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## Welcome

Congratulations on your purchase of the most powerful and advanced handheld computer available on the market today. The rugged design of your handheld allows you to work in harsh outdoor environments. You can operate your unit in blazing heat, subzero cold, driving rain, or dusty job sites – places you could not take a consumer-grade unit.

**NOTE:** Not all the features discussed in this manual will apply to every unit, as some of the features are offered as options. If the feature described does not apply to your unit, please disregard that section.

# Device Hardware

**Front View  
PDA Keypad  
Expansion Cap**

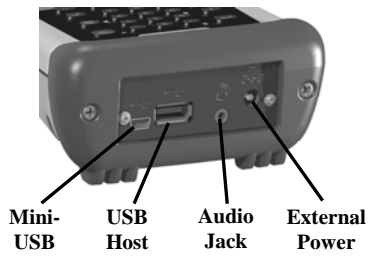


**Front View  
Numeric Data Keypad  
Expansion Cap**

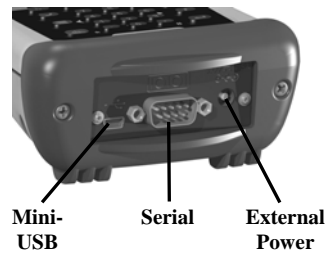


\*See settings for assignable application buttons (keys)

**USB I/O Boot**



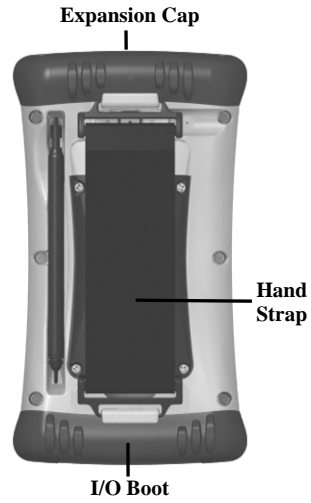
**Serial I/O Boot**



### Back View



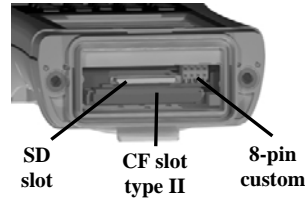
### Back View with hand strap



### Basic Expansion Cap



### Basic without Cap



An extended cap, sold as an accessory, can be used for oversized CompactFlash (CF) and Secure Digital (SD) cards.

**NOTE:** Be sure to read the warranty and safety information in this manual prior to using your unit.

# Unit Setup

## 1. Install the battery

The Lithium-Ion (Li-Ion) battery and battery cover are shipped detached from the unit. Insert the battery into the compartment so the connectors on the battery mate with the pins in the battery compartment, pressing firmly. Place the battery door over the battery, with the flat side of the battery door at the top.

Remove the cap from the Philips screwdriver end of the stylus or use a small #1 Philips head screwdriver to finger tighten the four screws in the battery door.

**NOTE: DO NOT** use the screwdriver part of the stylus on the touchscreen or it will scratch your screen. Only use the smooth end of the stylus.



**IMPORTANT:** Fully charge the battery once installed in the unit. The battery gauge may not be accurate until it has been fully charged at least one time. The battery LED (right side of unit) will turn green once fully charged.

## 2. Charge the battery

The AC adapter that ships with your unit has interchangeable AC plugs to fit almost every electrical outlet. Connect the appropriate AC plug to the AC adapter. Plug into an electrical outlet and plug the barrel end of the AC adapter into the unit. The battery gauge may not be accurate until it has been fully charged at least one time and may take up to about 4 ½ hours, depending on the initial state of the battery. A full charge is indicated by the battery LED (right side of the unit) turning green.

**Warning!** Be sure to only use the AC adapter included with your unit. Use of other adapters will void the product warranty.

### **3. Install the screen protector**

To keep the touchscreen clean and protected, install the screen protector following the instructions provided on the screen protector package. Unprotected screens become scratched and scuffed over time. Screen protectors extend the life of the display by providing a protective and replaceable barrier between abrasive grit and the surface of the display.

Screen damage associated with failure to use a screen protector is not covered under warranty,

### **4. Attach the hand strap**

Attach the hand strap to the back case.

### **5. Turning your unit on and off**

The unit will boot up when the battery is installed. If not, press and release the green **Power** key on the keypad. To turn your unit off, press and release the **Power** key again.

One of the most convenient features of your unit is “instant on” and “instant off” (also known as “suspend/resume”). There is no waiting for the unit to boot up every time it is turned on. “Instant on” does not occur on the first boot-up.

When the unit first turns on, the message “Tap the screen to set up your Windows Mobile-based device” will appear.

### **6. Align screen**

The Align Screen message will display a series of targets to tap in sequence on the screen. Use the stylus to tap the targets firmly and accurately. Sometimes you need to repeat the alignment procedure more than once to provide a satisfactory alignment.

### **7. Location – time zone**

Select your time zone location, set the time and date to the correct values and tap **Next**.

### **8. Password – lock (optional)**

You do not have to provide a password unless you are concerned about unauthorized use. To eliminate using a password, tap **Skip**.

If you opt for password protection the password must be entered every time you turn the unit on or use the **Power** key to resume operation.

**WARNING: BE CERTAIN TO REMEMBER THE PASSWORD.** The only way to recover from a forgotten password is to perform a Clean Boot and you will **LOSE** all application software, licenses, settings and data on your unit. See page 12 about how to perform a Clean Boot.

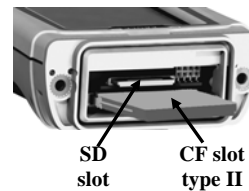
## 9. Using the expansion ports

To access the expansion ports, use the Philips screwdriver end of the stylus or a small #1 Philips head screwdriver to rotate the two quarter-turn fasteners and remove the Expansion Cap.



Under the Expansion Cap is a Secure Digital (SD) expansion slot. (Windows Mobile® 6 will not recognize storage cards greater than 2GB). There is also a CompactFlash (CF) type II slot and an 8-pin custom connector (for third-party developers).

