WorkForce®1
Model WF1
User's Information

WorkForce® model WF1 is a worker-worn motion-sensing Man-Down Alarm that uses independent, high performance RF (radio-frequency) wireless signaling to help protect workers in dangerous and hazardous environments.

WorkForce® provides real-time **motion-sensing,** including **fall-detection**, and contains an Emergency Alarm Button to immediately transmit a distress alarm signal.

WorkForce® Alarm Monitoring (AM) version also receives distress alarm signals from other workers equipped with WorkForce® and alerts the user with audible and visual indicators. Other emergency signaling features of WorkForce® include Evacuate, Abandon, PAR, Roll-Call, and optional Out-of-Range indication.

A complete worker safety system can be achieved by using additional Grace monitoring products with locating capabilities.

Read Instructions Before Use
Always test WorkForce® prior to use

Operating Instructions

(90 seconds to Alarm used for example)

ACTIVATING WorkForce®: Simultaneously pressing both side buttons turns the WorkForce® ON and activates Sensing Mode. In Sensing Mode, the device is monitoring radio traffic for alarm messages. The WorkForce® is also sensing motion, if enabled. *When Auto-ON/OFF setting is enabled, disconnecting the unit from the charger adapter will activate WorkForce® and put into Sensing Mode.*

During activation, an operational signal of escalating audio tones will be heard and the Power Indicator (at upper left) will begin to blink approximately once per second. A pair of Green LEDs in the Alarm Ring will begin flashing in an alternating display to indicate motion is being sensed.

When WorkForce® is activated, its internal radio transmits signals to other GRACE devices and equipment.

PRE-ALERT MODE: When a user remains motionless, a Pre-Alert warning will begin to sound approximately 12 seconds before going into Alarm Mode. When no motion is sensed for approximately 78-83 seconds, WorkForce® begins an audible Pre-Alert sound and an alternating Yellow LED display in the Alarm Ring. *If motion is detected during Pre-Alert, WorkForce® will reset into Sensing Mode.*

ALARM MODE: There are 2 methods of activating Alarm Mode.

1) MOTION ALARM: After 90 to 95 seconds of no motion, WorkForce® enters the Alarm Mode.

2) DISTRESS ALARM: WorkForce® user can activate Alarm Mode at any time (from **Sensing Mode** or **OFF Mode**) by pressing the Emergency Alarm Button.

ALARM MODE: Is indicated by a rapid pulsing of Red LEDs in the Alarm Ring while sounding a loud audio alarm. During alarm, an emergency radio signal is transmitted to other GRACE devices and equipment, alerting personnel that personnel may need assistance.

RESET Alarm Mode: Return WorkForce® to **Sensing Mode** by simultaneously pressing both side buttons.

OFF: When in Sensing Mode, turn OFF by simultaneously pressing and holding both side buttons for approximately 3 seconds until a series of de-escalating audio tones are heard and all LED activity cease. *When Auto-ON/OFF setting is enabled, connecting the unit to the charger adapter will turn the WorkForce® OFF.*

SYSTEM LOOP TEST: When in Sensing Mode, press and hold top button until a rapid tri-tone confirms the device has sent Loop Test Message and the countdown timer has started. A successful Loop Test is indicated by an escalating tri-tone and side LEDs 4-1 blinking yellow in an upward sequence. If the Loop Test Acknowledge message is NOT received within the configured timeframe, a de-escalating tri-tone will be heard. **NOTE: Use the Device Settings option in WorkForce Configuration tool to enable/disable this feature.**

Operation of Special Features

EVACUATION ACKNOWLEDGMENT: If an Evacuate message is received by the WorkForce®, it can be manually acknowledged by simultaneously pressing both side buttons.

ABANDON ACKNOWLEDGMENT: If an Abandon message is received by the WorkForce®, it can be manually acknowledged by simultaneously pressing both side buttons.

ALARM MONITORING: Allows the user to monitor the status of other personnel working in the same general area when they are equipped with WorkForce® or other GRACE devices. WorkForce® MUST be in the Sensing Mode to receive Alarm signals from other Grace devices or equipment. When one device goes into Alarm and an Alarm Monitoring WorkForce® receives the signal, the Red side LEDs will flash in an alternating pattern. This alert can be cleared for one minute by pressing both side buttons simultaneously. If additional GRACE devices go into Alarm during this one-minute period, the Alarm Monitoring LED display will be reactivated. This cycle will continue until the telemetry unit in Alarm is reset or shut off.

