
Probe De-skew and Calibration

Calibrating the InfiniiMax probes, the 1156A probe, 1157A probe, or 1158A probe is done using the E2655A De-skew and Calibration Kit. The kit contains the following parts:

- SMA (male) to SMA (male) adaptor
- SMA (male) to BNC (female) adaptor
- BNC (male) to SMA (male) adaptor
- 50 Ω SMA Terminator
- De-skew Fixture

This document contains procedures showing vertical and skew calibration for the InfiniiMax solder-in differential probe head and the differential browser probe head. However, the procedures also apply to all of the different InfiniiMax probe configurations and for the 115xA active probe configurations.

Calibration for the Solder-in and Socketed Probe Heads

Calibration of the solder-in and socketed probe heads consists of a vertical calibration and a skew calibration. The vertical calibration should be performed before the skew calibration. Both calibrations should be performed for best probe measurement performance.

Before calibrating the probe, verify that the Infiniium oscilloscope has been calibrated recently and that the calibration Δ temperature is within ± 5 °C. If this is not the case, calibrate the oscilloscope before calibrating the probe. This information is found in Infiniium Calibration dialog box.

Calibration Setup

The calibration procedure requires the following parts.

- BNC (male) to SMA (male) adaptor
- Deskew fixture
- 50 Ω SMA terminator

For the following procedure, refer to Figure 1.

- 1 Connect BNC (male) to SMA (male) adaptor to the deskew fixture on the connector closest to the yellow pincher.
- 2 Connect the 50 Ω SMA terminator to the connector farthest from the yellow pincher.
- 3 Connect the BNC side of the deskew fixture to the Aux Out BNC of the Infiniium oscilloscope.
- 4 Connect the probe to an oscilloscope channel.
- 5 To minimize the wear and tear on the probe head, the probe head should be placed on a support to relieve the strain on the probe head cables.
- 6 Push down on the back side of the yellow pincher. Insert the probe head resistor lead underneath the center of the yellow pincher and over the center conductor of the deskew fixture. The negative probe head resistor lead or ground lead must be underneath the yellow pincher and over one of the outside copper conductors (ground) of the deskew fixture.

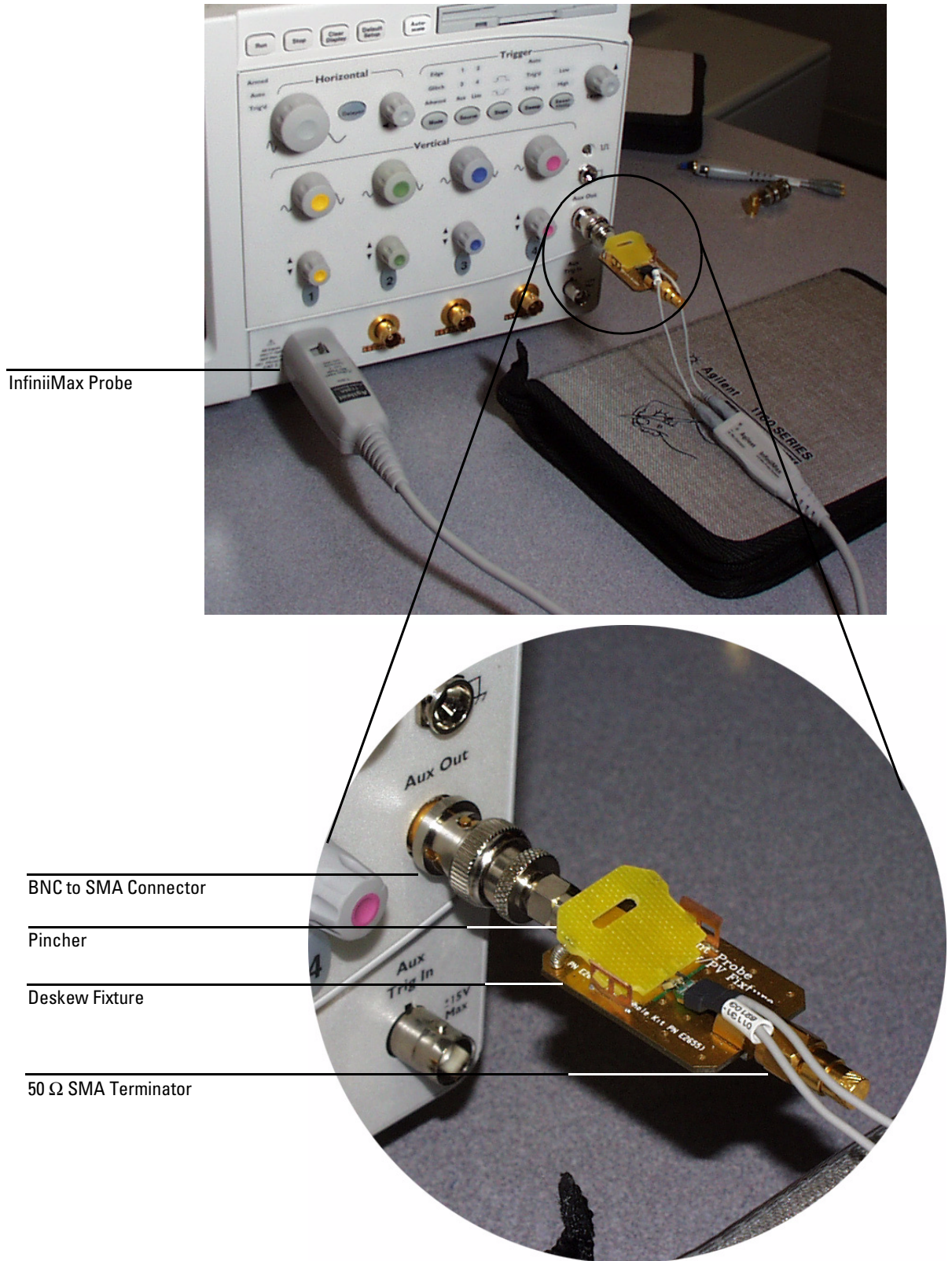
For the socketed probe head, insert two properly trimmed 82 Ω resistors into the sockets.

