P/N: VCM-2_REV.A

OPERATING INSTRUCTIONS for **AMPROBE** VCM-2

See “Precautions for Personal and Instrument Protection” on Page 3

See “Limited Warranty” on Page 2

Instrucciones en español ver página ?

SPX ATP ADVANCED TEST PRODUCTS

Miramar, FL
Phone: 954-499-5400
Fax: 954-499-5454
www.amprobe.com

AMPROBE®

LIMITED WARRANTY

Congratulations! Your new instrument has been quality crafted according to quality standards and contains quality components and workmanship. It has been inspected for proper operation of all of its functions and tested by qualified factory technicians according to the long-established standards of our company.

Your instrument has a limited warranty against defective materials and/or workmanship for one year from the date of purchase provided that, in the opinion of the factory, the instrument has not been tampered with or taken apart.

Should your instrument fail due to defective materials, and/or workmanship during this one year period, a no charge repair or replacement will be made to the original purchaser. Please have your dated bill of sale, which must identify the instrument model number and serial number and call the number listed below:

Repair Department
Phone:954-499-5400 / 800-327-5060
Fax:954-499-5454
Website:www.amprobe.com

Please obtain an RMA number before returning product for repair.

Outside the U.S.A. the local representative will assist you. Above limited warranty covers repair and replacement of instrument only and no other obligation is stated or implied.

PRECAUTIONS FOR PERSONAL AND INSTRUMENT PROTECTION

1) Read these instructions thoroughly and follow them carefully.
2) In many instances you will be working with dangerous levels of voltage and/or current therefore, it is important that you avoid direct contact with any uninsulated, current-carrying surfaces. Appropriate insulating gloves and clothing should be worn.
3) Before connecting or disconnecting the meter to or from the circuit to be tested, turn off all power to the circuit.
4) Before applying test leads to circuit under test, make certain that leads are plugged into proper Jacks and switches are set to proper range and function.
5) Before using any electrical Instruments or tester for actual testing, the unit should be checked on a low energy high impedance source. **Do not use power distribution lines or any other high energy sources.**
6) If the instrument should indicate that voltage is not present in circuit, do not touch circuit until you have checked to see that all instrument switches are in proper position and instrument has been checked on a known live line.
7) Make certain no voltage is present in circuit before connecting ohmmeter to circuit.
8) When not in use, set selector switch to "OFF" position.

IMPORTANT: Failure to follow these instructions and/or observe the above precautions may result in personal injury and/or damage to the instrument and/or accessories.

OPERATING CONTROLS CE

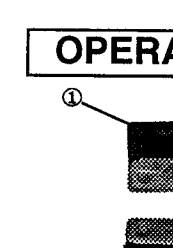
① Metal Sensor (Adjustable 90º)
② Batteries Compartment
③ Pocket Clip
④ AC Voltage Sensor
⑤ Continuity Test Pin
⑥ Continuity Test Plate
⑦ LED
⑧ Select Switch
(O=Off, II=AC/Microwave, I=Metal)
⑨ Sensitivity Knob
⑩ Pointer

Specifications:

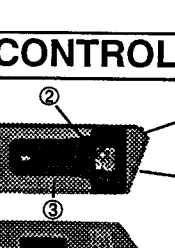
❶ With adjustable distance sensitivity and adjustable
❷ Continuity 0-5MΩ (with an audible sound adjustment)
❸ Verify Dc voltage/Polarity check ~ 2-36VDC
❹ AC voltage ~ non-contact(70-600VAC) with adjustable distance sensitivity
❺ Microwave leakage monitor ~ ≥5mW/CM
❻ Negative Ions Detector (Ionizer Detector)
❼ Indication ~ Audible and visible
❽ Maximum depth on metal detection is 1.5 inch.

HOW TO REPLACE BATTERIES

2) Slide →
1) Lift →



Be careful of young finger



Button Batteries 1.5 x 4pcs. (LR44, AG13, 3587 or equivalent) Slide ←

(Positive towards right hand side)

OPEN CLOSE

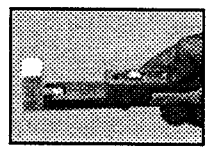
QUICK OPERATING GUIDE

SELF TEST

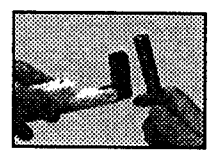
Guaranteed Operation !
Prior to use, please perform a "SELF-TEST" to ensure guaranteed operation.

WHEN SEARCHING *METAL OBJECT*

Set the switch to 'I' position



Slightly adjust the 'Sensitivity Knob' until 'LED and Buzzer' goes off.

