# Testing SM Bundles with Dual Switches

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This document will explain how to test SM bundles with dual switches.

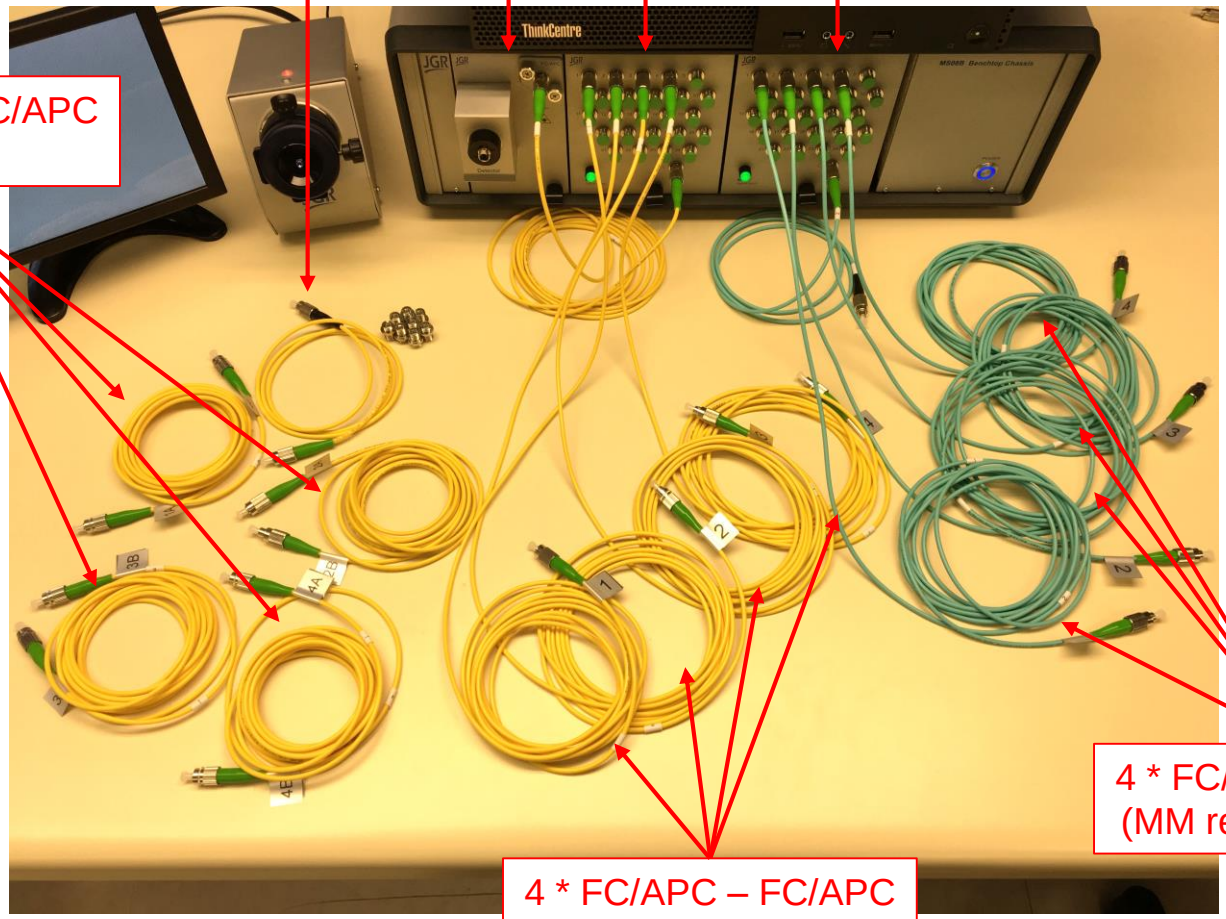
Please contact JGR Optics if you are planning to use this configuration to confirm the hardware has been correctly programmed for this application.

- Launch switch: SM MS7
- Receive switch: MM MS7 programmed as a SM MS7

Note: the MM MS7 cannot be used for a different configuration without being reprogrammed by JGR Optics.

This document will show how to do a bidirectional IL/RL test of a 4 fiber FC/APC – FC/APC bundle.

# Testing SM Bundles with Dual Switches

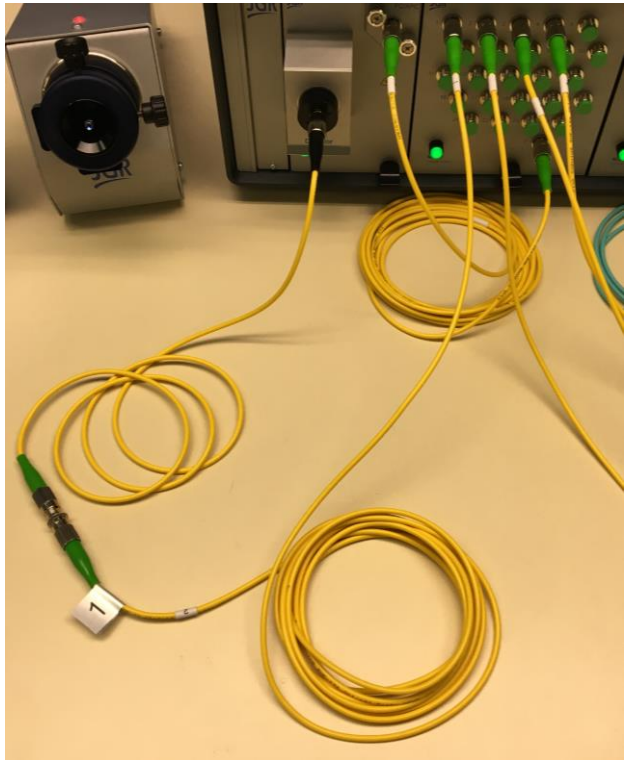


# Testing SM Bundles with Dual Switches

1. Length test

1.1. In order to test RL, the length will have to be input manually.

This step will measure the MS12 output – FC/APC-FC/APC – SM MS7 – SM MTJ length.



