

Circuit Description, Model: Rain Gauge transmitter

The Rain gauge is a MCU controlled transmitter working at 433.92MHz, Powered by 2 pcs AA battery. The circuit of Rain gauge transmitter has 2 main parts, MCU circuit and transmitter.

MCU

The MCU (RG424TR-V1) is the heart of Rain gauge, The system clock is control by (32.768KHz) crystal. The MCU will decode incoming signal from pin 17 (SW1 Reed switch), It will switch on/off the transmitter hardware via pin 12.

Transmitter

The oscillator (Q3) working at 433.92MHz is controlled by a SAW resonator, the output is coupled to output amplifier (Q3). A band-pass filter (C4, C18, L2 and L3) is placed between the output amplifier (Q3) and the built-in antenna. The RF signal is generated when the positive (refer to ground) part of an encode pulse. A pulse width modulation RF signal is being sent.