

JS8

**A Digital Mode for the
Ham Radio Conversationalist
and**

A Useful EmComm Messaging Tool

with Ed Poccia, KC2LM

Jordan Sherer's JS8Call

The software that enables the JS8 Mode

- * **JS8 is Similar to FT8. It is a weak signal mode.**
- * *Has Forward Error Correction*
- * **Operates with 6 to 15 second cycles depending on Mode**
(Normal 15s, 50Hz 15 wpm, Fast 10s 80Hz, Turbo 6s 160Hz 40 wpm)
- * **Compresses Text & Transmits it in Back-to-Back Frames**
 - * *The Software on the Rec. Side, Stitches Everything Back Together*
- * **JS8 Permits Keyboard-to-Keyboard Messaging**
- * **Imagine Carrying on a Conversation or sending a message with FT8's Robustness.**

Equipment Needed

**Simple Antenna
Systems Work Fine:**

Monoband Whips,
Verticals, Dipoles



**Modern Transceiver
Running Low
Power, < 30 Watts**



Interface



**Computer
Running
Windows 10 &
JS8CALL**

To Find Your Grid Square, go to:

http://www.levinecentral.com/ham/grid_square.php

Enter any address, city & state or zip:
or Enter any call sign: Data provided
or Enter any 2, 4 or 6 character grid square:

[?? How does this work? Why doesn't this work? ??](#)

Type in your Call Sign
OR
Zip Code

 AdChoices

[Grid Square Map](#)

[Locator Map](#)

[GPS Map](#)

Call [KC2LM](#) found for EDWARD J POCCIA

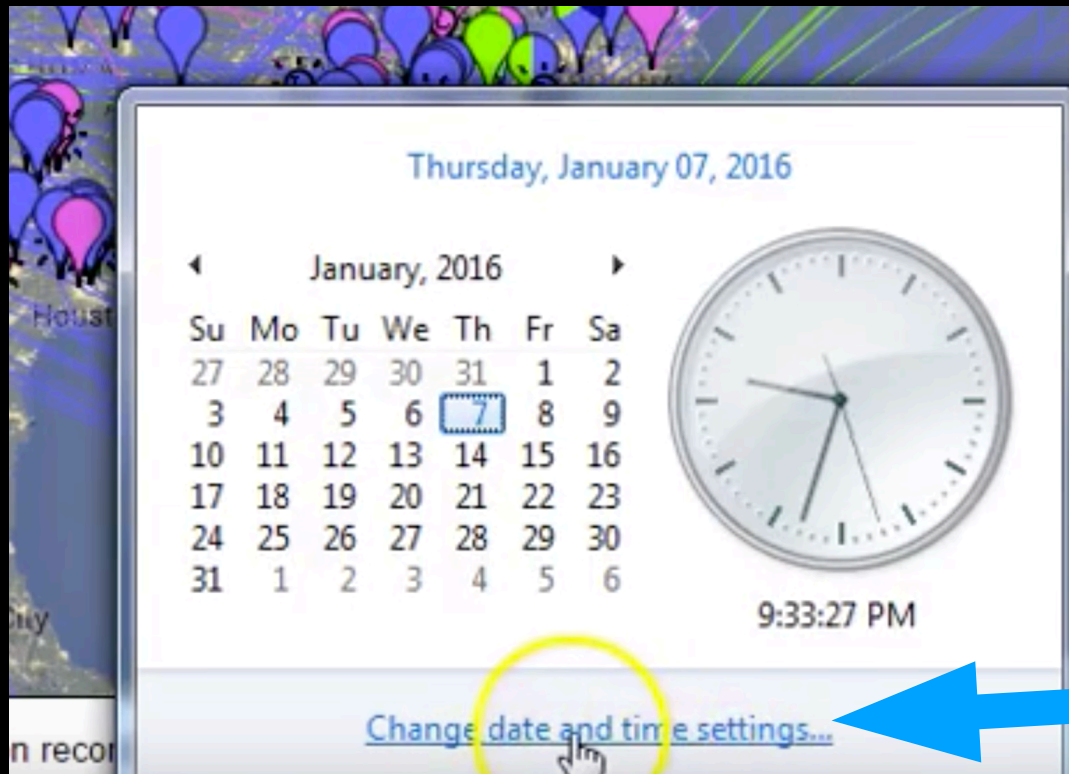
Latitude: 35.1564 / 35° 9' 22" N Longitude: -106.713 / 106° 42' 46" W

