## Winlink Express set-up for VARA-FM

### and C-Media sound card modem use - V0

This procedure applies to Vara FM sound modem and use of C-Media USB radio adapter with Winlink Express.



#### \* This procedure assumes the user has some experience with Winlink Express \*

- □ <u>Connect</u> your C-Media device between transceiver and computer. Refer to diagrams below.
- Download and install Vara FM per page 2. Do this before setting up Winlink Express.
- Download, install and open Winlink Express. < <u>https://downloads.winlink.org/User%20Programs/</u>> Install in a base folder such as C:\Winlink Express
- □ Set up Winlink Express Settings as normal with the following exceptions. (See HELP files as needed)

#### VARA FM settings □⇒

- □ From the Vara FM Winlink Session [Call Sign] click on stttings then Vara TNC Setup to get this window
- □ Accept TNC settings but insert the path to your VARAFM.exe.
- Check the 'Automatically launch Vara FM NC when session is opened' if you would like Vara FM to auto start
- □ Click Update to save settings.

85	Vara FM Setup					23
	Virtual TNC host address/name:	127.0.0.	1			
	Virtual TNC Command Port:	8300	* *	Data Port:	8301	
	VARA FM Modem location:	CAVAR			ava	
		0.0700				
	Automatically	launch \	/ara FM TN	VC when ses	sion is opened	
	Update		Ca	ncel		
-						

**Note**, If 'Automatically launch Vara FM TNC when session is opened' is checked, Vara FM will start when Open Session on main Winlink Express window is selected and closed when session is exited. Otherwise Start Vara FM before starting Winlink Express.



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TNC

## Vara FM Settings for C-Media device use with Winlink Packet

- Go to https://rosmodem.wordpress.com/ and download 'VARA FM v3.0.8 (VARA for FM transceivers)'.
- □ Create a new folder (ex. C:\VARA FM) and unzip the VARA zip file to the created folder. Run the VARA FM setup.exe file. Be sure to run as administrator. You may get a message from your Anti-Virus program. Ignore it or set allow.
- From the folder run VARAFM.exe. You will get the following window.



- □ Click on Settings to open the set up window and select VARA ... . The following window will open
- □ Accept the settings suggested, but change Retries to 3. You can adjust the settings once you get everything running to best communicate.
- □ Insert your call sign and your license key if you have one.

Note: You can run Vara FM for free but you will get a nag screen and the max speed is throttled back.

- □ Select NARROW in the FM Systems window. If registered and your radio supports it use WIDE.
- □ Click Close

Again from Settings, select PTT... This window will open.



- □ Select RA-Board as that is the C-Media Interface.
- □ Click Close
- □ Now select Sound Card from Settings.
- □ Select your DRA board in the Device input and output windows
- □ Select the RA-Board for PTT.
- □ You can use the slider on the Tune bar or Auto Tune if you have a buddy to test with.

TCP Ports:	-VARA Licer	nses	1
Command 8300	Callsign:	Registration Key:	
Data	Callsign:	Registration Key:	
	Callsign:	Registration Key:	
WIDE	l Callsign:	Registration Key:	
etries:	1		
Allow VARA check for updat internet server	es via		
2 baud Symbol Rate egal on 2 meters band			
SQL	200bps	to PC input	
9600bps GND		from PC output	
DATA		FT 897D pins	

- \* So, it's only with compatible with RA-Board soundcard interface, homebrew interfaces, modified Signalinks, etc..
- Requires technical knowledge to set the Rig menus for wide

Close

operation (PKT9600 menu option).

SoundCard
Device Input DRA-30 (4-USB PnP Sound Device
Device Output PTT DRA-30 (4- USB PnP Sound Device RA-Board-1 🗸
Tune Drive level:
Close

# Soundmodem Settings for C-Media device use with Winlink Packet

- Go to <u>http://uz7ho.ua/packetradio.htm</u> and download the latest soundmodemXXX.zip and ptt-dll.zip files.
  - (The XXX refers to the version number) Unzip the files to a temporary location on your computer.
- □ Create a new folder (ex. C:\UZ7HO) and copy soundmodem.exe and PTT.dll from the temporary location into the new folder. (soundmodem.exe and ptt.dll must be in the same folder)
- Run the soundmodem.exe file. You may get a message from your Anti-Virus program. Ignore it or set allow.
   **\*** Soundmodem will find and enable the PTT.DLL file.



