



VARA-FM Station Similarity to SCC Packet:

VARA-FM over 25 Kbaud UHF

AX.25 Packet over 1200 baud VHF

Basic Station Configuration

- Antenna
 - Field: Roll-up J-pole, 2m for individuals 1.25m for EOCs; push-up 32' mast, tripod, sand bags and/or stakes, safety cones
 - Fixed: Tri-band (2m/1.25m/70cm) ground-plane
- Coax
 - Field: 25' LMR-240 up mast; 25-50' LMR-400 to station
 - Fixed: LMR-400 or better; surge protection; properly grounded
- Radio
 - 25W minimum; 50W preferred
 - Built-in data connector preferred
 - Allows listening on speaker
 - Eliminate variability in audio level between radio and TNC
- TNC
 - External hardware TNC preferred
- PC
 - Windows preferred
 - Outpost and PacFORMS, plus other recommended applications

Tune to
433.33 MHz

USB Sound
Card

VARA-FM,
VARA Chat





SJ EOC VARA-FM Station Recommendations:

❖ USE A DEDICATED RADIO AND ANTENNA, 50W RF POWER OUTPUT, SUPERHET RECEIVER, WITH OUT-OF BAND FILTERING (NOT CHEAP CLONE RADIO). RECOMMEND YAESU FTM 6000R RADIO:

The screenshot shows a web browser window displaying the Gigaparts website. The address bar shows the URL: gigaparts.com/yaesu-ftm-6000r-dual-band-mobile-transceiver.html. The page features the Gigaparts logo, navigation links for Products, Services, and Specials, and a search bar. The main content area displays the product page for the Yaesu FTM-6000R Dual Band Mobile Transceiver. The product image shows the radio unit and its microphone. The price is listed as \$299.95 with free shipping. There is a red 'Add to Cart' button and a 'Build A Bundle' button. The bottom of the page shows a Windows taskbar with various application icons and a search bar.



Recommended VARA-FM Station USB Sound Card (“Digital Radio Adapter”):

masterscommunications.com/products/radio-adapter/dra/dra50m.html

Custom Products for the Digital Radio Amateur Enthusiast

Model DRA-50M

A Radio Interface for Digital Two-Way Radio Applications

Pricing:

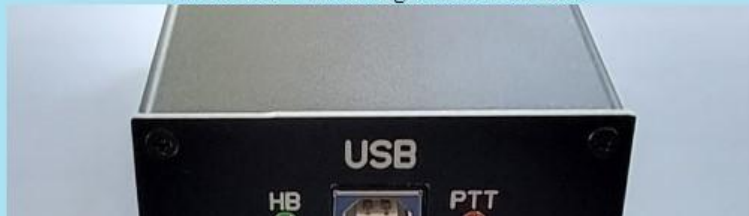
- **DRA-50M Unassembled Kit with Metal Case (Blue or Black) - \$85.00 each.**
- **DRA-50M Assembled and Tested with Metal Case (Blue or Black) - \$115.00 each.**
- **A (NO Case) option is not available - please click back and choose a DRA-50.**

The **DRA-50M** is available in a blue or black metal case.
The "M" Series is designed to fit our Metal-SC Cases and are easier to set-up and use.
They don't require adapter rails or hardware.
The board slides directly into the side rails of the metal case.

[Article on the differences between the DRA-50 and DRA-50M](#)

Shipping and handling is calculated at checkout for US and International orders.
First-Class shipping available to most locations worldwide, calculated at checkout.
Most Credit Cards & PayPal accepted - order below.

DRA-50M - shown larger than actual size.



masterscommunications.com/products/radio-adapter/dra/dra50m.html



VARA-FM Station USB Sound Card Kenwood D-710 Radio Interface Cable:

← → ↻ 🌐 masterscommunications.com/products/cables/drac-12.html

DRAC-12 Cable.



Description:

The DRAC-12 Cable is a high-quality 6-foot Mini-DIN-6 cable that connects the DRA-36, DRA-50 or DRA-70 radio adapters to radios that have a

It can also be used with the RA DIN-6 and DRA DIN-6 Adapters and the Alinco-6 Adapter in the same manner.

