoTW web site is operational; also verify that ARRL personnel have not changed your username and/or password.

If all of your QSOs are logged with the same station callsigns from the same location in a single log file, then the above facilities are all that are required to successfully maintain synchronization between your log and LoTW; If you have logged QSOs with multiple station callsigns, from multiple QTHs, and/or in multiple log files, then the following facilities can be used to accelerate processing.

By default, LoTW will download all of your accounts QSOs or QSLs when you click **Sync LoTW QSOs** and **Sync LoTW QSLs** respectively. If your current log contains only QSOs made from a single station callsign, however, you can reduce both the download and inspection times by specifying that callsign in the Limit Sync operations to this callsign setting. This setting is maintained independently for each log; loading a new log will automatically restore the setting value you established when that log was loaded. When the setting contains no callsign, all QSOs and QSLs in your LoTW will be downloaded by **Sync LoTW QSOs** and **Sync LoTW QSLs** respectively. Here's an example:

	AA6YQ.mdb	FJ-AA6YQ.mdb	KP2-AA6YQ.mdb
Station callsigns contained in log's QSOs	KC6IGZ, N6YBG, AA6YQ	FJ/AA6YQ	KP2/AA6YQ
Limit Sync operations to this station callsign		FJ/AA6YQ	KP2/AA6YQ
Report unmatched QSLs as errors	no	yes	yes

Enabling Report unmatched QSLs as errors is only practical when downloading is limited to a single station callsign -- either because the LoTW account contains only QSOs and QSLs made with that station callsign, or because Limit QSO and QSL downloads to this callsign is set to a specific callsign, as in the FJ-AA6YQ.mdb and KP2-AA6YQ.mdb logs in the example above.

Uncertain Station Callsigns

In circumstances where you are uncertain as to the station callsign used in one or more QSOs -- for example, AA6YQ vs. AA6YQ/1 -- one approach you can take is to

- upload them all with the operator callsign set to AA6YQ
- modify them all to have an station callsign of AA6YQ/1 and upload them again

QSOs submitted by your QSO partners will match one or the other.. By checking the Exclude station callsign when matching QSOs & QSLs to logged QSOs box, your QSOs will be properly confirmed when you run the **Sync LoTW QSLs** function.

Computer is not connected to the Internet

If your computer is not connected to the Internet but you have access to an Internet connection from another PC, check the PC has no internet connection box. When you click the **Prep LoTW upload** button, DXKeeper will invoke TQSL as described above to generate a signed (.tq8) file, and then display the name of this file so you can move it to an internet-connected PC and manually upload it to LoTW. After this upload is accomplished, click the **Update Log** button; DXKeeper will then perform the following for each enabled entry in the QSL Queue:

- set the associated logged QSO's LoTW sent to **U**, reflecting the fact that the QSO has been uploaded, but its individual acceptance by LoTW is unknown.
- set the associated logged QSO's LoTW date sent to the current UTC date
- set the associated logged QSO's LoTW rcvd to **R**
- remove the entry from the QSL Queue

With the PC has no internet connection box checked, invoking the Sync LoTW QSO, Sync LoTW QSL, or Update from LoTW functions will result in DXKeeper prompting you to manually query LoTW from an internet-connected PC and then move the file containing the query results to a specified file on your PC. When you click the OK button, DXKeeper will process the query results as if they had been directly downloaded from LoTW.

QSLing via Club Log

Before using DXLab's Club Log automation for the first time, specify your email address, callsign, and Club Log password on the QSL Configuration window's **Club Log** tab. The functions described in this section are available on the Main window's **QSL** tab when you set the QSL Via panel to Club Log.

Uploading a Batch of QSOs to Club Log

Clicking the **Club Log operations** panel's **Upload to Club Log** button will upload all logged QSOs whose Station_Callsign items matches the specified Club Log Callsign and that have never before been uploaded to Club Log, and whose uploads are not "prohibited" by their Club Log Sent items being set to **N**.

- To instead upload all QSOs whose Station_Callsign items match the specified Club Log Callsign and whose uploads are not "prohibited" by their Club Log Sent items being set to **N** - whether or not they've already been uploaded to Club Log - depress the CTRL key while clicking the **Upload to Club Log** button
- To instead upload all QSOs in the Log Page Display whose Station_Callsign items match the specified Club Log Callsign - no matter what their Club Log Sent items specify - depress the ALT key while clicking the **Upload to Club Log** button
- The date and time shown beneath the **Upload to Club Log** button will be updated to show the time at which this operation was initiated; its only purpose is to provide a reminder to the user.

QSOs with callsigns that begin with an exclamation point (!) are not uploaded to Club Log unless the Upload QSOs whose callsigns begin with ! box is checked - in which case the ! is removed from the callsign before it is sent to Club Log.

Club Log accepts QSOs on these bands.

If more than 5000 QSOs will be uploaded, DXKeeper automatically segments the action into files of 5000 QSOs; as Club Log limits the number of queued files to 10, a maximum of 50,000 QSOs can be submitted via the **Upload** button. Checking the Slow net box segments the action into groups of 250 QSOs, ensuring delivery when uploading via a slow internet connection; with this option enabled, a maximum of 2500 QSOs can be submitted via the **Upload** button. To submit larger numbers of QSOs to Club Log, use the Export ADIF for Club Log function to generate an ADIF file, and then upload that file to Club Log.

Uploading a QSO to Club Log by Right-clicking a Log Page Display Entry

Right-clicking a QSO's entry in the Log Page Display and selecting the **Upload to Club Log: C** command from the pop-up menu immediately uploads that QSO to Club Log using the station callsign C.

The **Upload to Club Log** command will be disabled if the selected QSO's callsign begins with an exclamation point (!) and the Upload QSOs whose callsigns begin with ! box is unchecked; if the Upload QSOs whose callsigns begin with ! box is checked, the ! is removed from the callsign before it is sent to Club Log.

Uploading QSOs to Club Log as they are Logged

You can configure DXKeeper to automatically upload each QSO to Club Log when it is initially logged via the Capture window or via the Main window's **Log QSOs** tab.

QSOs with callsigns that begin with an exclamation point (!) are not uploaded to Club Log unless the Upload QSOs whose callsigns begin with ! box is checked - in which case the ! is removed from the callsign before it is sent to Club Log.

Items Uploaded to Club Log

The following items are included with each QSO uploaded to Club Log.

- call
- DXCC
- QSO begin
- freq
- band
- rx band
- mode
- grid 1
- grid 2
- grid 3
- grid 4
- comment
- operator
- propagation mode
- sat_name
- rst_sent
- rst_rcvd
- CQZ
- IOTA
- QSL sent
- QSL rcvd
 - if the value is **E** or **B** or **M**, uploads the value **V**
 - if the value is **S**, uploads the value **Y**
 - if the value is **X**, uploads the value **I** - unless LoTW QSL rcvd is set to **Y** or **S** or **V**, in which case no value is uploaded
- date sent
- date rcvd

- LoTW QSL rcvd
 - if the value is **S**, uploads the value **Y**
 - if the value is **X**, uploads the value **I** - unless QSL rcvd is set to **Y** or **V** or **E** or **B** or **M**, in which case no value is uploaded)
- eQSL QSL rcvd
 - if the value is **X**, uploads the value **I** - unless QSL rcvd is set to **Y** or **V** or **E** or **B** or **M**, in in which case no value is uploaded)
- Credit_Granted
- IOTAVerified/li>
 - VUCCVerified
- WASVerified
- WAZVerified
- WPXVerified

Deleting a QSO from Club Log

Right-clicking a QSO's entry in the Log Page Display and selecting the **Delete from Club Log** command immediately directs Club Log to remove that QSO from your account.

Synchronizing: Updating Logged QSOs to Reflect their Confirmation via Club Log

Clicking the **Club Log operations** panel's **Sync Club Log QSLs** button will direct Club Log to report all confirmations created on or after the date shown beneath the **Sync Club Log QSLs** button. DXKeeper will direct Club Log to report all such confirmed QSOs. Each reported QSO's Club Log Rcvd item will be set to **Y**, and the date shown beneath the **Sync Club Log QSLs** button will be updated to the current date.

- Depressing the CTRL key while clicking the **Sync Club Log QSLs** button will direct Club Log to report all confirmations, and set each confirmed QSO's Club Log Rcvd item to **Y**.
- Double-clicking the date beneath the **Sync Club Log QSLs** button will display the **Club Log QSL Synchronization** window, which will enable you to specify a date of your choosing.

Club Log confirms QSOs on these bands.

Requesting a Confirmation via Club Log

If your QSO partner has configured Club Log to accept confirmation requests, you can log in to your Club Log account and request confirmation of an uploaded QSO that matches what your QSO partner uploaded.

- Clicking the **Club Log operations** panel's **Home** button will direct your web browser to display the Club Log home page.
 - Log in to your Club Log account
 - Select **Log Search** from the **Tools** menu along the left side of the Club Log home page
 - On the **Log Search** page that appears, specify the callsign of the **Log to search**
 - If one or more QSOs with the specified callsign have been confirmed, click the **Request QSL Card** button
- After requesting a confirmation via Club Log, select the QSO in DXKeeper's **Log Page Display**, and click the **QSL** panel's **OQRS** button to indicate that you have requested its confirmation via an electronic QSLing service.

Using the Main window's **Log QSOs** tab to modify any item of a QSO whose Club Log status is set to **Y** will change the QSO's Club Log status to **M**.

Processing Inbound OQRS Requests from Club Log

If you receive many requests for confirmations, accepting OQRS requests will reduce the amount of incoming postal mail containing QSL cards, self-addressed envelopes, and small bills for postage. This **Inbound OQRS** service makes it easy to populate DXKeeper's QSL Queue with OQRS requests for confirmation via QSL cards/labels, eQSL.cc, and/or LoTW. Your PayPal account will be credited with funds for postage and return envelopes, and with donations.

Clicking the **Club Log operations** panel's **Inbound OQRS** button directs Club Log to report all new confirmation requests received since the date-and-time that the **Inbound OQRS** button was last clicked, which is shown beneath the **Inbound OQRS** button. Each confirmation request received will be matched with a logged QSO, using the +/- 15 minutes matching rule employed by Club Log. For each logged QSO that matches an incoming confirmation request,

1. if the Inbound OQRS sub-panel's Set 'QSL Sent' to 'R' box is checked and the logged QSO's QSL Sent item is not set to **N** or **I**, or QSL Sent is set to **Y** but QSL Sent Via is not set to **B** or **D**,
 - the QSL Sent item is set to **R**
 - the QSL Sent Via item to **B** (for *bureau*) or **D** (for *direct*) as indicated in the confirmation request
2. if the Inbound OQRS sub-panel's Set 'eQSL QSL Sent' to 'R' box is checked and the logged QSO's eQSL QSL Sent item is not set to **N**, **I**, **U**, or **Y**, the eQSL QSL Sent item is set to **R**
3. if the Inbound OQRS sub-panel's Set 'LoTW QSL Sent' to 'R' box is checked and the logged QSO's LoTW QSL Sent item is not set to **N**, **I**, **U**, or **Y**, the LoTW QSL Sent item is set to **R**
4. the address item is set to the postal address specified in the confirmation request (**note**: addresses specified in UTF-8 Unicode will be ignored)
5. the email item is set to the email address specified in the confirmation request
6. any payment or donation information specified in the confirmation request is appended to the contents of the comment item

After each logged QSO matching a confirmation has been updated, a report listing confirmation requests that contained errors or did not match a logged QSO will be displayed, and the date-and-time shown beneath the **Inbound OQRS** button will be updated; this updated date-and-time is stored in the current log file.

With the QSL Sent, eQSL QSL Sent, and LoTW QSL Sent items of each matched QSO set as specified by the Inbound OQRS sub-panel checkboxes, confirmations requests can be fulfilled by

1. setting the QSL Via panel to Cards, Labels, ADIF file, tab-delimited file, eQSL.cc, or LoTW
2. invoking the Add Requested function to populate the QSL Queue
3. printing outgoing QSL cards or labels and their envelopes or address labels, uploading confirmations to eQSL.cc, or confirmations to LoTW

Inbound OQRS Variations

- Depressing the **Ctrl** key while clicking the **Inbound OQRS** button directs Club Log to report all confirmation requests, and update matching logged QSOs as described above.
- Depressing the **Alt** key while clicking the **Inbound OQRS** button displays a file selector with which you can choose an ADIF file containing **Inbound OQRS** requests that you manually downloaded from Club Log; DXKeeper will process the requests in the file you select as described above.
- Clicking the date-and-time displayed immediately below the **Inbound OQRS** button displays a window with which you can modify the date-and-time that will be used when the **Inbound OQRS** function is next invoked.

QSLing via QRZ

Before using DXLab's QRZ automation for the first time,

1. obtain a QRZ XML subscription; this is required to enable interoperation with DXKeeper via QRZ's programmatic interface
2. if you don't have a QRZ logbook for your current primary station callsign, click **My Logbook** in the dropdown menu that appears when you click on your callsign in the upper-right corner of your QRZ web page, and then click the **Settings** button in the upper-right corner of your QRZ Logbook web page; in the **Settings** window that appears,
 - o in the **Logbook Info** section,
 - set the **Start Date** to be as early as the earliest QSO in your log
 - set the **End Date** to be an appropriately distant date in the future
 - o click the **QRZ Logbook API** section's **Show** button to reveal your **Logbook API Key**
3. in the QRZ Logbook Selection panel on DXKeeper's **QSL Configuration** window's **QRZ** tab
 - o click the **New** button
 - o in the **New QRZ Logbook Station Callsign and API Key** window that appears, specify your **Station Callsign** and **Logbook API Key**, and then click the **OK** button

If you make (or made) QSOs with more than one station callsign, repeat steps 2 and 3 above for each station callsign.

The functions described in this section are available on the Main window's QSL tab when you set the the QSL Via panel to QRZ.

Uploading QSOs to QRZ

When a QSO is uploaded to QRZ,

- the QSO's QRZ Sent item is set to **Y**
- the QSO's QRZ date sent item is set to the current date
- the QSO's QRZ LogID item is set to a unique logid generated by QRZ

Uploading a Batch of QSOs to QRZ

Clicking the **QRZ operations** panel's **Upload to QRZ** button will upload all logged QSOs whose Station_Callsign items match the selected QRZ Logbook and that have never before been uploaded to QRZ, and whose uploads are not "prohibited" by their QRZ Sent items being set to **N**.

- To instead upload all QSOs whose Station_Callsign items match the selected QRZ Logbook and whose upload is not "prohibited" by their QRZ Sent items being set to **N** - whether or not they've already been uploaded to QRZ, depress the CTRL key while clicking the **Upload to QRZ** button
- To instead upload all QSOs in the Log Page Display whose Station_Callsign items match the selected QRZ Logbook - no matter what their QRZ Sent items specify - depress the ALT key while clicking the **Upload to QRZ** button
- The date and time shown beneath the **Upload to QRZ** button will be updated to show the time at which this operation was initiated; its only purpose is to provide a reminder to the user.

QSOs with callsigns that begin with an exclamation point (!) are not uploaded to QRZ unless the Upload QSOs whose callsigns begin with ! box is checked - in which case the ! is removed from the callsign before it is sent to QRZ.

Uploading a QSO to QRZ by Right-clicking a Log Page Display Entry

Right-clicking a QSO's entry in the Log Page Display and selecting the **Upload to QRZ: C** command from the popup menu immediately uploads that QSO to QRZ using the station callsign C.

The **Upload to QRZ** command will be disabled if the selected QSO begins with an exclamation point (!) and the Upload QSOs whose callsigns begin with ! box is unchecked; ; if the Upload QSOs whose callsigns begin with ! box is checked, the ! is removed from the callsign before it is sent to QRZ.

Uploading QSOs to QRZ as they are Logged

You can configure DXKeeper to automatically upload each QSO to QRZ when it is initially logged via the Capture window or via the Main window's **Log QSOs** tab.

QSOs with callsigns that begin with an exclamation point (!) are not uploaded to QRZ unless the Upload QSOs whose callsigns begin with ! box is checked - in which case the ! is removed from the callsign before it is sent to QRZ.

Items Uploaded to QRZ

The following items are included with each QSO uploaded to QRZ.

- call
- DXCC
- QSO begin
- freq
- band
- rx band
- rx_freq
- mode
- submode
- CQZ
- IOTA
- ITUZ
- SOTA_Ref
- grid 1
- grid 2
- grid 3
- grid 4
- comment
- operator
- propagation mode
- sat_name
- sat_mode
- rst_sent
- rst_rcvd
- Operator
- Name
- Address
- QTH
- TX_Power
- QSLMsg
- Contest_ID
- SFI
- A_Index
- K_Index
- QSL_Via
- PFX
- ARRL_Sect
- State
- Cnty
- Rig
- Email
- Web
- Ant_Az

- Ant_EI
- Ant_Path
- Distance
- QSL_Sent_Via
- QSL_Rcvd_Via
- QSL sent
- QSL rcvd
 - if the value is **E** or **B** or **M**, uploads the value **V**
 - if the value is **S**, uploads the value **Y**
 - if the value is **X**, uploads the value **I** - unless LoTW QSL rcvd is set to **Y** or **S** or **V**, in which case no value is uploaded
- date sent
- date rcvd
- LoTW_QSL_sent
- LoTW QSL rcvd
 - if the value is **S**, uploads the value **Y**
 - if the value is **X**, uploads the value **I** - unless QSL rcvd is set to **Y** or **V** or **E** or **B** or **M**, in which case no value is uploaded)
- eQSL_QSL_Sent
- eQSL QSL rcvd
 - if the value is **X**, uploads the value **I** - unless QSL rcvd is set to **Y** or **V** or **E** or **B** or **M**, in which case no value is uploaded)
- Club_Log_Sent
- Club_Log_Rcvd
- Credit_Submitted
- Credit_Granted
- IOTAVerified
- VUCCVerified
- WASVerified
- WAZVerified
- WPXVerified
- MY_DXCC
- MY_STATE
- MY_CQ_ZONE
- MY_ITU_ZONE
- MY_CNTY
- MY_CITY
- MY_GRIDSQUARE
- MY_IOTA
- MY_NAME
- MY_LAT
- MY_LON
- Each user-defined item that specifies a Caption and whose ADIF box is checked

Deleting a QSO from QRZ

Right-clicking a QSO's entry in the Log Page Display and selecting the **Delete from QRZ** command immediately directs QRZ to remove that QSO from your account.

Synchronizing: Updating Logged QSOs to Reflect their Confirmation via QRZ

Clicking the **QRZ operations** panel's **Sync QRZ QSLs** button will direct QRZ to report all confirmations created on or after the date shown beneath the **Sync QRZ QSLs** button. DXKeeper will direct QRZ to report the logid all such confirmed QSOs. Each reported QSO's QRZ rcvd item will be set to **Y**, and its QRZ rcvd date item and the date shown beneath the **Sync QRZ QSLs** button will be updated to the current date.

- depressing the CTRL key while clicking the **Sync QRZ QSLs** button will direct QRZ to report all confirmations, and set each confirmed QSO's QRZ rcvd item to **Y**
- double-clicking the date beneath the **Sync QRZ QSLs** button will display the **QRZ QSL Synchronization** window, which will enable you to specify a date of your choosing

If you have already established and populated a QRZ Logbook - for example, by exporting an ADIF file from your log in DXKeeper and then importing that file into your QRZ Logbook - you must first upload your logged QSOs from DXKeeper to your QRZ Logbook before you can update logged QSOs to reflect their confirmation via QRZ using the **Sync QRZ QSLs** function described above. Doing so will not create duplicate QSOs but will require you to direct your QRZ Logbook to re-import your LoTW confirmations.

Sync All

The **Sync All** function can automate the sequential invocation of 7 functions

1. Sync eQSL QSLs
2. Sync LoTW QSOs
3. Sync LoTW QSLs
4. Upload to Club Log
5. Upload to QRZ
6. Sync Club Log QSLs
7. Sync QRZ QSLs

Which of the above functions are performed when the **Sync All** function is invoked is governed by settings in the Sync All panel on the **QSL Configuration** window's **General** tab.

Buttons that initiate the Sync All functions are provided on the Main window's **QSL** tab (above the **Help** button) and on the Main window's **Log QSOs** tab (to the right of the **Filter** panel).

Notes:

- Before invoking the **Sync All** function for the first time, manually invoke each of the Sync and Upload functions that you've enabled to be sure they are correctly configured
- The Upload to eQSL and Upload to LoTW functions are not automated by the **Sync All** function because batches of QSOs submitted to these services should be reviewed in the QSL Queue before they are uploaded. You can configured DXKeeper to automatically upload QSOs to eQSL and to LoTW as they are logged; most applications that send QSOs to DXKeeper to be logged can be configured to specify that they be automatically upload QSOs to eQSL and to LoTW.
- Because the Sync LoTW QSLs function precedes the Upload to Club Log and Upload to QRZ functions, and QSOs newly confirmed via LoTW will be conveyed to Club Log and QRZ if uploads to those services are enabled

QSL Substitution Commands

Any substitution command found in a QSL Information textbox will be replaced as described in the table below before printing that textbox's content on a generated QSL card. This allows you to incorporate information about your operating location, equipment, and conditions that can vary from QSO to QSO.

Any substitution command found in a QSL msg will be replaced as described in the table below before the message is

- printed on a QSL card
- printed on a QSL label
- uploaded to eQSL.cc
- uploaded to LoTW
- placed in an ADIF file from the QSL queue
- placed in a tab-delimited file from the QSL queue
- exported to an ADIF file with the Export ADIF for eQSL.cc option selected

This allows you to personalize the QSL msg with information about you and your QSO partner.

Command	Replacement
<ant>	your antenna (associated with the QTH)
<band>	the QSO's band
<bandant>	the antenna for the current band (associated with the QTH)
<buro>	if the QSO's QSL_VIA is set to 'B' (bureau), [x buro] where x is the destination entity's DXCC prefix
<callsign>	the callsign of the station specified in the QSO
<city>	the QTH's city
<contestid>	the contest identifier
<country>	the QTH's country
<county>	the QTH's Secondary Administrative Subdivision (Sec sub)
<countyexplicit>	if the QSO specifies a county, the QTH's Secondary Administrative Subdivision (Sec sub) followed by the word County; otherwise, nothing
<cq>	the QTH's CQ zone
<currentutcdate>	the current UTC date formatted as specified in the QSL Date Format panel
<destination>	the QSL manager's callsign if one is specified, otherwise the callsign of the station specified in the QSO
<distance>	if the QSO's specifies a distance item, the replacement is the word "DX: " followed by the distance in miles or kilometers followed by either "mi" or "km"
<dx>	if the QSO's specifies a distance item, the replacement is the distance in miles or kilometers followed by either "mi" or "km"
<dxccentity>	the station's DXCC entity
<email>	your email address (associated with the QTH)

<grid>	if the QTH's grid square is specified, then the replacement is the word "grid:" followed by the specified grid square; otherwise, the replacement is empty
<iota>	if the QTH's Iota designator is specified, then the replacement is the specified Iota designator; otherwise, the replacement is empty
<itu>	the QTH's ITU zone
<latitude>	the QTH's latitude in degrees and minutes
<latitudewsecs>	the QTH's latitude in degrees, minutes, and seconds
<longitude>	the QTH's longitude in degrees and minutes
<longitudewsecs>	the QTH's longitude in degrees, minutes, and seconds
<meteor shower>	meteor shower name
<mode>	the QSO's mode
<mycall>	station callsign used during the QSO
<myqthid>	the myQTH identifier recorded with the QSO
<name>	the station's operator's name
<opcall>	callsign of the station operator
<opname>	your name (associated with the QTH)
<ownercall>	callsign of the station owner
<postalcode>	the QTH's postal code
<prisub>	the station's primary administrative subdivision
<propmode>	if the QSO specifies a propagation mode, then the replacement is the word "prop: " followed by the propagation mode; otherwise, the replacement is empty
<qsobegin>	the time at which the QSO began, formatted as specified in the QSL Date Format panel
<qsoend>	the time at which the QSO ended, formatted as specified in the QSL Date Format panel
<qth>	the station's QTH (up to 30 characters)
<rig>	your station equipment (associated with the QTH)
<rstrcvd>	the signal report you received from your QSO partner
<rxband>	if the QSO specifies a satellite, then the replacement is the phrase "rx band: " followed by the receive band; otherwise, the replacement is empty
<rxfreq>	if the QSO specifies a satellite, then the replacement is the phrase "rx freq: " followed by the receive frequency; otherwise, the replacement is empty
<rxpower>	the station's transmitter power
<satconfirm>	if the QSO specifies a satellite, then the replacement is the phrase "via Satellite (" followed by the satellite name followed by ")"; otherwise, the replacement is empty

<satmode>	if the QSO specifies a satellite, then the replacement is the phrase "sat mode: " followed by the satellite mode; otherwise, the replacement is empty
<satname>	if the QSO specifies a satellite, then the replacement is the word "sat: " followed by the satellite name; otherwise, the replacement is empty
<seclsub>	the station's secondary administrative subdivision
<SFI_A_K>	if the QSO specifies a solar flux, then the replacement is the phrase "SFI: <i>sfi</i> , A: <i>a</i> , K: <i>k</i> " where <i>sfi</i> , <i>a</i> , and <i>k</i> are the solar flux, a-index, and k-index logged with the QSO
<sig>	your special interest group name (associated with the QTH)
<signinfo>	your special interest group information (associated with the QTH)
<srx>	the receive serial number or exchange logged with the QSO
<srx_info>	the QSO's receive exchange info
<state>	the QTH's primary administrative subdivision (Pri sub)
<streetaddress>	the QTH's street address
<stationgrid>	the station's grid square
<stationiota>	the station's IOTA designator
<stx>	the transmit serial number or exchange logged with the QSO
<stx_info>	the QSO's transmit exchange info
<submode>	the QSO's submode
<txpower>	your transmitter's power
<userdefined_0>	the QSO's user-defined item #0
<userdefined_1>	the QSO's user-defined item #1
<userdefined_2>	the QSO's user-defined item #2
<userdefined_3>	the QSO's user-defined item #3
<userdefined_4>	the QSO's user-defined item #4
<userdefined_5>	the QSO's user-defined item #5
<userdefined_6>	the QSO's user-defined item #6
<userdefined_7>	the QSO's user-defined item #7
<via>	if the QSO specifies a QSL manager, then the replacement is the word "via" followed by the QSL manager's callsign; otherwise, the replacement is empty

The substitution command <via> lets you include contents of the QSO's Via item on the QSL card. if the QSO's Via item is specified, then the replacement is the word "via:" followed by the contents of the Via item; otherwise, the replacement is empty. The <propmode> and <satname> fields work in a similar fashion. The <satmode>, <rxfreq>, and <rxband> commands only produce replacements if the QSO specifies a satellite name.

LotW Procedures

The ARRL's Logbook of the World (LotW) is a repository of QSOs submitted by users from around the world. When both participants in a QSO submit matching QSOs to LotW, the result is a QSL that can be used for ARRL award credit. The process for enrolling in LotW is described at <https://p1k.arrl.org/lotw/getstart>

To ensure the authenticity of QSOs submitted by a user to LotW, the ARRL requires that the file containing these QSOs be encrypted with a unique key. Each user receives their key from the ARRL as part of the enrollment process, which requires the user to submit proof of identity. The ARRL embeds this key in a Callsign Certificate, and refers to the process of encrypting a file containing QSOs as digitally signing that file.

A Callsign Certificate is itself a file, but one whose contents are not directly readable by users; Callsign Certificate files have the suffix .tq6. The ARRL provides an application called **TQSL** that lets you request a Callsign Certificate from the ARRL, and manage Callsign Certificates sent to you by the ARRL.

If you have always operated with the same callsign, then one Callsign Certificate is all you need. If you have operated with more than one callsign -- with your novice callsign, or portable from another region of your country, or from another DXCC entity -- you'll need to request a Callsign Certificate for each such callsign. Start by requesting a Callsign Certificate for your current (primary) callsign. Once the ARRL has verified your identity and issued your first Callsign Certificate, you can submit that first Callsign Certificate as proof of identity with your requests for additional Callsign Certificates, eliminating the need for the ARRL to review documentation before granting those requests. When submitting QSOs to LotW, group them in batches made with the same callsign; the file containing each batch can thus be signed by the appropriate Callsign Certificate.

You must also define a Station Location for each geographical location from which you have operated.

A Callsign Certificate file (.tq6) will become invalid if you copy it to an external hard drive, a thumb drive, to another computer on your home network, or to a cloud storage service like DropBox or Google Drive or SkyDrive. To protect against the loss of your Callsign Certificates and Station Locations to a hardware or software failure, direct TQSL to create a backup file.

Step-by-step instructions for configuring DXKeeper to interoperate with LotW are provided at <https://www.dxlabsuite.com/dxlabwiki/QSLingLotW>.

QSL Cards, Reply Cards, QSL Labels, Envelopes, and Address Labels

QSL cards

QSL cards are printed four to each sheet of paper; you can specify each card's width and height in inches or millimeters. A printer capable of handling card stock is recommended. Information to be printed on each card can be specified on the QSL Configuration window's QSL Cards tab. Each printed page can be thought of as having four quadrants, with quadrant 1 in the upper left, quadrant 2 in the upper right, quadrant 3 in the lower left, and quadrant 4 in the lower right. DXKeeper places QSL cards into quadrants in a specific order that, if maintained, avoids the need to sort the final deck by DXCC prefix after the cards are separated with a paper cutter. To achieve this order, start with the cards in quadrant 1, then append the cards in quadrant 2, then quadrant 3, and finally those in quadrant 4.

QSL cards contain the callsign of the station worked, and the following information for each QSO:

- UTC date at which the QSO began (using English month abbreviations, independent of your PC's locale)
- UTC time at which the QSO began
- QSO Frequency (If the QSO Frequency is missing, DXKeeper will use the QSO Band instead)
- QSO Mode
- RST sent
- solicitation for a return QSL if the QSO's QSL_Sent field is set to **R** (see QSL Workflow)
- thanks for the return QSL if the QSO has been confirmed via QSL card or, if the Set outgoing card/label QSL ? to "thanks" box is checked, if the QSO has been confirmed via LotW
- QSL message
- Station callsign
- QSL route (if the Include QSL Mgr in Confirmation box is checked and if the Via item appears to contain a valid callsign -- a single word containing at least one number and one letter but no symbols other than /)

Settings on the QSL Configuration window's QSL Cards tab let you suppress printing of the Operator callsign (for QSL cards preprinted with this information) or print separation guides.

Additional information from the logged QSO - QSL note, QSL route, IOTA designator, CQ and ITU zones, etc. -- can be optionally printed on each QSL card via settings on the QSL Configuration window's QSL Cards tab using substitution commands.

Reply cards

Reply cards are QSL cards that you print for your QSO partner to sign and send back to you. They're traditionally used as "Mobile Reply Cards" by ops pursuing the USA-CA award, but can also be used to obtain confirmation from stations that do not have QSL cards of their own.

Reply cards are printed four to each sheet of paper using the same width and height settings in inches or millimeters specified for QSL cards.. A printer capable of handling card stock is recommended. Information to be printed on each card can be specified on the QSL Configuration window's QSL Cards tab. Each printed page can be thought of as having four quadrants, with quadrant 1 in the upper left, quadrant 2 in the upper right, quadrant 3 in the lower left, and quadrant 4 in the lower right. DXKeeper places QSL cards into quadrants in a specific order that, if maintained, avoids the need to sort the final deck by DXCC prefix after the cards are separated with a paper cutter. To achieve this order, start with the cards in quadrant 1, then append the cards in quadrant 2, then quadrant 3, and finally those in quadrant 4.

Reply cards display your station callsign, a confirmation from the station worked, and the following information for each QSO:

- UTC date at which the QSO began (using English month abbreviations, independent of your PC's locale)
- UTC time at which the QSO began
- QSO Frequency (If the QSO Frequency is missing, DXKeeper will use the QSO Band instead)
- QSO Mode
- RST rcvd (the signal report your QSO partner gave you)
- QSL message
- any of the following information logged with the QSO:
 - primary administrative subdivision
 - secondary administrative subdivision
 - region
 - IOTA tag
 - grid square
 - DOK

Unlike QSL cards, which can place user-specified information in each corner, Reply cards display fixed information in 8-point Arial font:

Corner	Information
upper-left	Reply card
upper-right	QSO partner's DXCC entity name
lower-left	date printed in specified format
lower-right	signature line

Also unlike QSL cards, Reply cards do not include a background image.

QSL Labels

Single labels, two-column labels, and three-column labels can be printed with QSL information; label dimensions are specified on the QSL Configuration window's QSL Labels tab. On installation, DXKeeper is pre-configured to support

- 1.1" x 3.2" (Dymo 30252) single labels
- 1" x 4" (Avery 8161 for inkjet printers, Avery 5961 for laser printers) 2-column labels.
- 1" x 2.625" (Avery 8160 for inkjet printers, Avery 5960 for laser printers) 3-column labels

as shown in this table::

Setting	single labels	2-column labels	3-column labels
labels per column		10	10
Row 1 offset		.5	.5
Row height		1	1
Column 1 offset		0	0
Column 2 offset		4.125	2.75
Column 3 offset			5.5
Label height	1.1		
Label width	3.2	3.875	2.5

You can specify QSL label dimensions in either inches or millimeters. Note that setting a column offset to 0 reduces the number of label columns per page.

Single and 2-column QSL labels contain the callsign of the station worked, and the following information for each QSO:

- UTC date at which the QSO began (using English month abbreviations, independent of your PC's locale)
- UTC time at which the QSO began
- QSO Frequency (If the QSO Frequency is missing, DXKeeper will use the QSO Band instead)
- QSO Mode
- RST sent
- solicitation for a return QSL if the QSO's QSL_Sent field is set to **R** (see QSL Workflow)
- thanks for the return QSL if the QSO has been confirmed via QSL card or, if the Set outgoing card/label QSL ? to "thanks" box is checked, if the QSO has been confirmed via LotW
- QSL message
- Station callsign
- QSL route (if the Include QSL Mgr in Confirmation box is checked and if the Via item appears to contain a valid callsign -- a single word containing at least one number and one letter but no symbols other than /)

3-column QSL labels contain the callsign of the station worked, and the following information for each QSO:

- UTC date at which the QSO began (using English month abbreviations, independent of your PC's locale)
- UTC time at which the QSO began
- QSO Frequency (If the QSO Frequency is missing, DXKeeper will use the QSO Band instead)
- QSO Mode
- RST sent
- Station callsign
- if the Include QSL Mgr and Pse/Tnx QSL box is checked
 - solicitation for a return QSL if QSL_Sent field of any QSO on the label is set to **R** (see QSL Workflow)
 - thanks for the return QSL if all QSOs on the label have been confirmed via QSL card or, if the Set outgoing card/label QSL ? to "thanks" box is checked, via LotW
 - QSL route (if the Include QSL Mgr in Confirmation box is checked and if the Via item appears to contain a valid callsign -- a single word containing at least one number and one letter but no symbols other than /)

Envelopes

Envelopes can be directly printed with

- your return address, as specified on the QSL Configuration window's Envelopes tab
- the address of the station worked with the address information from the logged QSO
- an Airmail indication, as specified on the QSL Configuration window's Envelopes tab

Address Labels

Single labels, two-column labels, and three-column labels can be printed with the

- your return address, as specified on the QSL Configuration window's Envelopes tab
- the address of the station worked with the address information from the logged QSO

Label dimensions are specified on the QSL Configuration window's Address Labels tab. On installation, DXKeeper is pre-configured to support

- 1.1" x 3.2" (Dymo 30252) single labels
- 1" x 4" (Avery 8161 for inkjet printers, Avery 5961 for laser printers) 2-column labels.
- 1" x 2.625" (Avery 8160 for inkjet printers, Avery 5960 for laser printers) 3-column labels

You can specify Address label dimensions in either inches or millimeters. Note that setting a column offset to 0 reduces the number of label columns per page

Log Integrity

When you're logging a new QSO, DXKeeper makes it easy to record valid information, prompting you if you attempt to record invalid information. When you're importing QSOs, DXKeeper reports any that contain invalid information, and makes it easy to later locate and correct them.

In a QSO, these 5 items are considered mandatory:

- Call - the worked station's callsign
- Band - the band on which the QSO was conducted
- Mode - the mode in which the QSO was conducted
- QSO_Begin - the date and time at which the QSO began
- DXCC - the country code associated with the worked station's DXCC entity

Every QSO is expected to specify a valid value for each mandatory item; a QSO that does not satisfy this criterion is considered **broken** with a fatal error.

Every QSO is expected to specify a valid Station_Callsign; a QSO that does not satisfy this criterion is considered **broken** with a non-fatal error (unless it also contains a fatal error).

If the current log specifies one or more QTHs from which QSOs are made, every QSO is expected to specify a valid myQTH ID; a QSO that does not satisfy this criterion is considered **broken** with a non-fatal error (unless it also contains a fatal error).

All other items can either specify a valid value, or be left empty; a QSO that does not satisfy these criteria is considered **broken** with a non-fatal error (unless it also contains a fatal error).

An item can be invalid for one of several reasons:

1. The specified value is inconsistent with the rules governing the item; for example,
 - SHAZAM in a Call item (if the Flag Invalid Callsigns option is enabled)
 - A1 in a CQ zone item
 - XX in a US State item
 - ZZ12 in a Grid item
2. The specified value contains more characters than DXKeeper will store; for example
 - K1OverTheRiverAndThroughTheWoods in a Call item
3. The specified value is inconsistent with the value of a related item, for example
 - QSO_END is earlier than QSO_Begin
 - Band specifies 20M but Freq specifies 21.005
 - Prop_Mode specifies SAT but SAT_Name is empty

If you attempt to log a QSO via the Capture window with a fatal error (one or more mandatory items that are missing or invalid), DXKeeper will render those items' captions in red font, and refuse to log the QSO. If you attempt to log a QSO via the Capture window with one or more non-fatal errors, DXKeeper will log the QSO, and consider it **broken**.

If you use the Main window's Log QSOs tab to create a new QSO, but fail to specify a valid value for each mandatory item, attempting to log the QSO will cause DXKeeper to render those items' captions in flashing red font; DXKeeper will refuse to allow any other QSO to be selected until each mandatory item has been modified to specify a valid item, or until the QSO has been deleted. If you use the Main window's "Log QSOs" tab to create a new QSO with one or more non-fatal errors, DXKeeper will when directed log the QSO, and consider it **broken**.

When importing a QSO from an ADIF or tab-delimited file, any record that does not specify both a Call item and a QSO_Begin item (both QSO_DATE and TIME_ON fields) will be reported as **illegal** and rejected. All other imported records will result in the creation of a logged QSO; if the logged QSO contains fatal or non-fatal errors, the errors will be reported, and the QSO will be considered **broken**.

If you select a logged QSO that contains one or more mandatory items that don't specify valid values, DXKeeper will render those items' captions in flashing red font; DXKeeper will refuse to allow any other QSO to be selected until each mandatory item has been modified to specify a valid item, or until the QSO has been deleted.

If a logged QSO not containing a valid Station_Callsign is selected, DXKeeper will make the Auxiliary panel visible and flash this panel's **station call** label in blue font.

If the current log specifies one or more QTHs from which QSOs are made and a logged QSO not containing a valid myQTH ID is selected, DXKeeper will make the QSL panel visible and flash this panel's **myQTH** label in blue font.

If a logged QSO containing a item with a non-fatal error is selected, DXKeeper will make the panel containing the item visible, and flash the item's label in blue font.

If a panel on DXKeeper's Main window spontaneously appears but with no label flashing, a QSO containing a fatal or non-fatal error was transiently selected; use the tools described in the following section to find and correct this QSO.

Finding Broken QSOs

To filter the Log Page Display to contain only QSOs that are considered **broken**, click the Broke button in the **Filter** panel at the bottom of the Main window's **Log QSOs** tab. If Subdivision validity checking is enabled, QSOs that specify invalid primary administrative subdivisions or invalid secondary administrative subdivisions will also be present in the Log Page Display

To review every logged QSO and report those that are **broken**, click the Recompute button at the bottom of the Main window's **Check Progress** tab; invoking the **Recompute** function will also reconstructs all realtime award tracking information in the current log.

DXing Award Families and their Information Requirements

The awards for which DXKeeper provides reporting and tracking have differing requirements as to what must be recorded with a QSO in order to accurately assess progress. The following table and its notes show what must be recorded for each award. In this table, the word *any* indicates that a valid item must be recorded; for a QSO to be properly considered for the CQ Field award, for example, its Grid item must specify a valid Maidenhead Grid Square.

Award	Cont	DXC Entity	Region(1)	Primary(2)	Secondary(3)	Grid	CQ	IOT A	DOK(4)	SOT A	WP X	User Item
AJA		JA, JD-M, JD-O		prefecture	city, gun, ku							
Canadaward		VE		province								
CQ DX		any	CQ prefix (5)									
CQ Field						any						
CQ DX Marathon		any	CQ prefix (5)				any					
CQ US Counties Award (USA-CA)				state	county handling of independent cities							
DDFM		F, TK		departmen t								
DOKs		DL							any			
DXCC		any										
Helvetia 26		HB		canton								
Holyland		4Z	IARC area (6)									
IOTA								any				
JCC		JA, JD-M, JD-O		prefecture	city							
JCG		JA, JD-M, JD-O		prefecture	gun							
KDN		HL		province	district							

NPOTA		K, KH6, KL7, KH0, KH2, KH8, KP2, T8										Park code or comma- delimited list of park codes (10)
POTA		any										Parks on the Air code (11)
RDA		UA, UA0, UA2, R1F		subyekt (oblast)	distrikt							
SOTA		any								any		
SRR		UA, UA0, UA2, R1F		subyekt (oblast)								
USA-CA		K, KH6, KL7		state	county (9)							
VUCC						any						
WAJA		JA, JD-M, JD-O		prefecture								
WAB		G, GD, GI, GJ, GM, GU, GW	WAB square (7)									
WABP		ON		province								
WAC	any											
WAE		1A0, 3A, 4O, 4U1I, 9A, 9H, C3, CT, CU, DL, E7, EA, EA6, EI,	WAE prefix (8)									

		ER, ES, EU, F, G, GD, GI, GJ, GM, GU, GW, HA, HB, HB0, HV, I, IS, JW, JX, LA, LX, LY, LZ, OE, OH, OH0, OJ0, OK, OM, ON, OY, OZ, PA, R1F, S5, SM, SP, SV, SV/A, SV5, SV9, T7, TA, TF, FK, UA, UA2, UR, YL, YU, Z3, Z6, ZA, ZB											
WAHUC		HA		megye									
WAIP		I, ISO		province									

WAS		K, KH6, KL7		state								
WAZ						any						
WPX											any	
WWFF		any										Worldwid e Flora & Fauna area code (12)

Notes

1. If the CQ, DARC WAE, Holyland region select option in the **Other Awards** panel on the **Configuration** window's **Awards** tab is enabled, clicking the region item's ? button will display an Award Selector window that lets you select a Region by code or by full name
2. Clicking the Primary item's ? button will display a Primary Selector window that lets you select a Primary Administrative Subdivision by code or by full name
3. Clicking the Secondary item's ? button will display a Secondary Selector window that lets you select a Secondary Administrative Subdivision by code or by full name
4. If the DARC DOK option in the **Other** panel on the **Configuration** window's **Awards** tab is enabled, clicking the DOK item's DOK ? button will display an **Award Selector** window that lets you select a DOK by code or by full name
5. CQ prefixes

CQ Country	DXCC entity	CQ Prefix
African Italy	Italy	IG9/IH9
Bear Island	Svalbard	JW/B
European Turkey	Turkey	TA1
ITU Vienna	Austria	4U1V
Kosovo *	Serbia	YU8
Shetland Island	Scotland	GM/S **
Sicily	Italy	IT9

* QSOs made with Kosovo prior to 2018-01-21 should be logged with a DXCC entity of Serbia and a Region of YU8; QSOs made with Kosovo after 2018-01-21 should be logged with a DXCC entity of Kosovo

** If you are also pursuing the WAB award, record the WAB square in the Region of QSOs with Shetland Island; the CQ DX progress report and CQ Marathon progress and submission reports will properly assess such QSOs.

6. IARC areas: 3-character 10 by 10 km Israeli grid reference square designator combined with a 2-letter "administrative region" code, as described here.
7. WAB squares: 2-letter 100 x 100 km "large square" designator combined with a 2-digit 10 x 10 km "small square" designator, as described here

8. WAE prefixes

WAE Country	DXCC entity	WAE Prefix
Bear Island	Svalbard	JW/B
European Turkey	Turkey	TA1
ITU Vienna	Austria	4U1V
Kosovo *	Serbia	YU8
Shetland Island	Scotland	GM/S **
Sicily	Italy	IT9

* QSOs made with Kosovo prior to 2018-01-21 should be logged with a DXCC entity of Serbia and a Region of YU8; QSOs made with Kosovo after 2018-01-21 should be logged with a DXCC entity of Kosovo

** If you are also pursuing the WAB award, record the WAB square in the Region of QSOs with Shetland Island; the WAE progress report will properly assess such QSOs.

9. ADIF defines 28 Alaskan Counties; DXKeeper expect these to be logged with Alaskan QSOs. DXKeeper's USA-CA report automatically maps these counties to the correct Judicial District and reports your County progress accordingly
10. Set the caption of one user item to be NPOTA, and use this item to record each QSO's NPOTA Park code(s)
11. Set the caption of one user item to be POTA, and use this item to record each QSO's Parks on the Air code
12. Set the caption of one user item to be WWFF, and use this item to record each QSO's Flora & Fauna area code

Checking and Managing Award Progress

DXKeeper can

- report your progress towards 26 DXing Award Families
- generate outgoing QSLs that request needed confirmations
- select confirmed QSOs to be submitted for award credit
- update logged QSOs to reflect the granting of award credit

Realtime Award Tracking

For seven of these award families, DXKeeper provides **Realtime Award Tracking (RAT)** service, which enables SpotCollector to immediately identify active DX stations with whom a QSO would advance your award progress, and which enables DXKeeper to immediately identify QSOs whose confirmation would advance your award progress:

1. ARRL DX Century Club (DXCC) and 425 DX News Top List
2. ARRL VHF/UHF Century Club (VUCC)
3. ARRL Worked All States (WAS)
4. CQ DX Marathon
5. CQ Worked All Prefixes (WPX)
6. CQ Worked All Zones (WAZ)
7. Islands On the Air (IOTA)

Progress reporting is accomplished by scanning each QSO in the Log Page Display to generate a classic Progress Report, which can be viewed and saved to a file for future reference. This approach is flexible because the Log Page Display can be filtered before generating the report, for example to contain QSOs made during a particular time interval, or from a particular location, or on a particular band, or in a particular mode. DXKeeper can generate progress reports for all supported awards. However, scanning the Log Page Display takes time proportional to the number of QSOs present. Even the few seconds required to scan a small log is too long when the goal is to determine whether an incoming DX spot is *needed*.

An award's Realtime Award Tracking service immediately indicates whether a QSO with a newly-spotted DX station would advance your progress towards that award. Each award's Realtime Award Tracking service is automatically updated whenever you log a new QSO, or modify a logged QSO in a way that might alter your progress towards its award. Performing such updates by scanning every QSO in the log -- a process referred to as **recomputation** -- would be a lengthy process. DXKeeper employs **selective recomputation**, scanning only the minimal subset of all logged QSOs required to determine the impact of any change on award progress. If you change the mode of a QSO with A92GE from RTTY to CW, for example, only QSOs with Bahrain need be scanned in order to update DXCC award progress. Such updates are usually fast enough to be invoked automatically, rather than requiring the user to initiate the action. However, DXKeeper can be directed to temporarily disable automatic updates when the user intends to make many progress-affecting changes to logged QSOs, after which Realtime Award Tracking can be updated once

When a log is created, Realtime Award Tracking for the ARRL DXCC and TopList awards is automatically enabled. Realtime Award Tracking for the other six award families can be enabled via the Configuration window's **Awards** Tab. Realtime award tracking information can be viewed and queried in DXKeeper's **Realtime Award Tracking** window, which provides a tab for each of the above seven awards; to display this window, click the **RAT** button above the **Log Page Display** on the Main window's **Log QSOs** tab, or click one of the **Realtime** buttons in panels on the Main window's **Check Progress** tab.

The Main window's **Check Progress** tab provides the ability to

- generate award progress reports
- report the ages of outstanding confirmation requests
- analyze confirmations by band, mode, and kind (hardcopy, LoTW, eQSL)
- generate award submission reports
- manage award credits
- initiate the execution of scripts that can filter the Log Page Display and generate award progress reports
- initiate recomputation to update Realtime Award Tracking
- display and query Realtime Award Tracking information

Generating Award Progress and Submission Reports

The awards for which DXKeeper provides progress reporting have differing requirements as to which items must be recorded with a QSO in order to properly determine credit. A table describing the requirements for each supported award is provided on page 124.

DXKeeper can generate a wide variety of award progress and submission reports. The format of all dates used in these reports is specified via the Date Format panel on the Config window's Reports tab. Generated reports are placed in files in DXKeeper's `Reports` sub-folder with filenames constructed from your callsign, the report name, and the report date, e.g.

- AA6YQ Marathon Unlimited Mixed Progress 2014-12-15.txt
- AA6YQ Marathon Formula Mixed Submission 2014-12-01.csv
- AA6YQ Worked All DOKs 2008-11-27.txt
- AA6YQ Worked All Prefixes Summary 2008-08-23.htm

Generated reports are saved as text files unless otherwise noted to produce files in HTML or CSV (comma-separated values) formats. After generating a progress report file, DXKeeper will display the report using the default *viewer application* for the file type assigned in Windows; typically, this assignment is

- **Notepad** for `.txt` files
- **Microsoft Internet Explorer** for `.htm` files
- **Microsoft Excel** for `.csv` files

You can alter these assignments using the **File Types** tab in the **Folder Options** window, which appears when you click the **Folder Options...** item in **Windows Explorer's Tools** menu.

Most reports consider only QSOs in the Log Page Display, thereby enabling you to produce band-specific, mode-specific, or timeframe-specific reports by appropriately setting the Log Page Filter. If you have operated from more than one location, filter the Log Page Display to contain only QSOs made from locations valid for the award whose progress is being reported. The **Card Aging** reports consider all QSOs in the Log Page Display regardless of filter.

The **Main** window's **Check Progress** tab provides panels from which reports can be generated for families and groups of awards:

DXCC, DXCC Challenge, & TopList

- The **Progress** button generates a detailed DXCC progress report for current and deleted DXCC entities from QSOs in the Log Page Display.
 - QSOs made prior to 1945-11-15 are ignored
 - CW QSOs made prior to 1975-01-01 are included in the DXCC mixed and band statistics, but not in the CW statistics
 - Satellite DXCC statistics are displayed for QSOs made prior to 1965-03-01 whose Prop Mode item is set to **SAT**; such QSOs are not included in the statistics DXCC mixed, mode, or band statistics
 - If the QRP option is enabled, only QSOs that specify a transmit power that is greater than 0 and less than or equal to 5 watts are considered
 - This report considers both QSL card and LoTW confirmations; if the Include eQSL confirmations... box is checked, eQSL confirmations are also considered.
 - By filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
 - The Hide unworked entities in progress report option lets you suppress the listing of unworked DXCC entities in the generated report
- The **Submission** button displays the DXKeeper DXCC Submission window, from which you can assemble a DXCC submission -- a set of confirmed QSO in the Log Page Display to which DXCC award credit has not been granted -- to be submitted to the ARRL's DXCC desk. You can also generate the DXCC Record Sheet required to accompany your award application, and generate an ADIF file that can be directly submitted to the ARRL's DXCC Online.
- The **QSL Kind** button generates a text report showing DXCC confirmations by QSL card, eQSL, LoTW, and the combination of eQSL and LoTW; if the Include eQSL confirmations... box is checked, this report shows the combination of eQSL, LoTW and eQSL confirmations.
- The **Realtime** button displays the DXCC tab in the Realtime Award Tracking window, from which you can
 - analyze your DXCC and TopList progress by band, mode, and confirmation status
 - generate DXCC/TopList progress summaries in text or HTML
- The **Compare** button reports any discrepancies between your DXCC Account credits and the current log's DXCC Entity, Entity-Band, and Entity-Mode award credit by using your LoTW username and password to download the ARRL's DXCC Award Credit Report for the specified DXCC account number; this report shows the entity, entity-band, and entity mode credits you've been granted for each DXCC entity.
 - This function requires your LoTW account to be linked to your DXCC account.
 - This function requires you to have Specified the correct DXCC account number
 - If you have only one DXCC account, your DXCC account number is most likely 1.
 - If you have more than one DXCC account, or if invoking the Compare function produces a *"Downloaded DXCC Verification file specifies no linkage to DXCC record"* message, you can determine the correct DXCC Account Number by using this procedure.
 - In the generated report, these abbreviations are used in the **Log Status** and **ARRL Status** columns:
 - C - confirmed
 - V - DXCC Credit Granted
- The **Credits** button displays DXKeeper's DXCC Credits Granted window, which enables you to manage your DXCC credits by
 1. downloading your DXCC Credits from the specified DXCC account number on the ARRL web site by using your LoTW username and password, reporting any DXCC Credits that are newly granted or modified since the last time you downloaded your DXCC Credits
 2. analyzing DXCC Credits that have not yet been linked to a logged QSO
 3. automatically linking DXCC Credits and QSOs that exactly match, setting each QSO's QSL RCVD or LoTW QSL RCVD item to **V** (if it's not already set to **V**)
 4. manually linking DXCC Credits and QSOs that don't exactly match; inexact matches are typically required because a DXCC Credit's date and/or callsign have been incorrectly entered, but occasionally because a DXCC Credit's band and/or mode have been incorrectly entered

You can also generate credit-only QSOs from DXCC Credits not linked to any QSO in your log.

