

all subject to change to
reflect IP30 use.

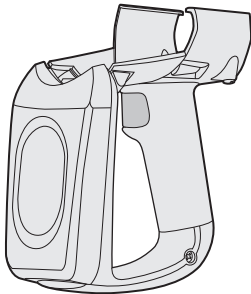
Dave Fry
Sr. EMC Engineer
Feb. 28, 2008

Intermec



Instructions

chg photo
chg title to IP30



IP4 Portable RFID Reader

Contents

- Introducing the IP4 Portable RFID Reader 3
- What You Get 3
- Using the IP4 3
 - Charging and Installing the Battery 3
 - Attaching Your IP4 to a 700 Color 5
 - (Optional) Configuring Your IP4 as a Keyboard Wedge 6
 - Reading an RFID Tag 8
- Understanding the IP4 LEDs 9
- Specifications 10

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Introducing the IP4 Portable RFID Reader

The IP4 Portable RFID Reader is an accessory handle for the 700 Series Color mobile computers. Together, the IP4 and 700 Color provide a high-performance mobile RFID solution that allows you to bring the read/write device to the tagged product rather than moving tagged products past a fixed reader.

What You Get

- IP4 Portable RFID Reader
- Battery (Model AB12)
- Product documentation

Using the IP4

To use the IP4, you need to perform these steps:

- 1 Charge and install the battery.
- 2 Attach your IP4 to a 700 Color.
- 3 (Optional) Configure your IP4 as a keyboard wedge.
- 4 Read an RFID tag.

These instructions describe each step.

Charging and Installing the Battery

To charge the IP4 battery, you need the Dual Pack Battery Charger (Model AC12).

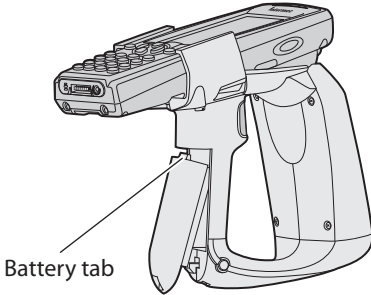
To charge the IP4 battery

- Insert the battery into a slot on the AC12 battery charger.
A fully discharged battery charges in less than 4 hours.

del 700 terminal
mention terminals
CK61
CN3
CN3e

To install the battery

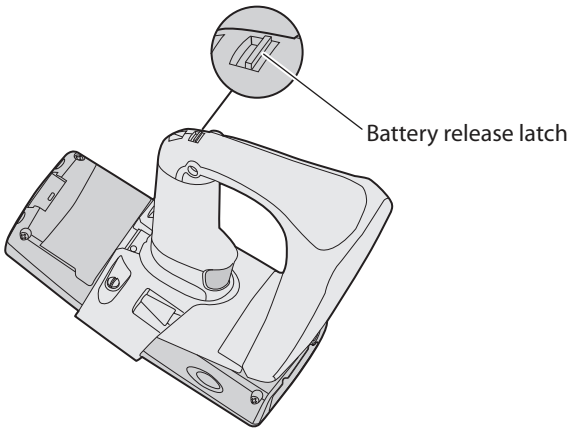
- 1 Insert the battery tab on the top of the battery into the IP4.



- 2 Firmly press the bottom of the battery onto the IP4 until the battery snaps into place.

To remove the battery

- Push the battery release latch on the bottom of the IP4.

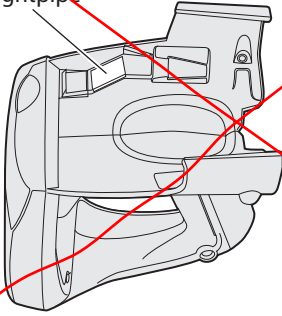


replace diagrams with
IP30

Attaching Your IP4 to a 700 Color

Your IP4 uses Infrared Data Association (IrDA) to communicate with the 700 Color. The lightpipe in the IP4 helps communicate the IrDA signal between the 700 Color and your IP4.

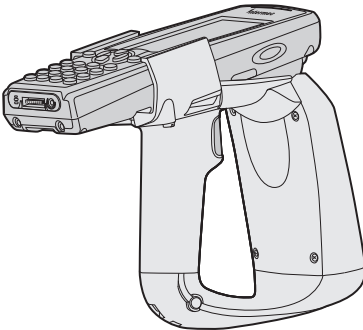
Lightpipe



Note: Do not remove the lightpipe from the IP4.

