

Model 250

SPEC SHEET

Tone Remote Adapter

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.

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



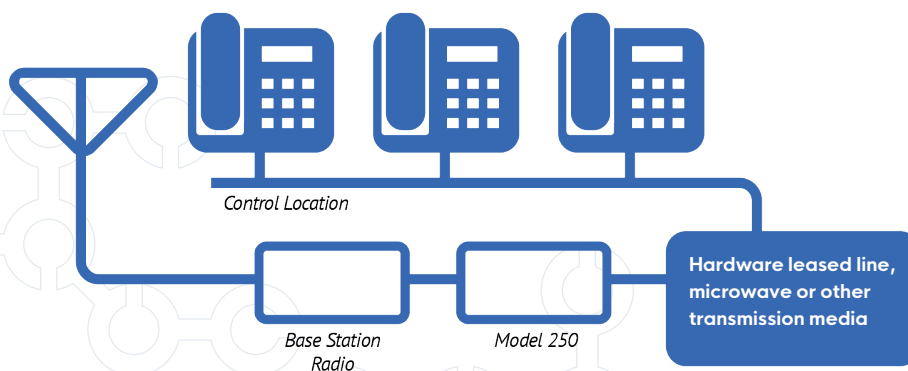
TONE REMOTE CONTROL SUMMARY

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.

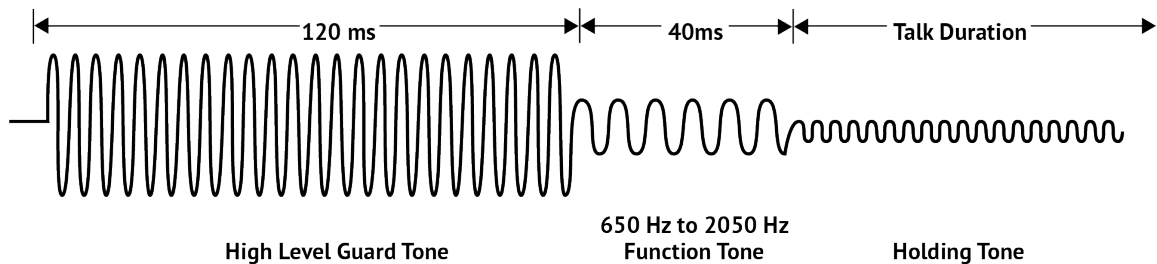
Due to its state-of-the-art DSP design, the Model 250 can accept a wide variation in TRC levels. Often, when multiple remotes are wired in parallel at varying distances, or when remotes from different manufacturers are connected, the signal levels from each remote will be quite different. The Model 250 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. By the installation of the internal telco option card in at least one M827, or the addition of a M844, in each site to be linked. The M827 optional telco card can be configured as either a PSTN/PABX interface or 4-wire audio link interface. At least one separate data link connection is required between sites. In network applications, sites are connected by leased 4-wire E&M lines provided by the telephone company, or by a multiplexer line shelf card connected to privately owned microwave links or fiber optic backbone.

One telco card is required for each PSTN line connection, or one pair (2) for each audio link desired. The total number of telco cards is dependent upon system capacity and expected multisite call volume.



ZETRON

Single Tone Remote Control Sequence



Specifications

GENERAL

Input Voltage

10.5 to 16 Volts DC

Operating Current

180 mA typical, 260 mA max

Operating Temp

-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

ZETRON AMERICAS

PO Box 97004,
Redmond, WA USA
98073-9704
P: +1 425 820 6363
F: +1 425 820 7031
E: zetron@zetron.com

ZETRON EMEA

27-29 Campbell Court, Bramley,
Hampshire RG26 5EG, United
Kingdom
P: +44 1256 880663
F: +44 1256 880491
E: uk@zetron.com

ZETRON AUSTRALASIA

PO Box 3045, Stafford Mail Centre,
Stafford QLD 4053, Australia
P: +61 7 3856 4888
F: +61 7 3356 6877
E: au@zetron.com

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Always on, always ready