



VarAC

HF Chat reinvented

Technical overview

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The screenshot displays the VarAC (V4.1.6) interface. At the top, it shows the current frequency set to 14.105.000 and the call sign 4Z1AC/GRP. The interface includes various control buttons such as 'CONNECT MODEM', 'DISCONNECT MODEM', 'TUNE', 'SEND BEACONS', 'CONNECT', 'PING', 'DISCONNECT', 'ABORT', 'CALL CQ', and 'END CQ'. A 'Data stream' window shows a chat log with messages from other users, including G4ROR and 4Z1AC/GRP. A 'Last heard beacons' table is visible, listing various call signs and their corresponding frequencies and SNR values. The interface also features a 'Messages in queue' section and a 'New message' input field.

Brnd	Time	Callsign	BW	SNR
20m	08:47	IZ3XJH	500	-19
20m	08:46	LA1AEA	500	-18
20m	08:42	DL5BCA	500	-03
20m	08:42	PE1PUX	500	-04
20m	07:25	VPSNAM	500	-19
20m	07:08	MG0RUH	500	-15
20m	07:07	OM2ABC	500	-20
20m	07:03	H8SAVK	500	-13

Agenda

- What is VarAC?
- About the VARA protocol & Modem
- Architecture
- Basic VarAC setup
- VarAC Beacons
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- CQ & The slots system
- Calling frequencies
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- Q & A

About us



4Z1AC
Irad Deutsch



NC3Z
Gary Mitchelson

The rational behind VarAC

What is VarAC?

- VarAC is a point-to-point digital chat application that provides a modern chat experience to the hamradio operator.
- VarAC uses the VARA protocol. Loss-less ARQ mode.
- Great speed under challenging SNR levels
- Ideal for QRP, Portable operations & EmCom
- VarAC can be used on HF, VHF/UHF (FM) and also Satellite (QQ-100)
- Over 6,000 registered users to date

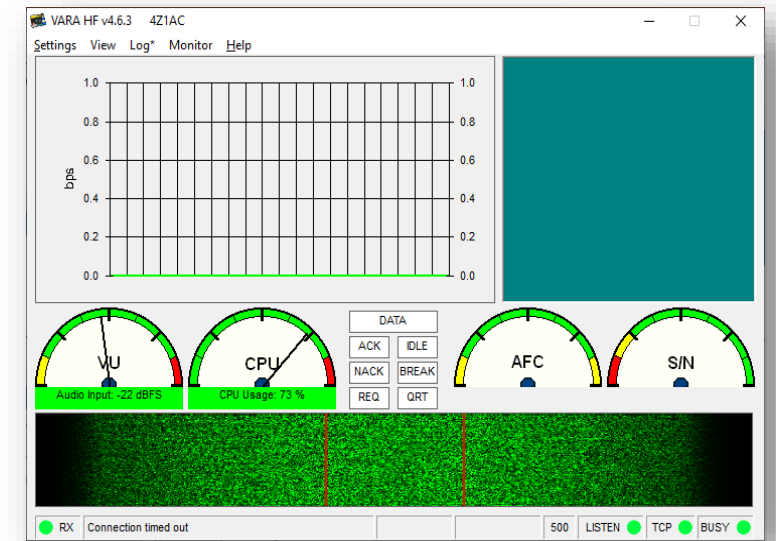
Download link: <https://www.varac-hamradio.com/download>