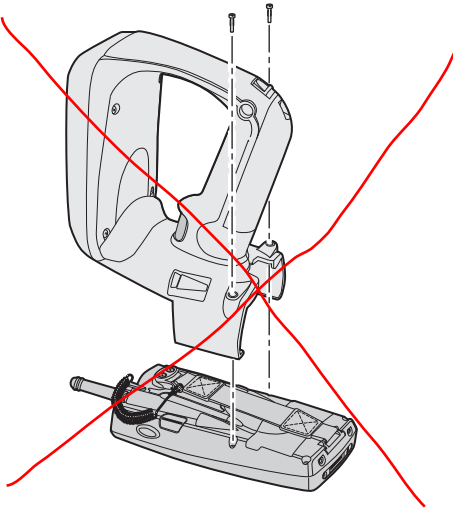
To attach your IP4 to a 700 Color

- 1 Slide the 700 Color into the IP4 until it clicks into place.



chg diagrams
consider adding
seperate CK61 and
CN3 installed diagrams

- 2 Secure the retaining screws, making sure that they are inserted straight into the 700 Color.



chg or del
IP30 does not require
screws for attachment

del
keyboard wedge
discussion

To remove your IP4 from a 700 Color

- 1 Remove the two retaining screws.
- 2 Hold the 700 Color at the display.
- 3 While lifting the 700 Color up (away from the IP4), pull the 700 Color forward and out of the IP4.

(Optional) Configuring Your IP4 as a Keyboard Wedge

You can configure your IP4 as a keyboard wedge to allow the 700 Color to receive data from your IP4 as it would from a keyboard.

To use your IP4 as a keyboard wedge, the 700 Color and your IP4 must meet these requirements:

- The 700 Color must have at least 64MB of flash ROM.
- The fifth character in the configuration number (CN) found on the back of the 700 Color must not be a 4 or 5. For example:
 - 751B6xxxx meets this requirement.
 - 760A4xxxx does not meet this requirement.

- The 700 Color must be running one of these operating systems (OS):
 - 4.95.1 or later Prem (Premium)
 - ~~• 4.96.4 or later GSM Phone~~
- If the fourth character in the configuration number (CN) of your IP4 is an “A”:
 - The 700 Color must be running IVA 4.03.35.1043 or later.
 - Your IP4 must be running firmware version 5.19 or later.
- If the fourth character in the configuration number (CN) of your IP4 is an “B”:
 - The 700 Color must be running IVA 4.03.35.1050 or later.
 - Your IP4 must be running firmware version 7.16 or later.



Note: Use Intermec Settings to find the OS and IVA versions of the 700 Color. For help, see the user’s manual for the 700 Color.

To configure your IP4 as a keyboard wedge

- 1 Fully charge your IP4 battery and attach your IP4 to a 700 Color.
- 2 On the 700 Color, start Intermec Settings.
- 3 Select **RFID > Reader 1**, and select **Enable Reader**.
- 4 Under **Reader 1**, select **Reader Module > Tag Type**, and select the type of RFID tag you are using.
- 5 From the main Intermec Settings menu, select **Device Settings > Keypad > Scan Button Remapping > Handle Trigger**, and select **RFID**.
- 6 Save your settings.

edit for correct terminal config

no cell phone offering in
CK61
options limited for CN3
NO CDMA or GPRS radio

RF safe distance may need correction.

initial distance
repl 20 cm (8 in)
with
23 cm (9 in)
TBD

To test the keyboard wedge

- 1 Start Microsoft Pocket Word.
- 2 Read an RFID tag. For help, see the next section.

The RFID tag information appears in Pocket Word.

Reading an RFID Tag

You can scan at least six RFID tags per second with the IP4.



Note: Continuously reading tags with the IP4 may cause the IP4 to overheat. If the IP4 temperature rises above the maximum operating temperature, the IP4 will stop reading tags. If this occurs, let the IP4 cool down until its temperature is within the operating temperature range.



Warning

RF Exposure regulations limit exposure to radio frequency (RF) radiation. To comply with these regulations, operators of this device must maintain a distance of at least 20 cm (8 in) from the cover on the antenna assembly. (The cover on the antenna is the dome-shaped surface.) While the device is on, the operator's body and parts of the body such as eyes, hands, or head, must be 20 cm (8 in) or farther from the cover of the antenna assembly.

