

Preliminary Draft 8/29/11

Honeywell

DolphinTM 99EX Mobile Computer

with Windows[®] Embedded Handheld 6.5

User's Guide

Preliminary Draft 8/29/11

Disclaimer

Honeywell International Inc. (“HII”) reserves the right to make changes in specifications and other information contained in this document without prior notice, and the reader should in all cases consult HII to determine whether any such changes have been made. The information in this publication does not represent a commitment on the part of HII.

HII shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages resulting from the furnishing, performance, or use of this material.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of HII.

Web Address: www.honeywellaidc.com

Trademarks

Dolphin, Dolphin RF, HomeBase, Mobile Base, and QuadCharger are trademarks or registered trademarks of Hand Held Products, Inc. or Honeywell International Inc.

Microsoft, Windows, Windows Mobile, Windows Embedded Handheld, Windows CE, Windows 98 Second Edition, Windows NT, Windows 2000, Windows ME, Windows XP, ActiveSync, Outlook, and the Windows logo are trademarks or registered trademarks of Microsoft Corporation.

Other product names mentioned in this manual may be trademarks or registered trademarks of their respective companies and are the property of their respective owners.

Patents

For patent information, please refer to www.honeywellaidc.com/patents.

Other Trademarks

The Bluetooth trademarks are owned by Bluetooth SIG, Inc., U.S.A. and licensed to Honeywell.

©2011 Honeywell International Inc. All rights reserved.



Preliminary Draft 8/29/11

Table of Contents

Chapter 1 - Agency Information

Laser Safety	1-1
Label Locations	1-1
Laser Safety Label	1-1
Laser Eye Safety Statement	1-1
LED Safety	1-2
LED Safety Statement.....	1-2
Infrared LED Safety Statement	1-2
UL and C-UL Statement.....	1-2
Approvals by Country.....	1-2
R&TTE Compliance Statement—802.11a/b/g/n, Bluetooth, and/or GSM.....	1-2
Dolphin RF Terminal—802.11a/b/g/n, Bluetooth, and/or GSM.....	1-3
Canadian Compliance.....	1-4
Conformité à la réglementation canadienne	1-4
RF Exposure Information (SAR)	1-4
For European Community Users	1-5
Waste Electrical and Electronic Equipment Information	1-5

Chapter 2 - Getting Started

Out of the Box	2-1
Home Screen	2-4
Title Bar.....	2-4
Icons in the Title Bar	2-4
Horizontal Scroll.....	2-7
Tile Bar.....	2-7
Pop-Up Menus.....	2-7
Selecting Programs.....	2-8
File Explorer.....	2-8
Search.....	2-9

Chapter 3 - Hardware Overview

Standard Configurations for the 99EX	3-1
Peripherals for the 99EX.....	3-2
Accessories for the 99EX.....	3-3
Front Panel: 99EX.....	3-5
Front Panel Features for the 99EX	3-5
Back Panel: 99EX	3-7
Back Panel Features for the 99EX.....	3-7
Side Panels: 99EX	3-9
Left Side	3-9
Right Side	3-9
Installing a Memory Card	3-10
Installing a SIM Card.....	3-10
Bottom Panel: 99EX.....	3-11
I/O Connector.....	3-11

Preliminary Draft 8/29/11

Using the Touch Panel	3-12
Installing a Screen Protector.....	3-12
Healthcare Housing	3-12
Batteries	3-13
Main Battery Pack.....	3-13
Internal Backup Battery	3-14
Managing Battery Power	3-15
Checking Battery Power	3-16
Resetting the Terminal	3-16
Soft Reset (Warm Boot).....	3-16
Hard Reset (Cold Boot)	3-17
Suspend Mode	3-17

Chapter 4 - Using the Scan Image Engine

Overview.....	4-1
Angled Imaging.....	4-1
Laser Safety	4-1
LED Safety	4-1
Image Engine Specifications	4-1
N5603 Beam Divergence Angle	4-1
Depth of Field	4-2
Supported Bar Code Symbologies	4-3
Decoding	4-4
To Decode a Bar Code.....	4-4
Aiming Options	4-4
Capturing Images	4-6
Taking an Image.....	4-6
Uploading Images.....	4-7

Chapter 5 - Using the Color Camera

Overview.....	5-1
Taking a picture using the Camera Demo tool	5-1
Options	5-2
Taking a picture using the Windows Embedded Handheld 6.5 Camera tool	5-2
Menu.....	5-3
Options	5-3
Recording Video	5-3

Chapter 6 - Using the Keyboards

Available Keyboards	6-1
Keyboard Combinations	6-1
Common Buttons	6-1
Using the Function Keys.....	6-2
Using the Modifier Keys	6-3
Using the Navigation Keys	6-3

Preliminary Draft 1/19/11

34-Key Alpha/Numeric Keyboard	6-5
ALPHA Key.....	6-5
34-Key Alpha/Numeric Keyboard Combinations	6-6
34-Key Numeric (Calculator) Keyboard	6-8
ALPHA Key.....	6-8
34-Key Numeric (Calculator) Keyboard Combinations.....	6-9
43-Key Alpha/Numeric Keyboard	6-11
Number Lock (NUM) Key.....	6-11
43-Key Keyboard Combinations	6-12
55-Key Full Alpha/Numeric Keyboard	6-14
55-Key Keyboard Combinations.....	6-14

Chapter 7 - System Settings

Overview.....	7-1
Clock & Alarms	7-2
Personal Menu	7-3
Buttons.....	7-3
System Menu.....	7-7
About	7-8
Backlight	7-9
Battery	7-10
Certificates.....	7-10
Customer Feedback	7-10
Encryption.....	7-11
Error Reporting	7-11
External GPS.....	7-11
Five Volt Control	7-12
HISS	7-12
Managed Programs	7-14
Memory.....	7-14
RIL	7-15
Power.....	7-16
Regional Settings.....	7-16
Remove Programs.....	7-17
Screen	7-18
Task Manager.....	7-19

Chapter 8 - Communication

Connections Menu.....	8-1
Using the IrDA Port.....	8-2
IrDA Port Location	8-2
Sending Data.....	8-2
Receiving Data	8-3
Connections Manager	8-4
To Access the Connections Manager.....	8-4
Tasks	8-4
Advanced.....	8-5

Preliminary Draft 1/19/11

Dolphin Wireless Manager	8-6
Dolphin Wireless Manager Window	8-6
Enabling the Radios	8-6
Accessing Radio Configuration Utilities	8-7
Communication	8-8
Installing Additional Software	8-10
Adding Programs to the Terminal Using ActiveSync	8-10
Adding Programs Directly from the Internet	8-11
99EX COM Port Assignment Table	8-12

Chapter 9 - Working with Wireless Wide Area Networking (WWAN)

Overview	9-1
Penta Band Antenna	9-1
SIM Card Installation	9-3
Installing a SIM Card	9-4
Enabling the WWAN Radio	9-5
GSM/HSPA+ Global Radio Dolphin Models	9-5
Voice Communication	9-5
Audio Modes	9-5
Volume Control	9-6
Accessing the Dialer Window	9-6
Dialing	9-6
Sending Calls	9-7
Ending Calls	9-7
Accessing Voice Mail	9-7
View Options	9-7
Setup Options	9-7
Data Communication	9-9
Establishing Data Communication (GSM/HSPA+ Global Radio Dolphin Models)	9-9
Ending the Data Connection	9-11
Manual Network Selection	9-12
GSM/CDMA Dolphin Models	9-13
Gobi Manager	9-13
Establishing Data Communication (GSM/CDMA Dolphin Models)	9-14

Chapter 10 - Working with the Bluetooth Radio

Enabling the Bluetooth Radio	10-1
Connecting to Other Bluetooth Devices	10-2
Pairing and Trusted Devices	10-4
Types of Devices and Services	10-5
Connecting to Bluetooth Printers	10-6
Connecting to Bluetooth Headsets	10-6
Transferring Files	10-7
Making the Terminal Discoverable	10-8
Selecting COM Ports	10-8

Chapter 11 - Working with GPS

Overview	11-1
----------------	------

Preliminary Draft 1/19/11

Assisted GPS Support.....	11-1
Powering the GPS Module	11-1
Communication Ports	11-1
Selecting the Port	11-1
COM7	11-2
GPS Intermediate Driver.....	11-2
GPS Demo	11-2

Chapter 12 - Dolphin 99EX HomeBase Device

Overview.....	12-1
Parts and Functions.....	12-2
Power	12-5
Serial Connector.....	12-5
Charging the Main Battery.....	12-6
To Power a Terminal and Charge its Main Battery.....	12-6
Charging a Spare Battery in the Auxiliary Battery Well	12-6
Communication.....	12-7
Connecting the Communication Cables	12-7
Establishing Communication	12-7
Communicating with the Dolphin Terminal	12-7
Verifying Data Transfer.....	12-8
RS232 Communications Cables.....	12-8
RS232 Pin Configuration	12-8
Mounting.....	12-9
Desk Mounting.....	12-9

Chapter 13 - Dolphin 99EX eBase Device

Overview.....	13-1
Unpacking the eBase.....	13-1
Parts and Functions.....	13-2
Front Panel	13-2
Back Panel	13-4
Bottom Panel	13-5
Power	13-5
Connecting Power to the eBase	13-5
Charging the Main Battery.....	13-6
To Power a Terminal and Charge its Main Battery.....	13-6
Charging a Spare Battery in the Auxiliary Battery Well	13-6
Communication.....	13-7
Software Requirements	13-7
Establishing Ethernet Communication.....	13-7
Establishing USB Communication	13-8
Mounting.....	13-8
Using the DIN Rail	13-8

Chapter 14 - Dolphin 99EX Mobile Base Device

Overview.....	14-1
---------------	------

Preliminary Draft 1/19/11

Front Panel.....	14-2
Bottom Panel.....	14-3
Back Panel and Mounting Brackets.....	14-4
Mounting.....	14-5
Safety Precautions.....	14-5
Installation.....	14-5
Powering the Dolphin Terminal	14-6
Charging the Dolphin Terminal.....	14-6
Establishing Communication	14-6
Connecting the Communication Cables	14-6
Establishing ActiveSync or Windows Mobile Device Center Communication	14-7
RS232 Communication Cables	14-7
Serial Connector.....	14-8

Chapter 15 - Dolphin 99EX ChargeBase Device

Overview.....	15-1
Parts and Functions.....	15-2
Front Panel	15-2
Back Panel.....	15-3
Power	15-3
Connecting Power to the ChargeBase	15-3
Charging the Main Battery.....	15-4
To Power a Terminal and Charge its Main Battery.....	15-4
Mounting.....	15-4

Chapter 16 - Dolphin 99EX Net Base Device

Overview.....	16-1
Parts and Functions.....	16-2
Front Panel	16-2
Back Panel	16-3
Bottom Panel	16-4
Power	16-4
Connecting Power to the Net Base.....	16-4
Charging the Main Battery.....	16-5
To Power a Terminal and Charge its Main Battery.....	16-5
Communication.....	16-5
Software Requirements	16-5
Connecting the Dolphin Terminal to the Net Base	16-5
Mounting the Net Base	16-6
Using the DIN Rail	16-6

Chapter 17 - Dolphin 99EX QuadCharger Device

Overview.....	17-1
Parts and Functions.....	17-2
Supplying Power.....	17-3
Inserting and Charging Batteries	17-3

Preliminary Draft 1/19/11

Mounting.....	17-4
Desk Mounting.....	17-4
Troubleshooting.....	17-5

Chapter 18 - Dolphin 99EX Charge Rack and Net Rack Device

Overview.....	18-1
Parts and Functions.....	18-2
Front and Side Panel.....	18-2
Back Panel.....	18-2
Power.....	18-2
Connecting Power to the Rack.....	18-3
Charging the Main Battery.....	18-3
To Power a Terminal and Charge its Main Battery.....	18-3
Communication (Net Rack Only).....	18-3
Software Requirements.....	18-3
Connecting the Dolphin Terminal to the Net Rack.....	18-4
Mounting the Rack.....	18-4

Chapter 19 - Customer Support

Product Service and Repair.....	19-1
Online Product Service and Repair Assistance.....	19-1
Technical Assistance.....	19-2
Online Technical Assistance.....	19-2
Limited Warranty.....	19-3
How to Extend Your Warranty.....	19-4

Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

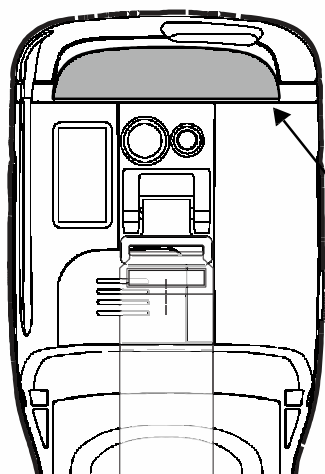
Agency Information

Dolphin 99EX mobile computers meet or exceed the requirements of all applicable standards organizations for safe operation. However, as with any electrical equipment, the best way to ensure safe operation is to operate them according to the agency guidelines that follow. Read these guidelines carefully before using your mobile computer.

Laser Safety

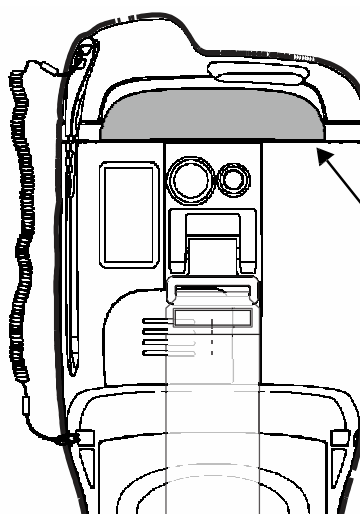
Label Locations

Dolphin 99EX with WLAN



Compliance Label

Dolphin 99EX with WWAN



Compliance Label

Laser Safety Label

If the following label is attached to your product, it indicates the product contains an engine with a laser aimer:

Image Engines with Integrated Laser Aimers



Laser Eye Safety Statement

This device has been tested in accordance with and complies with IEC60825-1(Ed. 2.0), EN60825-1:2007. Complies with 21 CFR 1040.10 and 1040.11, except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007. LASER LIGHT, DO NOT STARE INTO BEAM. CLASS 2 LASER PRODUCT, 1.0 mW MAX OUTPUT: 650nm, pulse duration of 15.5msec, and pulse repetition rate of 32.25 Hz.

Caution! Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Preliminary Draft 1/19/11

LED Safety

LED Safety Statement

LEDs have been tested and classified as “EXEMPT RISK GROUP” to the Standard: IEC 62471:2006.

Infrared LED Safety Statement

Caution! Do not view directly with optical instruments.

UL and C-UL Statement

UL and C-UL listed: UL60950-1 2nd Edition, and CSA C22.2 No. 60950-1-07 2nd Edition, ISA 12.12.01:2007, CAN/CSA: C22.2 No. 213-M1987.

Approvals by Country

Country	EMC, Radio, & SAR	Safety
U.S.A.	FCC Part 15, Subpart B FCC Part 15, Subpart C, 15.247 FCC Part 15, Subpart E FCC Part 22H FCC Part 24E FCC SAR OET 65 Supplement C	UL60950-1, 2nd Edition
Canada	ICES-003 (Class B) RSS 132 RSS 133 RSS 210	CSA C22.2 No. 60950-1-07, 2nd Edition
European Community/CE	EN300328, EN301893, EN55022, EN55024, EN301489-1, EN301489-7/24, EN301489-17, 3GPPTS 51.010-1, EN301511, EN301908, EN50360, EN50361, EN50371, EN50392, IEC6220-1, IEC6220-2, EN300440, 301 389- 25 (CDMA 2000)	EN60950-1, 2nd Edition EN60825-1, 2nd Edition

R&TTE Compliance Statement—802.11a/b/g/n, Bluetooth, and/or GSM

Dolphin RF terminals are in conformity with all essential requirements of the R&TTE Directive (1999/5/EC).

This product is marked with **CE0682** in accordance with the Class II product requirements specified in the R&TTE Directive. In addition, this product complies to 2006/95/EC Low Voltage Directive when supplied with the recommended power supply. Honeywell shall not be liable for use of our product with equipment (i.e., power supplies, personal computers, etc.) that is not CE marked and does not comply with the Low Voltage Directive.

Preliminary Draft 1/19/11

The equipment is intended for use throughout the European Community; PAN European Frequency Range: 2.402–2.480 GHz. Restrictions for use in France are as follows:

- Indoor use: Maximum power (EIRP*) of 100 mW for the entire 2.400–2.4835 GHz
- Outdoor use: Maximum power (EIRP*) of 100 mW for the 2.400–2.454 GHz band & maximum power (EIRP*) of 10 mW for the 2.454–2.483 MHz band.
- 5GHz band: UNII (Unlicensed National Information Infrastructure) or band1 (5.150 to 5.250 GHz) is restricted to indoor use only. Any other use will make the operation of the device illegal.

For further information, please contact:

Honeywell Scanning & Mobility Europe BV
Nijverheidsweg 9
5627 BT Eindhoven
The Netherlands

FCC Requirements

Dolphin RF Terminal—802.11a/b/g/n, Bluetooth, and/or GSM

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

In accordance with FCC 15.21, changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: "Something About Interference." This is available at FCC local regional offices. Our company is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by our company. The correction is the responsibility of the user. Use only shielded data cables with this system.

Preliminary Draft 1/19/11

Canadian Compliance

This Class B digital apparatus complies with Canadian ICES-003 and RSS210. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Conformité à la réglementation canadienne

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 et RSS210 du Canada. Son fonctionnement est assujéti aux conditions suivantes:

1. Cet appareil ne doit pas causer de brouillage préjudiciable.
2. Cet appareil doit pouvoir accepter tout brouillage reçu, y compris le brouillage pouvant causer un fonctionnement indésirable.

RF Exposure Information (SAR)

This mobile phone meets the government's requirements for exposure to radio waves. This phone is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. *Tests for SAR are conducted using standard operating positions accepted by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

The highest SAR value for the model phone as reported to the FCC when tested for use at the ear is 0.89 W/kg and when worn on the body, as described in this user guide, is 0.989 W/kg (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements.)

While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of www.fcc.gov/oet/ea/fccid after searching on **FCC ID: HD599EXLW**.

For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines for use with an accessory that contains no metal and the positions the handset a minimum of **1.5 cm** from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines. If you do not use a body-worn accessory and are not holding the phone at the ear, position the handset a minimum of **1.5 cm** from your body when the phone is switched on.

Preliminary Draft 1/19/11

For European Community Users

Honeywell complies with Directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment (WEEE).

Waste Electrical and Electronic Equipment Information

This product has required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment, if not properly disposed.

In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems for product disposal. Those systems will reuse or recycle most of the materials of the product you are disposing in a sound way.



The crossed out wheeled bin symbol informs you that the product should not be disposed of along with municipal waste and invites you to use the appropriate separate take-back systems for product disposal.

If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You may also contact your supplier for more information on the environmental performances of this product.

Pacemakers, Hearing Aids and Other Electrically Powered Devices

Most manufacturers of medical devices adhere to the IEC 601-1-2 standard. This standard requires devices to operate properly in an EM Field with a strength of 3V/m over a frequency range of 26 to 1000MHz. The maximum allowable field strength emitted by the Dolphin terminal is 0.3V/m according to Subpart B of Part 1 of the FCC rules. Therefore, the RF from the Dolphin terminal has no effect on medical devices that meet the IEC specification.

Hearing AID Compatibility (HAC)

Dolphin (99EX or 9700) has been tested for hearing aid compatibility. This device has an M3 and T3 rating. For additional HAC information, including the HAC rating of this product, please refer to www.honeywell.com/aidc.

When some wireless devices are used near some hearing devices such as hearing aids and implants users may detect a buzzing, humming noise. Some hearing devices are more immune than others to this interference noise, and phones/mobile computers are also vary in the amount of interference they generate.

M-Rating: Phones rating M3 or M4 meet FCC requirements and likely to generate less interference with hearing devices than phones that are not labeled. M4 is the better /higher of the two ratings.

T- rating: Phones rated T3 or T4 meet FCC requirements and likely to be more usable with hearing device's telecoil than unrated phones. T4 is the better/higher of the two ratings.

Preliminary Draft 1/19/11

The more immune the hearing aid device is the less likely one is to experience interference noise from the wireless phone. Hearing aid devices should have ratings similar to those of phones. Adding the rating of the hearing aid and the phone would determine probable usability:

- Any combined equal to or greater than six offers the best use
- Any combined rating equal to 5 considered normal use

This device has been tested and rated for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies used in this phone that have not been tested yet for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations, using your hearing aid or cochlear implant, to determine if you hear any interfering noise. Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility.

Microwaves

The radio in the Dolphin RF terminal operates on the same frequency band as a microwave oven. Therefore, if you use a microwave within range of the Dolphin RF terminal you may notice performance degradation in your wireless network. However, both your microwave and your wireless network will continue to function.

Preliminary Draft 1/19/11

Getting Started

Out of the Box

Verify that the carton contains the following items:

- Dolphin 99EX mobile computer (the terminal)
- Main battery pack (i.e., standard 3.7V Li-poly or extended 3.7V Li-ion)
- Quick Start Guide

Note: If you ordered accessories for your terminals, verify that they are also included with the order.

Be sure to keep the original packaging in the event that the Dolphin terminal should need to be returned for service. For details, see [Product Service and Repair](#) on page 19-1.

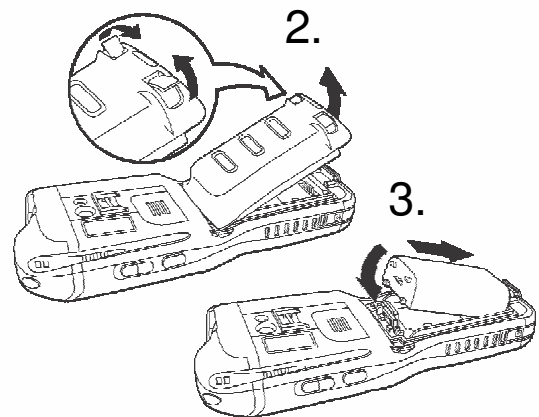
Step 1. Install the Main Battery Pack


The 99EX is shipped with the battery packaged separate from the unit. Follow the steps below to install the main battery.

1. Release the hook securing the hand strap to the back panel of the terminal near the speaker.
2. Remove the battery door by lifting up the latches near the base of the battery door.
3. Insert the battery into the battery well.
4. Replace the battery door. Apply pressure to engage the door latch.

Note: The battery door must be installed prior to powering the unit.

5. Reattach the hand strap.



 We recommend use of Honeywell Li-poly or Li-Ion battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.


Step 2. Charge the Main and Backup Batteries

The power supply for Dolphin terminals consists of two types of battery power: the main battery pack that is accessible from the back panel, and the backup battery that resides inside the terminal.


The main battery powers the terminal. The internal backup battery charges off the main battery and maintains the application data stored in RAM memory for up to 30 minutes when the terminal's main battery pack is completely discharged or removed.

Battery Error Notification

If your terminal displays the following indicators, replace the main battery pack with a Honeywell Li-poly or Li-ion battery pack.

-  appears in the Title bar at the top of the touch screen
- The General Notification LED flashes red
- A Notification appears on the Tile bar at the bottom of the touch screen

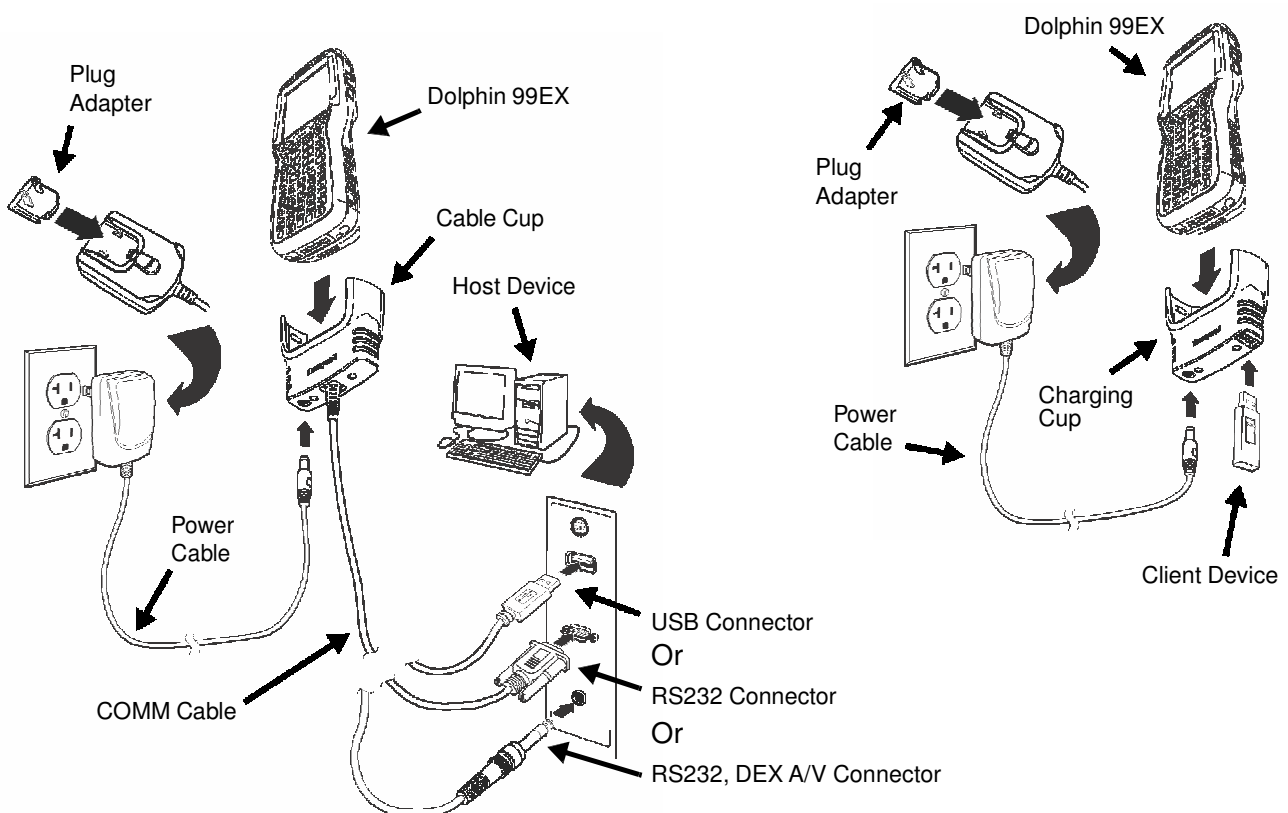
Preliminary Draft 1/19/11

 We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Before Initial Use

Terminals are shipped with both batteries discharged of all power. The initial charging time for the main battery pack is 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery. Connect the terminal to one of the 99EX series charging peripherals to charge; see [Peripherals for the 99EX](#) on page 3-2. Honeywell recommends charging the Dolphin terminal for at least 24 hours prior to initial use to ensure the internal backup battery is fully charged.

Using the Charging/Communication Cables



Step 3. Boot the Terminal

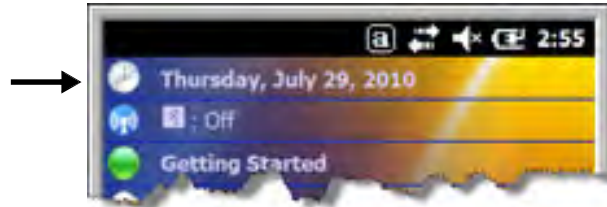
The terminal begins booting as soon as power is applied. Do NOT press any keys or interrupt the boot process. When the boot process is complete, the Home screen appears, and the terminal is ready for use.

Note: The Home screen appears several times during the boot process. To ensure the boot process is complete, wait several seconds before using the device.

Preliminary Draft 1/19/11

Step 4. Set the Time Zone, Time, and Date

On the Home screen, tap the line that displays the time and date.



The Clock Settings screen appears.

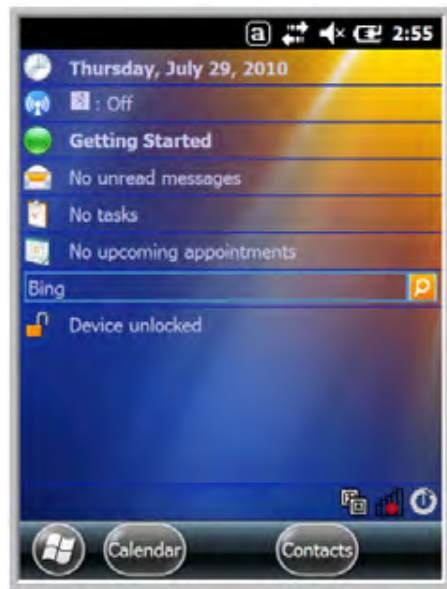



Tap the arrow to the right of the time zone to open the drop down menu. Select the appropriate time zone from the menu. Set the correct time and date in the remaining fields and tap **OK** to save.

Preliminary Draft 1/19/11

Home Screen

After the Dolphin terminal initializes the first time, you see the Home screen.



You can also display the Home screen anytime by tapping .




Title Bar

The Title bar, located at the top of the screen, displays the active program, the status of various system functions, and the current time. Tapping on the title bar provides access to the Horizontal Scroll. The scroll provides access to additional programs and application screens. For additional information, see [Horizontal Scroll](#) on page 2-7.
























Note: Tapping the battery icon at the top of the screen does not open the Power applet with this version of Microsoft Windows Embedded Handheld. Windows Embedded Handheld

Icons in the Title Bar

Indicator	Meaning
	Synchronizing data
	The terminal could not synchronize data with the workstation via ActiveSync.
	New e-mail























Preliminary Draft 1/19/11

Icons in the Title Bar

Indicator	Meaning
	New text message
	New voicemail
	New instant message
	Vibrate on
	Ringer off
	Speakerphone on
	Voice call in progress
	Calls are forwarded
	Call on hold
	Missed call
	Data call in progress
	A battery error has occurred. Replace the main battery pack with a Honeywell Li-poly or Li-ion battery pack.
	Battery is has a full charge
	Battery has a high charge
	Battery has a medium charge
	Battery has a low charge
	Battery has a very low charge and requires charging
	Terminal is running on external power. If a battery pack is installed, the battery is charging in the background.
	The terminal is not connected to external power. A battery is installed, but is defective; specifically, its charge level cannot be measured.
	No SIM card is installed
	Active network connection

Preliminary Draft 1/19/11

Icons in the Title Bar

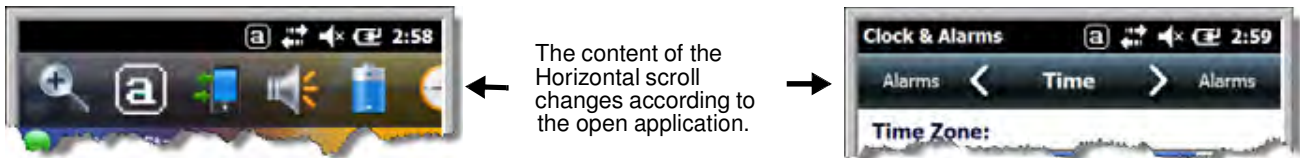
Indicator	Meaning
	No active network connection
	GPRS available
	GPRS connecting
	GPRS in use
	HSDPA available
	HSDPA connecting
	HSDPA in use
	EDGE available
	EDGE connecting
	EDGE in use
	UMTS available
	UMTS connecting
	UMTS in use
	Radio is off
	The radio is not connected to a network.
	The radio is connected. The bars indicate the signal strength.
	No radio signal
	The terminal is searching for a signal.
	Wi-Fi is on, but device is not connected
	Wi-Fi data call
	Pending alarm
	Bluetooth

Preliminary Draft 1/19/11

Horizontal Scroll

The Horizontal Scroll, located at the top of most application windows, provides access to additional application screens. You can flick left or right on the scroll or tap each label on the scroll, until you get to the desired screen. Tapping a label to the left or right of the center item brings new labels into view.

Note: Tap the Title bar to access the horizontal scroll if it is not visible on the screen.



Tile Bar

The Tile bar is located at the bottom of application windows.

The Tile bar displays icons you use to open and close screens, menus, and features.



The Task tray displays icons for programs running in the background.

The icons change according to the open application.

Pop-Up Menus

With pop-up menus, you can quickly choose an action for a selected item. To access a pop-up menu, tap and hold the stylus on the item name of the action you want to perform. When the menu appears, lift the stylus, and tap the action you want to perform.



Tap anywhere outside the menu to close the menu without performing an action.

Preliminary Draft 1/19/11

Selecting Programs

To see the programs loaded on your terminal, tap  to access the Start Menu. To open a program, tap once on the program icon. To reposition an icon on the Start Menu, tap and hold the stylus on the icon, and then drag the icon to the desired position.

File Explorer

You can also use the File Explorer to find files and organize these files into folders.

Tap  > **File Explorer** .



Tap the **Up** button at the bottom of the screen to move up one level in the directory.



You can move files in File Explorer by tapping and holding on the item you want to move, and then tapping **Cut** or **Copy** on popup menu.



Preliminary Draft 1/19/11



Navigate to the folder you want to move the file to, and then tap and hold a blank area of the window. Tap **Paste** on the pop-up menu.



Note: If there is no blank space available in the window, tap **Menu** on the command bar, navigate to the end of the menu using the down arrow, and then tap **Edit > Paste**.



Search

The Search feature helps you quickly locate information. Tap  > **Search Phone** .

Enter the text you want to find, select a data type, and then tap **Go** to start the search. Select **Larger than 64 KB** in the **Type** drop-down field to quickly find information that is taking up storage space.

Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Hardware Overview

Standard Configurations for the 99EX

WLAN & WPAN

- Microsoft Windows Embedded Handheld 6.5 Classic
- OMAP3715 (1Ghz)
- 256MB RAM X 1GB Flash
- Four keyboard options
- 3.7V Li-poly or extended 3.7V Li-ion rechargeable battery pack
- Adaptus Imaging Technology: N5603ER/SR/HD or N5600ER/SR/HD image engines
- 802.11a/b/g/n and Bluetooth

WLAN, WPAN, with GPS

- Microsoft Windows Embedded Handheld 6.5 Classic
- OMAP3715 (1Ghz)
- 256MB RAM X 1GB Flash
- Four keyboard options
- 3.7V Li-poly or extended 3.7V Li-ion rechargeable battery pack
- Adaptus Imaging Technology: N5603ER/SR/HD or N5600ER/SR/HD image engines
- 802.11a/b/g/n and Bluetooth
- GPS
- 3.1 megapixel auto control color camera

WLAN, WPAN, & WWAN

- Microsoft Windows Embedded Handheld 6.5 Professional
- OMAP3715 (1Ghz)
- 256MB RAM X 1GB Flash
- Four keyboard options
- 3.7V Li-poly or extended 3.7V Li-ion rechargeable battery pack
- Adaptus Imaging Technology: N5603ER/SR/HD or N5600ER/SR/HD image engines
- 802.11a/b/g/n, Bluetooth, and GSM/HSPA+ or GSM/CDMA

WLAN, WPAN & Camera

- Microsoft Windows Embedded Handheld 6.5 Classic
- OMAP3715 (1Ghz)
- 256MB RAM X 1GB Flash
- Four keyboard options
- 3.7V Li-poly or extended 3.7V Li-ion rechargeable battery pack
- Adaptus Imaging Technology: N5603ER/SR/HD or N5600ER/SR/HD image engines
- 802.11a/b/g/n and Bluetooth
- 3.1 megapixel auto control color camera

WLAN, WPAN, with GPS & Camera

- Microsoft Windows Embedded Handheld 6.5 Classic
- OMAP3715 (1Ghz)
- 256MB RAM X 1GB Flash
- Four keyboard options
- 3.7V Li-poly or extended 3.7V Li-ion rechargeable battery pack
- Adaptus Imaging Technology: N5603ER/SR/HD or N5600ER/SR/HD image engines
- 802.11a/b/g/n and Bluetooth
- GPS
- 3.1 megapixel auto control color camera

WLAN, WPAN, & WWAN with GPS

- Microsoft Windows Embedded Handheld 6.5 Professional
- OMAP3715 (1Ghz)
- 256MB RAM X 1GB Flash
- Four keyboard options
- 3.7V Li-poly or extended 3.7V Li-ion rechargeable battery pack
- Adaptus Imaging Technology: N5603ER/SR/HD or N5600ER/SR/HD image engines
- 802.11a/b/g/n, Bluetooth, and GSM/HSPA+ or GSM/CDMA
- GPS

Preliminary Draft 1/19/11

WLAN, WPAN, WWAN with GPS & Camera

- Microsoft Windows Embedded Handheld 6.5 Professional
- OMAP3715 (1Ghz)
- 256MB RAM X 1GB Flash
- Four keyboard options
- 3.7V Li-poly or extended 3.7V Li-ion rechargeable battery pack
- Adaptus Imaging Technology: N5603ER/SR/HD or N5600ER/SR/HD image engines
- 802.11a/b/g/n, Bluetooth, and GSM/HSPA+ or GSM/CDMA
- GPS
- 3.1 megapixel auto control color camera

Some configurations of the 99EX terminal are available with an external housing made of plastic that is specifically designed for the healthcare industry. For more information, see [Healthcare Housing](#) on page 3-12.

Peripherals for the 99EX

Each of the following items is sold separately to enhance the capabilities of your Dolphin terminal.

Dolphin 99EX HomeBase™ Device

The Dolphin 99EX HomeBase device is a charging and communication cradle supporting both RS232 and USB communications, which enables the terminal to interface with the majority of PC-based enterprise systems. This device also contains an auxiliary battery well that charges a spare Honeywell Li-poly or extended Li-ion battery.

For more information, see [Dolphin 99EX HomeBase Device](#) on page 12-1.

Dolphin 99EX Mobile Base™ Device

The Dolphin 99EX Mobile Base device is a charging and communication cradle designed specifically for in-premise and in-transit data collection applications. It features a flexible mounting bracket and a cigarette lighter adapter to adapt it to your environment.

The serial connector supports RS232 communication and power out to peripheral devices, such as handheld scanners. The USB connector is a high-speed 2.0v compliant host port. Using a USB cable, you can connect the base to a peripheral device, such as a memory stick or printer.

For more information, see [Dolphin 99EX Mobile Base Device](#) on page 14-1.

Dolphin 99EX eBase™ Device

The Dolphin 99EX eBase device enables a single 99EX mobile computer to communicate with a host device over USB and Ethernet network. This device also contains an auxiliary battery well that charges a spare Honeywell Li-poly or extended Li-ion battery.

For more information, see [Dolphin 99EX eBase Device](#) on page 13-1.

Preliminary Draft 1/19/11

Dolphin 99EX Net Base™ Device

The Dolphin 99EX Net Base device enables up to four 99EX mobile computers to communicate with a host device over an Ethernet network. In addition, the Net Base provides a second RJ45 Ethernet port for connection to an additional device such as a printer, workstation, eBase, or another Net Base.

For more information, see [Dolphin 99EX Net Base Device](#) on page 16-1.

Dolphin 99EX Net Rack™ Device

The Dolphin 99EX Net Rack device enables up to thirty 99EX mobile computer to communicate with a host device over an Ethernet network.

For more information, please consult the Dolphin 99EX Net Rack and Charge Rack User's Guide.

Dolphin 99EX ChargeBase

The Dolphin 99EX ChargeBase is a 4-slot charging cradle that holds, powers, and charges terminals.

For more information, see [Dolphin 99EX ChargeBase Device](#) on page 15-1.

Dolphin 99EX ChargeRack™ Device

The Dolphin 99EX Charge Rack device is a 30-slot charging rack that holds, powers, and charges terminals.

For more information, please consult the Dolphin 99EX Net Rack and Charge Rack User's Guide.

Dolphin 99EX QuadCharger™ Device

The Dolphin 99EX QuadCharger device is a 4-slot charging station for 99EX standard Li-poly or extended Li-ion battery packs.

For more information, see [Dolphin 99EX QuadCharger Device](#) on page 17-1.

Accessories for the 99EX

Each of the following items is sold separately to enhance your terminal's capabilities.

Note: When using accessories where the terminal is worn on the body, the terminal's touch panel must face away from the body.

Dolphin 99EX Mobile Charger

The Dolphin 99EX Mobile Charger is a charging cable that connects the terminal directly to a 12 Volt DC power source, such as a cigarette lighter port inside a vehicle, eliminating the need for a cradle. Intelligent battery technology on-board the terminal ensures proper charging. The Dolphin 99EX Mobile Charger is an ideal low-cost charging solution for in-transit mobile applications.

Preliminary Draft 1/19/11

Dolphin 99EX Mobile Mount

The Dolphin 99EX Mobile Mount, which holds a Dolphin terminal securely in place inside a vehicle, is an ideal, low-cost alternative to the Dolphin 99EX Mobile Base when communications is not required. When used in conjunction with the Dolphin 99EX Mobile Charger, the Dolphin 99EX Mobile Mount creates a complete mounting and charging solution for in-transit applications. The entire kit includes an adjustable vehicle mounting bracket.

Communication/Charging Cables

Dolphin communication/charging cable kits are an all-in-one solution for mobile applications. Each cable kit powers the terminal, charges its main battery, and communicates with host or peripheral devices without the need for a cradle. Cable kits can support RS232 or USB communications and are available with U.K. or European power cords.

Protective Holster

Holsters provide convenient storage for terminals and protect them from damage in mobile environments. **The holster features a front pocket that holds an extra battery, a side pocket to hold an extra stylus, and a belt loop to secure the holster to a belt.**

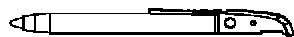
Protective Enclosure

Protective enclosures help seal and protect terminals from damage while providing full access to all terminal parts and features. These enclosures feature a swivel clip on the back that enables you to secure the enclosure to a belt. Enclosures also come with an adjustable shoulder strap for added convenience.

Stylus Kits

There are two stylus kits for each terminal type: one contains three styli and the other includes additional coiled tethers to secure the stylus to the terminal, which helps prevent loss.

Stylus for Dolphin 99EX with WLAN



Stylus for Dolphin 99EX with WWAN

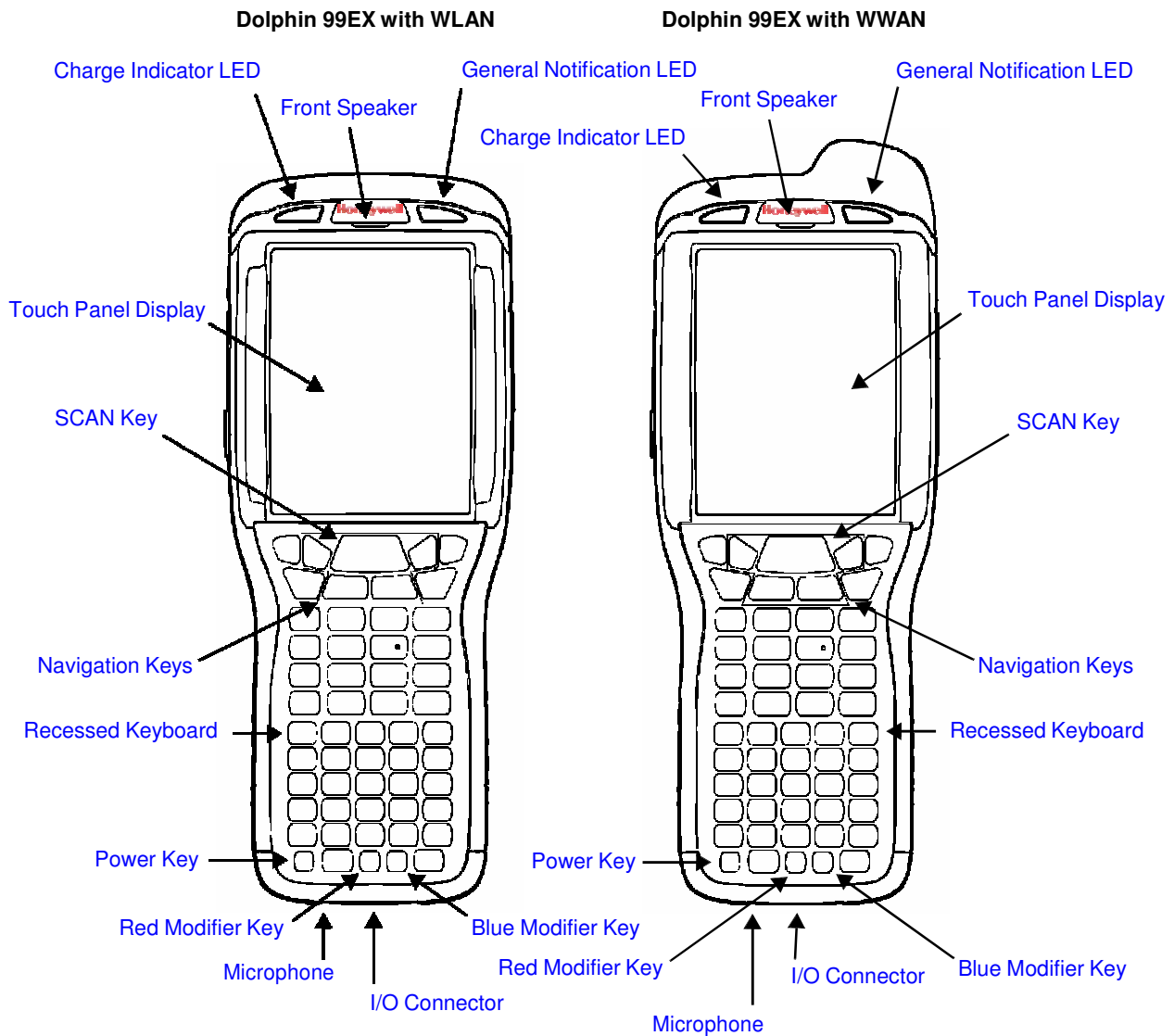


Battery Pack

The rechargeable battery pack (i.e., standard 3.7V, 3060mA Li-poly or extended 3.7V, 5000mA Li-ion) provides the main power for the terminal. For more information, see [Batteries](#) on page 3-13.

Preliminary Draft 1/19/11

Front Panel: 99EX



Note: The illustrations above show the 55-Key Full Alpha/Numeric Keyboard option. For a complete overview of the optional keyboards available for the 99EX, see [Using the Keyboards](#) on page 6-1.

For a description of each callout, see [Front Panel Features for the 99EX](#) on page 3-5.

Front Panel Features for the 99EX

Blue Modifier Key

See [Using the Modifier Keys](#) on page 6-3.

Front Speaker

The front speaker is the receiver for handset voice calls. See [GSM/HSPA+ Global Radio Dolphin Models](#) on page 9-5.

Preliminary Draft 1/19/11

General Notification LED

The light emitting diode (LED) located above the top right corner of the LCD display flashes and illuminates during resets, scanning/imaging, and taking a picture. This LED can be programmed by various software applications.

Charge Indicator LED

The light emitting diode (LED) located above the top left corner of the LCD display illuminates when the Power Tools **BattMon** application is enabled and the device is on AC charge. For more information, consult the Dolphin Power Tools User's Guide for Windows Embedded Handheld 6.5.


Microphone

The integrated microphone that provides audio input for handset and speakerphone voice calls. See [Voice Communication](#) on page 9-5.

Navigation Keys

The centrally located navigation keys enable you to move and position the cursor through software programs. The up and down arrows are programmed to perform specific functions when pressed in combination with the Blue and Red modifier keys. For more details, see [Using the Navigation Keys](#) on page 6-3.

Power Key

The power key  located at the lower left corner of the keypad puts the terminal in Suspend Mode or wakes the terminal from Suspend Mode. See [Software/Operating System Upgrades](#) on page 3-17.

Recessed Keyboard

There are three keyboard options: a 34-key alpha/numeric keyboard, a 43-key alpha/numeric keyboard or a 55-key full alpha/numeric keyboard. For a complete overview of each keyboard, see [Using the Keyboards](#) on page 6-1.

Red Modifier Key

See [Using the Modifier Keys](#) on page 6-3.

SCAN Key

The SCAN key is centrally located for easy access with the right or left hand. When pressed, the SCAN key activates the scanner/imager. The SCAN key also functions as a system wake-up control for the terminal.

Touch Panel Display

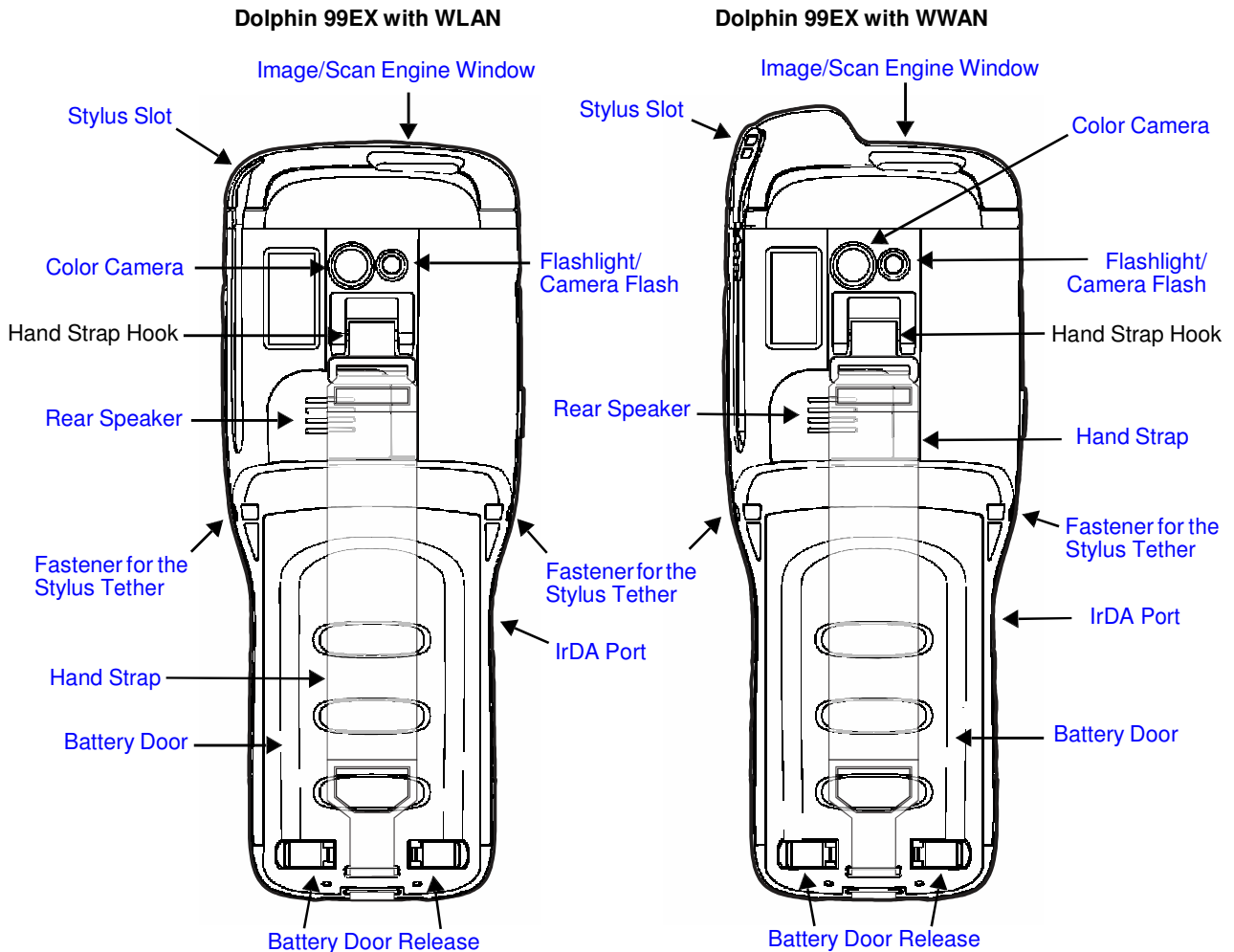
The color 3.7 inch liquid crystal display (LCD) touch panel is covered with an industrial, protective lens for greater durability. The video graphic array (VGA) display resolution is 480 X 640.

The **262K color (18 bit RGB)** LCD uses thin film transistor (TFT) technology. The touch panel backlight illuminates when the screen is touched, but not when the Backlight key is pressed. For more information, see [Backlight](#) on page 7-9.

The touch panel can be activated by the stylus (included with the terminal) or a finger. For more information, see [Using the Touch Panel](#) on page 3-12.

Preliminary Draft 1/19/11

Back Panel: 99EX



For a description of each callout, see [Back Panel Features for the 99EX](#) below.

Back Panel Features for the 99EX

Battery Door

The battery door secures the Li-ion or Li-poly battery pack in the terminal's battery well. For more information, see [Batteries](#) on page 3-13.

Color Camera


The 3.1-Megapixels Resolution (QXGA 2048H x 1536V) color camera provides easy picture capture with Automated Camera Control (ACC). Additional features include automated picture profiles and an Application Programming Interface (API).

Preliminary Draft 1/19/11

Fastener for the Stylus Tether

Stylus tethers can be purchased separately to help prevent accidental loss when the stylus is not stored in the stylus slot. A stylus tether is a coiled, elastic cord that tethers the stylus to the terminal. Secure one end of the cord to the back panel of the terminal and the other end to the stylus.

Flashlight/Camera Flash

The flashlight/camera flash is located on the back panel of the terminal. When used as a Flashlight, press the Blue key +  key to turn the flashlight on or off. When used as a Camera Flash with the terminal's color camera, the flash is controlled by the camera application.

Hand Strap

The 99EX comes with a removable, elastic hand strap.

Image/Scan Engine Window

The available image engines read and decode linear, stacked linear (e.g., PDF417), and 2D matrix bar code symbologies. The available image engines contain a laser aimer for greater accuracy. The laser apertures for the imaging engines' laser aimers are contained behind this window. For more details, see [Using the Scan Image Engine](#) on page 4-1.

Memory Card Socket and SIM Card Socket

The memory card socket provides the user with the option to expand the terminal's memory capacity using industry-standard microSD or microSDHC memory interfaces. The expansion socket is located under the main battery in the battery well.

When the protective SIM/memory card door, battery pack, and the battery door are properly installed, the memory card is sealed against moisture and particle intrusion, read/write data is stored securely, and the terminal's environmental rating is preserved; see [Installing a Memory Card](#) on page 3-10.

The card socket for the Subscriber Identity Module (SIM) is also located under the main battery in the battery well. See [SIM Card Installation](#) and [SIM Card Requirements](#), on page 9-3 for additional information.

Rear Speaker

The integrated rear speaker sounds audio signals as you scan bar code labels and enter data. The integrated speaker also supports playback of wave and MP3 files, software mixer, and Speakerphone for WWAN/GSM audio. The operating frequency range is 600-3000Hz at >90dB.

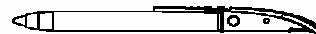
Stylus Slot

The stylus is used to operate the touch panel. The back panel of the terminal features a storage slot to hold the stylus when not in use. The stylus features a special tip for added accuracy and ease of use.

Stylus for Dolphin 99EX with WLAN



Stylus for Dolphin 99EX with WWAN

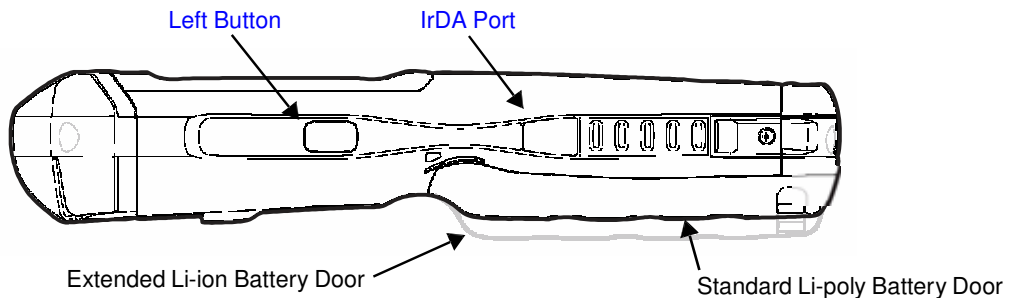


Preliminary Draft 1/19/11

Side Panels: 99EX

The left and the right side panels of the Dolphin contain different features.

Left Side



Left Button

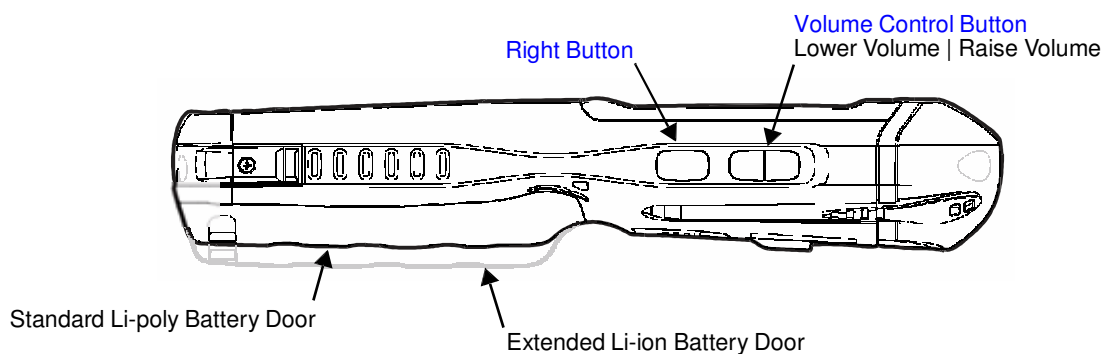
By default, the Left Button triggers the scanner/imager. You can reassign the button to launch applications or execute commands. For additional information, see [Changing Button Assignments](#) on page 7-4.

IrDA Port

The IrDA port enables infrared communication. The maximum data transfer speed is 115 kbps. For more information about using this port, see [Using the IrDA Port](#) on page 8-2.

Note: The infrared LED aperture is located behind the IrDA Port window.

Right Side



Right Button




By default, the Right Button triggers the scanner/imager. You can reassign the button to launch applications or execute commands. For additional information, see [Changing Button Assignments](#) on page 7-4.

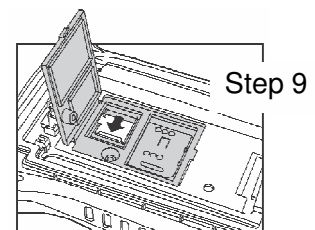
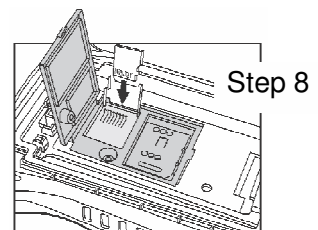
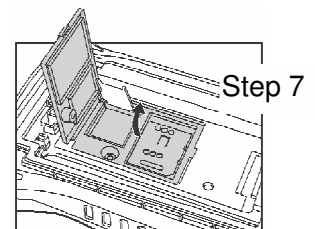
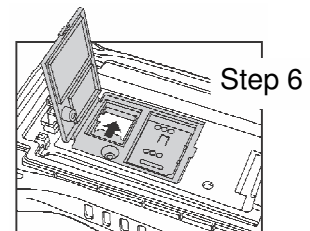
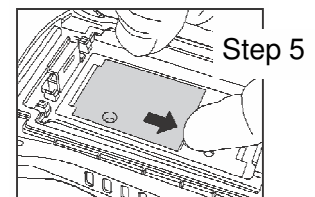
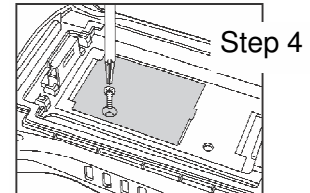
Volume Control Button

Press the top or bottom of the volume button to raise or lower the volume of the active speaker.

Preliminary Draft 1/19/11

Installing a Memory Card

1. Press the Power key  to put the terminal in Suspend Mode.
 2. Release the hand strap hook near the speaker on the back panel of the terminal.
 3. Remove the battery door and the battery.
 4. Remove the T6 torque screw securing the protective door closed.
 5. Lift up the lower left corner of the door to access the memory
 6. Unlock  the access door to the memory socket by sliding the door toward the IrDA port side of the terminal.
 7. Lift the door up to expose the socket.
 8. Slide the microSD or microSDHC card into the door of the socket.
- Note: Make sure the interface on the memory card is connected to the interface in the socket; align the notch on the card with the notch of the socket.
9. Close and lock  the access door.
 10. Close the protective door over the memory socket. Install and tighten the T6 torque screw to secure the door closed.
 11. Install the battery and the battery door. Reattach the hand strap to the terminal.
 12. Press the Power key or SCAN key to wake the terminal.



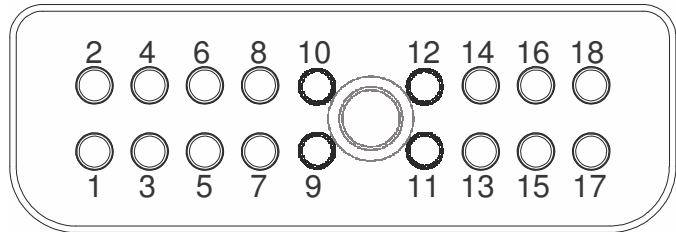
Installing a SIM Card

See [Installing a SIM Card](#) on page 9-4.

Preliminary Draft 1/19/11

Bottom Panel: 99EX

Pin	Description
1	GND
2	GND
3	USBC_DET
4	USBC_D-
5	RTS
6	USBC_D+
7	DTR
8	SPK
9	Audio_GND
10	MIC
11	CTS
12	USBH_D-
13	5V_OUT
14	USBH_D-
15	TXD
16	RXD
17	VCC
18	VCC



Note: Signals referenced are for a DTE device.

I/O Connector

The I/O connector powers the terminal, charges the main battery, and facilitates communication. All Dolphin peripherals are designed to work exclusively with this connector.

The I/O connector supports RS232 and high speed USB v2.0 communication. For RS232, the maximum communication speed is 115.2 Kbps with seven baud rate settings. For USB, the communication speed is up to 480 Mbps.

I/O Power Out

The I/O connector also provides power out (to peripheral devices) +5V at 500mA. This means that, with the proper cable, the terminal can power another device. By default, power out is disabled, but the 5V output may be enabled, see [Five Volt Control](#) on page 7-12.

Preliminary Draft 1/19/11

Using the Touch Panel

Honeywell defines proper use of the terminal touch panel as using a screen protector and proper stylus. Screen protectors maintain the ongoing integrity (i.e., prevent scratching) of the touch panel, which is why their use is recommended for applications that require a high to medium level of interface with the touch panel, such as signature capture for proof of delivery.

Honeywell advocates the use of screen protectors on all Dolphin devices. We recommend implementing a screen protector replacement program to ensure that screen protectors are replaced periodically when signs of damage/wear are noticeable. For general use, we recommend replacing the screen protector every thirty (30) days. However, replacement cycles vary according to the average level of touch panel use in your application.

Replacement screen protectors can be purchased directly from Honeywell. Please contact a Honeywell sales associate for details.

Honeywell also mandates use of a proper stylus, which is one that has a stylus tip radius of no less than 0.8 mm. Use of the Honeywell stylus included with the terminal is recommended at all times.

Honeywell warranty policy covers wear on the touch panel for the first twelve (12) months if a screen protector is applied and an approved stylus is used for the 12 month duration covered by the warranty.

Installing a Screen Protector

Dolphin terminals ship with a screen protector already installed. You will need to replace the screen protector at regular intervals.

1. After the current screen protector has been removed from the touch panel, clean the touch panel thoroughly with a clean, non-abrasive, lint-free cloth. Make sure there is no debris on the touch panel.
2. Align the exposed section of the protector with the bottom edge of the touch panel. Make sure that the screen protector is flush with each side of the touch panel. To reposition, lift up gently and reapply.
3. Press the screen protector firmly and carefully across the surface of the touch panel as you peel away the backing.
4. If necessary, smooth out any air pockets or bumps.

Healthcare Housing

Some configurations of the 99EX terminal are available with an external plastic housing that is designed to resist the effects of harsh chemicals in a healthcare environment. The plastic is crystalline in nature, which helps prevent chemicals from seeping through the housing.

Important! The following cleaning solutions have been tested to assure safe cleaning of your terminal's disinfectant-ready housing. They are the only solutions approved for use with these terminals. Damage caused by the use of cleaners other than those listed below may not be covered by the warranty.

- Sani-Cloth® HB wipes
- Sani-Cloth® Plus wipes
- Sani-Cloth® Bleach wipes
- Super Sani-Cloth® wipes

Preliminary Draft 1/19/11

- Isopropyl Alcohol wipes (70%)
- CaviWipes™
- Virex® 256
- 409® Glass and Surface Cleaner
- Windex® Blue
- Gentle dish soap and water

Batteries

There are three types of battery power: the main battery pack installed in the back panel, the backup battery located inside the terminal and the Real Time Clock (RTC) battery located inside the terminal. They are designed to work together to prevent data loss when the terminal is in use over long periods.

All batteries must be completely charged before using a Dolphin terminal for the first time!

Note: The RTC battery will preserve the Real Time Clock 60 days after the main battery and internal backup battery are fully depleted.

Main Battery Pack



We recommend use of Honeywell Li-ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

The standard 3.7 V, 11.3 watt hour Li-poly or extended 3.7 V, 18.5 watt hour Li-ion battery pack is the primary power source for the terminal. The Li-poly and Li-ion battery packs are designed to operate in a temperature range of -10° to 50°C (14° to 122°F).

Note: Honeywell recommends placing the terminal in [Software/Operating System Upgrades](#) (see page 3-17) before removing the battery cover.

Charging Options

When the main battery pack is installed in the terminal, use one of the following peripherals:

- [Dolphin 99EX HomeBase Device](#) (see page 12-1)
- [Dolphin 99EX eBase Device](#) (see page 13-1)
- [Dolphin 99EX Mobile Base Device](#) (see page 14-1)
- [Dolphin 99EX ChargeBase Device](#) (see page 15-1)
- [Dolphin 99EX Net Base Device](#) (see page 16-1)

When the main battery pack is not installed in the terminal:

- Place the battery pack in the [Dolphin 99EX QuadCharger Device](#) (see page 17-1)
- Place the battery pack in the [Auxiliary Battery Well](#) of the [Dolphin 99EX HomeBase Device](#) (see page 12-2) or [Dolphin 99EX eBase Device](#) (see page 13-1).

Charging Time

The standard 3.7V Li-poly battery pack requires 4.5 hours to charge completely before initial use.


The extended 3.7V Li-ion battery pack requires 6 hours to charge completely before initial use.

Honeywell recommends charging the Dolphin terminal for at least 24 hours prior to initial use to ensure the internal backup battery is fully charged.

Preliminary Draft 1/19/11

Battery Error Notification

If your terminal displays the following indicators, replace the main battery pack with a Honeywell Li-poly or Li-ion battery pack.

-  appears in the Title bar at the top of the touch screen.
- The General Notification LED flashes red.
- A Notification appears on the Tile bar at the bottom of the touch screen.

Storing Batteries

To maintain top performance from batteries, avoid storing batteries outside of the following temperature ranges:

- 14°F to 113°F (-10°C to +45°C) for short term storage of less than one month
- 32°F to 86°F (-0°C to +30°C) for long term storage

Do not store batteries in extremely high humidity. For prolonged storage, do not keep batteries stored in a charger that is connected to a power source.

Guidelines for Battery Pack Use and Disposal

The following are general guidelines for the safe use and disposal of batteries:

- We recommend use of Honeywell Li-ion or Li-poly battery packs. Use of any non-Honeywell battery may pose a personal hazard to the user.
- Replace defective batteries immediately; using a defective battery could damage the Dolphin terminal.
- Never throw a used battery in the trash. A battery contains heavy metals and should be recycled according to local guidelines.
- Do not use a battery in any other manner outside its intended use in Dolphin terminals and peripherals.
- Do not short-circuit a battery or throw it into a fire; it can explode and cause severe personal injury.
- Excessive discharge damages a battery. Recharge the battery when your terminal indicates low battery power.
- If you observe that the Honeywell battery supplied is physically damaged, please send it to Honeywell International Inc. or an authorized service center for inspection. Refer to the Product Service and Repair section of this guide.
- Although your battery can be recharged many times, the battery life is limited. Replace it after the battery is unable to hold an adequate charge.
- If you are not sure the battery or charger is working properly, send it to Honeywell International or an authorized service center for inspection.

Internal Backup Battery

Located inside the terminal, the backup battery is a 3.6 Volt nickel metal hydride (NiMH) battery.

The internal backup battery prevents the terminal from being reset if you need to remove and replace the main battery pack. It retains RAM data. If the terminal is left without the main battery pack for more than 30 minutes, the internal backup battery needs to be recharged to function according to its specifications.

Note: Data and programs stored in Flash memory are not lost even if the internal backup battery fails.

Preliminary Draft 1/19/11

Charging

The internal backup batteries are powered by the main battery pack. Therefore, charging the internal backup batteries require that the main battery pack be installed in the terminal and the terminal be connected to a charging device.

Note: Honeywell recommends placing the terminal in [Software/Operating System Upgrades](#) (see page 3-17) before removing the battery cover.

The internal backup battery must be fully charged before using the terminal for the first time. Honeywell recommends charging the Dolphin terminal for at least 24 hours prior to initial use to ensure the internal backup battery is fully charged. After that, if the internal backup battery becomes fully discharged of power, it requires a minimum of 30 hours of charging time to function normally.

Guidelines for Use

Follow these guidelines to maximize the life of the internal backup battery:

- Keep a charged Li-ion or Li-poly battery pack in the terminal; the backup battery prematurely discharges if there is not at least a partially charged battery in the terminal.
- Keep the terminal connected to power when the terminal is not in use.

Managing Battery Power

Letting the backup battery become fully discharged causes the terminal to lose all data in RAM. Honeywell recommends, you keep a charged battery pack in the terminal at all times to help prevent data loss. The internal battery discharges prematurely if there is not at least a partially charged battery in the terminal. When you remove a battery pack, insert another charged battery pack in the terminal immediately.

