

TX_Unit circuit description

1. Working Frequencies are all basing on 2.4GHz. 4 selectable channels: CH1:2414Mhz, CH2:2432Mhz, CH3:2450Mhz, CH4:2468Mhz. Press Button K2 to select from 4 channels, the corresponding LEDs such as D1, D2, D3 and D4 will be on.
2. Power supply system consist of DC 7.5 adapter, power switch SW2 and the Stabilizing Transformer IC U201. Pressing Button K1 for lasting 1.5 seconds will link up Transistors Q1 and Q3 to active the transmitter.
3. Visual signals from the camera and Sensor IC (U2:OV7910) are to be filtered by Filter Circuit C207-208-209, L201-202, R201-203, and then modulated by the Modulation Circuit.
4. When lights go dim, the Control Circuit which consist of Light Dependent Resistor (RPH1) and Transistors(Q100-101) automatically activated Infrared LED. When lights go strong, Infrared LED is inactivated
5. Sound input from the Microphone need to be transferred into electronic signal. Before proceeding to the Modulation Circuit, the signal need to be enlarged by Amplifier LM358(U203). Automatic Level Control Circuit consists of Q201, Q202, Capacitor C211 and Resistor R214. ALC can smooth the voice and make it real.
6. U3, C7 and VC2 comprise the 6 MHz Oscillator Signal. Voice signal through the Variable Capacitance Diode VD3 will be modulated directly into this 6 MHz, and then accompanying with video signals re-modulated into 2.4 GHz.
7. Local Oscillator Circuit (LOC) comprises Q205, C246, C248, D201, C204, C245. PLL circuit comprises LOC, Phase-Lock IC (U202) and the Low-Pass Filter Circuit (R240, R241. R242, C241, C242). CPU(U204) selects the channels.
8. Signal from Local Oscillator Circuit (LOC) will be amplified by transistors Q206, Q207, then to be filtered by Frequency Filter F201. After that transmitted by antenna.