

## **DESCRIPTION OF OPERATION**

The encoder generates a digital code serially transmit (typical designation) when press any button into the Central Processor Unit (modulator or called as mixer) stage in circuit. The serially digital signal mixed with the carrier at modulator (mixer) stage by way of FSK mode (Frequency Modulation) and to the Transmitter antenna. The modulation depth is designed such as  $\pm 5\text{KHz}$  in this application, that means the pulse (may be at high level state or low level state) will trigger the oscillator to generate a frequency at a specified fundamental frequency  $+5\text{KHz}$  or  $-5\text{KHz}$ , depended on the designation. For example, if the carrier frequency defined as fundamental frequency  $+5\text{KHz}$  at high level state, then the alternative carrier frequency will be fundamental frequency  $-5\text{KHz}$  at low level state. The Central Processor will trigger the oscillator to generate a carrier frequency when receive the signal.

The encoder generates a pulse code serially transmit (typical designation) when press any button into the Central Processor Unit (modulator or called as mixer) stage in circuit. The pulse signal mixed with the carrier at modulator (mixer) stage by way of Pulse Modulation and to the Transmitter antenna. The Central Processor will trigger the oscillator to generate a carrier frequency when any button was press .

The transmitter is powered by the 12V battery.