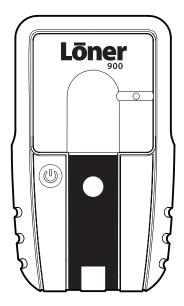
User Guide

Mobile Worker Safety Device





Protect. Share. Connect.



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Warranty

Your Loner is warranted against defects in materials and workmanship for up to one year from date of purchase. For further details regarding your Blackline GPS warranty, please refer to your Terms and Conditions of Service.

More information and support visit: http://www.blacklinesafety.com for more information.

FCC Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- · Increase the separation between the equipment and receiver.
- · Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- · Consult the dealer or an experienced radio/TV technician for further assistance.

Industry Canada Compliance

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.

Notification d'Industrie Canada

Ce dispositif est conforme au(x) format(s) RSS libre(s) d'Industrie Canada. Son fonctionnement est assujetti aux deux conditions suivantes : (1) Cet appareil ne peut causer d'interférences nuisibles, et (2) cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant provoquer un mauvais fonctionnement du dispositif.

RF Exposure Statement

For body worn operation, Loner 900 has been tested and meets the FCC and IC guidelines for RF exposure when used with the Blackline GPS belt clip designated for Loner 900. Use with other accessories may not ensure compliance with FCC and IC guidelines for RF exposure.

Déclaration d'exposition RF

Pour utilisation sur le corps, Loner 900 à été testé et répond aux directives de la FCC et IC d'exposition aux radiofréquences lorsqu'il est utilisé avec le clip ceinture Blackline GPS désigné pour Loner 900. Utilisation avec d'autres accessoires peut ne pas assurer le respect des directives de la FCC et IC d'exposition aux radiofréquences.

Table of Contents

Safety Precautions

DANGER	
WARNING	

Getting Started

Overview

ntrinsically Safe	,
Requirements	,
Contents	,

Using Loner 900

Loner 900 Hardware Details	8
Charging Loner 900	10
Turning Loner 900 Off	11
Loner 900 Power Button Light Behaviour	11
Loner 900 Light Annunciation Patterns	12
Ensuring Protection with Loner 900	12

Alerts

Understanding Alerts	13
Confirmation of Alerts	13
Initiating an Emergency Alert (Emergency Latch Use)	14
Silencing Emergency Alert (Emergency Latch Use)	14
Initiating a Silent Emergency Alert	14
Motion/Activity Monitoring	14



Muster Alarm Light)
Cancelling a Pending No-motion Alert15	-
Silencing a No-motion Alert	5

About True Fall Detection®

Performance Expectations of the Fall Detection System	.15
Cancelling a Pending Fall Detected Alert	.15
Silencing a Fall Detected Alert	.16
About Checking In	.16
Cancelling a Pending Missed Check-in Alert:	.16
Cancelling a Missed Check-in Alert	.16
Low Battery Detection	.16

Troubleshooting

SubHead goes here. Required for table of contents

Specifications

Specifications for Loner 900	
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Loner 900 Care

Consideration Regarding Use and Storage of Loner 900
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Customer Care

Customer Care for Loner 900

Safety Precautions

Blackline GPS takes your safety and the safety of those around you very seriously. It is important for you to be aware of the following precautions.

DANGER

Do not place the Loner 900 product in or near an open flame.



WARNING

To reduce the risk of ignition of a flammable atmosphere, batteries must only be charged in an area known to be nonflammable.

When in a hospital or other health care facility, observe the restrictions on the use of mobile devices, such as cellular phones. Do not operate Blackline GPS products where you are not able to operate your mobile/cellular phone.

Switch Blackline GPS products off before boarding an aircraft and make sure that it cannot be inadvertently turned on. To prevent interference with communication systems the operation of wireless applications, including Blackline GPS products, is forbidden aboard aircraft. Failure to observe these instructions may lead to the suspension or denial of cellular services to the offender, legal action, or both.

Road safety comes first. Do not operate a Blackline GPS product while you are driving a vehicle. Park your vehicle before operating a Blackline GPS product, or using your mobile phone to interface to the Blackline GPS service.

