



## MTR2000 Buffered Interface

My radio club has had a VHF and a UHF MTR2000 repeater on-the-air for quite some time as part of a linked system using RoIP. The wiring interface is a cable from the radio's System Connector (J5) to a multiport repeater controller. There's no buffering between the radio and the controller.

I've read about other repeater builders that have damaged their MTR2000 Station Control Module while working with external cabling connected to the System Connector. I wanted to avoid those problems.

More than just a board and a couple of connectors, the MTR2000 Buffered Interface described here minimizes those risks by buffering all signaling between the System Connector (J5) and any external control equipment.

In addition to the usual station audio and control signals, the interface module also provides access to power for an external controller and to alarm and wildcard signals. Jumper options allow some customization.

### Features

#### Radio Port Terminal Strip

- RX Audio Out
- TX Audio In
- RSSI Out
- CTCSS Encode Tone Audio In
- TX PTT Logic In
- RX COR Logic Out
- RX CTCSS Decode Logic Out

#### Alarm and I/O Terminal Strip

- AC Fail Logic Out
- PA Fail Logic Out (Aux I/O) \*
- VSWR Fault Logic Out (Aux I/O) \*
- RX LOCK Logic Out (Aux I/O) \*
- TX LOCK Logic Out (Aux I/O) \*
- GPO 0 Logic Out (Wildcard Out, Aux I/O) \*
- GPO 2 Logic Out (Wildcard Out, Aux I/O) \*
- GPI 3 Logic In (Wildcard In, Aux I/O) \*
- GPI 7 Logic In (Wildcard In, Aux I/O) \*

#### Wireline Terminal Strip

- Pair 1 +/-
- Pair 2 +/-

#### 14.2VDC Power Out Terminal Strip

- ATC Fuse (1A supplied)

#### Solder Jumper Options

- TX Audio In to Wireline or AUX TX In
- RX Audio Out from Wireline or RX Discriminator
- COR Logic Out Active High or Low
- CTCSS Decode Logic Out Active High or Low
- PTT Logic In Active High or Low
- PTT Logic In Pullup
- COR Logic Out Pullup
- CTCSS Decode Logic Out Pullup
- AC Fail Logic Out Pullup

#### Other Features

- Summing amp combines TX Audio In and CTCSS Encode Audio In to the MTR2000 AUX Tx Audio In.
- No Pots. Audio Levels adjusted with the MTR2000 RSS
- Powered from MTR2000 Internal +5VDC
- Status LEDs: PTT, COR, CTCSS, Power
- Optional: CTCSS High Pass Filter
  - Accepts a Masters Communications PLF-15