



# **Dolphin<sup>®</sup> 9900 Mobile Computer**

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with Windows Mobile<sup>®</sup> 6.0

## **User's Guide—Preliminary**

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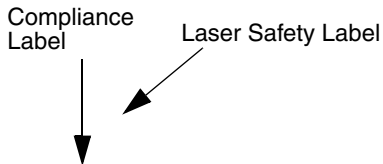
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## Agency Information

### Label Locations

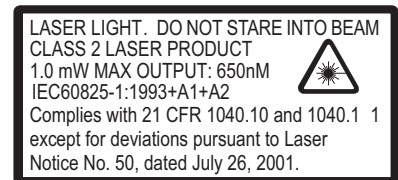
Dolphin 9900 mobile computers meet or exceed the requirements of all applicable standards organizations for safe operation. However, as with any electrical equipment, the best way to ensure safe operation is to operate them according to the agency guidelines that follow. Please read these guidelines carefully before using your Dolphin mobile computer.



### Laser Safety Label

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

**Laser Eye Safety Statement:** This device has been tested in accordance with and complies with EN60825-1: 1993+A1+A2 and 21 CFR 1040.10 and 1040.11, except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001. LASER LIGHT, DO NOT STARE INTO BEAM, CLASS 2 LASER PRODUCT, 1.0 mW MAX OUTPUT: 650nm.



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

### LED Safety Statement

This device has been tested in accordance with IEC60825-1 LED safety and has been certified to be under the limits of a Class 1 LED device.

The maximum power outputs for each diode are as follows:

- Illumination LED: 194.0 uW
- Aimer laser (5300 engine): 360.1 uW
- Aimer LED (5100 engine): 81.6 uW

### Infrared LED Safety Statement

Caution - Class 1M LED radiation when open. Do not view directly with optical instruments.

The maximum power outputs for the IR LED is 145.1 uW.

### UL and cUL Statement

UL and cUL listed: UL60950-1 and CSA C22.2 No. 60950-1-03.

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## **Regulatory and Safety Approvals for all Dolphin Terminals**

<b>Parameter</b>	<b>Specification</b>
U.S.A.	FCC Part 15, Class B
Canada	ICES-003
European Community	EN 55022 (CISPR 22) Class B EN60950:2000 EN60825-1:1994 + A11 + A2 EN55024:1998

**CE** The CE Mark on the product indicates that the system has been tested to and conforms with the provisions noted within the 89/336/EEC Electromagnetic Compatibility Directive and the 73/23/EEC and 93/68/EEC Low Voltage Directive.

For further information, please contact:

Hand Held Products BV, a wholly owned subsidiary of Honeywell International Inc.  
Nijverheidsweg 9  
5627 BT Eindhoven  
The Netherlands

Hand Held Products 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.

### ***Dolphin 9900 802.11b/g (WLAN), Bluetooth, and/or GSM***

Dolphin 9900 RF terminals are designed to comply with the most current applicable standards on safe levels of RF energy developed by the Institute of Electrical and Electronics Engineers (IEEE) and the American National Standards Institute (ANSI) and has been recommended for adoption by the Federal Communications Commission (FCC).



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## **FCC Compliance**

Dolphin terminals comply 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.

### ***Dolphin RF Terminal—802.11b/g (WLAN), 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.

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.

In accordance with FCC 15.21, changes or modifications not expressly approved by Hand Held Products, Inc. may void the FCC authorization to operate the equipment.

**CAUTION!** Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

For body worn operation, this device has been tested and meets the FCC RF exposure guidelines when used with the Hand Held Products Dolphin accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

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## **RF, Regulatory, and Safety Agency Approvals—802.11b/g (WLAN), Bluetooth, and/or GSM**

<b>Parameter</b>	<b>Specification</b>
U.S.A. Canada	FCC Part 15.247 RSS 210

## **R&TTE Compliance Statement—802.11b/g (WLAN), Bluetooth, and/or GSM**

Dolphin RF terminals are in conformity with all essential requirements of the R&TTE Directive (1999/5/EC). This equipment has been assessed to the following standards as applicable:

<b>Parameter</b>	<b>Specification</b>
R&TTE	EN 300 328-2:2000 EN 301 489-1 (2002-08) EN 301 489-17 (2002-08) EN 60950:2000 EN 50361:2001

This product is marked with \_\_\_\_\_ in accordance with the Class II product requirements specified in the R&TTE Directive, 1999/5/EC.

The equipment is intended for use throughout the European Community. PAN European Frequency Range: 2.402—2.480 GHz.

Restrictions 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 and maximum power (EIRP\*) of 10 mW for the 2.454—2.483 GHz band

## **Canadian Compliance**

This Class B digital apparatus complies with Canadian ICES-003. 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.

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) installed outdoors is subject to licensing.

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

## **For European Community Users**


Hand Held Products 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.

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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 is 0.3V/m according to Subpart B of Part 1 of the FCC rules. Therefore, the Dolphin RF has no effect on medical devices that meet the IEC specification.

### ***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. The Dolphin Batch terminal does not contain a radio, and therefore, is not affected by microwave ovens.



### **Using the Dolphin Terminal for the First Time**

1. [Unpack the Carton and Verify its Contents](#) (see page 2-1)
2. [Install the Main Battery Pack](#) (see page 2-2)
3. [Charge the Main and Backup Batteries](#) (see page 2-2)
4. [Initialize the Mobile Computer](#) (see page 2-2)
5. [Let Autoinstall Run](#) (see page 2-3)
6. [Set the Time and Date](#) (see page 2-3)
7. [Verify Imaging and Decoding with Demos](#) (see page 2-4)

#### **Step 1. Unpack the Carton and Verify its Contents**

Verify that the carton contains the following items:

- Dolphin 9900 Series mobile computer (the terminal)
- Main battery pack (7.4v Li-ion)
- Microsoft Companion CD
- Dolphin 9500 Quick Start Guide

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

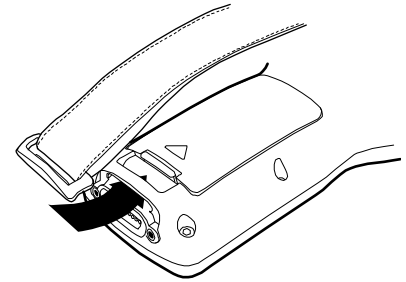
Be sure to keep the original packaging in the event that the Dolphin terminal should need to be returned for service. For details, see [Product Service and Repair](#) on page 14-1.

#### **Hand Strap**

The Dolphin 9900 ships with the hand strap installed and fastened to the bottom panel with a clip; see [Bottom Panel Features](#) on page 3-9. To install the battery pack, you must detach the hand strap.

To detach the hand strap, push the hand strap clip down and away from the terminal. Move the strap up and away from the bottom panel.

To re-attach the hand strap, slide the clip back into place on the bottom panel.



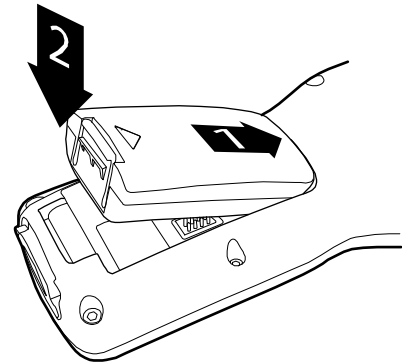
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## Step 2. Install the Main Battery Pack



Use only the Li-ion battery packs provided by Hand Held Products. Use of any battery not sold/manufactured by Hand Held Products may damage the terminal and/or the battery, may pose a personal hazard to the user, and will void the warranty.

1. Unpack the Li-ion battery pack. Hold the terminal with the front panel (keyboard) facing down.
2. Take the battery and insert the end without the locking tab into the top of the battery well and push down with a hinging motion until the locking tab snaps.



### To Remove the Main Battery Pack

Put the terminal in suspend mode (see page 3-20). Press the locking tab on the battery pack away from the bottom panel, and pull the battery pack up with a hinging motion.

## Step 3. Charge the Main and Backup Batteries

The power supply for the Dolphin mobile computer consists of two types of battery power: the main battery pack installed on 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 and system clock for up to 30 minutes when the terminal's main battery pack is completely discharged or removed.

**Before Initial Use** The terminals are shipped with both batteries discharged of all power. Charge the main battery pack for a minimum of four hours before initial use.

**Time to Charge** Four hours for the main battery pack, eight hours for the internal backup battery the first time.



Use only Dolphin 9900 Series peripherals, power cables, and power adapters. Use of peripherals, cables, or power adapters not sold/manufactured by Hand Held Products will void the warranty and may damage the terminal.

### Charging with Dolphin Peripherals

When the battery is installed in the terminal, you can insert the terminal into any one of the following peripherals to charge the main battery pack:

- [Dolphin HomeBase](#) (see page 10-1)
- [Dolphin Mobile Base](#) (see page 11-1)
- [Dolphin ChargeBase](#) (see page 12-1)
- Dolphin Net Base
- Dolphin Charging/Communication Cable

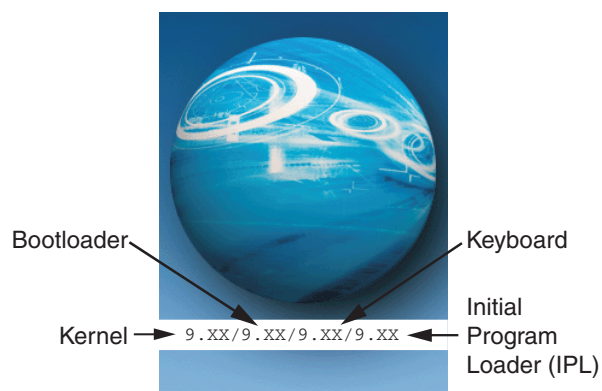
To fully charge the Li-ion battery **before** installing it in the terminal, use the

- [Dolphin QuadCharger](#) (see page 13-1)
- [Auxiliary Battery Well](#) of the Dolphin HomeBase (see page 10-6)

## Step 4. Initialize the Mobile Computer

1. Wake the terminal by pressing the POWER or SCAN key. The decode LED lights and the scan LED blinks for approximately three seconds. Do NOT press any keys while the terminal is initializing.

- 
- The terminal initializes and the splash screen displays for a few seconds. The Build numbers indicate the software version.



- The system performs a hard reset. When the display activates again, follow the instructions that appear.

### **Step 5. Align the Screen**

You are prompted to align the screen by tapping the target five times. Use the stylus provided by Honeywell.



- 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.
- You can re-align the screen at any time by going to **Start > Settings > System tab > Screen**.

### **Step 6. Let Autoinstall Run**

For each program that loads, a status bar indicates that the program is loading. Autoinstall occurs after each hard reset. Do NOT touch the keyboard or the screen while programs are loading. All configurations of the Dolphin terminal install Demos and Power Tools. If the terminal is configured with a wireless radio, the appropriate radio drivers and utilities for each radio install.

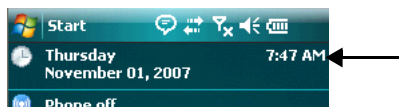
After Autoinstall is complete, the terminal performs a soft reset automatically. When it finishes booting up after the soft reset, the Today screen appears; see [Today Screen](#) on page 4-2.

### **Step 7. Set the Time and Date**

You need to re-set the time and date after every hard reset of the terminal. It is a good idea to set the time and date now before you begin using the device.

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On the Today screen, tap the line that displays the time and date,



The Clock Settings screen appears.



The time zone defaults to **GMT-5 Eastern US**; tap the arrow to the right of GMT-5 Eastern US to select another time zone. Set the correct time and date in the remaining fields and tap **OK** to save.

### ***Step 8. Verify Imaging and Decoding with Demos***

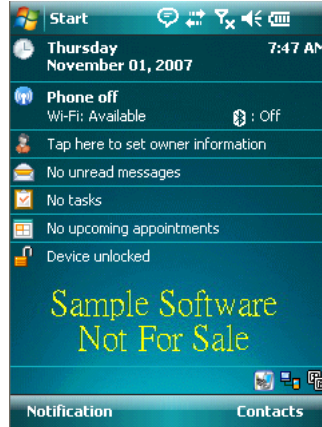
Dolphin terminals come loaded with Demos you can use to verify imaging and decoding. For more information about taking an image, see [Using the Image Engine](#) on page 4-4.



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## Today Screen

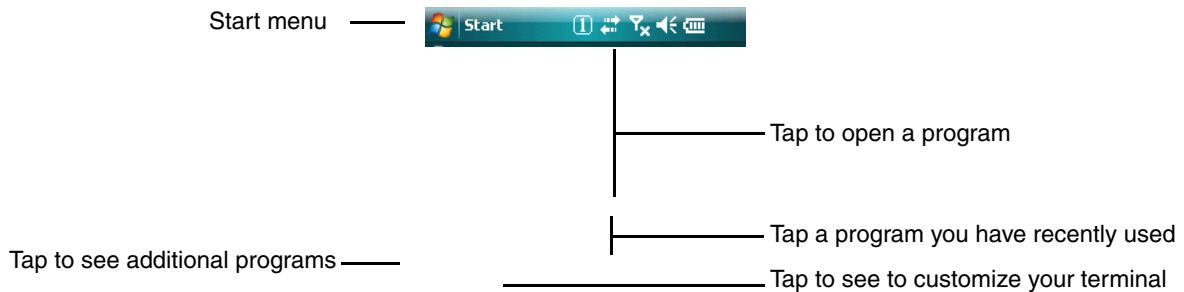
After the Dolphin terminal initializes the first time, you see the Today screen.



You can also display the Today screen anytime by tapping **Start** and then Today.

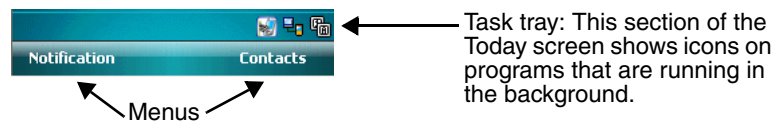
## Navigation Bar and Start Menu

The Navigation bar is located at the top of the screen that displays the active program and current time. It also provides access to the Start menu, which allows you to open programs and access the system settings.



## Command Bar

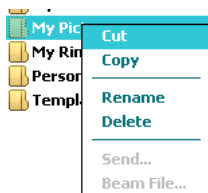
Use the Command bar at the bottom of application screens and contain menus that change according to the open application. Just above the command bar is the task tray, which contains icons for programs that are running in the background.



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## 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 the action. 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.

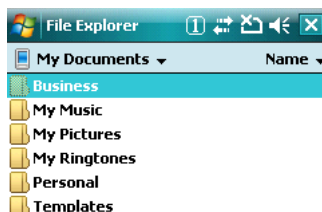
## Selecting Programs

To see additional programs loaded on your terminal, tap **Start > Programs**. The Programs screen displays the programs that are not listed on the Start menu. To open a program, tap once on the icon.

*Note: Some programs have abbreviated labels underneath the icon. To see the full spelling of an abbreviated label, tap and hold the stylus on the label. Drag the stylus off the label so that the command is not carried out.*

## File Explorer

You can also use the File Explorer to find files and organize these files into folders. Tap **Start > Programs > 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** and **Paste** on popup menus.

## Search

The Search feature on your Dolphin terminal helps you quickly locate information. Tap **Start > Programs**

> **Search**  Search .

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

**Standard Terminal Configurations**

Dolphin 9900	Dolphin 9900
<ul style="list-style-type: none"> <li>• Microsoft Windows Mobile 6.0</li> <li>• Intel XScale PXA27x 624 MHz</li> <li>• 256MB RAM X 1GB Flash</li> <li>• One of three in-mold, hard-top keyboard options</li> <li>• 2400mAh Extended life main battery</li> <li>• One of 5100SR/SF/HD or 5300SR/SF/HD image engines</li> <li>• WLAN (802.11b/g)</li> <li>• radio</li> <li>• radio</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Windows Mobile 6.0</li> <li>• Intel XScale PXA27x 624 MHz</li> <li>• 256MB RAM X 1GB Flash</li> <li>• One of three in-mold, hard-top keyboard options</li> <li>• 2400mAh Extended life main battery</li> <li>• One of 5100SR/SF/HD or 5300SR/SF/HD image engines</li> <li>• radio</li> <li>• radio</li> <li>• radio</li> </ul>

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## ***Dolphin 9900 Series Peripherals***

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

### ***Dolphin HomeBase™***

The Dolphin HomeBase charging and communication cradle supports both RS-232 and USB communications, which enable it to interface with the majority of PC-based enterprise systems. When a terminal is seated in the HomeBase, its main battery pack charges in less than four hours. In addition, the HomeBase contains an auxiliary battery well that charges a spare Li-ion battery.

For more information, see [Dolphin HomeBase](#) on page 10-1.

### ***Dolphin Mobile Base™***

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

When a terminal is seated in the Mobile Base, its main battery pack charges in less than four hours. The serial connector supports RS-232 communication and power out to peripheral devices, such as hand held scanners.

For more information, see [Dolphin Mobile Base](#) on page 11-1.

### ***Dolphin ChargeBase***

The Dolphin ChargeBase is a four-slot charging cradle that holds, powers, and charges a terminal in each slot.

For more information, see [Dolphin ChargeBase](#) on page 12-1.

### ***Dolphin Net Base***

The Dolphin Net Base is a four-slot charging/communication cradle that holds, powers, charges, and communicates with the terminal in each slot. Ethernet communication occurs via statically and dynamically-assigned IP addresses.

For more information about the Dolphin Net Base, please consult the Dolphin 9900 Series Net Base Quick Start Guide.

### ***Dolphin QuadCharger™***

The Dolphin QuadCharger is a four-slot charging station for Dolphin Li-ion battery packs. It can charge each battery in less than four hours. The fourth slot features a battery analyzer that completely resets and re-calibrates a battery and displays its resulting capacity.

For more information, see [Dolphin QuadCharger](#) on page 13-1.

---

## ***Dolphin 9900 Series Accessories***

Each of the following items is sold separately to enhance your Dolphin 9900 Series 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 Mobile Charger***

The Dolphin 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. The cable powers the terminal and charges its main battery in less than four hours. Intelligent battery technology on-board the terminal ensures proper charging. The Dolphin Mobile Charger is an ideal low-cost charging solution for in-transit mobile applications.

### ***Dolphin Mobile Mount***

The Dolphin Mobile Mount, which holds a Dolphin 9500 terminal securely in place inside a vehicle, is an ideal, low-cost alternative to the Dolphin Mobile Base when communications are not required. When used in conjunction with the Dolphin Mobile Charger, the Dolphin Mobile Mount creates a complete mounting and charging solution for in-transit applications. The entire kit includes an adjustable vehicle mounting bracket.

### ***Charging/Communication Cables***

Dolphin charging/communication 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 RS-232 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. Both holsters feature 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. Dolphin 9500 Series 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 Dolphin 9500 stylus kits: one contains three styli and the other includes additional coiled tethers to secure the stylus to the terminal, which helps prevent loss.

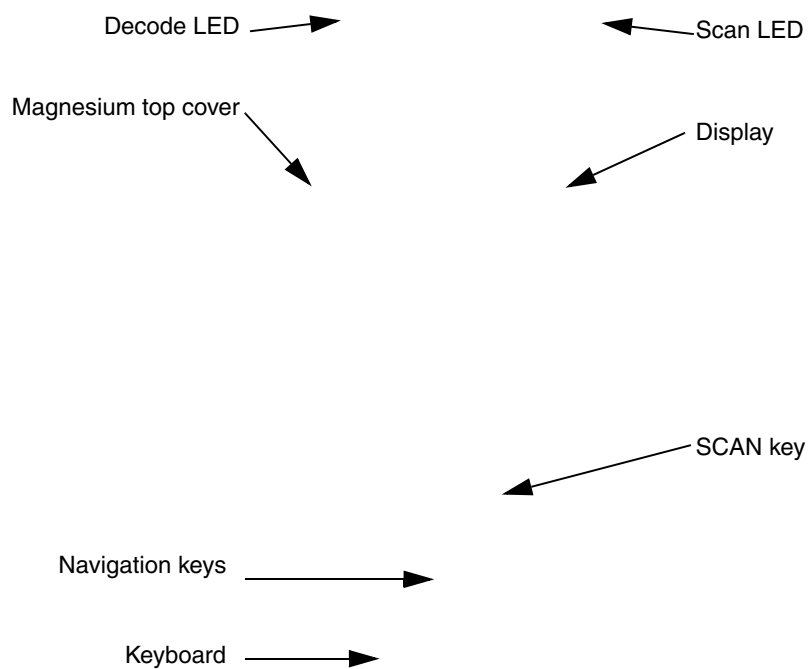
### ***Li-ion Battery Pack***

The 7.4v, 14.8 watt hour Li-ion rechargeable battery pack provides the main power supply for Dolphin 9900 Series terminals.

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## **Front Panel Features**

This section describes features on the front panel on the Dolphin 9900.



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## LEDs

The two light emitting diodes (LEDs) located at the top of the LCD display flash and illuminate during resets and scanning/imaging. Both can be programmed by various software applications.

**Scan LED** - Located in the upper right corner, this LED lights red when you press the SCAN key.

**Decode LED** - Located in the upper left corner, this LED lights green when a scanned bar code is successfully decoded.

## Touch Panel Display

Dolphin terminals feature a color 3.5" liquid crystal display (LCD) touch panel covered with an industrial, protective lens for greater durability. The video graphic array (VGA) resolution is 1/4 (240 X 320 pixel).

The color LCD is 16 bits/pixel and uses thin film transistor (TFT) technology. The backlight for the touch panel lights when the screen is touched, but not when the Backlight key is pressed. For more information, see [Backlight](#) on page 6-8.

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 3-13.

## 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 an on or system wakeup control for the terminal.

## 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.

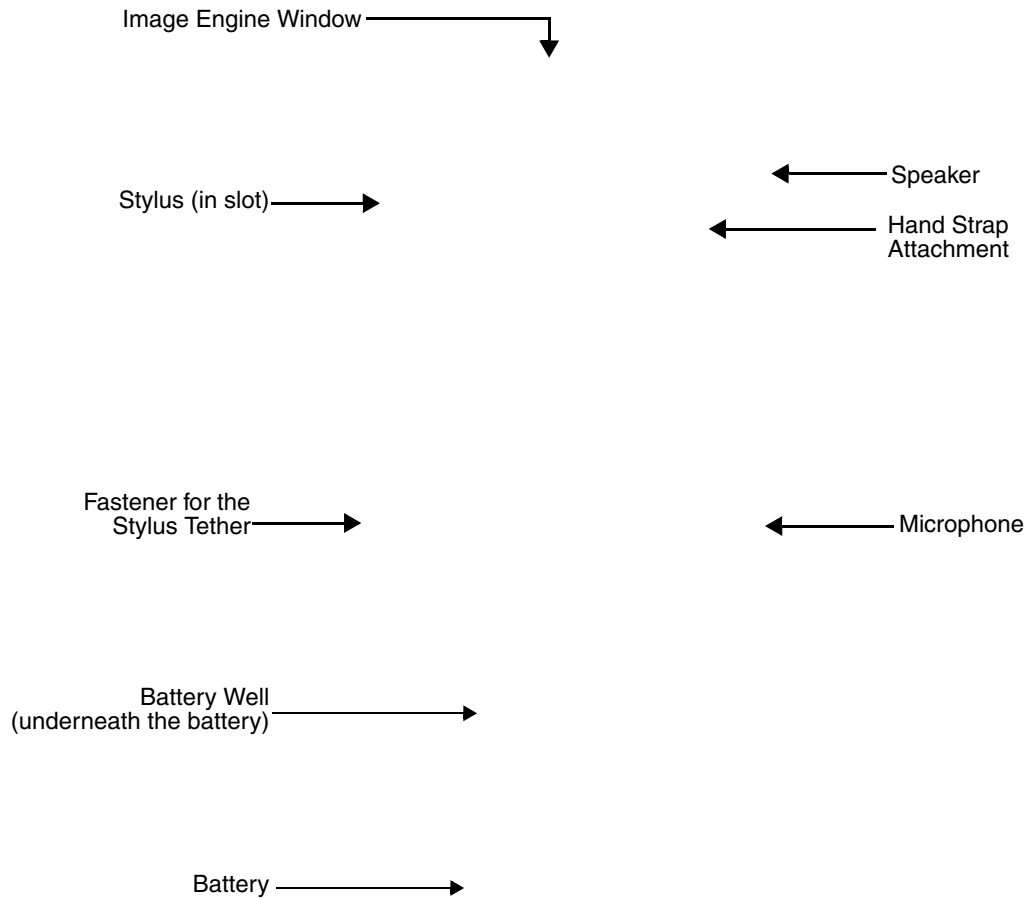
## Keyboard

The Dolphin terminal features three keyboard options: 35-key numeric/alpha keyboard, 43-key numeric/alpha keyboard, and 56-key full alpha/numeric keyboard. For a complete overview of each keyboard, see [Using Dolphin Keyboards](#) on page 5-1.

