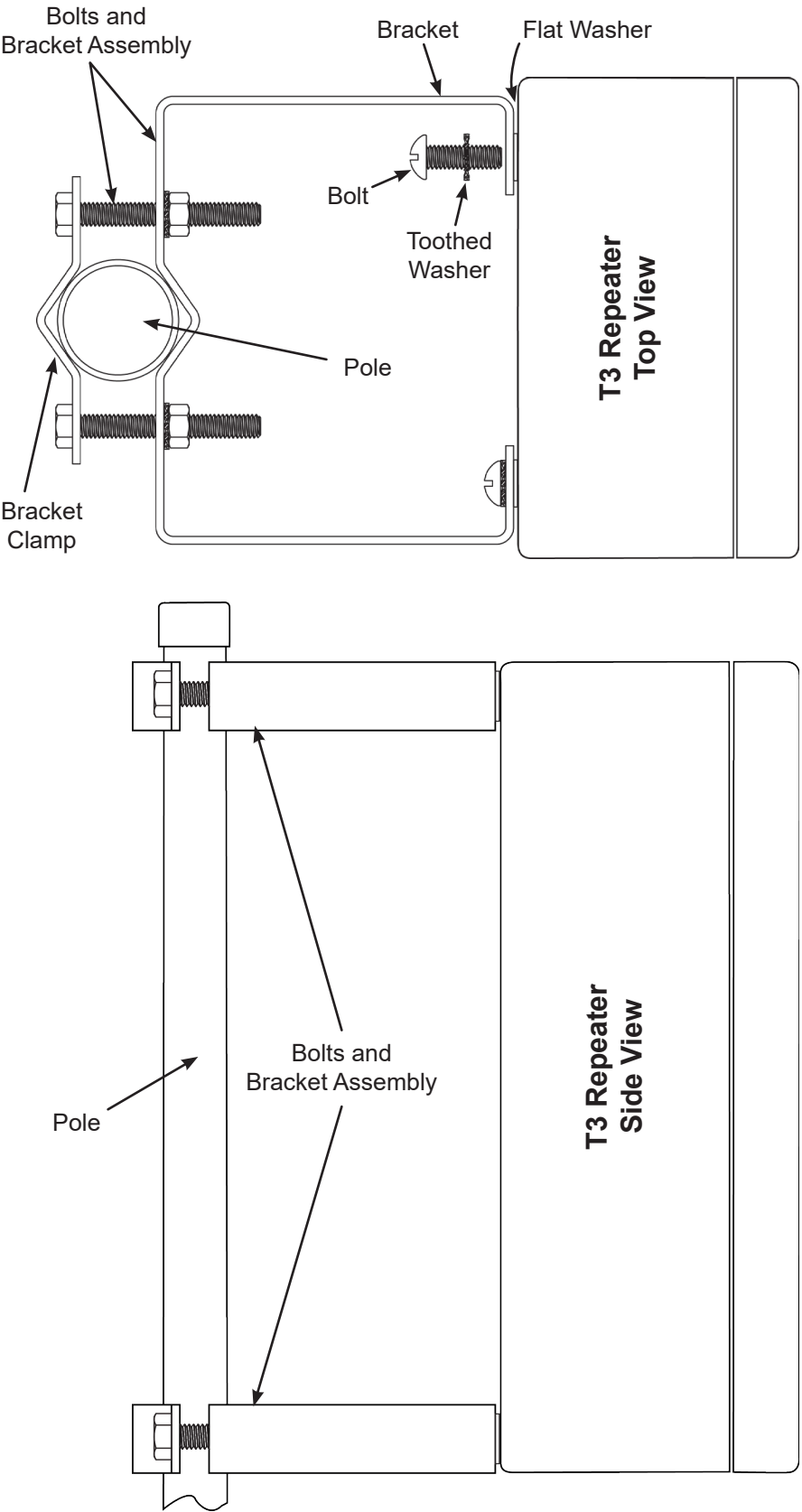


T3 Repeater Mounting Assembly

- Hardware for pole mounting is included.

DO NOT Mount T3 Repeater against metal surfaces!

Improper Installation May Impair Performance



FCC Statements

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Industry Canada Statements

This Class A digital apparatus complies with Canadian ICES-003.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.(select the class for your device)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

GRACE One (1) Year WARRANTY

Grace Industries Incorporated, of Fredonia PA 16124 USA, warrants products that it manufactures to be free from defects in workmanship and materials for a period of one (1) year from the original date purchase. This warranty does not apply to third party products sold by Grace Industries. Grace Industries will repair or replace, at their sole discretion, defective products free of charge. This warranty applies to products that Grace Industries deems defective in its sole discretion due to defects in material or workmanship under normal use and maintenance and where a defect was not caused by accident, misuse or abuse of the product and that no disassembly, repairs or parts replacement were made or attempted by other than Grace Industries' personnel. **GRACE INDUSTRIES, INCORPORATED SHALL NOT BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL LOSS OR DAMAGE ARISING OUT OF THE USE OF THE PRODUCT OR FAILURE OF THE PRODUCT TO OPERATE.**

The sole and exclusive remedy under all guarantees or warranties, expressed or implied, is strictly limited to repair or replacement as herein provided. **ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTIES OF FITNESS AND MERCHANTABILITY, ARE HEREBY LIMITED IN DURATION TO A PERIOD OF ONE (1) YEAR FROM THE DATE OF ORIGINAL PURCHASE.** The warranty and liability set forth here are in lieu of all other warranties, expressed or implied, in law or in fact, including warranties of merchantability and fitness for a particular purpose.