It's a straight through Male-to-Male DIN-6 (PS2 "type") cable.

These are good quality cables and have all conductors present.

(Not all cables have all 6 conductors populated. Some pins are therefore missing connectivity.)

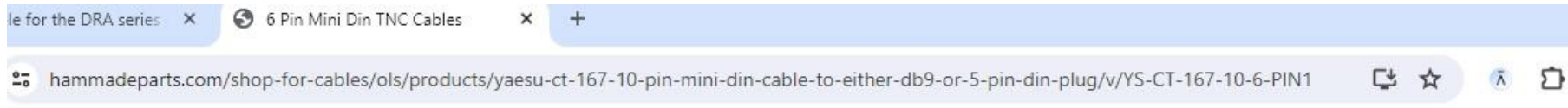
Secure PayPal Ordering:

Quantity can be changed at PayPal after pressing the "Add to Cart" button.

DRAC-12 Radio Cable



VARA-FM Station USB Sound Card Yaesu FTM 6000R Radio Interface Cable:



[All Products](#) / [Amateur Radio TNC Cables](#) / [6 Pin Mini Din TNC Cables](#)



Yaesu CT-167 10 pin mini din cable to either DB9, 5 pin din, Mobilinkd 3.5mm TRRS plug, DigiRig version 1.6 & Up 3.5 mm TRRS Plug, 6 pin mini din plug, PK-88 8 Pin Mic Plug - 3 ft cable length

\$49.95

TNC Connector

6 Pin Mini Din male Plug - 9600 Baud (Backordered) ▾

Backordered

Quantity



EA5HVK VARA Software (Windows Only) Download:






rosmodem.wordpress.com/2011/01/10/ros-2/

EA5HVK


Weak signals Software

« HRDLog.net Datamode groups join forces for contesting »

EA5HVK software

-  [VARA HF v4.8.1 \(High Performance HF Modem\)](#)
-  [VARA FM v4.3.2 \(VARA for FM transceivers\)](#)
-  [VARA SAT v4.4.0 \(VARA for QO-100 geostationary SAT\)](#)
-  [VARA Chat v1.3.6 \(Easy Text and File transfer chat\)](#)
-  [VARA Terminal v1.2.0 \(VARA dumb terminal for BBS's\)](#)

***** VARA HF Info *****

 [Wavetalkers Episode 17: Winlink with VARA HF \(by W6AH\)](#)

This is the "MODEM" Application

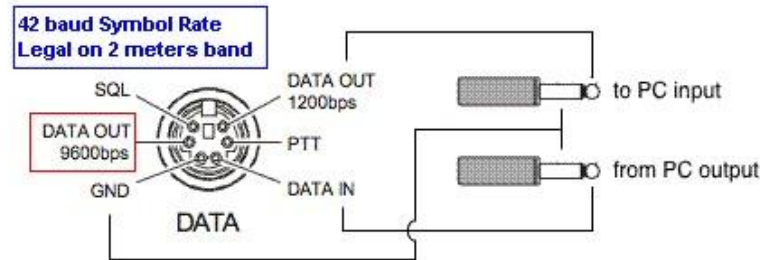
This is the "Operator Interface" Application



VARA-FM Software Configuration Example:

VARA Setup 127.0.0.1

TCP Ports: Command: 8300 Data: 8301 KISS: 8100	FM System: WIDE Digipeater: AI6EH-15 Retries: 2 <input checked="" type="checkbox"/> Allow VARA check for updates <input checked="" type="checkbox"/> KISS interface <input type="checkbox"/> SysLog	VARA Licenses: Callsign: AI6EH Registration Key: ***** Callsign: Registration Key: Callsign: Registration Key: Callsign: Registration Key:
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* VARA FM WIDE needs a FM rig set for 9600 Packet operation, with a special soundcard interface (6 kHz BW) connected to rear panel: RA-Board, Signalink "Black" transforms, Modified Signalink (red audio transforms removed), homebrew interface (a simple direct cable)...

