2.1 Circuit Description:

First, the PIR (PIR1) sensor transform infrared signal to electronic signal and send it to the amplify circuit from RC net consisting of R2 R3 , the amplify circuit's core component is U1,OA(operation amplifier-TLC27L4); the signal amplified is sent to U3(MCU) by RC net (C16 C31 R14 ).

Then, the U3(MCU-EM78P153) will immediately process the signal received including the amplified signal of PIR sensor circuit and the battery low voltage signal form the voltage comparator consisting of R15-18 VR1 C19 U1-D.

Next, the U3 will send code signal to TX module consisting of C1-C4 C12-13 R1-R4 SAW1 Q1 L1-3. At the same time, the enable signal by U3 will be sent to the RF POWER CONTROL and DC/DC CONVERTER circuits that supply 6V power of TX module. The RF POWER CONTROL circuit consist of Q1 Q2 R22 R23 R26 C24 C25; and the DC/DC CONVERTER circuit consist of L2 U4 D2 C26.

End, the TX module can transmit code out by RF(433.92MHz) in ASK mode after getting 6V DC power and encode . At the same time, the MCU drive indication circuit's LED1 to flash fast for indicating transmitting. The LED will also flash slowly when the MCU detect low voltage of battery.