

Encompass® 1i Handheld Reader Quick Start Guide



TransCore

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Introduction

The Encompass 1i Handheld Reader combines the TransCore IP30 TC RFID Scan Handle and the Intermec Model CN3x Mobile Computer. This document describes procedures to set up and read/verify tags using TransCore's Encompass 1i Handheld Reader.

Please refer to the following documents for comprehensive information about the IP30 TC RFID Scan Handle and the Intermec Model CN3x Mobile Computer:

IP30 Handheld RFID Reader User Guide

Mobile Computer for Windows Mobile 6.1 (CN3, CN3e) User's Manual

Both of these documents are available online at www.intermec.com.

Before Getting Started

TransCore's Encompass 1i Handheld Reader is designed to read from TransCore eGo^{®1} Plus sticker or license plate tags, eGo tags, ATA and/or Wiegand tags.

Handheld Reader Setup Instructions

To set up the basic Encompass 1i Handheld Reader, you will need the following items:

- TransCore IP30 TC RFID Scan Handle with battery
- Intermec CN3x Mobile Computer
- TagReader Demo software program preloaded on the Intermec CN3x Mobile Computer
- IP30 TC scan handle battery charger with universal AC adapter and power cord
- CN3x Mobile Computer single dock/charging station with universal AC adapter and power cord

¹ eGo tags are fully compliant with the American National Standards Institute NCITS 256-2001 and International Organization for Standardization 18000-6B standards.

Installing and Removing the IP30 Scan Handle Battery

Before you can use the IP30 TC scan handle, you must charge its battery. The charging process takes approximately 3 hours.

To remove the battery

1. Push in the battery release button and remove the battery from the handle (Figure 1).

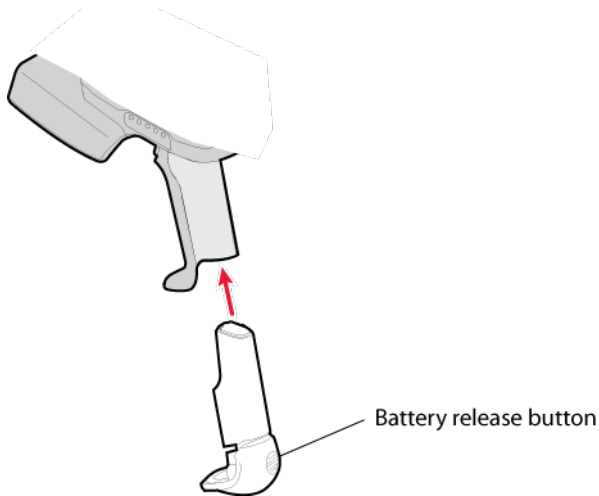


Figure 1. Battery Release Button Location on Scan Handle

Charging the IP30 TC Scan Handle Battery

The Encompass 1i Two-Bay Charger (TransCore P/N 76-0700-020) is suitable for use only with TransCore batteries (P/N 76-0700-021).



Caution

Use of any other battery may present risk of fire or explosion hazard.

Each charger power supply uses approximately 1.5 amps of current.

To charge the battery

1. Plug power supply into 110V AC outlet and then connect power supply to charger.
2. Insert one or two batteries into a slot in the charger (Figure 2).

3. Push battery down until it locks into place.
4. Charge battery for 3 hours.

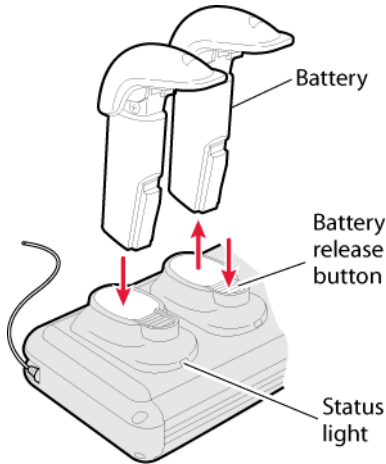


Figure 2. Scan Handle Dual Battery Charger

Charging–Status Light–Emitting Diode Indicators

There is one charge status light-emitting diode (LED) for each compartment. The charger LED indications are as follows:

Off	Battery not inserted properly, no battery installed, or battery completely run down
Red	Battery if faulty and should be replaced
Flashing red	Battery temperature is out of specifications. Make sure battery temperature is between 32° to 95°F (0° to 35°C)
Fast flashing green	Battery is charging
Slow flashing green	Battery is quick charging, which occurs for the first hour that the battery is being charged
Green	Battery is fully charged

TransCore recommends that you charge the IP30 TC scan handle battery after each shift.