Electrical equipment may be hazardous if misused. Operation of this product, or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical product and do not permit them to handle any cables.



Do Not:

- Do not operate Blackline GPS products outside their specified operating temperature. Consult the specifications section.
- Do not store Blackline GPS products outside their specified storage temperature. Consult the specifications section.
- Do not operate Blackline GPS products outside their specified humidity rating. Consult the specifications section.
- Do not dispose of Blackline GPS products in your household trash. Seek advice from your local electronics recycling authority. Blackline products contain an internal lithium-ion battery pack.

Getting Started

Activate your Device

Activation of Loner 900 device is managed within your Loner Portal account by the Blackline GPS Customer Care team. If a Loner Portal account has not been created, the Blackline GPS Customer Care team can provide assistance.

1-877-869-7212 support@blacklinegps.com

NOTE: Service activation requires a valid credit card and the Unit ID and Activation Code.

Overview

The Blackline GPS[™] Loner 900[™] dedicated safety device provides multi-layered safety for you as a mobile worker. This guide provides information that you will find helpful to comfortably operate your Loner 900 device. Your Loner 900 device contains the following internal components:

- Wireless radio and antenna
- High sensitivity GPS receiver
- Ultimate Sense® GPS antenna
- Large capacity 1500 mAh rechargeable battery
- Tri-axis accelerometer
- Tri-axis gyroscope
- Vibration motor
- Emergency Latch
- Power Button and Indicator Light
- Indicator Light Array
- Alarm Beeper
- USB Interface for charging
- Integrated weather-proof and dust-proof case



Intrinsically Safe

Blackline's Loner 900 device is a UL 913-certified Intrinsically Safe Apparatus for use in Class I, Division 1, Groups A – D and Class II, Division 1, Groups E – G in hazardous (classified) locations.

Please consult with your organization's safety professional for further information regarding the topic of intrinsic safety and any policies, procedures, facilities, or locations within facilities that may be related to intrinsic safety.

Requirements

Loner 900 promotes a safe work environment for you when:

- You are wearing the Loner 900.
- The Loner 900 is connected to a Loner Bridge.
- The Bridge has line-of-sight access to the sky to communicate data over GSM or satellite.
- The Loner 900 and Bridge have been activated on a Loner Portal user account.
- The Loner 900 and Bridge have sufficient battery capacity to operate.

Contents

- Loner 900
- Micro USB Charging Clip
- Charging cable
- Wall Charger
- Quick reference card
- Field Changeable Belt Clip

Loner 900 Service Plan

Various service plan options are available depending on your feature level requirements. Contact Blackline for more information.

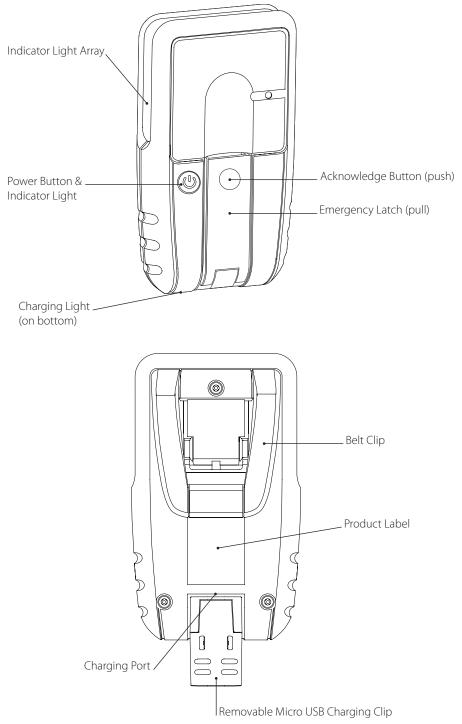
Using Loner 900

Loner 900 Hardware Details

Loner 900 is rugged and purpose-built for monitoring you as a mobile worker. Physical details are outlined below.

