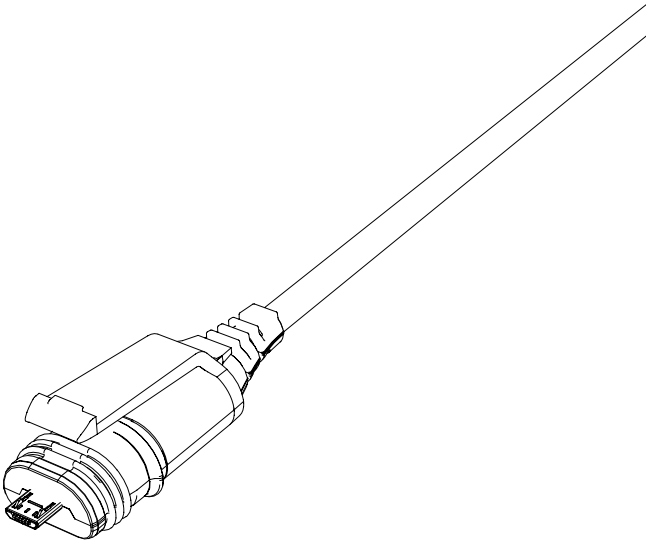
Installation Guide:
Hard-wire Kit for Loner Bridge



❖ This accessory is to be used with the Loner® Bridge System.

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Contents

- Hard-wire Kit
- Zip ties

Installation

Blackline Safety recommends that an automotive service center install Loner Bridge for you. Installation time varies depending on the installation, your vehicle model, and requires approximately 15 to 90 minutes. Please read the following installation instructions before you begin.

❖ IMPORTANT: Failure to properly wire the Bridge may result in loss of power to the Bridge.

Tools

To install Loner Bridge with the Hard-wire Kit you may need the following:

- Automotive test light
- Pliers
- Wire strippers
- Drill
- Soldering iron and solder
- Heat shrink
- Heat gun

Installation with the fuse expander accessory

For installations where splicing into vehicle wiring is not permitted, Blackline offers Quick Mini® and Quick ATO® fuse expander accessories. These wiring harnesses enable an installer to remove a fuse from a vehicle's fuse panel and install the fuse expander. A pair of fuse sockets provides one fuse socket for the original circuit within the vehicle and a secondary fuse socket for the additional circuit for Loner Bridge. This approach requires no stripping of a vehicle's wiring harness or soldering. Contact Blackline Safety for more information.

Choose where to install your Loner Bridge

Prior to installation, consider the following mounting options for Loner Bridge:

- A location near 12 or 24 VDC power
- Loner Bridge requires a clear view of the sky for satellite communications and optimum GPS reception.
- Mount Loner Bridge on a level surface so that the display is readable and the button are accessible.
- Never install Loner Bridge in a location that could interfere with an airbag, seat belt, or where it may interfere with vehicle operation or safety systems, or abstract the driver's view of the road.
- When installing within the interior of a vehicle, mount such that the display conveniently faces the vehicle passengers.

❖ Some vehicle power circuits are controlled by the ignition key. Blackline recommends wiring to such a circuit to prevent vehicle battery drainage when the vehicle is not in use.

❖ WARNING: Always wire the Loner Bridge System to a vehicle circuit that incorporates a fuse.

Loner Bridge can be mounted to a vehicle with the following:

- Truck and Pole mount (optional) that provides the option to mount to the anchor point of a truck box or on varying sizes of poles.
- Multi-purpose mount (included with Loner Bridge) that provides adhesive, tie-strap, and screw fastening options.
- Magnetic mount (included with Loner Bridge) that provides the option to mount to the exterior of a vehicle temporarily.

Hard-wiring your Loner Bridge

Loner Bridge is hard-wired to a vehicle's 12 or 24 VDC power system with the three-wire hard wire installation kit. Blackline recommends that you consider wiring Loner Bridge to the a circuit that is switched off when the ignition key is removed. This approach, compared to wiring to a circuit with continuous power, will remove the potential for Loner Bridge to draw down the vehicle's battery over time for long-term storage applications (more than one week). It is still reasonable to wire to a circuit with continuous power however this approach relies upon the Loner Bridge user to turn the device off when not in use in order to avoid draining the vehicle battery. For non-switched installations, the Loner Bridge device can be simply unplugged to ensure the vehicle battery is not drained.

❖ If additional wire is required to install Loner Bridge, ensure that a minimum 18 gauge automotive grade wire is used.

