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Intercom Talkback Mixer

4 off 32 x 32 Dante® / AES67 Network Audio Mixers

Dante®

BEATRICE MIX32

Network Audio Fixed Ratio Mixer
Now with Multiple Mix-Minus Circuits

Highlights

- 4 off Independent 32 x 32 Mixers
- Mix-Minus Circuits Ideal For Simple Intercom
- Dante® & AES67 Compatible
- Redundant Mains PSU
- Compressor/ Limiter on Outputs
- Redundant Copper & Fibre Network

Overview

The Glensound BEATRICE MIX32 is a high density audio mixer for producing fixed ratio audio mixes on Dante and AES67 audio networks. It can be fitted with a maximum of four independent mixer cards, each with their own redundant network interface. Each of these mixer cards provides 32 audio inputs and 32 audio outputs from the network, with the 32 outputs being mixes derived from different sets of input channels.

A number of different mix-minus mixes can be set on each of 32 x 32 mixer cards.These make it very practical to use as a central intercom mixing hub.

It was originally designed for setting up intercom and talk-back mixes but its high performance and low price point make it ideal for many other applications in broadcast, professional audio and commercial audio environments.

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Features

- **Redundant Network Interfaces**
  Each mixer card fitted in the BEATRICE MIX32 has 4 network interfaces.
  There are 2 copper RJ45 ports on Neutrik ethercon connectors and there are also 2 SFP (Small Form-Factor Pluggable) slots ready to accept fibre or copper SFP modules (not included).
  Any 2 network interfaces can be set up on the Dante network to provide glitch free redundancy.

- **Redundant Power Supplies**
  There are internally 2 mains power supplies fitted to provide a fully professional level of integrity for broadcast applications.
  Each power supply has its own filtered mains input on rear panel IEC plugs.

- **Semi Modular Mixer Modules**
  The BEATRICE MIX32 is supplied fitted with 1 off 32 x 32 mixer module, however the rack itself can fit a maximum of 4 off 32 x 32 mixer modules, each completely independent with their own network interfaces.
  The modules are reasonably easy to retro fit so adding extra mixer facilities is perfectly possible to allow you to expand your mixing capacity as your network grows.

- **Compressor/ Limiter Circuits**
  Compressor/ Limiter circuits are provided on the mixers outputs. We call them compressor/ limiter as the compression ratio we use is not constant, and at the compressor's knee a very small amount of compression is applied which increases as the input signal does. Until just prior to clipping, the compressor is acting as a limiter.
  For protection against multiple coherent input signals these compressor/limiter circuits are provided on all outputs.

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Features

- **Fixed Ratio Mixers**
  Each mixer card has 32 audio inputs and 32 mix outputs to and from the Dante/ AES67 network.
  The 32 mix outputs are derived from different combinations of the inputs as per the table below:

MIXER OUTPUT	SUM OF INPUTS
1	1 - 32
2	1 - 24
3	1 - 16
4	17 - 32
5	1 - 8
6	9 - 16
7	17 - 24
8	25 - 32
9	1 - 4
10	5 - 8
11	9 - 12
12	13 - 16
13	17 - 20
14	21 - 24
15	25 - 28
16	29 - 32
17	1 & 2
18	3 & 4
19	5 & 6
20	7 & 8
21	9 & 10
22	11 & 12
23	13 & 14
24	15 & 16
25	17 & 18
26	19 & 20
27	21 & 22
28	23 & 24
29	25 & 26
30	27 & 28
31	29 & 30
32	31 & 32

