

Send GPS Data From a GeoExplorer Handheld to the Ricoh Camera

January 12, 2009

This support note describes how to connect and use an external receiver with the Ricoh camera.

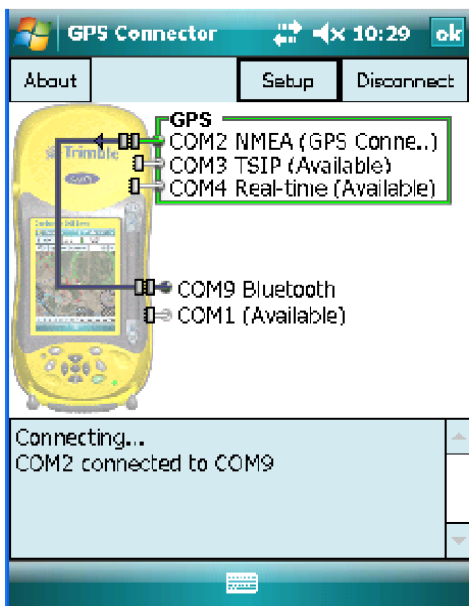
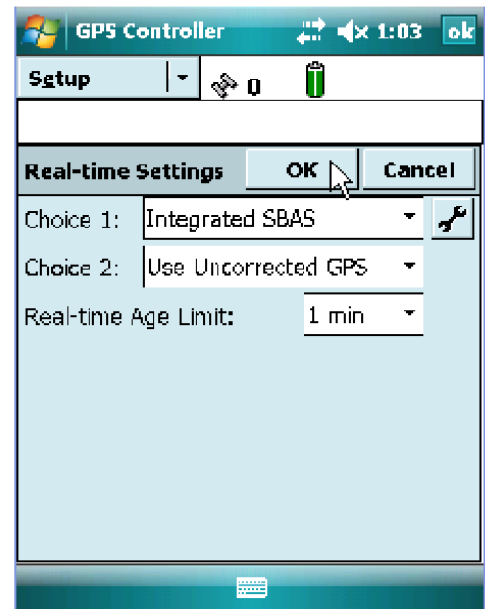
If you are using the camera as your data collector, but you want the higher accuracy GPS position from the GeoXT or GeoXH, follow the steps below:

1. Set up the handheld:

In order to get the highest possible accuracy from the Geo, you will want to first configure it to output real-time. To do this, you will need to install GPS Controller. You can download the latest version of GPS Controller from here: http://www.trimble.com/support_trl.asp?pt=GPS%20Controller&Nav=Collection-32053.

Open GPS Controller on the handheld. It should automatically connect to the internal receiver. If it does not connect, tap the dropdown next to Skyplot and go to Setup. Tap GPS in the upper right corner to connect to the receiver.

Once you are connected, tap Real-time Settings on the Setup page. Set Choice 1 to Integrated SBAS and Choice 2 to Use Uncorrected GPS. Tap OK. To save this change, tap the dropdown arrow next to Options, and tap Disconnect from GPS. You can now close GPS Controller.



Now go to Start>Settings>Connections tab>Bluetooth. On the Mode tab, make sure that Bluetooth is on and that the device is set to discoverable or visible. If you have a 2008 Series Geo, tap OK.

If you are using a 2005 Series Geo, tap the COM Ports tab. Tap New Incoming Port, and select a com port to output the data on (preferably COM 7, 8 or 9). Uncheck the Secure Connection box, and tap Finish. Close the Bluetooth Manager.

Tap GPS Connector. Tap Setup. In the dropdown next to NMEA Output, select the COM port you set up in the previous step. If you have a 2008 series, just choose the COM that is already assigned (Bluetooth-COM9). Tap OK. You should see the NMEA output connect to the Bluetooth COM port. You must leave GPS Connector open and connected on the handheld in order to connect to the camera.

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2. Set up the camera:

When connecting to the GeoXT or GeoXH, the first fix can take up to 20 minutes, so you will want to make sure the camera does not timeout when it is attempting to connect. So the first thing you want to do is set the Auto-Off to 30 minutes. To do this, push the MENU/OK button, the right arrow to get to SETUP and then the down arrow to get to AUTO POWER OFF. Push the right arrow to get the list of choices, choose 30 MIN, and push MENU/OK to select.

If you are using a 2008 series Geo, you will be required to enter a passkey. To set this up on the camera, push MENU, push the right arrow to get to EXP SET, push the down arrow until you get to PASS KEY, and then push the right arrow to set the pass key. Make it something easy to enter quickly, such as 1111 as this will be important when you attempt to connect to the Geo. Push OK when finished. If you are using a 2005 series Geo, this step is not necessary.

If you have a camera that has both Bluetooth and WiFi, you will want to set the camera to use Bluetooth. To do this, push the MENU button, the right arrow to get to EXP SET, and then the down arrow to get to CHANGE COM. Push the right arrow to choose BT, and then push OK. If you have a Bluetooth only camera, this step is not necessary.

If your camera has the GPS module installed, you will want to tell the camera to use the GPS data coming from the Geo and not the GPS data from the attached GPS module. To do this, push the MENU button, push the right arrow to get to EXP SET, push the down arrow until you get to GPS DATA SELECT, push the right arrow to select BT instead of ON-BOARD. If you do not have the GPS module installed, this step should not be necessary. *Note: If you do not have GPS DATA SELECT in the EXP SET, you may not have the correct firmware version installed. Contact your dealer to get the updated firmware and directions for installation.*

3. Make the connection:

Make sure the Geo is still on and connected in GPS Connector.

On the camera, push MENU, the right arrow to get to EXP SET, and then the down arrow to get to BT SERIAL. Arrow to the right. At "THE DESTINATION IS NOT REGISTERED. SEARCH DESTINATION?" screen, arrow to the right and press YES.

The Ricoh camera will find and display the address of your Geo. Highlight the appropriate Geo, and push OK.

If you are using a 2008 series Geo, you should see a message on the Geo asking if you would like to add the camera to your device list. Tap Yes, and enter the pass key that you previously set on the camera. Once you have done this the first time, you should not need to enter the pass key when connecting the next time.

The connection will be made, and the GPS data being received by the Geo should be sent to the camera.

On the camera, you will see the number of satellites that are being tracked. When the camera has a fix, it should say 3D, and when it is also getting real-time corrections and the higher accuracy, it will say 'diff'. As mentioned earlier, this can take around 20 minutes for the first fix.

If you want the Geo's GPS position imprinted on each photo, go the Menu, EXP SET, and arrow down to GPS IMPRINT. Set that to any of three coordinate system selections.

If you would like your Ricoh camera to connect to the Geo automatically, every time you turn it on, you can go to Menu, EXP SET. The first item is BT AUTO CONN. Set that to ON. This will only work if you have already set up your Geo and have GPS Connector running.