***NOTE:** If an alarm has been received, the WorkForce® will not turn off until the alarm has been cleared or reset.*

FALL DETECTION:

WorkForce® is capable of detecting a fall of greater than 4ft. If a fall is detected, the device will enter the Fall Pre-Alert state for 15 seconds to allow the user to reset the WorkForce® after a false trigger or a fall that does not require assistance. Fall Pre-Alert can only be reset by simultaneously pressing both side buttons. If the Fall Pre-Alert is not reset within 15 seconds the device will automatically enter the Fall Alarm mode. This will send out a Fall Detected Alarm message to any compatible Grace monitoring equipment.

FALL PRE-ALERT MODE: Is indicated by alternating Yellow LED display in the Alarm Ring, and a double beep after the Pre-Alert tone. Fall Pre-Alert may be cleared by simultaneously pressing both side buttons.

FALL ALARM MODE: Is indicated by rapid pulsing of the Red LED's in the Alarm Ring while sounding a loud audio alarm with a double beep. Clear the Fall Alarm by simultaneously pressing both side buttons.

IMPORTANT NOTE: WorkForce® model WF1 cannot detect every possible type of 'fall'-event and it is the user's responsibility to be trained to always push the Emergency Alarm button, if they are able, following any type of 'fall'-event.

SIGNAL-LOST/OUT-of-RANGE OPERATION:

Signal-Lost/Out-of-Range is an indication that the user is beyond the effective signaling range of the WorkForce® and a Grace monitoring device or unit, such as a Grace GMG or GFG Gateway, MS2000, SMS or Grace-Watch® system. This feature operates using 2 way signaling between the WorkForce and the monitoring unit for the purpose of indicating to the user they may be out of the effective signaling range of the system.

When this feature is enabled and under normal operation, the user will receive notification they are in the effective signaling range on the monitoring device within 30 seconds after powering on the WorkForce®.

This feature can be enabled through the PC software configuration tool. If this feature was not enabled, verify there is a Grace monitoring device that present that supports Signal-Lost/Out-of-Range notification and is configured to actively operate with the WorkForce® units.

WorkForce® Mounting and Attachment

IMPORTANT NOTE: For WorkForce® to properly sense a falling motion, the device must be securely attached to the user.

WorkForce® is equipped with a high-strength grip-clip designed for secure attachment to personnel gear such as to a vertical strap on the upper left or right shoulder with the sound port facing out, or on the right or left hip area. The optional swivel-clip attachment is designed to clip onto a horizontal belt or strap. **However, the ideal wearing position of WorkForce® is often best determined by the end user for ease of access and operation.**

Mode Selection

ON (Sensing Mode)

- Simultaneously press both side buttons to activate WorkForce® and put into **Sensing Mode**.
- **Auto-ON:** when Auto-ON/OFF setting is enabled, WorkForce® is activated and put into **Sensing Mode** by disconnecting the unit from charger adapter plugged into appropriate power source. ***NOTE:*** *if power source is disconnected or lost (i.e. power outage), the WorkForce® will turn ON.*

ALARM

- **Alarm Mode** can be manually activated at any time (from **Sensing Mode** or **Off Mode**) by pressing the Emergency Alarm Button.

RESET

- When in Alarm or receiving an EVACUATE / ABANDON signal, **RESET** the WorkForce® to **Sensing Mode** by pressing both side buttons simultaneously.

OFF

- When in **Sensing Mode**, turn **OFF** by simultaneously pressing and holding both side buttons until the unit deactivates.
- **Auto-OFF:** when Auto-ON/OFF setting is enabled, WorkForce® is turned OFF by connecting the unit to charger adapter plugged into an appropriate power source.

SYSTEM LOOP TEST

- When in **Sensing Mode**, press and hold top button until a rapid tri-tone confirms the device has sent Loop Test Message and the countdown timer has started.
- **SUCCESSFUL Loop Test** is indicated by an escalating tri-tone and side LEDs 4-1 blinking yellow in an upward sequence.
- **FAILED TEST:** If the Loop Test Acknowledge message is NOT received within the configured timeframe, a de-escalating tri-tone will be produced.

