

## **IBM Fibre Optic Mode Conditioning Patch Cord Installation Instructions**

Note: The IBM Fibre Optic Mode Conditioning Patch Cord is Essential for Multimode Operation with the IBM Fibre-Optic Extender 160 product.

The Fibre Optic Mode Conditioning Patch Cord ( MCP ) allows the connection of the IBM Fibre-Optic Extender 160 to a multimode fibre optic cable. There are two separate versions of the MCP, one for 50um/125um multimode fibre and one for 62.5um/125um multimode fibre. It is essential that the correct MCP is used for the multimode fibre type connecting the Fibre-Optic Extender 160 pair. The purpose of the MCP is to allow customers to use multimode fibre with the Fibre-Optic Extender 160, providing that the fibre performance and length satisfy the Fibre-Optic Extender 160 specification. In applications where singlemode fibre optic cable is used to connect Fibre-Optic Extender 160 pairs, the fibre can be directly connected to the extenders; no mode conditioning patch cords are required.

A pair of mode conditioning patch cords are required for a Fibre-Optic Extender 160 link, one at each end of the link. The MCPs are available individually or alternatively as a pair (for a complete link) and have the following IBM part numbers:

<b>Description</b>	<b>IBM Part Number</b>	<b>EC Level</b>
50um/125um MCP	09L5564	F23692
50um/125um MCP Pair	09L5575	F23692
62.5um/125um MCP	09L5565	F23692
62.5um/125um MCP Pair	09L5576	F23692

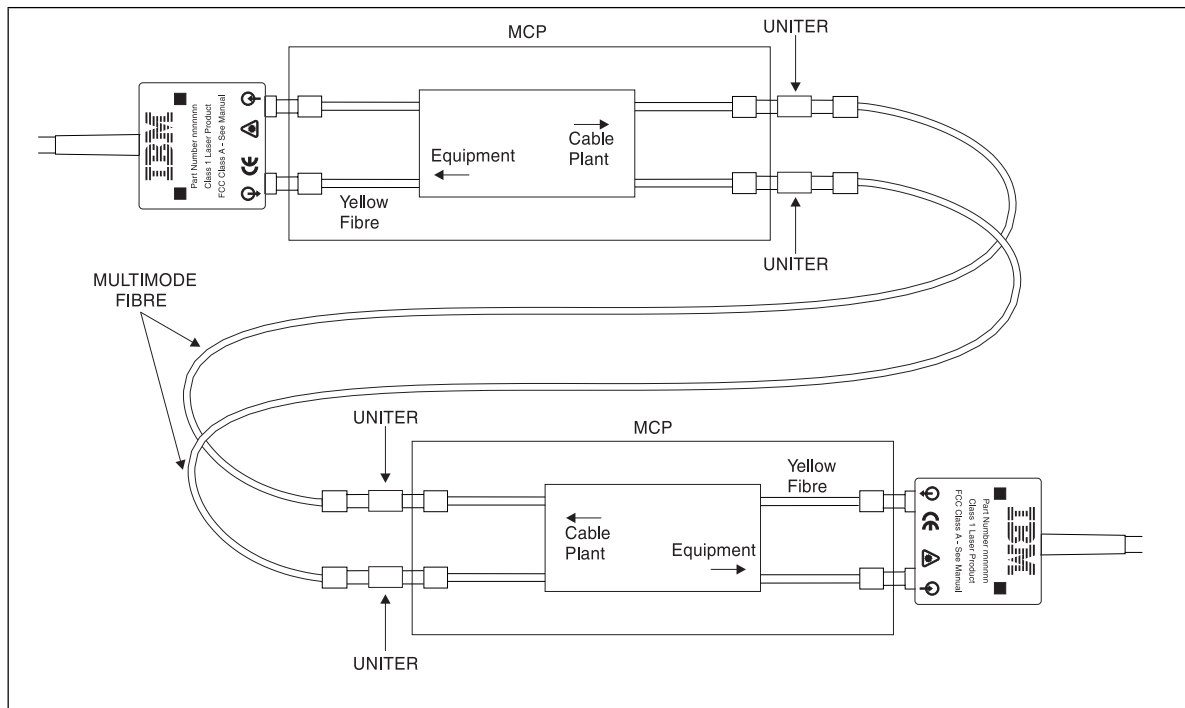
Each part consists of the respective number of the following pieces together with this instruction page:

IBM Mode Conditioning Patch Cord, which is 2 metres in length and is terminated with a pair of ST connectors at each end of the cable. This assembly contains a mixture of singlemode and multimode fibre, signified by the yellow and orange fibre jackets respectively. The mode conditioning unit is contained in a small box located near one end of the optical fibres.

IBM ST-to-ST uniters (P/N 02L7616) to connect between the MCP (two uniters per MCP) and the multimode cable that links the Fibre-Optic Extender 160 pairs.

To use the MCP, insert the unit between the Fibre-Optic Extender 160 and the multimode cable. The yellow fibre connects to the transmit connector on the Fibre-Optic Extender. The orange fibre that is at the same end of the MCP connects to the receiver. At the other end of the MCP, the fibres connect directly to the multimode fibres using the ST-to-ST uniters supplied. If the two fibres are individually marked on the multimode cable, these

connections can be predetermined. The side of the local MCP that connects to the local receiver connection connects at the far end of the link to the side of the remote MCP that connects to the transmitter connection on the remote Fibre-Optic Extender.



When connected correctly, both lights on the Fibre-Optic Extender 160 should come on. If the two fibres in the multimode cable are not individually marked, it is also possible to connect the multimode fibre to the uniters in any order at one end of the link. Either combination of connection for the multimode fibre to the uniter is then tried at the other end of the link until both lights are illuminated on the Fibre-Optic Extender 160.

The mode conditioner patch lead introduces a maximum loss of 0.5dB that needs to be included in the calculation and measurement of the total fibre optic path loss between the two Fibre-Optic Extenders. Because there are two mode conditioners on the link, the total maximum loss is 1dB. The fibre optic path loss and multimode optical fibre specifications are contained within the application documentation for the Fibre-Optic Extender 160.