Mobile Link[™] Cellular Remote Monitoring Installation and User Manual



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SAVE THIS MANUAL FOR FUTURE REFERENCE

| Generator Model: | |
|--------------------------------|--|
| Generator Serial Number: | |
| MDN | |
| Date Purchased | |

Record the information found on your unit data label on this page.

When contacting an Independent Authorized Service Dealer (IASD) about parts and service, always supply the complete model and serial numbers of the unit.

Operation and Maintenance: Proper maintenance and care of the unit ensures a minimum number of problems and keeps operating expenses at a minimum. It is the operator's responsibility to perform all safety checks, to make sure that all maintenance for safe operation is performed promptly, and to have the equipment checked periodically by an IASD. Normal maintenance, service, and replacement of parts are the responsibility of the owner/operator and are not considered defects in materials or workmanship within the terms of the warranty. Individual operating habits and usage may contribute to the need for additional maintenance or service.

When the unit requires servicing or repairs, the manufacturer recommends contacting an IASD for assistance. Authorized service technicians are factory-trained and are capable of handling all service needs.

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California Proposition 65. Engine exhaust and some of its constituents are known to the state of California to cause cancer, birth defects, and other reproductive harm. (000004)

California Proposition 65. This product contains or emits chemicals known to the state of California to cause cancer, birth defects, and other reproductive harm. (000005)

Section 1: Safety

Introduction

Thank you for purchasing this home standby generator product accessory.

Read This Manual Thoroughly

The information in this manual is accurate based on products produced at the time of publication. The manufacturer reserves the right to make technical updates, corrections, and product revisions at any time without notice.

If any section of this manual is not understood, contact the nearest Independent Authorized Service Dealer (IASD) for starting, operating, and servicing procedures.

SAVE THESE INSTRUCTIONS: The manufacturer requires that this manual and the rules for safe operation be copied and posted near the unit's installation site. Safety should be stressed to all operators and potential operators of this equipment.

SAFETY: Throughout this manual, DANGER, WARNING, CAUTION and NOTE blocks are used to alert personnel about particular operations, functions or services that may be hazardous if performed incorrectly or carelessly. Their definitions are as follows:

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

(000001)

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

(000002)

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

(000003)

NOTE: Notes provide additional information important to a procedure or component.

These safety alerts cannot eliminate the hazards that they signal. Strict compliance with these special instructions, plus common sense, are major accident prevention measures.

General Safety

WARNING

Consult Manual. Read and understand manual completely before using product. Failure to completely understand manual and product could result in death or serious injury.(000100a)

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The safety messages in this manual and on tags and decals affixed to the unit are, not all-inclusive. therefore. lf using work method procedure. or operating the does technique manufacturer not specifically recommend, verify that it is safe for personnel. Also make sure the procedure, work method or operating technique utilized does not render the generator unsafe.

General Safety Hazards

Electrocution. High voltage is present at transfer switch and terminals. Contact with live terminals will result in death or serious injury. (000129)

Accidental Start-up. Disconnect the negative battery cable, then the positive battery cable when working on unit, Failure to do so could result in death or serious injury. (000130)

Risk of injury. Do not operate or service this machine if not fully alert. Fatigue can impair the ability to service this equipment and could result in death or serious injury.

(000215)

Injury and equipment damage. Do not use generator as a step. Doing so could result in falling, damaged parts, unsafe equipment operation, and could result in death or serious injury. (000216

(000216)

 For safety reasons, the manufacturer requires that this equipment be installed by an Independent Authorized Service Dealer (IASD) or other competent, qualified electrician or installation technician who is familiar with applicable codes, standards and regulations. The operator also must comply with all such codes, standards and regulations. Repair generally requires simple replacement of the assembly with a new unit, which can usually be performed by the generator owner. Before performing any work near the generator, remove the control panel fuse and disconnect the black (-) battery cable to prevent accidental startup. When disconnecting battery cables, always remove the black (-) cable first, then remove the red (+) cable. When reconnecting the cables, connect the red (+) cable first, and then black (-) cable.

Electrical Hazards



Electrocution. Contact with bare wires, terminals, and connections while generator is running will result in death or serious injury. (000144)



Electrocution. Do not wear jewelry while working on this equipment. Doing so will result in death or serious injury.

(000188)



Electrocution. Water contact with a power source, if not avoided, will result in death or serious injury.

(000104)

Automatic start-up. Disconnect utility power and render unit inoperable before working on unit. Failure to do so will result in death or serious injury.