Default Critical and Low Battery Points

When the terminal is running on battery power (as opposed to external power), warnings are displayed when the battery reaches critical and low battery points. The warning points are determined by the following registry entry:

[HKEY_LOCAL_MACHINE\ControlPanel\Power]

There are two DWORD values in this registry entry: **MedState** and **LowState**.

The default values for these entries are as follows:

MedState=25%

This sets the Low Battery point to 25%. When the battery hits the percentage charge specified here, the user is notified.

LowState=10%


This sets the Critical Battery point to 10%. When the battery hits the percentage charge specified here, the user is notified.

Note: Warnings do not appear when the terminal is on external power.

Preliminary Draft 1/19/11

Setting Critical and Low Battery Points

Developers can reset the battery parameters in the registry from 0 (no warning) to 99 (would nearly always warn). You can review and set these battery points in the RegEdit Power Tool.

1. Tap  > **Power Tools** > **RegEdit**.
2. Drill down to **HKEY_LOCAL_MACHINE** > **ControlPanel** > **Power**.
3. Tap the **Value Name** to change the Value Data.
You can reset the Value Data from 0 (no warning) to 99 (would nearly always warn).
4. Tap **OK** to save changes.

For more information about the RegEdit Power Tool, refer to the Dolphin Power Tools User's Guide available for download at www.honeywellaidc.com.

Checking Battery Power

Tap  > **Settings** > **System** > **Power**.



For more information, see [Power](#) on page 7-16.

Note: Tapping the battery icon at the top of the screen does not open the Power applet with this version of Microsoft Windows Embedded Handheld.

Resetting the Terminal

There are three types of system resets: a soft reset, a hard reset and a factory reset. The soft and hard resets preserve all data stored in the file system. See Honeywell support for more information on how to perform a factory reset.



Soft Reset (Warm Boot)

A soft reset re-boots the device and preserves any objects created in RAM. You would perform a soft reset when:

- the terminal fails to respond.


Preliminary Draft 1/19/11



- after installing some software applications.
- after making changes to certain system settings, such as network cards.

1. Press and hold the CTRL  + ENTER  keys for approximately 5 seconds.
2. The decode and scan LEDs flash for approximately three seconds as the terminal resets.
3. When the reset is complete, the Home screen displays.

Hard Reset (Cold Boot)

A hard reset re-boots the device and clears RAM data. Files in the user store are not affected unless you are performing a software upgrade.

 A hard reset erases all of the data stored in RAM memory!


1. Press and hold the CTRL  + ESC  keys for approximately 5 seconds.
2. The decode and scan LEDs light for approximately 3 seconds.
3. The terminal re-initializes; see [Initialize the Mobile Computer](#) on page 2-8.

Software/Operating System Upgrades

Software upgrades reset the device back to a factory state. Back up all user files to a storage card or external memory prior to performing a software upgrade. All files in the user store will be erased during an operating system upgrade. Data stored in the IPSM directory is preserved during an operating system upgrade.

Suspend Mode

The terminal goes into Suspend Mode automatically when the terminal is inactive for a programmed period of time. You can program this time on the Advance tab of the Power System Setting; see [Power](#) on page 7-16.

To put the terminal into Suspend Mode manually, press the Power key  and the screen goes blank.

To wake the terminal from Suspend Mode, press the Power key  or SCAN key .

Hardware Maintenance

When needed, clean the image engine window and the LCD display with a clean, non-abrasive, lint-free cloth. The terminal can be cleaned with a damp cloth.

For additional information on hardware maintenance specific to the Dolphin Healthcare Housings, see [page 3-12](#).

Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Using the ScanImage Engine

Overview

The Dolphin terminal houses a compact image engine that instantly reads popular 1D and 2D bar codes and supports omni-directional aiming and decoding for greater flexibility in real-world settings. The image engine can also capture black and white digital images, such as signatures and pictures of damaged inventory.

With the latest CMOS-based technology, the engine works like a digital camera and enables black and white digital image capture, signature capture, and reading of OCR characters.

Angled Imaging

All imagers are installed at a 25 degree downward-facing angle for enhanced comfort and maneuverability while scanning.

Laser Safety

See [Laser Safety](#) on page 1-1.

LED Safety

See [LED Safety](#) on page 1-2.

Image Engine Specifications

Engines	1D	2D	Image Capture	Aiming Pattern	Omni-Directional Aiming
N5603SR/ER/HD	Y	Y	Y	N5603 Red High-Vis Aiming Pattern (page 4-5) See Laser Safety on page 1-1.	Y
N5600SR/ER/HD	Y	Y	Y	Capturing Images (page 4-6)	Y

N5603 Beam Divergence Angle

Engines	Horizontal Beam Divergence Angle (degrees)	Vertical Beam Divergence Angle (degrees)
N5603SR/HD	18.1	14.3
N5603ER	13.1	9.9

Preliminary Draft 1/19/11

Depth of Field

The depth of field measurements used the following parameters:

- Distances are measured from the front of the engine.
- +23 °C (+73 °F), 0 lux
- Photographic quality codes

Focus	N5603/N5600 High Density (HD)			N5603/N5600 Standard Range (SR)			N5603/N5600 Extended Range (ER)		
	Distance (in/cm)		Delta (in/cm)	Distance (in/cm)		Delta (in/cm)	Distance (in/cm)		Delta (in/cm)
	Near	Far		Near	Far		Near	Far	
3 mil C39/128	2.1 (5.3)	3.4 (8.6)	1.3 (3.3)	-	-	-	-	-	-
5 mil C39/128	1.3 (3.3)	4.8 (12.2)	3.5 (8.9)	2.7 (6.9)	6.2 (15.7)	3.5 (8.9)	5.8 (14.7)	9.0 (22.9)	3.2 (8.1)
7.5 mil C39/128	1.3 (3.3)	5.7 (14.5)	4.4 (11.2)	2.3 (5.8)	9.4 (23.9)	7.1 (18)	4.0 (10.2)	12.8 (32.5)	8.8 (22.4)
10 mil C39/128	1.3 (3.3)	5.6 (14.2)	4.3 (10.9)	1.3 (3.3)	13.5 (34.3)	12.2 (31)	2.7 (6.9)	17.6 (44.7)	14.9 (37.8)
15 mil C39/128	1.3 (3.3)	7.8 (19.8)	6.5 (16.5)	1.3 (3.3)	19.5 (49.5)	18.2 (46.2)	1.9 (4.8)	21.4 (54.4)	19.5 (49.5)
20 mil C39/128	2.1 (5.3)	9.4 (23.9)	7.3 (18.5)	2.0 (5.1)	20.1 (51.1)	18.1 (46)	2.8 (7.1)	26.5 (67.3)	23.7 (60.2)
100% UPC	1.9 (4.8)	7.1 (18)	5.2 (13.2)	1.8 (4.6)	17.0 (43.2)	15.2 (38.6)	2.7 (6.9)	20.9 (53.1)	18.2 (46.2)
5 mil PDF417	1.3 (3.3)	4.9 (12.4)	3.6 (9.1)	2.2 (5.6)	5.8 (14.7)	3.6 (9.1)	6.1 (15.5)	7.9 (20.1)	1.8 (4.6)
6.7 mil PDF417	1.3 (3.3)	4.9 (12.4)	3.6 (9.1)	1.9 (4.8)	6.6 (16.8)	4.7 (11.9)	4.6 (11.7)	9.9 (25.1)	5.3 (13.5)
10 mil PDF417	1.6 (4.1)	6.3 (16)	4.7 (11.9)	1.9 (4.8)	11.3 (28.7)	9.4 (23.9)	2.4 (6.1)	16.0 (40.6)	13.6 (34.5)
5 mil MicroPDF	1.7 (4.3)	3.3 (8.4)	1.6 (4.1)	-	-	-	-	-	-
5 mil Data Matrix	1.6 (4.1)	3.0 (7.6)	1.4 (3.6)	-	-	-	-	-	-
10 mil Data Matrix/Aztec	1.3 (3.3)	5.3 (13.5)	4.0 (10.2)	1.9 (4.8)	8.2 (20.8)	6.3 (16)	5.4 (13.7)	11.3 (28.7)	5.9 (15)
20 mil Data Matrix	1.9 (4.8)	8.0 (20.3)	6.1 (15.5)	1.9 (4.8)	16.0 (40.6)	14.1 (35.8)	2.4 (6.1)	19.9 (50.5)	17.5 (44.5)

Preliminary Draft 1/19/11

10 mil QR	3.3 (8.4)	5.0 (12.7)	3.5 (8.9)	2.1 (5.3)	7.2 (18.3)	5.1 (13)	4.1 (10.4)	10.6 (26.9)	6.5 (16.5)
20 mil QR	2.0 (5.1)	8.0 (20.3)	6.0 (15.2)	1.9 (4.8)	15.8 (40.1)	13.9 (35.3)	2.0 (5.1)	19.6 (49.8)	17.6 (44.7)
32 mil Maxicode	2.2 (5.6)	8.8 (22.4)	6.6 (16.8)	2.1 (5.3)	19.3 (49)	17.1 (43.4)	3.7 (9.4)	23.2 (58.9)	19.5 (49.5)

Supported Bar Code Symbolologies

Symbology Type	Symbology Name
1D Symbolologies	Codabar Code 3 of 9 Code 11 Code 32 Pharmaceutical (PARAF) Code 93 Code 128 EAN with Add-On EAN with Extended Coupon Code EAN-8 EAN-13 GS1-128 GS1 Databar Interleaved 2 or 5 ISBT 128 Matrix 2 of 5 MSI Plessey PosiCode Straight 2 of 5 IATA Straight 2 of 5 Industrial Telepen Trioptic Code UPC UPC-A UPC-E
2D Symbolologies	Aztec Codablock Code 16K Code 49 Composite Data Matrix GS1 Databar MaxiCode Micro PDF OCR PDF417 QR Code
Composite Codes	Aztec Mesa Codablock F EAN-UCC GS1 Databar-14
OCR	OCR US Money Font MICR (E 13 B) and SEMI Font OCR-A OCR-B
Postal Codes	Postnet and most international 4-state codes Australian Post British Post Canadian Post China Post Japanese Post KIX (Netherlands) Post Korea Post Planet Code

Preliminary Draft 1/19/11

Decoding

The terminal supports two types of image decoding for use in various bar code reading and imaging applications: full-area imaging and Advanced Linear Decoding (ALD).

Full-Area Imaging

Full-area imaging provides omni-directional reading of linear and non-linear 1D and 2D bar codes, OCR, signature capture, and picture taking. When reading all bar code types using full-area imaging, a positive read can be obtained from many positions; see [Aiming Options](#) on page 4-4. To achieve the best read, the aiming beam should be centered horizontally across the bar code.

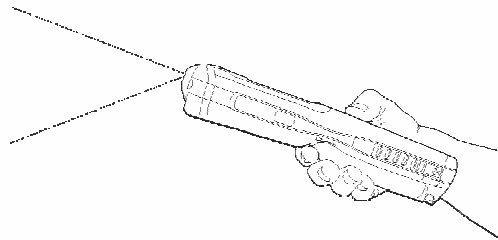
ALD


ALD provides fast reading of linear and stacked linear bar codes. To achieve a positive read when reading linear 1D and PDF417 bar codes, the green aiming beam should be centered horizontally across the bar code. When ALD is enabled, the reader does not read matrix or postal codes.

To Decode a Bar Code

The aiming beam should be oriented in line with the bar code to achieve optimal decoding. A range of 4-10 inches (10-25 cm) from the bar code is recommended.

1. Tap  > **Demos**  > **Scan Demo** .
2. Point the Dolphin terminal at the bar code.



3. Project the aiming beam or pattern by pressing and holding the SCAN key .
4. The scan LED lights red.
5. Center the aiming beam over the bar code; see [Aiming Options](#) on page 4-4.
6. When the bar code is successfully decoded, the decode LED lights green and the terminal beeps.
7. The bar code information is entered into the application in use.

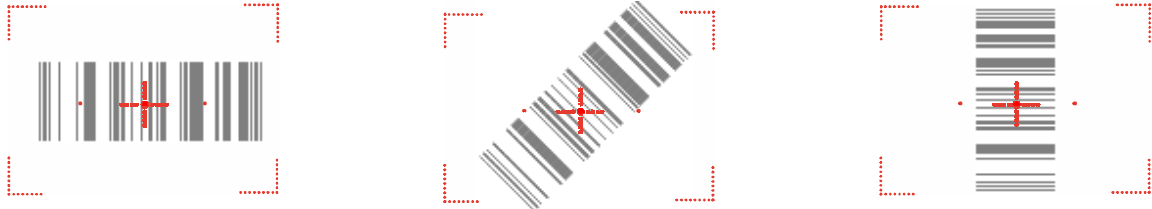
Aiming Options

The aiming beams are smaller when the terminal is held closer to the code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit whereas symbologies with larger bars or elements (mil size) should be read farther from the unit.

Preliminary Draft 1/19/11

N5603 Red High-Vis Aiming Pattern

If your Dolphin terminal is configured with a 5603 imager, high-vis aimers frame the bar code for more intuitive aiming. See [Laser Safety](#) on page 1-1.



N5600 Green Aiming Beam

Linear Bar Code



2D Matrix Symbol



Preliminary Draft 1/19/11

Capturing Images

The image-capture process is an intuitive, split-second operation for experienced users. By following the basic guidelines, new users can easily develop their own technique and, with practice, quickly learn to adapt it to different application environments.

Image Preview

When the imaging process is initiated, the touch screen displays a preview of the object. This is a live video image of what the imager is currently viewing. The live video image has a slightly degraded appearance compared to the captured image. This is normal.

Scan Key

On all 99EX terminals, the SCAN key captures images.

File Formats

File formats supported for image storage include Bitmap (BMP), JPEG (JPG) and Portable Network Graphics (PNG). The default file format for images is a grayscale JPG.



Compression

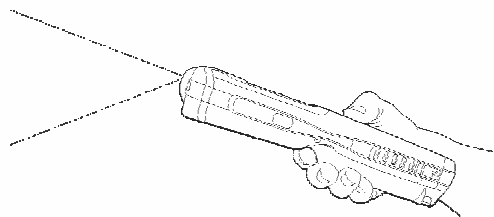
Digital images have a maximum image size of 640 x 480 pixels and may have up to a 256 grayscale image definition.


The image quality and related file size are determined by the data compression method used by the software application used to take images. The average size of the image file is approximately 4–8K. However, the size of the image depends on the content of the image - the more complex the content, the larger the file size.

Taking an Image

The following steps are basic guidelines for taking images:

1. Tap  > **Demos** > **Imaging Demo** .
2. Point the Dolphin terminal at the object.



3. To preview the image, press and hold the SCAN key .
4. The touch screen displays a preview of the object, and the decode and scan LEDs light red.
5. Adjust the terminal's position until the object appears on the screen the way you want it to appear in the image.
6. Hold the terminal still and release the SCAN key. The scan and decode LEDs flash red, the screen flashes, and the captured image appears on the screen.

Preliminary Draft 1/19/11

7. Unless otherwise specified by the application in use, the image is saved to the **\My Device\My Documents** folder.

Enabling the Aimer

If your Dolphin terminal is configured with the 5300 imager, you can enable the aiming pattern for imaging in the Imaging Demo. For details about the aimer, see [Capturing Images](#) on page 4-6.

1. Tap  > **Demos** > **Imaging Demo** > **Setup** menu > **Aimer**.



2. The aiming pattern is now enabled for imaging.

Uploading Images

Image files can be uploaded to a host workstation via Microsoft ActiveSync and a Dolphin communication peripheral or your wireless radio connection.

Note: You can download the most current version of ActiveSync from www.microsoft.com.

Note: Visit the Microsoft Windows 7 website for information on how to sync your music, pictures, contacts and calendars using Device Stage.

Note: Visit the Microsoft Windows Vista website for information on how to sync your music, pictures, contacts and calendars using Windows Mobile Device Center.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Preliminary Draft 1/19/11




Preliminary Draft 1/19/11

Using the Color Camera



Overview

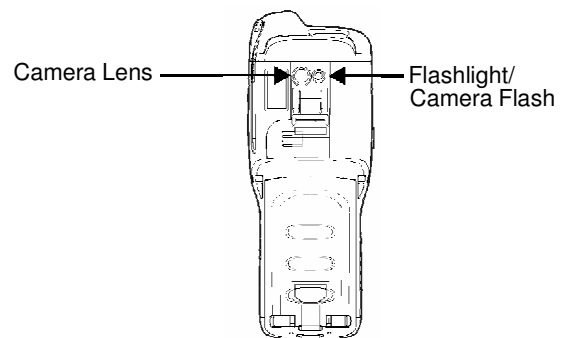
Dolphin 99EX terminals equipped with a 3.1-Megapixels Resolution color camera with Automated Camera Control (ACC), and an Application Programming Interface (API) provide easy integration of color picture and video capture into business applications. The camera lens and camera flash are located on the back panel of the terminal.

Taking a picture using the Camera Demo tool


1. Tap  > **Demos**  > **Camera Demo** .
2. Adjust the camera settings using the icon menu at the top of the display screen.

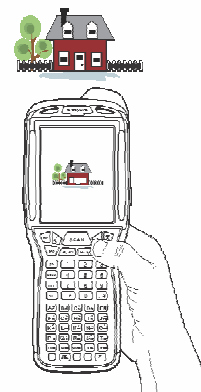


3. Point the terminal's camera lens at the object you want to capture. The camera lens is located on the back panel of the terminal.
4. Center the object in the touch screen display.
5. Press the ENT key  or tap **Snap** . The terminal's red LED illuminates during picture capture.



Note: Tap the green arrow  to review or edit your pictures.

Tap the green box  to exit the picture review/edit screen.



Preliminary Draft 1/19/11

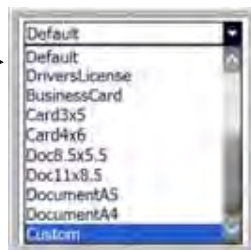
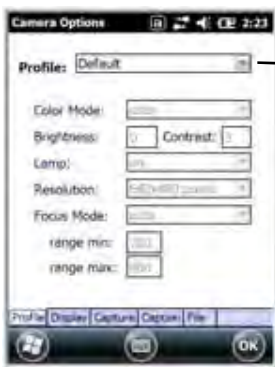
Options

Tap **Options** > **Camera**.



The Camera Options menu appears. There are five tabs of configurable options accessible from the Camera Options menu.

Profile Tab



The profile tab allows you to customize your camera settings, or choose from several predefined profiles designed to provide the best picture quality for common tasks.



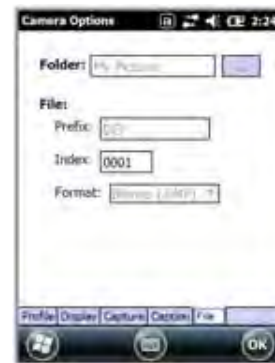
Capture Tab





Caption Tab



File Tab



Taking a picture using the Windows Embedded Handheld 6.5 Camera tool

1. Tap  > **Pictures & Videos** > **Camera**
2. Point the terminal's camera lens at the object you want to capture. The camera lens is located on the back panel of the terminal.
3. Center the object in the touch screen display.
4. Press the ENT key .
5. The touch screen displays the captured photo.

Preliminary Draft 1/19/11

Menu

Tap **Menu** on the Command Bar to adjust the camera settings, switch to video mode, and access additional camera options.

Item	Descriptions
Video	Activate Video Mode
Mode	Normal Mode, Burst Mode, Timer Mode
Resolution	Set picture resolution (i.e., 320 x 240, 640 x 480, 800 x 600, 1600 x 1200)
Zoom	Set zoom (i.e., x1, x2, x3, and x4)
Flash	Camera Flash On or Camera Flash Off
Focus	Focus On, Focus Off, Focus on Trigger, or Fixed-Focus
Brightness	Set the brightness setting from +2.0 EV to -2.0 EV in .5 EV increments
Full Screen	Switch to full screen mode
Options	Set General, Slide Show, Camera, and Video options
Focus	Manual focus adjustment

Options

Tap **Menu** > **Options**. The Options menu contains four screens:

General Tab



Slide Show Tab





Camera Tab



Video Tab



Recording Video

1. Tap  > **Pictures & Videos** > **Camera** > **Menu** > **Video**
2. Point the terminal's camera lens at the object you want to capture.
3. Press the ENT key  to start recording.
4. Tap Stop or press ENT to stop recording.

Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Using the Keyboards

Available Keyboards

There are four keyboard options in the 99EX series:

34-Key Alpha/Numeric
Keyboard



34-Key Numeric
(Calculator) Keyboard



43-Key Alpha/Numeric
Keyboard



55-Key Full Alpha/
Numeric Keyboard



All Keyboards Contain the Following:

- Backlit for easy viewing in various lighting conditions.
- Centrally located Scan key for both right- and left-hand operation.
- Color-coding so you can clearly see the most common keyboard combinations.
- Function, navigation, and modifier keys.

Keyboard Combinations

See [34-Key Alpha/Numeric Keyboard Combinations](#) on page 6-6.

See [34-Key Numeric \(Calculator\) Keyboard Combinations](#) on page 6-9.

See [43-Key Keyboard Combinations](#) on page 6-12.

See [55-Key Keyboard Combinations](#) on page 6-14.

Common Buttons
















See [Using the Function Keys](#) on page 6-2.

See [Using the Modifier Keys](#) on page 6-3.

See [Using the Navigation Keys](#) on page 6-3.








Preliminary Draft 1/19/11

Using the Function Keys

Name	Key	Function
Backlight		Turns the keyboard backlight on and off.
Flashlight		Turns the flashlight on and off. The flashlight is located on the back panel of the terminal.
Backspace (BKSP)	 34-Key  43-Key  55-Key	Moves the cursor back one space each time the key is pressed. If you are typing text, it deletes the previous character each time it is pressed.
Delete (DEL)	 34-Key  55-Key	Deletes the next character each time the key is pressed. This key only appears on the 34-key and 55-key keypad options.
Enter (ENT)		Confirms data entry.
Escape (ESC)		Cancels the current action.
Power Key		Puts the terminal in and wakes the terminal from Suspend Mode; see Software/Operating System Upgrades on page 3-17.
SCAN Key		Activates the scan and “wakes” the terminal from Sleep Mode. Its position allows convenient one-handed image-taking and/or bar code decoding.
Space (SP)	 34-Key  43-Key  55-Key	Moves the cursor one space.
Tab		Moves the cursor to the next tab stop or the next control (on a form).









Preliminary Draft 1/19/11

Using the Modifier Keys





Name	Key	Function
ALPHA	 34-Key	The ALPHA key enables you to toggle between the alpha and numeric modes. See ALPHA Key on page 6-5.
Blue and Red	 Blue  Red	The blue and red keys are used in combination with other keys to type special characters and perform system functions. Each key modifies only the next key pressed. Each keyboard is color-coded to indicate the character typed or function performed when specific keys are pressed immediately after the blue or red modifier key.
Number Lock (NUM)	 43-Key	The Number Lock key enables you to toggle between the alpha and numeric modes. See Number Lock (NUM) Key on page 6-11.
Shift (SFT)	 34-Key  43-Key  55-Key	The shift key modifies only the next key pressed; it must be pressed before each key you wish to modify. Shift toggles the keyboard between uppercase alphabet mode and lowercase alphabet mode. Press the shift key twice to toggle Caps Lock on and off. When Caps Lock is toggled on, characters are uppercase; when toggled off, characters are lowercase.

Using the Navigation Keys

Located in the center of each keyboard for easy access with either hand, the navigation keys navigate the cursor through application screens.

Key	Function
	Moves the cursor up one row or line.
	Moves the cursor down one row or line.
 & 	Raises the volume.
 & 	Lowers the volume.
 & 	Moves the cursor up one page.

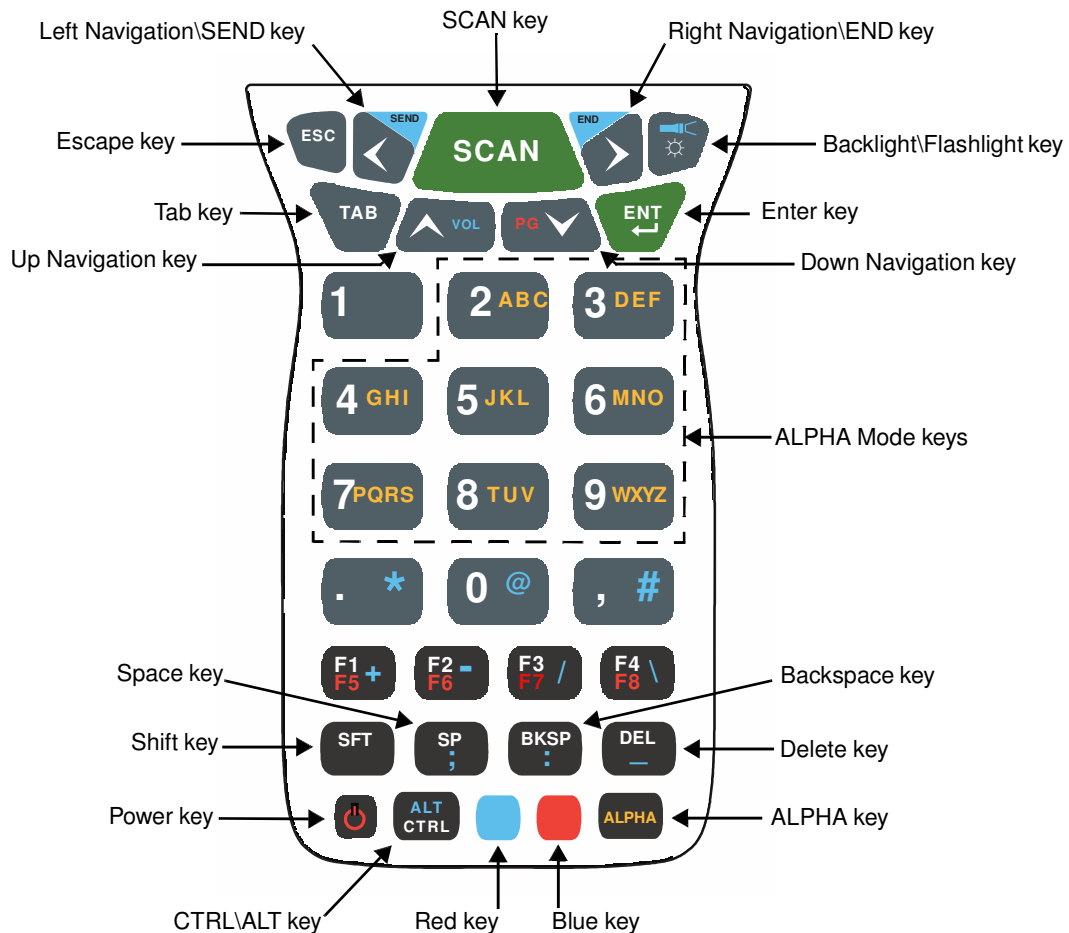
Preliminary Draft 1/19/11

Key	Function
 Red & 	Moves the cursor down one page.
	Moves the cursor one character to the right.
	Moves the cursor one character to the left.

Note: Additional functionality varies according to the application in use.

Preliminary Draft 1/19/11

34-Key Alpha/Numeric Keyboard



ALPHA Key

The ALPHA lock key enables you to toggle between the alpha and numeric keyboard modes. On the 34-Key Keyboard, numeric mode is the default. Press the ALPHA key once to switch to ALPHA lock mode. Press the ALPHA key again to exit the ALPHA lock mode.

Preliminary Draft 1/19/11

34-Key Alpha/Numeric Keyboard Combinations

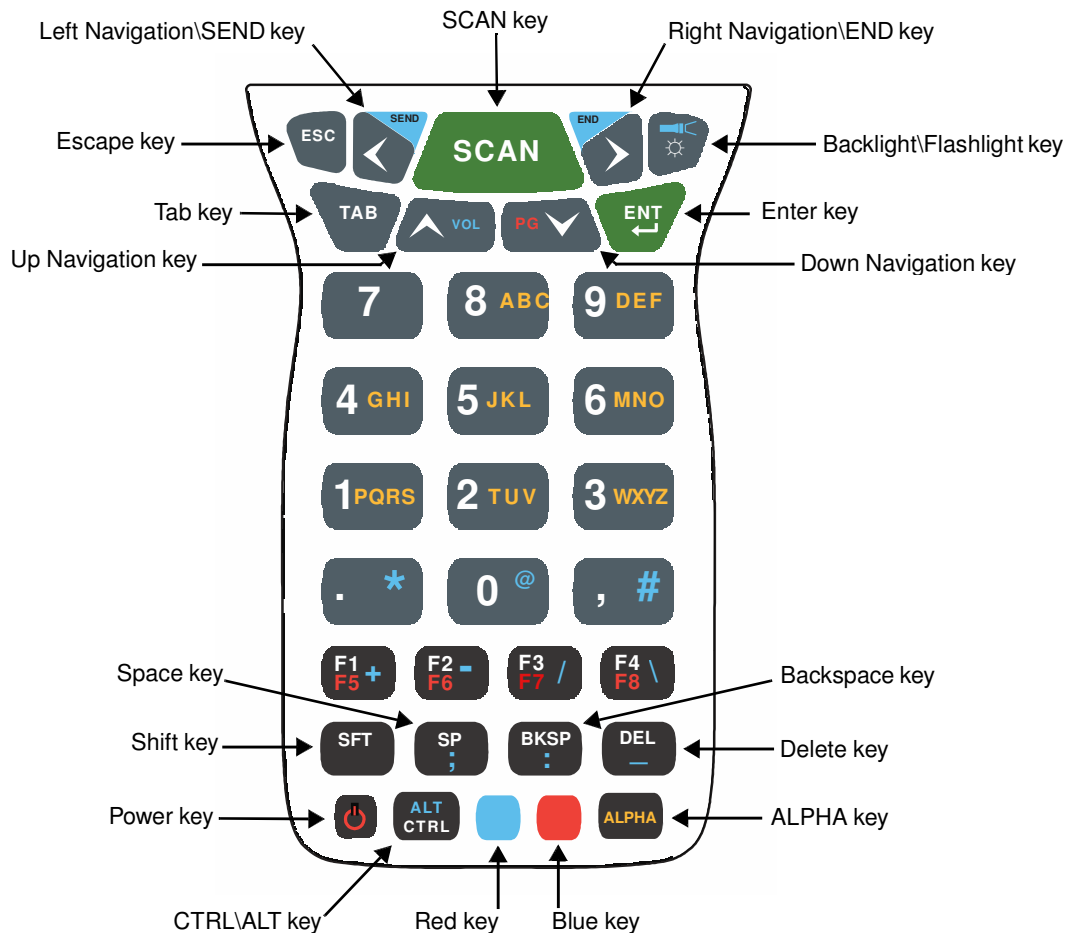
Key	NUM (Default)	Shift-NUM	ALPHA	Shift- ALPHA	Blue	Red
ESC	Escape					
Left	Left	Left	Left	Left	Send (Phone)	Left
Scan	Scan					
Right	Right	Right	Right	Right	End (Phone)	Right
Backlight	Toggles Keyboard Backlight On/Off				Toggles Flashlight On/Off	Toggles Keyboard Backlight On/ Off
TAB	Tab	Tab	Tab	Tab	Tab	Tab
Up	Up	Up	Up	Up	Volume Up	Prior
Down	Down	Down	Down	Down	Volume Down	Next
Enter	Return					
1	1	!				
2	2	@	a,b,c	A,B,C		
3	3	#	d,e,f	D,E,F		
4	4	\$	g,h,i	G,H,I		
5	5	%	j,k,l	J,K,L		
6	6	^	m,n,o	M,N,O		
7	7	& (ampersand)	p,q,r,s	P,Q,R,S		
8	8	* (multiply)	t,u,v	T,U,V		
9	9	(	w,x,y,z	W,X,Y,Z		
Period	. (period)	>	. (period)	>	* (multiply)	
0	0)			@	
Comma	, (comma)	<	, (comma)	<	#	

Preliminary Draft 1/19/11

Key	NUM (Default)	Shift-NUM	ALPHA	Shift- ALPHA	Blue	Red
F1	F1	F1	F1	F1	+	F5
F2	F2	F2	F2	F2	-	F6
F3	F3	F3	F3	F3	/	F7
F4	F4	F4	F4	F4	\	F8
SFT	Shift	Shift	Shift	Shift		
SP	Space	Space	Space	Space	;	Space
BKSP	Backspace	Backspace	Backspace	Backspace	:	Backspace
DEL	Delete	Delete	Delete	Delete	Underscore	Delete
Power	Off/On					
CTRL	Control		Control		Menu	
Blue	Blue		Blue		Blue	
Red	Red		Red			Red
ALPHA	Toggles between ALPHA mode and NUM Lock mode					

Preliminary Draft 1/19/11

34-Key Numeric (Calculator) Keyboard



ALPHA Key

The ALPHA lock key enables you to toggle between the alpha and numeric keyboard modes. On the 34-Key Keyboard, numeric mode is the default. Press the ALPHA key once to switch to ALPHA lock mode. Press the ALPHA key again to exit the ALPHA lock mode.

