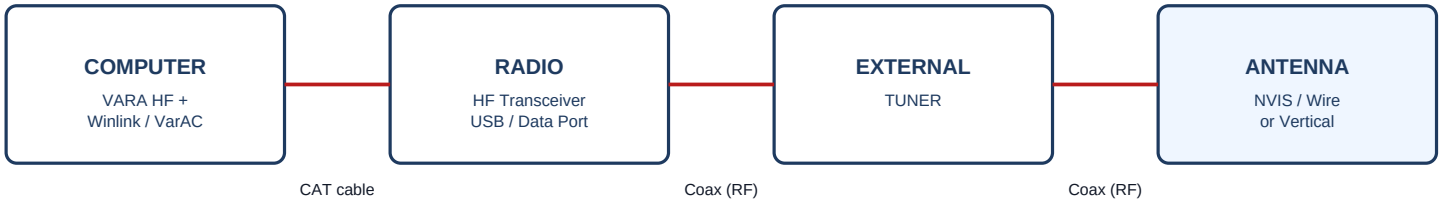
VARA HF Station Setup for Emergency Communications

Reliable Digital HF Messaging · Steps, Diagram & Cable Guide

Why VARA HF for EMCOM?

VARA HF is a high-performance sound-card mode that provides robust, adaptive digital messaging over HF. It works well with NVIS antennas for regional coverage when VHF/UHF fails. Ideal for Winlink email, VarAC chat, and ARES nets. Requires proper audio levels and clean RF to avoid interference.

CONNECTION DIAGRAM



Computer connects to Radio via CAT cable (USB or serial) for control. Audio may share the same cable on modern radios.

SETUP STEPS

1. Software

- Download VARA HF from rosmodem.wordpress.com
- Install Winlink Express (or VarAC for chat)
- Enter callsign (and registration key if licensed)
- Note TCP ports (default 8300/8301)

2. Hardware Connections

- Power radio and computer
- Connect USB or interface cable(s)
- Connect coax to antenna (or dummy load for test)
- Add Mix 31/43 RF chokes on both ends of cables

3. Sound Card Configuration

- In VARA: Settings → SoundCard
- Select radio USB codec or interface input/output
- Set channel (Left, Right, or L+R as needed)
- Avoid Windows system sounds on the same device

4. Levels, PTT & CAT

- Set radio to USB/DIGI mode, filter ~2.4–3.0 kHz
- Use VARA Tune; adjust Drive so ALC is light (not max)
- Set RX level so waterfall is clean (no red)
- Configure PTT via CAT (preferred) or VOX
- Verify CAT control changes frequency if used

CABLE DESCRIPTIONS

Cable / Connection	Purpose	Notes
USB (radio or interface)	Audio TX/RX + CAT control	Preferred on IC-7300, FT-991A, etc. One cable does both.
Audio TX (mic/data in)	Send VARA tones to radio	Keep levels low; use isolation if external interface.
Audio RX (speaker/line out)	Receive audio to computer	Use line-out if available; avoid speaker distortion.
CAT / CI-V / USB control	Frequency & PTT control	Strongly preferred over VOX for clean turnaround.
RF Coax to antenna	Radiate the signal	Use proper NVIS antenna; add chokes near radio.
Power (12–13.8 V)	Radio & interface power	Separate from computer if possible to reduce noise.

QUICK RULE: Install software first · Connect cables · Set levels carefully · Test on dummy load · Practice before the emergency

All stations should verify two-way VARA HF paths during training. Keep RF chokes on both ends of audio/control cables.

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