Glensound
Keeps Working

Beatrice R12 MkII

12 Channel Network Audio Intercom

PRODUCT DETAILS

The Design Buildings, 6 Brooks Place,
Maidstone, Kent, ME14 1HE. ENGLAND.
TEL: +44 (0)1622 753662
Visit our Website at www.glensound.com

Glensound Electronics Ltd

Thank you for choosing a new Glensound product.

Information contained in this manual is subject to change without notice, if in doubt please contact us for the latest product information. E&OE.

If you need any help with the product then we can be contacted at:

Glensound
The Design Buildings
6 Brooks Place
Maidstone
Kent
ME14 1HE
United Kingdom

Telephone: +44 (0) 1622 753662

EMAIL:

sales@glensound.com

IMPORTANT SAFETY INSTRUCTIONS

1) Read these instructions

2) Keep these instructions

3) Heed all warnings

4) Follow all instructions

5) Do not use this apparatus near water

6) Clean only with a dry cloth

7) Do not block any ventilation openings. Install in accordance with manufacturer's instructions

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat

9) Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has 2 blades with one wider than the other. A grounding type plug has 2 blades and third grounding prong. The wider blade or the 3rd prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet

10) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus

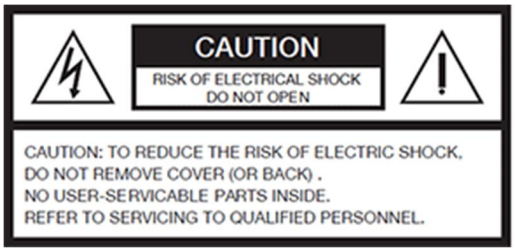
11) Only use attachments/ accessories specified/ supplied by the manufacturer

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip over

13) Unplug this apparatus during lightning storms or when unused for long periods of time

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped

15) Do not attempt to modify this product. Doing so could result in personal injury and/ or product failure



PRODUCT WARRANTY

All equipment is fully tested before dispatch and carefully designed to provide you with trouble free use for many years.

For a period of one year after the goods have been despatched the Company will guarantee the goods against any defect developing after proper use providing such defects arise solely from faulty materials or workmanship and that the Customer shall return the goods to the Company’s works or their local dealer.

All non-wear parts are guaranteed for 2 years after despatch and any defect developing after proper use from faulty materials or workmanship will be repaired under this warranty providing the Customer returns the goods to the Company's works or their local dealer.

CE

EU DECLARATION OF CONFORMITY

Beatrice R12 MkII

Network Audio Intercom

This declaration of conformity is issued under the sole responsibility of the manufacturer.

This equipment is manufactured by Glensound Electronics Ltd of Brooks Place Maidstone Kent ME14 1HE is CE marked and conforms to the following Union harmonisation legislation:

Directive 2014/30/EU (Electromagnetic Compatibility Directive)

References to the harmonised standards used:

- EN 55032:2015+A11:2020 — Electromagnetic compatibility of multimedia equipment – Emission requirements
- EN 55035:2017+A11:2020 — Electromagnetic compatibility of multimedia equipment – Immunity requirements

Directive 2014/35/EU (Low Voltage Directive)

References to the harmonised standards used:

- EN 62368-1:2014+A11:2017 — Audio/video, information and communication technology equipment – Safety requirements

Directive 2011/65/EU (RoHS Directive)

This product conforms to the above directive and for these purposes, the maximum concentration values of the restricted substances by weight in homogenous materials are:

Lead	0.1%
Mercury	0.1%
Hexavalent Chromium	0.1%
Polybrominated Biphenyls	0.1%
Polybrominated Diphenyl Ethers	0.1%
Cadmium	0.01%

Signed for and on behalf of Glensound Electronics Ltd.

Marc Wilson, Managing Director
Maidstone, Kent, England

Date: 13/11/25

UK DECLARATION OF CONFORMITY

Beatrice R12 MkII

Network Audio Intercom
This declaration of conformity is issued under the sole responsibility of the manufacturer.
This equipment is manufactured by Glensound Electronics Ltd of Brooks Place Maidstone Kent ME14 1HE is UKCA marked and conforms to the following UK legislation:

Electromagnetic Compatibility Regulations 2016 (SI 2016/1091)

References to the harmonised standards used:

- BS EN 55032:2015+A11:2020 — Electromagnetic compatibility of multimedia equipment – Emission requirements
- BS EN 55035:2017+A11:2020 — Electromagnetic compatibility of multimedia equipment – Immunity requirements

Electrical Equipment (Safety) Regulations 2016 (SI 2016/1101)

References to the harmonised standards used:

- BS EN 62368-1:2014+A11:2017 — Audio/video, information and communication technology equipment – Safety requirements

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (SI 2012/3032)

This product conforms to the above directive and for these purposes, the maximum concentration values of the restricted substances by weight in homogenous materials are:

Lead	0.1%
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Signed for and on behalf of Glensound Electronics Ltd.

Marc Wilson, Managing Director
Maidstone, Kent, England
Date: 13/11/25

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT REGULATIONS 2013 (WEEE)

Glensound Electronics Ltd is registered for business to business sales of WEEE in the UK our registration number is:

WEE/JJ0074UR

OVERVIEW

The BEATRICE range of IP intercoms was designed for broadcast, theatre and professional audio applications.

Our Beatrice intercom system 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 intercom units are also fully compatible with other manufacturers' equipment using the Dante protocol. The Beatrice R12 MkII is also AES67 compliant.

The Beatrice R12 MkII is also available in a full Ravenna/AES67 version with SMPTE ST-2110 and NMOS.

All units in the system are designed to be very easy to use for the operator and simple to setup for the technician. They includes all the basic functionality required for small intercom systems and none of the overly complex installation requirements normally associated with large systems.
There are 12 selectable audio channels each with individual talk and listen controls, and source/destination labelling on a colour LCD screen.