---

## ***Back Panel Features***

The following graphic describes features on the back panel of the Dolphin 9900.





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## Image Engine Window

Dolphin terminals have an optional image engine that reads and decodes linear, stacked linear (e.g., PDF417), and 2D matrix bar code symbologies. With the latest CMOS-based technology, the engine works like a digital camera and enables digital image capture, signature capture, and reading of OCR characters.

Digital images taken with Dolphin terminals have a maximum image size of 640 x 480 pixels and may have up to a 256 grayscale image definition. File formats supported for image storage include Bitmap (BMP), JPEG (JPG) and Portable Network Graphics (PNG).

## Speaker

Dolphin terminals have an integrated speaker that sounds audio signals as you scan bar code labels and enter data. The operating frequency range is 500Hz at 71 dB up to 80 dB. The speaker can also be used for playing sounds (e.g., WAV or MP3 files) as well as voice communication in handset mode in a terminal equipped with a GSM/GPRS radio. For more information about handset use, see [Audio Modes](#) on page 8-4.

## Hand Strap Attachment

The Dolphin 9900 has an adjustable, elastic hand strap to provide a comfortable, secure grip on the terminal. It is attached to the terminal with a clip on the bottom panel; see [Hand Strap Clip](#) on page 3-9. If desired, the strap may be adjusted or removed.

## Microphone

Dolphin terminals feature an integrated microphone that provides audio input to the terminal when a headset is not plugged into the [Audio Jack](#), page 3-8. When a headset is plugged in, the terminal defaults to the microphone on the headset.

## Battery Well

The Battery Well is a recessed area on the back of the Dolphin that holds the Li-Ion battery pack. For more information, see [Batteries](#) on page 3-15.

## Stylus and Fastener

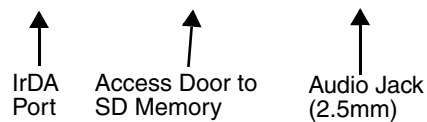
The stylus is used to operate the touch panel. The back panel features this storage slot to hold the stylus when not in use. There is also a fastener on the back panel for stylus tethers.

Stylus tethers can be purchased separately to help you keep the stylus attached to the terminal when not in the slot to prevent loss. A stylus tether is a coiled elastic cord with one end to attach to the stylus and another to attach to the back panel.

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## Side Panel Features

The following graphic shows the left, side panel:



### IrDA Port

The IrDA port communicates with IrDA-enabled devices such as PCs, printers, modems, or other Dolphin terminals. The maximum data transfer speed is 115kbps.

### SD Memory

The access door provides user access to the industry-standard SD memory interface. You can open the access door to insert SD memory cards to expand the terminal's memory capacity.

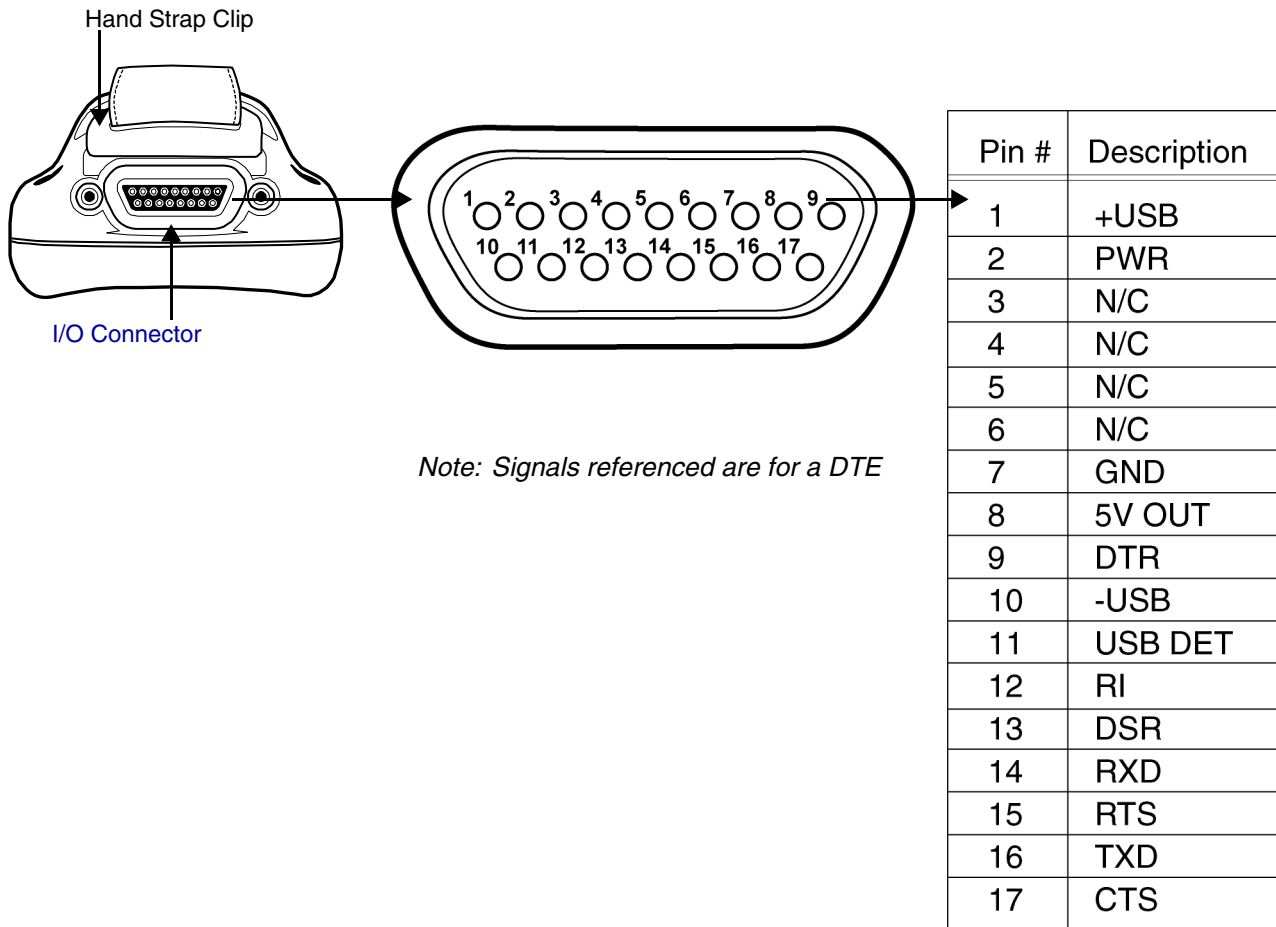
When the access door is fastened securely and properly, the memory interface is sealed against moisture and particle intrusion, read/write data is stored securely, and the terminal's environmental rating is preserved.

The SD memory interface does not support SDIO. For more information, see [Memory](#) on page 6-9.

### Audio Jack

The 2.5mm audio jack supports both speaker (stereo) and microphone (mono) headsets.

## Bottom Panel Features



### 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 RS-232 or USB. For RS-232, the maximum communication speed is 115 Kbps with seven baud rate settings. For USB, the communication speed is up to 12 Mbps.

### Powering Out

The mechanical connector also provides power out (to peripheral devices) 5V at 500mA. This means that, with the proper Honeywell cable, the terminal can power another device. By default, power out is disabled. To enable power out, alter the registry as follows:

```
[HKEY_LOCAL_MACHINE\Drivers\BuiltIn\Serial4]
    Conn5Venable=1
```


---

## ActiveSync Communication

To synchronize, ActiveSync 4.5 or higher 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, install it from the Microsoft Companion CD that came with the Dolphin terminal. Insert the CD into the CD-ROM drive of the host workstation and click the **yellow arrow**, then **Start Here**, and follow the directions on your screen.

*Note: You can also download the most current version of ActiveSync from [www.microsoft.com](http://www.microsoft.com) and install.*

 *When communicating via ActiveSync, your terminal must be connected to the host PC with a peripheral device sold/manufactured by Hand Held Products, such as the Dolphin HomeBase, Dolphin Mobile Base, Dolphin Net Base, Dolphin Mobile Charger or other Dolphin 9900 Series charging/communication cable. Use of any peripheral not sold/manufactured by Hand Held Products may damage your terminal and will void the warranty.*

## Capabilities

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

## Communication Types

The Dolphin 7600 supports the following types of communication via ActiveSync through its **I/O Connector** (see page 3-9) on the bottom panel:

- USB**            The USB cable and hardware peripherals allow the Dolphin terminal to communicate with a workstation or to networked through a USB hub. The Dolphin terminal supports full-speed USB communication (USB 1.1); maximum data transfer rate is 12 Mbps. The Dolphin terminal defaults to USB communication out of the box.
- RS-232**        The RS-232 cable allows the Dolphin terminal to communicate with a workstation, modem, or any RS-232 device. Maximum data transfer rate is 115 Kbps.

## Hardware Requirements for Setup

- Dolphin HomeBase or Dolphin communication cable
- Dolphin power cable from Honeywell
- USB Cable (for USB communication)
- Serial Cable (for RS-232 communication)
- ActiveSync v4.5 or higher installed on the host workstation
- Windows 98 Second Edition, Windows Me, Windows 2000, Windows NT (4.0 SP6 or higher) or Windows XP computer.

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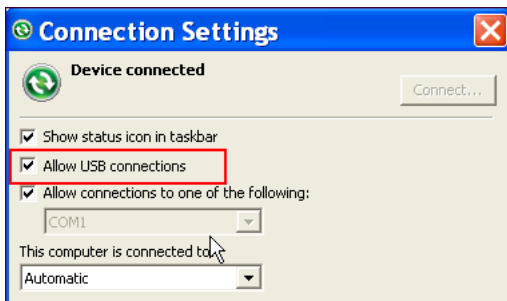
## Software Requirements for Communication

To sync successfully, ActiveSync must be configured for same communication type on both the host workstation and the Dolphin terminal. ActiveSync must be setup on your workstation *before* you initiate synchronization from the terminal for the first time.

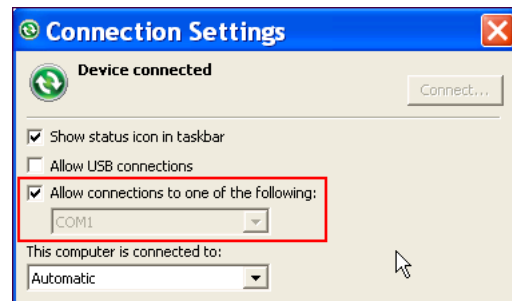
### Setting Up the Host Workstation

Verify that ActiveSync is configured to use the appropriate communication type by clicking **File > Connection Settings**.

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



For RS-232 communication, connect to **COM1**.



*Note: You can have both USB and RS-232 selected in the software without affecting processing. However, your hardware setup should use only RS-232 or USB, not both.*

### Communicating with the Dolphin Terminal

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

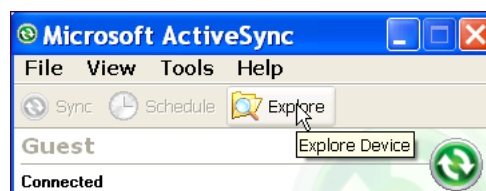
1. Connect the Dolphin terminal to the a communication peripheral, such as the Dolphin HomeBase.
2. The Dolphin terminal automatically opens ActiveSync to establish a connection.

### 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.

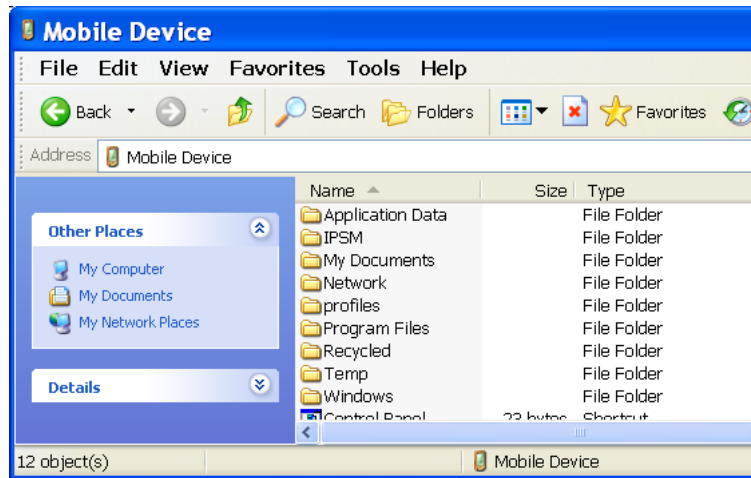
### Exploring the Terminal from the Workstation

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



---

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 as you would for moving files between folders on your hard drive.

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## ***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 continues to advocate 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 0.8mm. Use of the Honeywell stylus included with the terminal is recommended at all times.

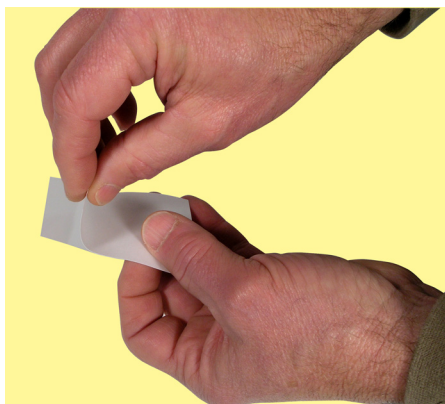
Hand Held Products warranty policy covers wear on the touch panel for the first 12 months provided that a screen protector is applied and an approved stylus is used for the 12 month duration covered by the warranty.

## ***Installing Your Screen Protector***

1. Clean the touch panel thoroughly with a clean, non-abrasive, lint-free cloth. Make sure nothing else is still attached to the touch panel.



2. Align the exposed section of the protector with the bottom edge of the touch panel. Make sure that it lies flush with each side of the touch panel. To reposition, lift up gently and reapply.



- 
3. Apply the touch panel protector to your device by sliding the enclosed squeegee across the surface as you peel away the backing.



4. Use the squeegee as necessary to smooth out any air pockets or bumps.





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## Batteries

Dolphin terminals feature intelligent battery technology. There are two types of battery power: the main battery pack installed in the back panel and the backup battery located inside the terminal. They are designed to work together to prevent data loss when the terminal is in use over long periods.

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

### Main Battery Pack



*Use only the Li-ion battery packs provided by Hand Held Products. Use of any battery not sold/manufactured by Hand Held Products may damage the terminal and/or the battery, may pose a personal hazard to the user, and will void the warranty.*

The 7.4V, 14.8 watt hour Li-Ion battery pack is the primary power source for the Dolphin. The Li-Ion battery is designed to operate in a temperature range of -10° to 50°C (14 to 122°F). For the location of the Li-Ion battery on the terminal, see [Battery Well](#) on page 3-7.

### Charging Options

When the Li-ion battery is installed in the terminal, use one of the following peripherals:

- [Dolphin HomeBase](#) (see page 10-1)
- [Dolphin Mobile Base](#) (see page 11-1)
- [Dolphin ChargeBase](#) (see page 12-1)
- Dolphin Net Base (Please see the Dolphin Net Base Quick Start Guide on [www.handheld.com](http://www.handheld.com).)
- Dolphin Mobile Charger – connect the charger to the terminal and vehicle power port

*Note: Make sure the mechanical connector on the terminal is properly connected to the peripheral and that the peripheral is connected to the appropriate power supply.*

When the Li-ion battery is not installed in the terminal:

- Place the battery pack in the Dolphin QuadCharger; see [Charging Batteries in the QuadCharger](#) on page 13-4.
- Place the battery pack in the [Auxiliary Battery Well](#) of the Dolphin HomeBase (see page 10-6).

### Charging Time

The Li-ion battery pack requires four hours to charge completely.

### Storing Batteries

To maintain optimal battery performance, follow these storage guidelines:

- Avoid storing batteries outside the specified range of -4° to 104° F (-20° to 40°C) or 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 Use and Disposal

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

- Use only the battery supplied, recommended, or approved by Hand Held Products.
- Replace defective batteries immediately; using a defective battery could damage the Dolphin terminal.
- Never throw a used battery in the trash. It contains heavy metals and should be recycled according to local guidelines.
- Don't use a battery in any other manner outside its intended use in Dolphin terminals and peripherals.

- 
- Don't 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 battery is physically damaged in some way, please send it to Hand Held Products or an authorized Hand Held Products service center for inspection.
  - Although your battery can be recharged many times, it will eventually be depleted. Replace it after the battery is unable to hold an adequate charge.

If you are not sure the battery or charger is working properly, please send it to Hand Held Products or an authorized Hand Held Products service center for inspection.

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## **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 and allows the real-time clock to remain operational for up to 30 minutes when the main battery pack is removed. 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. However, you must reset the real-time clock; see [Set the Time and Date](#) on page 2-3.*

### **Charging**

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

The internal backup battery must be fully charged before using the terminal for the first time. The initial charge cycle takes approximately eight hours. After that, if the internal backup battery becomes fully discharged of power, it requires a minimum of 10 hours of charging time to function normally.

### **Guidelines for Use**

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

- Keep a charged Li-Ion battery pack in the Dolphin terminal. The internal battery prematurely discharges if there is not at least a partially charged battery in the terminal.
- Keep the Dolphin terminal connected to power when the terminal is not in use.

---

## Managing Battery Power

Data and files saved on Dolphin terminals may be stored in RAM memory, which does not persist through a hard reset. Therefore, to help prevent data loss, maintain a continuous power supply to the terminal.

Letting the backup battery become fully discharged causes the terminal to lose all data in RAM. Therefore, you should keep a charged battery pack in the Dolphin at all times. 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 Dolphin immediately.

### Default Critical and Low Battery Points

Dolphin terminals are programmed to display warnings when the battery reaches critical and low battery points. There are two DWORD value registry entries [HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\Power] that set the warning points. The default values for these entries are as follows:

#### “LowBatt”=19 (25%)


This sets the Low Battery point to 25% (19 hex=25 decimal). The low battery setting is the point at which the user is notified that the battery is low by an icon in the Navigation bar. The user is notified only once for a low battery.


#### “CriticalBatt”=a (10%)

This sets the Critical Battery point to 10% (a hex= 0 decimal). The critical battery setting is the point at which the customer is warned that the battery charge is very low. This warning is posted every 3 minutes until the situation is corrected.

### Status Notifications

Icons appear in the Navigation bar to indicate battery status.

 The main battery pack is low (at 25% or less). If the main battery is low and the terminal is in suspend mode, pressing the SCAN or Power button won't wake the Dolphin terminal; you **must** replace the discharged battery with a battery charged over 25% mark before you can resume terminal operation.

 The main battery is critically low (at 10% or less).

 The backup battery is low.

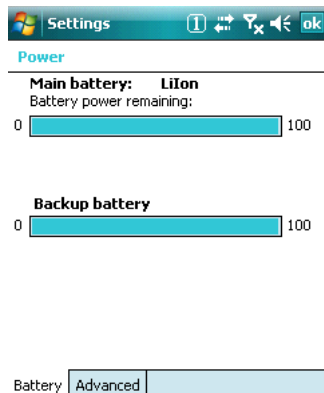
### Setting Critical and Low Battery Points

Developers can reset these parameters in the registry from 0 (no warning) to 99 (would nearly always warn). Warnings do not appear when the terminal is on external power.

You can review and set these battery points in the RegEdit Power Tool.

1. Tap Start > Power Tools > RegEdit.

- 
- Drill-down to **HKEY\_LOCAL\_MACHINE > System > CurrentControlSet > Control > Power.**

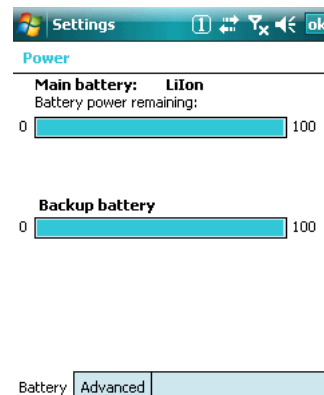


- Tap the **Value Name** to change the Value Data.  
You can reset the Value Data from 0 (no warning) to 99 (would nearly always warn).
- Tap **OK** to save changes.

For more information about the RegEdit Power Tool, refer to the Dolphin Power Tools User's Guide available for download at [www.handheld.com](http://www.handheld.com).

### **Checking Battery Power**

Tap **Start > Settings > System tab > Power.** The Battery tab opens displaying the charge status of both the installed Li-ion battery pack and the NiMH backup battery inside the terminal.



For more information, see [Power](#) on page 6-11.

### **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.

---

## ***Resetting the Terminal***

There are two types of system resets: a soft and a hard reset.

### ***Soft Reset (Warm Boot)***

A soft reset re-boots the device without losing RAM data. You would perform a soft reset when

- the terminal fails to respond.
  - after installing some software applications.
  - after making changes to certain system settings, such as network cards.
1. Press and hold the CTRL + SFT keys for approximately five seconds.
  2. The decode and scan LEDs flash for approximately three seconds as the terminal resets.
  3. When the reset is complete, the Today screen displays.

### ***Hard Reset (Cold Boot)***

A hard reset resets the operating system, restores the terminal back to factory defaults, and resets the terminal after a bootloader, keyboard, and kernel upgrade.

*A hard reset erases all of the data stored in RAM memory and all RAM installed applications!*

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

## ***Suspend Mode***

The terminal goes into suspend mode automatically when the terminal is inactive for a programmed period of time; see [Power](#) on page 6-11.

To put the Dolphin terminal into suspend mode manually, press and hold the Power key until the screen goes blank.

To wake the Dolphin terminal from suspend mode, press the Power or SCAN key.

## Using Scan Image 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 digital images, such as signatures and pictures of damaged inventory.