Demetre, M0SUY/P, doing portable VarAC operation



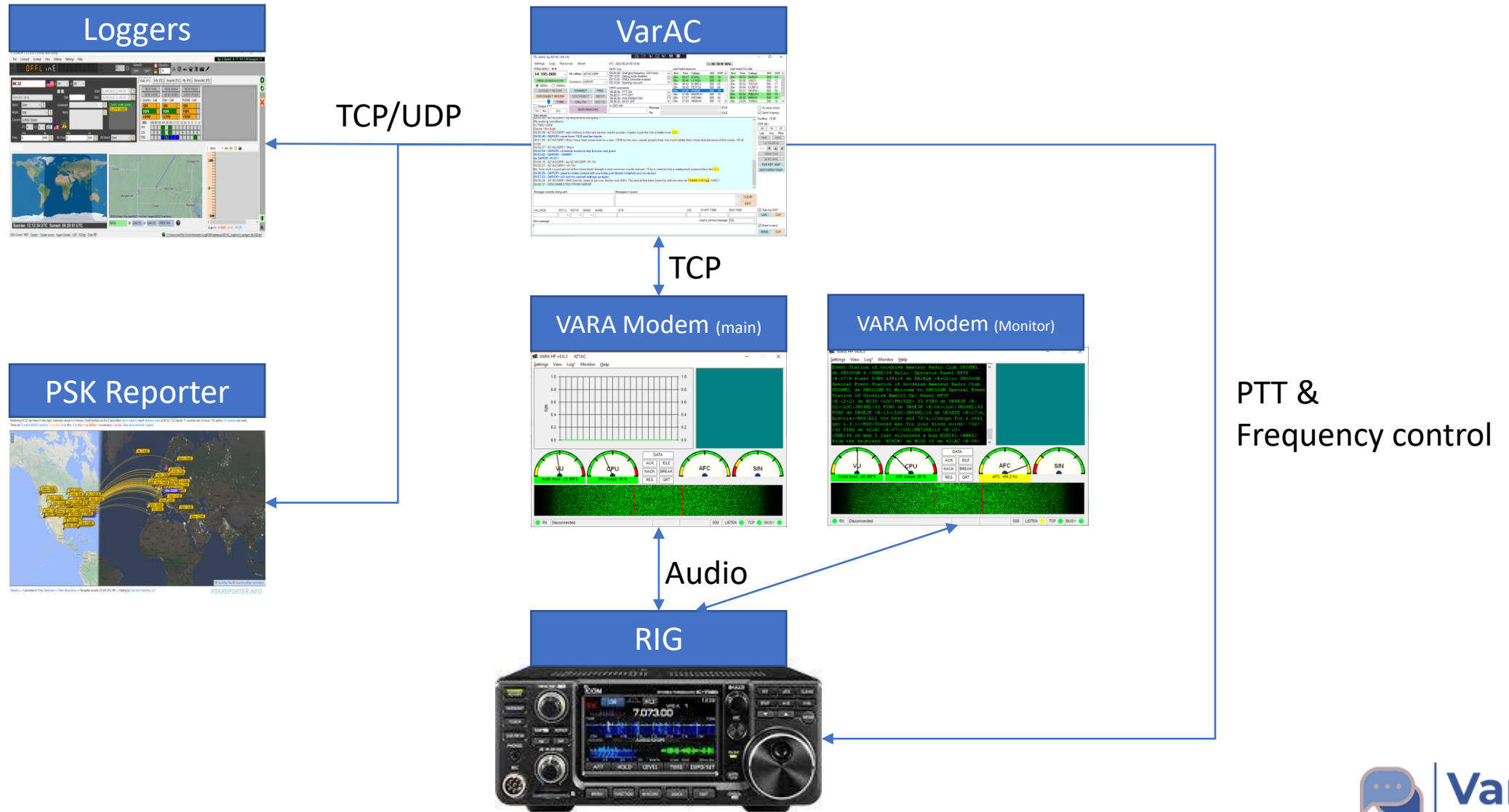
What is VARA

- Created by Jose Alberto Nieto Ros, EA5HVK
- ARQ, error free protocol
- Available modems :
 - VARA HF - Up to 1,543 BPS at 500Hz BW / 7,050 BPS at 2300Hz BW
 - VARA SAT – Like HF but with additional latency handling
 - VARA FM – Up to 12,750 BPS Narrow / 25,210 BPS Wide
- Free license version available with speed limit of 170 BPS



Download link: <https://rosmodem.wordpress.com/>

VarAC Basic Architecture



Basic VarAC setup

Things you MUST config:

- VARA modem connectivity
- PTT configuration

Supported RIG control:

- **CAT:** Direct CAT or through OmniRig
- **PTT:** Direct CAT or RTS/DTR

Other important configuration:

- Frequency control
- Vara monitor
- Beacon interval
- QSO logger integration
- PSK Reporter

The screenshot shows the 'Settings' window for VarAC, organized into several sections:

- PTT Configuration:** Radio buttons for CAT (selected), OmniRig, and VOX/None. A dropdown menu shows 'Icom IC-7300'. Buttons for 'TEST PTT ON' and 'TEST PTT OFF' are present.
- Frequency Control:** Radio buttons for CAT (selected), OmniRig, and None. A dropdown menu shows 'Icom IC-7300'. A checkbox 'Read freq. every' is checked with a value of '2' seconds. A 'Mode' dropdown shows 'USB-D' and a 'TEST' dropdown shows '7105000'.
- CAT Configuration:** Fields for Port (COM3), Baud (115200), Parity (None), Data bits (8), DTR (HIGH), StopBits (1), and RTS (HIGH).
- OmniRig Configuration:** A 'Rig #' dropdown menu showing '1'.
- DTR/RTS Configuration:** Fields for Port and Type (DTR).
- VARA Modem Configuration:** VARA modem type (VaraHF), VARA file path (C:\VARA\VARA.exe) with Port 8300, and VARA monitor path (Optional) (C:\VARA-MON\VARA.exe) with Port 8350.
- QSO Configuration:** Call ID TX interval (10 min), Auto disconnect (2), Callsigns block list, Auto away status (ON, 10 Minutes), and checkboxes for 'Allow last heard peeking', 'Allow non-ham callsigns', and 'Allow incoming pings'.
- File Transfer:** Incoming file size limit (500 bytes), Incoming files directory (C:\Users\lrad\My Drive\Hamadio\varAC\), and Outgoing files directory (C:\Users\lrad\My Drive\Hamadio\varAC\).
- Logging:** ADIF file path, Send log (UcxLog(UDP)), IP (127.0.0.1), Port (2237), Mode (DYNAMIC), and Submode (VARA HF).
- PSKReporter:** Checkboxes for 'Upload' and 'Self report', and a 'Custom map' field with '&timerange=21600&s'.
- Beacons / CQs:** Beacon interval (15 minutes), Digipeat via, Load last heard history (ON), CQ Slot wait (180 seconds), and a checkbox for 'Skip CQ slot selector'.
- Misc.:** A checkbox for 'Debug mode' and a 'Show distance in' dropdown menu set to 'KM'.

At the bottom, there is a 'DOWNLOAD latest CAT command file' link and a 'SAVE AND EXIT' button.

You can customize CAT commands in `VarAC_cat_commands.ini`

Beacons

- Letting people know you are “Online”
- Great for propagation analysis (Spots also uploaded to PSK Reporter)
- Minimum beacon interval: 15 minutes
- Beacons fires only if the frequency is clear for at least 30 seconds

The screenshot shows the VarAC by 4Z1AC (V5.3.2) interface. The 'SEND BEACONS' button is highlighted with a red box. The 'Last heard beacons' table is also highlighted with a red box and contains the following data:

Bnd	Time	Callsign	BW	SNR
20m	22:13	W4RJG	500	-16
20m	22:13	K1DOW	500	-09
20m	22:08	SA7FKR	500	-17
20m	22:04	N2SCD	500	-21
20m	22:01	NC3Z	500	-05
20m	21:39	M0SUJY	500	-22
20m	21:02	SM7DUZ	500	-16
20m	20:55	DB2LP	500	-16

The interface also shows a 'Data stream' window with the following log entries:

```
21:40:54 - CONNECTED TO NC3Z
21:41:30 - 4Z1AC> <SM><TO:K1DOW><FRM:4Z1AC><SBJ:RE:V5.3.1><MSG:Thanks man for your kinds words! 73s!>
21:41:36 - NC3Z> de NC3Z <LOC:FM15QD>
21:41:57 - 4Z1AC> PING de 4Z1AC <R-07><LOC:KM72KB>
21:42:02 - NC3Z> <R-10>
<SMR>
21:42:02 - PING RESULT: -10
21:42:02 - VMAIL DELIVERED SUCCESSFULLY
21:42:11 - 4Z1AC> oh man I just witnessed a bug HIHI
21:42:12 - DISCONNECTED FROM NC3Z
21:43:13 - CONNECTED TO NC3Z
21:43:25 - NC3Z> <AWAY> from the keyboard. 🙄🙄 de NC3Z
21:43:37 - 4Z1AC> de 4Z1AC <R-08>
21:43:46 - NC3Z> <R-09>
21:43:58 - DISCONNECTED FROM NC3Z
```

Ping

- Used to check connectivity with a station
- Exchanges SNRs so you know how you are being heard
- Disconnects immediately after SNR exchange.