Grid: **DM65pd**

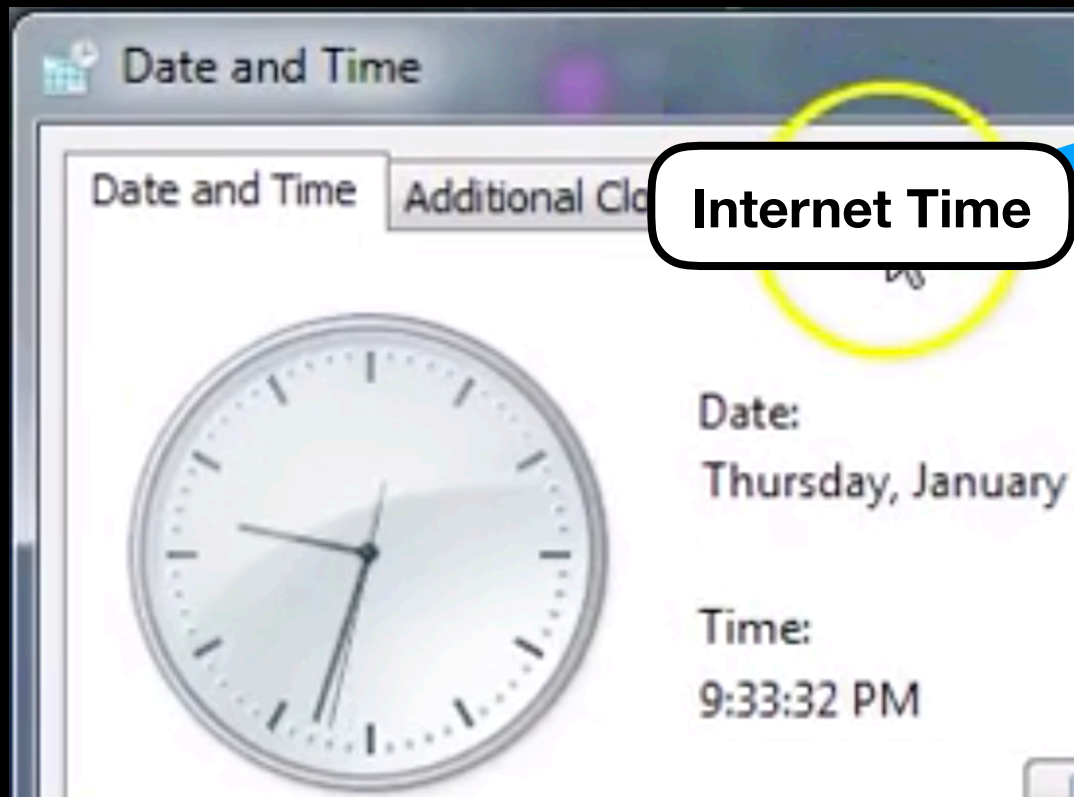
Time Synchronization

Time Synchronization is critical for proper JS8 operation

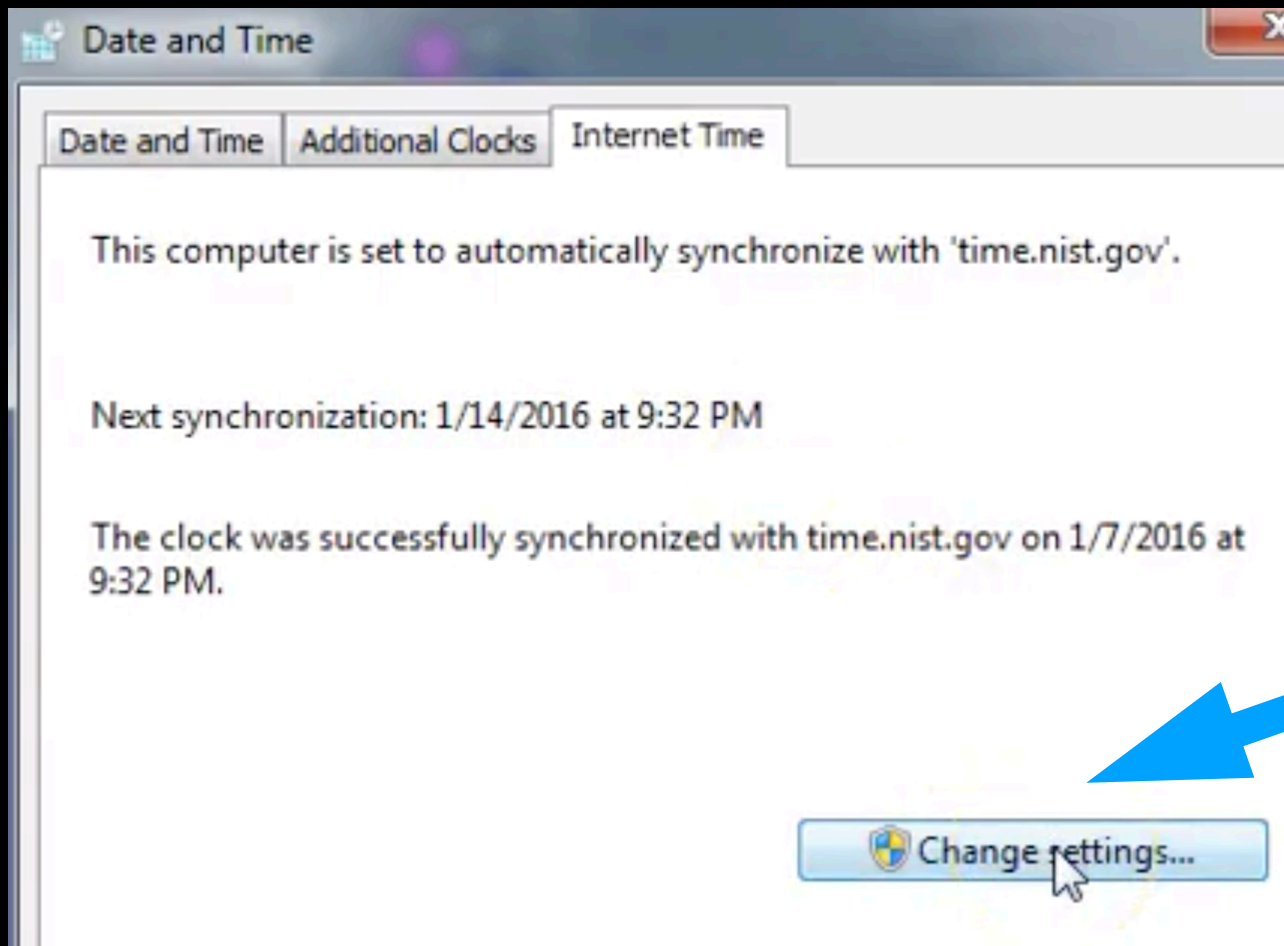
1. Go to the lower right menu on your PC. Click on “Adjust Date & Time” to bring up this frame.