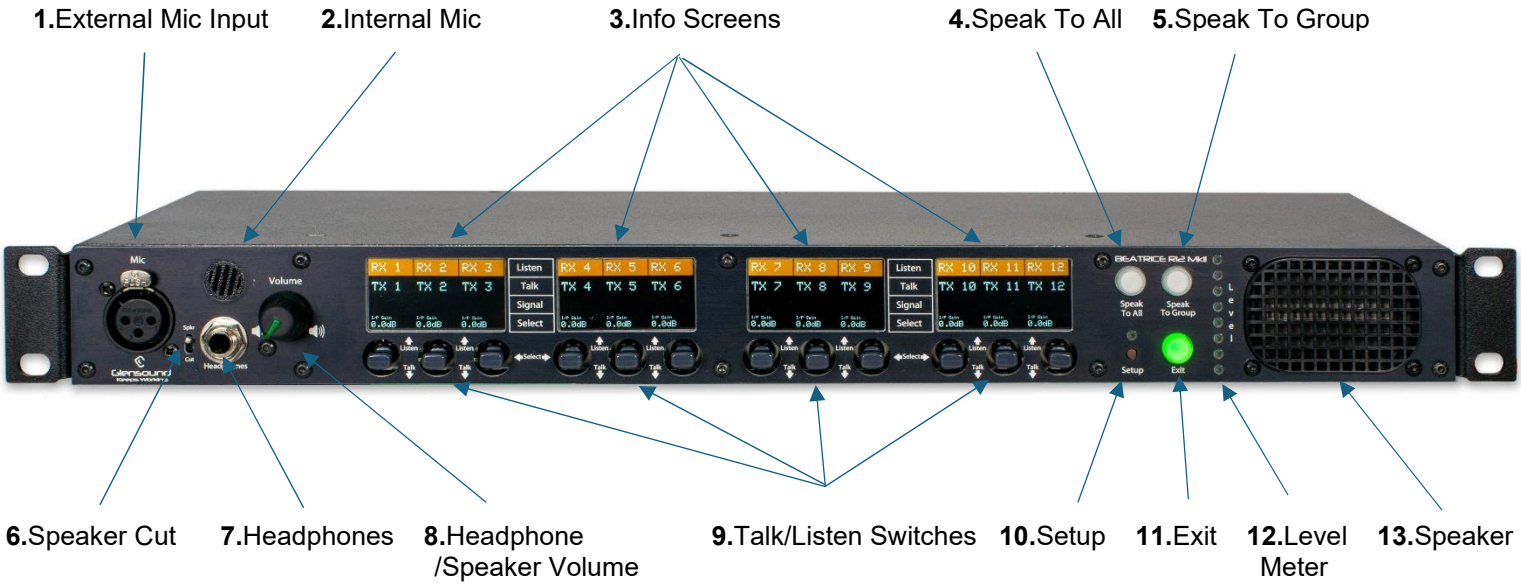
Audio inputs and outputs are available across a network audio connection to a network switch. The device has a headphone / loudspeaker amplifier and front panel mic or gooseneck mic connection..

The device is powered via PoE from the network switch or via AC mains voltage on an IEC connector on the rear of the unit.

The name Beatrice was chosen for our intercom range as she was the love of Italian poet 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.

R12 MkII Front Panel Layout



1. **External Mic Input**
   A 3 pin female Neutrik XLR for connecting an external gooseneck microphone (not supplied).

2. **Internal Mic Input**
   This is the attached electret internal microphone.

3. **Info Screens**
   These screens provide the user the following information for each of the 12 channels. Labelling is populated directly from Dante Controller. An 8 character limit for label names is recommended.

   a. ***Top Row:*** This shows the listen source channel name. When the listen channel is 'on' the background is ORANGE.
   b. ***Second Row:*** This shows the talk destination channel name. When active the background is RED.
   c. ***Third Row:*** This shows if an incoming signal is present by showing the background as GREEN.
   d. ***Fourth Row:***
      i. Normal operation: Shows the audio gain level of the incoming channel
      ii. In setup: This will show the relevant setup information.

4. **Speak To All**
   Pressing this key speaks to all 12 channel outputs at the same time.

5. **Speak To Group**
   Hold this key down and select any combination of the 12 channels to create a group. Further presses of Speak To Group will now only speak out to the previous channels selected.

6. **Speaker Cut**

Turns the speaker on or off.

7. **Headphones**
   A 6.35mm stereo jack socket for headphones. Inserting headphones will mute the loudspeaker.

8. **Headphone/Speaker Volume**
   Level adjust for the loudspeaker or headphones.

9. **Talk/Listen Switches**
   There are 12 multifunctional, 5 way lever keys for the key operation of the R12.

   LEFT/RIGHT: Channel Gain Level
   - Adjusting left/right will increase/decrease the incoming gain level of the individual channel.
   - Please note that there is a 1 second delay before changes are made to avoid accidental changes when operating the talk key.

   UP - Listen
   - Tapping up will turn the channel audio monitoring on/off. When audio monitoring is on, the background of the top line of the display will be orange.
   - Holding up will solo the individual channel

   DOWN - Talk
   - This function can be set in different modes via the menu:
     - MOMENTARY/PTT: Holding down will talk out to the individual channel and cancel when the key is let go.
     - LATCHING: A single tap will lock the talk 'on' to the individual channel.
     - INTELLIGENT: A short tap acts as a latching 'on', a longer hold acts as a momentary/PTT
   - When talk is active, the background of the second line of the display will illuminate red.

   PUSH – Output Monitor
   - Holding the switch in, monitors the audio being sent to the output of that channel.
   - This can be used to check the IFB

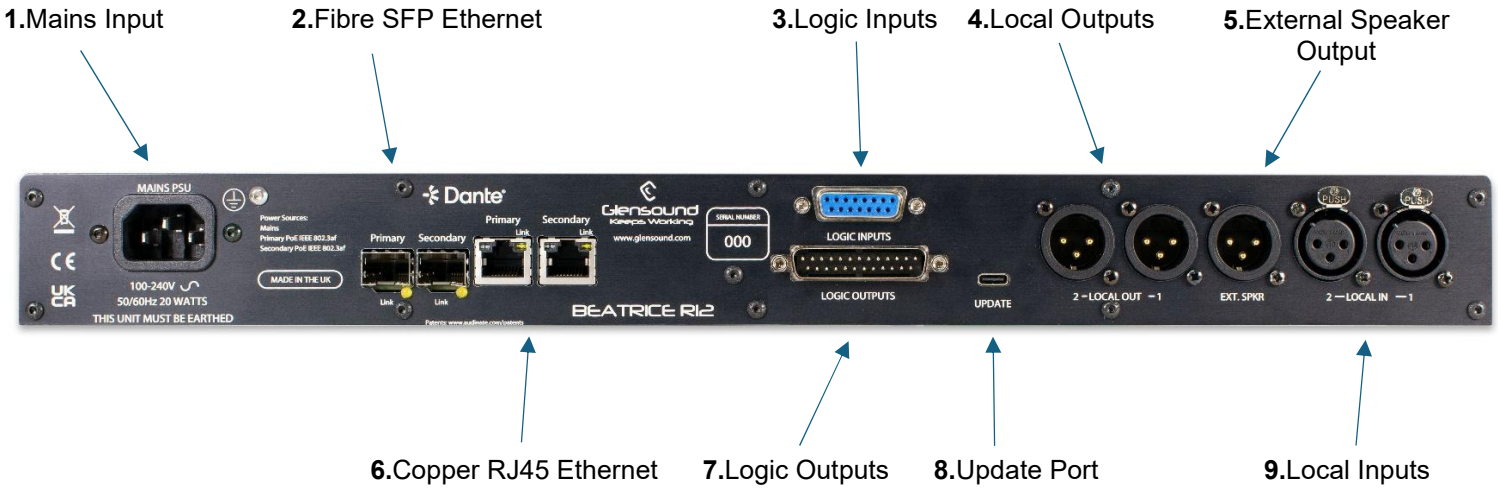
10. **SETUP**
    Press this switch to enter the setup menu.

11. **EXIT**
    Press this switch to save and exit the menu.

12. **LEVEL METER**
    Shows the incoming level of the mic input.

13. **SPEAKER**
    The front panel speaker allowing you to hear the selected incoming audio channels.

R12 MkII Rear Panel Layout



1. **Mains Input**
   An IEC socket, 100-240VAC for the mains power input.

2. **Fibre Ethernet**
   A primary and secondary SFP slot to allow connection of SFP fibre modules (not supplied).

3. **Logic Inputs**
   A female 15 pin dSub socket to receive GPI signalling inputs.

4. **Local Outputs**
   2 x 3 pin male XLR sockets with line level analogue audio direct from the network.

5. **External Speaker Output**
   A 3 pin male XLR with line level output of selected audio inputs.