Gently insert cards with the front of the card facing toward the display side of the unit. Insert the card into the slot and release; the card should catch in the slot. Always push the card in straight, never at an angle or forced.

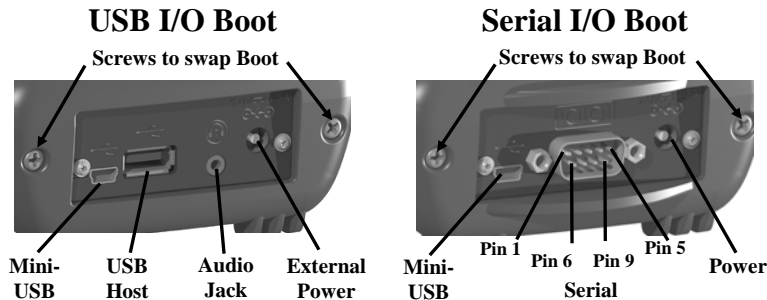


To eject an SD card, gently press the top of the card to release it. To eject a CF card, press the eject button located next to the CF.

**NOTE: DO NOT** use the unit without reattaching the cap and the boot. The unit is **NOT** sealed when the cap or boot is off and water damage can occur, voiding the warranty.

## 10. I/O Boots

There are two types of Boots available. The boots can be swapped by loosening the screws pointed out in the picture below.



Both boots have a mini-USB connector that uses a USB 2.0 A male to mini USB B 5-pin cable (included with the unit). The Mini-USB can be used to connect to a personal computer (PC).

**USB I/O Boot:** Has a USB host port to connect to USB client devices. Has an audio jack that is wired for a headset with a mono speaker(s) and mic combination. It is not for stereo headsets.

Note: Many USB host peripheral devices supported on personal computers are **not** supported by this unit. There are two classes of USB devices that have native support in the OS:

- 1.) USB Human Interface Devices (HID) examples include keyboards and some barcode scanners.
- 2.) USB Mass-Storage devices examples include memory-keys, hard disks, some digital cameras, and memory card readers.

Before purchasing a USB peripheral, check with the manufacturer to ensure that it will operate with one of these natively supported USB classes. Some devices have no applicability in Windows Mobile. For example, mice do not make sense to use with your unit because it is designed to be touchscreen operated.

**Serial I/O Boot:** For use with serial devices. NOTE: COM1 is always reserved for the 9-pin port, even if you don't have a unit with a serial boot.

# Working with the Unit and the Battery

**Battery life:** The Lithium-Ion (Li-Ion) battery life is dependent upon the application and operating environment. Frequent keypad and display backlight usage, heavy usage of the Wireless LAN (WLAN), cold temperatures, GPS, and high power consumption CF and SD devices can all significantly reduce the battery life. Other factors that may have some impact on battery life include heavy usage of the Bluetooth radio and heavy processing by the CPU, but these factors are typically less significant.

## Tips for extending the battery life:

- **Keypad backlight:** The default is off. This backlight uses a lot of power so use only when necessary. For information on changing the backlight settings, see page 16.
- **Display backlight:** The default is on. Minimize the amount of time the backlight stays on when idle. Dim the backlight to only as bright as required to view the display.
- **Wireless LAN:** If your unit comes with embedded WLAN, use ONLY when necessary. Turn off when not needed.
- **Cold temperatures:** Keep the unit as warm as possible. If feasible, keep it inside your coat or a vehicle when not in use.
- **GPS:** Ensure that the GPS-aware applications that communicate with the GPS are closed when not being actively used. The Today screen tells if the GPS is running.
- **Expansion ports:** Use low-power consumption CF and SD cards and use them only when necessary.
- **Auto features:** Tap **Start / Settings / System / Power / Advanced**. Make sure the unit is powered off when not in use with the shortest amount of time.

**Charging the battery:** The battery can be charged in the unit or separate from the unit with an external battery charger, sold as an accessory. Connect the appropriate AC plug to the AC adapter. Plug into an electrical outlet and plug the barrel end of the AC adapter into the unit. The unit will be fully charged in about 4 to 4.5 hours. A full charge is indicated by the battery LED (right side of the unit) turning green. The manufacturer recommended



temperature range for charging the battery is between 0°C and +45°C (+32°F and +113°F). If the battery temperature is outside of this range, the battery will not charge.

**Warning!** Be sure to only use the AC adapter included with your unit. Use of other adapters will void the product warranty.

**Battery Status (right LED)**

Color	Function
Off	On battery power
Solid yellow	Charging on AC adapter
Solid green	Fully charged on AC adapter
Blinking yellow	Battery fault during charging (temperature out of range, defective or missing battery)

**Changing the battery:** The battery is designed to be quickly changed (if you have additional batteries). The unit saves enough power that if you swap the battery within approximately one minute, it will not trigger a reset. If the saved power runs out before the new battery is installed, the unit will reset. This will not impact saved data, programs or configuration, however unsaved data will be lost and the time will need to be reset.

**To change a battery, perform the following steps:**

1. Close open applications and save data in case the battery exchange takes too long.
2. Remove the hand strap from the unit.
3. Turn the unit off using **Replace Battery** (ensures that alarms will not wake up the unit while changing the battery). Press and hold the **Power** key and tap **Replace Battery**. See page 12 about the Power Menu.
4. Use the supplied stylus or a small #1 Philips head screwdriver to loosen the four screws in the battery door.
5. Remove the battery from the unit.
6. Quickly insert the replacement battery onto the unit.
7. Place the battery door over the battery, with the flat side of the battery door at the top of the unit. Use the stylus or screwdriver to finger tighten the four screws.
8. Replace the hand strap.
9. Turn the unit ON to resume operation.

**Calibrating the battery:** The battery has an internal gauge that provides an estimate of the amount of energy in the battery as it charges and discharges. If your battery is showing inaccuracy in the power gauge or large jumps in capacity, (i.e. the power is reading 50% and goes dead shortly thereafter) it may need calibration.

