# **CW DXCC in Six Months**

A "How-To" Project

In 2015:

Phone for 53 years...
FINALLY "using" CW



Larry Banks, W1DYJ

First licensed: 1962 (KN1VFX)

W1DYJ since 1966 – Amateur Extra

33 Blueberry Hill Road Woburn MA

9B-DXCC 8B-WAS-MA 6B-WAS-ME 6m-VUCC [565+ Grids]



### **Abstract**

Are you curious about CW? Have you wanted to try it out but thought it was too big a hill to climb? This talk may be for you.

In 2014, after 52 years as a ham and multiple attempts to learn CW, I finally decided to learn CW enough to not only use it, but to like it. Starting with my motivation, this talk describes my "project" to learn CW.

It discusses a CW training program, rig interfaces, my realization that CW CONTESTING was the best way to learn CW (and some contesting details), logging software, and finally my results, both short term and long term.

W1DYJ ~ Larry Bank

- A Bit of History: the Motivation
- Preparing
  - Project Goals
  - Learning CW
  - CW Hardware Interface
- Operating with CW
  - First contest: Dipping my toe in
  - A CW Contest Contact
  - CW Logging SW
- Results, Update to 2023 & Summary

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#### **Comments:**

I operate barefoot (100 watts)

I have modest antennas

I am not a touch-typist

I only use what's between my ears to decode CW

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Results, Update to 2023 & Summary

### **CAUTION**

Doing this could turn you into a serious DXer or Contester and ruin your health...



## A Bit of History: the Motivation

#### **Stratford Connecticut**

March 1962 Novice KN1VFX / 5 WPM HB 80M CW 807 / Gotham V80

February 1963 Tech K1VFX HB 6M AM 2E26 / HB 5 el yagi

September 1964 First Contest ARRL VHF (AM)

Massachusetts

Fall 1966 Additional Station License → W1DYJ

Summer 1969 Married → W1DYJ Dark Ages

Summer 1993 Separated → W1DYJ Renaissance

Fall 1993 Dipole in Apt Bedroom 1<sup>st</sup> 10M Contest (1994 ARRL SSB)

Summer 1996 Bought home in Woburn → VHF Antennas & VHF Contesting (SSB)

Summer 1999 W1HP Field Day group → HF contesting (still SSB)

March 2001 Extra Class (CW grandfathered: original Tech @ 5 wpm)

Spring '11 Joined YCCC "Pressure" to get back to CW

Summer '14 Decide to finally "learn" CW

This never worked. As a result, I never really learned CW.

With a 1-year novice, I had to upgrade. I loved contesting...

**BUT only phone...** 



- A Bit of History: the motivation
- Preparing

→ I attacked this as an engineering project

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## **Preparing ~ Project Goals**

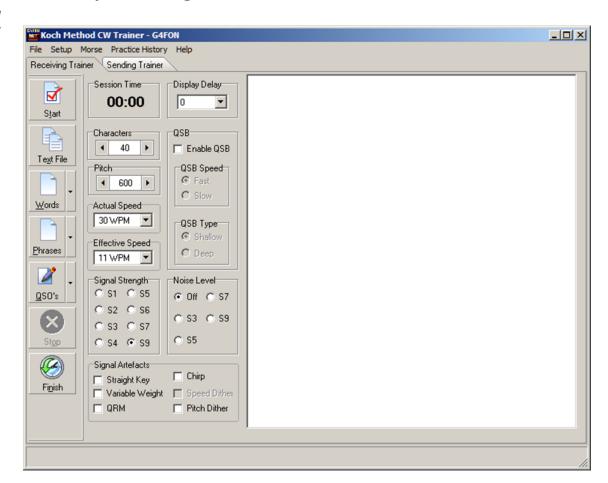
- Goal 1: Become comfortable with CW contesting
- Goal 2: CW DXCC
- Goal 3: Be able to ragchew in CW

### **G4FON Koch Trainer** < http://www.g4fon.net/ >

- Touch typing not required
- FREE
- 20 Min/day

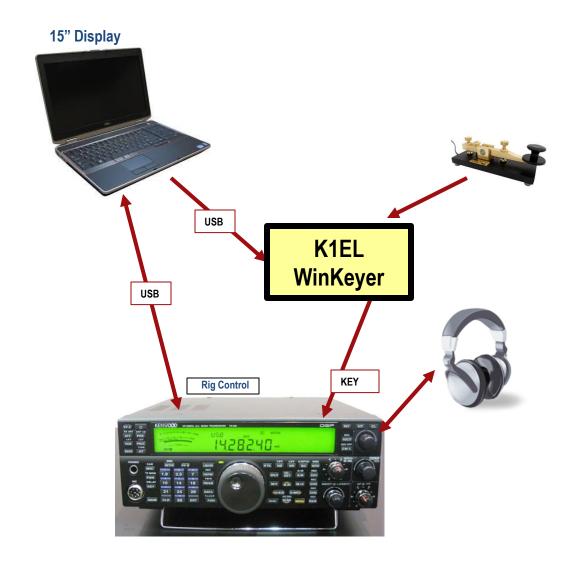
A method of CW training developed by a German psychologist called Ludwig Koch back in the 1930's.

