

Calibration and Inspection Steps for PDT700 and PDT800

The PDT78PV Verification Unit is designed to verify whether a tester is operating within specifications. This product can be used as one of the tools to fulfill the ANSI/ESD S20.20 paragraph 6.1.3.2 "Compliance Verification Plan." The PDT78PV is a passive device and requires no power source. The PDT78PV is designed to verify whether a tester is operating within specifications. The default settings for the PDT700 & PDT800 are:

Wrist-strap: Low-Limit 1M
High-Limit 35M
Footwear: Low-Limit 1M
High-Limit 100M



Wrist-strap Inspection Test

1. Insert one of the PDT78PV banana test plug into the single-wire wrist strap connector on the tester and connect the second banana test plug to the metal touch plate.
2. Select the **"1M low"** range on the rotary switch of the PDT78PV.
3. Press and hold the touch plate of the TESTER until the test is completed. The results of the test should be **"fail low"**.
4. Select the **"35M high"** setting on the PDT78PV and repeat the test. The result should be **"fail high"** for the wrist strap.

Footwear Inspection Test

1. Insert the PDT78PV stereo test plug into the foot plate cable connector on the TESTER.
2. Select the **"1M low"** range on the rotary switch of the PDT78PV.
3. Press and hold the touch plate of the TESTER until the test is completed. The result should be **"fail low"** for both left foot and right foot.
4. Select the **"100M high"** setting on the PDT78PV and repeat the test. The result should be **"fail high"** for both feet.

Adjusted Limits

The high and low limits of both wrist strap and footwear can be changed by the DIP Switch located at the bottom of the tester. If limits are changed, use the corresponding limits on PDT78PV

Footwear High Limit	High Limit Fail Setting
10M	10M High
35M	35M High
100M(Default)	100M High
1G	1G High

Low Limit Resistance	Low Limit Setting
100K	100K Low
1M (Default)	1M High

High Limit Resistance	High Limit Setting
10M	10M High
35M (Default)	35M High

Technology

The PDT78PV is a resistance box with fixed 5% precision resistors. Resistance decade boxes can quickly and accurately simulate resistance for testing the accuracy of ESD testers and meters. Resistance is the opposition to the passage of an electric current through an electrical conductor. Measured in ohms, and defined by Ohm's Law as equal to voltage divided by current, resistance is one of the most basic of electrical measurements.

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<i>Resistor Setting</i>	<i>Actual Value</i>	<i>Standard</i>
100K (LOW)	97.6K	97.503K
100K (SAFE)	102.59K	102.482K
750K (LOW)	735K	732.591K
750K (SAFE)	765.9K	763.359K
1M (LOW)	0.975M	0.972M
1M (SAFE)	1.022M	1.023M
10M (SAFE)	9.75M	9.774M
10M (HIGH)	10.26M	10.284M
35 M (SAFE)	34.00M	33.823M
35M (HIGH)	35.750M	35.886M
100M (SAFE)	98.0M	98.478M
100M (HIGH)	102.7M	103.224M
1G (SAFE)	0.980G	0.979G
1G (HIGH)	1.027G	1.021G

*Tolerance is +/- 10% for the PDT78PV

Calibration and Verification

The PDT series combo testers (PDT700, and PDT800) are factory calibrated and will never need recalibration. It is recommended to verify calibration with the PDT periodic verification units (PDT78PV) at least twice per year, or as deemed necessary by the user's quality control program.

The PDT78PV is a resistance box with fixed precision resistors. Resistance decade boxes can quickly and accurately simulate resistance for quickly testing the accuracy of ESD testers and meters. The PDT78PV is factory calibrated and does not require annual recalibration. If the PDT78PV is unable to operate, contact Transforming Technologies for more information.