

**NEW! REPLACEABLE  
PROBE TIPS**

**INSTRUCTION SHEET**

**AMPROBE<sup>®</sup>  
VOLTPROBE<sup>®</sup>**

**MODELS VT-100, VT-100B  
VT-124, VT-124B**

**DESCRIPTION:**

You are now the proud owner of the all-new AMPROBE "VOLTPROBE." This voltage tester is the result of years of research and development and embodies the latest technological advances.

All models may be used for testing residential and commercial circuits to determine the nominal voltage levels which exist.

All models indicate the following AC and DC nominal voltages:

AC (See #5 in Fig. 1 and 2)	DC (See #6 in Fig. 1 and 2)
550	750
440	600
277	400
220	220
115	115

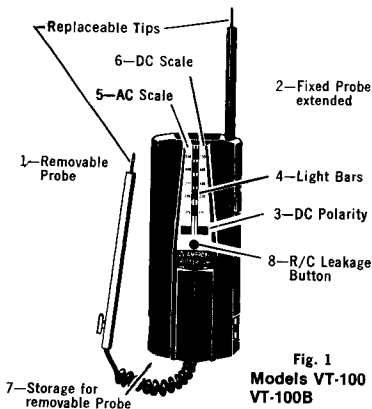
The models VT-100B and VT-124B also sound a high-pitched tone when the test probes are applied to voltages of 12 to 550VAC and 12 to 750VDC. That means these models may be used on many low voltage systems even when the tester may not be giving a neon lamp indication.

The models VT-124/VT-124B will also indicate the nominal AC voltage levels, 24/48.

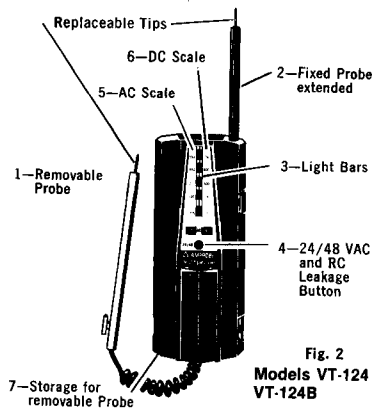
The models VT-100/VT-100B will also indicate DC polarity.

All models are usable on all frequencies from 25 to 800 Hz (cycles). Both probes store neatly in the body case, thus making the unit extremely compact. The unit features solid state components and is housed in a rugged ABS case which resists hard usage.

Pl. No. 945754, 3/84



**Fig. 1  
Models VT-100  
VT-100B**



**Fig. 2  
Models VT-124  
VT-124B**

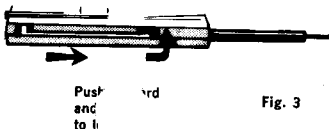
The removable, lefthand, red probe connected to the coil cord stores inside the housing. Unlock the probe by pushing down firmly on the red probe handle on the left side of the case. Withdraw probe from housing. The coil cord can be extended to facilitate measurements over 40 inches apart.

The tester will indicate the voltage with the captive, righthand, black probe in any position (other than completely retracted), however, the tester is more convenient to use if the probe is pushed as far forward as possible and locked in position (Fig. 3). The fact that it is spring loaded helps prevent the probe from slipping out of the lock position.

The tips on the probes are removable and may be replaced in the event they become damaged. To remove, simply unscrew. When replacing the tips, tighten them slightly with a pair of pliers to prevent accidental loosening.

**PRECAUTIONS FOR PERSONAL AND INSTRUMENT PROTECTION**

- 1) Read these instructions thoroughly and follow them carefully.



**Fig. 3**

- 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 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.
- 4) If the tester does not indicate that voltage is present in the circuit, or if it gives a reading which does not appear to be correct, do not touch the circuit until you have checked the tester on a known live line and you have checked to make certain that you are correctly applying the tester to the circuit.
- 5) Do not apply the tester to voltages higher than the unit's maximum AC/DC levels.

**IMPORTANT:** Failing to follow these instructions and/or to observe the above precautions may result in personal injury and/or damage to the voltage tester.

Level of voltage at probe terminals is indicated on tester by a light bar which illuminates appropriate voltage section. This light bar progresses vertically "thermometer style" so that when 115V is present, only the 115 bar is lit; when 220 is present the 115 and 220 bars are lit and so forth to the top of the scale.

**USING MODEL VT-100/VT-100B**

One test probe is placed on one terminal of the circuit and the other probe is placed in contact with the other side of the line. The nominal voltage of the circuit under test will be indicated by the highest glowing bar. If the circuit is AC, both "+ DC" lamps will light. If the circuit is DC, either the left or right "+ DC" lamp will light. When the left "+ DC" lamp lights, it means the lefthand probe has been placed on the positive terminal of the DC circuit—the right "+ DC" lamp indicates the righthand probe is on the positive terminal.

As an extra feature, a "Press for R/C Leakage" button has been incorporated into the VT-100/VT-100B. See below for an explanation of how to use.

**USING THE MODEL VT-124/VT-124B**

One test probe is placed on one terminal of the circuit and the other probe is placed in contact with the other side of the line.

The nominal voltage of the circuit under test will be indicated by the highest glowing bar. If no bar is lit, press black button momentarily to check for 24 or 48 volts AC. When the button is depressed and 24 volts AC is present, only the 24 bar is lit; when 48 volts AC is present, both the 24 and 48 bars are lit.

