



appliance testing

We get hundreds of calls to our technical helpline about the requirements for the inspection and testing of electrical appliances.

Inspection and testing is covered by three activities:

- user checks
- formal visual inspections (without tests)
- combined inspections and tests

User Checks

Most faults or damage can be found just by looking. Users should be encouraged to look critically at the electrical equipment in their own working environment. Staff should be given straightforward training and instruction on how to carry out a simple visual check before using any electrical appliance.

After disconnecting, the signs to look out for on the equipment, cable and plug are:

- damage, such as cuts or abrasions to the cable covering;
- damage to the plug such as the casing is cracked or the pins are bent;
- non-proprietary joints, including taped, in the cable;
- the outer covering of the cable not being gripped where it enters the plug or equipment. Look to see if the coloured insulation of the internal wires is showing;
- equipment that has been used in conditions where it is not suitable, such as a wet or dusty workplace;
- damage to the outer cover of the equipment or obvious loose parts or screws;
- overheating (burn marks)

Checks should be undertaken when the equipment is taken into use and during use. Any faults should be reported to the management and the equipment taken out of use immediately.

Visual Inspections

Visual inspections should be carried out by a competent member of staff who knows what to look at, what to look for and how to avoid danger to themselves and others. This type of inspection does not require the use of any specialist

HOME



**SITE
SEARCH**

[Why use NICEIC?](#)

[Appliance testing](#)

[Risk assessment](#)

[Landlords](#)

[Schools](#)

[Construction sites](#)

[Offices](#)

[Explaining PIRs](#)

[SEARCH ROLL](#)

[Home](#) | [NICEIC](#) | [Contact](#)

test equipment as it is purely a visual inspection. The inspection should include, when disconnected from the mains supply, the removal of the plug cover and checking that:

- The cord grip is holding the outer part of the cable tightly
- The wires, including the earth wire where fitted, are attached to the correct terminals
- No bare wire is visible other than at the terminals
- The terminal screws are tight
- There is no sign of internal damage, overheating, dust or dirt

This visual inspection should not include taking the equipment itself apart since this will take a lot more time, could damage the equipment and may be dangerous.

Combined Inspections and Tests

The checks carried out as above will have identified most (but not all) potentially dangerous faults - some deterioration of the cable, its terminals and the equipment itself can be expected after significant use. Equipment may also be misused or abused to the extent that it may give rise to danger. Testing, together with a thorough visual inspection can detect faults such as loss of earth integrity like a broken earth wire within a flexible cable, or deterioration of insulation integrity or contamination of internal or external surfaces.

Competent staff should be instructed to carry out inspections and tests, using a proprietary appliance testing instrument, as stated in the IEE Code of Practice for In-service Inspection and Testing of Electrical Equipment. This publication is available from our [Sales](#) Department.. They should have sound knowledge and experience relevant the the work undertaken, a knowledge of the technical standards and be well-versed in inspection and testing procedures.

We also offer general guidance for appliance testing in non-specialised situations such as [Offices](#), [Hotels](#), [Rented Accommodation](#) and [Schools](#).

The IEE Code of Practice give comprehensive information on the frequency of inspection and testing of equipment, such as:

Premises	Type of Equipment	User checks	Class I*		Class II**	
			formal visual inspection	combined inspection & testing	formal visual inspection	combined inspection & testing
Industrial, including commercial kitchens	Stationary	weekly	None	1 year	None	1 year
	IT equipment	weekly	None	1 year	None	1 year
	Moveable	before use	1 month	1 year	3 months	1 year
	Portable	before use	1 month	6 months	3 months	6 months
	Handheld	before use	1 month	6 months	3 months	6 months
Equipment used by the public	Stationary	Note +	1 month	1 year	3 months	1 year
	IT equipment	Note +	1 month	1 year	3 months	1 year
	Moveable	Note +	weekly	6 months	1 month	1 year
	Portable	Note +	weekly	6 months	1 month	1 year
	Handheld	Note +	weekly	6 months	1 month	1 year

Note+: For some equipment such as children's rides, a daily check may be necessary by supervisory, teacher or

member of staff

The following types of electrical equipment are covered:

- **Portable Appliances**
An appliance of less than 18kg in mass that is intended to be moved while in operation, or an appliance which can easily be move from one place to another such as a toaster, food mixer, vacuum cleaner, fan heater.
- **Moveable Equipment**
This is equipment which is either 18kg or less and not fixed such as electric fire, or equipment with wheels or other means to facilitate movement, such as an air conditioning unit
- **Handheld Appliances**
This is portable equipment intended to be held in the hand during normal use, such as hair dryer, drill, soldering iron.
- **Stationary Equipment**
This equipment has a mass exceeding 18kg and is not provided with a carrying handle, such as a refrigerator, washing machine
- **Fixed Equipment**
This is equipment which is fastened to a support or otherwise secured in a specified location, such as a bathroom heater, towel rail
- **IT Equipment**
IT equipment includes electrical business equipment such as computers and mains powered telecommunications equipment, and other equipment for general business use