



Modular large scale audio routing.



FEATURES

- Incredibly compact 896 x 896 in just 7RU (10RU including input DAs)
- Virtually unlimited expansion
- Synchronous "on-air" switching
- Output monitoring
- Distributed architecture
- Mixed analogue and digital operation
- Dual PSU and controller options
- Fully compatible with MADI equipment to AES10

The modular architecture of the MADI router makes it ideal for large-scale audio routing applications where space is at a premium, or where the ability to provide flexible, expandable and economic routing is essential. Suited to a diverse range of applications from central routing systems through to live theatre sound reinforcement, Pro-Bel's MADI range combines advanced digital technology with precision signal conversion and handling, providing an unrivalled package addressing the demands of today's multi-media businesses.

Central Router

At the heart of each MADI routing system is a compact selector with the ability to break down incoming MADI streams to mono channels and then to construct new outgoing MADI streams from any combination of these input signals. This non-blocking architecture permits any input to be routed to any output at either stereo or mono channel level.

Each 7RU router frame houses eight, 16 x 2, MADI selector modules which can be configured to provide routers of 16 x 16 (896 x 896 mono) or 32 x 8 (1792 x 448 mono). Each switching module has two further 'expansion' inputs which allow modules to be cascaded to provide input expansion limited only by the control system.

Destination expansion is virtually unlimited with additional modules and frames connected via co-axial circuits to the incoming MADI signals.

Each switching module has 16 individual BNC inputs (plus two for expansion) therefore, to provide more than two output busses, it is necessary to provide input distribution amplifiers to drive the modules. These are type 3404 non-reclocking, ten output DAs housed in a 3RU ICON frame which can accommodate the 16 modules required to drive a 16 x 16 MADI configuration. The 3404s use the 20mm rear connector which is fitted with SMB coaxial connectors to feed the router inputs. The DAs and special cables are included in the pre-configured router packages.

System flexibility is further enhanced through the addition of an output monitor row, providing an AES output capable of monitoring individual AES bitstreams from within the MADI outputs across the frame.

Options for redundant power supplies and redundant controller ensure the reliability of the system, while control is provided via RS485 control ports from Pro-Bel's advanced router control system, Aurora, by both conventional hardware panels or PC based 'soft' panels.

Transcoders

While the central router provides the switching element of the MADI system, transcoder frames provide the distributed input and output processing. These frames interconnect with the central router using either co-ax or optical circuits providing the interface between the analogue and digital audio environments. In addition they offer a compact and cost effective means of transporting multiple audio signals over either co-ax or optical circuits.

AES/EBU Transcoders

For systems where synchronous digital audio AES/EBU signals are guaranteed, the 5697 transcoder offers an exceptionally space effective solution for the simultaneous encoding and decoding of 28 AES/EBU signals to and from MADI.

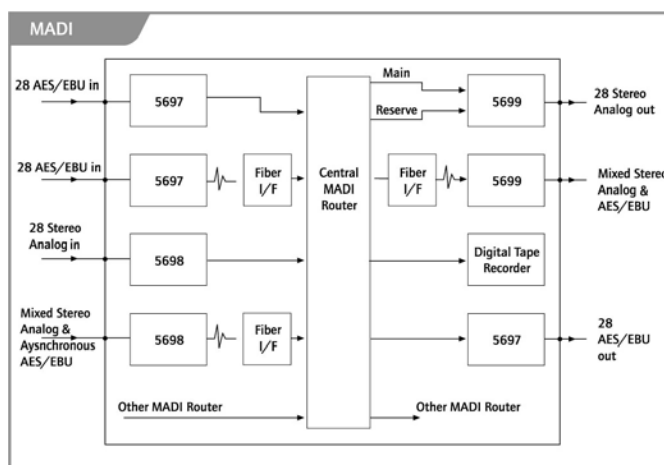
As the frame can be equipped for encoding or decoding only, it provides further flexibility where only sources or destinations are present. The compact 3RU frame also offers dual MADI outputs plus dual MADI inputs, on the decoder frame, with auto changeover between the input signals should one fail.

Multi-Format Transcoders

Systems using a mixture of analogue and digital inputs and outputs, or where asynchronous AES/EBU signals are present, require additional signal processing. The 5698 encoder and 5699 decoder frames provide the ability to mix analogue and digital signals within a single frame on a channel by channel basis through plug in sub-modules. These frames provide either 28 stereo/dual channels to MADI (encoder), or MADI to 28 stereo/dual channels (decoder). Additional sample rate converter/ synchroniser sub-modules are available for the 5698 encoder frame permitting asynchronous 32, 44.1 and 48kHz signals to be encoded in the MADI.

Fibre Interfaces

As the standard coax interfaces available with the MADI system are only designed to operate for distances of up to 50 metres, optional fibre interfaces are available for the transcoders and routers. These FDDI interfaces transport the MADI input and output signals over a dual fibre cable providing operation over distances of up to 2km. The use of fibre interfaces is not only ideal for linking remote system elements, but also ensures true earth isolation while offering immunity to hum and RFI interference.



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