Equipment Description

Transmitters

The hand-held remote control transmitter consists of the housing, switching circuitry, microcontroller, UHF oscillator, and a 12V alkaline battery. The microcontroller uses an external RC clock running at 3.58 MHz and the RF oscillator uses a SAW stabilized LC tank to resonate at 314.2 MHz +/- 75 kHz. Once a button has been activated, the microcontroller sends out coded data onto the pulse modulated (AM) carrier wave.

These two transmitters are based on the same circuit and are built on the same PCB board, differing only in the population of the components in the digital section. The RF section in these transmitters are identical.

The two descriptions of the transmitters follow:

M-49	Equipped with Arm/Disarm, Disarm/Trunk, Find/Panic, & Start/Defrst labeled silicon. This transmitter is equipped with Rolling Code Encryption and is depopulated from the fully populated circuit board by the LED and one resistor.
M-51	Fully populated circuit board. Equipped with Rolling Code Encryption. Plastic case is different than M-49 in that it has an opening for the LED to be seen.

EXHIBIT F
Page 1 of 1
U of Mich file 415031-962