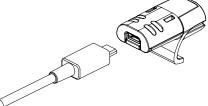
Physical Feature	Use
Power Button & Indicator Light	Powers Loner 900 and indicates cellular connection status
Acknowledge Button	Acknowledges alert messages on Loner 900
Indicator Light Array	Indicates Loner 900 is in an Alarm state
Emergency Latch	Sends an emergency alert to monitoring personnel
Charging Light	Indicates the charging state
Product Label	Provides device information, unit ID and activation code
Belt Clip	Attaches Loner 900 to a belt
Charging Port	Charges Loner 900
Removable Micro USB Charging Clip	Adapts Micro USB cable to charging port for charging Loner 900





Charging Loner 900

- 1. Plug the Wall Charger into an electrical outlet.
- 2. Insert the Micro USB Cable Plug into the corresponding Micro USB Charging Jack on the charging clip ← C→
- **3.** Slide the charging clip onto Loner 900 using the guides to align the clip with the charging port on the device.
- 4. Completely charge Loner 900 for 3 hours.
- 5. Remove the charging clip from Loner 900.
- Charging Loner 900 turns the device Off ensuring it will not trigger alerts while charging.
- Blackline GPS recommends charging Loner 900 after each shift to ensure the device is fully charged for the next shift.
- WARNING: Never charge Loner in a hazardous area. The Loner's charger is not intrinsically safe.



The charging state can be determined by observing the charging light.

Light Behaviour	Red Charging Light	
Light flashing	Indicates Loner 900 is charging.	
Light On	Indicates that Loner 900 is fully charged.	
Light Off	Indicates that Loner 900 is not charging.	

Turning Loner 900 On

1. Press the Power Button to turn Loner 900 On.

The beeper, the alarm status light and vibration motor will annunciate the chirp pattern. The power button indicator light will blink as Loner 900 connects. While Loner 900 retains connection to Blacklines servers, the power button indicator light will remain on.

Loner 900 needs to have sufficient battery power to connect to the Bridge. Connection takes approximately one minute.



If Loner 900 fails to connect to Blacklines servers, the device will enter the no communication alarm pattern.

Turning Loner 900 Off

Follow these steps for turning off the device:

- 1. Press and hold the Power Button for three seconds to power the device off. The beeper will sound three long beeps while the power button is pressed. The vibration motor vibrates for three long pulses. The beeper, vibration motor and Power Button Indicator Light will turn off after three seconds.
- The Loner 900 will flash the indicator light array during the shutdown sequence.
- If Loner 900 is plugged in to charge, it will automatically turn off to avoid false alerts.

Loner 900 Power Button Light Behaviour

Loner 900 features a Power Button Indicator Light. Please see below for the light behaviour.

Light Behaviour	Power Button Indicator Light
Light flashing	Indicates Loner 900 is powered and connecting to the wireless network.
Light On	Indicates that Loner 900 is powered and connected to the wireless network.
Light Off	Indicates that Loner 900 is powered off or the battery is depleted.

Loner 900 is referred to as being offline and is not connected to the Loner Network when the Power Button Indicator Light is blinking or the device is powered off. Loner 900 is referred to as being online and connected to the Loner Network when the Power Button Indicator Light is on continuously.

Loner 900 Light Annunciation Patterns

Loner 900 features audible, tactile and visual indicators for annunciating different types of messages. Please see below for these patterns.

Туре	Beeper	Vibration motor	Indicator light array
Pending alarm	Slow alarm pattern	Single repeating vibrate	Slow flash
High alarm	Fast alarm pattern	Double repeating vibrate	Fast flash
Low battery	Single beep once every 5 minutes	No vibration	Single flash once every 5 minutes
No communication	No beeper	No vibration	Slow double flash

Ensuring Protection with Loner 900

When safety monitoring is required, perform the following to ensure you are being protected with Loner 900.

Press the power button to turn on Loner 900.

