

2.1 Circuit Description:

2.1.a. Transmitter:

First, the PIR (PIR1) sensor transform infrared signal to electronic signal and send it to the amplify circuit from RC net consisting of R1 C1 C4, the amplify circuit's core component is U1,OA(operation amplifier-TLC27L4); the signal amplified is sent to the power control circuit (R18 R20 R21 R22 Q3 Q4) to give U3(SC2262) 3.6V DC power.

Then, the U3 will immediately send code signal to TX module consisting of C1-C4 C12-13 R1-R4 SAW1 Q1 L1-3. The TX module can transmit code out by RF(433.92MHz) in ASK mode by 9V power . At the same time, the U3 drive indication circuit's LED1 to flash for indicating transmitting.

The LED1 will also light when the battery voltage comparator consisting of R27-31 Q5 Q6 C14 detects low voltage of battery.

2.1.b Receiver:

When the RX module of 433.92MHz receives RF signal, it can give the code to the decoder IC SC2272. If the code have the same address with SC2272's, it can send the enable signal to the voice module and the indication circuit consisting of LED1-3 R6 R9 R11-12 Q3-4.

Then, the voice module's core the IC EST004 will give the chime or alarm to the BUZZER driver (Q2 R3). And the buzzer will sound. At the same time, the LED1-3 will flash for indicating.

When the voltage of battery comparator consisting of Q5-6 R13-16 R19 D7) detects the battery power low, the LED1 will light.