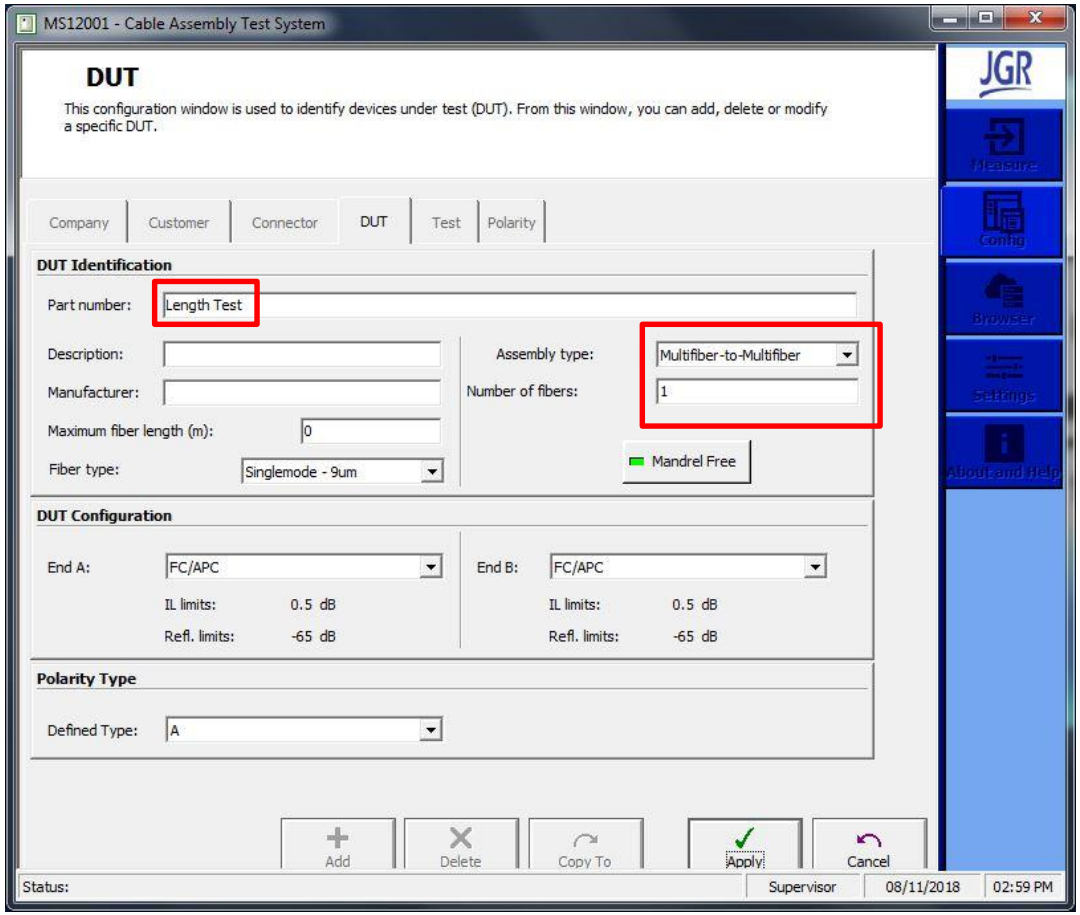
The DUT connector is APC therefore to facilitate the length measurement, a jumper with a PC termination of known length is used.

In this case, the PC stub is a 1m long FC/APC – FC/UPC jumper.

# Testing SM Bundles with Dual Switches

1. Length test

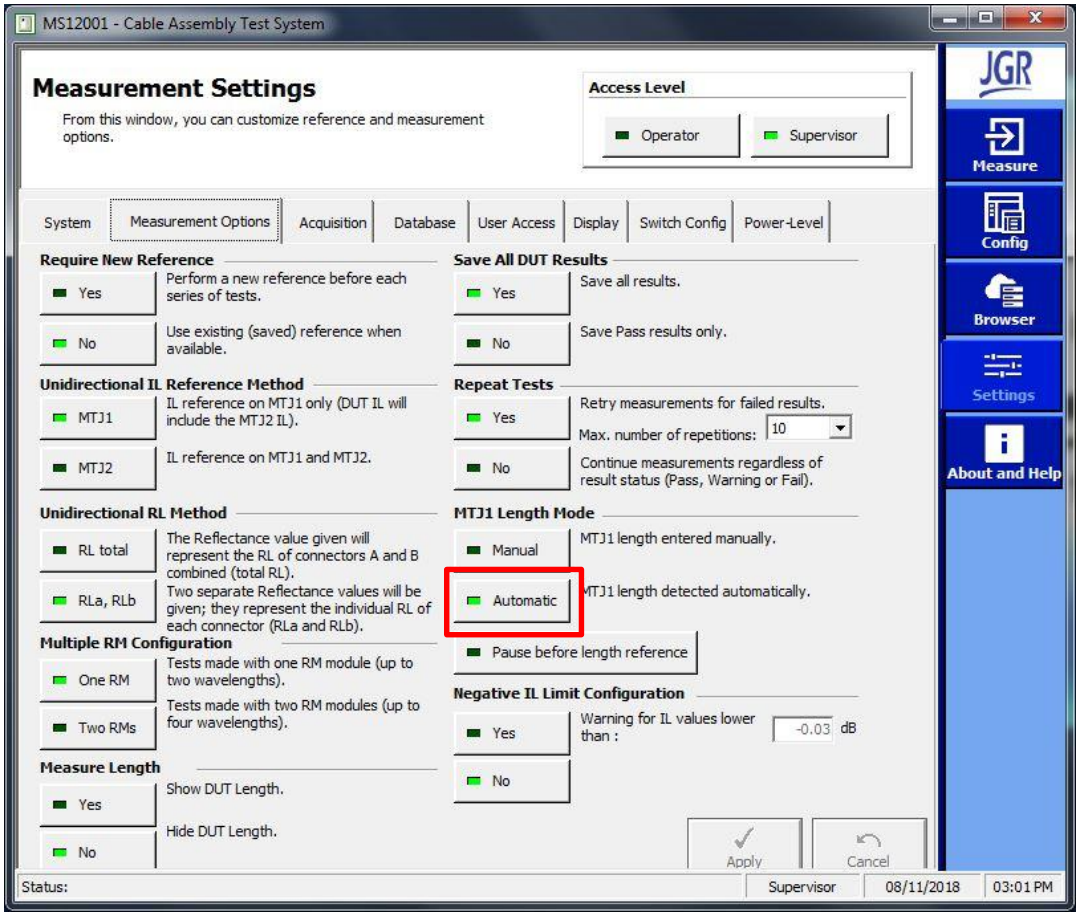
1.2. Go to Config > DUT to create a DUT for the length test.



