

TempTrak Liberator HandHeld Unit Product Description (4/26/00)

The TempTrak Liberator HandHeld Unit is a transceiver designed to collect temperature data in an industrial environment. The Liberator certification will be held by:

KatchAll Technology Group
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Cincinnati, Ohio 45242
(513) 793-5366
TIN 31-1037180
Contact: Jack Kenamer

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

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

The Liberator consists of an RF circuit board and a Control circuit board contained within a rectangular plastic 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 Liberator 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 transceiver control and data collection 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 Liberator is powered from a Symbol bar code reader included with the test unit. The base for the bar code reader is used for charging only. Transmit and receive functions are inhibited while charging.

The unit for FCC verification and certification contains a special set of software to facilitate testing. Plug the Liberator onto the end of the Symbol bar code reader and twist 1/8 turn to lock in place. Remove the Liberator from the bar code reader when not in use or the bar code reader battery will be drained.

Depress the yellow push button on the Symbol bar code reader at any time to bring up the operating menu. Press the BK button to end any operating mode. The operating modes are:

- R1: Channel 1 receive mode
- R2: Channel 2 receive mode
- T1: Channel 1 transmitting data (LED closest to jack on Liberator unit will flicker).
- T2: Channel 2 transmitting data (LED farthest from jack on Liberator unit will flicker).