Visual / Audio Mode Display

OFF

- No LED Display.

ON (Sensing Mode)

- A series of escalating, loud audio tones.
- Green alternating LED display in Alarm Ring.
- Power LED flashing approximately once per second.

PRE-ALERT

- No motion sensed for 78-83 seconds.
- Amber alternating LED display in Alarm Ring.
- Loud, sweeping audio tones.

ALARM

- No motion sensed for 90 to 95 seconds.
- Rapid pulsing of Red LEDs in Alarm Ring.
- Loud audio alarm.
- Audio Alarm pauses briefly as an aid for determining direction when personnel need assistance.
- Radio LED flashes Red when transmitting the emergency radio signal.

EVACUATE / ABANDON

- Running Man LED Flashes Red when receiving EVACUATE or ABANDON signal from another Grace device or equipment.
- EVACUATE Tone: Loud, stepped de-escalating tone ending in the higher start tone.
- ABANDON Tone: Loud, multi-chirp two-step pulsed tone.

Signal Lost / Out-of-Range Notification

- 3 audio down-sweeping tones.
- 3-second vibration.
- This notification repeats every minute until signal is regained

Signal Active / In Range Notification

- 3 audio up-sweeping tones.
- 3 short vibration pulses.

SATELLITE-GPS

- Slow blinking Green LED when GPS signal is acquired.
- Slow blinking Red/Green LED when NO GPS signal is detected.

LOW BATTERY

- Power LED blinks Red when battery charge is below 25%.
- Double chirp sound every five (5) minutes if audio is enabled.
- NO power-on tones.

SYSTEM LOOP TEST

- **Loop Test Initiated:** Rapid tri-tone.
- **Successful Loop Test:** Escalating tri-tone is produced and side LEDs blinking in upward sequence.
- **Failed Loop Test:** De-escalating tri-tone.

WorkForce®1 Top LED Indicators

POWER When WorkForce® is ON, Power LED blinks Green approximately once per second. LED blinks Red when battery level is below 25%.

RADIO Flashes Red when transmitting radio signals. Flashes Green when receiving radio signal from other GRACE devices or equipment. Alternating Green/Red flashing indicates Signal Lost/ Out-of-Range Notification.

SATELLITE-GPS For GPS Equipped devices, the Satellite LED displays status of GPS fix. LED blinks Green when a GPS fix is acquired.

EVACUATE / ABANDON Displays EVACUATION or ABANDON status of the WorkForce®. Flashes Red when receiving an EVACUATE or ABANDON signal.

ALARM RING STATUS LEDs: LED ring surrounding Emergency Alarm Button.

- Rapid pulsing **Red** LEDs when in Alarm.
- Alternating **Yellow** LEDs when in Pre-Alert.
- Alternating **Green** LEDs when in Sensing Mode.

System Status (Side) LED Indicators

The System Status LEDs perform several functions. Four (4) Red/Green LEDs are numbered 1 through 4 and arranged along the left side of the device beginning with #1 at the upper left and #4 at the lower left.

Alarm Monitoring (AM): If AM is enabled, Red LEDs will flash in an alternating pattern when an Alarm signal is received from a GRACE Man-Down device.

System Fault Detected: If a System Fault is detected, the LEDs will indicate the detected fault.

System Faults

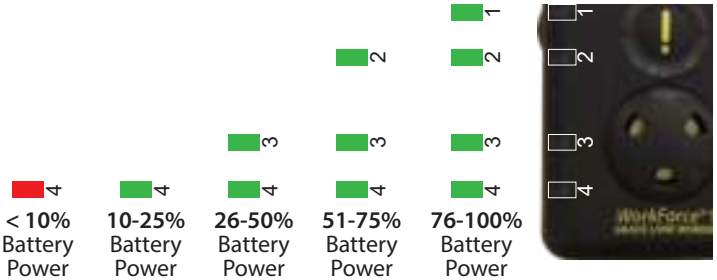
LEDs	Fault
4 3 2 **1**	Real Time Clock (RTC) Not Set
4 3 **2** 1	Settings
4 3 **2** **1**	Data-Log
4 **3** 2 1	Radio
4 **3** 2 **1**	Temperature Sensor
4 **3** **2** 1	Data-Log Hardware
4 **3** **2** **1**	12C0 Bus Lockup or Timeout
4 3 2 1	GPS (Solid Red Top LED also)
4 3 2 **1**	Real Time Clock Chip Not Responding
4 3 **2** 1	Battery System
4 3 **2** **1**	Accelerometer Fault
4 **3** 2 1	EEPROM Fault

Battery Power Level: When either side button is pressed, System Status LEDs will display the remaining battery power level. ***(See diagram below).***

Battery Charging Status: When charging the WorkForce®, the System Status LEDs will indicate the current battery power level.

