

Getting Started on High Frequency

A DIFFERENT AND EXCITING WORLD



Today We're Going to Cover:

- ▶ Why even do this?
- ▶ What are some major differences between operating on HF vs. VHF/UHF?
- ▶ How do I get started?
- ▶ What equipment do I need and how much does it cost?
 - ▶ Radios, Power supplies, Antennas, Computer connections and software, "Other" stuff
- ▶ Some examples of packages that are good starter points



Today We're Going to Cover:

- ▶ And, probably most importantly, how do I convince my spouse that this is a good thing.



So, why Do I Want to Do This Anyway?

It's Fun!

- ▶ A worldwide party line
Tens of thousands of people just waiting to talk to YOU.
- ▶ Lots of different modes to use
SSB, CW, 743 different digital modes, and, yes, FM and even SSTV
- ▶ Long distance transmitter hunts



So, why Do I Want to Do This Anyway?

It's Challenging, but Rewarding!

- ▶ Contesting
- ▶ Homebrewing
- ▶ Just you and the ionosphere figuring out how to get a signal through
- ▶ DX Certificates
- ▶ QRP



So, why Do I Want to Do This Anyway?

It's Important!

- ▶ Long distance emcomm
 - ▶ When the lights are out and internet/cell phones are down in all of eastern Washington, who you going to call?
 - ▶ Support for other parts of the country



What's Different from VHF/UHF?

- ▶ Propagation of signals is affected heavily by the sun cycle
- ▶ Grounding and bonding become much more important
- ▶ Noise levels tend to be higher
- ▶ Transmission line losses are much lower
- ▶ Frequency accuracy and stability are more critical
- ▶ Signal fading is much more of a factor
- ▶ Signals that aren't clean have a bigger impact on other users



How Do I Get Started?

- ▶ First, take out a second mortgage to buy your equipment
 - ▶ Icom IC-7851 HF-6m transceiver—on sale for \$12,498.95
 - ▶ Acom 2000A amplifier--\$6,599.99
 - ▶ SteppIR DB-42 80-6m 5 element Yagi beam antenna—\$9,360
 - ▶ Alpha Spid Big RAK antenna rotator with controller--\$2,199
 - ▶ Rohn 120' guyed tower with accessories--\$14,500 plus installation
 - ▶ Coax switches, remote control setup, grounding, etc.--\$6,000 estimated
- ▶ Total= ~\$65,000 and up once you've figured in tax, tower installation, permits, etc.



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OK, Seriously, How Do I Get Started?

1. What Modes do I want to operate with:

- SSB,
- Digital
- CW
- what?



OK, Seriously, How Do I Get Started?

2. What activity interests me most?

- ▶ DXing
- ▶ Contests
- ▶ Digital
- ▶ Homebrewing
- ▶ Encomm
- ▶ Ragchewing
- ▶ 6 Meter



OK, Seriously, How Do I Get Started?

3. What bands do I think are most important to me?

- ▶ The sun is not our friend right now; propagation is often tough
 - 40 meters is best all around right now
 - 80 meters is usually open pretty well at night
 - 20 meters is crowded, but often open during the day
 - 17 meters and up are iffy at best right now but 17 has moments of greatness
- ▶ On what bands are the nets and/or activities that interest me?



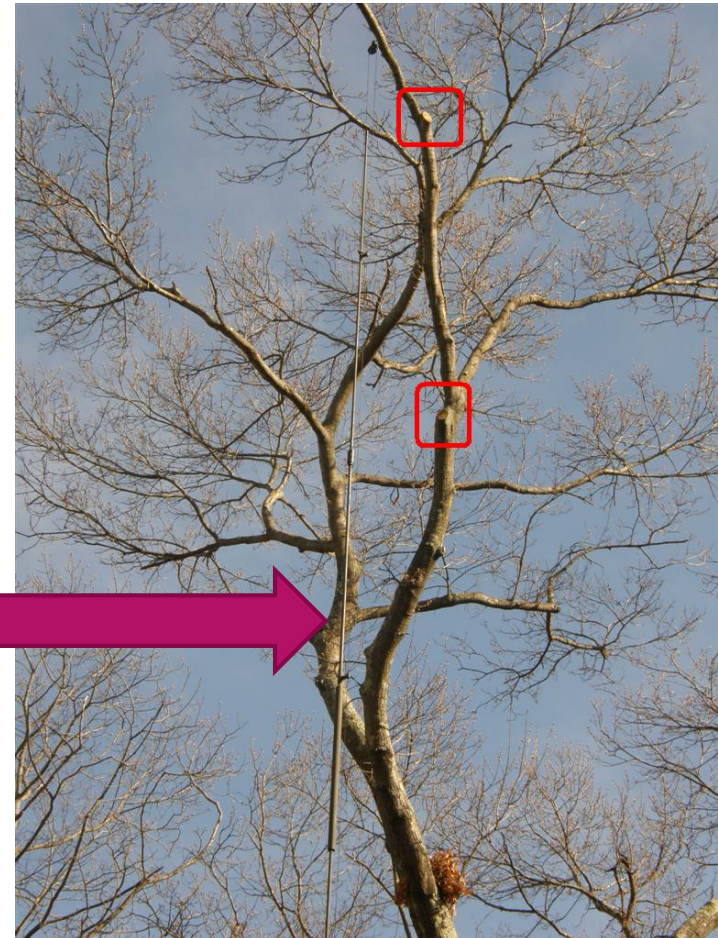
I. Antennas



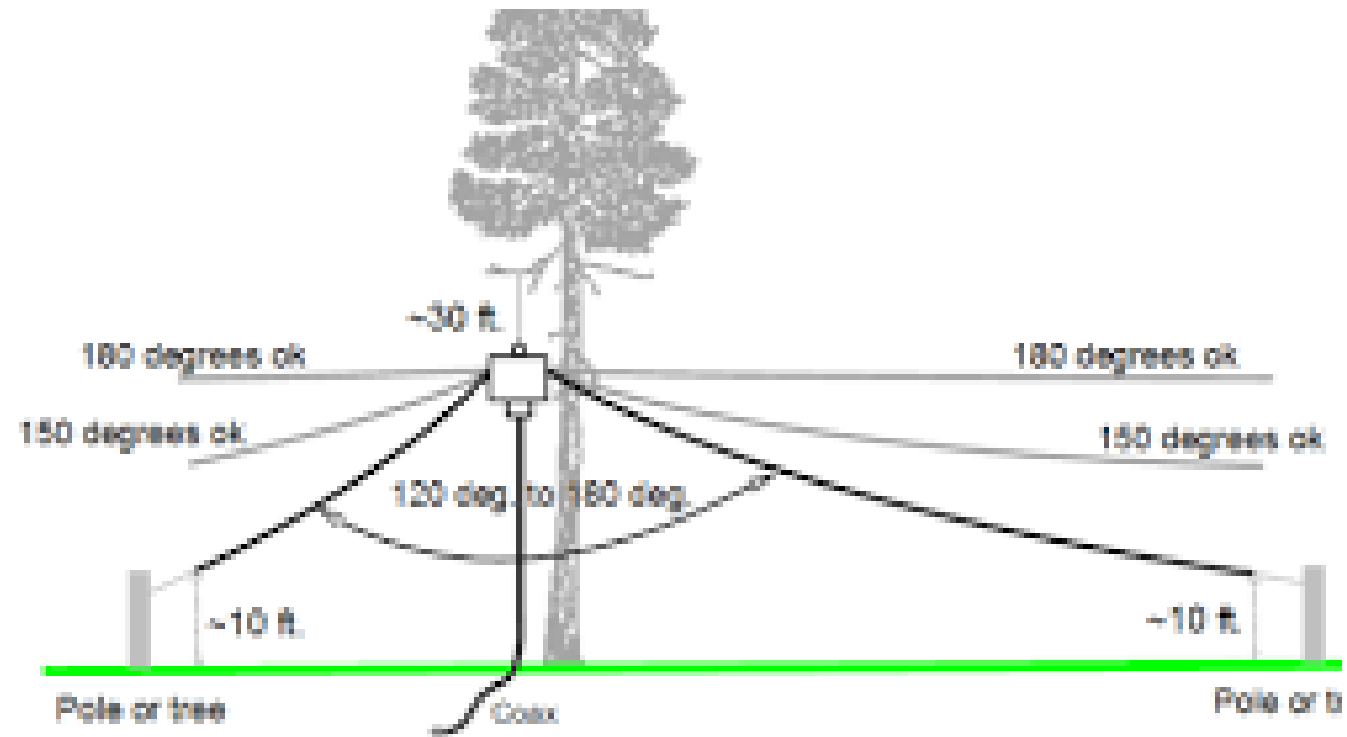
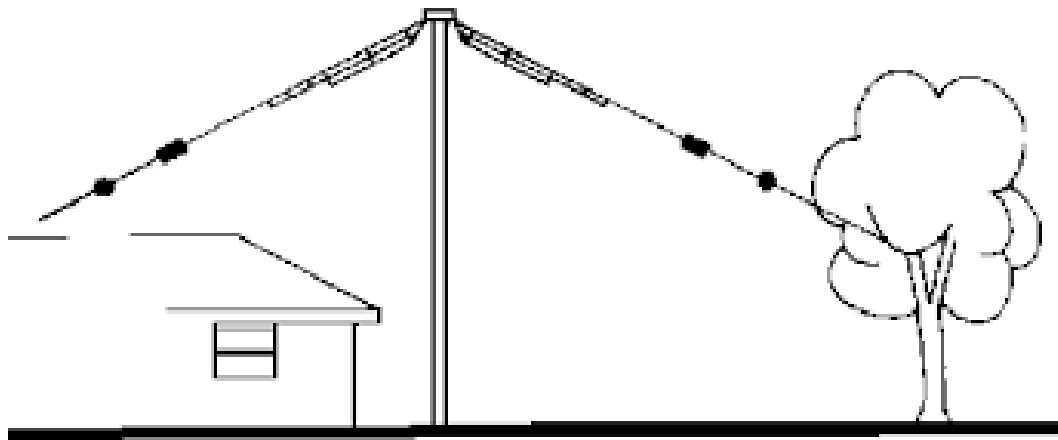
What are my limitations?