(000191)



Electrocution. In the event of electrical accident, immediately shut power OFF. Use non-conductive implements to free victim from live conductor. Apply first aid and get medical help. Failure to do so will result in death or serious injury. (000145)



Moving Parts. Do not wear jewelry when starting or operating this product. Wearing jewelry while starting or operating this product could result in death or serious injury. (000115)



Electrocution. Potentially lethal voltages are generated by this equipment. Render the equipment safe before attempting repairs or maintenance. Failure to do so could result in death or serious injury.

(000187)

This product is intended to be installed in conjunction with an Automatic Standby Generator. The generator may crank and start at any time when utility is lost. When this occurs, load circuits are transferred to the STANDBY (generator) power source. Before working on this generator (for inspection, service or maintenance), to prevent possible injury, always set the generator to the OFF mode and remove the 7.5A fuse from the generator control panel.

 Verify that all appropriate covers, guards and barriers are in place, secured and/or locked before operating the generator. If work must be done around an operating unit, stand on an insulated, dry surface to reduce potential shock hazard.

Explosion Hazards



Explosion and fire.Fuel and vapors are extremely flammable and explosive. No leakage of fuel is permitted. Keep fire and spark away. Failure to do so will result in death or serious injury. (000192)



Explosion and Fire. Fuel and vapors are extremely flammable and explosive. Store fuel in a well ventilated area. Keep fire and spark away. Failure to do so will result in death or serious injury. (000143)



Explosion and fire risk. Do not smoke near unit. Keep fire and spark away. Failure to do so could result in death, serious injury, or property or equipment damage. (000282)

- Verify that no combustible materials are left in the generator compartment or on or near the generator as FIRE or EXPLOSION may result. Keep the area surrounding the generator clean and free from debris.
- Gaseous fluids, such as natural gas and liquid propane (LP) gas, are extremely EXPLOSIVE. Install the fuel supply system according to applicable fuel-gas codes. Before placing the home standby electric system into service, fuel system lines must be properly purged and leak tested according to applicable code. Inspect the fuel system periodically for leaks. No leakage can be permitted.

Section 2: General Information and Setup

Introduction

This section of the manual describes the features and controls of the Mobile Link cellular remote monitoring system. Every effort was made to ensure that the information and instructions in this manual were both accurate and current at the time the manual was written. However, the manufacturer reserves the right to change, alter or otherwise improve this product or manual at any time without prior notice.

Description

The Mobile Link cellular remote monitoring system allows generator status and operating information to be monitored from anywhere the owner has access to a cellular network. In the United States, Verizon is the cellular network provider. The Mobile Link cellular unit is mounted on the outside of the generator and communicates with the generator's controller via a serial port.

After the generator is registered with www.MobileLinkGen.com, owners can log onto the website to check on the current status of the generator at any time. Registering the generator also enables the system to notify the owner of any change in operating status.

The owner will be contacted by e-mail, push notifications, or text messages if alarms or warnings occur. The delivery method and frequency of these alerts can be adjusted on the website.

NOTE: E-mail and text notifications can be managed through the website. Push notifications are also available and can be managed through the use of the Mobile Link App. See *Mobile Link Cellular App* for downloading instructions.

Verizon Cellular Network Extender

If Verizon cellular coverage is not adequate for communication signal strength, a cellular network extender is available through an IASD. Order part number #0L2824. A cellular network extender uses the home's internet connection to communicate information from the generator to the Mobile Link system.

Website Information Screens

The Mobile Link cellular unit sends messages to alert the owner when scheduled maintenance is required on the generator. The generator's total run hours can be viewed, and a log of completed maintenance can be generated.

Generator exercise time can also be checked and altered, if desired, through www.MobileLinkGen.com.

| Wire Harness Part Numbers | | |
|---------------------------|--|--|
| 1000003206 | Used on Air-Cooled Home Standby Generators | |
| 0K2231 | Used on Liquid-Cooled Commercial Generators | |

Mobile Link Cellular Information Screen

See *Figure 2-1* and *Figure 2-2*. Logging into the Mobile Link App launches an Information Screen. The Information Screen displays an overview of each generator being monitored by Mobile Link. A picture of the generator appears on screen against a color-coded background (A). Background color indicates at-a-glance operating status:

- Green: Generator is ready to operate.
- Blue: Generator is currently operating.
- Yellow: Generator requires maintenance, but is otherwise ready to operate.
- **Red:** Generator has a functional problem and requires immediate service.
- Gray: Generator not connected to Mobile LInk.

If Mobile Link cellular is being used to monitor multiple generators, scroll left and right to select the desired unit.

An instrument cluster displays total generator running time, time on backup power, time on exercise, battery voltage, and fuel level (diesel units only).



Figure 2-1. Mobile Link Cellular Information Screen



Figure 2-2. Mobile Link App Interface

Section 3: Operation and Troubleshooting

Installation

NOTE: Verify proper generator operation and performance before adding Mobile Link cellular during a new generator installation.

