CAT connection between SunSDR2 rig and ACOM 600S PA

ACOM Solid State PAs have RF sensor which, once a short PTT burst (modulated) has been applied, switch to the correct frequency in a second, however connecting the PA to the radio through CAT makes the band change faster and safer and this is always the preferred mean of connection.

The SUNSDR gives you the choice to use a physical connection to any PA or through SDC exploiting TCI protocol. Cables to connect the SunSDR are available throughout internet or easy to build following Expert Electronics instructions. SDC control is useful when you have more than one SunSDR Rig and want to connect all to the PA.

Connecting SUNSDR to ACOM 600S[1] through SDC (TCI protocol)

CAT to the ACOM is available through a 15DB female connector on the back of the PA.
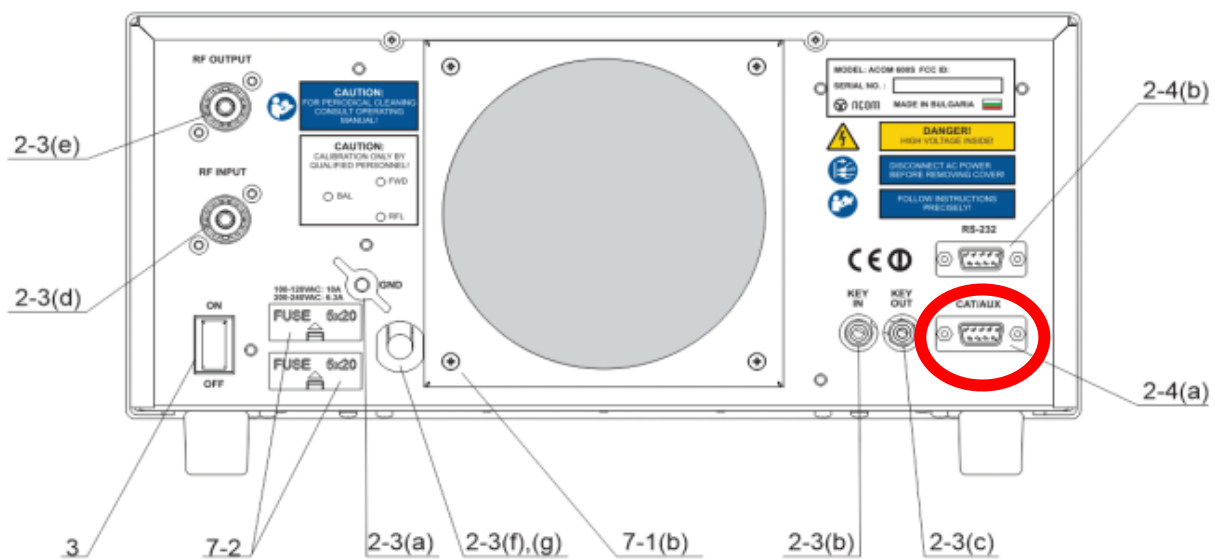

Fig. 2-1 Rear panel connections

The shopping list is as follow:

- 1x USB to RS232 adapter (if needed) RS232 Male (Make sure drivers are available for your OS)
- 1x DB9 RS232 connector female
- 1x DB15 connector Male
- 3+shield cable (as long as you like)

