

THE BEATRICE RANGE from GLEN SOUND

www.glen sound.com



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Keeps Working



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GlenSoundLTD

Dante® Network Intercom



BEATRICE B1 & B2
Ultra Compact Dante®/ AES67 Beltpack Intercoms

Highlights

1 & 2 Channel
Beltpacks

AES67 Compliant

High Output
Headphone Amp

48kHz Crystal
Clear Digital Audio

PoE Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE B1 & B2 are ultra compact, robust, portable 1 & 2 channel beltpack intercoms designed for broadcast, theatre and professional audio applications.

They are part of our Beatrice intercom system that utilises the reliable and proven Dante® network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks. As such, the BEATRICE B1 & B2 are also fully compatible with other manufacturers' equipment using the Dante® protocol. Both units are also AES67 compliant.

These small beltpacks were designed to be very easy to use for the operator and simple to setup for the technician. They include all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.

BEATRICE B1 & B2

Ultra Compact Dante®/ AES67 Beltpack Intercoms

Features

- B1 - One Channel**

One single user connected to the B1 unit can listen to one audio feed from the network and send one audio channel out onto the network. Depending upon how the Dante® network has been routed the incoming audio circuit and outgoing circuit can be different locations and the outgoing circuit can be routed to multiple locations.



- B2 - Two Channels**

One single user connected to the B2 unit can listen to two audio feeds from the network and send two audio channels out onto the network. Depending upon how the Dante® network has been routed the incoming audio circuits and outgoing circuits can be different locations and the outgoing circuits can be routed to multiple locations.



- Mic Amp with Compressor & Phantom Power**

A good quality, clear sounding microphone amplifier, designed for communication purposes, is fitted, which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. 12 Volt Phantom power is also available and can be turned on/ off as required.

- High Output Headphone Amp Suitable For Headphones & Earpieces**

One of our unique headphone amplifiers is fitted to the Beatrice beltpack units. These allow either low or high impedance headphones to be used and automatically adjust the output level to match the impedance of headphones in use. The headphone amplifier is stereo and sources can be panned to left or right ears as desired. The unique headphone amplifier can also drive mono earpieces from its stereo output without any performance issues.



BEATRICE B1 & B2

Ultra Compact Dante®/ AES67 Beltpack Intercoms

Features



- Volume, Panning & Incoming Levels**
 The B1 front panel has one volume level control for its one incoming circuit and the B2 has two volume level controls, one for each of the two incoming audio circuits. These volume controls also double up as pan controls allowing the associated incoming source to be routed to one or other of the operator's ears.

When in setup mode these level controls can also be used to provide preset levels of sidetone and the called alert chime.

- Single Cable For Power & Audio**
 One single standard RJ45 network cable provides both power (PoE) and bi-directional multichannel digital audio (Dante®).

The RJ45 socket on the Beatrice beltpacks are a rugged locking Neutrik etherCON XLR shell connector capable of connecting to both industrial quality etherCON cables and standard network RJ45 patch cables.



- 5 or 4 Pin XLR Headset Connectors**
 As standard the Beatrice B1 & B2 units are fitted with a single 5 pin XLR socket for connecting to users' headsets. This connector carries both microphone and headphone circuits and is wired in an industry standard format. Optionally a 4 pin XLR plug can be factory fitted wired to the industry's alternate standard format.

- Call Function**
 A simple call function is inbuilt allowing the operator of one unit to call/alert other users that they want to communicate with. To call another user the operator double taps the speak key of the channel they want to call, this then flashes a bright yellow call LED on the other users keypanel (if fitted), which continues to flash until the call is answered. As well as flashing a LED at the receiving end of the call, an audible 'beep' can be set to alert the user that an incoming call has been placed to them.



BEATRICE B1 & B2

Ultra Compact Dante®/ AES67 Beltpack Intercoms

Features

- Lever Keys Talkback Switches**

When an operator has the Beatrice beltpacks hooked on their belt, it is often impractical for them to try to look at the unit's front panel to see if a talkback key is on or off. Therefore the B1 and B2 units feature tactile lever keys as the talkback switches. These provide instant indication of a channel's talkback state just by feel of the position of the switch.

The lever keys switches that are fitted have two modes of operation, pushed in one direction they are momentary and pushed in the opposite direction they latch.



- Robust Beltclip**

Both units are fitted with a very long life extremely robust beltclip. We've been using these beltclips on our products for many years and have fitted tens of thousands - so far we are unaware of any breaking in normal use.



- Ultra Compact & Built To Last**

Our design engineers worked hard to utilise the very latest technology to fit the high quality digital electronics in as small a space as possible, making the Beatrice B1 & B2 units the smallest network audio beltpacks on the market today. Although compact, the units are still manufactured in house to our high standards and housed in robust lightweight aluminium enclosures to make sure that they keep working.



B1 & B2 Specification

NETWORK**Physical Interface**

1 off RJ45 Neutrik Ethercon

Audio Sample Frequency

48kS/s

Transfer Rate

100 Mbps

Dante® Chipset

Ultimo UXT-01-004

Note: Audiante recommend no more than 10 Ultimo chipsets on one network **UNLESS** another Dante® device such as the Brooklyn Module (found in 8 channel Beatrice/ Dark units), is on the same network

AES67 Compliant

The Audinate Ultimo chipset is AES67 compliant

AUDIO**Mic Gain Range**

60 to 20dB

Phantom Power

12 Volts

Equivalent Input Noise

-110dB (20-20KHz RMS A Weighted 300 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+10dB into 600 Ohms

Headset Connector

5 pin XLR Socket fitted as standard

4 pin XLR Plug (Order code B1 4pin or B2 4 pin)

Band Pass Filter

50Hz to 15kHz

POWER**Power over Ethernet (PoE)**

48V

Consumption

3 Watts

Call Circuit**Inband Calling Frequency**

20kHz

Amplitude

-20dBFs

Duration Of Signal

2 seconds

Compatibility

All Glensound Beatrice units & Studio Technologies

INCLUDED ITEMS**Handbook**

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

PHYSICAL**Mechanics**

All aluminium with laser etched panels and light textured black powder coated sides

Beltclip

Long life spring loaded plastic

Size (Body excluding Beltclip)

65 x 132 x 37mm (w x l x h)

Weight

248g / 8.8oz

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

SHIPPING SPECIFICATIONS**Weight: 1.75Kg****Shipping Size: 310x260x90mm****Shipping Carton**

Rugged export quality cardboard

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE



Dante® Network Intercom



BEATRICE B4
Four* Channel Beltpack Intercom

Highlights

4* Channel
Beltpack

AES67 Compliant

High Output
Headphone Amp

48kHz Crystal
Clear Digital Audio

PoE Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE B4 is a robust, portable 4* channel beltpack intercom designed for broadcast, theatre and professional audio applications.

It is part of our Beatrice intercom system that utilises the reliable and proven Dante® network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks. As such the BEATRICE B4 is also fully compatible with other manufacturers' equipment using the Dante® protocol. The Beatrice B4 is AES67 compliant.

This small beltpack was designed to be very easy to use for the operator and simple to setup for the technician. It includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.

BEATRICE B4

Four* Channel Beltpack Intercom

Features

- 4* Channels**

One single user connected to the unit can listen to and communicate with 4 separate audio circuits on the network. Depending upon how the Dante® network has been routed the incoming audio circuits and outgoing circuits can be different locations. PLEASE NOTE THERE IS A LIMITATION TO INCOMING NETWORK STREAMS: SEE * IN SPECIFICATION.
- Dante® Routing & Partyline**

Audio routing to/from other devices is setup using Dante® controller which allows for point to multipoint routing on outgoing circuits (but only 1 single incoming audio circuit for each of the 4 channels).
An inbuilt partyline facility allows any of the 4 incoming circuits to be routed to any of the 4 output circuits making both simple partyline and more complex group circuits easily configured.
- Presence Indicator**

Each channel has its own red LED that acts as a presence detector on the incoming audio circuit. When audio is detected the LED is lit and it stays lit for a short period after the incoming audio stops to enable the operator to know who is talking to them.
- Mic Amp with Compressor & Phantom Power**

A good quality, clear sounding microphone amplifier designed for communication purposes is fitted which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. 12 Volt Phantom power is also available and can be turned on/ off as required.
- High Output Headphone Amp Suitable For Headphones & Earpieces**

One of our unique headphone amplifiers is fitted to the Beatrice B4. This allows either low or high impedance headphones to be used and automatically adjusts the output level to match the impedance of headphones in use. The headphone amplifier is stereo and sources can be panned to left or right ears as desired. The unique headphone amplifier can also drive mono earpieces from its stereo output without any performance issues.



BEATRICE B4

Four* Channel Beltpack Intercom

Features



- Volume, Panning & Incoming Levels**
 The front panel features an easy to use volume/ setup control. This multi-functional control provides day to day operational control of:
 - A)** Overall volume control (just turn the knob)
 - B)** Incoming channel level (push the speak key and turn the knob simultaneously)
 - C)** Panning (push the speak key and push and turn the knob simultaneously)

- Single Cable For Power & Audio**
 One single standard RJ45 network cable provides both power (PoE) and bi-directional multichannel digital audio (Dante®). The RJ45 socket on the Beatrice B4 is a rugged locking Neutrik etherCON XLR shell connector capable of connecting to both industrial quality etherCON cables and standard network RJ45 patch cables.



- Optional Multipin XLR Headset Connector**
 As standard the Beatrice B4 is fitted with a normal 3 pin balanced XLR socket for the microphone input and a 6.35mm (1/4") TRS jack socket for the headphone output. Optional single connector 4 and 5 pin XLRs carrying both mic and headphone circuits can be factory fitted wired to any of the industry standards for connection to customers' preferred headsets.
- Call Function**
 A simple call function is inbuilt allowing the operator of one unit to call/alert other users that they want to communicate with them. To call another user the operator double taps the speak key of the channel they want to call, this then flashes a bright yellow call LED on the other users keypanel, which continues to flash until the call is answered. As well as flashing a LED at the receiving end of the call an audible 'beep' can be set to alert the user that an incoming call has been placed to them.



- Display for Setup**

To make setup of the unit easy and intuitive a display is provided on the side panel. This display provides a simple menu system for setting up such items as:

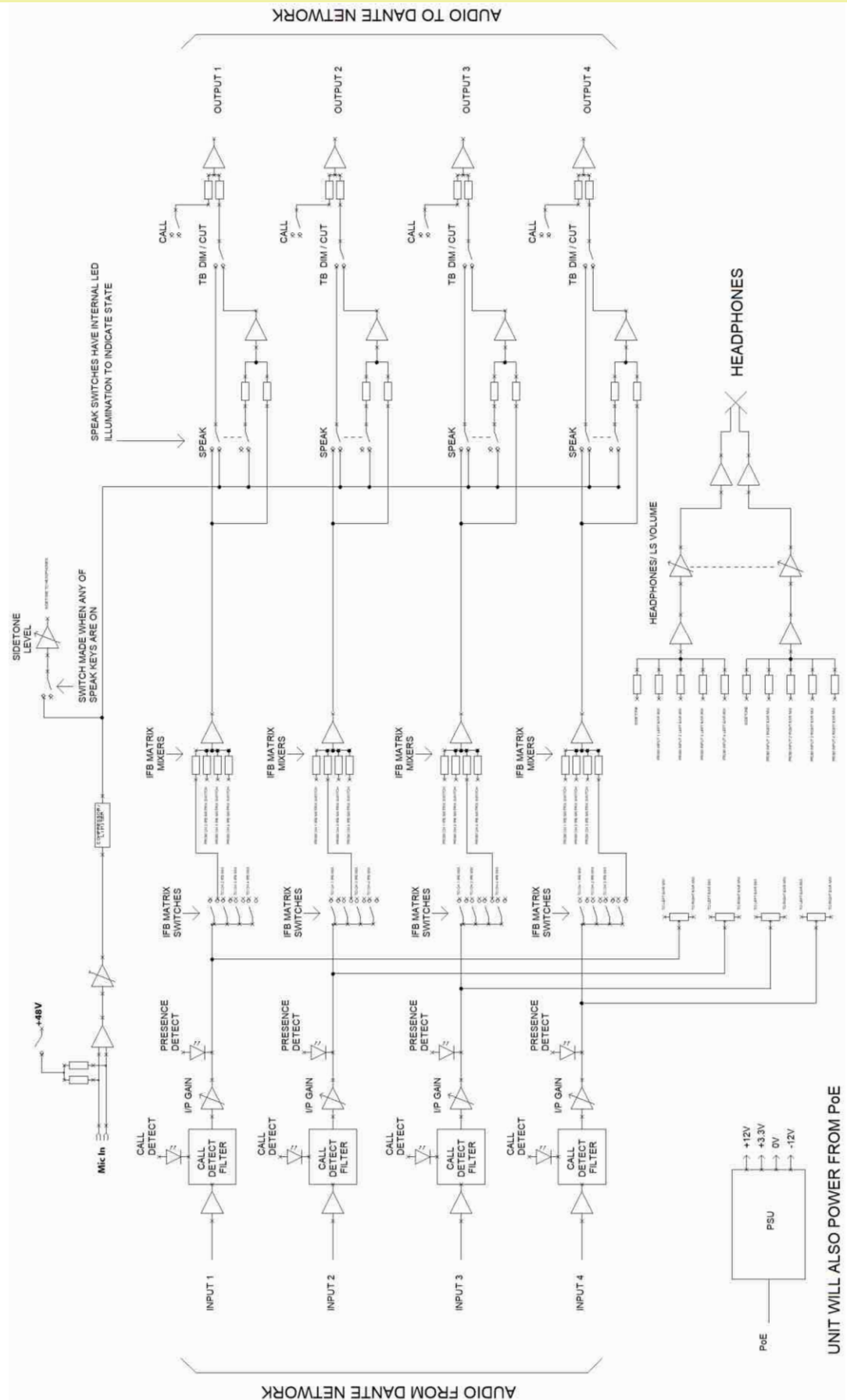
 - Button Configuration
 - Input Type (Mic/ Line)
 - Microphone Gain
 - Phantom Power On/ Off
 - Sidetone Level (Own voice)
 - Partyline/ Loop Through Mode
 - Mixing/ Cutting of Partyline when User Speaks
- Display Type & Illumination**

The display is a simple to read 2 line (each with 16 characters) backlit monochrome LCD. Having been designed for use in professional environments the back light is only illuminated when the Beatrice B4 is in setup mode. In normal day to day operation the display and back light are not required and therefore the back light is not on.



Simplified Block Diagram

The audio block diagram below shows an analogue representation of the digital audio routes within the Beatrice B4.

Block Diagram

Specification

* FOUR INCOMING AUDIO CIRCUITS

This device uses Audinate's Ultimo Chipset. This chipset can receive 4 incoming audio channels, each at 48kHz. However this chipset can only receive these 4 audio channels from a maximum of 2 network locations.

NETWORK

Physical Interface

1 off RJ45 Neutrik Ethercon

Audio Sample Frequency

48kS/s

Transfer Rate

100 Mbps

Dante® Chipset

Ultimo UXT-01-004

Note: Audinate recommends no more than 10 Ultimo chipsets on one network **UNLESS** another Dante® device such as the Brooklyn Module (found in 8 channel Beatrice/ Dark units), is on the same network

AES67 Compliant

The Audinate Ultimo chipset is AES67 compliant

AUDIO

Mic Gain Range

60 to 20dB

Phantom Power

12 Volts

Equivalent Input Noise

-110dB (20-20Khz RMS A Weighted 300 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+10dB into 600 Ohms

Headphone Connector

6.35mm (1/4") TRS socket, can be safely connected to mono TS jack plug

Band Pass Filter

50Hz to 15kHz

INCLUDED ITEMS

Handbook

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

OPTIONAL ITEMS

Shoulder Strap

Black padded strap printed with GlenSound logo

POWER

Power over Ethernet (PoE)

48V

Consumption

5 Watts

Call Circuit

Inband Calling Frequency

20kHz

Amplitude

-20dBfs

Duration Of Signal

2 seconds

Compatibility

All GlenSound Beatrice units & Studio Technologies

PHYSICAL

Mechanics

All aluminium with laser etched panels and light textured black powder coated sides

Beltclip

Long life spring loaded plastic

Shoulder Strap Holes

4 off (2 either side) 6.5mm Diameter

Size

92 x 164 x 39mm (w x l x h)

Weight

850g 1.9lb

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

SHIPPING SPECIFICATIONS

Weight: 2.35Kg

Shipping Size: 310x260x90mm

Shipping Carton

Rugged export quality cardboard

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE





BEATRICE B4 +

Four Channel Beatrice Beltpack Intercom On Dante / AES67 Networks

Highlights

4 x Fixed IFB
Channels

AES67 Compliant

4 Direct Access
Talk Buttons

Dante Broadway
Design

PoE Powered

Ultra Compact
Design

Overview

The Beatrice B4+ is Glensound's first Broadway design unit, with 16 inputs/outputs to the Dante/AES67 network. The B4+ can interface with 4 completely separate network locations.

The design of the B4+ is ultra compact to make the unit as unobtrusive to the operator as possible.

