

# PACIFICON<sup>SM</sup> 2025

ARRL Pacific Division Ham Radio Convention  
*Produced by the Mount Diablo Amateur Radio Club*



## Remote Operation of Your Ham Radio Station

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These slides, and more, are at my website [k6ufo.com](http://k6ufo.com)

Elecraft K4/0 Remote



FlexRadio Maestro



## ***Today's Schedule:***

11:00 – 11:05 Get seated, late-comers, early questions.

11:05 – 11:20 K6UFO on basic needs, and common approaches.

11:20 – 11:40 K6TD on Elecraft K4/0 Remote design

11:40 – 11:50 Q & A

Using **other people's stations** is a good learning experience, and a backup.

Receive-only sites: [websdr.org](http://websdr.org) [kiwisdr.com/public/](http://kiwisdr.com/public/) [rx-tx.info](http://rx-tx.info)

Receive AND Transmit (You will have to register, and pay \$0 to \$\$\$.):

[RemoteHams.com](http://RemoteHams.com) has many shared stations and club stations globally.

[RemoteHamRadio.com](http://RemoteHamRadio.com) has very good stations, free to “youth”, \$99/yr + airtime.

Remote operators need to be properly licensed for the location of the transmitter. Always follow the rules of the regulatory authority. Must use callsign correct for the transmitter location. Transmitter location is the location for purposes of LoTW, contest operation, and award chasing.

## **To setup your own station for remote use requires choices.**

Station used at home AND remotely, or dedicated to remote?

Do you need a human operator position at station?

How much re-configuration to go from local to remote use?

Will you re-configure every day before leaving to work?

Is the station easily accessible (in the garage), or is it a long trip to the hills?

How much equipment will you haul around? Just a smartphone or tablet?

Laptop (adds a keyboard)? Extra control head? Keyer and Paddles?

Modes: Voice, Digital, CW? CW by keyboard only, or key and paddle?

Will you keep a PC on-line at the remote station at the radio (useful),

or does everything have to be extended across the internet (harder)?

### Basic Needs for remote operation:

1. Audio In/Out of radio, and across the internet to the operator. (USB port)
2. Radio control (Band, Freq, Mode, Filters, all the buttons and knobs.) (USB port)
3. Station Control (AC power, antenna switch, rotators, tuners, amp, ...) (remote PC)
4. “Good” Internet service (Low delay, low variation, reliable.)

Wired internet (cable, fiber, DSL)=good.

WiFi, Cellular Data, StarLink = maybe good, maybe not — verify!



