

Due 11/26/2012

The next phase of the project is to construct the case. This involves determining where to place components, drilling appropriate holes, and then mounting the components. (Wiring the circuit board to the case components will be the final phase, due at the end of the course.) The following table shows the required components and the corresponding mounting hole diameters:

Component	Diameter
Gain switch	1/4 in
Battery check switch	1/4 in
Battery check LED	1/8 in
Power switch	1/4 in
Input banana jacks ($\times 2$)	5/16 in
Reference banana jack	5/16 in
Input BNC (isolated)	3/8 in
Output BNC	3/8 in
DIN connector	23/32 in
Battery holder screws ($\times 6$)	3/32 in

Notes:

1. The input banana jacks should be spaced by 3/4 inch, so that they can accept a standard dual-banana plug.
2. The battery holder uses 2-56 screws and nuts, which are available in the lab.
3. The battery holder itself can be used as a template in order to place the holes correctly.
4. The battery test LED is most easily mounted in place using 5 minute epoxy.

Layout:

The placement of the components is up to you. Some issues to consider:

1. Everything must fit together in the end, so be sure to leave sufficient room for the batteries and the circuit board. In particular, the circuit board is fairly long. However, if it doesn't end up fitting, it is easy to cut it down to be shorter.
2. It is useful to place components with related functions close together. For instance, the battery LED should be next to the battery test switch.
3. You can't place components on the sides of the box, due to the mounting fins.
4. Leave sufficient space around each component for a label, wrench access, and a cable connector (where needed).

Note that a portion of your project grade will be based on the neatness and stability of your product, which will mostly be determined by your work in this phase. Also, once you drill a hole, you can't change it without buying a new case. So think carefully about what you are doing before you drill!