JS8

A Digital Mode for the Ham Radio Conversationalist

with Ed Poccia, KC2LM

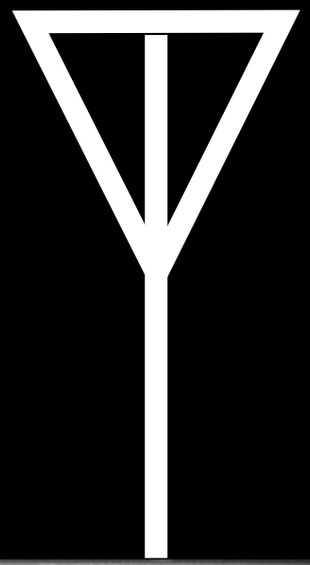
Jordan Sherer's JS8Call

The software that enables the JS8 Mode

* **JS8 is Similar to FT8, it is a weak signal mode**
* **Has Forward Error Correction**
* **Operates with 15 second cycles, like FT8**
* **Compresses Text Data and Transmits it in Back-to-Back Frames**
    * The Software on the Receive Side, Stitches Everything Back Together
* **JS8 Permits Keyboard-to-Keyboard Messaging**

* **Imagine Carrying on a Conversation with FT8's Robustness.**

Equipment Needed



Simple Antenna Systems Work Fine:

Monoband Whips, Verticals, Dipoles

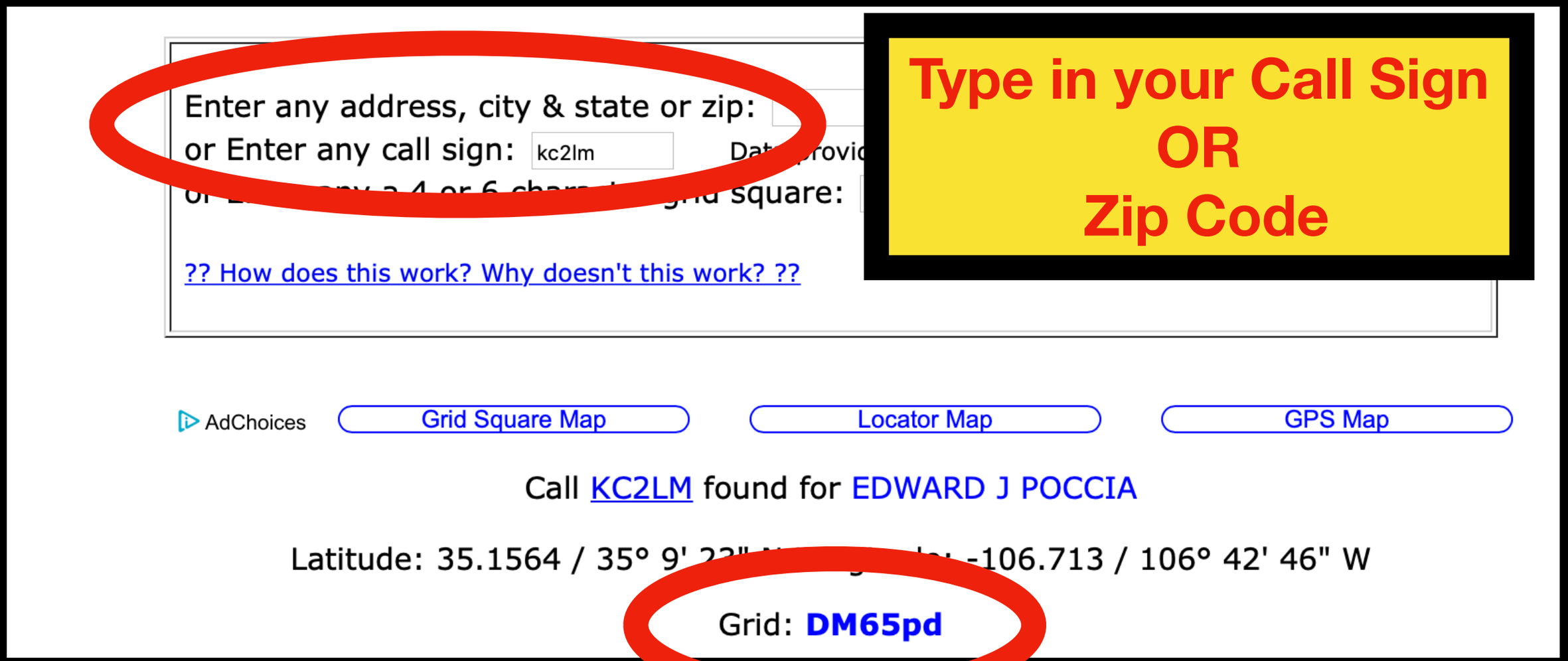
Modern Transceiver Running Low Power, < 30 Watts

