



DSX-3

75 ohm Circuit Termination

application note

Overview

DS3 Network Elements (NE) such as fiber optic terminals (FOT) or M13 multiplexers (M13) that are cabled to the DSX-3 require a 75 ohm load to stabilize the output signal. This 75 ohm load or "75 ohm termination" prevents the output from oscillating and affecting adjacent channels. When a NE is cross-connected to another NE, the output of each NE is terminated by the input of the other NE.

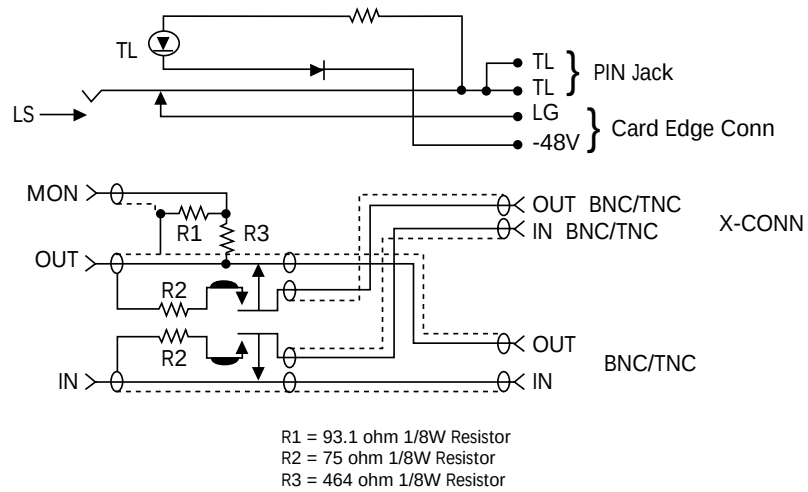
When multiple NEs are installed, many are often unassigned for a period of time until working service is required. Although unassigned, the NEs are powered up "Hot" in a standby mode, waiting to be turned up live as soon as a service order is issued.

When DS3 NEs are powered up but not yet cross-connected or assigned to other NEs, a 75 ohm termination is placed at the DSX-3. This 75 ohm termination may be placed in a number of ways as illustrated by the following figures.

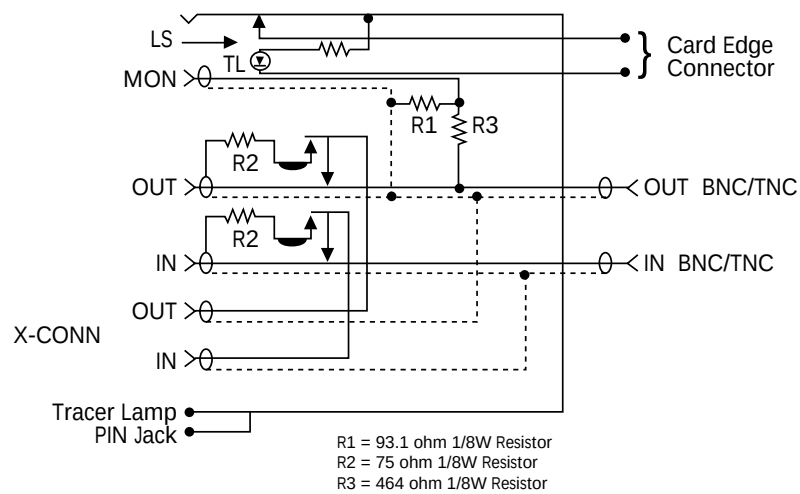
The 75 ohm termination is also required when disconnecting two NEs from each other for testing or reconfiguration. This termination is provided by a DS3 test set or a 75 ohm termination plug at the DSX-3 OUT jack.

Applications

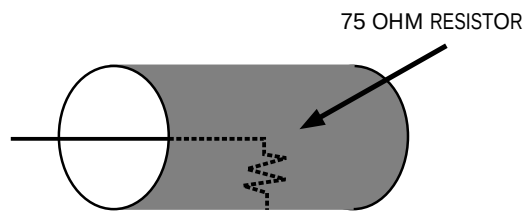
DSX-3 and 75 ohm Termination Plug Schematics



