

EE105 Lab Experiments

HP 6235A DC Power Supply Tutorial

1 Introduction

The DC power supply is simple, so this tutorial only contains a few bulleted notes and a simple example. There is an image of the front panel interface in Figure 1.

2 Interface Notes

- The power supply can output independent values on the +6V and ± 18 V outputs, adjusted with separate knobs. All outputs are always “on,” though the analog meter can only display one value at a time.
- For the 18 V outputs, use the blue numbers on the analog meter. For the 6 V output, use the black numbers.
- The Track knob is used to set the -18 V output as a proportion of the $+18$ V output setting. If the $+18$ V output is set to 9 V, then the -18 V output will be -9 V when the Track knob is turned all the way clockwise. The -18 V output can be moved closer to zero (COM ground) by turning the Track knob counterclockwise.
- The power supply can be switched into a current-source mode by toggling the V/A button on the left side of the METER section. For these labs you will only use the voltage mode, so the button should always be out.



Figure 1: HP6235A front panel.

3 Examples

Here are all of the steps necessary to set up +9 V and −9 V supply rails.

1. Turn on the power supply with the lower-left power button.
2. Check to be sure the V/A button in the METER section is out.
3. Press the +18 V button in the METER section to view the voltage setting for that output. Move the ± 18 V knob until the needle points to the blue 9 marking at the top of the meter.
4. Press the −18 V button in the METER section to view the voltage setting for that output. Adjust the Track knob all the way clockwise, and verify that the needle points to the blue 9 marking at the top of the meter.
5. Connect cables to the +18 V and −18 V output ports, which will be +9 V and −9 V, respectively.
6. **The power supply has a floating ground**, so you can cascade them in series to reach higher voltages. Other equipment is earth-grounded.