* In other case, you must select VARA FM NARROW

Close



VARA-Chat Software Configuration Example:

A screenshot of the VARA-Chat Setup dialog box. The window title is "Setup". It contains several sections for configuration:

- VARA FM TCP:** Command Port (8300), Data Port (8301), Host (localhost).
- VARA Mode:** Radio buttons for VARA HF, VARA FM (selected), and VARA SAT.
- My Call Sign:** Text field containing "A16EH-1".
- Downloads:** A text field containing "C:\Users\JohnN\Desktop" with a "Change" button to its right. This field is highlighted with a red dashed border.
- VARA FM Modem location:** Text field containing "C:\VARA FM\VARAFM.exe".
- KISS TCP:** Port (8100), Host (localhost).
- Options:** Two checkboxes: "Automatically launch VARA TNC at startup" (checked) and "Disconnect automatically after sending file" (unchecked).
- Buttons:** "Update" and "Cancel" buttons at the bottom.

This is Where Files Sent to You are Stored



VARA-FM Software Configuration Soundcard & PTT Examples:

Since the Radio Interface is a USB "Soundcard" make sure both these say "USB"

Radio "Push-To-Talk" is keyed by the Digital Radio Adapter ("Soundcard")

You Can Let the VARA-FM Software Set your Transmit Audio Level by Connecting with Another Station. (This is Very Slick!)



VARA-FM Software Ping & Connect Examples:

You Can Get a Signal Report by "Pinging" a Station before Connecting with them.

Ping to: Via1: Via2:



(This is the "EXECUTE" Button)

Connect with: Via1: Via2:

You Can "DIGIPEAT" thru one or two Intermediate Stations (at Lower Throughput)

Close



VARA-FM Software Ping & AutoTune Results:

Ping

Ping to: AI6EH-12 Via1: Via2:

S/N: +29.0
VU: -16 dB

AI6EH-1

S/N: +28.6
VU: -23 dB

AI6EH-12

Close

SoundCard

Device Input
Microphone (USB PnP Sound Device)

Drive Level Calibration

Calibrate with:
AI6EH-12

Drive Level: -18 dB
S/N: +28.9 dB
VU: -16 dB

APPROVED

Close



VARA Chat File Transfer Results:

The screenshot displays two windows from the VARA software suite. The left window, titled 'VARA Chat v1.3.6 AI6EH-1', shows a successful file transfer of 'B_WBarn.jpg' (73773/74820 bytes) at a rate of 98194 Bytes/min. The right window, titled 'VARA FM v4.3.2 AI6EH-1 <AI6EH-15>', features a histogram of data transfer rates in bps, four analog-style gauges for VU (Audio Input: -9 dB), CPU (Usage: 21%), TX Delay (85 ms), and S/N, and a control panel with buttons for DATA, ACK, NACK, REQ, IDLE, BREAK, and QRT. The status bar at the bottom indicates a transmission rate of 19003 bps and 73773 Bytes Sent.



How to Use VARA:

Generally:

- ❖ **THINK OF SENDING A FAX, POINT-TO-POINT**
- ❖ **LISTEN ON THE RADIO CHANNEL BEFORE TRANSMITTING**
- ❖ **NEVER USE A RADIO CHANNEL USED FOR PACKET MESSAGING. (VARA TAKES UP THE WHOLE CHANNEL).**

Operating:

- ❖ **USE VARA Chat "BROADCAST" FOR KEYBOARD-TO-KEYBOARD CHAT WITH OTHER STATIONS**
- ❖ **USE VARA Chat "BROADCAST" TO ADVISE OTHER STATIONS THAT YOU WILL BE SENDING A FILE**
- ❖ **"PING" THE DESTINATION STATION TO MAKE SURE THEY ARE ON-LINE**
- ❖ **SELECT "FILE SEND" AND POINT TO THE FILE YOU WANT TO SEND**
- ❖ **CLICK ON THE "POWER PLUG" ICON.**