CQ WAZ

- The **Progress** button generates an HTML report from QSOs in the Log Page Display showing detailed progress towards the CQ Worked All Zones(WAZ) awards specified in the WAZ Bands & Modes panel based on each QSO's CQ Zone item.
- The **Submission** button displays the WAZ Submission window, from which you can initiated assembly of a WAZ submission -- a set of confirmed QSOs in the Log Page Display to which WAZ award credit has not been granted that would if granted advance progress towards pursued WAZ awards -- and generation of a spreadsheet for each pursued WAZ award listing both newly-submitted QSOs and QSOs to which WAZ credit has already been granted.
- The **Summary** button generates a text report from QSOs in the Log Page Display showing a summary of progress towards the CQ Worked All Zones(WAZ) awards specified in the WAZ Bands & Modes panel based on each QSO's CQ Zone item.
- In the above three functions,
 - If a QSO with an empty CQ Zone encountered, a DXCC database query will be initiated to determine the QSO's CQ Zone; if the result is unambiguous, the QSO will be updated with the new CQ Zone item, and the QSO will be considered
 - If the 5 Band WAZ box is checked, QSOs on the 80m, 40m, 20m, 15m, and 10m bands prior to 1979-01-01 are ignored in the "5-band", "band-mixed" and "band-mode" report sections; If the 5 Band WAZ box is unchecked, QSOs on these bands prior to 1973-01-01 are ignored in the "band-mixed" and "band-mode" report sections, and no "5 band" report section is generated.
 - QSOs confirmed via a QSL card or via an eQSL confirmation with an Authenticity Guaranteed member are considered confirmed in the above reports; before invoking any of the above three functions, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database
 - QSOs confirmed via LoTW will only be considered *confirmed for WAZ* if they meet two requirements:
 1. the LoTW confirmation specifies a CQ Zone that matches the QSO's CQ zone, as indicated by presence of a **Z** in the QSO's LoTW cfm item
 2. the LoTW confirmation specifies a mode that either exactly matches the QSO's mode - as indicated by presence of a **M** in the QSO's LoTW cfm item - or the LoTW confirmation's mode and the QSO's mode are both WAZ Digital modes - as indicated by presence of a **D** in the QSO's LoTW cfm item
 - A QSO whose WAZ_Verify item is set to **s** is considered *confirmed* and *submitted*, independent of its QSL_Rcvd item
 - A QSO whose WAZ_Verify item is set to **v** is considered *confirmed* and *verified* (WAZ credit granted), independent of its QSL_Rcvd item
 - A QSO whose WAZ_Verify item is set to **i** is ignored, independent of its QSL_Rcvd item
 - By filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Credits** button generates
 - a WAZ Credit spreadsheet in DXKeeper's **Reports** folder for each pursued WAZ award with QSOs to which WAZ credit has already been granted
 - the name of each generated spreadsheet incorporates your callsign, the WAZ award, and the current date
 - on receipt of these spreadsheets, the CQ WAZ Award manager will update LoTW to reflect your WAZ credits
 - a WAZ Credit Report in DXKeeper's **Reports** folder that summarizes the content of each WAZ Credit spreadsheet; the name of the Credit report incorporates your callsign and the current date
- The **Realtime** button displays the WAZ tab in the Realtime Award Tracking window.

CQ WPX

- The **Progress** button generates a detailed progress report from QSOs in the Log Page Display showing confirmation status for WPX prefixes, prefix-bands, and prefix-modes for the CQ Worked All Prefixes (WPX) award, based on each QSO's WPX item and the WPX Bands & Modes panel settings.
- The **Submission** button displays the WPX Submission window, from which you can assemble an CQ WPX submission -- a set of confirmed QSOs in the Log Page Display to which WPX award credit has not been granted -- to be submitted to the CQ WPX award manager for one or more awards. This window also enabled you to generate submission reports listing the QSOs you're submitting for specific awards.
- The **Summary** button generates an HTML report from QSOs in the Log Page Display summarizing progress towards the CQ Worked All Prefixes (WPX) award, based on each QSO's WPX item.
- In the above functions,
 - QSOs confirmed via QSL card, via LoTW, or via eQSL with an Authenticity Guaranteed member are considered *confirmed*; before invoking any of the above three functions, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database
 - A QSO whose WPX_Verify item is set to **s** is considered *confirmed* and *submitted*, independent of its QSL_Rcvd item
 - A QSO whose WPX_Verify item is set to **v** is considered *confirmed* and verified, independent of its QSL_Rcvd item
 - A QSO whose WPX_Verify item is set to **ı** is ignored, independent of its QSL_Rcvd item
 - By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Realtime** button displays the WPX tab in the Realtime Award Tracking window.
- The **Update** button prompts you to select a **WPX Credit Spreadsheet** that you've obtained from the WPX Award Director, updates your logged QSOs to reflect the granting of WPX award credit, and generates an "Worked All Prefixes Award Credit Update" report showing the results of the Update operation.
 - the **WPX Credit Spreadsheet** will contain 1 to 4 worksheets, labeled **CW**, **DIGITAL**, **MIXED**, and **SSB**.
 - Each entry in each worksheet will at minimum specify a callsign and a WPX prefix; a band and continent may also be specified. DXKeeper will locate the chronologically first logged QSO that matches the worksheet entry.
 - if the logged QSO's WPX prefix item matches the WPX prefix specified in the worksheet entry, then the logged QSO's WPX Verify item will be set to **V**.
 - if the logged QSO's WPX prefix item does not match the WPX prefix specified in the worksheet entry but the latter is consistent with DXKeeper's WPX prefix computation, then the logged WPX prefix item will be replaced with the WPX prefix specified in the entry, and the logged QSO's WPX Verify item will be set to **V**.
 - if the logged QSO's WPX prefix item does not match the WPX prefix specified in the worksheet entry, then the logged QSO's WPX Verify item will **not** be set to **V**; if the logged WPX prefix item is not consistent with DXKeeper's WPX prefix computation, then the logged WPX prefix item will be replaced with the results of DXKeeper's WPX prefix computation.
 - if the logged QSO does not specify a WPX prefix item and the WPX prefix specified in the worksheet entry matches DXKeeper's WPX prefix computation, then the logged WPX prefix item will be set to the WPX prefix specified in the entry, and the logged QSO's WPX Verify item will be set to **V**
 - if the logged QSO does not specify a WPX prefix item and the WPX prefix specified in the worksheet entry is inconsistent with DXKeeper's WPX prefix computation, then the logged QSO's WPX Verify item will **not** be set to **V**; the logged WPX prefix item will be replaced with the results of DXKeeper's WPX prefix computation.

IOTA

- the **Progress** button generates a report from QSOs visible in the Log Page Display showing all Islands On The Air confirmed or worked, based on each QSO's IOTA item.
 - if a QSO whose IOTA item is empty is encountered, a DXCC database query will be initiated to determine the QSO's IOTA; if the result is unambiguous, the QSO will be updated with the new IOTA item, which will be listed in the first section of the generated report
 - if the IOTA Database is installed, then
 - QSOs with an IOTA tag marked as deleted will be ignored
 - optionally, clicking the Progress button will also create `IOTA_Worked` and `IOTA_Confirmed` update files for IOTAMem4WIN in DXKeeper's `Reports` sub-folder or
 - IOTA accepts QSOs confirmed via QSL card, QSOs confirmed via Club Log, and QSOs confirmed via LoTW. Thus a QSO confirmed via QSL card (QSL_Rcvd is set to `Y`, `S`, or `V`) or LoTW (LoTW_Rcvd is set to `Y`, `S`, or `V` with an `I` in its LoTW Cfm item), or Club Log (Club Log Rcvd is set to `Y`) is considered *confirmed* in this report unless its IOTAVerify item is set to `N`, in which case it is considered *worked*
 - `*Y` in the progress report's **LoTW Cfm** column means that the QSO's IOTA item exactly matches the IOTA designator submitted by your QSO partner to LoTW, and is thus considered "confirmed for IOTA".
 - by filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Submission** button displays the IOTA Submission window, from which you can assemble an Islands On The Air submission -- a set of confirmed QSOs in the Log Page Display to which IOTA award credit has not been granted -- to be submitted to Islands on the Air. This window also enables you to generate a submission report listing the QSOs you submit. A QSO confirmed via LoTW whose IOTA designator matches the IOTA designator submitted by your QSO partner will be submitted in preference to a QSO confirmed via LoTW that lacks this match; in the generated Submission Assembly report, a QSO confirmed via LoTW whose IOTA designator matches the IOTA designator submitted by your QSO partner is indicated with an asterisk in the report's **LoTW Cfm** column. Instructions for submitting QSOs confirmed via LoTW to Islands On The Air are here.
- In the above functions,
 - A QSO whose IOTAVerify item is set to `S` is considered *confirmed* and *submitted*, independent of QSL_Rcvd or LoTW_Rcvd
 - A QSO whose IOTAVerify item is set to `V` is considered *confirmed* and *verified*, independent of QSL_Rcvd or LoTW_Rcvd
 - A QSO whose IOTAVerify item is set to `D` or `I` is ignored
 - By filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
 - if the log specifies more than one QTH,
 - QSOs that specify a QTH whose IOTA box is unchecked are ignored
 - QSOs that don't specify a QTH are ignored
- The **Update** button prompts you to select a comma-delimited **IOTA Status File** that you've obtained by selecting **Download QSOs** from the IOTA web page's **My IOTA** menu, updates your logged QSOs with the information contained in that Status File, and generates an "Islands On The Air Status Update" report summarizing the results of the Update operation.
 - if a logged QSO does not specify an IOTA item, the logged QSO's IOTA item will be updated with the tag specified in the IOTA Status File
 - if a logged QSO specifies an IOTA item different than that specified in the IOTA Status File, the logged QSO's IOTA item will be changed to the tag specified in the IOTA Status File
 - if a logged QSO's IOTA verified item is not set to `V` and the status in the IOTA Status File is **Accepted**, the logged QSO's IOTA verified item will be set to `V`
 - if a logged QSO's IOTA verified item is set to `V` and the status in the IOTA Status File is not **Accepted**, the logged QSO's IOTA verified item will remain set to `V`
- The **Realtime** button displays the IOTA tab in the Realtime Award Tracking window.

CQ DX Marathon

The CQ DX Marathon defines 7 award classes:

1. QRP Limited
2. QRP Unlimited
3. Formula 100W
4. Formula Unlimited
5. Limited
6. Unlimited
7. Challenge

The CQ DX Marathon involves the pursuit of CQ Countries and CQ zones, and defines four possible objectives:

1. Mixed
2. Single band
3. Single Mode
4. Multiple band (Challenge class only)

CQ Countries include DXCC entities and countries within certain DXCC entities; such internal countries, like Bear Island and Sicily, are referred to as "regions". When logging a QSO with a station in one of these regions, set its region item to the appropriate code by clicking the ? button adjacent to the **region** selector in the Capture window or the **Awards** panel in the Main window's **Log QSOs** tab.

To be considered for CQ DX Marathon, a logged QSO must specify the transmit power consistent with the Marathon objectives that you are pursuing. You can specify a default transmit power to be logged with every QSO, a default transmit power to be logged as a function of band, or a default transmit power to be logged as a function of mode.

Since CQ DX Marathon precludes the use of repeaters and satellites, each QSO you log should also specify the propagation mode used. You can specify a default propagation mode to be logged with every QSO, or a default propagation mode to be logged as a function of band. Alternatively, you can configure DXKeeper to consider logged QSOs that don't specify a propagation mode as valid for Marathon.

You can pursue multiple CQ DX Marathon objectives and classes during the year, but at the end of the year, you can only make a submission for one class and objective, e.g. *QRP Limited on 10m*, or *Formula 100W on 20m*, or *Challenge*. The options in the Marathon Bands & Modes panel govern the generated Marathon progress report and are used by SpotCollector in determining which active DX stations to highlight as needed for all of the classes and objectives that you are pursuing. However, the generated Marathon submission file is governed by the Class and Category specified in the Marathon Year, Class, Category, and Submission Information window.

QSOs considered for inclusion in your CQ DX Marathon submission can be **risky** for several reasons:

- you are uncertain that you logged your QSO partner's callsign correctly; as a result, the QSO may specify the wrong Country or the wrong CQ Zone.
- the CQ Marathon Award Manager has indicated that a QSO's callsign may not be valid for CQ DX Marathon, pending the submission or approval of required documentation

To avoid submitting a "risky" QSO for a country or CQ zone when a "not risky" QSO is available for that country or CQ Zone, DXKeeper provides Country Risk and Zone Risk items in each QSO. When a QSO's Country Risk item is unspecified, the risk is nominal: the QSO's logged Country is likely to be correct and valid; Similarly, when the QSO's Zone Risk item is unspecified; the risk is nominal: the QSO's CQ Zone is considered likely to be correct and valid. Setting a QSO's Country Risk item to **L** means that you are certain the QSO's Country is both accurate and valid; similarly, setting a QSO's Zone Risk item to **L** means that you are certain the QSO's CQ Zone is both accurate and valid. For example, a QSO confirmed by an authenticity-guaranteed (AG) member of eQSL can be considered to have low Country Risk and low Zone Risk. A QSO made under conditions so noisy that you're not certain that you logged the correct callsign, on the other hand, should be considered to have a high Country Risk and Zone Risk; both items should be set to **H**, meaning that the QSO should not be submitted for its country or zone unless no lower-risk QSOs with its country or zone are available. If the CQ Marathon Award Manager has

ruled that QSOs with a specific callsign are not valid, the QSO's Country Risk and Zone Risk items should be set to **I**, meaning that this QSO should not be submitted under any circumstances.

- If the Confirmed QSOs are low risk option is enabled, the Marathon submission generator will automatically consider countries and Marathon zones of QSOs confirmed via QSL card, LoTW, Authenticity-Guaranteed members of eQSL, Club Log, or QRZ to be low risk
- So you can continue to seek QSOs more likely to be valid for Marathon countries and zones, Realtime Award Tracking for Marathon countries ignores QSOs whose Country Risk items are set to **H**, and Realtime Award Tracking for Marathon zones ignores QSOs whose Zone Risk items are set to **H**.

In the **DX Marathon** panel on the Main window's Check Progress tab,

- The **Progress** button generates a CQ DX Marathon progress report for the specified current year and Marathon Bands & Modes panel settings based on each QSO's DXCC entity and any CQ Prefix specified in its Region item, on its Country Risk and Zone Risk items, and on the Marathon Bands & Modes panel settings.
 - To generate this report for a year other than the current year, depress the **CTRL** key while clicking the **Progress** button; DXKeeper will prompt you to specify a year.
 - To verify the entry for each CQ country by performing a callbook lookup and to verify the entry for each CQ zone by performing a callbook lookup (and if that fails, a DXView lookup), depress the **ALT** key while clicking the **Progress** button. Depressing the **SHIFT** key while clicking the **Progress** button will verify only entries not confirmed via QSL card, LoTW, Authenticity-Guaranteed member of eQSL, Club Log, or QRZ for each CQ country and each CQ zone.
 - If the Include QSOs with no propagation mode box is unchecked, QSOs whose propagation mode is unspecified will not be included in the progress report
 - If a maximum transmit power is specified, QSOs whose transmit power is unspecified or whose transmit power exceeds the specified maximum transmit power will not be included. in the progress report
 - QSOs whose Zone Risk is nominal but whose logged CQ zone is inconsistent with information from the DXCC database, USAP database, or Override List will have their Zone Risk items set to High **unless** they are confirmed via LoTW and their LoTW Confirmation item contains the letter **Z**, meaning "CQ Zone confirmed via LoTW".
 - When choosing a QSO for each CQ DX Marathon Country to include in the progress report,
 - QSOs whose Country Risk items are set to **I** are ignored
 - first priority is given to QSOs made earliest in the year whose Country Risk items are set to **L** and, if the Confirmed QSOs are low risk option is enabled, QSOs whose Country Risk items are unspecified and are confirmed via QSL card, LoTW, Authenticity-Guaranteed members of eQSL, Club Log, or QRZ
 - second priority is given to QSOs made earliest in the year whose Country Risk items are unspecified, abbreviated as **N** (for **N**ominal) in the progress report.
 - third priority is given to QSOs made earliest in the year whose Country Risk items are set to **H**
 - When choosing a QSO for each CQ DX Marathon Zone
 - QSOs whose Zone Risk items are set to **I** are ignored
 - first priority is given to QSOs made earliest in the year whose Zone Risk items are set to **L** and, if the Confirmed QSOs are low risk option is enabled, QSOs whose Country Risk items are unspecified and are confirmed via QSL card, LoTW, Authenticity-Guaranteed members of eQSL, Club Log, or QRZ
 - second priority is given to QSOs made earliest in the year whose Zone Risk items are unspecified, abbreviated as **N** (for **N**ominal) in the progress report.
 - third priority is given to QSOs made earliest in the year whose Zone Risk items are set to **H**
 - By filtering the Log Page Display beforehand, you can narrow the generated progress report to consider only QSOs made with a particular operator callsign or from a particular "my QTH".

- The entry for each CQ Country or Zone shows the lowest-risk QSO selected
 - the QSO's Date and Time, Band, Mode, and Callsigns
 - whether the QSO has been confirmed via QSL card, LoTW, Authenticity-Guaranteed member of [eQSL](#), Club Log, or QRZ
 - the QSO's country or zone risk
 - if the Confirmed QSOs are low risk option is disabled, the risk (either its Country Risk or Zone Risk)
 - if the Confirmed QSOs are low risk option is enabled, the effective risk: the risk as modified by confirmation
- Note: the "By continent" statistics are included in the progress report's Mixed Analysis section is an aid to directional prioritization; continent plays no role in any CQ DX Marathon Class.
- the **Submission** button generates a CQ DX Marathon submission report in txt format and a submission file in XML format for the specified current year, the specified Class, and the specified Category based on each QSO's DXCC entity and Region items
 - To generate this report and submission file for a year other than the specified current year, depress the **CTRL** key while clicking the **Submission** button; DXKeeper will prompt you to specify a year.
 - If the Include QSOs with no propagation mode box is unchecked, QSOs whose propagation mode is unspecified will not be included.
 - Only QSOs whose transmit power items are consistent with the specified Class will be included.
 - Only QSOs whose band or mode are consistent with the specified Class and specified Category will be included
 - QSOs whose Zone Risk is nominal but whose logged CQ zone is inconsistent with information from the DXCC database, USAP database, or Override List will have their Zone Risk items to set to High
 - When choosing a QSO for each CQ DX Marathon Country
 - QSOs whose Country Risk items are set to **I** are ignored
 - first priority is given to QSOs made earliest in the year whose Country Risk items are set to **L** and, if the Confirmed QSOs are low risk option is enabled, QSOs whose Country Risk items are unspecified and are confirmed via QSL card, LoTW, or Authenticity-Guaranteed members of eQSL
 - second priority is given to QSOs made earliest in the year whose Country Risk items are unspecified, abbreviated as **N** (for **N**ominal) in the submission report..
 - third priority is given to QSOs made earliest in the year whose Country Risk items are set to **H**
 - When choosing a QSO for each CQ DX Marathon Zone
 - QSOs whose Zone Risk items are set to **I** are ignored
 - first priority is given to QSOs made earliest in the year whose Zone Risk items are set to **L** and, if the Confirmed QSOs are low risk option is enabled, QSOs whose Country Risk items are unspecified and are confirmed via QSL card, LoTW, or Authenticity-Guaranteed members of eQSL
 - second priority is given to QSOs made earliest in the year whose Zone Risk items are unspecified, abbreviated as **N** (for **N**ominal) in the submission report.
 - third priority is given to QSOs made earliest in the year whose Zone Risk items are set to **H**
 - By filtering the Log Page Display beforehand, you can narrow the generated submission to consider only QSOs made with a particular operator callsign or from a particular "my QTH".

The submission report and submission file are both created in DXKeeper's Reports folder. You can direct the Marathon Submission Tool to upload the generated submission file.

- in the above functions, if the log specifies more than one QTH,
 - QSOs that specify a QTH whose Marathon box is unchecked are ignored
 - QSOs that don't specify a QTH are ignored

VUCC

The ARRL does not accept "hybrid" VUCC applications containing QSOs confirmed via QSL cards and QSOs confirmed via LoTW; instead, a submission must contain only QSOs confirmed via QSL cards, or only QSOs confirmed via LoTW. Functions in the VUCC Submission window enable you to generate and manage a *QSL card submission*, or an *LoTW submission*. When the VUCC Submission window's **QSL Cards** option is enabled, both VUCC progress reports and submissions are generated by reviewing logged QSOs in descending order of QSO start date; thus when a grid square is confirmed by more than one logged QSO, the more recent QSO will be chosen. When the VUCC Submission window's **LoTW Confirmations** option is enabled, both VUCC progress reports and submissions are generated by reviewing logged QSOs in ascending order of LoTW confirmation date; thus when a grid square is confirmed by more than one logged QSO, the QSO first confirmed via LoTW will be chosen. The VUCC Submission window's **Preference** selector determines whether a QSO confirmed via both QSL Card and LoTW will be considered part of a *QSL Card submission* or an *LoTW submission* when assembling and managing a VUCC submission.

- The **Progress** button generates a VUCC progress report for satellite QSOs in the Log Page Display and for Log Page Display QSOs in the bands from 6m to light based on each QSO's Grid 1, Grid 2, Grid 3, and Grid 4, items, and based on the VUCC Bands & Modes panel settings.
- The **Submission** button displays the VUCC Submission window, from which you can assemble a VUCC submission -- a set of confirmed QSOs in the Log Page Display to which VUCC award credit has not been granted -- to be submitted to the ARRL for one or more VUCC awards. This window also enables you to generate a submission report listing the QSOs you submit.
- In the above functions
 - Only QSOs made on or after 1983-01-01 are considered.
 - If the log specifies more than one QTH,
 - QSOs that specify a QTH whose VUCC box is unchecked are ignored
 - QSOs that don't specify a QTH are ignored
 - A QSO confirmed via QSL card (QSL_Rcvd is set to **Y**, **S**, or **V**) is considered *confirmed*
 - A QSO confirmed via an LoTW confirmation that specifies a Gridsquare that matches the QSO's gridsquare is shown as *confirmed*; A QSO confirmed via an LoTW confirmation that does not specify a gridsquare that matches the logged Gridsquare will be considered *worked*, and shown in the progress report's "LoTW Cfm" column as **Missing**.
 - If the Include eQSL confirmations... box is checked, then eQSL confirmations are also considered.
 - A QSO whose VUCC Verify item is set to **S** is considered *confirmed* and *submitted*, independent of its QSL_Rcvd item
 - A QSO whose VUCC Verify item is set to **V** is considered *confirmed* and *verified*, independent of its QSL_Rcvd item
 - A QSO whose VUCC Verify item is set to **I** is ignored, independent of its QSL_Rcvd item
 - Each QSO's distance is displayed in miles or kilometers, as specified in the Distance Unit panel
 - By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Realtime** button displays the VUCC tab in the Realtime Award Tracking window

WAC reports

- The **Progress** button generates a report from QSOs in the Log Page Display showing progress towards the ARRL Worked All Continents award (WAC) based on each QSO's Continent item.
 - If a QSO whose Continent item is empty is encountered, a DXCC database query will be initiated to determine the QSO's Continent; if the result is unambiguous, the QSO will be updated with the new Continent item, which will be considered in the generated Progress report.
 - Only QSOs confirmed via QSL card or LoTW are considered confirmed for this award.
 - If the Include eQSL confirmations... box is checked, then eQSL confirmations are also considered.
 - By filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.

Maidenhead reports

- The **CQ Fields** button generates a CQ Field progress report from QSOs in the Log Page Display showing all Maidenhead Fields confirmed or worked based on each QSO's Grid 1 item.
 - Only QSOs made on or after 1980-01-01 are considered in this report.
 - Only QSOs confirmed via QSL card or via eQSL with an Authenticity Guaranteed member are considered confirmed in this report
 - Before generating a progress report, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database
 - If the Include LoTW confirmations... setting is enabled, then LoTW confirmations are also considered.
- The **Grids** button generates a report from QSOs in the Log Page Display showing all Maidenhead Grid Squares confirmed or worked based on each QSO's Grid 1 item.
 - Only QSOs confirmed via QSL card are considered confirmed for this award..
 - If the Include LoTW confirmations... setting is enabled, then LoTW confirmations are also considered.
 - If the Include eQSL confirmations... box is checked, then eQSL confirmations are also considered; before generating a progress report, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database.
 - Each QSO's distance is displayed in miles or kilometers, as specified in the Distance Unit panel
- By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.

CQ DX

- The **Progress** button generates a report from QSOs in the Log Page Display showing progress towards the CQ DX award based on each QSO's DXCC entity and any CQ Prefix specified in its Region item.
 - QSOs confirmed via QSL card or via eQSL with an Authenticity Guaranteed member are considered confirmed in the above report
 - Before generating a progress report, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database
 - If the Include LoTW confirmations... setting is enabled, then LoTW confirmations are also considered.
 - By filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.

WAS

- The **Progress** button generates a report from QSOs in the Log Page Display with US, Alaskan, and Hawaiian stations showing progress towards the ARRL Worked All States award based on each QSO's Primary Administrative Subdivision item and on WAS Bands & Modes panel settings.
- The **Submission** button displays the WAS Submission window, from which you can assemble a WAS submission -- a set of confirmed QSOs in the Log Page Display to which WAS award credit has not been granted -- to be submitted to the ARRL for one or more awards. This window also enabled you to generate submission reports listing the QSOs you're submitting for specific awards.
- In the above functions,
 - If the log specifies more than one QTH,
 - QSOs that specify a QTH whose WAS box is unchecked are ignored
 - QSOs that don't specify a QTH are ignored
 - QSOs confirmed via QSL card are considered *confirmed*.
 - A QSO confirmed via an LoTW confirmation that specifies a state that matches the logged state is considered *confirmed*; A QSO confirmed via an LoTW confirmation that does not specify a state that matches the logged state is considered *worked*.
 - If the Include eQSL confirmations... box is checked, eQSL confirmations are also considered.

- A Digital-mode QSO confirmed only via LoTW will be considered *confirmed* for Mixed and Band progress, but will only be considered *confirmed* for Mode progress if LoTW has reported an exact mode match; a QSO confirmed via an LoTW confirmation with an exact mode match will have an **M** in its LoTW cfm item. Digital-mode WAS Endorsements only accept LoTW confirmations in which the QSO mode exactly matches your QSO partner's uploaded mode; for these Endorsements, modes belonging to the same Mode Group are not sufficient.
 - QSOs with stations in the District of Columbia are treated as being in Maryland, consistent with WAS rules and ADIF.
 - By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Realtime** button displays the WAS tab in the Realtime Award Tracking window

North American progress reports

- The **USA-CA** button generates a report from QSOs in the Log Page Display with US, Alaskan, and Hawaiian stations showing progress towards the CQ United States Counties Award (USA-CA) award based on each QSO's Secondary Administrative Subdivision item.
 - QSOs whose Propagation Mode items are de is ECH, INTERNET, IRL, RPT, or SAT are ignore
 - An error report will be generated if QSOs are encountered whose Secondary Administrative Subdivision items are inconsistent with their Primary Administrative Subdivision item.
 - Only QSOs confirmed via QSL card or via eQSL with an Authenticity Guaranteed member are considered confirmed in this report; before generating a USA-CA progress report, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database
 - ADIF defines 28 Alaskan Counties; DXKeeper expects these to be logged with Alaskan QSOs. This progress report automatically maps these counties to the correct Judicial District and reports your County progress accordingly.
 - USA-CA rules governing the independent cities of **Virginia, Nevada**, and the **District of Columbia** are specified here.
- The **Canada** button generates a report from QSOs in the Log Page Display with Canadian stations showing progress towards the RAC Canadaward based on each QSO's Primary Administrative Subdivision item.
 - the RAC Canadaward specifies that "All QSOs must be on one band only. Separate awards will be issued for each band and mode on which the applicant qualifies." Thus for each band or mode being pursued, the user should filter the Log Page Display to contain only QSOs on that band or in that mode, and then generate a progress report. Operators pursuing multiple bands or modes (including the 5 band Canadaward) can construct a script that generates progress reports for each targeted band and mode.
 - QSOs confirmed via QSL card and LoTW are considered confirmed in this report; if the Include eQSL confirmations... box is checked, eQSL confirmations are also considered.
- By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.

JARL progress reports

- The **WAJA** button generates a report from QSOs in the Log Page Display with Japan, Minami Torishima, and Ogasawara showing progress towards the Worked All Japan Prefectures (WAJA) award based on the Primary Administrative Subdivision item of each QSO.
- The **JCC** button generates a report from QSOs in the Log Page Display with Japan, Minami Torishima, and Ogasawara showing progress towards the Japan Century Cities (JCC) award based on the Primary Administrative Subdivision and Secondary Administrative Subdivision items of each QSO.
 - A QSO whose Secondary Administrative Subdivision specifies a Ku will be counted towards the Ku's parent City for this award.
- The **JCG** button generates a report from QSOs in the Log Page Display with Japan, Minami Torishima, and Ogasawara showing progress towards the Japan Century Guns (JCG) award based on the Primary Administrative Subdivision and Secondary Administrative Subdivision items of each QSO.

- The **AJA** button generates a report from QSOs in the Log Page Display with Japan, Minami Torishima, and Ogasawara showing progress towards the All Japan (AJA) award based on the Primary Administrative Subdivision and Secondary Administrative Subdivision items of each QSO.
 - if a QSO's Secondary Administrative Subdivision specifies a City or Ku, it will be counted towards this award
- QSOs confirmed via QSL card, eQSL, and LoTW are considered confirmed for these awards.
 - Before generating a progress report, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database
 - If the Include LoTW confirmations... setting is enabled, LoTW confirmations are also considered.
- By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.

QRZ progress reports

- The **DX World** button generates a progress report showing progress towards the QRZ DX World award
- The **U.S.** button generates a progress report showing progress towards the QRZ United States award
- Only QSOs confirmed via QRZ are considered for these awards

SRR Russian Oblast reports

- The **Progress** button generates a report from QSOs in the Log Page Display showing progress towards the Russian Oblast Award based on the Primary Administrative Subdivision item of each QSO whose DXCC entity is European Russia, Asiatic Russia, Franz Josef Land, Kaliningrad, or Malyj Vysotski.
- The **Submission** button generates a report from QSOs in the Log Page Display showing confirmed Russian Oblasts based on the DXCC entity and Primary Administrative Subdivision item of each QSO whose DXCC entity is European Russia, Asiatic Russia, Franz Josef Land, Kaliningrad, or Malyj Vysotski.
- Only QSOs made on or after June 12, 1991 and confirmed via QSL card are considered for this award.
- By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.

RDA Russian District reports

- The **Progress** button generates a report from QSOs in the Log Page Display showing progress towards the Russian District Award based on the Secondary Administrative Subdivision item of each QSO from European Russia, Asiatic Russia, Franz Josef Land, Kaliningrad, and Malyj Vysotski.
- The **Submission** button generates a report from QSOs in the Log Page Display showing confirmed Russian Districts based on the Secondary Administrative Subdivision item of each QSO from European Russia, Asiatic Russia, Franz Josef Land, Kaliningrad, and Malyj Vysotski.
- Only QSOs made on or after June 12, 1991 and confirmed via QSL card, eQSL, or LoTW are considered for this award.
- By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.

Other progress reports

- The **DDFM** button generates a text report from QSOs in the Log Page Display showing progress towards the REF Diplôme des Départements Français de la Métropole awards based on each French and Corsican QSO's Primary Administrative Subdivision item.
- The **DOKs** button generates a report from QSOs in the Log Page Display showing progress towards DARC DOK awards based on each German QSO's DOK item.
- The **FFMA** button generates a Fred Fish Memorial Award progress report (6m only) based on each QSO's Grid 1, Grid 2, Grid 3, and Grid 4, items,
 - Only QSOs made on or after 1983-01-01 are considered.
 - If the log specifies more than one QTH,
 - QSOs that specify a QTH whose VUCC box is unchecked are ignored
 - QSOs that don't specify a QTH are ignored
 - A QSO confirmed via QSL card (QSL_Rcvd is set to **Y**, **S**, or **V**) is considered *confirmed*

- A QSO confirmed via an LoTW confirmation that specifies a Gridsquare that matches the QSO's gridsquare is shown as *confirmed*; A QSO confirmed via an LoTW confirmation that does not specify a gridsquare that matches the logged Gridsquare will be considered *worked*, and shown in the progress report's "LoTW Cfm" column as **Missing**.
 - If the Include eQSL confirmations... box is checked, then eQSL confirmations are also considered.
 - A QSO whose VUCC Verify item is set to **s** is considered *confirmed* and *submitted*, independent of its QSL_Rcvd item
 - A QSO whose VUCC Verify item is set to **v** is considered *confirmed* and *verified*, independent of its QSL_Rcvd item
 - A QSO whose VUCC Verify item is set to **i** is ignored, independent of its QSL_Rcvd item
 - Each QSO's distance is displayed in miles or kilometers, as specified in the Distance Unit panel
 - By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a particular operator callsign, etc.
- The **GC** button generates a progress report from QSOs in the Log Page Display showing progress towards the ARRL's 2018 International Grid Chase event in which points are issued to gridsquare-band-mode combinations confirmed via LoTW on a month-by month basis. Progress is tracked on the bands from 160m through 23cm. Points are only issued to QSOs whose LoTW confirmations specify one or more grid squares; up to 4 grid squares can be specified in each QSO for "grid boundary" and "grid corner" operations. The progress report includes
 - Worked, Confirmed and "Grid Unconfirmed" grid-band-mode counts for each month of the current year up to the current month; "Grid Unconfirmed" refers to a grid square in a QSO confirmed via LoTW whose LoTW confirmation does not specify the grid square.
 - Year-to-date Worked, Confirmed and "Grid Unconfirmed" grid-band-mode counts
 - A band-vs-mode matrix for each grid square worked or confirmed during the current month
- The **Helv 26** button generates a progress report for the Union of Swiss Shortwave Amateurs (USKA) Helvetia 26 award family based on each Swiss QSO's Canton specified in its Primary Administrative Subdivision item. Only QSOs confirmed via QSL card can be submitted for these awards.
- The **Holyland** button generates a progress report for the Israeli Amateur Radio Club's Holyland award based on each Israeli QSO's IARC area specified in its Region item; only QSOs made on or after January 1, 1992 and confirmed via QSL card are considered for this award.
- The **KDN** button generates a report from QSOs in the Log Page Display showing progress towards the Korean Amateur Radio League's Korean District Number Award based on the Secondary Administrative Subdivision item of each QSO with the Republic of Korea. Depressing the **CTRL** key while clicking the **KDN** button generates a Submission Report from QSOs in the Log Page Display showing confirmed Korean Districts based on the Secondary Administrative Subdivision item of each QSO with the Republic of Korea.
- The **SOTA** button generates text progress reports and .csv submission files from QSOs in the Log Page Display showing progress towards Summits on the Air awards based on the contents of each QSO's SOTA item, which should contain a SOTA reference for your QSO partner's summit. If you have operated from SOTA summits, configure a user-defined item whose caption is MY_SOTA_REF, and populate it with the SOTA reference for the summit from which you made the QSO.
 - You can choose any of DXKeeper's 8 user-defined items.
 - If you wish to be able to import and export ADIF files that employ MY_SOTA_REF to convey the summits from which you operate, check the ADIF box associated with the user-defined item you've chosen

When clicking the SOTA button, the state of the ALT and CTRL keys determine whether activator or chaser reports or submission files are generated:

ALT	CTRL	Generated file
		Chaser progress report
	X	Chaser submission file in comma-delimited (.csv) format
X		Activator progress report
X	X	Activator submission file in comma-delimited (.csv) format

Generated submission files include the contents of each QSO's QSL Msg item.

If you use a spreadsheet application to edit a generated .csv file, be sure to retain 4-digit formatting in the time column, or the resulting .csv file will not be accepted.

To generate an activator progress report or submission file for a specific summit that you've activated - say W1/AM-003 - then assuming you set the caption of user-defined item 0 to MY_SOTA_REF, filter the Log Page Display with this SQL expression before depressing the ALT key and clicking the SOTA button: APP_DXKeeper_USER_DEFINED_0='W1/AM-003'

- The **User** button displays the **User Item Progress Report Selector** window:
 - select one of the 8 User Items for which to generate a progress report
 - user items logged with each QSO cannot contain a single or double apostrophe
 - if the selected User Item is enabled in the Progress Report Generation panel, clicking the **Generate Progress Report** button will generate a Progress Report for that item so long as the item's caption does not contain characters like / or \ that cannot be included in a Windows filename
 - any ' or " characters in the specified user item will be display as ` characters in the progress report
 - any control characters in the specified user item will be displayed as space characters in the progress report
 - whether or not eQSL or LoTW confirmations are considered valid in the Progress Report is determined by settings in the Progress Report Generation panel; before generating a progress report, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database
 - if you set a user item's caption to **POTA**,
 - double-clicking a Spot Database Entry in SpotCollector will populate the user item with the contents of the Entry's POTA field.
 - an outgoing spot generated from the Capture window or from the Main window's **Log QSOs** tab with the Spot POTA, SOTA, & WWFF tags option enabled will include that user item's contents (presumably a POTA tag) in the outgoing spots notes
 - if you set a user item's caption to **WWFF**,
 - double-clicking a Spot Database Entry in SpotCollector will populate the user item with the contents of the Entry's WWFF field.
 - an outgoing spot generated from the Capture window or from the Main window's **Log QSOs** tab with the Spot POTA, SOTA, & WWFF tags option enabled will include that user item's contents (presumably a WWFF tag) in the outgoing spots notes
- The **WAB** button generates a text report from QSOs in the Log Page Display showing progress towards the Worked All Britain awards based on each British, Scottish, Welsh, Northern Irish, Guernsey, Jersey, and Isle of Man QSO's WAB square specified in its Region item.
- The **WABP** button generates a report from QSOs in the Log Page Display showing progress towards the Belgian Amateur Radio Society's Worked All Belgian Provinces Award based on the Primary Administrative Subdivision item of each QSO with Belgium. Depressing the **CTRL** key while clicking the **WABP** button generates a Submission Report from QSOs in the Log Page Display showing confirmed Belgian Provinces based on the Primary Administrative Subdivision item of each QSO with the Belgium.

- The **WAE** button generates a report from QSOs in the Log Page Display showing progress towards the DARC Worked All Europe award based on each QSO's DXCC entity and any WAE Prefix specified in its Region item. The WAE 2 point low-band QSOs setting determines whether this report credits 160m and 80m QSOs with 1 band point or 2 band points. QSOs uploaded to the DARC Contest Logbook are accepted for this award, including
 - Authenticity-guaranteed QSOs confirmed via eQSL; before generating a progress report, consider updating your logged QSOs to reflect eQSL participation based on the most recently downloaded eQSL database
 - QSOs confirmed via Club Log
 - QSOs confirmed via LoTW
 Thus QSOs confirmed via QSL card, via LoTW, or via eQSL with an Authenticity Guaranteed member are considered confirmed in the WAE Progress report.
- The **WAHUC** button generates a progress report for the Hungarian Radio Amateur Society's Worked All Hungarian Counties award based on each Hungarian QSO's Primary Administrative Subdivision item.. Only QSOs made on or after March 1, 1968 and confirmed via QSL card are considered for this award.
- The **WAIP** button generates a progress report for the Italian Radioamateur Association's Worked All Italian Provinces award based on each Italian and Sardinian QSO's Primary Administrative Subdivision item. Only QSOs made on or after April 1, 1990 and confirmed via QSL card are considered for this award.
- The **WIA** button generates a progress report for the Wireless Institute of Australia's DXCC Award. QSOs confirmed via QSL Card, Authenticity-guaranteed eQSL, LoTW and Club Log are considered for this award.
- The **WITU** button generates a progress report for the RSGB Worked ITU Zones award based on each QSO's ITU zone.
- The **YASME** button generates a progress report showing QSOs with YASME operations specified in the current YASME database.
 - QSOs confirmed via QSL Card, LoTW, and Authenticity-guaranteed eQSL are considered for this award.
 - to check the date of the YASME database that DXKeeper is using, click the Database Info button at the bottom of the Configuration window's General tab.
 - the current YASME database is available [here](#); download it into DXKeeper's `Databases` folder, replacing the existing `YASME.mdb` file; then restart DXKeeper
- Unless otherwise stated, only QSOs confirmed via QSL card are considered confirmed for the above awards.
- By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.

Additional Reports and Functions

- The **Report** button on the **Main** window's **Log QSOs** tab generates a report containing every QSO visible in the Log Page Display.
 - The order of items, and their captions and widths are specified by the Log Page Display panel; you may find it convenient to establish specific settings for your report that differ from those used in normal Log Page Display viewing, and save these settings in a Log Page Display layout file for quick recall.
 - By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Card Aging** button reviews the QSOs in the Log Page Display and generates a report of needed, outstanding QSL cards by age; the Select item of each such QSO is set to **Y**, enabling additional filtering.
 - A needed QSL card is one whose receipt would advance your progress towards an award family for which Realtime Award Tracking is enabled
 - An outstanding QSL is one whose QSO's QSL_Sent item contains **Y** (meaning "sent") and whose QSL_Rcvd item contains **R** (meaning "requested").
 - An outstanding QSL card's age is the number of weeks between the day the QSL was sent and the current date.

- the Optional report item selector lets you select any log item to appear in the generated report; selecting QSL_SENT_VIA, for example, would show how each outstanding QSL was routed
 - If an Expiration age is specified, this function also offers to **expire** any QSO whose needed, outstanding QSL card has an age exceeding the specified Expiration age by setting the QSO's QSL_Rcvd, LoTW_Rcvd, and eQSL_Rcvd items to **X**.
- The **QSL Stats** button generates a report showing QSO, outgoing count, incoming count, and return rate statistics for QSL cards, eQSL, LoTW, Club Log, and QRZ by mode and by band for each QSO in the Log Page Display.
 - By filtering the Log Page Display beforehand, you can narrow the above reports to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Uniques** button generates a report showing all unique callsigns in the Log Page Display, sorted alphabetically by callsign -- included mobile stations, and stations whose callsigns are preceded by !. Depressing the **CTRL** key while clicking the **Uniques** button generates a unique callsign report sorted in descending order of "mixed QSO count". Depressing the **ALT** key while clicking the **Uniques** button generates a unique callsign report sorted in descending order of "number of bands worked". In these reports,
 - the **RTTY statistics** count QSOs made in the RTTY mode only (e.g. QSOs in PSK and other modes that generate DIGI credit for DXCC are not included)
 - the **PSK statistics** count QSOs made in modes designated as PSK
 - the **Digi statistics** count QSOs made in digital modes that generates DIGI credit for DXCC, but are not RTTY and are not designated as PSK

Generating a Uniques report populates a UniquesReport.mdb database that can be loaded into a spreadsheet application for analysis

- The **First QSOs** button sets the Select item of each QSO in your log to **Y** if it's the chronologically first QSO with its callsign, or to **N** if the QSO's callsign was already worked in an earlier QSO; the Log Page Display is then filtered to show only QSOs whose Select item is set to **Y**.
- The **Reports** button directs Windows Explorer to display the files in DXKeeper's `Reports` folder.
- The **Scripts** button lets you select and execute a script file containing directives that filter the Log filter the Log Page Display and generate any of the reports described above. Here, for example, is the contents of a script file that will generates a set of 5-band Worked All US States reports:

```
filter Band='160m'
report us_states c:\program files\dxcslab suite\dxkeeper\reports\us_states_160.txt

filter Band='80m'
report us_states c:\program files\dxcslab suite\dxkeeper\reports\us_states_80.txt

filter Band='40m'
report us_states c:\program files\dxcslab suite\dxkeeper\reports\us_states_40.txt

filter Band='20m'
report us_states c:\program files\dxcslab suite\dxkeeper\reports\us_states_20.txt

filter Band='15m'
report us_states c:\program files\dxcslab suite\dxkeeper\reports\us_states_15.txt

filter Band='10m'
report us_states c:\program files\dxcslab suite\dxkeeper\reports\us_states_10.txt
```

- The **Recompute** button reconstructs all realtime award tracking information in the current log by examining each QSO in the current log. It populates unspecified items when possible; for example, an ARRL section from a US State. It reports QSOs with invalid items as *Errors*, and flags those QSO as *broken* by setting their **Broken** items to 'Y'.
 - If the CTRL key is depressed when the Recompute button is clicked, each QSO's WPX prefix will be computed from its callsign.
 - If the Alt key is depressed when the Recompute button is clicked, correctable errors in primary and secondary administrative subdivisions and in ARRL sections will be corrected and the corrections reported as *Actions*; for example, each inconsistent ARRL section item will be replaced with a value deduced from its QSO's DXCC entity, State, and County items.
 - If the Subdivision validity checking box is checked, then this function will
 - correct common misspellings of US Counties and Canadian Province abbreviations, reporting changes as *Actions*
 - check the validity of each QSO's Primary and Secondary Administrative Subdivisions; QSOs with invalid Subdivisions will be reported as *Errors*, but will not be flagged as *broken*; however, they will be revealed by the Broke filter.
 - If a QSO is missing its WPX prefix item, computes it
 - If a QSO's DXCC Prefix does not match its DXCC ID (country code), then the DXCC Prefix is updated, and an *Action* entry is appended to the report displayed when the function is complete
 - If a QSO is missing critical items, has an end date and time that occurs before its beginning date and time, then the QSO is flagged as *broken*, and an *Error* entry is appended to the report displayed when the function is complete.
 - If a QSO's grid 1 item is missing or invalid, computes it from the QSO's latitude and longitude items if they are specified; otherwise, if the grid 1 item is invalid, then the QSO is flagged as *broken*, and an *Error* entry is appended to the report displayed when the function is complete.
 - If a QSO's latitude or longitude items are missing or invalid, computes them from its grid 1 item if it is specified; otherwise, if the latitude or longitude items are invalid, then the QSO is flagged as *broken*, and an *Error* entry is appended to the report displayed when the function is complete.
 - If a QSO's propagation mode item specifies SAT but its satellite name item is empty, or if its satellite name item specifies a satellite but its propagation mode item does not specify SAT, then the QSO is flagged as *broken*, and an *Error* entry is appended to the report displayed when the function is complete.
 - If a QSO with Alaska, Hawaii, or the Continental US does not specify an ARRL section item, the ARRL section item will be populated based on the QSO's DXCC entity, State, and County. If the QSO's specified ARRL section item is inconsistent with its DXCC entity, State, and County items, then the QSO is flagged as *broken*, and an *Error* entry is appended to the report displayed when the function is complete.
 - If the Flag invalid callsigns box is checked and a QSO contains an invalid callsign, then the QSO is flagged as *broken*, and an *Error* entry is appended to the report displayed when the function is complete

Each of the preceding actions will be included in the report displayed when the function is complete. If the Recompute function encounters no QSOs that generate *Action* or *Error* entries, no report is generated. QSOs flagged as *broken* can be viewed using the Broke filter.

- The **Select Calls** button prompts you to select a text file containing one callsign on each line; every QSO in the Log Page Display with one of these callsigns will have its Select item set to **Y**.
- The **Clear Select** button sets the Select item of all logged QSOs to **N**.
- The **Adv** button displays the **Advanced Sorts, Filters, and Modifiers** window, from which you can sort the Log Page Display, Filter the Log Page Display, and modify multiple QSOs simultaneously.
- The **Config** button displays the Configuration window's Awards tab.
- The **Help** button displays this online documentation

Generating and Processing a DXCC Submission

In the **DXCC, Challenge, TOP** panel, clicking the **Submission** button displays the **DXCC Submission** window, from which you can assemble a **DXCC Submission** containing QSOs that are confirmed -- via QSL cards or via LoTW -- but to which a DXCC Credit has not been granted. As of April 2, 2012, the DXCC desk no longer accepts "hybrid" applications containing QSOs confirmed via QSL cards and QSOs confirmed via LoTW; instead, a submission must contain only QSOs confirmed via QSL cards, or only QSOs confirmed via LoTW. Functions in the DXCC Submission window enable you to generate and manage a *QSL card submission*, or an *LoTW submission*.

- QSOs made prior to 1945-11-15 are ignored
- CW QSOs made prior to 1975-01-01 may be submitted for DXCC mixed and band award credit, but not for the DXCC CW award credit

A QSO is considered to be included in your *QSL card submission* if either its QSL Rcvd item is set to **S**; a QSO is considered to be included in your *LoTW submission* if its LoTW Rcvd item is set to **S**.

You can manually add a QSO to your *QSL card submission* by setting its QSL Rcvd item to **S** using the **QSL** panel on the Main window's **Log QSOs** tab; you can manually add a QSO to your *LoTW submission* by setting its LoTW Rcvd item to **S** using the **Online QSL** panel on the Main window's **Log QSOs** tab. You may find filtering the Log Page Display (especially with the **Advanced Logs Sorts, Filter, and Modifiers** window) and generating Log Reports helpful in choosing QSOs to submit.

Alternatively, the Assemble Submission function described below automatically creates or expands your submission to include all confirmed QSOs whose verification would advance your DXCC progress on the bands and modes selected in the DXCC Bands & Modes panel.

- if the **DXCC Submission** window's **QSL Cards** box is checked, this function creates or expands your *QSL card submission*
- if the **DXCC Submission** window's **LoTW Confirmations** box is checked, this function creates or expands your *LoTW submission*

A QSO confirmed via a QSL card to which a DXCC Credit has been granted has its QSL Rcvd item is set to **V** (for *verified*); a QSO confirmed via an LoTW confirmation to which a DXCC Credit has been granted has its LoTW Rcvd item is set to **V** (for *verified*). A DXCC entity, entity-band, or entity-mode for which you have received DXCC Credit is referred to as *verified*.

The **DXCC Submission** window's View Submission, Create Planning Report, Create Card Record Sheet, Create LoTW Record Sheet, Export Card ADIF File, Verify Submission, and Reset Submission functions can all be used whether you assembled your submission(s) manually, or by invoking the **Assemble Submission** function.

- The **Assemble Submission** function finds all confirmed but unsubmitted and unverified QSOs visible in the Log Page Display whose DXCC entity is unverified, or whose band is selected in the DXCC/TOP Bands & Modes panel and whose entity-band is unverified, or whose mode is selected in the DXCC/TOP Bands & Modes panel and whose entity-mode is unverified; if the QRP option is enabled, only QSOs that specify a transmit power that is greater than 0 and less than or equal to 5 watts are considered. In each such QSO,
 - a QSL Rcvd item that is currently set to **Y** will be changed to **S** if the QSL cards box is checked, adding the QSO to your *QSL card submission*
 - a LoTW Rcvd item that is currently set to **Y** will be changed to **S** if the LoTW Confirmations box is checked, adding the QSO to your *LoTW submission*

If a QSO's QSL Rcvd and LoTW Rcvd are both currently set to **Y** and if both QSL cards and LoTW Confirmations boxes are checked, then the DXCC Submission Preference panel determines whether QSL Rcvd is set to **S** (adding the QSO to your *QSL card submission*) or LoTW Rcvd is set to **S** (adding the QSO to your *LoTW submission*).

- The **View Submission** function shows all QSOs visible in the Log Page Display that are included in your *QSL card submission* if the QSL cards box is checked, or that are included in your *LoTW submission* if the LoTW Confirmations box is checked. Depressing the **Ctrl** key while invoking this function will show all QSOs included in the *QSL card submission* or *LoTW submission* -- whether or not they are visible in the Log Page Display.

