

TECHNOLOGY EDUCATION

Electronic Lab Safety

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Following proper safety practices are a must when working with electronic equipment. Not only is there the danger of electrical shock, but the components can explode if not connected properly. Many of today's electronic components are easily damaged by improper handling. The test equipment used in the electronic service industry is expensive and easily damaged if proper operating procedures are not followed.

1. ALWAYS wear your SAFETY GLASSES.
2. KEEP soldering irons in their protective STAND when not in use.
3. Always CUT wire LEADS so the clipped wire falls on the table top and not toward others.
4. DO NOT TOUCH the tip end of a soldering iron to check for heat.
5. AVOID an EARTH GROUND when working with AC powered units.
6. ONLY work with powered units WHEN NECESSARY for troubleshooting.
7. AVOID SKIN CONTACT with chemicals.
8. REPLACE ALL screws, not just some.
9. Use the CORRECT CLEANING SOLVENTS for the job.
10. Avoid PINCHING wires when putting equipment back together.
11. Use a HEAT SINK when soldering temperature-sensitive components.
12. NEVER SOLDER a circuit that has the power applied.
13. DOUBLE CHECK circuits for proper connections and polarity prior to applying the power.
14. Observe POLARITY when connecting polarized components or test equipment into a circuit.
15. When soldering a multi-pin component, avoid excessive heating to one area of the component; DO NOT go from pin to pin in a straight line.
16. Make sure TEST instruments are set for proper FUNCTION AND RANGE prior to taking a measurement.
17. When measuring UNCERTAIN qualities, start with the range switch on the HIGHEST setting.
18. ALWAYS REPLACE shields that were removed during service to avoid signal RADIATION.
19. When cutting with an X-Acto knife, AVOID CUTTING TOWARDS yourself.
20. Apply HEAT from a soldering pencil for no more then a couple of seconds to AVOID HEAT DAMAGE.
21. Keep the INTENSITY on oscilloscopes as LOW as possible when in use and all the way down when not in use to avoid burning out the screen.
22. Always OBSERVE POLARITY when connecting components into a circuit, especially with electrolytic capacitors.
23. Always READ the MSDS (Material Safety and Data Sheet) for all chemicals prior to their use.