Koch came up with the idea that you should start off just learning two letters at full speed and add an additional letter once you reach 90% proficiency until you have mastered them all. Since you are only learning one new letter or figure at a time, your frustration is significantly reduced.

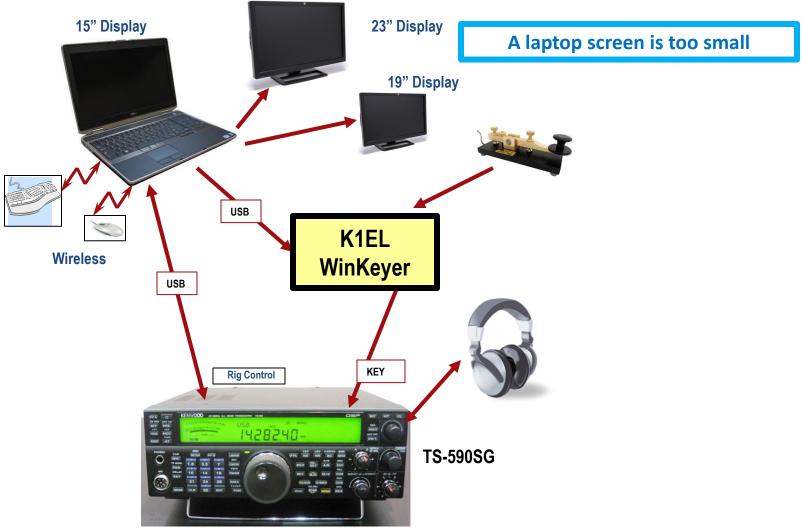




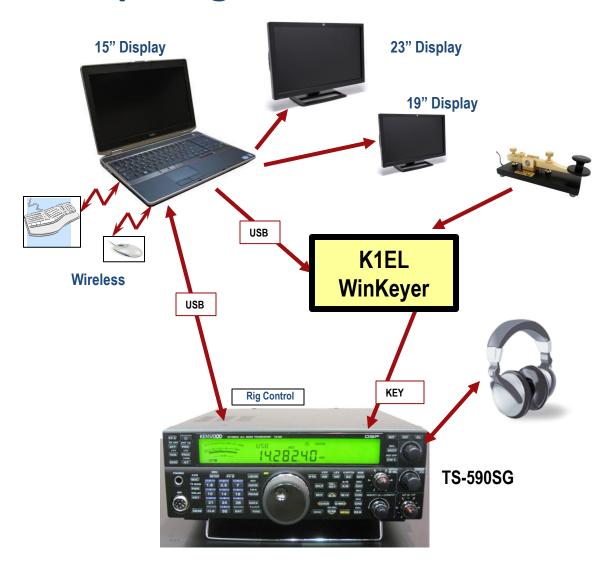
## **Preparing: CW Hardware Interface ~ simple**



## **Preparing: CW Hardware Interface ~ better**



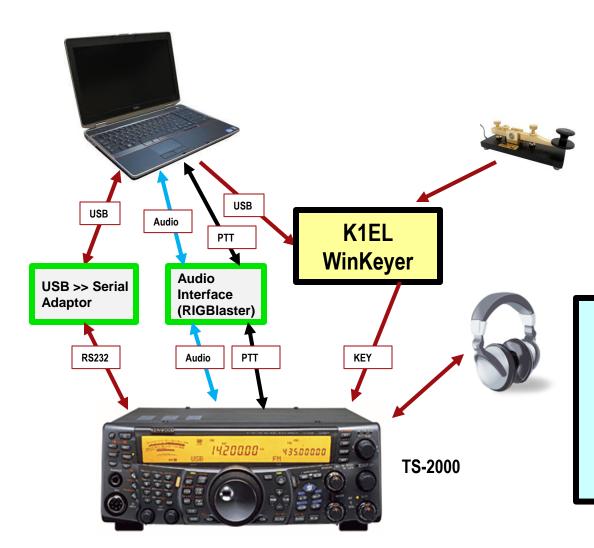
## **Preparing:** CW Hardware Interface ~ copying code



I use my computer to SEND CW and my ears to HEAR CW



## **Preparing: CW Hardware Interface ~ older rigs**



A rig without USB needs hardware interfaces for rig control and audio.

Back in 2015 I was using a TS-2000



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#### The contest calendar starts in October with the "Big Four"

- CQ WW DX SSB (Oct 4th Week End)
- CQ WW DX CW (Nov 4th Week End)
- ARRL International DX CW (Feb 3rd Week End)
- ARRL International DX SSB (Mar 1st Week End)



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#### Turns out $\rightarrow$ The CQ CW contest was easier than I expected...

