# DXKeeper Help

DXKeeper enables you to
- log (record and manage) QSOs
- track progress towards DXing objectives
- print QSL cards and labels
- QSL electronically via eQSL.cc
- import ADIF-compliant log files.
- export ADIF-compliant log files.

DXKeeper is a member of the DXLab suite, and interoperates with DXView, Commander, SpotCollector, and WinWarbler.

**Prerequisites**

**Downloading and Installation**

**Activities**
   DXKeeper provides a tabbed dialog for each of its primary activities. Click on the appropriate tab for access to the controls supporting that activity:
- **Logging** (recording and managing) QSOs
    - Logging a QSO with the Main window
    - Logging QSOs with the Capture window
    - Viewing and editing logged QSOs
    - Filtering the Log Page Display
    - Modifying QSOs en masse
    - Generating QSLs via the Log Page Display
    - Generating log reports
    - Creating and using scripts
    - Updating QSOs in the Log Page Display with Callbook information
    - Using keyboard shortcuts
    - Making Log backups, and recovering from backups

- **QSLing**
    - Batch QSL operations
    - Immediate QSL operations
    - Choosing the QSL kind: paper, eQSL.cc, or LotW
    - Identifying QSOs for which QSLs should be sent
    - QSLing with paper
    - QSLing with eQSL.cc
    - QSLing with LotW
    - QSLing via external applications
    - Paper QSL Media

- **Tracking Progress**
    - Checking and analyzing DXCC and Toplist progress
    - Generating progress reports
    - Generating and processing a DXCC submission
    - DXCC Database

- **Importing log files**
    - Options
    - Interactions with other configuration settings

- Exporting log files
- Managing multiple QTHs
- Contesting
- Configuring DXKeeper
    - QSLing
    - Defining bands
    - Defining or eliminating modes

- Backup and Recovery
    - Making a backup copy of your log file
    - Recovering your log file from a backup copy

**Reference**
- Log Items (field descriptions)
- Filtering the Log Page Display with SQL

# DXKeeper Prerequisites

To use DXKeeper, you need
- a PC running Windows 95, Windows 98, Windows 2000, or Windows NT, ideally
  - o    133 MHz Pentium or better
  - o    64 MB RAM or better
- an SVGA display or better

If you plan to run applications such as DXView, Commander, and/or WinWarbler in parallel with DXKeeper, additional memory may be required for satisfactory performance.

# DXKeeper Download and Installation

All DXLab applications are produced using a process that generates frequent releases, referred to as **developme**
**releases**. Every few months, a stable development release is used to create a **full release** containing all software
documentation components. Development releases contain only those components that have changed since the
recent full release. Thus installing DXKeeper on a PC for the first time is a two-step process:

      install the most recent full release
      install the most recent development release

The instructions below describe how to install the most recent full release. When you've completed these steps, c
http://www.qsl.net/dxlab/download.htm for access to the latest development release and instructions for installing

| Step | Directions |
|------|------------|
| **1** | Create the application folder in which DXKeeper will reside, such as: <br> C:\Program Files\DXKeeper |
| **2** | In the application folder, create an installation subfolder in which the downloaded and extracted files will reside, such as: <br> C:\Program Files\DXKeeper\Install |
| **3** | Download DXKeeper308Archive.exe, a 14 MB self-extracting executable file that contains DXKeeper and its associated files. When prompted, direct your browser to store this file into the installation subfolder you created in step 2; when downloading is complete, proceed to step 4. <br><br> To optimize the downloading of a file of this size, consider using a download manager such as Download Express .at http://metaproducts.com/mpDE-AY.html. <br><br> If downloading a single large file is infeasible, you can download each of the following 12 files, none larger than 1.5 MB,  into the installation subfolder you created in step 2: |

- DXKeep1.CAB
- DXKeep2.CAB
- DXKeep3.CAB
- DXKeep4.CAB
- DXKeep5.CAB
- DXKeep6.CAB
- DXKeep7.CAB
- DXKeep8.CAB
- DXKeep9.CAB
- DXKeep10.CAB
- DXKeep11.CAB
- setupArchive.exe

After downloading these files, run setupArchive.exe  - in its WinZip Self-Extractor dialog box, direct it
to place the unzipped files into the installation subfolder you created in step 2, and click the Unzip
button. After extraction completes, click the Close button and proceed to step 5.

**4**       Run DXKeeper308Archive.exe - in its WinZip Self-Extractor dialog box, direct it to place the unzipped files into the installation subfolder you created in step 2, and click the Unzip button. After extraction completes, click the Close button. The following files should now be present in the installation subfolder:

- DXKeeper308Archive.exe
- DXKeep1.CAB
- DXKeep2.CAB
- DXKeep3.CAB
- DXKeep4.CAB
- DXKeep5.CAB
- DXKeep6.CAB
- DXKeep7.CAB
- DXKeep8.CAB
- DXKeep9.CAB
- DXKeep10.CAB
- DXKeep11.CAB
- setup.exe
- setup.lst

**5**       To install DXKeeper, run the setup.exe program in the installation subfolder. Ignoring the setup program's request to close all running applications may result in error messages during the installation process, and possibly a faulty installation.

After copying several system files, the setup program may ask that you reboot your PC before continuing with the setup. If, after rebooting, your PC does not run setup.exe on its own, direct it to do so.

The setup program may report that the files being installed are older than files already installed on your system, and ask whether you want to over-write the existing newer files with the older files—you should decline.

**6**       DXKeeper requires access to a DXCC database; step 5 above installs one, but DXCC databases are typically updated monthly.  If you've installed, or are planning to install DXView, then DXKeeper will automatically use DXView's DXCC database; updating DXView's DXCC database will automatically give DXKeeper access to the most up-to-date DXCC data.

If you are not planning to use DXView, however, you should download the most recent DXCC database update at http://www.qsl.net/DXView/web/DXCC.exe ; when you run this self-extracting executable, be sure to set its "unzip to folder" to DXKeeper's Databases folder.

**7**       Now that you've installed the full release, check to see if a development upgrade is available.

**8**       After DXKeeper is installed and you've verified that it works, you may delete the installation subfolder and the files it contains.

You can uninstall DXKeeper by running the Add/Remove Programs applet on the Windows control panel.

If you have questions or suggestions, please post them on the DXLab reflector at http://groups.yahoo.com/group/dxlab/ .

if you're not a member, you can sign up. At http://www.qsl.net/dxlab/reflector.htm .

# DXKeeper: Logging (recording and managing) QSOs

DXKeeper allows you to capture as many as 49 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 6 groups:

- QSO items
- Auxiliary items
- QSL items
- Online QSL items
- Award items
- Contest items
- Satellite 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 Aux, QSL, Awards, and Contest panels using the Log Panel checkboxes in the Configuration screen's Log tab or using the six checkboxes to the right of the QSO panel. All 49 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.

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 **Log QSOs** items.

**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:\program files\DXKeeper` and your callsign is AA6YQ/KH6, for example, DXKeeper will create and open the file `c:\program files\DXKeeper\aa6yq-kh6.mdb`. This log file may be all you ever need. But if you participate in contests or operate from multiple locations, you may wish to maintain multiple log files; the controls in the Configuration screen'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

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.

**Logging a QSO using the Main window's Log QSOs tab**
There are three basic steps in logging a QSO:

1. create a new QSO record
2. capture the information items you care about
3. save the QSO record

To create a new QSO record, click the **New** button. This saves any previously open QSO record, initializes all of the textboxes used to capture information items to blanks, and places the cursor in the call item awaiting your entry of a callsign.

If, after entering or modifying a callsign in the call item, you strike the **Enter** key or the **Tab** key or immediately click the mode item selector, DXKeeper will

- automatically initialize many information items for you
- color the callsign to reflect its DXCC/Challenge/Toplist award status:
  - red: the callsign's DXCC entity is unworked, the entity-band is sought and unworked, or the entity-mode is sought and unworked
  - blue: the callsign's DXCC entity is worked but not confirmed, or the entity-band is sought and worked but not confirmed, or the entity-mode is sought and worked but not confirmed
  - black: the callsign's DXCC entity is confirmed, the entity-band is either confirmed or not sought, and the entity-mode is either confirmed or not sought
- if the Displays previous QSOs on lookup box is checked, DXKeeper will show all previous QSOs with the callsign in the Log Page Display
- if a Callbook is installed, selected, and configured for automatic initialization, DXKeeper will query the Callbook's database for name, location, and QSL route information.

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 field. 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 field.

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.

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 a new QSO, you can instead click the **New** button, which will save the information and create a new QSO record. With the cursor in any item textbox, you can perform these operations without lifting your hands from the keyboard; strike **Ctrl-L** or **Ctrl-J** respectively.

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 tem 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

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 on the caption of an item *selects* 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 keyboard focus in the selected item in that QSO

Logging a new QSO automatically selects the call item.

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.

If you are manually entering completed QSOs via the Main window, you will find it convenient to un-check the optimize for realtime QSO entry setting:
- the begin item 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 freq item will be initialized to the 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)
- 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
- clicking the **CBA** button will query the selected Callbook database for name, QTH information, QSL route, and address information,, but will not over-write fields already containing information; depressing the **Ctrl** key while clicking this button clears the name, QTH, and address fields before querying the Callbook
- double-clicking the end field copies 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 are copied into the end field

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 | 12:24:00 |
| 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 |

Striking the **Enter** key in the QTH field initiates a word-by-word inspection of the QSL field.
- If the QTH field contains a valid grid square and the QSO's, then the QSO's Grid Square item will be set to the Grid Square found in the QTH field
- If the QTH field 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 field
- If the QTH field 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 field
- If the QTH field 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 field
- If the State, Province, ARRL Section, and Grid Square items found in the QTH field unambiguously identify a CQ Zone, then the QSO's CQ zone item will be derived from the information found in the QTH field
- If the State, Province, ARRL Section, and Grid Square items found in the QTH field unambiguously identify an ITU Zone, then the QSO's ITU zone item will be derived from the information found in the QTH field

To make it easy to copy QSL route information into a QSO record, the address field 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 field and drop it there. Semicolons in the selected text will be converted to newline sequences in the address field. The drag and drop action replaces any pre-existing address field contents with the selected source text. You can also invoke the Address Editor by double-clicking the address field or the via field.

Double-clicking the notes or QSLMsg time 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.

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.

**Logging QSOs using the QSO 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 21 items, all but four of which (Call, DXCC, Frequency, and Mode) are optional.

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, state, county, and grid items are cleared
- if the **Ctrl** or **Shift** key is depressed when the **Lookup** button is clicked, the name, QTH, state, county, and grid fields are cleared
- the callsign is colored to reflect its DXCC/Challenge/Toplist award status:
    - o red: the callsign's DXCC entity is unworked, the entity-band is sought and unworked, or the entity-mode is sought and unworked
    - o blue: the callsign's DXCC entity is worked but not confirmed, or the entity-band is sought and worked but not confirmed, or the entity-mode is sought and worked but not confirmed
    - o black: the callsign's DXCC entity is confirmed, the entity-band is either confirmed or not sought, and the entity-mode is either confirmed or not sought
- if the Display Previous QSOs on Lookup box is checked
    - o filters the log to only display previous QSOs with the Call or a variant of the Call (e.g. with a portable, QRP, or mobile designator)
    - o sets the DXCC, name, QSL via,  QTH, gridsquare, IOTA, QSL address, county, state, ITU, CQ, and continent items using information found in previous QSOs, with priority given to information extracted from the most recent QSOs (the QSL address, county, state, ITU, CQ, and continent items are not visible in the Capture window, but will be logged with the other items)
- if a Callbook is installed, selected, and configured for automatic initialization, it's database is queried to set the name, QTH, state, county, IOTA, QSL address, QSL Via, and gridsquare items, if not already set (the QSL address item is not visible in the Capture window, but it will be logged with the other items)
- updates the DXCC item, if not already set, based on the Call's prefix and updates DXView's display based on the prefix and grid fields
- updates the Bearing and Path items to the values used in the last rotator control command issued by DXView (if running and rotator control is enabled)
- 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 Frequency and Mode items from your transceiver's current settings (if Commander is running) or from their previous values (if CI-V Commander isn't running)
- sets the RST sent and RST rcvd items if either the run-mode box or the Initialize RST fields box is checked

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.

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.

Clicking the **Begin** button, entering a received signal report in the **RST rcvd** field with the Set QSO start when RST Rcvd box is checked, or striking Alt-B in any Capture window field

- designates 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

Clicking the **End** button
- designates 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. This is accomplished by setting the QSO's QSL Sent and QSL Rcvd fields 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.

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

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.

Striking the **Enter** key in the **QTH** item initiates a word-by-word inspection of the  QSL item.
- If the QTH item contains a valid grid square and the QSO's, then the QSO's Grid Square 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 clears all items and presents the **Begin** button; if Contest-mode checked, the TX# item is not cleared.

Clicking the **Log** button
- verifies that all required items are present
- computes the DX station's latitude and longitude if the grid square 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
- 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 **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 is set to **Y**
  - the QSO's eQSL date sent is set to the current UTC date
  - the QSO's eQSL rcvd 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.

- 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
- 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 toggle between displaying the notes item or the QSL msg selector by striking the **~** button. 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.

While DXKeeper can log a receive frequency (distinct from a transmit frequency) for each QSO, the Capture window does not provide a means of recording this information. For cross-band QSOs -- Satellite QSOs, for example -- use the **Main** window for logging.

If SpotCollector is running and has been configured to generate cluster spots, then clicking the **Spot** button will use the Capture window's Call, Freq, 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 band is 6m or above and a gridsquare has been captured, it will also be included as a spot note; if the operator's gridsquare is specified in the current myQTH, then the spot note will be of the form "DX_Grid > Operator_Grid". 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.

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.

