Intermec

User's Manual

CK30 Handheld Computer

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Before You Begin

This section provides you with safety information, technical support information, and sources for additional product information.

Safety Summary

Your safety is extremely important. Read and follow all warnings and cautions in this document before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety warnings and cautions.

Do not repair or adjust alone

Do not repair or adjust energized equipment alone under any circumstances. Someone capable of providing first aid must always be present for your safety.

First aid

Always obtain first aid or medical attention immediately after an injury. Never neglect an injury, no matter how slight it seems.

Resuscitation

Begin resuscitation immediately if someone is injured and stops breathing. Any delay could result in death. To work on or near high voltage, you should be familiar with approved industrial first aid methods.

Energized equipment

Never work on energized equipment unless authorized by a responsible authority. Energized electrical equipment is dangerous. Electrical shock from energized equipment can cause death. If you must perform authorized emergency work on energized equipment, be sure that you comply strictly with approved safety regulations.

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Safety Icons

This section explains how to identify and understand dangers, warnings, cautions, and notes that are in this document. You may also see icons that tell you when to follow ESD procedures and when to take special precautions for handling optical parts.

Warning

A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons working on the equipment.

Avertissement: Un avertissement vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour éviter l'occurrence de mort ou de blessures graves aux personnes manupulant l'équipement.

Caution

A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.

Attention: Une précaution vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour empêcher l'endommagement ou la destruction de l'équipement, ou l'altération ou la perte de données.

Note: Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.

Global Services and Support

Warranty Information

To understand the warranty for your Intermec product, visit the Intermec web site at http://www.intermec.com, click Support, and then click Warranty.

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Disclaimer of warranties: The sample code included in this document is presented for reference only. The code does not necessarily represent complete, tested programs. The code is provided "as is with all faults." All warranties are expressly disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.

Web Support

Visit the Intermec web site at http://www.intermec.com to download many of our current manuals in PDF format. To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

Visit the Intermec technical knowledge base (Knowledge Central) at http://intermec.custhelp.com to review technical information or to request technical support for your Intermec product.

Telephone Support

These services are available from Intermec by calling **1-800-755-5505** and choosing an option.

Service	Description	Option
Factory Repair and On-site Repair	Request a return authorization number for authorized service center repair, or request an on-site repair technician.	1
Technical Support	Get technical support on your Intermec product.	2
Service Contract Status	Inquire about an existing contract, renew a contract, or ask invoicing questions.	3
Schedule Site Surveys or Installations	Schedule a site survey, or request a product or system installation.	4
Ordering Products	Talk to sales administration, place an order, or check the status of your order.	5

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Who Should Read This Document?

The *CK30 Handheld Computer User's Manual* provides you with information about the features of the CK30, and how to install, operate, maintain, and troubleshoot them.

Before you install and configure the CK30, you should be familiar with your network and general networking terms, such as IP address.

Related Documents

The Intermec web site at http://www.intermec.com contains many of our documents that you can download in PDF format.

To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

Patent Information

Product is covered by one or more of the following patents: 4,455,523; 5,627,360; 4,553,081; 5,657,317; 4,709,202; 5,671,436; 4,845,419; 5,684,290; 4,961,043; 5,777,309; 5,195,183; 5,793,604; 5,216,233; 5,805,807; 5,218,187; 5,818,027; 5,218,188; 5,821,523; 5,227,614; 5,828,052; 5,241,488; 5,831,819; 5,278,487; 5,834,753; 5,322,991; 5,841,121; 5,331,136; 5,844,222; 5,331,580; 5,883,492; 5,349,678; 5,883,493; 5,397,885; 5,886,338; 5,371,858; 5,889,386; 5,373,478; 5,898,162; 5,410,141; 5,969,328; 5,488,575; 5,986,435; 5,500,516; 6,075,340; 5,504,367; 6,109,528; 5,508,599; 6,158,661; 5,530,619; 6,234,395; 5,567,925; 6,244,512; 5,568,645; 6,330,975; 5,592,512; 6,431,451; 5,598,007, 6,497,368; 5,617,343; 6,538,413.

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

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1 Using the CK30 Handheld Computer

Use this chapter to familiarize yourself with the CK30 Handheld Computer. In this chapter you will find these sections:

- Introducing the CK30 Handheld Computer
- Using the CK30 Battery
- Using the Keypad
- Using the Screen
- Understanding the LEDs
- Understanding the Beeps
- Scanning Bar Codes
- Using the SD Card

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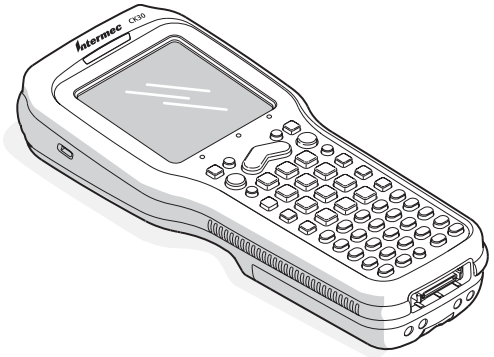
Introducing the CK30 Handheld Computer

The Intermec CK30 is the first in a new line of ergonomically designed handheld computers built on the Microsoft® Windows® CE .NET operating system. It is a lightweight, easy-to-use, reliable computer that enables you to use legacy applications as well as develop applications based on the latest technologies. The CK30 supports programming tools such as VB.NET, C#, JavaScript, and XML.



Use this table to understand the features included with each model of the CK30. For a complete list of accessories, see the Appendix.

Feature	Model A	Model B	Model C
Batch only	✓		
.Net Compact Framework			✓
Color Display			✓
Monochrome Display	✓	✓	
32M/32M Memory	✓	✓	
64M/64M Memory			✓
200 MHz Processor	✓	✓	
400 MHz Processor			✓
IBrowse	✓	✓	✓

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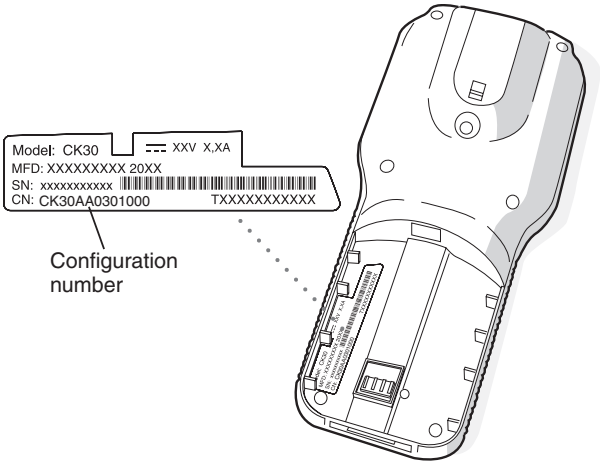
Understanding the CK30 Models and Options

The CK30 computer is available in three different models that consist of different options. To find out which model of the CK30 you have, locate the configuration label on the back of the computer. The first five letters of the configuration number indicate the model of CK30 you ordered. For example, the label in the following illustration is for a CK30 model A (CK30A).



This option is available for model A of the CK30:

- 10/100 base T Ethernet interface

These options are available for models B and C of the CK30:

- TE 2000 including 3270, 5250, and VT/ANSI as well as third-party TE applications
- WiFi certified 802.11b radio
- DcBrowser application
- Java™ platform
- 1D linear imager
- Bluetooth™ compatible module from Socket Communications

These options are for the CK30 Model C only:

- 2D area imager

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CK30 Handheld Computers with an IEEE 802.11b radio installed are Wi-Fi certified for interoperability with other 802.11b wireless LAN devices.

Use this manual to understand how to use the features and options available on the CK30. For additional help using terminal emulation, see the appropriate TE 2000 guide:

- TE 2000 5250 Terminal Emulation Programmer's Guide (P/N 977-055-004)
- TE 2000 3270 Terminal Emulation Programmer's Guide (P/N 977-055-003)
- TE 2000 VT/ANSI Terminal Emulation Programmer's Guide (P/N 977-055-005

For additional help using dcBrowser, see the documentation that ships with your G4000, the dcBrowser gateway software, or the Data Collection Browser Client User's Guide (P/N 070011).

IBrowse is a locked-down web browser for Intermec devices that is compatible with Microsoft's Internet Explorer but does not allow the user to exit out of the browser or key in a URL to access a non-work related website. For additional help using IBrowse, see ??????

Using the CK30 Battery

The CK30 uses an AB1 lithium-ion battery as its main power source. You must fully charge the main battery before you can use the CK30.

Caution

If you fail to replace the battery immediately, you may lose important data or applications.

Attention: Si la batterie n'est pas remplacée immédiatement, des données ou applications importantes risquent d'être perdues.

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Warning

The lithium-ion battery pack that is used in this device may present a fire or chemical burn hazard if it is mistreated. Do not disassemble it, heat it above 100° C (212° F) or incinerate it.

Avertissement: Le paquet de piles d'ions de lithium qui est utilisé dans cet appareil peut presenter un risque feu ou un risque chimique de brûlure s'il est maltraité. Il ne faut pas le désassembler, le réchauffer à une température plus élevée que 100° C (212° F) ou l'incinérer.

Dispose of used battery packs promptly. Keep away from children. Contact your local Intermec sales representative for replacement batteries.

Several factors determine the life of your battery such as extreme temperatures, input devices, and your usage. For example, if you use a tethered scanner every day, you will need to replace your battery more often than someone who uses an internal scanner.

Maximizing Battery Life

To prolong the life of your battery, follow these guidelines.

When You Want To:	Do This to Save Battery Power:
Operate the CK30 and the Low Battery status icon appears or the Battery light comes on.	**1** Press **Power** to turn off the CK30. **2** Remove the battery and insert another fully charged battery within 10 minutes or you may lose data. Or, you can insert the CK30 into a powered AC1, AC2, AD1, or AD2.
Stop using the CK30 for 5 minutes or longer.	Make sure the Low Battery icon is not on the screen and that the Battery light is not turned on. Press **Power** to turn of f the CK30.
Store the CK30 for more than a day.	**1** Save your data and end your computer session. **2** Press **Power** to turn off the CK30. **3** Insert a fully charged battery.

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Checking the Battery Status

The easiest way to tell the status of your battery is to look at the battery icon in the status bar of your CK30.

Icon	Status
	Battery has a full charge.
	Battery has a medium charge. You should be able to work for several more hours before changing batteries.
	Battery is low. You need to replace the battery now.

If you cannot see a status bar on your screen, you can also check the battery status by looking at the Battery Status light on the front of the CK30. See "Understanding the LEDs" later in this chapter for more information.

Charging and Installing the Battery

Make sure you fully charge the AB1battery before you install it in your CK30.

To charge the battery

- Either insert the battery into the AC1 4-slot battery charger or place the CK30 with battery installed in the AC2, AD1, or AD2.

Use the following table to understand how long it will take to charge your batteries in each of the CK30 charging or communications dock accessories.

