VarAC Manual

Version 6.3.3

24 Nov 2022

Content

Content *2*
VarAC Basic Architecture *8*
Introduction *8*
Who is the author of VarAC? **8**
What operating systems are supported by VarAC? 8
What is VarAC *8*
VarAC prerequisites *8*
Optional **8**
Installing the program: *9*
VARA-HF **9**
VARA-FM **9**
VARA-SAT **9**
VARA-HF install **9**
VARA Setup *11*
VARA Monitoring *11*
Optional installation **12**
OmniRig 12
OmniRig install 12
VarAC install *12*
VarAC install **13**
Files **13**
Note: 14
Customize VarAC window **14**
VarAC settings *15*
My Information *15*
How complex Callsigns work? **15**
RIG Control and VARA Configuration *16*
PTT Configuration **16**
CAT PTT Configuration 16
OmniRig Configuration 17
VOX/None 17
DTR/RTS 17
CAT Configuration **17**
Slow BAUD rate transceivers **18**
Frequency Control **18**
CAT Frequency Control 18
OmniRig Frequency Control 18
OmniRig Configuration **18**
DTR/RTS Configuration **18**
VMail Relay 18
Allow Parking 19
Cat Test Error Log 19
I am having trouble with CAT control 19
Logging **19**
DXKeeper logging 19
HRD_Logbook (UDP) 20
Log4OM (UDP) 20

N1MM (TCP) 20
N1MM (UDP) 20
N3FJP AC Log 20
Swisslog (Logbook (TCP) 20
UcxLog (UDP) 20
Mode - submode 21
Log pings 21
PSKReporter 21
Upload data to PSKReporter 21
Self report 21
Custom map 21
VARA Modem Configuration 22
VARA-HF/FM monitor config 22
Remark 22
VARA-HF Monitor ON or OFF 22
Monitor OFF 22
Monitor ON 23
QSO Configuration 23
Call ID TX interval (min) 23
Allow last Heard peeking 23
Allow non ham Callsigns 23
Allow incoming pings 24
Auto Disconnect 24
Callsigns block list 24
Auto away 24
I'm Away message 24
File transfer 24
Incoming file size limit (bytes) 24
DX Cluster uploads 25
Beacons / CQs 25
Beacon interval 25
Digipeat 25
Load last heard history 25
CQ Slot wait 26
Skip CQ Slot 26
Misc. 26
Linux compatible mode 26
Linux using 26
DOWNLOAD latest CAT command file 26
Save and Exit 26
Switch profile 26
VarAC_FT-991A.ini 27
VarAC_Kenwood.ini 28
Canned (predefined) messages 28
Canned messages 28
Shortcut F keys 29
Tags 29
Welcome message 29
Appearance and Customization 29
Appearance and Sounds settings 29
Dark mode enabled 30
Dark Mode disabled 31
Frequency schedule 32

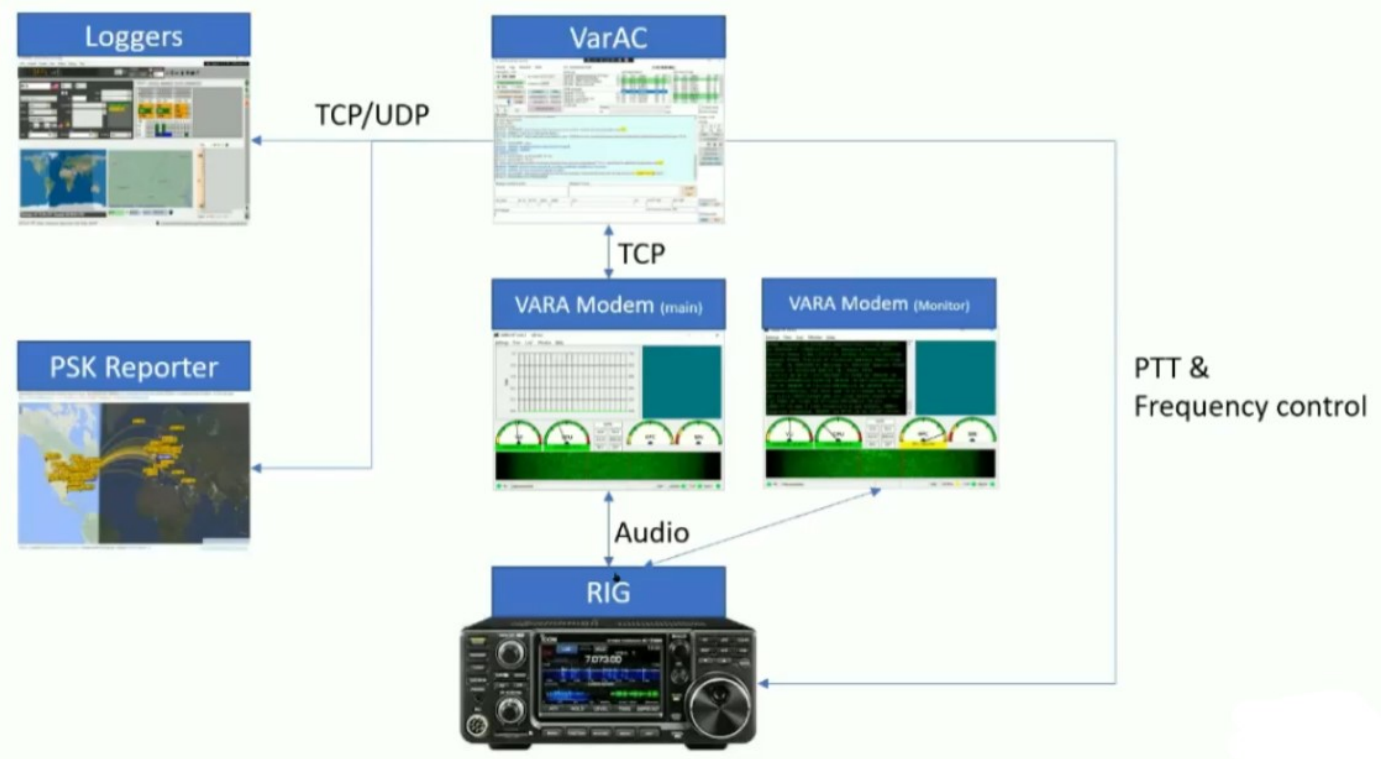
Download Latest CAT Commands File *33*
Tools *33*
Mailbox **33**
Inbox 33
Sent 34
Outbox 34
Parking 34
Outbox view **34**
Relay **35**
Send Vmail **35**
Callsign history **35**
Logs *36*
Resources *36*
About *36*
VarAC main screen *36*
VarAC Commands **37**
Calling Frequency (CF) (USB dial) **37**
Slots *38*
The problem **38**
The Solution **38**
Band plan: **38**
QSO-workflow **38**
500Hz of 2300Hz *39*
CALL CQ *39*
What are Slots? **39**
Log & VARA commands **40**
In QSO with **40**
See History **40**
See QRZ.com **41**
Last heard beacons **41**
Legend of color 42
Last heard CQ Calls **42**
Legend of color 43
Broadcasts **43**
Data stream **44**
Translate *44*
HAM is typing *44*
Log & messages **44**
Start & End Time 45
Message currently being sent 45
Messages in Queue 45
Callsign, Report,enz… 45
Load a canned message **45**
New message **45**
Message / File **45**
Message 45
File 45
Graph **46**

QSY code of conduct ... *46*
A quick QSY ... **47**
Maximum time on a Calling Frequency ... **47**
QSY back to default frequency ... **47**
Mailbox ... *47*
Send File ... **47**
Send Mail ... **47**
PSK Report Map ... **48**
VarAC & VaraFM ... *48*
VarAC configuration ... **48**
Digipeater connection ... **49**
How do I contact someone? ... *49*
Reports and Regulations ... *49*
Gestures – Tags - QSO protocol ... *49*
Tags & Gestures ... **50**
Emojis ... 50
Sounds ... 50
My data tags ... 50
His/her data tags ... 50
Request data tags ... 50
Trigger events ... 51
Message Tags ... 51
Tags ... **51**
QSO protocol ... **51**
Tip ... **51**
Canned messages and VarAC tags ... *51*
QSO ending ... *51*
QSO log ... *52*
QRZ.COM uploaded ... **52**
VarAC Cluster (Multiple instances) ... *52*
Step #1 ... **53**
Step #2 ... **53**
Step #3 ... **53**
Step #4 ... **54**
Step #5 ... **54**
Strange signals and noise. ... *55*
How to find other radio amateurs to chat with VarAC? ... *55*
Which RIGs are supported by VarAC? ... *55*
CQ and beacons ... **56**
Calling CQ: ... **56**
Beacon: ... **56**
What should I use? ... *56*
Tip ... **56**
What are the limitations of using VarAC beacons? ... *56*
Are VarAC and Vara-Chat compatible? ... **56**
My OmniRig has a delay in sending ... **56**

What can I do if I encounter a bug in VarAC? ... *56*
Where can I find VarAC manuals? ... 56
Do you have any questions? ... *56*
Logbook programs ... *57*
AC Log (Amateur Contact Log) ... **57**
DXKeeper (DXLabSuite) ... **57**
Ham Radio Deluxe ... **58**
Settings ... 58
Ham Radio Deluxe 6 setup ... 59
OmniRig setup ... 59
VarAC setup ... 60
Log4OM ... **60**
N1MM ... **61**
Swisslog ... **62**
Linux Installation ... *62*
Install WineLink ... **63**
Download VarAC ... **63**
Launch VarAC ... **63**
Enable "Linux compatible mode" in VarAC settings ... **63**
Annexes ... *63*
Introduction ... **63**
CAT cable connected to the USB port ... **64**
FT-991A with a USB cable ... 64
Installing the Communication Ports (COM) ... 64
FT-991A Setup for DATA-USB modus ... 64
FT-991A Setup for USB modus ... 64
Micro HAM-interfaces ... **64**
FT-991A with a micro KEYER II ... 64
FT-991A Setup for DATA-USB mode ... 64
FT-991A Setup for USB mode ... 64
VARA Soundcard settings ... 64
Soundcard settings ... 65
FT-897 connected with the micro KEYER II and OmniRig ... 65
Micro Keyer settings ... 65
Omni-Rig & VARA-HF & Log4OM ... 66
FT-897 Menu setup ... 66
Flex radio's ... **67**
Flex 6400M ... 67
VarAC settings ... 67
SmartSDR +VARA Soundcard settings ... 67
Release updates ... *68*
VarAC V6.3.3 (24/11/2022) ... **68**
Enhancements/Changes ... 68
Bug fixes ... 68
VarAC V6.2.4 (19/11/2022) ... **68**
New features ... 68
Enhancements ... 69
Bug fixes ... 69
VarAC V6.0.8 (08/10/2022) ... **69**
New features ... 69
Enhancements ... 69
Bug fixes ... 70
VarAC V5.3.1 (09/09/2022) ... **70**
New Features ... 70

Enhancements 70
Bug fixes 70
VarAC V5.1.8 (01/08/2022) 70
New features 70
Enhancements 70
Bug Fixes 71
VarAC V5.0.1 (17/07/2022) 71
New features 71
Enhancements 71
Bug Fixes 71
VarAC V4.1.0 (18/06/2022) 71
New features 71
Enhancements 72
Bug Fixes 72
VarAC V3.8.8 (24/05/2022) 72
New Features 72
Enhancements 72
Bug fixes 72
VarAC V3.7.9 (13/05/2022) 72
New Features 72
Enhancements 72
Bug Fixes 72
VarAC V3.6.5 (24/04/2022) 73
New features 73
Enhancements 73
Bug Fixes 73
VarAC V3.5 (05/04/2022) 73
New features 73
Enhancements 73
Bug Fixes 73
VarAC V3.4.1 (26/03/2022) 73
New Features 73
Enhancements 73
Bug Fixes 73
VarAC V3.3 (21/02/2022) 73
New features 73
Enhancements 74
VarAC V3.2.1 (05/02/2022) 74
New Features 74
Enhancements 74
Bug fixes 74
VarAC V3.0.2 (08/01/2022) 74
New features: 74
Enhancements 74
Bug fixes: 74
VarAC 2021 V2.7.2 Beta (11/12/2021) 74
New features: 74
Enhancements 75
VarAC 2021 V2.6.2 Beta (27/11/2021) 75
New in this version: 75
Bug fixes: 75
VarAC 2021 V2.5 Beta (17/11/2021) 75
VarAC 2021 V2.4 Beta (08/11/2021) 75
VarAC 2021 V2.1 Beta (15/10/2021) 75
VarAC 2021 V1.9 Beta (08/10/2021) 76

VarAC Basic Architecture



Top

Introduction

Who is the author of VarAC?

Irad Deutsch, 4Z1AC is the author of VarAC.
He has been an amateur radio operator since the age of 13 (30 years now).
He has always been fascinated by digital modes such as PACKET RADIO, AMTOR, PACTOR, GTOR, CLOVER, FT8/4, PSK and others... and he likes to chat with these modes rather than just exchanging reports.

When VARA came into our lives, he adopted it because he believes it offers the protocol robustness of PACTOR coupled with the ability to handle challenging SNR levels like FT8. So he decided to create a chat application with lots of cool features to chat with his fellow HAMs.

But he is not the only one. There is a great team of supporters and testers who play a huge role in this project. You can read more about them here.

He has contacted the creator of VARA (EA5HVK) about feature requests and bug fixes, but has no business relationship with them. He does this purely for fun.

What operating systems are supported by VarAC?

VarAC is written in C#, which means it can only run on Windows for now. You can try using some C# emulators for Linux and if it works he will be happy to know and provide the community with a help book.

What is VarAC

VarAC is a FREE, modern HF P2P real-time chatting application for the amateur radio operator that leverages the VARA protocol

VarAC prerequisites

VARA-HF 4.6.7 or higher.

YOU MUST UPGRADE your VARA modem to V4.6.4 or higher to enjoy new features in VarAC.

Optional

OmniRig V1.X (V2.0 is NOT supported at this time)
1280 X 800 screen resolution or higher

Windows 8.1 and above (some hams reported that Win7 also works. but officially it is not supported)
.NET framework 4.X or above
10MB of disk space.

Installing the program:

Two programs need to be installed, namely

VARA-HF

(High Performance HF Modem) what this manual is about..
Up to 1.543 bps at 500 Hz BW / 7.050 bps at 2300 Hz BW

VARA-FM

(for FM transceivers)
Like HF but with additional latency handling

VARA-SAT

(for QO-1410 Geostationary SAT)
Up to 12.750 bps Narrow / 25,210 bps Wide

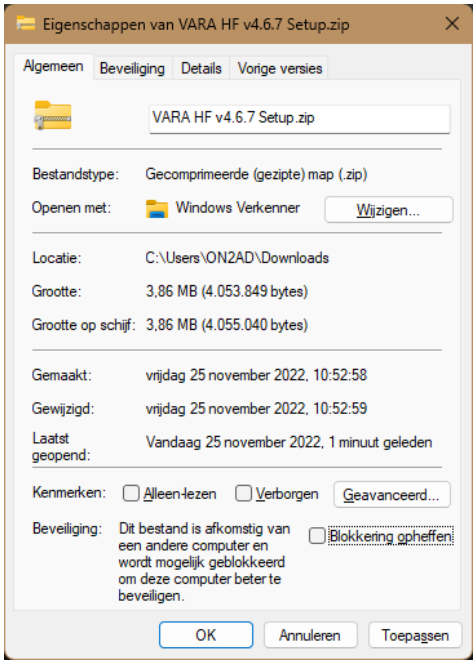
VarAC

The chat program itself

VARA-HF install

Download and install the VARA-HF version which can be found at:
EA5HVK | Weak signals Software (wordpress.com)

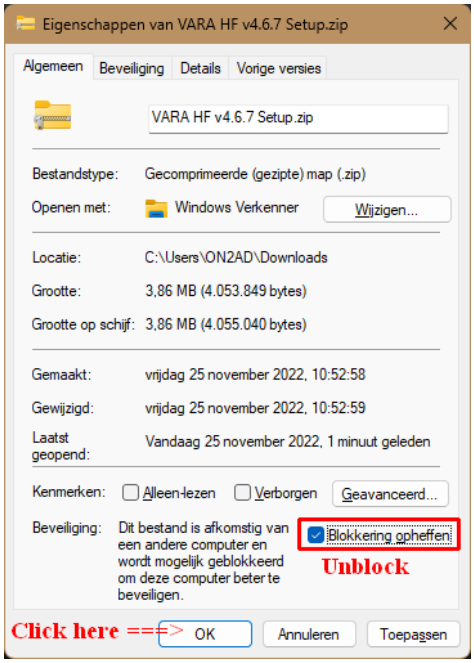
Top



After these files are downloaded, they must be unblocked
Select the file with the right mouse button

Now with the left mouse button, click Properties

Select properties from the drop-down menu.
If a button marked with Unblock is visible on the General menu, this file is blocked.

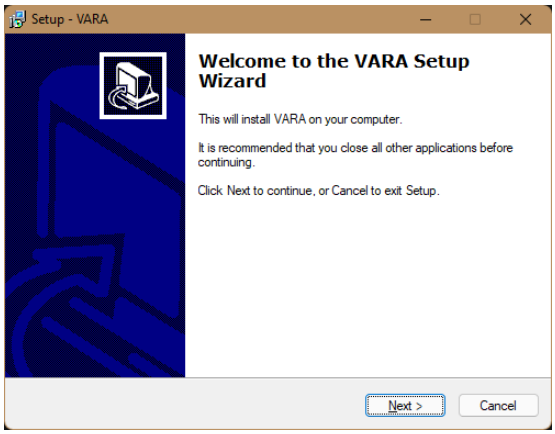


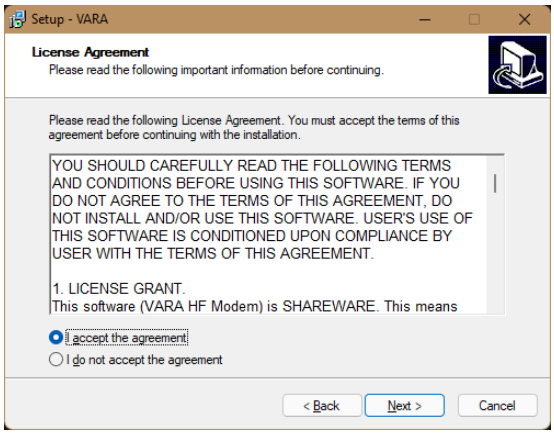
Click the Unblock button on the left mouse, and then click OK to unblock the file

Unzip VARA-HF version
Twice click on the VARA setup (run as Administrator).exe

Click now on Next

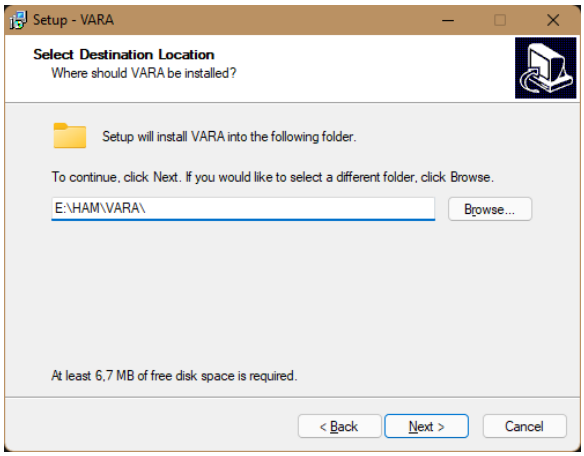
Select “I accept the agreement”
And click on Next

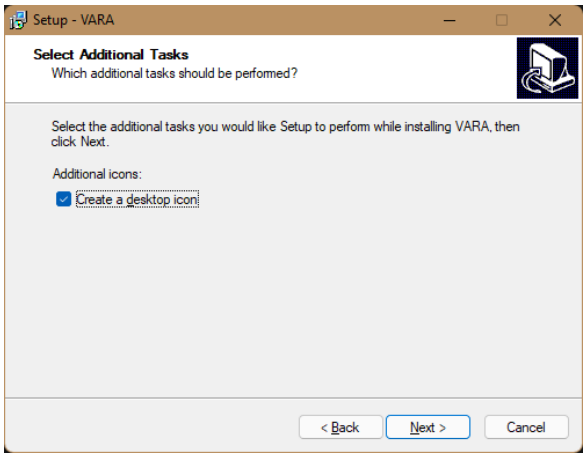




Click on Browse for select the folder who you will install VARA or use the default setting.
Click Next.

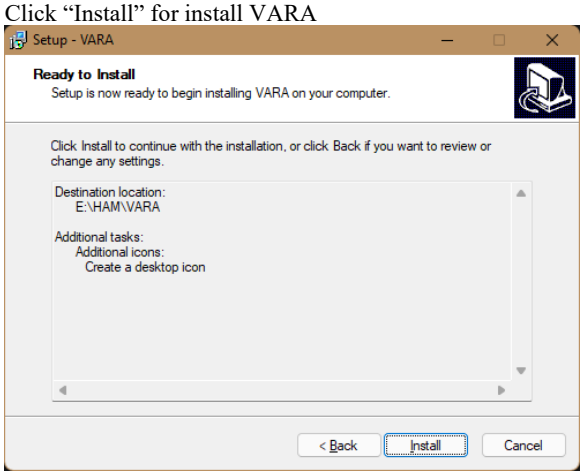
Enable the “Create a desktop icon” if you want a icon for VARA on your desktop.
Click Next.

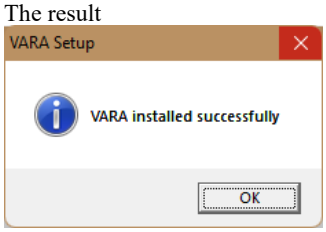




Click “Install” for install VARA

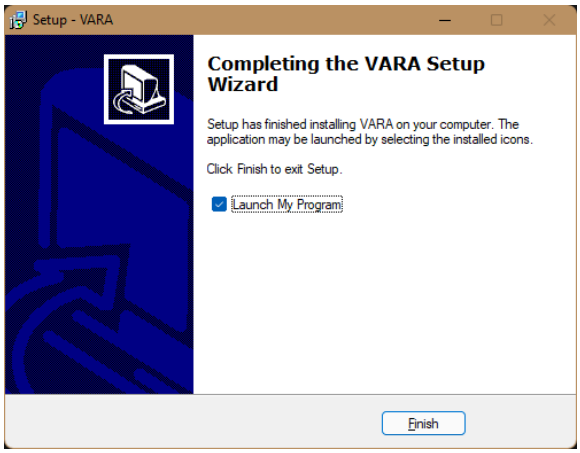
The result

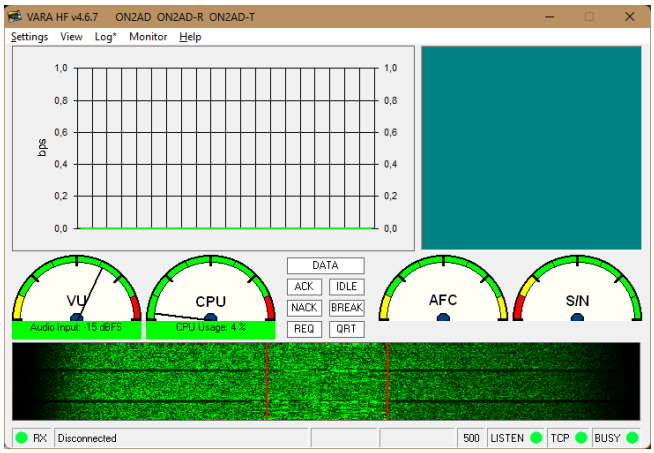




After VARA is installed successfully screen you will have the next window. Press Finish to launch VARA

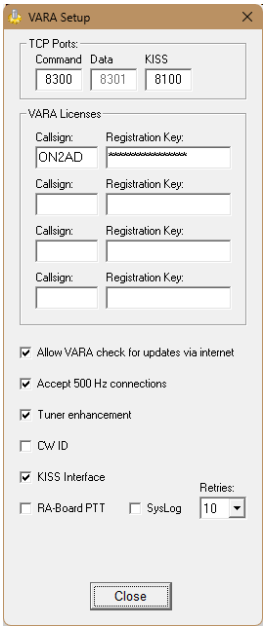
This can be your result.





VARA Setup

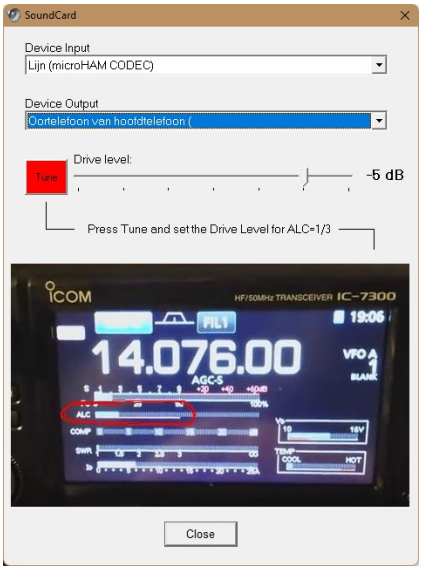
Click Settings and then on VARA setup…
Fill in the necessary data in the screen on the left and if you have a Key for this program, put your Callsig and your Key in it, if you do not have a key then leave these fields empty.
Click Close



Click back on Settings and click on Soundcard…

Now select your Device Input
and the
Device Output of the sound card

Close with click on the "Close" button.



VARA Monitoring

VARA is an ARQ mode.
Which means that what you get is 100% accurate due to CRC correction, or you do not get it at all.
Very similar to Pactor and Packet.

Now, when 2 stations have a strong solid link between them (lets say +2 SNR for example) and they shift to **HIGH SPEED** (Level 5 for example) and I receive them -10 SNR, sure you can't decode much of it as out of the many bytes sent, You will miss too many due to noise so the CRC can't be used to correct the message.

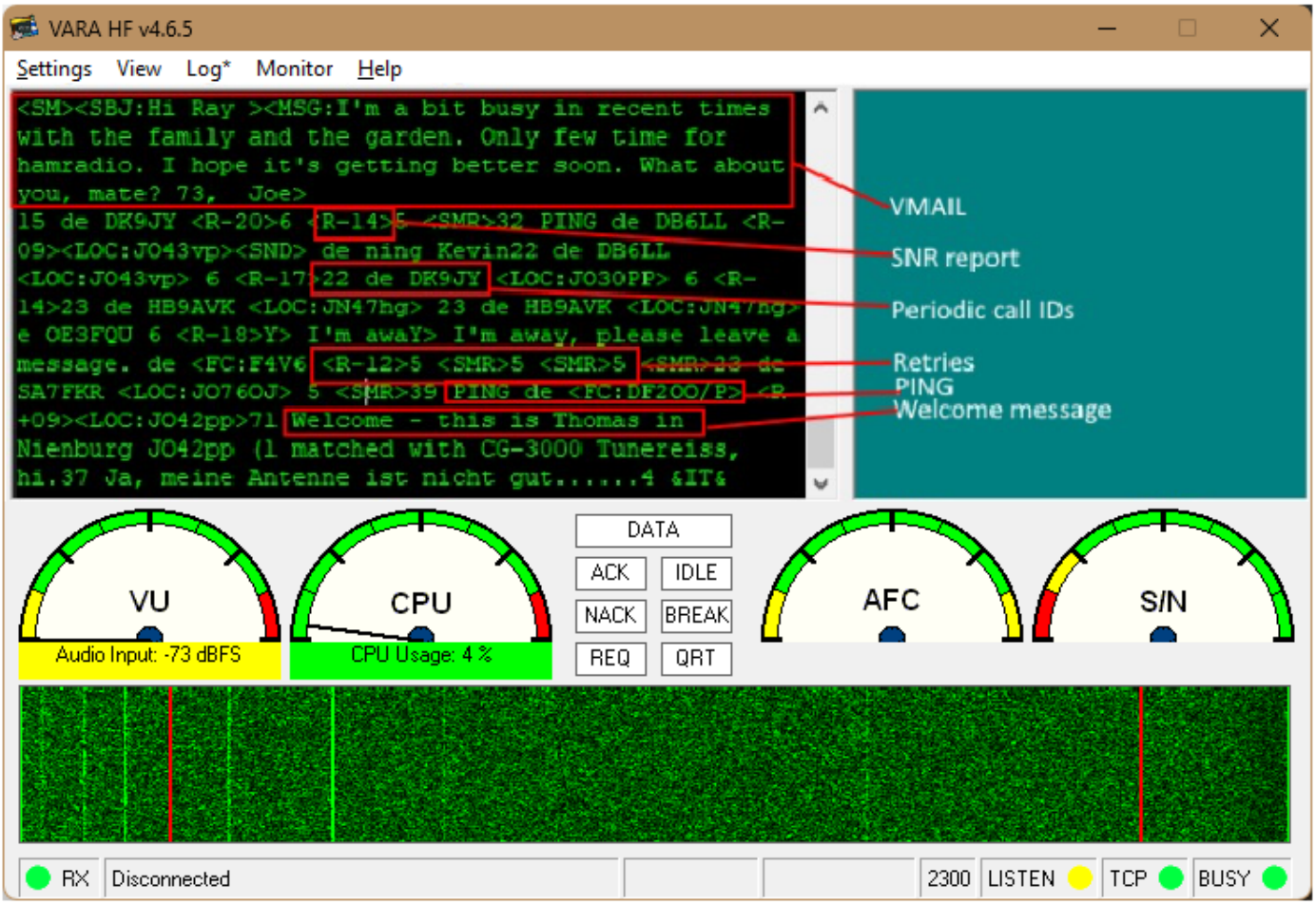
Same with hearing a high speed **Pactor 4** signal that may sound strong to your ear but too weak to decode the packet due to noise...

In **NON** ARQ modes like RTTY/PSK, if you missed a few letters you can still get the before and after of the message, with ARQ mode the whole set of bytes in a packet (up to a certain threshold) has to be received to decode the packet correctly.
Otherwise it is dumped..

Therefore it is most likely you will decode more packets in low VARA speed then high... the fact that you hear a signal, (faint or not) doesn't mean your modem was able to decode all the encodded bytes in it.

Here is an example of a monitor screen on the Calling frequency.
You can notice quite a few elements in it.

Top



Optional installation

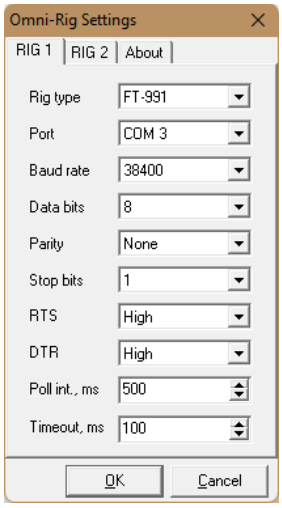
OmniRig

OmniRig install

Omni Rig-version 1.
Home page: http://www.dxatlas.com/omnirig
OmniRig can be downloaded from DX Atlas: Amateur Radio software
Download: http://www.dxatlas.com/OmniRig/Files/OmniRig.zip

Select and adjust this information as prescribed in your manual.
This setting is for my Yaesu FT-991A

Rig Type: Select your Rig here.
Port: Select your COM port.
Baud rate: Select your baud rate corresponding to that of your transceiver.
Data bits: Select your Data bits according to your transceiver.
Parity: None, Odd, Even, Mark, Space (here on None).
Stop bits: 1, 1.5, 2 (here on 1).
RTS: High, Low, Handshake (here on High).
DTR: High, Low, (here on High).
Poll int. ms: is on here 500
Timeout, ms: is on here 100



Top

VarAC install
Download VarAC on https://www.varac-hamradio.com/download

After completing the form and answering the question, click Download to download VarAC.

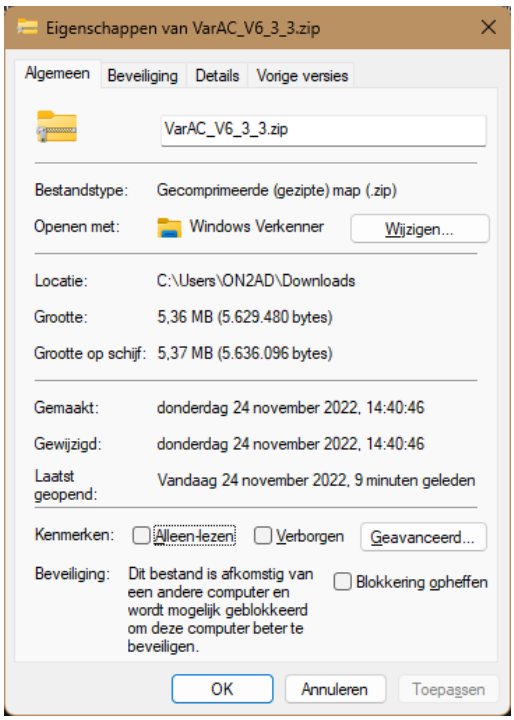
VarAC install

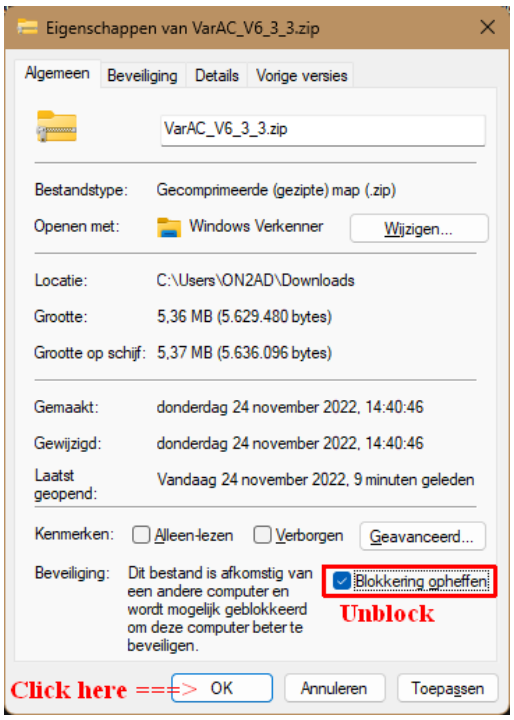
After these files are downloaded, they must be unblocked
Select the file with the right mouse button

Now with the left mouse button, click Properties

Select properties from the drop-down menu.
If a button marked with Unblock is visible on the General menu, this file is blocked.

Click the Unblock button on the left mouse, and then click OK to unblock the file



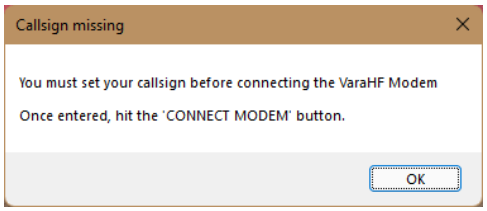


Click on the VarAC_V6_3_3.zip or higher and Unpack everything in the folder for VarAC.

