







## WARNING

This test can be hazardous if the earth continuity and insulation of the appliance have not been checked prior to performing a run test. Always ensure that any appliance with electrically energised moving parts is securely mounted before performing a test.

**ENSURE THAT THE WANDER EARTH CLIP IS DISCONNECTED.  
DO NOT TOUCH THE APPLIANCE DURING TESTS.  
DO NOT RUN THE APPLIANCE LONGER THAN NECESSARY.  
DO NOT USE THE EASYPAT AS A MAINS POWER OUTLET.**

### Run current

Press and hold the 'RUN CURRENT' key. The display will show the current drawn by the appliance for as long as the button is held depressed.

### Run Leakage Current

Press and hold the 'RUN LEAKAGE' key. The display will show the earth leakage current for the appliance for as long as the button is held depressed. Ideally this should register as 0mA - any higher reading gives an indication of current leakage to earth which can be useful for tracking down appliances that are causing nuisance tripping of RCDs.

## WARNING

If the fuse in the EasyPat ruptures it **must** be replaced with a fuse as specified. Fitting of any other type or rating of fuse is hazardous and may result in damage to the EasyPat.

### 3.5 Flash

**NOTE:** Due to the high voltages present during this test it should only be carried out by suitable trained operators. Always inspect the flash gun for damage before use.

Flash voltage is applied:

i) Along the mains lead phase/neutral and the earth for a Class I instrument (test voltage 1.5kV).

ii) Along the mains lead phase/neutral and the flash probe for Class II instruments (test voltage 3kV).

iii) Along the flash gun and the Wander earth clip for testing Class I sub assemblies not connected to any mains plug (test voltage 1.5kV).

This test severely stresses the insulation of the appliance under test and should not be carried out on a routine maintenance basis. Always check the appliance manufacturers data to ensure that permanent damage will not be done to the appliance if a flash test is carried out.

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**NOTE:** With Class I appliances it is important to test the earth continuity prior to flash testing otherwise the test may not be valid.

## DO NOT TOUCH THE TEST APPLIANCE DURING TEST.

With Class II appliances, the flash gun should be plugged into the safety test socket. The flash gun is operated by pulling its trigger to expose its probe tip which should be held firmly against any exposed metal surfaces on the appliance during the flash test.

With Class II appliances the flash gun should be held firmly against any exposed metal surfaces on the appliance for the duration of the flash test.

If there is not exposed metalwork on the appliance, metal foil should be wrapped around the appliance and the Flash gun held in contact with the foil.

With sub assemblies attach the Wander earth clip to any metal which would normally be connected to earth. Link together all connections which would normally be connected to mains phase or neutral. Hold the flash gun firmly against a mains connection for the duration of the test.

Press and hold the 'FLASH' key. The orange flash indicator will illuminate and the flash leakage current will be measured and shown on the display for as long as the key is held down.

If the leakage current exceeds the preset limit the EasyPAT will automatically switch off the high voltage.

### 3.6 Lead Test

**DO NOT PERFORM FLASH TEST while lead is connected to EasyPat IEC connector.**

Ensure the earth wander lead is connected to the EasyPat. The crocodile clip however should not be used and must not be connected to the lead under test nor any earth path.

### For IEC Leads

Plug the lead into the appropriate EasyPat mains socket. Plug the IEC connector into the EasyPat IEC socket.

### For Extension Leads

Plug the lead into the appropriate EasyPat mains socket. Use the short 230V IEC lead EX-332 (or optional 110V LEAD EX-331) to connect the extension lead outlet to the EasyPat IEC socket.

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Perform earth continuity and insulation tests as 3.1 & 3.3.

If earth and insulation tests have successfully passed, perform a run current test and check the illumination of Lamp 1 & Lamp 2 against the table printed on the EasyPat front panel.

The Run Leakage test would not normally be carried out on extension leads etc, however if the button is pressed then the display will indicate a value of approx 1.3mA while under test - this is not indicating a fault in the lead but is simply a product of the test current drawn.

## 4. MAINTENANCE

### 4.1 Cleaning

Maintenance consists of periodic cleaning.

The exterior of the instrument can be cleaned with a dry clean cloth to remove any oil, grease or grime. Never use liquid solvents or detergents. Repairs or servicing not covered in this manual should only be performed by qualified personnel.

### 4.2 Calibration

The recommended calibration interval is 12 months.

Martindale Electric will carry out routine calibration (on a chargeable basis) if the instrument is returned, carriage paid, to the address on the final page of this document. Alternatively, a chargeable collection and return service is available.

### 4.3 Repair & Service

There are no user serviceable parts in this unit. Return to Martindale Electric Company Ltd if faulty, unless fuse replacement only is necessary. Our service department will promptly quote to repair any faults that occur outside the warranty period.

### 4.4 Storage Conditions

The EasyPat should be kept in warm, dry conditions away from direct sources of heat or sunlight and in such a manner as to preserve the working life of the instrument.

### 4.5 Warranty

Faults in manufacture and materials are fully guaranteed for 24 months from date of invoice and will be rectified by us free of charge, provided the unit has not been tampered with and is returned to us with its housing unopened. Damage due to dropping, abuse or misuse is not covered by the guarantee. Nothing in these instructions reduces your statutory rights.

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Other products from Martindale:

- 16th Edition Testers
- All-in-one's
- Calibration Equipment
- Continuity Testers
- Electrician's kits
- Full Calibration & Repair Service
- Fuse Finders
- Digital Clamp Meters
- Digital Multimeters
- Microwave Leakage Detectors
- Motor Maintenance Equipment
- Non-trip loop testers
- Pat testers & Accessories
- Phase rotation
- Proving units
- Socket Testers
- Thermometers & Probes
- Test Leads
- Voltage Indicators
- and
- Specialist Metrohm testers (4 & 5kV)
- Specialist Drummond testers



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# EPAT1600 & EPAT2100

## Instruction Addendum



Specification of Earth Continuity Test has been enhanced, increasing from 100mA to 200mA nominal. This commenced on EPAT1600 & EPAT2100 with serial numbers > 185xxxxx

Markings on the front panel remain as 100mA.

New Specification:

Test Voltage: 500mV DC nominal open circuit

Test Current 200mA DC nominal constant current

Range 0-1.99Ω

Accuracy of Indication: ±10% of reading ± 2digits

Remaining specification is unaltered.

Supply Voltage	Lamp 1	Lamp 2	Wiring Status
240V 50/60 Hz	ON	OFF	CORRECT
	OFF	ON	Phase/Neutral/Reversed
110V 50/60 Hz	OFF	OFF	Phase open circuit
	ON	ON	Phase/Neutral short
110V 50/60 Hz CENTRETAPPED	ON	ON	CORRECT
	OFF	ON	Conductor open circuit
	ON	OFF	Conductor open circuit
	OFF	OFF	Supply open circuit



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