- 7 Release the yellow pincher.

To insure contact, pull up on the back side of the yellow pincher to insure good contact between resistor leads and the deskew fixture.

- 8 On the Infiniium oscilloscope in the Setup menu, select the channel connected to the probe.
- 9 In the Channel Setup dialog box select the Probes... button.
- 10 In the Probe Setup dialog box select the Calibrate Probe... button.
- 11 In the Probe Cal dialog box select the Calibrated Atten/Offset radio button.
- 12 Select the Start Atten/Offset Calibration... button and follow the on-screen instructions for the vertical calibration procedure.
- 13 Once the vertical calibration has successfully completed, select the Calibrated Skew... button.
- 14 Select the Start Skew Calibration... button and follow the on-screen instructions for the skew calibration.

Figure 1



Calibration for Hand-held Browser Probe Heads

Calibration of the hand-held browser probe heads consists of a vertical calibration and a skew calibration. The vertical calibration should be performed before the skew calibration. Both calibrations should be performed for best probe measurement performance.

Before calibrating the probe, verify that the Infiniium oscilloscope has been calibrated recently and that the calibration Δ temperature is within ± 5 °C. If this is not the case, calibrate the oscilloscope before calibrating the probe. This information is found in Infiniium Calibration dialog box.

Calibration Setup

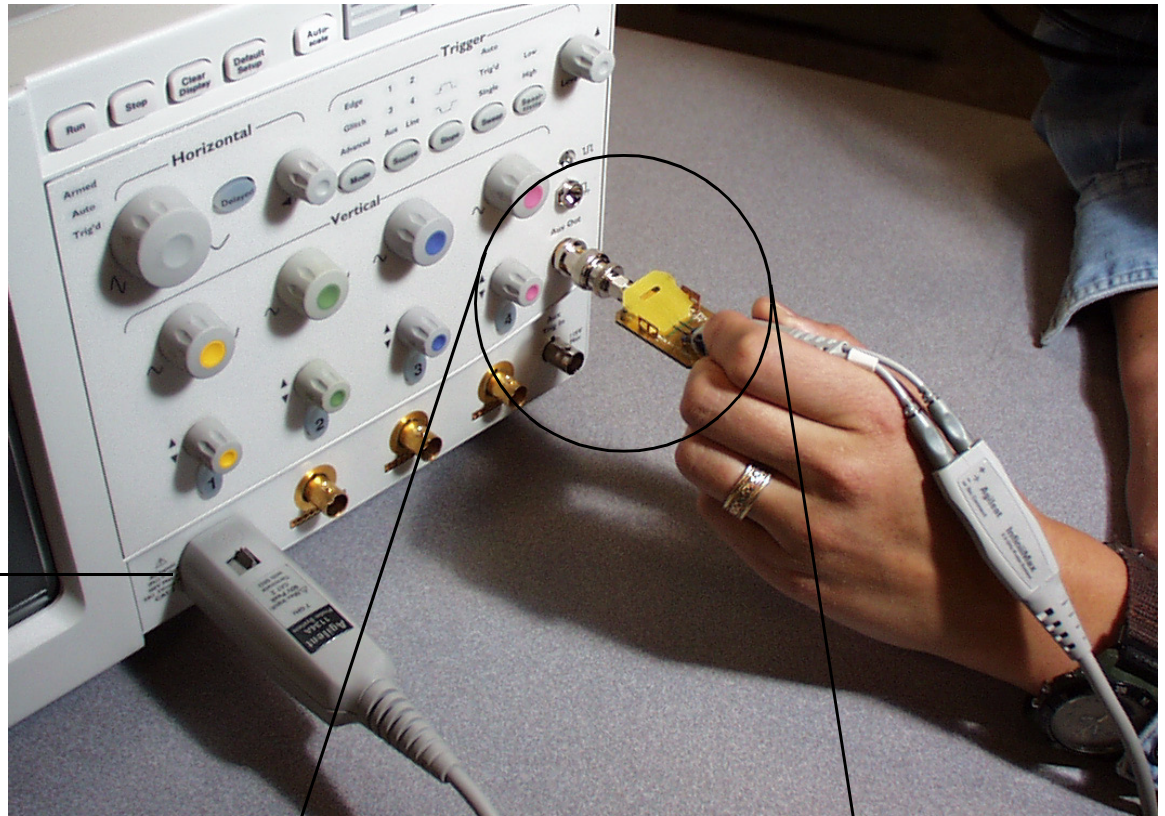
The calibration procedure requires the following parts.