How much space horizontally and vertically do I have for (an) antenna(s)?

- ▶ How much space will my HOA, zoning, spouse let me use.
- ▶ Do I have trees I can use for antenna support?



Antennas: Wire Dipole



Antennas: Verticals (with Radials)

Butternut



Hustler



Antennas: end Fed



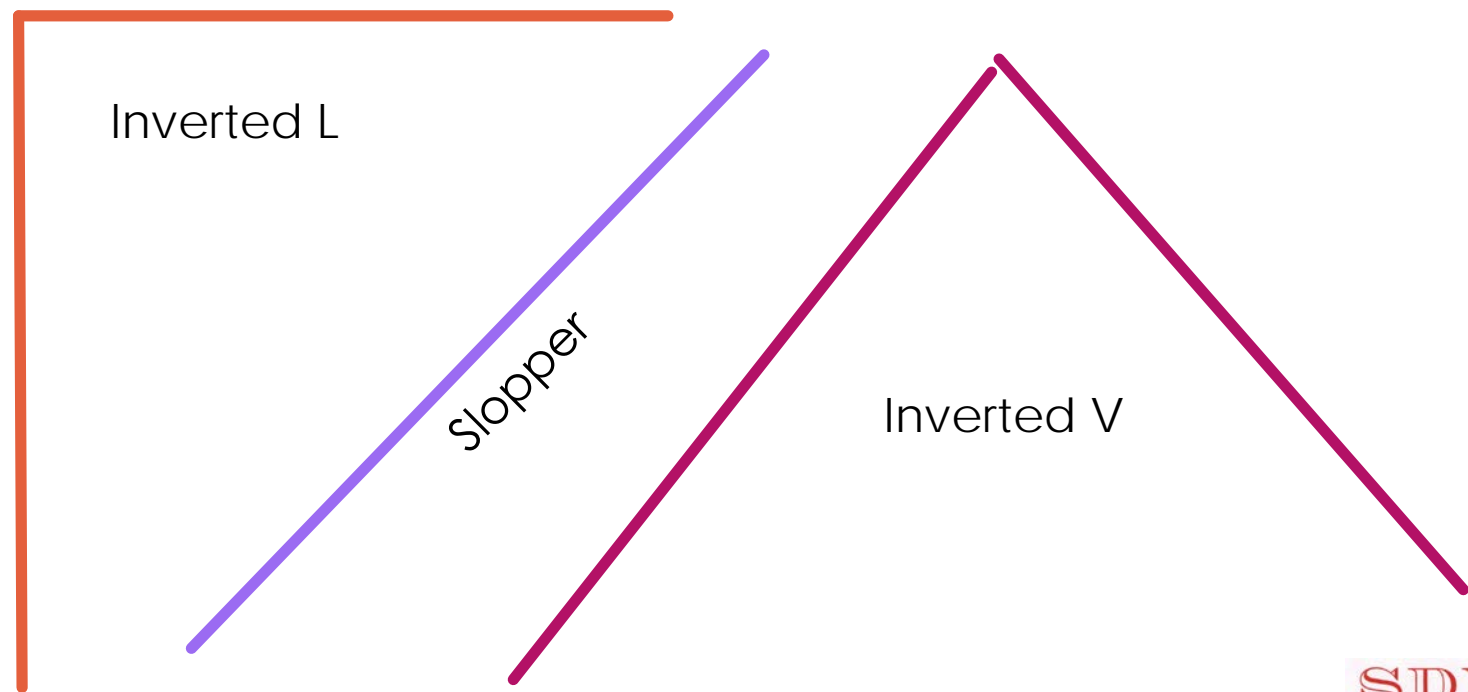
Inverted L

Slopper

Inverted V

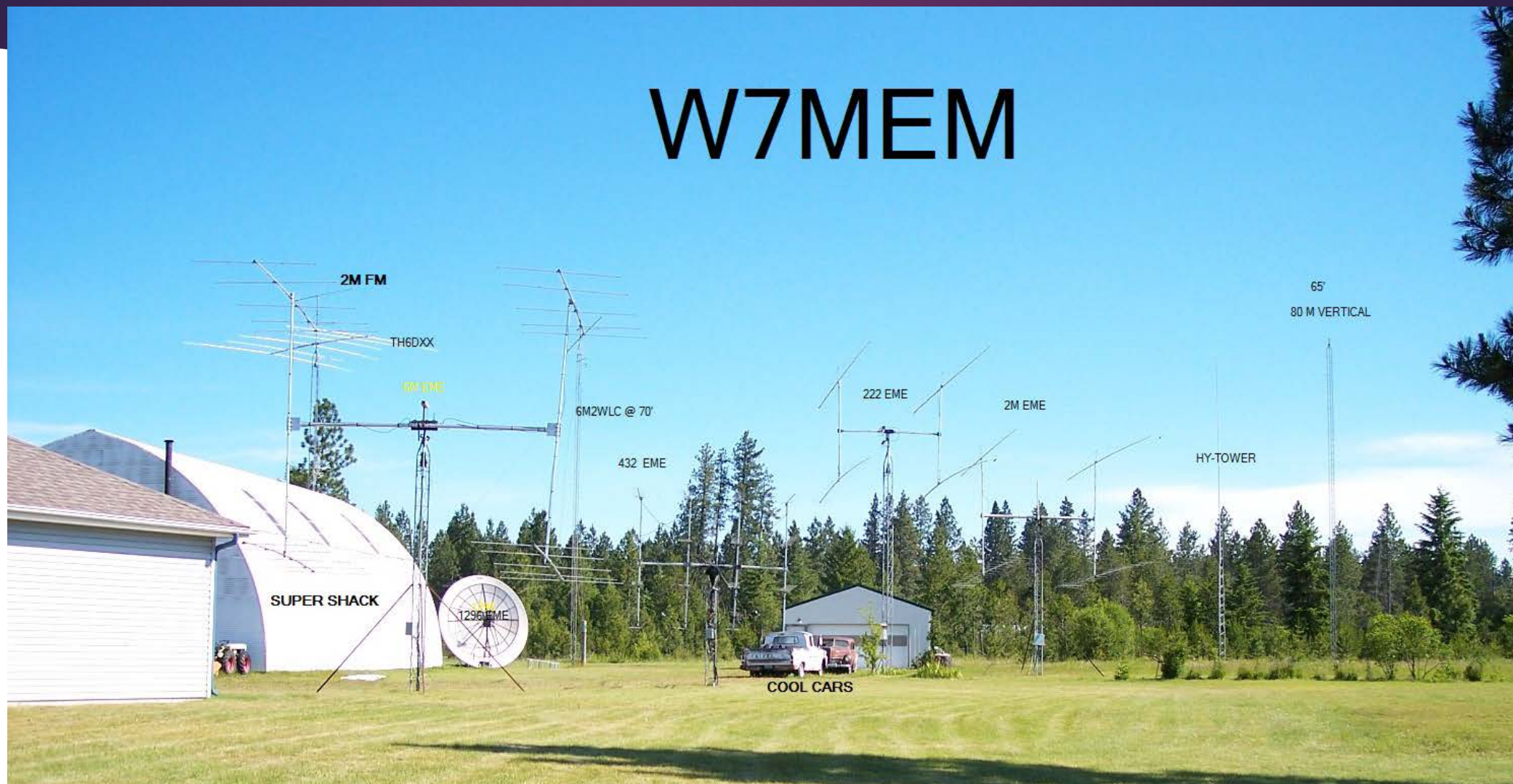


Antennas: Tuner with Long wire



Do you want an Antenna Farm?

W7MEM



Or just one
tower?



II. Radios



Transceivers



Transceivers – Icom 7100



Transceivers – Icom 7300



Transceivers – Icom 7610



III. Power Supplies



Power Supplies



Powerpoles



Power distribution



IV. Antenna Tuners



They come in many styles and sizes



V. Computer Related



Logging software

What is it, and why do I want it?

- ▶ Gives you a history of your contacts
- ▶ Allows for easy submittal of contacts
 - ▶ Awards
 - ▶ Contests
- ▶ For use in responding to QSL cards



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

Find

Recent Contacts

● Last 50

● All

2 Listed Items

Rec#	Call	Date / Time	Bnd	Mode	Power	Snt	Rec	Off	Country	ST	County	Name	Other	S	R	Comments	Fr
14913	LW8DOZ	2019/05/25 07:20	40	FT8		-04	-01	07:21	Argentina			Rolando		Y	Y	Rolando R Vidal ...	
13762	LW8DOZ	2018/10/22 05:44	40	FT8	100	-20	-07	05:45	Argentina			Rolando		Y	Y	FT8 Sent: -20 R...	

AC Log by N3FJP

Image: LW8DOZ



LogData.mdb

Call	Date	Band	Mode	Power	Time On	Sent	Rec	Country
LW8DOZ	2019/11/06	20			00:21	59	59	Argentina

Name	State	County	Frequency	Grid
Rolando			14.07400	

☐ QSL Sent
☐ QSL Rcvd

Spot Last

4:26:18 PM
00:26:18 UTC

Log Contact

Bearing: 136

Miles: 6,950

Cont: SA

Comments

Rolando R Vidal - -Mar de Cobo-,

☐ Current time
if blank

Logger32

Logger32

File Tools View Awards Setup Utilities Help

Operator: VA7HU

Freq 3729 Mode SSB Band 80M

Call

Sent

Rcvd

Name

QTH

field 6 ? ir field 7 ?