VE3VEE

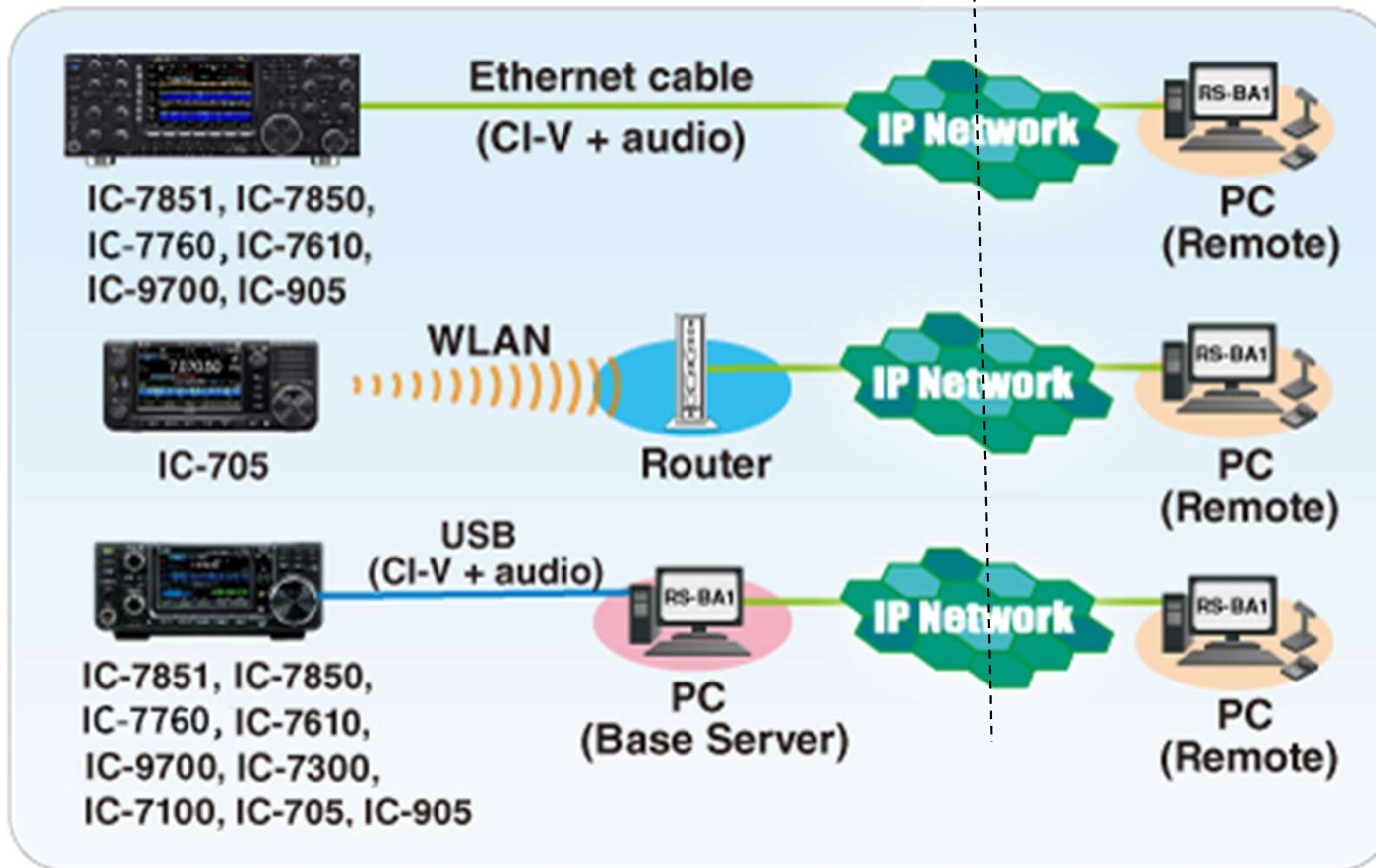




# Some common splits: (Stuff at transmitter vs. Stuff at operator.)

Example: ICOM RS-BA-1 IP Remote Control software. \$160.

Rest of station on this side:  
antenna,  
tuner,  
amp,  
power supplies,  
internet modem,  
router,  
...



“Operator side” has a person with a Phone or Tablet, plus headphones. Maybe a laptop or office computer.

But there’s no tuning knob or CW key!

You will want the “PC(Base Server)” to also control the AC power, rotator, and other station items. Can run software there, too (WSJT, CW keying, logging, ...) If you run “remote desktop” software like AnyDesk, the two PCs are easy to manage. If you run a VPN, all the equipment can appear to be on one local network.

# Remote with Knobs and Buttons!



## K4/O REMOTE

FULL K4 OPERATING EXPERIENCE 1/3RD OF THE DESK SPACE



Elecraft has designed the K4 “front panel” to control another K4 locally or remotely. You can control a K4 to a K4. Or, a K4/O to a K4. They also have a smaller knob box called a K-POD. And software for tablets, laptops etc... Visit their booth.



# Remote with Knobs and Buttons! FlexRadio “Maestro”

All FlexRadios are controlled from a software program (SmartSDR) locally or remotely. “Maestro” control panel can also be used locally or remotely. (WiFi or wired) There are also tablet and smartphone apps. Visit their booth.



The advertisement features a blue header with the FlexRadio Systems logo. Below the logo, three pieces of equipment are displayed: a Maestro control panel on the left, a FlexRadio 8000 radio unit in the center, and a laptop on the right showing the SmartSDR software interface. The Maestro panel has a color screen, several knobs, and buttons. The laptop screen displays a software-defined radio interface with a spectrum analyzer and a waterfall display. At the bottom, there is a blue banner with the word "Maestro" in a script font and the text "Win PC runs digitals". Below this banner, there is a small red SD card icon and two paragraphs of Italian text.

**FlexRadio Systems**  
Software Defined Radios

**Maestro**

**Win PC runs digitals**

FlexRadio Systems **MAESTRO** è la nuova console di controllo per i ricevassemitrattori della serie 8000 che permette l'uso immediato dell'apparato senza bisogno del PC, tramite connessione alla rete LAN anche WiFi, oppure direttamente all'apparato.

FlexRadio Systems **MAESTRO** è un moderno e funzionale pannello radio dotato di schermo touch, pulsanti e manopole, connessioni per microfono e tasto/pedale con il quale usare l'apparato senza rinunciare alla operatività tradizionale di una qualsiasi apparecchiatura radio, oltre che a permetterne la remotizzazione in qualsiasi punto coperto dalla vostra rete LAN.

*If you can't afford a Elecraft K4 and K4/0,  
or a FlexRadio and Maestro,  
there are other options:*

*RemoteHams.com software called RCForb*

*Icom RS-BA1 software*

*wfview.org software for Icom or Kenwood radios*

*RemoteTX.net Raspberry Pi and software [Visit his booth.](#)*

*N4PY.com software called PegasusPlus*

*Ham Radio Deluxe software has a remote control capability.*

*Any favorite radio control software running on a PC at the radio, remotely accessed by AnyDesk, TeamViewer, Chrome Remote desktop, Windows Remote Desktop, ...*

## ***Summary: ... how to build a remote station:***

Use other people's stations as a learning experience.

Different solutions have different advantages/problems.

Do not select a remote site without Low Delay and Reliable internet service!

Consider a remote desktop or VPN to use your home station from elsewhere.

The real problems are control of “everything else”: AC power outlets, antenna switching, rotators, tuners, ...

Remember the goal: get on the air, for more hours of operating.

Other resources: YouTube videos by:

VE6WZ - “The control setup at VE6WZ”

FlexRadioSystems VA3MW - Setting up my First HF Remote Station

- How To Build A HF Remote Station with Mike VA3MW

***Now, we speak to an expert! Kevin Rowett K6TD***

Kevin was deeply involved in the design of the Elecraft K4/0 Remote Panel, and has maintained a remote contest station for many years.