6. **Copper Ethernet**
   A primary and secondary RJ45 slot to allow wired connection to the network. Accepts PoE power on both sockets.

7. **Logic Outputs**
   A male 15 pin dsub plug to send GPO signalling outputs.

8. **Update Port**
   A USBC socket for firmware upgrades.

9. **Local Inputs**
   2 x 3 pin female analogue XLR sockets that connect directly into the network.

Default Screen Description

A single LCD screen is shown above showing 3 channels. All four screens will have identical function to this.

- **First Row – LISTEN**
  - This shows the incoming audio channel name, with the labels being taken directly from Dante Controller (in Dante version).
  - If the channel has been selected to be 'on' for monitoring (press 'up' on lever key), the background will be ORANGE.

- **Second Row – TALK**
  - This shows the destination channel name, with labels being taken directly from Dante Controller (in Dante version).
  - If the channel has been selected to be 'on' for talking (press 'down' on lever key), the background will be RED.

- **Third Row – SIGNAL PRESENT**
  - If audio is detected on the channel, the background will be GREEN.

- **Fourth Row – INCOMING AUDIO GAIN LEVEL**
  - This indicates the incoming gain level set on the channel.
  - Level can be adjusted by pressing 'left' to decrease and 'right' to increase.
  - There is a 1 second delay before initial level change starts to avoid accidental adjustments.

Setup Screens

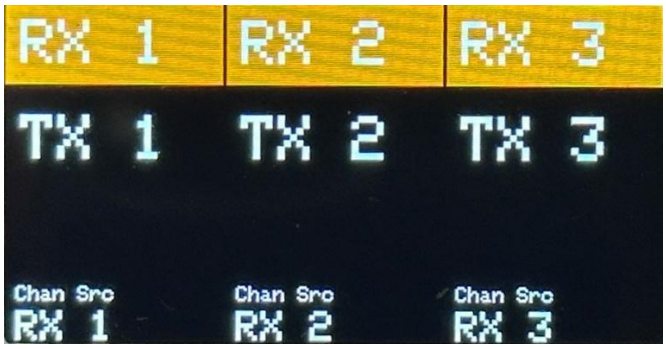
Pressing button 10 ‘Setup’ on the front panel will put the R12 into setup mode. In this mode, the bottom line of text on the display indicates the setup parameter and value.

- Left/right on the lever key adjusts the value
- Pressing setup again moves on to the next setup page

Page 1 – Output Gain

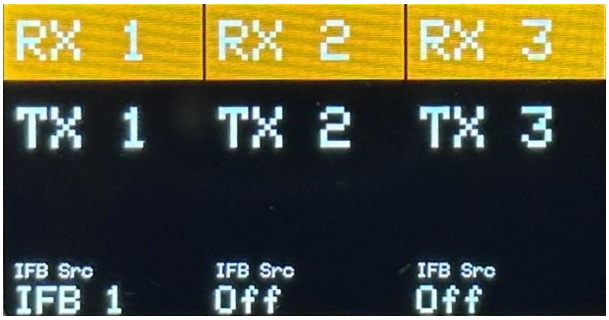
- The output level of each channel going out to the network.

Page 2 – Channel Source



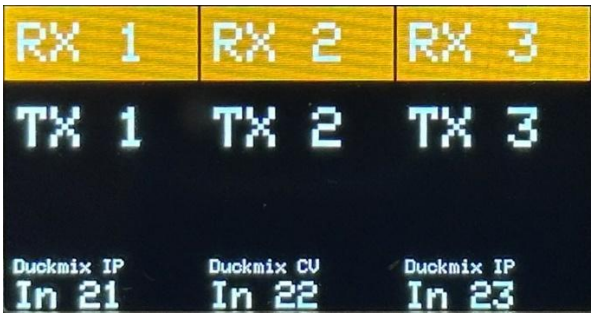
- Selection of the incoming audio source. Available inputs can be selected to any channel.

Page 3 – IFB Source



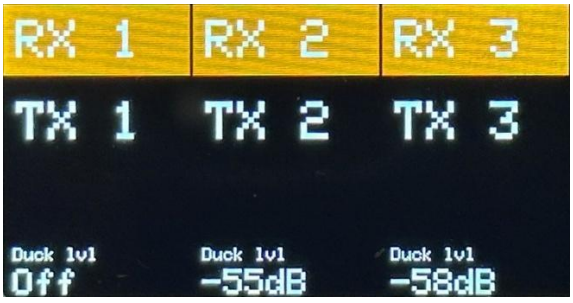
- Selection of the IFB source
- There are 6 available IFB channels to use
- Using an IFB input loops the audio directly to the output
- Activating the talk key cuts/dims the incoming IFB

Page 4 - Duckmix Sources



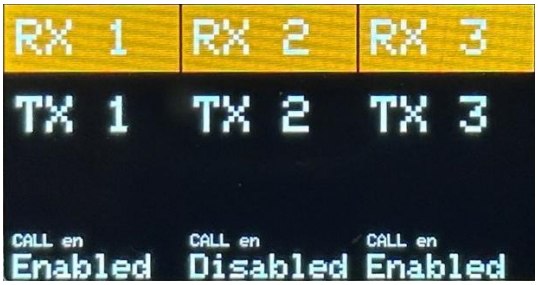
- There are 6 x 2 channel mixers on the R12. This setting allows you to assign the input and output channel of the mixers.
- There is a priority function on these 2 channel mixers:
  - The highest channel number has priority
  - Any audio on the highest channel number will automatically dim the lower channel number

Page 5 – IFB Dim Level



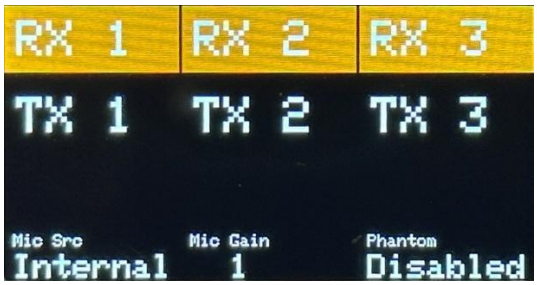
- Sets the dim level for the IFB overrides.

Page 6 - Call Enable



- Enables the call function
    - If the channel receives a 20kHz call signal (as used on other Glensound Beatrice units), the channel will flash and an audio beep will be heard.
    - If the lever key is double tapped, a call signal will be sent out on the relevant channel

Page 7, Screen 1 (Global Settings)

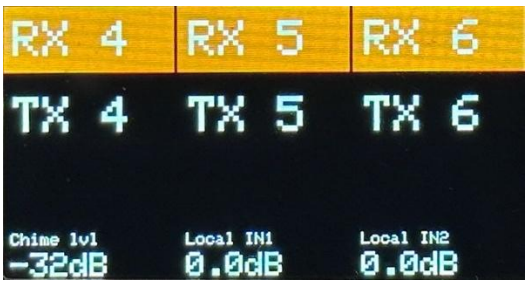


- **Mic Source**
  This allows the selection of the front panel mic (internal) or an attached gooseneck mic via the front panel XLR (external).

- **Mic Gain**
  This sets the preset gain level of the microphone amplifier in 4 steps from 0-3.

- **Phantom Power**
  This setting enables or disables phantom power to the external microphone input.

