

CIRCUIT DESCRIPTION

TRANSMITTER

The hand-held RF transmitter consists of the housing, three or four control buttons, microcontroller, an UHF oscillator (Colpits configuration) and a 3 volt battery. The microcontroller uses an internal oscillator running at 4.0 MHz, and the RF oscillator uses a SAW based oscillator to resonate at 315.0 MHz. The modulation format used will be ASK, with a Rolling/Manchester code data format. Once the user presses a button power is applied to the microcontroller which turns the RF oscillator on and off at the rate of the Rolling/Manchester code data being sent. The signal is then sent to the receiver module via RF data transmission. The module will then act upon the RF data received and will perform certain functions in correspondence to which transmitter button is pressed.