

## DUNE DEVIL #K7238

### 49.860MHz TRANSMITTER OPERATIONAL DESCRIPTION

The Dune Devil radio control transmitter is a low powered, hand held unit for controlling the movement of a toy car. The transmitter is powered by two 1.5volt AA batteries. It is designed to operate on a single fixed frequency in the 49.82---49.90MHz band. See the attached block diagram and schematic.

Input switches trigger integrated circuit (U1) which produces the digital control signals that will modulate the carrier signal. The carrier signal is generated by a crystal oscillator circuit comprised of a 49.860MHz crystal (Y1) and a PNP transistor (Q2). The RF carrier signal is modulated by the digital control signal at the base of an RF amplifier stage (Q3). The modulated output of the RF amplifier stage is capacitively coupled (via C12 ) to the antenna through a “Pi” matching network comprised of C13 、 C14 、 T1 .The antenna is 15inches long and permanently attached.

A led acts as a power-on indicator.

All tuning and verifications are performed by the manufacturer and there are no adjustments that can be made by the User .No external ground is required or used with this transmitter.