Interface

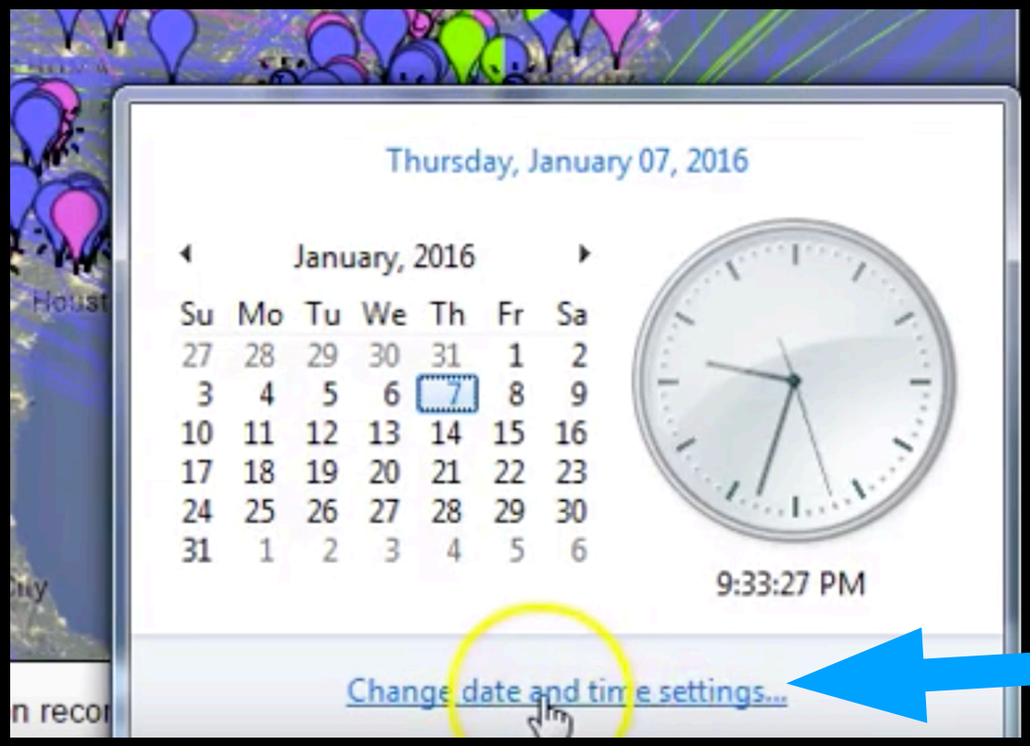
Computer Running Windows 7, 10 & JS8CALL

To Find Your Grid Square, go to:

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



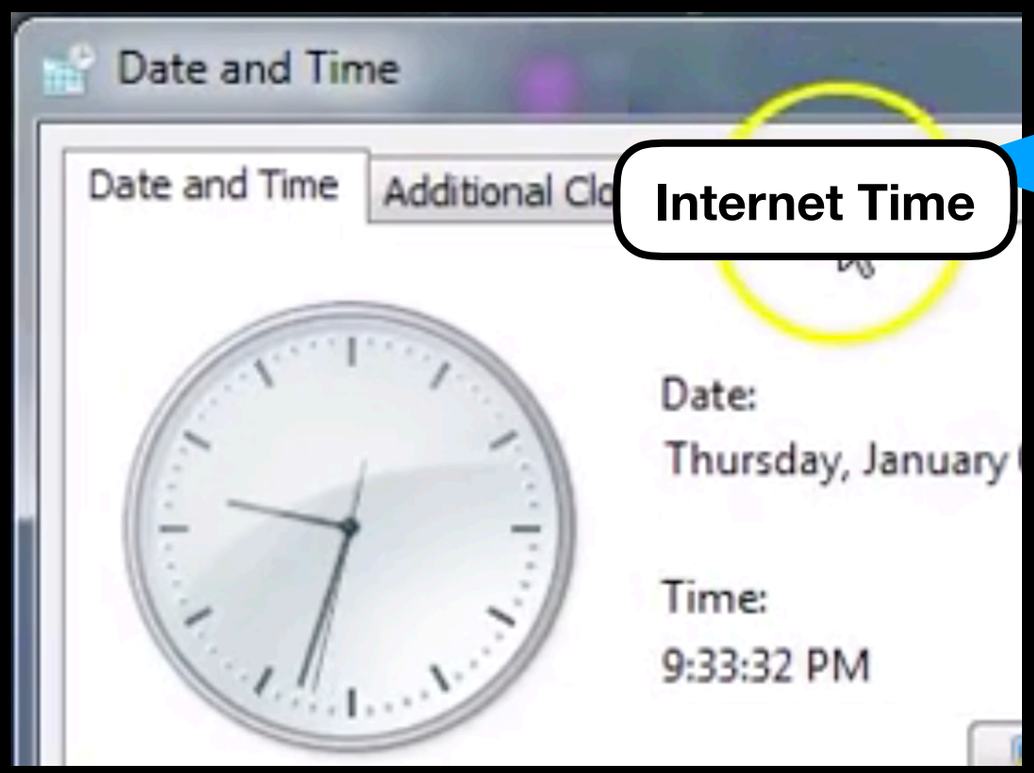
Time Synchronization



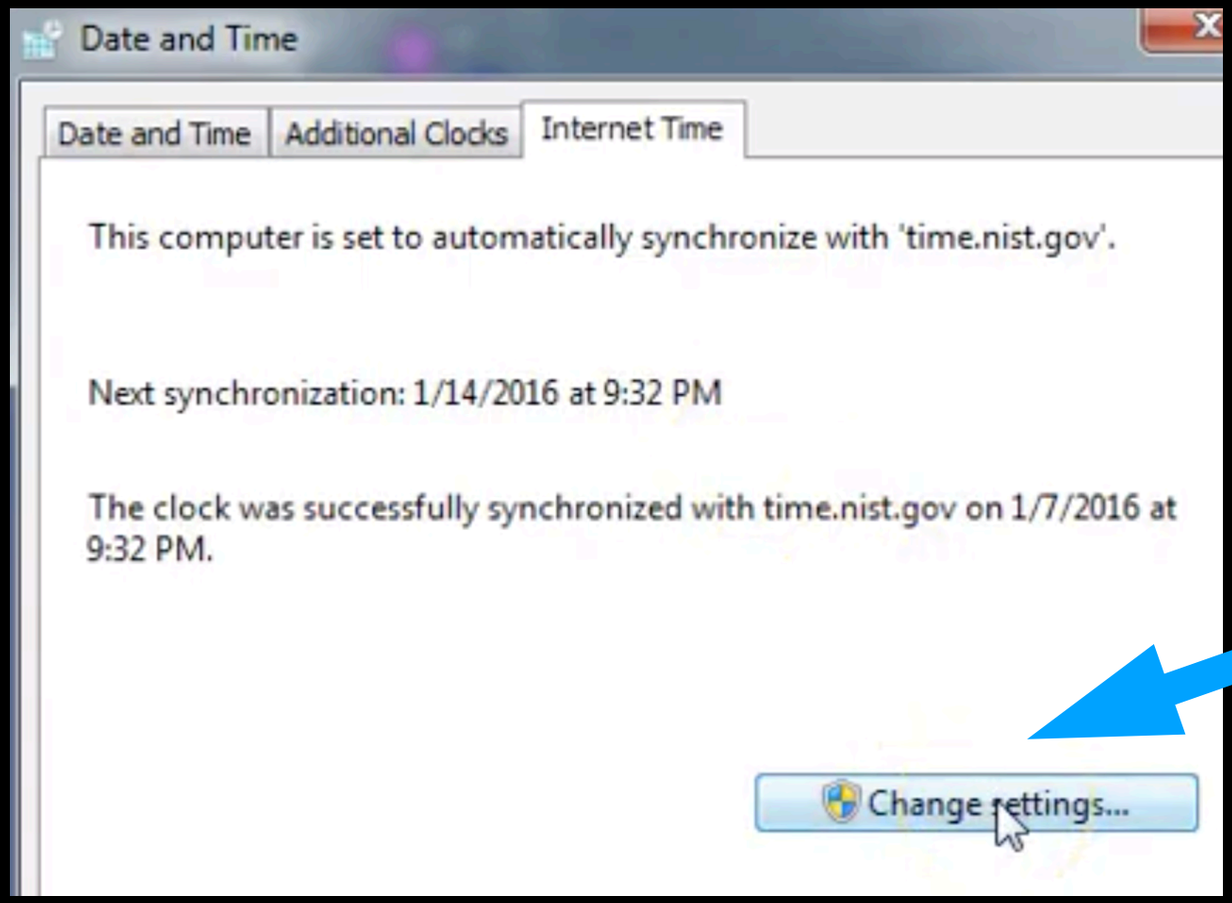
Time Synchronization is critical for proper JS8 & FT8 operation

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

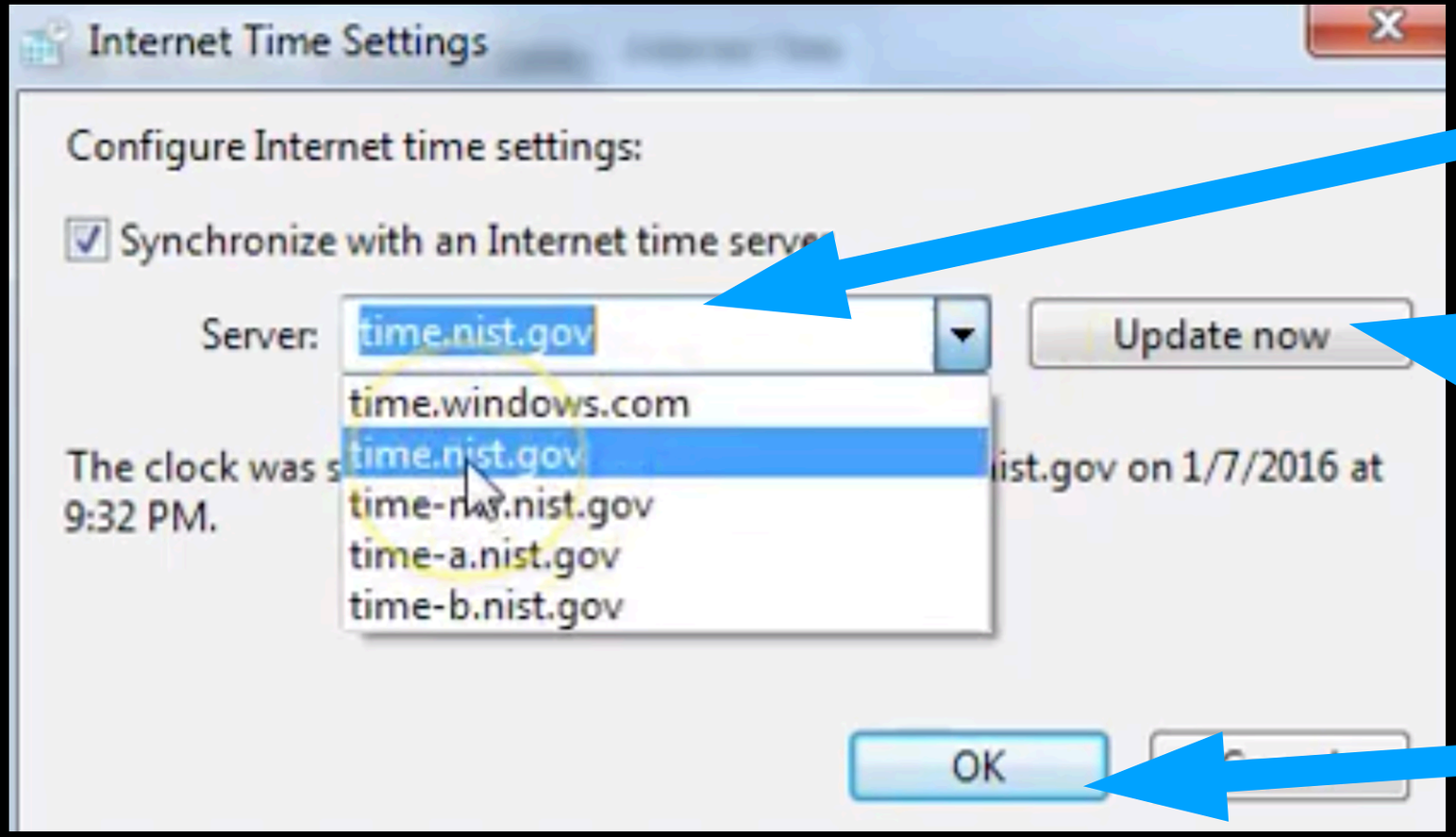
2. **Click on "Change date and time settings"**



