



# VarAC

HF Chat reinvented

**Download the VarAC V5.0.2.0 Software:**

<https://www.varac-hamradio.com/download>

**English Manuals by VarAC Users:**

<https://www.varac-hamradio.com/forum/manuals/english-manuals-by-varac-community>

## Windows prerequisites

Windows 8.1 and above  
(some hams reported that Win7 also works)  
.NET framework 4.X or above

## Linux / Pi / Mac prerequisites

WINE platform  
Use [Winelink](#) or stand alone install [manual](#)

## VarAC Quick Start Guide

<https://www.varac-hamradio.com/forum/manuals/varac-quick-start-guide>

# Station Requirements

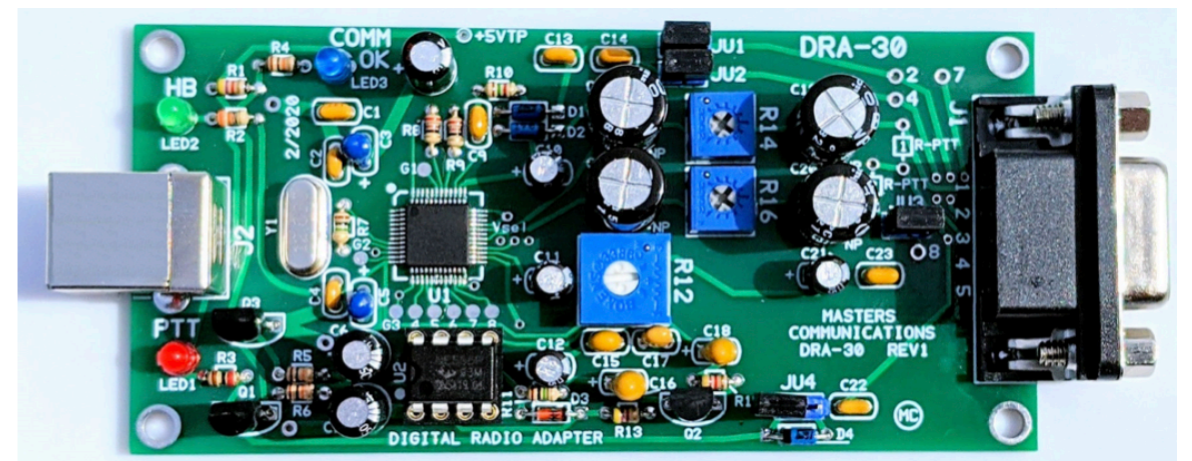
*If you can operate FT8, your station is already set-up for VarAC.*



