

Introduction

- The CRD-13 is a designated charging and communication cradle for the H-13.
- Read this quick start guide carefully before installing and/or using this product.
- Keep this quick start guide for future reference and store it in a safe place.

Notice

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Cautions and Warnings (Please refer to the specification manual for details.)

1. Handling Instructions

- Do not attempt to disassemble, modify or update this device.
- Do not use this device near combustible materials.
- Use only the AC adapter specified for this product.
- Do not drop this product or put heavy items on this product.
- Keep the device out of the reach of small children.
- Do not damage the AC adapter or power cable by bending, twisting, pulling, or heating. Do not use them if they are seriously damaged.
- Do not store this device in an extremely cold or hot environment.
- Do not touch the AC adapter or power cable while your hands are wet.
- Do not insert foreign substances into the device.
- Do not charge the battery in temperatures less than 0 deg. C or greater than 40 deg. C.
- Keep the IrDA communication window clean to avoid communication problems.
- When cleaning this product, rub gently with either a soft dry cloth or a damp cloth with mild detergent.
- Do not use this product in the following areas:
 - In areas exposed to direct sunlight for long periods of time.
 - Near water or other liquids, or in extremely high humidity.
 - Near heat sources, such as radiators, heat registers, stoves, or other types of devices that produce heat.

Before Getting Started

■ What's in the Box

Confirm that you have the following items before getting started:

No.	Item	Function
1	Cradle	Designated charging and communication cradle for the H-13.
2	AC/DC Adapter	Designated AC/DC adapter with a replaceable plug for the CRD-13.
3	RS-232C Cable	Designated RS-232C cable for the CRD-13.
4	USB Cable	Designated USB cable for the CRD-13.
5	Quick Start Guide	Provides product information and instruction guide.

* The number of accessories may differ depending on the product specification.
Please contact the nearest dealer if accessories are damaged or missing.

■ CRD-13 Basic Specifications

Parameter		Specifications
Physical Features	Size	(H)64.9 × (W)70.0 × (D) 144.4mm
	Weight	Approx. 125g
Control Section	CPU	32bit RISC CPU
	Internal Memory	ROM : 256KB RAM : 64KB
Comm. Section (H-13-CRD-13)	IrDA ※1	IrDA Ver1.2 (physical layer only) Baud rate: SiR : 9600 to 115.2kbps FiR : 4Mbps
	RS-232C ※2	Baud rate: 9600 bps 19.2, 38.4, 57.6, 115.2 kbps
Comm. Section (CRD-13- Host)	USB	Ver2.0 (Full-Speed) Virtual COM
Power Supply Section	Main Power Supply	AC Adapter : DC 6.0V, 2.0A
	Current Consumption	When communicating : 110mA or less (DC 6.0V, when not charging) Max: 1.7A or less (when charging a portable terminal)
	Charging Time	Approx. 3 hours
Power Feed Section	For Charging the Portable Terminal ※3	Output: DC 6.0V (Typ.) Electrical terminals : + / -
Display Section	LED	Power Supply : Red / Green
		Data communication : Red / Green
Durability	Operating Temp.	-10 deg. C to 50 deg. C
	Operating Humidity	25% to 85% (non-condensing)
	Storage Temp.	-20 deg. C to 60 deg. C
	Storage Humidity	20% to 90% (non-condensing)
	Charging Temp.	0 deg. C to 40 deg. C
	Shock Endurance	Dropped once from each of 6 angles onto concrete from a height of 75cm with no defects found.

※1 Baud Rate: Theoretical figure

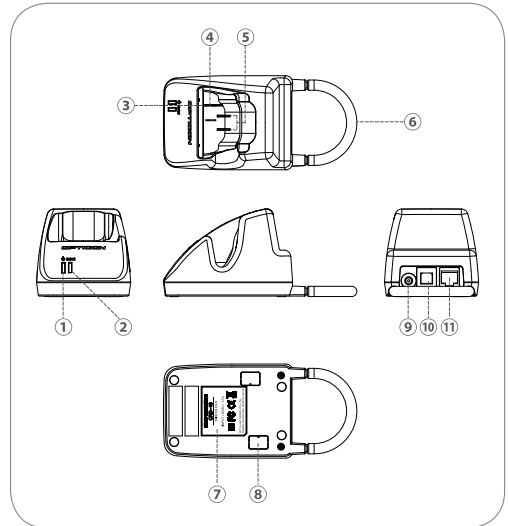
※2 RS-232C baud rate synchronizes with IrDA baud rate.

