

Profile Plane #K8888

49.860MHz TRANSMITTER OPERATIONAL DESCRIPTION

The remote control transmitter of the Profile Plane is a low power consumption, hand-holding device for controlling the movement of a toy plane. The transmitter uses two 1.5volt AA batteries as the power supply. It is designed to operate on a single fixed frequency which the band is between 49.82 MHz - 49.90MHz. Refer to the attached block diagram and schematic diagram.

The input switches trigger integrated circuit (U1) to generate the digital signals that will modulate the carrier wave. The carrier wave is generated by a oscillation circuit which comprised of a 49.860MHz crystal (Y1) and amplifier circuit. The RF carrier wave is modulated by the digital signals of U1. The modulated RF signal is transmitted out from PIN_{RFO} of U1. It is coupled (via C1) to the antenna through a “Pi” matching network that comprised of C3,C4,T2,L3 and L4 .The antenna is 15inches long and permanently attached.

The charger circuit is comprised of Q8~Q12 and the protection circuit of the charger include Q1,Q5,Q6.

A red led acts as a power-on indicator.

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 transmitter.