Create a Shortcut from the VarAC.exe, or add to the "Pin to Start" or….

Click on the Shortcut for start VarAC.

By the first start of VarAC you will see the next window.
Click on OK.



Files

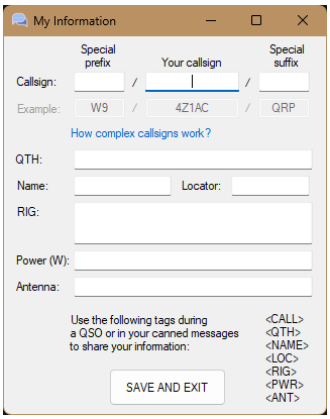
After extracting the zip file you will find the following files:

File	Info
Licence.txt	License info
PSKReporter.dll	The PSKReporter dll file for the PSKReporter to function
VarAC.exe	The VarAC program
VarAC.ini	The VarAC ini file
VarAC_cat_commands.ini	The VarAC CAT Commands
VarAC_frequencies.conf	The VarAC preset frequency which one can also adjust See Calling Freq.

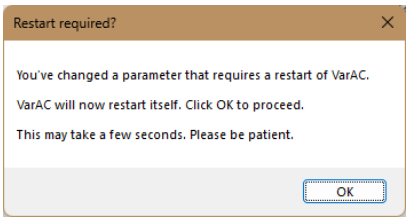
The following files are generated at the first start of VarAC:

File	Info
VarAC.log	Program events log
VarAC_frequency_schedule.conf	The schedule list
VarAC_mailbox.mbx	The mailbox
VarAC_traffic.log	The RX and TX traffic log
VarAC_last_heard.log	List of the heard beacons and calling the CQ

With a new installation of VarAC and starting it up, the following screen will appear where you can enter personal information.
See My Information

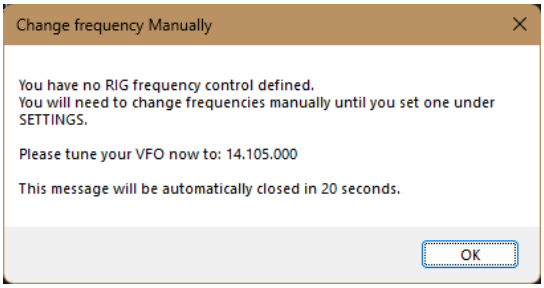


When everything is filled in click on "SAVE AND EXIT" and another info screen will appear. Click OK. See second image



When overwriting an older version of VarAC, this screen will no longer appear because this data already exists.

After the restart, a new notification screen will appear.



You have no RIG frequency control defined.
You will need to change frequencies manually until you set one under SETTINGS.

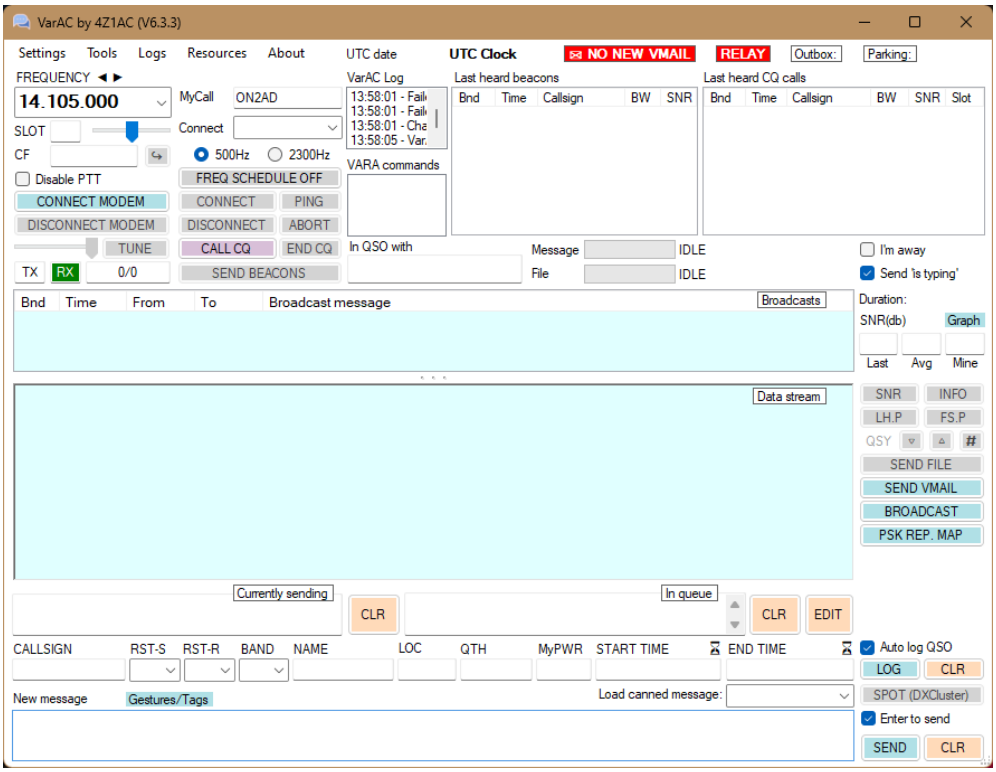
Please tune your VFO now to: 14,105.000

This message will be automatically closed in 20 seconds.

Note:

If you didn't install VarAC in the default folder, don't forget to change this in the Menu – Settings – PTT and VARA Configurations by VARA-HF/FM main config path the same for the VARA-HF/FM monitor config (Optional)

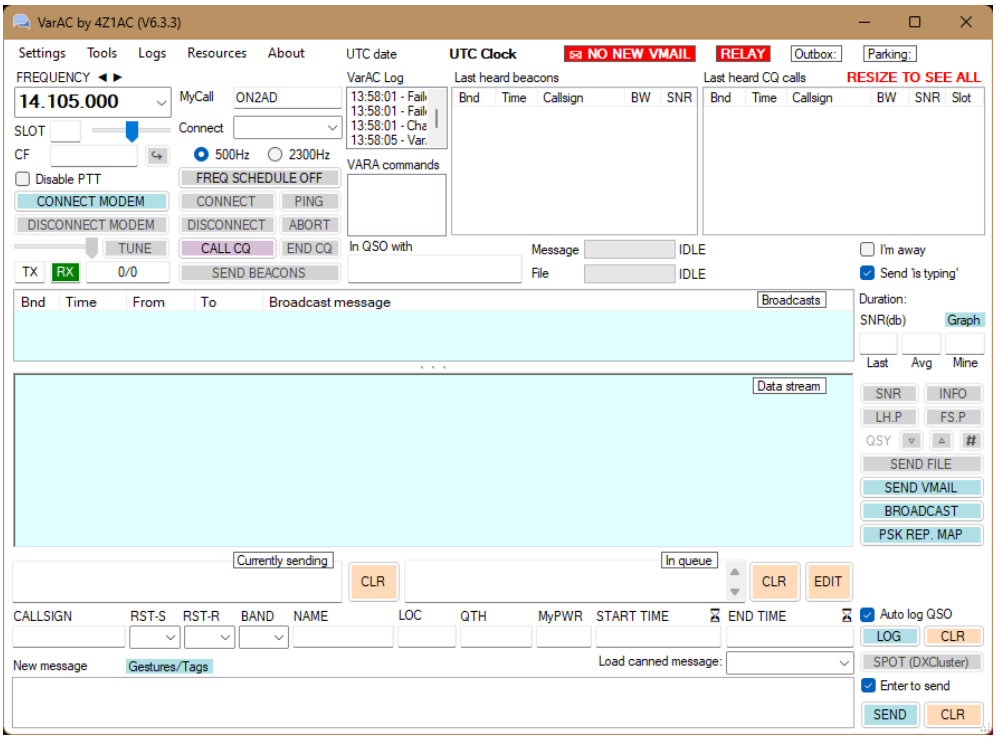
If everything is installed correctly then start VarAC and the next screen will this



Customize VarAC window

If for some reason you have resized the VarAC window size then a red warning will appear in the top right corner to adjust this window to see all elements

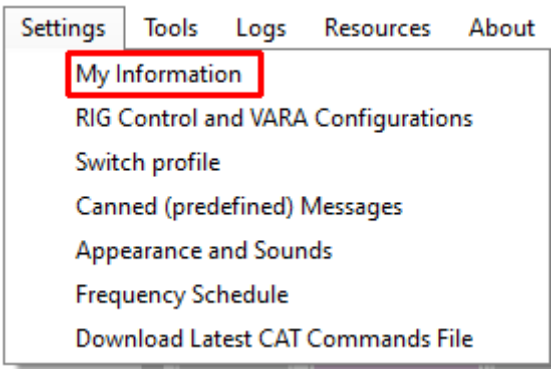
RESIZE APP TO SEE ALL ELEMENTS



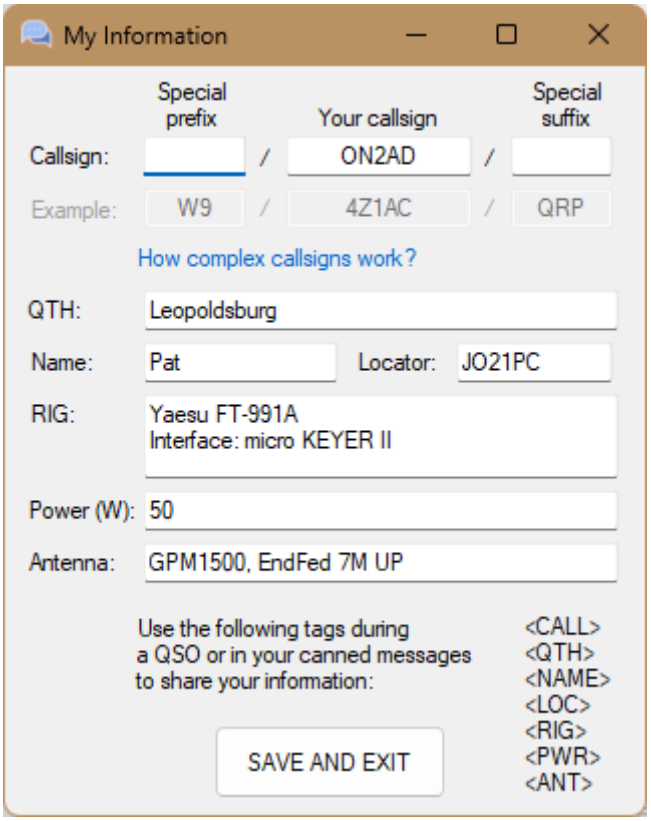
VarAC settings

Start VarAC and fill in all the needed info in the “My Information” or go to the Settings/My Information menu

My Information



Click the Settings menu
And then on "My Information" and fill in the fields used in the "Canned messages".



The following canned messages are used:

<CALL> : this will automatically fill in your own callsign.
<QTH> : this will automatically fill in your QTH.
<NAME> : this will automatically fill in your name or nickname.
<LOC> : this will automatically fill in your locator.
<RIG> : this will automatically fill in your equipment.
<PWR>: this will automatically fill in your power.
<ANT>: this will automatically fill in your antenne infos.

Remark:
Click SAVE AND EXIT to Save your settings

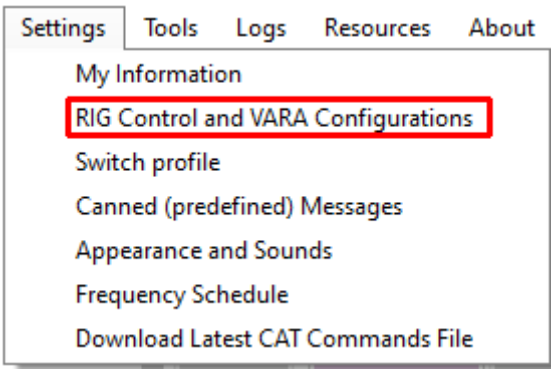
How complex Callsigns work?

VARA modem supports only plain callsigns.
However, with VarAC you can define a complex callsign such as W/4Z1AC/QRP.

VarAC will use your plain callsign during the connect phase, and if a complex callsign is defined, it will be sent right after the connection is established and will be reflectected on the other console.

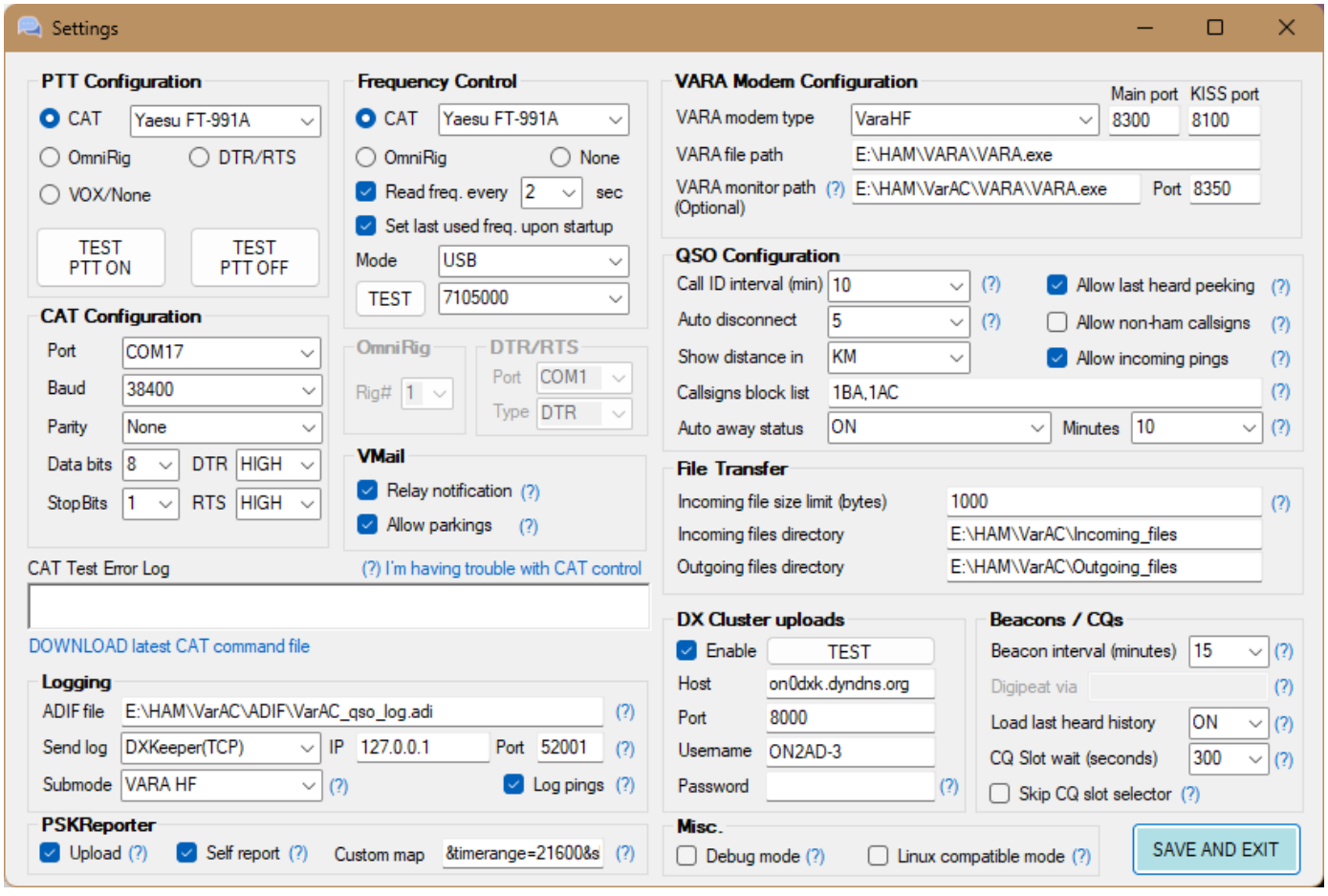
PLEASE NOTE:
CQ and BEACONS will show your plain callsign only.

RIG Control and VARA Configuration



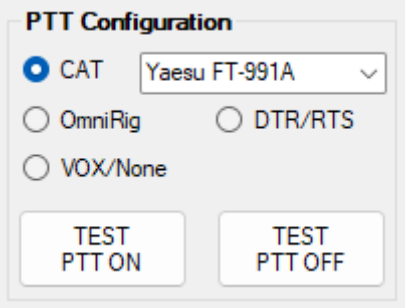
Click on the settings menu
RIG control and VARA Configurations
And a new window opens.

Top



PTT Configuration

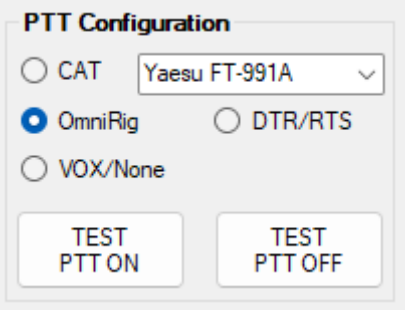
CAT PTT Configuration



Click on CAT and select your transceiver.

Test PTT ON to test whether the transceiver is transmitting.
Test PTT OFF to stop transmitting**.**

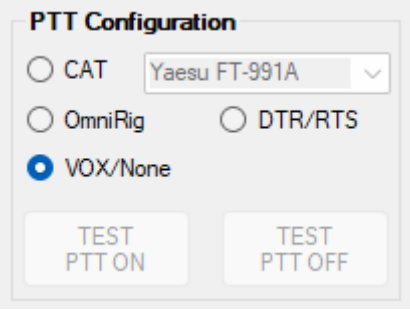
OmniRig Configuration



To work with the **OmniRig** select OmniRig

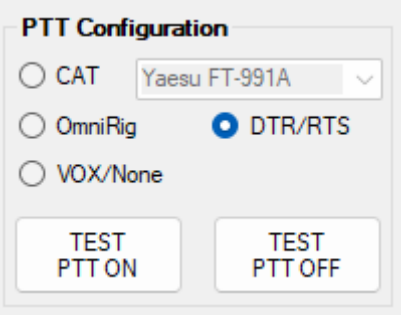
Top

VOX/None



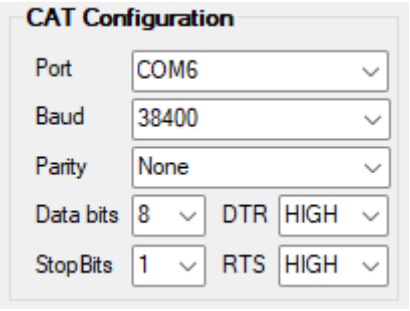
VOX is not recommended

DTR/RTS



Select DTR/RTS if you needed.

CAT Configuration



Port: Select your COM port.
Baud rate: Select your Baud rate.
Parity: Select your Parity
Data bits: Select your Data bits
Stop Bits: Select your Stop bits
DTR: Choice of LOW and HIGH
RTS: Choice of LOW and HIGH

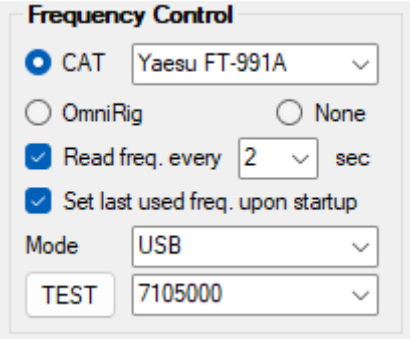
Slow BAUD rate transceivers

There is a new parameter in the VarAC.ini file to set the amount of time to wait for a CAT command to complete. default is 100ms. you can increase where necessary in rare scenarios.

```
PortWaitTimeMs=100
```

Frequency Control

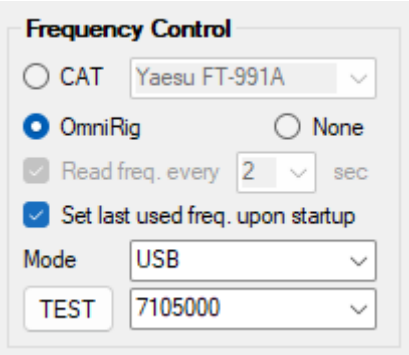
CAT Frequency Control



CAT: Select your transceiver
OmniRig: see OmniRig.
None: No setting

Read Freq. Every xx sec
When selected, the frequency will be monitored at the set time
Set last used freq. upon startup : Your last used Freq. will upon by startup
Mode: Select the transmitter mode, for the FT-991A, the choice is
USB, USB-D (USB-DATA) or FM
Test: Select the frequency you want to test on.

OmniRig Frequency Control



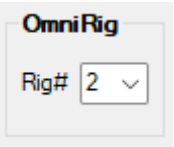
Select **OmniRig**
Also see OmniRig

Set last used freq. upon startup : Your last used Freq. will upon by startup

Mode: Select the desired mode.

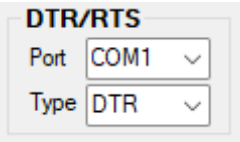
Click on:
TEST and if everything is set correctly then the transceiver frequency will change

OmniRig Configuration



Select the right Rig see also info about the OmniRig

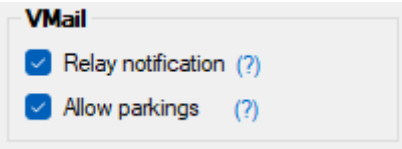
DTR/RTS Configuration



Select DTR/RTS

Select your **COM port**
Select **Type** DTR or RTS

Vmail



Relay notification : See VMail Relay

Allow parking : See Allow parking

VMail Relay

When your VarAC hears a beacon of a station, it checks if it has parking VMails waiting for that station.

If there are, it will send a asynchronous packet (broadcast) letting that station know you hold VMails that waiting to be collected.

Your VarAC also receives relay notifications and show you in indication for VMails that are waiting to be collected.

You can enable or disabled these incoming & outgoing notification using this checkbox.

Allow Parking

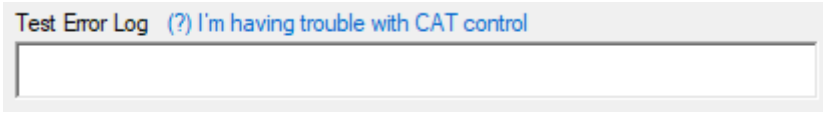
VarAC allows you to store and forward VMails for 3rd parties.

Users can connect you and leave VMails for 3rd parties.
Your VarAC notifies users about parked (waiting) VMails through the "Relay notification" mechanism, and forward the VMail, once the destination station connects to you.

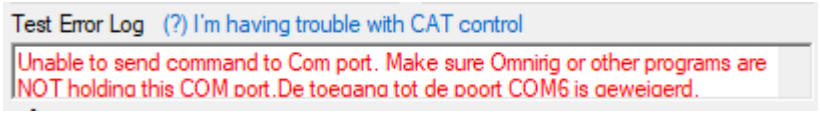
If you do not wich users to park messages on your VarAC due to local regulations or other reasons, you can disable this feature here.

Cat Test Error Log

In normal circumstances if everything is configured correctly this window will remain empty



If there are conflicts, they will be displayed in the same window, see below.



I am having trouble with CAT control

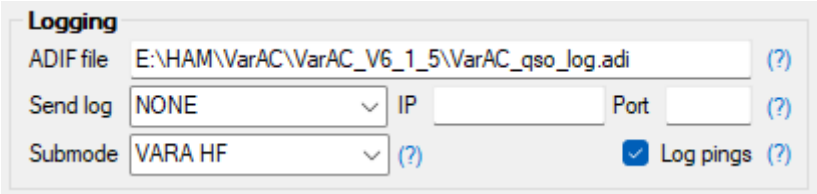
VarAC direct CAT control is a fairly new feature and may still experience some instabilities.
As there are so many Rigs out there, it takes time to develop and validate against each and every one.

But no worries, if you cannot find your RIG here or if you fail to configure it with CAT control, you can always use OmniRig to control both of your PTT and frequency.

Logging

VarAC can send your QSO record in real-time to an external logger such as DXKeeper, N3FJP etc… using both TCP & UDP protocol.

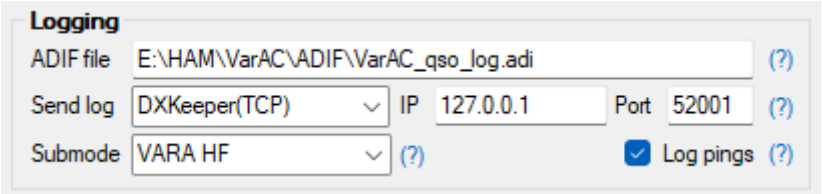
The default port number for your selected logger is automatically populated, however you can change it manually.



ADIF file path	VarAC stores all your QSOs in an ADIF file. You can configure the ADIF file path according to your preferences.
Send log:	VarAC can send your records in real time to a remote logger such as using the TCP protocol
IP	See your logging manual
Port	See your logging manual
Mode	See Mode - Submode
Submode	See Mode - Submode
Log pings	See Log pings

Top

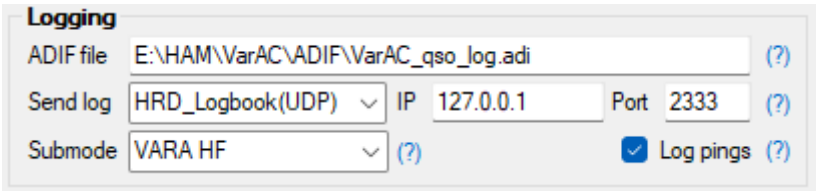
DXKeeper logging



To use DXKeeper, select DXKeeper (TCP)
The IP address and Port number are filled in automatically, but can be changed manually

Log pings: See Log pings

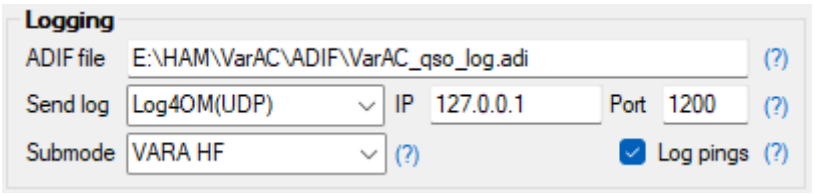
HRD_Logbook (UDP)



To use the HRD_Logbook, select HRD_Logbook (UDP)
The IP address and Port number are filled in automatically, but can be changed manually.

Log pings: See Log pings

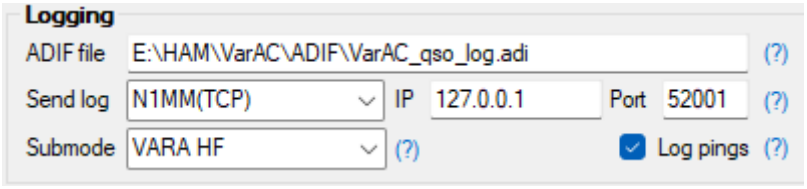
Log4OM (UDP)



To use the Log4OM, select Log4OM (UDP)
The IP address and Port number are filled in automatically, but can be changed manually

Log pings: See Log pings

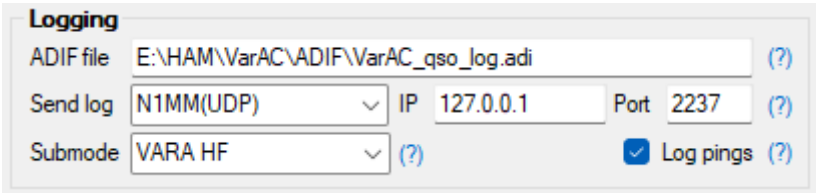
N1MM (TCP)



To use the N1MM, select N1MM (TCP)
The IP address and Port number are filled in automatically, but can be changed manually

Log pings: See Log pings

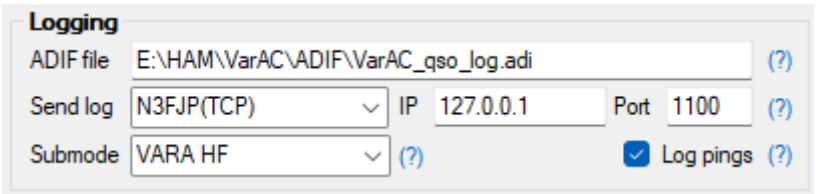
N1MM (UDP)



To use the N1MM, select N1MM (UDP)
The IP address and Port number are filled in automatically, but can be changed manually

Log pings: See Log pings

N3FJP AC Log

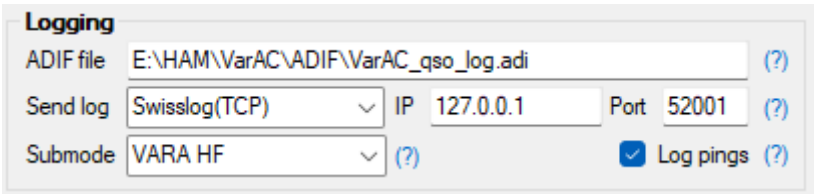


To use the N3FJP AC Log, select N3FJC (TCP)
The IP address and Port number are filled in automatically, but can be changed manually

Log pings: See Log pings

Top

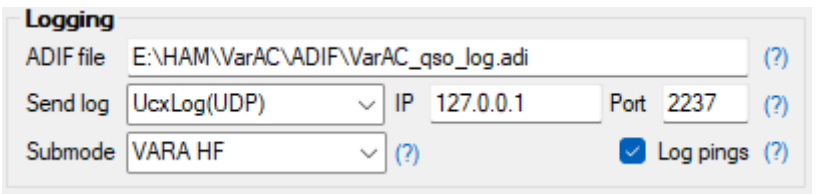
Swisslog (Logbook (TCP)



To use the Swisslog, select Swisslog (TCP)
The IP address and Port number are filled in automatically, but can be changed manually

Log pings: See Log pings

UcxLog (UDP)



To use the UcxLog, select UcxLog (UDP)
The IP address and Port number are filled in automatically, but can be changed manually

Log pings: See Log pings

Mode - submode

The ADIF committee has decided to classify VARA as a set of sub mode's under a generic mode called "DYNAMIC".

The supported ADIF classifications are:
Mode: DYNAMIC
Submode: VARA HF
VARA SATELLITE
VARA FM 1200
VARA FM 9600

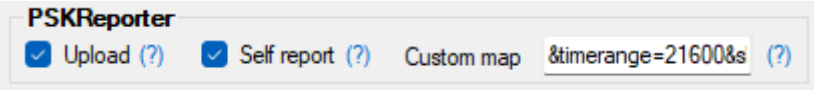
Most of the QSO logging programs comply with the ADIF guidelines so it is recommended to keep up with the ADIF standard.

Log pings

When "Auto Log" is enabled , by default, incoming & outgoing Pings are logged both to the VarAC ADIF file as well to the selected external logger.

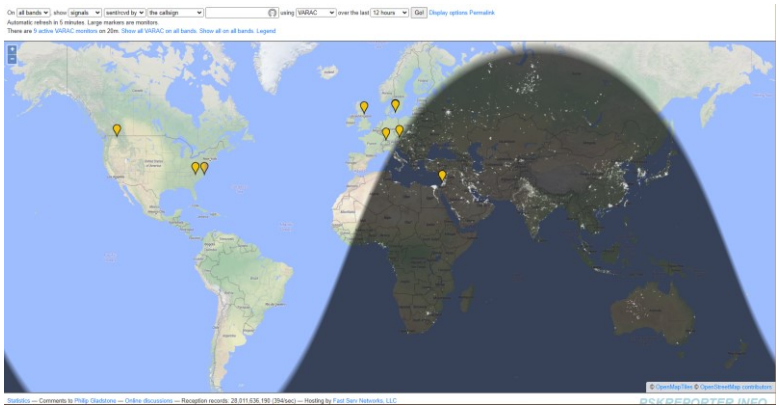
Uncheck this checkbox to disable Auto logging of incoming & outgoing pings.

PSKReporter



Upload See Upload to PSKReporter
Self report See Self report
Custom map See Custom map

Upload data to PSKReporter



If this function is checked, your data will be forwarded to the PSKReporter.
Display Reception Reports (pskreporter.info)

Self report

Let people know that you are active on a frequency without being noticed by sending a beacon or a call.
Every time you change the frequency, a self-report is sent to the PSKReporter.

Custom map

PSKReporter offers a verity of options to customize the map.
The VarAC PSKReporter buttons is activating a link which is composed of two elements.

A static one:
Https://pskreporter.info/pskmap.html?preset&callsign=YOURCALL&mode=VARAC

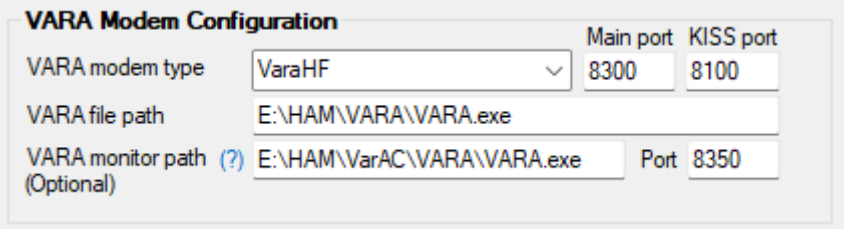
And dynamic one that is concatenated to the static one which contains the customization options.
The VarAC default dynamic element is:
&timerange=21600&showsnr=1&showlines=1

Change your PSKReporter map preferences but changing this link
so next time you click the button "PSKReporter MAP" it will open up the way you want it to.

To find it more about PSKReporter customization options, open the PSKReporter map, click "Display options" at the top right, and set your preferences. Then click the "Permalink" to see the results.

Once you are happy, copy the website URL aside and paste only what comes after the Mode = VARAC to this settings field.

VARA Modem Configuration



VARA modem type: Choice between, VaraHF or VaraFM and VaraSAT.
Main Port: put the port number here.
KISS port: see VARA setup

VARA file path: select where the VARA.exe is located.
VARA-Monitor PATH (Optional) see
Port: put the port number of the VARA monitor here.

