

Using the HP E3631A Power Supply

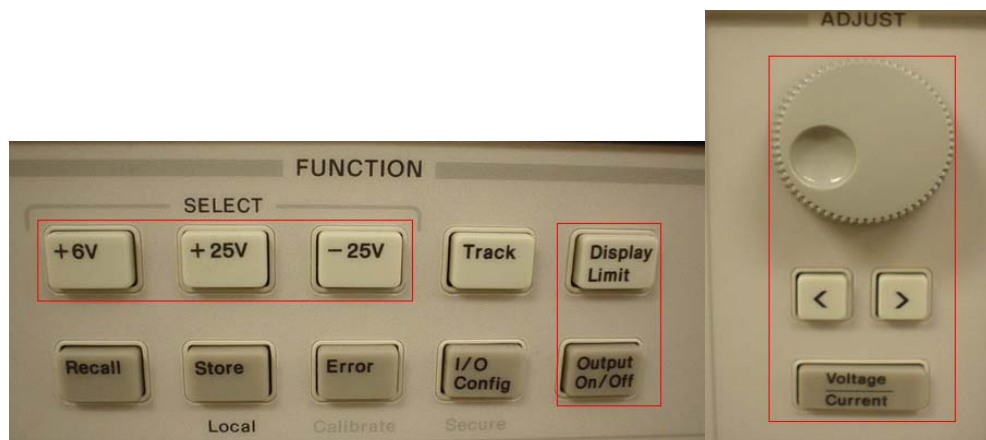
In our labs we will be using the HP E3631A triple output power supply as our power source. It will assist you in supplying power for each lab. Basic functions are explained in the following abstract:

Getting the Basics:

You will need to obtain the proper cables to connect the power supply to your circuit. The cables are located on both ends of the center workstation. This is what the power supply looks like:



The HP3631A is a triple output power supply : 6V/5A, +25V/1A and -25V/1A . You will notice on the lower right hand corner of the face that there are 6 outputs labeled : 6V +/- , . an earth ground terminal, and 25+/- . Depending on your voltage/ampereage needs you will use the appropriate outputs. We will also be using a variety of the buttons located in the “Function” area as well as the buttons located in the “Adjust” area. We will be using everything enclosed by the red box in the following pictures.



You first want to turn the power supply on. This is simply done by depressing the power switch located on the lower left hand corner on the face of the power supply.



Here is how to connect the outputs:

Setting 0 to 6V:

First you want to use the Display Selection switches and press the +6V key. By doing this you are in 0-6 Volt output mode.



You should see the resulting mode displayed. Next for safety purposes you should press the Output On/Off button(so that the output is on) to make sure your output is currently set to 0. You should now see Voltage with corresponding Current displayed. You want to 0 the values out. You do this by using the left/right arrows to select each digit you wish to change. You can change the digit by using the circular knob and turning it clockwise to increase the value or turning it counterclockwise to decrease it. After this is done push the Output On/Off button so that the output is off now.

To get the proper outputs connected you will simply attach the cables to the following positive/negative posts:



6V
+ -
● ●
Red Post= Positive Cable
Black Post= Negative/Ground Cable

Setting 0 to 25V or (-25) to 0V:

First you want to look in the “Function” section and press the +25V key or -25 key depending on which value you prefer. By doing this you are in 0-25 Volt or (-25)-0 output mode. You should see the resulting mode displayed. Next for safety purposes you should press the Output On/Off button(so that the output is on) to make sure your output is currently set to 0. You should now see Voltage with corresponding Current displayed. You want to 0 the values out. You do this by using the left/right arrows to select each digit you wish to change. You can change the digit by using the circular knob and turning it clockwise to increase the value or turning it counterclockwise to decrease it. After this is done push the Output On/Off button so that the output is off now.



If you wanted to use the output for 0-25 Volts you would simply connect:

+  +/- 25 V RED Positive Post = Positive Cable
com  -  Black Com Post = Negative/Ground Cable

If you wanted to use the output for (-25)-0 Volts you would simply connect:

+  +/- 25 V RED Negative Post = Positive Cable
com  -  Black Com Post = Negative/Ground Cable

So essentially you have 3 ways of generating output power.

With the outputs connected to circuit you can now proceed to power your circuit. Simply press the Output On/Off button and adjust voltage accordingly. If for any reason during operation the readings for voltage and current disappear while the output is on, you can press the Display Limit button to bring the values back up. If you wish to adjust current you press the Voltage/Current key when you have selected the appropriate voltage mode. You can then use the left/right arrows to select the digit you would like to change and use the circular knob to change the actual value.