CK30 Accessory	Charging Time
AC1 4-Slot Battery Charger	5 hours
AC2 4-Bay Charging Dock	5 hours
AD1 1-Bay Communications Dock	3 hours
AD2 4-Bay Communications Dock	5 hours

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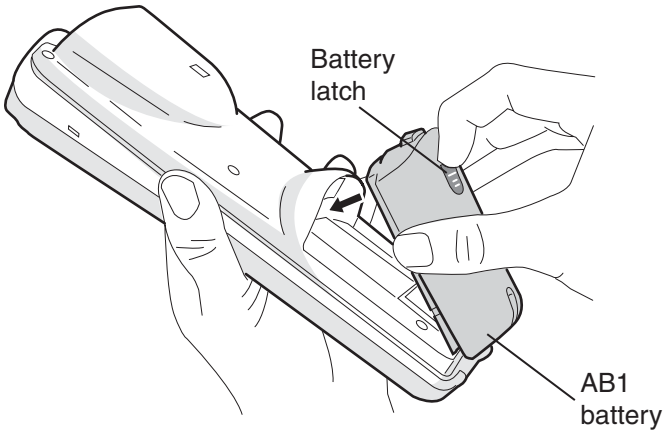
To install the battery

- Insert the tabs on the bottom of the charged battery into the CK30 and snap the battery into place.



Using the Keypad

Your CK30 has one of the following keypad overlay options:

- 42-key large numeric and function
- 50-key full alphanumeric
- 52-key full alphanumeric

Each of these keypads also comes in an International version. The International keypads support French, German, Italian, Portuguese, and Spanish. Although the keypads are smaller than standard PC or terminal keyboards, you can use special keys to access all of the keys and functions you need.

In addition, there are keypad overlays available for each type of TE 2000 supported: 3270, 5250, and VT/ANSI. You receive the appropriate TE overlay when you order your TE 2000 application. Each TE 2000 keypad overlay is almost identical to the standard keypad overlay, but it contains additional keys that are available on an IBM 3270, IBM 5250, or VT/ANSI keyboard. For help using your terminal emulation keypad overlay, see your specific TE 2000 guide.

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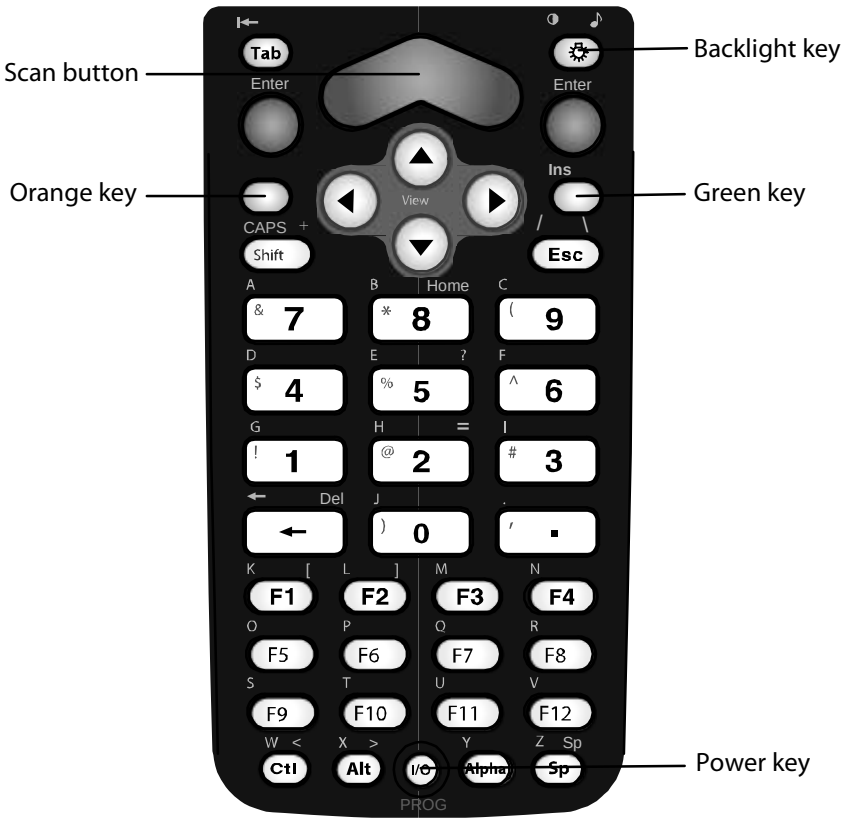
Using the 42-Key Large Numeric and Function Keypad



42-key large numeric and function keypad: *Use this keypad to easily print numbers (0-9) and access function keys F1 through F12. You can also print the entire alphabet and special characters by pressing color-coded key sequences.*

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Using the 50-Key Full Alphanumeric Keypad

50-key full alphanumeric keypad: *Use this keypad to easily print numbers (0-9) and the entire alphabet. You can access Function keys (F1-F9) and special characters, symbols, and functions by pressing color-coded key sequences.*

Note: The 50-key keypad does not have a scan key because it was designed to work with the AH1 handle that has a built-in scanner trigger.

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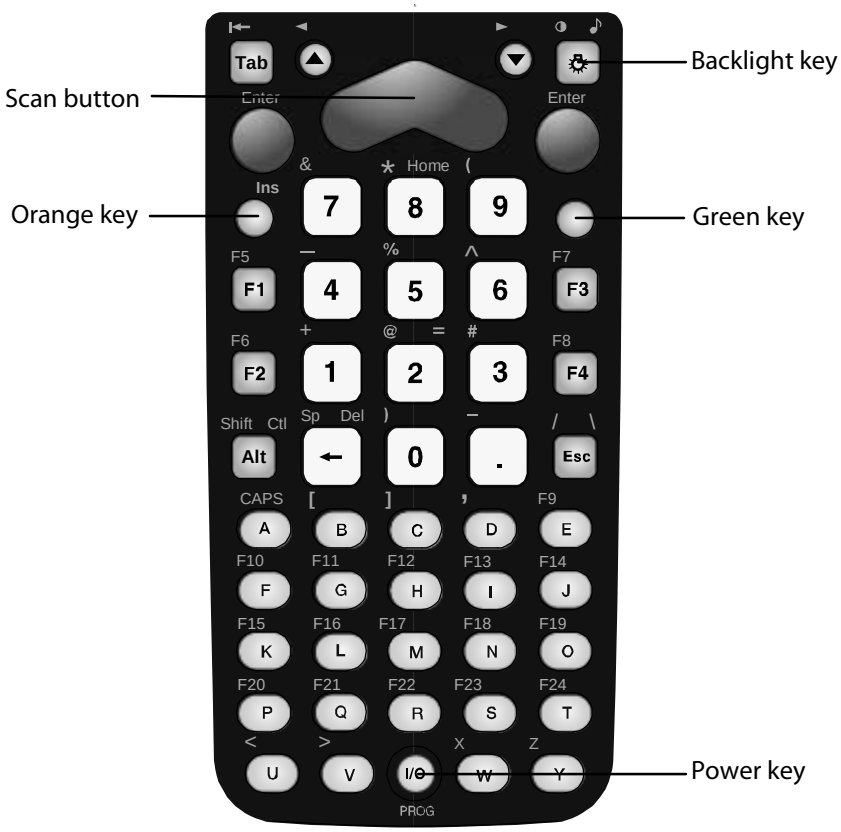
Using the 52-key Full Alphanumeric Keypad



52-key full alphanumeric keypad: *Use this keypad to easily print numbers (0-9) and the entire alphabet. You can access Function keys (F5-F24) and special characters, symbols, and functions by pressing color-coded key sequences.*

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Understanding How to Use the Keypad

Each keypad available for the CK30 provides color-coded keys to let you to access additional characters, symbols, and functions printed on the keypad overlay. Once you understand how to use the color-coded keys and key sequences, you will know how to access all of the additional features printed on the keypad overlay. There are two color-coded modifier keys on the CK30: the **Green** key and the **Orange** key.

Use the CK30 modifier keys in these two ways:

- Press the key once to hold the modifier state until the next key is pressed.
- Press the key twice to lock the modifier key. Press the key again to release it.

This manual uses the following convention when referring to keys that you press in sequence. That is, you press and release the first key and then press and release the second key:

- **Modifier** key, key

Use this table to understand how to use the color-coded keys.

You Want To:	Press:
Use an orange character or function printed above a key	**Orange** key, key with character or function printed above it
Use a green character or function printed above a key	**Green** key, key with character or function printed above it
Use a blue character printed on a key (42-key and 50-key keypads only)	**Shift** key (in blue text on the key), key
Lock the orange or green key so that you can continually access characters or functions printed above a key	**Orange** key twice or **Green** key twice

Note: There are several hidden key functions (such as { and }) on each CK30 keypad. For more information on these hidden key sequences, refer to “Using Hidden Key Sequences” in Appendix A.

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Capitalizing All Characters

To type all alphabetic characters as uppercase letters, you can do one of the following:

- Enable the Caps lock feature. For help, see the next procedure.
- Use the Keypad Caps Lock configuration command. For help, see "Keypad Caps Lock" in Chapter 6 of the *CK30 Handheld Computer Configuration Manual*.

To enable Caps lock

1. Press **Orange** key to activate the modifier key. The Orange modifier key icon appears in the status bar (■□).
2. Press one of these keys:
   - On the 52-key keypad, press **A**.
   - One the 42-key and 50-key keypad, press **Shift**.

   The Caps lock icon (A)appears in the status bar.
3. Type an alphanumeric character. The letter appears as an uppercase character on the CK30's screen.

The Caps lock icon remains in the status bar until you disable it by pressing the same key sequence you used to enable it.

Using the International Keypad

You can order all versions of the CK30 keypad with an international overlay. The international overlay supports English and most Western European languages, such as French, German, Italian, Portuguese, and Spanish.

You enter all of the characters and functions printed above the keys just like you would on a standard keypad. For help, see "Understanding How to Use the Keypad" earlier in this chapter.

Note: There are several hidden key functions (such as { and }) on each international keypad. For more information on these hidden key sequences, refer to “Using Hidden Key Sequences” in Appendix A.

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Using the TE 2000 Keypad

The CK30 supports TE 2000 VT100/220/320/340 and ANSI, TE 2000 5250, and TE 2000 3270. When you order the CK30 with a TE 2000 application, you also receive the corresponding keypad overlay. Use the TE 2000 keypad overlays to enter the same keys that you can enter on a VT/ANSI keyboard, an IBM 5250 keyboard, or an IBM 3270 keyboard.

Like the standard CK30 keypad overlays, the TE 2000 keypad overlays lets you enter all the characters printed on or above the keys. The TE keypads also come with the same color-coded keys that are on the standard overlay.

For more help using TE 2000, see the appropriate TE 2000 guide.

Understanding the Power Key

When you press the **Power** key to turn off the terminal, you actually put the terminal in Suspend mode. In Suspend mode, the terminal continues to supply power to all memory, but turns off power to most hardware. This power-saving feature is designed to prolong battery life.

When you press the **Power** key to turn the CK30 back on, your computer resumes where it was when you turned it off. If you are using 802.1x security, the computer may reauthenticate before it starts your application.

If you have programmed the Resume Execution command, your CK30 may warm boot and restart your application. For help with the Resume Execution command, see Chapter 6 of the *CK30 Handheld Computer Configuration Manual*.

If your CK30 does not resume after pressing **Power**, you may need to warm boot it.

To warm boot the CK30

- Press and hold the **Power** key for five seconds. The CK30 will tell you it is performing a warm boot and the screen will come back up to the splash screen or your application.

