



## Description of the Surveillance PAD

MicroLogic, Inc.

78 Fourth Avenue

Watson, MA 02154

(617) 487-2300

fax (617) 487-2323

### General

The Surveillance PAD is a low power transmitter. Carrier is pulsed on or off with no other modulation during a sequence of 37 bit formatted message. The SAW-based transmitter microcontroller, and the supporting hardware are powered by a pair of 3 volt (6 volt total) button cell batteries.

### Specific

The 16C84 microcontroller is normally powered down, awaiting a hardware input signal from several possible sources, including: the release of a tamper switch, the activation of a shock/motion detector, and data on the programming pins.

Once the microcontroller is powered up and reset properly, the microcontroller applies debouncing algorithms and preset timing logic tests to the received hardware input signal(s) to determine if transmissions should be sent. The release of the tamper switch is responded to immediately. Shock/motion detection is debounced to a set of factory-programmed parameters. Data on the programming pins also power up the microcontroller, which then checks for valid programming frames.

If it is determined that transmissions will be sent, then the microcontroller will send the preset pulsed message, with the timing generated by a 3.58 MHz ceramic oscillator, to the 310.050 MHz SAW-based transmitter. Regardless of whether or not the hardware input condition is still valid, the entire message sequence is sent from the microcontroller. A loop antenna printed on the PC board is used in conjunction with the SAW transmitter.

