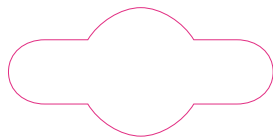
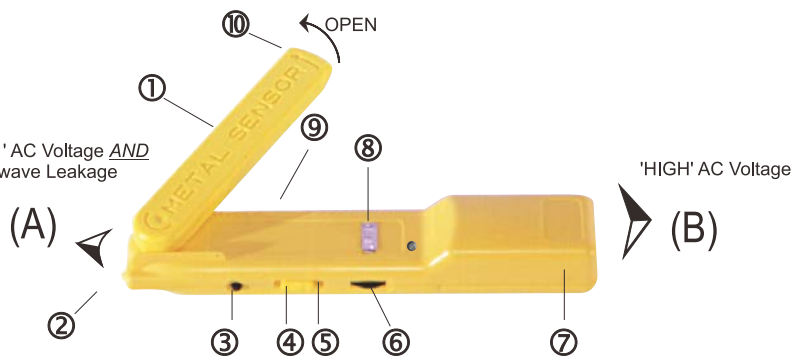


⚠ Caution  
 □ Ins. Cat. II



## OPERATION MANUAL

MEET® MS-158 Metal Detector Series  
 Model No.: MS-158M



- ① Metal Sensor  
(Adjustable arm 0~270° maximum)
- ② LED light
- ③ Tact Switch (Flash Light / Torch)
- ④ Pointer

- ⑤ Select Switch  
(0=Off/Light ; II=ACV / Continuity / Microwave ; I=Metal)
- ⑥ Sensitivity Knob (for metal only)
- ⑦ Battery Compartment
- ⑧ Continuity or Polarity Test Plate (TEST PLATE)
- ⑨ Continuity or AC Voltage Sense Pin (TEST PIN)
- ⑩ Top edge of Metal Sensor

## SPECIFICATIONS

- Metal Sensor : Maximum detecting distance approximate 2" (50mm) when the metal conduit/pipe is  $\varnothing$ 20mm
- Non-Contact AC Voltage : 70 ~ 600VAC
- Continuity Check : 0 ~ 50M $\Omega$
- DC Polarity Check : 6 ~ 36VDC
- Microwave Leakage :  $\geq$ 5mw/cm<sup>2</sup>
- Battery Life : One year when normal use (Excluding Flash Light / Torch Function)

## HOW TO REPLACE BATTERY



Type of battery:  
 9V NEDA 1604/1604A ; IEC6F22/6LR61

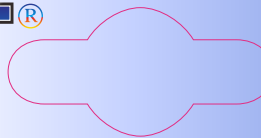
Slide towards right hand side to open the battery compartment

### NOTES :

- The tester should not be used to test voltages above the stated rated voltage.
- Operating temperature within -10° to + 50°C (14° to 122°F) and the frequency range from 50 to 500 Hz. But best environmental temperature range upto 30°C, humidity 80% at altitude upto 2,000 meter.
- The tester must be tested for perfect function before use (SELF-TEST).
- The tester must not be used in the presence of moisture (e.g. dew or rain).
- Damaged tester must not be used.

03 158 V.02

**MULTI-FUNCTION ELECTRICAL TESTER**



**NEW LATEST HI-TECH**

# MULTI-FUNCTION METAL DETECTOR

DETECT MICROWAVE LEAKAGE



NON-CONTACT ACV TEST



FLASHLIGHT (TORCH)



DETECT METAL



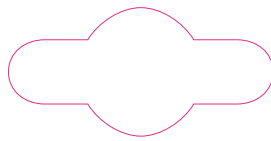
CONTINUITY & POLARITY CHECK



Battery not include  
 World-wide Patent Pending



Model no.:MS-158M



## SELF-TEST FUNCTION

Prior to use, please perform a 'Self-test' to ensure guaranteed indication.

*I. Before Testing AC Voltage / Continuity / Microwave Leakage.*

☞ Set the 'Select Switch' to 'II' position. 



Turn sensor arm to 90° or 180° as shown, touch 'Test Plate' with your left hand thumb while using, the free hand finger to make contact with 'Test Pin'.

Results : LED blinks and buzzer sounds (Bi... Bi... Bi...) @2Hz. (slowly) indicating 'Normal functioning'.

Note : When not in use, set the select switch to 'O' position.

*II. Before Searching Metal Object*

☞ Set the 'Select Switch' to 'I' position. 



Adjust the 'Sensitivity Knob' slightly until both buzzer sound and LED blinking stops. (this is the maximum sensitivity position).



Move the 'Metal Sensor' near a known metal object.

Results : LED blinks and buzzer sounds (Bi... Bi... Bi...) @ 10Hz. (faster) indicating 'Normal'

Note : When not in use, set the select switch to 'O' position.

## HOW TO FIND METAL OBJECT

☞ Set the 'Select Switch' to 'I' position. 