The screenshot shows the VarAC by 4Z1AC (V5.3.2) software interface. The main window is titled "VarAC by 4Z1AC (V5.3.2)" and shows the current frequency set to 14.105.000. The "CONNECT" button is highlighted in green, and the "PING" button is highlighted with a red box. A context menu is open over the "PING (get report)" button, also highlighted with a red box. The interface displays various controls like frequency, mode, and a log window showing the results of the ping operation.

Log window content:

```
21:40:54 - CONNECTED TO NC3Z
21:41:30 - 4Z1AC> <SM><TO:K1DOW><FRM:4Z1AC><SBJ:RE: V5.3.1><MSG:Thanks man for your kinds words! 73s!>
21:41:36 - NC3Z> de NC3Z <LOC:FM15QD>
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<SMR>
21:42:02 - PING RESULT: -10
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21:43:46 - NC3Z> <R-09>
21:43:58 - DISCONNECTED FROM NC3Z
```

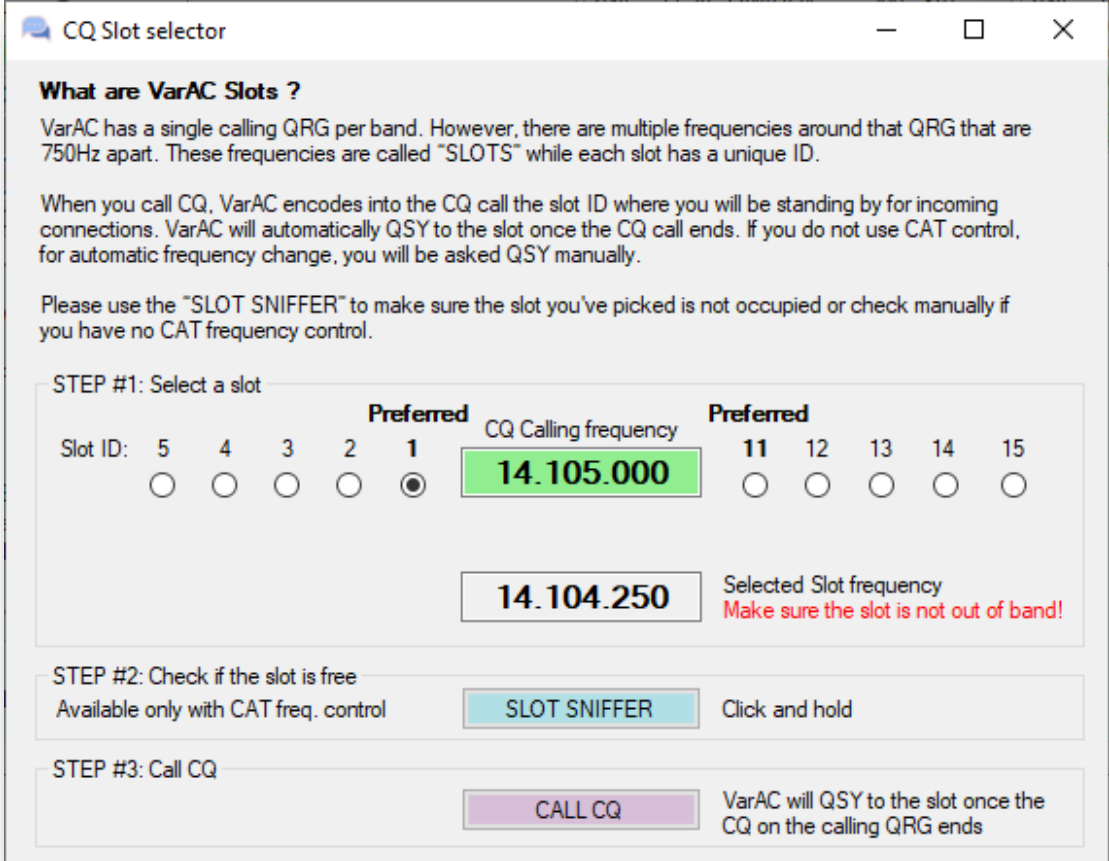
CQ & The Slots system

Provides scale with a single calling frequency

- Main calling frequency (CF) per band
- 10 slots around it. 5 below and 5 above
- 750Hz steps each

CQ Flow:

1. Pick a slot
2. Making sure it's free (using the slot sniffer)
3. Call CQ on the CF
4. VarAC will auto QSY to the slot
5. Double clicking a CQ automatically QSY to the slot and connects
6. No answer? Your Rig will QSY back to the CF



The screenshot shows a software window titled "CQ Slot selector". It contains the following text and controls:

What are VarAC Slots ?
VarAC has a single calling QRG per band. However, there are multiple frequencies around that QRG that are 750Hz apart. These frequencies are called "SLOTS" while each slot has a unique ID.

When you call CQ, VarAC encodes into the CQ call the slot ID where you will be standing by for incoming connections. VarAC will automatically QSY to the slot once the CQ call ends. If you do not use CAT control, for automatic frequency change, you will be asked QSY manually.

Please use the "SLOT SNIFFER" to make sure the slot you've picked is not occupied or check manually if you have no CAT frequency control.