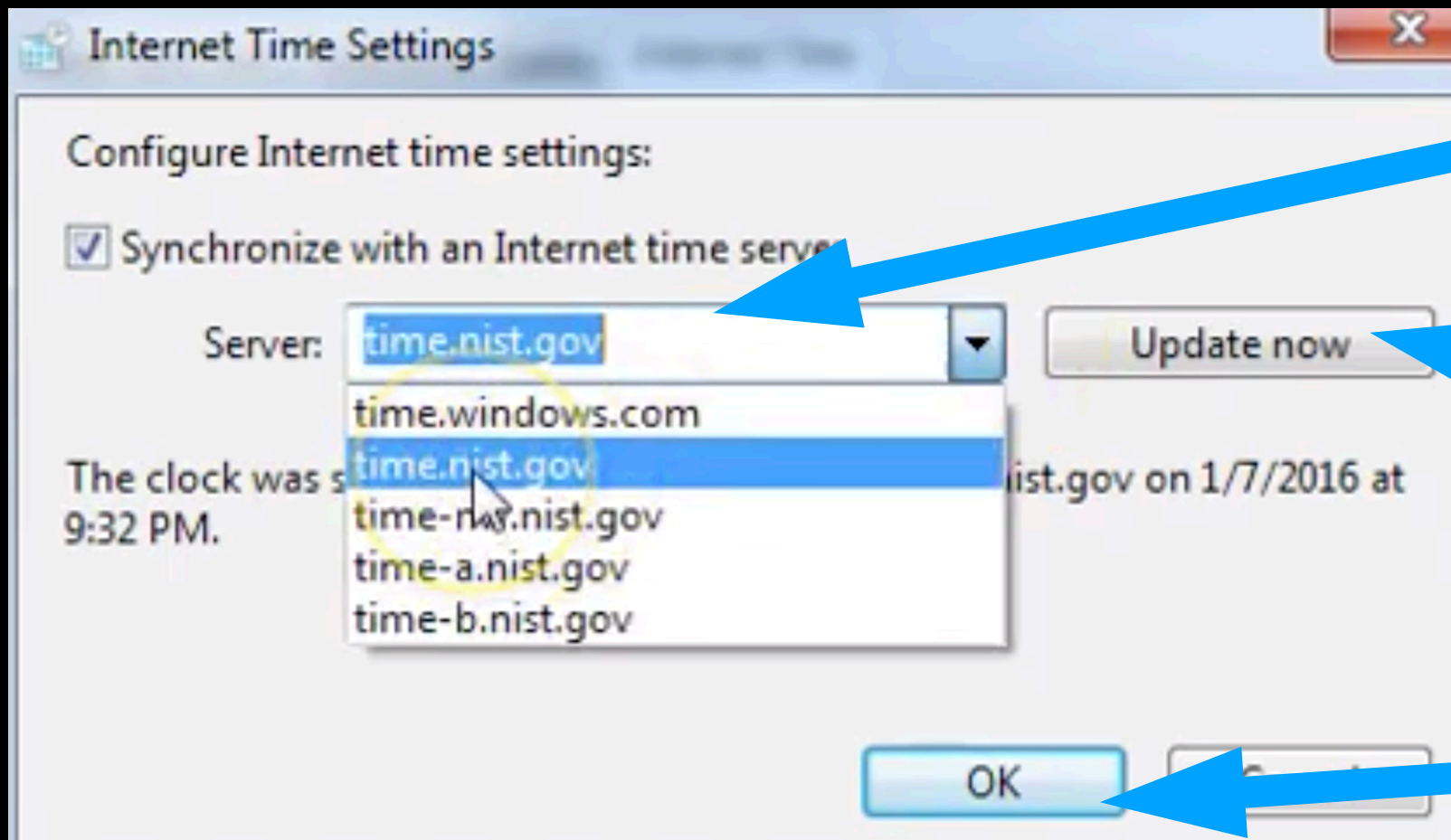
2. Click on “Change date and time settings”



3. Select “Internet Time”.



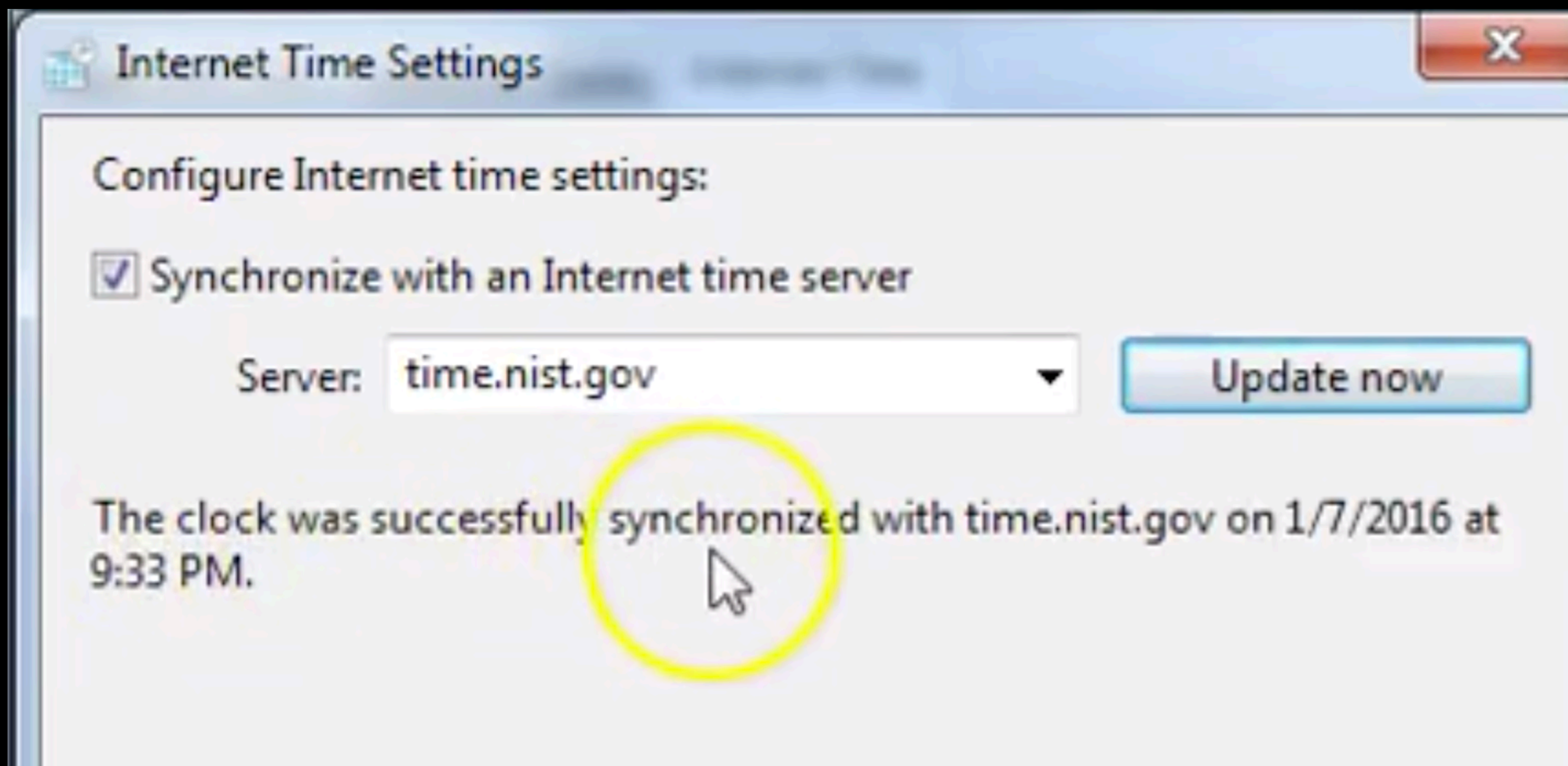
4. Click on "Change Settings"



