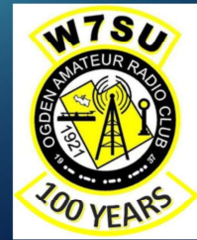


ELECTRONIC LOGGING

PRESENTED BY EUGENE MORGAN (WB7RLX)

TO THE OGDEN AMATEUR RADIO CLUB ON MARCH 18, 2023

V1.2



AGENDA

- Logging- A Brief History
- Why do we Log QSO's Today?
- Electronic Logging
- LoTW
- QRZ
- Questions

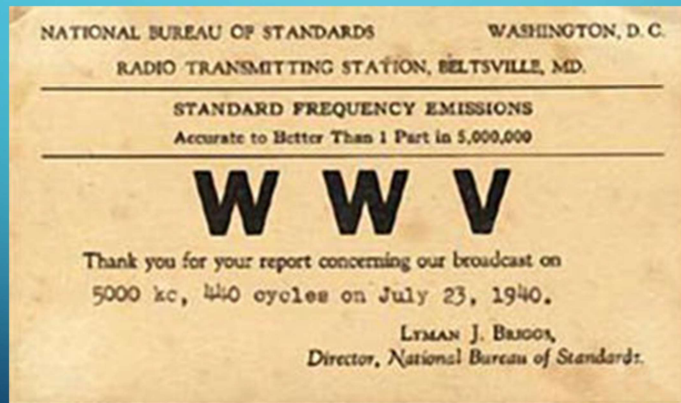


A BRIEF HISTORY OF LOGGING

- When did it start?: As near as I can determine Hams have been logging their QSO from the beginning, even before the founding of the ARRL.
- Why did it start: It was a way of “documenting” where their signals were going and what stations they had contacted.
- This evolved to the sending of QSL cards as a way of “confirming” contacts. Note that the tradition of sending out QSL cards started in the early days of shortwave radio listening.

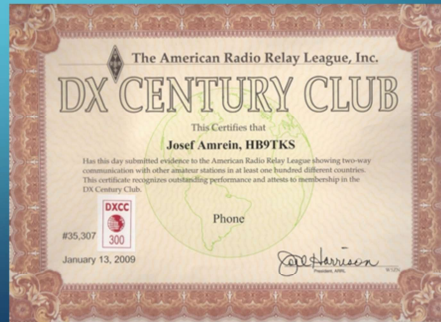
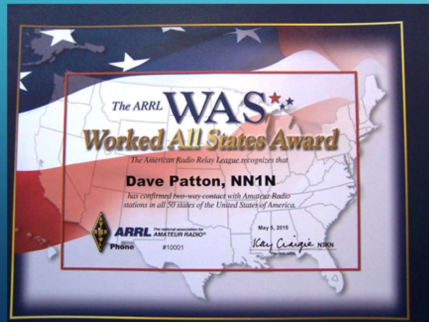
The very first radio signal that was purposely sent occurred in summer of 1865 by a Dr. (a dentist) Mahlon Loomis sent a signal up a wire suspended by a kite to a similar arrangement 18 miles away. (See: “200 Meters & Down” by Clinton DeSoto, page 11) Through the late 1800’s folks like Marconi and Tesla were experimenting with radio and in the first years of the 1900’s one can safely say amateur radio was born. For reference, the ARRL was founded by Hiram Percy Maxim in 1914.

EXAMPLE OF A QSL CARD FROM 1940



THE EVOLUTION OF THE QSL CARD

- After the ARRL was formed the ARRL thought it would be a good idea to create awards for certain achievements such as WAS and DXCC. So in 1935 the DXCC program began.
- However to earn these awards the QSO had to be confirmed and that confirmation was in the form of a paper QSL card.



See: QST, October 1935 by Clinton DeSoto

WHY DO WE LOG QSO'S TODAY?

- In the past the FCC required stations to keep a log of their contacts. This requirement was dropped in November of 1982 (see FCC-82-456)
- So why do we do it today? It goes back to the idea of “confirming” a QSO. And why would you want to confirm a QSO?
 - Old Habit
 - Just because
 - Award Chasing



For what ever reason the FCC dropped the logging requirement in 1982. So the question today is “Why do we log QSO’s today?” Is it just that old habits die hard? For the fun of it? I’m sure that if we did a survey among hams that still log QSO’s I’m sure we would find that some do it out of habit and some just because they want to keep track of who they have worked. But I believe the biggest reason is for chasing awards. But understand for awards it more than just logging, there also has to be “confirmation” In short both participants have to log the QSO and then send confirmation. And the properties of that conversation must agree. Let’s look at this a bit closer in the next slide.

WHAT IS CONFIRMATION?

- Confirming A QSO requires the Following Information from both stations:
 - ✓ **Call Signs** - both QSO reports must name the same two call signs
 - ✓ **Date/Time (UTC)** - both QSO reports must have the same timestamp, +/- 30 minutes
 - ✓ **Band** - both QSO reports report the same band in use
 - ✓ **Mode** - both QSO reports report the same mode in use

WB7RLX
Eugene Morgan
2757 Buchanan Ave
Ogden, UT 84403
USA

Portable Location: _____
 Mobile Location: _____

Confirming QSO With:
Radio: _____

DN41af • Weber County

DATE			UNIVERSAL TIME UTC	FREQUENCY MHZ	2-WAY MODE	REPORT		
DAY	MO	YR				R	S	T

Remarks: _____

Please QSL Thanks QSL
TNX QSO _____

www.qslworks.com

It's important that both stations log the date and time in UTC time. A question comes up about what time to log, the start time or the end time. I recommend that you should use the start time as a default time. Remember the margin of error can be as much as 30 minutes.

A JUST IN CASE YOU WERE WONDERING

- Yes people still send out paper QSL Cards! Although it's not as prevalent as it once was.



AND A LONG CAME THE COMPUTER (1977'ISH)



IMSAI, 1975



IBM PC, 1975



Commodore Pet, 1977



Apple II, 1977



TRS 80 Model I, 1977



Commodore VIC 20, 1980



Commodore 64, 1982

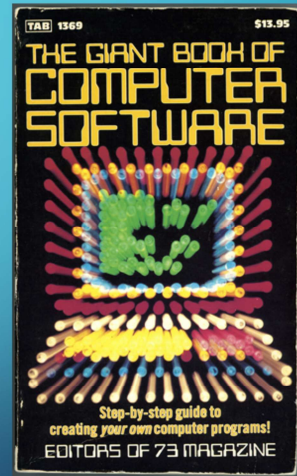
Needless to say the computer and Ham radio goes together like Champaign and strawberries, a match made in heaven. The computer has a hundred uses in ham radio from sending and receiving RTTY to designing antennas and circuits. And one of the more popular uses was logging.

SAMPLE LOGGING PROGRAM FROM 1981

A "Type-In" in GWBASIC, a version of Microsoft BASIC for the IBM PC. You would often see these "Type-In" programs in ham radio magazines like QST, 73 Magazine, and CQ Magazine. They were very popular with the readers.

Table 6-12. COMPULOG Program Listing.

