



LOGGING AND RIG CONTROL

BARC MEMBERSHIP MEETING

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The screenshot shows a software interface for logging radio contacts. At the top, there is a menu bar with 'File', 'View', and 'Help'. Below it is a table titled 'Recent Contacts' with columns: Rec, Off, Country, ST, County, Name, Other, S, and N. The table lists various countries and their corresponding status in the S and N columns. Below the table are several control fields: 'Band', 'Mode', 'Power', 'Time On', 'Sent', and 'Re'. There are also checkboxes for 'QSL Sent' and 'QSL Rcvd', and a 'Spot Last' button. At the bottom, there is a 'Comments' section with a table of contact details.

Rec	Off	Country	ST	County	Name	Other	S	N
		Ecuador					Y	N
		Cape Verde					Y	N
		Suriname					Y	N
		USA					Y	N
		Puerto Rico					Y	N
		French Guiana					Y	N
		Puerto Rico					Y	N
		Belgium					Y	N
		England					Y	N
		USA					Y	N
		Brazil					Y	N
		Chile					Y	N
FT8		USA	ID	KOOTENAI			Y	Y
FT8		Azores					Y	Y
FT8		Brazil					Y	Y
FT8		Canada					Y	Y
FT8		USA					Y	N
FT8		Belize					Y	Y
FT8		Switzerland					Y	Y

Band	Mode	Power	Time On	Sent	Re

County	Frequency	Other

Comments	Pfx	Time	C...	Bea...	Dist...
LU5FCV: CORRIJO FRECUENCIA	CX	1731Z	SA	156	5
CLJ: USB	CX	1730Z	SA	156	
Gracias 73's GI	AO	1729Z	EU		

JOHN WESTERKAMP, W8LRJ

- Always interested in radio and have always been a SWL
- Extra Class Operator and BARC Member since April 2018
- Bachelor of Electrical Engineering from University of Dayton
- Ph.D. in Electrical Engineering from Purdue University
- Specialized in Digital Signal Processing/Communications
- Electrical Engineering Faculty at U.D. for 17 years
- Computers and Networking for 10 years
- Retired and enjoying a great hobby
- **LRJ stands for Lori, Rachel, and Jacob (wife and two kids)**
- Nephew is Jordan Westerkamp, football player University of Nebraska