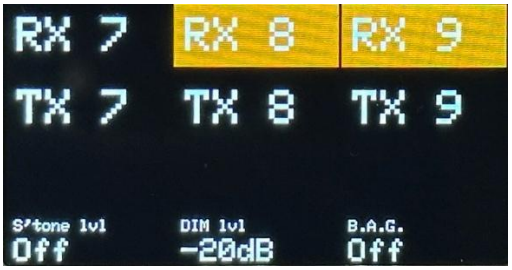
Page 7, Screen 2 (Global Settings)



- **Chime Level**
  This is the audio level setting for the incoming call chime

- **L1 & L2 Level**
  L1 and L2 are the two analogue inputs on the rear panel that are routed directly to the network. These controls allow you to adjust their incoming audio levels.

Page 7 Screen 3 (Global Settings)

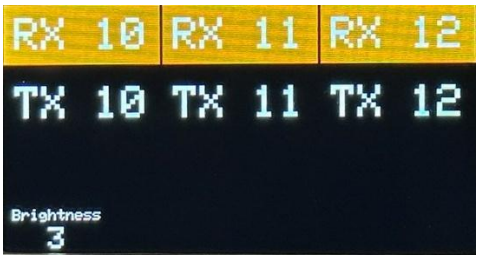


- **Sidetone Level**
  This sets the level of the users own voice in their headphones

- **DIM Level**
  This sets the loudspeaker/headphone DIM level when a talk channel is active.

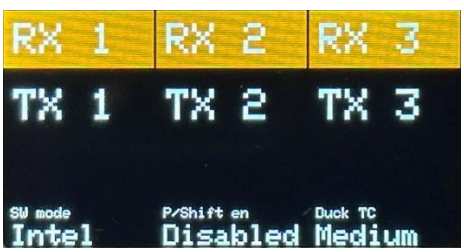
- **Background Audio Guard**
  This sets the threshold of the Background Audio Guard (BAG). The BAG is very powerful 34 channel noise gate which removes all background noise from the microphone. It is very useful when the Beatrice R12 is used in noisy environments.

Page 7 Screen 4 (Global Settings)



- **Brightness**
  This sets the brightness level of the LCD screens

Page 8 Screen 1 (Global Settings)



- **SW (Switch) Mode**

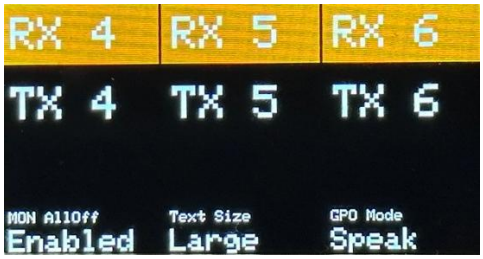
Allows the setting of 3 different switch modes:

- **Latching**
  Pressing the lever key down will lock the talk output on. To turn it off the level key must be pressed again.
- **Momentary/Push To Talk**
  The talk output is only active when the talk key is being held down.
- **Intelligent**
  A short tap latches the talk output on. If you use a longer press, the channel will not latch, and the key will act as a momentary/Push To Talk.

- **P/Shift (Frequency Shifter)**
  The R12 features a very powerful frequency shifter that significantly reduces the onset of feedback, allowing for the mics to still operate when the same audio is being output on nearby speakers. This turns the frequency shifter on and off.

- **Duck TC**
  When auto ducking occurs, this control sets the recovery time back to the original audio.

Page 8, Screen 2 (Global Settings)

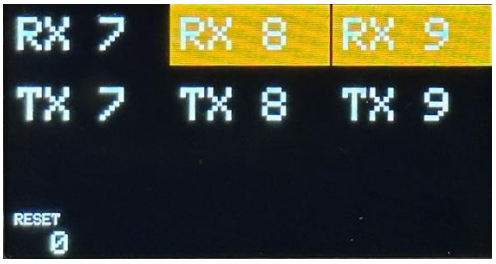


- **MON All Off**
  When enabled, all monitoring inputs can be turned off. When disabled, one monitor source must always be left on.

- **Text Size**
  Allows selection of small or large text size.

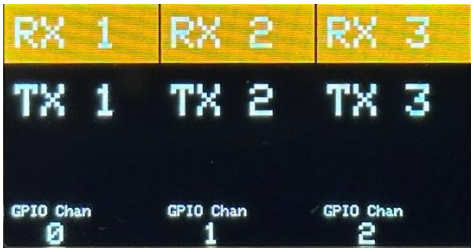
- **GPO Mode**
  - **Call**
    GPO activates when an incoming call is received
  - **Speak**
    GPO activates when a talk key is pressed

Page 8, Screen 3 (Global Settings)



Reset
Returns the Beatrice R12 MkII to the factory settings.

Page 9 - GPIO



There are 8 GPIOs available which can be assigned on this screen, for connection with the talk switch.

CONNECTING TO 4-WIRE EQUIPMENT

The Beatrice R12 MkII can be interfaced to a maximum of two traditional 4-wire systems.

To do this it is necessary to utilise the local audio inputs & local audio output circuits on the R12 and route these to/ from one of the talkback channels via the audio over IP network.

Example to make Talkback Channel 12 operate as a 4 wire circuit.

A) In Dante controller route local input 1 (Dante transmitter no 13) to Dante receiver no 12 (the audio input to channel 12)
B) In Dante controller route Talkback 12 output (Dante transmitter no 12) to Dante receiver no 13 (local output 1)

CONNECTING THE BEATRICE UNIT TO A DANTE NETWORK

The Beatrice intercom units are network audio devices utilizing the reliable and versatile Dante audio over IP protocol. Dante is a proprietary system (although very widely used) the originators of which are Audinate.

The information below is only meant as a very basic guide. Full details of the power of Dante network audio and instructions for using it can be found at www.dante.com

Getting Dante Controller

If you are connecting the Beatrice to a new Dante network the first thing you will need to do is to get the free Dante controller software.
This can be downloaded by visiting the Dante web site at www.dante.com

Connecting Beatrice device to the network

The Beatrice can be connected to the network that you are going to use for your audio distribution simply by plugging in to the RJ45 network connections on the rear. Once connected to the network it will be possible to see the Beatrice from within the Dante controller and route its' audio circuits.