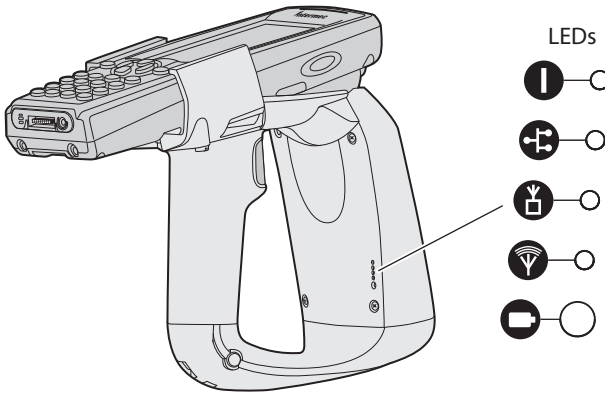
Avertissement: Les réglementations sur les expositions RF limitent l'exposition aux rayonnements RF. Pour se conformer à ces réglementations, les opérateurs de ce dispositif doivent maintenir une distance minimale de 20 cm du couvercle de l'antenne. (Le couvercle de l'antenne est la surface bombée.) Lorsque l'appareil est sous tension, le corps et les parties du corps (yeux, mains, tête) de l'opérateur doivent être à au moins 20 cm du couvercle de l'antenne.

To read an RFID tag

- 1 Position the front of the IP4 within 91 cm (3 ft) of an RFID tag.
- 2 Pull the trigger.

Understanding the IP4 LEDs

Your IP4 uses LEDs to indicate the status of certain operations.



IP4 LEDs: The IP4 LEDs are located on the back of the IP4.

IP4 LED Descriptions

Icon	LED	Description
	Power (PWR)	This LED is green when +5 power is on and the IP4 is ready to read tags.
	Host Communications (HOST COMM)	This LED is green when data communication with the host is active.
	RF Power On (RF ON)	This LED is green when RF power is on.
	Tag Communications (TAG COMM)	This LED turns green after the IP4 successfully reads an RFID tag.
	Battery (BATT)	This LED indicates the status of the battery: <ul style="list-style-type: none"> • Red: The battery is low (less than 20% capacity). • Green: The battery is fully charged (more than 80% capacity). • Orange: The battery is charged (from 20% to 80% capacity).

replace with IP30 placements

Specifications

This section contains specifications for the IP4.

Environmental Specifications

Specification	Value
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-30°C to 70°C (-22°F to 158°F)
Relative humidity	5 to 95% non-condensing

869 MHz Frequency

Specification	Value
Source type	Single Channel
Frequency band	869.525 MHz
EIRP/ERP	0.5 watt ERP
Output power 1 W maximum	Minimum = 26.0 dBm Typical = 26.5 dBm Maximum = 27.0 dBm
Modulation	80%
Data Rate	N/A

915 MHz Frequency

Specification	Value
Source type	Frequency hopper
Frequency band	902-928 MHz
EIRP/ERP	1 watt EIRP ?
Output power 1 W maximum	Minimum = 28.5 dBm Typical = 29.5 dBm Maximum = 30.0 dBm
Modulation	90%
Data Rate	38 to 44 Kbps

Performance

Specification	Value
RFID tag identification rate	At least six tags per second with one to ten tags in the RF field, located at half the maximum reading distances from the IP4 front panel.
RFID tag read distance	91 cm (3 ft) ?
RFID tag data exchange rates	Read a tag containing 8 bytes of data within 50 ms. Perform a verified write to tag at an average rate of 75 ms per byte per tag.

Firmware Architecture

Specification	Description
Firmware	Communicates in Basic Reader Interface (BRI) mode.
Protocol/Compatibility	ANSI NCITS 256.2000 for API, part 2, part 3-1

Reader Configuration Access Summary

Function	Control Mechanism	Responsible Party
Change Country Code	Hardware key or configuration tag	Factory or Intermec® Field Technician
Download updated firmware	Intermec-only password	Remote or on-site field technician
Setup, system configuration not secured at higher level, such as change battery or wake up default	Configuration file	Customer System Administrator

Patent Information

Product is covered by one or more of the following patents:

5,673,037; 5,729,697; 5,777,561; 5,828,318; 5,850,187;
5,912,632; 5,942,987; 5,995,019; 6,032,127; 6,121,878;
6,172,596; 6,286,762; 6,288,629; 6,422,476; 6,429,775;
6,525,648; 6,529,880; 6,608,551; 6,639,509; 6,812,841;
6,812,852; 6,919,793.

Patent Application 2002-0046173

There may be other U.S. and foreign patents pending.



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~~IP4~~ Portable RFID Reader Instructions



~~P/N 943-002-004~~