

The Powerhouse Charging Station is the perfect companion for your T3 Series or T4 Thermal Imager. Designed to safely house and charge the Thermal Imager and an accompanying battery, the Powerhouse ensures that your Thermal Imager will always be ready for action.

### Using the Powerhouse as a free-standing unit:

#### NOTE

Although the Powerhouse is designed for permanent vehicle installation, Bullard also provides an optional adapter kit for unattached, free-standing use. As a free-standing unit, the Powerhouse cannot provide secure storage of the thermal imager and its spare battery in a vehicle in accordance with NFPA 1901-10-1.7. Free-standing use is not recommended for vehicles. The adapter kit includes a back cover panel, rubber feet, an AC power adapter and necessary wiring connectors.

### Installation

The Powerhouse is designed to be mounted on any convenient flat panel surface in a vehicle. When installed and used in accordance with these instructions, the unit is designed to comply with NFPA 1901-10-1.7 (see Caution section for proper installation).

**Location:** Select a conveniently located, flat panel surface of sufficient size to accommodate the unit. If the optional, detachable transmitter/handle is to be used with the thermal imager, be sure to allow sufficient room (**Figure 1**) for the handle which will protrude from the left side of the unit when in place. The unit can be conveniently mounted in various orientations; however, avoid mounting the unit in a flat position with the open end facing either the front or back part of the vehicle. These orientations do not comply with NFPA 1901-10-1.7. As the required wiring enters the unit from behind, (**Figure 2**) it is necessary to have sufficient access to the area behind the panel to install the wiring. In addition, the unit is secured to the panel by four (4) 1/4"-28 stainless steel flat head screws which are provided with the unit. These may be secured to the panel by drilling and tapping holes in the panel (if it is thick enough to accommodate the threaded holes), or alternately by means of the four 1/4"-28 hex nuts provided.

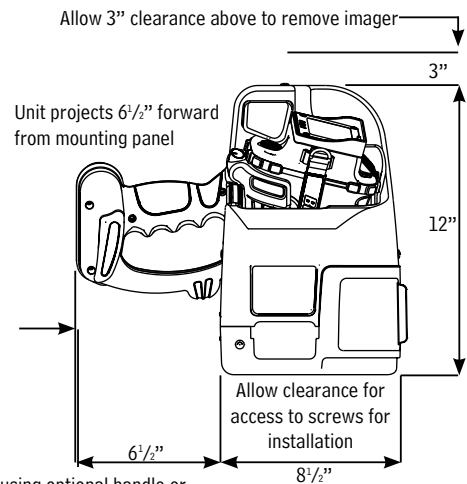


Figure 1  
If using optional handle or transmitter, allow 6 1/2" clearance to left of unit.



Figure 2

**Electrical Wiring:** The unit is provided with a plug-in connector fitted with a pair of wires for attachment to the power supply wiring in the vehicle. The wires are color coded, with red signifying the positive (+) conductor and black signifying the negative (-) conductor. Provide power supply wiring to the mounting location from a 5 Ampere fused power source with a voltage of 12-24 VDC. Connect the power supply wires to the ends of the wires on the provided connector by soldering or by using acceptable electrical connection devices.

**NOTE**

The Powerhouse should be connected to an uninterrupted circuit, such as the apparatus battery, which continues to provide power when the vehicle is not in use. Wiring the Powerhouse to a switched circuit or through a relay may result in discharged imager batteries if the vehicle is left idle for periods of more than a few days at a time.

**CAUTION**

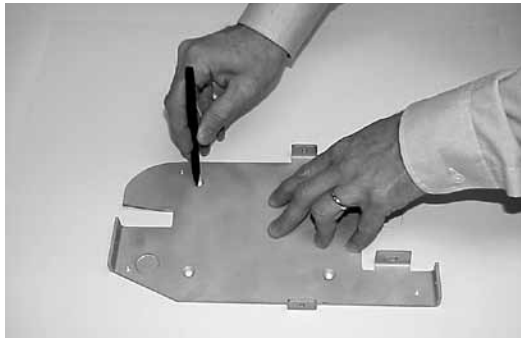
DO NOT wire the Powerhouse to a third party apparatus battery charger! Failure to comply may result in improper function of the Powerhouse.

**Marking and Drilling the Panel:**

**NOTE**

For protection in shipping, the Powerhouse unit is shipped with the back plate attached. Before installation, remove the back plate by removing the four screws that secure it to the plastic housing. Retain these screws for reassembly.

Place the aluminum back plate in the desired position on the panel. Mark the locations of the four countersunk holes onto the panel (**Figure 3**). The lower right hand corner (as facing the panel) of the back plate is cut away to permit passage of the wires from behind the panel into the unit. Mark and drill a suitably sized hole in this area of the panel, ensure that there are no sharp edges or burrs that could harm the insulation, and pass the wiring through this hole. Either drill and tap four (4) 1/4"-28 threaded holes at the previously marked locations or drill four (4) 9/32" diameter clearance holes, depending on the desired mounting method.



**Figure 3**

**Mounting the back plate:** In order to guarantee the least amount of vibration and to provide sufficient clearance between the panel and the Powerhouse, it is necessary to install the four (4) rubber feet provided.

Insert one of the # 10-32 x 1/2" screws into each of the four (4) rubber feet, ensuring the screw heads do protrude above the top of the rubber feet. Install the four (4) screw and rubber feet assemblies on the flat surface of the back panel. Tighten the feet finger tight; if necessary, gently tighten with a Phillips screwdriver. Do not overtighten. Set the back plate in place on the panel and attach it with the four 1/4"-28 flat head screws provided. Tighten all fasteners securely.