# Testing SM Bundles with Dual Switches

1. Length test

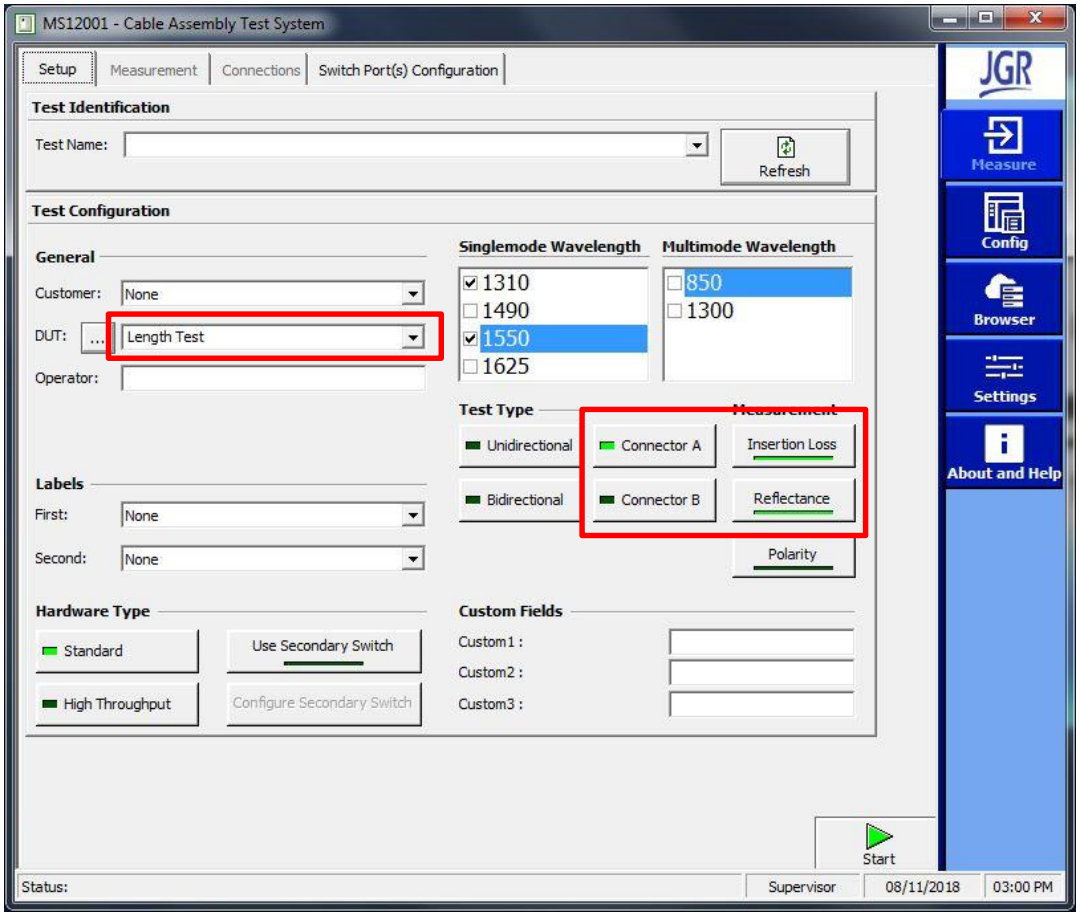
1.3. Go to Settings > Measurement Options to enable Automatic MTJ1 Length Mode.



# Testing SM Bundles with Dual Switches

1. Length test

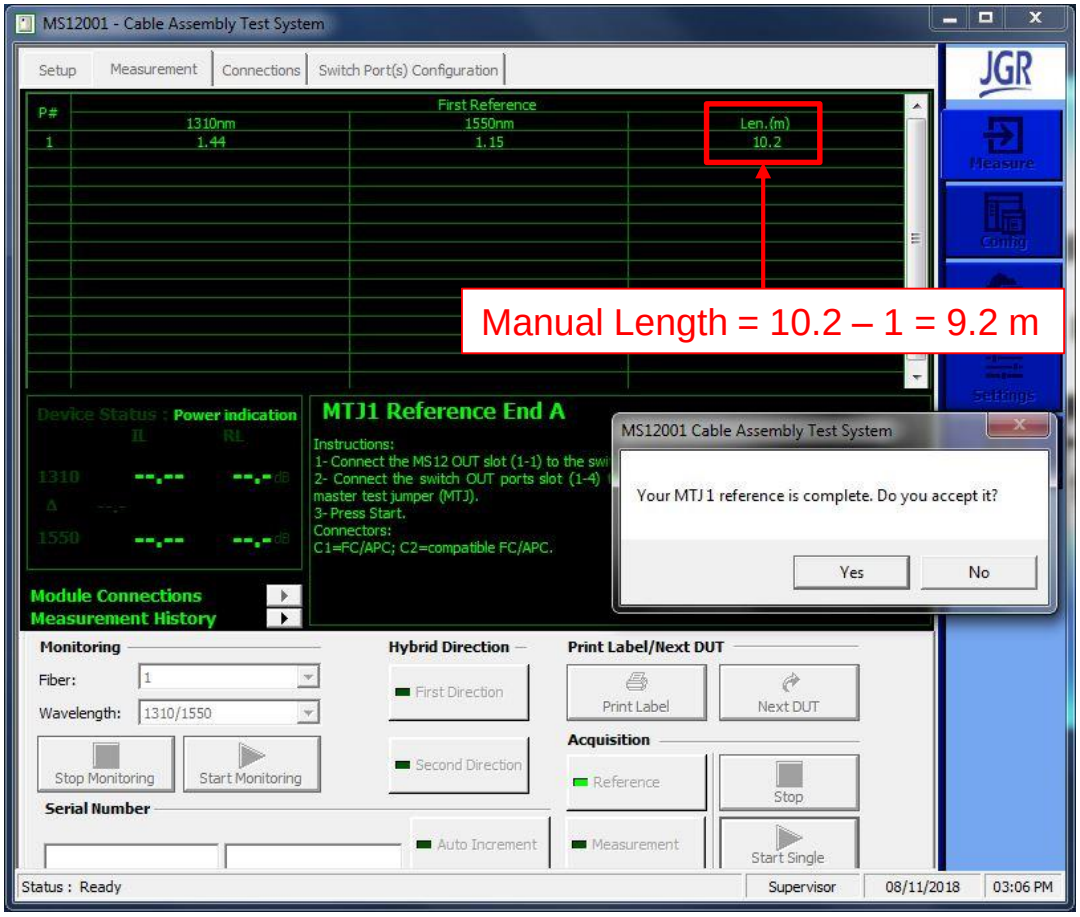
1.4. In Measure > Setup, configure the following test then press Start.



