

Advanced Audio Processor.



FEATURES

- 4 AES inputs
- 2 Auxiliary AES inputs
- Auto locking to 32, 44.1, 48kHz AES
- 4 AES output pairs
- Channel swap/combine
- Level adjust
- Phase reversal
- Preset configuration recall
- 24-bit processing
- Variable delay to 0.5s*, tracking to 40ms
- Test tone
- AES or video reference

OPTIONAL FEATURES

- Dolby® Digital Decoder Card (for Dolby Digital (AC-3) or Dolby E Decoding)
- AES DeMUX/ReMUX

The V6302 Advanced Audio Processor provides synchronising, retiming, channel swapping and level control for up to 8 channels (4 AES) of digital audio. An option /DB is available allowing any one of 6 AES input streams to be routed to an 'on board' sub-module that provides decoding of a Dolby Digital (AC-3) or Dolby E compressed data stream to 6 channel digital audio.

All the selected input channels and decoded outputs from the Dolby Digital decoder (when fitted) are then 'rate converted' to provide synchronisation to a single internal clock reference. Alternatively, an external reference input (with loop-through) facility is provided allowing the internal clock (and subsequently AES outputs) to be locked to an AES or analogue video reference source. The main processing section in the V6302 includes a 14 x 8 matrix allowing any of the input channels to be routed to any one of 8 (4 AES) output channels. Processing functions include level control and mixing to provide, for instance, a direct additive mix or produce a mono output from a selected input pair.

In addition, a Delay Pulse (TTL) input is provided allowing the 4 AES outputs to track the delay through an external device. This input is compatible, for example, with the output from a V1640, V1641 or V6402 Frame Synchroniser. A fixed delay of 0-500ms, adjustable in steps of 1ms, can also be applied to each output. A 'copy' output for each of the 4 AES outputs is provided. Two types of rear module are available. A 'single' width rear module with a high density D type connector is for use with balanced AES signals and a 'double' width rear module for use with unbalanced AES signals.

Embedded Audio

The V6302 can be used in conjunction with other modules including, for example, the V6402 HD Frame Synchroniser. It is coupled to the V6402 module using a special 'double' or 'triple' width rear module depending on the audio I/O requirements (see V6402 datasheet for order codes). An embedded audio processor option /AP can then be fitted to the V6302. The special rear modules provide communication between the two modules via an internal LVDS (Low Voltage Differential Signalling) bus. The LVDS bus not only allows the serial input stream to the Frame Synchroniser to be routed through the audio processor but also to pass other relevant data including the retiming delay. In this configuration the system can demultiplex up to 4 AES signals from the HD serial stream, perform the required audio processing and then re-multiplex up to 4 AES streams back into the serial output(s) of the V6402. Furthermore, a multi channel matrix switch in the V6302 allows combinations of external and de-multiplexed audio to be fed to its audio processor stage. Indeed, with the embedded audio option fitted, the processing power of the V6302 is expanded to provide two independent 8 channel processor allowing a different audio setup/mix for the re-multiplexed HD serial outputs and external audio ports.

Technical Specification

AES Inputs (6)

Sampling	32m 44,1, 48kHz (channel independent)
Formats	AES3 Dolby Digital (AC-3) or Dolby E (one user selected input only)
Processing	24-bit
Impedance options	110 ohm balanced D type AES-3 (1992)
Or	75 ohm unbalanced BNC AES-3id (1995)
Cable equalisation	Up to 250m

AES Outputs (4)

Sampling	48kHz
Formats	AES-3
Impedance options	110 ohm balanced D type AES-3 (1992)
Or	75 ohm unbalanced BNC AES-3id (1995)
Cable equalisation	Up to 250m

AES Reference

Format	AES-3id
Connector	BNC
Impedance	75 ohm
Return loss	>35dB to 5.5MHz
Or	
Format	AES-3
Connector	D type
Impedance	110 ohm

Analogue Reference + Loop

Signal	PAL/NTSC colour black
Connector	BNC
Impedance	75 ohm
Return loss	>35dB to 5.5MHz
Looped output	As reference input

Delay Pulse

Level	TTL
Range	0 to 40ms
Connector	BNC
Impedance	High Z (>10k ohm)

Option: Embedded Audio (Suffix /AP)

Inputs	4 AES (2 groups)
Standard & level	SMPTE 299M
Of operation	24-bit 48kHz synchronous
Outputs	4 AES (2 groups)
Standard & level	SMPTE 299M
Of operation	24-bit 48kHz synchronous

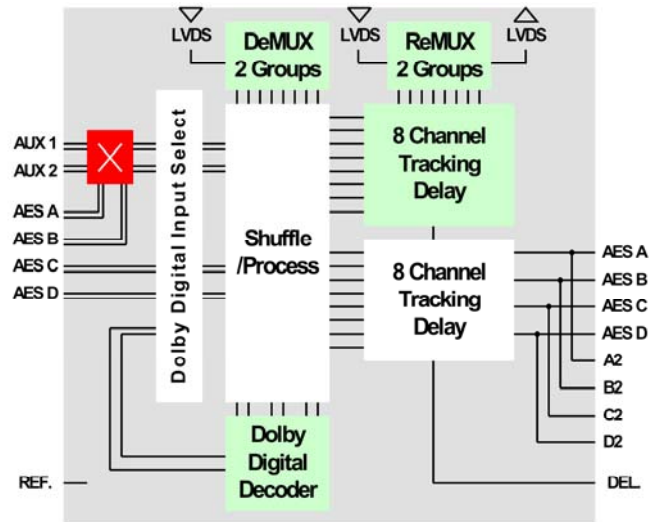
Ordering Information

V6302	Advanced Audio Processor
/DB	Dolby Digital (AC-3) / Dolby E Decoder (operation with one selected AES input only)
/AP	Embedded Audio Processor

All Pro-Bel's quoted prices for interface modules include the supply of one suitable rear module. Please specify the type required when placing order:

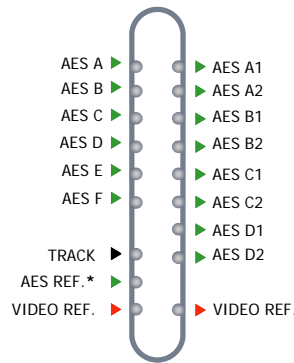
V16AR3AB	3RU - Balanced AES I/O D type rear module
V16AR3AC	3RU - Unbalanced AES I/O BNC dual width rear module

Note: Special versions of rear module are available on request



V6302

Advanced AES Processor



V6302/DB

AES Processor /
Dolby Decoder

