

BASIC ELECTRICAL SAFETY PRACTICES

The Institute requires everyone who uses electrical equipment to understand these safety precautions to comply with the Electrical Safety-Related Work Practices standard. The following safe work practices can prevent electrical shock.

A. Safe Work Practices

1. Turn off and unplug equipment (instead of relying on interlocks that can fail) before removing the protective cover to clear a jam, replace a part, adjust or troubleshoot. Ask a qualified person to do the work if it involves opening equipment and creating an exposure to energized parts operating at 50 volts or more.
2. Don't use an electrical outlet or switch if the protective cover is ajar, cracked or missing. Call Zeng(X7-5739) and report this.
3. Only use DRY hands and tools and stand on a DRY surface when using electrical equipment, plugging in an electric cord, etc.
4. Never put conductive metal objects into energized equipment.
5. Always pick up and carry portable equipment by the handle and/or base. Carrying equipment by the cord damages the cord's insulation.
6. Unplug cords from electrical outlets by pulling on the plug instead of pulling on the cord.
7. Use extension cords temporarily. The cord should be appropriately rated for the job.
8. Use extension cords with 3 prong plugs to ensure that equipment is grounded.
9. Never remove the grounding post from a 3 prong plug so you can plug it into a 2 prong, wall outlet or extension cord.
10. Re-route electrical cords or extension cords so they aren't run across the floor, under rugs or through doorways, etc. Stepping on, pinching or rolling over a cord will break down the insulation and will create shock and fire hazards.
11. Don't overload extension cords, multi-outlet strips and wall outlets.
12. Heed the warning signs, barricades and/or guards that are posted when equipment or wiring is being repaired or installed or if electrical components are exposed.

B. Check for Unsafe Conditions (either before or while you're using equipment:)

1. Is the cord's insulation frayed, cracked or damaged, exposing the internal wiring?
2. Are the plug's prongs bent, broken or missing, especially the third prong?
3. Is the plug or outlet blackened by arcing?
4. Was liquid spilled on or around the equipment?
5. Are any protective parts (or covers) broken, cracked or missing?
6. Do you feel a slight shock when you use the equipment?
7. Does the equipment or the cord overheat when it is running?
8. Does the equipment spark when it is plugged in or when switches or controls are used?

C. If you observe any of these unsafe conditions:

1. Don't use (or stop using) the equipment.
2. Tag/label the equipment UNSAFE--DO NOT USE and describe the problem.
3. Notify your TA or the Laboratory Engineer (X7-5739) immediately, as appropriate.