- BNC (male) to SMA (male) adaptor
- Deskew fixture
- 50 Ω SMA terminator

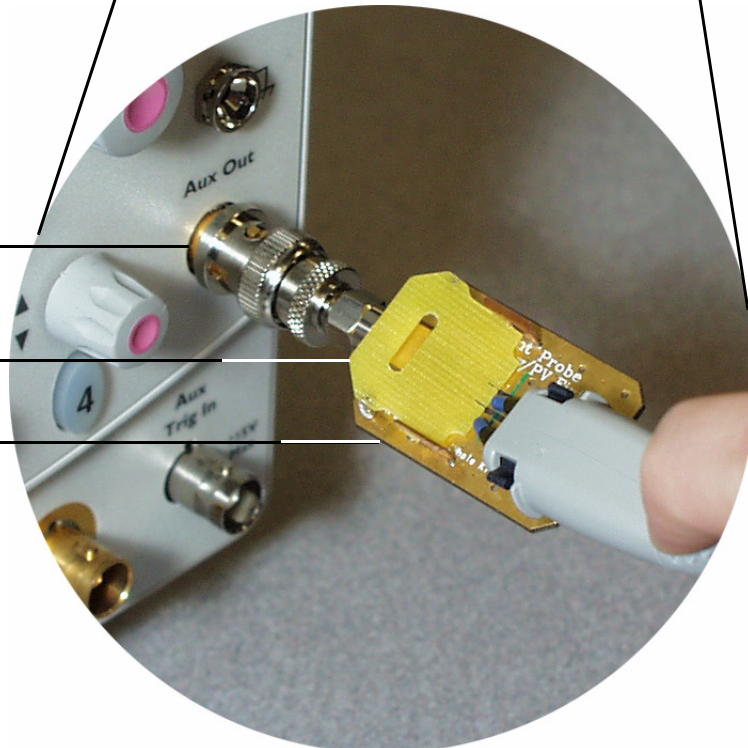
For the following procedure, refer to Figure 2.

- 1 Connect BNC (male) to SMA (male) adaptor to the deskew fixture on the connector closest to the yellow pincher.
- 2 Connect the 50 Ω SMA terminator to the connector farthest from the yellow pincher.
- 3 Connect the BNC side of the deskew fixture to the Aux Out of the Infiniium oscilloscope.
- 4 Connect the probe to an oscilloscope channel.
- 5 Place the positive resistor tip of the browser on the center conductor of the deskew fixture between the green line and front end of the yellow pincher. The negative resistor tip or ground pin of the browser must be on either of the two outside conductors (ground) of the deskew fixture.
- 6 On the Infiniium oscilloscope in the Setup menu, select the channel connected to the probe.
- 7 In the Channel Setup dialog box select the Probes... button.
- 8 In the Probe Setup dialog box select the Calibrate Probe... button.
- 9 In the Probe Cal dialog box select the Calibrated Atten/Offset radio button.
- 10 Select the Start Atten/Offset Calibration... button and follow the on-screen instructions for the vertical calibration procedure.
- 11 Once the vertical calibration has successfully completed, select the Calibrated Skew... button.
- 12 Select the Start Skew Calibration... button and follow the on-screen instructions for the skew calibration.

Figure 2



InfiniiMax Probe



BNC to SMA Connector

Pincher

Deskew Fixture



Printed in Malaysia

Manual Part Number

E2655-92000

