

3-Pedon PC Setup with GPS

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Title :Pedon PC Setup with GPS

Type: Skill Knowledge

Performance Objective:

Trainee will be able to set up a GPS receiver to work with ArcMap at the completion of the Module

Trainer Preparation:

Make sure the participants have machines with the SRITB Extension loaded and a GPS receiver with cable or Bluetooth connectivity.

Special Requirements:

CCE configuration and ensure that ArcMap is installed.

Prerequisite Modules:

None

Procedure:

- Trainer will use as a job aid to help prepare for this task.
- Trainer can then use this job aid as a training module to accomplish the task.

Notes/Purpose:

The purpose is to provide a consistent setup of the GPS unit.

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Pedon PC Setup with GPS

- The SRITB toolbar gives you the ability to auto-populate site information in Pedon PC using data in ArcMap
- It populates the documentation point layer in your geodatabase
- It can populate previously recorded descriptions with site data
- Starts Pedon PC from a GIS environment
- When used with a GPS, it intersects the GPS location with data in ArcMap

These are the benefits of the Auto-Population Toolbar.

At the National Level we have included those layers that have the least controversy associated with them. Over time it would be possible to autopopulate tables from other geospatial layers. However, there is some concern that it would be more appropriate to use the native layers in conjunction with the tabular data rather than to extract data to populate another database. As users work with the initial few fields that are autopopulated, we are hoping that they formulate an opinion regarding the value of populating other fields this way.

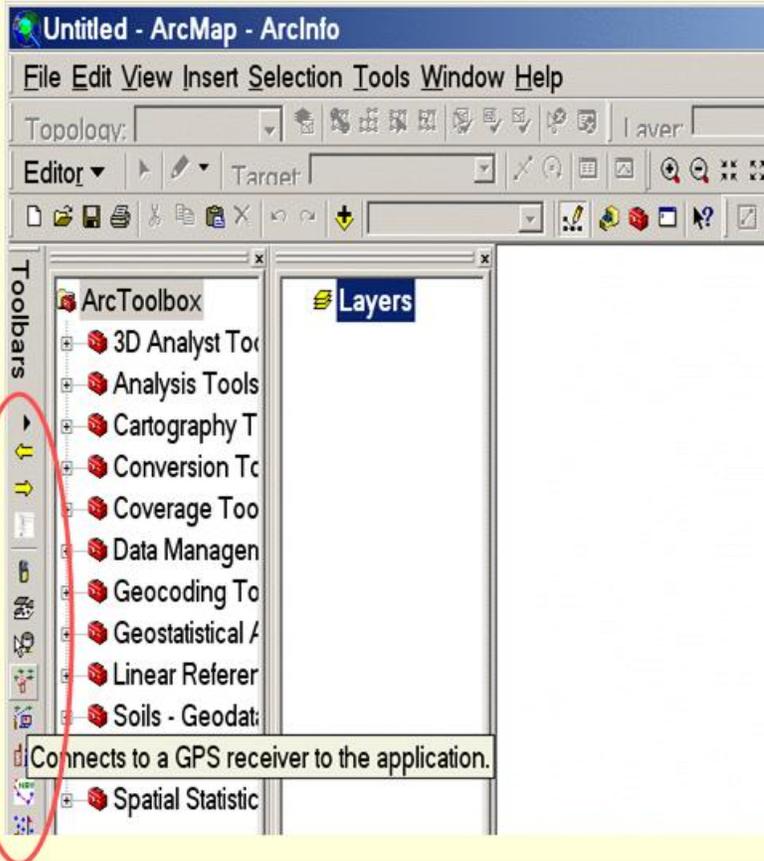
Setup is required to use the GPS functions with ArcMap

