QRG

CRD 7500
1-Slot Cradle

symbol®

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1 - S l o t   C r a d l e

Patents
This product is covered by one or more of the following U.S. and foreign Patents:
U.S. Patent No.4,360,798; 4,369,361; 4,387,297; 4,460,120; 4,496,831; 4,593,186; 4,603,262; 4,607,156; 4,652,750; 4,673,805; 4,736,095; 4,758,717; 4,816,660; 4,845,350; 4,896,026; 4,897,532; 4,923,281; 4,933,538; 4,992,717; 5,015,833; 5,017,765; 5,021,641; 5,029,183; 5,047,617; 5,103,461; 5,113,445; 5,130,520; 5,140,144; 5,142,550; 5,149,950; 5,157,687; 5,168,148; 5,168,149; 5,180,904; 5,216,232; 5,229,591; 5,230,088; 5,235,167; 5,243,655; 5,247,162; 5,250,791; 5,250,792; 5,260,553; 5,262,627; 5,262,628; 5,266,787; 5,278,398; 5,280,162; 5,280,163; 5,280,164; 5,280,498; 5,304,786; 5,304,788; 5,306,900; 5,321,246; 5,324,924; 5,337,361; 5,367,151; 5,373,148; 5,378,882; 5,396,053; 5,396,055; 5,399,846; 5,408,081; 5,410,139; 5,410,140; 5,412,198; 5,418,812; 5,420,411; 5,436,440; 5,444,231; 5,449,891; 5,449,893; 5,468,949; 5,471,042; 5,478,998; 5,479,000; 5,479,002; 5,479,441; 5,504,322; 5,519,577; 5,528,621; 5,532,469; 5,543,610; 5,545,889; 5,552,592; 5,557,093; 5,578,810; 5,581,070; 5,589,679; 5,589,680; 5,608,202; 5,612,531; 5,619,028; 5,627,359; 5,637,852;5,664,229; 5,668,803; 5,675,139; 5,693,929; 5,698,835; 5,705,800; 5,714,746; 5,723,851; 5,734,152; 5,734,153; 5,742,043; 5,745,794; 5,754,587; 5,762,516; 5,763,863; 5,767,500; 5,789,728; 5,789,731; 5,808,287; 5,811,785; 5,811,787; 5,815,811; 5,821,519; 5,821,520; 5,823,812; 5,828,050; 5,850,078; 5,861,615; 5,874,720; 5,875,415; 5,900,617; 5,902,989; 5,907,146; 5,912,450; 5,914,478; 5,917,173; 5,920,059; 5,923,025; 5,929,420; 5,945,658; 5,945,659; 5,946,194; 5,959,285; D305,885; D341,584; D344,501; D359,483; D362,453; D363,700; D363,918; D370,478; D383,124; D391,250; D405,077; D406,581; D414,171; D414,172.
Invention No. 55,358; 62,539; 69,060; 69,187 (Taiwan); No. 1,601,796; 1,907,875; 1,955,269 (Japan).
European Patent 367,299; 414,281; 367,300; 367,298; UK 2,072,832; France 81/03938; Italy 1,138,713.
rev. 11/99

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Introduction

This guide presents information on the installation, use, troubleshooting, and maintenance of the single-slot CRD 7500 cradle, which is used with Symbol's PDT 7500 Series terminals for battery charging and host communication.

This guide provides information on the following:

- *Connecting Power* on page 3
- *Inserting the Terminal in the Cradle* on page 3
- *Battery Pack Charging* on page 4
- *Data Communications* on page 5
- *LED Indications* on page 6
- *Troubleshooting* on page 7.

Set Up

The setup of the cradle includes unpacking, placing the cradle on a tabletop, and connecting the power and communication cables.

Unpacking the Cradle

After opening the shipping box, inspect the contents. You should have received the following:

- One cradle (p/n CRD7500-10R0-xxx)
- This Quick Reference Guide (p/n 72-39761-xx)

You will also need the following:

- One DC power supply cable (p/n 50-16002-014 - only with 50-14001-005 power supply)
- One power supply (p/n 50-14001-005 or 50-14000-076)
- One AC line cord (p/n 23844-00-00)

If you are missing any of these parts, or if anything appears to be damaged, please contact your authorized Customer Support

Representative immediately. We strongly recommend that you save the shipping box for storing or shipping.