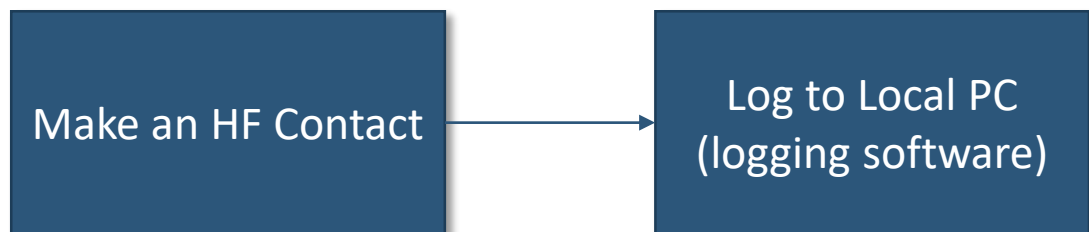


PURPOSES FOR LOGGING

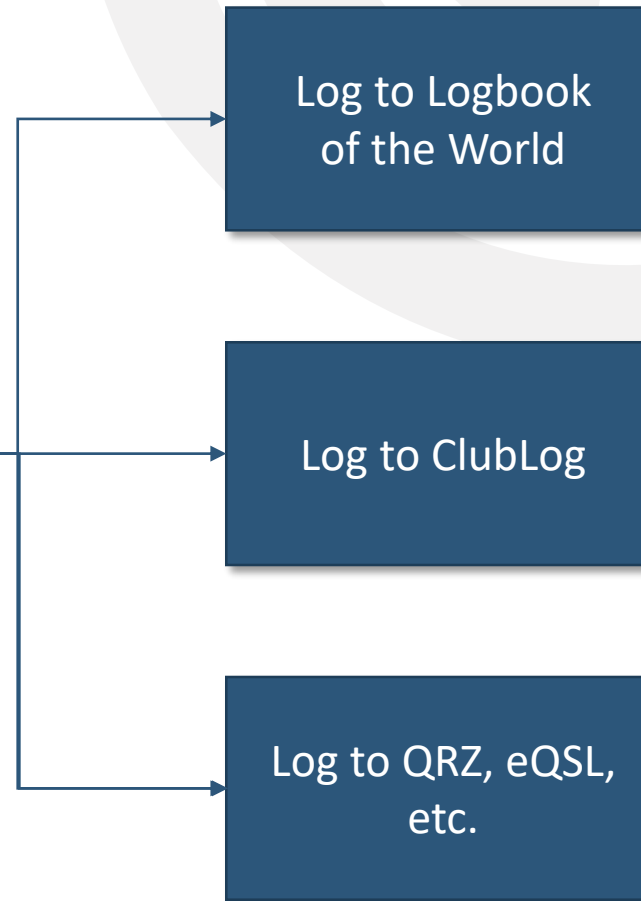
- FCC used to require a logbook at each station (not any longer); however, the FCC *may* request information about a contact
- **Transmitting on 60m with other than a dipole** requires a log of your power settings
- Now mostly local software and on-line
- Personal satisfaction to track your progress
- Record of previous contacts when calling or being called by a station
- Avoid duplicate calls (especially in contests)
- Award applications (DXCC, WAS, etc.)
 - ✓ DXCC (DX Century Club, 100 DX Contacts)
 - ✓ WAS (Worked All States)
 - ✓ WAC (Worked All Continents)
 - ✓ CQ (Worked All CQ Zones)
- Focus today on logging *voice* contacts (FT8 another day!)

LOGGING PROCESS

Your Shack



Internet



- Ideally, the Internet logging is done automatically by your logging software on your PC.
- You may have to trigger the upload manually, however.
- Internet logging is *optional*, but important.



LOCAL PC LOGGING SOFTWARE

- N3FJP Amateur Contact Log (BARC uses N3FJP for logging and contesting; free for first 30 contacts, only \$60 for entire suite)
 - N1MM+ is very popular for contesters (free)
 - DXKeeper (part of DX Lab Suite and free)
 - CQ Log
 - Log4OM
 - MacLogger DX (obviously for the Mac)
-
- Note that some logs are for Contesting and some have regular contact logging components.



INTERNET LOGGING SITES

- Logbook of the World (LoTW) is the standard, especially for awards
 - ✓ Account creation process is somewhat involved
 - ✓ Requires downloading and installing software and using a callsign certificate
 - ✓ Allows you to track your award progress
 - ✓ After creating an account, upload your log (.adi file)
- ClubLog is great for tracking DX and is also used by BARC for our cutthroat, highly competitive DXCC League
 - ✓ Create an account at clublog.org
 - ✓ Upload your log (.adi file)
 - ✓ Send email to Paul Sharp, WS8R, to add you to the league
 - ✓ Use DX Cluster to spot any DX entities you still need
- QRZ is at qrz.com (good if you pay for qrz.com membership)
- eQSL is another site that some hams use for awards



LOGBOOK OF THE WORLD

- Logbook of the World (LoTW) is the main logging system for amateur radio and a source of awards (DXCC, WAS, etc)
- All contacts are verified and automatically matched with the other QSO station for an official QSL
- Requires an account at LoTW and that you are a licensed amateur
- Requires you to download and install TQSL software to upload contacts (runs on Windows, MacOS, and Linux)
- Requires that you verify your address and install a callsign certificate



ACTIVATING TQSL

- [Quick Start TQSL \(arrl.org\)](http://www.arrl.org)

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Help Support ARRL

QST
ARRL's Monthly Membership Journal
GET IT HERE

Logbook of the World
LOGBOOK OF THE WORLD

Learn More

Get Started

- + Instructions
- + Step 1 - Download and install the software
- + Step 2 - Request a certificate for your call sign
Requesting a certificate is a simple process of entering some basic information such as your call sign, name, address and your e-mail address.
[Go Now](#)
- + Step 3 - Authenticate your location (USA)
- + Step 3 - Authenticate your location (non-USA)
- + Step 4 - Accept Your Call Sign Certificate (TQ6 file)
- + Step 5 - Create a station location
- + Step 6 - Sign Upload Your Log Files via the Internet