Terminal	Engine Options	1D	2D	Image Capture	Aiming	Omni-Directional Aiming
Dolphin 9900	5100SR/SF	Y	Y	Y	Green aiming beam or	Y
	5300SR/SF	Y	Y	Y	Red High-Vis aiming pattern	Y

### Image Engine Specifications

#### 5100 Standard Range (5100SR) 5300 Standard Range (5300SR)

Code	8 mil Linear	10 mil PDF417	13 mil UPC	15 mil QR	15 mil Data Matrix	35 mil MaxiCode
<b>Working Range</b>	(.020 cm)	(.025 cm)	(.033 cm)	(.038 cm)	(.038 cm)	(.089 cm)
<b>Near</b>	3.4 in. (8.6 cm)	3 in. (7.6 cm)	2 in. (5.1 cm)	3 in. (7.6 cm)	2.2 in. (5.6 cm)	1.9 in. (4.8 cm)
<b>Far</b>	7.5 in. (19 cm)	8.9 in. (22.6 cm)	13.1 in. (33.3 cm)	8.7 in. (22 cm)	10.1 in. (25.6 cm)	12.9 in. (32.7 cm)

#### 5100 Smart Focus (5100SF) 5300 Smart Focus (5300SF)

Code	6.6 mil PDF417	7.5 mil Linear	10 mil Linear	10 mil PDF417	13 mil UPC	15 mil Data Matrix
<b>Working Range</b>	(.017 cm)	(.019 cm)	(.025 cm)	(.025 cm)	(.033 cm)	(.038 cm)
<b>Near</b>	2.7 in. (6.8 cm)	2.4 in. (6.1 cm)	2.1 in. (5.3 cm)	2.1 in. (5.3 cm)	1.9 in. (4.8 cm)	1.7 in. (4.3 cm)
<b>Far</b>	5.9 in. (14.9 cm)	6.4 in. (16.2 cm)	7.5 in. (19 cm)	7.5 in. (19 cm)	8.8 in. (22.3 cm)	7.4 in. (18.8 cm)

*Note: The 5300 image engines contains a high-visibility aimer that projects aiming brackets around the bar code or image preview for maximum viewability and aiming. For details, see [5300 Red High-Vis Aiming Pattern](#) on page 4-4 and page 4-6.*

## Bar Code Symbologies Supported

Symbology type	Symbologies Supported
<b>1D Symbologies</b>	Codabar Code 3 of 9 Code 11 Code 32 Pharmaceutical (PARAF) Code 93 Code 128 EAN with Add-On and EAN with Extended Coupon Code EAN-13 GS1 DataBar Interleaved 2 of 5 Matrix 2 of 5 Plessey PosiCode Straight 2 of 5 IATA Straight 2 of 5 Industrial Telepen Trioptic Code UCC/EAN-128 UPC and UPC-A
<b>2D Symbologies</b>	Aztec Code 16K Composite Data Matrix GS1 DataBar MaxiCode OCR PDF417 QR Code
<b>Composite Codes</b>	Aztec Mesa Codablock F EAN-UCC GS1 DataBar 14
<b>OCR Codes</b>	OCR-A and OCR-B
<b>Postal Codes</b>	Postnet and most international 4 state codes Australian Post British Post Canadian Post China Post Japanese Post KIX (Netherlands) Post Korea Post Planet Code



---

## ***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 [Scanning Position 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***

1. Point the Dolphin terminal directly at the bar code. The imager faces straight out the top panel. 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.
2. Project the aiming beam or pattern by pressing and holding the SCAN key.
3. The scan LED lights red.
4. Center the aiming beam over the bar code; see [Scanning Position Options](#) on page 4-4.
5. When the bar code is successfully decoded, the decode LED lights green and the terminal beeps.
6. The bar code information is entered into the application in use.

---

## Scanning Position 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.

### 5100 Green Aiming Beam

#### Linear Bar Code

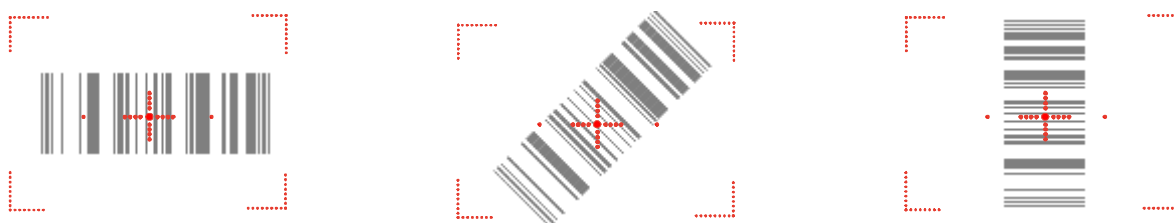


#### 2D Matrix Symbol



### 5300 Red High-Vis Aiming Pattern

If your Dolphin terminal is configured with a 5300 imager, high-vis aimers frame the bar code for more intuitive aiming.



---

## 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, Dolphin touch screens display 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** The SCAN key captures images.

**Image Files** The terminal is capable of saving images in a number of industry-standard file formats such as BMP, JPG, and PNG. The default file format for images is a grayscale JPG.

**Compression** 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. For the highest quality image, take grayscale images.

## Taking an Image

The following steps are basic guidelines for taking images:

1. Point the Dolphin terminal directly at the object. The imager points straight out the top panel.
2. To preview the image, press and hold the SCAN key.
3. The touch screen displays a preview of the object, and the decode and scan LEDs light red.
4. Adjust the terminal's position until the object appears on the screen the way you want it to appear in the image.
5. Hold the terminal still and release the SCAN key or Scan Trigger. The scan and decode LEDs flash red, the screen flashes, and the captured image appears on the screen.



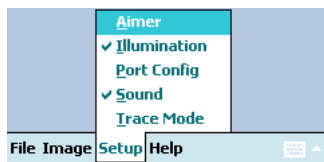
6. Unless otherwise specified by the application in use, the image is saved to the **My Device\My Documents** folder (**Start > Programs > File Explorer > My Device > My Documents**).

---

### *5300 High-Vis Aiming Pattern*

If your Dolphin terminal is configured with the 5300 imager, you can enable the aiming pattern for imaging in the Imaging Demo.

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



2. The aiming pattern is now enabled for imaging.

### ***Uploading Images***

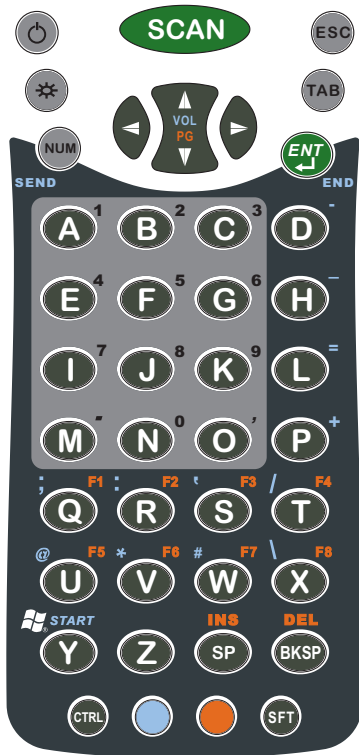
Image files can be uploaded to a host PC via Microsoft ActiveSync and a Dolphin communication peripheral or your wireless radio connection.

## Using Dolphin Keyboards

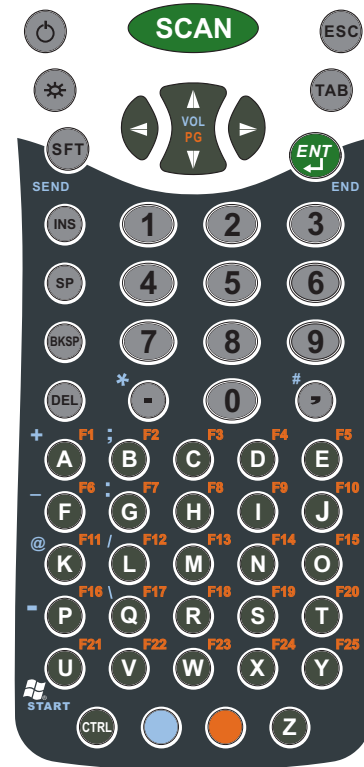
### Keyboard Options

There are two keyboards available in the Dolphin 9900 Series:

43-key Alpha/Numeric Keyboard



56-key Full Alpha/Numeric Keyboard



All keyboards

- Are backlit for easy viewing in various lighting conditions.
- Have centrally-located keys for both right- and left-hand operation.
- Have keys and overlays with a silver background to enhance readability.
- Contain function, navigation and modifier keys.
- Are color-coded for ease-of use.

### Common Buttons

See [Using the Function Keys](#) on page 5-2.

See [Using the Navigation Keys](#) on page 5-4.

See [Using the Modifier Keys](#) on page 5-2.










### Keyboard Combinations

See [43-Key Alpha/Numeric Keyboard](#) on page 5-6.



See [56-Key Full Alpha/Numeric Keyboard](#) on page 5-10.

---


## Using the Function Keys

Name	Key	Function
Backlight		Turns the keyboard backlight on and off.
Backspace (BKSP)		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)		Deletes the next character forward each time the key is pressed. This key appears on the 56-key keyboard only. 43-key keyboard= Red + BKSP.
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 <a href="#">Suspend Mode</a> on page 3-20.
SCAN Key		Activates the scan and “wakes” the terminals from sleep mode. Its position allows convenient one-handed image-taking and/or bar code decoding.
Space (SP)		Moves the cursor one space.
Tab		Moves the cursor to the next tab stop or the next control (on a form).

## Using the Modifier Keys


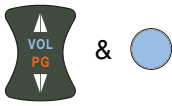


Name	Key	Function
Shift		<p>The SFT key modifies only the next key pressed; it must be pressed before each key you wish to modify. SFT toggles the keyboard between uppercase alphabet mode and lowercase alphabet mode.</p> <p>Double-tap SFT to toggle Caps Lock on and off. When Caps Lock is toggled on, characters are uppercase; when toggled off, characters are lowercase.</p>
CTRL		The function of the CTRL key depends on the software application in use and the key combination.

---

Name	Key	Function
<b>Blue and Red</b>		<p>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.</p> <p>The overlay of 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.</p>

## 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.

Button	Function
	Moves the cursor up one row or line. OR Moves the cursor down one row or line.
	Raises the volume. OR Lowers the volume.
	Moves the cursor one character to the right.
	Moves the cursor one character to the left.

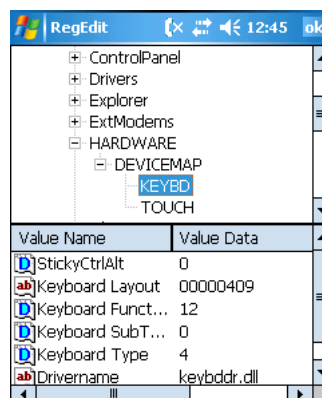
*Note: Additional functionality varies according to the application in use.*

## Sticky Key Functionality

Dolphin terminals support sticky key functionality for the CTRL key, which means that you don't have to press and hold the CTRL key when you press the next key. Instead, just tap CTRL and then the next key.

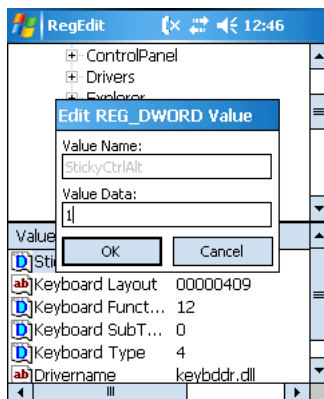
You need to open RegEdit and enable the **\HKEY\_LOCAL\_MACHINE\HARDWARE\DEVICEMAP\KEYBD** key.

1. Tap **Start > Power Tools > RegEdit**  RegEdit.
2. Tap the **+↵** sign.
3. Tap **HKEY\_LOCAL\_MACHINE > HARDWARE > DEVICEMAP > KEYBD**.



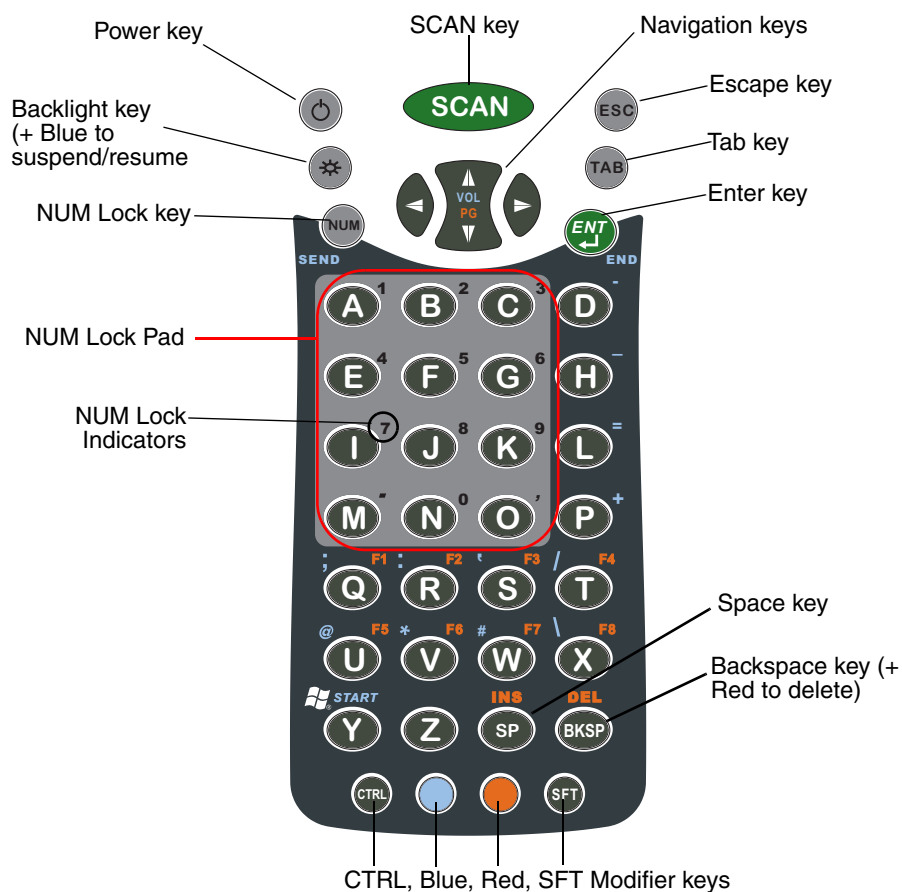


- 
- In the bottom half of the window, double-tap the **StickyCtrlAlt** key and change the Value Data from “0” to “1.”



- Tap **OK**, then **OK** in the upper right corner to save the change to the registry.
- Press the CTRL key combination with other keys to verify that you do not need to hold them down while you press the next key. For an example of CTRL key combinations, see [General Windows Keyboard Shortcuts](#) on page 5-14.

## 43-Key Alpha/Numeric Keyboard



### Number Lock (NUM)





The **NUM Lock** key and **NUM Lock Pad** and **Indicators** appear only on the 43-key keyboard. The Number Lock key enables you to toggle between the alpha and numeric modes. Alpha mode is when you type letters with the letter keys. Numeric mode is when you type numbers with the letter keys. On the 43-key keyboard, alpha mode is the default.

The **NUM Lock Indicators** above the letter keys in the **NUM Lock Pad** specify the number or character that will be typed when you press that letter key in numeric mode.

---

### 43-Key Blue Key Combinations

Key Combination	Function/Special Character
Blue key + NUM 	Send (a phone call)
Blue key + ENT 	End (a phone call)
Blue key + D	-
Blue key + H	—
Blue key + L	=
Blue key + P	+
Blue key + Q	;
Blue key + R	:
Blue key + S	“
Blue key + T	/
Blue key + U	@
Blue key + V	*
Blue key + W	#
Blue key + X	\
Blue key + Y	Start menu

### 43-Key Red Key Combinations

Key Combination	Function/Special Character
Red key + SFT	Toggles on Caps Lock
Red key + Q	F1
Red key + R	F2
Red key + S	F3
Red key + T	F4
Red key + U	F5
Red key + V	F6
Red key + W	F7
Red key + X	F8


---

<b>Key Combination</b>	<b>Function/Special Character</b>
<b>Red key + SP</b>	Insert
<b>Red key + BKSP</b>	Delete

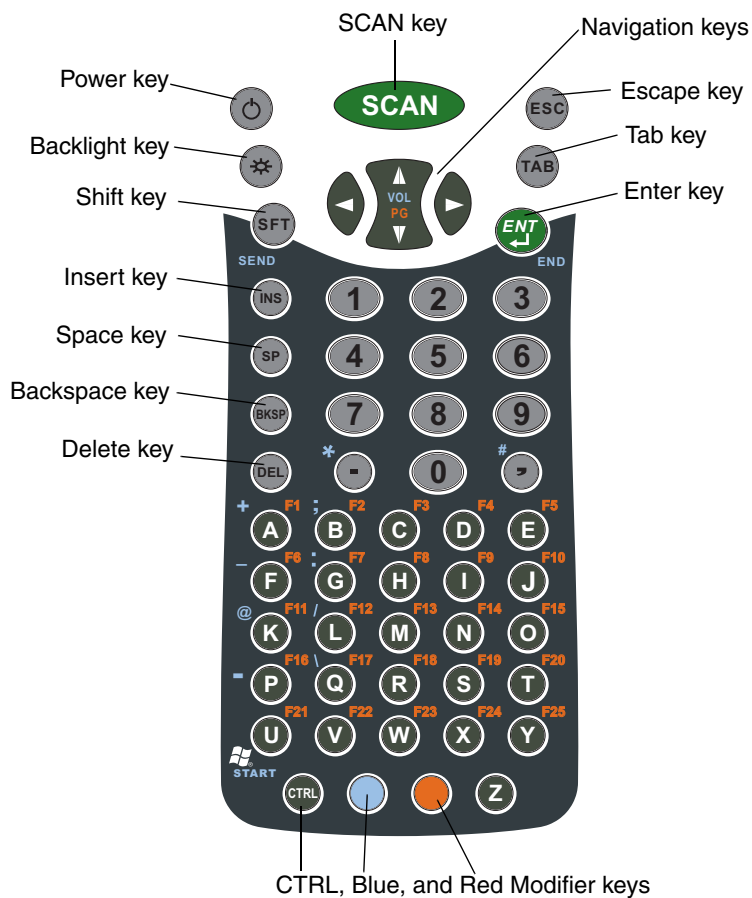
---

### **43-Key Num Lock Key Combinations????????**



The 43-key keyboard defaults to alpha mode. To switch to num lock mode, press the NUM key once. In Num Lock mode, when you press a letter key, you type the number indicated by the num lock indicators over the key.

<b>Key/Key Combination</b>	<b>Function/Special Character</b>
 Press the NUM key only once to switch to num lock mode.	
<b>NUM + SFT + A</b>	!
<b>NUM + SFT + B</b>	@
<b>NUM + SFT + C</b>	#
<b>NUM + SFT + E</b>	\$
<b>NUM + SFT + F</b>	%
<b>NUM + SFT + G</b>	^
<b>NUM + SFT + I</b>	&
<b>NUM + SFT + J</b>	*
<b>NUM + SFT + K</b>	(
<b>NUM + SFT + M</b>	>
<b>NUM + SFT + N</b>	)
<b>NUM + SFT + O</b>	<

## 56-Key Full Alpha/Numeric Keyboard



## 56-Key Blue Key Combinations

Key Combination	Function/Special Character
Blue key + SFT 	Send (a phone call)
Blue key + ENT 	End (a phone call)
Blue key + .	*
Blue key + ,	#
Blue key + A	+
Blue key + B	;
Blue key + F	-
Blue key + G	:

---

Key Combination	Function/Special Character
Blue key + K	@
Blue key + L	/
Blue key + P	-
Blue key + Q	\
Blue key + U	Start menu

### ***56-Key Red Key Combinations***

Key Combination	Function/Special Character
Red key + SFT	Toggles on Caps Lock
Red key + A	F1
Red key + B	F2
Red key + C	F3
Red key + D	F4
Red key + E	F5
Red key + F	F6
Red key + G	F7
Red key + H	F8
Red key + I	F9
Red key + J	F10
Red key + K	F11
Red key + L	F12
Red key + M	F13
Red key + N	F14
Red key + O	F15
Red key + P	F16
Red key + Q	F17
Red key + R	F18
Red key + S	F19
Red key + T	F20
Red key + U	F21

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<b>Key Combination</b>	<b>Function/Special Character</b>
<b>Red key + V</b>	F22
<b>Red key + W</b>	F23
<b>Red key + X</b>	F24



---

## **56-Key SFT Key Combinations???????**

<b>Key Combination</b>	<b>Function/Special Character</b>
SFT + 1	!
SFT + 2	@
SFT + 3	#
SFT + 4	\$
SFT + 5	%
SFT + 6	^
SFT + 7	&
SFT + 8	*
SFT + 9	(
SFT + 0	)
SFT +.	>
SFT +,	<

---

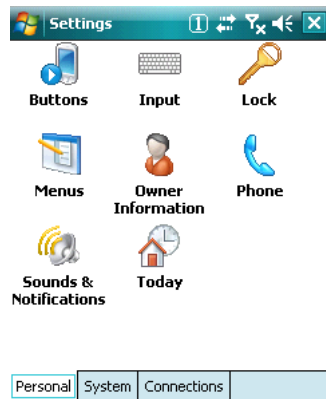
## General Windows Keyboard Shortcuts

Press these keys,	To...
<b>CTRL + C</b>	Copy
<b>CTRL + X</b>	Cut
<b>CTRL + V</b>	Paste
<b>CTRL + Z</b>	Undo
<b>DELETE</b>	Delete
<b>CTRL + Right Arrow</b>	Move the insertion point to the beginning of the next word.
<b>CTRL + Left Arrow</b>	Move the insertion point to the beginning of the previous word.
<b>CTRL + Down Arrow</b>	Move the insertion point to the beginning of the next paragraph.
<b>CTRL + Up Arrow</b>	Move the insertion point to the beginning of the previous paragraph.
<b>SHIFT + any of the arrow keys</b>	Select more than one item in a window or on the desktop, or select text within a document.
<b>CTRL+ A</b>	Select all
<b>CTRL + ESC</b>	Display the <b>Start</b> menu.
<b>Underlined letter in a command name on an open menu</b>	Carry out the corresponding command.
<b>Backspace</b>	View the folder one level up in My Computer or File Explorer.

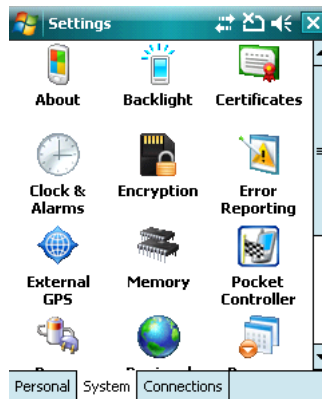
## Overview

Customized settings are available from the Start menu. Tap **Start > Settings** and settings screen opens. Settings consists of three tabs:

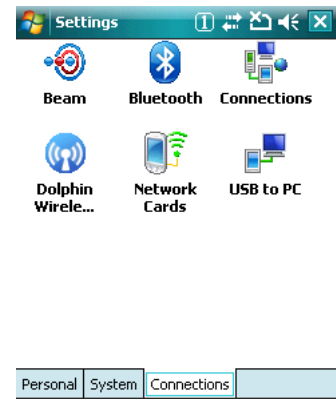
### Personal Tab



### System Tab



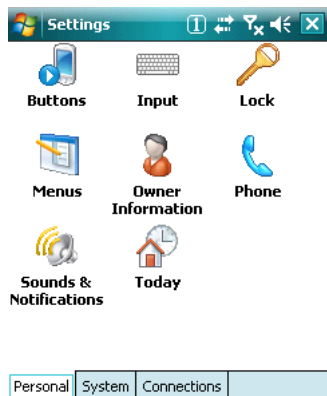
### Connections Tab



Tab	Description	See Page
<b>Personal</b>	Customize buttons, set SIP options, and adjust headset settings.	<a href="#">Personal Tab</a> , page 6-2
<b>System</b>	Adjust system settings.	<a href="#">System Tab</a> , page 6-7
<b>Connections</b>	Establish network connections settings.	<a href="#">Connections Manager</a> , page 7-4

## Personal Tab

To access the Personal tab, tap **Start > Settings**. The screen opens to the Personal tab.



Button Name	Description	See
<b>Buttons</b>	Customize keyboard buttons to perform functions.	<a href="#">Buttons</a> on page 6-3.
<b>Input</b>	Customize the SIP.	<a href="#">Input Panel Options</a> on page 6-4.
<b>Lock</b>	Password protect the terminal to limit access to your device.	
<b>Menus</b>	Customize the Start and New menus.	<a href="#">Menus—Modifying the Start Menu</a> on page 6-5.
<b>Owner Information</b>	Enter your contact information.	
<b>Phone</b>	Opens the settings window for the GSM phone, if installed.	
<b>Sounds &amp; Notifications</b>	Set the sound volume, enable and disable sounds for specific actions, and set sound parameters for system notifications.	<a href="#">Notifications</a> on page 6-6.
<b>Today</b>	Customize the look and information that is displayed on the Today screen.	




*Personal settings are stored in RAM memory. They are replaced by system defaults after each hard reset. For more information about resets, see [Resetting the Terminal](#) on page 3-20.*

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## Buttons

Buttons programs keyboard buttons to launch applications or execute commands. The default button assignments that appear on the Buttons window are inactive until you enable the HotKeys Power Tool.

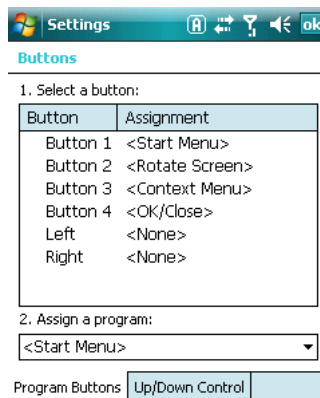
### To Enable HotKeys

1. Tap **Start > Power Tools**.
2. Tap the HotKeys icon **once**  HotKeys activates the button assignments in Buttons.
3. Verify the assignment by tapping the button on the keyboard.

