WDT 3200
Product Reference Guide

Wasp Barcode Technologies

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Chapter 1. WDT3200 Introduction

Overview

The WDT3200 is a rugged, compact and ergonomic handheld terminal powered by the WinCE.NET OS to enable you to work more efficiently. The WDT 3200 incorporates an integral barcode scanning laser device, color LCD with touch screen, keypad, BT and wireless communication interface capability. It provides you with a standard Windows-based environment that is easy to operate and customize

This WDT3200 Product Reference Guide provides simple step-by-step instructions on how to operate the device, giving you hands-on experience with your WDT3200.

Support

Wasp Barcode Technologies has a professional support team to quickly answer your questions or address any technical related issues.   Should an equipment problem occur, please contact Wasp Barcode Technologies using the information listed below.

Web Address:
www.waspbarcode.com/support

Phone Number:
214-547-4100

Notice

1. This unit is equipped with a battery pack and backup battery. It is possible that the WDT3200 may not power-on due to battery discharge as a result of storage. The first time you use your device and in the event of a depleted battery, attach the WDT3200 to the charging cable and charge the unit for no less than 12 hours. This length of time ensures the backup battery is fully charged as well.

2. Under normal conditions, the back-up battery will be charged from external power or the main battery (if the main battery still has enough power to turn on). If it is charged for the first time, the back-up battery will charge at the same time the main battery is charging.   **Please refer to the Before You Begin Section in the manual.**

<u>Warranty</u>

Wasp Barcode Technologies' Limited Warranty provides for different warranty periods for different parts and accessories:

- Terminal is covered by one-year limited warranty
- Docking Station is covered by one-year limited warranty
- Cable is covered by one-year limited warranty
- Battery is covered by three-month limited warranty

<u>Regulatory</u>

Compliance with RoHS
Certificate includes: CB, CE, CCC, FCC, BSMI, TELEC, VCCI

WDT3200 Model Specification

Model	WDT3200 BT	WDT3200BT+RF
Rugged/Environment		
Drop test	1.5M	1.5M
IP	54	54
Operating Temp.	0℃ to 50℃	0℃ to 50℃
Storage Temp.	-20℃ to 60℃	-20℃ to 60℃
Humidity	5%~95% non-condensing	5%~95% non-condensing
ESD	± 8 Contact~ ± 12 Air	± 8 Contact~ ± 12 Air
Keypads		
Full Alphanumeric	36 keys	36 keys
Physical		
Weight (g)	360g w/ Battery	360g w/ Battery
Dimension (LxWxH mm)	199.5x72.1x39.6mm	199.5x72.1x39.6mm
Power supply & Management		
Main Battery Type	3.7V / 1950mAH Li-ion	3.7V / 1950mAH Li-ion
Battery Recharging Time	4 hours	4 hours
Battery Life	BT--> 12 hours RF--> 8 hours	BT--> 12 hours RF--> 8 hours
Backup Battery Type	120AH Li-polymer	120AH Li-polymer
Display		
color (Touch Panel 2.7")	Included	Included
Display pixels	240x320 pixel	240x320 pixel
Docking Station	RS232/USB or Modem	RS232/USB or Modem
Barcode Scanner Reader	Laser / CCD	Laser / CCD
System Architecture		
CPU Processor	Intel PXA255	Intel PXA255
Operating System	WinCE Core	WinCE Core
Flash ROM	64MB	64MB
Flash RAM	64MB	64MB
Speaker	Included	Included
Communication Interface	RS232 or USB	RS232 or USB
Expansion Memory Slot		
SD Slot	Included	Included
Radio Options		
802.11b/g	Not Included	Included
Bluetooth	Included	Included

<u>WDT3200 Accessories</u>

Communication and Charging Cradle

RS232/USB Cradle is used for data transmission and charging.

Communication and Charging Cable Kits

Included USB cable and serial cable connects the WDT3200 terminal directly to a peripheral device for communication and a power source for charging.

Universal Adaptor

AC Power Supply

The AC Power Supply connects the WDT3200 to an electrical power outlet in order to power the terminal and / or charge the battery pack.   The power supply utilizes either 110 or 220 Volt (100 to 240 VAC, 50 or 60 MHz) electrical outlets available in most countries.

Holster

The holster holds the terminal for mobile use.