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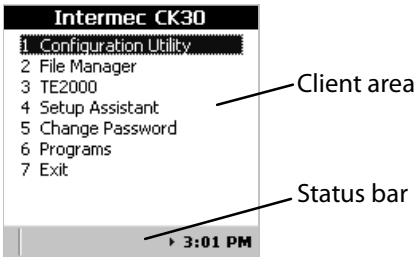
Using the Screen

The CK30 can have either a color or monochrome display depending on the model. Both screens are 160 x 160 pixels: the client area is 160 x 140 pixels and the status bar is 160 x 20 pixels. In addition, the screens support double-byte characters, user-programmable fonts, and bitmap graphics.



Navigating on the Screen

There are several ways to navigate through the CK30 screens. Use this table to understand what keys to press to navigate:

To Do This:	Press:
Select an option	• The number associated with the option • ▲ or ▼ to select an option and then press **Enter** • Press **Tab** to select an option and then press **Enter**
Exit or return to a previous screen	**Esc** until you exit the application or return to a previous screen
Move back a space	• **Backspace** • **Orange** key, ▲
Move forward a space	• **Orange** key, ▼

Understanding the Screen Icons

Use the screen icons in the status bar to easily see the status of the battery, any connections to the network or applications, and any special keys or functions you may be using.

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CK30 Screen Icons

Icon	Description
	Battery has a full charge.
	Battery has a medium charge. You should be able to work for several more hours before changing batteries
	Battery is low. You need to replace the battery now.
	Strong connection to the network.
	Medium-strength connection to the network.
	Weak connection to the network.
	No connection to the network.
	No Ethernet connection.
	Ethernet connection.
	Orange modifier key pressed.
	Green modifier key pressed.
ALT	**Alt** key is enabled.
CTL	**Ctrl** key is enabled.
SHF	**Shift** key is enabled.
	Caps lock key is enabled.
	Alpha lock key is enabled.
	Buffered data.
	You are in the password-protected area of the CK30.
	The CK30 is connected using ActiveSync.
	Mouse pointer turned on.

Rotating the Screen

If you turn the CK30 sideways to scan information, you might find it useful to rotate the screen 90 degrees clockwise for easier readability.

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To rotate the screen 90 degrees clockwise

- Press **Alt**, ▲

Using the Mouse Pointer

If you need to use a mouse to perform an action in the Windows environment, you can use the mouse pointer that came on your CK30.

To turn on the mouse pointer

- Press **Alt** key, ▼ key.

The mouse pointer can simulate single-clicks, double-clicks, right mouse button, middle mouse button, and left mouse button functions. Use this table to understand the keys that produce each function.

To Simulate This Function:	Press This Key on One of the Keypads:		
	42-key	**50-key**	**52-key**
Left mouse button	**F2**	**X**	**B**
Middle mouse button	**F3**	**Y**	**C**
Right mouse button	**F4**	**Z**	**D**
Single-click	**5**	**5**	**5**
Double-click	←	←	←
Mouse down event	**0** (zero)	**0** (zero)	**0** (zero)
Mouse up event	**.** (period)	**Tab**	**.** (period)

For example, to generate a left single-click with the 52-key keypad

- Press **B**, **5**

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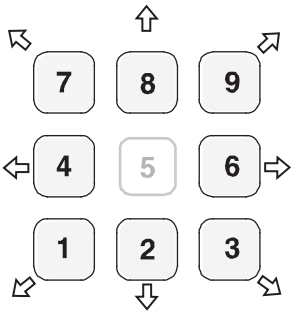
Moving the mouse pointer around the screen is very easy. You just need to press the appropriate number key that is associated with the direction you want the mouse pointer to move.



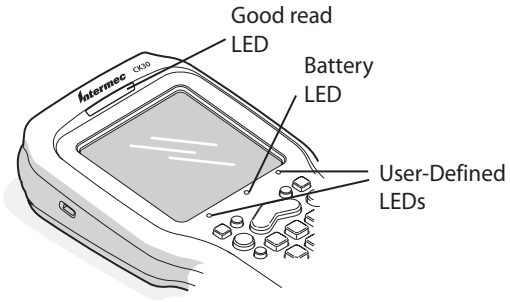
Using the numeric keypad to move the mouse pointer

To continue moving the mouse pointer in one direction

- Press and hold the number key that corresponds to the direction you want to move.

Understanding the LEDs

The LEDs on the CK30 turn on to indicate the status of the battery, a successful decode of a bar code, or a user-defined function.



Understanding the LEDs on the CK30

BETA

Use this table to understand what the CK30 LEDs mean.

LED Name	Icon	Description
User-defined	■ *	Use the CK30 Programmer's Software Kit (PSK) to program these LEDs to turn on and off for any task or error within your application. For help, see the *CK30 Programmer's Software Kit (PSK) Reference Manual.*
Battery status	▬	**LED Status** / **What it means** Off — The battery is fully charged On — The battery is low. Replace the battery.
Good Read		This LED comes on when the CK30 successfully decodes a bar code.

Understanding the CK30 Beeps

The CK30 uses beeps to provide you with audio feedback when it performs some functions. For example, you hear a beep each time you scan a valid bar code.

Use the following table to understand what the beep sequences mean.

Beep Sequence	What it means
High beep	You entered valid data or a valid command, the computer decoded a label, or the computer decoded the last row of a two-dimensional bar code.
Three low beeps	You entered or scanned an invalid command or data.
Low beep (every 15 seconds)	The battery is low. Replace or recharge the battery as soon as possible.
Low beep, high beep	Your 802.1x CK30 has been authenticated
High beep, low beep	Your 802.1x CK30 is not authenticated. For help, see "Problems While Configuring 802.1x Security" in Chapter 4.
Click	You pressed a key. You can use the Configuration Utility to change the volume of the keyclick.

BETA

You can change the beep volume and duration to accommodate your needs and environment. When you change the beep volume, you also change the keyclick volume if you have the Keypad Clicker command enabled. The keyclick is the sound you hear when you press a key.

You can set the beep volume to off, low, medium, and high (default). Use one of these three ways to change the beep volume:

Method	Procedure
Use the keypad.	Press the **Green** key, **Backlight** key to increase the volume. There are four beep volumes on the CK30 including off. When you reach the loudest setting, the next setting is off. The volume will then start with the lowest setting and go up.
Use the Intermec Configuration menu.	From the Intermec CK30 menu, choose **Configuration Utility** > **CK30 Settings** > **Beeper and LED**.
Use the Beep Volume command.	For help, see "Beep Volume" in the *CK30 Handheld Computer Configuration Manual*.

Scanning Bar Codes

Warning

Do not look directly into the window area or at a reflection of the laser beam while the laser is scanning. Long-term exposure to the laser bean can damage your vision.

Avertissement: Ne regardez pas directement la réflexion d'un rayon laser ou dans la fenêtre du laser lorsque celui-ci est en opération. Si vous regardez trop longtemps un rayon laser, cela peut endommager votre vue.

Use the scanner to scan and enter bar code data. The type of scanner you are using and the type of bar code you are decoding determines the way you scan the bar code. The CK30 supports the scanning of 1D linear bar codes and 2D images depending on your model of CK30. Plus, if you have are using an integrated handle or a tethered scanner, the way you scan bar codes will be different.

BETA

When you unpack the CK30, these bar code symbologies are enabled:

- Code 39
- Code 128
- UPC/EAN
- PDF 417 (with Model C only?)

If you are using bar code labels that are encoded in a different symbology, you need to enable the symbology on the computer. Use the Configuration Utility to enable and disable symbologies for your scanner. For help understanding how to use the Configuration Utility, see "Configuring the CK30 With the Configuration Utility" in Chapter 2.

The next sections describe how to scan a bar code label with the integrated laser scanner, 1D linear imager and the 2D imager.

Scanning With the Integrated Laser Scanner and 1D Linear Imager

If the CK30 has a laser scanner or 1D linear imager, use the following procedure to understand how to scan a bar code. The linear imager can decode PDF417 bar codes as well as bar codes with high-density, wide-density, and poor quality in any lighting conditions.

To scan a bar code label with the laser scanner

1. Press **Power** to turn on the CK30.
2. Point the scanner window at the bar code label and hold the computer at a slight angle a few inches from the label.

Note: If you have an advanced long-range scanner, you may need to hold the computer further away from the label.

3. Press the **Scan** button on the keypad and direct the red beam so that it falls across all bars in the bar code label.

Insert illustration

BETA

When the CK30 successfully reads a bar code label, you will hear a high beep and the green Good Read LED turns on briefly.

4 Release the **Scan** button.

Scanning Bar Codes With the 2D Area Imager

The CK30C may have a 2D area imager instead of the conventional laser scanner. Omni-directional (360°) scanning means that you can position the CK30 in any direction to scan a bar code label.

To scan a bar code label with the 2D area imager

1 Press **Power** to turn on the CK30.

2 Point the scanner window at the bar code label and hold the computer a few inches from the label.

3 Press the **Scan** button on the keypad and center the red aiming beam over the bar code label.

Note: The aiming beam is smaller when the imager is closer to the bar code and larger when it is further away.

Insert illustration

BETA

When the CK30 successfully reads a bar code label, you will hear a high beep and the green Good Read LED turns on briefly.

4 Release the **Scan** button.

Attaching a Tethered Scanner

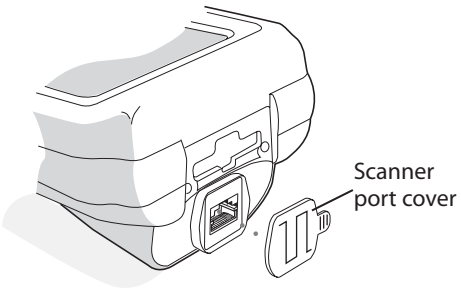
You can use a tethered scanner with the CK30 if you ordered it with a 10-pin tethered scanner port in place of the integrated scanner. The following devices are currently supported by the CK30:

- Decoded scanners: 1470B, 1551E, 1553, 1555, 1800-series laser scanners
- Undecoded scanners: 1550C, 128X wands

An auto-detection wizard automatically detects the presence of a scanner connected to the 10-pin scanner port. If the scanner is not auto-detected, an optional wizard allows you to identify scanner types that cannot be auto-detected by the CK30.

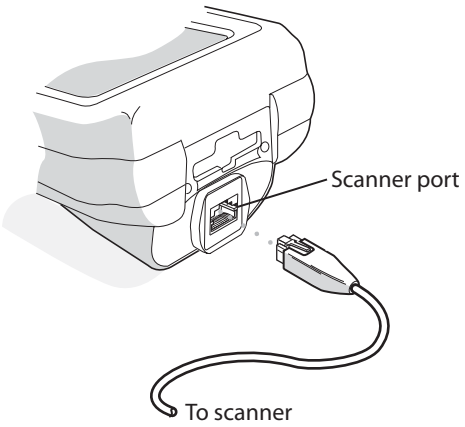
To attach a tethered scanner

1 Locate and remove the scanner port cover.



BETA

2 Insert the scanner 10-pin connector until it locks in place.



Using the SD Card

You can use an SD card to increase file storage and install software. The CK30 supports the following type of SD card:

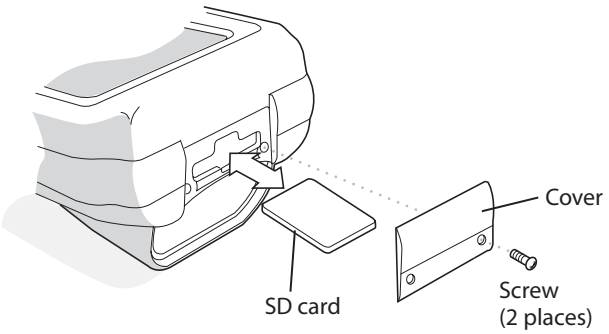
- SanDisk SD cards supporting 1-bit mode only

The SD card slot is located on the top of the CK30 just above the laser scanner window. The SD card will appear in the File Manager as "SDMMC Disk."