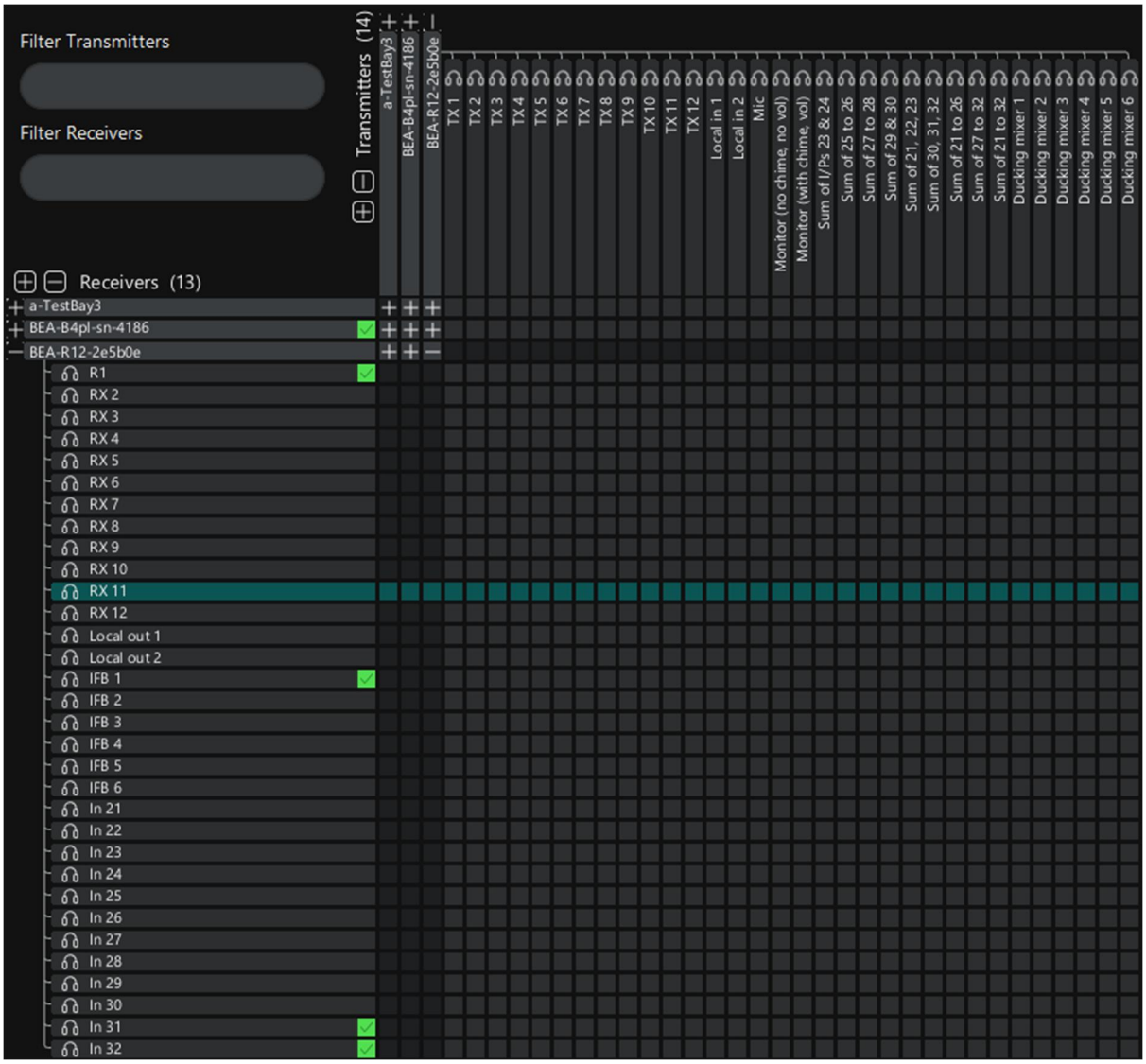
Audio Over IP Network

We strongly recommend that you consider your network topology carefully and would not recommend sharing broadcast audio and general data on the same network.

For more details of audio over IP network structure please visit www.dante.com

Running Dante Controller

At the time of writing this manual the Dante Controller for the R12 looks as per the screenshot below:



The Beatrice R12 MkII will have been named at the factory during test to allow them to be identified by the Dante controller.

The format used for the factory name is:

‘BEA-R12-SN-XXXX’

Where ‘BEA-R12’ refers to the Glensound product i.e. Beatrice R12 MkII.

The ‘SN-XXXX’ refers to the serial number of the Beatrice R12 MkII which can be found printed on the rear or side of the unit.

The unit may be renamed in Dante controller by opening the ‘Device view’ window and selecting Beatrice R12 in the drop-down menu. Go to the ‘Device Config’ tab and change the name with the Rename Device box.

Note if you upload a new DNT file or clear the devices config then the name will change to ‘BEA-R12-xxXxXx’ whereby the ‘X’s refer to the devices MAC address.

Dante Controller TIP

If you have never run Dante controller before then make sure that on the bottom left of the Dante controllers' screen 'P' or 'S' is next to a green square as this indicates that it is connected to a network. By clicking 'P' or 'S' a pop up box opens to allow you to set what network interface the controller is using.

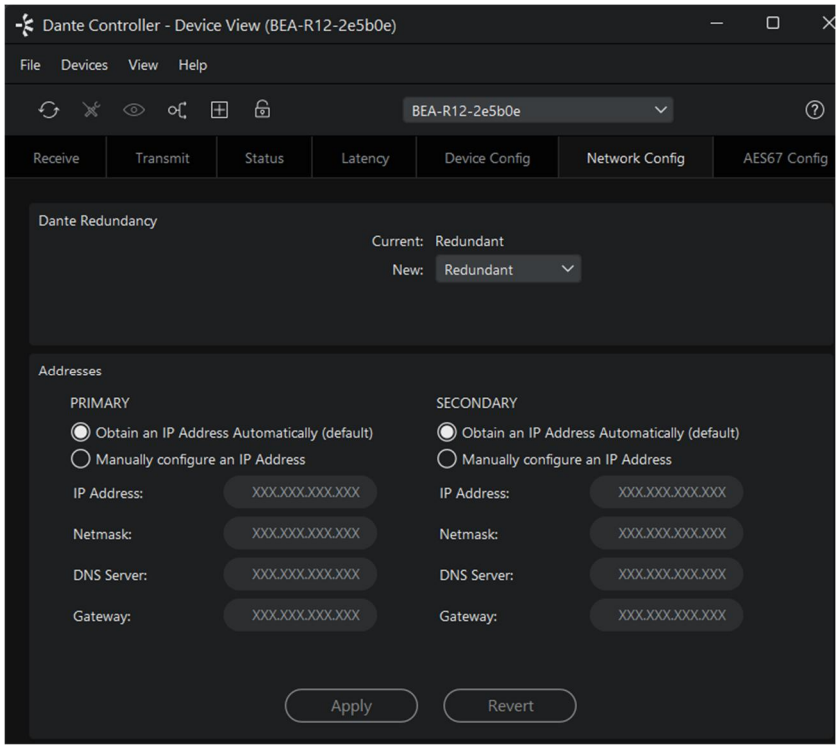
Device not showing up in Dante Controller

If your Dante device does not show up in Dante Controller then the most likely issue is that the device's IP Address is not appropriate for your network.

A) It maybe that the device is set to obtain an IP address automatically using DHCP (this is the default configuration) and your network is setup for fixed IP addresses only and does not have a DHCP server.
B) It maybe that the device has had a fixed IP address assigned but that this address is not suitable for your network.

The solution to both scenarios is basically the same.

1) You must connect your Dante device directly to the Ethernet port of your computer using an Ethernet cable.
2) Make sure that your computer is set to 'Obtain an IP address automatically'
3) After a few minutes the Dante device should now appear in Dante Controller.
4) Double click the device name to open up device view.
5) Open up the 'Network Config' tab
6) Either turn on 'Obtain an IP Address Automatically' or correctly configure the 'Manually configure an IP Address' options for your network.
7) Click on 'Apply' to confirm the new settings, then disconnect the computer and reconnect the Dante device to your network.