The microphone input is on a 3 pin XLR and features gain adjust and 48V phantom power. The XLR connector can be specified with 4 or 5 pins for headset connection.

Four separate talk buttons route the microphone input to either of the 4 network outputs. The button operation can be configured as momentary, latching or intelligent. A double tap of any talk button will produce a 'call' signal alert that will be received by another Beatrice unit. An LED indicates an incoming call alert, which will also produce an audio indication on the headphones.



Each input has a separate level control adjust and a signal present indicator.

The 16 inputs and outputs feature some useful utility mixing options, and 4 permanent IFBs are available.

Later in the year the settings will be accessible via remote control software.

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

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Dante® Network Intercom



BEATRICE D4

Four* Channel Desktop Intercom

Highlights

4* Channel
Desktop

Simple To Use

Large Highly
Intelligible
Loudspeaker

48kHz Crystal
Clear Digital Audio

Mains/
PoE Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE D4 is a robust, 4* channel Desktop intercom with crystal clear audio designed for broadcast, theatre and professional audio applications.

It is part of our Beatrice intercom system that utilises the reliable and proven Dante® network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks. As such the BEATRICE D4 is also fully compatible with other manufacturers' equipment using the Dante® protocol. The Beatrice D4 is also AES67 compliant.

This small desktop was designed to be very easy to use for the operator and simple to setup for the technician. It includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.



- 4* Channels**

One single user connected to the unit can listen to and communicate with 4* separate locations on the network. Depending upon how the Dante® network has been routed the incoming audio circuits and outgoing circuits can be different locations. PLEASE NOTE THERE IS A LIMITATION TO INCOMING NETWORK STREAMS SEE* IN SPECIFICATION.
- Dante® Routing & Partyline**

Audio routing to/ from other devices is setup using Dante® controller which allows for point to multipoint routing on outgoing circuits (but only 1 single incoming circuit for each of the 4 channels).

An inbuilt partyline facility allows any of the 4 incoming circuits to be routed to any of the 4 output circuits making both simple partyline and more complex group circuits easily configured.
- Onboard Mic & External Mic Input**

A good quality, clear sounding microphone amplifier designed for communication purposes is fitted which also has the benefit of a compressor/limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. This microphone amp has two microphone sources, either the inbuilt front panel mounted electret capsule which provides good voice intelligibility from normal working distances or a balanced XLR input for connecting external gooseneck microphones. Twelve Volt Phantom power is also available and can be turned on/off as required.
- Large Diameter Visatron Loudspeaker**

What's the point of an intercom unit if the onboard speaker is so small and cheap that you can't understand what is being said to you? We use high output, high quality, large magnet Visatron speakers with excellent voice intelligibility to make communication straightforward and easy to understand.

Intercom & Talkback





- Volume, Panning & Incoming Levels**

The front panel features an easy to use volume/setup control. This multi-functional control provides day to day operational control of:

 - A)** Overall volume control (just turn the knob)
 - B)** Incoming channel level (push the speak key and turn the knob simultaneously)
 - C)** Panning (push the speak key and push and turn the knob simultaneously)
- Mains or PoE Powered**

An inbuilt wide range switch mode mains power supply is fitted for powering the Beatrice D4. It is terminated with a standard IEC plug, making it easy to plug in wherever you are in the World. It can also be powered via the Ethernet cable by standard PoE (Power over Ethernet), which can be supplied by an external PoE switch or a midspan power injector.
- Headphone Output**

One of our unique headphone amplifiers is fitted to the Beatrice D4. This allows either low or high impedance headphones to be used and automatically adjusts the output level to match the impedance of headphones in use. The headphone amplifier is stereo and sources can be panned to left or right ears as desired. The unique headphone amplifier can also drive mono earpieces from its stereo output without any performance issues. Headphone connection is via a standard 6.35mm TRS jack socket located out of the way on the rear panel.
- Call Function**

A simple call function is inbuilt allowing the operator of one unit to call/alert other users that they want to communicate with them. To call another user the operator double taps the speak key of the channel they want to call, this then flashes a bright yellow call LED on the other users keypanel, which continues to flash until the call is answered. As well as flashing a LED at the receiving end of the call an audible 'beep' can be set to alert the user that an incoming call has been placed to them.



BEATRICE D4

Four* Channel Desktop Intercom

Features



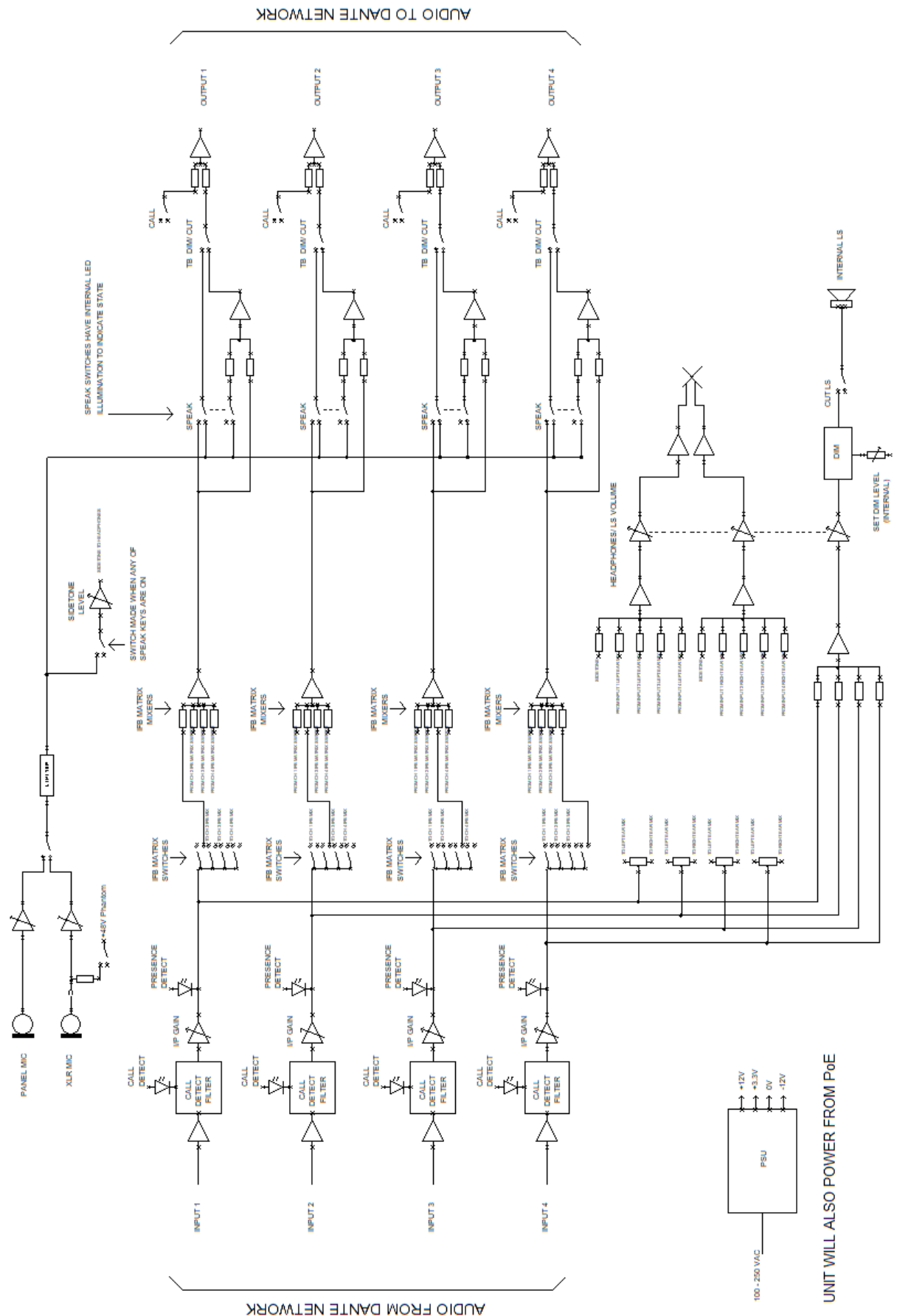
- Display for Setup**
 To make setup of the unit easy and intuitive a display is provided on the front panels. This display provides a simple menu system for setting up such items as:
 - Button Configuration
 - Input Type (Mic/Line)
 - Microphone Gain
 - Phantom Power On/Off
 - Sidetone Level (Own voice in own headphones)
 - Partyline/ Loop Through Mode
 - Mixing/Cutting of Partyline when User Speaks
- Presence Indicator**
 Each channel has its own red LED that acts as a presence detector on the incoming audio circuit. When audio is detected the LED is lit and it stays lit for a short period after the incoming audio stops.
- Small and Robust**
 The Beatrice D4 is manufactured using lightweight but strong aluminium. It has laser etched aluminium front & rear panels and powder coated aluminium sides. The form factor has been carefully designed to be as small as the internal electronics allow whilst keeping user buttons, microphone and loudspeaker ergonomically positioned for optimum user experience. Weighing in at just 1.5Kg it is light enough to easily transport but heavy enough to stay put on a busy desk or work surface, and at just 41 x 214 x 172mm it won't get in the way.



Simplified Block Diagram

The audio block diagram below shows an analogue representation of the digital audio routes within the Beatrice D4.

Block Diagram



Specification

*** FOUR INCOMING AUDIO CIRCUITS:** This device uses Audinate's Ultimo Chipset. This chipset can receive 4 incoming audio channels each at 48kHz. However this chipset can only receive these 4 audio channels from a maximum of 2 network locations.

NETWORK

Physical Interface

1 off RJ45 Neutrik Ethercon

Audio Sample Frequency

48kS/s

Transfer Rate

100 Mbps

Dante® Chipset

Ultimo UXT-01-004

Note: Audinate recommends no more than 10 Ultimo chipsets on one network **UNLESS** another Dante® device such as the Brooklyn Module (found in 8 channel Beatrice/ Dark units), is on the same network

AES67 Compliant

The Audinate Ultimo chipset is AES67 compliant

AUDIO

Mic Gain Range

60 to 20dB

Phantom Power

12 Volts

Equivalent Input Noise

-110dB (20-20KHz RMS A Weighted 300 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+10dB into 600 Ohms

Headphone Connector

6.35mm (1/4") TRS socket, can be safely connected to mono TS jack plug

Band Pass Filter

50Hz to 15kHz

Line Input Gain Range

+10 to -20dB

Loudspeaker Drive Unit

8cm (3.3") fullrange, high efficiency, 10 watt
130 - 20000 Hz

INCLUDED ITEMS

Handbook

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

POWER

Mains Voltage

100 - 240 VAC +/-10%

Consumption

8 Watts

Mains Frequency

50 to 60 Hz

Power over Ethernet (PoE)

48V

Redundancy

Mains & PoE supplies are dioded together for glitch free redundancy

Call Circuit

Inband Calling Frequency

20kHz

Amplitude

-20dBfs

Duration Of Signal

2 seconds

Compatibility

All Glensound Beatrice units & Studio Technologies

PHYSICAL

Mechanics

All aluminium with laser etched panels and light textured black powder coated sides

Size

214x172x41mm (w x l x h)

Weight

1.1kg 2.42lb

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

SHIPPING SPECIFICATIONS

Weight: 2.6Kg

Shipping Size: 3290x230x270mm

Shipping Carton

Rugged export quality cardboard

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE



Dante® Network Intercom



BEATRICE D8
Eight Channel Desktop Intercom

Highlights

Dante® and
AES67 Compliant

Simple To Use

Intelligible
Loudspeaker

48kHz Crystal
Clear Digital Audio

Mains/
PoE Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE D8 is a versatile and fully featured, 8 channel desktop intercom with crystal clear audio designed for broadcast, theatre and professional audio applications.

It is part of our Beatrice intercom system that utilises the reliable and proven Dante network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks, it is also AES67 compliant. As such the BEATRICE D8 is fully compatible with other manufacturers' equipment using the Dante and/ or AES67 protocols.

The desktop intercom was designed to be very easy to use for the operator and simple to set up for the technician. It includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.

BEATRICE D8

Eight Channel Desktop Intercom

Features



- 8 Channels Of Intercom**
 One single user connected to the unit can listen to and communicate with 8 separate locations on the network. Depending upon how the Dante network has been routed the incoming audio circuits and outgoing circuits can be different locations.
- Dante Routing & Partyline**
 Audio routing to/ from other devices is setup using Dante controller which allows for point to multipoint routing on outgoing circuits (but only 1 single incoming circuit for each of the 8 channels). Therefore we've included an inbuilt fixed ratio 14 input 19 output mixer matrix with inputs and outputs connected directly to the Dante / AES67 network, which allows for setting up partyline and complex group circuits.
- Onboard Mic & External Mic Input**
 A good quality, clear sounding microphone amplifier designed for communication purposes is fitted which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. This microphone amp has two microphone sources, either the inbuilt front panel mounted electret capsule which provides good voice intelligibility from normal working distances or a balanced XLR input for connecting external gooseneck microphones. Twelve Volt Phantom power is also available and can be turned on/ off as required via an internal link.
- Large Diameter Visatron Loudspeaker**
 What's the point of an intercom unit if the onboard speaker is so small and cheap that you can't understand what is being said to you? We use high output, high quality, large magnet Visatron speakers with excellent voice intelligibility to make communication straightforward and easy to understand.

Intercom & Talkback



BEATRICE D8

Eight Channel Desktop Intercom

Features



- Mains or PoE Powered**
 An inbuilt wide range switch mode mains power supply is fitted for powering the Beatrice D8. It is terminated with a standard IEC plug, making it easy to plug in wherever you are in the World.
 The unit can also be powered via the Ethernet cable by standard PoE (Power over Ethernet) on either of the copper Ethernet ports. The PoE power can be supplied by an external PoE switch or a midspan power injector.

- Redundant Twin Copper & Twin Fibre Ethernet Interface**
 When ultra reliable communications is needed for the utmost important jobs, glitch free redundant network circuits can be set up using the primary and secondary Dante network ports.
 There are 2 copper Ethernet ports on Neutrik Ethercons and also 2 fibre Ethernet ports presented as SFP slots (SFP modules not included). Redundant networks can be set up across any of these ports.



- Channel Input and Output Gain Controls**
 For maximum flexibility, gain can be applied to incoming audio signals and outgoing signals separately. A row of LEDs indicate the current gain setting when a channel's input or output is being adjusted.



Intercom & Talkback



BEATRICE D8

Eight Channel Desktop Intercom

Features



Programmable Speak Keys

Each speak key can be individually programmed to operate how you would like, be it push to talk, latching or intelligent lever key.

- AUX/IFB**
 To allow a flexible intercom system to be built around the D8, AUX/ IFB circuits are built in.
 This means that for each of the 8 talkback outputs there is a specific AUX/ IFB audio input from the Dante/ AES67 network.
 Any audio routed to the channel's AUX/ IFB input is mixed together with the channel's outgoing talkback circuit. The incoming AUX/ IFB audio is ducked when the channel's talkback key is operated. The level of ducking is user configured.
- IFB Monitoring**
 If the D8 is being used as an outside source talkback device then it is possible to set the audio monitoring circuits to monitor the incoming AUX/ IFB circuits and not the 'normal' Dante inputs.
 This allows an operator to know what they hear is also what the outside source hears
- Monitor Button Setup**
 To allow you to operate the D8 in a way that works for you it is possible to set the loudspeaker/ monitor circuits to either route all the monitoring inputs circuits to the loudspeaker/ monitor when all the monitoring select switches are off, or have the unit not send any audio to the loudspeaker/ monitor when all switches are off.
- Variable Loudspeaker Dimming**
 The output level of the loudspeaker automatically dims when a speak key is pressed to prevent acoustical feedback. The level of the dim can be programmed by the operator to suit their working environment.
- Presence Indication**
 A front panel illuminated red switch is used to indicate the presence of incoming audio on that channel. When audio is detected on the channel the switches internal red LED is illuminated. The red LED then stays on for a short period after the incoming audio stops to help the operator identify who has been talking to them.



Monitor Selection

Each channel has an illuminated audio monitor switch. This allows the channels' incoming audio circuit to be routed to the headphones/ loudspeakers. Using these switches makes it easy for an operator to just monitor the desired incoming audio channels.



Call Function

A simple call function is inbuilt allowing the operator of one unit to call/alert other users that they want to communicate with. A simple double tap of the speak key initiates a calling signal sent to the other party. The audio presence indicator flashes to indicate that you have been called. As well as the flashing LED at the receiving end of the call an audible 'beep' can be set to alert the user that an incoming call has been placed to them. The call function can be disabled on a channel by channel basis if required.

