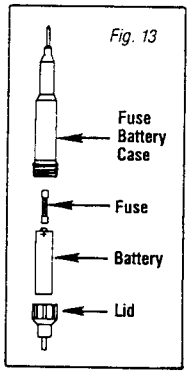
HOW TO INSTALL FUSE AND BATTERY

Unscrew base of ohmmeter battery/fuse attachment. Insert fuse (Use Littelfuse Type 8AG-360x023, 1 AMP fast blow) and AAA battery (Cat. No. 912, not supplied) into probe end as shown in figure. Screw base on to probe.



NOTE: If you fail to get an ohmmeter indication or the indication is intermittent, before replacing the battery or fuse, lightly sand the base of the battery with fine sandpaper. This will remove any oxidation that could be causing poor or intermittent contact.

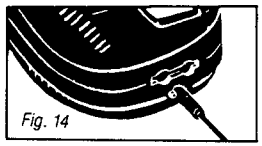
HOW TO USE AS AN OHMMETER

NOTE: See listing on cover page for models that have ohmmeter range.

IMPORTANT:
Read "Precautions for Personal and Instrument Safety" before using instrument.

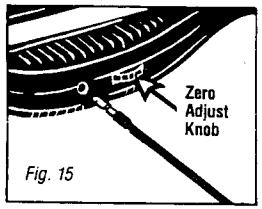
CAUTION
Make certain no voltage is present in circuit before connecting ohmmeter to circuit. The ohmmeter is fused to help protect it against a misapplication of voltage but under certain conditions it is still possible to damage the meter and/or obtain incorrect readings.

1. Insert either the Red or Black Voltage Lead into the **Left Voltage Receptacle** at bottom of instrument case (Fig. 14).

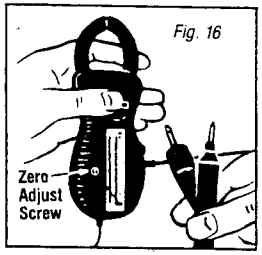


2. Insert ohmmeter battery/fuse attachment into the jack on the right side of the instrument just below the ohmmeter Zero Adjust Knob. Seat plug to bottom for good connection (Fig. 15).

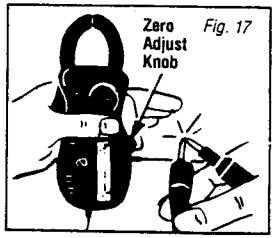
3. **Set Range Selector so that the 150 volt red scale appears in window.**



4. **Ohmmeter Scale Adjustment with Test Leads Open**–Pointer should line up with division marked "∞" on OHMS SCALE. Turn Pointer Zero Adjust Screw if necessary (Fig. 16).

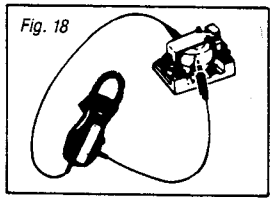


5. **With Test Leads Shorted**–Line up pointer with "0" mark on ohms scale by turning Small Black Knob on right side of instrument (Fig. 17).



NOTE: If ohmmeter zero adjust knob does not line pointer up on zero mark, replace battery with a new one. Oxidation on base of battery can cause poor contact. Sand lightly to assure good contact.

6. **To Measure Resistance between any two points on a device, simply apply the clip lead and the ohmmeter attachment probe tip and read pointer.**



CAUTION:
Make certain that circuit is disconnected from line before taking any resistance measurements.

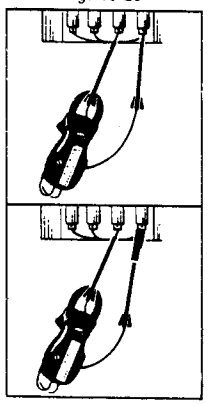
HOW TO READ OHMMETER SCALE

The ohmmeter scale is located on the flat plate along the righthand edge of the window. The zero mark (beginning) is on top of the scale while the infinity mark "∞" ends the scale.

USING RS-7 and PRS-7R TO RECORD VOLTAGE OR CURRENT
The PRS-7R Recording Module is an optional accessory. It is not supplied with the RS-7/7A.