**Viewing and editing logged QSOs**
The Log Page Display contains one entry for each QSO in the current Log file, subject to settings in the Filter panel. Each such row contains multiple cells, each cell containing an information item stored for that QSO. The caption at the top of each column identifies the information item in the cells below it.

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 item
- if an item has been selected, it will receive keyboard focus

The four VCR-like control buttons in the **Log QSOs** tabbed dialog allow you to select the first, previous, next, or last QSO in the current Log file. You can similarly navigate the Log Page Display using the **CTRL-Home**, **PageUp**, **PageDown**, and **CTRL-End** keys respectively.

You can edit items in the currently selected QSO by directly modifying the item textboxes; 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

You can make your changes permanent by clicking the **Log** 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 **CFM** button in the QSL panel makes it easy to confirm 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)

You can delete the currently selected QSO by clicking the **Delete** button, and then clicking the **Yes** button in the subsequently displayed confirmation dialog box. You can delete all QSOs in the Log Page Display by depressing the CTRL key while clicking the **Delete** button.  There is no undo operation for a confirmed delete.

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.

**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. 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 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 do it again, the Log Page will be sorted in descending order.

For more sophisticated sorts, click the **Adv** button to the right of the **Sort** panel to display DXKeeper's **Advanced Logs Sorts, Filter, and Modifiers** window. In this window's **Advanced Sort** panel, you can compose four different advanced sorts, each containing up to three sort fields. To compose a sort, select the first field to be sorted in the **ADIF field name** control at the top of the window; then double-click in the **First Field** textbox. If the first field is to be sorted in ascending order, click the **First Field** panel's **Ascend** button, otherwise click the **Descend** button. If there is a second field to be sorted, specify it in the **Second Field** panel; if there is a third field to be sorted, specify it in the **Third Field** panel. If necessary, use the **X** buttons to the right of a sort field textbox to clear its contents. Double-clicking one of the four sort textboxes at the bottom of the **Advanced Sort** panel will assemble your specified sort in that textbox. To apply a sort, click the **Select** radio button to its right, and click the **Adv** button in the **Main** window's **Sort** panel. You can directly edit an Advanced sort; doing so will reset the **Select** radio button to its right. Click an Advanced sort's **Select** radio button with the **Adv** button in the **Main** window's **Sort** panel already selected will immediately sort the Log Page Display.

**Filtering the Log Page Display**
The controls in the **Filter** panel, located at the bottom of the **Log QSOs** tabbed dialog, allow you to control which QSOs appear in the Log Page Display. Note that QSLing and Exporting operations act only upon QSOs appearing in the Log Page Display, so you can use filtering to QSL or Export a specific subset of the QSOs in your log.

At startup, the Filter is set to None, thus the Log Page Display contains rows for every QSO in the current log file. If you enter a callsign into the **Filter textbox** and click the **Filter** panel's **Call** button, the Log Page Display removes rows 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 rows 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 = UL) |
| 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`.

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.

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.

The **UTC** filter allows you to restrict the Log Page Display to those QSOs falling within a specified range. You can specify this range as being
- **within** a certain number of minutes of a particular date-and-time (useful for locating QSOs for which the callsign may have been incorrectly logged), or
- **after** one date-and-time and **before** another date- and-time (useful for exporting QSOs logged during a particular contest); if an **after/before** range is selected but no **before** date-and-time is specified when the **UTC** filter is invoked, the current date-and-time is used for this parameter.

To specify the **UTC** filter range, depress the Control key while clicking the filter panel's **UTC** button, or click the **Adv** button to the left of the **Filter** panel. This displays DXKeeper's **Advanced Logs Sorts, Filter, and Modifiers** window, whose **UTC Filter** panel lets you choose between **within** and **after/before** ranges, and specify the parameters for that range. Date-and-time parameters can be specified using your locale's standard date/time format, the `dd-mmm-yyyy hh:mm:ss` format, or the `yyyy-mm-dd hh:mm:ss` format.

After specifying the **UTC** filter range, you can activate the filter by clicking the Filter button in the **Advanced Logs Sorts, Filter, and Modifiers** window's **UTC Filter** panel. Alternatively, you can activate the **UTC** filter by placing a valid date-and-time in the **Filter** panel on the Main window's **Log QSOs** tab and then clicking the **Filter** panel's **UTC** button. If the **Advanced Logs Sorts, Filter, and Modifiers** window's **UTC** panel specifies a **within** range, then the date-and-time in the Main window's **Filter** panel specifies the center of that range;  if the **Advanced Logs Sorts, Filter, and Modifiers** window's **UTC** panel specifies an **after/before** range, then the date-and-time in the Main window's **Filter** panel specifies the beginning of that range.

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

Clicking the **SQL1** button invokes the first SQL search defined on the **Advanced Logs Sorts, Filter, and Modifiers** window, as described below.

Clicking the **Broke** button displays 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
- 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

Clicking the **Adv** button located between the **Sort** and **Filter** panels displays the DXKeeper **Advanced Logs Sorts, Filter, and Modifiers** window, which enables you to

- specify the UTC filter's range and activate the **UTC filter**
- specify one or more bands and activate the **Band filter**
- specify one or more modes and activate the **Mode filter**
- specify up to four structured query language (SQL) queries and invoke them as filters; double-clicking in an SQL Query Filter textbox appends the contents of the **ADIF field name** control at the top of the window; the first of these queries can be directly invoked from the **Main** window's Filter panel by clicking the SQL1 button.
- modify a specified item in every QSO in the Log Page Display
- execute a script file containing `Filter`, `Retain Filter`, `Sort`, and `Modify` commands; note that a script containing one `Filter` and one `Retain Filter` command provide a means of storing an effectively unlimited number of structured query language (SQL) queries for use as Log Page Display filters

The filter setting -- whether based on callsign, DXCC prefix, time window, band, mode, broken, or an SQL query -- is shown in the Filter panel's caption.

To reset the Log page filter so that all QSOs are visible there, click the Filter panel's **X** button.

Filter's 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

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.

**Generating QSLs via the Log Page Display**
You can individually place a QSO in the QSL Queue by right-clicking on its entry in the Log Page Display and then left-clicking on the Add to QSL Queue option. If the QSL Queue is empty, right-clicking on a QSO in the Log Page Display will provides a set of immediate QSLing options:

- Print QSL card
- Print Envelope
- Upload to eQSL.cc
- Upload to LotW

**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, as described below.

**Plotting QSOs**
If DXView is running, the **Plot** button conveys all QSOs in the Log Page Display to DXView for display on its world map.

**Modifying QSOs *en masse***
The **Advanced Logs Sorts, Filter, and Modifiers** window provides two facilities for applying modifications to many QSOs: the **Modify QSOs** panel, and the **Script** 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.

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 ADIF field 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's ADIF field 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's ADIF field 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 **New item value**. In this way, consistency between `DXCCPrefix` and `DXCCID` is maintained.

- You can use `<current>` in the **New item value** to represent the item's current value in the logged QSO; thus an **Item's ADIF field name** of `Call` and a **New item value** of `<current>/KH6` will change `AA6YQ` to `AA6YQ/KH6` and `K4IK` to `K4IK/KH6`.

- You can use `<compute>` in the the **New item value** to compute the value of certain items from other items in the QSO:

| Item | Computation | Prerequisite |
|---|---|---|
| lat | compute latitude and longitude from grid square | • valid grid square |
| lon | compute latitude and longitude from grid square | • valid grid square |
| grid | compute grid square from latitude and longitude | • valid latitude and longitude |
| dist | compute distance from grid square or latitude and longitude | • valid grid square or latitude and longitude<br>• antenna path set to short or long<br>• myQTHID specifies a QTH that includes a valid latitude and longitude, or default QTH latitude and longitude is specified |

| | | |
|---|---|---|
| antenna az | compute antenna azimuth from grid square or latitude and longitude | • valid grid square or latitude and longitude<br>• antenna path set to short or long<br>• myQTHID specifies a QTH that includes a valid latitude and longitude, or default QTH latitude and longitude is specified |

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

| **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 `<ADIF field name>` in the **New item value** to represent the value of the designated ADIF field in the current QSO. If the **Item's ADIF field name** is set to `Comment` and the **New item value is**

  `worked <Name> on <Band>`

  then a 20m QSO with ON4UN will have its Notes item set to
  `worked John on 20m`

If you modify the QSL Rcvd or LotW Received items of one or more QSOs, the Log's Award Progress may requiring updating; DXKeeper will prompt you to invoke the Recompute function after any such change, but if you are making a sequence of changes involving either of these items, it will be faster to run Recompute once after all changes are complete.

**Scripts**
The **Script** panel contains a single **Run** button that when clicked
- lets you choose a script file containing Filter, Retain Filter, LogReport, and Modify commands; script filename extensions can be either `.txt` or `.scp`
- if the chosen script file will modify your log, offers to create a backup copy of your log; accepting this offer is highly recommended
- executes each of these commands in sequence
- records each executed command in a script log file with an indication as to success or failure

The script log file is created in the folder in which the script file resides; its filename is constructing 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` .

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.

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. They 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.

The `LogReport` command generates a log report with one entry for each QSO visible in the Log Page Display, and places that report in a file in the specified filename. For example, the command

```
LogReport C:\Program Files\DXKeeper\Reports\6M QSOs.txt
```

will produce a log report in the file `6M QSOs.txt` in the folder `C:\Program Files\DXKeeper\Reports`.

- any occurrence of <stationcallsign> in the report filename will be replaced with the Default station callsign
- any occurrence of < operator> in the report filename will be replaced with the Default operator callsign
- any occurrence of <ownercallsign> in the report filename will be replaced with the Default owner callsign
- any occurrence of <date> in the report filename will be replaced with the current UTC date in the format dd-mmm-yyyy (e.g., 25-JAN-1952)
- any occurrence of <ISOdate> in the report filename will be replaced with the current UTC date in the format yyyy-mm-dd (e.g., 1952-01-25)

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, as described below.

The `Modify` command designate an item and provide a new value for that item; its operation is comparable to the **Modify QSOs** panel. 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 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 notes 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, you can reference the contents of any other item in the QSO by enclosing that item's ADIF 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 Notes field.

You can also use the new value field to add or subtract a time interval from the QSO_Begin or QSO_End item of each selected QSO:

| 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`.

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 `Modify` command from being executed, and will be recorded in the script log file.

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.

**Updating QSOs in the Log Page Display with Callbook information**
From the **Main** window's Log QSOs tab,
- clicking the **CBA** button will query the selected Callbook database for name, QTH information, and address information and add these to the current QSO, but will not over-write fields already containing information
- depressing the **Ctrl** key while clicking the **CBA** button clears the current QSO's name, QTH, and address fields before updating these fields by querying the Callbook
- depressing the **Alt** key while clicking the **CBA** button, updates every QSO in the Log Page Display by querying the selected Callbook database for name, QTH information, and address information without over-writing fields already containing information
- depressing both the **Alt** and **CTRL** keys while clicking the **CBA** button will replace the name, QTH information, and address information in every QSO in the **Log Page Display** by querying the selected Callbook.

If you clicking the CBA button with the Alt key depressed, DXKeeper will offer to create a backup copy of your log before proceeding with the update; doing so is highly recommended. Note that applying these operations to large numbers of QSOs will take significant time, particularly if you haven't copied your Callbook's database from CDROM to a hard drive.

**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, allowing you to create and retain log backups as frequently as every day. 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.

**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 SpotCollector if its 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 and timestamp `_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.

**Configuring the Log Page Display**
When first installed, DXKeeper's Log Page Display is configured to show 8 of the 31 items associated 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. This control lets you modify the Log Page Display's column captions, change column widths, and change the column order.

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.

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.

You can save the current Log Page Display's layout to a file, and you can restore a layout stored a previously saved file.

# DXKeeper: 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 *State* item |
| Alt-B | moves the mouse cursor to the *QSO begin* item |
| Alt-C | moves the mouse cursor to the *Call* item |
| Alt-D | moves the mouse cursor to the *DXCC* item |
| Alt-E | moves the mouse cursor to the *Notes* item |
| Alt-F | moves the mouse cursor to the *Freq* item |
| Alt-G | moves the mouse cursor to the *Grid* item |
| Alt-H | moves the mouse cursor to the *QSL Message* item |
| Alt-I | moves the mouse cursor to the *Iota* 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 *Address* item |
| Alt-L | saves the QSO (equivalent to clicking the **Log** button) |
| Alt-M | moves the mouse cursor to the *Mode* item |
| Alt-N | moves the mouse cursor to the *Name* item |
| Alt-O | moves the mouse cursor to the *County* item |
| Alt-P | moves the mouse cursor to the *Province* item |
| Alt-Q | moves the mouse cursor to the *QTH* item |
| Alt-R | moves the mouse cursor to the *RST rcvd* item |
| Alt-S | moves the mouse cursor to the *RST sent* item |
| Alt-T | moves the mouse cursor to the *Contest* item |
| Alt-U | moves the mouse cursor to the *QSL_Sent* item |
| Alt-V | moves the mouse cursor to the *QSL Via* item |
| Alt-W | moves the mouse cursor to the *TX serial#* item |
| Alt-X | moves the mouse cursor to the *Band* item |
| Alt-Y | moves the mouse cursor to the *Satellite Name* item |
| Alt-Z | moves the mouse cursor to the *RX serial#* text box |

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

| Ctrl Key Shortcut | Effect |
|---|---|
| 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-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-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 |
| 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 |
| 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 |

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-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-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 |
| 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 |

**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 *State* item |
| Alt-B | <ul><li>designates the QSO start time</li><li>hides the **Begin** button until the QSO is logged or cleared</li><li>displays the QSO start time</li></ul> |
| Alt-C | moves the mouse cursor to the *Call* item |
| Alt-D | moves the mouse cursor to the *DXCC* item |
| Alt-E | moves the mouse cursor to the *Notes* item |
| Alt-F | moves the mouse cursor to the *Freq* item |
| Alt-G | moves the mouse cursor to the *Grid* item |
| Alt-H | moves the mouse cursor to the *QSL Message* item |
| Alt-I | moves the mouse cursor to the *Iota* 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 *Pwr* 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 *Mode* item |
| Alt-N | moves the mouse cursor to the *Name* item |
| Alt-O | moves the mouse cursor to the *County* item |
| Alt-P | moves the mouse cursor to the *Province* item |
| Alt-Q | moves the mouse cursor to the *QTH* item |
| Alt-R | moves the mouse cursor to the *RST rcvd* item |
| Alt-S | moves the mouse cursor to the *RST sent* item |
| Alt-T | moves the mouse cursor to the *Contest* item |
| Alt-U | toggles the *QSL request* checkbox |
| Alt-V | moves the mouse cursor to the *QSL Via* item |
| Alt-W | moves the mouse cursor to the *TX serial#* item |
| Alt-X | moves the mouse cursor to the *CQ* item |
| Alt-Y | moves the mouse cursor to the *ITU* item |
| Alt-Z | moves the mouse cursor to the *RX serial#* text box |

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

| Ctrl Key Shortcut | Effect |
| --- | --- |
| Ctrl-A | selects the field's contents |
| Ctrl-C | copies the selected text to the Windows clipboard |
| 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-V | pastes the text contents of the Windows clipboard |
| Ctrl-W | clears all Capture window fields and places the cursor in the Call field |
| 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 |

# DXKeeper: Tracking Progress

The **Check Progress** tabbed dialog tracks by-mode and by-band progress for each DXCC entity, considering each QSO in the current log file. Both QSL card and LotW confirmations (in QSL_Rcvd and Lotw Rcvd respectively) are considered in determining progress; if you check the Include eQSL.cc confirmations... box, QSOs confirmed by eQSL.cc will also be considered in determining progress.

