Wall Mount Remote Transmitter (WMT101) Principle of Operation

The micro-controller (MSM64168-205) on the Remote Transmitter reads the resistance of the temperature sensor (thermistor 203-AT) every 16 second. It then converts the resistance reading into temperature reading and display the temperature on the LCD.

When the user presses the on button on the Remote Transmitter, the micro-controller will send a series of on/off code words to turn on/off the RF oscillator (MPSH-10) which in turn will transmit an ASK RF signal to the Remote Receiver.

The super-regenerative circuit on the Remote Receiver receives the RF signal from the Remote Transmitter, converts it into code words (CMOS logic level) and feed the received code words to the Decoder IC (HT12D). If the received code words match the setting at the Decoder IC it will turn on or off the output drive (a pair of MOSFETs IRFZ-24) according to the code words it received.

All timing on the Remote Transmitter is derived from 32768 Hz Crystal-Oscillator.