

AMATEUR RADIO CLUB OF COLUMBIA COUNTY, INC.



GENERAL MEETING

MEETING #21

Tuesday, October 25, 2016

7 PM



INVOCATION

RECOGNIZE SPECIAL VISITORS





ARCCC, INC. AGENDA OVERVIEW

- Welcome and Introductions (Quickly)
- Presentation
- Applications for New Membership
- Treasury Report and Meeting Minutes
- Swap Table
- Upcoming Events
- New Business
- Updates from Committee Directors



WELCOME AND INTRODUCTIONS

- Please Sign In on the Attendance Log
 - Please PRINT Legibly
- Introductions
 - QUICKLY Go Around the Room and Provide Your Name and Call Sign

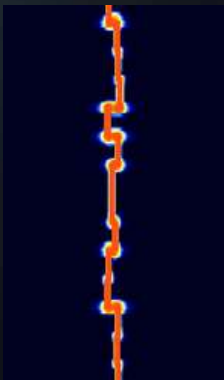
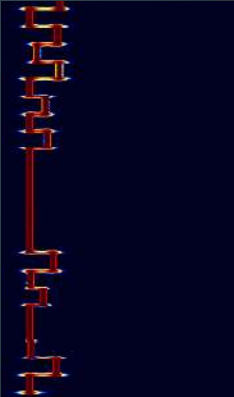
PRESENTATION

JT65A and JT9

Dan Marshall (N1ADM)

JT65A AND JT9

DIGITAL MODES ON HF



SOME BASICS

- JT65A and JT9 are weak-signal modes that are great for pulling DX out from under the noise
 - Great for low power or antenna restricted stations
 - Contacts are valid for DXCC, WAC, WAS, and are supported by LoTW
- Uses sophisticated digital signal processing, and relies on redundancy (FEC)
 - As much as 80% of the transmission can be lost and still be decoded
- Each transmission lasts 46.8 seconds; only a small amount of information is sent
 - The remaining 13 seconds is for the operator to prepare the response (usually just a mouse click)
- Requires very tight synchronization of time and frequency between transmitting and receiving stations
 - Computer clocks on both ends of the QSO must agree within ~ 2 seconds
- Stations take turns transmitting
 - One station transmits on even or odd minutes, then listens for reply during the following minute

JT65A

- JT65A is a “sub-mode” of the JT65 protocol, designed by Joe Taylor, K1JT, to optimize EME contacts
- A 1270.5 Hz synchronizing tone, and 64 additional tones to carry the information
 - On the air it sounds like someone playing strange music
- The bandwidth of a JT65A signal is 177.6 Hz
- Signals decode reliably at S/N of about -22db or better

JT9

- A more recent protocol; very similar in operation to JT65A, but more sensitive and efficient
- One tone is used for synchronization, and 8 tones are used for data
- The bandwidth of a JT9 signal is 15.6 Hz
- Messages decode reliably at S/N of about -24db or better

SOME OTHER THINGS TO KNOW

- **These are low power modes, even more so than PSK31**
 - 10-20 watts will usually work, even for DX when band conditions are good
 - Don't crank up the power too much because it will make it difficult for others to decode weaker signals
- **Set USB receive bandwidth as wide as possible to decode audio over the entire JT65/JT9 frequency range (~4 kHz)**
- **Carefully adjust the computer's audio output and watch the ALC meter so you don't overdrive the audio**
 - Too much audio volume can cause the audio to be distorted, leading to spurs and garbage, which could cause interference or prevent message decoding
 - Turn off the computer sounds!
- **The QSO procedures are different than other digital modes - JT65A and JT9 contacts are designed to exchange only the bare minimum information needed to qualify as a QSO**
 - Callsigns
 - Grid Squares
 - Signal Reports
 - 73
- **These are not good modes for ragchewing or contesting**

JT65A AND JT9 QSO

CQ N1ADM EM83	23:03	N1ADM calls CQ
N1ADM CT1FBK IM58	23:04	CT1FBK responds
CT1FBK N1ADM -12	23:05	N1ADM sends -12db signal report
N1ADM CT1FBK R-09	23:06	CT1FBK acks, sends -9db signal report
CT1FBK N1ADM RRR	23:07	N1ADM acknowledges report
N1ADM CT1FBK 73	23:08	end of QSO

You can also send a free format text, but it is limited to 13 characters

Examples: "TU 73 FM GA" or "73 10W VERT"

JT65A AND JT9 VFO FREQUENCIES (ALL USB)

Band	JT65A	JT9
160m	1838 kHz	1840 kHz
80m	3576 kHz	3578 kHz
40m	7076 kHz*	7078 kHz
30m	10139 kHz	10140 kHz
20m	14076 kHz	14078 kHz
17m	18102 kHz	18104 kHz
15m	21076 kHz	21078 kHz
12m	24917 kHz	24919 kHz
10m	28076 kHz	28078 kHz
6m	50.276 MHz	

*7039 kHz sometimes used by European stations

There are also some alternate JT65 frequencies in some of the bands

WHAT YOU NEED FOR JT65 & JT9

If you are set up for PSK31, you probably have *almost* everything you need already!

- SSB capable HF transceiver
- Computer
 - Consumer grade, processor of 1.5GHz or better should be fine
 - Most applications will run on Windows 7, 8 or 10 (and some older versions)
 - Mac and Linux applications are also available
- Sound card/Interface (Signalink, RigBlaster)
 - Some new transceivers have built-in sound cards
- Some additional software
 - Don't worry, it's free! (and easy, sort of...)

THE SOFTWARE

WSJT-X, by Dr. Joe Taylor, K1JT

<http://physics.princeton.edu/pulsar/k1jt/wsjsx.html>

- Windows, Mac, Linux versions
- Supports JT65 and JT9 (and other modes JT4, WSPR and Echo)
- Offers rig control for most modern transceivers

JT65-HF, by Joe Large, W6CQZ

<http://jt65-hf.com/downloads/>

- Older software, no longer supported, but still very popular and capable
- Only supports the JT65A protocol
- Some rig control capability

Other variations/adaptations of the JT-65HF software:

- JT65-HF HB9HQX-Edition <https://sourceforge.net/projects/jt65hfhb9hqxedi/>
- JT65-HF-Comfort http://funkamateure-dresden-ov-s06.de/index.php?article_id=178 (web page is in German)

ADDITIONAL SOFTWARE AND WEB PAGES

- JTAlert (hamapps.com)
 - Great (free!) companion program that adds many useful functions to JT-65HF and WSJT-X
- HamSpots (hamspots.net)
 - Provides spotting information for digital modes
- PSKReporter (pskreporter.info/pskmap)
 - Visual display of stations receiving your digital transmissions

JT65-HF with JTAalert

JTAlert 2.8.1 NIADM [20m, NO Log, #1] | Alerts | Settings | View | Sound ON | ? | 160 80 60 | 12 10 6

HK4QYE Colombia	XE2YWB Mexico	WA2AXO - NY U.S.A.	DL8ZBA F.R. Germany	N5ILN - CA U.S.A.	ON4CBK Belgium	WE7CB - UT U.S.A.	HK2PMR Colombia
VE2PDT Canada							

JT65-HF Version 1.0.9.3 [RB Enabled, not logged in. QRG = 14076 KHz] [NIADM QRV]

Setup Rig Control Raw Decoder Transmit Log About JT65-HF

Audio Input Levels
L: 4
R: 4
Optimum input level is 0 with only background noise present.
Digital Audio Gain
L: 3
R: 3

2016-Aug-28
23:23:54
Dial QRG KHz
14076

Current Operation: Idle

Color-map Brightness Contrast Speed Gain
Linrad 5 0 Smooth

Message To TX: N5ILN N1ADM RRR
TX Text (13 Characters) **TX ENABLED**
Enable TX Halt TX
TX Generated
N5ILN N1ADM RRR
TX Even TX Odd

Clear Decodes Decode Again 0 DT Offset Restore Defaults

Double click an entry in list to begin a QSO. Right click copies to clipboard.

UTC	Sync	dB	DT	DF	Exchange
23:23	9	-11	-0.5	651	B CP6CL VE2PDT FN35
23:23	5	-11	-0.6	530	B CQ9DX HK2PMR FK20
23:23	2	-13	-1.0	380	B M0AUI WE7CB DN40
23:23	9	-6	-1.6	135	B KK7X ON4CBK JO11
23:23	2	-17	-0.2	-3	B N1ADM N5ILN R-18
23:23	1	-16	-0.6	-218	K K9VER DL8ZBA RRR
23:23	2	-18	-1.0	-350	K CP6CL WA2AXO FN30
23:23	6	-9	-0.4	-732	B AD7EO XE2YWB R-09
23:23	1	-10	2.4	-945	K W6RYO HK4QYE R-20

23:21	5	-10	-0.5	738	B EA3LI KB7EM CN87
23:21	1	-17	-0.2	0	K N1ADM N5ILN CM96
23:21	5	-9	0.0	-347	B CP6CL FY4PU 73
23:21	2	-9	1.1	-732	B CQ XE2YWB DL82
23:19	8	-9	0.2	703	B K8FJK CE3CBM RR73
23:19	5	-12	-0.6	530	B CQ9DX HK2PMR FK20
23:19	3	-16	-0.5	382	K M0AUI W4JSI R-13
23:19	5	-4	-0.4	-92	B VE8PR ON3MK -13
23:19	2	-13	0.5	-345	B CP6CL FY4PU R-10
23:19	7	-8	-0.5	-439	B DB3GI VE2PDT FN35

Call CQ and answer callers
Call CQ Answer Caller Send RRR
Answering CQ Answer CQ Send Report
Send 73

TX DF RX DF TX DF = RX DF TX to Call Sign Rpt (-#)
-3 -3
Zero Zero
AFC N5ILN -17
Noise Blank Log QSO
Single BW Multi BW
100 100
Enable Multi
Enable RB Enable PSKR
RB/PSKR Counts 0 106
Sound In:
01-Microphone (USB Audio CODEC)
Sound Out:
03-Speakers (USB Audio CODEC)

7:23 PM
8/28/2016

WSJT-X with
JTAalert
JT9 mode

JTAAlertX 2.8.1 NIADM [40m, NO Log, #1] | Alerts | Settings | View | Sound ON | 7 | 150 60 15 12 10 6

K4BSZ - NC RMZL
U.S.A. Russia (EU)

WSJT-X v1.6.0 by K1JT

File View Mode Decode Save Help

Band Activity

UTC	dB	DT	Freq	Message
2356	-17	0.1	532	NIADM AA1XQ 73
2358	-16	0.1	533	CQ AA1XQ FN41 U.S.A.
0001	-16	-0.2	531	AA1XQ AFSAT EM15
0003	-19	0.5	999	NIADM KD4Y EM62
0003	-21	0.2	102	CQ RM7L LN07 EU Russia
0003	-17	-0.2	531	AA1XQ AFSAT R-10
0005	-22	0.4	999	NIADM KD4Y R-17
0005	-17	-0.2	532	AA1XQ AFSAT 73
0005	-20	0.1	591	RW3RQ RM7L LN07
0007	-23	0.1	998	FLEX 1.5K 73
0007	-19	0.1	531	AA1XQ K4BSZ EM96
0007	-20	0.2	591	RW3RQ RM7L R-20

Rx Frequency

UTC	dB	DT	Freq	Message
2347	Tx		945	CQ NIADM EM83
2349	Tx		945	CQ NIADM EM83
2351	Tx		1100	CQ NIADM EM83
2352	-11	0.1	534	CQ AA1XQ FN41
2353	Tx		534	AA1XQ NIADM EM83
2354	-13	0.1	532	NIADM AA1XQ -13
2355	Tx		532	AA1XQ NIADM R-13
2356	-17	0.1	532	NIADM AA1XQ 73
2357	Tx		532	TU 73 FM GA
0000	Tx		999	CQ NIADM EM83
0002	Tx		999	CQ NIADM EM83
0003	-19	0.5	999	NIADM KD4Y EM62
0004	Tx		999	KD4Y NIADM -19
0005	-22	0.4	999	NIADM KD4Y R-17
0006	Tx		999	KD4Y NIADM RRR
0007	-23	0.1	998	FLEX 1.5K 73

