

6V SPIDERMAN MONSTER TRUCK # 80412 49.860 MHz TRANSMITTER OPERATIONAL DESCRIPTION

The 6V Spiderman Monster Truck radio control transmitter is a low powered, hand held unit for controlling the movement of a toy truck. The transmitter is powered by a 9 volt battery. It is designed to operate on a single fixed frequency in the 49.82-49.90 MHz band. See the attached block diagram and schematic.

Input switches trigger an integrated circuit (TX2) which produces the digital control signals which will modulate the carrier signal. The carrier signal is generated by a crystal oscillator/ amplifier circuit comprised of a 49.860 MHz crystal (X1) and a npn transistor (Q1). The RF carrier signal is modulated by the digital control signal at the base of an RF amplifier stage (Q2). The modulated output of the RF amplifier stage is capacitively coupled (via C5) to the antenna through a “ pi “ matching network comprised of C7, T1 and C8. The whip antenna is 11 inches long and permanently attached.

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