On The Air >> Logbook of the World >> Quick Start >> Quick Start TQSL [Back to Top](#)
[Having Trouble?](#)

EXPLORE ARRL

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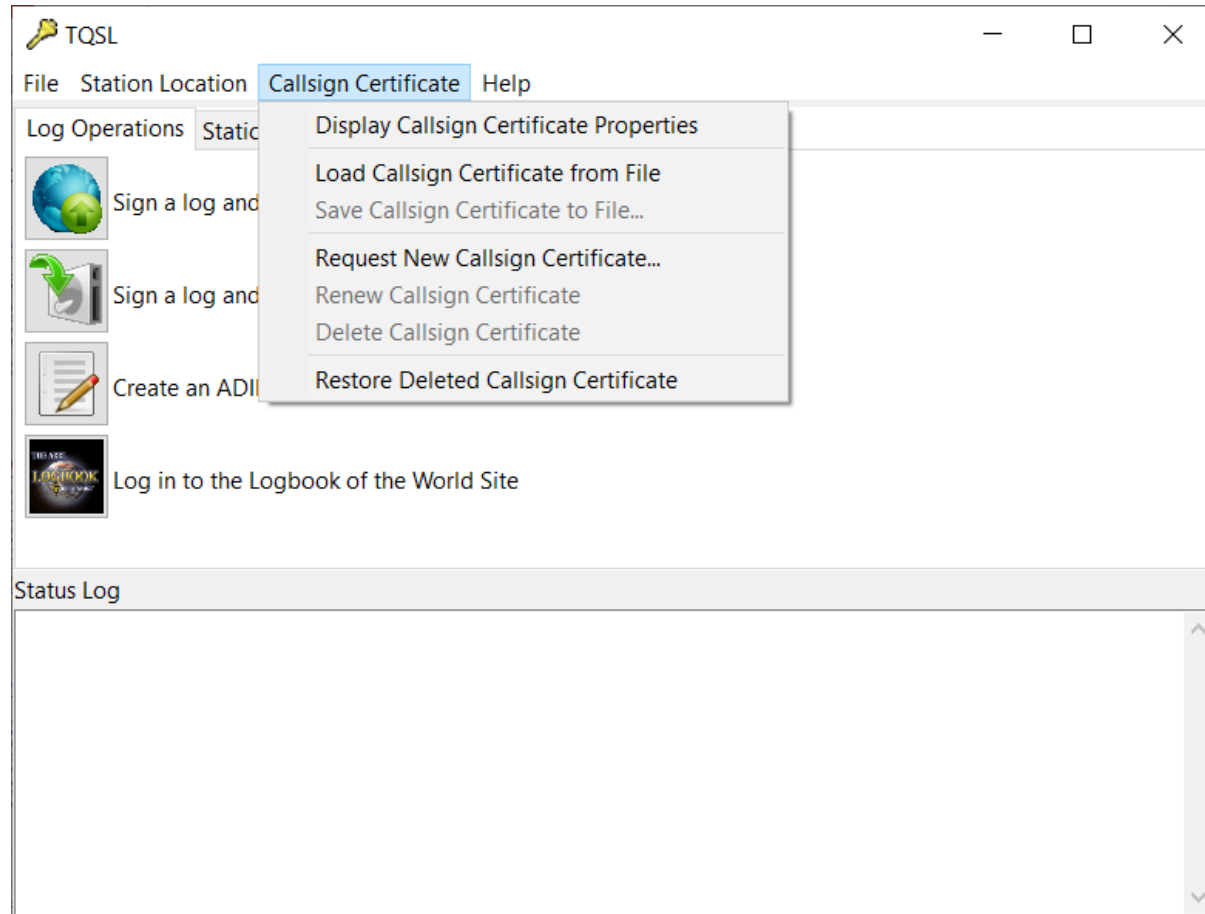
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TQSL SETUP



- Select *Callsign Certificate*
- Next select *Request New Callsign Certificate*
- Fill in the form and submit
- For radio amateurs in the USA, callsign authentication is done with a postcard that is mailed to the address in the FCC database.
- If this address is not current, please visit the [FCC ULS website](#) and update your address information.
- The postcard will direct you to a special LoTW web page (URL is on the postcard) and enter an eight digit code from the postcard after which the TQ6 file will be e-mailed to the user.