Log QSO Stop Monitor Erase Decode Enable Tx Halt Tx Tune

40m 7.078 000

TX Call TX End Tx JT9 Tx even Tx 999 Hz Tx < Rx Rx 999 Hz Rx < Tx Lock Tx = Rx Report -22

KD4Y EM62 Az: 258 282 mi Lookup Add

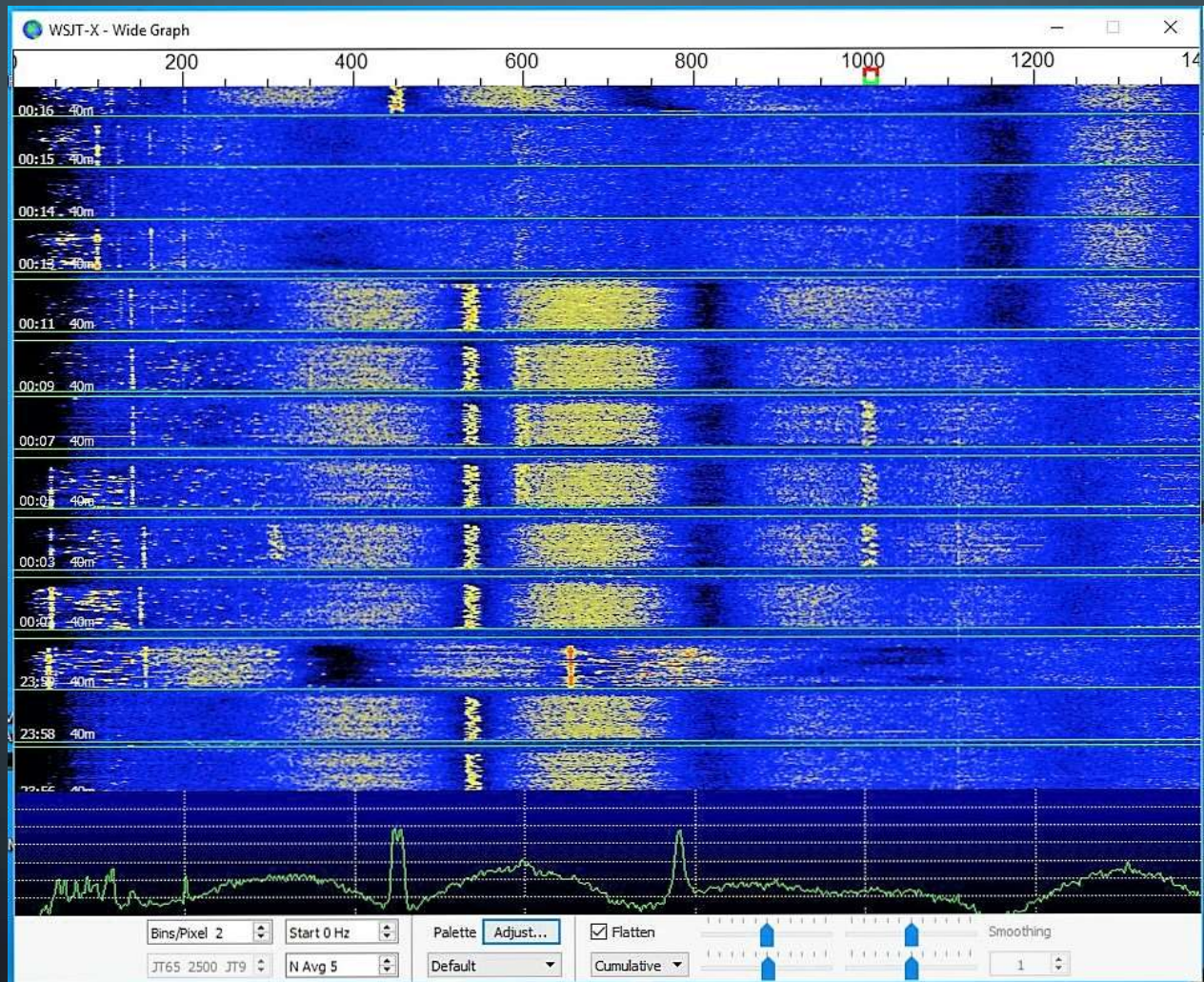
2016 Aug 29 00:07:56

Generate Std Msgs Next Now Pwr

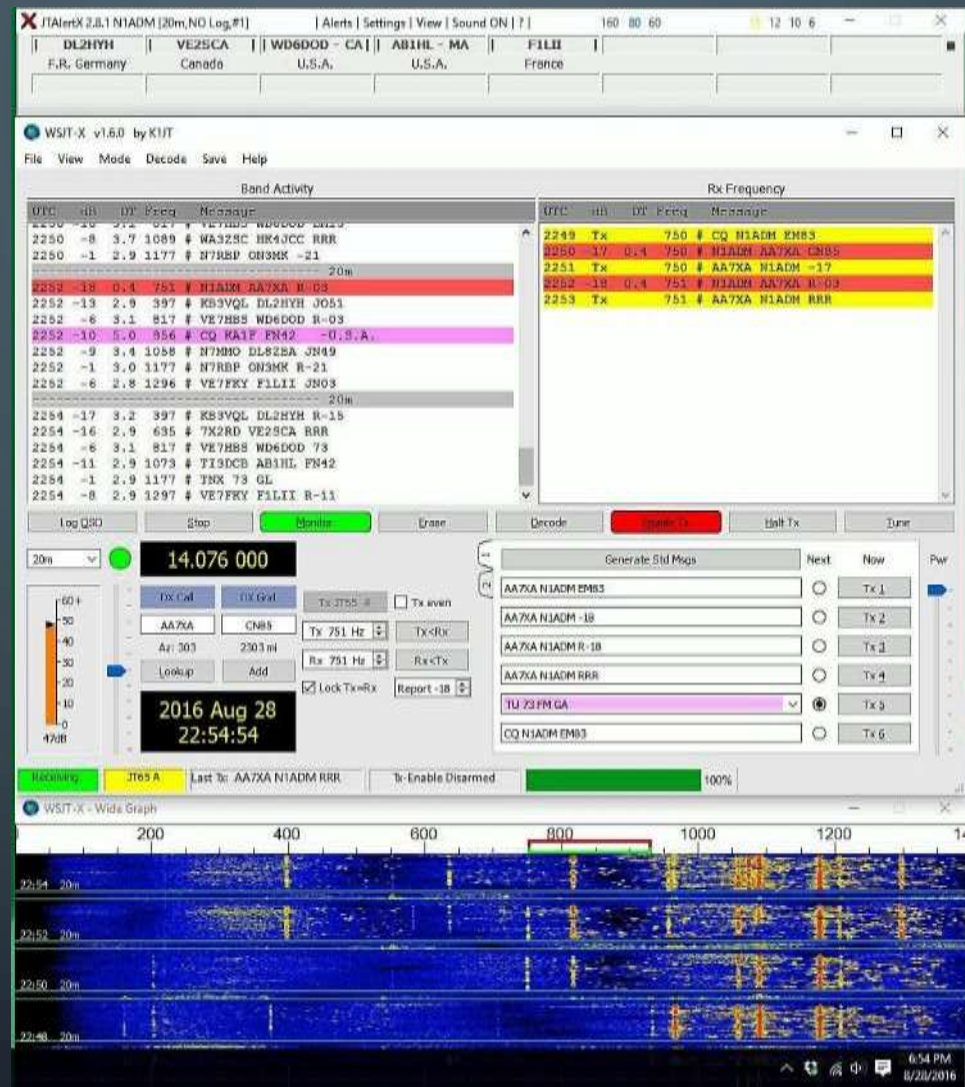
Msg	Next	Now	Pwr
KD4Y NIADM EM83	<input type="radio"/>	<input type="radio"/>	Tx 1
KD4Y NIADM -22	<input type="radio"/>	<input type="radio"/>	Tx 2
KD4Y NIADM R-22	<input type="radio"/>	<input type="radio"/>	Tx 3
KD4Y NIADM RRR	<input type="radio"/>	<input type="radio"/>	Tx 4
TU 73 FM GA	<input type="radio"/>	<input checked="" type="radio"/>	Tx 5
CQ NIADM EM83	<input type="radio"/>	<input type="radio"/>	Tx 6

