

Technical Description

Transmitter unit

The device is a random 10 channels (ch1~10 or ch11~20 is selected at programming) transmitter to send alarm signal to base unit. It contains follows functional blocks:

CPU: It is the core of the unit. It controls LEDs control, push buttons detection, EEPROM read/write, RF power on/off control, PLL control and power management.

The coding of the unit is assigned by Base CPU. It is up-loaded to the device via a 3.5mm mono-phone wire. All information is stored into EEPROM to prevent re-programming after power fault.

RF section: It is a 20-channel transmitter from 924.875MHz to 927.725MHz (150KHz/channel). The RF signal is generated from the VCO (Q52, R57~62, C56~65, L53, 54 and D52), which is control by PLL, U51, for corresponded channel. The signal then feed into power amp (Q51, R52~ 54 and L52) and then antenna via a 927MHz filter (F51).

RF Power Control: It includes Q3, R20 and 21. It is a switch to cut off RF power while no data sending in order to improve standby time.

Power management: power on/off switch is formed by Q1,Q2, R13~15 and D1. When user presses the button, the switch turns on. CPU weak up and then control the switch until the transmission procedure is completed. After all data are sent out, CPU cut off the power by switching off Q1 and Q2 in order to maintain low standby current consumption.