**Checking and Analyzing DXCC and Toplist Progress**
The Award Progress panel displays a **Progress Grid** with one entry per DXCC entity; the panel below it 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
- **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 by the ARRL

If either of a QSO's QSL_Rcvd or LotW Rcvd fields are set to **I**, then the QSO is considered invalid for award tracking purposes. If both of a QSO's QSL_Rcvd and LotW Rcvd fields 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.cc confirmations... box is checked, then an **I** or **X** in the QSO's eQSL Rcvd field has an equivalent effect.

If the DXCC award objectives indicate 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 award objectives indicate 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 Include eQSL.cc confirmations... setting, the Progress Grid, Progress Details Grid, and other reports will not reflect the change until you invoke the Recompute function.

Note that RTTY mode progress includes credit for PSK31 QSOs. RTTY mode progress also includes QSOs in any other digital modes designated as eligible for DXCC RTTY 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
- double-clicking a band or mode cell in the Progress Grid
  - o   selects the associated DXCC entity
  - o   provides detailed award status in the Progress Details Grid
  - o   filters the Log Page display to show all QSOs with the DXCC entity in the selected band or mode
  - o   shows the Log Page display if the CTRL key was depressed when the Progress Grid entry was double-clicked
- double-clicking a column or row heading in the Progress Details Grid
  - o   filters the Log Page display to show all QSOs with the DXCC entity in the selected band **or** mode
  - o   shows the Log Page display if the CTRL key was depressed when the Progress Details Grid cell was double-clicked

- 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 mode
  - shows the Log Page display if the CTRL key was depressed when the Progress Details Grid cell was double-clicked

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 and mode, or on specific band-mode combinations. 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 the specified filter, click the Award Progress Filter panel's **Report** button; 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 Gird 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.cc if the Include eQSL.cc 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.cc 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.

**Generating Progress Reports**
DXKeeper can generate a wide variety of progress reports. The format of all dates used in these reports is specified via the Date Format panel on the Config window's Reports tab.

For a report containing every QSO visible in the Log Page Display, click the Report button on the Main window's Log QSOs tab. The contents of this report are governed by the Log Page Display filter. The order of fields, 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.

All other progress reports are requested via the Main window's Check Progress tab.

The **Summary** button on Main window's Check Progress tab 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 was 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 of the 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; see http://webpages.charter.net/goldenhartz/dxkeeper.html for suggestions and sample HTML.

Panels along the bottom of the **Check Progress** tab contain buttons that generate reports useful in pursuing awards:

- in the **DXCC, Challenge, TOP** panel,
  - clicking the **Progress** button generates a detailed DXCC progress text report for current and deleted DXCC entities; this report considers both QSL card  and LotW  confirmations; if the Include eQSL.cc confirmations... box is checked, eQSL.cc confirmations are also considered.
  - clicking the **Card Aging** button offers to *expire* any outstanding QSL whose age exceeds the specified Expiration age, and generates a text report of needed, outstanding QSL cards by DXCC prefix and age
    - an outstanding QSL is one whose QSO's QSL_Rcvd field contains **R** (for "requested")
    - an outstanding QSL's age is the number of weeks between the day the QSL was sent and the current date
    - a QSO is *expired* by setting its QSL_Rcvd field to **X**
    - whether or not you choose to have this function automatically *expire* QSOs whose age exceeds the specified Expiration age, the report will identify QSLs whose age exceeds this threshold
  - clicking the **by QSL Kind** button generates a text report showing DXCC confirmations by QSL card, eQSL.cc, LotW, and the combination of eQSL.cc and LotW; if the Include eQSL.cc confirmations... box is checked, this report shows the combination of  eQSL.cc, LotW and eQSL.cc confirmations.
- in the **VUCC** panel,
  - clicking the **Progress** button generates a VUCC progress text report for 6M and 2M QSOs visible in the Log Page Display. This report considers QSL card  confirmations. If the Include LotW confirmations... setting is enabled, then LotW confirmations are also considered; if the Include eQSL.cc confirmations... box is checked, eQSL.cc confirmations are also considered.
  - clicking the **Submission** button generates a VUCC submission text report for 6M and 2M QSOs visible in the Log Page Display that enumerates all confirmed QSOs for gridsquares not yet verified by the ARRL. This report considers QSL card  confirmations. If the Include LotW confirmations... setting is enabled, then LotW confirmations are also considered; if the Include eQSL.cc confirmations... box is checked, eQSL.cc confirmations are also considered.

- in the **Maidenhead** panel,
  - o clicking the **Fields** button generates a text report from QSOs visible in the Log Page Display showing all Maidenhead Fields confirmed or worked. This report considers QSL card confirmations. If the Include LotW confirmations... setting is enabled, then LotW confirmations are also considered; if the Include eQSL.cc confirmations... box is checked, eQSL.cc confirmations are also considered.
  - o clicking the **Gridsquares** button generates a text report from QSOs visible in the Log Page Display showing all Maidenhead Grid Squares confirmed or worked. This report considers QSL card  confirmations. If the Include LotW confirmations... setting is enabled, then LotW confirmations are also considered; if the Include eQSL.cc confirmations... box is checked, eQSL.cc confirmations are also considered.
- in the **Worked All...** panel,
  - o clicking the **WAS** button generates a text report from QSOs visible in the Log Page Display showing progress towards the ARRL Worked All States award (WAS). This report considers QSL card  confirmations. If the Include LotW confirmations... setting is enabled, then LotW confirmations are also considered; if the Include eQSL.cc confirmations... box is checked, eQSL.cc confirmations are also considered.
  - o clicking the **Counties** button generates a text report from QSOs visible in the Log Page Display showing progress towards the Worked All Counties award; an error report will be generated if QSOs whose County fields are inconsistent with their State fields are encountered
  - o clicking the **IOTA** button generates a text report from QSOs visible in the Log Page Display showing all Islands On The Air confirmed or worked; optionally, clicking the IOTA button will also create `IOTA_Worked` and `IOTA_Confirmed` update files for IOTAMem4WIN in DXKeeper's `Reports` sub-folder
  - o clicking the **WAC** button generates a text report from QSOs visible in the Log Page Display showing progress towards the ARRL Worked All Continents award (WAC); log entries whose *continent* item is empty will be updated from the DXCC database. This report considers both QSL card  and LotW  confirmations. This report considers QSL card confirmations. If the Include LotW confirmations... setting is enabled, then LotW confirmations are also considered; if the Include eQSL.cc confirmations... box is checked, eQSL.cc confirmations are also considered.
  - o clicking the **WAZ** button generates an HTML report from QSOs visible in the Log Page Display showing progress towards the CQ Worked All Zones award (WAZ) on the bands and modes specified in the WAZ Bands & Modes panel; log entries whose *CQ Zone* item is empty will be updated from the DXCC database.
  - o clicking the **WPX** button generates an HTML report showing progress towards the CQ Worked All Prefixes (WPX) award; all QSOs containing a WPX field are considered, regardless of the Log Page filter

Reports generated from the **VUCC**, **Maidenhead**, and **Worked All...**  panels 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. **Progress** reports generated from the **DXCC, Challenge, TOP pane**l show progress for all QSOs, whether or not the Log Page Display is filtered.

All generated reports are placed in an appropriately-named file in DXKeeper's `Reports` subfolder, and then immediately displayed using the default file viewer. To view the contents of this subfolder, click the **Reports** button.

DXCC-oriented progress reports use the awards tab settings to determine the bands and modes you are pursuing. If no awards tab boxes are checked, DXKeeper assumes that you are pursuing DXCC without focus on specific bands or modes.

The **Recompute** button initializes the current log file's progress grid from the DXCC database, and then updates the progress grid by examining each QSO in the current log. If the WPX box is checked, then this function also computes a WPX prefix for those QSOs for which one is missing. This operation also flags any QSO that is missing critical fields, or whose End occurs before its Beginning, or that contains an invalid callsign; QSOs flagged in this way are referred to as *broken*, and can be viewed using the Broke filter.

**Generating and Processing a DXCC Submission**

In the **DXCC, Challenge, TOP** panel, clicking the **Submission** button displays the **DXKeeper DXCC Submission window**, from which you can assemble a *DXCC Submission* -- a set of confirmed but unverified QSOs to be submitted to the ARRL's DXCC desk -- and generate the required DXCC Record Sheet to accompany your award application. A QSO is considered to be included in your DXCC Submission if either its QSL Rcvd or LotW Rcvd items are set to **S**. You can manually add a QSO to your DXCC Submission by setting either of these items to **S** using the Main window's **QSO panel** or **Online QSO** panel. The Assemble Submission function described below automatically expands your DXCC Submission to include all confirmed QSOs whose verification would advance your DXCC progress on the bands and modes selected in the DXCC/TOP Bands & Modes panel, choosing between QSL cards and LotW credits as directed by settings in the DXCC Submission panel.

- **Assemble Submission** - 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; in each such QSO, a QSL Rcvd item that is currently **Y** will be changed to **S** if Submit QSL cards is selected, or a LotW Rcvd item that is currently **Y** will be changed to **S** if Submit  LotW credits is selected; if a QSO's QSL Rcvd and LotW Rcvd are currently **Y** and if both Submit QSL cards and Submit  LotW credits are selected, then the DXCC Submission Preference determines which of QSL Rcvd or LotW Rcvd is set to **S**.
- **View Submission** - shows all QSOs visible in the Log Page Display that are included in the DXCC Submission; depressing the Ctrl key while invoking this function will show all QSOs included in the DXCC Submission whether or not they are visible in the Log Page Display.
- **Create Planning Report** - generates a report showing all QSOs visible in the Log Page Display that are included in the DXCC Submission, sorted by DXCC entity and showing what the QSO verifies: entity, band, and/or mode, and whether a QSL card or LotW credit is being submitted; this report also shows the total number of QSL cards and LotW credits in the DXCC Submission (more precisely, in the portion of the DXCC Submission visible in the Log Page Display).
- **Create Card Record Sheet** - generates a DXCC Record Sheet report showing all QSOs visible in the Log Page Display whose QSL Rcvd item is **S**, sorted by band and mode as specified by the DXCC desk.
- **Create LotW Record Sheet** - generates an LotW Record Sheet report showing all QSOs 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.
- **Verify Submission** - updates your log to reflect verification of your DXCC Submission by the ARRL's DXCC desk: for all QSOs visible in the Log Page Display, if a QSO's QSL Rcvd or LotW Rcvd item is currently **S** it is changed to **V**.
- **Reset Submission** - performs an "undo" operation on your DXCC Submission;  for all QSOs visible in the Log Page Display, if a QSO's QSL Rcvd or LotW Rcvd item is currently **S** it is changed to **Y**.

**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.qsl.net/dxkeeper/DXCC.zip  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.

# DXKeeper: Contesting

DXKeeper's support for contesting is enabled when you check the Contest-mode box, which 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 Ctlr-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 specific contest specified via the Contest ID setting, filtering the Log Page Display for previous QSOs with a specified station shows only QSOs 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. By choosing a unique Contest ID setting such as ARRL-DX-SSB-2003, DXKeeper will thus perform accurate contest-specific duplicate checking, even in a log containing non-contest QSOs and/or QSOs from other contests. 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..