For more information about the HotKeys Power Tool, refer to the Dolphin Power Tools User's Guide, which is available for download from [www.handheld.com](http://www.handheld.com).

### Button Assignments

1. After HotKeys is enabled, tap **Start > Settings > Personal tab > 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 application in the **Assignment** column and select a program or command in the **Assign a program** drop down list.
3. Tap **OK** to save.

### 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 6-5.

### Additional Functions

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

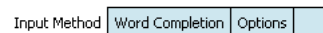
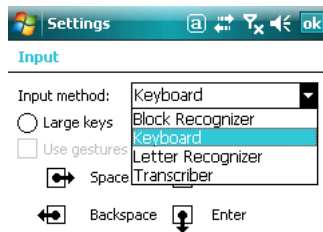
Command	Description
<Input Panel>	Opens the soft input panel.

Command	Description
<None>	Nothing happens when the button is pressed.
<OK/Close>	Performs the same function as tapping <b>OK</b> on the screen.
<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.
<Today>	Opens the Today screen.

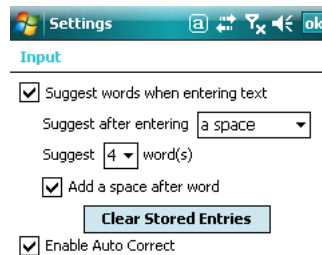
## Input Panel Options Input

The following graphics are the tab windows where you can customize the input panel to your preferences:

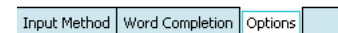
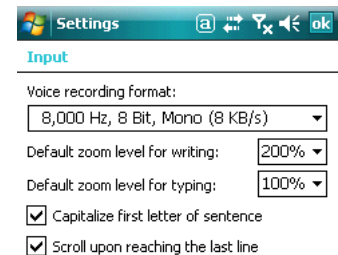
### Input Method



### Word Completion Tab



### Options Tab



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## Menus—Modifying the Start Menu

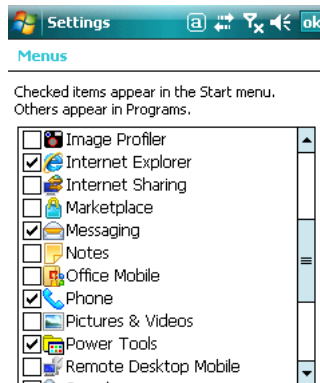
You can add existing programs you use often, such as File Explorer, to the Start menu. You are not installing or moving the program itself, you are simply creating a shortcut to the program from the Start menu.

You can modify the Start menu,

- [Using Menus](#) (page 6-5),
- [Using File Explorer](#) (page 6-5), or
- [Using ActiveSync on the Desktop](#) (page 6-6)

### Using Menus

1. Tap **Start > Settings > Personal tab > Menus**.



2. Select the program you want to add and tap **OK** to save.
3. Tap the **Start** menu.
4. Verify that the shortcut to the program appears on the Start menu.

*Note: You can also remove shortcuts from the Start menu by de-selecting them here and tapping **OK**.*

### Using File Explorer

We recommend that you Copy and Paste **Shortcut** so that you do not alter your program configurations by accident. If you Cut and Paste the program itself, you will be removing the program from its proper location, which means that the program might not run properly. Using Copy and Paste Shortcut ensures that the program files remain where they need to be to function properly.

1. Tap **Start > Programs > File Explorer**.
2. Navigate to the program.
3. Tap and hold on the program, then tap **Copy** on the pop-up menu.
4. Navigate to the Windows folder and open the Start Menu (**My Device > Windows > Start Menu**), tap and hold a blank area of the window, and tap **Paste Shortcut** on the pop-up menu.
5. Tap the **Start** menu.
6. Verify that the shortcut to the program now appears on the Start menu.

---

### *Using ActiveSync on the Desktop*

You can use the Explore feature of ActiveSync on your desktop computer to navigate through the files on your Dolphin terminal. The process is essentially the same, except that you are using Windows Explorer on the PC to create and paste the shortcut.

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

See ActiveSync Help for more information about using ActiveSync.

### ***Notifications***

Notifications remind you when you have something to do. For example, if you've set up an appointment in Calendar, a task with a due date in Tasks, or an alarm in Clock, you'll be notified in any of the following ways:

- A message box appears on the screen.
- A sound, which you can specify, is played.

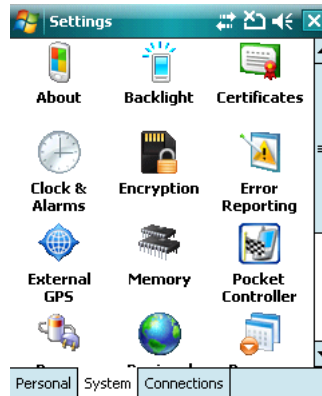
The options you choose here apply throughout the terminal.



---

## System Tab

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



## About

The About system setting displays specific information about what is loaded on the terminal. It contains three tabs: Version, Device ID, and Copyrights.

**Version Tab** Displays the information about the software, operating system, and processor of the terminal.

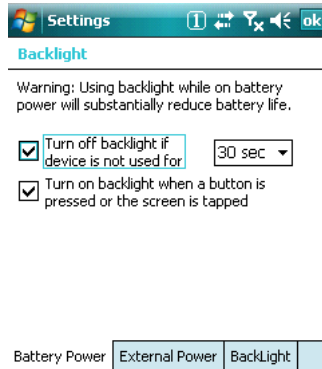
**Device ID Tab** Displays the information the terminal uses to identify itself to other devices. It can be important to know this information if the Dolphin terminal is going to be part of a networked system of devices.

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

**Description:** Displays the description of the device ID.

**Copyrights Tab** Displays important copyright information.

## Backlight



The Backlight Setting has two tabs: **Battery** and **External**; the options on each tab are the same. The Battery tab determines display backlight settings when the terminal is running on battery power. The External tab determines display backlight settings when the terminal is powered by an external source, such as a Honeywell cable.

Field	Description
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 a button is pressed or the touch screen is tapped.
Dim backlight if	Select how many minutes you want to elapse before the backlight dims.
Backlight Intensity	Move the slider to set the intensity of the backlight.
OK	Tap OK to save settings. The display backlight functions according to the settings saved on each tab.

## ClearType Tuner

Dolphin terminals display support ClearType font rendering. ClearType is a Microsoft technology that increases the readability of text on LCD displays.

After you enable ClearType font rendering in the Screen setting ([Screen](#), page 6-13), you can adjust the render level. Use the slider to adjust the appearance of the sample type on the screen and tap **OK**. For more information about ClearType font rendering, visit: [www.microsoft.com/typography/cleartype/what.htm?fname=%20&fsize=](http://www.microsoft.com/typography/cleartype/what.htm?fname=%20&fsize=)

## Clock

This setting sets the system clock. Appointments, scheduled events, and any function on a schedule runs off this setting. You need to set the time zone and time after each hard reset; see [Set the Time and Date](#) on page 2-3.

---

## Memory

There are two kinds of memory:

**Main Board/IPSM** 256MB RAM X 1GB Flash

### Secure Digital (SD) Card

Each terminal has an SD memory interface for additional application and data storage. You can order memory cards to increase memory. Each terminal contains an access door on the side panel that makes the SD memory interface user-accessible; see [Access Door to SD Memory](#) on page 3-8.

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.

There are three tabs: Main, Storage Card, and Running Programs.

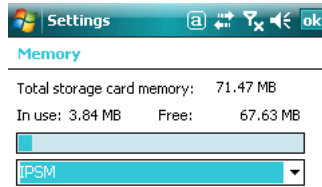
**Main Tab** This tab displays the usage statistics of the 64MB of on-board, volatile RAM memory.

Storage	Program
Total: 13.58 MB	Total: 104.75 MB
In use: 6.36 MB	In use: 22.41 MB
Free: 7.22 MB	Free: 82.34 MB

Main | **Storage Card** | Running Programs |

Field	Description
<b>Columns</b>	<b>Storage:</b> The part of RAM memory used for storing programs and program data. <b>Program:</b> The part of RAM memory used to run programs.
<b>Total</b>	Displays the current MB of memory allocated for Storage and Program use.
<b>In use</b>	Displays the total MB of that allocated memory being used in Storage and Program memory functions.
<b>Free</b>	Displays the total MB of memory available for Storage and Programs use.

**Storage Card Tab** This tab 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 the selected memory.

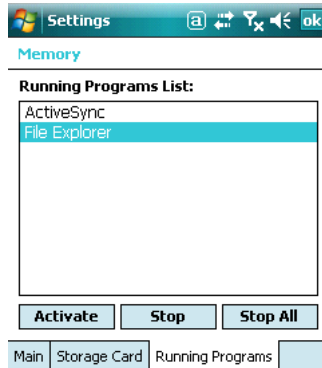
**In use** The MB currently being used.

**Free** The MB that is still available for use.

**IPSM**—Short for Internal Persistent Storage Manager, this is the 14MB of on-board Flash memory that is non-volatile. Because this memory is non-volatile, data or programs stored in IPSM are not affected when power is removed. Autoinstall programs, for example, are stored in IPSM so that they are always installed at cold-boot startup.

**Storage Card**—You can install one memory card in Dolphin terminals (see [Access Door](#) on page 3-6). 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.

**Running Programs Tab** Displays the software programs currently using Storage memory.



Check this tab when you are receiving out of memory errors or when the mobile computer is running slowly. You can

- Select a program in the list and tap **Stop** to stop it from running (and therefore from using memory), or
- Tap **Stop All** to automatically stop all running programs.



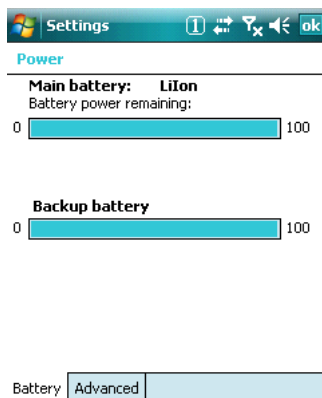
*Anytime you stop a running program, it frees up RAM memory. Be advised that, when you stop a program here, any unsaved data in that program is lost. To free up memory without risking data loss, return to the running program, save your data, and close the application.*

---

## Power

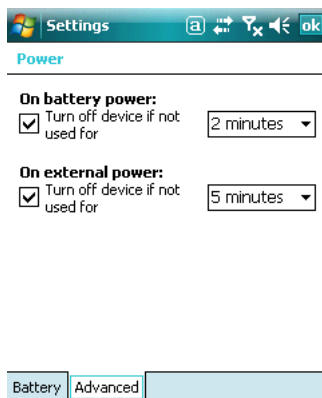
### Battery Tab

Displays the remaining charge of both the main and backup batteries. For more information about the terminal's batteries, see [Batteries](#) on page 3-15.



### Advanced Tab

Determines power time-outs for battery and external power.



When the device is “turned off,” that means that it goes into [Suspend Mode](#) (see page 3-20).

## Regional Settings

Regional Settings enables you to customize the appearance and formatting to your geographic region. Specifically, you can customize numbers (number of decimal places allowed, for example), currency (using the \$ or € symbol, for example), time, and date.

These specifications apply to all screens, including the Today screen. To see specific settings or change a specific setting, tap on one of the tabs, make the change and tap **OK** to save it.

---

## Remove Programs

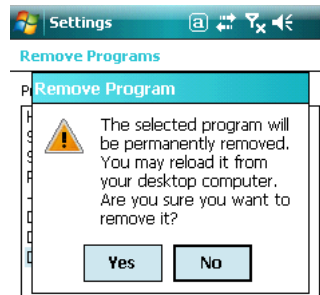
The Remove Programs settings enables you to remove programs installed on the terminal. Use this setting to troubleshoot when you receive messages that the device is low on of memory.

The programs removed here are removed from RAM memory. Any program (usually \*.cab or \*.dll files) stored in the Autoinstall folder (**My Device > IPSM > AutoInstall**) will re-install after the next hard reset; see [Hard Reset \(Cold Boot\)](#) on page 3-20.

1. Tap the **Remove Programs** icon.



2. In the list, select a program and 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.

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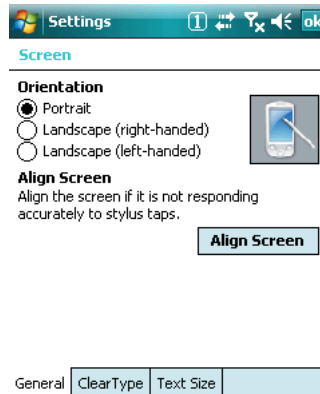
## Screen

*Note: By default, dynamic screen rotation (i.e., the ability to switch between landscape and portrait orientation) is disabled on Dolphin terminals. Please consult the Dolphin SDK Add-on to find out how to enable dynamic screen rotation.*

There are three tabs: Alignment, Clear Type, and Text Size. Screen opens to the Alignment tab.

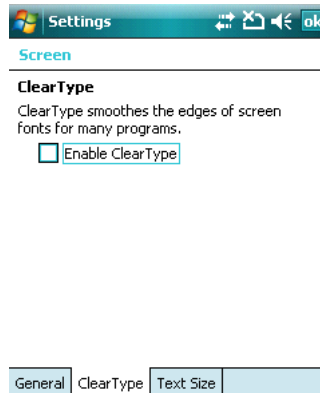
### Alignment Tab

On this tab, you can re-align the screen. You first align the screen at bootup. Re-align the screen again if tapping buttons or icons with the stylus no longer seems to work appropriately. For more information, see [Align the Screen](#) on page 2-3.



### ClearType Tab

The displays of Dolphin terminals support ClearType font rendering. ClearType is a Microsoft technology that increases the readability of text on LCD displays.



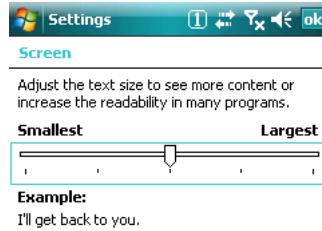
To enable ClearType font rendering, select **Enable ClearType** and tap **OK**. To adjust the level of ClearType font rendering, use the ClearType Tuner; see [ClearType Tuner](#) on page 6-8.

For more information about ClearType font rendering, visit: [www.microsoft.com/typography/cleartype/what.htm?fname=%20&fsize=](http://www.microsoft.com/typography/cleartype/what.htm?fname=%20&fsize=)

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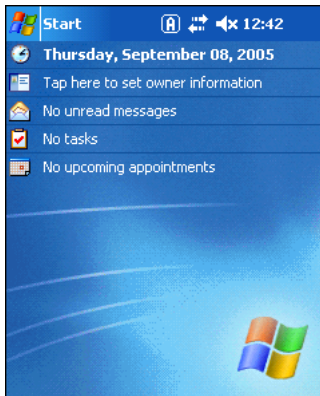
## Text Size Tab

The Text Size tab enables you to perform font scaling within certain views of the Today screen, Contacts, Calendar, Messaging, and Tasks. This means that you can increase or decrease the point size of the font on application windows.

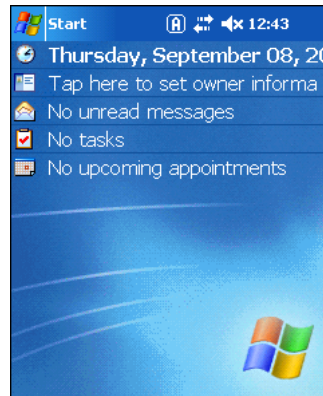


This is the default font size setting. To change the font size, move the slider toward Smallest or Largest. The Example text changes to reflect the font change. Tap **OK** to save the new font size setting.

### Default Font Size



### Largest Font Size











## Connections Tab

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



Icon	Setting	Tapping this icon...	See Page
 Beam	<b>Beam</b>	Enables infrared communication.	<a href="#">7-9</a>
 Bluetooth	<b>Bluetooth</b>	Configures the Bluetooth radio. This icon appears only if a Bluetooth radio and driver is installed on the terminal.	<a href="#">9-1</a>
 Connections	<b>Connections</b>	Opens Microsoft's connections manager.	<a href="#">7-4</a>
 Dolphin Wireless Manager	<b>Dolphin Wireless Manager</b>	Manages the wireless radios installed in the terminal.	<a href="#">7-6</a>
 USB to PC	<b>USB to PC</b>	Enables advanced USB communication via ActiveSync, which is wired communication.	<a href="#">3-10</a>
 Wi-Fi	<b>Wi-Fi</b>	Enables you to configure Wireless Zero Config. This icon appears only if the 802.11b/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 will appear only if you removed the supplicant and cold boot the terminal.	

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

---

## Using Infrared

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 Mobile information such as Contacts and Tasks, as well as software upgrades.

The maximum data transfer speed is 115 Kbps.

### IrDA Port Location

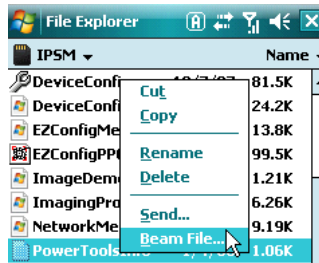
IrDA Port



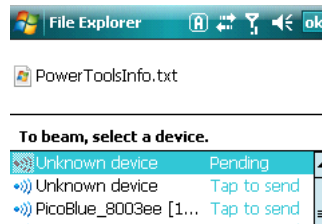
To send or receive, the IrDA ports of both devices - whether it's two terminals, or a terminal and a host device - must be aligned with each other and within a close range. The maximum data-transfer speed is 115 Kbps.

### Sending Data

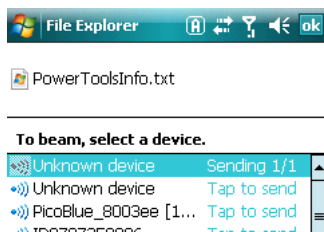
1. Align the IrDA ports.
2. Open the program where you created the item you want to send and locate the item in the list. You can also beam files, but not folders, from File Explorer.
3. Tap and hold the item and select **Beam File**.



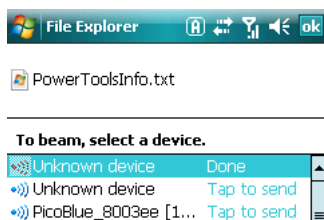
4. The IrDA port searching for a receiving IrDA port in the vicinity. The selected device reads "Pending."



- 
- When the IrDA port finds the aligned IrDA port, it immediately starts sending the selected file. The selected device reads “Sending.”



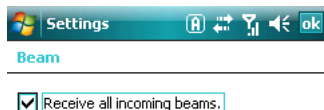
- When the file transfer is complete, the selected device reads “Done.”



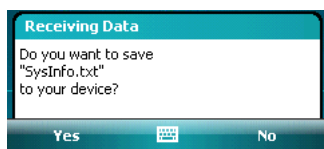
## Receiving Data

The Beam Setting must be set to receive for the terminal to receive data from other infrared devices.

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



- Align the IrDA ports.
- Have the owner of the other device send the information to you.
- Your terminal automatically begins receiving it.
- A popup message appears asking if you want to receive the incoming file.



- Tap **Yes** to receive the file.

---

## Connections Manager

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

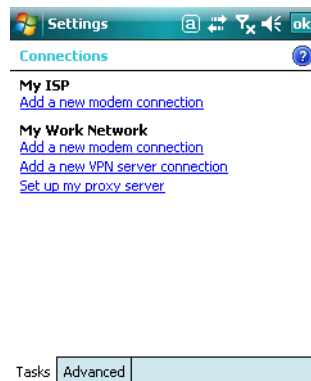
**Do NOT enter connection parameters in the connections manager if:**

- 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 (WZC). By default, WZC is disabled on Dolphin terminals.

You also use the connections manager to establish a data connection with the GSM radio; for details,

### To Access the Connections Manager:

Tap **Start** > **Settings** > **Connections** tab > **Connections** icon  **Connections**.



### Task Tab

The Task tab enables you to initially configure, 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)
- \*Proxy server connection

---

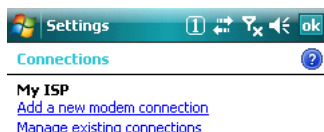
To complete the setup screens, obtain the network parameters from your system administrator.

### \*Proxy Server Connections

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 sever name, server type, port, type of Socks protocol used, and your user name and password.

### *Modify an Existing Connection*

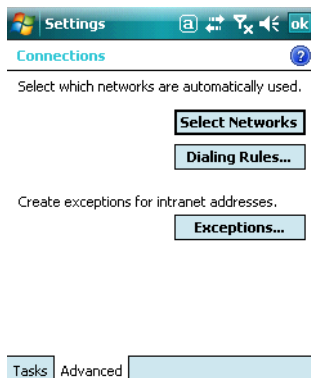
**Manage Existing Connections** appears on the Connections tab after at least one network connection has been established. Tap **Manage Existing Connections** on the Tasks tab and follow the setup



screens. You will usually be walked through the same setup screens used to establish the connection.

### **Advanced Tab**

The Advanced tab 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.*

### **Online Help**

For more information about modem connection setup, consult the online help on the setup screens by tapping the Help icon .

---

## Dolphin Wireless Manager

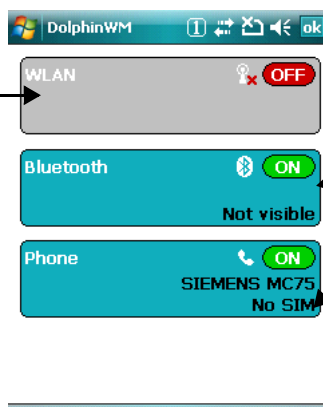
The Dolphin Wireless Manager provides a centralized interface that enables and disables all the on-board radios. Each radio has its own configuration program and the Dolphin Wireless Manager also provides shortcuts to the configuration utilities for each radio.

### Dolphin Wireless Manager Window

Tap **Start** > **Settings** > **Connections** tab > **Dolphin Wireless Manager**



If a rectangle is grayed-out, then the radio is not installed on the terminal.

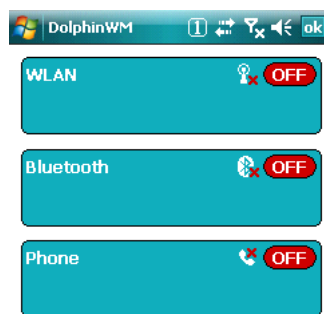


These buttons show you the state of the radio.

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

### Enabling the Radios

1. Tap **Start** > **Settings** > **Connections** tab > **Dolphin Wireless Manager**



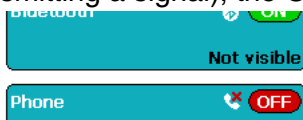
2. Tap anywhere inside the rectangle or the **OFF** button inside the rectangle. A message appears asking if you want to turn on the radio.



3. Tap **OK** and 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 three radios have their own configuration utilities that you can access through the **Menu**.



There are three radio configuration utilities:

- For **802.11b/g** 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 9900 product page at [www.handheld.com](http://www.handheld.com).
- For **GSM** Tap **Phone Settings** and the Phone opens. (Only for HD59900LUP)  
For details, see [Working with GSM](#) on page 8-1.
- For **Bluetooth** Tap Bluetooth Settings and the Bluetooth Settings open.  
For details, see [Working with Bluetooth](#) on page 9-1.

---

## 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 Mobile-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 on the Windows Mobile website: [www.microsoft.com/windowsmobile/products/pocketpc/](http://www.microsoft.com/windowsmobile/products/pocketpc/)



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

You can install additional software via:

- ActiveSync - see page 7-8.
- Infrared - see page 7-2.
- Network connection (via wireless radio) - see page 7-9.
- 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 Mobile and your processor. You can verify your processor by tapping Start > Settings > System tab > About > Version tab. 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.
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. You will know the program cannot be installed on the PC if an error message appears when you try to install it stating that the program is valid but designed for a different type of computer.