5. Select "time.nist.gov"

6. Click on "Update now"

7. Click on "OK"



**“The clock has been successfully synchronized”
and you are ready to operate JS8.**

Download Page: js8call.com

MacOS:

<http://files.js8call.com/1.1.0/js8call-1.1.0-Darwin.dmg>

Windows:

<http://files.js8call.com/1.1.0/js8call-1.1.0-win32.exe>

You can view a presentation of JS8Call by Jordan Sherer on youtube which describes JS8Call.

<https://youtu.be/mZKhVcFOIjY>

Radio's Settings After Software Downloaded

GENERAL - Station

Settings

General | Audio | Reporting | Frequencies

Station Behavior

Station Details

My Call

My Grid Locator

IARU Region:

Callign Groups (comma separated):

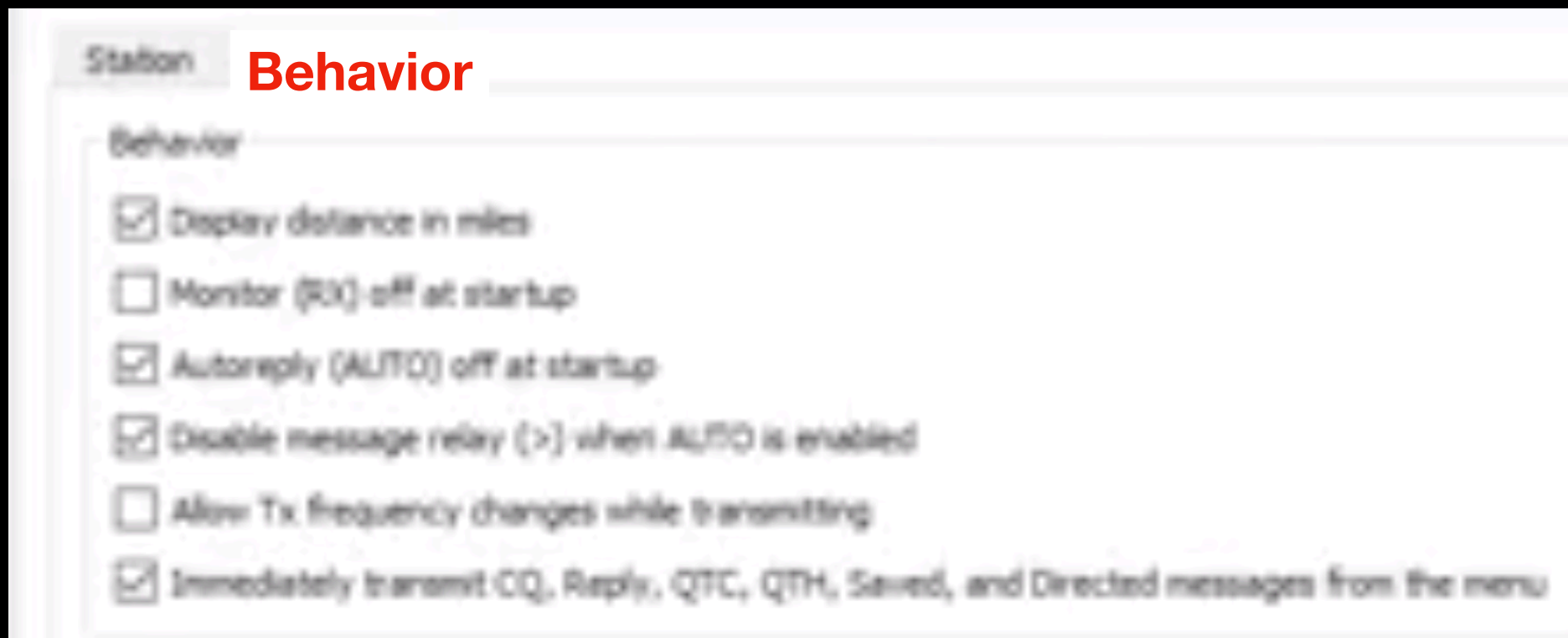
Station Messages

CQ Meesage

Reply Message

Call Sign
Grid Locator

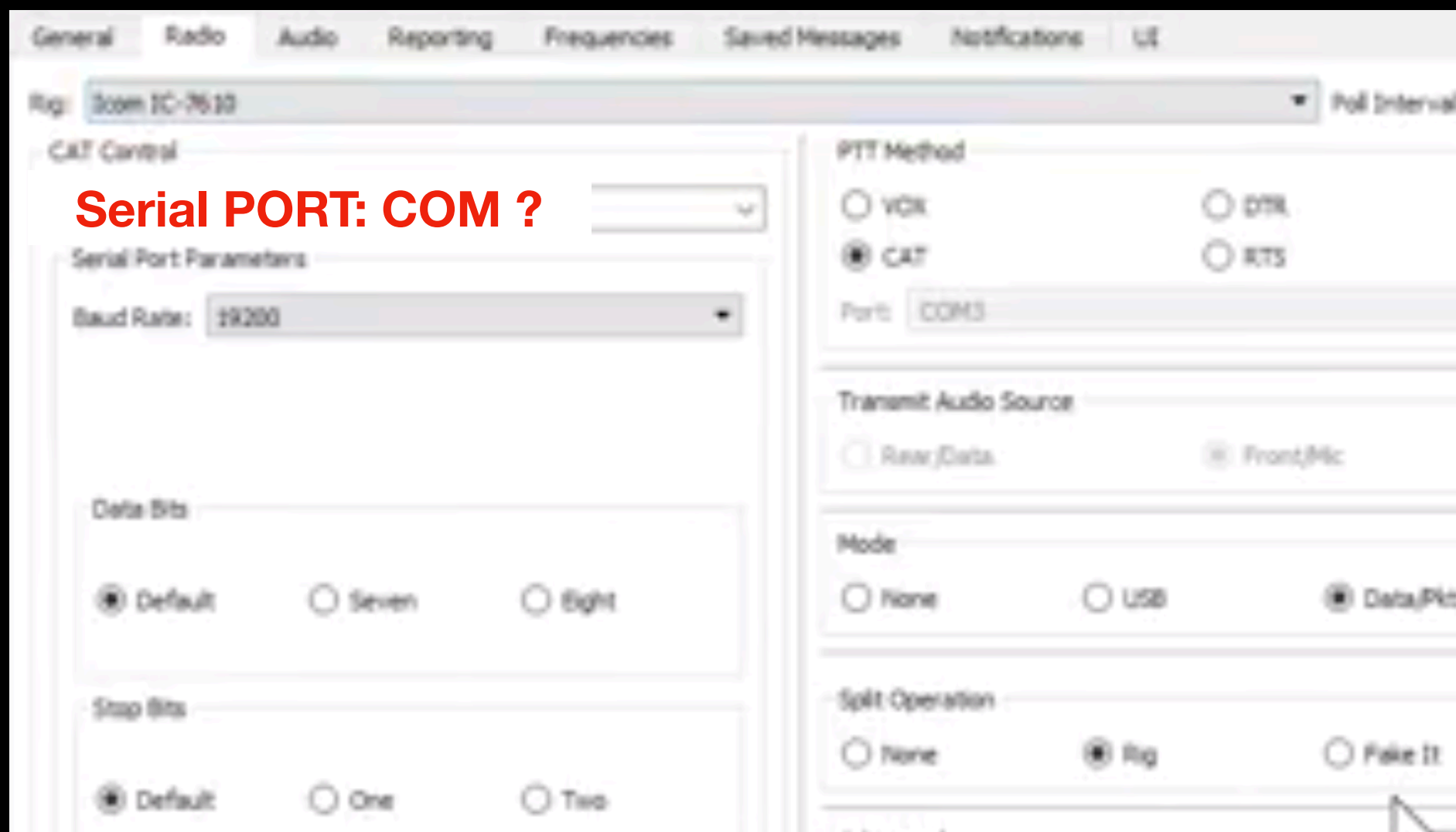
CQ Message
Reply to CQ



Behavior

Station Behavior

Start with Defaults



Serial PORT: COM ?

Radio Settings

Select Serial Port used by your system.

Audio Settings

General Radio. **Audio** Reporting. Frequency

Soundcard

Input: USB Audio CODEC
Output: USB Audio CODEC

Sometimes computers will default to a different **Audio** setting and the software will not decode.

Resetting the **Audio** to USB CODEC should be your first step toward correcting the fault.

Saved Message

TNX 73 GL

