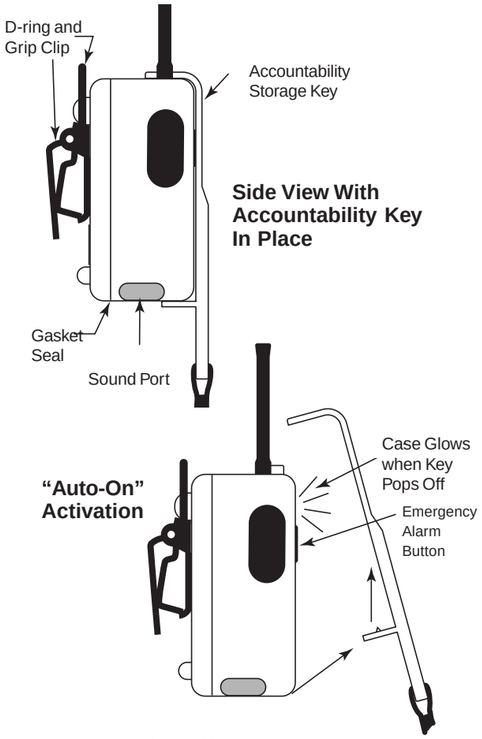
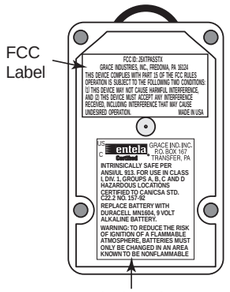
T PASS 3
Features and Labeling

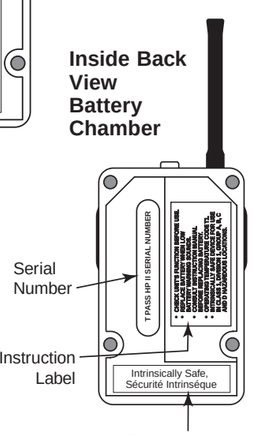


Inside Back Cover

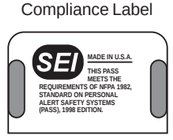


Intrinsic Safety
Label

Inside Back View Battery Chamber



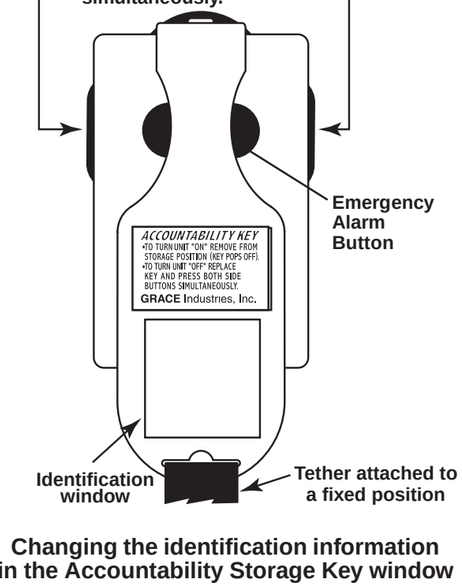
Bottom View
Compliance Label



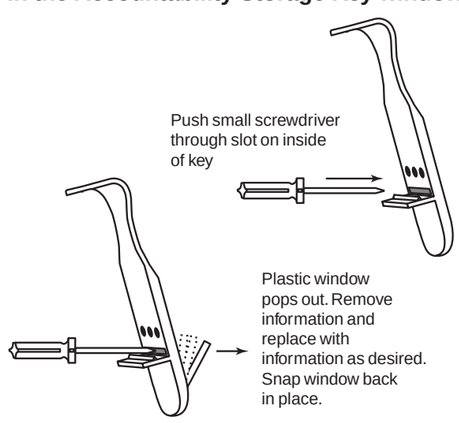
Accountability Storage Key Identification Window

Front view with key in place

1. **To "Reset", press both side buttons simultaneously when accountability key is off unit.**
2. **To turn "Off", replace accountability key and press both side buttons simultaneously.**

