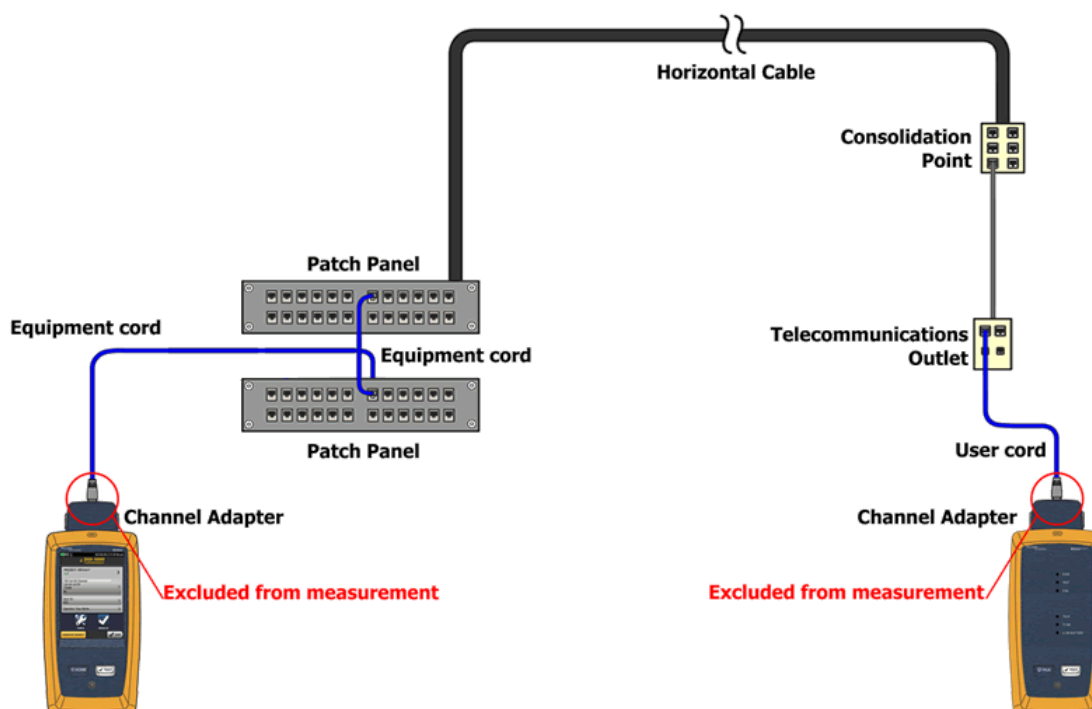# Channel definition - DSX CableAnalyzer

The only time you should be making a Channel measurement is to confirm the end to end system performance including user and equipment cords.

You are not allowed to go around the cabling system with two patch cords making measurements. The moment the patch cord is moved, that Channel measurement is no longer valid. If you see an installer certifying a cabling system using channel adapters, you may wish to stop and ask them why they are not making Permanent Link measurements (/knowledge-base/dsx-cableanalyzer-series/permanent-link-definition-dsx-cableanalyzer) - a requirement for cabling warranty application.

