

SCREAMIN KART # 97599

49.860MHz RECEIVER OPERATIONAL DESCRIPTION

The Screamin Kart is a full functioned radio controlled toy go kart. It operates on 6 volts supplied by four 1.5 volt alkaline AA batteries. 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.

The modulated RF signal from the transmitter induces an electrical signal into the go kart's 11 inch long permanently attached whip antenna . The electrical signal is selectively amplified by a super regenerative input circuit (Q1,T1,L2,C2,C3, C5,C6). The signal is then capacitively coupled (via C7) to an integrated circuit (U2) where the signal is further amplified and decoded. A pair of digital outputs from U2 act as inputs to another integrated circuit (U1) . U1 is a logic controller which decides when , how fast and for how long the drive motor is turned on. This is done by a pair of digital outputs from U1 which drives a full H bridge circuit (Q10-Q13) for the drive motor. Another pair of digital outputs from U2 directly drives a second H bridge (Q3-Q6) to control the speed and direction of the steering motor. A try me function is included which powers the drive motor for a few seconds when a button is pushed. The button triggers U1, which controls the speed and on time of the drive motor for the try me cycle.

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 receiver.