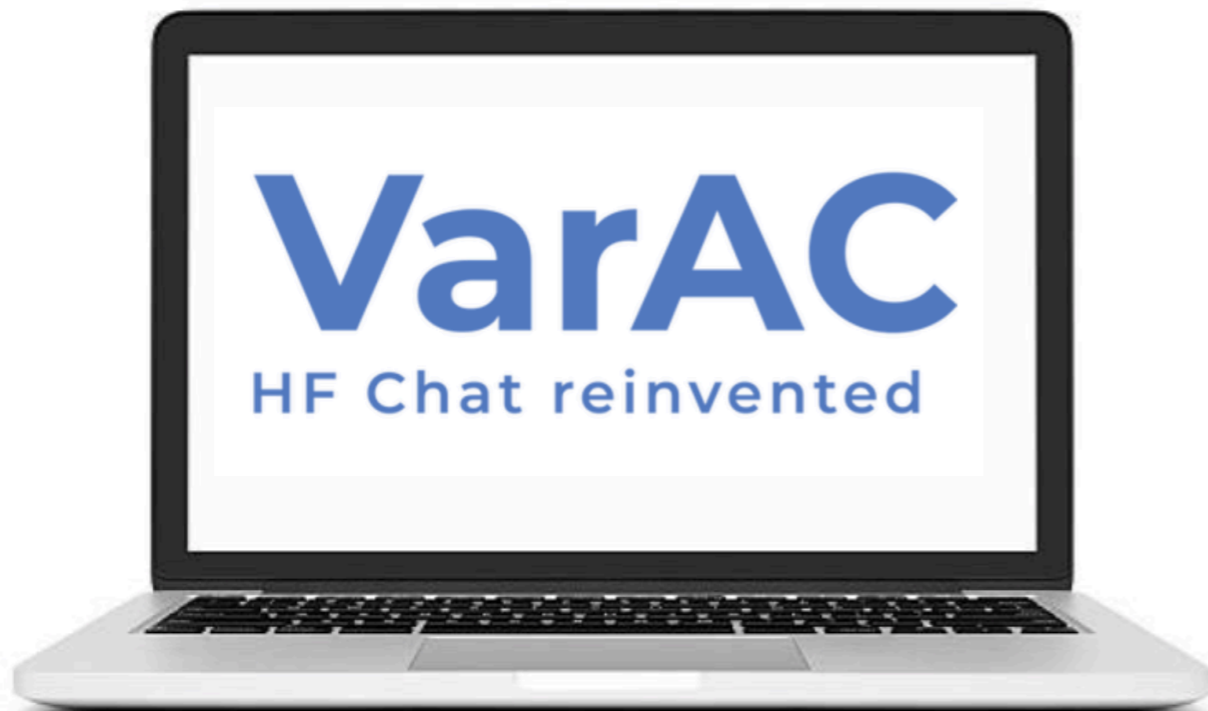
## Computer Interface



*OR*



## DRA-30



# Basic VarAC Configuration

<https://rosmodem.wordpress.com>

## EA5HVK software

10 January, 2011

 [VARA HF v4.7.4 \(High Performance HF Modem\)](#)

 [VARA FM v4.2.8 \(VARA for FM transceivers\)](#)

1. Make sure you installed VARA-HF modem. It can be downloaded from <https://rosmodem.wordpress.com>
2. **Unpack (Unzip) VarAC in a dedicated directory.** c:\VarAC can be a good place. **DO NOT** run it directly from the zip file!
3. Launch VarAC by double clicking the VarAC.exe file.
4. You will be asked to enter your callsign in the **"My callsign"** text box.
5. On the top menu select: **Settings --> RIG control & VARA Configuration**
6. Set your desired PTT and Frequency control modes (CAT/OmniRig/RTS/DTR) and use the TEST buttons to make sure they work. You can find [here](#) some screenshots of popular rigs configurations made by VarAC community members.
7. To allow VarAC to automatically launch your VARA modem, tell VarAC where the VaraHF modem is located under the **"VARAHF main file path"** section. Point it out to the **VARAHF.EXE** file you installed on step #1 (or VARAFM.EXE if you use VaraFM)
8. Make sure you select the right VaraHF port in the **"VARAHF main port"** section. The default port of VaraHF modem is **8300**
9. Click **"SAVE & CLOSE"**

# Settings to Get You Started

Settings

**PTT Configuration**  
 CAT  OmniRig  DTR/RTS  VOX/None  
Icom IC-7300  
TEST PTT ON TEST PTT OFF

**Frequency Control**  
 CAT  OmniRig  None  
Icom IC-7300  
 Read freq. every 2 sec  
Mode USB-D  
TEST 7105000

**VARA Modem Configuration**  
VARA modem type VaraHF  
**VARA-HF/FM Main**  
File path C:\VARA\VARA.exe Port 8300  
VARA-HF/FM Monitor (Optional) (?)  
File path C:\VARA-MON\VARA.exe Port 8350

**CAT Configuration**  
Port COM3  
Baud 115200  
Parity None  
Data bits 8 DTR HIGH  
StopBits 1 RTS HIGH

**OmniRig Configuration**  
Rig # 1

**DTR/RTS Configuration**  
Port  
Type DTR

**QSO Configuration**  
Call ID TX interval (min) 10 (?)  Allow last heard peeking (?)  
Auto disconnect 3 (?)  Allow non-ham callsigns (?)  
 Allow incoming pings (?)  
Callsigns block list  
Auto away status ON Minutes 10 (?)

