

Technology Technical Note No. 4

South Dakota Trimble GeoXT/ ArcPad User Guide



United States Department of Agriculture



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What's in the box?



1. Protective Case
2. Power cord with receptacle adaptors
3. Cradle or docking station
4. USB computer connection cable
5. CD – Documentation/Software
6. Quick start guide
7. Trimble GeoXT GeoExplorer 2008 Series
8. Hand strap
9. Stylus
10. Protective screen covers

Getting Started

Parts of the GeoExplorer 2008 series handheld

The following pages show the main parts of the handheld.



Powering the Handheld

When charging the battery, put the unit in the suspend mode or turn off the handheld.

If the battery becomes hotter than maximum temperature allowed, charging is automatically suspended until the battery cools and then charging automatically restarts. (This may take up to 1 hour.)

Flashing orange light means there is a battery charge fault. May need to call for assistance.

Note – The battery life can be significantly shortened if power is constantly supplied to the handheld.

Suspend Mode

Set the handheld to automatically enter Suspend Mode when idle.

Suspend Mode – When you press the **Power** button to turn off the handheld, the handheld goes into Suspend mode.

- This is a low-power mode that maintains the main memory contents and keeps applications running but does not allow you to operate any of the handheld's function.
- To turn on the handheld when it is in Suspend mode, press the **Power** key. The handheld is ready for operation. There may be a delay of up to 30 seconds while the integrated GPS receiver automatically reactivates.

You can configure the handheld to automatically enter Suspend mode when it has been idle for a specified time. By default, the handheld is set to enter Suspend mode if the handheld is not used for three minutes.

To change the time to enter Suspend mode:

1. Tap the battery icon  in the title bar of the *Today* screen. The Power control appears.
2. Tap the *Advanced* tab.
3. From the *On battery power* option, select the *Turn off device if not used for* check box and then select the idle time format the drop-down list.
4. Tap **OK**.

Resetting the Handheld

Performing a soft reset

A soft reset is similar to restarting a computer. A soft reset saves data and closes all open applications and then restarts the handheld. All data and settings are retained after a soft reset.

To perform a soft reset, use the tip of the stylus to lightly press the **Reset** button. Alternatively, press the Power key for one second until the **Power** menu appears and then tap the **Soft Reset** button.

Performing a hard reset

A hard reset retains settings and data that you have previously saved on the handheld. However, any unsaved data may be lost.

Note – Perform a hard reset only if a soft reset does not resolve the problem.

To perform a hard reset, press and hold the **Power** button as you use the tip of the stylus to lightly press the **Reset** button.

Storing Data

As an alternative to internal storage, data can be saved to a removable card. An SD card was provided with each unit. This card should not have to be removed. The data can be transferred using Active Sync to your computer.

Device Lock

Use the *Device Lock* option on the *Today* screen to lock the screen and keypad while the handheld remains turned on.

To lock the device, tap *Device unlocked* in the *Today* screen. The *Today* screen shows *Device locked*, and *Unlock* appears in the left corner of the menu bar.

Once the handheld is locked, the screen and most of the keys do not respond until the handheld is unlocked. The exceptions are the **Power** key and the **Reset** button, which always respond. Communication with the external devices such as a GPS receiver is not interrupted by locking the handheld. An example of this use is you could lock the device to safely transport it between features, while keeping the connection to the GPS receiver so you can continue recording the GPS positions.

To unlock the device, tap the *Unlock* notification in the left corner of the *Today* screen menu bar and then tap **Unlock**.

Backlight

The backlight makes the screen easier to read in low light, but uses extra power. Use the *Backlight* control to configure power-saving settings for the backlight. To open the *Backlight* control:

- Tap Windows icon/*Settings* / *System* / *Backlight*.

To set the backlight to automatically turn off:

1. To automatically turn off the backlight when the handheld is idle and is using *battery power*, tap the *Battery Power* tab. Select the *Turn off backlight* check box and then select a time from the drop-down list.
2. To automatically turn off the backlight when the handheld is idle and is using *external power*, tap the *External Power* tab. Select the *Turn off backlight* check box and then select a time from the drop-down list.
3. Tap **OK**.

