**Quick Reference**

**Introduction**

This guide describes how to install and use a VCD 8000 vehicle cradle with a Symbol PDT 8000 Series terminal.

The VCD 8000 should be installed into the cab of your vehicle. Once installed, the cradle holds a terminal securely in place. It also:

- provides power for operating the terminal.
- provides a serial port for data communication between a terminal and an external device (e.g., a printer).
- re-charges the terminal’s Lithium-Ion battery
- re-charges a spare battery.

The cradle is powered by the vehicle’s 12 or 24V electrical system. The operating voltage range is 9V to 32V and requires a maximum current of 7A.

**About This Guide**

Specific topics in this guide include:

- **Requirements** on page 2
- **Parts** on page 3
- **Mounting the Cradle** on page 5
- **Power Connection** on page 6
- **Serial Device Connection** on page 8
- **Terminal Insertion and Removal** on page 9
- **Terminal Battery Charging** on page 10
- **Spare Battery Charging** on page 11
- **LED Indicators** on page 13
- **Care and Cleaning** on page 13
- **Troubleshooting** on page 14
- **Regulatory Information** on page 15
- **Service Information** on backcover.
For detailed information on PDT 8000 Series terminals, see the *PDT 8000 Series Quick Reference Guide*, p/n 72-58168-xx or *PDT 8000 Series Product Reference Guide*, p/n 72-58169-xx.

**Requirements**

- **for mounting**
  - four #8-32 self-locking nuts
  - four #8 washers
  - a drill with a #6 drill bit (.204")
- **for power connection**
  - power input cable, p/n 25-61987-01
  - optional in-line fuse, p/n 50-15100-120 (included)
  - optional in-line fuse holder, p/n 50-15100-112 (included)
- **for serial connection**
  - DB9 Female serial cable
    (some devices may require null modem)
- **for communication**
  - a PDT 8000 Series terminal
  - Microsoft ActiveSync
  - setup of host computer and terminal (refer to the *PDT 8000 Series Product Reference Guide* for detailed instructions).
Quick Reference

Parts

FRONT

Terminal release button

Terminal slot

Spare battery slot

Spare battery charging LED

BOTTOM

Serial Port

Power port
There are two connection ports on the bottom of the cradle:

<table>
<thead>
<tr>
<th>Ports</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial</td>
<td>Standard RS 232 port used for direct connection to your serial device using a serial cable.</td>
</tr>
<tr>
<td>Power</td>
<td>Used for connecting to vehicle power using the power input cable.</td>
</tr>
</tbody>
</table>

Caution: ROAD SAFETY - Don’t use the terminal while driving. Park the vehicle first. Always ensure the terminal is fully inserted into the cradle. Do not place it on the seat or where it can break loose in a collision or sudden stop. Lack of proper insertion may result in property damage or personal injury. Symbol Technologies, Inc. is not responsible for any loss resulting from the use of the products while driving. Remember: Safety comes first.
Quick Reference

Mounting the Cradle
1. Select a mounting location for the cradle. It should be flat, and must provide adequate support for the unit.
2. Prepare the mounting surface to accept four #8-32 studs in the pattern shown below. You need to drill four holes with a #6 drill bit.

![Holes for Studs Diagram]

3. Position the cradle on the mounting surface.
4. Fasten it using four #8 washers and four #8-32 self-locking nuts.

Caution: Do not install a VCD 8000 Vehicle Cradle on or near an airbag cover plate or within an airbag zone. Also, do not install it in a location that will affect vehicle safety or driveability.
Power Connection

Please read all of these instructions before you begin.

**WARNING**

A properly trained technician must perform the power connection. Improper connection can damage your vehicle or the cradle.

To connect the cradle to power:

1. Locate your vehicle power source.

   **Note:** The ideal location for connecting the vehicle cradle power input cable would be an accessory output in your vehicle’s fuse panel. If a fused output is not available, Symbol recommends that you use the provided in-line fuse holder and 10A fuse. The fuse protects the vehicle from an electrical short on the power line to the cradle.

   To use the cradle to charge the terminal and spare battery, when the vehicle’s ignition is off, connect the cradle to unswitched power.

