

# Audit Survival Guide

We recommend you store the calibration documentation and this guide in a safe and accessible location. Your auditor requires the calibration documentation for all audits.

**1 LOCATE** the instrument calibration information. The auditor needs to review the following documentation.

## CALIBRATION CERTIFICATE

Every instrument comes standard with a calibration certificate.



**Don't Have the Calibration Certificate?**

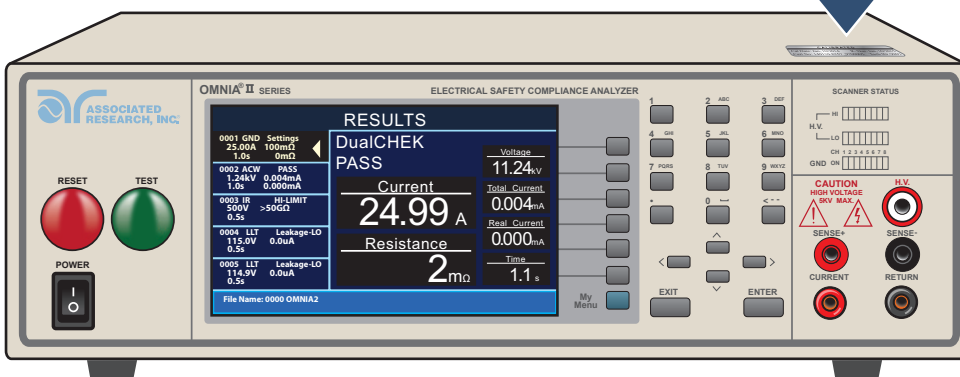
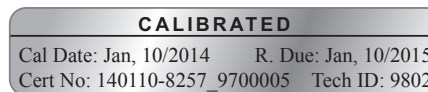
*We've got you covered.*

Contact Associated Research and we can provide you with calibration information free of charge.

1-847-367-4077  
info@arisafety.com

## CALIBRATION STICKER

The instrument has a calibration sticker located on the top corner showing the last calibration date and calibration due date.



## DID YOU KNOW?

Associated Research Inc. is an A2LA Accredited Laboratory with the capability to perform calibrations to numerous requirements. All calibration measurements traceable to NIST.

Standard Calibration Options:

- Standard Calibration - Verifies your instrument is functioning properly and includes a calibration certificate.
- Standard Calibration with Data - Includes before (as received) data and after (as returned) data along with a calibration certificate.

Accredited Calibration Options

- ISO 17025
- ANSI Z540.1-1994
- CTL Specification Sheet DSH 251B
- Denan's Law

## 2 VERIFY your instrument is working properly. The auditor wants to see that you know how to test that the instrument is functioning.

### Required Equipment

Resistor Value	Resistor Specification
120kΩ	2.5kVac / 50W / 1%
2MΩ	2.5kVAC/3W/ 1%
0.5Ω	350VDC/2W/ 5%
2Ω	350VDC/2W/ 5%

Or use the TVB-2 box shown in the example below.

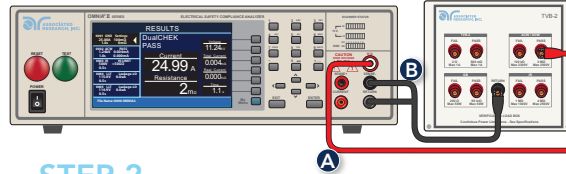
### VERIFY HIPOT PASS/FAIL

#### STEP 1.

Set parameters for Hipot PASS and FAIL Conditions

Note: Setting may vary depending on the application.

Hipot PASS/FAIL recommended settings	
Voltage	1240 VAC, 2121 VDC
Current	10mAAC, 5000 uADC
Test Time	2 sec ramp up and 2 sec dwell

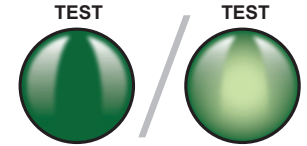


#### STEP 2.

Connect leads for Hipot PASS Condition

**A.** Connect the high voltage lead from the HV terminal on the instrument to the ACW/DCW PASS terminal on the TVB-2.

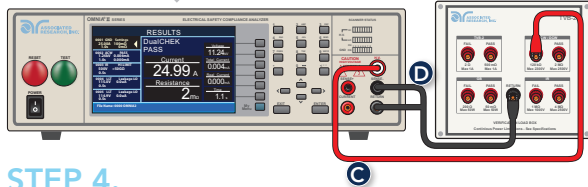
**B.** Connect the return lead from the RETURN and SENSE- terminals on the instrument to the RETURN terminal on the TVB-2.



#### STEP 3.

Press the TEST button

The instrument will indicate a PASS and the TEST button will illuminate.



#### STEP 4.

Connect leads for Hipot FAIL Condition

**C.** Connect the high voltage lead from the HV terminal on the instrument to the ACW/DCW FAIL terminal on the TVB-2.

**D.** Connect the return lead from the RETURN and SENSE- terminals on the instrument to the RETURN terminal on the TVB-2.



#### STEP 5.

Press the TEST button



#### STEP 6.

Check for Failure

The instrument will indicate a failure, sound an audible alarm and the RESET button will illuminate.

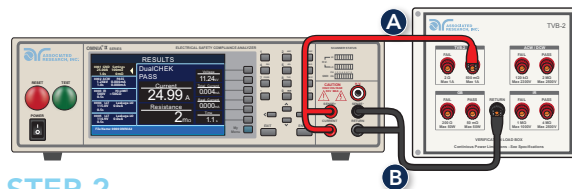
### VERIFY GROUND CONTINUITY PASS/FAIL

#### STEP 1.

Set parameters for Ground Continuity PASS and FAIL Conditions

Note: Setting may vary depending on the application.