Warranty claims process: 1) Obtain a Return Authorization Code or Number from Grace Industries corporate headquarters by calling phone number 724-962-9231, or by email correspondence to sales@graceindustries.com. 2) The product name, serial number, date and proof of purchase must be provided and 3) Return products including Return Authorization number, prepaid and accompanied by original proof of purchase that states the date and location of purchase to: Grace Industries, Inc., Repair Department, 305 Bend Hill Road, Fredonia, PA 16124, USA. Customer is responsible for all shipping costs, return shipping costs, handling, or any other fees associated with a warranty claim.



Grace Industries, Inc.
724-962-9231
305 Bend Hill Rd
Fredonia, PA 16124
sales@graceindustries.com

T3 Repeater

User Information



T3 Repeater extends operational distance of a Grace Lone Worker Safety system.

T3 Repeater



Front View



Inside View
Shown with Heater Option

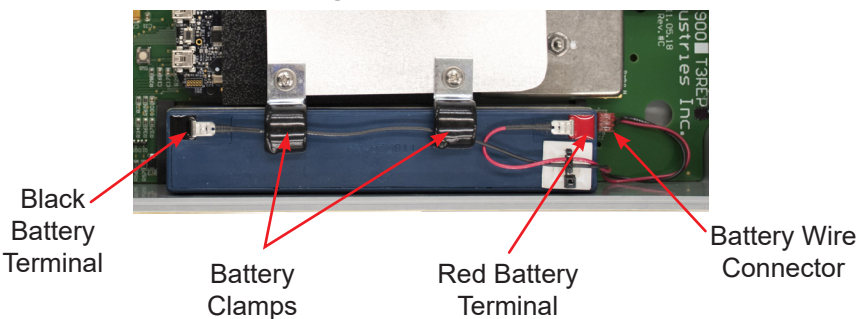


Bottom View

Transmit / Receive LED
RED: Receiving
GREEN: Transmitting

Power LED
GREEN: Operating on AC Power
RED: Operating on Battery

Battery Replacement



T3 Repeater System

T3 Repeater extends operational distance by receiving and retransmitting RF signals to and from Grace Gateway Base Monitoring devices and worker-worn Pendants.

Power and Operation

T3 Repeater is powered by 90-264 VAC 50/60 Hz Single Phase 1 Amp source and contains a lead-acid battery backup system.

Once the repeater has been prepared for AC power, the unit may be plugged in. AC power connector is a screwless terminal rated for solid or stranded wire from 14-22AWG. Wire should be stripped at a 1/2". Wires should be inserted by using a small screwdriver to depress the lever and then inserting the wire.

When the T3 Repeater is connected to AC Power, the Power Indicator LED glows Green, indicating the unit has Power and is ready for operation. With loss of AC power, the Power Indicator glows Red, indicating Repeater is operating on battery power.

Power Indicator LED

- **Green Glow:** Operating on AC Power, and battery is fully charged.
- **Red Glow:** Operating on battery backup
- **Red Flashing:** Operating on Low Battery.
- **Red/Green Alternate Flashing:** Battery fault detected. Battery is either extremely discharged, open or shorted.

If fault occurs at power-up, the indicators should clear in 4 - 6hrs. If fault continues after 12Hrs, the battery is failed (Open or Shorted).

Transmit / Receive LED

- **Green Flashing:** Transmitting a signal.
- **Red Flashing:** Receiving a signal.

T3 Repeater Specifications

- **Case:** Rugged, industrial grade, water-proof enclosure
- **Color:** Medium gray
- **Weight:** 8.5 lbs (without cable and mounting brackets)
- **Case Dimensions:** 6.3" W x 15" H x 3.5" D
- **Antenna:** 1.7" Internal

- **Power Requirements:** 90-264 VAC 50/60 Hz. Single Phase 1 Amp
- **Battery Backup:** Provides backup power for up to 40 hours
- **Complies with:** UL 60950-1, CSA C22.2 No. 60950-1
- **Operating Frequency:** 902-928 MHz
- **FCC ID:** J5MXHEM -- Meets FCC Part 15
- **IC:** 5916A-MXHEM -- Complies with Canadian ICES-003
- **Environmental Range:** -40°C to +55°C
- Heated system option recommended for environments below -5°F / -20°C
- **Compatible Equipment:** Grace Radio-H telemetry products
- Dual Mounting Brackets included for recommended pole-mounting
- **Cleaning / Decontamination:** Units contaminated by chemical or radioactive materials must be disposed of or decontaminated in accordance with all applicable regulatory standards. **DO NOT mark or apply paint to T3 Repeater.**

Battery Replacement

WARNING: Disconnect Power Supply before servicing T3 Repeater.