# Testing SM Bundles with Dual Switches

1. Length test

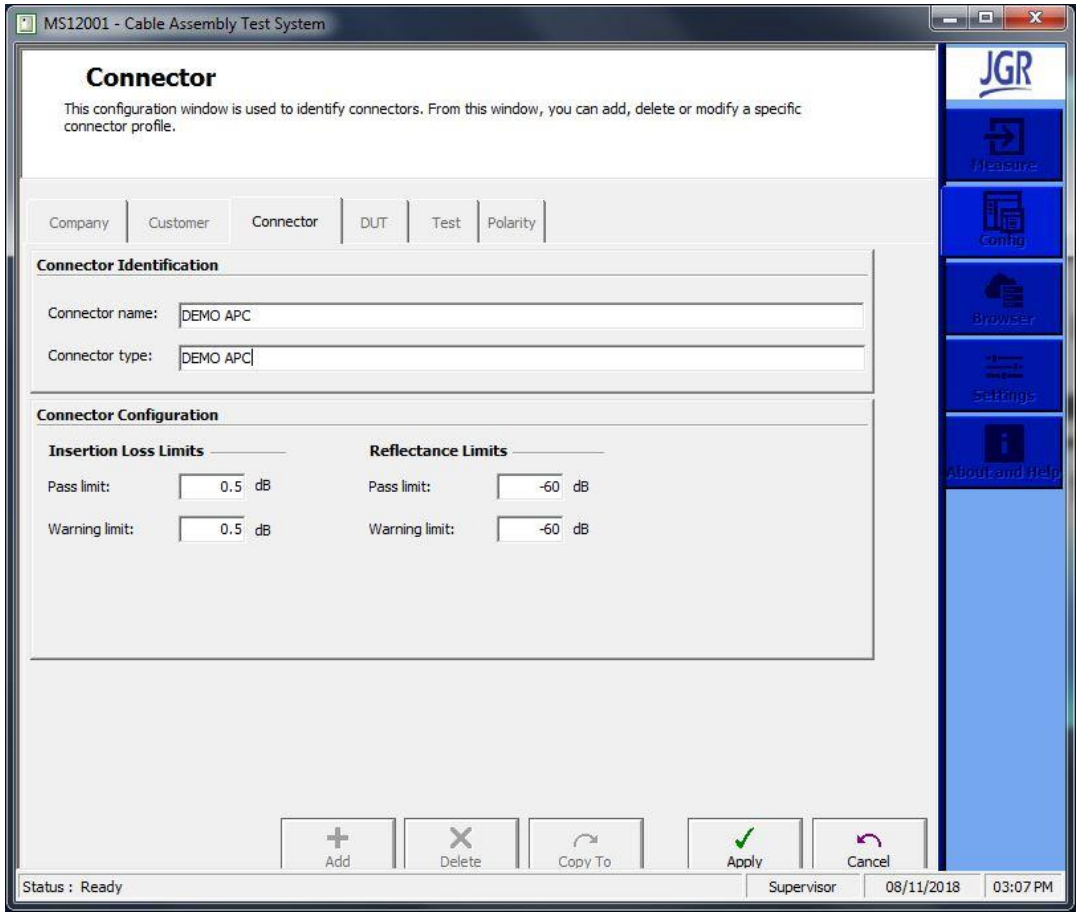
1.5. Select Reference Acquisition and press Start Single. Subtract the length of the PC Stub from the displayed length. This is the MTJ length to input manually during the DUT testing.