To insert an SD card

1 Press Power to turn on the CK30.

2 Remove the two screws on the SD card slot cover and remove the cover.



BETA

3. Gently insert the SD card into the CK30 with the printed side facing the front of the CK30.
4. Push the card into the slot until it fits firmly.
5. Replace the cover and two screws.

BETA

2 Configuring the CK30

Use this chapter to understand how to configure the CK30 to communicate in your network. In this chapter, you will find these sections:

- How to Configure the CK30
- How the CK30 Fits Into Your Network
- Configuring Security on the CK30

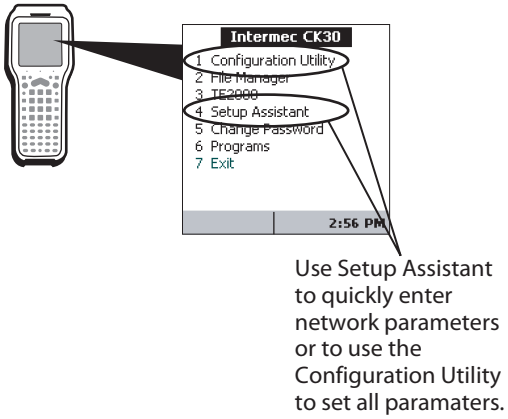
BETA

How to Configure the CK30

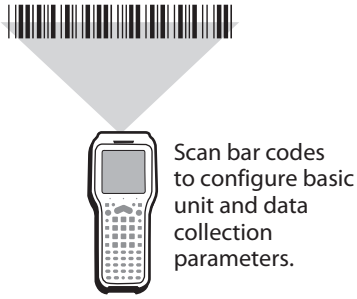
You can configure many operation characteristics of the CK30, such as the bar code symbologies it decodes or the network settings. These characteristics are controlled by configuration parameters. The values you set for these configuration parameters determine how the computer operates.

There are several ways to configure the CK30:

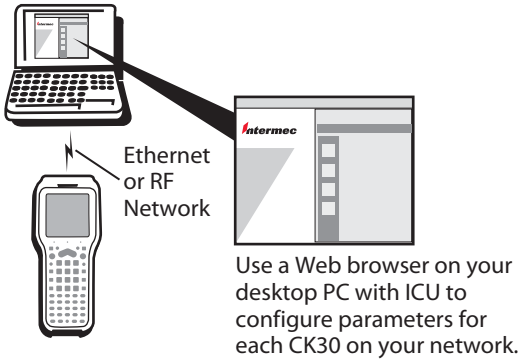
Use Applications on the CK30



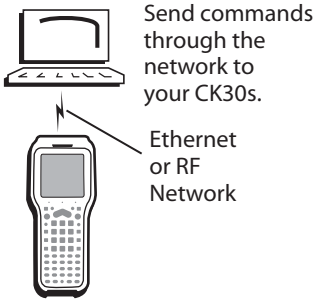
Scan Bar Codes



Use Intermec Configuration Utility (ICU)



Use Configuration Commands



BETA

Configuring the CK30 With the Setup Assistant

When first setting up the CK30, use the Setup Assistant to set or enable basic network parameters and connect your CK30 to the network. The Setup Assistant is a wizard that guides you through setting the following basic network parameters:

- Date and time
- SSID (Network name)
- 802.1x security
- DHCP server or IP address, subnet mask, and default router
- Primary and secondary DNS addresses
- Primary and secondary WINS addresses
- Device name

To set other parameters, use the Configuration Utility or another configuration method. The Setup Assistant runs on the CK30 the first time you turn on the computer.

The first screen of the Setup Assistant Wizard

However, if you exit Setup Assistant before you are finished configuring the CK30, you can restart it from the **System Main Menu**. See the next section for information on how to access the **System Main Menu**.

After you complete the Setup Assistant, the CK30 should be communicating with your network. If you are using RF communications on your CK30, a network connection icon appears in the status bar.

BETA

Configuring the CK30 With the Configuration Utility

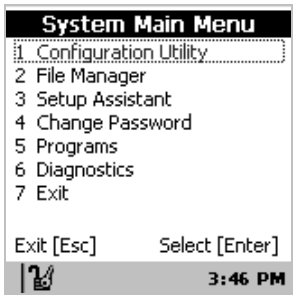
Use the menu-driven Configuration Utility to configure the CK30 and view system information. You can access the Configuration Utility while running any application.

Opening the Configuration Utility

When using the Configuration Utility, you may not see a parameter until you enable or disable a value for another key field. For example, you will not see IP Settings unless you disable DHCP. You may also not see a parameter if your computer does not support a particular feature.

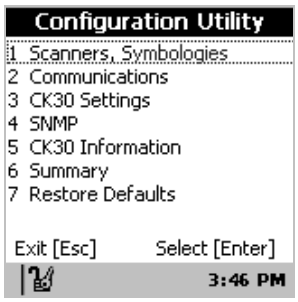
To open the Configuration Utility

1. From the CK30 splash screen, press **Green** key, **Orange** key.
2. In the password dialog box, type `intermec` and press **Enter**. The **System Main Menu** appears.



An icon ( ) appears in the status bar showing that you are in the password-protected area of the CK30.

3. Select the **Configuration Utility**. The Configuration Utility main menu appears.

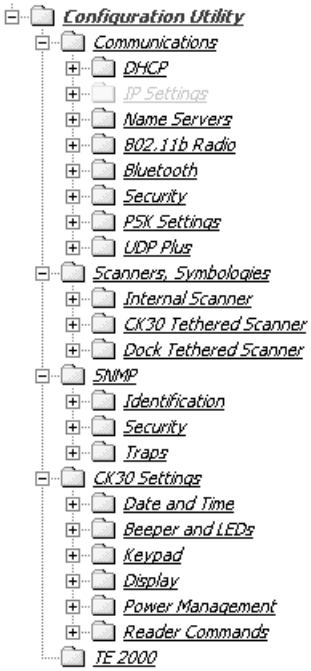


BETA

Use this table to understand your menu options in the Configuration Utility.

Configuration Utility Menu Options

Menu Option	Description
Scanners, Symbologies	Configure scanner settings and bar code symbologies.
Communications	Set up network settings including the 802.11b radio and the Bluetooth printer.
CK30 Settings	Configure settings specific to the CK30 such as the date, time, beeper volume, and backlight timeout.
SNMP	??
About the CK30	View the part number, firmware version, radio, and RF protocol loaded on your CK30.
Summary	View a summary of all settings for the Scanners, Symbologies menu, the Communications menu, the CK30 Settings menu, and the SNMP menu.
Restore Defaults	Restore factory default settings on your CK30.



Configuration Utility Menus at a Glance (placeholder graphic)

BETA

Use this table to understand how to navigate and enter information in the **Configuration Utility**.

To Do This:	Press:
Select an option	• The number associated with the option • ▲ or ▼ to select an option and then press **Enter** • **Tab** to select an option and then press **Enter**
Save a setting	**Enter** key
Exit or return to a previous screen	**Esc** until you exit the application or return to a previous screen
Move back a space	• **Backspace** • **Orange** key, ▲
Move forward a space	• **Orange** key, ▼
Delete a character	**Green** key, **Backspace (←)** key
Delete all characters in a field when highlighted	**Backspace (←)** key

Restoring Default Settings

You can restore the CK30 to factory default settings from the Configuration Utility.

Note: Using the Restore Defaults option resets all network parameters. As a result, you may lose network communications. This option should only be used by network administrators or by Intermec support personnel.

To restore factory default settings

1 From the **Configuration Utility** menu, select **Restore Defaults**. The following Alert box appears:

BETA

2 Press **Enter** to restore factory defaults.

A progress bar appears on the screen to show you the status of restoring the factory defaults.

Exiting the Configuration Utility

When you exit the Configuration Utility, you leave the password-protected area of the CK30. The password-protected icon ( ) disappears from the status bar.

To exit the System Main Menu

1 From the **System Main Menu**, press **Esc** or select **Exit**.

2 When asked if you want to exit the **System Main Menu**, press **Enter**.

Configuring the CK30 With Commands Through the Network

You can change the configuration parameters of the CK30 by sending commands through a host computer or through the network. If you are using a network, you can configure one or more CK30 at a time. For help, see Chapter 2 of the *CK30 Handheld Computer Configuration Manual*.

Configuring the CK30 With the Intermec Configuration Utility (ICU)

I don't have any information to put here yet….

Configuring the CK30 by Scanning Bar Codes

You can change the configuration parameters of the CK30 by scanning Code 39 or Code 93 bar codes labels containing configuration commands. This method is a fast and easy way to change just a few configuration parameters on a single CK30. You can scan the bar code labels in the *CK30 Handheld Computer Configuration Manual* or you can create your own bar code labels. Chapter 2 in the Configuration Manual describes how to create your own bar code labels.

BETA

You can only change some of the configuration parameters by scanning bar codes. To configure all of configuration parameters, use the Configuration Utility, send commands through the network to your Ck30, or use the Intermec Configuration Utility.

For example, you can use the Beep Volume configuration command to adjust the beep volume of the CK30. Scan this bar code label to set the volume to the lowest level:

Set Beep Volume to Low

$+BV1

When you scan bar code configuration commands, the CK30 emits a series of beeps unless the volume is turned off. There are two beep sequences:

- One high beep means you scanned a valid configuration command.
- Three low beeps means you scanned an invalid configuration command.

How the CK30 Fits Into Your Network

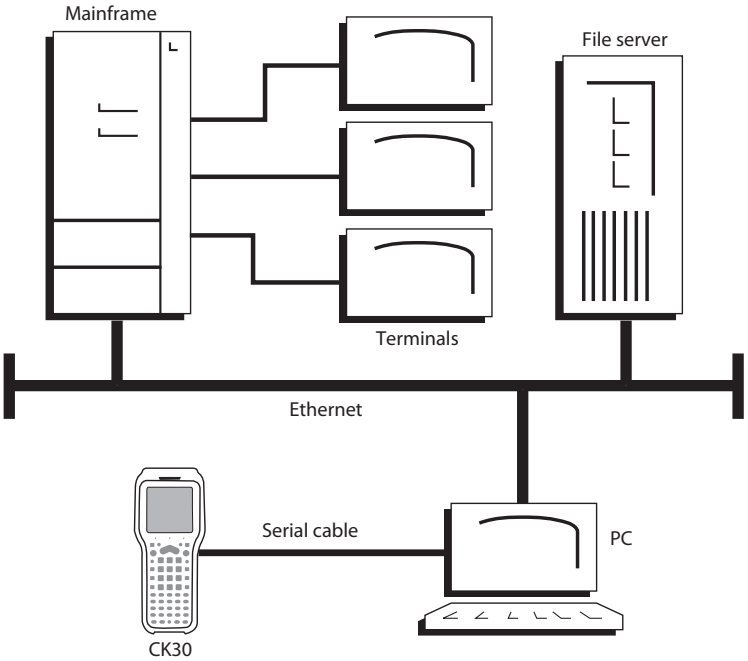
The CK30 is a versatile handheld computer that you can easily add to your wired or wireless data collection network. You can connect your CK30 to your network using:

- Serial Communications
- RF Communications
- Ethernet Communications
- Bluetooth Wireless Printing

BETA

Using Serial Communications on the CK30

The CK30 has a serial port to transfer data to and receive data from another device via RS-232 communications. You can also insert the CK30 into a communications dock to transmit data to and receive data from a host computer or PC using serial communications.