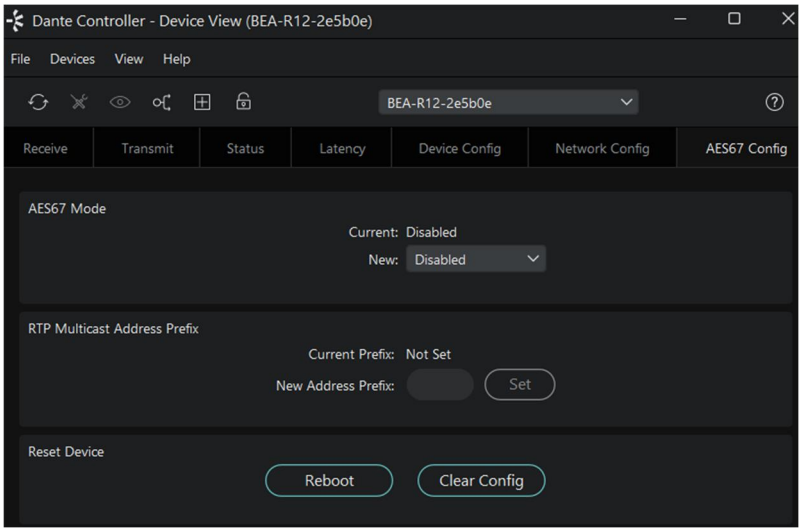
AES67 MODE

The Beatrice uses a chipset from Audinate called the Broadway for its network audio interface. Audinate are the company behind Dante and as such the primary network audio protocol is Dante, however Audinate have enabled their chip to comply with AES67 and therefore the Beatrice can be set to AES67 mode for interaction with other AES67 devices.

Please note however that Glensound are relying on Audinate's AES67 interface and are unfortunately not able to provide full AES67 support for the unit. AES67 support should be sought directly from Audinate.

Turning On AES67 Mode

If you want to use your Beatrice on an AES67 network and it has not been set to AES67 mode then this can be set in Dante controller by double clicking the Beatrice to open the Device View window where you will find an AES67 tab to enable AES67 support.

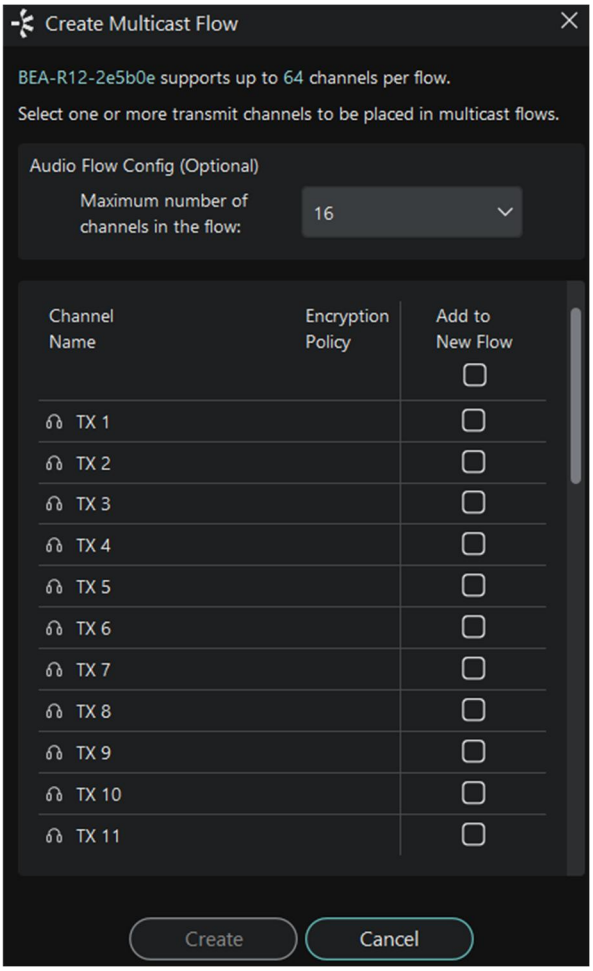


Once the AES67 drop down box has been enabled you'll have to reboot the Beatrice for the change to take effect. After the reboot go back to the AES67 tab and set the multicast prefix address to one that is suitable for your newtork.

Sending AES67 Audio

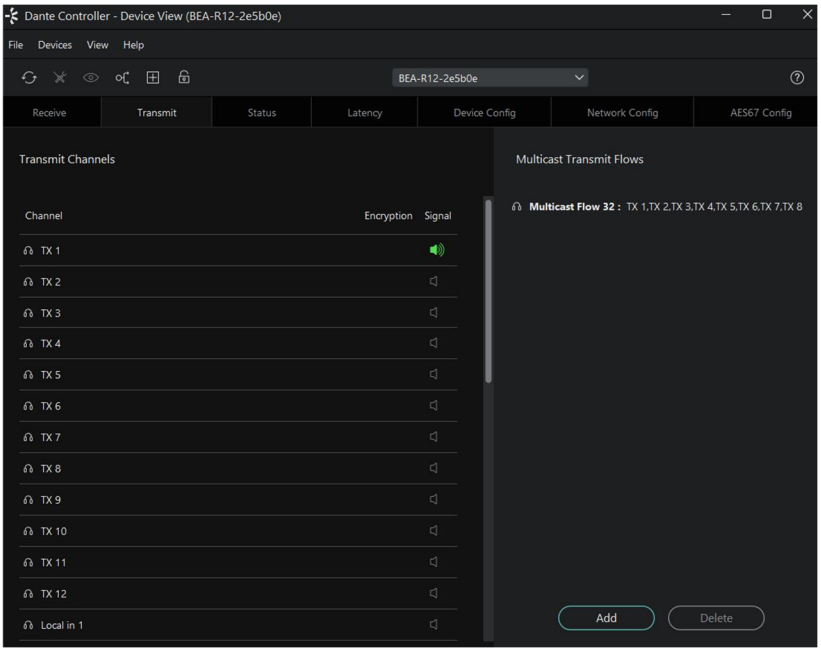
To transmit AES67 audio to the network a multicast flow must first be setup.

This is done by selecting the 'Create New Multicast Flow' Icon  in the Device View.



Tick the AES67 Flow check box, then select channels to be included in the flow then click ‘Create’

Once set the flows can be seen in the transmit tab of the device view.



Receiving AES67 Audio

Once a compatible AES67 stream is detected on the network by Dante Controller the AES67 flows will appear in the Dante Transmitters section in the Routing tab.

AES67 Restrictions

AES67 flows can only be generated with the following constraints:

- Multicast Only
- Non-redundant
- Destination address in range 239.nnn.0.0 to 239.nnn.255.255 (239.nnn/16), port 5004
- 48kHz sampling rate
- 24 bit linear (L24) encoding
- 1 msec packet time
- Up to 8 channels per stream

Received AES67 flows have the following constraints:

- Multicast Only
- Non-redundant
- Destination address in range 239.nnn.0.0 to 239.nnn.255.255 (239.nnn/16), port 5004. Must match destinatio address range.
- 48kHz sampling rate
- L16 or L24 encoding
- 125usec, 250usec, 333usec, 1 msec packet time
- Up to 8 channels per stream

UPDATING THE BROOKLYN III MODULE

The Brooklyn module is a device supplied by Audinate that does most of the processing for the actual Dante/ AES67 network audio streams. There is one Brooklyn III module in each Beatrice R12. We supply special code (a .dnt file) that sets up/ initiates the Brooklyn module and makes it work in particular way and we also run extra code on its internal microprocessor to make it work correctly with the Beatrice D12.

