OPL 972X
CRD 972X
USER'S
MANUAL

OPTICON

Version 3, printed 03/2004
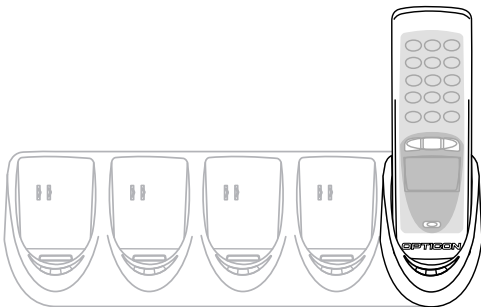
CAUTION: This information is subject to change without prior notice.

THE GENERAL USE AND FUNCTIONING OF THE BAR CODE DATA COLLECTOR TOGETHER WITH THE CRADLE IS DESCRIBED IN THIS MANUAL. THE EXACT BEHAVIOUR OF THE BAR CODE DATA COLLECTOR DEPENDS ON THE USER APPLICATION THAT IS RUNNING. FOR INSTRUCTIONS ABOUT APPLICATIONS CONSULT THE DOCUMENTATION OF THAT SOFTWARE.

LIMITED WARRANTY AND DISCLAIMERS

BY OPENING THE PACKAGE OF THIS PRODUCT YOU AGREE TO BECOME BOUND BY THE LIABILITY AND WARRANTY CONDITIONS AS DESCRIBED BELOW.

UNDER ALL CIRCUMSTANCES THIS MANUAL SHOULD BE READ ATTENTIVELY, BEFORE INSTALLING AND OR USING THE PRODUCT.

Serial number
A serial number appears on all Opticon products. This official registration number is strictly related to the device purchased. Make sure that the serial number appearing on your Opticon device has not been removed. Removing the serial number might affect the warranty conditions and liability disadvantageously, so please be strict at maintaining the label with serial number on the Opticon product.

Warranty / Warranty period / Liability
Unless otherwise agreed in a contract, all Opticon products are warranted for the period of one year after purchase, covering defects in material and workmanship. Opticon will repair or, at its opinion, replace products that prove to be defective in material or workmanship under proper use during the warranty period. Opticon will not be liable in cases where modifications are made by the customer. In such case the standard repair charge will be applicable. The standard charge for repair will also be applicable in cases where no defect is found at all. These rules also apply for products that are still under warranty. Under no circumstance will Opticon Sensors Europe, be liable for any direct, indirect, consequential or incidental damages arising out of use or inability to use both the hardware and software, even if Opticon has been informed about the possibility of such damages.

Packaging
We recommend that you save all packing material, as it should be used whenever you need to transport your scanner (eg. for service). Damage caused by improper repacking is not covered by the warranty.

Trademark
Trademarks used are property of their respective owners.

CONTENTS

1

1 INTRODUCTION

The bar code data collector

The OPL972X is a range of handheld bar code data collectors, that are well suited for a variety of portable applications. Using a built-in laser scanner they can read all popular types of bar code labels at varying distances. There are several models to meet a variety in use. All models are equipped with data memory to collect the scanned data.

User's applications can be downloaded to the bar code data collector to adapt it to the user's situation. As a tool to develop an application Opticon can supply a compiler and a development kit.

Operating power is supplied by the rechargeable battery. For recharging there are several cradles available. A single cradle can charge one data collector. A multi cradle can charge up to 5 data collectors.

For communication the IrDA interfaced models can communicate through a communication station. In common the cradle supports communication for one bar code data collector. There is also a model available that supports communication up to 5 bar code data collectors.

The Bluetooth model can communicate with the SIG certified Bluetooth devices. The SPP and DUN profile are supported.

The cradle

The cradle provides functionality for charging and/or communication in several combinations. The combinations are supported in different models:

• Charging cradle: A charging station for the bar code data collector that charges the rechargeable battery as soon as the bar code data collector is placed.

• Single cradle: A regular communication and charging station. It charges the rechargeable battery as soon as the bar code data collector is placed. Data will be transmitted to the host through RS232 or USB.

• Multicradle, single communication, multiple charging: A multi cradle equipped with 5 slots to keep up to 5 data collectors. One slot supports communication, data will be transmitted to the host through RS232 or USB. All slots charges the rechargeable battery as soon as the bar code data collector is placed.

• Multicradle, multiple communication, multiple charging: A multi cradle equipped with 5 slots to keep up to 5 data collectors, extended with RS485 connection. All slots have the same functionality. They charge the rechargeable battery as soon as the bar code data collector is placed. Data will be transmitted to the host through RS232 or USB. The RS485 feature enables to create a network of multicradles.
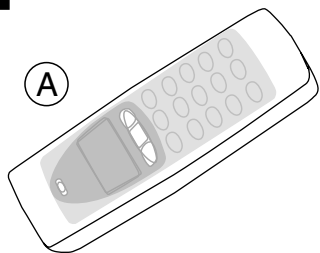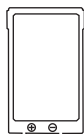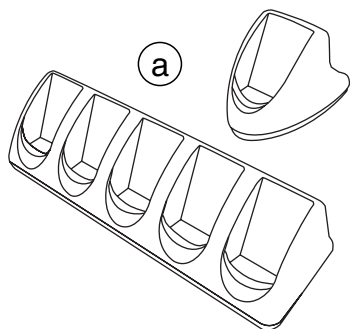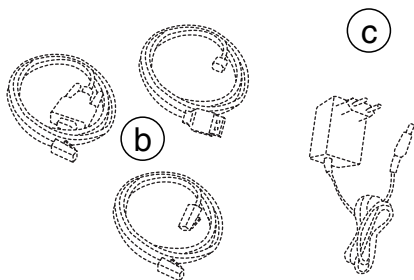
1.1 UNPACKING

When you remove the packing, please check for any physical damage. We recommend that you save all packing material, as it should be used whenever you need to ship your barcode data collector (eg. for service). Damage due to improper repacking is not covered by the warranty.

