

Transmitter Circuit Function Description

The Flash Fire R/C transmitter is a full function proportional controller: left / right steering, forward / backward , The transmitter is powered by 4 AA battery. It is designed to provide 8 FM channels spacing of approximately 30KHz, in the frequency band of 26.985 MHz ~ 27.255 MHz. Within this band, 8 units can be operated at the same time, but without interference.

1. Voltage Regulator:

Comprise a NPN transistor Q2, zener diode ZD1, ON / OFF switch SW1 and its associated components.

2. MCU:

Turn any VR of F/B VR or L/R VR, change the voltage at MCU P60 , P61. MCU will issue out the digital control signals of F/B L/R at P57 (DOUT). This control code signal will modulate the high frequency signal in angle.

3. Power Indicator:

Formed by a red LED LED1. LED1 turns on when power's on.

4. FM Transmitter:

Contains IC1 ET13X221 and it associated circuit. The switch SW2 to select 8 different channel coded by D0 D1 D2, Then the selected channel is locked in receive loop and transmit. At the end the FM channel output at pin 10 (TXO). The U1 ET13 x 221 reference oscillator consisted of Y1 (4MHz crystal) and IC1 interior circuit. The VCO circuit consisted of D3, C19, C32, C31, T2 and its associated components.

5. RF Amplifier:

Comprise a NPN transistor Q1, RF turn coil T1 and its associated components. The FM signal feeds into the base of Q1 through a matching network, and then transmits from the collection to the telescoping antenna through another matching network.