Receiving JT9 Last Tx: KD4Y NIADM RRR Tx-Enable Disabled 100%

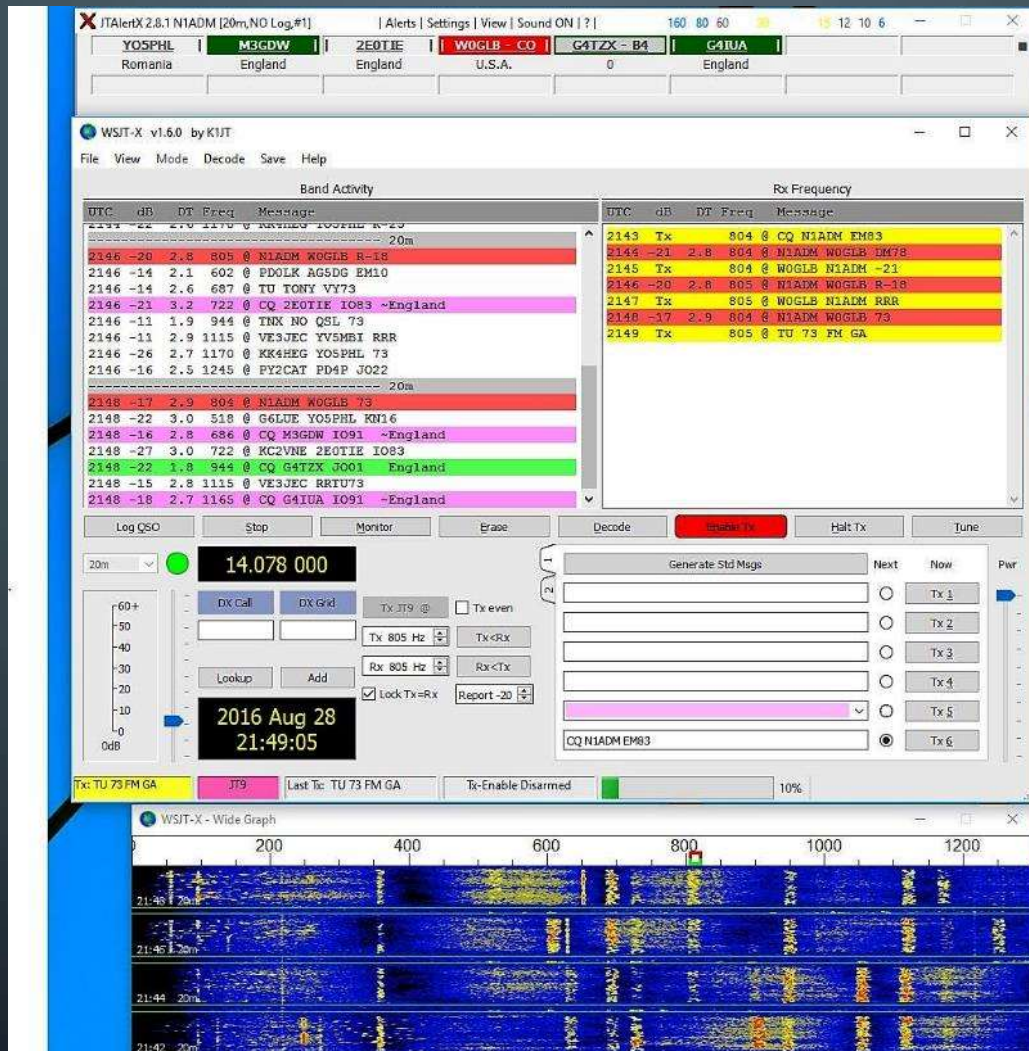
WSJT-X
Graph &
Waterfall
JT9 mode



WSJT-X with
JTAalert
JT65A mode

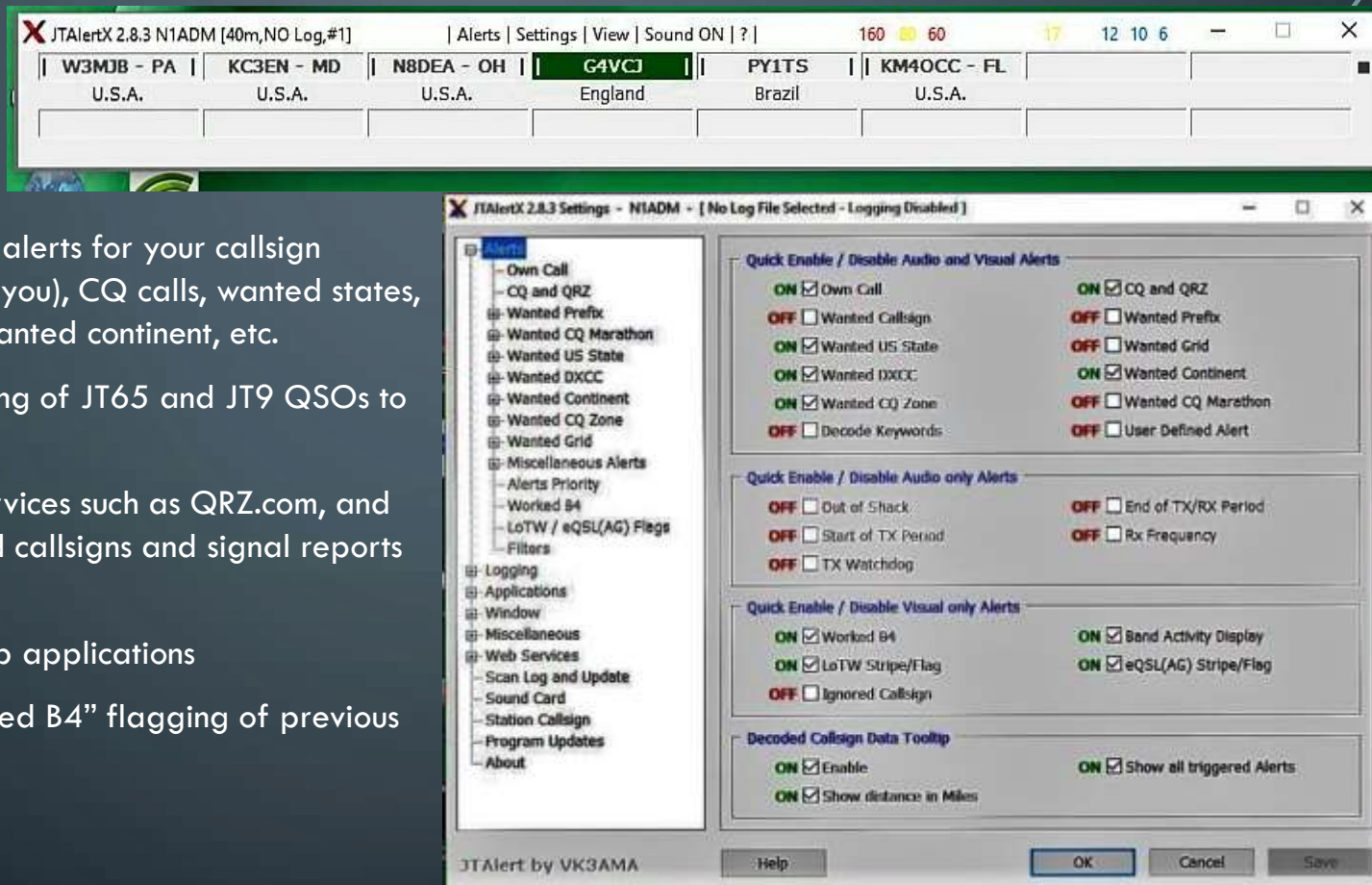


WSJT-X with JTAlert JT9 mode



JTAlert

- Audio and visual alerts for your callsign (someone calling you), CQ calls, wanted states, wanted DXCC, wanted continent, etc.
- Automated logging of JT65 and JT9 QSOs to several log types
- Supports web services such as QRZ.com, and uploads decoded callsigns and signal reports to HamSpots
- Works with DXlab applications
- Automatic “Worked B4” flagging of previous QSOs



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Call:

SFI 85, A 4, K 1
Online : 01:25:34

**** JT65 MODES ****

329 Online
22:21:58 : UTC

Auto refresh every 60 secs - Next refresh in 47 secs - [Refresh Now](#)

Local Spots / Chat / Skeds

PE1IVR de PA3FMP
Simply add a frequency so they know were to listen for you
[age +1h] Aug-28 20:51utc

de PE1IVR
pe1ivr jo21ul CQcqcqcqcqcqcqcqcqcqc CQ CQ CQ
[age +2h] Aug-28 20:10utc

de PE1IVR
vk3xz called you this morning ,please give it a try 10:138 tu
[age +5h] Aug-28 16:36utc

3B8CW de E56DO **10139.00 kHz JT65**
Clive, trx for calling and QSO. 73 and GL!
[age +5h] Aug-28 16:28utc

Query: 0.9888 sec

Cluster Spots.

☐ 180M
☐ 80M
☐ 60M
☐ 40M
☐ 30M
☒ 20M
☐ 17M
☐ 15M

☐ 12M
☐ 10M
☐ 6M

[Apply Changes](#)
[Check All](#)
[UnCheck All](#)

S	Age	DX	Freq	Sig	Mode	St	Country	Spotter
A	1m	N0KQ	14076.70	-17	JT65A	CA	United States	LU8DQS
X	1m	CP6CL	14078.56	-09	JT65A	Bolivia		VK2BYI
X	1m	N9BUB	14076.78	-13	JT65A	IN	United States	M3WRL
X	1m	CP6CL	14077.55	-09	JT65A	Bolivia		OH3NE
X	1m	K7RVF	14076.90	-07	JT65A	WA	United States	IW2OCY
X	1m	RW4F	14078.22	-11	JT65A	EU Russia		M0MVB
X	1m	LU3FL	14079.41	-14	JT65A	Argentina		VK2BYI
X	1m	KD9ERS	14077.24	-05	JT65A	IL	United States	VE9DX
A	1m	AC2SB	14076.77	-11	JT65A	NY	United States	F1LII
A	1m	M3OTM	14078.00	-18	JT65A	England		UR4MLS
A	1m	SQ5CSF	14076.64	-11	JT65A	Poland		F1LII
X	1m	K8SAR	14077.12	-18	JT65A	OH	United States	KF5GST
X	1m	LW1EK	14077.11	-21	JT65A	Argentina		PD5DJ
X	1m	AC2SB	14076.81	-10	JT65A	NY	United States	AD5FW
X	1m	7J1BBC	14076.37	-18	JT65A	Japan		IW2OCY
X	1m	CP6CL	14077.54	-01	JT65A	Bolivia		LU5ALE
X	1m	PP5BN	14077.54	-15	JT65A	Brazil		OH3NE
X	1m	VE6UX	14078.20	-22	JT65A	Canada		VK3YYR
X	1m	N16NM	14076.54	-12	JT65A	GA	United States	KA9A
X	1m	KK6QMS	14077.30	-20	JT65A	CA	United States	VE9DX
X	1m	K4NDN	14077.31	-18	JT65A	VA	United States	LU5ALE
X	1m	7J1BBC	14076.38	-01	JT65A	Japan		VK3YYR
X	1m	7J1BBC	14076.38	-04	JT65A	Japan		JA3QVO
X	1m	TA1L	14077.41	-17	JT65A	Turkey		G4PEN
X	1m	K1LHO	14077.01	-17	JT65A	CT	United States	IW2OCY
X	1m	K4UTX	14077.53	-18	JT65A	FL	United States	WA2HIP
A	1m	WW3N	14077.41	-13	JT65A	MD	United States	M6DHV
X	1m	N4ZZZ	14078.39	-04	JT65A	VA	United States	IW2OCY

Calls You Spotted

Age	Bnd	Mode	Sig	DX
2m	20	JT65A	-14	DL3MB
2m	20	JT65A	-11	DL8ZBA
2m	20	JT65A	-07	FY4PU
2m	20	JT65A	-08	HA6NN
2m	20	JT65A	-14	SP9JP
2m	20	JT65A	-12	VE4DPR
2m	20	JT65A	-05	VE9DX
2m	20	JT65A	-12	XE2N
4m	20	JT65A	-04	EA5WO
4m	20	JT65A	-11	FY4PU
4m	20	JT65A	-12	HA6NN
4m	20	JT65A	-07	ON3MK
4m	20	JT65A	-12	VE2SCA
4m	20	JT65A	-10	VE4DPR
4m	20	JT65A	-06	VE9DX

Your Call Spotted

Age	Bnd	Mode	Sig	Spotter
1m	20	JT65A	-10	IW2OCY
1m	20	JT65A	-12	KA9A
1m	20	JT65A	-23	LB6B
1m	20	JT65A	-14	M3WRL
1m	20	JT65A	-17	PD5DJ
1m	20	JT65A	-01	VE3NLS
1m	20	JT65A	-01	VE9DX
1m	20	JT65A	-15	WA2HIP
3m	20	JT65A	-18	VE3NLS
3m	20	JT65A	-10	VE9DX
7m	20	JT65A	-8	CT1BM
7m	20	JT65A	-5	F5RRS
7m	20	JT65A	-15	K5RHD
7m	20	JT65A	-14	KF5GST
7m	20	JT65A	-19	N3DCE

N1ADM

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Seen Call:
Frequency:
Mode:

Message:

To chat, you can leave "Mode" & "Frequency" fields blank.

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BANDS

Online?

Call

Search

SF184, A 5, K 0
Online: 00:51:38

** JT9 MODES **

366 Online
21:48:00 UTC

Auto refresh every 60 secs - Next refresh in 24 secs - Refresh Now

Local Spots / Chat / Skeds

de K0TAZ 14076.00 kHz
CQ LOOKING FOR NE KS ON 20M JT9 >K0TAZ BOB
[age +7h] Aug-28 14:23UTC
JT9

de K0TAZ 14076.00 kHz
CQ LOOKING FOR NE KS. JT9 K0TAZ/BOB
[age +7h] Aug-28 14:23UTC
JT9

PA3FMP de MM0HVU 18102.00 kHz
Hi Dek and new mode I believe 8 bands and new mode
excellent for pleasure 73 david
[age +8h] Aug-28 09:50UTC
JT9