BCPSN RN7 Tune

BCEN Thru

BCVTN

Worked/Confirmed

SSB	RTTY	PSK31	CW
6M			
10M			
12M			
15M			
17M			
20M			
30M			
40M			
80M			
160M			

Data Terminal: X.25

File Settings View Mode Config Clear

CD CTS DSR TXD RXD SELCAL

XFLOW ON

cmd:

DX

Previous QSOs

QSO #	Date	Time	Band	Mode	RST	LoTW S	LoTW R	QSL S	Q
-------	------	------	------	------	-----	--------	--------	-------	---

Logbook page (C/L32_34222:VA7HU)

QSO #	Date	Time	Call	Band	Mode	QSL Via	RST	LoTW
3004	83 Jan 2013	1934	5W0W	15M	SSB		59	Y
3005	83 Jan 2013	1944	H40FN	20M	CW		599	Y
3006	84 Jan 2013	2141	VP9WW3S	12M	CW		599	Y
3007	20 Jan 2013	2000	890M	160M	CW		599	N
3008	21 Jan 2013	2023	V73NS	15M	CW		599	N
3009	21 Jan 2013	2025	KL7J	17M	CW		599	N
3010	23 Jan 2013	2137	CO6YAC	15M	SSB		59	N

DX Spots (VA7HU op, All types)

Q	DX Spot	Pfx	Freq	Comment	Time	Origin
	DL1KD	DL	21070.0	pek 31	1752	W08NMV
	WA4VUT	W	50125.0	EM64<-EM50	1754	KJ4UGO
X	EA3JE	EA	14210.0	TNX LOU 59+ AS USUAL	1757	VE7DJ
	4A2I	XE	15003.0		1800	KC8CF
	P48YL	P4	36922.1	RTTY	1801	W9QL
	WCY				1800	
	CR2V	CU	14027.4	Fioris 18 EU 009	1804	VA2AM
	CR2V	CU	15007.0		1805	KC8CF
	WV				1806	
	EA3J	EA	14014.0	cq cq	1808	W7OO

80M

Config Monitor

DX Spot map

Grayline Satellite DX Spots IOTA Spots View DX

29 Jan 2013 1800 Data Terminal Ckater Radio 1 No Rotor Telnet Antenna DVK WwV at 1000: SF1 98, A 4, K 0

Features of Logging programs

- ▶ Rig control & communication with Transceiver
- ▶ Automatic uploads to LoTW & Club Log
- ▶ Easy to check for status on awards
- ▶ Integrated Spotting
- ▶ Record of confirmation
- ▶ Integration with QRZ

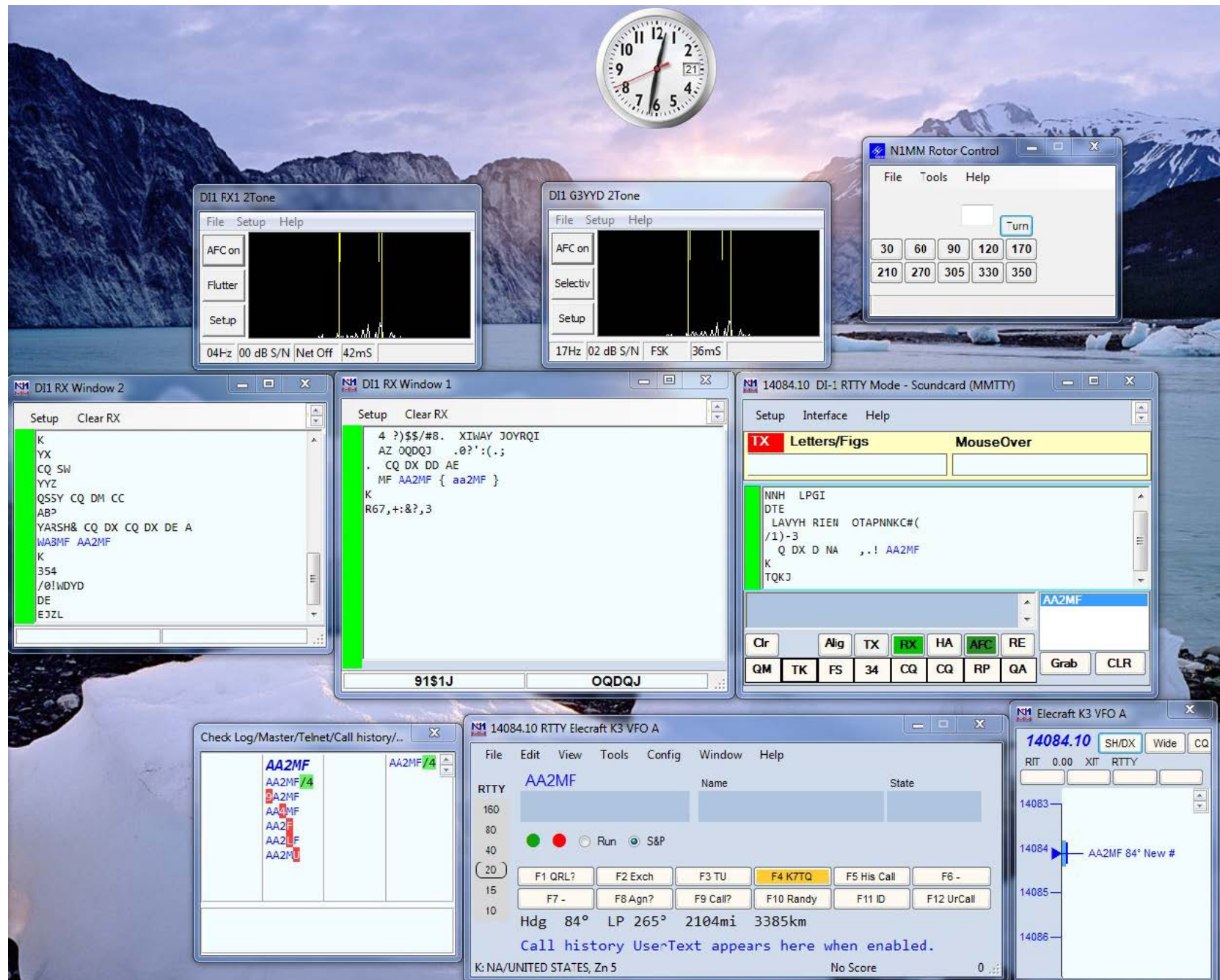


Contest Software

- ▶ N1MM+
- ▶ N3FJP
- ▶ Winlog



N1MM+ RTTY Contest



N3FJP
SSB
Contest

N3FJP's CQ WW DX Contest Log 4.2www.n3fjp.com

FileSettingsBandViewHelp

Current Band OnlyFind

Recent ContactsLast 20All

Rec	Call	Rcvd	CQz	Snt	Country	Date / Time	Bnd	Mode	Pnts
378	VP5DX	59	08	59	Turks & Caicos Is.	10/27 05:06	40	PH	2
377	YW5T	59	09	59	Venezuela	10/27 05:06	40	PH	3
376	PJ2T	59	09	59	Curacao	10/27 05:02	40	PH	3
375	DR1A	59	14	59	Federal Republic of Germany	10/27 04:57	40	PH	3
374	YT3A	59	15	59	Serbia	10/27 04:55	40	PH	3
373	CR2X	59	14	59	Azores	10/27 04:51	40	PH	3
372	IR3C	59	15	59	Italy	10/27 04:41	40	PH	3
371	TM1O	59	14	59	France	10/27 04:40	40	PH	3
370	EU1A	59	16	59	Belarus	10/27 04:37	40	PH	3
369	LN8W	59	14	59	Norway	10/27 04:35	40	PH	3
368	4L0A	59	21	59	Georgia	10/27 04:29	20	PH	3

Score Statistics

Total Contacts377

Total QSO Points1,082

Total Multipliers268

Total Score289,976

QSOs / Hr (Last 20 min)0

QSOs / Hr (Last 60 min)12

CallRecCQzSntCountry

DQ4W14Federal Repu

Possible DuplicatesAny Portion

Bearing: 29Miles: 5,042Cont: EU

Stop tracking op time17:37:37

Band: 40Mode: PH

160 = 1 / 1Canada

80 = 0 / 0

40 = 33 / 16Aland Is.
Antigua & Barb
Australia
Austria
Azores
Belarus
Canada
Cape Verde
China
Curacao
Czech Republic
Denmark
England
European Russ
Federal Republ
Fernando de N
Finland
France
Greece
Hawaii
Indonesia
Italy

20 = 35 / 17Aland Is.
Alaska
Aruba
Argentina
Asiatic Russia
Azores
Barbados
Bahamas
Belgium
Bosnia-Herzegov
Brazil
Canada
Cape Verde
Costa Rica
Croatia
Curacao
Cyprus
Czech Republic
Estonia
European Russ
Federal Republ
Finland
France
Georgia
Hawaii
Hungary
Italy

15 = 49 / 16Aland Is.
Aruba
Australia
Austria
Azores
Bahamas
Belgium
Bosnia-Herzegov
Brazil
Canada
Cape Verde
China
Costa Rica
Croatia
Curacao
Czech Republic
England
Estonia
Federal Republ
Finland
France
French Guiana

10 = 74 / 26Alaska
Antigua & Barb
Argentina
Aruba
Asiatic Russia
Australia
Austria
Azores
Bahamas
Balearic Is.
Barbados
Belgium
Belize
Bermuda
Bonaire
Brazil
Bulgaria
Canada
Cape Verde
Cayman Is.
Chile
China