**File Transfer**  
Incoming file size limit (bytes) 500 (?)  
Incoming files directory C:\Users\lrads\My Drive\Hamadio\varAC\  
Outgoing files directory C:\Users\lrads\My Drive\Hamadio\varAC\

**Logging**  
ADIF file C:\Users\lrads\My Drive\Hamadio\varAC\VarAC\VarAC\bin\Deb (?)  
Send log Log4OM(UDP) IP 127.0.0.1 Port 1200 (?)  
 Upload data to PSKReporter

**Beacons / CQs**  
Beacon interval (minutes) 15 (?)  
Load last heard history ON (?)

**Misc.**  
 Debug mode (?)

Test Error Log (?) I'm having trouble with CAT control

DOWNLOAD latest CAT command file

SAVE AND EXIT

# Features with VarAC V5.0.2.0

1. **Sending VMail** - *VarAC's own Email. Leave a message for the operator of a Beacon station. It let's you add something to the contact DURING OR AFTER on VarAC's on Newer Versions, once you had signed-off. They will pick it up the next time they log on.*
2. **VarAC Slots** - *New and Expanded QSY Methodology - This permits a more efficient use of the bandwidth.*
3. **Log** *Many QSO Elements, Text sent to you within "Canned Messages" is automatically stored.*
4. **Guidance with Frequency Change** - *A text box tells you what frequency you **should be on** based on your own Slot Selection.*
5. Custom **PSK Reporter** *Link to a Map - Stations that heard you are listed.*
6. **EmComm Version** - *ICS "Mime" Forms are downloaded and stored. They can be used to send EmComm ICS Messages to Agencies providing emergency services in a format with which they are familiar.*
7. **QSO History Revealed** - *Text messages let you know IF you have worked before.*

# Sample Text Exchange

18:45:40 - K5DSJ> I loved the Las Cruces area. My son lives on the west side of El Paso.

18:46:06 - KC2LM> Wx today, cloudy es cool. Temp about 68 Deg F.

18:46:12 - K5DSJ> de K5DSJ <R+06>

18:46:19 - KC2LM> de KC2LM <R-05>

18:46:41 - K5DSJ> He goes to NMMSU

18:47:24 - KC2LM> Retires school teacher. Other hobbies, motorcycle touring and paragliding.

18:47:56 - K5DSJ> Partly cloudy and 74 Deg here. Spring, TX, just north of Houston.

18:48:19 - KC2LM> Age 76, Been ham since 1961

18:49:03 - K5DSJ> Age 65. Only been a ham since 2000.

18:49:29 - KC2LM> Been to your area, niece lives in Houston, far more humid than NM. But NM

18:49:58 - K5DSJ> Found a new hobby during all the pandemic mess.

18:50:30 - KC2LM> I operate most digital and CW modes.

18:50:36 - K5DSJ> I liked the drier climate. No hurricane worries either.

18:51:36 - K5DSJ> I like SSB and am learning CW. I hunt POTA stations.

18:52:39 - KC2LM> No hurricanes, No rain, period, but lots of snakes! I have a rattler living under  
figure, I'm ahead.

18:53:31 - KC2LM> I too op POTA, and activate NM Parks a few times a month.

18:54:37 - K5DSJ> Logging into a zoom channel where I hang out with some other buddies and

18:55:42 - K5DSJ> He was featured in the Feb edition of QST.

18:56:04 - KC2LM> OK! 73s, David es tnxs for the chat

18:56:10 - K5DSJ> de K5DSJ <R+06>

# VarAC Work Space

Operating Frequency On Display

14.106.5

SLOT & Calling Frequency On Display

NO NEW VMails

SLOT Frequency On Display

Last Heard Beacons

Last Heard CQs

Bnd	Time	Callign	BW	SNR	Slot
20m	21:41	SP3IEW	500	-04	13
20m	21:40	HB9TJM	500	-05	
20m	21:39	SA7FKR	500	-10	
20m	21:39	M7CQA	500	-14	
20m	21:37	SM7DUZ	500	-15	
20m	21:30	HB9AVK	500	-16	
20m	21:29	J41PAN	500	+01	
20m	21:24	TF3AO	500	-18	