1. If you cannot find any installation instructions for the program in the Read Me file or documentation, open **ActiveSync** and click **Explore**.\*
2. Navigate to the **My Pocket PC** 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 Pocket PC > IPSM > 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 regular Autoinstall; see [Let Autoinstall Run](#) on page 2-3. Remember, a hard reset erases RAM data! For more information, see [Hard Reset \(Cold Boot\)](#) on page 3-20.

After installation on the terminal is complete, tap **Start > Programs** and the program and its icon appears on the Programs 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 Mobile and your processor. You can verify your processor by tapping Start > Settings > System tab > About > Version tab. 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 **Start > Settings > System** tab > **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 Pocket Internet Explorer. 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."

---

## ***COM Port Assignment Table***

<b>COM Port</b>	<b>Assignment</b>
<b>COM Port 1</b>	Serial port. This is the 17-pin connector on the bottom panel of Dolphin terminals.
<b>COM Port 2</b>	Bluetooth Module If there is no Bluetooth hardware installed on the terminal, this com port is unassigned.
<b>COM Port 3</b>	Raw Infrared
<b>COM Port 4</b>	
<b>COM Port 5</b>	USB virtual serial port
<b>COM Port 6</b>	IrDA, if IrDA is enabled.
<b>COM Ports 7-9</b>	Unassigned. These are available for selection only when connecting to devices that use virtual com ports, such as Bluetooth.

### Overview

The Dolphin 9900 can be configured with an integrated Siemens® GSM/GPRS quad-band radio module for WWAN communications.

- GSM** Short for Global System for Mobile communications, GSM is an open, non-proprietary wireless WAN system that is constantly evolving and growing.
- 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.

### Quad Band Antenna

Dolphin terminals configured with a GSM radio feature an external antenna that is optimized for power output and receiver sensitivity. This is an omni-directional antenna with zero dBm gain.

For the MC-75 radio, there are two different antennas based on geographical location; each supports two bandwidths:

- Europe** Supports 900 MHz and 1800 MHz bands.
- North America** Supports 850 MHz and 1900 MHz bands.

### Capabilities

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

- GSM voice data ("dial-up")
- GPRS Class 10: Data transmissions average 40-60 Kbps (available speed depends on the wireless network carrier).

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.

### Requirements

Using GSM/GPRS requires a:

- Network subscription to a GSM/GPRS 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 8-2).

---

## **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 are installed in compatible mobile devices, enabling you to switch devices without losing personal and setup information.

### **SIM Card Requirements**

Before installing the SIM card:

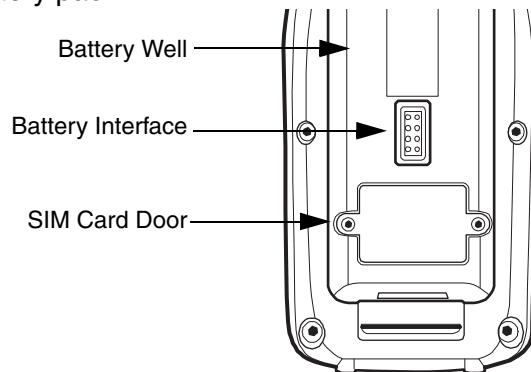
- The SIM card **must** be activated by the service provider.
- The terminal **must** be powered down.

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

### **To Install a SIM Card**

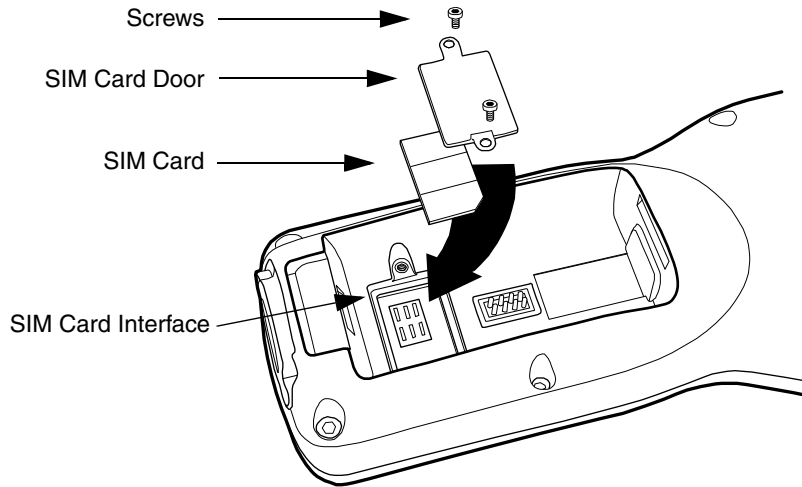
On the Dolphin 9900 terminal, access to the SIM card is located under the battery well, which enables easy access to the SIM card while securing it under an installed battery.

1. Put the terminal in suspend mode and lay it face-down on a flat surface.
2. Remove the battery pack.



3. Unscrew the faceplate of the SIM card door. You **must** use a Torx T6 wrench. You can purchase this wrench from Honeywell, part number 100001700.
4. Insert your SIM card. Make sure the interface on the card is connected to the SIM Card interface in the slot; the beveled corner is in the upper right corner.

- 
5. Place the SIM card door over the secured SIM card and fasten the screws.

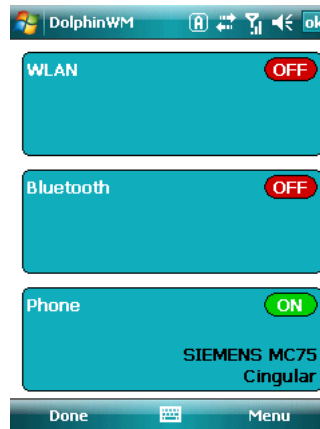


6. Install the battery pack and turn on the terminal.

### ***Enabling the GSM Radio***

By default, the GSM radio should be enabled after each hard reset. Verify the status of the radio in the Dolphin Wireless Manager.

Tap **Start > Settings > Connections tab > Dolphin Wireless Manager**



If the Phone is set to OFF, tap the Phone rectangle and the GSM radio enables.

---

## Voice Communication

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

### Audio Modes

The back panel of the Dolphin 9900 contains both a speaker and a microphone that you can use to send and receive audio signals over the GSM network; see [Back Panel Features](#) on page 3-6.

There are two audio modes:

- Headset** Headset mode is when you plug a headset into the audio jack and speak into the microphone. You must use a 2.5mm plug; no other audio plug will fit.
- Hands-Free** Hands-free mode is when you use the back panel as a speakerphone. To switch the back panel to speakerphone, in the Dialler, tap **Settings > Speakerphone**. The audio levels adjust appropriately for speakerphone use.

### Volume Control



Use the Dolphin keyboard to manually adjust the volume.

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

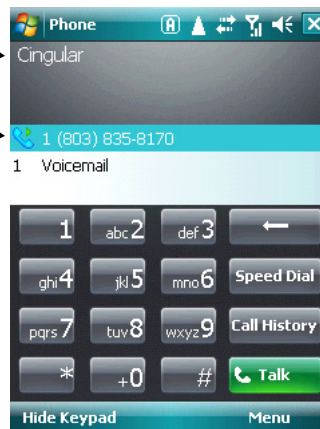
To lower the volume, press the Blue modifier key + down arrow.

### Accessing the Dialer Window

When the GSM radio is active, tap **Start > Settings > Connections** tab > **Dolphin Wireless Manager**, then tap **Menu > Phone Settings**. The Phone dialer opens.

Displays the network carrier from the SIM

Displays the most recent calls.



### 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 it's in numeric mode).

---

## Sending Calls

After the number is dialed, tap **Talk**  or use the keyboard.



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

## Ending Calls

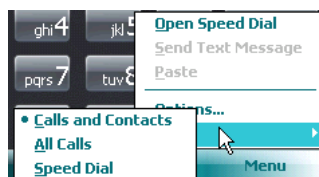
While the phone call is live, tap **End**  or use the physical keyboard.

## Keyboard Combinations for Calls

Keyboard	To Send a Call, Press...	To End a Call, Press...
43-key keyboard	Blue + NUM	Blue + ENT
56-key keyboard	Blue + SFT	Blue + ENT

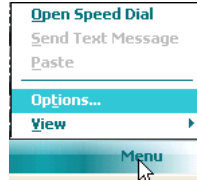
## View Options

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



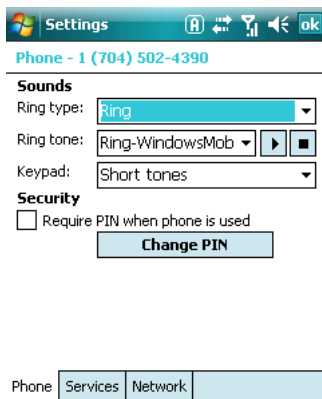
## Setup Options

Tap Menu > Options.



The Phone Settings tab windows appear.

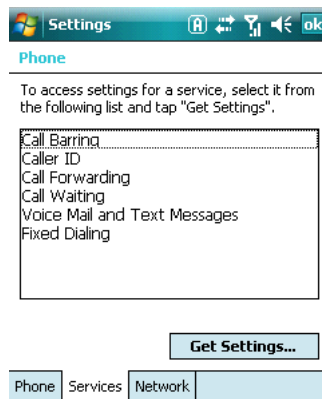
### Phone Tab



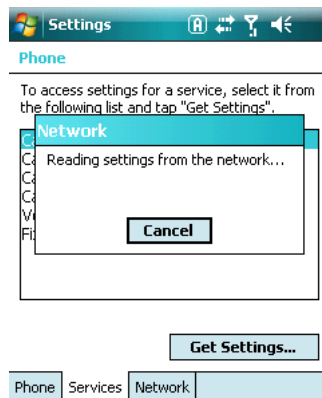
Establish or change a PIN on the Phone tab.



### Services Tab



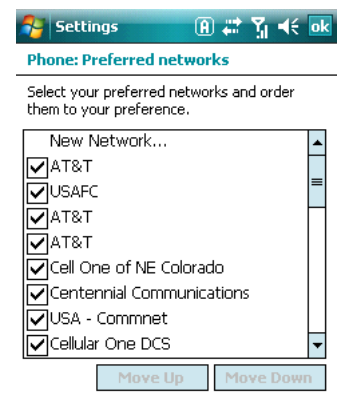
For each service, the phone will read settings from the network on the SIM and display the available options from the carrier.



### Network Tab



You can set networks on the Network tab.






---

## 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 GSM Radio](#) on page 8-3.
- You must have an active SIM card installed; see [SIM Card Installation](#) on page 8-2.
- The Phone must not be in use. The  in the navigation bar indicates that the GSM phone is active but the phone is not in use.

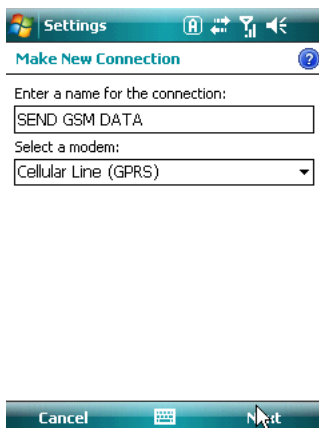
### Information Requirements

You must have from the SIM card carrier:

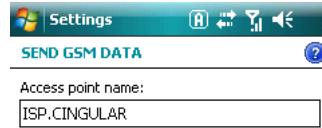
- The APN (access point name) number.
- The username and password of the account.

### Establishing Data Communication

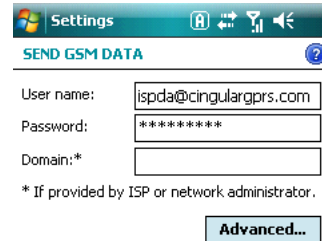
1. Tap **Start > Settings > Connection tab > Connections** 
2. Under My ISP, tap **Add a new modem connection**.
3. Enter a name for the connection, Select **Cellular Line (GPRS)** as the modem, and Tap **Next**.



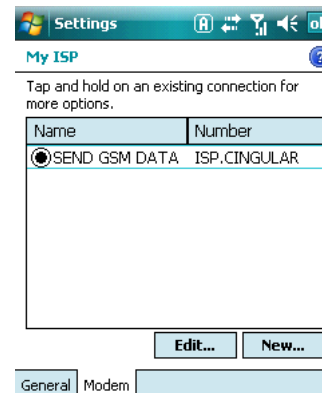
4. Enter the APN and tap **Next**.



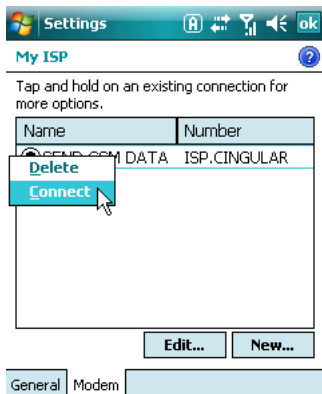
5. Enter the username and password from the account and tap **Finish**.





6. On the Connections window, tap **Manage existing connections**. The connection you just created should appear in the list on the modem tab.




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



8. The network icon in the navigation bar indicates the GSM radio is attempting to connect .
9. When the connection is complete, the network icon changes to: .
10. You can now send data over GSM.

### ***Ending the Data Connection***

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

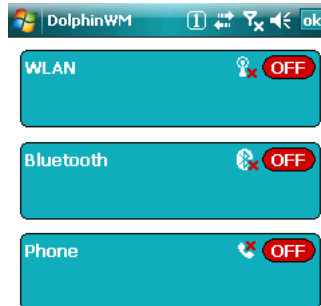
To end the data connection manually, tap the network icon in the navigation bar  and select **Disconnect** on the popup bubble.



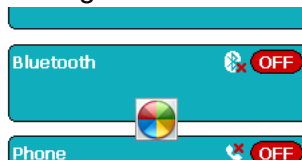
## Enabling the Bluetooth Radio

You enable the Bluetooth radio in the [Dolphin Wireless Manager](#) (see page 7-6).

1. Tap **Start** > **Settings** > **Connections** tab > **Dolphin Wireless Manager**  Dolphin Wirele...



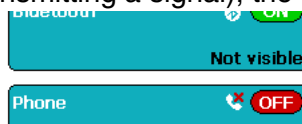
2. Tap anywhere inside the Bluetooth rectangle.



3. Tap **OK** and Bluetooth begins activating.



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



Now, the Bluetooth radio is transmitting a signal.

Now, you can connect to other transmitting Bluetooth devices (see page 9-2).

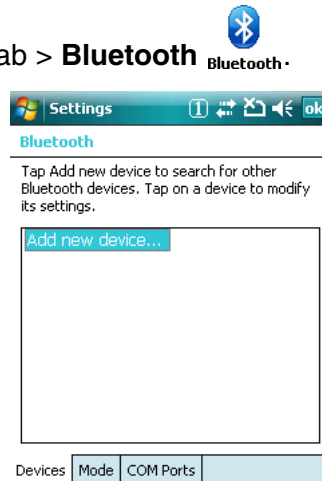
To make the terminal discoverable for other Bluetooth devices to find, you need to make the Bluetooth radio discoverable (see page 9-7).

---

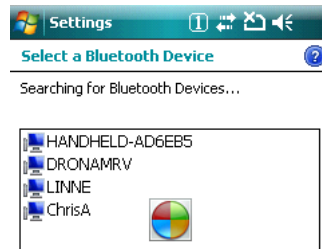
## Connecting to Other Bluetooth Devices

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

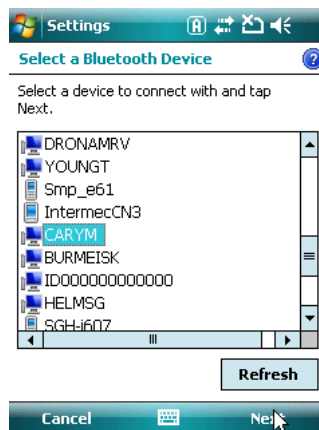
**Start > Settings > Connections tab > Bluetooth**



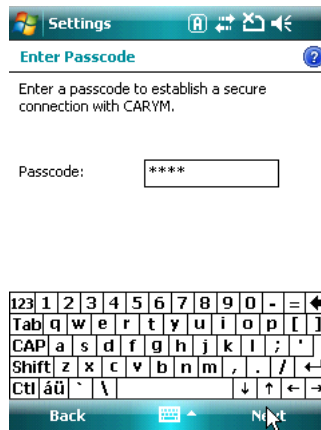
2. Tap **Add new device**. The terminal begins searching for discoverable Bluetooth devices.



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



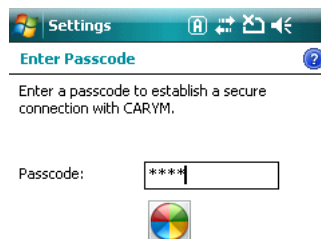
- You are prompted to enter a passcode.



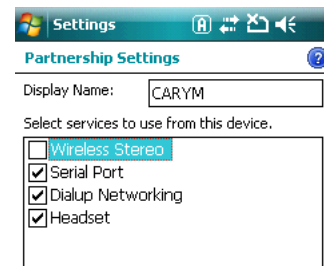
If the device you are attempting to connect to has a specific passcode, enter it in the Passcode field and tap **Next**.

If the device you are attempting to connect to does not have a specific passcode, enter one in the Passcode field and tap **Next**.

The Bluetooth radio tries to connect with the device.



- 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 connection. (If you entered a known passcode, you shouldn't have to do anything on the other device.)
- When the connection is complete, a list of matching and supported services on that device appears.



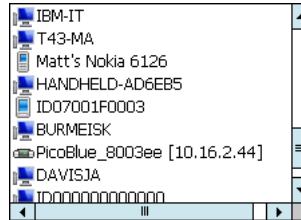
- 
7. Select the services you want to use and tap **Finish**. The device appears in the list on the main window.










## Types of Devices and Services

When you tap **Add new device** on the Devices tab, the Bluetooth radio scans for discoverable Bluetooth devices, which appear in a list.



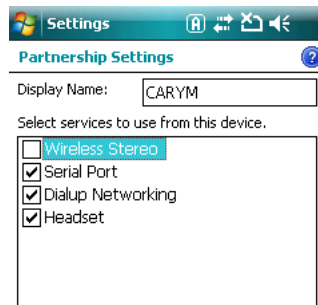
### Device Types

The different types of devices each have an icon.

Icon	Device Type
	?????????
	Desktop or laptop
	PDA-type device
	Bluetooth-compatible phone
	?????????????????

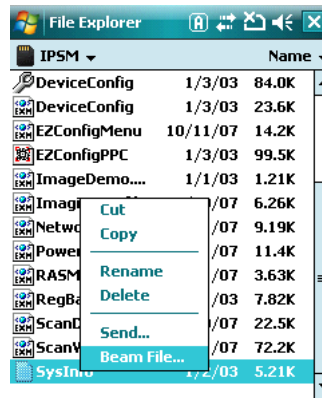
### Supported Services

The services that appear on the Partnership Settings window when Bluetooth tries to connect to another device are the services that are mutually supported on both devices.

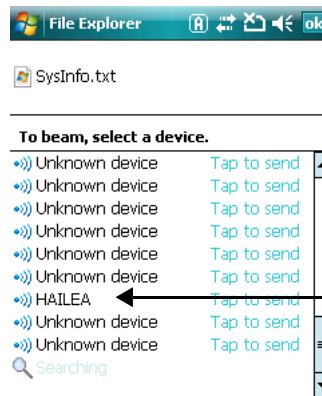



## Transferring Files Via Bluetooth

1. Tap **Start > Programs > 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.



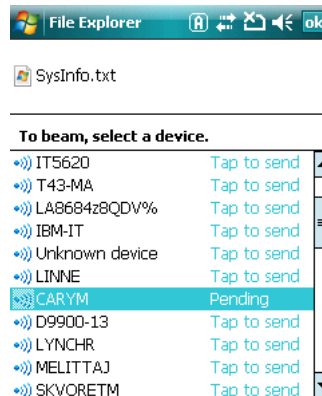
4. Bluetooth begins searching for devices.



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 device IDs appear in the list.

5. Tap the device to begin sending the selected file.



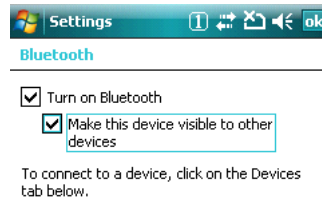
6. While trying to connect, the selected device reads “Pending.”
7. When the file is being transferred, the selected device reads “Sending.”

---

## ***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 the **Mode** tab.



Select **Make this device visible to other devices**.

DOES THE USER HAVE TO TAP OK?

DOES THE USER HAVE TO WARM BOOT?

## ***Connecting to Bluetooth Printers***

## ***Pairing with Bluetooth Devices???***

## ***Trusted and Untrusted Devices???***



## **Overview**

As the hub of your Dolphin system, the Dolphin HomeBase charging and communication cradle supports both RS-232 and USB communications, which make it able to interface with the majority of PC-based enterprise systems. When a terminal is seated in the HomeBase, its main battery pack charges in less than four hours.

## **Power**

The HomeBase completes a full charge of the main battery pack in less than four hours. The HomeBase 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 HomeBase through the RS-232 serial port. Using the full-speed USB port, the data transmission rate goes up to 12 Mbps. HomeBases cannot be physically connected to each other - sometimes referred to as “daisy-chained” - but can be networked together via a serial or USB hub.

## **Convenient Storage**

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

## **Capacity**

The Dolphin HomeBase 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 HomeBase can charge two battery packs: the one installed in the terminal and a spare.



*Use only Dolphin 9900 peripherals, power cables, and power adapters. Use of peripherals, cables, or power adapters not sold/manufactured by Hand Held Products will void the warranty and may damage the terminal.*

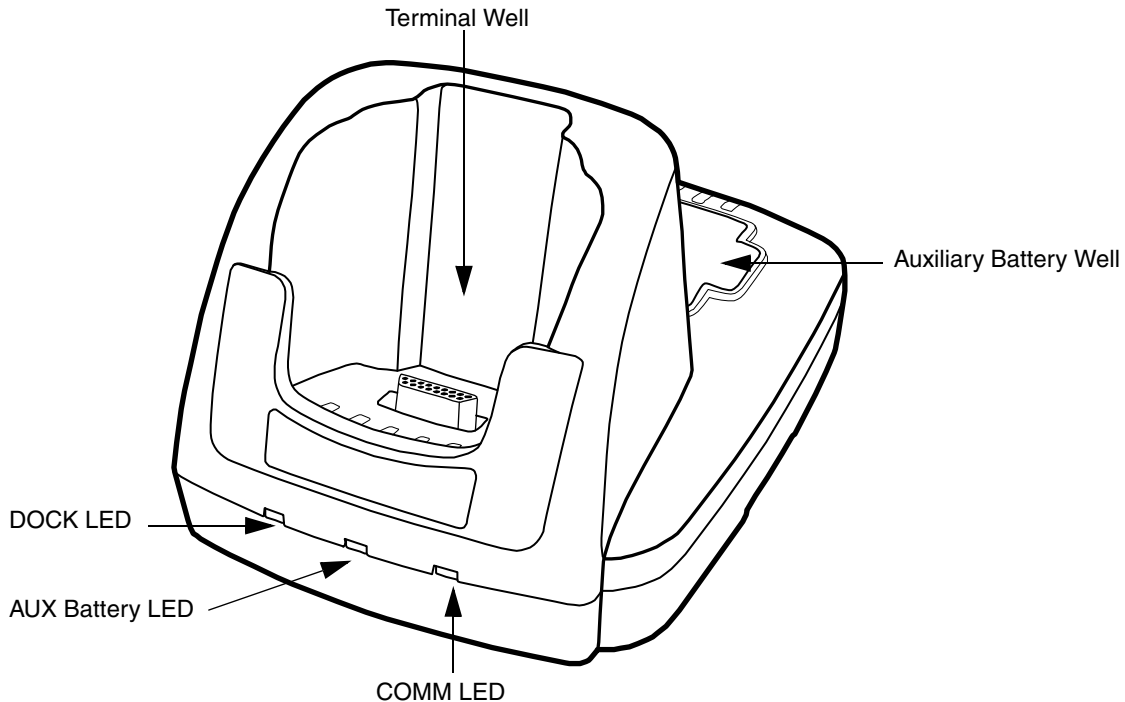


*Use only the Li-ion battery packs provided by Hand Held Products. Use of any battery not sold/manufactured by Hand Held Products may damage the terminal and/or the battery, may pose a personal hazard to the user, and will void the warranty.*

---

## Dolphin HomeBase Parts and Functions

### Front Panel



#### Terminal Well

Place the Dolphin terminal in this well to communicate with a host device, power the terminal, and charge its battery pack. If the host device is a desktop computer that uses ActiveSync, synchronization begins immediately. While seated in the terminal well, the main battery installed in the terminal charges. The HomeBase completely charges a battery pack in less than four hours.