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Switch position →	2	3	4	5	6	7	8	9
	Mix_minus_32	Mix_minus_24_8	Mix_minus_16_16	Mix_minus_16_8_8	Mix_minus_16_8_4_4	Mix_minus_8_8_8_8	Mix_minus_8_8_8_4_4	Mix_minus_8_8_4_4_4_4
Output	Mix of inputs	Mix of inputs	Mix of inputs	Mix of inputs	Mix of inputs	Mix of inputs	Mix of inputs	Mix of inputs
1	1-32 excluding 1	1-24 excluding 1	1-16 excluding 1	1-16 excluding 1	1-16 excluding 1	1-8 excluding 1	1-8 excluding 1	1-8 excluding 1
2	1-32 excluding 2	1-24 excluding 2	1-16 excluding 2	1-16 excluding 2	1-16 excluding 2	1-8 excluding 2	1-8 excluding 2	1-8 excluding 2
3	1-32 excluding 3	1-24 excluding 3	1-16 excluding 3	1-16 excluding 3	1-16 excluding 3	1-8 excluding 3	1-8 excluding 3	1-8 excluding 3
4	1-32 excluding 4	1-24 excluding 4	1-16 excluding 4	1-16 excluding 4	1-16 excluding 4	1-8 excluding 4	1-8 excluding 4	1-8 excluding 4
5	1-32 excluding 5	1-24 excluding 5	1-16 excluding 5	1-16 excluding 5	1-16 excluding 5	1-8 excluding 5	1-8 excluding 5	1-8 excluding 5
6	1-32 excluding 6	1-24 excluding 6	1-16 excluding 6	1-16 excluding 6	1-16 excluding 6	1-8 excluding 6	1-8 excluding 6	1-8 excluding 6
7	1-32 excluding 7	1-24 excluding 7	1-16 excluding 7	1-16 excluding 7	1-16 excluding 7	1-8 excluding 7	1-8 excluding 7	1-8 excluding 7
8	1-32 excluding 8	1-24 excluding 8	1-16 excluding 8	1-16 excluding 8	1-16 excluding 8	1-8 excluding 8	1-8 excluding 8	1-8 excluding 8
9	1-32 excluding 9	1-24 excluding 9	1-16 excluding 9	1-16 excluding 9	1-16 excluding 9	9-16 excluding 9	9-16 excluding 9	9-16 excluding 9
10	1-32 excluding 10	1-24 excluding 10	1-16 excluding 10	1-16 excluding 10	1-16 excluding 10	9-16 excluding 10	9-16 excluding 10	9-16 excluding 10
11	1-32 excluding 11	1-24 excluding 11	1-16 excluding 11	1-16 excluding 11	1-16 excluding 11	9-16 excluding 11	9-16 excluding 11	9-16 excluding 11
12	1-32 excluding 12	1-24 excluding 12	1-16 excluding 12	1-16 excluding 12	1-16 excluding 12	9-16 excluding 12	9-16 excluding 12	9-16 excluding 12
13	1-32 excluding 13	1-24 excluding 13	1-16 excluding 13	1-16 excluding 13	1-16 excluding 13	9-16 excluding 13	9-16 excluding 13	9-16 excluding 13
14	1-32 excluding 14	1-24 excluding 14	1-16 excluding 14	1-16 excluding 14	1-16 excluding 14	9-16 excluding 14	9-16 excluding 14	9-16 excluding 14
15	1-32 excluding 15	1-24 excluding 15	1-16 excluding 15	1-16 excluding 15	1-16 excluding 15	9-16 excluding 15	9-16 excluding 15	9-16 excluding 15
16	1-32 excluding 16	1-24 excluding 16	1-16 excluding 16	1-16 excluding 16	1-16 excluding 16	9-16 excluding 16	9-16 excluding 16	9-16 excluding 16
17	1-32 excluding 17	1-24 excluding 17	17-32 excluding 17	17-24 excluding 17	17-24 excluding 17	17-24 excluding 17	17-24 excluding 17	17-21 excluding 17
18	1-32 excluding 18	1-24 excluding 18	17-32 excluding 18	17-24 excluding 18	17-24 excluding 18	17-24 excluding 18	17-24 excluding 18	17-21 excluding 18
19	1-32 excluding 19	1-24 excluding 19	17-32 excluding 19	17-24 excluding 19	17-24 excluding 19	17-24 excluding 19	17-24 excluding 19	17-21 excluding 19
20	1-32 excluding 20	1-24 excluding 20	17-32 excluding 20	17-24 excluding 20	17-24 excluding 20	17-24 excluding 20	17-24 excluding 20	17-21 excluding 20
21	1-32 excluding 21	1-24 excluding 21	17-32 excluding 21	17-24 excluding 21	17-24 excluding 21	17-24 excluding 21	17-24 excluding 21	21-24 excluding 21
22	1-32 excluding 22	1-24 excluding 22	17-32 excluding 22	17-24 excluding 22	17-24 excluding 22	17-24 excluding 22	17-24 excluding 22	21-24 excluding 22
23	1-32 excluding 23	1-24 excluding 23	17-32 excluding 23	17-24 excluding 23	17-24 excluding 23	17-24 excluding 23	17-24 excluding 23	21-24 excluding 23
24	1-32 excluding 24	1-24 excluding 24	17-32 excluding 24	17-24 excluding 24	17-24 excluding 24	17-24 excluding 24	17-24 excluding 24	21-24 excluding 24
25	1-32 excluding 25	25-32 excluding 25	17-32 excluding 25	25-32 excluding 25	25-28 excluding 25	25-32 excluding 25	25-28 excluding 25	25-28 excluding 25
26	1-32 excluding 26	25-32 excluding 26	17-32 excluding 26	25-32 excluding 26	25-28 excluding 26	25-32 excluding 26	25-28 excluding 26	25-28 excluding 26
27	1-32 excluding 27	25-32 excluding 27	17-32 excluding 27	25-32 excluding 27	25-28 excluding 27	25-32 excluding 27	25-28 excluding 27	25-28 excluding 27
28	1-32 excluding 28	25-32 excluding 28	17-32 excluding 28	25-32 excluding 28	25-28 excluding 28	25-32 excluding 28	25-28 excluding 28	25-28 excluding 28
29	1-32 excluding 29	25-32 excluding 29	17-32 excluding 29	25-32 excluding 29	29-32 excluding 29	25-32 excluding 29	29-32 excluding 29	29-32 excluding 29
30	1-32 excluding 30	25-32 excluding 30	17-32 excluding 30	25-32 excluding 30	29-32 excluding 30	25-32 excluding 30	29-32 excluding 30	29-32 excluding 30
31	1-32 excluding 31	25-32 excluding 31	17-32 excluding 31	25-32 excluding 31	29-32 excluding 31	25-32 excluding 31	29-32 excluding 31	29-32 excluding 31
32	1-32 excluding 32	25-32 excluding 32	17-32 excluding 32	25-32 excluding 32	29-32 excluding 32	25-32 excluding 32	29-32 excluding 32	29-32 excluding 32