3. **Select "Internet Time".**



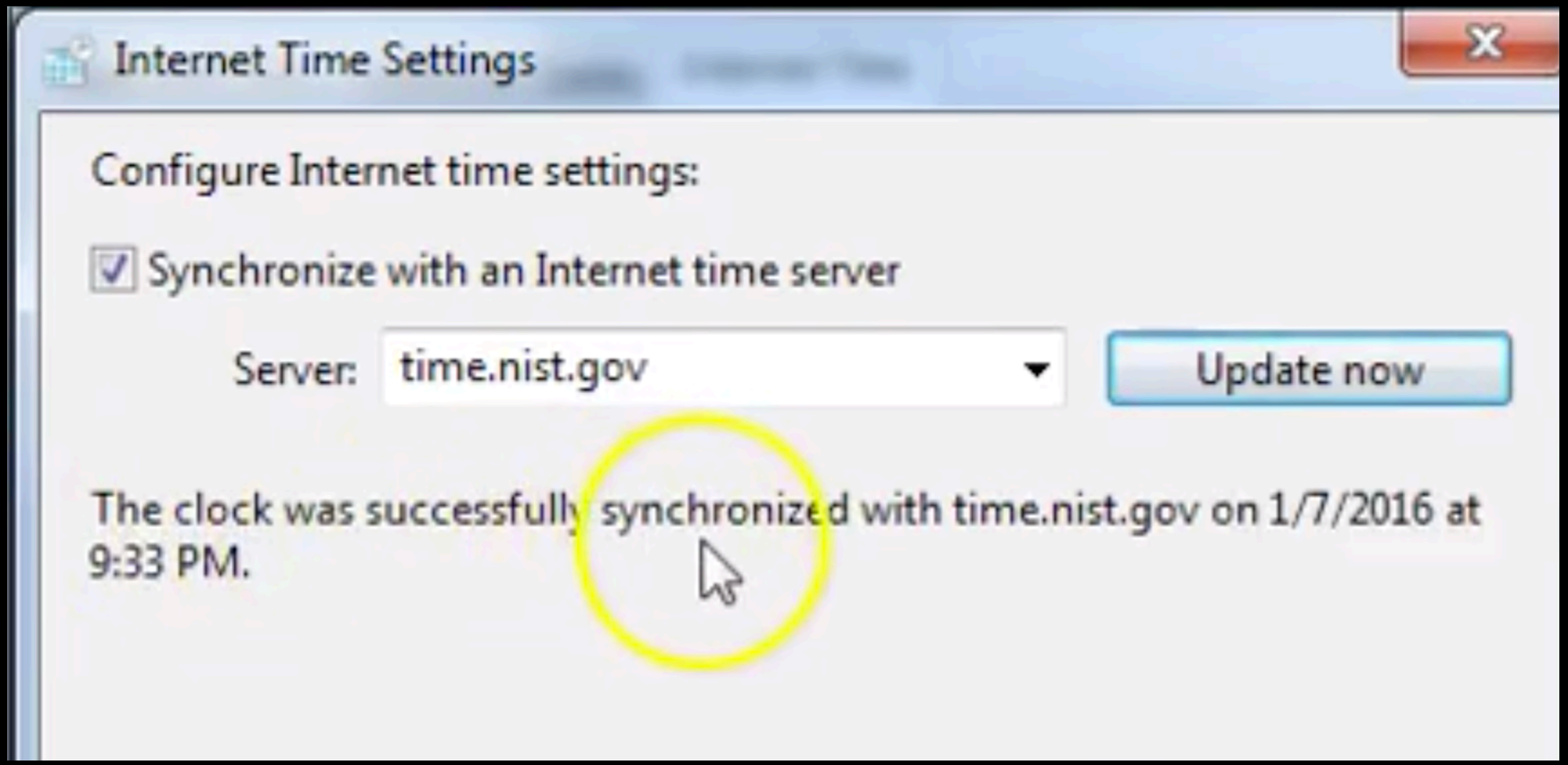
4. Click on “Change Settings”