**Preparing the Powerhouse unit for installation:** First, make sure that the power is disconnected from the supply wiring. Plug the power supply connector into the mating connector on the battery charger circuit board (**Figure 4**). Place the latch spring firmly onto the protruding spring seat on the back of the latch, near the top of the unit. Set the unit in place on the back plate, making sure that the free end of the latch spring seats into the milled recess in the back plate and that the wiring is not pinched or trapped (**Figure 5**). The Powerhouse™ unit is a snug fit on the back plate, and it may be necessary to spread the sides slightly as you set it into place. Once in place, secure the unit to the back plate with the four (4) stainless steel #10-32 Phillips Head screws provided. Reconnect the power supply wiring. Installation is now complete.



**Figure 4**



**Figure 5**

# Bullard POWERHOUSE™ Charging Station User Manual

for use with the Bullard T3 Series and T4 Thermal Imager

## Operation

The Powerhouse charging station is designed to perform the following functions:

- Securing the Imager in the vehicle in accordance with NFPA 1901-10-1.7
- Storing and recharging the battery in the Imager and maintaining the battery at full charge.
- Securing a spare rechargeable battery in accordance with NFPA 1901-10-1.7
- Storing and recharging the spare battery and maintaining it at full charge.
- Securing an optional AA battery pack in accordance with NFPA 1901-10-1.7

**Inserting the Imager into the Powerhouse:** Depress the black imager retaining latch at the upper left corner of the Powerhouse with your left thumb and set the imager firmly into place in the upper recess of the Powerhouse, with the lens facing downward and the top of the imager facing to the right (**Figure 6**). Release the latch when the imager is fully seated into the unit. The battery charger is automatically activated when the imager is inserted. Battery charge condition is indicated by a two-color LED on top of the unit adjacent to the imager recess. A red LED indicates that the battery is being charged; a green LED indicates that the battery is fully charged and its charge is being maintained by the Powerhouse unit.

**Removing the Imager from the Powerhouse:** Depress the retaining latch with your left thumb while grasping the imager with your right hand. Pull the imager upward and away from the Powerhouse unit (**Figure 6**).

**Inserting the spare rechargeable battery into the Powerhouse:** Hold the battery by its broad flange, with the label on top. Insert the battery by pressing it into the opening at the lower left of the Powerhouse unit (**Figure 7**). Once fully inserted, the battery will snap firmly into place and the battery charging circuit will automatically activate. If the battery is inserted incorrectly, it will not be possible to fully insert it. In this case, the battery will not snap into place, and the charging circuit will not activate. Battery charge condition is indicated by a two-color LED just to the left of the charger opening. A red LED indicates that the battery is being charged; a green LED indicates that the battery is fully charged and its charge is being maintained by the Powerhouse unit.

**Removing the spare rechargeable battery from the Powerhouse:** Grasp the protruding flange of the battery, lift up and pull the battery out of the opening.

**Storing the optional AA battery pack in the Powerhouse:** The black sliding door at the lower right corner of the Powerhouse conceals a storage area designed to contain a holder for eight AA batteries for emergency use in case all available rechargeable batteries should become discharged. This AA battery holder is available as an option from your Bullard distributor. To open the compartment, grasp the protruding handle at the left edge of the door and push it to the right until it stops (**Figure 8**). To close the door, push it all the way to the left. If you do not have the AA battery holder, the compartment may be used for any other items of comparable size and weight.



Figure 6



Figure 7



Figure 8



#### CAUTION

The Powerhouse is not compliant with NFPA 1901-10-1.7 when mounted laying flat with its vertical axis in either a front or back orientation with the vehicle. Installation in either of these two configurations is not advised and could result in serious injury or malfunction of the unit.

Use only a fused power source of 5 amp capacity and 12-24 VDC voltage.

Ensure that the polarity of the power supply wiring is correct.

Failure to follow these instructions could result in serious injury or malfunction of the unit.

## Warranty

Bullard warrants to the original purchaser that the Powerhouse charging station is free of defects in materials and workmanship under intended use and service for a period of 1 (one) year from date of manufacture. Bullard's obligation under this warranty is limited to repairing or replacing, at the Company's option, articles that are returned within the warranty period and that, after examination, are shown to the Company's satisfaction to be defective, subject to the following limitations:

- a) Article must be returned to Bullard with shipping charges prepaid.
- b) Article must not be altered from its original configuration.
- c) Articles must not have been misused, abused or damaged in transport.

In no event shall Bullard be responsible for damages, loss of use or other indirect, incidental, consequential or special costs, expenses or damages incurred by the purchaser, notwithstanding that Bullard has been advised of the possibility of such damages.

**Any implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to one (1) year from the date of manufacture of this product.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

**Americas:**  
**E.D. Bullard Company**  
1898 Safety Way  
Cynthiana, KY 41031-9303  
Toll free: 877-BULLARD (285-5273)  
Tel: 859-234-6616  
Fax: 859-234-8987  
[www.bullard.com](http://www.bullard.com)

**Europe:**  
**Bullard GmbH**  
Lilienthalstrasse 12  
53424 Remagen • Germany  
Tel: +49-2642 999980  
Fax: +49-2642 9999829  
[www.bullardextrem.com](http://www.bullardextrem.com)

**Asia-Pacific:**  
**Bullard Asia Pacific Pte. Ltd.**  
LHK Building  
701, Sims Drive, #04-03  
Singapore 387383  
Tel: +65-6745-0556  
Fax: +65-6745-5176  
[www.bullard.com](http://www.bullard.com)

©2010 Bullard. All rights reserved.  
T3MAX, T4, and Powerhouse are trademarks of Bullard.

