User's Manual – DisplayPort Compliance Test

Rev. 0, June 2010

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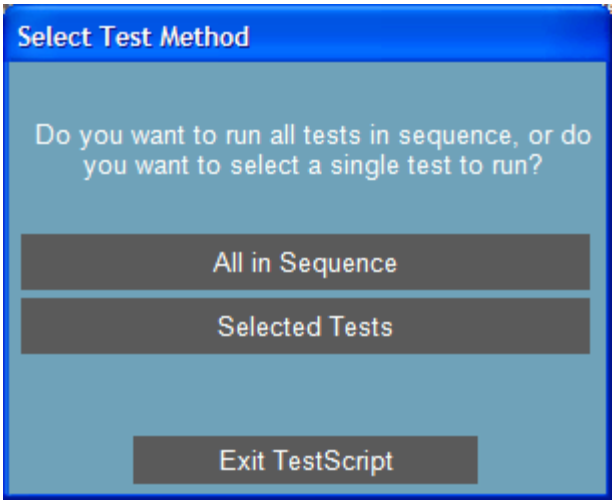
1 Introduction

The DisplayPort Compliance Test uses the *VESA DisplayPort v1.1a, 11 January 2008* as a reference.[1] The Compliance Test will perform measurements at different voltages, and using multiple data stream patterns. It is assumed that the operator has a test fixture that makes available the Test Points TP2 and TP3 as decribed in the specification.

Some dialogs, such as the **Individual Results Dialog**, occur commonly in the course of testing. Descriptions of such dialogs are provided in **Appendix A**, and are referred to in the course of the test descriptions.

The Test starts with two dialogs that tell what version of the VESA specification is being used, and the version of M1 OT that is needed to successfully run the Compliance Test. At the end of the test, the results of all testing may be saved to a file for documentation.

After the first two dialogs have appeared, the operator will see the **Select Test Method** dialog:



Operator Action: Click on **All in Sequence** to run all DisplayPort Tests, or **Selected Tests** to select a single test to run. If **All in Sequence** is chosen, the operator will be given the option of running each test, or skipping the test.

[1] Anything that gets written down is subject to interpretation, and interpretation is subject to ambiguities in what was written. The world of compliance specifications is, unfortunately, rich with instances of ambiguity. Every compliance test provider has to interpret these specifications but only ASA goes the extra step of providing information on how we interpreted these details and our reasoning behind those decisions. When available, this information is included in the Compliance App's Data Sheet, available for download from the M1 Apps Store.

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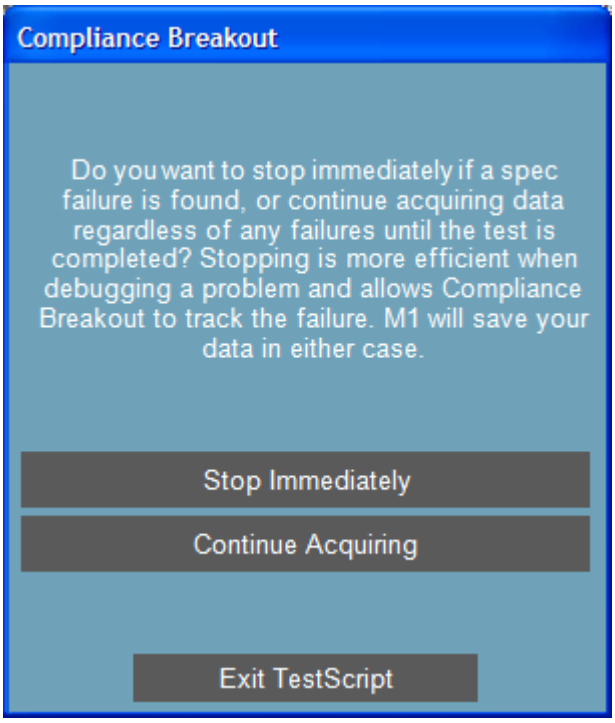
The operator will then see this dialog:



This dialog gives the option of either stopping when the first out-of-spec measurement is found, or continuing the test until the proper number for events has been detected. Selecting **Continue Acquiring** will make it more likely that all possible error conditions are found, since it is possible that not all out-of-spec conditions will happen at the same time. However, selecting **Stop Immediately** will ensure that the Compliance Breakout feature of M1 will be available to analyze the problematic waveform. The operator should make the selection based upon which scenario is appropriate. The mode selected will be applied to all tests that are conducted during this execution of the Compliance Test.

1.1 Probes Needed

The operator will need four single-ended probes and two differential probes for these tests.

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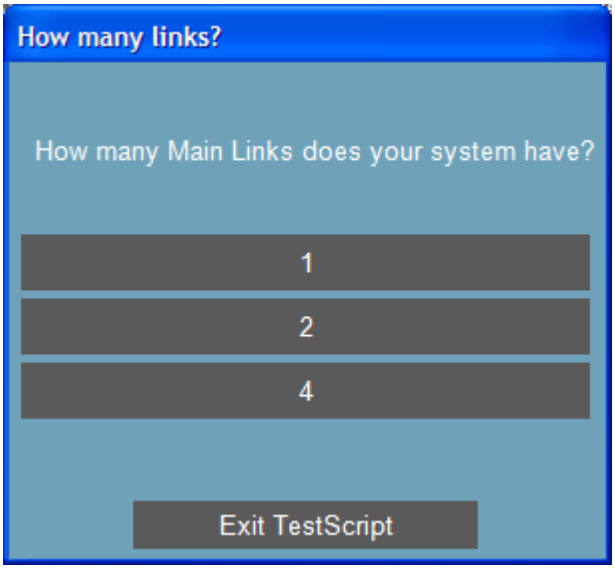
2 All in Sequence

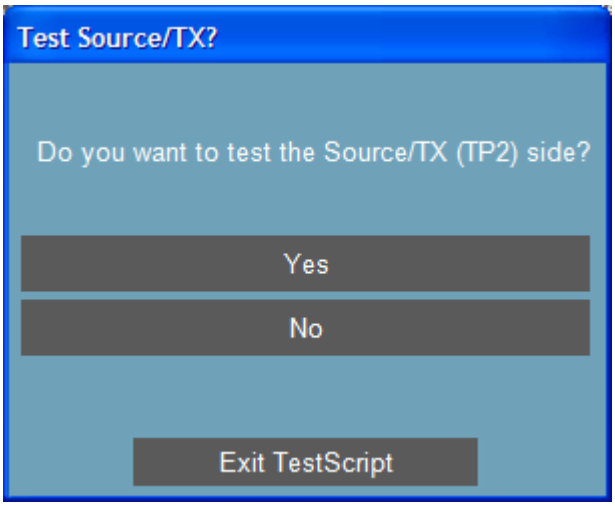
2.1 How many links?

The operator will see this dialog box:



Operator Action: Click on the appropriate button to indicate how many links are present in the DUT.

2.2 Test Source/TX



Operator Action: Click on **Yes** to test the TX side at TP2. Click on **No** to skip these tests, and proceed to **Section 2.3 Test Sink/RX**.

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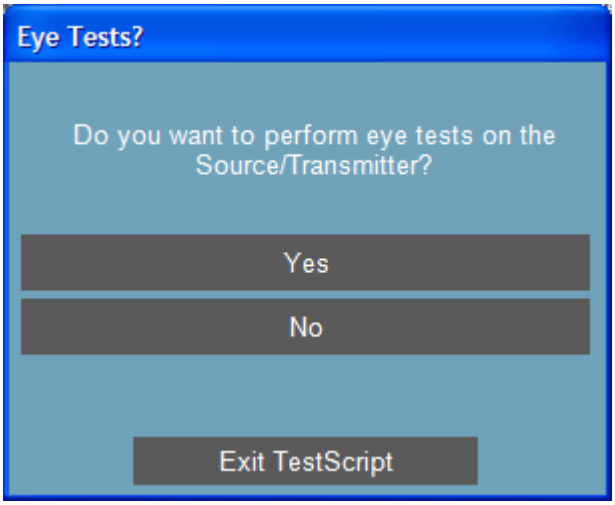
2.2.1.1 Eye Tests – TP2



Operator Action: Click on **Yes** to perform Eye Tests on the **TX**. Click on **No** to skip these tests, and proceed to **Section 2.2.2 Main Link Transmitter**.

The Eye Tests require testing at a variety of voltages and data rates. The operator will be prompted to provide the following settings as testing proceeds:

- PRBS7, 400mV, HBR
- PRBS7, 600mV, HBR
- PRBS7, 800mV, HBR
- PRBS7, 400mV, RBR
- PRBS7, 600mV, RBR
- PRBS7, 800mV, RBR

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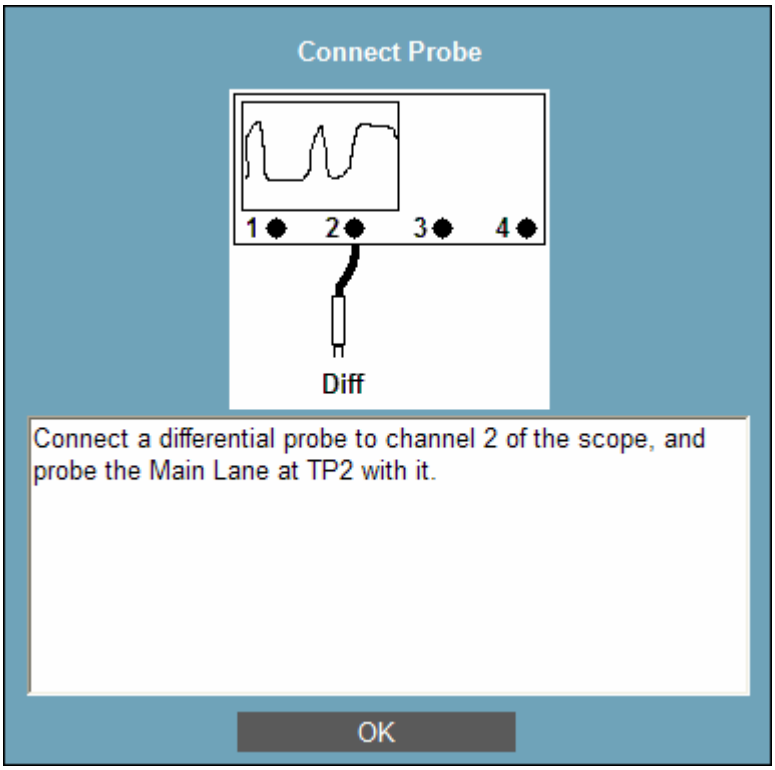
2.2.1.2 One Data Lane

If the system has one data lane, the operator will see this dialog:



Operator Action: Detach any probes that are connected to the scope. Connect a **differential** probe to Channel 2, and probe the **Main Lane** at **TP2** with the probe.

The operator will be prompted to change the data rate and voltage settings as testing proceeds.

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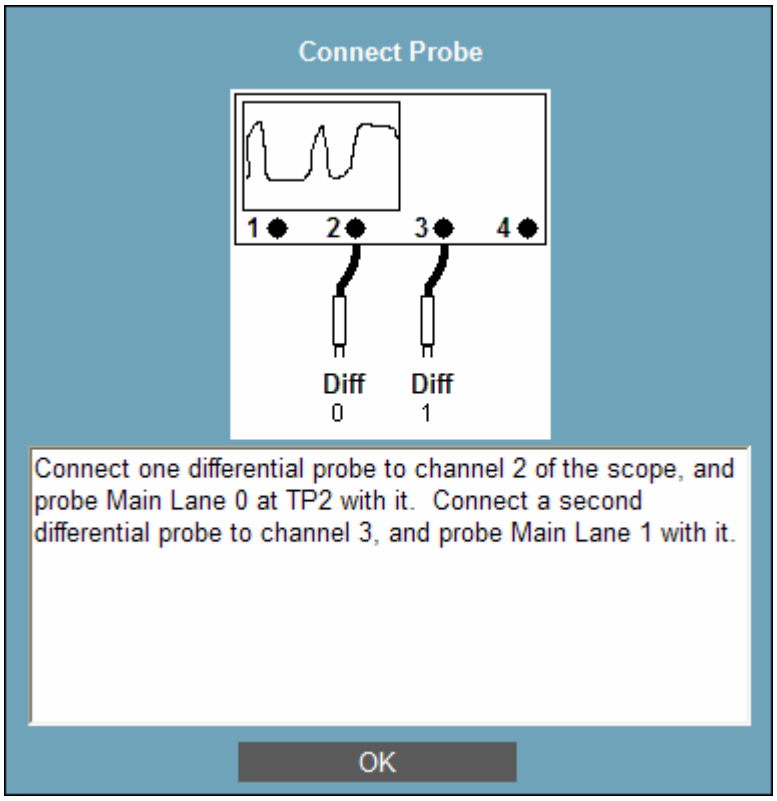
2.2.1.3 Two Data Lanes

If the system has two data lanes, the operator will see this dialog:



Operator Action: Attach two **differential** probes to Channels 2 and 3 of the scope. Probe Main Data Lane 0 at **TP2** with the probe on Channel 2. Probe Main Data Lane 1 at **TP2** with the probe on Channel 3.

The operator will be prompted to change the data rate and voltage settings as testing proceeds

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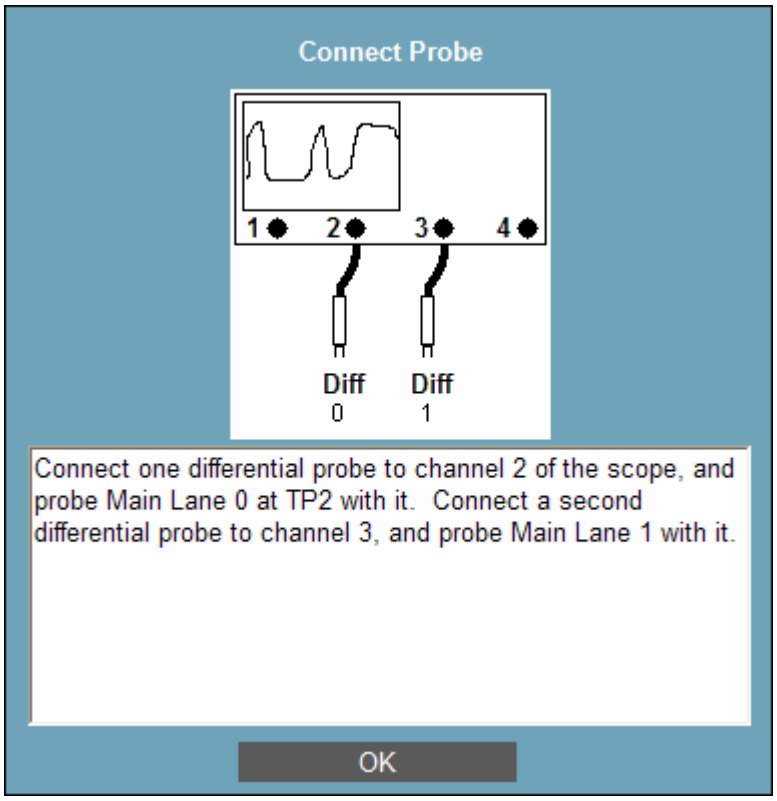
2.2.1.4 Four Data Lanes



Operator Action: Connect **differential** probes to channels 2 and 3 of the scope. Probe **Data Lane 0** at **TP2** with the probe attached to channel 2, and probe **Data Lane 1** at **TP2** with the probe attached to channel 3.

The operator will be prompted to change the data rate and voltage settings as testing proceeds

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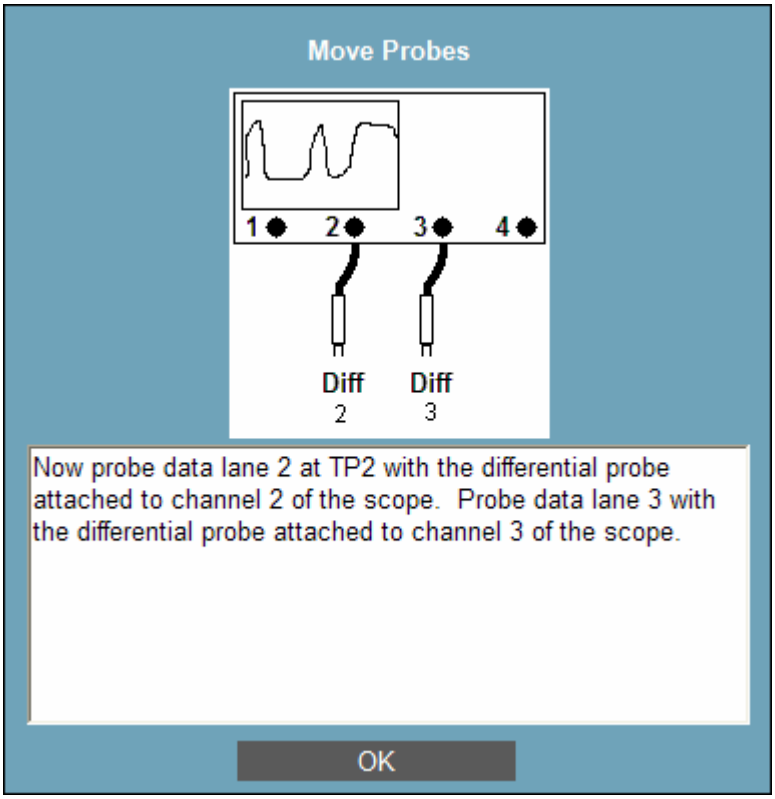
After testing is complete for Data Lanes 0 and 1, this dialog will appear:



Operator Action: Move the **differential** probe on Channel 2 to probe **Data Lane 2** at **TP2**. Move the **differential** probe on Channel 3 to probe **Data Lane 3** at **TP2**.