To use serial communications with your CK30

1. Turn off the CK30.
2. Connect the CK30 to the serial port of another device. You can do this in one of the following ways:
   - Connect the CK30 serial port to the serial port of the other device using the AA1A (26-pin to DB9-pin) serial adapter cable.

BETA

- Connect the AD1 or AD2 Communications Dock to the serial port of the other device using a DB9-pin to DB9-pin serial adapter cable.

3 Turn on the CK30.

Using RF Communications on the CK30

Caution

Make sure all components with antennas are at least 30 cm (1 ft) apart when power is applied. Failure to comply could result in equipment damage.

Attention: Assurez-vous que la distance entre tous les éléments avec antennes soit d'au moins 30 centimètres (un pied) avant de faire la connexion avec l'alimentation électrique, faute de quoi vous risquez d'endommager votre installation.

The CK30 has an internal antenna to transfer data using RF communications. This section of the manual assumes that you have already set up your RF communications network including your access points. If you are using a UDP Plus network, you also need to have your DCS 30X or G4000 communicating with a host computer.

If you are using 802.1x security, this section also assumes that your authentication server and access points are properly configured and that they have been set to the current date and time.

Your CK30 supports one of the following types of network protocol:

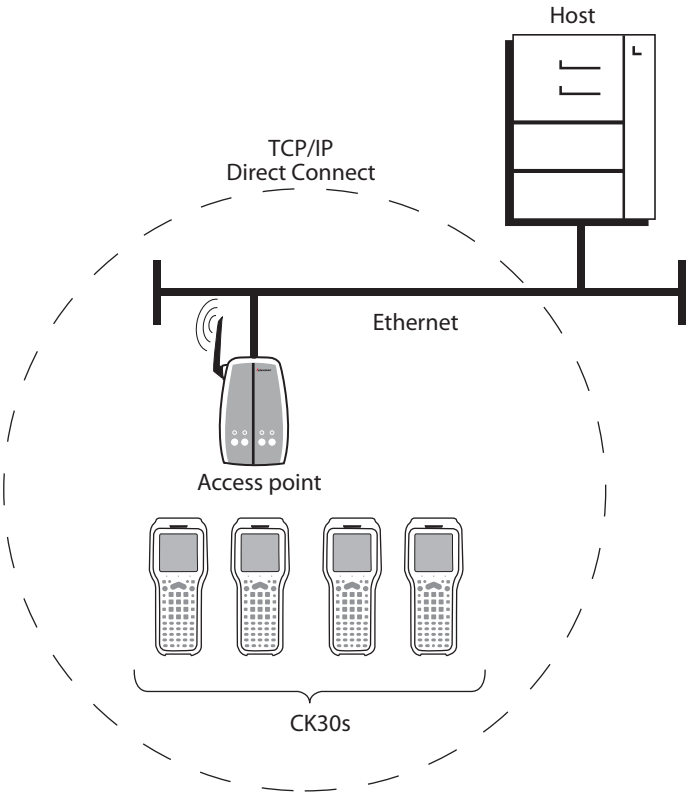
- TCP/IP
- UDP Plus

The next sections explain the parameters you need to configure for the CK30 to work in your RF network.

BETA

Configuring the Network Parameters for a TCP/IP Network

In a TCP/IP network, the CK30 communicates with a host computer directly using TCP/IP for the RF protocol. The access point acts as a bridge to allow communications between the wired network and the RF network.



To use RF communications in a TCP/IP network

1 Configure these network parameters on each CK30 in the network:

- Network Name (SSID)
- Host IP Address

BETA

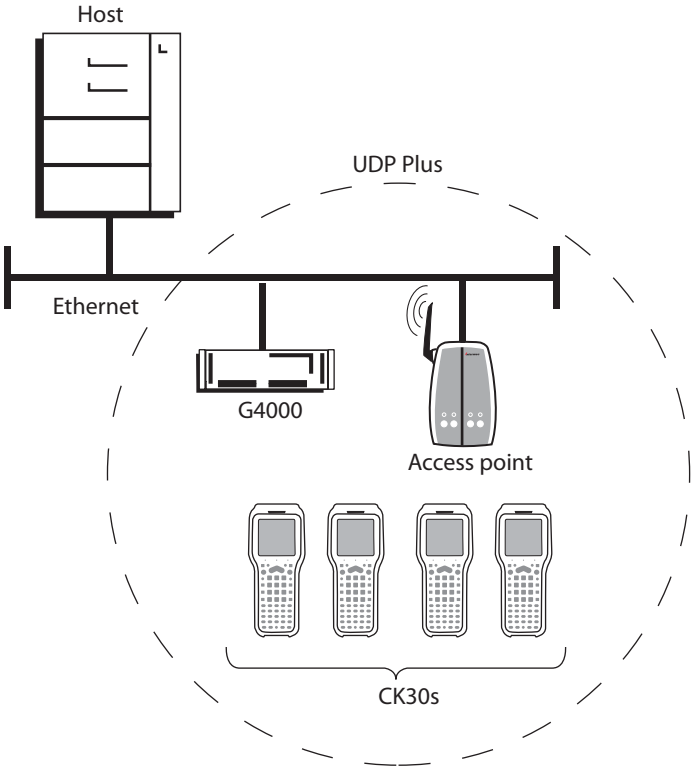
- IP Settings (if not using DHCP)
- Network Port

2 Configure the security.

The easiest way to configure the network parameters on the CK30 is to use the Configuration Utility. For help, see "Configuring the CK30 With the Configuration Utility" on page 28.

Configuring the Network Parameters for a UDP Plus Network

In a UDP Plus network, the CK30 communicates with a host computer through the DCS 30X or the G4000.



BETA

The DCS 30X or G4000 translate UDP Plus packets on the RF network into TCP/IP packets on the wired network and vice versa. The access point acts as a bridge to allow communications between the wired network and the RF network.

To use RF communications in a UDP Plus network

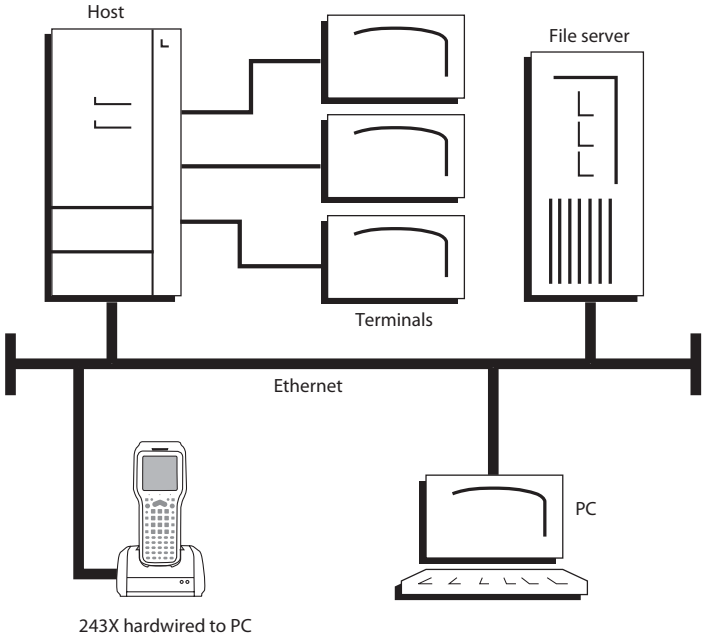
1. Configure these network parameters on each CK30 in the network:
   - Network Name (SSID)
   - Controller IP Address
   - IP Settings (if not using DHCP
   - Network Port
   - Default Router (DCS 30X or G4000 on different subnetwork)
   - Subnet Mask (DCS 30X or G4000 on different subnetwork)
2. Configure the security.

The easiest way to configure the network parameters on the CK30 is to use the Configuration Utility. For help, see "Configuring the CK30 With the Configuration Utility" on page 28.

BETA

Using Ethernet Communications on the CK30

You can use the CK30 directly in an Ethernet network if you have ordered Ethernet on your CK30 and you insert it into an AD1 or AD2 communications dock. The communications dock has an Ethernet connector that makes it possible for the CK30 to connect to your Ethernet network.



To use the CK30 in an Ethernet network

1 Either enable DHCP or configure these network parameters on each CK30 in the network:

- IP Address
- Subnet Mask
- Default Router

2 If required for your network, set these parameters on each CK30 in the network:

- Primary and Secondary DNS Servers
- Primary and Secondary WINS Servers

BETA

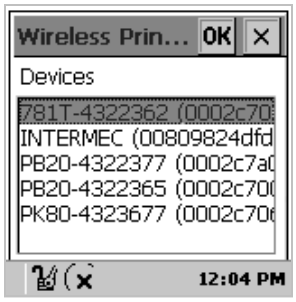
Configuring the CK30 for Bluetooth® Wireless Printing

You can send information to printers wirelessly using the Bluetooth qualified module by Socket Communications. The Bluetooth technology uses short-range radio links and allows for communications over a ten-meter range.

To configure the CK30 for wireless printing

1 Go to **Configuration Utility** > **Communications** > **Bluetooth**.

2 Select **Set Wireless Printer** to start the Bluetooth device discovery. A list of discovered devices appears in the Devices dialog box.



3 Select the device you want to use from the list and press **Enter**.

If devices are discovered, but your device is not displayed, make sure your device and radio are turned on and try device discovery again.

Use this table to understand the parameters you see in the Bluetooth menu.

Parameter	Description
Remote Device Name	Name of the remote Bluetooth compatible printer.
Remote Device Address	The network address of the Bluetooth compatible printer.
Set Wireless Printer	Discovers Bluetooth compatible devices.
Device Name	The name assigned to your CK30.
Device Address	The network address of your CK30.

BETA

Bluetooth Parameter Descriptions (continued)

Parameter	Description
Discoverable	Makes your CK30 discoverable on the network.
Connectable	Makes your CK30 connectable on the network.
Class of Device	Determines how the device appears to other devices during discovery.

For more information about using Bluetooth communications, see the *Wireless Printing Development Guide* available on the *Intermec Developer's Library CD*.

Configuring Security on the CK30

The CK30 uses the Wired Equivalent Privacy (WEP) protocol to provide your wireless networks the same level of protection as a comparable wired network. WEP adds security to wireless local area networks (WLANs) based on the 802.11b standard. You can enable or disable WEP security.

