Deadbug Assembly for Lab 2

- Let’s see how to assemble your amplifier for Lab 2
- It helps to first have a clean PCB surface. You can clean it with soap and water and some sort of scrubbing pad. You can use some rough wool fabric too.
- With a clean surface, it's easy to solder to.
- Start out by placing a little puddle of solder on the board for your first connection to ground.
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- Next, bend the resistor lead about half-way up into an ”L” with your needle-nose pliers. Bending away from components moves the stress sway from the component body.
- Trim the excess off of the ”L”.

![Image of resistor being bent with needle-nose pliers and being trimmed](image_url)
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- Then tin the end of the resistor lead with solder. This makes it much easier to solder to the board.
- You won’t need a ”third hand” as shown.
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- Solder down the "L" end of the resistor directly to the PCB.
- The PCB becomes the "third hand" you will need for the next step.
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- Close-up of soldered "L".
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- Tin the transistor leads and bend them away from the body of the package. Bending the leads against the package is a sure way to break them off.
- Trim the top resistor lead to a manageable length, then solder the emitter lead to the top of the emitter resistor.
- Note pinout of the transistor on board preventing connection errors.
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- Like we did before, tin the board to receive the base resistor.
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- And solder it into place as before.
Continue on in the same manner.

Here, a decoupling capacitor is also soldered in at the $V_{cc}$ end of the 33K resistor.
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▶ And now, the finished amplifier.
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- The power leads were made from ribbon cable. A "crimp" was made by soldering down a small "hump" on the board, threading the wires through, and then crimping them down.
- Don’t try to solder the crimp while the wires are in it as you will melt the insulation off from them. Bzzzzzit!
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- The oscilloscope or DMM may probe just about anywhere with ease. The circuit is also easy to check against the schematic.
- I often make notes on the circuit as I go measuring things.