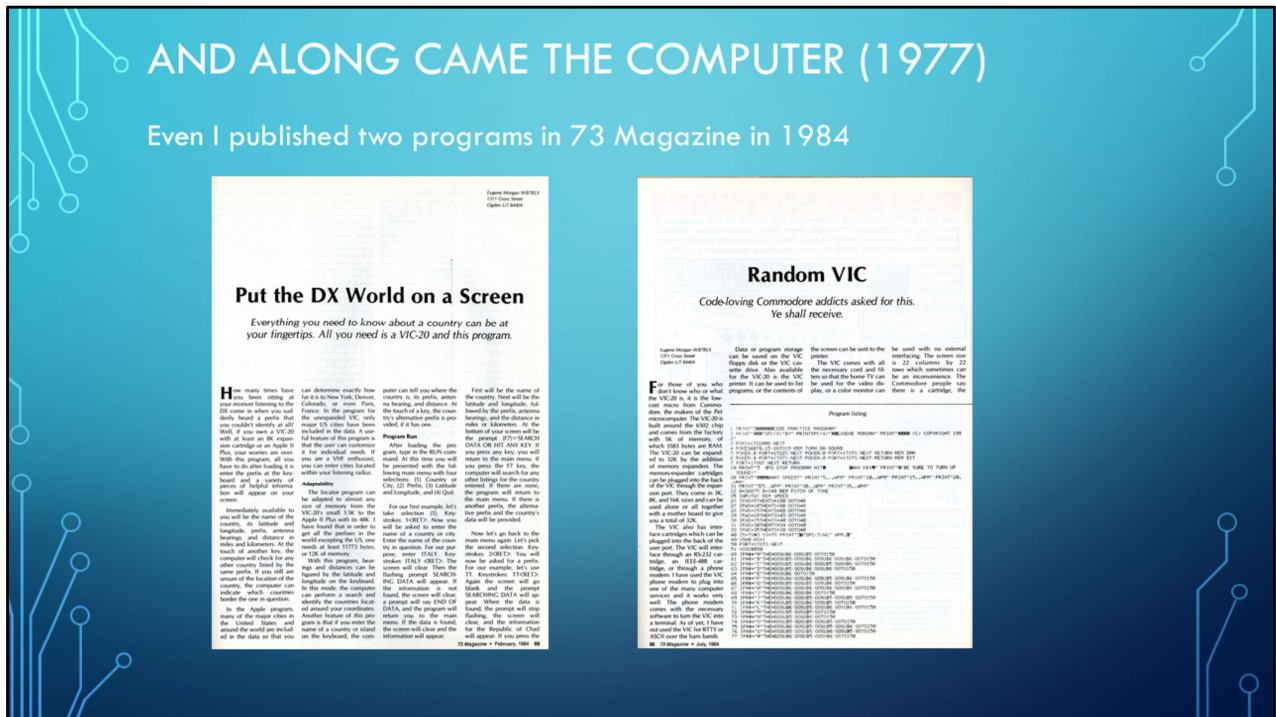
```
100 FILE #1:"COMLOG"
110 FILE #2:"CONTEST"
120
130 PRINT "COMPULOG OPTIONS: LOG ENTRY (L), SEARCH (S)"
140 PRINT "CONTEST LOG (C) - PROGRAM TERMINATION (Q)"
150 PRINT "OPTION:"
160
170 INPUT A
180 IF A=1 THEN GOTO 200
190 IF A=2 THEN GOTO 410
200 IF A=3 THEN GOTO 410
210 IF A=4 THEN GOTO 410
220 IF A=5 THEN GOTO 410
230
240 NEW OPTION 1 = LOG ENTRIES
250
260 PRINT "LOG ENTRY FORMAT:"
270
280 PRINT "CALL(CZC) NAME (GN) QSO-DATE (DD-MO-YY) RST (RST) REMARKS*"
290
300 PRINT "NO OF ENTRIES:"
310 INPUT N
320 FOR I=1 TO N
330 INPUT A$
340 PRINT A$
350 NEXT I
360 PRINT
370 GO TO 240
380
390 NEW OPTION 2 = LOG SEARCH
400
410 PRINT "CALL:"
420 INPUT A$
430 PRINT A$
440 INPUT B$
450 IF "Q"=B$ THEN I=1: A1
460 IF "R"=B$ THEN I=1: A1
470 IF "A"=B$ THEN I=1: A1
480 GO TO 510
490 INPUT C$
500 GO TO 510
510 INPUT B1:B2
520 IF A$=B1 AND A$=B2 THEN I=1: A1
530 IF A$=B1 AND A$=B2 THEN I=1: A1
540 PRINT
550 IF "F"=B$ THEN I=1: A1
560 GO TO 510
570 PRINT "STATION HAS NOT BEEN LOCATED"
580 PRINT
590 GO TO 410
600
610 NEW OPTION 3 = CONTEST LOG
620
630 PRINT "ENTER NAME OF CONTEST, DATE, OPERATOR(S)"
640
650 INPUT C$
660 PRINT C$
670 INPUT B1:B2
680 PRINT "ENTER CONTEST LOGGING FORMAT"
690 PRINT
700 INPUT B$
710 PRINT #2:"CONTEST LOGGING FORMAT:"
720 PRINT "CONTEST LOG HOW SPENT"
730 PRINT
740 INPUT A$
750 IF A$="STOP" THEN GOTO 840
760 INPUT B1:B2
800 IF "Q"=B1 AND "Q"=B2 THEN I=1: A1
810 IF "R"=B1 AND "R"=B2 THEN I=1: A1
820 IF "A"=B1 AND "A"=B2 THEN I=1: A1
830 PRINT A$
840 INPUT B$
850 IF "F"=B$ THEN I=1: A1
860 GO TO 750
870
880 PRINT "STATION HAS BEEN LOCATED"
890
900 END
```



This program is from the book called "The Giant Book of Computer Software" published by 73 Magazine and was first published in 1981. This book is from my personal collection.

AND ALONG CAME THE COMPUTER (1977)

Even I published two programs in 73 Magazine in 1984



These are two program I wrote for the Commodore computer. "Put the DX World on the Screen" was a program that would allow you to type in a prefix and the computer would tell you what country it was and give the bearing, distance and MUF (Maximum Usable Frequency) to the country in question. The MUF portion of the program was taken from a program called mini-muf which I converted to Commodore BASIC. The Random VIC program was one of the very first program I wrote. It was for learning CW. The VIC 20 had a whopping 3.5K of free RAM. The Vic 20 was my very first computer.... Now let's turn our attention to logging software in particular.

LOGGING SOFTWARE

- There are just too many to choose from. Here's the list:
 - <https://www.eham.net/reviews/view-category?id=27>
- Things to look for:
 - Can Import and Export ADIF files (we will get to that shortly)
 - Can Upload to LoTW
 - Can talk to your radio via CAT commands (Computer Aided Transceiver)
 - Can access call books like QRZ, HamQTH, DX Maps, HamCall, and Callbook

There are just too many logging programs to call out here. The provided link will give you an idea of what's available today. Logging programs can be broken down into two basic categories: one for contesting and one for everyday use and yes some can be adapted or extended to do both. From my perspective the most popular are: Ham Radio Deluxe, LogBook4OM, N1MM, N3FJP, and QRZ. Note that QRZ is an online log book while the others are installed on your local hard drive. I did not include LoTW in this list. LoTW a cloud based database and not a logging program per se given that it doesn't have a user interface suitable for direct data entry of QSO information. LoTW depends on other systems such as those mentioned above for direct data input.

AND THEN ALONG CAME THE INTERNET (1969)

- As the Internet began to become ubiquitous someone decided that it might make a great way of confirming QSO's.
 - It eliminated the cost of sending out paper QSL cards not to mention the cost of the QSL cards themselves.
 - Mail did not work equally well worldwide
 - The mail was slow and especially so in certain parts of the world.

Fun Fact: QRZ came on line on October 28, 1993. LoTW came on line on September 15, 2003.

During the same period the World Wide Web was born, on **October 28, 1993**, QRZ went online with <http://www.qrz.com> It was one of the very first web based callsign lookup services. QRZ holds the distinction of being one of the first 5,000 websites in existence (there are many millions today).