Main Circuit Breaker Locations

See *Figure 3-1*. Depending on your generator model, the main circuit breaker is located either in an external breaker box (A), or internally near the Controller (B).



Figure 3-1. Main Circuit Breaker Locations

Installing Mobile Link Cellular

- 1. Unlock both locks, open generator lid, and remove front panel.
- See Figure 3-2. If generator is equipped with an internal breaker near the Controller, remove end panel from right side. Otherwise, proceed to Step 3.



Figure 3-2. Removing End Panel (Internal Breaker)

 Turn generator to OFF. Remove generator panel fuse. **NOTE:** There are different Controller configurations for various model years.

- 4. Turn main utility disconnect breaker in home's electrical panel to OFF or OPEN.
- 5. Using an appropriate fuse puller, remove T1 fuse from transfer switch.
- 6. Disconnect battery negative (–) cable, then positive (+) cable.

NOTE: The battery divider will need to be removed for installation on PowerPact units.

- If generator is equipped with an external breaker box, remove controller sheet metal cover and fasteners.
- Attach provided template to position mounting hole location in end panel. Mounting hole location is critical for proper operation. Mobile Link cellular unit antenna must protrude 1 inch (2.54 cm) above top of generator roof when installation is complete.

NOTE: See *Figure 3-3.* 2013 and later models have a pre-positioned dimple on the end panel to mark the center of the hole.





Figure 3-3. Pre-Positioned Dimple

 Inspect area behind external breaker box to verify all wires are moved out of the way to prevent damage during drilling. **NOTE:** Models equipped with an internal breaker mounted near the Controller will already have the end panel removed at this point. Carefully place the end panel face up on a clean, smooth, flat surface to avoid damaging the paint.

- 10. Use template provided with these instructions to drill a 1-1/8 in. (29 mm) hole.
- 11. See *Figure 3-4.* Route six pin connector through plastic fitting (A) and one green gasket (B).





Figure 3-4. Mobile Link Cellular Installation

- Insert plastic fitting, from inside of generator, through newly drilled hole in end panel. Position threaded portion of fitting towards outside.
- 13. Install second green gasket (B) on outside of end panel.
- Thread antenna (D) into Mobile Link cellular unit (C). Rotate antenna clockwise until secure. Position antenna pointing up.

NOTE: Do not overtighten. Hand tighten only.

- Insert six pin connector into Mobile Link cellular unit. Connector will only fit one way. DO NOT force into place.
- See *Figure 3-5*. With plug installed, tighten plastic fitting and draw Mobile Link cellular unit to generator wall. Do not overtighten. Position Mobile Link cellular unit with antenna facing upwards.



Figure 3-5. Mobile Link Cellular In Place

NOTE: Hold Mobile Link cellular unit firmly and tighten nut during installation to avoid damage to unit wiring harness.

17. Route wire harness to back side of controller. Wherever possible, bundle harness with other wire looms to provide additional support.

NOTE: On 2008 Home Standby Units only, remove fasteners that secure controller.

- Locate accessory port. Accessory port is an eight-pin connector on underside of controller.
 - On models equipped with an external breaker box, lift controller to gain access to accessory plug location.
 - See Figure 3-6. On models equipped with an internal breaker mounted near the controller, accessory port is visible from the battery compartment when end panel is removed.



Figure 3-6. Accessory Port (Internal Breaker)

 See Figure 3-7. For PowerPact models, the accessory port is located under the Controller, and visible through the battery door after the plate is removed.



Figure 3-7. Accessory Port (PowerPact)

NOTE: If there is a decal labeled "Port 1" or "Accessory Prt 1," remove decal to locate connector.

19. Install eight pin connector harness into open socket on controller.

NOTE: The connector will only fit one way. DO NOT force.

See Figure 3-8. Loosen and remove nuts

 (A) from both positive (+) and negative (-) terminal screws on battery cables. Slide harness power wires (B) over terminal screws and replace nuts. Tighten securely.



Figure 3-8. Attach Harness Power Wires

NOTE: The harness power wires consist of a black negative (–) wire and a fused red positive (+) wire.

- 21. Install end panel, controller, or sheet metal controller cover. Install and tighten retaining fasteners.
- 22. Verify generator is OFF.
- 23. Install generator controller fuse.
- 24. Install T1 fuse into transfer switch using an appropriate fuse puller.
- 25. Turn main breaker in the home electrical panel to ON. On generator control panel, follow installation wizard and validate correct date, time, etc.