- **Battery fully charged:** All 4 LEDs will blink Green.
- **Partially charged:** While charging, these LEDs will cycle from #4 up to the current Battery Power Level.

Battery Power Level



Battery Charging

When less than 3 hours of operating time remain in Sensing Mode, the WorkForce® Power LED will blink Red. The power-on tones are not emitted when WorkForce® has a low battery. When audio is enabled, low battery is also indicated by a double chirp sound once every five minutes.

Warning: There are no audible low battery sounds with audio tones disabled.

When low battery is indicated, less than 3 hours of operating time remain and battery should be charged immediately.

With the 120VAC charger provided, recharge time is approximately 3 hours from a low battery warning and 4 hours for a dead battery.

Typical operation time between recharging is approximately 40 hours in Sensing Mode.

An optional 12VDC charging adapter is available.

NOTE: Charging via computer USB port may take longer.

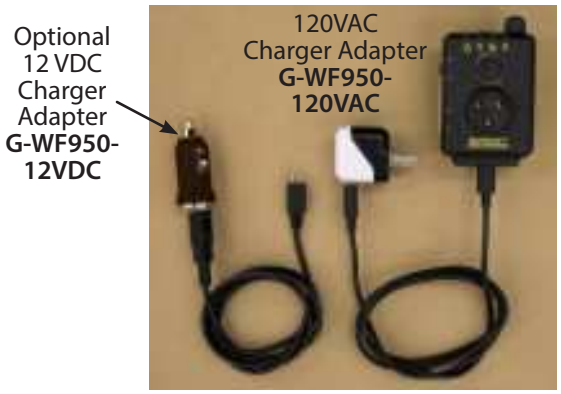
Plug the charger into an outlet. It takes approximately 10 seconds for the unit to detect a charger connection and begin to show charging status. Charging status is displayed on the side LED status bar 1-4. This battery charge status will be indicated by the number of blinking status bar LEDs.

Battery Charging Status: When charging the WorkForce®, the System Status LEDs will indicate the current level of charge.

- Battery fully charged: All 4 LEDs will blink Green
- Partially charged: While charging, these LEDs will cycle from #4 up to the current Battery Power Level.

Battery Calibration: For optimum performance of the battery monitor it is recommended to run the battery through a calibration cycle every 6 months.

Calibration Procedure: Allow the Workforce to drain fully then perform a full charge before using. This step will recalibrate the battery power level gauge.



WorkForce®1 shown with Micro B USB Cord and 120VAC Charger Adapter (p/n: G-WF950-120VAC)
Optional 12VDC Charger Adapter shown at left

Features

- Large button for manual activation of Emergency Alarm
- Man-Down safety monitoring feature provides the user with motion sensing protection
- Audible and Visible Pre-Alert warning before Man Down Alarm
- Audible and Visible Indicators for all Modes of Operation
- RF (radio-frequency) wireless signaling for immediate notification of personnel emergency distress
- No voice radio needed for Evacuation signaling and user acknowledgment
- Alarm Monitoring function alerts the user that a Grace Man-Down device, within signaling range, is transmitting an alarm message
- High performance radio signaling with RF repeating capability
- Tracking the location of WorkForce®1 is possible when used in conjunction with Grace Locator Beacon and either a GRACE SMS or Grace-Watch® safety monitoring system