- Step 1. Start ArcMap

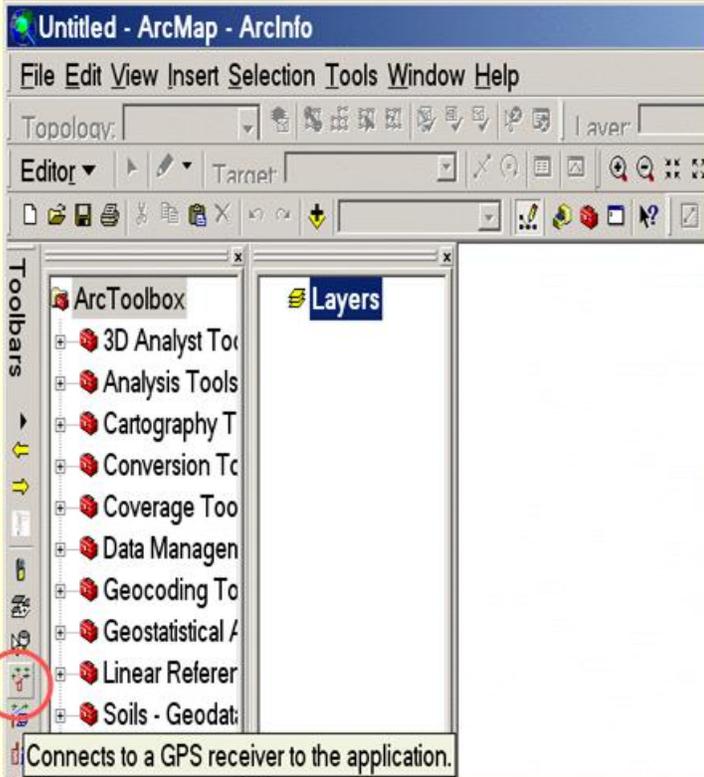
Start>All Programs > ArcGIS > ArcMap



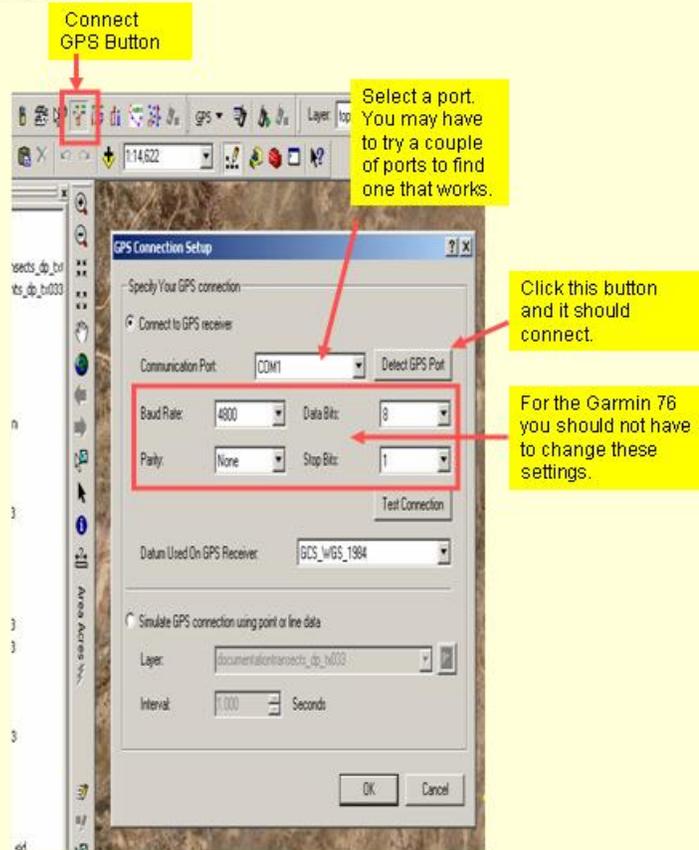
- Step 2 Navigate to the GPS Toolbar on the SRITB – Soil Resource Inventory Toolbox Extension for ArcGIS using the yellow arrows.



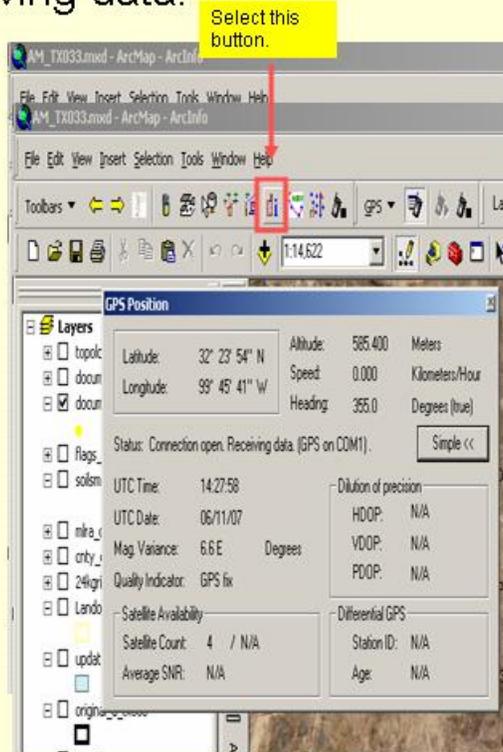
- Step 3. Click the button that connects the GPS receiver to the ArcMap application for live tracking. It may take a couple of tries to get a connection.



