

SuperCELL®

User's Information

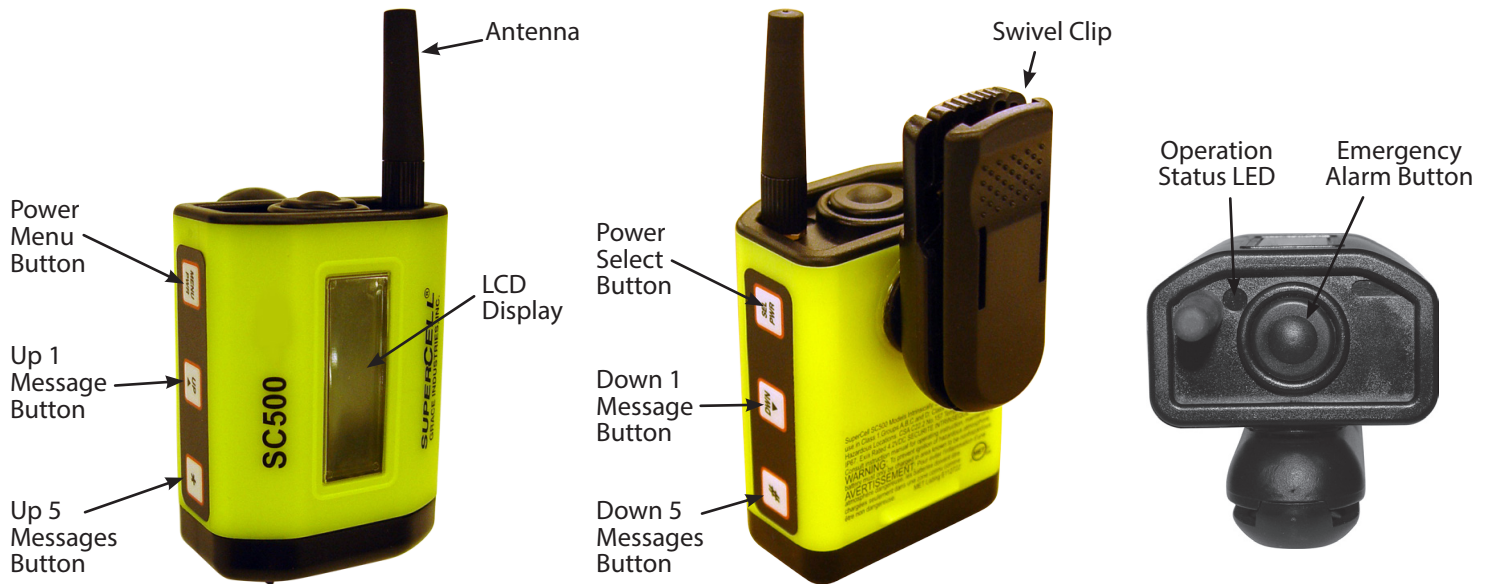
Model SC500 with Top Button ALARM



SuperCELL® is a wearable, no-motion man-down alarm designed for workers in hazardous environments. It uses independent, high-performance RF (radio-frequency) wireless signaling to provide reliable protection and rapid response in dangerous situations. **SuperCELL®** provides real-time no-motion sensing and fall detection, and features an emergency alarm button that instantly transmits a distress signal when help is needed.

The **SuperCELL®** Alarm Monitoring (AM) version can also receive distress signals from other workers equipped with Grace TPASS®, SuperCELL®, WorkForce® devices, alerting the user through clear audible and visual indicators. Additional emergency signaling features include Evacuate, Abandon, PAR, Roll Call, and an optional out-of-range alert.

For a fully integrated worker safety solution, **SuperCELL®** can be paired with additional Grace monitoring products that offer advanced locating capabilities.



Power Operation (Manual Control) SuperCELL® SC500-MAN

SuperCELL® SC500-MAN model is equipped with a manual power On/Off feature.

Power On: Press both side PWR buttons simultaneously to turn the device on.

Power Off: Press and hold both PWR buttons at the same time until the device powers down.

Ensure both buttons are pressed firmly and at the same time for proper operation.

Power Operation (Auto On/Off) SuperCELL® SC500-A

Model SC500-A is equipped with an automatic power On/Off feature. This function is enabled by default on the SC500-A.

Power On: The device will automatically turn on when it is disconnected from the charger, provided the charger is connected to an appropriate power source.

Power Off: The device will automatically turn off when it is connected to the charger, while the charger is plugged into an appropriate power source.

Ensure the charger is properly connected to a suitable power supply to enable correct operation of the automatic on/off feature.