Mixer Matrix

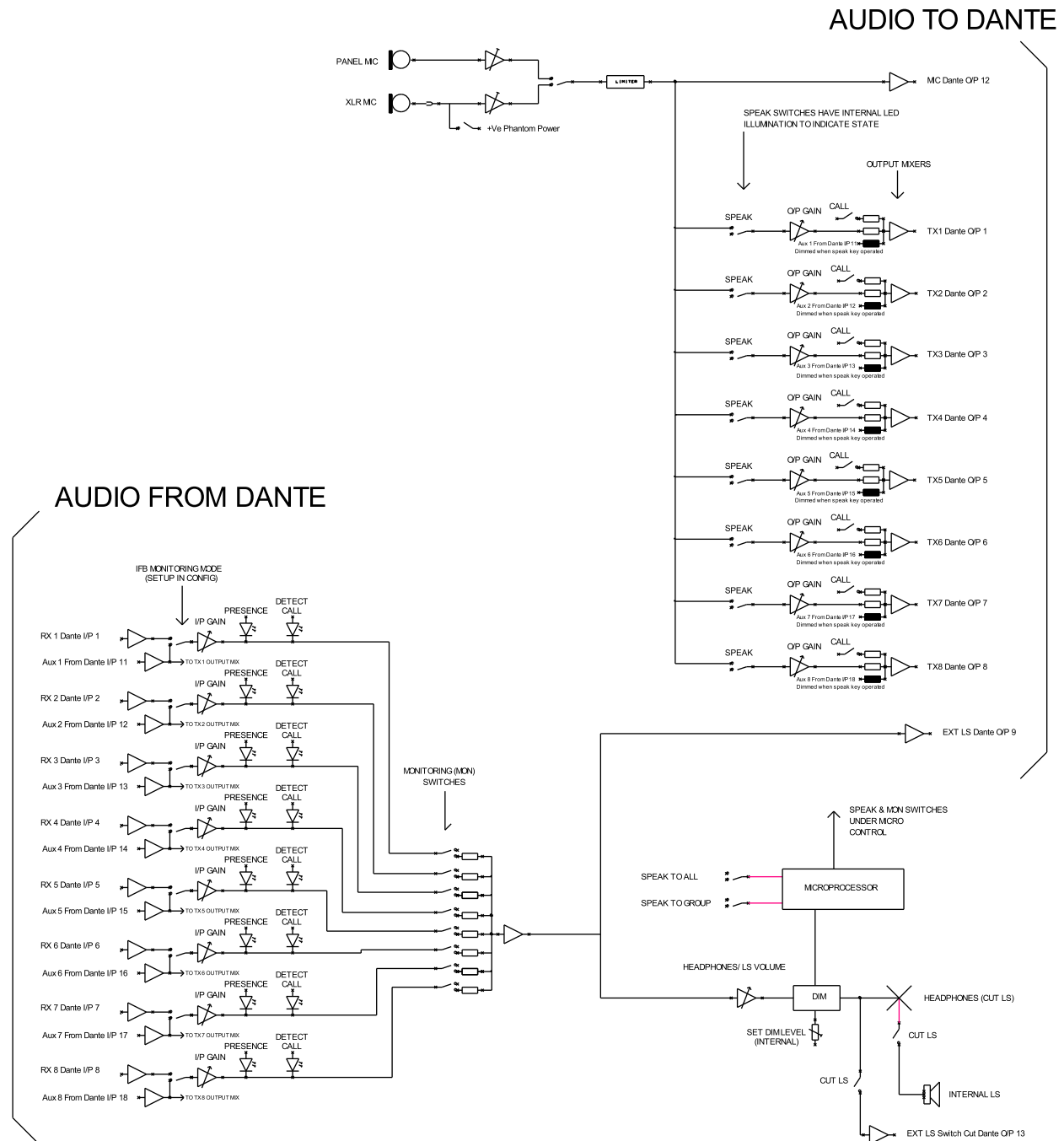
For setting up more complex groups and partyline circuits that could not be achieved via Dante controller or your AES67 router, an inbuilt fixed ratio mixer is supplied. It has 14 audio inputs direct from the network and 19 mix outputs to the network. 5 of the mixers have inbuilt automatic audio ducking circuits.

MIX OUTPUT		SUM OFF	NOTES
Dante Output Channel No:	Default Name in Dante Controller:	Dante Receiver Channel Nos:	
14	"Sum of 19 to 32"	19 to 32	
15	"Sum of 19 to 25"	19 to 25	
16	"Sum of 26 to 32"	26 to 32	
17	"Sum of 19 to 21"	19 to 21	
18	"Sum of 22 to 24"	22 to 24	
19	"Sum of 25 to 27"	25 to 27	
20	"Sum of 28 to 30"	28 to 30	
21	"Sum of 19 & 20"	19 and 20	
22	"Sum of 21 & 22"	21 and 22	
23	"Sum of 23 & 24"	23 and 24	
24	"Sum of 25 & 26"	25 and 26	
25	"Sum of 27 & 28"	27 and 28	
26	"Sum of 29 & 30"	29 and 30	
27	"Sum of 31 & 32"	31 and 32	
28	"Sum of 19 & 20 Dim"	19 and 20	Note Mix in 19 dimmed when signal present on Mix in 20
29	"Sum of 21 & 22 Dim"	21 and 22	Note Mix in 21 dimmed when signal present on Mix in 22
30	"Sum of 23 & 24 Dim"	23 and 24	Note Mix in 23 dimmed when signal present on Mix in 24
31	"Sum of 25 & 26 Dim"	25 and 26	Note Mix in 25 dimmed when signal present on Mix in 26
32	"Sum of 27 & 28 Dim"	27 and 28	Note Mix in 27 dimmed when signal present on Mix in 28

Simplified Block Diagram

The audio block diagram below shows an analogue representation of the digital audio routes with the Beatrice D8 excluding the fixed ratio mixer.

Block Diagram



intercom & Talkback



BEATRICE D8

Eight Channel Desktop Intercom

Specification

NETWORK/ Dante®

Physical Interface

2 off RJ45
2 off SFP slots

Audio Sample Frequency

48kS/s

Transfer Rate

1000 Mbps

Dante® Chipset

Brooklyn II

Note: suitable for acting as master clock for a network incorporating many Ultimo chipsets

AES67 Compliant

AES67 compliant

POWER

Mains Voltage

100 - 240 VAC +/-10%

Mains Frequency

50 to 60 Hz

Power over Ethernet (PoE)

48V

Consumption

10 Watts

Redundancy

Mains & PoE supplies are dioded together for glitch free redundancy

Call Circuit

Inband Calling Frequency

20kHz

Amplitude

-20dBfs

Duration Of Signal

2 seconds

Compatibility

All GlenSound Beatrice units & Studio Technologies

INCLUDED ITEMS

Handbook

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

AUDIO

Mic Gain Range

61 to 21dB

Phantom Power

12 Volts (set via internal link)

Equivalent Input Noise

-126dB (20-20Khz RMS A Weighted 150 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+14dB into 600 Ohms

Headphone Connector

6.35mm (1/4") TRS socket

Band Pass Filter

50Hz to 15kHz

PHYSICAL

Mechanics

All aluminium with laser etched panels and light textured black powder coated base & sides

Size

269 x 172 x 100mm (w x d x h)

Weight

1.6Kg 3.5lb

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

SHIPPING SPECIFICATIONS

Weight: 3.10Kg

Shipping Size: 620x410x210mm

Shipping Carton

Rugged export quality cardboard

MIC/ HEADSET OPTION

Standard (Part no: Beatrice D8)

Front Panel 3 pin XLR socket Mic Input

Optional 5 Pin (Part no: Beatrice D8-X5)

Front Panel 5 pin XLR socket Headset Connector

Optional 4 Pin (Part no: Beatrice D8-X4)

Front Panel 4 pin XLR plug Headset Connector

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'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE

Dante® Network Intercom



BEATRICE D8+
Eight Channel Desktop Intercom

Highlights

Dante® and
AES67 Compliant

Simple To Use

Intelligible
Loudspeaker

48kHz Crystal
Clear Digital Audio

Mains/
PoE Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE D8+ is a versatile and fully featured, 8 channel desktop intercom with crystal clear audio designed for broadcast, theatre and professional audio applications.

It is part of our Beatrice intercom system that utilises the reliable and proven Dante network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks. It is also AES67 compliant. As such the BEATRICE D8+ is fully compatible with other manufacturers' equipment using the Dante and/ or AES67 protocols.

This desktop intercom was designed to be very easy to use for the operator and simple to set up for the technician. It includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.

BEATRICE D8+ Eight Channel Desktop Intercom

Features



- 8 Channels Of Intercom**
 One single user connected to the unit can listen to and communicate with 8 separate locations on the network. Depending upon how the Dante network has been routed the incoming audio circuits and outgoing circuits can be different locations.
- 2 Racks make 16 Channels**
 Two Beatrice D8+ units can be joined together by just a pair of digital S/PDIF cables making a fully featured 16 channel intercom unit, with groups, mics, speakers and other resources shared between the 2 units.
- Dante Routing & Partyline**
 Audio routing to/ from other devices is setup using Dante controller which allows for point to multipoint routing on outgoing circuits (but only 1 single incoming circuit for each of the 8 channels). Therefore we've included an inbuilt fixed ratio 14 input 19 output mixer matrix with inputs and outputs connected directly to the Dante / AES67 network which allows for setting up partyline and complex group circuits.
- Onboard Mic & External Mic Input**
 A good quality, clear sounding microphone amplifier designed for communication purposes is fitted which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. This microphone amp has two microphone sources, either the inbuilt front panel mounted electret capsule which provides good voice intelligibility from normal working distances, or a balanced XLR input for connecting external gooseneck microphones. Twelve Volt Phantom power is also available and can be turned on/ off as required via an internal link.
- High Output Intelligible Loudspeaker**
 What's the point of an intercom unit if the onboard speaker is so cheap that you can't understand what is being said to you? We tried hundreds of different drive units before settling on the one used in the Beatrice D8+. We chose it because it had a much cleaner sound and better frequency response for vocals than any other speaker on the market that we tested.

Intercom & Talkback



BEATRICE D8+ Eight Channel Desktop Intercom

Features



- Mains or PoE Powered**
 An inbuilt wide range switch mode mains power supply is fitted for powering the Beatrice D8+. It is terminated with a standard IEC plug, making it easy to plug in wherever you are in the World.
 The unit can also be powered via the Ethernet cable by standard PoE (Power over Ethernet) on either of the copper Ethernet ports. The PoE power can be supplied by an external PoE switch or a midspan power injector.
- Redundant Twin Copper & Twin Fibre Ethernet Interface**
 When ultra reliable communications is needed for the utmost important jobs, glitch free redundant network circuits can be set up using the primary and secondary Dante network ports.
 There are 2 copper Ethernet ports on Neutrik Ethercons and also 2 fibre Ethernet ports presented as SFP slots (SFP modules not included). Redundant networks can be set up across any of these ports. These ports can also be setup as a network switch.
- GPIO**
 There are nine solid state relay outputs. One of these outputs is triggered when any speak key is on (useful for dimming external loudspeakers or red light controls). The other eight are triggered individually when their associated channel receives a call.
 In total there are 12 loop closure inputs. 10 of these control the talk keys (the 8 channels, talk to group & talk to all) and the other 2 provide internal & external LS cuts.

Intercom & Talkback





Microphone Level Meter

An eight LED front panel multipurpose indicator is used to indicate the outgoing microphone level.

- Channel Input and Output Gain Controls**
 For maximum flexibility gain can be applied to incoming audio signals and outgoing signals separately. A row of LEDs indicate the current gain setting when a channel's input or output is being adjusted.
- Monitor Selection**
 Each channel has an illuminated audio monitor switch. This allows the channels' incoming audio circuit to be routed to the headphones/ loudspeakers. Using these switches makes it easy for an operator to just monitor the desired incoming audio channels.
- Call Function**
 A simple call function is inbuilt allowing the operator of one unit to call/alert other users that they want to communicate with. A simple double tap of the speak key initiates a calling signal sent to the other party. The audio presence indicator flashes to indicate that you have been called. As well as the flashing LED at the receiving end of the call an audible 'beep' can be set to alert the user that an incoming call has been placed to them.
- Presence Indication**
 A front panel illuminated red switch is used to indicate the presence of incoming audio on that channel. When audio is detected on the channel the switches internal red LED is illuminated, the red LED then stays on for a short period after the incoming audio stops to help the operator identify who has been talking to them.



Speaker Output

As well as the front panel internal loudspeaker a balanced analogue output is provided for connecting to an external powered loudspeaker.

- 4-Wire Connectivity**
 Two traditional analogue 4-wire circuits can be connected to two of the D8+'s intercom channels by utilising the versatile analogue inputs and outputs.



- Local Input and Output Circuits**

For increased versatility there are 2 local balanced analogue audio inputs and 2 local balanced analogue outputs. The inputs have input gain controls and presence detectors on them (just like an intercom's channel input) and are routed directly to two output channel on the Dante/ AES67 network. The outputs are fed directly from two input channels from the Dante/ AES67 network.
- Mixer Matrix For Partyline**

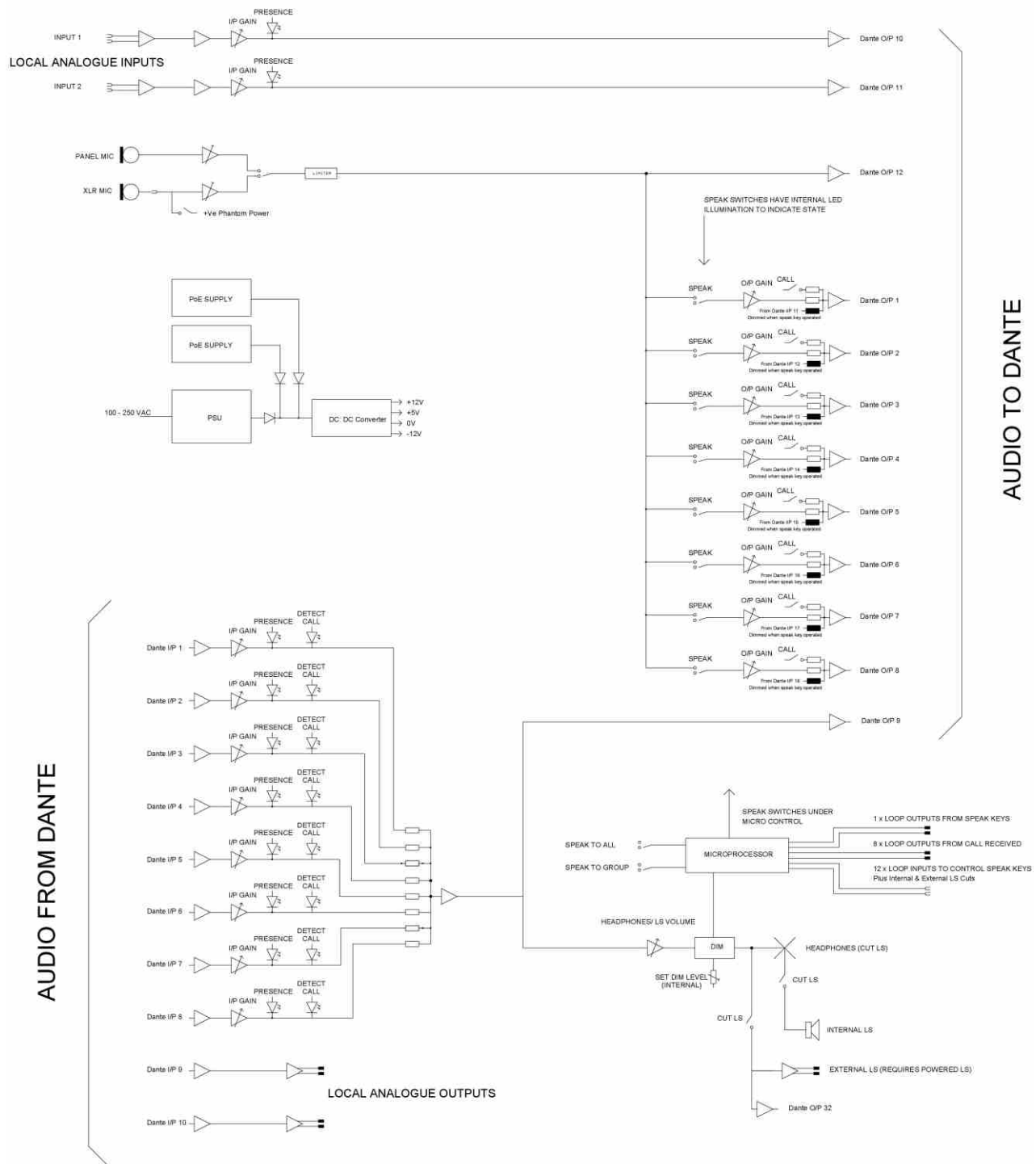
For setting up more complex groups and partyline circuits that could not be achieved via Dante controller or your AES67 router, an inbuilt fixed ratio mixer is supplied. It has 14 audio inputs direct from the network and 19 mix outputs to the network. 5 of the mixers have inbuilt automatic audio ducking circuits.