1. See the instruction label on the lid of the PRS-7R. Follow steps 1 to 4.
2. Plug PRS-7R meter line cord into the jack located on the lower lefthand side of the RS-7.
3. If RS-7/7R combination will be recording
   a. current, see "How To Take Current Readings" on page 1 of this instruction manual for instructions about connecting the RS-7 for current measurements.
   b. voltage, see "How to Take Voltage Readings" on page 3 of this instruction manual for instructions about connecting the RS-7 for voltage measurements.
4. Follow remaining steps 7 to 10 of instruction label on lid of PRS-7R.

Fig. 19-20



IMPORTANT: The RS-7 will not show any reading when it is connected to the PRS-7R. Do not assume circuit is dead.

EXTENDO LEADS FOR FASTER AND EASIER VOLTAGE TESTING
EXTENDO TEST LEADS have 5 inch long insulated probes for a man-sized grip. One probe clamps between instrument jaws. Optional alligator clip adaptor. (Cat. No. VRC-320) converts probe so it can be fastened to test point. Probe tips are replaceable (Cat. No. VPT). Extendo Lead Cat. No. VLK-411R for 100, 250, 300 amps RS models: Cat. No. VLK-100R for 1000 amps RS models. *Fig. 19-20.*

FACTORY SERVICE

For factory service, package instrument and packing slip with sufficient cushioning material in a shipping carton; make certain your name and address appear on box and packing slip; ship prepaid via U.P.S. (where available) or Air Parcel Post insured to Service Division, AMPROBE INSTRUMENT, 630 Merrick Rd., Lynbrook, N.Y. 11563.

Outside of the U.S.A. the local AMPROBE representative will assist you.

RANGE-EXPANDING ACCESSORIES

Model	Ratio	Maximum Range Capability
A50-1	10 to 1	1,200 amperes*
CT-50-1	50 to 1	6,000 amperes*
CT-50-2	50 to 1	3,600 amperes*

*Intermittent duty

All of the above are clamp-on type transformers. Models CT-50-1 (six link) and CT-50-2 (four link) are flexible link construction.
Request Cat. No. AAD38.

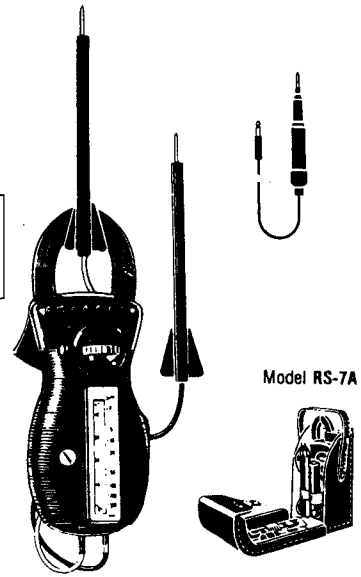
Ptd. In U.S.A.

P/N 915760
6/95

OPERATING INSTRUCTIONS

AMPROBE®
Rotary Scale Snap-Around Models

See PRECAUTIONS FOR PERSONAL AND INSTRUMENT SAFETY on page 1.



SPECIFICATIONS

MODEL	RANGES		
	Amps, AC	Volts, AC (See Note)	Ohmmeter**
RS-1 & RS-1A	0-6/15/40/100	0-150/600	No
RS-1B & RS-1BA	0-6/15/40/100	0-150/600	Yes
RS-2 & RS-2A	0-6/15/40/100	0-150/300	No
RS-5 & RS-5A*	0/10/40/100/300	0-300/600	No
RS-7 & RS-7A	0-5/25/100/250	0-150/300/600	Yes
RS-300 & RS-300A	0-6/15/40/100/300	0-150/300/600	No
RS-1000/RS-1000S‡	0-15/40/100/300/1000†	0-150/300/600	Yes
RS-1007/RS-1007S‡	0-15/40/100/300/1000†	0-150/300/750	Yes

Accuracy (volts & amps) — within ±3% of Full Scale, based on sinusoidal wave form; (Ohms)–±3% of arc.
Case Voltage Breakdown Test — 3000 volts AC (except ohmmeter Models 2200VAC)

NOTE: 750 VAC Range can be obtained on any RS or RS-A model having a 150 V range by means of a VL-750R Multiplier Lead.