2. Route the power input cable from the cradle’s power port to the connection point for your vehicle’s power source.

   **Caution:** The means of routing and securing the power input cable from the cradle through to the vehicle power source is extremely important. Hazards associated with improper wiring can be severe. To avoid unintentional contact between the wire and any sharp edges, provide the cable with proper bushings and clamping where it passes through openings. If the wire is subjected to sharp surfaces and excess engine vibration, the wiring harness insulation can wear away, causing a short between the bare wire and chassis. This can start a fire.
3. Optional: If you use the supplied in-line fuse holder:
   a. Make sure the fuse holder contains a 10A UL-listed slow-blow fuse.
   b. Splice the fuse holder to the end of the red V+ wire, as shown above. Make the distance from the fuse to the power connection point as short as possible.

4. Prepare the cable termination.
   a. Red wire: connect to a +12/24 V vehicle power source.
   b. Black wire and Shield wire: connect to vehicle ground wire or chassis ground.
Note: How the cable terminates depends on your vehicle. If your vehicle has a power output connector, then you must attach a mating connector to the end of the power cable. You may be able to connect to a fuse panel with a simple blade terminal or commercially available connector. Consult your vehicle Owner’s Manual for information on how to access your vehicles power supply.

5. Connect the Power Input cable into the Power Port on the cradle.

To see if the cradle has power, insert the terminal. The terminal’s charging LED blinks amber to indicate that the battery is charging and turns solid amber when battery is completely charged. See LED Indicators on page 13 for other indications.

Serial Device Connection

The terminal has a serial port on the bottom. When you insert the terminal into the cradle, it connects to the cradle’s serial port. The terminal can then use the cradle’s serial port to communicate with an external device.

To provide serial communications between a terminal and a serial device, connect one end of the 9-pin serial cable into the serial port on your cradle, and the other end into the serial port on your serial device.

Note: Some devices may require a null modem serial cable.

To begin communication:

1. Insert the terminal into the cradle.
Quick Reference

2. To initiate communication, make appropriate selections on the terminal, as determined by the application you’re using.

Caution: Removing a terminal during data communication will disrupt communication between the terminal and the attached device.

Terminal Insertion and Removal

To insert the terminal into a cradle:

To ensure the terminal has been inserted correctly, listen for the audible click that signifies that the locking mechanism has been enabled and the terminal has been locked into place.

Caution: Ensure that the terminal is fully inserted into the cradle. Lack of proper insertion may result in property damage.
To remove the terminal from the cradle:
Push in both release buttons simultaneously to release the bottom of the terminal from the cradle’s locking mechanism.

Lift the terminal from the cradle.

**Terminal Battery Charging**

1. Ensure the cradle is connected to a power source. See *Power Connection* on page 6.

2. Insert the terminal into the cradle. See *Terminal Insertion and Removal* on page 9.

The terminal starts to charge through the cradle as soon as you insert it. This does not deplete the vehicle battery significantly.

The terminal’s charging LED blinks amber to indicate that the battery is charging and turns solid amber when the battery is completely charged. The battery usually charges in two hours or
Quick Reference

less, but may take up to four hours to fully charge. See LED Indicators on page 13 for other indications.

Spare Battery Charging
1. Ensure the cradle is connected to a power source. See Power Connection on page 6.
2. Slide the latch on the top of the battery to the right, to ensure it is in the unlock position.
3. Insert the battery into the Spare Battery Charging slot on the cradle, as shown below. Position it with the charging contacts facing down (over charging pins).
4. Gently press on the battery to ensure proper contact and lock the battery into place, as shown below:

The spare battery charging LED blinks amber to indicate that the spare battery is charging and turns solid amber when the battery is completely charged. The battery usually charges in two hours or less, but may take up to four hours to fully charge. See LED Indicators for other indications.
Quick Reference

LED Indicators

<table>
<thead>
<tr>
<th>LED</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Terminal Charging (LED is on terminal)</strong></td>
<td></td>
</tr>
<tr>
<td>Off</td>
<td>Terminal not in cradle; terminal not placed correctly; cradle is not powered.</td>
</tr>
<tr>
<td>Fast Blinking Amber</td>
<td>Error in charging; check placement of terminal.</td>
</tr>
<tr>
<td>Slow Blinking Amber</td>
<td>Terminal is charging.</td>
</tr>
<tr>
<td>Solid Amber</td>
<td>Charging complete.</td>
</tr>
<tr>
<td><strong>Spare Battery Charging (LED is on cradle)</strong></td>
<td></td>
</tr>
<tr>
<td>Off</td>
<td>No spare battery in slot; spare battery not placed correctly; cradle is not powered.</td>
</tr>
<tr>
<td>Fast Blinking Amber</td>
<td>Error in charging; check placement of spare battery.</td>
</tr>
<tr>
<td>Slow Blinking Amber</td>
<td>Spare battery is charging.</td>
</tr>
<tr>
<td>Solid Amber</td>
<td>Charging complete.</td>
</tr>
</tbody>
</table>

