

## **RF Wireless Remote Switch – Receiver**

### **Technical Description**

The RF Wireless Remote Switch composes of 2 modules. One is the remote control unit (Transmitter) and the other is the power switch unit (Receiver). The transmitter is using a remote control encoder IC to encode the ON/OFF signals while the receiver is using a Micro-controller (MCU) to decode the receiving signals.

The receiver is an AC120V open-frame PCB unit. There is a power relay installed in the unit. The relay will be made and broken the contact upon receiving signal from the remote control unit.

The receiver consists of several parts, including Input Stage (ANT), R.F. Amplifier (Q1), Demodulator (Q2), Amplifier (U1-A), Comparator (U1-B), Remote Control Decoder (U2), Driver (Q3, Q4), Output Stage (K1) and Power Supply (R1, C1, ZD1, U3).

When a signal is received through the antenna, the Input Stage, it will be passing through the R.F. Amplifier and Demodulator to remove the carrier frequency. Then the signal will go through the Amplifier and the comparator to retrieve the original encoded signal. The Remote Control Decoder (MCU) will decode a correct signal to make or break the relay contacts through the Driver in order to open or close the relay in the Output stage.