

**OPERATING
INSTRUCTIONS**
for
**AMPROBE®
MULTIMETER**
Model AM-6B

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See "PRECAUTIONS FOR PERSONAL AND
INSTRUMENT PROTECTION" on Pg. 4

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AMPROBE.

SPECIFICATIONS MODEL AM-6B

LIMITED WARRANTY

Congratulations! You are now the owner of an AMPROBE® instrument. It has been quality crafted according to quality standards and contains quality components and workmanship. This instrument has been inspected for proper operation of all of its functions. It has been tested by qualified factory technicians according to the long-established standards of AMPROBE INSTRUMENT.

Your AMPROBE 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 the one year warranty period, return it along with a copy of your dated bill of sale which must identify instrument by model number and serial number.

For your protection, please use the instrument as soon as possible. If damaged, or should the need arise to return your instrument, it must be securely wrapped (to prevent damage in transit) and sent prepaid via Air Parcel Post insured or UPS where available to:

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Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176

FAX 781.665.0780 - TestEquipmentDepot.com

Voltage Ranges:

AC: 0-30/120/300/600V (4K Ω /Volt)

DC: 0-0.3/3/12/30/300/600V (4K Ω /Volt)

Resistance Ranges:

X1: 2K Ω , 30 Ω mid -scale (0.5 Ω resolution from 0-5 Ω)

X100: 200K Ω , 3K Ω mid -scale (50 Ω resolution from 0-500 Ω)

K Ω : 1M Ω , 10K Ω mid -scale (200 Ω resolution from 0-5K Ω)

DC Current Ranges: 0-250 μ A/3mA/30mA/300mA

Battery Test Range: 0-1.5VDC

db Ranges:

(30 VAC): -10 - +31dB

(120 VAC): +2 - +43dB (add 12 dB to readout)

(300 VAC): +10 - +51dB (add 20 dB to readout)

(600 VAC): +16 - +57dB (add 26 dB to readout)
(reference: 0dB = .775v, 600 Ω)

Accuracy:

AC Volts: +/-4% full scale

DC Volts: +/-3% full scale

Resistance: +/-3% of arc

DC milliamps: +/-3% full scale

1.5V Battery Test: +/-5% of arc

dB +/-4% of arc

Frequency Response: 50-60Hz

Ohmmeter Battery: Amprobe part number SN915
(AA) included

Fuse: Amprobe part number 5X20-250.5, 0.5A/250V
fast blow type, 1 spare included

Dimensions: 14 cm(L) x 9.4cm(W) x 40mm(H) 5.5"(L)
x 3.7"(W) x 1.6"(H)

Approximate Weight: 212g (7.5 oz.)

Test Leads: MTL-6B

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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:
- 5) Before using any electrical instrument or tester for actual testing the unit should be checked on a known live line to make certain it is operating properly.
- 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.

FUSE PROTECTION

All ohms and milliamp ranges of the AM-6B are fuse protected to withstand the momentary misapplication of up to a maximum of 250 volts.

If you should accidentally apply voltage while on these ranges, disconnect the leads from the circuit as quickly as possible. Check instrument operation on that range by applying the proper input. If instrument does not operate properly on that range, remove the back cover of the instrument (see pages 8-9). Check fuse. If it is blown, replace with appropriate fuse (see pages 8-9).

ACCURACY

1. For greatest accuracy, the pointer should be set on the zero line. Use zero adjusting screw, if necessary.
2. When using meter, place it panel side up on a flat non-metallic surface.
3. Take reading on the range on which the reading is as close to full scale as possible.

OPERATION

Before using instrument, read "Precautions for Personal and Instrument Protection: on page 4.

DC/AC Voltage Ranges:

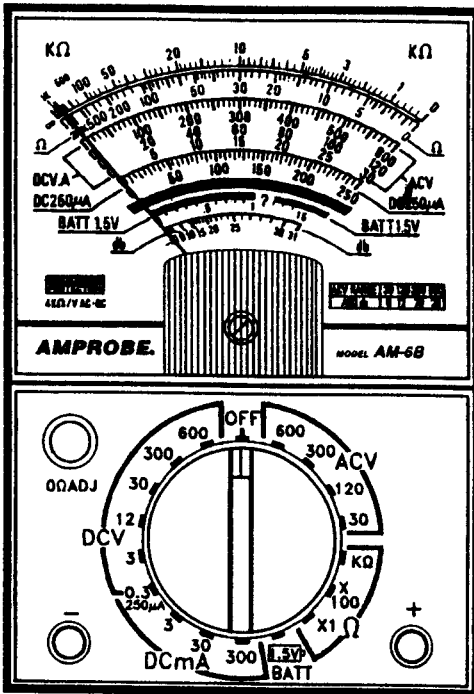
All voltage measurements are take directly on the appropriate 0.3/3/12/30/120/300/600V scale. When using 3VDC range, take reading on 30 volt scale and divide reading by 10. When using the 0.3VDC range, take the reading on the 30 volt scale and divide by 100.

AC Voltage Measurements:

1. Set the selector switch to appropriate AC voltage range. When voltage is unknown, use the highest voltage range.
2. Plug the Black test lead into "-" jack.
3. Plug the Red test lead into the "+" jack.
4. Place one test prod on each side of the AC voltage.

DC Voltage Measurements:

1. Set the selector switch to appropriate DC voltage range. When voltage is unknown, use the highest voltage range.
2. Plug the Black test lead into the "-" jack.
3. Plug the Red test lead into the "+" jack.
4. If negative and positive sides of the circuit to be tested are known:
 - a) connect the black test prod to the negative side of the circuit.



- b) connect the red test prod to the positive side of the circuit.

If the negative and positive sides of the circuit are not known:

- a) connect the black and red prods to circuit.
b) If meter deflects to the left, reverse the black and red prods.
5. If meter indication is in lower half of scale and falls within the range of a lower scale, reset selector switch to the lower range.

Current Measurements:

A milliampere is one thousandth (1/1000) of an ampere and may be written as 1mA or 0.001 ampere.

A microampere is one millionth (1/1,000,000) of an ampere and may be written as $1\mu\text{A}$ or 0.000001 ampere. Meter must be connected in series with the circuit under test.

DC Current Measurements:

1. Set the selector switch to appropriate range. When current is unknown use the highest current range.
2. Plug black test lead into the "—" jack.
3. Plug red test lead into the "+" jack.
4. Using the red and black test leads connect the meter in series with the circuit under test.
5. If meter deflects to the left, reverse the red and black test prods.
6. If meter indication is in lower half of scale and falls within the range of a lower scale, reset selector switch to the lower range.

FUSE/BATTERY INSTALLATION

The ohmmeter is powered by one 1.5V type "AA" battery. This instrument uses 250V, .5A amp fast blow fuse, cat. no. 5X20-250.5 (spare included).

To install (or replace) fuse or battery, remove instrument back cover by removing large screw. Observe proper polarity when installing battery. To replace back cover, line up edges and tighten screw.

Resistance Measurements:

1. Set the selector switch to appropriate range. When resistance is unknown use the highest resistance range (K Ω). 1K Ω =1000 Ω .
2. Plug the black test lead into the "—" jack.
3. Plug the red test lead into the "+" jack.
4. Short the test leads by touching them together.
5. With leads shorted together observe pointer. It should read "0" at the right hand end of the ohms scale.
6. If pointer does not indicate "0", use ohmmeter zero adjust (0 Ω ADJ) knob to line up with "0" on ohms scale. If pointer cannot be brought up to "0", replace battery.
7. Separate the test leads.
8. Connect test leads across the resistance to be measured. Caution: Resistance to be measured must be disconnected from all power before applying ohmmeter test leads.
9. The K Ω scale is read off the top green scale. The read out is multiplied by 1000 to determine your resistance in ohms.

10. The X1 and X100 scale is read off the lower green scale. The readout is read directly when on the X1 scale, and multiplied by 100 on the X100 scale.
11. If there is little or no pointer deflection from "infinity" (∞ left hand end of scale), reset selector switch to a higher range to get a greater deflection. The best readability on an ohmmeter range is between mid scale and zero ohms.

Note: When switching ranges, readjust pointer to "0" ohms as outlined above.

BATTERY TEST

1. Set selector switch to batt/1.5V position.
2. Plug the black test lead into the "-" jack.
3. Plug the red test lead into the "+" jack.
4. Touch red test lead to "+" terminal of battery and the black test lead to "-" end of battery.
5. Take reading on the special "BAT" scale.