

Activation: all electronic switching

Manual Activation

On - unit may be turned ON by pressing both side buttons simultaneously

Alarm

- unit may be put into Alarm at any time by pressing the button on the front of the unit

OFF - unit may be turned off by pressing both side buttons simultaneously

Auto-ON Activation

On - Remove Accountability Key to automatically activate the unit

Alarm

- unit may be put into Alarm at any time by pressing the button on the front of the unit

OFF - replace the Accountability Key and press both side buttons simultaneously

Case: rugged, high temperature, impact resistant, translucent, Apache Orange polycarbonate. Entire case glows during the Sensing, Pre-Alert, and Alarm modes.

Methods of Attachment: rugged Grip Clip and D-ring for versatility in attaching to gear.

Antenna: short threaded antenna for easy replacement

Alarm Transmission: a 1.5 second burst of RF transmissions occurring every 4.5 seconds.

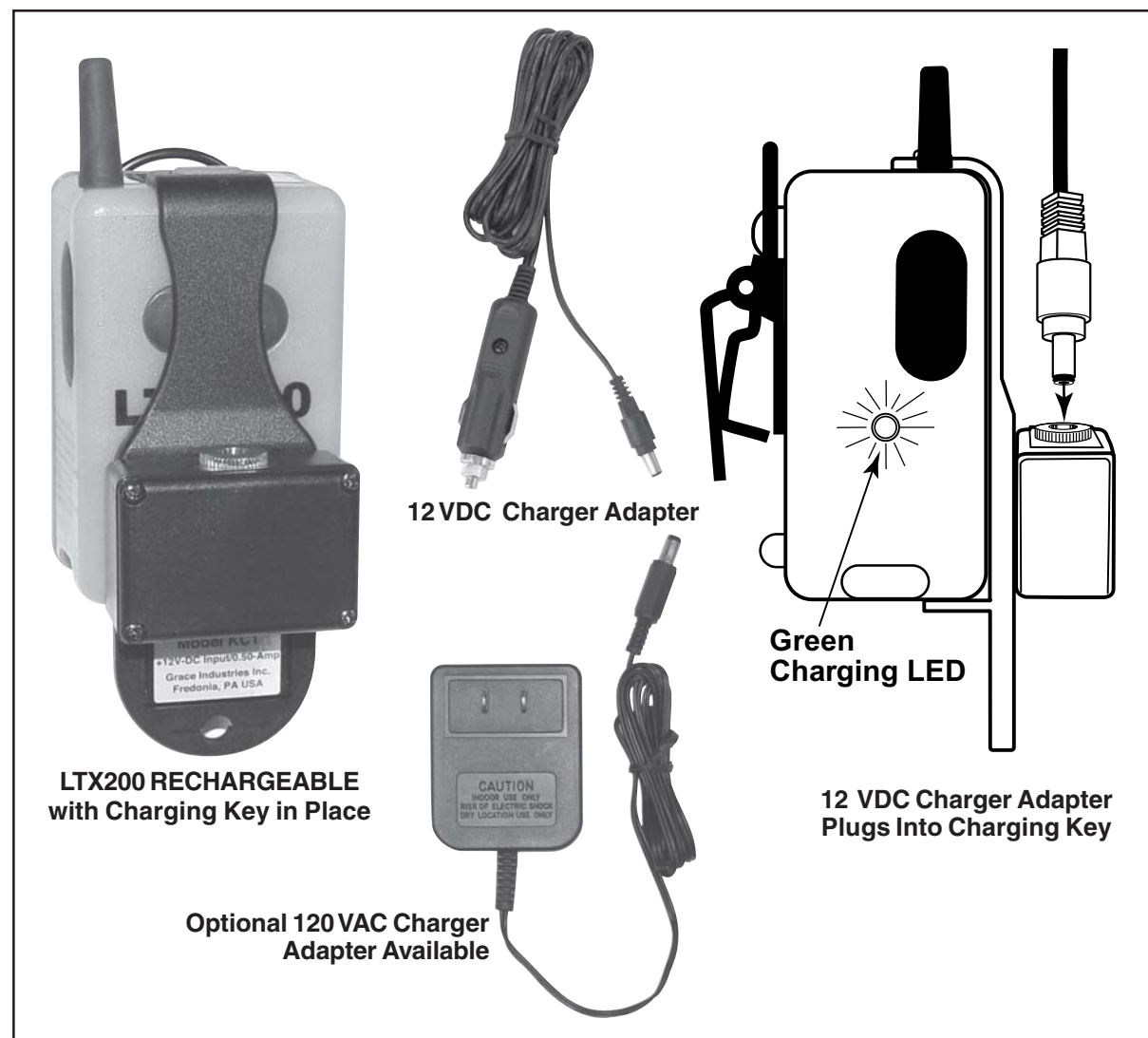
Battery: Internal intrinsically safe Lithium-ion (non field replaceable)

Battery Life: estimated at 80 hrs in Sensing mode and 4 to 6 hours in the Alarm mode.