MIX OUTPUT		SUM OFF	NOTES
<i>Dante Output Channel No:</i>	<i>Default Name in Dante Controller:</i>	<i>Dante Receiver Channel Nos:</i>	
14	"Sum of 19 to 32"	19 to 32	
15	"Sum of 19 to 25"	19 to 25	
16	"Sum of 26 to 32"	26 to 32	
17	"Sum of 19 to 21"	19 to 21	
18	"Sum of 22 to 24"	22 to 24	
19	"Sum of 25 to 27"	25 to 27	
20	"Sum of 28 to 30"	28 to 30	
21	"Sum of 19 & 20"	19 and 20	
22	"Sum of 21 & 22"	21 and 22	
23	"Sum of 23 & 24"	23 and 24	
24	"Sum of 25 & 26"	25 and 26	
25	"Sum of 27 & 28"	27 and 28	
26	"Sum of 29 & 30"	29 and 30	
27	"Sum of 31 & 32"	31 and 32	
28	"Sum of 19 & 20 Dim"	19 and 20	Note Mix in 19 dimmed when signal present on Mix in 20
29	"Sum of 21 & 22 Dim"	21 and 22	Note Mix in 21 dimmed when signal present on Mix in 22
30	"Sum of 23 & 24 Dim"	23 and 24	Note Mix in 23 dimmed when signal present on Mix in 24
31	"Sum of 25 & 26 Dim"	25 and 26	Note Mix in 25 dimmed when signal present on Mix in 26
32	"Sum of 27 & 28 Dim"	27 and 28	Note Mix in 27 dimmed when signal present on Mix in 28

Simplified Block Diagram

The audio block diagram below shows an analogue representation of the digital audio routes within the Beatrice D8+ excluding the fixed ratio mixer.

Block Diagram



BEATRICE D8+

Eight Channel Desktop Intercom

Specification

NETWORK/ Dante

Physical Interface

2 off RJ45 Neutrik Ethercon
2 off SFP slots

Audio Sample Frequency

48kS/s

Transfer Rate

1000 Mbps

Dante Chipset

Brooklyn II

Note: suitable for acting as master clock for a network incorporating many Ultimo chipsets

AES67 Compliant

AES67 compliant

AUDIO

Mic Gain Range

61 to 21dB

Phantom Power

12 Volts (set via internal link)

Equivalent Input Noise

-126dB (20-20KHz RMS A Weighted 150 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+14dB into 600 Ohms

Headphone Connector

6.35mm (1/4") TRS socket

Band Pass Filter

50Hz to 15kHz

POWER

Mains Voltage

100 - 240 VAC +/-10%

Mains Frequency

50 to 60 Hz

Power over Ethernet (PoE)

48V

Consumption

15 Watts

Redundancy

Mains & PoE supplies are dioded together for glitch free redundancy

Call Circuit

Inband Calling Frequency

20kHz

Amplitude

-20dBFS

Duration Of Signal

2 seconds

Compatibility

All Glensound Beatrice units & Studio Technologies

GPIO

GPO

Solid State Relays. Wired N'O and N'C

GPI

Logic level pull down to ground to operate

PHYSICAL

Mechanics

All aluminium with laser etched panels and light textured black powder coated sides

Size

348 x 170 x 100mm (W x D x H)

Weight

1.8Kg 3.5lb

Shipping Weight

3.5Kg

Shipping Size

62 x 42 x 17 cms

Shipping Carton

Rugged export quality cardboard

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

INCLUDED ITEMS

Handbook

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.



Dante® Network Intercom



BEATRICE D16
Sixteen Channel Desktop Intercom

Highlights

Dante® and
AES67 Compliant

Simple To Use

Intelligible
Loudspeaker

48kHz Crystal
Clear Digital Audio

Mains/
PoE Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE D16 is a versatile and fully featured 16 channel desktop intercom with crystal clear audio designed for broadcast, theatre and professional audio applications.

It is part of our Beatrice intercom system that utilises the reliable and proven Dante network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks. It is also AES67 compliant. As such the BEATRICE D16 is fully compatible with other manufacturers' equipment using the Dante and/or AES67 protocols.

This desktop intercom was designed to be very easy to use for the operator and simple to set up for the technician. It includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.



BEATRICE D16

Sixteen Channel Desktop Intercom

Features



- 16 Channels Of Intercom**
 One single user connected to the unit can listen to and communicate with 16 separate locations on the network. Depending upon how the Dante network has been routed the incoming audio circuits and outgoing circuits can be different locations.
- Dante Routing & Partyline**
 Audio routing to/from other devices is setup using Dantecontroller which allows for point to multipoint routing on outgoing circuits (but only 1 single incoming circuit for each of the 16 channels). Therefore we've included an inbuilt fixed ratio 11 input 11 output mixer matrix with inputs and outputs connected directly to the Dante / AES67 network which allows for setting up partyline and group circuits.
- Onboard Mic & External Mic Input**
 A good quality, clear sounding microphone amplifier designed for communication purposes is fitted which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. This microphone amp has two microphone sources, either the inbuilt front panel mounted electret capsule which provides good voice intelligibility from normal working distances, or a balanced XLR input for connecting external gooseneck microphones. Twelve Volt Phantom power is also available and can be turned on/off as required via an internal link.
- Large Diameter Visatron Loudspeaker**
 What's the point of an intercom unit if the onboard speaker is so small and cheap that you can't understand what is being said to you? We use high output, high quality, large magnet Visatron speakers with excellent voice intelligibility to make communication straightforward and easy to understand.

Talkback Intercom & Network



BEATRICE D16 Sixteen Channel Desktop Intercom

Features



- **Mains or PoE Powered**

An inbuilt wide range switch mode mains power supply is fitted for powering the Beatrice D16. It is terminated with a standard IEC plug, making it easy to plug in wherever you are in the World.

The unit can also be powered via the Ethernet cable by standard PoE (Power over Ethernet) on either of the copper Ethernet ports. The PoE power can be supplied by an external PoE switch or a midspan power injector.



- **Redundant Twin Copper & Twin Fibre Ethernet Interface**

When ultra reliable communications is needed for the utmost important jobs, glitch free redundant network circuits can be set up using the primary and secondary Dante network ports.

There are 2 copper Ethernet ports on RJ45s and also 2 fibre Ethernet ports presented as SFP slots (SFP modules not included). Redundant networks can be set up across any of these ports. These ports can also be set up as a network switch.

- **Microphone Level Meter**

An eight LED front panel multipurpose indicator is used to indicate the outgoing microphone level.

- **IFB/ AUX Sources**

Four different IFB/ AUX audio sources are received from the Dante network. Each of the four sources is associated with four outgoing talkback channels. If audio is routed to the(se) IFB/ AUX sources in the network then they are mixed in with their associated outgoing talkback channel circuit.

If a talkback key is on then the associated IFB/ AUX source is ducked by 20dB; if the talkback is not on then the IFB/ AUX source is routed to the channels output with unity gain.

IFB/ AUX sources are very useful for distributing programme audio around an intercom setup whilst the ducking facility allows talkback to be heard over it.



Features

- Channel Input and Output Gain Controls**

For maximum flexibility, gain can be applied to incoming audio signals and outgoing signals separately. A row of LEDs indicate the current gain setting when a channel's input or output is being adjusted.
- Monitor**

All incoming talkback channels are mixed together to the headphones/ loudspeakers.
- Presence Indication**

Front panel LEDs located next to the talk switches are used to indicate the presence of incoming audio on that channel. When audio is detected on the channel the LED is illuminated, the LED then stays on for a short period after the incoming audio stops to help the operator identify who has been talking to them.
- Speak To All and Speak To Group**

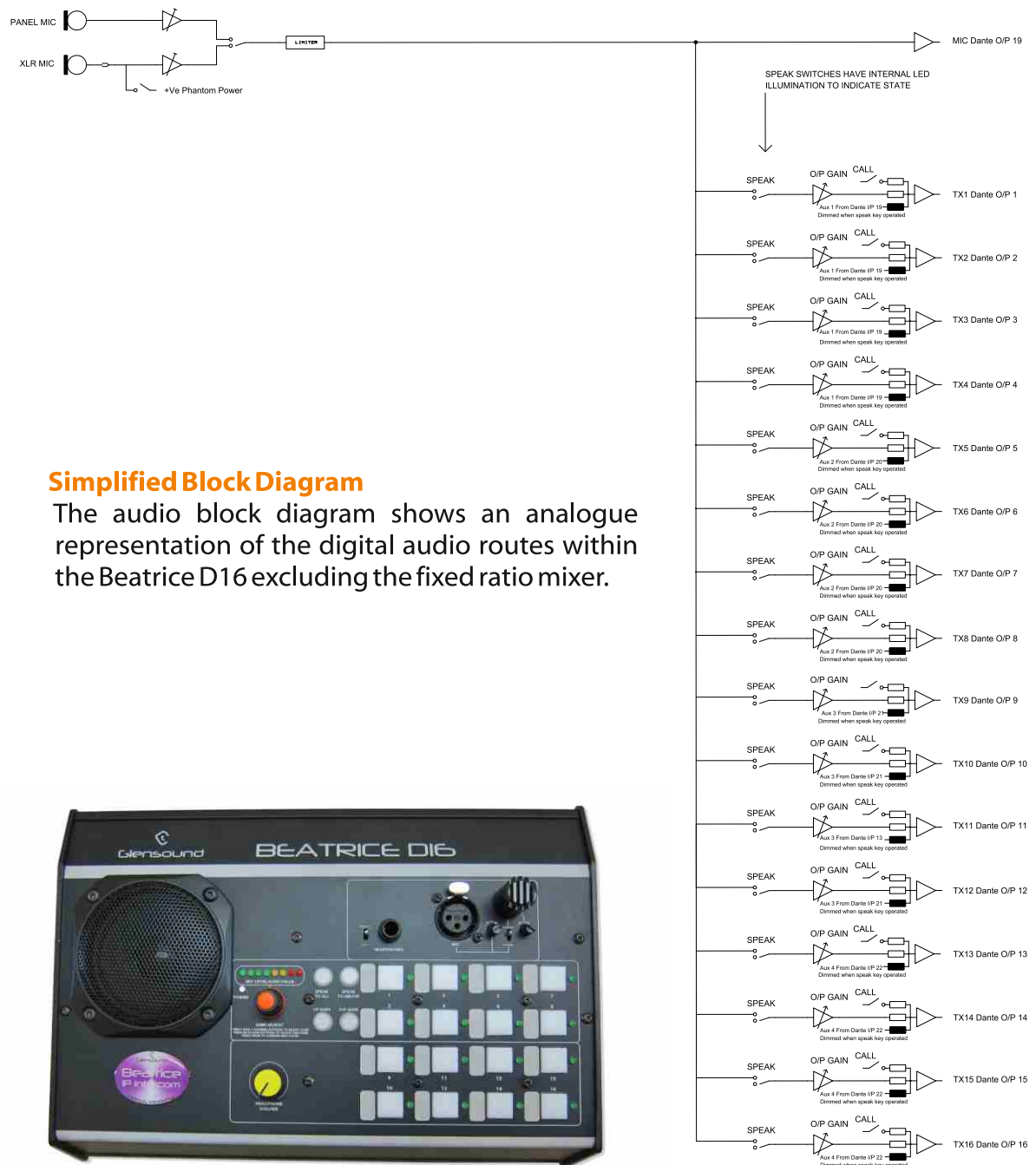
Two useful front panel controls are fitted. When pressed, the 'Speak To All' button will enable the operator to talk to all the outputs simultaneously. The 'Speak To Group' button allows the operator to talk to an easily assignable set of outputs.
- Mixer Matrix For Partyline**

For setting up simple groups and partyline circuits that could not be achieved via Dante controller or your AES67 router, an inbuilt fixed ratio mixer is supplied. It has 11 audio inputs direct from the network and 11 mix outputs to the network.

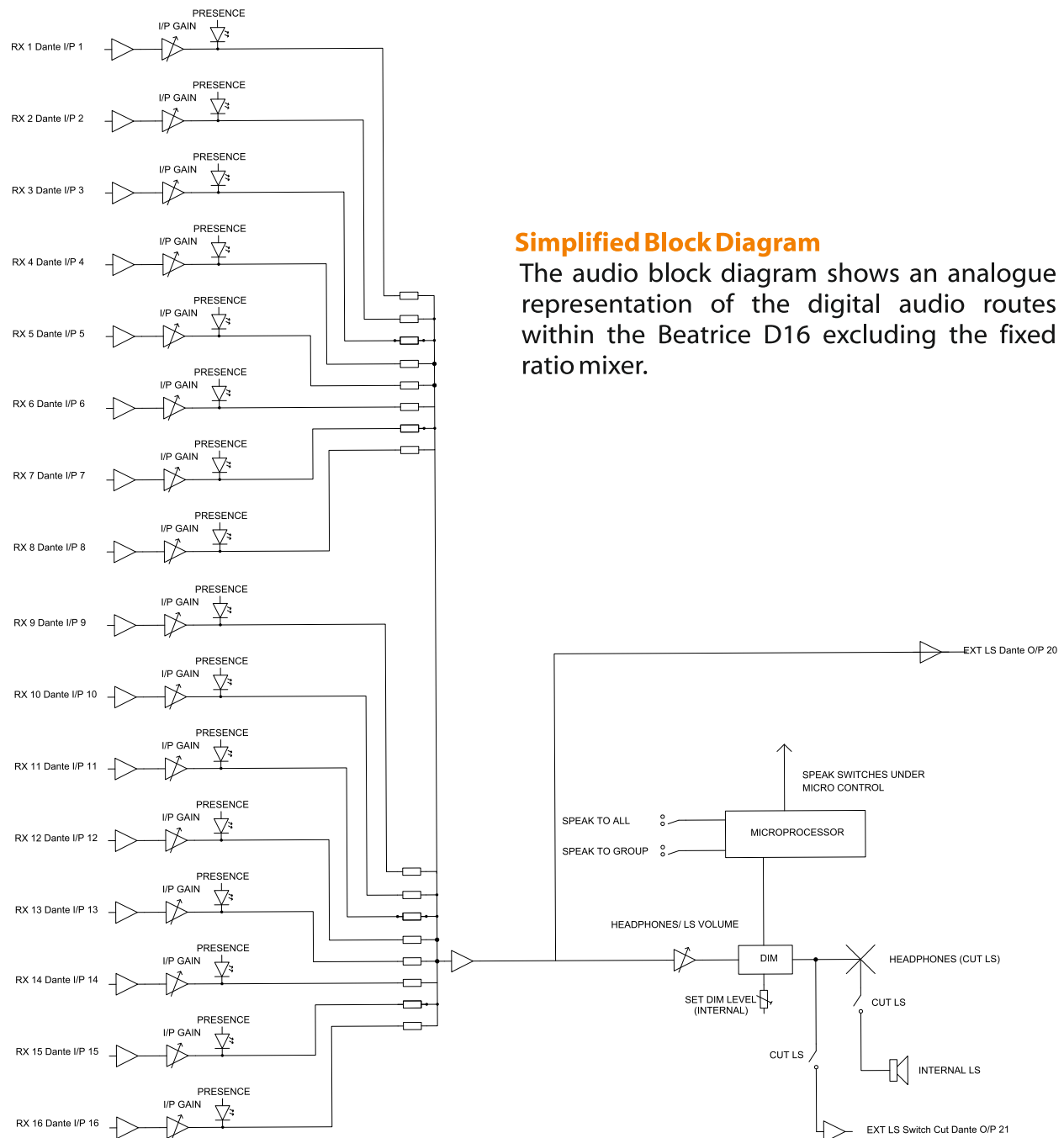
MIX OUTPUT		SUM OFF
<i>Dante Output Channel No:</i>	<i>Default Name in Dante Controller:</i>	<i>Dante Receiver Channel Nos:</i>
22	"Sum of 23 to 32"	23 to 32
23	"Sum of 23 to 27 "	23 to 27
24	"Sum of 28 to 32"	28 to 32
25	"Sum of 23 to 25"	23 to 25
26	"Sum of 26 to 29 "	26 to 29
27	"Sum of 30 to 32 "	30 to 32
28	"Sum of 23 & 24 "	23 and 24
29	"Sum of 25 & 26 "	25 and 26
30	"Sum of 27 & 28 "	27 and 28
31	"Sum of 29 & 30"	29 and 30
32	"Sum of 31 & 32 "	31 and 32



Block Diagram of Audio Sent to The Dante®/ AES67 Network



Block Diagram of Audio Received From The Dante®/ AES67 Network



Simplified Block Diagram

The audio block diagram shows an analogue representation of the digital audio routes within the Beatrice D16 excluding the fixed ratio mixer.

Calling Facility Note:

Please note that unlike the lower channel count Beatrice units (B1, B2, B4, D4, R4, D8, D8+, P1, P2 and R8) the 16 key units D16 and R16 do not support inband calling.