Bnd	Time	Callign	BW	SNR	Slot
20m	21:42	NC3Z	500	-11	13
20m	21:37	J41PAN	500	-13	
20m	21:05	PE1LUP	500	-15	
20m	20:44	W1IZZ	500	-13	12
20m	20:34	PD3EVT	500	-12	
20m	20:03	EA1FFT	500	-14	
20m	19:51	PD0MO	500	-11	

See Hx

Provides the text from the last QSO w/ this station

Progress Bar for Tx & Rec. Messages & Files

Clickable Links to Features

- SEND FILE
- SEND VMails
- PSK MAP
- Gestures

Messages Currently Being Sent

MSGs in Queue

CallSign RST-S. RST-R. Band. Name QTH LOC. Start Time End Time

NC3Z -09 -03 20m FM15qd 2022-07-16 21:43:11

New Message

*Write your text message, HERE.*

CANNED MESSAGE Pull Down Menu

CLICK HERE to SEND MSG

LOG

SEND

# CQ Slot Selector

STEP #1: Select a slot

Slot ID:	5	4	3	2	<b>Popular</b> 1	<b>Calling Frequency</b> 14.105.000	<b>Popular</b> 11	12	13	14	15
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
						<input type="radio"/> Slot #0					
						14.108.000	Selected Slot frequency Make sure the slot is not out of band!				

STEP #2: Check if the slot is free

Available only with CAT freq. control

SLOT SNIFFER

Click and hold

STEP #3: Call CQ

CALL CQ

VarAC will QSY to the slot once the CQ on the calling QRG ends

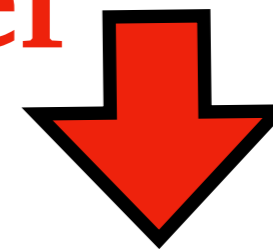


# How Slot Frequencies Work

1. **Calling CQ**, Pick a Slot Frequency, there are 5 kHz Below & 5 kHz Above the Calling Frequency
2. Use the **Slot Sniffer** (*for CAT controlled rigs*) to Identify slots that are FREE. *If without CAT Control, you will have to do this manually.*
3. CQ transmits on the Calling Frequency (*20 meters, 14.105.0*) and Identifies the SLOT you selected.
4. You, Working Manually or Your Rig (*for those with CAT*) will QSY to the selected slot and wait for an incoming call
5. A station double-clicks on your call appearing in the CQ Box and will automatically QSY (*If CAT is used*) to the selected SLOT, initiating contact

**The Software will Guide You Through the Process.**

# Slot Identifier



## Last Heard CQ Calls

Band	Time	Callsign	BW	SNR	Slot
20m	21:42	NC3Z	500	-11	13
20m	21:37	J41PAN	500	-13	
20m	21:05	PE1LUP	500	-15	
20m	21:24	W1IZZ	500	-11	14
20m	20:34	PD3EVT	500	-12	
20m	20:03	EA1FFT	500	-14	
20m	19:51	PD0MO	500	-11	

CQ Calling frequency

**14.105.000**

Slot #0

11    12    13    14    15

**14.108.000**

Selected Slot frequency  
Make sure the slot is not out of band!

To Answer W1IZZ's CQ,  
Set Your Radio to his  
**Slot Frequency** (14.108.000)  
And then **CLICK** on his Call Sign

# Last Heard Beacons

*Beacons are Transmitted on Calling Frequencies*

Band	Time	Callsign	BW	SNR
20m	21:39	SA7FKR	500	-10
20m	21:39	M7CQA	500	-14
20m	21:37	SM7DUZ	500	-15
20m	21:30	HB9AVK	500	-16
<b>20m</b>	<b>21:28</b>	<b>JA1PAN</b>	<b>500</b>	<b>-01</b>
20m	21:24	TF3AO	500	-18

- \* Beacons are usually sent automatically by an unattended station.
- \* Here is a Strong Signal From Japan
- \* Click on **JA1PAN** to Initial a **PING** (*a Signal Report*). *Select PING from the pull Down Menu*

Use “Ping”  
To Get  
S/N Report

## Last Heard Beacon

Bnd	Time	Callsign	BW	SNR	Last heard
40m	19:00	KJ7ROX	500	-12	

Clear  
Copy all  
Ping (get report)