Mix-Minus Mixers

Each mixer card provides eight pre-configured options for generating mix-minus outputs. The table below shows details of these eight different configurations.

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Specification

NETWORK

Physical Interface
2 off RJ45 Neutrik Ethercon
2 off SFP slots

Audio Sample Frequency
Up to 96kS/s

Transfer Rate
1000 Mbps

PHYSICAL

Mechanics
All aluminium with laser etched panels

Size
19" 1RU, 30cm deep

Weight
2.8Kg (1 mix card fitted)

Shipping Weight
4.5Kg

Shipping Size
62 x 42 x 12 cms

Shipping Carton
Rugged export quality cardboard

INCLUDED ITEMS

Handbook
Physical A4 (download also available)

Mains Cable
UK & EU Only, 2 metre mains plug to IEC x 2

RJ45 Network Cable
2 metre Cat5 RJ45plug /RJ45plug cable x2

Compressor/ Limiters

In the screen shot (below right) the vertical column indicates the output level in dBu (0dBu = -18dBFs). The horizontal row indicates the input level in dBFs.
Green Line: No compressors on outputs.
Blue Line: Output compressor on.
Yellow Line: Output compressors on.
(This last option is no longer available)

AUDIO

Audio inputs & outputs are entirely digital fed via the digital network. Internally audio is processed in a DSP with 32 bit resolution. Performance is expected to be completely flat and noise free. We cannot measure it as its performance exceeds the performance of our test equipment.

POWER

No of Inputs
Two

Physical Inputs
IEC Plug

Type of Input
Fully Redundant

Voltage Range
100 -240 VAC +/-10%

Frequency
50 - 60 Hz

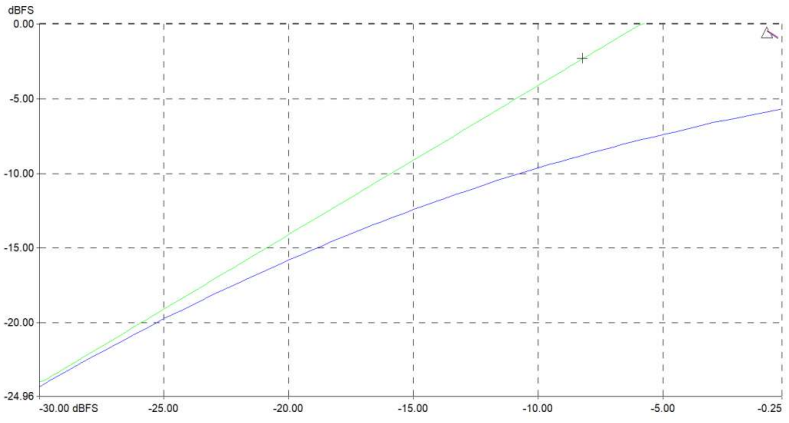
Consumption
14 Watts (1 mix card fitted) then add 2 Watts for each extra mix card

ENVIRONMENTAL

Operating Temperature
0 to +50 °C (32 to 122°F)

Storage Temperature
-20 to +70 °C (-4° to 158°F)

Relative Humidity
0 to 95% non-condensing



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