See:

<https://www.qrz.com/page/about.html#:~:text=During%20this%20same%20period%20the%20World%20Wide%20Web,websites%20in%20existence%20%28there%20are%20many%20millions%20today%29.>

See: OCT 2003 - QST (PG. 46)

Introducing Logbook of The World

Author: Mills, Wayne, N7NG

Article: [QST Archive \[PDF\]](#)

See: [A Brief History of the Internet - Internet Society](#)

WHAT'S AN ADIF: AMATEUR DATA INTERCHANGE FORMAT

- ADIF is a publish standard for exchanging QSO information
- It establishes an agreed to standard for field names, aka “Labels” that can be used in identifying specific data elements of a QSO such as:
 - Call Sign, Signal Reports, QTH Information and so on.
 - See: <http://www.adif.org/>

The key purpose of the ADIF format is to provide a means of transferring logbook data from one system to another such as when uploading your logbook to QRZ or LoTW. Writing parsers for ADIF files is fairly simple. The ADIF format is dynamic and is constantly being amended to include additional labels. The current ADIF standard is version 3.1.4 (as of March 2023)

WHAT DOES AN ELECTRONIC LOG LOOK LIKE?

```
<call:6>M10JZZ <gridsquare:4>IO65 <mode:3>FT8 <rst_sent:3>-19  
<rst_rcvd:3>-12 <qso_date:8>20230214 <time_on:6>181600  
<qso_date_off:8>20230214 <time_off:6>181800 <band:3>10m  
<freq:9>28.074553 <station_callsign:6>WB7RLX <my_gridsquare:6>DN41AF  
<tx_pwr:3>100 <eor>
```

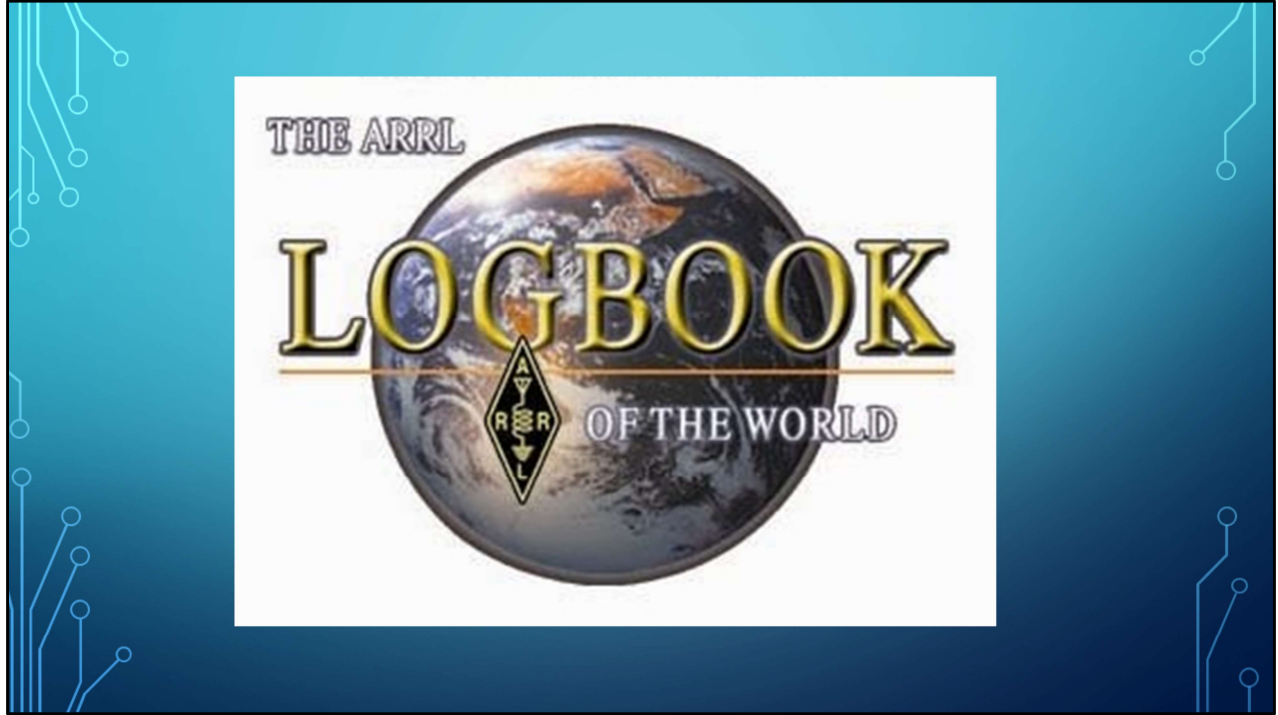
```
<call:6>IS0KNG <gridsquare:4>JM49 <mode:3>FT8 <rst_sent:3>-17  
<rst_rcvd:3>-17 <qso_date:8>20230214 <time_on:6>183000  
<qso_date_off:8>20230214 <time_off:6>183100 <band:3>10m  
<freq:9>28.074664 <station_callsign:6>WB7RLX <my_gridsquare:6>DN41AF  
<tx_pwr:3>100 <eor>
```

This is an example from my own log book as seen via Windows Notepad. Although there are several hundred records in this file this shows an excerpt of just two separate QSO's. Note that each QSO entry is terminated with an <eor> label which indicates the end of a given record. The advantage to this format is each record can be of a different length and the fields do not need to be stored in any specific order. The only requirement is each record must use the standard labels and that the length of each field be indicated. <label:length>data
<label:length>data Example 1: <call:6>WB7RLX
Example 2: <call:4>W7SU

CABRILLO

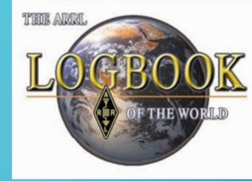
- Cabrillo is just another electronic log file format. However it's primary use is for contest logging.
- Practically all contest logging programs support the Cabrillo format
- You can find out more about Cabrillo by visiting these web sites:
 - <https://wwrof.org/cabrillo/>
 - <http://arrl.org/cabrillo-format-tutorial>
 - <http://arrl.org/files/file/Contest%20-%20General/Tutorials/Submitting%20An%20Electronic%20Contest%20Log.pdf>

Given that the Cabrillo was specific to contesting I chose to not include it in the formal presentation. But for those who are interested in contesting I wanted to include a slide that would explain what it is and where more information can be found.



Now let's dive into Log Book of the World aka: LoTW

LOTW: PROS AND CONS



- Pros:

- It Free!
- Uses digitally sign certificates (military grade security)
- QSO's recognized by ARRL. Makes QSO's eligible for ARRL WAS, DXCC and other ARRL specific awards.

- Cons:

- Cryptic User Interface
- Hard to Set up – due mainly to security requirements
- Takes time to set up – requires the ARRL to mail security key
- Single purpose - electronic Logging and reporting
- Requires installation of software on your local hard drive: Tqsl

The biggest pro is that QSO's confirmed by LoTW are recognized by the ARRL. It's second biggest pro is it uses military grade public key/private key security system. In short that means that no one else can upload to your logbook. This also happens to be one of it's biggest cons. Setting up this public/private key security is complicated and takes time and requires you to configure your logging program to use the LoTW security certificate for signing logs before being uploaded to LoTW.