- Operating in <u>assisted</u> category can use <u>spotting</u> assistance
- Simple "Standard" exchange
- "Easy" to recognize your own call
- Use computer to send CW
- No ESL issues as in SSB
- Signals are cleaner (150 Hz. Bandwidth)



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51 countries logged during 1<sup>st</sup> this contest! (I'm hooked...)



#### **Exchanges:**

CQ WW DX: RST (599) CQ-zone (for us= 5) NOT ITU Zone 8

ARRL 10M: W/VE/XA: RST State/Prov 2-letter abbreviation

DX: RST Ser#  $001 \rightarrow nnnn$ 

ARRL WW DX: W/VE: RST State/Prov 2-letter abbreviation

DX: RST XmtPwr

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#### **Cut Numbers:**

```
\begin{array}{cccc}
1 & \cdot - - - - & \rightarrow A & \cdot - \\
5 & \cdot \cdot \cdot \cdot & \rightarrow E & \cdot \\
9 & - - - - & \rightarrow N & - \cdot \\
0 & - - - - & \rightarrow long T & - \\
\end{array}
```

or letter 0 ---

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#### **Cut Numbers:**

```
1 \cdot - - - \longrightarrow A \cdot -
```

```
5 \cdots \rightarrow E \cdot Transmitter Power of 1000 watts:
```