Apart from the bar code data collector, charger or cradle, additional items might be ordered and supplied. If there are any missing parts please contact your supplier.

OPL972X contents:
• Bar code data collector: model applicable as supplied (A)
• Battery (B)
• Hand strap (C)

CRD972X contents:
• Cradle: model applicable as supplied (a)
CRD972X accessories
• Interface cable(s): model applicable as supplied, can be supplied as separate item (b)
• Power supply, supplied as separate item (c)

Do not remove the product label!
On the back of every unit you will find a product label. This is attached by the manufacturer and includes product information and serial number. Do not remove it.

- 1-key model:
  Typical use as trigger key to switch laser beam on for bar code reading
- other models:
  Typical use of middle key as trigger key to switch laser beam on for bar code reading.
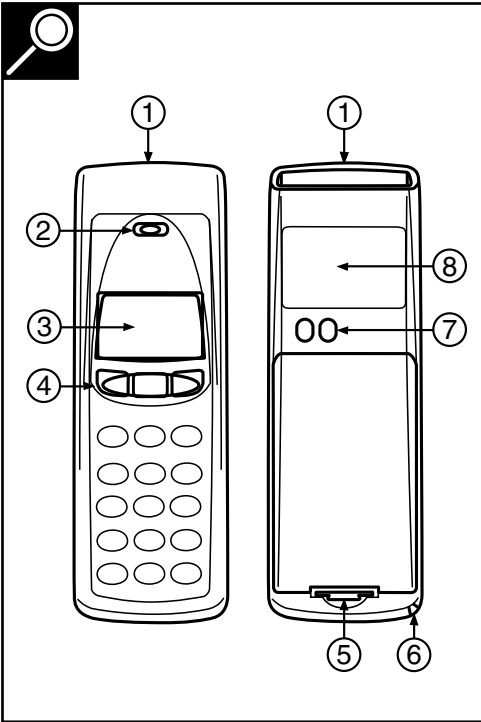 Typical use of left and right key as menu scroll keys or yes/no input
- keyboard:
  Typical use of top middle key as trigger key to switch laser beam on for bar code reading.
  Typically basic functions for data input, as below:

  ⬆ : scroll up

  ⬇ : scroll down

  ⬆ + SHIFT : scroll left

  ⬇ + SHIFT: scroll right
  BS : Back space
  CLR : Cancel input
  ENT : (Enter) to confirm input
  The standard appearance of the alphanumeric keys is the numeric value. Together with the SHIFT key the alpha characters appear.

5. Battery case cover
For housing battery

6. Hand strap pillar
For attaching hand strap

7. Charging contacts
For power supply from cradle to bar code data collector

8. Product label
Contains product information and serial number. Do not remove it!

1.2 DETAILED VIEW

1.2.1 BARCODE DATA COLLECTOR DETAILS

Depending on the supplied model, the following options are applicable:

1. Reading window / Optical window
For the emission of laser beam for bar code reading / optical data transmission

2. Indicator
LED indicator or buzzer can be used to indicate results, for example bar code reading / status of communication / status of charging

3. LCD Display
For displaying information

4. Operating key(s)
Definable by application

1.2.2 CRADLE DETAILS

Depending on the supplied model, the following options are applicable:

1. DC input socket
Input for AC power supply

2. RS 232-C socket
Left connector (RS232C-1): for connection to PC through Opticon RS232 cable
Right connector (RS232C-2): for optional connection to second device

3. USB socket
For connecting to PC, through Opticon USB cable

4. RS 485 socket
For connection of cradle network

5. Product label
Contains product information and serial number. Do not remove it!

6. DIP switches
Set parameters of the optical communication interface, do not change unnecessary.

7. Electrical contacts
If the OPL972X bar code data collector is inserted the battery will automatically be charged.

8. Optical window
Optical communication interface for data transmission

9. LED indicator
Show current status. Read more at the installation instructions.

1.3 HANDLING INSTRUCTIONS

To avoid malfunctioning and to ensure years of trouble free operation, pay attention to the following:

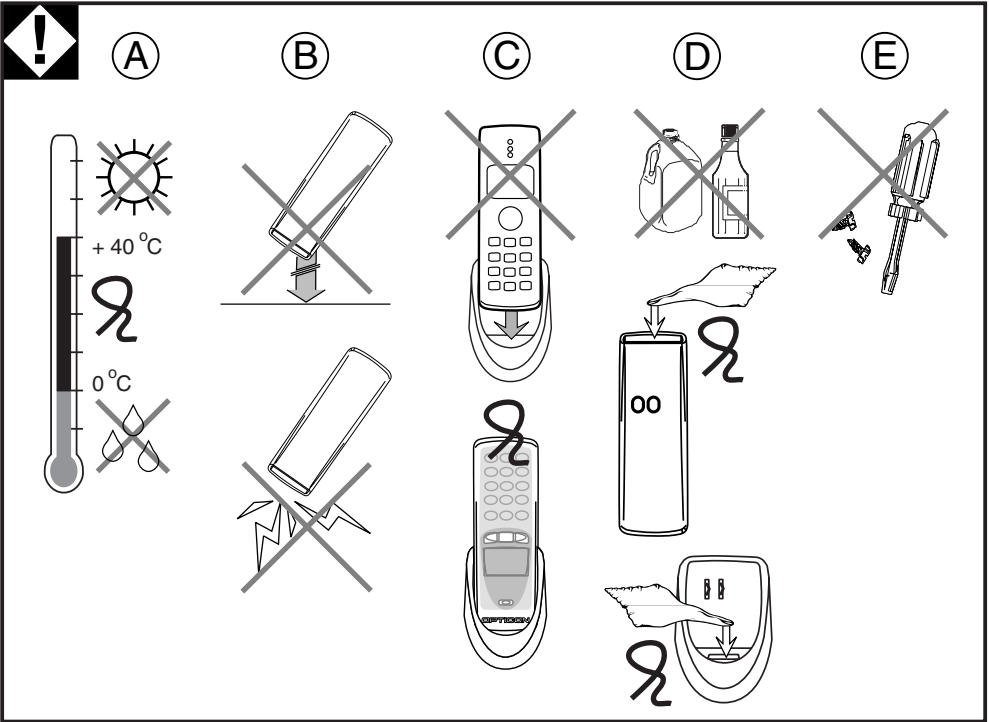### A. Temperature conditions

Use in area's between 0 and 40 °C.
Do not expose the scanner for a long time to extreme conditions - like direct sunlight, near a heater, or in a car - or in areas that are very cold, humid, moisturized or dusty.
Do not expose the product to rain or water splash. Avoid temperature changes. Sudden temperature changes can cause condensation to form on the bar code data collector. Using the bar code data collector while condensation is present can cause malfunction. Always wait until the condensation clears naturally before attempting operation.

B. Shock

Do not subject the product to very strong impact, do not throw or drop the bar code data collector from large heights.
Do not allow a mechanical shock to the product.
Do not leave the bar code data collector in an area where static charge is accumulated, or near devices where electromagnetic emission is generated.
Do not place any objects on top of the bar code data collector. Do not lay the bar code data collector face down. Doing so can cause accidental operation of the key(s).

C. Use of the cradle

Do not place any product other than the OPL972X-type bar code data collector in the CRD972X cradle.

2

2 GET STARTED

Fix hand strap to bar code data collector.
Use the hand strap properly to avoid drop.
Read instructions in this manual.

Insert battery.
To be sure of proper operation, it is advised to start with a fully charged battery. First charge the bar code data collector for 8 hours.
Read instructions in this manual.

Place the cradle in normal office conditions.
Avoid a place under strong light. Otherwise infra red communication may be disturbed.
Read instructions in this manual.

Use properly.
Take notice that the CRD972X cradle is designed for the OPL972X bar code data collector.

D. Cleaning instructions
Clean the reading window periodically with a soft dry cloth.
Clean the exterior by wiping it with a soft, dry cloth. Do not use thinner, white spirit or other solvents. These can discolour the case and the keys and has a negative effect on the lifetime of the keys.
Clean the electrical contacts of the bar code data collector and the cradle with a soft dry cloth, or cotton bud.
Avoid touching the contacts The contacts must stay as clean as possible to maintain optimal charging capacity.
Do not use water when cleaning the cradle. This can cause malfunction.

E. Maintenance
There are no user-serviceable parts inside the bar code data collector or the cradle. So do not try to take it apart. The manufacturer will not be liable for any damage caused by the customer. In case of serious malfunction, please consult your supplier.
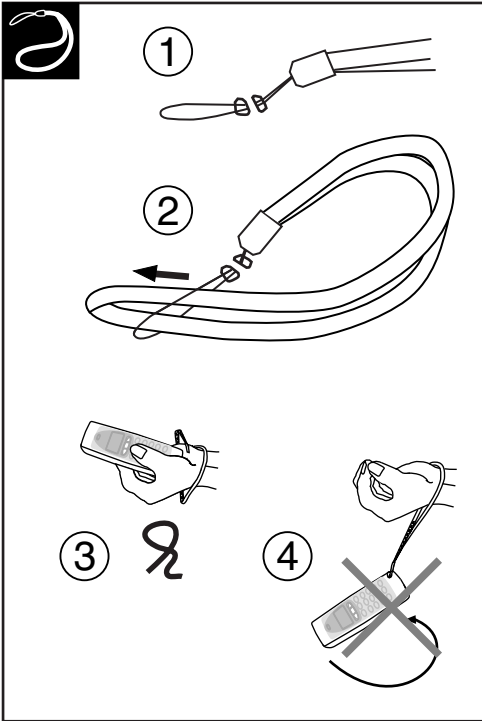
2.1 FIX HAND STRAP

Instructions

1. Fix the small thin cord of the strap around the pillar of the bar code data collector. (ref. 1)

2. Insert the handle cord of the strap into the thin loop in order to fix the hand strap. (ref. 2)

TO AVOID DROP HOLD THE HAND STRAP AROUND THE WRIST WHEN CARRYING THE BAR CODE DATA COLLECTOR. (REF. 3)

DO NOT SWING THE BAR CODE DATA COLLECTOR AROUND. (REF. 4)

2.2 BATTERY INSTRUCTIONS

FOLLOW THE INSTRUCTIONS FOR INSTALLING, CHARGING AND REMOVING THE BATTERIES VERY STRICTLY.

WRONG USE OF BATTERIES MIGHT CAUSE SERIOUS DAMAGE TO THE BAR CODE DATA COLLECTOR OR TO THE CRADLE.

THE PRODUCTS ARE NOT WARRANTED FOR DAMAGE, DEFECTS, MALFUNCTION OR LOSS OF DATA, RESULTING FROM INCORRECT USE OF BATTERIES.