Disable PTT      FREQ SCHEDULE OFF

CONNECT MODEM      CONNECT      PING

DISCONNECT MODEM      DISCONNECT      ABORT

TUNE

CALL CQ      END CQ

SEND BEACONS

19:16:36 - PTT ON  
19:16:40 - PTT OFF  
19:16:40 - DISCONNECT  
19:16:40 - BUSY OFF

In QSO with  
Message  
File

TX   RX   0/0

Data stream

19:16:10 - CONNECTED TO KJ7ROX

19:16:17 - KJ7ROX> de KJ7ROX <LOC:DM44II>

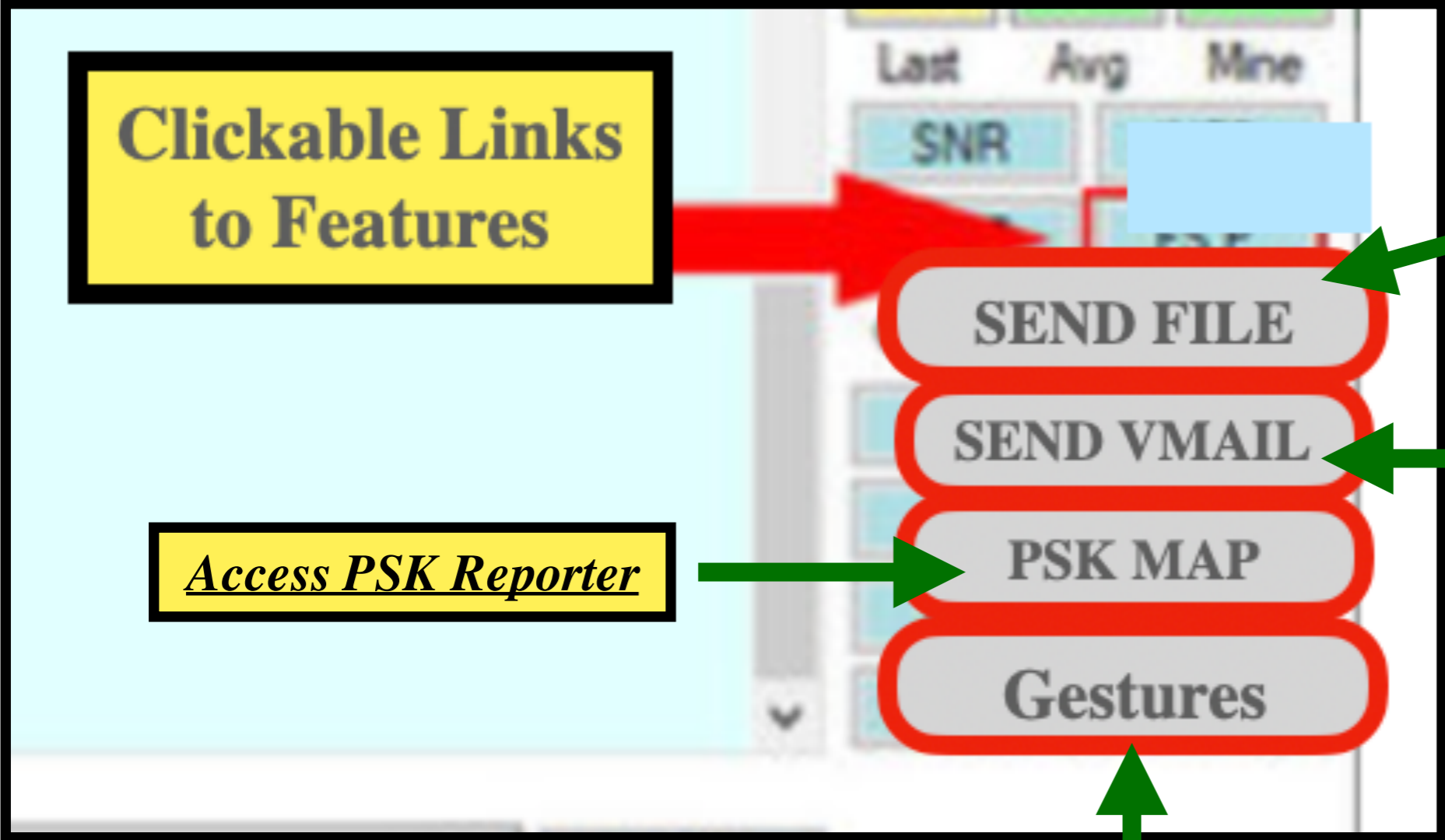
19:16:27 - KC2LM> PING de KC2LM <R-01><LOC:DM65pb>

