

**RUNNING ACE OVER FIBRE OPTIC**

ACE stands for 'Audio & Control over Ethernet' and is a point to point link, created and developed by Allen & Heath. Please see our 'Understanding ACE' document for further information.

Fixed format iLive systems are shipped with a built in ACE single connection which allows the mixing surfaces to be linked to an IDR MixRack using standard Cat5e twisted pair cable. This link provides both network connection and bidirectional audio. Modular iLive systems can employ the M-ACE module for the Surface to MixRack link. This can also provide redundant connection.

Connections of up to 120m (400ft) are possible, depending on cable type. Please see our recommended & tested cables as published on our website.

Since ACE is Ethernet IEEE 802.3 Layer 2 compliant, standard Cat5 to Fibre Optic media converters can be used. These must support Fast Ethernet (100base TX) connections. Many media converters only support Gigabit Ethernet (1000baseT), which will not work, as the ACE port must link at 100baseTX.

In theory, any Layer 2 network switch or managed switch could also be used as a media converter, provided it has optical ports. In order for this to work, you must be able to turn off 'broadcast storm protection' and 'spanning tree protocol' in the switch.

Fibre Optic transmission relies on thin, flexible, transparent fibre that acts as a waveguide, or 'light pipe', to transmit light between the two ends of the fibre. Widely used in communications, this technology permits transmission over longer distances and at higher bandwidths than metal wires. Signals travel along them with less loss and are also immune to electromagnetic interference, potential difference and grounding issues.

Cost-effective, Multi-mode Fibre Optic can be used for cable length up to 2km, depending on equipment and cable quality. Neutrik OpticalCON DUO cable is typically sold with 150m drums, but couplers are available to join two cables together.

Please visit the Neutrik website for more information:

[http://www.neutrik.com/uk/en/audio/204\\_2128866957/opticalCON\\_DUO,\\_two\\_channel,\\_hybrid\\_group.aspx](http://www.neutrik.com/uk/en/audio/204_2128866957/opticalCON_DUO,_two_channel,_hybrid_group.aspx)

TESTED EQUIPMENT



2x TP-Link MC-100CM Fast Ethernet Media Converter (Multi-mode), SC optical connectors

2x Videk 3182-1 adapter cable (SC to LC optical connectors, duplex, multimode)



2x Neutrik N02-4FDW (OpticalCON DUO chassis connector with LC-duplex socket on the rear)

1x Neutrik OpticalCON DUO field cable



2x Neutrik NE8FDP (EtherCON chassis connector with RJ45 feedthrough)

The above is an example system. We recommend customers source and try similar technology with their iLive system and test for functionality and reliability before putting into service.

Allen & Heath can't provide technical support for issues related to third party equipment.



