A better method for ARDOP controlling PTT in Trimode.

This new procedure is not applicable to Signalink users, this procedure is for those with rigs that have CAT control and internal sound cards. (IC-7100, 7200, 7300, etc) or rigs with CAT but no internal sound card, rather using an external USB sound dongle or the sound card built in a laptop (FT-857, 891, 897, 990, etc.)

Past versions of TriMode have been plagued by random crashes of ARDOP, JS8Call throwing hamlib errors, or with certain rigs, the radio getting stuck in transmit. The cause of this is due to two programs competing for the same serial port (ttyUSB0) Although this “sharing of serial port” is considered illegal in Linux, we did it anyways as it seemed the only way to accomplish the mission. Hey gimme a break I'm just a Linux noob.

A couple weeks back Kilo Delta-22 (if I have the wrong call, please forgive) mentioned that rigctld now has a rig definition for FLRig that uses FLRig’s native XML::RPC protocol, and upon that suggestion the dim light finally became bright!

This is exactly how JS8Call is accomplishing CAT control though FLRig. Now if we could just configure a link from ARDOP to FLRig, then FLRig would be the sole owner of the serial port to the Rig and no more conflicts. Actually we were 98% there with ARDOP talking though socat, and socat talking to rigctld, now to simply configure rigctld to use FLRig as it’s “rig”. A couple of script mods and it works!

So far we have tested this new method with the IC-7100 and the IC-7300 with 100% results. Still waiting for someone with an IC-7200 and a Yaesu FT-891 to test and verify before we ask Tango Bravo-14 to update the AmRRON Trimode Setup script to use this new method.

If you want to give it a try now here goes:

1. Run the AmRRON-Setup-Script and
    a. update the operating system
    b. select the Radio category
    c. select hamlib (even if it indicates installed and updated versions the same)
    d. select FLRig
    e. select js8call
    f. select any other programs that indicate an updated version is available
    g. click install selected
    h. reboot

2. Run the AmRRON-TriMode-Setup script
    a. select ardop file
    b. PTT Method select “SOCAT-RIGCTLD”
    c. configure RIGCTLD? Select”YES”
    d. click OK
    e. next screen select PTT Device: clear the box of any characters
    f. Select your radio select “not-listed”
    g. Enter the baud rate: clear the box of any characters
    h. click “OK”
    I. on next screen select Radio Make: select FLRig

J on next screen select Radio Make: select FLRig
k. on next screen Rigctl Radio ID: 4
l. click “OK”
m. click “OK”

3. Edit Ardop-Status to clean up the rigctld command line
   a. open a terminal and type: sudo nano /usr/local/bin/ardop-status
   b. cursor down (use arrow keys not mouse) to the very bottom then cursor back up to the 17th line from very bottom
   c. edit the line to look exactly like this: rigctld -vvvvv -m 4 &
   d. save the file and close nano type: ctl-x then type: y

Note: If you run the AmRRON-TriMode-Setup script again you will have to redo step 3, as the Ardop-Status file will be overwritten by the script.

4. Start up order is important!
   a. Fire up the rig
   b. Start FLRig
   c. From the TNC-Status app, start: PAVUCONTROL and RIGCTLD
   d. From the TNC-Status app, start: ARDOPC and ARDOP_GUI
   e. Start FLDigi, JS8, Etc.