Parts of the Cradle

Front View

Spare Battery
Charging Slot

Terminal Slot

Spare Battery
Charge LED

Communication
(COM) LED

Back View

Power Connector

RS-232
Connection

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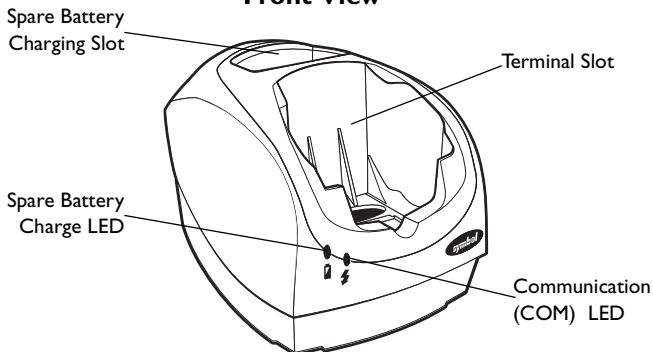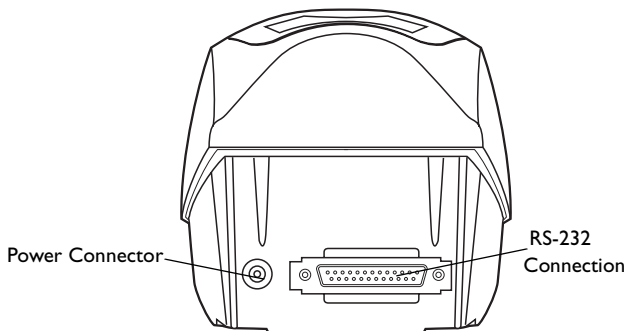
Connecting Power

To connect power to the cradle:

1. Connect the power supply cable to the power connector on the back of the cradle.
2. Connect the power supply cable AC plug to a standard electrical outlet.

At power-up, the cradle's COM LED lights yellow for 3 seconds, then blinks seven times.

Power Connection

Inserting the Terminal in the Cradle

Insert the bottom of the terminal into the cradle slot, gently. DO NOT FORCE.

Battery Pack Charging

Charging the Terminal's Battery Pack
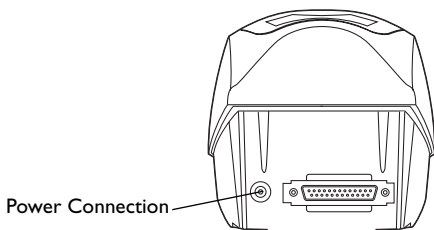
The lithium-ion (Li-Ion) battery pack is automatically recharged whenever the terminal is properly inserted in the cradle. The terminal may be on or off. The terminal's charge LED turns yellow while the terminal's battery pack is charging. Once charging is complete, the terminal's charge LED turns green. If the terminal's charge LED is off, no battery is present. If the terminal's charge LED is blinking yellow, the battery pack is faulty.

The terminal must be left in the cradle for approximately 2.5 hours to recharge a fully discharged battery pack.

Caution: The temperature range for charging the battery pack is
           $5°$C- $46°$C. Do not operate battery pack charger outside
           these temperatures.

The terminal contains a safety mechanism so that disposable alkaline batteries are not charged.

To remove the terminal from the charging slot, pull straight up and lift out of the cradle.

Caution: Removing the terminal while the cradle's yellow COM
           LED is blinking disrupts communication between the
           host and the terminal.

Charging A Spare Battery Pack

If a battery pack is present in the spare battery pack charge slot, the spare battery charge LED turns yellow. Once charging is complete, the LED turns green. If the slot's charge LED is off, no battery pack is present. If the charge LED is blinking yellow, try re-inserting the

battery several times. If the condition persists, the battery pack is faulty.
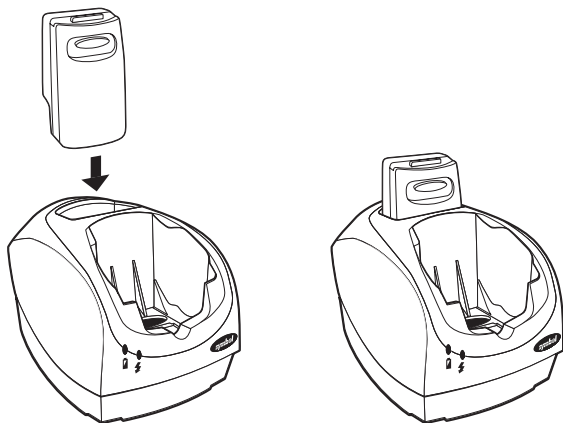
It takes approximately 5 hours to fully recharge a completely discharged spare battery in the spare battery charging slot.

