Operational Description

This product designed for light type load control with night light function, this product include a receiver socket unit and a hand hold/wall mount transmitter unit, push the switch of transmitter to control the receiver ON or OFF the load and control the night ON or OFF.

Schematic description

◆ Receiver

- ✧ RC step-down circuitry: current limit resistor R4 and AC capacitor C4 and electric charge discharge resistor R5, rectifier diode D1~D4 to complete the AC120V to DC low voltage convert, it will supply all other circuit to working.
- ✧ Relay and drive circuitry: Relay REL1 control the load ON or OFF, R7, Q3, R8, R2, R1, Q1 drive the relay ON or OFF.
- ✧ Night light circuitry: Z3 will limit the night light LED1 voltage to 3.6V, Q1 will control the night light work or non, when the relay is ON the night will OFF and the relay OFF the night light will ON.
- ✧ 3.6V regulator: IC U2 Z2 convert the 4.7V voltage to 3.6V supply for IC SC5272 and receiver module.
- ✧ Decode circuitry. The IC SC5272 will decode wireless data signal and output control level at pin 10.
- ✧ Receive module: it will receive the 433M wireless signal and demodulation data send to decode IC SC5272.

◆ Transmitter

- ✧ ON/OFF and timer circuitry: SW1 Q1 Q4 and other resistor capacitor to control power supply ON/OFF, also control the encode IC to send ON or OFF code for transmit.
- ✧ Encode IC: IC SC5262 to encode the address and data for transmit mixed signal.
- ✧ Voltage gate circuit: R9 R10 R11 Q2 to limit the transmit circuit gate at 6.0V, lower 6.0V the transmit circuit will can not work to shun error code.
- ✧ Wireless transmit circuitry: R14 Q3 R12 C11 C10 to generate 433M wireless signal, the SAW1 will lock the oscillator frequency for 433.95 +/-75K, C14 L2 L3 C15 C16 C17 to match the impedance 50 ohm for transmit antenna.