The Contest style setting initializes the Increment TX serial# box,  and determines how transmit and receive exchanges are exported with each QSO in the appropriate Cabrillo template, as shown in the following table:

| Contest Style | Increment TX serial# | Cabrillo Template | Transmit Exchange | Receive Exchange |
|---|---|---|---|---|
| Anarts RTTY | | Anarts | recorded RST sent QTH CQ recorded begin time | recorded RST rcvd recorded RX# (note 5) |
| AP Sprint | ✔ | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| ARRL 10m | | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| ARRL 160m | | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| ARRL International DX | | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| ARRL VHF | | VHF | QTH Grid setting | recorded Grid |
| BARTG RTTY | ✔ | BARTG | recorded RST sent recorded TX# recorded begin time | recorded RST rcvd recorded RX# recorded notes (UTC time) |
| CQ VHF | | VHF | QTH Grid setting | recorded Grid |
| CQ Worldwide | | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |

| | | | recorded RST sent | recorded RST rcvd |
|---|---|---|---|---|
| CQ Worldwide RTTY | | HF | recorded RST sent TX Exchange setting (note 9) | recorded RST rcvd recorded RX# (note 10) |
| CQ WPX | ✔ | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| IARU | | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| JIDX CW | | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| North American QSO Party | ✔ | NA | recorded TX# First name setting QTH state setting | recorded RX# recorded name recorded state |
| North American Sprint | ✔ | NA | recorded TX# First name setting QTH state setting | recorded RX# recorded name recorded state |
| Oceania DX | ✔ | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| RSGB IOTA | ✔ | RSGB IOTA | recorded RST sent recorded TX# QTH IOTA setting | recorded RST rcvd recorded RX# recorded IOTA |
| State QSO Parties | | HF | recorded RST sent TX Exchange setting (note 1) recorded TX# | recorded RST rcvd recorded RX# (note 2) |
| Stew Perry | | HF | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |
| Sweepstakes | ✔ | Sweepstakes | recorded TX# ARRL Section TX Exchange setting (note 3) | recorded ARRL recorded RX# (note 4) |
| 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# QTH CQ | recorded RST rcvd recorded RX# (note 6) |
| Worked All Europe | ✔ | WAE | recorded RST sent recorded TX# | recorded RST rcvd recorded RX# |

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

Cabrillo header information is generated using the following contest configuration settings:
- Operator callsign
- Contest name
- Submitter's full name
- Submitter's full address
- Category
- Category assisted
- Operators
- Club

# DXKeeper: QSLing

DXKeeper supports three independent kinds of QSLing: paper QSL cards and labels, electronic QSLs via the eQSL.cc service, and electronic QSLs via the ARRL's Logbook of the World (LotW). You can choose to confirm a QSO by any one of these QSL kinds, any two, or all three.

Traditionally, the need to load your printer with index stock or labels has made QSLing a batch operation, 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 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 and, if appropriate, that return QSLs have been requested.

The eQSL.cc service provides a new mode of operation; by depressing the Ctrl key while logging a QSO via the Main or Capture windows, DXKeeper will immediately upload the QSO to eQSL.cc; if you check the Upload an eQSL... box, simply logging a QSO via the Capture window will perform the immediately upload without your having to depress the Ctrl key. Real-time uploads are attractive if you are always connected to the internet, but those using dialup connections will prefer to connect to the internet, upload a batch of QSLs to eQSL.cc and then disconnect. Because LotW QSOs must be digitally encrypted before transmission to the ARRL, its it is more efficient wait until a batch of QSLs are needed before uploading them. Batches of outgoing QSLs are collected in DXKeeper's **QSL Queue**. From here, they can be printed or uploaded, and then used to update your log to indicate the operation's success. The QSL Queue is stored in each log file; if you switch log files, you will also switch QSL Queues.

DXKeeper does provide a set of immediate QSLing operations. If the QSL Queue is empty, right-clicking on a QSO in the Log Page Display will produce a popup menu containing the following options:
- **Print QSL card**
- **Print Envelope**
- **Upload to eQSL.cc**
- **Upload to LotW**

Left-clicking on one of these options will immediately perform the action; before selecting Print QSL card or Print Envelope, load your printer with the appropriate media. Note that Print QSL card will uncheck the Print Preview option.

The workflows for batch QSLing via cards, labels, eQSL.cc, and LotW are similar:
1. choose the QSL kind (cards, labels, eQSL.cc, and LotW)
2. identify the QSOs for which QSLs should be sent and load them into the QSL Queue
3. print or upload the QSLs, or place the QSL information in a file for printing by another application
4. print addresses on envelopes or labels (only if QSLing via cards or labels)
5. remove each entry from the QSL queue, and update its associated QSO to indicate that QSLs have been sent and, if appropriate, that return QSLs have been requested (this step is automatic when uploading to eQSL.cc or LotW)

If you intend to upload a large number of QSOs to eQSL.cc, the following workflow will be faster than identifying individual QSOs and loading them into the QSL Queue:
1. Filter the Log Page Display so that all QSOs to be uploaded are visible
2. Use the Main window's Export to eQSL.cc function to generate an ADIF file that can be uploaded to eQSL.cc

The exact threshold depends on your CPU and hard drive speed, as well as 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.

You will also wish to update your log to reflect incoming confirmations, whether in the form of QSL cards received via postal mail or electronically via eQSL.cc or LotW; the process of updating your log to reflect confirmations received from eQSL.cc and LotW is automated, and is referred to as **synchronization**.

**Choosing the QSL kind: cards/labels, eQSL.cc, LotW, ADIF files, or tab-delimited files**
You choose the QSL *kind* by making a selection in the QSL Via panel on the Main window's QSL tab:

| Selection | Meaning |
|---|---|
| Cards | print QSL cards, 4 per page |
| 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.cc |
| LotW | upload QSOs to LotW |
| ADIF | 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 using mail merge techniques) |

Cards, 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 four kinds are therefore collectively referred to as QSL Cards.

**Identifying QSOs for which QSLs should be sent and loading them into the QSL Queue**
You can individually place a QSO in the QSL Queue by right-clicking on its entry in the Log Page Display and then left-clicking on the **Add to QSL Queue** option. You can also direct DXKeeper to populate the QSL Queue with multiple QSOs in order to
- respond  to all requests for confirmation from QSO partners
- solicit confirmation of all QSOs needed to achieve your DXCC/Challenge/Toplist objectives
- solicit confirmation of all QSOs in the Log Page Display

Responding to requests for confirmation and soliciting confirmation require status information to be recorded with each QSO. DXKeeper separately tracks the confirmation of each QSO by QSL Card, eQSL.cc, and LotW. For each of these three *kinds* of QSLing, there are four fields stored with each QSO:

| | QSL Card | eQSL.cc | LotW | Meaning |
|---|---|---|---|---|
| **outgoing status** | QSL sent | eQSL sent | LotW sent | <ul><li>`R` - an outgoing QSL should be printed or uploaded</li><li>`U` - the outgoing QSL has been uploaded but acceptance is unknown (LotW only)</li><li>`Y` - the outgoing QSL has been printed or uploaded and accepted</li></ul> |

| | | | | |
|---|---|---|---|---|
| **outgoing date** | QSL date sent | eQSL date sent | LotW date sent | date on which the outgoing QSL was printed or uploaded and accepted |
| **confirmation status** | QSL rcvd | eQSL rcvd | LotW rcvd | <ul><li>`R` - the outgoing QSL should (or did) include a request for a confirming QSL</li><li>`Y` - confirmation has been received</li><li>`S` - confirmation has been submitted to the ARRL for verification (cards & LotW only)</li><li>`V` - confirmation has been verified by the ARRL (cards & LotW only)</li><li>`I` - this QSO is invalid for award purposes</li><li>`X` - this QSO can't be confirmed</li></ul> |
| **confirmation date** | QSL date rcvd | eQSL date rcvd | Lotw date rcvd | date on which the incoming QSL was received |

To designate a QSO for which an outgoing QSL should be printed or uploaded, set the outgoing status to **R**; if you'd like the QSO confirmed, also set the appropriate confirmation status to `R`; in the case of cards and 2-column labels, this will result in the a "please!" being printed in the QSL? column. The Main window's QSL and Online QSL panels provide full access to the outgoing status fields for QSL Card, eQSL.cc, and LotW. These panels also provide **RR** buttons for each kind of QSL; clicking an **RR** button simultaneously sets the outgoing status to **R** and the confirmation status to **R**. Having to click all these buttons for each logged QSO would clearly be inconvenient. 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 Card. 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 Card 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.

The **Add Requested** function on the Main window's QSL tab respond to requests for confirmation from 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

LotW requires that only QSOs made with the same operator callsign be uploaded together. You can enforce this by placing an operator callsign in the Limit Add and Sync operations to this callsign setting, which if the QSL kind is LotW causes the **Add Requested** function to ignore Log Page Display QSOs made with any other operator callsign.

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 .

Besides memorializing memorable QSOs, we send QSL Cards to solicit QSO confirmations we need to achieve our DXing objectives. DXKeeper automates this process for the ARRL DX Century Club award (DXCC), the ARRL DX Century Club Challenge award , and the Top List award. by providing the **Add Needed** function on the Main window's QSL tab, which

- scans all QSOs in the Log Page Display in reverse chronological order for any QSOs whose confirmations are required, as determined by the DXing objectives you have specified; two passes through the Log Page Display are required: the first pass checks for needed entity-bands and entity-modes, and the second pass checks for needed entities (you can terminate scanning by clicking the **Stop** button)
- sets the QSL Card outgoing status and confirmation status to **R**
- create an entry in the QSL Queue for each such QSO it locates

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, QSL labels, ADIF files, or tab-delimited files.

When **Add Needed** finds a QSO whose confirmation is required, it locates all other unconfirmed QSOs with the same station and adds these to the QSL Queue. If you'd prefer to only request confirmation for the QSOs you need, un-check the Add Needed requests all with same call box. If a QSO whose confirmation is required has a QSL manager, Add Needed will locate all other unconfirmed QSOs with having the same QSL manager and add these to the QSL Queue if you check the Add Needed requests all with same mgr box.

The **Add Needed** function determines which QSL Card confirmations are required by consulting the Configuration window's DXCC/TOP Bands & Modes panel, which you should set to indicate the bands and modes that you are pursuing.

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. If the QSL kind is LotW, placing an operator callsign in the Limit Add and Sync operations to this callsign setting causes the **Add All** function to ignore Log Page Display QSOs made with any other operator callsign. 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.

For other awards -- VUCC, ARRL Worked All States, ARRL Worked All Continents, Islands On The Air, CQ Worked All Zones, or CQ Worked All Prefixes, 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.

Once one or more entries have been added to the **QSL Queue** with **Add Requested** or **Add Needed**, you can no longer change the selected QSL kind until you either complete this batch of QSLs -- either by printing or by uploading -- and update your log accordingly, or until you abort this batch by clicking the QSL tab's **Clear** button.

Because eQSL.cc confirmations currently do not "count" for ARRL DXing awards, the **Add Needed** function is disabled when the selected QSL kind is eQSL.cc. While LotW confirmations do "count" for ARRL DXing awards, it is assumed that operators with an LotW account will upload every QSO (in batches); thus the **Add Needed** function is also superfluous when the selected QSL kind is LotW.

The LotW implementation of digital encryption requires that all QSLs in an uploaded batch share the same operator callsign and the same operator QTH. If all QSOs in your log meet this requirement, then you can freely use **Add Requested**. If not, you must filter the Log Page Display to meet this requirement prior to executing **Add Requested**.

Note that each entry in the QSL Queue contains a QSL box. By default, each entry's box is checked, which *enables* the entry for later QSL 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.

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.

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 Address Editor window and direct Pathfinder (if running) to perform a QSL route lookup. When you click the Address Editor's **Save** button, any changes you've made will update both the QSL Queue entry and the logged QSO.

Double-clicking a QSL Queue entry while depressing the **Alt** key will 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.

**QSLing with Paper: Printing QSL cards, QSL labels, Envelopes, and Address Labels from the QSL Queue**
QSL 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 card can be specified on the configuration window's QSL Cards tab. When printed four cards per page, each page can be thought of as having four quadrants, with quadrant 0 in the upper left, quadrant 1 in the upper right, quadrant 2 in the lower left, and quadrant 3 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. 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 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.

Both two-column 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" x 2.625" (Avery 8160 for inkjet printers, Avery 5960 for laser printers) 3-column labels, and 1" x 4" (Avery 8161 for inkjet printers, Avery 5961 for laser printers) 2-column labels. 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; this can be used to print single column labels on dedicated label printers, for example. 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.

When QSLing via cards or labels, DXKeeper will by default confirm multiple QSOs with the same station on the same card or label if
- the Operator in the Op field 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

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

If you want outgoing cards or labels to bear the word "thanks!" if the QSO is already confirmed in LotW, then check the Set outgoing QSL? to "thanks!"... box.