Features

- Man-Down safety monitoring feature provides the user with motion sensing protection
- **Emergency Alarm Button: Large top button for manual activation of Emergency Alarm**
- Audible and Visible Indicators for Pre-Alert warning, Man-Down Alarm, and other Modes of Operation
- LCD Display
- 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 user of nearby Grace Man-Down device transmitting an alarm message.
- High performance radio signaling with RF repeating capability
- SuperCELL® supports location tracking when used with a Grace Locator Beacon and Grace Cloud Connect®, Grace SMS or Grace-Watch®

Specifications

- **Model:** SC500, with Top Button Alarm
- **Dimensions:** 2-3/16" wide, 1-3/8" deep (without clip), 5" high (with antenna)
- **Weight:** 5.6 oz
- **Display Screen:** LCD
- **Internal Battery:** 3.7 V nominal, 1960 mAh, lithium-ion rechargeable
- **Device Run Time:** Approximately 40 hours in Sensing Mode and 10 hours. in Alarm Mode.
- **Radio Frequency:** ISM license free, spread spectrum.
- **Battery Charger Operational Voltage:** 120VAC or 12VDC. *Available international power adapters rated for 100-240VAC input, with UL, FCC, CE,  safety ratings*
- **Battery Charge Time:** 6-8 hrs
- **Environmental Range:** -20°C to 60°C / -4°F to 140°F
- **Certifications:**
 - IP67
 - FCC ID: J5XT5HIP
 - IC: 5916A-T5HIP
 - 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



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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.

Important Notice

Read Instructions Before Use

Carefully review all instructions in this manual before operating the SuperCELL® device. Proper understanding of its functions and settings is essential for safe and effective use.

Always Test SuperCELL® Prior to Use

Before each use, test the SuperCELL® device to ensure it is functioning correctly and that all features are operating as intended. This helps confirm proper system performance and readiness.

Operating Instructions

ACTIVATING SUPERCELL®

SuperCELL® devices are activated by entering Sensing Mode, during which the unit monitors radio traffic for alarm messages and, if enabled, detects no-motion events.

- **Manual Activation (SC500-MAN Models):**
Press both side PWR buttons simultaneously to power on the device and activate Sensing Mode.
- **Automatic Activation (SC500-A Models):**
When the auto on/off feature is enabled, disconnecting the device from the charger adapter (while the adapter is connected to a power source) will automatically power on the unit and place it into Sensing Mode.

Ensure the device is properly powered and configured so that all sensing features operate as intended.

ACTIVATION INDICATORS

During activation, SuperCELL® provides audible and visual feedback to confirm proper operation and entry into Sensing Mode.

- **Audible Indicator:** An escalating sequence of audio tones will sound during activation.
- **Motion Sensing Indicator:** After a series of splash screens, the LCD will display motion-sensing status as well as SuperCELL® unit ID.

These indicators confirm that the device has successfully powered on and is operating in Sensing Mode.

When SuperCELL® is activated, its internal radio transmits signals to other compatible Grace devices and equipment. This communication enables coordinated system operation and allows connected devices to respond appropriately to the SuperCELL® status and any detected events.

NO-MOTION PRE-ALERT and ALARM FUNCTIONS

If the SuperCELL® device has No-Motion Timing enabled, it will monitor for movement and trigger an alarm if no motion is detected for the preset time interval (measured in seconds). Approximately 12 seconds before the No-Motion Alarm activates, the device will enter a Pre-Alert Warning phase to provide advance notice and allow time for user response.

NOTE: No-Motion timing can be adjusted by the user or configured by the factory prior to shipment. The factory default setting is 90 seconds.

When no motion is detected for approximately 78 seconds, the device will begin a pre-alert phase approximately 12 seconds before the full alarm is activated.

- **During the Pre-Alert Phase:**

An audible Pre-Alert tone will sound.

The on-screen countdown Time-to-Alarm will be highlighted.

If motion is detected during the Pre-Alert phase, the device will automatically reset and return to Sensing Mode.

ALARM MODE

SuperCELL® can enter Alarm Mode in two ways: automatically through motion sensing or manually via the Emergency Alarm Button.

- **No-Motion Alarm:**

If the device is programmed to trigger an alarm after 90 seconds of no detected motion, it will automatically enter Alarm Mode once this threshold is reached.

- **Distress Alarm:**

The user may manually activate Alarm Mode at any time, whether the device is in Sensing Mode or powered off, by pressing the top button.

In both cases, Alarm Mode is initiated immediately upon activation conditions being met.

ALARM MODE INDICATORS and TRANSMISSION

When Alarm Mode is activated, the device provides both visual and audible alerts to indicate an emergency condition.