Continuity PASS/FAIL recommended settings	
Resistance Limit	1Ω
Test Time	2 sec ramp up and 2 sec dwell

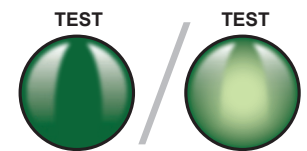


#### STEP 2.

Connect leads for Ground Continuity PASS Condition

**A.** Connect the CURRENT and SENSE+ terminals on the instrument to the GC PASS terminal on the TVB-2.

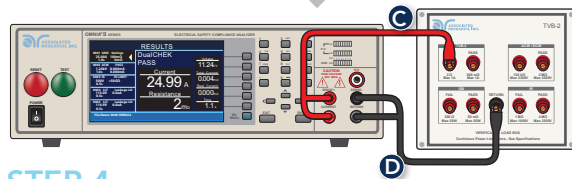
**B.** Connect the RETURN and SENSE- terminals on the instrument to the RETURN terminal on the TVB-2.



#### STEP 3.

Press the TEST button

The instrument will indicate a PASS and the TEST button will illuminate.

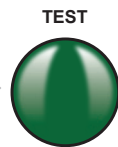


#### STEP 4.

Connect leads for Ground Continuity FAIL Condition

**C.** Connect the CURRENT and SENSE+ terminals on the instrument to the GC FAIL terminal on the TVB-2.

**D.** Connect the RETURN and SENSE- terminals on the instrument to the RETURN terminal on the TVB-2.



**STEP 5.**  
Press the TEST button



**STEP 6.**  
Check for Failure  
The instrument will indicate a failure, sound an audible alarm and the RESET button will illuminate.

#### HOW OFTEN SHOULD YOU RUN A VERIFICATION SEQUENCE?

It depends upon how often the instrument is used.

If used infrequently, run a verification sequence before each use.

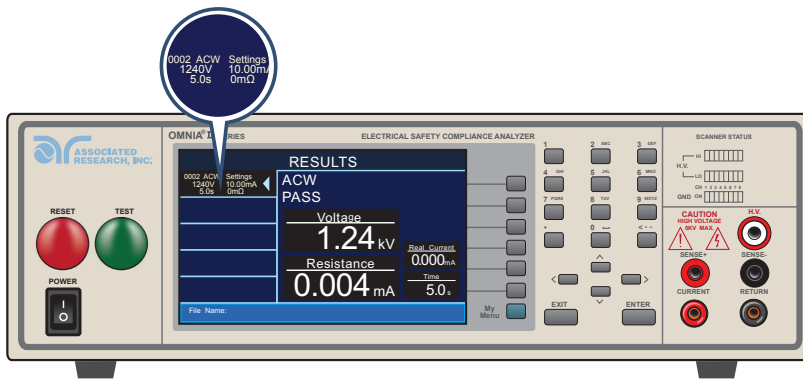
In a production environment, verification should be run daily at minimum.

In a high volume production environment, we recommend you run a verification test for every shift. This will ensure that if there is a problem, the number of products that need to be re-tested is limited.

### 3 TEST with your instrument. The auditor wants you to show how to run a typical test.

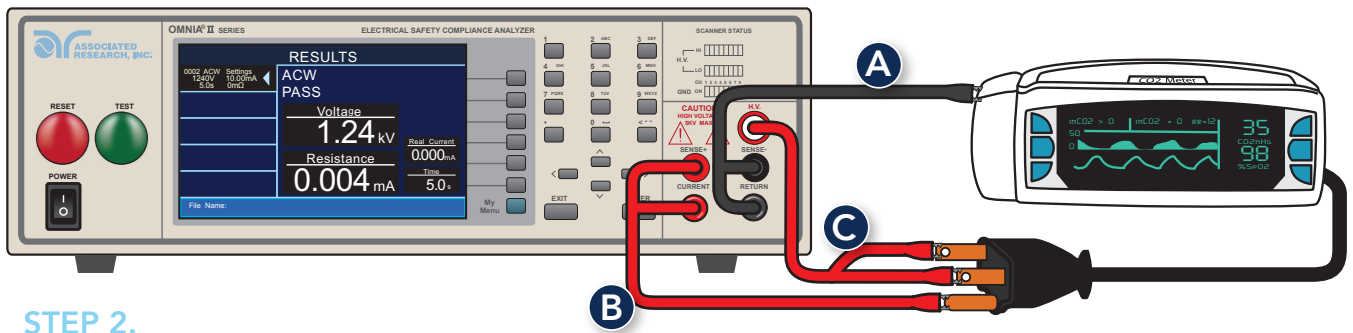
Below is a common test procedure example for running a routine Continuity and Hipot test:

COMMON TEST PROCEDURE EXAMPLE



#### STEP 1.

Select the proper memory location for the routine test sequence.



#### STEP 2.

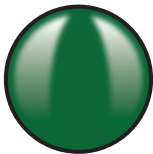
Connect the device under test

**A.** Connect the black return lead (part #38490) to the front panel RETURN and SENSE- terminals and connect the other end of the lead to the dead metal chassis of the DUT.

**B.** Connect the red lead (part #38490) to the front panel CURRENT and SENSE+ terminals and connect the other end to the ground pin of the power cord of the DUT.

**C.** Connect the high voltage lead (part #38489) to the front panel HV terminal and connect the other end of the lead to the line and neutral of the power cord of the DUT.

TEST



#### STEP 3.

Run the sequence

Press the TEST button and run the test sequence. Disconnect the leads when the sequence is finished.



For more calibration & inspection details, please visit us at [arisafety.com/support/product-service.aspx](http://arisafety.com/support/product-service.aspx)