Preliminary Draft 1/19/11

34-Key Numeric (Calculator) Keyboard Combinations

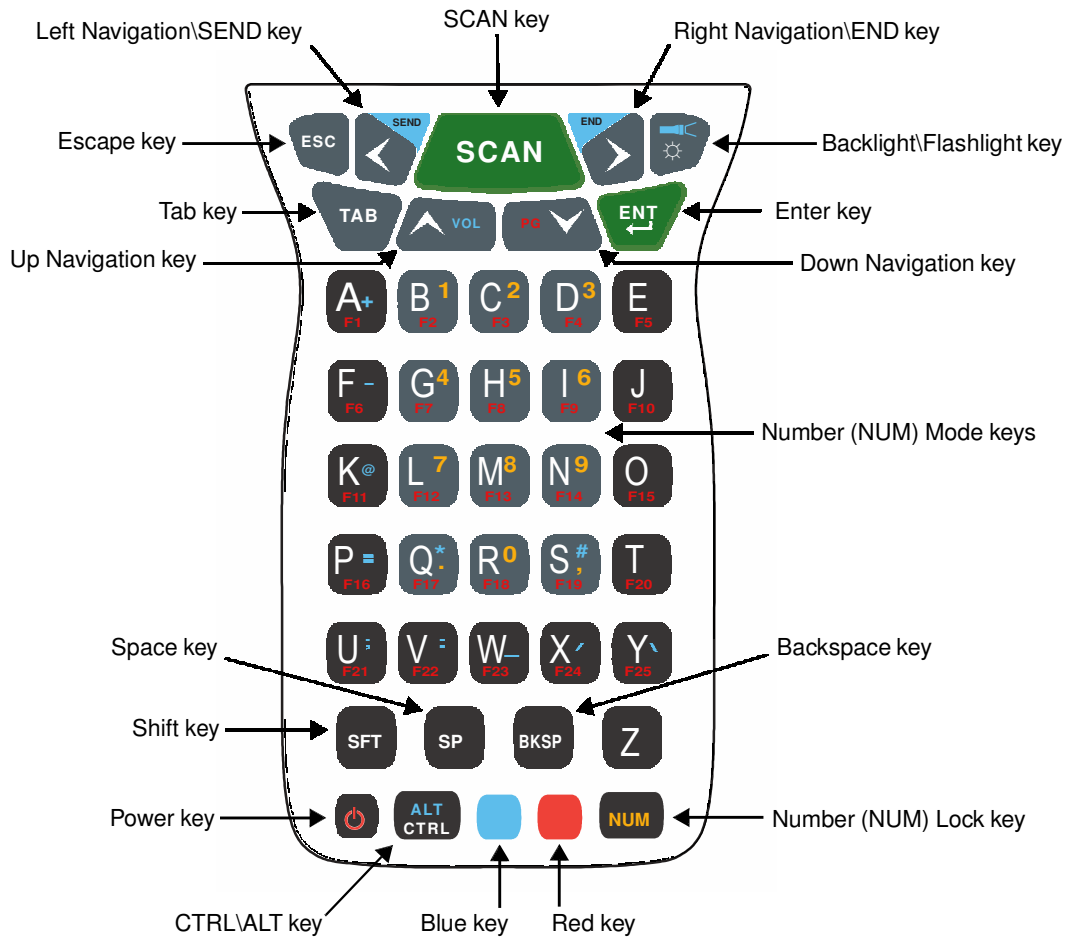
Key	NUM (Default)	Shift-NUM	ALPHA	Shift- ALPHA	Blue	Red
ESC	Escape					
Left	Left	Left	Left	Left	Send (Phone)	Left
Scan	Scan					
Right	Right	Right	Right	Right	End (Phone)	Right
Backlight	Toggles Keyboard Backlight On/Off				Toggles Flashlight On/Off	Toggles Keyboard Backlight On/ Off
TAB	Tab	Tab	Tab	Tab	Tab	Tab
Up	Up	Up	Up	Up	Volume Up	Prior
Down	Down	Down	Down	Down	Volume Down	Next
Enter	Return					
1	1	!				
2	2	@	a,b,c	A,B,C		
3	3	#	d,e,f	D,E,F		
4	4	\$	g,h,i	G,H,I		
5	5	%	j,k,l	J,K,L		
6	6	^	m,n,o	M,N,O		
7	7	& (ampersand)	p,q,r,s	P,Q,R,S		
8	8	* (multiply)	t,u,v	T,U,V		
9	9	(	w,x,y,z	W,X,Y,Z		
Period	. (period)	>	. (period)	>	* (multiply)	
0	0)			@	
Comma	, (comma)	<	, (comma)	<	#	

Preliminary Draft 1/19/11

Key	NUM (Default)	Shift-NUM	ALPHA	Shift- ALPHA	Blue	Red
F1	F1	F1	F1	F1	+	F5
F2	F2	F2	F2	F2	-	F6
F3	F3	F3	F3	F3	/	F7
F4	F4	F4	F4	F4	\	F8
SFT	Shift	Shift	Shift	Shift		
SP	Space	Space	Space	Space	;	Space
BKSP	Backspace	Backspace	Backspace	Backspace	:	Backspace
DEL	Delete	Delete	Delete	Delete	Underscore	Delete
Power	Off/On					
CTRL	Control		Control		Menu	
Blue	Blue		Blue		Blue	
Red	Red		Red			Red
ALPHA	Toggles between ALPHA mode and NUM Lock mode					

Preliminary Draft 1/19/11

43-Key Alpha/Numeric Keyboard



Number Lock (NUM) Key

The Number Lock key enables you to toggle between the alpha and numeric keyboard modes. On the 43-key keyboard, alpha mode is the default. Press the NUM key once to switch to NUM lock mode. Press the NUM key again to exit the NUM lock mode.

Preliminary Draft 1/19/11

43-Key Keyboard Combinations

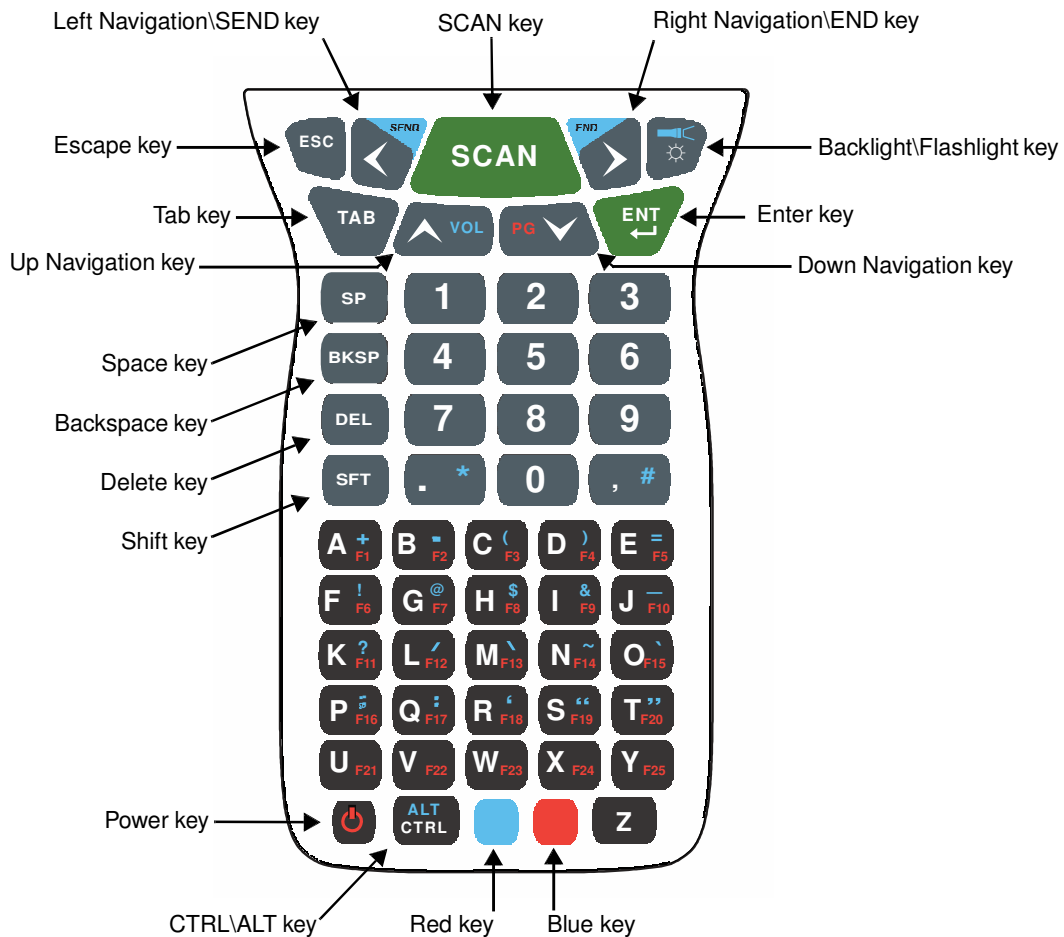
Key	ALPHA (Default)	Shift-ALPHA	NUM	Shift-NUM	Blue	Red
ESC	Escape					
Left	Left	Left	Left	Left	Send (Phone)	Left
Scan	Scan					
Right	Right	Right	Right	Right	End (Phone)	Right
Backlight	Toggles Keyboard Backlight On/Off				Toggles Flashlight On/Off	Toggles Keyboard Backlight On/ Off
TAB	Tab					
Up	Up	Up	Up	Up	Volume Up (Phone)	Prior
Down	Down	Down	Down	Down	Volume Down (Phone)	Next
Enter	Return					
A	a	A			+ (add)	F1
B	b	B	1	!		F2
C	c	C	2	@		F3
D	d	D	3	#		F4
E	e	E				F5
F	f	F			- (subtract)	F6
G	g	G	4	\$		F7
H	h	H	5	%		F8
I	i	I	6	^		F9
J	j	J				F10
K	k	K		@	@	F11

Preliminary Draft 1/19/11

Key	ALPHA (Default)	Shift-ALPHA	NUM	Shift-NUM	Blue	Red
L	l	L	7	&		F12
M	m	M	8	* (multiply)		F13
N	n	N	9	(		F14
O	o	O				F15
P	p	P			=	F16
Q	q	Q	. (period)	>	* (multiply)	F17
R	r	R	0	)		F18
S	s	S	, (comma)	<	#	F19
T	t	T				F20
U	u	U			;	F21
V	v	V			:	F22
W	w	W			<u>(underscore)</u>	F23
X	x	X			/	F24
Y	y	Y			\	F25
SFT	Shift		Shift			
SP	Space					
BKSP	Backspace					
Z	z	Z				
Power	Off/On					
CTRL	Control		Control		Menu	
Blue	Blue		Blue		Blue	
Red	Red		Red			Red
NUM	Toggles between NUM lock mode and ALPHA mode					

Preliminary Draft 1/19/11

55-Key Full Alpha/Numeric Keyboard



55-Key Keyboard Combinations

Key	Normal	Shift	Blue	Red
ESC	Escape			
Left	Left	Left	Send (Phone)	Left
Scan	Scan			
Right	Right	Right	End (Phone)	Right

Preliminary Draft 1/19/11

Key	Normal	Shift	Blue	Red
Backlight	Toggle Keyboard Backlight On/Off		Toggle Flashlight On/Off	Toggle Keyboard Backlight On/Off
TAB	Tab			
Up	Up	Up	Volume Up	Prior
Down	Down	Down	Volume Down	Next
Enter	Return			
SP	Space			
1	1	!	1	1
2	2	@	2	2
3		#	3	3
BKSP	Backspace			
4	4	\$	4	4
5	5	%	5	5
6	6	^	6	6
DEL	Delete			
7	7	&	7	7
8	8	*	8	8
9	9	(	9	9
SHIFT	Shift			
Period	. (period)	>	* (multiply)	. (period)
0	0	)	0	0
Comma	, (comma)	<	_ (underscore)	, (comma)
A	a	A	+ (add)	F1
B	b	B	- (subtract)	F2
C	c	C	(	F3

Preliminary Draft 1/19/11

Key	Normal	Shift	Blue	Red
D	d	D	)	F4
E	e	E	=	F5
F	f	F	!	F6
G	g	G	@	F7
H	h	H	\$	F8
I	i	I	&	F9
J	j	J	_ (underscore)	F10
K	k	K	?	F11
L	l	L	\	F12
M	m	M	/	F13
N	n	N	~	F14
O	o	O	'	F15
P	p	P	;	F16
Q	q	Q	:	F17
R	r	R	' (back quote)	F18
S	s	S	" (quotes)	F19
T	t	T	" (back quotes)	F20
U	u	U	u or U	F21
V	v	V	v or V	F22
W	w	W	w or W	F23
X	x	X	x or X	F24
Y	y	Y	y or Y	F25
Power	Off/On			
CTRL	Control		Menu	
Blue	Blue			

Preliminary Draft 1/19/11


Key	Normal	Shift	Blue	Red
Red	Red			
Z	z	Z	z or Z	z or Z

Preliminary Draft 1/19/11








Preliminary Draft 1/19/11

System Settings



Overview

Customized settings are available on the System Settings menu. Tap  > **Settings** and the settings screen opens.



Icon		Description
Bluetooth		Configures the Bluetooth radio. See Working with the Bluetooth Radio on page 10-1.
Clock & Alarms		Set the system clock, date, time and schedule alarms. See Clock & Alarms on page 7-2.
Lock		Password protect the terminal to limit access to the terminal.
Sounds & Notifications		Set the sound volume, enable or disable sounds for specific actions, set sound parameters for system notifications and enable or disable vibrator notification.
Home		Customize the look and the information displayed on the Home screen.
Connections		Establishes network connections settings. See Connections Menu on page 8-1.
Personal		Customizes buttons, and set SIP options. See Personal Menu on page 7-3.

Preliminary Draft 1/19/11

Icon	Description
	Adjusts system settings. See System Menu on page 7-7.
	Synchronizes your phone's contacts, calendar, tasks, text messages, music, photos, videos, and other documents with your My Phone account at http://myphone.microsoft.com .

Clock & Alarms

The Clock & Alarms settings can be accessed from the Home screen or the Settings Menu.

1. On the Home screen, tap the line that displays the time and date

OR

Tap  > **Settings** > **Clock & Alarms**,

2. The Clock Settings screen appears. This setting sets the system clock. All scheduled items run according to this setting.






Tap the arrow to the right of the time zone to open the drop down menu. Select the appropriate time zone from the menu. Set the correct time and date in the remaining fields and tap **OK** to save.

Preliminary Draft 1/19/11

Personal Menu

To access the Personal Menu, tap  > **Settings** > **Personal**. The screen opens displaying the Personal Menu.





Icon	Description
Buttons 	Program the side buttons to perform specific tasks. See Buttons on page 7-3.
Owner Information 	Enter your contact information. This information will appear on the Home screen.
Phone 	When the GSM radio is enabled, tap this icon to set up user parameters. See Setup Options on page 9-7.

Buttons

The Buttons setting programs certain keyboard buttons to launch applications or execute commands.

Enable HotKeys

Default Buttons setting assignments are inactive until you enable the HotKeys Power Tool.

Tap  > **Power Tools** and tap the HotKeys icon  **once**. HotKeys is enabled, and the button assignments in the Buttons setting are active.

For more information about the HotKeys Power Tool, refer to the Dolphin Power Tools User's Guide, which is available for download from the web at www.honeywellaidc.com.

Preliminary Draft 1/19/11

Changing Button Assignments

1. After HotKeys is enabled, tap  > **Settings** > **Personal**  > **Buttons** .



Note: The buttons that appear on this window are the only buttons that can be programmed via the Buttons setting. You cannot add buttons to this window.

2. To change button assignment, tap on the name of the button in the **Button** column, and then select a program or command in the **Assign a program** drop down list.
3. Tap **OK** to save.
4. Press the button to verify that the program is launched or action performed.

Available Applications

The **Assign a program** list contains the applications installed on the terminal. If there is a program installed that you would like to see in this list, paste a Shortcut to the program in the `\\Windows\Start Menu\Programs` folder. For instructions about creating shortcuts, see [Using File Explorer](#) on page 7-5.

Additional Functions

The **Assign a program** list also contains the following commands:

Command	Description
<Context Menu>	Performs the same function as tap-and-hold to open the context menu for the control.
<Input Panel>	Opens the soft input panel.
<Left Softkey>	Opens the menu or performs the action displayed on the left side of the Command bar.
<Left Trigger>	Activates the scanner/imager.
<None>	Nothing happens when the button is pressed.
<OK/Close>	Performs the same function as tapping OK on the screen.



Preliminary Draft 1/19/11

Command	Description
<Right Softkey>	Opens the menu or performs the action displayed on the right side of the Command bar.
<Right Trigger>	Activates the scanner/imager.
<Rotate Screen>	Changes the screen orientation from portrait to landscape.
<Scroll Down>	Scrolls down in the open application.
<Scroll Left>	Scrolls left in the open application.
<Scroll Right>	Scrolls right in the open application.
<Scroll Up>	Scrolls up in the open application.
<Start Menu>	Opens the Start menu.

Using File Explorer

If you do not see the program listed, you can either use File Explorer to move the program or ActiveSync on the workstation to create a shortcut to the program and place the shortcut in the Start Menu folder.

Note: We recommend that you Copy and Paste Shortcut so that you do not alter your program configurations by accident. Using Copy and Paste Shortcut (as opposed to Cut and Paste) ensures that the program files remain where they need to be for the system to find them to perform system functions.

1. Tap  > **File Explorer** , and navigate to the program (**My Device > Program Files**).



2. Tap and hold on the program, then tap **Copy** on the pop-up menu.

Preliminary Draft 1/19/11

3. Navigate to the Windows folder and open the Start Menu (**My Device > Windows > Start Menu > Programs**), tap and hold a blank area of the window, and tap **Paste Shortcut** on the pop-up menu.



Note: If there is no blank space available in the window, tap on **Menu > Edit > Paste Shortcut**.



4. Tap  to verify that the program now appears on the Start menu.

Using ActiveSync on the Workstation

Here, you are performing the same basic process as on the terminal, except that you are using the Explore utility (Windows Explorer) to copy and paste the shortcut.




1. Open **ActiveSync > Explore** and navigate to the program.
2. Right-click on the program and select **Create Shortcut**.
3. Select the shortcut, right-click, and select **Cut**.
4. Navigate to the **Start Menu** folder (**Windows > Start Menu > Programs**).
5. Right-click on an empty area and select **Paste Shortcut**.
6. On the terminal, tap the **Start** menu.
7. Verify that program appears.

Preliminary Draft 1/19/11









System Menu

The System menu enables you to verify and sometimes alter system parameters. To access the System menu, go to **Start > Settings > System**. Tap the appropriate icon to open that system setting.



Icon		See Page
About		See About on page 7-8.
Backlight		See Backlight on page 7-9.
Battery		See Battery on page 7-10.
Certificates		See Certificates on page 7-10.
Customer Feedback		See Customer Feedback on page 7-10.
Encryption		See Encryption on page 7-11.
Error Reporting		See Error Reporting on page 7-11.

Preliminary Draft 1/19/11

Icon		See Page
External GPS		See External GPS on page 7-11.
Five Volt Control		See Five Volt Control on page 7-12.
HISS		See HISS on page 7-12.
Managed Programs		See Managed Programs on page 7-14.
Memory		See Memory on page 7-14.
Power		See Power on page 7-16.
RIL		See RIL on page 7-15.
Regional Settings		See Regional Settings on page 7-16.
Remove Programs		See Remove Programs on page 7-17.
Screen		See Screen on page 7-18.
Task Manager		See Task Manager on page 7-19.

About

The About system setting displays specific information about the terminal. It contains three screens:

Version Screen Displays the information about the software, operating system, and processor.

Device ID Screen Displays the information the terminal uses to identify itself to other devices. It can be important to know this information if the Dolphin terminal is going to be part of a networked system of devices.

Device name: Displays the system's default name. (This is the name used by ActiveSync.)


Description: Displays the description of the device ID.

Preliminary Draft 1/19/11

Copyrights Screen Displays important copyright information.

Backlight

The Backlight system setting enables you to customize backlight functionality for the display. The backlight for the color display is user-defined. The Backlight system setting screen contains three tabs: Battery Power, External Power, and Brightness.

Tap  > **Settings** > **System** > **Backlight**.



The **Battery Power** tab determines the backlight timeout when the terminal is running on battery power.

The **External Power** tab determines the backlight timeout when the terminal is running on external power.

The options on the power tabs are the same.

Turn off backlight: 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.

The **Brightness** tab determines the backlight intensity. Move the slider to set the intensity of the backlight. The default is 8.

Preliminary Draft 1/19/11

Battery

The Battery system settings menu contains two tabs: Battery Status and Log Config. The **Battery Status** tab provides the status of the main battery pack (e.g., Battery Life Percentage, Voltage, Current, Temperature, Type, and Serial Number). The **Log Config** Tab allows you to enable and customize a time-event log.

Tap  > **Settings** > **System** > **Battery**

Battery Status Tab



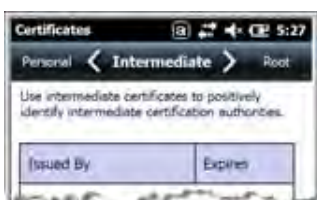
Log Config Tab



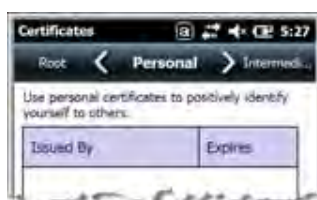
Certificates

Certificates shows you the certificates that are recognized by the operating system. It contains three screens.

Intermediate Screen



Personal Screen



Root Screen



Customer Feedback

Customer Feedback gives you the option to participate in the Microsoft Customer Experience Improvement Program.

Preliminary Draft 1/19/11

Encryption

Encryption gives you the option of encrypting files placed on storage cards so that those files cannot be read by any other device.



Error Reporting

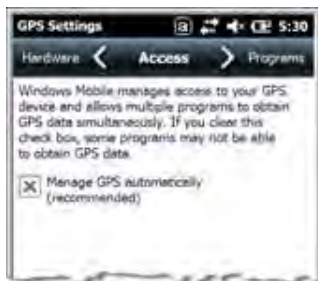
Error Reporting gives you the option of enabling or disabling the error reporting function of Windows Embedded Handheld 6.5.



External GPS

External GPS determines which port a third-party GPS software application can use to access the GPS receiver.

Battery Power Tab



External Power Tab



Brightness Tab



Note: You need the installation parameters from the GPS manufacturer to configure the connection.

Preliminary Draft 1/19/11

Five Volt Control

Five Volt Control gives you the option to enable 5V output.

Note: Do not leave the USB Host enabled at all times.

HISS

The Honeywell Integrated Smart Sensor (HISS) configuration utility enables you to configure the Dolphin's integrated accelerometer, light, and proximity sensors.

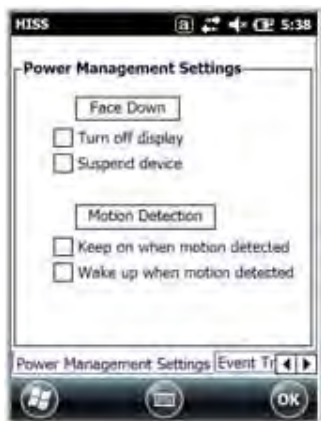
Tap  > **Settings** > **System** > **HISS**.

Motion Settings

Motion Settings enable you to customize how the terminal responds to motion and object proximity for advanced power management.



Display Settings enables or disables **Auto Display Orientation**. When enabled, the Dolphin's display automatically switches between portrait and landscape depending on how you hold the terminal.



Power Management Settings customize how the terminal responds to object proximity and motion.

- Save power by turning off the display or suspending the terminal when it is placed face down.
- Modify the Motion Detection settings to wake the terminal from suspend mode or prevent the terminal from entering suspend mode when motion is detected.

Preliminary Draft 1/19/11



Event Track displays an event log summary of detected free fall events **exceeding 2 ft. over 250 ms**. The summary includes the time, date, and duration of the most recent 50 events. Several options are provided for audible notification of free fall events.

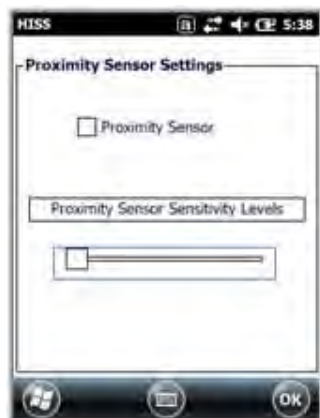
Light Settings



Light Sensor Settings customize how the terminal responds to the environmental lighting conditions in which the terminal is being used.

- **Enable Display Backlight Adjustment** automatically adjusts the brightness of the display screen depending on the environmental lighting conditions.
- **Enable Automatic Keypad Backlight** automatically turns the keypad backlight on or off depending on the environmental lighting conditions.

Proximity Settings



Proximity Sensor Settings customize how the terminal responds to objects detected close to the touch screen display (e.g., a person's face, carrying holster, or tabletop). When enabled, the terminal automatically turns the display off when it detects an object in close proximity to the entire touch panel display. The display turns back on when the sensor detects the removal of the object. Sensor sensitivity is adjusted using the slider bar.

Preliminary Draft 1/19/11

Accelerometer Calibration



Tap **Start** to calibrate the integrated accelerometer sensor used for motion detection. When calibration is complete, the "Accelerometer Calibration Finished!" message window appears.

Managed Programs

Managed Programs are a list of programs that are managed if enrolled to enterprise domain. Managed Programs is the client-side that works with the server product System Center Mobile Device Manager (MDM). MDM consists of MDM Gateway Server and one or more computers that run MDM Device Management Server; MDM Enrollment Server; and Microsoft SQL Server® 2005 databases.

It lets system administrators:

- provide an authenticated connection to LOB applications, managed Group Policy, and application packages.
- use Group Policy and software packages to manage the enrolled Windows phones (enforce policy, wipe devices, etc.).
- manage the requests for and retrieving of certificates for devices and for creating the Active Directory® Domain Service objects that represent these devices. By using these objects, you can manage the devices as if they were members of a domain.

Memory

The Memory system setting displays capacity and usage statistics for both RAM (volatile) and IPSM/ Storage Card (non-volatile) memory. Access this setting whenever you receive system messages about memory.

You cannot change the terminal's memory allocation in the Memory system setting. To change the memory allocation, you need to use the SetRAM Power Tool (**Start > Power Tools > SetRAM**). For more details, please refer to the Honeywell Power Tools User's Guide, which is available for download from www.honeywellaidc.com.

Preliminary Draft 1/19/11

There are two screens: Main and Storage Card.

Main Screen



This screen displays the usage statistics of the on-board, volatile RAM memory.

Columns:

Storage = RAM memory used to store programs and program data.
Program = RAM memory used to run programs.

Rows:

Total = Displays the current MB of memory allocated for use.
In use = Displays the total MB of that allocated memory being used.
Free = Displays the total MB of memory available.

Storage Card Screen



This screen displays the current capacity and usage statistics of the selected memory type: IPSM or Storage Card.

Select the memory type from the drop-down list. IPSM is selected by default.

Total storage card memory=
The total MB of memory capacity of IPSM or Storage Card.
In use = The MB currently being used.
Free = The MB that is still available for use.

Note: The IPSM partition is fixed at 128MB and cannot be increased in size.

IPSM—Short for Internal Persistent Storage Manager, this is the on-board Flash memory that is non-volatile. This memory is non-volatile, data or programs stored in IPSM are not affected when power is removed or the operating system is upgraded. Autoinstall programs, for example, are stored in \\IPSM\Honeywell\Autoinstall so that they are always installed after a operating system upgrade or factory reset. See Honeywell support for more information on how to perform a factory reset.

Storage Card—You can install one memory card in Dolphin terminals (see [Installing a Memory Card](#) on page 3-10). If a storage card is installed in the terminal, you can select it in the drop-down list and see capacity and usage statistics for the card.

RIL

The RIL Information screen displays useful statistics for the GSM WAN Voice module (PH8).

To verify whether or not the GSM radio is enabled, check the [Dolphin Wireless Manager](#) (see page 8-6).

Preliminary Draft 1/19/11

Power

Power system settings contains two tabs: Battery and Advanced.

Battery Tab



For more information, see [Batteries](#) on page 3-13.

Advanced Tab



Determines power time-outs.

For **On battery power**, select from the drop-down list, the number of minutes of inactivity you want to pass before the terminal powers off when running on battery power.

For **On external power**, select from the drop-down list, the number of minutes of inactivity you want to pass before the terminal powers off when running on external power.

Note: You can also set automatic turn-off times for the terminal to conserve power. When the terminal is “turned off,” that means that it goes into Suspend Mode, see [Software/Operating System Upgrades](#) on page 3-17.

Regional Settings

Regional Settings enables you to customize the appearance and formatting to your geographic region. Specifically, you can customize numbers (i.e., number of decimal places allowed), currency (i.e., using the \$ or € symbol), time, and date. These specifications apply to all screens, including the Home screen. The Region tab displays an overview of the region selected in the drop-down list at the top.

The terminal is loaded with a number of pre-programmed regional settings. Select one from the list and the results appear on the screen. To see specific settings or to change a specific setting, tap on one of the tabs, make the change, and tap **OK** to save it.

Preliminary Draft 1/19/11

Remove Programs

Remove Programs enables you to remove programs installed on the terminal. Use this setting to troubleshoot when you receive messages that the terminal is out of memory. The programs removed are removed from RAM memory. Any program (usually CAB or DLL files) stored in the Autoinstall folder (**My Device > IPSM > Honeywell > Autoinstall**) will re-install after the next hard reset, operating system upgrade or a factory reset.

For information about the hard reset process, see [Hard Reset \(Cold Boot\)](#) on page 3-17. See Honeywell support for more information on how to perform a factory reset.

1. Tap **Remove Programs**. In the list, select the program you want to remove.



2. Tap **Remove**. The following message appears:



3. Tap **Yes**. Wait while the program is removed.
4. Verify that the program no longer appears in the list.

Preliminary Draft 1/19/11

Screen

The Screen system setting contains three screens: General, Clear Type, and Text Size.

General Screen



Orientation

The General screen enables you to set the dynamic screen rotation. Three choices of screen orientation are supported: Portrait, Landscape (right-handed), and Landscape (left-handed).

Align Screen

The General Tab also allows you to re-align the screen. You need to re-align the screen if tapping buttons or icons with the stylus no longer seems to work appropriately.

Tapping **Align Screen** brings up the align screen window where you are guided to tap a target several times. This recalibrates how the touch screen receives input.

- Alignment should always be performed with a stylus designed for touch panel applications. The small point is required for accurate calibration.
- Press the stylus firmly into the center of the cross-hair target once and release. Do not “double-tap” the target.

ClearType Screen



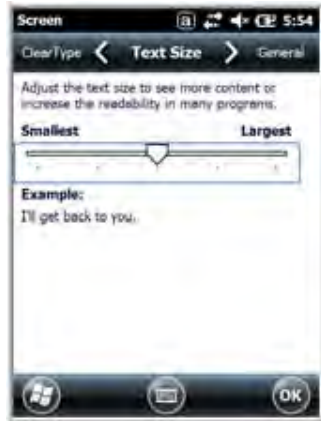
The display supports ClearType font rendering, which is a Microsoft technology that dramatically increases the readability of text on LCD displays.

To enable ClearType font rendering, select **Enable ClearType** and tap **OK**.

For more information about ClearType font rendering, visit: www.microsoft.com/typography/WhatIsClearType.aspx.

Preliminary Draft 1/19/11

Text Size Screen



The Text Size screen enables you to perform font scaling within certain views of the:

- Home screen,
- Contacts,
- Calendar,
- Messaging, and
- Tasks.

Font scaling means that you can increase or decrease the point size of the font on application windows.

To change the font size, move the slider toward **Smallest** or **Largest**. The Example text changes to reflect the font change. Tap **OK** to save the new font size setting.

Task Manager

The Task Manager provides information about applications and processes running on your mobile computer. You can use the Task Manager to monitor the memory and CPU usage of specific applications and processes. Check the Task Manager when you are receiving out of memory errors or when the mobile computer is running slowly.



Application	Mem	CPU
ActiveSync	628K	0 %
File Explorer	196K	0 %
Task Manager	92.0K	0 %

Preliminary Draft 1/19/11

Using the Task Manager

Applications



To view the status of the programs running on your mobile computer, tap the **Menu** button at the bottom of the screen, then tap **View > Applications**.

From the application list, you can:

- Tap and hold on an application, then tap **Switch To** on the pop-up menu.
- Tap and hold on an application, then tap **End Task** or **End All Tasks** on the pop-up menu.

Note: Anytime you stop a running program, it frees up RAM memory. Be advised that, when you stop a program here, any unsaved data in that program is lost. To free up memory without risking data loss, return to the running program, save your data, and close the application.

Processes



To view information about the processes running on the mobile computer, tap the **Menu** button at the bottom of the screen, then tap **View > Processes**.






Preliminary Draft 1/19/11

Communication

Connections Menu

The Connections system setting provides access to the terminal's various wireless communication options.



Icon		Tapping this icon...
Beam		Enables infrared communication. See Receiving Data on page 8-3.
Connections		Opens Microsoft's connections manager. See Connections Manager on page 8-4.
Domain Enroll		Opens the Enrollment screen for connecting your phone with company resources. Note: System administrator password is required for domain enrollment.
USB to PC		Enables advanced wired USB to PC communication via sync software. See Communication on page 8-8.
Wi-Fi		Enables you to configure Wireless Zero Config (WZC). This icon appears only if the 802.11a/b/g driver is loaded on the terminal and the Honeywell WLAN Security Supplicant is not loaded. By default, the Wireless Zero Config is disabled and the supplicant is loaded. This icon appears only if you removed the supplicant and cold booted the terminal.

Note: All server-assigned IP addresses use Dynamic Host Configuration Protocol (DHCP).

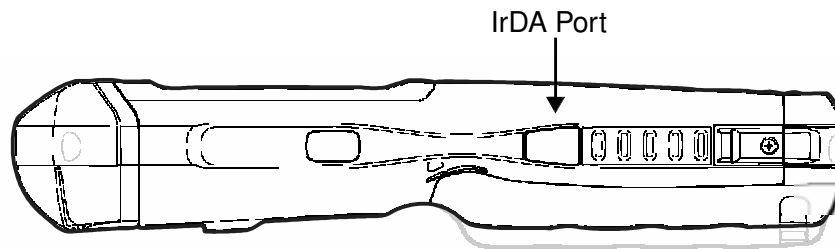
Note: The Dolphin Wireless Manager controls the wireless radios installed in the terminal, see [Dolphin Wireless Manager Window](#) on page 8-6. for additional information.

Preliminary Draft 1/19/11

Using the IrDA Port

Using the IrDA port, you can send and receive data between the terminal and other devices equipped with infrared. This can include, but is not limited to, Windows Embedded Handheld information such as Contacts and Tasks, as well as software upgrades.

IrDA Port Location



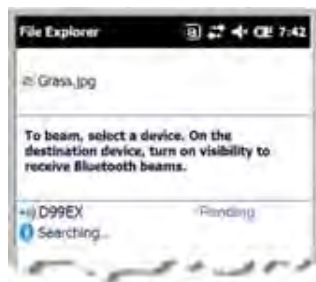
To send or receive, the IrDA ports of both devices - whether it is two terminals, or a terminal and a host device - must be aligned with each other and within a close range. The maximum data transfer speed is 115 Kbps.

Sending Data

1. Align the IrDA ports.
2. Open the program where you created the item you want to send and locate the item in the list. You can also beam files, but not folders, from File Explorer.
3. Tap and hold the item and select **Beam File**.

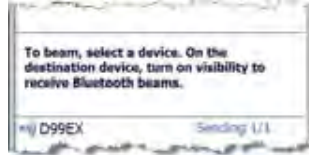


4. The IrDA port searches for a receiving IrDA port in the vicinity. The selected device reads "Pending."

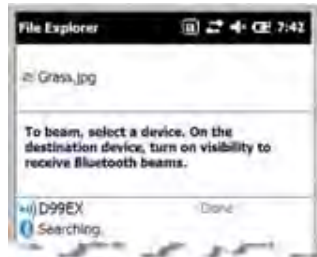


Preliminary Draft 1/19/11

5. When the IrDA port finds the aligned IrDA port, it immediately starts sending the selected file. The selected device reads "Sending."



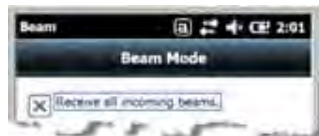
6. When the file transfer is complete, the selected device reads "Done."



Receiving Data

The Beam Setting must be set to receive all incoming beams from other infrared devices.