Charging the CN3x Mobile Computer Battery

Before using the IP30 TC scan handle with the color mobile computer, you need to charge the mobile computer battery using the CN3x Mobile Computer Single Dock/Charger station.

To charge the mobile computer battery using the single dock station

1. Connect power supply unit plug to the single dock station jack (Figure 3).

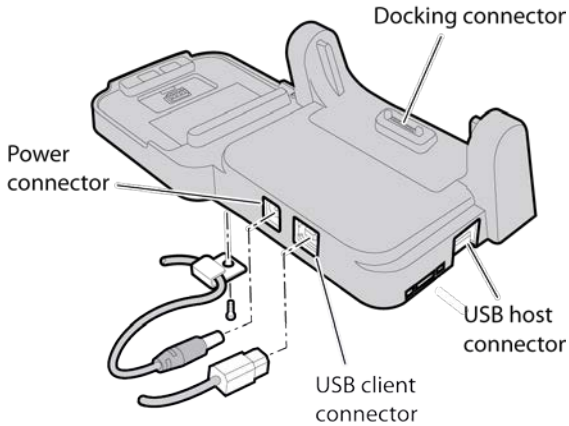


Figure 3. Single Dock Station Rear Panel

2. Insert the mobile computer onto the computer dock connector (Figure 4).

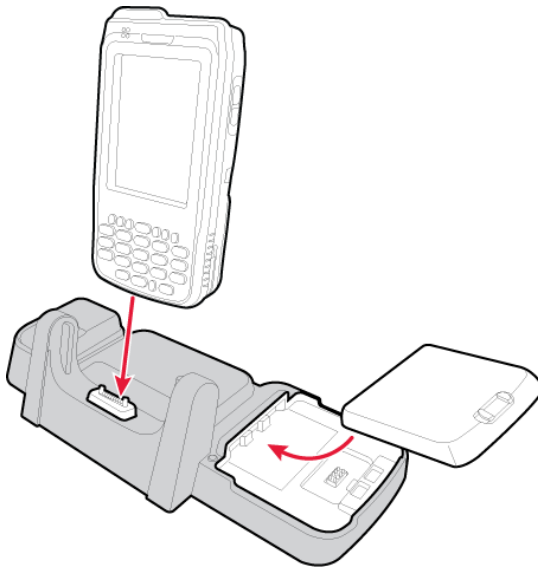


Figure 4. Mobile Computer and Single Dock Station (showing extra battery)

Note: The TagReader Demo software will not operate without a charged battery in the CN3x Mobile Computer. Do not proceed if the battery is not fully charged.

Connecting the IP30 TC Scan Handle to the CN3x Mobile Computer

To connect the IP30 TC scan handle and mobile computer

1. Remove the CN3x handstrap and insert it into the IP30 TC scan handle, then slide the CN3x Mobile Computer into your IP30 TC scan handle.

Ensure that the computer slides all the way into the IP30 TC scan handle. You will hear a click when you have the mobile computer fully inserted (Figure 5).

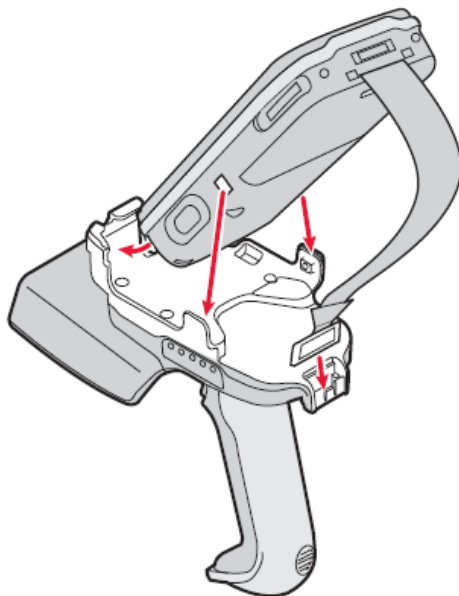


Figure 5. Connecting CN3x Color Mobile Computer to Scan Handle

2. To remove the mobile computer from the IP30 TC scan handle, grasp the CN3x Mobile Computer at the keypad end, and lift up away from the IP30 TC scan handle cradle. Disconnect the handstrap from the IP30 TC scan handle (reverse actions in Step 1).

