Operational description of the Limit Switch Transmitter, Model LSX1

Description of the circuit functions, ground system and antenna of the Point Six, WOWLSX1 Wireless transmitter

The WOWLSX1 limit switch transmitter is a lithium battery powered, microprocessor based, 418 MHz. transmitter that transmits switch status, open-state counter and closed-state counters and a unique 30-bit serial number. The microprocessor is brought up from a power down state every 1 second by a DS2417 time of day clock interrupt output. The microprocessor counts the total number of times that the limit switch inputs are activated and registers the current state of each opened or closed switch. The microprocessor counts the 1-second interrupt cycles from the DS2417 clock until the transmit period has expired. The microprocessor then combines the counts and switch status with serial number data from an onboard DS18B20 and transmits the entire data packet serially with a Linx Technologies TXM-418-LC-R 418 MHz. Transmitter module. The microprocessor then powers down into a quiescent state to wait for the next interrupt from the DS2417 clock.

The PC board bottom layer is a ground plane and the antenna is a 1/4-wave loop that has been hot upset into the PVC cover to form a spiral. The electronics is housed in a metal box with a plastic lid.