Zones01 21
02 22
03 23
04 24
05 25
06 26
07 27
08 28
09 29
10 30
11 31
12 32
13 33
14 34
15 35
16 36
17 37
18 38
19 39
20 40

N7GCO

RS(T)

3

10:28:54 PM
05:28:54 UTC

Features of Contest programs

- ▶ Rig control & communication with Transceiver
- ▶ Integrated Spotting and show needed contacts
- ▶ Keeps track of Multipliers
- ▶ Keeps track of contact points
- ▶ Keeps track of time you are participating
- ▶ Shows any potential duplicated
- ▶ Performs Super Check Partial



Spotting Programs

- ▶ What are they and why do I want them?
 - ▶ Helps identify propagation paths
 - ▶ Makes it easier to make contacts
 - ▶ Shows spots you need
- ▶ Examples
 - ▶ DX Summit
 - ▶ VE7CC
 - ▶ DX Labs Spot Collector



» LAST 25 DX SPOTS - RELOADED EVERY MINUTE

PA/NL8992-	10143.7	A45XR	cq RTTY no takers	1847 03 Nov	Oman
EA2DT	7028.5	OK1RZ		1847 03 Nov	Czech Republic
IK2SAR	7008.0	4U20B	TNX QSO	1847 03 Nov	Not Found
UN7TK-@	10138.0	JE2KSM	JT65 - 09 Yuji Numazu	1847 03 Nov	Japan
7X2RD-@	14264.0	7U60AR	SPECIAL CALL INFOS QRZ.COM	1847 03 Nov	Algeria
F5MZE	21361.0	W1AW/1		1846 03 Nov	United States
KI4BKE	28082.9	CN8KD	RTTY, TNX for Morocco!	1846 03 Nov	Morocco
VK7BO-@	10138.0	UN7TK	JT65	1845 03 Nov	Kazakhstan
PA/NL8992-	10138.7	HS02KM	WSPR	1845 03 Nov	Thailand
IW7DHC	21290.0	VP8LP/100		1844 03 Nov	Falkland Islands
LY3B	7130.0	ON1418HRT	TNX QSO	1844 03 Nov	Belgium
EA2DT	7003.3	9A7R		1844 03 Nov	Croatia
M0TFO	14187.5	SV3AAF		1844 03 Nov	Greece
K4YYL	28018.5	FT4TA	QSO 28023.26 AF031	1844 03 Nov	France
ON8DM-@	3513.0	HG6L	cq cq tu	1843 03 Nov	Hungary
W3LPL	21027.0	HP1RN	Heard in OH and MA	1843 03 Nov	Panama
SP5GKN	14017.0	EA6NB	QSB	1843 03 Nov	Balearic Islands
P11KTZ	24944.0	ZW75PSO	USB	1842 03 Nov	Brazil
P11WJH	24955.0	FT4TA	Any chance for South America?	1842 03 Nov	France
PA/NL8992-	10138.0	UN7TK	JT65a	1842 03 Nov	Kazakhstan
OG1X-@	50000.0	OH1NO	Never heard her! Fake spot agn??	1841 03 Nov	Finland
PA/NL8992-	10138.0	TR8CA	JT65a	1841 03 Nov	Gabon
W3LPL	28029.0	OX3LX	Heard in KS and MA	1841 03 Nov	Greenland
ZS1TAF	28465.0	CX3AT	JF96GE<>GF15VC	1841 03 Nov	Uruguay
W9MO	28036.8	W1AW/KP2		1841 03 Nov	US Virgin Island

I2YBC ANY NEWS VU4CB 1843 03 Nov
ID10T PLEASE RESPECT FOR ITALIANS !!! LEARN THE LANGUAGE BEFORE 1832 03 Nov

[Sign In/Register](#)

Solar-Terrestrial Data

03 Nov 2014 1838 GMT
SFI:124 SN: 91
A-Index: 9
K-Index: 1
X-Ray: B4.9
304A: 158.9 @ SEM
Calculated Conditions
Band Day Night
80m-40m: Fair Good
30m-20m: Good Good
17m-15m: Fair Fair
12m-10m: Fair Poor
Signal Noise: S0-S1
Click to Install Solar
Data On your Web Site
<http://www.n0n0h.com>
Copyright Paul L Herrman 2010



The World's Most Popular
43-Foot Vertical Antenna!

- High Quality
- Superior Performance
- Low Price

Connected to VE7CC-1

Disconnect

Sunset 08 May
-1:52 01:44:41BER^HA7UG^226^69^AB5K^8^5^28^15^MA^^CT-Connecticut-W^Hungary-HA^FN32^JN97
User UK2UK has logged out

Settings

Country

State

Bands

Locals = 27

DX

W/W

Login Msg

Ann

W/x

Mail

Spotter	Freq	DX	Time	Comments
U01AU	7004.0	HC1MD	0138Z	
AD1C	7237.0	WA1ENO	0139Z	Plymouth, MA (also WB1ARU)
W2YJ	28476.5	ZL4PW	0139Z	10m open!!!
PY2D0	1817.5	EW60IG	0139Z	tnx
AA3B	3517.8	SN8F	0138Z	ARI
W0FLS	14020.5	PY1CE	0143Z	
N5CR0	21308.0	UK1CW	0141Z	
G8VHB	3768.0	9A4D	0141Z	
K4KWK	7012.0	IR4T	0140Z	TEST, 599 PLUS 30 IN TN
G8VHB	3773.0	IQ3AZ	0141Z	GO
G8VHB	3786.0	IQ2CJ	0141Z	MI
Y02LDC	1832.9	SU5/DJ5AA/P	0141Z	
AA3B	3510.1	ON6NR	0139Z	ARI
W2RQ	7070.0	IK0PHY	0141Z	qsx 7215 for stateside..
W2XYZ	7041.5	K1ZZ	0140Z	NEQP
W9YK	28430.0	XE1ZGG	0143Z	
HA7UG	7037.0	K1TTT	0144Z	MA- BER

ALL

85

160

7

7

80

22

40

29

29

20

5

5

15

11

11

10

11

11

Alarm

Minor Radio
Blackouts

SA: Eruptive

GMF: Quiet

Aurora

SFI=110 A=17 K=4

Chat

Fix Spots

Set Alarm

Clear ALL

Announce

Send Spot

Get Spots ALL

Spotting Programs

The key is setting which spots are shown (filters)!

- ▶ For example I only want spots:
 - ▶ From west coast or call areas 7,6,0
 - ▶ By particular mode (SSB, Digital, RTTY, CW)
 - ▶ To be shown if I have worked them before or I need them (by band and mode)



WWW 07-21 1211 Z
 SFI History
 Q: 1 A K

Outgoing spot
 Call 50,101.6 Freq Cluster
 Notes X Local

Spot source status
☒ ☒ ☒ ☒ ☒ ☒
 Report Stats Prop Config Help

Callsign	Pfx	Freq	QsX	RcvdTime	Band	Mode	DXCCCountry	Cont	CountryPro	Notes	Source	Network	LotW	eQSL	FirstTime
ON4IQ	ON	50,276.0		7/21/2014 1351	6M	SSB	Belgium	EU	V	FM15MM<ES>J020	WD4KPD	EI7MRE	Y	A	7/21/2014 1351
G6WRW/P	G	18,140.0		7/21/2014 1352	17M	SSB	England	EU	V	OP. CAROLYN QSL BUREAU	IZ3PYL	DX Spots	N	N	7/21/2014 1351
OE4BHF	OE	18,151.0		7/21/2014 1352	17M	SSB	Austria	EU	V	GOOD SING 5/9 BEST 73	ON7CFX	DX Spots	N	A	7/21/2014 1352
JA1CG	JA	14,298.0		7/21/2014 1353	20M	SSB	Japan	AS	V	59+10 in Arkansas	K5XS	DX Spots	N	A	7/21/2014 1352
FR4PJ	FR-R	14,263.0		7/21/2014 1353	20M	SSB	Reunion	AF	F	TNX QSO DAVID !	RW9JZ	DX Spots	N	N	7/21/2014 1344
OK2APY/P	OL	14,256.0		7/21/2014 1355	20M	SSB	Czech Republic	EU	V	OKFF-094, WCA OK-00172	EA2DT	DX Spots	Y	A	7/21/2014 1352
MW0ZZK	GW	24,936.9		7/21/2014 1355	12M	SSB	Wales	EU	V	TNX STEVE	F4ULC	EI7MRE	Y	A	7/21/2014 1355
MX0TBG/P	G	14,265.0		7/21/2014 1356	20M	SSB	England	EU	V	good copy in VIGO	EA1AIQ	DX Spots	N	N	7/21/2014 1342
W1AW/4	K	21,287.5		7/21/2014 1357	15M	SSB	United States	NA	V	In South Carolina	WA5KSC	DX Spots	Y	N	7/21/2014 1356
UN6QBx	UN	14,173.0		7/21/2014 1357	20M	SSB	Kazakhstan	AS	V	tnx QSO	R9CC	EI7MRE	N	N	7/21/2014 1357
SV8/OK1FFU	SV	14,188.0		7/21/2014 1357	20M	SSB	Greece	EU	V	EU-174	PD9DX	EI7MRE	N	N	7/21/2014 1357
G8BCG	G	50,101.6		7/21/2014 1358	6M	SSB	England	EU	V	Tks qso Peter	VE2DLC	EI7MRE	Y	N	7/21/2014 1348
N3DB	K	50,105.0		7/21/2014 1358	6M	SSB	United States	NA	V	JN78CJ<ES>FM18SU	OE5MPL	EI7MRE	N	N	7/21/2014 1358
OE5MPL	OE	50,105.0		7/21/2014 1358	6M	SSB	Austria	EU	V	559 w/ qsb	N3DB	EI7MRE	Y	A	7/21/2014 1356
Z35T	Z3	21,265.0		7/21/2014 1358	15M	SSB	Macedonia	EU	V	qrz	JA0HWf	DX Spots	N	A	7/21/2014 1357
EF6	EA6	28,478.2		7/21/2014 1401	10M	SSB	Balearic Is	EU	V	Cq 10 Mtr 55 In NJ	AB2DE	EI7MRE	N	N	7/21/2014 1332
YBQJS	YB	14,220.0		7/21/2014 1401	20M	SSB	Indonesia	OC	F	Sur in Djakarta	ON6ZK	EI7MRE	N	N	7/21/2014 1401