TQSL SETUP (CON'T)

- At this point you have received an e-mail from LoTW with your TQ6 file. This e-mail also contains your username (your callsign) and a password to log into the LoTW userpage. This information is in the lower portion of the text in the e-mail message.
- These instructions will show you how to load the TQ6 file and more importantly how to save the certificate. **The TQ6 file by itself is not your complete certificate so please be sure to use the instructions to load and save your certificate.**
- Once the callsign certificate is installed in TQSL, you need to create a ***Station Location***. The station location contains all of the geographic information for your operation. This includes ITU and CQ zones, grid square, US State and county, and IOTA number if you operated from an IOTA island.



USING N3FJP FOR LOGGING

N3FJP's Amateur Contact Log 7.0.6 www.n3fjp.com

File Edit Settings Clear CallBook List Search Awards eLogs Recall Net View Help

Find Recent Contacts 250 Listed QSOs

Rec#	Call	Date / Time	Bnd	Mode	Power	Snt	Rec	Off	Country	ST	County	Name	Other	S	R	Comments	Frequency	10-10	Grid	Cont
250	HC5EG	2022/01/01 20:53	15	FT8					Ecuador					Y	N					SA
249	D44PM	2022/01/01 20:50	20	FT8					Cape Verde					Y	N					AF
248	PZ2YT	2022/01/01 20:37	20	SSB					Suriname					Y	N					SA
247	W2T	2021/12/28 23:10	10	SSB					USA					Y	N					NA
246	NP4VM	2021/12/28 21:09	10	SSB					Puerto Rico					Y	N					NA
245	TO60CNES	2021/12/28 19:53	20	SSB					French Guiana					Y	N					SA
244	KP4PUA	2021/12/28 19:35	20	SSB					Puerto Rico					Y	N					NA
243	OO9A	2021/12/28 19:12	20	FT8					Belgium					Y	N					EU
242	GB1HNY	2021/12/28 19:08	20	FT4					England					Y	N					EU
241	KE7RTB	2021/12/28 18:57	10	FT8					USA					Y	N					NA
240	PY2SGL	2021/12/28 18:56	10	FT8					Brazil					Y	N					SA
239	CA3SOC	2021/12/28 18:54	10	FT8					Chile					Y	N					SA
238	N7UVH	2021/12/28 17:58	12	FT8					USA	ID	KOOTENAI			Y	Y				DN17MR	NA
237	CU3EQ	2021/12/28 17:56	12	FT8					Azores					Y	Y				HM68KP	EU
236	PY4DY	2021/12/28 17:53	12	FT8					Brazil					Y	Y				GH80AC	SA
235	VA3MJR	2021/12/28 03:12	80	FT8					Canada					Y	Y				FN03BF	NA
234	N7XXC	2021/12/28 03:05	40	FT8					USA					Y	N					NA
233	V31DL	2021/12/28 01:10	40	FT8					Belize					Y	Y				EK57NF	NA
232	HB9HIT	2021/12/27 16:04	15	FT8					Switzerland					Y	Y				JN36HN	EU

Ready to begin! LogData.mdb

Call	Date	Band	Mode	Power	Time On	Sent	Rec	Country

Name	State	County	Frequency	Other	<input type="checkbox"/> QSL Sent	Spot Last	1:32:19 PM	Log Contact
					<input type="checkbox"/> QSL Rcvd		17:32:19 UTC	

Bearing: _____

Miles: _____

Cont: _____

Comments

Call	Frequency	QTH	Band	Mo...	Status	Comments	Pfx	Time	C...	Bea...	Dist...	On ...
A65HC	14.2200	United Arab ...	20	SSB	Unconfirmed!	de: PA2PKZ: BIG!! USB	A6	1732Z	AS	39	7.267	
CX7SS	21.2500	Uruguay	15	SSB	Unconfirmed!	de: LU5FCV: CORRIJO FRECUENCIA	CX	1731Z	SA	156	5.330	
CX7SS	21.2500	Uruguay	15	SSB	Unconfirmed!	de: SV2CLJ: USB	CX	1730Z	SA	156	5.330	
OM3IW	14.4810	Belgium	20	SSB	Unconfirmed!	de: QR2A	ON	1729Z	EU	47	4.125	