1. Verify that beam settings are set to receive. Tap  > **Settings** > **Connections** > **Beam**. The Beam Settings window should appear as follows:



2. Align the IrDA ports.
3. Have the owner of the other device send the data to you.
4. Your terminal automatically begins receiving the data.
5. A popup message appears asking if you want to save the incoming file.
6. Tap **Yes** to receive the file.

Preliminary Draft 1/19/11

Connections Manager

Microsoft's Connections Manager sets up multiple network connections to Internet Service Providers (ISPs) via external modem.

Do NOT enter connection parameters in the Connections Manager if:

- You are using one of the on-board wireless radios to connect to a network.
The Dolphin terminal uses the settings from each radio's configuration utility to connect.
- You are using Wireless Zero Config. By default, WZC is disabled on Dolphin terminals.

To Access the Connections Manager

Tap  > **Settings** > **Connections**  > **Connections** .



Tasks

The Tasks screen enables you to initially configure, and then manage network settings when using a modem. Select an item in this list and then complete the setup screens that follow with the appropriate information for your network.

My ISP

The links under this heading enables you to add and manage modem connections to an ISP. To complete the setup screens, obtain the following information from your ISP:

- ISP dial-up access telephone number
- Username
- Password
- TCP/IP settings

My Work Network

These links enable you to establish the following connections types:

- Modem
- Virtual Private Network (VPN)

Preliminary Draft 1/19/11

- Proxy server connection

Note: If you are connected to your ISP or private network during synchronization, the terminal should download the proper proxy settings during synchronization with the PC. If these settings are not on your PC or need to be changed, ask your ISP or network administrator for the proxy server name, server type, port, type of Socks protocol used, and your user name and password.

To complete the setup screens, obtain the network parameters from your system administrator.

Modify an Existing Connection

Manage Existing Connections appears on the Connections tab after at least one network connection has been established.

Tap **Manage Existing Connections** on the Horizontal scroll and follow the setup screens.



Advanced

The Advanced screen enables you to select the default network, dialing rules, and IP address exceptions for modem connections.




Note: You should not need to change Advanced settings because most ISPs now use DHCP addresses.


Preliminary Draft 1/19/11

Dolphin Wireless Manager

The Dolphin Wireless Manager provides a centralized interface that enables and disables all the on-board radios. Each radio has its own configuration program. The Dolphin Wireless Manager also provides shortcuts to the configuration utilities for each radio.

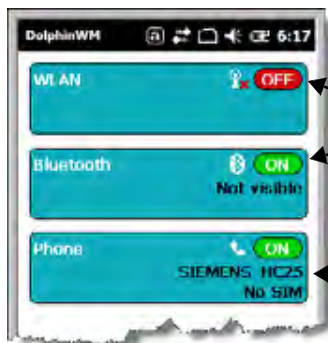
Tap  on the Home screen to access the **Dolphin Wireless Manager**.

OR

1. Tap once on the Title bar to access the Horizontal Scroll bar.
2. Tap .
3. Select, "Dolphin Wireless Manager".




Dolphin Wireless Manager Window



These buttons show you the state of the radio.

If applicable, information about the radio appears when the radio is activated.

Enabling the Radios

1. Tap  on the Home screen to access the **Dolphin Wireless Manager**.



2. Tap anywhere inside the rectangle or the **OFF** button inside the rectangle.

Preliminary Draft 1/19/11

3. The radio begins activating.



4. When the radio is activated (i.e., transmitting a signal), the **OFF** button changes to **ON**.



Note: If applicable, information about the radio appears in the rectangle.

Accessing Radio Configuration Utilities

Each of the four radios has its own configuration utilities that you can access through the **Menu**.



There are four radio configuration utilities:

For **802.11a/b/g/n**: Tap **WLAN Settings** and the Honeywell WLAN Security Supplicant opens.
The [Honeywell WLAN Security Supplicant User's Guide](#) is available for download from the Dolphin 99EX product page at www.honeywellaidc.com.

For **Bluetooth**: Tap **Bluetooth Settings** and the Bluetooth Settings open.
For details, see [Working with the Bluetooth Radio](#) on page 10-1.

For **GSM/HSDPA**: Tap **Phone Settings** and the Phone opens.
For details, see [Working with Wireless Wide Area Networking \(WWAN\)](#) on page 9-1.

For **GSM/CDMA**: Tap **Gobi Settings** and the Gobi Manager opens. For details, see [Gobi Manager](#) on page 9-13.

Preliminary Draft 1/19/11

Communication

To synchronize data between the terminal and the workstation, ActiveSync (version 4.5 or higher) or Windows Mobile Device Center must be installed and configured for the appropriate communication type on the host workstation and the Dolphin terminal.

Dolphin terminals ship with ActiveSync already installed. Therefore, if ActiveSync is already installed on the host workstation, you just need to connect the Dolphin terminal to the host workstation (via Dolphin peripheral) to initiate communication.

If ActiveSync 4.5 or higher is not installed on the host workstation, you can download and install the most current version of ActiveSync from <http://www.microsoft.com/> from www.microsoft.com.

Note: ActiveSync on your Dolphin terminal works with Windows Mobile Device Center on host workstations running Windows Vista or Windows 7 and with ActiveSync on host workstations running Windows XP. For detailed information on ActiveSync and WMDC visit Microsoft's Windows Mobile Web site.



When communicating via ActiveSync or Windows Mobile Device Center, your terminal is designed to be connected to the host workstation with a communication peripheral sold/manufactured by Honeywell, such as the charge/communication cable. Use of any peripheral not sold/manufactured by Honeywell may cause damage not covered by the warranty.

Capabilities

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

Communication Types

The Dolphin terminal supports the following types of communication via ActiveSync through its **I/O Connector** (see page 3-11) on the bottom panel:

USB The USB cable and hardware peripherals allow the terminal to communicate with a workstation or to networked through a USB hub. The Dolphin terminal supports high-speed USB communication (USB 2.0); maximum data transfer rate is 480 Mbps. The Dolphin terminal defaults to USB communication out of the box.

RS232 The RS232 cable allows the terminal to communicate with a workstation, modem, or any RS232 device. Maximum data transfer rate is 115 Kbps.

Hardware Requirements for Setup

- Dolphin communication peripheral or cable
- Dolphin power cable from Honeywell
- USB cable (for USB communication)
- Serial cable (for RS232 communication)

Software Requirements for Communication

- To synchronize successfully, ActiveSync (v4.5 or higher) or Windows Mobile Device Center must be configured for same communication type on both the host workstation and the Dolphin terminal.

Preliminary Draft 1/19/11

ActiveSync or Windows Mobile Device Center must be setup on your workstation before you initiate synchronization from the terminal for the first time.

- Windows 98 Second Edition, Windows Me, Windows 2000, Windows NT (4.0 SP6 or higher), Windows XP, Windows Vista, and Windows 7 operating systems.

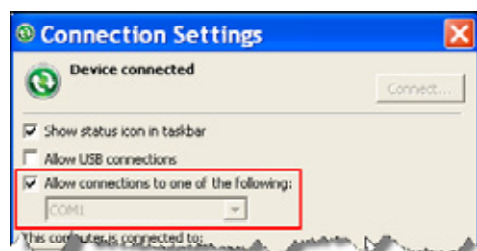
Setting Up the Host Workstation

Verify that ActiveSync is configured to use the appropriate communication type by clicking **File > Connection Settings** in the ActiveSync window on your workstation.

For USB communication, check **Allow USB connections**.



For RS232 communication, connect to **COM1**.



Note: You can have both USB and RS232 selected in the software without affecting processing. However, your hardware setup should use only RS232 or USB, not both.

Communicating with the Dolphin Terminal

After setting up both the workstation and the terminal, ActiveSync connection should be automatic.

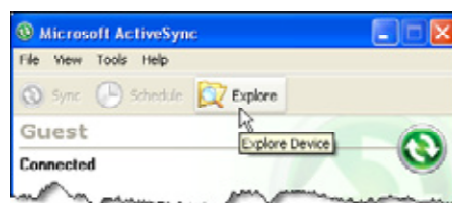
1. Connect the Dolphin terminal to a Dolphin communication peripheral.
2. The Dolphin terminal automatically opens ActiveSync to establish a connection.

Synchronizing with the Host Workstation

After setup, synchronization begins automatically whenever the terminal's mechanical connector connects to a Dolphin peripheral that is connected to a host workstation with ActiveSync installed.

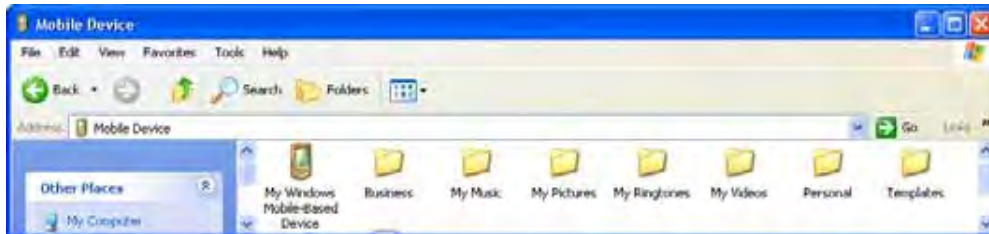
Exploring the Terminal from the Workstation

When the Dolphin terminal and workstation are connected, open the main ActiveSync window (on the desktop), and click **Explore**.



Preliminary Draft 1/19/11

The Mobile Device folder opens in Windows Explorer.



The Dolphin terminal is now treated as a mass storage device, and transferring files is as simple as dragging and dropping or copying and pasting.

Installing Additional Software

In addition to the default programs installed on your terminal when it is first booted up, you can install any program (created for a Windows Embedded Handheld-based device), as long as the terminal has enough memory to store the program and the program has an EXE, CAB, or DLL extension.

The most popular place to find software is on the Windows Mobile website: www.microsoft.com/windowsmobile/en-us/downloads/default.aspx



When selecting programs, verify that the program and version of the program are designed for Windows Embedded Handheld and your processor. You can verify your processor by tapping **Settings > System > About > Version**. Make a note of the information in the Processor field.

You can install additional software via:

- ActiveSync - see page 8-10.
- Infrared - see page 8-2.
- Network connection (via wireless radio) - see page 8-11.
- Connect to your ISP.

Adding Programs to the Terminal Using ActiveSync



When selecting programs, verify that the program and version of the program are designed for Windows Embedded Handheld and your processor. You can verify your processor by tapping **Settings > System > About > Version**. Make a note of the information in the Processor field.

Depending on the application, the software must be stored or installed on the host PC.

1. Download the program to your desktop computer from either the Internet or the CD or disk that contains the program. You may see a single EXE or setup.exe file, a CAB file, or DLL. There may also be several versions of files for different device types and processors.
2. Read any installation instructions, Read Me files, or documentation that comes with the program. Many programs provide special installation instructions.
3. Connect the terminal to the desktop computer via a Honeywell communication peripheral.

If the File is an Installer:

An installer program is one that installs on the PC and the terminal simultaneously; one process installs to both devices.


1. On the PC, double-click the EXE or *.setup.exe file. The installation wizard begins.

Preliminary Draft 1/19/11

2. Follow the directions on the PC screen. The installation process includes transferring the software to the terminal.

If the File is Not an Installer:


Some programs cannot be installed on PCs because they are designed for terminals. In these cases, the appropriate files must be stored on the host PC, transferred via ActiveSync, and installed on the terminal. If an error message stating that the program is valid but designed for a different type of computer appears during installation, you will know the program cannot be installed on the PC.

1. If you cannot find any installation instructions for the program in the Read Me file or documentation, open **ActiveSync** and click **Explore**.
2. Click on the **My Windows Mobile-Based Device**  folder and copy the program file or files to the **Program Files** folder on the terminal.
 - If you want the program to be part of the Autoinstall that occurs after every hard reset, place the program file in the **Autoinstall** folder (**My Windows Mobile-Based Device** > **IPSM** > **Honeywell** > **Autoinstall**).
3. Depending on the program, you may need to open **File Explorer** on the terminal, navigate to the folder where the program is located, and tap on the program file to install it.
 - If you copied the file to the **Autoinstall** folder, you can either tap on the program inside the Autoinstall folder or perform a hard reset and the program will install as part of the Autoinstall process that occurs during each hard reset. Remember, a hard reset erases RAM data! For more information, see [Hard Reset \(Cold Boot\)](#) on page 3-17.


After installation on the terminal is complete, tap  and the program and its icon appears on the Start screen. Tap it to open the program.

Adding Programs Directly from the Internet



When selecting programs, verify that the program and version of the program are designed for Windows Embedded Handheld and your processor. You can verify your processor by tapping  > **Settings** > **System** > **About** > **Version**. Make a note of the information in the Processor field.

1. Determine your device and processor type so that you know which version of the software to install.

Tap  > **Settings** > **System** > **About**. On the **Version** tab, make a note of the information in the **Processor** field.
2. Download the program to your device straight from the Internet using Internet Explorer Mobile. You may see a single EXE or setup.exe file, or several versions of files for different device types and processors.
3. Read any installation instructions, Read Me files, or documentation that comes with the program. Many programs provide special installation instructions.
4. Tap the file, such as an EXE file. The installation wizard begins. Follow the directions on the screen.
5. Select the radio or radio combination and tap **Apply**.
The Radio Manager begins enabling your radio or radio combination.
6. When enabled, the **Status** field reads "Success".

Preliminary Draft 1/19/11

99EX COM Port Assignment Table

COM Port	Description
COM0	Unused
COM1	Serial Port: RS232 Connector on the bottom panel
COM2	Bluetooth
COM3	IrDA: Serial Infrared (SIR) up to 115 Kbps
COM4	Available
COM5	Bluetooth DUN
COM6	IrCOMM
COM7	GPS: COM Port for the GPS receiver
COM8	USB Serial: Virtual USB Serial port for ActiveSync
COM9	Bluetooth BTHATCI server

Preliminary Draft 1/19/11

Working with Wireless Wide Area Networking (WWAN)

Overview

The Dolphin 99EX terminal can be configured with an integrated, embedded GSM/UMTS/GPRS/EDGE penta-band radio module for WWAN communication.

GSM	Short for Global System for Mobile communications, GSM is an open, non-proprietary wireless WAN system that is constantly evolving and growing.
HSPA+	Short for High-Speed Download Packet Access, HSPA+ is a non-voice value added service that allows packet-switched data to be instantly sent and received across mobile telephone networks.
UMTS	Short for Universal Mobile Telecommunications System, UMTS is a non-voice value added service that allows packet-switched data to be instantly sent and received across mobile telephone networks.
GPRS	Short for General Packet Radio Service, GPRS is a non-voice value added service that allows packet-switched data to be instantly sent and received across mobile telephone networks.
EDGE	E-GPRS is a non-voice value added service that allows packet-switched data to be instantly sent and received across mobile telephone networks at a higher data rate than standard GPRS.

Requirements

Using GSM/HSPA+/UMTS/GPRS/EDGE requires a:

- Network subscription to a GSM/HSPA+/UMTS/GPRS/EDGE network (you need to know what service providers are in your geographic area), and
- An installed SIM card that has been activated by the network service provider (see [SIM Card Installation](#) on page 9-3).

Penta Band Antenna

The GSM radio features an internal antenna that is optimized for power output and receiver sensitivity. This is an omni-directional antenna.




For the HC-25 radio, there is a unified penta-band antenna that supports 850/900/1800/1900 (GSM/GPRS/EDGE) and 850/1900/2100 (HSPA+/UMTS) MHz for obtaining GSM service worldwide.

Signal Strength

The signal strength of the GSM connection is indicated by the number of bars that appear in the signal strength icon in the Title bar at the top of the window.



Preliminary Draft 1/19/11

Icon	Indicates...
	The signal strength of the radio connection.
	The signal strength of the phone (voice) connection; see GSM/HSPA+ Global Radio Dolphin Models on page 9-5.
	The signal strength of the data connection; see Data Communication on page 9-9.

Voice and Data Communication

Dolphin terminals with integrated GSM/HSPA+/UMTS/GPRS/EDGE radios are optimized for the following two-way voice and data communications:

Voice: GSM voice data (dial-up)

Data: Available speed depends on the wireless network carrier and their supported packet-data technology in addition to network conditions.

GPRS Class 10: data transmission max. 85.6 kbps (DL), max. 42.8 kbps (UL)

HSPA+: data transmission max. 3.6 Mbps (DL), max. 384 Kbps (UL)

UMTS: data transmission max. 384 Kbps (DL), max 384 Kbps (UL)

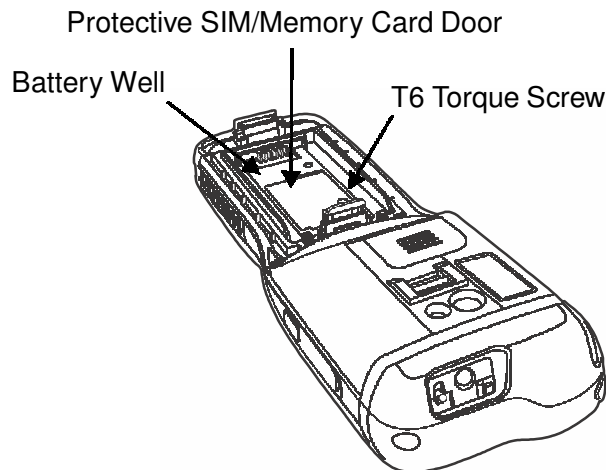
EDGE (E-GPRS) Class 10: data transmission max. 237 Kbps (DL), max. 118 kbps (UL)

You can use the GSM radio for voice communication and data communication but not at the same time. If you want to communicate over the phone (voice), you cannot send data. If you want to send data, you cannot use the phone.

Preliminary Draft 1/19/11

SIM Card Installation

Short for Subscriber Information Module, a SIM card stores the subscriber's personal information, GSM/GPRS radio settings, security keys, contacts, etc. SIM cards can be installed in compatible mobile devices, enabling you to switch devices without losing personal and setup information.



SIM Card Requirements


Before installing the SIM card:

- The service provider **must** activate the SIM card.
- The terminal **must** be powered down.


Note: If no SIM card is installed, you can still make emergency phone calls such as 9-1-1, for example.

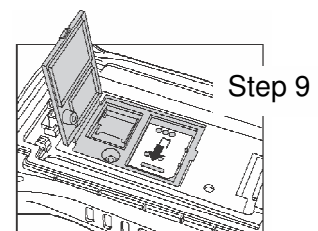
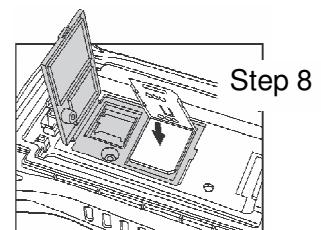
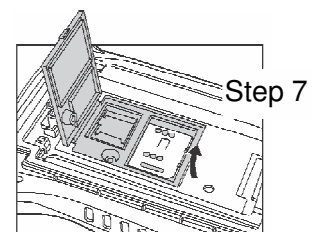
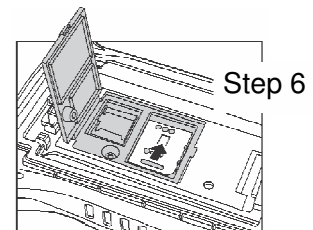
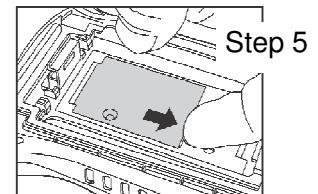
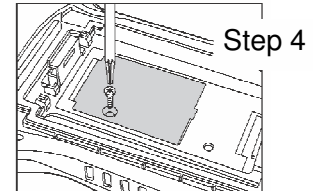
Preliminary Draft 1/19/11

Installing a SIM Card

1. Press the Power key  to put the terminal in Suspend Mode.
2. Release the hand strap near the speaker on the back panel of the terminal.
3. Remove the battery door and the battery.
4. Remove the T6 torque screw securing the protective door closed.
5. Lift up the lower left corner of the door to access the SIM card
6. Unlock the access door to the memory socket by sliding the door toward the IrDA port side of the terminal.
7. Lift the door up to expose the socket.
8. Insert the SIM card into the socket.

Note: Make sure the interface on the card is connected to the SIM Card beveled corner of the socket.


9. Close and lock the access door.
10. Close the protective door over the memory socket. Install and tighten the T6 torque screw to secure the door closed.
11. Install the battery and the battery door.
12. Press the Power key  or SCAN key to wake the terminal.



Preliminary Draft 1/19/11

Enabling the WWAN Radio

By default, the WWAN radio is not enabled after a hard reset. Verify the status of the radio in the Dolphin Wireless Manager.

Tap  on the Home screen to access the **Dolphin Wireless Manager**.



If the WWAN radio is OFF, tap the rectangle to enable or turn ON the radio.

GSM/HSPA+ Global Radio Dolphin Models

Voice Communication

You can use the Dolphin terminal as a phone over the GSM radio.

Audio Modes

The front panel of the 99EX contains both a speaker and a microphone that you can use to send and receive audio signals over the GSM network, see [Front Panel: 99EX](#) on page 3-5.

There are two audio modes:

- **Handset Mode** - The front speaker is used for receiving handset voice calls and the front panel microphone provides audio input to the terminal.
- **Hands-Free Mode** - Hands-free mode is when you use the rear speaker as a speakerphone. To switch to speakerphone, tap on the speaker button in the Dialer window, see [Accessing the Dialer Window](#) on page 9-6.

Preliminary Draft 1/19/11

Volume Control



Use the Dolphin keyboard to adjust the volume.

To raise the volume, press the Blue modifier key + up arrow.

To lower the volume, press the Blue modifier key + down arrow.

Or

Press the up or down arrow on the Volume Control button on the right side of the device to adjust the volume of the active speaker, see [Volume Control Button](#) on page 3-9.

Accessing the Dialer Window

Note: The WWAN radio must be active for voice communication, see [Enabling the WWAN Radio](#) on page 9-5.

Tap  on the Home screen or tap  > **Phone**  to open the Phone dialer.

Displays the network carrier from the SIM card.

Displays the most recent calls.



Toggles the touch screen keypad ON or OFF.

Menu

Dialing

Once the dialer window is open, you can dial out two ways:

- Tap the buttons on the dialer window.
- Use the physical keyboard (when the keyboard is in numeric mode).

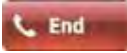


Preliminary Draft 1/19/11

Sending Calls

After the number is dialed, tap **Talk**  or press the **Blue**  + **Send** key .

Note: The  icon indicates that the phone is in use.

Ending Calls

While the phone call is live, tap **End**  or press the **Blue**  + **End Key** .

Accessing Voice Mail

Tap  > **Phone**  > **Speed Dial**  > **Voice Mail** > **Call**.

Note: Update the voice mail retrieval number by turning the phone OFF and then ON via the Dolphin Wireless Manager, see [Enabling the WWAN Radio](#) on page 9-5.

View Options

From the view menu, you can modify the display screen to show Calls and Contacts, All Calls or Speed Dial numbers.

Tap **Menu**  > **View**.

Setup Options

The Options menu contains four setting widows: Sounds, Security, Services, and Network.

Tap **Menu**  > **Options**.

Sounds



The **Sounds** screen enables you to customize the:

- Ring type (e.g., Ring, Increasing ring, Ring once, Vibrate, Vibrate and ring, Vibrate then ring or None)
- Ring tone
- Keypad tone (e.g., Long, Short, or Off)

Preliminary Draft 1/19/11

Security



The **Security** screen provides access to establish or change your security PIN. Check the box next to, “Require a PIN when the phone is used” to enable the PIN security feature.

Services



For each service, the phone reads settings from the network stored on the SIM card and then displays the available options from the carrier on the screen. To customize the settings, select it from the list and tap “Get Settings”.

Preliminary Draft 1/19/11

Network



You can find, select, and set your preferred network order from the **Network** screen.

Data Communication

You set up data communication via the Connections Manager. The carrier on the SIM card is the ISP.

System Requirements



- The GSM radio must be enabled; see [Enabling the WWAN Radio](#) on page 9-5.
- You must have an active SIM card with a DATA plan installed; see [SIM Card Installation](#) on page 9-3.

Information Requirements

You must have from the SIM card carrier:

- The APN (access point name).
- The username and password of the account.

Establishing Data Communication (GSM/HSPA+ Global Radio Dolphin Models)

1. Tap  > **Settings** > **Connection** > **Connections** .
2. Under My ISP, tap **Add a new modem connection**.

Preliminary Draft 1/19/11

3. Enter a name for the connection. Select **Cellular Line (GPRS)** as the modem. Tap **Next**.



4. Enter the Access point name. Tap **Next**.

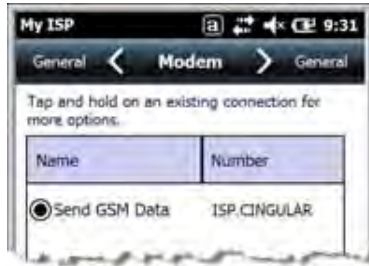


5. Enter the username and password from the account. Tap **Finish**.




Preliminary Draft 1/19/11

6. The connection you just created should appear in the list on the modem tab.




7. Tap and hold on the connection. Select **Connect** on the popup menu.



8. The network icon in the Title bar indicates the GSM radio is attempting to connect .


Note: When the device is on a 2G (EDGE/GPRS) network, a data connection failure occurs if the phone is in use for a voice call while attempting a data connection. Simultaneous voice and data use is only supported if the device is on a 3G network. In 2G mode, a voice call takes precedence over data connections. Active data connections are placed in "park" mode automatically and the data is "retrieved" when the voice call ends.

9. When the connection is complete, the network icon changes to: .

10. You can now send data over GSM.

Ending the Data Connection

By default, the data connection will disconnect after a certain amount of time passes without use. This period of time is determined by ISP.

To end the data connection manually, tap the network icon  in the Title bar and select **Disconnect** on the popup bubble.

Preliminary Draft 1/19/11

Manual Network Selection

You can select Automatic or Manual network selection. The Phone defaults to Automatic network selection.

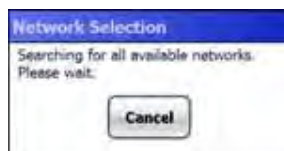
1. When an active SIM card is inserted in the terminal, tap

 > **Settings** > **Personal** > **Phone**  > **Menu** > **Options**.

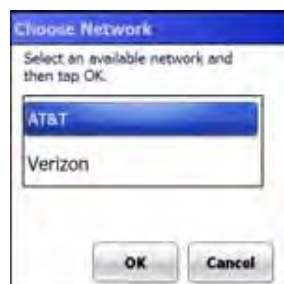
2. Select the **Network** tab.



3. Under **Network selection**, select **Automatic** (the default selection) or **Manual**.
 - a. If you select **Manual**, the Phone searches for available networks.



- b. The found networks appear.




- c. Select a new network and tap **OK**. The Phone registers on the new network and the Network tab appears.
 - d. To switch to another network, tap the now active **Select** button and the process repeats.
4. To switch back to automatic roaming, select **Automatic** under **Select networks** and tap **OK**.

Preliminary Draft 1/19/11

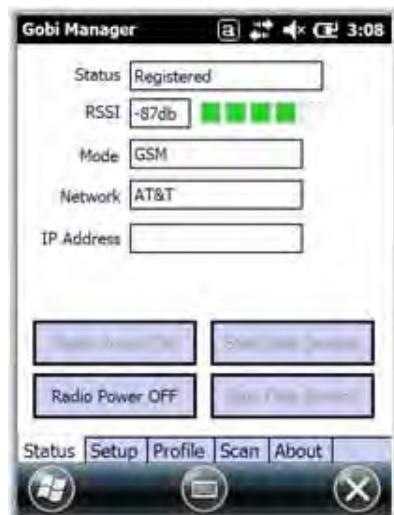
GSM/CDMA Dolphin Models

Gobi Manager

The Gobi Manager enables you to see real time status of the radio, setup your Network selection, view you're profile and scan for networks. The Gobi Manager contains five tabs: Status, Setup, Profile, Scan, and About.

1. Tap  on the Home screen to access the **Dolphin Wireless Manager**.
2. Tap **Menu**.
3. Select **Gobi Settings**.

Status Tab



The **Status** tab contains the real time radio status information including:

- The power status of the radio (e.g., ON or OFF)
- The received signal strength intensity (RSSI)
- The radio mode used (e.g., GSM, UMTS, EVDO or 1xRTT)
- The network firmware used
- The IP Address assigned

You can also turn the radio ON or OFF and Start or Stop a data session from the Status tab.

Setup Tab

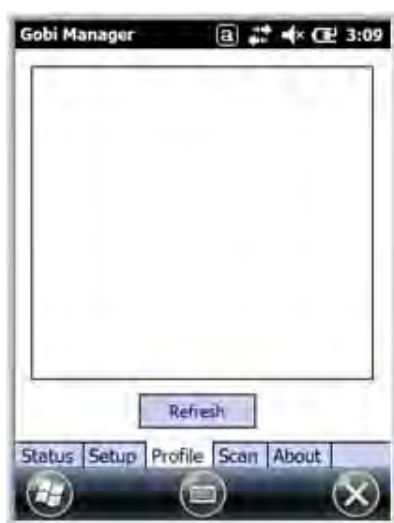


The **Setup** tab allows you to view and customize the Network Setup including:

- The Network Firmware (e.g., AT&T, Verizon, Sprint, or T-Mobile)
- The SIM Slot accessed
- The Access Point Name (APN)
- The Username of the account
- The Password of the account
- Enable or Disable Automatic Data Sessions
- Activate Over the Air (OTA) or Manual

Preliminary Draft 1/19/11

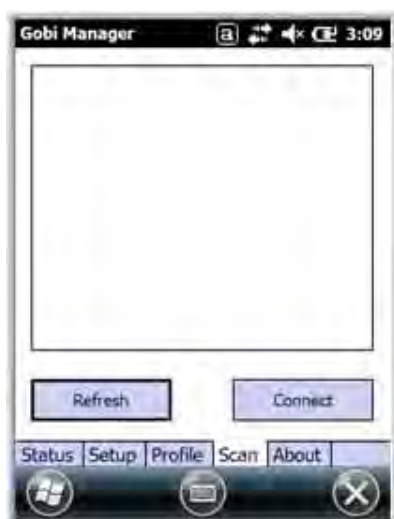
Profile Tab



The **Profile** tab allows you to see Radio capability information and network statistics including:

- Radio Hardware and Software versions
- Radio and SIM identification numbers
- Serving network connection type and state
- Available radio interfaces for the current serving network

Scan Tab




The **Scan** tab allows you to scan and connect to networks within the vicinity.

About Tab Displays copyright and version information for the Gobi Connection Manager

Establishing Data Communication (GSM/CDMA Dolphin Models)



Direct IP Method (Recommended)

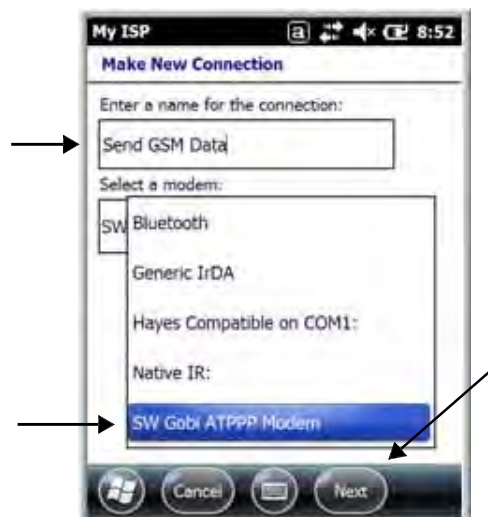
1. Tap  on the Home screen to access the **Dolphin Wireless Manager**.
2. Tap **Menu** and then select **Gobi Settings**.
3. From the **Setup** tab, select the carrier and enter user information (GSM only).
4. Check the **Auto Start Data Session** checkbox to automatically start the data session.

Preliminary Draft 1/19/11

5. Tap the **Apply** button. The Connection Manager automatically switches to the **Status** Tab.
6. Tap the **Radio Power ON** button.
7. When the radio connects to the network, the status changes to “Registered” and a Signal Strength is displayed.
8. If **Auto Start Data Session** was checked on the **Setup** tab, the state automatically changes from “Registered” to “Data Session Open” and an IP address appears. If **Auto Start Data Session** was not selected, then the Data session can be started manually by tapping **Start Data Session** button from the **Status** tab.

Dial-up PPP Method

1. Tap  > **Settings** > **Connection** > **Connections** .
2. Under My ISP, tap **Add a new modem connection**.
3. Enter a name for the connection. Select **SW Gobi ATPPP Modem**. Tap **Next**.



Preliminary Draft 1/19/11

4. Enter the number. Tap **Next**.



5. Enter the user name and password for the account. Enter the network APN in the Domain box. Tap **Finish**.



6. The connection you just created should appear in the list on the modem screen.



Preliminary Draft 1/19/11

7. Tap and hold on the connection. Select **Connect** on the popup menu.




Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Working with the Bluetooth Radio

Enabling the Bluetooth Radio

You enable the Bluetooth radio in the [Dolphin Wireless Manager](#) (see page 8-6).

1. Tap  on the Home screen to access the **Dolphin Wireless Manager**.



2. Tap anywhere inside the Bluetooth rectangle and Bluetooth begins activating.



3. When the radio is activated (i.e., transmitting a signal), the **OFF** button changes to **ON**.



Now, the Bluetooth radio is transmitting a signal. Additional text in the Bluetooth section tells information about the Bluetooth radio. “Visible” and “Not visible” indicates whether the Bluetooth radio is discoverable or not discoverable by other Bluetooth devices.

Now, you can connect to other transmitting and discoverable Bluetooth devices (see page [10-2](#)).

To make the terminal discoverable for other Bluetooth devices, you need to make the Bluetooth radio discoverable (see page [10-8](#)).

Preliminary Draft 1/19/11

Connecting to Other Bluetooth Devices

You need to perform a device discovery and then select a discovered device and connect to it. Pairing happens as part of the connection process.

1. In the Dolphin Wireless Manager, tap **Menu** > **Bluetooth Settings**.

OR

Tap  > **Settings** > **Bluetooth** .

2. Tap **Add new device**. The terminal begins searching for discoverable Bluetooth devices.



3. Select a device from the list and tap **Next**.



4. You are prompted to enter a passcode.
If the device has a specific passcode, enter it in the **Passcode** field and tap **Next**.
If the device does not have a specific passcode, enter one in the **Passcode** field and tap **Next**.

Preliminary Draft 1/19/11

The Bluetooth radio tries to connect with the device.



5. If you created a passcode, you will be prompted by the other device to enter the same passcode. Enter the created passcode to establish a paired connection.

If you entered a device specific passcode, you should not have to do anything on the other device.

6. When the connection is complete, a list of matching and supported services on the device appears.



7. Select the services you want to use and tap **Save**.
The services on the new devices have to be selected or the pairing won't include those services, even though the devices are paired. If services are not selected, you will be continually re-prompted for the passcode from the device.