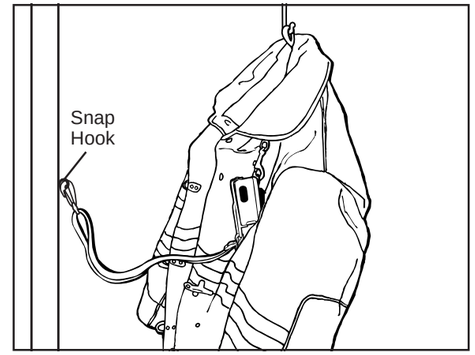


Changing the identification information in the Accountability Storage Key window

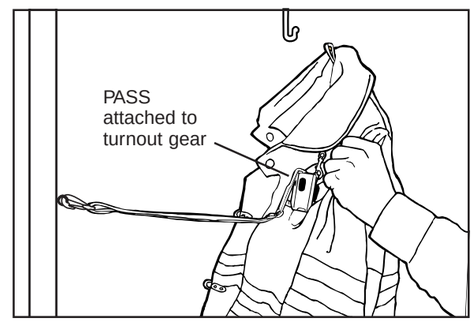


An added benefit of the new Grace system is the Accountability Storage Key. The clear Identification Window located on the front of the key provides the opportunity for specific identity of the PASS user through the ability to personalize keys with pictures, names, numbers, dept. ID, bar-codes etc. The clear access window easily snaps into place to protect the enclosed information and provide instant access for quick ID should the need arise. Information in the Identification Window can easily be changed by partially popping the ID window out with a small, flat blade screwdriver through the access slot located on the back side of the key.

Pull Away Tether for "Auto-On" Activation from Storage Positions



Snap hook attached to Transportation or Fixed Storage Position.



Pull turnout gear away, the Tether tightens and pulls the Accountability Key off the PASS. This will automatically activate the PASS into the Sensing Mode.

The TP3 is designed to be automatically activated into the "Sensing Mode" (motion sensing mode) or turned "ON" when removed from the PASS storage position, whether it is a transportation or a fixed storage position. When removed from the storage position, the tether will tighten and the Accountability Storage Key will automatically pop off putting the TP3 into the Sensing Mode. At this point, the unit can be "reset" (from the alarm to the sensing mode) but cannot be turned "OFF" until the Accountability Storage Key is replaced and both side buttons pressed simultaneously.

The Accountability Storage Key has an adjustable tether for ease of use. The tether can be adjusted from approx. 3' to 6½' in length. This allows for easy utilization whether you are anchoring the tether to a transportation position (such as to a seat in a vehicle) or a fixed storage position (such as in the fire station). Accountability Storage Keys are available with various length tethers to facilitate various operational needs.

The 1998 edition of the 1982 NFPA standard on PASS requires all stand alone PASS to automatically activate into the Sensing Mode (motion sensing mode) when removed from a transportation or a fixed storage position. The intention is to provide a higher level of safety to the Fire Fighter by insuring the PASS is automatically turned ON. Grace Industries, Inc. recommends that TP3 be utilized in a manner consistent with the spirit of the 1998 edition of 1982 NFPA Standard on PASS.

Safety Certifications

Certified to meet the requirements of: NFPA 1982, Standard on Personal Alert Safety Systems (PASS), 1998 edition.

Intntrinsically Safe per ANSI/UL-913 for Use in Class I, Div. 1, Groups A, B, C, and D Hazardous Locations. Certified to CAN/CSA Std.C22.2 No. 157-92

Intrinsically Safe, Sécurité Intrinséque.

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

AVERTISEMENT: Afin De Prévenir L'Inflammation D' Atmosphéres 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.

Warranty Information

Grace Industries, Inc. warrants the T PASS 3 Evacuate 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 T PASS 3 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 T PASS 3 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.

T PASS 3 Evacuate 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.

T PASS 3 Evacuate issues may be reported at any time to Grace Industries, Inc. at 724-962-9231. After working with the manufacturer to resolve any issues, they may be reported to SEI at 703-442-5732.

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TPASS 3 EVACUATE™

USER'S INFORMATION

Only To Be Removed By End User

Front View
with
Accountability
Key In Place

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

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Front View without Accountability key In Place

T PASS 3 EVACUATE

TPASS 3 (TP3) is an “Auto On”, two-way signaling, NFPA compliant PASS. Through the utilization of the TP3 and Command Base, Incident Commanders are provided with the ability to EVACUATE or callback firefighters as needed from dangerous situations. The “Auto On” feature insures that the TP3 is turned on “Automatically” when removed from a storage position.

TP3 Operating Instructions

When removed from a storage position, the TP3 Accountability Storage Key automatically pops off, activating the unit into the “Sensing” mode (motion sensing). When the TP3 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 TP3 unit is in the “Sensing” mode. At the same time, the integrated TP3 transceiver is also activated and starts signaling the Base.

