

SPECIFICATIONS & FUNCTIONAL DESCRIPTION

MX-62 - TRANSMITTER

1.0 DESCRIPTION

The MX-62 is a low-power hand held remote control device operating at a frequency of 303.875 MHz. The signal output is a binary-coded, pulse-position type A1D modulated transmission which has an information rate of approximately 167 bits per second (bps). It is coded by Megacode® formatted wireless data for the Linear Corporation security consoles.

Actuating the push button illuminates a light-emitting diode (LED), piezo annunciator and activates the transmitter. Releasing the push-button immediately terminates transmission. Transmission time is limited to 30 seconds if button is held on.

2.0 FUNCTIONAL DESCRIPTION

The push-button switch, S1, applies power to the unit and activates L.E.D. (D1).

Digital encoding is a function of microprocessor, U1. An internally generated microcontroller clock runs at approximately 4MHz and creates the coding and timing sequence. There are over 1 million possible code combinations. Transmitter coding is done during manufacture and is not user accessible.

The RF oscillator Q2 functions as a tuned Colpitts oscillator / driver whose frequency control and feedback is determined by SAW resonator FR1. Q3 is the RF output amplifier. The inductive trace load E1 is configured on the circuit board as the principle-radiating element with tuning capacitor C5 to resonate the loop. Base bias resistors R6 & R7 in conjunction with the coupling capacitor C3 regulates the power output of the oscillator.

Because of the transmitter's small size, its radiation pattern is similar to that of an elementary dipole.

3.0 SPECIFICATIONS

Product Identification:	MX-62, One channel emergency transmitter
Encoding Technique:	A1D Pulse position Modulation at 167 bits/sec.
Number of codes:	$> 1 \times 10^6$ (1×2^{20})
RF Carrier Frequency:	303.875 MHz \pm 125 KHz
Power Requirements:	3 VDC - 3 volt #2025 coin cell lithium battery, 4 mA maximum current - operating, < 2 uA standby
Operating Temperature Range:	0 to 50 °C Tested -30 to $+70$ °C
Timing:	30-second maximum transmission per activation
Physical Requirements:	Water resistant, tested to 1' depth for case leakage.
Size:	1.2" x 1.2" x 0.25" (approx.)

All specifications nominal unless specified.