ZETRON®

MODEL 250

Tone Remote Adapter

FEATURES

- **Exceptional audio quality**
- **Decodes all 15 industry standard function tone sequences**
- **Seven installer-selectable guard tone frequencies for compatibility with a wide range of applications**
- **BCD, "One-Of-N" and binary channel select**
- **Up to six control outputs; two relays**
- **Automatic line loss compensation**
- **Latched and momentary functions**
- **Two and four wire tone remote interface**
- **Control functions: PTT, Monitor, channel select, PL select, PL Strip, Wildcard**
- **Rugged metal enclosure, 19" rack mount option available**
- **14 pre-set radio interface configurations to choose from - covers most popular applications**
- **Test modes facilitate setup and adjustment**
- **Pre-wired cables are available for popular radios**
- **Easy configuration setup from front panel dip switches**
- **Line integrity function**

INTRODUCTION

The Model 250 is a tone termination panel that includes features typically only found in high-end remote control stations.

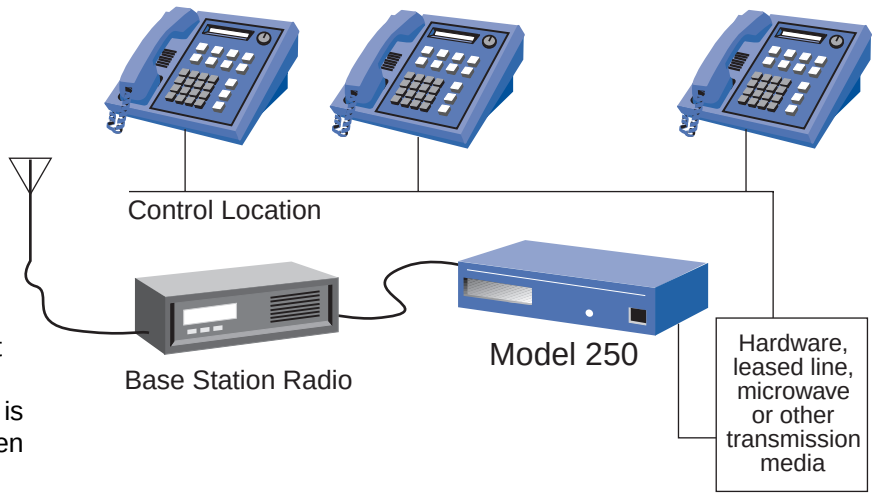
It provides a means of connecting a base station radio to industry standard tone remote encoders, such as Zetron's radio remotes and dispatch consoles. The Model 250 Tone Remote Adapter connects to an audio circuit or leased line from the tone remote and to the unique interface of the base station radio.

The Model 250 includes integrated setup utilities that reduce the need for service equipment. Designed for fast installation and easy setup, it can be configured in the field without tools.

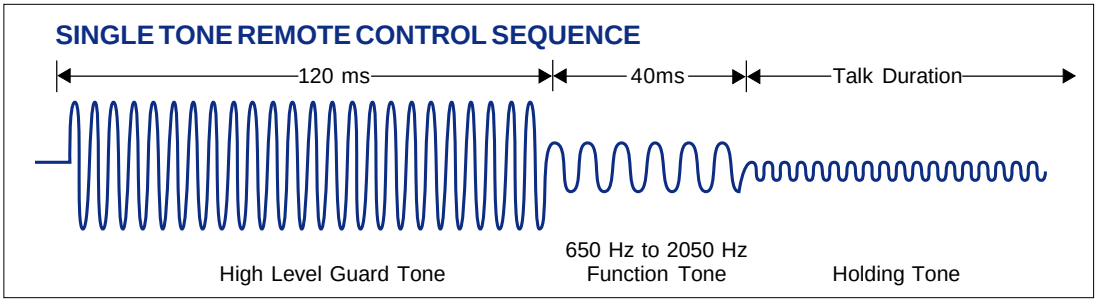
TONE REMOTE CONTROL SUMMARY

Tone remote equipment uses the Tone Remote Control (TRC) Protocol to send control information to the Model 250. The Model 250 in turn translates the tone remote commands into base station radio control.

Each tone remote command from a dispatch console or "radio remote" consists of a high level guard tone followed by a function tone and an optional holding tone that remains present as long as the transmitter is keyed. If the command is not intended to key the transmitter then the holding tone is omitted.



Due to its state-of-the-art DSP design, the Model 250 can accept a wide variation in TRC levels. Often, when multiple remotes are wired in parallel at varying distances, or when remotes from different manufacturers are connected, the signal levels from each remote will be quite different. The Model 250 has been designed to handle this situation with ease, amplifying audio from each remote as it connects and delivering the audio to the radio at the correct level.



SPECIFICATIONS

GENERAL

Input Voltage	10.5 to 16 Volts DC
Operating Current	180 mA typical, 260 mA max
Operating Temperature	-30° to +70° Celsius. 95% relative humidity at +50° C (non-condensing).
Indicators	Power, status
Adjustments	Rx audio, Tx audio, Line Tx
Configuration/setup	Using front panel switches
Guard tone frequencies	Configurable for 2100Hz, 2175Hz, 2300Hz, 2323Hz, 2600Hz, 2800Hz, 2970Hz
Audio filtering	Guard tone notch and hi-pass filters in both directions
Audio connections	Rx discriminator or speaker, and microphone Tx
Control outputs	6 open drain outputs, 2 relays and PTT. Two of the signals are configurable for monitor and COR.

MECHANICAL

Line Connector	RJ11 modular jack
Radio Connector	Detachable 0.156” crimp pin style
Line type	2-wire half-duplex, 4-wire full or half-duplex

ELECTRICAL

Line impedance	Balanced 600 ohm or 200 k ohm
Tone Decode Level	Guard: -16 to +10dBm Function: -26 to 0dBm Holding: -36 to -10
FET output drive	Open drain, 115 mA sink capability
Relay contact rating	2 A at 30 Vdc
Rx to Line output drive	0dBm
Line to Tx output drive	50mV to 5Vpp output into a high impedance load

SELECTABLE CONFIGURATIONS

- 1 Frequency, Monitor, PL strip, 6 Wildcards
- 1 Frequency, Monitor, PL strip, 4 PL, 2 Wildcards
- 2 Frequency, Monitor, 6 Wildcards
- 2 Frequency, Monitor, 4 PL, 2 Wildcards
- 4 Frequency (1 of 4), Monitor, 3 Wildcards
- 7 Frequency (1 of 7), Monitor
- 8 Frequency (binary), Monitor, 4 PL
- 8 Frequency (binary), Monitor, 3 Wildcards
- 12 Frequency (binary), Monitor, 1 Wildcards
- 14 Frequency (binary), Monitor
- 15 Frequency (binary)
- 1 Frequency, Monitor, Latched outputs
- Inverted BCD

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