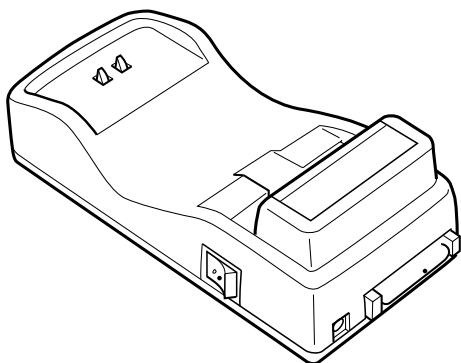


QRG

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symbol[®]



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Symbol Technologies, Inc.

One Symbol Plaza

Holtsville, N.Y. 11742-1300

<http://www.symbol.com>

Patents

This product is covered by one or more of the following U.S. and foreign Patents:

U.S. Patent No. 4,593,186; 4,603,262; 4,607,156; 4,652,750; 4,673,805; 4,736,095;
4,758,717; 4,760,248; 4,806,742; 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; 5,324,924; 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;
5,848,064; 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; 6,002,918; 6,021,947; 6,029,894; 6,031,830; 6,036,098; 6,047,892;
6,050,491; 6,053,413; 6,056,200; 6,065,678; 6,067,297; 6,082,621; 6,084,588; 6,088,482;
6,092,725; 6,101,483; 6,102,293; 6,104,620; 6,114,712; 6,115,678; 6,119,944; 6,123,265;
6,131,814; 6,138,180; 6,142,379; 6,172,478; 6,176,428; 6,178,426; 6,186,400; 6,188,681;
6,209,788; 6,209,789; 6,216,951; 6,220,514; 6,243,447; 6,244,513; 6,247,647; 6,308,061;
6,250,551; 6,295,031; 6,308,061; 6,308,892; 6,321,990; 6,328,213; 6,330,244; 6,336,587;
6,340,114; 6,340,115; 6,340,119; 6,348,773; 6,380,949; 6,394,355; 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; D418,500; D419,548; D423,468; D424,035;
D430,158; D430,159; D431,562; D436,104.
Invention No. 55,358; 62,539; 69,060; 69,187, NI-068564 (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. 06/02

Introduction

The optional CRD 1100 cradle is available in two models. One model provides communication and NiMH battery charging capabilities for the PDT 1100 terminal. The second model provides communication capabilities only. This guide provides information on both types of cradles.

The communications function provides for data exchange between the PDT 1100 terminal and the host computer. The terminal communicates with the cradle via an infrared beam, and the cradle communicates with the host computer through an RS-232C cable. Communications between the cradle and the host computer require the appropriate Ir Transfer Utility software (provided separately) installed on the host computer.

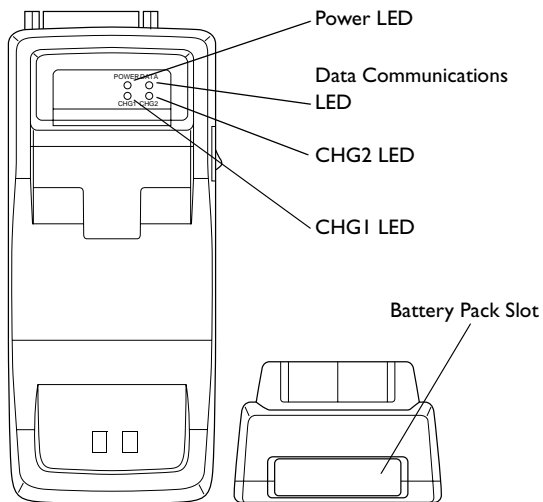
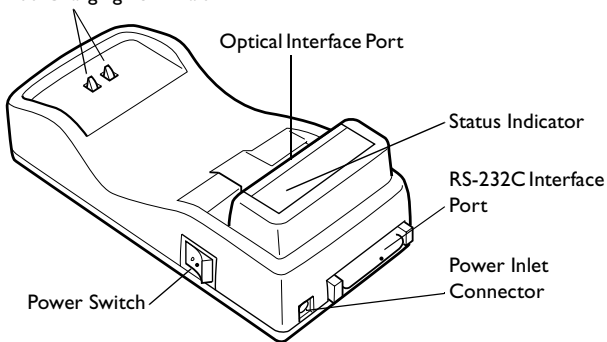
About This Guide

This *Quick Reference Guide* describes the basic operation of the CRD 1100, including information on:

- *Parts of the CRD 1100* on page 2
- *Functions* on page 3
- *Powering the CRD 1100* on page 3
- *Communicating with the Host Computer* on page 4
 - *Setting the Transmission Speed* on page 4
 - *Setting Up for Host Communication* on page 5
 - *Interfacing With the Host Computer* on page 6
- *Installing and Charging the NiMH Battery Pack* on page 6
- *Charging Using the NiMH Battery Pack Alone* on page 8
- *Troubleshooting* on page 10.