Never remove the battery while the bar code data collector is turned on.
Doing so can cause data in the bar code data collector to be deleted. If you have data stored, make sure the data is transmitted to the host system.

Use proper battery
Only use the Opticon rechargeable battery as specified from Opticon.

Insert the battery correctly.
The bar code data collector may be damaged by wrong insertion. Handle properly and do not force.

Use the cradle to charge battery
The battery of Opticon can only be charged inside the bar code data collector.

2.2.1 HOW TO CHARGE THE BATTERY

If the bar code data collector with the battery is placed in the cradle, the voltage and the required charging time will be automatically determined and the cradle will charge for a maximum of 8 hours. The charging procedure is fully automated.
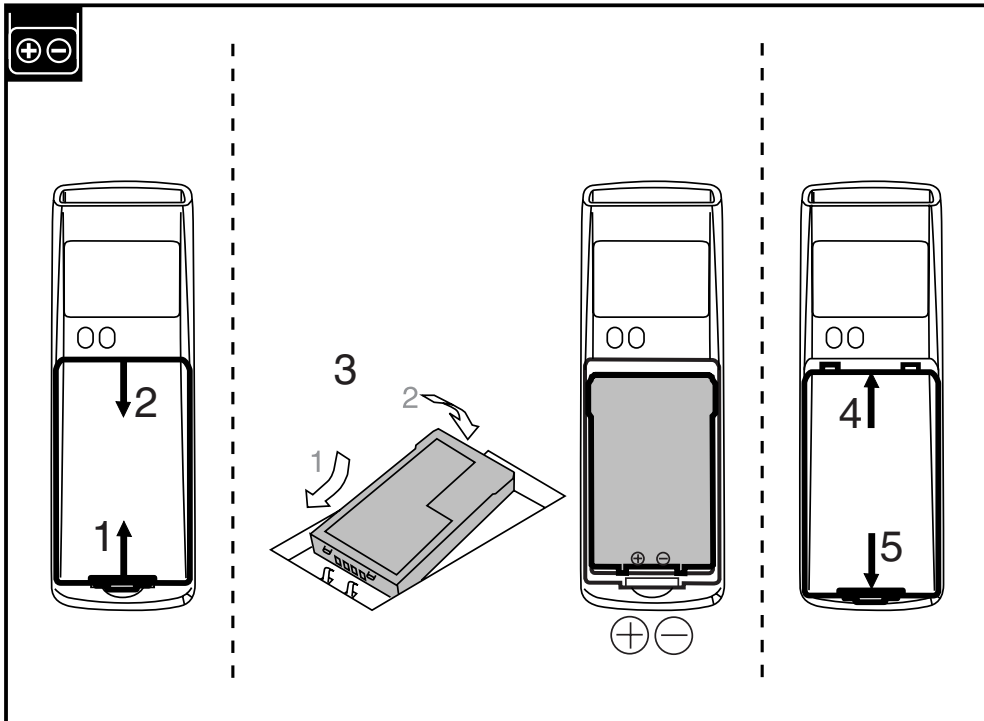
2.2.2 HOW TO (RE)PLACE THE BATTERY

Unlock battery case cover: (ref. 1 and 2)
• Unlatch the case cover by lifting first into the
  direction of the nose and then lift up the case.

Install Opticon battery: (ref. 3.)
• Remove old battery. Insert new battery as
  instructed on the battery. Do not use force.

Lock battery case cover: (ref. 4 and 5)
• Position the case cover into the savings and latch
  it by pressing slightly.

2.3 INSTALLATION INSTRUCTIONS

EXERCISE CAUTION AT ALL TIMES WHEN
WORKING WITH AC-POWERED EQUIPMENT.

TURN OFF YOUR DEVICES BEFORE
INSTALLATION.

BECAUSE OF THE SPECIAL PIN-OUT OF THE
CONNECTORS, USE THE CABLES SUPPLIED
BY THE MANUFACTURER.
When you need another cable for a certain device,
that is not supplied, contact your supplier to
purchase the right cable.

2.3.1 CONNECT CHARGING CRADLE

Start
Switch off the power of the host computer.

(ref. 1.) Choose proper place
Place the cradle in normal office conditions, avoid a
place under strong light.

(ref. 2.) Connect power
Connect the power supply.

End
Switch on the power of the host computer.
Place the bar code data collector in the cradle.

LED indicator
Typical LED indication:
red: power is on

2.3.2 CONNECT RS232 CRADLE

Start
Switch off the power of the host computer.

(ref. 1.) Choose proper place
Place the cradle in normal office conditions, avoid a place under strong light.

(ref. 2.) Set DIP switch
Set the required DIP switches for baud rate. For (default) settings notice DIP switch table in the next chapter.

(ref 3.) Connect interface cable
Connect the cable between the cradle and the host computer.

(ref. 4.) Connect power
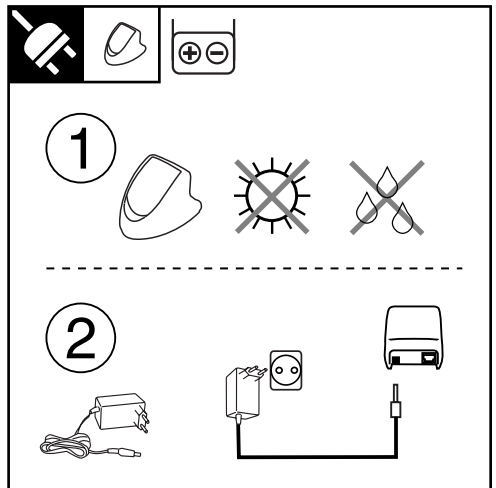Connect the power supply.