The Power Button Indicator Light on Loner 900 will blink while establishing a network connection. The vibration motor vibrates and the beeper annunciates the power on sequence. Loner 900 will continue to flash the Power Button Indicator Light while it is establishing a network connection.

- 2. When the Loner 900 establishes a network connection to the Loner Portal the Power Button Indicator Light remains on continuously.
- 3. If you have Fall Detection enabled, wear Loner 900 on your belt at your hip at all times that you require remote safety monitoring. Perform your work duties as you normally would. Loner 900 automates remote monitoring of your safety. True Fall Detection works best when worn on the hip.
- 4. Power down Loner 900 when remote monitoring of your safety is no longer required.
- The Loner 900 logo must face outward, away from your body for optimum GPS and fall detection performance.



Alerts

Alert messages are configured for Loner 900 through the Loner Portal web app. Loner Portal displays alerts and they can be sent via email and SMS to safety monitoring personnel.

Understanding Alerts

An alert is a message that communicates a device or system level event, such as an Emergency Alert or a Low Battery Alert. Depending on the priority level of the Alert, different action must be taken by safety-monitoring personnel.

Alert	Explanation	
Emergency alert	Loner 900 sends an Emergency Alert if the Emergency Latch has been opened;	
Silent alert	Loner 900 sends a Silent Emergency alarm if the acknowl- edge button is pressed for 3 seconds.	
Fall detected alert	Loner 900 sends a Fall Detected Alert when the device has detected a fall AND you have not canceled the pending message within 30 seconds.	
No-motion alert	Loner 900 sends a No-motion Alert when the device does not detect motion for 2 minutes AND you have not can- celed the pending message within 30 seconds.	
Missed check-in alert	Loner 900 sends a Missed Check-in alert when you have not checked in during the pre-configured check-in period and you have not cancelled the pending alarm.	
Low-battery notification	Loner 900 sends a Low Battery Alert if the internal battery level falls below 20% by default.	

 For No-motion alert, options from 0 – 30 minutes are available. (0 Indicates the feature is disabled.)

Confirmation of Alerts

Loner 900 will activate a yellow light on the left and right sides of the indicator light array when a monitoring center has acknowledged an alarm sent by the Loner 900. Once the monitoring center has resolved the alarm, the light will shut off. If an alarm is generated while the confirmation light is on, the light will reset (turn off) until the new alarm has been acknowledged.

Initiating an Emergency Alert (Emergency Latch Use)

If you are in an emergency situation, perform the following:

- Open the Emergency Latch. Loner 900 will instantly send an Emergency Message to Loner Background Services. Loner 900 will annunciate the high alarm pattern to notify others nearby of the event.
- The alarm pattern on Loner 900 will continue until the Emergency Alert has been canceled or the battery is depleted.
- Another Emergency Alert will not occur until the Emergency Alert has been canceled.

Silencing Emergency Alert (Emergency Latch Use)

- 1. Return the Emergency Latch to the closed position.
- 2. Press and hold the Acknowledge Button for 3 seconds. After three seconds, the alarm pattern will be silenced and Loner 900 will return to regular operation.
- If the user silences an Emergency Alert, this does not cancel the alert within the Loner Portal user account. Monitoring personnel are required to address the safety incident.

Initiating a Silent Emergency Alert

If you are in an emergency situation where you would prefer to not alert others in the area (a silent emergency), perform the following:

- Push and hold the acknowledge button for 5 seconds. Loner 900 will vibrate for 3 seconds, pause and then vibrate for 2 more seconds. A Silent Emergency Message will be sent to monitoring personnel.
- Loner 900 will NOT locally annunciate the alarm pattern (it will remain silent).
- Loner 900 will return to normal operation. You cannot cancel the Silent Emergency. Monitoring personnel are required to address the safety incident.

Motion/Activity Monitoring

Loner 900 is constantly monitoring your motion. If Loner 900 has not detected motion for five minutes, it will enter the alarm mode and annunciate the low alarm pattern to indicate a pending No-motion alert. If you do not require assistance, you have 30 seconds to cancel the alert.