After lack of motion for approximately 18 to 23 seconds, the unit will go into pre-alert and annunciate 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”. When there is lack of motion for approximately 30 to 35 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 rapid modulated loud audio “Alarm Signal”. When the TP3 goes into “Alarm”, an emergency radio transmission is sent to the Base. This alerts personnel outside the immediate area that firefighters may need assistance. **Always test TP3 prior to use.**

While in the sensing mode, the TP3 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 TP3 “OFF” replace the Accountability Storage Key and press both side buttons simultaneously.

TP3 EVACUATE or Callback

The TP3 EVACUATE function may be activated by the Incident Commander from the Command Base at any time. When the Evacuation signal is received by the TP3, both amber LEDs flash rapidly with a loud chirping audio alarm tone. The Evacuation alarm tone is easily differentiated from other audio tones with minimal training.

When the Evacuation alarm signal is received by the TP3, it automatically sends an electronic acknowledgement that the signal was received. A manual acknowledgement of the Evacuation signal, by the firefighter, is also required. The Firefighter manually acknowledges the evacuation signal by momentarily pressing both side buttons simultaneously. The operational signal will be heard. The acknowledgement will cause the flashing LEDs and the loud chirping audio tones to reset. The manual acknowledgement notifies the Incident Commander that the signal was received and understood by the firefighter and is being complied with. When the firefighter is out of harms way and accounted for the Incident Commander can clear the evacuation field on the Base.

Accountability Key

An added benefit of the Grace PASS is the Accountability Storage Key. The clear Identification Window provides the opportunity for specific identity of the TP3 user through the ability to personalize keys with pictures, names, numbers, dept. ID, bar-codes etc. The clear access window easily snaps into place to protect the enclosed information and provide instant access for quick ID should the need arise.

The TP3 should be securely attached to a waist strap on the lower right hip or on a vertical strap on the upper left shoulder, in the vertical position. However, the ideal wearing position of TP3 is often best determined by the end user for ease of access, operation or departmental SOP.

Each member involved in rescue, fire suppression, or other hazardous duties shall be provided with and shall use a PASS device in the hazardous area, according to NFPA 1500. **All personnel should be thoroughly familiar with and trained in the proper operation of TP3 and the Advanced Accountability System prior to field use. Failure to do so may expose the user to serious injury or loss of life.**

Battery Installation/ Replacement

To reduce the risk of ignition of a flammable atmosphere, batteries must only be changed in an area known to be non-flammable. To change the battery, remove the four screws securing the back. Remove the back cover, disconnect and dispose of the spent battery and connect the new battery. Replace the back cover and gently tighten all four screws using a criss-cross pattern for even gasket pressure ensuring a good seal. Do not over tighten screws.

WARNING Always use the specified 9 volt alkaline battery. The Duracell MN1604 is recommended for optimum performance, as other batteries may not provide the same operating life. Replacing the battery every two to three months is required unless indicated before by the Low Battery Alarm. The Low Battery Alarm will sound when the battery has been exhausted to 20% of capacity (indicating approx. 1 hour operating time remains). Immediate replacement 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. Grace Industries, Inc. assumes no liability for mechanical, electrical or other types of battery failure.“ Warning - substitution of components may impair intrinsic safety.” **After battery replacement, always test TP3 with the Base to insure proper operation.**

Limitations

T PASS 3 Evacuate is engineered to meet the design and performance requirements for personal alert safety systems (PASS) to be used by fire fighters engaged in rescue, fire fighting and other hazardous duties as defined in the NFPA 1982 Standard on PASS for Fire Fighters, 1998 edition.

Failure to ensure that TP3 is fully operational prior to use, may expose the user to serious injury or loss of life. Although TP3 meets all current NFPA specifications, there is no inherent guarantee against PASS failure. Even the best PASS cannot compensate for abuse or the lack of a PASS training and maintenance program.

Although TP3 can be checked for proper operation, most performance properties of the PASS cannot be tested by the end user in the field.

TP3 Maintenance

The TP3 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 TP3 in a dry, well ventilated area consistent with battery manufacturer requirements. Recommended storage conditions are: 50°F (10°C) to 77°F (25°) at no more than 65 percent relative humidity.
- Units contaminated by chemical or radioactive materials must be disposed of or decontaminated in accordance with all applicable regulatory standards.
- Replace battery every 2 to 3 months or sooner if indicated by the low battery alarm.
- Do Not mark or apply paint to case.