The operator will be prompted to change the data rate and voltage settings as testing proceeds

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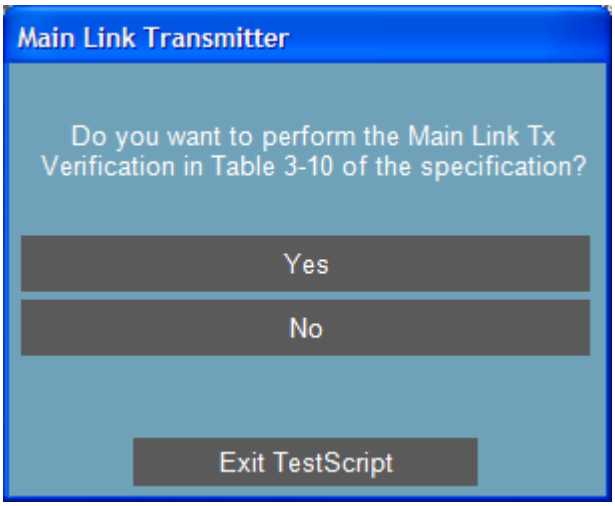
2.2.2 Main Link Transmitter



Operator Action: Click on **Yes** to test the Main Link TX as specified in Table 3-10 of the standard. Click on **No** to skip these tests, and proceed to **Section 2.2.3 Intra-pair Skew and Rise/Fall**.

The Main Link Transmitter Tests require testing at a variety of settings. The operator will be prompted to provide the following settings as testing proceeds:

- PRBS7, HBR, 400 mV, 3.5 dB pre-emphasis
- PRBS7, HBR, 400 mV, 6 dB pre-emphasis
- PRBS7, HBR, 400 mV, 9.5 dB pre-emphasis
- PRBS7, HBR, 600 mV, 3.5 dB pre-emphasis
- PRBS7, HBR, 600 mV, 6 dB pre-emphasis
- PRBS7, HBR, 600 mV, without pre-emphasis
- PRBS7, HBR, 800 mV, without pre-emphasis
- PRBS7, HBR, 800 mV, 3.5 dB pre-emphasis
- PRBS7, RBR, 800 mV, without pre-emphasis
- PRBS7, RBR, 800 mV, 3.5 dB pre-emphasis
- PRBS7, RBR, 600 mV, 3.5 dB pre-emphasis
- PRBS7, RBR, 600 mV, 6 dB pre-emphasis
- PRBS7, RBR, 600 mV, without pre-emphasis
- PRBS7, RBR, 400 mV, without pre-emphasis
- PRBS7, RBR, 400 mV, 3.5 dB pre-emphasis
- PRBS7, RBR, 400 mV, 6 dB pre-emphasis
- PRBS7, RBR, 400 mV, 9.5 dB pre-emphasis

If the 1200 mV mode of operation is supported, there are two additional settings that will be required:

- PRBS7, HBR, 1200mV without pre-emphasis
- PRBS7, RBR, 1200mV without pre-emphasis

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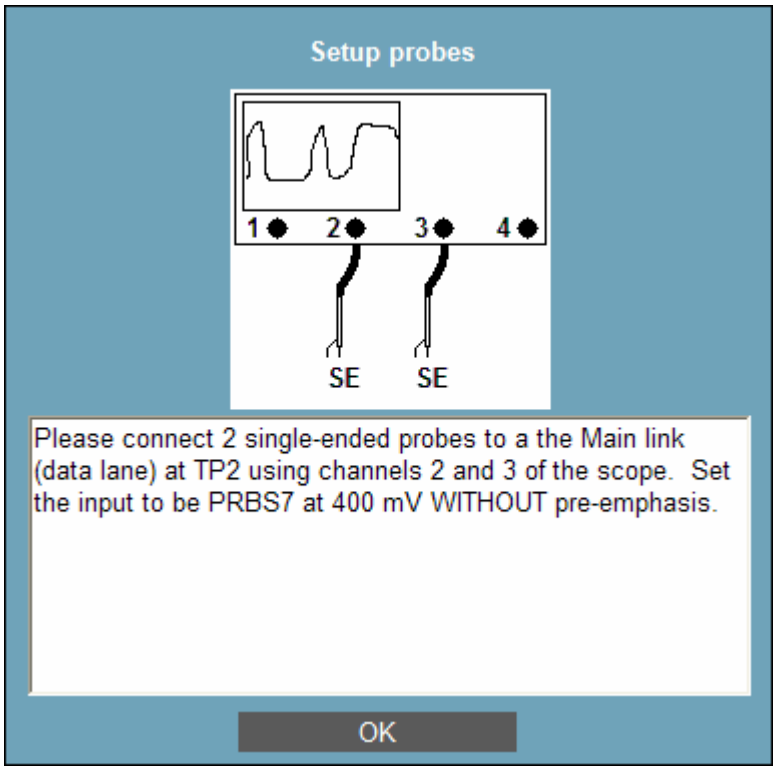
2.2.2.1 One Data Lane

If the system has one data lane, the operator will see this dialog:



Operator Action: Attach two **single-ended** probes to Channels 2 and 3 of the scope. Probe **TP2** with the two probes. Set the input to be PRBS7 at 400 mV *without* pre-emphasis.

The operator will be prompted to change the settings as testing proceeds

The operator will be prompted to specify whether the system supports the 1200 mV mode of operation.

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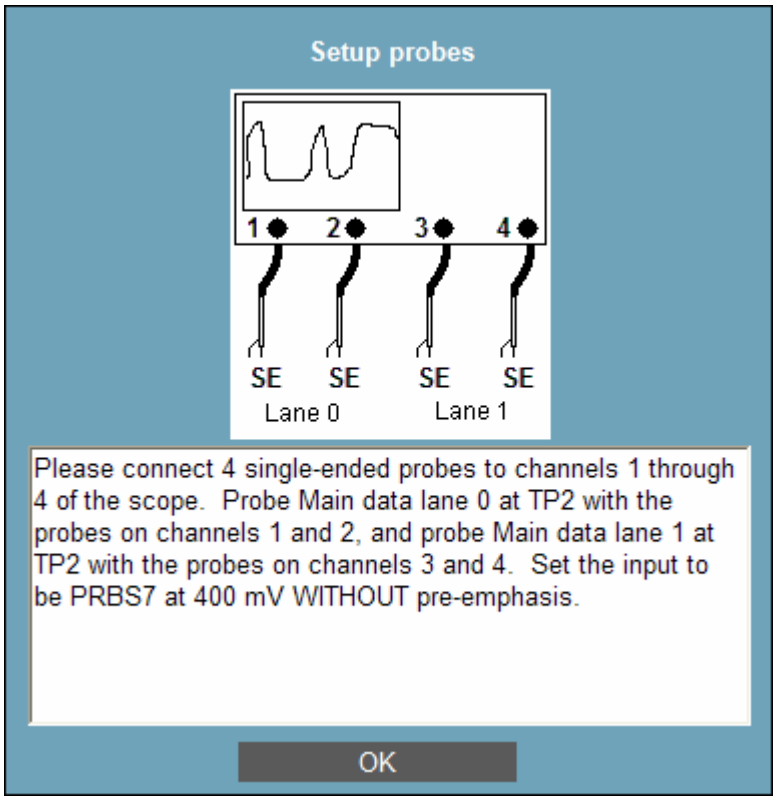
2.2.2.2 Two Data Lanes

If the system has two data lanes, the operator will see this dialog:



Operator Action: Attach four **single-ended** probes to Channels 1 through 4 of the scope. Probe Main Data Lane 0 at **TP2** with the probes on Channels 1 and 2. Probe Main Data Lane 1 at **TP2** with the probes on Channels 3 and 4. Set the input to be PRBS7 at 400 mV *without* pre-emphasis.

The operator will be prompted to change the settings as testing proceeds

The operator will be prompted to specify whether the system supports the 1200 mV mode of operation.

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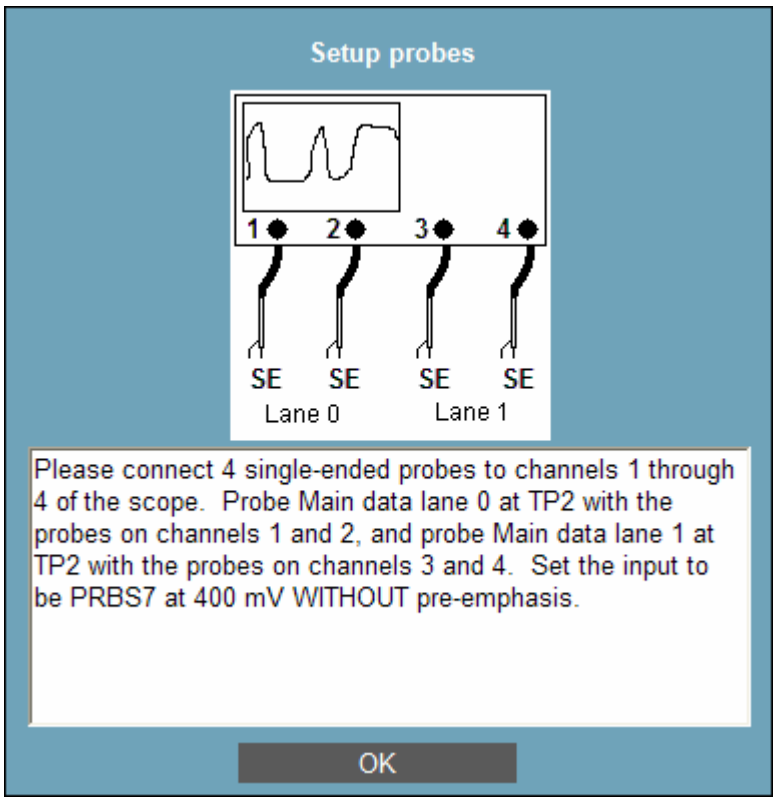
2.2.2.3 Four Data Lanes

If the system has four data lanes, the operator will see this dialog:



Operator Action: Attach four **single-ended** probes to Channels 1 through 4 of the scope. Probe Main Data Lane 0 at **TP2** with the probes on Channels 1 and 2. Probe Main Data Lane 1 at **TP2** with the probes on Channels 3 and 4. Set the input to be PRBS7 at 400 mV *without* pre-emphasis

The operator will be prompted to change the settings as testing proceeds

The operator will be prompted to specify whether the system supports the 1200 mV mode of operation.

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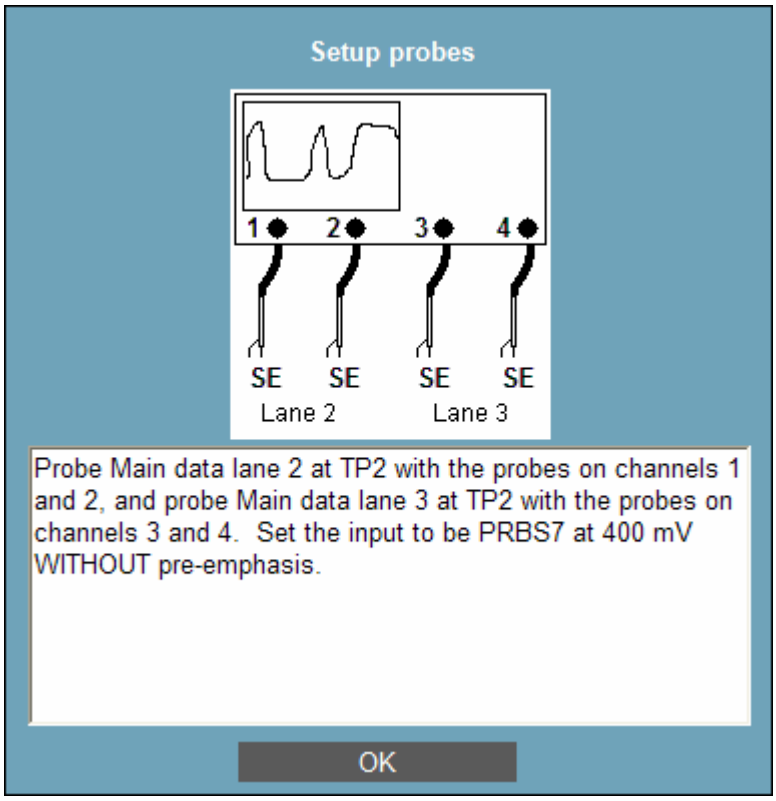
After the tests on lanes 0 and 1 are completed, the operator will see this dialog:



Operator Action: **Probe Data Lane 2** at **TP2** with the probes on channels 1 and 2, and probe **Data Lane 3** at **TP2** with the probes on channels 3 and 4.

The operator will be prompted to change the settings as testing proceeds

The operator will be prompted to specify whether the system supports the 1200 mV mode of operation.

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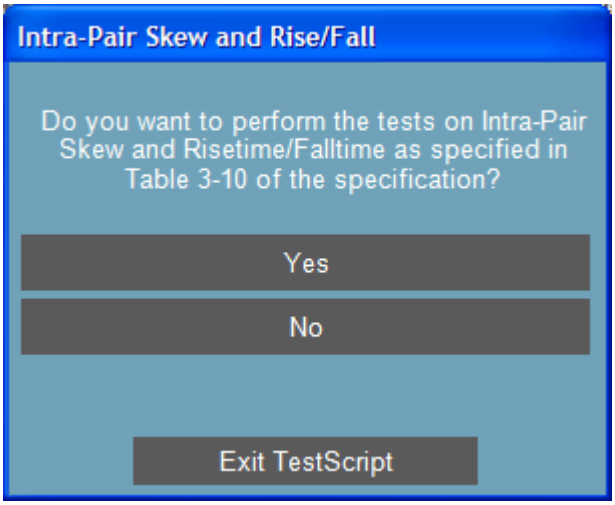
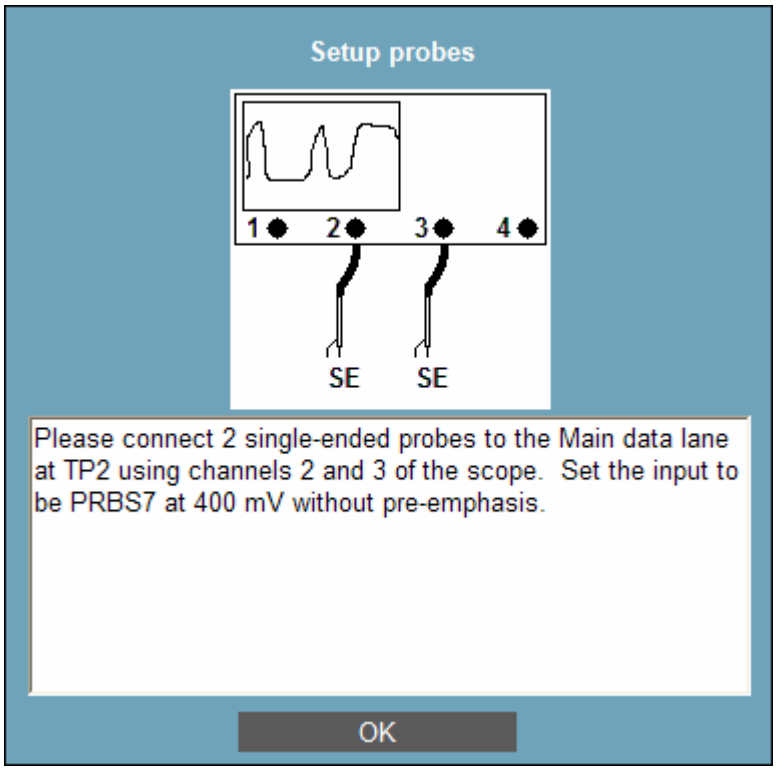
2.2.3 Intra-Pair Skew and Rise/Fall – TP2



Operator Action: Click on **Yes** to perform Intra-Pair Skew and Rise/Fall tests on the TX. Click on **No** to skip these tests, and proceed to **Section 2.2.4 SSC**.

2.2.3.1 One Data Lane

If the system has one data lane, the operator will see this dialog:



Operator Action: Connect two **single-ended** probes to Channels 2 and 3 of the scope. Probe the **Data Lane** at **TP2** with the two probes. Set the input to be PRBS7, 400 mV, without pre-emphasis.

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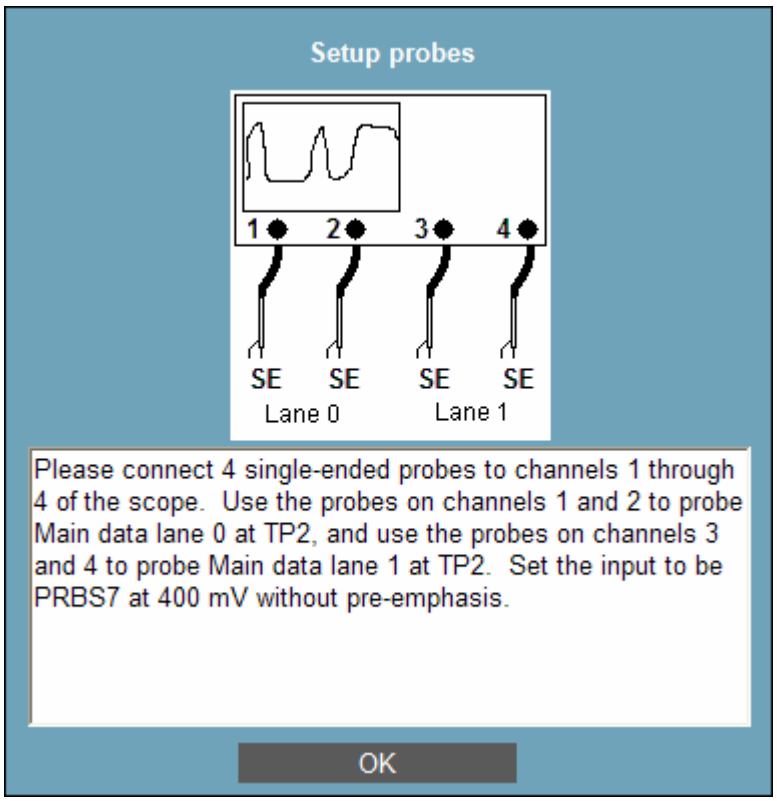
2.2.3.2 Two Data Lanes

If the system has two data lanes, the operator will see this dialog:



Operator Action: Attach four **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP2** with the probes on Channels 1 and 2. Probe **Data Lane 1** at **TP2** with the probes on Channels 3 and 4. Set the input to be PRBS7 at 400 mV *without* pre-emphasis.