1. RS232 – DB15 preparation

Since the RS232 cable has 9 pin and the CAT has 15, we need to make an adaptation DB9>DB15. Link up the 2 connectors as below:
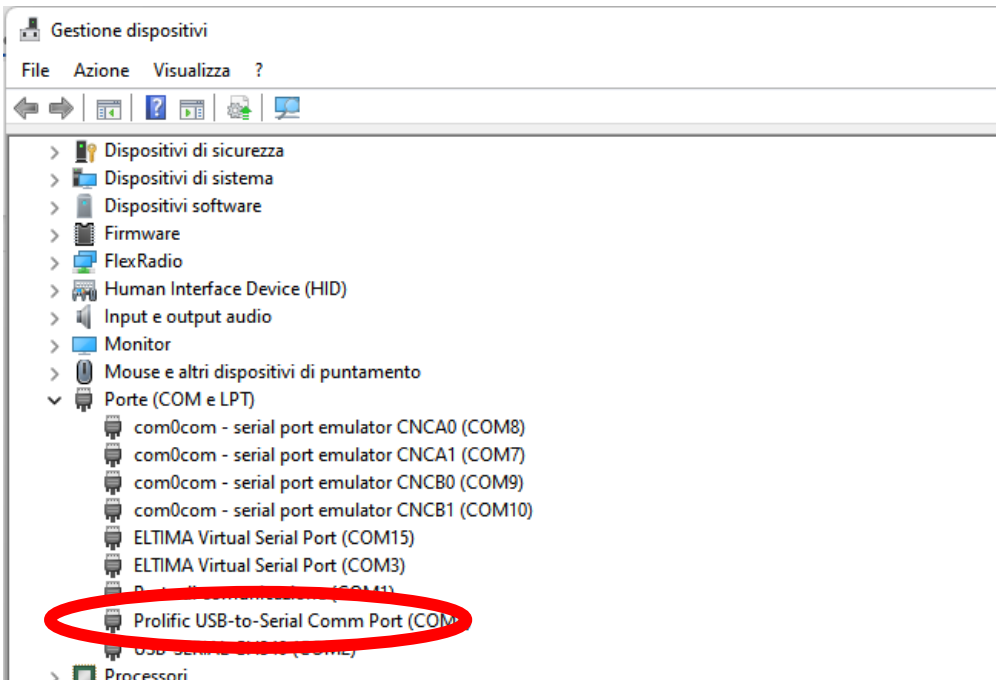
```
    DB9              DB15
   Pin 2 ------------------ 2
   Pin 3 ------------------ 3
   Pin 5 ------------------ 5
   Shield ------------------ Shield
 connect 7 and 8 on DB9
```


Cable shield

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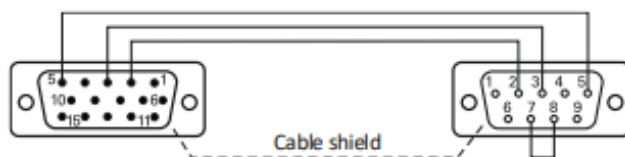
[1] valid also for Acom 700S and Acom 1200S
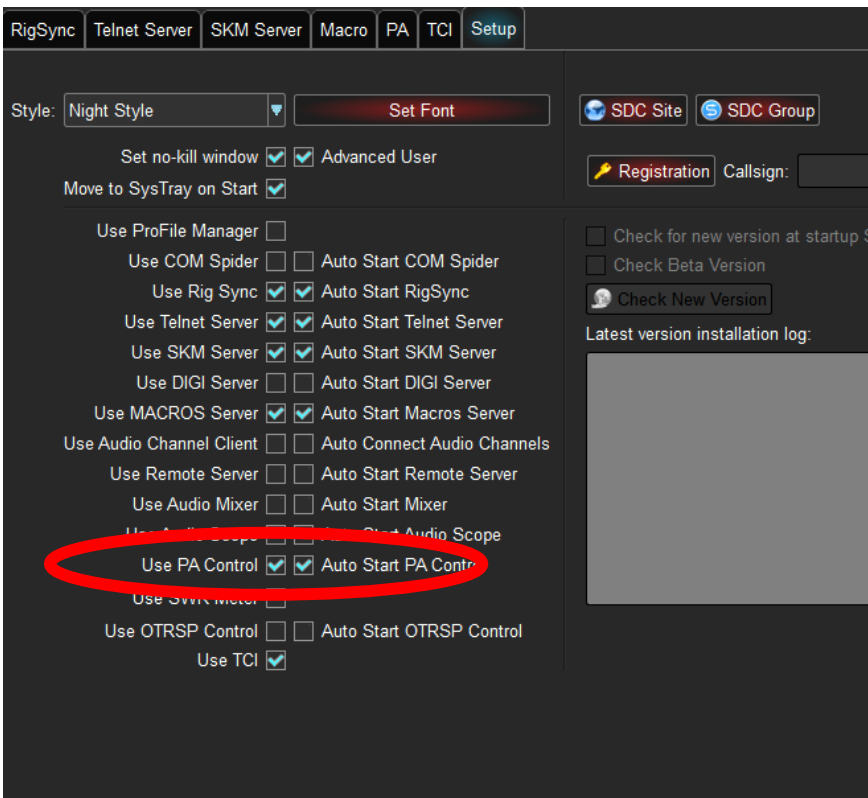
2. Comport installation / setup

If you use the USB to RS-232 it's time to install the driver and setup the Com Port.