- **Visual Indicator:**

The Alarm Mode is displayed on screen.

- **Audible Indicator:**

A loud audible alarm will sound continuously.

- **Radio Transmission:**

During an Alarm condition, the device transmits an emergency radio signal to other compatible Grace devices and equipment. This signal is used to alert personnel that assistance may be required.

RESETTING ALARM MODE

To reset the device and return SuperCELL® to Sensing Mode, press both side PWR buttons simultaneously. Release buttons when a series of escalating audio tones is heard and LCD will display the home screen with motion-sensing status.

- The device will then return to Sensing Mode.
- When the auto on/off feature is enabled, connecting the unit to the charger adapter (while the adapter is plugged into an appropriate power source) will power the SuperCELL® off and also reset the alarm condition.

PAGE NAVIGATION

Press MENU/PWR button to cycle through pages on SuperCELL®

OFF

SuperCELL® is powered off using one of the following methods:

- **Manual Deactivation (SC500-MAN Models):**

While in Sensing Mode, press and hold both side PWR buttons simultaneously for approximately three (3) seconds. A series of de-escalating audio tones will sound, and all display activity will cease, indicating the device has powered off.

- **Auto-Off Feature (SC500-A Models):**

When the Auto-On/Off setting is enabled, connecting the SuperCELL® to a charger adapter plugged into an appropriate power source will automatically power the unit off.

Operation of Special Features

EVACUATION ACKNOWLEDGMENT:

Evacuation Acknowledgment feature allows the user to confirm receipt of an evacuation alert transmitted to the SuperCELL®.

- **To Acknowledge an Evacuation Alert:**
When an Evacuation message is received, press MENU/PWR and SEL/PWR buttons simultaneously.
- **ACK is only visible on select Grace Base stations / software.**

ALARM MONITORING:

Alarm Monitoring feature enables personnel to monitor the status of nearby colleagues using SuperCELL® units or other compatible Grace devices.

- **Operation:**
SuperCELL® must be in Sensing Mode to receive alarm signals from other devices.
- **Alarm Indication:**
When an Alarm signal from another device is received, a rapid ringing tone will sound and device information of the originating alarm is displayed on screen.
- **Temporarily Clear an Alarm Indication:**
Press MENU/PWR and SEL/PWR buttons simultaneously.
Alarm indication will be cleared for approximately 30 seconds.
- **Alarm Re-Notification:**
If another device enters an Alarm state during the 30-second period, the Alarm Indication will reactivate.
This cycle will continue as long as Alarm signals are being received.
- **End of Alarm Monitoring Alert:**
The Alarm Indication will stop only when the originating device is reset or powered off.
- **NOTE:**
SuperCELL® must remain in Sensing Mode to continue receiving alarm signals.
Clearing the alert does not reset the originating alarm; it only silences the local alarm indication temporarily.

MESSAGES RECEIVED:

SuperCELL® is designed to receive both canned (pre-configured) and freeform (on-demand) messages from various compatible devices, including other SuperCELL® pendants, WorkForce®, MS2000, Grace-Watch®, Grace Cloud Connect® and GMG.

- **When a Message is Received:**
A rapid ringing tone sounds to notify the user.
Message is displayed on the screen.

LOCATION:

SuperCELL® provides real-time location and status updates whenever it is within range of a Locator Beacon. When the device enters a Locator Beacon coverage zone, a chirp tone will sound and the Locator Beacon ID will appear on the SuperCELL® display.

If the Locator Beacon battery is low, a low battery warning will appear on the SuperCELL® screen in reverse colors to alert the user.

To view your last three recorded locations, press the Left (Menu) button to open the Location History screen.

SuperCELL® Mounting and Attachment

SuperCELL® is equipped with a swivel clip attachment for secure attachment to personnel gear. For best performance, attach the device to a stable part of your gear or clothing where it can remain firmly in place during normal movement and activity.

The ideal wearing position may vary depending on the user's equipment, work environment, and personal preference. Select a mounting location that provides a secure attachment, allows the device to move naturally with the body, and remains easily accessible for operation.

Mode Selection

Turn ON (Sensing Mode)

- Press both side PWR buttons simultaneously.
- **If Auto-ON/OFF is enabled:**
SuperCELL® turns on automatically when unplugged from its charger. It may also turn on if power is lost (during an outage).

ALARM Mode

- Press the top button to trigger Alarm.
Alarm can be activated whether SuperCELL® is on or off.

RESET

- When in Alarm or an Evacuate signal is received, reset SuperCELL® by simultaneously pressing the side PWR buttons.