End
Switch on the power of the host computer.
Place the bar code data collector in the cradle.

LED indicator
Typical LED indications are:
red: power is on
flashing green: collector sends to host
flashing yellow: host sends to collector

FOR CONNECTING A NETWORK OF CRADLES SEE RS485 DESCRIPTION.
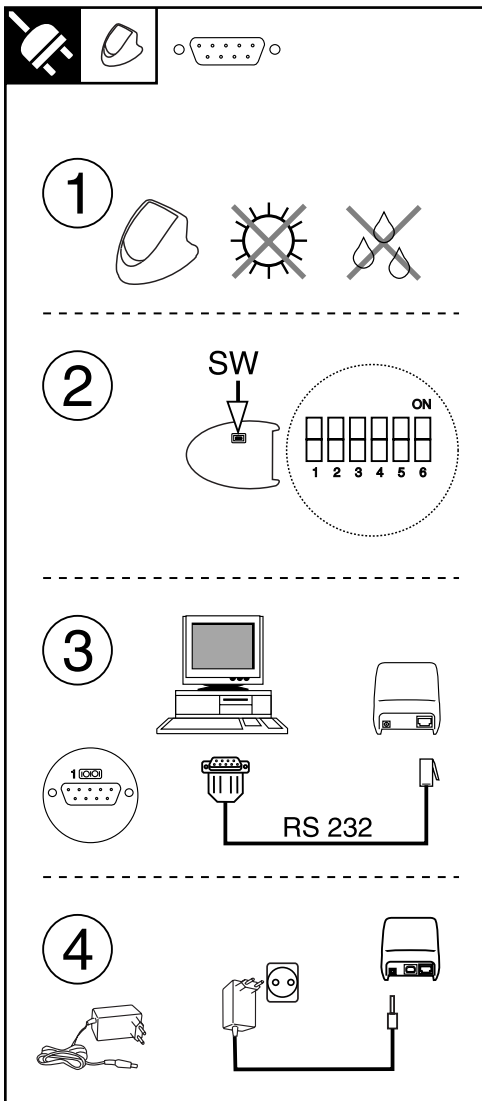
2.3.3 CONNECT RS232 MULTICRADLE

Start
Switch off the power of the host computer.

(ref. 1.) Choose proper place
Place the multicradle in normal office conditions, avoid a place under strong light.

(ref. 2.) Set DIP switch
Set the required DIP switches for baud rate. For (default) settings notice DIP switch table in the next chapter.

(ref 3.) Connect interface cable
Connect the cable between the multicradle and the host computer.
For RS232 interface use the left RS232 connector (RS232C-1).

(ref. 4.) Connect power
Connect the power supply.

End
Switch on the power of the host computer.
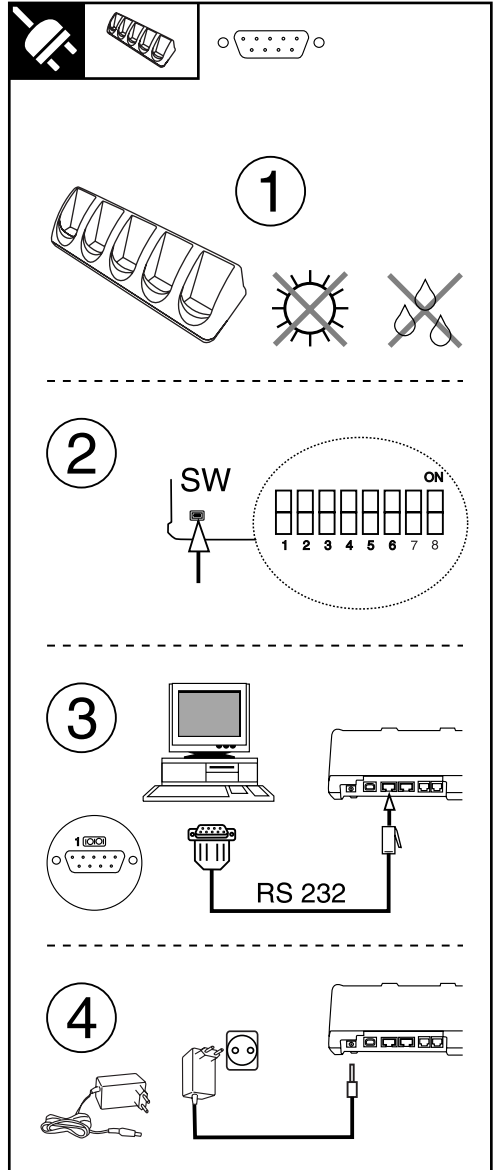Place the bar code data collector(s) in the multicradle.

LED indicator
Typical LED indications are:
red: power is on
flashing green: collector sends to host
flashing yellow: host sends to collector

FOR CONNECTING A NETWORK OF MULTICRADLES SEE RS485 DESCRIPTION.

2.3.4 CONNECT USB TO WINDOWS PC

Get USB driver
- Download the USB driver from the software download section on the Opticon website. (The USB driver can be found as software for either CRD972X or OPL972X)
- Place the file on your hard disk in a separate directory and unpack the contents of the file.

Choose proper place
Place the cradle in normal office conditions, avoid a place under strong light.

Connect interface cable
Connect the cable between the cradle and the host computer.

Connect power
Connect the power supply.