※3 Can be switched ON/OFF using the detection switch.



- To avoid communication problems between the cradle and a portable terminal, keep the IrDA window clean.
- IrDA communication performance may decline due to excessive ambient light (especially under strong sunlight or inverted fluorescent light.)

■ Detailed View



No.	Part	Function
①	Power Supply Status LED	Alerts users to the status of power distribution from the AC adapter to the cradle.
②	Comm. Status LED	Alerts users to the status of the IrDA data transmission.
③	IrDA Communication Window	The cradle communicates with the designated portable terminal through the IrDA communication window.
④	Detection Switch	Terminal detection switch to change the settings of the power feeding section.
⑤	Portable Terminal Charging Terminals	Electrical terminals for power distribution to the designated portable terminal.
⑥	Guard Bar	To protect the USB, RS-232C cables and DC jack.
⑦	Product Label	
⑧	DIP Switches	DIP switches to configure the settings of the CRD-13. Refer to the DIP Switch Configuration for details.
⑨	DC jack	DC6.0V power supply jack. Please use the AC adapter.
⑩	USB Connector	Connector for USB interface.
⑪	RS-232C Connector	Connector for RS-232C cable.

■ AC adapter Basic Specifications

Parameter		Specifications
AC adapter	Input	Power Voltage: AC 90 to 265V Current Consumption : 0.5A max.
	Output	Power Voltage: 5.7 to 6.3V Maximum current: 2.0A max.

Using the Cradle

■ Charge Function



- 1 Charging starts as soon as the H-13 with the provided battery (BTR0100) is placed into the cradle.
- 2 The charging status LED for the H-13 turns solid GREEN after the battery has finished charging or when a fully charged battery is detected.
- 3 Charging Time

Charging Time	Conditions
Approx. 3 hours	Time needed to fully charge an empty battery.

■ LED Notification

Status LEDs	Color	Function
Cradle LED	Green	Turn solid GREEN when a portable terminal is placed on the cradle.
Portable Terminal LED	Red	Turn solid RED while the battery is being charged.
	Green	Turn solid GREEN after the battery has finished charging.



* If you try to charge the battery pack when the ambient temperature is outside the range of 0 to 40 degrees C, the cradle may stop charging to protect the battery pack.

* Please clean the charging terminals of the portable terminal on a regular basis.

* It is possible that the application program in the terminal controls the terminal LED differently.

■ Supported Interface

RS-232C Interface

Please use the RS-232C connector provided by Opticon.

USB Interface

The CRD-13 supports USB2.0, Full Speed interface.



* Do not use a hub to connect the CRD-13 to the host. Please use the designated USB cable provided by Opticon.

■ DIP Switch (DIPSW) Configuration

Use the DIP switches on the bottom of the CRD-13 to configure the following settings.

DIP Switch Settings

Item	DIPSW							
	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
Baud Rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Data Length				<input type="radio"/>				
Parity bits					<input type="radio"/>	<input type="radio"/>		
Stop bits							<input type="radio"/>	
RFU								<input type="radio"/>

Baud Rate

Item	SW1	SW2	SW3
115.2K	OFF	OFF	OFF
57600	ON	OFF	OFF
38400	OFF	ON	OFF
19200	ON	ON	OFF
9600	OFF	OFF	ON
4M	ON	OFF	ON
Open	OFF	ON	ON
Auto configuration	ON	ON	ON

Data Length

Item	SW4
8 bits	OFF
7 bits	ON

Parity Bits

Item	SW5	SW6
No Parity	OFF	OFF
Odd Parity	ON	OFF
Even Parity	OFF	ON
Open	ON	ON

Stop Bits

Item	SW7
1 bit	OFF
2 bits	ON

Default Settings

SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
ON	ON	ON	OFF	OFF	OFF	OFF	OFF

Default Settings

Baud Rate: Auto configuration
Data Length: 8 bits, Parity Bits: No parity
Stop bits: 1 bit,



* You need to turn the power ON again after changing the DIP switch settings.

Memo

Contact

Please contact OPTICON or your local dealer.

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