Sort
☐ First ☐ Call
☐ Last ☐ Freq
☒ Rcv ☐ Az

Filter: Band and Mode
 X AH Need Call DXCC Freq Tag Band Mode Cont Origin
 Audio Age LotW eQSL Mrthn SQL 1 SQL 2 SQL 3 SQL 4 SQL 5 SQL 6 SQL 7 SQL 8

Color codes
☒ verified ☒ unvrkd B or M ☒ LotW
☒ unneeded ☒ unvrkd counter ☒ eQSL AG
☒ unconfmrd ☒ special tag ☒ LotW & eQSL AG

Digital Programs

- ▶ What are they and why do I want one?
 - ▶ Add additional operating modes
 - ▶ Will make contacts when no other mode will
- ▶ Examples
 - ▶ WSJT-X (FT8/FT4)
 - ▶ Winlink
 - ▶ Fldigi



WSJT-X FT8

WSJT-X v2.1.0 by K1JT

File Configurations View Mode Decode Save Tools Help

Band Activity

UTC	dB	DT	Freq	Message
002230	0	0.0	2059 ~	VA6DWR WA6WGS -15
002230	-11	0.1	2484 ~	K5DSQ W6CYX RR73
----- 20m -----				
002300	3	0.1	941 ~	KN6EWL LW8DOZ RRR
002300	-15	0.1	619 ~	CQ KF6EOJ DM03 U.S.A.
002300	12	0.1	1089 ~	KD9LOK K6QU RR73
002300	-5	0.1	1179 ~	CQ HC1MD/2 Ecuador
002300	-15	0.0	1496 ~	CQ PY4GSS GG79 Brazil
002300	3	0.1	2059 ~	VA6DWR WA6WGS -15
002300	-12	0.0	2317 ~	CQ N0PSJ DM79 U.S.A.
002300	-17	0.0	2381 ~	<ZY50Y> HP3AXL EJ88
002300	-12	0.1	2484 ~	JR7NMH W6CYX -01
----- 20m -----				
002330	5	0.1	941 ~	KN6EWL LW8DOZ 73
002330	-13	0.1	619 ~	LU8AFR KF6EOJ -08
002330	8	0.1	1089 ~	CQ DX K6QU DM04 U.S.A.
002330	2	0.3	1179 ~	N7XG XE1HON DL80
002330	-12	0.0	1496 ~	CQ PY4GSS GG79 Brazil
002330	-20	0.1	1735 ~	KR4MT JA1NLX -23
002330	-17	2.4	1836 ~	LU2FB R0CD R-15
002330	-11	0.1	1900 ~	CQ LU1HVX FF87 Argentina
002330	2	0.1	2059 ~	VA6DWR WA6WGS -15
002330	-11	0.1	2317 ~	CQ N0PSJ DM79 U.S.A.
002330	-15	0.1	2381 ~	<ZY50Y> HP3AXL EJ88
002330	-12	0.1	2484 ~	JR7NMH W6CYX -01
002330	-19	0.1	584 ~	CQ PP5FE GG53 Brazil
002330	0	0.1	1179 ~	CQ HC1MD/2 Ecuador

Rx Frequency

UTC	dB	DT	Freq	Message
002130	3	0.1	941 ~	CQ LW8DOZ GF12 Argentina
002153	Tx		1981 ~	LW8DOZ N7GCO DN17
002200	11	0.1	941 ~	KN6EWL LW8DOZ -18
002215	Tx		1981 ~	LW8DOZ N7GCO DN17
002230	-1	0.1	941 ~	KN6EWL LW8DOZ RRR
002245	Tx		1981 ~	LW8DOZ N7GCO DN17
002300	3	0.1	941 ~	KN6EWL LW8DOZ RRR
002315	Tx		1981 ~	LW8DOZ N7GCO DN17
002330	5	0.1	941 ~	KN6EWL LW8DOZ 73
002345	Tx		1981 ~	LW8DOZ N7GCO DN17

☐ CQ only Log QSO Stop Monitor Erase Decode Enable Tx Halt Tx Tune ☒ Menus

20m S

14.074 000

☐ Tx even/1st
 Tx 1981 Hz ☒ Hold Tx Freq
 Rx 941 Hz
 Report 3
☒ Auto Seq ☐ Call 1st

DX Call: LW8DOZ DX Grid: GF12
 Az: 135 6938 mi
 Lookup Add

2019 Nov 06
 00:23:46

Tx: LW8DOZ N7GCO DN17
7300
FT8
Last Tx: LW8DOZ N7GCO DN17

JTAlert 2.14.5 N7GCO [~20m,ACL,F,#1] (!)
+ Alerts | Settings | View

LW8DOZ Argentina	K6QU - CA U.S.A.	XE1HON Mexico	JA1NLX-B4 Japan

Generate Std Msgs Next Now Pwr

LW8DOZ N7GCO DN17	<input checked="" type="radio"/>	Tx 1
LW8DOZ N7GCO +03	<input type="radio"/>	Tx 2
LW8DOZ N7GCO R+03	<input type="radio"/>	Tx 3
LW8DOZ N7GCO RR73	<input type="radio"/>	Tx 4
LW8DOZ N7GCO 73	<input type="radio"/>	Tx 5
CQ N7GCO DN17	<input type="radio"/>	Tx 6

JTALERT

WSJT-X
FT8
Waterfall



WSJT-X v2.1.0 by K1JT

FileConfigurationsViewModeDecodeSaveToolsHelp

Band Activity

UTC	dB	DT	Freq	Message
002230	0	0.0	2059	~ VA6DWR WA6WGS -15
002230	-11	0.1	2484	~ K5DSQ W6CYX RR73
----- 20m -----				
002300	3	0.1	941	~ KN6EWL LW8DOZ RRR
002300	-15	0.1	619	~ CQ KF6EOJ DM03 U.S.A.
002300	12	0.1	1089	~ KD9LOK K6QU RR73
002300	-5	0.1	1179	~ CQ HC1MD/2 Ecuador
002300	-15	0.0	1496	~ CQ PY4GSS GG79 Brazil
002300	3	0.1	2059	~ VA6DWR WA6WGS -15
002300	-12	0.0	2317	~ CQ N0PSJ DM79 U.S.A.
002300	-17	0.0	2381	~ <ZY50Y> HP3AXL EJ88
002300	-12	0.1	2484	~ JR7NMH W6CYX -01
----- 20m -----				
002330	5	0.1	941	~ KN6EWL LW8DOZ 73
002330	-13	0.1	619	~ LU8AFR KF6EOJ -08
002330	8	0.1	1089	~ CQ DX K6QU DM04 U.S.A.
002330	2	0.3	1179	~ N7XG XE1HON DL80
002330	-12	0.0	1496	~ CQ PY4GSS GG79 Brazil
002330	-20	0.1	1735	~ KR4MT JA1NLX -23
002330	-17	2.4	1836	~ LU2FB ROCD R-15
002330	-11	0.1	1900	~ CQ LU1HVK FF87 Argentina
002330	2	0.1	2059	~ VA6DWR WA6WGS -15
002330	-11	0.1	2317	~ CQ N0PSJ DM79 U.S.A.
002330	-15	0.1	2381	~ <ZY50Y> HP3AXL EJ88
002330	-12	0.1	2484	~ JR7NMH W6CYX -01
002330	-19	0.1	584	~ CQ PP5FE GG53 Brazil
002330	0	0.1	1179	~ CQ HC1MD/2 Ecuador

Rx Frequency

UTC	dB	DT	Freq	Message
002130	3	0.1	941	~ CQ LW8DOZ GF12 Argentina
002153	Tx	1981	~	LW8DOZ N7GCO DN17
002200	11	0.1	941	~ KN6EWL LW8DOZ -18
002215	Tx	1981	~	LW8DOZ N7GCO DN17
002230	-1	0.1	941	~ KN6EWL LW8DOZ RRR
002245	Tx	1981	~	LW8DOZ N7GCO DN17
002300	3	0.1	941	~ KN6EWL LW8DOZ RRR
002315	Tx	1981	~	LW8DOZ N7GCO DN17
002330	5	0.1	941	~ KN6EWL LW8DOZ 73
002345	Tx	1981	~	LW8DOZ N7GCO DN17

CQ only

Log QSO

Stop

Monitor

Erase

Decode

Enable Tx

Halt Tx

Tune

Menus

20m

14.074 000

80

60

40

20

0

0 dB

Az: 135

6938 mi

Lookup

Add

2019 Nov 06

00:23:46

Tx: LW8DOZ N7GCO DN17

7300

FT8

Last Tx: LW8DOZ N7GCO DN17

1/15

WD:4m

Generate Std Msgs

Next

Now

LW8DOZ N7GCO DN17

LW8DOZ N7GCO +03

LW8DOZ N7GCO R+03

LW8DOZ N7GCO RR73

LW8DOZ N7GCO 73

CQ N7GCO DN17

Tx 1

Tx 2

Tx 3

Tx 4

Tx 5

Tx 6

1981 Hz

Hold Tx Freq

Rx 941 Hz

Report 3

Auto Seq

Call 1st

DX Call

LW8DOZ

DX Grid

GF12

Az: 135

6938 mi

Lookup

Add

2019 Nov 06

00:23:46

Tx: LW8DOZ N7GCO DN17

7300

FT8

Last Tx: LW8DOZ N7GCO DN17

1/15

WD:4m

JTAlert 2.14.5 N7GCO [~,20m,ACL,F,#1] (!)