VARA-HF/FM monitor config

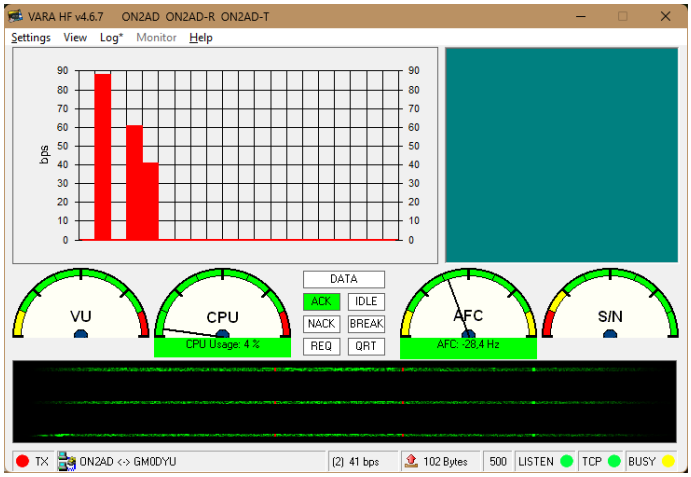
A VARA modem can be configured either in the Ready-To-Connect mode, or the Listening (Monitoring) mode.

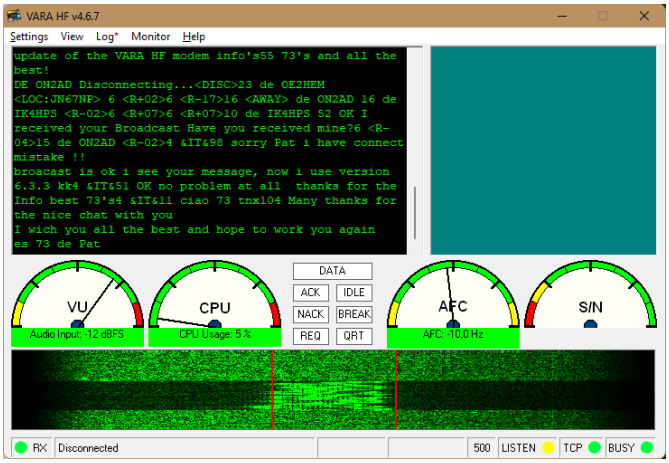
If you wish to be ready for incoming connections and at the same time monitor the frequency for VARA traffic such as ongoing VARA QSO, then you need to run a separate VARA modem instance in Monitor mode.

Simply duplicate your existing VARA modem directory into a new folder, set this path to the new VARA.exe file and VarAC will do the rest. VarAC will configure the second VARA modem to Run in Monitoring mode upon startup.

If you do not wish you launch a Monitor VARA modem, simply leave this section empty.

Then you see the next:





Remark

When selecting the VARA-HF/FM Main and the VARA-HF/FM Monitor (Optional) make sure not to select the VarAC.exe, otherwise the program will go in looping loop. I had to experience this myself.

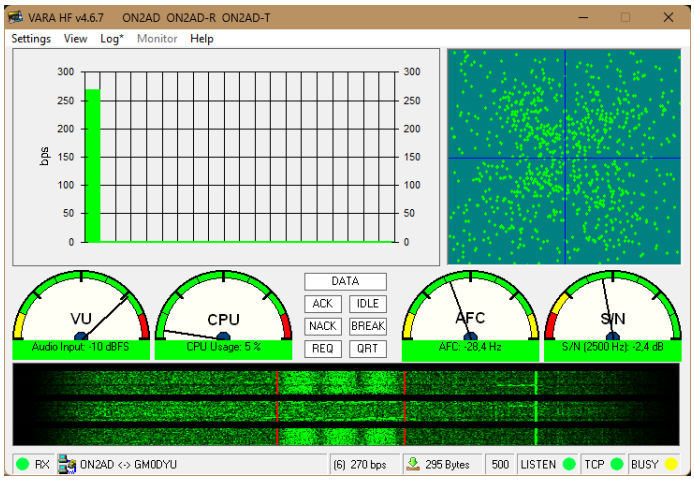
VARA-HF Monitor ON or OFF

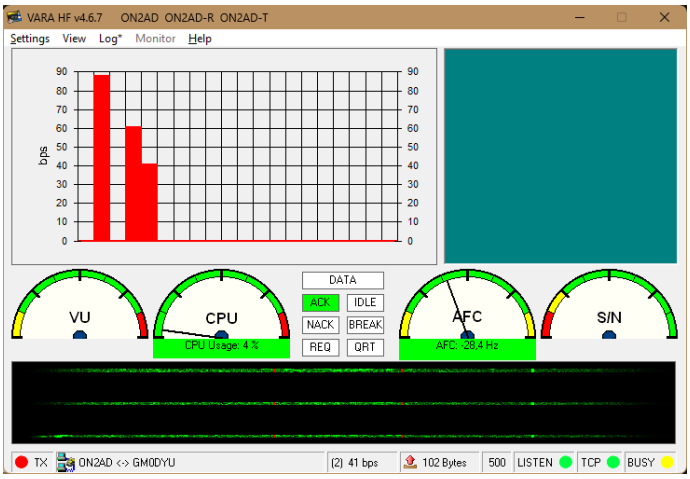
In the VARA-HF you also have the option to monitor the signals and display the received signals in text in the monitor section.

Monitor OFF

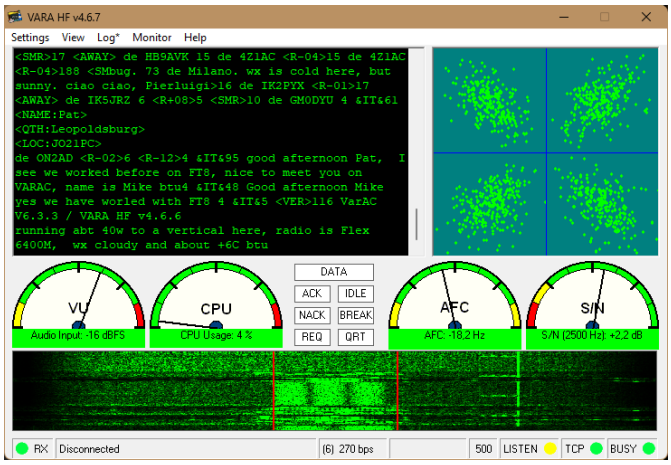
When the transceiver receives the signals, we see in the VARA-HF monitor a green bar that is an indication of the received DATA.

When the transceiver sent the signals, we see in the VARA-HF monitor a red bar that is an indication of the sent DATA



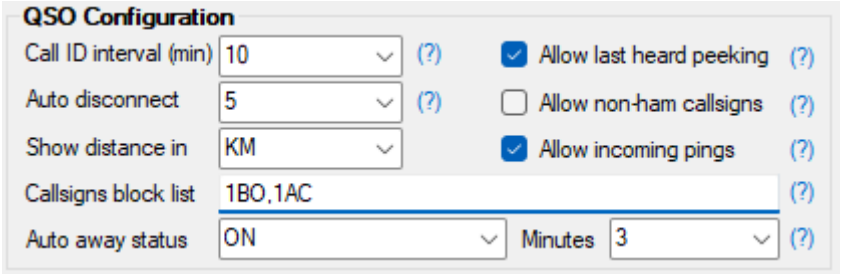


Monitor ON



When the transceiver receives the signals, we see the decoded data in text format in the Monitor screen of VARA-HF..

QSO Configuration



Call ID TX interval (min): see
Allow last heard peeking: see
Allow non ham Callsigns : see
Allow incoming pings: see
Auto disconnect see
Show distance in: show KM or MI (Kilometre or Miles)
Callsigns block list: see
Auto away status: see I'm Away message
Minutes: set the time for the Auto Away

Call ID TX interval (min)

As HAMs, we are required to identify ourselves every few minutes during a QSO. The number of minutes depends on YOUR local regulations.

It also enables other HAMs monitoring frequency to know who is chatting, and once the QSO is over, they can connect to any of the chat parties.

This parameter affects the interval in which a "DE MyCallsign" message is sent over the chat.

Allow last Heard peeking

You can allow the other party to retrieve your last heard beacons/CQ lists.
Allows your partner to see who sees you online.

Allow non ham Callsigns

You can tell VarAC to block specific callsigns you do not want to see or connect to.
Type calls separated by commas.
Those callsigns cannot connect you and will not appear on your last heard lists.

By default VarAC ignores beacons, CQ calls and connection attempts from stations that do not use a valid radio callsign.

We recommend that you leave this feature disabled to protect against attempts by non-amateur radio connections.

If you use VarAC for other purposes outside of the amateur radio bands with non-amateur callsigns, you must enable this feature.

Allow incoming pings

Pings are short QSO for the purpose of reports exchange only.
Pings are great to check the link between two stations.

Be default, your VarAC will accept ping requests.
You can disable it by unchecking this box.

Auto Disconnect

Set the time in minutes in which you want to end the inactive connection.

This is useful if you do not want someone to forward you and leave the link open for a long time without sending anything or if you forget that the link is open.

Set this parameter to 0 (zero) if you want to disable this function

Callsigns block list

You can tell VarAC to block specific callsigns you do not want to see or connect to.
Type these Callsigns separated by commas.
Those callsigns cannot connect you and will not appear on your last heard lists.

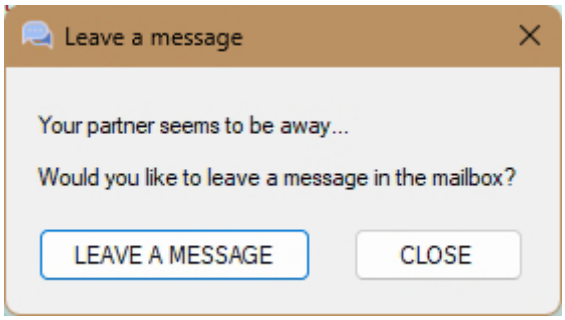
Auto away

The automatic away mode automatically puts VarAC in the “I'm away” state, if no operation has been performed in the VarAC application for a certain number of minutes.

I’m Away message

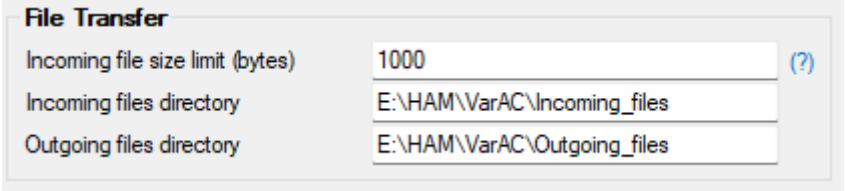
When you connect to a station that is in "I'm away" status, the following messages appear:
In the first image you see a summary of the connection and in the second image a question appears if you still want to send a message.

15:35:49 - CONNECTED TO KN4PRE
15:35:58 - KN4PRE> <AWAY> Busy taming tigers...lv a msg? de <FC:Z6/KN4PRE>
15:36:07 - ON2AD> de ON2AD <R+01>
15:36:16 - QSO SUMMARY: Frequency: 14.105.000 (20m) Duration: 00:26
15:36:16 - DISCONNECTED FROM KN4PRE



The AWAY station will automatically send an "<AWAY>" message when it has enabled "Allow incoming pings" in the "Rig Control and VARA configurations" menu in the "QSO Configuration" panel.

File transfer



Incoming file size limit (bytes): see
Incoming file directory: Set the folder for the files to be received.
Outgoing files directory: Set the folder for the outgoing files

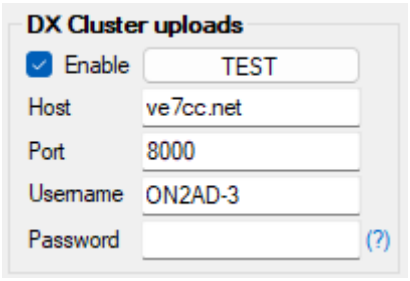
Incoming file size limit (bytes)

You can configure the maximum file size (in bytes) that you want to receive automatically without explicit permission.

During the activity in QSO, if an incoming file transfer exceeds this limit, you will be prompted to approve or reject the file.

While you are away (status "I'm away"), if someone tries to send you a file that exceeds this limit, it will be automatically rejected.

DX Cluster uploads



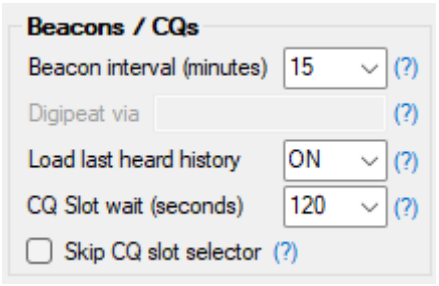
Enable : Check this to use the DX Cluster

Host : Fill in the Hostname
Default setup: **Host**: ve7cc.net **Port**: 8000

Port : Fill in the Port number of the Host

Username : Fill in your username
Password : Most DX Clusters do not require a password.
Only a username that is your Callsign.
If no password is required – leave this field empty.

Beacons / CQs



Beacon interval (minutes): see Beacon interval

Digipeat via : See Digipeat

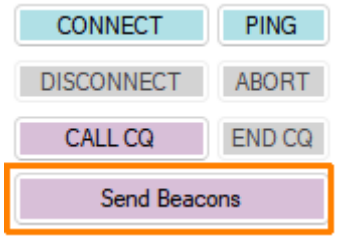
Load last heard history: see

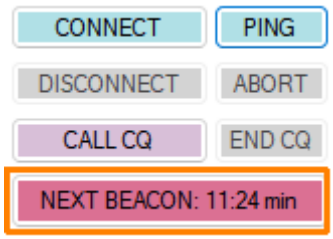
CQ Slot wait (seconds): see CQ Slot wait

Skip CQ slot selector see Skip CQ slot

Top

Beacon interval





You can periodically set VarAC to send beacons to let other stations know you are on frequency.

If you check the "send beacons" box, a beacon with your callsign will be broadcast every 15 minutes based on your selection here.

A beacon will only be broadcast if the frequency is not occupied for at least 1 minute to avoid disturbing active QSOs or beacons.
Once you activate beacons, they will be sent for a period of up to 24 hours and then automatically turn off.

In the box NEXT BEACON: xx:xx min you can see when the next beacon will be broadcast.

To stop broadcasting the beacons just click:
NEXT BEACON: xx:xx min

Remark
xx:xx indicates the duration

Digipeat

Applicable only for VARA-FM:
VaraFM allows you to digipeat your transmission through one or more parties.

If you wish to CQ/Beacon trough a digipeater, enter it is callsign here.

You can enter more than one callsign if you wish to relay your transmissions trough a chain of digipeaters.
Use SPACE as a delimiter. Ex; "4Z1DIG 4Z2DIG"

Load last heard history

VarAC keeps a log of both CQ calls heard and the last beacons heard.

You can ask VarAC to fill in the last heard list from that log, so if you restart VarAC for any reason you will see the previous CQ calls and Beacons on the screen.

VarAC only looks back on the last 100 rows of the last heard log file.
Note that you may see fewer callsigns on the screen as VarAC only shows the latest event per callsign.

CQ Slot wait

When you Call CQ, you can wait for incoming connections on another frequency (Slot).

The amount of time VarAC will keep waiting for incoming connection on the Slot is determined by this parameter.

Skip CQ Slot

VarAC slot system allow you to call CQ on a shared calling frequency while encoding into the CQ call the frequency (slot) where you standing will be for an incoming call.

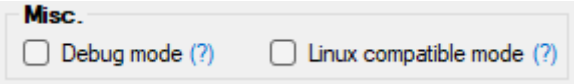
This checkbox disables this CQ mechanism.

Disable the slot - based mechanism **ONLY** if you use VarAC with VARA-HF or if you wish to run your own VarAC net on another frequency without slots.

IF YOU USE VarAC ON THE OFFICIAL HF CALLING FREQUENCIES, YOU MUST USE SLOTS
(Hence leave this checkbox un-checked)

Top

Misc.



Linux compatible mode: see Linux compatible mode

Debug mode: once this is enabled VarAC creates a new file with all the information VarAC does etc…

Enable this ONLY when instructed by the developers of VarAC.

Enabling this way may slow down VarAC significantly and may affect / disable some of the VarAC functionalities as many log entries will be written to “one” disk.

Linux compatible mode

VarAC can be used on Linux based platform such as WINE.

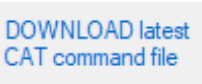
Some VarAC elements are managed differently on such a platform so check this checkbox in case you are running VarAC on Linux.

Please note: Linux compatibility mode disabled the speller feature.

Linux using

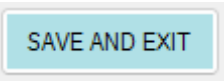
See Linux Installation

DOWNLOAD latest CAT command file



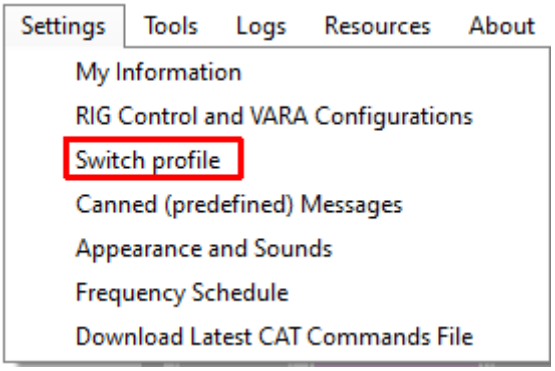
When click on DOWNLOAD latest CAT command file will open the RIG control file | VarAC (varac-hamradio.com) website who you can download the latest CAT command file.

Save and Exit

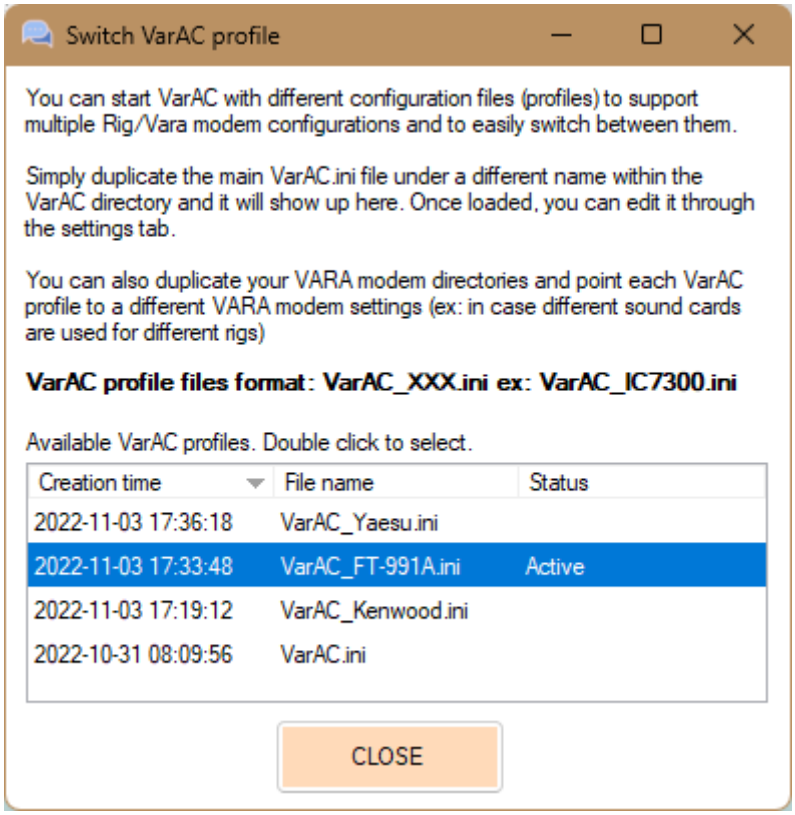


Do not forget to save your settings

Switch profile



Select Switch profile to switch to another profile or setting



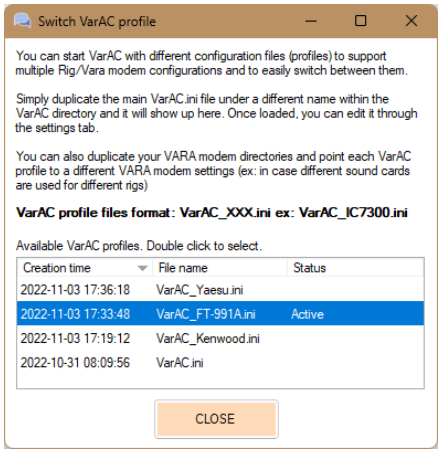
You can start VarAC with different configuration files (profiles) to support multiple Rig/VARA modem configurations and easily switch between them.

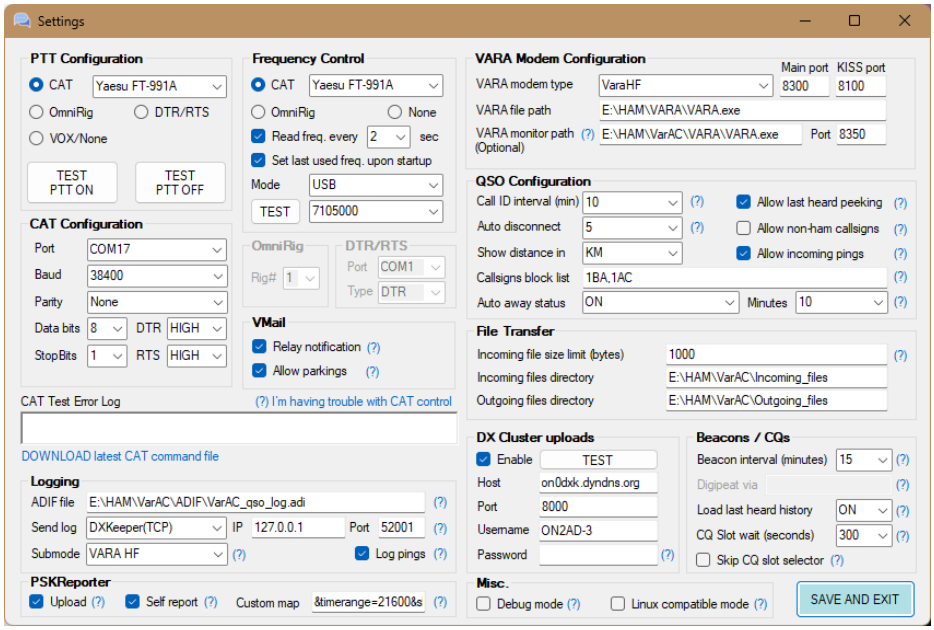
Simple duplicate the main VarAC.ini file under a different name within the VarAC directory and it will show up here. Once loaded, you can edit it through the settings tab.

You can also duplicate your VARA modem directories and point each VarAC profile to a different VARA modem settings (ex: in case different sound cards are used for different Rigs)

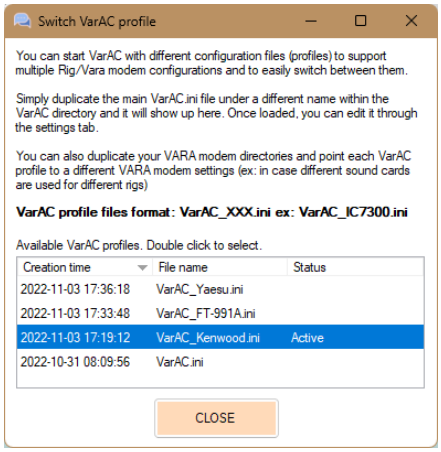
VarAC profile files format:
VarAC_XXX.ini
Ex:
VarAC_Kenwood.ini
VarAC.ini

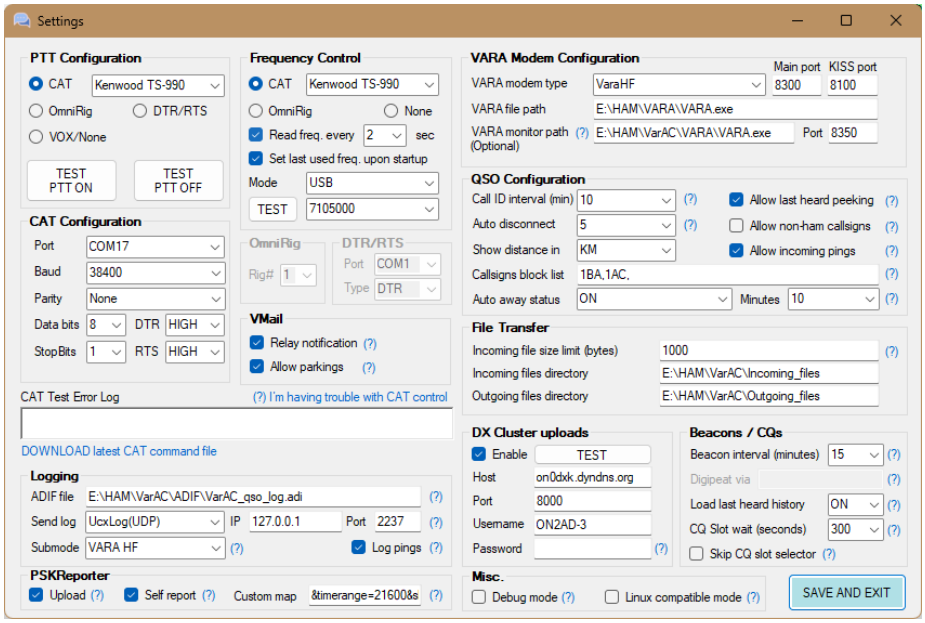
VarAC_FT-991A.ini



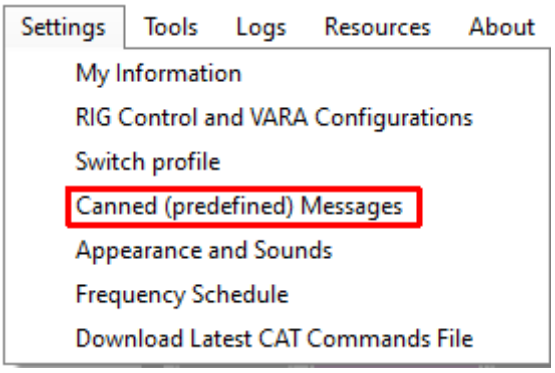


VarAC_Kenwood.ini



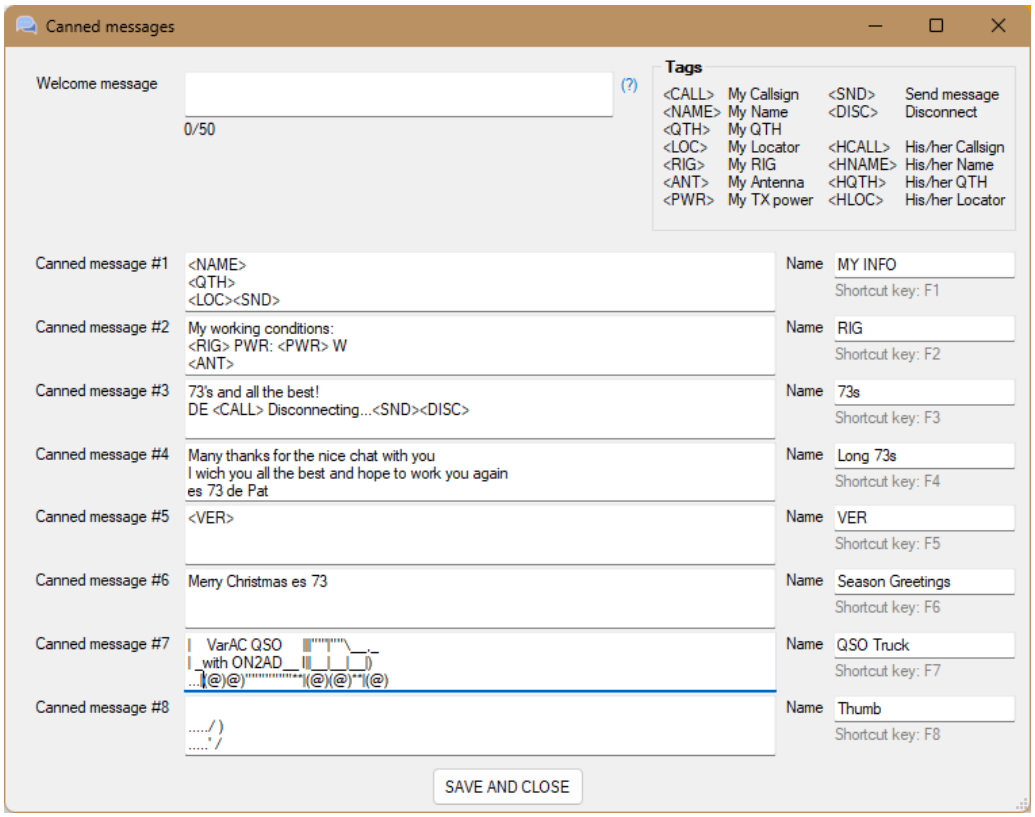


Canned (predefined) messages



Click on the Menu Settings and then Canned (predefined) messages and the following screen will be displayed.

Canned messages



Welcome message: See

Canned message #1 till #8:
Here you can write your info's

Note: If all your info's are right do not forget to press the Save and Close button

Shortcut F keys

The Canned messages can easily be called up by pressing a Shortcut key.
This is how the Shortcut key is:
F1 for the Canned message #1
F2 for the Canned message #2
Etc…

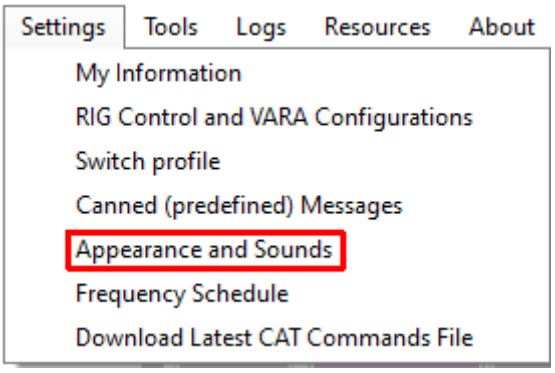
Tags

See Tags & Gestures

Welcome message

This message will be automatically sent to anyone who connects you while you are not in "I'm away" status
Leave it empty if you do not wish you send anything.
Please note: a 'de YOURCALL" will assed at the end of your welcome message.

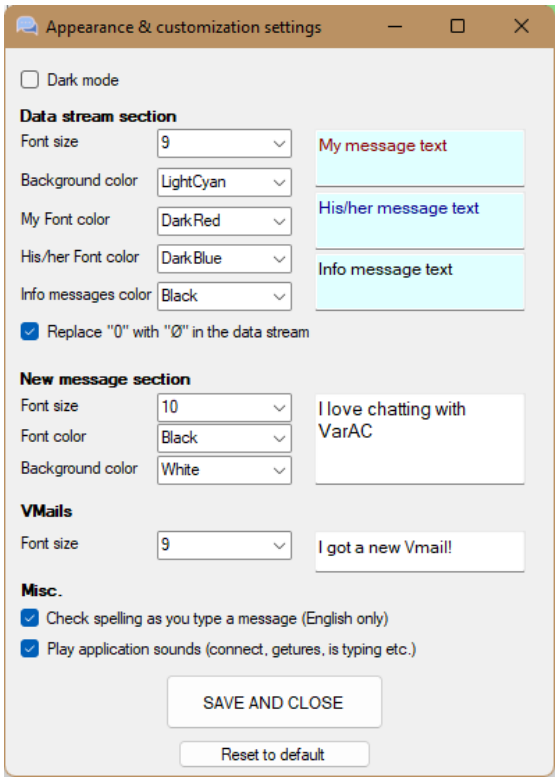
Appearance and Customization



Click on the Menu Settings and then on Appearance and Customization and next screen is visible.

Top

Appearance and Sounds settings



Dark mode enabled

Dark mode:
If enabled then VarAC goes in dark mode. See Dark Mode enabled
If disabled then VarAC goes in default modus. See Dark Mode disabled

Data stream section:
Here you can change the Font size, Background color, My Font color, and His/her Font color.

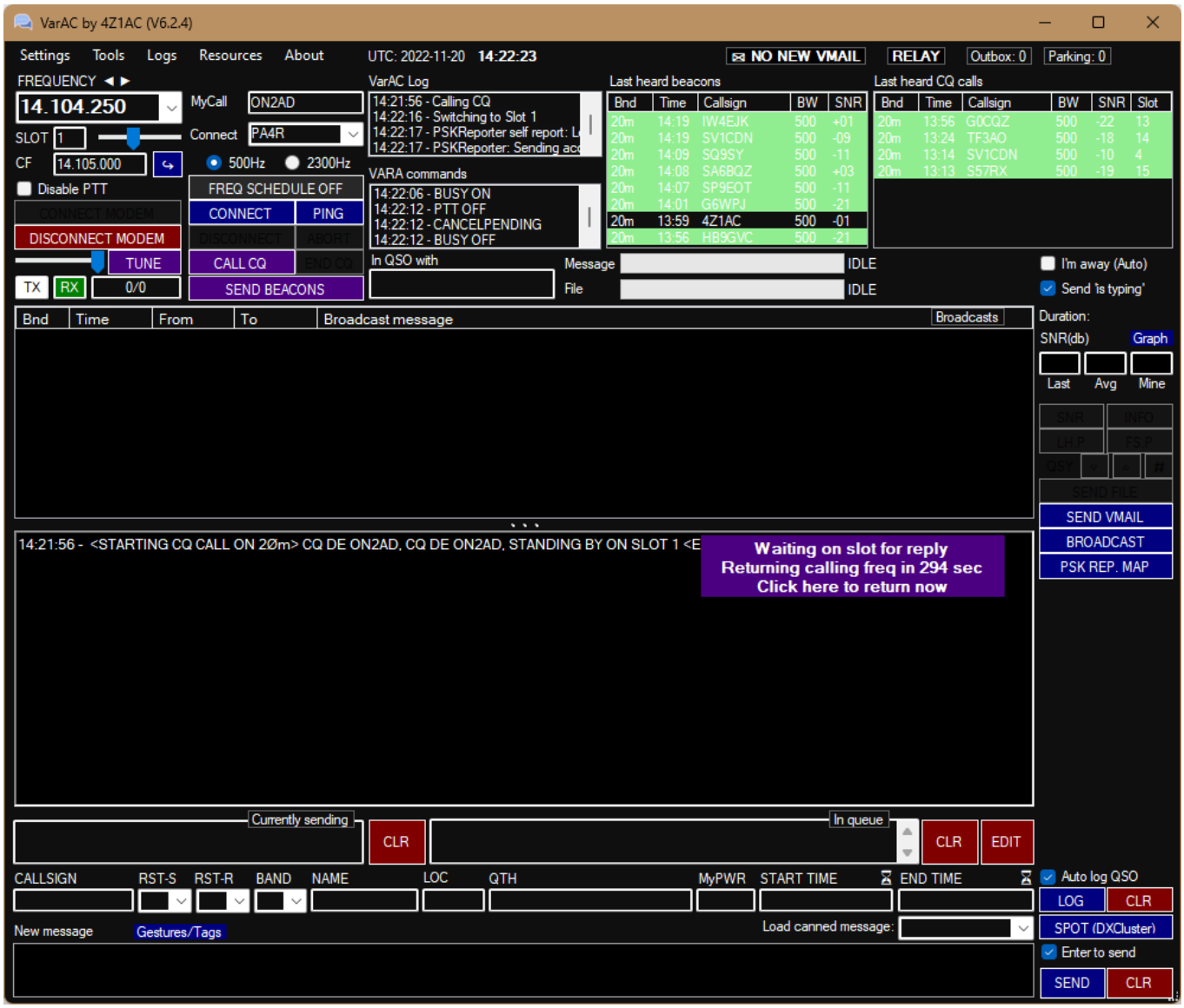
Replace"0" with "Ø"

New messages section:
Here you can change the Font size, Font color and the Background color

VMails.

