

# PM440 TRANSMITTER Technical DESCRIPTION

1. Power Supply: 4 x AAA BATTERY is the power supply of this unit
2. AUDIO AMPLIFIER and ALC : BA3308 are dual channel amplifier with built-in ALC circuit. It amplifier input audio signal to designed level with low distortion
3. STEREO MODULATOR: the NJM2035 is used to generate a stereo composite signal and obtain switching output and 19KHZ pilot signal due to two input audio signal and 38khz XTAL.
4. MCU : the MCU U2 is use to control the PLL IC and 8-segment LED. We can push the SWITCH S1 to change the channel from 1 to 8. the correspond channel NO. is indicate on the 8-SEGMENT LED.
5. 2.4G OSCILATOR: The modified colpitts oscillator is buildup of Q4 C20 C15 C22 C31 L2 C23 D3. it generate 2.4G CARRIER WAVE signal
6. MODULATOR: The composite stereo signal with 19khz pilot signal is modulated on 2.4G carrier wave by D3. and we can tune VR1 to adjust the modulation depth.
7. PLL : The PLL IC U2 /FS8160 is used to control the carrier wave to designed frequency . we can tune VC1 to fine adjust the frequency. The 11.5M crystal X1 is its reference clock
8. BUFFER and AMPLIFIER: Q1,Q2 and their external circuit act as power amplifier to amplify the 2.4G oscillator signal to designed level
9. 2.4G BPF: 2.4G BPF filtered out the outside RF signal to meet FCC
10. ANTENNA: A 2.4GHZ antenna is used to transmit 2.4GHZ carrier signal