- The **Create Planning Report** function generates a report showing all QSOs visible in the Log Page Display that are included in your *QSL card submission* and your *LoTW submission*. QSOs in the report
 - are sorted by DXCC entity prefix
 - show what unverified entity, entity-band, and/or entity-mode for which the QSO will yield DXCC Credit when submitted
 - show whether a QSL card or LoTW confirmation is being submitted
 If a QSL card is being submitted and the QSO specifies a QSL#, it's also included in the report. This report also shows the total number QSOs visible in the Log Page Display that are being submitted.
- The **Create Card Record Sheet function** generates a DXCC Record Sheet report showing each QSO visible in the Log Page Display whose QSL Rcvd item is **S**, sorted by band, mode, and entity prefix.
 - A Card Record Sheet is required if you'll be submitting QSL cards to a Card Checker. A Card Record Sheet is not required if you are sending cards directly to the ARRL's DXCC desk.
 - The ARRL requires QSOs confirmed by QSL cards that confirm multiple QSOs to appear at the end of the Card Record Sheet. If you are submitting QSL cards that confirm multiple QSOs, assign the same unique QSL# to each QSO confirmed by the same QSL card; the Create Card Record Sheet function will place QSOs having identical QSL# items at the end of the generated Card Record Sheet; it accomplishes this by setting temp to **Y** in QSOs with identical QSL# items, and by setting temp to **N** in QSOs that specify either no QSL# or that specify a unique QSL#. If you don't appropriately specify QSL# items in such QSOs, you must manually move these QSOs to the end of the Card Record Sheet after it's been generated.
- The **Create LoTW Record Sheet function** generates an LoTW Record Sheet report showing each QSO visible in the Log Page Display whose LoTW Rcvd item is **S**, sorted by entity, band, and mode to assist you in selecting credits on the LoTW web site.
- The **Export Card ADIF File** function generates an ADIF file containing records for each QSO visible in the Log Page Display whose QSL Rcvd item is **S**, sorted by band, mode, and entity prefix -- but with QSOs having identical QSL# items sorted at the end of the file; this is accomplished by setting temp to **Y** in QSOs with identical QSL# items, and by setting temp to **N** in QSOs that specify either no QSL# or that specify a unique QSL#. This ADIF file is accepted by the ARRL's **Online DXCC**.
- The **Verify Submission** function updates your log to reflect the granting of DXCC credit by the ARRL. For all QSOs visible in the Log Page Display,
 - if the QSL cards box is checked, then if a QSO's QSL Rcvd item is currently set to **S** it is changed to **V**
 - if the LoTW Confirmations box is checked, then if a QSO's LoTW Rcvd item is currently set to **S** it is changed to **V**.
- The **Reset Submission** function performs an "undo" operation on your DXCC Submission; for all QSOs visible in the Log Page Display,
 - if the QSL cards box is checked, then if a QSO's QSL Rcvd item is currently set to **S**, it is changed to it's previous value, which could be **Y**, **E**, **B**, or **M**
 - if the LoTW Confirmations box is checked, if a QSO's LoTW Rcvd item is currently set to **S**, it is changed to **Y**

Managing DXCC Credits

When the ARRL's DXCC desk approves a QSL card or LoTW confirmation you've submitted, you are granted a DXCC Credit for the entity, band, and mode specified on the card or in the LoTW confirmation; the DXCC Credit also specifies the callsign and QSO date specified on the card or LoTW confirmation. Since it computerized in 1991, the DXCC desk has created a database record for each DXCC Credit granted, assigning it a unique DXCC Credit Number. Over the past several years, the ARRL has expanded its LoTW web site to enable ops to view their DXCC credits online. DXKeeper's Sync LoTW QSLs function will update logged QSOs to reflect DXCC credit granted to QSOs confirmed via LoTW - but only if they are included in the set of QSLs being reported as "new" since the date shown beneath the **Sync LoTW Button**.

Clicking the **Credits** button in the **DXCC, Challenge, & TopList** panel on the **Check Progress** tab of DXKeeper's Main window displays the DXCC Credits Granted window, which enables you to

1. download all of your DXCC Credits from the ARRL web site, reporting any that are newly granted or modified since the last time you downloaded your DXCC Credits
2. analyze DXCC Credits that have not yet been linked to a logged QSO, reporting those that
 - o exactly match a logged QSO and thus could be automatically linked
 - o don't exactly match any logged QSO
 - o are duplicates of another DXCC Credit
3. automatically link DXCC Credits and QSOs that exactly match, setting each QSO's QSL RCVD or LoTW QSL RCVD item to **V** (if it's not already set to **V**)
4. manually link DXCC Credits and QSOs that don't exactly match; inexact matches are typically required because a DXCC Credit's date and/or callsign have been incorrectly entered, but occasionally because a DXCC Credit's band and/or mode have been incorrectly entered

Depending upon how many DXCC Credits you've been granted, initially linking your current DXCC Credits to your logged QSOs will take some time and effort. DXCC Credits generated from LoTW confirmations are generally accurate, but ~25% of the DXCC Credits generated from submitted QSL cards specify erroneous QSO Begin times or erroneous QSO Callsigns that prevent automatic linking. Once these have been dealt with, you need only download and link DXCC Credits when the DXCC desk notifies you that new DXCC credits have been granted, or that DXCC Credit errors you submitted have been corrected.

Users with paper logbooks full of QSOs not yet entered into DXKeeper can optionally generate credit-only QSOs from un-linked DXCC Credits, a process that links each credit-only QSO to the DXCC Credit from which it was generated. While this will not populate DXKeeper with every QSO, it will populate DXKeeper with the QSOs needed to generate "DXCC credit granted" statistics consistent with the ARRL's DXCC statistics, immediately enabling the use of DXLab's automation for seeking out and confirming needed DXCC entities, entity-bands, and entity-nodes.

Like award progress information, DXCC Credits are stored in their own section of your log file. Thus backing up your log file will backup your DXCC credits along with your QSOs. You can move all of this information from one PC to another by simply moving your log file.

Note that DXKeeper's Sync LoTW QSLs function will update your logged QSOs to reflect QSOs confirmed via LoTW to which DXCC Credit has been granted. The functions described above will update logged QSOs to reflect DXCC credit granted, whether the QSO was confirmed via LoTW or via QSL card.

Duplicate DXCC Credits

Your downloaded DXCC Credits may include more than one DXCC Credit for the same QSO; this typically (but not always) manifests as a DXCC Credit created from an LoTW confirmation, and a DXCC Credit for the same entity, band, mode, callsign, and date that appears to have been created from a QSL card confirmation -- even though no QSL card was submitted for credit. To prevent such duplicate DXCC Credits from causing errors, they are automatically flagged as duplicates by the DXCC Credits Granted window's AutoLink function. You can also manually flag a DXCC Credits as a duplicate.

Ambiguous DXCC Credits

If a DXCC credit exactly matches a logged QSO but the QSO's QSL RCVD and LoTW QSL RCVD items either both indicate "confirmed" or both indicate "not confirmed", DXKeeper cannot determine whether to set the QSO's QSL RCVD item to **V** or its LoTW QSL RCVD item to **V**; such DXCC credits are thus ambiguous. However, DXKeeper's Sync LoTW QSLs function will update your logged QSOs to reflect QSOs confirmed via LoTW to which DXCC Credit has been granted; if you're using Sync LoTW QSLs function, then any QSO whose QSL RCVD and LoTW QSL RCVD items either both indicate "confirmed" or both indicate "not confirmed" must have been granted DXCC credit for a QSL card submission, because otherwise Sync LoTW QSLs would have updated it to reflect credit granted to an LoTW confirmation. The **DXCC Credits Granted** window thus provides a **Resolve ambiguous confirmations** option that, when enabled, causes the Analyze and AutoLink functions to assume that DXCC credit granted to a QSO whose QSL RCVD and LoTW QSL RCVD items either both indicate "confirmed" or both indicate "not confirmed" are the result of credit being granted to a QSL card confirmation.

Linking DXCC Credits to Logged QSOs

DXKeeper can automatically link DXCC Credits and logged QSOs whose DXCC entities, Bands, Modes, Callsigns, and QSO Begin times match exactly. Entry errors made when a DXCC Credit was created will prevent an exact match, so DXKeeper enables you to manually link a DXCC Credit to a logged QSO so long as the two specify the same DXCC entity.

- a link between a DXCC Credit and a logged QSO whose DXCC entities, Bands, Modes, Callsigns, and QSO Begin times all match exactly is referred to as a *exact* link
- a link between a DXCC Credit and a logged QSO whose DXCC entities, Bands and Modes match exactly is referred to as a link with a *minor inconsistency* (because their Callsigns and/or QSO Begin times don't match exactly)
- a link between a DXCC Credit and a logged QSO whose DXCC entities match exactly is referred to as a link with a *major inconsistency* (because their Bands and/or Modes don't match exactly)

A DXCC Credit specifies 6 core items:

- Credit Number (ARRL-assigned) with **C** or **L** appended to identify *card* or *LoTW* credits respectively
- Credit Entity
- Credit Band
- Credit Mode: *PHONE*, *CW*, *DATA*, or *SATELLITE*
- Credit Callsign
- Credit Begin time (Card credits only specify a Begin date)
- Credit Duplicate (set to **Y** if the credit is a duplicate)

To enable the linking of DXCC Credits and logged QSOs, DXKeeper

- provides a DXCC Credit Number item in each logged QSO
- associates 5 additional items with each downloaded DXCC Credit:
 - Link Status
 - *None*: not linked
 - *Exact*: links with exact matches
 - *Minor*: links with minor mismatches (Callsign, Begin time)
 - *Major*: links with major mismatches (Band, Mode)
 - QSO Band: if linked, the linked QSO's band
 - QSO Mode: if linked, the linked QSO's mode
 - QSO Callsign: if linked, the linked QSO's callsign
 - QSO Begin time: if linked, the linked QSO's begin time

When a DXCC Credit and a Logged QSO are linked,

- the Logged QSO's DXCC Credit Number item specifies the DXCC Credit's Credit Number
- the DXCC Credit's **Link Status** indicates the *quality* of the link (exact, minor discrepancies, major discrepancies)
- the DXCC Credit's four QSO items specify the logged QSO's band, mode, callsign, and begin date-and-time

An unlinked logged QSO has an empty **DXCC Credit Number** item.. An unlinked DXCC Credit has its **Link Status** set to *none*, an empty **QSO Band**, **QSO Mode**, **QSO Callsign**, and **QSO Begin** items.

To maintain the integrity of links between DXCC Credits and logged QSOs,

1. do not use the Modify QSOs panel to modify a QSO's DXCC Credit Number item
2. do not export a QSO to an ADIF or tab-delimited file, modify the contents of that QSO's DXCC Credit Number, and then import the modified QSO

If you suspect that links have been damaged, invoke the DXCC Credits Granted window's Repair function.

DXCC Credits Granted window

This window provides the following facilities:

- the **Selected QSO** panel, which displays items from the QSO currently selected on the **Main** window's **Log QSOs** tab
- the **Selected DXCC Credit** panel, which displays items from the currently selected DXCC Credit
- the **DXCC Credit Display**, a table whose rows depict some or all of your DXCC Credits, subject to filtering by the **DXCC Credit Filter** panel
- the **DXCC Credit Filter** panel, which enables you to filter the **DXCC Credit Display** by
 - DXCC entity prefix
 - Band
 - Mode
 - Credit Callsign (callsign specified in the DXCC Credit; strike the **Enter** key after typing in a callsign)
 - QSO Callsign (callsign of the logged QSO to which the DXCC Credit is linked; strike the **Enter** key after typing in a callsign)
 - Duplicate status (via the **Dup** checkbox)
 - Link status (via the **Link to QSO** panel)
 - None: not linked
 - Exact: links with exact matches
 - Minor: links with minor mismatches (Callsign, Begin time)
 - Major: links with major mismatches (Band, Mode)

Clicking this panel's **All** button will remove all filtering from the **DXCC Credit Display** so that all DXCC Credits are present.

The DXCC Credits Granted window provides capabilities that facilitate the linking and general management of DXCC Credits:

- clicking the Selected QSO panel's **Link** button will link the credit in the Selected DXCC Credit panel to the logged QSO in the Selected QSO panel
- clicking the Selected DXCC Credit panel's **Show Credit** button will direct the specified web browser to display the DXCC Credit's information on the ARRL web site
- depressing the **Ctrl** key while clicking the Selected DXCC Credit panel's **Show Credit** button will display the DXCC Credit's ARRL Credit Number in a small popup window
- when the selected QSO is linked to a DXCC Credit,
 - the **QSO** panel on the Main window's **Log QSOs** tab appends the words *linked to DXCC Credit* to its caption
 - the **QSL** panel on the Main window's **Log QSOs** tab enables its **Display credit** button
 - clicking the **Display credit** button selects the linked DXCC Credit in the DXCC Credits Granted window
 - depressing the **Ctrl** key while clicking the **Display credit** button will display the linked DXCC Credit's ARRL Credit Number in a small popup window
 - depressing the **Alt** key while clicking the **Display credit** button will direct the specified web browser to display the linked DXCC Credit's information on the ARRL web site
- to select a linked DXCC Credit's logged QSOs, click the Selected DXCC Credit panel's **Select QSO** button
- if the **Auto QSO Selection** box is checked, selecting a linked DXCC Credit will automatically select the QSO linked to that DXCC Credit
- if the Resolve ambiguous confirmations box is checked, the Analyze and AutoLink functions will assume that ambiguous DXCC credits - credits granted to a QSO whose QSL RCVD and LoTW QSL RCVD items either both indicate "confirmed" or both indicate "not confirmed" are the result of DXCC credit being granted to a QSL card confirmation.

To unlink a linked DXCC Credit and logged QSO, select that DXCC Credit, select the logged QSO to which it is linked by clicking the Selected DXCC Credit panel's **Select QSO** button, and click the Selected QSO panel's **Unlink** button.

To generate a printable report of all DXCC Credits present in the DXCC Credit Display, click the DXCC Credits Granted window's **Report** button.

Downloading DXCC Credits

Clicking the **Download** button at the bottom of the DXCC Credits Granted window will download your DXCC Credits from the ARRL's web site.

- This function requires your LoTW account to be linked to your DXCC account.
- This function requires you to have Specified the correct DXCC account number
 - If you have only one DXCC account, your DXCC account number is most likely 1.
 - If you have more than one DXCC account, you can determine the correct DXCC Account Number by using this procedure.

Downloading your DXCC Credits can take awhile, depending upon the number of DXCC Credits to be downloaded, the current performance of the ARRL's servers, and your internet connection speed. At the completion of the Download operation, newly downloaded or updated DXCC Credits will accessible via the DXCC Credit Display, and a report will be displayed showing

- New DXCC Credits granted since the last time the Download function was invoked
- Changes in previously downloaded DXCC Credits
- Errors encountered during the download process
- Summary Statistics

Analyzing DXCC Credits

Clicking the **Analyze** button at the bottom of the DXCC Credits Granted window will review your DXCC Credits and display a report describing the action that would be taken for each unlinked DXCC Credit not already marked as a duplicate if the AutoLink function were invoked:

- would be marked as a duplicate because it matches a logged QSO that is already linked
- would be linked to a logged QSO, whose LoTW QSL RCVD item would be set to **V**
- would be linked to a logged QSO, whose QSL RCVD item would be set to **V**
- would be linked to a logged QSO, with no change to the QSO's LoTW QSL RCVD or LoTW QSL RCVD item

The report also notes DXCC Credits that can't be automatically linked because they

- are missing information
- don't exactly match any logged QSO
- match more than one logged QSO
- exactly match one logged QSO, but are ambiguous with respect to which of QSL RCVD or LoTW QSL RCVD should be to set to **V**; if the Resolve ambiguous confirmations box is checked, the **Analyze** function will assume that ambiguous DXCC credits are the result of DXCC credit being granted to a QSL card confirmation.

Automatically Linking DXCC Credits

Clicking the **AutoLink** button at the bottom of the DXCC Credits Granted window will, after offering to backup your log because both logged QSOs and DXCC credits can be modified by this operation, attempt to perform one of the following actions on each previous-unlinked DXCC Credit not already marked as a duplicate:

- mark the DXCC Credit as a duplicate because it matches a logged QSO that is already linked
- link the DXCC Credit to a logged QSO, whose LoTW QSL RCVD item would be set to **V**
- link the DXCC Credit to a logged QSO, whose QSL RCVD item would be set to **V**
- link the DXCC Credit to a logged QSO, with no change to the QSO's LoTW QSL RCVD or LoTW QSL RCVD item

The report also notes DXCC Credits that were not automatically linked because they

- are missing information
- don't exactly match any logged QSO
- match more than one logged QSO
- exactly match one logged QSO, but are ambiguous with respect to which of QSL RCVD or LoTW QSL RCVD should be set to **V**; if the Resolve ambiguous confirmations box is checked, the **AutoLink** function will assume that ambiguous DXCC credits are the result of DXCC credit being granted to a QSL card confirmation.

Manually Linking DXCC Credits

The DXCC Credits Granted window's facilities enable you to manually link DXCC Credits with logged QSOs when

- the DXCC Credit and logged QSOs don't exactly match each other's DXCC entity, Band, Mode, Callsign, and/or QSO Begin date (typically due to entry errors in the DXCC credit)
- the DXCC Credit exactly matches more than one logged QSO (typically because you logged more than one QSO with the same Callsign on the same Band and Mode during the same day)
- the DXCC Credit exactly matches one logged QSO, but DXKeeper can't link them because it can't determine whether the QSO's QSL RCVD or LoTW QSL RCVD should be set to **V**

The process of manually linking a DXCC Credit with a logged QSO involves 3 steps:

1. select an unlinked DXCC Credit that isn't a duplicate by clicking on it in the DXCC Credit Display
 - this credit will appear in the Selected DXCC Credit panel
 - If the DXCC Credit Display contains a lot of already-linked DXCC Credits, you can more rapidly locate unlinked DXCC Credits by
 - unchecking all but the **None** box in the DXCC Credit Filter panel's **Link to QSO** subpanel.
 - unchecking the **Yes** box and checking the **No** box in the DXCC Credit Filter panel's **Dup** subpanel.
2. select the logged QSO to which that DXCC Credit should be linked by clicking on that QSO's in entry the Log Page Display
 - this QSO will be displayed in the Selected QSO panel, whose caption will indicate whether or not the selected QSO is already linked to a DXCC Credit
 - variances between the selected QSO and the selected DXCC Credit will be highlighted by displaying their labels in red font in the Selected DXCC Credit and Selected QSO panels
3. link the selected DXCC Credit to the selected QSO by clicking the Selected QSO panel's **Link** button

After you select a DXCC Credit in step 1, locating candidate QSOs can be accelerated by clicking the Selected DXCC Credit panel's **Show QSO(s)** button, will initiate a 3-stage search to populate the Log Page Display with QSOs that most closely match the selected DXCC Credit:

- by filtering the Log Page Display for logged QSOs whose DXCC prefix, Band, Mode, Callsign, and Begin time exactly match those of the selected DXCC Credit
- if the previous stage fails to locate a logged QSO, by filtering the Log Page Display for logged QSOs whose DXCC prefix, Band, Mode, and Callsign exactly match those of the selected DXCC Credit
- if the previous stage fails to locate a logged QSO, by filtering the Log Page Display for logged QSOs whose DXCC prefix, Band, and Mode exactly match those of the selected DXCC Credit

Depressing the **Ctrl** key while clicking the **Show QSO(s)** button will filter the Log Page Display to show all QSOs with the selected DXCC Credit's callsign; depressing the **Alt** key while clicking the **Show QSO(s)** button will filter the Log Page Display to show all QSOs with the selected DXCC Credit's DXCC entity. If after invoking one of the above filtering options the Log Page Display contains more than one QSO, click on the one you wish to link to the selected DXCC Credit

The DXCC Credits Granted window provides additional capabilities that facilitate the linking and general management of DXCC Credits:

- clicking the Selected DXCC Credit panel's **Show Credit** button will direct the specified web browser to display the DXCC Credit's information on the ARRL web site
- depressing the **Ctrl** key while clicking the Selected DXCC Credit panel's **Ctrl** will display the DXCC Credit's ARRL Credit Number in a small popup window
- when the selected QSO is linked to a DXCC Credit,
 - the **QSO** panel on the Main window's **Log QSOs** tab appends the words *linked to DXCC Credit* to its caption
 - the **QSL** panel on the Main window's **Log QSOs** tab enables its **Display credit** button
 - clicking the **Display credit** button selects the linked DXCC Credit in the DXCC Credits Granted window
 - depressing the **Ctrl** key while clicking the **Display credit** button will display the linked DXCC Credit's ARRL Credit Number in a small popup window
 - depressing the **Alt** key while clicking the **Display credit** button will direct the specified web browser to display the linked DXCC Credit's information on the ARRL web site
- to select a linked DXCC Credit's logged QSOs, click the Selected DXCC Credit panel's **Select QSO** button
- if the **Auto QSO Selection** box is checked, selecting a linked DXCC Credit will automatically select the QSO linked to that DXCC Credit

To unlink a linked DXCC Credit and logged QSO, select that DXCC Credit, select the logged QSO to which it is linked by clicking the Selected DXCC Credit panel's **Select QSO** button, and click the Selected QSO panel's **Unlink** button.

Reporting DXCC Credits

To generate a printable report of all DXCC Credits present in the DXCC Credit Display, click the DXCC Credits Granted window's **Report** button.

Generating Credit-only QSOs

A Credit-only QSO is generated from an unlinked, non-duplicate DXCC Credit and placed in your log. The generated QSO's DXCC entity, Band, Mode, Callsign, and Begin time are all taken from the DXCC Credit. Such QSOs count towards all awards; they are distinguished by their CreditOnly item being set to **Y**.

Credit-only QSOs can be automatically generated from all unlinked, non-duplicate DXCC Credits, or can be manually generated one-at-a-time from the selected DXCC credit. Before initiating automatic generation, review the last analysis of your DXCC Credits to verify that you want Credit-only QSOs generated for each unlinked, non-duplicate DXCC Credit. Then check the **DXCC Credits** panel's **Credit-only QSO creation** box on the Configuration window's **Awards** tab, and click the DXCC Credits Granted window's **Create QSOs** button. At the completion of the operation, DXKeeper will display a printable report listing the Credit-only QSOs inserted into the current log. When you are done automatically generating Credit-only QSOs, uncheck the **Credit-only QSO creation** box to prevent the inadvertent creation of Credit-only QSOs.

A Credit-only QSOs can be manually generated from an unlinked, non-duplicate DXCC Credit by

1. checking the **DXCC Credits** panel's **Credit-only QSO creation** box on the Configuration window's **Awards** tab
2. selecting that Credit in the DXCC Credit Display
3. clicking the Selected DXCC Credit panel's **Create QSO** button

If the DXCC credit from which the QSO is generated specifies an invalid callsign, the generated QSO's callsign will be set to **UNKNOWN** (with a zero, not the letter O!).

If DXCC credit from which the QSO is generated specifies a mode but does not specify a band, the generated QSO's band will be set to 20m, and its QSL RCVD item will be set to **M**, meaning that entity and entity-mode credit has been granted. If DXCC credit from which the QSO is generated specifies a band but does not specify a mode, the generated QSO's mode will be set to SSB, and its QSL RCVD item will be set to **B**, meaning that entity and entity-band credit has been granted. If DXCC credit from which the QSO is generated does not specify a mode or a band, the generated QSO's band will be set to 20m, its mode will be set to SSB, and its QSL RCVD item will be set to **E**, meaning that entity credit has been granted. In these circumstances, the Partial DXCC Credit option is enabled so that **M**, **B**, and **E** will be available in the QSL RCVD selector.

When you are done manually generating Credit-only QSOs, uncheck the **Credit-only QSO creation** box to prevent the inadvertent creation of Credit-only QSOs.

Repairing DXCC Credits

In the DXCC Credits Granted window,

- clicking the **Repair** button will review each linked DXCC Credit and each linked QSO to verify the integrity of those links, repair any that are damaged, update the QSL RCVD and LoTW QSL RCVD items of each QSOs linked to a DXCC Credit, and display a report listing all repair actions
- depressing the **Ctrl** key while clicking the **Repair** button will unlink all DXCC Credits and QSOs
- depressing the **Alt** key while clicking the **Repair** button will unlink all DXCC Credits and QSOs, and then delete all downloaded DXCC Credits

Linking your LoTW Account to your DXCC Account

1. using your web browser, log into your LoTW account
2. click on the **Awards** tab
3. Beneath the **Your LoTW ARRL DXCC (DX Century Club) Account(s)** heading, click the **Select DXCC Award Account** button
4. if a table like this appears beneath the **Account Status** heading with a "View Award Credit Matrix" hyperlink at the bottom, your LoTW and DXCC accounts are linked.

Account Status				
Award	Selected	Applied	Awarded	Total / Current
Mixed *	4	0	343	347 / 340
CW *	4	0	340	344 / 338
Phone *	4	0	343	347 / 340
RTTY *	3	0	326	329 / 327
160M *	7	0	215	222 / 220
80M *	4	0	297	301 / 299
40M *	4	0	330	334 / 330
30M *	5	0	304	309 / 307
20M *	4	0	340	344 / 338
17M *	4	0	331	335 / 333
15M *	4	0	336	340 / 335
12M *	5	0	312	317 / 315
10M *	4	0	322	326 / 320
6M	0	0	88	88 / 86
2M	1	0	1	2 / 2
Challenge *	41	0	2842	--- / 2883
5-Band *	---	---	---	--- / ---
5-Band 160M *	---	---	---	--- / ---
5-Band 17M *	---	---	---	--- / ---
5-Band 30M *	---	---	---	--- / ---
5-Band 12M *	---	---	---	--- / ---
Satellite	0	0	1	1 / 1

* = Award has been issued

[View Award Credit Matrix](#)

If your accounts are not linked, then click the **Link Account** button the **DXCC Account Menu** along the left side of the page. Specify the callsign under which your current LoTW certificate was issued, along with any other callsigns used with this certificated. Then click the **Request Linking** button; ARRL staff will respond to this request by linking your DXCC and LoTW accounts.

Determining your DXCC Account Number

1. Using your web browser, navigate to
https://LoTW.arrl.org/LoTWuser/awards?awg_id=&ac_acct=
2. Log in with your LoTW username and password
3. Click the Awards tab
4. Under the **Your LoTW ARRL DXCC (DX Century Club) Account(s)** heading on the left, use the "pulldown" selector to choose a DXCC account, and then click the **Select DXCC Award Account** button beneath the selector.
5. Your browser will display a table summarizing your DXCC **Account Status**.

- If a hyperlink named **View Award Credit Matrix** appears beneath this table, then examine the URL your browser is displaying; it will look like

https://LoTW.arrl.org/LoTWuser/awardaccount?awardaccountcmd=status&awg_id=DXCC&ac_acct=n

Where the above URL shows **n**, the selected DXCC account's account number will appear. Specify this DXCC account number in the **Log Settings** panel on the **Config** window's **Log** tab.

- If a hyperlink named **View Award Credit Matrix** does not appear beneath this table, then you must first link your LoTW account to your DXCC record before you can proceed further:
 - Click the **Link Account** hyperlink in the **Notes** section to the left of the **Account Status** table
 - Your web browser will display a **Link Account** page, in which you must specify the **current callsign** and any **past callsigns** associated with your DXCC record
 - After specifying the appropriate current and past callsigns, click the **Request linking** hyperlink
 - Your link request will be submitted to the ARRL; when you receive notification that this request has been processed, repeat steps 1 through 5 above to determine the DXCC Account number to specify in the **Log Settings** panel on the **Config** window's **Log** tab.

The DXCC Database

DXKeeper includes a comprehensive DXCC database, which it uses to lookup DXCC prefixes and country codes, and to initialize log file progress grids -- when a log file is first created, or when you click the Recompute button. You can always obtain an up-to-date DXCC database by downloading www.dxlabsuite.com/dxview/DXCC.exe and extracting its contents (the file `DXCC.mdb`) into your DXKeeper **Databases** subfolder. The pathname and version of the DXCC database currently in use is displayed in the DXCC Database panel on the Configuration window's **Databases** tab.

You can maintain your own DXCC database using the application DXView, a freeware application that displays DXCC info and country maps, and plots spots, beam headings, solar position, and the solar terminator on a world map. If, when DXKeeper starts, it finds DXView installed on your PC, DXKeeper uses DXView's DXCC database, ignoring its own. Thus DXCC database updates you make with DXView are accessible to DXKeeper with no further action on your part.

Generating and Processing an IOTA Submission

In the **IOTA** panel, clicking the **Submission** button displays the IOTA Submission window, from which you can assemble an **IOTA Submission** containing QSOs that are confirmed via QSL cards but to which IOTA Credit has not been granted.

A QSO is considered to be included in your *IOTA Submission* if either its *IOTAVerified* item is set to **S**. You can manually add a QSO to your *IOTA submission* by setting its *IOTAVerified* item to **S** by using the **QSL** panel on the Main window's **Log QSOs** tab. You may find filtering the Log Page Display (especially with the **Advanced Logs Sorts, Filter, and Modifiers** window) and generating Log Reports helpful in choosing QSOs to submit.

Alternatively, the Assemble Submission function described below automatically creates or expands your submission to include all confirmed QSOs whose verification would advance your IOTA progress.

The **IOTA Submission** window's View Submission, Create Submission Report, Verify Submission, and Reset Submission functions can all be used whether you assembled your submission manually, or by invoking the **Assemble Submission** function.

- The **Assemble Submission** button finds all confirmed and not-yet-submitted QSOs visible in the Log Page Display whose IOTA designators has not been granted award credit, and sets their IOTAVerified items to **S**.
- The **View Submission** button shows all QSOs visible in the Log Page Display that are included in your *IOTA Submission*. Depressing the **Ctrl** key while invoking this function will show all QSOs included in your *IOTA Submission* whether or not they are visible in the Log Page Display.
- The **Create Submission Report** button generates a report from QSOs visible in the Log Page Display that are included in your *IOTA Submission*.
 - if the IOTA Database is installed, then QSOs with an IOTA tag marked as deleted will be ignored
 - by filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Verify Submission** button updates your log to reflect the granting of IOTA credit by Islands on the Air . For all QSOs visible in the Log Page Display, if a QSO's IOTAVerified item is currently set to **S**, it is changed to **V**
- The **Reset Submission** button performs an "undo" operation on your *IOTA Submission*; for all QSOs visible in the Log Page Display, if a QSO's IOTAVerified item is currently set to **S**, it is cleared.

Note that you can directly switch among Submission windows by appropriately setting the **Award Family** selector.

Generating and Processing a VUCC Submission

In the **VUCC** panel on the Main window's **Check Progress** tab, clicking the **Submission** button displays the **VUCC Submission** window, from which you can assemble a **VUCC Submission** containing QSOs that are confirmed via QSL cards or LoTW but to which VUCC Credit has not been granted.

The ARRL does not accept "hybrid" VUCC applications containing QSOs confirmed via QSL cards and QSOs confirmed via LoTW; instead, a submission must contain only QSOs confirmed via QSL cards, or only QSOs confirmed via LoTW. Functions in the VUCC Submission window enable you to generate and manage a *QSL card submission*, or an *LoTW submission*.

When the VUCC Submission window's **QSL Cards** option is enabled, VUCC submissions are generated by reviewing logged QSOs in descending order of QSO start date; thus when a grid square is confirmed by more than one logged QSO, the more recent QSO will be chosen. When the VUCC Submission window's **LoTW Confirmations** option is enabled, VUCC submissions are generated by reviewing logged QSOs in ascending order of LoTW confirmation date; thus when a grid square is confirmed by more than one logged QSO, the QSO first confirmed via LoTW will be chosen.

A QSO is considered to be included in your VUCC *QSL card Submission* if its VUCCVerify item is set to **S**, its QSL Rcvd item is set to **Y**, **S**, or **V**, and the QSO is not confirmed via LoTW. A QSO is considered to be included in your VUCC *LoTW Submission* if its VUCCVerified item is set to **S**, its LoTW Rcvd item is set to **Y**, **S**, or **V**, and the QSO is not confirmed via QSL card. The handling of a QSO confirmed via both QSL card and LoTW is determined by the **VUCC Submission** window's **Preference** selector: if **Cards** is selected, such QSOs are considered for inclusion in your *VUCC QSL card Submission*; if **LoTW** is selected, such QSOs are considered for inclusion in your *VUCC LoTW Submission*.

You can manually add a QSO confirmed via QSL card to your *QSL card submission* by setting its VUCCVerified item to **S** using the **QSL** panel on the Main window's **Log QSOs** tab; you can manually add a QSO confirmed via LoTW to your *LoTW submission* by setting its VUCCVerified item to **S** using the **QSL** panel on the Main window's **Log QSOs** tab. You may find filtering the Log Page Display (especially with the **Advanced Logs Sorts, Filter, and Modifiers** window) and generating Log Reports helpful in choosing QSOs to submit.

Alternatively, the Assemble Submission function described below automatically creates or expands your submission to include all confirmed QSOs whose verification would advance your VUCC progress on the bands and modes selected in the VUCC Bands & Modes panel.

- if the **VUCC Submission** window's **QSL Cards** box is checked, this function creates or expands your *QSL card submission*
- if the **VUCC Submission** window's **LoTW Confirmations** box is checked, this function creates or expands your *LoTW submission*

If your preference is to submit as many LoTW confirmations as possible, and then submit as many QSL card confirmations as is necessary to obtain credit for all confirmed grid squares,

- set the **VUCC Submission** window's **Preference** selector to **LoTW**
- generate your VUCC *LoTW submission* before you generate your VUCC *QSL card submission*

If, on the other hand, your preference is to submit as many QSL card confirmations as possible, and then submit as many LoTW confirmations as is necessary to obtain credit for all confirmed grid squares,

- set the **VUCC Submission** window's **Preference** selector to **Cards**
- generate your VUCC *QSL card submission* before you generate your VUCC *LoTW submission*

The **VUCC Submission** window's View Submission, Create Submission Report, Verify Submission, and Reset Submission functions can all be used whether you assembled your submission manually, or by invoking the **Assemble Submission** function. If the **VUCC Submission** window's **QSL Cards** box is checked, these functions operate on your *VUCC QSL card Submission*; if the **VUCC Submission** window's **LoTW** box is checked, they operate on your *VUCC LoTW Submission*.

- The **Assemble Submission** button finds all confirmed and not-yet-submitted QSOs in the Log Page Display whose grid squares have not been granted award credit, and sets their VUCCVerify items to **S**.
- The **View Submission** button shows all QSOs in the Log Page Display that are included in your *VUCC Submission*. Depressing the **Ctrl** key while invoking this function will show all QSOs included in your *VUCC Submission* whether or not they are present in the Log Page Display.
- The **Create Submission Report** button generates a report from QSOs present in the Log Page Display that are included in your *VUCC Submission*.
 - by filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Verify Submission** button updates your log to reflect the granting of VUCC credit by the ARRL. Every QSO present in the Log Page Display whose VUCCVerified item is currently set to **S** has its VUCCVerified item changed to **V**.
- The **Reset Submission** button performs an "undo" operation on your *VUCC Submission*; every QSO present in the Log Page Display whose VUCCVerified item is currently set to **S** has its VUCCVerified item cleared.

Note that you can directly switch among Submission windows by appropriately setting the **Award Family** selector.

Generating and Processing a WAS Submission

In the **WAS** panel on the Main window's **Check Progress** tab, clicking the **Submission** button displays the **WAS Submission** window, from which you can assemble a **WAS Submission** containing QSOs that are confirmed via QSL cards or LoTW but to which WAS Credit has not been granted.

The ARRL's WAS award program permits the same confirmed QSO to be submitted for more than one award. For example, a confirmed 6m CW QSO with a station in Hawaii might initially be submitted with an application for the CW WAS award and granted WAS credit, and then years later be submitted with an application for the 6m WAS award. Thus **Submission Reports** generated for WAS awards include QSOs whose WASVerified item is set to **V** as well as **S**.

A QSO is considered to be included in your *WAS Submission* if its WASVerified item is set to **S**. You can manually add a QSO to your *WAS Submission* by setting its WASVerify item to **S** using the **QSL** panel on the Main window's **Log QSOs** tab. You may find filtering the Log Page Display (especially with the **Advanced Logs Sorts, Filter, and Modifiers** window) and generating Log Reports helpful in choosing QSOs to submit.

Alternatively, the Assemble Submission function automatically creates or expands your *WAS Submission* by considering confirmed QSOs in the Log Page Display which if granted WAS credit would advance your progress towards the WAS awards selected in the WAS Bands & Modes panel.

- if the **WAS Submission** window's **QSL Cards** box is checked, QSOs confirmed via QSL card are considered
- if the **WAS Submission** window's **LoTW Confirmations** box is checked, QSOs confirmed via LoTW are considered
- if the **WAS Submission** window's **QSL Cards** box is checked but its **LoTW Confirmations** box is not checked, then a QSO confirmed by both QSL card and LoTW will only be considered if the **WAS Submission** window's **Preference** selector is set to **Cards**.
- if the **WAS Submission** window's **LoTW Confirmations** box is checked but its **QSL Cards** box is not checked, then a QSO confirmed by both QSL card and LoTW will only be considered if the **WAS Submission** window's **Preference** selector is set to **LoTW**.

If your preference is to submit as many LoTW confirmations as possible, and then submit as many QSL card confirmations as is necessary to obtain credit for all confirmed states,

- set the **WAS Submission** window's **Preference** selector to **LoTW**
- check the **WAS Submission** window's **LoTW Confirmations** box and uncheck its **QSL Cards** box
- invoke the Assemble Submission function
- check the **WAS Submission** window's **QSL Cards** box and uncheck its **LoTW Confirmations** box
- invoke the Assemble Submission function

If, on the other hand, your preference is to submit as many QSL card confirmations as possible, and then submit as many LoTW confirmations as is necessary to obtain credit for all confirmed states,

- set the **WAS Submission** window's **Preference** selector to **Cards**
- check the **WAS Submission** window's **QSL Cards** box and uncheck its **LoTW Confirmations** box
- invoke the Assemble Submission function
- check the **WAS Submission** window's **LoTW Confirmations** box and uncheck its **QSL Cards** box
- invoke the Assemble Submission function

The **WAS Submission** window's View Submission, Create Submission Report, Verify Submission, and Reset Submission functions can all be used whether you assembled your submission manually, or by invoking the **Assemble Submission** function.

The **View Submission** button shows all QSOs in the Log Page Display that are included in your *WAS Submission*. Depressing the **Ctrl** key while invoking this function will show all QSOs included in your *WAS Submission* whether or not they are present in the Log Page Display.

The **Create Submission Report** button generates a submission report for a selected WAS award from QSOs present in the Log Page Display that satisfied three requirements:

1. They are confirmed via QSL Card or LoTW as specified by the **WAS Submission** window's **QSL Cards** and **LoTW Confirmations** checkboxes and its **Preference** setting:
 - if the **WAS Submission** window's **QSL Cards** box is checked, QSOs confirmed via QSL card are considered
 - if the **WAS Submission** window's **LoTW Confirmations** box is checked, QSOs confirmed via LoTW are considered
 - if the **WAS Submission** window's **QSL Cards** box is checked but its **LoTW Confirmations** box is not checked, then a QSO confirmed by both QSL card and LoTW will only be considered if the **WAS Submission** window's **Preference** selector is set to **cards**.
 - if the **WAS Submission** window's **LoTW Confirmations** box is checked but its **QSL Cards** box is not checked, then a QSO confirmed by both QSL card and LoTW will only be considered if the **WAS Submission** window's **Preference** selector is set to **LoTW**.
2. They "match" the **Award** selector setting
 - **Basic**: QSOs whose propagation mode item is not set to **SAT** or **EME**
 - **Band**: QSOs whose band item is identical to the band specified in the **Award** selector and whose propagation mode item is not set to **SAT** or **EME**
 - **5BWAS**: QSOs on 80m, 40m, 20m, 15m, or 10m whose propagation mode item is not set to **SAT** or **EME**
 - **Mode**: QSOs whose mode item is identical to the mode specified in the **Award** selector and whose propagation mode item is not set to **SAT** or **EME**
 - **PHONE**: QSOs whose mode item is SSB, AM, or FM and whose propagation mode item is not set to **SAT** or **EME**
 - **DIGITAL**: QSOs whose mode item is valid for the WAS Digital mode award and whose propagation mode item is not set to **SAT** or **EME**
 - **Sat**: QSOs whose propagation mode item is set to **SAT**
 - **EME**: QSOs whose propagation mode item is set to **EME**
 - **QRP**: QSOs whose power item is greater than 0 and less than or equal to 5 and whose propagation mode item is not set to **SAT** or **EME**
3. Their WASVerify item is set to **V** or **S** (a QSO that satisfies the first two requirements and whose WASVerify item is set to **V** will be chosen over a QSO with the same US state whose WASVerify item is set to **S**).

You can filter the Log Page Display to further focus the generated submission report. To generate a submission report for a 160m-CW WAS endorsement, for example, set the **WAS Submission** window's **Award** selector to 160m, and filter the Log Page Display to contain only CW QSOs before invoking the **Create Submission Report** function.

The **Verify Submission** button updates your log to reflect the granting of WAS credit by the ARRL. Every QSO present in the Log Page Display whose WASVerified item is currently set to **S** has its WASVerified item changed to **V**.

The **Reset Submission** button performs an "undo" operation on your *WAS Submission*; every QSO present in the Log Page Display whose WASVerified item is currently set to **S** will have its WASVerified item cleared.

Note that you can directly switch among Submission windows by appropriately setting the **Award Family** selector.

Generating and Processing a WAZ Submission

In the **CQ WAZ** panel on the Main window's **Check Progress** tab, clicking the **Submission** button displays the **WAZ Submission** window, from which you can assemble a **WAZ Submission** containing QSOs that are confirmed via QSL cards, LoTW, or eQSL (with Authenticity Guaranteed) but to which WAZ Credit has not been granted.

A QSO is considered to be included in your *WAZ Submission* if its *WAZVerified* item is set to **S**. You can manually add a QSO to your *WAZ submission* by setting its *WAZVerified* item to **S** by using the **QSL** panel on the Main window's **Log QSOs** tab. You may find filtering the Log Page Display (especially with the **Advanced Logs Sorts, Filter, and Modifiers** window) and generating Log Reports helpful in choosing QSOs to submit.

Alternatively, the Assemble Submission function described below automatically creates or expands your submission to include all confirmed QSOs that if granted WAZ credit would advance your WAZ progress on the bands and modes selected in the WAZ Bands & Modes panel. The Assemble Submission function also generates a spreadsheet for each WAZ award selected in the WAZ Bands & Modes panel from which you can copy QSOs and paste them into a CQ WAZ submission spreadsheet.

If the **WAZ Submission** window's **QSL Cards** box is not checked, Assemble Submission will ignore QSOs confirmed via QSL card; if the **WAZ Submission** window's **eQSL confirmations** box is unchecked, Assemble Submission will ignore QSOs confirmed via eQSL. ; if the **WAZ Submission** window's **LoTW confirmations** box is unchecked, Assemble Submission will ignore QSOs confirmed via LoTW .These three checkboxes make possible to assemble a submission where priority is given to QSOs confirmed via eQSL, or QSOs confirmed via QSL cards. For example, to assemble a submission in which QSOs confirmed via eQSL are chosen over QSOs confirmed via QSL card ,

1. check boxes in the WAZ Bands & Modes panel for the WAZ awards the generated submission should cover
2. check the **eQSL confirmations** box
3. uncheck the **LoTW confirmations** box
4. uncheck the **QSL Cards** box
5. click the **Assemble Submission** button
6. uncheck the **eQSL confirmations** box
7. check the **QSL Cards** box
8. click the **Assemble Submission** button
9. check the **eQSL confirmations** box
10. check boxes in the WAZ Bands & Modes panel for the WAZ awards you are still pursuing

An "LoTW confirmations only" submission can be generated by checking the **LoTW confirmations** box and unchecking the **eQSL confirmations** and **QSL Cards** boxes:

1. check boxes in the WAZ Bands & Modes panel for the WAZ awards the generated submission should cover
2. check the **LoTW confirmations** box
3. uncheck the **eQSL confirmations** box
4. uncheck the **QSL Cards** box
5. click the **Assemble Submission** button
6. check boxes in the WAZ Bands & Modes panel for the WAZ awards you are still pursuing

The **WAZ Submission** window's View Submission, Create Submission Report, Verify Submission, and Reset Submission functions can all be used whether you assembled your submission manually, or by invoking the **Assemble Submission** function.

Reports generated by WAZ Submission functions can be found in DXKeeper's **Reports** folder.

If **QSL Cards** box is checked, these functions apply to QSOs in the Log Page Display confirmed via QSL card; if the **eQSL confirmations** box is checked, these functions will apply to QSOs in the Log Page Display confirmed via eQSL; if the **LoTW confirmations** box is checked, these functions will apply to QSOs in the Log Page Display confirmed via LoTW.

- The **Assemble Submission** button finds all confirmed and not-yet-submitted QSOs that would, if granted WAZ credit, advance your progress towards the WAZ awards selected in the WAZ Bands & Modes panel, and adds these QSOs to the submission by setting their WAZVerified items to **S**. The **Assemble Submission** function also generates
 - for each pursued WAZ award, a WAZ Application spreadsheet in DXKeeper's **Reports** folder that specifies QSOs to which WAZ credit has already been granted and QSOs included in the submission
 - the name of each generated spreadsheet incorporates your callsign, the WAZ award, and the current date
 - you can copy the QSOs from each generated WAZ Application spreadsheet into a CQ WAZ application spreadsheet
 - a WAZ Application Summary in DXKeeper's **Reports** folder that summarizes the content of each generated WAZ Credit spreadsheet; the name of the Application Summary report incorporates your callsign and the current date
- The **View Submission** button shows all QSOs that are included in your *WAZ Submission*. Depressing the **Ctrl** key while invoking this function will show all QSOs included in your *WAZ Submission* whether or not they are present in the Log Page Display.
- The **Create Submission Report** button generates a report from QSOs that are included in your *WAZ Submission*.
 - by filtering the Log Page Display beforehand, you can narrow the generated report to a time interval, to a specific set of bands or modes, to a particular operator callsign, etc.
- The **Verify Submission** button updates your log to reflect the granting of WAZ credit by the ARRL. Every QSO whose WAZVerified item is currently set to **S** has its WAZVerified item changed to **V**.
- The **Reset Submission** button performs an "undo" operation on your *WAZ Submission*; every QSO whose WAZVerified item is currently set to **S** has its WAZVerified item cleared.

Note that you can directly switch among Submission windows by appropriately setting the **Award Family** selector.

Generating and Processing a WPX Submission

In the **CQ WPX** panel on the Main window's **Check Progress** tab, clicking the **Submission** button displays the **WPX Submission** window, from which you can assemble a **WPX Submission** containing QSOs that are confirmed via QSL cards or LoTW or eQSL (with Authenticity Guaranteed), but to which WPX Credit has not been granted.

CQ WPX award program permits the same confirmed QSO to be submitted for more than one award. For example, a confirmed 6m CW QSO with a station in Hawaii might initially be submitted with an application for the CW WPX award and granted WPX credit, and then years later be submitted with an application for the 6m WPX award. Thus **Submission Reports** generated for WPX awards include QSOs whose WASVerified item is set to **V** as well as **S**.

A QSO is considered to be included in your *WPX Submission* if its WPXVerified item is set to **S**. You can manually add a QSO to your *WPX submission* by setting its WPXVerified item to **S** by using the **QSL** panel on the Main window's **Log QSOs** tab. You may find filtering the Log Page Display (especially with the **Advanced Logs Sorts, Filter, and Modifiers** window) and generating Log Reports helpful in choosing QSOs to submit.

Alternatively, the Assemble Submission function automatically creates or expands your submission to include all confirmed QSOs in the Log Page Display which if granted WPX credit would advance your WPX progress towards the awards selected in the WPX Bands & Modes panel.

If the **WPX Submission** window's **QSL Cards** box is not checked, Assemble Submission will ignore QSOs confirmed via QSL card. If the **WPX Submission** window's **LoTW confirmations** box is unchecked, Assemble Submission will ignore QSOs confirmed via LoTW. If the **WPX Submission** window's **eQSL confirmations** box is unchecked, Assemble Submission will ignore QSOs confirmed via eQSL. These three checkboxes it possible to assemble a submission where priority is given to QSOs confirmed via eQSL, or QSOs confirmed via QSL cards. For example, to assemble a submission in which QSOs confirmed via eQSL are chosen over QSOs confirmed via LoTW and QSL cards, and QSOs confirmed via LoTW are chosen over QSOs confirmed via QSL cards,

1. check the **eQSL confirmations** box
2. uncheck the **LoTW confirmations** box
3. uncheck the **QSL Cards** box
4. click the **Assemble Submission** button
5. uncheck the **eQSL confirmations** box
6. check the **LoTW confirmations** box
7. click the **Assemble Submission** button
8. uncheck the **LoTW confirmations** box
9. check the **QSL Cards** box
10. click the **Assemble Submission** button
11. check the **eQSL confirmations** box
12. check the **LoTW confirmations** box

The **WPX Submission** window's View Submission, Create Submission Report, Verify Submission, and Reset Submission functions can all be used whether you assembled your submission manually, or by invoking the **Assemble Submission** function. If the **QSL Cards** box is not checked, these functions will ignore QSOs confirmed via QSL card. If the **LoTW confirmations** box is unchecked, these functions will ignore QSOs confirmed via LoTW. If the **eQSL confirmations** box is unchecked, these functions will ignore QSOs confirmed via eQSL.

The **View Submission** button shows all QSOs in the Log Page Display that are included in your *WPX Submission*. Depressing the **Ctrl** key while invoking this function will show all QSOs included in your *WPX Submission* whether or not they are present in the Log Page Display.

The **Create Submission Report** button generates a submission report for a selected WPX award from QSOs present in the Log Page Display that satisfied three requirements:

1. They are confirmed via QSL Card or LoTW eQSL as specified by the **WPX Submission** window's **QSL Cards**, **LoTW Confirmations**, and **QSL Confirmations** checkboxes.
2. They "match" the **Award** selector setting:
 - **Mixed**: QSOs with any valid band item and mode item
 - **Band**: QSOs whose band item is identical to the band specified in the **Award** selector
 - **Mode**: QSOs whose mode item is identical to the mode specified in the **Award** selector
 - **DIGITAL**: QSOs whose mode item is valid for the WPX Digital mode award
 - **Continent**: QSOs whose continent item is identical to the continent specified in the **Award** selector
3. Their WPXVerified item is set to **V** or **S** (a QSO that satisfies the first two requirements and whose WPXVerified item is set to **V** will be chosen over a QSO with the same WPX prefix whose WPXVerified item is set to **S**).

If the **Create Submission Report** function is invoked with the **Generate Submission File** box, a comma-delimited **Submission File** (suffix: `.csv`) will be generated in DXKeeper's `Reports` folder that can be emailed to the CQ WPX award manager. Generating this report requires that a valid email address is specified.

You can filter the Log Page Display to further focus the generated submission report. To generate a submission report for the European CW WPX award, for example, set the **WAS Submission** window's **Award** selector to EU, and filter the Log Page Display to contain only CW QSOs before invoking the **Create Submission Report** function.

The **Verify Submission** button updates your log to reflect the granting of WPX credit by CQ. Every QSO present in the Log Page Display whose WPXVerified item is currently set to **S** has its WPXVerified item changed to **V**.

The **Reset Submission** button performs an "undo" operation on your *WPX Submission*; every QSO present in the Log Page Display whose WPXVerified item is currently set to **S** has its WPXVerified item cleared.

Note that you can directly switch among Submission windows by appropriately setting the **Award Family** selector.

Realtime Award Tracking for ARRL DXCC and 425DXN TopList Awards

Realtime award tracking information for the ARRL DXCC and TopList award families is displayed on the **Realtime Award Tracking** window's **DXCC** tab, which is vertically resizable. This information consists of by-mode and by-band progress for each DXCC entity based on every QSO in the current log file *unless* the QRP option is enabled, in which case only QSOs that specify a transmit power that is greater than 0 and less than or equal to 5 watts will be considered. QSOs made prior to 1945-11-15 are ignored; CW QSOs made prior to 1975-01-01 are included in the DXCC mixed and band statistics, but not in the CW statistics. Confirmations via QSL card and LoTW (in QSL_Rcvd and LoTW Rcvd respectively) are both considered in determining progress; if you check the Include eQSL confirmations... box, confirmations via eQSL will also be considered in determining progress.

The **Award Progress** panel displays a **Progress Grid** with one entry per DXCC entity; its **Progress Details** sub-panel displays a **Progress Details Grid** for the currently-selected Progress Grid entry. Cells in the Progress Grid contain codes showing the confirmation status of the entity, bands, and modes; cells in the Progress Details Grid contain codes showing the confirmation of band-mode combinations. The codes used in both grids are identical:

- **W** worked
- **Q** an entry is present in the QSL Queue
- **R** a QSL card has been sent requesting a confirmation
- **C** confirmed via QSL card or LoTW (or via eQSL if the Include eQSL confirmations... box is checked)
- **V** verified (award credit granted) by the ARRL

To display these codes in bold font, check the Display Progress in bold font box in the **Realtime Award Tracking** panel on the Configuration window's **Awards** tab.

If either of a QSO's QSL_Rcvd or LoTW Rcvd items are set to **I**, then the QSO is considered invalid for DXCC and TopList awards. If both of a QSO's QSL_Rcvd and LoTW Rcvd items are set to **X**, the QSO is considered to be unconfirmable and thus treated for award tracking purposes as if it did not occur. If the Include eQSL confirmations... box is checked, then an **I** or **X** in the QSO's eQSL Rcvd item has an equivalent effect.

If the DXCC Bands & Modes panel indicates that a mode is sought, but there are no confirmed QSOs with the currently-selected Progress Grid entry in that mode, then the background of that mode's cells in the Progress Details Grid will be white rather than the window's background color. Similarly, if the DXCC Bands & Modes panel indicates that a band is sought, but there are no confirmed QSOs with the currently-selected Progress Grid entry on that band, then the background of that band's cells in the Progress Details Grid will be white rather than the window's background color.

If you change the QRP or Include eQSL confirmations... settings, the Progress Grid, Progress Details Grid, and other reports will not reflect the change until you invoke the Recompute function.

Note that DIGI mode progress includes credit for PSK31 QSOs. DIGI mode progress also includes QSOs in any other digital modes designated as eligible for DXCC Digital credit via DXKeeper's user-defined mode mechanism.