Tap **Start / Settings / System / Power / Calibration** to see if the message reads “Calibration recommended” or “Calibration not necessary”.

If calibration is recommended or the battery is reporting inaccurately, perform the following:

1. Plug in the AC adapter. The unit **MUST** stay charging while doing the calibration or you may need to restart the process.
2. Ensure the temperature is between 0°C and +45°C (+32°F and +113°F) while charging.
3. Tap **Start Calibration**.
4. During the calibration process, the **Power** key is disabled temporarily and the backlight is turned up to 100%.

It takes up to 25 hours to complete the calibration. A notification will state “Calibration is complete”. It is recommended to not use your unit during the calibration process so calibrate when the use of the unit is not required. If you wish to stop the calibration process, tap **Start / Settings / System / Power / Calibration / Stop Calibration**.

Possible error messages that can occur during calibration:

<b>Error Message</b>	<b>Solution</b>
Battery is not charging, aborting	Battery temperature may be out of range. Wait until battery temperature settles and try again.
Discharge became invalid, restarting	Calibration will restart itself.
AC power is in an unknown or uncontrolled state; aborting	Plug in unit and restart calibration. Try a different AC adapter and restart calibration. If it continues to fail, have the unit serviced.

## Speaker and microphone

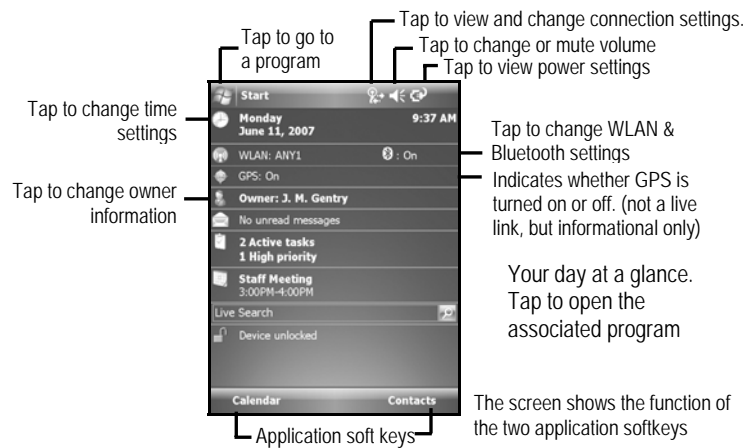
Your unit comes with an integrated speaker and a microphone. It also has an audio jack that is wired for a headset with a mono speaker(s) and mic combination. It is not for stereo headsets.

To record, tap **Start / Programs / Notes**. If you do not see the **Recording** toolbar, tap **Menu / View Recording Toolbar**. Tap the round record symbol on the screen. The unit will record until **Stop** is pressed. The recorded file will be saved in the Notes folder. To change the directory where recorded files will be saved, tap the folder icon and navigate to the desired folder.

To play the recorded file, tap the desired file from the Notes program. You cannot play and record simultaneously; playback will be disabled during recording. To change the volume or mute all sounds, tap the speaker icon in the status bar of the Today screen.

## The Today screen

The Today screen provides information that you need for the day. Tap an item to view or edit details. To customize which items are shown on the Today screen, tap **Start / Settings / Today / Items**.

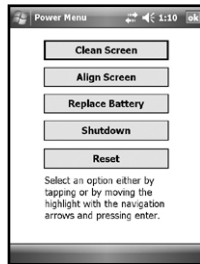


## Power key features

The **Power** key turns the unit on and off and performs a number of additional functions.

**Turn backlight on/off:** To toggle the backlight on or off, hold down the **Power** key for approximately 1 second. Once toggled off, the backlight will stay off until it is toggled back on. Screen taps and key presses will not cause it to turn on.

**Power menu:** Hold down the **Power** key for about 3 seconds to display a countdown. Continuing to press the **Power** key will cause a reset when the countdown reaches zero. If you release the **Power** key while the countdown is proceeding, you access the following menu. Tap an option or **OK** to exit.



**Clean Screen:** Disables the touchscreen for cleaning. Press the enter key to re-enable the touchscreen.

**Align Screen:** A series of targets is displayed. Use a stylus to tap each target to align the touchscreen.

**Replace Battery:** Ensures that alarms will not wake up the unit while changing the battery.

**Shutdown:** Closes all running applications and puts the device in its lowest power mode. No file system data is lost, only open or unsaved files will be lost. All registry settings, control panel, personal information and databases are preserved. NOTE: while shutdown, the battery LED does not work but if the AC adapter is plugged in, it will still charge. The GPS will be reset to its default settings if the unit is shutdown for 5 or more minutes.

**Reset:** Restarts a running program that has become unresponsive. No file system data is lost, only open or unsaved files will be lost. All registry settings, control panel, personal information, GPS settings and databases are preserved.

## Perform a Clean Boot

**WARNING: All application software, (installed by the factory and the customer) licenses, settings and user data will be cleared if you perform this function!**



Hold down the **Power** key to display a countdown. Continue to hold down the **Power** key until it counts down to zero, followed by a brief appearance of the boot screen. Continue to hold the **Power** key down. When you see the boot screen a second time (about a second after its first brief appearance), briefly press the right **—**

while still holding down the **Power** key. Release both keys and wait a few moments. A screen will appear warning that if you continue, this operation will clear the persistent store. Follow the instructions on the screen **ONLY** if you want to completely clear your unit. (GPS applications installed will need to be reinstalled, but GPS settings will be retained unless the unit is shutdown prior to performing a Clean Boot.)

## Storage memory

Unlike many handhelds which can lose data if they lose power, all your data is always stored in non-volatile persistent storage memory. Losing power will not impact **saved** data or configurations other than the real time clock. This means that you do not have to use a RAM backup utility to protect your data. However, you can lose data by accidentally deleting or overwriting it. As with any computer system, we recommend that you regularly backup your data to removable media or to a PC.