OFF

- **When in Sensing Mode:** Press and hold both side PWR buttons until the unit powers down.
- **If Auto-ON/OFF is enabled:** Plugging SuperCELL® into the charger will automatically turn it off.

Device Status and Indicators

OFF

- No LCD Display
- Device is inactive

ON (Sensing Mode)

- **Audio:** Escalating, loud audio tones upon activation
- **LCD Screen:** On
- Device is actively monitoring for motion

PRE-ALERT

- Triggered after approximately 78 seconds of no-motion
- **Audio:** Loud, sweeping audio tones
- **LCD Screen:** Time to Alarm countdown is highlighted
- Early warning before full Alarm

ALARM

- Triggered after approximately 90 seconds of no-motion or by pressing the Emergency Alarm Button
- **Audio:** Loud, continuous alarm
- Audio Alarm briefly pauses to help responders locate direction
- **LCD Screen:** Alarm type is displayed

EVACUATE Signals

- **LCD Screen:** ||| EVAC ||| will appear on the display
- **EVACUATE Tone:** Loud, stepped de-escalating tone ending with a higher note

ALARM MONITORING

- **Audio:** rapid ringing tone
- **LCD Screen:** Device info of unit in alarm is displayed

MESSAGE RECEIVED

- **Audio:** rapid ringing tone
- **LCD Screen:** Message displayed

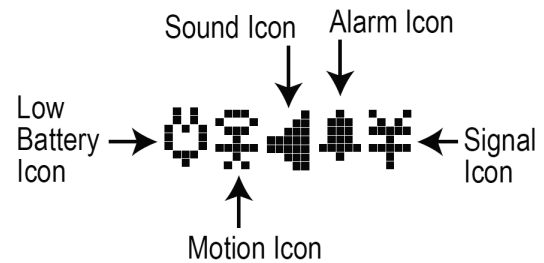
LOCATION

- **Audio:** a chirp tone when a new Coverage Zone is entered
- **LCD Screen:** Locator Beacon ID of the Coverage Zone

LOW BATTERY

- **Audio:** Short, double high-pitched sound every five minutes (if audio is enabled)
- **NO power-on tones**
- **LCD Screen:** Plug Icon is displayed

SuperCELL® Display Icons



Low Battery Indication

When approximately 3 hours of operating time remain in standby mode, the SuperCELL® will display a plug icon on the display status screen. The power-on tones are not emitted when SuperCELL® has a low battery. Low battery is also indicated by the Operational Status LED changing to a periodic Red strobe. A double chirp sounds once every five minutes with audio enabled. **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 the battery should be charged immediately.

Charging the Battery

With the charger provided, recharge time is approximately 6 hours from a low battery warning and 9 hours for a dead battery. Due to current limits imposed by Intrinsic Safety requirements, a unit that has gone completely dead will have to be removed from the charging base and reinserted when the charging light turns Red. Typical operation time between recharging is approximately 40 hours in standby/ready mode.

Plug the charger into an outlet. It takes approximately 20 seconds for the Green charger LED to light up. If it does not turn on or a Red LED turns on, then the battery is either too hot or cold, or has a fault.

Charging is complete when the Green charge LED starts to slowly flash.



Menu Pages

Pressing MENU button brings up menu pages in the following order:

Page 1 - Send Message

Page 2 - Alarm History Display

Page 3 - Event Counters Display

Page 4 - Device Name and Run Time Display

Page 5 - Setup Mode

Page 1 - Send Message



The Send Message function may be used to send one of 80 user-programmed, canned text messages. These messages are programmed into the SuperCELL® device through the SuperCELL® Database Manager Utility Program via the ACTiSYS IrDA USB Adapter, available for the SuperCELL® device. This process is explained in the IrDA Transfer section, on page 4.

To send a message, proceed to the Send Message page by pressing the MENU/PWR button. Next, cycle through the messages stored on the SuperCELL® by pressing the UP, DWN, *, or # buttons until you find the desired message you wish to send. UP and DWN cycle the message count by one, * and # cycle the count by five. Once you have the desired message displayed, pressing the SEL button transmits the message, and a Message Sent acknowledgment is displayed on the screen. Other messages can be selected and sent by pressing the UP, DWN, *, or #, and then pressing SEL to send.

Pressing MENU/PWR will navigate away from the Send Message page. Resetting the device will return the SuperCELL® to the home page.

Page 2 - Alarm History Display



The Alarm History Display page displays the name and unit ID of any Grace Industries telemetry product that has transmitted an alarm message received by the SuperCELL®.

Proceed to the Alarm History Display page by pressing the MENU/PWR button. On the Alarm History Display page, the UP and DWN buttons cycle through the stored alarm messages that were received by the SuperCELL®. The 32 most recent, unique, alarms are stored on the SuperCELL® in the order they were received. Turning the SuperCELL® off clears the Alarm History.