W1UU de GM0HUU 5358.20 kHz
Calling you on 5357.580KHz.
[age +8h] Aug-28 01:02UTC
JT9

de SM6NZV 14080.00 kHz
[age +8h] Aug-28 01:02UTC
JT9

Cluster Spots

100W 50W 30W 40W 30W 25W 17W 15W
12W 10W 6W Empty Channel Check All Uncheck All

S	Age	DX	Freq	Sig	Mode	St	Country	Spotter
X	2m	KM4MSH	14078.47	-21	JT9	TN	United States	W0GLB
X	2m	P00LK	14079.63	-22	JT9		Netherlands	VK2BYI
X	2m	K7QL	14079.31	-23	JT9	OR	United States	P00AI
X	2m	EA4OPZ	14079.67	+3	JT9		Spain	M3GDW
X	2m	VE4RK	14078.73	-25	JT9		Canada	M3GDW
X	2m	ON6SX	14079.62	-07	JT9		Belgium	CT1EWT
X	2m	M6R3B	14079.05	-11	JT9		England	CT1EWT
X	2m	HQ6IA	14078.89	-25	JT9		Hungary	SP5DL
X	2m	SA5CDO	14079.26	-24	JT9		Sweden	N1ARE
X	2m	GM4ZET	14078.85	-11	JT9		Scotland	G4IUA
X	2m	F4HPX	14079.05	-13	JT9		France	SP5DL
X	2m	VE4RK	14078.72	-21	JT9		Canada	JA1PJS
X	2m	KK4HEG	14079.13	-25	JT9	NC	United States	VE6JR
X	2m	DL3HBT	14079.33	-19	JT9		Germany	M3GDW
X	2m	KK4HEG	14079.18	-19	JT9	NC	United States	PA0TBR
X	2m	SA5CDO	14079.00	-25	JT9		Sweden	I28UYT
X	2m	KQ5JVF	14078.95	-19	JT9	MS	United States	M3GDW
X	2m	VE3JEC	14079.11	-21	JT9		Canada	P00AI
X	2m	VE2AT3	14078.70	-19	JT9		Canada	G4IUA
X	2m	K1TAN	14078.81	-20	JT9	GA	United States	M3GDW
X	2m	GM4ZET	14078.84	-20	JT9		Scotland	KB3GVC
X	2m	P00LK	14078.61	-24	JT9		Netherlands	PA0TBR
X	2m	TF3EK	14078.63	-21	JT9		Iceland	PA0TBR
X	2m	WVYYM	14079.36	-23	JT9	GA	United States	N2LQ
X	2m	VE3JEC	14079.15	-15	JT9		Canada	W6K
X	2m	PY2CAT	14079.25	-18	JT9		Brazil	CT1BM
X	2m	WVYYM	14079.38	-24	JT9	GA	United States	CT1BM
X	2m	DL3HBT	14079.33	-21	JT9		Germany	N4RLG

Calls You Spotted

Age	Bnd	Mode	Sig	DX
1m	20	JT9	-21	2E0TIE
1m	20	JT9	-14	AG5DG
1m	20	JT9	-16	PD4P
1m	20	JT9	-20	W0GLB
1m	20	JT9	-26	Y05PHL
1m	20	JT9	-11	YV5MBR
3m	20	JT9	-23	2E0TIE
3m	20	JT9	-25	CX7BJ
3m	20	JT9	-13	G4TZX
3m	20	JT9	-10	KI0J
3m	20	JT9	-15	M3GDW
3m	20	JT9	-21	W0GLB
3m	20	JT9	-26	W5QI
3m	20	JT9	-22	Y05PHL
3m	20	JT9	-09	YV5MBR

Your Call Spotted

Age	Bnd	Mode	Sig	Spotter
2m	20	JT9	-24	CT1BM
2m	20	JT9	-25	DC9JVN
2m	20	JT9	-13	G4IUA
2m	20	JT9	-15	K5SRG
2m	20	JT9	-26	K9WGX
2m	20	JT9	-23	K7TFT
2m	20	JT9	-21	KA9A
2m	20	JT9	-20	M3GDW
2m	20	JT9	-23	N2LQ
2m	20	JT9	-23	PA0TBR
2m	20	JT9	-20	P00AI
2m	20	JT9	-20	SP5DL
2m	20	JT9	-20	VE9ZZ
2m	20	JT9	-21	W0GLB
2m	20	JT9	-22	W6K

N1ADM
Log Out

Seen Call
Message

Frequency
[]

Mode
[]

Activity
Spotters

Links

Post

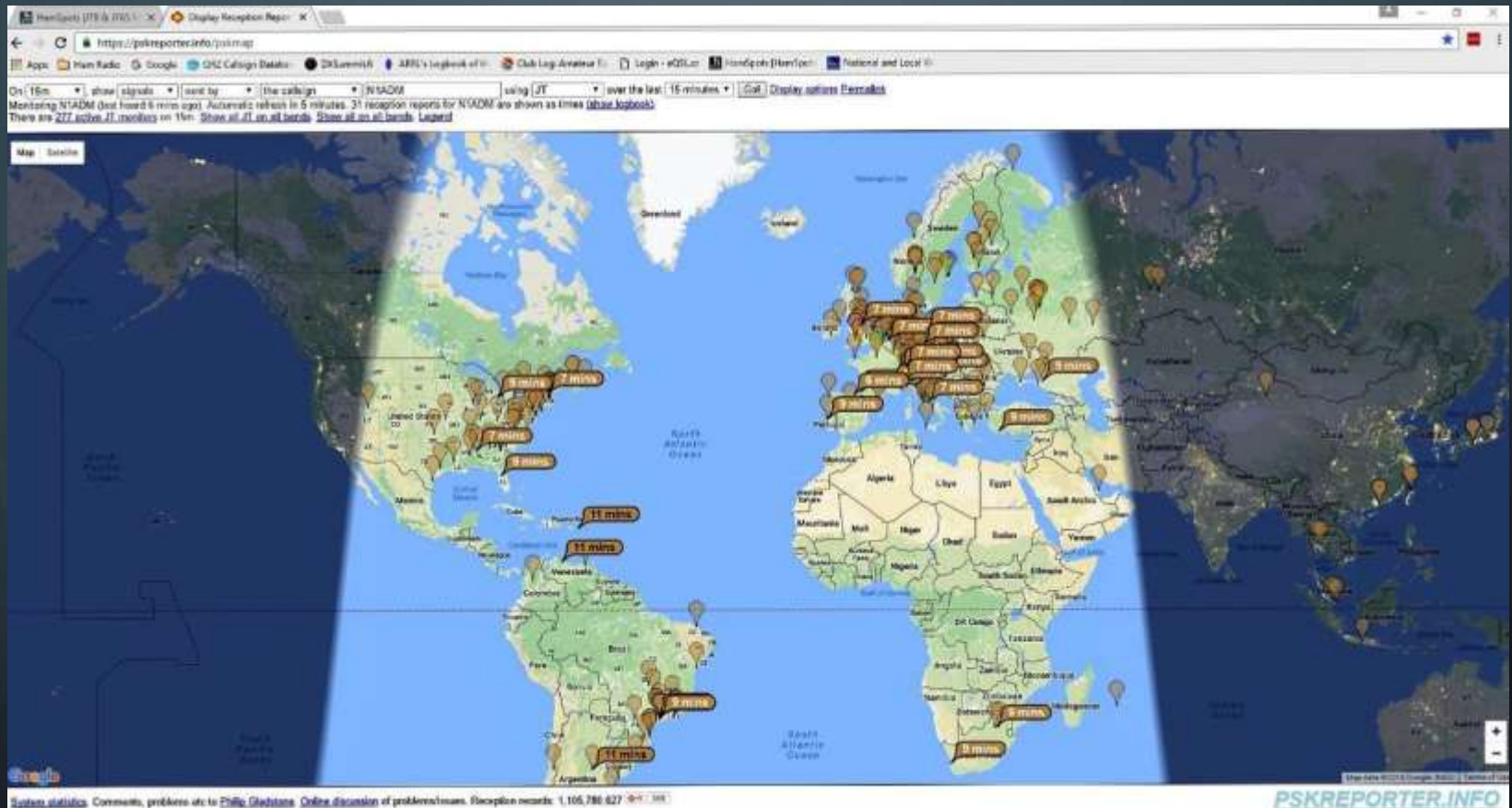
In chat, you can leave "Mode" & "Frequency" fields blank