*50Hz only.

**25 ohms midscale ohmmeter.

†Continuous duty up to 600 amps. Intermittent duty (1½ minutes maximum) above 600 amps.

‡Models RS-1000S and RS-1007S have built-in, manually-set, surge indication capability.

AMPROBE INSTRUMENT®
DIVISION OF CORE INDUSTRIES INC., LYNBROOK, NEW YORK 11563

PRECAUTIONS FOR PERSONAL AND INSTRUMENT SAFETY.

IMPORTANT:

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 voltmeter 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:
   a. Proper test leads are plugged into correct instrument jacks, and
   b. Selector switch is set to proper range.
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. Make certain no voltage is present in circuit, before connecting ohmmeter to circuit.
7. The jaws of clamp-on instruments should not, under any circumstances, be used as a device to hold or hang the instrument. When using the instrument as a voltmeter or ohmmeter, *never* clamp the jaws around or on to a conductor box or anything else – conducting or non-conducting. For easier and faster voltage and resistance tests, we recommend Extendo Leads, available from your AMPROBE distributor.
8. When measuring voltage or current with models that have an ohmmeter, remove the ohmmeter battery/fuse attachment from the instrument. Under no condition must the ohmmeter battery/fuse attachment be left plugged in when doing amps or volts measurement. Use the ohmmeter battery/fuse attachment only when taking resistance measurements.
9. Before interpreting a reading on the instrument be sure that the Pointer lock is free or in the off position. The pointer is free when button is at left position (See Fig. 2).

ZERO ADJUSTMENT

For greater accuracy, the pointer should be set on the zero line. This is done with the zero adjust screw. If while turning the zero adjust screw, the pointer swings away from the zero line, and will not come to rest directly over it, it is possible that the scale window is statically charged. To neutralize – clean window with fluid from **SCK-100 Anti-Static Cleaning Kit.**

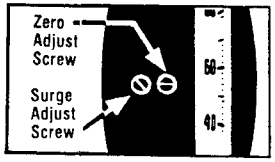


Fig. 1

HOW TO TAKE CURRENT READINGS

(See Pages 2 and 5 for range-expanding accessories)
(All ampere ranges are printed black)

IMPORTANT:
Read "Precautions for Personal and Instrument Safety" before using instrument.

1. Make certain Pointer Lock is in "OFF" position.

Fig. 2

Pointer is free when button is at left. TO PREVENT DAMAGE TO INSTRUMENT **DO NOT** STORE IT WITH POINTER IN LOCKED POSITION

2. Turn rotary scale selector until highest current range appears in window.
3. Press trigger button to open Jaws.
4. Encircle one conductor with the Transformer Jaws.
5. Release finger pressure on Trigger to allow Probe Jaws to close around the conductor before attempting to read the meter.

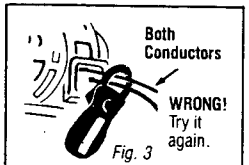


Fig. 3

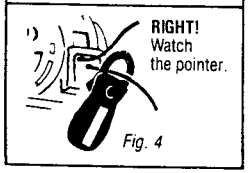


Fig. 4

6. If Pointer indicates below 40 Amps (Fig. 5).

DON'T READ YET!

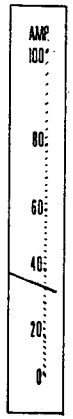


Fig. 5

Fig. 6

7. Set Rotary scale Selector to next current range until a reading is obtained in the upper half of scale *(Fig. 6).*

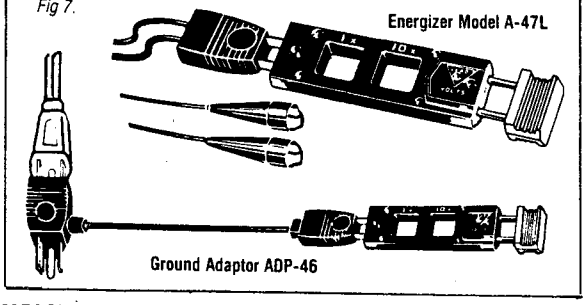
O.K.! READ

8. If the reading is below half scale on the lowest range of the meter, and greater accuracy is desired, either one of the following methods can be used:

a. Loop the conductor two or more times around the transformer jaws and divide the reading by the number of turns.

b. Use the AMPROBE Energizer. It increases current measuring sensitivity 10 times. 0-6 amp range becomes 0-0.6 amps. Can also be used to take voltage measurements at receptacles under load conditions. Energizer Ground Adapter ADP-46, available separately as an accessory, enables A-47L to be used for taking current measurements on 115VAC/15Amp equipment with ground plug while maintaining existing equipment ground circuit. See Fig. 7.

