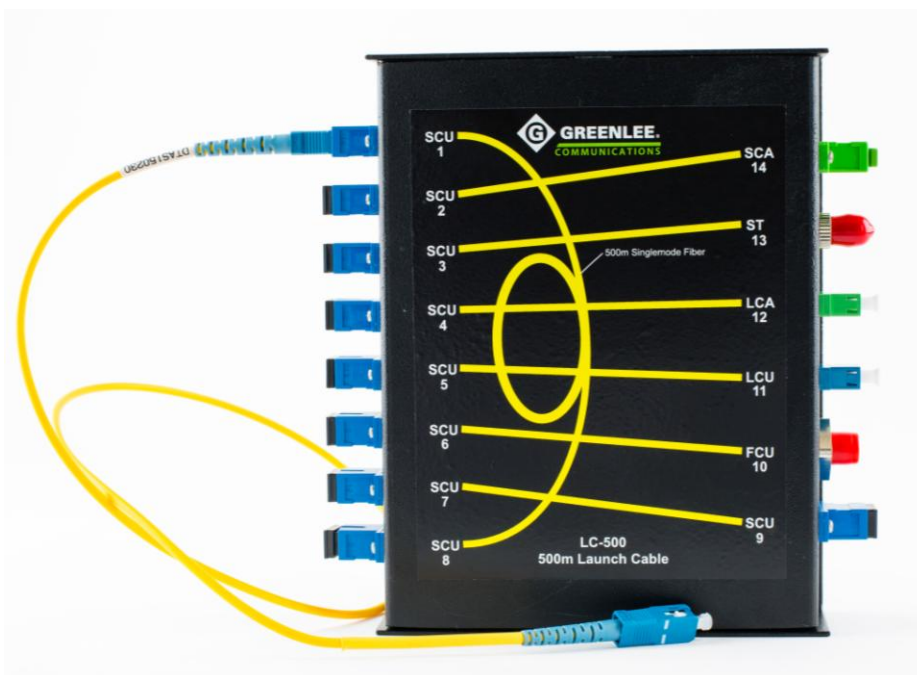


Application Note Use of the LC-500 Launch Cable

When long fibers are being measured, the deadzone of the OTDR becomes longer because a wider pulse width is used to launch more light into the fiber. The increased amount of light allows the OTDR to probe longer fibers and links that may have loss events such as bad connectors or splitters.

If a launch cable is not used the longer deadzone of the OTDR can overlap and mask events at the beginning of the fiber under test.



The LC-500 is universal; all common connections are accommodated so that interface to any outside plant termination can be made to interface to the OTDR. A hybrid cable can be used as the one meter patch cord to the OTDR.

<http://www.greenleecomunications.com/products/1M-FIBER-OPTIC-PATCH-CORDS.html>

It is recommended that a 1m cable is connected to the OTDR bulkhead and then to the launch cable so that the quality of the bulkhead connection is maintained. Please refer to the application note "Using a 1m Jumper with the 930XC OTDR".

http://www.greenleecomunications.com/resources/app_notes.html

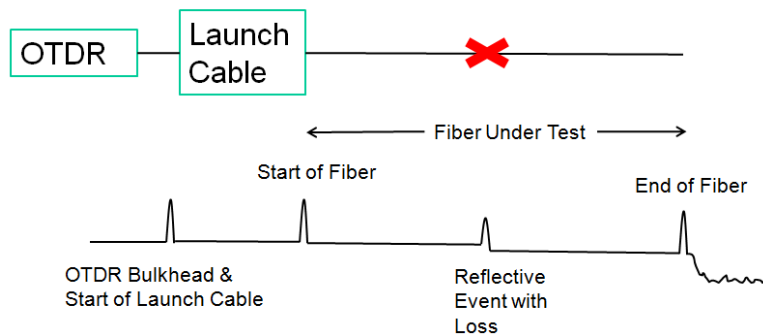


The Greenlee Communications LC-500 launch cable can be used for two purposes.

1. Troubleshoot the input connector and the initial fiber span that may be masked by the deadzone of an OTDR.
2. Characterize input and output connectors and the entire fiber link.

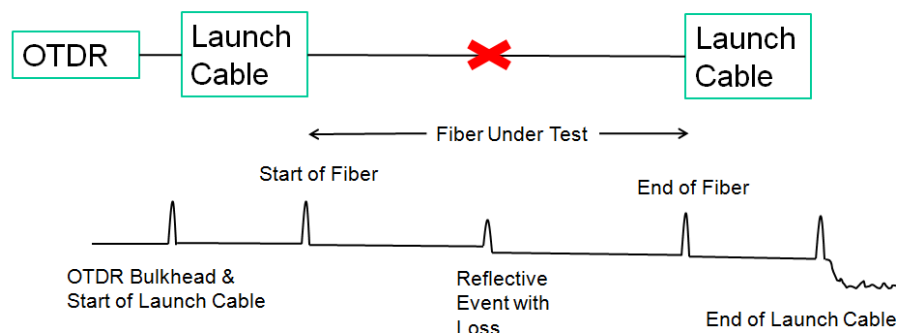
Troubleshooting Fiber Links

During trouble shooting the technician will need a launch cable connected between the OTDR and the fiber under test. This will allow the technician to view the condition of the input connector of the fiber under test and the portion of the fiber span that may be masked by the increased deadzone of the OTDR when wider pulses are used to measure long fibers. In this case only one launch cable will be required.



Characterize new Fiber Links

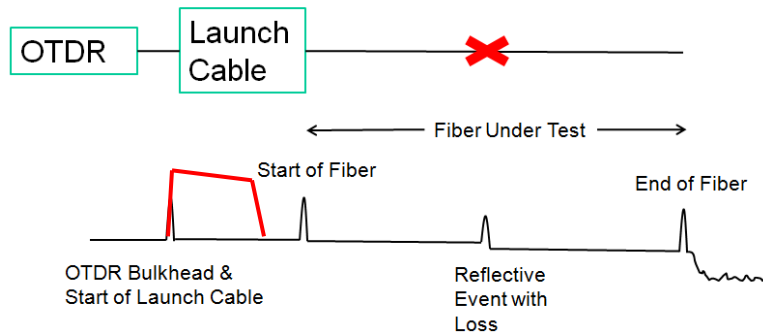
Characterize the input and output connectors and the portion of the fiber span that may be masked by the increased deadzone of the OTDR when wider pulses are used to measure long fibers. In this case two launch cables are employed.





Wide Pulse Width Results in a Longer Deadzone

The wide red pulse represents the pulse width of the OTDR (long deadzone). The input connector of the fiber under test can be seen and measured. Without the LC-500 launch cable, this connector reflection/loss would not be measurable.



Note:

1. The deadzone of an OTDR is specified at the shortest pulse width. The IEC specification is a pulse width of 10ns while measuring an event of -45dBm reflectivity. More reflective events will cause a longer deadzone. It is imperative that all connectors are cleaned and inspected so as to avoid contaminated and or damaged connectors that will be more reflective and cause a longer deadzone.