June 28, 2021

ARL2300LOCAL: Linux OS receiver control software for AOR AR5700D / AR2300 / AR5001D / AR6000 receivers.

Following instructions are based on version 4.0.10.

Confirmed to work on:

Raspberry Pi O.S on RPI3/RPI4/RPI400

Linux MINT 20 on Intel Celeron PC

Ubuntu 18 on Atom PC

Ubuntu 20 on Intel I5 PC.

It is likely to work on any recent version of DEBIAN, UBUNTU and RASPBIAN.

Required Linux knowledge: Even beginners should be fine

<Supplied files>

* ARL2300LOCAL_installation_instructions.pdf --- This file

* ARL2300LOCALv4.0.10.jar--- The software executable based on JAVA.

* ARL2300_client_software_guide.pdf --- Software user guide (originally for the ARL2300 Ethernet Controller client software, but instructions are identical except for login)

<Features>

* Local receiver control via USB, memory management, scan, search, basic spectrum display, audio recording to SD. Received audio via receiver audio outputs only. Simultaneous multi-receiver control on the same PC!

* The software can be used and shared freely, however the source code is not public.

* The software is supplied “as is” without any obligation of support.

<Preparing for receiver control>

1.

Install following packages:

$ sudo apt install openjdk-11-jre librxtx-java

2.

Set the login user name in vigr:

$ sudo vigr

(You can find out your login username by opening a command window. It will indicate for example “pi@raspberrypi”. In this case, “pi” is the user name.)

In the vigr window, find the “dialout” line and make sure your login username is set. For example: **dialout:x:20:pi** (“pi” would be the login user name)

Save changes with CTRL+O and ENTER.

Close vigr with CTRL+X.

Set the login user name in vigr -s:

$ sudo vigr -s

In the vigr -s window, find the “dialout” line and make sure your login username is set. For example: **dialout:*::pi** (“pi” would be the login user name)

Save changes with CTRL+O and ENTER.

Close vigr -s with CTRL+X.

3.

Connect the receiver to the PC via USB. Beware that on the receiver the USB socket to be used is the one below the 12V DC socket. The other USB socket for I/Q is not used here!

Prefer a USB2.0 port as 3.0 sometimes might create problems.

Disconnect other USB peripherals (mouse & keyboard can stay connected) to avoid USB number allocation complications.

Now you can switch on the receiver.

4.

Check if the USB connection is correctly detected:

$ ls -l /dev |egrep ttyUSB0

If the reply is terminated by “ttyUSB0” as below, then it is detected correctly.

crw-rw---- 1 root dialout 188, <date & time stamp> ttyUSB0

5.

Go to the directory where you saved "ARL2300LOCALv4.0.10.jar". If it's into "Downloads", that would be:

$ cd Downloads

6.

Execute the program:

$ java -jar ARL2300LOCALv4.0.10.jar

(Some operating systems such as Linux MINT might require sudo)

Wait a few seconds until the program is launched.

If you can see “/dev/ttyUSB0” in the PORT section top left of the program window, then everything is OK and you can click CONNECT.

(Leave the command window open during use.)

For simultaneous multi-receiver control, launch another session of ARL2300LOCALv4.0.10.jar. in the PORT section top left of the program window, there should be a drop-down menu where you can select the USB port corresponding to the other receiver(s).

Known limitations:

-The spectrum display is basic.

-The GSSI filtering function for the TETRA mode on AR5700D is not supported.

-Audio recording to receiver SD card only.