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

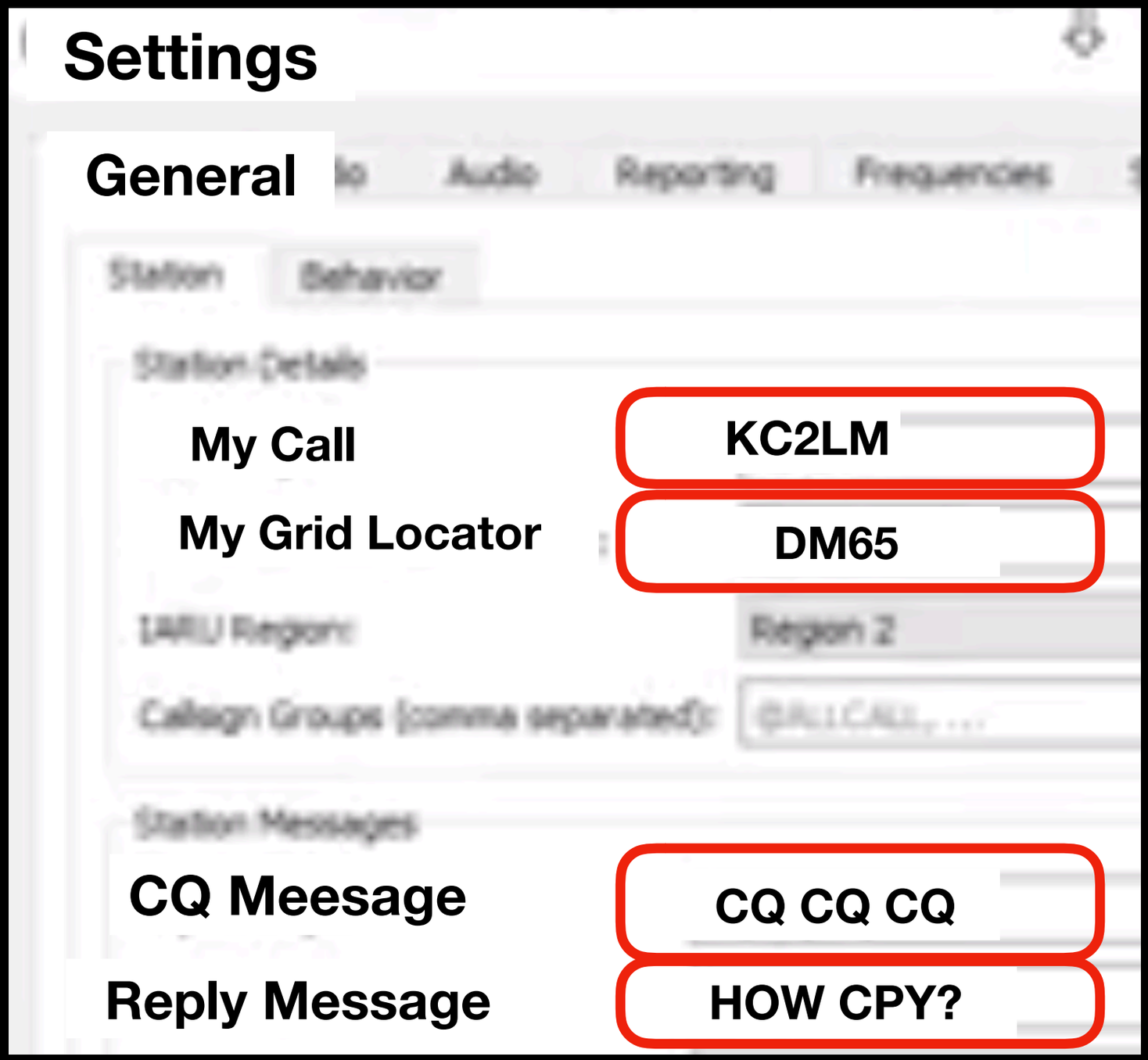
MacOS:
http://files.js8call.com/1.1.0/js8call-1.1.0-Darwin.dmg

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 – https://youtu.be/mZKhVcFOljY

