



## HF Remote/phone patch basics

Revised: 20<sup>th</sup> December 2020

### Objective:

I basically set up the remote control HF operation for amateur radio “down the road” when I no longer have the ability of erecting an HF antenna. A lot of seniors move into apartments or condos where there are limitations to amateur radio. So...here in a nutshell is how I did it

### Full HF control:

Note: The remote operator **MUST** have the license to operate phone on the amateur bands as well as an **ADVANCED** license. Basic Plus doesn't cut it.

Here is a summary of the essential parts to HF amateur remote control.

- 1) The transceiver must have the ability to be controlled via serial/usb interface.
- 2) The operator must install a dedicated “computer server” at the site to control the above radio.
- 3) **FREE SKYPE™** must be installed in an auto answer mode to hear and answer your calls.
- 4) Optional transceiver computer control. My current preference is from VA2SFQ (Win4IcomSuite)
- 5) A SignalLink USB sound control box to interface the transceiver with SKYPE.
- 6) A site where you have Internet connectivity and of course a place to erect your antennas.

### The interface hardware:

There are many products that connect the computer to the radio for the audio rx/tx component. Unfortunately a lot of them produce a ground loop or “hum” in the audio transmission. The new **SignalLink™ USB** interface from Tigertronics solves all those problems and provides the operator with the necessary front panel controls to adjust the station as necessary. This USB sound card is recognized by SKYPE and works everytime. Rather than plug the audio in and out from the computer into the radio's mike and external speaker lines, the **SignalLink™ USB** interfaces directly into the rear panel of the HF radio. **SignalLink™** provides the exact plug for your transceiver. Audio in/out of the transceiver is thus at flat level and allows the transceiver to be used in conjunction with the remote settings.

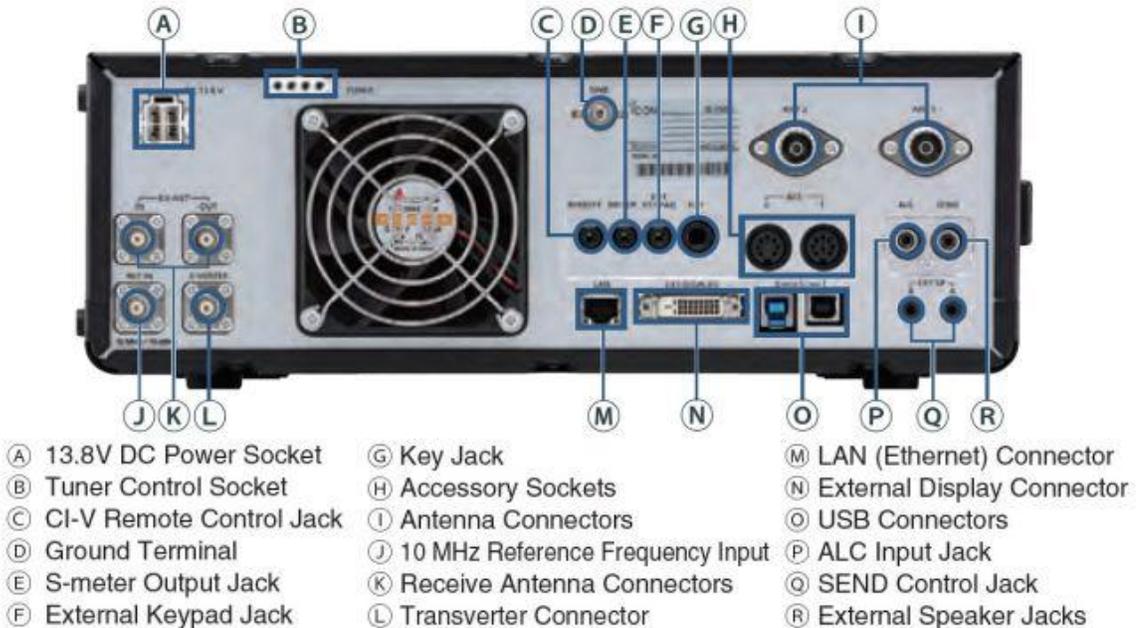
## The HF station:

You should be able to connect any of the popular HF transceivers that have a rear apron audio/input/output connection.



Icom HF transceivers have all the necessary connections on the rear apron.

### Rear panel view



**SignalLink connects to Accessory Sockets.**



**This device directly connects to your transceiver**

**You can still operate the speaker and microphone as usual. The Signalink USB must be ordered with a dedicated DIN plug cable.**



**The remote can be controlled from your hand held device with the live streaming SKYPE video.**

## **The SKYPE audio/video setup.**

You should use a dedicated Mac or Windows machine to set up the AUTO ANSWER FREE program. Your contract list should only enable "trusted entities" with ADVANCED license. When they call your SKYPE station, the transceiver will automatically connect. A further enhancement is the use of a VIDEO CAMERA that is pointed to the transceiver display screen. This enables the remote user to see his audio via metering and give S readings. Skype handles the video and must be enabled.

Again, you must set up a separate account with SKYPE for this.

## **The "Phone Patch" operation theory:**

SKYPE will allow multi conference connections to the dedicated HF radio server. To dial a landline, you must take out the economical \$30/year telephone option. This can be used anywhere in the North American continent. You basically call the landline, engage the caller and then conference in the HF Transceiver in YOUR shack. You will do this on your own laptop or computer. It is suggested that a USB headset is employed to keep out extraneous noise in that is what will VOX key the Signalink USB device connected to the station HF transceiver. Once the Phone Patch is established, you operating as the moderator can MUTE your MICROPHONE and let the caller carry on. You must also terminate the conference call once all is completed. Once the patch is operational, there is no intervention on your part. The telephone caller has full control of receive and transmit just by speaking.

## **The "iPhone/Laptop/Computer" operation theory:**

Occasionally an amateur may wish to remotely log into your HF Station. In this case, it is a SKYPE to SKYPE connection with no additional cost to the HF station operation. With video of the transceiver screen and full audio rx/tx this is perfect for the amateur no longer able to operate a transceiver in a condo or retirement home. Log in devices include your laptop, desktop computer and more recently your handheld ANDROID or iPhone devices. SKYPE APPS are readily available for these items and FREE of charge.

Again, the called should MUTE his audio to prevent background noise from keying the transmit on the REMOTE HF Station HF receiver. If he is controlling an amateur net, a full hour is usually permitted. The occasional check in should only last 10 minutes to allow other remote users a chance to use the system.

## Enhancements:

A bonus **SKYPE™** camera function will show video of your station transceiver status. In my case while I am away, we monitor critical shack heating and air conditioning set points. Yes, thanks to my Hydro provider I can even change the temperature of the house before we arrive home.

You can remotely change the frequency and settings of your HF transceiver with

FREE Remote Desktop programs such as:

TeamViewer ..... [TeamViewer: The Remote Desktop Software](#)

AnyDesk..... [The Fast Remote Desktop Application – AnyDesk](#)

These programs will go on the same stand alone computer operating your HF transceiver

## Acknowledgements:

**Signalink™** USB..... [TigerTronics, Signalink™ USB | Radioworld](#)

**VA2SFQ rig control software**..... [VA2SFQ Rig Control Software \(ontars.com\)](#)

HF\_REMOTE\_2021.pdf (VE3ISX 31st December 2020)