Establishing a Connection to the IP30 TC

Scan Handle

Before using the IP30 TC, you first must establish a connection between the IP30 TC and the CN3x mobile computer using the Wireless Reader Wizard applet.

To connect the IP30 TC using the Wireless Reader Wizard

1. Switch on the mobile computer by pressing the On/Off button (Figure 6).



Figure 6. Location of On/Off Button (CN3e numeric 10-key keypad shown)

2. Make sure you have your Bluetooth radio enabled on your mobile computer, see the *Mobile Computer for Windows Mobile 6.1 (CN3, CN3e) User's Manual* for more information. The Start screen displays (Figure 7).

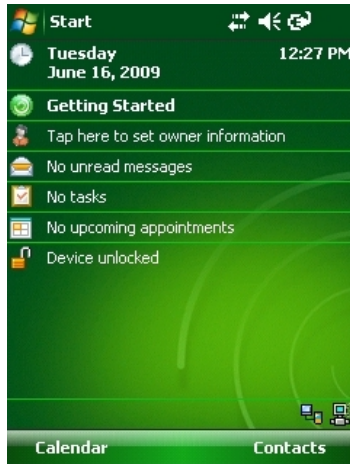


Figure 7. Encompass 1i Handheld Reader Start Screen

3. Select Start > Settings > System and tap the **Wireless Readers** icon. The Wireless Reader Wizard displays (Figure 8).



Figure 8. Wireless Readers Wizard Screen

4. Tap **Add Reader**. The wizard advances to the next screen.
5. Select how you would like to set your reader (the default is Search) and then tap **Next**. The computer starts discovering readers.

Note: The Devices list will show all data collection devices, including RFID readers, that are Bluetooth enabled. To connect to the right reader, verify that the serial number you selected matches the one located on the bottom of the IP30 TC's antenna.

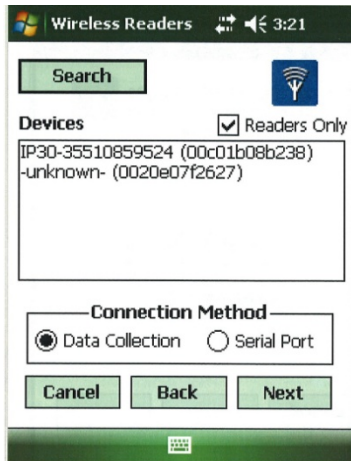


Figure 9. Connection Method Screen

6. Tap **Next**.

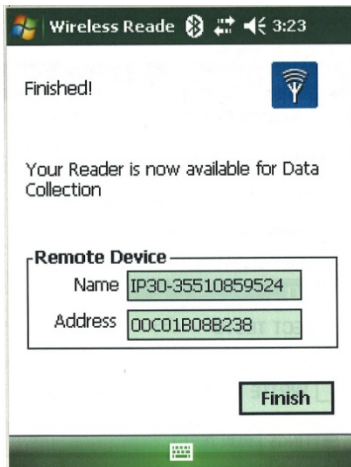


Figure 10. Remote Device Information Screen

7. Tap **Finish**.

Using Your Encompass 1i Handheld Reader

Before reading tags, check the IP30 TC scan handle battery capacity by squeezing the trigger (Figure 11). The IP30 TC LED panel (Figure 12) displays the battery capacity, as well as other functions of the scan handle (see table on page 10).




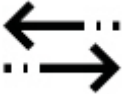



Figure 11. Trigger Location



Figure 12. Scan Handle LED Panel

IP30 TC Scan Handle LED Indicators and Descriptions

The table lists the IP30 TC scan handle LED symbols and descriptions.

LED Symbol	Indication	Description
	READY TO WORK	Indicator: Off – IP30 TC not ready for operation or in low power mode Blinking – IP30 TC not connected to mobile computer Steady – IP30 TC connected to mobile computer and ready for use
	DATA COMM	Data communication with host is active
	RF ON	RF power is on
	TAG COMM	Valid tag transaction
	BATT	Battery condition: Red – <20% charge Orange – 20% to 80% charge Green – >80% charge

Note: If your IP30 TC RFID Scan Handle is not identified by the TransCore logo on the LED panel, you will not be able to read ATA, Wiegand, and TransCore eGo or eGo Plus tags.