19:16:34 - KJ7ROX> <R-10>

19:16:34 - PING RESULT: -10

19:16:40 - DISCONNECTED FROM KJ7ROX

# VarAC's Features



The image shows a screenshot of the VarAC interface with several callout boxes pointing to specific features. A red box on the left contains the text "Clickable Links to Features" with a red arrow pointing to a blue box in the interface. A yellow box on the right contains the text "Documents & Images" with a green arrow pointing to the "SEND FILE" button. Another yellow box on the right contains the text "Send Text Messages to Stations with Whom You Are Connected" with a green arrow pointing to the "SEND VMAIL" button. A yellow box on the left contains the text "Access PSK Reporter" with a green arrow pointing to the "PSK MAP" button. A green arrow also points from the bottom to the "Gestures" button.

**Clickable Links to Features**

*Documents & Images*

*Send Text Messages to Stations with Whom You Are Connected*

*Access PSK Reporter*

SEND FILE

SEND VMAIL

PSK MAP

Gestures

"DISCO" - will make sound.

"HIHI" - will make a smiley emoji 😊😊

"TU!" - will say "THANK YOU 🙏"

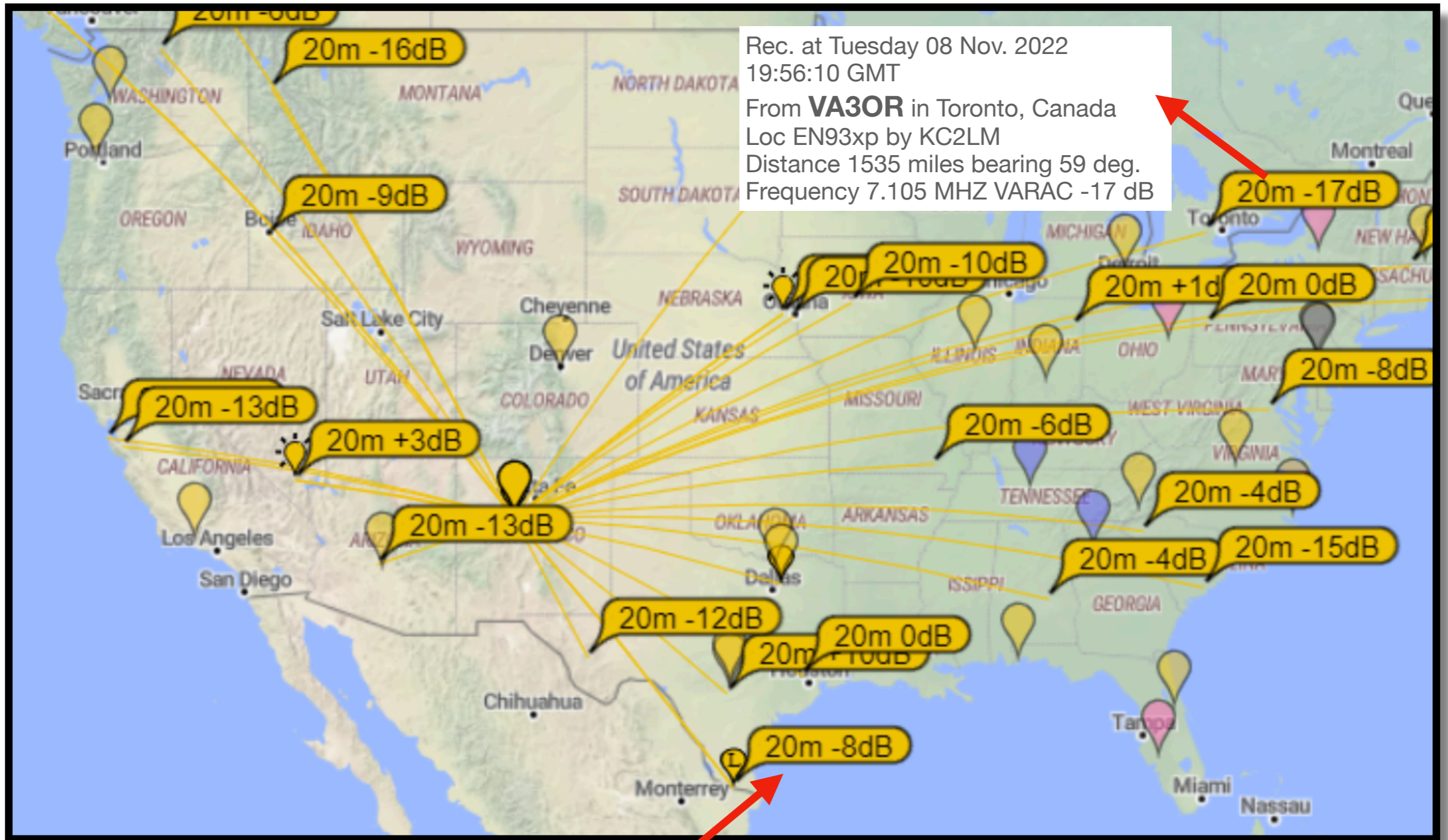
# Progress Bar



The Progress Bar Illustrates the Speed with Which the Message/File is Being Transmitted *OR* Received.

When Completed, the Text of the Message Appears on the Main Screen in **Red** for what's **Transmitted** and **Blue** for the **Received** Messages.

# PSK Map - Signal Results From Reporting Stations



Rec. at Tuesday 08 Nov. 2022  
19:56:10 GMT  
From **VA3OR** in Toronto, Canada  
Loc EN93xp by KC2LM  
Distance 1535 miles bearing 59 deg.  
Frequency 7.105 MHZ VARAC -17 dB