To use 802.11 security, you need:

- An Intermec MobileLAN access point with an 802.11b radio and software release 1.80 or later.
- A CK30 handheld computer with an 802.11b radio and the wireless security option.

To enable WEP security on the CK30

1. Make sure you have configured the communications and radio parameters on your CK30.
2. Open the Configuration Utility. For help, see "Configuring the CK30 With the Configuration Utility" earlier in this chapter.
3. Enable WEP Encryption.
4. Set the value of each of the four WEP keys.

BETA

You can enter either an ASCII key or a hex key that is either 5 bytes or 13 bytes long depending on the capability of the radio. Set a 5-byte value for WEP 64-bit or a 13-byte value for WEP 128-bit. Hex keys must be preceded by 0x and contain 10 or 26 hex numbers.

For example, to enter a key with the value of ABCDE for a radio that supports WEP 64-bit:

- Enter ABCDE for an ASCII key
- Enter 0x4142434445 for a hex key

5 Select the WEP key you want to use for data transmission.

6 Exit the **Configuration Utility**.

BETA

BETA

3 Managing the CK30

Use this chapter to understand how to manage information on the CK30. In this chapter, you will find these sections:

- Accessing the System Main Menu
- Using File Manager
- Using Task Manager
- Using ActiveSync on the CK30
- Installing Applications Using AutoCab
- Changing the Password
- Saving Your Configuration or Application to Flash
- Upgrading the Firmware

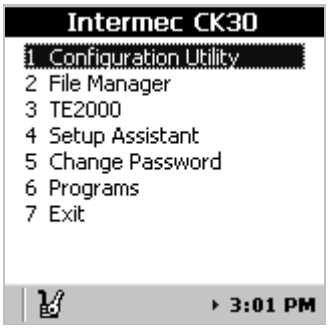
BETA

Accessing the System Main Menu

You need to access the System Main Menu to be able to use most of the tools for managing the CK30. Access to the System Main Menu is password protected to ensure that only authorized individuals can use it.

To access the System Main Menu

1. From the CK30 splash screen, press **Green** key, **Orange** key.
2. In the password dialog box, type `intermec` and press **Enter**. The System Main Menu appears.



Note: When you access the System Main, an icon ( ) appears in the status bar indicating that you are in the password-protected area of the CK30.

To exit the System Main Menu

- From the **System Main Menu**, press **Esc** or select **Exit** from the list.

When you exit the System Main Menu, the icon disappears from the status bar.

BETA

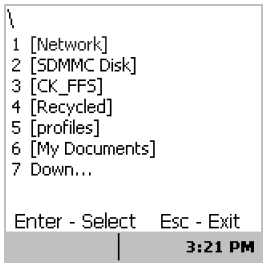
Using File Manager

File Manager provides the ability to run an executable file, delete a file, or view the properties of a file.

To open File Manager

- From the **System Main Menu**, select **File Manager**.

  The File Manager screen appears.



To run an application

1. Navigate to the folder containing the application file.
2. Select the file by pressing its associated number or by scrolling to it and pressing **Enter**. The following dialog box appears:

3. Select **Run** and press **Enter**. Your application opens.

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To delete a file

1. Navigate to the folder containing the file you want to delete.
2. Select the file by pressing its associated number or by scrolling to it and pressing **Enter**.
3. From the dialog box, select **Delete** and press **Enter**.
4. When the screen asks for confirmation that you want to delete the file, Press **Enter**.

The file is deleted and you remain in the selected folder.

To view the properties of a file

1. Navigate to the folder containing the file you want to view.
2. Select the file by pressing its associated number or by scrolling to it and pressing **Enter**.
3. From the dialog box, select **Properties** and press **Enter**. A screen appears showing you the details of the file. For example, you should see something similar to this screen:

4. Press any key to return to the File Manager.

BETA

Using Task Manager

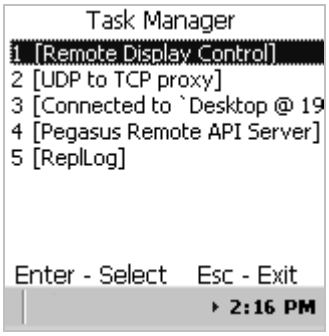
Task Manager provides information about applications running on the CK30. You do not need to use the System Main Menu to access Task Manager - you can access Task Manager at any time. Use Task Manager to perform several tasks, such as:

- View all applications currently running on the CK30
- Close an application
- Switch between applications

To view applications currently running on the CK30

- Press **Alt**, **Tab**

  The **Task Manager** dialog box appears with the active application selected.



To close an application

1. Select the application you want to close. The following list box appears:

2. Scroll to **End Task** and press **Enter**.

BETA

The application closes and you return to the **System Main Menu**.

To switch between applications

1. Select the application you wan to close.
2. Select **Switch To** and press **Enter**.

The application you selected now appears on the screen.

Using ActiveSync on the CK30

You can use ActiveSync to establish a connection between your desktop PC and the CK30. ActiveSync allows you to transfer files, synchronize files, perform remote debugging, and other device management activities. ActiveSync is a free application available from the Microsoft® website.

To establish a partnership between your desktop PC and the CK30, you will need:

- A USB cable
- An AD1 or AD2 communications dock
- ActiveSync version 3.7 or later

Installing ActiveSync and Establishing a Partnership

You must use a USB cable to establish your initial partnership between the CK30 and your desktop PC. If you are running Windows NT on your desktop PC, you cannot connect to your CK30 with ActiveSync.

To install ActiveSync and establish a partnership

1. Download ActiveSync from the Microsoft website and follow the onscreen instructions for installing it on your desktop PC. When the installation process is complete, the **Get Connected** dialog box appears:

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The ActiveSync Get Connected dialog box

2 Connect the AD1 to your desktop PC with the USB cable

3 Click **Next** in the **Get Connected** dialog box. ActiveSync detects a device on the USB port and prompts you to set up a new partnership.

4 In the **Set Up a Partnership** dialog box, click **Next**.

5 In the **Select Number of Partnerships** dialog box, select **Yes, I want to synchronize with only this computer** and then click **Next**.

6 In the **Select Synchronization Settings** dialog box, check the items you want to synchronize and click **Next**.

7 In the **Setup Complete** dialog box, click **Finish**.

BETA

When the partnership has been established, the following screen appears on your desktop showing the device name of your CK30 and the Connected status.

The Microsoft ActiveSync screen

An icon also appears in the CK30 status bar indicating that it has established an ActiveSync partnership with your desktop PC.

Note: If ActiveSync does not establish a partnership on the first try, the **Get Connected** dialog box appears on your desktop with the message "Your device was not detected." Click **Next** on the **Get Connected** dialog box until your device is detected.

Now that the partnership has been established, all future connections will be handled through ActiveSync. To connect to your PC using ActiveSync in the future, all you need to do is place a CK30 in the AD1 or AD2 communications dock or turn on the CK30 by pressing **Power**.

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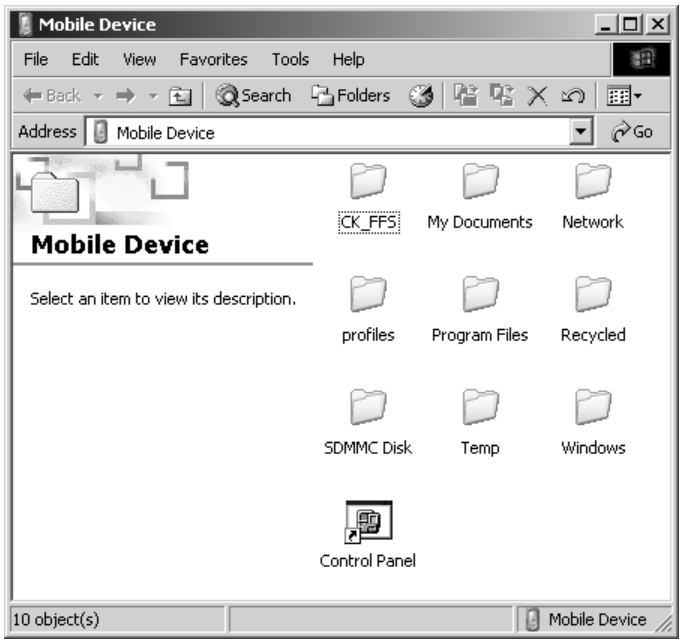
Using ActiveSync to Copy Files and Install Applications

You can use ActiveSync to copy files to the CK30 and to install applications. Basically, to install an application, you need to copy the .cab file to a directory on the CK30 and then run it. Use the following procedures to learn how to copy files and install applications on the CK30 using ActiveSync.

To copy a file to the CK30

1. Connect the CK30 to your desktop PC using ActiveSync. For help, see the previous section "Installing ActiveSync and Establishing a Partnership."
2. In ActiveSync, click **Explore**. Windows Explorer will open the Mobile Device window of your CK30:



3. In Windows Explorer, browse to the file that you want to copy on your device or desktop computer.

BETA

4 Right-click the file and click **Copy**.

5 Place the cursor in the desired folder for your device, right-click, and click **Paste**.

The file has now been copied to the CK30 and you will be able to see it using File Manager.

To install an application on the CK30

1 Open File Manager on the CK30.

2 Navigate to the .cab file you want to install.

3 Select the file by pressing its associated number or by scrolling to it and pressing **Enter**.

4 Select **Run** from the dialog box and press **Enter**.

The .cab file executes and your application begins the installation process on the CK30.

Installing Applications Using AutoCab

Still waiting to see how this is going to work on the CK30…

Changing the Password

You may want to change the password from the default (`intermec`) to help restrict access to the **System Main Menu**. The **Change Password** dialog box is very easy to access and to use.

To change the password

1 From the CK30 splash screen, press **Green** key, **Orange** key.

2 In the password screen, type `intermec` and press **Enter**. The **System Main Menu** appears.

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3 From the System Main Menu, select **Change Password**. The **Change Password** dialog box appears:

4 Type `intermec` in the **Old Password** field.

5 Press **Tab** to move to the **New Password** field.

6 Type your new password and then press **Tab** to move to the **Retype New** field.

7 Type your new password in again.

8 Press Enter.

The screen displays a message reading "Password successfully changed."

Saving Your Configuration or Application to Flash

There is now an option to save the configuration or applications to Flash. There will be a menu option at the System Main Menu level for applications and a menu option at the Configuration Utility level. Saving the changes to Flash ensures that the changes will be persistent – that is, that the changes will be there after the CK30 is cold-booted.

Upgrading the Firmware

How is this done?

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4 Troubleshooting and Maintaining the CK30

Use this chapter to solve problems you may encounter while using the CK30. You will also find information on booting the computer and routine maintenance.

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Problems and Solutions

If you have any problems using the CK30, look in this chapter to find a possible solution. This chapter consists of the following sections:

Sections	Page
Problems While Operating the CK30	4-57
Problems While Configuring the CK30	4-57
Problems While Configuring 802.1x Security	4-58
Problems With RF Connectivity	4-61
Problems Transmitting Data Through the Serial Port	4-63
Problems Transmitting Data Through the DCS 30X or G4000	4-63
Problems While Scanning Bar Codes	4-64
Booting and Resetting the CK30	4-66
Cleaning the Scanner Window and Computer Screen	4-67

You can also use the error numbers and messages table and the terminal diagnostics to help analyze and solve problems. For help, see Chapter 4, “Running Diagnostics,” in the *CK30 Handheld computer configuration Manual* (P/N 073528).

