

DSP-PLCAL

Automated Calibration Kit

Instruction Sheet

The DSP-PLCAL Automated Calibration Kit lets you calibrate your DSP-LIA101 permanent link adapters to meet enhanced accuracy specifications. Calibration compensates for physical changes that occur over time to the adapter's cable and other components.

When to Calibrate

Fluke Networks recommends that you calibrate your adapters after the first 40 hours of use. Thereafter, calibrate the adapters at least every 6 months. You should also calibrate the adapters after your DSP-4000 Series test tools receive factory calibration.

Required Equipment

The calibration process requires the following:

- DSP-PLCAL calibration artifact
- Set of two DSP-LIA101 permanent link adapters
- CableManager™ software version 4.5 or higher loaded on a PC
- DSP-4000 or DSP-4100 main and remote units with the following software versions:
 - DSP-4000: Software version 3.7 or higher
 - DSP-4100: Software version 4.7 or higher
- PC interface cable for the DSP test tool (included with the test tool)

Getting the Required Software

The CableManager and DSP software listed above is available on the Fluke Networks website (www.flukenetworks.com). If you need assistance with loading the software, refer to your DSP test tool's users manual or contact Fluke Networks.

Calibrating the Permanent Link Adapters

Caution

To avoid latent or immediate damage due to electrostatic discharge, ground yourself when possible by touching a grounded, conductive surface before handling a personality module or a permanent link adapter with no personality module attached.

The calibration procedure deletes saved test results from the memory of DSP-4000 test tools. To retain this data, use CableManager to upload the test results to a PC before calibrating the permanent link adapters.

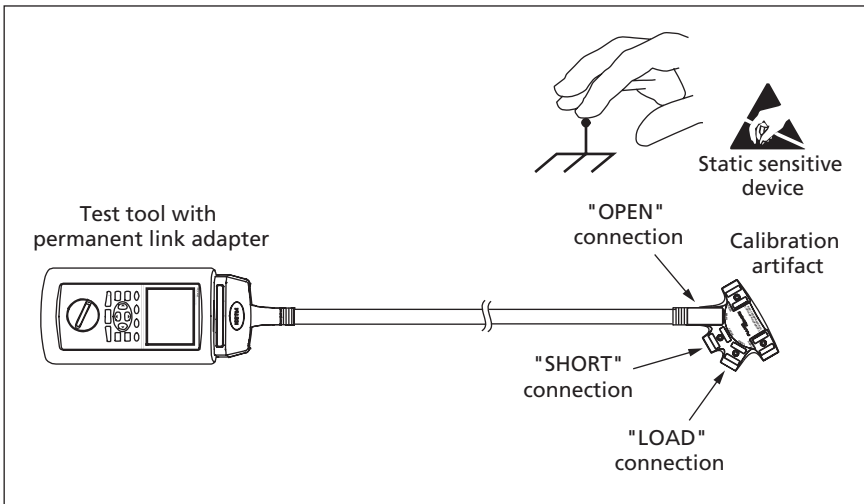
The calibration procedure deletes custom cable configurations from the test tool's memory. To retain this data, write it down before calibrating.

1. Verify the permanent link adapters are securely attached to the DSP main and remote units.
2. Connect the DSP main unit to the PC with the PC interface cable. Turn on the main unit.
3. Start the CableManager software by clicking on the CableManager icon in the Fluke Networks CableManager group.
4. From the DSP Utilities menu, select "Permanent Link Cal."; then click "Continue".
5. Remove the personality module from the permanent link adapter cable. Place the module in its original, static protection bag.
6. Attach the permanent link adapter cable to the calibration artifact's "OPEN" connector as shown in Figure 1; then click "Continue".

Note

If an "Error Detected" message appears, verify that the permanent link adapter is securely attached to the test tool and the adapter cable is securely attached with the thumbscrew to the correct connector on the calibration artifact. Click "Continue" to retry the step.

