

STB ELECTRICAL TEST EQUIPMENT, INC.

Operating Instructions for Phasing Voltmeter

0-15kV
0-20kV
0-25kV
0-35kV
0-40kV
0-50kV

I. Selector Switch Position

- C Capacitance Tap Sensing
- CP Capacitance Tap Phasing
- L Line Sensing
- LP Line Phasing
- BT Battery Test

II. Proof Testing (ALWAYS TEST PRIOR TO USE)

- A. ALL Selector Switch Positions MUST be proof tested before making any live measurements.
- B. Make sure tester is properly connected to battery and turn switch to the "on" position.
- C. With meter probe, make contact with raised washer on tester.
- D. Depress washer until red indicator glows.
 - 1. If indicator does not come on or no meter deflection is obtained, **do not** attempt to use the meter!
- E. Look for meter deflection on "C" mode to move at least three-quarter scale.
- F. Look for meter deflection on "L" mode to move one-half scale.
 - 1. If little or no deflection is observed check selector switch on opposite side of the meter to verify unit is in "C" or "L" function.
 - a. If not, turn switch to proper function and repeat test.
 - b. If there still is no deflection **do not** attempt to use unit.
- G. To verify proper operation on phasing modes, turn selector switch (located opposite side of meter face) to appropriate position- "CP" or "LP".
- H. Install phasing cable between meter probe and phasing probe.
 - 1. Make contact with stationary washer of tester using phasing probe.
 - 2. Depress raised washer with meter probe until red indicator glows.
 - a. Observe the same precautions as above for red indicator.
 - 3. Look for meter deflection "CP" to be greater than full scale and a deflection on "LP" to be between 3 and 6kV.
 - 4. Depress raised washer meter probe until red indicator glows.
 - a. Make contact on same washer with both probe tips.
 - b. Look for deflection on the meter less than 5kV on CP and 2kV on LP.

Always use proper safety equipment and follow your company's procedures when making live measurements!

NOTE: POSITIVE DEFLECTION ON THE METER DURING PROOF TESTER OPERATION DOES NOT PROVE ACCURACY OF CALIBRATION. THE VOLTMETER SHOULD BE SCHEDULED FOR ANNUAL CALIBRATION CHECKS AND INSPECTIONS FOR SAFETY AND RELIABILITY.

III. Testing Procedure Live Line

Note: Always follow your company's safety and testing procedures.

IV. Maintenance

- A. Selector switch should indicate better than $\frac{3}{4}$ deflection, batteries should be changed.
- B. If the indication is less than $\frac{3}{4}$ deflection, batteries should be changed.
- C. Storage: Store in a cool and dry place. Never store unit in damp or wet place, as condensation will decrease personal safety.
- D. Operation Check: Always verify unit is functioning with proof-tester before and after each use. (*Follow operating instructions for tester.*)

General Maintenance/Troubleshooting Guide

If, red indication light on tester is dim or not on....

- Replace 6-volt lantern battery

If, meter deflection is low or does not move when red light on tester lights...

- Check 6-volt lantern battery for low volts when loaded.
- Check batter tester on back of meter.
- Check "switch" position.

If, meter deflection is low or does not move on "BT" switch position...

- Replace 6-volt lithium battery on PC board inside large meter head.

GRAY TEST BOX

The Gray Test Box produces different voltages. The voltage varies from box to box and battery to battery. Batter age can be a factor.

- ❖ Cap or "C" will vary- $\frac{3}{4}$ scale to full scale.
- ❖ "L" or Line will read a minimum of 3kV to 15kV
- ❖ The Gray Box is to make sure the unit is working before use.
- ❖ "C" and "L" mode are approximate because the test boxes vary in the voltage they produce.