Alerts | Settings | View

LW8DOZ

Argentina

K6QU - CA

U.S.A.

XE1HON

Mexico

JA1NLX-B4

Japan

Display Reception Reports

pskreporter.info/pskmap.html

On 20m, show countries, rcvd by, the callsign n7gco using FT8 over the last 2 hours Go! Display options Permalink

Automatic refresh in 5 minutes. Small markers are the 11 countries (show logbook) heard at N7GCO (20 reports, 8 countries last 24 hours, 1180 reports, 21 countries last week).

There are 606 active FT8 monitors on 20m. Show all FT8 on all bands. Show all on all bands. Legend

OP

PP

QP

RP

AP

BP

CP

DP

EP

FP

GP

OO

PO

QO

RO

AO

BO

CO

DO

EO

FO

GO

ON

PN

QN

RN

AN

BN

CN

DN

EN

FN

GN

OM

PM

QM

RM

AM

BM

CM

DM

EM

FM

GM

OL

PL

QL

RL

AL

BL

CL

DL

EL

FL

GL

OK

PK

QK

RK

AK

BK

CK

DK

EK

FK

GK

OJ

PJ

QJ

RJ

AJ

BJ

CJ

DJ

EJ

FJ

GJ

OI

PI

QI

RI

AI

BI

CI

DI

EI

FI

GI

OH

PH

QH

RH

AH

BH

CH

DH

EH

FH

GH

OG

PG

QG

RG

AG

BG

CG

DG

EG

FG

GG

OF

PF

QF

RF

AF

BF

CF

DF

EF

FF

GF

OD

PD

QD

RD

AD

BD

CD

DD

ED

FD

GD

Rx at Wed, 06 Nov 2019 00:20:44 GMT

From United States (W6CYX) in United States

Loc CM97cj70vh

Distance: 734 miles bearing 198°

Frequency: 14.076.484 MHz (20m), FT8, -9dB

Last LoTW upload: Sun, 27 Oct 2019

Statistics — Comments to Philip Gladstone — Online discussions — Reception records: 9,098,469,344 — Hosting by Fast Serv Network LLC

PSKREPORTER.INFO

WSJT-X v2.1.0 by K1JT

FileConfigurationsViewModeDecodeSaveToolsHelp

Band Activity

UTC	dB	DT	Freq	Message
002230	0	0.0	2059	~ VA6DWR WA6WGS -15
002230	-11	0.1	2484	~ K5DSQ W6CYX RR73
----- 20m				
002300	3	0.1	941	~ KN6EWL LW8DOZ RRR
002300	-15	0.1	619	~ CQ KF6EOJ DM03 U.S.A.
002300	12	0.1	1089	~ KD9LOK K6QU RR73
002300	-5	0.1	1179	~ CQ HC1MD/2 Ecuador
002300	-15	0.0	1496	~ CQ PY4GSS GG79 Brazil
002300	3	0.1	2059	~ VA6DWR WA6WGS -15
002300	-12	0.0	2317	~ CQ N0PSJ DM79 U.S.A.
002300	-17	0.0	2381	~ <ZY50Y> HP3AXL EJ88
002300	-12	0.1	2484	~ JR7NMH W6CYX -01
----- 20m				
002330	5	0.1	941	~ KN6EWL LW8DOZ 73
002330	-13	0.1	619	~ LU8AFR KF6EOJ -08
002330	8	0.1	1089	~ CQ DX K6QU DM04 U.S.A.
002330	2	0.3	1179	~ N7XG XE1HON DL80
002330	-12	0.0	1496	~ CQ PY4GSS GG79 Brazil
002330	-20	0.1	1735	~ KR4MT JA1NLX -23
002330	-17	2.4	1836	~ LU2FB ROCD R-15
002330	-11	0.1	1900	~ CQ LU1HVK FF87 Argentina
002330	2	0.1	2059	~ VA6DWR WA6WGS -15
002330	-11	0.1	2317	~ CQ N0PSJ DM79 U.S.A.
002330	-15	0.1	2381	~ <ZY50Y> HP3AXL EJ88
002330	-12	0.1	2484	~ JR7NMH W6CYX -01
002330	-19	0.1	584	~ CQ PP5FE GG53 Brazil
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Rx Frequency

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002245	Tx	1981	~	LW8DOZ N7GCO DN17
002300	3	0.1	941	~ KN6EWL LW8DOZ RRR
002315	Tx	1981	~	LW8DOZ N7GCO DN17
002330	5	0.1	941	~ KN6EWL LW8DOZ 73
002345	Tx	1981	~	LW8DOZ N7GCO DN17

CQ only

Log QSO

Stop

Monitor

Erase

Decode

Enable Tx

Halt Tx

Tune

Menus

20m

14.074 000

DX Call

LW8DOZ

DX Grid

GF12

Az: 135

6938 mi

Lookup

Add

2019 Nov 06

00:23:46

Tx: LW8DOZ N7GCO DN17

7300

FT8

Last Tx: LW8DOZ N7GCO DN17

1/15

WD:4m

JTAlert 2.14.5 N7GCO [~.20m,ACL,F,#1] (!)

Alerts | Settings | View

LW8DOZ	K6QU - CA	XE1HON	JA1NLX-B4
Argentina	U.S.A.	Mexico	Japan

Display Reception Reports

using FT8 over the last

logbook) heard at N7GCO (20 reports, 8 countries last 24 hours)

Show all on all bands. Legend

Rx at Wed, 06 Nov 2019 00:19:29 GMT

From Asiatic Russia (RA0CGY) in Asiatic Russia

Loc PN78

Distance: 4514 miles bearing 315°

Frequency: 14.076.298 MHz (20m), FT8, -15dB

Last LoTW upload: Mon, 21 Oct 2019

eQSL Authenticity Guaranteed.

Rx at Wed, 06 Nov 2019 00:20:44 GMT

From United States (W6CYX) in United States

Loc CM97cj70vh

Distance: 734 miles bearing 198°

Frequency: 14.076.484 MHz (20m), FT8, -9dB

Last LoTW upload: Sun, 27 Oct 2019

Statistics — Comments to Philip Gladstone — Online discussions — Reception records: 9,098,469,344 — Hosting by Fast Serv Network LLC

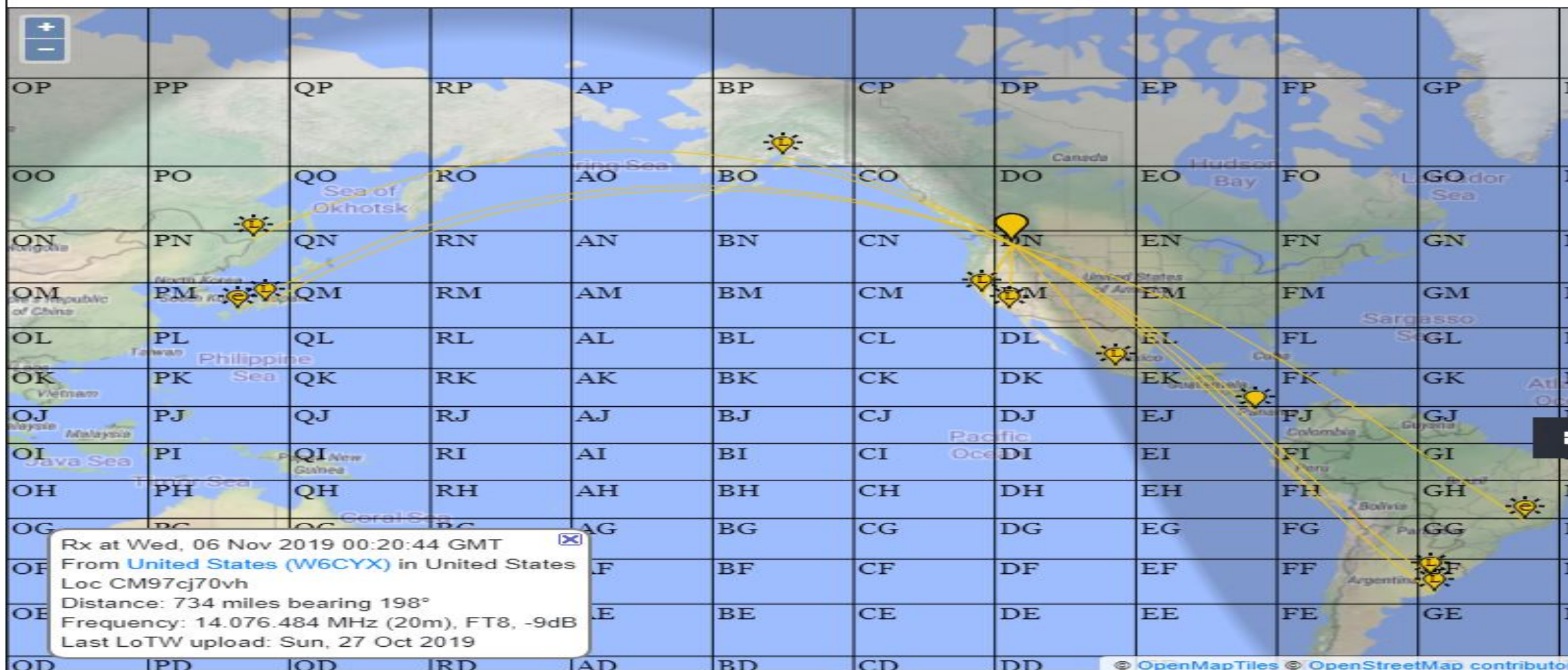
PSKREPORTER.INFO

On show rcvd by n7gco using over the last

2 hours ▼ Go! Display options Permalink

Automatic refresh in 5 minutes. Small markers are the 11 countries ([show logbook](#)) heard at N7GCO (20 reports, 8 countries last 24 hours; 1180 reports, [21 countries](#) last week).