- Download Amateur Contact Log (ACL) from n3fjp.com and install.
- Run ACL and type in your settings (callsign, gridsquare, state, etc.).
- Type in a callsign you want to work or have just worked and hit *Tab*.
- If you connect ACL with QRZ.com, it automatically fills in the info.
- If you connect ACL to your rig, it automatically fills in the frequency and mode information.
- After the QSO, click *Log Contact* or hit *Enter*.
- Use *eLogs* to log the QSO to any Internet logging site.
- Need to set this up first.

CALLBOOK SETUP

QRZ Internet Lookup

After entering your user name, password and checking the check box below, tabbing from the Call field while on line will initiate the QRZ Internet

Note - QRZ will only return name after your subscription or trial period has

Please enter your QRZ Username:

Please enter your QRZ Password:

Display Password

QRZ Lookup URL:

Enable QRZ Internet Lookup

Open image & bio page on Call tab

[Please click here to learn more.](#)

- If you pay for QRZ lookups, you can enter the information under *Callbook*.
- There are also other free callbooks you can use by selecting them under *Callbook*.



SETUP LOTW IN ACL

LoTW Manager 1.9

LoTW User Name: W8LRJ

LoTW Login Password: [REDACTED]

LoTW Station Location: W8LRJ (Beavercreek)

Sign and Upload: All Contacts Not Uploaded, Selected Contacts from Main Form, Entire Log

Download: All Since 2022/01/05, Confirmed Since 1901/12/12, All Confirmed, All Data

Own Call (optional): [REDACTED]

LoTW Server Download URL: <https://lotw.arrl.org/lotwuser/lotwreport.ad?login=>

To sign and upload records to LoTW, you must have version 1.14 (or later) of the TQSL software installed, received your TQSL certificate and passwords. The signing and upload of your QSO records is performed by the TQSL software.

Setting up LoTW is easy and there are plenty of resources to help! For the easy, step by step instructions on getting started with LoTW, please click the LoTW Help Page button below, that will take you here: <http://www.n3fjp.com/lotwhelp.html>

TQSL Software path: C:\Program Files (x86)\TrustedQSL\ Browse

Records Downloaded from LoTW: 0 Listed Items

Rec	Call	Band	Mode	Date	On	R	R Date	Country	CQz	ITUz	Iota	Grid	St	County

- Along left-hand side, enter your LoTW username and password.
- Enter the *Station Location* (must match an entry in TQSL).
- Click *Browse* to find and enter the TQSL software path.
- You can check the *Enable Real-Time Upload* box if you want automatic uploads to LoTW.
- This procedure is typical for almost all Internet logging software using LoTW.
- ClubLog setup only requires your username and password.
- QRZ setup requires a special key that is generated when you pay for an account.

CLUBLOG AND QRZ



Club Log Uploader

Please enter your Club Log E-mail Address:
westerkamp@gmail.com

Please enter your Club Log Password:

 Display Password

Please enter your Club Log Call Sign:
W8LRJ

A free, Club Log account is required to use this function.
Please visit <http://www.clublog.org/> for more details.

When you upload records to Club Log, a 'B' (or which ever single character you choose) will be added to the Sent Confirmed By field of each record so that it is not duplicated on future uploads.

You may also mark the uploaded records as QSL Sent, but note that ARRL only recognizes LoTW and QSL card confirmations, so you may wish to leave that option

Club Log Confirmed By letter to designate upload:

Upload

Selected Contacts from Main Form

All Contacts Not Uploaded

On upload, the Confirmed By character is added to the Sent Confirmed By field. You may also mark the QSO record as QSL sent on upload if you wish.