Splicing the Hard-wire Kit

- Using an automotive test light, identify a switched 12/24 VDC wire that is controlled by the ignition key.
- Loner Bridge consumes up to 1.0 A of peak current. Ensure the chosen vehicle circuit can handle the additional load.
- Disconnect the negative connection to the vehicle's battery.
- Route the positive wire (red) and the brown/green wire of the Hard-wire Kit to the switched 12/24 VDC wire.
- Connect both the red and the brown/green wire to the switched 12/24 VDC wire using either a crimp or solder connection. Do not use wiring taps such as 3M Scotchlok™.
- When soldering, ensure that the connection is appropriately insulated using heat-shrink.
- Route the negative wire (black/white) to a vehicle ground wire or chassis ground.
- Connect black/white wire to vehicle ground or chassis ground using either a crimp or solder connection.
- Insulate a soldered connection appropriately.

Protective Wires

Use split loom where wiring will be run under the truck or exposed to rocks, mud, salt, and snow. Use grommets to protect the wire from sharp edges drilled into the body of the vehicle.

Wiring Diagram

The following are the three options for wiring your Dart device. Javelin does not use the Key On wire so it does not need to be connected if using the hard-wire kit with the Javelin.

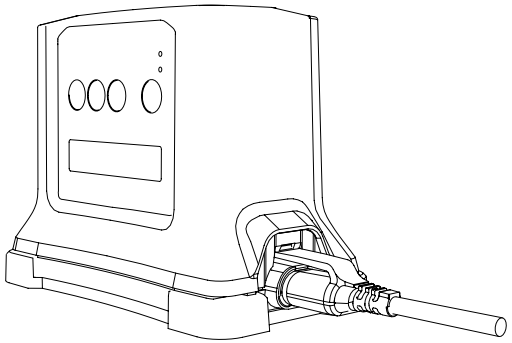
Option		
Wire colours		**Vehicle wiring**
Red [+]		12/24 V DC
Brown/green [Key On]		
Black/white [-]		Ground

Wiring using the fuse expander accessory

Use the optional Quick MINI and Quick ATO fuse expanders to connect Loner Bridge to 12/24 VDC power without splicing into the vehicle's electrical system. Installation instructions accompany the fuse expander accessory, when purchased. Two sizes of fuse expander are available: Mini and ATO. Contact Blackline for more information.

Connecting your Loner Bridge

Once the wiring is completed, Loner Bridge will need to be connected to the Hard-wire Kit. Remove the Sealing Plug from the device. This Plug is not required for a hard-wire installation. Please retain for portable operation, if needed. Align the Micro USB end of the Hard-wire Kit with the device and fully push the Hard-wire Kit plug into the device ensuring the USB connector and cable catch correctly align and the cable catch fully engages with the device.



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Verifying an ignition key switched installation

At any time, to verify a Hard-wire Kit installation that has been connected to a circuit controlled by the ignition key:

1. Ensure that the ignition key is in the OFF position. Loner Bridge may be OFF or ON.
2. Observe the red Charge Indicator Light on the front of Loner Bridge. it should be OFF continuously. If the Charge Indicator Light is blinking or on steadily, the Hard-wire Kit is connected to a non-switched vehicle circuit—check your wiring.
3. Turn the ignition key to the ON position. The Charge Indicator Light should begin to blink or be a steady red. If the light does not turn on, check your wiring.

❖ Some vehicle power circuits are controlled by the ignition key. Blackline recommends wiring to such a circuit to prevent vehicle battery drainage when the vehicle is not in use.

Verifying an installation directly to vehicle power (non-switched)

At any time, to verify a Hard-wire Kit installation that has been connected to a circuit not controlled by the ignition key:

1. Ensure that the ignition key is in the OFF position. Loner Bridge may be OFF or ON
2. Observe the Charge Indicator Light on the front of Loner Bridge. it should be blinking or a steady red light. If the light does not turn on, check your wiring.

❖ Some vehicle power circuits are controlled by the ignition key. Blackline recommends wiring to such a circuit to prevent vehicle battery drainage when the vehicle is not in use.

Loner Bridge display, battery level, charging status, and sleep mode

Loner Bridge features a Liquid Crystal Display that provides an indication of the battery level in percentage full and a charging status. When turned on, Loner Bridge features a Display Sleep Mode that turns off the Liquid Crystal Display and the Green Status Light two minutes after the last button press. This feature ensures that Loner Bridge maximizes battery life and reduces power consumption. To wake up the display at any time to review the battery capacity and charge status, press the OK Button.

Mounting Loner Bridge

Loner Bridge supports multiple mounting options. Refer to the Loner Bridge User Guides for further information.

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