## Accessing storage memory using file explorer

File Explorer (**Start / Programs / File Explorer**) lets you browse the contents of folders on your unit. To easily delete, rename, or copy an item, touch and hold the item.

NOTE: Unlike PCs, Windows Mobile does not support a Recycle Bin. Once a file is deleted, it cannot be recovered.

## Notification LEDs

At the top of the unit are two LEDs that provide status information. The LED states are shown in the following table.

LED	Color	Function
Battery Status (right LED)	Off	On battery power
	Solid yellow	Charging on AC adapter
	Solid green	Fully charged on AC adapter
	Blinking yellow	Battery fault during charging (temperature out of range, defective or missing battery)
Notification (left LED)	Off	No notifications
	Blinking yellow	Appointment/task due

## GPS

Tap **Start / Settings / System / System Information / Wireless** to see if your unit has a built-in GPS. COM2 is the dedicated hardware port for the built-in GPS and **GPS Address** shows the COM port.

Your unit does NOT come with a GPS-aware application installed. If you want to use GPS capabilities on your unit, you must install a GPS-aware application.

The GPS is turned on when a GPS-aware application accesses it and it is turned off when all GPS-aware applications are closed. To see if the GPS is on or off, refer to the Today screen. You cannot modify its state from there. Running the GPS will impact the Nomad's battery performance, so the GPS should be turned off when not in use.

**GPS settings:** If you only run one GPS-aware application at a time, there is no need to adjust the GPS settings. If you want to use multiple GPS-aware applications to share a single GPS device, change the settings at **Start / Settings / System / GPS**. For more information on these settings, refer to page 17.

## Using the stylus

















Ensure that you **DO NOT** use the metal screwdriver of the stylus on the touchscreen; it will scratch your screen. Only use the smooth end of the stylus.

Use the stylus to navigate and select objects on the screen.

- **Tap:** Tap the screen with the stylus to select or open an item. Tapping is the same as clicking the left button on a PC mouse.
- **Drag:** Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.
- **Touch and hold:** is similar to a right mouse click on a computer and uses pop-up menus to easily select an action for an item. To access a pop-up menu, touch and hold the stylus on an item name. A circle of dots will appear to indicate that a pop-up menu will soon appear.

## Status indicators

Following are some of the status indicators seen on your unit.

Icon	Description	Icon	Description
	Battery power is low		Indicates that one or more networks are present. Tap to access an available network
	Battery power is very low		Wireless LAN connected
	Battery charging		Active connection, but not currently synchronizing
	Battery level		Inactive connection to computer or wireless network
	Battery calibration in progress		Synchronizing
	Instant messages received		Synchronizing error
	Speaker is on		E-mail has been received
	Speaker is off (or in mute position)		Pending alarm

## Settings on your Unit

Tap **Start / Settings**. Tap any of the icons on the **Personal**, **System** or **Connections** tabs to customize the unit settings to your own preferences. Tap **OK** to exit the settings. Some of the more useful settings are described below.


### Lock (password)

If you want password protection from unauthorized use of your unit, tap **Personal / Lock**. The password must be entered every time you turn the unit on or resume operation.

**WARNING: BE CERTAIN TO REMEMBER THE PASSWORD.** The only way to recover from a forgotten password is to perform a Clean Boot and you will **LOSE** all application software, licenses, settings and data on your unit. See page 12 about how to perform a Clean Boot.

## Buttons (keys)

Tap **Personal / Buttons**. You can assign your favorite programs to several of the keypad buttons. The list of assignable keys is shown on the left hand side with the program that is assigned by default on the right. To reassign a key, select the key you wish to change in section 1 and choose the desired program or action from the pull-down list in section 2.

If your unit has the numeric data keypad, the yellow  shift key (sticky FN) accesses yellow shifted functions, including the Navigation arrows. There are several settings that can be changed under **Keyboard Options**.

*Auto release:* Press and release the shift key to access the shifted function for one use. It then goes back to the keytop function.

*Manual release:* This is the default. Press the shift key to toggle it on and off. The shifted function stays on until the shift key is pressed again to input the keytop function.

*Disabled:* The shift key has to be held down while pressing any other key to access the shifted function.

*Play Sticky Key Sounds:* To turn the sound off for sticky key sounds, remove the check in the box.

## Input

Tap **Personal / Input**. You can change settings related to input method, word completion, voice recording and other options.

## Today

Tap **Personal / Today**. This screen allows you to customize the Today screen.

## Backlight for display and keypad

Tap **System / Backlight**. To change the settings:

*Display backlight:* The default is on. Tap **Battery Power**, **External Power** and **Brightness** tabs to change settings.

*Keypad backlight:* The default is off. Scroll by tapping the arrows over to **Keypad Battery**, **Keypad External** and **Keypad Brightness** tabs to change settings.



## Encryption

Tap **System / Encryption**. To prevent sensitive data on a CF or SD storage card from being used if the card is lost or stolen, files can be encrypted as they are placed on the card and will only be readable on the unit that they were encrypted. If you put a check in the checkbox, the files saved thereafter will only be readable on this unit. It will not be possible to read these files on the storage card by any other device or even from a PC. Files saved on storage cards before enabling encryption will not be encrypted.

NOTE: if you perform a Clean Boot on your unit, previously encrypted files on storage cards will no longer be readable by that unit or by any other device, including PCs.

## GPS

Tap **System / System Information / Wireless** to see if your unit has a built-in GPS. If you do, COM2 is the dedicated hardware port and **GPS Address** shows the COM port. (COM1 is dedicated to the external 9-pin.)

To allow your unit to use multiple GPS-aware applications to obtain GPS data simultaneously, your unit can manage access to your GPS. If you are using only one GPS-aware application, the following settings do not need changed.

To use multiple GPS-aware applications, tap **System / GPS** and select the following tabs:

**Access:** The GPS Intermediate Driver is disabled by default. To enable, check the box “Manage GPS automatically (recommended)”.

