

ACL MODEL #300B CALIBRATION INSTRUCTIONS

Accuracy should be checked only at 1/2 inch spacing as at greater distances the viewing area of the electrode and therefore the area of the surface needed for calibration becomes prohibitively large. Additionally, stray electrostatic charges and nearby grounds become a source of error.

EQUIPMENT REQUIRED

1. Monroe Electronics, Inc. Model 241 ± 3 KV reference Supply, or equivalent, capable of a 500V DC and 3000V DC output at least 1% accurate.
2. A test fixture consisting of an electrically isolated metal plate at least three inches on a side (the larger, the better) and a means positioning this plate $\frac{1}{2}$ " from the electrode of the unit under test.

TEST PROCEDURE

1. Connect the output of the Reference Supply to the test plate and the case (of the ACL 300B) to the low side of the Reference Supply or ground.
2. Position the unit under test so that its electrode is $\frac{1}{2}$ " from the plate's center.
3. Mechanically zero the meter
4. Turn the unit under on to low.
5. Press the zero switch 2 or 3 times and the meter should zero.
6. Apply +450V DC to the test plate from the Reference Supply.
7. The meter of the unit under test should read between +400 and +500 volts.
8. Release the applied voltage.
9. Repeat Step #5.
10. Repeat steps #6 & #7 using -450V DC.
11. Observe the meter for approximately 30 seconds and it should not drift more than one division (50V). Twenty percent per minute drift maximum.
12. Release the applied voltage.
13. Set the unit under test to HI.
14. Repeat step #5.
15. Apply +3000V DC to the test plate.
16. The meter should read between +2700 and +3300 volts.

NOTE: Any accurate higher voltage may be used here between 2000 and 5000 volts and the meter should read the voltage applied $\pm 10\%$.