To change the brightness:

1. Tap the *Brightness* tab.
2. Tap and drag the slider control to the left to make the backlight darker, or to the right to make the backlight brighter.
3. Tap **OK**.

Using the Stylus



To interact with the handheld, use the stylus to tap on the touch screen.

Actions you can perform with the stylus are as follows:

Tap – Touch the screen once with the stylus to open items and select options

Tap and hold – Tap and hold the stylus on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform

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.

Activating Keyboard

Use the Input Panel button  to type or write on the screen.

The Input Panel button automatically appears in the menu bar of any application.

To display the currently selected input panel, tap a text box in the application, or tap the Input Panel button.

To select an input panel, tap the Input Selector arrow next to the Input Panel button and then tap the input panel you want to use.

Using the on-screen keyboard

To enter characters, use the stylus to tap the keys on the keyboard. When finished entering text in a field, tap (Tab) to accept the text you have entered and then move to the next field.

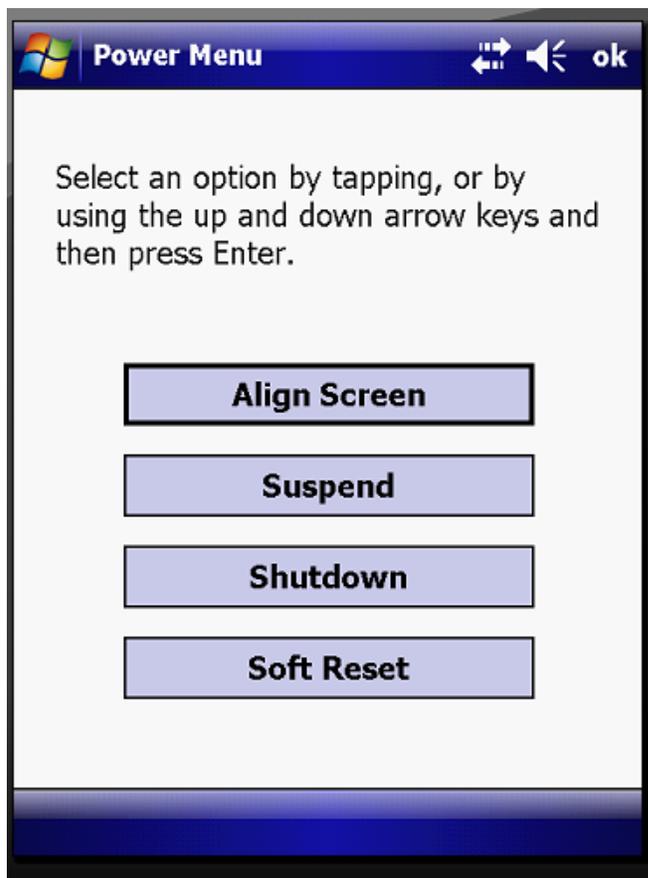
To enter special characters, tap (123) to display keyboards containing numbers and symbols. To switch back to the main keyboard, tap (123) again.

To hide the keyboard, tap the keyboard icon again.

Tip –To make the keys larger, tap the Input Selector arrow and then tap *Options*. In the *Input method* list, select Keyboard and then tap **Large Keys**.

Power Up, Standby Mode, Power Down

1. To power the unit up or put in Suspend mode, press briefly (less than one second) tap on the green power button  or to turn off the handheld (put it into Suspend mode).
2. To Power the unit down (shutdown), press the green power button till the power menu appears.



3. Tap on **Shutdown** to power the unit off.

ActiveSync Software

ActiveSync synchronizes information between the Trimble and the computer for transferring data. You can use the Windows Explorer feature in either program to move files from your computer to your device and back.