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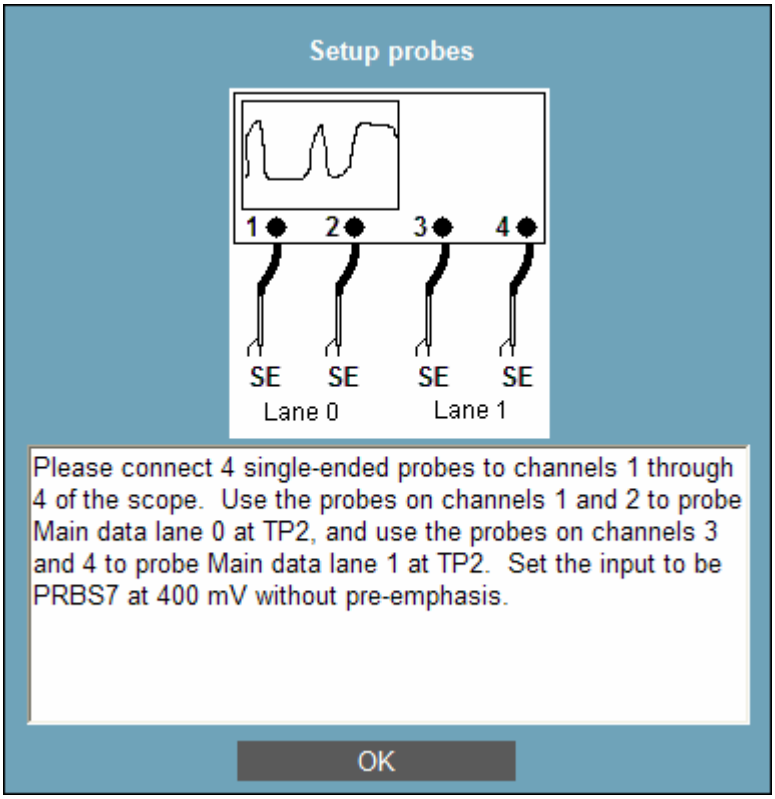
2.2.3.3 Four Data Lanes

If the system has two data lanes, the operator will see this dialog:



Operator Action: Attach four **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP2** with the probes on Channels 1 and 2. Probe **Data Lane 1** at **TP2** with the probes on Channels 3 and 4. Set the input to be PRBS7 at 400 mV *without* pre-emphasis.

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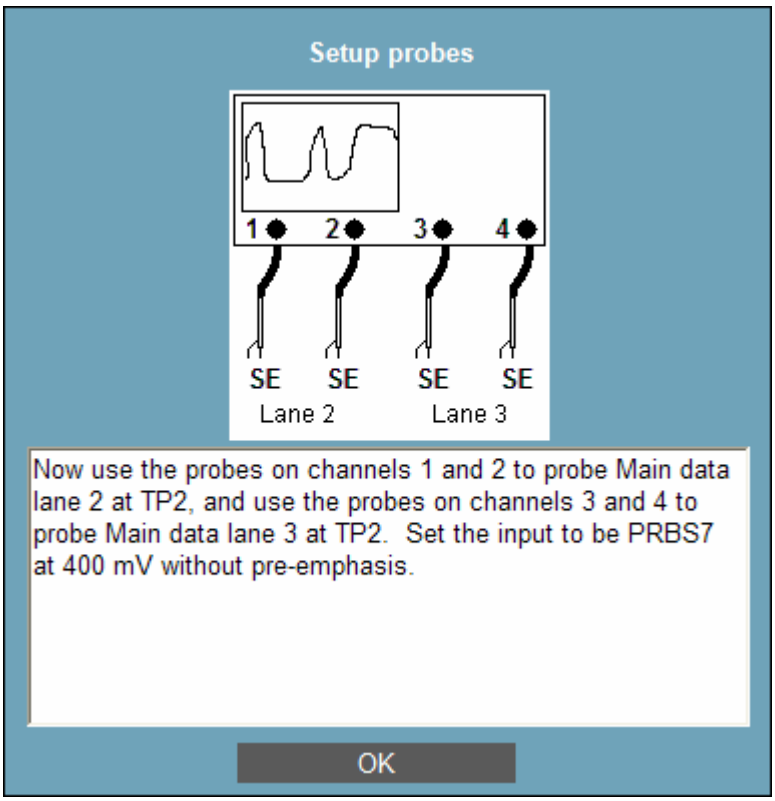
After the tests on Data Lanes 0 and 1 are finished, the operator will see this dialog:



Operator Action: Move the probes on channels 1 and 2 to **Data Lane 2** at **TP2**, and move the probes on Channels 3 and 4 to **Data Lane 3** at **TP2**.

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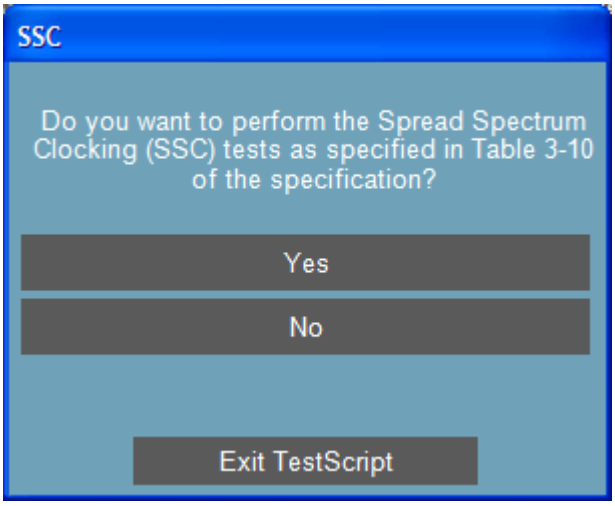
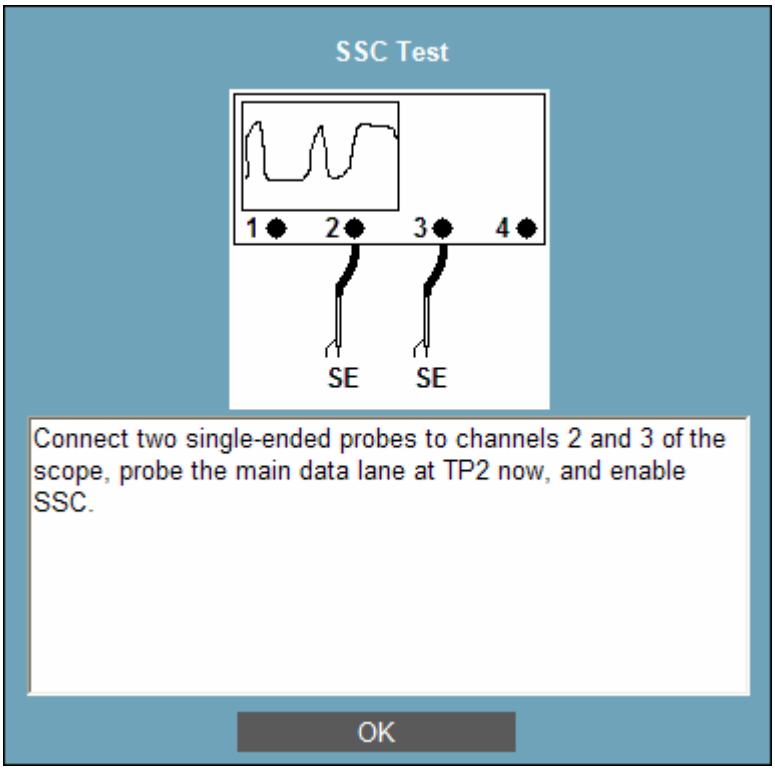
2.2.4 SSC – TP2



Operator Action: Click on **Yes** to perform Spread Spectrum Clocking tests on the TX. Click on **No** to skip these tests, and proceed to **Section 2.2.5 Non-ISI and Total Jitter**.

2.2.4.1 One Data Lane

If the system has one data lane, the operator will see this dialog:



Operator Action: Connect two **single-ended** probes to Channels 2 and 3 of the scope. Probe the **Data Lane** at **TP2** with the two probes. Enable **Spread Spectrum Clocking**.

The operator will be prompted to set the data rate to RBR and HBR at the 400 mV mode of operation. The pattern being transmitted should be PRBS7.

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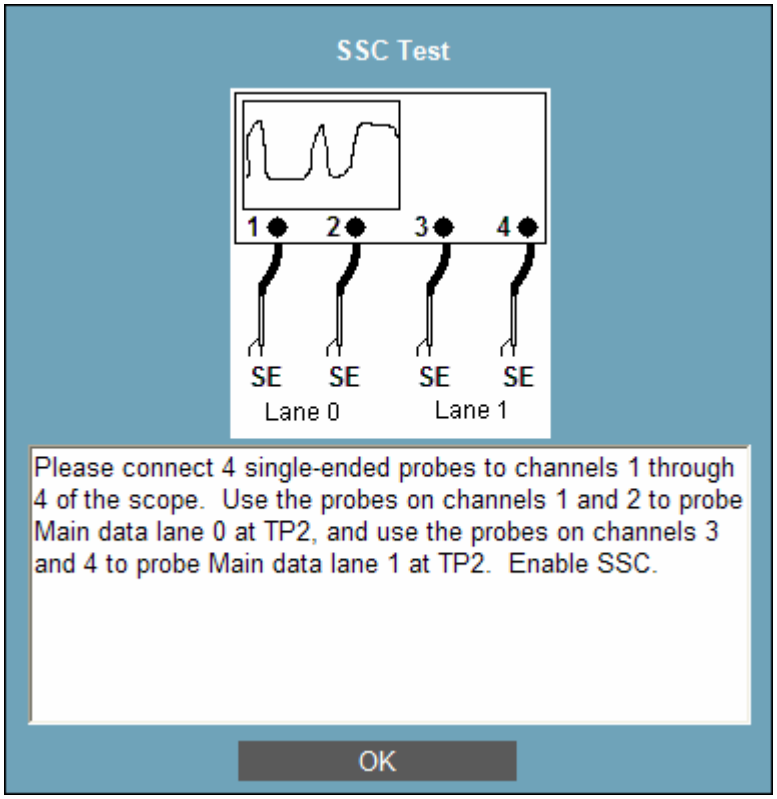
2.2.4.2 Two Data Lanes

If the system has two data lanes, the operator will see this dialog:



Operator Action: Attach four **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP2** with the probes on Channels 1 and 2. Probe **Data Lane 1** at **TP2** with the probes on Channels 3 and 4. Enable SSC.

The operator will be prompted to set the data rate to RBR and HBR at the 400 mV mode of operation. The pattern being transmitted should be PRBS7.

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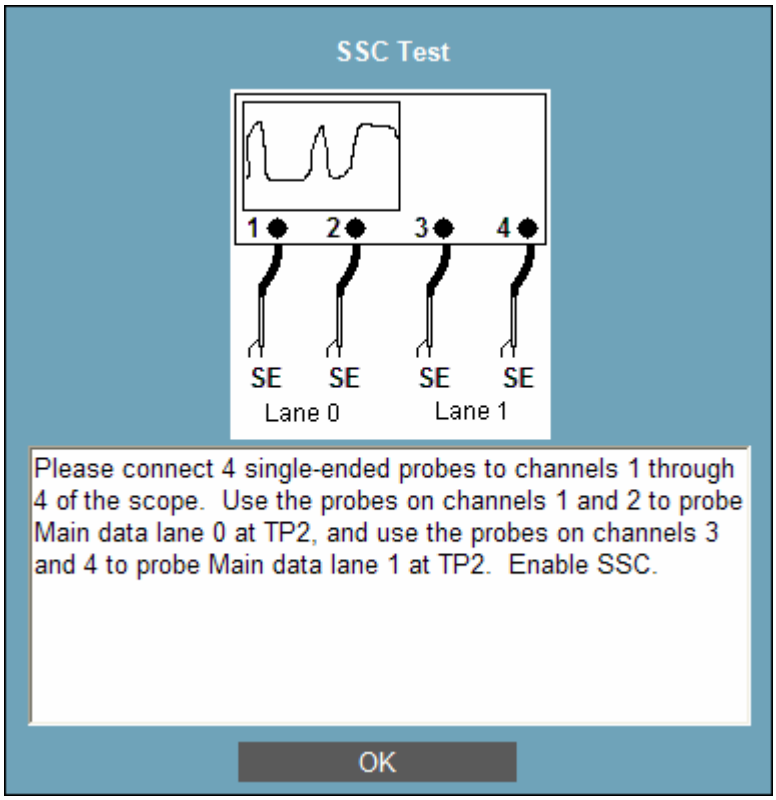
2.2.4.3 Four Data Lanes

If the system has four data lanes, the operator will see this dialog:



Operator Action: Attach four **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP2** with the probes on Channels 1 and 2. Probe **Data Lane 1** at **TP2** with the probes on Channels 3 and 4. Enable SSC.

The operator will be prompted to set the data rate to RBR and HBR at the 400 mV mode of operation. The pattern being transmitted should be PRBS7.

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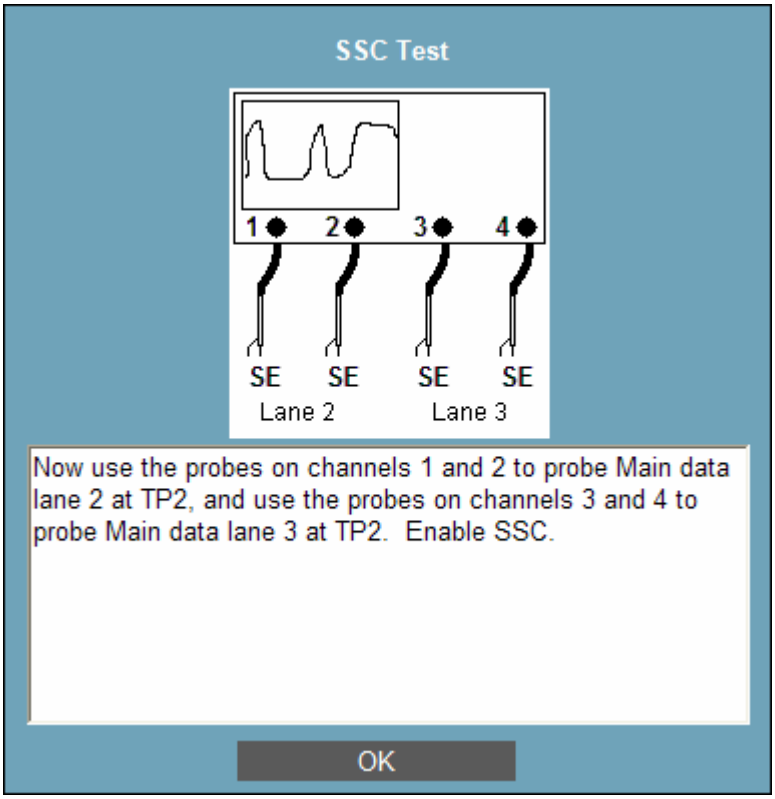
After testing of Data Lanes 0 and 1 has completed, the operator will see this dialog:



Operator Action: Attach four **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 2** at **TP2** with the probes on Channels 1 and 2. Probe **Data Lane 3** at **TP2** with the probes on Channels 3 and 4. Enable SSC.

The operator will be prompted to set the data rate to RBR and HBR at the 400 mV mode of operation. The pattern being transmitted should be PRBS7.

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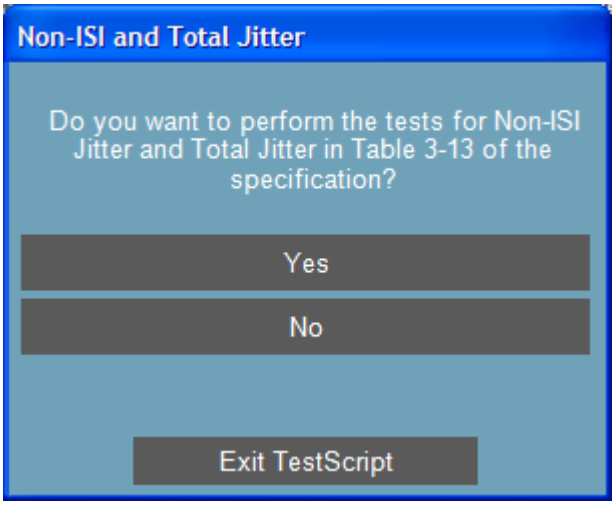
2.2.5 Non-ISI and Total Jitter – TP2



Operator Action: Click on **Yes** to perform **Non-ISI and Total Jitter** tests on the TX. Click on **No** to skip these tests, and proceed to either **Section 2.2.6 Inter-pair Skew** (if the system has more than one data lane), or **Section 2.2.7 Test Sink/RX**.