Specification

NETWORK/ Dante®

Physical Interface

2 off RJ45
2 off SFP slots

Audio Sample Frequency

48k

Transfer Rate

1000 Mbps

Dante® Chipset

Brooklyn II

Note: suitable for acting as master clock for a network incorporating many Ultimo chipsets

AES67 Compliant

AUDIO

Mic Gain Range

61 to 21dB

Phantom Power

12 Volts (set via internal link)

Equivalent Input Noise

-126dB (20-20KHz RMS A Weighted 150 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+14dB into 600 Ohms

Headphone Connector

6.35mm (1/4") TRS socket

Band Pass Filter

50Hz to 15kHz

INCLUDED ITEMS

Handbook

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

Mains Cable

2 metre IEC (UK & Europe Only)

MIC/ HEADSET OPTION

Standard (Part no: Beatrice D16)

Front Panel 3 pin XLR socket Mic Input

Optional 5 Pin (Part no: Beatrice D16-X5)

Front Panel 5 pin XLR socket Headset Connector

Optional 4 Pin (Part no: Beatrice D16-X4)

Front Panel 4 pin XLR plug Headset Connector

POWER

Mains Voltage

100 - 240 VAC +/-10%

Mains Frequency

50 to 60 Hz

Power over Ethernet (PoE)

May be powered by PoE on either Copper Port
Complies to: IEEE 802.3af-2003
Classification Class 0

Consumption

<12 Watts

Redundancy

Mains & Both PoE supplies are all dioded together for glitch free redundancy

Power On LED

Bright Blue

PHYSICAL

Mechanics

All aluminium with laser etched panels and light textured black powder coated base & sides

Size

269 x 172 x 100mm (w x d x h)

Weight

1.6Kg 3.5lb

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

SHIPPING SPECIFICATIONS

Weight: 3.10Kg

Shipping Size: 290x230x270mm

Shipping Carton

Rugged export quality cardboard

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'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE

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



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.

BEATRICE MIX32

Network Audio Fixed Ratio Mixer

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.

Intercom Talkback Mixer



BEATRICE MIX32

Network Audio Fixed Ratio Mixer

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

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.

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 4 4	Mix minus 8 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	25-32 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

BEATRICE MIX32

Network Audio Fixed Ratio Mixer

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

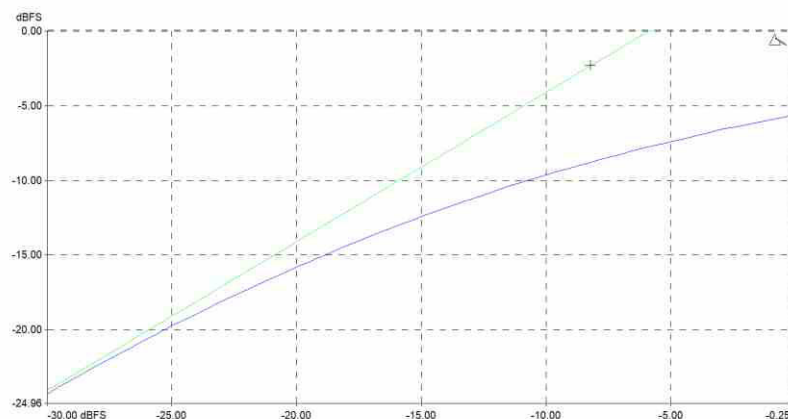
0 to +50 °C (32 to 122°F)

Storage Temperature

-20 to +70 °C (-4° to 158°F)

Relative Humidity

0 to 95% non-condensing



E & OE

Dante® Network Intercom



BEATRICE R4 Four Channel Rackmount Intercom

Highlights

4 Channel
1RU Rackmount

Simple To Use

Intelligible
Loudspeaker

48kHz Crystal
Clear Digital Audio

Mains/
PoE Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE R4 is a versatile, 4 channel rackmount intercom with crystal clear audio designed for broadcast, theatre and professional audio applications.

It is part of our Beatrice intercom system that utilises the reliable and proven Dante network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks. As such the BEATRICE R4 is also fully compatible with other manufacturers' equipment using the Dante / AES67 protocol.

This 1RU rackmount intercom was designed to be very easy to use for the operator and simple to set up for the technician. It includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.



- 4 Channels**

One single user connected to the unit can listen to and communicate with 4 separate locations on the network. Depending upon how the Dante network has been routed the incoming audio circuits and outgoing circuits can be different locations.
- Dante Routing & Partyline**

Audio routing to/ from other devices is set up using Dante controller which allows for point to multipoint routing on outgoing circuits (but only 1 single incoming circuit for each of the 4 channels).
An inbuilt partyline facility allows any of the 4 incoming circuits to be routed to any of the 4 output circuits making both simple partyline and more complex group circuits easily configured.
- Onboard Mic & External Mic Input**

A good quality, clear sounding microphone amplifier designed for communication purposes is fitted which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. This microphone amp has two microphone sources, either the inbuilt front panel mounted electret capsule which provides good voice intelligibility from normal working distances or a balanced XLR input for connecting external gooseneck microphones. Twelve Volt Phantom power is also available and can be turned on/ off as required.
- High Output Intelligible Loudspeaker**

What's the point of an intercom unit if the onboard speaker is so cheap that you can't understand what is being said to you? We tried hundreds of different drive units before settling on the one used in the Beatrice R4. We chose it because it had a much cleaner sound and better frequency response for vocals than any other speaker on the market that would fit in a 1RU subrack.

Features

- **Volume, Panning & Incoming Levels**

The front panel features an easy to use volume/ setup control. This multi-functional control provides day to day operational control of:

- A)** Overall volume control (just turn the knob)
- B)** Incoming channel level (push the speak key and turn the knob simultaneously)
- C)** Panning (push the speak key and push and turn the knob simultaneously)



- **Mains or PoE Powered**

An inbuilt wide range switch mode mains power supply is fitted for powering the Beatrice R4. It is terminated with a standard IEC plug, making it easy to plug in wherever you are in the World. It can also be powered via the Ethernet cable by standard PoE (Power over Ethernet), which can be supplied by an external PoE switch or a midspan power injector.



- **Headphone Output**

One of our unique headphone amplifiers is fitted to the Beatrice R4. These allow either low or high impedance headphones to be used and automatically adjust the output level to match the impedance of headphones in use. The headphone amplifier is stereo and sources can be panned to left or right ears as desired. The unique headphone amplifier can also drive mono earpieces from its stereo output without any performance issues. Headphone connection is via a standard 6.35mm TRS jack socket located conveniently on the front panel.

- **Call Function**

A simple call function is inbuilt allowing the operator of one unit to call/alert other users that they want to communicate with. To call another user the operator double taps the speak key of the channel they want to call. This then flashes a bright yellow call LED on the other user's keypanel, which continues to flash until the call is answered. As well as flashing an LED at the receiving end of the call an audible 'beep' can be set to alert the user that an incoming call has been placed to them.



- Display for Setup**
 To make setup of the unit easy and intuitive a display is provided on the front panels. This display provides a simple menu system for setting up such items as:

Button Configuration
 Input Type (Mic/ Line)
 Microphone Gain
 Phantom Power On/ Off
 Sidetone Level (Own voice in own headphones)
 Partyline/ Loop Through Mode
 Mixing/ Cutting of Partyline when User Speaks



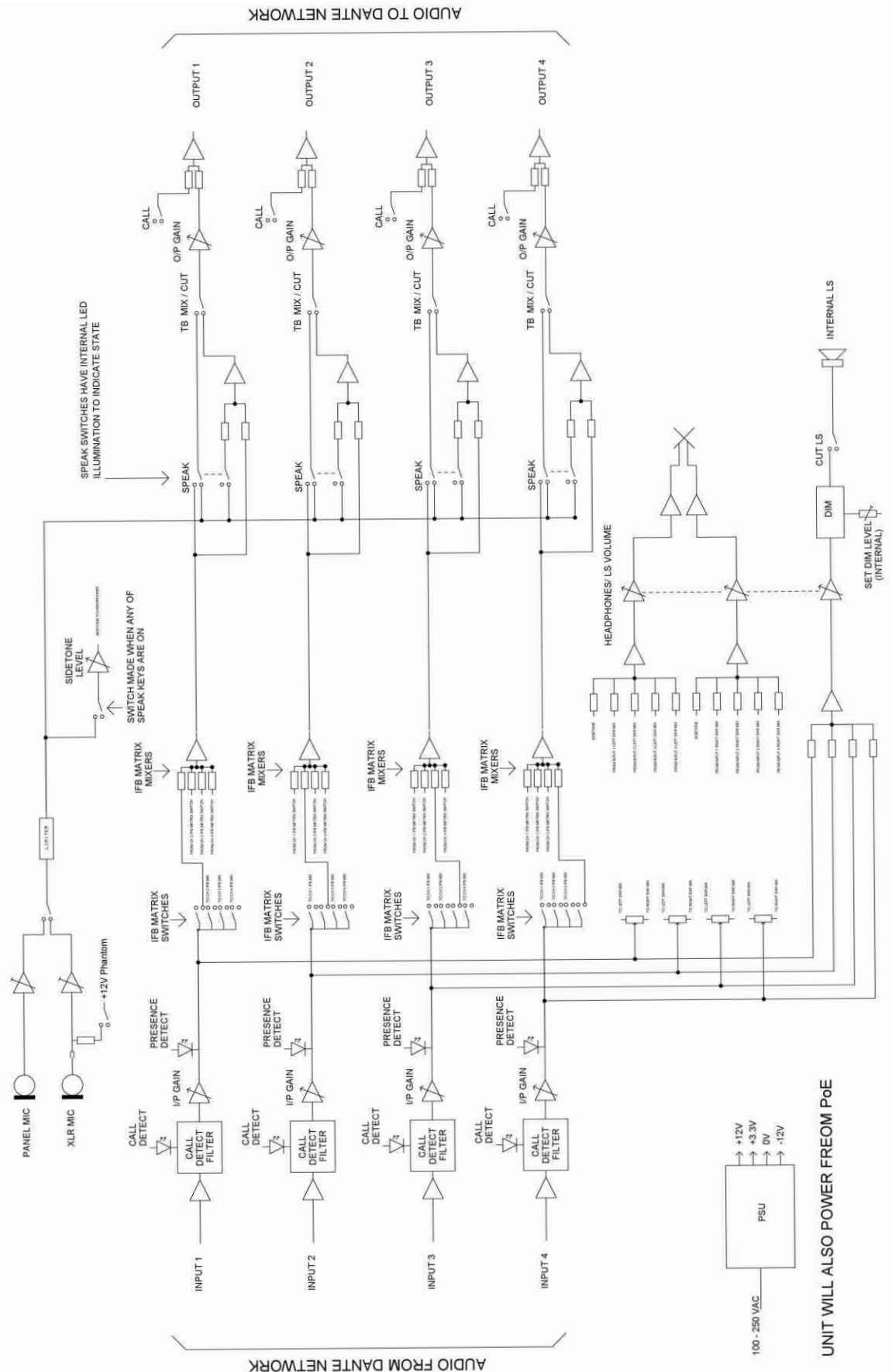
- Presence Indicator**
 Each channel has its own red LED that acts as a presence detector on the incoming audio circuit. When audio is detected the LED is lit and it stays lit for a short period after the incoming audio stops.
- Built to Last**
 The Beatrice R4 is manufactured using lightweight but strong custom designed aluminium extrusions for the front and side panels and lightweight but strong extruded aluminium sheet for the lid and base. Front and rear panels are anodised and laser etched and side panels and lid/ base are powder coated in an aesthetically pleasing textured black powder coat.



Simplified Block Diagram

The audio block diagram below shows an analogue representation of the digital audio routes within the Beatrice R4.

Block Diagram



Specification

NETWORK/ Dante

Physical Interface

1 off RJ45 Neutrik Ethercon

Audio Sample Frequency

48kS/s

Transfer Rate

100 Mbps

Dante Chipset

Ultimo UXT-01-004

Note: Audinate recommend no more than 10 Ultimo chipsets on one network **UNLESS** another Dante device such as the Brooklyn Module (found in 8 channel Beatrice/ Dark units), is on the same network

AES67 Compliant

The Audinate Ultimo chipset is AES67 compliant

PHYSICAL

Mechanics

All aluminium with laser etched panels and light textured black powder coated lid & base

Size

19", 1RU, 164mm deep

Weight

1.5 Kg 3.3lb

Shipping Weight

3.5 Kg

Shipping Size

62 x 42 x 12 cms

Shipping Carton

Rugged export quality cardboard

POWER

Mains Voltage

100 - 240 VAC +/-10%

Mains Frequency

50 to 60 Hz

Power over Ethernet (PoE)

48V

Consumption

4 Watts

Redundancy

Mains & PoE supplies are dioded together for glitch free redundancy

AUDIO

Mic Gain Range

60 to 20dB

Line Input Gain Range

+10 to -20dB

Phantom Power

12 Volts

Equivalent Input Noise

-110dB (20-20Khz RMS A Weighted 300 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+10dB into 600 Ohms

Headphone Connector

6.35mm (1/4") TRS socket, can be safely connected to mono TS jack plug

Band Pass Filter

50Hz to 15kHz

Call Circuit

Inband Calling Frequency

20kHz

Amplitude

-20dBfs

Duration Of Signal

2 seconds

Compatibility

All Glensound Beatrice units & Studio Technologies

INCLUDED ITEMS

Handbook

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

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

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE



Dante® Network Intercom



BEATRICE R8 Eight Channel Rackmount Intercom

Highlights

Dante® and
AES67 Compliant

Simple To Use

Intelligible
Loudspeaker

48kHz Crystal
Clear Digital Audio

Mains/PoE
Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE R8 is a versatile and fully featured, 8 channel rackmount intercom with crystal clear audio designed for broadcast, theatre and professional audio applications.

It is part of our Beatrice intercom system that utilises the reliable and proven Dante network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks, it is also AES67 compliant. As such the BEATRICE R8 is fully compatible with other manufacturers' equipment using the Dante and/or AES67 protocols.

This 1RU rackmount intercom was designed to be very easy to use for the operator and simple to set up for the technician. It includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.

BEATRICE R8

Eight Channel Rackmount Intercom

Features



- 8 Channels Of Intercom**

One single user connected to the unit can listen to and communicate with 8 separate locations on the network. Depending upon how the Dante network has been routed the incoming audio circuits and outgoing circuits can be different locations.
- 2 Racks make 16 Channels**

Two Beatrice R8 racks can be joined together by just a pair of digital S/PDIF cables making a fully featured 2RU 16 channel intercom unit, with groups, mics, speakers and other resources shared between the 2 units.
- Dante Routing & Partyline**

Audio routing to/ from other devices is setup using Dante controller which allows for point to multipoint routing on outgoing circuits (but only 1 single incoming circuit for each of the 8 channels). Therefore we've included an inbuilt fixed ratio 14 input 19 output mixer matrix with inputs and outputs connected directly to the Dante/ AES67 network, which allows for setting up partyline and complex group circuits.
- Onboard Mic & External Mic Input**

A good quality, clear sounding microphone amplifier designed for communication purposes is fitted which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. This microphone amp has two microphone sources, either the inbuilt front panel mounted electret capsule which provides good voice intelligibility from normal working distances or a balanced XLR input for connecting external gooseneck microphones. Twelve Volt Phantom power is also available and can be turned on/ off as required via an internal link.
- High Output Intelligible Loudspeaker**

What's the point of an intercom unit if the onboard speaker is so cheap that you can't understand what is being said to you? We tried hundreds of different drive units before settling on the one used in the Beatrice R8. We chose it because it had a much cleaner sound and better frequency response for vocals than any other speaker on the market that would fit in a 1RU subrack.

Intercom & Talkback



BEATRICE R8

Eight Channel Rackmount Intercom

Features



- Mains or PoE Powered**

An inbuilt wide range switch mode mains power supply is fitted for powering the Beatrice R8. It is terminated with a standard IEC plug, making it easy to plug in wherever you are in the World.

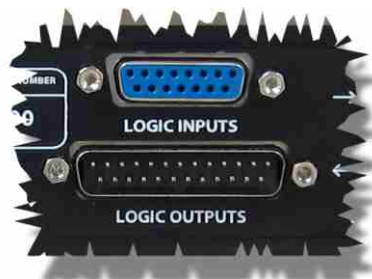
The unit can also be powered via the Ethernet cable by standard PoE (Power over Ethernet) on either of the copper Ethernet ports. The PoE power can be supplied by an external PoE switch or a midspan power injector.



- Redundant Twin Copper & Twin Fibre Ethernet Interface**

When ultra reliable communications is needed for the utmost important jobs, glitch free redundant network circuits can be set up using the primary and secondary Dante network ports.

There are 2 copper Ethernet ports on Neutrik Ethercons and also 2 fibre Ethernet ports presented as SFP slots (SFP modules not included). Redundant networks can be set up across any of these ports. These ports can also be set up as a network switch.



- GPIO**

There are nine solid state relay outputs. One of these outputs is triggered when any speak key is on (useful for dimming external loudspeakers or red light controls), the other eight are triggered individually when their associated channel receives a call.

In total there are 12 loop closure inputs. 10 of these control the talk keys (the 8 channels, talk to group & talk to all) and the other 2 provide internal & external LS cuts.





Microphone Level Meter

An eight LED front panel multipurpose indicator is used to indicate the outgoing microphone level.