Data Communications

Connecting the RS-232 Cable to a Host Computer, SMG, Printer or Modem

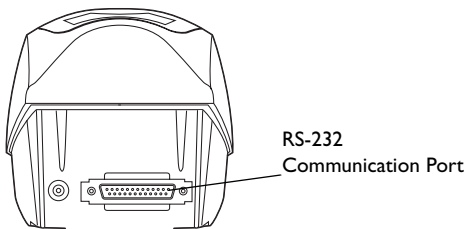1. Plug an RS-232 serial cable into the communication port located on the right end of cradle.

RS-232
Communication Port

2. Connect the other end of the cable to the serial (COM) port of the host computer or printer.

Note: *In performing serial communications, in most cases, you must use a null-modem cable. However, modems and some serial printers (DCE-type) require a DB9 or DB25 connection. For a DB25 connection, use cable p/n 25-19297-01. For a DB9 connection, use cable p/n 25-19299-01 (see your System Administrator).*

Sending Data

To begin serial communication:

1. Insert the terminal in the cradle.
2. As determined by your specific application, press the appropriate key(s) on the terminal to initiate communication.

The cradle's COM LED blinks yellow when communication begins.

Caution: Removing the terminal while the cradle's COM LED is blinking yellow disrupts communication between the host and the terminal, possibly resulting in a loss of data.

LED Indications

The following table describes the LED light indications.

Condition	LED State
Battery Charging LED	
Off	Spare battery absent, no charge power.
Steady yellow	Spare battery is charging.
Steady green	Spare battery is charged.
Flashing yellow	Abnormal battery.

Condition	LED State
Communication LED	
Off	Terminal is not trying to communicate.
Blinking yellow	Terminal is sending/receiving data or is ready to send/receive data.

Troubleshooting

Symptom	Possible Cause	Action
Yellow COM LED does not momentarily light when the cradle is plugged in.	Cradle is not receiving power.	Make sure power cable is securely connected and wall outlet is supplying power.
Terminal's charge LED does not light when terminal is inserted in cradle.	Terminal is not seated firmly in cradle.	Replace terminal in cradle; terminal must fit securely.
	Terminal without a battery was placed in the cradle.	Insert the battery in the terminal and reinsert in cradle.
Li-Ion battery pack did not recharge in the terminal.	Battery pack failed, indicated by flashing yellow charge LED on the terminal.	Reinsert the terminal in the charging slot. If the flashing yellow LED persists, replace the battery pack.
	Terminal was removed from cradle too soon.	Replace terminal in cradle; approximately 2.5 hours are needed to recharge a completely dead battery pack.

Symptom	Possible Cause	Action
No data was transmitted to the host or printer, or the data transmitted to host or printer was incomplete.	Terminal was removed from cradle while yellow COM LED was blinking.	Replace terminal in cradle and retransmit.
	Null modem cable was not used.	Null modem is required for communication to DTE devices. Retransmit using appropriate null modem cable.
	Incorrect null modem configuration.	See your System Administrator.
Spare battery charge LED does not light when the spare battery is inserted in the cradle.	Spare battery is not seated firmly in the cradle.	Reinsert the spare battery in the cradle.
		Check for damaged contacts in the cradle spare battery slot.
Li-Ion battery pack in spare battery charging slot did not recharge.	Battery pack failed (indicated by a flashing yellow spare battery charge LED).	Reinsert the spare battery several times. If the flashing yellow LED persists, replace the battery.
	Battery was removed from the spare battery charging slot too soon.	Replace the spare battery in the spare battery charging slot. It takes approximately 5 hours to recharge a completely discharged spare battery.

Service Information

Before you use a terminal, it must be configured to operate in your facility's network and run your applications.

If you have a problem with running your terminal 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	Canada	905-629-7226
United Kingdom	0800 328 2424	Asia/Pacific	337-6588
Australia	1-800-672-906	Austria	1-505-5794
Denmark	7020-1718	Finland	9 5407 580
France	01-40-96-52-21	Germany	6074-49020
Italy	2-484441	Mexico	5-520-1835
Netherlands	315-271700	Norway	66810600
South Africa	11-4405668	Spain	9-1-320-39-09
Sweden	84452900		
Latin America Sales Support		1-800-347-0178 Inside US +1-561-483-1275 Outside US	
Europe/Mid-East Distributor Operations		Contact local distributor or call +44 118 945 7360	

Warranty

Symbol Technologies, Inc. ("Symbol") manufactures its hardware products in accordance with industry-standard practices. Symbol warrants that for a period of twelve (12) months from date of shipment, products will be free from defects in materials and workmanship.