For all numbers of Data Lanes, the tests will be made at the following settings:

- PRBS7, HBR, at 400 mV without pre-emphasis
- PRBS7, HBR, at 600 mV without pre-emphasis
- PRBS7, HBR, at 800 mV without pre-emphasis
- PRBS7, RBR, at 800 mV without pre-emphasis
- PRBS7, RBR, at 600 mV without pre-emphasis
- PRBS7, RBR, at 400 mV without pre-emphasis

If the 1200 mV mode is supported, these settings will also be used:

- PRBS7, HBR, at 1200 mV without pre-emphasis (if supported)
- PRBS7, RBR, at 1200 mV without pre-emphasis (if supported)

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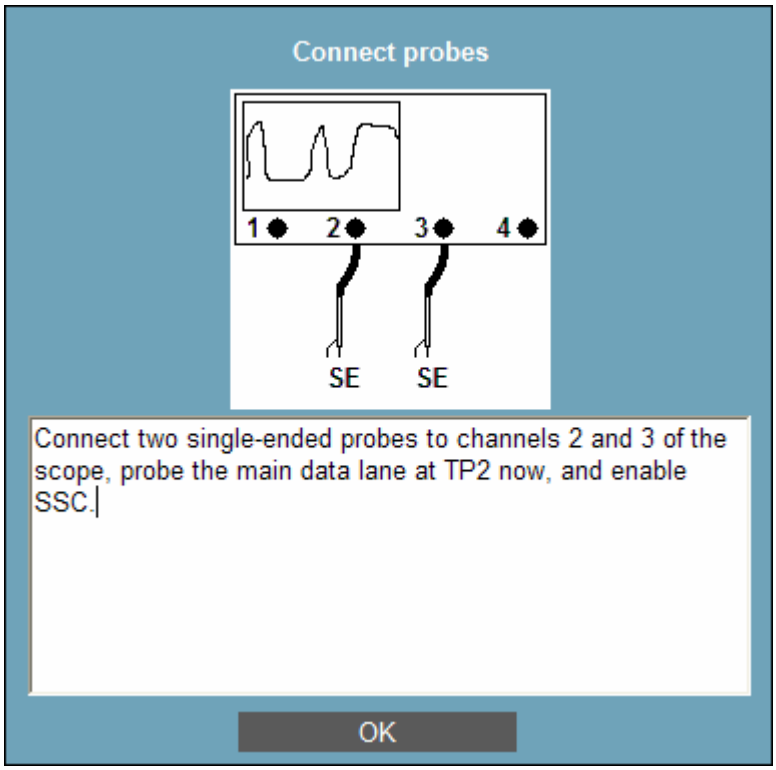
2.2.5.1 One Data Lane

If the system has one data lane, the operator will see this dialog:



Operator Action: Connect two **single-ended** probes to Channels 2 and 3 of the scope. Probe the **Data Lane** at **TP2** with the two probes. Enable **Spread Spectrum Clocking.**

The operator will be prompted to change the input settings as needed.

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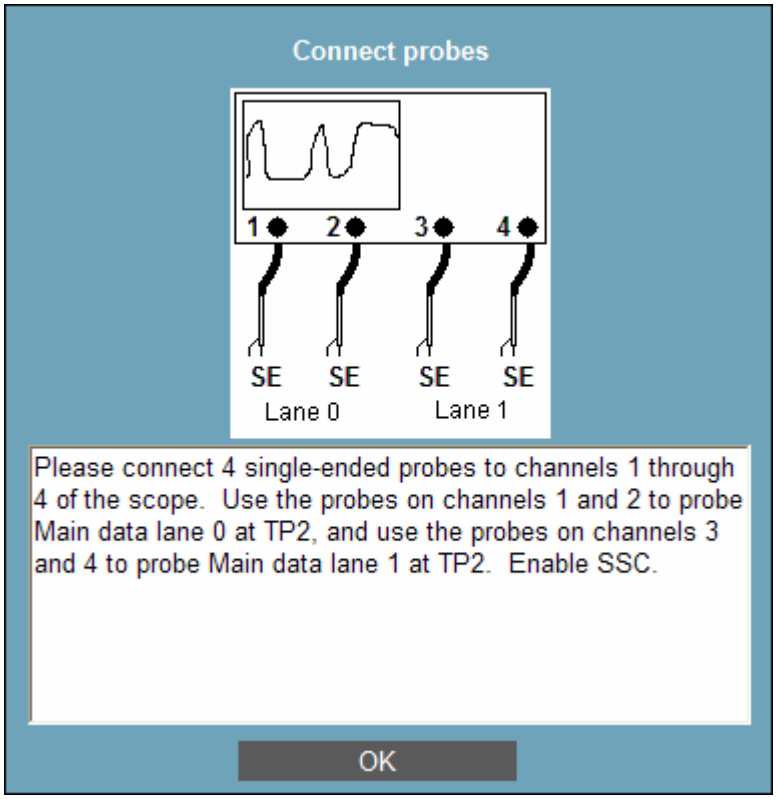
2.2.5.2 Two Data Lanes

If the system has two data lanes, the operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP2** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP2** with the probes on Channels 3 and 4. Make sure SSC is enabled.

The operator will be prompted to change the input settings as needed.

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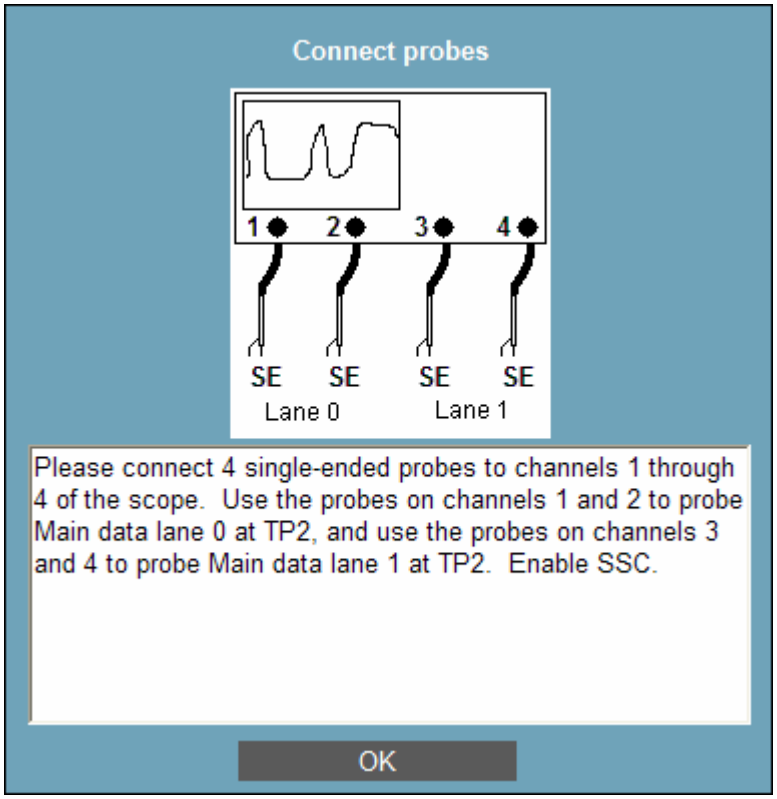
2.2.5.3 Four Data Lanes

If the system has four data lanes, the operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP2** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP2** with the probes on Channels 3 and 4. Make sure SSC is enabled.

The operator will be prompted to change the input settings as needed.

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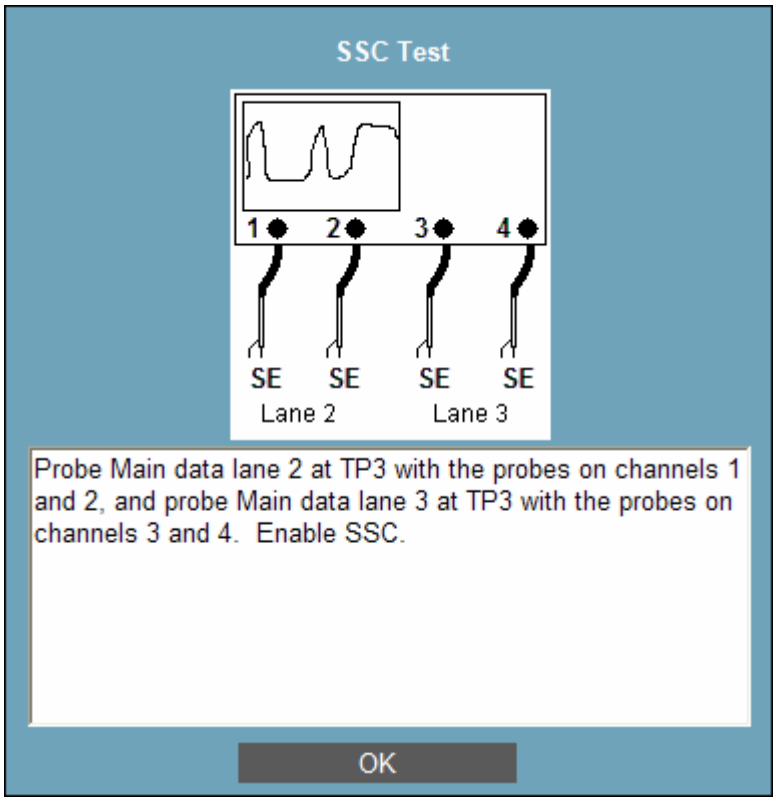
After testing is complete on Data Lanes 0 and 1, the operator will see this dialog:



Operator Action: Probe **Data Lane 2** at **TP2** with the probes on Channels 1 and 2, and probe **Data Lane 3** at **TP2** with the probes on Channels 3 and 4.

The operator will be prompted to change the input settings as needed.

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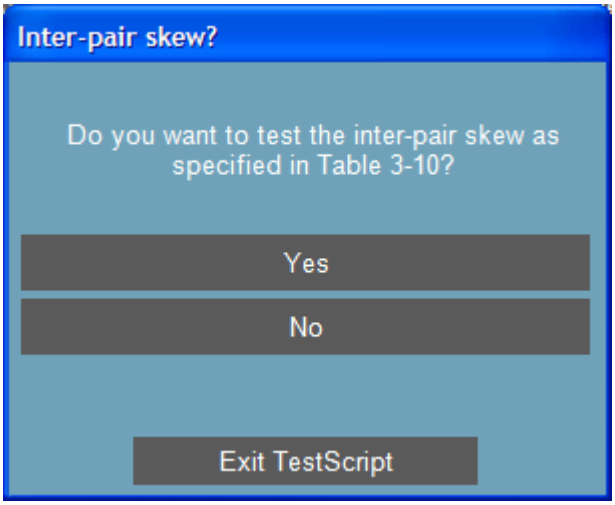
2.2.6 Inter-Pair Skew – TP2

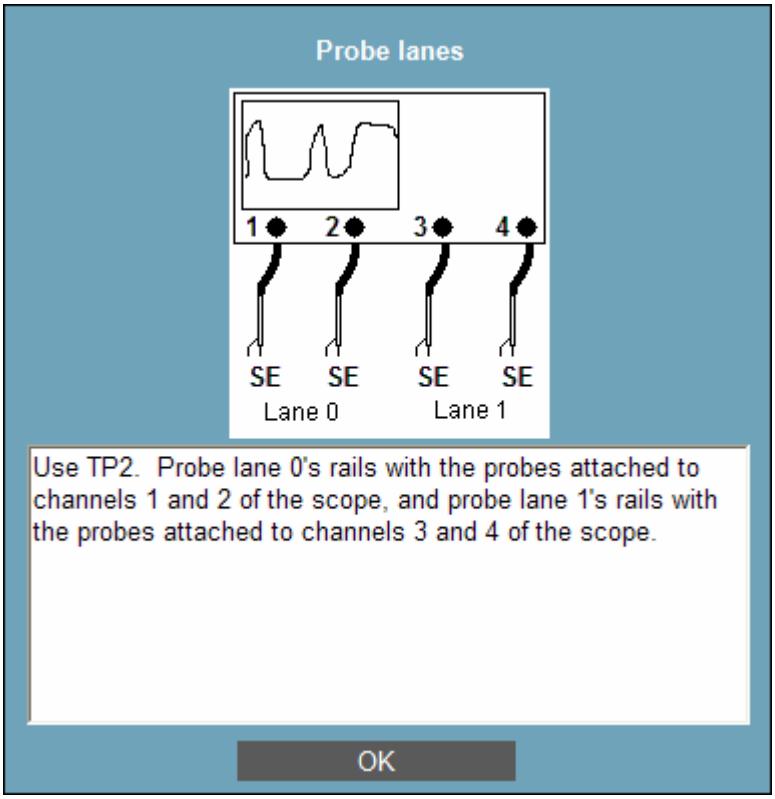
If the system has more than one data lane, inter-pair skew will be the next available test.



Operator Action: Click on **Yes** to perform **Inter-pair Skew** tests on the TX. Click on **No** to skip these tests, and proceed to **Section 2.3 Test Sink/RX**.

2.2.6.1 Two Data Lanes

If the system has two data lanes, the operator will be prompted to set the input appropriately, then will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP2** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP2** with the probes on Channels 3 and 4.

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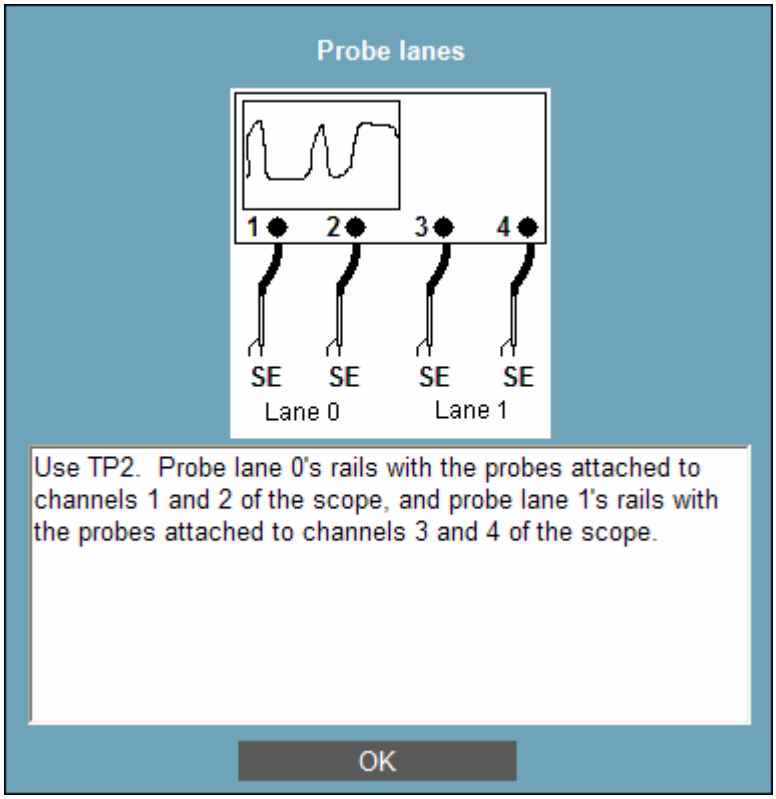
2.2.6.2 Four Data Lanes

If the system has four data lanes, the operator will be prompted to set the input appropriately, then will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP2** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP2** with the probes on Channels 3 and 4.

There are six possible pairs of data lanes. The operator will be prompted to move probes to different data lanes. Only one pair will be moved at a time. The operator should pay careful attention when being prompted to move probes, as different probes may be moved at each prompt. For brevity, the remaining 5 dialogs of this section are not shown.

The order of probing (Ch1/2 of the scope, Ch3/4 of the scope) is: (0, 1), (0, 2), (0, 3), (1, 3), (2, 3), (1, 3).

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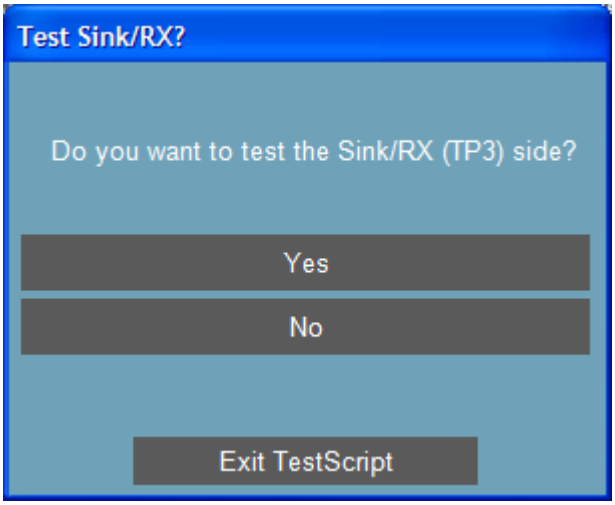
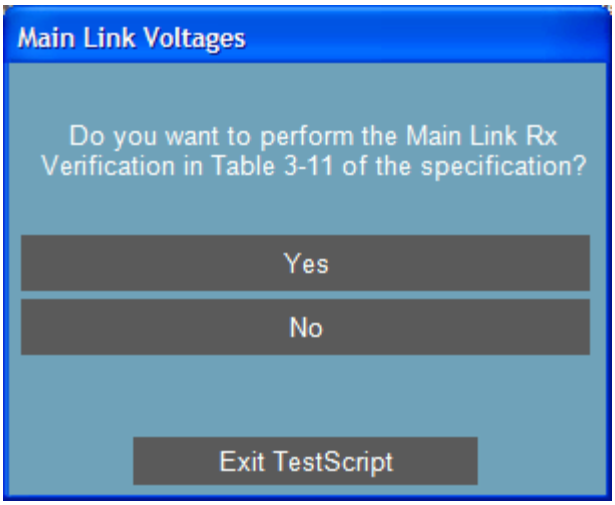
2.3 Test Sink/RX

This dialog will appear:



Operator Action: Click **Yes** to perform the test, or **No** to skip the test. This document will assume that the operator clicks **Yes**. Otherwise, testing is complete, and the test results summary dialog will appear.