Add New Hardware
If the wizard for new hardware is not started automatically, go to 'Control Panel' – 'Add Hardware'.
- Select the option to search for the best driver for your device. Browse for the directory where you put the contents of the downloaded USB driver file.
- Windows should recognize the USB cradle as 'USB High Speed Serial Converter'
- Possibly (depending on Windows version) the system will ask for the 'ftdiport.cat' file. This can be skipped ('Skip File' button).
- Finish the installing procedure. A message will pop-up that new hardware is found, recognized as USB Serial Port.
- Possibly (depending on Windows version) the system asks to insert a disk labeled 'FTDI USB Drivers Disk', click on OK and in the next screen skip this action.
- When the USB driver is installed, you can check on 'Control Panel' – ('System') – 'System Properties' ('Hardware') – 'Device Manager'- menu if the 'USB High Speed Serial Converter' is recognized.
- Check at properties for the COMport: 'USB Serial Port (COMn). This information might be needed for application loading.
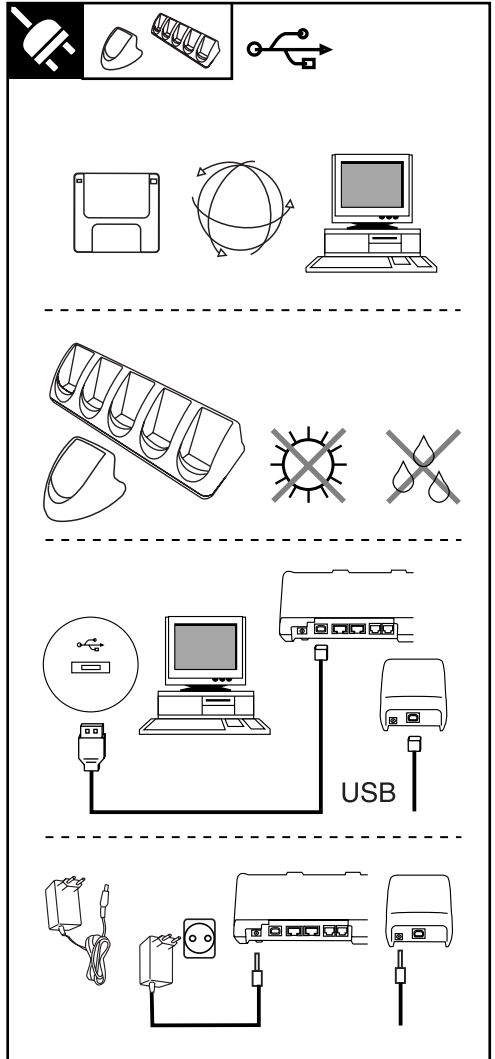
Cradle installed
Place the bar code data collector in the cradle

LED indicator
Typical LED indications are:
red: power is on
flashing green: collector sends to host
flashing yellow: host sends to collector

2.3.5 CONNECT RS485 MULTICRADLE NETWORK

THIS PART DESCRIBES THE NETWORK DETAILS. FOR CONNECTION DETAILS REFER TO PREVIOUS PAGE.

TAKE NOTICE OF THE NECESSARY PRECAUTIONS THAT NEEDS BE MADE TO ESTABLISH A PROPER NETWORK CONNECTION AS DESCRIBED BELOW.

Connect RS232
Only 1 multicradle in the network will be connected to the PC through one RS232 cable. For RS232 interface use the left RS232 connector (RS232C-1). Through this connection all multicradles can communicate to the PC.

Connect RS485
A maximum of 16 multicradles can be connected in a network through RS485 cables.

Set DIP switch settings
For (default) settings notice DIP switch table in the next chapter.
• All multicradles in the network need to be set to RS232/RS485 connection.
• All multicradles need to have the same baud rate to be set by DIP switch.
• The first and the last multicradle in the network must have the termination resistors set.
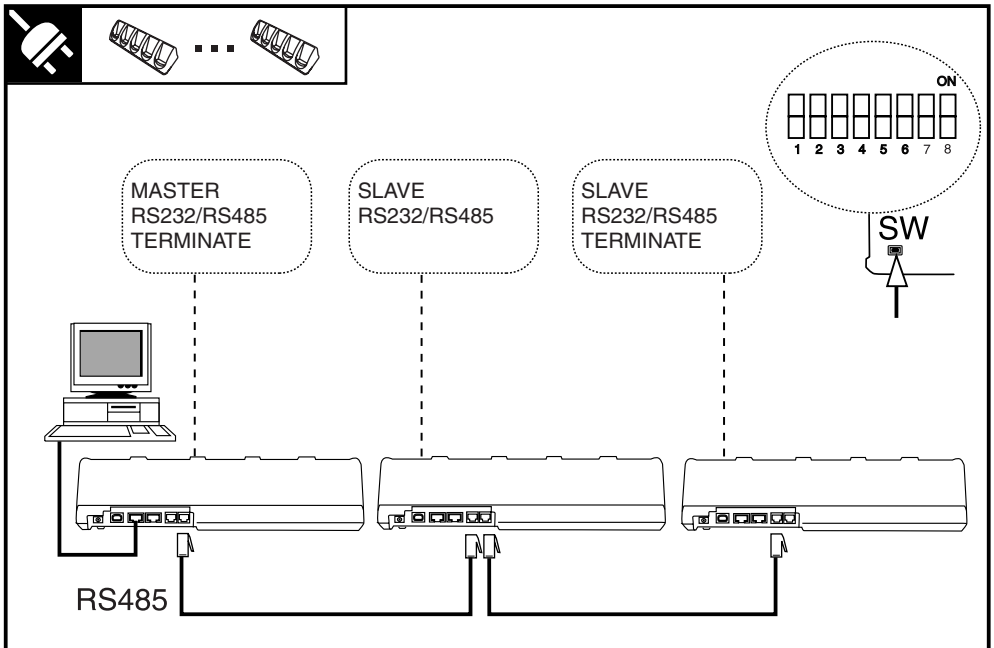
LED indicator
Typical LED indications are:
red: power is on
flashing green: collector sends to host
flashing yellow: host sends to collector

2.4 DIP SWITCH SETTINGS

Open the cover of the DIP switches on the bottom of the cradle in order to reach the DIP switches.
• Turn the DIP switch ON by moving it upwards.
• Turn the DIP switch OFF by moving it downwards.