Your Spot History

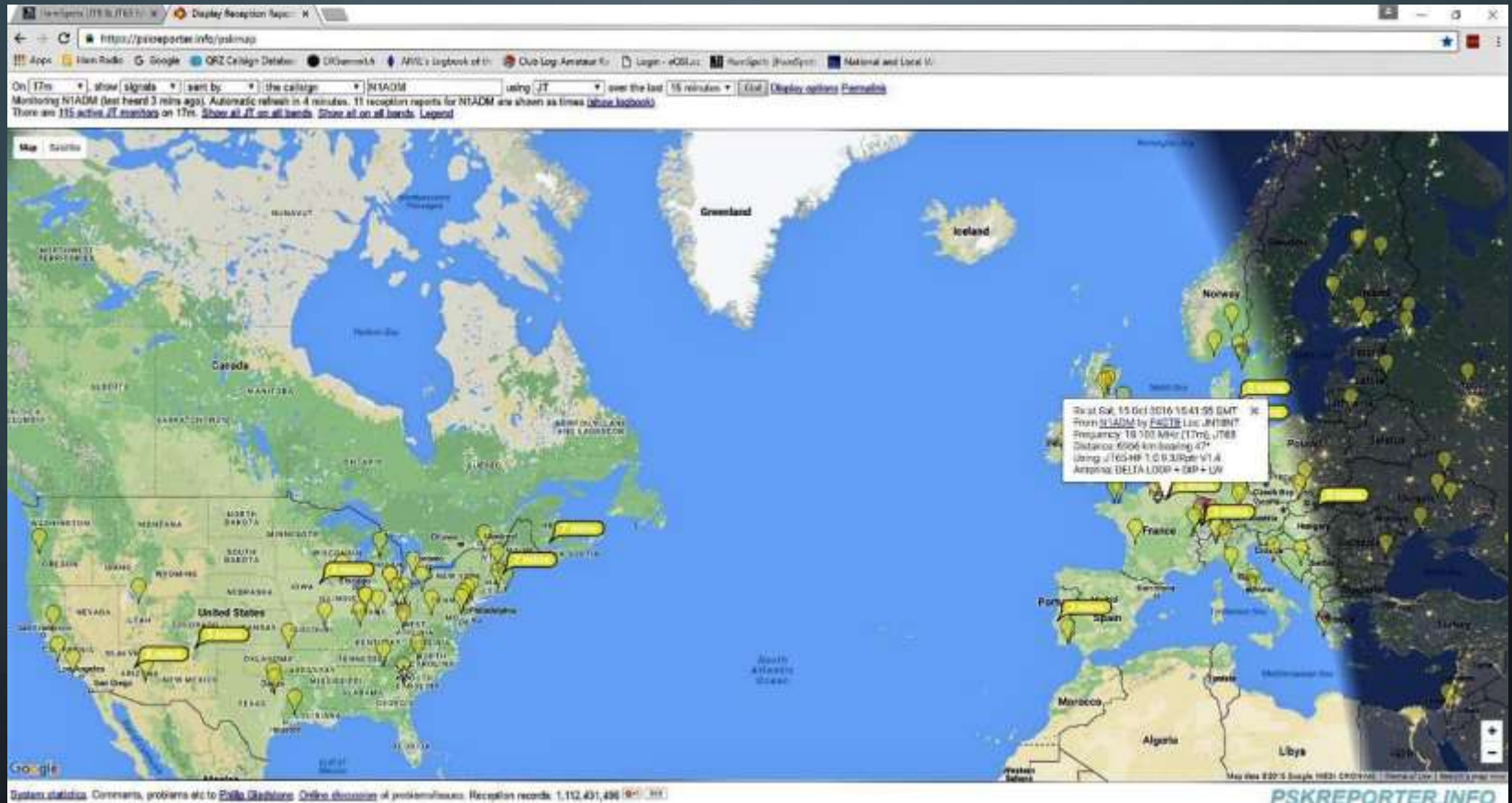
Settings

© 2016, HamSpots by UN3JAA

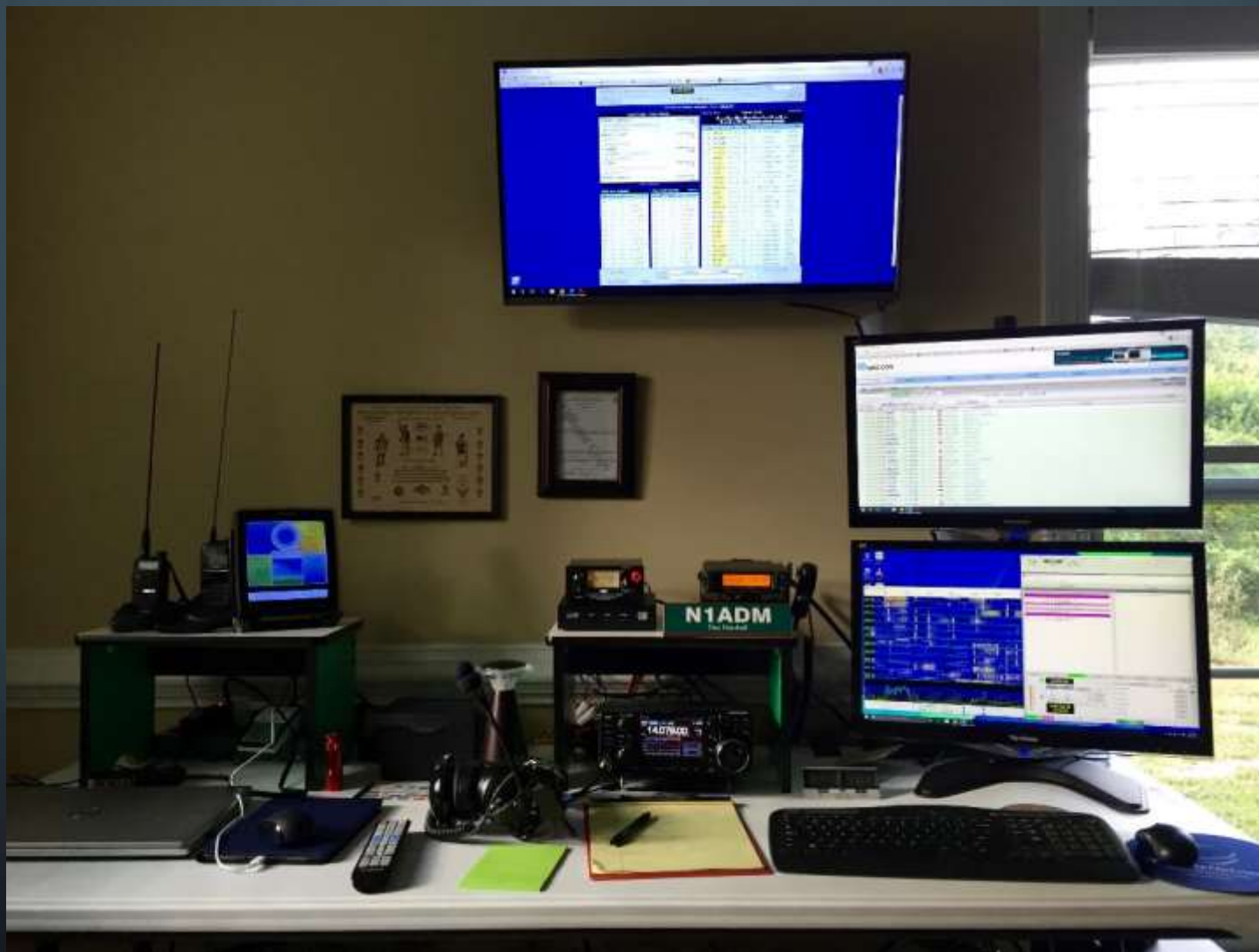
PSKREPORTER.INFO/PSKMAP



PSKREPORTER.INFO/PSKMAP



N1ADM's
Station



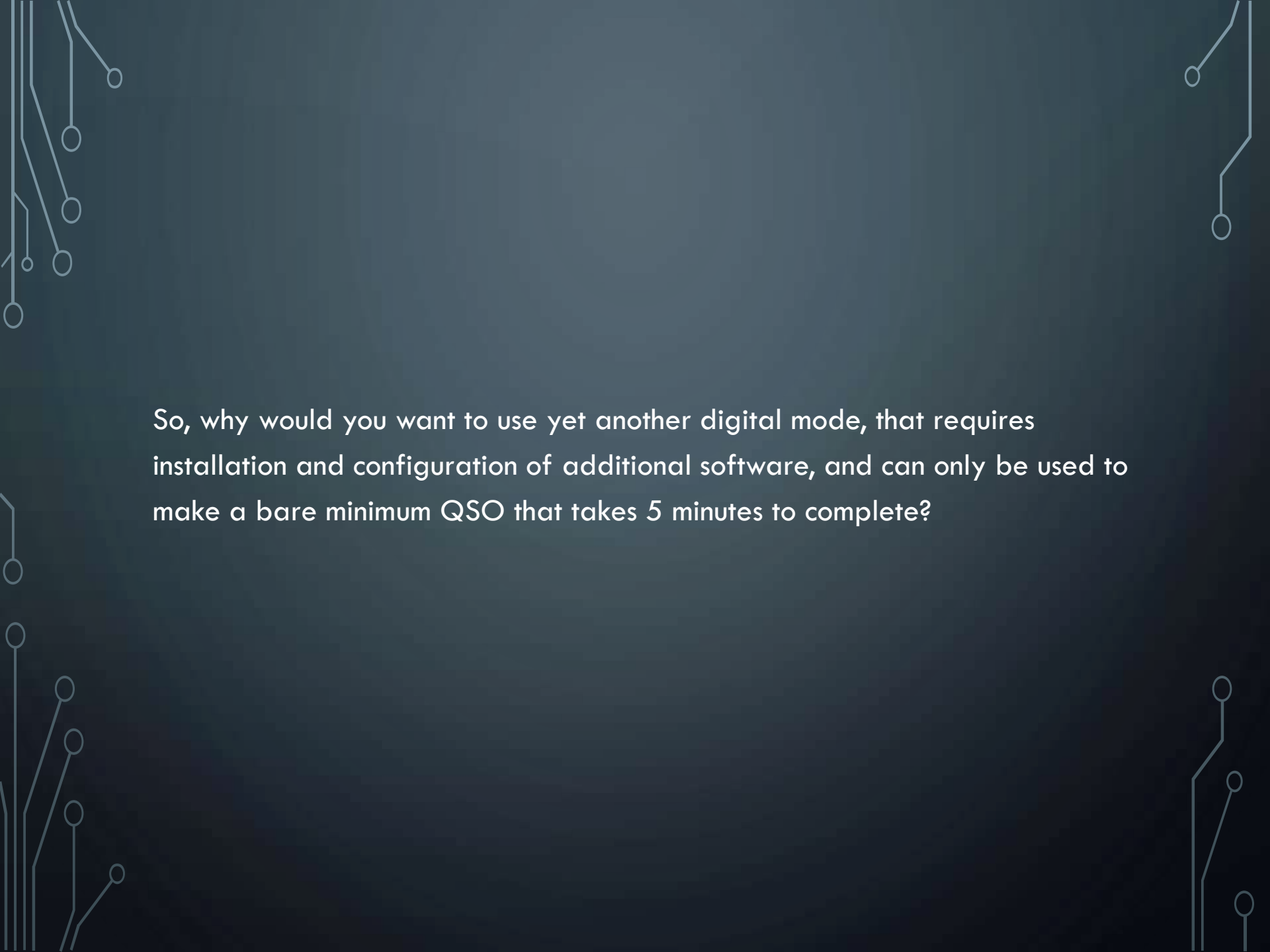
Eagle One
antenna



IC-7300 on
20m JT65 freq





The background is a dark blue gradient. In the corners, there are white line art illustrations of circuit traces and nodes, resembling a printed circuit board (PCB) layout. These elements are positioned in the top-left, top-right, bottom-left, and bottom-right corners, framing the central text area.

So, why would you want to use yet another digital mode, that requires installation and configuration of additional software, and can only be used to make a bare minimum QSO that takes 5 minutes to complete?

Logbook by QRZ.COM

logbook.qrz.com/logbook

Apps Ham Radio Google QRZ Callsign Database DXSummit.fv ARRL's Logbook of the World Club Log: Amateur Radio Login - eQSLcc HamSpots [HamSpot]

QRZ.COM

Not just years ahead of the competition... lightyears ahead

The SARK-110 Antenna Analyzer Now available in North America from SteppIR Antennas Order now at www.SteppIR.com

21:48:47 UTC 28 Aug 2016

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


















































Add QSO N1ADM Logbook Book #: 153358

QSO's: 650 Confirmed: 265 Countries: 65

1 of 7 Sort: Date - new->old Find Viewing: All QSOs Rows: 100

	Date	Time	Call	Band	Freq	Mode	Grid	Country	Operator Name	Comments	
1	2016-08-28	21:48	W0GLB	20m	14.078	JT9	DM78ps	United States	Gordon L Beck		
2	2016-08-28	21:39	G4TZX	20m	14.078	JT9	JO811a	England	GC EVEREST		
3	2016-08-28	21:14	KB5TB	20m	14.076	JT65	EM12NP	United States	Tommy Brough		
4	2016-08-28	21:08	HA6NN	20m	14.076	JT65	JN98vc	Hungary	Andrs Bat		
5	2016-08-28	00:22	AA0OG	20m	14.078	JT9	EN34kt	United States	THOMAS J SEIBERLICH		
6	2016-08-27	22:15	HB9JNM	17m	18.104	JT9	JN47jm	Switzerland	Hans Hofmann		
7	2016-08-27	21:59	EA3CFV	15m	21.076	JT65	JN11jx	Spain	Albert Rispau		
8	2016-08-27	21:33	PA3FMP	17m	18.103	JT65	JO22im	Netherlands	D HENDRIKS		
9	2016-08-27	21:09	YO8PS	17m	18.103	JT65	KN37sd	Romania	Sorin Parlog		
10	2016-08-27	20:52	ON8BB	17m	18.103	JT65	JO21cc	Belgium	Patrick Vermeulen		
11	2016-08-27	20:37	W7IXZ	17m	18.103	JT65	DM14cs	United States	LARRY R WILSON		
12	2016-08-27	20:09	DM1FL	17m	18.104	JT9	JO30ns	Germany	Florian Corsten		
13	2016-08-27	19:53	MW0ZZK	17m	18.103	JT65	IO72ru	Wales	Steve Redmond		
14	2016-08-27	19:31	LU2VH	15m	21.076	JT65	FE48fp	Argentina	Carlos Otto Frei		
15	2016-08-27	19:00	KI0J	20m	14.078	JT9	DM79lu	United States	ALBERT E BRITTON JR		
16	2016-08-27	18:49	KC0QIK	20m	14.078	JT9	EM28tv	United States	SCOTT C MEADOR		
17	2016-08-27	18:38	WL7CG	20m	14.076	JT65	BP61xb	Alaska	ALAN J SORUM		
18	2016-08-27	18:29	AB1HL	20m	14.076	JT65	FW42kj	United States	ROBERT T MORRIS		
19	2016-08-27	18:15	KC0QIK	20m	14.076	JT65	EM28tv	United States	SCOTT C MEADOR		
20	2016-08-27	11:46	VK6BMW	40m	7.078	JT9	OF87ax	Australia	Richard Grocott		
21	2016-08-27	11:22	VK3SIM	40m	7.078	JT9	QF22ni	Australia	SIMON KEANE		

Sometimes the JT modes bring in some great DX!