Preliminary Draft 1/19/11

8. The device appears in the list on the main window.



9. After the passcodes have been accepted on both sides, you have a trusted ("paired") connection.

Pairing and Trusted Devices

The terminal does support pairing. Pairing happens during general connection setup. Paired devices are "trusted" devices. This means that there is unrestricted access to all services (including services that require authorization and authentication).

A connection can exclude pairing. A device that is connected to the terminal but not paired with it is considered an untrusted device. Content can still be passed to untrusted devices by requiring authorization with each attempt (for example, with the initialization of a file exchange). The Beam File method of file transfer can be used to pass a file as an untrusted device; see [Transferring Files](#) on page 10-7.

Preliminary Draft 1/19/11

Types of Devices and Services

When you tap **Add new device** on the Devices tab, the Bluetooth radio scans for discoverable Bluetooth devices in range, which are Bluetooth devices that have been made discoverable.

Device Types

The types of devices in the vicinity of the radio appear in the list of discovered devices. →



Supported Services

Only the services that are mutually supported on both devices appear on the Partnership Settings window.



Preliminary Draft 1/19/11

Connecting to Bluetooth Printers


1. Make sure the Bluetooth printer is in range and set to be discoverable by other Bluetooth devices.
2. Look up the Bluetooth printer's broadcasted ID.
3. Perform a device discovery (Tap **Settings** > **Bluetooth** > **Add new device.**)
4. Look for the Bluetooth printer's broadcasted ID in the list of discovered devices.
5. Click on the Bluetooth printer's ID and wait for the prompt to enter a **Passcode**.
6. Enter the **Passcode** and tap **Next**.
The passcode may default to either "1111" or "0000." If there is no default, consult the printer literature for the number.
7. Select a printing-related service in the list of services.
8. Tap **Save** to establish the connection on the terminal.
9. Complete any additional steps required by the printer.

Connecting to Bluetooth Headsets

1. Make sure the Bluetooth headset is in range and set to be discoverable by other Bluetooth devices.
2. Look up the headset's broadcasted ID.
3. Perform a device discovery (Tap **Settings** > **Bluetooth** > **Add new device.**)
4. Look for the headset's broadcasted ID in the list of discovered devices.
5. Click on the headset's ID and wait for prompt to enter a passcode.
6. Enter the **Passcode** and tap **Next**.
The passcode may default to either "1111" or "0000." If there is no default, consult the headset literature for the number.
7. Select **Headset** in the list of services.
8. Tap **Save** to establish the connection on the terminal.
9. Complete any additional steps required by the headset.

Preliminary Draft 1/19/11


Transferring Files

1. Tap  > **File Explorer**.
2. Navigate to the file you want to transfer.
3. Tap and hold on the file and select **Beam File** on the popup menu.



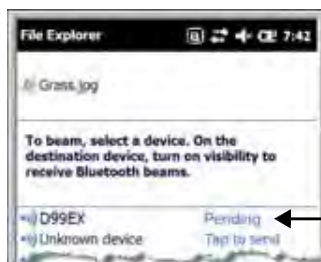
4. The Bluetooth radio begins searching for devices.



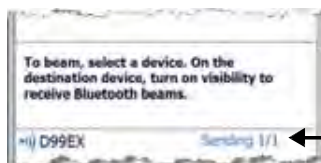
When a Bluetooth device is first found, it appears as an Unknown device; the  icon indicates that the device is a Bluetooth device.

As data is retrieved, the

5. Tap the device to begin sending the selected file.
6. While trying to connect, the selected device reads "Pending".



7. When the file is being transferred, the selected device reads "Sending".



Preliminary Draft 1/19/11

Making the Terminal Discoverable

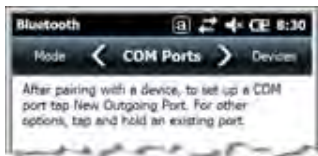
By default, the Dolphin terminal is not discoverable, which means that the terminal will not be found by other Bluetooth devices.

To make the terminal discoverable, tap **Mode** on the Horizontal scroll. Select **Make this device visible to other devices** and tap **OK**.



Selecting COM Ports

You can select COM ports 0-9. For more information, see [99EX COM Port Assignment Table](#) on page 8-12.



Preliminary Draft 1/19/11

Working with GPS

Overview

The Dolphin 99EX terminal contains an integrated GPS module that allows location tracking of workers and vehicles, providing better utilization of field assets. Optional mapping and navigation software provides turn-by-turn driving directions and location information.

Assisted GPS Support

The operating system software does not inhibit nor explicitly support assisted GPS modes, which usually requires installing a vendor-specific client on the terminal that communicates with the GPS module. This client would then provide the almanac and/or ephemeris data for warm or hot start modes of operation, allowing a lower time to first fix (TTFF). The Client must be configured on the terminal, active, and provide the data to the GPS module through the standard COM port.


Powering the GPS Module

The GPS module powers on automatically when accessed by a software application and powers off automatically when that software application closes. You cannot manually power on and off the GPS module.

Communication Ports

There are two ways to access the GPS module: through the actual COM port (COM7) or the GPS Intermediate Driver. The method you use depends on the software application you are using. If the software application requires the actual COM Port, set the operating system to use COM7. If the software application requires the GPS Intermediate Driver, set the operating system to use the GPS Intermediate Driver.

Selecting the Port

1. Tap  > **Settings** > **System** > **External GPS**.
2. In the **GPS program port:** drop-down list, select **COM7** or **GPD1** (the GPS Intermediate Driver) as required by the application.



Preliminary Draft 1/19/11

3. Tap **OK** to save.

COM7

COM Port 7 can be set to the following baud rates:

- 4800
- 9600 (This is the default baud rate and recommended for optimal GPS functioning.)
- 19200
- 38400

Other baud rates are not possible. The baud rate selected on COM7 is the actual baud rate with which the GPS will be communicating.

GPS Intermediate Driver

When the first user of GPD1 opens the port, the GPS Intermediate Driver in turn opens port COM7. The GPS Intermediate Driver allows multiple applications to open GPD1, and the GPS data is broadcast to all open ports.

When the GPSID driver is in use, the COM7 port is allocated to GPSID as READ|WRITE (COM7 is still available for access mode of 0).

For more information about Microsoft's GPS Intermediate Driver, follow this link:

<http://msdn.microsoft.com/en-us/library/ms850332.aspx>

GPS Demo

The GPS Demo demonstrates the main functionality of the integrated GPS module. The GPS Demo uses COM7.

To see the GPS Demo, tap  > **Demos** > **GPS Demo**.

For complete information about how to operate the GPS Demo, refer to the [Demos User's Guide for Windows Mobile 6.5](#), which is available for download from www.honeywellaidc.com.

Preliminary Draft 1/19/11

Dolphin 99EX HomeBase Device

Overview

As the hub of your Dolphin system, the Dolphin 99EX HomeBase charging and communication cradle supports both RS232 and USB communications, which make it able to interface with the majority of PC-based enterprise systems.

Charge Time

The base completes a full charge of the main battery pack installed in the terminal seated in the terminal well in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery. The base completes a full charge of the battery pack in the [Auxiliary Battery Well](#) (see page 12-2) in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery.

Charging Process

The base also provides power to the intelligent battery charging system in all Dolphin terminals that senses when a full charge has been achieved and switches to a trickle charge to maintain the full charge.

Communications

Reliable data communications at speeds of up to 115K baud can be transmitted by the base through the RS232 serial port. Using the high-Speed USB port, the data transmission rate goes up to 480 Mbps.

These bases cannot be physically connected to each other - sometimes referred to as "daisy-chained".

Convenient Storage

The intelligent battery charging system makes this base a safe and convenient storage receptacle for your Dolphin terminal.

Capacity

The base holds one terminal and features an auxiliary battery well behind the terminal well that can charge a battery pack independently of the terminal well. This means that one base can charge two battery packs: the one installed in the terminal and a spare.



We recommend use of Honeywell Li-ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

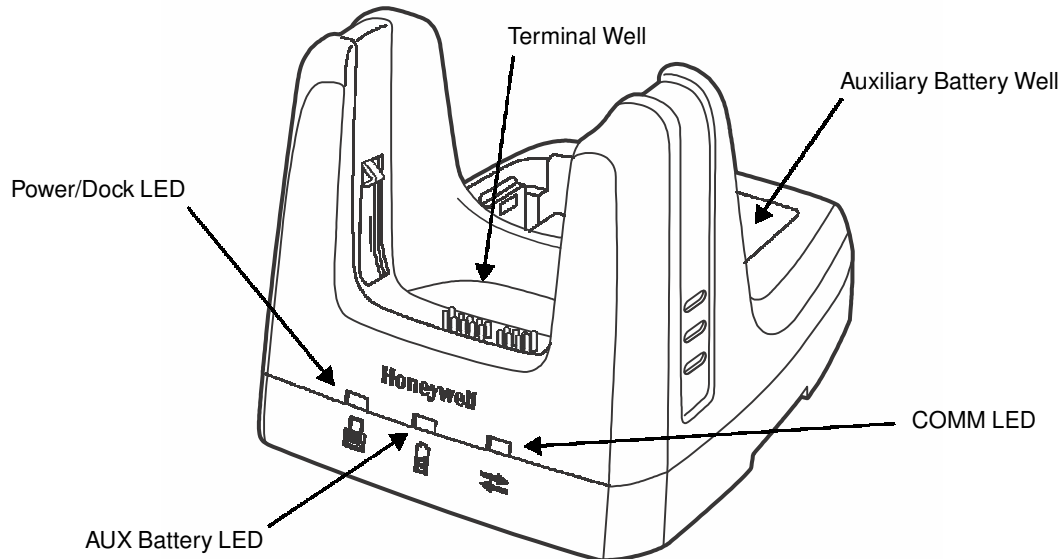


We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Preliminary Draft 1/19/11

Parts and Functions

Front Panel



Terminal Well

Place the terminal in this well to communicate with a host device, power the terminal, and charge the installed battery pack. The base completely charges the main battery in a Dolphin terminal in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery. If the host device is a workstation that uses ActiveSync, synchronization begins immediately.

Auxiliary Battery Well

See [Auxiliary Battery Well](#) on page 12-4.

Power/Dock LED

Indicates if power is supplied to the HomeBase and if a terminal is docked properly in the base.

This color	means...
Red	The HomeBase has power but no terminal is docked.
Green	The HomeBase has power and the terminal is properly seated in the base.

AUX Battery LED

Indicates status of the battery charging in the auxiliary battery well; see [Back Panel](#) on page 12-4.

This color	means...
Orange	The auxiliary battery is charging.
Green	The auxiliary battery has completed charging and is ready for use.

Preliminary Draft 1/19/11

Red, Flashing The internal temperature of the auxiliary battery is too hot or there is a battery error. Charge the auxiliary battery in a cooler environment or replace the battery with a new Honeywell Li-ion or Li-poly battery.

For information about charging a battery in the auxiliary battery well, see page 12-6.

COMM LED

This is the communication LED. It indicates the status of data transfer between the Dolphin terminal and the host device. The color of this LED differs if the base is using the serial or USB port connection.

If using the serial port

This color **means...**

Red Serial data is being sent from the host device to the base.

Green Serial data is being sent from the base to the host device.

Orange Serial data is being sent in both directions at the same time.

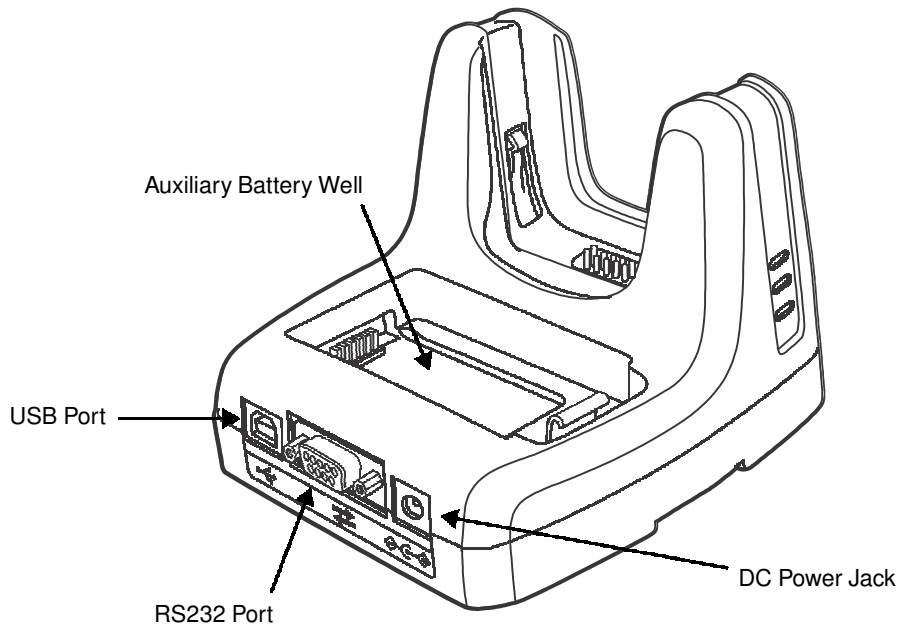
If using the USB port

This color **means...**

Green A USB Connection is established with the host workstation.

Preliminary Draft 1/19/11

Back Panel



Auxiliary Battery Well

The base enables you to charge an additional battery pack independently of the terminal well in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery. This feature ensures that you can always have a fully-charged battery for your terminal. See [Charging a Spare Battery in the Auxiliary Battery Well](#) on page 12-6.

USB Port

This USB port is USB v2.0 high-speed compliant. Using a USB cable, you can connect the base to a host device, such as a workstation. USB communication occurs through Microsoft ActiveSync (v4.5 or higher) or Microsoft Windows Mobile Device Center (WMDC) depending on the host workstation's operating system. When the terminal is seated in the terminal well, it is connected to the host device via the base.

Note: ActiveSync on your Dolphin terminal works with Windows Mobile Device Center on host workstations running Windows Vista or Windows 7 and with ActiveSync on host workstations running Windows XP. For detailed information on ActiveSync and WMDC visit Microsoft's Windows Mobile Web site.

RS232 Port

Use the 9-pin, RS232 cable from Honeywell to connect this port to a peripheral device for RS232 data communication. For more information, see [Serial Connector](#) on page 12-5.

DC Power Jack

Use the power cable from Honeywell that comes with the base to supply power to this power jack. For more information, see [Power](#) section that follows.

Preliminary Draft 1/19/11

Power

The base requires 12 Volts DC input for communications, battery charging, and power output to the terminal; the power adapter included with the base converts the voltage from the AC power source to 12 Volts DC. Use only the Honeywell 12VDC, 3A power supply provided with the base. The operating temperature range is -10° to 45°C (14° to 113°F).

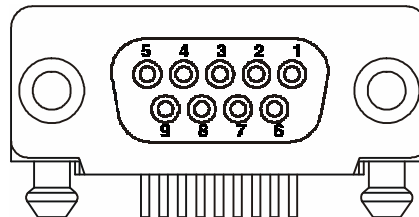
Honeywell recommends that you leave the base connected to its power source at all times, so that it is always ready to use.

1. Connect the power cable to the DC jack on the rear panel of the base.
2. Connect the power cable to the power adapter.
3. Plug the power adapter cable into the power source. The base is now powered.

Serial Connector

The following diagram displays the pin diagram of the serial connector of the base.

Pin	Description
1	Internal Jumper to Pin 6
2	TXD
3	RXD
4	No Connect
5	GND
6	DTR
7	CTS
8	RTS
9	RI



Note: The signal names are referenced to the terminal. The terminal is a DCE RS232 device. Refer to section, RS232 Communications Cables and RS232 Pin Configuration for more details. The base is at a right-angle to the printed circuit board (PCB). The ninth pin has a ring indicator (RI).

Preliminary Draft 1/19/11

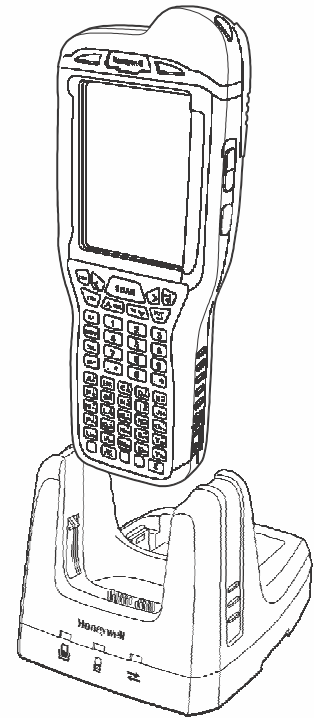
Charging the Main Battery

The base powers the terminal and fully charges its main battery pack in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery.

The terminal contains an intelligent battery charging system that protects the battery from being damaged by overcharging. The unit senses when a battery pack is fully charged and automatically switches to a trickle charge that maintains the battery at full capacity. Therefore, terminals may be stored in the base without damage to the terminals, battery packs, or peripherals.

To check battery power, use the Power system setting; see [Power](#) on page 7-16.

For more information about Honeywell Li-ion batteries, see [Batteries](#) on page 3-13.



To Power a Terminal and Charge its Main Battery

1. Install the battery pack in the terminal; see [Install the Main Battery Pack](#) on page 2-1.
2. Connect the base to the power supply provided by Honeywell.
3. Slide the terminal into the terminal well until the Dock LED lights green to indicate that the terminal is properly seated. The battery pack begins charging.



Make sure the terminal is dry before placing it in the base. Do NOT place a wet terminal in the base! Doing so may cause damage not covered by the warranty.



We recommend use of Honeywell Li-ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

Charging a Spare Battery in the Auxiliary Battery Well

The auxiliary battery well located on the back of the base charges a spare battery independently of the terminal well. The Aux Battery LED on the front panel indicates the status of the battery in this well.

Charge time is 4.5 hours for the standard battery pack or 6 hours for the extended battery pack; see [Auxiliary Battery Well](#) on page 12-4.

1. Insert the battery at an angle so the battery pack contacts and the auxiliary well contacts align.
2. Snap the battery into place with a hinging motion. The Aux Battery LED lights orange.
3. Use the AUX Battery LED to monitor the charging progress. The LED lights green when the auxiliary battery has completed charging and is ready for use.

Note: If the AUX Battery LED flashes red, the internal temperature of the battery is too hot or there is a battery error. Charge the auxiliary battery in a cooler environment or replace the battery with a new Honeywell Li-ion or Li-poly battery.

Preliminary Draft 1/19/11

Communication

USB

Dolphin terminals support USB communications out of the box.

The base also supports USB communications via the USB port located on the back. The base acts as a USB device by interfacing the USB signals of the Dolphin terminal to the USB of the host workstation. Using a standard USB cable, the base's USB interface allows the Dolphin terminal to communicate with a workstation.

RS232

The base supports RS232 communications via the RS232 Communications Port located on the back of the device. This port enables the Dolphin terminal to communicate to a workstation, modem, or any RS232 device using a standard serial cable and communications software.

Requirements

- A base powered by a power cable and power adapter cable
- For RS232 communications, a serial cable
- For USB communications, a USB cable
- A work station running Windows 98 Second Edition, Windows Me, Windows 2000, Windows NT (4.0 SP6 or higher), Windows XP, Windows Vista, or Windows 7.
- ActiveSync (v4.5 or above) or Widows Mobile Device Center on the workstation

Connecting the Communication Cables

1. Plug in the power supply and connect it to the back of the base.
2. Plug the USB or the RS232 communication cable into the back of the base.
3. Connect the communication cable into the back of the workstation.
4. At this point, the hardware is installed and operating. You may need to reboot your workstation to complete the installation process.

Establishing Communication

USB or RS232 communication with the terminal is usually auto-detected and configured by ActiveSync or Windows Mobile Device Center based on the communication cable connected. If you are using a USB cable to connect to the workstation, the sync software sets up a USB connection. If you are using an RS232 cable, the sync software sets up an RS232 connection.

For more information, see [Communication](#) on page 12-7.

Communicating with the Dolphin Terminal

To initiate communications between the Dolphin terminal and peripheral, complete these steps:

1. Insert the Dolphin terminal into the terminal well of the base.
 - The DOCK LED illuminates green. If the DOCK LED does not illuminate, make sure that the terminal is properly seated. You may need to remove and re-insert the terminal.
 - The Dolphin terminal activates; if the power is off, the terminal automatically powers on. If the terminal does not power on, verify that the Honeywell power supply is properly connected to the cradle and plugged into a functioning outlet.

Preliminary Draft 1/19/11

- If the base is connected to the workstation, the Dolphin terminal automatically opens ActiveSync or the Windows Mobile Device Center to establish a connection.
2. The base can now transfer data between the terminal and the host device. If communication does not occur, check the port connections to ensure that the cradle is correctly configured.

Verifying Communication

You can verify that the USB driver is functioning by watching the COMM LED on the USB base. When the COMM LED illuminates solid green, the base is communicating with the host device.

Verifying Data Transfer

The COMM LED flashes when data is being transferred via the base. For an RS232 connection, the COMM LED flashes red and green. For a USB connection, the COMM LED does not flash during data transfer.

RS232 Communications Cables

Connect the base to the host workstation or other device by plugging an RS232 serial cable into the RS232 Communications Port on the rear of the base. The wiring of your cable depends on whether the other device is set up as a Data Communications Equipment (DCE) or Data Terminal Equipment (DTE) device.

The Communication Port is configured as a DCE device. To communicate with a DCE device, use either a null modem adapter in line with a standard RS232 cable, or a null-modem serial cable. To communicate with a DTE device such as a workstation, use a standard (or straight-through) RS232 cable.

You can make your own cables by following the pin configuration in the chart that follows. To do so, you must determine if your host RS232 device is 9-pin or 25-pin, and whether it is configured as a DCE or DTE device.

RS232 Pin Configuration

Base /Host Port (DCE)	IBM AT DB9 (DTE)	IBM XT DB25 (DTE)	Modem DB25 (DCE)
Pin / Input Signal			
2 / (RD)	2	3	2
3 / (TD)	3	2	3
5 / (SG)	5	7	7
4 / (DTR)	4	20	6
6 / (DSR)	6	6	20
7 / (RTS)	7	4	5
8 / (CTS)	8	5	4

Note: This base cannot be daisy-chained.

Note: The input signal names are referenced to the DTE target device (ie. workstation or host computer) in accordance with the RS232 standard.

Preliminary Draft 1/19/11

Mounting

Set the base on a dry, stable surface, such as a desktop or workbench near an electrical outlet. Be sure to provide enough workspace with good lighting for the user to view and operate the Dolphin terminal while it is in the base.

When choosing a mounting location, bear in mind that the location must allow users' easy access to the Auxiliary Battery Well and the back panel of the HomeBase where the serial port, USB port, and the power jack are located.

Installation Hardware

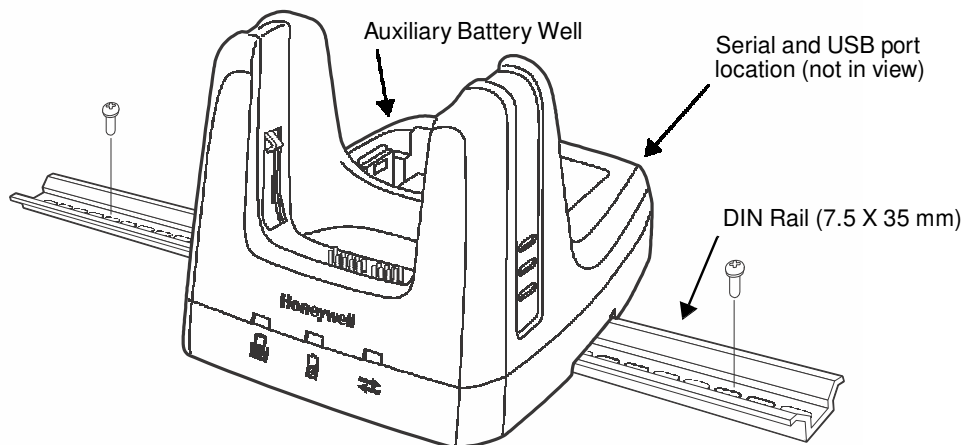
Screw: 3/16 in. dia x 5/8 in. long pan head screw

Washer: 1/2 in. OD x 7/32 in. ID x 3/64 in. thick

Nut: 3/16 in. dia

Desk Mounting

The DIN rail slot (7.5 X 35 mm) may be mounted on the bottom to allow for secure desk attachment of the unit if desired.



Slide the DIN rail slot along the bottom panel.

Then, using the appropriate nuts and bolts, secure the DIN rail to the desk or flat surface.

Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Dolphin 99EXeBase Device

Overview

The Ethernet Base (eBase) enables a single Dolphin 99EX computer to communicate with a host device over an Ethernet network.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Unpacking the eBase

Open the shipping box and inspect the package to see that the following standard items are included:

- One Dolphin eBase Ethernet cradle
- One universal AC/DC power adapter for the Dolphin eBase
- One power cord

You will also need to provide a standard CAT-5 Ethernet network cable. These items are needed to set up and operate the eBase. If any items are missing or anything appears to be damaged, contact your Customer Account Representative.

Keep the original packaging in case you need to return the eBase for service or to store the eBase while not in use.

Charge Time

The base completes a full charge of the main battery pack installed in the terminal seated in the terminal well in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery. The base completes a full charge of the battery pack in the [Auxiliary Battery Well](#) (see page 13-2) in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery.

Convenient Storage

The intelligent battery charging system makes this base a safe and convenient storage receptacle for your Dolphin terminal.

Capacity

The base holds one terminal and features an auxiliary battery well behind the terminal well that can charge a battery pack independently of the terminal well. This means that one base can charge two battery packs: the one installed in the terminal and a spare.



We recommend use of Honeywell Li-ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

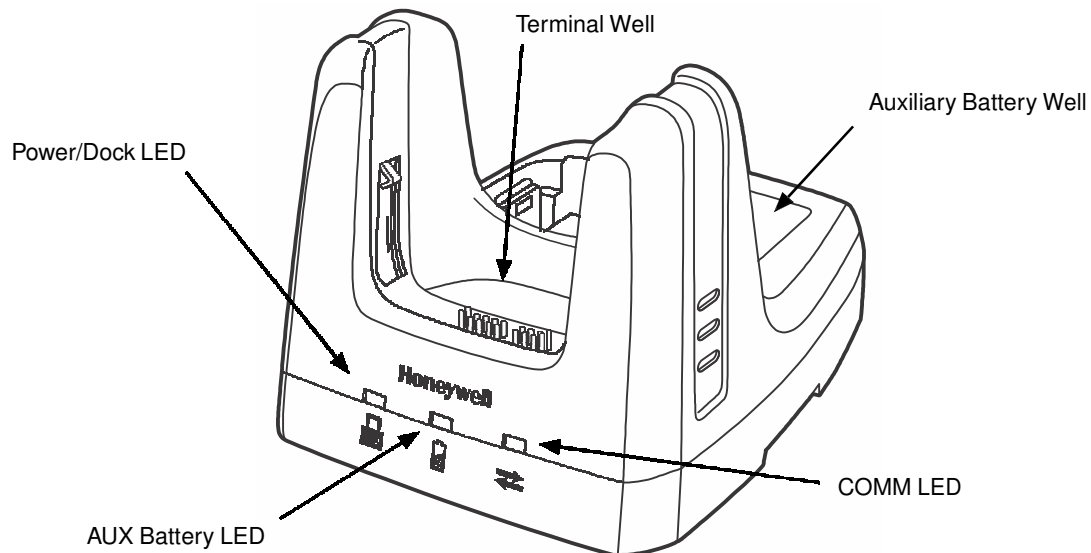


We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Preliminary Draft 1/19/11

Parts and Functions

Front Panel



Terminal Well

Place the terminal in this well to communicate with a host device, power the terminal, and charge the installed battery pack. The eBase completely charges the main battery in a Dolphin terminal in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7 battery.

Auxiliary Battery Well

See [Auxiliary Battery Well](#) on page 13-4.

Power/DOCK LED

Indicates if power is supplied to the eBase and if a terminal is docked properly in the base.

This color	means...
------------	----------

Red	The eBase has power but no terminal is docked.
-----	--

Green	The eBase has power and the terminal is properly seated in the base.
-------	--

AUX Battery LED

The AUX Battery LED indicates the status of the battery charging in the auxiliary battery well; see [Back Panel](#) on page 13-4.

This color	means...
------------	----------

Orange	The auxiliary battery is charging.
--------	------------------------------------

Green	The auxiliary battery has completed charging and is ready for use.
-------	--

Preliminary Draft 1/19/11

Red Flashing The internal temperature of the auxiliary battery is too hot or there is a battery error. Charge the auxiliary battery in a cooler environment or replace the battery with a Honeywell Li-ion or Li-poly battery.

COMM LED ⇄

The COMM LED indicates the status of data transfer between the Dolphin terminal and the eBase.

Ethernet Communication

When the Dolphin terminal is docked:

This color	and status	means...
Green	Solid	A connection has been established between the Dolphin terminal and the Ethernet.
Green	Flashing	Data transfer in progress.

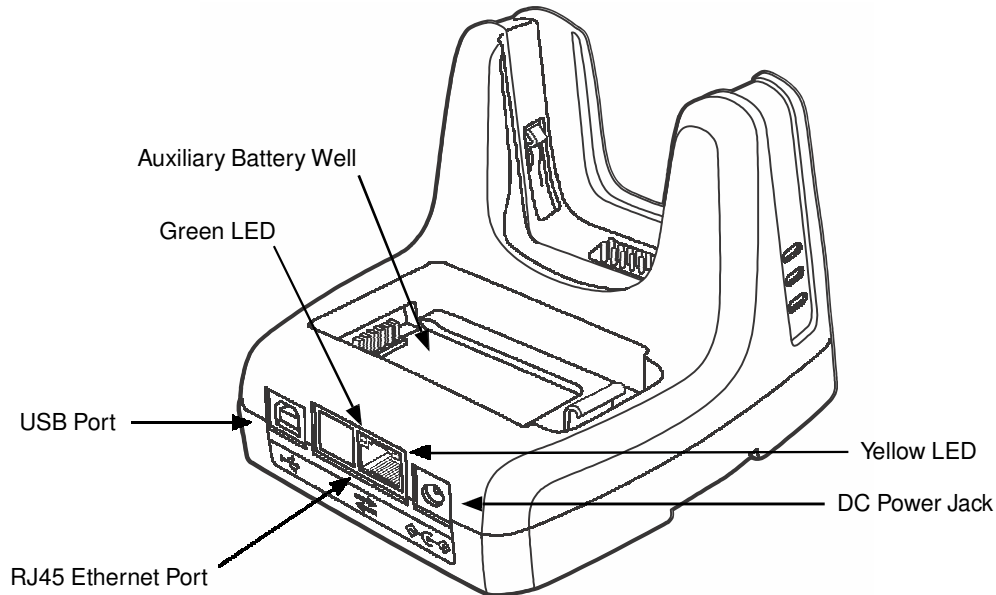
USB Communication

When the Dolphin terminal is docked:

This color	and status	means...
Red	Solid	A USB connection has been established between the Dolphin terminal and the host workstation.

Preliminary Draft 1/19/11

Back Panel



Auxiliary Battery Well

The eBase enables you to charge an additional battery pack independently of the terminal well in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery. This feature ensures that you can always have a fully charged battery for your terminal.

USB Port

This USB port is USB v2.0 high-speed compliant. Using a USB cable, you can connect the eBase to a USB compliant device to facilitate USB communication to and from the terminal. USB communication occurs through Microsoft ActiveSync (v4.5 or higher) or Microsoft Windows Mobile Device Center depending on the host workstation's operating system. When the terminal is seated in the terminal well, it is connected to the peripheral device via the eBase.

Note: ActiveSync on your Dolphin terminal works with Windows Mobile Device Center on host workstations running Windows Vista or Windows 7 and with ActiveSync on host workstations running Windows XP. For detailed information on ActiveSync and Windows Mobile Device Center visit [Microsoft's Windows Mobile](#) Web site.

RJ45 Ethernet Port

Use a standard CAT-5 Ethernet cable; you can connect the ebase to an Ethernet-compliant device to facilitate Ethernet communication to and from the terminal.

This color	and status	means...
Green	Flashing	Data transfer in progress.
	Solid	A connection has been established between the Dolphin terminal and the Ethernet.
Yellow	Solid	Ethernet is connected at 100T.
	Off	Ethernet is connected at 10T.

Preliminary Draft 1/19/11

DC Power Jack

Use the power cable from Honeywell that comes with the ebase to supply power to this power jack. For more information, see [Power](#) on page 13-5.

Bottom Panel

For details on how to mount the eBase, see [Mounting](#) on page 13-8.

Serial Number Label _____

Compliance Label _____

Power

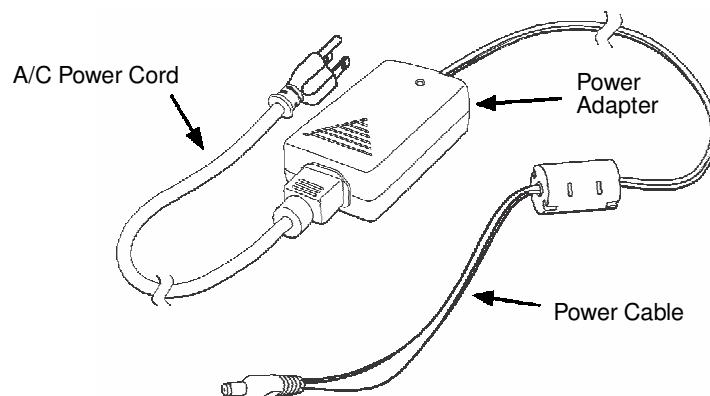
The terminal requires 12 Volts DC input for communications and battery charging; the power adapter on the power cable converts the voltage from the power source to 12 Volts DC. **Only** the Honeywell 12VDC, 3A power supply provided with the ebase converts the voltage appropriately. The operating temperature range is -10° to 45°C (14° to 113°F).

Honeywell recommends that you leave the eBase connected to its power source at all times, so that it is always ready to use.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Connecting Power to the eBase



1. Plug the A/C power cord into the power adapter.
2. Plug the power cable into the power connector on the back of the eBase.

Preliminary Draft 1/19/11

3. Plug the A/C power cord into a standard wall outlet. The Power/Dock LED on the eBase illuminates solid red to indicate the eBase has power and no terminal is docked.

Charging the Main Battery


The eBase provides power to the Dolphin terminal and allows the charging of the terminal's main battery. The intelligent battery charging system incorporated into all Dolphin terminals prevents overcharging, which means that Dolphin terminals may be stored in the eBase indefinitely without damage to the terminals, battery packs, or the eBase.


To check battery power, use the Power system setting; see [Power](#) on page 7-16.

For more information about Honeywell Li-ion batteries, see [Batteries](#) on page 3-13.

To Power a Terminal and Charge its Main Battery

1. Install the battery pack in the terminal; see [Install the Main Battery Pack](#) on page 2-1.
2. Verify the base has power. If the Power/Dock LED is not illuminated, see [Connecting Power to the eBase](#) on page 13-5.
3. Slide the terminal into the terminal well. The Power/Dock LED changes to green. Battery charging begins immediately if required by the Dolphin terminal.