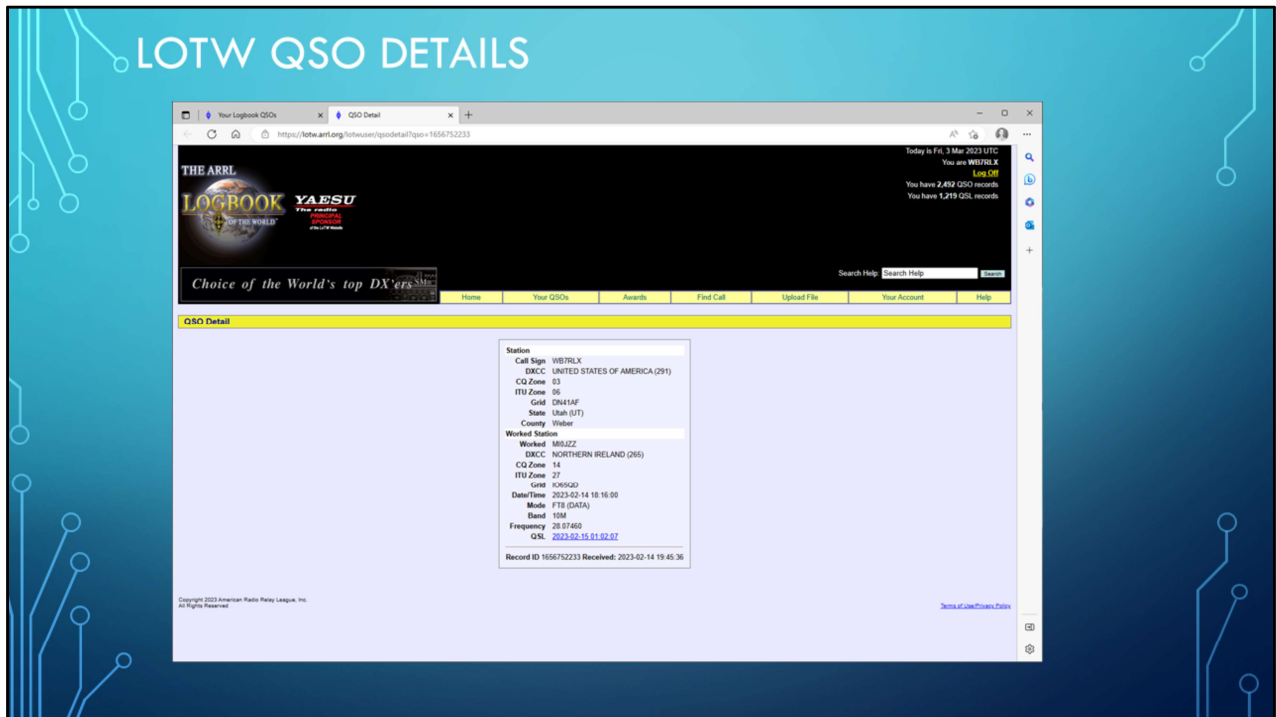
Also note that QRZ does recognize LoTW confirmations, but unfortunately the reverse is not true. I assume that's due to the fact the ARRL does not consider QRZ as "trustworthy." *(Editorial Note: There are many who consider the LoTW security overkill for a bunch of hams just exchanging QSO confirmations. It's not like life, property, or financial damage would occur if someone tried to cheat the system.)*

ELECTRONIC LOGGING: LOTW

The screenshot displays the LotW (Logbook of the World) user interface. The main content area shows a table of 25 QSO records for the year 2023, sorted by date. The records include call signs, worked status, date and time, band, mode, frequency, and QSL status. The sidebar on the right contains advertisements for Elecraft antennas and MFJ antenna tuners.

Call sign	Worked	Date/Time	Band	Mode	Freq	QSL
WB7RLX	RLZAC	2023-01-03 18:07:00	10M	FT8	28.07560	ALASKA
WB7RLX	MMATQZ	2023-01-19 19:36:00	10M	FT8	28.07460	
WB7RLX	A4VVK	2023-02-09 19:02:00	10M	SSB	28.40000	
WB7RLX	WB9TFF	2023-02-12 20:47:00	10M	CW	28.05400	UNITED STATES OF AMERICA
WB7RLX	DLXJL	2023-02-13 17:06:00	10M	FT8	28.07460	
WB7RLX	MAABG	2023-02-13 17:12:00	10M	FT8	28.07460	ENGLAND
WB7RLX	WB9HR	2023-02-14 02:38:00	10M	FT8	28.07520	INDONESIA
WB7RLX	UA8SDX	2023-02-14 02:40:00	10M	FT8	28.07520	ASIA/RUSSIA
WB7RLX	BD4UDS	2023-02-14 02:46:00	10M	FT8	28.07520	CHINA
WB7RLX	8A1LP	2023-02-14 02:56:00	10M	FT8	28.07520	CHINA
WB7RLX	YB4DCE	2023-02-14 02:51:00	10M	FT8	28.07520	
WB7RLX	OS3BNU	2023-02-14 02:52:00	10M	FT8	28.07520	REPUBLIC OF KOREA
WB7RLX	UA8LQE	2023-02-14 02:52:00	10M	FT8	28.07520	
WB7RLX	J41NLX	2023-02-14 02:53:00	10M	FT8	28.07520	JAPAN
WB7RLX	JEUJST	2023-02-14 02:59:00	10M	FT8	28.07460	JAPAN
WB7RLX	JR1USG	2023-02-14 02:59:00	10M	FT8	28.07460	JAPAN
WB7RLX	YK3AL	2023-02-14 03:17:00	10M	FT8	28.07460	INDONESIA
WB7RLX	JF7KMC	2023-02-14 03:18:00	10M	FT8	28.07460	JAPAN
WB7RLX	UA8ANF	2023-02-14 03:21:00	10M	FT8	28.07460	JAPAN
WB7RLX	JE2GSG	2023-02-14 03:23:00	10M	FT8	28.07450	JAPAN
WB7RLX	JABKOV	2023-02-14 03:26:00	10M	FT8	28.07460	JAPAN
WB7RLX	J41SBA	2023-02-14 03:27:00	10M	FT8	28.07460	JAPAN
WB7RLX	JN1WZ2	2023-02-14 03:30:00	10M	FT8	28.07460	JAPAN
WB7RLX	JG1GFU	2023-02-14 03:31:00	10M	FT8	28.07460	JAPAN
WB7RLX	OZ2LCC	2023-02-14 16:45:00	10M	FT8	28.07660	DENMARK

This is an example of the LotW user interface. This was a query to pull up a list of my confirmed QSO's for all of 2023. I had to enter in the search criteria before executing the search. As you can see the UI is pretty basic especially when compared to actual logging programs like LogBook4OM or QRZ. In those programs all I have to do is type in a call sign and it pulls up any information in the logbook for that call and displays it. In addition, these programs can also give you things like bearing and distance. This goes back to what I said earlier, LotW is little more than a cloud-based central repository for QSO's that allow the ARRL to match up QSO's and certify the QSO was real.



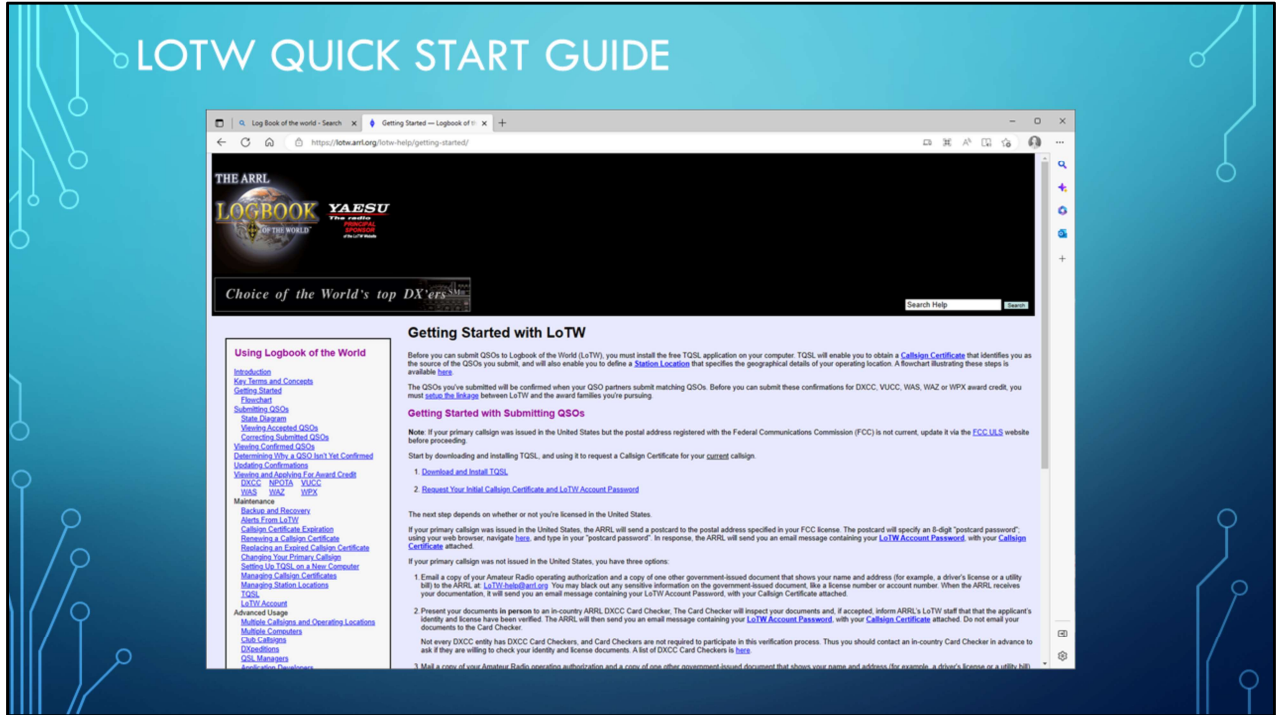
This is a simple screen shot of a particular QSO. This shows how minimal LoTW user interface is. I don't believe that LoTW was intended to be used as log book but rather just a QSO database with a minimal user interface.