The time window and sensitivity of the No-motion Alarm are custom configurable in the Loner Portal.



Muster Alarm Light

A blue LED on either side of the Loner 900 will light up if the unit is in a state of return-tomuster or if there is an emergency text message at the BRidge that requires action.

Cancelling a Pending No-motion Alert

1. Press the acknowledge button for 1 second during the pending No-motion Alarm. After one second, the alarm pattern will be silenced and Loner 900 will return to regular operation.

If you have not cancelled the alert within 30 seconds, the No-motion Alert is sent, initiating the alert escalation process. Loner 900 will annunciate the high alarm pattern and will continue until the alert is silenced or the battery is depleted.

Silencing a No-motion Alert

- 1. Press and hold the acknowledge button for 3 seconds. After three seconds, the alarm pattern will be silenced and Loner 900 will return to regular operation.
- If the user silences a No-motion Alert, this does not clear the alert within the Loner Portal user account. Monitoring personnel are required to address the safety incident.

About True Fall Detection®

Loner 900 is constantly monitoring your motion for falls. If Loner 900 detects a fall, it will enter the pending alarm mode and annunciate the low alarm pattern to indicate a pending Fall Detected alert. If you do not require assistance, you have 30 seconds to cancel the alert.

Performance Expectations of the Fall Detection System

Loner 900 utilizes a gyroscope and accelerometer to determine the motion of normal human activity and thus determines when an extreme event occurs, such as a fall. Accuracy of the system depends on you wearing Loner 900 on the belt at the hip. Wearing the Loner 900 anywhere else may result in more false fall alarms.

Cancelling a Pending Fall Detected Alert

1. Press the acknowledge button for 1 second during the pending fall detect alarm. After one second, the alarm pattern will be silenced and Loner 900 will return to regular operation. If you have not cancelled the alert within 30 seconds, the Fall Detected Alert is sent, initiating the alert escalation process. Loner 900 will annunciate the high alarm pattern and will continue until the alert is silenced or the battery is depleted.

Silencing a Fall Detected Alert

- 1. Press and hold the acknowledge button for 3 seconds. After three seconds, the pending alarm pattern will be silenced and the Loner 900 will return to regular operation.
- If the user cancels a fall detected alert, this does not clear the alert within the Loner Portal user account. Monitoring personnel are required to address the safety incident.

About Checking In

Loner 900 can be configured in Loner Portal to have you periodically check in. During the Check-in period, Loner 900 will enter the alarm mode and annunciate the pending low alarm pattern to indicate a pending Missed Check-in alert. If you do not require assistance, you have 30 seconds to cancel the alert.

Cancelling a Pending Missed Check-in Alert:

- 1. Press the acknowledge button for 1 second. After one second, the pending alarm pattern will be silenced and Loner 900 will return to regular operation.
- If you have not cancelled the alert within 30 seconds, the Missed Check-in alert is sent, initiating the alert escalation process. Loner 900 will annunciate the high alarm pattern until the alert is silenced or the battery is depleted.

Cancelling a Missed Check-in Alert

 Press and hold the acknowledge button for 3 seconds during the pending Missed Check-in alert.
After three seconds, the alarm pattern will be silenced and Loner 900 will return to

regular operation.

If the user cancels a Missed Check-in Alert, this does not clear the alert within the Loner Portal user account. Monitoring personnel are required to address the safety incident.

Low Battery Detection

Loner 900 monitors the battery level of the device. If the battery level drops below 20% of battery capacity, a Low Battery Alert will be sent and Loner 900 will annunciate the low battery alarm pattern.



Loner 900 will continue all of the alarms until one of the following occurs:

Loner 900 automatically shuts down with a depleted battery; or Loner 900 is plugged in for charging.

- Loner 900 sends a Loner 900 Powered Off by Low Battery message to the Loner Background Services before finally powering off.
- If Loner 900 powers off with low battery, it will annunciate with a three second beep, vibrate and indicator light array flash.