9 ----  $\rightarrow$  N  $\rightarrow$  1000  $\cdot$  ---- ----

 $0 ---- \rightarrow long T \longrightarrow ATTT \cdot - - - -$ 

or letter 0 − − − → often times just "K" − · −

ie: 599 ·····  $---- \rightarrow 5NN \cdots - - -$ 

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> RST XmtPwr DX:

```
Cut Numbers: ie: 599 \cdots ---- \rightarrow 5NN \cdots ---
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### **Q Signals:**

QSL – Acknowledge QRZ – Call me

TU - Thank You **AGN - Again** 



#### A typical S&P exchange:

Them: XP2XX Running

You: W1DYJ S&P → Search & Pounce (Click & Pounce)

Them: CQ XP2XX TEST

You: W1DYJ (just once!)

Them: W1AW... (be patient)

Them: TU XP2XX (QRZ)

You: W1DYJ

Them: W1DYJ 5nn 14

**You: 5nn 5 (TU)** 

Them: TU XP2XX (QRZ)

#### **Most DXpeditions:**

**Similar to CQ WWDX:** (CQ XP2XX UP)



#### **Paper**

- microHam
- Rig Expert
- dxBase
- StarLog
- Log4OM New!
- N1MM+ Logger
- WinLog32
- RCK Log
- LuxLog
- SD by EI5DI
- RCS by N4PY
- TRX-Manager
- MixW
- WriteLog
- Ham Radio Deluxe
- Win-EQF
- Logger32
- MRP40 CW Reader
- Swisslog

#### Write your own SW

- RoverLog by N1MU
- Win-Test
- DXLab Suite
- **N3FJP Contest Logs**
- PDA's LOGic9
- DX4WIN
- CommCat by W6HN
- XMlog
- CQ/X de NO5W
- TurboLog
- MacLoggerDX
- Linux Daemon for WK by PA0R
- CQPWIN by AE6Y
- TR4W
- CQRlog for LINUX
- WinKeyUltra Software
- Win4K3 Suite
- CWtype v2.20

**Products & Applications that support K1EL's WinKeyer in 2017** 

N1MM+ < <a href="http://n1mm.hamdocs.com/tiki-index.php?page=HomePage">http://n1mm.hamdocs.com/tiki-index.php?page=HomePage</a>>

- Free
- One program infinitely configurable, but complicated
- Design/support by committee/Groups.io
- Used by many "serious" contesters (#1)
- Not a general purpose logger



**N1MM+** < <a href="http://n1mm.hamdocs.com/tiki-index.php?page=HomePage">http://n1mm.hamdocs.com/tiki-index.php?page=HomePage">http://n1mm.hamdocs.com/tiki-index.php?page=HomePage</a>>

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#### N3FJP < <a href="http://www.n3fjp.com/index.html">http://www.n3fjp.com/index.html</a> > Scott Davis and family