Fig 7.



MEASURING MOTOR STARTING CURRENTS WITH MODELS THAT HAVE SURGE INDICATION CAPABILITY

NOTE: Pointer lock must be in "off" position.

1. If the starting current (locked rotor) is not shown on motor nameplate, you can estimate the current as it is generally 5–6 times full load current.
2. Set instrument to appropriate current range and adjust Pointer to zero using Zero Adjust Screw, if necessary. See Fig. 1.
3. Turn Surge Adjustment Screw counter-clockwise. See Fig. 1 to move Pointer upscale. Set it to a value approximately 5% (1/20) below estimated current. Do not try to set Pointer above 95% of full scale value of range Eg. on 100 Amp range, do not set above 95 amps.
4. Turn off motor.
5. Clamp instrument jaws around one motor lead. Observe Pointer and turn on the motor.

6a. Adjustment is correct when Pointer shows only a slight movement (less than one division) upscale. Read current value that Pointer moves up to

6b. If Pointer moves upscale more than one division or does not move at all readjust pointer accordingly upscale or down scale.

7. After measurement is completed, return Pointer to zero using Surge Adjustment Screw. Recheck zero setting, using Zero Adjust Screw.

See page 5 for instructions for using Model RS-7 and PRS-7R Recording Module to record current.

HOW TO TAKE VOLTAGE READINGS

(All voltage ranges are printed red)

IMPORTANT:
Read "Precautions for Personal and Instrument Safety" before using instrument.

1. Insert bayonet type voltage test leads into Voltage Receptacles at bottom of instrument. Push against receptacle spring and twist to lock in place (Fig. 8).


Fig. 8

2. Turn Rotary Scale Selector until highest voltage range – eg. 600 volts – appears in window. See table on cover page for ranges of each model.

3. Connect one Alligator Clip to one side of line. Then with Meter in one hand, touch the other side of the line with the Alligator Clip. If voltage does not exceed 600 volts (using Model RS-1), attach second Alligator Clip and read voltage on Red Scale marked 600 volts. Using Model RS-2, if voltage does not exceed 300 volts, attach second Alligator Clip and read voltage on Red Scale marked 300 volts (Fig. 9).

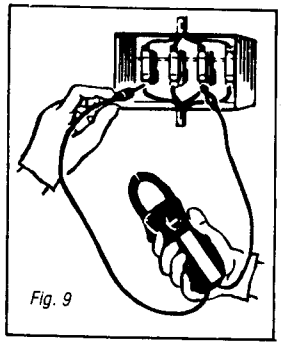


Fig. 9

4. If voltage is below 150, rotate Scale Selector until the 150 volt range appears in window. Read on this scale.

See page 5 for instructions for using Model RS-7 and PRS-7R Recording Module to record voltage.

HOW TO READ THE SCALE

Let us assume the pointer is at the position indicated in the illustration. The reading will be as follows, depending on the setting of the range selector–

Fig. 10
Pointer Reads 440 Volts. Each subdivision between 400 & 500 is 20 volts.

Fig. 11
Pointer Reads 78 Amps. Heavy mark between 60 & 80 is 70 amps. Each subdivision between 60 & 80 is 2 amps.

Fig. 12
Pointer Reads 12.7 Amps. Heavy mark above 12 is 13 amps. Each subdivision between 12 & 15 is .5 amp.

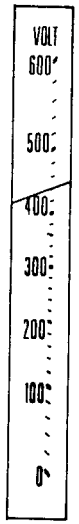


Fig. 10

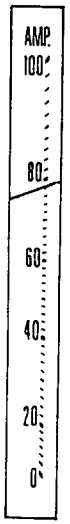


Fig. 11

Fig. 12