62	2016-08-23	00:33	LU8WAG	40m	7.078	JT9	FE771f	 Argentina	ARMANDO JOSE POLARI		★	
63	2016-08-23	00:20	PD4P	40m	7.078	JT9	JO22ff	 Netherlands	Pieter De Hartog		★	
64	2016-08-22	23:26	IV3GKL	20m	14.078	JT9	JN65qs	 Italy	Sergio Marchetti			
65	2016-08-22	23:02	KB7N	20m	14.078	JT9	CN97ap	 United States	MARK E REISENAUER			
66	2016-08-21	21:38	WQ6C	20m	14.078	JT9	CM87xh	 United States	Carl C Creamer			
67	2016-08-21	21:11	N7MJ	17m	18.104	JT9	DN71pd	 United States	JACKIE L MITCHELL			
68	2016-08-21	21:04	F1MWV	17m	18.104	JT9	IN951p	 France	Jean-Pierre LUCAS			
69	2016-08-21	20:06	ON8BB	20m	14.078	JT9	JO21cc	 Belgium	Patrick Vermeulen			
70	2016-08-21	19:30	KC9RFO	20m	14.076	JT65	EM49PR20	 United States	Wendel W White			
71	2016-08-21	14:57	OZ1TMK	17m	18.104	JT9	JO45ws	 Denmark	Torben Mellerup Kristensen			
72	2016-08-21	14:13	DJØQO	20m	14.078	JT9	JN39ii	 Germany	Rene Zimnoch		★	
73	2016-08-21	13:46	YV5ARM	20m	14.078	JT9	FJ69cc	 Venezuela	ALFONSO ROBAINA MARTIN			
74	2016-08-21	12:03	F6ARS	20m	14.078	JT9	JN181t	 France	Gerard Szente		★	
75	2016-08-21	05:03	PA3AIN	40m	7.078	JT9	JO32kj	 Netherlands	Johan SCHEPERS			
76	2016-08-21	04:58	EI1DG	40m	7.078	JT9	IO63tj	 Ireland	Paddy McGrath			
77	2016-08-21	04:12	UR4UM	40m	7.078	JT9	KO50be	 Ukraine	Mikhail Soga			
78	2016-08-21	04:07	DL6TY	40m	7.078	JT9	JO44lo	 Germany	Gerd		★	
79	2016-08-21	03:54	IW1FZR	40m	7.078	JT9	JN45bj	 Italy	Luca Nerva			
80	2016-08-21	03:33	ER1PB	40m	7.078	JT9		 Moldova	Simanenkov Sergei I.			
81	2016-08-21	03:24	US7VF	40m	7.078	JT9	KN58sh	 Ukraine	Sergei P. Plotyan			
82	2016-08-21	03:08	UT7IS	40m	7.078	JT9	KN98aq	 Ukraine	Max Burmaklin			
83	2016-08-21	02:38	AA7IX	20m	14.078	JT9	DN71oe	 United States	MARTIN L MC GUFFEY		★	
84	2016-08-21	02:08	K2GT	20m	14.078	JT9	BK29ln	 Hawaii	GUSTAVE L TREEWATER			
85	2016-08-21	01:58	RA9HO	20m	14.078	JT9	NO09kc	 Asiatic Russia	Leonid N. Nepryakhin		★	
86	2016-08-21	01:32	TI4DJ	20m	14.076	JT65	EK70VC55	 Costa Rica	HERMES QUESADA		★	
87	2016-08-21	01:25	GØKLD	20m	14.076	JT65	IO83XK19	 England	Charlie Wren		★	
88	2016-08-21	01:02	KB2F	40m	7.076	JT65	EM64kr	 United States	Robert C Fudge II		★	
89	2016-08-21	00:46	K9MQ	80m	3.576	JT65	EN61gk	 United States	MARK A SKOWRONSKI			
90	2016-08-20	23:26	PY2MR	20m	14.078	JT9	GG66NM55	 Brazil	Marcos Ribeiro			
91	2016-08-20	22:54	I1SOP	20m	14.078	JT9	JN441m	 Italy	PIETRO SORBI			

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[N1ADM Logbook](#)

QSO's: **812** Confirmed: **335** Countries: **74**























of 9

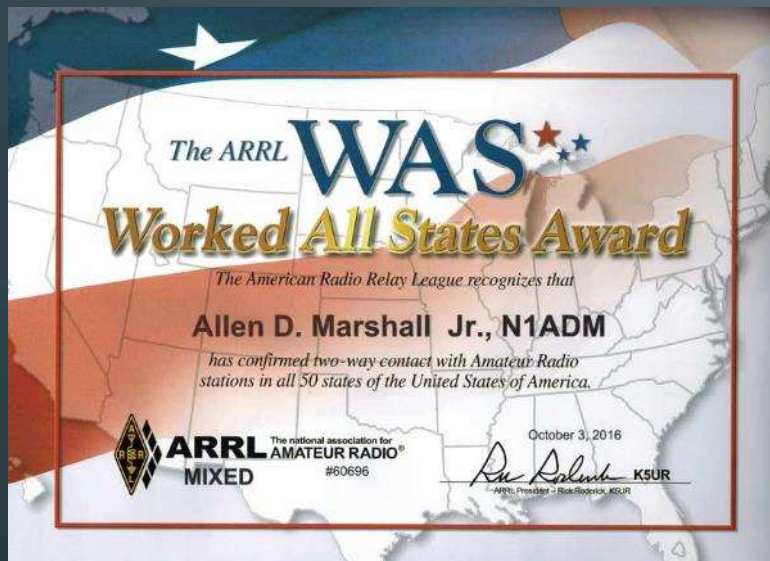
Sort: Date - new->old



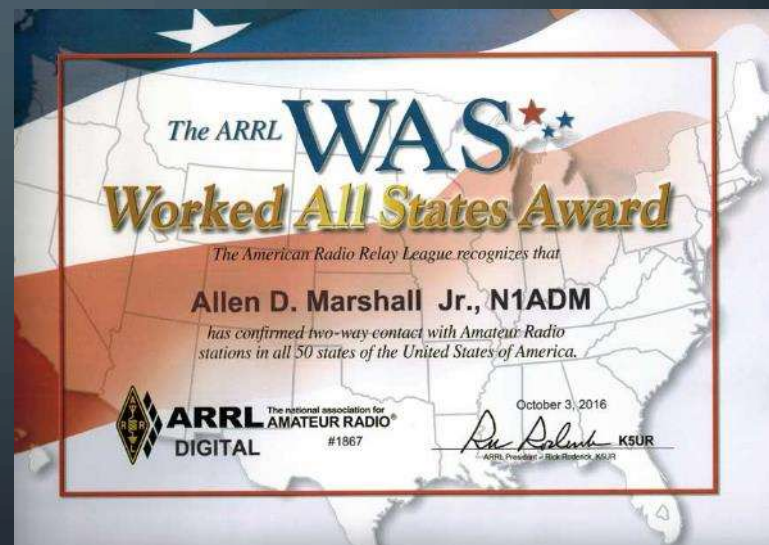
Viewing: All QSOs



	Date	Time	Call	Band	Freq	Mode	Grid	Country	Operator Name
1	2016-09-18	18:43	5X8C	17m	18.102	JT65	K360gb	 Uganda	February 7-17 2013 DX-pedition of F6KOP Team
2	2016-09-18	18:00	SV1IYF	17m	18.102	JT65	KF117ux	 Greece	Nikos Michailidis
3	2016-09-18	17:50	DF3ZE	17m	18.102	JT65	7040cb	 Germany	Rudi Schmidt
4	2016-09-18	17:42	LY2VM	17m	18.102	JT65	K014ew	 Lithuania	Vygirdas
5	2016-09-18	16:56	LX1HD	17m	18.102	JT65	3N39aq	 Luxembourg	Henri DAVID
6	2016-09-18	16:36	LX1DA	17m	18.102	JT65	3N39ah	 Luxembourg	ANDY DOFFING
7	2016-09-18	16:11	GI4LKG	17m	18.104	JT9	1064xm	 Northern Ireland	Victor John Taft
8	2016-09-18	16:01	IV3CJR	17m	18.104	JT9	3N65pt	 Italy	Francoesco Gentile
9	2016-09-18	15:44	SP1TMH	17m	18.104	JT9	3073ff	 Poland	Jacek Jarzabek
10	2016-09-18	15:31	OZ1HX	17m	18.104	JT9	3056ad	 Denmark	HENNING PLOUG THOMSEN
11	2016-09-18	15:20	GM0UDL	17m	18.104	JT9	1077vo	 Scotland	Andrew Cowan
12	2016-09-18	15:01	F5NBQ	17m	18.104	JT9	3N05dn	 France	Fabrice
13	2016-09-18	14:24	ZP4KFX	10m	28.076	JT65	6G151v	 Paraguay	PINO ZOLLO
14	2016-09-18	13:54	ZS1CF	15m	21.076	JT65	3F96av	 South Africa	Charles Le Roux
15	2016-09-18	13:25	SA0BFG	17m	18.102	JT65	7088kw	 Sweden	Johan Ahlneby
16	2016-09-18	13:13	DL3LBP	17m	18.102	JT65	3053gj	 Germany	Walter Pflhar
17	2016-09-18	12:57	DJ0QO	20m	14.076	JT65	3N3911	 Germany	Rene Zimnoch
18	2016-09-18	12:15	ON4CHD	20m	14.078	JT9	30100U62	 Belgium	Stephan Wydaeghe
19	2016-09-18	11:53	OK1JKV	20m	14.078	JT9	30708P	 Czech Republic	Vojta
20	2016-09-18	11:44	HB9ACA	20m	14.078	JT9	3N361s	 Switzerland	MANFRED OBERHOFER
21	2016-09-18	01:53	RA9HO	20m	14.076	JT65	MO09kc	 Asiatic Russia	Leonid P. Nepryakhin



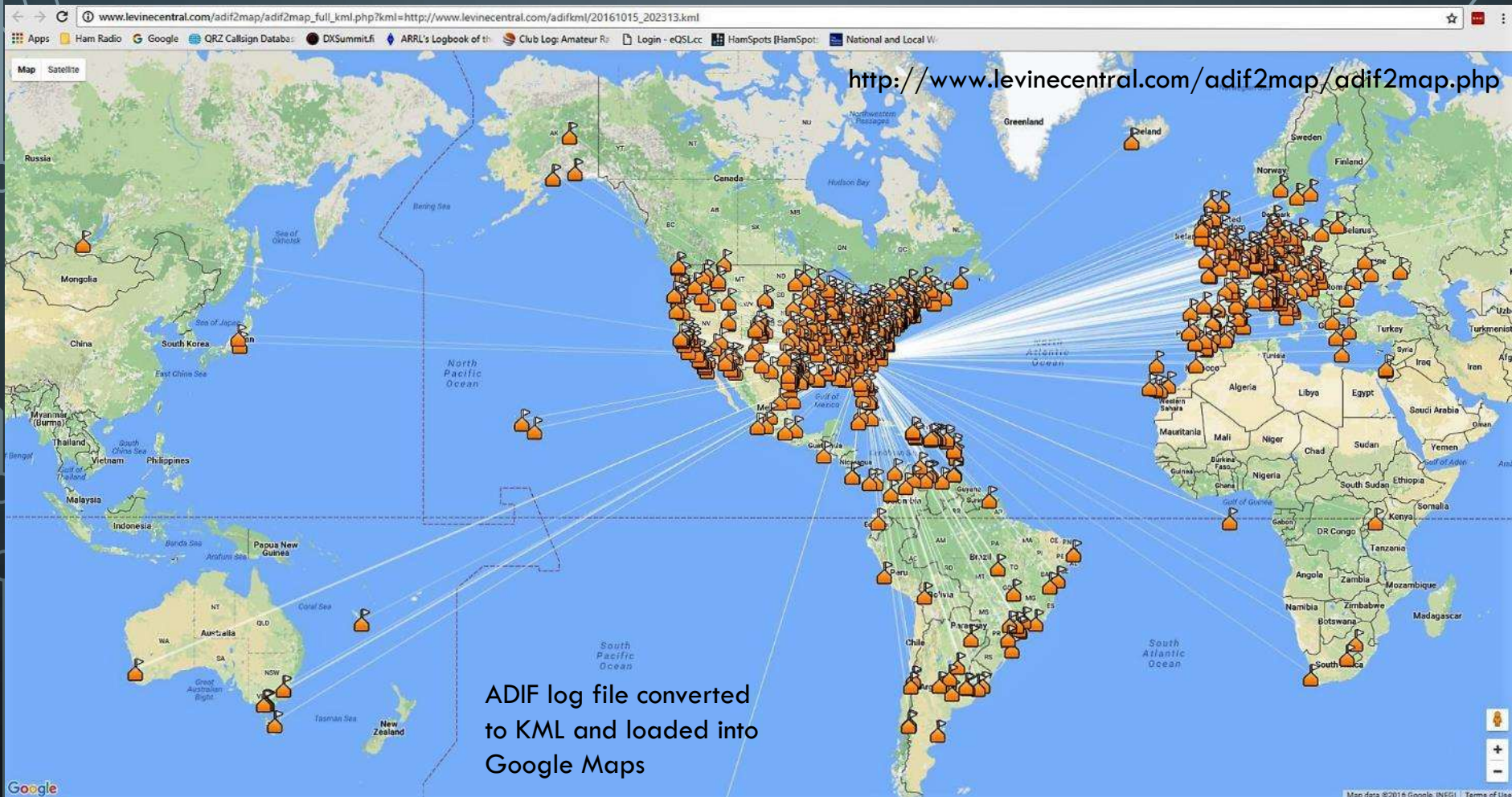
I began using JT65 in July, and JT9 in August



REFERENCES AND LINKS

- **Work The World With JT65 And JT9**, by Steve Ford, WB8IMY ARRL
<https://www.arrl.org/shop/Work-the-World-with-JT65-and-JT9/>
- JT65 HF Frequency Information Digital Mode LF-MF-HF-VHF
<http://hfllink.com/jt65/>
- WSJT Home Page, by K1JT
<http://physics.princeton.edu/pulsar/k1jt/>
- Signal Identification Wiki
www.sigidwiki.com/wiki
- The Old Codger's Guide to JT65A and JT9
<http://obriensweb.com/wsjsx.html>
- Have a Great Time with JT9
<http://www.arrl.org/have-a-great-time-with-jt9>

One more thing, just for fun...