Battery Charging: 12VDC (std) or 120 VAC (optional adapter required) may be used

Battery Charging Time: 6 to 8 hrs

Battery Charging Cycles: 500



LTX200 RECHARGEABLE with Charging Key in Place

12VDC Charger Adapter

Green Charging LED

12 VDC Charger Adapter Plugs Into Charging Key

Optional 120VAC Charger Adapter Available

Battery Charging LED Display:

Charging: When the charging key is in place and plugged into a power source a steady Green LED below the left side button (left side when facing the LTX200-R unit) will glow.

Charging Complete: Unit is fully charged when the steady green glow is replaced by a flashing Green display.

The Low Battery Alarm will sound when the battery has been exhausted to 20% of capacity (indicating approx. 1 hour operating time remains). Charging of the battery is necessary when the low battery alarm sounds.

The low battery alarm is an easily recognized series of two audio beep tones enunciated every five seconds when the PASS® is in the **Sensing** mode or **ON**.

Pre-Alert and Alarm Time Periods

Alarm Time	Per-Alert	Alarm
30 seconds	Pre-Alert 18 to 23 seconds	30 to 35 seconds to Alarm
60 seconds	Pre-Alert 48 to 53 seconds	60 to 65 seconds to Alarm
90 seconds	Pre-Alert 78 to 83 seconds	90 to 95 seconds to Alarm
120 seconds	Pre-Alert 108 to 113 seconds	120 to 125 seconds Alarm

Product Life: approx. 3 to 7 years depending upon frequency of use. Product should be retired from service if damaged, or returned to Grace Industries for evaluation and repair if applicable.

Warranty Information

Grace Industries, Inc. warrants the TPASS® LTX200-R to be free from defects in workmanship and materials for a period of one year from the date of purchase. This warranty is valid only when the returned unit is accompanied by a sales slip or other proof of purchase that states the date and location of purchase. Grace Industries, Inc. will not repair or replace any merchandise under warranty which has been damaged because of accident, misuse or abuse of the TPASS® LTX200-R while in possession or control of the consumer. This warranty is void if any attempt to repair or replace parts was made or attempted by other than qualified Grace Industries, Inc. personnel. This warranty is void if any of the sealed compartments are opened or tampered with. Send all returned merchandise, prepaid and accompanied by proof of purchase to: Grace Industries, Inc., Repair Division, 305 Bend Hill Road, Fredonia, PA 16124. Grace Industries, Inc. shall not be liable for any direct, incidental or other consequential loss or damage arising out of the failure of the device 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 ENDING ONE (1) YEAR FROM THE DATE OF PURCHASE. The warranty and liability set forth in the prior paragraphs are in lieu of all other warranties, expressed or implied, in law or in fact, including implied warranties of merchantability and fitness for a particular purpose. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

The information contained in this booklet is believed to be accurate and reliable. Grace Industries, Inc. provides this information as a guide only.

TPASS® LTX200-R system technical assistance is available by contacting Grace Industries, Inc. at 724-962-9231.

For training purposes a copy of this information is available by contacting Grace Industries, Inc.



TPASS® LTX200 RECHARGEABLE USER'S INFORMATION

Only To Be Removed By End User

INTRINSICALLY SAFE

MADE IN USA



TPASS® LTX200-R Rechargeable Auto-ON Model with Accountability Key in Place

Grace Industries, Inc.
305 Bend Hill Road, Fredonia, PA 16124
724-962-9231 • FAX 724-962-3611



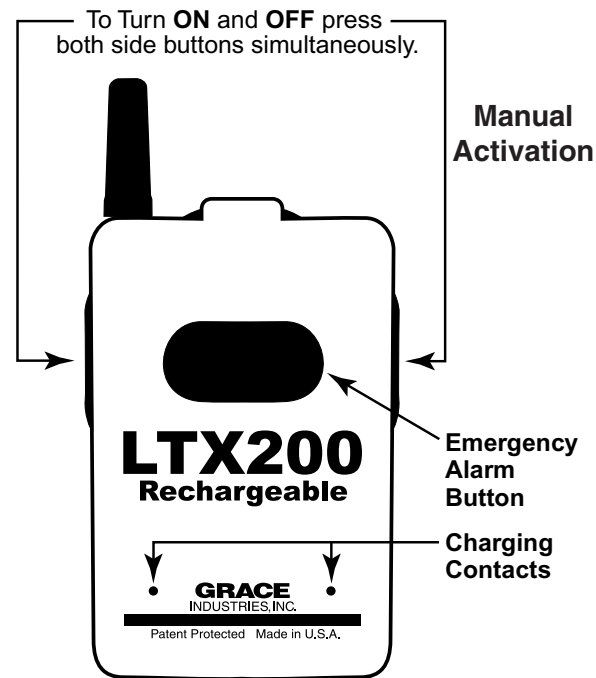
TPASS® LTX200-R Rechargeable Manual ON/OFF Model