Hand Strap & Stylus

The hand strap is convenient for carrying your WDT3200 and also includes a stylus attachment.

Li-ion Battery Pack

The 3.7v, 1950mAh Li-ion rechargeable battery pack provides the main power supply for the WDT3200 terminal.

WDT3200 Product Introduction & Accessory Kit

Terminal

Communication Cable

Battery

Adaptor　　　　**Plugs**

Hand Strap

Stylus

Communication Cradle

WDT3200 Front View

LED

Touch Screen Display

Trigger

Indicator

Alpha

Function

Power

RS232 Interface

WDT3200 Back View

SD Memory Slot

Bar Code Scanner

Speaker

Hand Strap & Stylus

Battery Door
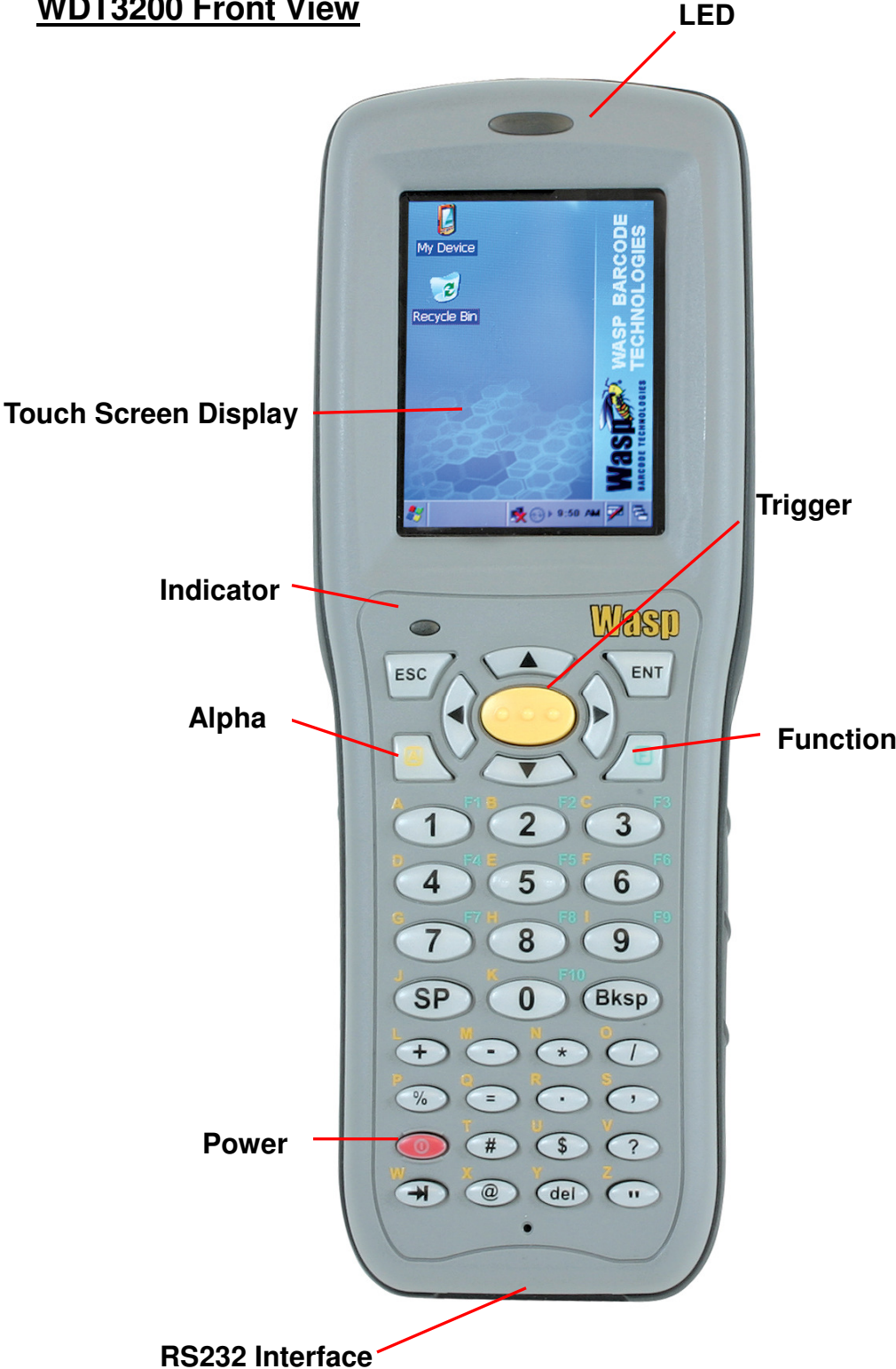
Before You Begin Using Your WDT3200