Pressing MENU/PWR will navigate away from the Alarm

History Display page. Resetting the device will return the SuperCELL® to the home page.

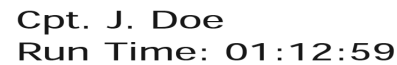
Page 3 - Event Counters Display

The Event Counters Display page shows the number of Page (Evacuate), Par, and Roll Call events received by the SuperCELL® device since it was last turned on.

Navigate to the Event Counters Display page by pressing the MENU/PWR button.

Pressing MENU/PWR will navigate away from the Event Counters Display page. Resetting the device will return the SuperCELL® to the home page. Turning the SuperCELL® device off resets each counter to zero.

Page 4 - Device Name and Run Time Display



The Device Name and Run Time Display page displays the SuperCELL® device name which has been programmed onto the device through the SuperCELL® Database Manager Utility Program via the ACTiSYS IrDA USB Adapter, available for the SuperCELL®. This page also displays the length of time the SuperCELL® has been running (turned on), in days/hours/minutes.

Navigate to the Device Name and Run Time Display page by pressing the MENU/PWR button.

Pressing MENU/PWR will navigate away from the Device Name and Run Time Display page. Resetting the device will return SuperCELL® to the home page.

Page 5 - Setup Mode



The Setup Mode page allows the user to put the SuperCELL® into Setup Mode, where the various user preferences of the device can be changed.

To enter Setup Mode, proceed to the Setup Mode page by pressing the MENU/PWR button. Next, press and hold the SEL/PWR button for three seconds. The SuperCELL® device is now in Setup Mode. Press the MENU/PWR button while in Setup Mode to cycle through the Setup Mode pages

WARNING: While in Setup Mode, Alarm, Page, Par, and Roll Call messages CANNOT be monitored or be logged in the SuperCELL® devices Event Counter. Any Alarm, Page, Par, or Roll Call messages received, while in Setup Mode, will be subject to the SuperCELL® device's inhibit timer.

Resetting the device or waiting two minutes without a button press will exit out of Setup Mode and return the SuperCELL® to the home page.

Setup Mode Page 1 - Alarm Disabled Notification
 Setup Mode Page 2 - Firmware Versions
 Setup Mode Page 3 - IrDA Transfer Mode
 Setup Mode Page 4 - View Adjust
 Setup Mode Page 5 - Motion Sensing
 Setup Mode Page 6 - Signal Lost Timer
 Setup Mode Page 7 - Radio Range Test
 Setup Mode Page 8 - Sound
 Setup Mode Page 9 - Location Change Chirp
 Setup Mode Page 10 - Alarm Button Sound
 Setup Mode Page 11 - Constant Alarm Vibration
 Setup Mode Page 12 - Backlight
 Setup Mode Page 13 - Charger Auto Off
 Setup Mode Page 14 - Alarm Inhibit Timer

Setup Mode Page 1 - Alarm Disabled Notification



The Alarm Disabled Notification page acts as a reminder the SuperCELL® will not monitor Alarm, Page, Par, or Roll Call transmissions while in Setup Mode.

Pressing MENU/PWR will navigate away from the Alarm Disabled Notification page. Resetting the device will exit out of Setup Mode and return the SuperCELL® to the home page.

Setup Mode Page 2 - Firmware Versions

The Firmware Versions page displays the model number, CPU firmware version, and radio firmware version found on the SuperCELL® device.

Navigate to the Firmware Versions page by pressing the MENU/PWR button.

The top text line displays the model number of the device.

The middle text line displays the CPU firmware version found on the device.

The Bottom text line displays the creation date of this firmware version.

Press the SEL/PWR button to display the radio firmware version.

Pressing MENU/PWR will navigate away from the Firmware Versions page; resetting the device will exit out of Setup Mode and return SuperCELL® to the home page.

Setup Mode Page 3 - IrDA Transfer Mode



The IrDA Transfer Mode allows the SuperCELL® device to be loaded with over 60,000 names (254 groups of 255 names) of 16 characters each. The SuperCELL® can also be loaded with 80 user-programmed canned text messages, plus the unit ID.

This information is programmed into the SuperCELL® through the SuperCELL® Database Manager Utility Program via the ACTiSYS IrDA USB Adapter, available for the SuperCELL®.

To enter the IrDa Transfer Mode, navigate to the IrDA Transfer page by pressing the MENU/PWR button. Once arriving on the IrDA Transfer page, press and hold the SEL/PWR button for three seconds to enter the IrDA Transfer Mode. In the IrDA Transfer Mode, the SuperCELL® will only respond to commands from the host computer running the SuperCELL® Database Manager Utility Program.

