WHIPLASH # 91497
49.860MHz RECEIVER OPERATIONAL DESCRIPTION

The Whiplash car is a full function radio controlled toy car . It operates on 6volts 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 car's permanently attached wire hoop antenna . The electrical signal is selectively amplified by a super regenerative input circuit (Q1,T1,L2,C2-C5). The signal is then capacitively coupled (via C8) to an integrated circuit (U2) were the signal is further amplified and decoded. A pair of digital outputs from the integrated circuit (U2) drives a full H-bridge drive circuit (Q5-Q8) for controlling the speed and rotational direction of the drive motor. A second pair of digital outputs from the integrated circuit (U2) drives a second full H-bridge drive circuit (Q11-Q14) for controlling the steering motor.

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 receiver.