SETTING UP LOTW LOGBOOK

- Setting up an LoTW log book is fairly complicated. Far more complicated than can be explained in this meeting. But begin by going to: [Getting Started — Logbook of the World \(LoTW\) Help Pages \(arrl.org\)](https://www.arrl.org/getting-started-logbook-of-the-world-lotw-help-pages)
- Also there are many good videos on YouTube that explain the process.
- A word of advise. Write down any passwords you are instructed to create and define what they are for. There will be a password for your online LoTW account and the security key for your log book. That will arrive by mail. **SAVE THEM BOTH!** And know the difference.

The key point of this slide is save everything you get from the ARRL and understand the difference between your LoTW sign on password and your LoTW logbook password. Also, **READ THE GETTING STARTED Guide** It will save you a lot of frustration. It is very straight forward and provides step by step instructions. You might also consider asking a friend who has set up an LoTW account for some help.

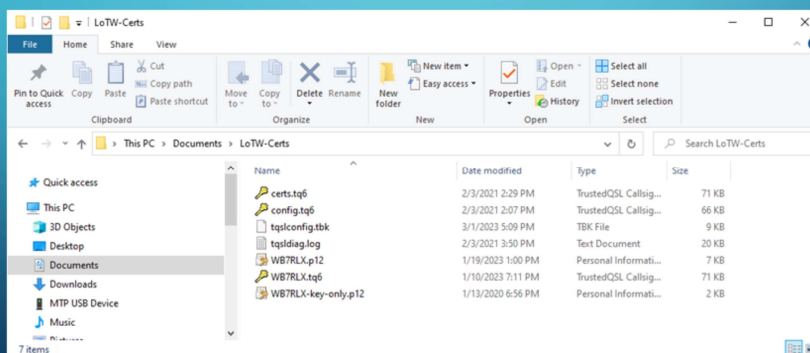
LOTW QUICK START GUIDE



READ THIS Before attempting to set up your LoTW account.

SETTING UP TRUSTED QSL (TQSL)

- When you install TQSL set up a folder in your documents directory for your LoTW certificates and other related TQSL files.



When you setup TQSL set up a folder on your local hard drive to store all of your LoTW specific files. These files will include your certificates, certificate backups, and tqsl configuration information. In my case I set this up in my “*Documents*” folder and named it LoTW-Certs. Because this is in my Windows profile directory it can be backed up by any of the many backup utilities for Windows including Windows File History Backup. You can also copy this folder to a thumb drive and put it in your safe. **Key points, know where this folder is on your hard drive and make a back up of it!** Yes you can set it up on your OneDrive but I prefer to keep it local.

WHEN TO DO IF YOU HAVE MULTIPLE CALL SIGNS

- There are situations where a ham may change their call sign or they may want to set up a /MM designation.
- To do that you will have to submit a separate certificate. Each call sign must be signed with a different certificate.
- This also infers that you need to keep them in a separate path on your local hard drive.
- See: [multiple-callsigns-locations — Logbook of the World \(LoTW\) Help Pages \(arrl.org\)](https://lotw.arrl.org/lotw-help/multiple-callsigns-locations/#:~:text=Using%20LoTW%20With%20Multiple%20Callsigns%20and%20Operating%20Locations,than%20your%20present%20operati)

This is a common scenario after one upgrades from General to Advance or when one has requested a vanity call or when using a special event call sign. It needs to be understood that ARRL/LoTW considered these two separate entities and each call sign requires its own unique certificate. For example WB7RLX would not be considered the same as WB7RLX/MM. I would need two different certificates, one for WB7RLX and one for WB7RLX/MM. Note /MM is the designation for Maritime Mobile.

See:

<https://lotw.arrl.org/lotw-help/multiple-callsigns-locations/#:~:text=Using%20LoTW%20With%20Multiple%20Callsigns%20and%20Operating%20Locations,than%20your%20present%20operati>

ng%20location.%20It%20assumes%20that



Now lets turn our attention to QRZ. Unlike LoTW QRZ is not only a cloud based QSO data store capable of matching up QSO's for the purpose of confirmation but can also be used as an actual log book complete with a fairly intuitive user interface. This is what distinguishes it from LoTW. Also note that data can be imported and exported into LoTW, however as has been mentioned LoTW does not recognize QRZ confirmations. What that means is that both stations have to have uploaded the QSO data to LoTW either via QRZ or directly into LoTW. Assume I upload my QSO with KB7LAK to LoTW either directly to LoTW via QRZ and KB7LAK only uploads his side of the QSO to QRZ and not LoTW it will not be recognized by LoTW.

Fun Fact: What we have found is if you use both LoTW and QRZ your confirmed QSO rate will be around 80% but if you only use one or the other your confirmed QSO rate will be much lower.

QRZ: PROS AND CONS

• Pros:

- It's easy – in my opinion far easier than setting up LoTW log book
- It has an intuitive user interface
- There is an extensive support network if you want to extend it's usefulness
- It has a lot more to offer than just electronic logging!
- No waiting - You can have your log book up and running in minutes
- It can integrate with LoTW – It recognizes LoTW confirmations
- Many more awards and certificates available than from ARRL

• Cons:

- Some features require a subscription of \$35.95 year see: [Subscriptions – QRZ](#)
- Confirmations not recognized by ARRL (QSO's don't count toward ARRL Awards)

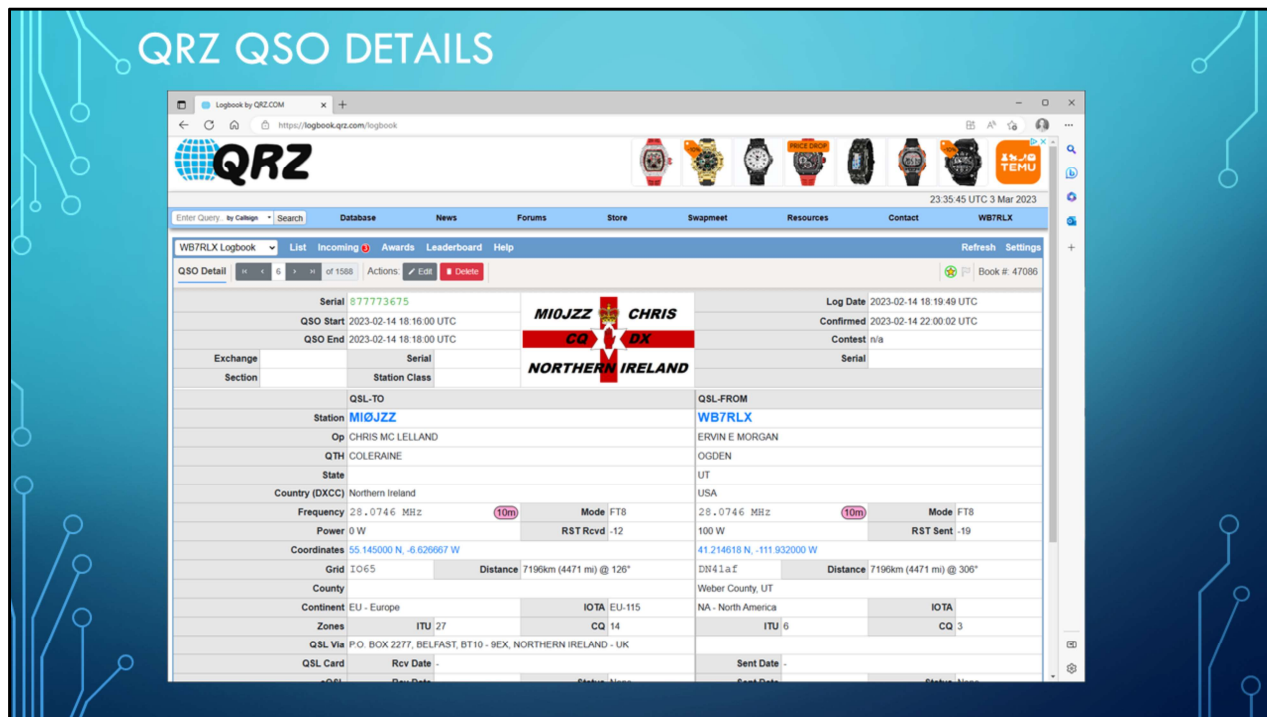
The biggest advantage to QRZ is that's it's very easy to set up. You can set up your first log book in only a few minutes using a fairly intuitive process. The biggest con is that the ARRL does not recognize QSO's confirmed only by QRZ. In short what that means is both sides of the QSO need to be uploaded into LoTW in order for the QSO to count toward any of the ARRL sanctioned awards. QRZ on the other hand does recognize LoTW confirmed QSO's. What that means if the QSO is confirmed by LoTW then QRZ recognizes it and the QSO can be counted toward any of the QRZ specific awards.

ELECTRONIC LOGGING: QRZ

The screenshot shows the QRZ logbook interface. At the top, there's a navigation bar with 'Database', 'News', 'Forums', 'Store', 'Swapmeet', 'Resources', and 'Contact'. Below this is a search bar and a table of QSOs. The table has columns for Date, Time, Call, QSOs, Confirmed, Countries, Operator Name, and Comments. The QSOs listed include calls like G44WJA, LA3POT, EA3J, IS0A, KDP, K1P, KH6/G3, NU4N, K4PVCV, YL3CW, PD1LSD, J1WV, JN1WZ, JA1SBA, JA0BK, JE2QGQ, and JA6JNF. The status column contains icons: a gold star for confirmed QSOs and a green circle for QSOs confirmed by LoTW. Three callouts explain these icons: 'Light green background means the QSO has been uploaded to LoTW', 'Gold Star means it has been confirmed in QRZ', and 'Green circle means it's been confirmed by LoTW'.

Date	Time	Call	QSOs	Confirmed	Countries	Operator Name	Comments
1	2023-02-14	19:00	G44WJA	28.074	FT8	Scotland	JC FRASER
2	2023-02-14	18:40	LA3POT	28.076	FT8	Monaco	Nik-Minech-Japan
3	2023-02-14	18:34	EA3J				
4	2023-02-14	18:30	IS0A				
5	2023-02-14	18:22	KDP				
6	2023-02-14	18:16	K1P				
7	2023-02-14	17:52	KH6/G3	28.075	F1B	Hawaii	
8	2023-02-14	17:39	NU4N				
9	2023-02-14	17:26	K4PVCV	28.075	F1B	Texas	WALERY SINTSOV
10	2023-02-14	17:09	YL3CW	28.075	FT8	Netherlands	Jeroen Evertsen
11	2023-02-14	16:46	PD1LSD	28.075	FT8	Netherlands	Jeroen Evertsen
12	2023-02-14	15:57					
13	2023-02-14	15:45					
14	2023-02-14	03:31	J1WV				
15	2023-02-14	03:30	JN1WZ	28.075	FT8	Japan	Toshio Kodaira
16	2023-02-14	03:27	JA1SBA	28.075	FT8	Japan	TADASHI (SEBE) OI
17	2023-02-14	03:25	JA0BK	28.075	FT8	Japan	Tamiyoshi Chino "TAMI"
18	2023-02-14	03:23	JE2QGQ	28.075	F1B	Japan	Yamuchi Yutaka
19	2023-02-14	03:21	JA6JNF	28.075	FT8	Japan	MASAN IDE KAN

This is a screen print of my QRZ log book. Note the column with the gold stars and circles.



This is a screen dump of my QSO with M10JZZ. There's a lot of information here. Note that I can go to his QRZ profile page by simply clicking on his call sign. This is what I mean when I say QRZ offers a lot more functionality than LoTW and is one of the biggest reasons why I like QRZ. LoTW is a cloud based database with a fairly sophisticated QSO match algorithm. QRZ is that and much more.

SETTING UP QRZ LOG BOOK

- If you plan to export your log book or use a 3rd party logging program to look up calls you will need to purchase a subscription: \$35.95 per year.
- Without a QRZ subscription, you're limited to 6 lookups per day.

However all that functionality is not free, at least not if you want to exploit QRZ full functionality.

CREATING A QRZ LOG BOOK

✓ From the QRZ Home Page Click on your call sign on the far right side of the page and then select "QRZ Logbook"

✓ Then Select "New Log Book"

✓ Enter in the call sign for the log book

This slide shows you the step by step clicks for setting up you QRZ log page. However before you start the process there is certain information that you will need before you begin.

CREATING A QRZ LOG BOOK

- After you enter in the call sign you will be asked to enter the following information: Be Prepared!
 - Log Book Name
 - Start Date (date of first QSO)
 - End Date (date of last QSO) Suggestion: I put in my license expiration date. You can change this date later.
 - Other Users
 - Log QTH
 - Lat, Long, and Grid (accepts a 6 digit grid)
 - CQ Zone (for Utah this is 3)
 - ITU Zone (for Utah this is 6)
 - There are some other questions which are all optional.

