

CONVENTIONAL BINARY INTERFACE

The following steps outline the procedure for interfacing a conventional radio requiring binary control signals to the 20-28:

1. Identify which radio functions should be controlled by the 20-28. The available functions of the conventional binary interface on the 20-28 are described below.
 - **COR:** Control signal from the radio that is active while receiving audio.
 - **PTT:** Control signal from the 20-28 that is active when the radio should transmit.
 - **Channel Control Outputs:** Control signals from the 20-28 to change the channel on the radio through binary output patterns. The number of outputs used for channel control can be programmed from 1 to 7. Consult the table below for the number of outputs required. Note that output #1 will always be the least significant output. Outputs #2 to #7 not used for channel control are available as user defined outputs.

Number of Channel Outputs	Max. # of Channels
1	2
2	4
3	8
4	16
5	32
6	64
7	99

- **User Defined Outputs:** Several additional outputs are available for controlling other radio functions.
2. Construct the cable end that will connect to the 20-28's P2 Radio connector. A generic cable kit is available from IDA Corporation (Part No. 102-OPT371). The following table lists the connections required to a DB25 male connector for each 20-28 function.

Connection	Function
Pin #1	RX Audio
Pin #7	Ground
Pin #20	+13.8 Vdc
Pin #21	TX Audio
Pin #25	COR
Output #1-7 User-programmable	Channel Output Pattern
Output #8	User Defined
Output #9	PTT
Output #10	User Defined

3. Connect the other end of the cable to the radio. This may require modifications to the radio. Consult the radio manual for details.
4. Configure the jumpers on the 20-28 based on the system requirements. Check the audio level adjustments (refer to the maintenance manual).