- Family of low cost (~\$9) contest programs (currently about 120 programs)
- Includes a compatible general log "ACLog" (\$40)
- Full package = \$60; includes lifetime upgrades and all new programs
- Each program is ready to go for that specific contest "no" configuration
- Easy to learn and use (same user interface)
- Contest SW integrated (API) with ACLog for tracking awards
- Scott provides <u>active</u> support, plus an active email group on Groups.io



The following slides show the N3FJP CQ WW contest logger as an example of logging.

#### Any decent contest logger will have these features.

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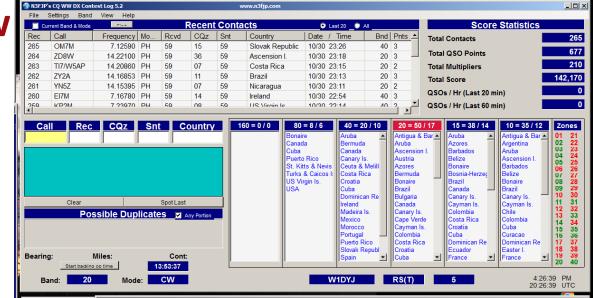




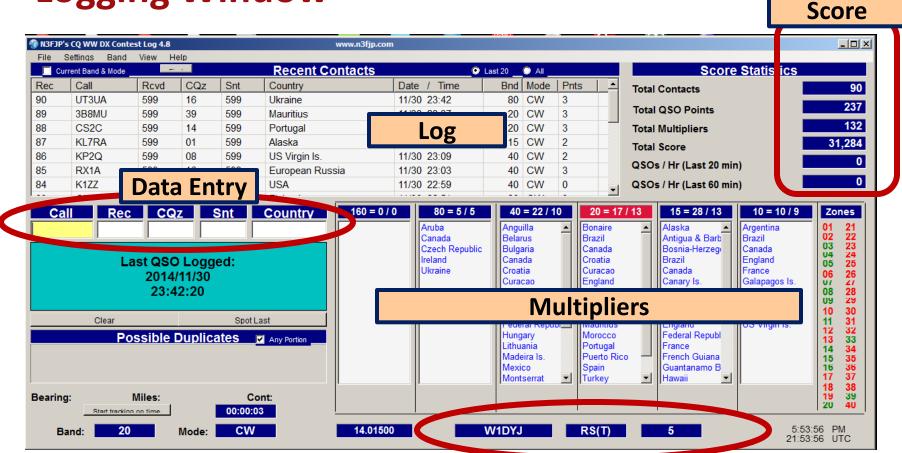
## If you have one 23" display



**Logging Window** 

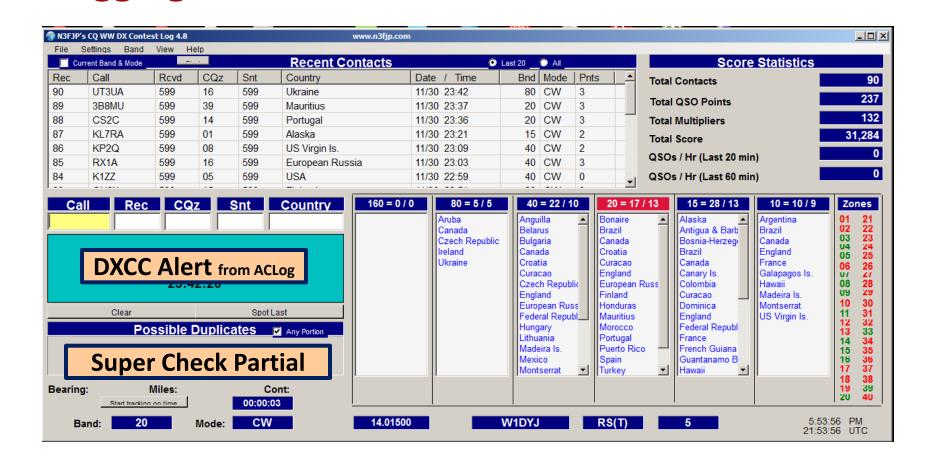


**Logging Window** 



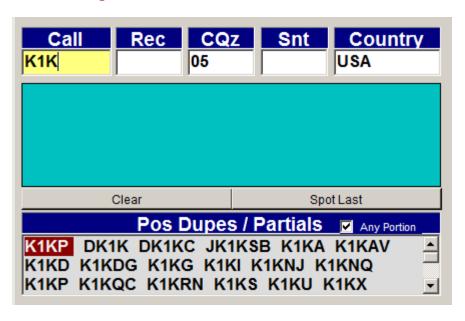
Your Exchange: from Settings >> Setup

## **Operating:** N3FJP - CQ WW DX Contest Log Logging Window

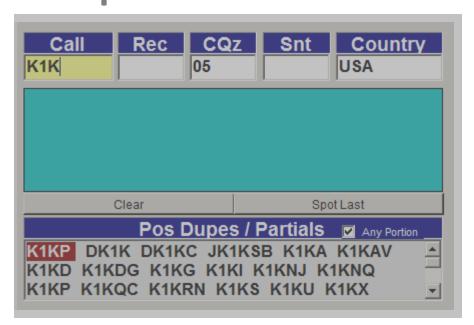


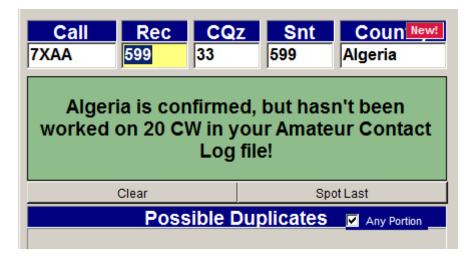
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## **Operating:** N3FJP - CQ WW DX Contest Log **Super Check Partial**



## Operating: N3FJP - CQ WW DX Contest Log Super Check Partial DXCC Alert



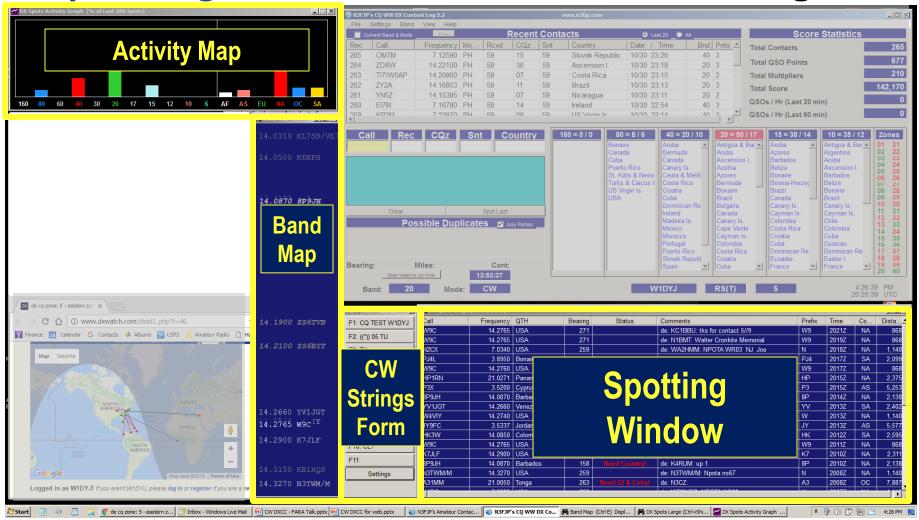


#### **Integration with ACLog**

- Entity is an All Time New One
- Entity is not confirmed on any band or mode
- Entity is confirmed, but has not been worked on current band and mode
- Entity is confirmed, but is unconfirmed on current band and mode

Easy log migration into ACLog at end of contest

INDEXA



# Operating: N3FJP - CQ WW DX Contest Log Spotting Window → Assisted Entry

TA DX Spots Large (Ctrl+Shift D)										
Call	Frequency	QTH	Status	Comments	Prefix	Time	Co	Bearing	Dista	
SX10TARG	7.0091	Greece	Need Country!	de: IW2NBW:	SX	2156Z	EU	58	4,475	
RP70FG	7.0880	European Russia		de: RD1AH: LSB	R	2153Z	EU	37	4,578	
AO150O	7.0120	Spain	Need Country!	de: DL5AWI:	AO	2152Z	EU	70	3,256	
EM70U	14.0170	Ukraine	Need Country!	de: UX7UA:	EM	2151Z	EU	45	4,369	
R120A	7.0995	European Russia		de: UY2ZZ:	R	2151Z	EU	37	4,578	
