

AEV CROSS – digital audio matrix



AEV CROSS

Digital & Modular Audio Matrix



AEV CROSS – digital audio matrix

Main Features

This device acts as the "SQUARE CROSSING" and allows you to route the input sources like analog and digital to analog and / or digital either.

Cross has been designed so that each output can assign a single input; Cross Mixer does not function.

Each input can be associated with multiple outputs simultaneously.

This device is made inside a RACK to 3 units, located on the front panel place a large LCD display (240x128) display on which machine states in particular are of the general situation and specific connection of each node with the Alias associatogli and data sources / users such as sample-rate levels and (for digital channels). The navigation between the nodes is done by pressing the "Arrow Key", also on the front panel which also serve to establish connections and query Cross.

Cross can 'be made up of:

- _ Analog Input (each input is stereo L / R)
 - _ Digital input modules (each module has 2 AES3 inputs)
 - _ Analog output modules (each output is stereo L / R)
 - _ Composite Analog Output Modules (this form is used when the digital inputs to get an analog stereo L / R)
 - _ Composite Digital Output Modules (this form is used in the presence of 2 analog inputs for outputs AES3)
 - _ Monitor module comprising in addition to the circuit required to connect a headset, even a USB port.
- There can be optionally an access network to 10/100 and / or a circuit to generate / receive synchronization word clock.
- _ Power supply module with the option to insert a second (optional) with hot swap function (replacement of a defective power supply without powering down the system).

The layout of Cross is bound for some slots, especially the No. 10 and No. 11 are reserved for power supplies (PSUs), the No. 9 is reserved for the monitor module, the other from No.1 to No. can accommodate either 8 input or output modules.

Cross is designed for self-recognition modules that make up each restart, the CPU will utomatically create a graph of connections previously set as well as cancel any existing links in case of replacement and / or moving a module and then assigning the default parameters.

1 - Analog Input Module

Circuit includes two differential input (balanced) Left to righth which owns two XLR female connectors, EMI filters, variable gain stage which allows vary the input level in a range that goes from +12 to-12dBu and a signal to the circuit assignment 1 of the 4 stereo bus on the back panel of the machine interconnection. And 'possible to program the panel to 600-ohm input termination.

2 - Digital Input Module

Includes two input circuits transformer terminated at 110 ohms AES 3 for two separate channels, two circuits that translate this level of work to RS-422 5V HCMOS. Two circuits of allocation can be connected independently, channel by channel, for a 4-bus digital.

2 - Analog Output Module

Receives the signal from the bus, which is associated with a pair of electronic switches transfers the signal to a variable gain amplifier that adjusts the output level to a value ranging from -12 to +12 dBu (+18 dBu can get to). It has a single balanced stereo output.

3 - Composite Analog Output Module

And 'the form of output that has been implemented prior to a D / A and a switch that can direct it to

AEV CROSS – digital audio matrix

a 4-bus digital. Clearly, the association analog bus prevents the simultaneous use of digital bus and vice versa. Preserve the output characteristics of the previous module. The peculiarity of this module is its ability to provide an analog output even starting from a digital signal.

2 - Composite Digital Output Module

And 'the output module that has been implemented A / D converter and a switch that can direct it to one of 4 digital buses. Clearly the combination analog bus to prevent the simultaneous use of digital bus and vice versa. The peculiarity of this module is its ability to provide a digital output signal starting from a well analog signal.

Technical Specification

DIGITAL INPUT

Digital input configuration AES 3 professional (IEC-60958 S/PDIF consumer compatibility)

Digital AES 3 Input Impedance 110 Balanced

Digital AES 3 Input Connector XLR Female EMI suppressed

Sample Rate Automatic lock 32 - 44.1 - 48 - 96 KHz

Resolution 24 Bit

Over sampling 256 x

Digital Channel indications Sample freq. Decoding, Channel status, Error Decoding

ANALOG INPUT

Analog Input configuration Stereo Electronically balanced

Analog Input Impedance 10 K or 600 (software selectable)

Analog Input Level Range ± 10 dBu (Digital adj. step 0,5 dB)

Headroom + 8 dB

Analog Input Connector 2x XLR Female EMI suppressed

DIGITAL OUTPUT

Digital Output Sample Rate Selectable 32 - 44.1 - 48 - 96 KHz

Resolution 24 Bit

Over sampling 256 x

Digital Output configuration AES 3 professional Transformer Balanced (IEC-60958,S/PDIF consumer compatibility)

Digital Output Impedance 110 Balanced

Digital Output Connector XLR Male EMI suppressed

Digital Channel Status indications Sample Rate, Copy status, Audio Data Status, Pre-Emphasis status

ANALOG OUTPUT

Analog Output configuration Stereo Electronically balanced

Analog Output Impedance 100 balanced

Analog Output Level Range ± 10 dBu (Digital adj. step 0,5 dB)

Headroom + 8 dB

Stop band -82 dB

Analog Output Connector 2x XLR Male EMI suppressed

MONITORING

All data information are displayed on a 240x128 Graphic Display. Arrow key are available for

AEV CROSS – digital audio matrix

menu selections. Led Bar (avg. + peak) display level of the channel selected signal. One Headphone monitor output on Jack 6mm connector.

SYNCHRONIZATION

Input Word Clock range 32 - 44.1 - 48 - 96 KHz

Connector BNC grounded

Input impedance 10 K

Output Word Clock range 32 - 44.1 - 48 - 96 KHz Software selectable

Connector BNC grounded

Output impedance 100

I/O INTERFACES

USB serial interface (With PnP feature)

Connector USB B

LAN ETH 10/100 Mbps

Connector RJ45

GENERAL

FREQUENCY RESPONSE: 14.85 KHz (-0.5 dB @ 32 KHz SR)

20.45 KHz (-0.5 dB @ 44.1 KHz SR)

22.18 KHz (-0.5 dB @ 48 KHz SR)

49.68 KHz (-0.5 dB @ 96 KHz SR)

NOISE: -84.9 dB Din Audio @ 48 KHz SR

-76,8 dB CCIR WTD @ 48 KHz SR

-80.7 dB CCIR UNWTD @ 48 KHz SR

DISTORTION T.H.D. 0.016 % (@ 1 KHz input 48 KHz SR with conversion A/D-D/A)

COSSTALK L/R -85 dB @ 10 KHz

CMRR (Line Stereo Input)

60 Hz -56 dB

1 KHz -56 dB

20 KHz -56 dB

GENERAL DATA

Double Power Supply with Hot Swap capability

Power requirement 90 ÷ 264 VAC 50 - 60 Hz

Consumption 20 VA (single PSU)

Dimension (WxHxD) 48.3 x 24 x 13.2 cm 3 rack unit

Weight 2,5 Kg. (5.5 Lbs)

Operating Temp. 0 ÷ 50° C