#### Auxiliary Battery Well

See [Auxiliary Battery Well](#) on page 10-3.

#### DOCK LED

Turns solid green when the Dolphin terminal is properly seated in the Dolphin HomeBase. When this light is on, the terminal is connected to the base.

#### AUX Battery LED

Indicates status of the battery charging in the auxiliary battery well; see [Back Panel](#) on page 10-3.

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

<b>Orange</b>	The auxiliary battery is charging.
---------------	------------------------------------

<b>Green</b>	The auxiliary battery has completed charging and is ready for use.
--------------	--

For information about charging a battery in the auxiliary battery well, see page 10-6.

---

## 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 HomeBase 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 Dolphin HomeBase.

**Green**           Serial data is being sent from the HomeBase device to the Host Device.

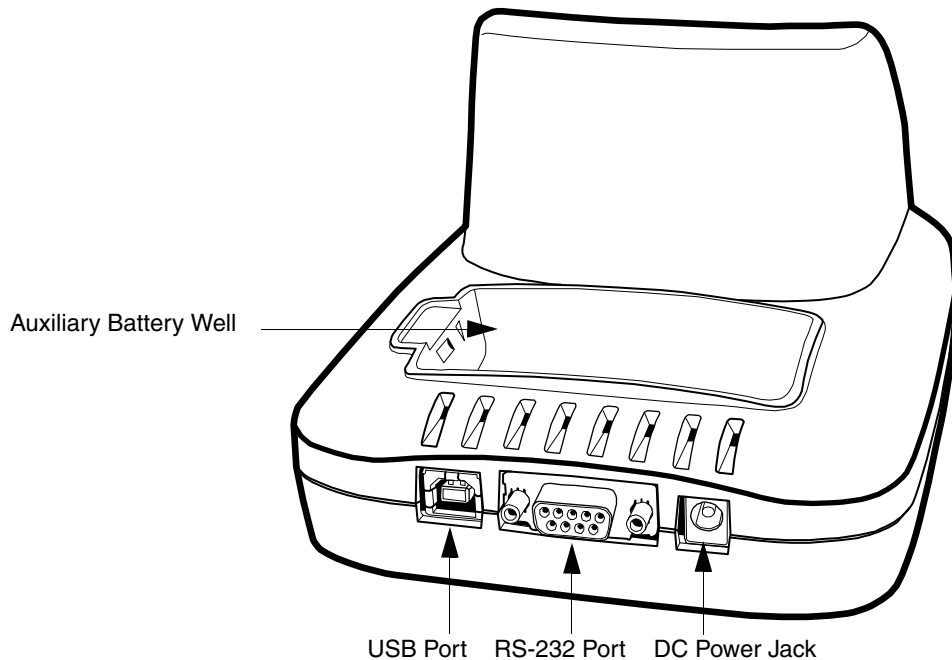
**Orange**          Serial data is being sent at high data rates.

### If using the USB port

**This color**      **means...**

**Green LED**      A USB Connection is established with the host computer.

## Back Panel



## Auxiliary Battery Well

The HomeBase enables you to charge an additional Li-ion battery pack independently of the terminal well. This feature ensures that you can always have a fully-charged battery for your Dolphin terminal. See [Charging a Spare Battery in the Auxiliary Battery Well](#) on page 10-6.

---

## USB Port

This USB Port is full-speed and 2.0 compliant. Using a USB cable, you can connect the HomeBase to a peripheral device, such as a desktop computer or printer. When the Dolphin terminal is seated in the terminal well, it is connected to the peripheral device via the HomeBase. The USB port on the HomeBase requires that you use ActiveSync 4.1 or higher.

## RS-232 Port

Use a 9-pin, RS-232 cable from Honeywell to connect this port to a peripheral device for RS-232 data communication. For more information, see [HomeBase Serial Connector](#) on page 10-5.

## DC Power Jack

Use a power cable from Honeywell to supply power to this power jack. For more information, see [Powering the HomeBase](#) on page 10-4.

## ***Powering the HomeBase***

The terminal requires 9.5 Volts DC input for communications and battery charging; the Honeywell power cable contains a power adapter that converts the power source voltage accordingly. **Only** the power adapter cable from Honeywell converts the voltage appropriately.

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

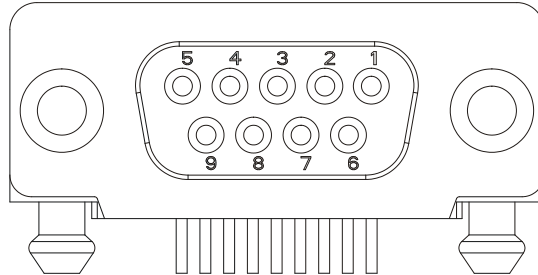
1. Connect the Honeywell power cable to the DC jack on the rear panel of the HomeBase.
2. Connect the Honeywell power cable to the power adapter.
3. Plug the power adapter cable into the power source. The HomeBase is now powered.



---

## HomeBase Serial Connector

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



<u>Pin #</u>	<u>Description</u>
1	Internal Jumper to Pin 6
2	TXD
3	RXD
4	DSR
5	GND
6	DTR
7	CTS
8	RTS
9	RI

*Note: Signals referenced are for a DTE device. The HomeBase is at a right-angle to the printed circuit board (PCB). The ninth pin has a ring indicator (RI).*

---

## ***Charging the Main Battery***

The Dolphin HomeBase powers the terminal and fully charges its main battery pack in less than four hours.

The HomeBase 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, Dolphin terminals may be stored in the HomeBase without damage to the terminals, battery packs, or peripherals.

To check battery power, use the Power system setting; see [Power](#) on page 6-11.  
For more information about Honeywell Li-ion batteries, see [Batteries](#) on page 3-15.

### ***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 2-2.
1. Connect the HomeBase to the power supply provided by Honeywell.
2. Slide the terminal into the terminal well until the Dock LED lights green to indicate that the terminal is properly seated.
3. The battery pack begins charging.

### ***Charging a Spare Battery in the Auxiliary Battery Well***

The auxiliary battery well located on the back of the HomeBase 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 less than four hours; see [Auxiliary Battery Well](#) on page 10-3.

1. Insert the end of the battery without the locking tab into the bottom of the auxiliary well opening.
2. Snap the battery into place with a hinging motion. The Aux Battery LED lights orange.
3. Use the AUX Battery LED to monitor charging progress.

---

## **Communications**

### **USB**

Dolphin terminals support USB communications out of the box.

The HomeBase also supports USB communications via the USB port located on the back. The HomeBase 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 HomeBase's USB interface allows the Dolphin terminal to communicate with a personal computer or to be networked through a USB hub.

### **RS-232**

The HomeBase supports RS-232 communications via the RS-232 Communications Port located on the back of the device. This port enables the Dolphin terminal to communicate to a workstation, modem, or any RS-232 device using a standard serial cable and communications software.

*Note: The HomeBase should have only one type of interface cable connected at a time, either USB or RS-232.*

### **Requirements**

To use the HomeBase for communications, you need the following equipment:

- A HomeBase powered by a power cable and power adapter cable from Honeywell
- For RS-232 communications, a serial cable
- For USB communications, a USB cable
- ActiveSync v4.5 or above on the host workstation
- Windows® 98 Second Edition\*, Windows® Me, Windows® 2000, or Windows® XP on the host workstation.

*Note: The HomeBase does not support Windows NT® when using a USB connection because Windows NT does not support USB. Windows® 98 second edition provides full USB support.*

### **To Install the HomeBase for Communication**

*Note: You must be using ActiveSync 4.5 or higher.*

1. Plug in the power supply and connect it to the back of the HomeBase.
2. Plug the USB or the RS-232 communication cable into the back of the HomeBase.
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 with the HomeBase**

USB or RS-232 communication with the terminal is usually auto-detected and configured by ActiveSync based on the communication cable. If you are using a USB cable to connect to the workstation, ActiveSync will usually set up a USB connection. If you are using an RS-232 cable, ActiveSync will usually set up an RS-232 connection.

For more details, see [ActiveSync Communication](#) on page 3-10.

---

## ***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 HomeBase.
  - 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.
  - If the HomeBase is connected to the workstation, the Dolphin terminal automatically opens ActiveSync to establish a connection.
2. The HomeBase 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 HomeBase. When the COMM LED illuminates solid green, the HomeBase is communicating with the host device.

### ***Verifying Data Transfer***

The COMM LED flashes when data is being transferred via the HomeBase. For an RS-232 connection, the COMM LED flashes red and green. For a USB connection, the COMM LED flashes green.

---

## **RS-232 Communications Cables**

Connect the HomeBase to the host computer or other device by plugging an RS-232 serial cable into the RS-232 Communications Port on the rear of the HomeBase. 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 HomeBase 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 RS-232 cable, or a null-modem serial cable. To communicate with a DTE device such as a computer, use a standard (or straight-through) RS-232 cable.

You can make your own cables by following the pin configuration in the chart below. To do so, you must determine if your host RS-232 device is 9-pin or 25-pin, and whether it is configured as a DCE or DTE device.

### **RS-232 Pin Configuration**

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

*Note: The Dolphin HomeBase device cannot be daisy-chained.*

---

## **Mounting the HomeBase**

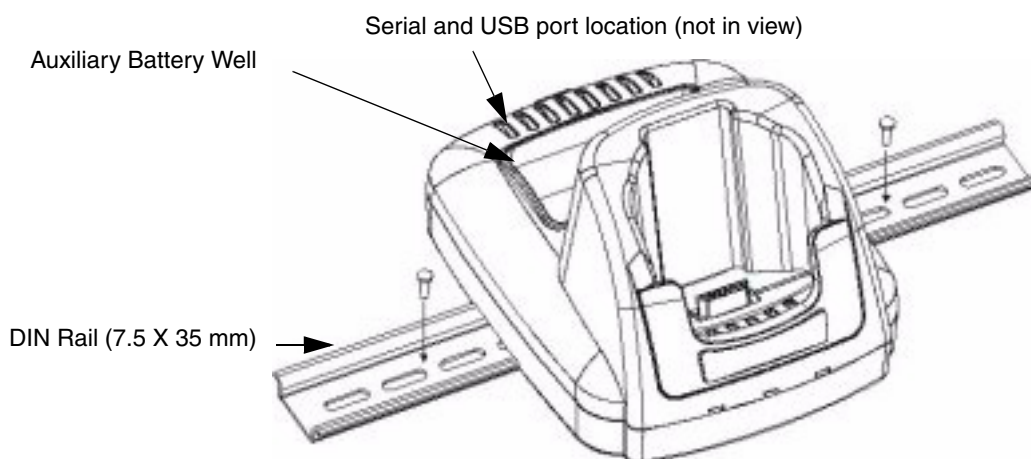
Set the Dolphin HomeBase on a dry, stable surface, such as a desktop or workbench near an electrical outlet. Be sure to provide enough workspace with good lighting for the user to view and operate the Dolphin terminal while it is in the HomeBase.

When choosing a location, bear in mind that:

- the mounting location must allow users easy access to the Auxiliary Battery Well, and
- the serial 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.

### **Desk Mounting**

Dolphin charging/communication cradles have a DIN rail (7.5 X 35 mm) slot on the bottom to allow for secure desk attachment of the unit if desired.



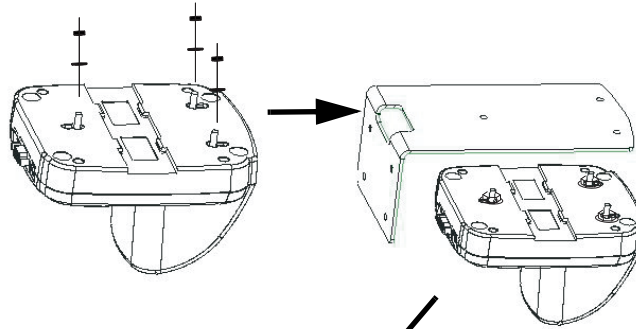
To mount the HomeBase, you slide the DIN rail slot along the bottom panel and secure it. Then, using the appropriate nuts and bolts, secure the DIN rail to the desk or flat surface.

## Wall Mounting

You can purchase a wall mount kit that contains

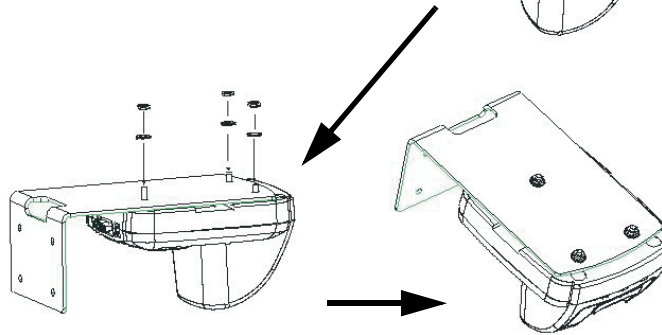
- a mounting bracket,
- three screws, and
- six washer/nut sets.

1. Insert a screw into the round end of each screw slot on the bottom panel. Slide each screw towards the narrow end of the slot. Then, use a washer/nut set on each screw to secure the screw in the slot.



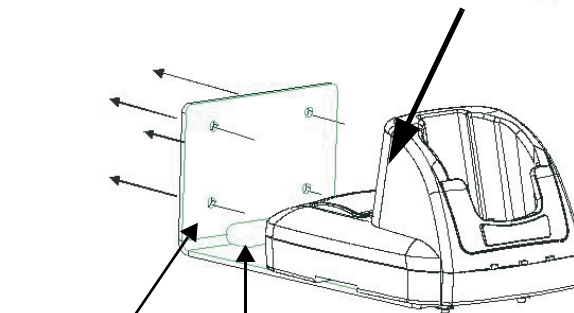
2. Attach the bottom panel to the mounting bracket; match the holes to the secured screws.

3. Use the remaining washer/nut sets to secure the mounting brackets to the bottom panel.



4. Turn the secured device right side up.

5. Secure the back wedge of the mounting brackets to a stable vertical surface.



Back wedge    Open slot for cords

The back wedge of the mounting bracket contains an open slot for the power and communications cables. There is an extra space between this slot and the rear panel of the HomeBase to allow easy access to the power and communications ports. For more details on both ports, see [Back Panel](#) on page 10-3.





## **Overview**

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

When a terminal is seated in the Mobile Base, its main battery pack charges in less than four hours. The serial connector supports RS-232 communication and power out to peripheral devices, such as hand held scanners.

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

## **Charging**

The Dolphin Mobile Base completes a full charge of the main battery pack in less than four hours. The Mobile 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**

The Mobile Base transmits data to other devices at speeds of up to 115K baud via its RS-232 serial port.

## **Convenient Storage**

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

## **Capacity**

The Mobile Base holds one terminal.



*Use only Dolphin 9900 Series peripherals, power cables, and power adapters. Use of peripherals, cables, or power adapters not sold/manufactured by Hand Held Products will void the warranty and may damage the terminal.*



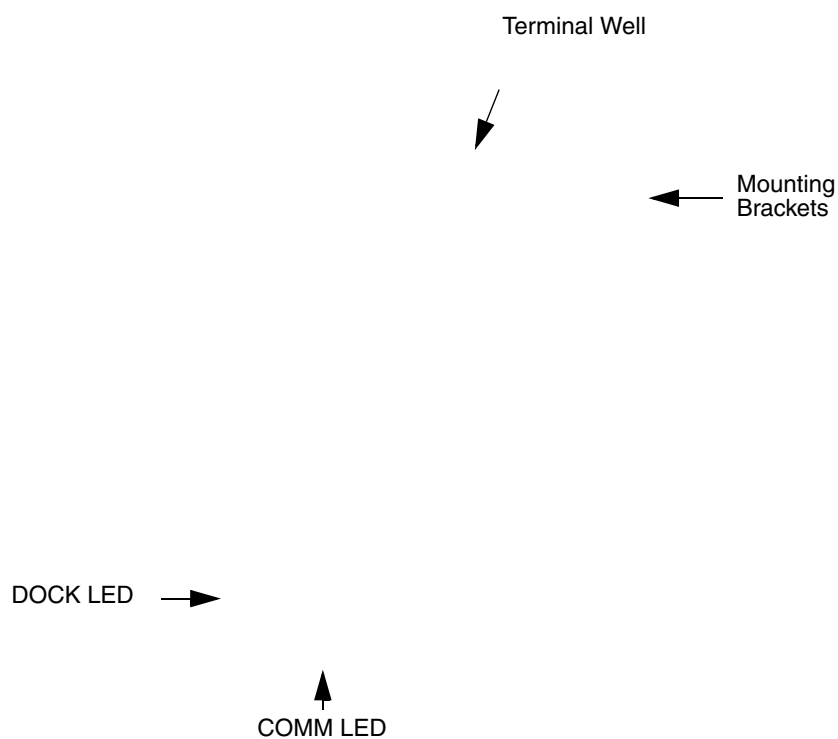
*Use only the Li-ion battery packs provided by Hand Held Products. Use of any battery not sold/manufactured by Hand Held Products may damage the terminal and/or the battery, may pose a personal hazard to the user, and will void the warranty.*

---

## Mobile Base Parts and Functions

### Front Panel

The front panel of the Mobile Base has one slot. The following graphic features the Mobile Base with the terminal inserted into the terminal well.



**Terminal Well** Place the terminal in this well to communicate with a host device and charge the main battery pack.

#### Mounting Brackets

Use these to mount the Mobile Base to a fixed location.

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

**COMM LED** Indicates the status of data transfer between the host device and the Dolphin terminal

#### COMM LED color Indicates that...

**Red** Data is being sent from the Host Device to the Dolphin Mobile Base.

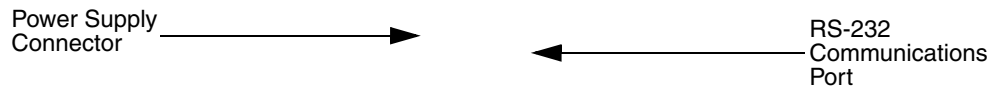
**Green** Data is being sent from the Dolphin Mobile Base to the Host Device.

**Orange** Data is being sent at high data rates.

---

## Bottom Panel


The power supply and RS-232 connectors are located on the bottom of the unit.



### Power Supply Connector

Use this connector to attach a Honeywell power cable to the Dolphin Mobile Base. The Mobile Base can be powered by an external DC power source of between 11 VDC to 48 VDC.

To run on vehicle power, you can use the 12 VDC cable or 24 VDC cable option. The appropriate cable comes with the kit you ordered. The 12 VDC cable can be used with a cigarette lighter outlet. The 24 VDC, pigtail cable can be used to “hard-wire” into the vehicle power bus.

 *Verify that the power source is always within the specified range and observe correct input voltage polarity. An improper input voltage range (above the 48 VDC maximum) or reverse polarity could damage the power conversion circuitry.*

### RS-232 Communications Port

Use a standard serial cable to connect the unit to a host device via RS-232; see [Mobile Base Serial Connector](#) on page 11-8.

---

## ***Powering the Dolphin Terminal***

When seated in a Mobile 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 Mobile Base plugged into the power source so that the Dolphin terminal battery pack stays fully charged.

For more information about powering the Mobile Base, see [Powering the Dolphin Mobile Base](#) on page 11-6.

## ***Charging the Dolphin Terminal***

The Mobile 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 Mobile Base without damage to the terminal, the battery pack, or the Mobile Base.

To charge a Dolphin terminal, complete these steps:

1. Insert a battery pack into the Dolphin terminal.
2. Slide the terminal, imager window up and the LCD visible, into the terminal well of the Mobile Base until it stops.
3. When the Dolphin terminal is properly seated, the DOCK LED on the Mobile Base illuminates solid green. The terminal begins charging automatically.

---

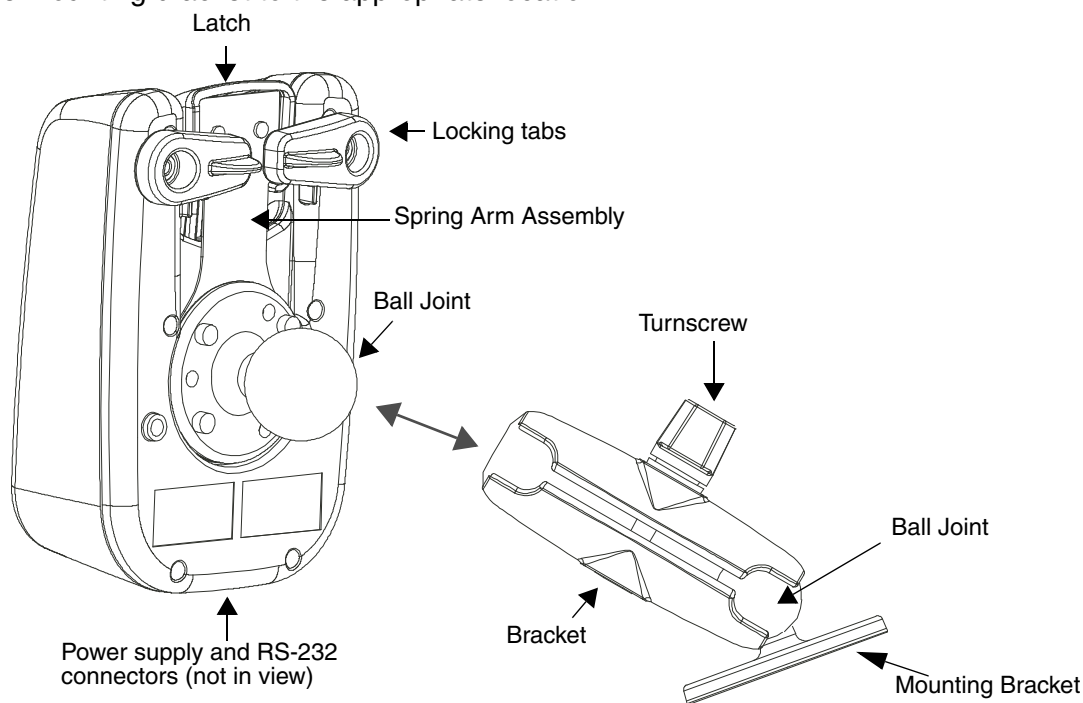
## **Installing the Dolphin Mobile Base**

To install the Dolphin Mobile Base, you need to mount it securely to an appropriate location and supply it with power.

### **Mounting the Mobile Base**

The adjustable mounting bracket holds the terminal securely in place and gives the user a variety of options for mounting the Mobile Base. When selecting a location, keep in mind that the power supply and serial connectors point straight out the bottom panel.

1. Loosen the turnscrew.
2. Insert the ball joint of the mounting bracket to the back of the bracket.
3. Insert the ball joint on the back of the Mobile Base into the other side of the bracket.
4. Tighten the turnscrew to secure both ball joints.
5. Secure the mounting bracket to the appropriate location.



### **Back Panel**

#### **Latch**

The latch sits on top of the spring arm assembly and holds the back of the terminal securely in place. The graphic above displays the mounting of a Dolphin 9900 terminal. There is another Dolphin Mobile Base that contains a special latch to accommodate the pistol-grip handle on the Dolphin 9550.

---

## Locking Tabs

When positioned as shown in the above graphic, the locking tabs secure the spring arm assembly, latch, and terminal in place. When seating a terminal, turn both arms up to allow the spring arm to move as necessary while the terminal is being inserted. After the terminal is seated, turn both arms toward the center to lock them.

Both locking tabs must be pointing up to insert or remove a terminal in the Mobile Base.

## Spring Arm Assembly

The spring arm assembly is the column that connects the latch to the back of the Mobile Base.