Parts of the CRD 1100

PDT 1100 Charging Terminals



Functions

- PDT 1100 charging terminals - Contacts for charging the NiMH battery while it is still in the terminal (not provided on the non-charging CRD 1100).
- Optical Interface Port - Exchanges data optically with the PDT 1100 Status Indicator.
- Status Indicator - Indicates the status of the CRD 1100.
- RS-232C Interface port - Exchanges data with the host computer.
- Power inlet connector - Plug AC power supply into this connector.
- Power switch - Turns the unit on and off.
- Power LED (green) - Lights when power is provided to the CRD 1100.
- Data communications LED (green) - Lights when cradle is communicating with host computer
- CHG2 LED (yellow) - Battery pack charge light. Lights when charging a NiMH battery pack in the battery slot. When charge is complete, flashes.
- CHG1 LED - Lights when the cradle is charging a NiMH battery that is loaded in the terminal. When charge is complete, flashes.
- Battery pack slot - Slot for charging the battery pack (not provided on the non-charging CRD 1100).

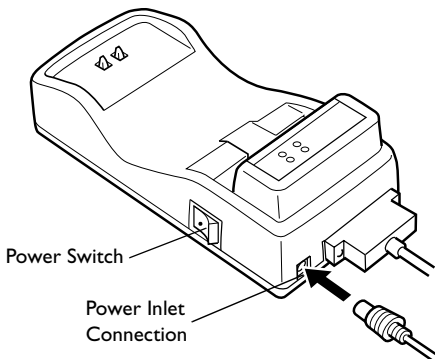
Powering the CRD 1100

The CRD 1100 is powered by an AC input 100-240VAC/DC output 12V 1.5A power supply (p/n 50-14000-103), and a DC inter-connect cable.

1. Make sure the power switch on the CRD 1100 is turned off.
2. Connect the DC inter-connect cable to the CRD 1100 and then to the power supply.

CRD 1100

3. Connect the power supply to the wall outlet.
4. Power on the CRD 1100.



Communicating with the Host Computer

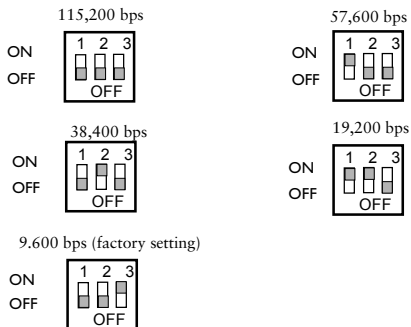
Setting the Transmission Speed

Using the DIP switch on the bottom of the cradle, set the transmission speed of the CRD 1100 to the same value as that of the PDT 1100 and the host computer.

1. Remove the protective sheet from the DIP switch.
2. Set the selectors of the DIP switch.
3. Reinstall the protective sheet.

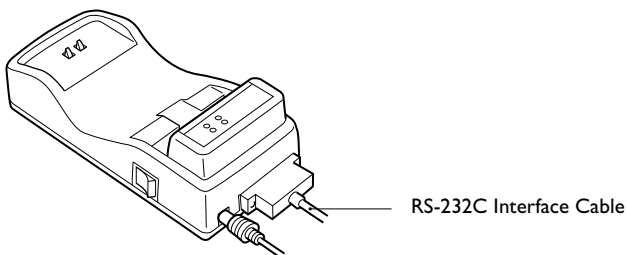
Note: Do not set the DIP switch to any configuration other than one of these five.

Q u i c k R e f e r e n c e



Setting Up for Host Communication

1. Before connecting the cradle to the host computer, make sure both are powered off.
2. Connect the 25-pin plug of the interface cable to the cradle's RS-232C interface port.
3. Connect the other end of the interface cable to the host computer.



Interfacing With the Host Computer

1. Power on the host computer and start MS-DOS.
2. Power on the CRD 1100.
3. Turn off the PDT 1100, and place it on the cradle.
4. Power on the PDT 1100 and run Systems Mode. Set the communications environments (communications protocol, interface port, communications parameters, and protocol options). For more information on communications protocol, see the *PDT 1100 Product Reference Guide* (p/n 70-35864-xx).
5. Initiate a communications program (Ir-Transfer Utility C/Ir-Transfer Utility E, or equivalent) on the host computer.
6. To transfer data stored in the PDT 1100 to the host computer, select "3:UPLOAD" on the SYSTEM MENU in System Mode. To transfer data from the host computer to the terminal, select "2: DOWNLOAD" (for details, refer to the *PDT 1100 Product Reference Guide*). On the CRD 1100 the DATA LED illuminates at the start of communications, and goes off at the completion of data transmission.
7. Power off the PDT 1100, CRD 1100, and the host computer.

Installing and Charging the NiMH Battery Pack

Charging the NiMH Battery Pack Using the CRD 1100

The NiMH battery pack may be charged in the PDT 1100, or by itself.

Service Life of the Battery Pack

Due to normal wear and tear, the NiMH battery pack gradually deteriorates and the service period becomes shorter, even if the battery has been fully charged. Generally, after about 200 charge cycles, the battery pack should be replaced.