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 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
```
7O1NU 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.

If you are printing QSL cards, then
- make sure that dimensions and fixed information have been properly specified on the QSL Configuration window's QSL Cards tab
- ensure that the desired printer is selected and configured on the QSL Configuration window's Printer tab
- load the appropriate paper or labels into your 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 **QSL Via** panel
  - click the **Print QSL Cards** button
  - inspect the contents of the Print Preview window and, 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
- ensure that the desired printer is selected and configured on the QSL Configuration window's Printer tab
- load the appropriate paper or labels into your printer
- on the Main window's QSL tab
  - disable any QSL Queue entries for which you don't want labels generated
  - specify the number of labels missing from the first sheet in the **Missing Labels** box
  - check the **Print Preview** box in the **QSL Via** panel
  - click the **Print QSL Labels** button
  - inspect the contents of the Print Preview window and, if satisfied click its **Print** button

If the previewed cards or 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** 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** 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 Address Editor window. When you click the Address 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.

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 you want the DX address printed in upper case
- load the appropriate envelopes into your 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 Label tab
- indicate whether you want the DX address printed in upper case
- load the appropriate envelopes into your printer
- on the Main window's QSL tab
  - 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, QSL labels, envelopes, and/or address labels, click the **Update Log** button on the Main window's QSL tab. This will
- remove each entry from 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**.

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. 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**.

**QSLing via eQSL.cc: uploading QSLs from the QSL Queue, and synchronizing confirmed QSLs**
If you need to convey more than a few hundred QSOs to eQSL.cc, using Export to eQSL.cc will likely be faster. To upload the contents of the QSL Queue to eQSL.cc
- disable any QSL Queue entries that you don't want uploaded
- connect to the Internet and then click the **Upload to eQSL.cc** button on the Main window's QSL tab.

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

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.

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 <span style="color:red">**other than callsign or begin time**</span> 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,

- clear 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

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

- verify that the setting that establishes the maximum time variance for a match is correct
- connect to the Internet
- 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 the current log to reflect confirmations.

The current UTC date and time will appear under the **Sync 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.

Under certain circumstances, you may wish to manually download an eQSL.cc Inbox and direct **Sync eQSL.cc** 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**. To manually download an eQSL.cc Inbox, log in to eQSL.cc and then navigate to http://www.eqsl.cc/qslcard/DownloadInbox.cfm .

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.

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

To upload the contents of the QSL Queue to LotW,

- disable any QSL Queue entries that you don't want uploaded
- connect to the Internet
- click the **Upload to LotW** button on the Main window's QSL tab; DXKeeper will create an ADIF file containing the enabled QSL Queue entries, and invoke TQSL using the specified TQSL full pathname and TQSL station location
    - o if the certificate associated with the specified TQSL station location is password-protected, the **Enter password** dialog box will appear; enter the password that unlocks the certificate's private key, and the click the OK button; to remove the password from a certificate so that TQSL does not prompt you for a password each time you upload, use the ARRL's TQSLCert application to save the certificate in a .p12 file with no password specified, and then reload the certificate from that .p12 file with no password specified.
    - o the DXKeeper LotW Upload dialog box will report upload progress, culminating in a response from LotW; if the response is not "upload to LotW accepted", inspect the associated message to understand the problem, correct it, and invoke **Upload to LotW** again

The current UTC date and time will appear under the **Upload to LotW** button to remind you when you last invoked this function; this information is stored in the current log.

After a successful upload to LotW, DXKeeper will 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

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

LotW generally processes successfully uploaded QSLs quickly; after waiting a few minutes, verify that the uploaded QSLs were accepted by connecting to the Internet and clicking the **Sync LotW QSOs** button. This will download all uploaded QSLs (LotW refers to these as QSOs). 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 verified will appear under the **Sync LotW QSOs** button to remind you when you last invoked this function; 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

To synchronize your log with LotW  by downloading QSLs and matching them with logged QSOs,

- connect to the Internet
- click the **Sync LotW QSLs** button on the Main window's QSL tab

The date and time when the last QSL was downloaded will appear under the **Sync LotW QSLs** button to remind you when you last invoked this function; this information is stored in the current log.

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 start times fall within the same minute
- the operator callsigns are identical (this requirement can optionally be eliminated, as discussed below)

For each confirmed QSL, DXKeeper will set the logged QSO's  LotW rcvd to **Y** and its  Lotw date rcvd to the current UTC date. 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.

QSLs downloaded from LotW include additional information provided by the QSLing station:
- DXCC entity
- Continent
- CQ zone
- ITU zone
- IOTA tag
- Gridsquare
- State
- County

Each QSL is compared with its matching logged QSO. Information downloaded from LotW that is not present in the logged QSO will be automatically added unless it is inconsistent with the callsign; for example, a logged QSO missing a Iota tag will be updated with the Iota tag contained in its matching QSL, but a QSO with AA6YQ missing a CQ zone will not 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 logged with QSO 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 three choices
- always replace the logged data with the LotW QSL data
- always preserve the logged data, ignoring the LotW QSL data
- display a dialog presenting the logged data and the LotW QSL data so that the operator can choose (the default setting)

When the **Sync LotW QSLs** function completes, DXKeeper displays a report showing
- any errors encountered while inspecting the downloaded QSLs
- any confirmations of desired (per your specified DXCC award objectives) but previously unconfirmed entities, entity-modes, or entity-bands

The **Sync LotW QSOs** and **Sync LotW QSLs** functions remember the last QSO and QSL respectively that they process; 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 your PC 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 Update** 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** or **Sync LotW QSL** 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.

If all of your QSOs are logged with the same operator 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 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 operator callsign, however, you can reduce both the download and inspection times by specifying that callsign in the Limit Add and 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 |
|---|---|---|---|
| **Operator callsigns contained in log's QSOs** | KC6IGZ, N6YBG, AA6YQ | FJ/AA6YQ | KP2/AA6YQ |
| **Limit QSO and QSL downloads to this 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 operator callsign -- either because the LotW account contains only QSOs and QSLs made with that operator 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.

In circumstances where you are uncertain as to the operator 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 operator callsign of AA6YQ/1 and upload them again

Incoming QSLs will match one or the other, depending upon the operator callsign logged by the QSLing station. By checking the Exclude operator callsigns when matching QSOs to QSLs box, your QSOs will be properly confirmed when you run the **Sync LotW QSLs** function**.**

Note: **Upload to LotW** sends the following information for each QSL Queue entry:

- 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  (mapped to modes accepted by LOTW)
- RST sent
- RST received
- QSL message
- QSL route
- Satellite name
- Satellite mode
- Propagation mode
- QSO receive frequency
- QSO receive band

**QSLing via ADIF or tab-delimited files: Generating QSL cards via an external application 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 -- BV for example -- 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; setting the QSL kind to **ADIF file** allows you to generate QSL cards using such applications. 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.

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.

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

- 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
- RST rcvd
- QSL_rcvd
- QSL message
- QSL route
- Satellite name
- Satellite mode
- Propagation mode
- QSO receive frequency
- QSO receive band

To generate a file containing tab-delimited 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 tab-delimited file and 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
- UTC time at which the QSO began
- QSO Frequency
- QSO Band
- QSO Mode
- RST sent
- RST received
- QSL route
- QSL message
- QSO receive frequency
- QSO receive band
- Propagation mode
- Satellite name
- Satellite mode
- DXCC entity name (derived from the country code)
- Name
- Transmitter power
- QTH
- Contest identifier
- Operator callsign
- QSL_SENT
- QSL_RCVD
- SRX
- STX
- Operator's QTH street address
- Operator's QTH city
- Operator's QTH county
- Operator's QTH state
- Operator's QTH postal code
- Operator's QTH country
- Operator's QTH latitude
- Operator's QTH longitude
- Operator's QTH grid square
- Operator's QTH Iota tag
- Operator's QTH CQ zone
- Operator's QTH ITU zone
- Operator's name
- Operator's rig
- Operator's email address

After you have printed all of your QSL cards, click the **Update Log** button on the Main window's QSL tab. This will

- remove each entry from 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**.

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.

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**.

# QSL 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 0 in the upper left, quadrant 1 in the upper right, quadrant 2 in the lower left, and quadrant 3 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
- Operator 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.

**QSL Labels**

Both two-column 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" x 2.625" (Avery 8160 for inkjet printers, Avery 5960 for laser printers) 3-column labels, and 1" x 4" (Avery 8161 for inkjet printers, Avery 5961 for laser printers) 2-column labels. 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; this can be used to print single column labels on dedicated label printers, for example.

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
- Operator 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
- Operator 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**

Both two-column and three-column labels can be printed 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" x 2.625" (Avery 8160 for inkjet printers, Avery 5960 for laser printers) 3-column labels, and 1" x 4" (Avery 8161 for inkjet printers, Avery 5961 for laser printers) 2-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; this can be used to print single column labels on dedicated label printers, for example.

# DXKeeper: Managing Multiple QTHs

If you operate from more than one QTH and want to print QSL cards that correctly describe the location from which you were operating at the time, then you'll need to describe each of your QTHs and assign each a unique identifier. When you log a QSO, specifying the correct unique QTH identifier enables DXKeeper's QSL information substitution commands to take on the correct value when you print a QSL card.

QTH descriptions are captured and maintained using the **my QTHs** tab of DXKeeper's main window. To describe a QTH, click the New button, and enter appropriate text in the Name,Street, City, County, State, PostCode, Country, Email, Rig, CQ, ITU, IOTA, Grid, Latitude, and Longitude text boxes. You need only enter information that you plan to print on QSL cards (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; the single apostrophe ' cannot be used. When you log a QSO, the myQTH 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 Calcutta, etc). After filling in all of the textboxes, click the **Save** button.

As you define QTHs, they appear in a grid display in the lower part of the **my QTHs** tab. You can define up to 1024 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 QTH identifier; 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 QTH identifier for the QTH definition you are attempting to delete. If desired, you can use the Modify QSOs function to change these QTH definitions in a single operation. Successfully deleting a QTH definition leaves the Log Page Display showing all QSOs in the log.

If you've got a log full of QSOs made from different QTHs and wish to properly associate each with the correct QTH ID, you need not step through each QSO individually to set its myQTH item -- you can use DXKeeper's filtering capabilities to select a group of QSOs made from the same QTH. First, select a QTH by clicking on its grid display entry in the **my QTHs** tab. Then switch to the **Log QSOs** tab and use the filtering capabilities to select a set of QSOs made from that QTH -- for example, all QSOs between 25-DEC-00 and 1-JAN-01. Then switch back to the **my QTHs** tab and click the **Set myQTH ID** button in the **Update QSOs in Log Page Display** panel -- this will set the myQTH item of each selected QSO to that of the current QTH.

If you've defined one or more QTHs, invoking the Broke filter on the **Log QSOs** tab will reveal any QSOs for which the myQTH 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 my QTH fields for City, County, State, 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 item is exported in ADIF, the QTH identifier 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 QTH identifier 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 associated QTH identifier is placed in the imported QSO's myQTH item; single apostrophes contained in the identifier are removed, and noted in the import log. If the log contains no QTH definition with this QTH identifier, then a new QTH definition is created, and assigned this QTH identifier. 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 QTH identifiers) 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.

# DXKeeper: Importing Log 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.

Options 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:

- if you are importing QSOs into an empty log, you can uncheck the **Check Duplicates on Import** checkbox to improve performance; if you are importing into a populated log and wish to prevent the importing of duplicates, check the **Check Duplicates on Import** box and specify the range (in minutes)
  - o 0 means an imported QSO must exactly match a logged QSO's begin date/time to be considered a duplicate
  - o 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 file you are importing contains QSOs that may be missing Station Callsign fields, you can check the **Substitute ... for missing station callsigns** box to replace this missing information with the callsign specified in the Station callsign text box in the Default panel of DXKeeper's configuration window.
- if the file you are importing contains QSOs that may be missing Operator Callsign fields, you can check the **Substitute ... for missing operator callsigns** box to replace this missing information with the callsign specified in the Operator callsign text box in the Default panel of DXKeeper's configuration window.
- if the file you are importing contains QSOs that may be missing Owner Callsign fields, you can check the **Substitute ... for missing owner callsigns** box to replace this missing information with the callsign specified in the Owner callsign text box in the Default panel of DXKeeper's configuration window.