**Hardware:** If you have an internal GPS in your unit, COM2 is the hardware port dedicated for the internal GPS. Verify COM2 is selected. The internal GPS communicates at 9600 baud by default, though you may need to adjust the baud rate to match the baud rate that the receiver is set to.

**Programs:** Programs that use GPS need to know which port to use to access GPS data. Ensure that the COM port on the GPS-aware application is set to the same port as shown in the

programs tab. The programs port must be a different port than the hardware port. NOTE: Some GPS-aware applications may not communicate over GPD ports.

If you are unable to connect to the GPS using the default GPS settings, you can restore it to factory default settings by performing a shutdown. See page 12.

## **Power**

Tap **System / Power** to view the approximate battery power remaining. Tap the **Advanced** tab and choose the settings for automatically turning off the unit when not in use.

Tap **System / Power / Calibration** to see if the message reads “Calibration recommended” or “Calibration not necessary”. For more information on calibration, refer to page 10.

## **Memory**

Tap **System / Memory** to see how much Storage memory (Flash) and Program memory (RAM) is available. Closing programs still leaves them resident in RAM. As more programs are started, available RAM decreases. If RAM resources become low, you can stop programs and remove them from RAM. First, ensure you have saved all your data. To stop a program, tap the tab **Running Programs**. You can stop individual programs or tap **Stop All**.

## **Screen**

Tap **System / Screen**. The orientation can be changed to landscape for some programs that are not screen aware. To change the size of the text on the screen, tap **Text Size** to see more content or increase the readability in many programs.

## **System information**

Tap **System / System Information**. Unit information can be found here including firmware version, serial number, processor speed, RAM and Flash size, as well as the wireless configurations, and battery and card port information.

# Communication

The unit is equipped with multiple ways to communicate with other devices. Many of these are described in the following sections. Not all the features apply to every unit, as some of the features are offered as options. If the feature described does not apply to your unit, please disregard that section.

## Connecting to a PC

Connecting your unit to a PC allows you to copy files, synchronize information, send and receive e-mail and install applications on your unit. Connectivity software is pre-installed on your handheld unit.

You will need to install connectivity software on your PC using the Getting Started Disc that will automatically launch what is needed for your PC depending on the operating system (OS).

NOTE: If you have an earlier version of ActiveSync installed on your PC, you will need to upgrade it to version 4.5 prior to connecting to your unit.

- **Windows XP SP2 or earlier:** Microsoft ActiveSync 4.5. (Microsoft Office Outlook 2000 is not supported by ActiveSync 4.5.)
- **Windows Vista:** Microsoft Windows Mobile Device Center ensures that synchronization will work correctly. NOTE: It does not recognize the serial port. You must connect by either USB or Bluetooth.

**IMPORTANT: Do not connect** your unit to the USB port on the PC until **after** you install connectivity software to your PC. If you prematurely connect the unit to your PC, your PC USB drivers may get into a confused state and will not connect. If you suspect that something like this has happened, uninstall the connectivity software on your PC, reboot, and reinstall.

After the connectivity software is installed on the PC, connect the unit to the PC:

- 1) Connect the USB end of the synchronization cable to the PC.
- 2) Turn on your unit.
- 3) Connect the mini-USB end of the cable to your unit.

### ***Troubleshooting connection problems***

1. Confirm the unit is configured to communicate with the PC.  
Tap **Start / Programs / ActiveSync / Menu / Connections**.  
Confirm the box **Synchronize all PCs using this connection** is checked and **USB** is selected from the dropdown list.
2. Try disabling any personal firewall software running on the PC. TCP/IP ports need to be open.
3. Reset the unit.
4. If you have more than one unit, PC and/or cable, testing different combinations of equipment can help isolate the cause of the problem.
5. As noted earlier, if you suspect the unit may have been connected to the PC USB port before the connectivity software was installed, uninstall, reboot the PC, and reinstall.
6. Confirm that the version of connectivity software used on your PC is the same as or later than the one on the Getting Started Disc.
7. Tap **Start / Settings / Connections / USB to PC** and try changing the check box **Enable advanced network functionality**.

## Bluetooth

All units come with embedded Bluetooth capability—a short-range of about 10 meters (30 feet) wireless communications technology that allows your unit to beam (exchange information) with other Bluetooth-enabled devices without a physical connection.

**Bluetooth settings:** tap **Start / Settings / Connections / Bluetooth**.

**Mode:** To enable Bluetooth, check the box **Turn on Bluetooth**.

If you want other Bluetooth devices to find your unit, also check the box **Make this device visible to other devices**.

**Device:** tap **Add new device** to search for other Bluetooth devices. For enhanced security, use passcodes.

**COM Ports:** Available only for Bluetooth-connected devices that support serial (COM) connections.

**Power: Maintain Bluetooth connections when device is turned off.** When checked, BT connections are not terminated on your unit when suspended. When the unit is turned back on, applications can continue to use their BT connections as if nothing happened, provided the other BT device is still connected. NOTE: communication cannot occur with other BT devices while the unit is suspended and the other device may disconnect.

**Power: Allow Bluetooth activity to turn the device on.** When checked, BT connections are also maintained during suspend. If the device on the other end of the connection (existing as well as new requests) sends data, the unit will wake from suspend and reply if necessary. Note: It is strongly recommended that your unit is configured to automatically turn off when not in use. (See the power section on page 18.) Otherwise, a BT device could wake your unit and not suspend again, therefore draining the battery.

The details of configuring Bluetooth connections vary depending upon how the other Bluetooth device works. Refer to the other device documentation.

### ***Bluetooth file transfer between two units***

Confirm Bluetooth is enabled on both units, the receiving unit is visible and within close range. Tap **Add new device** to pair with the other unit.

Tap **Start / Programs / File Explorer** on the unit that will send the file. Browse to the file to be sent, and touch and hold on it. Tap **Beam File**. Wait for several moments while the sending unit searches for Bluetooth devices in the vicinity.



