

# Leica Flexline & FieldGenius Setup Guide

## Firmware Check

To check Firmware version do the following:

1. From the Main Menu, press 6 (Tools)
2. From the Tools Menu, press 3 (SysInfo)
3. From the System Information 1/2 page, press F1 (Softw.)
4. From the Software Information 1/4 page, you will see the firmware versions.

During the writing of this document our instrument had the following firmware:

|                     |                       |
|---------------------|-----------------------|
| Instrument Firmware | V 0.99                |
| Build Number        | 428                   |
| Active Language     | English (V 1804.4113) |
| EDM Firmware        | V 4.17                |

## Communication Parameters

The flexline series of instrument support serial communication via Bluetooth or Serial cable.

### Check Baud Rate

It is important to check the communication parameters before connecting your data collector. The default baud rate for the Flexline series of instruments is 115200.

1. From the Main Menu, press 5 (Settings)
2. From the Settings Menu, press 3 (Comms)
3. Make a note of the baud rate displayed on the Communication Parameters Page.

### Check Bluetooth PIN Code

The default pin code for the Bluetooth connection is 0000. It is recommended that you confirm the PIN code before connecting your data collector for the first time.

1. From the Main Menu, press 5 (Settings)
2. From the Settings Menu, press 3 (Comms)
3. From the Communication Parameters page, press F1 (BT-PIN) and make a note of the pin number for the Bluetooth connection.

## Port Settings


It is recommended that you leave the Port setting set to Automatic for ease of use.

1. From the Main Menu, press 5 (Settings)
2. From the Settings Menu, press 3 (Comms)
3. From the Communication Parameters page, ensure that you have the following settings:


|           |                                 |
|-----------|---------------------------------|
| Port      | Automatically                   |
| Bluetooth | Active                          |
| Baudrate  | 115200 (Can be changed by user) |
| Databits  | 8                               |
| Parity    | None                            |
| Endmark   | CR/LF                           |
| Stopbits  | 1                               |


## Connect Archer and FieldGenius with Bluetooth

### Start Bluetooth

|  |  |
|--|--|
|  A screenshot of a Windows Mobile Start menu. At the top, it says 'Start' with a Windows logo and icons for copy, paste, and volume. Below that, it shows the date 'Tuesday February 03, 2009' and the time '6:05 PM'. A Bluetooth icon is shown with the text ': On'. Other items include 'Tap here to set owner information', 'No unread messages', 'No tasks', 'No upcoming appointments', 'Device unlocked', and 'Tap here to sign in to Pocket MSN!'. At the bottom, there are 'Calendar' and 'Contacts' buttons. | <p>Start the Bluetooth radio on the Archer. You can do this by selecting the Bluetooth icon on the Windows desktop screen.</p> |
|--|--|

## Search for Instrument

|   |   |
|---|---|
|  | <p>Open the Bluetooth Settings screen by pressing the <b>Menu</b> button in the lower right corner.</p> |
|---|---|

|  |  |
|--|--|
|  | <p>In the Bluetooth Settings screen click on the Device tab and select “<b>Add new device...</b>”.</p> |
|--|--|



Your Archer will now start searching for your Bluetooth instrument. When it appears in the list, **select it** and then press the **Next** button.



Depending on how the instrument is configured, you might be prompted for a **passkey**.

Enter it now and press **Next**.

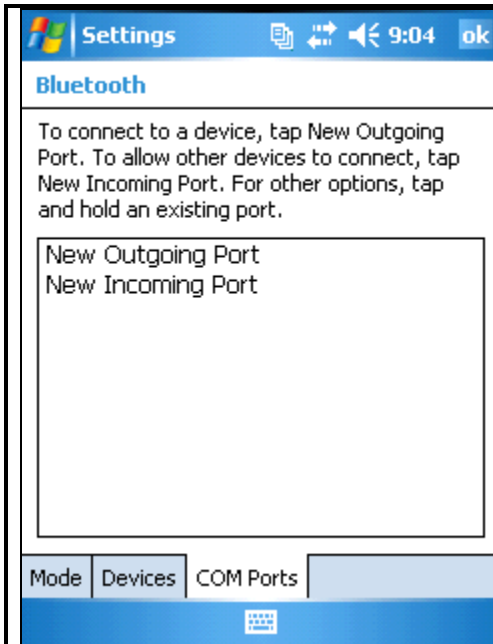
To confirm the passkey set on the instrument, refer to the Bluetooth Pin Code topic at the beginning of this document.