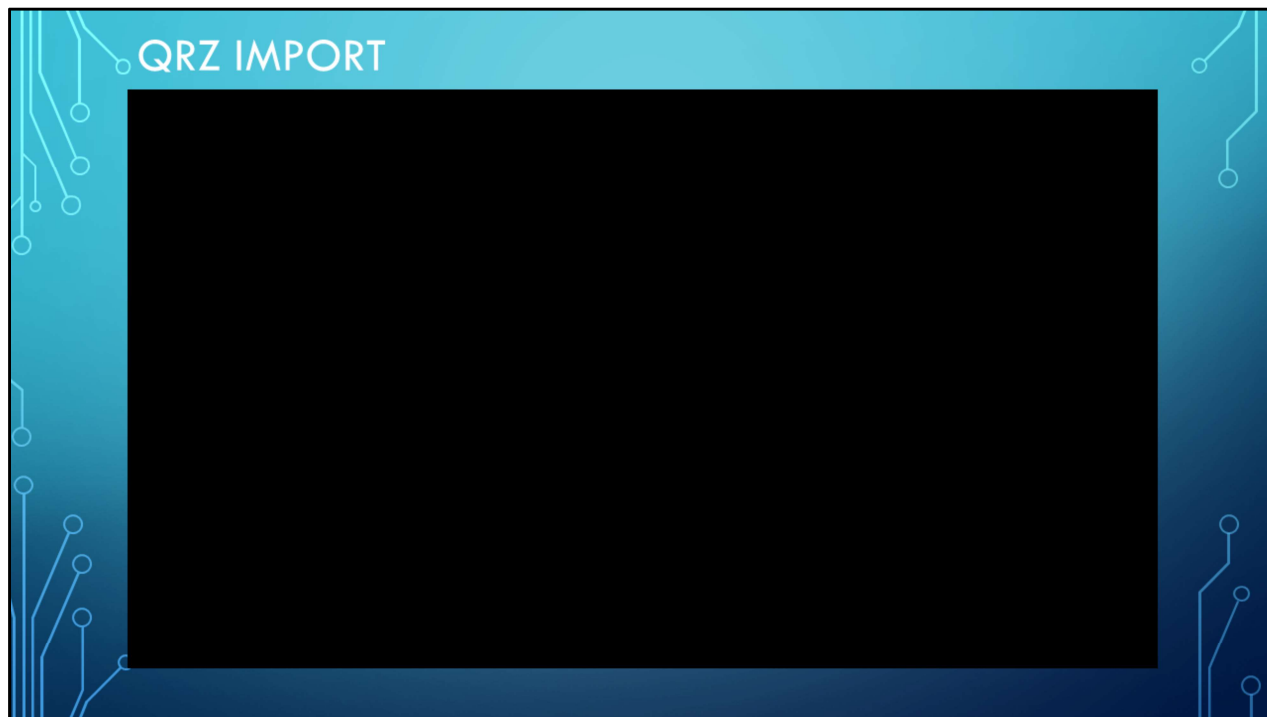
This is the minimum information you will need before proceeding to set up you QRZ log book. Let me talk specifically about the end date question. When I set up my QRZ log book I wanted to set up two logs. The first one was for my activities before I move into my current home. What I did was look up the date of my first and last QSO before I move to my current QTH. This became my Start date and end date for my first log book. I named that log book simply "Old" I then uploaded that log file which was in a ADIF format to QRZ. I never did bother to upload that log book to LoTW. Next I created my second log book and called it WB7RLX. For starting date I put the date of the first QSO I logged from this QTH. And for the end date I entered in the date my current license expires. Note that when I renewed my license I was able to very easily change the end date for my log book. It was very simple.

A suggestion regarding your lat/long for your Bio page. In the QRZ bio page if you leave the lat and long blank QRZ will default your lat and long to the center of your 4 digit grid. I would recommend that you get your actual lat and long and enter it in in your profile page and not let QRZ default it based on your 4 digit grid square.

IMPORTING YOUR CURRENT LOGBOOK

- If you have been using an electronic log book export you log book to a ADIF file. Make sure you know where you have exported your logbook to. In the video the exported file is in the root of my documents folder.
- Watch the QRZImport video

A short comment on this slide. This is the process I used to get all of my old calls into QRZ. I used LogBook4OM and hand enter in the information from all of my old QSL cards. This process took me days spread over a period of about 3 months. Once I did that I exported the log file to an ADIF file and uploaded that file to QRZ. It was interesting to see that a small number of those QSO's from as far back as 1977 were confirmed even though they were dated back to June of 1977. There were even a few that were confirmed in LoTW.



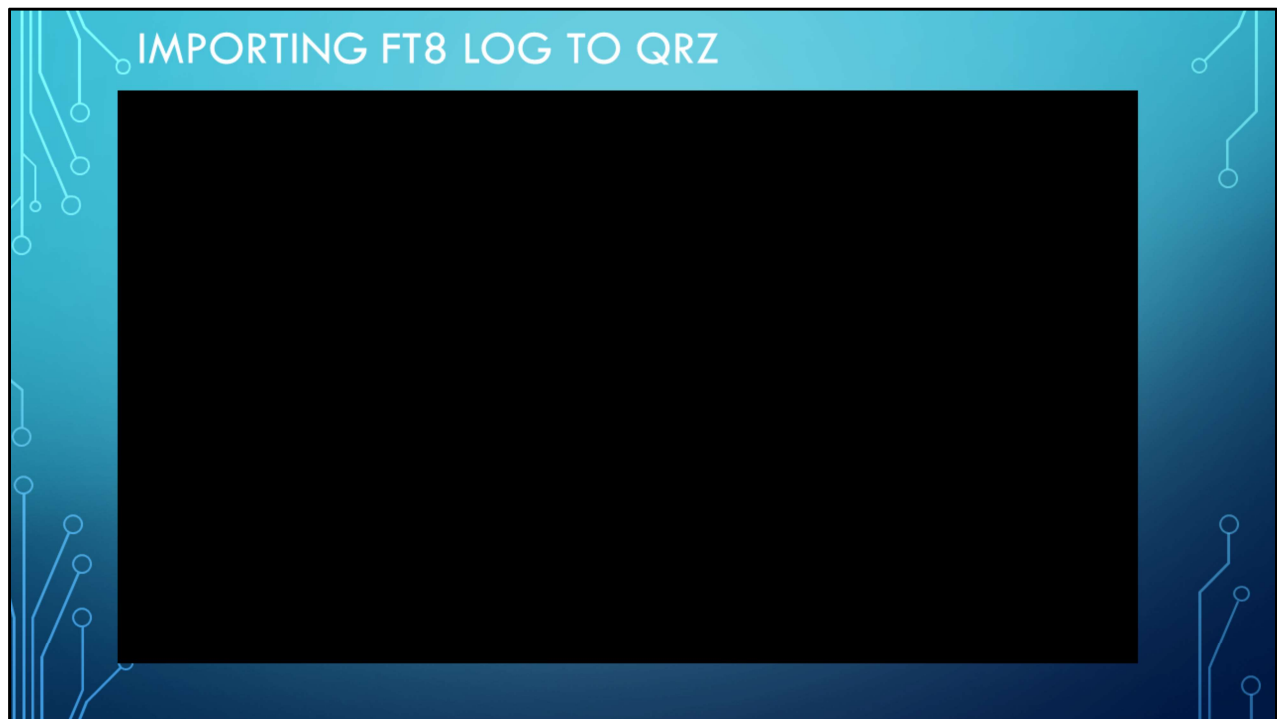
This video goes through the process of importing an ADIF file into QRZ. One of your questions will be, where did the ADIF file I uploaded to QRZ come from? In my case it was a file created by one of my programs. In this particular case it looks at my FT8 log and pulls out the new log entries and writes them to an ADIF file that I can then export into QRZ. In your case the export file could be one generated by a logging program or one of the programs you might be using, such as WSJT-X, CWTY, or MRP40. Understand that with most logging programs this process can be automatically done inside your logging program. I know Ham Radio Deluxe and LogBook4OM both have this capability. In a minute I'll demonstrate how to import your WSJT-X/FT8 log file into QRZ.



This video goes through the process of exporting your QRZ log book to your local hard drive. Why would you want to do this you might wonder? If your setting up a new logging program you might want to import your cloud based log book to your client based log book. Or maybe for backup purposes. Or maybe you want to write a custom utility that uses your log book. It should be noted that you can also do this with LoTW, it's just a different process.

If your are applying for one of the clubs awards such as 10 on 10 or 10 meter WAS you will need to export your log file. Once you have exported it you will receive an email from QRZ with a link to where you can download your exported log from. Just forward that email to me and I can take care of it from there. Please note your do not need to filter your log. I have written software that will do that for me and pull out all your 10 meter confirmed QSO and process them accordingly.

For LoTW you will need to send me your actual log file. If your log file is over 25MB you will need to either zip it or filter it. Most email systems limit attachment size to 25 MB but some email providers may vary.



This video goes through the process of importing my FT8 log into QRZ. Note that I wrote a small utility that can pull out new QSO's and write them to a separate file that can be uploaded to QRZ or LoTW. I will be happy to make this available to via the clubs web site. It's small enough that I could also email it to you.

IMPORTING FT8 LOG TO QRZ

My FT8 Log is in:

C:\users\eemorgan.000\AppData\Local\WSJT-X\wsjtx_log.adi

Yours will most likely be in the same place but instead of *eemorgan.000* it will be your login name:

C:\users\[*your login name*]\AppData\Local\WSJT-X\wsjtx_log.adi

SETTING UP LOTW IN QRZ

Read the Quick Start Guide!

