DIRECTIONS FOR USE OF MERIAM WIRELESS DEMO KIT

Introduction

The Meriam Wireless RF demo kits consist of a battery powered MWT transmitter, MWR receiver and a battery charger for each. The kit may be used to demonstrate the capabilities of the transceivers. The MWT transmitter is calibrated to transmit a temperature of 0 to 500°F using a J type thermocouple. An alarm will trigger on the MWR indicating that the thermocouple has reached 250 °F; the alarm resets at 240 °F. The LCD displays linearized temperature.

Operation

- 1.0 Turn on the MWR receiver by pulling out on the locking off/on switch and moving to the on position. The LEDS will light sequentially: POWER, LINK, and BAT LOW, and the LCD display should read zero. LEDS, RECEIVED and TRANSMIT will not be lit at this time. Only the POWER LED and the display will remain on.
- 2.0 Turn on the MWT transmitter by plugging the connectors together. The following LEDs will light sequentially POWER, LINK and CALIBRATE, RECEIVED will not be lit at this time. The TRANSMIT LED begins blinking and data will be transmitted to the receiver. The receiver's LINK LED will turn on and the blue RECEIVED LED will pulse when data is received; the display indicates temperature in Fahrenheit.

3.0 MWR Receiver BAT LOW

BAT LOW indicates the state of the batteries in the MWT transmitter, not the receiver. The production version of the receiver is not available in battery power; however, the demo unit has been equipped to operate from a lead acid battery. There is no indicator to tell if the battery is low so keep on charge when possible. When the battery in the MWT reaches a threshold it will send a signal to the receiver indicating the battery is low and the receiver's BAT LOW LED will light. If the battery is not charged soon the MWT will stop sending RF data and the LINK LED on the receiver will turn off.

4.0 MWR Alarms

One of the three alarms in this demo has been set to turn on at $250 \,^{\circ}$ F and turn off at $240 \,^{\circ}$ F. Heat the thermocouple to see the alarm set and reset when cooled.

5.0 RSSI Mode.

The MWR has a built in RSSI (received signal strength indicator). The three LEDs POWER, LINK and BAT LOW become an RSSI meter. It can be used to analyze each packet of data that is properly received. Before putting the MWR in RSSI mode the transmitter must be transmitting and the RECEIVED LED on the MWR must be blinking. To put in RSSI mode press the switch behind the front panel marked PGM. When the button is pressed the POWER, LINK and BAT LOW LEDs will turn off briefly and then light

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sequentially from POWER, to LINK to BAT LOW; unit is now in RSSI mode. *NOTE: no data is output to the LCD display in this mode, the last valid data received will remain on the display.* The LEDs indicate the following:

- > POWER, LINK and BAT LOW LEDS on: excellent signal strength.
- > BAT LOW and LINK LEDs on: good signal strength.
- > BAT LOW: ACCEPTABLE signal strength.
- > No LEDS on: weak signal strength

The higher the signal strength the better. Every signal received is verified for validity before displaying. It is normal for the RECEIVED LED to be erratic in this mode. Every time the RECEIVED LED lights the signal strength is updated. To return to normal mode, press the reset switch or turn the unit off then back on.

6.0 Battery Charging

MWT Transmitter

The MWT is normally powered from lithium batteries, DC or AC power. The demo MWT is equipped with rechargeable NiMH batteries. Use only the charger supplied with the MWT. Charging can take up to 5 hours if batteries are completely dead. Batteries can be left on charge. See charger to determine charge state.

MWR Receiver

The MWR receiver is normally powered from +24Vdc. The demo unit has been equipped with a lead acid battery. Use only the charger that was supplied with the MWR. Charging can take up to 2 hours if batteries are completely dead. See charger to determine charge state.

Technical support line: 216-281-1100

Caution:

Keep receiver and transmitter a minimum of 10' apart. Receiver can be damaged if placed too close to transmitter.