Select the receiving unit from the list, and tap **Tap to send**. Wait a few moments while the file is transferred. The receiving unit will open a window saying you are receiving data and if you want to stop receiving, tap **Cancel**. The file will be saved in the My Documents folder.

### ***Bluetooth connection with a PC***

Ensure that your PC has connectivity software installed. See Connecting to the PC on page 19. Ensure that Bluetooth on the PC is enabled and configured to be discoverable. Refer to your PC documentation for instructions.

Confirm that Bluetooth is enabled on your unit. Under **Bluetooth Settings**, the **Devices** tab, tap **Add new device...** Wait a few moments while your unit searches for Bluetooth devices in the vicinity. Select the PC from the list and tap **Next**. For enhanced security, use passcodes. On your unit, confirm that the ActiveSync service is available and check in the check box and tap **Finish**. Tap **Start / Programs / ActiveSync / Menu / Connect via Bluetooth**.

### ***Bluetooth connection with a printer***

NOTE: Windows Mobile 6 does not support printing without additional third-party software.

If the printer is Bluetooth-enabled via Bluetooth serial profile, it is possible to establish a Bluetooth connection. Refer to the printer documentation to see if a passcode is required. If the wireless printer wants to connect to your unit using Bluetooth, tap **no**. Confirm that serial port service is available, put a check in the box next to it and tap **Finish**.

#### ***Bluetooth-enabled headphone***

You can use a Bluetooth stereo A2DP headphone only. Bluetooth handsfree audio devices that are typically used with cell phones are not supported.

#### ***Troubleshooting Bluetooth connection problems***

If your unit cannot find another Bluetooth device, confirm that the device is within range (less than 10 meters / 30 feet) and no large objects obstruct the path of other Bluetooth-enabled devices. Also confirm that the device is turned on and has been configured to be discoverable as devices such as printers and cell phones are typically not discoverable by default.

## Wireless LAN

If your unit comes with built-in Wireless Lan (WLAN) capability, also known as 802.11, you can wirelessly transmit data to and from your unit by connecting to available access points or hot spots. Once connected, you can access the Internet and other network information, send and receive email and use virtual private networks (VPNs) for secure remote access.

To find out if you have WLAN installed in your unit, tap **Start / Settings / System / System Information / Wireless**.

The WLAN is off by default; however the on/off state will persist after a reset. To turn the WLAN on or off, tap **WLAN** from the **Today** screen or tap **Start / Settings / Connections / Wireless Manager** and tap **Wireless LAN**. The unit will automatically detect wireless networks or hot spots. (There can be a slight delay before it updates.) Turn it off when not in use to save battery power and possibly speed up other processes.

If you have trouble with your unit adding a new connection from within the Wireless Manager, tap **Menu / Wireless LAN Settings / Add New**. Type in the Network name and select connection to **Internet** or **Work** and tap **ok**. Configuring the **Work** option is usually best left to network administrators. The **Internet** option is simpler and serves most needs. Depending upon the configuration of the wireless network, you may be prompted to enter a Wireless Encryption Protocol (WEP) key or an Internet login for authentication purposes. Obtain the WEP key from your network administrator.

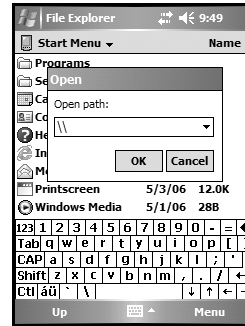
**NOTE:** The **Internet** connection is one in which Virtual Private Network (VPN) services are not involved and proxy servers may or may not be utilized. This can include a typical **Internet** connection through a corporate wireless network. A **Work** connection allows you to view file shares on a corporate network.



If you choose to create an **Internet** connection, open Internet Explorer Mobile on the unit (**Start / Internet Explorer**) to browse the Internet. Some features supported by PC browsers are not supported by Internet Explorer Mobile. For instance, there are no pop-up windows, some sites may not be accessible and you may be unable to send e-mail with file attachments.

If you choose to create a **Work** connection, open File Explorer on your unit. Tap **Menu / Open Path / New Path** to open a window, allowing you to enter the name of a computer on the network on which you want to view file shares. Tap **OK**.

From here, you can browse the network file shares and copy and paste files between PCs on the network and the unit.



### ***Exchange ActiveSync***

Exchange ActiveSync, a component of Exchange Server, facilitates data synchronization between your unit and an Exchange server. This synchronization can occur over WLAN, allowing you to update calendars, contacts, tasks and the Inbox on your unit without directly connecting to a PC. The server must be running Exchange Server 2003 SP2 or later.

To use Exchange ActiveSync, confirm with your system administrator that an Exchange Server is available. The administrator will provide you with a login name, password, server name, and domain name. To configure Exchange ActiveSync on your unit, tap **Start / Programs / ActiveSync / Menu / Add Server Source**. Enter the server address and confirm with your administrator whether the Exchange server requires an encrypted (SSL) connection. Tap **Next**. Enter the login name, password and domain name and tap **Next**. Choose the data types you want to synchronize and tap **Finish**.

### ***Troubleshooting WLAN connection problems***

If the unit seems to be connected to the network, but you are having difficulty using the network connection, tap **Start / Settings / Connections / Network Cards / Network Adapters**, and confirm that the connection is appropriately configured as either a **Work** or **Internet** connection.

### **Additional connectivity**

Your unit supports several additional kinds of connections. If you do not have embedded WLAN or GPS, you can purchase CF or SDIO cards to add the functionality. The following types of additional connectivity are also possible:

**Modem:** The unit supports dial-up connections to an Internet Service Provider and sending and receiving e-mail with file attachments. You will need to purchase an external modem or a CF modem.

**Web-enabled cell phones:** The unit can connect to the Internet via Bluetooth and Web-enabled cell phones that are compatible with Windows Mobile devices. USB phone connections are not supported. Refer to your phone service provider for more information on establishing Internet connections via your cell phone.

For more information on creating these connections, see the Web site listed under reference materials on the cover of this manual.

