

# Testing Bidirectional Insertion Loss and Return Loss on a Simplex DUT

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Bidirectional testing is an effective way to test connector-level return loss (RL) and throughput insertion loss (IL) for a variety of different DUTs. In this video, our CTO Chris Heisler walks through the process of referencing and performing a bidi test on a simplex DUT using OPL-CLX. Learn how this new software suite enhances the test process by simplifying how the operator captures results and creates labels for the finished product.

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Here we have an OP940 and an OP725, which is set up to test bidirectional insertion loss and return loss on a simplex DUT.

We have OPL-CLX running on this computer and we also have a label printer, which will print out the label after the DUT's been tested.

Initially, in OPL-CLX, the technician is going to type in or search for a work order that somebody may have already created, might be an administrator or a supervisor of some sort.

Because this was created by a supervisor, the software already has the order information selected and a list of DUTs that are going to be inside that batch.

Initially, what we need to do is, we are going to reference our setup. Press the reference button. This is an instruction; it says please disconnect both reference connectors and leave open for return loss reference.

What this is going to do is the instrument is going to go out and find the position for both directions as to where to measure return loss.

I am going to press this continue button, so the software is going to go through and scan for those connectors.

Next, I'm given a pop-up here, it says: please connect both reference connectors together for the IL reference. What I'm going to do is clean this connector, and mate these two together, and the software will perform an insertion loss reference.

I am going to press the continue button. Now the system is completely referenced; next thing to do is to connect up our DUT into it.

I am going to go to the measurement tab. My DUT is already selected. This is serial number 1001.

I am going to take my DUT and clean each connector and mate this in between my reference cables and I am going to press test.

This DUT passed for the first cord and the second side as well. I'm going to get a label printed out.

I'm going to disconnect my DUT, grab a bag, apply my label and set this to the side.

Then I am going to go to the next DUT. I press the next button here, insert my new DUT between the two reference cords, and press the test button.

This passed as well. The label will be printed. I'll grab a bag, then I am going to apply my label to the bag and that's it. Now I will continue on testing the rest of the DUTs I have selected here.