Hold the unit as shown with 'Metal Sensor' arm opened, then, slowly adjust the 'Sensitivity Knob' until both Buzzer sound and LED blinking stops (this is the maximum sensitivity position). Make sure the unit is away from the area being scanned or any other metal object.



Move the unit slowly and smoothly across the surface area, approaching from different directions. Buzzer will sound and LED will start blinking when metal object is detected.



To find out the precise position of METAL object, turn the 'Sensitivity Knob' backwards to make the detection sensitivity narrower and re-scan the area again.



To pinpoint metal objects, such as nail etc, use 'Top Edge' of the metal sensor.



The detectors detects metals such as steel, iron, copper, brass, gold, aluminum etc.



It locates pipe, reinforced steel, nail, screw, metal conduit, cable etc. inside the concrete, plaster cellular blocks and wood.



It helps to avoid the dangers of drilling through power cables or gas pipes and saves unnecessary damage to decorations.

☞ When METAL object is detected, the Buzzer sounds and LED blinks @10Hz. ie. Bi... Bi... Bi...

Notes :

1. It is not suitable to detect on walls or ceilings or insulated with metallic foils.
2. The detector will not detect plastic water pipes.
3. The wires those are inside the Metal or P.V.C. conduit, shows the presence of METAL.
4. The depth to which the detector will detect metal depends on the type of material, object's size, the larger objects being detected to a greater depth.

## DETECTING AC VOLTAGE

☞ Set the 'Select Switch' to 'II' position. 



Hold the unit and touch 'Test Pin' as shown in picture, use the top side (A) near LED light for 'LOW' sensitivity, Alternatively you may use 'Bottom' side (B) near battery for 'HIGH' sensitivity.



Move the unit near or across the surface to be tested, such as switch, plug, wire or wire inside P.V.C. conduit etc.



For more accuracy in locating the 'Broken Point' or 'Live/Hot' side of the wire, hold the wire with free hand to reduce the sensitivity, The 'Broken Point' is indicated when the signal is interrupted.



Move unit in proximately of ELECTRICAL APPLIANCE (with power off) such as electrical kettle, rice cooker, heater, washing machines, dry machine, microwave oven, monitor filter screen (with ground clip attached), the LED and Buzzer both come on when 'Ground/Earthing' is not connected to the appliance.



Move the unit close to a hair dryer with the power off, 'LED and Buzzer' comes on when the plug is inserted improperly, OR 'LIVE HOT' wire is connected 'WRONGLY' to the socket.



Move the unit away from monitor/TV screen. The point where LED and Buzzer turns off is approximately the safe distance with the radiation harms.

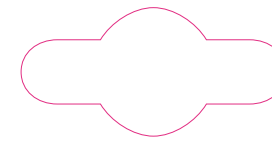


The unit can also detect AC voltage from the unshielded wire located inside the wooden/dry wall (For more accuracy and lower detection sensitivity, place your free hand onto the wall).

☞ The presence of AC voltage indicated by 'LED' lights up and 'Buzzer' sounds according to AC signals i.e. (Zi... Zi... Zi...).

Notes :

1. Static electricity may be generated by rubbing or banging the plastic housing thus causing false indication (LED and Buzzer both go on).
2. The sensitivity may be reduced under high humidity environment.
3. You may reduce the sensitivity by placing your free hand on the object i.e. wire or dry wall.



## CONTINUITY / DC POLARITY CHECK

⚠ CAUTION : Be sure to remove AC mains or high voltage !

☞ Set the 'Select Switch' to 'II' position. 



Turn the sensor arm to 90° or 180° as shown, use left hand thumb to touch the 'Test Plate' and free hand finger to make contact with one side of object being tested.



It is very simple, fast and accurate to find out 'Good' or 'Defective' fuses, bulbs, heating elements etc. When 'LED and Buzzer' turns on it is 'GOOD'.



It also identifies battery polarity 6 ~ 36VDC, DC adapter etc. Positive (+) side is indicated by both LED light and Buzzer sound.

☞ During above tests LED blinks and Buzzer sounds @2Hz. ie. (Bi... Bi... Bi...).

## MICROWAVE LEAKAGE DETECT

Check Your Microwave Oven Every Week And Cook With Confidence !

NOTE : The plug of the Microwave Oven should be connected to 'Ground/Earthing' !

☞ Set the 'Select Switch' to 'II' position. 



Use index finger of your right hand to touch the 'Test Pin' as shown.



1. Place a cup of water or food 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 unit slowly over and around the door edge and front glass of oven door.

☞ In case of radiation leakage is detected LED and Buzzer both will turn on according to the fluctuation in signal i.e. from 'HIGH' ➡ 'LOW' ➡ 'HIGH' ➡ 'LOW' ➡ (Zi... Zi... Zi...)

## FLASH LIGHT / TORCH FUNCTION

☞ Set the 'Select Switch' to 'O' position. 



Press the 'Tact Switch' as shown and LED lights up.