This warranty is provided to the original owner only and is not transferable to any third party. It shall not apply to any product (i) which has been repaired or altered unless done or approved by Symbol, (ii) which has not been maintained in accordance with any operating or handling instructions supplied by Symbol, (iii) which has been subjected to unusual physical or electrical stress, misuse, abuse, power shortage, negligence or accident or (iv) which has been used other than in accordance with the product operating and handling instructions. Preventive maintenance is the responsibility of customer and is not covered under this warranty.

Wear items and accessories having a Symbol serial number, will carry a 90-day limited warranty. Non-serialized items will carry a 30-day limited warranty.

Warranty Coverage and Procedure

During the warranty period, Symbol will repair or replace defective products returned to Symbol's manufacturing plan in the US. For warranty service in North America, call the Symbol Support Center at 1-800-653-5350. International customers should contact the local Symbol office or support center. If warranty service is required, Symbol will issue a Return Material Authorization Number. Products must be shipped in the original or comparable packaging, shipping and insurance charges prepaid. Symbol will ship the repaired or replacement product freight and insurance prepaid in North America. Shipments from the US or other locations will be made F.O.B. Symbol's manufacturing plant.

Symbol will use new or refurbished parts at its discretion and will own all parts removed from repaired products. Customer will pay for the replacement product in case it does not return the replaced product to Symbol within 3 days of receipt of the replacement product. The process for return and customer's charges will be in accordance with Symbol's Exchange Policy in effect at the time of the exchange.

Customer accepts full responsibility for its software and data including the appropriate backup thereof.

Repair or replacement of a product during warranty will not extend the original warranty term.

Symbol's Customer Service organization offers an array of service plans, such as on-site, depot, or phone support, that can be implemented to meet customer's special operational requirements and are available at a substantial discount during warranty period.

General

Except for the warranties stated above, Symbol disclaims all warranties, express or implied, on products furnished hereunder, including without limitation implied warranties of merchantability and fitness for a particular purpose. The stated express warranties are in lieu of all obligations or liabilities on part of Symbol for damages, including without limitation, special, indirect, or consequential damages arising out of or in connection with the use or performance of the product.

Seller's liability for damages to buyer or others resulting from the use of any product, shall in no way exceed the purchase price of said product, except in instances of injury to persons or property.

Some states (or jurisdictions) do not allow the exclusion or limitation of incidental or consequential damages, so the proceeding exclusion or limitation may not apply to you.

Ergonomic Recommendations

Caution: In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are meeting with your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

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Regulatory Information

Radio Frequency Interference Requirements

This device has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the Federal Communications Commissions Rules and Regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

However, there is no guarantee that interference will not occur in a particular installation. If the 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:

- Re-orient 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 which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC Part 15. 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 device complies with RSS 210 of Industry & Science Canada. 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.

This Class B digital apparatus complies with Industry Canada Standard ICES-003.

Cet appareil numérique de la classe B est conform à la norme NMB-003 d'Industrie Canada.

CE Marking and European Union Compliance

Products intended for sale within the European Union are marked with the CE Mark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included:

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Applicable Directives

- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC

Applicable Standards

- EN 55 022 - Limits and Methods of Measurement of Radio Interference Characteristics of Information technology Equipment
- EN 55024:1998; Information technology equipment-Immunity characteristics-Limits and methods of measurement.
- IEC 1000-4-2(1995-01) - Electromagnetic compatibility (EMC) - Part 4:Testing and measurement techniques - Section 2: Electrostatic discharge immunity test.
- IEC 1000-4-3(1995-03) - Electromagnetic compatibility (EMC) - Part 4:Testing and measurement techniques - Section 3: Radiated, radio-frequency, electromagnetic field immunity test.
- IEC 1000-4-4(1995-01) - Electromagnetic compatibility (EMC) - Part 4:Testing and measurement techniques - Section 4: Electrical Fast transient/burst immunity test.
- IEC 1000-4-5:1995/EN61000-4-5:1995, Electromagnetic compatibility (EMC), Part 4:Testing and Measurement techniques;Section 5: Surge Immunity.
- IEC 1000-4-6:1996/EN61000-4-6:1996, Electromagnetic compatibility (EMC), Part 4: Testing and Measurement techniques; Section 6: Immunity to conducted disturbances, induced by radio frequency fields.
- IEC 1000-4-11: 1994/EN61000-4-11:1994, Electromagnetic compatibility (EMC), Part 4: Testing and measurement techniques; Section 11: Voltage Dips, Short Interruptions and Voltage Variations.
- EN 60 950 + Amd 1 + Amd 2 - Safety of Information Technology Equipment Including Electrical Business Equipment