Before using the WDT3200, please ensure the battery is fully charged.
There are three ways to charge your WDT3200:

- Docking Station
- RS232/Charging cable or USB/Charging cable
- Rechargeable Lithium-Ion battery pack

CAUTION: There is a high risk of data loss if the WDT3200's backup battery is not fully charged.   This data loss can occur if the main battery has been drained and the unit is not connected to the AC adaptor.   For this reason, it is crucial that before you charge the main battery, you make sure the backup battery switch is set to ON.   For further information on turning on the backup battery switch, please see the next page.

Wasp Barcode Technologies recommends that you charge the battery at least 12 hours before using for the first time.   After the initial charge, a fully drained battery can be recharged in about 4 hours.   While charging the main battery the backup battery will also be charged if the backup battery switch is set to "ON".

Installing the Battery Pack

1. Remove the battery door.

2. Move the backup battery switch to the ON position.

On

Off
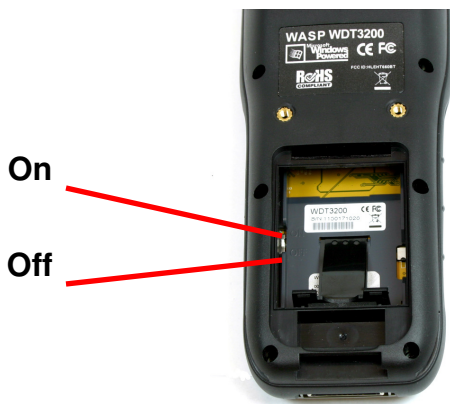
3. Insert the battery pack so that the contacts on the battery pack line up with the contacts in the battery compartment.   Fully seat the battery.

Supplying Power to the WDT3200

Connect the RS232/Charging Cable or USB/Charging Cable to the WDT3200 and connect the AC adapter to the cable's power jack and an electrical outlet.

Alternately you can place the WDT3200 into the Docking Station (first connect the power supply to the Docking Station).

Using the WDT3200 for the First Time

Pressing the Power ON/OFF Key

When you press the ON key, the WDT3200 Welcome Screen appears. The Wasp Barcode Technologies screen will appear shortly thereafter.

Align the Screen

When prompted, use the stylus to tap the targets as they appear in order to align the touch screen.

When you complete the procedure, press any key or press anywhere on the touch screen to start up the WinCE system.   Examples of the align prompts are shown below:
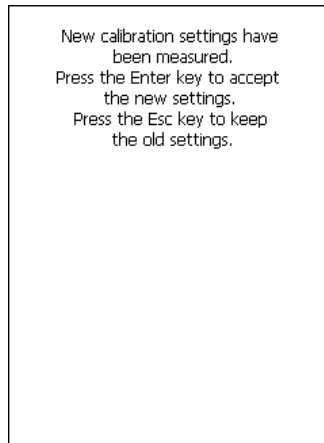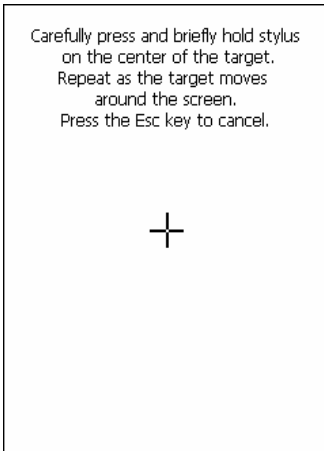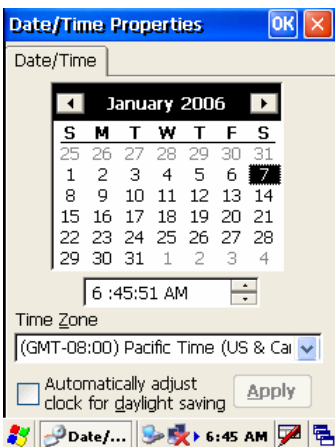

Adjusting Screen Brightness

To adjust the original default setting of the screen brightness, the backlight setting will be required.   Please refer to page 21 for the new setting procedure.