NAME ED, QTH ALBUQUERQUE, NM, GRID DM65

RIG FTDX1200, 25 WTS, ANT VERT

RIG FTDX1200, 25 WTS, ANT G5RV DIPOLE

TNXS FOR THE QSO BEST 73S GUD DX

QSL VIA LOTW

- * Common, pre-formatted messages can be saved.**
- * Develop & save BCARES exercise messages.**
- * Pull them up using the **SAVED** button to include in your next message.**

JS8Call DE KN4CRD (v1.0.0)

File Configurations Decode Save Log View Control Help

14.078 000
1404 Hz

KC2LM
00:03:58
2019 Apr 17

RX TX TUNE
SPOT AUTO LOG

Offset	Age	SNR	Message(s)
1179 Hz	1m	-08 dB	GRT MODE.FT8 WAS GETTING ABIT STALE ~
1207 Hz	1m	-07 dB	...AR: @ALLCALL QUERY CALL KB6YNN? IV/ ~
1403 Hz	1m	-10 dB	... 35 WTS TO LONG WIRE AND IC7300 RIG ~
1555 Hz	45s	-11 dB	KK4KVA: W2BT IS LOT OF JS8 T . . .

DIDDLE W JS8 FOR ALMOST YEAR NOW AND IT'S MY FAV MODE! DON'T DO MUCH ON OTHER MODES NOW.. HI ~

23:57:51 - (1404) - KC2LM: K7SH I HOPE IT GETS MORE POPULAR. DOING A PRESENTATION ON IT NXT MONTH. K7SH HW CPY? ~

00:00:29 - (1403) - K7SH: KC2LM YES, WE NEED MORE ACTIVITY ON JS8. IT'S GETNG BTR BUT I BEAT THE DRUM WHENEVER I CAN!..HI IM RUNNG 35 WTS TO LONG WIRE AND IC7300 RIG ~

00:02:51 - (1400) - KC2LM: K7SH DID NOT SEE MUCH ON JS8 QSO PARTY LAST WKEND. ANT 42 FT VERT K7SH HW CPY? ~

KC2LM: K7SH DID NOT SEE MUCH ON JS8 QSO PARTY LAST WKEND. ANT 42 FT VERT K7SH HW CPY?