Single cradle DIP switch settings:

DIP Switch	ON	OFF
SW 1	Baud rate *	Baud rate *
SW 2	Baud rate *	Baud rate *
SW 3	Baud rate *	Baud rate *
SW 4		Spare
SW 5		Spare
SW 6	Auto-baud rate (PC-controlled)	SW 1, 2, 3 determines baud rate.

Multicradle DIP switch settings:

DIP Switch	ON	OFF
SW 1	Baud rate *	Baud rate *
SW 2	Baud rate *	Baud rate *
SW 3	Baud rate *	Baud rate *
SW 4	RS232/ RS485	RS232 only
SW 5	Cascade **	
SW 6	RS485 termination ON	RS485 Termination OFF
SW 7		Factory setting
SW 8		Factory setting

* Set baud rate as in table below.
** In typical use keep cascade switch SW5 off.

User baud rate settings:

*) Baud rate	SW 1	SW 2	SW 3
2400	ON	OFF	OFF
4800	OFF	ON	OFF
9600 (default)	ON	ON	OFF
19200	OFF	OFF	ON
38400	ON	OFF	ON
57600	OFF	ON	ON
115200	ON	ON	ON

2.5 BLUETOOTH INSTALLATION

In the bar code collector with Bluetooth interface some settings can be made in the system menu.

Get system menu	Press all 3 keys at the same time to get the system menu. To navigate downwards use the right key [Q2] and to navigate upwards use the left key [Q1]. Confirm or select with the middle [Trigger]key.
Cancel operation	When an operation needs to be cancelled, press all 3 keys at the same time to cancel the current option and get the system menu.

2.5.1 SET OR SEARCH BLUETOOTH DEVICE ADDRESS:

To enable the bar code data collector with Bluetooth interface to communicate to another Bluetooth device, the Bluetooth address of the device needs to be set in the system menu of the bar code data collector.

```
System menu
> Input address    <
```
Start the system menu
Select option Input address.

```
Set Bluetooth addr
Q1 = Manual
Q2 = Discovery
Tr = Cancel
```
Set Bluetooth address
To set by manual entry, select Manual.
To search for Bluetooth device address, select Discovery.

```
Set Bluetooth addr
Bluetooth address =
001268305486

1=up Tr=done 2=move
```
Manual entry
The address shown is either 000000000000, or the address that was entered before.
The Bluetooth address can be found on the other device. Mostly it is displayed on the product label as a 12 digits number or a number with 6 hex digit pairs. (e.g. 0050f27d78c5).
The digits can be selected one by one by the block marker.
Change the digit by pressing the left key [Q1]. Every time the left key [Q1] is pressed the value of the digit is incremented by one hexadecimal value. When the proper value is displayed move the marker to the next digit with the right key [Q2].
When the setting of the device address is done, confirm with the middle [Trigger]key.

```
BT discovery
Searching..
```

Discovery

The discovery method is a more automated method. The bar code data collector will try to discover all Bluetooth devices in range (up to a maximum of 10 devices).

The address and the name of each Bluetooth device is shown one by one in the display.

```
Select address  1/6
0050f27d78c5
DESKTOPPC

1=up Tr=sel 2=down
```

Navigate downwards by the right key [Q2] and navigate upwards by the left key [Q1].

When device that should be used for communication is found, select it by the middle [Trigger]key.

2.5.2 SECURITY

To provide additional security connections, the Bluetooth specification allows you to enable a special security setting, so that a PIN-code is required from the barcode data collector in order to establish a connection.

If you want to use 'unsecured' connections, do not set the PIN-code.

```
System menu
> Input PINcode   <
```

Start the system menu.
Select option Input PIN-code.
Select option Input PIN-code.

```
Set PINcode
PINcode =
1234...........

1=up Tr=sel 2=move
```

Set PIN-code

The code shown is either ……………, or the code that was entered before.

The PIN-code is a code of 1 to 16 digits. Any personal combination of numeric values can be set.

The digits of the address can be selected one by one by the block marker.

Change the digit by pressing the left key [Q1]. Every time the left key [Q1] is pressed the value of the digit is going up with one numeric value. When the proper value is displayed move the marker to the next digit with the right key [Q2]. When the setting of the code is done, confirm by the middle [Trigger]key.

Delete PIN-code

The PIN-code is seen as not set when all digits are set to none (……………)

2.6 COMMUNICATION

2.6.1 RS32 INTERFACE

Check if the chosen COM port matches the COM port in the user's application program.

Check if the baud rate of the cradle and the host computer match.

2.6.2 USB INTERFACE

Check if the defined COM port in Windows matches the COM port in the user's application program.

Check if the baud rate of the cradle and the host computer match.

2.6.3 MULTICRADLE SINGLE COMMUNICATION

When using the multicradle type with single communication, note that the model has only one slot that supports communication. To transmit data to the host, place the bar code data collector in the right slot of the cradle seen from the front side.