To change battery, disconnect the external power supply.

Loosen all four screws and remove the cover. Unhook battery wire from the battery terminals. Unhook battery wire connector from the board and set the battery wire aside.

Loosen the battery clamps enough to allow them to swing freely. **Do not completely remove them.** Rotate the clamps clear of the battery and remove the expired battery.

Carefully set the new battery in place. Rotate the battery clamps over the new battery and tighten them down until snug.

Connect the red wire to red battery terminal. Thread the black wire through the battery clamps and connect the black wire to black battery terminal.

Attach the battery wire connector to the board. Replace the cover and tighten all four screws until snug.

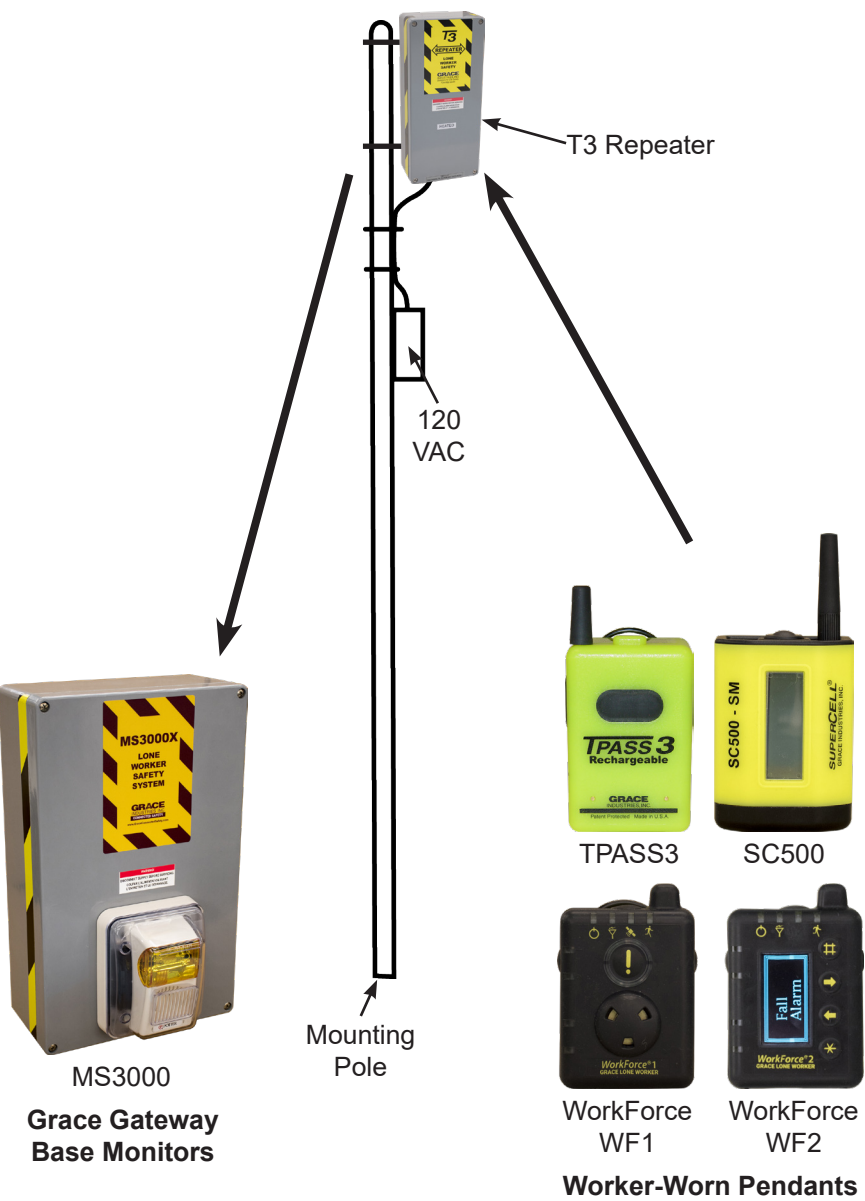
Reconnect power supply and test system for proper operation before field use.

T3 Repeater System Installation

IMPORTANT: Always test System for proper operation before use.

T3 Repeater must be mounted so there is a clear, unobstructed path to the area where Grace Gateway Base Monitoring devices and worker-worn Pendants are used.

For optimum performance, place T3 Repeater at a minimum of 6 feet above ground level.



Hardware for recommended pole mounting is included with each T3 Repeater.

DO NOT Mount T3 Repeater against metal surfaces!