The Lines Show the Contact Pathways

20 Minutes ago, this station received my signal at -8db

# Using Canned Messages

Settings

Canned Msgs

1. Select Canned Messages from the Pull Down Menu
2. Fill-In Text Within the Canned Messages Panel
3. Be Sure to Complete the Title for Each Message
4. Message(s) within Brackets **<NAME>** **<Call>** **<RIG>** are developed when you first set-up the program OR from the QSO.

## Canned Messages

Welcome Welcome to KC2LM in Albuquerque, NM

35/100

I'm Away I am away. Please Leave a Message.

37/100

Canned Msg #1

<Name>  
<LOC> <SND>

Canned Msg #2

My Working Conditions <RIG>

Canned Msg #3

73 All the Best de <Call> <DISCONNECTING> <SND>

(?)

Tags

<SND> Auto send message  
<DISC> Disconnect  
<CALL> My Callsign  
<NAME> My Name  
<QTH> My QTH  
<LOC> My Locator  
<RIG> My RIG

Name

My INFO

Name

RIG

Name

73



# QSO Details Are Sent to the Logging Section

CALLSIGN	RST-S	RST-R	BAND	NAME	QTH	LOC
NC3Z	-08	-03.	20m	Gary	Merrit, NC.	FM15qd

New Message

**Text Typed Here will be Sent on the Next Exchange.**

- \* Text Messages are Transmitted Between Stations in a Hand-Shake Mode
- \* The Speed of the Message Transfer Depends on the Signal Strength
- \* The Application Adjusts Its Speed Based On Its Connectivity
- \* Messages Are Sent/Received, Error Free

# Popular Operating Calling Frequencies

20m - 14.105 MHz (Primary - day time)

40m - 7.105 MHz (Primary - night time)

80m - 3.595 MHz

30m - 10.133 MHz

17m - 18.106 MHz

15m - 21.105 MHz

12m - 24.927 MHz

10m - 28.105 MHz

6m - 50.330 MHz

**OK for Techs**



*Questions?*

*Comments?*

*Who wants to Try It?*