

Turbo Pro Wheelie Cycle#N1920

49.860MHz RECEIVER OPERATIONAL DESCRIPTION

The Wheelie cycle is a full function radio controlled toy vehicle. It operates on 9.6 volts supplied by one rechargeable Ni-Mh battery pack. It is designed to operate on a single fixed frequency in 49.82- 49.90MHz band. See the attached block diagram and schematic.

The modulated RF signal from the transmitter induces an electrical signal into the vehicle's permanently attached external antenna. Pre-amplified by the transistor Q18, the electrical signal is then selectively amplified by a super regenerative input circuit (Q1,L2,C2-C5,T1)

The low frequency signal amplified circuit consist of the transistor Q2,Q3 and its associated components.

The amplified signal is decoded by the IC(U1). According to the controlling signal, the U1's output port P62 and P63, P60 and P61, P66 will separately drives the motor M1,M2 and M3 through the drive circuit.

The switch SW2 here is used as the detect switch, while playing wheelie, the stunt motor (M3) will contact the SW2 so that P67 connects to GND, at the same time, the IC will make P62 output high for driving the back motor (M1) and P66 will output low.

A over current and low voltage protection circuit consist of U2 and its associated components. The voltage of U2's Pin1 and Pin7will turn to low (from high level) when the battery voltage drop to preset low level or M1 motor operating current over preset value, if the voltage of U2's Pin1 and Pin7maintain preset time with low level, U1 will cut off its output until re-power off/on.

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.