# Testing SM Bundles with Dual Switches

2. Test configuration

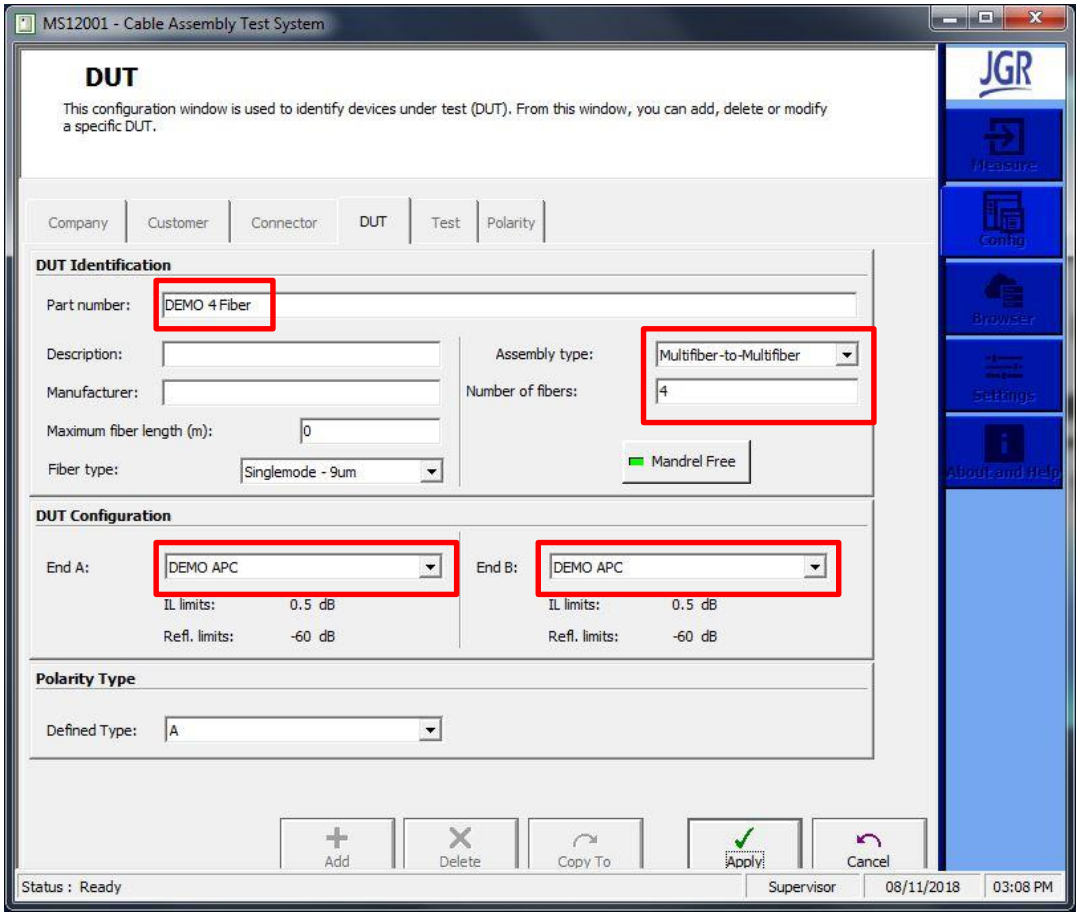
2.1. Go to Config > Connector to set the connector pass/fail limits.



# Testing SM Bundles with Dual Switches

2. Test configuration

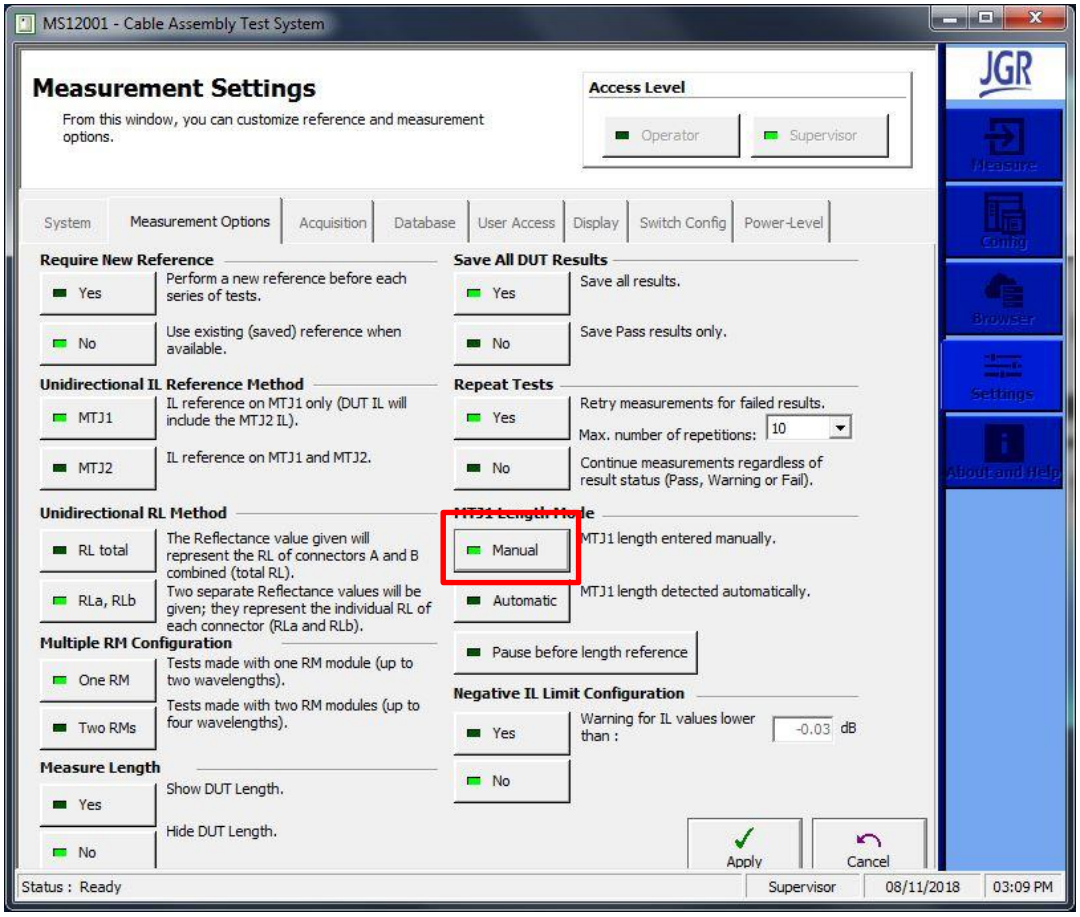
2.2. Go to Config > DUT to create the DUT configuration.



