



Overview

This activity is designed to ensure that you understand the topics covered in your courseware. You are required to know the names, purposes and characteristics of power supplies. For example: AC adapter, ATX, proprietary, voltage, and the different types used for the PC and the laptop.

Lab Activities

- ✓ Exercise 1: Understanding Power Supply Wattage Rating
- ✓ Exercise 2: Identify the Power Supply Connectors
- ✓ Exercise 3: Identify the Power Source

Exercise 1: Understanding Power Supply Wattage Rating

Overview: To understand the different power supplies and to know what the requirements are you need to have an understanding of wattage rating.

1. Circle the voltage selector switch.



2. What voltage setting should be configured for each area:
 - a. US _____
 - b. Europe _____
3. What will happen if the voltage selector switch is configured at the wrong setting? _____

4. In what unit of power are power supplies rated? _____
5. Why is a power supply a field replaceable unit (FRU)? _____

6. Circle the power supply.

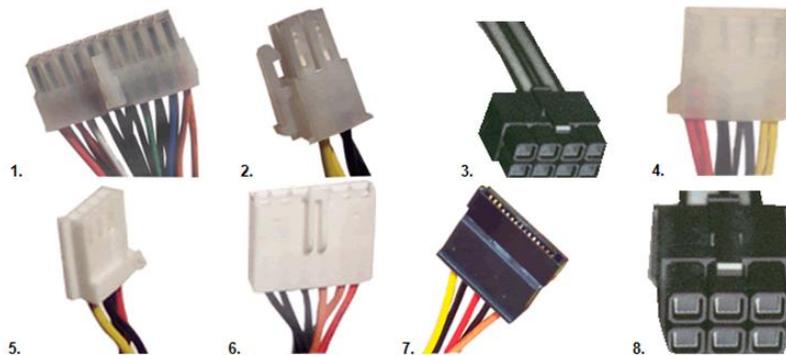


Exercise 2: Identify the Power Supply Connectors

Overview: Power supplies contain one or more auxiliary power connectors. Research power supply connectors and answer the following questions.

1. Name the power supply connector.

1.	2.
3.	4.
5.	6.
7.	8.



2. How many pins are on a typical ATX power connector? _____

3. What is a molex connector used to power? _____

4. What does a Berg connector power? _____

5. If you can't remove a power connector by hand, what tool should you use? _____

Exercise 3: Identify the Power Source

Overview: While power is necessary to a computer it can also be harmful in some cases. Research the different methods to protect devices from power sags, temporary power loss, called brownouts, and short term power loss, called blackouts.

1. Identify the following as either a UPS, Surge Protector or Power Strip:

	Contains batteries and a line conditioner to power to devices in the event that the external power is lost
	Minimum protection for electronic devices.
	When power is lost, this device will continue to power devices plugged into it and beep to alert the administrator that power has been lost
	Have some sort of visible breaker or trip switch.
	You should never plug a laser printer into this device.
	Will stop a surge from traveling to electronic devices.
	A device that allows you to connect multiple devices to a single outlet.
	These should be taken to a licensed recycler for disposal
	Does not provide any protection from electrical overloads.

Lab Answers

Exercise 1

1. Circle the voltage selector switch.



2. What voltage setting should be configured for each area:

- a. US _____ **115v** _____
- b. Europe _____ **230v** _____

3. What will happen if the voltage selector switch is configured at the wrong setting? **No power will be sent to the system**

4. In what unit of power are power supplies rated? **Watts**
5. Why is a power supply a field replaceable unit (FRU)? **If something on a power supply stops functioning the entire unit should be replaced. A power supply should never be opened because it contains a dangerous high voltage capacitor**
6. Circle the power supply.



Exercise 2

1. Name the power supply connector.

1. ATX	2. P4-ATX 12vX1
3. 8-pin CPU	4. Molex
5. Berg	6. AUX 6-pin
7. SATA X2	8. PCI Express

2. How many pins are on a typical ATX power connector? 20 or 24
3. What is a molex connector used to power? optical drives and hard drives
4. What does a Berg connector power? Floppy
5. If you can't remove a power connector by hand, what tool should you use? needle nose pliers

Exercise 3

1. Identify the following as either a UPS, Surge Protector or Power Strip:

UPS	Contains batteries and a line conditioner to power to devices in the event that the external power is lost
Surge Protector	Minimum protection for electronic devices.
UPS	When power is lost, this device will continue to power devices plugged into it and beep to alert the administrator that power has been lost
Surge Protector	Have some sort of visible breaker or trip switch.
UPS	You should never plug a laser printer into this device.
Surge Protector	Will stop a surge from traveling to electronic devices.
Power Strip	A device that allows you to connect multiple devices to a single outlet.
UPS	These should be taken to a licensed recycler for disposal
Power Strip	Does not provide any protection from electrical overloads.