- Channel Input and Output Gain Controls**
 For maximum flexibility, gain can be applied to incoming audio signals and outgoing signals separately. A row of LEDs indicate the current gain setting when a channel's input or output is being adjusted.
- Monitor Selection**
 Each channel has an illuminated audio monitor switch. This allows the channels' incoming audio circuit to be routed to the headphones/ loudspeakers. Using these switches makes it easy for an operator to just monitor the desired incoming audio channels.
- Call Function**
 A simple call function is inbuilt allowing the operator of one unit to call/alert other users that they want to communicate with. A simple double tap of the speak key initiates a calling signal sent to the other party. The audio presence indicator flashes to indicate that you have been called. As well as the flashing LED at the receiving end of the call, an audible 'beep' can be set to alert the user that an incoming call has been placed to them. (Call function can be disabled on a channel by channel basis if required).
- Presence Indication**
 A front panel illuminated red switch is used to indicate the presence of incoming audio on that channel. When audio is detected on the channel the switches internal red LED is illuminated, the red LED then stays on for a short period after the incoming audio stops to help the operator identify who has been talking to them.



Speaker Output

As well as the front panel internal loudspeaker, a balanced analogue output is provided for connecting to an external powered loudspeaker.



BEATRICE R8

Eight Channel Rackmount Intercom

Features



Programmable Speak Keys

Each speak key can be individually programmed to operate how you would like, be it push to talk, latching or intelligent lever key.

- AUX/IFB**
 To allow a flexible intercom system to be built around the R8, AUX/ IFB circuits are built in.
 This means that for each of the 8 talkback outputs there is a specific AUX/ IFB audio input from the Dante/ AES67 network.
 Any audio routed to the channels AUX/ IFB input is mixed together with the channel's outgoing talkback circuit. The incoming AUX/ IFB audio is ducked when the channel's talkback key is operated. The level of ducking is user configured.
- IFB Monitoring**
 If the R8 is being used as an outside source talkback device then it is possible to set the audio monitoring circuits to monitor the incoming AUX/ IFB circuits and not the 'normal' Dante inputs.
 This allows an operator to know what they hear is also what the outside source hears.
- Monitor Button Setup**
 To allow you to operate the R8 in a way that works for you, it is possible to set the loudspeaker/ monitor circuits to either route all the monitoring inputs circuits to the loudspeaker/ monitor when all the monitoring select switches are off, or have the unit not send any audio to the loudspeaker/ monitor when all switches are off.
- Variable Loudspeaker Dimming**
 The output level of the loudspeaker automatically dims when a speak key is pressed to prevent acoustical feedback. The level of the dim can be programmed by the operator to suit their working environment.
- 4-Wire Connectivity**
 Two traditional analogue 4-wire circuits can be connected to two of the R8's intercom channels by utilising the versatile analogue inputs and outputs.





- Local Input and Output Circuits**

For increased versatility, there are 2 local balanced analogue audio inputs and 2 local balanced analogue outputs. The inputs have input gain controls and presence detectors on them (just like an intercom's channel input) and are routed directly to two output channels on the Dante / AES67 network. The outputs are fed directly from two input channels from the Dante / AES67 network.
- Mixer Matrix For Partyline**

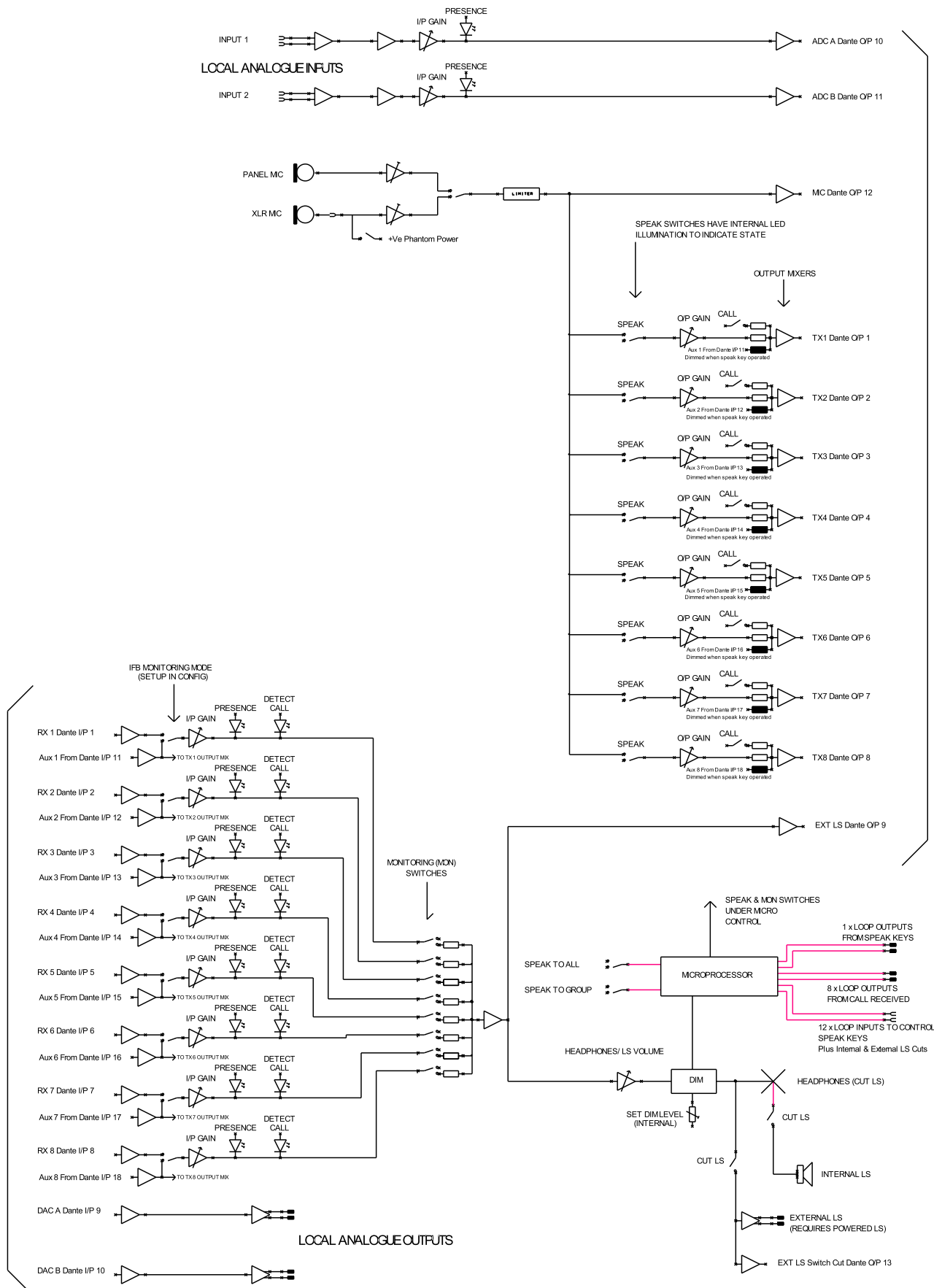
For setting up more complex groups and partyline circuits that could not be achieved via Dante controller or your AES67 router, an inbuilt fixed ratio mixer is supplied. It has 14 audio inputs direct from the network and 19 mix outputs to the network. 5 of the mixers have inbuilt automatic audio ducking circuits.

MIX OUTPUT		SUM OFF	NOTES
<i>Dante Output Channel No:</i>	<i>Default Name in Dante Controller:</i>	<i>Dante Receiver Channel Nos:</i>	
14	"Sum of 19 to 32"	19 to 32	
15	"Sum of 19 to 25"	19 to 25	
16	"Sum of 26 to 32"	26 to 32	
17	"Sum of 19 to 21"	19 to 21	
18	"Sum of 22 to 24"	22 to 24	
19	"Sum of 25 to 27"	25 to 27	
20	"Sum of 28 to 30"	28 to 30	
21	"Sum of 19 & 20"	19 and 20	
22	"Sum of 21 & 22"	21 and 22	
23	"Sum of 23 & 24"	23 and 24	
24	"Sum of 25 & 26"	25 and 26	
25	"Sum of 27 & 28"	27 and 28	
26	"Sum of 29 & 30"	29 and 30	
27	"Sum of 31 & 32"	31 and 32	
28	"Sum of 19 & 20 Dim"	19 and 20	Note Mix in 19 dimmed when signal present on Mix in 20
29	"Sum of 21 & 22 Dim"	21 and 22	Note Mix in 21 dimmed when signal present on Mix in 22
30	"Sum of 23 & 24 Dim"	23 and 24	Note Mix in 23 dimmed when signal present on Mix in 24
31	"Sum of 25 & 26 Dim"	25 and 26	Note Mix in 25 dimmed when signal present on Mix in 26
32	"Sum of 27 & 28 Dim"	27 and 28	Note Mix in 27 dimmed when signal present on Mix in 28

Simplified Block Diagram

The audio block diagram below shows an analogue representation of the digital audio routes within the Beatrice R8 excluding the fixed ratio mixer.

Block Diagram



Specification

NETWORK/ Dante®**Physical Interface**

2 off RJ45
2 off SFP slots

Audio Sample Frequency

48k

Transfer Rate

1000 Mbps

Dante® Chipset

Brooklyn II

Note: suitable for acting as master clock for a network incorporating many Ultimo chipsets

AES67 Compliant

AES67 compliant

PHYSICAL**Mechanics**

All aluminium with laser etched panels and light textured black powder coated lid & base

Size

19" wide, 1RU high, 164mm deep

Weight

1.6Kg 3.5lb

Shipping Weight

3Kg

Shipping Size

62 x 42 x 12 cms

Shipping Carton

Rugged export quality cardboard

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

INCLUDED ITEMS**Handbook**

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

Mains Cable

2 metre IEC (UK & Europe Only)

AUDIO**Mic Gain Range**

61 to 21dB

Phantom Power

12 Volts (set via internal link)

Equivalent Input Noise

-126dB (20-20Khz RMS A Weighted 150 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+14dB into 600 Ohms

Headphone Connector

6.35mm (1/4") TRS socket

Band Pass Filter

50Hz to 15kHz

GPIO**GPO**

Solid State Relays. Wired N'O and N'C

GPI

Logic level pull down to ground to operate

POWER**Mains Voltage**

100 - 240 VAC +/-10%

Mains Frequency

50 to 60 Hz

Power over Ethernet (PoE)

May be powered by PoE on either Copper Port
Complies to: IEEE 802.3af-2003
Classification Class 0

Consumption

<15 Watts

Redundancy

Mains & Both PoE supplies are all dioded together for glitch free redundancy

Power On LED

Bright Blue

MIC/ HEADSET OPTION**Standard (Part no: Beatrice R8)**

Front Panel 3 pin XLR socket Mic Input

Optional 5 Pin (Part no: Beatrice R8-X5)

Front Panel 5 pin XLR socket Headset Connector

Optional 4 Pin (Part no: Beatrice R8-X4)

Front Panel 4 pin XLR plug Headset Connector

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE

Dante® Network Intercom



BEATRICE R16 Sixteen Channel Rackmount Intercom

Highlights

Dante® and
AES67 Compliant

Simple To Use

Intelligible
Loudspeaker

48kHz Crystal
Clear Digital Audio

Mains/
PoE Powered

Low Noise
Microphone Amp

Overview

The GlenSound BEATRICE R16 is a versatile and fully featured 16 channel rackmount intercom with crystal clear audio designed for broadcast, theatre and professional audio applications.

It is part of our Beatrice intercom system that utilises the reliable and proven Dante network audio transmission protocol to allow real time distribution of uncompressed audio across standard networks. It is also AES67 compliant. As such the BEATRICE R16 is fully compatible with other manufacturers' equipment using the Dante® and/or AES67 protocols.

This 1RU rackmount intercom was designed to be very easy to use for the operator and simple to set up for the technician. It includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.

BEATRICE R16

Sixteen Channel Rackmount Intercom

Features



- 16 Channels Of Intercom**
 One single user connected to the unit can listen to and communicate with 16 separate locations on the network. Depending upon how the Dante network has been routed the incoming audio circuits and outgoing circuits can be different locations.
- Dante Routing & Partyline**
 Audio routing to/ from other devices is set up using Dante controller which allows for point to multipoint routing on outgoing circuits (but only 1 single incoming circuit for each of the 16 channels). Therefore we've included an inbuilt fixed ratio 11 input 11 output mixer matrix with inputs and outputs connected directly to the Dante / AES67 network which allows for setting up partyline and group circuits.
- Onboard Mic & External Mic Input**
 A good quality, clear sounding microphone amplifier designed for communication purposes is fitted which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. This microphone amp has two microphone sources, either the inbuilt front panel mounted electret capsule which provides good voice intelligibility from normal working distances, or a balanced XLR input for connecting external gooseneck microphones. Twelve Volt Phantom power is also available and can be turned on/ off as required via an internal link.
- High Output Intelligible Loudspeaker**
 What's the point of an intercom unit if the onboard speaker is so cheap that you can't understand what is being said to you? We tried hundreds of different drive units before settling on the one used in the Beatrice R16. We chose it because it had a much cleaner sound and better frequency response for vocals than any other speaker on the market that would fit in a 1RU subrack.
- User Programmable Talk Switches**
 The Beatrice R16 can have each individual speak switch set to the way that you prefer to work, be it latching, momentary or intelligent lever key.



Features

- Mains or PoE Powered**

An inbuilt wide range switch mode mains power supply is fitted for powering the Beatrice R16. It is terminated with a standard IEC plug, making it easy to plug in wherever you are in the World.

The unit can also be powered via the Ethernet cable by standard PoE (Power over Ethernet) on either of the copper Ethernet ports. The PoE power can be supplied by an external PoE switch or a midspan power injector.



- Redundant Twin Copper & Twin Fibre Ethernet Interface**

When ultra reliable communications is needed for the utmost important jobs glitch free redundant network circuits can be set up using the primary and secondary Dante network ports.

There are 2 copper Ethernet ports on RJ45s and also 2 fibre Ethernet ports presented as SFP slots (SFP modules not included). Redundant networks can be set up across any of these ports. These ports can also be setup as a network switch.

- GPIO**

A solid state relay output is provided and is triggered when any speak key is on (useful for dimming external loudspeakers or red light controls).

In total there are 12 loop closure inputs. 10 of these control the first 8 talk keys and talk to group and talk to all.

The other 2 loop closure inputs provide internal & external LS cuts.

- IFB/ AUX Sources**

Four different IFB/ AUX audio sources are received from the Dante network. Each of the four sources is associated with four outgoing talkback channels. If audio is routed to the(se) IFB/ AUX sources in the network then they are mixed in with their associated outgoing talkback channel circuit.

If a talkback key is on then the associated IFB/ AUX source is ducked by a user definable amount. If the talkback is not on then the IFB/ AUX source is routed to the channel's output with unity gain.

IFB/ AUX sources are very useful for distributing programme audio around an intercom setup whilst the ducking facility allows talkback to be heard over it.



Features

**Microphone Level Meter**

An eight LED front panel multipurpose indicator is used to indicate the outgoing microphone level.

- Channel Input and Output Gain Controls**
 For maximum flexibility gain can be applied to incoming audio signals and outgoing signals separately. A row of LEDs indicate the current gain setting when a channels input or output is being adjusted.
- Monitor**
 All incoming talkback channels are mixed together to the headphones/ loudspeakers.
- Presence Indication**
 Front panel LEDs located next to the talk switches are used to indicate the presence of incoming audio on that channel. When audio is detected on the channel the LED is illuminated, the LED then stays on for a short period after the incoming audio stops to help the operator identify who has been talking to them.
- 4-Wire Connectivity**
 Two traditional analogue 4-wire circuits can be connected to two of the R16's intercom channels by utilising the versatile analogue inputs and outputs.
- Speak To All and Speak To Group**
 Two useful front panel controls are fitted. When pressed, the 'Speak To All' button will enable the operator to talk to all the outputs simultaneously, and the 'Speak To Group' button allows the operator to talk to an easily assignable set of outputs.

**Speaker Output**

As well as the front panel internal loudspeaker a balanced analogue output is provided for connecting to an external powered loudspeaker.





