Principle of Operation

The micro-controller (U1) on the Remote Transmitter reads the resistance of the temperature sensor (TH1) every 16 second. It then converts the resistance reading into temperature reading and display the temperature on the LCD.

When the user press the auto button on the Remote Transmitter, the micro-controller will compare the preset temperature with the room temperature. If the room temperature is above/below the preset temperature, it will send a series of on/off code words to turn on/off the RF oscillator (Q1,C7,C8,C10) which in turn will transmit an ASK RF signal to the Remote Receiver.

When the user press the manual on the Remote Transmitter, the micro-controller on the Remote Transmitter will send a series of on code words (if the Remote Transmitter is at off state) or off code words (if the Remote Transmitter is at on state) to the RF oscillator. The RF oscillator will in turn transmit an ASK RF signal to the Remote Receiver.

When the user press the flame or fan buttons on the Remote Transmitter, the micro-controller will send a series of code words to the RF oscillator. The RF oscillator will turn ASK RF signal to the Remote receiver.

All timing on the Remote Transmitter is derived from 32768 Hz Crystal-Oscillator and 4.19 MHz Ceramic Resonator Oscillator.