

MC OPTICAL / SC OPTICAL

Compatible with all InnovaSON consoles, the MC OPTICAL and SC OPTICAL communication cards provide all the features already present on the MC-64 and SC-64 plus an optical fibre interface and improved IN and OUT Sync connections.

Transmission and reception can now be coaxial, optical or both in the case of a three way digital split on the Stage Box.

Both modules are designed with the same electronic board, only a couple of EPROM and a physical jumper determine whether the module will function as an MC or SC. One module with a set of EPROM can be used as a spare / back-up for both the MC and SC cards.

Word-clock input on BNC and AES input on XLR allows the audio digital clock of the InnovaSON console to be synchronized easily with external peripherals.

Word-clock output on BNC allows the console to synchronize slave digital peripherals to its audio digital clock.

A headphone output is available on the module faceplate to maintain compatibility with the Grand Live, Compact, Sy40 and Muxipaire systems.



The Optical Fibre interface



Using multimode 50 / 125mm diameter standard fibre with ST connectors, the MC OPTICAL and SC OPTICAL fibre interface provides an audio signal transport system capable of 64 audio channels of 24 bits at 43 to 49KHz (48KHz when not synchronized by an external clock).

The optical interface provides total electro-magnetic isolation, which is useful in situations where there is a danger of interference from power lines or other sources of electro-magnetic radiation.

Up to 400m of fibre can be used from Mix Box and Stage Box in Master position, up to 2Km of fibre can be used for a digital split in Slave position.

The Coaxial cable interface



This well proven interface, used successfully by InnovaSON for 10 years, has been enhanced by the use of BNC jack filter connectors and an auto-equalized input stage which is able to auto-adjust the transmission over coax cables from 1m to 500m in length.

For better isolation, transmission and receiver stages are transformer isolated. To improve signal stability, the digital voltage in the coaxial cable has been doubled compared to the previous MC-64 and SC-64 modules.



MC OPTICAL is compatible with SC-64 series

SC OPTICAL is compatible with MC-64 series

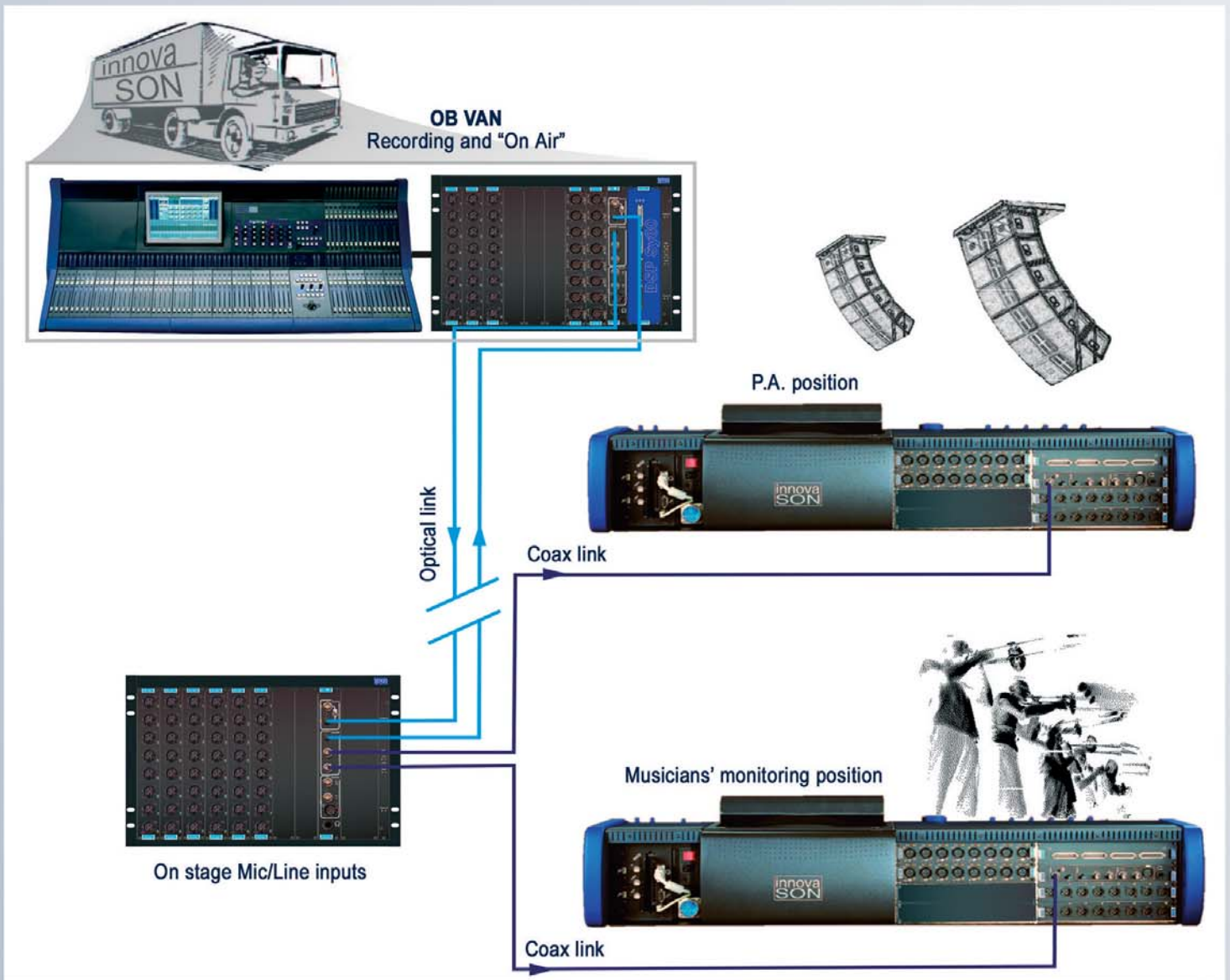
No upgrade is necessary to use the OPTICAL transmission boards in an existing system, the boards are " Plug and Play "

Synchronisation modes

- **WC OUT:** Available on the front panel of each module
- **WC IN:** To synchronize the entire system to a 43 to 49 KHz incoming TTL signal.
- **AES IN:** To synchronize the entire system to a 43 to 49 KHz incoming AES signal.

MC OPTICAL / SC OPTICAL applications & specifications

One of the many possible applications : OB VAN equipped of an Sy80 for recording and On-Air, opto-isolated from the stage using optical fibre. Sy48 used FOH and Monitoring linked to the Stage Box by Coax cable.



Optical fibre interface characteristics

Connectors : ST
Fibre : Multimode Ø 50/125µm
 : Lambda = 1300nm
Latency : 0,5µs / 100m + 1,2µs
Max length : 400m in Master mode
 2000m in Slave mode

Option
 1U 19" unit equipped with SC to EBC lens connector converter.



Coaxial interface characteristics

Connector : cable - BNC Neutrick Push-Pull socket - BNC jack filter connectors
Cable : Coax 75ohm impedancy adapted
Latency : 0,43µs / 100m + 1,2µs

Max length : 500m in Master and Slave mode

Signal : 125MHz-100Mb/s
 Magnitude = 1,6Vcc
 RX and TX stages are isolated and protected by transformers
 Auto equalizing system, no adjustments to do.

Synchro and global characteristics

WC I/O : 75ohm adapted and Isolated by transformer BNC input and output.
 TTL standard (0/5V)

AES : Standard 110ohm AES input isolated for clock extraction and synchronisation.

SPLIT : 3 way digital split when SC function (2 coax and 1 optical simultaneously).
 Off-Line programming on PC