Memory Effect

If the battery pack is not fully charged, or if it undergoes repeated cycles of incomplete charging, the battery operating time between

charges may decrease. This is known as “memory effect”. This can be eliminated or reduced by doing battery pack maintenance cycling in the cradle or the CRG 1100 battery charger. Refer to *Battery Pack Maintenance Cycling* on page 7.

Recharging While in the PDT 1100

1. Turn on the CRD 1100.
2. Place the PDT 1100 (with the battery still loaded) in the cradle. After approximately 10 hours, the CHG1 LED flashes at 2-second intervals. This indicates that charging is complete.

Battery Pack Maintenance Cycling

Battery pack maintenance cycling fully discharges and then recharges the battery in the cradle.

Note: It is not recommended to fully discharge the battery pack more than once a month. Discharging the battery more often results in faster battery deterioration.

1. Power on the CRD 1100.
2. Remove the battery pack from the PDT 1100 terminal and load it into the battery pack slot.
 - When the battery is seated properly in the slot and begins charging, the CHG2 LED flashes quickly (.4 second intervals).
 - The CRD 1100 begins discharging the battery. This takes 3 hours or less, depending upon the original condition of the battery.
 - When discharging is complete, the CHG2 LED stays on and the battery begins charging.
 - After about 10 hours, the LED flashes slowly (at 2 second intervals) indicating that charging is complete.
3. Remove the battery pack from the cradle.

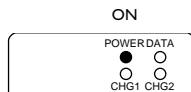
CRD 1100

Note: Removal of the battery pack before charging is complete results in an insufficient charge and may shorten the battery service life.

Refer to the *CRG 1100 Quick Reference Guide* (p/n 70-35863-xx) for battery pack maintenance cycling in the CRG 1100 battery charger.

LED Indication for Recharging While in the PDT 1100

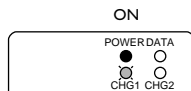
The cradle is on standby mode.



Ordinary charging begins.



The battery is fully charged and trickle charging begins.



Flashing at 2 second intervals

Charging Using the NiMH Battery Pack Alone

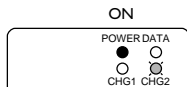
The CRD 1100 with the charging capability can charge the battery by fully discharging the battery and then recharging it, or charging only. The first method prevents the memory effect described earlier.

LED Indication for Using the Charge Slot

The cradle is on standby mode.

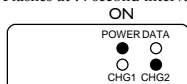


The battery begins discharging.

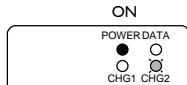


Flashes at .4 second intervals

After discharge, the battery begins ordinary charging.



The battery is fully charged and trickle charging begins.



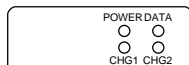
Flashes at 2 second intervals

Charging Without Using Discharge Mode

1. Load the NiMH battery pack into the battery pack slot, with the power off.
2. Power on the CRD 1100.
 - CHG2 LED illuminates and the battery begins charging.
 - After about 10 hours, the LED flashes slowly (at 2 second intervals) indicating that charging is complete.
3. Remove the battery pack from the cradle.

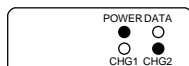
LED Indication for Charging Without Using Discharge Mode

With the cradle power off, load the battery pack into the CRD 1100.



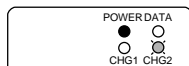
ON

Power on the CRD 1100. The battery begins ordinary charging.



ON

The battery is fully charged and trickle charging begins.



Flashing at 2 second intervals

Troubleshooting

The following table lists common problems and their potential causes and solutions.

Problem	Cause	Solution
No communication between terminal and cradle.	Terminal not seated properly Power off	Seat terminal properly Turn power on
Power light does not illuminate	AC adapter not connected properly Power switch is off	Connect AC adapter properly Turn power switch on
NiMH battery pack did not charge.	Battery failed Insufficient charging time Battery and charger contacts are dirty	Replace battery Allow the full 10 hours for battery to charge Check and clean battery and charger contacts

Q u i c k R e f e r e n c e

Warranty

(A) Seller's hardware Products are warranted against defects in workmanship and materials for a period of three (3) months from the date of shipment, 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) 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. Shipment to and from Seller will be at Seller's expense, unless no defect is found. 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. The aforementioned provisions do not extend the original warranty period of any Product that had either been repaired or replaced by Seller. (C) 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 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 HERUNDER 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.

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 A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in 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.

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. A Declaration of Conformity may be obtained from <http://www2.symbol.com/doc/>.

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	1-800-653-5350 1-631-738-2400	Canada	905-629-7226
United Kingdom	0800 328 2424	Asia/Pacific	+65-6796-9600
Australia	1-800-672-906	Austria/Österreich	1-505-5794-0
Denmark/Danmark	7020-1718	Finland/Suomi	9 5407 580
France	01-40-96-52-21	Germany/Deutschland	6074-49020
Italy/Italia	2-484441	Mexico/México	5-520-1835
Netherlands/Nederland	315-271700	Norway/Norge	+47 2232 4375
South Africa	11-8095311	Spain/España	91 324 40 00 Inside Spain
Sweden/Sverige	84452900		+34 91 324 40 00 Outside Spain
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		

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

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