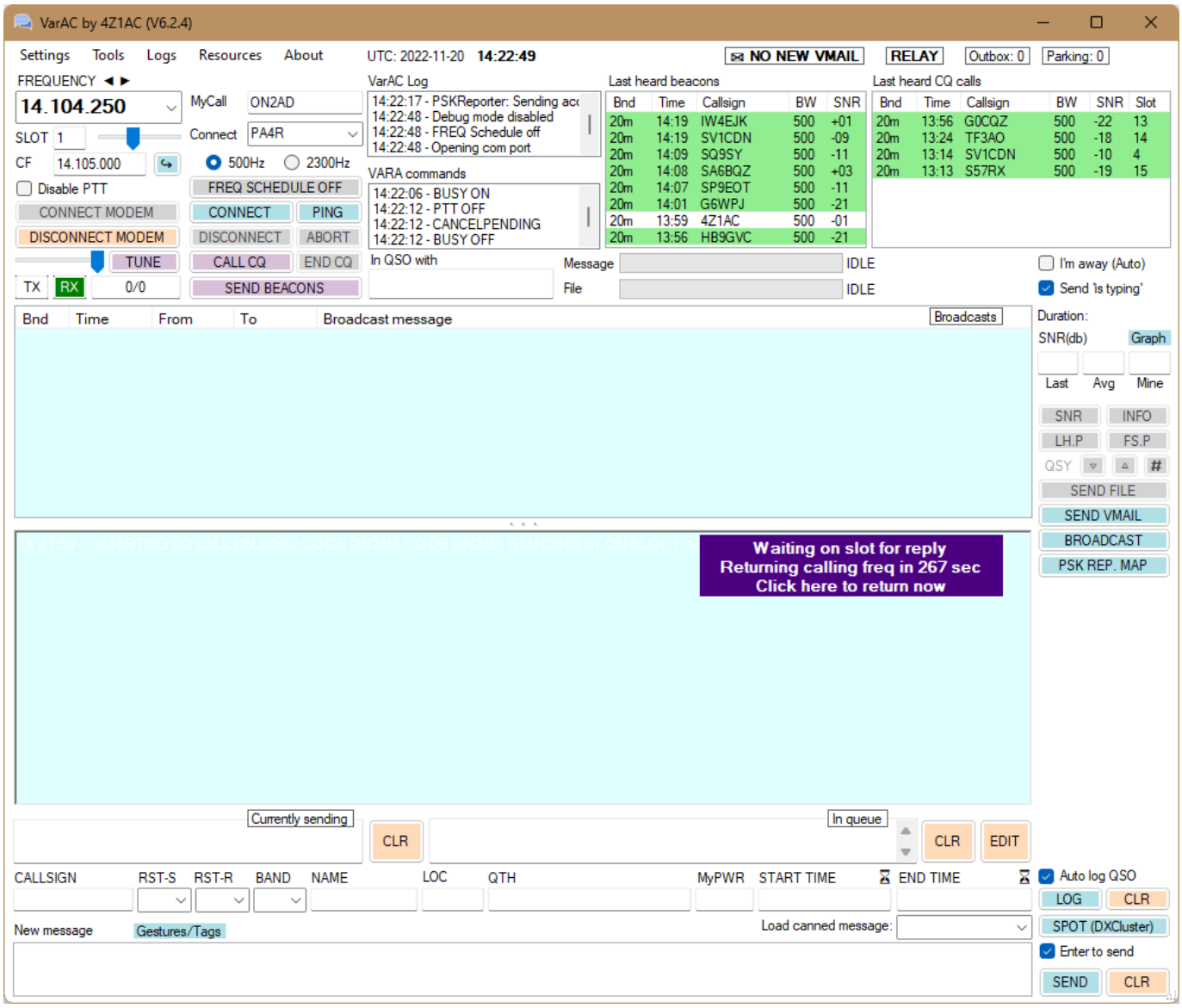
Here you can change the Font size of the VMails.

Misc.
Check the spelling
Play application sounds for Connect, gestures, if the other HAM is typing etc…

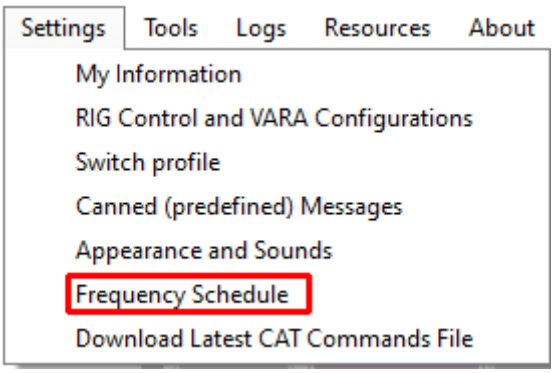


Top

Dark Mode disabled



Frequency schedule



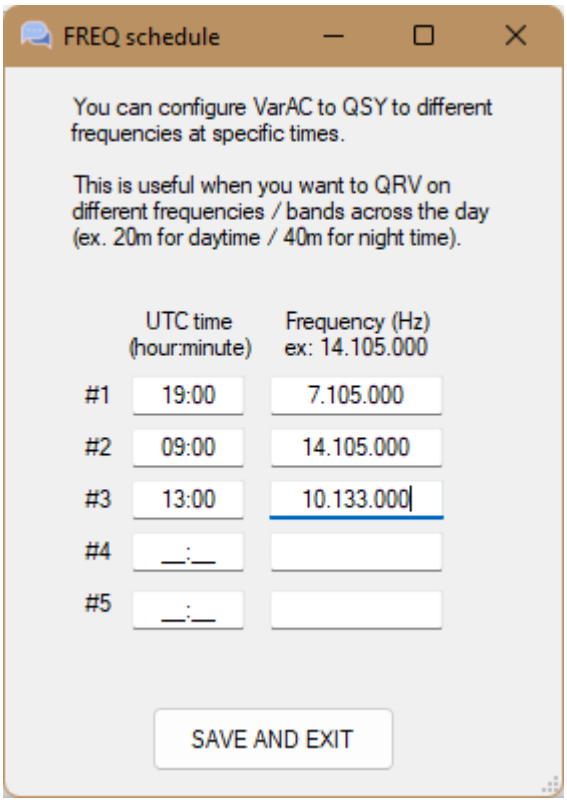
You can configure VarAC to QSY to different frequencies at specific times.

This is useful when you want to QRV on different frequencies / bands across the day.

(ex. 20 meter for daytime / 40 meter for night time)

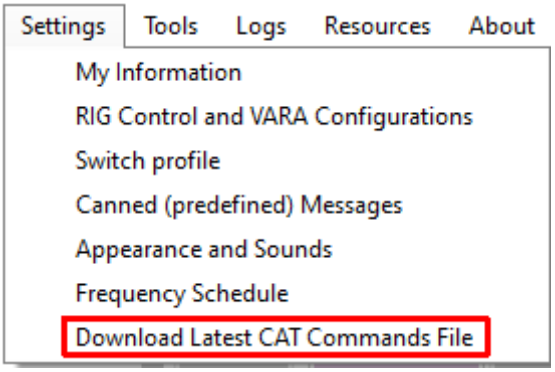
In the column:

UTC time you set the UTC time as hours: minutes
Frequency (Hz) you enter the frequency as Hz.



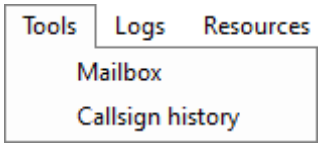
Top

Download Latest CAT Commands File



When click on DOWNLOAD latest CAT command file will open the RIG control file | VarAC (varac-hamradio.com) website who you can download the latest CAT command file.

Tools

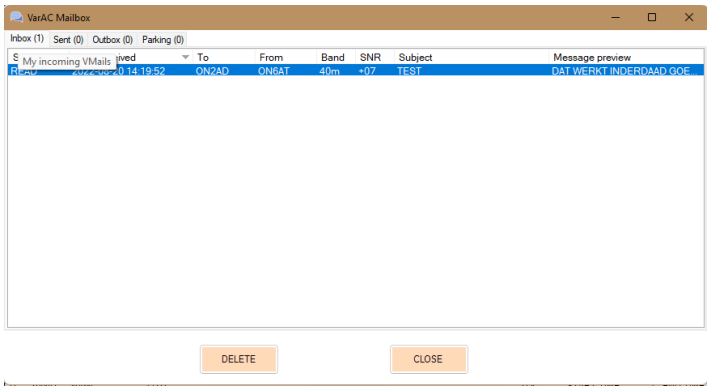


MailBox: See Mailbox

Callsign history: See Call history

Mailbox

Inbox



Inbox: This contains the already received VMails.

Sent: This is where the VMails to be sent are set when sending the VMails

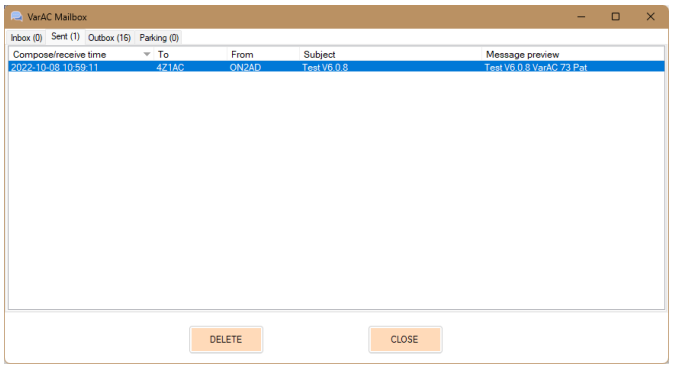
Outbox: The VMails to be sent are placed here, and they are only sent when there is a connection with the counterpart station.

Parking: This is where the VMails are parked

Sent

They are 2 options:

1	**Connect a station.**	Send VMAIL and state another destination callsign. You will be asked if you want to "Relay now through connected station".
2	**Write an offline message.**	Once connected, go to your outbox, right click and select "Relay now through connected station"



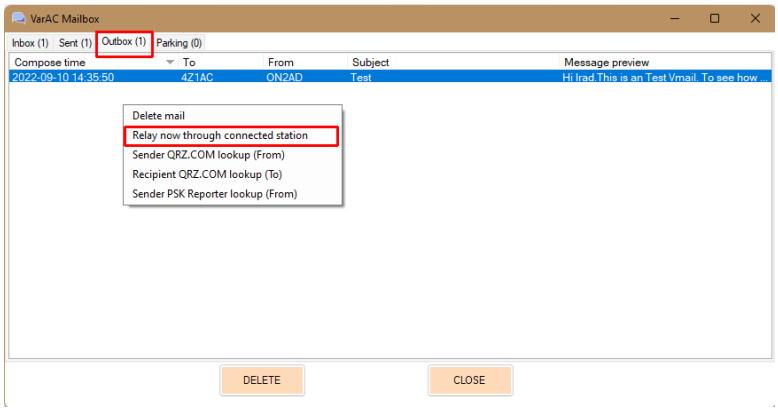
Sent message to 4Z1AC

After sending a VMAIL, you will receive a confirmation that the VMAIL has been delivered successfully.

Example:

```
14:31:25 - 4Z1AC> <R-15>
14:32:48 - ON2AD> <SM><TO:4Z1AC><FRM:ON2AD><SBJ:Test><MSG:Test for new Manual>
14:33:02 - 4Z1AC> <SMR>
14:33:02 - VMAIL DELIVERED SUCCESSFULLY
14:34:10 - QSO SUMMARY: Frequency: 14.105.000 (20m) Duration: 03:43
14:34:10 - DISCONNECTED FROM 4Z1AC
```

Outbox



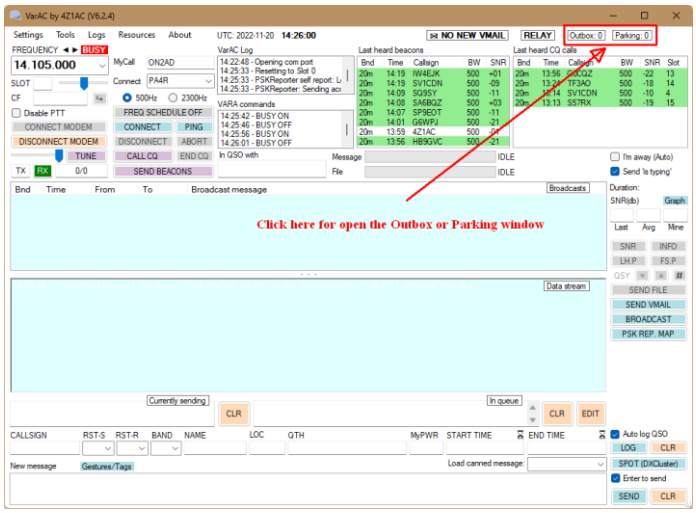
Remark:

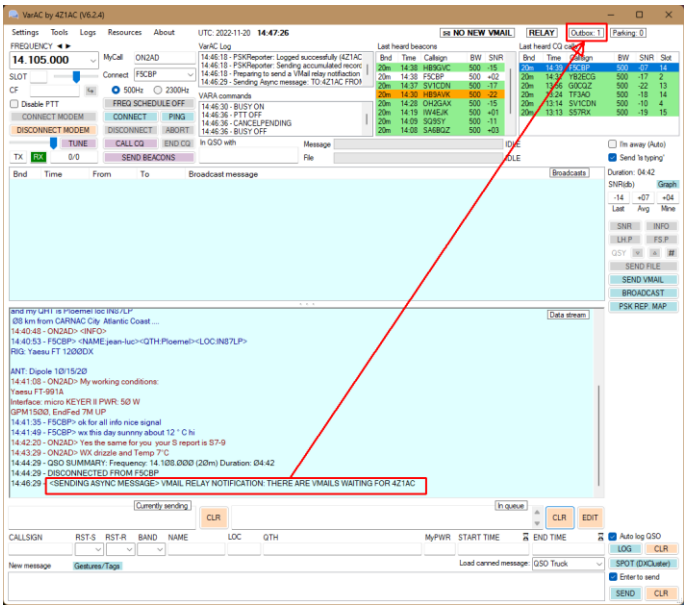
The VMAIL will not auto connect, only if you connect with the destination station (or vice versa) will your message relay.

Parking

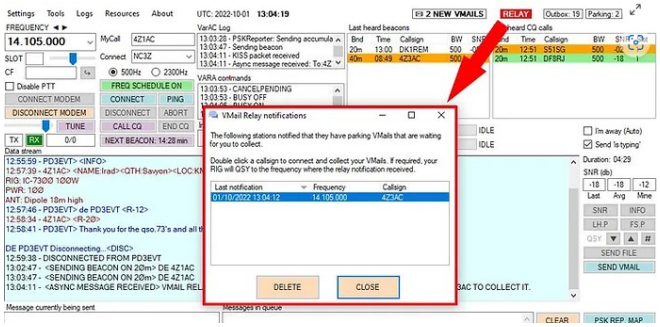
Whenever your station decodes a beacon, it will check if you are holding VMails for that station (either VMails you have written or VMails written by others that park in your mailbox).

Outbox view





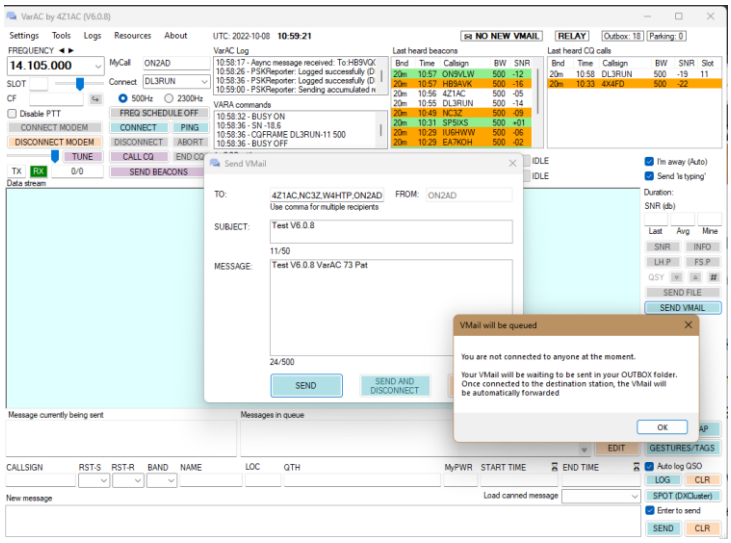
Relay

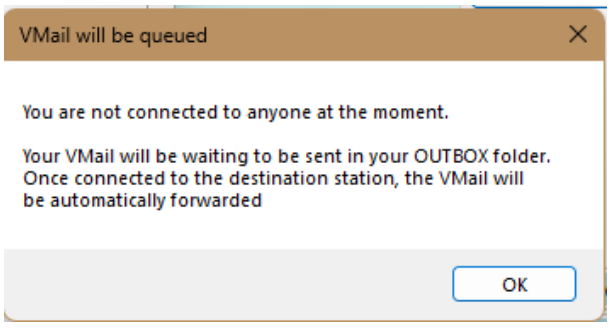


The following stations notified that they have VMails waiting for you to collect.
Double click a Callsign to connect and collect your Vmails. If required, your RIG will QSY to the frequency where the relay notifications received.

How does it work?
Every time your beacon is decoded by someone, if they have a Vmail to relay to you, they will send you a “Relay Notification” broadcast. Those broadcasts are limited to once every 20 minutes per Callsign.

Send Vmail





Callsign history

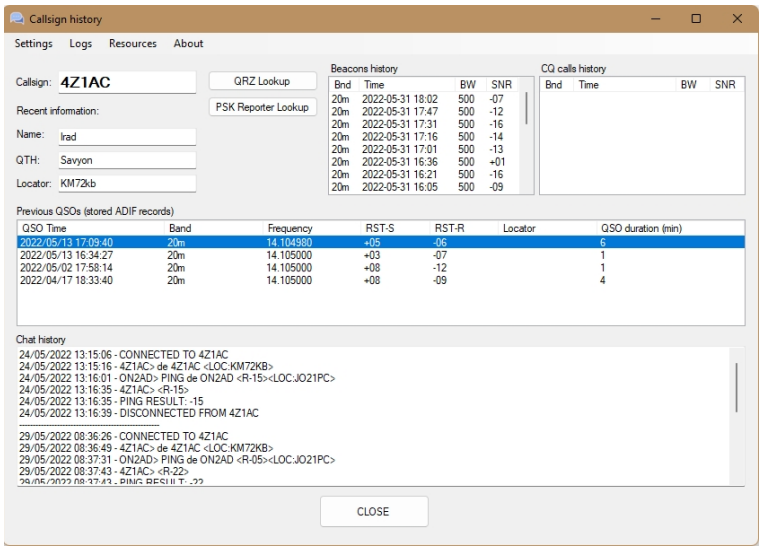
Once you are connected to that counterpart station, you can click on “See History” to view the complete “History” with this counterpart station.

The menu bar is the same as the main VarAC screen.

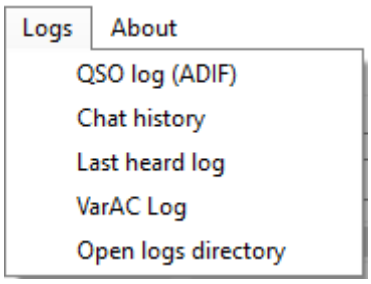
When clicking QRZ lookup a new QRZ.com window opens

There is also an option to activate the PSK Reporter by clicking on the PSK Reporter Lookup.

Click on “Close” to close this window



Logs

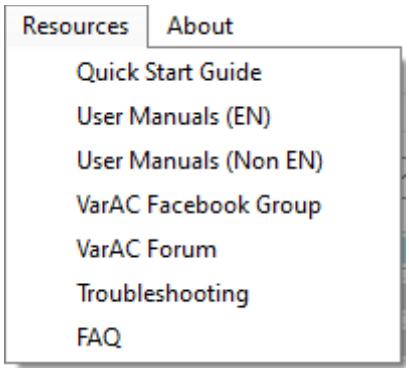


Easy access to all VarAC logs like:

QSO log (ADIF): here are your log in ADIF format(xxx.adi).
Chat history: Your chat history.
Last heard log: Here you will see the last heard Calls as Beacon or as CQ calling.
VarAC Log: Here are the whole VarAC log (not the logbook).
Open log directory: This open the VarAC folder.

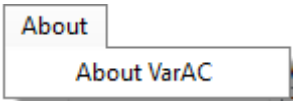
Top

Resources



Quick Start Guide: Opens the VarAC Quick Start Guide page
User Manuals (EN): Opens the English manual page
User Manuals (Non EN): Opens the manuals in the non-English language such as: Dutch, German, Spanish etc…
VarAC Facebook Group: Opens the Facebook page of VarAC
VarAC Forum: Opens the VarAC Forum page
Troubleshooting: Opens the troubleshooting page
FAQ: Opens the most Frequently Asked Questions page

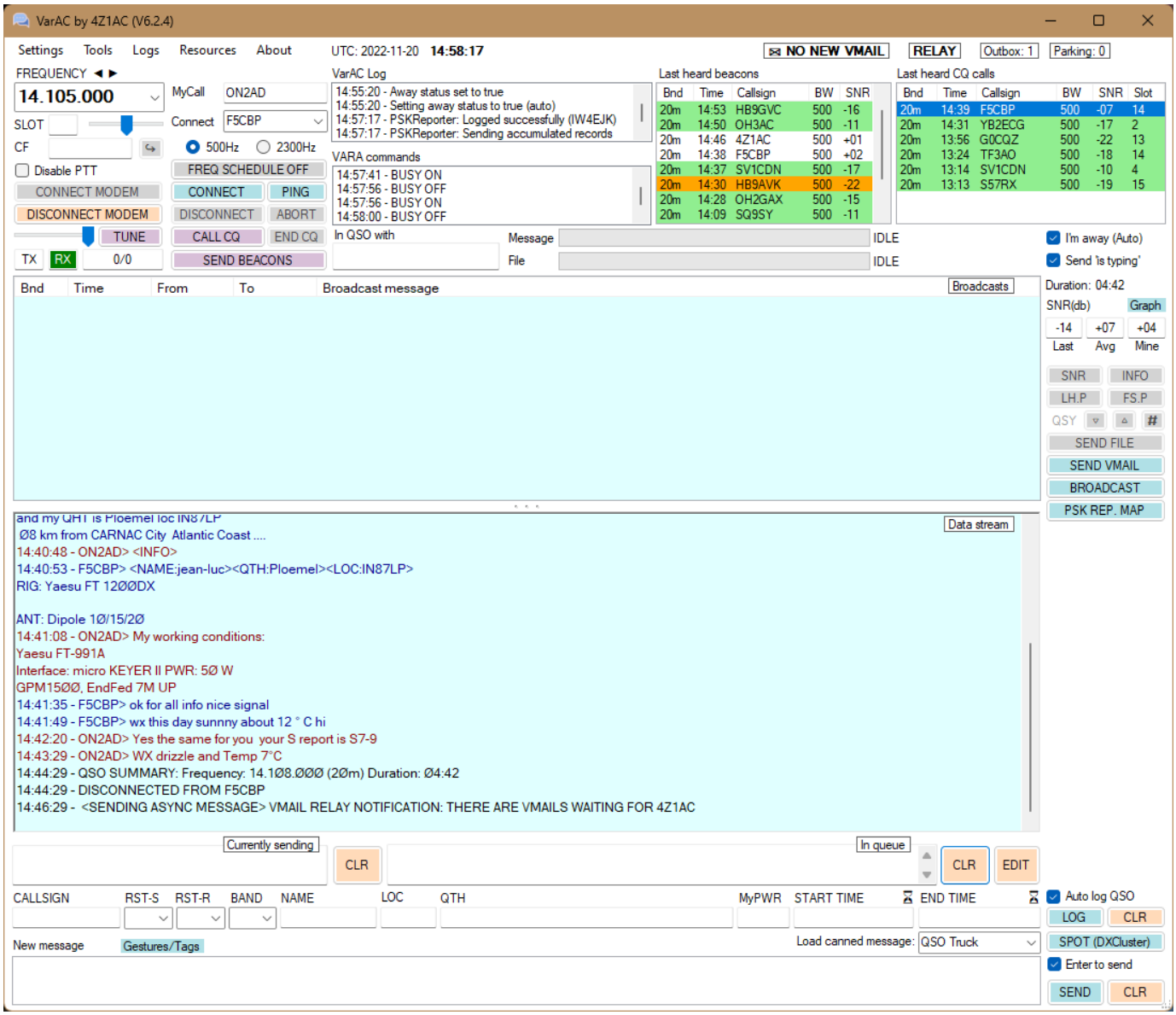
About



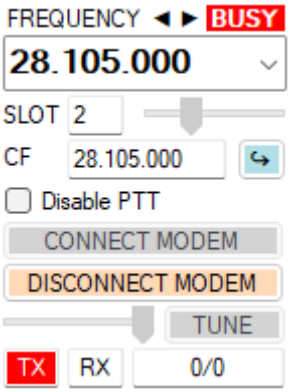
About: VarAC: with info about the version and Author of VarAC

Top

VarAC main screen



VarAC Commands



FREQUENCY ◄ ► Increase or decrease the frequency by 750 Hz

Frequency: Select a frequency with a drop-down button. See

BUSY Frequency BUSY indicator.

SLOT Here you see the SLOT number Slot slider here on Slot 2

CF CALL Frequency ↪CF Returns to the call frequency

Disable PTT Switching the PTT on and off

Connect Modem: Connecting to the VARA modem

Disconnect Modem: Disconnect the VARA modem

Set the VARA modem ALC level and keys the PTT to test it.

TUNE Tune signal. Note: only works with the paid VARA version

Switching the PTT on and off

TX Send info white button but changed to red by TX

RX Receive info coloured green but when info received changes to red

sent and received bytes

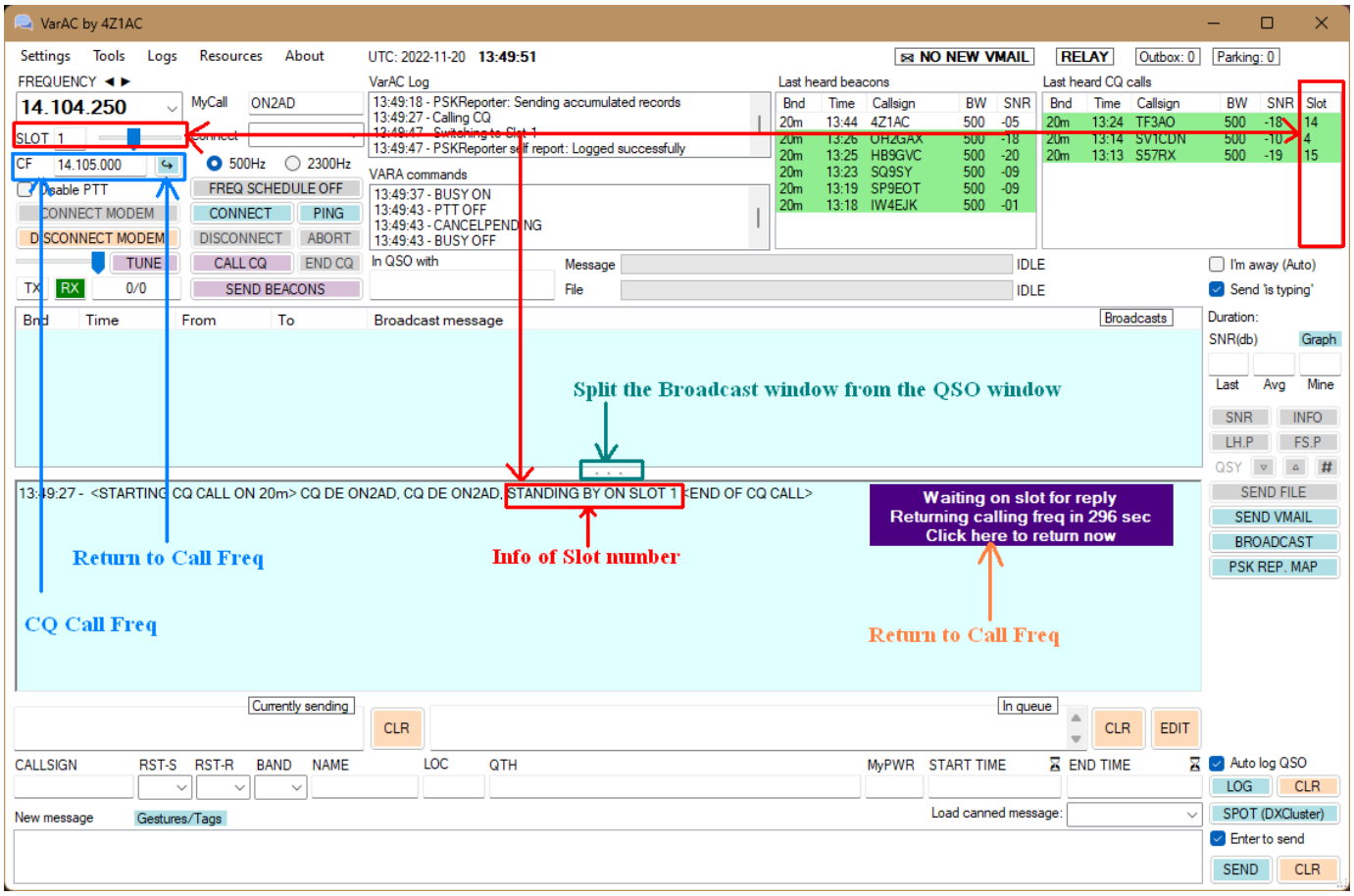
0/0 Send and received bytes

Calling Frequency (CF) (USB dial)

Band	-	Freq	MHz	
20M	-	14.105	MHz	Primary – day time

40M	-	7.105	MHz	Primary – night time
80M	-	3.595	MHz	
30M	-	10.133	MHz	
17M	-	18.107	MHz	
15M	-	21.105	MHz	
12M	-	24.927	MHz	
10M	-	28.105	MHz	
6M	-	50.330	MHz	

Slots



The problem

VarAC QRGs becomes highly busy. The QSY UP/DOWN frequencies are sometimes also in use simultaneously. This leaves no room for people to CALL CQs or conduct long QSOs.

The Solution

Creating a SLOT-based mechanism. Here are the main principles of this model:

Band plan:

1. A single calling QRG (ex. 14.105.000) per band.
2. 10 slots around the main QRG with +-750Hz steps. Ex.:
   a. Above QRG : 14.105.750, 14.106.500, 14.107.250, 14.108.000, 14.108.750
   b. Belong QRG: 14.104.250, 14.103.500, 14.102.750, 14.102.000, 14.101.250
3. Each slot will be given a number – AKA SLOT-ID: Ex. SLOT-ID 1,2,3…

QSO-workflow

6. Checks that the SLOT is not occupied :
   A SLOT SNIFFER button – this button will allow the user to temporarily QSY to the SLOT and listen if it is free.
   Holding the button down will listen on the SLOT.
   Releasing it will jump back to the calling QRG.
7. User A calls CQ on the main QRG with an SSID that points to the SLOT-ID that the user desires to have a QSO on.
   Example: CQ DE 4Z1AC-4 which stands for: “I standby on Slot #4”

8. After the CQ, User A will automatically QSY to the relevant SLOT waiting for an incoming connection request.
9. The CQ call will appear on Last-Heard-CQ with the SLOT-ID indication for users that monitors the calling QRG.
10. User B double click User A callsign on the LH CQ list.
11. User B automatically QSY to the identified SLOT and makes a connection attempt.
12. User A and User B connect on the SLOT and conduct a QSO.
13. Once the QSO ends, Both users will remain on the slot. A “Back to Calling frequency” button will be enabled to allow them an easy skip back.

New configurable parameters under settings

CQ SLOT WAIT TIME = from 60 till 3600 seconds (1 to 60 minutes): how much time a station will park on the SLOT for incoming calls following a CQ call.

See Beacons / CQ’s

Additional notes

If a QSO takes place on the main QRG for any reason, CQ calls can still be decoded quite well by others so it will have some, yet minimal effect on the model.

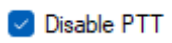
The model is relative. Meaning that SLOT ID frequencies will be calculated based on the parking QRG. Users can create their own SLOT plans on other frequencies just be deciding on an agreed calling QRG.

The QSY UP/DOWN/# will remain as is. People can still move around in case of QRM.

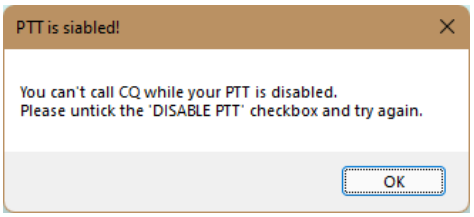
500Hz of 2300Hz

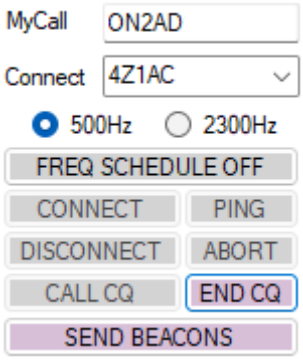
Well, we want to be efficient. So by default all VarAC QSOs are made in 500Hz. if you want to test a wider bandwidth feel free to do so, but choose another frequency not listed in the VarAC QRGs and try it out. Just be respectful to other HAMs on the band.

Note: On the VarAC CQ frequency, the 2300 Hz is locked



If “Disabled PTT” is enabled and you try to connect, a window will appear reminding you to disable it first





My Callsign: Here you see your Callsign.

Connect: connect to the connected station.