WARNING: While in IrDA Transfer Mode, the device **CANNOT** monitor or send Alarm, Page, Par, or Roll Call messages, nor will these messages be logged in the SuperCELL® device's Event Counter. Any Alarm, Page, Par, or Roll Call messages received, while in IrDA Transfer Mode, will be subject to the SuperCELL® device's inhibit timer.

Interrupting an IrDA transfer while in progress may corrupt the SuperCELL® device's name database. If this should occur, the SuperCELL® name database will need to be reloaded.

Pressing the MENU/PWR button navigates away from the IrDA Transfer page. Resetting the device exits out of IrDA Transfer Mode and returns the SuperCELL® to the home page.

Setup Mode Page 4 - View Adjust



View Adjust page allows the display contrast to be adjusted for easier viewing of the SuperCELL® device's display. Adjusting the display contrast may be necessary if the SuperCELL® is used in extreme temperatures.

To adjust the display contrast, navigate to the View Adjust page by pressing the MENU/PWR button. At the View Adjust page, press the UP and DWN buttons to increase (or decrease) the display contrast by 1, and the * and # to increase (or decrease) the display contrast by 10.

Pressing MENU/PWR will navigate away from the View Adjust page. Resetting the device will exit out of Setup Mode and return the SuperCELL® to the home page.

Setup Mode Page 5 - Motion Sensing



The Motion Sensing capability of SuperCELL® is intended to alert personnel that the wearer of the device has stopped moving.

SuperCELL® is typically shipped with Motion Sens-

ing timer set to 90 seconds. To enable or disable Motion Sensing, and to adjust the length of time the device must remain motionless before going into alarm mode - proceed to the Motion Sensing page by pressing the MENU/PWR button. Once on the Motion Sensing page, press the UP and DWN buttons to increase (or decrease) the motion sensing timer by 15 seconds and the * and # buttons increase (or decrease) the motion sensing timer by 1 minute (15 minutes maximum).

Pressing the MENU/PWR button navigates away from the Motion Sensing page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

With **Motion Sensing enabled**, the Motion Sensing Activation Icon appears on the icon line of the SuperCELL® device's home page, accompanied by a countdown timer in the center of the page. The timer indicates (in minutes and seconds) how much time of motionlessness remains before the SuperCELL® enters alarm mode. Moving the SuperCELL® resets the timer.

Approximately 12 seconds before the SuperCELL® enters alarm mode, a pre-alert warning tone will sound, alerting the user that the device will enter alarm mode if it continues to remain motionless. Upon entering Alarm Mode, the SuperCELL® will sound a repeating alarm tone and transmit alarm messages.

Resetting the device exits Alarm Mode, returns the device to home page, and resets motion sensing timer.

Setup Mode Page 6 - Signal Lost Timer

The Signal Lost Timer is intended to alert user of the SuperCELL® that he has drifted out of the detection range of the monitoring base.

NOTE: The Signal Lost Timer may only be used in conjunction with compatible Grace Industries monitoring bases. Enabling the Signal Lost Timer without the proper monitoring base will result in the SuperCELL® continually alerting the user that the device is out of detection range. Without a compatible monitoring base, the Signal Lost Timer should be disabled.

SuperCELL® is shipped with the Signal Lost Timer disabled. To enable the Signal Lost Timer and adjust the length of time the SuperCELL® can be out of detection range before alerting the user, navigate to the Signal Lost Timer page by pressing the MENU/PWR button. At the Signal Lost Timer page, press the UP and DWN buttons to increase (or decrease) the Signal Lost Timer by 1 minute (15 minutes maximum).

Pressing the MENU/PWR button navigates away from the Signal Lost Timer page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

With the Signal Lost Timer enabled, the Signal Loss Activation Icon appears on the icon line of the SuperCELL® home page, accompanied by a countdown timer beside

the icon. The timer indicates (in minutes) how much time remains before the SuperCELL® alerts the user that he is no longer in detection range of the monitoring base. With one minute remaining, the timer counts down in seconds.



When a signal loss event occurs, Signal Lost will be displayed on the screen, the SuperCELL® will vibrate, and three alert tones will sound. The alert tones will be repeated every 30 seconds while the SuperCELL® remains out of detection range. The alert tones can be momentarily silenced by resetting the device. Doing so resets the signal lost timer, which will now be displayed in reverse contrast to indicate the SuperCELL® is still out of detection range. Once communication between the SuperCELL® and the monitoring base is re-established, the Signal Lost Timer is reset and the timer is displayed in normal contrast.