## Assign Com Port to Bluetooth / Instrument Device



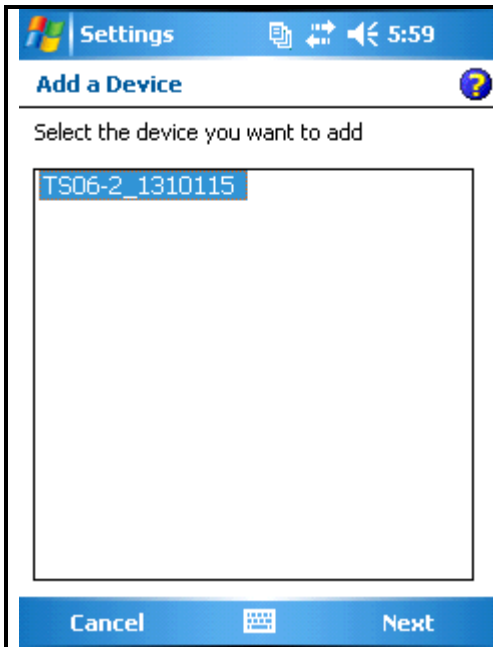
You will then need to select the service type you want to use, on our instrument it the Serial Port service.

Select it, then press **finish** to complete the setup.

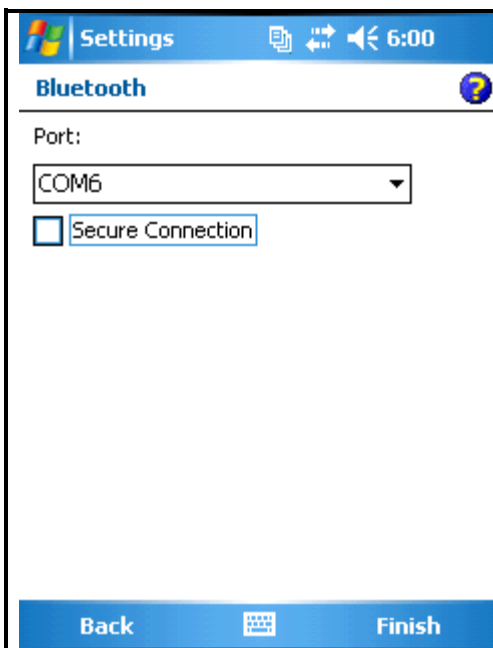


The last thing you need to do is setup the incoming port that the Archer's Bluetooth radio will use.

Select "**New Outgoing Port**".

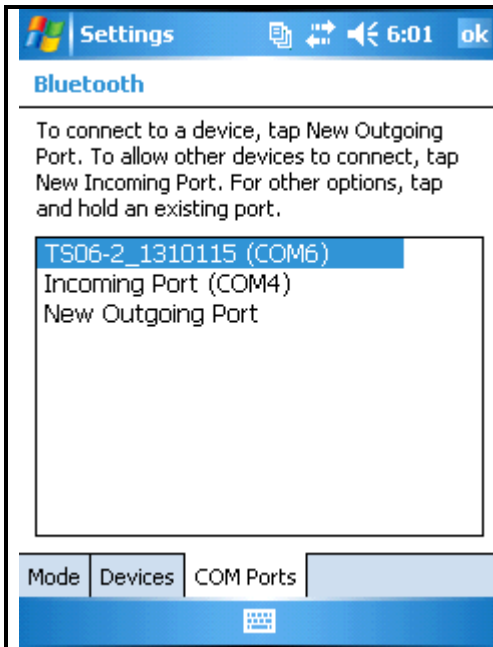


You should now see the partnership that you created with the instrument, select it from the list, then press **Next**.



Select a COM Port to use.

In our example we used COM 6 and turned off "secure connection" and press **Finish** to complete.

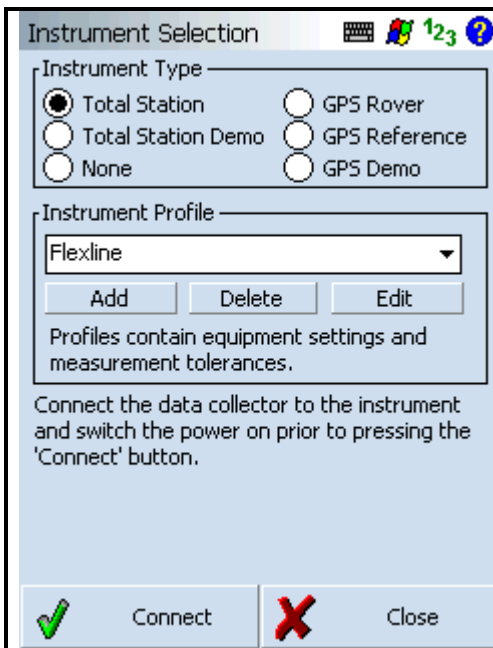


You should now see your Bluetooth setup for your instrument in the list of available COM ports.

