

## UPS Systems

There are two types of UPS systems:

■ **On-line UPS** systems provide electricity to the equipment all the time. A well designed and maintained unit will help to protect against most types of supply disturbance.

■ **Off-line UPS** systems, sometimes called Standby UPS, provide back up electricity supply to the equipment. They only switch on if the main supply fails. Most off-line systems only provide protection against supply interruptions and will have little effect against surges and other problems.

Both types will maintain the power to a computer for a short time to allow work to be saved. Some versions will save the current computer files automatically.

The cost of UPS systems vary widely depending on their rating and type. Specialist advice should be sought if a UPS is to be considered. A basic off-line UPS that can supply the load to a PC for about five minutes can cost from about £200.

### Further Advice

Some computer shops and large electronics retailers supply surge protectors and filters; they may also provide advice on UPS systems.

Computer magazines aimed at the business user often include adverts for specialist UPS companies.

#### Please note:

**Western Power Distribution cannot guarantee that the equipment discussed in this leaflet will be completely effective or suitable for all applications. If you are in doubt please seek advice from the relevant manufacturer or supplier.**

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# DISTURBANCES TO YOUR ELECTRICAL EQUIPMENT AND SUPPLY

**WESTERN POWER  
DISTRIBUTION**

*Serving the Midlands, South West and Wales*

# Your electrical equipment and supply disturbances

**The electricity supply throughout the UK is very reliable. We all expect electricity to be available whenever it is required but on rare occasions there may be problems.**

The supply voltage is sometimes adversely affected by connected electrical equipment. Any device which uses a large amount of current or which frequently switches the current on and off could cause difficulties. Electric motors and welders are particularly onerous. These difficulties are largely controlled through compliance with applicable standards and practices; for example voltage fluctuations for small electrical appliances are controlled by compliance with a specific British Standard; larger motors are subject to special consideration by Western Power Distribution (WPD).

The voltage will also be affected if the electricity system is damaged or a piece of equipment fails. Cables are occasionally struck during road works and overhead lines can be damaged by lightning, very high winds or by falling trees and branches. When this occurs the voltage usually just dips for a fraction of a second and then returns to normal. Sometimes the electricity may switch off completely for a time.

WPD is working hard to improve the reliability of the electricity network in the Midlands, South Wales and the South West.

## Electrical Equipment

Some equipment can be affected by voltage dips and supply interruptions. Digital clocks, DVD/video equipment and other devices may need to be reset following a disturbance. Computers may also shut down and information may be lost or corrupted.

Equipment can also be damaged by lightning which can occasionally enter premises via electrical cables or by direct strike to a building.



European legislation came into force on 1 January 1996 which requires new electrical equipment to be designed to withstand the type of disturbances normally found on any electricity supply network. Many manufacturers met these standards before this date.



## Computer Back-up

If you use a computer we recommend that you save your work at regular intervals. Important files should also be backed up just in case your computer develops a fault.

## Flickering Lights

Sometimes you may notice your lights flicker or dip. If this occurs rarely and is not too severe, there is unlikely to be a long term problem. If it occurs regularly or is particularly severe please contact WPD; we will be happy to investigate.

## Protecting Your Equipment

A number of devices are available which can help to reduce the effects of voltage fluctuations, lightning, interference and power failures.

- **Surge protectors** limit the maximum voltage reaching electrical equipment. They can be used to help protect sensitive equipment such as satellite receivers from being damaged by higher than normal 'transient' voltages on the power supply which, although very rare, do sometimes occur. Surge protector plugs can cost from about £15.
- **Line conditioners** provide a regulated voltage and remove interference from the supply. They are sometimes used in factories where heavy machinery is used nearby to computers and office equipment. Specialist advice should be sought before buying this type of equipment. Line conditioners can cost from about £250.
- **Power filters** are available which protect against high voltages in the same way as surge protectors. They also help to reduce electrical interference which may occur on the supply. Filter plugs can cost from about £30.
- **Uninterruptible Power Supplies (UPS)** are designed to maintain the power to equipment if the electricity fails. They are often used to supply computers where vital information could otherwise be lost.