TPASS® LTX200

Intrinsically Safe Rechargeable

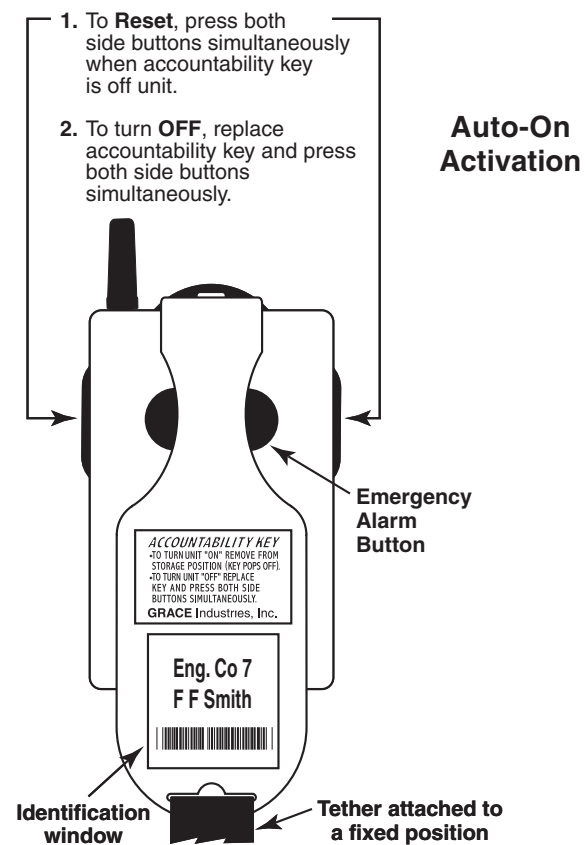
LTX200-R Operating Instructions (120 seconds to Alarm used for example)



Manual Activation

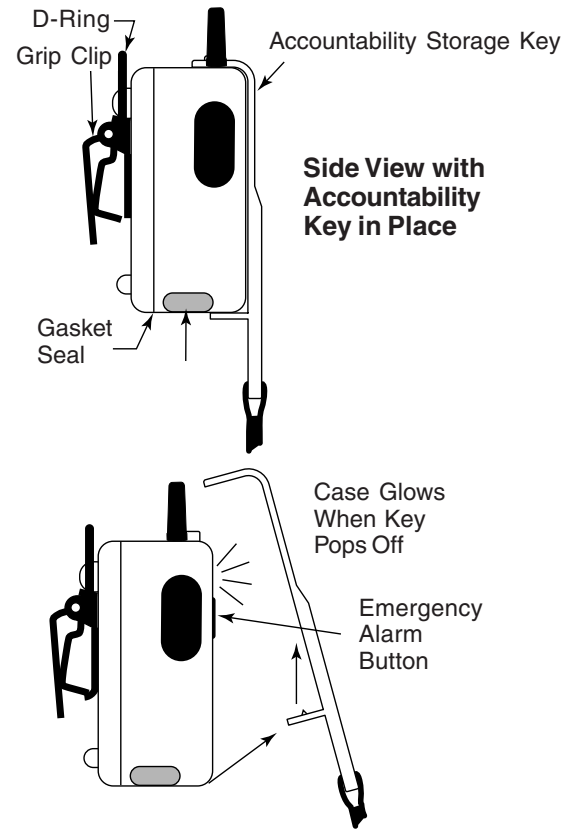
Always test the unit prior to each use. To turn unit **ON** and **OFF**, simultaneously press the buttons located on sides of unit. This feature safeguards against accidental turn off. When activated, an escalating series of loud audio tones will be heard and LTX200-R will display a bright yellow alternating LED display. Unit is now in the **Sensing** mode. If the wearer should become motionless for a period of approximately 108-113 seconds, a 12 second **Pre-Alert Signal** will be heard. If no movement is detected for 120-125 seconds, the LTX200-R will go into a loud alarm that can be heard one LTX200-R goes into **Alarm**, and an emergency radio transmission is sent. This alerts personnel outside the immediate area that personnel may need assistance.