Radio's Settings After Software Downloaded

GENERAL - Station

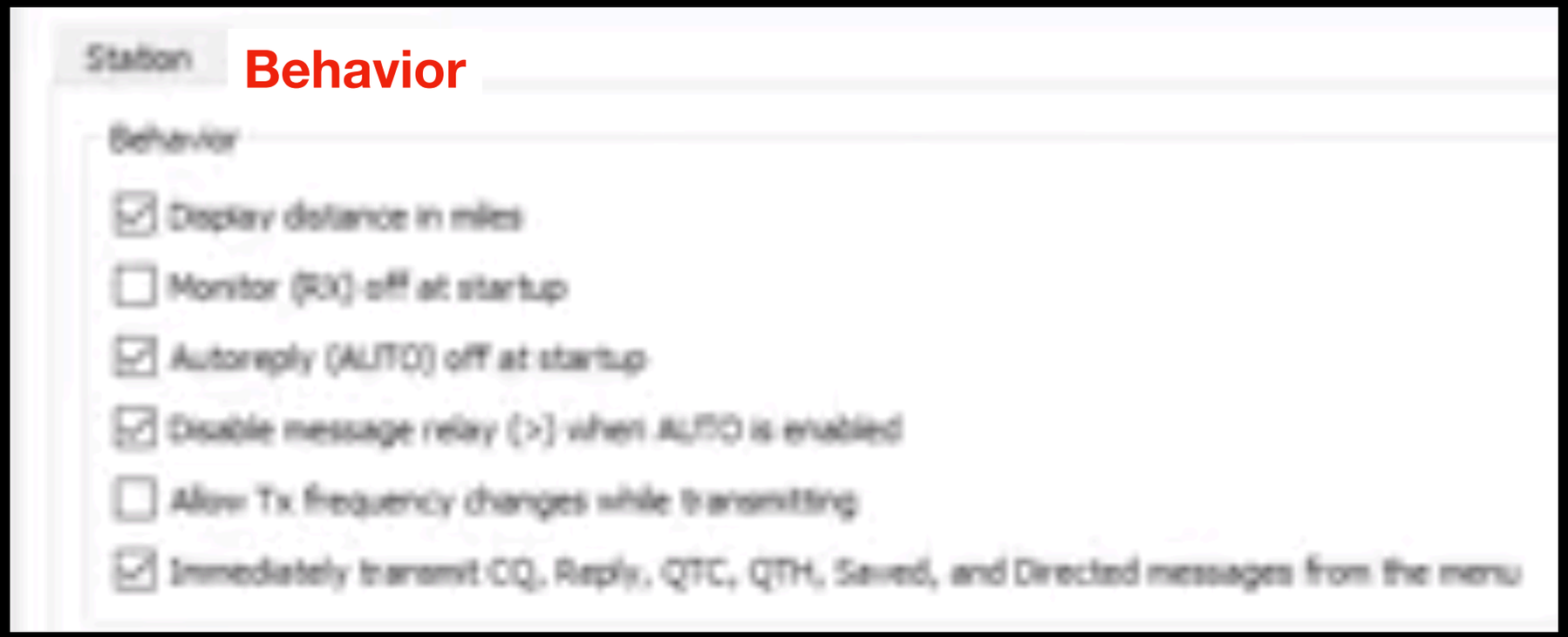


Call Sign

Grid Locator

CQ Message

Reply to CQ



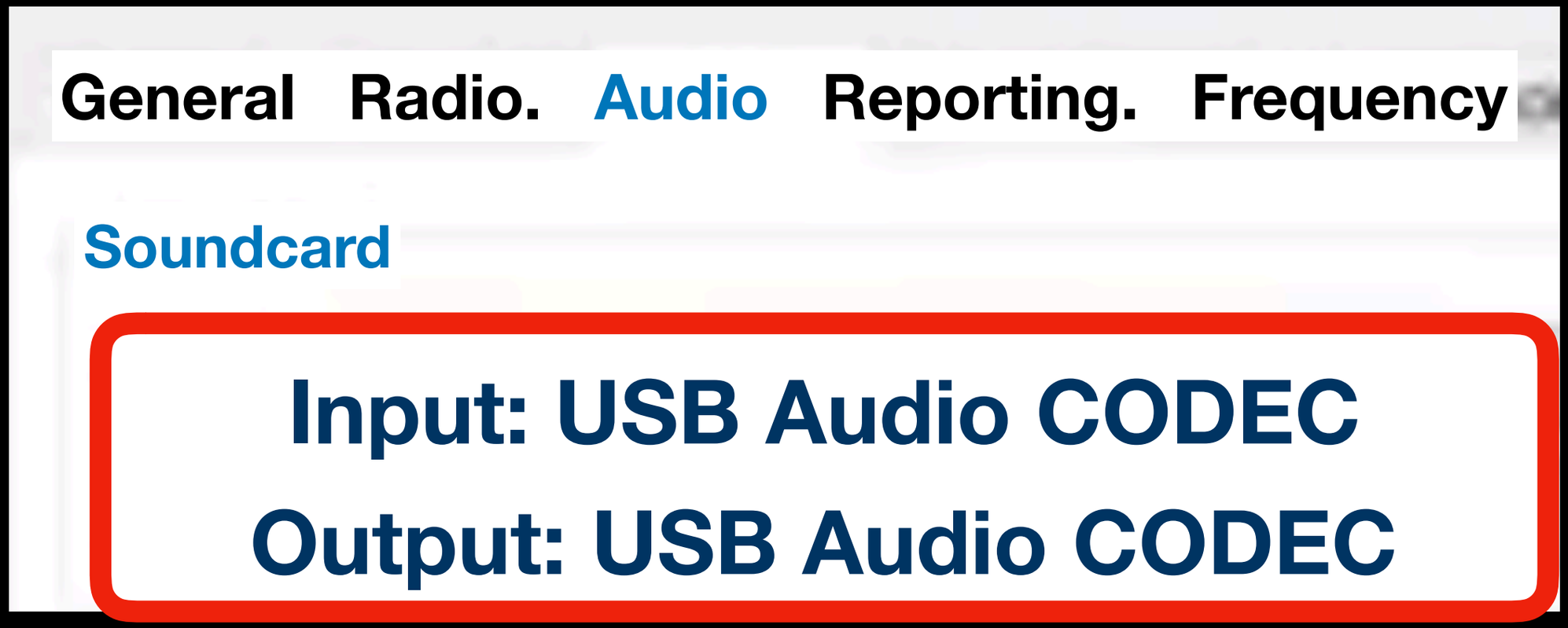
Station Behavior

Start with Defaults

Radio Settings

Select <u>Serial Port used by your system</u>.

Audio Settings



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 you can save. 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 . . .

DIDDLING 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

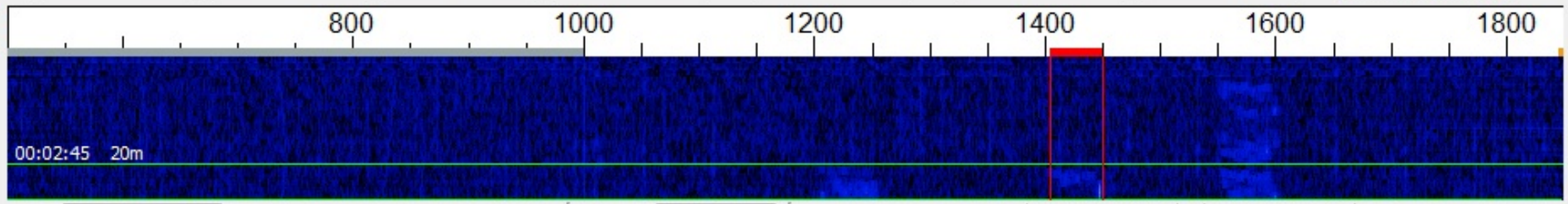
00:02:51 - (1400) - KC2LM: K7SH DID NOT SEE MUCH ON JS8 QSO PARTY LAST WKEND. ANT 42 FT VERT K7SH HW CPY?

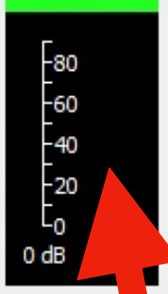
KC2LM: K7SH DID NOT SEE MUCH ON JS8 QSO PARTY LAST WKEND. ANT 42 FT VERT K7SH HW CPY?

