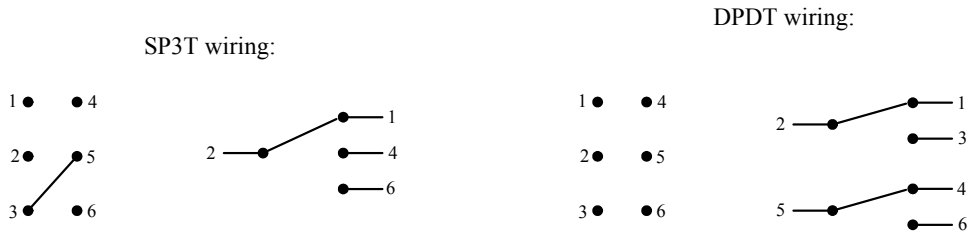


The final phase of the project is to assemble the connections to the case components and complete the amplifier instrument. Use the circuit diagram previously provided to guide the assembly. The connection diagrams for the two main switches are shown below. Note that in the SP3T switch, you need to solder a connection from pin 3 to pin 5. The pins are not labelled, but the circuit diagrams for both switches will work the same way in either orientation. (In the case of the SP3T switch, that means that you could instead solder pins 2 and 4 together and use pin 5 as the single pole.) When assembling the gain switch, make sure you pay attention to the order of the switch positions. The low, medium, and high gain switches should activate in that order as you move the switch.



Once the amplifier is completed, you should test its operation and label all controls and connectors. An adapter cable is available to check the circular DIN connector. Final assembly of the box should be made with the metal screws, rather than the plastic tabs, and the plastic bumper feet should be attached.

The last step will be to label the connections and prepare a brief user manual. The manual should include a copy of the circuit diagram, a list of the key specifications (including gains, gain accuracy, bandwidth, CMRR, power supply range, and output range), which can be taken from the AD627 datasheet or your test results as appropriate. The document should also provide instructions for use, which briefly describe what each connector and switch does.

This document is not meant to be an essay or lab report, but rather an instruction sheet informing a future user (such as yourself) what the instrument is and how to use it.

The projects are due in their entirety at midnight on Dec 13.

Evaluation:

The projects will be tested by operation at each gain setting, verification of the battery test switch, and operation from both the batteries and the external power supply. (A power adapter cable is available to run the circuit from the ELVIS supplies.) In addition, each box will be opened up, inspected, reassembled and then re-tested, in order to inspect the interior work and make sure the construction is secure enough to withstand disassembly. They will be returned to you at the final exam.