



Load/Power Supply Interface (LPI1010) High Voltage EIS Test System

QUICK-START GUIDE



Hardware Installation and Configuration

① Install your Interface 1010 potentiostat

Install your Interface 1010 potentiostat and calibrate the instrument. Please refer to the Interface 1010 Operator's Manual for detailed information. The latest version of the manual can be downloaded on the Gamry Instruments website at <https://www.gamry.com/support/documentation-downloads/>.

② Install the LPI1010 D-sub Module

Connect the LPI1010 D-sub Module to the Cell Cable connector on the Interface 1010's front panel and hand-tighten the jackscrews.



③ Install the LPI Power Cable

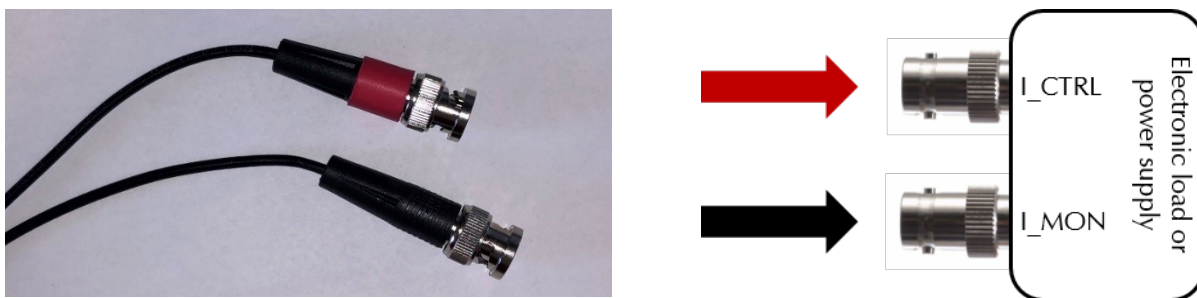
Connect the 15-pin HD D-sub connector of the LPI Power Cable to the mating **User I/O** connector on the back of the Interface 1010 and hand-tighten the jackscrews.

Connect the **male micro USB-C** connector of the LPI Power Cable into the female micro USB-C connector on the top side of the LPI1010 D-sub Module.



④ Connect Current Monitor and Current Control Cables

The LPI D-sub Module has one cable end with two BNC connectors. Connect the red-marked BNC connector lead to the mating **current control** (I_CTRL) input of your power supply. Connect the second, black-marked BNC connector to the **current monitor** (I_MON) output of your power supply.



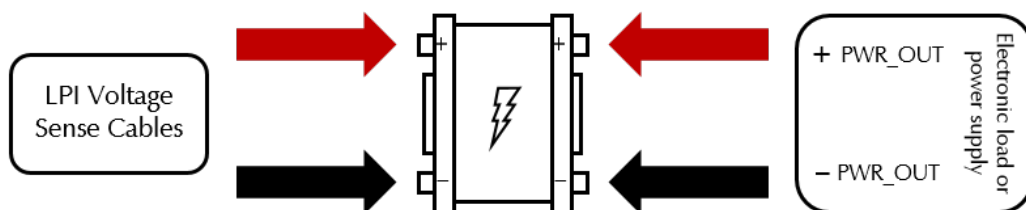
⑤ Connect Voltage Sense Cables

The LPI D-sub Module is connected via a cable to one side of the Cable End Module. On the other side, connect both red and black Voltage Sense Cables which are supplied with your LPI1010 system to the mating banana connectors of the Cable End Module. The red cable is assigned to the positive (+) contact and the black cable is for the negative (-) contact.



⑥ Connect your cables to the DUT (Device Under Test).

Connect both Voltage Sense Cables to the electrode contacts of your DUT. The red connector is for the positive lead, the black connected to the negative contact. Afterwards, connect the power supply to your DUT. Depending on your system, the **power output** may vary. Use appropriate cables and adapters.