- 26. Place generator in AUTO.
- 27. Turn utility disconnect switch OFF to simulate a power outage. Generator should turn ON. Allow to run for approximately 30 seconds, then turn utility disconnect switch back to ON or CLOSED to restore utility service. Transfer switch will transfer back to utility. Generator will cool down and then shut down.
- 28. Verify Mobile Link cellular unit middle LED is illuminated and bottom LED is illuminated or flashing at this time.

NOTE: Top LED will not illuminate until registration/activation process is complete.



Figure 3-9. Mobile Link Cellular LEDs

000217

| А | LED will illuminate when unit is registered. | |
|---|---|--|
| В | LED will flash if there is a poor connection. | |
| С | LED will be off if there is no network connection | |
| | LED will flash if the server connection is pending or down. | |

Verizon Cellular Network Extender Installation

In the US, if cellular coverage is not adequate for communication signal strength, a network extender is available through an IASD.

- Place network extender near the most centrally located window. For best results, place extender in an elevated location such as the top of a bookshelf or tall cabinet. If already using a Wi-Fi router, keep extender at least 2 feet (61 cm) away.
- Connect one end of the provided Ethernet cable to an open port on the router and connect the other end to the WAN port located at the rear of the network extender.
- Plug the power supply into the 12VDC power port located at the rear of the network extender and plug the supply into an available wall outlet.

| Problem | Cause | Correction |
|------------------------|--|--|
| All LEDs OFF | No power to Mobile Link cellular unit | Check 5 Amp fuse located on yellow harness wire. |
| | | Check that harness is properly connected to battery. |
| | | Reset connector to Mobile Link cellular unit. |
| Top LED OFF | Unit not enrolled | Enroll Mobile Link cellular unit at www.MobileLinkGen.com |
| | | Verify Mobile Directory Number (MDN) is enrolled on www.MobileLinkGen.com and enrolled number matches Mobile Directory Number (MDN) of Mobile Link cellular unit. |
| Middle LED flashing | Poor connection | Reset connector at generator controller and Mobile Link cellular unit. |
| | | Replace cable. |
| Bottom LED OFF | No cellular network connection | Check cellular coverage in area. |
| | | Mobile Link cellular unit in "Suspended" mode. Contact Customer Service for assistance at (US) 1-855-GEN-VIEW (1-855-436-8439) |
| Bottom LED flashing | Server connection pending | Network connection established. Awaiting server response. |
| | Server may be down | Wait for situation to resolve itself. NOTE: Cellular coverage may be intermittent. Verify cellular coverage is good in area by trying to make a phone call from a mobile phone near Mobile Link cellular unit. |

Troubleshooting

Section 4: Registration

Once the Mobile Link cellular unit has been installed, it should be registered and activated to obtain full benefits of product capabilities. Gather the following information prior to initiating registration process:

- E-mail address
- Mobile Directory Number (MDN) (located on bottom of Mobile Link cellular unit or product box)
- Mobile Equipment Identification Number (MEID) (located on Mobile Link cellular product box)
- Generator serial number (located on label plate, near control panel console)
- Mailing address
- Valid credit card
- Address of generator location (if different than mailing address)

Go to **www.MobileLinkGen.com** to complete the registration process. The welcome screen is shown in *Figure 4-1*.

- 1. Click "Sign Up" (A).
- 2. Enter requested information when prompted, then click "Sign Up."
- Enter requested generator enrollment information when prompted, then click "Enroll."

NOTE: The MDN can be found on the bottom of the device or on the device packaging. The serial number is located on or in the area of the control panel.

 Select the types of alerts to receive, how often to receive them, and whether the alerts should be sent as text messages, email messages, or both.



Figure 4-1. Mobile Link Cellular Information Screen

- Text alert settings can be configured to deliver notifications of any or all changes in generator status.
- Status changes include such events as faults, warnings, exercise confirmations, or maintenance reminders.
- **5.** An enrollment summary screen appears. Select "Submit" to continue.

 Connect the Mobile Link cellular account to a preferred Independent Authorized Service Dealer (IASD). This enables Mobile Link cellular to automatically deliver maintenance notifications and alarms to the IASD.

NOTE: Contact the IASD for help in establishing a connection between them and the Mobile Link account.

 When generator enrollment is complete, top LED light on Mobile Link cellular unit will illuminate.

Section 5: Mobile Link Cellular App

Download the Mobile Link Cellular for Generators app:



See *Figure 5-1*. The Mobile Link cellular app provides generator data optimized for your mobile device:

- View current generator status and upcoming maintenance needs.
- Remotely set the generator's exercise time.
- Review generator's run and maintenance history.
- Receive push notifications to indicate changes in status.



Figure 5-1.Mobile Link Cellular for Generators App

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