

Operational Description

After the system powered on, the internal power supply outputs 8V and 5V to supply functional circuit. CPU PIC16F72 outputs 40kHz signal to electronic switch IC4052 after amplified, meanwhile PIC16F72 outputs 25Hz signal to Double D-Trigger IC14013. IC14013 outputs 12Hz and 6Hz trigger signals to electronic switch IC4052 to control on & off status. The 40kHz signal via electronic switch IC4052 is output to audion amplifier and pulse transformer to become a pulse signal with 140V_{P-P}. The 140V_{P-P} pulse signal drives ultra-sonic transducer to transmit and receive ultra-sonic signals. The reflected ultra-sonic signal from object is sent to electronic switch IC4052 and then amplified and filtered by IC084. Then the signal is processed by CPU PIC16F72 and output data to IC6450, at the same time, PIC16F72 outputs a group to data to audio IC840. Audio IC840 outputs an audio signal relevant with the object to transmission circuit 2.4G. Meanwhile camera send video signal to IC6450. IC6450 combines data and video together to transmission circuit 2.4G. The transmission circuit 2.4G transmits audio and video signals by antenna with frequency 2.4GHz.