

## Transmitter Circuit Function Description

The 1/3 Suzuki Motorcycle R/C transmitter has a pistol grip styling and requires 4 AA batteries for full function control: left / right steering, forward / brake, sound and turbo. It is designed to provide 4 FM channels spacing of approximately 30KHz, in the frequency band of 27.075MHz ~ 27.165MHz. within this band, 4 units can operate at the same time, but without interference.

### 1. Voltage Regulator:

Comprise a NPN transistor Q2, zener diode D1, ON / OFF switch SW1 and its associated components.

### 2. Encoder:

Turn on any of SW-S, SW-T, SW-R, SW-F, SW-B switches trigger the IC U2 SPRC201A which produces the digital signals at pin8 ( DOUT ). This control code signal will modulate the high frequency signal in angle.

### 3. Power Indicator:

Formed by a red LED D2 and its drive circuit. D2 turns on when power's on, and will be brighter while transmitting.

### 4. FM Transmitter:

Contains U1 ET13X221 and it associated circuit. Slide the switch SW2 to select 4 different channel coded by D0 D1 D2 D3. 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 U1 interior circuit. The VCO circuit consisted of D2, C19, C32, C31, L7 and its associated components.

### 5. RF Amplifier:

Comprise a NPN transistor Q1, RF turn coil L2 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.