- If your log contains one or more QTH definitions and you've specified a default QTH identifier, the **Substitute QTH ID**...box will be enabled. Checking this box will place the specified default QTH identifier into the myQTH item of any imported QSO whose ADIF record lacks an APP_DXKEEPER_MY_QTHID tag.
- Errors will be noted in the **Progress** panel, up to a maximum of 65,000 characters. To additionally record all error reports to a file, check the **Report import errors in error file** checkbox; if errors are detected, they will be recorded in an error 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. If the **Report import errors in error file** box is checked and no import errors are detected, any pre-existing error file with that pathname will be deleted.
- Checking the **Query Callbook for missing items** box will lookup each imported QSO in the selected Callbook and fill in any items not present in the imported QSO with information from the Callbook; this option will be disabled if no Callbook is currently selected.
- Checking the **Produce and Display Award Progress Report** box tracks all changes to award progress attributable to the imported QSOs, generates 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), and displays this report. Award progress is subject to the objectives you've specified in the DXCC/Top Bands & Modes panel.

- if you are importing a standard ADIF file, the check the Import Standard ADIF button; if you are importing a file exported by DXBase, Logger 16, MMTTY, or Writelog, check the appropriate button as described below:
    - checking the **Import From DXBase** button will set the DXCC entity for each imported QSO from information exported by DXBase
    - checking the **Import From Logger16** radio button will result in all but the first word of each incoming Name field to be relocated to the Comment field.
    - checking the **Import From MMTTY** button will extract transmit and receive contest sequence numbers from the RST sent and received fields respectively.
    - checking the **Import from Writelog** button will enable DXKeeper to correctly interpret Writelog's DXCC prefixes in <PREF> tags, ensuring that each imported QSO is assigned to the correct DXCC entity
- if you are importing a contest log, the following options may be useful:
    - 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.
    - If you check the **Recover State, Province, & Section from** box and enter or choose an ADIF tag, the specified field of each imported QSO 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 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.
    - if you check the **Replace Station Callsign with** box, the Station Callsign of every imported QSO will be replaced with the specified value.
    - if you check the **Replace Operator Contest ID with** box, the Contest ID of every imported QSO will be replaced with the specified value.
- 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 contains 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.

Interactions with other configuration settings
- 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 State or 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.
- 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 B*PSK* will be imported as *PSK31*
  - the mode B*PSK31* will be imported as *PSK31*
  - the mode B*PSK63* 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 QTH identifier is placed in the imported QSO's myQTH item. If the log contains no QTH definition with this QTH identifier, then a new QTH definition is created, and assigned this QTH identifier. 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, and MY_STREET.

# DXKeeper: Exporting Log Files

The **Export QSOs** tabbed dialog enabled you to export QSOs to a file
- in standard ADIF format
- in ADIF targeted to the ARRL's Logbook of the World (LotW)
- in ADIF targeted to eQSL.cc
- in ADIF that DXBase can import
- in tab-delimited format
- using the Cabrillo 2.0 template specified by the Contest Style setting.

If the current log is filtered, only QSOs visible in the Log Page Viewer are exported, making it easy to export a selected subset of QSOs in the current log file.

Check the **Export QTH definitions** box to include the contents of a QTH definition in the ADIF record of each QSO containing a myQTH item. The QTH definition contents are exported with the following ADIF 2.0 tags: MY_CITY, MY_CNTY, MY_COUNTRY, MY_CQZONE, MY_GRIDSQUARE, MY_IOTA, MY_ITUZONE, MY_LAT, MY_LON,  MY_POSTAL_CODE, MY_STATE, and MY_STREET.

QSOs whose callsigns begin with an exclamation point are only exported if the **Export callsigns with leading !** box is checked; such callsigns will not be exported if either the **Export ADIF for LOTW**,  **Export ADIF for eQSL.cc**,  or **Export Cabrillo** radio buttons are checked, even if the **Export callsigns with leading !** box is checked.

To export QSOs, first make the appropriate selections in the Options panel:
- if you are exporting a file to be uploaded to LotW, check the **Export ADIF for LOTW** radio button to export modes accepted by LotW and update each QSO's status as described below
- if you are exporting a file to be uploaded to eQSL.cc, check the **Export ADIF for eQSL.cc** radio button to export modes accepted by eQSL.cc and update each QSO's status as described below
- if you are exporting a file to be imported by DXBase, check the **Export ADIF For DXBase** radio button to use its two-decimal-point representation of frequencies
- if you are generating QSLs with another application using mail merge techniques, check the **Export tab-delimited file** radio button to  export QSO information in tab-delimited format
- if you are exporting a Cabrillo file, check the **Export Cabrillo** radio button
- to insert text into the header of the exported ADIF file, enter this text into the **Insert in ADIF Header** textbox
- to append text to the QSO notes item of each exported QSO, enter this text in the **Append to QSO Notes** textbox

Click the **Start** button, and use the file selector to choose the file to which QSOs will be exported. The **Progress** panel provides real-time statistics of the operation. Click the **Abort** button to terminate the export operation before it completes.

If you export a Cabrillo file, DXKeeper will display the file in Notepad after the operation is complete so that you can complete the necessary descriptor fields and delete unnecessary descriptor fields.

The format of the date placed in exported ADIF file headers is governed by the Date Format sub-panel on the Config window's Awards tab.

**Exporting to LotW**
Exporting ADIF to LotW translates modes unsupported by LotW as shown in the following table:

| QSO Mode in log | Exported QSO Mode |
|---|---|
| ASCI | DATA |

Each exported QSO will be updated to reflect the correct status:
- the QSO's LotW Sent will be set to **U**, reflecting the fact that these QSOs have been uploaded, but their acceptance by LotW is unknown.
- the QSO's LotW Date Sent will be set to the current UTC date
- the QSO's LotW Rcvd will be set to **R**

Invoke TQSL and direct it to encrypt and sign the file you just exported; the resulting file will have a file extension of .tq8. You can submit this .tq8 file to LotW by emailing it to lotw-logs@arrl.org, or by logging on to your LotW web page and uploading the file from there. You can then proceed with the LotW QSL workflow by click the Sync LotW QSOs button.

**Exporting to eQSL.cc**
Each exported QSO will be updated to reflect the correct status:
- the QSO's eQSL Sent will be set to **R**
- the QSO's eQSL Date Sent will be set to the current UTC date
- the QSO's eQSL Rcvd will be set to **R**

After logging into eQSL.cc, upload the file you just exported. Since eQSL.cc does not presently provide a means of verifying that a QSO has been successfully uploaded, you must inspect the upload report and manually reset the eQSL Sent, eQSL Date Sent, and eQSL Rcvd fields for each QSO that was rejected.

**Exporting a tab-delimited file**
For each exported QSO, the following information will be stored in the following order:
- 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
- RST received
- QSL route
- QSL message
- QSO receive frequency
- QSO receive band
- Propagation mode
- Satellite name
- Satellite mode
- DXCC entity name (derived from the country code)
- Name
- Transmitter power
- QTH
- Contest identifier
- Operator callsign
- QSL_SENT
- QSL_RCVD
- SRX

- STX
- Operator's QTH street address
- Operator's QTH city
- Operator's QTH county
- Operator's QTH state
- Operator's QTH postal code
- Operator's QTH country
- Operator's QTH latitude
- Operator's QTH longitude
- Operator's QTH grid square
- Operator's QTH Iota tag
- Operator's QTH CQ zone
- Operator's QTH ITU zone
- Operator's name
- Operator's rig
- Operator's email address
- Country code

# DXKeeper 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.

DXKeeper's Configuration window presents 7 tabs:
- the General tab enables you to specify default values for the current operator's callsign, transmit power and a QSL message, set or reset various options, 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
- the Reports tab lets you configure the reports award status 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 Databases tab shows the DXCC database pathname and version, and the IOTA database pathname and version

**General Tab**
- Options Panel

| | |
|---|---|
| Confirm QSO deletion | if this box is checked, DXKeeper will request confirmation before deleting a QSO |
| Optimize for realtime QSO entry | When this box is checked, DXKeeper's Main window is optimized for logging QSOs in real time:<br>• if, after entering a callsign in the call textbox, you strike the **Enter** key, DXKeeper will<br>    o if the begin item has not been specified, set the begin item to the current UTC date and time<br>    o if Commander is running, set the freq item to your transceiver's current frequency<br>    o if Commander is running, set the band item to the band for your transceiver's current frequency<br>    o if Commander is running, set the mode item to the your transceiver's current mode<br>• if you double-click the end item, DXKeeper will set the end item to the current UTC date and time<br>• setting the QSL Rcvd,  item to 'Y' will set the Date Rcvd item to the current date<br>• setting the eQSL.cc Rcvd item to 'Y' will set the  eQSL.cc Date Rcvd item to the current date<br>• setting the LotW QSL Rcvd item to 'Y' will set the  LotW Date Rcvd item to the current date<br>• if you save a QSO whose end item has not been specified, DXKeeper will set the end item to the current time.<br>When this box is unchecked, DXKeeper's Main window is optimized for manually entering past QSOs:<br>• if, after entering a callsign in the call textbox, you strike the **Enter** key and , DXKeeper will<br>    o if the begin item has not been specified, set the begin item to the begin item of the previously-entered QSO plus 1 second<br>    o set the freq item to the freq item of the previously entered QSO<br>    o set the band item to the band item of the previously entered QSO<br>    o set the mode item to the mode item of the previously entered QSO |

|  | • if you double-click the end item, DXKeeper will set the end item to the contents of the begin item<br>• setting the QSL Rcvd,  item to 'Y' will not set the Date Rcvd item to the current date<br>• setting the eQSL.cc Rcvd item to 'Y' will not set the  eQSL.cc Date Rcvd item to the current date<br>• setting the LotW QSL Rcvd item to 'Y' will not set the  LotW Date Rcvd item to the current date<br>• 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<br>• 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<br>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. |
|---|---|
| Optimize for roundtable QSOs | 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.<br>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. |
| 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<br>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 checkbox | When checked, entering a new callsign in the Main window or clicking the QSO Capture window's Lookup button filters the log to only display QSOs with the captured Callsign |
| Highlight duplicate QSOs | When checked, QSOs in the Log Page Display that match the QSO Capture window's callsign, band, and mode will be highlighted in red font |
| Set QSO start when RST Rcvd | When checked, automatically set the QSO start time when a received signal report is entered in the Capture window |
| Initialize RST fields to 59/599 | When checked, automatically sets the Main and Capture window RST sent and RST rcvd fields 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 |
| Run-mode checkbox | If this box is checked, striking the enter key in the call textbox will<br>• initialize  the freq textbox, mode textbox, and band textbox<br>• 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)<br>• save the current QSO<br>• create an empty log record for the next QSO<br>• if the Contest mode box is checked, increment the Contest TX Serial#l<br>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) |

| Capture window F-keys via WW | When checked<br>• the Function keys **F5** through **F12** when struck in a Capture window textbox activate WinWarbler macros, with **Shift** and **Alt** key modifiers interpreted as they would be within WinWarbler<br>• the **Esc** key when struck in a Capture window textbox aborts WinWarbler transmission |
|---|---|
| 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) |
| 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 |
| 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 |
| Provide audible feedback | When checked,<br>• 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<br>• play a continuous sequence of "Windows Default Beep" sounds when an attempt to log a QSO fails due to invalid items<br>• play a single  "Windows Default Beep" sound when a duplicate QSO is entered into the Capture window with Contest mode enabled |
| Use Dual Monitors | When checked, windows that resided on the secondary monitor during the previous session will be restored to the secondary monitor |
| Log debugging information | When checked, records debugging information to the file ErrorLog.txt in DXKeeper's folder |

- Log QSOs Tab's Default Focus

| 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 |

- Default Settings Panel

| Operator callsign | current operator's callsign (label is highlighted in red if maximum length is exceeded)<br>• used to name the log file created when DXKeeper runs the first time after being installed<br>• initializes the op textbox<br>• specifies the operator's callsign when another DXLab application logs a QSO that is missing this item |
|---|---|

| Transmit power | transmitter power, in watts (label is highlighted in red if maximum length is exceeded)<br>• initializes the pwr textbox<br>• specifies the transmit power when another DXLab application logs a QSO that is missing this item |
|---|---|
| Propagation mode | specifies the propagation mode used in each QSO |
| Satellite name | specifies the satellite name recorded in each QSO |
| Satellite mode | specifies the satellite mode recorded in each QSO |
| QSL msg | selects message to be printed on each QSL card from among the standard messages defined in the QSL Msgs tab<br>• initializes the Capture window's QSL Msg item<br>• initializes the Main window's msg textbox<br>• specifies the QSL message when another DXLab application logs a QSO that is missing this item<br>if a message is selected, you can modify it by editing the displayed text |

- 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. |
| 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.<br>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.<br>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<br>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 |
|---|---|
| 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.

| Display DXCC submission reminder | When checked, setting a needed QSL's QSL Rcvd field to 'Y' will display a dialog box reminding you to submit the QSL to the DXCC desk |
|---|---|
| my QTH ID | identifies the operator's current QTH <br> • initializes  the myQTH textbox <br> • 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, Award, Contest, and Satellite  fields checkboxes are also accessible from the Main window's Log QSOs tab)

| Auxiliary fields checkbox | Checking this box shows the Log's Aux panel, which contains textboxes for each of the following fields: <br> • op <br> • code <br> • pwr <br> • note <br> 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. <br> 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. |
|---|---|

| | |
|---|---|
| QSL fields checkbox | Checking this box shows the Log's QSL panel, which contains textboxes for each of the following fields:<br>• sent<br>• rcvd<br>• date sent<br>• date rcvd<br>• msg<br>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.<br>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. |
| Award fields checkbox | Checking this box shows the Log's Awards panel, which contains textboxes for each of the following fields:<br>• cnty<br>• state<br>• continent<br>• IOTA<br>• grid<br>• CQ<br>• ITU<br>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.<br>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. |
| Contest fields checkbox | Checking this box shows the Log's Contest panel, which contains textboxes for each of the following fields:<br>• ID<br>• rx #<br>• tx #<br>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.<br>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. |
