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# XPV MINI RAD

## 49.860MHZ Transmitter Operational Description

The XPV MINI RAD radio control transmitter is a low powered, hand held unit for controlling the movement of a toy RAD , the transmitter is powered by a 9.0V battery(6XAA) ,it is designed to operate on a single fixed frequency in the 49.82-49.90MHZ band . Please see the attached block diagram and schematic.

Position of VR trigger(single use the L/R or tact key isn't function) an integrated circuit(U1)which produces the control signals that will modulate the carrier signal .The carrier signal is generated by a crystal oscillator circuit comprised of a 49.860MHZ crystal (X1) and a NPN transistor (Q2). The RF carrier signal is modulated by the digital control signal at the base of an RF amplifier stage (Q1). The modulated output of the RF amplifier stage is capacitive coupled (via C3) to the antenna through a "pi" matching network comprised of C2,L2 C1.It is sent out.

When the user need charge about RX battery, the U2 and Q3 would adjust out current. When working finish the LED2 would crush out. If charger jack will by short, then the U3 will send out one high voltage and the Q5 will be by cut out to U2.

When user always command the transmitter VR is same one space and other keys is not pressed ,the transmitter will be by stop out the control signals after 30 second.

LED1 is act 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