

a practical introduction to electricity



Robust & durable

Safe & simple to use

No tools needed

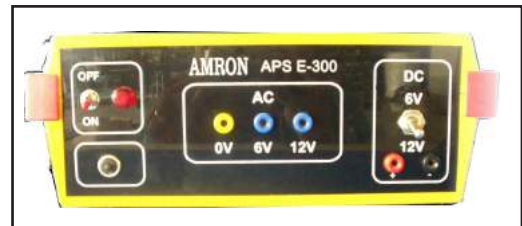
All round top quality

Detailed wiring diagrams

Comprehensive experiment manual



Motor/dissectable transformer components



Power Supply



Springs accept
4mm banana plugs



Robust & versatile
electric motor



Individually mounted
transformer



E300 - The complete
Basic Electricity Trainer

Additional equipment recommended :
Analogue multimeter
Digital multimeter
Oscilloscope

Topics Covered

Sources of electricity	Series circuits	Capacitors
Use of multimeters	Parallel circuits	Diodes
Safety	Kirchoff 's laws	Rectification
Resistor colour codes	Fuse	Switching circuits
Potential difference	Magnetism	Transformer principles
Current	Electro-magnetism	Transformer ratios
Resistance	DC Generators	Faraday 's laws
OHM 's law	AC Generators	The LDR
Electrical power	DC Series motor	The LED
Switches	DC Shunt motor	The Solar cell
Relay operation	Motor starters	Sensors
Conductor & Insulators	Motor speed control	Cell & Batteries

The trainer comprehensively covers all the principles of basic electricity, and consists of the following parts :
Component panel, meter panel, power supply, electric motor set, transformer coils (x3), 'U' core and 'I' bar, conductor and insulator set, centre tap transformer, compass, bar magnets (x2), horseshoe magnet, helix coil, moving iron set, current pendulum, experiment/operating manual. Each component is identified by a silk-screened IEC symbol. Connections are via rust-proof springs which can accommodate several wires and/or a 4mm banana plug. Springs are easily replaceable without tools.

Component Panel

3x mes lampholders	4x external spring contacts
1x buzzer 12V	2x cell holders
1x fuse holder	1x relay 12V DC 2 pole
1x thermocouple	1x solar cell
1x resistor 1K 5W	1x LDR
1x resistor 1K 0.25W	1x LED
1x resistor 1K5 0.5W	1x capacitor 470uf 25V
1x resistor W/W 6R 20W	1x capacitor 220uf 63
1x resistor W/W 9R 20W	4x diodes IN5408
1x resistor adjustable W/W 12R 20W	1x toggle switch DPDT
1x push button switch N/C	1x toggle switch SPDT
1x push button switch N/O	1x toggle switch SPST
1x knife switch	1x toggle switch DPST

Meter Panel

1x voltmeter 0-15V DC	1x ammeter 0-5A DC
1x galvanometer 500-0-500uA	1x ammeter 0-500mA DC

Power Supply

Rated at 5amp,with the following features:
"ON/OFF" switch with neon indicator; 6V & 12V,AC & DC (rectified AC)outputs protected by a resettable circuit breaker; fuse protection of transformer.

Electric Motor Set

Consists of a wound rotor,with both commutator and sliprings; two adjustable brushes; a rigid motor support bracket; a base plate with rubber feet; three coils (100,200 and 400 turns), 'U' core and 'I' bar (to suit coils); horseshoe magnet.



BASIC ELECTRICITY TRAINER

E-300

Other Accessories

Centre-tap transformer, 12VA 0-12V primary, 12-0-12V secondary; helix coil 7 turns of 1mm resistance wire; 2x bar magnets 75mm long; magnetic compass 30mm dia; insulators-plastic, rubber, wood, steel, copper, brass, aluminum; 3V lamp 100mA; 3x 12V lamps 100mA; 12V lamp 250mA; 5x fuses 1A; moving iron set; container of iron filings; 2x cells 1.5V; 12x 0.7mm single core leads; current pendulum.

Manual of Experiments and Operating Instructions

Each experiment includes; aim, list of equipment, schematic diagram, wiring diagram, procedure, results and conclusions. The Basic Electricity Trainer is self-contained, requiring no extra components or any tools.

Packaging Specification

1x carton 59x38x7cm - Component and Meter Panels - 2kg
1x carton 33x27x13cm - Power Supply, Motor Set & Accessories - 5.6kg

Manufacturer : **AMRON**

Tel : (033) 3868309

Fax : (033) 3868556

E MAIL: amron@pixie.co.za

P. O. BOX 2435
Pietermaritzburg
3201

Distributor :

AMRON reserves the right to amend these specification in the interest of product improvement