## Ball Joints

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

## Connectors

The power and RS-232 connectors are located on the bottom panel. For more information, see [Bottom Panel](#) on page 11-3.

## Brackets

### 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 Mobile Base to the mounting surface.

## Powering the Dolphin Mobile Base

*Note: Honeywell recommends that you leave the Mobile Base connected to its power source at all times.*

The Mobile Base is powered via the power connector on the bottom panel; see [Bottom Panel](#) on page 11-3. Both the power and serial connectors are straight out, not at an angle. The Mobile Base must be powered by a 12 to 48 volt DC source.

---

## ***Establishing Communication with the Mobile Base***

The Mobile Base RS-232 interface allows the Dolphin terminal to communicate to a personal computer, modem, or any standard RS-232 device using a standard serial cable and communications software.

### ***Requirements***

To use the HomeBase for communications, you need the following equipment:

- A Mobile Base powered by a power cable and power adapter cable from Honeywell
- The RS-232 communications cable
- ActiveSync v4.1 or above on the host workstation
- Windows® 98 Second Edition\*, Windows® Me, Windows® 2000, or Windows® XP on the host workstation

### ***To Install the Mobile Base for Communication***

*Note: You must be using ActiveSync 4.5 or higher.*

1. Plug in the power supply and connect it to the back of the Mobile Base.
2. Plug the RS-232 communication cable into the back of the Mobile 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 ActiveSync Communication with the Mobile Base***

The Dolphin terminal is usually auto-detected and configured by ActiveSync based on the communication cable. If you are using an RS-232 cable, ActiveSync will usually set up an RS-232 connection.

For more details, see [ActiveSync Communication](#) on page 3-10.

### ***Connecting the Cables***

Connect the Mobile Base to the host computer or other device by plugging an RS-232 serial cable into the RS-232 Communications Port on the bottom of the Mobile Base. Plug the other end of the RS-232 serial cable into the correct port on the host RS-232 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 Mobile Base Communication Port is configured as a DCE device. To communicate with a DTE device such as a computer, use a standard (or straight-through) RS-232 cable. To communicate with a DCE device, use either a null modem adapter in line with a standard RS-232 cable, or a null-modem serial cable.

---

## **RS-232 Pin Configuration**

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

Refer to this table if you want to make your own cables. To do so, you must determine if your host RS-232 device is

- 9-pin or 25-pin and
- configured as a DCE or DTE device.

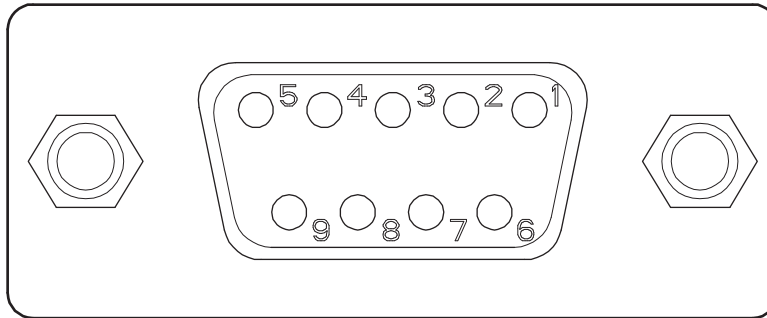
### **Mobile Base Serial Connector**

The Mobile Base connector is straight to the printed circuit board (PCB). The ninth pin sends 500mA at 5V power out. This can power a peripheral device, such as a mobile printer, as long as that peripheral device can accept 500mA at 5V.



---

The following diagram displays the pin diagram of the serial connector of the bottom panel of the Mobile Base.



<u>Pin #</u>	<u>Description</u>
1	Internal Jumper to Pin 6
2	TXD
3	RXD
4	DSR
5	GND
6	DTR
7	CTS
8	RTS
9	5 VOLT OUT

*Note: Signals referenced are for a DTE device.*



## **Overview**

The Dolphin ChargeBase is a four-slot charging cradle that can power four Dolphin terminals, and charge their main batteries in less than four hours.

## **Charging**

The Dolphin ChargeBase completes a full charge of the main battery pack in less than four hours. The ChargeBase 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. As battery packs charge, the charging circuitry follows the two-step charging process (CC-CV) that is recommended for Li-Ion batteries. The process monitors changes in temperature, current, and voltage.

## **Convenient Storage**

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

## **Capacity**

The ChargeBase can hold up to four Dolphin terminals. Each charging slot charges each terminal independently of the other slots.



*Use only Dolphin 9900 Series peripherals, power cables, and power adapters. Use of peripherals, cables, or power adapters not sold/manufactured by Hand Held Products will void the warranty and may damage the terminal.*

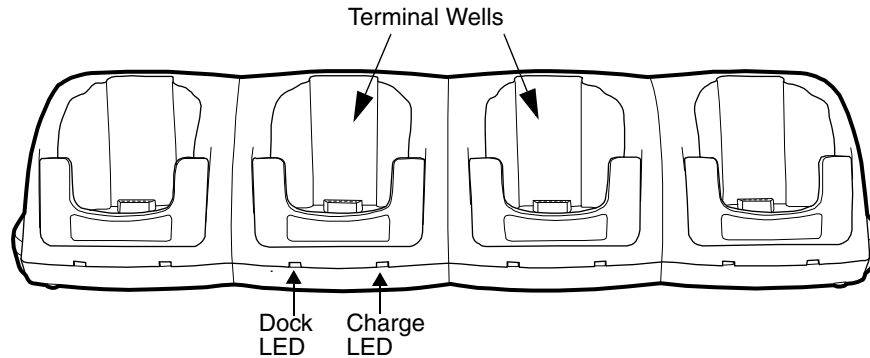


*Use only the Li-ion battery packs provided by Hand Held Products. Use of any battery not sold/manufactured by Hand Held Products may damage the terminal and/or the battery, may pose a personal hazard to the user, and will void the warranty.*

---

## Dolphin ChargeBase Parts and Functions

### Front Panel



### Terminal Wells

The ChargeBase contains four terminals wells. Each well

- Holds and charges the main battery pack of one Dolphin terminal.
- Contains the companion to the I/O connector on the bottom panel of Dolphin terminals.
- Has two LEDs on the front: the Dock LED and the Charge LED.

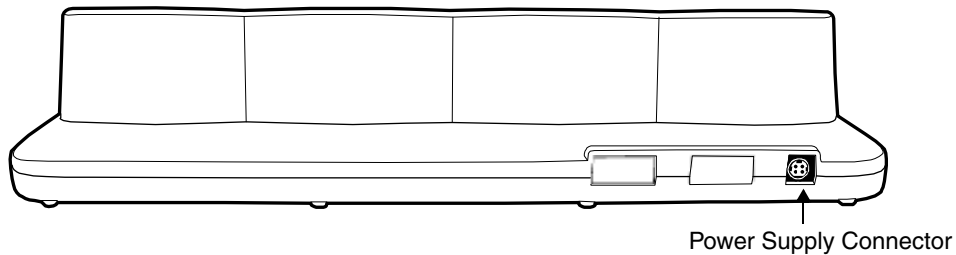
### Dock LED

Each terminal well displays a Dock LED on the front that lights solid green when a terminal is properly seated, which means that the terminal and the base are connected.

### Charge LEDs

Each terminal well displays a Charge LED on the front that lights green to indicate charging. For details, see [Charging Terminals in the ChargeBase](#) on page 12-5.

### Back Panel



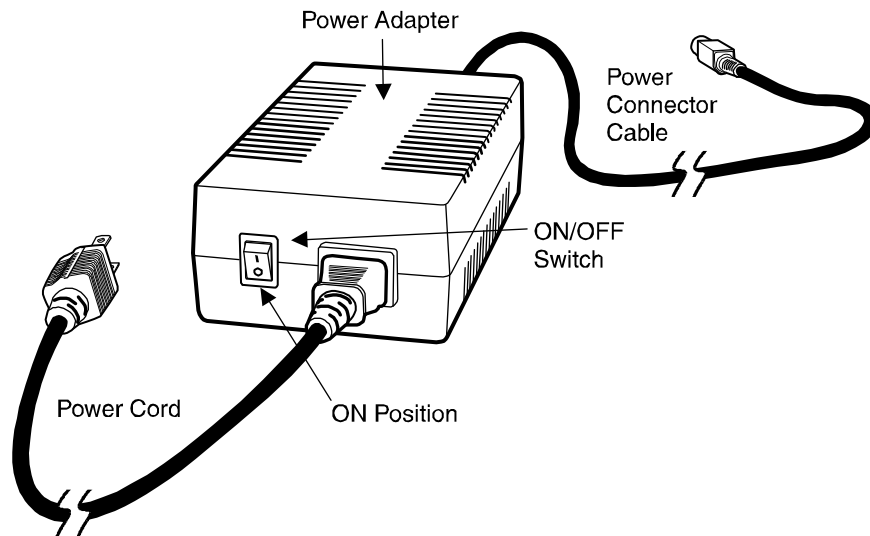
### Power Supply Connector

This connector receives input from the power adapter. Plug the power connector cable from the power adapter into this connector. There is no ON/OFF switch on the back panel of the ChargeBase. The power switch is on the power adapter.

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## **Power Supply**

The ChargeBase includes a power supply that contains a power adapter to ensure the proper voltage. The power adapter is plugged into standard AC/DC outlets.



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## Supplying Power to the ChargeBase

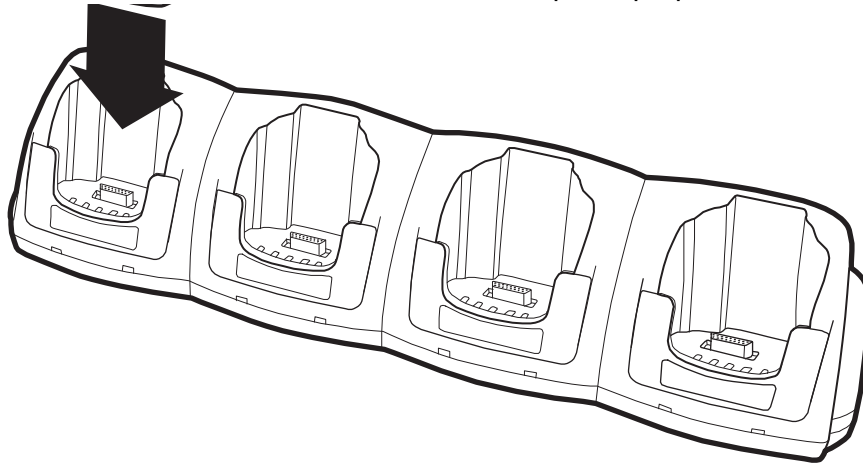


*Using a non-Hand Held Products power adapter voids your warranty and could result in serious damage to the circuitry of the Dolphin ChargeBase.*

1. Be sure the power switch on the power adapter is in the OFF position.
2. Plug the power cord into the power adapter.
3. Plug the power connector cable into the power connector on the back panel of the ChargeBase.
4. Plug the power cord into a standard wall outlet.
5. On the power adapter, turn the power switch to the ON position. The LEDs illuminate as the ChargeBase powers up.
6. The ChargeBase is ready to begin charging terminals.

## Inserting and Removing Terminals

1. To insert the terminal, hold the terminal with the bottom panel perpendicular to the base.



2. Slide the terminal into the well until the Dock LED lights solid green.
3. Charging begins immediately.

*Note: To remove a terminal, grasp it firmly in your hand and lift it up and out of the terminal well. The LEDs for the terminal well turns off.*

---

## Charging Terminals in the ChargeBase

The Dolphin ChargeBase charges the main battery of each terminal in less than four hours. The ChargeBase uses the intelligent battery charging system incorporated into all Dolphin terminals that prevents overcharging. This means that Dolphin terminals may be stored in the ChargeBase indefinitely without damage to the terminals, battery packs, or the ChargeBase.

1. Power the ChargeBase; see [Supplying Power to the ChargeBase](#) on page 12-4.
2. Insert a terminal into a terminal well; see [Inserting and Removing Terminals](#) on page 12-4.
3. The Charge LED lights green to indicate that the terminal is powered and charging.

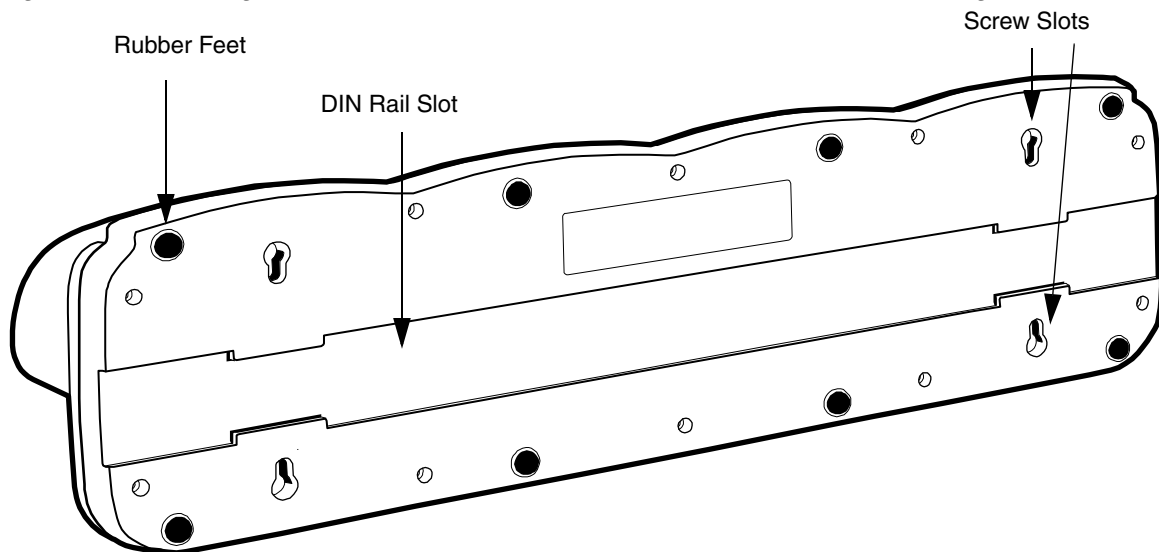
## Mounting the ChargeBase

The Dolphin ChargeBase 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 ChargeBase should be oriented so that users can easily read the labels.

### Bottom Panel

The bottom panel of the Dolphin ChargeBase offers two mounting options: insert a DIN Rail for desk mounting or use mounting brackets with the available screw slots for wall mounting.

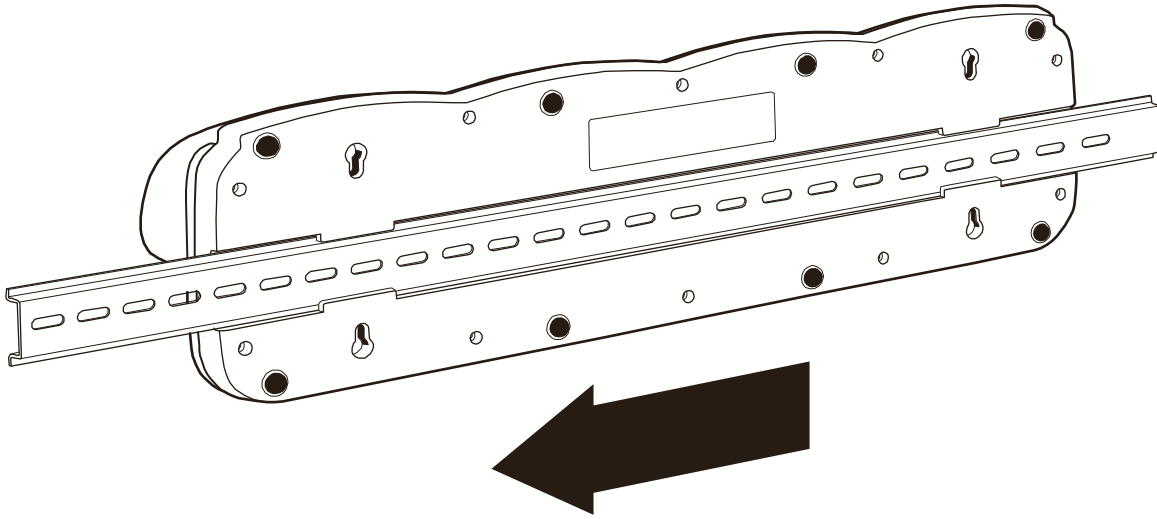


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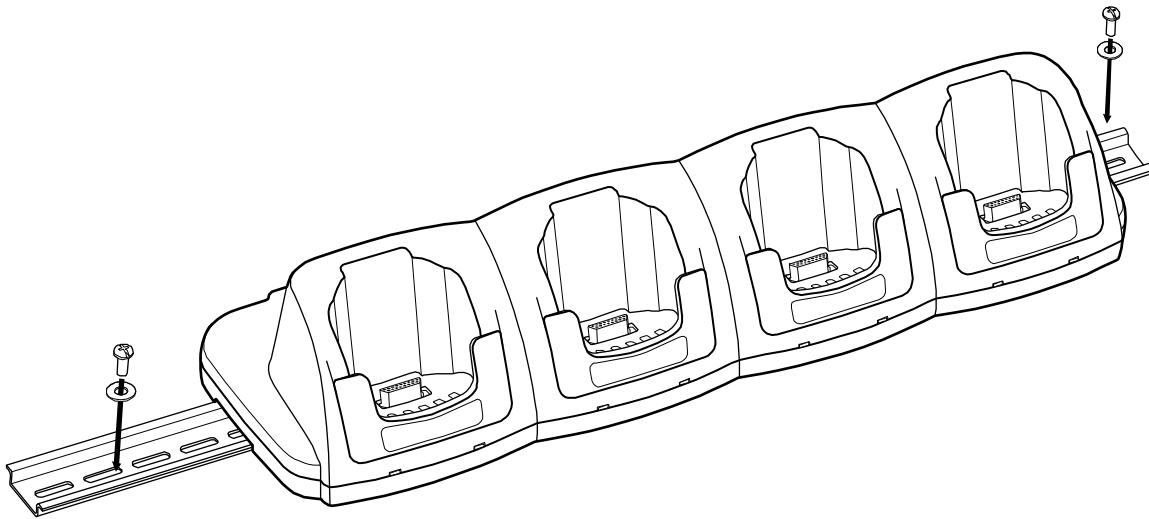
## **Using the DIN Rail**

All Dolphin charging/communication cradles have a DIN rail (7.5 X 35 mm) slot on the bottom panel to enable secure mounting.

1. Slide the DIN Rail into the DIN Rail slot on the bottom panel.



2. Turn the ChargeBase and DIN Rail right side up.
3. Secure the DIN Rail to a stable, flat horizontal surface.



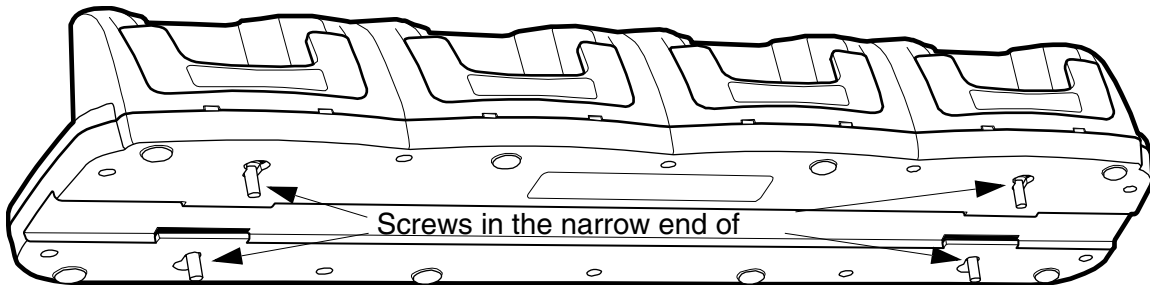


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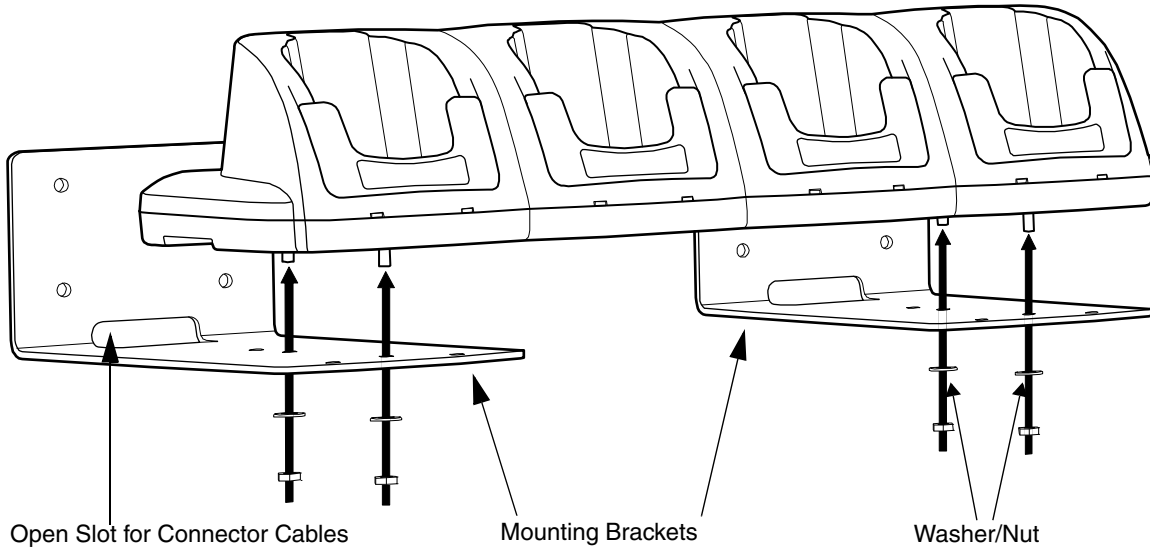
## Using the Wall Mount Kit

Wall mount kits can be purchased separately to secure the ChargeBase to a wall or other vertical surface. For the ChargeBase, you need to purchase two kits so that you have two mounting brackets, one for each end of the ChargeBase. Each mounting bracket contains an open slot in the back to accommodate the connector cables.

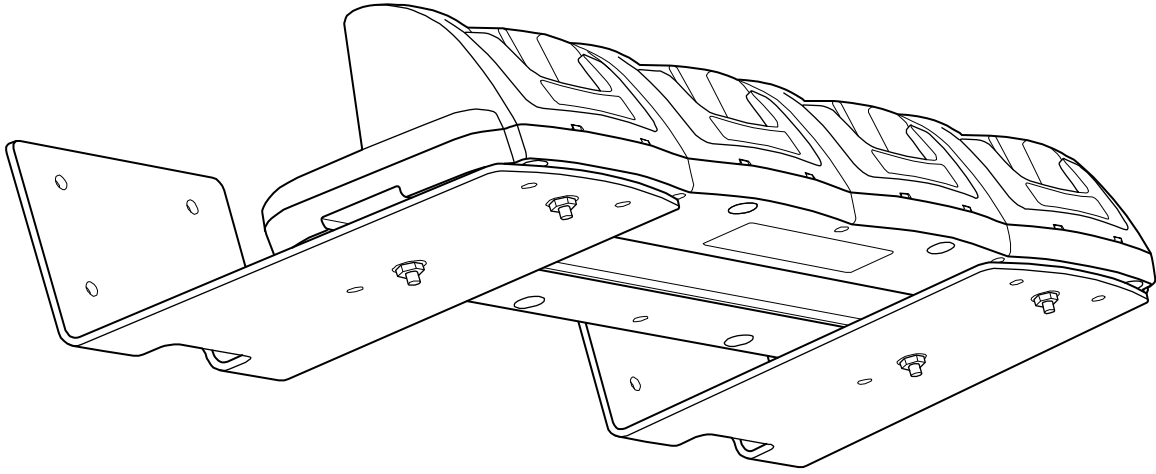
1. Insert the head of each screw into the round end of each of the four screw slots on the bottom panel. Slide each screw towards the narrow end of the screw slot.