STEP #1: Select a slot

Slot ID	5	4	3	2	1	CQ Calling frequency	11	12	13	14	15
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	14.105.000	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14.104.250 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

Calling Frequencies (CF)

- Use the Drop down to move between CFs
- You can use the Slot slider / little arrows to sniff around it.
- Add your own frequencies in **VarAC_frequencies.conf**

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

The screenshot shows the VarAC by 4Z1AC (V5.3.2) interface. On the left, a 'FREQUENCY' dropdown menu is open, showing a list of frequencies: 14.105.000, 3.105.000, 14.105.000, 7.105.000, 1.850.000, 3.595.000, 10.133.000, 18.106.000, 21.105.000, 24.927.000, 28.105.000, and 50.330.000. The main interface includes a 'MyCall' field (4Z1AC), a 'Connect' field (NC3Z), and a 'FREQ SCHEDULE ON' button. There are also buttons for 'CONNECT', 'PING', 'DISCONNECT', 'ABORT', 'CALL CQ', 'END CQ', and 'SEND BEACONS'. The right side of the interface features a 'Last heard beacons' table and a 'Last heard CQ calls' table. The 'Last heard beacons' table has columns for Bnd, Time, Callsign, BW, and SNR. The 'Last heard CQ calls' table has columns for Bnd, Time, Callsign, BW, SNR, and Slot. At the bottom, there are fields for 'CALLSIGN', 'RST-S', 'RST-R', 'BAND', 'NAME', 'LOC', 'QTH', 'START TIME', and 'END TIME', along with buttons for 'LOG', 'CLR', 'SEND', and 'CLR'.

Conducting a QSO

- IS TYPING indicator!
- Fully multilingual support! (even 4-bytes languages)
- Emoji support
- Incoming message will unfold as its being received.
- Message queue
- Called ID is sent periodically to comply with local regulations
- A status bar shows the progress of sending/receiving a message.
- Tags & gestures that will show symbols & play sounds
- All chat history is stored in a log file and can be viewed in the “callsign history” screen.
- Bi directional SNR exchange
- Auto QSO logging
- And much more!

The screenshot displays the VarAC by 4Z1AC (V5.3.2) software interface. The main window shows a QSO in progress with the call sign 4Z1ABC. The interface includes a top menu bar with 'Settings', 'Tools', 'Logs', 'Resources', and 'About'. The main area is divided into several sections: 'FREQUENCY' (14.105.000), 'SLOT', 'CF', and 'MyCall' (4Z0ACC/QRP). A 'Data stream' window shows the QSO log with timestamps and messages, including '19:22:41 - INCOMING CONNECTION REQUEST.. Hold tight!', '19:22:46 - CONNECTED TO 4Z1ABC', and '19:23:01 - 4Z0ACC/QRP> <AWAY> I'm away. Please leave a message.de <FC:4Z0ACC/QRP>'. The interface also features a 'Message' window, a 'Message queue', and a 'Callsign history' table. The table has columns for CALLSIGN, RST-S, RST-R, BAND, NAME, LOC, and QTH. The current call sign is 4Z1ABC, RST-S is +20, RST-R is +21, and BAND is 20m. The START TIME is 2022-09-21 19:22:46 and the END TIME is empty. The interface also includes a 'New message' input field, a 'SEND BEACONS' button, and a 'SEND FILE' button. The bottom right corner has a 'SEND' button and a 'CLR' button. The interface is in English and shows a 'BUSY' status.

Callsign history

Aggregates all activity of a station including:

- History of logged QSOs
- Spotted Beacons & CQs
- Previous chats

Callsign history

Callsign: History lookup

Recent information: QRZ Lookup

Name: PSK Reporter Lookup

QTH:

Locator:

Beacons history

Bnd	Time	BW	SNR
20m	2022-09-21 12:00	500	-14
20m	2022-09-21 11:24	500	-20
20m	2022-09-21 10:54	500	-19
20m	2022-09-21 10:23	500	-19
20m	2022-09-21 08:20	500	-16
20m	2022-09-21 08:05	500	-16
20m	2022-09-21 07:34	500	-14
20m	2022-09-21 06:47	500	-13

CQ calls history

Bnd	Time	BW	SNR
20m	2022-09-21 15:37	500	+00
20m	2022-09-21 15:37	500	-06
20m	2022-09-21 15:35	500	-02
20m	2022-09-21 15:35	500	-01
40m	2022-09-20 02:46	500	-01
40m	2022-09-20 02:46	500	-02
40m	2022-09-20 02:43	500	-03
40m	2022-09-20 02:41	500	+00

Previous QSOs (stored ADIF records)

QSO Time	Band	Frequency	RST-S	RST-R	Locator	QSO duration (min)
2022/09/16 17:50:46	20m	14.105000	-17	-06		7
2022/09/05 15:13:13	20m	14.105000	-14	+06		3
2022/09/05 11:41:10	20m	14.105000	-18	-04		11
2022/09/03 00:12:30	40m	7.105000	-10	+01		2
2022/09/02 08:38:41	20m	14.104250	-21	-12		5
2022/09/02 08:18:45	20m	14.104250	-13	+02		14
2022/08/30 20:58:14	20m	14.105000	-13	-15		2