Both the Progress Grid and the Progress Details Grid are *live* -- you can navigate among them and your log by selecting entries or double-clicking cells:

- clicking an entry in the Progress Grid selects the associated DXCC entity and provides detailed award status in the Progress Details Grid
- striking a letter or number key in the Progress Grid selects the first entity whose DXCC Prefix begins with that letter or number and provides detailed award status for that entity in the Progress Details Grid; if no entity's DXCC Prefix begins with that letter or number, the table's first entry is selected.
- double-clicking a band or mode cell in the Progress Grid
 - selects the associated DXCC entity
 - provides detailed award status in the Progress Details Grid
 - filters the Log Page display to show all QSOs with the DXCC entity in the selected band or mode
 - shows the Log Page display
- double-clicking a column or row heading in the Progress Details Grid
 - filters the Log Page display to show all QSOs with the DXCC entity in the selected band **or** mode
 - shows the Log Page display
- double-clicking a cell in the Progress Details Grid
 - filters the Log Page display to show all QSOs with the DXCC entity in the selected band **and** mode
 - shows the Log Page display

The Award Progress panel's **Award Progress Filter** panel contains a set of controls that let you filter the Progress Grid to show what's unworked, what's worked but not requested, what's requested but not confirmed, what's confirmed but not verified, and/or what's verified -- on any band, in any mode, or on specific band-mode combinations; setting the **Band** selector to *ANY* and the **Mode** selector to *MIXED* will display entity progress. You can also choose whether or not to include DXCC entities that are no longer current. Only Progress Grid entries that match the criteria set in these controls are visible; the number of matching entries is shown in the Award Progress panel's caption.

- To generate a report showing all entities shown by the specified filter sorted in entity prefix order, click the Award Progress Filter panel's **Report** button
- To generate a report showing all entities shown by the specified filter sorted in entity name order, depress the **CTRL** key while clicking the Award Progress Filter panel's **Report** button; this format is useful when comparing against ARRL-generated reports sorted in entity name order
- To reset the filter so that all Progress Grid entries are visible, click the **All** button.

Note that filtering the Progress Grid has no impact on DXKeeper's ability to track awards progress; such progress will be accurately tracked whether all DXCC entities are visible in the Progress Grid or not.

The Progress Grid and Progress Details Grid are incrementally updated when

- a station is worked
- a QSL card is requested
- when a QSO is confirmed via QSL card or LoTW (or via eQSL if the Include eQSL confirmations... box is checked)
- when a QSO is verified by the ARRL

When enabled, DXKeeper will automatically update the Progress Grid and Progress Details Grid when you

- indicate a regression in the QSO's progress, e.g. demoting its QSL_Rcvd or LoTW Rcvd status from confirmed to worked, or from worked to unworked (if the Include eQSL confirmations... box is checked, demoting a QSO's eQSL Rcvd status will also trigger an automatic update)
- modify a QSO's band or mode
- modify a QSO's DXCC entity
- place an exclamation point at the beginning of a QSO's callsign (marking the QSO as not to be considered for award progress)
- delete a QSO

This update is accomplished by reviewing all QSOs with the DXCC entity of the deleted or modified QSO; this is generally much faster than clearing the Progress Grid and rebuilding it by scanning every QSO in the log, as performed by the Recompute function. DXKeeper displays a small dialog box with a progress bar whenever it is recomputing progress for a specific DXCC entity. If you plan to delete or modify several QSOs, however, it may be faster to disable automatic progress recomputation, make the changes, and then perform a Recompute to rebuild the log's Progress Grid.

The **Summary** button in the Award Progress panel computes and displays a summary of progress towards the ARRL DX Century Club award (DXCC), the ARRL DX Century Club Challenge award, and the Top List award; this summary considers both QSL card and LoTW confirmations. The results appear in a separate **DXCC Summary window**, within which

- the **Update** button in the **Summary panel** recomputes the displayed DXCC and Top List progress, taking into account changes since the progress summary WAZ last updated
 - you can view the results either with or without deleted countries by making the appropriate selection in the **Award Program - include deleted countries? panel**.
 - note that **HR** (Honor Roll) totals include only non-deleted countries no matter how the radio buttons in the **Award Program - include deleted countries? panel** are set.
- the **Progress** button in the **DXCC Challenge, TOP panel** generates a DXCC and Top List progress report showing verified Honor Roll countries and confirmed countries. The DXCC section includes deleted entities, whereas the Top List section does not. This report considers both QSL card and LoTW confirmations.
- the **Summary** button in the **DXCC Challenge, TOP panel** generates a DXCC or Top List summary report showing worked, confirmed and verified countries; use the **Award Program panel** to choose whether or not deleted entities are included. The summary report considers both QSL card and LoTW confirmations. This report is generated in HTML, and so can easily be uploaded to your personal web site. You can optionally insert additional HTML to appear above the report's table via the Optional HTML textbox on the Config window's Report tab.

Realtime Award Tracking for ARRL VUCC Awards

Realtime award tracking information for the ARRL VUCC award family is displayed on the **Realtime Award Tracking** window's **VUCC** tab, which is vertically resizable. This information consists of 6 meter through 23 centimeter by-band progress and Satellite progress for Maidenhead gridsquares based on every QSO in the current log made from a location that is valid for VUCC:

- in a log with zero or one QTHs defined, all QSOs are considered valid for VUCC
- in a log with more than one QTH defined, only QSOs that specify a QTH whose VUCC box is checked are considered valid for VUCC

If you make QSOs from more than one location, this mechanism enables you to comply with the VUCC rule regarding the maximum distance between locations from which QSOs are made.

Confirmations via QSL card and LoTW (in QSL_Rcvd and LoTW Rcvd respectively) are both considered in determining progress; if you check the Include eQSL confirmations... box, confirmations via eQSL will also be considered in determining progress. A QSO confirmed via an LoTW confirmation that specifies a Gridsquare that matches a logged Gridsquare is considered *confirmed*; A QSO confirmed via an LoTW confirmation that does not specify the logged Gridsquare will be considered *worked*.

The **VUCC Award Progress** panel displays a **Progress Grid** with one entry per gridsquare. Cells in the Progress Grid contain codes showing the confirmation status of the gridsquare:

- **W** worked
- **R** a QSL card has been sent requesting a confirmation
- **C** confirmed via QSL card or LoTW (or via eQSL if the Include eQSL confirmations... box is checked)
- **V** verified (award credit granted) by the ARRL

To display these codes in bold font, check the Display Progress in bold font box in the **Realtime Award Tracking** panel on the Configuration window's **Awards** tab.

If a QSO's VUCCVerified item is set to **I**, then the QSO is considered invalid for VUCC awards. If both of a QSO's QSL_Rcvd and LoTW Rcvd items are set to **X**, the QSO is considered to be unconfirmable and thus treated for award tracking purposes as if it did not occur. If the Include eQSL confirmations... box is checked, then an **X** in the QSO's eQSL Rcvd item has an equivalent effect.

If you change the Include eQSL confirmations... settings, the Progress Grid, and other reports will not reflect the change until you invoke the Recompute function.

The **VUCC Award Progress** panel's Progress Grid is *live* -- you can navigate among its entries and your log by double-clicking cells:

- double-clicking a Grid or Mixed cell
 - filters the Log Page display to show all QSOs with the gridsquare
 - shows the Log Page display
- double-clicking a Grid-Band cell
 - filters the Log Page display to show all QSOs with the gridsquare on that band
 - shows the Log Page display
- double-clicking a Satellite cell
 - filters the Log Page display to show all QSOs with the gridsquare whose propagation mode is **Sat**
 - shows the Log Page display

If the log defines two or more QTHs, the above double-click operations filter the Log Page Display to contain only QSOs made from QTHs whose VUCC box is checked.

The **VUCC Award Progress Filter** panel contains a set of controls that let you filter the Progress Grid to show what's worked but not requested, what's requested but not confirmed, what's confirmed but not verified, and/or what's verified on a particular band or via Satellite; setting the **Band** selector to **ANY** will display "mixed" progress, though there is no VUCC Mixed award. Specifying a **Grid** and then striking the Enter key will display progress for the specified grid square. To reset the filter so that all Progress Grid entries are visible, click the **All** button.

To generate a report showing all gridsquares shown by the specified filter, click the **VUCC Award Progress Filter** panel's **Report** button.

Note that filtering the Progress Grid has no impact on DXKeeper's ability to track award progress; such progress will be accurately tracked whether all gridsquares are visible in the Progress Grid or not.

The Progress Grid is immediately updated when

- a station is worked
- a QSL card is requested
- when a QSO is confirmed via QSL card or LoTW (or via eQSL if the Include eQSL confirmations... box is checked)
- when a QSO is verified by the ARRL and you set its VUCCVerified item to **V**

When enabled, DXKeeper will automatically update the Progress Grid when you

- indicate a regression in the QSO's progress, e.g. demoting its QSL_Rcvd or LoTW Rcvd status from confirmed to worked, or from worked to unworked (if the Include eQSL confirmations... box is checked, demoting a QSO's eQSL Rcvd status will also trigger an automatic update)
- modify a QSO's band or mode
- modify a QSO's gridsquare
- place an exclamation point at the beginning of a QSO's callsign (marking the QSO as not to be considered for award progress)
- delete a QSO

This update is accomplished by reviewing all QSOs with the gridsquare of the deleted or modified QSO; this is generally much faster than clearing the Progress Grid and rebuilding it by scanning every QSO in the log, as performed by the Recompute function. DXKeeper displays a small dialog box with a progress bar whenever it is recomputing progress for a specific gridsquare. If you plan to delete or modify several QSOs, however, it may be faster to disable automatic progress recomputation, make the changes, and then perform a Recompute to rebuild the Progress Grid.

Realtime Award Tracking for ARRL WAS Awards

Realtime award tracking information for the ARRL WAS award family is displayed on the **Realtime Award Tracking** window's **WAS** tab, which is vertically resizable. This information consists of mixed progress, by-mode progress, by-band progress, Satellite progress, and EME progress for US States based on every QSO in the current log made from a location that is valid for WAS:

- in a log with zero or one QTHs defined, all QSOs are considered valid for WAS.
- in a log with more than one QTH defined, only QSOs that specify a QTH whose WAS box is checked are considered valid for WAS

If you make QSOs from more than one location, this mechanism enables you to comply with the WAS rule regarding the maximum distance between locations from which QSOs are made.

If the QRP option is enabled, only QSOs that specify a transmit power that is greater than 0 and less than or equal to 5 watts will be considered.

Confirmations via QSL card and LoTW (in QSL_Rcvd and LoTW Rcvd respectively) are both considered in determining progress; if you check the Include eQSL confirmations... box, confirmations via eQSL will also be considered in determining progress. For QSOs not confirmed via QSL card,

- A phone or CW QSO with an LoTW confirmation that includes the US State is considered *confirmed*.
- A RTTY or digital QSO with an LoTW confirmation that includes the US State and an exact mode match is considered *confirmed*.
- A QSO with an LoTW confirmation that does not include the US State is considered *worked*.
- A RTTY or digital QSO with an LoTW confirmation that does not specify the US State and an exact mode match is considered *worked*.

The **WAS Award Progress** panel displays a **Progress Grid** with one entry per US State. Cells in the Progress Grid contain codes showing the confirmation status of the state:

- **W** worked
- **R** a QSL card has been sent requesting a confirmation
- **C** confirmed via QSL card or LoTW (or via eQSL if the Include eQSL confirmations... box is checked)
- **V** verified (award credit granted) by the ARRL

To display these codes in bold font, check the Display Progress in bold font box in the **Realtime Award Tracking** panel on the Configuration window's **Awards** tab.

If a QSO's WASVerified item is set to **I**, then the QSO is considered invalid for WAS awards. If both of a QSO's QSL_Rcvd and LoTW Rcvd items are set to **X**, the QSO is considered to be unconfirmable and thus treated for award tracking purposes as if it did not occur. If the Include eQSL confirmations... box is checked, then an **X** in the QSO's eQSL Rcvd item has an equivalent effect.

If you change QRP or the Include eQSL confirmations... settings, the Progress Grid, and other reports will not reflect the change until you invoke the Recompute function.

Note that Digi mode progress includes credit for QSOs in any digital modes designated as eligible for WAS Digital credit via DXKeeper's user-defined mode mechanism.

The **WAS Award Progress** panel's Progress Grid is *live* -- you can navigate among its entries and your log by double-clicking cells:

- double-clicking a State cell
 - filters the Log Page Display to show all QSOs with the US State
 - shows the Log Page Display
- double-clicking a State-Mode cell
 - filters the Log Page Display to show all QSOs with the US State in that mode
 - shows the Log Page Display
- double-clicking a State-Band cell
 - filters the Log Page Display to show all QSOs with the US State in that band
 - shows the Log Page Display
- double-clicking a State-Satellite cell
 - filters the Log Page Display to show all QSOs with the US State whose propagation mode is **Sat**
 - shows the Log Page Display
- double-clicking a State-EME cell
 - filters the Log Page Display to show all QSOs with the US State whose propagation mode is **EME**
 - shows the Log Page Display

If the log defines two or more QTHs, the above double-click operations filter the Log Page Display to contain only QSOs made from QTHs whose WAS box is checked.

The **WAS Award Progress Filter** panel contains a set of controls that let you filter the Progress Grid to show what's unworked, what's worked but not requested, what's requested but not confirmed, what's confirmed but not verified, and/or what's verified on a particular band, in a particular mode, via Satellite, or via EME; setting the **Band** selector to *ANY* and the **Mode** selector to *MIXED* will display "mixed" progress. To reset the filter so that all Progress Grid entries are visible, click the **All** button.

To generate a report showing all US States shown by the specified filter, click the **WAS Award Progress Filter** panel's **Report** button.

Note that filtering the Progress Grid has no impact on DXKeeper's ability to track award progress; such progress will be accurately tracked whether all US States are visible in the Progress Grid or not.

The Progress Grid is immediately updated when

- a station is worked
- a QSL card is requested
- when a QSO is confirmed via QSL card or LoTW (or via eQSL if the Include eQSL confirmations... box is checked)
- when a QSO is verified by the ARRL and you set its WASVerified item to **V**

When enabled, DXKeeper will automatically update the Progress Grid when you

- indicate a regression in the QSO's progress, e.g. demoting its QSL_Rcvd or LoTW Rcvd status from confirmed to worked, or from worked to unworked (if the Include eQSL confirmations... box is checked, demoting a QSO's eQSL Rcvd status will also trigger an automatic update)
- modify a QSO's band or mode
- modify a QSO's DXCC entity or US State
- place an exclamation point at the beginning of a QSO's callsign (marking the QSO as not to be considered for award progress)
- delete a QSO

This update is accomplished by reviewing all QSOs with the US State of the deleted or modified QSO; this is generally much faster than clearing the Progress Grid and rebuilding it by scanning every QSO in the log, as performed by the Recompute function. DXKeeper displays a small dialog box with a progress bar whenever it is recomputing progress for a specific US State. If you plan to delete or modify several QSOs, however, it may be faster to disable automatic progress recomputation, make the changes, and then perform a Recompute to rebuild the Progress Grid.

Realtime Award Tracking for CQ DX Marathon Awards

Realtime award tracking information for the CQ DX Marathon award family is displayed on the **Realtime Award Tracking** window's **Marathon** tab, which is vertically resizable. This information consists of by-mode and by-band progress - unworked or worked - for each CQ Country and CQ zone based on QSOs for the current year in the log file.

- in a log with zero or one QTHs defined, all QSOs are considered valid for DX Marathon
- in a log with more than one QTH defined, only QSOs that specify a QTH whose Marathon box is checked are considered valid for DX Marathon

The **Marathon Award Progress** panel displays a **Marathon Progress Grid** with one entry CQ Country and one entry per CQ zone. In this grid, the letter **W** identifies a *worked* band or mode. To display these letters in bold font, check the Display Progress in bold font box in the **Realtime Award Tracking** panel on the Configuration window's **Awards** tab.

QSOs considered for inclusion in your CQ DX Marathon submission can be risky for several reasons:

- you are uncertain that you logged your QSO partner's callsign correctly; as a result, the QSO may specify the wrong Country or the wrong CQ Zone.
- the CQ Marathon Award Manager has indicated that a QSO's callsign may not be valid for CQ DX Marathon, pending the submission or approval of required documentation

To avoid submitting a "risky" QSO for a country or CQ zone when a "not risky" QSO is available for that country or CQ Zone, DXKeeper provides Country Risk and Zone Risk items in each QSO. When a QSO's Country Risk item is unspecified, the risk is nominal: the QSO's logged Country is likely to be correct and valid. Similarly, when the QSO's Zone Risk item is unspecified; the risk is nominal: the QSO's CQ Zone is considered likely to be correct and valid. Setting a QSO's Country Risk item to **L** means that you are certain the QSO's Country is both accurate and valid; similarly, setting a QSO's Zone Risk item to **L** means that you are certain the QSO's CQ Zone is both accurate and valid. For example, a QSO confirmed by an authenticity-guaranteed (AG) member of eQSL can be considered to have low Country Risk and low Zone Risk. A QSO made under conditions so noisy that you're not certain that you logged the correct callsign, on the other hand, should be considered to have a high Country Risk and Zone Risk; both items should be set to **H**, meaning that the QSO should not be submitted for its country or zone unless no lower-risk QSOs with its country or zone are available. If the CQ Marathon Award Manager has ruled that QSOs with a specific callsign are not valid, the QSO's Country Risk and Zone Risk items should be set to **I**, meaning that this QSO should not be submitted under any circumstances.

- If the Confirmed QSOs are low risk option is enabled, the Marathon submission generator will automatically consider countries and Marathon zones of QSOs confirmed via QSL card, LoTW, Authenticity-Guaranteed members of eQSL, Club Log, or QRZ to be low risk
- So that you can continue to seek QSOs more likely to be valid for Marathon countries and zones, Realtime Award Tracking for Marathon countries ignores QSOs whose Country Risk items are set to **H**, and Realtime Award Tracking for Marathon zones ignores QSOs whose Zone Risk items are set to **H**.

If a QSO's WAZVerified item is set to **I**, then the QSO is considered to be invalid for Marathon country and zone credit.

A QSO is considered to be invalid for Marathon country credit if

- its WAZVerified item is set to **I**
- its Country Risk item is set to **I**

A QSO is considered to be invalid for Marathon zone credit if

- its WAZVerified item is set to I
- its Zone Risk item is set to I

The Progress Grid is *live* -- you can navigate to your log by double-clicking a band or mode cell in the Progress Grid; this action filters the Log Page display to show all QSOs with the CQ selected CQ country or zone in the selected band **or** mode, and shows the Log Page Display.

The Marathon Award Progress panel's **Marathon Award Progress Filter** panel contains a set of controls that let you filter the Marathon Progress Grid to show what's unworked, what's worked -- on any band, or in any mode. Only Marathon Progress Grid entries that match the criteria set in these controls are visible; the number of matching entries is shown in the Marathon Award Progress panel's caption. To generate a progress report showing only Marathon countries and zones shown by the specified filter, click the Marathon Award Progress Filter panel's **Report** button; to reset the filter so that all Marathon Progress Grid entries are visible, click the **All** button. Note that filtering the Marathon Progress Grid has no impact on DXKeeper's ability to track awards progress; such progress will be accurately tracked whether all Marathon countries and zones are visible in the Marathon Progress Grid or not.

The Marathon Bands & Modes panel's Mixed, Band, and Mode boxes determine whether an active DX station will be highlighted and announced by SpotCollector as "needed for CQ DX Marathon". The CQ DX Marathon award defines four objectives: Mixed, single-band, single-mode, and multiple-band (Challenge); at the end of the year, your submission must specify one such objective. During the year, however, you may pursue Marathon on multiple bands and modes, and decide for which objective you will compete after comparing your results in each.

- If the Include QSOs with no propagation mode box is unchecked, QSOs whose propagation mode is unspecified will be ignored
- If a maximum transmit power is specified is specified, QSOs whose transmit power is unspecified or whose transmit power exceeds the specified maximum transmit power will be ignored

At the beginning of a new calendar year, you must reset DXLab's Marathon award tracking in both DXKeeper and SpotCollector by performing these actions in the order specified:

1. Configure the Marathon Bands & Modes panel to indicate which active DX stations should be highlighted and announced by SpotCollector as "needed for CQ DX Marathon" during the new year
 - check the Mixed box if you're considering submitting a Mixed entry end of the new year
 - check the box for each band for which you're considering submitting a single-band entry at the end of the new year
 - check the box for each mode for which you're considering submitting a single-mode entry at the end of the new year
 - check the Mixed box if you're considering submitting a Challenge entry end of the new year
2. On the **Check Progress** tab of DXKeeper's Main window, click the **Recompute** button
3. On the **Spot Database** tab of SpotCollector's **Configuration** window, click the **Recomputation** panel's **Recomp** button

Realtime Award Tracking for CQ WAZ Awards

Realtime award tracking information for the CQ Worked All Zones award family is displayed on the **Realtime Award Tracking** window's **WAZ** tab, which is vertically resizable. This information consists of by-mode and by-band progress for each CQ zone based on every QSO in the current log file. Confirmations via QSL card and eQSL (in QSL_Rcvd and eQSL Rcvd respectively) are considered in determining progress, but eQSL confirmations only count if they come from an Authenticity Guaranteed member. A QSO confirmed via an LoTW confirmation that specifies a CQ Zone that matches the logged CQ Zone is considered *confirmed*; A QSO confirmed via an LoTW confirmation that does not specify the logged CQ Zone will be considered *worked*.

The **WAZ Award Progress** panel displays a **WAZ Progress Grid** with one entry per CQ zone; its CQ Zone Progress Details sub-panel displays a **Progress Details Grid** for the currently-selected Progress Grid entry Cells in the Progress Grid contain codes showing the confirmation status of the CQ zone, bands, and modes; cells in the Progress Details Grid contain codes showing the confirmation of band-mode combinations. The codes used in both grids are identical:

- **W** worked
- **Q** an entry is present in the QSL Queue
- **R** a QSL card has been sent requesting a confirmation
- **C** confirmed via QSL card or Authenticity Guaranteed member of eQSL
- **V** verified (award credit granted) by the award sponsor

To display these codes in bold font, check the Display Progress in bold font box in the **Realtime Award Tracking** panel on the Configuration window's **Awards** tab.

If a QSO's WAZVerified item is set to **I**, then the QSO is considered to be invalid for WAZ awards. If a QSO's QSL_Rcvd or eQSL_QSL_RCVD item is set to **X**, the QSO is considered to be unconfirmable and thus treated for WAZ award tracking purposes as if it did not occur.

Both the Progress Grid and Progress Details Grid are *live* -- you can navigate among them and your log by selecting entries or double-clicking cells:

- double-clicking a band or mode cell in the Progress Grid
 - selects the associated CQ zone
 - filters the Log Page display to show all QSOs with the CQ zone in the selected band **or** mode
 - shows the Log Page display
- double-clicking a cell in the Progress Details Grid
 - filters the Log Page display to show all QSOs with the CQ zone in the selected band **and** mode
 - shows the Log Page display

The WAZ Award Progress panel's **WAZ Award Progress Filter** panel contains a set of controls that let you filter the WAZ Progress Grid to show what's unworked, what's worked but not requested, what's requested but not confirmed, what's confirmed but not verified, and/or what's verified -- on any WAZ band, or in any WAZ model; setting the **Band** selector to *ANY* and the **Mode** selector to *MIXED* will display CQ Zone progress. Only WAZ Progress Grid entries that match the criteria set in these controls are visible; the number of matching entries is shown in the WAZ Award Progress panel's caption. To generate a report showing all CQ zones shown by the specified filter, click the WAZ Award Progress Filter panel's **Report** button; to reset the filter so that all WAZ Progress Grid entries are visible, click the **All** button. Note that filtering the WAZ Progress Grid has no impact on DXKeeper's ability to track awards progress; such progress will be accurately tracked whether all CQ zones are visible in the WAZ Progress Grid or not.

Bands and modes being pursued for WAZ are specified in the WAZ Bands & Modes panel.

Realtime Award Tracking for CQ WPX Awards

Realtime award tracking information for the CQ WPX award family is displayed on the **Realtime Award Tracking** window's **WPX** tab, which is vertically resizable. This information consists of mixed progress, by-mode progress, and by-band progress for WPX prefixes based on every QSO in the current log.

Confirmations via QSL card, LoTW, and eQSL (in QSL_Rcvd, LoTW Rcvd, and eQSL Rcvd respectively) are considered in determining progress; eQSL confirmations only count if they come from an Authenticity Guaranteed member.

The **WPX Award Progress** panel displays a **Progress Grid** with one entry per WPX prefix. Cells in the Progress Grid contain codes showing the confirmation status of the WPX prefix:

- **W** worked
- **R** a QSL card has been sent requesting a confirmation
- **C** confirmed via QSL card or LoTW or eQSL
- **V** verified (award credit granted) by the award sponsor

To display these codes in bold font, check the Display Progress in bold font box in the **Realtime Award Tracking** panel on the Configuration window's **Awards** tab.

If a QSO's WPXVerified item is set to **I**, then the QSO is considered invalid for WPX awards. If a QSO's QSL_Rcvd, LoTW Rcvd, and eQSL Rcvd items are set to **X**, the QSO is considered to be unconfirmable and thus treated for award tracking purposes as if it did not occur.

Note that Digi mode progress includes credit for QSOs in any digital modes designated as eligible for WPX Digital credit via DXKeeper's user-defined mode mechanism.

The **WPX Award Progress** panel's Progress Grid is *live* -- you can navigate among its entries and your log by double-clicking cells:

- double-clicking a Prefix or Mixed cell
 - filters the Log Page display to show all QSOs with that WPX prefix
 - shows the Log Page display
- double-clicking a Prefix-Mode cell
 - filters the Log Page display to show all QSOs with that WPX prefix in that mode
 - shows the Log Page display
- double-clicking a State-Band cell
 - filters the Log Page display to show all QSOs with that WPX prefix in that band
 - shows the Log Page display

The **WPX Award Progress Filter** panel contains a set of controls that let you filter the Progress Grid to show what's worked but not requested, what's requested but not confirmed, what's confirmed but not verified, and/or what's verified on a particular band, or in a particular mode; setting the **Band** selector to **ANY** and the **Mode** selector to **MIXED** will display "mixed" progress. To reset the filter so that all Progress Grid entries are visible, click the **All** button.

To generate a report showing all WPX Prefixes shown by the specified filter, click the **WPX Award Progress Filter** panel's **Report** button.

Note that filtering the Progress Grid has no impact on DXKeeper's ability to track award progress; such progress will be accurately tracked whether all WPX prefixes are visible in the Progress Grid or not.

The Progress Grid is immediately updated when

- a station is worked
- a QSL card is requested
- when a QSO is confirmed via QSL card or LoTW or eQSL
- when a QSO is verified by the award sponsor and you set its WPXVerified item to **V**

When enabled, DXKeeper will automatically update the Progress Grid when you

- indicate a regression in the QSO's progress, e.g. demoting its QSL_Rcvd or LoTW Rcvd or eQSL Rcvd status from confirmed to worked, or from worked to unworked
- modify a QSO's band or mode
- modify a QSO's WPX prefix
- place an exclamation point at the beginning of a QSO's callsign (marking the QSO as not to be considered for award progress)
- delete a QSO

This update is accomplished by reviewing all QSOs with the WPX prefix of the deleted or modified QSO; this is generally much faster than clearing the Progress Grid and rebuilding it by scanning every QSO in the log, as performed by the Recompute function. DXKeeper displays a small dialog box with a progress bar whenever it is recomputing progress for a specific WPX prefix. If you plan to delete or modify several QSOs, however, it may be faster to disable automatic progress recomputation, make the changes, and then perform a Recompute to rebuild the Progress Grid.

Realtime Award Tracking for IOTA Awards

Realtime award tracking information for the IOTA award family is displayed on the **Realtime Award Tracking** window's **IOTA** tab, which is vertically resizable. This information consists of IOTA status and mixed award progress for IOTA groups based on every QSO in the current log. A QSO confirmed via QSL card (QSL_Rcvd is set to **Y**, **S**, or **V**) or LoTW (LoTW_Rcvd is set to **Y**, **S**, or **V** with an **I** in its LoTW Cfm item), or Club Log (Club Log Rcvd is set to **Y**) is considered *confirmed for IOTA* unless its IOTAVerify item is set to **N**, in which case it is considered *worked*.

The **IOTA Award Progress** panel displays a **Progress Grid** with one entry per gridsquare. Cells in the Progress Grid contain codes showing the IOTA status and mixed confirmation status of the IOTA group. The IOTA status codes are

- **D** deleted
- **P** provisional
- **H** on hold pending additional information

The confirmation status codes are

- **W** worked
- **R** a QSL card has been sent requesting a confirmation
- **C** confirmed via QSL card or LoTW
- **V** verified (award credit granted) by IOTA

To display these codes in bold font, check the Display Progress in bold font box in the **Realtime Award Tracking** panel on the Configuration window's **Awards** tab.

If a QSO's IOTAVerified item is set to **I**, then the QSO is considered invalid for IOTA awards.

The **IOTA Award Progress** panel's Progress Grid is *live*. Double-clicking a group or mixed cell will filter the Log Page display to show all QSOs with that IOTA Group, and show the Log Page display.

The **IOTA Award Progress Filter** panel contains a set of controls that let you filter the Progress Grid to show what's worked, what's worked but not requested, what's requested but not confirmed, what's confirmed but not verified, and/or what's verified. To reset the filter so that all Progress Grid entries are visible, click the **All** button.

To generate a report showing all IOTA Groups shown by the specified filter, click the **IOTA Award Progress Filter** panel's **Report** button.

Note that filtering the Progress Grid has no impact on DXKeeper's ability to track award progress; such progress will be accurately tracked whether all IOTA groups are visible in the Progress Grid or not.

The Progress Grid is immediately updated when

- a station is worked
- a QSL card is requested
- when a QSO is confirmed via QSL card or via LoTW
- when a QSO is verified by IOTA and you set its IOTAVerified item to **V**

When enabled, DXKeeper will automatically update the Progress Grid when you

- indicate a regression in the QSO's progress, e.g. demoting its QSL_Rcvd status from confirmed to worked, or from worked to unworked
- modify a QSO's IOTA group
- place an exclamation point at the beginning of a QSO's callsign (marking the QSO as not to be considered for award progress)
- delete a QSO

This update is accomplished by reviewing all QSOs with the IOTA group of the deleted or modified QSO; this is generally much faster than clearing the Progress Grid and rebuilding it by scanning every QSO in the log, as performed by the Recompute function. DXKeeper displays a small dialog box with a progress bar whenever it is recomputing progress for a specific IOTA group. If you plan to delete or modify several QSOs, however, it may be faster to disable automatic progress recomputation, make the changes, and then perform a Recompute to rebuild the Progress Grid.

Importing ADIF and Tab-delimited Files

The **Import QSOs** tabbed dialog enabled you to import QSOs from standard ADIF files:

- Click the **Start** button, and use the file selector to choose the file containing the QSOs to be imported. The **Progress** panel provides a display of real-time statistics, as well as errors encountered
- Click the **Abort** button to terminate the import operation before it completes.

You can also import QSOs from non-standard ADIF files, and from tab-delimited files.

The ADIF specification precludes characters whose code is less than 32. Importing a file containing a character whose code is less than 32 can prematurely terminate the import process, preventing all QSOs in the file from being imported. If there is any possibility that the file you are importing contains characters with codes less than 32, enable the Ignore tags with binary data option, which will pre-scan the file to remove fields containing character codes less than 32.

When DXKeeper accepts a **Log QSO** command from another application, it is being imported and thus is subject to the Import Options described below unless stated otherwise. DXKeeper will initialize missing fields in such QSOs to default values.

To make it easy to view QSOs newly imported from a file, DXKeeper provides the option to automatically set the Select item of each imported QSO to **Y**. Before starting the import operation, however, you should set the Select item of all existing QSOs to **N** by clicking the **Import QSO** tab's **Clear Select** button. After the import operation is complete Invoke the **Sel** filter to see only the imported QSOs in the Log Page Display.

If SpotCollector is running when an import operation completes, DXKeeper will direct it to automatically update the entries in the Spot Database to reflect advances in award progress. If you are planning to import several files, it will be more efficient to unchecked the **Enable automatic updates box** in the **Recomputation** panel on the **Spot Database** tab of SpotCollector's Config window, perform the imports, click SpotCollector's **Recomp** button, and then check the **Enable automatic updates box**.

When importing a QSO record that does not specify an azimuth or distance field, DXKeeper computes these items if the QSO specifies sufficient information, including information obtained from a callbook lookup.

When importing a QSO record for a station in the United States, Alaska, or Hawaii, DXKeeper corrects frequent county misspellings, e.g. IL, Du Page => IL, DuPage. It also replaces counties that specify an independent city name with the name of the surrounding county, e.g. VA, Frankin => VA, Southampton.

Import Options

Options available on this tab allow you to prevent the importing of duplicate QSOs, import from non-standard ADIF files produced by other applications, recover or insert missing information, save errors to a file, and/or display a report showing any advances in award progress attributable to the imported QSOs:

General Options

- If you want each imported QSO's QSL_Sent_Via item set to **'B'** (for "bureau") unless it specifies otherwise, check the **Default to 'send via bureau'** box. This option only applies to QSOs imported from a file; it does not apply to QSOs logged in response to a **Log QSO** command from another application.
- Check the **Deduce missing items from entity, primary subdivision, and available databases** box to have DXKeeper fill in missing items like Cont, CQ, ITU, ARRL Section, Primary Administrative Subdivision, and Secondary Administrative Subdivision when they can be unambiguously determined from the DXCC entity and Primary Administrative Subdivision, a DXCC database query of the imported callsign, or an RDA database query (if installed) of the imported callsign

- Check the **Query Callbook and available databases for missing items** box to have DXKeeper lookup each imported QSO's callsign in the selected Callbook, the DXCC database, and the RDA database (if installed) and fill in any items not present in the imported QSO with information from these sources; this option will be disabled if no Callbook is currently selected.
- Check the **Update LotW membership** box to have DXKeeper determine whether the callsign of an imported QSO that does not indicate LoTW membership is an LotW member by consulting the LotW database; if so, the imported QSO's LotW Member item is set to **Y**, subject to the Maximum age of most recent LotW upload setting
- Check the **Update eQSL membership** box to have DXKeeper determine whether the callsign of an imported QSO that does not indicate eQSL Authenticity Guaranteed (AG) membership is an eQSL AG member by consulting the eQSL.cc database; if so, the imported QSO's eQSL Member item is set to **Y**.
- Check the **Enable Override checking** box to have DXKeeper check each imported callsign against the Override list maintained by DXView and SpotCollector. You can use Overrides to handle DX callsigns that do not conform to standard prefix allocations, or to provide specific location information for a station operating in a needed CQ zone, continent, grid square, or IOTA tag. If an imported Callsign matches an entry on the Override list that specifies a valid DXCC entity,
 - the imported QSO's DXCC entity, Region, Primary Administrative Subdivision, CQ, ITU, Cont, Grid 1, and IOTA items will be populated with their values specified in the Override entry; imported values for these items will be ignored
 - the imported QSO's Secondary Administrative Subdivision and ARRL Section items will be cleared; imported values for these items will be ignored
- Check the **Set Select in imported QSOs to Y** box to have the Select item of each QSO imported from a file set to **Y**, thereby making it easy to later filter the Log Page Display to contain only the imported QSOs by invoking the **Sel** filter; it's generally appropriate to set the Select item of all existing QSOs to **N** before performing the import so that when the import is complete, only newly-imported QSOs will have their Select items set to **Y**. This option only applies to QSOs imported from a file; it does not apply to QSOs logged in response to a **Log QSO** command from another application.
- Check the **Create Mobile myQTHID** box if you want DXKeeper to handle an imported QSO that doesn't specify a App_DXKeeper_My_QTHID field but does specify a MY_GRIDSQUARE field by constructing a myQTHID by appending the specified MY_GRIDSQUARE to the word mobile_ (e.g. mobile_CN87) and assigning the constructed myQTHID to that QSO
- If you check the **Guarantee unique start times** box, DXKeeper assumes that the ADIF file being imported contains QSOs in ascending order of start time, and compares imported QSO's start time to that of its immediate predecessor; if a QSO's start time is the same or earlier than that of its predecessor's start time, the imported QSO's start time is set to that of its predecessor plus 5 seconds, time and the imported end time is set to 1 second after the start time -- thereby guaranteeing that each imported QSO has a unique start time. This option should only be enabled when necessary, as it can significantly reduce the rate at which QSOs are imported. **This option should not be used when importing an ADIF file whose QSOs are not sorted in ascending order of start time.**
- If the file you are importing contains tags contains binary data, you must either check the **Ignore tags with binary data** box or select **Import From Logic**; otherwise, DXKeeper will be unable to properly import the file. The maximum size of a file imported with this option enabled is 2 gigabytes. This option only applies to QSOs imported from a file; it does not apply to QSOs logged in response to a **Log QSO** command from another application.
- Check the **Produce and Display Award Progress Report** box to
 - track all changes to award progress attributable to the QSOs imported from a file, subject to the objectives specified in the DXCC/Top Bands & Modes panel; this option only applies to QSOs imported from a file; it does not apply to QSOs logged in response to a **Log QSO** command from another application.
 - generate a report in a file whose pathname is created by appending `_progress.txt` to the pathname of the file being imported (over-writing any existing file with that pathname)
 - display the generated report; award progress is subject to the objectives you've specified in the DXCC Bands & Modes, Marathon, and WAZ Bands & Modes panels on the Configuration window's Awards tab

- Check the **Report import errors in error file** checkbox to record all errors encountered while importing QSOs from a file. The error report is created in a file whose pathname is created by appending `_error.txt` to the pathname of the file being imported, over-writing any existing file with that pathname whether or not new errors are actually reported; if errors are detected, the error report will be displayed when the import operation finished. Note that import errors are also displayed in the **Progress** panel, but to a maximum of 65,000 characters. Entries in the error file generated by imported QSOs considered illegal are begin with the word *illegal*. This option only applies to QSOs imported from a file; it does not apply to QSOs logged in response to a **Log QSO** command from another application.

Duplicate Checking

Duplicate checking prevents the importing of QSOs from a file that are already present in your log, but significantly reduces the rate at which QSOs are imported. If you are importing QSOs into an empty log file, or are certain that the file to be imported contains no duplicate QSOs, then uncheck the **Check Duplicates on Import** box. Note duplicate checking is only performed on imported files; it is not performed on QSOs received from other applications via DDE or TCP.

If you are importing into a populated log and wish to prevent the importing of duplicate QSOs, check the **Check Duplicates on Import** box.

- Specify the **range** (in minutes) that defines a duplicate QSO
 - 0 means an imported QSO must exactly match a logged QSO's begin date/time to be considered a duplicate
 - a number larger than 0 specifies a range before and after the imported QSO's begin date/time; if a matching logged QSO's begin date/time falls in this range, the imported QSO will be considered a duplicate
- If the **Consider primary and secondary administrative subdivisions** box is checked, an imported QSO is only rejected if its primary and secondary administrative subdivisions also match
- If the **Consider gridsquares** box is checked, an imported QSO is only rejected if its gridsquare also matches the existing QSO's Grid 1 item
- If the **Merge information from each duplicate into the existing QSO** box is checked, information not present in an existing QSO is updated with information harvested from an imported QSO that duplicates it

Substitution Options

If the file you are importing contains QSOs that may be missing Station Callsign, Operator Callsign, Owner Callsign, or myQTH ID fields, use the options in this panel to populate missing items with the default values you've specified. These options only applies to QSOs imported from a file; they does not apply to QSOs logged in response to a **Log QSO** command from another application.

- Check the **Substitute ... for missing station callsigns** box to populate missing Station Callsigns with the callsign specified in the Station callsign text box in the Default panel of DXKeeper's configuration window.
- Check the **Substitute ... for missing operator callsigns** box to populate missing Operator Callsigns with the callsign specified in the Operator callsign text box in the Default panel of DXKeeper's configuration window.
- Check the **Substitute ... for missing owner callsigns** box to populate missing Owner Callsigns with the callsign specified in the Owner callsign text box in the Default panel of DXKeeper's configuration window.
- Check the **Substitute for missing myQTH IDs** box to place the selected myQTH Identifier into the myQTH ID item of any imported QSO whose ADIF record lacks an APP_DXKEEPER_MY_QTHID tag.
- Check the **Substitute default Transmit Power for missing TX_PWR** box to set a QSO's transmit power item to the value specified on the Configuration window's Defaults tab when importing a QSO that does not specify a TX_PWR tag; the specified value is determined from the Default Transmit Power by Band, Default Transmit Power by Mode, and Transmit power settings.
- Check the **Substitute default Antenna Path for missing ANT_PATH** box to set a QSO's Antenna Path item to the value specified on the Configuration window's Defaults tab when importing a QSO that does not specify an ANT_PATH tag.

- Check the **Substitute default Propagation mode for missing PROP_MODE** box to set a QSO's Propagation Mode item to the value specified on the Configuration window's Defaults tab when importing a QSO that does not specify an `PROP_MODE` tag
 - if Default Propagation Mode by band is not enabled, set the QSO's Propagation Mode item to the value selected in the Propagation Mode selector
 - if Default Propagation Mode by band is enabled, set the QSO's Propagation Mode item to the value specified in the Default Propagation Mode by band panel's HF, VHF, or UHF selectors as a function of the imported QSO's band
- Check the **Substitute default SFI, A, and K for missing SFI, A, and K** box to set a QSO's SFI, A, and K items to the values specified on the Configuration window's Defaults tab when importing a QSO that does not specify all three of these items

Note that

- if an imported QSO is missing a Station Callsign field but contains an Operator field, and both the **Substitute ... for missing station callsigns** and **Replace Station Callsign with** boxes are unchecked, then the contents of the Operator field will be imported as the Station Callsign
- if an imported QSO is missing an Owner Callsign field, and the **Substitute ... for missing owner callsigns** box is unchecked, then
 - if the imported QSO contains a Station Callsign field, its contents will be imported as the Owner Callsign
 - if the imported QSO does not contain a Station Callsign field but does contain an Operator field, the Operator field's contents will be imported as the Owner Callsign.

Replacement Options

if you are importing a contest log file, the following options may be useful. These options only apply to QSOs imported from a file; they do not apply to QSOs logged in response to a **Log QSO** command from another application.

- if you check the **Station Callsign** box, the Station Callsign of every imported QSO will be replaced with the specified value.
- if you check the **Operator Callsign** box, the Operator Callsign of every imported QSO will be replaced with the specified value.
- if you check the **Owner Callsign** box, the Owner Callsign of every imported QSO will be replaced with the specified value.
- if you check the **Contest ID** box, the Contest ID of every imported QSO will be replaced with the specified value.
- If you check the **State, Province, & Section** box and set the selector to its right to an ADIF tag (or a non-standard tag present in the ADIF file you are importing), the field of each imported QSO designated by that tag will be inspected word by word for a Grid Square or for
 - a US State abbreviation (if the QSO's DXCC entity is USA, Alaska, or Hawaii)
 - a Canadian Province abbreviation (if the QSO's DXCC entity is Canada)
 - an ARRL section abbreviation (if the QSO's DXCC entity is the USA, Alaska, Hawaii, US Virgin Islands, Puerto Rico, US Pacific possessions, or Canada)

If a grid square, US State, Canadian Province, and/or ARRL section abbreviation are found in the designated ADIF tag, the contents of that designated tag will also be imported into the QSO's QTH item. If unambiguous, a CQ zone and ITU zone will be derived from the State, Province, and Grid Square. Any Information found in or derived from the specified field will only be utilized if field specifications are absent from the imported QSO.

The selector to the right of the **State, Province, & Section** box is prepopulated with `APP_N1MM_EXCHANGE1`, `COMMENT`, `NOTES`, `QTH`, `REMARK`, `SECTION`, `SRX_STRING`, and `SRX`, but you can type in any tag you wish.

ADIF Style

While there exists a formal ADIF specification, some applications export ADIF files that are not fully compliant in ways that require foreknowledge on DXKeeper's part in order to successfully import information. QSOs logged in response to a **Log QSO** command from another application are always considered to be "Standard ADIF", independent of the **ADIF Style** panel's setting.

Option	Effect
Standard ADIF	<ul style="list-style-type: none"> assumes an ADIF-compliant file, and imports application-specific ADIF tags
non-compliant ADIF	<ul style="list-style-type: none"> compensates for reported defects in the ADIF files generated by some applications
DX4WIN v7	<ul style="list-style-type: none"> extracts LotW confirmation from COMMENT tags extracts receive frequencies from NOTES tags extracts name and QTH from NOTES tags
DX4WIN v8	<ul style="list-style-type: none"> extracts LotW confirmation from COMMENT tags extracts receive frequencies from NOTES tags
DXBase5	<ul style="list-style-type: none"> imports QSOs exported from DXBase version 5 using Btrieve and DXBconvt extracts Name, Frequency, Gridsquare, CQ zone, and IOTA information from COMMENT tags
DXBase	<ul style="list-style-type: none"> sets the DXCC entity for each imported QSO from information in the DXBPFX tag acquires LotW QSL sent information from the DXBQSL_SENT tag acquires LotW QSL received information from the DXBQSL_RCVD tag acquires the LotW QSL received date from the DXBLOTWR tag acquires DXCC verification information from the DXBAWD tag if a DXVAL tag is present and specifies the value 0, marks the QSO as invalid for DXCC awards by setting the imported QSO's QSL_RCVD item to I acquires primary and secondary subdivision information from the SPEC1 tag in QSOs with stations in Japan, Ogasawara, or Minami Torishima; this tag is expected to contain JCCnnnn or JCGnnnnn respectively (City or Gun codes) acquire the QSX frequency specified in the first word of a comment it matches the QSO frequency's band Note: if a QSO's DXBAWD tag indicates that its been approved for DXCC, and its confirmed via both QSL card and LotW, then DXKeeper sets its QSL_RCVD item to V
Hamlog	<ul style="list-style-type: none"> imports text files exported by Hamlog version 5.18 and earlier, which cannot export ADIF files
Logger16	<ul style="list-style-type: none"> all but the first word of each imported NAME tag is relocated to the COMMENT tag
LOGic	<ul style="list-style-type: none"> ignore any tags containing binary data acquires LotW QSL sent information from the LotW_Sent tag acquires LotW QSL received information from the LotW_Rcvd tag interprets DXCCSUB: in a COMMENT tag to mean that the QSO has been verified by the DXCC desk; if the QSO is confirmed via both QSL card and LotW, then DXKeeper sets its QSL_RCVD item to V

MMTTY	<ul style="list-style-type: none"> extracts transmit and receive contest sequence numbers from the RST_SENT and RST_RCVD tags respectively
N3FJP	<ul style="list-style-type: none"> converts a MODE of PH to SSB
SWISSLOG	<ul style="list-style-type: none"> converts a value conveyed by the non-standard QSL_ACTION tag to the ADIF standard QSL_SENT_VIA tag, which is placed in the QSO's Sent Via item places the contents of the non-standard P_SUB_REGION tag into the QSO's Region item places the contents of the non-standard L_QSL_CARDNR tag into the QSO's QSLNumber item places the contents of the non-standard REGION tag into the QSO's State item converts non-standard VE_PROV values to ADIF standard Canadian province abbreviations converts values conveyed by the non-standard L_LOTW_STATUS, L_LOTW_SEND_DATE, L_LOTW_RECEIVED, and L_LOTW_RECEIVED_DATE tags to values conveyed by ADIF standard LotW tags, and places these in the QSO's LotW status items places the contents of the non-standard MY_EVENT tag into the QSO's ContestID item; the value DX is ignored
TurboLog v3, v4	<ul style="list-style-type: none"> extracts US State and CQ Zone information from IOTA tags extracts "via Buro" and "via Direct" information from QSL_SENT tags replaces a leading * in the CALL tag with a ! interprets <TL4_QSL_ACCEPTED:1>Y to mean "verified - DXCC Credit Granted", and sets the QSO's QSL_RCVD item to V
WinLog32	<ul style="list-style-type: none"> imports information from WL_REMARKS tags into comment items, and ignores information associated with COMMENT tags (which contain country names) an imported <QSL_SENT:1>N will clear the imported QSO's QSL_SENT item
Writelog	<ul style="list-style-type: none"> correctly interprets Writelog's DXCC prefixes in PREF tags, ensuring that each imported QSO is assigned to the correct DXCC entity
tab-delimited file	<ul style="list-style-type: none"> assumes an tab-delimited file whose first line is a header, and whose values are consistent with those specified in ADIF (a few exceptions are permitted, as described below)

If the file you are importing contains tags that specify binary data, you must either check the **Ignore tags containing binary data** box or select **Logic** in the **ADIF Style** panel; otherwise, DXKeeper will not properly import the file.

QSOs logged in response to a Log QSO command from another application

As noted above, the following Import Options do not apply to QSOs logged in response to **Log QSO** command from another application:

- Default to 'send via bureau
- Set Select in imported QSOs to Y
- Ignore tags with binary data
- Produce and Display Award Progress Report
- Report import errors in error file
- Substitution Options
- Replacement Options
- ADIF Style

When importing a QSO logged in response to **Log QSO** command from another application that does not specify one of these items, DXKeeper will import that item with a default value if one has been specified:

Item	Configuration tab	Setting
Ant_Path	Defaults	Antenna Path
MS_Shower	Defaults	Meteor shower
MyQTHID	Log	default myQTH ID
Operator	Defaults	Operator callsign
Owner Callsign	Defaults	Owner callsign
Prop Mode	Defaults	Propagation mode
QSLMsg	Defaults	QSL msg
Sat_Name	Defaults	Satellite name
Sat_Mode	Defaults	Satellite mode
Station Callsign	Defaults	Station callsign
TX_Power	Defaults	Transmit power by Band
		Transmit power by Mode
		Transmit power

Application-specific ADIF tags

The ADIF specification enables applications to define their own tags. With the ADIF Style set to Standard ADIF, DXKeeper recognizes the application specific tags of certain other applications, as described below:

Tag	Effect
APP_DXLOG_RCVD	sets the QSO's rx info item <ul style="list-style-type: none">• APP_DXLOG_RCVD has the highest priority• APP_DXLOG_RECINFO has the 2nd-highest priority• APP_DXLOG_RECINFO2 has the 3rd-highest priority• APP_DXLOG_RECINFO3 has the 4th-highest priority
APP_DXLOG_RECINFO	
APP_DXLOG_RECINFO2	
APP_DXLOG_RECINFO3	
APP_LOGGER32_CNTY	sets the QSO's Cnty item
APP_LOGGER32_eQSL	if Y sets the QSO's eQSL_Sent item to R
APP_LOGGER32_EQSL_QSL_SENT	if Y or N , sets the QSO's eQSL_Sent item
APP_LOGGER32_EQSL_QSL_RCVD	if Y or N , sets the QSO's eQSL_Rcvd item
APP_LOGGER32_LAT	sets the QSO's Lat item
APP_LOGGER32_LNG	sets the QSO's Lon item
APP_LOGGER32_LoTW	if Y sets the QSO's LotW_Sent item to R
APP_LOGGER32_LOTW_QSL_SENT	if Y or N , sets the QSO's LotW_Sent item
APP_LOGGER32_LOTW_QSL_RCVD	if Y or N , sets the QSO's LotW_Rcvd item
APP_LOGGER32_QSL	if Y sets the QSO's QSL_Sent item to R
APP_LOGGER32_STATE	sets the QSO's State item
APP_N1MM_HQ	sets the QSO's rx info item
APP_N1MM_EXCHANGE1	sets the QSO's rx info item
APP_WRITELOG_IOTA	sets the QSO's DXCC item
APP_WRITELOG_PREF	sets the QSO's Iota item

Note that these application-specific tags take precedence over any standard ADIF tag that may be present in the same record. For example, importing an ADIF record containing <SRX_STRING:3>foo <APP_N1MM_EXCHANGE1:3>bar will set the QSO's rx info item to **bar**.

Importing tab-delimited files

To import a tab-delimited file by set the ADIF Style panel to *tab-delimited file* before initiating the import operation. Tab-delimited files are easily created by spreadsheet applications; each row in the spreadsheet produces a line in the file, and each column in the spreadsheet is represented by a tab-delimited field in each line. For DXKeeper to successfully import a tab-delimited file,

1. the first line must contain a caption for each field, where a caption is either a valid ADIF tag, or one of the following
 - QSO_BEGIN_DATE - treated the same as QSO_DATE
 - QSO_BEGIN_TIME - the first 4 digits represent the QSO start time
 - UDF_X - treated the same as APP_DXKEEPER_USER_DEFINED_X (where X is an integer between 0 and 7)
 - any other caption will ignored, as will the data associated with its field
2. the following fields must be present
 - CALL
 - QSO_DATE or QSO_BEGIN_DATE
 - TIME_ON or TIME_OFF or QSO_BEGIN_TIME
 - BAND or FREQ
 - MODE
3. subsequent lines must contain fields whose values comply with the ADIF specification, e.g. frequencies are represented in megahertz with the period character as a decimal separator; the following exceptions are supported
 - BAND - the trailing M character is optional; 20 and 20M are both acceptable
 - QSO_DATE and QSO_BEGIN_DATE - standard date formats like YYYY-MM-DD are accepted in addition to the ADIF standard YYYYMMDD (be careful when using MM/DD/YYYY and DD/MM/YYYY, as these are ambiguous)
 - TIME_ON and TIME_OFF - colon-delimited formats like HH:MM and HH:MM:SS are also accepted in addition to the ADIF standard HHMMSS
 - QSO_BEGIN_TIME - expects times to specified in the format HHMMZ, e.g.. 2345Z

For some users, creating a spreadsheet will be the fastest way to digitize paper logs. Before embarking down this path, set up the spreadsheet's header row, record a few test QSOs, generate a tab-delimited file, import that file into your DXKeeper log, and verify that all QSO data is being properly captured. Then large number of QSOs can be digitized with confidence.