2.6.4 BLUETOOTH BAR CODE DATA COLLECTOR

The Bluetooth bar code data collector model will communicate with the SIG certified Bluetooth devices. The choice in profile (SPP or DUN) that needs to be supported must be set in the user's application program.

3

3 READING BAR CODES

TAKE CARE OF THE 'HANDLING INSTRUCTIONS' AND 'GET STARTED' PRECAUTIONS.

Instructions
Point the bar code data collector to the bar code and press the trigger key.
Fit the bar code in the laser beam from margin to margin and pass the scanner to the bar code, as shown in the scan position illustration.
The bar code will be read and the reading results will be indicated.

A "Good Read" means that the scanner has effectively recognised and decoded the bar code. In most cases, the application program will provide an indicator signal or a buzzer signal to indicate a good read to the user.

The bar code data collector is a Class I laser product conforming to the strictest laser safety standards. However, we recommend that you avoid looking directly into the laser beam emitter, or pointing the laser beam directly into someone's eyes.

Barcode reading problems
When the barcode can not be read, try the following:
• Check that the width of the bar code label does not exceed the width of the light beam.
• Change the angle between the bar code and the scanner.
• Change the distance between the bar code and the scanner.
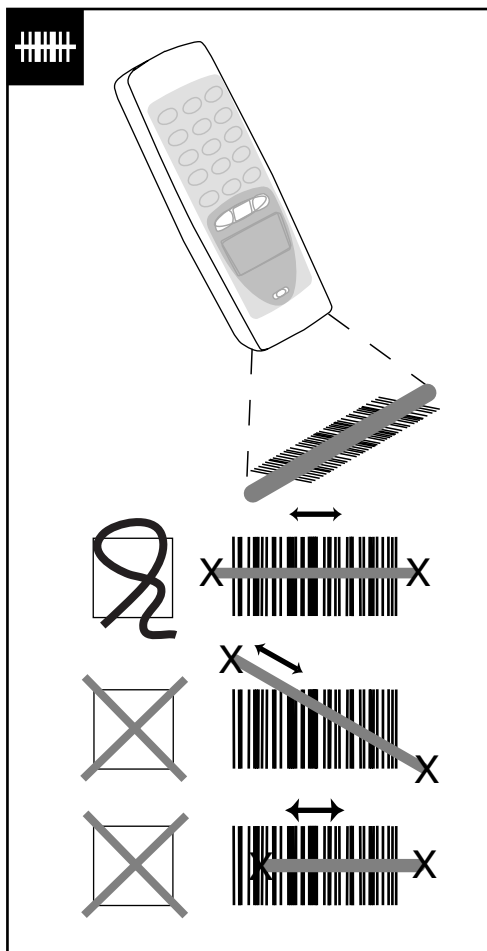
4

4 TROUBLE SHOOTING

This chapter contains information on solving problems you may encounter when using the barcode data collector and/or cradle. If problems occur, first carry out some general checks, before verifying the problem with the descriptions in this chapter.

General checks:
• Make sure the product is installed properly.
• Check the power supply of all devices
• Is the reading window of the product clean?
• Are the bar code labels damaged?
• Check if the error also occurs with other bar code labels.

Product does not operate:
• Check if the battery requires charging.

If you can not solve the problem:
If the equipment still does not work after these checks have been performed, please verify if one of the problems described in this chapter applies to the problem you have with the scanner.

4.1 COMMUNICATION MALFUNCTIONING

No communication from the cradle to the device, or data is corrupted.

? Power indicator of the cradle is not red.
• Check the connection of the power supply to the cradle.
• Check if the mains socket has power.

? No data transmitted, or corrupted data.
• Check if the interface cable is undamaged, and properly connected to the cradle and the host computer.
• Check the COM port and baud rate settings, and try again.

4.2 READ OPERATION MALFUNCTIONING

When the barcode data collector has a problem with reading the label:

? General tips.
- Change the angle of the bar code data collector relative to the bar code.
- Change the distance between the bar code and the bar code data collector.

? The label consists of small bars with small spaces (high-resolution label).
- Decrease the distance between the bar code and the bar code data collector.

? The bar code is larger than the laser beam.
- Try moving the bar code data collector a bit further away from the bar code.

? The reading window is dirty.
- Clean the reading window of the bar code data collector.

? The type of the bar code label is not enabled.
- If applicable, enable the bar code symbology in the application program.

? The error occurs consistently with a certain batch of labels.
- Verify the barcode. If you use a barcode printer it is advised to use also a barcode verifier.

4.3 BARCODE DATA COLLECTOR MALFUNCTIONING

Barcode data collector does not respond to key presses, while the display stays on.

? Message "Application halted" or "No application installed" is shown.
- There is no proper user's application loaded in the bar code data collector. Contact your supplier.

Laser stays off, when pressing the trigger key.

? Trigger key has no scan function.
- If your bar code data collector has a display, check in your display if the scan menu is selected. When an other menu is selected switch to the scan menu.

? Laser temperature has become too high.
- The laser is switched off automatically, when the laser temperature becomes above 50°C. Wait until the temperature has dropped.

Barcode data collector does not work, when pressing the trigger key.

? The battery is empty.
- Charge the barcode data collector in the cradle.

Bar code data collector can be used only for a short time after recharging.

? The main battery is not properly charged.
- Check if the charging contacts of the bar code data collector and the cradle are clean. If needed, clean the charging contacts.
- Check the cradle for power by checking the power supply and/or the mains socket.
- Check if the bar code data collector is properly placed on the cradle.

When the product needs to be repaired:
The label with serial number should be present. If returning the product, please use the original packaging to minimise the chance of damage.