UNC CHARLOTTE
Department of Engineering Technology

LABORATORY SAFETY ANALYSIS

Operating an AC Power Supply

Location: All Smith Electrical/Computer Engineering Technology Labs.

Required Training: An AC Power Supply is designed and intended for use by properly trained and experienced operators. If you are not familiar with the proper and safe operation of the equipment, do not use until proper training and knowledge have been obtained.

Required Personal Protective Equipment (PPE): Safety glasses closed toed shoes.

Reference Materials: Manufacturer's safety rules and operating instructions

PHOTOS	TASK	HAZARDS	CONTROLS
	Wear clear safety glasses with side shields.	Flying debris	• Students are required to provide their own safety glasses. • See laboratory instructor or laboratory manager if you do not have safety glasses before proceeding to use equipment.
	Inspect safety glasses for cracks, scratches or other damage. Ensure the ANSI standard Z87.1 is stamped into the side of glasses.	Flying debris	• If defects are found report this to your lab instructor before using.
	Put on PPE	Flying debris	• Always wear safety glasses.
	Inspect work area.	Slips, trips & falls.	• Keep the work area free from scraps, dust, oil and grease.
	Preparing to operate an AC power supply	Shock Hazard/ Damage to the AC power supply.	• Read operating instructions thoroughly and completely before operating the Digital/Analog Trainer. Note all cautions very carefully. • Always inspect your AC power supply's power cord and accessories for any signs of damage or abnormalities before every use. • If the electrical cord is damaged or worn the electrical cord should be unplugged and tagged "Out of Service-Do Not Use".

			• This should be reported to your laboratory manager immediately. • Electrical cord replacement should only be conducted by a factory authorized technician. • Ensure that the Isolated Variable Power Supply is connected to the proper 120VAC, 60Hz power source. The wall outlet MUST be a three-wire grounded type, with a good earth ground. • These instruments are intended for use with 120V, 60Hz line voltage. Do not operate with 50Hz line voltages, or 220~240VAC volt power systems. The instrument may be operated safely with line voltages as low as 100V
	Ensure the electrical cord is connected to the outlet.	Shock Hazard/ Damage to the AC power supply	• Caution: Always remember to disconnect the electrical power cord when operation is complete or when you leave the work station for an extended period of time.
	Operating an AC power supply	Injury/ Damage to the AC Power Supply.	• Never block the ventilation if you do it could cause excessive temperature buildups, which could cause failure and/or potential hazards • AC power supply may be operated safely with line voltages as low as 100V. • If AC power supplies are on high voltage when you get it. Be careful improper use or carelessness can result in electric shock. • Isolated output should only be used for equipment under test. Other test instruments should not be connected to this output • Typically people turn the voltage to 120v 60hz
	MAINTENANCE	Shock Hazard/ Damage to the AC power supply.	• Keep the Power Supply dry and dust free. If it gets wet, wipe it dry immediately. Liquids can contain minerals that can corrode electronic circuits. • Use and store the power supply only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts. Handle the power supply gently and carefully. Dropping it can

			damage the circuit boards and cause the power supply to work improperly
	Clean work area and return all PPE to a clean storage area.	Injury	• Ensure adequate housekeeping measures to prevent accidents.

For more information about this LSA, contact the *Department of Engineering Technology* at UNC Charlotte (704) 687-2305
Please visit our website at: http://www.et.uncc.edu\

The development of Laboratory Safety Analyses is a very effective means of helping reduce incidents, accidents, and injuries in the workplace. It is an excellent tool to use for training purposes and can also be used to investigate "near misses" and accidents.