User-defined Items

Each of the eight user-defined items logged with each QSO can be imported

- from an ADIF file using the field names APP_DXKEEPER_USER_DEFINED_0 through APP_DXKEEPER_USER_DEFINED_7
- from a tab-delimited file using the field names APP_DXKEEPER_USER_DEFINED_0 through APP_DXKEEPER_USER_DEFINED_7 or UDF_0 through UDF_7 or UDF_CAPTION where CAPTION is the user-defined item's Caption

Enabling a user-defined item's ADIF option enables that item to be both imported or exported using its Caption as the field name - in both ADIF and tab-delimited files.

Interactions with other configuration settings

- If the Initialize QSL Sent to 'R' for each imported QSO box is checked, then each imported QSO's QSL Sent item will be set to 'R' unless the imported value is 'Y'
- If the WPX box is checked, the Import operation computes a WPX prefix for imported QSOs for which one is missing.
- If the Initialize eQSL Sent to 'R' box is checked, imported QSOs will have their eQSL sent field set to **R**.
- If the Initialize LotW Sent to 'R' box is checked, imported QSOs will have their LotW sent field set to or **R**.

Other considerations

- If an imported QSO contains an ARRL Section and its DXCC Entity is specified, but is missing a US State or Canadian Province, the State or Province will be determined from the ARRL Section and DXCC Entity if the relationship is unambiguous. For example, an ARRL Section of EMA with a DXCC Entity of USA will automatically set the State to MA.
If an imported QSO specifies a DXCC entity that formally defines a set of Primary Administrative Subdivisions and specifies a Primary Administrative Subdivision code or abbreviation in its `STATE` tag and if the Subdivisions box is checked on the **Config** window's **Awards** tab, then DXKeeper will
 - correct common misspellings in that primary code or abbreviation
 - determine whether that code or abbreviation is valid. If valid, then the QSO's PrimaryInvalid item will be set to **N**, if invalid, then the QSO's PrimaryInvalid item will be set to **Y** and an error will be noted in the **Progress** panel.
- If an imported QSO specifies a DXCC entity that formally defines a set of Primary Administrative Subdivisions and formally defines a set of Secondary Administrative Subdivisions specifies a Primary Administrative Subdivision code or abbreviation in its `STATE` tag, and specifies a Secondary Administrative Subdivision code or abbreviation in its `CNTY` tag, and if the Subdivisions box is checked on the **Config** window's **Awards** tab, then DXKeeper will
 - correct common misspellings in those primary and secondary codes or abbreviations
 - determine whether the secondary code or abbreviation is valid for the specified DXCC entity and primary code or abbreviation. If valid, then the QSO's SecondaryInvalid item will be set to **N**, if invalid, then the QSO's SecondaryInvalid item will be set to **Y** and an error will be noted in the **Progress** panel.
- If an imported QSO specifies a DXCC entity that does not formally define a set of Primary Administrative Subdivisions, then its PrimaryInvalid item will be set to **N** no matter what is imported in the `STATE` tag; similarly, if an imported QSO specifies a DXCC entity that does not formally define a set of Secondary Administrative Subdivisions, then its SecondaryInvalid item will be set to **N** no matter what is imported in the `CNTY` tag. The Broke filter can be used to filter the Log Page Display to show QSOs whose PrimaryInvalid or SecondaryInvalid items are set to **Y**.
- If the Secondary Administrative Subdivision imported with a QSO is inconsistent with that QSO's DXCC Entity and/or Primary Administrative Subdivision, an import error will be reported and the QSO's SecondaryInvalid item will be set to **Y**. You can use the Broke filter to identify such QSOs after the import operation is complete.
- The following conversions are performed automatically during import:
 - Frequencies containing two decimal points, like those exported by DXBase, will be correctly interpreted
 - the mode PSK will be imported as PSK31
 - the mode BPSK will be imported as PSK31
 - the mode BPSK31 will be imported as PSK31
 - the mode BPSK63 will be imported as PSK63
 - the mode MFSK will be imported as MFSK16
 - the modes USB and LSB are imported as SSB.
- Information imported with a `Prop_Mode` tag that exceeds the field-width (8) will be appended to the Comment field.
- When an imported ADIF record contains an `APP_DXKEEPER_MY_QTHID` tag, the associated myQTH ID is placed in the imported QSO's myQTH ID item. If the log contains no QTH definition that specifies the imported myQTH ID, then a new QTH definition is created, and assigned this myQTH ID. If the imported ADIF record contains any of the following ADIF tags, their associated data is used to populated the newly-created QTH definition: `APP_DXKEEPER_MY_COUNTY_NAME`, `APP_DXKEEPER_MY_STATE_NAME`, `MY_CITY`, `MY_CNTY`, `MY_COUNTRY`, `MY_CQZONE`, `MY_DXCC`, `MY_GRID SQUARE`, `MY_IOTA`, `MY_ITUZONE`, `MY_LAT`, `MY_LON`, `MY_POSTAL_CODE`, `MY_STATE`, and `MY_STREET`.

Managing Multiple QTHs

If you operate from more than one QTH and

- want to print QSL cards or labels that correctly describe the location from which you were operating at the time
- want to generate progress reports for awards that consider only QSOs made from some of the locations from which you operated
- want DXView to be updated with the latitude and longitude of a newly-selected default QTH
- want to specify which of those locations are valid for ARRL VHF/UHF Century Club (VUCC) and ARRL Worked All States (WAS) awards
- want to ensure that QSOs submitted to LoTW reference the correct Station Location

then you'll need to describe each of your QTHs and assign each a unique identifier, referred to as a **myQTH ID**.

When you log a QSO, specifying the correct unique myQTH ID enables DXKeeper's QSL information substitution commands to take on the correct value when you print a QSL card or label.

DXKeeper assumes that all QSOs in a log file are valid for the same ARRL DXCC, RSGB Islands On the Air (IOTA), CQ DX Marathon, CQ Worked All Zones (WAZ), and CQ Worked All Prefixes (WPX) awards. Thus if you have operated from multiple DXCC entities, you should use a separate log file for the QSOs made from each entity.

Descriptions of your QTHs are captured and maintained using the **my QTHs** tab of DXKeeper's Main window; you can define up to 4096 **my QTHs**. To describe a QTH, click the **New** button, and enter appropriate text in the Name, Street, City, Primary Administrative Subdivision (Pri sub), Secondary Administrative Subdivision (Sec sub), PostCode, Country, Email, Rig, Ant, CQ, ITU, IOTA, Grid square, Latitude, and Longitude textboxes.

- Always specify the QTH's location with a Grid Square, or with a Latitude and a Longitude using the format selected in the **Lat/Lon** panel; specifying a Grid will automatically compute the Latitude and Longitude, and specifying a Latitude and Longitude will automatically compute the Grid.
- You need only enter additional information if you want it printed on QSL cards or labels (using the substitution commands), but to avoid extra work if you later change your mind, its best to capture all of the information.

The textbox labeled **ID** is special -- you must enter a set of characters that uniquely identify this QTH and that do not include the single apostrophe '. When you log a QSO, the myQTH ID item is used to capture the unique identifier of the QTH from which you are making the QSO. If you never operate from two cities with the same name (like San Jose, California and San Jose, Costa Rica), then you can use the city name as a unique identifier. You could also use the name of the street from which you operate, or the name of the village, or just assign each QTH a unique letter (A for Addis Ababa, B for Bata Sani, C for Chelyabinsk, etc.). After filling in all of the textboxes, click the **Save** button.

To define a new QTH and populate it with information from an existing QTH, click on the entry for the existing QTH, and depress the **CTRL** key while clicking the **New** button; the new QTH's ID item will be empty, but all of the other information will be populated from the existing QTH you selected. This is useful when you're defining multiple QTHs for the same geographic location, but with different radios or antennas.

The **LotW** selector lets you choose from among the Station Locations you've defined in TQSL.

- When you submit a batch of QSOs to LotW from the QSL Queue using the Upload to LOTW function, DXKeeper ensures each QSO referencing a QTH that specifies an LotW Station Location matches the **Station Location** specified in the **TQSL** panel on the QSL Configuration window's LotW tab; any QSO that references a QTH that specifies an LotW Station Location that doesn't match, will not be submitted to LotW.
- When you submit a single QSO to LotW, if the QSO references a QTH that specifies an LotW Station Location, that Station Location and the Station Callsign it specifies will be used to submit the QSO to LotW. If the specified Station Location specifies a Station Callsign of [NONE], then the QTH's Station Location and the QSO's Station Callsign item will be used to submit the QSO to LotW. If a single QSO submitted to LotW doesn't reference a QTH, or references a QTH that doesn't specify an LotW Station Location, then the Station Location and Station Callsign specified in the **TQSL** panel on the QSL Configuration window's LotW tab will be used to submit the QSO to LotW. Single QSOs can be submitted to LotW by one of these three means:
 - right-clicking an entry in the Log Page Display and selecting the **Upload to LotW** command
 - logging a QSO via the Capture window with the Upload each QSO logged via the Capture window to LotW option enabled
 - directing an external application to log a QSO to DXKeeper and submit it to LotW

The **Ant** textbox supports a specific format for describing an **antenna configuration** for each of several bands, permitting the `<bandant>` substitution command (and the `<myqthbandant>` substitution command in WinWarbler) to automatically extract the description of the antenna for the current band:

```
[antX: description]
```

where X is the band, and `description` is the description of the antenna for that band. This example describes antennas for the 160m, 80m, and 40m bands:

```
[ant160m:1/4 wave inverted L][ant80m:1/4 wave vertical][ant40m:F12 240/420 at 80 feet]
```

The **IOTA**, **Marathon**, **VUCC**, and **WAS** checkboxes indicate whether QSOs made from a QTH should be considered for IOTA, Marathon, VUCC and WAS award progress, respectively; this governs IOTA Realtime Award Tracking, IOTA Progress Reporting and Submission, DX Marathon Realtime Award Tracking, DX Marathon Progress Reporting and Submission, VUCC Realtime Award Tracking, VUCC Progress Reporting and Submission, WAS Realtime Award Tracking, and WAS Progress Reporting. If the log specifies fewer than two QTHs, all of its QSOs will be considered for IOTA, Marathon, VUCC and WAS whether they specify a QTH or not, and whether that QTH's IOTA, Marathon, VUCC and WAS boxes are checked or not.

As you define QTHs, they appear in a grid display in the lower part of the Main window's **my QTHs** tab; vertically resizing the Main window with this tab selected will increase or decrease the number of QTHs visible in the grid. You can define up to 4096 QTHs; each must have a unique identifier. To modify a QTH definition, select its entry in grid display, make whatever changes are required, and click the **Save** button.

To delete a QTH definition, select its entry in the grid display and click the **Delete** button. Note that you cannot delete a QTH definition if one or more QSOs still contain its myQTH ID; should you attempt to do so, DXKeeper will inform you of its refusal, and will filter the Log Page Display to show all QSOs still containing a myQTH ID for the QTH definition you are attempting to delete. If desired, you can use the Modify QSOs function to change these myQTH IDs in a single operation. Successfully deleting a QTH definition leaves the Log Page Display showing all QSOs in in the log.

If you have many QTH definitions and wish to quickly select a particular QTH definition, open the **Find myQTH ID** selector, scroll down to the desired QTH definition, and click it; the selected QTH definition will appear.

The **Set myQTH ID** button in the **Update QSOs in Log Page Display** panel will set the myQTH ID item of each QSO in the Log Page Display to that of the QTH currently select in the **my QTHs** tab's grid display. If you've got a log full of QSOs made from different QTHs and wish to properly associate each with the correct QTH, this function avoids the need to step through each QSO individually to set its myQTH ID item:

1. Select a QTH by clicking on its entry in grid on the Main window's **my QTHs** tab.
2. Select the Main window's **Log QSOs** tab, and use DXKeeper's filtering capabilities to limit the Log Page Display to a set of QSOs made from that QTH; for example, all QSOs between 25-DEC-00 and 1-JAN-01.
3. Select the Main window's **my QTHs** tab and click the **Set myQTH ID** button in the **Update QSOs in Log Page Display** panel; this will set the myQTH ID item of each QSO in the Log Page Display to that of the QTH selected on the **my QTHs** tab.

When you log a QSO via the Main or Capture windows, you can record the myQTH ID for the QTH from which you are operating. If you are making many QSOs from the same QTH, you can define a default myQTH ID that will be used to initialize each new QSO. You can optionally make the default myQTH ID be the combination of a root myQTH ID and the name of the primary radio currently selected in Commander. You can configure DXKeeper to update DXView with the latitude and longitude of a newly-selected default myQTH.

To filter the Log Page Display to show only QSOs made from the currently-selected QTH, click the **my QTHs** tab's **Filter** button.

To generate and display a report showing the number and percentage of QSOs made from each QTH, click the **my QTHs** tab's **Report** button.

If you've defined one or more QTHs, invoking the Broke filter on the **Log QSOs** tab will reveal any QSOs whose myQTH ID item has not been set.

When you print QSL cards or labels, DXKeeper will confirm multiple QSOs with the same station on a single card or label if the myQTH fields for City, Primary Administrative Subdivision, Secondary Administrative Subdivision,, Country, and PostCode all match; upper/lower case and white space are ignored in this comparison. You can, however, force each QSO to be confirmed on a separate card or label by unchecking the Confirm multiple QSOs per QSL box.

When a QSO containing a myQTH ID item is exported in ADIF, the myQTH ID is exported with the tag APP_DXKEEPER_MY_QTHID. If the Export tab's Export QTH definitions box is checked, DXKeeper will also export the contents of the QTH definition selected by the myQTH ID using the ADIF 2.0 tags MY_CITY, MY_CNTY, MY_COUNTRY, MY_CQ_ZONE, MY_GRIDSQUARE, MY_IOTA, MY_ITU_ZONE, MY_LAT, MY_LON, MY_POSTAL_CODE, MY_STATE, MY_STREET, MY_NAME, MY_RIG, and MY_EMAIL.

When an imported ADIF record contains an APP_DXKEEPER_MY_QTHID tag, the imported myQTH ID is placed in the imported QSO's myQTH ID item; single apostrophes contained in the imported myQTH ID are removed, and this action is noted in the import log. If the log contains no QTH definition with the imported myQTH ID, then a new QTH definition is created, and assigned the imported myQTH ID. If the imported ADIF record contains any of the following ADIF 2.0, their associated data is used to populated the newly-created QTH definition: MY_CITY, MY_CNTY, MY_COUNTRY, MY_CQZONE, MY_GRIDSQUARE, MY_IOTA, MY_ITUZONE, MY_LAT, MY_LON, MY_POSTAL_CODE, MY_STATE, MY_STREET, MY_NAME, MY_RIG, and MY_EMAIL.

Taken together, the above export and import capabilities mean that if a log containing multiple QTH definitions and QSOs that reference them (via myQTH IDs) is exported in ADIF with the Export QTH definitions box checked, the resulting ADIF file can later be imported into an empty log with the result that all QTH definitions from the original log will be re-created, and the imported QSOs will appropriately reference these QTH definitions.

Contesting

DXKeeper supports Contesting by

- providing a contest mode that when enabled accelerates the logging of contest QSOs; contest mode can be enabled by checking the Contest mode box on the Configuration window's Contest tab, or by checking the Capture window's contest mode box.
- identifying stations already worked in the current contest on the current band and mode
- providing the ability to filter the Log Page Display to contain only QSOs made in a specified Contest, optionally in a specified year
- providing the ability to generate a Cabrillo log from QSOs in the Log Page Display

Generating a Cabrillo log requires that

- all necessary Cabrillo parameters -- NAME, CATEGORY-ASSISTED, CATEGORY-STATION, etc -- have been specified
- if present in the **Transmit Exchange** column of the table below, TX Exchange has been specified
- contest information is logged as described in the table below.

Making a few test QSOs before the contest and verifying that a proper Cabrillo log can be generated is strongly recommended.

Support for contesting is enabled when you check the Contest mode box on the Configuration window's Contest tab, or when you check the contest mode box on the Capture window. Enabling contest mode also enables Run-mode. With contest mode enabled, DXKeeper displays the word Contest followed by the Contest ID in the Main window's title bar; if no Contest ID is specified, DXKeeper displays Contest: ?

In the Capture window,

- striking the enter key in the Call textbox will
 - set the RST sent and RST rcvd items to 59 (if the mode is SSB or FM) or 599 (if the mode is CW, RTTY, or PSK)
 - set the contest and tx# fields to the Contest ID and TX serial# settings respectively
 - place the mouse cursor in the RX# field (to place the mouse cursor in the RX# when activating a DX spot in SpotCollector, DXView or Commander, check the Place focus in RX# ... box.
- striking Ctrl-L in any Capture window field or clicking the Log button will
 - record the QSO
 - automatically increments the TX serial# setting if the Increment TX serial# box is checked and the TX serial# contains a numeric value

With Contest mode enabled and a Contest ID specified,

- the Contest ID is logged in each QSO.
- filtering the Log Page Display for previous QSOs with a specified station shows only QSOs in the current year whose recorded Contest ID matches the Contest ID setting; a Log Page Display entry matching the Capture window's Callsign, Band, Mode and Contest ID will be rendered in red font. DXKeeper will thus perform accurate contest-specific duplicate checking, even in a log containing non-contest QSOs, QSOs from other contests, and QSOs from the same contest in previous years. If Contest mode is enabled but the Contest ID setting is empty, then filtering the Log Page Display for previous QSOs shows previous QSOs independent of the contest in which they were worked.

If WinWarbler is running, its contest mode setting is automatically conveyed to DXKeeper; thus to enable or disable DXKeeper's contest mode, enable or disable contest mode on WinWarbler's Configuration window's Contest tab.

DXKeeper can export Cabrillo files for the contests listed in the following table. Setting the Contest ID selector to one of the contests on this list

- initializes the Increment TX serial# box, as shown in the table
- enables the Export Cabrillo option on the Main window's Export QSOs tab
- determines how transmit and receive exchanges are exported with each QSO in the appropriate Cabrillo template, as shown in the table:

Contest ID	Increment TX serial#	Cabrillo Template	Transmit Exchange	Receive Exchange
ANARTS-RTTY		Anarts	recorded RST sent Location CQ recorded begin time	recorded RST rcvd recorded RX# (note 5)
AP-SPRINT	✓	APSprint	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
ARRL-10	(note 15)	ARRL-10	recorded RST sent recorded TX# (note 15)	recorded RST rcvd recorded RX# (note 15)
ARRL-160		ARRL-160	recorded RST sent recorded TX# (note 13)	recorded RST rcvd recorded RX# (note 13)
ARRL-DIGI		ARRL-DIGI	Location Grid setting	recorded Grid
ARRL-DX-CW ARRL-DX-SSB		ARRL-DX	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
ARRL-RTTY	(note 16)	HF	recorded RST sent recorded TX# (note 16)	recorded RST rcvd recorded RX# (note 16)
ARRL-SS-CW ARRL-SS-SSB	✓	Sweepstakes	recorded TX# Location Section TX Exchange setting (note 3)	recorded ARRL recorded RX# (note 4)
ARRL-UHF-AUG ARRL-VHF-JAN ARRL-VHF-JUN ARRL-VHF-SEP		ARRL-VHF	Location Grid setting	recorded Grid
BARTG-RTTY	✓	BARTG	recorded RST sent recorded TX# recorded begin time	recorded RST rcvd recorded RX# recorded comment (UTC time)
CA-QSO-PARTY	✓	CAQP	recorded RST sent TX Exchange setting (note 1) recorded TX#	recorded RST rcvd recorded RX# (note 2)
CQ-160-CW CQ-160-SSB		HF	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
CQ-VHF		CQ-VHF	Location Grid setting	recorded Grid

CQ-WW-CW CQ-WW-SSB		HF	recorded RST sent recorded TX# (note 21)	recorded RST rcvd recorded RX# (note 22)
CQ-WW- RTTY		CQ-WW- RTTY	recorded RST sent TX Exchange setting (note 9)	recorded RST rcvd recorded RX# (note 10)
CQ-WPX-CW CQ-WPX-RTTY CQ-WPX-SSB	✓	HF	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
DARC-WAEDC- CW DARC-WAEDC- RTTY DARC-WAEDC- SSB	✓	WAE	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
EPC-PSK63		EPC-PSK63	recorded RST sent TX Exchange setting (note 11)	recorded RST rcvd recorded RX# (note 12)
EPC-WW-DX	✓	EPC-WW-DX	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
IARU-HF		IARU	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
JIDX-CW JIDX-SSB		JIDX	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
LZ DX		LZ DX Contest	recorded RST sent recorded TX# (note 14)	recorded RST rcvd recorded RX# (note 14)
NAQP-CW NAQP-RTTY NAQP-SSB	✓	NA	recorded TX# First name setting Location ST/PR setting	recorded RX# recorded name recorded state
NA-SPRINT-CW NA-SPRINT-RTTY NA-SPRINT-SSB	✓	NA	recorded TX# First name setting Location ST/PR setting	recorded RX# recorded name recorded state
OCEANIA-DX-CW OCEANIA-DX-SSB	✓	HF	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
FL-QSO-PARTY		FLQP	recorded RST sent TX Exchange setting (note 1) recorded TX#	recorded RST rcvd recorded RX# (note 2)

GA-QSO-PARTY IL QSO Party MI-QSO-PARTY NEQP OH-QSO-PARTY ON-QSO-PARTY QC-QSO-PARTY Virginia QSO Party WA-State-Salmon-Run WI-QSO-PARTY	✓	NEQP	recorded RST sent TX Exchange setting (note 1) recorded TX#	recorded RST rcvd recorded RX# (note 2)
PACC	(note 20)	RAC	recorded RST sent recorded TX# (note 20)	recorded RST rcvd recorded RX# (note 20)
RAC, CANADA DAY, CANADA WINTER	(note 17)	RAC	recorded RST sent recorded TX# (note 17)	recorded RST rcvd recorded RX# (note 17)
RSGB-IOTA	✓	IOTA	recorded RST sent recorded TX# Location IOTA setting	recorded RST rcvd recorded RX# recorded IOTA
SAC-CW SAC-SSB	✓	HF	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
STEW-PERRY		Stew	recorded RST sent recorded TX#	recorded RST rcvd recorded RX#
TMC-RTTY		Makrothen	recorded RST sent Location Grid setting	recorded RST rcvd recorded Grid
UK-DX-RTTY	(note 18)	UK DX RTTY	recorded RST sent recorded TX# (note 18)	recorded RST rcvd recorded RX# (note 18)
UK-DX-BPSK63	(note 18)	UK DX BPSK63	recorded RST sent recorded TX# (note 18)	recorded RST rcvd recorded RX# (note 18)
UKSMG		UKSMG	recorded RST sent TX Exchange setting (note 7)	recorded RST rcvd recorded RX# (note 8)
VOLTA-RTTY	✓	Volta	recorded RST sent recorded TX# Location CQ	recorded RST rcvd recorded RX# (note 6)

Note 1: In State QSO Parties, the TX Exchange should be set to a state, country, or state-and-county abbreviation per contest rules.

Note 2: In State QSO Parties, the recorded RX# item is assumed to contain both a received sequence number and a received state, county, or state-and-county abbreviation. These two sub-items can be immediately adjacent, or separated by one or more spaces; DXKeeper will properly separate them for use in generated Cabrillo records.

Note 3: In Sweepstakes, the TX Exchange should be set to the Precedence and Check, separated by a space. The ARRL Section must also be selected for a valid Cabrillo log to be generated.

Note 4: In Sweepstakes, the recorded RX# item is assumed to contain a received sequence number followed by a Precedence character followed by a two-digit Check followed by an ARRL section; these sub-items can be immediately adjacent, or separated by one or more spaces; DXKeeper will properly separate them for use in generated Cabrillo records. If the recorded RX# item does not include an ARRL section, the recorded ARRL will be used (if recorded with the QSO).

Note 5: In Anarts RTTY, the recorded RX# item is assumed to contain a one-digit or two-digit CQ zone followed by a space character followed by the UTC time.

Note 6: In Volta RTTY, the recorded RX# item is assumed to contain a sequence number followed by a one-digit or two-digit CQ zone.

Note 7: in UKSMG, the TX Exchange should be set to the four-character grid locator followed by a space character followed by the UKSMG membership number

Note 8: In UKSMG, the recorded RX# item is assumed to contain a four-character grid locator followed by a space character followed by the UKSMG membership number

Note 9: in CQ WW RTTY, the TX Exchange should be set to the two-digit CQ zone followed by a space character followed by one of the following:

- a 2-character state abbreviation (for American stations)
- a 2-character province abbreviation (for Canadian stations)
- DX (for all other stations)

Note 10: In CQ WW RTTY, the recorded RX# item is assumed to contain a one-digit or two-digit CQ zone and, optionally, a 2-character area indicator: a state abbreviation, a province abbreviation or DX. If no area indicator is present, DX is assumed. The zone and area indicator can be in any order, with or without a space separator.

Thus the following are all acceptable receive exchanges:

- 03 NV
- nv 3
- CA3
- 25
- dx31
- 26 DX

Note 11: in EPC contests, the TX Exchange should be EPC followed by your five-digit EPC membership number, e.g. EPC02640.

Note 12: In EPC contests, the recorded RX# item is assumed to contain either a five-digit EPC membership number, e.g. EPC02640, or a serial number, e.g. 007.

Note 13: in the ARRL 160m contest, US and Canadian stations should set TX serial# to your ARRL section abbreviation, e.g. STX; stations outside the US or Canada should set TX serial# to DX. Each QSO's RX# item should be set to your US or Canadian QSO partner's ARRL section abbreviation, e.g. LAX, or DX for all other QSO partners.

Note 14: in the LZ DX contests, Bulgarian operators set TX# to their Oblast code and capture Bulgarian Oblast codes or ITU zones in the RX# item; operators outside Bulgaria set TX# to their Oblast code and capture Bulgarian Oblast codes or ITU zones in the RX# item

Note 15: in the ARRL 10m contest

- stations in the US, Canada, and Mexico
 - disable Increment TX Serial#
 - set TX serial# to your state/province abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's state/province abbreviation or serial number in each QSO's RX# item
- stations outside the US, Canada, and Mexico
 - enable Increment TX Serial#
 - initialize set TX serial# to 1(will be logged in each QSO's TX# item)
 - capture your QSO partner's state/province abbreviation or serial number in each QSO's RX# item

Note 16: in the ARRL RTTY Roundup

- stations in the US
 - disable Increment TX Serial#
 - set TX serial# to your state abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's state abbreviation, province abbreviation or serial number in each QSO's RX# item
- stations in Canada
 - disable Increment TX Serial#
 - set TX serial# to your province abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's state abbreviation, province abbreviation or serial number in each QSO's RX# item
- stations outside the US and Canada
 - enable Increment TX Serial#
 - initialize set TX serial# to 1(will be logged in each QSO's TX# item)
 - capture your QSO partner's state abbreviation, province abbreviation or serial number in each QSO's RX# item

Note 17: in RAC contests,

- stations in Canada
 - disable Increment TX Serial#
 - set TX serial# to your province or territory abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's province or territory abbreviation or serial number in each QSO's RX# item
- VE0s and stations outside Canada
 - enable Increment TX Serial#
 - initialize set TX serial# to 1(will be logged in each QSO's TX# item)
 - capture your QSO partner's province or territory abbreviation or serial number in each QSO's RX# item

Note 18: in the UK DX RTTY contest,

- stations in the United Kingdom
 - disable Increment TX Serial#
 - set TX serial# to your UK Area abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's UK Area abbreviation or 3-digit serial number in each QSO's RX# item (not necessary to zero fill)
- stations outside of the United Kingdom
 - enable Increment TX Serial#
 - initialize set TX serial# to 1(will be logged in each QSO's TX# item)
 - capture your QSO partner's province or territory abbreviation or 3-digit serial number in each QSO's RX# item (not necessary to zero fill)

Note 19: in the UK DX BPSK63 contest,

- stations in the United Kingdom
 - disable Increment TX Serial#
 - set TX serial# to your UK Area abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's UK Area abbreviation or 4-digit serial number in each QSO's RX# item (not necessary to zero fill)
- stations outside of the United Kingdom
 - enable Increment TX Serial#
 - initialize set TX serial# to 1(will be logged in each QSO's TX# item)
 - capture your QSO partner's province or territory abbreviation or 4-digit serial number in each QSO's RX# item (not necessary to zero fill)

Note 20: in the PACC contest,

- stations in the Netherlands
 - disable Increment TX Serial#
 - set TX serial# to your province abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's province abbreviation or serial number in each QSO's RX# item
- stations outside the Netherlands
 - enable Increment TX Serial#
 - initialize set TX serial# to 1(will be logged in each QSO's TX# item)
 - capture your QSO partner's province abbreviation or serial number in each QSO's RX# item

Note 21: in CQ WW CW and CQ WW SSB, the TX Exchange should be set to the two-digit CQ zone

Note 22: In CQ WW CW and CQ WW SSB, the recorded RX# item is assumed to contain a one-digit or two-digit CQ zone

Note 19: in the UK DX BPSK63 contest,

- stations in the United Kingdom
 - disable Increment TX Serial#
 - set TX serial# to your UK Area abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's UK Area abbreviation or 4-digit serial number in each QSO's RX# item (not necessary to zero fill)
- stations outside of the United Kingdom
 - enable Increment TX Serial#
 - initialize set TX serial# to 1(will be logged in each QSO's TX# item)
 - capture your QSO partner's province or territory abbreviation or 4-digit serial number in each QSO's RX# item (not necessary to zero fill)

Note 20: in the PACC contest,

- stations in the Netherlands
 - disable Increment TX Serial#
 - set TX serial# to your province abbreviation (will be logged in each QSO's TX# item)
 - capture your QSO partner's province abbreviation or serial number in each QSO's RX# item
- stations outside the Netherlands
 - enable Increment TX Serial#
 - initialize set TX serial# to 1(will be logged in each QSO's TX# item)
 - capture your QSO partner's province abbreviation or serial number in each QSO's RX# item

Configuration

Configuring DXKeeper is primarily accomplished via the Configuration window and the QSL Configuration window. Defining bands and defining or eliminating modes, however, are accomplished by editing files.

Clicking a **Config** button on the tabs of DXKeeper's Main window displays the **Configuration** window. Depressing the CTRL key while clicking a **Config** button on DXKeeper's Main window displays the QSL Configuration window; clicking the **QSL Config** button on the **QSL** tab of DXKeeper's Main window also displays the QSL Configuration window.

DXKeeper's Configuration window presents 8 tabs:

- the General tab enables you to set or reset various options, show pathnames and versions for the DXCC, IOTA, and LoTW databases, and configure the online help system
- the Log tab lets you select a log file, and configure the log display
- the Awards tab enables you to specify the bands and modes for which you seek QSLs, and configure DXKeeper's DXCC Submission generator and its DXCC Credit Manager.
- the Reports tab lets you configure the reports that DXKeeper generates
- the Callbook tab enables you to specify the location of the Radio Amateur Callbook on your PC so that DXKeeper can query it
- the Contest tab enables you specify the settings that govern DXKeeper's support for contest operation
- the User Items tab lets you configure up to 8 user-defined items stored with each QSO
- the Defaults tab lets you specify default values for QSO items, and provides control over DXKeeper's TCP/IP server

General Tab

- Options panel

Display seconds in date/time fields	When checked, begin and end items are displayed using the locale's standard date/time format with hours, minutes, and seconds When unchecked, begin and end items are displayed using the locale's standard date/time format with hours, and minutes
Display previous QSOs on Lookup	When checked, entering a new callsign in the Main or Capture windows or clicking the QSO Capture window's Lookup button <ul style="list-style-type: none">• filters the log page display to show previous QSOs with the new Callsign, and - unless an override for the callsign is defined in DXView or SpotCollector - initializes the Capture window items with information extracted from those previous QSOs: DXCC entity, Region, name, QSL via, QTH, Grid 1, IOTA, QSL address, email, web, Primary Administrative Subdivision, Secondary Administrative Subdivision, ITU, CQ, continent, IOTA, ARRL Section, DOK, user-defined items, eQSL.cc member and LotW member items• displays a last QSO section at the bottom of the Capture window with the date, time, frequency, and mode of the most recent QSO with the new callsign
Display callsign progress on Lookup	When checked with Display previous QSOs on Lookup also checked, entering a new callsign in the Main or Capture windows or clicking the QSO Capture window's Lookup button displays the Callsign Progress window, which shows the bands and modes on which previous QSOs were made
Display previous comments on Lookup	When checked with Display previous QSOs on Lookup also checked, entering a new callsign in the Main or Capture windows or clicking the QSO Capture window's Lookup button displays a scrollable window containing comments extracted from previous QSOs with the same base callsign, each preceded by the QSO's start time and terminated by the QSO's callsign

Highlight duplicate QSOs	When checked with the QSO Capture window visible, QSOs in the Log Page Display that match the QSO Capture window's callsign, band, and mode will be highlighted in red font
Provide audible feedback	When checked, <ul style="list-style-type: none"> • play a single "Windows Default Beep" sound when a QSO is logged via the Main window's Log or New functions or the Capture window's Log function • play a continuous sequence of "Windows Default Beep" sounds when an attempt to log a QSO fails due to invalid items • play a single "Windows Default Beep" sound when a duplicate QSO is entered into the Capture window with Contest mode enabled
Initialize RST fields to default	When checked, automatically sets the Main and Capture window RST sent and RST rcvd items to the specified default value; if no default value is specified, these items are initialized to 59 (for phone modes) or 599 (for non-phone modes) unless another report has already been entered, and selects the entire contents of these fields whenever they gain focus
New QSO on DX Spot activation	When checked, create a QSO in the Main window when a DX Spot is activated (in SpotCollector, DXView or Commander) with the Capture window closed and Optimize for realtime QSO entry checked
Log Special Callsign Tags	when checked, Special Callsign Tags provided by DXView and SpotCollector will be appended to the Comment item
Backup log on shutdown	when checked, automatically creates a Log backup on shutdown if a log file is open
Flag invalid callsigns	When checked, callsigns not containing at least one number and one letter will be flagged when you attempt to Save in the Main window or Log in the Capture window; QSOs containing such callsigns will be marked Broken by the Recompute function
Main & Capture window F-keys via CC	When checked <ul style="list-style-type: none"> • the Main & Capture window F-keys via WW option is disabled • the Function keys F5 through F12 when struck in a textbox or selector on the Main window's Log QSOs tab will activate Commander User-defined Command Sequences, with Shift and Alt key modifiers interpreted as they would be within Commander • the Function keys F5 through F12 when struck in a textbox or selector on the Capture window will activate Commander User-defined Command Sequences, with Shift and Alt key modifiers interpreted as they would be within Commander
Main & Capture window F-keys via WW	When checked <ul style="list-style-type: none"> • the Main & Capture window F-keys via CC option is disabled • the Function keys F5 through F12 when struck in a textbox or selector on the Main window's Log QSOs tab will activate WinWarbler macros, with Shift and Alt key modifiers interpreted as they would be within WinWarbler • the Esc key when struck in a textbox or selector on the Main window's Log QSOs tab will abort WinWarbler transmission • the Function keys F5 through F12 when struck in a textbox or selector on the Capture window will activate WinWarbler macros, with Shift and Alt key modifiers interpreted as they would be within WinWarbler • the Esc key when struck in a textbox or selector on the Capture window will abort WinWarbler transmission

Use multiple monitors	When checked, windows that resided on a secondary monitor during the previous session will be restored to the same secondary monitor on startup; when not checked, all windows are restored to the primary monitor on startup
Log debugging information	When checked, records debugging information to the file ErrorLog.txt in DXKeeper's folder

- Main "Log QSOs" options panel

Require Edit to modify logged QSOs	if this box is checked, the QSO currently selected on the Main window's Log QSOs tab cannot be modified without first clicking the Edit button
Confirm QSO deletion	if this box is checked, DXKeeper will request confirmation before deleting a QSO
Optimize for realtime QSO entry	<p>When this box is checked, DXKeeper's Main window is optimized for logging QSOs in real time:</p> <ul style="list-style-type: none"> • if, after entering a callsign in the call textbox, you strike the Enter key, DXKeeper will <ul style="list-style-type: none"> ○ if the begin item has not been specified, set the begin item to the current UTC date and time ○ if Commander is running, set the freq item to your transceiver's current frequency ○ if Commander is running, set the band item to the band for your transceiver's current frequency ○ if Commander is running, set the mode item to the your transceiver's current mode • if you double-click the end item, DXKeeper will set the end item to the current UTC date and time • setting the QSL Rcvd, item to 'Y' will set the Date Rcvd item to the current date • setting the eQSL.cc Rcvd item to 'Y' will set the eQSL.cc Date Rcvd item to the current date • setting the LoTW QSL Rcvd item to 'Y' will set the LoTW Date Rcvd item to the current date • if you save a QSO whose end item has not been specified, DXKeeper will set the end item to the current time. • for QSOs with DXCC entities that specify Primary and Secondary Administrative Subdivisions, these subdivision items can only be selected from a list of valid choices <p>When this box is unchecked, DXKeeper's Main window is optimized for manually entering past QSOs:</p> <ul style="list-style-type: none"> • if, after entering a callsign in the call textbox, you strike the Enter key and , DXKeeper will <ul style="list-style-type: none"> ○ if the begin item has not been specified, set the begin item to the begin item of the previously-entered QSO plus 1 second ○ set the freq item to that of the previously entered QSO ○ set the band item to that of the previously entered QSO ○ set the mode item to that of the previously entered QSO ○ set the myQTH ID item to that of the previously entered QSO ○ set the propagation mode item to that of the previously entered QSO ○ set the satellite name item to that of the previously entered QSO ○ set the satellite mode item to that of the previously entered QSO

	<ul style="list-style-type: none"> ○ set the meteor scatter shower item to that of the previously entered QSO ○ set the SFI item to that of the previously entered QSO ○ set the A index item to that of the previously entered QSO ○ set the K index item to that of the previously entered QSO ○ set the TX power item to that of the previously entered QSO ○ set the antenna path item to that of the previously entered QSO ○ set the station callsign item to that of the previously entered QSO ○ set the operator callsign item to that of the previously entered QSO ○ set the owner callsign item to that of the previously entered QSO <ul style="list-style-type: none"> • if you double-click the end item, DXKeeper will set the end item to the contents of the begin item • setting the QSL Rcvd, item to 'Y' will not set the Date Rcvd item to the current date • setting the eQSL.cc Rcvd item to 'Y' will not set the eQSL.cc Date Rcvd item to the current date • setting the LoTW QSL Rcvd item to 'Y' will not set the LoTW Date Rcvd item to the current date • if you save a QSO whose end item has not been specified, DXKeeper will set the end item to the contents of the begin item • if you save a QSO whose RST sent or RST rcvd item has not been specified, DXKeeper will set the item to 59 or 599 as appropriate for the specified mode <p>Note that the Optimize for realtime QSO entry setting has no effect on the Capture window's behavior, which is always optimized for logging QSOs in real time.</p>
Optimize for realtime satellite QSOs	<p>When this box is checked and the Optimize for realtime QSO entry option is enabled, then when logging QSOs via the Main window's Log QSOs tab,</p> <ul style="list-style-type: none"> • if Commander isn't running, the TX and RX frequency items will be set the TX and RX frequencies logged in the previous QSO • the propagation mode item will be set to SAT • the satellite name and satellite mode items will be set to the satellite name and satellite mode logged in the previous QSO
Optimize for roundtable QSOs	<p>When this box is unchecked and Optimize for realtime QSO entry is unchecked, a new QSO's begin item is initialized to the last manually-entered QSO's end item incremented by 1 second.</p> <p>When this box is checked and Optimize for realtime QSO entry is unchecked, a new QSO's begin item is initialized to the last manually-entered QSO's begin item incremented by 1 second.</p>
Allow direct Subdivision entry	<p>when checked, for QSOs with DXCC entities that specify Primary and Secondary Administrative Subdivisions, these subdivision items can be directly entered and edited in the Award panel on the Main window's Log QSOs tab</p>
Run-mode checkbox	<p>If this box is checked, striking the enter key in the call textbox will</p> <ul style="list-style-type: none"> • initialize the freq textbox, mode textbox, and band textbox • set the sent textbox and rcvd textbox to 59 (if the mode is SSB or FM) or 599 (if the mode is CW, RTTY, or PSK) • save the current QSO • create an empty log record for the next QSO • if the Contest mode box is checked, increment the Contest TX Serial#

	If this box is checked, striking the enter key in the QSO Capture window's Call textbox will set the RST sent and RST rcvd items to 59 (if the mode is SSB or FM) or 599 (if the mode is CW, RTTY, or PSK)
Display panels in two columns	when checked, panels in the Main window's Log QSOs tab are displayed side-by-side in two columns, yielding an aspect ratio more suitable for widescreen monitors

- Outgoing Spots panel

Spot split frequency	when checked, outgoing spot notes will include the difference between the QSO's TX and RX frequencies unless that difference exceeds 9.9 KHz, in which case the full TX frequency will be included
Spot IOTA, POTA, SOTA, & WWFF tags	when checked, outgoing spot notes will include <ul style="list-style-type: none"> the QSO's IOTA tag, if specified the QSO's SOTA tag, if specified the QSO's POTA tag, if specified in a user-defined item whose caption is set to <i>POTA</i> the QSO's WWFF tag, if specified in a user-defined item whose caption is set to <i>WWFF</i>
Use DXGrid>SpotterGrid format	when selected, outgoing spot notes that specify grid squares will use the DXGrid>SpotterGrid format
Use SpotterGrid<P>DXGrid format	when selected, outgoing spot notes that specify grid squares will use the SpotterGrid <P> DXGrid format, where P is the Propagation indicator specified in this panel
Propagation indicator	the propagation mode abbreviation included in outgoing spot notes that specify grid squares when the SpotterGrid <P> DXGrid format is selected

- Log QSOs Tab's Default Focus panel

Call textbox	place the mouse cursor in the QSO panel's Call textbox after completing an operation on the Main window's Log QSOs tab
Filter textbox	place the mouse cursor in the Filter panel textbox after completing an operation on the Main window's Log QSOs tab

- Distance unit panel

Miles	QSO distance is displayed in miles
Kilometers	QSO distance is displayed in kilometers

- Capture options panel

Capture always on top	When checked, the Capture window always appears atop other windows
Capture callsign generates prop forecast	When checked with DXView running, entering a callsign in the Capture window and striking the Enter or Tab key or clicking the Lookup button directs PropView (if running) to generate a propagation forecast for the station's location on the captured TX frequency
Local spot on callsign acquisition	When checked with SpotCollector running, an outgoing local spot will automatically be generated entering a callsign in the Capture window and striking the Enter or Tab key

Set QSO start when RST Rcvd	When checked, automatically set the QSO start time (if not already set) when a received signal report is entered with a keystroke in the Capture window's RST rcvd textbox
Set QSO start on lookup	When checked, entering a callsign in the Capture window or clicking the Capture window's Lookup button sets the QSO start time
Prompt on Capture overwrite	When checked, if an action -- e.g. activating a Spot Database entry in SpotCollector-- would overwrite unsaved Capture window data from an active QSO, DXKeeper will display a dialog box allowing the user to allow or disallow the overwrite. A QSO is considered active if its start time has been set, either by clicking the Begin button or by capturing a received signal report (if Set QSO start when RST Rcvd is checked)
Prompt on Capture clear	When checked, clicking the Capture window's Clear button displays a dialog box confirming the user's intention to clear the Capture window items
Use SpotCollector's callsign colors	<p>When checked, uses the colors specified in the Font Colors and Background Colors panels on the Spot Database Display tab of SpotCollector's Configuration window to set</p> <ul style="list-style-type: none"> the Capture window's Callsign textbox's font and background colors the Log Page Display's background colors, if enabled <p>After typing a callsign into the Capture window, strike the Enter or Tab key to initiate a lookup operation that will update its font and background colors. Operations that populate the Capture window's Callsign textbox -- like double-clicking a Spot Database Entry -- will automatically update the callsign's text and background colors.</p> <p>With this option enabled, if SpotCollector specifies a background color selection that is too dark (one or more red, green, or blue components is less than 65), DXKeeper will employ its default background colors: yellow for LoTW, pink for eQSL.cc AG, cyan for both, and white for neither.</p>
Question Mark replacement delay (sec)	Specifies the number of seconds that must expire after a Question Mark (?) key is struck in the Capture window's Call textbox after which the left-most ? character will be replaced by the next non-? character struck -- unless the asterisk (*) key is struck in the Call textbox, in which case replacement is immediate
Layout	When clicked, DXKeeper's Capture Layout window is displayed, which provides row-by-row control over which items are visible in the Capture window
Colors	<p>When clicked, DXKeeper's Capture and Log Page Display Colors window is displayed, which enables you to review and modify</p> <ul style="list-style-type: none"> the font colors used to indicated whether and why the Callsign specified in the Capture window is needed the background colors used to indicate whether the Capture window Callsign is a known participant in LoTW and/or an Authenticity-Guaranteed (AG) member of eQSL.cc <p>After typing a callsign into the Capture window, strike the Enter or Tab key to initiate a lookup operation that will update its font and background colors. Operations that populate the Capture window's Callsign textbox -- like double-clicking a Spot Database Entry -- will automatically update the callsign's text and background colors.</p> <p>If SpotCollector has been installed and run, you can optionally enable DXKeeper's Use SpotCollector's callsign colors option, which enables control of the font and background colors used in the Capture window's Callsign textbox</p>

	via the Foreground Colors and Background Colors panels respectively on the Spot Database Display tab of SpotCollector's Configuration window.
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- Guidance panel

Browser pathname textbox	if this setting is blank, DXKeeper displays online help using your PC's default HTML browser; if this setting contains the pathname of an HTML browser, DXKeeper displays online help using that browser.
Select button	displays a file selector dialog that allows you to choose a Browser pathname
show control explanations	when checked, enables the display of explanatory information when the mouse cursor lingers over a textbox, button, checkbox, display pane, or setting.

- **QSL Config** button - when clicked, displays the QSL Configuration window
- **Audio Recording Config** button - when clicked, displays the Audio Recording Configuration window
- **Database info** button - when clicked, displays the **DXKeeper Database Info** window, which shows the pathname and version of each database utilized by DXKeeper; all but the YASME database can be installed via the **Database** tab of DXView's Configuration window.

DXCC Database panel	shows the pathname and version of the DXCC database being used by DXKeeper
IOTA Database panel	shows the pathname and version of the IOTA database being used by DXKeeper
USAP Database panel	shows the pathname and version of the USAP database being used by DXKeeper
RDA Database panel	shows the pathname and version of the RDA database being used by DXKeeper
YASME Database panel	shows the pathname and version of the YASME database being used by DXKeeper
LoTW Database panel	shows the pathname and version of the LoTW database being used by DXKeeper
eQSL AG Database panel	shows the pathname and version of the eQSL Authenticity Guaranteed database being used by DXKeeper

- **Display Error Log** button - when clicked, displays DXKeeper's errorlog.txt file
- **Display License** button - when clicked, displays DXKeeper's license
- **Help** button - displays the information you are now reading

Log Tab

- Log File Panel

Pathname textbox	This textbox specifies the pathname of the current log file. To open a different log file or create a new log file, you can enter or paste the appropriate pathname into this textbox and then click the Select or Create buttons in this panel. Alternatively, you can click the Select button in this panel and use the file selector dialog to choose the log file you wish to open or create. Note: If you start DXKeeper with a command line argument that specifies a valid pathname, DXKeeper will place this argument in the Pathname textbox and attempt to open the designated file as a log.
Open Button	closes any open log and opens the log in the file specified by the Pathname textbox; this button is only present when the Pathname textbox specifies an existing file

Create Button	closes any open log, and creates a new log in the file specified by the Pathname textbox; this button is only present when the Pathname textbox specifies a non-existent file If DXView has been installed on your PC, the newly-created log's progress table will be initialized using the DXCC database managed by DXView. If DXView has not been installed, the newly-created log's progress table will be initialized from the file DXCC.mdb in the Databases subfolder of your DXKeeper application folder.
Compact Button	If you delete QSOs in a log, the log file can become fragmented and use disk space inefficiently. Compacting the log file re-arranges the files contents to improve storage efficiency.
Select Button	displays a file selector dialog with which you can navigate to a desired folder and select a log file to open; if the selected file exists, any currently-open log is closed and the selected log file is opened
New Button	displays a file selector dialog with which you can navigate to a desired folder and specify a new log file to be created; if the specified file does not exist, any currently-open log is closed, and the specified log file is created and then opened If DXView has been installed on your PC, the newly-created log's progress table will be initialized using the DXCC database managed by DXView. If DXView has not been installed, the newly-created log's progress table will be initialized from the file DXCC.mdb in the Databases subfolder of your DXKeeper application folder.

- Backup Folder Panel

Backup folder pathname	this textbox specifies the pathname of folder into which log backups will be stored
Select button	displays a folder selector dialog with which you can select the folder into which log backups will be stored
Backup button	creates a backup copy of the current Log file in the specified backup folder pathname
Recover button	replaces the contents of the current Log file with the contents of a specified backup copy

- Log Settings Panel: these settings are stored in each log; when you select a new log, the settings will be updated to reflect the values saved with that log.

Submission reminder	when checked, setting a needed QSO's QSL Rcvd item to 'Y' will display a dialog box reminding you to <ul style="list-style-type: none"> submit the QSL to the ARRL's DXCC desk, if the QSOs' entity, entity-band, or entity-mode is needed but not confirmed submit the QSL to the RSGB's IOTA desk, if the QSO's IOTA tag is needed but not confirmed submit the QSL to the ARRL's VUCC desk, if the QSOs' gridsquare-band is needed but not confirmed submit the QSL to the ARRL's WAS desk if the QSO's state, state-band, or state-mode is needed but not confirmed submit the QSL to the CQ's WAZ desk if the QSO's zone, zone-band, zone-mode, or zone-band-mode is needed but not confirmed submit the QSL to the CQ's WPX desk if the QSO's prefix, prefix-band, or prefix-mode is needed but not confirmed
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	Note that an award's Realtime Award Tracking service must be enabled in order to determine whether a QSO is needed for that award.
Partial DXCC Credit	<p>when checked, a QSO's QSL Rcvd item can also be set to E, B, or M:</p> <ul style="list-style-type: none"> • E (Entity verified) - the card's Entity has been verified by the ARRL • B (Entity and Band verified) - the card's Entity and Entity-Band have been verified by the ARRL • M (Entity and Mode verified) - the card's Entity and Entity-Mode have been verified by the ARRL <p>(use these settings for QSL cards submitted to the DXCC desk before its records were computerized, where a card's Entity-Band and/or Entity-Mode was not recorded)</p>
Include radio name in myQTH ID	when checked, the default myQTH ID is assembled by appending the Radio Name specified for the currently-selected transceiver in Commander to the specified root myQTH ID
Update DXView on default myQTH change	when checked, the latitude and longitude specified in a newly-selected default myQTH are sent to DXView, which updates its QTH latitude and longitude
DXCC account #	<p>specifies the DXCC account from which</p> <ul style="list-style-type: none"> • the Compare function obtains your Award Credit Matrix in order to report any discrepancies with the current log's DXCC Entity, Entity-Band, and Entity-Mode verification data. • the DXCC Credits Granted window's Download function obtains your DXCC Credits so you can link them with logged QSOs <p>If you have only one DXCC account, your DXCC account number is most likely 1. If you have more than one DXCC account, you can determine the correct DXCC Account Number by using this procedure.</p>
root myQTH ID	text to which the currently-selected transceiver's Radio name is appended to assemble a default myQTH ID (only visible if the Include radio name in myQTH ID option is enabled)
default myQTH ID	<p>identifies the operator's current QTH</p> <ul style="list-style-type: none"> • initializes the myQTH textbox • specifies the operator's current QTH when another DXLab application logs a QSO that is missing this item

- Log Panels Panel (note that the functions of the Auxiliary, QSL, Online QSL, Award, Contest, Propagation, and User-defined checkboxes are also accessible from the Main window's **Log QSOs** tab)

Auxiliary items checkbox	<p>Checking this box shows the Auxiliary panel, which contains textboxes for each of the following items:</p> <ul style="list-style-type: none"> • station call • operator call • owner call • QSO # • submode • rx band • select • temp <p>Depressing the CTRL key while checking this box will display the Log's Aux panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.</p>
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	<p>Unchecking this box will hide the Log's Aux panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's Aux panel and increase the number of visible Log Page Display entries.</p>
QSL items checkbox	<p>Checking this box shows the QSL panel, which contains textboxes for each of the following items:</p> <ul style="list-style-type: none"> • sent • rcvd • date sent • date rcvd • sent via • rcvd via • msg • addr • myQTH • QSL # • IOTA vfy • VUCC vfy • WAS vfy • WAZ vfy • WPX vfy <p>Depressing the CTRL key while checking this box will display the Log's QSL panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.</p> <p>Unchecking this box will hide the Log's QSL panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's QSL panel and increase the number of visible Log Page Display entries.</p>
Online QSL items checkbox	<p>Checking this box shows the Online QSL panel, which contains eQSL and LoTW sub-panels with textboxes for each of the following items:</p> <ul style="list-style-type: none"> • eQSL sub-panel <ul style="list-style-type: none"> ○ eQSL sent ○ eQSL rcvd ○ eQSL date sent ○ eQSL date rcvd ○ eQSL member • LoTW sub-panel <ul style="list-style-type: none"> ○ LoTW sent ○ LoTW rcvd ○ LoTW date sent ○ LoTW date rcvd ○ LoTW member <p>Depressing the CTRL key while checking this box will display the Online Log's QSL panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.</p> <p>Unchecking this box will hide the Log's Online QSL panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's Online QSL panel and increase the number of visible Log Page Display entries.</p>

Club & QRZ checkbox	<p>Checking this box extends the height of the Online QSL panel to include Club Log and QRZ sub-panels with textboxes for each of the following items:</p> <ul style="list-style-type: none"> • Club Log sub-panel <ul style="list-style-type: none"> ○ Club Log sent ○ Club Log rcvd ○ Club Log date sent ○ Club Log date rcvd • QRZ sub-panel <ul style="list-style-type: none"> ○ QRZ sent ○ QRZ rcvd ○ QRZ date sent ○ QRZ date rcvd <p>Unchecking this box will reduce the height of the Online QSL Panel to contain only the eQSL and LoTW sub-panels</p>
Award items checkbox	<p>Checking this box shows the Awards panel, which contains textboxes for each of the following items:</p> <ul style="list-style-type: none"> • SOTA • region (if QSO's DXCC entity contains a CQ or WAE region) • ARRL (if QSO's DXCC entity contains an ARRL section) • IOTA • primary administrative subsystem • secondary administrative subsystem • continent • WPX • CQ • ITU • grid 1 • grid 2 • grid 3 • grid 4 • Zone Risk • Country Risk <p>Depressing the CTRL key while checking this box will display the Log's Awards panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.</p> <p>Unchecking this box will hide the Log's Awards panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's Awards panel and increase the number of visible Log Page Display entries.</p>
Contest items checkbox	<p>Checking this box shows the Contest panel, which contains textboxes for each of the following items:</p> <ul style="list-style-type: none"> • ID • rx # • tx # • tx info • rx info <p>Depressing the CTRL key while checking this box will display the Log's Contest panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.</p> <p>Unchecking this box will hide the Log's Contest panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's Contest panel and increase the number of visible Log Page Display entries.</p>

Propagation items checkbox	<p>Checking this box shows the Propagation panel, which contains textboxes for each of the following items:</p> <ul style="list-style-type: none"> • propagation mode • complete • EME initial • Antenna azimuth • Antenna path • Antenna elevation • Solar Flux Index • Geomagnetic A-index • Geomagnetic K-index • Satellite name • Satellite mode • Meteor shower • Meteor max time • Meteor bursts • Meteor random • Meteor pings <p>Depressing the CTRL key while checking this box will display the Log's Propagation panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.</p> <p>Unchecking this box will hide the Log's Propagation panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's Propagation panel and increase the number of visible Log Page Display entries.</p>
Details items checkbox	<p>Checking this box shows the Details panel, which contains textboxes for each of the following items:</p> <ul style="list-style-type: none"> • dist • sig • sig info • lat • lon • owner call • email • web • rig • age • power • file • audio file • comment <p>Depressing the CTRL key while checking this box will display the Log's Details panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.</p> <p>Unchecking this box will hide the Log's Details panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's Details panel and increase the number of visible Log Page Display entries.</p>

User-defined items checkbox	<p>Checking this box shows the User-defined panel, which lets you specify up to eight user-defined items.</p> <p>Depressing the CTRL key while checking this box will display the Log's User-defined panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.</p> <p>Unchecking this box will hide the Log's User-defined panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's User-defined panel and increase the number of visible Log Page Display entries.</p>
Font Button	Enables you to specify the font and font metrics (size, bold, italic) used in the Main window's Auxiliary, QSL, Online QSL, Awards, Contest and Satellite panels, and the Capture window.