Logbook Info

Name: WB7RLX Logbook
Book #: 47086
Owner: WB7RLX
Access: Enabled
Last Export: 2023-03-03 23:08:08
Last Import: 2023-03-03 23:09:01

QRZ Logbook API

API Key: [REDACTED]
Note: This key allows full read/write access to this logbook. Treat it as you would any other password.

Logbook of the World Import/Export

Import: Retrieve records and confirmations from your Logbook of the World account.
Export: Sign and submit records from your QRZ Logbook to Logbook of the world for processing.

File Import / Export History

Date	Operator	Type	Count	Inserts	Dupes	Ignored	Errors	Download	Report
Fri Mar 3 23:08:57 2023	WB7RLX	download lotw	6	0	0	3	0	N/A	View Report
Fri Mar 3 23:08:01 2023	WB7RLX	send to lotw	5	0	0	0	0	N/A	View Report
Fri Mar 3 23:08:40 2023	WB7RLX	export	1588	0	0	0	0	Download	View Report

Setting up QRZ to be able to upload to LoTW is fairly straight forward. I strongly suggest you read the quick start guide. Once you have configured QRZ to upload to LoTW the process of uploading to LoTW is pretty simple. From your log book page select the QSO's you want uploaded, then click on "Action" and then click on "Send to LoTW". The next slide shows that process.

UPLOADING QRZ LOGBOOK ENTRIES TO LOTW

The screenshot displays the QRZ Logbook website interface. At the top, there's a navigation bar with tabs for Database, News, Forums, Store, Swapmeet, Resources, and Contact. Below this, the main content area shows the 'WB7RLX Logbook' with a search bar and a table of log entries. The table has columns for Date, Time, Call, File, Mode, Grid, Country, Operator Name, and Comments. The entries are listed in a table with alternating row colors (green and white). The bottom of the screenshot shows a Windows taskbar with various application icons and a system tray showing the time as 4:07 PM on 3/10/2023.

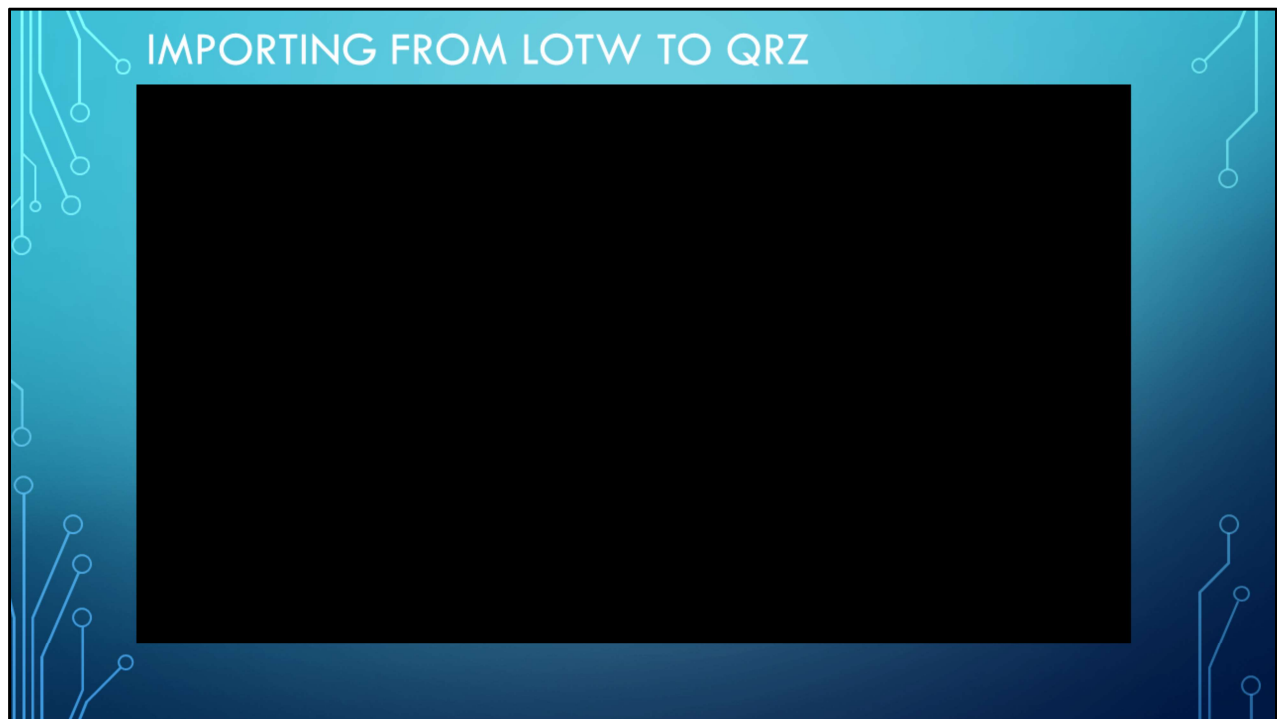
Date	Time	Call	File	Mode	Grid	Country	Operator Name	Comments	
1	2023-02-14	19:00	GH4H3A	28.074	FT8	1O877	Scotland	JC FRASER	
2	2023-02-14	18:40	LASROA	28.076	FT8	2P978	Norway	Nils Henrik Iversen	
3	2023-02-14	18:34	EA3HMM	28.076	FT8	2F804J	Spain	José María Melchor	
4	2023-02-14	18:30	IS0KNG	28.075	FT8	2K449	Sardinia	RAFFAELE CUGIA	
5	2023-02-14	18:22	KD9YY	28.075	FT8	EN640	United States	Shawn S Sullivan	
6	2023-02-14	18:16	HI0JZZ	28.075	FT8	1O665	Northern Ireland	CHRIS MC LELLAND	
7	2023-02-14	17:52	KH6/G3...	28.076	FT8		Hawaii		
8	2023-02-14	17:39	NU4N	28.076	FT8	EM57	United States	DAVID W TUCKER	
9	2023-02-14	17:26	IK0VSY	28.076	FT8	2K43ga	Italy	ROBERTO SIENA	
10	2023-02-14	17:09	YL3ca	28.075	FT8	RO434	Latvia	VALERY SINTSOV	
11	2023-02-14	16:46	PD1LSD	28.075	FT8	2O22M1	Netherlands	Jeroen Evertsen	
12	2023-02-14	16:47	UN5ZH	28.076	FT8	K857W4	Ukraine	Eugene	
13	2023-02-14	16:45	OZ2LC	28.077	FT8	2O56ca	Denmark	Lars Christensen	
14	2023-02-14	03:31	JG1GFU	28.076	FT8	PH95	Japan	TAKASHI(TAKA) ONO	
15	2023-02-14	03:30	JN1WZ	28.075	FT8	PH96	Japan	Toshio Kodaira	
16	2023-02-14	03:27	JA1SBA	28.075	FT8	PH95ah	Japan	TADASHI (SEBE) OI...	
17	2023-02-14	03:25	JA0BKW	28.075	FT8	PH96	Japan	Tamiyoshi Chino 'TAMI'	
18	2023-02-14	03:23	JE2QOQ	28.076	FT8	PK84	Japan	Yamauchi Yutaka	

Step 1: Select the QSO's you want to upload to LoTW

Step 2: Click on "Action"

Step 3: Click on "Send to LoTW"

Your done. I usually do this after every operating session.



This video shows how to update your QRZ logbook from LoTW. I usually do this before every operating session. But to be honest you don't have to do it that often. But you should sync them up once in a while especially if you are actively chasing awards.

Step 1: From your log book click on settings

Step 2: Click on "Import"

Step 3: Enter in your LoTW account login password

Step 4: Make sure that "Import new and/or updated records" is enabled

Step 5: Click on "Import from LoTW"

Step 6: Select "Close Window"



QUESTIONS?

This brings us to the end of the presentation. It's your turn to ask questions.