Google Earth

Thank you Dan!

PRESENTATION

Voice of America Site B Tour

Earl Welsh (KG4HIQ)

We recently toured the VOA's Site B, Greenville, N.C

VOA
Voice of America

RadioFreeEurope
Radioliberty

Marti

RFA Radio Free Asia

MBN
MIDDLE EAST BROADCASTING NETWORKS, INC.

BBG Broadcasting Board of Governors

Our Mission:
To inform, engage, and connect people around the world in support of freedom and democracy.

The Broadcasting Board of Governors oversees all U.S. government-funded civilian international broadcasting. All five of its broadcasters adhere to the highest standards of journalistic independence and objectivity.

Each broadcaster:

- serves as an ongoing antidote to censored news;
- is a journalistic catalyst in support of democracy, civil society, and transparent institutions around the world;
- offers life-saving information during humanitarian emergencies;
- applies technologies to penetrate restrictive information firewalls; and
- reacts quickly to crises with surges in broadcasting.

VOA's Site B is located in the middle of Carolina farm land and forests just a few miles from downtown Greenville. Administrative and broadcasting operations take place within this 23,308 square-foot building.



Our Tour was conducted by the
Station Chief Engineer Macon Dail!



The site is officially known as the Edward R. Murrow Transmitting Station. It actively beams out 2,300 hours of programming each month in the international broadcasting spectrum.



Edward R. Murrow Transmitting Station

This broadcast facility operates around the clock, transmitting shortwave radio signals for Radio Martí to Cuba and for the Voice of America to Latin America and Africa, as part of the Broadcasting Board of Governors' mission to inform, engage, and connect people around the world in support of freedom and democracy.

President John F. Kennedy officially dedicated the station on February 8, 1963, and it was rededicated as the Edward R. Murrow Transmitting

Station in October 1968. The station honors Murrow, who was a renowned broadcast journalist made famous by his moving reports on the London Blitz during World War II, a longtime CBS newsmen, and director of the U.S. Information Agency from 1961-1964.

Murrow has been called the "Father of Broadcast Journalism" and cited as an example of the essential role the free press plays in a democratic society. With his pioneering investigative journalism, such as

his exposé of Senator McCarthy's anti-Communist campaign in the 1950s, Murrow showed how a fearless journalist can use his or her skills in the public's service.

Murrow's championship of balanced journalism, his ardent belief in American democracy, his courage and perseverance in searching for and reporting the truth, and his dedication to journalism as an essential tool in the democratic political process inspire the work of U.S. international broadcasting today.

"To be persuasive we must be believable; to be believable we must be credible; to be credible we must be truthful."

—Edward R. Murrow

The facility was completed in 1963
and first took to the air in February 1963.



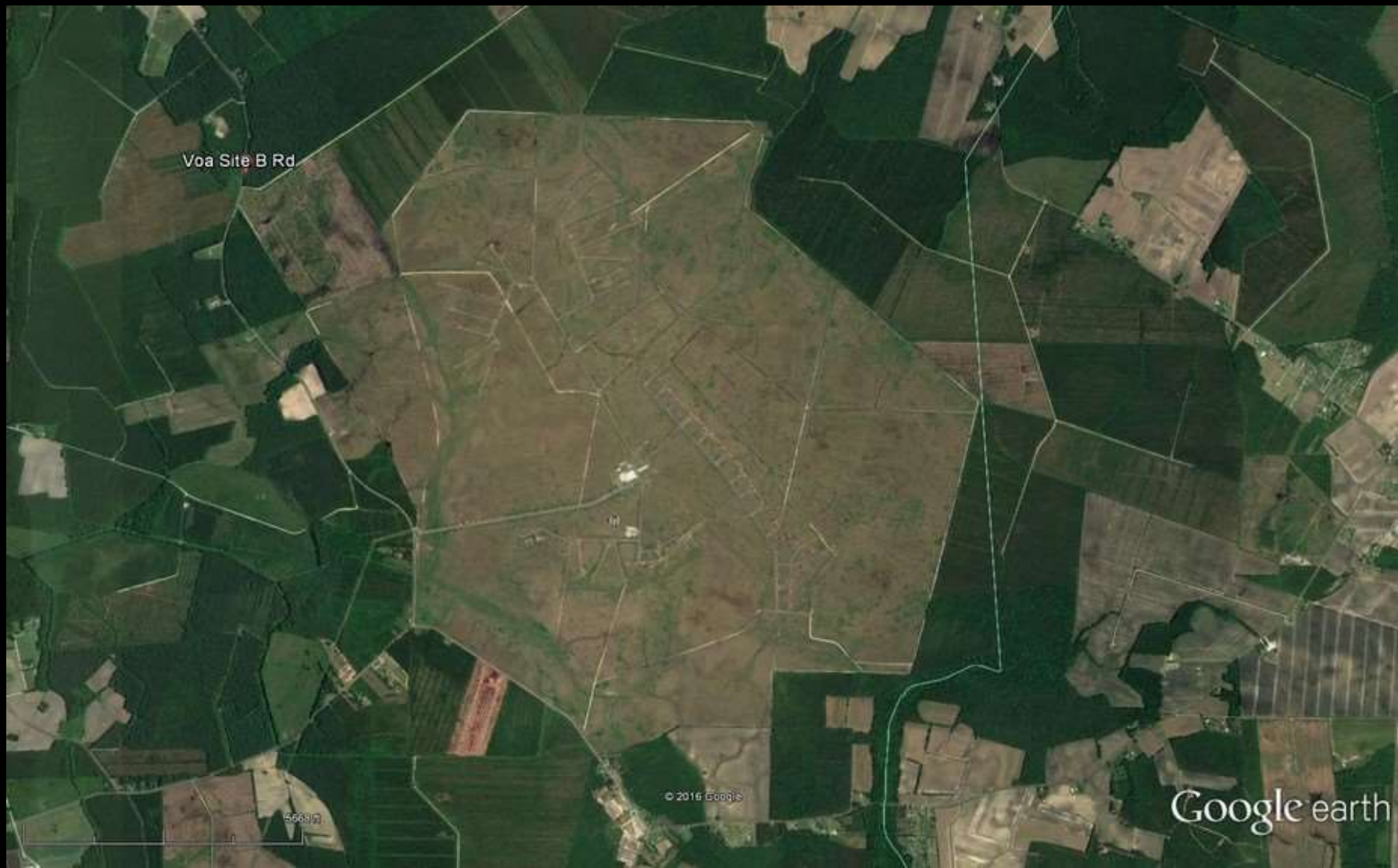
Today 16 full-time federal employees and three contract technicians work there. The facility is staffed 24 hours, a day 365 days a year by at least 2 people.



Recorded IDs are the only audio transmitted from the site.
Washington studios deliver the programming via satellite.



Some 25 miles of heavy open-wire feeders connect the high-power RF routing switcher to the site's 38 transmitting antennas, which are spread across nearly 2,800 acres of North Carolina countryside.



Although the tour starts well before you get to the guard shack, we will start inside the building.



We make our way to the elevated control area through the a series of racks.



These racks house satellite receivers, audio processing, modulation monitors, patch bays and more.



The elevated control area is where the control of the entire operation takes place.



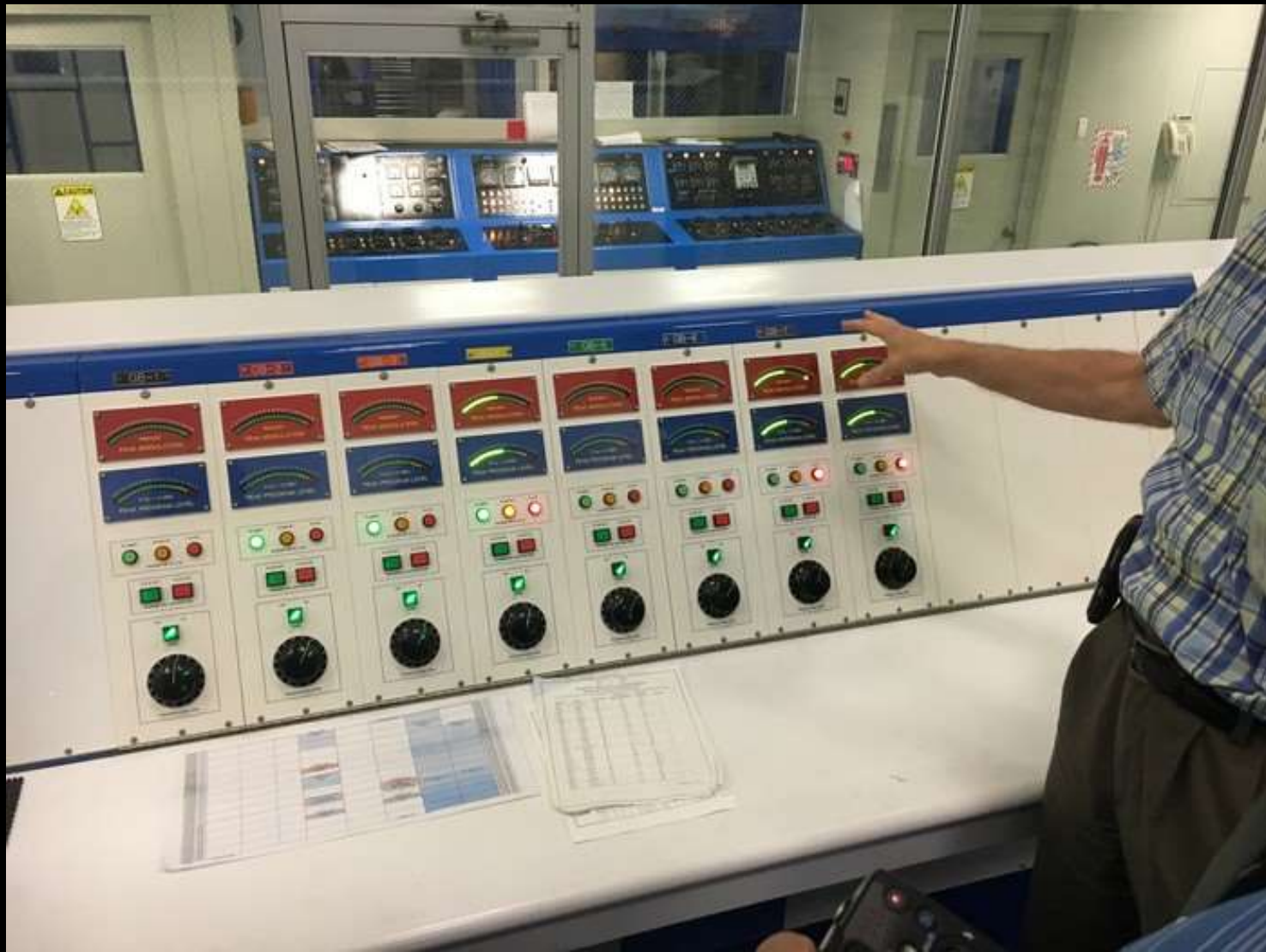
At one time other transmitting plants located
in Ohio, California and North Carolina.
Today, only Greenville Site B remains.



