VERTEX VRX5000 – ELEKTRA 2000

DB25 CONNECTOR ON VERTEX 5000		DB9 CONNECTOR ON ELEKTRA 2000	
Pin	**Description**	**Pin**	**Description**
2	+13.8V DC out from repeater power supply	9	VCC
3	Transmitter Audio In	3	AUDIO OUT (MIC)
6	Unsquelched discriminator audio	1	AUDIO IN (DISCRIMINATOR)
11	C.O.R./C.O.S open collector output[1]	5	C.O.R.
12	Transmitter PTT input	4	PTT
13	Vertex "BASE Logic"[2]	-	
16	Receiver CTCSS tone detect	6	CTCSS logic input (optional)

Notes:

[1] – As the Vertex C.O.R. output is an open collector type, a pull up resistor must be installed. Install a 10K pull-up between Vertex pin 11 and Vertex pin 2 (+13.8VDC). You can install this resistor inside the Vertex on the board that contains the DB25 or inside the shell of the cable that plugs into the Vertex (preferred).

[2] - With the Vertex software, setup the unit in "Duplex base station" mode. In this mode, the Vertex internal controller runs the show. If you add a jumper between Vertex pin 13 ("BASE Logic") and ground inside the DB25 plug that goes into to the Vertex, it tells the Vertex to have the receiver and transmitter to work independently so that way the Elektra 2000 can take over. Yaesu calls this the Base (or SIMPLEX) mode. This allows you to have the Vertex revert back to a standalone repeater just by unplugging your controller plug. This is a really nice option if your controller dies or you just want to take it off-line for some reason. The repeater just keeps on working.

Just keep in mind that the Vertex internal logic doesn't have any IDers. Just a hang time (also called a carrier delay) and time-out timer. We suggests you program the Vertex internal controller for a 1-second or less carrier delay, and your normal controller for a longer value - maybe 2 seconds or more. Then tell your users that if they hear the short delay that they have to voice ID the repeater as well as themselves.