500Hz or 2300Hz:	The selected bandwidth see
FREQ SCHEDULE OFF / FREQ SCHEDULE ON	See Frequency schedule

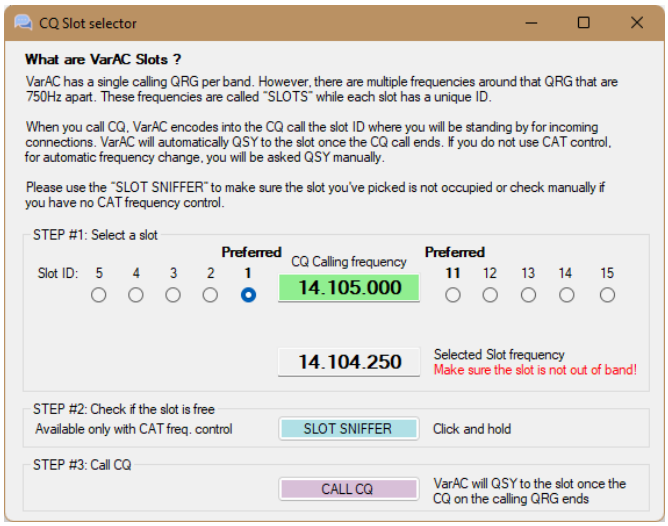
CONNECT: Make your connection
PING: Connect only to get a report followed by a disconnect.
DISCONNECT: Disconnect from
ABORT: …Abort
CALL CQ: Click this button to send your CQ
END CQ: Click this button to end the CQ call.
SEND BEACONS: send your beacon

CALL CQ

See also Slots

What are Slots?

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



When clicking the CALL CQ button, the following window will appear.

Here you can choose from different “Slots”.

When you call CQ, VarAC encodes into the CQ call the slot ID where you will be standing by incoming connections.

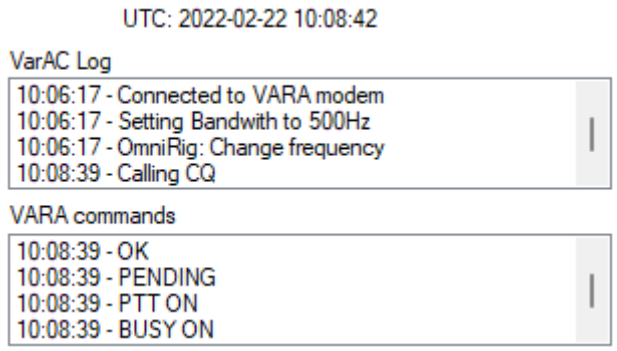
VarAC will automatically QSY to the slot once the CQ Call ends. If you do not use CAT control, for automatic frequency change, you will be asked QSY manually.

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

If no answer, your Rig will QSY back to the CF (Call Frequency)

Note: If you do not have CAT control or you wish to do a QSO on the call frequency then you must check the “Skip CQ slot selector” in the menu “Settings/Rig Control and VARA Configurations”.
Please note this method is NOT recommended.

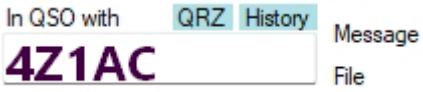
Log & VARA commands



Clock and the UTC time.
as YYYY-MM-DD hh:mm:ss
VarAC Log:
Here you can see all the info like Connected to VARA modem.
That the band with is 500 Hz
That OmniRig change the frequency

That you Call CQ
Or the you call via the Beacon
That you are connected to station XXXXX etc…
VARA commands:
Vara OK or ….
Is Pending
Your PTT is ON or OFF
Frequency is busy
The SN is visible ect…

In QSO with



If you are connected to a counterpart station, the callsign of the counterpart station will be displayed

See History

See History

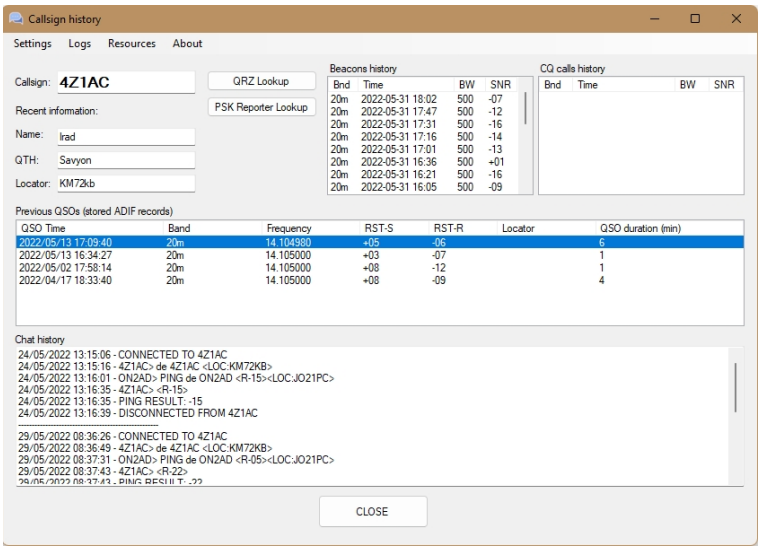
Once you are connected to that counterpart station, you can click on “See History” to view the complete “History” with this counterpart station.

The menu bar is the same as the main VarAC screen.

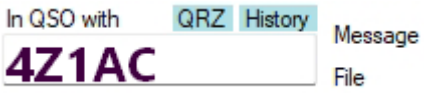
When clicking QRZ lookup a new QRZ.com window opens

There is also an option to activate the PSK Reporter by clicking on the PSK Reporter Lookup.

Click on “Close” to close this window



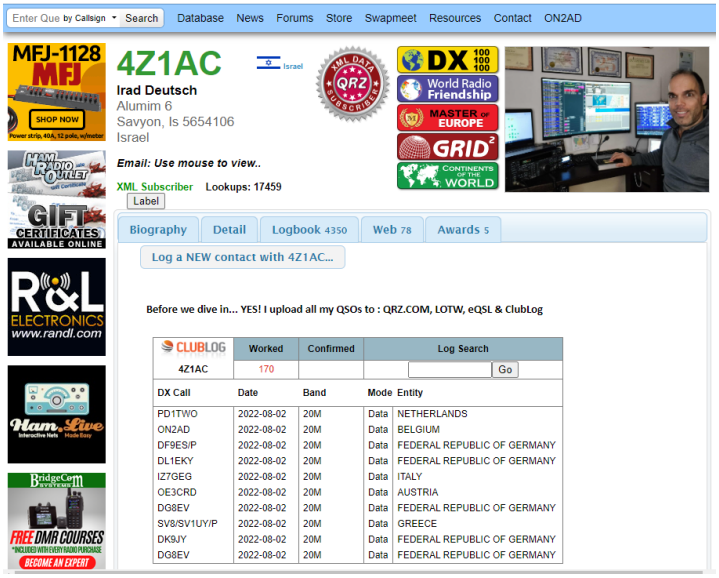
See QRZ.com



If you are connected to a counterpart station, the Callsign of the counterpart station will be displayed

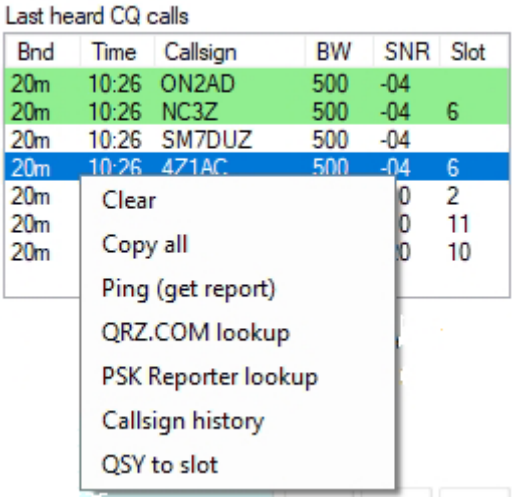
QRZ

Clicking on the QRZ opens the QRZ.com page of your chat partner



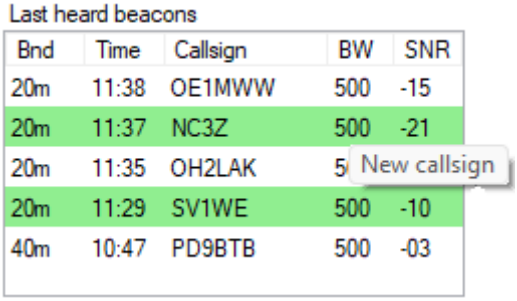
Last heard beacons

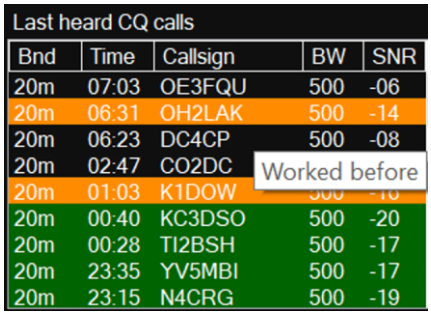
Here you find a list of stations that have access the beacon function.



By select a Call and press on the right mouse button on that Callsign a new window open for the next info:
Clear: Select that Call and then left mouse click for clear this Callsign
Copy all: Copy it all
Ping (get report): Select that Call and then left mouse click for get your report
QRZ.COM lookup: Select that Call and then left mouse click for lookup QRZ.com.
PSK Reporter Lookup: see their PSK Reporter spots
Callsign history: Go to the Callsign history
QSY to Slot: QSY to the Slot number

When you hoover with your mouse in a green/orange/non-coloured line you will get a tooltip explaining the coloured lines.



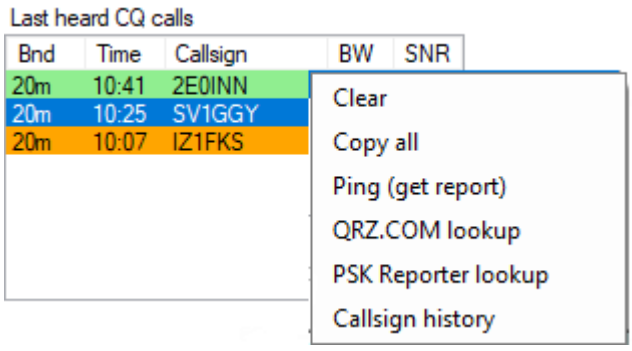


Legend of color

Green	-	new callsign (you did not worked)
Orange	-	New band for existing worked callsign
No color	-	worked before

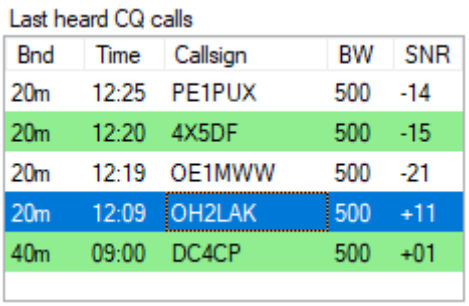
Last heard CQ Calls

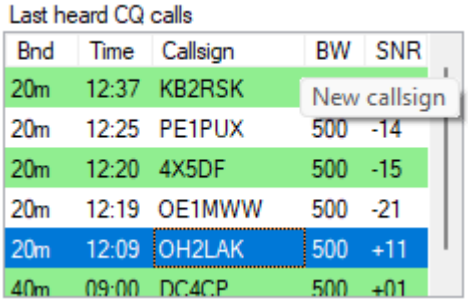
Here you find a list of stations that have calling CQ.



By select a Call and press on the right mouse button on that Callsign a new window open for the next info:
Clear: Select that Call and then left mouse click for clear this Callsign
Copy all: Copy it all
Ping (get report): Select that Call and then left mouse click for get your report
ORZ.COM lookup: Select that Call and then left mouse click for lookup QRZ.com.
PSK Reporter Lookup: see their PSK Reporter spots

When you hoover with your mouse in a green/orange/non-coloured line you will get a tooltip explaining the coloured lines.

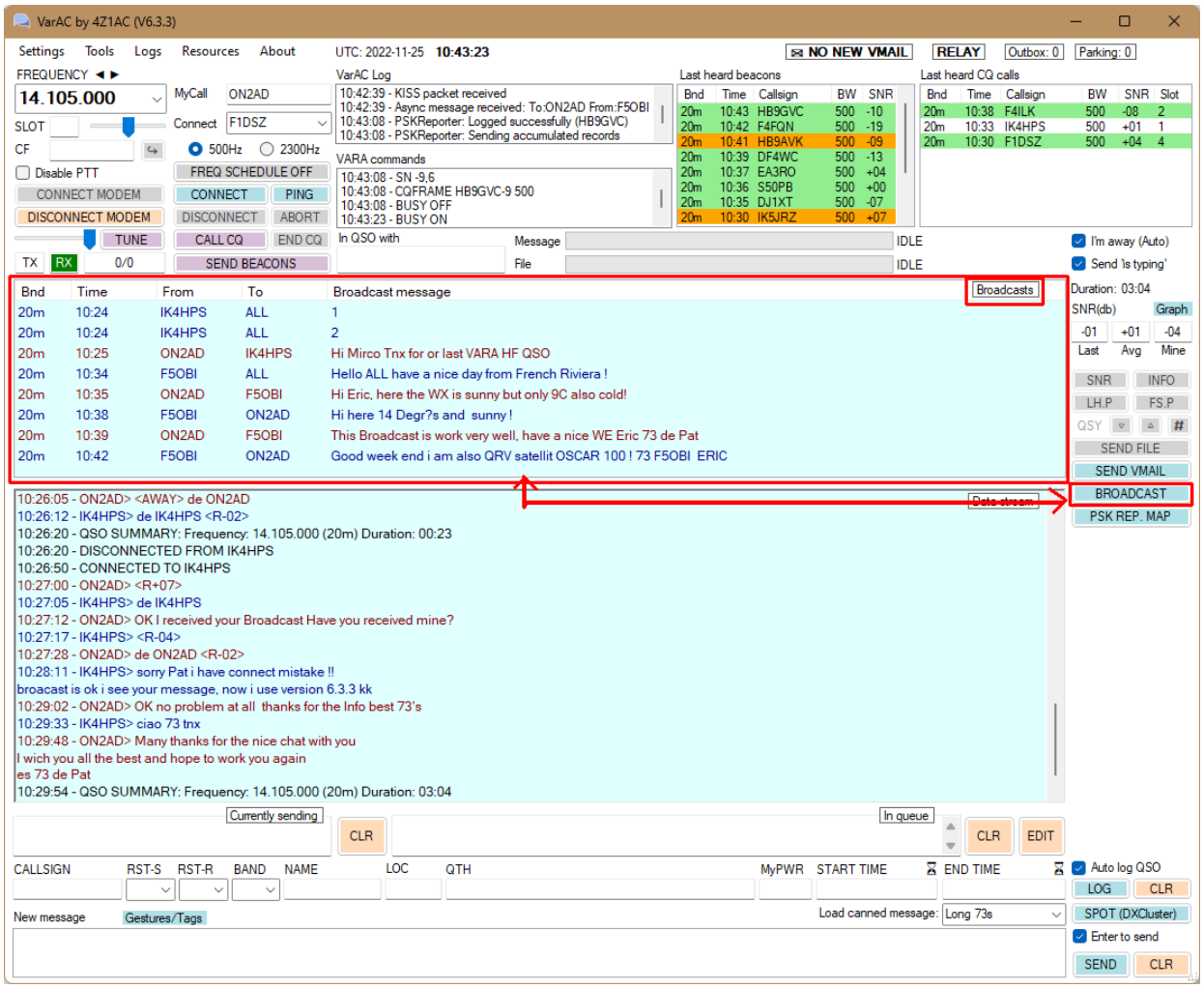




Legend of color

Green	-	new callsign (you did not worked)
Orange	-	New band for existing worked callsign
No color	-	worked before

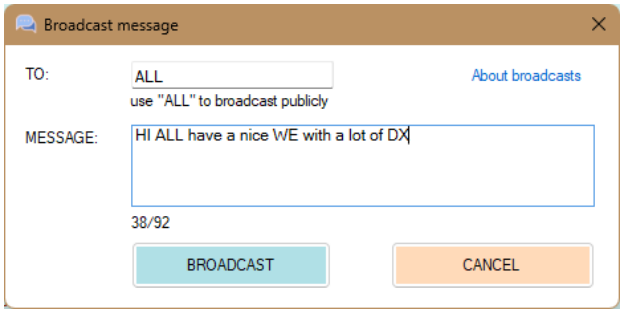
Broadcasts



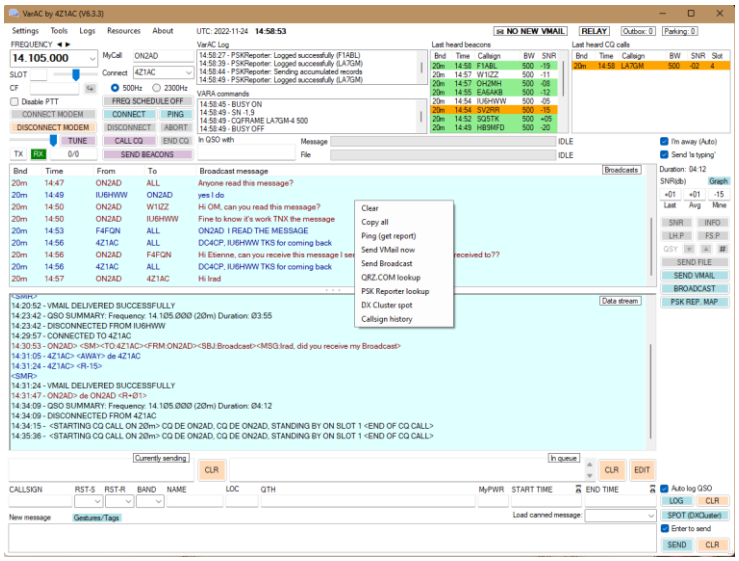
VarAC broadcasts are async messages that are sent in AX25 protocol (similar to APRS).

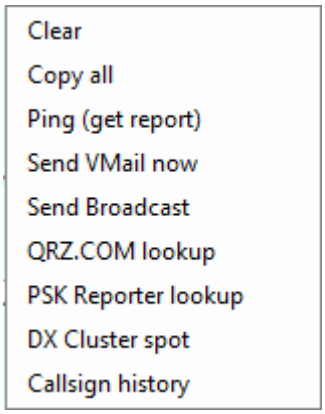
Broadcasts do not have a “delivery guaranteed” mechanism like a VARA link and they may not be received (it depends on received signal strength)

You can send a broadcast to a specific callsign or to all.

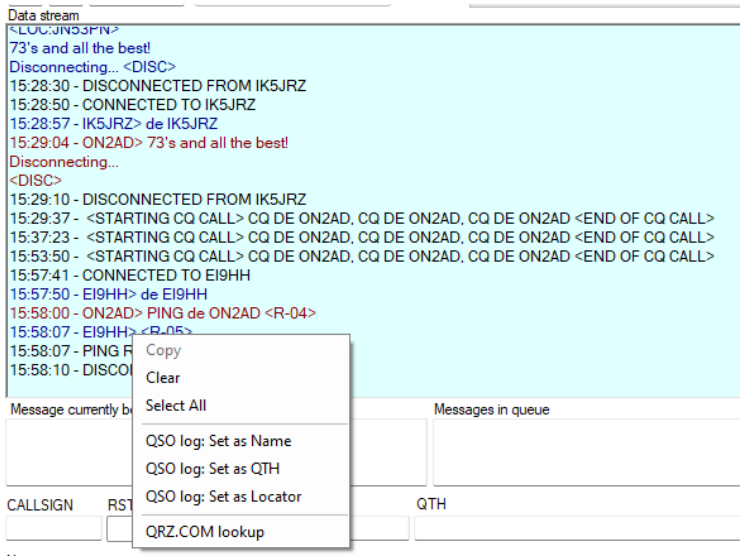


Right mouse click in the Broadcast screen open another window with next info





Data stream



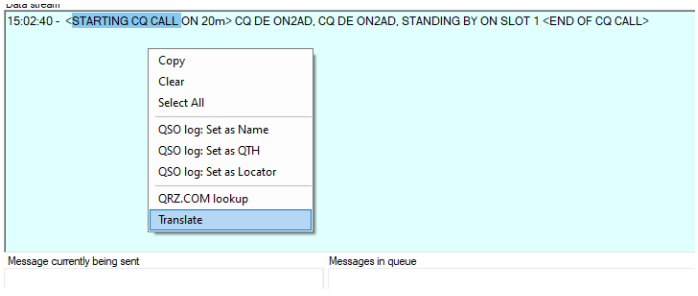
In this window you will see all the send and received communications you have done with a connected station.
Also the incoming connection request

Your CQ Calling etc…

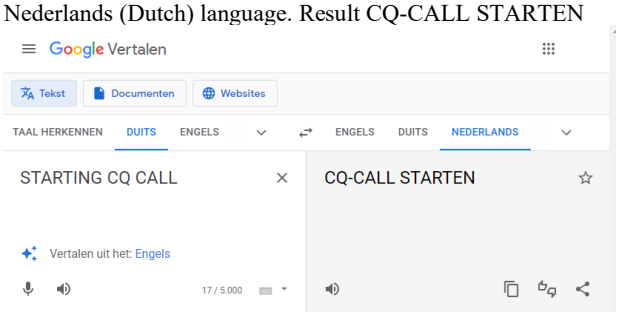
If you right click on a Callsign, name, QTH or Locator, this window will open which explains itself

Translate

Select the text you will have translated and click on the right mouse button. Click on Translate and the Google translater will open



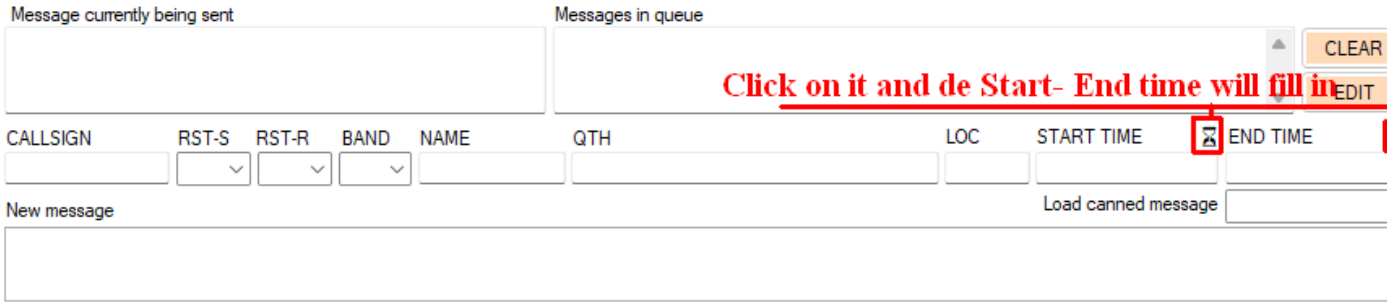
I have selected:
STARTING CQ CALL (English) and I will translate it in the Nederlands (Dutch) language. Result CQ-CALL STARTEN



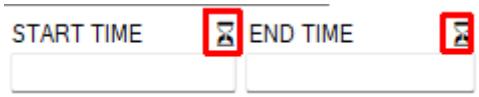
HAM is typing

This appears when the opposite station is typing

Log & messages



Start & End Time



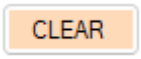
If you click on this, the start or end time will be displayed

Message currently being sent

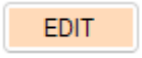
Messages in this window are sent.

Messages in Queue

These are the messages that are in the waiting area, ready to go to the "Message Currently being sent" to be sent.



Deletes the text in the "Messages in queue" window



Edit the unsent text in the "Message currentle being sent" and put it in the "New Message" window to edit your text.

Callsign, Report,enz…

In a normal QSO the fields like Callsign RST-s ect… will automatic filled with the received info from the other station.
But you can also fill manual enter some broken info in this fields.

Load a canned message

This is a drop down menu with some info's to sent see

New message

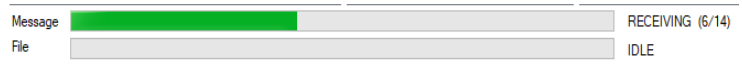
By select a canned message you will see this message in this screen, press SEND, this message goes to Messages in queue and then to Message currently being sent.
But you can also type manual some enter info in this New Message field.

Message / File

Message

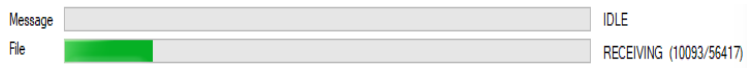
Idle screen for the Message and the File.
In the Message and File you will see a colored tracking bar of the transmitted data. you will also see the value of the packets that are sent and are.

By sent info the coloured tracking bar is visible and the IDLE is changed in SENDING (x/xx) x/xx here 8 from 30 packets

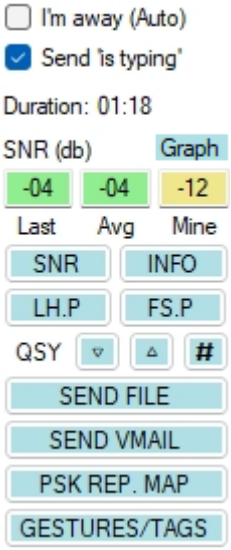


By receiving info the coloured tracking bar is visible and the IDLE is changed in RECEIVING (x/xx) x/xx here 6 of 14 packets

File



By receiving a file the coloured bar is green and you see at the end you see the received bytes and how big the file is Here 10093/ 56417



I'm away (Auto): see
Send "is typing": see

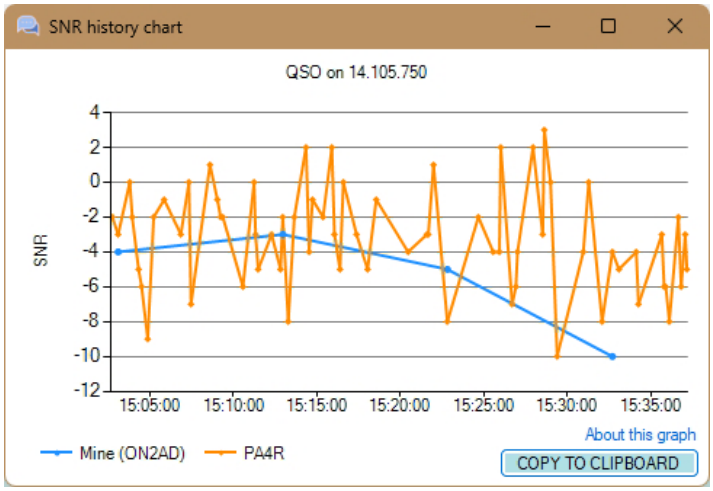
Duration: Time you are in QSO/Chat.
SNR (dB):
Last: His signal in dB
Avg: signal in dB
Mine: My received signal in dB
Graph see Graph

SNR: You're in a QSO and want to know you current report? You now can.
Info: Get your partners Name/QTH/Locator and RIG.
LH.P: See the last heard beacons/CQ of others. Great for digipeating.
FS.P: See what is the frequency schedule of your partner so you know where to hunt him.
QSY see QSY code of conduct

Send file: Send a File. See Send File
Send VMail: Send a mail message See Send Mail

PSK REP. MAP : See PSK report map
Gestures/Tags: See Canned messages

Graph



Here you can track the SNR reports during the QSO.

There are more reports of your partner as VarAC tracks the SNR every time a message is received while your SNR is reported by your QSO partner only occasionally.

Use the SNR button on the main screen if you wish to get a an updated SNR report.

QSY code of conduct

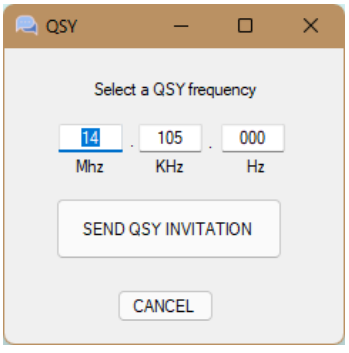
The collection frequencies are only used for finding QSO partners and for short QSOs.
If you enjoy your QSO and want to continue chatting with your partner, ask your partner for QSY after about 5-10 minutes.

You do this by clicking on the following in the chat:

QSY 750Hz down - Right mouse click and hold while connected for QSY sniffer

QSY 750Hz up - Right mouse click and hold while connected for QSY sniffer

By clicking here you can choose a frequency to continue the QSO.
The following window will then open where you can bet the frequency
When that has done press SEND QSY INVITATION



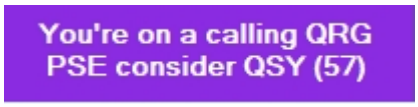
These tags initiate a QSY request that instructs both parties to change the frequency while chatting.

There is no need to disconnect before or during QSY

A quick QSY

To make a quick QSY when using OmniRig CAT Control, pre-populate the VarAC_frequencies.conf file with +/- 750Hz frequencies and simply select the desired QSY frequency from the frequency drop-down menu

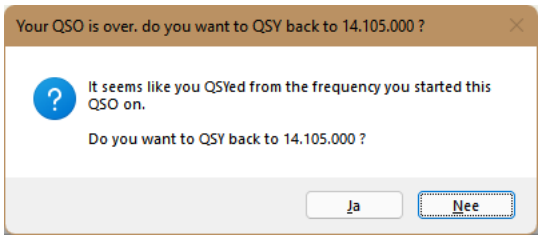
An automatic message will appear to warn you to possibly do a QSYD to keep the calling frequency free.



Maximum time on a Calling Frequency

The Connection on a Calling Frequency (CF) is limited to (36Ø Seconds (6 Minutes)) after this you will Disconnected from the CF.

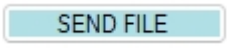
QSY back to default frequency



When you have done a QSY and the QSO is done, you will automatically be asked if you want to go back to the default frequency

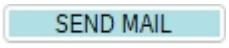
Mailbox

Send File



Click this button and select the file you wish to send.

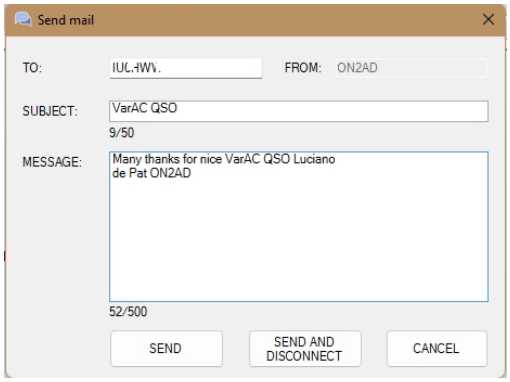
Send Mail

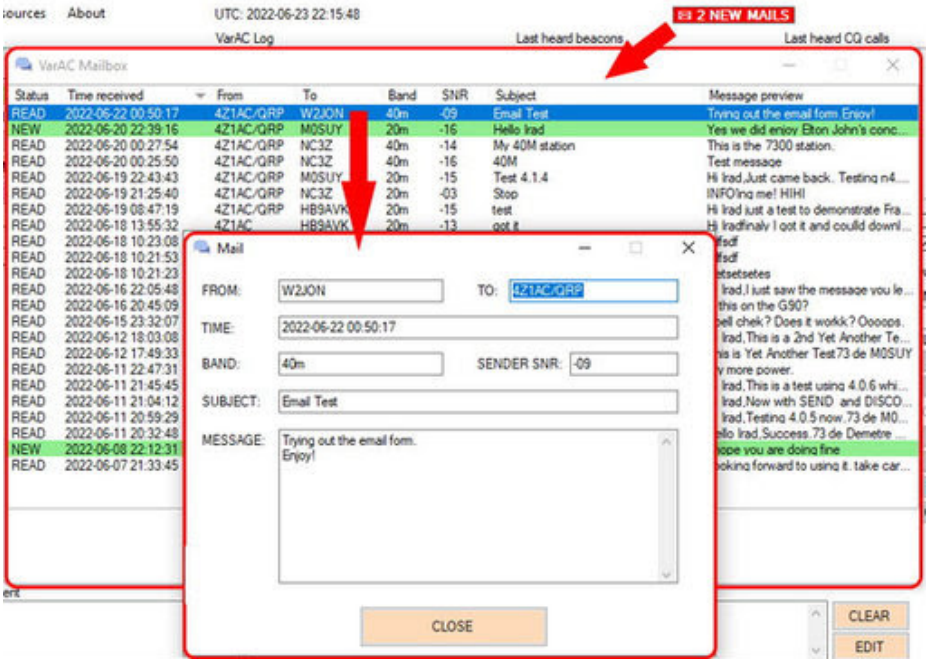


You can send an mail to a station, or leave a message.

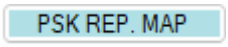
Remark:

This only works if the other station also has this function in VarAC.



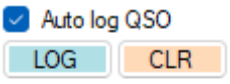


PSK Report Map

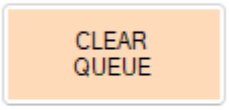


Take you to the PSK-Reporter website to view recently active VarAC callsigns on the map.

Once opened, you can change the PSKReporter filters to your liking.
See also on PSK Reporter map

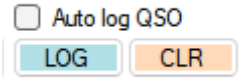


Auto log QSO: QSO is logged automatically when enabled
Log: Logging manually.
CLR: Clear the log input.



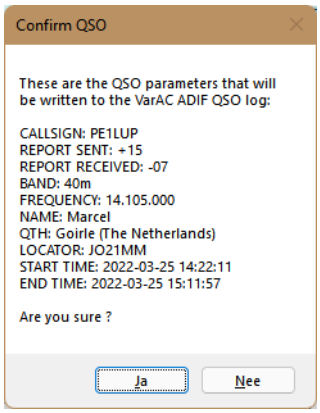
Clear Queue: Delete the message in the Queue.

Enter to send: Send your text by clicking Enter.
Send: Send your message.
CLR: Clear the New message info's.



If Auto log QSO is not checked and you wish to save a QSO, the following window will appear.

Where then all the data of the counterpart station is stored and you are asked if you are sure to save this QSO

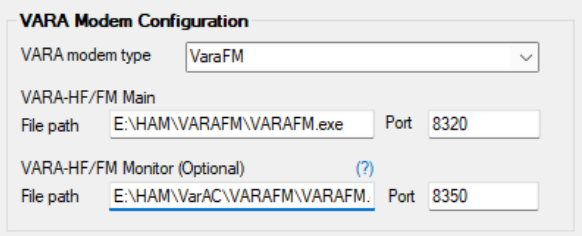


VarAC & VaraFM

To use VaraFM you must first download and install the VaraFM modem, which you can find at:
EA5HVK | Weak signals Software (wordpress.com)

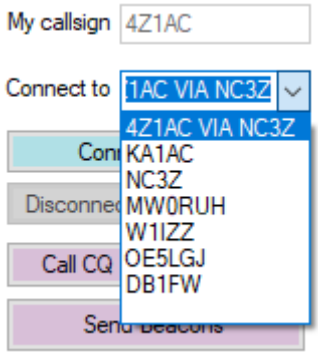
VarAC configuration

Go to the menu Settings press Rig control and VARA configurations.



