

## **TempTrak Sentry Remote Temperature Measuring Unit Product Description (4/26/00)**

The TempTrak Sentry Remote Temperature Measuring Unit is a transceiver designed to collect temperature data in an industrial environment. The Sentry certification will be held by:

KatchAll Technology Group  
5800 Creek Road  
Cincinnati, Ohio 45242  
(513) 793-5366  
TIN 31-1037180  
Contact: Jack Kennamer

The party responsible for the design, documentation and manufacturing is:

Critical Link, LLC  
404 Oak Street  
Syracuse, NY 13203  
(315) 425-4045  
TIN 16-1534393  
Contact: John Fayos

The Sentry consists of an RF circuit board and a Control circuit board contained within a plastic domed housing. The Control board performs the temperature measurements and provides control signals to the RF board to facilitate transmit and receive functions. The RF board uses permanently attached wires for both the transmit and receive antennas. All circuitry is contained within the plastic housing and will not normally be accessible to the user.

The Sentry is a two channel transceiver operating at 906.0 MHz and 916.55 MHz. An ASK modulation scheme is used with only one channel active at any given time. Maximum transmission length is 99.8 ms with a maximum duty cycle of 61.4% in a 100ms period.

All timing is derived from the following:

- Control board timing for temperature measurements and transceiver control is derived from a 3.6864 MHz oscillator.
- Receive channel 1 timing is derived from a 7.0041 MHz oscillator.
- Receive channel 2 timing is derived from a 7.1244 MHz oscillator.
- Transmit channel 1 timing is derived from a 906.0 MHz oscillator.
- Transmit channel 2 timing is derived from a 916.55 MHz oscillator.

The Sentry will operate from either a 9V battery or a wall transformer. Both are included with the test unit. When not being used, the battery should be removed from the unit to prevent it from being drained. The battery is easily accessible by removing the single screw holding the battery cover in place.

The unit for FCC verification and certification contains a special set of software to facilitate testing. On the underside of the unit locate the white pushbutton switch and the two LED's. LED1 is closest to the pushbutton switch and corresponds to channel 1 operation. The other LED is LED2 and corresponds to channel 2 operation. Depressing the pushbutton should cycle through the various operating modes. These operating modes are:

LED1 solid: Channel 1 receive mode  
LED2 solid: Channel 2 receive mode  
LED1 blinking: Channel 1 transmits a data packet every 500 ms.  
LED2 blinking: Channel 2 transmits a data packet every 500 ms.