Care and Cleaning

Avoid getting oils, grease or gasoline on the cradle, and do not let debris gather in the bottom of the cradle slot. When necessary, clean the cradle with a mild cleaner. If you are not sure whether or not to use a particular cleaner, contact Symbol for advice.
## Troubleshooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal charging LED does not light up.</td>
<td>Cradle is not receiving power.</td>
<td>Make sure the Power Input cable is securely connected to the cradle’s Power Port.</td>
</tr>
<tr>
<td>Terminal’s battery is not recharging.</td>
<td>Terminal was removed from the cradle too soon.</td>
<td>Replace the terminal in the cradle; you may have removed it before it was recharged. If a terminal’s battery pack is fully depleted, it can take 2 - 4 hours to fully recharge.</td>
</tr>
<tr>
<td></td>
<td>Battery is faulty.</td>
<td>Replace the battery.</td>
</tr>
<tr>
<td></td>
<td>Terminal has not been placed correctly in the cradle.</td>
<td>Remove the terminal from the cradle, and re-insert correctly. If the battery still does not charge, contact Customer Support. The Terminal Charging LED blinks amber when the terminal has been correctly inserted and is charging.</td>
</tr>
<tr>
<td>No data was transmitted, or transmitted data was incomplete.</td>
<td>Terminal removed from cradle during communications.</td>
<td>Replace terminal in cradle and retransmit.</td>
</tr>
<tr>
<td></td>
<td>No null modem cable was used.</td>
<td>Some external devices require a null modem cable. Retransmit using a null modem cable.</td>
</tr>
<tr>
<td></td>
<td>Incorrect cable configuration.</td>
<td>See your system administrator.</td>
</tr>
</tbody>
</table>
Quick Reference

Regulatory Information
All Symbol devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Any changes or modifications to Symbol Technologies equipment, not expressly approved by Symbol Technologies, could void the user’s authority to operate the equipment.

Radio Frequency Interference Requirements
Note: 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. 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 help.

Radio Frequency Interference Requirements - FCC
This device complies with Part 15 of the FCC Rules. 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.

Radio Frequency Interference Requirements - Canada
This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Marking and European Economic Area (EEA)

Statement of Compliance
Symbol Technologies, Inc., hereby declares that this device is in compliance with all the applicable Directives, 89/336/EEC, 73/23/EEC, 95/54/EEC. A Declaration of Conformity may be obtained from http://www2.symbol.com/doc/
Quick Reference

Warranty

(A) Warranty Symbol Technologies (hereafter “Seller”) hardware Products are warranted against defects in workmanship and materials for a period of three (3) months from the date of shipment, unless otherwise provided by Seller in writing, provided the Product remains unmodified and is operated under normal and proper conditions. Warranty provisions and durations on software, integrated installed systems, Product modified or designed to meet specific customer specifications (“Custom Products”), remanufactured products, and reconditioned or upgraded products, shall be as provided in the applicable Product specification in effect at the time of purchase or in the accompanying software license.

(B) Spare Parts Spare parts (i.e. parts, components, or subassemblies sold by Seller for use in the service and maintenance of Products) are warranted against defects in workmanship and materials for a period of thirty (30) days from the date of shipment. Spare parts may be new or originate from returned units under the conditions set forth in subsection D below.

(C) Repair of Symbol-branded hardware For repairs on Symbol-branded hardware Products under this Agreement, including repairs covered by warranty, the repair services provided are warranted against defects in workmanship and materials of the repaired component of the Product for a period of thirty (30) days from the shipment date of the repaired Product, or until the end of the original warranty period, whichever is longer.

