

Topcon AP-L1A Robotic Connection

Confirm Settings

Communication Parameters (Bit Format)

1. Select Menu
2. Select F1:Parameters
3. Select F3:COM
4. Select F1:COM1
5. Select F1:BIT FORMAT
6. On the BIT FORMAT screen, make sure it is set to: **D8 S1 NONE**.
7. Press F4 "ENT" to exit.

Communication Parameters (Transfer Speed)

1. Select Menu
2. Select F1:Parameters
3. Select F3:COM
4. Select F1:COM1
5. Select F2:TRANSFER SPEED
6. On the TRANSFER SPEED screen, make sure it is set to: **9600**.
7. Press F4 "ENT" to exit.

Communication Parameters (Terminate)

1. Select Menu
2. Select F1:Parameters
3. Select F3:COM
4. Select F1:COM1
5. Select F3:TERMINATE
6. On the TERMINATE screen, make sure it is set to: **ETX**.
7. Press F4 "ENT" to exit.

Radio Channel Parameters

1. Select Menu
2. Select F1:Parameters
3. Select F3:COM
4. Select F2:COM2(CHANNEL)
5. On the CHANNEL screen, make note of what channel the instrument is set to. This is important, because you will need to match this in FieldGenius.
6. Press F4 "ENT" to exit.

Checking Settings in FieldGenius

Please ensure you have FieldGenius 2005 Version 1.2 installed.

Go to the Main Menu → Settings → Instrument Settings → Total Station

Instrument Type	Settings
GPS	Model and Communication
Total Station	EDM Settings
Manual	Tolerance Settings
Laser	Search Settings
None	Radio Configuration
	Check Level

OK Cancel

Model and Communication

Make certain you set FieldGenius to equal the following:

Total Station

Make: Topcon Model: AP-L1A

Connect to Instrument Default Comm Settings

Port: COM1 Data Bits: 8

Baud Rate: 9600 Stop Bits: 1

Parity: None

OK Cancel

EDM Settings

Make certain you set FieldGenius to equal the following:

EDM Settings

Mode: IR Fine 0.2mm

Time Out(s): 10

Use Default

Minimum: 0m

Maximum: 10000m

Guide Light: High

Prism Offsets (mm)

Foresight: 1.0

Backsight: 0.0

Set Instrument

Reflectorless Settings

Std Dev:

OK Cancel

Tolerance Settings

These are tolerances used during multisets, please confirm that the values meet your desired specifications.

Search Settings

To begin with, set this to Relative Window. Please refer to your FieldGenius manual for more information about the search settings options.

Search Settings ? Help

Search Mode: Relative Window

Search Window Range

Horizontal: 30°00'00" Measure

Vertical: 30°00'00"

Search Window Center

Horizontal: 0°00'00" Measure

Vertical: 90°00'00"

OK Cancel

Radio Configuration

Make sure you select Radio, and confirm that the radio channel matches what is set for your instrument.

Radio Configuration ? Help

Connection

Direct RC-2

Radio

Settings

Channel: E

Station Address:

Remote Address:

OK Cancel

Connecting FieldGenius to your AP-L1A

Once you've confirmed all your settings, and gone through the startup process on your instrument, you can do the following to begin robotic control with FieldGenius.

1. Select the MENU button.
2. Select F3: (Remote)
3. Select F1: (REMOTE)
4. The instrument should now be in REMOTE mode.
5. Make sure you have FieldGenius connected to your radio.

6. From the Model and Communication screen, select the Connect to Instrument button.

Model and Communication ? Help

Total Station

Make **Trimble** Model **5600 Robot**

Connect to Instrument Default Comm Settings

Port **COM1** Data Bits **8**

Baud Rate **9600** Stop Bits **1**

Parity **None**

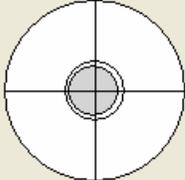
OK Cancel

After you press the continue button you will see some reminders of things to check before you move on, press Continue when ready.

You should hear your instrument beep and if a successful connection is made you will see the Check Level screen.

Check Level ? Help

Calibrate instrument.



Cross Inclination: 0°00'24"
Length Inclination: -0°00'04"

OK Cancel

You can calibrate the instrument if you desire by selecting the corresponding checkbox.

Press OK to continue.

Model and Communication ? Help

Total Station

Make **Topcon** Model **AP-L1A**

Connect to Instrument Default Comm Settings

Port **COM1** Data Bits **8**

Baud Rate **9600** Stop Bits **1**

Parity **None**

OK Cancel

You will now see a green check mark on the Connect to Instrument button.

Press Ok to continue. You are now connected and ready to start surveying.