DSX Rear Cross-Connect Schematic



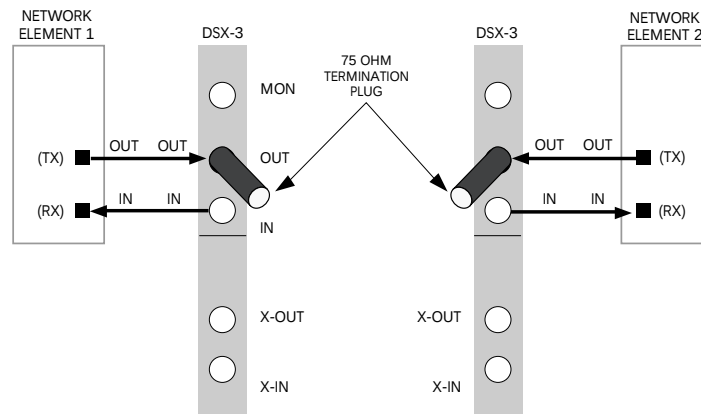
DSX Front Cross-Connect Schematic



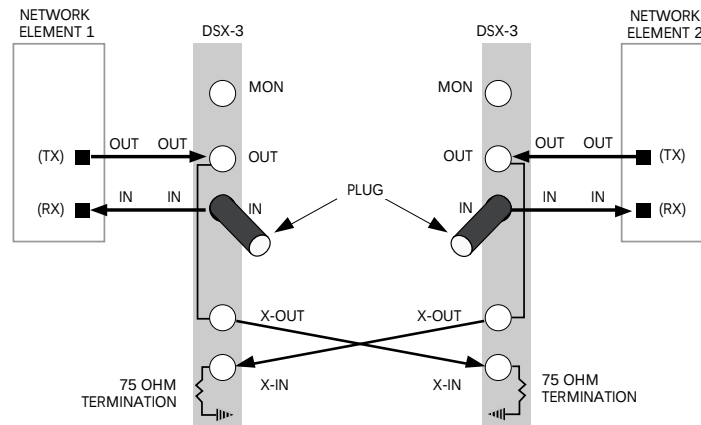
75 ohm Termination Plug Schematic

Applications

75 ohm Termination Plug at DSX-3 OUT Jack

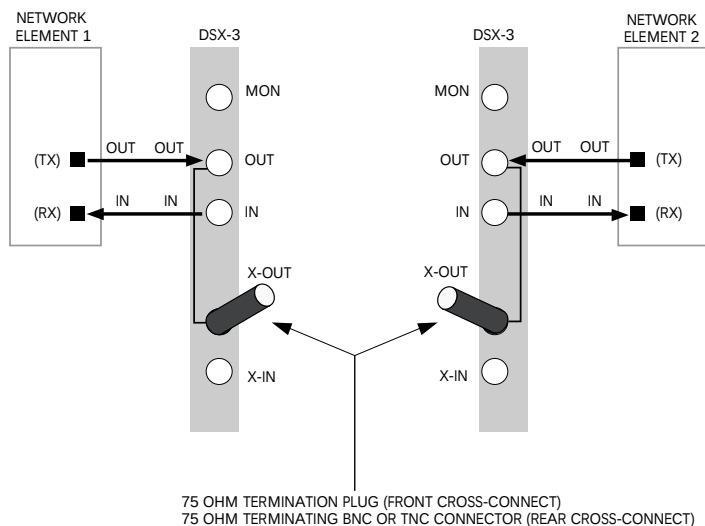


75 ohm Termination Provided by the Far-End DSX-3 IN Jack



NOTE: 75 OHM TERMINATION PROVIDED INTERNALLY BY JACK OPERATION

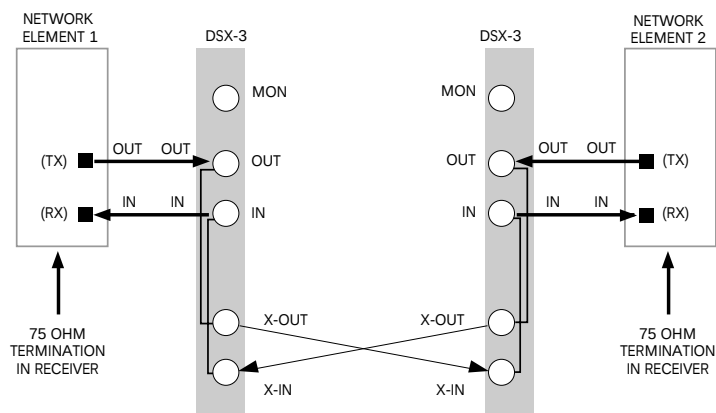
75 ohm Termination Plug or Terminating Connector at the DSX-3 Cross-Connect OUT Terminal



75 OHM TERMINATION PLUG (FRONT CROSS-CONNECT)
75 OHM TERMINATING BNC OR TNC CONNECTOR (REAR CROSS-CONNECT)

Applications

75 ohm Termination Provided by the Far-End NE Equipment (Working Configuration)



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