### **Installing additional software on your unit**

The unit can run third-party software designed for Microsoft Windows Mobile. If needed, some programs may run better if the screen orientation is changed in **Start / Settings / System / Screen**.

Most third-party software is installed by running a setup program on the PC while the unit is connected with ActiveSync or the Windows Mobile Device Center. Follow the setup instructions that came with your software. If prompted, perform a reset to complete the installation.

# Caring for your Unit

## Cleaning the unit

Clean the unit with a soft cloth dampened with either water or a diluted mild detergent. **If a mild detergent is used, rinse with water to ensure all residue is removed. Do not use any chemical cleaners and do not put the unit in the dishwasher.**

## Care of the touchscreen

Use only the included stylus or other devices specifically designed for use with touchscreens. Ensure that you **DO NOT** use the metal screwdriver end of the stylus on the touchscreen or it will scratch your screen. Only use the smooth end of the stylus.

The use of ballpoint pens, nails or other sharp objects to operate the touchscreen will scratch and/or damage the unit. Keep the touchscreen clean by gently wiping the display, using a soft cloth dampened either with clean water or glass cleaner. **Do not use abrasive cleaners or apply any cleaner directly to the display. Doing so will void your warranty.**

Use the screen protectors included with the unit to keep the touchscreen clean and protected, following the instructions provided on the screen protector package.

## Case vent hole

A GoreTex membrane is used at the vent hole to equalize the atmospheric pressure within the unit and to prevent dust, water, etc. from entering. The vent **must** remain clear of any obstruction. Damage to the touchscreen will occur if the vent is covered. Covering the vent with stickers and labels may void the warranty.



## Mechanical shock

The unit is designed to resist damage for drops up to 1.22 meters (4.0 ft). However, you should protect the display from impact, pressure, or abrasive substances that can scratch it or crack it. The unit should not be dropped unnecessarily.

## **Environmental Considerations**

The unit's rugged design allows you to run your applications in harsh outdoor environments. Here are some considerations that will help you get the most out of your unit when working in very wet, hot or cold conditions.

### **Water**

This unit is designed to withstand accidental immersion. To maintain the unit's water resistant seal, it is important to ensure that the quarter turn fasteners on the cap are clamped. Keep the bottom boot and its connectors as dry as possible. If the boot does get wet, dry off the contacts as much as possible.

Removal of the back case torx screws or failure to reattach the cap or boot could cause leakage and will void your warranty.

### **Temperature range**

The operational temperature range is from -30°C to +60°C (-22°F to +140° F). Although the unit is designed to be rugged, do not leave it in direct sunlight or in a parked vehicle in the sunlight for extended periods.

Batteries perform best at room temperatures. The battery also has a very stable capacity as temperatures rise above the human comfort level. However, cold temperatures cause battery life to drop, and the colder the temperature the greater the reduction in available battery life. Under very cold conditions (-20°C / -4°F and below), you can expect your battery life to be shortened. When working in very cold conditions, consider carrying a fully charged, spare battery in a warm place. The unit is designed so that battery replacement can be easily done. The battery performance will improve by keeping the unit and the spare battery warm (for instance, keeping them inside your coat).

# Safe use of your Unit

## Carrying the unit

Due to radio frequency emissions, it is unsafe to operate the radio with the unit in a holster, dangling from a lanyard, or with any method that keeps the powered unit in very close proximity to the head or torso. For safe operation, carry the unit in your hand with the antennas located at least 20 cm (~8 inches) from the head or torso.

## Repair

Do not attempt to dismantle the unit for repair. There are no user-serviceable parts inside. For service, use the contact details listed on the cover of this manual or contact your local dealer.

## Battery safety

- Use only the battery supplied with your unit to power the unit. Use of other power sources could damage the unit, void your warranty and pose safety hazards.
- **Caution:** Do not expose to temperatures above 70 C (158 °F) Do not short external contacts. Do not disassemble or mistreat the battery. Failure to follow those instructions may present risk of explosion, fire or high temperatures. There are no user-serviceable parts in the battery pack.
- Handle a damaged battery with extreme care. If the electrolyte comes in contact with your skin, wash the exposed area with soap and water. If it comes in contact with the eye, flush the eye with water for 15 minutes and seek medical attention.
- Lithium-Ion batteries are classified by the U. S. Federal Government as non-hazardous waste and are safe for disposal in the normal municipal waste stream. These batteries, however, do contain recyclable materials and are accepted for recycling.

## AC adapter safety

- Use only AC and vehicle adapters intended for the unit. Other external power sources may damage your product and void the warranty.

- Make certain the input voltage on the adapter matches the voltage in your location. Make certain the adapter has prongs compatible with your outlets.
- AC adapters are designed for **indoor use only**. Avoid using the AC adapter in wet areas.
- Unplug the AC adapter from power when not in use.
- Do not short the output connector.

## Environmental Specifications

TEMPERATURE	Operation: -30 to +60 C (-22 to +140 °F) Storage: -40 to +70 C (-40 to +158 °F) Shock: MIL-STD-810F, Method 503.4
HUMIDITY	MIL-STD-810F, Method 507.4
WATER	IP67, sealed against accidental immersion (submersible to 1 meter for 30 minutes), MIL-STD 810F, Method 512.4, Procedure 1
DROP	MIL-STD-810F, Method 516.5, Procedure IV 26 drops @1.22 m (4 ft.) onto plywood over concrete; 6 drops @-30 C (-22 °F), 6 drops @60 C (140 °F)
SAND AND DUST	IP67, sealed against dust, MIL-STD 810F, Method 510.3, Procedure 1 & 2
VIBRATION	MIL-STD 810F Method 514.5, Procedure I & II
ALTITUDE	MIL-STD 810F, to 4572 m (15,000 ft) at a nominal temp. of +23 C (+73 °F), Method 500.4, Procedures I, II, & III
EMI	Meets FCC class B requirements
ROHS COMPLIANT	This product complies with international RoHS regulations