Set the VARA modem type to "VaraFM"
Set the VaraFM modem path and port number.
Click "SAVE AND EXIT"

Digipeater connection



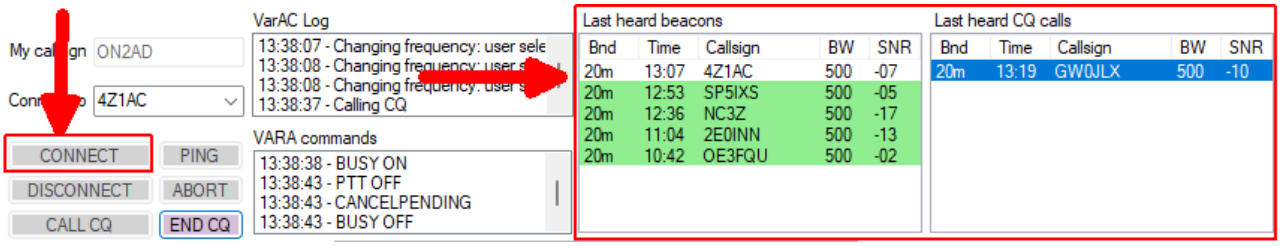
You can connect through one or two digipeaters. Simply type the following in the "CONNECT TO" field:
DESTCALL VIA DIGICALL1 DIGICALL2

examples :
To connect to 4Z1AC through NC3Z type :
4Z1AC VIA NC3Z

To connect to 4Z1AC through NC3Z and W1IZZ type:
4Z1AC VIA NC3Z W1IZZ

How do I contact someone?

There are 3 easy ways to start a QSO:
1. Double click on a callsign in the section “Last heard CQ calls”.
2. Double click on a callsign in the section “Last heard beacons”.
3. Type the callsign you want to connect to in the text box “Connect to” and press on “Connect station”.

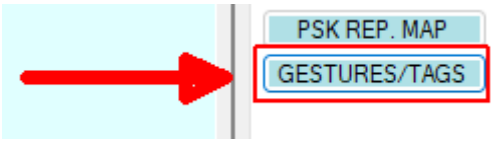


Reports and Regulations

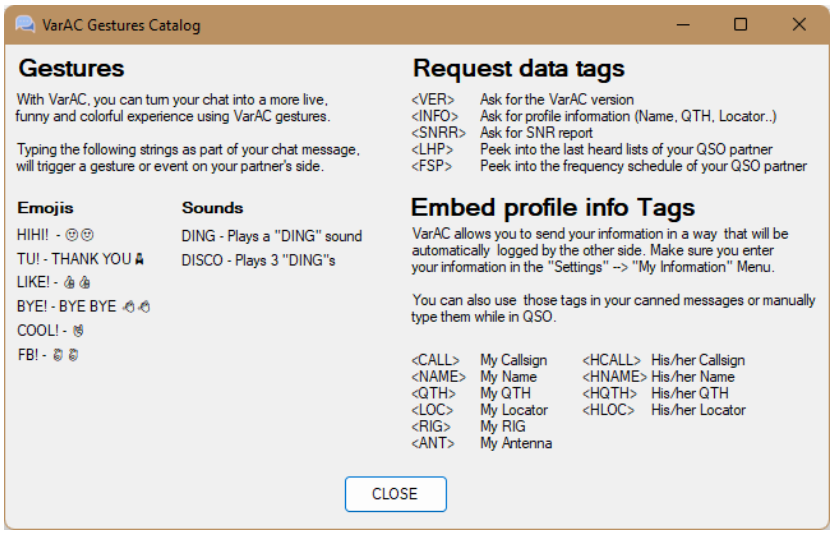
What are all these lyrics and songs that I see when I am connected with someone?
At connections you see texts like "<R-10>" or "de YOURCALL"
• As in FT8, VarAC exchanges SNR reports with the other side so you know how you are being listened to and also for logging purposes.
• VarAC periodically transmits your callsign to comply with "self-identification" regulations.

Gestures – Tags - QSO protocol

Click on the “Gestures/Tags” button and the VarAC Gestures Catalog will appear.



Tags are text codes that, when typed as part of your chat message, will trigger an event on the other side, such as:
More info on Canned Messages / Tags



Top

Tags & Gestures

With VarAC you can make your chat a more lively, funny and colourful experience with VarAC gestures.

Emojis

Tag	Operation
HIHI!	makes a smiley emoji
TU!	"Thank You "
LIKE!	makes a thumbs up emoji
BYE!	
COOL!	
FB!	

Sounds

Tag	Operation
DING	Play a “DING” sound.
DISCO	Play 3 “DING” s sounds.

My data tags

Tag	Operation
<CALL>	My Callsign
<NAME>	My name
<QTH>	My QTH
<LOC>	My Locator
<RIG>	My equipment
<ANT>	Antenna info

VarAC allows you to send your information in a way that will be automatically logged by the other side. Make sure you enter your information in the "Settings" ==> "My Information" Menu
You can also use those tags in your canned messages on manually type them in a QSO..

His/her data tags

Tag	Operation
<HCALL>	His/her Callsign
<HLOC>	His/her Locator
<HNAME>	His/her Name
<HQTH>	His/her QTH
<VER>	Get your QSO partner's VarAC version

Request data tags

Tag	Operation
<FSP>	Ask for the profile information (Naam, QTH, Locator)
<FSR>	Frequency schedule peeking – know where your partner parks along the day
<INFO>	Ask for profile information (Name, QTH, Locator)

<LHP>	Peek into the last heard list of your QSO partner
<LHR>	Last heard peeking request – List of stations your partner recently spotted on this band
<SNRR>	Ask for SNR report
<QSYU>	Invite your partner to QSY UP 750Hz
<QSYD>	Invite your partner to QSY DOWN 750 Hz
<QSF>XXXXX</QSYF>	Free form QSO invitation. Example: <QSF>14105000</QSYF>

Trigger events

Tag	Operation
<AWAY>	Triggers “send message” at your partners side.
<DISC>	Disconnect
<SND>	Send the message automatically

Message Tags

Those tags are used "ONLY" for sending a message (Vmail) .

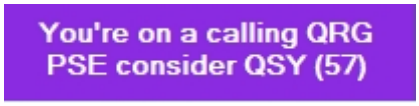
Tag	Operation	Info
<AE>	Away time exceeded	There is a limit to a connection to a station in AWAIT status. The AWAY station will kill the link when this limit is reached and will signal the reason on the other wide by sending an <AE> prior to disconnecting. This will show a message on the other side: "CONNECTION TO A STATION IN AWAY STATUS ON A CALLING FREQUENCY HAS REACHED TO ITS TIME LIMIT”.
<SM>	Send Message	Header of the message signalling the other VarAC that there is a message frame coming afterwards.
<SMR>	Send message received	Its the target VarAC signaling the sender the Vmail message message was decoded successfully
TO	To	These are all part of the VMail packet itself.
FRM	From	These are all part of the VMail packet itself.
SBJ	Subject message	These are all part of the VMail packet itself.
MSG	Body message	These are all part of the VMail packet itself.

Tags

With VarAC you can send your information in a way that is automatically registered by the other side
You can set those tags in your template messages or type them manually while in QSO.
More info on Canned Messages / Tags

QSO protocol

An automatic message will appear to warn you to possibly do a QSYD to keep the call frequency free.



Tip

Connected to someone, but they are not there?
Write "DISCO" to make some noise on their side to alert them of your call.

Canned messages and VarAC tags

Canned messages are predefined texts like your information, 73, greetings, ASCII art etc…
In most manuals for HAM's you will mainly find “Macro” messages as names instead of “Canned Messages”
You can configure your canned messages in the settings menu.

You can then add one to your message by selecting it from the 'Load a standard message' drop-down menu.

VarAC tags are used manually or in template messages to send information decoded by the other side and automatically populate the QSO log with your name, QTH and locator.

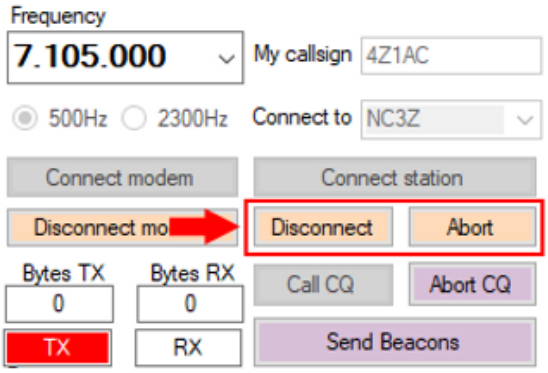
you can read more about VarAC tags in this document.

QSO ending

Top

Be courteous, say 73's (or use one of the configurable default messages) and press the "DISCONNECT" button.

Quick ejection? Press the "ABORT" button".



QSO log

VarAC logs QSOs in an ADIF file in the VarAC installation directory under the name VarAC_qso_log.adi.

You can set VarAC to log your QSO automatically when disconnected, or you can log it manually by clicking the "LOG" button.

QRZ.COM uploaded

You can have your QSO automatically uploaded to QRZ.COM and other logging systems. See Logbook programs

Callsign	Rpt Sent	Rpt Rcvd	Band	Name	QTH	Locator	Start time	End time
4Z1AC	+14	-03	20M	Irad Deutsch	Savyon	KM72KB	2022-01-07 10:00:00	2022-01-07 10:05:35

Multiple configuration files

Load VarAC with different config files to support various rigs or settings.
Example: "VarAC.exe MyVarAC.ini"

VarAC Cluster (Multiple instances)

By NC3Z, Gary Mitchelson

VarAC will allow you to run multiple and separate instances of VarAC. Depending on your radio or radios you will be able to operate VarAC on multiple bands at once using a single install of VarAC.

Running multiple VarAC in a cluster format allow all VarAC instances to share the same resource such as log files, ADIF file as well as ,mailbox.

This allows you for example to act as a cross-band mailbox while VMails that are parked on Band A will be forwarded on Band B.

To form a VarAC cluster, all that is required is:

- Separate .ini file for each instance in your one VarAC folder, each properly configured.
- Each .ini file will need to be configured with a unique “Instance Number”
- Separate VARA HF (modem) folders for each instance.

In the example below here are 4 instances running on the same PC. The radio is a Flex 6500 which can operate as 4 radios at once.
But you could easily be using any number of separate radios.

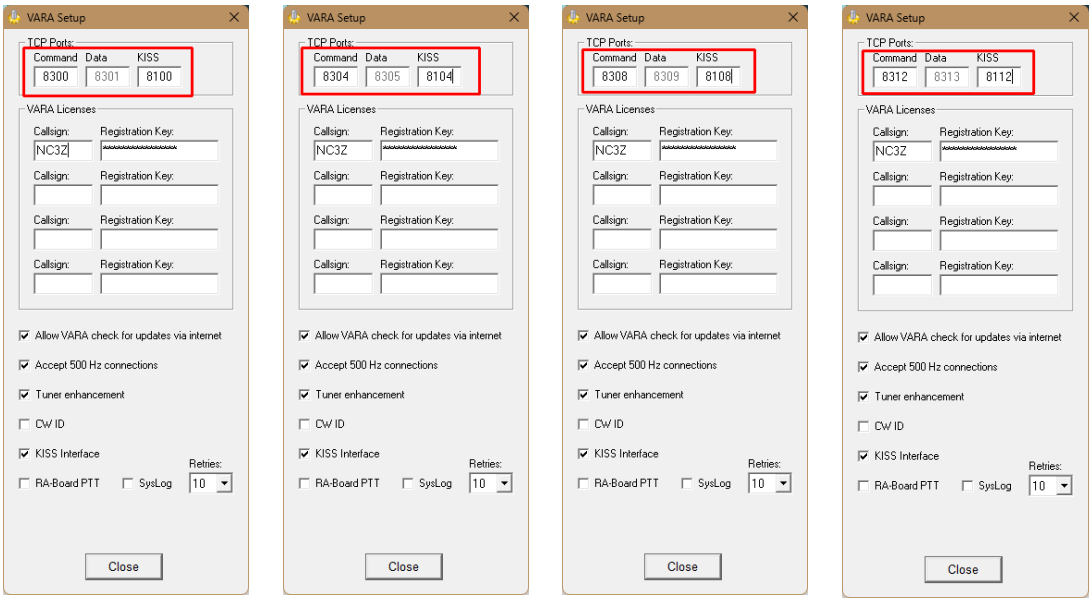
Multiple VarAC instances working as a cluster sharing the same VMail Mailbox

Step #1

Separate VARA HF folders for each instance. Just make copies of each VARA HF folder:

Step #2

Configure each VARA HF with its own unique ports (COMMAND, DATA and KISS) that do not conflict

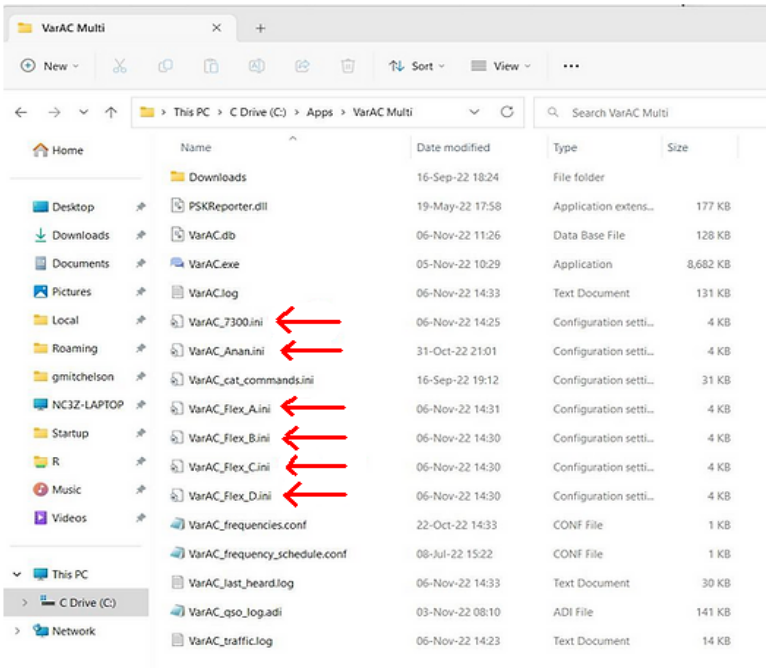


Step #3

Configure different VarAC.ini files with different names.

Use a meaningful name - like your RIG type you intend to use for each VarAC instance

Each .ini file will need to be configured with a unique “Instance Number”



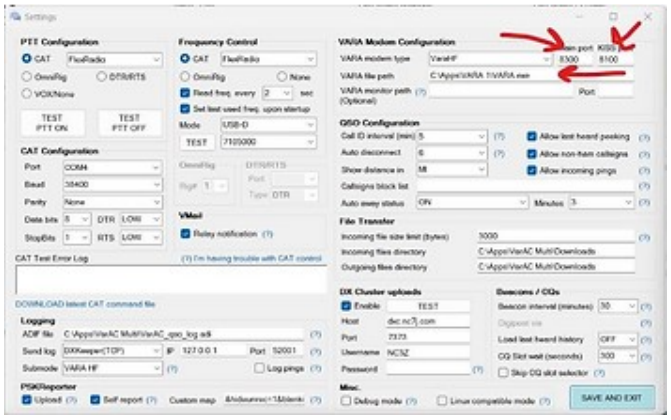
[VMAIL]
SendRelayNotifications=ON
AllowParking=OFF

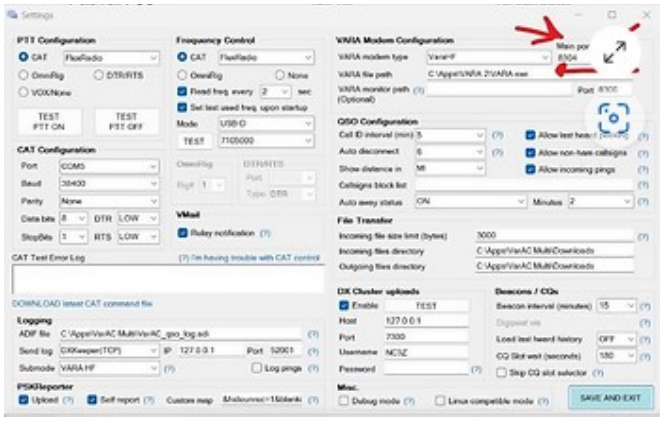
[VARAC_CLUSTER]
ClusterEnabled=ON
InstanceNumber=1
MailboxRefreshRateSec=60

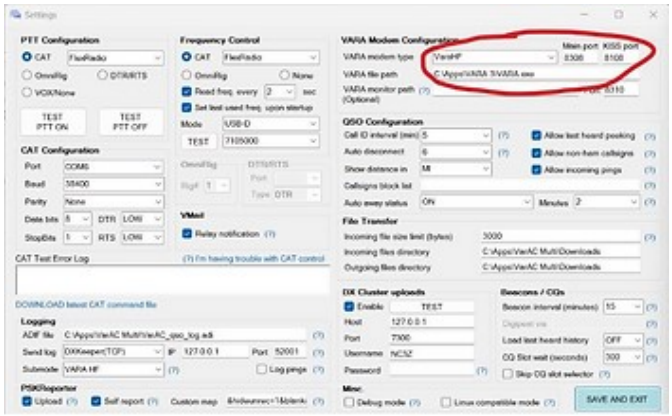
[OTHER]
LinuxCompatibleMode=OFF

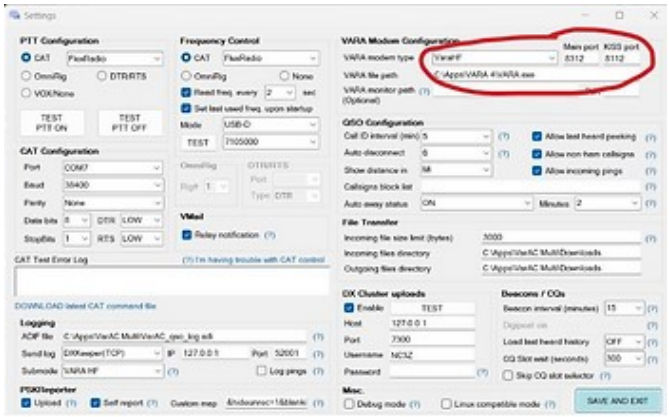
Step #4

For each VarAC settings, set the relevant VARA ports and path
If you use Monitor you will need to do the same and take the same precautions.







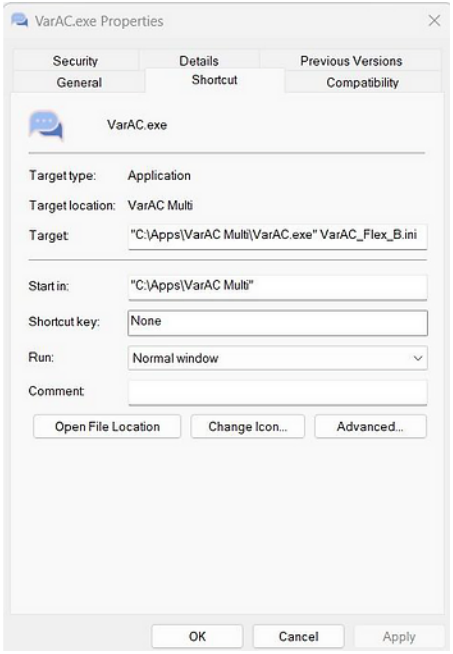


Step #5

Example of shortcut for one of the instances

Once all that is set, you will need to tell each VarAC instance which .ini file to use.
That is simply done with a command line switch in the shortcut.

If you want to run instances from separate PC's you will need to do this using a "Shared" drive for SQLite (main VarAC DB) to work properly in s shared environment.



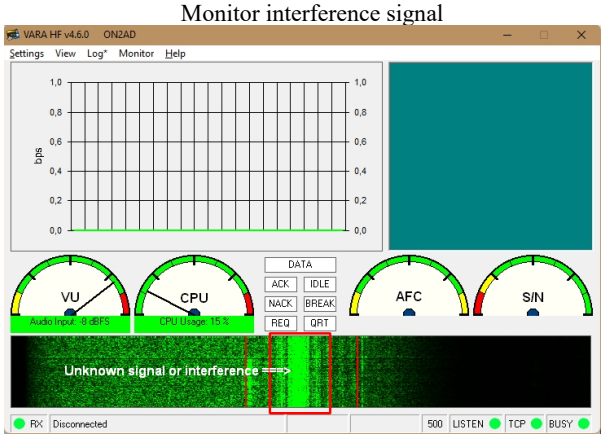
Strange signals and noise.

I use two 23 Inch IPS LED monitors from LG and on some frequencies I see a strange signal in the waterfall and I hear a monotonous noise (sound) in my speakers.

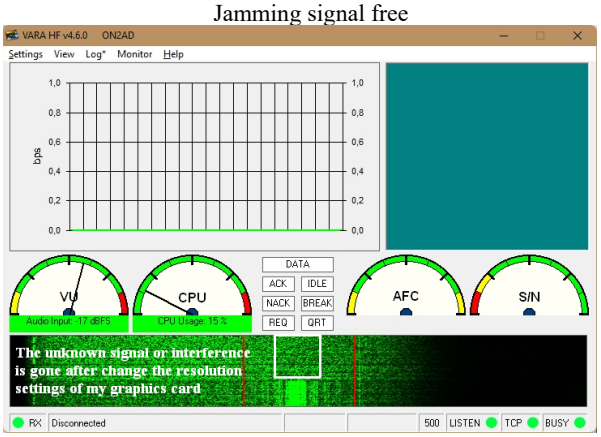
Further research shows me that if I turn off the monitors, the noise is gone.

So open the advanced display settings in Windows or open the resolution settings of the graphics card and adjust the refresh rate for 1 or more screens until the interference is gone.

Monitor interference signal



Jamming signal free



How to find other radio amateurs to chat with VarAC?

EASY :) our main QRG is 14.105.00 USB watch face. Simply tune your transceiver and press the "CALL CQ" button. If someone is watching the frequency, they will see you on the screen and even hear a THING sound.

If you want to make yourself visible to others, you can also activate a beacon by clicking the "SEND BEACON" checkbox so that once someone tunes in, they can see and connect with you.

You can also join our vibrant Facebook community and schedule a QSO by posting there. There are plenty of people willing to help you.

Which RIGs are supported by VarAC?

VarAC needs to manage your PTT.
Therefore, it requires some form of CAT checking (unless you choose to use VOX, which is not recommended).

So you can set up your own CAT control commands if you know them, but I've made your life easier by integrating with OmniRig, which covers every transceiver. Therefore, it is recommended to install and configure the OmniRig before installing VarAC.

Top

CQ and beacons
VarAC offers 2 different ways to let other VarAC users know that you are online.

Calling CQ:
VarAC offers 2 different ways to let other VarAC users know that you are online..

Beacon:
This is a "Soft CQ Call" that is activated every 15 minutes to let people know that you are online and ready to connect.

What should I use?
- Looking for someone to chat with NOW? Press the CQ button.
  Did not get an answer? try it a few more times.
- Want to leave your RIG open and accept incoming connections while you are with other business - press the BEACON button.

Tip
Leaving your RIG on the QRG with VarAC open will intercept other users' beacons.

What are the limitations of using VarAC beacons?
Beacons are great. But they can also become a nightmare for your fellow HAMs. Therefore, some limits are built in:

Beacons turn off automatically after 24 hours.

Minimum beacon period is 15 minutes.

Beacons will not activate if the frequency is identified as BUSY with a pending VARA QSO or other beacons/CQ calls. It waits 60 seconds from the time the frequency is cleared before sending a beacon.

Beacons will not activate while in the middle of a QSO/CQ, even if it is enabled. In other words, you do not have to turn off beacons while chatting or CQing. It stays lit once you end your CQ/Chat.

Are VarAC and Vara-Chat compatible?
Yes, but up to a certain level.
VarAC can connect Vara-Chat and perform normal QSO. However, VarAC has some features of its own which cannot be decoded in Vara chat like Emojis, Sounds, typing something etc...

My OmniRig has a delay in sending
In OmniRig - set the menu item "Timeout, ms" to "100" and you are good to go

What can I do if I encounter a bug in VarAC?

Yes, Bugs and crashes can occur. And they are willing to solve them quickly, but they need your help by providing the following details.

Just log in to the VarAC community and submit your bug here. Provide as much information as possible, including:

A bug description and how to reproduce

A screenshot

The VarAC.ini file

The VarAC.log file

The relevant section of the VarAC_traffic.log file

Where can I find VarAC manuals?
There are still no official manuals because everything is very new. But some VarAC users decided to invest their precious time and write tutorials. You will find them all Here.

Top

Do you have any questions?
We are happy to help you. Ask your question on the forum on or Facebook-grouppage.

You do not wait long for an answer :)

Here you will also find more VarAC -manuals.

We wish you the best of luck in taking your first steps at VarAC and hope you enjoy it.

Top

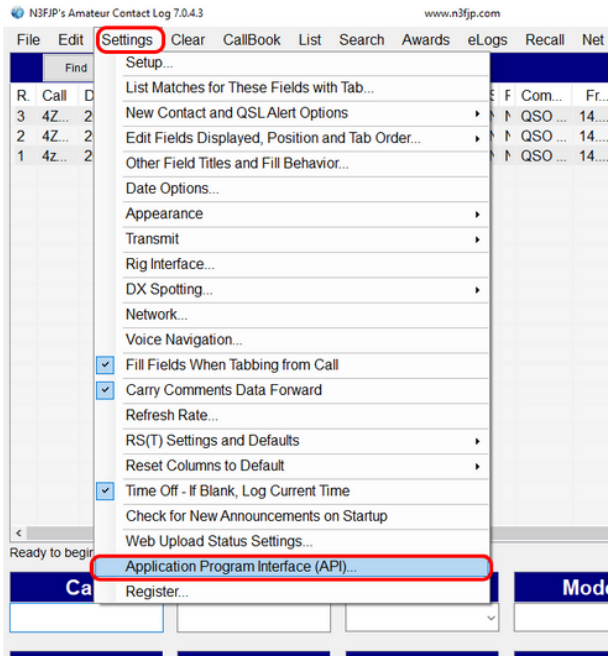
Logbook programs

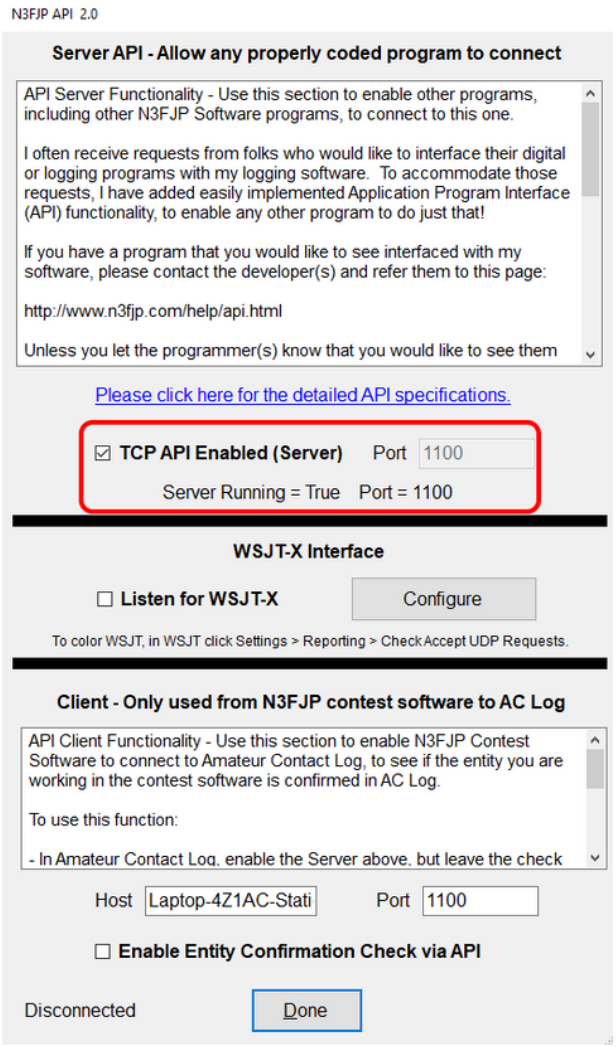
AC Log (Amateur Contact Log)

Please note - Logging QSO to AC Log works only with AC Log version 7.0.5 and above.

AC Log provides with TCP support for external logging:

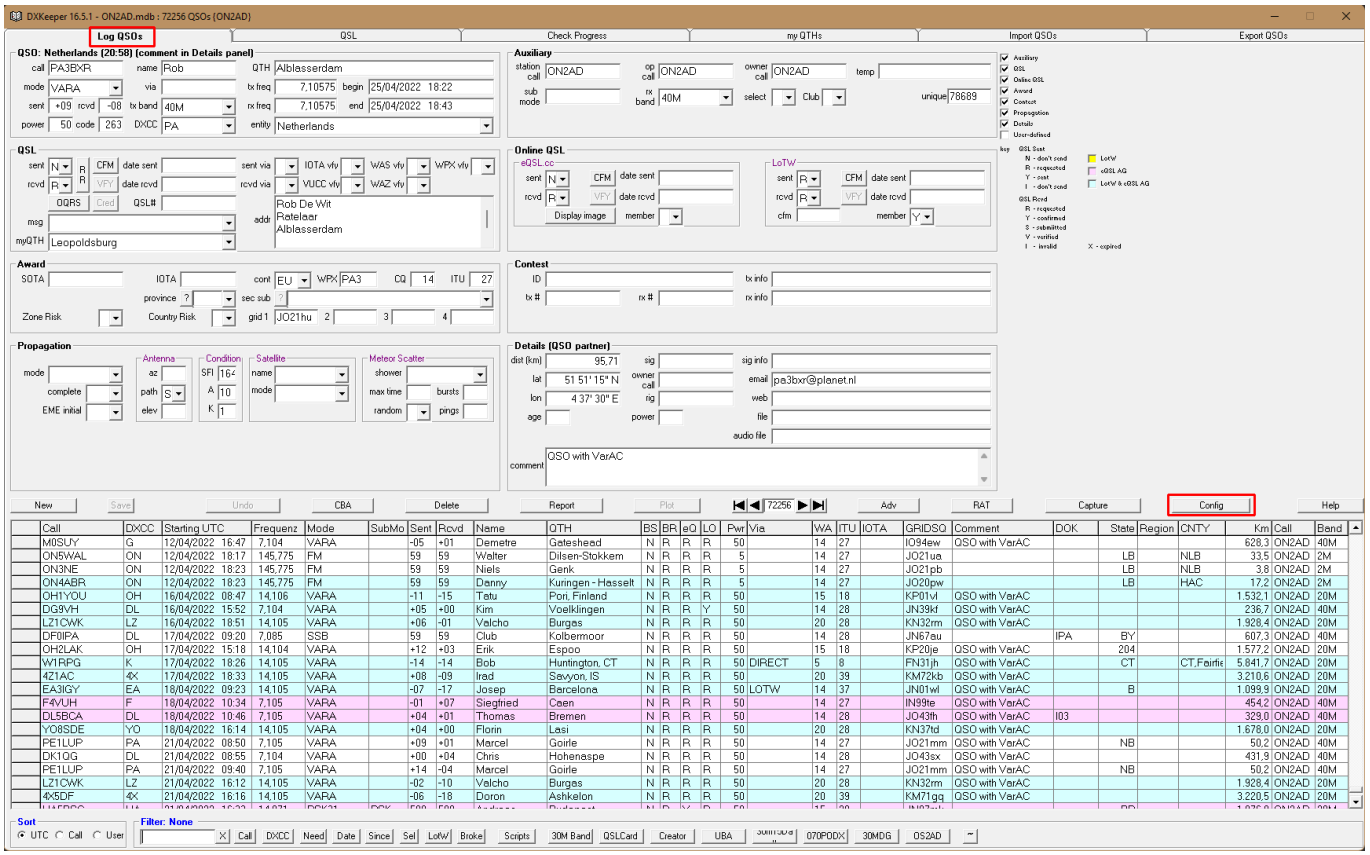
1. Go to Settings --> Application Program interface (API)
2. Enable the "TCP API Enabled (server)
3. If you change the port - make sure it is aligned with the port you have selected in VarAC.
4. Click DONE

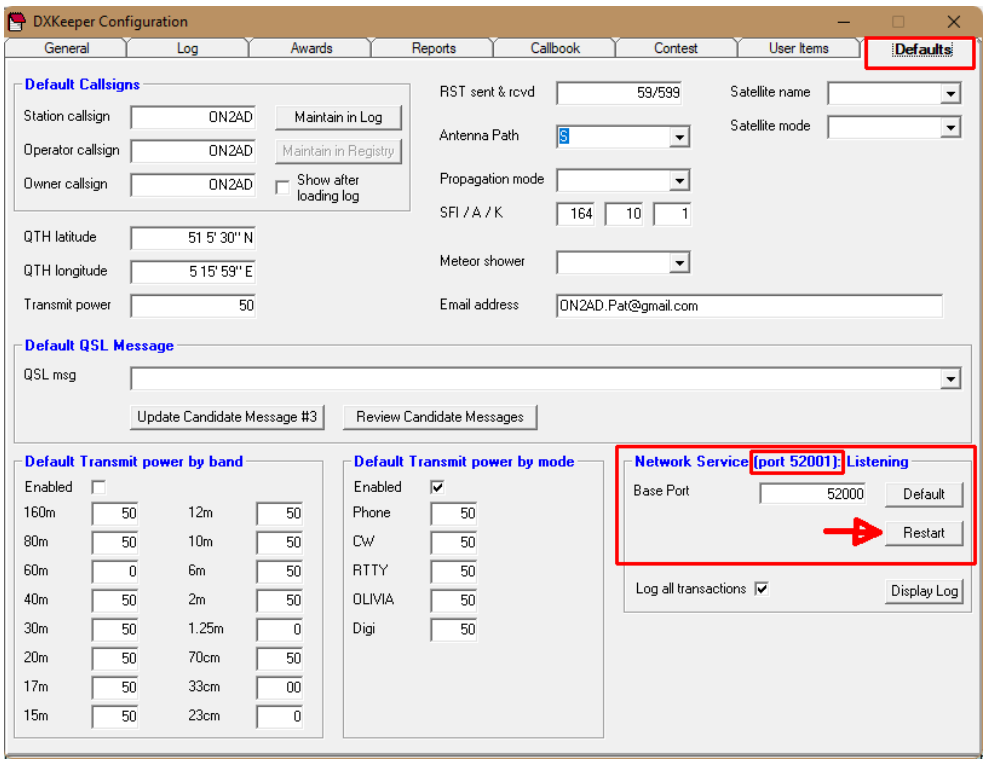




DXKeeper (DXLabSuite)