Specifications

- **Model:** WF-1-H, User Model.
- **Dimensions:** 2-1/4" wide, 1-1/4" deep (without clip), 3-3/8" high.
- **Weight:** 5.7 oz.
- **Alarm Audio:** 79+ dBA at 10 feet.
- **Internal Battery:** 3.7 V nominal, 1960 mAh, lithium-ion rechargeable.
- **Device Run Time:** Approximately 40 hours in Sensing Mode, and 8 hrs. in Alarm Mode.
- **Radio Frequency:** ISM license free, spread spectrum.
- **Battery Charger Operational Voltage:** 120VAC or 12VDC.
- **Battery Charge Time:** 3 - 4 hrs.
- **USB Connector:** Micro B USB connection for battery charging and WorkForce®1 configuration.
- **Certifications:**
  - FCC ID: J5XT5HIP
  - IC: 5916A-T5HIP
  - AS/NZS 4268:2017
  - Australia / New Zealand: Compliant to ACMA AS/NZS CISPR22:2006, Class A Digital Apparatus | AS/NZS 4268:2017 for Intentional Radiators
    - EMC93142B-ACMA
    - EMC93142B-AS/NZS 4268

Pre-Alert and Alarm Time Periods

Alarm Time	Pre-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 to Alarm
180 seconds	Pre-Alert 168 to 173 seconds	180 to 185 seconds to Alarm

90 seconds is standard setting (factory default) from the Manufacturer.

WARNING: Any motion sensing Alarm Time period longer than 90 seconds is potentially dangerous to the user of this product. The longer the motion sensing time period is, the greater the risk of exposing the user to a delayed response to an incapacitated, distressed worker.

Definition of Terms

ABANDON: Abandon signal received, indicating imminent harm may occur and the user should abandon the area immediately.

Alarm Inhibit Timer: When WorkForce® receives an alarm message from another GRACE Industries device and that alarm is cleared, the Alarm Inhibit Timer provides a 30 second period of time where the WorkForce® will not receive another alarm message from that same device.

Alarm Message: A radio transmitted signal is sent from the WorkForce® to notify monitoring personnel that an emergency situation is present and rescue action is requested.

Alarm Mode: WorkForce® transmits an emergency radio signal and emits a loud audio alarm tone when motion-sensing timer has lapsed, fall-detection was recorded, or the emergency alarm button is activated.

Alarm Monitoring: Allows the user to monitor the status of other personnel working in the same general area when they are equipped with WorkForce® or other GRACE devices. WorkForce® MUST be in the Sensing Mode to receive Alarm signals from other GRACE devices or equipment.
When one device goes into Alarm and an Alarm Monitoring WorkForce® receives the signal, the Red side LEDs will flash in an alternating pattern. This alert can be cleared for 30 seconds by pressing both side buttons simultaneously. If additional GRACE devices go into Alarm during this one-minute period, the Alarm Monitoring LED display will be reactivated. This cycle will continue until the unit in Alarm is reset or shut off.
NOTE: *If an alarm has been received, the WorkForce® will not turn off until the alarm has been cleared or reset.*

Auto ON/OFF: When this setting is enabled, WorkForce® is turned On and Off by disconnecting or connecting the device into the Charger Adapter.

Dilution of Precision: A term used in satellite-gps navigation to express the positioning accuracy of a GPS enabled device.

EVACUATE: Evacuation signal received, indicating the user should leave the area immediately.

Fall Detection: When in Sensing Mode, WorkForce® monitors the user for a falling motion. Once a possible fall is detected, the unit enters Fall Pre-Alert mode, alerting the user of a detected fall and allowing time (< 15 seconds) to clear the detected fall before an Alarm is activated.

Man-Down Alarm Mode: A WorkForce® or other GRACE safety device enters Man-Down Alarm Mode when the Motion Sensing Timer counts down to zero.

Monitoring Authority: The Monitoring Authority is the person/people responsible for monitoring the status of the devices used by the various on-scene personnel, usually from a centralized base location.

PAR: Personnel Accountability Report is used to prompt the person wearing the WorkForce® to acknowledge a **PAR-request** signal sent from a **Grace-Watch® software monitoring system**. This is designed as a periodic **check-in** for the WorkForce® user providing an indication of their well-being.

Radio Signal Propagation: Radio Signal Propagation is the behavior radio waves exhibit when they are transmitted. Radio Signal Propagation can be affected by structural, environmental, and atmospheric conditions.

Resetting the Device: Simultaneously pressing the side buttons resets the WorkForce®.

ROLL-CALL: Requires the use of a **Grace-Watch® software monitoring system** and is designed to signal the WorkForce® user of an escalated situation prompting the user to acknowledge their safety status immediately.

Sensing Mode: When the WorkForce® is turned on, it is in Sensing Mode. In Sensing Mode, the device is monitoring radio traffic for alarm messages. The WorkForce® is also sensing motion, if enabled.

