

Technical Description of the Circuit:

This product can be divided into two separate function module

- (i) RF module
- (ii) RCC module

(i)RF module

This module can divide into two part, RF and Baseband, the RF circuit is a single conversion, super-heterodyne architecture receiver IC. The incoming RF signal received by the antenna is fed to the RF input terminal of the IC RX3310A, then the RF signal is then amplified by the LNA in the IC RX3310A. The amplified signal will fed to the mixer input, the LO for the mixer is generated by the external LC tank circuit, in the above circuit, the LO is 432.12MHz, the IF ($F_{RF}-F_{LO}$) is then demodulated by the demodulator in the IC RX3310A and the IC RX 3310A provide the raw data.

The data is then fed to the baseband MCU TM8706 for decoding and the MCU TM8706 will display the decoded temperature at the LCD.

(ii)RCC module

This module can also divide into RF and Baseband, the RF circuit is a AM demodulator which receive 60kHz WWVB time signal and demodulate the signal into useful time data.

The data is then fed to the baseband MCU S1C60N16 for decode, the decoded time will be display on the LCD.