 Make sure the terminal is dry before placing it in the eBase. Do NOT place a wet terminal in the eBase! Doing so may cause damage not covered by the warranty.

 We recommend use of Honeywell Li-Ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

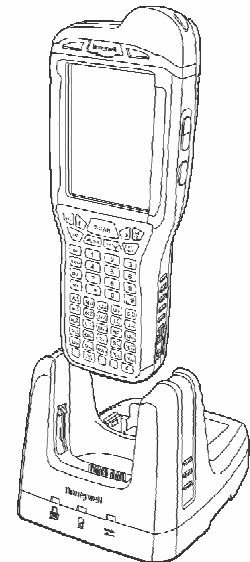
Charging a Spare Battery in the Auxiliary Battery Well

The auxiliary battery well located on the back of the base charges a spare battery independently of the terminal well. The Aux Battery LED on the front panel indicates the status of the battery in this well.

Charge time is 4.5 hours for the standard battery pack or 6 hours for the extended battery pack; see [Auxiliary Battery Well](#) on page 13-4.

1. Insert the battery at an angle so the battery pack contacts and the auxiliary well contacts align.
2. Snap the battery into place with a hinging motion. The Aux Battery LED lights orange.
3. Use the AUX Battery LED to monitor the charging progress. The LED lights green when the auxiliary battery has completed charging and is ready for use.


Note: If the AUX Battery LED flashes red, the internal temperature of the battery is too hot or there is a battery error. Charge the auxiliary battery in a cooler environment or replace the battery with a new Honeywell Li-ion or Li-poly battery.



Preliminary Draft 1/19/11

Communication

Software Requirements

Before you connect the Dolphin terminal to the eBase, make sure you have the most current software installed. To check the terminal's system information, tap  > **Power Tools** > **SysInfo**.

- The Kernel version must be 26.01 or later in terminals running Windows Embedded Handheld 6.5 Classic.
- In terminals running Windows Embedded Handheld 6.5 Professional, the kernel version must be 25.01 or later.



Applications on the Dolphin Terminal

Applications running on the Dolphin terminal when it is connected to the eBase should be designed specifically for a partially connected network. For more details, please refer to the Best Practices for Partially Connected Networks document available at www.honeywellaidc.com.

Establishing Ethernet Communication

Connecting the Dolphin Terminal to the eBase


By default, the Dolphin terminal is configured to obtain IP addresses automatically via DHCP server. This means that in most cases you would simply plug-and-play the unit.

1. Verify the base has power. If the Power/Dock LED is not illuminated, see [Connecting Power to the eBase](#) on page 13-5.
2. Plug the CAT-5 Ethernet cable into the RJ45 connector on the back of the eBase.
3. Plug the Ethernet cable into the network.
4. Insert the Dolphin into the terminal well. The DOCK LED for the well changes from red to green and the connection icon on the Dolphin's title bar changes from  to .

Note: Instead of using the default for DHCP assigned IP addresses, the Dolphin terminal can use a statically assigned IP address. See standard Microsoft Windows Mobile documentation for how to assign a static IP address to a network adapter. In this case, set a static IP address for the adapter named "SMSC9500 USB2.0 FAST Ethernet Drive".

Displaying the eBase and Terminal IP Address

Once the Dolphin terminal has been successfully connected to the eBase, the terminal uses the eBase IP address. This IP address can be used by any application on the Dolphin terminal.

1. Tap  > **Power Tools** > **Network Utilities** > **IPConfig**.
2. Change a **Adapter** to SMC9500.
3. On the Input tab, tap the **Display full configuration** button.
4. The Dolphin terminal retrieves and displays the IP configuration for the entire terminal and eBase. Locate the **IpAddress** field in the IP configuration list.



Preliminary Draft 1/19/11

Establishing USB Communication

Dolphin terminal's support USB communication out of the box. The eBase also supports USB communications using the USB port located on the back panel of the eBase. The eBase acts as a USB device by interfacing the USB signals of the Dolphin terminal to the USB of the host workstation. Using a standard USB cable, the ebase's USB interface allows the Dolphin terminal to communicate with a host workstation.

Setting Up and Connecting the Dolphin Terminal to the eBase

1. Verify the base has power. If the Power/Dock LED is not illuminated, see [Connecting Power to the eBase](#) on page 13-5.
2. Plug the USB communication cable into the USB port on the back of the eBase.

Note: The Dolphin terminal should always be removed from the eBase when connecting or disconnecting the USB cable.
3. Connect the other end of the USB cable to the host workstation.
4. Insert the Dolphin terminal in the eBase terminal well. The Power/Dock LED changes to green and the COMM LED illuminates red.
5. The Dolphin terminal activates and automatically opens ActiveSync to establish a connection.
6. The connection icon in the Dolphin's navigation bar changes from  to  it indicate a successful connection. The eBase can now transfer data between the terminal and the host device.

Mounting

Set the eBase on a dry, stable surface, such as a desktop or workbench near an electrical outlet. Be sure to provide enough workspace with good lighting for the user to view and operate the Dolphin terminal while it is in the eBase.

When choosing a location, bear in mind that:

- the mounting location must allow users easy access to the Auxiliary Battery Well, and
- the Ethernet and USB ports as well as the power jack face straight out of the rear panel, and you will most likely want easy access to them in the future.

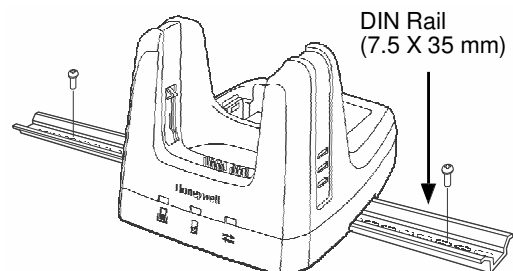
Using the DIN Rail

Installation Hardware

- Screw:** 3/16 in. dia x 5/8 in. long pan head screw
Washer: 1/2 in. OD x 7/32 in. ID x 3/64 in. thick
Nut: 3/16 in. dia

The DIN rail slot (7.5 X 35 mm) may be mounted on the bottom to allow for secure desk attachment of the unit if desired.

1. Slide the DIN rail slot along the bottom panel.
2. Then, using the appropriate nuts and bolts, secure the DIN rail to the desk or flat surface.



Preliminary Draft 1/19/11

Dolphin 99EXMobile Base Device

Overview

This charging and communication cradle is designed specifically for in-premise and in-transit data collection applications. It features a flexible mounting bracket and a cigarette lighter adapter to adapt it to your environment.

The serial connector supports RS232 communication and power out to peripheral devices, such as handheld scanners. The USB connector supports USB communication and power to peripheral devices such as a memory stick or printer.

As the hub of your Dolphin mobile data collection system, the base performs three important functions: charging, communications, and storage.

Charging

The base completes a full charge of the main battery pack in 4.5 hours for the standard 3.7V battery pack or 6 hours for the extended 3.7V battery pack. The base also provides power to the intelligent battery charging system in all terminals that senses when a full charge has been achieved and switches to a trickle charge to maintain the full charge.

Communications

The base supports both RS232 and USB communications. Through the RS232 serial port, you can transmit reliable data communications at speeds of up to 115K baud. By using the high-speed USB (v2.0) port, the data transmission rate goes up to 480 Mbps.

Convenient Storage

Intelligent battery charging makes the base a safe and convenient storage receptacle for your Dolphin terminal.



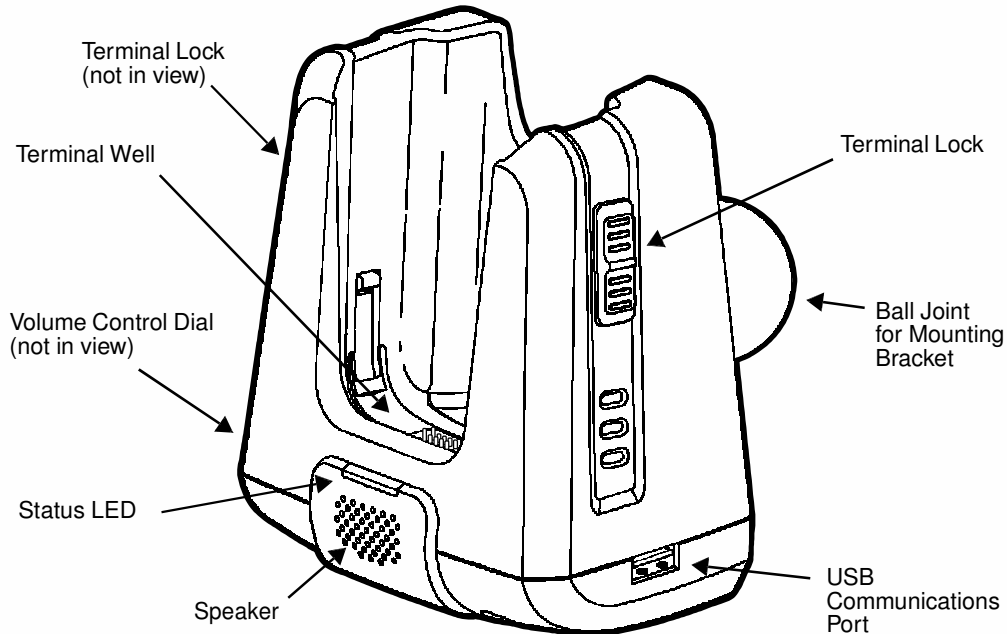
We recommend use of Honeywell Li-Ion or Li- poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Preliminary Draft 1/19/11

Front Panel



Mounting Bracket

Used to mount the base to a fixed location.

Speaker

Amplifies the Dolphin's audio signals.

Status LED

Illuminates solid green when the Dolphin terminal is properly seated in the terminal well.

Terminal Locks

The mobile base has a locking switch on the left and right side. Pushing one of the switches up locks the terminal in the base. To unlock the terminal push either switch down.

Terminal Well

Place the terminal in this well. Once seated, the terminal can communicate with a host device and its main battery pack begins charging.

USB Communications Port

This USB Port is host high-speed 2.0v compliant. You can connect the base to a peripheral device, such as a memory stick or to a printer using a USB cable. When the terminal is seated in the terminal well, it is connected to the peripheral device via the base.

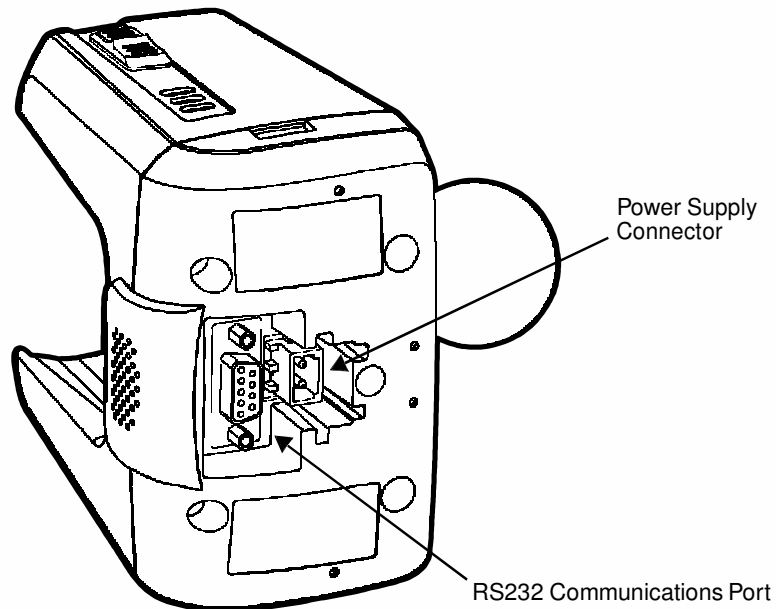
Volume Control Dial

The speaker volume is adjusted via the dial located on the side of the base.

Preliminary Draft 1/19/11


Bottom Panel

The power supply and RS232 connectors are located on the bottom of the unit.



Power Supply Connector

To run on vehicle power, you can use the 12 VDC cable. The appropriate cable comes with the kit you ordered. The 12 VDC cable can be used with a cigarette lighter outlet.

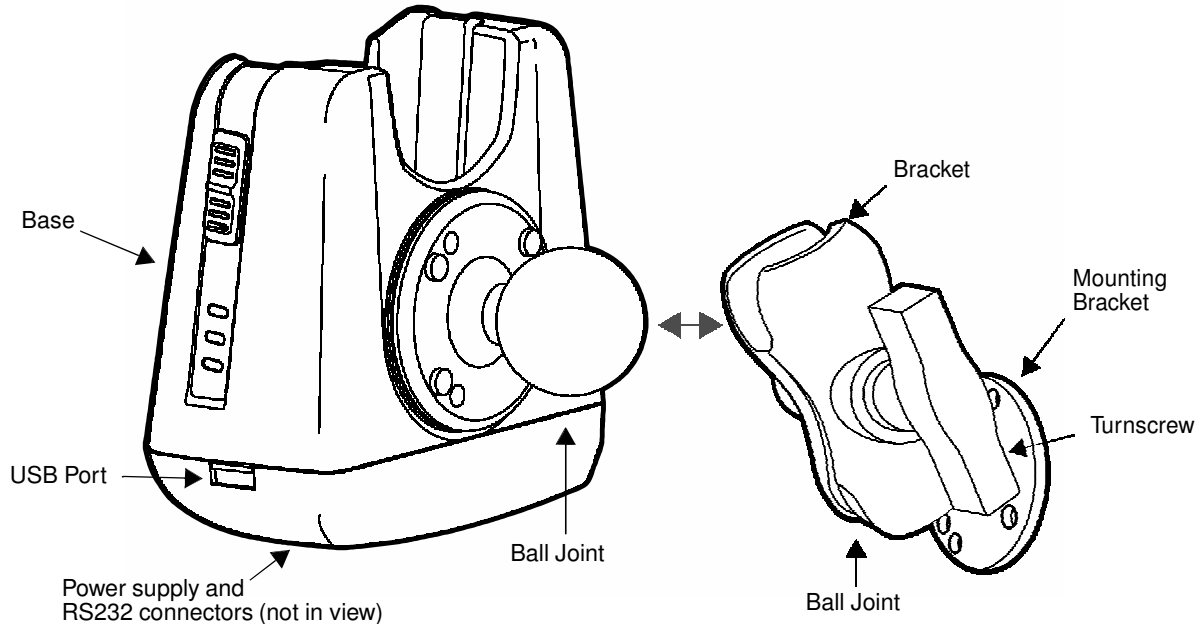
 Verify that the power source is always within the specified range and observe correct input voltage polarity. An improper input voltage range or reverse polarity could damage the power conversion circuitry.

RS232 Communications Port

Use a standard serial cable to connect the unit to a host device via RS232; see [Serial Connector](#) on page 14-8.

Preliminary Draft 1/19/11

Back Panel and Mounting Brackets



Ball Joints

There are two ball joints: one on the back of the base and one on the mounting bracket. Both ball joints are inserted into the bracket and secured to mount the base.

Connectors

The power and RS232 connectors are located on the bottom panel. For more information, see [Bottom Panel](#) on page 14-3.

Bracket

The bracket contains the turnscrew and two slots. Ball joints are inserted into each slot and secured with the turnscrew.

Turnscrew

The turnscrew is located on the top of the bracket. Rotate the turnscrew to secure or loosen the ball joint slots.

Mounting Bracket

The mounting bracket is what you attach to the mounting surface. It is comprised of a ball joint and flat disk. The disk contains drill holes you use to secure the base to the mounting surface.

Preliminary Draft 1/19/11







Mounting

The adjustable mounting bracket holds the terminal securely in place and gives the user a variety of options for mounting the base.

Safety Precautions

Honeywell is not responsible for any damages caused to you, your vehicle, or other individuals due to the installation of the Dolphin Mobile mount.

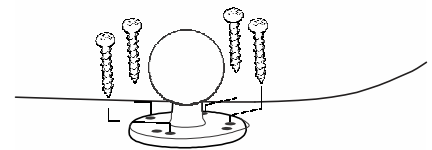
Follow these safety precautions when mounting the mobile base:

-  Never drill into a surface in your vehicle without first consulting a mobile installation professional experienced with your vehicle type to avoid damaging the vehicle's safety features, gas tank, electrical system or other sensitive vehicle components.
-  Do not install the Mobile base in an air bag deployment zone. Honeywell assumes no responsibility of liability for injury or death because of car crashes and/or air bag deployment.
-  Do not mount the base in a location where it prevents safe operation of the vehicle and/or impedes the vehicle operator's field of view.
-  Do not mount the base in a location where the connectors on the bottom panel of the base are not easily accessible. Be sure to leave enough room for unrestricted cable connections.
-  The Mobile base is intended for use in an enclosed space protected from the elements. Do not mount the Mobile base on external vehicle surfaces.
-  Select a mounting surface that is flat and smooth like the console area in the vehicle located between the seats.

Installation

Mounting hardware is not included. You must provide the appropriate hardware for your particular application and vehicle type. **To ensure a safe installation, consult a mobile installation professional experienced with your vehicle type.**

1. Using the bracket as a template, mark the locations for the mounting screws.
2. Drill the appropriate size pilot holes in the mounting surface.
3. Secure the mounting bracket to the mounting surface using the appropriate screw type for your application and vehicle type.
4. Loosen the turnscrew.
5. Insert the ball joint of the mounting bracket to the back of the bracket.
6. Insert the ball joint on the back of the base into the other side of the bracket.
7. Tighten the turnscrew to secure both ball joints.



Preliminary Draft 1/19/11

Powering the Dolphin Terminal

When seated in a base that is connected to the appropriate power source, the Dolphin terminal receives the power to charge its main battery and run its internal circuitry. Keep the base plugged into the power source so that the Dolphin terminal battery pack stays fully charged.

Note: Honeywell recommends that you leave the base connected to its power source at all times.

The base is powered via the power connector on the bottom panel; see [Bottom Panel](#) on page 14-3. Both the power and serial connectors are straight out, not at an angle. The base requires a 12 VDC power input.

Charging the Dolphin Terminal

The base supplies charging power to the Dolphin terminal so that the terminal can monitor the charging of its battery pack. This charging method protects the battery from being damaged by overcharging. Therefore, the Dolphin terminal may be stored indefinitely in the base without damage to the terminal, the battery pack, or the base.

1. Insert a battery pack into the terminal.
2. Slide the terminal, imager window up and the LCD visible, into the terminal well until it stops.
3. When the terminal is properly seated, the DOCK LED on the base illuminates solid green. The terminal begins charging automatically.

Establishing Communication

The RS232 interface allows the terminal to communicate to a workstation, modem, any standard RS232 device using a standard RS232 and communications software.

Requirements

You need the following equipment:

- A Mobile Base device powered by a power adapter cable
- For RS232 communications, a serial cable
- ActiveSync v4.5 or above or Windows Mobile Device Center on the host workstation
- Windows 98 Second Edition, Windows Me, Windows 2000, Windows NT (4.0 SP6 or higher), Windows XP, Windows Vista or Windows 7 on the host workstation.

Connecting the Communication Cables

Note: You must be using ActiveSync (4.5 or higher) or Windows Mobile Device Center.

1. Plug in the power supply and connect it to the bottom of the base.
2. Plug the RS232 communication cable into the appropriate connector on base.
3. Connect the other end of the communication cable into the back of the workstation.
4. At this point, the hardware is installed and operating.
You may need to reboot your workstation to complete the installation process.

Preliminary Draft 1/19/11

Establishing ActiveSync or Windows Mobile Device Center Communication

The Dolphin terminal is usually auto-detected and configured by ActiveSync or Windows Mobile Device Center based on the communication cable. The synchronization software automatically sets up an RS232 connection when you are using an RS232 cable.

For more details, see [Communication](#) on page 8-8.

RS232 Communication Cables

Connect the base to the host workstation or other device by plugging an RS232 serial cable into the RS232 Communications Port on the bottom of the base. Plug the other end of the RS232 serial cable into the correct port on the host RS232 device. The wiring of your cable depends on whether the other device is set up as a Data Communications Equipment (DCE) or Data Terminal Equipment (DTE) device.

The Communication Port is configured as a DCE device. To communicate with a DTE device such as a workstation, use a standard (or straight-through) RS232 cable. To communicate with a DCE device, use either a null modem adapter in line with a standard RS232 cable, or a null-modem serial cable.

You can make your own cables by following the pin configuration in the chart that follows. To do so, you must determine if your host RS232 device is 9-pin or 25-pin, and whether it is configured as a DCE or DTE device.

RS232 Pin Configuration

Base/Host Port (DCE)	IBM AT DB9 (DTE)	IBM XT DB25 (DTE)	Modem DB25 (DCE)
Pin / Input Signal			
2 / (RD)	2	3	2
3 / (TD)	3	2	3
5 / (SG)	5	7	7
4 / (DTR)	4	20	6
6 / (DSR)	6	6	20
7 / (RTS)	7	4	5
8 / (CTS)	8	5	4

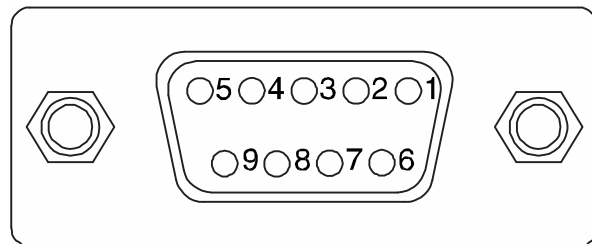
Note: The input signal names are reference to the DTE target device (i.e., workstation or host computer) in accordance with the RS232 standard.

Preliminary Draft 1/19/11

Serial Connector

The base connector is straight to the printed circuit board (PCB). This can power a peripheral device, such as a mobile printer.

Pin	Description
1	Internal Jumper to Pin 6
2	TXD
3	RXD
4	DSR
5	GND
6	DTR
7	CTS
8	RTS
9	5 Volt Out



Signals referenced are for a DTE device.

Preliminary Draft 1/19/11

Dolphin 99EXChargeBase Device

Overview

This 4-slot charging cradle that can power 4 Dolphin terminals, and charge their main batteries in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery.

Charging

The base supplies power to the intelligent battery charging system in all Dolphin terminals, which senses when a full charge has been achieved and switches to a trickle charge to maintain the full charge.

As battery packs charge, the charging circuitry follows the two-step charging process (CC-CV) that is recommended for Li-ion or Li-poly batteries. The process monitors changes in temperature, current, and voltage. The main battery of each terminal charges in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery.

Convenient Storage

Intelligent battery charging makes this base a safe and convenient storage receptacle for your Dolphin terminal.

Capacity

The base can hold up to 4 Dolphin terminals. Each charging well charges each terminal independently of the other wells.



We recommend use of Honeywell Li-Ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

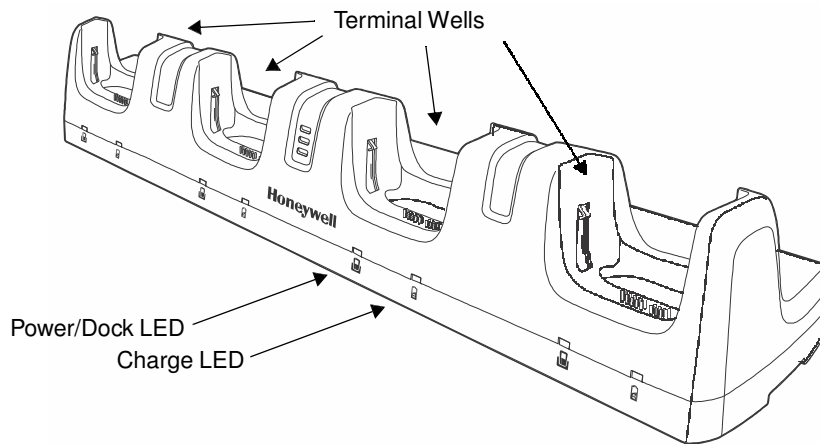


We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Preliminary Draft 1/19/11

Parts and Functions

Front Panel



Terminal Wells

The base contains four terminal wells. Each well has its own dedicated Power/Docking LED and Charging LED indicator.

Power/Dock LEDs

The Power/Dock LED indicates if the ChargeBase has power and if the terminal is properly seated in the terminal well. Each terminal well has its own dedicated Power/Dock LED.

This color	means...
-------------------	-----------------

Red	The ChargeBase has power but no terminal is docked.
------------	---

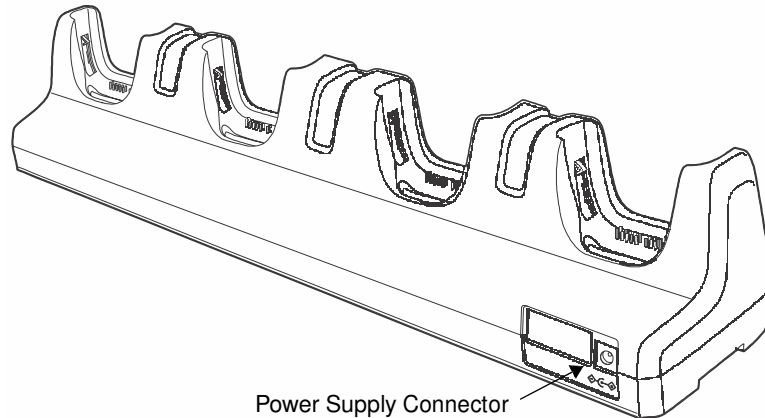
Green	The ChargeBase has power and the terminal is properly seated in the well facilitating communication between the base and terminal
--------------	---

Charge LEDs

Each terminal well displays a Charge LED on the front that lights green to indicate charging. For details, see [Charging the Main Battery](#) on page 15-4.

Preliminary Draft 1/19/11

Back Panel



Power Supply Connector

This connector receives input from the power adapter. Plug the power connector cable from the power adapter into this connector.

Power

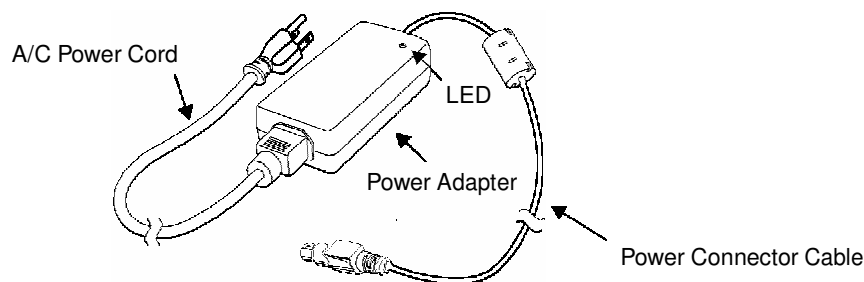
The terminal requires 12 Volts DC input for battery charging; the power adapter on the power cable converts the voltage from the power source to 12 volts DC. **Only** the Honeywell 12V/8.5A power supply provided with the Net Base converts the voltage appropriately. The operating temperature range is -10° to 45°C (14° to 113°F).

Honeywell recommends that you leave the ChargeBase connected to its power source at all times, so that it is always ready to use.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Connecting Power to the ChargeBase



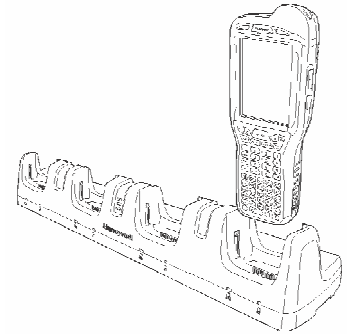
1. Plug the A/C power cord into the power adapter.
2. Plug the power connector cable into the power connector on the back panel of the ChargeBase.
3. Plug the A/C power cord into a standard wall outlet. The LED on the Power Adapter illuminates to indicate power.
4. All of the Power/Dock LEDs illuminate red to indicate the base has power. Terminal wells with properly docked Dolphins indicate power with a green LED.

Preliminary Draft 1/19/11

- The base is ready to begin charging terminals.

Charging the Main Battery

The base provides power to the Dolphin terminals and allows charging of the main batteries in the terminals. The main battery of each terminal charges in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery. The intelligent battery charging system incorporated into all Dolphin terminals prevents overcharging, which means that Dolphin terminals may be seated in the base indefinitely without damage to the terminals, battery packs, or the base.



To Power a Terminal and Charge its Main Battery

- Install the main battery pack in the terminal; see [Install the Main Battery Pack](#) on page 2-1.
- Verify the base has power. If the Power/Dock LEDs are not illuminated, see [Connecting Power to the ChargeBase](#) on page 15-3.
- Slide the Dolphin terminal into one of the four terminal wells. The the Power/Dock LED for the well changes to green. Charging begins immediately if required by the Dolphin terminal.



Make sure the terminal is dry before placing it in the Net Base. Do NOT place a wet terminal in the Net Base! Doing so may cause damage not covered by the warranty.



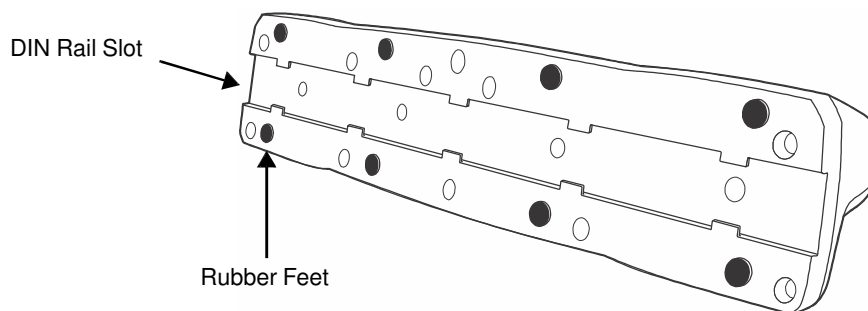
We recommend use of Honeywell Li-Ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

Mounting

This base should be mounted to a dry, stable surface. When choosing a location, always bear in mind that

- The mounting location must allow users easy access to the power connector.'
- The **base** should be oriented so that users can easily see the LEDs.

Bottom Panel



Desk Mounting

The DIN Rail (7.5 X 35 mm) slot on the bottom panel enables secure mounting.

Preliminary Draft 1/19/11

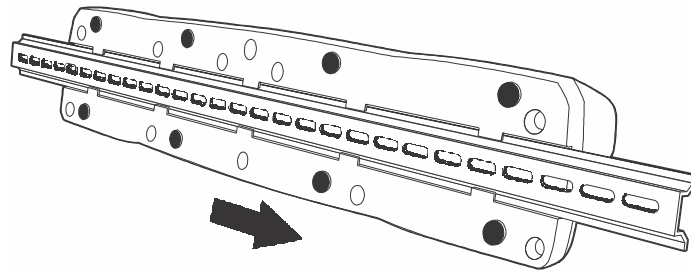
Installation Hardware

Screw: 3/16 in. dia x 5/8 in. long pan head screw

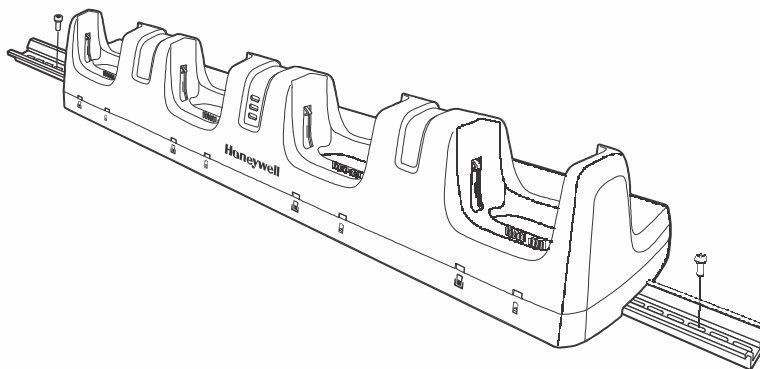
Washer: 1/2 in. OD x 7/32 in. ID x 3/64 in. thick

Nut: 3/16 in. dia

1. Slide the DIN Rail into the DIN Rail slot on the bottom panel.



2. Turn the base and DIN Rail right side up.
3. Secure the DIN Rail to a stable, flat horizontal surface.



Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Dolphin 99EXNetBase Device

Overview

The Net Base enables up to four Dolphin 99EX mobile computers to communicate with a host device over an Ethernet network. In addition, the Net Base provides a second RJ45 Ethernet port for connection to an additional device such as a printer, workstation, eBase, or another Net Base.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Unpacking the Net Base

Open the shipping box and inspect the package to see that the following standard items are included:

- One Dolphin Net Base Ethernet cradle
- One universal AC/DC power adapter for the Dolphin Net Base
- One power cord

You will also need to provide a standard CAT-5 Ethernet network cable. These items are needed to set up and operate the Net Base. If any items are missing or anything appears to be damaged, contact your Customer Account Representative.

Keep the original packaging in case you need to return the Net Base for service or to store the Net Base while not in use.

Charge Time

The base supplies power to the intelligent battery charging system in all Dolphin terminals, which senses when a full charge has been achieved and switches to a trickle charge to maintain the full charge.

As battery packs charge, the charging circuitry follows the two-step charging process (CC-CV) that is recommended for Li-ion or Li-poly batteries. The process monitors changes in temperature, current, and voltage. The main battery of each terminal charges in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery.

Convenient Storage

Intelligent battery charging makes this base a safe and convenient storage receptacle for your Dolphin terminal.

Capacity

The base can hold up to 4 Dolphin terminals. Each charging well charges each terminal independently of the other wells.



We recommend use of Honeywell Li-ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

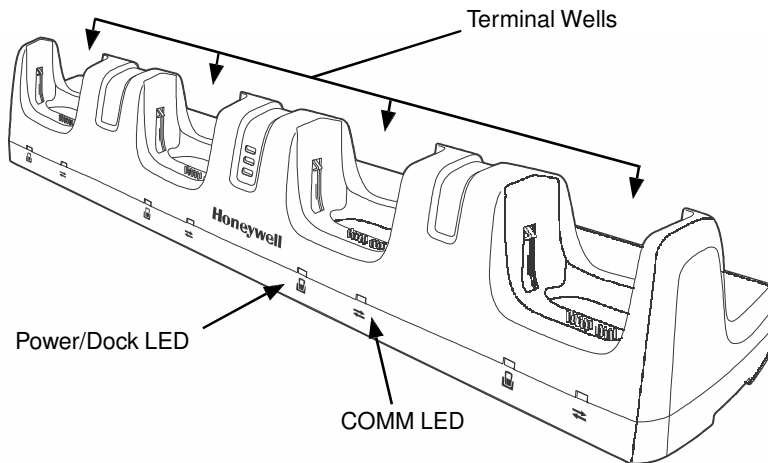


We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Preliminary Draft 1/19/11

Parts and Functions

Front Panel



Terminal Wells

The Net Base contains four terminal wells. Each well has its own dedicated Power/Dock LED and COMM LED indicator.

Place the Dolphin terminal in any one of the four wells to communicate with a host device, power the terminal, and charge the installed battery pack. The Net Base completely charges the main battery in a Dolphin terminal in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7 battery.

Power/DOCK LED

Indicates if power is supplied to the Net Base and if a terminal is docked properly in the terminal well. Each terminal well has its own dedicated Dock LED.