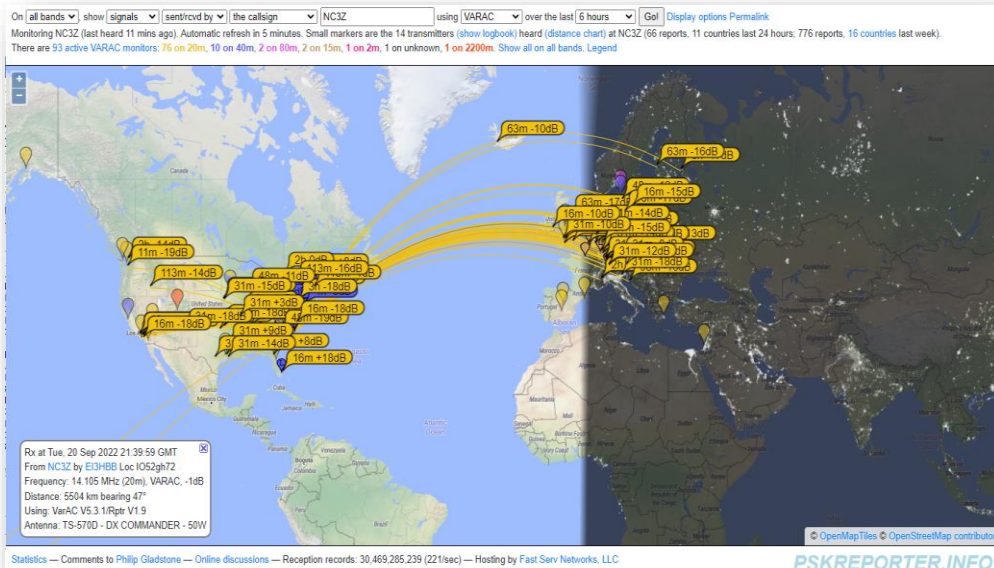
Chat history

```
10/07/2022 10:23:29 - 4Z1AC> Hi Paul. Nice to see you on the slot :)
10/07/2022 10:23:55 - HB9AVK> <R-10>
10/07/2022 10:24:10 - HB9AVK> i just switched to my GP antenna -
10/07/2022 10:24:56 - HB9AVK> it seems to be better to ur direction.
I also just sent u an e-mail. ok?
10/07/2022 10:25:48 - 4Z1AC> ur signal here is weak. lots of noise here. so way below the noise level
10/07/2022 10:26:00 - 4Z1AC> lets hope your GP will be better :)
10/07/2022 10:26:27 - 4Z1AC> yes. got ur vmail and now i see your email
10/07/2022 10:26:36 - HB9AVK> i am back on the LW ant cuz its strong at the moment... vy strange...
10/07/2022 10:27:14 - HB9AVK> anyway, glad to chat with you lad.
10/07/2022 10:27:33 - 4Z1AC> I am wokring remote btw. from office. taking oer my station rig
10/07/2022 10:27:41 - 4Z1AC> keeping an eye on the slow column looking for friends :)
```

CLOSE

PSK Reporter

- Every CQ and Beacon is reported to PSK Reporter
- Self reporting is also possible
- ~50,000 spots per day (to-date)
- Great tool to see how you are being heard
- You can customize your PSK reporter preferred view



Settings

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

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

VARA Modem Configuration
VARA modem type VaraHF
VARA file path C:\VARA\VARA.exe Port 8300
VARA monitor path (Optional) 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
Auto disconnect 2
Callsigns block list
Auto away status ON Minutes 10
 Allow last heard peeking
 Allow non-ham callsigns
 Allow incoming pings

File Transfer
Incoming file size limit (bytes) 500
Incoming files directory C:\Users\Irad\My Drive\Hamadio\varac\
Outgoing files directory C:\Users\Irad\My Drive\Hamadio\varac\
 Skip CQ slot selector

Beacons / CQs
Beacon interval (minutes) 15
Digipeat via
Load last heard history ON
CQ Slot wait (seconds) 180

Misc.
 Debug mode
Show distance in KM

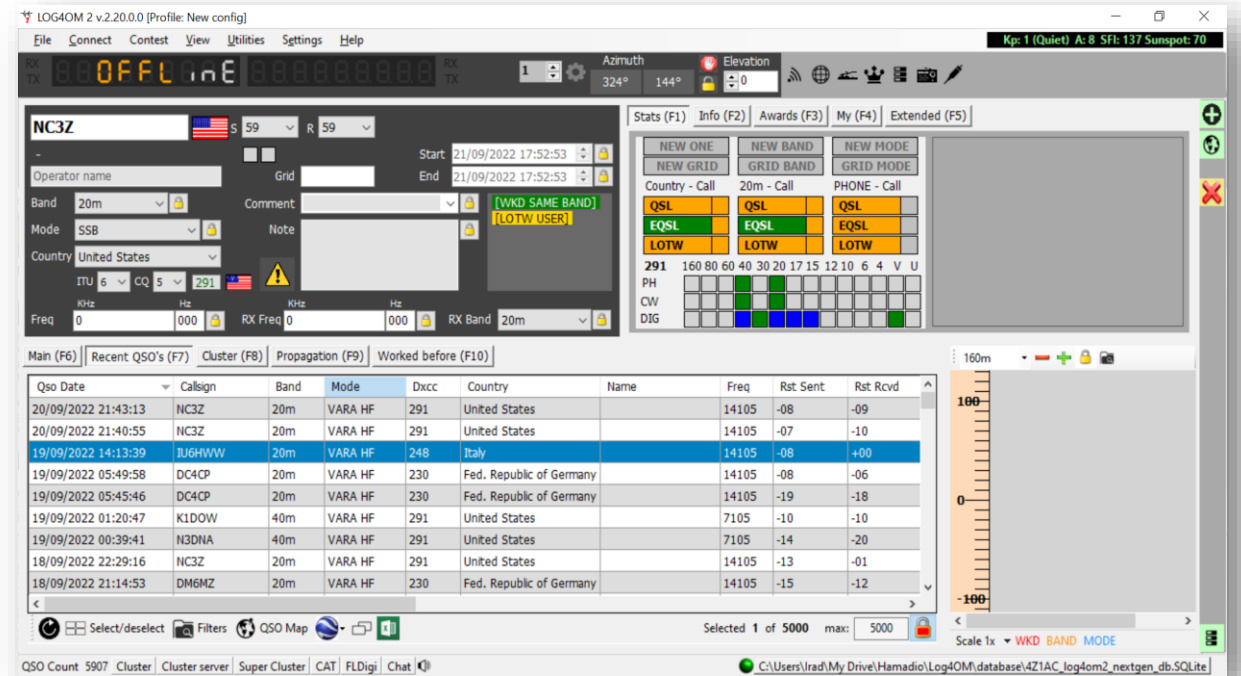
Logging
ADIF file C:\Users\Irad\My Drive\Hamadio\varac\VarAC\bin\Del
Send log UcxLog(UDP) IP 127.0.0.1 Port 2237
Mode DYNAMIC Submode VARA HF