Setting Time Zone/ Date

Before using the WDT3200 please take a few minutes to set the time and date so that data can be properly time-stamped.

Setting the Time Zone

1. Tap the location arrow to see a list of cities.

2. Choose your location (or nearest listed one).

3. Select the Daylight Savings Time check box, if necessary.
4. Tap the APPLY button.

5. Select "Automatically adjust clock for daylight saving" for a Daylight Savings Time zone.
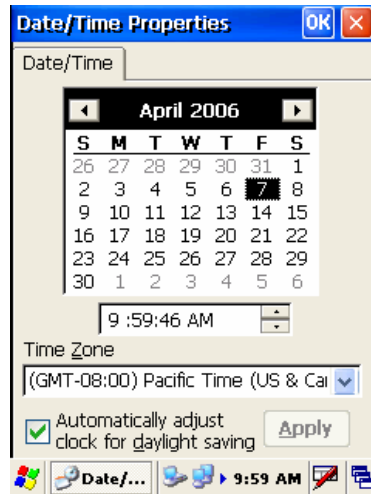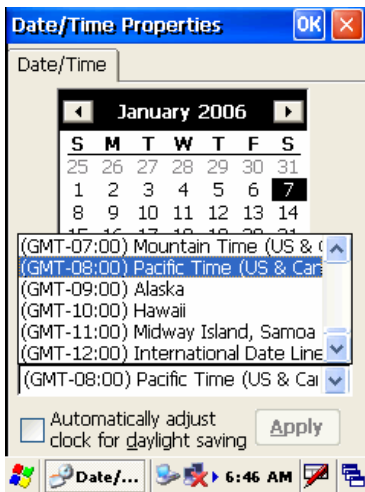
Setting Date/Time

Tap the Left or Right arrows to scroll to the correct year and month.
Or, directly tap the location of the year or month to change the year or month setting.
To set the time, tap on the Hr/Min/Sec AM/PM to input the Hr/Min/Sec.

13
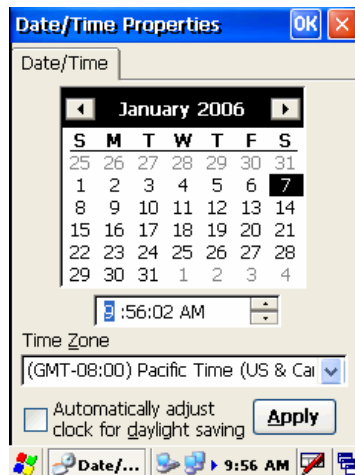
Chapter 2.   Using the Keypad and Scanner

Keypad

Data can be entered into the WDT3200 via the 36 key keypad.   The keypad includes: 0~9, alpha, function, escape, backspace, enter, scanner trigger, cursor, and on/off keys.

Escape Key

Alpha Key

Cursor Key

Space Key

Tab Key

On/Off Key

Enter Key

Scan Key

Function Key

Backspace Key

[ENT]   The Enter key confirms data entry.

[FUNC]   The Function Key is used in conjunction with specific number keys to operate as Hotkeys (see next page).

[Bksp]   The backspace key erases the character to the left of the cursor.

[ESC]   The escape key returns you to a previous page.

[TAB]   The Tab key moves the cursor to the next tab or next control on a form.

[Cursor]   The cursor key moves the cursor around the screen.

[Alpha]   The Alpha key toggles Alpha mode on and off and Caps mode on

and off.   One press of the Alpha key causes the WDT3200's keys to input alpha characters, indicated by a blue LED light.   A second press causes the input of upper-case characters, indicated by a green LED.   A third press returns the WDT3200 to numerical input.