In my case the port is the COM4/9600baud. Restart the PC to apply changes.
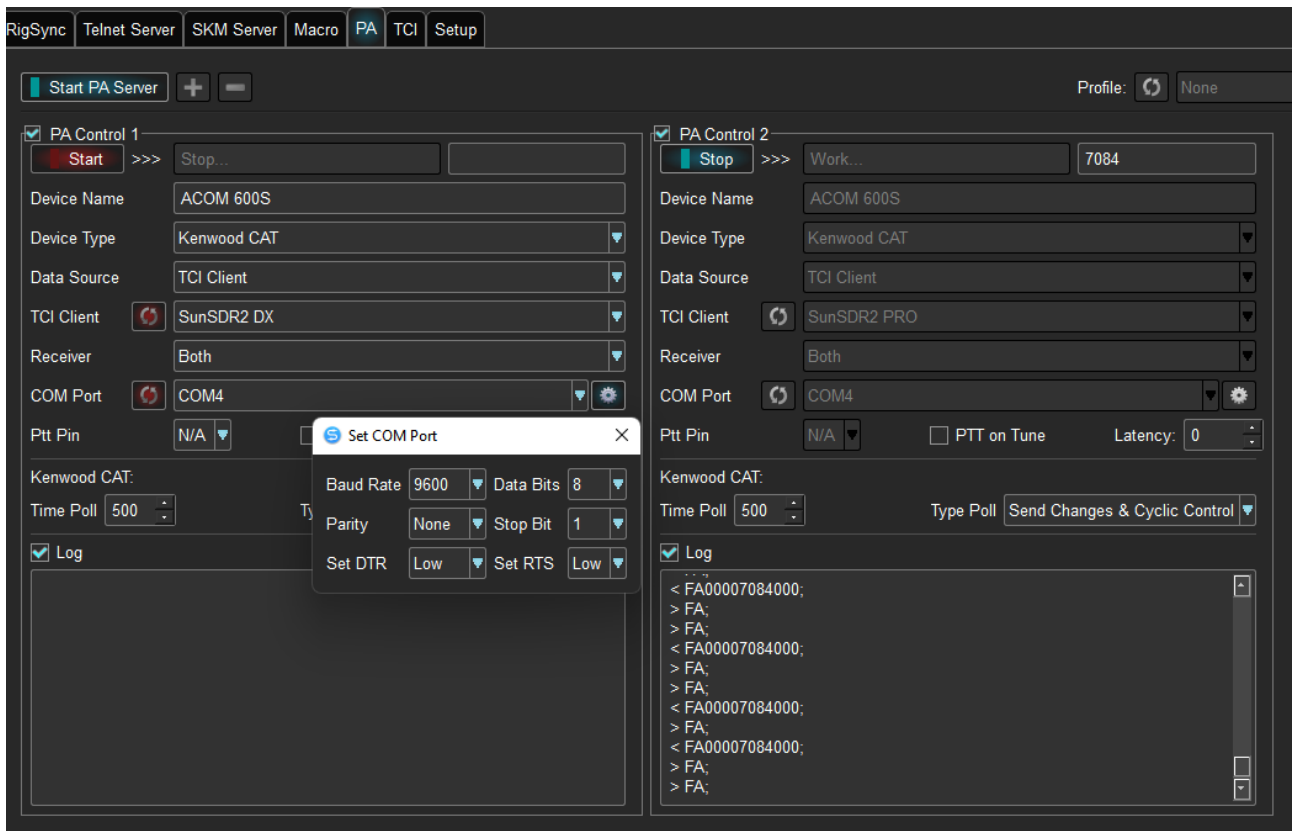
3. SDC setup

Once the connection has been made it's time to setup SDC:

Enable Use PA control and Auto Start PA control

Goes to the PA tab and setup your connection. Remember that SunSDR use the Kenwood protocol, so setup accordingly.

You can follow the above setup. Make sure the Com port and the port speed are in accordance with your comport. As you see, the setup is for two Rigs but you can setup more PA controls, attached to each radio.

Save and goes to the ACOM setup.

4. ACOM CAT setup

In the Menu selection, open CAT settings and select as below. The mandatory values are Interface RS232, command set 5, baud rate in accordance with the previous setup. Byte spacing and polling time are ineffective, although I use polling time 500ms:

Exit from menu.

At this time, if you didn't start your rig and SDC there should be a CAT error yellow caution on the ACOM display. Start your ExpertSDR and SDC, in few seconds you should have the CAT connected, the yellow band disappear as well as the Band button indicator.

The CAT is not a mandatory setup, however, if you plan to use the ACOM 04AT ATU it becomes of high priority to change to the pre-tuned band slices.

Short demo on you tube

73 de Max IU4JNR