Press **OK** at the top right to continue.

## Connect FieldGenius




You must use FieldGenius 2008 Version 4.0.6 or greater.



Start FieldGenius and open or create a new project.

On the Instrument Selection screen create a new Total Station Profile. In our example we created one named Flexline.

Press the **Edit** button to edit the profile and then press **Model and Communication**.

Model and Communication   123 

Make


Model

Status: **Not Connected**

Port  Data Bits

Baud Rate  Stop Bits

Parity



On the Model and Communication screen, Select Leica Flexline (GeoCom) and press Use Default Communication Settings.




**Cable:**

If you are using a cable use COM 1.

**Bluetooth:**

If you are using Bluetooth, select the appropriate COM port, in our example our Bluetooth port on the data collector was setup for COM 6.

Press **Close** and then select **EDM Settings**.

EDM Settings   123 

EDM Settings

Mode  EGL

Time Out   Use default time

Minimum  Maximum


Prism Offsets (mm)

FS  BS  RL

Set instrument to zero

Reflectorless Settings

Standard Deviation



Specify the EDM Settings and Prism Offsets you wish to use on the EDM Settings screen.


We suggest you always use the “Set instrument to zero” option and specify your prism offsets in FieldGenius.

We have a comprehensive article on Leica prism offsets and how they affect FieldGenius.




Please refer to the “Leica RX1250 & TPS 1200 Prism Offsets” topic in the MicroSurvey Helpdesk. [www.microsurvey.com/helpdesk](http://www.microsurvey.com/helpdesk)

In our example we are using a non Leica prism and must define a prism offset of 4.4 mm to get correct measurements.

For reflectorless mode you will want to match the Leica offset and set it to 34.4 mm.

 Once you connect to the instrument always take some manual measurements and compare them to the distance reported by FieldGenius. Test both the non prism and prism modes.


Press **Close** then press **Tolerance Settings**.

Measurement Tolerance   123 

Horizontal Angle Tolerance (sec)

Vertical Angle Tolerance (sec)




Distance Tolerance

 Close

Specify the Multiset Tolerances you wish to use on the Tolerance Settings screen.

Press **Close**.


**Note:** There are no Search or Radio settings to define so you can skip those screens.

Instrument Selection   123 

Instrument Type

Total Station       GPS Rover  
 Total Station Demo       GPS Reference  
 None       GPS Demo



Instrument Profile

Flexline 

Add    Delete    Edit

Profiles contain equipment settings and measurement tolerances.




Connect the data collector to the instrument and switch the power on prior to pressing the 'Connect' button.

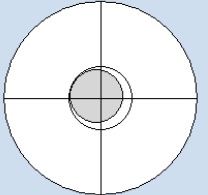
 Connect     Close

Go back to the Model and Communication screen. You are now ready to connect to the instrument.


Make sure the instrument is powered on and leveled.

Press the **Connect** button. If you successfully connect, you will see the Check Level screen.

Check Level   123 

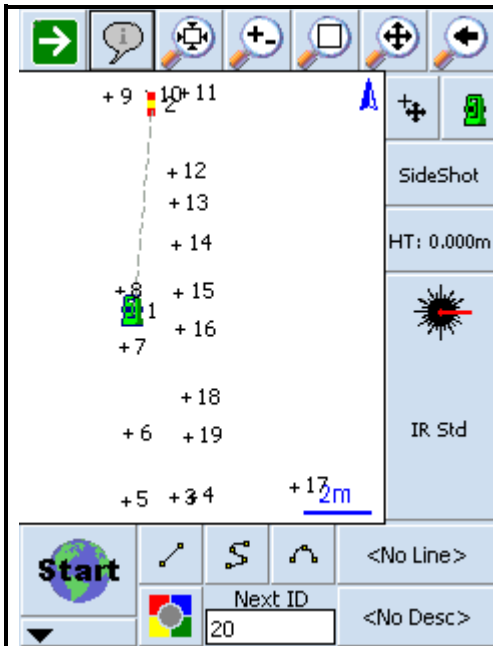



Cross Inclination: 0°00'53"  
Length Inclination: -0°00'23"

 Close

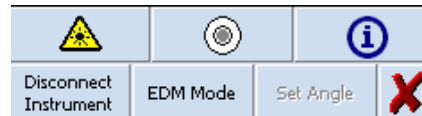
Press **Close** to continue.

## Instrument Control



 From the Map screen you can access the instrument settings by pressing the instrument icon.

Doing so will open the **Instrument Settings** toolbar.



From this toolbar you can change EDM modes, turn the laser pointer on and off, connect to the instrument, check level and view instrument stats.

