

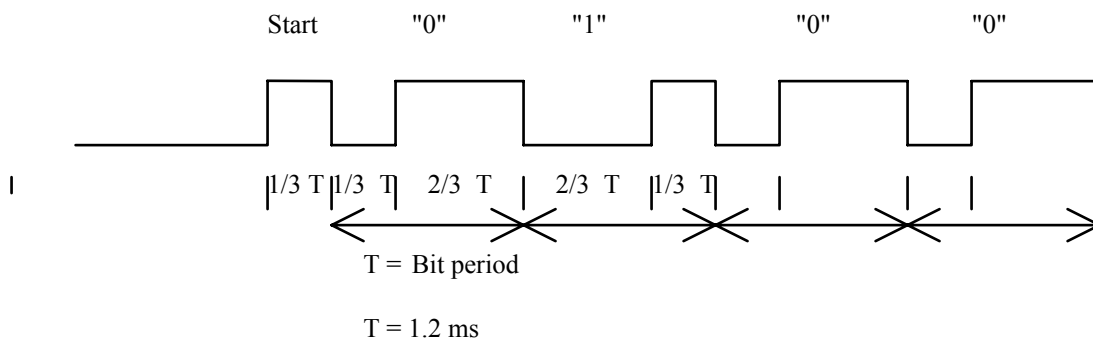
MCT-212 RL Waterproof PowerCode Wrist Transmitter

The MCT-212 RL is a miniature hand worn battery operated waterproof transmitter, designed for home health care signaling. In the event of an emergency, help can be summoned at the press of the transmitter button.

It includes a built in printed integral antenna (part of the PCB). Activated by pressing a push button, it transmits a brief RF coded alarm message whose power is no more than 1 mWatt, the message stops at less than 5 seconds. The modulation is FSK (ON/OFF Keying).

It has been designed to transmit manually coded alert signals to be used with personal security systems such as Home Healthcare Security system. The coding uses return to zero pulsed width code.

The following figure shows the start pulse and bit timing.

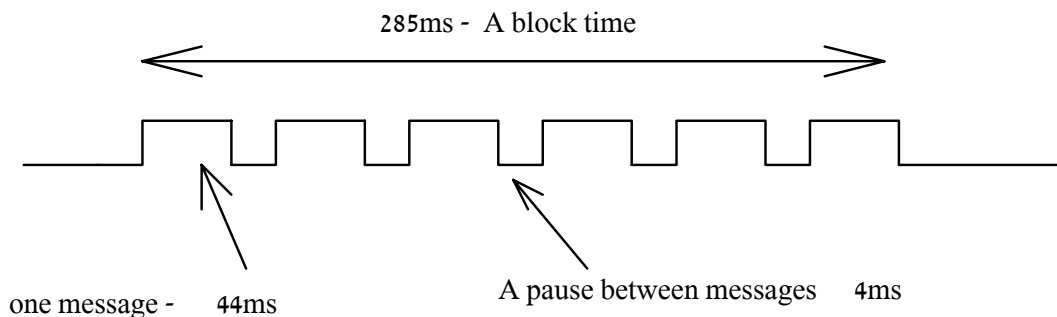


The message starts with a start pulse after a pause of at least $2T$ ($\geq 2.4 \text{ ms}$). The start pulse is of the duration of $1/3 T$ (0.4 ms), followed by the message bits (see figure).

The end of the start pulse is used as time reference for the next bit, and the end of each bit is the reference for the next one.

Bit "0" is starting at $1/3 T$ from the end of the previous bit. Bit "1" will start transmission at $2/3 T$ from the end of the previous bit. The transmission stops always at the end of the bit period.

The messages are transmitted in repeated blocks. Each message block is composed of a burst of 6 identical messages, separated by 4 ms from each other - see figure below



The blocks are transmitted six times. Each transmitted block is identical and there is a pause of 300 ms between block transmissions.