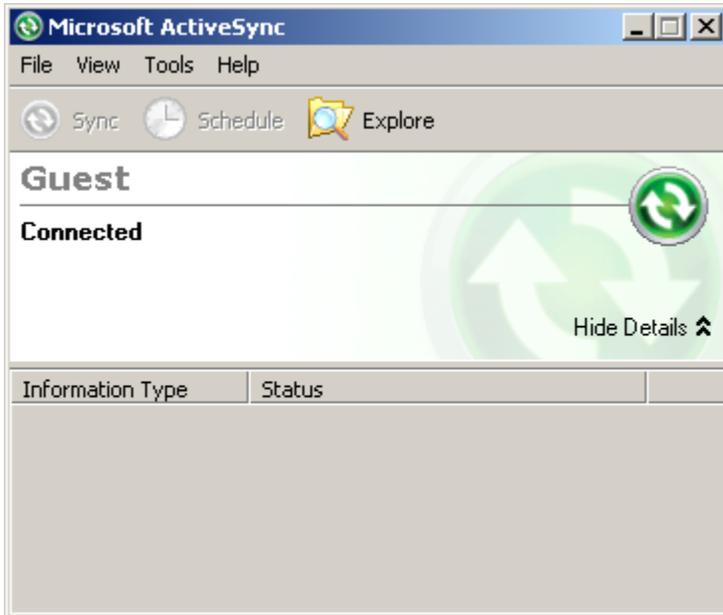
To activate ActiveSync:

1. Hook the USB data cable between the Trimble cradle and the computer.
2. Go to Programs – click on Microsoft Active Sync. The following screen should appear:

*Note – For laptop users, the USB data cable between the cradle and computer must be connected directly to the computer, not the docking station.

Hit cancel on the setup wizard screen.

The following screen should appear:



Now you should be synchronized and able to communicate between the Trimble and the computer.

ArcPad on the GeoXT

Each Trimble has ArcPad 8.0, Service Pack 2 customized software loaded. This will be the software we will use to collect the data.

Appendix A

Official Natural Resources Conservation Service (NRCS) Policy in South Dakota (SD) for Using Trimble GeoXT 2008 Global Positioning System (GPS) Unit to Certify Conservation Practices

PROCEDURES

Background

The Trimble GeoXT 2008 series GPS units have shown to have high level of accuracy for geographic information system (GIS) data collection. Trimble units properly used by trained personnel can meet current NRCS spot-checking tolerances for practice certification.

Area Measurements

Trimble GPS units can be used to measure any area for practice certification as it has reliable accuracy within one to three meters when the Positional Arelution of Precision (PDOP) is at or below 5.0. The GeoXT is geared toward maintaining precise GIS databases by delivering submeter accuracy.

Length Measurements

Trimble GPS units can be used to measure any length for practice certification on slopes less than 15 percent provided the accuracy level calculated by the GPS unit has a PDOP at or below 5.0. If slopes exceed 15 percent for a portion of the measurement, the steeper slope lengths must be measured by conventional methods, such as tapes or measuring wheels.

Verification of GPS Data for Practice Certification

All area and length measurements obtained from the Trimble units for practice certification must be downloaded into Common Computing Environment (CCE) approved GIS software for verification of the proper location of the conservation practice. Trimble data (position points) used for practice certification will be stored in a Customer folder in Customer Service Toolkit (CST) for that cooperator. When CST and Trimble equipment are used to certify a conservation practice, the Conservation Practice Certification Template shall be used to document certification of all conservation practices.

Use of Digital Orthophotography or Other Georectified Imagery for Practice Certification

Areas that are very WELL-DEFINED (visually) on Digital Orthophotography or other georectified imagery can be digitized and measured using CST for practice certification. The view scale shall be 1:7920 (1 inch = 660 feet) or less.

GPS Practice Certification

Only those employees that have received Trimble training will be allowed to use CST and GPS equipment to certify a conservation practice.

Approved GPS Platform

The state conservationist will approve Trimble GeoXT platforms (hardware and software) that are acceptable for practice certification.

Please see General Manual, Title 450, Part 407.12, Subpart B, dated July 2006, for official NRCS policy.