Signal-Lost/Out-of-Range: Signal Lost is an indication that the user is beyond the effective signaling range of the WorkForce® and a Grace monitoring device or unit, such as a Grace GMG or GFG Gateway, MS2000, SMS or Grace-Watch® system

Unit ID: The Unit ID is the unique ID number assigned to the WorkForce® device for the purpose of radio communication. It can be viewed on the HID WorkForce® Configuration Tool.

Unit OEM: The Unit OEM is a number assigned to the WorkForce® device and is similar to the Unit ID. The key difference is the Unit OEM is not a unique number to each device. In most applications all of the WorkForce® devices will have the same OEM number; from the factory, this number will usually be 9090.

User's Manual info: Survey Mode, WorkForce® Models WF1, WF2

1. The WorkForce® models WF1 and WF2 have a RF performance Site-Survey test mode, further referred to as "Survey mode", whereby two WorkForce® units transmit and receive RF signals between them providing an indication of anticipated RF signaling performance when used in the environment that is being surveyed. Important, **PLEASE READ THIS ENTIRE SECTION ON THE SURVEY MODE BEFORE ATTEMPTING TO PLACE A WorkForce® UNIT IN TO SURVEY MODE**.

Before starting Survey Mode, make sure all Grace Gateways and Base Station devices are powered off. This includes: GFG, GMG, MS3000. PWA, MS2000, Grace-Watch, and SMS.

WARNING! Powering off Gateways and/or Base Stations may leave lone workers or employees without safety monitoring and alerting during this time. Be sure to re-activate the Gateways and Base Stations after Survey Mode testing is complete.

a) The WorkForce® Survey mode is operational between two model WF1 and/or model WF2 units and are not exclusive to any model, thereby allowing two model WF1 units, two model WF2 units or one of each (a model WF1 and a model WF2) to be used in this Survey mode.

IMPORTANT NOTE: WorkForce® units placed in Survey mode <u>are not operational</u> as a safety device.

b) While WorkForce® units are in the Survey mode, only two WorkForce® units can be used at the same time for this purpose, however on-going use of other Grace devices (including WorkForce® units) can continue to operate, unaffected by the Survey mode testing.

c) The WorkForce® units, when placed in Survey mode will assume a role of either roving-Primary or stationary-Secondary, determined by which WorkForce® unit was put in the Survey mode first. The WorkForce® unit powered on first and placed in Survey mode becomes the ***roving-Primary*** and the second WorkForce® unit placed in Survey mode becomes the ***stationary-Secondary***.

d) The WorkForce® Survey test mode uses a method indicating a successful RF transmit and receive from both units. When in Survey mode, the WorkForce® does not Smart-signal® repeat other RF signals from other Grace devices nor will they transmit any polling signals. Typically, a WorkForce® model WF2 is used as the Primary and a WorkForce® model WF1 is used as a Secondary.

2. Placing the WorkForce® models WF1 and WF2 in to Survey mode is done using this sequence:

IMPORTANT NOTE: WF1 can only enter the Survey mode within the first 15 seconds after powering on the WF1 unit. (Lone Worker models are automatically powered On by disconnecting the WorkForce® from the Charger Adapter.)

a. With the unit turned off, power on the WorkForce® unit by pressing and releasing both side buttons simultaneously.

b. The WorkForce® model WF2 will use a menu and display to enter Survey mode. After powering on the WF2, use the MENU button to index the display showing message "Hold Select 3Sec for Setup Mode" and then press and hold the Select button for 3+ seconds to enter Setup mode. Once in Setup mode, press the MENU button to navigate to the "Radio Survey Mode" menu item and enable the Survey mode by pressing the SELECT button. To exit Survey mode, press and release both side buttons (MENU and SELECT) and then again press and hold the MENU and SELECT buttons simultaneously to power off the unit.

c. The WorkForce® model WF1 is placed in Survey mode after powering on by pressing and holding the unit's SELECT button (on the antenna side) and then the TOP button both for 3+ seconds until a double-chirp beep tone sounds, indicating Survey mode is entered. **<u>Note</u>:** Lone Worker models are automatically powered On by disconnecting the WF1 from the Charger Adapter.

d. Once the first WorkForce® unit is placed in Survey mode, THERE IS A REQUIRED 20+ SECOND WAITING PERIOD before placing the second WorkForce® unit in to Survey mode. After the 20+ second wait period, the first WorkForce® unit begins transmitting the Survey mode signals every 2 seconds indicated by the red LED transmit indicator and the audible two-tone (high to low) chirp sound.