2.3.1 Main Link Voltages – TP3



Operator Action: Click on **Yes** to perform the Main Link Voltages test Click on **No** to skip these tests, and proceed to **Section 2.3.2 Intra-Pair Skew**.

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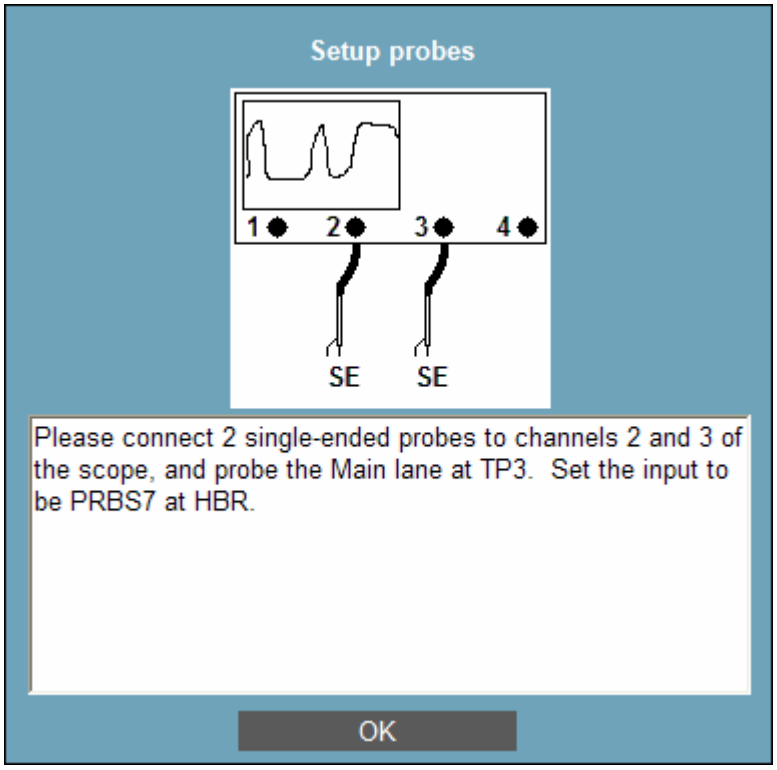
2.3.1.1 One Data Lane

The operator will see this dialog:



Operator Action: Connect two **single-ended** probes to Channels 2 and 3 of the scope. Probe the Main Lane at TP3 with the two probes

Testing till be performed at HBR, then the operator will be prompted to switch to RBR.

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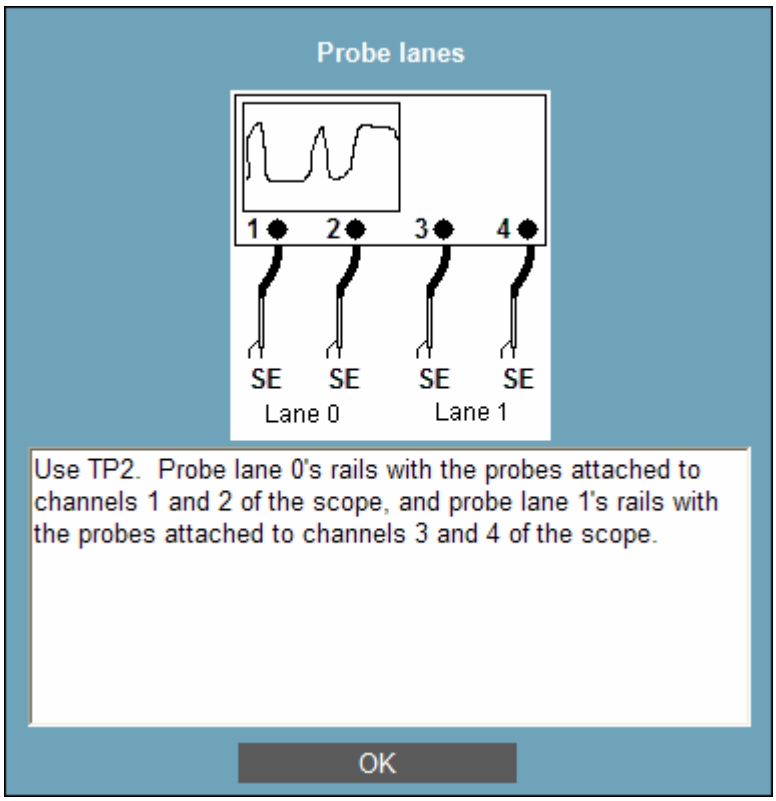
2.3.1.2 Two Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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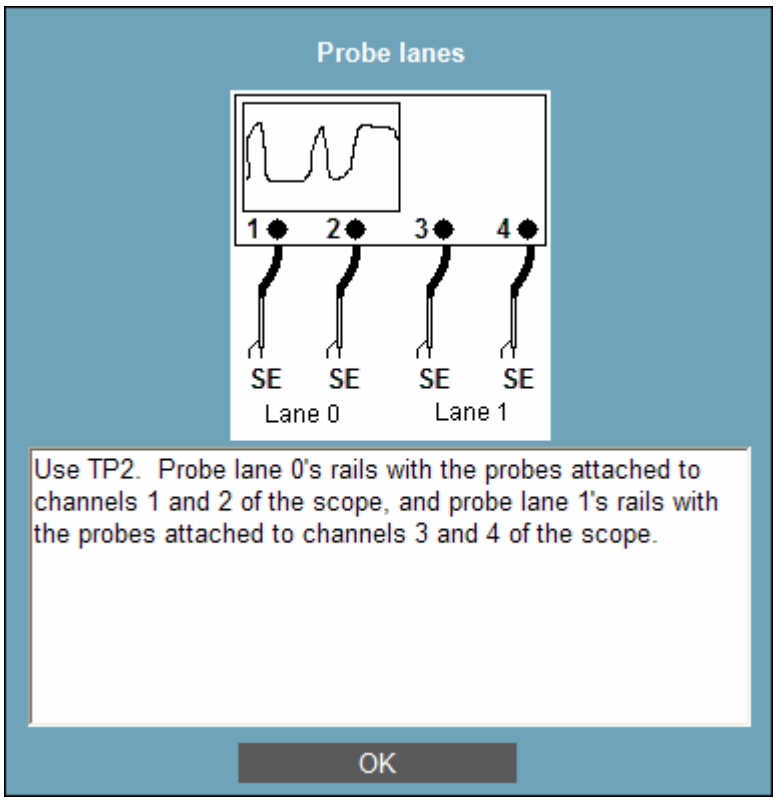
2.3.1.3 Four Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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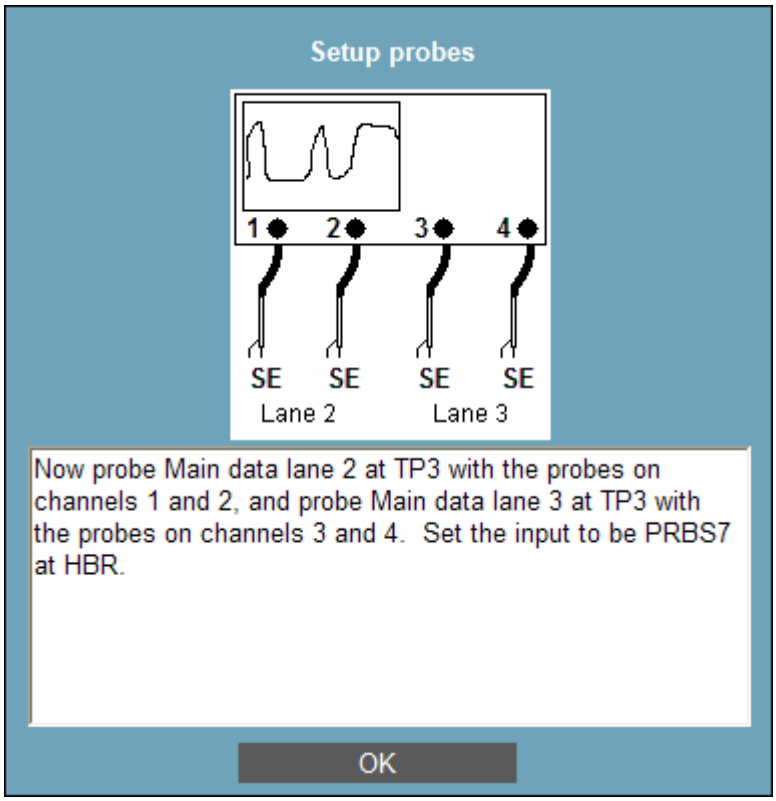
After testing is complete on Data Lanes 0 and 1, the operator will see this dialog:



Operator Action: Move the probes on Channels 1 and 2 to **Data Lane 2** at **TP3**, and move the probes on Channels 3 and 4 to **Data Lane 3** at **TP3**.

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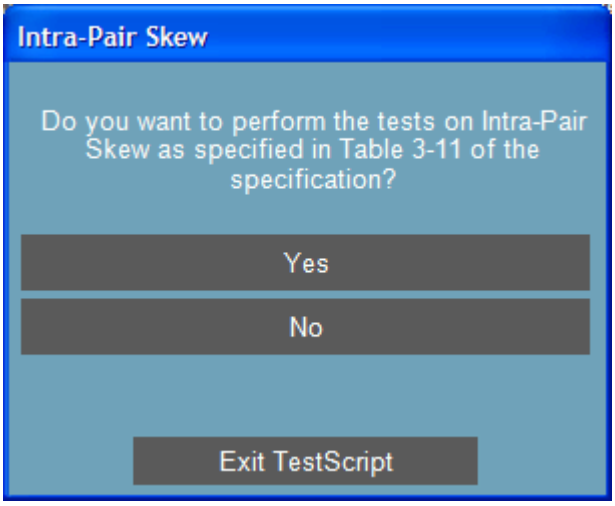
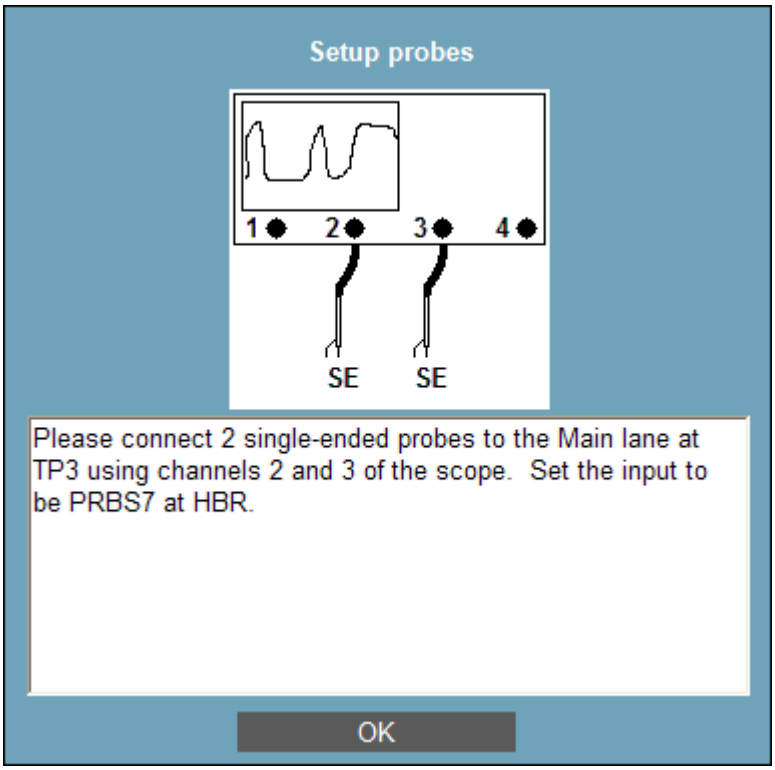
2.3.2 Intra-Pair Skew – TP3



Operator Action: Click **Yes** to perform the test, or **No** to proceed to **Section 2.3.3 SSC**.

2.3.2.1 One Data Lane

The operator will see this dialog:



Operator Action: Connect two **single-ended** probes to Channels 2 and 3 of the scope, and probe the **Data Lane** at **TP3** with it. Set the input to be PRBS7 at HBR. Click on **OK**.

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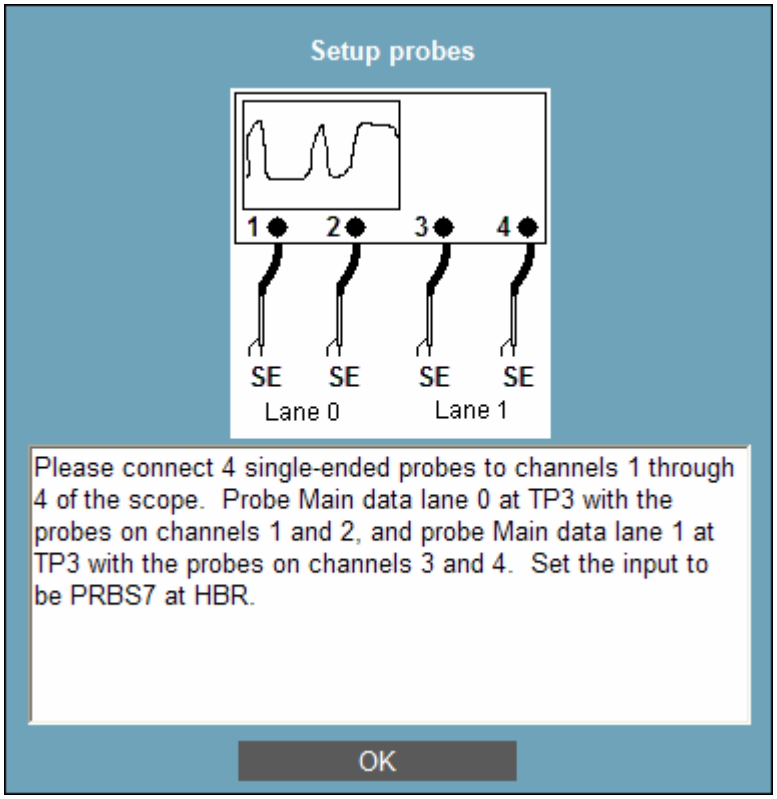
2.3.2.2 Two Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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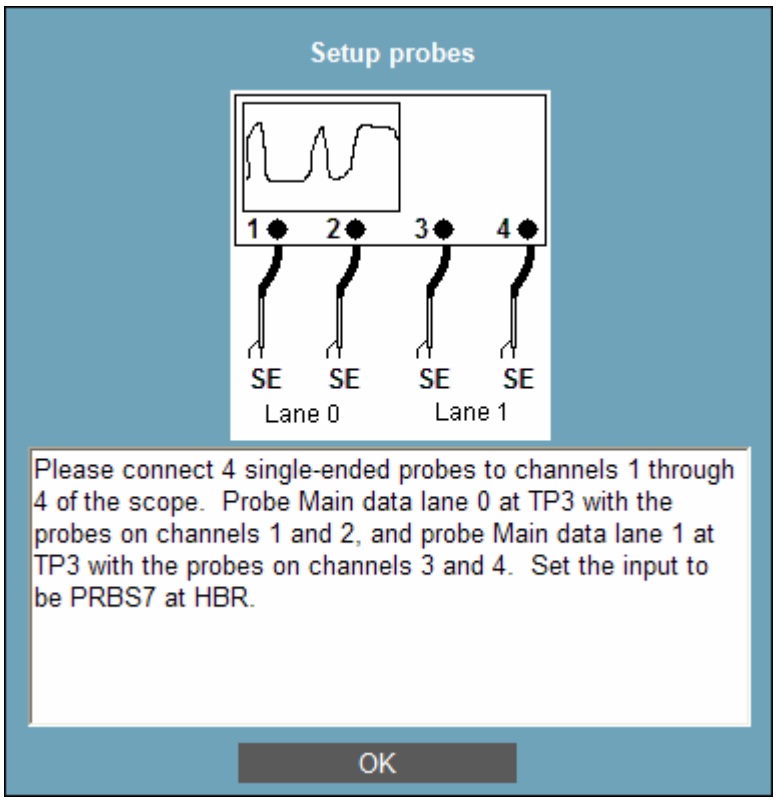
2.3.2.3 Four Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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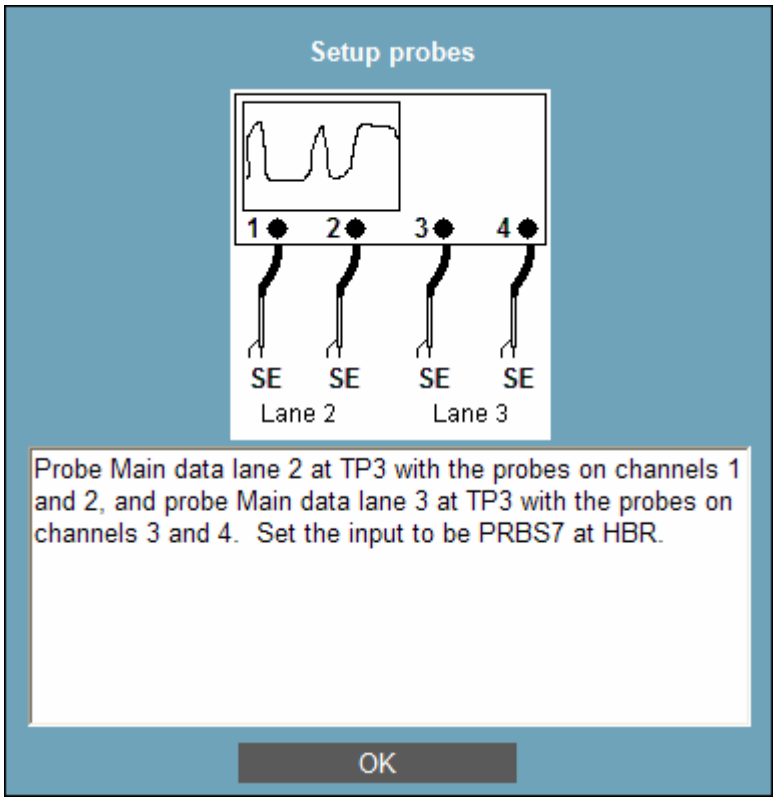
After testing is complete on Data Lanes 0 and 1, the operator will see this dialog:



Operator Action: Move the probes on Channels 1 and 2 to **Data Lane 2** at **TP3**, and move the probes on Channels 3 and 4 to **Data Lane 3** at **TP3.**

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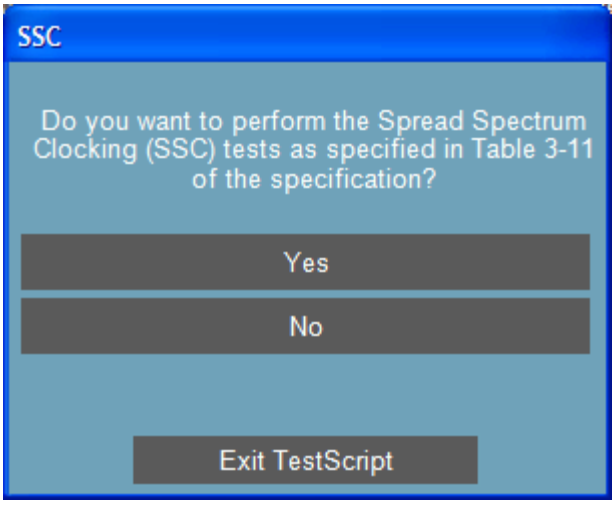
2.3.3 SSC – TP3

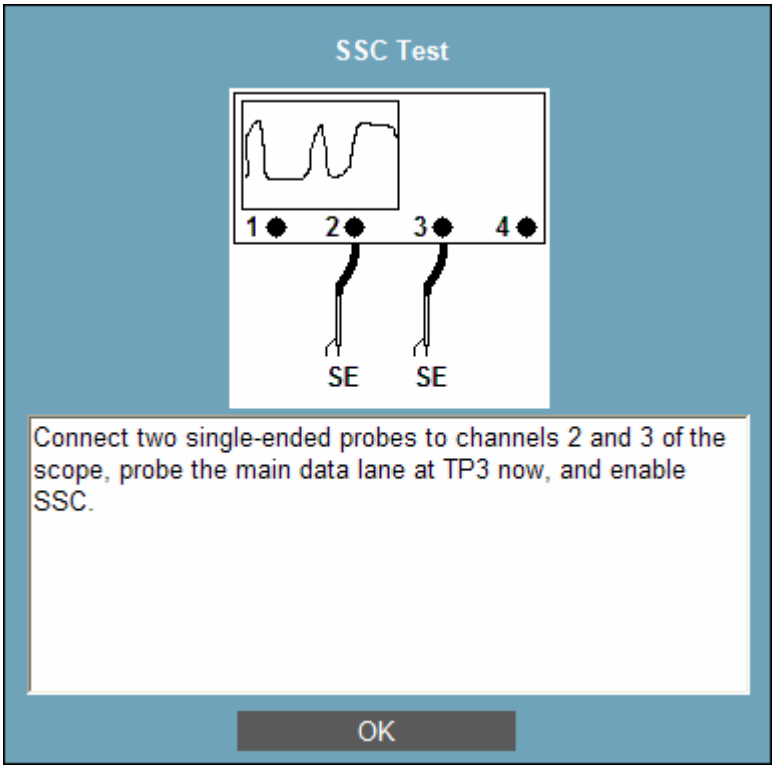


Operator Action: Click **Yes** to perform the test, or **No** to proceed to **Section 2.3.4 Non-ISI and Total Jitter**. This document will assume that the operator clicks **Yes**.

The operator will be prompted to change the input to RBR and HBR as required.

2.3.3.1 One Data Lane

The operator will see this dialog:



Operator Action: Connect two **single-ended** probes to Channels 2 and 3 of the scope, and probe the **Data Lane** at **TP3** with it. Enable SSC. Click on **OK.**

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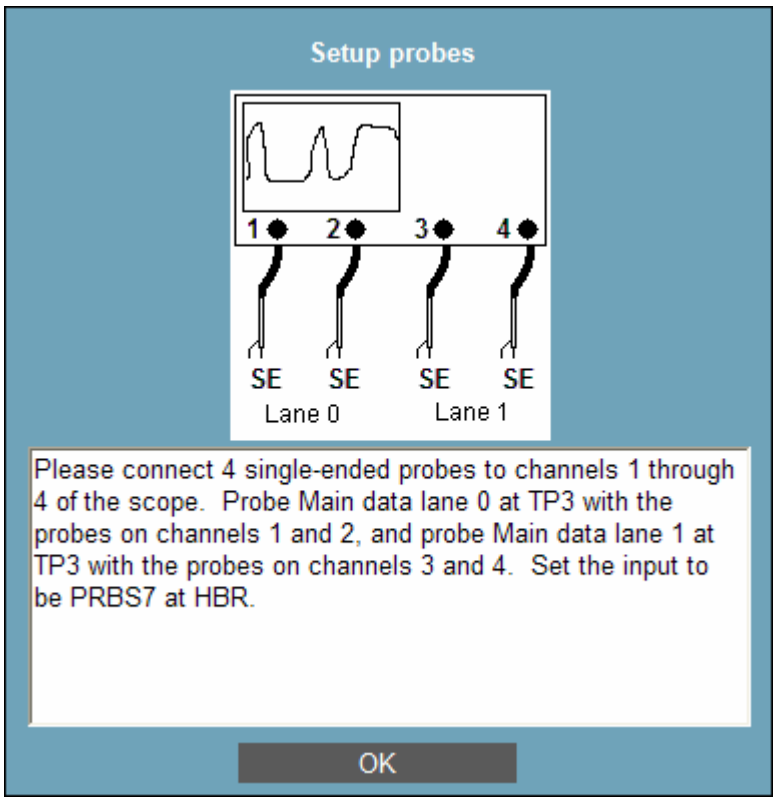
2.3.3.2 Two Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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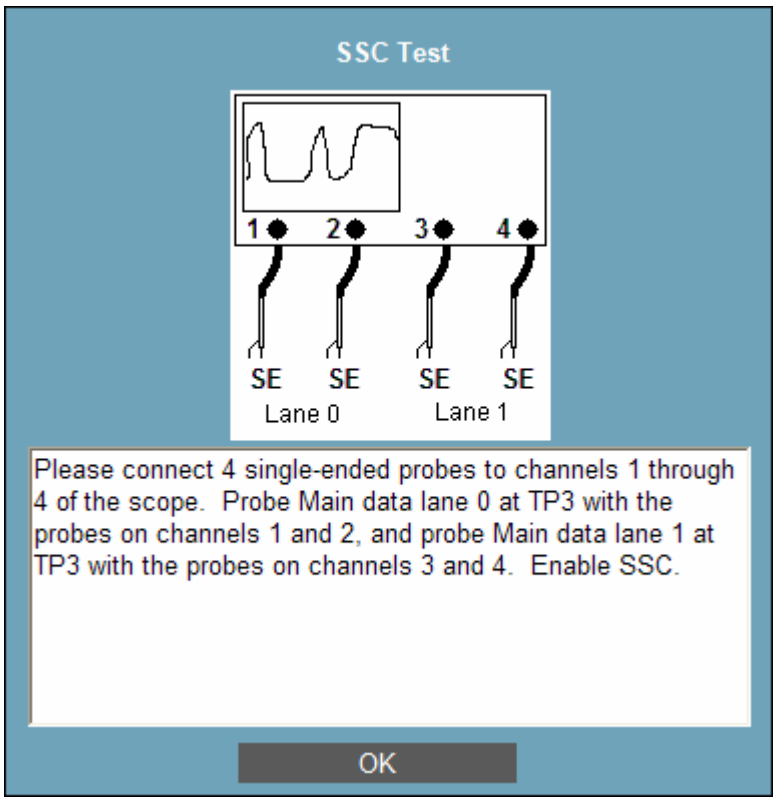
2.3.3.3 Four Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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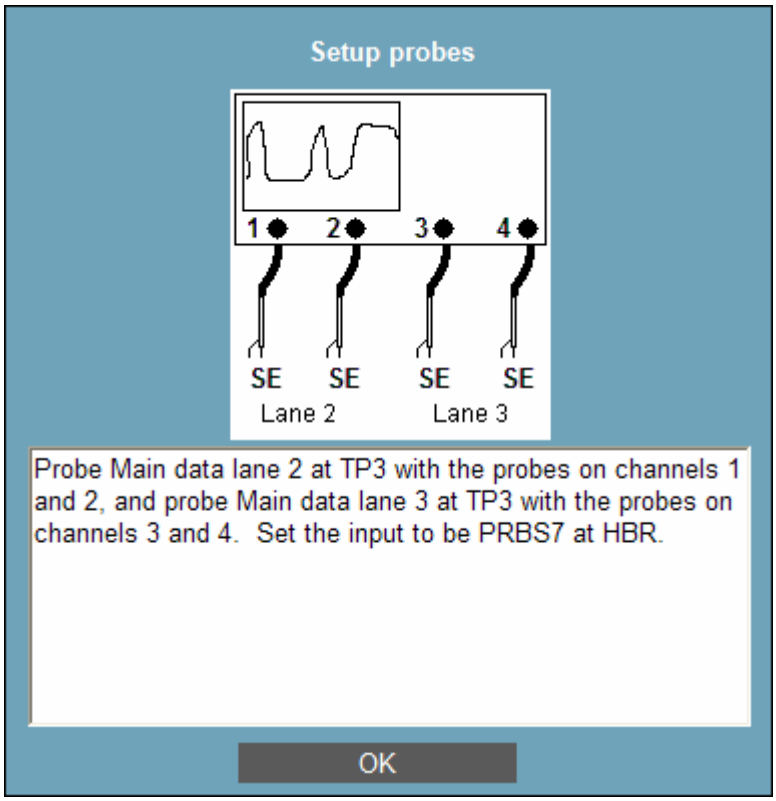
After testing is complete on Data Lanes 0 and 1, the operator will see this dialog:



Operator Action: Move the probes on Channels 1 and 2 to **Data Lane 2** at **TP3**, and move the probes on Channels 3 and 4 to **Data Lane 3** at **TP3.**

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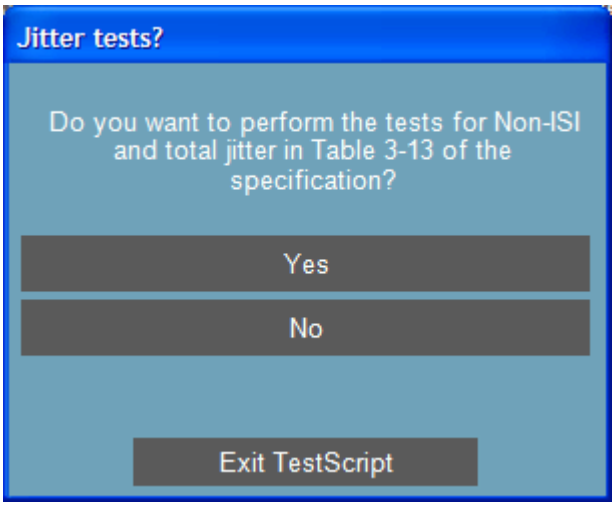
2.3.4 Non-ISI and Total Jitter – TP3



Operator Action: Click **Yes** to perform the test. Clicking on **No** will go to either **Section 2.3.5 Inter-pair Skew** if your system has more than one Data Lane, or **Section 2.3.6 Eye Tests** if your system only has one Data Lane.

Tests will be performed with the following combinations of settings:

- PRBS7, HBR, 400mV without pre-emphasis
- PRBS7, HBR, 600mV without pre-emphasis
- PRBS7, HBR, 800mV without pre-emphasis
- PRBS7, RBR, 800mV without pre-emphasis
- PRBS7, RBR, 600mV without pre-emphasis
- PRBS7, RBR, 400mV without pre-emphasis

If the system supports 1200 mV operation, these combinations will also be tested:

- PRBS7, HBR, 1200mV without pre-emphasis (if supported)
- PRBS7, RBR, 1200mV without pre-emphasis (if supported)

The operator will be prompted to change the input as required.

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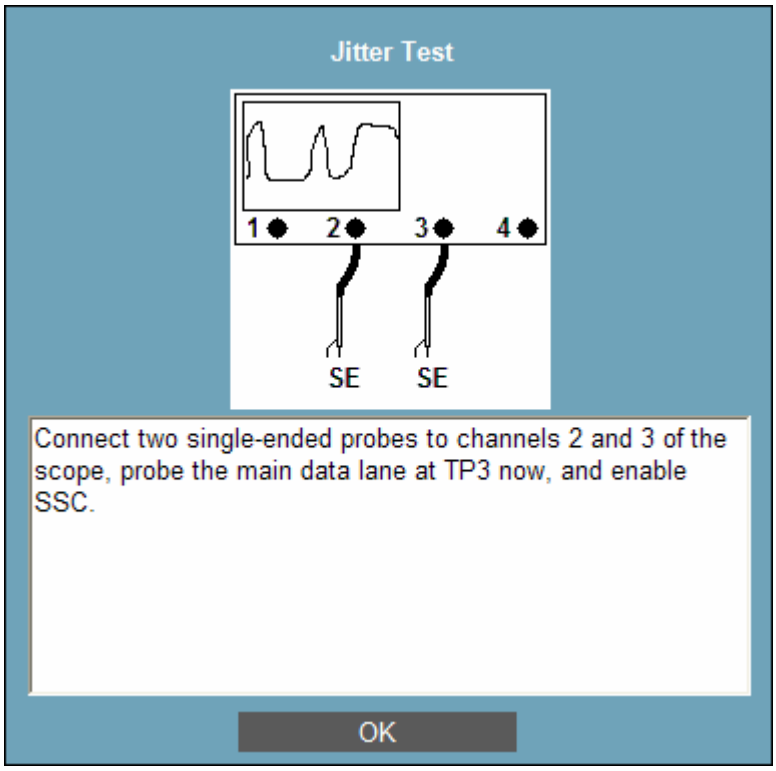
2.3.4.1 One Data Lane

The operator will see this dialog:



Operator Action: Connect two **single-ended** probes to Channels 2 and 3 of the scope, and probe the Main Lane at **TP3** with it. Enable SSC. Click on **OK.**

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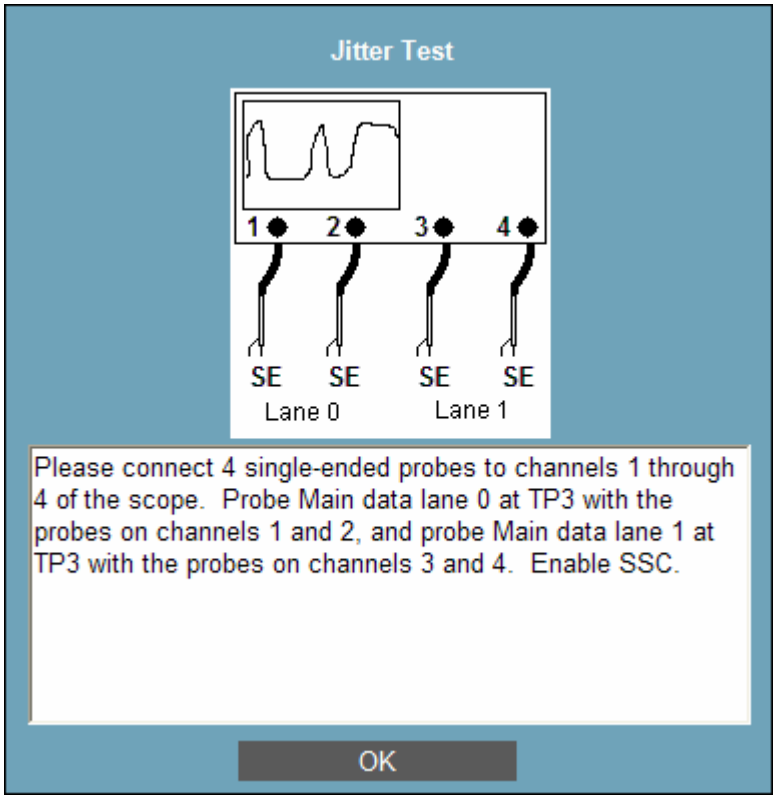
2.3.4.2 Two Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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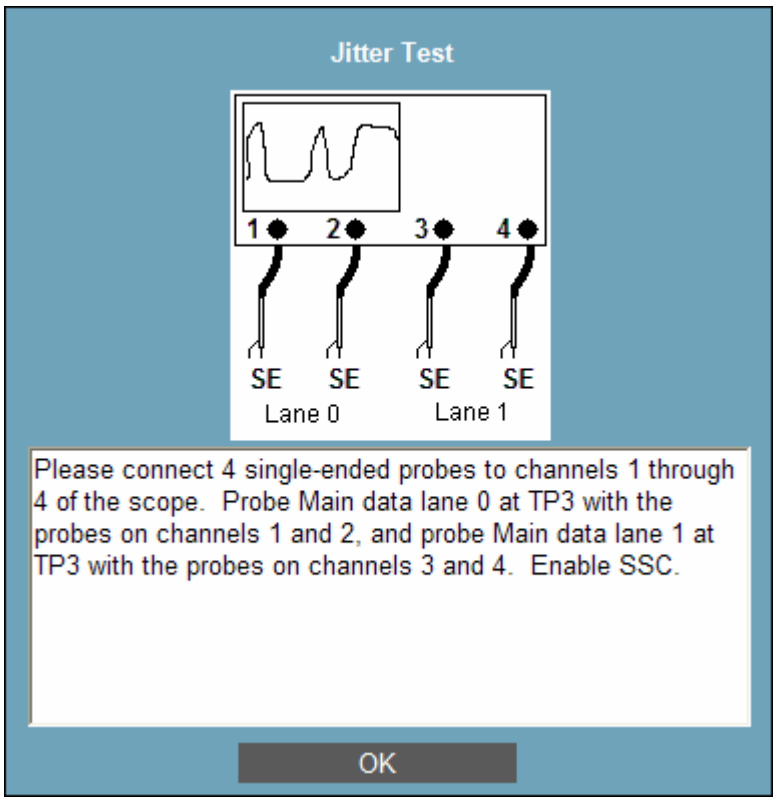
2.3.4.3 Four Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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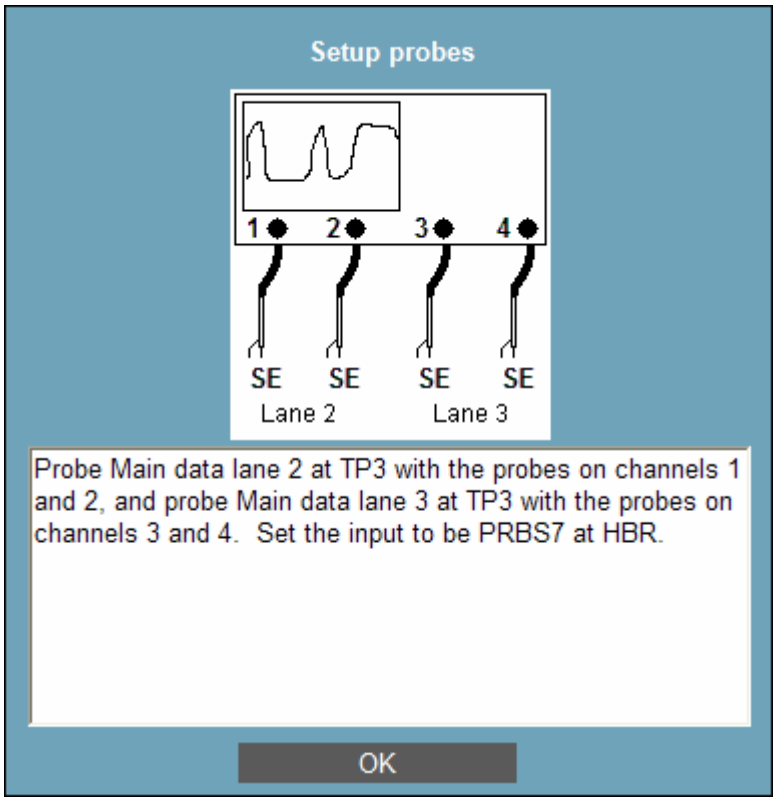
After testing is complete on Data Lanes 0 and 1, the operator will see this dialog:



Operator Action: Move the probes on Channels 1 and 2 to **Data Lane 2** at **TP3**, and move the probes on Channels 3 and 4 to **Data Lane 3** at **TP3.**

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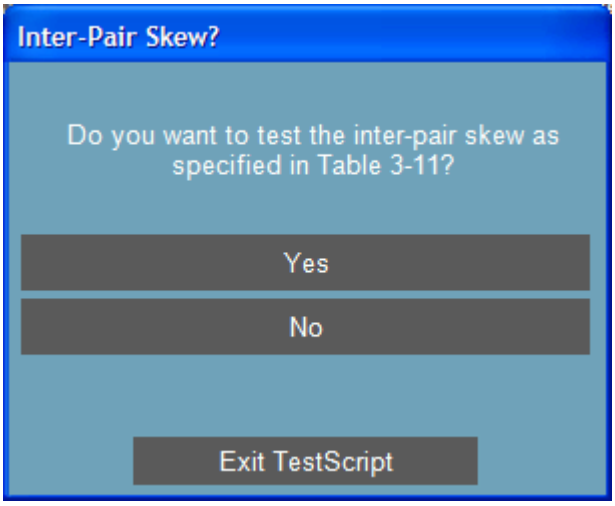
2.3.5 Inter-Pair Skew – TP3

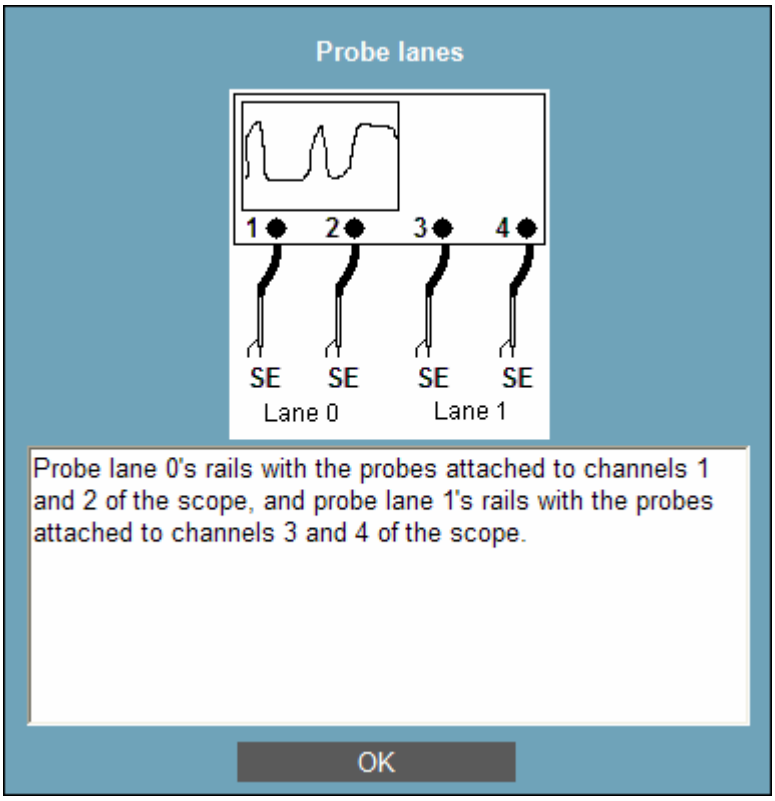
The Inter-pair Skew tests will only be done if the system has more than one Data Lane.



Operator Action: Click on Yes to perform the Inter-pair Skew tests. Click on No to proceed to **Section 2.3.6 Eye Tests**.

2.3.5.1 Two Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

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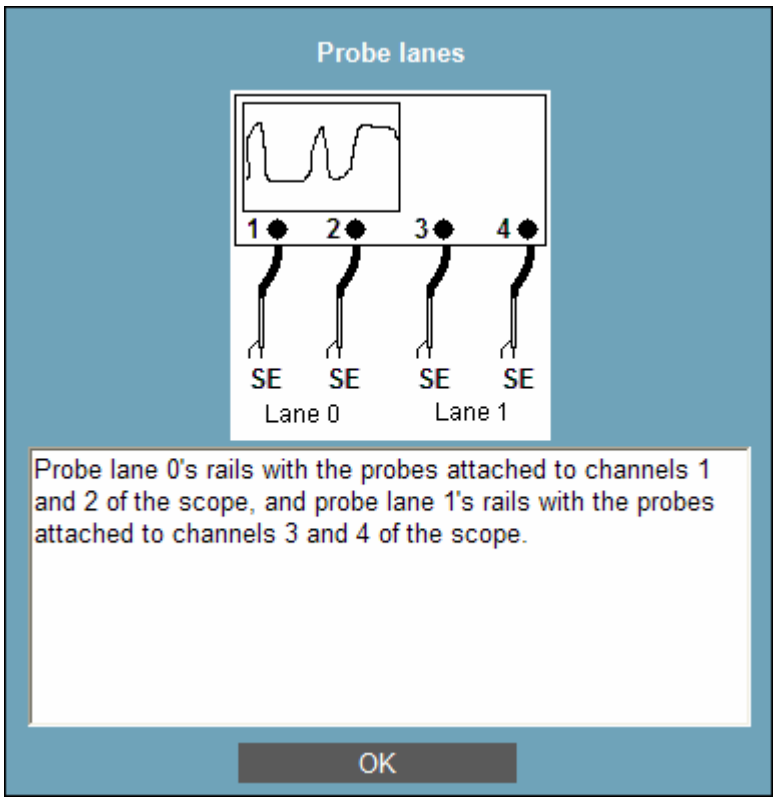
2.3.5.2 Four Data Lanes

The operator will see this dialog:



Operator Action: Connect 4 **single-ended** probes to Channels 1 through 4 of the scope. Probe **Data Lane 0** at **TP3** with the probes on Channels 1 and 2, and probe **Data Lane 1** at **TP3** with the probes on Channels 3 and 4.

There are six possible pairs of data lanes. The operator will be prompted to move probes to different data lanes. Only one pair will be moved at a time. The operator should pay careful attention when being prompted to move probes, as different probes will be moved at each prompt.

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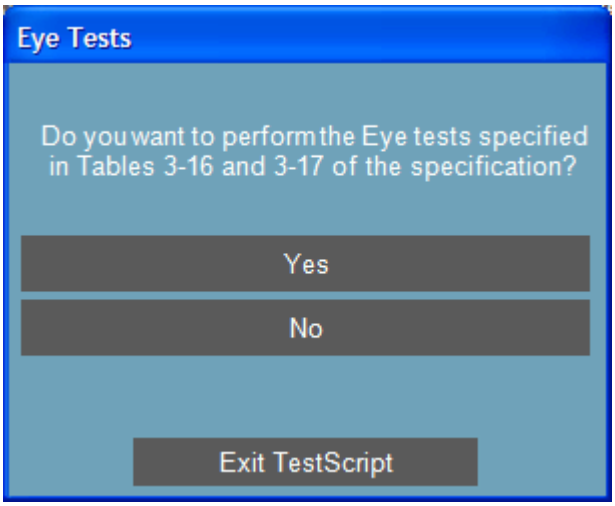
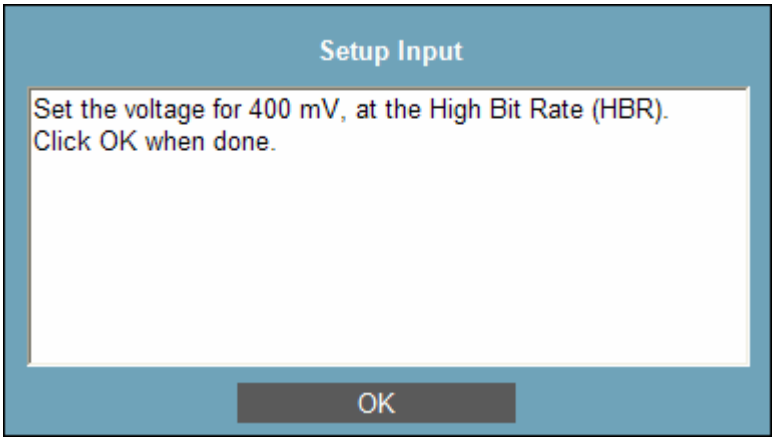
2.3.6 Eye Tests – TP3



Operator Action: Click **Yes** to perform the test. Clicking on **No** will complete the testing.

2.3.6.1 One Data Lane

The operator will see this dialog:



Operator Action: Set the input as directed.

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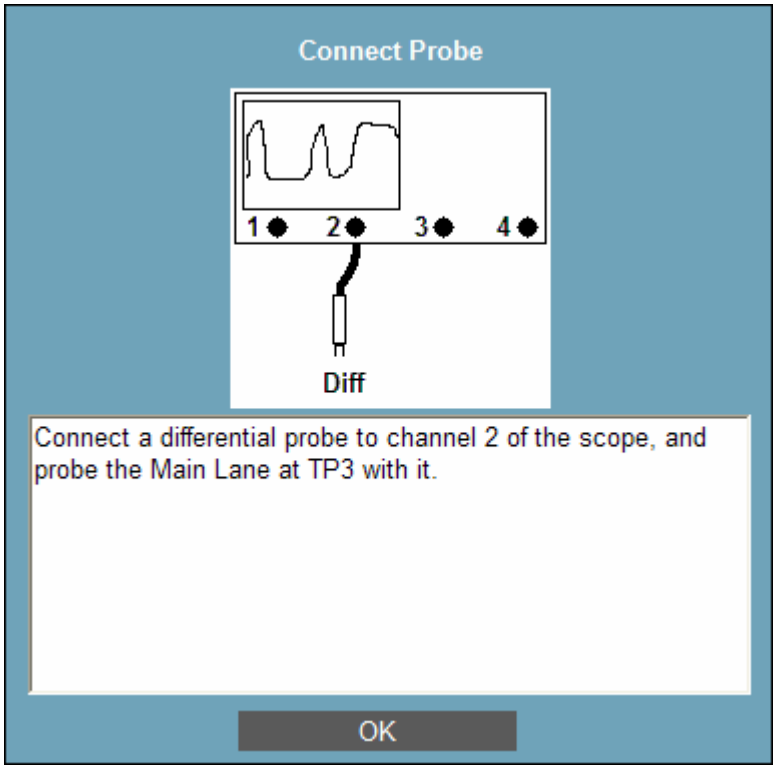
The operator will see this dialog:



Operator Action: Connect a **differential** probe to Channel 2 of the scope, and probe the **Data Lane** at **TP3** with it. Click on **OK**.

The operator will be prompted to change the input to RBR at 400mV when the first test is completed.

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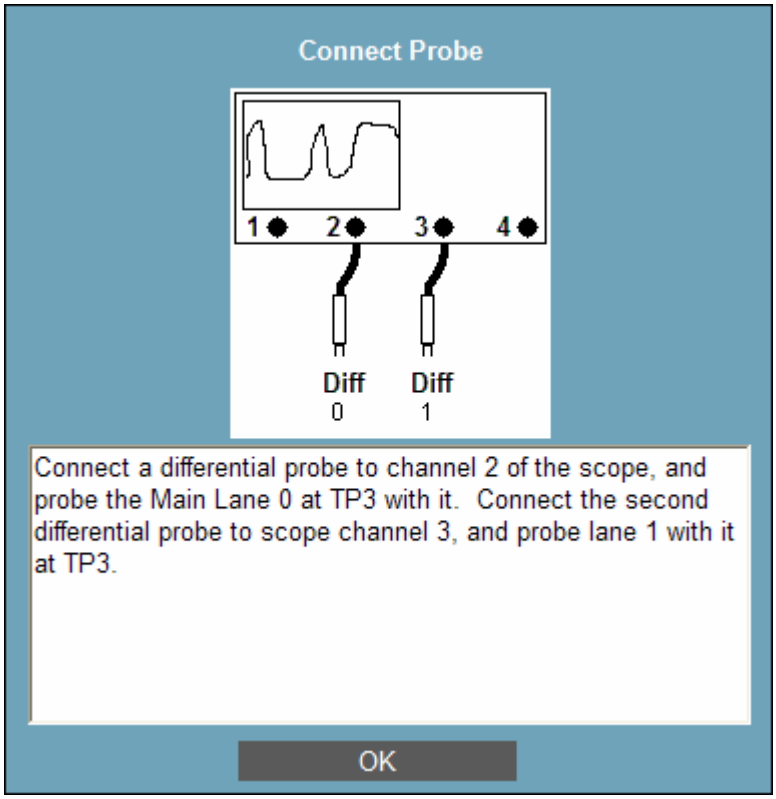
2.3.6.2 Two Data Lanes

The operator will see this dialog:



Operator Action: Connect 2 **differential** probes to Channels 2 and 3 of the scope. Probe **Data Lane 0** at **TP3** with the probe on Channel 2, and probe **Data Lane 1** at **TP3** with the probe on Channel 3.

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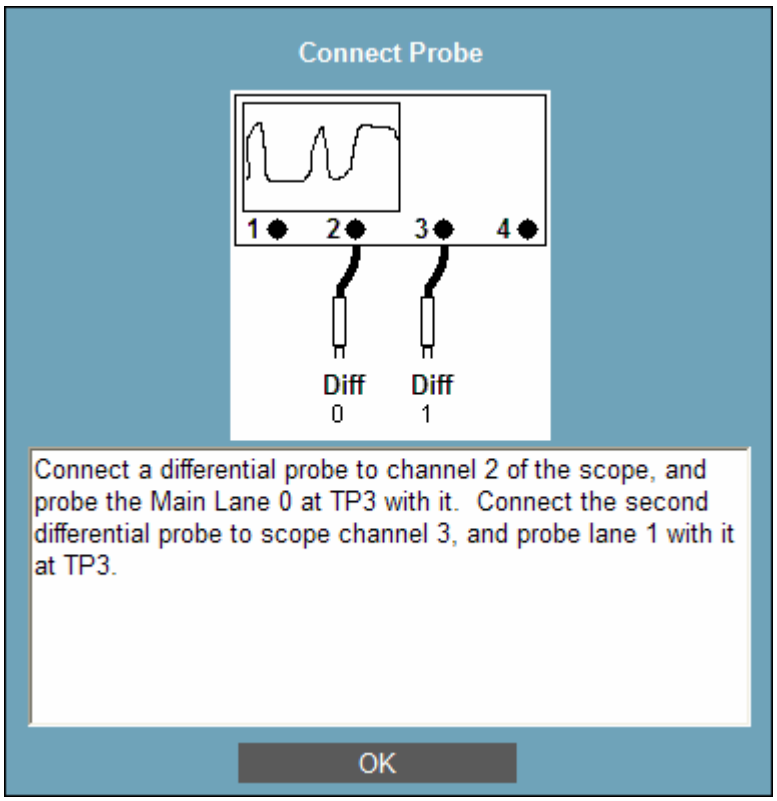
2.3.6.3 Four Data Lanes

The operator will see this dialog:



Operator Action: Connect 2 **differential** probes to Channels 2 and 3 of the scope. Probe **Data Lane 0** at **TP3** with the probe on Channel 2, and probe **Data Lane 1** at **TP3** with the probe on Channel 3.