Mark records as QSL Sent
 Enable Real Time Upload (batches of 10)

QRZ Logbook

Please enter your QRZ key (from your QRZ Logbook settings):

 Display Key

A paid QRZ account, such as the QRZ XML callbook lookup service is required to use this function. Please visit <https://shop.qrz.com/collections/subscriptions> for more details.

When you upload records to QRZ, a 'Q' will be added to the Sent Confirmed By field of each record, so that it is not duplicated on future uploads. Similarly, a 'Q' will be added to the Received Confirmed By field for confirmed records downloaded from QRZ.

You may also mark the uploaded and downloaded records as QSL Sent and / or Received, but note that ARRL only

Upload **Download**

Selected Contacts from Main Form All Since

All Contacts Not Uploaded All Data

Enter an optional comment:

On upload / download, a Q is added to the Confirmed By fields. You may also mark the QSO record as QSL sent / received if you wish.

Mark records as QSL Sent / Received
 Enable Real Time Upload

The screenshot shows the QRZ website interface. The main header includes the QRZ logo and navigation links like Database, News, Forums, Store, Swapmeet, Resources, and Contact. The user is logged in as W8LRJ. The page title is "QRZ Logbook API". The "API Key" field is highlighted with a red box. Below it, there are instructions: "Note: This key allows full read/write access to this logbook. Treat it as you would any other password." There are also links for "Need Help? Check out our QRZ Logbook API Developer Guide".



RIG CONTROL

Rig Interface Setup 2.8 (Ctrl R)

Select Rig:

- None
- Client API
- Elecraft
- Flex API
- FlexRadio
- Icom
- Icom2
- Icom 735
- Kenwood
- Kenwood2
- N3FJP API
- Ten Tec Argonaut VI
- Ten Tec Eagle
- Ten Tec Fnt Pnl
- Ten Tec Omni VI
- Ten Tec Omni VII
- Ten Tec Orion
- Ten Tec Pegasus
- Yaesu - Older
- Yaesu 100D
- Yaesu 757 GX II
- Yaesu 890
- Yaesu 891
- Yaesu 900

Com Port:

- COM4
- COM104
- COM5
- COM105

Baud Rate:

1.2 2.4 4.8 9.6 11.5 14.4 19.2 28.8 38.4 56

Parity:

Odd None Even

Data Bits: 7 8

Stop Bits: 1 2

Connection Power:

None RTS DTR Both

Radio Polling Rate:

100 ms 500 ms 2 sec 10 sec

Mode Determined By:

Rig Frequency Don't Use

Mode by Frequency: Return All Mapped Modes

Command to Read Frequency: FA; Frequency: [REDACTED]

Command to Read Mode (if required): MD; Mode: [REDACTED]

Use Frequency on Main Form Convert Command to Hex

Return LSB / USB Immediately Execute Commands

Show Frequency Change Form on Startup Clear On QSY

Don't Send CW Mode Change if on CW (so CW filters won't reset)

Don't Send Mode Change with Freq (useful when operating digital)

Add Offset to Frequency Change (CW & DIG) Offset (Hz): 0

Enable Ctrl Key Keyboard Tuning Invert Keyboard Tuning Up / Dn + / -

Block Band Overlap Transverter Offset (MHz): 0

Description:

To use the Rig Control interface, select the appropriate parameters for your radio and click test.

Be sure to select the RTS or DTR connection power option if your interface requires it. Many interfaces require RTS.

Icom users, after selecting Icom, don't forget to enter your rig ID into the command strings, which you will find in your rig's manual under CAT control.

I have the detailed successful settings users have sent along for many rigs here:
<http://www.n3fjp.com/help/righelp.htm>

I have tested this code personally on

[More rig interface help and settings!](#)

Unprocessed data returned: [REDACTED]

Converted from hex: [REDACTED]

Multi Radio Configuration: (Main Form Ctrl + X)

Rig 1: []

Rig 2: []

Rig 3: []

To test the change frequency command, enter a frequency in MHz and click Send. The mode should change to SSB or CW as well, depending on the frequency you enter. Test changing modes by clicking on the mode buttons:

Frequency: 21.446

- Select *Rig*
- Select *COM Port*
- Select *Baud Rate*
- Click *Test*
- If box shows current rig frequency, click *Done*.
- If not, may have to play with Rig settings.
- You can *Save Settings* on the left and keep separate settings for each rig you own.



