

This Information Sheet provides hints and tips when carrying out PAT Testing. The Information Sheet forms part of a series of Information Sheets that supports the Safety of Electrical Equipment Policy Standard.

Below are 'hints and tips' for testing appliances commonly found in an office environment. The information complements instruction provided by Health and Safety Services (HSS) during the HSS PAT Test Training course. The course covers such things as what to assess during a visual inspection etc. Further information on PAT Test Training is available on the HSS Website.

Use this document in conjunction with the following Information Sheets:

- Inspection and Testing of Electrical Equipment – E1-1.
- Using the Primetest 100 Portable Appliance Tester – E1-4.

## Testing Different Portable Electrical Appliances

### Kettles

- Can only be tested when switched 'ON'.
- The earth clip (black) needs to be attached to the heating element on the inside of the kettle (occasionally this can be a bar or disc on the inside).

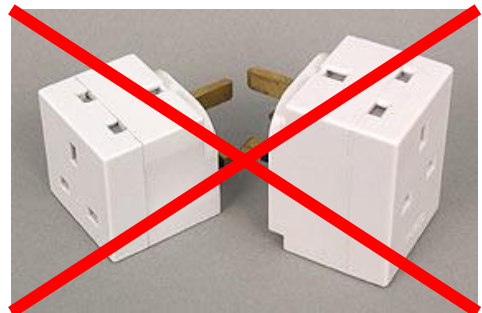
### Extension Cables & Multi-plug Leads (no-surge protection)



- Test with the cable (lead) unwound ie. coiled extension leads must have all the cable pulled out of the holder.
- The fuse and cable rating will normally be 13amp. Check for 'cheap' extension cables that may have a 3amp fuse that is unsuitable for use at the University.
- To test the extension cable use the Primetest 100 and connect as described in 'Cord' Test.
- Check IEC cables have the correct fuse for the item they are used with eg they could be paired up incorrectly at purchase, or been switched and matched up wrongly.

**Note:** The heat created operating an appliance with the cable fully wound may melt the insulation and cause a fault and **even fire**. Some items do not operate if the cable is not fully unwound, or there could be a thermal cut out.

Multi socket plugs must not be used.



### Surge Protected Adaptors

Testing of 'surge-protected' extension leads and socket adaptors is more difficult. Seek guidance from the manufacturer on how to undertake the necessary safety tests.

In many cases, only the 'Earth' can be tested as typical Testers 'surge' the appliance to test its connectivity and safety.



## Toasters

- Clamp the earth clip to a metal part of the toaster. This may be 'inside' the toaster. **Do not** clamp to the actual heating element.

## Transformers (Voltage Rectifiers)



- Some speaker / phone chargers have simple plastic-encased transformers that require a thorough visual inspection. If there is any sign of heat damage the item must be removed from service until assessed by a qualified electrical engineer.
- Standard Class 1 tests can be undertaken on transformers with metal parts eg a metal base.
- If the lead to the rectifier is an IEC type (removable) this should be tested using the Primetest 100 under 'Cord' Test with the IEC replacing the red adaptor cable.

## Laptop (Notebook) - see 'Transformers' above

- If fitted with a removable IEC type lead test, use the Primetest 100 under 'Cord' Test with the IEC lead replacing the red adaptor cable.

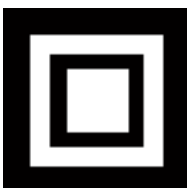
## Portable Heaters

- Visually assess the power cable for any damage eg significant scuffs / depressions, heat damage, repairs etc.
- Check where the cable enters the equipment. Ensure there is no scuffing or cuts at this point.
- Check there are no 'sharp' areas on the casing that could cut into, or damage the cable.



**Note:** No open-bar electric fires are permitted at the University.

## Fans (desktop)



- Double insulated Fans (Class 11) do not require a test.
- For fans that are Class 1 and Class 11 try to connect the earth lead to a metal part.
- If not possible, carry out a thorough visual inspection and test as a Class 11 electrical appliance.

## Computer Monitors



- Usually low voltage devices with an integrated or separate transformer (voltage rectifier).
- Try to purchase double insulated items as they will only need a visual / formal inspection.
- Check the monitor is not affected by other factors eg desk lamps burning holes in the casing (see picture).

**Note:** Often, only a Class 11 test is possible on monitors with integral transformers. Refer to Manufacturer's Instructions.

## Other Information

### CE Markings

- Only purchase equipment with CE markings (check for fakes). This indicates the item is approved and meets essential CE (EU) standards.



**Left  
are correct and real  
CE Conformity Marking**

**Below are mis-use or fake CE Conformity Marking**



**Note:** If concerned about a CE marking contact the supplier and request the Certificate of Conformity.

## Vending Machines, Water Coolers, Photocopiers

- Suppliers should check under Contract.

### Labelling

- Only use 'Inspection / Test Date' labels. **Do not** use 'Next Test Date' labels.
- If an item fails a test, apply a 'Failed / Do Not Use Label' and remove the item from service to ensure others cannot use it.

**Note:** Consult an electrical engineer if unsure with any aspect of the Test and Inspection Programme or concerned about an item.

### Repairs

- Remove items that have 'tape' on the cable or plug from service until repaired by a competent person.

<b>TESTED</b> comments signed dated
<b>INSPECTED</b> comments signed dated
<b>DO NOT USE</b> comments signed dated