TP3 - Specifications

Dimensions: 2.1" wide by 3.2" high by 1.6" deep.

Weight: eight ounces with battery (w/out key).

Alarm Audio Output: 98+ dBA @ 10 feet.

Case: rugged, high temperature, impact resistant, translucent, Apache Yellow 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.

Sound discernability: 6 dBA against given background noise.

Antenna: robust design which aids in signal propagation. Threaded antenna for easy replacement.

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

Range: dependent upon environmental conditions.

Battery: Duracell MN1604, 9 volt alkaline recommended.

Battery Life: estimated at 30 hrs in Sensing mode and 2 to 4 hours in the Alarm mode.

Product Life: approx. 3 to 5 years depending upon frequency of use. Product should be retired from service after five years of use or earlier when damaged.

TP3 Visual / Audio Mode Display

“OFF”

- Storage key in place with no LED display.
- Periodic flash of Red LEDs as Polling Pulse is sent

“ON”

- Storage key removed with an alternating yellow wig-wag LED display - a series of escalating, loud, attention getting audio tones when accountability key is removed.

“Pre-Alert”

- No motion sensed for 18 - 23 seconds.
- Yellow wig-wag LED display alternates with the pulsing of two red LEDs.
- Accompanied by a progressively, louder, sweeping audio alarm.

“Alarm”

- No motion sensed for 30 - 35 seconds.
- Yellow wig-wag LED display is replaced by the rapid pulsing of two red LEDs.
- Accompanied by a rapidly modulated loud (98+dBA) audio alarm.
- The alarm signal is between 1,000 and 3,000 Hertz and cycles at 5.25 seconds on and .75 seconds off as an aid for determining direction when personnel need assistance.

“EVACUATION signal received”

- Activated by a signal from the BASE.
- Yellow wig-wag LED display of the sensing mode is replaced by the rapid flashing of both amber LEDs.
- Loud chirping audio alarm tone simultaneous with the rapid flashing of both amber LEDs.
- Manual acknowledgement of evacuation signal by momentarily pressing both side buttons simultaneously, the operational signal will be heard.

TP3 Mode Selection

“Auto-On”

- From Off to the Sensing Mode.
- When removed from storage position, Accountability Storage Key pops off and unit goes into the Sensing mode.

“Sensing”

- Yellow wig-wag LED display
- unit is in sensing mode.

“Alarm”

- Unit may be put into Alarm from the Sensing mode at any time by pressing the button on the front of the unit.

“Reset”

- When in Alarm, the unit may be reset to the Sensing mode by simultaneously pressing both side buttons.

“OFF”

- Unit may be turned Off by replacing the storage key and simultaneously pressing both side buttons.

TP3 with Temperature Sensing Option

Your TP3 is equipped with temperature sensing capability if the side and alarm buttons are red and the serial number ends in an H. The serial number is located in the battery compartment.

The TP3 temperature alarm (a rapid ringing tone) should not be regarded as an absolute measure of existing temperatures. The temperature alarm may sound an alarm earlier or later with regards to integrated time temperature sensing. The time variation is dependent upon where the unit is worn and the environmental conditions at the fire scene.

When the temperature alarm threshold has been exceeded by exposure to extreme environmental conditions, the unit will sound the temperature alarm audio tone with a specific LED display. The temperature alarm sound signature is a loud, piercing rapid chirping tone accompanied by the slow pulsing of 2 red LEDs. The temperature alarm cannot be silenced while the unit is in the sensing mode. The unit must cool down below the temperature alarm threshold to be reset and silenced. The TP3 and the temperature alarm may be turned Off by replacing the accountability key and pressing both side buttons simultaneously. Note: For TP3 equipped with temperature sensing, only the PASS portion of the unit is NFPA compliant. As of this writing there are no NFPA criteria or guidelines established regarding temperature sensing.

Temperature Alarm Approximate Response Times

350°F - 6 minutes	300°F - 8 minutes
250°F - 10 minutes	200°F - 12 minutes

TP3 equipped with the Temperature Telemetry Option transmit the ambient temperature to the Base with each check-in signal, approximately every 30 seconds. The ambient temperature information screen is easily accessed by pressing the appropriate key on the Operation Keypad.