This color means...

- | | |
|-------|---|
| Red | The Net Base has power but no terminal is docked. |
| Green | The Net Base has power and the terminal is properly seated in the base. |

COMM LED

The COMM LED indicates the status of connection and data transfer between the Dolphin terminal and the Ethernet. Each terminal well has its own dedicated COMM LED.

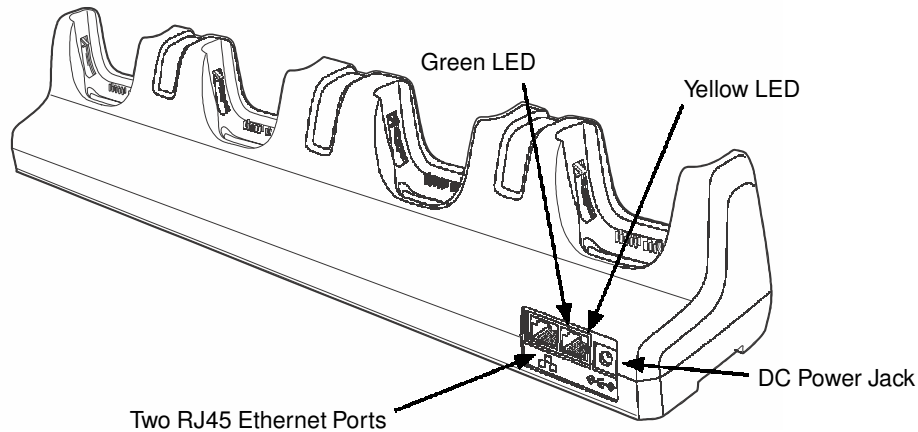
When the Dolphin terminal is docked:

This color and status means...

- | | | |
|-------|----------|--|
| Green | Solid | A connection has been established between the Dolphin terminal and the Ethernet. |
| Green | Flashing | Data transfer in progress. |

Preliminary Draft 1/19/11

Back Panel



DC Power Jack

Use the power cable from Honeywell that comes with the Net Base to supply power to this power jack. For more information, see [Power](#) on page 16-4.

RJ45 Ethernet Ports

The Net Base contains two RJ45 Ethernet ports. You can connect the Net Base to an Ethernet-compliant device to facilitate Ethernet communication to and from the terminal by plugging a standard CAT-5 Ethernet cable into one of the two Ethernet ports provided. The second RJ45 Ethernet port can be used for connection to an additional device such as a printer, workstation, eBase, or another Net Base.

Note: The Net Base does not use a Spanning Tree Protocol (STP). When both RJ45 Ethernet ports are used, do not connect both Net Base interfaces to the same layer 2 LAN.

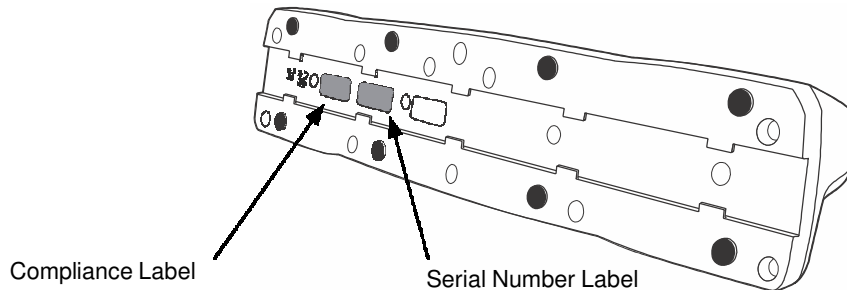
Each Ethernet port has a dedicated green and yellow status LED.

This color	and status	means...
Green	Flashing	Data transfer is in progress.
	Solid	A connection has been established between the Dolphin terminal and the Ethernet.
Yellow	Solid	Ethernet is connected at 100T.
	Off	Ethernet is connected at 10T.

Preliminary Draft 1/19/11

Bottom Panel

For details on how to mount the Net Base, see [Mounting the Net Base](#) on page 16-6.



Power

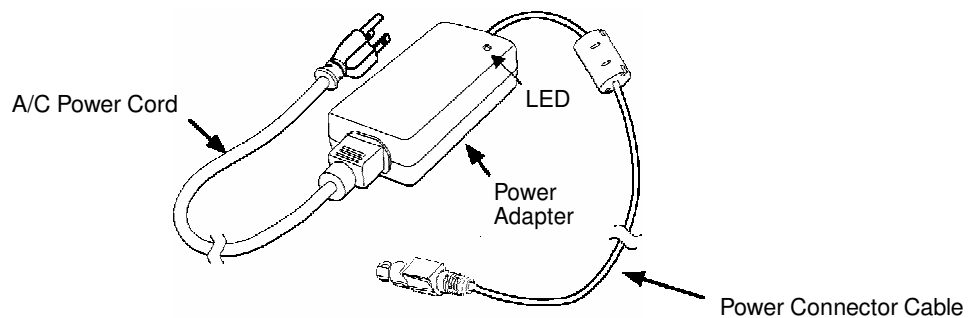
The terminal requires 12 Volts DC input for communications and battery charging; the power adapter on the power cable converts the voltage from the power source to 12 volts DC. **Only** the Honeywell 12V/ 8.5A power supply provided with the Net Base converts the voltage appropriately. The operating temperature range is -10° to 45°C (14° to 113°F).

Honeywell recommends that you leave the Net Base connected to its power source at all times, so that it is always ready to use.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Connecting Power to the Net Base

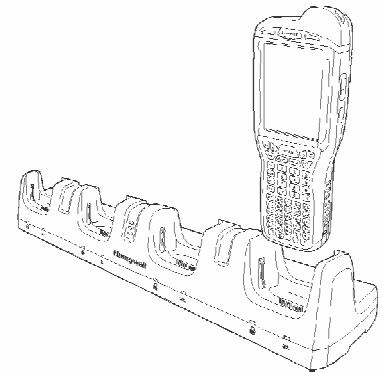


1. Plug the A/C power cord into the power adapter.
2. Plug the power connector cable into the power connector on the back of the Net Base.
3. Plug the A/C power cord into a standard wall outlet. The LED on the Power Adapter illuminates to indicate power.
4. All four Power/Dock LEDs illuminate solid red to indicate the base has power. Terminal wells with properly docked Dolphins indicate power with a green LED.
5. The base is ready to begin charging terminals.

Preliminary Draft 1/19/11


Charging the Main Battery


The base provides power to the Dolphin terminals and allows the charging of the main batteries in the terminals. The main battery of each terminal charges in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery. The intelligent battery charging system incorporated into all Dolphin terminals prevents overcharging, which means that Dolphin terminals may be stored in the base indefinitely without damage to the terminals, battery packs, or the base.



To Power a Terminal and Charge its Main Battery


1. Install the main battery pack in the terminal; see [Install the Main Battery Pack](#) on page 2-1.
2. Verify the base has power. If the Power/Dock LEDs are not illuminated, see [Connecting Power to the Net Base](#) on page 16-4.
3. Slide the Dolphin terminal into one of the four terminal wells. The the Power/Dock LED for the well changes to green. Charging begins immediately if required by the Dolphin terminal.

 Make sure the terminal is dry before placing it in the Net Base. Do NOT place a wet terminal in the Net Base! Doing so may cause damage not covered by the warranty.

 We recommend use of Honeywell Li-Ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

Communication

Software Requirements

Before you connect the Dolphin terminal to the Net Base, make sure you have the most current software installed. To check the terminal's system information, tap  > **Power Tools** > **SysInfo**.

- The Kernel version must be 26.01 or later in terminals running Windows Embedded Handheld 6.5 Classic.
- In terminals running Windows Embedded Handheld 6.5 Professional, the kernel version must be 25.01 or later.

Applications on the Dolphin Terminal



Applications running on the Dolphin terminal when it is connected to the Net Base should be designed specifically for a partially connected network. For more details, please refer to the Best Practices for Partially Connected Networks document available at www.honeywellaidc.com.

Connecting the Dolphin Terminal to the Net Base

By default, the Dolphin terminal is configured to obtain IP addresses automatically using a DHCP server. This means that in most cases, you would simply plug-and-play the unit.

1. Verify the base has power. If the Power/Dock LEDs are not illuminated, see [Connecting Power to the Net Base](#) on page 16-4.
2. Plug the CAT-5 Ethernet cable into one of the RJ45 connectors on the back of the Net Base.


Preliminary Draft 1/19/11

3. Plug the Ethernet cable into the network.
4. Insert the Dolphin into one of the terminal wells. The DOCK LED for the well changes from red to green and the connection icon on the Dolphin's title bar changes from  to .
5. By default, the DHCP server assigns a unique IP address to each of the Dolphin terminals docked in the Net Base. This IP address can be used by any application on the Dolphin terminal.

Note: Instead of using the default for DHCP assigned IP addresses, the Dolphin terminal can use a statically assigned IP address. See standard Microsoft Windows Mobile documentation for how to assign a static IP address to a network adapter. In this case, set a static IP address for the adapter named "SMSC9500 USB2.0 FAST Ethernet Drive".

Displaying the Net Base Terminal Well and Dolphin IP Address

Once the Dolphin terminal establishes communication, it uses the unique IP address assigned to the terminal well it is docked in on the Net Base. If four Dolphin terminals are successfully connected, then four different IP addresses are assigned **to the adapter associated with the Dolphin terminal**.

1. Tap  > **Power Tools > Network Utilities > IPConfig**.
2. Change a **Adapter** to SMC9500.
3. On the Input tab, tap the **Display full configuration** button.
4. The Dolphin terminal retrieves and displays the IP configuration for the entire Dolphin terminal and the Net Base terminal well where the Dolphin is docked.
5. Locate the **IpAddress** field in the IP configuration list.

Mounting the Net Base

Set the Net Base on a dry, stable surface, such as a desktop or workbench near an electrical outlet. Be sure to provide enough workspace with good lighting for the user to view and operate the Dolphin terminal while it is in the Net Base. When choosing a location, bear in mind that the mounting location must allow users easy access to the terminal wells, the Ethernet ports, and the power jack.

Using the DIN Rail

Installation Hardware

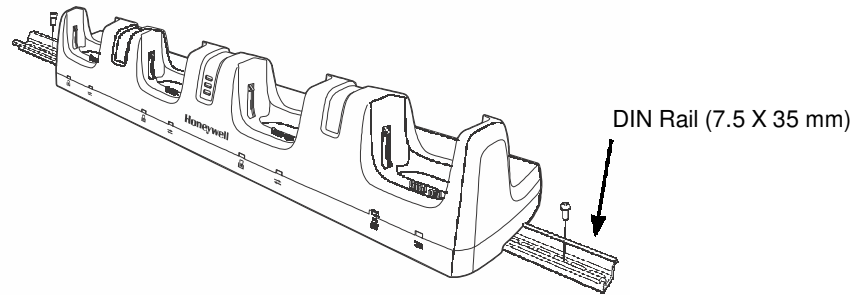
- Screw:** 3/16 in. dia x 5/8 in. long pan head screw
Washer: 1/2 in. OD x 7/32 in. ID x 3/64 in. thick
Nut: 3/16 in. dia

The DIN rail slot (7.5 X 35 mm) on the bottom panel enables secure mounting to a horizontal surface.

1. Slide the DIN rail into the DIN rail slot along the bottom panel of the Net Base.

Preliminary Draft 1/19/11

2. Then, using the appropriate nuts and bolts, secure the DIN rail to the desk or flat surface.



Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Dolphin 99EXQuadCharger Device

Overview

This 4-slot charging station provides intelligent battery management for the rechargeable battery packs used in Dolphin terminals.

Capacity

The charger holds 4 Honeywell 3.7V Li-ion or 3.7V Li-poly batteries.

Charging Time

Charge time is 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery.

Charging Process

Each charging slot works independently of the other three. As battery packs charge, the charging circuitry follows the two-step charging process (CC-CV) that is recommended for Li-ion and Li-poly batteries. The process monitors changes in temperature, current, and voltage and resets the battery pack.



We recommend use of Honeywell Li-Ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

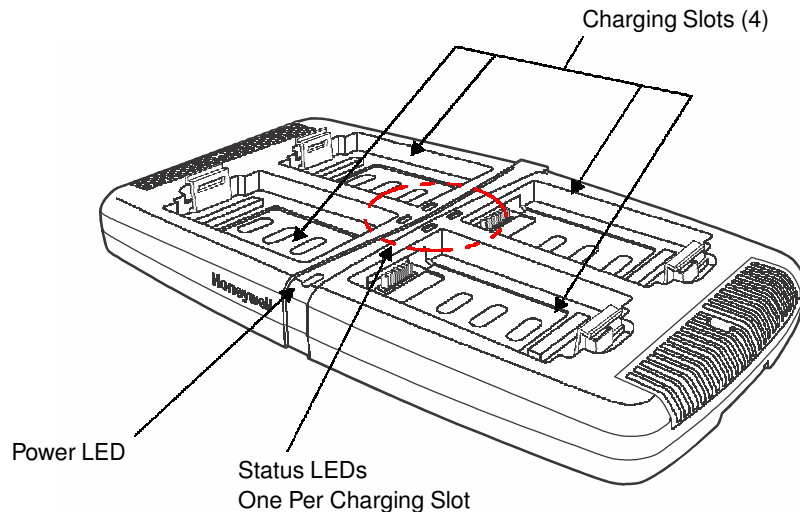


We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Preliminary Draft 1/19/11

Parts and Functions

Top Panel



Charging Slots

There are 4 charging slots. Each slot holds one Li-ion or Li-poly battery and charges it independently of the other slots. When a battery is placed in each slot, it immediately begins charging.

Power LED

The power LED indicates if the QuadCharger is powered and operational. When the QuadCharger is receiving power, the LED illuminates green.

Power Supply Connector

You attach the power supply to this connector. The universal power supply accepts input voltages between 90-265 volts. See [Supplying Power](#) on page 17-3.

Status LEDs

A status LED is located at one corner of each of the 4 battery slots. The color of the LED indicates the charge status of the batteries in its slot.

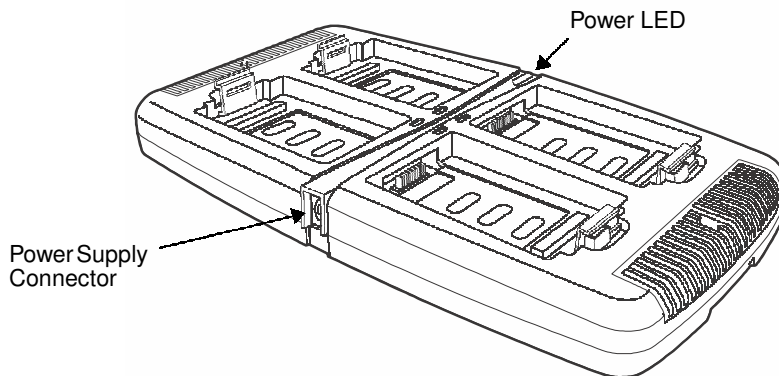
Color	This color indicates that the battery in the slot...
Green (Solid)	Has completed its charge cycle and is ready for use.
Orange (Solid)	Is being charged at a maximum charge rate.
Red (Flashing)	Encountered an error during the most recent charge cycle.

Preliminary Draft 1/19/11

Supplying Power

The charger must be connected to a power source via the Honeywell power adapter cable so that voltage is adjusted appropriately. Use only the Honeywell 12VDC, 3A power supply provided with the base.

1. Locate the AC power adapter cable and plug it into the power source.
2. Connect the power cable to the power adapter.
3. Connect the power cable to the supply connector on the back of the charger.



4. The power LED illuminates green, and the charger performs a self-diagnostic test that lasts approximately five seconds.

Recommendations for Storing Batteries

To maintain top performance from batteries, avoid storing batteries outside of the following temperature ranges:

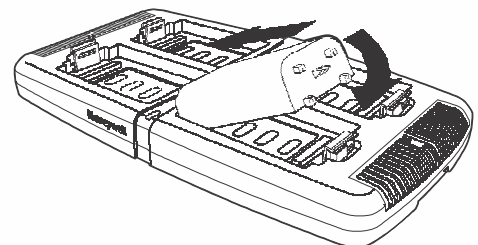
- 14°F to 113°F (-10°C to +45°C) for short term storage of less than one month
- 32°F to 86°F (-0°C to +30°C) for long term storage

Do not store batteries in extremely high humidity. For prolonged storage, do not keep batteries stored in a charger that is connected to a power source.

Inserting and Charging Batteries

For best results, battery packs should be at room temperature before recharging them; temperature has a marked effect on charging. The recommended temperature range is 50°F to 95°F (10°C to 35°C).

1. Set up the charger, see [Supplying Power](#) above.
2. Power the charger. The Power LED illuminates green.
3. Insert the battery at an angle so the battery pack contacts and the QuadCharger contacts align.
4. Snap the battery into place with a hinging motion.
5. The Status LED for that particular slot illuminates orange to indicate the battery is seated properly and the charging cycle has begun.
6. When the Status LED turns green, the battery in the slot has completed charging.



Preliminary Draft 1/19/11

Mounting

The charger should be on a dry, stable surface and can be mounted on a flat, horizontal surface such as a desktop or workbench.

When choosing a location, always bear in mind that

- the mounting location must allow users easy access to the power connector.
- the charger should be oriented so that users can easily insert and remove battery packs and see the LEDs.

Installation Hardware

The DIN rail slot on the bottom panel enables secure mounting to a horizontal surface.

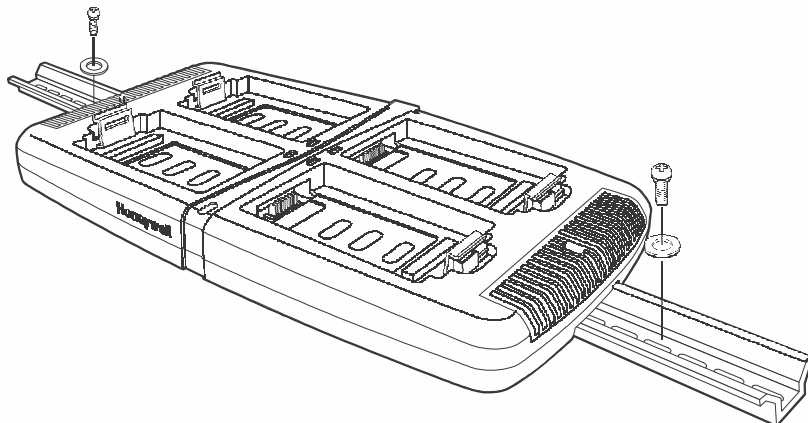
Screw: 3/16 in. dia x 5/8 in. long pan head screw

Washer: 1/2 in. OD x 7/32 in. ID x 3/64 in. thick

Nut: 3/16 in. dia

Desk Mounting

1. Slide the DIN rail into the DIN rail slot (7.5 X 35 mm) on the bottom of the QuadCharger.
2. Then, using the appropriate nuts and bolts listed above, secure the DIN rail to the desktop.



Preliminary Draft 1/19/11

Troubleshooting

If you encounter problems with your QuadCharger device, refer to chart below for possible solutions. If problems persist, please contact Honeywell Technical Support.

Problem	Issue
The Status LED does not come on when I insert a battery pack.	Check the power connections; make sure the Power cable is inserted into the Power supply connector and the battery pack is properly seated.
The Status LED lights red during charging.	Try to charge the battery in one of the other charging slots. If the red Status LED comes on again, then the problem is associated with the battery pack. If the red status stays with the charging slot, the problem is associated with the charging circuitry.
The Status LED lights red and stays on without a battery in the charging slot.	An error occurred during the self-diagnostic test for that particular charging pocket. Call Honeywell Product Service and request an RMA. For additional warranty and return information, see Customer Support on page 19-1.

Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Dolphin 99EXCharge Rack and NetRack Device

Overview

Note: The information in this chapter applies to both the Dolphin Charge Rack and Dolphin Net Rack unless otherwise indicated.

You can power and charge the main battery in up to thirty Dolphin terminals using the Charge Rack or Net Rack. The Net Rack also enables up to thirty Dolphin 99EX mobile computers to communicate with a host device over an Ethernet network.

Unpacking the Rack

Open the shipping box and inspect the package to see that the following standard items are included:

- One Dolphin Charge Rack or Net Rack
- One power cord

For the Net Rack, you will also need to provide a standard CAT-5 Ethernet network cable. The network cable is needed to set up and operate the Net Rack. If any items are missing or anything appears to be damaged, contact your Customer Account Representative.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Charge Time

The rack supplies power to the intelligent battery charging system in all Dolphin terminals, which senses when a full charge has been achieved and switches to a trickle charge to maintain the full charge. As battery packs charge, the charging circuitry follows the two-step charging process (CC-CV) that is recommended for Li-ion or Li-poly batteries. The process monitors changes in temperature, current, and voltage.

The rack completes a full charge of the Dolphin's main battery pack in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7V battery.



We recommend use of Honeywell Li-ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

Convenient Storage

Intelligent battery charging makes this rack a safe and convenient storage receptacle for your Dolphin terminal.

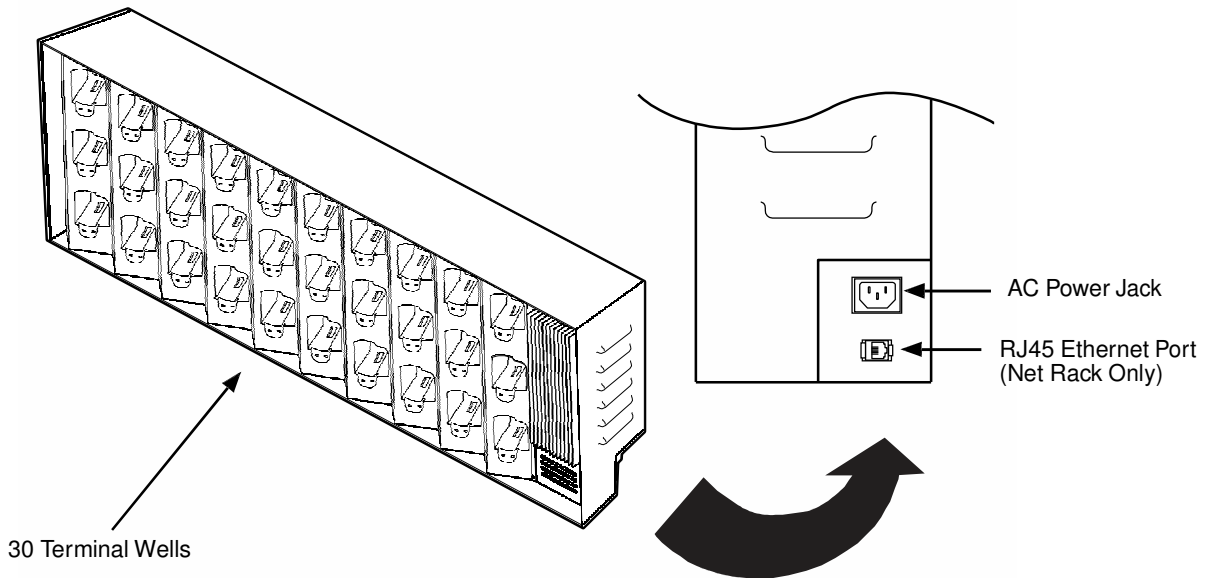
Capacity

The rack can hold up to thirty Dolphin terminals. Each charging well charges each terminal independently of the other wells.

Preliminary Draft 1/19/11

Parts and Functions

Front and Side Panel



Terminal Wells

The rack contains thirty terminal wells. Place the Dolphin terminal in any one of the thirty wells to communicate with a host device (Net Base only), power the terminal, and charge the installed battery pack. The rack completely charges the main battery in a Dolphin terminal in 4.5 hours for the standard 3.7V battery or 6 hours for the extended 3.7 battery.

AC Power Jack

Use the AC power cable from Honeywell that comes with the rack to supply power to this power jack. For more information, see [Power](#) on page 18-2.

RJ45 Ethernet Ports (Net Rack Only)

The Net Rack contains an RJ45 Ethernet port. You can connect the Net Rack to an Ethernet-compliant device to facilitate Ethernet communication to and from the terminal by plugging a standard CAT-5 Ethernet cable into the Ethernet port provided.

Back Panel

For details on how to mount the Charge Rack or Net Rack, see [Mounting the Rack](#) on page 18-4.

Power

The rack requires 100 - 240 Volts AC, 6 Amps of power to charge the Dolphin terminals. Honeywell recommends that you leave the rack connected to its power source at all times, so that it is always ready to use.



We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.

Preliminary Draft 1/19/11

Connecting Power to the Rack

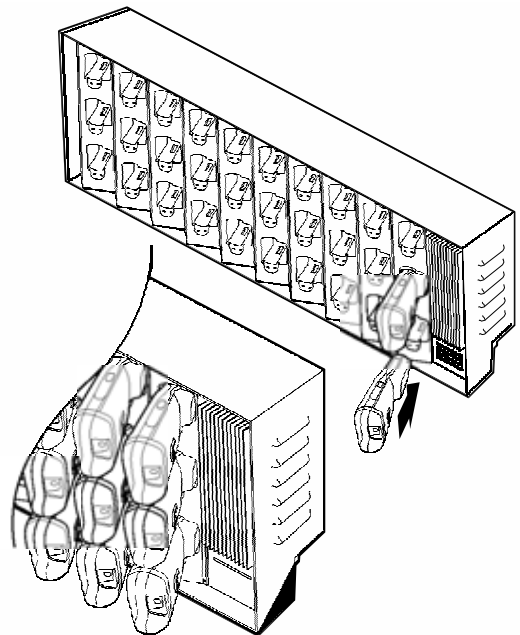
1. Plug the power cable into the power connector on the side of the rack, see [AC Power Jack](#) on page 18-2.
2. Plug the A/C power cord into a standard wall outlet. The rack is now powered.


Charging the Main Battery


The rack provides power to the Dolphin terminals and allows the charging of the main batteries in the terminal. The intelligent battery charging system incorporated into all Dolphin terminals prevents overcharging, which means that Dolphin terminals may be stored in the rack indefinitely without damage to the terminals, battery packs, or the rack.

To Power a Terminal and Charge its Main Battery

1. Install the main battery pack in the terminal; see [Install the Main Battery Pack](#) on page 2-1.
2. Slide the Dolphin terminal into one of the thirty terminal wells. The terminal screen turns off and the right LED illuminates orange indicating a properly seated terminal. Charging begins immediately if required by the Dolphin terminal.




 Make sure the terminal is dry before placing it in the Charge/Net Rack. Do NOT place a wet terminal in the Charge/Net rack! Doing so may cause damage not covered by the warranty.

 We recommend use of Honeywell Li-Ion or Li-poly battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.

Communication (Net Rack Only)

Software Requirements

Before you connect the Dolphin terminal to the Net rack, make sure you have the most current software installed. To check the terminal's system information, tap  > **Power Tools** > **SysInfo**.

- The Kernel version must be 26.01 or later in terminals running Windows Embedded Handheld 6.5 Classic.
- In terminals running Windows Embedded Handheld 6.5 Professional, the kernel version must be 25.01 or later.

Applications on the Dolphin Terminal

Applications running on the Dolphin terminal when it is connected to the Net rack should be designed specifically for a partially connected network. For more details, please refer to the Best Practices for Partially Connected Networks document available at www.honeywellaidc.com.

Preliminary Draft 1/19/11

Connecting the Dolphin Terminal to the Net Rack

By default, the Dolphin terminal is configured to obtain IP addresses automatically using a DHCP server. This means that in most cases, you would simply plug-and-play the unit.

1. Verify the Net Rack has power, see [Connecting Power to the Rack](#) on page 18-3.
2. Plug the CAT-5 Ethernet cable into the RJ45 connector on the side of the Net Rack.
3. Plug the Ethernet cable into the network.
4. Insert the Dolphin into one of the terminal wells. The terminal screen turns off and the right LED illuminates orange indicating a properly seated terminal.
5. By default, the DHCP server assigns a unique IP address to each of the Dolphin terminals docked in the Net Rack. This IP address can be used by any application on the Dolphin terminal.

Note: Instead of using the default for DHCP assigned IP addresses, the Dolphin terminal can use a statically assigned IP address. See standard Microsoft Windows Mobile documentation for how to assign a static IP address to a network adapter. In this case, set a static IP address for the adapter named "SMSC9500 USB2.0 FAST Ethernet Drive".

Mounting the Rack

Mount the rack on a dry, stable surface, near an electrical outlet. Be sure to provide enough workspace with good lighting for the user to view Dolphin terminal's LEDs while it is in the rack. When choosing a location, bear in mind that the mounting location must allow users easy access to the terminal wells, the Ethernet port (Net Rack only), and the power jack.

Preliminary Draft 1/19/11

Installation Hardware

H-Bracket to the Mounting Surface			
Mount Type	Drill Size	Washer	Bolt
Hollow Wall (e.g., Steel stud or cinder block)	7/8"	3/8" Flat Washer, Qty. 4	Zinc-Plated Steel Toggle Bolt, Round Head, 3/8" Dia., 4" Length (2-5/8" Usable Length Required), Qty. 4
Wood Stud	1/4"	3/8" Flat Washer, Qty. 4	Hex Head (Lag Screw), Steel, Zinc-plated, 3/8" thread, 2-1/2" Length, Qty. 4

Charge/Net Rack to the H-Bracket		
Washer	Bolt	Additional
3/8" Flat Washer, Qty. 4	3/8"-16 , Cap Screw, Zinc-plated, 1" length, Grade 5, Qty. 4	3/8"-16 Nut for Strut Channel W/Spring, Zinc, for 13/16" Deep Strut, Qty. 4
150lbs. Max recommended load on H-Bracket (this is approx. 40lbs. Over a fully loaded rack)		
Use bracket and available studs to determine hole pattern (bracket to wall fasteners must be spaced at a minimum of 16" apart horizontally)		

1. Attach the mounting bracket to dry, stable surface.
2. Then, using the appropriate nuts and bolts, secure the Charge/Net Rack to the mounting bracket.

Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Customer Support

Product Service and Repair

Honeywell International Inc. provides service for all its products through service centers throughout the world. To obtain warranty or non-warranty service, contact the appropriate location below to obtain a Return Material Authorization number (RMA #) before returning the product.

North America

Telephone: (800) 782-4263
E-mail: hsmnaservice@honeywell.com

Latin America

Telephone: (803) 835-8000
Telephone: (800) 782-4263
Fax: (239) 263-9689
E-mail: laservice@honeywell.com

Brazil

Telephone: +55 (11) 5185-8222
Fax: +55 (11) 5185-8225
E-mail: brservice@honeywell.com

Mexico

Telephone: 01-800-HONEYWELL (01-800-466-3993)
Fax: +52 (55) 5531-3672
E-mail: mxservice@honeywell.com

Europe, Middle East, and Africa

Telephone: +31 (0) 40 2901 633
Fax: +31 (0) 40 2901 631
E-mail: euroservice@honeywell.com

Hong Kong

Telephone: +852-29536436
Fax: +852-2511-3557
E-mail: apservice@honeywell.com

Singapore

Telephone: +65-6842-7155
Fax: +65-6842-7166
E-mail: apservice@honeywell.com

China

Telephone: +86 800 828 2803
Fax: +86-512-6762-2560
E-mail: apservice@honeywell.com

Japan

Telephone: +81-3-3839-8511
Fax: +81-3-3839-8519
E-mail: apservice@honeywell.com

Online Product Service and Repair Assistance

You can also access product service and repair assistance online at www.honeywellaidc.com.

Preliminary Draft 1/19/11

For ongoing and future product quality improvement initiatives, the 99EX comes equipped with an embedded device lifetime counter function. Honeywell may use lifetime counter data for future statistical reliability analysis as well as ongoing quality, repair and service purposes.

Technical Assistance

If you need assistance installing or troubleshooting your device, please call your distributor or the nearest technical support office:

North America/Canada

Telephone: (800) 782-4263
E-mail: hsmnasupport@honeywell.com

Latin America

Telephone: (803) 835-8000
Telephone: (800) 782-4263
E-mail: hsmilasupport@honeywell.com

Brazil

Telephone: +55 (11) 5185-8222
Fax: +55 (11) 5185-8225
E-mail: brsuporte@honeywell.com

Mexico

Telephone: 01-800-HONEYWELL (01-800-466-3993)
E-mail: soporte.hsm@honeywell.com

Europe, Middle East, and Africa

Telephone: +31 (0) 40 7999 393
Fax: +31 (0) 40 2425 672
E-mail: hsmeurosupport@honeywell.com

Hong Kong

Telephone: +852-29536436
Fax: +852-2511-3557
E-mail: aptechsupport@honeywell.com

Singapore

Telephone: +65-6842-7155
Fax: +65-6842-7166
E-mail: aptechsupport@honeywell.com

China

Telephone: +86 800 828 2803
Fax: +86-512-6762-2560
E-mail: aptechsupport@honeywell.com

Japan

Telephone: +81-3-3839-8511
Fax: +81-3-3839-8519
E-mail: aptechsupport@honeywell.com

Online Technical Assistance

You can also access technical assistance online at www.honeywellaidc.com.

Preliminary Draft 1/19/11

Limited Warranty

Honeywell International Inc. ("HII") warrants its products and optional accessories to be free from defects in materials and workmanship and to conform to HII's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any HII product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than HII or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by HII for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to HII factory or authorized service center for inspection. No product will be accepted by HII without a Return Materials Authorization, which may be obtained by contacting HII. In the event that the product is returned to HII or its authorized service center within the Warranty Period and HII determines to its satisfaction that the product is defective due to defects in materials or workmanship, HII, at its sole option, will either repair or replace the product without charge, except for return shipping to HII.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

HII'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT SHALL HII BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HII ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO HII FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN HII MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. HII extends these warranties only to the first end-users of the products. These warranties are non-transferable.

The limited duration of the warranty for the Dolphin 99EX is as follows:

- The duration of the limited warranty for terminals with an integrated imager is one year.
- The duration of the limited warranty for touch screens is one year.
- The duration of the limited warranty for the Dolphin 99EX HomeBase device, Dolphin 99EX QuadCharger device, Dolphin 99EX Mobile Base, and Dolphin 99EX ChargeBase device, Mobile is one year.
- The duration of the limited warranty for batteries is one year.
Use of any battery from a source other than Honeywell may result in damage not covered by the warranty. Batteries returned to Honeywell International Inc. in a reduced state may or not be replaced under this warranty. Battery life will be greatly increased when following the battery instructions in this user's guide.

Preliminary Draft 1/19/11

How to Extend Your Warranty

Honeywell International Inc. offers a variety of service plans on our hardware products. These agreements offer continued coverage for your equipment after the initial warranty expires. For more information, contact your Sales Representative, Customer Account Representative, or Product Service Marketing Manager from Honeywell International Inc., or your Authorized Reseller.

Preliminary Draft 1/19/11

Preliminary Draft 1/19/11

Honeywell Scanning & Mobility

9680 Old Bailes Road

Fort Mill, SC 29707

www.honeywellaidc.com