CIRCUIT DESCRIPTION

CAMERA TX UNIT

- Switch SW201 is used to power on/off the unit and change the channel between CH1 & CH2 .
- Regulator Circuit includes the U201, C202, C204, R228. They provide constant voltage to the circuit.
- MCU (U203-W741C2601) control PLL IC, SP5055 & MCD2926 to get the accurate audio & video transmit frequency for channel 1 & 2.

- **VIDEO PATH**

1) The video Local Oscillator and Modulator is a combination of circuit components of Q102,VD101 which are constructed to form a video modulator circuit.
   Local Frequency: F1: 908.5MHz
   F2: 921.5MHz
2) Video LPF. & PLL are formed by Q103 & U101. the X101 provide 4MHz reference frequency to PLL SP5055
3) Video RF Amp is achieved by using a transistor Q101. The RF signal is applied to the base of this transistor Q101 for amplification only. The signal will be sent to the antenna via TX Match Filter.
4) Video Tx Match Filter is a filtering and matching circuit, which includes the capacitors C136 and F101;
5) The Video Antenna is a Koch type and solder directly onto RF PCB Boards;
6) The Video sensor circuit is formed by U301, X301. It transfer the image to CCIR video signal, then provide to video modulator. U302 regulate the 9V voltage to 5V and provide to U301.
7) IR circuit include Q401-402, U100, R408 & IRD1-10. In night it transmit IR light;

- **AUDIO PATH**

1) The Audio Local Oscillator and Modulator is a combination of circuit components of Q2, L1 &VD1 which are constructed to form a audio modulator circuit.
   Local Frequency: F1: 463.75MHz
   F2: 451.25MHz
2) Audio LPF. & PLL are formed by C23-25, R9-10 & U1. the X1 provide 4MHz reference frequency to PLL MCD2926;
3) Audio Amp is achieved by U202-A, B to provide amplified audio signal to the audio modulator circuit. The AGC is controlled by Q201-202 for automatic level control.
4) AUDIO RF Amp and Multiplier (double) is achieved by using a transistor Q1. The LO signal is applied to the base of this transistor of Q1 for amplification and multiplication. The amplified and multiplied signal will be sent to the antenna via TX Match Filter to select wanted RF signal.
   The transmitter RF Frequency is: F1: 927.5MHz
   F2: 902.5MHz
5) AUDIO Tx Match Filter is a filtering and matching circuit, which includes the capacitors C1,C4,C5 and filter of F2;
6) The Audio Antenna is a Helix type and solder directly onto RF PCB Boards;