

Uninterruptible Power Supplies (UPS) for Workstations

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Electrical & Power

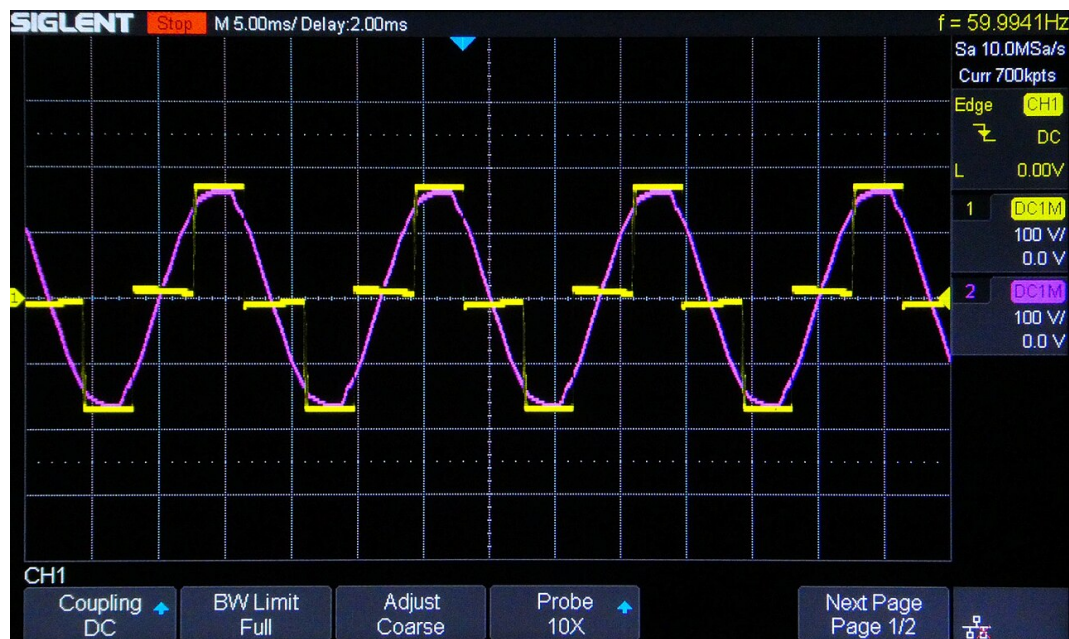


Photo: Timothy Quill — CC BY-SA 4.0 — via Wikimedia Commons (APC_Back-UPS_550_Uninterruptible_Power_Supply_Output_Waveform.jpg)

A UPS protects workstations and servers from power cuts and surges, switching to battery seamlessly when the supply fails so work is saved and hardware survives. Line-interactive models with surge filtering suit CAD and lab machines.

Key Features

- VA ratings 600-3000 VA
- Line-interactive and online types
- Battery runtime 5-30 minutes
- Surge and brownout protection
- USB monitoring and shutdown

Typical Uses in the Workshop

- Protect CAD workstations from outages
- Keep servers and NAS running cleanly
- Save work during classroom power cuts
- Filter surges on sensitive equipment

Safe Operation

1. Charge the UPS fully before use
2. Connect the protected equipment
3. Run the provided shutdown software
4. Check the battery runtime regularly
5. Replace batteries on schedule

SAFETY NOTES

- Do not connect laser printers to UPS - surge loads
- Keep the UPS ventilated
- Batteries leak acid - handle carefully
- Do not daisy-chain UPS units
- Test the battery monthly

Maintenance & Consumables

- Run a self-test monthly
- Replace the batteries every 3-5 years
- Clean the vents and casing
- Check the alarms work
- Log the load and runtime

Specification & Buying Notes

Size the VA to the load plus 30% headroom and buy line-interactive UPS with USB software for graceful shutdown. Quality units sine-wave output; cheap step-wave can upset PSUs.