★	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

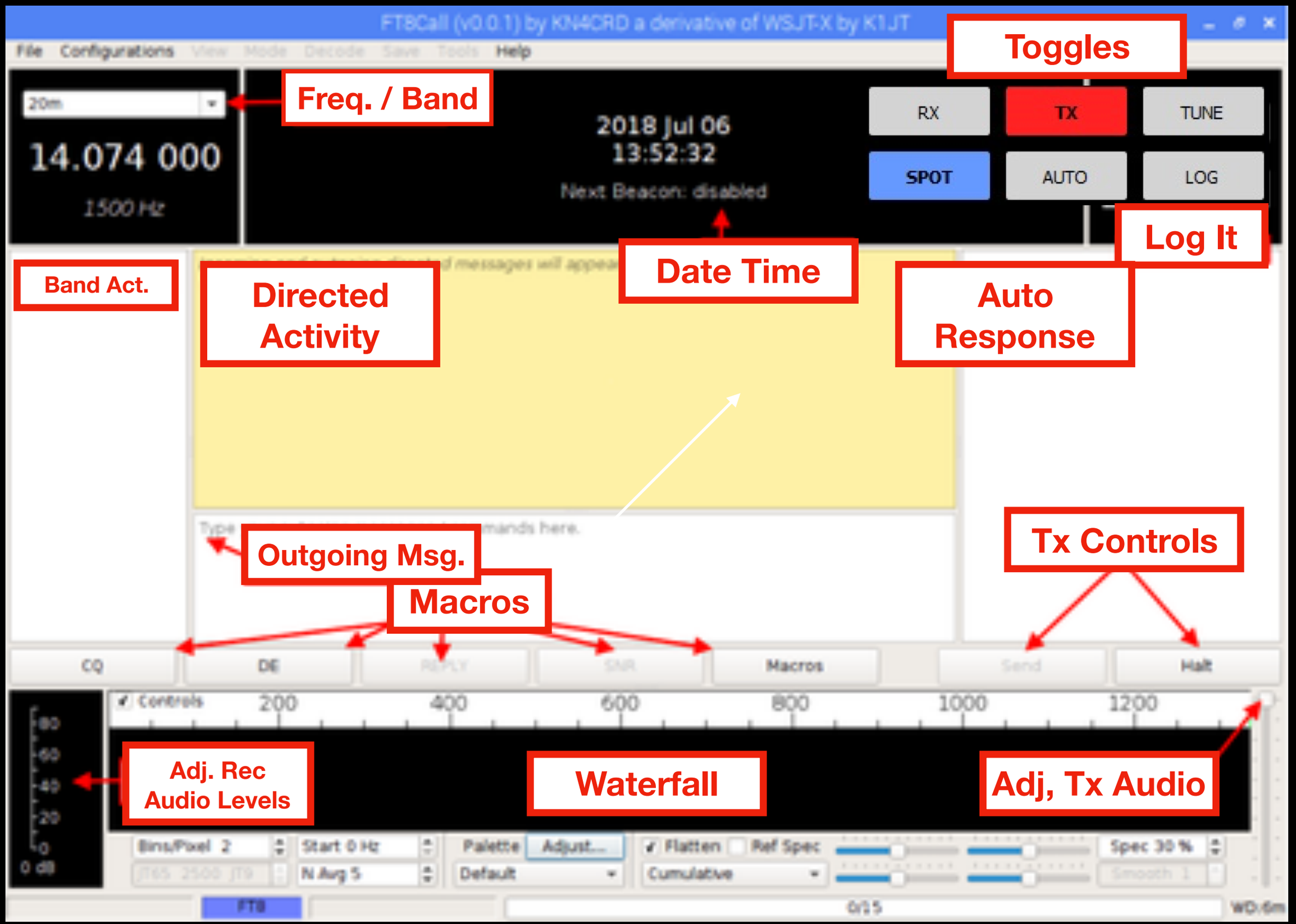




QSY Bins/Pixel 2 Start 500 Hz Palette Adjust... Flatten Ref Spec Spec 0 %
Center 1500 Hz Offset 1404 Hz N Avg 1 Default Cumulative Smooth 1

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

Set Audio Level at 40 dB


FT8Call (v0.0.1) by KN4CRD a derivative of WSJT-X by K1JT
File Configurations View Mode Decode Save Tools Help
Toggles
20m
Freq. / Band
14.074 000
1500 Hz
2018 Jul 06
13:52:32
Next Beacon: disabled
RX
TX
TUNE
SPOT
AUTO
LOG
Log It
Band Act.
Directed Activity
Date Time
Auto Response
Outgoing Msg.
Macros
Tx Controls
CQ
DE
REPLY
SNR
Macros
Send
Halt
Controls
200
400
600
800
1000
1200
Adj. Rec Audio Levels
Waterfall
Adj, Tx Audio
Bins/Pixel 2
Start 0 Hz
Palette
Adjust...
Flatten
Ref Spec
Spec 30 %
N Avg 5
Default
Cumulative
FT8

Constructing JS8 Messages

- **Messages are typed into the "Outgoing Message Box"** ***(The Lower Center Section)***

- **The software separates the message into a series of frames for transmission of 15 seconds each.**

