

Operational Description of the Identity Transmitter

BZ1 is a ceramic piezo element against which a 4mm steel ball runs. The voltage generated is amplified by TR1, and the logic is switched to the processor pin 7 via TR3. TR2 has 2 functions in that it is a pulse stretcher, and also has the 10 second inhibit function. Upon receipt of a pulse from TR3, Pin 6 of the processor pulse hi momentarily to charge C1 via D1. C1 holds TR2 on until discharged via R4.

Upon receipt of a pulse on Pin 8, Pin 3 of the processor modulates the RF oscillator via R13. The oscillator frequency is SAW stabilised at 433.92 MHz by SAW1.

TR4 is a battery voltage detection circuit, which is monitored on pin 5 of the processor, and low battery voltage is indicated on the LED.

The transmitter can also be enabled by depressing switch 1.

"The device is a small keychain size intentional radiator. It meets the technical requirements of 15.231(e). The open issue is the automatic operation feature of the device. The transmission is initiated by physical movement of the device as in a walking motion. While the person carrying the device is in motion, the device transmits for (40) ms and then is silent for (11) seconds. If after this (11) seconds of silence, motion is again detected, the device repeats the sequence."