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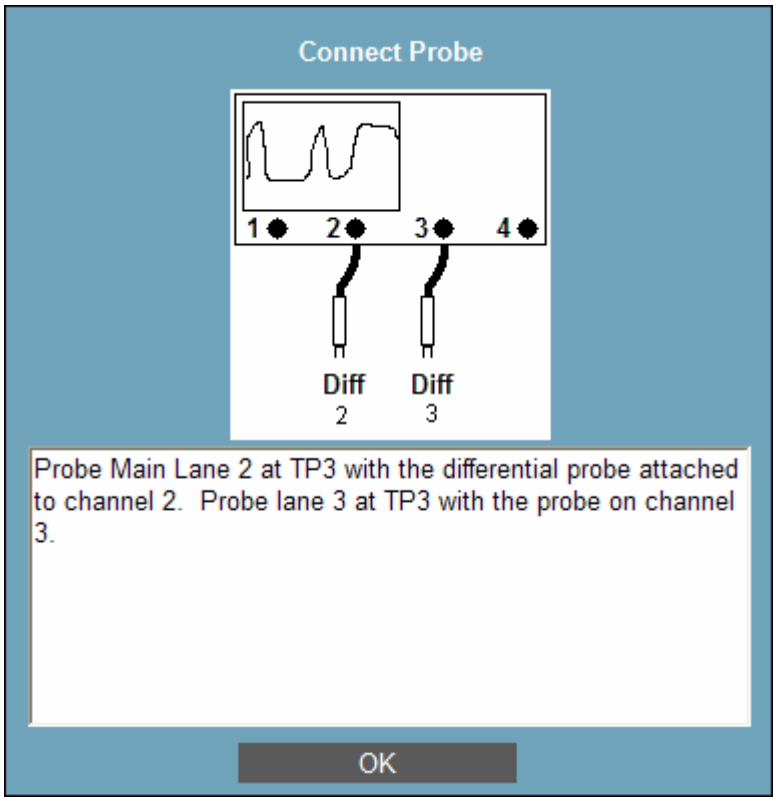
When testing on Data Lanes 0 and 1 is complete, the operator will see this dialog:



Operator Action: Probe **Data Lane 2** at **TP3** with the probe on Channel 2, and probe **Data Lane 3** at **TP3** with the probe on Channel 3.

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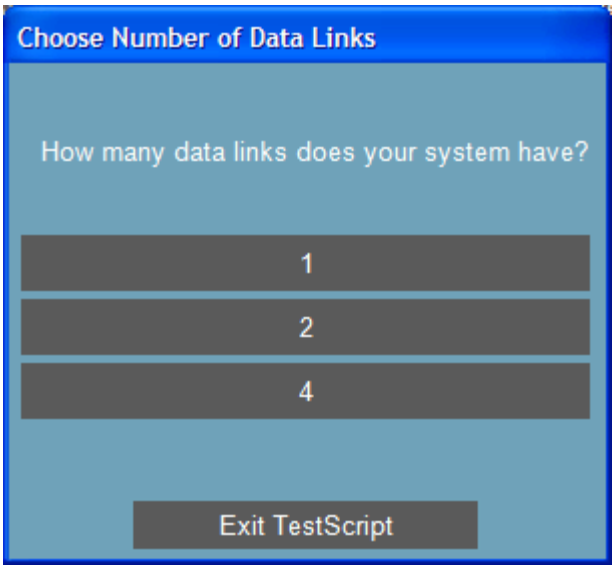
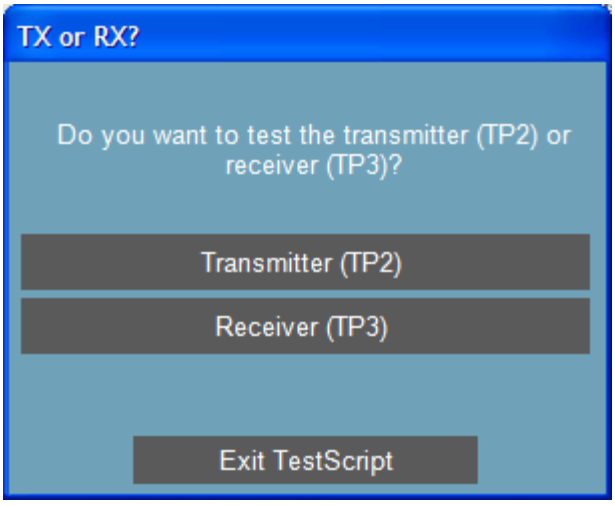
3 Selected Tests

The operator will see this dialog:



Operator Action: Click on the button that accurately indicates the number of Data Lanes in the DUT.

After the number of Data Lanes has been indicated, the operator will see this dialog:



Operator Action: Indicate whether the test to be run is on the Transmitter (TP2) or the Receiver (TP3).

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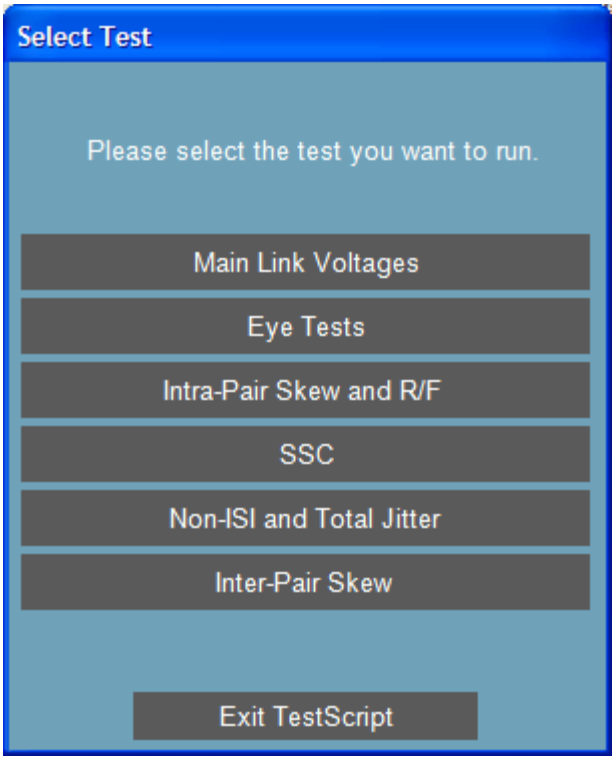
3.1 Transmitter

The operator will see this dialog:



Operator Action: Select the desired test. See the instructions in the appropriate section above; it may help to refer to the Table of Contents.

If the indicated number of Data Lanes is 1, the Inter-pair Skew option will not be available, as it is not applicable for only one Data Lane.

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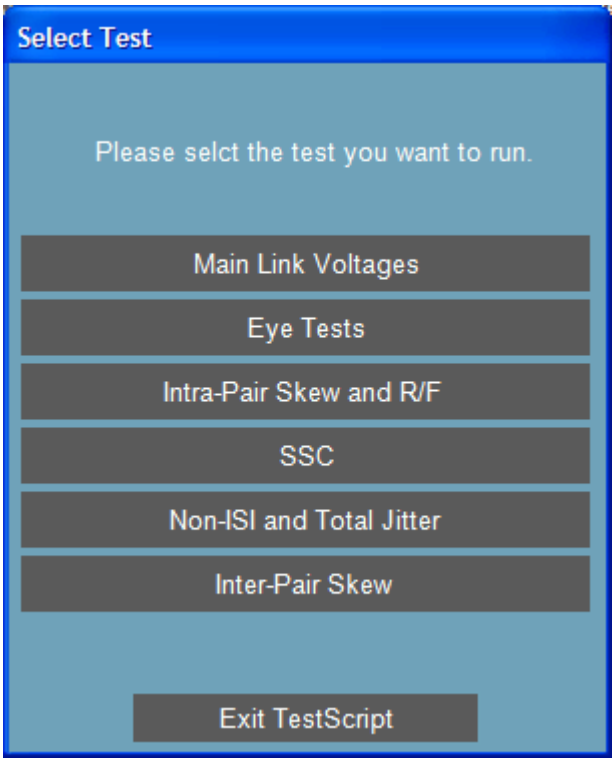
3.2 Receiver

The operator will see this dialog:



Operator Action: Select the desired test. See the instructions in the appropriate section above; it may help to refer to the Table of Contents.

If the indicated number of Data Lanes is 1, the Inter-pair Skew option will not be available, as it is not applicable for only one Data Lane.

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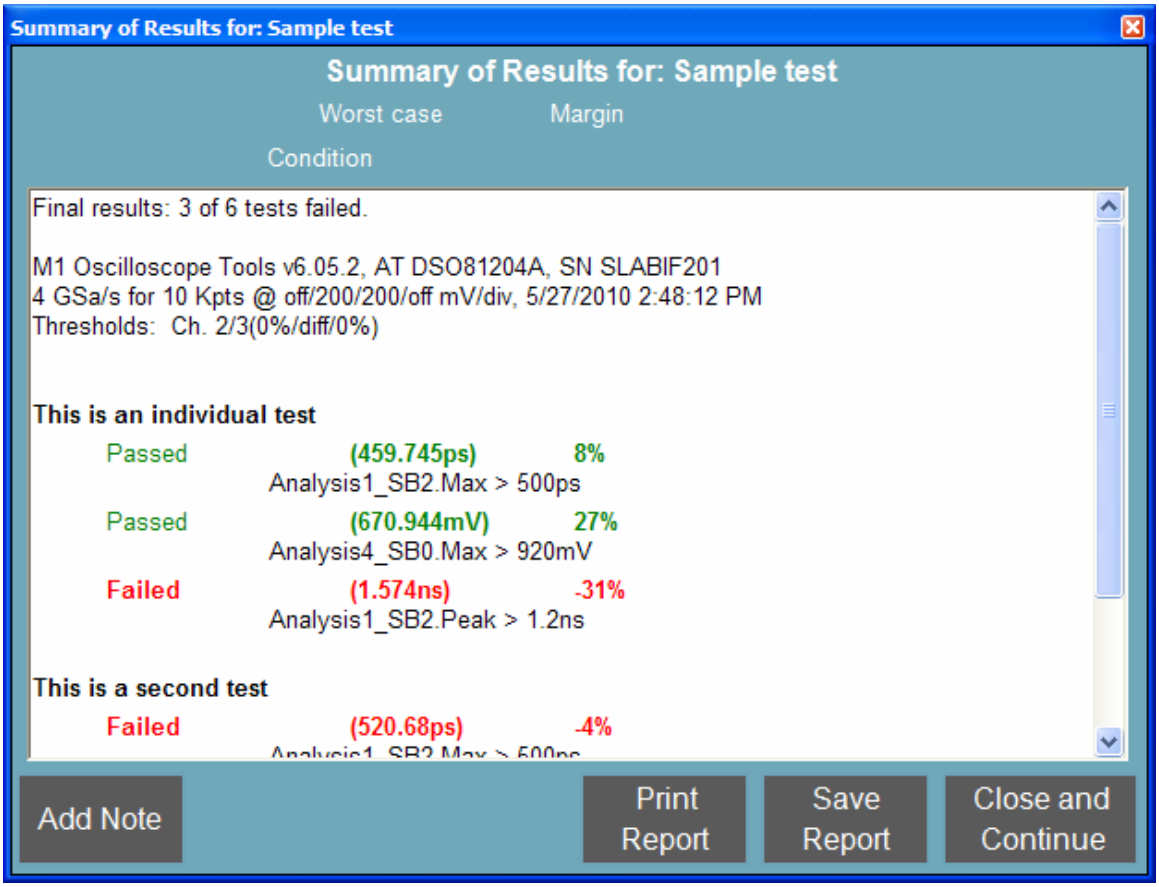
4 Testing Complete

When testing is complete, a summary of all tests run will be presented in a dialog. At this time the operator should use **Add Note** to add any notes regarding any unexpected events during the test, and click on **Save Report** to save the results of the testing in an appropriate place and format.



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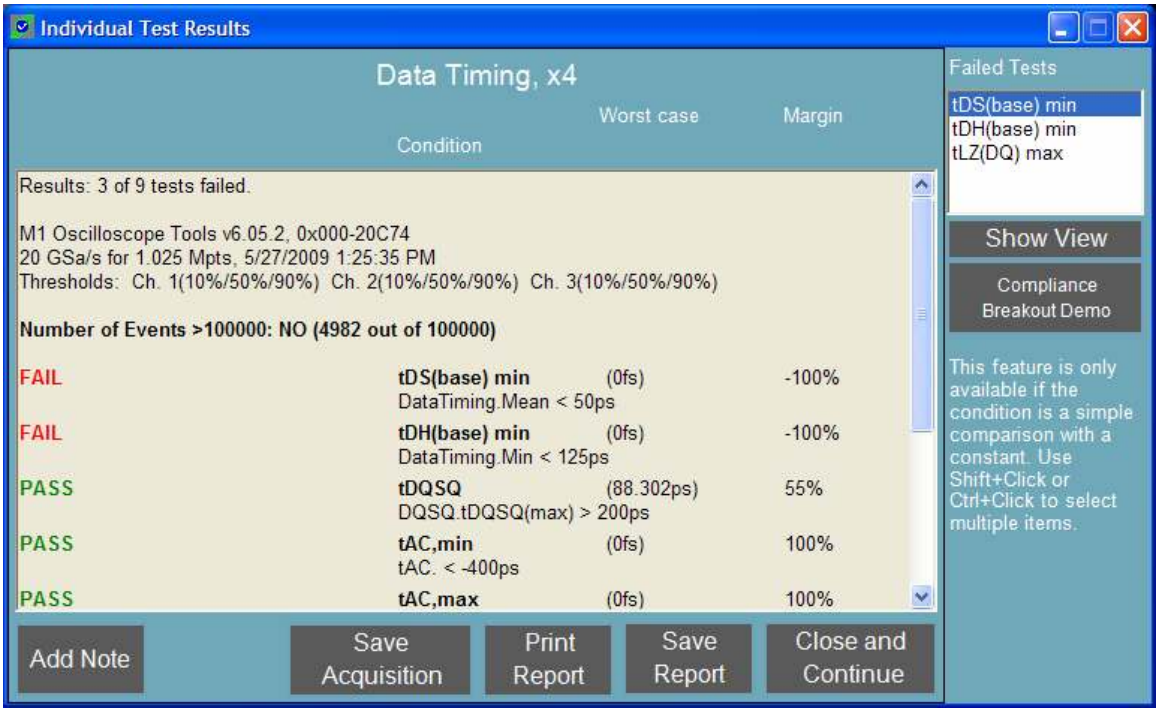
Appendix A – Individual Test Results Dialog

The **Individual Test Results** dialog appears while acquisitions are being taken to perform a test. Some of the buttons on the bottom will be disabled while testing is being done; when they are all enabled, the test has completed. The operator should not take any action if any of the buttons on the bottom are disabled.

The main text display shows a summary line telling the overall results, as well as information about the scope being used, the acquisition settings of the scope, and the time the acquisitions started. The remainder of the main text display tells the status of each condition being tested (**PASS** or **FAIL**).

The **Add Note** button brings up a dialog that will let the operator enter a note about the test. It is recommended that the operator add a note for each line that is tested, so that failure or success may be associated with the correct signal for later analysis. For instance, if lines **DQ0-DQ15** are being tested, the text "**DQ0**", "**DQ1**", etc. would be entered as each line was tested. These notes will automatically be stored with the test results for the final report; it is not necessary to save each individual test result separately.

If none of the tests failed, the right-hand portion of the dialog ("**Failed Tests**") will not be visible.



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Appendix B – Parameters Tested

This appendix lists the parameters tested by this Compliance Test, in which section the parameter is tested, and which signal lines are tested. Section numbers refer to section numbers in this document.

Parameter	**Tested in Section**
Eye, RX	2.3.6 Eye Tests – TP3
Eye, TX	2.2.1 Eye Tests – TP2
L_RX-SKEW-INTER-PAIR max	2.3.5 Inter-pair Skew – TP3
L_TX-SKEW-INTER-PAIR max	2.2.6 Inter-pair Skew – TP2
Lrx-skew-intra-pair max	2.3.2 Intra-Pair Skew – TP3
Ltx-skew-intra-pair-skew max	2.2.3 Intra-Pair Skew and Rise/Fall – TP2
Non ISI Jitter (RX)	2.3.4 Non-ISI and Total Jitter – TP3
Non ISI Jitter (TX)	2.2.5 Non-ISI and Total Jitter – TP2
Non PreEmphasis low, high	2.2.2 Main Link Transmitter
SSC Freq low, high (RX)	2.3.3 SSC – TP3
SSC Freq low, high (TX)	2.2.4 SSC – TP2
SSC Freq percent modulation (RX)	2.3.3 SSC – TP3
SSC Freq percent modulation (TX)	2.2.4 SSC – TP2
T_TX_RF_MISMATCH max	2.2.2 Main Link Transmitter
Total Jitter (RX)	2.3.4 Non-ISI and Total Jitter – TP3
Total Jitter (TX)	2.2.5 Non-ISI and Total Jitter – TP2
Ttx-rise-fall min, max	2.2.3 Intra-Pair Skew and Rise/Fall – TP2
UI min, max (RX)	2.3.3 SSC – TP3
UI min, max (TX)	2.2.4 SSC – TP2
V_RX_DC_CM min, max	2.3.1 Main Link Voltages – TP3
V_RX_DIFFpp min	2.3.1 Main Link Voltages – TP3
V_TX_AC_CM max	2.2.2 Main Link Transmitter
V_TX_DC_CM min, max	2.2.2 Main Link Transmitter

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