

This tutorial describes how to change the settings of the LAIRD BT900 Bluetooth module on:

- EmStat Pico development board.
- Sensit BT (SNS and SPE)
- EmStat Go

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1 Bluetooth Development Mode

Most of our OEM instruments use the Laird BT900 module for Bluetooth communications. The Laird BT900 Bluetooth module can be set in a Development Mode to allow for changing the *smartBASIC* script running on it. SmartBASIC is a scripting language from Laird, the manufacturer of the Laird BT900 Bluetooth module.

For more information, see: [BT900 Series Bluetooth Module | Laird Connectivity](#)

2 Using the Dual Mode script from PalmSens

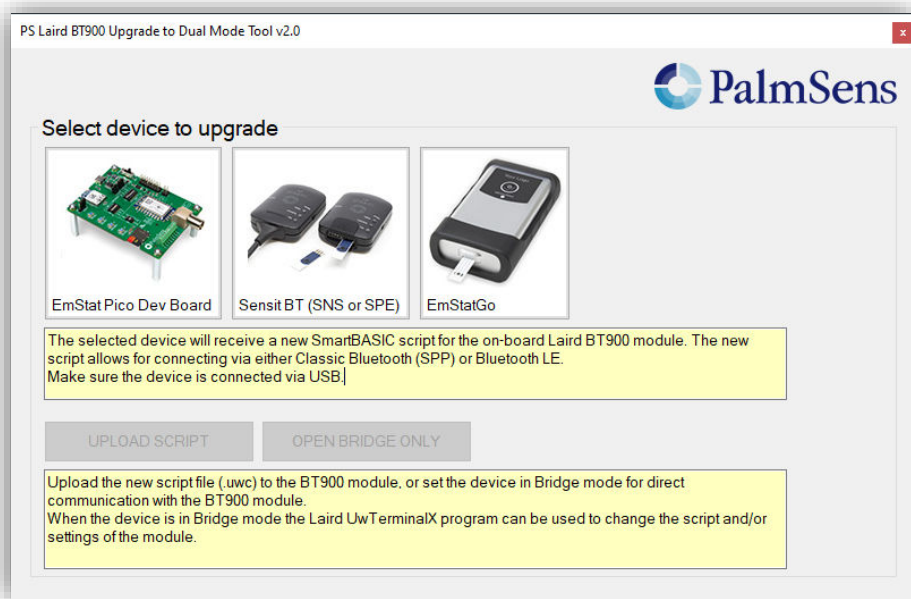
PalmSens has developed a script for using the Bluetooth module in Dual Mode. This means that it will identify itself as a classic Serial Port Profile (SPP) Bluetooth device and as a Bluetooth 4.0 or Bluetooth LE (BLE) device. The host (PC, mobile or other Bluetooth enabled device) can choose to connect via SPP or BLE. The latter allows for connecting with an **iOS app** for example.

The BLE settings used in our Dual Mode script are based on the VSP Application Note from Laird, which can be found here: [BT900 Series Bluetooth Module Documentation](#)

2.1 PalmSens BT900 programming tool

To easily update your device to the dual mode smartBASIC we have developed a simple tool to update your device. The tool works with:

- EmStat Pico development board.
- Sensit BT (SNS and SPE)
- EmStat GO



The tool works simply by selecting which device you have connected to your PC via USB and clicking the "UPLOAD SCRIPT"-button.

You can download the tool here: www.palmsens.com/ps-laird-bt900-upgrade-tool

3 Using your own custom smartBASIC script

In case you would like to use your own smartBASIC script for the Laird BT900 module, you can set the device in "Bridge Mode" using the Programmer tool as described in the previous section. When the device is in Bridge Mode you can directly access the BT900 module via a COM port. You can download the tools to update the BT900 module using UwTerminalX from the Laird website.

See for more information: [BT900 Series Bluetooth Module Documentation](#)

When using UwTerminalX from Laird, please make sure to set Handshaking to None:

