

Quick Operating Guide

Initial Preparation

Self-Test

• **Guaranteed Indicating!**

Prior to use, please perform a 'Self-Test' to ensure guaranteed Indicating



While 'SELF-TEST' we must touch the 'DRIVER-BLADE' and other hand touching the 'MAGIC SENSE'

- 'Red' LED lights up indicating 'Normal Functioning' •

Testing AC Voltage

1. By Contact Method (70-250VAC)

• **Safe!**

When Testing, the 'TIP' MUST be in direct contact with the 'Live/Hot' part of the AC Voltage. 'Red' LED lights up indicating the presence of AC Voltage. Also, whenever 'Neutral' or 'Earthing/Ground' is disconnected, the 'Red' LED will light up indicating a 'Fault' line in the system.



Note: When in direct 'Contact Method' mode, it is not recommended to touch the 'MAGIC SENSE' of the tester. (Of course, it is absolutely safe even when touching it)

2. By Non-Contact Method (70-600 VAC)

i. **Identifying Polarity of AC Voltage**

Hold the Tester as shown for 'Non Contact' testing of AC voltage. To locate 'Live/Hot' side of wire, gently 'Trace' the Tester along the wire. 'Live/Hot' side is indicated by the 'Red' LED 'Fault' point in the 'Live/Hot' wire is indicated by an interruption in light. Instantaneous finding of AC voltage is also obtained by the Tester when placed near socket, plug, wire inside PVC conduit etc.



Note: To increase the sensitivity, hold the tester by the TIP while testing

ii. **High Voltage/Electrical Appliances/Hidden Wire Check**

Detects 'High Voltage', such as in car ignition system, high voltage in Transformer/Wire, Improper connection of circuits and Ungrounding in Electrical Appliances. Wire inside wooden/dry wall etc



iii. **Great For Modern Home/Do-If-Yourself**

It is great for Education and a MUST for 'Modern Home' 'Educates' children not to watch TV at a close distance due to Static Radiation. Also, it checks for Microwave leakage in a microwave oven



Approximate safe distance is obtained when LED turns off

1. Place a cup of water inside the oven (as it is not safe to operate the oven empty).
2. Set the oven to 1 minute at 'HIGH' and turn ON
3. Move the tester slowly over and around the door edge and also front glass of oven. LED lights up when microwave leakage is detected.

☞ **SENSITIVITY SELECT (AC VOLTAGE ONLY)**



LOW SENSITIVITY

For more sensitivity, please touch the 'MAGIC SENSE' when testing



HIGH SENSITIVITY

To obtain 'Higher' sensitivity and perfect visibility, please hold the tester 'TIP' and place the 'MAGIC SENSE' towards the object being tested.



REDUCE THE SENSITIVITY

To reduce the sensitivity, please place your other hand on the object being tested (e.g. grip the wire)

Note:

The sensitivity may be reduced under high humidity environment.

Continuity Test

CAUTION: Be sure to disconnect any AC Mains or High Voltage!

1. **Polarity Check**

Identifies the Polarity of DC Voltage (1.5-36VDC) 'Lights' up at 'POSITIVE' (+) only.



Lights up (Positive)



Does not Light up (Negative)

2. **Electrical Check**

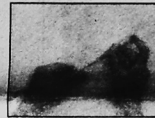
TESTS and VERIFIES the connection of wire, plug, socket, fuse, bulb, heater/heating element, toaster, fan etc.

"JUST VERY SIMPLE TO OPERATE, MUCH EASIER THAN A MULTI-METER"



3. **Electronic Component Check**

Ideal for electronic Personnel/Technician, since it can test/check/identify the condition of Rectifier, Diode, Resistor, capacitor, Transistor, Cable, Computer Cable, PCB etc.



4. **Battery Test**

It can roughly test the condition of a battery cell (1.5 volts and up). A 'NORMAL' battery is when the LED lights up at the 'Positive' (+) side, while a reverse indication shows a 'WEAK/DRAINED' battery



Does not light up at negative (Normal)



Lights up at negative (Weak/Drained)

Typical Examples For Testing/Checking

* WRONG CONNECTION CHECK

Move the Tester close to a Hair Dryer with Power OFF 'LED' lights up when the plug is inserted improperly. OR 'LIVE/HOT' wire is connected 'WRONGLY' to the socket

* GROUND/EARTHING DISCONNECTED CHECK

Move the Tester close to a Toaster with Power OFF 'LED' lights up when 'Ground/Earthing' is not connected to the system

* CAPACITOR

LED light comes 'ON' and then goes 'OFF' Capacitor is GOOD, when similar indication is shown by switching legs

* DIODE; RECTIFIER

LED lights up at 'FORWARD' direction only.

* TRANSISTOR (NPN Type)

LED lights up both at 'C' & 'E' with finger touching at 'B'

* TRANSISTOR (PNP Type)

LED lights up at 'B' with finger alternatively touching at 'C' & 'E'

* IGNITION CHECK

LED flashes consistently when the Tester is moved close to Ignition Wire with High Voltage presence



* BULB; RELAY COIL; FUSE; SPEAKER

LED lights up 'brightly' means 'GOOD', LED lights 'dimly' or 'not at all' means 'FAULTY/BAD'

* FAULT FINDING

Checks 'FAULT' condition of wiring such as 'LOOSE' (BAD contact) connection, 'DRY JOINT' of wiring etc

* LOCATING BROKEN WIRE

Trace along the wire. LED interrupts where the wire is broken

* PICKS UP STATIC RADIATION OF T.V. OR MONITOR

LED lights up at a distance away from T.V. harmful to 'Close watching' of T.V. Also, LED lights up near the 'Polarizing Filter' of a monitor, when 'GROUND/EARTHING' is not connected.

* INSTANTANEOUSLY CHECKS AC POWER

No need to remove the plug, easy to find out the presence of AC voltage (Power).

* DO-IT-YOURSELF

Easy to check out proper connection of the wiring, just very simple to use

CE EMC
LVD



BEFORE OPERATING

"IP44" Products is the Latest, Hi-tech, New Invention, and Safety

Tester. It allows you to check/test with safety, quickly, and accurately the following main features

- | | |
|--------------------------------|--|
| 1) AC VOLTAGE TEST | Contact method from 70-250VAC
Non-contact method from 70-600VAC |
| 2) DC VOLTAGE TEST | : Up to 250VDC |
| 3) POLARITY TEST | : 1.5V-36VDC. |
| 4) CONTINUITY CHECK | : 0-50MΩ |
| 5) MICROWAVE LEAKAGE DETECTION | : ≥5MW/CM ² |

* BATTERIES REPLACEMENT :

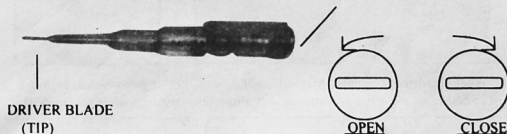
- Type : 392A; AG3; LR41; 192; V3GA. (1.5V x 2 Alkaline or Silver type)
- Battery life : Min. 5 hours of continuity operation.

* HOW TO REPLACE THE BATTERIES:

Unscrew the 'MAGIC SENSE' (Screw) completely in anticlockwise direction, gently straighten the wire over the batteries. Replace the batteries with 'NEGATIVE' side at inside position and then bend the wire back.

- ! CAUTION : 1) Never attempt to take any parts out except replacing batteries.
2) Do not operate the tester with the 'Magic Sense' removed.
3) Please 'Secure' the screw tightly (clockwise direction).

"MAGIC SENSE" (SCREW)



DRIVER BLADE
(TIP)

OPEN

CLOSE

* NOTES :

1. The tester should not be used to test voltages above the stated rated voltage.
2. Perfect indication is only assured in temperature range from 14° to 122°F (-10°C to +50°C) and the frequency range from 50 to 500 Hz.
3. The perceptibility of the indication can be impaired - in unfavorable lighting conditions, (e.g. in sunlight) or in unfavorable positions, (e.g. on wooden runged ladders etc.)
4. The tester must be tested for perfect function before use (SELF-TEST).
5. The tester must not be used in the presence of moisture. (e.g. dew or rain)
6. The screw-driver blade should only be used for testing voltage on live/hot parts. Other work must not be carried out without isolating the voltage.
7. Damaged tester must not be used.
8. Static electricity may generate by rubbing the 'PLASTIC BODY' thus causing false reading (indication).
9. Never try to modify any components / parts inside the tester.