WDT3200 HotKeys

The WDT3200 provides hotkeys for frequently used functions.   Press the Function key and the appropriate numeric key for the following functions listed below:

Func 6 = Task Manager
Func 7 = Scanner Setting
Func 8 = Power Properties
Func 9 = System Info

Hotkeys can be modified to suit your preferences. To modify hotkeys, follow the instructions below:

1. Navigate to: **Start – Programs – Utilities - RegFuncKey**

2. On the **RegFuncKey** screen, select **Edit** and the hotkey you want to change.

3. On the **Edit** screen, enter a new file name or browse for the correct file. You can optionally enter a parameter.

4. When you have finished making changes, select **Set** to save your new settings.
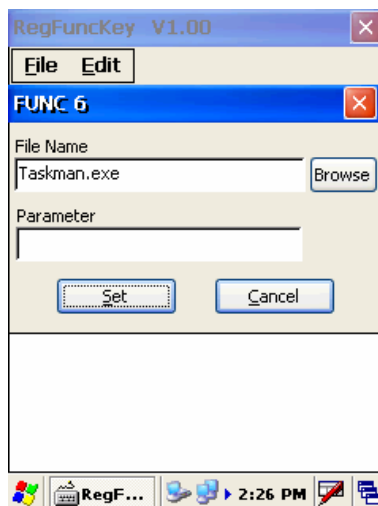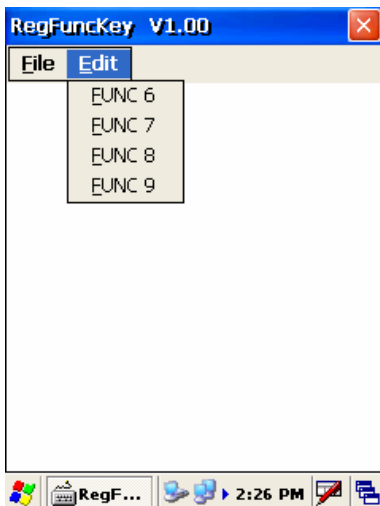
Software Keyboard (Windows CE Keyboard)

Besides its hardware keypad, the WDT3200 provides a touchscreen keyboard as an alternative method of character input. This software keyboard replicates the layout of a standard PC keyboard.

Opening the Windows CE Keyboard:

The Windows CE keyboard can be opened by tapping the "keyboard" icon on the Task bar. (Refer to picture).
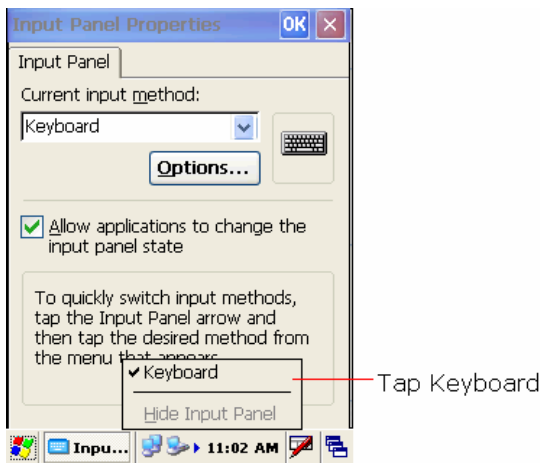
Other Character Support from WinCE Keyboard:

In addition to standard keyboard input, the WDT3200 supports special European character and symbol input. To enter these characters, tap the [áü] key on the touch screen keyboard to display the available characters.

The Bar Code Scanner

The WDT3200 has an integrated laser scanner capable of reading all major bar code labels.

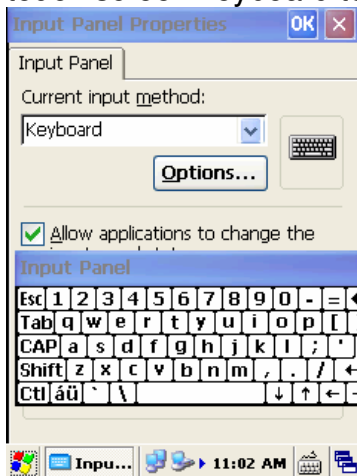# Chapter 3. Power system

Charging the Lithium-Ion Battery Pack

The WDT3200's batteries can be charged via the USB or serial communication cable, or via the optional docking station - both using the included AC adaptor. Please charge the battery for at least 4 hours per session to ensure a full charge. Please note that the first time charge should be for at least 12 hours (see below).