If you have problems with the TE 2000 terminal emulation applications, see the appropriate TE 2000 guide.

If you send the CK30 in for service, it is your responsibility to save the terminal data and configuration. Intermec is responsible only for ensuring that the keypad and other hardware features match the original configuration when repairing or replacing your computer.

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Problems While Operating the Terminal

Problem	Solution
You press **Power** to turn on the CK30 and nothing happens.	Make sure you have a charged battery installed correctly. For help, see "Charging and Installing the Battery" in Chapter 1. The battery may be discharged. Replace the battery pack with a spare charged battery, or charge the battery and try again.
The Battery light is on and the terminal beeps once every 15 seconds.	The battery charge is low. You have a few minutes of power left. Immediately replace the battery with a spare charged battery pack, or charge the battery.
The terminal appears to be locked up and you cannot enter data.	• Press **Power** to turn on the CK30. The CK30 boots all the systems, clears RAM memory, and starts the application. • Remove the battery pack. Let the terminal sit for 1 minute. Install the battery pack. Press **Power** to turn on the CK30. • (CK30 with an 802.11b radio only) Wait at least 10 seconds and try again. If the CK30 is still connecting to the G4000 or the host, it ignores any input from the keypad or scanner. • Try reloading the firmware. For help, see "Upgrading the Firmware" in Chapter 3. • If the CK30 will not boot or reset, contact your local Intermec service representative for help.

Problems While Configuring the Terminal

Problem	Solution
You scan a configuration command, such as Keypad Caps Lock, and nothing happens.	There are two possible solutions: • You may have one or more reader commands disabled, such as Change Configuration, so that you cannot change the configuration. Enable all of the reader commands and try again.

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Problems While Configuring the Terminal (continued)

Problem	Solution
	• The terminal may be waiting for another command to complete the configuration change. If you started by scanning the Enter Accumulate command, you must finish the command by scanning the Exit Accumulate command. For help, see Chapter 6, "Configuration Command Reference," in the *CK30 Handheld Computer Configuration Manual*. Scan the Enable Override to temporarily enable all of the reader commands. When you are finished, remember to disable the override so that your data is not interpreted as a command. Enable Override *$+DC3*
You scan or enter an option for the Scanner Selection configuration command and you hear three low beeps.	You may have scanned or entered a Scanner Selection command that does not apply to the type of scanner that you have installed. Try scanning or entering the Scanner Selection command again and select an option for the type of module you have installed.
You scan a configuration command, such as Keypad Caps Lock, and you hear three low beeps.	If you are working in the CK30 System Main Menu, you cannot scan configuration commands. Use the Configuration Utility to change the CK30 configuration, or exit the system menu to scan configuration commands.

Problems While Configuring 802.1x Security

If you have trouble configuring the terminal for 802.1x security, check these problems and possible solutions. For more error numbers and messages, see "802.1x Security Error Numbers and Messages" in Chapter 4 of the *CK30 Handheld Computer Configuration Manual*.

This section references error numbers that are displayed on the Error Logger screen in the Diagnostics menu. To view the Error Logger screen, from the **System Main Menu**, choose **Diagnostics** > **Software Diagnostics** > **Error Logger**.

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Problems While Configuring 802.1x Security

Problem	Possible Solution
The CK30 indicates that it is authenticated by emitting a low beep and a high beep, but it does not communicate with the host.	Make sure that the CK30 IP address, host IP address, subnet mask, and default router are properly configured for your network. **Note:** Do not cold boot the terminal. Cold booting the terminal resets the time and date.
The "AUTHENTICATING" message does not appear on the screen, and a network connection icon is not in the status bar.	The terminal may not be communicating with your MobileLAN access point. Make sure the network name on the CK30 is the same as the network name (SSID) of the access point that you are trying to communicate with. The default network name is "INTERMEC." The 802.1x security network may not be active. Make sure that the Odyssey™ server software is properly loaded and configured on the server PC. For help, see the documentation that shipped with your server software.
The "AUTHENTICATING" message does not appear on the screen. A network connection icon appears in the status bar, but it disappears.	The CK30 may not be communicating with the MobileLAN access point that you want it to communicate with. Make sure that the network name on the CK30 is the same as the network name of the access point that you are trying to communicate with. The default network name is "INTERMEC." The MobileLAN access point that you are trying to communicate with may not be communicating with the Odyssey server. Make sure your MobileLAN access point is turned on, properly configured, and has 802.1x security enabled.
The terminal indicates that it is not authenticated by emitting a high beep and a low beep. This error code appears on the Error Logger screen: 0x377	Make sure that: • The User Name and Password parameters on your CK30 match the user name and password on your Odyssey server. You may need to re-enter the password on both your CK30 and Odyssey server. • On your Odyssey server, the user and group are allowed and the group policy is allowed to log in to the Odyssey server. For help, see the documentation that shipped with your Odyssey server software.

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Problems While Configuring 802.1x Security (continued)

Problem	Solution
	• The IP address and secret key for your MobileLAN access point must match the IP address and secret key on your Odyssey server. You may need to re-enter the IP address and secret key on both your MobileLAN access point and Odyssey server. • Your Odyssey server is active and that it can communicate with your MobileLAN access point. You can use the PING command to determine communications. • The Odyssey server software is running on the server PC. • The UDP port (standard RADIUS port, 1812) on your Odyssey server is active. For help, see the documentation that shipped with your Odyssey server software.
The "AUTHENTICATING" message appears on the screen, but the CK30 does not emit a low beep and a high beep to indicate that it is authenticated.	The CK30 takes up to 60 seconds to authenticate; however, this process may take longer if there is interference in RF communications. You may need to wait for the authentication process to finish. You may be out of range of the MobileLAN access point you are trying to communicate with. Try moving closer to the MobileLAN access point.
The "AUTHENTICATING" message appears on the screen, but the CK30 does not emit a low beep and a high beep to indicate that it is authenticated. This error code appears on the Error Logger screen: `0x37B`	The authentication process timed out. You may be out of range of the MobileLAN access point that you are trying to communicate with. Try moving closer to the MobileLAN access point.
The CK30 indicates that it is not authenticated by emitting a high beep and a low beep. One of these error codes appears on the Error Logger screen: `0x50A` or `0x509`	The time and date on your CK30 does not fall within the range of valid dates indicated on the server certificate. Modify the time and date so that it falls within the range of valid dates. For help, see "Time and Date" in Chapter 6 of the *CK30 Handheld Computer Configuration Manual*.

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Problems While Configuring 802.1x Security (continued)

Problem	Possible Solution
The terminal indicates that it is not authenticated by emitting a high beep and a low beep. This error code appears on the Error Logger screen: `0x513`	The root Certificate Authority certificate on your terminal cannot validate the server certificate. • Make sure your Odyssey server is using a server certificate that matches the root certificate loaded on your terminal. • Verify the root certificate in the CACERT.PEM file on your terminal's C drive. WHERE WILL THIS BE ON THE CK30? For help, see the documentation that shipped with your Odyssey server software.
The terminal indicates that it is not authenticated by emitting a high beep and a low beep. This error code appears on the Error Logger screen: `0x542`	Neither of the server certificate common names configured on your terminal match the server certificate common name in the active server certificate on your Odyssey server. • Delete both server certificate common names on your terminal to see if you can authenticate without checking the server certificate common name. • Change one or both server certificate common names on your terminal so that they match the server certificate common names in the active server certificate on your Odyssey server. For help, see "Server Certificate Common Name" in Chapter 6 of the *CK30 Handheld Computer Configuration Manual*.

Problems With RF Connectivity

Problem	Solution
You are having problems with your 802.11b RF network coverage.	Make sure that the Multiple Density Distribution (MDD) command on your access point is not enabled. When MDD is enabled, the access point distributes values for these RF coverage parameters to your terminal: AP Density and Medium Reservation. Changes made by your access point are not reflected in the terminal menu system.

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Problems With RF Connectivity (continued)

Problem	Possible Solution
When you turn on the terminal after it was suspended for a while (10-15 minutes or longer), the terminal can no longer send or receive messages over the network.	The host may have deactivated or lost your current terminal emulation session. In a TCP/IP direct connect network, you need to turn off the "Keep Alive" message (if possible) from the host so that the TCP session is maintained while a terminal is suspended.
The no network connection icon appears in the status bar. The CK30 is not communicating with the access point.	The CK30 is not connected to the access point. Make sure the access point is turned on and operating. You may also be using the terminal out of range of an access point. Try moving closer to an access point to re-establish communications. If you are using a MobileLAN™ access point with firmware release 1.34 or earlier, it may not be able to communicate with the terminal. For help upgrading your access point firmware, see the *MobileLAN access System Manual* (P/N 067150). Make sure the CK30 is configured correctly for your network. The radio parameters on the terminal must match the values set for all access points the terminal may communicate with. For help, see "Using RF Communications on the CK30" in Chapter 2. If you have an 802.11b radio, the radio initialization process may have failed. Try resetting the CK30. See "Booting the CK30" later in this chapter. If you have tried these possible solutions and the no network connection icon still appears, you may have a defective radio card. For help, contact your local Intermec service representative.
The CK30 is connected to the G4000 or host computer and you move to a new site to collect data. The network connection icon was visible but now the no network connection icon is visible.	You may have gone out of range of an access point. Try moving closer to an access point or to a different location to re-establish communications. Once you are in range again, the network connection icon will appear again. Any data you collected while out of range will be transmitted over the network.

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Problems With RF Connectivity (continued)

Problem	Possible Solution
The network connection icon is in the status bar, but you cannot establish a terminal emulation session with the host computer.	There may be a problem with the host computer, a problem with the connection between the G4000 and the host computer, or a problem with the connection between the access point and the host computer. Check with your network administrator to make sure the host is running and allowing users to login to the system.
The network connection icon is in the status bar, but the host computer is not receiving any data from the CK30.	In a UDP Plus or WTP network, there may be a problem with the connection between the G4000 and the host computer. Check with your network administrator or see the user's manual for the G4000. In a TCP/IP network, there may be a problem with the connection between the access point and the host computer. Check with your network administrator or use your access point user's manual.

Problems Transmitting Data Through the Serial Port

If you are having problems sending or receiving data through the integrated I/O port on the terminal, check these possible problems:

- Make sure the terminal is connected to the PC, host computer, or RS-232 serial device using the appropriate cable.
- If the terminal is in a communications dock, make sure that the communications dock is connected to the serial device using the appropriate cable.

Problems Transmitting Data Through the DCS 30X or G4000

Problem	Solution
Transaction Buffer Full.	The buffer holding transactions to be sent to the DCS 30X or G4000 is full. Stop collecting data with this terminal. Make sure the terminal is communicating with the DCS 30X or G4000 and let the terminal send all the transactions in the buffer before you continue collecting data.