PSKReporter
 Upload Self report Custom map &timerange=21600&s

DOWNLOAD latest CAT command file SAVE AND EXIT

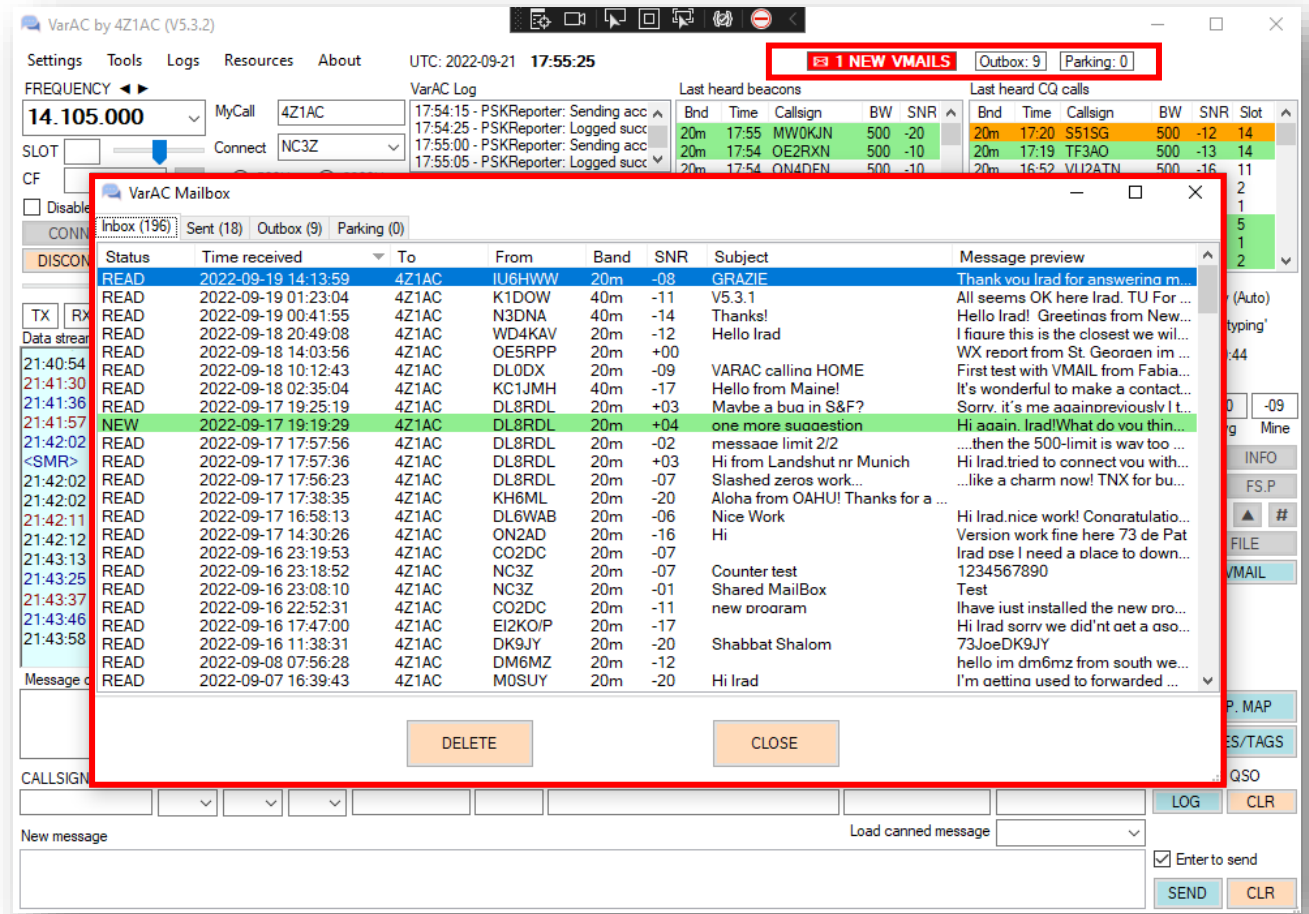
QSO Logging

- VarAC has its own ADIF log file that can be scanned by 3rd party loggers
- ADIF standard now includes VARA as a sub-mode of DYNAMIC.
- LOTW recently adopted this as well
- VarAC can send Logs (Using TCP/UDP) to:
 - DX Keeper
 - HRD log
 - Log4OM
 - N1MM
 - N3FJP
 - Swisslog
 - UcxLog
- Using those loggers you can automate uploads to QRZ, LOTW, EQSL etc.



Vmail Mailbox

- VarAC has an internal mailbox system
- Connecting an “AWAY” station will ask you to leave a VMail
- You can relay a message to a 3rd party through a mediator
- You can queue VMails in your Outbox. Those VMails will be forwarded once connected