AO150N	7.0110	Spain	Need Country!	de: DL5AWI:	AO	2151Z	EU	70	3,256	
AO150H	7.0400	Spain	Need Country!	de: EA7JW: rtty	AO	2151Z	EU	70	3,256	
8J1KJ	14.0760	Japan	Need 25 & Cntry!	de: JK3IJQ: JT65 Event Station	8J	2150Z	AS	337	6,611	
EA3DD	14.0075	Spain		de: JG2KJU: TNX MANU	EA	2150Z	EU	70	3,256	
N2L	14.0374	USA		de: EW4DW: tks QSO	N	2150Z	NA	256	1,213	
EM70F	7.0100	Ukraine	Need Country!	de: DL5AWI:	EM	2150Z	EU	45	4,369	
RP70AP	3.5132	European Russia	Need Country!	de: RM4D: tnx QSO	R	2150Z	EU	37	4,578	
TM0GA	14.0030	France	Need Country!	de: F5MAG: ca ja or asia	TM	2150Z	EU	61	3,400	
FW5JJ	21.0110	Wallis & Futun	Need 32 & Cntry!	de: JP1EWY: CQ	FW	2149Z	ОС	271	7,650	
IT9CFP	14.0840	Sicily	Need Country!	de: JA1WLO: rtty on freq. op jose	IT9	2149Z	EU	64	4,228	
4Z5FW	14.0230	Israel	Need Country!	de: JG1MUY: tnx	4Z	2148Z	AS	58	5,409	
ER70V	7.0131	Moldova	Need Country!	de: RM4D: tnx QSO	ER	2148Z	EU	48	4,459	
RP70FG	7.0899	European Russia		de: RD1AH: LSB	R	2146Z	EU	37	4,578	

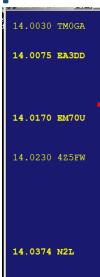
### Click on entry -> Transceiver moves to that frequency & mode

For CQ WW: Stations → count on each band

Multipliers → countries & zones on each band

Spots are often incorrect
EZ4EDL - Turkmenistan
→ E74EDL - Bosnia-Herzegovina





## Band Map → Assisted Entry

Displays stations by frequency position of for current band

Click on entry:

→ Transceiver moves to that frequency & mode

14.0760 8J1KJ

14.0840 IT9CFP

#### **Operating:** N3FJP - CQ WW DX Contest Log

14.0075 EA3DD 14.0170 EM70U 14.0374 N2L

#### Band Map

**Displays** stations by frequency position of for current band

#### **CW Strings Form**

**Click on entry:** → Transceiver sends that CW string





14.0760 8J1KJ

### **Operating:** N3FJP - CQ WW DX Contest Log

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#### **Band Map**

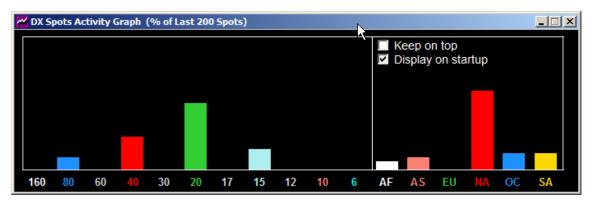
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#### **Activity Map**



## **Operating:** N3FJP - CQ WW DX Contest Log



Band Map
Displays
stations by
frequency
position of
for current

band

**CW Strings Form** 

→ Transceiver sends that CW string