DX SPOTTING

DX Spotting Setup (Ctrl D)

Data Source <input checked="" type="radio"/> Telnet Host <input type="radio"/> LAN Relay	Telnet Host: dxspots.com <small>Delete Host From List</small>	Telnet 23	Telnet Login W8LRJ	Login Command SHOW/DX	<input type="checkbox"/> Enable DX Spotting % of Form <input checked="" type="checkbox"/> Auto Reconnect <input type="checkbox"/> 3 Min Keep Alive 12 <input checked="" type="checkbox"/> Show Band Map on Startup (Ctrl E) <input type="checkbox"/> Show Large Form on Startup (Ctrl+Shift D)
Display spots for these continents on the main form: <input checked="" type="checkbox"/> AF <input checked="" type="checkbox"/> AS <input checked="" type="checkbox"/> EU <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/> OC <input checked="" type="checkbox"/> SA <small>More Filtering</small>		Audio Alerts: <input type="checkbox"/> DX <input type="checkbox"/> Needed Spot <input checked="" type="checkbox"/> Beep When Spotted Speak Details: <input type="checkbox"/> DX <input type="checkbox"/> Needed Spot			
<pre>To enable Telnet DX spotting, enter your call sign in the login field above and then click the check box to enable DX spotting. You can also optionally add a command to be sent automatically when you log in such as SHOW/DX to retrieve recent DX spots immediately when you connect. You can change the size of the DX spots list on the main form by adjusting the percentage above. Press Ctrl E from the main form to also display a band map. The color codes on the band map are: Yellow Bold = < 3 minutes Yellow = 3 - 5 minutes White = 5 - 10 minutes Light Gray = 10 - 20 minutes Gray = 20+ minutes Italics = New Multiplier / Entity (in programs where applicable - not in state QSO programs) Red = New Entity LoTW user (AC Log only - must enable ID of LoTW Users on LoTW setup form) Note these color codes only apply to the band map, not the list on the main form. Also, only the last 200 spots are held in RAM, so during busy times, depending on your filtering, you may not see any gray spots. You can display the band map horizontally or vertically by clicking the Horz / Vert button at the bottom of the map. The button disappears after five seconds, but you can</pre>					
Press Ctrl E from the main form to display the band map! Click here to learn more!					
Please type text to send here and then press enter: <input type="text"/> <input type="button" value="Send"/> <input type="button" value="Spot Last"/> <input type="button" value="Done"/>					

- Click *Telnet Host*
- Enter *dxspots.com*
- Enter 23 for *Telnet* port
- Use your callsign for *Telnet Login*
- ***Be sure to click Enable DX Spotting.***
- Other settings as desired.



DX SPOTTING (CON'T)

DX Filter Settings

The following applies to the station that posted the spot, not the station being spotted. The idea is that if you filter DX spots to only spots posted by stations closer to you, you will have a better chance of hearing the spotted station at your location.

Only display DX spotted by stations that are located in:

No Filter Your Continent Your Country

You can also filter by Call Area (or any string value) in the station that posted the DX spot's call. For example, if you only want to receive spots from Call Areas 3 and 4, you would type 3 4 (spaces are value separators).

Mode Filtering (Based on spot frequency):

Block Phone Block CW Block Digital

CW / Digital plan segments may not be strictly honored, especially during contests. You may not wish to block Digital during CW contests, etc.

Display digital modes. (Based on frequency as mapped in your BandPlan.txt file. AC Log only).

Only show DX spots inside USA allocation privileges for: Technician General Advanced

Check any bands you would like to BLOCK. Checking the band will block the DX spots on that band.

160 80 60 40 30 20 17 15 12 10 6 2 & up

Block spots for DX entities where the entity has been confirmed on both that band AND mode (CW & PH).

Block spots not in Super Check Partial list (contest software only).

Block spots in your country (stations in USA).

These filters only apply to the main form. No filtering is applied on the DX Spotting setup form.

[Learn how to set even more filtering.](#)

- Check settings for your application as desired.