1. Go to the panel Log QSOs click on Config
2. Select the "Defaults" panel
3. Under network service - set the Base port. **Important - 52000 means that you listen on 52001.**
4. If you change the port - make sure it is aligned with the port you have selected in VarAC.
5. Click "Restart"



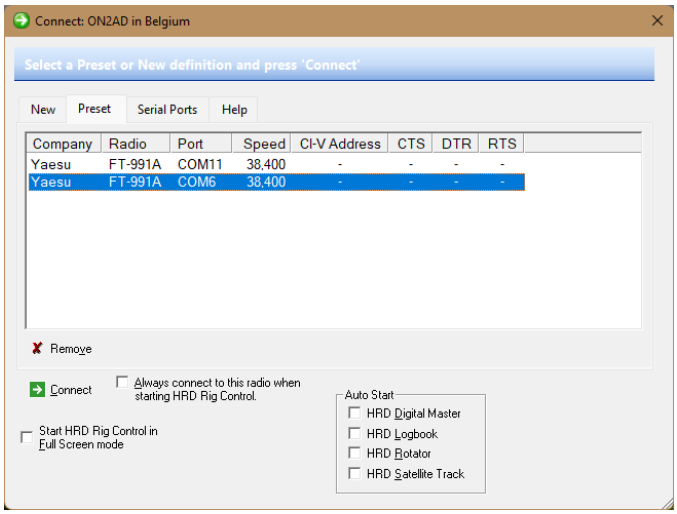


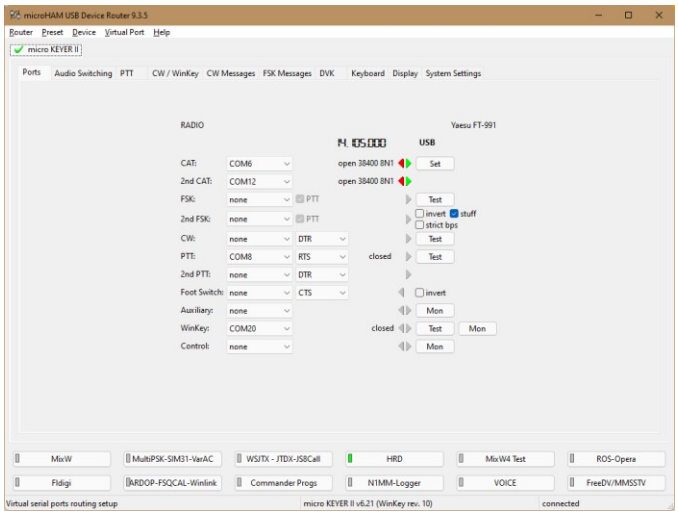
Ham Radio Deluxe

Settings

Ham Radio Deluxe 6

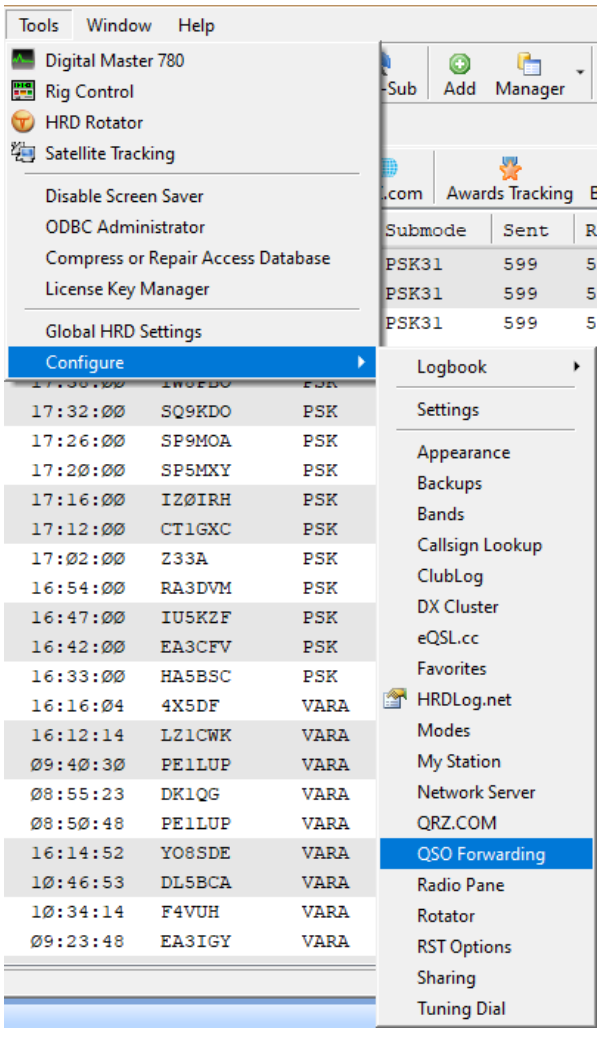
microHAM USB Device Router

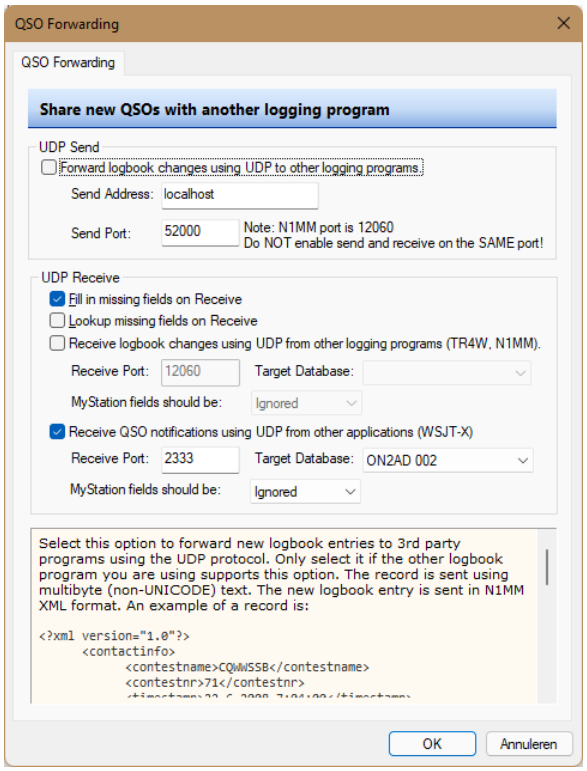




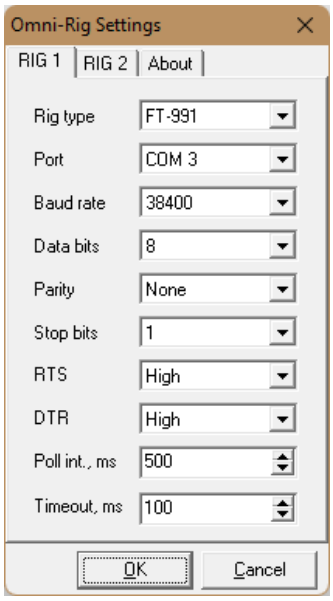
Ham Radio Deluxe 6 setup

1. Go to Tools --> Configure --> QSO Forwarding
2. Enable the "Receive QSO notifications using UDP from other applications (WSJT-X)
3. Selected the desired target database.
4. If you change the Port - make sure it is aligned with the Port you have selected in VarAC.
5. Click OK

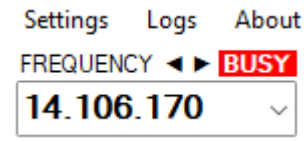




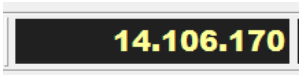
OmniRig setup



With the micro KEYER II interface and the USB cable connected, both connected from the FT-991A to the computer, the frequency in the main screen of VarAC and the frequency in Ham Radio Deluxe (Logbook and DM-780) are adjusted along with it, when I adjust to the VFO turn.



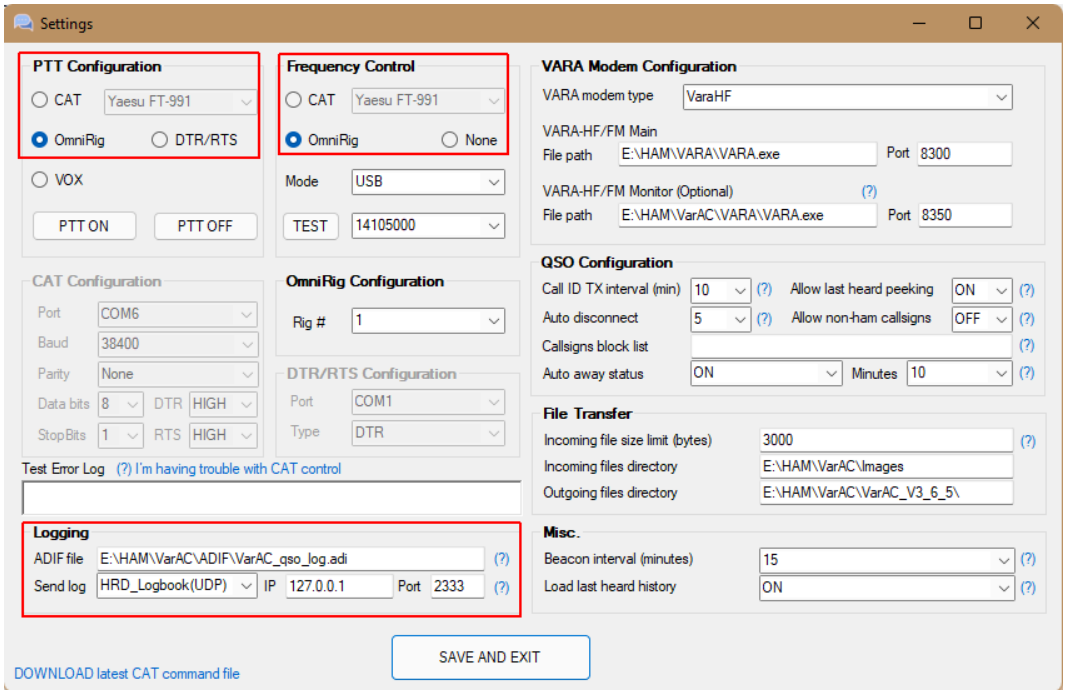
Frequency in VarAC



Frequency in the HRD logbook

Frequency in DM-780

VarAC setup



Log4OM

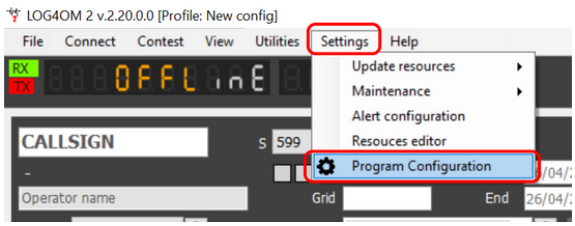
Log4OM provides with UDP logging.

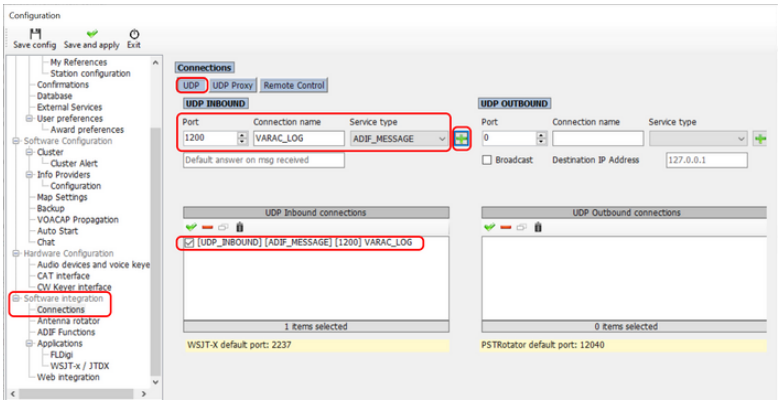
However Log4OM2 also provides with a unique Logging option - tapping directly to VarAC log ADIF file.
This options is preferred as Log4OM will never miss a log entry if it was not running at the time the QSO was logged.

Both options are show below:

<u>This is how you set the UDP logging with Log4OM:</u>

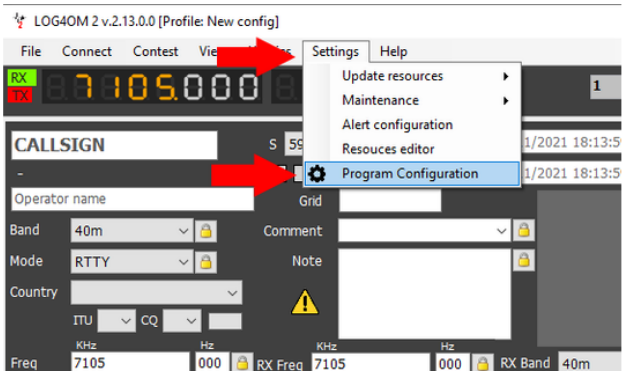
1. Go to Settings --> Program Configuration
2. On the left menu - select Software integration --> Connections
3. Click UDP and go to UDP INBOUND
4. Enter a port number (ex: 1200)
5. Give it a meaningful name (ex. VARAC_LOG)
6. Select Service Type: "ADIF_MESSAGE"
7. Click the "+" button
8. Make sure the new recorded is there and marked with a "V" sign
9. Click "Save and Apply"

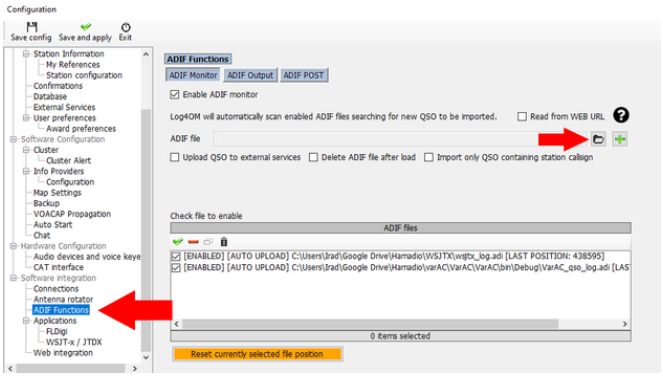


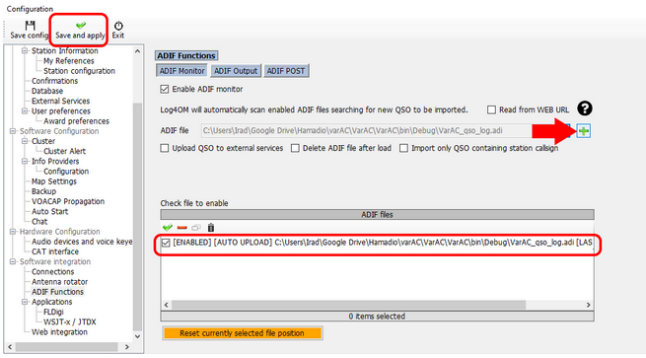


<u>This is how to configure LOG4OM2 to collect your VarAC QSOs automatically from the VarAC ADIF log file.</u>

1. Open Log4OM 2 and click **Settings --> Program configuration**
2. On the left, Click **ADIF Functions** and click the **folder** icon to select a file
3. Go to the VarAC installation directory (or where you placed your ADIF file) and select the **VarAC_qso_log.adi** file
4. Now click the **"+"** icon to add the file for Realtime ADIF file monitoring
5. Make sure the VarAC ADIF file appears here and set as ENABLED and marked with a "V" sign
6. "Save and apply"



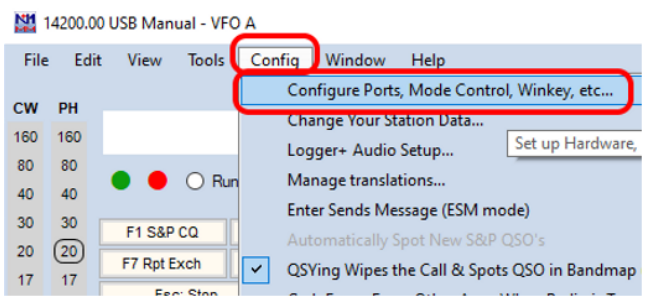


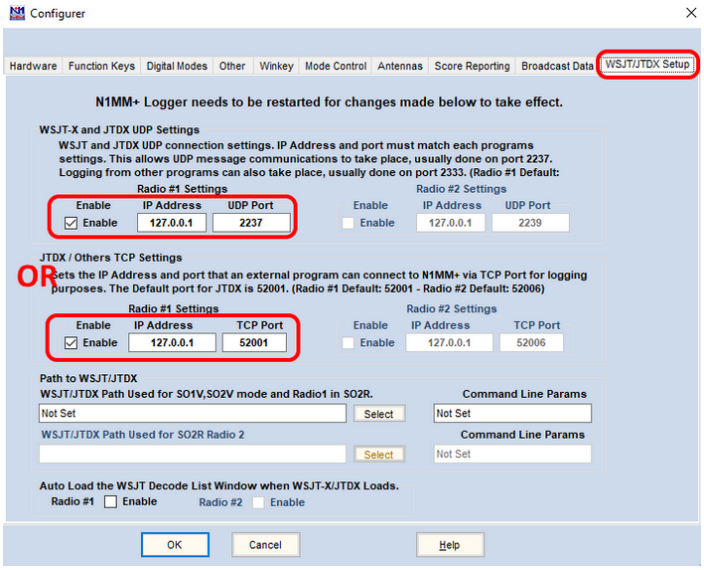


N1MM

N1MM provides with 2 options for Loggins. TCP or UDP. VarAC support both.

1. Go to Config --> Configure Ports, Mode control, Winkey etc...
2. Go to the WSJT/JTDX Setup
3. Enable either the UDP or TCP options as show on the screenshot below.
4. If you change the port - make sure it is aligned with the port & method (UDP/TCP) you have selected in VarAC.
5. Click OK





Swisslog

Swisslog started to provide TCP logging support from V5.104. Make sure you upgrade to this version or later before trying to integrate with VarAC.

This is how you set the UDP logging with Log4OM:

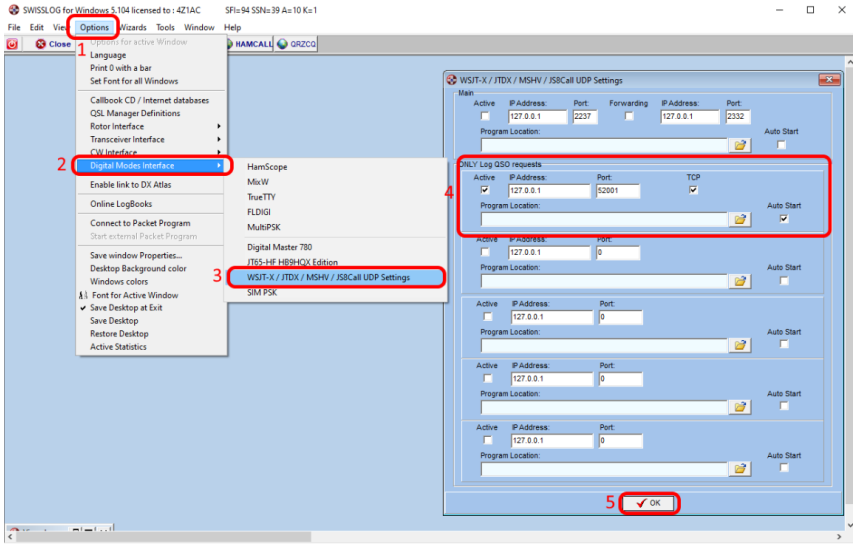
Go to Options --> Digital modes interface --> "WSJT-X / JTDX / MSHC / JS8Call UDP settings"

Under "Only Log QSO requests" locate the first line.

Check the "Active", "TCP" & "Auto start" checkboxes

Set the IP address to 127.0.0.1 and Port to 52001.

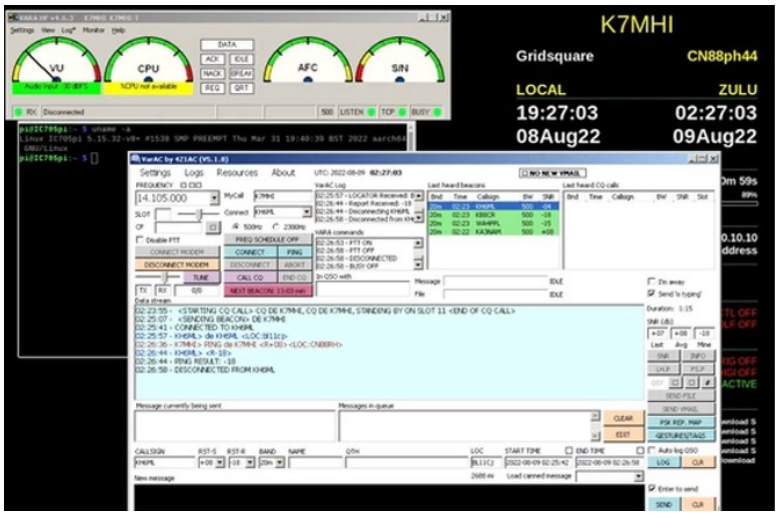
Click OK



Linux Installation

This manual was based on the documentation of K7MHI @kellykeeton

This is how it looks...



I assume this will work on 32bit Debian (had a report of no)
I do run in 64bit mode bullseye RPi4 fully updated to the day of this post.
The very nice Build-A-Pi project is also used to load ham software.

There are some nice tools for ham radio included in this project.

https://github.com/km4ack/pi-build

Install WineLink

WineLink deploys WINE with a full Winlink RMS version and VARA using this following project script. We only need the WINE and the VARA modem part of it but this installer simplifies the installation.
https://github.com/WheezyE/Winelink

Download VarAC

Download, unzip and place the files in the **~/.wine/drive_c/VarAC** directory

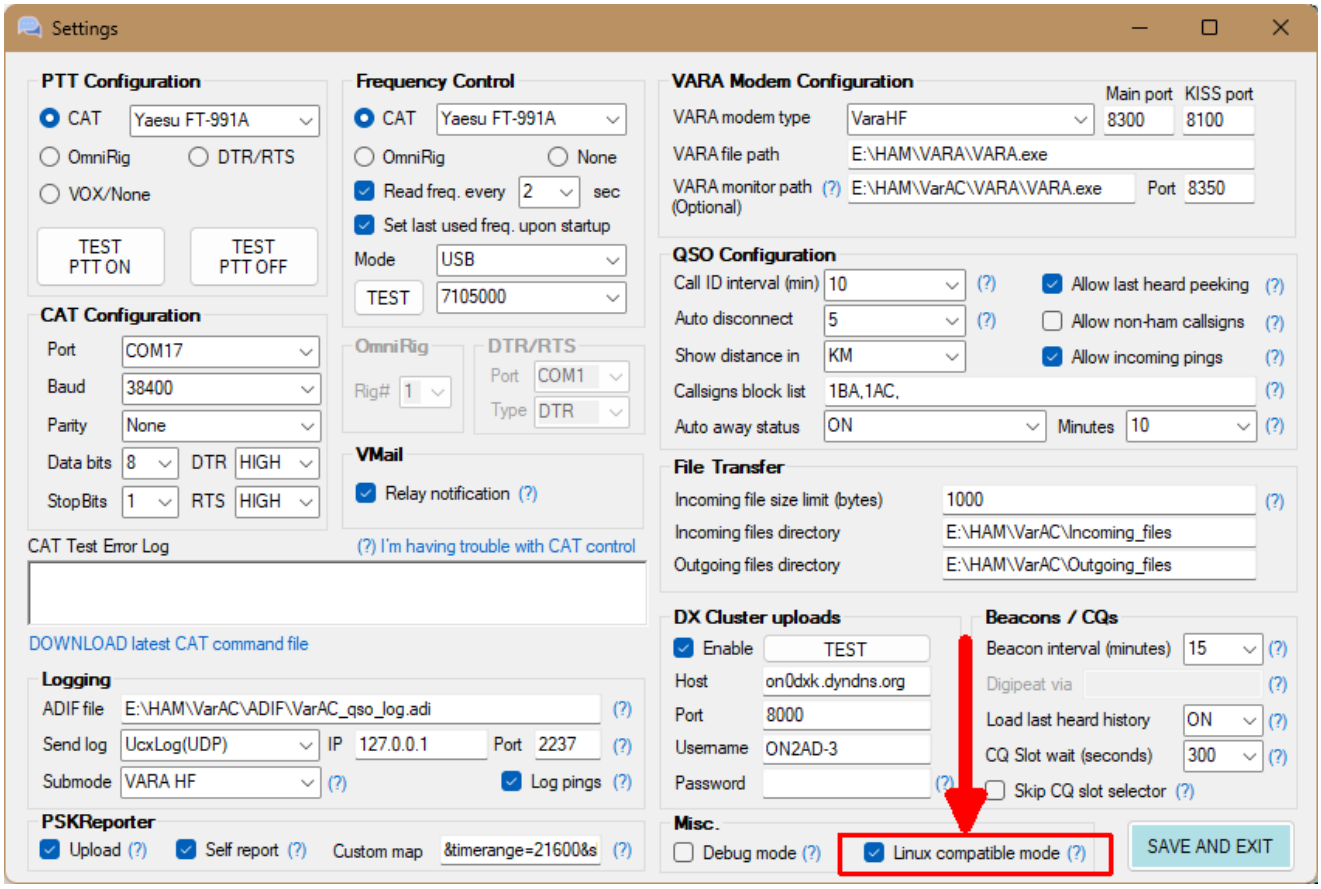
Launch VarAC

Using the following command. You can use in a menu.desktop object:
env WINEDEBUG=-all wine /home/pi/.wine/drive_c/VarAC/VarAC.exe

I had to launch a few times and get the settings saved and working but it did work with no major issues! using a IC-705.

Enable "Linux compatible mode" in VarAC settings

Go to Settings --> Rig control & Vara configuration
Check the "Linux compatible mode" checkbox:
Click Save & Exit



Annexes

Introduction

The purpose of these appendices is to provide a better insight into how certain settings are made and this with the different transceiver devices. Also discussed are the CAT settings of some Interfaces and also the use of a CAT cable.
If you have a properly working VarAC with an Interface or transceiver not yet listed, please send it to us so that we can complete these manuals. They are a great help to other HAMs.

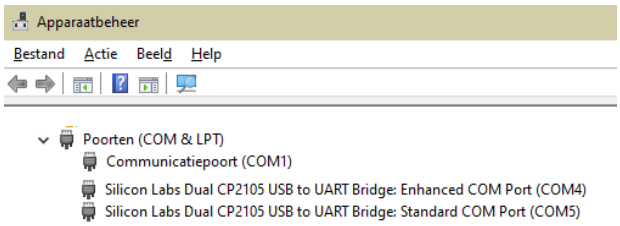
CAT cable connected to the USB port

FT-991A with a USB cable

(by Pat, ON2AD)

Installing the Communication Ports (COM)

Go to Yaesu's website select the FT-991A click Files and download the FT-991A / SCU-17 USB driver (virtual com port driver)



After installing these drivers, two com ports are created

The Enhanced COM Port is used for CAT control.
The Standard COM Port is used for the TX

(the COM ports may be different from those in the example)

You can view the installed COM ports in device manager

FT-991A Setup for DATA-USB modus

If you are using DATA-USB instead of USB mode, set up your FT-991A with the next settings
Set menu
072 to USB
109 on DATA

FT-991A Setup for USB modus

If you are using USB instead of DATA USB mode, set up your FT-991A with the next settings
Set menu
072 on DATA
109 to USB

Micro HAM-interfaces

The microHAM interfaces use the Eltima Virtual Serial Port drivers, which are installed when installing the microHAM USB Device Router. To do this, go to the Vertical Port menu and select the necessary COM ports that you think you will use. Personally, I have selected 13 COM ports.

FT-991A with a micro KEYER II

(By Pat, ON2AD)

Since I noticed when I used the FT-991A in DATA-USB the frequency was always 1 kHz higher than normal, I decided to always use the FT991A in USB mode. A few settings had to be made for that in the Menu of the FT-991A

FT-991A Setup for DATA-USB mode

If you are using DATA-USB instead of USB mode, set up your FT-991A with the next settings
Set menu
072 to USB
109 on DATA

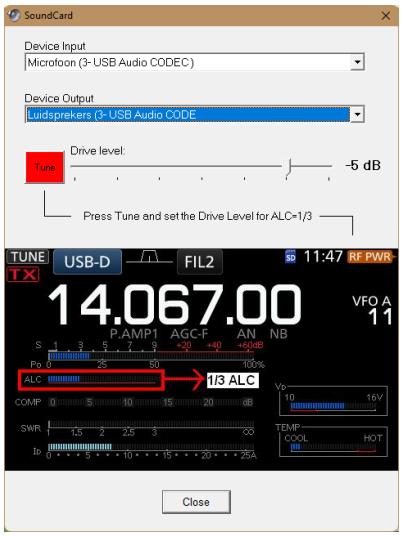
FT-991A Setup for USB mode

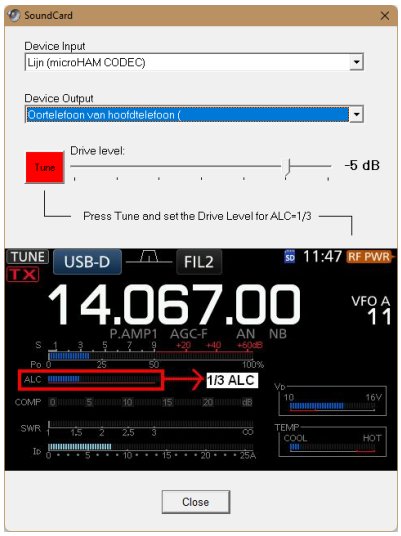
If you are using USB instead of DATA USB mode, set up your FT-991A with the next settings
Set menu
072 on DATA
109 to USB

VARA Soundcard settings

With use of the USB cable

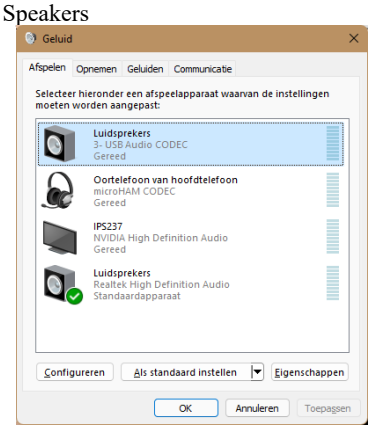
For use with the microHAM interface



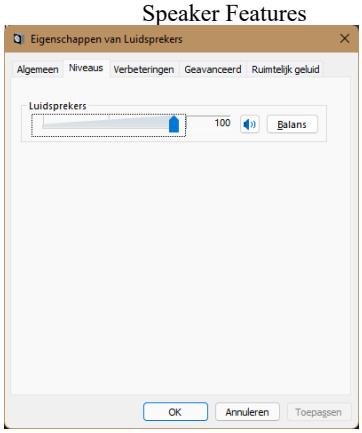


Soundcard settings

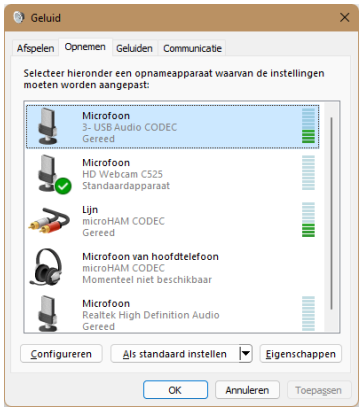
Speakers



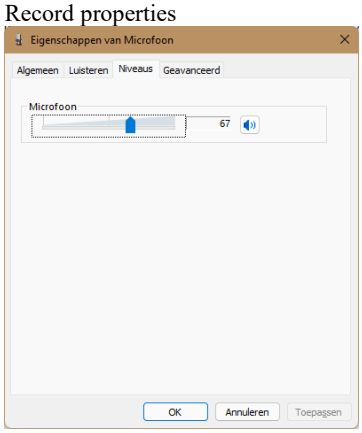
Speaker Features



Record



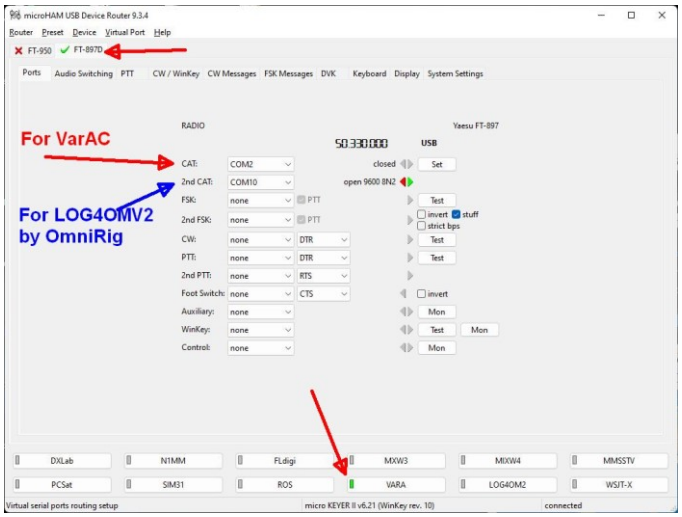
Record properties

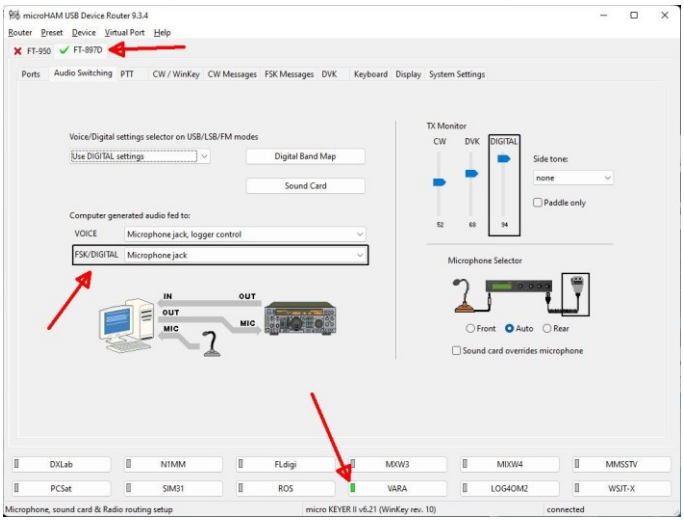


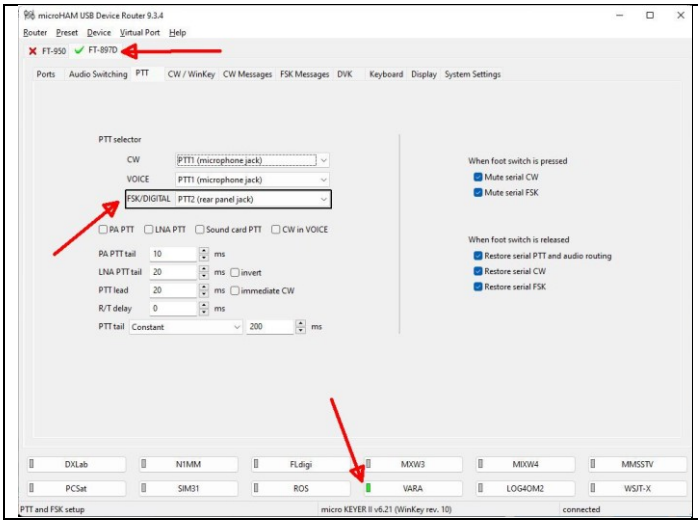
FT-897 connected with the micro KEYER II and OmniRig