- Local Input and Output Circuits**

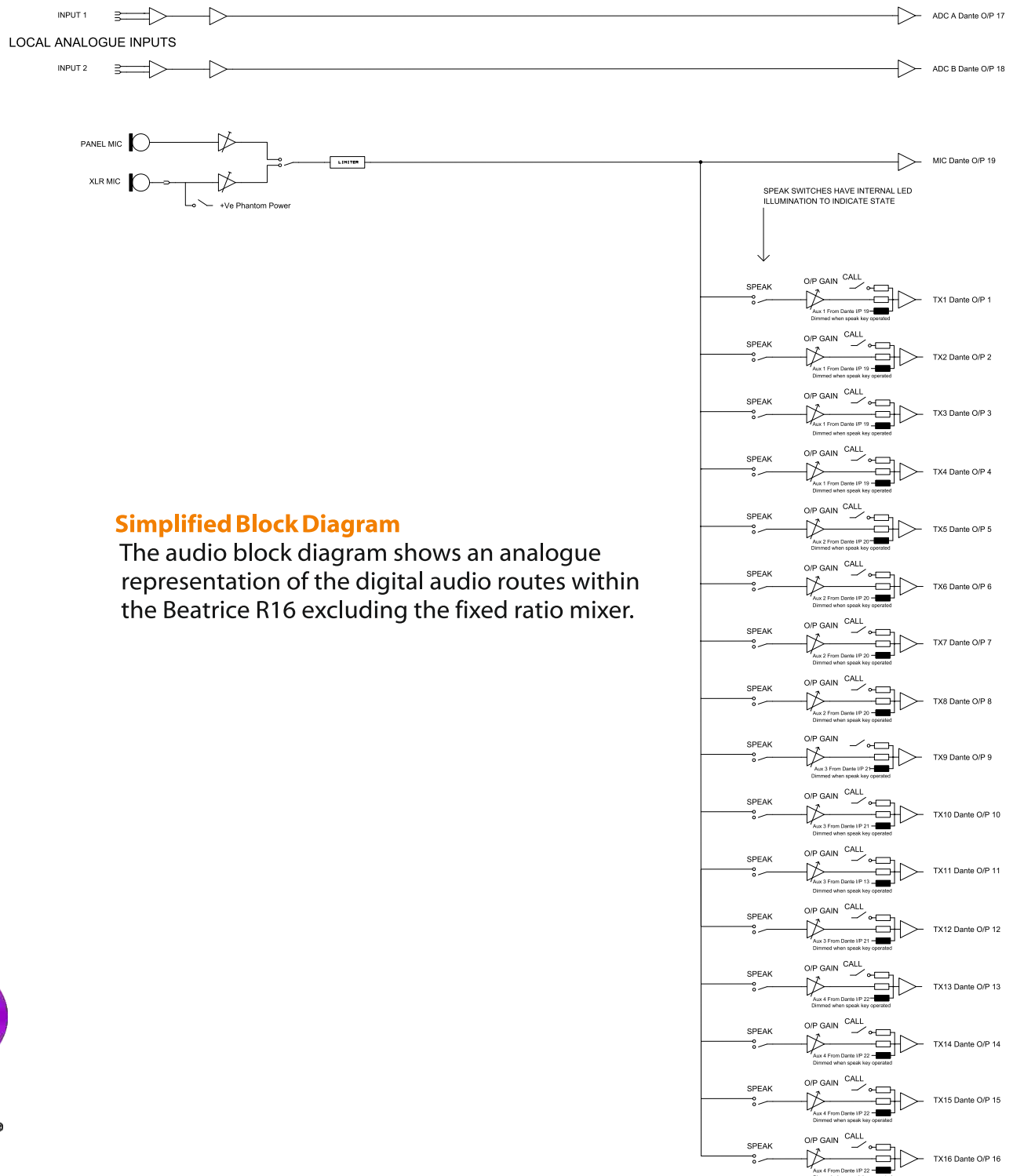
For increased versatility there are 2 local balanced analogue audio inputs and 2 local balanced analogue outputs. The inputs are routed directly to two output channels on the Dante/ AES67 network. The outputs are fed directly from two input channels from the Dante/ AES67 network.
- Mixer Matrix For Partyline**

For setting up simple groups and partyline circuits that could not be achieved via Dante controller or your AES67 router, an inbuilt fixed ratio mixer is supplied. It has 11 audio inputs direct from the network and 11 mix outputs to the network.

MIX OUTPUT		SUM OFF
<i>Dante Output Channel No:</i>	<i>Default Name in Dante Controller:</i>	<i>Dante Receiver Channel Nos:</i>
22	"Sum of 23 to 32"	23 to 32
23	"Sum of 23 to 27 "	23 to 27
24	"Sum of 28 to 32"	28 to 32
25	"Sum of 23 to 25"	23 to 25
26	"Sum of 26 to 29 "	26 to 29
27	"Sum of 30 to 32 "	30 to 32
28	"Sum of 23 & 24 "	23 and 24
29	"Sum of 25 & 26 "	25 and 26
30	"Sum of 27 & 28 "	27 and 28
31	"Sum of 29 & 30 "	29 and 30
32	"Sum of 31 & 32 "	31 and 32



Block Diagram of Audio Sent to The Dante®/ AES67 Network

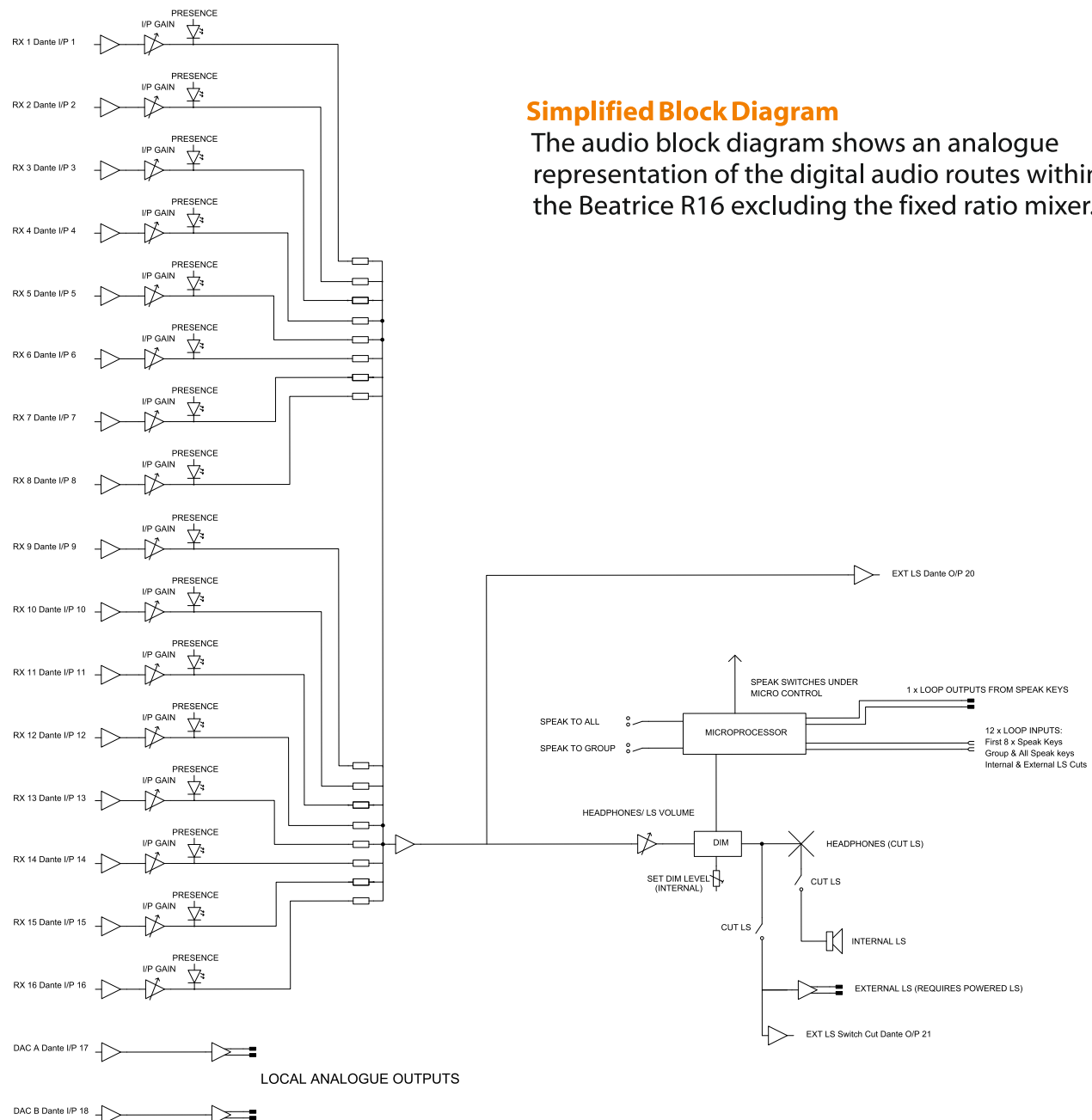


Simplified Block Diagram

The audio block diagram shows an analogue representation of the digital audio routes within the Beatrice R16 excluding the fixed ratio mixer.



Block Diagram of Audio Received From The Dante®/ AES67 Network



Calling Facility Note:

Please note that unlike the lower channel count Beatrice units (B1, B2, B4, D4, R4, D8, D8+, P1, P2 and R8) the 16 key units D16 and R16 do not support inband calling.

Specification

NETWORK/ Dante®**Physical Interface**

2 off RJ45
2 off SFP slots

Audio Sample Frequency

48k

Transfer Rate

1000 Mbps

Dante® Chipset

Brooklyn II

Note: suitable for acting as master clock for a network incorporating many Ultimo chipsets

AES67 Compliant

AES67 compliant

PHYSICAL**Mechanics**

All aluminium with laser etched panels and light textured black powder coated lid & base

Size

19" wide, 1RU high, 164mm deep

Weight

1.6Kg 3.5lb

Shipping Weight

3Kg

Shipping Size

62 x 42 x 12 cms

Shipping Carton

Rugged export quality cardboard

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

INCLUDED ITEMS**Handbook**

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

Mains Cable

2 metre IEC (UK & Europe Only)

AUDIO**Mic Gain Range**

61 to 21dB

Phantom Power

12 Volts (set via internal link)

Equivalent Input Noise

-126dB (20-20Khz RMS A Weighted 150 Ohms)

Headphone Impedance

32 - 1000 Ohms

Max Headphone Output Level

+14dB into 600 Ohms

Headphone Connector

6.35mm (1/4") TRS socket

Band Pass Filter

50Hz to 15kHz

AUX/ IFB Ducking Range

0 to -63dB (set per talkback channel)

GPIO**GPO**

Solid State Relays. Wired N'O and N'C

GPI

Logic level pull down to ground to operate

POWER**Mains Voltage**

100 - 240 VAC +/-10%

Mains Frequency

50 to 60 Hz

Power over Ethernet (PoE)

May be powered by PoE on either Copper Port

Complies to: IEEE 802.3af-2003

Classification Class 0

Consumption

<15 Watts

Redundancy

Mains & Both PoE supplies are all dioded together for glitch free redundancy

Power On LED

Bright Blue

MIC/ HEADSET OPTION**Standard (Part no: Beatrice R16)**

Front Panel 3 pin XLR socket Mic Input

Optional 5 Pin (Part no: Beatrice R16-X5)

Front Panel 5 pin XLR socket Headset Connector

Optional 4 Pin (Part no: Beatrice R16-X4)

Front Panel 4 pin XLR plug Headset Connector

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE

Dante® Network Intercom



BEATRICE P1 & P2

Dante®/ AES67 Telephone Handset Interface

Highlights

1 or 2 Network
Audio Circuits

AES67 Compliant

Desk or Wall
Mounted48kHz
Clear Digital Audio

PoE Powered

Low Noise
Microphone Amp
c/w compressor

Overview

The GlenSound BEATRICE P1 & P2 are Dante/ (AES67 Compliant) 1 & 2 audio channel telephone handset interfaces. They were originally designed as part of our Beatrice intercom range but can also be used as stand alone network audio interfaces suitable for broadcast, theatre and professional audio applications.

The reliable and proven Dante network audio transmission protocol, allowing real time distribution of uncompressed audio across standard networks, is used in the BEATRICE P1 and P2. As such they are also fully compatible with other manufacturers' equipment using the Dante protocol. Both units are also AES67 compliant.

These telephone handset interfaces were designed to be very easy to use for the operator and simple to setup for the technician. They are also very competitively priced and will have a very long life span to keep the company accountant happy.

BEATRICE P1 & P2

Dante®/ AES67 Telephone Handset Interface

Features

- P1 - One Channel**

The user of the handset on the P1 unit can listen to one audio feed from the network and send one audio channel out onto the network. Depending upon how the Dante network has been routed, the incoming audio circuit and outgoing circuit can be different locations and the outgoing circuit can be routed to multiple locations. Audio to/ from the handset is automatically turned on when the handset is off hook and turned off when on hook.



- P2 - Two Channels**

The user of the handset on the P2 unit can listen to two audio feeds from the network and send two audio channels out onto the network. Depending upon how the Dante network has been routed, the incoming audio circuits and outgoing circuits can be different locations and the outgoing circuits can be routed to multiple locations. Audio to the handset from the two network sources is routed to the telephone's earpiece only when the handset is off hook. When the handset is picked up (off hook), the handset's microphone is turned on and two switches allow the operator to route the handset's microphone to one or other (or both) of the outgoing network audio channels.



- Mic Amp with Compressor & Phantom Power**

A good quality, clear sounding microphone amplifier designed for communication purposes is fitted to the output of the handsets microphone capsule which also has the benefit of a compressor/ limiter circuit to help keep levels and intelligibility consistent even when the operator gets overly excited. The gain of the microphone amplifier can be adjusted in the menu system to suit your working environment.

- Handset Loudspeaker Amp With Volume Control**

A low noise amplifier is fitted to provide the best possible output to the handsets earpiece. A volume control is provided to easily allow the user to adjust the volume of the handset's earpiece.



BEATRICE P1 & P2 Dante®/ AES67 Telephone Handset Interface

Features



- Incoming Level Gain**
 As well as the volume control adjusting the audio level to the telephone handset's earpiece, it is possible by using the menu system to adjust the gain of the incoming network audio circuit(s).
- Single Cable For Power & Audio**
 One single standard RJ45 network cable provides both power (PoE) and bi-directional multichannel digital audio (Dante/ AES67 compliant).
- Call Function**
 A simple call function is inbuilt allowing the operator of one unit to call/alert other users that they want to communicate with them. To call another user the operator double taps the speak key of the channel they want to call (P2) or the dedicated call key (P1), this then flashes a bright yellow call LED on the other users keypanel (if fitted), which continues to flash until the call is answered. As well as flashing an LED at the receiving end of the call, an audible 'beep' can be set to alert the user that an incoming call has been placed to them.
 When the P1 or P2 receives a call a very large red LED will flash to attract the operator's attention. An extra pair of small LEDs are also fitted on the P2 to indicate which of the 2 incoming channels generated the call signal.

It is possible to disable the call functionality if required.



P1 & P2 Specification

NETWORK**Physical Interface**

1 off RJ45 Neutrik Ethercon

Audio Sample Frequency

48kHz

Audio Resolution

24 Bit

Transfer Rate

100 Mbps

Dante Chipset

Ultimo UXT-01-004

Note: Audiante recommend no more than 10 Ultimo chipsets on one network **UNLESS** another Dante® device such as the Brooklyn Module (found in 8 channel Beatrice/ Dark units), is on the same network

AES67 Compliant

The Audinate Ultimo chipset is AES67 compliant

PHYSICAL**Chassis Mechanics**

All aluminium with laser etched panels and light textured black powder coated sides

Telephone Handset

Interquartz 9826N

Size (Body excluding Beltclip)

120 x 280 x 95 (inc handset 45 ex) mm (w x l x h)

Weight

835g / 1lb8oz

Shipping Weight

2Kg

Shipping Size

62 x 41 x 17cms

Shipping Carton

Rugged export quality cardboard

POWER**Consumption**

<3 Watts

PoE

Powered by PoE

Complies to: IEEE 802.3af-2003

Classification Class 0

ENVIRONMENTAL**Operating Temperature**

0 to +50 °C (32° to 122°F)

Storage Temperature

-20 to +70 °C (-4° to 122°F)

Relative Humidity

0 to 95% non-condensing

CALL CIRCUIT**Inband Calling Frequency**

20kHz

Amplitude

-20dBfs

Duration Of Signal

2 seconds

Compatibility

All GlenSound Beatrice units & Studio Technologies

INCLUDED ITEMS**Handbook**

Physical A5 (download also available)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

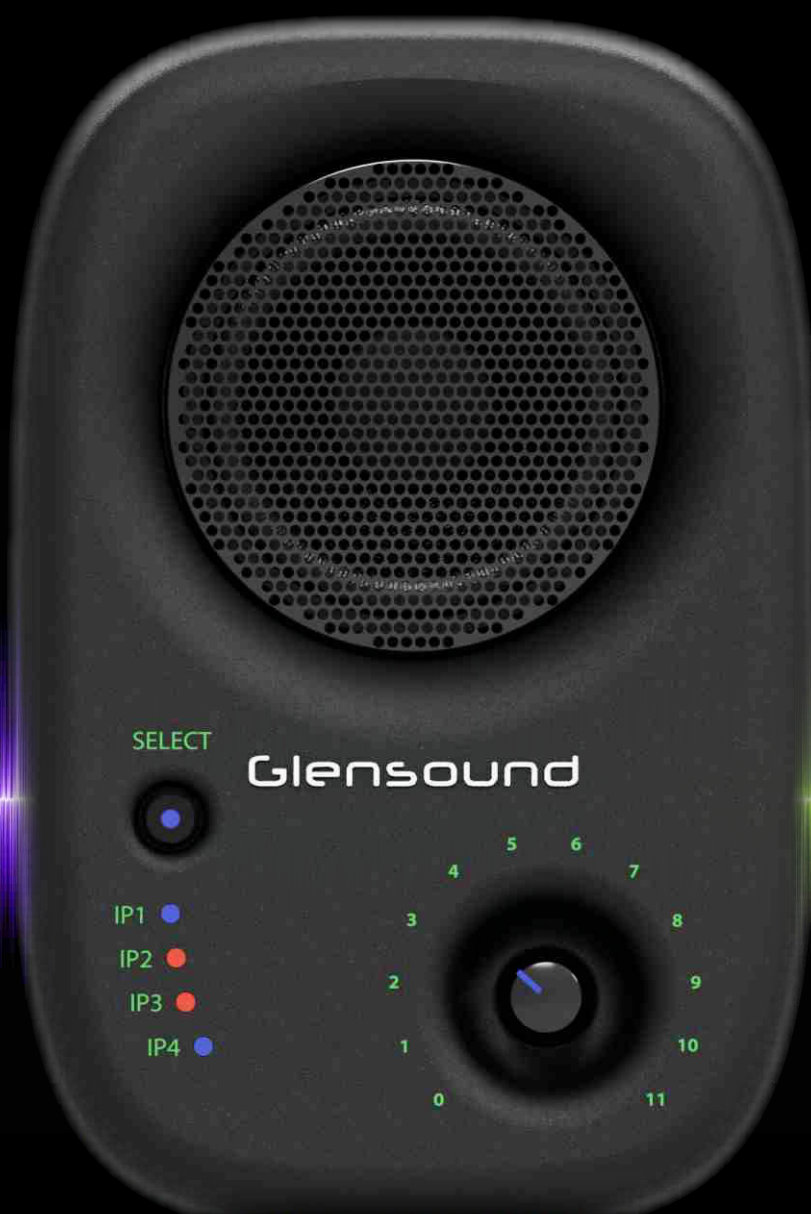
'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.