Setup Mode Page 7 - Radio Range Test



The Radio Range Test mode of the SuperCELL® device is used to test radio signal propagation during on-site testing and system installation.

To enable or disable the Radio Range Test mode, proceed to the Radio Range Test page by pressing the MENU/PWR button. On the Radio Range Test page, press SEL/PWR button to enable or disable Radio Range Test mode. Once the Range Test Mode is enabled, resetting the device IS NOT REQUIRED - doing so disables the Radio Range Test mode and returns the device to the home page.

Any radio signal that can be monitored by the SuperCELL® (and is within the device's detection range) will be displayed on screen as it is received by the device. Each received signal is accompanied by an audio chirp and the blinking of Operation Status LED.

Pressing the MENU/PWR button navigates away from the Radio Range Test page. Resetting the device disables Radio Range Test mode and returns the SuperCELL® to the home page.

Setup Mode Page 8 - Sound



The Sound page allows the majority of the audio tones emitted from the SuperCELL® device to be enabled or disabled.

NOTE: Disabling the Sound DOES NOT disable the Power

On or Power Off audio tones. The Power On and Power Off audio tones are permanently enabled.

To enable or disable Sound, proceed to the Sound page by pressing the MENU/PWR button. At on the Sound page, the SEL/PWR button enables (or disables) the audio tones emitted from the SuperCELL®.

Pressing the MENU/PWR button navigates away from the Sound page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

When Sound is enabled, the Sound Icon appears solid; when Sound is disabled, the Sound Icon appears empty.

Setup Mode Page 9 - Location Change Chirp

The Location Change Chirp page (displayed as Loc. Change Chirp) allows the enabling or disabling of the audio chirp emitted from the SuperCELL® whenever the device receives a new location transmission.

To enable or disable Location Change Chirp, proceed to the Loc.Change Chirp page by pressing the MENU/PWR button. At the Loc.Change Chirp page, the SEL/PWR button enables/disables the audio tones emitted from the SuperCELL® when the device receives a new location transmission.

Pressing the MENU/PWR button navigates away from the Loc.Change Chirp page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

Setup Mode Page 10 - Alarm Button Sound



The Alarm Button Sound page enables/disables the alarm audio tone emitted from the SuperCELL® when the Distress Alarm Buttons are pressed.

NOTE: If the master Sound control is disabled (Setup Mode Page 9 - Sound), the SuperCELL® will not emit an alarm audio tone, even if the Alarm Button Sound is enabled.

To enable or disable Alarm Button Sound, proceed to the Alarm Button Sound page by pressing the MENU/PWR button. On the Alarm Button Sound page, the SEL/PWR button enables or disables the audio tones emitted from the SuperCELL® device.

Pressing the MENU/PWR button navigates away from the Alarm Button Sound page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

Setup Mode Page 11 - Constant Alarm Vibration

The Constant Alarm Vibration page (displayed as Alarm-VibConstant) allows the vibration notification emitted from the SuperCELL® device to be toggled between a

single burst or a continuous series of bursts.

To enable or disable Constant Alarm Vibration, proceed to the AlarmVibConstant page by pressing the MENU/PWR button. At the AlarmVibConstant page, the SEL/PWR button enables or disables the Constant Alarm Vibration setting.

Pressing the MENU/PWR button navigates away from the AlarmVibConstant page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

Setup Mode Page 12 - Backlight



The Backlight page allows the SC500 display Backlight to be enabled or disabled.

To enable or disable the Backlight, proceed to the Backlight page by pressing the MENU/PWR button. On the Backlight page, the SEL/PWR button enables or disables the SuperCELL® device display Backlight.

Pressing the MENU/PWR button navigates away from the Backlight page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

Setup Mode Page 13 - Auto ON/Off

The Auto ON/OFF page allows the Auto ON/OFF function to be enabled or disabled.

To enable or disable the Auto ON/OFF function, proceed to the Auto ON/OFF page by pressing the MENU/PWR button. At the Auto ON/OFF page, the SEL/PWR button enables or disables the Auto ON/OFF function.

Pressing the MENU/PWR button navigates away from the Auto ON/Off page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

With the Auto ON/OFF function **disabled**, the SuperCELL® is turned on and off by simultaneously pressing and holding the MENU/PWR and the SEL/PWR buttons.

With Auto ON/OFF function **enabled**, the SuperCELL® is turned on and off by removing or inserting the device into the Charging Base plugged into an appropriate power source. Simultaneously pressing the MENU/PWR and the SEL/PWR buttons cannot turn the SuperCELL® on and off with the Charger Auto Off function enabled.