- Log Page Display Panel

Log Page Display table	<p>Each row in this table corresponds to a column in Log Page Display. By adding or removing rows in this table, you can control which items appear (as columns) in the Log Page Display. You can also specify the caption and alignment for each item appearing in the Log Page Display.</p> <p>To add an item to the Log Page Display,</p> <ul style="list-style-type: none"> • scroll to the last row of the Log Page Display table; this row is distinguished by an asterisk in its leftmost cell • click in the Item cell of this last row, then click the pulldown icon (a small black triangle), and choose the item to be displayed from the resulting list (the pulldown contains ADIF field names - to correlate with items, consult the cross reference) • click in the Caption cell of the last row, and type the caption to be used for this item in the Log Page Display • click in the Align cell of the last row, then click the pulldown icon (a small black triangle), and choose item's alignment (left-justified, centered, or right-justified) • click in the row above the last row to complete the addition <p>To see the newly added item (column) in the Log Page Display, you may need to horizontally scroll the log page display or widen your DXKeeper window.</p> <p>To remove a item from the log page display,</p> <ul style="list-style-type: none"> • select the row corresponding to the item to be removed by clicking in row's leftmost cell (this cell is shaded) • strike the Delete key <p>The order in which items appear in the log page display, and the width of each column in the log page display are controlled by direct manipulation.</p>
Colors button	<p>When clicked, DXKeeper's Capture and Log Page Display Colors window is displayed, which enables you to review and modify the Log Page Display background colors that indicate whether an entry's callsign is a known participant in LoTW and/or an Authenticity-Guaranteed (AG) member of eQSL.cc, if enabled.</p> <p>If SpotCollector has been installed and run, you can optionally enable DXKeeper's Use SpotCollector's callsign colors option, which enables control of the Log Page Display background colors via the Background Colors panel on the Spot Database Display tab of SpotCollector's Configuration window.</p>
Font button	Enables you to specify the font and font metrics (size, bold, italic) used in the Log Page Display

Reset button	Set's the Log Page Display row height and column widths to default values based on the current font size
Log Page Display layout file	<p>if specified, the pathname of a file to which the Log Page Display layout will be saved after you change any of the following:</p> <ul style="list-style-type: none"> • which items appear in the log page display • the caption for each such item • the alignment of each such item • the order in which such items appear • the width of each item <p>You will be prompted to confirm each such update to the file unless the Automatically update layout file option is enabled</p>
Select button	displays a file selector that lets you choose a Log Page Display layout file and then format the Log Page Display as specified by the selected file's contents
Save button	displays a file selector that lets you choose a file into which will be saved the Log Page Display's current layout
Include Entity name with DXCC prefix	<p>when checked,</p> <ul style="list-style-type: none"> • the Log Page Display column configured to display the DXCCPrefix item will include both the DXCC prefix and the full name of each DXCC entity • the DXCC column in the generated Log Report will include both the DXCC prefix and the full name of each DXCC entity
Automatically update layout file	when checked, the specified Log Page Display layout file will automatically be updated to reflect changes made to the Log Page Display layout without your approval of each such update
Indicate LoTW & eQSL AG status	<p>When checked, the background color of each entry in the Log Page Display indicates whether the entry's callsign is a known participant in LoTW and/or an Authenticity-Guaranteed member of eQSL.cc</p> <ul style="list-style-type: none"> • If a callsign is found to be a known participant of LoTW but not an Authenticity-Guaranteed member of eQSL.cc, the callsign's background color is set to yellow by default, but can be changed. • If a callsign is found to be an Authenticity-Guaranteed member of eQSL.cc but not a known participant of LoTW, the callsign's background color is set to pink by default, but can be changed. • If a callsign is found to be a known participant of LoTW and an Authenticity-Guaranteed member of eQSL.cc, the callsign's background color is set to cyan (light blue) by default, but can be changed.
Frequency precision	specifies the number of decimal digits shown in transmit frequencies and receive frequencies appearing in the Log Page Display; the valid range is 3 to 6.
Power precision	specifies the number of decimal digits shown in the transmit power appearing in the Log Page Display; the valid range is 0 to 6.
Chronological sort order	<p>determines whether the Sort panel's UTC button, the Sync eQSL.cc QSLs operation, and the Sync LoTW QSLs operation will sort the Log Page Display in ascending or descending order of QSO Begin time, eQSL Date Rcvd, or LoTW Date Rcvd respectively.</p> <ul style="list-style-type: none"> • if the Sort panel's UTC sort is active, a change to the sort order is immediately effected

- Reset Unique #s - when clicked, each QSO in the current log is assigned a unique number based on its QSO Begin date and time: the earliest QSO is assigned QSO number 1, the second is assigned QSO number 2, etc.

Awards Tab

This tab provides settings that specify the bands and modes on which you are pursuing the DXCC, Marathon, VUCC, WAS, WAZ, and WPX awards.

The **Automatically recompute realtime award tracking** checkbox determines whether DXKeeper will automatically update realtime award tracking information when you delete a QSO or indicate a regression in the QSO's progress, e.g. demoting its status from confirmed to worked, or from worked to unworked. If this box is unchecked, DXKeeper will not direct SpotCollector to initiate progress recomputations.

The **Deduce CQ and ITU zones from US callsigns** checkbox determines whether callsigns of US stations will be used to deduce CQ and ITU zones if more precise information (previous QSOs, state, ARRL section, Callbook) is unavailable and the call area fits entirely in the zone.

The **Include LoTW confirmations in CQ (DX, Fields), & Maidenhead Grid progress** box will, when checked, include QSOs confirmed by the ARRL's Logbook of the World (LoTW) in the CQ DX, CQ Fields, and Maidenhead Grids report.

The **Include eQSL.cc confirmations in DXCC, WAS, WAC, & Maidenhead Grid progress** box will, when checked, will include QSOs confirmed by eQSL.cc in the DXCC, Challenge, TOPLIST, WAS, WAC, and Maidenhead Gridsquare awards progress and reports. The ARRL, and TOPLIST do not accept eQSL.cc confirmations for their awards, but if your personal DXing program considers eQSL.cc confirmations to be valid, then checking this box will generate correct status. If you change this setting, immediately running the By QSL Mode, WAS, WAC, and Maidenhead Gridsquare reports will produce correct results. However, the Progress Grid, Progress Details Grid, and all other reports will not reflect the change until you invoke the Recompute function.

DXCC Bands & Modes Panel

Checkboxes in this panel specify the bands and modes you are pursuing for the ARRL DX Century Club award (DXCC), the ARRL DX Century Club Challenge award, and/or the 425DXN Top List award. When you click the QSL tab's Add Needed button, these settings are used to identify QSOs for which QSLs would advance your progress. When you prepare a DXCC Submission, confirmed QSL cards and/or LoTW credits will only be submitted for bands and modes selected in this panel. If SpotCollector is running, the settings of these checkboxes are used to determine whether a QSO with a spotted station would advance your progress. If none of the band or mode boxes in this panel are checked, DXKeeper and SpotCollector assume that you are pursuing DXCC without focus on specific bands or modes.

Award Program	boxes to check in DXKeeper's DXCC/Top Bands & Modes panel
DXCC	none
5-band DXCC	80m, 40m, 20m, 15m, 10m
DXCC Challenge	160m, 80m, 40m, 30m, 20m, 17m, 15m, 12m, 10m, 6m, Phone, CW, Digital
TopList	160m, 80m, 40m, 30m, 20m, 17m, 15m, 12m, 10m, Phone, CW, Digital

The **User-specified digital mode family** selector lets you choose a digital mode family (e.g. FT8, JT65, PSK, etc.) in which you wish to confirm every DXCC entity, independently of RTTY and any other digital modes. If you change this selector from one digital mode family to another, DXKeeper will display a small window that displays status and instructions.

- The ARRL does not offer DXCC awards specific to one digital mode or one digital mode family; the ability to pursue confirmations in a specified digital mode family with every DXCC entity is provided to support the user's personal objectives
- A checkbox for the selected digital mode family will appear immediately beneath the **User-specified digital mode family** selector. If this box is checked, DXLab applications will prompt you to work and confirm every DXCC entity using modes in the selected digital mode family; if this box is not checked, modes in the selected digital mode family will still be considered valid for DXCC Digital awards.

Click the **HF** button to check the 160m through 10m band boxes; click the **VHF** button to check the 6m and 2m band boxes.

If the DXCC Bands & Modes Panel's **QRP** option is enabled, only QSO that specify a transmit power that is greater than 0 and less than or equal to 5 watts will be counted towards DXCC award progress. If you enable or disable this setting, DXKeeper will prompt you to recompute your realtime DXCC award progress.

The DXCC Bands & Modes Panel's **Hide unworked in progress rpt** option lets you suppress the listing of unworked DXCC entities in the DXCC Progress report.

DXCC Submission panel

This panel provides settings that control the generation and management of DXCC submissions

Submit deleted entities	when checked, QSOs that confirm deleted DXCC entities will be submitted
Record Sheet lines/page	specifies the number of lines to be printed on each page of a generated Card Record Sheet or LoTW Record Sheet report

Marathon Submission panel

When enabled this panel's **Confirmed QSOs are low risk** setting causes the CQ DX Marathon Progress Report function and Submission function to consider as low risk the Marathon countries and Marathon zones of QSOs confirmed via QSL card, LoTW, Authenticity-Guaranteed members of eQSL.cc, Club Log, or QRZ to be low risk.

DXCC Credits panel

This panel's **Credit-only QSO creation** setting enables the generation of Credit-only QSOs from the DXCC Credits Granted window.

Realtime Award Tracking panel

The **Display Progress in bold font** setting determines whether information displayed in the Realtime Award Tracking window's Award Progress and Progress Details grids are displayed in bold font

Marathon Bands & Modes panel

Checkboxes in this panel specify

- the bands and modes on which Progress will be reported, on which an active DX station will be highlighted and announced by SpotCollector as "needed for CQ DX Marathon" (if realtime award tracking is enabled)
 - check the **Mixed** box if you're considering submitting a Mixed entry at year end
 - check the box for each band for which you're considering submitting a single-band entry at year end
 - check the box for each mode for which you're considering submitting a single-mode entry at year end
 - check **Challenge** box if you're considering submitting a Marathon entry at year end
 - click the **HF** button to check the 160m through 10m band boxes; click the **VHF** button to check the 6m and 2m band boxes.
- whether Marathon reports should include QSOs whose propagation mode is unspecified
- the maximum transmit power for QSOs to be included in Marathon Progress reports and realtime award tracking
 - to track progress towards **Unlimited Class** or **Challenge Class**, set this to a value greater than 100; if you specify no value, **Unlimited Class** will be assumed, but logged transmit power will not be used as a constraint on QSOs considered for inclusion in generated Progress Reports
 - to track progress towards **Limited Class** or **Formula Class**, set this to 100
 - to track progress towards **QRP Class**, set this to 5
- whether realtime award tracking for CQ DX Marathon awards is enabled; if unchecked, checking the **Realtime Award Progress** checkbox directs DXKeeper to enable realtime award tracking for Marathon in the current log

Click the **Year, Class, & Category** button to display the **Marathon Year, Class, Category, and Submission Information** window, on which you can specify

- the **Current year**, for which CQ DX Marathon Progress Reports and Submissions are generated when not invoked with the **CTRL** key depressed
- the **Class** for which Submissions are generated; QSOs whose TX Power is not consistent with the selected Class are ignored when generating a submission
- the **Category** for which Submissions are generated; QSOs whose band or mode is not consistent with the selected Category are ignored when generating a submission
- the Callsign, Name, Street, City, State/Province, Country, Postal Code, CQ Zone, Email Address, and Club Name to be included in the generated submission
- the Overlay to be included in the generated submission
- the Antenna Description to be included in the generated submission
- any comments you'd like included in the generated submission

If realtime award tracking for CQ DX Marathon awards is enabled and SpotCollector is running, the settings of this panel's Mixed, band, and mode checkboxes are used to determine whether a QSO with a spotted station would advance your Marathon progress.

VUCC Bands & Modes Panel

The band checkboxes in this panel specify the bands you are pursuing for awards in the VUCC award family

- check the **6M** through **23CM** boxes to enable realtime award tracking and VUCC progress reporting for these bands
- check the **13CM and up** box to enable VUCC progress reporting for these bands
- check the **Satellite** box if you are pursuing VUCC via Satellite QSOs (whose prop mode items are set to **SAT** and whose satellite name items specify a satellite)

The **Realtime Award Progress** checkbox indicates whether realtime award tracking for the VUCC award family is enabled; if unchecked, checking this box directs DXKeeper to enable realtime award tracking for VUCC in the current log. When enabled,

- the Card Aging function reports QSOs needed for VUCC awards for which confirmation has been requested but not received
- If SpotCollector is running, the settings of this panel's band checkboxes are used to determine whether a QSO with a spotted station would advance your VUCC progress.

WPX Bands & Modes Panel

Checkboxes in this panel specify the bands and modes you are pursuing for awards in the CQ Worked All Prefixes (WPX) family.

- click the **HF** button to check the 160m through 10m band boxes
- check the **Mixed** box if you are pursuing WPX on any band and mode

The **Realtime Award Progress** checkbox indicates whether realtime award tracking for the WPX award family is enabled; if unchecked, checking this box directs DXKeeper to enable realtime award tracking for WPX in the current log. When enabled,

- the Card Aging function reports QSOs needed for WPX awards for which confirmation has been requested but not received
- If SpotCollector is running, the settings of this panel's Mixed, band and mode checkboxes are used to determine whether a QSO with a spotted station would advance your WPX progress.

WAS Bands & Modes Panel

Checkboxes in this panel specify the bands and modes you are pursuing for awards in the ARRL Worked All States (WAS) family.

- click the **HF** button to check the 160m through 10m band boxes
- click the **VHF** button to check the 6m and 2m band boxes
- check the **Mixed (Basic)** box if you are pursuing WAS on any band and mode
- check the **Sat** box if you are pursuing WAS via Satellite QSOs (whose prop mode items are set to SAT and whose satellite name items specify a satellite)
- check the **QRP** box to specify that QSOs whose transmit power is greater than 5 watts be ignored by realtime award tracking and by the WAS Progress Report.

The **Realtime Award Progress** checkbox indicates whether realtime award tracking for the WAS award family is enabled; if unchecked, checking this box directs DXKeeper to enable realtime award tracking for WAS in the current log. When enabled,

- the Card Aging function reports QSOs needed for WAS awards for which confirmation has been requested but not received
- If SpotCollector is running, the settings of this panel's Mixed, band and mode checkboxes are used to determine whether a QSO with a spotted station would advance your WAS progress.

IOTA Panel

This panel's **IOTAMem4win** checkbox determines whether generating an IOTA progress report will also create **IOTA_Worked** and **IOTA_Confirmed** update files for IOTAMem4WIN in DXKeeper's **Reports** sub-folder.

The **Realtime Award Progress** checkbox indicates whether realtime award tracking for the IOTA award family is enabled; if unchecked, checking this box directs DXKeeper to enable realtime award tracking for IOTA in the current log. When enabled,

- the Card Aging function reports QSOs needed for IOTA awards for which confirmation has been requested but not received
- If SpotCollector is running, it will determine whether a QSO with a spotted station would advance your IOTA progress.

Other Awards Panel

In this panel,

- if the **CQ, DARC WAE, Holyland region select** box is checked, DXKeeper enables the ? buttons to the right of the **region** boxes on the **Capture** window and on the **Main** window's **Log QSOs** tab; these ? buttons display an **Award Selector** window that lets you select a region by its full name
- if the **DARC DOK region selection** box is checked, DXKeeper enables the ? buttons to the right of the **DOK** boxes on the **Capture** window and on the **Main** window's **Log QSOs** tab; these ? buttons display an **Award Selector** window that lets you select a DOK by its full name
- the **WAE 2 point low-band QSOs** box determines whether the Worked All Europe progress report credits 160m and 80m QSOs with 1 band point or 2 band points
- if the **Subdivision validity checking** box is checked
 - the validity of Primary and Secondary Administrative Subdivisions is recorded with each QSO
 - the Broke filter displays QSOs with invalid primary or secondary administrative subdivisions
 - the Recompute function flags QSOs with invalid primary or secondary administrative subdivisions
 - when importing QSOs from a file, logging QSOs from another application (e.g. WinWarbler or MultiPSK), or synchronizing LoTW QSLs,
 - corrects common misspellings of Primary and Secondary Administrative Subdivisions
 - in US QSOs, replaces Secondary Administrative Subdivisions specifying independent Virginian cities completely surrounded by one county with the surrounding county
 - when performing a Sync LoTW QSLs operation, report any confirmation with a station in the US, Hawaii, or Alaska that does not specify a valid US state

WAZ Bands & Modes Panel

Checkboxes in this panel are used to specify the CQ Worked All Zones (WAZ) family awards you're pursuing.

To indicate your pursuit of a single-band mixed award, check the appropriate band box(es) in the Mixed column. Note that WAZ only defines single-band mixed awards for 160m, 6m, and (for 5-band WAZ) 80m, 40m, 20m, 15m, and 10m.

To indicate your pursuit of the 5-band WAZ mixed award, check the **5-Band WAZ** box. With the **5 Band WAZ** box checked,

- the WAZ Progress Report will include a "5 band" report section
- QSOs on 80m, 40m, 20m, 15m, and 10m prior to 1979-01-01 will be ignored by realtime award tracking and by the WAZ Progress Report's "5 band" and "band-mixed" and "band-mode" report sections

With the **5 Band WAZ** box not checked,

- the WAZ Progress Report will not include a "5 band" report section
- QSOs on 80m, 40m, 20m, 15m, and 10m prior to 1973-01-01 will be ignored by realtime award tracking and by the WAZ Progress Report's "band-mixed" and "band-mode" report sections

To indicate your pursuit of a single-mode mixed award, check the appropriate mode box(es) in the Mixed row.

To indicate your pursuit of a single-band single-mode WAZ award, check the box at the intersection of the band row and mode column. Note that the 30m SSB, 30m AM, and 30m SSTV boxes cannot be checked.

Checking the **Sat** box will cause the WAZ Progress Report to display your WAZ progress with QSOs made via Satellite (QSOs whose prop mode items are set to `SAT`).

Checking the **EME** box will cause the WAZ Progress Report to display your WAZ progress with QSOs made via EME (QSOs whose prop mode items are set to `EME`).

The **Realtime Award Progress** checkbox indicates whether realtime award tracking for the WAZ award family is enabled; if unchecked, checking this box directs DXKeeper to enable realtime award tracking for WAZ in the current log. When enabled,

- clicking the QSL tab's Add Needed button identifies QSOs for which QSLs would advance your WAZ progress
- the Card Aging function reports QSOs needed for WAZ awards for which confirmation has been requested but not received
- if SpotCollector is running, the settings of this panel's band and mode checkboxes are used to determine whether a QSO with a spotted station would advance your WAZ progress; if no boxes in this panel are checked, DXKeeper and SpotCollector assume that you are pursuing mixed WAZ without focus on specific bands or modes.

The **Recompute** button reconstructs all realtime award tracking information in the current log by examining each QSO in the current log.

Reports Tab

The **Date Format panel** lets you specify the format of dates used in reports, and in the headers of exported ADIF files.

- dd-mmm-yyyy (local month abbreviations) uses the standard month abbreviations for your PC's locale
- dd-mmm-yyyy (English month abbreviations) uses the English month abbreviations independent of your PC's locale
- yyyy-mm-dd (ISO 8601) uses the ISO 8601 standard date format independent of your PC's locale

The **Frequency precision** setting specifies the number of decimal digits shown in frequencies appearing in Progress and Submission reports; the valid range is 3 to 6.

The DXCC Summary panel's Optional HTML textbox lets you insert HTML at the beginning of the DXCC Summary's body, prior to the data table.

In the **QSL Aging** panel

- the **Expiration age** textbox lets you specify a time interval in weeks that the Card Aging function can use to automatically flag QSOs as expired, meaning that a confirmation is no longer expected; the maximum value is 999.
- the **Optional report item** selector lets you choose a log item to be displayed in each entry of the report generated by the Card Aging function

Callbook Tab

DXKeeper can obtain name, address, and location information for a callsign from multiple sources:

- CDRoms and DVDs
 - the Flying Horse Radio Amateur's Callbook installed on your PC
 - the HamCall Callbook installed on your PC
 - the QRZ Callsign Database installed on your PC
 - Online Callbooks
 - HamCall.net (requires a paid subscription)
 - HamQTH (requires registration, but is free)
 - QRZ.com
 - if you have a paid XML Data or full subscription to QRZ.com
- or
- if Pathfinder is running (the downloading and display of advertisements significantly increases access time, but free registration is all that's required)

DXKeeper can optionally check a second Callbook if the first Callbook is inaccessible or does not have information for the callsign.

Your QSO partner's first name is placed in the QSO's name item. Your QSO partner's full name and postal address are placed in the QSO's address item.

Use the radio buttons in this tab's **Primary Callbook** panel to specify the first source of information to be used for Callbook Lookup operations.

Note: Passwords specified in the Primary Callbook panel will appear in generated errorlog.txt files when Log debugging information is enabled; do not employ passwords that you also use to secure valuable online accounts!

None	no callbook lookup is performed
RAC (PC)	use the RAC callbook installed on your PC; specify the pathname of the folder containing the RAC's <code>Callbook.exe</code> file
HamCall (PC)	use the HamCall callbook installed on your PC; specify the pathname of the folder containing the HamCall database Note: if you've installed a HamCall CD-ROM dated May 2013 or later, <ol style="list-style-type: none"> 1. terminate DXKeeper, if it's running 2. use Windows Explorer to navigate to your DXKeeper folder, and delete the file <code>Hamcal32.dll</code> 3. obtain the file <code>Hamcal32.dll</code> from the HamCall web site, and place it in your DXKeeper folder
QRZ (PC)	use the QRZ callbook installed on your PC; specify the pathname of the folder containing the QRZ database <code>callbk.dat</code> file If you use QRZ's default installation location, the correct pathname will be <code>C:\Program Files\QRZ Ham Radio\CALLBK</code>

HamCall Online	use your subscription to HamCall.net; specify the callsign and password registered with HamCall.net, and set the HamCall Online timeout to indicate how long to wait before abandoning a request made to HamCall
HamQTH	use your free registered account with HamQTH; specify the callsign and password registered with HamQTH, and set the HamQTH timeout to indicate how long to wait before abandoning a request made to HamQTH
QRZ.com XML Data	use your subscription to QRZ.com <ul style="list-style-type: none"> • specify the callsign and password registered with QRZ.com • set the QRZ.com timeout to indicate how long to wait before abandoning a request made to QRZ.com • check the Ignore geocoded grid squares, latitudes, and longitudes box if location data derived from the postal address via "geocoding" should not be used (location data provided by the callsign's owner will always be used)
QRZ.com via Pathfinder	use Pathfinder to obtain information from QRZ.com <ul style="list-style-type: none"> • make sure Pathfinder (version 4.2.6 or later) is running • set the QRZ.com timeout to indicate how long to wait before abandoning a request made to QRZ.com • check the Ignore geocoded grid squares, latitudes, and longitudes box if location data derived from the postal address via "geocoding" should not be used (location data provided by the callsign's owner will always be used) • if the Alt key is depressed while clicking the CBA button to initiate a QRZ.com lookup on every QSO in the Log Page Display, the rate will be limited to one lookup every 4 seconds

Use the **Preferred Location Source** panel to indicate which source of grid square, latitude, and longitude to utilize - the imported/received QSO, or the callbook entry for the QSO's callsign - when both sources specify valid location information

Use the **Secondary Callbook** panel to specify and enable a second Callbook to be queried when the first Callbook is inaccessible or does not have information for the callsign:

Enable	when checked, DXKeeper will query the specified second Callbook when the first Callbook is inaccessible or does not have information for the callsign
Callbook	specifies the second Callbook to be used when the first Callbook is inaccessible or does not have information for the callsign
Warn when the primary callbook can't be accessed	when checked, failure to access the primary callbook will be noted in an always-on-top warning message that appears for 10 seconds

Use these checkboxes to govern Callbook behavior:

Automatically use callbook data... checkbox	when checked <ul style="list-style-type: none"> • DXKeeper will initialize the name, QTH, primary administrative subdivision,, secondary administrative subdivision, IOTA, and grid items with the results of a successful Callbook query • the Capture window's Lookup button will initialize the Capture window's name, QTH, primary administrative subdivision, secondary administrative subdivision, IOTA, and grid items with the results of a successful Callbook query
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Warn when a callbook lookup returns "callsign not found"	when checked, a callbook lookup that fails to obtain callbook information for a callsign will display a warning message requiring confirmation
CBA generates a Callbook Lookup Actions Report	when checked, if the CBA function generates and displays a report that lists all changes it made to logged QSOs

From the Capture window, you can add name, QTH information, and address information from the selected Callbook to the current QSO by clicking the **Lookup** button, as described above.

Using the **CBA** button on the Main window's Log QSOs tab, you can update or replace name, QTH information, and address information in the current QSO or in all QSOs visible in the Log Page Display.

You can also configure DXKeeper to lookup each imported QSO in the selected callbook and the DXCC database and fill in any items not present in the imported QSO with information from these sources.

Contest tab

These settings govern DXKeeper's support for contest operation.

Contest mode	<p>when contest mode is enabled,</p> <ul style="list-style-type: none"> • The contest ID and Contest tx# items of QSOs recorded via the Main window's Log QSOs tab are initialized to the Contest ID and TX serial# respectively • The contest and tx# items of QSOs recorded via the Capture window are initialized to the Contest ID and TX serial# respectively • Striking the Enter key in the Main window's Call item with Run-mode enabled automatically increments the TX serial# if the Increment TX serial# box is checked • Logging a QSO via the Capture window automatically increments the TX serial# if the Increment TX serial# box is checked • a Log Page Display entry will be rendered in red font if its Callsign, Band, Mode and Contest ID match those in the Capture window • Filtering the Log Page Display for previous QSOs with a specified station shows only QSOs whose recorded Contest ID matches the Contest ID configuration setting <p>Enabling Contest mode automatically enables Run-mode; disabling Contest mode automatically disables Run-mode</p> <p>Contest mode can also be enabled or disabled via the Capture window's contest mode checkbox.</p> <p>If WinWarbler is running, its contest mode setting is automatically conveyed to DXKeeper; thus to enable or disable DXKeeper's contest mode, enable or disable contest mode on WinWarbler's Configuration window's Contest tab.</p>
Increment TX serial#	when checked, increments the TX serial# after each QSO (if the Contest mode box is checked, and if the TX serial# contains a numeric value)
Place focus in RX# on DX spot activation	<p>when checked, activating a DX spot in SpotCollector, DXView or Commander will place the mouse cursor in the Capture window's RX# item if the Capture window has not been closed</p> <p>if the Capture window is closed, Optimize for realtime QSO entry is checked, and New QSO on DX Spot activation is checked, then activating a DX spot will create a new QSO and display it in the Main window; if the Contest panel on the Main window's Log QSOs tab is visible, then the mouse cursor will be placed in its RX# item</p>

Don't log Capture window Contest, TX#, RX# if contest mode disabled	when checked with contest mode disabled, don't log the Capture window's Contest, TX#, and RX# items
Contest ID	the Contest Identifier recorded with each QSO, and used to select the Cabrillo template used when generating a Cabrillo log
TX serial#	the transmit serial number or exchange to be recorded with the next QSO
TX Exchange	fixed portion of transmit exchange (see the table describing how Contest information is recorded to enable Cabrillo generation)

Cabrillo panel

This panel determines what information is placed in the header section of a generated Cabrillo file; some of this information is also incorporated in recorded contest exchanges, as noted in the table below. If no value for an item is specified, then its Cabrillo tag will not appear in the header section.

Item	Cabrillo Tag	Description
Contest	CONTEST	the name of the contest (initialized when you select a Contest ID)
Name	NAME	submitter's full name
Address	ADDRESS	up to 4 lines of postal address (do not include your name)
Operators	OPERATORS	callsigns of participating operators, separated by commas
Soapbox	SOAPBOX	Cabrillo Soapbox
Operator's first name		your first name (used in contest exchanges)
Club	CLUB	name of your contest or radio club
Score	CLAIMED-SCORE	your claimed score in the contest (obtained from your contesting application, or manually computed)
Category	CATEGORY	Cabrillo category
Category Assisted	CATEGORY-ASSISTED	Cabrillo assistance category
Category Operator	CATEGORY-OPERATOR	Cabrillo operator category
Category Station	CATEGORY-STATION	Cabrillo station category
Category Band	CATEGORY-BAND	Cabrillo band category
Category Mode	CATEGORY-MODE	Cabrillo mode category
Category Power	CATEGORY-POWER	Cabrillo power category
Category Overlay	CATEGORY-OVERLAY	Cabrillo overlay category
Category Transmitter	CATEGORY-TRANSMITTER	Cabrillo transmitter category
Category Time	CATEGORY-TIME	Cabrillo time category
Location Section	LOCATION	the ARRL section from which you are operating

Location ST/PR	LOCATION	two-letter abbreviation for the US State or Province from which you are operating (for use in contest exchanges)
Location IOTA	LOCATION	Islands on the Air tag or Island Name from which you are operating (for use in contest exchanges)
Location Grid	LOCATION	Maidenhead Grid Square from which you are operating (for use in contest exchanges)
Location CQ	LOCATION	CQ Zone from which you are operating (for use in contest exchanges)
Location RDA #	LOCATION	RDA number from which you are operating (for use in RDXC contest exchanges)

User Items tab

DXKeeper can record up to 8 user-defined items with each QSO. This tab lets you specify a caption, style, alignment, and default value for each user-defined item. DXKeeper can generate a progress report based on each user-defined item. Note that this information is stored in the current log file, which means that different log files can employ different sets of user-defined items.

Caption	<p>specifies the caption that appears to the left of the item in the User-defined panel on the Main window's Log QSOs tab, in the Capture window, and in WinWarbler's QSO Info panel</p> <ul style="list-style-type: none"> a user item progress report generated for the item will include the caption in the report's filename, so do not use characters like / or \ that are invalid in Windows filenames 																										
Style	<p>specifies the type of information captured in the item:</p> <table border="1"> <thead> <tr> <th>Style</th><th>Valid Characters</th></tr> </thead> <tbody> <tr> <td>Integer</td><td>digits, minus sign</td></tr> <tr> <td>Positive Integer</td><td>digits</td></tr> <tr> <td>Number</td><td>digits, minus sign, decimal separator</td></tr> <tr> <td>Positive Number</td><td>digits, decimal separator</td></tr> <tr> <td>Alphanumeric</td><td>all</td></tr> <tr> <td>Lower Alphanumeric</td><td>all (letters converted to lower case)</td></tr> <tr> <td>Upper Alphanumeric</td><td>all (letters converted to upper case)</td></tr> <tr> <td>Alphabetic</td><td>letters</td></tr> <tr> <td>Lower Alphabetic</td><td>letters (converted to lower case)</td></tr> <tr> <td>Upper Alphabetic</td><td>letters (converted to upper case)</td></tr> <tr> <td>List</td><td> set of legal values specified in a file <ul style="list-style-type: none"> each line in the file specifies a value; maximum 32767 lines click the Set list button to specify the file's pathname user-defined items specified by a list are always left-aligned </td></tr> <tr> <td>Comma-delimited List</td><td> set of legal values separated by commas, e.g. K-8345, K-5681, K-1181, K-3425 </td></tr> </tbody> </table>	Style	Valid Characters	Integer	digits, minus sign	Positive Integer	digits	Number	digits, minus sign, decimal separator	Positive Number	digits, decimal separator	Alphanumeric	all	Lower Alphanumeric	all (letters converted to lower case)	Upper Alphanumeric	all (letters converted to upper case)	Alphabetic	letters	Lower Alphabetic	letters (converted to lower case)	Upper Alphabetic	letters (converted to upper case)	List	set of legal values specified in a file <ul style="list-style-type: none"> each line in the file specifies a value; maximum 32767 lines click the Set list button to specify the file's pathname user-defined items specified by a list are always left-aligned 	Comma-delimited List	set of legal values separated by commas, e.g. K-8345, K-5681, K-1181, K-3425
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Align	specifies whether values are displayed as Left-aligned , Centered , or Right-aligned <ul style="list-style-type: none"> user-defined items specified by a list are always left-aligned
Init	If checked and the Display Previous QSOs on Lookup box is checked, then new QSOs will be initialized with information extracted from previous QSOs with the same callsign
ADIF	if checked, import and export ADIF and tab-delimited files using Caption as an ADIF tag if not checked, <ul style="list-style-type: none"> import and export ADIF files using APP_DXKEEPER_USER_DEFINED_ <i>N</i> import and export tab-delimited files using UDF_Caption if a Caption is specified or UDF_ <i>N</i> if no Caption is specified where <i>N</i> is the User item #. Note: while the ADIF tag for POTA is POTA_REF, a user-defined item whose Caption is POTA will be treated as if its Caption is POTA_REF
Default	specifies an optional default value for use in initializing a new QSO in the Capture window, in the Main window's Log QSOs tab, and in WinWarbler's QSO Info panel

The List style is appropriate when a user-defined item's value is limited to a small discrete set, for example the set {Y, N}, or the set {Alinco, Elecraft, FlexRadio, Icom, Kachina, Kenwood, TenTec, Yaesu}. A text file specifying the latter set would contain 8 lines:

```
Alinco
Elecraft
FlexRadio
Icom
Kachina
Kenwood
TenTec
Yaesu
```

It is usually appropriate to offer a choice representing "not specified"; this can be accomplished by having the first line of the specifying file be blank. When exporting a QSO, any of its user-defined items whose value is "not specified" are not included.

The Comma-delimited List style is appropriate when it is necessary to record more than one identifier per QSO; POTA identifiers, for example.

When importing QSOs, you can configure DXKeeper to check each imported field not recognized by DXKeeper -- whether defined in ADIF or not -- be against the caption specified for each user-defined item and, if a match is found, import the field's contents into the user-defined item associated with the matching caption. The field's contents are imported without regard to style. If the matching item's style is *List* but the imported contents are not among the specified values, the user-defined item will appear to be empty even though a value is present; change the item's style to *Aphanumeric* and the item's contents will be visible.

The **Save user item definitions** function saves the current set of user-defined item definitions to a file you choose. The **Load user item definitions** function replaces the current user-defined item definitions with those from a file you choose. To copy user-defined item definitions from one log file to another,

1. load the "source" log file
2. invoke the **Save user item definitions** function
3. load the "destination" log file
4. invoke the **Load user items definition** function, and select the file created in step 2

DXKeeper can generate a progress report for the contents of a specified user-defined item so long as item name does not contain / or \ characters that cannot be included in a Windows filename.

- any ' or " characters in the specified user item will be display as ` characters in the progress report
- any control characters in the specified user item will be displayed as space characters in the progress report

The generated report is governed settings for each item in the **Progress Report Generation** panel:

Enable	When checked, offer progress report generation for the user-defined item when the User progress report function is invoked
eQSL	When checked, the progress report generated for the user-defined item will consider eQSL confirmations from an authenticity-guaranteed member as valid
LoTW	When checked, the progress report generated for the user-defined item will consider LoTW confirmations as valid

Defaults tab

The settings on this tab are used to fill in for missing items when a QSO is logged via the Capture window, logged via the Main window's "Log QSOs" tab, or received from another application like WinWarbler or JTAAlert.

To specify default values for missing items in a QSO imported from an ADIF or tab-delimited file, use the Substitutions options panel on the Main window's **Import QSOs** tab.

Default Callsigns panel	Station callsign	<p>the station callsign used over the air (label is highlighted in red if maximum length is exceeded)</p> <ul style="list-style-type: none"> • used to name the log file created when DXKeeper runs the first time after being installed • initializes the station call textbox • specifies the station callsign when another application sends a QSO to be logged that is missing this item <p>The default station callsign is displayed in the Main window's title bar, enclosed by curly braces.</p>
	Operator callsign	<p>the callsign of the operator of the station (label is highlighted in red if maximum length is exceeded)</p> <ul style="list-style-type: none"> • initializes the operator textbox • specifies the operator callsign when another application sends a QSO to be logged that is missing this item
	Owner callsign	<p>the callsign of the owner of the station (label is highlighted in red if maximum length is exceeded)</p> <ul style="list-style-type: none"> • initializes the owner textbox • specifies the owner callsign when another application sends a QSO to be logged that is missing this item
	Maintain in Log	<p>if the Station Callsign, Operator Callsign, and Owner Callsign are each specified, clicking this button</p> <ul style="list-style-type: none"> • saves these three default callsigns in the current log file's Settings table • appends the name of the current log file to the Default Callsigns panel's caption, e.g. Default Callsigns from K6XT.mdb • disables the Maintain in Log button • enables the Maintain in Registry button

Maintain in Registry	<p>clicking this button</p> <ul style="list-style-type: none"> clears the three default callsigns in the current log file's Settings table changes the Default Callsigns panel's caption to Default Callsigns enables the Maintain in Log button disables the Maintain in Registry button
Show after loading log	when checked, displays the Configuration window's Defaults tab whenever a log file is opened, including at DXKeeper startup

After first installation, DXKeeper maintains the Station Callsign, Operator Callsign, and Owner Callsign in the Windows Registry, along with most of its other settings. Any changes you make to these three settings are restored from the Registry the next time you start DXKeeper.

If you operate from multiple DXCC entities or maintain separate logs for a club or for station for whom you manage QSLs, then you likely maintain multiple log files, and utilize a different Station Callsign when recording QSOs to each log; you may also employ different Operator Callsigns and/or Owner Callsigns when recording QSOs to each log.

To eliminate the need to manually change these three Default Callsigns each time you change log files, you can direct DXKeeper to save them in each log file's Settings table. To save the current Station Callsign, Operator Callsign, and Owner Callsign to the currently-open log file's Settings table, click the Maintain in Log button; the caption of the Default Callsigns panel will be updated to indicate the name of the currently-log file. Whenever you subsequently open this log file, the Station Callsign, Operator Callsign, and Owner Callsign will be updated from the log file, and the Default Callsigns panel will be updated to indicate the name of the currently-log file.

If you have used the Maintain in Log button to maintain Station Callsign, Operator Callsign, and Owner Callsign settings in the current log file, any changes you make to these three settings will be save to the Windows Registry as well as to the current log file's Settings table.

Should you change your mind and no longer wish to maintain the Station Callsign, Operator Callsign, and Owner Callsign settings in the current log file, click the Maintain in Registry button. This will clear the settings for these callsigns in the current log file's Settings table; whenever you subsequently open this log file, the Station Callsign, Operator Callsign, and Owner Callsign will remain unmodified from their previous values.

Enabling the Show after loading log option will display the Configuration window's Defaults tab whenever a log file is opened, making it easy to confirm that the correct values for Station Callsign, Operator Callsign, and Owner Callsign are specified before you begin logging new QSOs.

QTH latitude>	<p>the QTH latitude used to compute QSO distance and azimuth if no myQTH is specified, or if the specified myQTH does not include a grid square or latitude and longitude</p> <ul style="list-style-type: none"> • initialized from the QTH latitude specified in DXView, if DXView is installed • double-clicking prompts you to specify a grid square, from which the QTH latitude and QTH longitude are computed
QTH longitude	<p>the QTH longitude used to compute QSO distance and azimuth if no myQTH is specified, or if the specified myQTH does not include a grid square or latitude and longitude</p> <ul style="list-style-type: none"> • initialized from the QTH longitude specified in DXView, if DXView is installed • double-clicking prompts you to specify a grid square, from which the QTH latitude and QTH longitude are computed
Transmit power	<p>transmitter power, in watts (label is highlighted in red if maximum length is exceeded); if neither Default Transmit power by band nor Default Transmit power by mode is enabled or applicable,</p> <ul style="list-style-type: none"> • initializes the Capture window's Pwr item • initializes the pwr textbox if Optimize for realtime QSO entry is enabled • sets the transmit power when you double-click the a href="Items.htm#power">power item in the QSO panel on the Main window's "Log QSOs" tab • specifies the transmit power when another DXLab application logs a QSO that is missing this item • if the Substitute default Transmit Power for missing TX_PWR option is enabled, specifies the transit power when importing a QSO that doesn't specify a TX_PWR tag
RST sent & rcvd	<p>if enabled, the specified default value is used to initialize the RST sent and RST rcvd items in the Capture window or in the Main window's Log QSOs tab. If the default value includes a slash, e.g. 59/599, characters before the slash are used with phone modes, and characters after the slash are used with non-phone modes.</p> <p>if enabled with no default value specified, the RST send and RST rcvd items in the Capture window or in the Main window's Log QSOs tab are initialized to 59 for phone modes and 599 for non-phone modes.</p>
Antenna Path	<ul style="list-style-type: none"> • specifies the antenna path for QSOs logged via the Capture window • initializes the antenna path selector on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled
Propagation mode	<ul style="list-style-type: none"> • specifies the propagation mode for QSOs logged via the Capture window • initializes the propagation mode selector on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled and Default Propagation Mode by band is not enabled
SFI	<ul style="list-style-type: none"> • initialized from the most recent Solar Flux captured by SpotCollector, if SpotCollector is running • specifies the solar flux for QSOs logged via the Capture window • initializes the solar flux textbox on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled

A	<ul style="list-style-type: none"> • initialized from the most recent A-index captured by SpotCollector, if SpotCollector is running • specifies the A-index for QSOs logged via the Capture window • initializes the A-index textbox on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled
K	<ul style="list-style-type: none"> • initialized from the most recent K-index captured by SpotCollector, if SpotCollector is running • specifies the K-index for QSOs logged via the Capture window • initializes the K-index textbox on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled
Meteor shower	<ul style="list-style-type: none"> • specifies the meteor shower name for QSOs logged via the Capture window • initializes the meteor shower name textbox on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled
Email address	specifies the email address included in the generated WPX Submission File
Satellite name	<ul style="list-style-type: none"> • specifies the satellite name for QSOs logged via the Capture window • initializes the satellite name selector on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled
Satellite mode	<ul style="list-style-type: none"> • specifies the satellite mode for QSOs logged via the Capture window • initializes the satellite mode selector on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled
Default QSL Message panel	<p>A QSO's QSL msg item is printed on a QSL card or wide label generated from that QSO. This panel's QSL msg selector chooses a default QSL message from among "no message" and the eight candidate messages defined in the QSL Msgs tab. The selected message</p> <ul style="list-style-type: none"> • when logging a QSO via the Capture window, populates the Capture window's QSL Msg selector • when logging a QSO via the Main window's Log QSOs tab, initializes the QSL panel's msg item • supplies the QSL message used when another application logs a QSO that is missing a msg item <p>A QSL msg item can include one or more QSL Substitution Commands that are replaced before the message printed on a QSL card, printed on a QSL label, uploaded to eQSL.cc, uploaded to LoTW, placed in an ADIF file from the QSL queue, placed in a tab-delimited file from the QSL queue, or exported to an ADIF file with the Export ADIF for eQSL.cc option selected.</p> <p>You can modify one of the eight candidate message in the QSL msg selector, but the modified message will not be usable until you click the Update Candidate Message button. To display all eight candidate QSL messages, click the Review Candidate Messages button and DXKeeper will display the QSL Configuration window's QSL Msgs tab.</p>

Default Transmit power by band panel	<p>specifies the default transmitter power, in watts, for the amateur bands from 160m through 23cm; if enabled and the QSO's frequency lies within one of the bands for which a default is specified,</p> <ul style="list-style-type: none"> • initializes the Capture window's Pwr item • initializes the pwr textbox if Optimize for realtime QSO entry is enabled • sets the transmit power when you double-click the power item in the QSO panel on the Main window's "Log QSOs" tab • specifies the transmit power when another DXLab application logs a QSO that is missing this item • if the Substitute default Transmit Power for missing TX_PWR option is enabled, specifies the transit power when importing a QSO that doesn't specify a TX_PWR tag
Default Transmit power by mode panel	<p>specifies the default transmitter power, in watts, for Phone, CW, RTTY, and PSK modes; if enabled and the QSO's mode is one for which a default is specified,</p> <ul style="list-style-type: none"> • initializes the Capture window's Pwr item • initializes the pwr textbox if Optimize for realtime QSO entry is enabled • sets the transmit power when you double-click the power item in the QSO panel on the Main window's "Log QSOs" tab • specifies the transmit power when another DXLab application logs a QSO that is missing this item • if the Substitute default Transmit Power for missing TX_PWR option is enabled, specifies the transit power when importing a QSO that doesn't specify a TX_PWR tag
Default Propagation Mode by band panel	<p>specifies the Propagation mode for the HF bands (frequency < 30 mHz), VHF bands (30 mHz < frequency < 300 mHz, and UHF bands (300 mHz < frequency);if enabled and the Satellite Name is not set to SAT,</p> <ul style="list-style-type: none"> • specifies the propagation mode for QSOs logged via the Capture window • initializes the Propagation mode selector on the Main window's Log QSOs tab if Optimize for realtime QSO entry is not enabled
Network Service panel	<p>Base Port specifies the first port in a range port numbers used by DXLab applications to accept external commands via TCP. DXKeeper uses the port number computed by adding 1 to the specified Base Port. After changing the Base Port, click the Restart button.</p> <p>Clicking the Default button sets the Base Port to 52000.</p> <p>Clicking the Restart button restarts the TCP server.</p> <p>Any errors that occur while processing commands received by DDE or TCP will be reported in the Server Log window.</p> <ul style="list-style-type: none"> • to immediately display the Server Log window, click the Display Log button • to record incoming requests in the Server Log in addition to error reports, check the Log all transactions box

Defining Bands

DXKeeper is driven by a set of band definitions contained in a file. Any attempt to log a QSO on a frequency not falling within a defined band will be flagged.

At startup, DXKeeper checks its `Databases` folder for the file `Bands.txt` ; if found, the contents of this file are interpreted as user-defined band specifications in the format shown below. If `Bands.txt` is not found, then DXKeeper checks its `Databases` folder for the file `DefaultBands.txt`, which every DXKeeper release installs.

`DefaultBands.txt`, is a file containing one line per band:

```
2190M, 0.136,0.137
160M, 1.800, 2.000
80M, 3.500,4.000
60M, 5.3305,5.405
40M, 7.000,7.350
30M, 10.100, 10.150
20M, 14.000, 14.350
17M, 18.068, 18.168
15M, 21.000, 21.450
12M, 24.890, 24.990
10M, 28.000, 29.900
6M, 50.000, 54.000
4M, 70.0, 71.0
2M, 144.000, 148.000
1.25M,222.0,225.0
70CM, 420.0, 450.0
33CM, 902.0, 928.0
23CM, 1240, 1300
13CM,2400,2450
9CM, 3300, 3500
6CM, 5650, 5925
3CM, 10000, 10500
1.25cm,24000,24250
6MM, 47000, 47200
4MM, 75500, 81000
2.5MM, 119980,120020
2MM, 142000, 149000
1MM, 241000,250000
SUBMM, 300000,1000000
```

Each line contains three parameters, separated by commas: the band name, the band's lower edge in megahertz, and the band's upper edge in megahertz. The band name cannot exceed its defined maximum length.

To add or subtract bands, make a copy of `DefaultBands.txt` in DXKeeper's `Databases` folder and name this copy `Bands.txt`. Delete or add lines in `Bands.txt` as required, ensuring that

- each band's lower band edge is less than its upper band edge
- the upper band edge defined on one line is less than the lower band edge defined on the next line

Be sure to make your changes in `Bands.txt` as `DefaultBands.txt` will be overwritten by the next DXKeeper release. After making changes to `Bands.txt`, restart DXKeeper.