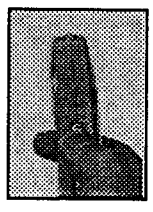


Move the "METAL SENSOR" near the metal object.

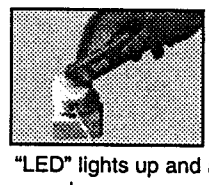
"LED" lights up and steadily 'Buzzer' sounds

WHEN TESTING *AC VOLTAGE* **OR** *MICROWAVE LEAKAGE*

Set the switch to "II" position

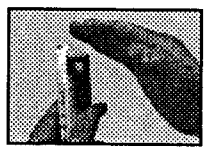


Slightly adjust the 'Sensitivity Knob' until 'LED and Buzzer' goes off.

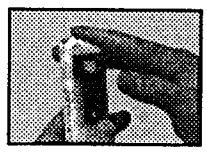


Move the tester near a known AC voltage.

"LED" lights up and alternating 'Buzzer' sounds



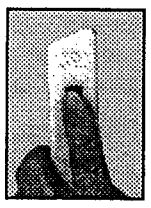
'Tapping near the 'Test Pin' with your hand.



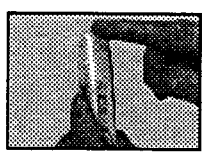
'LED' lights up and the 'Buzzer' sounds when 'tapping' with finger.

WHEN TESTING *CONTINUITY CHECK* / *DC POLARITY* / *BATTERY CHECK*

Set the switch to 'O' position



Use index finger of your left hand to touch the 'Metal Plate ' and



Use finger of other hand to make contact with the 'Test Pin'.

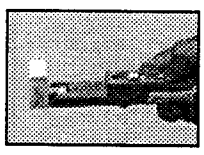
'Led' lights up and steady 'Buzzer' sounds

Notes:

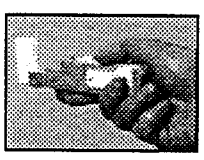
1. From above 'Self-test', if 'LED and Buzzer' comes on it means the unit is functioning normal.
2. 'LOW BATTERY' warning will sound when both 'LED and Buzzer' has long beeps.
   (When the switch is in 'I' and the SENSITIVITY KNOB' is adjusted to minimum.)

DETECTING METAL OBJECT

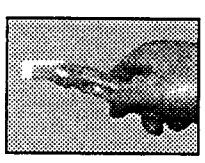
Set the switch to 'I' position



Hold the unit as shown with the 'Metal Sensor' arm opened. Then, gently adjust the 'Sensitivity Knob' until 'LED and Buzzer' goes off. (Which is the maximum detecting sensitivity.) Make sure the unit is away from the scanning area and the metallic objects.



Move the until slowly and smoothly across the surface the surface area, approaching from different directions. 'LED and Buzzer' comes on when a METAL object is detected.



To find more accurately the exact position of a METAl object, turn the 'Sensitivity Knob' backwards to reduce sensitivity, then re-scan the object.

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

It locates metal pipe, reinforced steel, nail, screw, metal conduit, cable etc. inside of bricks, concrete, plaster, cellar blocks and wood.

It helps to avoid the danger of drilling through power cables or gas pipes.

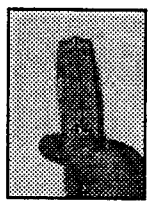
The presence of Metal object is indicated by the LED lighting up and the Buzzer sounding.

Notes:

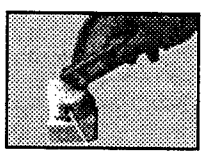
1. Is is not suitable to detect on walls or ceilings insulated with metallic foils.
2. The detector will not detect plastic water pipes.
3. Wires inside the metal conduit, it shows the presence of METAL.
4. The depth to which the detector will detect metal depends on the object's size, larger objects being detected to a greater depth.

DETECTING AC VOLTAGE

Set the switch to 'I' position



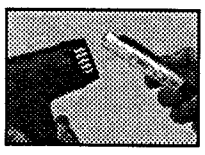
Hold the unit as shown. Then, slowly adjust the "Sensitivity Knob' until 'LED and Buzzer' goes off (which is the maximum detecting sensitivity).



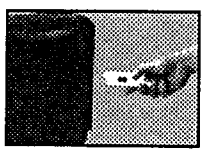
Move the unit near or across the surface to be tested, such as switch, socket, plug, wire inside P.V.C. conduit etc.

For more accuracy in locating the 'Broken Point' or ' Live/hot' side in the wire, <u>just grip the wire</u> and turn forwards the 'Sensitivity Knob' to <u>reduce the sensitivity</u>. The broken point is indicated when the signal is interrupted (stopped).