There are **606 active FT8 monitors** on 20m. [Show all FT8 on all bands.](#) [Show all on all bands.](#) [Legend](#)



[Statistics](#) — [Comments to Philip Gladstone](#) — [Online discussions](#) — Reception records: 9,098,469,344 — Hosting by [Fast Serv Networks](#).



Winlink Express 1.5.11.4 - KB1HNZ

CONTENTS

 Settings

Message

Attachments

Move To:

Saved Items

Delete

Open Session:

Ardox Winlink

Loss



No active session.

System Folders

Inbox (0 unread)

Read Items (0)

Outbox (0)

Sent Items (12)

Saved Items (0)







Deleted Items (0)

Drafts (0)

Personal Folders

Global Folders

Contacts

	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
	2018/03/24 17:48	UIMERBG50QYBP	208	WX1GYX	WX1GYX	KB1HNZ...	//WL2K Test message
	2018/03/24 17:22	H6KPJU1SSPCY	26939	SMTP	SMTP:query-repl...	KB1HNZ	GFS:39N.48N.74W.60W
	2018/02/02 16:19	ESRPL003S7RF	528	SYSTEM	SERVICE	KB0FX...	//WL2K User Notice
	2017/10/05 21:52	EWUX8M3D87NE	186	WS1EC	WS1EC	KB1HNZ	//WL2K test message
	2017/06/25 17:13	204NOBHJWW3G	381	System	SERVICE	KB1HNZ	Undelivered Message
	2017/06/25 01:15	QV545N5ACUX9	547	KB1YTR	KB1YTR	WS1SM...	//WL2K Happy Field Day

Message ID: VIJCTW9I6019

Date: 2017/02/10 21:37

FROM: WX1GIX

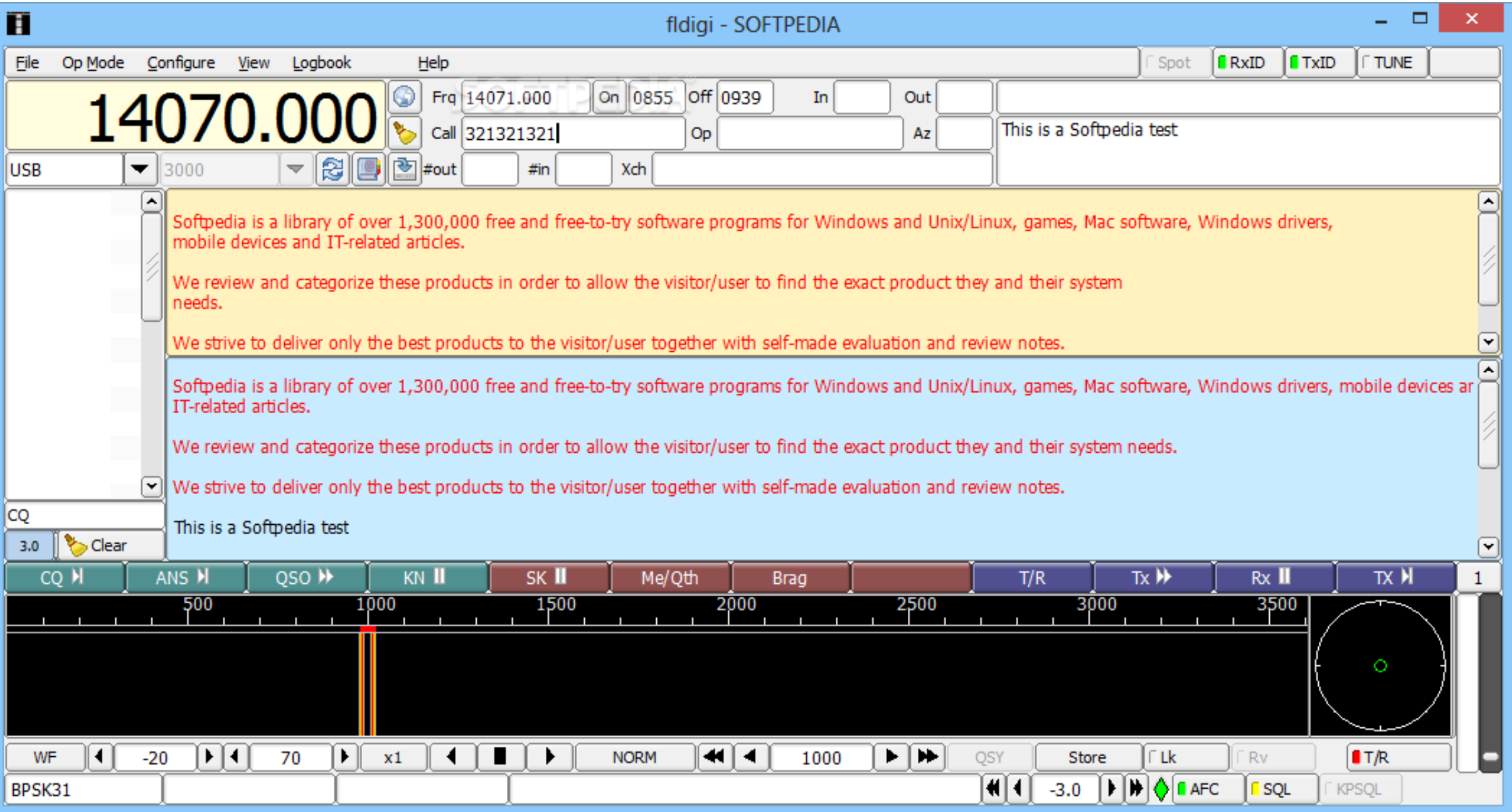
To: KBLHNZ

Source: WEBMAIL

Downloaded-from: Telnet:Halifax.Winlink.org

Subject: test message

test message



Some Suggested Starter Packages to Get You Started

- ▶ Listed in the handout



AWARDS

- ▶ Relatively Easy Awards
 - ▶ WAS
 - ▶ WAC
- ▶ ARRL DXCC
- ▶ CQ WAZ



Other Stuff

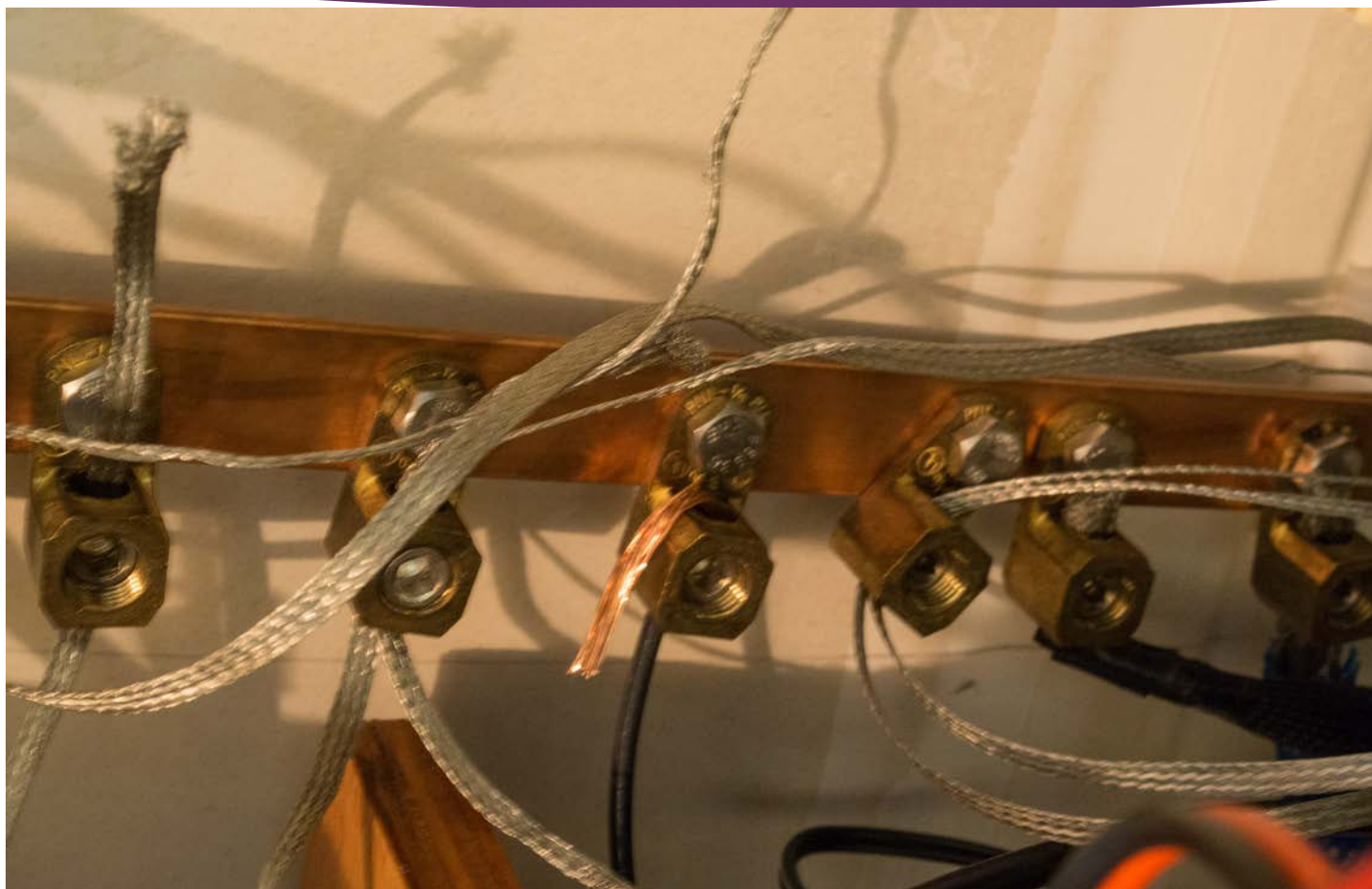
- ▶ Grounding
- ▶ Lightning protection
- ▶ Antenna switches
- ▶ SWR and power meters
- ▶ Feedline/coax cable
- ▶ QSL Cards