Charging the Main and Backup Battery for the First Time

When first charging the WDT3200, please allow at least 12 hours to fully charge both the main and backup batteries.   When the WDT3200 arrives from the factory the backup battery switch is in the OFF position in order to protect the backup battery.   Before charging the WDT3200, make sure the backup battery switch is moved to the ON position.   The backup battery switch can be found inside the main battery compartment.   Data loss can occur if the backup battery is not adequately charged - therefore it is imperative to ensure that the backup battery switch is in the ON position before charging for the first time.

Note: A properly charged backup battery can store data for up to 72 hours without power from the main battery.   This is not recommended.   Please make sure an adequately charged main battery or AC power is connected.   Do not rely on the backup battery for other than unusual or emergency situations.   To prevent data loss due to backup battery failure (always a slim possibility), please minimize the amount of time that the backup battery has to operate without the main battery pack installed or while disconnected from AC power.

Environmental Consideration for Charging

It is important to consider the temperature when you are charging the Lithium-Ion battery pack. The process is most efficient at normal room temperature or slightly cooler. It is

essential that you charge batteries within the stated range of -5°C to 50°C (23°F to 122°F). Charging batteries outside of the specified range could damage the batteries and shorten their charging life cycle.

Power Status Indication

When the "Main Batteries Very Low" icon appears, charging the main battery pack as soon as possible is highly recommended in order to avoid system shutdown.
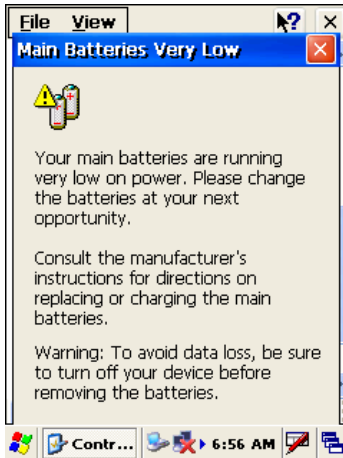
When the "Backup Battery Low" icon appears it indicates that the backup battery is low and needs to be charged.

How to Save Battery Power

Automatic shutdown of the WDT3200

The WDT3200 will enter idle mode when there is no task, or all tasks are waiting for input. In the default setting, the WDT3200 will automatically turn itself off if it remains idle for 3 minutes and when there is no external charging power applied. Pressing the power button will return the WDT3200 to where it was at the time of automatic shutdown.

Note: Suggestion 1:   Turn off wireless mode if you are not using it.   This will conserve battery power.

Suggestion 2:   Disable the I/O card if Internet access is not required.

Storage and Safety Precautions

Batteries should be stored in an open environment and should be placed where there is no risk of accidental shorting or other damage.   Although charged Li-Ion batteries may be left unused for several months, their capacity may be reduced due to back up and internal resistance. If this happens they will require recharging prior to use.   Li-Ion batteries may be stored at temperatures between -4°F and 158°F (-20°C to 70°C).

Backlight Setting

The backlight for color display is user-defined. There are two tabs – one for Battery Power and the other for External Power.

Field	Description
Dim Backlight if device is not used for:	Select how many minutes you want to elapse before the backlight dims.
Turn Off Backlight If device is not used for:	Select how many minutes you want to elapse before the backlight automatically turns off.
Turn on Backlight	Select this option if you want the backlight to turn on when the button is pressed or the touch screen is tapped.
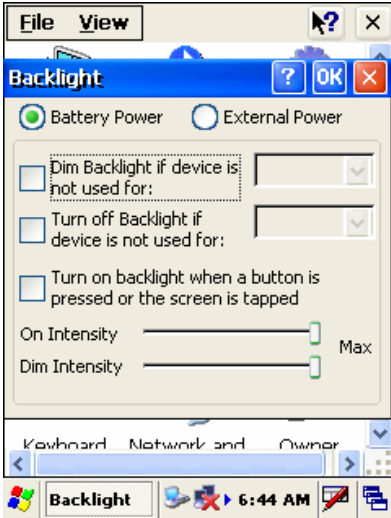
Warm Boot / Cold Boot

Warm Boot

Warm Boot is a reset to re-boot the WDT3200 without losing saved data. Perform a warm boot when:

- The terminal fails to respond

- After installing some software applications

- After making changes to certain system settings, such as network cards

WARNING -   Performing a Warm Boot will result in the loss of all unsaved data!

Warm Boot via Software

To perform a Warm Boot via software, locate the BootMode program.
Start - Programs - Utlitities – BootMode.