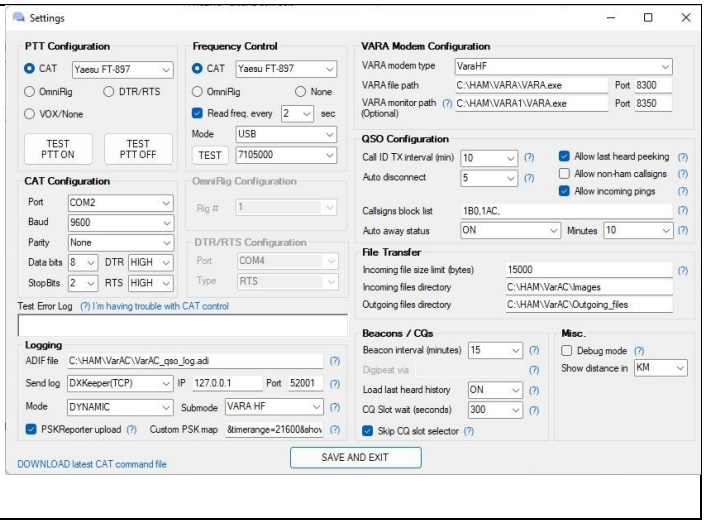
Info ON6AT, Patrick

Micro Keyer settings

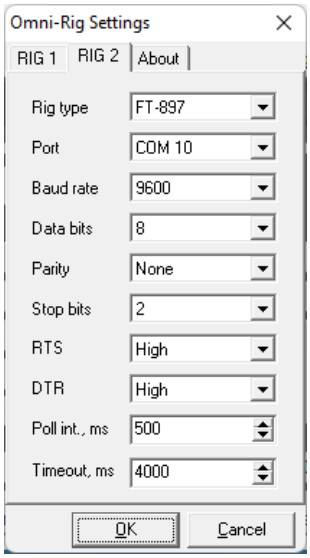


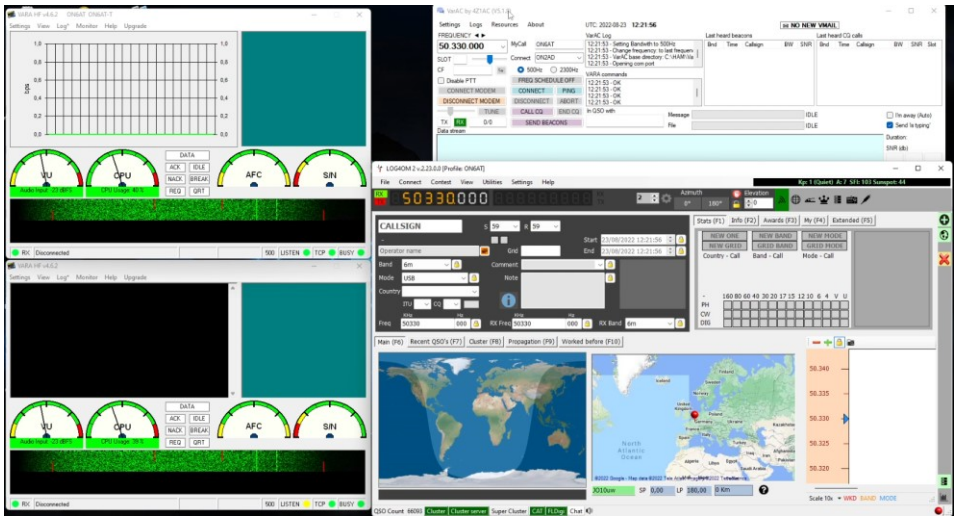






Omni-Rig & VARA-HF & Log4OM





FT-897 Menu setup

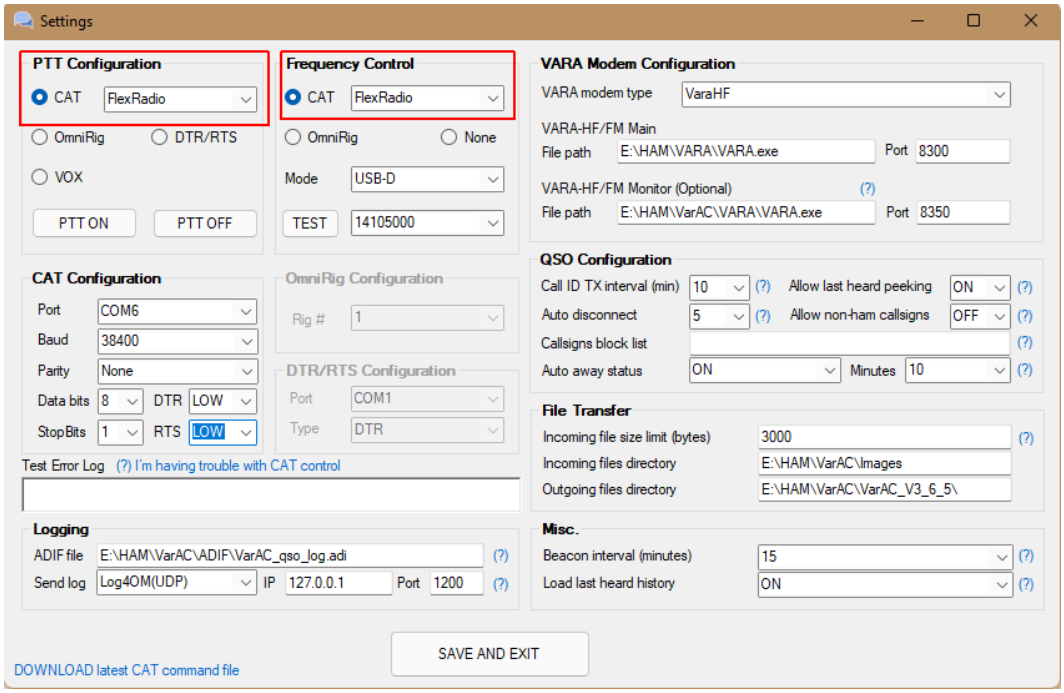
Menu	Mogelijkheid	Instelling
019	CAT Rate	9600bps or select another, but change also the MKII baudrate
020	CAT/LIN/TUN	CAT
037	DIG GAIN	10
038	DIG MODE	USER-U or USER-L
039	DIG SHIFT	0 Hz
040	DIG VOX	0

Flex radio's

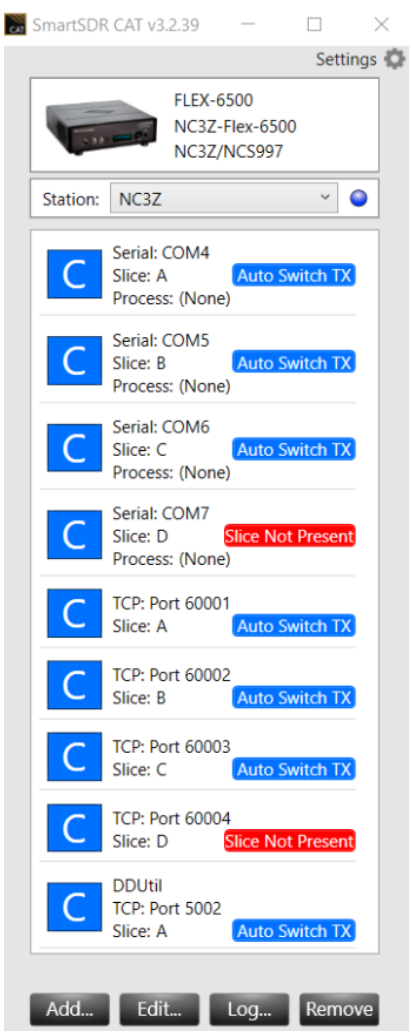
Flex 6400M

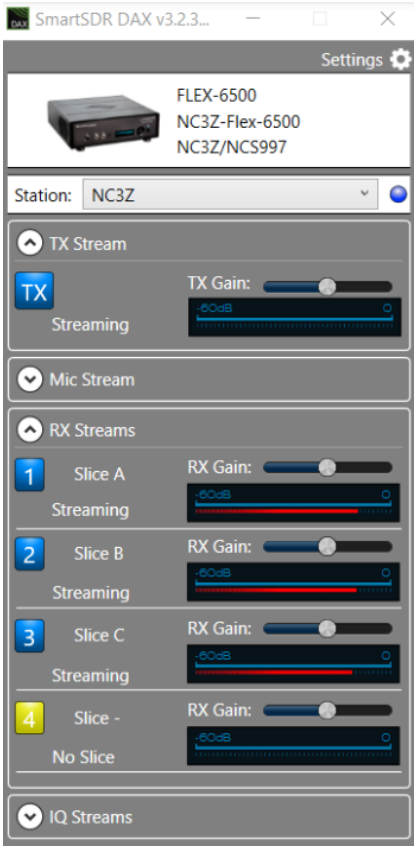
Info from VarAC-Forum

VarAC settings



SmartSDR +VARA Soundcard settings





Release updates

VarAC V6.3.3 (24/11/2022)

Enhancements/Changes

If VarAC fails to send commands to the VARA KISS port (for relay notifications / broadcast) it shows a message on screen.
Showing Queued broadcasts in the "in queue" section
Clearing "in queue" section now clears also broadcasts.
Changing the following parameter on the VARA Monitoring instance to avoid KISS port blockage : Enable KISS=0, KISS Port=0

Bug fixes

After calling CQ, the "Click here to return to CF" did not work.
Fixing broadcast row height - cutting letters like g/q/y
Broadcasts were not sent if "relay notification" checkbox was disabled under settings.
right click Broadcast --> copy all, did not include the broadcast message
Changing KISS interface to work with new KISS header By Jose (192,1). Requries VARA HF 4.6.6 / FM 4.2.6

VarAC V6.2.4 (19/11/2022)

New features

SNR Live graph - see SNR reports of you and your QSO partner on a live graph.
Linux compatible mode - Full support of VarAC on Linux/Raspberry using WINE. Read THIS for more details.
Translation - "right click text -> Translate" in the data stream and it will show a google translate result.
Edit VMails - that are waiting in your outbox
VarAC profiles - easily switch between different VarAC configurations for different RIGs. (Settings -> Switch profile)
VarAC Cluster - run multiple VarACs with different ini & rigs while sharing resources. Great for VMail relays across different bands. Read THIS (To Be Defined - still WIP) for more details.
QSO Summary - showing summary data upon disconnection.

VarAC Broadcasts - Sending an asynchronous message to a user or to ALL. (Requires VARA 4.6.5)
Clean VARA buffer - clear a message that is already in the VARA buffer but yet to be sent. Requires a VARA license (requires VARA 4.6.5 onwards)

Enhancements

Removing personalized away messages to save traffic.
Closing com ports upon VARA modem disconnect.
Reported ADIF Mode is no longer controlled by the user. It's now hard coded as DYNAMIC.
Showing a warning if trying to start a connection on a busy frequency.
Showing a warning if setting a callsign that is too long under "My information" screen.
Small arrows above the frequency indicator are now tied to the slot system and will move you between slots.
Change in 17m Calling frequency. Moved from 18.106 to 18.107.
Allowing the use of <LOC> tags in welcome messages.
Reducing welcome message to 50 characters.
Reducing max Vmail message size to 300 characters.
Mailbox is now implemented using a SqLite DB (VarAC.db file). This opens new opportunities for software integrations for developers.
Not showing non-500Hz CQ/Beacons if intercepted on a calling frequency.
Disable VarAC <-> VARA KISS connection with VarAC.ini parameter: VarahfEnableKissInterface

Bug fixes

Locking field on the call-history screen for read-only.
VARA-FM - closing the modem screen upon VarAC Closing.
VARA-FM - changing the VARA ports automatically based on port numbers selected in the VarAC settings screen.
VARA-FM - Fixing the "WRONG" message on the VARA command log upon VarAC Startup
Mailbox rows where too tight. Extended their height for better viewability.
Added 500ms wait time before queueing up a new message to be sent to overcome some VARA modem dead locks.
Not sending relay notification with callsigns that are longer than 6 characters (AX25 protocol limit)
Using the mouse wheel on the slot selector slider now moves one slot at a time
When receiving a VMail with a full callsign (Like 4Z1AC/P) it ended up in parking and not in inbox.
Free form QSY ("#") did not allow a sniffing or QSY to a manually inserted frequency.
Pausing beacon while sniffing another non-CF frequency.
When a corrupted packet is received, performing a clean disconnection.
While invited to QSY, and when not using frequency control through cat (but manually) your VarAC kept showing you are on the CF and killed your link when CF time limit exceeded.
When the CF is busy, and trying to connect on a slot, VarAC didn't let you continue with the connect sequence.
When disabling Vmail relay notifications, VarAC still changed the VARA.ini kiss port number.

VarAC V6.0.8 (08/10/2022)

New features

VMail relay notifications. Requires VARA V4.6.4.
DX Cluster integration - Upload spots to DX Cluster.
Showing bearing next to the distance
Allow users to disabled logging for incoming/outgoing pings.
Setting and Logging your TX power
Add multiple recipients for a VMail (Using comma separation)
<VER> tag now returns also the VARA modem version (starting VARA 4.6.4)

Enhancements

Logging the frequency upon the QSO started on (instead of current frequency)
Last heard lists can now be sorted by any column. New rows will still be added at the top of the list.
Adding a right-click -> "Send VMail" option on the last heard lists.
Adding a right-click -> "DX Cluster spot" option on the last heard lists.
Not allowing tags in welcome & away messages to reduce message size.
Adding band indication for CQ and beacons printouts.
Official 60m calling frequency (5.355 for non-US stations)
Reducing the beacon wait time for non BUSY frequency from 30 to 20 seconds.
Not allowing to send files over the calling frequency.
Select if you want to set your rig to the last used frequency or not, upon startup.
Validation of DxCluster values upon Settings saving.
Setting default out-of-the-box dxcluster to VE7CC.NET
setting your callsign as the username of dxcluster by default
Following a successful dxcluster spot - disabling the SPOT button to avoid spot duplications
Reducing QSY reminder to ~2 minutes into the QSO in the calling freq
Added a TOTAL QSO LIMIT time on the CF. 6 minutes. both sides will get a warning upon which both sides will automatically ABORT the link if not QSYed.

Bug fixes

60m band was not resolved correctly
Forcing upper case letter for destination callsign when composing VMails
Corrupted ADIF records threw exception. now skipping and writing to log file.
When disabling the slot system, after CQ, it still moved to a slot.
Not allowing space in a VMail "TO" field.
When clicking OUTBOX/PARKING multiple times quickly, VarAC throws an exception.
HRD QSO logging was doubled
An exception is shown when the VarAC.ini parameter "LastFrequency" is corrupted
Pings exchange parked VMails. Fixed.
Right-click on VMail in outbox for relay picked the wrong VMail.
Sending the same VMail twice in case it was left in the queue after disconnection.

VarAC V5.3.1 (09/09/2022)

New Features

Adding tools menu with quick access to tools such as mailbox, callsign history lookup etc.
Store & forward: leave a message in your/other mailbox and once the target station connects, they will receive the vmail.
Offline VMail compose.
New Inbox/Outbox/Sent/Parking mailbox folders
Clickable Mailbox counters on the main screen
Free form QSY (#) now support SLOT frequencies
Integration with UcxLog
File transfer statistics (time and average speed)
Self reporting to PSK Reporter. Upon frequency change, the PSK reporter map will show where you QRV.

Enhancements

In the callsign history screen you can now enter a callsign manually and perform a search. Also adding an access to the callsign history lookup in the main dropdown menus.
Adding extra space after each element in the ADIF record to comply with ADIF standard
Self reporting to PSK Reporter. Upon frequency change, the PSK reporter map will show where you QRV.
DXKeeper logger - auto filter of previous QSOs with a station once login a QSO (requires DXkeeper 16.7.6)
Calling CQ now must include a Slot ID.

Bug fixes

Replacing emoji based buttons icons with ASCII for windows 7 users.
Removing the drop down menus in the callsign history screen.
PING disabled the slot selector and only way to recover was to restart VarAC
CAT change frequency for 2M and above frequencies (9 digits and above) changed not to the accurate frequency.
Free form QSY (using the # button) did not work if Ø (zero with slash) was enabled.

VarAC V5.1.8 (01/08/2022)

New features

Slot slider - easily scan of all slots
Manual settings of QSO start & end times
QRZ lookup of your QSO partner
Time limit (5 min) for AWAY links on a calling frequency.
Replace "0" with "Ø" in the data stream (customize under appearance settings)
Show distance based on locators (Km/mi)
Additional gestures: FB! / COOL! / BYE! and 2 Easter eggs sound based gestures I'll let you all find on your own 😊 😊
Supporting Swisslog logger (The Swisslog version will be released later this week)
Shortcut F-keys for canned messages (F1, F2, F3...)
CQ/Beacon through one or more digipeaters (for VARA-FM)
New tags to be used on canned messages. your partner (his/her) info : <HNAME> / <HQTH> / <HLOC>

Enhancements

Adding antenna description to the user profile + <ANT> tag + reporting it to PSK Reporter.
When trying to connect someone on a slot, if it fails, a QSY back popup will appear.
Increased send file size limit to 1M for 2300Hz bandwidth links
Providing sound alert for incoming connection request.

Allow VARA-FM users to disable the Slot-based CQ mechanism.
When the link is corrupted - providing the user with a reason.
UTC Time more readable
Convenient ADIF directory selector
If frequencies list file does not exists, recreate with default frequencies
Adding CB Calling frequency (27.195.000) to the hard-coded CF lists for the "QSY reminder" feature.
Faster loading of callsign history
Remove BW column from the last heard lists when using VaraFM/VaraSAT

Bug Fixes

QSY Reminder stopped working in 5.0.2. now fixed.
Pinging 7 characters callsigns (mostly CBiers) will result with an extra T in the callsign.
When standing by on a slot and double clicking a CQ call without a slot, VarAC did not move to the CF.
Double clicking a CQ/Beacon on a different band than where you are now, tried it connect it on the wrong band.
While on a slot, if changing frequency from the drop down menu, it reset back to the slot frequency.
Frequency scheduler switch did not reset the selected slot (if there was one).

VarAC V5.0.1 (17/07/2022)

New features

Mailbox! You can now leave a message when the other side is away (and even if he is not)
Supporting "/" callsigns. W/4Z1AC , 4Z1AC/P, 4Z1AC/QRP etc...
Callsign history - you can now all see your previous engagement with a callsign (Chats history, Log records, Info, Beacons, CQs)
Create CAT macros: Add to the rig file your commands using commas, like after changing setting mode to put your RIG in your desired configuration. example: ModeUSB_D=FEFE94E02600010102FD,FEFE94E02600010103FD
Edit queued messages: Want to edit things you already queued? Hit the new "EDIT" button.
New CQ Paradigm. Introducing: VarAC Slots! New QSY methodology - for better scale (conducting multiple parallel QSOs)
Support ADIF new Vara classification (Mode: DYNAMIC / SubMode: VARA HF / VARA SATTELITE / VARA FM 1200/9600)
Official support for Vara SAT modem
Frequency scheduler peeking - see what is the frequency schedule of your partner so you know where to hunt him.

Enhancements

Forcing main VARA modem on non-monitor upon startup up.
Adding indication for incoming PING upon PING connection
If one side reaches the idle time limit, the other side will be notified about the reason of disconnecting.
Custom font size applies also to reading and writing vmails
"Leave a message" pop up will appear at the top of all windows.
Custom PSKReporter map - set it to your preferred layout.
Free form QSY now auto populates with the current frequency for faster QSY frequency settings
Auto QSO Log off reminder - Reminding you know the auto log is turned off once a QSO is over.
Shortening CQ calls to 2 cycles (instead of 3)
Every frequency change is now audible for better control.
Improved frequency change awareness: Every frequency change now highlights the frequency indicator.
Improved frequency change guidance for users with no RIG frequency control.

Bug Fixes

When leaving the ADIF file settings empty, the settings screen crashes.
If PTT timeout occurs while in TUNE, reset the TUNE button.
Not cleaning previous a previous failing QSO log information and reporting it as part of the upcoming QSO.
if in "I'm away", send Away message even if it is a repetitive connection from the same callsign
Corruption with multibyte texts (3 bytes or more like Japanese, Chinese)
TO and FROM columns misplaced on the mailbox mail list.
When editing a canned message (Away/Welcome) in the middle of it, the cursor keeps "jumping" to the end
Upon <INFO> request, not sending empty tags for undefined elements.
When selecting "NONE" for Freq control under settings, also unchecking the "read freq" checkbox.

VarAC V4.1.0 (18/06/2022)

New features

Mailbox! You can now leave a message when the other side is away (and even if he is not)
Supporting "/" callsigns. W/4Z1AC , 4Z1AC/P, 4Z1AC/QRP etc...
Callsign history - you can now all see your previous engagement with a callsign (Chats history, Log records, Info, Beacons, CQs)
Create CAT macros: Add to the rig file your commands using commas, like after changing setting mode to put your RIG in your desired configuration. example: ModeUSB_D=FEFE94E02600010102FD,FEFE94E02600010103FD

Edit queued messages: Want to edit things you already queued? Hit the new "EDIT" button.

Enhancements

Forcing main VARA modem on non-monitor upon startup up.
Adding indication for incoming PING upon PING connection
If one side reaches the idle time limit, the other side will be notified about the reason of disconnecting.

Bug Fixes

When leaving the ADIF file settings empty, the settings screen crashes.
If PTT timeout occurs while in TUNE, reset the TUNE button.
Not cleaning previous a previous failing QSO log information and reporting it as part of the upcoming QSO.
if in "I'm away", send Away message even if it is a repetitive connection from the same callsign
Corruption with multibyte texts (3 bytes or more like Japanese, Chinese)

VarAC V3.8.8 (24/05/2022)

New Features

PSKreporter integration! Upload every beacon, CQ and QSO to PSKreporter. Quick access to PSKReporter map.
Multiple configuration files - Load VarAC with different config files to support various rigs or settings. Ex: "VarAC.exe MyVarAC.ini"
My information screen - manage your info (Name/QTH/Locator/Rig) in one place and use tags to send it to others easily
New Tags to easily incorporate your information in a QSO or canned messages: <CALL> <QTH> <NAME> <LOC> <RIG>

Enhancements

Disable the "Go to Last Frequency upon startup" feature. Keep your rig VFO where it is upon VarAC startup. Set it in VarAC.ini:
LastFrequencyLoadUponStartup=OFF
PING now exchange locators (both sides)
Direct access to user manuals from the new "Resources" menu.
Opening the frequency scheduler editor if turning it on while no rules are configured.

Bug fixes

LHR sometimes does not work and may cause hangs.
I am away kept turning off and on every hour.
Frequency scheduler does not work with some European localizations (storing frequency list in a format that is not readable by VarAC)
Suppressing the "Unable to open comport... retrying" message
Incoming file already exists - adding a random number to the incoming file name to avoid overwriting an existing file
Not killing a session due to idleness during a file transfer
Preventing PINGing while already connected
When clicking "None" under the Frequency control menu, it disabled

VarAC V3.7.9 (13/05/2022)

New Features

QSY sniffer - Easily check if your QSY Up/Down destination is free by right-clicking & Holding the QSYU/D button.
VFO read: Turning your VFO knob now reflects on the VarAC console (enable this feature under the settings menu)
Frequency Schedule - Tell VarAC when and where you want to QRV. Great for day/night frequency changes.
<VER> tag - check VarAC version of your QSO partner
TUNE button - set your ALC level directly in VarAC (requires VARA 4.6.2 and a VARA license)

Enhancements

CAT Frequency control for the remaining Yaesu rigs (FT-817,818,847,857,897)
Fix for Frequency control of rigs that has 10Hz resolution
Ignore double QSY invitation - when both sides send QSY invitations together.
Supporting frequencies of 2.4GHz (VARA-SAT QO100 Operations)
Enabling "Debug mode" from the settings screen

Bug Fixes

With DTR/RTS PTT - showing an error "'PortName' cannot be set while the port is open"
Exceptions when trying to write to VarAC_traffic.log file
Right clicking on an empty space in the LH lists generated an error.

VarAC V3.6.5 (24/04/2022)

New features

Up/Down buttons to manually skip +-750Hz
Free form QSY - select any frequency for a QSY invitation
Disable PTT - keep your VarAC in listening mode only.
Setting default outgoing files directory
Block lists - prevent those callsigns you do not like from connecting you and away from your last heard lists.
Send QSOs to TCP server (for loggers such as DXKeeper)
Set your preferred ADIF file directory and file name

Enhancements

Beacon on demand - Zero the beacon timer when restarting it.
Amateur radio callsign structure validations.
Manually override the frequency busy indicator in case of false detection

Bug Fixes

Not showing PING callsigns "YOURCALL-T" on the "connect to" dropdown
Right click on last heard callsign does not select the row
Adaptive row height for the last heard lists

VarAC V3.5 (05/04/2022)

New features

Last heard color coding. Identify new callsign easily.
Last heard history loaded upon start-up. No more loosing your Beacons/CQ list upon VarAC restart
Adding FM-D mode
Disabling/Enabling "incoming connection request alerts" (New Vara.ini only parameter (Incoming Connection RequestAlert=OFF)
New sound alert for QSY invitation and QSY Back.

Enhancements

Allowing DTR/RTS PTT & CAT control on the same COM port
Blocking a CQ call if the frequency is busy
Different sound for new/existing stations calling CQ
Slimmer LH PEAKING data transfer
Suppressing welcome/away messages if reconnecting with the same station.
Zero beacon timer upon Beacon restart
Updated CAT RIG file.
Warning when switching to 2300Hz

Bug Fixes

Allowing space in the CONNECT TO drop down for FM digipeater
When opening the ADIF file from the LOGS menu, if no application is associated with it, VarAC will try to open using NOTEPAD
Allow space in the "CONNECT TO" only if modem type is VaraFM (for digipeaters connect strings)
Suppressing the "PortName cannot be empty" alert when no comports are available

VarAC V3.4.1 (26/03/2022)

New Features

Frequency control using CAT commands.
Splitting PTT control from OmniRig. Example: You can KEY your PTT using CAT or RTS while managing frequency using OmniRig.
"QSY BACK": QSYed after connecting? VarAC will remind you to QSY back to the calling QRG when your QSO ends.

Enhancements

Set the color of info messages as you wish (under appearance)
Shorter PING cycle: Not sending Welcome/Away message.
Enhanced settings screen
QSY reminder is set to 5 min (previously 10 min)

Bug Fixes

Frequency revert back after a frequency change
Connecting to invalid callsign puts VarAC in unresponsive state that requires a modem reconnect.
Show "No luck" messages also in other situations except failing incoming connection requests.
Application is not restored from task bar when minimized

VarAC V3.3 (21/02/2022)

New features

Last heard peeking - see the last heard beacons/CQ of others. Great for digipeating.

Idle connection timeout - Drop the link if no traffic is sent for a certain period of time.
PING - Connect only for the sake of getting a report... followed by a disconnect.
Frequency BUSY indicator
SNR Request - you're in a QSO and want to know you current report? You now can.
Storing last heard CQ and Beacons into a log file. Access it from the Logs menu.
Canned message tags - add <SND> or <DISC> to your canned message to auto send them or auto disconnect.

Enhancements

Additional Calling QRGs for 80,30,17,12 & 6 meter bands.
25% Faster initial handshake & SNR exchange (3 data exchange cycles instead of 4)
FM mode - configure Omnirig to change your RIG mode to FM (for VaraFM)
Contentious SNR reporting - receive SNR reports contentiously from your partner. Not only upon connecting.
Adding 3 more canned messages
Last heard order - All last heard lists are now ordered from new to old.
Blocking 2300HZ calls on Calling QRGs
Adding "Clear" button to clear the new message text box.
Resize screen from all 4 edges.
Larger fonts for main elements and buttons for better visibility.
Tooltips for some less intuitive elements.

VarAC V3.2.1 (05/02/2022)

New Features

Multilingual chat! no more "????" signs. PLEASE NOTE: Both sides must be with V3.2.1 for this to work.
QSY Reminder
Showing CQ/Beacon bandwidth
Showing CQ/Beacon SNR level requires VARAHF 4.5.7 and above)
Auto QSY - auto frequency change by accepting QSY invitation.
Display UTC Clock in the UI
You can now resize VarAC window and VarAC will remember it.
Supporting AUX callsigns (ex: 4Z1AC-2)
Incoming file size limit (set by the receiving side)
CAT PTT support for almost all RIGs
Cat HEX command support
Log menu - easy access to all VarAC logs (ADIF, Chat history...) from one place

Enhancements

Showing frequency (instead of N/A) even if not using OmniRig with frequency control.
Adding support for 2m & 70cm bands
Under settings, check that the incoming file dir exists and VarAC has WRITE permissions to it.
If Disconnecting during a file transfer, delete the temporary GZIP file.
Limit send file size to 100K with VaraHF (not suitable)
If Clearing messages queue while it has SendFile tags, perform SendFileAbort

Bug fixes

Remove the erroneous "upgrade to VaraHF 4.0.5+ message"
With multiple VarAC instances, closing one VarAC will only close the VARA modem that is attached to it.

VarAC V3.0.2 (08/01/2022)

New features:

File transfer
Inline chat Pictures
Full VARA FM support
Dark mode
DTR/RTS PTT support
VOX support
Auto pilot mode for "I'm away"

Enhancements

Clear log entry button

Bug fixes:

Keyboard language keeps going back to EN

VarAC 2021 V2.7.2 Beta (11/12/2021)

New features:

QSO timer - showing the QSO duration
SNR (RST) support - show real-time SNR metrics of both sides
Fully automated SNR (RST) Exchange

Auto QSO log (upon disconnect)
Auto logging of NAME, QTH, LOCATOR using VarAC TAGs

Enhancements

Reset beacon timer when switching bands
Start VarAC on the last tuned QRG
Converting all times to UTC
Right-click -> Copy on Last heard CQ/Beacons
Place the cursor automatically on the new message dialog upon startup and when connection is established
Log QSO while still chatting - entering the current time as END TIME
Show Band for every record on the last heard CQ/BEACONS

VarAC 2021 V2.6.2 Beta (27/11/2021)

New in this version:

Log QSO to ADIF! (can be automatically loaded now to LOG4OM, QRZ.COM etc...)
Right click words on data stream and set as Name/QTH/Locator
Disable/Enable all application sounds under settings
Allowing to change dropdown frequency while connected
Callsign QRZ.com Lookup - mark a callsign on the data stream and right click it
Finally an official VarAC Logo and app icon.
CALL ID – Sending “DE YOURCALL” periodically.
Keeping your last state of “Is typing” and “I’m away” checkbox.
New sounds: Is typing, Incoming/Outgoing messages
VarAC displays the current VFO frequency (when using OmniRig)
Beacons appear in the data stream
QSY Gesture. Using QSYU and QSYD – to signal your partner to QSY +-750Hz.
Clearing Queue when connected to another station (avoid sending messages from previous QSOs)
Right click to copy text from the Data stream
Clearing “Beacon/CQ last heard” or “data stream” by right-clicking them.

Bug fixes:

If screen position turns negative in VarAC.ini file, resetting it to default automatically
If AWAY/WELCOME messages has "Enters" (multiline message), it is sent and shown with "\\n" instead of newline. This does not affect other canned messages.
While using OmniRig, when opening the dropdown of the frequency selector, it always "jump" to top every second.

VarAC 2021 V2.5 Beta (17/11/2021)

New in this version:
Custom font size & background color - set to your own preferences.
Beacon countdown - so you know when the next Beacon will be fired.
Spell check as you type
VARA-HF auto PORT config - Change the port in VarAC and VarAC will change the port in VARA-HF accordingly.
VarAC Last position - remember VarAC last position on screen and launch it in that exact position.
Bug fix: Application cuts off on the edges in low-res screens
Bug fix: Beacon timer show 1,5,10 min values that are not usable

VarAC 2021 V2.4 Beta (08/11/2021)

Lots of good stuff in this version :
Canned messages - for welcome/away messages and for in-QSO messages
VARA CQFRAME support - Call CQ. No Audio files required.
Recently CQ calls - see who was on frequency and called CQ
Message aggregation - combine multiple messages in queue to a single broadcast
IS TYPING ! Let the other side know you are composing a new message
BEACONS - send a beacon periodically letting everyone know you are on frequency
Last heard beacons - see who was ONLINE recently.
Back to Queue - lost precious message due to link timeout during a QSO? Not anymore! if you disconnect while sending a message, the message goes back into the queue.

VarAC 2021 V2.1 Beta (15/10/2021)

New features in this version:
Alerts about incoming connection request
3 Emoji Gestures
Bigger font in the main data stream log
Color distinction between incoming and outgoing messages on the main data stream section
24 hours time format for all logging
Allow both "hit enter" to send message and "SEND" button simultaneously
Bug Fixes:
"Connected to" show your own callsign when using lower letters in the "My callsign" field.

Fixing the log entry upon change of BW to 2300. Currently presenting 500Hz for all BW for both BW changes.

VarAC 2021 V1.9 Beta (08/10/2021)

I have created VarAC as I believe Digital HF Chat can be easy and fun. After working with almost every Digital mode out there, I have come to a conclusion that the VARA protocol is the perfect platform for a chatting application.
This version is the first version to be release for the public. This Beta version may experience some glitches so I kindly ask you to report any issue through the contact page.
4Z1AC, Irad Deutsch

Top

Top

Thanks to all those who have already written a manual in one language or another.

With name;

1. Irad Deutsch, 4Z1AC auteur van VarAC.
2. Ivan Valentin, K3IV
3. Gary Mitchelson, NC3Z
4. Rick Lanford, N8SDR
5. Roy Beiser 4X5BR
6. Pat, ON2AD (Dutch - English & German manuals)
7. And all those we forgot to mention