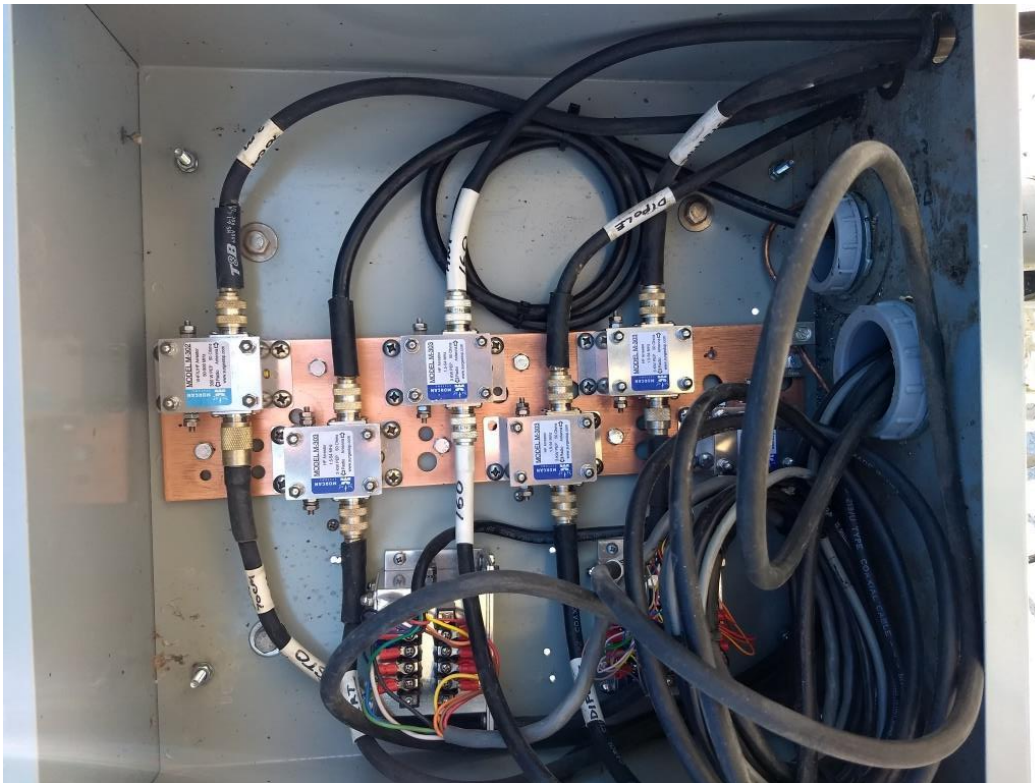
Tower Grounding & Lightning Protection



Station Grounding



Lighting Protection at Shack Entrance



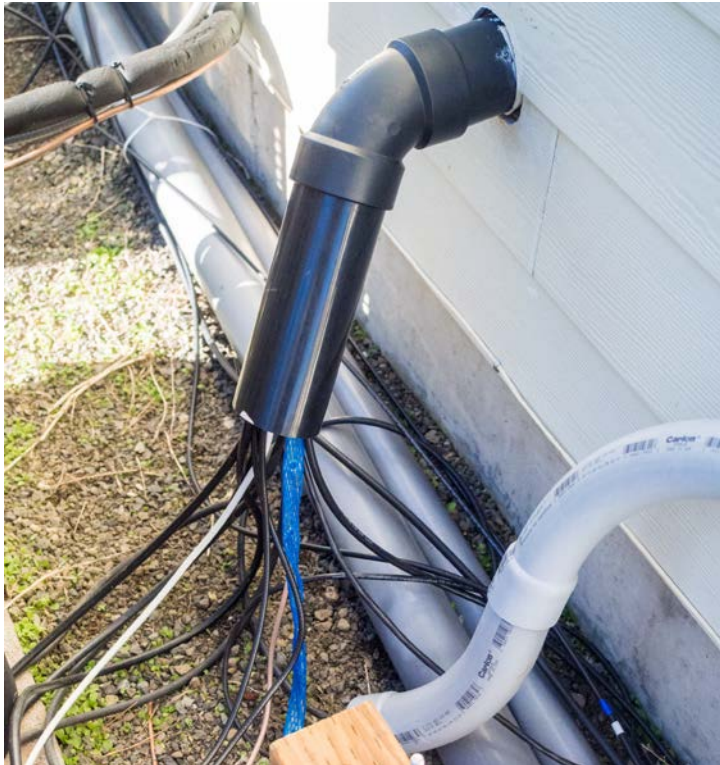
Antenna Switches



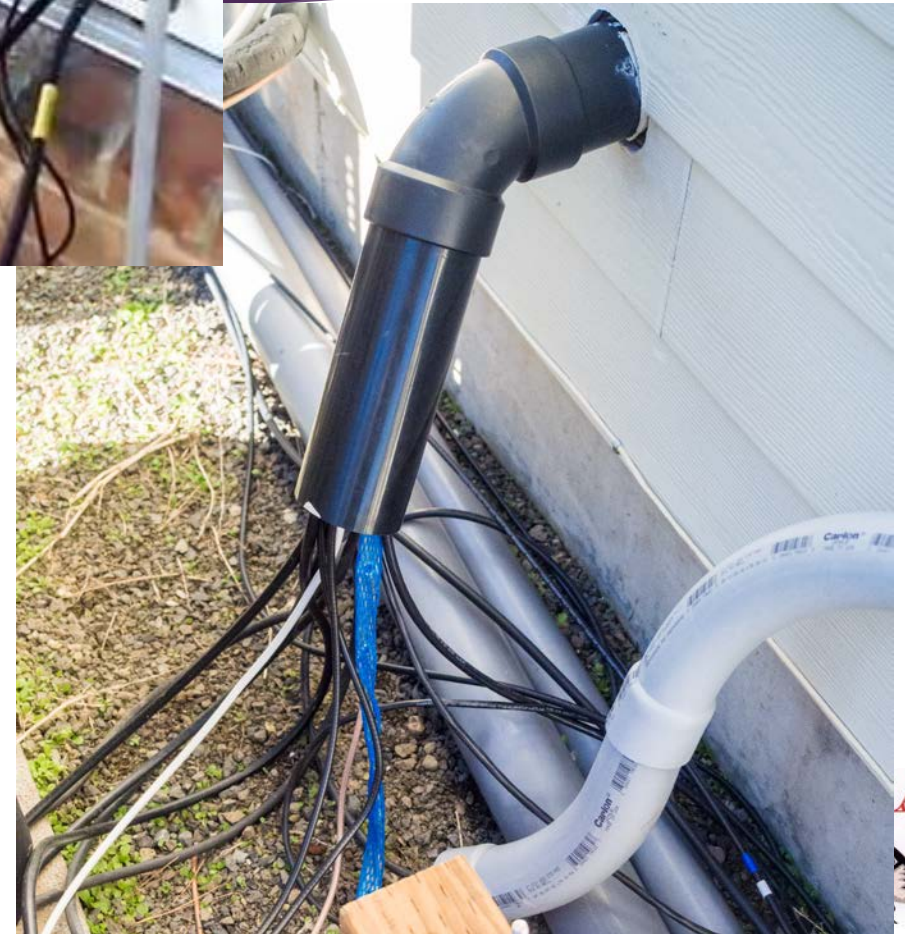
SWR/Power Meters



Feedline/Coax Cables



House Entrance



QSL Cards





N7GGO

Mel Ming

(James) Mel Ming
13010 S Short Rd
Cheney, WA 989004
USA

N7GGO



CQ Zone 3
ITU Zone 6
DN17gm
Spokane County

CONFIRMING QSO WITH	Month	Day	Year	UTC	Band	2-Way	RST

☐ PSE QSL TNX ☐

73 and Good DX!

www.MrQSL.com

Key Skills and Concepts for DX

1. Use Official Phonetics only (Appendix I)
2. Learn to work Split (Appendix II)
3. Working a pileup
4. Working the Grey Line
5. Using QRZ to look up contacts



After the Workshop

Mel will send you the following PDF's:

1. Operating Practices (19 Pages)
2. DX Summit Guide (14 pages)
3. CC Users Guide (VE7CC) (20 pages)



Questions

- ▶ Contact:
 - ▶ Del WA7AQH WA7AQH@gmail.com
 - ▶ Mel N7GCO Teammel@gmail.com
- ▶ www.sdxa.org



How Do I Learn What's Available and How to Operate on HF?

- ▶ SDXA can help
 - ▶ Mentor program for new/inexperienced Generals (and above)
 - ▶ Come to the SDXA meeting first Thursday every month
 - ▶ Great presentations
 - ▶ Ask questions
 - ▶ Lots of mentoring available



Thanks for Joining Us Today

► We hope you found it worthwhile!