★ Callsigns (20)	Age	SNR	Offset	✓
K6MAR	1m	-08 dB	1207 Hz	
★ K7SH	3m	-10 dB	1403 Hz	
KB2HSH	7m	-18 dB	1316 Hz	
KD9APZ	1m	+02 dB	1301 Hz	
KF7VUT	1m	-11 dB	899 Hz	
✚ KJ7ABG	4m	+09 dB	1032 Hz	
KK4KVA	45s	-06 dB	1555 Hz	
KN4GFP	11m	-05 dB	600 Hz	
KR4VJ	1m	-17 dB	798 Hz	

HB CQ REPLY SNR INFO Saved Directed to K7SH Deselect Sending (4/6) Halt

CAT

80
60
40
20
0
0 dB

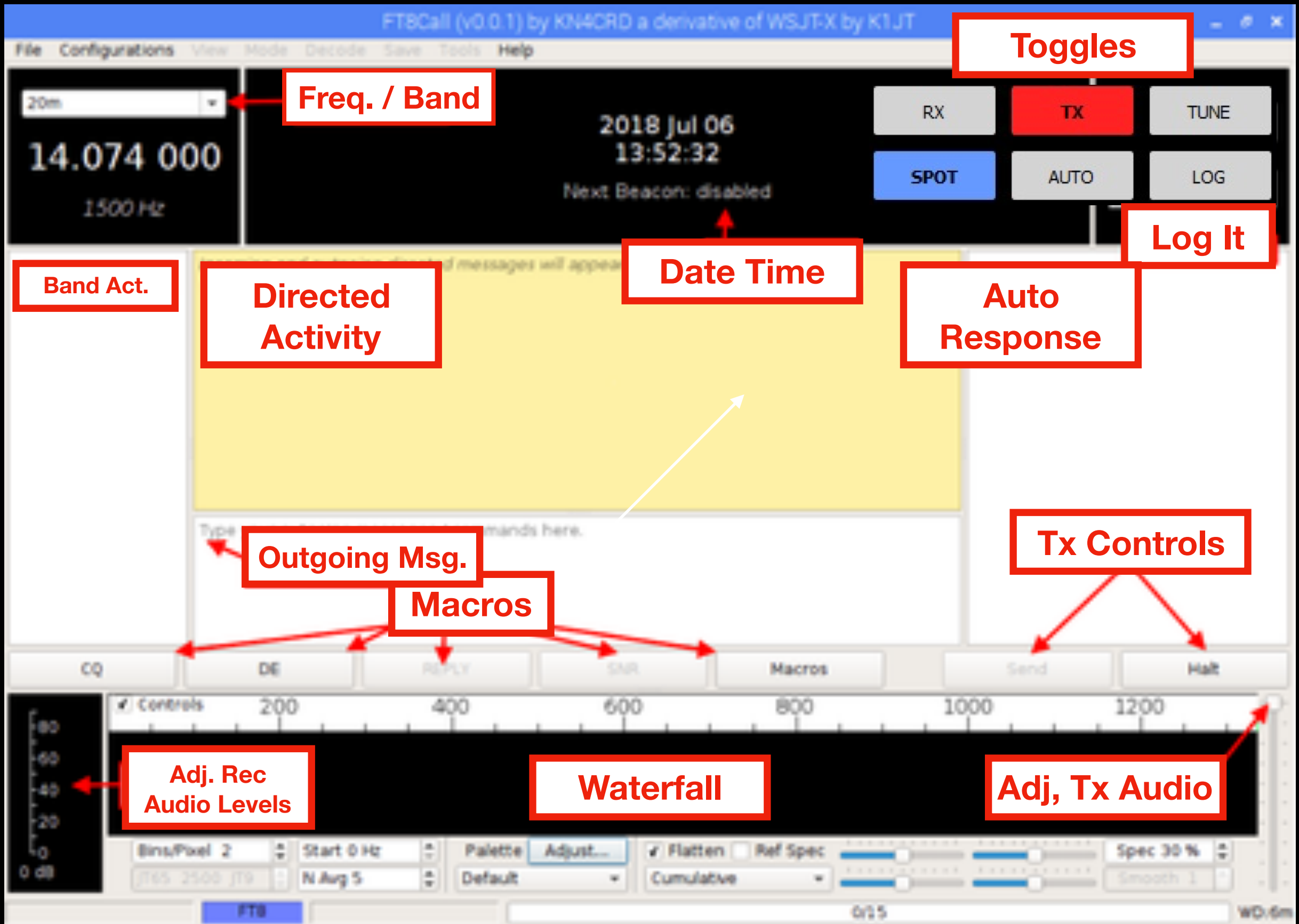
00:02:45 20m

800 1000 1200 1400 1600 1800

QSY Bins/Pixel 2 Start 500 Hz Palette Adjust... Flatten Ref Spec Spec 0 %
Center 1500 Hz Offset 1404 Hz N Avg 1 Default Cumulative Smooth 1

Tx: WK... ANT 42 JS8 Last Tx: N JS8 QSO PARTY LAST 13/15 12.7wpm / 58.0cpm

Set Audio Level at 40 dB



Freq. / Band

Toggles

Date Time

Log It

Band Act.

Directed Activity

Auto Response

Outgoing Msg.

Tx Controls

Macros

Adj. Rec Audio Levels

Waterfall

Adj, Tx Audio

Constructing JS8 Messages

- **Messages are typed into the “Outgoing Message Panel”**
(The Lower Center Section)
- **The software separates the message into a series of frames for transmission of 4 -12.5 seconds each depending on the mode selected. (**
- **Each frame is 13 characters, including spaces,**
- **Longer text messages require additional frames**
- **Messages many require 3-7 frames within one transmission sequence. (JS8 is 100% Duty Cycle)**

QSO Exchange

My contact's message is decoded in the "Activity Box" in BLACK.

When "SEND" button is depressed, the msg. goes into the "Activity Box" in RED.

00:00:29 - (1403) - K7SH: KC2LM YES, WE NEED MORE ACTIVITY ON JS8. IT'S GETNG BTR BUT I BEAT THE DRUM WHENEVER I CAN!..HI IM RUNNG 35 WTS TO LONG WIRE AND IC7300 RIG ~

00:02:51 - (1400) - KC2LM: K7SH DID NOT SEE MUCH ON JS8 QSO PARTY LAST WKEND. ANT 42 FT VERT K7SH HW CPY? ~

KC2LM: K7SH DID NOT SEE MUCH ON JS8 QSO PARTY LAST WKEND. ANT 42 FT VERT K7SH HW CPY?