Troubleshooting

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Symptom	Cause	Solutions
Green power light is blinking	Loner is not connected to the Loner Portal	Ensure Bridge is turned On (It may take up to 2 minutes after power-on to connect.); Ensure Bridge has line- of-sight view to the sky to connect our satellite.
Lots of false fall alarms	Loners fall detect algo- rithm is being tripped	Desensitize the fall detect settings in the portal. You can raise the thresh- old from the default 3.5 to reduce false alarms.
Too many No- motion alarms		The No-motion alarm can be made less sensitive. The time window can also be changed through the Loner Portal.



Specifications

Specifications for Loner 900

Size & Weight

Size: 63 mm W x 107 mm L x 22 mm D (2.48" W x 4.21" L x 0.87" D) Weight: 137 g (4.8 oz)

Safety Features

Fall detection technology: True Fall Detection[®], Tri-axis accelerometer, tri-axis gyro, plus software processing Emergency latch: Open latch to trigger alert Silent emergency: Press & hold acknowledge button to trigger alert Worker No-motion monitoring: Configurable time window (1 – 30 min, or Off) Worker check-in: Check-in period (5 – 180 min)

Buttons & Indicator Lights

Power button: Power on/off Acknowledge button: Check-in/Silent Emergency/Cancel Pending Alerts/Acknowledge Alerts Emergency latch: Send emergency alert Red indicator light array plus vibration and buzzer: Safety alert triggered Green indicator light: Blinking (not connected), continuous (connected)

User Notification

Indicators: Acoustic beeper, LEDs, and vibration motor Acoustic beeper sound pressure level: ~90 dB @ 10 cm (~90 dB @3.94")

Wireless Communication

Radio: 915 MHz) Antenna: Internal Bidirectional communication

Location Technology

GPS Radio: 20 Channel high sensitivity, mobile assisted GPS Antenna: Internal Ultimate Sense 2° GPS antenna extends operation in weak GPS signal conditions GPS Accuracy: ~5 m (16 ft) Outdoors, ~50 m (165 ft) indoors GPS Real-time location turnaround time: ~20 seconds

Mobile Messaging Methods Email, text message (SMS)

Alert Messages Fall Detected

Emergency

Silent Emergency No-motion Missed Check-in Low Battery Power off

Power & Battery

Rechargeable Li-ion battery: 1500 mAh Li-ion Battery Life: 12 hours continuous operation Charging connector: 4-pin sealed connection

Environmental

Storage temperature: -30 to 75° C (-22 to 167° F) Operating temperature: -20 to 55° C (-4 to 131° F) Charging temperature: 0 to 45° C (32 to 113° F) Ingress Protection: Designed to meet IP65

Approvals

FCC Part 15 Subpart B, FCC ID: W77LNR900, Industry Canada 8255A-LNR900 Intrinsically safe: Class I, Division 1, Groups A – D and Class II, Division 1, Groups E – G, T4 Class I Zone 0, Group IIC, T4

Device Requirements

Blackline GPS activated service plan Bridge with activated service plan GPS signal coverage required for GPS locating ANThill location beacons for location awareness where GPS service is not available

Warranty

One year limited factory warranty Wireless Coverage and Activated Service Plans Wireless coverage: Nearly 150 countries Service plan options: Contact Blackline

Loner Portal Web Application

Features include: Alarm banner, event history, device location mapping, device management, alert & notification settings, and more.

Loner 900 Care

Consideration Regarding Use and Storage of Loner 900

Loner 900 meets IP65 ingress protection ensuring that under normal operation no dirt or water can enter the device.

Storage temperature range: -30 to 75° C (-22 to 167° F) Operating temperature: -20 to 55° C (-4 to 131° F). Charging temperature: 0 to 45° C (32 to 113 °F)

More details can be found in the specifications section.

Customer Care

Customer Care for Loner 900

Customer Care for Loner 900 is available between the hours of 8 AM and 5 PM Mountain Time.

North America toll-free: 1-877-869-7212 | International: +1-403-451-0325 Email: support@blacklinegps.com

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