Bullard *POWERHOUSE*™ Charging Station User Manual

for use with the Bullard T3™ Thermal Imager

The Powerhouse Charging Station is the perfect companion for your T3 Thermal Imager. Designed to safely house and charge the T3 and an accompanying battery, the Powerhouse ensures that your T3 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 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) 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 (4) hex nuts provided.

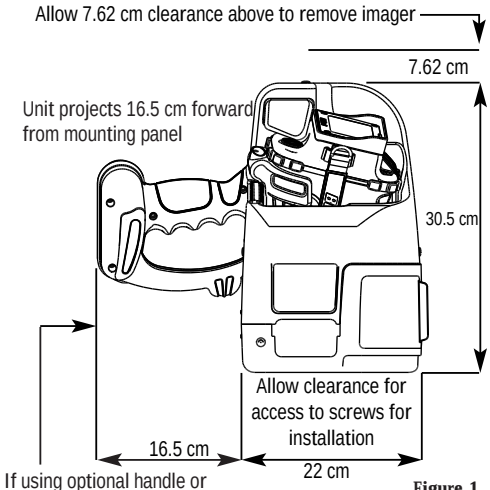

Figure 1

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

For best results, the Powerhouse should be connected to an unswitched circuit which continues to provide power when the vehicle is not in use. Wiring the Powerhouse to a switched circuit may result in discharged imager batteries if the vehicle is left idle for periods of more than a few days at a time.

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) threaded holes at the previously marked locations or drill four (4) 7.1437 mm diameter clearance holes, depending on the desired mounting method.

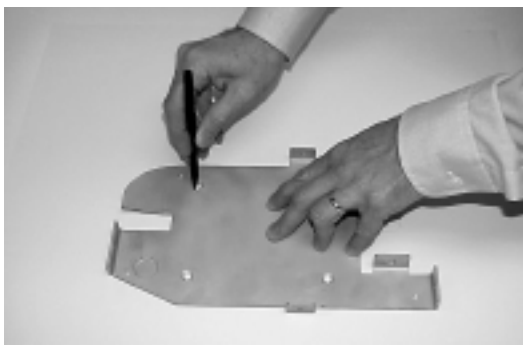

Figure 3

Mounting the back plate: Set the back plate in place on the panel and attach it with the four (4) 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 Phillips Head screws provided. Reconnect the power supply wiring. Installation is now complete.

Figure 4

Figure 5

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 it's 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.

Ordering Information

CATALOG NUMBER	DESCRIPTION
T3POWERHOUSEE	Truck mounted direct charge system includes vehicle mount, built-in battery charger, direct-wiring kit, and attachment hardware
T3POWERHOUSEKITE	Kit for conversion to freestanding unit includes AC and DC adapters

Technical Specifications

Dimensions	30.48 cm height x 16.5 cm length x 22 cm width
Weight	1.4 kg
Power Consumption	1500 mA max.; 750 mA average
Power Requirements	12-24 VDC (center positive)

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 ninety (90) days from date of manufacture. Bullard's obligation under this warranty is limited to repairing or replacing, at Bullard's option, articles that are returned within the warranty period and that, after examination, are shown to Bullard'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 ninety (90) days from the date of manufacture of this product.

CE e24 020745

ISO 9001 certified

Bullard
1898 Safety Way
Cynthiana, KY 41031-9303
Toll free: 877-BULLARD (285-5273)
Tel: 859-234-6616
Fax: 859-234-8987
www.bullard.com

Bullard GmbH
Lilienthalstrasse 12
53424 Remagen
Germany
phone: +49-2642 999980
fax : +49-2642 9999829
www.bullardextrem.com

Bullard Asia Pacific Pte. Ltd.
Cisco Centre
20 Jalan Afifi, #08-03
Singapore 409179
Tel: +65-6745-0556
Fax: +65-6745-5176
www.bullard.com

6050046967 (0806)

Bullard
It's your life and you're worth it™

Bullard
1898 Safety Way
Cynthiana, KY 41031-9303
Toll free: 877-BULLARD (285-5273)
Tel: 859-234-6611
Fax: 859-234-8987

Bullard GmbH
Lilienthalstrasse 12
53424 Remagen
Germany
Tel: +49 2642 99998-0
Fax: +49 2642 99998-29

Bullard Asia Pacific Pte. Ltd.
Cisco Centre 2, #08-03
20 Jalan Afifi
Singapore 409179
Tel: +65 6745-0556
Fax: +65 6745-5176

Head Protection

Respiratory Protection

Fire and Rescue Safety

Thermal Imaging

EC DECLARATION OF CONFORMITY

Manufacturer:
E.D. Bullard Company
1898 Safety Way
Cynthiana, Kentucky 41031
USA

European representative:
Bullard GmbH
Lilienthalstrasse 12
53424 Remagen
Germany

Hereby declares that the following designated product,

Bullard Powerhouse Charging Station,
T3 POWERHOUSE CHARGER (part # T3POWERHOUSEE)

complies with the Council Directive 72/245/EEC of 20th June 1972, amended by Council Directive 95/54/EC of 31st October, 1995 relating to the Radio interference suppression (electromagnetic compatibility EMC) of motor vehicles.