Tap "Warm Boot". The system will be warm started.

Warm Boot via Hardware

Use a blunt pin (like an unfolded paper clip) to press the reset pin located on the front of the WDT3200, below the keypad.

Cold Boot

A Cold Boot is used to reset the operating system, restore the terminal back to factory default, and reset the terminal after a BootLoader, keyboard, or kernel upgrade.

WARNING -   Performing a Cold Boot will return the WDT3200 to its original factory settings! All installed programs and data will be lost!

Cold Boot via Software

To perform a Cold Boot via software, locate the BootMode program.
Start - Programs - Utlitities - BootMode.

Tap "Cold Boot". The system will be re-started and reset back to factory default.

You will need to recalibrate the screen and reset the date and time.

Cold Boot via Hardware

1. Remove the Main Battery.
2. Switch OFF the Backup Battery.
3. Switch the Backup Battery back ON.
4. Insert the Main Battery.
5. The terminal will be cold started and reset back to factory default.
6. Recalibrate the screen and reset the date and time.

Chapter 4. Data Communication

Introduction

The WDT3200 allows you to link to a host computer via RS-232 / USB, Bluetooth, or Wireless connection for data communication.

This chapter provides an overview of the communication of the WDT3200.

Connecting the Serial or USB Cable

Plug the RS232 or USB end of the WDT3200 communication cable into your PC's Com or USB port, and the other end into the WDT3200's communication port. To simultaneously charge the WDT3200, plug the AC power adaptor into the power receptacle on the RS232 or USB plug.

Docking Station

RS232 / USB Cradle

For data transmission, plug one end of your WDT3200's RS232 or USB communication cable into your PC's Com Port and the other end into the WDT3200 Docking Station's RS232 / USB port.   To simultaneously charge the WDT3200, plug the AC power adaptor into the power receptacle on the Docking Station.
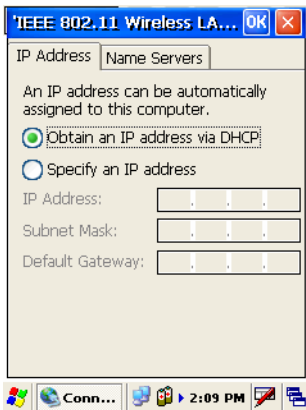

RF Communication

This section is only for WDT3200 equipped with a wireless card.

Windows CE can support TCP/IP protocol and you can link to the Internet via the settings under " Network and Dial-up Connections".

In Network and Dial-up Connections, go to PRISM1 to set up the IP to connect to the internet.

<u>Using ActiveSync</u>

Using Microsoft ActiveSync, you can synchronize and transfer information between your desktop computer and terminal. The most current version of ActiveSync can be downloaded from www.microsoft.com.

With ActiveSync, you can also:

- Back up and restore your device data.
- Copy (rather than synchronize) files between your device and desktop computer.
- Control when synchronization occurs by selecting a synchronization mode.
- For example, you can synchronize continually while connected to your desktop computer or only when you choose the synchronize command.
- Select which information types are synchronized and control how much data is synchronized. For example, you can choose how many weeks of past appointments you want synchronized.

Before beginning installation, carefully read the following:

- Because you will be restarting your computer during installation, save your work and quit all programs before you begin.

- To set up your communication settings, the WDT3200 serial cable is required to connect the WDT3200 to your host computer.

- If you run the Windows NT® operating system with a service pack, you will be informed during setup that you may need to reinstall the service pack. Try connecting first. If unsuccessful, reinstall the latest service pack.

Requirements

To synchronize, ActiveSync version 3.7 or higher must be installed on your desktop computer. The WDT3200 terminal ships with ActiveSync already installed.

To install ActiveSync on your desktop computer, please link to Microsoft website to get the free download driver.

<u>Using the Mobile Devices Window</u>

■ Start Microsoft ActiveSync by clicking the **Microsoft ActiveSync** shortcut on your desktop and then clicking the "Explore" icon.
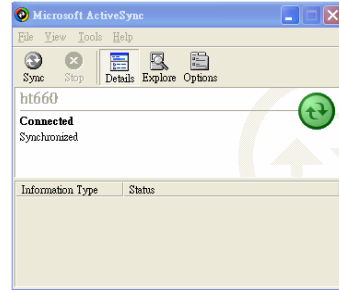
In the displayed window, you can:

■ Select your WDT3200 to use Microsoft ActiveSync features such as changing synchronization options, as described in the "Synchronization" section.