| Satellite fields checkbox | Checking this box shows the Log's Satellite panel, which contains textboxes for each of the following fields:<br>• name<br>• mode<br>Depressing the CTRL key while checking this box will display the Log's Satellite panel and decrease the number of visible Log Page Display entries rather than expand the Main window's height.<br>Unchecking this box will hide the Log's Satellite panel and vertically shrink the Main window; depressing the CTRL key while unchecking this box will hide the Log's Satellite panel and increase the number of visible Log Page Display entries. |

| 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. If a bold font is selected, then information in the Award Progress and Progress Details grids will also be rendered in bold font. |
|---|---|

- Log Page Display Panel

| Log page fields control | This control enables you to specify <br> • which fields appear in the Log Page Display <br> • the caption for each such field <br> • the alignment of each such field. <br> To add a field to the log page display, <br> • scroll to the last row of the control; this row is distinguished by an asterisk in its leftmost cell <br> • in the field cell of this last row, click the pulldown icon (a small black triangle) and choose the field to be displayed from the resulting list (the pulldown contains ADIF field names - to correlate with the field captions, consult the cross reference) <br> • in the caption cell of the newly added row, enter the caption to be used for this field in the log page display, followed by the enter key <br> To see the newly added field, you may need to horizontally scroll the log page display or widen your DXKeeper window. <br> The order in which fields appear in the log page display, and the width of each column in the log page display are controlled by direct manipulation. <br> To remove a field from the log page display, <br> • select the row corresponding to the field to be removed by clicking in row's leftmost cell (this cell is shaded) <br> • strike the Delete key |
|---|---|
| Font Button | Enables you to specify the font and font metrics (size, bold, italic) used in the log page display |
| Log Page Display layout file | the pathname of a file whose contents specify a Log Page Display **layout**: <br> • which fields appear in the log page display <br> • the caption for each such field <br> • the alignment of each such field <br> • the order in which such fields appear <br> • the width of each field |
| Select | 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 | displays a file selector that lets you choose a file into which will be saved the Log Page Display's current layout |

**Awards Tab**

The **Automatically Recompute Awards Progress** checkbox determines whether DXKeeper will automatically recompute awards progress 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.

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 VUCC, WAS, WAC, & Maidenhead awards progress** box will, when checked, include QSOs confirmed by the ARRL's Logbook of the World (LotW) in the VUCC Progress, VUCC Submission, WAS Progress, WAC Progress, Maidenhead Field, and Maidenhead Gridsquare reports.

The **Include eQSL.cc confirmations in DXCC, WAS, WAC, & Maidenhead awards progress** box will, when checked, will include QSOs confirmed by eQSL.cc in the  the DXCC, Challenge, TOPLIST, WAS, and WAC, Maidenhead Field, and Maidenhead Gridsquare awards progress and reports. The ARRL, TOPLIST, and CQ Magazine 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, and WAC 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.

Checkboxes in the **DXCC/TOP Bands & Modes 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 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 no awards tab boxes are checked, DXKeeper and SpotCollector assume that you are pursuing DXCC without focus on specific bands or modes. This panel's **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 **DXCC Submission panel** lets you specify
- whether QSL cards should be submitted as proof of confirmed QSOs
- whether LotW credits should be submitted as proof of confirmed QSOs
- if an unverified QSO is confirmed by both QSL card and LotW credit, which should be submitted
- the number of lines to be printed on each page of the generated Card Record Sheet and LotW Record Sheet reports

Checkboxes in the **WAZ Bands & Modes Panel** specify the bands and modes you are pursuing for the CQ Worked All Zones award. The contents of a WAZ Progress Report are controlled by these settings.

In the **Other Panel**,
- the **WPX** checkbox determines
  - whether or not the Recompute operation computes a WPX prefix for those QSOs for which one is missing
  - whether or not the Import operation computes a WPX prefix for imported QSOs for which one is missing
- the **IOTA** 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

**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 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.

**Callbook Tab**

DXKeeper can obtain name, address, and location information from  the Flying Horse Radio Amateur's Callbook ,
HamCall, or the QRZ Callsign Database. You may install one, two, or all three of these. If Pathfinder (version
4.2.6 or later) is running, DXKeeper can direct it to obtain name, address, and location information from the
QRZ.com web site. Use this tab's radio buttons to specify which source of information is used for Callbook Lookup
operations.

| | |
|---|---|
| Callbook | select the radio button for the Callbook or web site to be used |
| Folder containing callbook database | pathname to the folder containing the Callbook's data* |
| Browse button | displays a folder selector that allows you to choose the folder containing the Callbook's data |
| Automatically use callbook data... checkbox | if checked<br>• DXKeeper will initialize the name, QTH, state, cnty, IOTA, and grid fields with the results of a successful Callbook query<br>• the Capture window's **Lookup** button will initialize the Capture window's name, QTH, state, cnty, IOTA, and grid fields with the results of a successful Callbook query |
| Warn when Callsign Lookups fail | When checked, a Callsign lookup that fails to locate Callbook information for the Call will display a warning message requiring confirmation |

\* QRZ volume 22 and onward allows you to install the database onto your hard drive for improved performance,
but requires that you copy the file QRZ32.DLL from the QRZ CDROM to your DXKeeper folder (replacing the
existing file), and has a different requirement for Folder containing callbook database. If you install the QRZ
database into the folder

    `C:\Program Files\QRZ`

then set Folder containing callbook database to

    `C:\Program Files\QRZ\CALLBK`

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.

**Contest tab**

These settings govern DXKeeper's support for contest operation.

| | |
|---|---|
| Contest-mode | when checked<br>• The contest ID and Contest tx# fields of QSOs recorded via the Main window's Log QSOs tab are initialized to the Contest ID and TX serial# respectively<br>• The contest and tx# fields of QSOs recorded via the Capture window are initialized to the Contest ID and TX serial# respectively<br>• Striking the Enter key in the Main window's Call field with Run-mode enabled automatically increments the TX serial# if the Increment TX serial# box is checked<br>• Logging a QSO via the Capture window automatically increments the TX serial# if the Increment TX serial# box is checked<br>• 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<br>• 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<br>Enabling Contest mode automatically enables Run-mode; disabling Contest-mode automatically disables Run-mode |
| 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) |
| TX serial# | the transmit serial number or exchange to be recorded with the next QSO |
| TX Exchange | fixed portion of transmit exchange (as specified by contest rules, for use in Cabrillo QSO record) |
| Place focus in RX# on DX spot activation | 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<br>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 |
| 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 style | configures DXKeeper to support a specific style of contest by<br>• checking or un-checking the TX serial# box<br>• determining how transmit and receive exchanges are exported with each QSO in the appropriate Cabrillo template, as shown in the contest style table<br>• selecting a Contest name (if the choice is clear) |
| Cabrillo Category | The Operator, Band, Power, and Mode selectors in this panel are used to assemble a Category for incorporation in a Cabrillo header; in each selector, you can choose a preset value, or key in a new value, and the Category will be appropriately updated. Alternatively, you can directly key in the Category. |
| Contest ID | a unique identifier for the current contest to be recorded with each QSO (e.g. ARRL-DX-SSB-2003) |

| | |
|---|---|
| Claimed score | your claimed score in the contest (obtained from your contesting application, or manually computed) |
| QTH State | state from which the station is operating (abbreviation per contest rules, for use in contest exchanges) |
| QTH Grid | Maidenhead Grid Square from the station is operating (for use in contest exchanges) |
| QTH IOTA | Islands on the Air designator for the station's QTH (for use in contest exchanges) |
| QTH CQ | CQ Zone for the station's QTH (for use in contest exchanges) |
| Operator's first name | your first name (for use in contest exchanges) |
| Contest name | contest name selector (for use in a Cabrillo header; an arbitrary name can be entered, e.g. for state QSO parties) |
| Submitter's full name | your full name (for use in a Cabrillo header) |
| ARRL Sect | the ARRL section from which you are operating (for use in a Cabrillo header) |
| Submitter's full addr | your multiple-line postal address (not including your name, for use in a Cabrillo header) |
| Category assisted | contest assistance category (for use in a Cabrillo header) |
| Club | name of your contest or radio club (for use in a Cabrillo header) |
| Operators | callsigns of participating operators, separated by commas (for use in a Cabrillo header) |

**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.

To add or subtract bands, make a copy of `DefaultBands.txt` in DXKeeper's `Databases` folder and name it `Bands.txt`. Delete or add lines 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

**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 | DXCC SSB credit | DXCC CW credit | DXCC RTTY credit | WAZ RTTY credit | WAZ Digital credit | WPX SSB credit | WPX CW credit | PSK credit |
|---|---|---|---|---|---|---|---|---|
| ASCI | | | ✔ | ✔ | | | | |
| ATV | | | | | | | | |
| CLO | | | | | | | | |
| FAX | | | | | | | | |
| GTOR | | | | | | | | |
| Hell | | | ✔ | | ✔ | | | |
| HFSK | | | | | | | | |
| JT44 | | | | | | | | |
| MFSK8 | | | ✔ | | ✔ | | | |
| MFSK16 | | | ✔ | | ✔ | | | |
| MT63 | | | ✔ | | ✔ | | | |
| Pac | | | ✔ | | ✔ | | | |
| Pac2 | | | ✔ | | ✔ | | | |
| Pac3 | | | ✔ | | ✔ | | | |
| Pkt | | | ✔ | | ✔ | | | |
| PSK63 | | | ✔ | | ✔ | | | ✔ |
| PSK125 | | | ✔ | | ✔ | | | ✔ |
| Q15 | | | | | | | | |
| SSTV | | | | | | | | |
| Thrb | | | ✔ | | ✔ | | | |
| TOR | | | ✔ | | ✔ | | | |

Users wishing to define additional modes or remove modes that aren't built-in can do so by creating the file `Modes.txt` in SpotCollector'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. 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_RTTY | QSOs in this mode "count" for DXCC RTTY 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 |
| 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.

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.

# DXKeeper QSL Configuration

Configuring DXKeeper is primarily accomplished via the Configuration window and the QSL Configuration windows. Defining bands and defining or eliminating modes, however, are accomplished by editing files. DXKeeper's Configuration window presents 9 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 QSL Cards tab enables you to specify the dimensions of QSL 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 Printer tab enables you to select the printer on which QSLs will be printed

**General Tab**

| | |
|---|---|
| Preset 'QSL Requested' checkbox | When checked, the Capture window's QSL Requested checkbox will be set for each new QSO |
| Confirm multiple QSOs per QSL | <ul><li>when checked, multiple QSOs will be confirmed on each QSL card and label as long as the Operator and myQTH fields match, and as long as there is space on the card or label</li><li>when unchecked, each QSL card or label will confirm exactly one QSO</li></ul> |
| Add Needed requests all with same call | when checked, the Add Needed function will request confirmation for all unconfirmed QSOs with a station for which there's a QSO whose confirmation is needed |
| Add Needed requests all with same mgr | when checked, the Add Needed function will request confirmation for all unconfirmed QSOs having a QSL manager from whom confirmation of a QSO requiring confirmation will be sought |
| 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 |

**QSL Cards Tab**

The Page Layout panel lets you specify whether DXKeeper prints

- one QSL card per page aligned on the printer's right-side paper guide
- one QSL card per page aligned on the printer's left-side paper guide
- four QSL cards per page as shown in this layout:



If you choose 4 QSL 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.

If you check the *print grid lines* box, the generated QSL cards will include grid lines that separate the rows and columns of QSO information, as shown in the above layout.

This tab's Frequency panel allows you to specify whether generated QSL cards show a QSO's frequency or its band.

This tab's Card Dimensions panel allows you to specify the geometry of each card:

| | |
|---|---|
| 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 QSL card in inches or millimeters as specified by the Inches and Millimeters selectors |
| Top border | the width of the top border of each QSL card in inches or millimeters as specified by the Inches and Millimeters selectors |

Additional panels on this tab provide control of information printed on QSL cards generated by DXKeeper. You can individually specify the font name, font metrics (bold, italic), and font color of the callsign, confirmation statement, and information positioned in each corner of the card. Double-clicking a font name, font size, or font color control displays a dialog box that facilitates selection of the desired parameters.

If you are printing QSL cards on blank cardstock, check the *Operator Callsign Display* box so that DXKeeper will print your callsign at the top-center of each card. Note that the callsign printed is taken from the QSO's Op field, not the from the Operator textbox in the General panel on the Configuration window's General tab; 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 QSO.

If you are printing QSL cards on cardstock preprinted with your callsign, then uncheck the *Operator Callsign Display* box.

If you want the contents of the QSO's Via item to be appended to the confirmation line if those contents are a valid callsign, check the Confirmation panel's Include QSL Manager box.

Information from the following QSL Information fields 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 fields 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 fields 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 substitution commands in the QSL information fields

By using substitution commands in the QSL Information fields, 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 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 |
|---|---|
| <opname> | your name (associated with the QTH) |
| <email> | your email address (associated with the QTH) |
| <rig> | your station equipment (associated with the QTH) |
| <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 |
| <latitude> | the QTH's latitude |
| <longitude> | the QTH's longitude |
| <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 |
| <cq> | the QTH's CQ zone |
| <itu> | the QTH's ITU zone |
| <txpower> | your transmitter's power |
| <callsign> | the callsign of the station specified in the QSO |
| <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 |
| <destination> | the QSL manager's callsign if one is specified, otherwise the callsign of the station specified in the QSO |
| <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 |
| <satname> | if the QSO specifies a satellite, then the replacement is the word "sat: " followed by the satellite name; 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 |
| <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 |

| | |
|---|---|
| <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 |
| <dxccentity> | the station's DXCC entity |
| <name> | the station's operator's name |
| <qth> | the station's QTH |
| <contestid> | the contest identifier |
| <stx> | the transmit serial number or exchange logged with the QSO |
| <srx> | the receive serial number or exchange logged with the QSO |

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 <satemode>, <rxfreq>, and <rxband> commands only produce replacements if the QSO specifies a satellite name.