#### Also interfaces to:

N7YG's <u>Digital Engine</u> and <u>PSK Express</u>

<u>FIdigi</u> <u>WSJT-X</u> <u>JT Alert</u>

W4ELP Lookup Bridge program for

Ham Radio Deluxe / DM780

CW F (Ctrl > Shift W) 

F1: CQ TEST DE

F2: ((\* 5))

F3: TU

F4: W1DYJ

F5: \$

F6: \* 05 05

F7: AGN?

F8: NR?

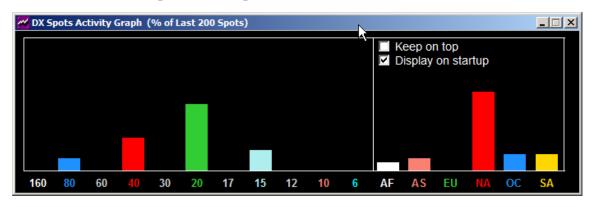
F9: VVV DE W1DYJ

F10: CL?

F11:

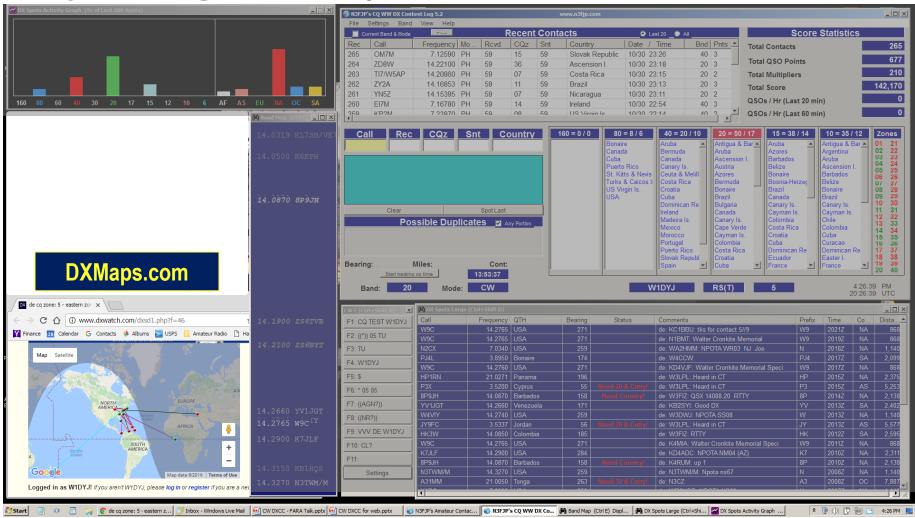
Settings

#### **Activity Map**



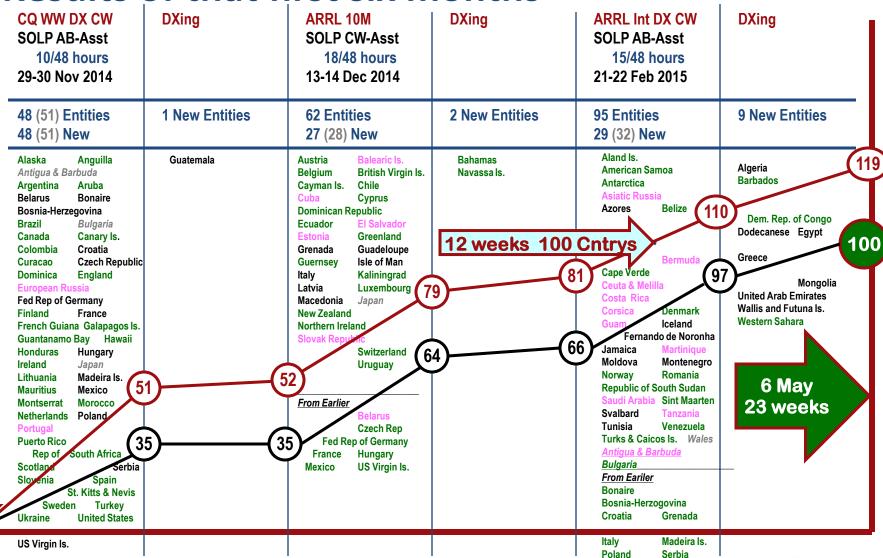
International

## **Operating: DXMaps.com**



- A Bit of History: the motivation
- Preparing
  - Project Goals
  - Learning CW "Well Enough"
  - CW Hardware Interfaces
- Operating
  - First contest: Dipping my toe in
  - A CW Contest Contact
  - CW Logging SW
- Results, Update to 2023 & Summary

#### Results of that first six months

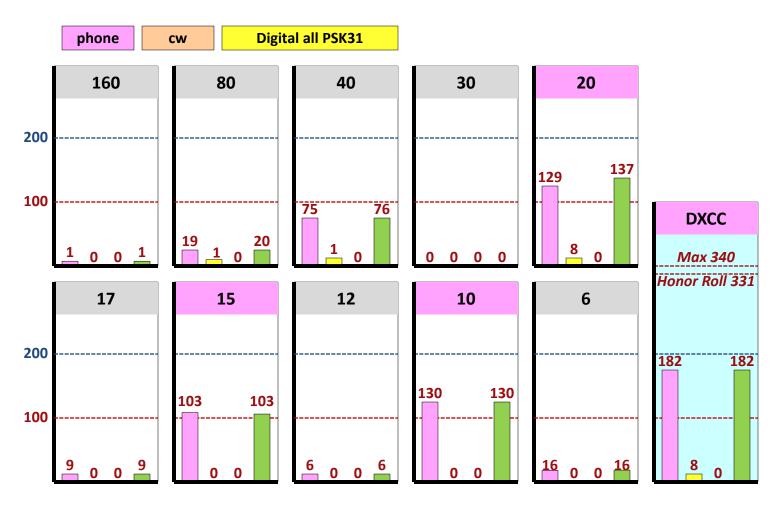


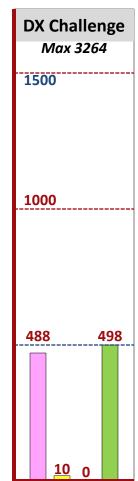
**KEY: LoTW QSL Card Not Confirmed NIL** 



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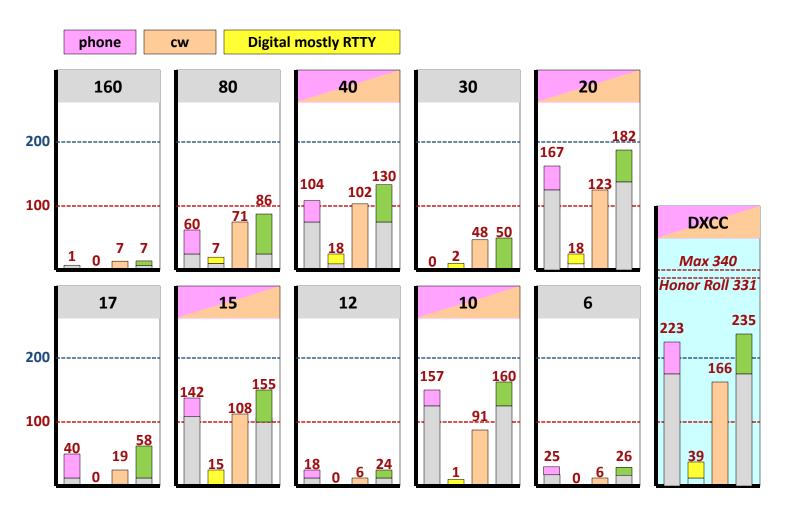
#### Results — April 2014: Confirmed before CW DXCC

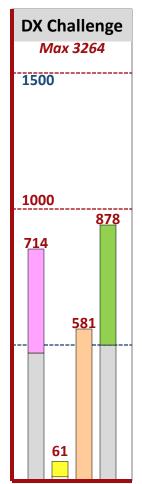






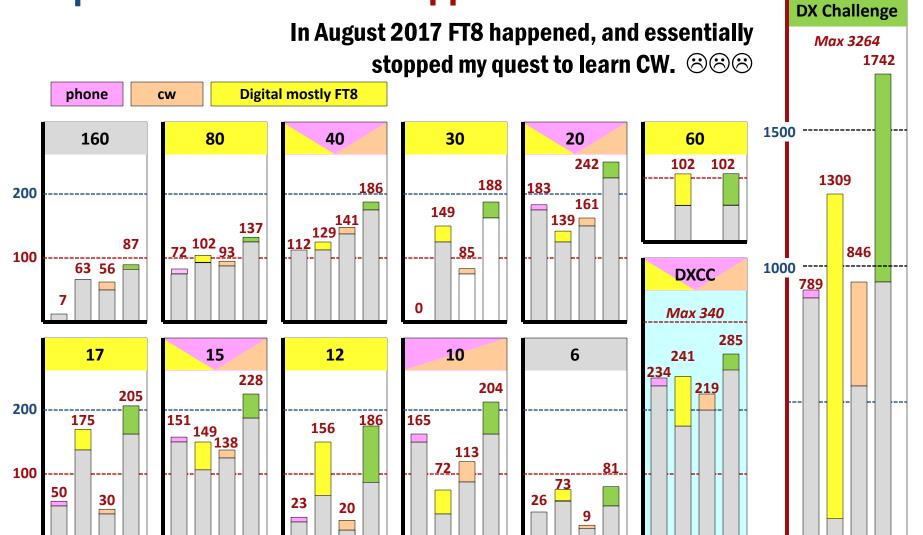
#### Results — three years later: Confirmed by April 2017







## **Update** — what has happened since 2017...



As of 21 August 2023



#### **Summary** By late 2015 after "phone only" for 53 years... FINALLY "using" CW

Experience with SSB contesting helps, but not essential

When you start - pick your mountains carefully!

Contests with <u>simple</u> exchange

**DXpeditions** 

Casual CW is hard – need to "rag chew"

#### **Summary** By late 2015 after phone only for 53 years... FINALLY "using" CW

Experience with SSB contesting helps, but not essential

When you start – pick your mountains carefully!

Contests with <u>simple</u> exchange

DXpeditions

Casual CW is hard – need to "rag chew"

Goals:		Results
1	Comfortable with CW contesting	OK
2	CW DXCC (in <6 months!)	YES!
3	CW Ragchewing	Not Yet ⊗

Final Comment: I still wish I could Touch-Type!

#### Some books for your library

#### **ARRL Handbook**

(1962, 1968, 1996, 2012 2023)