- $\Box$  For soundcard packet the signal bar on the waterfall should be centered at 1700.
- □ Check Hold Pointers on main window.



□ In the Soundmodem window, click Settings then Devices.



#### **Sound Card Settings**

- Select Output and Input devices:
   C-Media interface: Select USB PnP Sound Device
- Uncheck TX rotation
- □ Check Single channel output
- □ Check <u>Color waterfall. This can use a lot of computer</u> resources, so you may not want to check this. It will depend upon your computer's CPU. Optional
- □ Check Stop waterfall on minimize.

#### Server setup:

□ Check – Enabled for Kiss Server Port (8100). Lleave AGWPE Server Port unchecked

#### PTT Port:

- □ Uncheck Dual PTT & Swap COM pins for PTT
- □ Select EXT in the Select PTT port dropdown
- □ Click OK

\* Go to Advanced PTT Settings section to set up PTT options.

Settings 📃					
Sound Card					
Output device Speakers (USB PnP Sound Device)					
Input device Microphone (USB PnP Sound Devic 💽					
🔲 Dual channel	TX SampleRate 11025				
TX rotation	TX corr. PPM				
🔽 Single channel output	RX SampleRate 11025				
Color waterfall	RX corr. PPM				
🔽 Stop waterfall on minimize	Priority Highest 💽				
Minimized window on startup					
Server setup					
AGWPE Server Port 8000	🔲 Enabled				
KISS Server Port 8100	🔽 Enabled				
PTT Port					
Select PTT port EXT	🗖 Dual PTT				
Advanced PTT settings	Swap COM pins for PTT				
ОК	Cancel				

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#### **Modem Settings:**

- □ Click Settings/Modems
- □ Check Default settings
- □ Check KISS Optimization
- □ Check non-AX25 filter
- Set ch: A Modem filters as shown (Channel B not used)
- □ Set Modem type ch: A settings as shown
- □ Click OK
- □ Close Soundmodem and restart.

# Once set up, start before Winlink Express if auto start is not enabled.

Modem settings	×		
Modem filters ch: A	Modem filters ch: B		
BPF Width 1400 Show	BPF Width 1400 Show		
TXBPF Width 1600 Show	TXBPF Width 1600 Show		
LPF Width 650 Show	LPF Width 650 Show		
BPF Taps 256	BPF Taps 256		
LPF Taps 128	LPF Taps 128		
Default settings	Default settings		
PreEmphasis filter 🛛 🔽 🔽 All	PreEmphasis filter 🛛 🔽 🔽 All		
✓ KISS Optimization	KISS Optimization		
v non-AX25 filter	✓ non-AX25 filter		
Modem type ch: A	Modem type ch: B		
Mode AFSK AX.251200bd 💌	Mode AFSK AX.25 1200bd 💌		
TXDelay 250 msec	TXDelay 250 msec		
TXTail 50 msec	TXTail 50 msec		
Add. RX 0 pairs	Add. RX 0 pairs		
Add. RX shift 30 Hz	Add. RX shift 30 Hz		
Bits Recovery NONE	Bits Recovery NONE		
Ok	Cancel		

#### **Advanced PTT Settings**

- □ From the Settings window, click on the Advanced PTT settings tab
- An Information window may pop up indicating to check the advanced settings. If so click Yes.
   This only occurs on the initial installation.

Information	×
Cannot open PTT device! Check the advanced s	ettings?
<u>Y</u> es <u>N</u> o	
EXT Settings - [PTT.DLL v1.2.2]	$\times$
Select PTT HID device	

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TEST

USB PnP Sound Device

Cancel

Device

Apply

- □ An EXT Settings window should pop up allowing you to select the Device and to test the PTT.
- Note: Once set up is complete the Advanced PTT settings bar will be enabled In the settings window. You can go to this window and select TEST to test your PTT at any time.
- □ Click Apply to save settings

**Tip:** Set computer's internal microphone and speaker as default. Create a shortcut for sound settings.

Right click on Desktop ⇔ Select Create Shortcut ⇔ Type *control mmsys.cpl* for location: ⇔ Click Next ⇔ Type *Sound Settings* ⇔ Click Finish

Note: information provided here is believed to be correct. Use at your own risk.

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