**QSL Labels Tab**
Each QSL label is composed of a confirmation line and a table with a header row and one row for each confirmed QSO.  You can individually control the font name, font metrics (bold, italic), and font color of each of these elements. Double-clicking a font name, font size, or font color control displays a dialog box that facilitates selection of the desired parameters.

The following settings are used to specify the geometry of the QSL labels you're using.

| | |
|---|---|
| Label model # | manufacturer's model number for the label in use (serves as a reminder to the user) |
| Labels per columns | 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 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 (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 panel:<br>• the contents of the QSO's Via item if it is a valid callsign<br>• if all QSOs on the label have been confirmed, 'tnx QSL'; otherwise, 'pse QSL!' |

**Envelopes Tab**
The following settings are used to specify the geometry of the envelopes to be addressed, and 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 |
| Left margin | distance from the printer's left edge to the left edge of the envelope, in inches |
| Address top offset | distance from the top edge of the envelope to the first address line, in inches |
| Address left offset | distance from the left edge of the envelope to the left edge of the address, in inches |
| Airmail Indicator | check to have "Airmail, Par Avion" printed on each envelope |
| Printer orientation | set to "portrait" or "landscape" as required to reliably print envelopes on your printer |
| Print DX address in upper case | check to print the DX address 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 |

**Address Labels Tab**
The following settings are used 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 columns | 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 width | the width of each label, in inches or millimeters as specified by the Units panel |
| Print DX address in upper case | check to print the DX address in upper case |

**QSL Msgs Tab**
This tab provides 8 standard QSL messages, any one of which can be selected as the default QSL message via the General tab's QSL msg selector. You can also chose from among these messages using the Capture window's QSL msg selector, and make modifications there. Double-clicking one of these messages invokes a Field editor. 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**

| Username | your eQSL.cc username |
|---|---|
| Password | your eQSL.cc password |
| Maximum time difference... | if a downloaded QSL in consistent with a QSO's callsign, band, and mode, this parameters 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 an eQSL... | when checked, clicking the Capture window's Log button automatically uploads an eQSL (eliminating the need to depress the **Ctrl** key each time) |
| Initialize eQSL Sent to 'R'... | when checked, logging a QSO via the Main or Capture windows, or importing a QSO records the eQSL Sent field as 'R' (for requested) |
| Don't upload QSOs whose operator callsign isn't the specified Username | when checked, only QSOs whose operator 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 |

**LotW Tab**

| Username | your LotW username |
|---|---|
| Password | your LotW password (use the web account password) |
| Initialize LotW Sent to 'R'... | when checked, logging a QSO via the Main or Capture windows, or importing a QSO records the LotW Sent field as 'R' (for requested) |
| Set outgoing card/label QSL? to "thanks!"... | when checked, an outgoing QSL card or label's QSL? field will be set to "thanks!" if the QSO is already confirmed in LotW |

| | |
|---|---|
| PC has no internet connection (prompt operator to manually query LotW) | 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 |
| Handling of LotW QSL detail inconsistencies | this 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:<br>• always replace the logged data with the LotW QSL data<br>• always preserve the logged data, ignoring the LotW QSL data<br>• display a dialog presenting the logged data and the LotW QSL data so that the operator can choose |
| Limit  Add and Sync operations to this operator callsign | When this setting specifies a callsign, and QSL Via is set to LotW,<br>• the Add Requested and Add All operations ignore Log Page Display QSOs whose Operator item doesn't match the specified callsign<br>• the Sync LotW QSOs and Sync LotW QSLs operations download and synchronize only QSOs and QSLs whose operator callsign matches the specified callsign<br>When this setting is empty, the Sync LotW QSOs and Sync LotW QSLs operations download and synchronize all QSOs and QSLs in your LotW account, respectively<br>• the Add Requested and Add All consider all QSOs in the  Log Page Display<br>• the Sync LotW QSOs and Sync LotW QSLs operations download and synchronize only QSOs and QSLs whose operator callsign matches the specified callsign |
| Report unmatched QSOs or QSLs as errors | when checked,<br>• the Sync LotW QSOs operation will report any downloaded QSOs that don't match any QSO in the current log<br>• the Sync LotW QSLs operation will report any downloaded QSLs that don't match any QSO in the current log |
| Exclude operator callsign when matching downloaded QSOs & QSLs to logged QSOs | when checked,<br>• 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 operator callsigns much also be identical.<br>• 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 operator callsigns much also be identical. |
| Full pathname of TQSL.exe | specify the location of the LotW application TQSL on your PC's hard drive<br>• TQSL is free, and available via https://www.arrl.org/lotw/getstart<br>• if you already have TQSL installed, verify that it is version 1.1.0 or later by running it and invoking its Help:About menu item<br>• By default, TQSL is installed in c:\Program Files\TrustedQSL\TQL.exe<br>• If you installed TQSL in another location, use the **Browse** button to locate and select TQSL |

| TQSL station location | Select the TQSL station location to be used associated with the uploaded QSOs; if no station location is selected, TQSL will ask you to select one when it invoked by DXKeeper during the LotW upload process.<br>If you add, modify, or delete a station location in TQSL, click the **Update** button to update the station location selector. |
|---|---|

**Printer Tab**

| Name | the name of the printer on which QSLs will be printed |
|---|---|
| Paper Size | select the printer paper size |
| Paper Source | select the printer paper source |
| Print Quality | select the desired print quality |

# DXKeeper: Log Items

**QSO items**

| Textbox Caption | ADIF Field Name | Item Description | Max Length |
|---|---|---|---|
| call | Call | the station's callsign | 13 |
| DXCC | DXCCPrefix | the station's DXCC prefix | 6 |
| name | Name | the operator's name | 20 |
| QTH | QTH | the operator' QTH | 30 |
| sent | RST_Sent | the RST report you sent | 3 |
| rcvd | RST_Rcvd | the RST report you received | 3 |
| mode | Mode | QSO mode (SSB, CW, RTTY, AM, FM, PSK31 plus any user-defined modes) | 8 |
| freq | Freq | the QSO frequency in MHz. (in a cross-band QSO, the transmit frequency) | 10 |
| band | Band | the QSO band (2190m, 160m, 80m, ... 2m ... 3cm ... 1mm .. submm) | 6 |
| begin | QSO_Date Time_On | the UTC time at which the QSO started<br>• entry format is your locale's standard date/time format, or `dd-mmm-yyyy hh:mm:ss`, or `yyyy-mm-dd hh:mm:ss`<br>• display format is your locale's standard date/time format, with seconds presented if the Display seconds in date/time fields checkbox is checked.<br>• the year must be 1930 or later | NA |
| end | QSO_Date Time_Off | the UTC time at which the QSO ended<br>• entry format is your locale's standard date/time format, or `dd-mmm-yyyy hh:mm:ss`, or `yyyy-mm-dd hh:mm:ss`<br>• display format is your locale's standard date/time format, with seconds presented if the Display seconds in date/time fields checkbox is checked.<br>• the year must be 1930 or later | NA |
| via | QSL_via | the station's QSL route | 13 |

**Auxiliary items**

| Textbox Caption | ADIF Field Name | Item Description | Max Length |
|---|---|---|---|
| op | Operator | your callsign when you worked the station | 13 |
| code | DXCC | the ARRL's country code for the station's DXCC entity | 3 |
| entity | (not stored in log) | the name of the station's DXCC entity (changing this automatically sets the DXCCID code to the correct value) | (not stored in log) |
| power | TX_Power | your transmit power, in watts | 4 |

| prop mode | Prop_Mode | the propagation mode<br>• AUR - Aurora<br>• AUE - Aurora-E<br>• BS - Back scatter<br>• ECH - EchoLink<br>• EME - Earth-Moon-Earth<br>• ES - Sporadic E<br>• FAI - Field Aligned Irregularities<br>• F2 - F2 Reflection<br>• ION - Ionoscatter<br>• IRL - IRLP<br>• MS - Meteor scatter<br>• RS - Rain scatter<br>• SAT - Satellite<br>• TEP - Trans-equatorial<br>• TR - Tropospheric ducting | 8 |
|---|---|---|---|
| notes | Comment | 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. | 1024 |

**QSL items**

| Textbox Caption | ADIF Field Name | Item Description | Max Length |
|---|---|---|---|
| sent | QSL_sent | status of your outgoing QSL card<br>• `R (requested) - the card should be sent`<br>• `Y (yes)      - the card has been sent` | 1 |
| rcvd | QSL_rcvd | status of the station's incoming QSL card<br>• `R (requested) - the card has been requested`<br>• `Y (yes)      - the card has been received`<br>• `S (submitted) - the card will be submitted to the ARRL for verification`<br>• `V (verified)  - the card has been ARRL-verified`<br>• `I (invalid)   - ignore this QSO when tracking progress`<br>• `X (expired)   - ignore this QSO when determining which QSOs should be confirmed` | 1 |
| date sent | QSLSdate | the date your outgoing QSL card was sent<br>• entry format is your locale's standard date format, or `dd-mmm-yyyy`, or `yyyy-mm-dd`<br>• display format is your locale's standard date format<br>• the year must be 1930 or later<br>• | 11 |

| date rcvd | QSLRdate | the date the station's incoming QSL card was received<br>• entry format is your locale's standard date format, or `dd-mmm-yyyy`, or `yyyy-mm-dd`<br>• display format is your locale's standard date format<br>• the year must be 1930 or later | 11 |
|---|---|---|---|
| msg | QSLMsg | a message to appear on your outgoing QSL card | 1024 |
| myQTH | APP_DXKEEPER_MY_QTHID | uniquely identifies the QTH from which you were operating when making this QSO | 20 |
| addr | Address | the 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 linebreaks) | 1024 |

**Online QSL Items**

| Textbox Caption | ADIF Field Name | Item Description | Max Length |
|---|---|---|---|
| eQSL.cc sent | APP_DXKeeper_EQSL_QSL_sent | status of upload to eQSL.cc<br>• `R (requested) - this QSO should be uploaded to eQSL.cc`<br>• `U (uploaded)  - this QSO has been uploaded to eQSL.cc`<br>• `Y (yes)       - this QSO has been uploaded and accepted by eQSL.cc` | 1 |
| eQSL.cc rcvd | APP_DXKeeper_EQSL_QSL_rcvd | status of confirmation by eQSL.cc<br>• `R (requested) - confirmation has been requested from eQSL.cc`<br>• `Y (yes)      - confirmation has been received from eQSL.cc`<br>• `V (verified) - confirmation has been verified by eQSL.cc`<br>• `I (invalid)  - ignore this QSO when tracking progress`<br>• `X (expired)  - ignore this QSO when determining which QSOs should be confirmed` | 1 |
| eQSL.cc date sent | APP_DXKeeper_EQSL_QSLSdate | the date that the QSO information was successfully uploaded to eQSL.cc<br>• entry format is your locale's standard date format, or `dd-mmm-yyyy`, or `yyyy-mm-dd`<br>• display format is your locale's standard date format<br>• the year must be 1930 or later | 11 |

| eQSL.cc date rcvd | APP_DXKeeper_EQSL_QSLRdate | the date that the QSO was confirmed via eQSL.cc<br>• entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd<br>• display format is your locale's standard date format<br>• the year must be 1930 or later | 11 |
|---|---|---|---|
| LotW sent | APP_DXKeeper_LOTW_QSL_sent | status of upload to LotW<br>• `R (requested)` - this QSO should be uploaded to LotW<br>• `U (uploaded)` - this QSO has been uploaded to LotW<br>• `Y (yes)` - this QSO has been uploaded and accepted by LotW | 1 |
| LotW rcvd | APP_DXKeeper_LOTW_QSL_rcvd | status of confirmation by LotW<br>• `R (requested)` - confirmation has been requested from LotW<br>• `Y (yes)` - confirmation has been received from LotW<br>• `S (submitted)` - the confirmation will be submitted to the ARRL for verification<br>• `V (verified)` - confirmation has been verified by LotW<br>• `I (invalid)` - ignore this QSO when tracking progress<br>• `X (expired)` - ignore this QSO when determining which QSOs should be confirmed | 1 |
| LotW date sent | APP_DXKeeper_LOTW_QSLSdate | the date that the QSO information was successfully uploaded to LotW<br>• entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd<br>• display format is your locale's standard date format<br>• the year must be 1930 or later | 11 |
| LotW date rcvd | APP_DXKeeper_LOTW_QSLRdate | the date that the QSO was confirmed via LotW<br>• entry format is your locale's standard date format, or dd-mmm-yyyy, or yyyy-mm-dd<br>• display format is your locale's standard date format<br>• the year must be 1930 or later | 11 |

**Award items**

| Textbox Caption | ADIF Field Name | Item Description | Max Length |
|---|---|---|---|
| county | Cnty | the station's county or local governmental region | 32 |
| state | State | the station's US state | 2 |
| prov | Province | the station's Canadian province | 2 |
| ARRL | ARRL_Sect | the station's ARRL section | 6 |
| continent | Cont | the station's continent (NA, SA, EU, AF, OC, AS) | 2 |
| IOTA | IOTA | the station's Islands on the Air designator | 7 |
| grid | GridSquare | the station's grid square in the Maidenhead Locator System | 8 |
| WPX | Pfx | the station's prefix as defined by the CQ WPX awards program | 8 |
| CQ | CQZ | the station's CQ zone | 2 |
| ITU | ITUZ | the station's International Telecommunications Union zone | 2 |

**Contest items**

| Textbox Caption | ADIF Field Name | Item Description | Max Length |
|---|---|---|---|
| ID | Contest_ID | the name of the current contest | 32 |
| tx # | STX | transmit serial number or exchange | 16 |
| rx # | SRX | receive serial number or exchange | 16 |

**Satellite items**

| Textbox Caption | ADIF Field Name | Item Description | Max Length |
|---|---|---|---|
| Name | SAT_NAME | satellite name | 32 |
| Mode | SAT_MODE | satellite mode | 8 |
| RX Freq | FREQ_RX | the QSO receive frequency in MHz. | 10 |
| RX Band | BAND_RX | the QSO receive band (2190m, 160m, 80m, ... 2m ... 3cm ... 1mm .. submm) | 6 |

**MyQTH items**

| Textbox Caption | ADIF Field Name | Item Description | Max Length |
|---|---|---|---|
| ID | APP_DXKEEPER_MY_QTHID | unique identifier associated with a QTH | 20 |
| Name | MY_NAME | operator's name | 32 |
| Email | APP_DXKEEPER_MY_EMAIL | operator's email address | 32 |
| Street | MY_STREET | station QTH street name | 32 |
| City | MY_CITY | station QTH city | 32 |
| State | MY_STATE | station QTH state | 32 |

| PostCode | MY_POSTAL_CODE | station QTH postal code | 32 |
|---|---|---|---|
| County | MY_CNTY | station QTH county | 32 |
| Country | MY_COUNTRY | station QTH country | 32 |
| Rig | MY_RIG | equipment in use | 128 |
| CQ | MY_CQ_ZONE | station QTH CQ zone | 2 |
| ITU | MY_ITU_ZONE | station QTH ITU zone | 2 |
| IOTA | MY_IOTA | station QTH IOTA tag | 8 |
| Grid | MY_GRIDSQUARE | station QTH grid square | 6 |
| Latitude | MY_LAT | station QTH latitude | 16 |
| Longitude | MY_LON | station QTH longitude | 16 |

# DXKeeper: Filtering the Log Page Display with SQL

To create a more sophisticated search in SQL (Structured Query Language), click the **Adv** button to the immediate left of the Filter panel; 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 eight different SQL Queries; these are automatically saved between DXKeeper sessions. Notice that this panel also gives you the ability to construct more sophisticated UTC filters, specify BAND and MODE filters, and compose up to four advanced Sorts. Like the SQL Queries, the Sorts are also saved between sessions.

The **SQL Query Filters** panel contains four query textboxes that display either SQL Queries 1 to 4, or SQL Queries 5 to 8; click the **~** button in the panel's upper right corner switch between the two sets of four. To create a Query, enter the appropriate 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 makes it easy to compose queries and immediately see their results.

The first SQL Query can be directly invoked from the Main window's Filter panel by clicking the SQL1 button.

The database schema for logs contains one record for each QSO, and each record contains an identical set of fields. Use each field's specified ADIF field name when constructing a query.

At the very top of the **Advanced Log Sorts and Filter** window, 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, date constants must be enclosed between # symbols.

```
(CALL='VK9NS') AND (QSO_Begin between #1997-06-01 12:00# and #1999-12-1#)
```

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.

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:

| 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') |

| 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*') |

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

```
QTH like '*<filtertextbox>*'
```

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.

A 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.devguru.com/Technologies/jetsql/quickref/jet_sql_intro.html .