NOTE: if power source is disconnected or lost (i.e. power outage), the SuperCELL® will turn ON.

Setup Mode Page 14 - Alarm Inhibit Timer



The Inhibit Timer page allows the Alarm Inhibit Timer to be enabled or disabled.

The SuperCELL® is shipped with the Alarm Inhibit Timer enabled.

To enable or disable the Alarm Inhibit Timer, proceed to the Inhibit Timer page by pressing the MENU/PWR button. At the Inhibit Timer page, the SEL/PWR button enables or disables the Alarm Inhibit Timer function.

NOTE: With the Alarm inhibit Timer enabled, the SuperCELL® will not respond to the same alarm message for 30 seconds after that alarm message has been acknowledged. This allows the user of the SuperCELL® time to operate the menu system of the device during an alarm event.

Pressing the MENU/PWR button navigates away from the Inhibit Timer page. Resetting the device exits out of Setup Mode and returns the SuperCELL® to the home page.

When the Alarm Inhibit Timer is enabled and no alarm messages have been received and acknowledged within the 30 second inhibit time, the Alarm Inhibit Timer Icon will be displayed as solid on the Icon Line of the SuperCELL® display. If an alarm message HAS been received and acknowledged, the Alarm Inhibit Timer Icon will be displayed as empty. This indicates that the device will not respond to an alarm that had been acknowledged until the 30 second Alarm Inhibit Timer expires.

Definition of Terms

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

Alarm Message: A radio transmitted signal sent from a SuperCELL®, or other GRACE Industries telemetry device, when the Emergency Distress button is pressed for the purpose of notifying monitoring personnel that an emergency situation is present and rescue action is requested.

Alarm Mode: A SuperCELL®, or other GRACE Industries telemetry device, is placed in alarm mode by pressing the device's Emergency Distress button. When this occurs, the device transmits an alarm signal and emits a loud alarm audio tone.

Canned Text Message: Canned Text Messages are pre-programmed, text based messages that can be sent from one SuperCELL® to another.

Device Name: The Device Name is a pre-programmed name assigned to the SuperCELL® device that can be viewed on the Device Name and Run Time Display page.

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

GPS Status Icon: The GPS Status Icon appears on the Icon Line of the Home Page when the GPS Location feature is active. The icon changes based on the satellite fix quality.

Home Page: The Home Page is the main page of the SuperCELL® that is displayed on startup and any time the device is reset. Displayed on this page is the status icons, motion sensing timer, device OEM and ID numbers, and the firmware versions loaded on the device.

Icon Line: The Icon Line is the display line at the top of the home page that displays the device status icons.

Man-Down Alarm Mode: A SuperCELL, or other GRACE Industries telemetry 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 telemetry devices used by the various on-scene personnel, usually from a centralized base location.

Motion Sensing Activation Icon: The Motion Sensing Activation Icon appears on the Icon Line of the Home Page when the Motion Sensing feature is active. The icon changes as the devices senses motion.

Motion Sensing Timer: The Motion Sensing Timer indicates the seconds of lack-of-motion required before the SuperCELL® enters the Man-Down Alarm mode.

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 MENU/PWR and SEL/PWR resets the SuperCELL® and returns the display to the Home Page.

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

Setup Mode: Setup Mode allows certain characters and functions on the SuperCELL® to be activated, deactivated, or modified.

Signal Loss: Signal Loss is an event that occurs when the SuperCELL® is out of the communication range of a base monitor for a preset length of time.

Signal Loss Activation Icon: The Signal Loss Activation Icon appears on the Icon Line of the Home Page when the Signal Loss feature is active.

Unit ID: The Unit ID is the unique ID number assigned to the SuperCELL® device for purposes of radio communication. It can be viewed on the device's home page.

Unit OEM: The Unit OEM is a number assigned to the SuperCELL® device, 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 SuperCELL® devices will have the same OEM number; from the factory this number will usually be 9090.

Safety Certifications

Intrinsically Safe, Sécurité Intrinsèque

SuperCell® SC500 Models Intrinsically Safe per ANSI/UL913 For use in Class 1, Groups A, B, C and D; Class II, Groups E, F, G; Div. 1 Hazardous Locations. CSA C22.2 No.157.

Temperature Code T6. IP67. Exia Rated 4.2VDC.

WARNINGS, AVERTISSEMENTS

WARNING! To prevent ignition of hazardous atmosphere, battery must only be charged in area known to be nonhazardous.

AVERTISSEMENT! Pour éviter l'inflammation d'une atmosphère dangereuse, les batterie doivent être chargées seulement dans une zone connu comme être non dangereuse.

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.



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