Defining or Eliminating Modes

DXKeeper provides built-in support for six modes: *SSB*, *CW*, *RTTY*, *AM*, *FM*, and *PSK31*. At startup, DXKeeper checks its `Databases` folder for the file `Modes.txt`; if found, the contents of this file are interpreted as user-defined mode specifications, as described below. If `Modes.txt` is not found, then DXKeeper checks its `Databases` folder for the file `DefaultModes.txt` and if found interprets its contents as user-defined mode specifications. Every DXKeeper release installs a `DefaultModes.txt` file that contains the following mode specifications:

Mode Name	DXC C Phon e credit t	DXC C CW credit t	DXC C Digital credit t	WAZ RTT Y credit t	WAZ Digital I credit t	WPX SSB credit t	WPX CW credit t	WPX Digital I credit t	WAS Digital I credit t	Digital Mode Family	ADIF
8PSK125			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:7>8PSK125
8PSK125F			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:8>8PSK125F
8PSK125FL			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>8PSK125FL
8PSK250			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:7>8PSK
8PSK250F			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:8>8PSKF
8PSK250FL			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>8PSKFL
8PSK500			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:7>8PSK500
8PSK500F			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:8>8PSK500:
8PSK1000			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE8:>8PSK1000
8PSK1000F			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>8PSK1000F
8PSK1200F			✓		✓			✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>8PSK1200F
AMTORFEC			✓		✓			✓	✓	TOR	<MODE:3>TOR<SUBMODE:8>AMTORFEC
ARDOP			✓		✓			✓	✓		<MODE:5>ARDOP
ASCI			✓	✓				✓	✓		<MODE:4>RTTY<SUBMODE:4>ASCI
ATV											<MODE:3>ATV
C4FM											<MODE:12>DIGITALVOICE<SUBMODE:4>C4 FM
CHIP			✓		✓			✓		CHIP	<MODE:4>CHIP
CHIP64			✓		✓			✓		CHIP	<MODE:4>CHIP<SUBMODE:6>CHIP64
CHIP128			✓		✓			✓		CHIP	<MODE:4>CHIP<SUBMODE:7>CHIP128
CLO			✓		✓			✓	✓		<MODE:3>CLO
CONTESTI			✓		✓			✓	✓		<MODE:8>CONTESTI
DIGVOICE*	✓										<MODE:12>DIGITALVOICE

DMR					<MODE:12>DIGITALVOICE<SUBMODE:3>DMR
DOMINO	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO
DOMINOF	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE:7>DOMINOF
DOM-M	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE:5>DOM-M
DOM4	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE:4>DOM4
DOM5	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE4:>DOM5
DOM8	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE:4>DOM8
DOM11	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE:5>DOM11
DOM16	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE:5>DOM16
DOM22	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE:5>DOM22
DOM44	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE:5>DOM44
DOM88	✓	✓	✓	✓	DOMINO <MODE:7>DOMINO<SUBMODE5:>DOM88
DSTAR					<MODE:12>DIGITALVOICE<SUBMODE:4>DSTAR
FAX	✓				<MODE:3>FAX
FMHELL	✓	✓	✓	✓	HELL <MODE:4>HELL<SUBMODE:6>FMHELL
FSK31	✓	✓	✓	✓	PSK <MODE:3>PSK<SUBMODE:5>FSK31
FSK441	✓	✓	✓	✓	<MODE:6>FSK441
FST4	✓	✓	✓	✓	FST4 <MODE:4>MFSK <SUBMODE:4>FST4
FST4W	✓	✓	✓	✓	FST4W <MODE:4>MFSK <SUBMODE:5>FST4W
FT4	✓	✓	✓	✓	FT4 <MODE:4>MFSK <SUBMODE:3>FT4
FT8	✓	✓	✓	✓	FT8 <MODE:3>FT8
GTOR	✓	✓	✓	✓	TOR <MODE:3>TOR<SUBMODE:4>GTOR
HELL	✓	✓	✓	✓	HELL <MODE:4>HELL
HELL80	✓	✓	✓	✓	HELL <MODE:4>HELL<SUBMODE:6>HELL80
HELLX5	✓	✓	✓	✓	HELL <MODE:4>HELL<SUBMODE:6>HELLX5
HELLX9	✓	✓	✓	✓	HELL <MODE:4>HELL<SUBMODE:6>HELLX9
HFSK					HELL <MODE:4>HELL<SUBMODE:4>HFSK
ISCAT	✓	✓	✓	✓	ISCAT <MODE:5>ISCAT
JS8	✓	✓	✓	✓	MFSK <MODE:4>MFSK<SUBMODE:3>JS8

JT4	✓	✓	✓	✓	JT4	<MODE:3>JT4
JT44	✓	✓	✓	✓	JT4	<MODE:4>JT44
JT4A	✓	✓	✓	✓	JT4	<MODE:3>JT4<SUBMODE:4>JT4A
JT4B	✓	✓	✓	✓	JT4	<MODE:3>JT4<SUBMODE:4>JT4B
JT4C	✓	✓	✓	✓	JT4	<MODE:3>JT4<SUBMODE:4>JT4C
JT4D	✓	✓	✓	✓	JT4	<MODE:3>JT4<SUBMODE:4>JT4D
JT4E	✓	✓	✓	✓	JT4	<MODE:3>JT4<SUBMODE:4>JT4E
JT4F	✓	✓	✓	✓	JT4	<MODE:3>JT4<SUBMODE:4>JT4F
JT4G	✓	✓	✓	✓	JT4	<MODE:3>JT4<SUBMODE:4>JT4G
JT65	✓	✓	✓	✓	JT65	<MODE:4>JT65
JT65A	✓	✓	✓	✓	JT65	<MODE:4>JT65<SUBMODE:5>JT65A
JT65B	✓	✓	✓	✓	JT65	<MODE:4>JT65<SUBMODE:5>JT65B
JT65C	✓	✓	✓	✓	JT65	<MODE:4>JT65<SUBMODE:5>JT65D
JT6M	✓	✓	✓	✓		<MODE:4>JT6M
JTMS	✓	✓	✓	✓	MFSK	<MODE:4>MFSK<SUBMODE:4>JTMS
JT9	✓	✓	✓	✓	JT9	<MODE:3>JT9
MFSK	✓	✓	✓	✓	MFSK	<MODE:4>MFSK
MFSK8	✓	✓	✓	✓	MFSK	<MODE:4>MFSK<SUBMODE:5>MFSK8
MFSK16	✓	✓	✓	✓	MFSK	<MODE:4>MFSK<SUBMODE:6>MFSK16
MFSK64L	✓	✓	✓	✓	MFSK	<MODE:4>MFSK<SUBMODE:7>MFSK64L
MFSK128L	✓	✓	✓	✓	MFSK	<MODE:4>MFSK<SUBMODE:8>MFSK128L
MSK144	✓	✓	✓	✓	MFSK	<MODE:6>MSK144
MT63	✓	✓	✓	✓		<MODE:4>MT63
NAVTEX	✓	✓	✓	✓	TOR	<MODE:3>TOR<SUBMODE:6>NAVTEX
OLIVIA	✓	✓	✓	✓	OLIVIA	<MODE:6>OLIVIA
OPERA	✓	✓	✓	✓		<MODE:6>OPERA
PAC	✓	✓	✓	✓	PAC	<MODE:3>PAC
PAC2	✓	✓	✓	✓	PAC	<MODE:3>PAC<SUBMODE:4>PAC2
PAC3	✓	✓	✓	✓	PAC	<MODE:3>PAC<SUBMODE:4>PAC3

PAX	✓	✓	✓	✓	PAX	<MODE:3>PAX
PAX2	✓	✓	✓	✓	PAX	<MODE:3>PAX<SUBMODE:4>PAZ2
PKT	✓	✓	✓	✓		<MODE:3>PKT
PSK	✓	✓	✓	✓	PSK	<MODE:3>PSK
PSK10	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:5>PSK10
PSK2K	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:5>PSK2K
PSK63	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:5>PSK63
PSK63F	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:6>PSK63F
PSK63RC20	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK63RC20
PSK63RC32	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK63RC32
PSK63RC4	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:8>PSK63RC4
PSK63RC5	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:8>PSK63RC5
PSK63RC10	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK63RC10
PSK125	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:6>PSK125
PSK125RC10	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:10>PSK125RC10
PSK125RC12	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:10>PSK125RC12
PSK125RC16	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:10>PSK125RC16
PSK125RC4	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK125RC4
PSK125RC5	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK125RC5
PSK220F	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:7>PSK220F
PSK250RC2	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK250RC2
PSK250RC3	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK250RC3
PSK250RC5	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK250RC5
PSK250RC6	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK250RC6
PSK250RC7	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK250RC7
PSK500RC2	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK500RC2
PSK500RC3	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK500RC3
PSK500RC4	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK500RC4
PSK800RC2	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:9>PSK800RC2

PSK1000RC 2	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:10>PSK1000RC2
PSKAM10	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:7>PSKAM10
PSKAM31	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:7>PSKAM31
PSKAM50	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:7>PSKAM50
PSKFEC31	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:8>PSKFEC31
PSKHELL	✓	✓	✓	✓	HELL	<MODE:4>HELL<SUBMODE:7>PSKHELL
Q15				✓		<MODE:3>Q15
Q65	✓	✓	✓	✓	MFSK	<MODE:4>MFSK<SUBMODE:3>Q65
QPSK31	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:6>QPSK31
QPSK63	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:6>QPSK63
QPSK125	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:7>QPSK125
QRA64	✓	✓	✓	✓	QRA64	<MODE:5>QRA64
QRA64A	✓	✓	✓	✓	QRA64	<MODE:5>QRA64<SUBMODE:6>QRA64A
QRA64B	✓	✓	✓	✓	QRA64	<MODE:5>QRA64<SUBMODE:6>QRA64B
QRA64C	✓	✓	✓	✓	QRA64	<MODE:5>QRA64<SUBMODE:6>QRA64C
QRA64D	✓	✓	✓	✓	QRA64	<MODE:5>QRA64<SUBMODE:6>QRA64D
QRA64E	✓	✓	✓	✓	QRA64	<MODE:5>QRA64<SUBMODE:6>QRA64E
ROS	✓	✓	✓			<MODE:3>ROS
RTTYM	✓	✓	✓			<MODE:5>RTTYM
SIM31	✓	✓	✓	✓	PSK	<MODE:3>PSK<SUBMODE:4>SIM31
SITORB	✓	✓	✓	✓	TOR	<MODE:3>TOR<SUBMODE:6>SITORB
SLOWHELL	✓	✓	✓	✓	HELL	<MODE:4>HELL<SUBMODE:8>SLOWHELL
SSTV	✓					<MODE:4>SSTV
T10	✓	✓	✓	✓		<MODE:3>T10
THOR	✓	✓	✓	✓	THOR	<MODE:4>THOR
THOR-M	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:6>THOR-M
THOR4	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:5>THOR4
THOR5	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:5>THOR5
THOR8	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:5>THOR8

THOR11	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:6>THOR11
THOR16	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:6>THOR16
THOR22	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:6>THOR22
THOR25X4	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:8>THOR25X4
THOR50X1	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:8>THOR50X1
THOR50X2	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:8>THOR50X2
THOR100	✓	✓	✓	✓	THOR	<MODE:4>THOR<SUBMODE:7>THOR100
THRB	✓	✓	✓	✓	THRB	<MODE:4>THRB
THRBX	✓	✓	✓	✓	THRB	<MODE:4>THRB<SUBMODE:5>THRBX
THRBX1	✓	✓	✓	✓	THRB	<MODE:4>THRB<SUBMODE:6>THRBX1
THRBX2	✓	✓	✓	✓	THRB	<MODE:4>THRB<SUBMODE:6>THRBX2
THRBX4	✓	✓	✓	✓	THRB	<MODE:4>THRB<SUBMODE:6>THRBX4
THROB1	✓	✓	✓	✓	THRB	<MODE:4>THRB<SUBMODE:6>THROB1
THROB2	✓	✓	✓	✓	THRB	<MODE:4>THRB<SUBMODE:6>THROB2
THROB4	✓	✓	✓	✓	THRB	<MODE:4>THRB<SUBMODE:6>THROB4
TOR	✓	✓	✓	✓		<MODE:3>TOR
VARA FM 1200					DYNAMI C	MODE:7>DYNAMIC<SUBMODE:12>VARA FM 1200>
VARA FM 9600					DYNAMI C	MODE:7>DYNAMIC<SUBMODE:12>VARA FM 1200>
VARA HF					DYNAMI C	MODE:7>DYNAMIC<SUBMODE:7>VARA HF>
VARA SAT					DYNAMI C	MODE:7>DYNAMIC<SUBMODE:14>VARA SATELLITE>
VOI	✓	✓	✓	✓		<MODE:3>VOI
V4	✓	✓	✓	✓		<MODE:2>V4
WINMOR	✓	✓	✓	✓		<MODE:6>WINMOR
WSPR	✓	✓	✓	✓		<MODE:4>WSPR

*DXKeeper considers DIGVOICE a PHONE mode for purposes of CQ DX Marathon and WAS award tracking.

The ADIF column in the above table shows the ADIF representation for each mode that DXKeeper recognizes when importing and emits when exporting. When importing, DXKeeper will also recognize each mode in the table in a <MODE> tab. When importing, for example, both <MODE:5>THRBX and <MODE:4>THRB<SUBMODE:5>THRBX will create a new QSO whose Mode item is set to THRBX.

Users wishing to define additional modes or remove modes that aren't built-in can do so by creating the file `Modes.txt` in DXKeeper's `Databases` folder. The specification format used in `DefaultModes.txt` and `Modes.txt` is identical: each line of the file specifies a mode's name, followed optionally by a list of awards for which QSOs in the mode produce credit; the mode name and optional awards are separated by commas. The mode name cannot exceed its defined maximum length. Valid award designators are shown in the following table:

Award Designator	Meaning
DXCC_Phone	QSOs in this mode "count" for DXCC Phone credit
DXCC_CW	QSOs in this mode "count" for DXCC CW credit
DXCC_DIGI	QSOs in this mode "count" for DXCC Digital credit
DXCC_RTTY	QSOs in this mode "count" for DXCC Digital credit
WAS_DIGITAL	QSOs in this mode "count" for WAS Digital credit
WAZ_RTTY	QSOs in this mode "count" for WAZ RTTY credit
WAZ_DIGITAL	QSOs in this mode "count" for WAZ Digital credit
WPX_Phone	QSOs in this mode "count" for WPX Phone credit
WPX_CW	QSOs in this mode "count" for WPX CW credit
WPX_Digital	QSOs in this mode "count" for WPX Digital credit
PSK	QSOs in this mode "count" for PSK credit

Thus, the first line of the file `DefaultModes.txt`, which is

```
ASCI, DXCC_RTTY, WAZ_RTTY
```

defines the new mode `ASCI`, and specifies that QSOs in `ASCI` should be credited as DXCC RTTY and WAZ RTTY QSOs.

A new mode added to `Modes.txt` that is defined in ADIF as a submode will be imported and exported using the ADIF `MODE` and `SUBMODE` tags; for example, if `PAC4` were added, it would be imported and exported with `<MODE:3>PAC<SUBMODE:4>PAC4`. A new mode added to `Modes.txt` that is not defined in ADIF will be imported and exported with the ADIF `MODE` tag; for example, if `SHAZAM` were added, it would be imported and exported with `<MODE:6>SHAZAM`.

The easiest way to create a custom `Modes.txt` file is by starting with a copy of `DefaultModes.txt` and editing as required. Be sure to make your changes in `Modes.txt` as `DefaultModes.txt` will be overwritten by the next DXKeeper release. After making changes to `Modes.txt`, restart DXKeeper.

Defining Satellite Names

At startup, DXKeeper checks its `Databases` folder for the file `Satellites.txt`; if found, the contents of this file are interpreted as user-satellite names, in a one-name-per-line format. If `Satellites.txt` is not found, then DXKeeper checks its `Databases` folder for the file `DefaultSatellites.txt`, which every DXKeeper release installs. `DefaultSatellites.txt`, is a file containing one line per band:

AISAT1
AO-3
AO-4
AO-6
AO-7
AO-8
AO-10
AO-13
AO-16
AO-21
AO-24
AO-27
AO-40
AO-51
AO-73
AO-85
AO-91
AO-92
AO-109
ARISS
Arsene
BO-102
BY70-1
CAS-2T
CAS-3H
CAS-4A
CAS-4B
CAS-5A
DO-64
EO-79
EO-88
FO-12
FO-20
FO-29
FO-99
FO-118
FS-3
HO-68
HO-107
HO-113
IO-86
IO-117
JO-97
KEDR
LO-19
LO-78
LO-90
MAYA-3
MAYA-4
MIREX
MO-112

NO-44
NO-83
NO-84
NO-103
NO-104
PO-101
QO-100
RS-1
RS-2
RS-5
RS-6
RS-7
RS-8
RS-10
RS-11
RS-12
RS-13
RS-15
RS-44
SAREX
SO-35
SO-41
SO-50
SO-67
TAURUS
TO-108
UKUBE1
UO-14
UVSQ
VO-52
XW-2A
XW-2B
XW-2C
XW-2D
XW-2E
XW-2F

To add or subtract satellite names, make a copy of `DefaultSatellites.txt` in DXKeeper's Databases folder and name this copy `Satellites.txt`. Delete or add lines in `Satellites.txt` as required. Be sure to make your changes in `Satellites.txt` as `DefaultSatellites.txt` will be overwritten by the next DXKeeper release. After making changes to `Satellites.txt`, restart DXKeeper.

Defining Satellite Modes

At startup, DXKeeper checks its Databases folder for the file SatellitesModes.txt ; if found, the contents of this file are interpreted as user-satellite modes, in a one-mode-per-line format, and are loaded into DXKeeper's **Satellite Mode** selectors in the Capture window and in the **Propagation** panel on the Main window's **Log QSOs** tab. If the file SatellitesModes.txt is not found in DXKeeper's Databases folder, then the **Satellite Mode** selectors are loaded with these modes:

A
B
J
JL
LS
LT
LU
LV
K
KT
L
R
RA
RK
RT
S
SX
T
US
UT
UU
UV
VA
VS
VT
VU

Capture Layout window

This window provides row-by-row control over which items are visible in the Capture window. Items in the Capture window are displayed in 18 rows of *controls* - textboxes, selectors, and checkboxes. The first row's items - callsign and DXCC prefix - are always displayed. This window's 17 **Enable row** checkboxes determine which of the items in rows 2 through 18 are also displayed.

Clicking the **Enable All Rows** button checks every **Enable row** box, making all Capture items visible.

Clicking the **Disable All Rows** button unchecks every **Enable row** box, shrinking the Capture window to display on the Callsign and DXCC prefix items.

With a useful subset of **Enable row** boxes checked, click one of the four Save buttons in the **Saved Layouts** panel will save the current Capture window layout for later restoration by clicking its associated **Select** button; the **Notes** boxes can be used to describe each saved layout.

The **Capture Layout** window can be displayed by clicking the Cfg button in top right corner of the Capture window, or by clicking the Layout button in the Capture options panel on the Configuration window's General tab.

Capture and Log Page Display Colors window

This window governs the font colors used to indicate "award need" for the Capture window callsign and the font background colors used to indicate eQSL Authenticity-Guaranteed (AG) and LoTW participation in both the Capture window callsign textbox and in the Log Page Display.

To display this window, click the Colors button in the Capture options panel on the Configuration window's General tab, or the Colors button in the Log Page Display panel on the Configuration window's Log tab. This window contains two panels and a Reset button:

- The **Capture Callsign font colors** panel displays the font colors used to indicate "award need" for the Capture window callsign, and provides the ability to modify those colors:

Category	Meaning	Default Color
Verified DX	stations to which award credit has been granted for all pursued DX Counters	dark green
Unneeded DX	stations confirmed for each pursued DX Counter	black
Unconfirmed DX	stations that are unconfirmed for at least one pursued DX Counter	blue
Unworked DX Band or Mode	having an unworked band or mode for at least one pursued DX Counter	red
Unworked DX Counter	stations in at least one unworked pursued DX Counter	red
Tagged Special Callsign	tagged Special Callsigns	magenta

- Each font color category's colored square shows the font color used to depict the Capture window callsign. To change a category's font color, click its button, and a standard Windows color selection window will appear.
- The **Capture Callsign and Log Page Display background colors** panel displays the font background colors used to indicate eQSL Authenticity-Guaranteed (AG) and LoTW participation in both the Capture window callsign textbox and - if enabled - in the Log Page Display:

Category	Meaning	Default Color
Normal	stations not known to participate in eQSL AG or LoTW	white
LoTW	stations known to participate in LoTW	yellow
eQSL	stations known to participate in eQSL AG	pink
Both	stations known to participate in both eQSL AG and LoTW	cyan

- Each background color category's colored square shows the font color used to depict the Capture window callsign. To change a category's font color, click its button, and a standard Windows color selection window will appear.
- Clicking the **Reset** button will disable the Use SpotCollector's callsigns colors option and set each color to its default value.

After typing a callsign into the Capture window, strike the **Enter** or **Tab** key to initiate a lookup operation that will update its font and background colors. Operations that populate the Capture window's Callsign textbox -- like double-clicking a Spot Database Entry -- will automatically update the callsign's text and background colors. If SpotCollector has not been installed and run, then this window's panels provide exclusive control over Capture window font and background colors, and over Log Page Display background colors. If SpotCollector has been installed and run, enabling the Use SpotCollector's callsigns colors option will cause the colors in the **Capture and Log Page Display Colors** window to automatically follow the colors specified in the **Font Colors** and **Background Colors** panels on the Spot Database Display tab of SpotCollector's Configuration window. Modifying a color in the **Capture and Log Page Display Colors** window will disable the Use SpotCollector's callsigns colors option.

With the `Use SpotCollector's callsigns colors` option enabled, if SpotCollector specifies a background color selection that is too dark (one or more red, green, or blue components is less than 65), DXKeeper will employ its default background colors: yellow for LoTW, pink for eQSL.cc AG, cyan for both, and white for neither.

QSL Configuration

Configuring DXKeeper is primarily accomplished via the Configuration window and the QSL Configuration window.

DXKeeper's QSL Configuration window presents 12 tabs:

- the General tab enables you to preset each new QSO's 'QSL Requested' checkbox, indicate whether multiple QSOs should be confirmed on each QSL card or label, and customize the operation of the Add Needed and Add Requested functions
- the Cards tab enables you to specify the dimensions of QSL cards and Reply cards, and the information to be printed on each card
- the QSL Labels tab enables you to specify the dimensions of QSL labels
- the Envelopes tab enables you to specify the layout of your envelopes, your return address, and whether or not an Airmail designator is to be printed
- the Address Labels tab enables you to specify the dimensions of address labels
- the QSL Msgs tab enables you to specify up to 8 standard QSL messages
- the eQSL tab enables you to specify your eQSL.cc username and password, and control synchronization between DXKeeper and eQSL.cc
- the LoTW tab enables you to specify your LoTW username and password, specify uploading parameters, and control synchronization between DXKeeper and LoTW
- the ClubLog tab enables you to specify your Club Log email address, username, and password, enable automatic uploading, and govern the way DXKeeper processes **Inbound QRS** requests
- the QRZ tab enables you to specify the Station Callsign and API Key for each of your QRZ Logbooks, select the QRZ Logbook to receive uploaded QSOs and report confirmations, and enable automatic uploading
- the ADIF & TDF tab enables you to control the precision of frequencies exported to ADIF and Tab-delimited files from the QSL Queue and suppress QSL Via items whose content is not a single callsign
- the Printer tab enables you to select the printer(s) on which QSL cards, QSL labels, envelopes, and address labels will be printed

General Tab

The **Options** panel provides the ability to set default values for the Capture window's QSL requested and use bureau checkboxes, and to enable the confirmation of multiple QSLs on each QSL card or label:

Preset 'QSL Requested' checkbox	When checked, the Capture window's QSL requested checkbox will be set for each new QSO
Preset 'use bureau' checkbox	When checked, the Capture window's use bureau checkbox will be set for each new QSO
Initialize QSL Sent to 'R' for each imported QSO	When checked, each imported QSO's QSL Sent item will be set to 'R' unless the imported value is 'Y'
Outgoing QSLs request confirmation unless already confirmed	When checked, each outgoing QSL card or label will requests a confirmation by displaying 'please!' or 'pse!' respectively unless the QSO has already been confirmed; changing this setting has no effect on QSOs already present in the QSL Queue
Confirm multiple QSOs per QSL	<ul style="list-style-type: none">• when checked, multiple QSOs will be confirmed on each QSL card, Reply card, and label as long as the Operator and myQTH fields match, and as long as there is space on the card or label• when unchecked, each QSL card or label will confirm exactly one QSO

Prompt on change to logged QSO already uploaded to Club Log, eQSL.cc, LoTW, or QRZ	When checked, modification of a QSO's item that impacts a QSLing service (Club Log, eQSL.cc, LoTW, or QRZ) to which it has already been uploaded will display a reminder to re-upload the QSO after changes have been completed and saved
Upload QSOs whose callsigns begin with !	when checked, QSOs with callsigns whose first character is ! can be added to the QSL Queue and uploaded to Club Log, eQSL, LOTW, or QRZ; the ! will be removed from such callsigns that appear in QSL media printed from the QSL Queue, in files exported from the QSL Queue, or in QSOs uploaded to Club Log, eQSL, LOTW, or QRZ

The **Add Needed** panel controls the operation of the Add Needed function:

Add Needed requests all with same call	when checked, the Add Needed function will, on adding to the QSL Queue a QSO whose confirmation is needed, also add to the QSL Queue all QSOs with that station that haven't been confirmed by QSL card
Add Needed requests all with same mgr	when checked, the Add Needed function will, on adding to the QSL Queue a QSO whose confirmation is needed, also add to the QSL Queue all QSOs with that QSO's QSL manager that haven't been confirmed by QSL card
Add Needed sets Sent Via to 'B' (for Bureau)	when checked, the Add Needed function sets each needed QSO's Sent Via item to B (for Bureau) before adding it to the QSL Queue
Add Needed sets Sent Via to 'D' (for Direct mail)	when checked, the Add Needed function sets each needed QSO's Sent Via item to D (for Direct mail) before adding it to the QSL Queue
Add Needed sets Sent Via to 'E' (for Electronic File Transfer)	when checked, the Add Needed function sets each needed QSO's Sent Via item to E (for Electronic File Transfer) before adding it to the QSL Queue
Add Needed sets Sent Via to 'R' (for Reply Card)	when checked, the Add Needed function sets each needed QSO's Sent Via item to R (for Reply Card) before adding it to the QSL Queue
Awards	the Add Needed function will populate the QSL Queue with confirmation requests needed for each award whose box in this panel is checked

The **Add Requested** panel controls the operation of the Add Requested function:

Add Requested never request confirmation	when checked, QSL cards or labels generated from QSOs added to the QSL Queue by the Add Requested function will not include 'please!' or 'pse!' in their QSL column
Add Requested no dup band-modes	when checked, the Add Requested function won't generate a QSL Queue entry unless doing so would give the receiving station a new confirmed band or mode, or unless the QSL Via panel is set to LoTW or eQSL.cc
Add Requested sets Sent Via to 'B' (for Bureau)	when checked, the Add Requested function sets each needed QSO's Sent Via item to B (for Bureau) before adding it to the QSL Queue
Add Requested sets Sent Via to 'D' (for Direct mail)	when checked, the Add Requested function sets each needed QSO's Sent Via item to D (for Direct mail) before adding it to the QSL Queue
Add Requested sets Sent Via to 'E' (for Electronic File Transfer)	when checked, the Add Requested function sets each needed QSO's Sent Via item to E (for Electronic File Transfer) before adding it to the QSL Queue

The **Sync All** panel determines which online confirmation services are processed by the Sync All function in this sequence:

1. **eQSL** - when checked, the Sync All function invokes the Sync eQSL QSLs function
2. **LoTW** - when checked, the Sync All function invokes the Sync LoTW QSOs function followed by the Sync LoTW QSLs function
3. **upload to Club Log & QRZ** - when checked, the Sync All function invokes the
 - o if this panels' **Club Log** and **QRZ boxes** are both unchecked, the upload to Club Log & QRZ box is disabled, and the Sync All function does not invoke the Upload to Club Log or Upload to QRZ functions
 - o if this panels' **Club Log** box is checked, the Sync All function invokes the Upload to QRZ function
 - o if this panels' **QRZ** box is checked, the Sync All function invokes the Upload to Club Log function
 - o if this panels' **Club Log** and **QRZ** boxes is checked, the Sync All function invoke both the Upload to Club Log and the Upload to QRZ functions
4. **Club Log** - when checked, the Sync All function invokes the Sync Club Log QSLs function
5. **QRZ** - when checked, the Sync All function invokes the Sync QRZ QSLs function

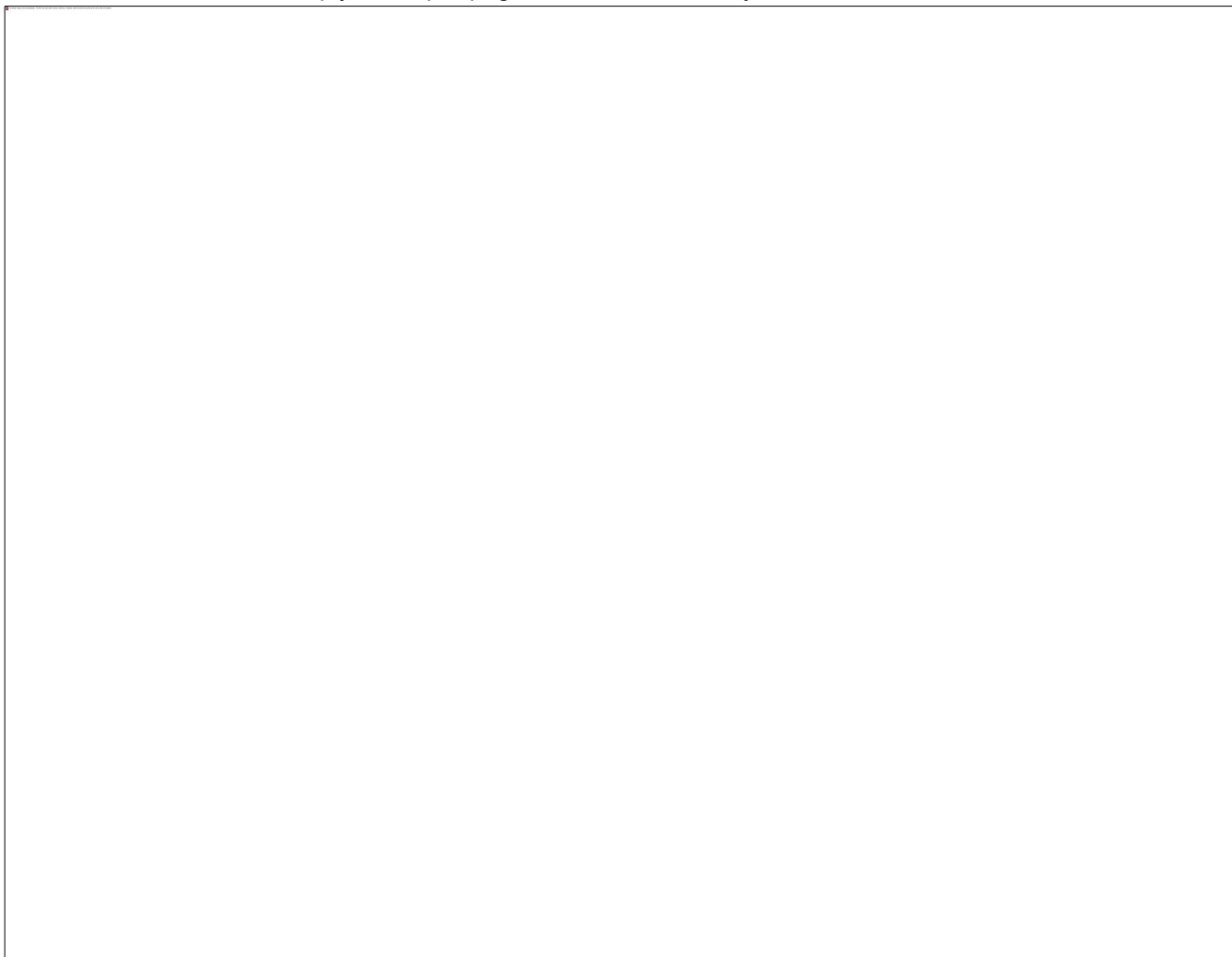
The **QSL Date Format** panel selects the date format used on QSL cards, Reply cards, QSL labels, and in tab-delimited files exported from the QSL Queue or exported from the Log Page Display.

The **Address report** panel provides a Report one address per callsign option that when enabled limits the generated Address File to report a callsign's address once, no matter how many entries are present for that callsign in the QSL Queue; if this option is disabled, an address is reported for each entry in the QSL Queue.

Cards Tab

The **Page Layout** panel lets you specify whether DXKeeper prints

- one QSL card or Reply card per page, aligned on the printer's right-side paper guide
- one QSL card or Reply card per page, centered in the printer's paper guide
- one QSL card or Reply card per page, aligned on the printer's left-side paper guide
- four QSL cards or Reply cards per page, as shown in this layout:



If you choose 4 cards per page, guides that make it easier to separate the cards will be printed if you check the Page Layout panel's *print separation guides* box.

This tab's Frequency panel allows you to specify whether generated QSL cards and Reply cards show a QSO's frequency or its band.

This tab's Card Dimensions panel allows you to specify the geometry of each card, and the separation between the two rows of cards printed four cards per page:

Width	the width of each QSL card in inches or millimeters as specified by the Inches and Millimeters selectors
Height	the height of each QSL card in inches or millimeters as specified by the Inches and Millimeters selectors
Side border	the width of the left and right side border of each card in inches or millimeters as specified by the Inches and Millimeters selectors
Top border	the width of the top border of each card in inches or millimeters as specified by the Inches and Millimeters selectors
2nd row offset	the separation between the top row of cards and the bottom row of cards printed four cards per page

Additional panels on this tab provide control of information printed on QSL cards generated by DXKeeper. You can individually specify the font name, metrics (size, bold, italic), and color of the station callsign, confirmation statement, QSO information, and the text positioned in each corner of the card. Double-clicking a font name, size, or color control displays a dialog box that facilitates selection of the desired parameters.

You can also specify the pathname of a file containing a background image in BMP format to be printed on QSL cards. You can use Microsoft Paint to open a file in JPG format and save it in BMP format. If the *Background Image* panel's *Enable* box is checked, then DXKeeper will compute an image size in pixels from the printable area dimensions reported by the selected printer's driver, the specified card Width and Height, and your monitor resolution; the computed image size is displayed at the top of the Print Preview window. If the selected printer's driver reports left and top margins of 0, then background image will cover the entire QSL card; otherwise, there will be side margins equal to the printer's left margin, and top/bottom margins matching the printer's top margin. The selected background image will be adjusted to fit; an image whose pixel size exactly matches the computed image size shown at the top of the Print Preview window will not be adjusted -- otherwise, re-sampling and/or changes to the image's aspect ratio may be required.

If you are printing QSL cards on blank cardstock either without a background image or with a background image that does not include the station callsign, check the *Station Callsign* panel's *Display* box so that DXKeeper will print each QSO's station callsign. If the *Below Upper Text* box is unchecked, the station callsign will be printed at the top-center of each card; if this box is checked, the station callsign will be printed in the center of each QSL card below the fourth line of Upper Text -- allowing more or larger text in the Upper Left and Upper Right text boxes, but reducing the number of QSOs that can be confirmed on a single QSL card. Note that the callsign printed is taken from the QSO's station call item, not the from the default station callsign; this allows you to operate with multiple callsigns within the same log -- e.g. AA6YQ and AA6YQ/1 -- and print the correct callsign on each card.

If you are printing QSL cards or Reply cards on cardstock preprinted with your callsign or using a background image that includes the station callsign, then uncheck the *Station Callsign* panel's *Display* box.

If you want the contents of the QSO's Via item to be appended to the Confirmation information if those contents are a valid callsign, check the *Confirmation* panel's *Include QSL Manager* box. If you want [*x* buro] (where *x* is the DXCC prefix for the destination QSL bureau) appended to the Confirmation information if the QSL is to be sent via the QSL bureau, check the Confirmation panel's *Include [buro]* box.

Below the Confirmation information, DXKeeper will print a table consisting of a row of Heading text followed by one row of Information text for each QSO being confirmed. The *QSO Information* panel lets you specify the color of the font used to display text in the Heading row, and separately specify the color of the font used to display text in the QSO Information rows. If you'd like the table's rows and columns to be separated by lines, check the *QSO Information* panel's *print grid lines* box, and specify the color to be used to render these lines.

Information from the following *QSL Information* textboxes is printed on every QSL card using the specified font parameters and color:

Upper Left Text	up to 4 lines of text positioned in the card's upper left corner
Upper Right Text	up to 4 lines of text positioned in the card's upper right corner
Lower Left Text	up to 1 lines of text positioned in the card's lower left corner
Lower Right Text	up to 1 lines of text positioned in the card's lower right corner

Typically, these QSL Information text boxes are used to print information about your QTH -- your city, county, state, grid-square, etc. If you are printing QSL cards on cardstock preprinted with your QTH information, then simply leave the QSL Information text boxes blank. If you always operate from the same place, then you can directly enter your QTH information. But if you operate from multiple locations and want your QSL cards to accurately indicate the QTH from which you made the QSO, then you must

1. specify each QTH, assigning each a unique identifier
2. make sure that each QSO's myQTH field contains the identifier for the QTH from which that QSO was made
3. use appropriate QSL substitution commands in the QSL information fields

By using QSL substitution commands in the QSL Information textboxes, you can establish one QSL card style that will correctly print QSL cards for QSOs made from a variety of locations. Each substitution command found in a QSL Information textbox is replaced by the appropriate information for the QTH from which the current QSO was made.

Information is printed in the four corners of a Reply card using 8-point Arial font:

- upper-left corner: Reply Card
- upper-right corner: recipient's DXCC entity
- lower-left corner: Date Printed
- lower-right corner: signature line

The font colors used to display the above information are specified by the **Upper Left Text Font color**, **Upper Right Text Font color**, **Lower Left Text Font color**, and **Lower Right Text Font color** settings, respectively.

Font metrics for a Reply card's Station Callsign and Confirmation line are specified by the **Station Callsign** and **Confirmation** panel settings, respectively. The **Station Callsign** panel's **Below Upper Text** setting is ignored when generating Reply Cards, as are the **Confirmation** panel's **Include QSL Manager** and **Include [buro]** settings.

QSL Labels Tab

Each QSL label is composed of a **Confirmation** line and a table consisting of a **Heading** row and one row of **QSO Information** for each confirmed QSO. You can individually control the font name, font metrics (size, bold, italic), and font color of each of these elements with the **Confirmation Font**, **Heading Font**, and **QSO Information Font** boxes at the bottom of the tab. Double-clicking a font name, font size, or font color control displays a dialog box that facilitates selection of the desired parameters. If you'd like the table's rows and columns to be separated by lines, check the **print grid lines** box.

This tab's **Frequency** panel allows you to specify whether generated QSL labels show a QSO's frequency or its band.

The following settings are used in the **Single Address Labels**, **2-column Address Labels**, and **3-column Address Labels** panels to specify the geometry of the QSL labels you're using.. Sample settings are available here.

Label model #	manufacturer's model number for the label in use (serves as a reminder to the user)
Labels per column	the number of labels in each column
Row 1 offset	distance from the top edge of the label sheet to the top of the first row of label, in inches or millimeters as specified by the Units panel
Row height	distance from the top edge of the one row of labels to the top edge of the next row of label, in inches or millimeters as specified by the Units panel
Column 1 offset	distance from the left edge of the label sheet to the left edge of the first label column, in inches or millimeters as specified by the Units panel
Column 2 offset	distance from the left edge of the label sheet to the left edge of the second label column, in inches or millimeters as specified by the Units panel; if 0, only 1 column of labels per page are printed
Column 3 offset	distance from the left edge of the label sheet to the left edge of the third label column, in inches or millimeters as specified by the Units panel; if 0, only 2 columns of labels per page are printed
Label height	the height of each label, in inches or millimeters as specified by the Units panel (Single QSL labels only)
Label width	the width of each label, in inches or millimeters as specified by the Units panel
Include QSL Mgr in confirmation	When checked, the contents of the QSO's Via item will be appended to the Confirmation line if the contents are a valid callsign (single labels and 2-column labels only)
Include [buro] in confirmation	When checked, [x buro] (where x is the DXCC prefix for the destination QSL bureau) will be appended to the Confirmation line if the QSL is to be sent via the QSL bureau (single labels and 2-column labels only)
Include QSL Mgr & Pse/Tnx QSL	When checked, places the following information along the bottom margin of each 3-wide label using the font metrics specified in the Bottom Line Font panel: <ul style="list-style-type: none"> the contents of the QSO's Via item if it is a valid callsign if all QSOs on the label have been confirmed, 'tnx QSL'; otherwise, 'pse QSL!'
Include [buro]	When checked, [x buro] (where x is the DXCC prefix for the destination QSL bureau) will be printed along the bottom of 3-wide label using the font metrics specified in the Bottom Line Font panel if the QSL is to be sent via the QSL bureau and Include QSL Mgr & Pse/Tnx QSL is enabled (3-column labels only)

Envelopes Tab

You can print envelopes for conveying QSL cards to your QSO partner ("DX Envelopes") bearing addresses extracted from logged QSOs, and envelopes bearing your address ("Self-addressed Envelopes").

The following settings are used to specify the geometry of **DX envelopes** to be addressed, the location of the address on the envelope, and the return address to be printed.

return address	your return address (up to 5 lines)
top margin	distance from the printer's top of page to the top edge of the envelope, in inches or millimeters as specified by the Units panel
left margin	distance from the printer's left edge to the left edge of the envelope, in inches or millimeters as specified by the Units panel
address top offset	distance from the top edge of the envelope to the first address line, in inches or millimeters as specified by the Units panel
address left offset	distance from the left edge of the envelope to the left edge of the address, in inches or millimeters as specified by the Units panel
airmail Indicator	check to have "Airmail, Par Avion" printed on each envelope
return Address font	specifies the font name, metrics (size, bold, italic), and color used to print the return address
DX Address font	specifies the font name, metrics (size, bold, italic), and color used to print the DX address
Append callsign to first line of address	check to append the callsign to the first line of the address
Print DX address in upper case	check to force the DX address to be printed in upper case

If you always operate from the same place, then you can directly enter your return address; even if you operate from multiple locations, you may want all QSLs returned to the same address. But if you operate from multiple locations and want QSL cards returned to the location from which you operated, you must

1. specify each QTH, assigning each a unique identifier
2. make sure that each QSO's myQTH field contains the identifier for the QTH from which that QSO was made
3. use appropriate substitution commands in the return address

By using the following substitution commands in the return address field, you can establish one return address specification that will correctly print envelopes whose return addresses are specified by the operating location. Each substitution command found in a return address field is replaced by the appropriate information for the QTH from which the current QSO was made, as shown in the following table:

Command	Replacement
<streetaddress>	the QTH's street address
<city>	the QTH's city
<county>	the QTH's county
<state>	the QTH's state
<postalcode>	the QTH's postal code
<country>	the QTH's country

Self-addressed envelopes bear the **return address** specified in the **DX Envelope** panel. The **DX Envelope** panel's top margin and left margin settings and the following additional settings specify the geometry of Self-Addressed Envelopes:

address top offset	distance from the top edge of the envelope to the first address line, in inches or millimeters as specified by the Units panel
address left offset	distance from the left edge of the envelope to the left edge of the address, in inches or millimeters as specified by the Units panel
address font	specifies the font name, metrics (size, bold, italic), and color used to print the address
airmail indicator	check to have "Airmail, Par Avion" printed on each envelope

The **Printer Orientation** panel determines whether DX Envelopes and Self-address Envelopes are printed in "portrait" or "landscape" orientation.

Address Labels Tab

The following settings are used in the **Single Address Labels**, **2-column Address Labels**, and **3-column Address Labels** panels to specify the geometry of the address labels you're using.

Label model #	manufacturer's model number for the label in use (serves as a reminder to the user)
Labels per column	the number of labels in each column
Row 1 offset	distance from the top edge of the label sheet to the top of the first row of label, in inches or millimeters as specified by the Units panel
Row height	distance from the top edge of the one row of labels to the top edge of the next row of label, in inches or millimeters as specified by the Units panel
Column 1 offset	distance from the left edge of the label sheet to the left edge of the first label column, in inches or millimeters as specified by the Units panel
Column 2 offset	distance from the left edge of the label sheet to the left edge of the second label column, in inches or millimeters as specified by the Units panel; if 0, only 1 column of labels per page are printed
Column 3 offset	distance from the left edge of the label sheet to the left edge of the third label column, in inches or millimeters as specified by the Units panel; if 0, only 2 columns of labels per page are printed
Label height	the height of each label, in inches or millimeters as specified by the Units panel (Single address labels only)
Label width	the width of each label, in inches or millimeters as specified by the Units panel

The **Units** panel determines whether dimensions in the **Single Address Labels**, **2-column Address Labels**, and **3-column Address Labels** panels are specified in inches or millimeters.

The **Append callsign to first line of address** option, when enabled, appends the callsign to the first line of the address

The **Print DX address in upper case** option forces the DX address to be printed in upper case.

The **Return Address** panel specifies up to 5 lines of address to be printed on self-addressed Single Address Labels, 2-column Address Labels, and 3-column Address Labels. If you always operate from the same place, then you can directly enter your return address; even if you operate from multiple locations, you may want all QSLs returned to the same address. But if you operate from multiple locations and want QSL cards returned to the location from which you operated, you must

1. specify each QTH, assigning each a unique identifier
2. make sure that each QSO's myQTH field contains the identifier for the QTH from which that QSO was made
3. use appropriate substitution commands in the return address

By using the following substitution commands in the return address field, you can establish one return address specification that will correctly print envelopes whose return addresses are specified by the operating location. Each substitution command found in a return address field is replaced by the appropriate information for the QTH from which the current QSO was made, as shown in the following table:

Command	Replacement
<streetaddress>	the QTH's street address
<city>	the QTH's city
<county>	the QTH's county
<state>	the QTH's state
<postalcode>	the QTH's postal code
<country>	the QTH's country

QSL Msgs Tab

This tab provides 8 candidate QSL messages, any one of which can be selected as the default QSL message via the Defaults tab's QSL msg selector. You can also chose from among these messages using the Capture window's QSL msg selector. Double-clicking one of these messages invokes an editor window that's helpful when modifying a long QSL message. A QSL message's label will be highlighted in red if the maximum length is exceeded.

You can use substitution commands in QSL messages to include information determined by your current location.

eQSL Tab

eQSL Settings denoted with an asterisk * are stored in a log file:

- when you modify these settings, they are stored in the currently-open log file
- when you open a log file, these settings are restored from that log file

Note: The Username and Password specified in this tab will appear in generated errorlog.txt files when Log debugging information is enabled; do not employ a username or password that you also use to secure valuable online accounts!

Username *	your eQSL.cc username
Password	your eQSL.cc password, concealed by * characters; clicking the ? button reveals the password Note: eQSL.cc passwords can be no longer than 14 characters
Update button	when clicked, displays the eQSL Account window, which enables you to specify or modify the username or password to be used when accessing your eQSL account
QTH Nickname *	optional eQSL.cc QTH nickname <ul style="list-style-type: none">• if present, limits the Sync eQSL.cc QSLs operation to QSLs from the specified QTH in your eQSL.cc profile• if present and Use each QSO's myQTHID as its QTH Nickname when uploading or exporting is disabled, selects the QTH in your eQSL.cc profile for QSOs uploaded or exported to eQSL.cc note: if Use each QSO's myQTHID as its QTH Nickname when uploading or exporting is enabled, this textbox will contain (myQTHID) and be disabled
Maximum time difference for considering a downloaded QSL to match a logged QSO (minutes)	if a downloaded QSL is consistent with a QSO's callsign, band, and mode, this parameter specifies the maximum difference in minutes between the QSL's begin time and the QSO's begin time for the QSL to be deemed a match for the QSO
Upload each QSO logged via the Capture window to eQSL.cc	when checked, clicking the Capture window's Log button automatically uploads the QSO to eQSL.cc
Initialize eQSL Sent to 'R' for each logged or imported QSO	when checked, <ul style="list-style-type: none">• logging a QSO via the Main or Capture windows sets the QSO's eQSL Sent item to 'R' (for requested)• importing a QSO record that doesn't specify a value for EQSL_QSL_SENT will set the QSO's eQSL Sent item to 'R' (for requested)
Use each QSO's myQTHID as its QTH Nickname when uploading or exporting	when checked, each QSO's myQTHID will be used as its QTH Nickname when uploading to eQSL.cc or when exporting for eQSL.cc, ignoring the contents of QTH Nickname textbox ; when not checked, the specified QTH Nickname will be used.
Don't upload QSOs whose station callsign isn't the specified Username	when checked, only QSOs whose station callsign matches the eQSL.cc Username will be uploaded to eQSL.cc by the Upload to eQSL.cc function
Prompt the user to specify a file containing the already-downloaded contents of an eQSL.cc Inbox when a Sync eQSL.cc QSLs operation is performed	when checked, the Sync eQSL.cc QSLs operation prompts you to specify a file containing the contents of an eQSL.cc Inbox that you have already downloaded

Retain eQSL images	<p>when checked, clicking the eQSL.cc Display button checks to see if the current QSO's eQSL image has already been downloaded into DXKeeper's eQSL image folder</p> <ul style="list-style-type: none"> • if not, the image is downloaded from eQSL, saved in DXKeeper's eQSL image folder, and displayed • if so, the already-downloaded image is displayed -- unless the user depressed the CTRL key while clicking the eQSL Display button, in which case the already-downloaded image is replaced with a new image downloaded from eQSL.cc, and displayed
eQSL image folder pathname	the pathname of the folder into which downloaded eQSL images are stored; click the Select button to choose a folder

Update eQSL AG Membership button

- enabled if the eQSL AG database is present in DXView's Databases folder or in DXKeeper's Databases folder
- click to set the eQSL Member item to 'A' in all QSOs in the Log Page Display whose callsign is an Authenticity Guaranteed member of eQSL.cc

LoTW Tab

LoTW Settings denoted with an asterisk * are stored in a log file:

- when you modify these settings, they are stored in the currently-open log file
- when you open a new log file, these settings are restored from that new log file

Note: The Username and Password specified in this tab will appear in generated errorlog.txt files when Log debugging information is enabled; do not employ a username or password that you also use to secure valuable online accounts!

Username *	your LoTW web account username
Password	your LoTW web account password, concealed by * characters; clicking the ? button reveals the password
Update button	when clicked, displays the LoTW Account window, which enables you to specify or modify the username or password to be used when accessing your LoTW Web account
Upload each QSO logged via the Capture window to LoTW	<p>when checked, clicking the Capture window's Log button automatically uploads the QSO to LoTW</p> <ul style="list-style-type: none"> • if the QSO specifies a myQTH ID whose QTH specifies an LoTW Station Location, the uploaded QSO will be associated with that Station Location and the QSO's Station Callsign • If the QSO doesn't specify a myQTH ID, or specifies a myQTH ID whose QTH doesn't specify an LoTW Station Location, the uploaded QSO will be associated with the Station Location specified on the QSL Configuration window's TQSL panel
Initialize LoTW Sent to 'R' for each logged QSO or Imported QSO	<p>when checked,</p> <ul style="list-style-type: none"> • logging a QSO via the Main or Capture windows sets the QSO's LoTW Sent item to 'R' (for requested) • importing a QSO record that doesn't specify a value for <code>LoTW_QSL_SENT</code> will set the QSO's LoTW Sent item to 'R' (for requested)

Consider LoTW confirmations in outgoing card/label QSL? "please/thanks" decisions	when checked, a QSO confirmed via LoTW will be considered confirmed when deciding whether or not to print 'please!' or 'thanks!' in a QSL card's QSL? column or to print 'pse!' or 'tnx!' in a QSL label's QSL? column
Permit uploading of QSOs already uploaded to LoTW	<ul style="list-style-type: none"> when not checked, the presence of any QSO already uploaded to LoTW in the set of QSOs to be uploaded will prevent all QSOs in the set from being uploaded when checked, all QSOs will be uploaded whether or not they've already been uploaded to LoTW; this setting will be disabled after the QSOs are uploaded
PC has no internet connection (prompt operator to manually query LoTW)	<p>when checked, DXKeeper will prompt you to manually upload a signed .TQ8 file, and to manually query LoTW and place the query results in a designated file; this option should only be selected when your PC does not have a direct connection to the internet. This option can also be used to report DXCC verification discrepancies from a PC with no internet connection.</p> <p>The URL you are directed to use is placed in the Windows Clipboard; use CTRL-V to paste it into your Web Browser's Address Bar.</p>
Maximum age of most recent LoTW upload to be considered "active" (months)	<ul style="list-style-type: none"> if no age is specified, a callsign is considered to be an active LoTW participant if it appears in the LoTW database, independent of when it last uploaded QSOs to LoTW if an age in months is specified, a callsign is considered to be an active LoTW participant if it appears in the LoTW database and has uploaded QSOs to LoTW within the specified interval <p>A QSO's LoTW Member will be set to Y if its callsign is considered to be an active LoTW participant for the reasons described above, or if its callsign appears in the LoTW database and has uploaded QSOs to LoTW after the QSO began.</p>
Limit Sync operations to this station callsign *	<p>When this setting specifies a callsign, and QSL Via is set to LoTW, the Sync LoTW QSOs and Sync LoTW QSLs operations download and synchronize only QSOs and QSLs whose station callsign matches the specified callsign.</p> <p>When this setting is empty, the Sync LoTW QSOs and Sync LoTW QSLs operations download and synchronize all QSOs and QSLs independent of their station callsign.</p>
Report unmatched QSOs or QSLs as errors *	<p>when checked,</p> <ul style="list-style-type: none"> the Sync LoTW QSOs operation will report any downloaded QSOs that don't match any QSO in the current log the Sync LoTW QSLs operation will report any downloaded QSLs that don't match any QSO in the current log
Exclude station callsign when matching downloaded QSOs & QSLs to logged QSOs *	<p>when checked,</p> <ul style="list-style-type: none"> the Sync LoTW QSOs operation will consider a downloaded QSO to match a logged QSO if the callsigns, bands, modes, and begin times are all identical; when unchecked, the station callsigns must also be identical. the Sync LoTW QSLs operation will consider a downloaded QSL to match a logged QSO if the callsigns, bands, modes, and begin times are all identical; when unchecked, the station callsigns must also be identical.