The Emergency Alarm may be manually activated by pressing the button on the front surface of the unit. **NOTE:** The alarm will continuously sound until it is reset by pressing both side buttons simultaneously. Using an accountability key (w/ 6" tether) may help prevent accidental activation of the Emergency Alarm.



Auto-ON Activation

Always test the unit prior to each use. When removed from a storage position, the LTX200-R Accountability Key automatically pops off, activating the unit into the **Sensing** mode (motion sensing). When the LTX200-R turns **ON**, the operational signal (an escalating series of loud attention getting audio tones) will be heard accompanied by a visual wig-wag display of two yellow LEDs. The wig-wag display indicates that the LTX200-R unit is in the **Sensing** mode. After lack of motion for approximately 108 to 113 seconds, the unit will go into pre-alert and announce an audible **Pre-Alert Signal**. While in pre-alert, the yellow wig-wag display is interrupted by the intermittent pulsing of two red LEDs accompanied by a progressively louder sweeping pre-alert audio signal. The longer the unit is in pre-alert, the louder the sweeping pre-alert signal becomes signifying the unit is closer to going into **Alarm**.



Remove unit from storage position. Tether tightens, Key pops off and unit automatically goes into **Sensing** mode.

When there is lack of motion for approximately 120 to 125 seconds, the unit will go into the **Alarm Mode**. When in **Alarm**, the pre-alert LED display is replaced by a rapid pulsing of two red LEDs accompanied by a rapidly modulated loud audio **Alarm** signal. When the LTX200-R goes into **Alarm**, an emergency radio transmission is sent. This alerts personnel outside the immediate area that personnel may need assistance.

While in the sensing mode, the LTX200-R may be put into **Alarm** at any time by manually pressing the alarm button located on the front surface of the unit. Once in alarm, the unit can be reset or returned to the **Sensing** mode by simply pressing both side buttons simultaneously. To turn the LTX200-R **OFF** replace the Accountability Storage Key and press both side buttons simultaneously.

Limitations

LTX200-R is designed to meet the needs for personal alert safety systems for use in hazardous occupations including personnel working alone. Failure to ensure the LTX200-R is fully operational prior to use, may expose the user to serious injury or loss of life. Although LTX200-R is a durable product, there is no inherent guarantee against failure. Even the best PASS cannot compensate for abuse or the lack of a PASS training and maintenance program. LTX200-R can and should be checked for proper operation but most performance properties of the PASS cannot be tested by the end user in the field. After charging battery, always test LTX200-R with the MX900 to insure proper operation.

The LTX200-R is Not available in a temperature sensing model.

LTX200-R Maintenance

The LTX200-R requires minimum maintenance and will provide years of service.

Please Observe the Following Guidelines

- At the end of each use, clean unit with a damp cloth and warm water. Do Not use cleaning solvents.
- Inspect unit for signs of physical damage.
- Store LTX200-R in a dry, well-ventilated area
- 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 case.

Safety Certifications

Intrinsically Safe per ANSI/UL 913 for use in Class 1, Groups A, B, C and D; and Class II Groups E, F, G; Division 1 Hazardous Locations. Operating Temperature Code T6.

Certified to CAN/CSA Std. C22.2 No. 157-92

Intrinsically Safe, Sécurité Intrinsèque

AVERTISEMENT: La Substitution De Composants Peut Compromettre La Sécurité Intrinsèque.

AVERTISEMENT: Afin De Prévenir L 'Inflammation D' Atmosphères Dangereuses, NE Changer Les Batteries Que Dans Des Emplacements Désignés Non Dangereux.

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

Specifications

Dimensions:

2-1/8" wide, by 2-1/4" deep (with clip), 4-1/8" high (with antenna)

Weight: 7.3 ounces with battery

Alarm Audio Output: approx. 92 dBA @ 10 feet

Visual / Audio Mode Display:

OFF - no LED display

- a series of de-escalating, loud, attention getting audio tones

ON - yellow alternating LED display

- a series of escalating, loud, attention getting audio tones

Pre-Alert

- no motion sensed for 108-113 seconds

- yellow alternating LED display is interrupted by the pulsing of four red LEDs

- accompanied by a progressively louder, sweeping audio signal

Alarm

- no motion sensed for 120-125 seconds

- yellow alternating LED display is replaced by the rapid pulsing of four red LEDs

- accompanied by a rapidly modulated loud (92 dBA) audio signal

- the alarm signal is between 1,000 and 2,000 Hertz and cycles at 5.25 seconds on and .75 seconds off as an aid for determining direction when personnel need assistance