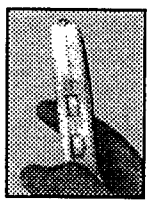
Move the tester to the approximate area of the electrical appliances with the power off, such as kettle, rice cooker, washing machine, dryer, microwave oven 'Ground/Earthing' is <u>NOT</u> connected to the appliance.



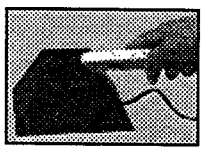
Move the unit to a hair dryer with the power off. 'LED and Buzzer' comes on when the plug is inserted improperly, OR 'Live/Hot' wire is incorrectly wire at the socket.



Approximate safe distance is obtained when 'LED and Buzzer' turn off while moving away from TV screen with tester pointing towards TV.



The unit can also detect an AC signal of an unshielded wire located inside dry wall. (To reduce the detecting sensitivity just place your other hand onto the wall).



The detector can also detect the conditions of an ionizer, 'LED and Buzzer' comes on near the unit.

<u>The presence of AC voltage indicated by 'LED' lights and an intermittent 'Buzzer' sounds.</u>

<u>Notes</u>:

1. Static electricity may be generated by rubbing or banging the plastic housing thus cause false indication. (LED lits and Buzzer beeps.)
2. The sensitivity may decrease under high humidity environment.
3. You may increase the sensitivity by touching the 'Continuity Test Plate'.

CONTINUITY

→**<u>CAUTION:</u>** <u>Be sure to remove AC mains or high voltage!</u>

Set the switch to 'O' position

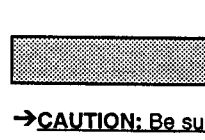
Hold the unit as shown. Then turn the 'Sensitivity Knob' backwards for highest sound level.

It very simple and accurate to find out if a bulb, fuse, heating element, etc. Is 'Good' or 'Bad' . When the 'LED and Buzzer' comes on , it is 'Good'!

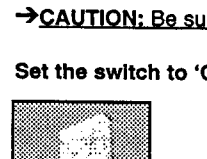
'LED and Buzzer' come on when the resistor is at or below 5mΩCoils, transformer, inductor etc. are tested the same way.

To approximate check the conditions of a capacitor. If the "LED" and "Buzzer" go 'ON' and then 'OFF', the capacitor is 'GOOD'.

'LED and Buzzer' comes on in 'FORWARD' direction and NOT in REVERSE when checking a diode.



FOR 'NPN' TYPE TRANSISTOR, THE 'LED and Buzzer' comes on a at 'C' and 'E', with finger touching at 'B' and for 'PNP' type transistor, the 'LED and Buzzer' comes on at 'B', finger alternatively touching at 'C' and 'E'.



Check the correct connection of home appliances, wire cable.

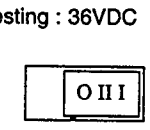
Check your appliances once every month and live with confidence !

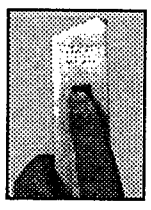
When conducting a continuity check, 'LED' lights up and 'Buzzer' sounds STEADY.

DC POLARITY AND BATTERY CHECK

CAUTION : Maximum DC voltage testing : 36VDC

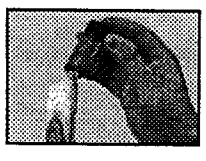
Set the switch to 'O' position





Hold the unit as shown. Then turn the 'Sensitivity Knob' backwards for highest sound level.

It identifies th Polarity (2-36VDC) of battery, DC adaptor, etc. 'LED and Buzzer' comes on at 'POSITIVE'(+) side only.



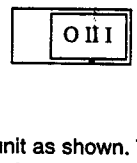
It can roughly test the condition of a battery cell (AA;

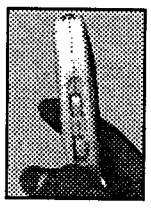
During the above tests, 'LED and Buzzer' sounds continuously.

MICROWAVE LEAKAGE DETECT

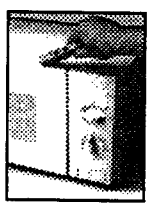
NOTE : The plug of the Microwave Oven must be connected to 'Earth/Ground'!

Set the switch to 'II' position





Hold the unit as shown. Then turn the 'Sensitivity Knob' completely forwards. (Minimum sensitivity).



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 also front glass of oven.

Attention : 'LED and Buzzer' comes on when microwave leakage detected.

When detecting the leakage of microwave radiation, 'LED and Buzzer' comes on according to the fluctuating signal i.e. from 'HIGH' →'LOW'→'HIGH'→'LOW'...