■ Open the Explorer window by double clicking your device icon in the Mobile Devices window.
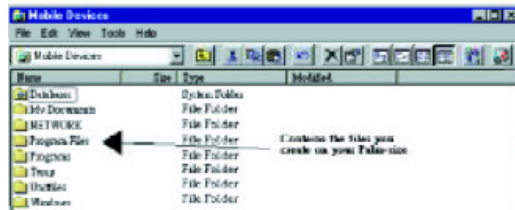
Use this window, which is the root window to the WDT3200, to copy and move files between the WDT3200 and your desktop computer, as described in the "Synchronization" section.

Changing Communications Settings

If Microsoft ActiveSync fails to detect the WDT3200 during installation, set up communications manually instead.   Make sure the following conditions are met:

■   Verify that the correct communications port is selected for your desktop computer and that it is free.
■   Microsoft ActiveSync uses the specified communication ports to connect to the WDT3200.   Make sure these resources are available for Microsoft ActiveSync to connect to the WDT3200. Other programs cannot use them while the WDT3200 and your desktop computer are connected.

■   Set your baud rate on the WDT3200 - the desktop computer will match it.

To check communication settings, open the Mobile Devices folder, and click *File / Connection Settings*. The connection on the WDT3200 is set to USB connection by default. To adjust the connection, tap *Start, Settings, Control Panel,* select the *Communication icon,* select the *PC Connection* tab, and then tap the *Change Connection…* button.

For more information see Microsoft ActiveSync Help.

Chapter 5. Useful Utilities

Introduction

This chapter discusses software applications you can use to make your experience with the WDT3200 more productive.

Scanner Setting

When it is necessary for you to change the default barcode symbologies for a different application, **Scanner Control Panel** allows you to change default symbologies, place delimiter characters behind scanned data, and save the settings. Run this program from **\Start\Setting\Control Panel\Scanner Setting.exe**.   An example of the Scanner Control Panel/Settings tab is shown below:
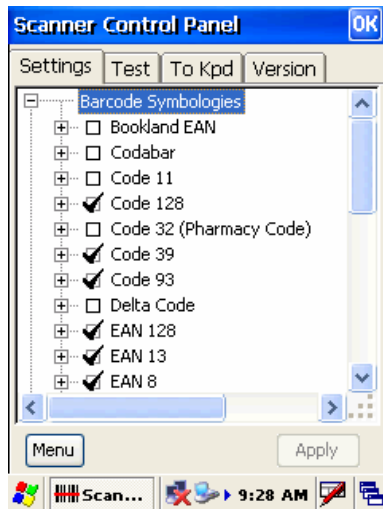

Scan2Key

This program is enabled by default.

The Scan2Key application can route input from the scanner port to the keyboard buffer, with the result that all scanned data will be treated as if it were input from the keypad.   With this router, scanned data can be directly input into generic applications like MS Pocket Word.

Scan2Key can be found at: \Start\Setting\Control Panel\Scanner Setting\ To Kpd.
Below is an example of the Scanner Control Panel/To Kpd tab.
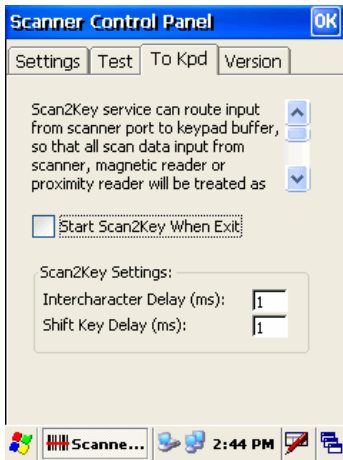
Registry Backup/Restore

The Registry Backup program stores the WDT3200's registry settings for the user
to access.   If a cold boot is required, or the user otherwise wants to return the
registry to a previous state, the user can retrieve an earlier setting from Registry
Backup.

Registry Restore allows the user to restore the WDT3200's registry to a
previously saved version.

The Registry backup/restore feature can be found at:
\Start\Program\Utilities\Registry Backup.   Below is an example of the Registry
Backup/Restore screen