3. The first WorkForce® unit placed in Survey mode will automatically become the ***roving-Primary*** after 20+ seconds, assuming there are no other WorkForce® units present that are already in roving-Primary Survey mode. After the 20+ second wait period, the second WorkForce® unit is to be powered on and placed in Survey mode and will automatically become the ***stationary-Secondary*** unit if it receives the Survey RF signal from another WorkForce® already in ***roving-Primary*** Survey mode.

Once the WorkForce® units are successfully placed in their respective Survey modes, the ***roving-Primary*** WorkForce® unit will emit two separate audible two-tone chirp sounds indicating successful signaling between the ***roving-Primary*** and ***stationary-Secondary*** WorkForce® units.

4. While the WorkForce® units are in Survey mode, the recommended method used to survey an environment is to place the ***stationary-Secondary*** WorkForce® unit at the physical location that is intended to be the monitoring place for worker alarms from all WorkForce® users, or the location that a Grace Repeater would be placed, for large areas. Then a user is to carry the ***roving-Primary*** WorkForce® unit to various locations in your facility or environment while listening to the audible chirp sounds, realizing that a change (not hearing the second two-tone audible sound) will be noticed if the signaling links between the WorkForce® units are not successful.

It is recommended that if available, a WorkForce® model WF2 is used as the ***roving-Primary*** unit as there are both audible and visual (via OLED display) indications of successful signaling performance including a resettable counter that shows the number of attempts and successes of each set of test signals sent and received every 2 seconds.

The Survey mode test signals are repeated by Grace telemetry system Repeaters and other Grace fixed monitoring equipment including MS2000 series units.

HID WorkForce®Configuration Tool
User's Manual

WorkForce® Model WF1: A worker-worn motion-sensing Man-Down Alarm that uses proprietary, ISM license free, high performance RF (radio-frequency) wireless signaling to help protect workers in dangerous and hazardous environments.

HID WorkForce® Configuration Tool: Allows users to customize the settings of their WorkForce® by connecting the device to a PC with a Micro B USB cable and running the GRACE utility (HID WorkForce® Configuration) tool.

To use the configuration tool:

1. **If configuration tool is not already installed on your Windows PC:**
   A. Download the WorkForce® configuration tool from http://www.graceindustries.info/downloads/
   B. Select "WorkForce Config tool" to download the installer.
   C. Run the program installer to install configuration tool onto your Windows PC.
   NOTE: WorkForce Configuration Tool User manual is included in the Configuration Tool software/program.
2. **Open the configuration tool.**
3. Follow the instructions on the tool to connect to your WorkForce® device.
4. Once the device is connected, you will hear 3 quick beeps and all 4 side status bar LED will glow green. The WorkForce® configuration tool should display the current device settings within 30 seconds of the 3 quick beeps.
5. **Settings will not be changed until the <Sync Device Setting> button is clicked.** A pop up window will acknowledge that device settings have been updated
6. Note the unit will drop out of HID configuration mode after 5 minutes of inactivity. To reconnect, you must turn the unit off and start over at step 3.

Connection Troubleshooting Guide:

- **WorkForce® fails to show device settings after completing Step 4 (in the instructions above), or the device connects but only briefly displays the current device settings. <u>This can occur when the device USB connection is unstable</u>.**
  1. If WorkForce® was in Low Battery when connected or the battery was dead - let the WorkForce® charge for 30 minutes before re-attempting to configure.
  2. It is recommended to have at least 50% (2 bars) of battery power before attempting configuration.
  3. Verify the USB connection at WorkForce® and at the computer is fully connected and not loose.
  4. Verify the 4 side status bars are blinking, indicating the WorkForce® is charging or is fully charged.
  5. Try connecting with a different USB Micro Cable. NOTE: Some USB Micro cables are for charging only and are not designed for data transfer.
  6. Try connecting with a different USB port on the computer. The best port is a directly connected port on the body of the PC. USB hubs are a common point of communications trouble.
  7. Turn computer completely off for 5 minutes and try again.

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

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.**

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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.

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