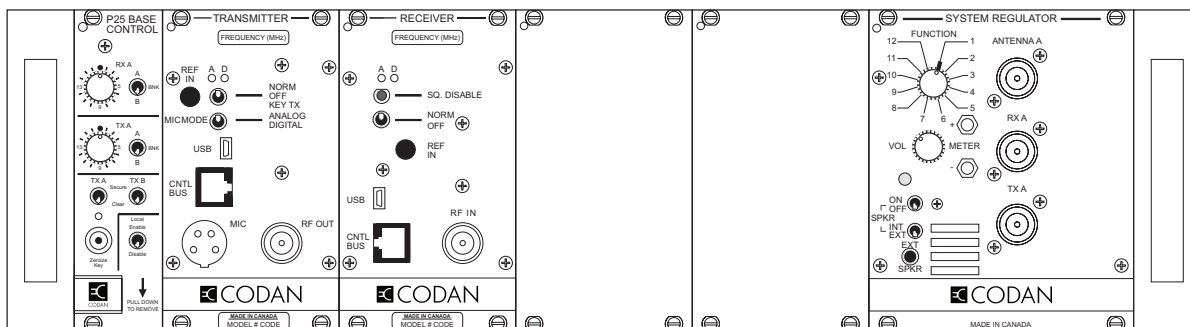


TN655 CI-BC-4E Base Control Card

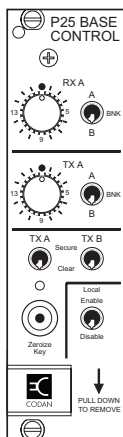
The CI-BC-4E base control card is a plug-in module which provides audio routing, COR and PTT routing and front panel control for an MT-4 base station radio system. The base control card includes the following features:

- jumper selectable audio routing, PTT, and muting.
- low power analog and CMOS control circuitry.
- true balanced 600 Ω inputs and outputs for external equipment connection.
- optically isolated inputs and outputs for control by external equipment.
- front panel control of channel and bank select for receiver and transmitter.
- front panel selection of clear / secure (encrypted) operation and clear keys operation.
- front panel selection of local or remote control of base station functions.
- suitable for Type 2 E&M signalling.

The MT-4 receiver and transmitter modules all connect to the CI-BC-4E base control card via the back panel motherboard. There is no front panel RJ45 connection between the MT-4 receivers, transmitters and base control card.



The CI-BC-4E base control card module circuitry consists of three main functional blocks:



(1) The repeater control circuit allows all the common COR / PTT routing combinations for dual base-repeater systems.

(2) Front panel interface allows for user control of transmitter and receiver functions, including encryption operation.

(3) Audio routing circuitry is for the active level control and distribution of receiver and transmitter audio signals. The CI-BC-4E is designed for applications where interface to external equipment is required. All audio and control inputs/outputs are isolated by transformers and opto-isolators on the CI-BC-4E.

| | |
|---------------------------------|---|
| CI-BC-4E External Audio Input: | 600 Ω , -25 dBm to 0 dBm adjustable |
| CI-BC-4E External Audio Output: | 600 Ω , -20 dBm to +3 dBm adjustable |
| CI-BC-4E Internal Audio Input: | 4.7 K Ω , -25 dBm to +3 dBm adjustable |

TN655 CI-BC-4E Base Control Card

The three main functions of the CI-BC-4E Base Control Card are shown in Figures 1, 2 and 3:

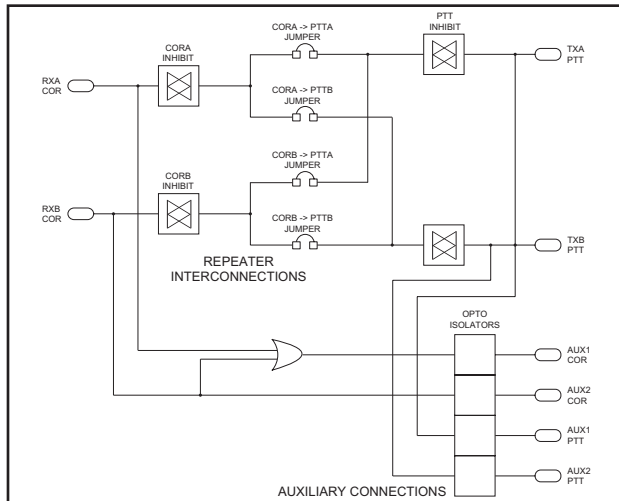


Figure 1: Repeater Control

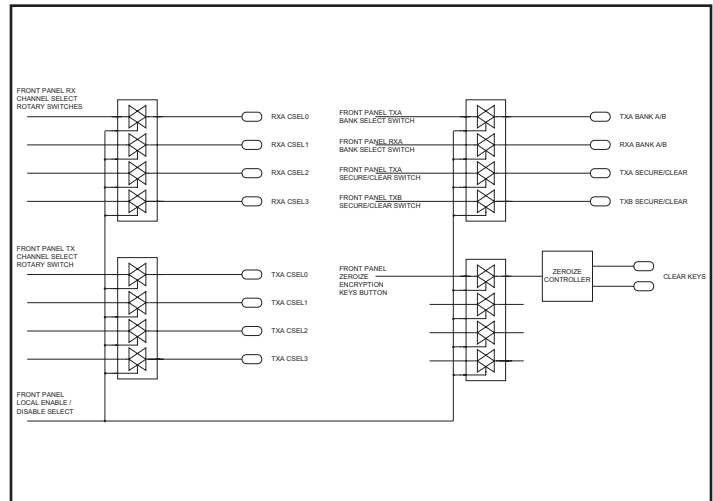


Figure 2: Front Panel Interface

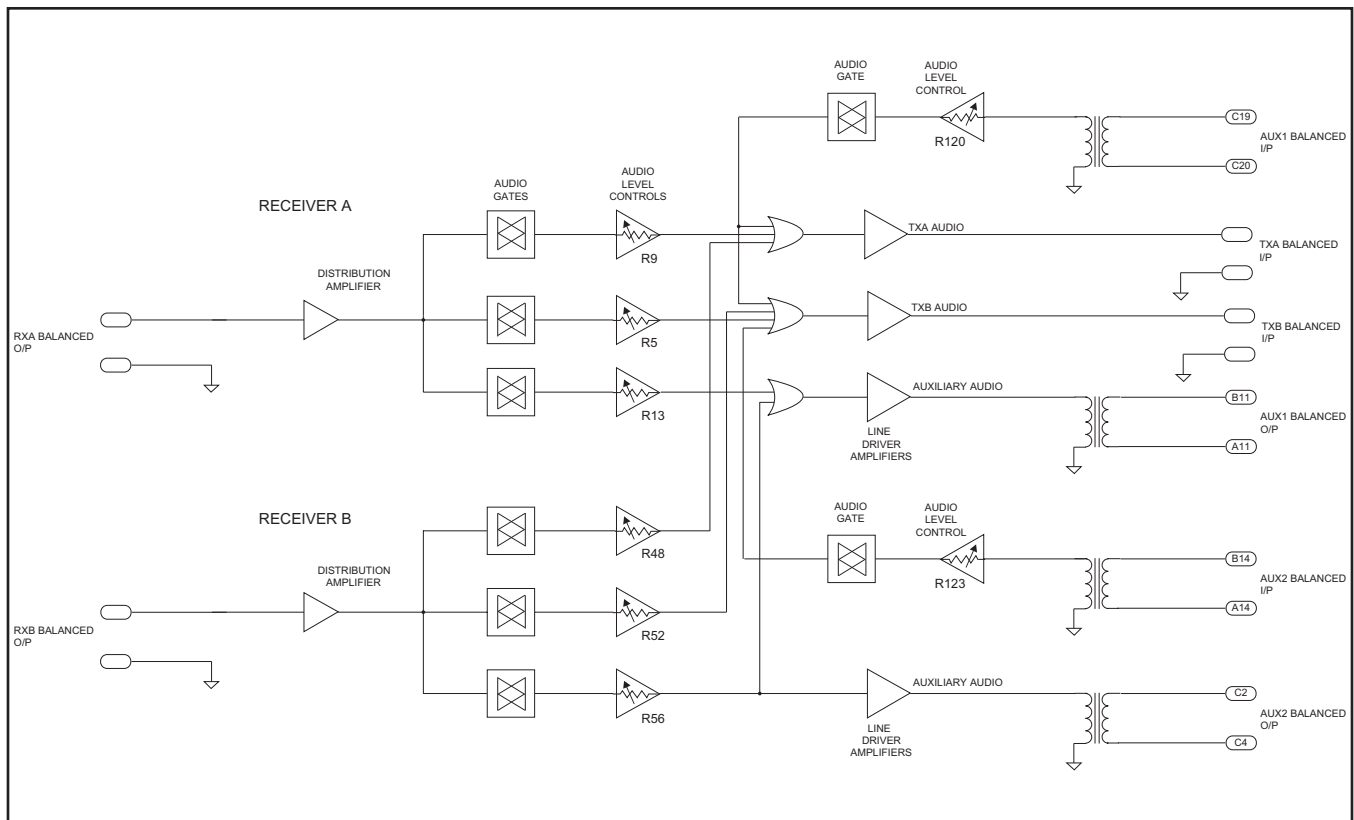


Figure 3: Audio Routing