Operational description of the 418 mHz. battery operated temperature or temperature setpoint override sensor.

Description of the circuit functions, ground system and antenna of the HWSO Wireless transmitter

The HWSO   Wireless transmitter is a lithium battery operated, microprocessor based, 418 MHz. transmitter that transmits temperature or temperature setpoint/override data and a unique 30-bit serial number. The microprocessor is brought up from a power down state every 1/60 second by an internal timer in the microprocessor. The microprocessor gathers data from either a slide pot/pushbutton or the on board thermistor temperature sensor via. an analog. The microprocessor converts this information to digital data and then combines the data and with the serial number data from an onboard stored unique serial number and then 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 on board timer.

The PC board bottom layer is a ground plane and the antenna is a 1/4-wave loop that has been etched in PC board material and placed into the ABS enclosures cover.