# Testing SM Bundles with Dual Switches

## 2. Test configuration

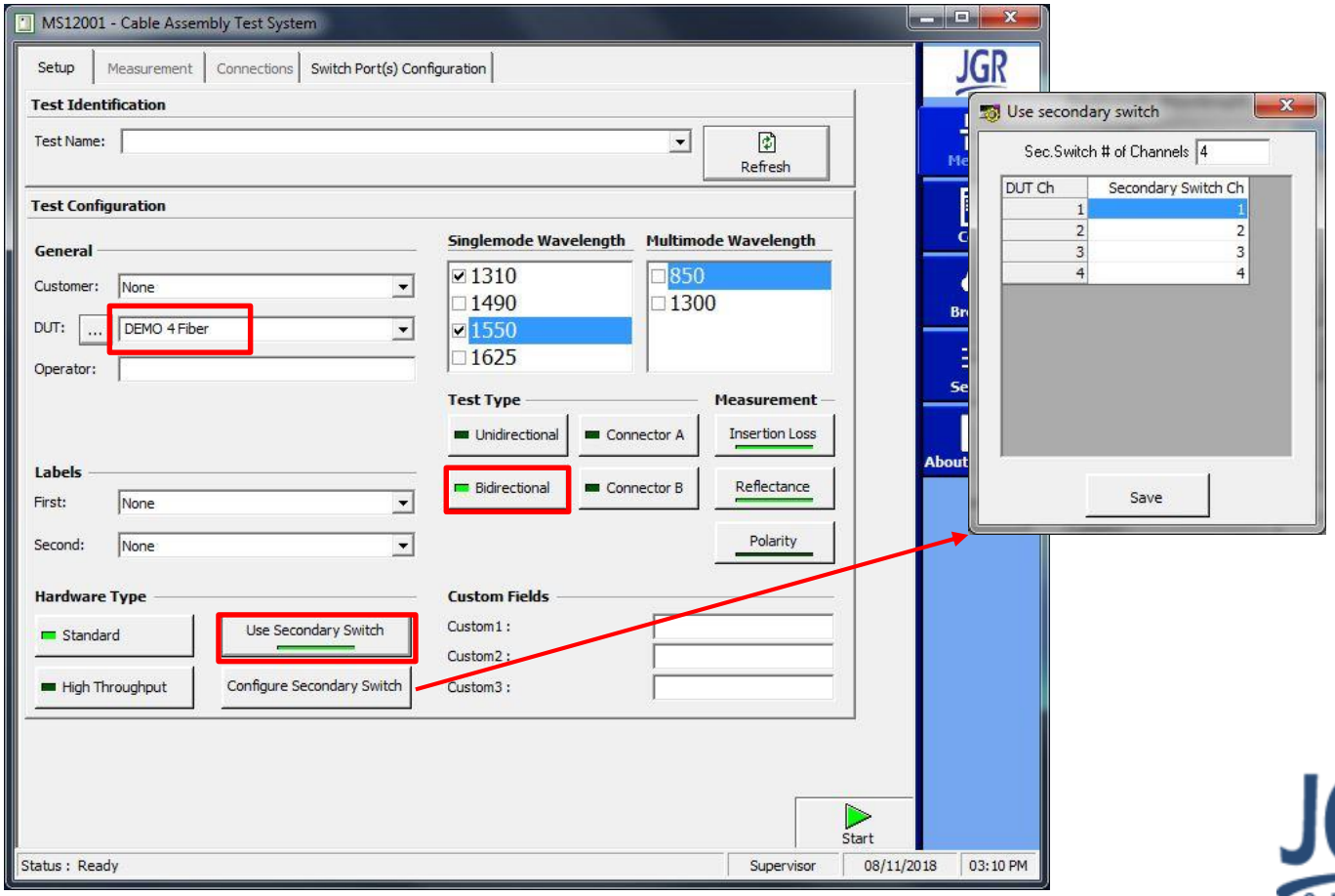
### 2.3. Go to Settings > Measurement Options to enable Manual MTJ1 Length Mode



# Testing SM Bundles with Dual Switches

## 2. Test configuration

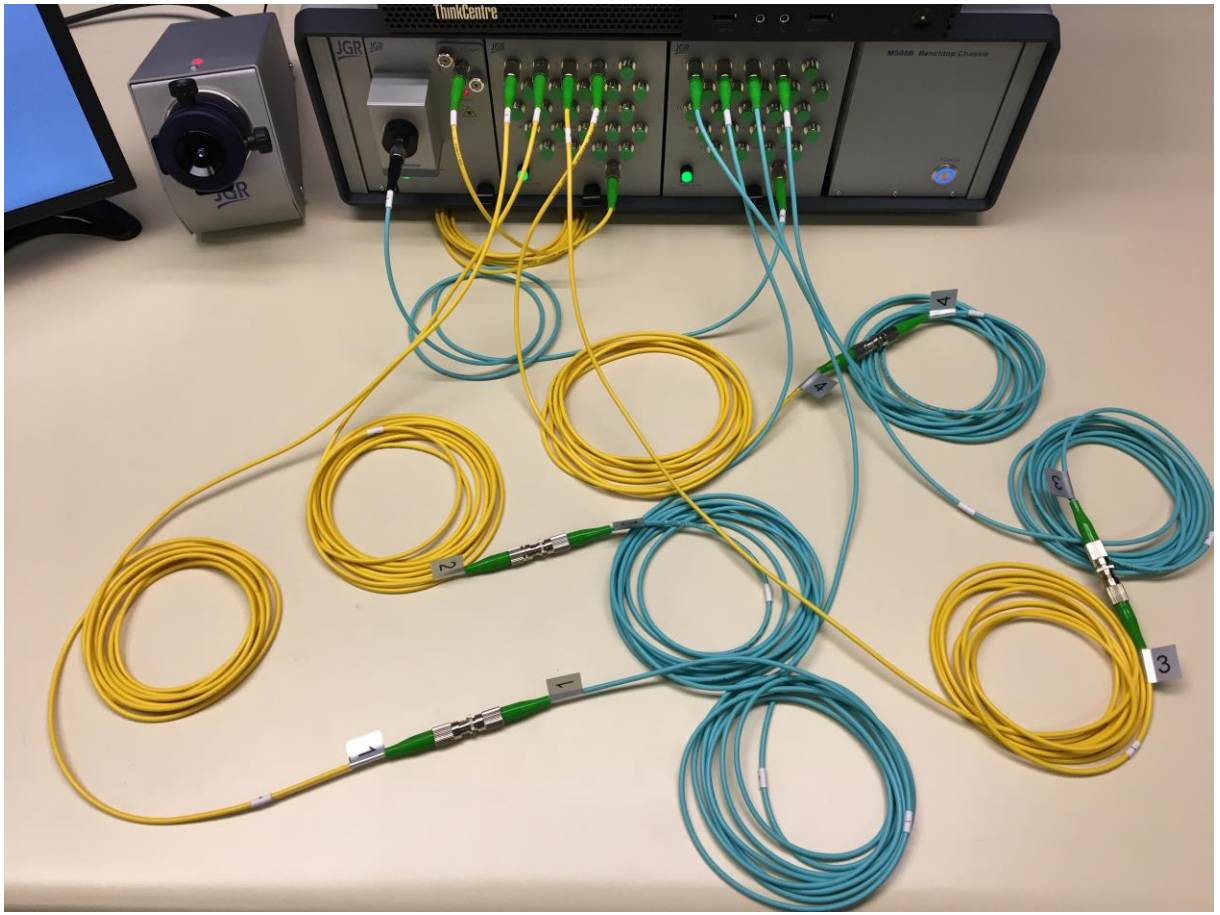
2.4. In Measure > Setup, configure the test. Click Configure Secondary Switch to configure the MM MS7 to the corresponding DUT channels then click Start.



