

## AUX OUTPUTS and INPUTS

This measurement is designed to illustrate the use of the Aux Outputs and Inputs on the rear panel. You will need BNC cables and a digital voltmeter (DVM).

Specifically, you will set the Aux Output voltages and measure them with the DVM. These outputs will then be connected to the Aux Inputs to simulate external DC voltages which the lock-in can measure.

1. Disconnect all cables from the lock-in. Turn the power on while holding down the [Setup] key. Wait until the power-on tests are completed.

When the power is turned on with the [Setup] key pressed, the lock-in returns to its standard settings. See the Standard Settings list in the Operation section for a complete listing of the settings.

2. Connect Aux Out 1 on the rear panel to the DVM. Set the DVM to read DC volts.

The 4 Aux Outputs can provide programmable voltages between -10.5 and +10.5 volts. The outputs can be set from the front panel or via the computer interface.

3. Press [Aux Out] until the Reference display shows the level of Aux Out 1( as indicated by the AxOut1 led below the display).

Show the level of Aux Out 1 on the Reference display.

Use the knob to adjust the level to 10.00 V.

Change the output to 10V. The DVM should display 10.0 V.

Use the knob to adjust the level to -5.00 V.

Change the output to -5V. The DVM should display -5.0 V.

The 4 outputs are useful for controlling other parameters in an experiment, such as pressure, temperature, wavelength, etc.

4. Press [Channel 1 Display] to select AUX IN 1.

Change the Channel 1 display to measure Aux Input 1.

The Aux Inputs can read 4 analog voltages. These inputs are useful for monitoring and measuring other parameters in an experiment, such as pressure, temperature, position, etc.

We'll use Aux Out 1 to provide an analog voltage to measure.

5. Disconnect the DVM from Aux Out 1. Connect AuxOut 1 to Aux In 1 on the rear panel.

Channel 1 should now display -5 V (Aux In 1).