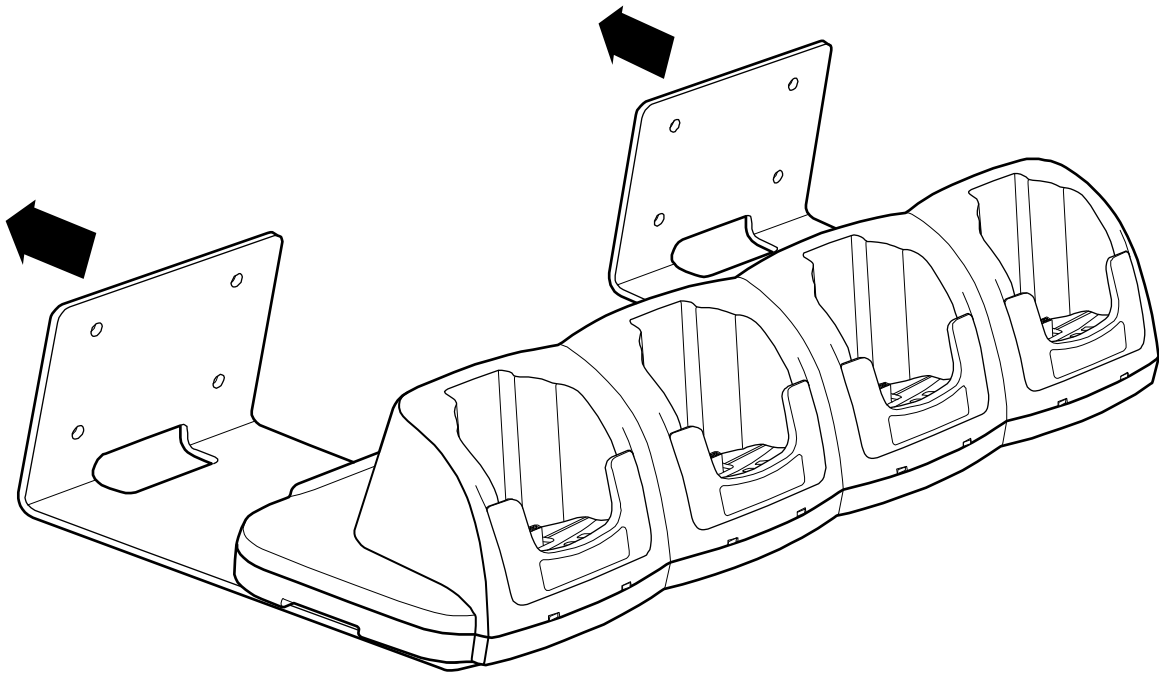
2. Use a washer/nut set on each screw to secure the screw in each slot.
3. Attach the bottom panel to the two mounting brackets.



- 
4. Using the remaining washer and nut sets, secure the mounting brackets to the bottom panel.



5. Secure the mounting brackets to an appropriate vertical surface.



## **Overview**

The Dolphin QuadCharger is a four-slot charging station that provides intelligent battery management for the Li-ion battery packs used in Dolphin terminals. Batteries charge in less than four hours. The fourth slot features a battery analyzer that completely resets a battery, then displays its remaining capacity.

## **Compatibility**

The QuadCharger is compatible with the Li-ion batteries that power the Dolphin terminals.

## **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 batteries. The process monitors changes in temperature, current, and voltage and resets the battery pack.

## **Capacity**

The Dolphin QuadCharger holds four Li-ion batteries.



*Use only Dolphin 9900 peripherals, power cables, and power adapters. Use of peripherals, cables, or power adapters not sold/manufactured by Hand Held Products will void the warranty and may damage the terminal.*

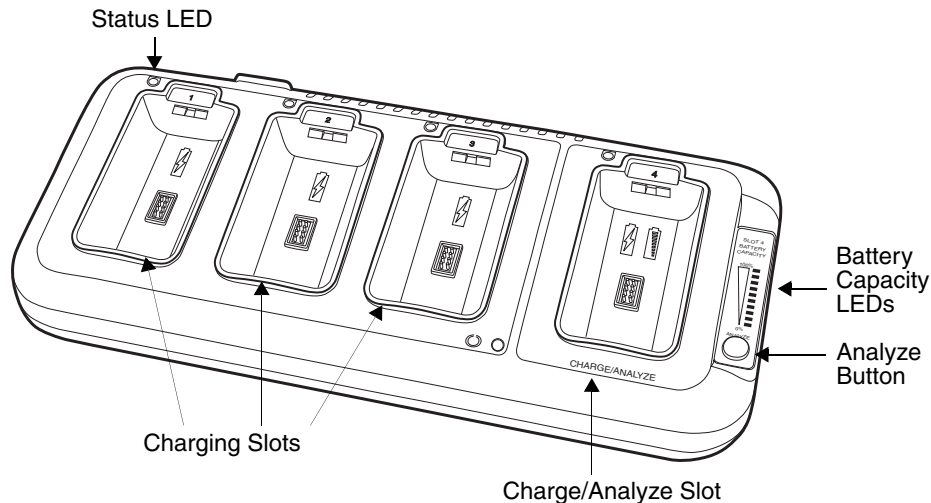


*Use only the Li-ion battery packs provided by Hand Held Products. Use of any battery not sold/manufactured by Hand Held Products may damage the terminal and/or the battery, may pose a personal hazard to the user, and will void the warranty.*

---

## Dolphin QuadCharger Parts and Functions

### Top Panel



### Charging Slots

The QuadCharger contains four charging slots. Each slot holds one Li-ion battery and charges it independently of the other slots. When a battery is placed in each slot, it immediately begins charging.

### Charge/Analyze Slot

This is the fourth slot and the only one that can be used to analyze a battery. When a battery is placed in this slot, it begins charging just as it does in the other three slots. However, if you press the ANALYZE button, it runs the battery in this slot through the complete Analyze cycle. For more information, see [Using the Battery Analyzer](#) on page 13-5.

### Battery Capacity Indicator LEDs

These LEDs give a readout of the remaining battery capacity after it has run through a complete analyze cycle. For more information, see [Battery Capacity Indicator LEDs](#) on page 13-2.

### Analyze Button

Press this button to start a battery analyze cycle; see [Using the Battery Analyzer](#) on page 13-5.

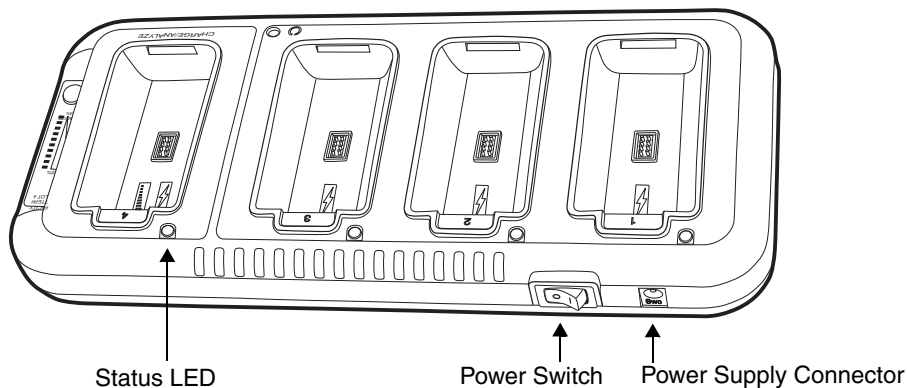
### Status LEDs

A status LED is located above each of the four battery slots. The color of the LED indicates the charge status of the batteries in its slot.

Status LED color	This color indicates that the battery in the slot...
Green	Has completed its charge cycle and is ready for use.
Orange	Is being charged at a maximum charge rate.
Red	Encountered an error during the most recent charge cycle.

---

## Back Panel



### Power Switch

Toggle the power switch to turn the QuadCharger on and off.

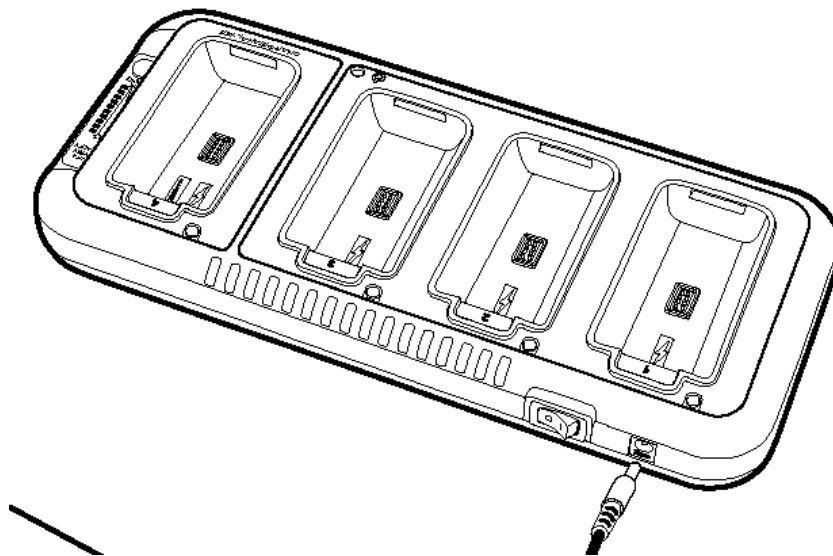
### Power Supply Connector

Use this connector to attach the power supply to the QuadCharger. The universal power supply accepts input voltages between 90-265 volts.

## Supplying Power to the QuadCharger

The QuadCharger must be connected to a power source via the Honeywell power adapter cable so that voltage is adjusted appropriately.

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 QuadCharger.



- 
4. Press the power switch to the ON position.  
The power LED illuminates green, and the charger performs a self-diagnostic test that lasts approximately five seconds.

### ***Inserting and Removing Battery Packs***

To insert a battery pack, place the end of the battery without the locking tab into the bottom of the charging pocket and snap the battery into place with a hinging motion. The Status LED for that particular slot illuminates orange when the battery has been properly inserted.

To remove a battery pack, push the locking tab down and pull the battery out from the charging slot with a hinging motion.

### ***Recommendations for Storing Batteries***

To maintain top performance from batteries, follow these storage guidelines:

- Avoid storing batteries outside of the specified temperature range of -4 to 104° F (-20 to 40°C) or in extremely high humidity.
- For prolonged storage, do not keep batteries stored in a charger that is connected to a power source.

### ***Charging Batteries in the QuadCharger***

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° to 95° F (10° to 35° C).

1. Set up the QuadCharger.
2. Supply the QuadCharger with power and turn the power switch on.
3. Insert batteries into the appropriate slots.  
The Status LED for each slot turns orange to indicate that the battery has begun a charge cycle.
4. When the Status LED turns green, the battery in the slot has completed charging.

---

## Using the Battery Analyzer

### Purpose

Using the Charge/Analyze slot helps you monitor the charge capacity of Li-ion batteries over time.

### Location

The battery analyzer is located in the fourth slot - named the Charge/Analyze slot - of the ChargeBase. Only a battery placed in this slot can be run through an Analyze cycle. This slot contains Battery Capacity LEDs along the right side.



### Analyze Cycle

The Analyze cycle is initiated when a battery is placed in the Charge/Analyze slot and the ANALYZE button is pressed. In an Analyze cycle, batteries are completely discharged, then recharged to capacity. The length of time it takes for a battery to complete the Analyze cycle varies depending on the initial state of the battery's charge. Minimum time is 8 hours, maximum time is 12 hours.

### Battery Capacity LEDs

The Battery Capacity LEDs are located along the right side of the Charge/Analyze slot. Each LED equates to 10% battery capacity. These LEDs display the capacity of the battery at the end of the Analyze cycle. Battery capacity is displayed as a percentage of measured capacity/rated capacity.

### Status LED

The Charge/Analyze slot also contains a standard status LED in the upper, left corner of the slot. When this slot is used for regular charging, this LED operates in the usual manner; see [Status LEDs](#) on page 13-2.

When this slot is being used to analyze a battery, the Status LED functions as follows:

**Status LED color**      **Indicates that the battery in the slot...**

**Solid Green**              Has completed the Analyze cycle.

**Flashing Orange**        Is being analyzed.

**Solid Red**                 Encountered an error during the Analyze cycle.

### To Analyze a Battery

1. Insert the battery into the Charge/Analyze slot (the fourth).
2. Press the ANALYZE button. The Status LED flashes orange to indicate that the analyzing cycle has begun.



*The Dolphin QuadCharger is accumulating battery pack information during the entire Analyze cycle. Do NOT remove the battery until the cycle has been completed.*

3. Upon completion of the Analyze cycle, the Status LED lights solid green, and the Battery Capacity Indicator LEDs display the battery's capacity.

You can verify a battery's capacity by installing the battery in a terminal and checking the power; see [Power](#) on page 6-11.

---

## **Mounting the QuadCharger**

The Dolphin QuadCharger should be on a dry, stable surface. To easily adapt the QuadCharger to your environment, it can be mounted on a flat, horizontal surface such as a desktop or workbench, or a flat, vertical surface such as a wall.

When choosing a location, always bear in mind that

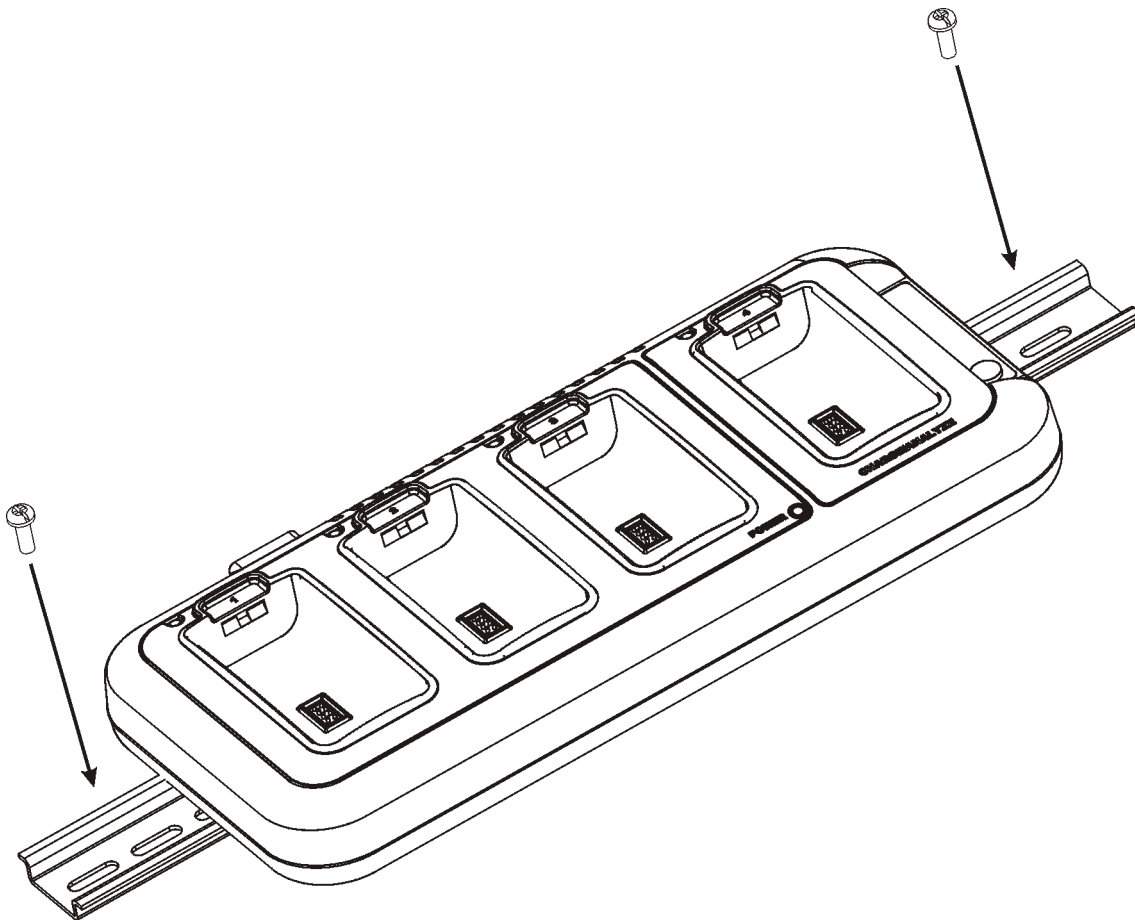
- the mounting location must allow users easy access to power switch and power connector.
- the QuadCharger should be oriented so that users can easily insert and remove battery packs and read the labels, especially for the Battery Analyzer.

### **Desk Mounting**

All Dolphin charging/communication cradles have a DIN rail (7.5 X 35 mm) slot on the bottom panel to enable secure mounting.

To mount the QuadCharger, you slide the DIN rail slot along the bottom panel and secure it. Then, using the appropriate nuts and bolts, secure the DIN rail to the desk or wall.

The following graphic displays how to mount the QuadCharger to a desk:

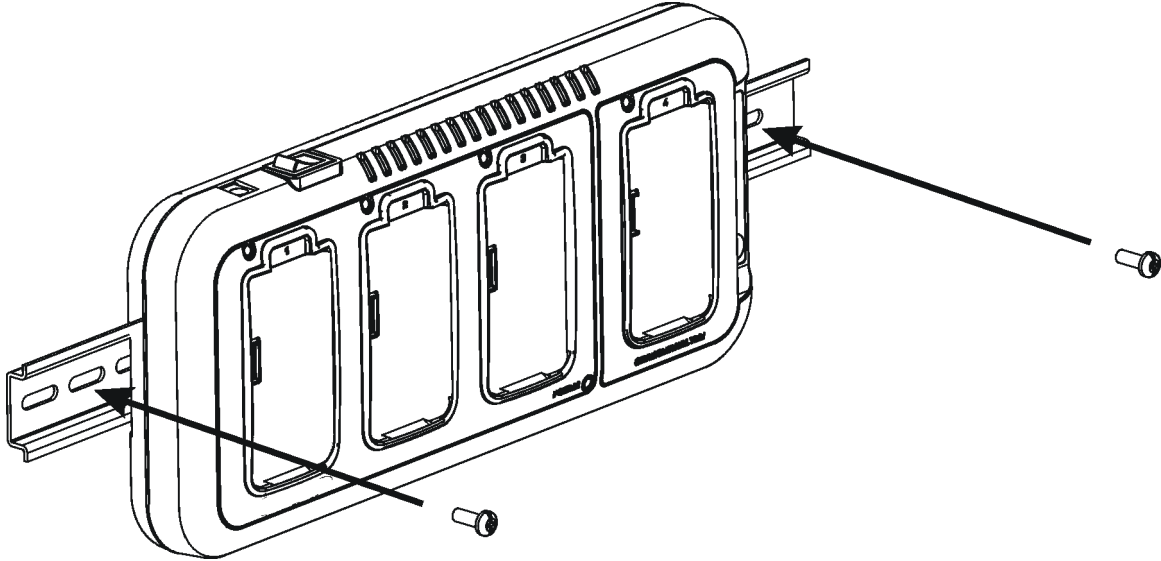




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## Wall Mounting

The following graphic displays how to mount a QuadCharger to a wall:



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## Troubleshooting

If you encounter problems with your Dolphin QuadCharger, 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 into the Dolphin QuadCharger.	Check the power connections on the Dolphin QuadCharger; make sure the POWER switch is ON 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 <a href="#">Customer Support</a> on page 14-1.

**Product Service and Repair**

Honeywell 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  
Fax: (803) 835-8012  
E-mail: [naservice@handheld.com](mailto:naservice@handheld.com)

**Latin America**

Telephone: (803) 835-8000  
Telephone: (800) 782-4263  
Fax: (239) 263-9689  
E-mail: [laservice@handheld.com](mailto:laservice@handheld.com)

**Brazil**

Telephone: +55 (21) 3535-9100  
Fax: +55 (21) 3535-9105  
E-mail: [brservice@handheld.com](mailto:brservice@handheld.com)

**Mexico**

Telephone: +52 (55) 5203-2100  
Fax: +52 (55) 5531-3672  
E-mail: [mxservice@handheld.com](mailto:mxservice@handheld.com)

**Europe, Middle East, and Africa**

Telephone: +31 (0) 40 2901 633  
Fax: +31 (0) 40 2901 631  
E-mail: [euservice@handheld.com](mailto:euservice@handheld.com)

**Asia Pacific**

Telephone: +852-2511-3050  
Fax: +852-2511-3557  
E-mail: [apservice@handheld.com](mailto:apservice@handheld.com)

**Japan**

Telephone: +813-5770-6312  
Fax: +813-5770-6313  
E-mail: [apservice@handheld.com](mailto:apservice@handheld.com)

**Online Product Service and Repair Assistance**

You can also access product service and repair assistance online at [www.honeywell.com/aidc](http://www.honeywell.com/aidc).

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## **Technical Assistance**

If you need assistance installing or troubleshooting, please call your Distributor or the nearest technical support office:

### **North America/Canada**

Telephone: (800) 782-4263  
Fax number: (315) 554-6705  
E-mail: [natechsupport@handheld.com](mailto:natechsupport@handheld.com)

### **Latin America**

Telephone: (803) 835-8000  
Telephone: (800) 782-4263  
E-mail: [latachsupport@handheld.com](mailto:latachsupport@handheld.com)

### **Brazil**

Telephone: +55 (21) 3535-9100  
Fax: +55 (21) 3535-9105  
E-mail: [brsuporte@handheld.com](mailto:brsuporte@handheld.com)

### **Mexico**

Telephone: (803) 835-8000  
E-mail: [latachsupport@handheld.com](mailto:latachsupport@handheld.com)

### **Europe, Middle East, and Africa**

Telephone: +31 (0) 40 7999 393  
Fax: +31 (0) 40 2425 672  
E-mail: [eurosupport@handheld.com](mailto:eurosupport@handheld.com)

### **Asia Pacific**

Telephone: Hong Kong: +852-3188-3485 or 2511-3050  
Telephone: China: +86 21 6361 3818  
E-mail: [aptechsupport@handheld.com](mailto:aptechsupport@handheld.com)

### **Japan**

Telephone: +813 5770-6312  
E-mail: [aptechsupport@handheld.com](mailto:aptechsupport@handheld.com)

### **Malaysia**

Telephone: +603-6201-7020  
E-mail: [aptechsupport@handheld.com](mailto:aptechsupport@handheld.com)

## **Online Technical Assistance**

You can also access technical assistance online at [www.honeywell.com/aidc](http://www.honeywell.com/aidc).

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## **Limited Warranty**

Honeywell International Inc. ("Honeywell") warrants its products to be free from defects in materials and workmanship and to conform to Honeywell's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any Honeywell 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 Honeywell or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by Honeywell 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 Honeywell's factory or authorized service center for inspection. No product will be accepted by Honeywell without a Return Materials Authorization, which may be obtained by contacting Honeywell. In the event that the product is returned to Honeywell or its authorized service center within the Warranty Period and Honeywell determines to its satisfaction that the product is defective due to defects in materials or workmanship, Honeywell, at its sole option, will either repair or replace the product without charge, except for return shipping to Honeywell.

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.

HONEYWELL'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 HONEYWELL BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HONEYWELL 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 HONEYWELL FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN HONEYWELL 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 manufactured/sold by Honeywell may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, power adapters, cradles, and docking stations.

Honeywell extends these warranties only to users of the products. These warranties are non-transferable.

The limited duration of the warranty for Dolphin 9900 series of products is as follows:

- Dolphin 9900 terminal with integrated imager is covered by a two-year limited warranty.
- Touch screens are covered by a one-year limited warranty.
- Dolphin HomeBase, Mobile Base, ChargeBase, Net Base, Mobile Charger, and QuadCharger are covered by a one-year limited warranty.
- Batteries are covered by a one-year limited warranty.

Use of any battery not sold/manufactured by Hand Held Products may damage the terminal and/or the battery, may pose a personal hazard to the user, and will void the warranty. Batteries returned to Hand Held Products in a reduced state may or may not be replaced under this warranty. Battery life will be greatly increased when following the battery instructions in the Dolphin 9900 User's Guide.

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Use only power adapters approved for use by Hand Held Products. Failure to do so may result in improper operation or damage to the unit and will void the warranty.

### ***How to Extend Your Warranty***

Honeywell 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, or your Authorized Reseller.



# Honeywell

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