Reading Tags

To read tags

1. Tap the **TagReader** icon (Figure 13).



Figure 13. TagReader Demo Icon

2. Aim the handheld reader at the tag and squeeze the trigger. To obtain a good first-time read, the front edge of the handheld reader needs to be within 3.5 to 12 feet (approximately 1.1 to 3.7 meters) of the properly mounted tag.
3. Check the mobile computer screen to see if the tag type and ID displayed.

An example of a screen display for an ATA tag transaction is shown in Figure 14.

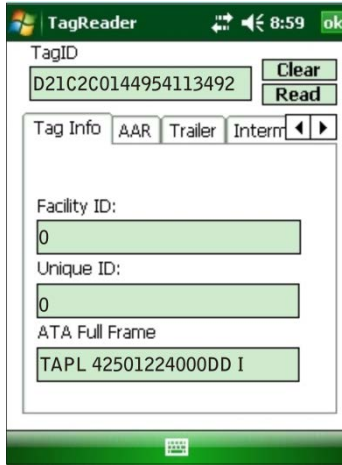


Figure 14. Sample Display of ATA Tag Read

An example of a screen display for a half-frame Wiegand tag transaction is shown in Figure 15.

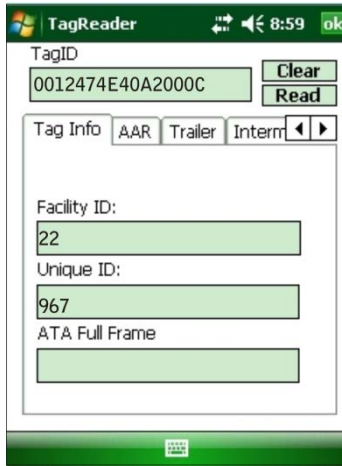


Figure 15. Sample Display of Wiegand Tag Read

An example of a screen display for an eGo or eGo Plus tag transaction is shown in Figure 16.

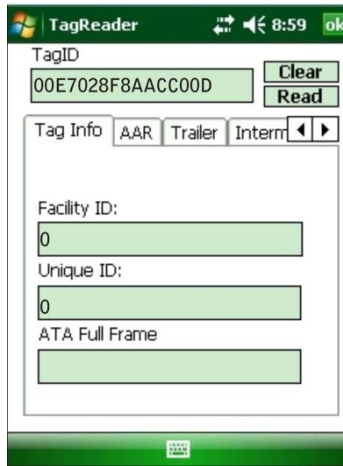


Figure 16. Sample Display of an eGo or eGo Plus Tag

Windshield sticker-type tags are designed for optimal performance when mounted to a windshield. Tags that are not mounted to glass will not perform to the specifications listed in this guide.

Resetting Your CN3x Mobile Computer

Applications operating on your CN3x Mobile Computer may stop responding to the system. Should this occur, you may need to perform either a warm reset or cold reset of your computer. Refer to the warm and/or cold resetting sections in the Intermec *Mobile Computer for Windows Mobile 6.1 (CN3, CN3e) User's Manual*.

Cold Weather Operation

The Encompass 1i reader is designed to operate at temperatures ranging from 5°F to 122°F (-15°C to 50°C). When operating the reader continuously in cold temperatures (less than 32°F/0°C), the lithium-ion (Li-ion) battery loses its charge faster than when operated at warmer temperatures. Operating in colder temperatures does not damage the Li-ion battery it only reduces the battery charge capacity.

If required to operate the reader at the minimum operating temperature, try to warm the E1i Handheld Reader when it is not in use. If you cannot warm the reader between tag reads, you can expect to charge the scan handle battery more frequently.

IP30 TC RFID Scan Handle Specifications

Specifications for the IP30 TC RFID Scan Handle are printed on the back side of the *Encompass 1i Handheld Reader Product Profile* (TransCore document number 600005). The Encompass 1i Handheld Reader product profile can be found at www.transcore.com. Select downloads then RFID PRODUCTS and Readers.

Safety/Regulatory/Compliance



Refer to the Model IP30 (915 MHz) and CN3x Compliance Inserts enclosed with the reader for important safety and regulatory information.



This equipment has been tested and found to comply with the limits for a Class B 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 a commercial environment. This equipment generates, uses, and can radiate RF energy and may cause harmful interference to radio communications if not installed and used in accordance with the instruction manual. Operating this equipment in a residential area is likely to cause harmful interference, in which case, depending on the regulations in effect, the user may be required to correct the interference at their own expense.

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Two easy ways to contact us:

- Call Dealer Technical Support at 505 856 8007
- Visit us on the Web at www.transcore.com

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