The Channel definition includes up to four connections, but can be as little as two per ANSI/TIA-568-C.2 and ISO/IEC 11801:2010. These standards require the test equipment vendor to exclude the mated connection to the instrument. This is achieved by using digital signal processing in the DSX CableAnalyzer. However, the DSX CableAnalyzer will assess the mated NEXT in the time domain at the channel adapters. If it is excessive, the DSX CableAnalyzer will report a warning (/knowledge-base/dsx-cableanalyzer-series/bad-patch-cord-main-remote-reported-dsx-cableanalyzer). Users have expressed a desire to know if they should be concerned about the quality of that RJ45 plug termination.
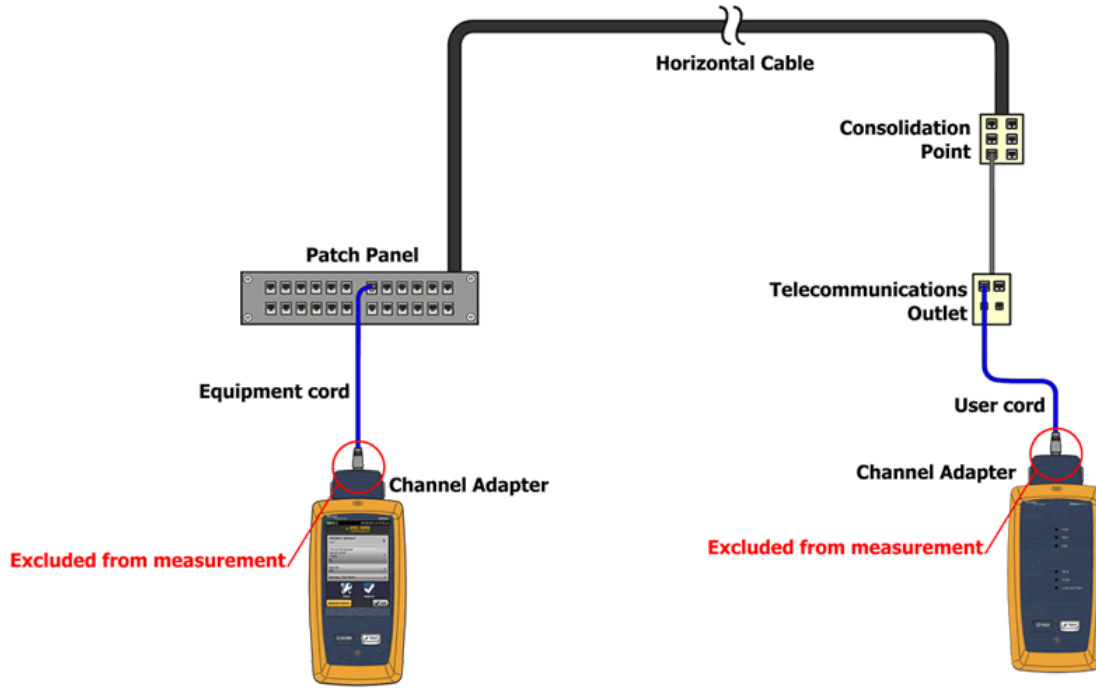
If your link has a patch panel at one end and an RJ45 plug at the other, click here. (/knowledge-base/dsx-cableanalyzer-series/modified-single-connector-permanent-link-dsx-cableanalyzer).
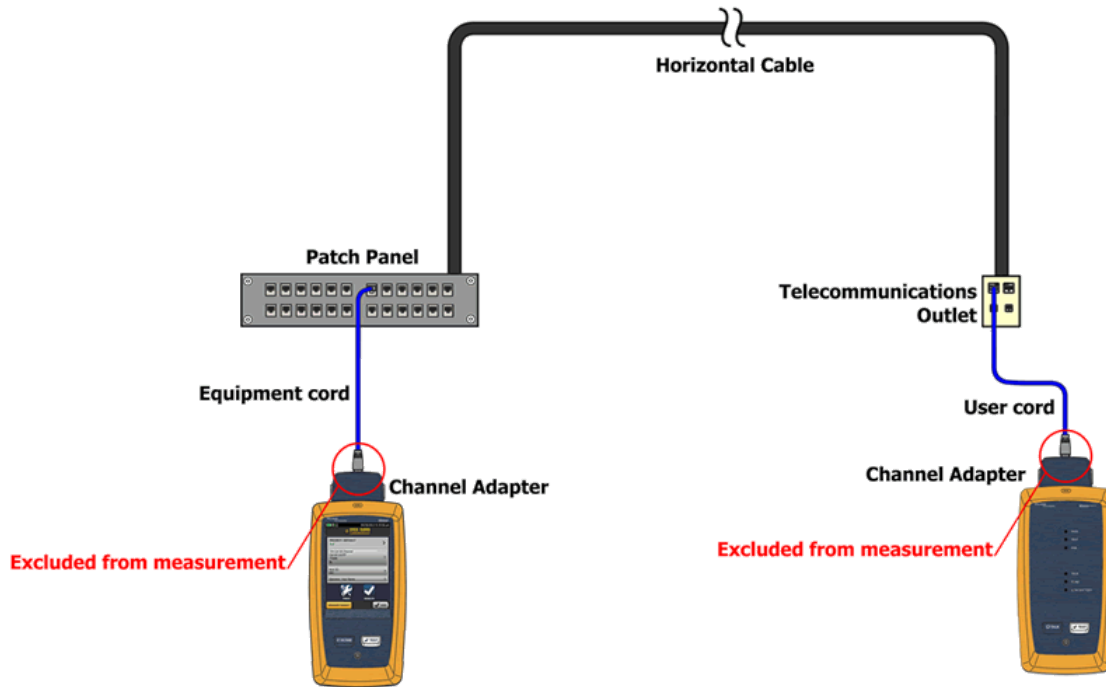
Four connector channel definition:

Three connector channel definition:

Horizontal Cable

Consolidation Point

Patch Panel

Telecommunications Outlet

Equipment cord

User cord

Channel Adapter

Channel Adapter

Excluded from measurement

Excluded from measurement

Two connector channel definition:

Horizontal Cable

Patch Panel

Telecommunications Outlet

Equipment cord

User cord

Channel Adapter

Channel Adapter

Excluded from measurement

Excluded from measurement

Data center two connector channel definition

Horizontal Cable

Patch Panel

Patch Panel

Equipment cord

User cord

Channel Adapter

Channel Adapter

Excluded from measurement

Excluded from measurement