Today 16 full-time federal employees and three contract technicians work there. The facility is staffed 24 hours, a day 365 days a year by at least 2 people.



Greenville Site B is the single largest radio transmission plant in the United States. In its heyday, the Greenville operation was the largest broadcasting site in the world.



A photograph of a ship's control room. A person's hand is pointing at a tablet mounted on a white control panel. The tablet displays a table with columns for 'Date', 'Time', 'Speed', 'Altitude', and 'Status'. The table has several rows of data, with some cells highlighted in red. To the left of the tablet is a panel with various switches and a small digital display showing '12.4'. To the right is a panel with more switches, buttons, and two large analog gauges. A pair of glasses is resting on the control panel surface. The background shows the interior of the ship with blue structural elements.



Logging, generator control and monitoring.



Program Control



We left the control area and enter the Synthesizer and driver amp area.



RF starts here...



250 Watt Buffers



GE Transmitter



Inside the GE



GE Power Supply



Transmitters are from several manufacturers, including AEG-Telefunken, Brown Boveri Corp., Continental and General Electric. The earliest date back nearly 50 years, having been installed when the station first went on the air.



There are eight very large transmitters, all typically operate at 250 kW, one can provide 750 kW of HF energy if required. There is one 50 kW used for backup, most recently used for evaluating DRM performance in the HF bands.



Brown Boveri Corp. Transmitter



Just outside the back door are the antennas and feedlines.



...and antennas and feedlines



...and antennas and feedlines



Did I say feedlines???



The 12,000 square foot building located behind the main transmitting plant and encloses a massive remotely-controlled high-power RF routing switcher for switching transmitter outputs to various antennas.



Switching output to antennas



Always Something There to Remind Me



This sign is for someone else.



1.6 Megawatt Standby Generator



The station consumes approximately
1 million kilowatt hours of electricity each month.



Continental Power Supply



Continental Transmitters



Continental Controls



Small Parts and Test Equipment



Screen Room



Thousands of spare parts, including large and small vacuum tubes, are kept on site to maintain the huge shortwave transmitters.



Humidity Controlled Room



Humidity Controlled Room II



The facility also has a complete machine shop for fabricating transmitter components and assemblies that are no longer available from their manufacturers.



In the observation tower.







Saying Goodbye



Saying Goodbye



Thank you Earl!



MEMBERSHIP APPLICATIONS

- Are there any additional ARCCC, Inc. Membership Applications which need to be turned in before we vote?



ARCCC, INC. REPORTS

- Treasurer's Report
- Secretary's Report
 - Posted on Website





AmazonSmile

- Log into <https://smile.amazon.com/>
- Select the Amateur Radio Club of Columbia County, Inc. as your charity
- Amazon Gives!

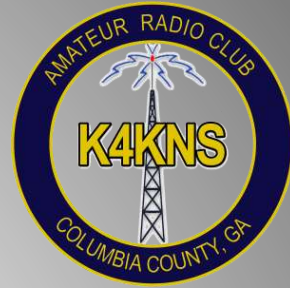
**Support
Amateur Radio Club Of
Columbia County Inc.**

When you shop at **smile.amazon.com**,
Amazon donates.

[Go to smile.amazon.com](https://smile.amazon.com/)

amazonsmile

SWAP TABLE





UPCOMING EVENTS

- 11-05-2016 – Stone Mountain Hamfest
- 11-22-2016 – ARCCC, Inc. Meeting
- 12-08-2016 – ARCCC, Inc. Christmas Party
 - Olive Garden
 - December 2016 Meeting Cancelled



OLD BUSINESS

- Any Old Business?
 - Previous Motions to follow up on not otherwise covered by a committee?



CHILD ENRICHMENT CENTER

- Notes for receiving donated toys for the Child Enrichment Center:
- The Child Enrichment Center accepts unwrapped toys for boys and girls ages newborn to 18 years of age.
- 2015 – Pete LaPierre learned one very important tid bit - very few gifts are donated for boys 13 to 18. They have a huge need in this category (see the next to the last picture). Something to remember for next year.

2015 – ARCCC, Inc. Donation to CEC



2015 – ARCCC, Inc. Donation to CEC



2015 – ARCCC, Inc. Donation to CEC



2015 – ARCCC, Inc. Donation to CEC



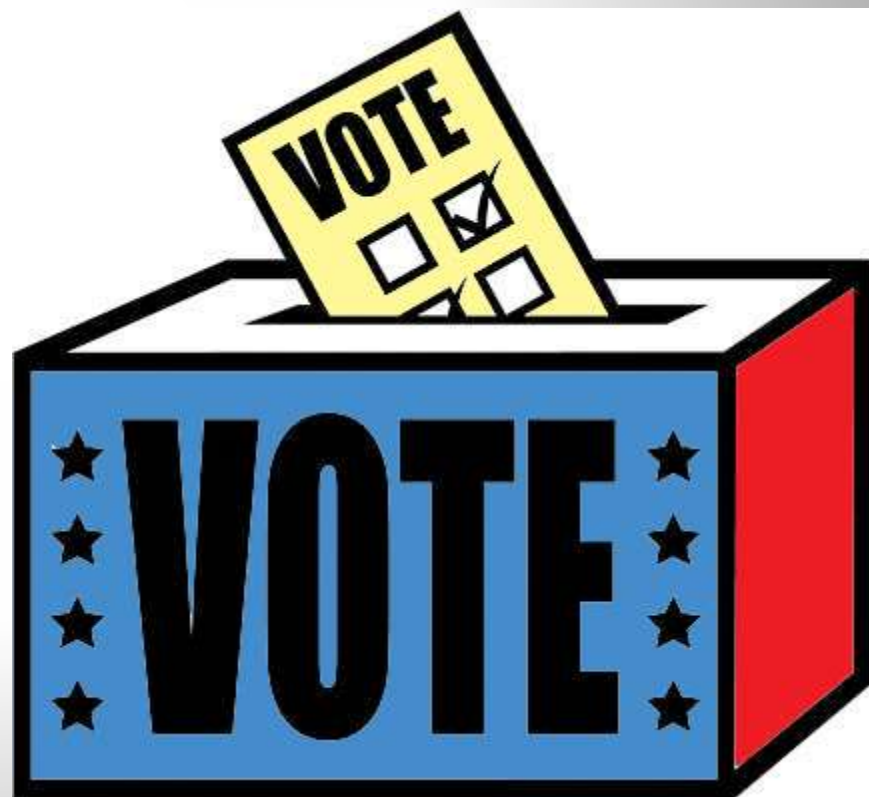
2015 – ARCCC, Inc. Donation to CEC





ARCCC, INC. ELECTION REMINDER

- Nominations offered in October 2016
- Elections held in November 2016





ELECTIONS



NOMINATIONS

- **Article II. MEMBERS OF THE BOARD OF DIRECTORS**

- Section 2.07

- The Board of Directors will be elected every two years at the November meeting of the organization. Nominations will be offered at the October or other designated meeting by the Board and nominations will also be accepted from the floor. Nominees must confirm that they are willing to accept if they are present or in writing if they are not present. Nominees will be listed and the list distributed to Full Members via e-mail at least two weeks prior to the November meeting. Only Full Members in good standing and at least 18 years old may hold office in the organization. A term for a Board Member is defined as two years. A Board Member can serve in the same position for no more than 5 years. The nominating committee will be the Board, unless a nominating committee is established by the Board of Directors.



NOMINATION COMMITTEE

- Earl Welsh – Committee Director
 - Nomination Slate
 - President
 - Rusty Welsh – KG4HIR (Incumbent)
 - Vice President
 - Walter Brumbeloe – W4EFS (Incumbent)
 - Secretary
 - Shannon Covington – KK4MED (Incumbent)
 - Treasurer
 - Howard Weeks – K5JCP (Incumbent)
 - Board Member at Large
 - Eric Cagle – KK4ZHT
 - Norm Selby – KORFR



NOMINATION COMMITTEE

- Earl Welsh – Committee Director
 - Move to Accept Nominations from Floor for the following Board Positions
 - President
 - Vice President
 - Secretary
 - Treasurer
 - Board Member at Large



NOMINATION COMMITTEE

- Earl Welsh – Committee Director
 - Move to close the floor nominations and present the nomination Slate
 - President
 - Rusty Welsh – KG4HIR (Incumbent)
 - Vice President
 - Walter Brumbeloe – W4EFS (Incumbent)
 - Secretary
 - Shannon Covington – KK4MED (Incumbent)
 - Treasurer
 - Howard Weeks – K5JCP (Incumbent)
 - Board Member at Large
 - Eric Cagle – KK4ZHT
 - Norm Selby –K0RFR



NET UPDATES

- Devon Harris (KM4PHT) – Net Director
 - Net Controllers WANTED!!!
- ARCCC, Inc. Net
 - Monday's at 7:30 PM Local Time on 146.985 TSqI 71.9
- East Central GA ARES Net
 - Need Net Controllers!!!
 - Monday's at 20:30 on 147.120, No Tone
- AmRRON Net
 - Monday's at 21:00 on 146.985, 71.9 TSqI



COMMITTEE UPDATES

- Directors should provide QUICK UPDATES on their committees
 - Who has an update?



COMMITTEE UPDATES

- Outreach Committee – Dan Marshall (N1ADM)
 - Oliver Hardy Festival
 - Request for additional clip board for outreach materials (Delivered)

Outreach Committee: Oliver Hardy Festival 10-01-2016



Outreach Committee: Oliver Hardy Festival 10-01-2016



Outreach Committee: Oliver Hardy Festival 10-01-2016

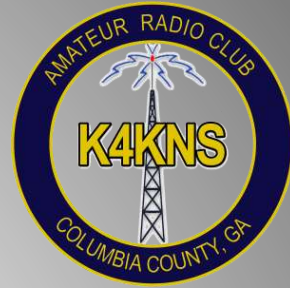




COMMITTEE UPDATES

- Repeater Committee
 - Echolink
 - Belair Road Repeater Site Update
 - Too Much to List – See Photos

ARCCC, Inc. Facebook Page



 **Amateur Radio Club of
Columbia County, Inc.**
Non-Profit Organization

[Add a Button](#) [Liked](#) [Message](#) [...](#)

[Timeline](#) [About](#) [Photos](#) [Events](#) [More](#)

Non-Profit Organization · Evans, Georgia

[Status](#) [Photo / Video](#) [Offer, Event +](#)

 Write something...



DONATIONS NEEDED!

- 146.985 Repeater Building Repair
- Rohn 45G Tower for Sell
 - 18" Face
 - 9 – 10' Sections
 - 1 Section has about 3' which is Bent





MEETING AGENDA ITEMS

- Anyone wishing to place an item on the ARCCC, Inc. Meeting Agenda should provide their request via email to the ARCCC, Inc. President at least 7 days prior to the upcoming meeting.



PHOTOS OF THE HOBBY

- TAKE PHOTOS!!!
- Share the photos with the ARCCC, Inc. Board so they can be placed on the website and other outreach materials.
- Take photos in order so they tell a story in chronological order
- Be certain Camera Date and Time are Correct



ANY OTHER BUSINESS?

- New Business?



REVIEW

- Review Motions and Assignments



MEETING RAFFLE

- All ARCCC, Inc. Members get a free ticket
- Additional Tickets may be purchased for \$1 each
- Nonmembers may purchase Tickets for \$1 each



THANK YOU!!!