



FEATURES

- Tone Remote Control of Paging Transmitters
- Modem for Digital Paging
- Multiple Address Option
- Programmable Function Tone Option
- Guard Tone Option
- Busy Frequency Detection

INTRODUCTION

The Zetron Model 33 is a remote transmitter controller which connects directly to paging encoders such as the Zetron Models 15, 32, 64, or 150. The addition of remote control allows the paging transmitter to be located away from the paging encoder. This allows the transmitter to be located where it will provide the best coverage.

The Model 33 generates the keying tones to be transmitted via wireline, microwave, or RF link equipment to transmitter controller equipment such as the Zetron Model 66 located at the paging transmitter sites.

TRANSMITTER CONTROL

The tone protocol used is an industry-standard continuous-tone protocol, called Motorola PURC® (Paging Universal Remote Control). It is compatible with equipment made by Zetron, Motorola and G.E.

In addition to analog paging, digital paging is possible for transmitters capable of transmitting the FSK (frequency shift keying) information. An internal modem allows the Model 33 to receive and send digital numeric and alphanumeric display pages.

A front panel switch provides test key up sequences for analog or digital modes.

Multiple Address Option

Wide-area paging systems can be designed to avoid the expense of simulcast equipment. By arranging the geographical paging area into zones that do not overlap, the central paging controller can select each zone in sequence and reach all paging subscribers. Or if necessary, simulcast transmitters can be used. With the multiple address option, the Zetron Model 33 can send the proper tone sequences to selectively key up individual or groups of transmitters.

Each of the 8 available zones can be programmed to key up any of 10 groups of transmitters. Each group of transmitters is programmed to respond to the same tones. This option is compatible with the 4-zone transmitter steering feature of the Model 64.

Programmable Function Tone Option

The programmable function tone option allows the paging encoder to send control messages to the transmitters. These control messages might be used to indicate to the transmitter which frequency to key up on. For transmitters that do not support multiple addressing, but do support programmable function codes the option can also be used to select between 10 different transmitters. This option is mutually exclusive with the multiple address option.

Guard Tone Option

The guard tone option allows the user to select a guard tone other than the standard 2175Hz. The guard tone is the initial tone sent to the transmitters indicating the start of a message. The available frequencies are: 2600Hz, 2675Hz, or 2875Hz.

2175Hz COR Decode Frequency Option

Some paging channels are shared for use by co-channel carriers or mobile subscribers. In these systems, it is necessary for the paging sites to notify the central paging terminal when the channel is clear for transmission. The Model 33's COR (carrier operated relay) tone decoder option allows the Model 33 to identify when the frequency is being used by another source. This "busy" indication is sent back to the Model 33 from the transmitter site to prevent the Model 33 from keying up a transmitter on a frequency already in use.

Physical Characteristics

The unit is housed in an attractive clear iridited aluminum case that measures 6.8" X 5.75" X 1". All adjustments are made from the readily accessible back panel with the exception of the multiple address option's DIP switch array.

Power is supplied by an external 9-volt AC or 13.5-volt DC source.

SPECIFICATIONS

FRONT PANEL CONTROLS

Push-button switches:	Analog Test Page Digital Test Page
LEDs:	Power Analog RTS Digital RTS Analog CTS Digital CTS COR Detection

Input/Output CONNECTIONS

Analog Request to Send (ARTS) (note 1)
Digital Request to Send (DRTS) (note 1)
Digital Data (note 1)
Analog Audio 10K or 600 ohm
Zone lines (2) (note 1)
Analog Clear to Send (ACTS) (note 2)
Digital Clear to Send (DCTS) (note 2)
To Link Audio
From Link Audio 10K or 600 ohm
Gnd

TONE SIGNALING PROTOCOL

Motorola PURC compatible
2175 Hz burst tone (other tone frequencies optional)
1950 Hz function tone
Adjustable 2175 Hz low level guard tone level
Optional disable tones
Detection of Model 66's 387Hz COR tone

INTERNAL SETTINGS

Audio gain
From link (COR) gain
Tone gain
Pre-emphasis voice
De-emphasis tone
AGC bypass
CCITT or BELL 202 modem standard
Low level guard tone level adjust
Test mode

Power: 9 Volts AC or 11-15 Volts DC
105-125 VAC with optional power adapter

Note 1: Inputs are compatible with contact closure, TTL, CMOS or RS-232 signaling. Threshold is approximately 1.5 Volts.

Note 2: Outputs are CMOS outputs: 0-5 Volts range.



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