You may need to do a test connection
Step 4. Select a port. Ports 1 thru 7 generally work.
Step 5. Click the Detect GPS Port Button.



Step 6. The GPS information button gives you a screen showing information about the data you are receiving from your GPS. If the Lat and Long is blank, you are not receiving data.



If your GPS has Bluetooth capabilities, connect using them

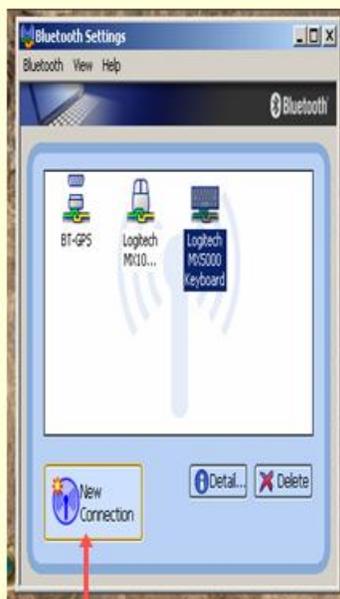
- The following slides detail how to set up a Bluetooth connection.
- They were written using a Garmin 76 with a Bluetooth transmitter plugged into the back of the GPS.
- The instructions will work for any type of Bluetooth device.
- If you are using a GPS cabled to a tablet or laptop, the only setup required is from the GPS connection button as described previously.

Set up a Bluetooth connection for the GPS. This is only done once. After this initial setup, you can connect using the ArcMap tools.

If the Bluetooth program is not showing you will need to have your IT person enable bluetooth.



Step 1. Go to Start, All Programs, Bluetooth, Bluetooth settings.



Step 2. Click on the New Connection button.



Step 3. Turn the Bluetooth transmitter on so the tablet can "discover" it. It does not have to be hooked up to the GPS. Just turned on and transmitting a signal.

Step 4. Select the custom mode. This will allow you to select the port used. Express mode assigns a port of 40 which will not work with ArcMap. Ignore any warnings about using custom. Click next.



Step 5. If everything works this screen will come up showing the BT-GPS. If any other Bluetooth enabled devices like a mouse are turned on they will also show up. Click next.



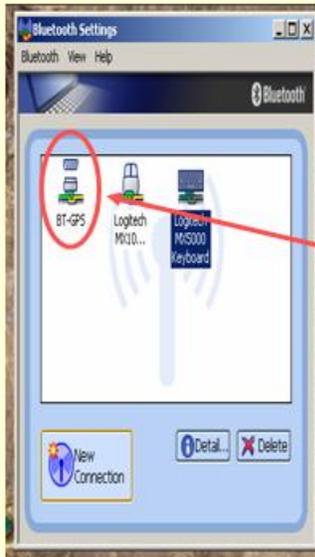
Do not use the default settings. Step 6. Uncheck "Use default COM port".

Step 7. Hit the drop down and select a port. Use port 1, 6 or 7. They seem to work best.

Step 8. Click next.



Step 9. You can accept the default name or give it a name. Click next.



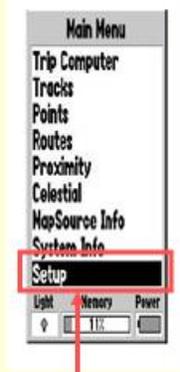
Once you are done this screen opens showing your devices connected via Bluetooth. My GPS is now connected and streaming data to Arcmap.



This screen shows a successful connection using the defaults. You have a Bluetooth connection but it will not work in Arcmap. This is the most common mistake made when setting up a Bluetooth connection.

Your GPS needs to be set up to communicate with Arcmap. Step 10. Go to the main menu and select Setup. Step 11. Select the interface tab. Step 12. Select the Serial Data Format and scroll down to RTCM In/NMEA Out. This makes the GPS stream data in a format that Arcmap can use for live tracking. If you have never used the GPS for live tracking, your GPS is probably set to the default Garmin setting. If live tracking is not working, this is the most common reason why.

receiver.



Main menu then select setup.



Used for downloading into DNR Garmin program

This setting allows the GPS to stream data to the computer in a format for live tracking.

- You only have to do the connection setup once per Bluetooth device.
- From this point forward, to start live tracking using your GPS, click the “Connects GPS receiver to the application” button  on the GPS toolbar. The tablet and GPS find each other and connect using the settings you created.
- Now that you are recording descriptions and integrating them with Arcmap, you can use the site table in the pedon.mdb file to display your points.
- This is also done in your geodatabase but I prefer to use my pedon database also.