This is what I would type into the "Outgoing Msg. Box"

Each Message is Broken Down Into Frames

00:02:51 - (1400) - KC2LM: K7SH DID NOT SEE MUCH ON JS8 QSO PARTY LAST WKEND. ANT 42 FT VERT K7SH HW CPY? ~

KC2LM: K7SH DID NOT SEE MUCH ON JS6 QSO PARTY LAST

Each Frame is 13 characters in a 12.5 second transmission with a 2.5 second break. (In Normal Mode)

The frames are transmitted consecutively until the entire message is complete. It may take 3 - 6 15 second transmission cycles to complete one message. Six frames will take 1 min. 30 sec. to complete.

04:14:03 - (1205) - KC2LM: WD9DUI SNR -09 WD9DUI SNR -09 ~

04:15:14 - (1205) - WD9DUI: KC2LM HI ED, UR SIGS -1DB, NAME GARY ~

04:16:31 - (1205) - KC2LM: WD9DUI TNXS FOR CALL, GARY, NAME ED QTH NM ~

04:18:29 - (1205) - FB, GUD PRT HR, WK B4 ON PSK, QTH: TORRANCE, CA DM03 10MILES S OF LA ~

04:19:35 - (1205) - KC2LM: WD9DUI DID U EXPERIENCE ANY EARTHQKE ACTIVITY? ~

04:21:29 - (1205) - YES, FELT THE BIG ONES, THERE HAS BEEN OVER 4K



The **Lightning Bolt** symbol OR **Arrow** symbol on the latest Software, indicates their transmission is over and it is time for the next ham to transmit.

18:03:55 - (1181) - KC2LM: WD9DUI SNR -18 ~

18:04:29 - (1178) - HI ED ~

18:05:14 - (1181) - KC2LM: WD9DUI HI GARY, SUNNY ES WARM IN NM TODAY ~

18:06:29 - (1178) - WD9DUI: KC2LM TNKS FOR CM BK, SIGS -9DB, VERY LITTLE ACTION HR?
~

18:08:02 - (1180) - KC2LM: WD9DUI I AM MAKING A JS8 PRESENTATION SAT AT OUR CLUB
MTING . HOPE TO GET SOME FOLLOWERS. ~

18:09:59 - (1186) - WX 76, SOME CLDS/MARINE LAYER , UR SOLID PRT ~

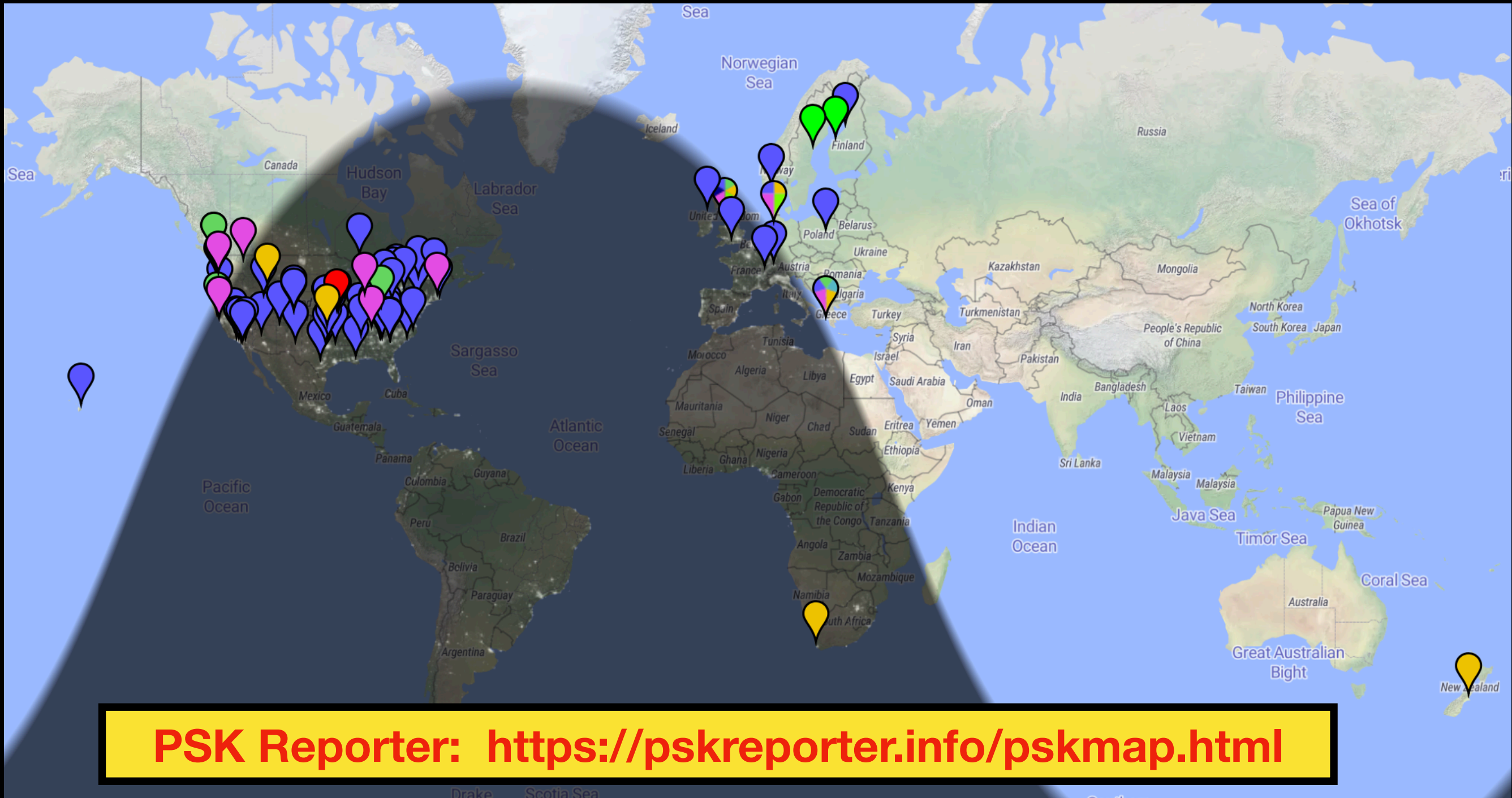
18:11:35 - (1181) - KC2LM: WD9DUI TNX 4 REPRT. WORKED CUACAO ON 10 CW, SO MAY
BE THINGS R LOOKIN UP. ~

18:15:14 - (1185) - IT IS TAKING TIME ~

18:15:43 - (1181) - KC2LM: WD9DUI GOING FOR LNCH W/ XYL 73S GARY. ~

World-Wide JS8 Activity

All Bands for 12 Hours on Tuesday



PSK Reporter: <https://pskreporter.info/pskmap.html>

JS8 QSO Party

Each Month to Increase Activity

JS8 QSO Party is a chance to get on the air with JS8 and make some contacts every month. There are a lot patient operators in the group, so the environment is very welcoming!