The QSY Protocol

VarAC provides seamless QSY mechanism while keeping an ACTIVE LINK

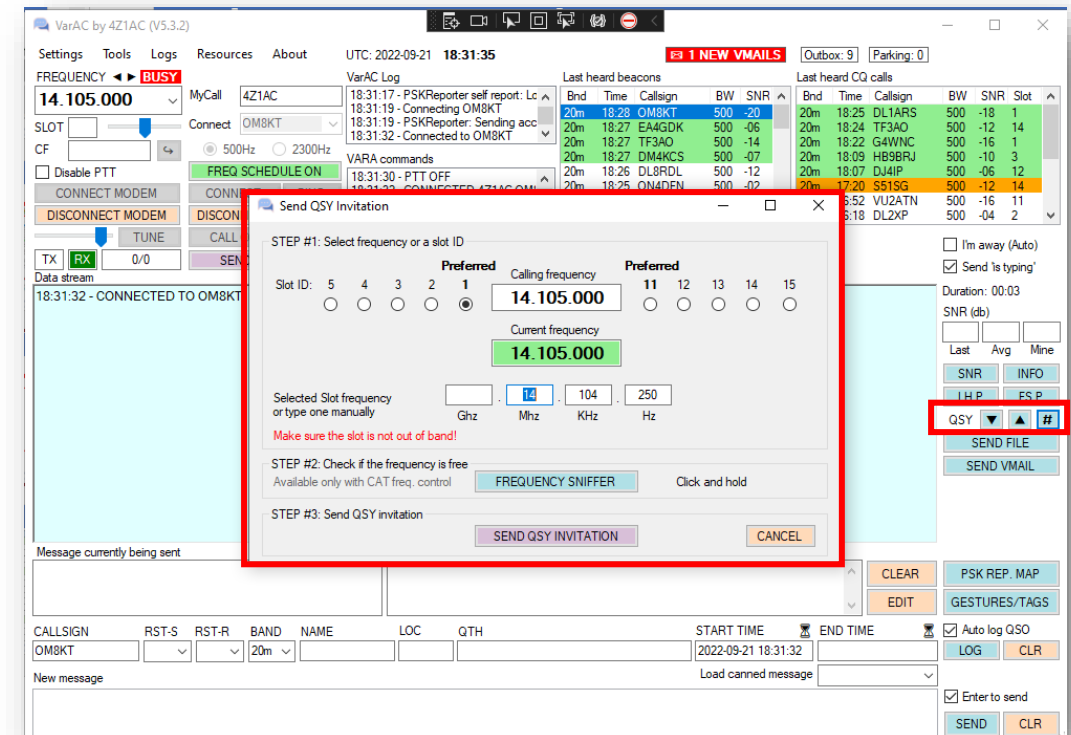
- You can also QSY between bands during the QSO
- Mainly used when starting a QSO on the CF or in case of QRM
- Use the QSY sniffer prior to sending a QSY invitation.

2 Types of QSY:

- UP/DOWN QSY – moves 750Hz. (Right click to sniff)
- Free form QSY – select any frequency you want

Once you send a QSY invitation, both sides will have a popup message asking for their acknowledge.

Both rigs will auto-QSY upon confirmation.



VarAC Tags & Gestures

Tag types:

- Embedding my/your data
- Request data
- Trigger events

Tags can be used to automate things when used in predefined messages

Gestures

- Play sounds on the other side
- Sending Emojis

Emojis

HIHI! - 😄😄
TU! - THANK YOU 🙏
LIKE! - 👍👍
BYE! - BYE BYE 🙏🙏
COOL! - 🍻
FBI! - 🚓

Main VarAC tags. More are listed in the VarAC interface

Tag	Operation
Sending my data tags	
<NAME>	Send your name
<QTH>	Send your QTH
<LOC>	Send your Location
<RIG>	Send your RIG info
Request data tags	
<LHR>	Last heard peeking request – List of stations your partner recently spotted on this band
<FSR>	Frequency scheduler peeking - know where your partner parks along the day
<QSYU>	Invite your partner to QSY UP 750hz
<QSYD>	Invite your partner to QSY DOWN 750hz
<QSF>XXXXX</QSYF>	Free form QSO invitation Example: <QSF>14105000</QSYF>
<VER>	Ask for your partner VarAC version number
<INFO>	Ask for your partner info (Name, QTH, LOC...)
Trigger events	
<AWAY>	Triggers "send message" at your partners side
<SND>	Automatically click"enter" to queue a message
<DISC>	automatically disconnect upon message delivery (usually used in final QSO message)

File transfer

VarAC supports sending binary files of any kind

- Images (PNG/JPG/GIF) are shown in the chat stream
- Files are compressed before being sent
- You can limit incoming files size.

The screenshot shows the VarAC by 4Z1AC (V5.1.6) interface. The main window displays a chat stream with the following content:

```
<< RECEIVING FILE TRANSFER DATA >>
22:07:34 - FILE SUCCESSFULLY RECEIVED: file://C:\Users\lradi\My Drive\Hamadi\varAC\VarAC\bin\Debug\TNX-for-QSO.jpg (Size: 5051 Bytes)
22:07:34 - OPEN FILE LOCATION: file://C:\Users\lradi\My Drive\Hamadi\varAC\VarAC\bin\Debug
22:07:34 -

22:07:53 - 4Z1AC> de 4Z1AC <R+00>
22:07:58 - SP3IEW> Yes, the propagation conditions are good.
This photo was taken by my wife after installing the new antenna :)
```

The interface also shows a 'Data stream' section with the text: 'Data stream', 'TX RX 2811/7150', and 'SEND BEACONS'. The 'Messages in queue' section contains: 'I have high noise level so need lowest speed, we got to 600bps there at the peak :)', 'NICE :) see you Arek !', and 'CLEAR EDIT' buttons.

The bottom of the interface shows a table with columns: CALLSIGN, RST-S, RST-R, BAND, NAME, QTH, LOC, START TIME, END TIME, and Auto log QSO. The table contains one row: SP3IEW, 01, +17, 20m, Arek, Poznan, J082JL, 2022-07-29 21:55:24, and LOG CLR buttons.

Live Demo

Monitoring VarAC QSOs

- Install a secondary VARA modem for monitoring
- VarAC will automatically configure and launch it upon VarAC launch.

