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 <u>SDC</u> exploiting TCI protocol. Cables to connect the SunSDR are available throughout internet or easy to build following Expert Electronics <u>instructions</u>. SDC control is useful when you have more than one SunSDR Rig and want to connect all to the PA.

Connecting SUNSDR to ACOM 600S¹ through SDC (TCI protocol)

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



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:





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:

Style: Night Style Set Font SDC Site SDC Group Set no-kill window ✓ Advanced User Registration Callsign: Move to SysTray on Statt ✓ Registration Callsign: Use ProFile Manager Use ProFile Manager Check for new version at startup S Use COM Spider Auto Start COM Spider Check Beta Version Use Rig Sync ✓ Auto Start Telnet Server Check New Version Use DIGI Server ✓ Auto Start DIGI Server Check New Version Use Audio Channel Client △ Auto Start Macros Server Use Audio Channel Client △ Auto Start Macros Server Use Audio Channel Client △ Auto Start Macros Server Use PA Control ✓ △ Auto Start OTRSP Control Use OTRSP Control △ △ Auto Start OTRSP Control	RigSync	Telnet Server	SKM Server	Macro	PA	тсі	Setup		
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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.

RigSync Telnet Serve	r SKM Server N	1acro PA T	CI Setup]									
Start PA Server	+ =									Pro	file: 🗘		
PA Control 1 Start >>> Device Name Device Type Data Source	Stop ACOM 600S Kenwood CAT TCI Client					PA Control Stop Device Name Device Type Data Source	2	Work ACOM 600S Kenwood CAT TCI Client		70	84		
TCI Client Receiver COM Port	SunSDR2 DX Both COM4	Set COM	Port			TCI Client Receiver COM Port Ptt Pin	0 0	SunSDR2 PRO Both COM4	PTT on Tune		Latency	· 0	
Kenwood CAT: Time Poll 500		Baud Rate	9600 None Low	Data Bits Stop Bit Set RTS	8 V 1 V Low V	Kenwood CAT Time Poll 50 C Log C FA000070 > FA; > FA; < FA000070 > FA;	T: 10 ÷ 84000 84000		Type Poll Send	Change	es & Cycli	c Contr	
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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:

INTERFACE:	OFF	[RS232	1 1	TL.	BCD		VOLTAGE
COMMAND SET:	1	2		3	•		[5]
BAUD RATE, bps:	1200 4000		[9600]	[9600] 19200		38400	
BYTE SPACING, US:	0	[50]	100	200	500	1000	1500
POLLING TIME, ms:	200	300	500	[000]	1200	1900	OFF
2	-						-

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.

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POWER GAIN: 0.0 dB SWR:	
CATIAUX	
STBY RX CONTROL	
	MENU
OPR/S B V BAND A	
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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