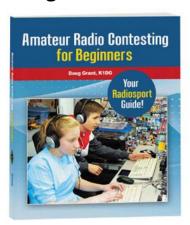


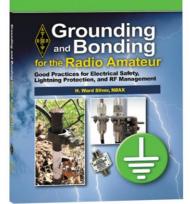
## **Grounding and Bonding for the Radio Amateur**

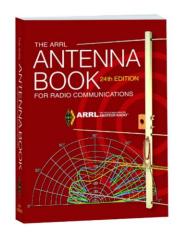
H. Ward Silver NOAX

# **Amateur Radio Contesting for Beginners**

**Doug Grant K1DG** 







#### **ARRL Antenna Book**

 $(17^{st} \text{ ed} - 1994, 21^{st} \text{ ed} - 2007, 23^{rd} \text{ ed} - 2015, 24^{th} \text{ ed} - 2019)$ 

## **CW DXCC in Six Months**

A "How-To" Project

Only phone for 53 years...

**FINALLY** using CW...

Now, 61+ years after my Novice license, I'm still not very good at it!

## Thank You!

http://www.qsl.net/w1dyj/



#### **Abstract**

Are you curious about CW? Have you wanted to try it out but thought it was too big a hill to climb? This talk may be for you. In 2014, after 52 years as a ham and multiple attempts to learn CW, Larry finally decided to learn CW enough to not only use it, but to like it. Starting with some history (the motivation), this talk describes Larry's "project" to learn CW. It includes a CW training app, rig interfaces, a realization that CW CONTESTING was the best way to learn CW (and some contesting details), logging software, and finally Larry's results, both short term and long term.

#### Bio

Larry was licensed in 1962 as novice KN1VFX and became W1DYJ in 1966. He was an engineer and project manager in Hewlett-Packard Medical's cardiac lab in Waltham and Andover MA starting in 1969. In 1985 he started the cardiac R&D lab's CAD and the SW Testing groups. He moved to HP Medical Education in 1993, responsible for technical and project management training. When Agilent split out of HP in 1999, he became Agilent Technology's global program manager for their Learning Management System. "Retiring" in 2005, he then consulted for Avago (now Broadcom) on eLearning technologies through 2012. Larry holds three degrees in EE from MIT. He spends his time chasing DX and contesting in Woburn, traveling with his wife Maren, and attending many jazz and classical concerts. He is the net manager and newsletter editor for the MMRA, publications editor for HamXposition, and a member of the YCCC.