

9.6V STREET BEAST TRUCK #97993 49.860MHz TRANSMITTER OPERATIONAL DESCRIPTION

The Street Beast 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 a microprocessor (U1) 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 Y1,L1,C26,R11 and a npn transistor (Q3). The RF carrier signal is modulated by the digital control signal at the base of an RF amplifier stage (Q4). The modulated output of the RF amplifier stage is capacitively coupled (via C12) to the antenna through a “ pi “ matching network comprised of C14, L3 and C15. The whip antenna is 8 inches long and permanently attached.

The transmitter also has a sound mode in which sound effects are played. The sound files are stored in the microprocessor (U1) , amplified by a single npn transistor (Q1) and played on the 29mm,16 ohm, .25W speaker.

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.