Held monthly on the **Second Saturday of the month for 24 hours**. QSOs may be a short exchange or a long chat.

Organizer: KN4CRD, kn4cird@gmail.com

JS8's Hidden Gems

- **Checking Propagation** with Heart Beat (HB), “Pings”
 - With **AUTO** selected, Click on **HB**
 - Stations with **AUTO** selected will reply with SNRs

- **Sending Messages** to stations **NOT** on the air
 - With **BEACON** & **AUTO** selected, **RT Click on** Call Sign and **Select** “Relay via “???call sign???”
 - When they sign-in again, a Pop-Up box will display the message on their screen. The software stores the info to a replay route & they can then reply to the message.

Send a message that will show in a pop up window to a station that is On the Air.

★	Callsigns (31)	Age	SNR	Offset
	KN0MAP	1m	-11 dB	850 Hz
	KP3FT	7m	-16 dB	1186 Hz
	KV4ATV	31m	-08 dB	696 Hz
	N0GQ	1m	-18 dB	1631 Hz
	N0JDS	4m	-03 dB	745 Hz

Jump to 1303Hz

Log...

Show Message Inbox...

Store Message...

Saved Messages... ▶

Directed to N0LSD... ▶

Relay via N0LSD...

Deselect N0LSD

INFO - Send my station information

GRID DM65 - Send my current station Maidenhead grid locator

SNR? - What is my signal report?

INFO? - What is your station information?

GRID? - What is your current grid locator?

STATUS? - What is the status of your station (auto, hb, version, etc)?

HEARING? - What are the stations are you hearing? (Top 4 ranked by most recently heard)

>[MESSAGE] - Please relay this message to its destination

MSG [MESSAGE] - Please store this message in your inbox

MSG TO:[CALLSIGN] [MESSAGE] - Please store this message at your station for later retrieval by [CALLSIGN]

QUERY CALL [CALLSIGN]? - Please acknowledge you can communicate directly with [CALLSIGN]

QUERY MSGS - Do you have any messages for me?

QUERY MSG [ID] - Please deliver the complete message identified by ID

AGN? - Please repeat your last transmission

QSL? - Did you receive my last transmission?

QSL - I confirm I received your last transmission

YES - I confirm your last inquiry

NO - I do not confirm your last inquiry

Send a message that will show in a pop up window to a station that is On the Air. (con't)

JS8Call will show in a dialog box on the receiving station, from which they can send you an ACK if they so wish. SO if you want to get a station's attention then here's how:

Right click on the station's callsign, select the menu option "Directed to <callsign>" then select the option ">[MESSAGE] ...", and enter the text of the message in the composition pane. Send the message and if the selected station receives it, it will show in a pop up message box.

Operating Tips

- * **Set ALS to Zero**
- * **Use Abbreviations - *but not so as to hide the meaning of the msg.***
- * **JS8 is 100% Duty Cycle - 25 watts is fine, no need to cook the finals.**
- * **Use HB, heart beat “pings” to check propagation**
- * **Be patient, JS8 is not as popular as FT8**
- * **Keep Messages to 3 or 4 cycles, to keep tx times low.**

“JS8Call” Version 2.0.1 Has a Turbo Function

The screenshot shows the JS8Call v2.0.1 application window. The title bar reads "JS8Call de KN4CRD (v2.0.1)". The menu bar includes "File", "Configurations", "Mode", "Log", "View", "Control", and "Help". The "Mode" menu is open, showing three options: "JS8 (Normal, 15s, 50Hz, ~16 WPM)", "JS8 (Fast, 10s, 80Hz, ~24 WPM)", and "JS8 (Turbo, 6s, 160Hz, ~40 WPM)". The "JS8 (Turbo)" option is selected and highlighted with a red box. Below the mode list are several checkboxes: "Enable Simultaneous Decoding of All Speeds (MULTI)" (checked), "Enable Autoreply (AUTO)", "Enable Heartbeat Networking (HB)", and "Enable Heartbeat Acknowledgments (ACK)".

On the left side of the interface, a digital display shows "7.078" and "1303". Below this is a table with columns "Offset", "Age", and "SNR".

Offset	Age	SNR
1303 Hz	2m	-17 dB
1940 Hz	1m	+02 dB

At the bottom of the interface, a green bar displays the text "KI6NAZ: CQ CQ CQ DM03 ◊".

Select JS8 Turbo to enable a wide but rather fast function.

Enables Multi Decode Function

Enable HB

Each Message in Turbo Mode is Broken Down Into Frames

00:02:51 - (1400) - KC2LM: K7SH DID NOT SEE MUCH ON JS8 QSO PARTY LAST WKEND. ANT 42 FT VERT K7SH HW CPY? ~

KC2LM: K7SH DID NOT SEE MUCH ON JS6 QSO PARTY LAST

Each Frame is 13 characters in a 4 second transmission with a 2.5 second break.

The frames are transmitted consecutively until the entire message is complete. It may take 3 - 6.5 second transmission cycles to complete one message. Six frames will take about 36 sec. to complete.

JS8 Frequencies

Most Popular

For the Technicians

1.842Mhz

3.578Mhz

7.078MHz

10.130Mhz

14.078MHz

18.104Mhz

21.078Mhz

24.922Mhz

28.078 MHz

50.318 MHz

Questions?

**Email your questions & comments to
kc2lm@arri.net**