The screenshot displays the VARA HF v4.6.2 software interface. The main window shows a QSO log with the following text:

```
<SM><SBJ:Hi Ray ><MSG:I'm a bit busy in recent times with the family and the garden. Only few time for hamradio. I hope it's getting better soon. What about you, mate? 73, Joe>  
15 de DK9JY <R-20>6 <R-14>5 <SMR>32 PING de DB6LL <R-09><LOC:JO43vp><SND> de ning Kevin22 de DB6LL  
<LOC:JO43vp> 6 <R-17>22 de DK9JY <LOC:JO30PP> 6 <R-14>23 de HB9AVK <LOC:JN47hg> 23 de HB9AVK <LOC:JN47hg> e OE3FQU 6 <R-18>Y I'm awayY I'm away, please leave a message. de <FC:F4V6 <R-12>5 <SMR>5 <SMR>5 <SMR>23 de SA7FKR <LOC:JO760J> 5 <SMR>39 PING de <FC:DF200/P> <R-+09><LOC:JO42pp>71 Welcome - this is Thomas in Nienburg JO42pp (1 matched with CG-3000 Tunereiss, hi.37 Ja, meine Antenne ist nicht gut.....4 &IT&
```

Annotations on the right side of the log window point to specific elements:

- VMAIL
- SNR report
- Periodic call IDs
- Retries
- PING
- Welcome message

Below the log, there are four circular gauges and a control panel:

- VU: Audio Input: -18 dBFS
- CPU: CPU Usage: 32%
- AFC: AFC: +0.0 Hz
- S/N: Signal-to-Noise ratio gauge

The control panel includes buttons for DATA, ACK, IDLE, NACK, BREAK, REQ, and QRT.

At the bottom, there is a status bar with indicators for RX (Disconnected), 500, LISTEN, TCP, and BUSY.

VarAC code of behavior

- ✗ Don't jam the Calling Frequency (CF). Don't hold it for more than a few minutes or more than necessary.
- ✓ Started a QSO on the CF? It's OK, but QSY as soon as possible. You have QSY UP/Down buttons or a free-form QSY button where you can select your desired QSY frequency.

- ✗ Don't use the PING feature for DXCC/Grid hunting. This will jam the CF, and besides, upcoming versions will limit the SNR exchange during PINGS so it will be useless for DXCC.
- ✓ Use PING only as tool to check propagation.

- ✗ Don't use 2300Hz BW on the VarAC CF or on any of the slots.
- ✓ Use Only 500Hz on VarAC CF and slots to avoid QRM-ing nearby VarAC QSOs. Use 2300Hz only outside of the slot frequencies.

VarAC code of behavior – Cont.

- ✗ Don't QSY to a frequency without checking if it is free.
- ✓ VarAC provides you with Sniffers. Right-click on the QSY Up/Down buttons will temporarily QSY to the destination frequency (without keying your PTT) so you can listen before QSY-ing. Same goes for calling CQs: Use the CQ slot sniffer.
- ✗ Don't try to send large files over HF. And if the link is slow - don't send files at all. It will never end. And PLEASE don't send files over the CF.
- ✓ Send files up to 5-10K in high speed and no more than 1-2K in low speed and always on non CF frequencies.

Additional useful features

- Frequency scheduler – Auto QSY based on pre-defined times
- Canned (predefined) messages with Quick access buttons
- Listening mode – Disable PTT
- Appearance customization (Font size and colors) including dark mode
- Block list
- Block incoming pings
- Set auto-away
- Showing distance and bearing

Community support & online resources

Super active Facebook group

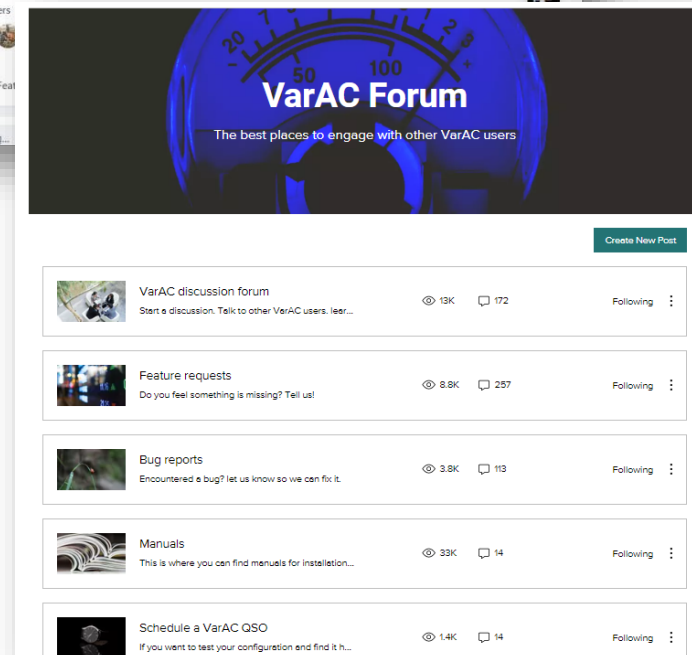
<https://www.facebook.com/groups/varahf>

- 3.3K members to date.
- Hundreds of new discussions per month

VarAC forum:

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

- Feature request submission
- Roadmap
- Bug reports
- Updated user manuals by Pat ON2AD
- Recent Rig control file



The VarAC Hall of Fame

NC3Z - Gary Mitchelson

Gary stepped forward when I started VarAC. He is investing his precious time in testing releases and advising on feature designs as well as supporting the VarAC community.

ON2AD - Pat Patrick De Wever

Pat masters the art of writing user manuals in 3 languages. Pat volunteered to do the hard work of documenting all VarAC features so you can have a smooth ride.

Our brave Beta Lab Team

The following brave hamradio operators have decided to risk their lives and rigs so you can have a safe VarAC experience.

Thank you guys for your continues support in this project!

DM7RO - Malte Röwekamp

HB9AVK - Paul King

GW4OZU - Peter Hyams

K1DOW - Russ Tower

LA5XTA - Erik Dahl

MW0RUH - Dave Thomas

M0SUY - Dimitrios Valaris

N8SDR - Rick Langford

PE1LUP - Marcel Tuerlings

SM7DUZ - Ingvar Eriksson

VA7RBP - Rick Paynter

W1IZZ - Lawrence Gray

W2JON - Jon Bruno

W3RED - Scott Redd

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

Thank you
Q&A



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