

Exhibit B - Technical Description

B1.0 Product Description:

The Telemotive transmitter Model E13653-JLTX is a joystick version of their remote control for industrial overhead cranes and other material handling equipment.

The transmitter operates over the frequency range from 436.0 to 439.8 MHz. The signal is direct frequency modulated and keyed-on in short bursts. The unit transmits when one of the controls is operated. The controls are manually operated and must be held in place to transmit a signal. The transmission ceases when the control is released.

A 7.5 Vdc battery is used to power the transmitter.

The antenna is an integral part of the printed circuit board.

The transmitter operates with its companion receiver FCC ID: GXZE13151

B2.0 Block Diagram:

The block diagram is presented in Figure B-1.

B3.0 Schematic:

The schematic is presented in Figure B-2.

B4.0 RF Module Circuit Description:

The purpose of the RF Module is to provide an RF output carrier frequency which is direct frequency modulated. This carrier is keyed-on in short burst of data to provide Time Multiplex Sharing (TMS) systems operation.

The regulated voltage is maintained at 5 Vdc by means of U1. U1 also provides the on-off control.

Oscillator circuit Q1 is crystal controlled by Y1 which operates near 16.2 MHz and depends on the channel frequency trimmer capacitor C1 used to set the oscillator center frequency. The data input level of 0 to +5 peak volts is applied across the varicap diode CR1, which pulls the crystal controlled oscillator above and below the center frequency. This results in a slight FM deviation which is multiplied along with the oscillator center frequency to provide a total 80 kHz deviation bandwidth.

Transistor Q2 acts as a tuned frequency tripler resulting in an output near 49 MHz. This circuit is keyed-on by switching transistor Q5 which provides the TMS data operation. Components C11 through C16, L3 and L4 provide a 49 MHz bandpass filter.

Transistor Q3 is a second tripler and output amplifier at a frequency of 438 MHz. The harmonics generated by the amplifier are attenuated by the filter made through C28, L7, L8 and L9. The output to the antenna is matched to approximately 50 ohms by the coil tap at the end of L9.