## Hardware Specifications

OS	Windows Mobile 6
CPU	Marvel PXA320 XScale® 806 MHz
RAM (VOLATILE)	128 MB DDR SDRAM
FLASH STORAGE MEMORY (NONVOLATILE)	512 to 1G MB of nonvolatile Nand Flash storage
DISPLAY	480 x 640 pixel (VGA) color TFT with LED backlight
KEYPAD	PDA or Data Numeric
BATTERY LIFE	15 hours continuous room temperature operation with default settings and no embedded radios
BATTERY CHARGING	4 to 4.5 hours to full charge
BATTERY CAPACITY	5200 mAh Li-ION rechargeable
I/O BOOTS	<b>USB Boot:</b> Mini-USB, USB, Audio Jack, Power <b>Serial Boot:</b> Mini-USB, RS-232 serial (9-pin), Power
SOUND	Integrated sealed speaker and microphone. Audio jack is for a headset with mono speaker(s) and mic.
EXPANSION PORTS	<b>Basic:</b> SD slot, CF Type II, 8-pin custom connector
INTEGRATED WIRELESS CONNECTIVITY	All units have Integrated Bluetooth Optional Wireless LAN and GPS

# Troubleshooting

**It is critically important that my battery doesn't fail during a job. Do you have any suggestions?**

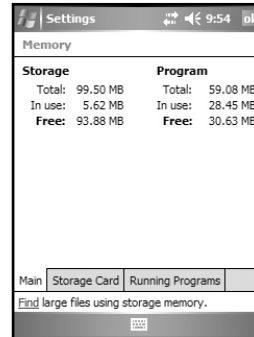
Consider carrying a fully charged spare battery in the field. The unit is designed so that battery replacement can be easily done.

**How do I delete files?**

Open File Explorer and browse to the file to be deleted. Touch and hold on the file and tap **Delete** from the menu that appears. **Unlike PCs, Windows Mobile does not support a Recycle Bin. Once you delete a file, it cannot be recovered.**

**How can I tell how much memory is available?**

Tap **Start / Settings / System / Memory** to view available free storage and program memory. The screen shot shows 94 MB of storage memory is available for files and 31 MB of program memory is available for running applications. Tap **Storage Card** to view available memory on memory cards that may be installed. If there is more than one card installed, tap on the dropdown arrow to select the different cards.



Storage		Program	
Total:	99.50 MB	Total:	59.08 MB
In use:	5.62 MB	In use:	28.45 MB
Free:	93.88 MB	Free:	30.63 MB

Main Storage Card Running Programs

Find large files using storage memory.

**How can I make the display more viewable?**

The default backlight brightness is set to about 65 percent of the maximum brightness. Tap **Start / Settings / System / Backlight / Brightness**, and adjust the slider to increase display brightness; however, doing this will reduce battery life. You can also change background theme found under **Start / Settings / Personal / Today**. Confirm that you have only one screen protector in place.



**Can I use my SDIO device with my unit?**

SDIO devices work as long as they are supported with Microsoft Windows 6 drivers. An extended cap, sold as an accessory, can be used for oversized SD cards.

**How can I see file extensions or file attributes?**

The File Explorer included in Windows Mobile does not have any support for viewing file extensions or attributes like the Windows Explorer program on a PC.

There are two ways to get around this limitation. You can connect the unit to your PC and browse from the PC to view file extensions and attributes. (Refer to **Connecting to a PC** on page 19 for details.) Alternatively, third-party file management programs are available for Windows Mobile devices that may support a Recycle Bin as well as viewing file extensions, file attributes, zip archives and more.

**Can I work with Microsoft Office files in Word Mobile and Excel Mobile?**

Office Mobile applications are trimmed down versions of the PC Microsoft Office applications that allow you to view simple documents and to make simple changes on your unit. However, they do not support all of the formatting and other features that are supported by the PC applications.

**Can I use my USB memory stick (or mouse, keyboard, cell phone or other USB device) with my unit?**

Memory sticks and many other USB devices will work. Other USB devices may require special drivers that must come from the device manufacturer. Check with the device manufacturer to see if the device is supported under Microsoft Windows Mobile.

# Regulatory Information

## U.S.A.

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 to 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.

## Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications. Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

# Declaration of Conformity

## Europe

According to ISO / IEC Guide 22 and EN 450 14

**Manufacturer's Name:** Tripod Data Systems, Inc.  
**Manufacturer's Address:** 345 SW Avery Ave.  
Corvallis, OR 97333 USA

Declares, under our sole responsibility, that the product:

**Product Name:** Handheld Data Collector  
**Model Number:** Nomad  
**Product Options:** ALL

### conforms to the following Product Specifications:

R&TTE Directive 1999/5/EC	EN 61000-3-2 (2000)
ETSI EN 300 328 V1.6.1 (2004)	EN 61000-3-3 (2001)
ETSI EN 301 489-1 V1.5.1 (2004)	EN 61000-4-3 (2002)
ETSI EN 301 489-17 V1.2.1 (2002)	EN 61000-4-2 (2001)
EN 55022 (1998)	EN 61000-4-4 (2004)
CISPR 22 (2005)	EN 61000-4-5 (2001)
EN 55024 (1998), Amendments A1:2001, A2:2003	EN 61000-4-6 (2004)
EN 60950-1 (2001)	EN 61000-4-11 (2004)
CFR 47, Part 15, Subpart B	

### Supplementary Information:

In addition, the product is battery powered and the AC adapter provided with this product has been certified to IEC 60950 +A1, A2, A3, A4, A11.

As manufacturer, we declare under our sole responsibility that the equipment follows the provisions of the Standards stated above.

Corvallis, OR USA

### CAUTION:

Only approved accessories may be used with this equipment. In general, all cables must be high quality, shielded, correctly terminated and normally restricted to two meters in length. AC adapters approved for this product employ special provisions to avoid radio interference and should not be altered or substituted.

Unapproved modifications or operations beyond or in conflict with these instructions for use may void authorization by the authorities to operate the equipment.

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