# Testing SM Bundles with Dual Switches

3. Reference

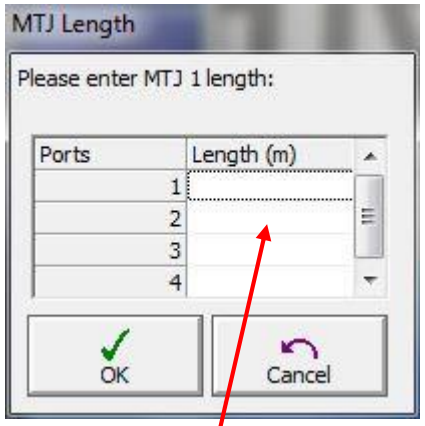
3.1. Connect the SM MTJ to the MM receive jumpers and the common of the MM MS7 to the MS12 detector.



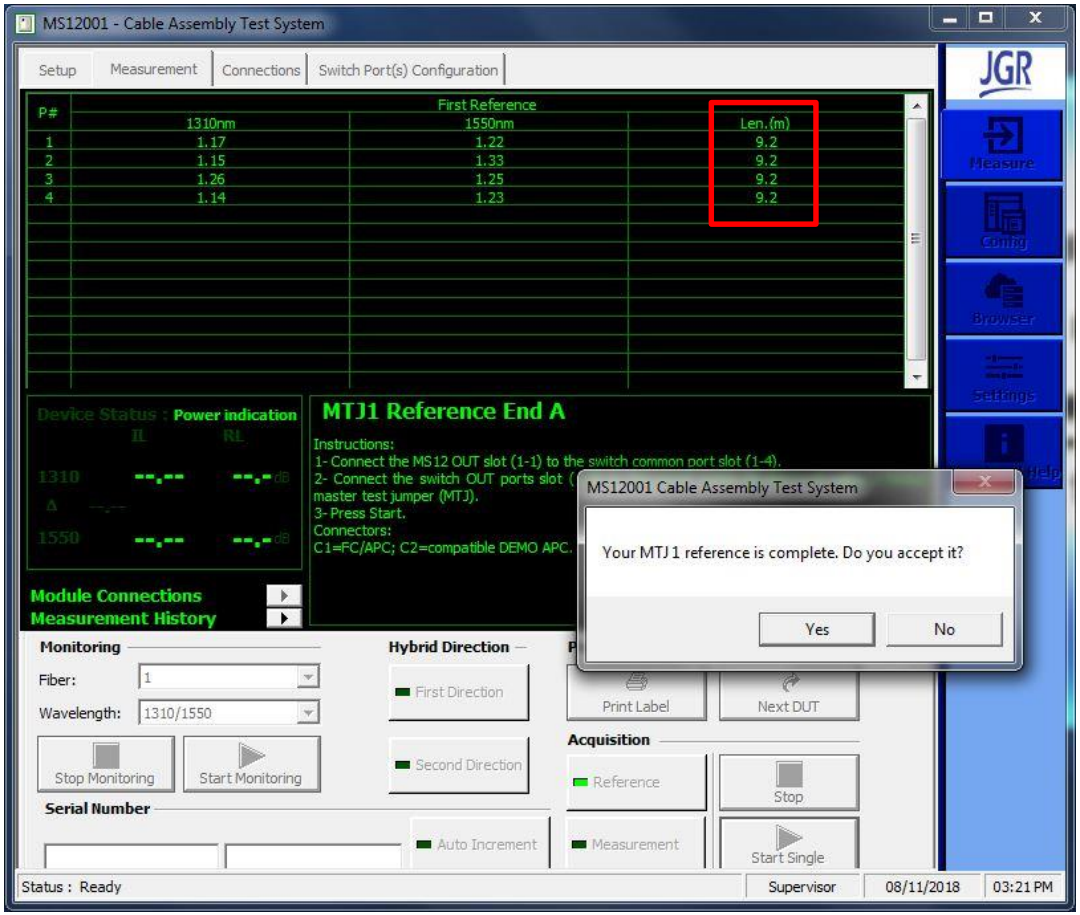
# Testing SM Bundles with Dual Switches

3. Reference

3.2. Select Reference Acquisition and click Start Single. The software will begin by referencing the IL for each channel then you will be prompted to manually enter the length.



