UPS (Uninterruptible Power Supply)

What is a UPS?

A UPS is a device that allows a computer to continue to run for a short period of time during a power outage.

Ideal Use of a UPS:

- 1:1 Workstation Use
  - This mean ideally if battery backup is required, then there will be 1 UPS per station.
- The desktop environment will also sense the UPS if connected by USB cable
  - This means computers cannot auto shutdown unless there is software and instruction telling the UPS to do so.

Battery Backup: If you are plugged in to this side of the UPS you will have battery back-up for devices.

Surge Only: If you are plugged into the surge only side, then you will only have surge protection, and not have battery backup.

USB Support: Newer models of UPS have USB support. This allows USB cables to be plugged in. This is helpful for charging small devices, such as phones

Surge Protectors vs. UPS

Surge Protectors(Simple Protection for Electronics): A consumer-grade surge protector has multiple outlets as well, but it also includes a shorting mechanism and a ground line that will physically block excess electrical energy from reaching your devices.

UPS(Save Your Work From Random Power Outages): The primary purpose of the uninterruptible power supply is right there in the name: it provides power without interruption, no matter what else is happening to the power system in your home or city.

Volt-Amperes (VA) vs. Watts (W)

Both Watts and Volt-Amps are units of measurement for electrical power. Watts refer to real power and Volt-Amps refers to apparent power. Most electronics provide both values. UPS's can **only** handle a total of the power output capacity listed on the back of the UPS.

- **Watts:**
  - The real power in watts is the power that performs work or generates heat.
- **Volt-Amps:**
  - The apparent power in VA is used to simplify power ratings, making it easier to calculate current draw.

A typical desktop computer uses about 65 to 200 W. LCD monitors use about 20 to 40 W.

. **Load Sizing:** If a battery is undersized for a load, battery run time and life expectancy will be shortened.