Cynthiana, Kentucky
27. July 2006

Richard Kovacs
Director, Product Development

National Standards Authority of Ireland

EC TYPE-APPROVAL CERTIFICATE

With regard to Radio Interference of Motor Vehicles

Council Directive 72/245/EEC of 20th June 1972, as amended by Council Directive 95/54/EC of 31st October, 1995 of the approximation of the laws of the Member States relating to the radio interference suppression (electromagnetic compatibility) of motor vehicles.

EC Type Approval No:	*e24*72/245*95/54*0745*00*
Reason for extension:	*N/A.*

SECTION I

0.1	Make (trade name of manufacturer's):	*Ed Bullard Company.*
0.2	Type and general commercial description:	*T3 Powerhouse Charger.*
0.3	Means of identification of type, if marked on the separate technical unit:	*T3 Powerhouse.*
	0.3.1 Location of that marking:	*On the rear side of the main unit.*
0.4	Category of vehicle:	*See Appendix.*
0.5	Name and address of manufacturer:	*Ed Bullard Company, 1898 Safety Way, Cynthiana Kentucky 41031-882, USA.*
0.6	In the case of components and separate technical units, location and method of affixing of the EEC approval mark:	*On the rear side of the main unit. Printed label.*
0.7	Address(es) of assembly plant(s):	*Ed Bullard Company, 1898 Safety Way, Cynthiana Kentucky 41031-882, USA.*

SECTION II

1.	Additional information (where applicable):	*See Appendix.*
2.	Technical service responsible for carrying out the tests:	*Electronic Technology Systems Dr. Genz GmbH, Storkower Strasse 38C, D-15526 Reichenwalde B., Berlin.*
3.	Date of test report:	*14.08.2003.*
4.	Number of test report:	*G0M20305-7886-M-12.*
5.	Remarks (if any):	*See Appendix.*
6.	Place:	*Dublin.*
7.	Date:	*27th August, 2003.*
8.	Signature:	

9. The index to the information package lodged with the approval authority, which may be obtained on request is attached.

10. Documentation: *43 sheets.*

Appendix

to EC Type Approval Certificate No.: *e24*72/245*95/54*0745*00*

Concerning the type approval of an electrical/electronic sub-assembly with regard to Directive 72/245/EEC, as last amended by Directive 95/54/EC

1.	Additional information	
1.1.	Electrical system rated voltage:	*12 volts nominal.*
1.2.	This ESA can be used on any vehicle type with the following restrictions:	*See technical report G0M20305-7886-M-12 and accompanying manufacturer's information document.*
1.2.1	Installation conditions, if any:	*See manufacturer's specifications.*
1.3.	This ESA can only be used on the following vehicle types:	*N/A.*
1.3.1	Installation conditions, if any:	*N/A.*
1.4.	The specific test method(s) used and the frequency ranges covered to determine immunity were:	*N/A.*
1.5	Approved/recognised laboratory responsible for carrying out the tests:	*Electronic Technology Systems Dr. Genz GmbH.*
5.	Remarks:	*N/A.*

Concerning the type approval of a vehicle with regard to Directive 72/245/EEC, as last amended by Directive 95/54/EC

1.	Additional information	
1.1.	Special devices for the purpose of Annex IV to this Directive:	*N/A.*
1.2.	Electrical system rated voltage:	*N/A.*
1.3.	Type of bodywork:	*N/A.*
1.4.	List of electronic systems installed in the tested vehicle not limited to the items in the information document (see Appendix 1 to Annex II):	*N/A.*
1.5	Approved/recognised laboratory(for the purpose of this Directive) responsible for carrying out the tests:	*N/A.*
5.	Remarks:	*N/A.*

NSAI
Glasnevin
Dublin 9.
Telephone: 01-807 3800
[International (+353+1) 807 3800]
Facsimile: 01-807 3838

NSAI
The Granary, Michael Street,
Limerick.
Telephone: 061-411872
[International (+353+61) 411872]
Facsimile: 061-411874