7. Attach the permanent link adapter cable to the calibration artifact's "SHORT" connector; then click "Continue".
8. Attach the permanent link adapter cable to the calibration artifact's "LOAD" connector; then click "Continue". The test tool will restart when calibration is complete.
9. Replace the personality module on the DSP test tool's adapter cable. Turn off the test tool.
10. Connect the PC interface cable to the DSP remote unit. Turn on the remote unit; then click "Continue".
11. Repeat steps 5 through 9 for the remote unit. Click "Continue" when you are finished.



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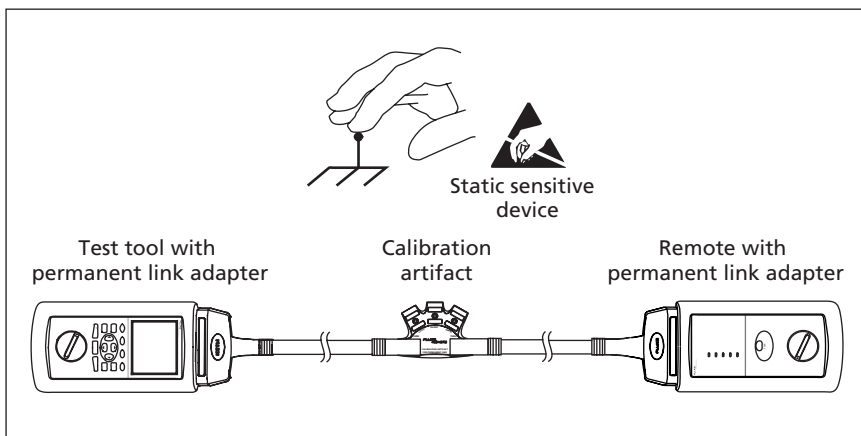
Figure 1. Calibration Connections ("OPEN" connection shown)

Testing Your Permanent Link Adapters

You can run a self test on your permanent link adapters as follows:

1. Verify the permanent link adapters are securely attached to the DSP main and remote units. Remove the personality modules and place them in their original, static protection bag. Turn on both units.
2. Connect the adapter cables to the "THRU" connectors on the calibration artifact, as shown in Figure 2.
3. Turn the test tool's switch to SETUP. Set the test standard to "Permanent Link Test". Choose the default cable type.
4. Run an Autotest. If the Autotest fails, do the calibration procedure again; then run the Autotest again. If the test continues to fail, contact Fluke Networks for assistance.

Before you test cable, choose an appropriate test standard and cable type in SETUP.



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Figure 2. Permanent Link Adapter Self Test Connections

Maintenance and Service

Clean the calibration artifact with a soft cloth dampened with water or water and a mild soap. Do not use abrasives, solvents, or alcohol.

Store the calibration artifact in its original, static protection bag.

The permanent link adapters and the calibration artifact should be serviced only by a qualified technician. Contact Fluke Networks for the location of the nearest service center.

Contacting Fluke Networks

Visit the Fluke Networks website at www.flukenetworks.com. Send email to fluke-assist@flukenetworks.com.

To order accessories or get the location of the nearest Fluke Networks distributor or service center, call:

- USA: 1-888-993-5853
- Canada: 1-800-363-5853
- Europe: +31-402-675-200
- Japan: +81-3-3434-0181
- Singapore: +65-738-5655
- Anywhere in the world: +1-425-446-4519

For operating assistance in the USA, call 1-800-283-5853.

Specifications

Reference load return loss uncertainty (all pairs): -40 dB up to 50 MHz, linearly tapered to -34 dB at 250 MHz

Operating temperature: 0 °C to 40 °C

Storage temperature: -20 °C to +55 °C

Life of artifact contacts (typical): >10,000 cycles

Certifications:  

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke Networks product will be free from defects in material and workmanship for one (1) year from the date of purchase. This warranty does not cover damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke Networks' behalf. To obtain service during the warranty period, contact your nearest Fluke Networks authorized service center to obtain return authorization information.

Fluke Networks' warranty obligation is limited, at Fluke Networks' option, to refund of the purchase price, or free of charge repair or replacement of a defective product that is returned to an authorized Fluke Networks Service Center within the warranty period.

Warranty service is available outside the United States only if product was purchased through a Fluke Networks Authorized Sales Outlet in the country of use or the applicable Fluke Networks international price was paid.

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