(D) Product Service Products may be serviced or manufactured with parts, components, or subassemblies that originate from returned products and that have been tested as meeting applicable specifications for equivalent new material and Products. The sole obligation of Seller for defective hardware Products is limited to repair or replacement (at Seller’s option) on a “return to service depot” basis with prior Seller authorization. Customer is responsible for shipment to the Seller and assumes all costs and risks associated with this transportation; return shipment to the Customer will be at Seller’s expense. Customer shall be responsible for return shipment charges for product returned where Seller determines there is no defect (“No Defect Found”), or for product returned that Seller determines is not eligible for warranty repair. No charge will be made to Buyer for replacement parts for warranty repairs. Seller is not responsible for any damage to or loss of any software programs, data or removable data storage media, or the restoration or reinstallation of any software programs or data other than the software, if any, installed by Seller during manufacture of the Product.

(E) Original Warranty Period Except for the warranty applying solely to the repaired component arising from a repair service as provided in Section C above, the aforementioned provisions do not extend the original warranty period of any Product that had either been repaired or replaced by Seller.

(F) Warranty Provisions The above warranty provisions shall not apply to any Product (i) which has been repaired, tampered with, altered or modified, except by Seller’s authorized service personnel; (ii) in which the defects or damage to the Product result from normal wear and tear, misuse, negligence, improper storage, water or other liquids, battery leakage, use of parts or accessories not approved or supplied by Symbol, or failure to perform operator handling and scheduled maintenance instructions supplied by Seller; (iii) which has been subjected to unusual physical or electrical stress, abuse, or accident, or forces or exposure beyond normal use within the specified operational and environmental parameters set forth in the applicable Product specification; nor shall the above warranty provisions apply to any expendable or consumable items, such as batteries, supplied with the Product.

EXCEPT FOR THE WARRANTY OF TITLE AND THE EXPRESS WARRANTIES STATED ABOVE, SELLER DISCLAIMS ALL WARRANTIES ON PRODUCTS FURNISHED HEREUNDER INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED IN DURATION TO THE LIMITED WARRANTY PERIOD. SOME STATES OR COUNTRIES DO NOT ALLOW A LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS. IN SUCH STATES OR COUNTRIES, FOR SUCH PRODUCTS, SOME EXCLUSIONS OR LIMITATIONS OF THIS LIMITED WARRANTY MAY NOT APPLY.

The stated express warranties are in lieu of all obligations or liabilities on the part of Seller for damages, including but not limited to, special, indirect or consequential damages arising out of or in connection with the use or performance of the Product or service. Seller’s liability for damages to Buyer or others resulting from the use of any Product or service furnished hereunder shall in no way exceed the purchase price of said Product or the fair market value of said service, except in instances of injury to persons or property.
Service Information

Before you use the unit, it must be configured to operate in your facility’s network and run your applications.

If you have a problem running your unit or using your equipment, contact your facility’s Technical or Systems Support. If there is a problem with the equipment, they will contact the Symbol Support Center:

- **United States**: 1-800-653-5350
- **United Kingdom**: 0800 328 2424
- **Australia**: 1-800-672-906
- **Denmark/Danmark**: 7020-1718
- **France**: 01-40-96-52-21
- **Italy/Italia**: 2-484441
- **Netherlands/Nederland**: 315-271700
- **South Africa**: 11-8095311
- **Sweden/Sverige**: 84452900
- **Latin America**: 1-800-347-0178
- **Europe/Mid-East**: Contact local distributor or call +44 118 945 7360

<table>
<thead>
<tr>
<th>Country</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>905-629-7226</td>
</tr>
<tr>
<td>Asia/Pacific</td>
<td>+65-6796-9600</td>
</tr>
<tr>
<td>Austria/Österreich</td>
<td>1-505-5794-0</td>
</tr>
<tr>
<td>Finland/Suomi</td>
<td>9 5407 580</td>
</tr>
<tr>
<td>Germany/Deutschland</td>
<td>6074-49020</td>
</tr>
<tr>
<td>Mexico/México</td>
<td>5-520-1835</td>
</tr>
<tr>
<td>Norway/Norge</td>
<td>+47 2232 4375</td>
</tr>
<tr>
<td>Spain/España</td>
<td>91 324 40 00</td>
</tr>
<tr>
<td>Inside Spain</td>
<td></td>
</tr>
<tr>
<td>+34 91 324 40 00</td>
<td>Outside Spain</td>
</tr>
</tbody>
</table>

1Customer support is available 24 hours a day, 7 days a week.

For the latest version of this guide go to: [http://www.symbol.com/manuals](http://www.symbol.com/manuals).