To determine if a high voltage indication is AC or DC, press the black 24/48 button. If the voltage is AC, both the 24 and 48 volt lamps will light up and remain on. If the voltage is DC the 24 and 48 volt lamps may flash but they will then go off and remain off.

The 24/48 black button may also be used to determine if a voltage indication is due to capacitance or a high resistance leakage. See below for explanation.

The "normally off" black button for the 24/48 volt readout should be held down only momentarily for test indication. Excessive internal heating will result if held down for more than 30 seconds. Use black button for 24 or 48 AC volt checks only except as noted.

**CHECKING FOR CAPACITANCE OR HIGH RESISTANCE LEAKAGE.**

As mentioned previously the Voltprobe tester has a "Press for R/C Leakage" button. This feature enables you to distinguish a voltage indication due to a true ground from a voltage indication due to

distributed capacitance or high resistance leakage.

To check, momentarily depress the "Press for R/C Leakage" button (on the VT-124(B) this is the same as 24/48 button). If the highest indicating bulb stays on (lighted), the indication is an actual grounded line (low impedance). If the highest indicating lamp goes out, then the indication is due to a high leakage resistance or cable capacitance.

As an example, when pulling wire through conduit, this feature permits you to check to see if the insulation may have been damaged and a wire grounded to the conduit.

To check for this condition, touch one Voltprobe probe to the live side of any available line. Touch the other Voltprobe probe to the unconnected wire to be checked. If the Voltprobe does not indicate any voltage, the wire under test is not grounded. If the tester indicates a voltage, it may be because of a ground or reactance due to distributed capacitance. To determine if an actual ground exists or if capacitive coupling is causing a false reading—

Momentarily depress the "Press for R/C Leakage" button. (On the VT-124(B) this is the same button used to check for 24/48 volts.) If the highest indicating bulb stays on (lighted), the indication is an actual voltage, meaning a ground does exist.

If the highest indicating bulb goes out, the voltage is coming through a high leakage resistance or cable capacitance and as such does not constitute an actual ground.

There may be other circuits where it may be advisable to verify that there is an actual voltage rather than a false indication due to a high resistance leakage or capacitance. Using the "Press for R/C Leakage" button, these

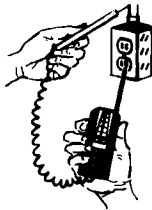


Fig. 4

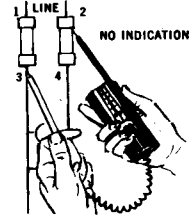


Fig. 5

#### TESTS YOU CAN MAKE WITH YOUR VOLTPROBE.

The grounded side of the line may be found by placing one test probe to a conduit ground and touching the other test probe to each of the line terminals. The terminal that does not produce a light bar is the grounded side of the line. See Figure 4.

Blown fuses may be found readily with the VOLTPROBE. If a blown fuse is suspected, check across terminals 1 and 2 (Fig 5). If you have a reading then check from point 1 to 4 and/or points 2 and 3. If there is no reading between 2 and 3, fuse connected between 1 and 3 is gone. To verify, connect probes across 1 and 3 and a line voltage reading should be obtained, if load is connected.

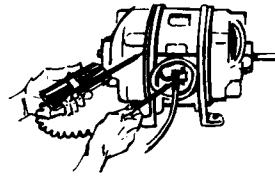


Fig. 6

It is possible that the above check may indicate that both fuses are good but the equipment still doesn't operate. This may be due to the failure of either fuse to blow completely i.e. open circuit, resulting in a high resistance connection through the fuse. To check an indication between points 2 and 3, momentarily depress black button and line voltage indication should go out confirming that it was due to a high resistance leak in fuse 1-3; Fuse 2-4 may be checked in the same manner.

To check connections at motor or appliance for grounded side... turn appliance or motor "ON." Touch one probe to grounded frame (Fig. 6) and other probe to each of the terminals. The grounded side will be indicated by no lit bar.

**NOTE:** If your VOLTPROBE indicates a dead line, before working on the line, check your VOLTPROBE on a known live line to make certain your tester is operating properly.

#### LIMITED WARRANTY

*Congratulations.* You are now the owner of an AMPROBE® VOLTPROBE® voltage tester. It has been union crafted according to rigid quality standards and contains quality components and workmanship. This tester 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 VOLTPROBE tester has a limited warranty against defective materials and/or workmanship for one year from the date of purchase provided in the opinion of the factory, it has only been subjected to normal usage and it has not been opened, tampered with or taken apart. Should your tester 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. For your protection, please use the tester as soon as possible. If damaged, or should the need arise to return your tester, it must be securely wrapped (to prevent damage in transit) and sent prepaid via Air Parcel Post insured or UPS where available to Service Division. AMPROBE INSTRUMENT, 630 Merrick Rd. (Use for UPS) P.O. Box 329 (Use for P.P.) Lynbrook, New York 11563. Outside of the U.S.A., your AMPROBE representative will assist you. Above limited warranty covers repair and replacement of tester only and no other obligation is stated or implied.

**AMPROBE INSTRUMENT**  
DIVISION OF CORE INDUSTRIES INC.

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