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Problems Transmitting Data Through the DCS 30X or G4000 (continued)

Problem	Solution
Sending Buffer Transactions.	This is an information message to tell you that buffered transactions are now being sent to the DCS 30X or G4000. You can begin collecting data again once the message clears.
Transaction Aborted.	The transaction just sent to the DCS 30X or G4000 was not received. Try sending the transaction again.
Transmit Error XX, press Enter.	There is an error transmitting data to the DCS 30X or G4000. XX represents the status code error. Note the error code listed in the message and contact your local Intermec service representative for help. Press **Enter** to continue.
Receive Error XX, press Enter.	There is an error receiving data from the DCS 30X or G4000. XX represents the status code error. Note the error code listed in the message and contact your local Intermec service representative for help. Press **Enter** to continue.
Shutting down.	The DCS 30X or G4000 is shutting down. You may continue collecting data and buffer the transactions in the terminal until the DCS 30X or G4000 starts again, or stop collecting data with the terminal.
Controller Shutdown.	The DCS 30X or G4000 has shut down. You may continue collecting data and buffer the transactions in the terminal until the DCS 30X or G4000 starts again, or stop collecting data with the terminal.

Problems While Scanning Bar Codes

Problem	Solution
You cannot see a red beam of light from the scanner when you press the Scan button and aim the scanner at a bar code label.	There are two possible problems: • You may be too far away from the bar code label. Try moving closer to the bar code label and scan it again. • You may be scanning the bar code label "straight on." Change the scanning angle and try again. You can test the effective range of the scanner. Move within 2 feet of a wall and test the scanner. You need to be within the scanning range to scan bar code labels. For help on scanning distances, see "Specifications" in Appendix A.

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Problems While Scanning Bar Codes (continued)

Problem	Solution
When you release the Scan button, the Good Read LED does not turn off.	The Good Read LED will remain on if you configure the terminal to use edge triggering. If you configure the terminal for level triggering and the Good Read LED remains on, there may be a problem. Press the Scan button again without scanning a bar code label. If the LED is still on, contact your local Intermec service representative.
You have an input device attached to the terminal and it cannot read any bar codes.	You may not be using an input device that is supported with the terminal. Make sure you are using one of the supported input devices.
The input device attached to the terminal does not appear to work well or read bar code labels very quickly.	Try setting the Scanner Selection command to the specific input device you have attached. Check the bar code symbologies you have enabled on the terminal. Enable only the symbologies that you are using.
The scanner will not read the bar code label.	Make sure you aim the scanner beam so it crosses the entire bar code label in one pass. The angle you are scanning the bar code label may not be working well, or you may be scanning the label "straight on." Try scanning the bar code label again, but vary the scanning angle.
	The bar code label print quality may be poor or unreadable. To check the quality of the bar code label, try scanning a bar code label that you know scans. Compare the two bar code labels to see if the bar code quality is too low. You may need to replace the label that you cannot scan. Make sure the bar code symbology you are scanning is enabled. Use the Configuration Utility to check the symbologies. On the Symbologies Menu, each symbology that is enabled has a check mark (➽) next to the name of the symbology. If your bar code symbology is disabled, enable it and then try scanning the bar code label again. Make sure that the application you are running on the terminal is expecting input from a bar code. You may need to type this information instead of scanning it.
The scanner does not read the bar code labels quickly, or the scanning beam seems to be faint or obscured.	The scanner window may be dirty. Clean the window with a solution of ammonia and water. Wipe dry. Do not allow abrasive material to touch the window.

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Problems While Scanning Bar Codes (continued)

Problem	Solution
You scan a reader command, such as Backlight On, and nothing happens.	The reader commands are disabled. Scan the Enable Override command shown here to temporarily enable all of the reader commands. When you are finished, remember to disable the override so that your data is not interpreted as a command. Enable Override *$+DC3*
You scan a valid bar code label to enter data for your application. The data decoded by the scan module does not match the data encoded in the bar code label.	The terminal may have decoded the bar code label in a symbology other than the label's actual symbology. Try scanning the bar code label again. Make sure you scan the entire label. To operate the terminal quickly and efficiently, you should enable only the bar code symbologies that you are going to scan.

Booting the CK30

You seldom need to warm or cold boot the CK30. The CK30 uses the configuration currently saved in flash memory during the boot process. Once the CK30 finishes booting, your application appears on the screen.

You need to cold boot the CK30 when an application is locked up and will not respond, when you upgrade the firmware, or when you reflash the computer. The next instructions explain how you warm and cold boot the CK30.

Warm Booting the CK30

If your CK30 does not resume after pressing **Power**, you may need to warm boot it.

To warm boot the CK30

- Press and hold the **Power key** for five seconds. The CK30 will tell you it is performing a warm boot and the screen will come back up to the splash screen or your application.

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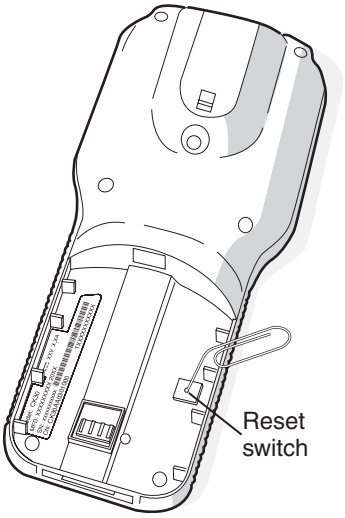
Cold Booting the CK30

If the CK30 or application is locked up, follow this procedure to perform a cold boot:

To cold boot the CK30

1. Remove the battery.
2. Using a small pointed device (such as the end of a paper clip), press the reset switch on the back side of the CK30.



3. Replace the battery.

The battery LED on the CK30 will blink three times and the CK30 will start performing the power on sequence.

Cleaning the Scanner Window and CK30 Screen

To keep the terminal in good working order, you may need to perform these minor maintenance tasks:

- Clean the scanner window.
- Clean the CK30screen.

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Clean the scanner window and CK30 screen as often as needed for the environment in which you are using the terminal. To clean the CK30, use a solution of ammonia and water.

Caution

There are no user-serviceable parts inside the terminal. Opening the unit will void the warranty and may cause damage to the internal components.

Attention: La terminal ne contient pas de pièces révisibles par l'utilisateur. Le fait d'ouvrir l'unité annule la garantie et peut endommager les pièces internes.

To clean the scanner window and terminal screen

1. Press **Power** to turn off the CK30.
2. Dip a clean towel or rag in the ammonia solution and wring out the excess solution. Wipe off the scanner window and CK30 screen. Do not allow any abrasive material to touch these surfaces.
3. Wipe dry.

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A Appendix

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Physical and Environmental Specifications

Use the tables in this section to locate technical information about the CK30 and its available features and options.

Physical Dimensions

Length:	20.3 cm (8.0 in)
Width:	8.9 cm (3.5 in)
Depth:	5.5 cm (2.15 in), 6.2 cm (2.45 in) with large bottom enclosure
Weight:	476 g (16.8 oz)

Power Specifications

Operating:	Rechargeable 2200 mAh lithium-ion battery
Backup:	Super Cap supplying 10 minutes bridge time while the main battery is replaced

Electrical Specifications

Models:	CK30A, CK30B, CK30C
Electrical rating:	12VDC at XXX mA

Temperature and Humidity Specifications

Operating temperature:	0°C to 50°C (32°F to 122°F)
Operating humidity:	10 to 90% non-condensing
Storage temperature:	-20°C to 60°C (-4°F to 140°F)
Storage humidity:	0 to 95% relative humidity, non-condensing

Screen Specifications

- 160 x 160 pixels
- 3.12 inch diagonal square active area
- Contrast: eight settings
- CK30A, CK30B: electroluminescent backlight with on/off control
- CK30C: LED backlight with high and low settings

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Keypad Options

- 42-key large numeric and function keypad, available with programmable, international, 3270 TE, 5250 TE, and VT/ANSI TE overlays
- 50-key full alphanumeric keypad, available with programmable, international, 3270 TE, 5250 TE, and VT/ANSI TE overlays
- 52-key full alphanumeric keypad, available with programmable, international, 3270 TE, 5250 TE, and VT/ANSI TE overlays

Accessories for the CK30

You can use these accessories (sold and ordered separately) with the CK30:

AB1 Battery

Use the lithium-ion battery to provide main power to the computer.

AC1 4-Slot Battery Charger

Use the AC1 to charge up to four AB1 batteries at a time. The battery charger is designed to sense when a battery is fully charged and not overcharge it, ensuring long and consistent battery life.

AC2 4-Bay Battery Charging Dock

Use the AC2 to charge up to four AB1 batteries without having to remove them from the CK30. You can insert up to four CK30s with batteries installed making it easy to remember to charge your batteries overnight.

AD1 Communications Dock

Use the AD1 to charge your AB1 battery and provide power to your CK30 while still having the ability to communicate via a serial, Ethernet, or USB port.

AD2 4-Bay Communications Dock

Use the AD2 to accommodate up to four CK30s with a battery installed. The AD2 dock charges the batteries, provides power to

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the computer, and provides a USB and serial port for each inserted CK30.

AG1 Protective Case
The protective case provides a clear vinyl covering to protect the display and keypad area.

AG2 Protective Boot
The protective boot provides additional ruggedness for the CK30.

AH1 Handle
The handle works with all models of the CK30 and provides a convenient scanning trigger.

AL1 Holster and Belt
The holster and belt provide an easy way for you to carry the CK30 while not using it. The holster and belt support either right or left-handed use and you can use it with a CK30 with or without a handle.

AL2 Handstrap
The removable and adjustable handstrap make it easy for you to hold and use the CK30 without fatiguing your hand.

AL3 Swiveling Belt Clip
Use the swiveling belt clip to expediently store your CK30 while not in use. Once you have attached the belt clip, it is easy to insert and remove the CK30 as necessary.

AV1 Vehicle Cradle
The vehicle cradle provides protection from vibrations that exceed the level the CK30 can withstand alone.

AA1A Serial Adapter
The serial adapter is a 26-pin dual-row connector to DB-9 connector that connects directly to the bottom of the CK30.

AE1 Power Supply
Provides power to all of the communication docks and chargers.

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Using Hidden Key Sequences

Both the standard and international keypads have hidden key sequences to access special characters not printed on the keypad overlay. Use the following tables to understand how to access these hidden functions on the different versions of the keypads.

Hidden Key Sequences on the Standard Keypads

To Type:	Press This Key Sequence on One of the Keypads: 42-Key	50-Key	52-Key
$			**Green** key, **6**
`	**Green** key, **F9**		**Green** key, **G**
!			**Green** key, **I**
"	**Green** key, **F6**		**Green** key, **K**
'	**Green** key, **F7**		**Green** key, **L**
{	**Green** key, **F11**		**Green** key, **N**
}	**Green** key, **F12**		**Green** key, **O**
:	**Green** key, **F3**		**Green** key, **P**
;	**Green** key, **F4**		**Green** key, **Q**
|	**Green** key, **F8**		**Green** key, **R**
?			**Green** key, **S**
~	**Green** key, **F10**		**Green** key, **T**

Hidden Key Sequences on the International Keypads

To Type:	Press This Key Sequence on One of the Keypads: 42-Key	50-Key	52-Key
$			**Green** key, **6**
{	**Green** key, ▲	**Green** key, **S**	**Green** key, **9**
}	**Green** key, ▼	**Green** key, **T**	**Green** key, **0**
<	**Green** key, ◀		
>	**Green** key, ▶		
]	**Green** key, **9**		
[	**Green** key, **Tab**		

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