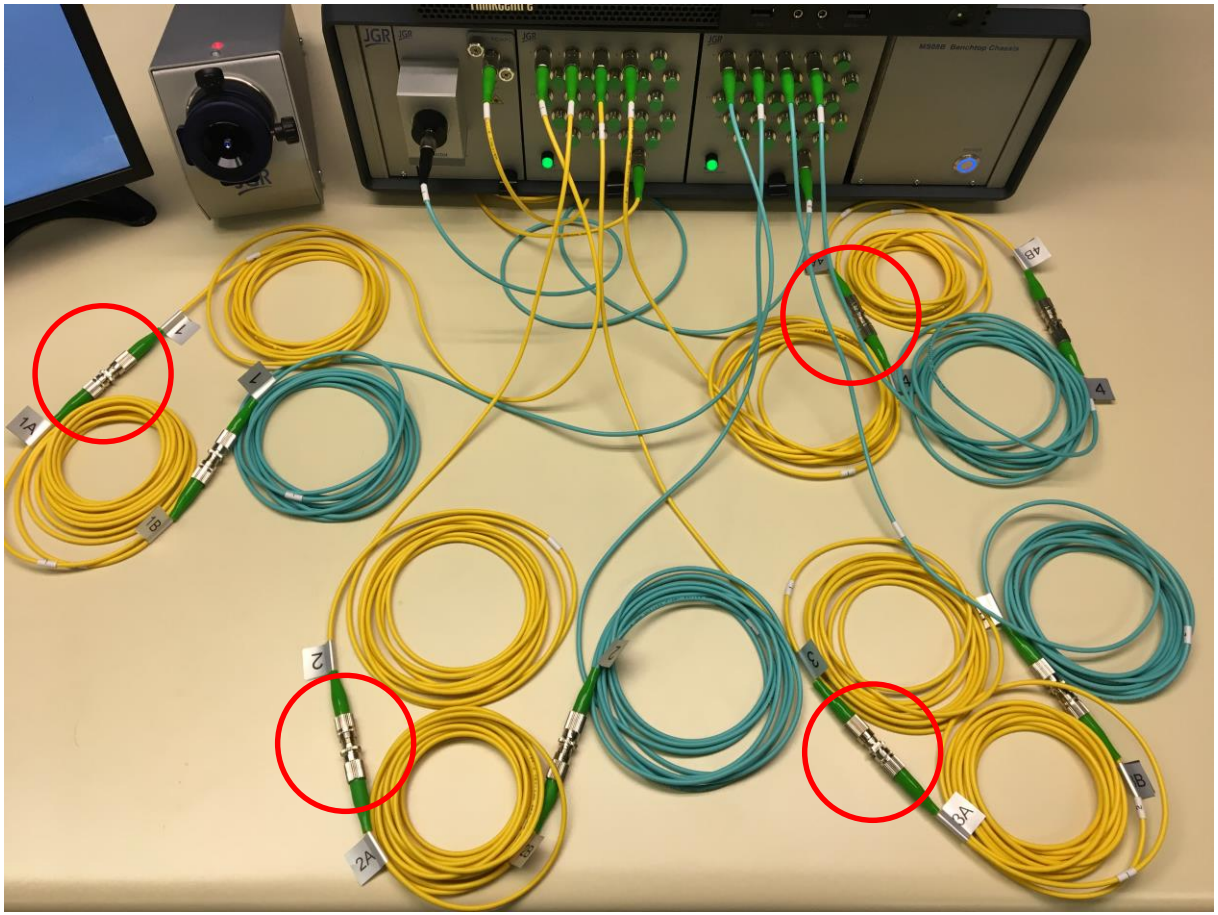

Type in the result of the length test for each channel



# Testing SM Bundles with Dual Switches

4. Measurement

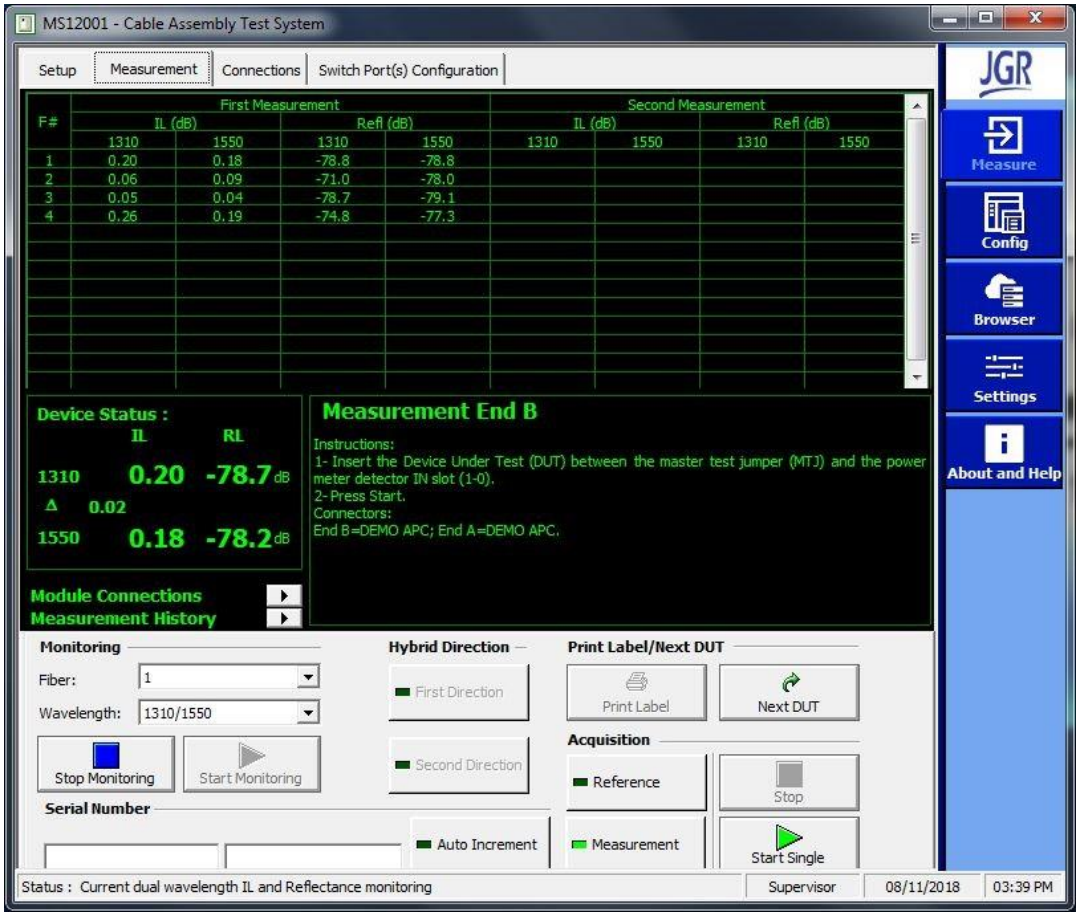
4.1. Connect the SM MTJ to the end A of the DUT and the end B of the DUT to the MM receive jumpers.



# Testing SM Bundles with Dual Switches

4. Measurement

4.2. Click Start Single to measure end A.



# Testing SM Bundles with Dual Switches

4. Measurement

4.3. Flip the DUT (SM MTJ to end B of DUT, end A of DUT to MM receive jumpers) then click Start Single to measure end B. Enter a serial number and click Next DUT to save the results.