E & OE

DIVINE

Intelligent network audio monitor



www.aoip.ls

The **Divine** is the World's first intelligent network audio monitor.



It features many innovations and transforms the traditional active monitor speaker from a dumb device to a truly powerful workhorse.

Divine is designed to work in Broadcast, Theatre and Production Facilities and provides exceptionally clear mid range voice orientated output making it ideal for talkback, cue, monitoring, general listening & engineering purposes.



Divine is a new concept in powered network audio monitors. It is housed in a hardwearing fully sealed diecast enclosure, is powered by Power over Ethernet (PoE) and boasts the very latest low noise high output class D power amplifier.

Internally, a Digital Signal Processor (DSP) takes the utmost care of the audio signals, including state of the art compression and limiting circuits, while a microprocessor provides full setup and control via a small rear panel LCD. Control of setup and day to day operation of the Divine will also be available on our Windows 10 application GlenController including the ability to group multiple Divines together and control their levels simultaneously.

Divine can receive up to four Dante (AES67 compliant) audio over IP (AoIP) inputs (from two different locations). These inputs can be selected by the user on a large clear front panel select switch. The four audio inputs can also be easily mixed together and their individual levels adjusted.

A priority system is provided to allow one (or more) of the inputs to automatically duck another. This can be very useful if you want to monitor one source but also listen to another when audio is present, such as sending show relay to dressing rooms in a theatre but having the stage manager's call and building fire alarm take precedence when they're active.

The diecast enclosure has been carefully designed to provide full protection of all control knobs, switches and ports to prevent damage. The housing also uniquely features a standard PC screen Vesa mount, meaning that you can purchase any standard Vesa mounting solution to hang/ mount your Divine, saving you lots of money. Standard microphone stand threads are also provided in the base for an alternative support solution.

Different preset EQs and an LF cut can all be set in the user menu to allow the Divine to be used for a variety of applications.

Divine is so much more than just another powered loudspeaker



INNOVATIVE FEATURES



Programmable Input Summing

Divine features four network audio inputs. A simple to operate front panel select switch routes these audio inputs to the loudspeaker. These individual inputs can be mixed together to monitor multiple sources and this mixing function can be set in the menu system.



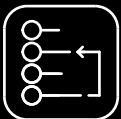
VESA 75mm Compatible

For extreme ease of installation the Divine features an integral 75mm Vesa mount to allow it to be fixed to a huge variety of off the shelf mounting solutions. No longer do you have to buy overly expensive mounting brackets which can only be used with your current loudspeakers.



Lockable User Controls

In some environments you may not want anybody to be able to alter the volume, or input source or even any of the more advanced settings, therefore these can be all locked so that they cannot be 'fiddled with'.



Set User Input Priority

Priority is a feature that allows you to have one incoming audio circuit automatically duck or be replaced when another is present. This is perfect for situations whereby you're monitoring programme audio on one channel but want to listen to director's or producer's talkback on another but only when it's present. Any Priority input will bypass the volume pot level. If the user has turned the speaker down they will still hear priority announcements. This is a configurable function.



Standard Mic Thread

Standard microphone stand thread sockets are provided in the base to allow quick and easy mounting of the Divine monitor speaker to microphone stands in location environments.



Control Over Network (Summer 2020)

Full control of the Divine's parameters, including all settings and day to day controls such as volume and source selection will be available on our Windows 10 application 'GlenController'. It will also be possible to group multiple Divines and control their volume together and update their firmware across the network.



User Selectable EQ

For use in different environments and for different purposes a number of preset EQs are provided. Initially there are three (but this will be extended in the future). 'Natural' provides what we believe is the best all-round audio response, whereas 'Basic' makes the Divine sound similar to old legacy units and 'Voice' has significant LF and HF shelves making the mid range voice presence unmissable.

MORE INNOVATIVE FEATURES



LF Cut

A Low Frequency cut facility can be selected in the setup menu. This is useful if the Divine is situated in a corner or hard against a wall or floor to help with resonating low frequencies.



Gain Boost

Because our engineers at GlenSound are passionate about sound, the Divine's internal circuitry is very carefully designed to provide perfect performance even when the incoming signal is at full scale (FS). As most programme signals are well below FS level our selectable gain boost provides greater output volume if needed.



Dark Mode

The front panel LEDs and rear LCD screen are all set as standard to be visible in normal operating conditions. However some locations such as theatres and studios require as little equipment light as possible. When set to Dark mode the select LEDs are dimmed and LCD backlight turned off when not in use.



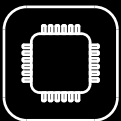
PoE Powered

Being a network audio device with an ethernet cable connected, it makes perfect sense not to have to connect a second DC or mains cable but to power the unit from standard Power Over Ethernet (PoE). Meaning one single cable carries all your audio and power making installation and setup quick, simple and hassle free.



Input Gain Trim

With 4 different incoming network audio circuits it's likely that in the real world their audio levels will be different: some may be too hot while others too cold. Therefore we've added a simple to use facility that allows the operator to easily add gain or loss to each of the incoming audio signals.



DSP Control

We first started programming Digital Signal Processors (DSPs) in the early 1990s and have used them extensively ever since. The device that we've selected for the Divine provides plenty of internal headroom (very important) and can process the audio as quickly as it arrives, and the processing only adds a few samples of delay.



Front Panel PPM

The four front panel source LEDs can be set to operate as programme level meters in two different ways. They can be set to show the currently selected source level across all four LEDs and operate vertically like a traditional PPM. Each LED can also be set to show just its own source's level, which is possible because we're using RGB LEDs and can alter their colour, with blue indicating cold/ low level, through green and amber until red indicates high level.

SPECIFICATIONS

AUDIO

Amplifier Type

Low Noise Class D

Amplifier Power

10 Watts

Amplifier THD + Noise

0.02% @ 1 Watt @ 1kHz

Digital Line Up

User selectable -24, -20 -18 dBfs

Input Gain Boost

0, +6, +12 +18dB

Input Channel Gain Trim

+/-16 dB

Loudspeaker Impedance

8 Ohms

Loudspeaker Cone Type

Poly damped woven glass fibre with copper cap and rubber surround

Loudspeaker Magnet

High energy ferrite

LF Cut

User selectable (on/off) Knee X Hz
12dB/Octave

Voice EQ Frequency Settings

300Hz to 3kHz 12dB/ Octave

Frequency Response

See graphs for Basic & Normal EQ LS outputs

NETWORK

Connector

Neutrik EtherCON (mates with standard RJ45)

Type

100 Mbit/s

AoIP Audio

Dante® Audinate Ultimo chipset (AES67 Compliant)

AoIP Audio Sample Frequency

4 channels @ 48k or 2 channels @ 96k (Dante® only)

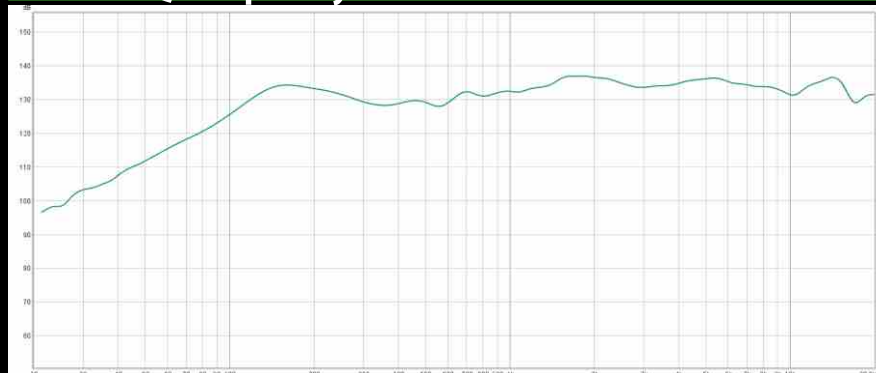
AoIP Resolution

Up to 24 Bit

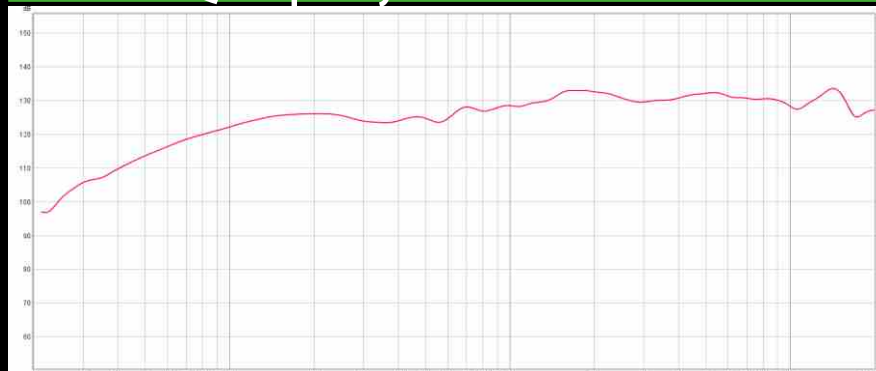
* FOUR AUDIO INPUTS

Divine uses Audinate's Ultimo Chipset. This can receive 4 audio channels but can only receive 2 network streams. Therefore the 4 audio channels must be from no more than 2 different locations.

Basic EQ Frequency vs Level



Normal EQ Frequency vs Level



SPECIFICATIONS Continued.

POWER

PoE

Powered by PoE
Complies to: IEEE 802.3af-2003
Classification Class 0

Consumption

12.8 Watts

PoE Source

Can be powered by PoE enabled network switches or Mid-Span PoE injectors

Energy Saving Mode

Automatic energy saving mode (shuts down power amplifier when no audio present)
User settable delay 15, 30 & 60 mins.

INCLUDED ITEMS

Quick Start Guide

Printed folded A4 (Full handbook by download)

RJ45 Network Cable

2 metre Cat5 RJ45plug /RJ45plug cable

PHYSICAL

Size

190 x 128 x 100mm (HxWxD)
7.5 x 5 x 3.9"

Weight

1.725Kg 3lb12oz

Mechanics

Bespoke diecast aluminium chassis
Powder coated and printed with UV stable ink

Mounting Points

75 x 75mm (2.95 x 2.95") VESA mount
2 of mic stand thread socket 5/8" 27tpi

Packaging

Printed Retail cardboard box, packed inside plain rugged cardboard box
175 x 145 x 225mm (WxDxH)

Individual Shipping Weight

1.975Kg

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



GlenSound

Keeps Working

www.glenSound.com

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COMEDIA

Divine Intelligence



Connect the Comedia to a Dante/AES67 network to provide intelligent controls on a class D power amplifier to connect to your own speakers

- ↳ **Intelligent 10W class D audio amplifier for Dante/AES67 networks**
- ↳ **Speaker terminal output plus line level**
- ↳ **PoE powered so just a single cable connection**
- ↳ **Monitors 4 incoming Dante/AES67 channels**
- ↳ **Set priority override on one input to interrupt another**
- ↳ **Multi mode tri colour LED PPM meters**

COMEDIA

Comedia is the intelligence system and amplifier of the Divine loudspeaker, just without the actual speaker. This gives the user all of the intelligent network functions of the Divine, but with the option of connecting their own choice of speaker. It comes in an installer style design with wings for flush mounting.

The Comedia is PoE powered and a single network cable connection carries power and 4 audio channels from the Dante/AES67 network. These can be selected to the output as an individual channel, in pairs, or with all four mixed.



There are three selectable priority overrides. An input on any defined channel can act as a priority over the others. This means you could have programme audio playing on one channel, with a director on another channel able to make announcements over the top of the programme audio. The programme audio would return after the priority interrupt stopped.

There are preset EQ settings, LF cut, and gain boost available, all of which can be set using the configuration screen. The menu and certain settings can be locked for security.

Remote control across the network using GlenController will be available in Summer 2020. At this time you will also be able to upgrade individual or batch Comedia units.

GlenSound
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sales@glen-sound.co.uk
www.glen-sound.com

INNOVATIVE FEATURES

COMEDIA



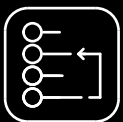
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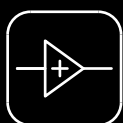
INNOVATIVE FEATURES

COMEDIA



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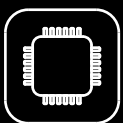
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Being a network audio device with an ethernet cable connected, it makes perfect sense not to have to connect a second DC or mains cable but to power the unit from standard Power Over Ethernet (PoE). Meaning one single cable carries all your audio and power making installation and setup quick, simple and hassle free.



Input Gain Trim

With 4 different incoming network audio circuits it's likely that in the real world their audio levels will be different: some may be too hot while others too cold. Therefore we've added a simple to use facility that allows the operator to easily add gain or loss to each of the incoming audio signals.



DSP Control

We first started programming Digital Signal Processors (DSPs) in the early 1990s and have used them extensively ever since. The device that we've selected for the Divine provides plenty of internal headroom (very important) and can process the audio as quickly as it arrives, and the processing only adds a few samples of delay.



Top Panel PPM

The four front panel source LEDs can be set to operate as programme level meters in two different ways. They can be set to show the currently selected source level across all four LEDs and operate vertically like a traditional PPM. Each LED can also be set to show just its own source's level, which is possible because we're using RGB LEDs and can alter their colour, with blue indicating cold/ low level, through green and amber until red indicates high level.

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BEATRICE W1
Wall Or Desk Mounting
Beatrice Intercom Position

Highlights

Single Dante/AES67
Intercom Position

AES67 Compliant

Flush Wall
Mounting

Configurable Talk
Button

PoE Powered

Internal & External
Mic Connection

Overview

The Beatrice W1 is a single user interface for the Beatrice system, designed to mount flush on a wall or into a desk. It is a useful intercom position allowing two way communication to be possible at standing levels whilst mounted into walls, or at desk levels if mounted on a desk.



Connectivity for the Beatrice W1 is via a single Cat5/Cat6 cable which carries the audio to and from the unit, and also powers the unit via PoE, making installation very simple. The W1 has 1 input and 1 output to the Dante/AES67 network.



There is an internal loudspeaker to monitor the incoming audio which can be level adjusted. There is an internal microphone, and also an XLR for connecting an external goose neck microphone if required.

A single talk switch is available for routing the selected microphone onto the Dante/AES67 network. This can

be a momentary push to talk or a latching connection. A double tap of the talk key sends a call function to another Beatrice device. There is also an incoming call LED and a selectable audio alert for when a call signal is being received.



All settings are accessible via the configuration screen, including a party line mode, where the input is looped directly to the output.

A 4 input, 4 output version with 4 talk keys is also available, the Beatrice W4.

The name **Beatrice** was chosen for our intercom range as she was the love of Dante Alighieri:

'Dante had fallen in love with another, Beatrice Portinari (known as Bice), whom he first met when he was only nine.' Source Wikipedia.

We hope that you will also fall in love with Beatrice.



BEATRICE LightHouse

A Dante®/ AES67 Flasher Unit For Signalling And Indication

Highlights

Bright, Multi Coloured
LED Flasher

AES67 Compliant

Indication on
Signal Present

Indication On A
20kHz 'Call' Signal

PoE Powered

4 Inputs From
Dante/AES67 Network

Overview

The Glensound Beatrice LH4 provides audio signal present and call indication via a bright LED 'lighthouse' tower, providing 360 degrees of visual signalling.

The Beatrice LH4 receives 4 audio channels from the Dante/AES67 network. It can indicate signal presence on any channel using different colours and/or different flashing options. If it receives a Beatrice 20kHz 'call' signal, it can also indicate a different flash or colour to show a 'call' is being received.

A speaker is also included that through the configuration menu can pass audio from the Dante/AES67 network if required.

The Beatrice LH4 is in a compact unit with a bright lighthouse tower for signalling. There is an onboard configuration screen and it is PoE powered.

www.glensound.com