- **Each frame is 13 characters, including spaces, ….**

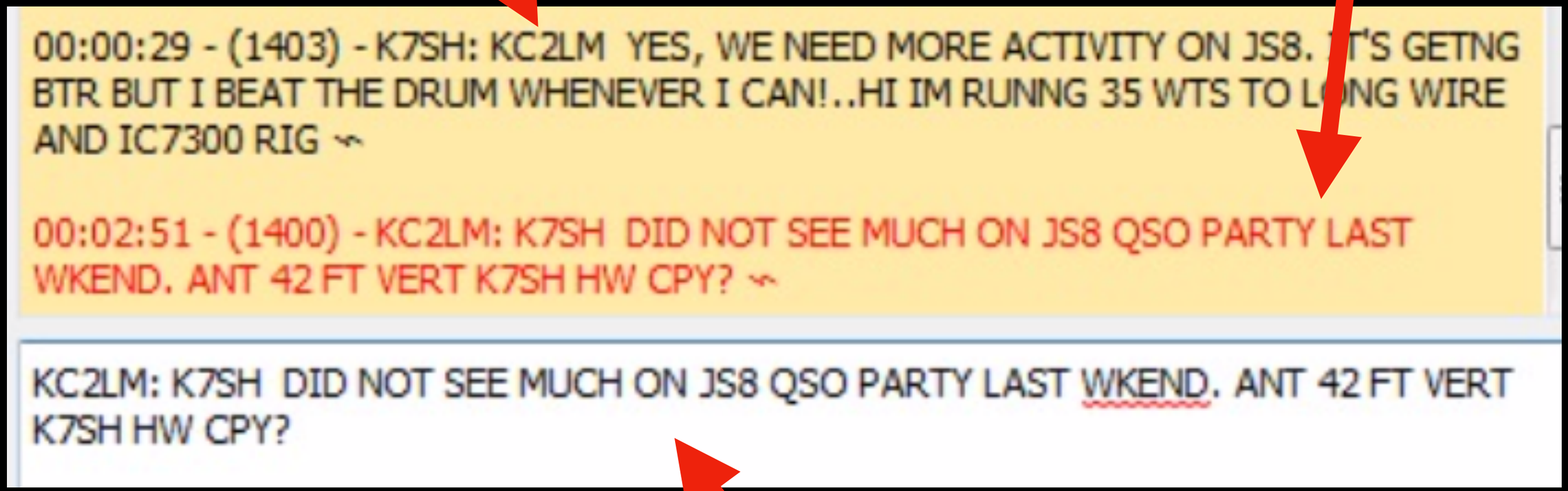
- **Longer text messages require additional frames**

- **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.



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

Each Transmission is a Message 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 D	D NOT SEE MU	CH ON JS6 QSO	PARTY LAST

Each Frame is 13 characters in a 12.5 second transmission with a 2.5 second break.

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 Lightening 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 ↶

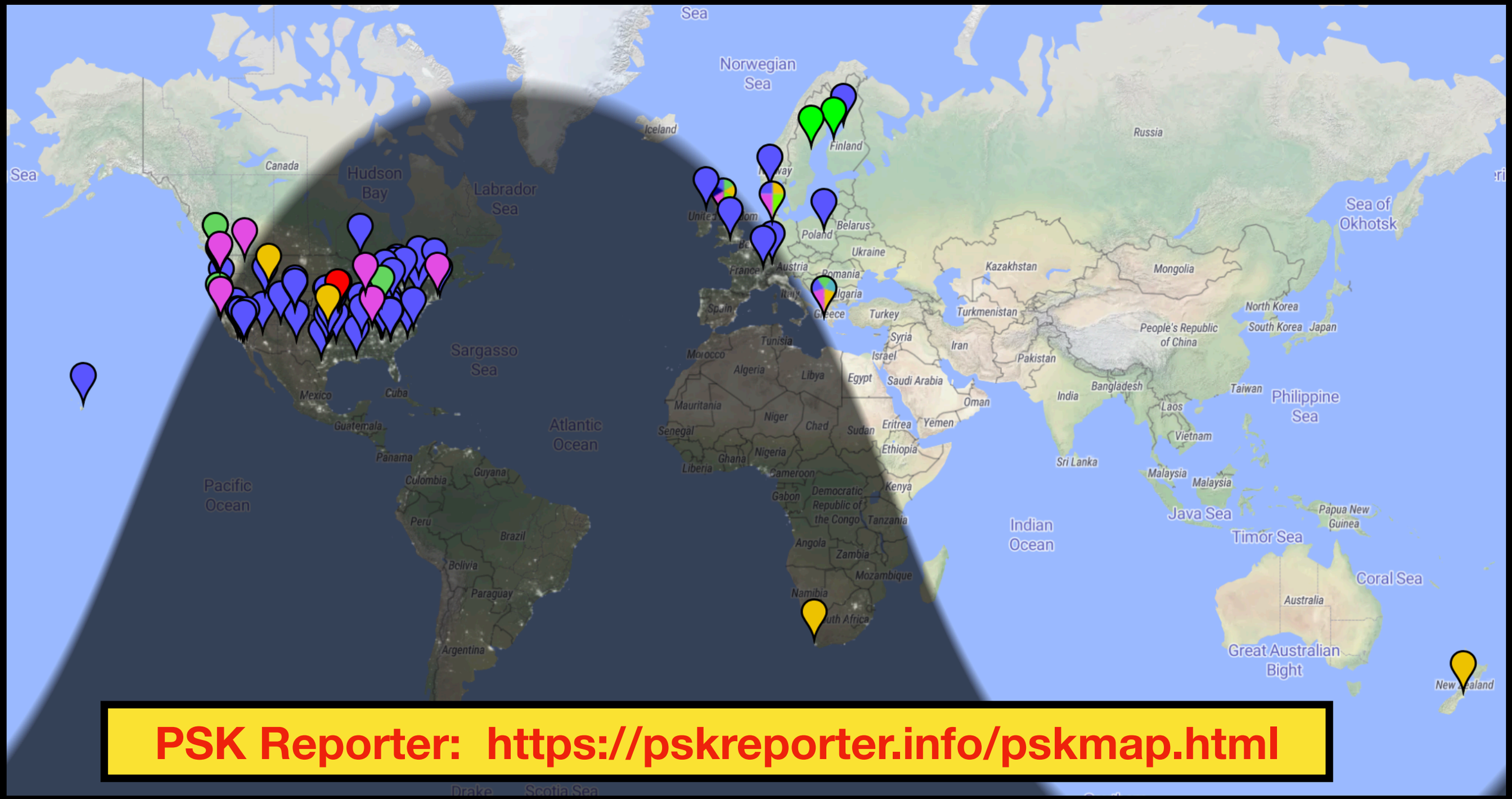
18:11:35 - (1181) - KC2LM: WD9DUI TNX 4 REPRT. WORKED CUACAO ON 10 CW, SO MAY BE THNGS R LOOKIN UP. ↶

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, kn4crd@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.**

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.**

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?