The **Handling of LoTW QSL detail inconsistencies** setting controls the resolution of inconsistencies between a downloaded LoTW QSL and its matching logged QSO in the country code, CQ, ITU, Gridsquare, Iota, State, and/or County fields:

1. always replace the logged data with the LoTW QSL data
2. always preserve the logged data, ignoring the LoTW QSL data
3. always preserve the logged data, ignoring the LoTW QSL data, and describe each inconsistency in the report displayed when the Sync LoTW QSLs or Update from LoTW operation completes
4. display a dialog presenting the logged data and the LoTW QSL data so that the operator can choose
 - if the **Ignore subsquare mismatches** option is enabled, then the logged Grid will be replaced with the LoTW Grid if the first four characters of the logged and LoTW Grids are identical, no matter which of the above options is selected

TQSL settings:

TQSL.exe pathname	<p>specify the location of the LoTW application TQSL on your PC's hard drive</p> <ul style="list-style-type: none"> • TQSL is free, and available via https://www.arrl.org/LoTW/getstart • if you already have TQSL installed, verify that it is version 2.0.0 or later by checking the version number shown in this panel's label • By default, TQSL is installed in c:\Program Files\TrustedQSL\TQL.exe • If you installed TQSL in another location, use the Select button to locate and select TQSL <p>Note that TQSL must be installed on a drive directly attached to your PC; otherwise, DXKeeper will be unable to obtain your station locations. To start TQSL, click the Run button.</p>
station location *	<p>Select the TQSL Station Location to be associated with QSOs submitted to LoTW via</p> <ul style="list-style-type: none"> • the Upload to LoTW function on the Main window's QSL tab • the Upload to LoTW command in the Log Page Display's right-mouse menu when the selected QSO doesn't specify a myQTH ID, or specifies a QTH that doesn't specify an LoTW Station Location • an automatic upload to LoTW of a QSO logged via the Capture window that doesn't specify a myQTH ID, or specifies a QTH that doesn't specify an LoTW Station Location • an automatic upload to LoTW of a QSO received from another application that doesn't specify a myQTH ID, or specifies a QTH that doesn't specify an LoTW Station Location <p>If no station location is selected, TQSL will prompt you to select one when it's invoked by DXKeeper during the LoTW upload process.</p> <p>Note that you cannot add a new Station Location or modify an existing Station Location using this selector; you can only do that in TQSL. If you add, modify, or delete a Station Location in TQSL, click the Update button to update the Station Location selector.</p>

station callsign *	<p>Specifies the Station Callsign to be associated with QSOs submitted to LoTW via</p> <ul style="list-style-type: none"> the Upload to LoTW function on the Main window's QSL tab the Upload to LoTW command in the Log Page Display's right-mouse menu when the selected QSO doesn't specify a myQTH ID, or specifies a QTH that doesn't specify an LoTW Station Location an automatic upload to LoTW of a QSO logged via the Capture window that doesn't specify a myQTH ID, or specifies a QTH that doesn't specify an LoTW Station Location an automatic upload to LoTW of a QSO received from another application that doesn't specify a myQTH ID, or specifies a QTH that doesn't specify an LoTW Station Location <p>If the currently-selected Station Location specifies a Station Callsign, it will appear in this setting. If the currently-selected Station Location does not specify a Station Callsign, [NONE] will appear in this setting, and you will be prompted to specify the Station Callsign to be used.</p>
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Update LoTW Membership button

- enabled if the LoTW database is present in DXView's Databases folder or in DXKeeper's Databases folder
- if no Maximum age of most recent LoTW upload is specified, clicking this button sets LoTW Member item to 'Y' in all QSOs in the Log Page Display that has been confirmed via LoTW, or whose callsign is found in the LoTW database.
- if a Maximum age of most recent LoTW upload is specified, clicking this button
 - sets the LoTW Member item to 'Y' in all QSOs in the Log Page Display that have been confirmed via LoTW, or whose callsign is found in the LoTW database with a "date of last upload" within the interval specified by Maximum age of most recent LoTW upload, or whose callsign is found in the LoTW database with a "date of last upload" after the QSO date
 - clears the LoTW Member item in all QSOs in the Log Page Display that have not been confirmed via LoTW and whose callsign is not found in the LoTW database with a "date of last upload" within the interval specified by Maximum age of most recent LoTW upload and whose callsign is not found in the LoTW database with a "date of last upload" after the QSO date

Club Log Tab

The **Club Log** panel on this tab provides settings that enable DXKeeper to upload QSOs to Club Log, delete QSOs from Club Log, download confirmations from Club Log, and download new OQRS requests from Club Log.

Note: The Password specified in this tab will appear in generated errorlog.txt files when Log debugging information is enabled; do not employ a username or password that you also use to secure valuable online accounts!

Email	specifies the Email address with which you've registered with Club Log
Password	specifies the password that enables your access to Club Log
Callsign	specifies the station callsign in your Club Log account to which QSOs should be uploaded and from which Inbound OQRS requests should be downloaded; this setting is stored with each log file, and thus changes when a new log file is loaded

Auto upload *	<p>when checked, any QSO logged by DXKeeper either directly, or on behalf of another application and whose station callsign item matches the specified Club Log Callsign, will automatically be uploaded to Club Log using the above settings</p> <ul style="list-style-type: none"> enabling this option does not automatically upload QSOs as they are imported from a file this setting is stored with each log file, and thus changes when a new log file is loaded
Slow net	<p>when checked, QSOs are uploaded in small chunks to ensure delivery when uploading via a slow internet connection</p>
Include seconds in uploaded QSOs *	<p>determines whether the QSO Start Time in QSOs uploaded to Club Log will specify time to the minute, or to the second</p> <ul style="list-style-type: none"> when checked the, QSO Start Time in QSOs uploaded to Club Log will specify the time to the second when not checked, the QSO Start Time in QSOs uploaded to Club Log will specify the time to the minute, with seconds set to 00 this setting is stored with each log file, and thus changes when a new log file is loaded this setting defaults to 'not checked' <p>If all QSOs uploaded to Club Log come from DXKeeper, then this option can remain in its default 'not checked'; setting. However, if QSOs have been or will be uploaded to Club Log from other applications, then this option should be set to match the behavior of those applications to avoid creating duplicate QSOs in Club Log.</p> <p>If you change the setting of this option with QSOs already uploaded from the current log to Club Log, you should direct Club Log to clear all QSOs and then resubmit the QSOs from this Log.</p>
Inbound OQRS	<p>Set 'QSL Sent' to 'R' *</p> <p>when checked,</p> <ul style="list-style-type: none"> the Inbound OQRS function will set each matching QSO's QSL Sent item to R the Clear Selected Requests function will clear each QSO's QSL Sent item <p>Set 'eQSL Sent' to 'R' *</p> <p>when checked,</p> <ul style="list-style-type: none"> the Inbound OQRS function will set each matching QSO's eQSL QSL Sent item to R the Clear Selected Requests function will clear each QSO's eQSL QSL Sent item <p>Set 'LoTW Sent' to 'R' *</p> <p>when checked,</p> <ul style="list-style-type: none"> the Inbound OQRS function will set each matching QSO's LoTW QSL Sent item to R the Clear Selected Requests function will clear each QSO's LoTW QSL Sent item <p>Clear Selected Requests</p> <p>when clicked, clears the QSL Sent and/or eQSL QSL Sent and/or LoTW QSL Sent items of every logged QSO as specified by the Set 'QSL Sent' to 'R', Set 'eQSL Sent' to 'R' and Set 'LoTW Sent' to 'R' settings above</p>

QRZ Tab

QRZ Logbook Selection	QRZ Logbook Selector	selects the QRZ Logbook to which QSOs are uploaded and from which confirmations are downloaded
	Logbook API Key	the QRZ Logbook API Key associated with the currently-selected QRZ Logbook; when you direct QRZ to create a Logbook, you will be given the new Logbook's API Key
	New	click to define a new QRZ Logbook by specifying its Station Callsign and Logbook API Key
	Update	click to save changes made to the currently-selected Logbook API Key
	Remove	click to remove the currently-selected entry in the QRZ Logbook Selector
Report unmatched QSLs as errors *	when checked, the Sync QRZ QSLs operation will report downloaded QSLs whose logIDs do not match the LogID items of any logged QSO	
Auto upload *	when checked, any QSO logged by DXKeeper either directly, or on behalf of another application whose station callsign item matches the selected QRZ Logbook Selector, will automatically be uploaded to the selected QRZ Logbook <ul style="list-style-type: none"> enabling this option does not automatically upload QSOs as they are imported from a file this setting is stored with each log file, and thus changes when a new log file is loaded 	

ADIF & TDF Tab

Don't save non-callsign QSL Via items to ADIF or tab-delimited files	if checked, the Save ADIF file and Save TDF file functions will ignore QSL Via items whose content is not a single callsign
Frequency precision	specifies the number of decimal digits shown in transmit frequencies and receive frequencies included in ADIF and Tab-delimited files exported from the QSL Queue; the valid range is 3 to 6.

Printer Tab

Settings on this tab specify

- the printer to be used for printing QSL cards and Reply cards
- the printer to be used for printing QSL labels and address labels
- the printer to be used for printing Envelopes

For each of these three printing categories, you can specify the paper size, paper source, and print quality. If you have a single printer, configure all three printing categories to utilize that printer.

QSL cards and Reply cards	Printer	selects the printer to be used when printing QSL cards and Reply cards
	Size	selects the paper size on which QSL cards and Reply cards will be printed
	Source	selects the media bin from which QSL cards and Reply cards will be printed
	Print Quality	selects the print quality used when printing QSL cards and Reply cards

QSL labels and address labels	Printer	selects the printer to be used when printing QSL labels and address labels
	Size	selects the paper size on which QSL labels and address labels will be printed
	Source	selects the media bin from which QSL labels and address labels will be printed
	Print Quality	selects the print quality used when printing QSL labels and address labels
	Single Label Orientation	selects the printer orientation to be used when printing single QSL labels, single address labels, or single self-addressed labels (2-column and 3-column labels are always printed using portrait orientation)
Envelopes	Printer	selects the printer to be used when printing envelopes
	Size	selects the paper size on which envelopes will be printed
	Source	selects the media bin from which envelopes will be printed
	Print Quality	selects the print quality used when printing envelopes
Ignore printer-imposed margins	when checked, top and left margins reported by the printer driver are ignored and reported as 0; this allows borderless printing of QSL cards and labels. Note that doing this could damage your printer, so USE AT YOUR OWN RISK .	

Backing Up and Recovering Your Log

While modern mass storage devices are very reliable, they retain their predecessors' habit of failing at the worst possible moment. The careful operator will make frequent backup copies of his or her log using external media -- a removable disk drive, a disk drive on another PC on a home network, or a thumb drive; storing backup copies off-premises in the cloud using DropBox, OneDrive, or Google Drive provides additional protection against catastrophes. In addition, one should make a backup before performing major changes to one's log, such as importing new QSOs, using the **Modify QSOs** panel, or running a script; this makes it easy to recover if things don't go as expected.

Making a backup copy of your Log file

To make a backup copy of the current Log file,

1. click the **Config** button
2. select the Configuration window's **Log** tab
3. click the **Backup folder** panel's **Backup** button.

DXKeeper will create a copy of your log file in the specified backup folder; this copy's filename will include the current UTC date and time, allowing you to create and retain log backups as frequently as every second. If you've previously created a log backup file on the same UTC date, you will be offered the choice of aborting the new backup or over-writing the previous backup.

Automatically making a backup copy of your Log file on shutdown

If the Backup log on shutdown box is checked when DXKeeper is directed to terminate with a log file open, then

- a copy of your log file will be created in the specified backup folder
- this copy's filename will be constructed by appending the current UTC date to the log filename
- if an existing file with this name already exists in the specified backup folder, the existing file will be replaced with the new copy

Recovering your Log file from a backup copy

If the contents of the current Log are damaged -- by the unintentional deletion of multiple QSOs, for example -- you can replace the contents of the current Log with those of a previously-created backup copy. To do so,

1. terminate DXView and SpotCollector if they are running
2. click the **Config** button
3. select the Configuration window's **Log** tab
4. click the **Backup folder** panel's **Recover** button.

DXKeeper will display a file selector dialog window with which you can choose the backup copy whose contents will be replace the contents of the current Log file. Before this replacement occurs, the contents of the current Log file are saved to a file whose name is generated by appending the words

_abandoned_YYYY MMM DD HH MM SS 0 to the original filename. This file provides a safety net should you later discover that it contains needed data; it can be deleted when you are certain that its no longer needed. When the operation is complete, the Log file will will be in a state identical to that of the moment you created the selected backup file: logged QSOs, awards progress, QSL queue, and log-specific settings.

Log Items

QSO items

Textbox Caption	Item Name	ADIF Field Name	Data Type	Item Description	Max Length
call	Call	Call	String	your QSO partner's callsign	13
name	Name	Name	String	your QSO partner's first name	1024
QTH	QTH	QTH	String	your QSO partner's city or town	1024
mode	Mode	Mode	String	QSO mode (SSB, CW, RTTY, AM, FM, PSK31 plus any user-defined modes)	8
via	QSL_via	QSL_via	String	your QSO partner's QSL route	1024
tx freq	Freq	Freq	Number	the QSO transmit frequency in MHz. (in a cross-band QSO, the transmit frequency)	14

begin	QSO_Begin	QSO_Date Time_On	Date	the UTC time at which the QSO started <ul style="list-style-type: none"> entry format is your locale's standard date/time format, or dd-mmm-yyyy hh:mm:ss, or yyyy-mm-dd hh:mm:ss display format is your locale's standard date/time format, with seconds presented if the Display seconds in date/time fields checkbox is checked. the year must be 1930 or later 	NA
sent	RST_Sent	RST_Sent	String	the RST report you sent to your QSO partner	8
rcvd	RST_Rcvd	RST_Rcvd	String	the RST report you received from your QSO partner	8
tx band	Band	Band	String	the QSO transmit band (2190m, 160m, 80m, ... 2m ... 3cm ... 1mm .. submm)	6
rx freq	Freq_RX	Freq_RX	Number	the QSO receive frequency in MHz.	14

end	QSO_End	QSO_Date Time_Off	Date	<p>the UTC time at which the QSO ended</p> <ul style="list-style-type: none"> entry format is your locale's standard date/time format, or dd-mmm-yyyy hh:mm:ss, or yyyy-mm-dd hh:mm:ss display format is your locale's standard date/time format, with seconds presented if the Display seconds in date/time fields checkbox is checked. the year must be 1930 or later 	NA
power	TX_Power	TX_Power	Number	<p>your transmit power, in watts Note: the ADIF tag for this item is TX_PWR, and this is what appears in ADIF files generated by DXKeeper. In the Modify QSOs panel and in SQL Filter expressions, use TX_Power to refer to this item.</p>	11

code	DXCCID	DXCC	String	the ARRL's country code for your QSO partner's DXCC entity	3
DXCC	App_DXKeeper_DXCCPrefix	App_DXKeeper_DXCCPrefix	String	your QSO partner's DXCC prefix	6
entity	(not stored in log)	(not stored in log)		the name of your QSO partner's DXCC entity (changing this automatically sets the DXCCID code to the correct value)	(not stored in log)

Auxiliary items

Textbo x Caption	Item Name	ADIF Field Name	Data Type	Item Description	Max Length
station call	Station_Callsign	Station_Callsign	String	the station callsign you used over the air	13
op call	Operator	Operator	String	the callsign of your station's operator	13
owner call	Owner_Callsign	Owner_Callsign	String	the callsign of your station's owner	13

unique	app_dxkeeper_qso_number	(not imported or exported)	Integer	unique number assigned to this QSO <ul style="list-style-type: none"> the first QSO logged or imported is assigned the number 1 each subsequent QSO logged or imported is assigned the next number the unique numbers assigned to a QSO's log can be reset 	8
sub mode	App_DXKeeper_Submode	Submode	String	specific variant of mode	32
rx band	Band_RX	Band_RX	String	the QSO receive band (2190m, 160m, 80m, ... 2m ... 3cm ... 1mm .. submm)	6
select	App_DXKeeper_Select	App_DXKeeper_Select	String	this item can be used in conjunction with the Select filter and SQL filters to place arbitrary sets of QSOs in the Log Page Display <ul style="list-style-type: none"> Y - the QSO is selected N - the QSO is not selected 	1

Club Log status	App_DXKeeper_ClubLog	CLUBLOG_QSO_UPLOAD_STATUS	String	Club Log upload status <ul style="list-style-type: none"> • Y - the QSO has been uploaded to ClubLog • N - this QSO will not be uploaded to ClubLog by the ClubLog Update function • M - the QSO has been modified after being uploaded to ClubLog 	1
Club Log QSO Upload Date	APP_DXKeeper_ClubLogDate	CLUBLOG_QSO_UPLOAD_DATE	String	the date the QSO was last uploaded to ClubLog	NA
temp	App_DXKeeper_Temp	App_DXKeeper_Temp	String	this item can be used in conjunction with the Modify QSOs panel to non-destructively move information between items Note: for QSOs in a submission confirmed by QSL card, the Create Card Record Sheet function sets temp to Y in QSOs with identical QSL# items, and to N in QSOs that specify either no QSL# or that specify a unique QSL#	1024

QSL items

Textbo x Captio n	Item Name	ADIF Field Name	Dat a Typ e	Item Description	Ma x Len gth
sent	QSL_sent	QSL_sent	Stri ng	<p>status of the outgoing QSL card sent to your QSO partner</p> <ul style="list-style-type: none"> • (blank) - a card has not yet been sent • N (no) - no card should be sent • R (requested) - the card should be sent • Y (yes) - the card has been sent • I (ignore) - no card should be sent 	1

rcvd	QSL_rcvd App_DXKeeper_ QSL_Verified App_DXKeeper_ QSL_Expired	QSL_rcvd App_DXKeeper_ QSL_Verified App_DXKeeper_ QSL_Expired Credit_Submitted Credit_Granted	String	<p>status of your QSO partner's incoming QSL card</p> <ul style="list-style-type: none"> • R (requested) - the card has been requested • Y (yes) - the card has been received, and is expected to be valid for DXCC award credit (if submitted) • S (submitted) - the card will be submitted to the ARRL for DXCC award credit • V (verified) - the QSO's Entity, Entity-Band, and Entity-Mode have been granted DXCC award credit by the ARRL as a result of QSL card submission • I (invalid) - the QSO is invalid for DXCC awards and, if no Region is specified, for CQ DX Marathon country credit • X (expired) - ignore this QSO when determining which QSOs should be confirmed <p>if the Partial DXCC Credit option is enabled, the following values can also be used:</p> <ul style="list-style-type: none"> • E (Entity verified) - the QSO's Entity has been granted DXCC award credit by the ARRL as a result of QSL card submission • B (Entity and Band verified) - the QSO's Entity and Entity-Band have been granted DXCC award credit by the ARRL as a result of QSL card submission • M (Entity and Mode verified) - the QSO's Entity and Entity-Mode have been granted DXCC award credit by the ARRL as a result of QSL card submission <p>(use these settings for QSL cards submitted to the DXCC desk before its records were computerized, where a card's Entity-Band and/or Entity-Mode was not recorded)</p> <p>submitted is also imported/exported from/to ADIF with <Credit_Submitted> Entity verified, Entity and Band verified, Entity and Mode verified, and verified are also imported/exported from/to ADIF with <Credit_Granted></p>	1
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date sent	QSLsdate	QSLsdate	Date	the date your outgoing QSL card was sent to your QSO partner <ul style="list-style-type: none"> entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd display format is your locale's standard date/time format the year must be 1930 or later if not specified, the value 4000-01-01 is recorded 	NA
date rcvd	QSLRdate	QSLRdate	Date	the date the station's incoming QSL card was received from your QSO partner <ul style="list-style-type: none"> entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd display format is your locale's standard date/time format the year must be 1930 or later if not specified, the value 4000-01-01 is recorded 	NA
sent via	QSL_Sent_Via	QSL_Sent_Via	String	means by which an outgoing confirmation should be (or has been) conveyed <ul style="list-style-type: none"> E - convey electronically B - convey QSL card via the QSL bureau D - convey QSL directly R - send a Reply Card <ul style="list-style-type: none"> exported to ADIF as <QSL_SENT_VIA:1>D<APP_DXKEEPER_QSL_SENT_VIA_REPLY_CARD:1>Y imported from ADIF by <APP_DXKEEPER_QSL_SENT_VIA_REPLY_CARD:1>Y 	1
rcvd via	QSL_Rcvd_Via	QSL_Rcvd_Via	String	means by which confirmation was conveyed (if QSO has been confirmed), or by which confirmation was requested to be conveyed (if QSO is not yet confirmed) <ul style="list-style-type: none"> E - electronic B - via the QSL bureau (and possibly electronic) D - directly (and possibly via bureau or electronic) 	1
QSL#	App_DXKeeper_QSL_Number	App_DXKeeper_QSL_Number	Integer	user-assigned tracking number associated with the received QSL card	NA
msg	QSLMsg	QSLMsg	String	a message to appear on the outgoing QSL card or QSL label to be sent to your QSO partner; the message can include substitution commands that are replaced by information from other QSO items	1024
myQTH	MyQTHID	App_DXKeeper_My_QTHID	String	uniquely identifies the QTH from which you were operating when making this QSO	64

addr	Address	Address	String	the full name and address to which a request for QSL should be sent, formatted as you wish it to appear on an envelope or label (use the Enter key to insert line breaks)	1024
WAZVerified	WAZVerified	Credit_Submitted (CQWAZ_MIXED) Credit_Granted (CQWAZ_MIXED) App_DXKeeper_WAZ_Invalid	String	WAZ verification status <ul style="list-style-type: none"> • S (submitted) - the QSO has been submitted for WAZ credit • V (verified) - the QSO has been granted WAZ credit • I (invalid) - the QSO is invalid for WAZ and Marathon awards submitted and verified are imported/exported from/to ADIF with <Credit_Submitted> and <Credit_Granted> invalid is imported/exported from/to ADIF with <App_DXKeeper_WAZ_Invalid:1>I	1
IOTAVerified	IOTAVerified	Credit_Submitted (IOTA) Credit_Granted (IOTA) App_DXKeeper_IOTA_Status	String	IOTA verification status <ul style="list-style-type: none"> • S (submitted) - the QSO has been submitted to RSGB, and is considered confirmed • V (verified) - the QSO has been granted IOTA credit • N (not confirmed) - the QSO's confirmation is invalid for IOTA, but the QSO is valid • D (deleted) - the QSO IOTA group is deleted • I (invalid) - the QSO is invalid for IOTA submitted and verified are imported/exported from/to ADIF with <Credit_Submitted> and <Credit_Granted> not confirmed is imported/exported from/to ADIF with <App_DXKeeper_IOTA_Status:1>N deleted is imported/exported from/to ADIF with <App_DXKeeper_IOTA_Status:1>D invalid is imported/exported from/to ADIF with <App_DXKeeper_IOTA_Status:1>I	1
VUCCVerified	VUCCVerified	Credit_Submitted (VUCC_BAND) Credit_Granted (VUCC_BAND) App_DXKeeper_VUCC_Status	String	VUCC verification status <ul style="list-style-type: none"> • S (submitted) - the QSO has been submitted for VUCC credit • V (verified) - the QSO has been granted VUCC credit • I (invalid) - the QSO is invalid for VUCC submitted and verified are imported/exported from/to ADIF with <Credit_Submitted> and <Credit_Granted> invalid is imported/exported from/to ADIF with <App_DXKeeper_VUCC_Status:1>I	1

WASVerified	WASVerified	Credit_Submitted (WAS) Credit_Granted (WAS) App_DXKeeper_WAS_Invalid	String	<p>WAS verification status</p> <ul style="list-style-type: none"> • S (submitted) - the QSO has been submitted for WAS credit • V (verified) - the QSO has been granted WAS credit • I (invalid) - the QSO is invalid for WAS <p>submitted and verified are imported/exported from/to ADIF with <Credit_Submitted> and <Credit_Granted> invalid is imported/exported from/to ADIF with <App_DXKeeper_WAS_Invalid:1>I</p>	1
WPXVerified	WPXVerified	Credit_Submitted (CQWPX) Credit_Granted (CQWPX) App_DXKeeper_WPX_Invalid	String	<p>WPX verification status</p> <ul style="list-style-type: none"> • S (submitted) - the QSO has been submitted for WPX credit • V (verified) - the QSO has been granted WPX credit • I (invalid) - the QSO is invalid for WPX <p>submitted and verified are imported/exported from/to ADIF with <Credit_Submitted> and <Credit_Granted> invalid is imported/exported from/to ADIF with <App_DXKeeper_WPX_Invalid:1>I</p>	1

Online QSL Items

Textbox Caption	Item Name	ADIF Field Name	Data Type	Item Description	Max Length
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eQSL sent	App_DXKeeper_EQSL_QSL_Sent	EQSL_QSL_Sent	String	status of upload to eQSL <ul style="list-style-type: none"> • (blank) <ul style="list-style-type: none"> - this QSO has not yet been uploaded to eQSL • R (requested) <ul style="list-style-type: none"> - this QSO should be uploaded to eQSL • U (uploaded) <ul style="list-style-type: none"> - this QSO has been uploaded to eQSL • Y (yes) <ul style="list-style-type: none"> - this QSO has been uploaded and accepted by eQSL • N (no) <ul style="list-style-type: none"> - this QSO should not be uploaded to eQSL • I (ignore) <ul style="list-style-type: none"> - this QSO should not be uploaded to eQSL 	1
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eQSL rcvd	App_DXKeeper_EQSL_QSL_R cvd	EQSL_QSL_Rcvd	Strin g	status of confirmation by eQSL. <ul style="list-style-type: none"> • R (requested) - confirmatio n has been requested from eQSL • Y (yes) - confirmatio n has been received from eQSL • V (verified) - confirmatio n has been verified by eQSL • I (invalid) - ignore this QSO when tracking progress • X (expired) - ignore this QSO when determining which QSOs should be confirmed 	1
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eQSL date sent	App_DXKeeper_EQSL_QSLdate	EQSL_QSLdate	Date	<p>the date that the QSO information was successfully uploaded to eQSL</p> <ul style="list-style-type: none"> entry format is your locale's standard date format, or dd-mm-yyyy, or yyyy-mm-dd display format is your locale's standard date/time format the year must be 1930 or later if not specified, the value 4000-01-01 is recorded 	NA
eQSL date rcvd	App_DXKeeper_EQSL_QSLRdate	EQSL_QSLRdate	Date	<p>the date that the QSO was confirmed via eQSL</p> <ul style="list-style-type: none"> entry format is your locale's standard date format, or dd-mm-yyyy, or yyyy-mm-dd display format is your locale's standard date/time format the year must be 1930 or later if not specified, the value 4000-01-01 is recorded 	NA

eQSL member	App_DXKeeper_EQSL_Member	App_DXKeeper_EQSL_Member	String	participation in eQSL <ul style="list-style-type: none"> • Y - known to participate • A - known to participate / "authenticity guaranteed" • N - known not to participate 	1
LoTW Sent	App_DXKeeper_LoTW_QSL_Sent	LoTW_QSL_Sent	String	status of upload to LoTW <ul style="list-style-type: none"> • (blank) - this QSO has not yet been uploaded to LoTW • R (requested) - this QSO should be uploaded to LoTW • U (uploaded) - this QSO has been uploaded to LoTW • Y (yes) - this QSO has been uploaded and accepted by LoTW • N (no) - this QSO should not be uploaded to LoTW • I (ignore) - this QSO should not be uploaded to LoTW 	1

LoTW Rcvd	App_DXKeeper_LoTW_QSL_R cvd	LoTW_QSL_Rcvd App_DXKeeper_LoTW_Verified	String	status of confirmation by LoTW <ul style="list-style-type: none"> • R (requested) - confirmatio n has been requested from LoTW • Y (yes) - confirmatio n has been received from LoTW and is valid for DXCC award credit (if submitted) • S (submitted) - the confirmatio n will be submitted to the ARRL for DXCC award credit • V (verified) - the QSO's Entity, Entity- Band, and Entity-Mode have been granted DXCC award credit by the ARRL as a result of LoTW confirmatio n submission • I (invalid) - the QSO is invalid for DXCC awards 	1
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				<ul style="list-style-type: none"> • X (expired) - ignore this QSO when determining which QSOs should be confirmed submitted and verified are imported/exported from/to ADIF with <Credit_Submitted > and <Credit_Granted> 	
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LoTW cfm	App_DXKeeper_LoTWConfirm ation	App_DXKeeper_LoTWConfirmati on	Strin g	<p>contains</p> <ul style="list-style-type: none"> - G if this QSO's Grid item is confirmed via LoTW - 2 if this QSO's Grid2 item is confirmed via LoTW - 3 if this QSO's Grid3 item is confirmed via LoTW - 4 if this QSO's Grid4 item is confirmed via LoTW - M if this QSO's Mode item exactly matches the QSO partner's uploaded Mode - D if this QSO's Mode item is a WAZ digital mode and the QSO partner's uploaded Mode is a WAZ digital mode - I if this QSO's IOTA item exactly matches the QSO partner's uploaded IOTA designator - N if this QSO's NPOTA code item exactly matches the QSO partner's uploaded NPOTA code - S if this QSO's US State is confirmed via LoTW - Z if this QSOs' CQ Zone is confirmed via LoTW <p>Thus G2SZ in this item means the QSO's Grid, Grid2, State, and CQ Zone items are all confirmed via LoTW.</p>	4
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LoTW date sent	App_DXKeeper_LoTW_QSLDate	LoTW_QSLDate	Date	<p>the date that the QSO information was successfully uploaded to LoTW</p> <ul style="list-style-type: none"> • entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd • display format is your locale's standard date/time format • the year must be 1930 or later • if not specified, the value 4000-01-01 is recorded 	NA
LoTW date rcvd	App_DXKeeper_LoTW_QSLRdate	LoTW_QSLRdate	Date	<p>the date that the QSO was confirmed via LoTW</p> <ul style="list-style-type: none"> • entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd • display format is your locale's standard date/time format • the year must be 1930 or later • if not specified, the value 4000-01-01 is recorded 	NA
LoTW member	App_DXKeeper_LoTW_Member	App_DXKeeper_LoTW_Member	String	<p>participation in LoTW</p> <ul style="list-style-type: none"> • Y - known to participate • N - known not to participate 	1

Club Log Sent *	APP_DXKeeper_ClubLog	CLUBLOG_QSO_UPLOAD_STATUS	String	Club Log upload status <ul style="list-style-type: none"> • Y - the QSO has been uploaded to Club Log • N - this QSO will not be uploaded to Club Log by the Upload to Club Log function • M - the QSO has been modified after being uploaded to Club Log 	1
Club Log Rcvd *	APP_DXKeeper_ClubLog_QSL_Rcvd	APP_DXKeeper_ClubLog_QSL_Rcvd	String	status of confirmation by Club Log <ul style="list-style-type: none"> • R (requested) - confirmation has been requested from Club Log • Y (yes) - confirmation has been received from Club Log • I (invalid) - the QSO is invalid for awards • X (expired) - ignore this QSO when determining which QSOs should be confirmed 	1

Club Log Date Sent *	App_DXKeeper_ClubLogDate	CLUBLOG_QSO_UPLOAD_DATE	Date	the UTC date and time at which the QSO was last uploaded to Club Log; if never uploaded, the value 4000-01-01 is recorded <ul style="list-style-type: none"> entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd display format is your locale's standard date/time format 	NA
Club Log Date Rcvd *	APP_DXKeeper_ClubLog_QSLRDate	APP_DXKeeper_ClubLog_QSLRDate	Date	the date that the QSO was confirmed via Club Log <ul style="list-style-type: none"> entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd display format is your locale's standard date/time format if not specified, the value 4000-01-01 is recorded 	NA
QRZ Sent *	QRZcom_QSO_Upload_Status	QRZcom_QSO_Upload_Status	String	QRZ upload status <ul style="list-style-type: none"> Y - the QSO has been uploaded to QRZ N - this QSO will not be uploaded to QRZ by the Upload to QRZ function M - the QSO has been modified after being uploaded to QRZ 	1

QRZ Rcvd *	APP_DXKeeper_QRZcom_QSL_Rcvd	QRZCOM_QSO_DOWNLOAD_STATUS	String	status of confirmation by QRZ <ul style="list-style-type: none"> • R (requested) - confirmation has been requested from QRZ • Y (yes) - confirmation has been received from QRZ • I (invalid) - the QSO is invalid for awards • X (expired) - ignore this QSO when determining which QSOs should be confirmed 	1
QRZ Date Sent *	QRZcom_QSO_Upload_Date	QRZcom_QSO_Upload_Date	Date	the UTC date and time at which the QSO was last uploaded to QRZ; if never uploaded, the value 4000-01-01 is recorded <ul style="list-style-type: none"> • entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd • display format is your locale's standard date/time format 	NA

QRZ Date Rcvd *	APP_DXKeeper_QRZcom_QS LRDate	QRZCOM_QSO_DOWNLOAD_ DATE	Date	the date that the QSO was first reported as confirmed via QRZ <ul style="list-style-type: none"> entry format is your locale's standard date format, or dd- mmm-yyyy, or yyyy-mm-dd display format is your locale's standard date/time format if not specified, the value 4000-01-01 is recorded/li> 	NA
QRZ LogID *	APP_DXKeeper_QRZcom_Log ID	APP_DXKeeper_QRZcom_LogI D	Strin g	unique identifier assigned to this QSO by its QRZ logbook	4

* Item is only present in the Online QSL panel if the Club & QRZ option is enabled

Award items

Textbox Caption	Item Name	ADIF Field Name	Data Type	Item Description	Max Length
SOTA	SOTA_REF	SOTA_REF	String	your QSO partner's Summits on the Air reference	16
IOTA	IOTA	IOTA	String	your QSO partner's Islands on the Air designator	7
cont	Cont	Cont	String	your QSO partner's continent (NA, SA, EU, AF, OC, AS)	2
WWPX	Pfx	Pfx	String	your QSO partner's prefix as defined by the CQ WPX awards program	8
CQ	CQZ	CQZ	String	your QSO partner's CQ zone	2
ITU	ITUZ	ITUZ	String	your QSO partner's International Telecommunications Union zone	2
ARRL	ARRL_Sect	ARRL_Sect	String	your QSO partner's ARRL section (only visible in the Awards panel for stations in the US, US possessions, and Canada)	6
DOK	App_DXKeeper_DOK	App_DXKeeper_DOK	String/alpha	your QSO partner's DARC DOK (only visible in the Awards panel for stations in Germany) <ul style="list-style-type: none"> clicking the ? button displays the Main Award Selector window, which lets you select a DOK by name or by code 	16

Region	App_DXKeeper_Regi on	App_DXKeeper_Region	String	<p>for QSO partners in Austria, Italy, Scotland, Svalbard, and Turkey, your QSO partner's Region as defined by CQ for its Marathon award and DARC for its WAE award</p> <ul style="list-style-type: none"> clicking the ? button displays the Main Award Selector window, which lets you select a CQ or WAE Region by name or by code <p>for QSO partners in Israel, your QSO partner's Region as defined for the Holyland award</p> <ul style="list-style-type: none"> clicking the ? button displays the Main Award Selector window, which lets you select a Holyland Region by name or by code <p>for QSO partners in England, Guernsey, Ireland, Isle Of Man, Jersey, Northern Ireland, Scotland, and Wales, a Worked All Britain code</p> <p>Note: if you are pursuing both the Worked All Britain and Marathon awards or both the Worked All Britain and WAE awards, then log the appropriate Worked All Britain code with Scottish stations; the Marathon reporting will interpret this code correctly</p> <p>Note: On 2017-08-13, ADIF 3.0.6 defined a Region item. DXKeeper</p>	8
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				imports and exports this field. If an imported ADIF record contains both an App_DXKeeper_Region field and a Region field, the contents of the Region field will be imported.	
<p><i>varies by entity</i></p> <p>see the Primary column in this table</p>	State	State	String	<p>your QSO partner's primary administrative subdivision code</p> <ul style="list-style-type: none"> clicking the ? button displays the Main Administrative Subdivision Selector window, which lets you choose the primary administrative subdivision by name or by code <p>DXKeeper employs the Primary Administrative Subdivision codes defined by ADIF, with these exceptions.</p>	2
<p><i>varies by entity</i></p> <p>see the Secondary column in this table</p>	Cnty	Cnty	String	<p>your QSO partner's secondary administrative subdivision code</p> <ul style="list-style-type: none"> clicking the ? button displays the Main Administrative Subdivision Selector window, which lets you choose the secondary administrative subdivision by name or by code <p>DXKeeper employs the Secondary Administrative Subdivision codes defined by ADIF.</p>	32

	PrimaryInvalid	PrimaryInvalid	String	<p>validity of specified primary administrative subdivision code for DXCC entity</p> <ul style="list-style-type: none"> • Y - specified primary administrative subdivision code is invalid • N - specified primary administrative subdivision code is valid 	1
	SecondaryInvalid	SecondaryInvalid	String	<p>validity of specified secondary administrative subdivision code for DXCC entity and primary administrative subdivision code</p> <ul style="list-style-type: none"> • Y - specified secondary administrative subdivision code is invalid • N - specified secondary administrative subdivision code is valid 	1

Zone Risk	MarathonZoneRisk	App_DXKeeper_MarathonZoneRisk	String	<p>risk that QSO's zone won't be valid for the CQ DX Marathon award</p> <ul style="list-style-type: none"> • I - QSO's zone is invalid for the Marathon award • H - QSO's zone may be invalid for the Marathon award • (unspecified) - QSO's zone is likely valid for the Marathon award • L - QSO's zone is certainly valid for the Marathon award 	1
Country Risk	MarathonCountryRisk	App_DXKeeper_MarathonCountryRisk	String	<p>risk that QSO's country won't be valid for the CQ DX Marathon award</p> <ul style="list-style-type: none"> • I - QSO's country is invalid for the Marathon award • H - QSO's country may be invalid for the Marathon award • (unspecified) - QSO's country is likely valid for the Marathon award • L - QSO's country is certainly valid for the Marathon award 	1

grid 1	GridSquare	GridSquare	String	your QSO partner's grid square in the Maidenhead Locator System	8
grid 2	App_DXKeeper_Grid2	App_DXKeeper_Grid2	String	your QSO partner's second grid square in the Maidenhead Locator System when operating on a grid boundary; this item is only visible in the Awards panel if the VUCC box is checked on the Configuration window's Awards tab.	6
grid 3	App_DXKeeper_Grid3	App_DXKeeper_Grid3	String	your QSO partner's third grid square in the Maidenhead Locator System when operating on a grid boundary; this item is only visible in the Awards panel if the VUCC box is checked on the Configuration window's Awards tab.	6
grid 4	App_DXKeeper_Grid4	App_DXKeeper_Grid4	String	your QSO partner's fourth grid square in the Maidenhead Locator System when operating on a grid boundary; this item is only visible in the Awards panel if the VUCC box is checked on the Configuration window's Awards tab.	6
		VUCC_GRIDS	String	comma-delimited list of 2 or 4 grid squares that if present in an imported ADIF record set grid 1, grid 2, grid 3, and grid 4	

Contest items

Textbox Caption	Item Name	ADIF Field Name	Data Type	Item Description	Max Length
ID	Contest_ID	Contest_ID	String	the name of the current contest	32
tx #	STX	STX	String	transmit serial number or exchange	16
rx #	SRX	SRX	String	receive serial number or exchange	16
tx info	STX_String	STX_String	String	transmit exchange information	32

rx info	SRX_String	SRX_String	String	receive exchange information	32
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Propagation items

Textbox Caption	Item Name	ADIF Field Name	Data Type	Item Description	Max Length
mode	Prop_Mode	Prop_Mode	String	the propagation mode <ul style="list-style-type: none"> • AUR - Aurora • AUE - Aurora-E • BS - Back scatter • ECH - EchoLink • EME - Earth-Moon-Earth • ES - Sporadic E • FAI - Field Aligned Irregularities • F2 - F2 Reflection • GWAVE - Ground wave • ION - Ionosscatter • IRL - IRLP • LOS - Line of sight • MS - Meteor scatter • RS - Rain scatter • SAT - Satellite • TEP - Trans-equatorial • TR - Tropospheric ducting 	8
complete	QSO_Complete	QSO_Complete	String	indicates whether the QSO was complete from your perspective <ul style="list-style-type: none"> • Y - yes • N - no • NIL - not heard • ? - uncertain 	3
EME initial	Force_Init	Force_Init	String	new Earth-Moon-Earth "initial" <ul style="list-style-type: none"> • Y - yes • N - no 	1
Antenna az	Ant_Az	Ant_Az	Integer	antenna azimuth	4
Antenna path	Ant_Path	Ant_Path	String	antenna path <ul style="list-style-type: none"> • S - shortpath • L - longpath • G - grayline • O - other 	1
Antenna elev	Ant_El	Ant_El	Integer	antenna elevation	4
Condition SFI	SFI	SFI	Integer	solar flux	4
Condition A	A_Index	A_Index	Integer	Boulder K-index	4
Condition K	K_Index	K_Index	Integer	Boulder A-index	4
Satellite name	Sat_Name	Sat_Name	String	satellite name	32

Satellite mode	Sat_Mode	Sat_Mode	String	satellite mode	8
Meteor Scatter shower	MS_Shower	MS_Shower	String	meteor shower name	32
Meteor Scatter max time	Max_Bursts	Max_Bursts		maximum length of meteor scatter bursts heard by the logging station, in seconds	4
Meteor Scatter random	QSO_Random	QSO_Random	String	indicates whether the QSO was random or scheduled <ul style="list-style-type: none"> • Y - random • N - scheduled 	1
Meteor Scatter bursts	Nr_Bursts	Nr_Bursts	Integer	the number of meteor scatter bursts heard by the logging station	4
Meteor Scatter pings	Nr_Pings	Nr_Pings	Integer	the number of meteor scatter pings heard by the logging station	4

Details items

Textbox Caption	Item Name	ADIF Field Name	Data Type	Item Description	Max Length
dist (mi or km)	Distance	Distance	Number	distance to your QSO partner's station via the antenna path in miles or kilometers	8
lat	Lat	Lat	String	your QSO partner's station's latitude	11
lon	Lon	Lon	String	your QSO partner's station's longitude	11
age	Age	Age	String	your QSO partner's age	3
sig	Sig	Sig	String	your QSO partner's special interest group	32
sig info	Sig_Info	Sig_Info	String	your QSO partner's special interest group information	32
owner call	Eq_Call	Eq_Call	String	your QSO partner's station's owner's callsign	13
rig	Rig	Rig	String	your QSO partner's station's equipment	32

power	RX_Pwr	RX_Pwr	Integer	your QSO partner's station's output power	4
email	Email	Email	String	your QSO partner's email address	1024
web	Web	Web	String	your QSO partner's worldwide web URL	1024
file	App_DXKeeper_File	App_DXKeeper_File	String	name of local file containing information associated with this QSO	1024
audio file	App_DXKeeper_AudioFile	App_DXKeeper_AudioFile	String	name of local file containing audio associated with this QSO	1024
comment	Comment	Comment	String	additional information about the QSO you wish to retain; in Contest Mode, used to capture secondary exchanges for some contests as selected by the Contest Style setting. note: when importing an ADIF file, information found in a QSO record's Notes field is placed in the imported QSO's comment item	1024

User defined

Textbox Caption	Item Name	ADIF Field Name	Data Type	Item Description	Max Length
configurable	App_DXKeeper_User_Defined_0	App_DXKeeper_User_Defined_0	String	user-defined	1024
configurable	App_DXKeeper_User_Defined_1	App_DXKeeper_User_Defined_1	String	user-defined	1024
configurable	App_DXKeeper_User_Defined_2	App_DXKeeper_User_Defined_2	String	user-defined	1024

configurable	App_DXKeeper_User_Defined_3	App_DXKeeper_User_Defined_3	String	user-defined	1024
configurable	App_DXKeeper_User_Defined_4	App_DXKeeper_User_Defined_4	String	user-defined	1024
configurable	App_DXKeeper_User_Defined_5	App_DXKeeper_User_Defined_5	String	user-defined	1024
configurable	App_DXKeeper_User_Defined_6	App_DXKeeper_User_Defined_6	String	user-defined	1024
configurable	App_DXKeeper_User_Defined_7	App_DXKeeper_User_Defined_7	String	user-defined	1024

Other items

These items do not appear in any panel on the Main window's Log QSOs tab:

Item Name	ADIF Field Name	Data Type	Item Description	Max Length
App_DXKeeper_CreditOnly	App_DXKeeper_CreditOnly	String	Y if the QSO was generated from a DXCC Credit	1
App_DXKeeper_DXCCCreditNumber	App_DXKeeper_DXCCCreditNumber	String	ARRL-assigned credit number with C or L appended to identify <i>card</i> or <i>LoTW</i> credits respectively	16
APP_DXKeeper_Needed	APP_DXKeeper_Needed	String	As of the point in time when the Need filter was last invoked with the CTRL key depressed: <ul style="list-style-type: none"> Y - confirmation of this QSO will advance progress towards the DXCC, IOTA, VUCC, WAS, WAZ, or WPX awards N - confirmation of this QSO will not advance progress towards the DXCC, IOTA, VUCC, WAS, WAZ, or WPX awards 	

MyQTH items

Textbox Caption	ADIF Field Name	Data Type	Item Description	Max Length
ID	App_DXKeeper_My_QTHID	String	unique identifier associated with the QTH from which you operated when making this QSO	20
Rig	My_Rig	String	your equipment	128
Ant	APP_DXKEEPER_MY_ANT	String	your antenna configuration	1024
Name	My_Name	String	your name	32
Email	App_DXKeeper_My_Email	String	your email address	32
Street	My_Street	String	your QTH's street name	32
City	My_City	String	your QTH's city	32
State	My_State	String	your QTH's state	32
PostCode	My_Postal_Code	String	your QTH's postal code	32
County	My_Cnty	String	your QTH's county	32
Country	My_Country	String	your QTH's country	32
CQ	My_CQ_Zone	String	your QTH's CQ zone	2
ITU	My_ITU_Zone	String	your QTH's ITU zone	2
IOTA	My_IOTA	String	your QTH's IOTA tag	8
Grid	My_Gridsquare	String	your QTH's grid square	6
Latitude	My_Lat	String	your QTH's latitude	16
Longitude	My_Lon	String	your QTH's longitude	16
Sig	My_Sig	String	your special interest group name	32
Sig Info	My_Sig_Info	String	your special interest group information	32
LoTW	APP_DXKEEPER_MY_LoTW_STATION_LOCATION	String	LoTW Station Location for this QTH	32

Primary and Secondary Administrative Subdivision Codes

For most DXCC entities, DXKeeper's State item employs the codes defined by ADIF for Primary Administrative Subdivisions. For the following DXCC entities, however, DXKeeper uses codes different than ADIF's, performing translation during import and export operations to maintain ADIF compliance:

Entity Name	Primary Code (ADIF)	Primary Code (DXKeeper)	Secondary Code (DXKeeper)
Franz Josef Land	FJL	AR	AR-32
Lord Howe Is	LH	NSW	
Malyj Vysotskij	MV	LO	LO-24
Macquarie Is	MA	TAS	
Minami Torishima	MT	10	100007
Ogasawara	O	10	100007

As shown in the above table, DXKeeper also defines Secondary Administrative Subdivision codes for several DXCC entities where ADIF does not define such codes.

Capture Window Items

call	required	<p>station callsign</p> <ul style="list-style-type: none"> striking the <enter> key is equivalent to clicking the Lookup button striking CTRL-<enter> is equivalent to clicking the Log button striking the ESC key or clicking on the ? button to the left of this field filters the Log Page Display for previous QSOs with this station striking the INS key is equivalent to clicking the Start button keyboard shortcuts navigate to other Capture Window items the label of this field indicates the number of previous QSOs after the Log Page Display has been filtered for previous QSOs clicking on the label of this field will display the main log window, should it be minimized
RST sent	optional	<p>signal report sent</p> <ul style="list-style-type: none"> if the run-mode box is checked, clicking the Lookup button initializes this field to 59 (if the mode is SSB or FM) or to 599 (if the mode is CW, RTTY, or PSK) striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
RST rcvd	optional	<p>signal report received</p> <ul style="list-style-type: none"> if the run-mode box is checked, clicking the Lookup button initializes this field to 59 (if the mode is SSB or FM) or to 599 (if the mode is CW, RTTY, or PSK) if the Set QSO start when RST Rcvd box is checked, entering a received signal report <ul style="list-style-type: none"> designates the QSO start time hides the Start button until the QSO is logged or cleared displays the QSO start time striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items

tx frequency	optional	<p>transmit frequency in mHz</p> <ul style="list-style-type: none"> if Commander is running and a call is specified, clicking the Lookup button or clicking the ? button to the left of this field initializes the field to your transceiver's current frequency if Commander is not running and a call is specified, clicking the Lookup button or clicking the ? button to the left of this field initializes the field to its value in the previously-logged QSO striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
name	optional	<p>operator's name</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
pri sub (name of primary administrative subdivision, e.g. state or district)	optional	<p>primary administrative subdivision</p> <ul style="list-style-type: none"> clicking the ? button displays the Capture Administrative Subdivision Selector window, which lets you choose the primary administrative subdivision by name or by code striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
QSL requested	optional	check if the operator asked you to QSL (initial value is set by the Preset 'QSL Requested' checkbox)
QSL via	optional	<p>QSL route</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items double-clicking invokes the Address Editor
use bureau	optional	check to designate that this QSO should be QSL'd via the bureau (initial value is set by the Preset 'use bureau' checkbox)
grid 1	optional	<p>Maidenhead grid square</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
LotW member	optional	check if this callsign participates in the ARRL's Logbook of the World
IOTA	optional	<p>RSGB Islands On The Air designator</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
eQSL.cc member	optional	check if this callsign participates in the eQSL.cc

pwr	optional	transmit power (watts) <ul style="list-style-type: none"> double-clicking sets the Default Transmit Power to the power specified in this field striking SHIFT-<enter> sets the Default Transmit Power to the power specified in this field striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
comments	optional	QSO comments and notes <ul style="list-style-type: none"> if this item is not visible, strike the ~ button to the left of the QSL msg selector striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items double-clicking invokes the Field Editor
QSL msg	optional	QSL message selector <ul style="list-style-type: none"> if this item is not visible, strike the ~ button to the left of the notes item striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
contest ID	optional	contest identifier <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
grid 2	optional	Second Maidenhead grid square for a QSO partner operating on a grid square boundary <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
grid 3	optional	Third Maidenhead grid square for a QSO partner operating on a grid square boundary <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
grid 4	optional	Fourth Maidenhead grid square for a QSO partner operating on a grid square boundary <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items

SOTA	optional	<p>Summits on the Air reference</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
user-defined items 0, 1,2, and 3	optional	<p>User-defined items</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
sat name	optional	<p>satellite name</p> <ul style="list-style-type: none"> clicking the Log button with a satellite name specified will log the QSO with its Propagation mode item set to SAT striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
DXCC	required	<p>DXCC prefix</p> <ul style="list-style-type: none"> clicking the Lookup button or clicking the ? button to the left of this field chooses the DXCC prefix associated with the Callsign striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
mode	optional	<p>mode</p> <ul style="list-style-type: none"> if Commander is running and a call is specified, clicking the Lookup button or clicking the ? button to the left of this field initializes the field to your transceiver's current mode if Commander is not running and a call is specified, clicking the Lookup button or clicking the ? button to the left of this field initializes the field to its value in the previously-logged QSO striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
rx frequency	optional	<p>receive frequency in mHz</p> <ul style="list-style-type: none"> if Commander is running and a call is specified, clicking the Lookup button initializes this field to your transceiver's current frequency if Commander is not running and a call is specified, clicking the Lookup button initializes this field to its value in the previously-logged QSO striking CTRL-<enter> is equivalent to clicking the Log button double-clicking sets the rx frequency to the tx frequency keyboard shortcuts navigate to other Capture Window items

QTH	optional	station QTH <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
sec sub (name of secondary administrative subdivision, e.g. state or district)	optional	secondary administrative subdivision code <ul style="list-style-type: none"> clicking the ? button displays the Capture Administrative Subdivision Selector window, which lets you choose the secondary administrative subdivision by name or by code striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
cont	optional	Continent <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
ARRL	optional	ARRL section (present if the callsign is associated with a DXCC entity governed by the ARRL) <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
DOK	optional	DARC DOK code (present only for German callsigns) <ul style="list-style-type: none"> clicking the ? button displays the Capture Award Selector window, which lets you select a DOK by name or by code striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
region	optional	<p>for stations in Austria, Italy, Scotland, Svalbard, and Turkey, the station's Region as defined by CQ for its Marathon award and DARC for its WAE award</p> <ul style="list-style-type: none"> clicking the ? button displays the Capture Award Selector window, which lets you select a CQ or WAE region by name or by code <p>for stations in England, Guernsey, Ireland, Isle Of Man, Jersey, Northern Ireland, Scotland, and Wales, a Worked All Britain code</p> <p>Note: if you are pursuing both the Worked All Britain and Marathon awards or both the Worked All Britain and WAE awards, then log the appropriate Worked All Britain code with Scottish stations; the Marathon reporting will interpret this code correctly</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items

CQ	optional	<p>CQ zone</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
ITU	optional	<p>ITU zone</p> <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
az	optional	<p>antenna azimuth in degrees</p> <ul style="list-style-type: none"> if DXView is running with antenna rotator control enabled and a call is specified, clicking the Lookup button initializes this field to the most recent heading sent to the rotator if DXView is not running or running with antenna control enabled and a call is specified, clicking the Lookup button initializes this field to its value in the previously-logged QSO striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
path	optional	<p>antenna path</p> <ul style="list-style-type: none"> if DXView is running with antenna rotator control enabled and a call is specified, clicking the Lookup button initializes this field to the path selected when the most recent heading was sent to the rotator if DXView is not running or running with antenna control enabled and a call is specified, clicking the Lookup button initializes this field to its value in the previously-logged QSO striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
myQTH ID	optional	<p>unique myQTH ID associated with one of the QTHs defined on the Main window's myQTHs tab</p> <ul style="list-style-type: none"> clicking the Lookup button or clicking the ? button to the left of this item initializes the field to the contents of the default myQTH ID textbox on the Log Settings panel of the Configuration window's Log tab striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items

tx#	optional	transmitted sequence number <ul style="list-style-type: none"> automatically increments after each QSO if Contest is not blank striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
rx#	optional	received sequence number <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
user-defined items 4, 5,6, and 7	optional	User-defined items <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
sat mode	optional	satellite mode <ul style="list-style-type: none"> striking CTRL-<enter> is equivalent to clicking the Log button keyboard shortcuts navigate to other Capture Window items
Last QSO	{displayed information}	if the Display Previous QSOs on Lookup option is enabled, displays the date, time, frequency and mode of the most recent QSO with the callsign