

# Soldering Lab

Remember you must frequently clean and tin the iron.

- 1) Select a PC board and try the following:
  - a) Get a feel for how long it takes to heat up a solder joint by heating up a solder joint with just the very tip of the iron. With a different solder joint try using the narrow side of the iron. Try another with the wide side of the iron. And last, put a bead of solder on the wire side of the iron and squeeze the bead between the iron and the solder joint. You should see a difference. Also notice that the larger the solder joint the more time it takes to melt the solder.
  - b) Using a solder sucker, remove a component from the PC board.
  - c) Using solder wick, remove the remaining solder from the PCB holes. **SHOW THE PCB and THE COMPONENT TO THE INSTRUCTOR.**
  - d) Replace the component. Remember to let **THE WORK MELT THE SOLDER!** Show the result to the instructor.
  
- 2) Select a piece of old twisted pair wire.
  - a) Strip away the shield about two inches from the end.
  - b) Expose the drain wire ( or twist together the shield wires ) and separate the inner conductors.
  - c) With one of the inner conductors strip about ½” of insulation and then **USING THE SAME WIRE** strip away another ½” so you now will have 1” exposed. Show this to the instructor.
  - d) Using the drain wire or one of the inner conductors, tin the wires using two techniques.
    - 1) Get something to hold the wire, heat the wire with the iron near the tip of the wire and add just a little solder to the wire **AT THE SAME TIME**. You will not need very much solder and you can then “run” the iron down the wire and the solder will coat the wire very evenly.
    - 2) Put flux on the wire. Then melt a bead of solder onto the tip of the iron. Place the bead of solder against the wire near the tip of the wire and **ZOOM!!** The wire will be tinned!
  
- 3) Using a scrap piece of twisted pair, Prepare the wire to be soldered onto a ¼” TRS plug. Show this to the instructor.
  
- 4) Solder the wire onto the ¼” plug. Show to the instructor.
  
- 5) Using a scrap piece of twisted pair, Prepare the wire to be soldered onto a RCA plug. Show this to the instructor.
  
- 6) Solder the wire onto the RCA plug. Show to the instructor.
  
- 7) Using a scrap piece of twisted pair, Prepare the wire to be soldered onto an XLR plug. Show this to the instructor.
  
- 8) Solder the wire onto the XLR plug. Show to the instructor.
  
- 9) Clean the iron and put a good bead of solder onto the iron, replace the iron into the holder and turn it off.