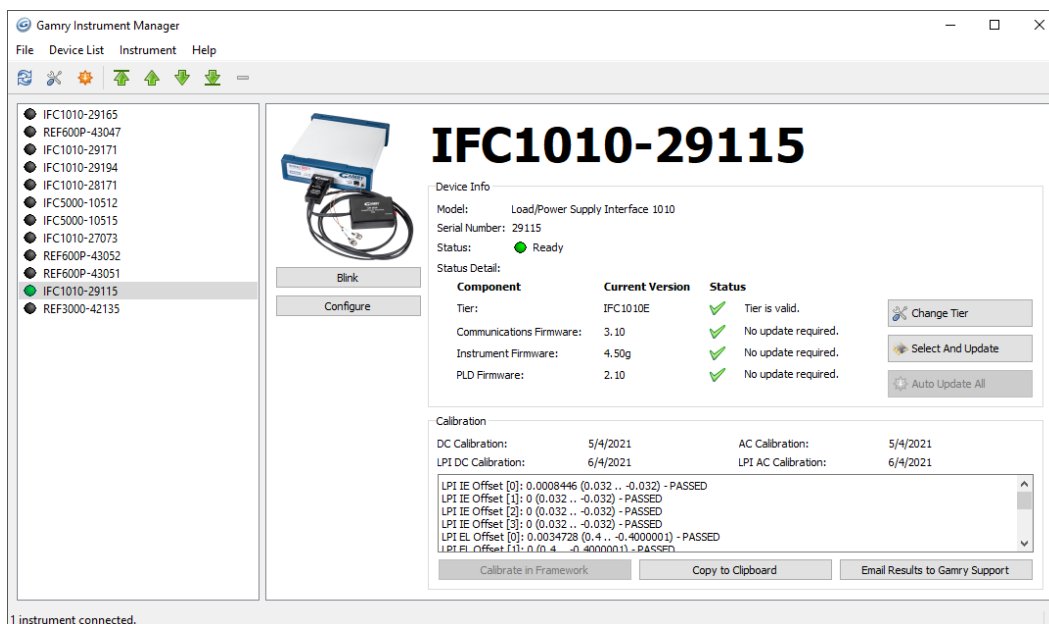


7 Configure the Hardware Settings of your Electronic Load or Power Supply

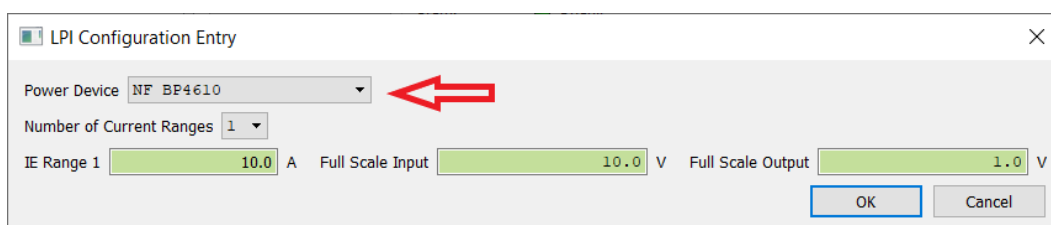
- 1) Ensure that the DUT is not connected to anything.
- 2) Verify that the output of your electronic load or programmable power supply is set to zero.
- 3) Turn on your electronic load or programmable power supply.
- 4) Set the operation mode **ExternalCurrentControl**.
- 5) Set the **full-scale current** on your electronic load or programmable power supply to accommodate the maximum desired current.

8 Configure the Framework Settings for your Electronic Load or Power Supply

- 1) Ensure that your LPI1010 is plugged into the Interface 1010 instrument and the LPI1010 is powered.
- 2) Power on your Interface 1010 and ensure that its USB port is connected to your computer.
- 3) Start the **Gamry Instrument Manager** from either the Start menu or from within the Framework™ software by selecting **Options > Instrument Manager...** on the Framework Menu.



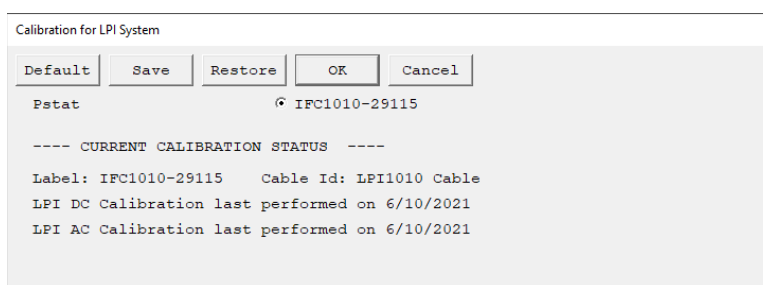
- 4) Click on the potentiostat that is connected to the LPI1010. Check if any software updates are required.
- 5) Press the **Configure** button to open the LPI Configuration Entry.
- 6) Correctly enter all parameters in the **LPI Configuration Window** for your Electronic Load or Power Supply in use and press OK.



User Calibration

① Open the LPI Calibration script

- 1) Ensure that your LPI1010 is plugged into the Interface 1010 instrument and the LPI1010 is powered.
- 2) Power on your Interface 1010 and ensure that its USB port is connected to your computer.
- 3) Open the LPI Calibration script by selecting **Experiment > Named Script...** on the Framework Menu. The name of the LPI calibration script is **CALIBLPI .EXP**.



② Connect the Calibration Cell

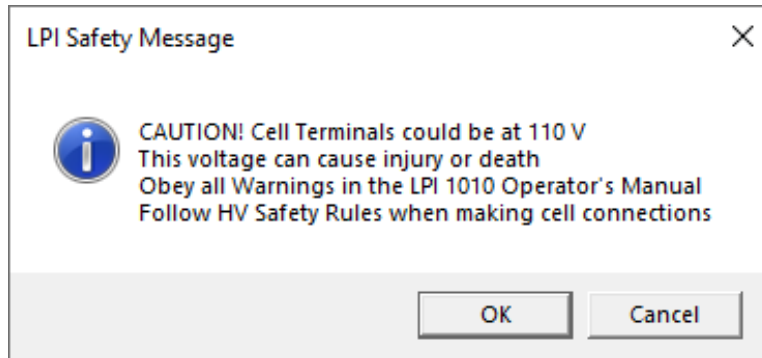
- 1) Verify that the electronic load or power supply is turned OFF.
- 2) Connect the power output cables of your electronic load or power supply to the LPI Calibration Cell when prompted. Be careful to not short the connections!



- 3) Slide the safety enclosure back on and secure again before continuing.
- 4) Connect the LPI Voltage Sense Cables to the Calibration Cell.



③ Carefully follow all instructions during the LPI Calibration



1) When prompted, type in the **precise resistor value** of the LPI Calibration Cell in use. The value is labeled on the outside of the LPI Calibration Cell.



A dialog box titled "Enter precise calibration resistor value". It has buttons for "Default", "Save", "Restore", "OK", and "Cancel". Below these buttons is a text field labeled "Cal Resistor (ohms)" containing the value "1.953".

- 2) When prompted, change the LPI Calibration Cell and connect as described above.
- 3) The procedure requires you to turn your electronic load or power supply ON and OFF several times.
- 4) After the calibration is done, a window appears to confirm its completion. Click the OK button to confirm.
- 5) The calibration results are stored within the EEPROM memory of the cables. You can check the calibration results in the Calibration pane of the LPI 1010 system within the Gamry Instrument Manager.