1. Finding Out Current Installed Version

Open Dante Controller.
Open Device Info tab.
Double Click in the device that you are working with….a new window will open called 'Device View (name of device'
Open the status tab.
The Firmware Version (of the Brooklyn module) will be found under the 'Device Information' heading.

2. Finding Out What The Latest Available Version Is

Go the Beatrice R12's web page at http://www.glensound.co.uk/product-details/beatrice-r12/ and open the 'Firmware Latest Version' Tab.
This will give both the latest version numbers/ file names.

3. Updating the Brooklyn Module

The firmware that runs on the Brooklyn module is updated using Dante Updater (part of Dante Controller). Dante Controller, and a user guide can be downloaded from Dante's website:

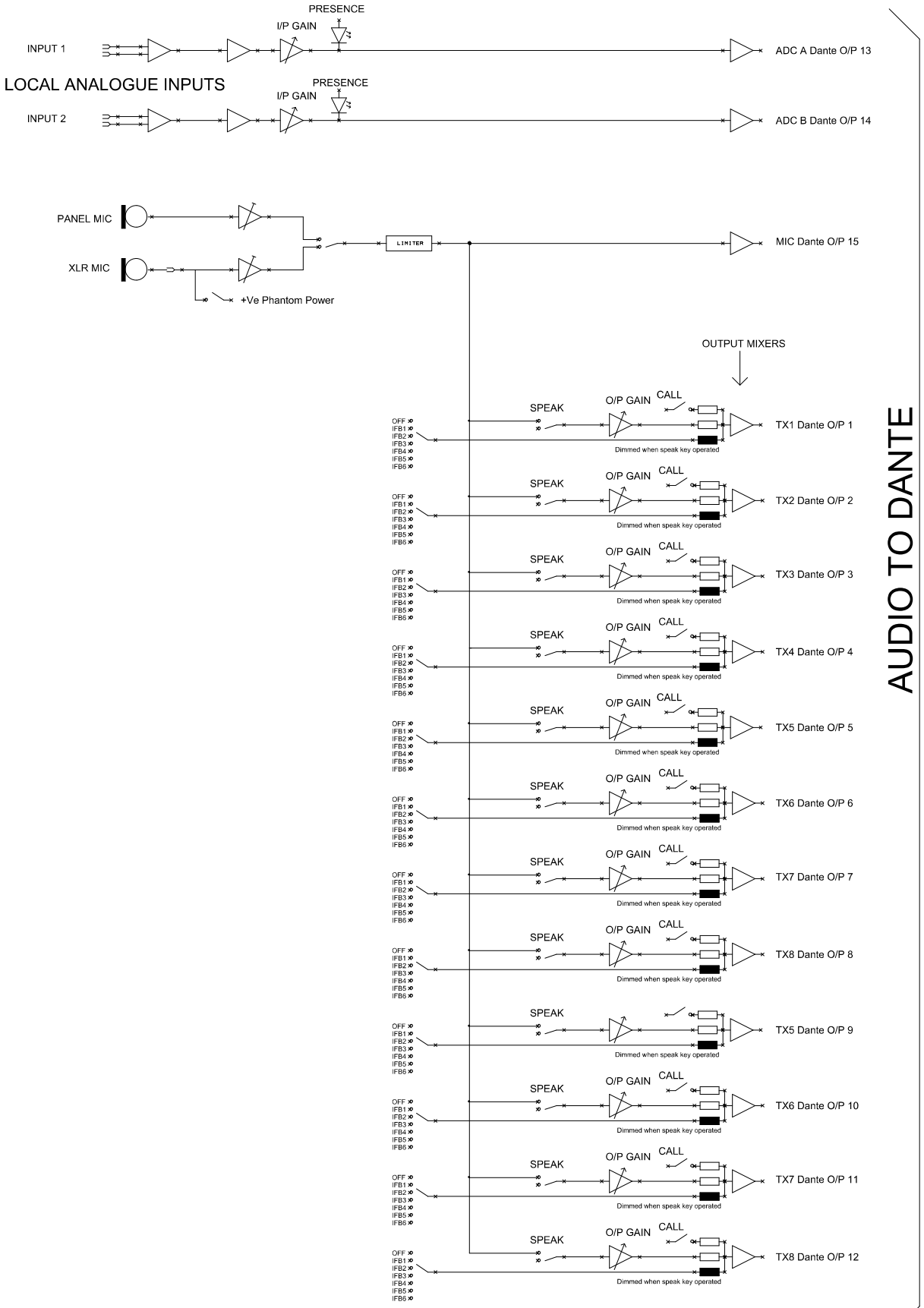
https://www.getdante.com/support/software-downloads/#dante-controller

When new firmware is available we build the file and upload it to Dante. It then magically appears in Dante Controller!

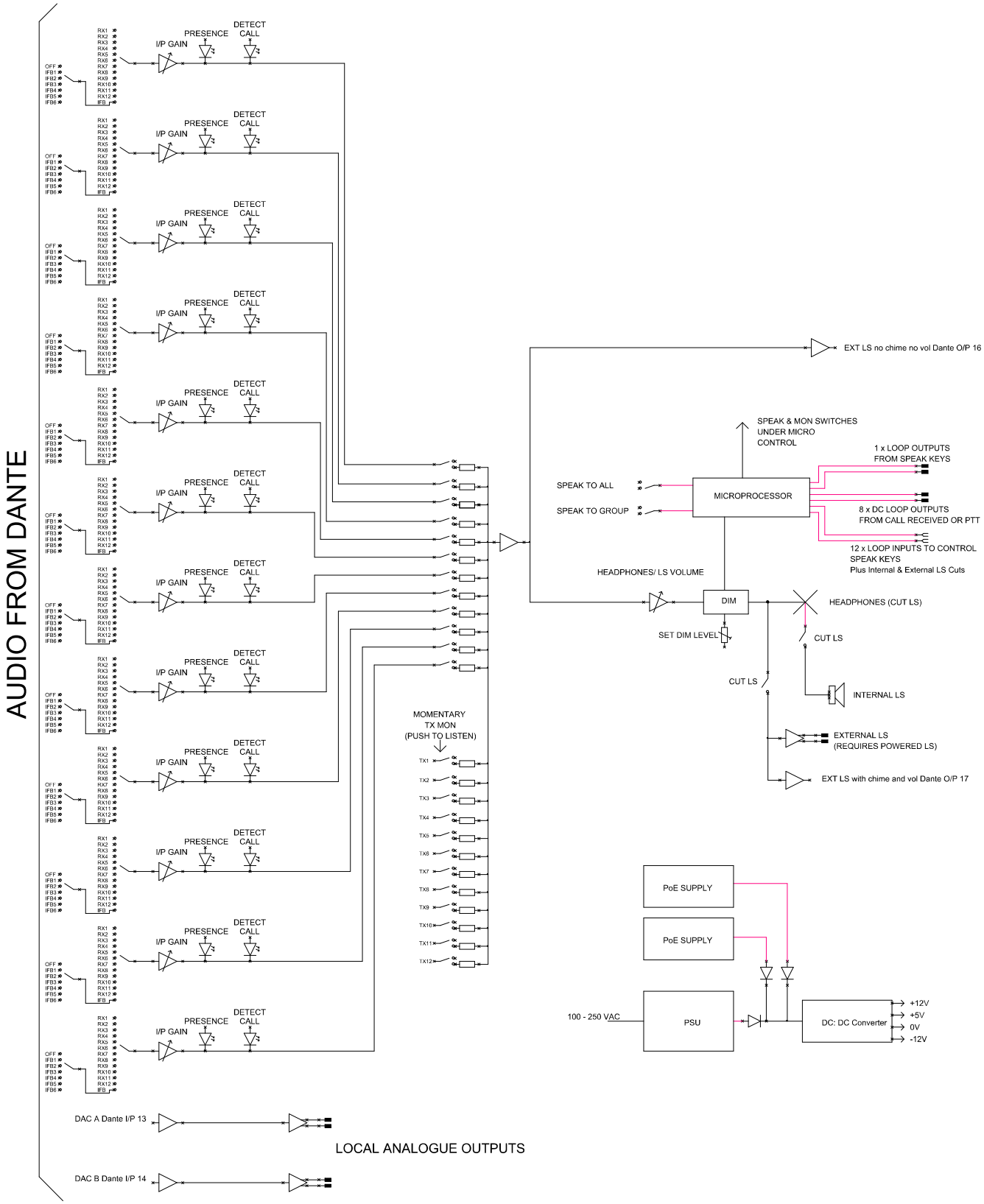
NOTE

Once updated the devices name will change to BeatriceD12-xxXxXx whereby the 'X's refer to the MAC address. We recommend changing the name to something more convienient.

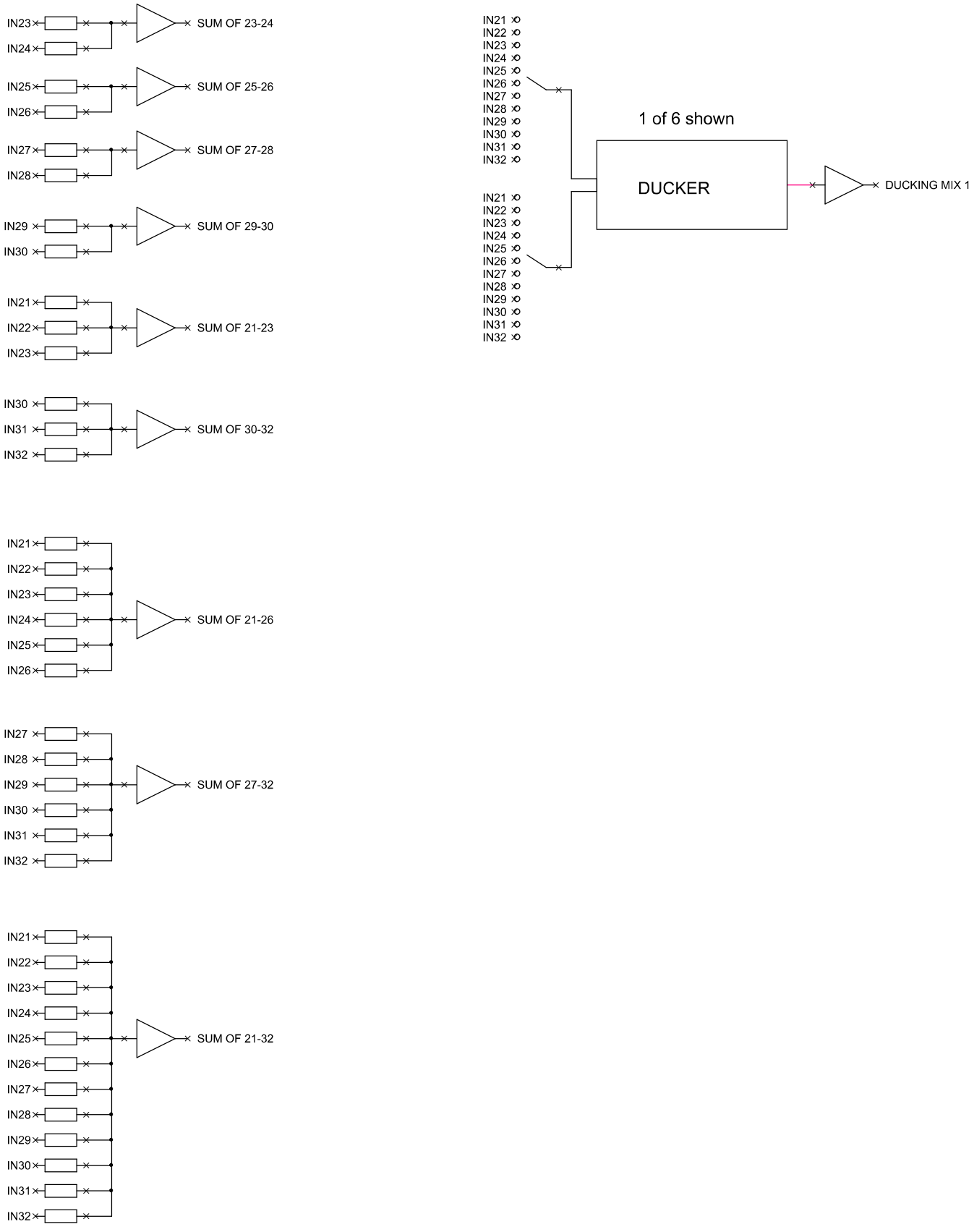
AUDIO BLOCK DIAGRAM - TRANSMIT



AUDIO BLOCK DIAGRAM - RECEIVE



AUDIO BLOCK DIAGRAM – AUX MIXERS



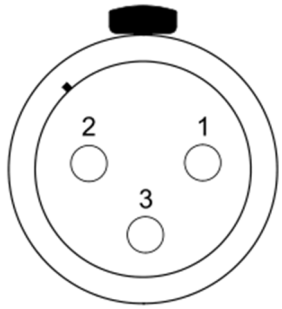
TECHNICAL SPECIFICATION

Unit:	**Beatrice R12**	**NETWORK**	
		Dante	Yes
AUDIO		**Ravenna/ST2110**	Option
Mic Input Gain Range			
Dynamic	40dB(10dB step)	**AES67 Compliant**	Yes
Phantom	40dB(10dB step)		
Phantom Power	12V	**SMPTE ST-2110-30 Compliant**	Option
Equivalent Input Noise		**Number Of Network Interfaces**	4
150R 22Hz-22kHz	-115dBu		
		Copper Ethernet	2
Frequency Response Line in	20Hz-16kHz		
		Fibre Ethernet	2
Frequency Response Line out	20Hz-20kHz		
		Transfer Rate	
Dynamic Mic Line Up	-65/-55/-45/-35dBu		
		Dante Network Sample Rate	1GB/sec
Mic + Phantom Power Line Up	-65/-55/-45/-35dBu		
		AES67 Network Sample Rate	48kHz
Mic Input Impedance	2k4 Ohms		
		Resolution	24 Bit
Line Input Impedance	>10k Ohms		
Number of Inputs / Outputs		**POWER**	
Mic inputs	1+Panel	**PoE**	Yes
Line Inputs	2	Powered by the PoE network port Complies to: IEEE 802.3af-2003 Classification Class 0	
Line Outputs	3		
		DC	N/A
Maximum Input Level			
Dynamic Mic: Mic + 12V PH:	-17dBu	**AC**	100- 240VAC
Dynamic Mic: Mic + 12V PH: **Compressor/ Limiter**	-17dBu		
Dynamic Mic: Mic + 12V PH: **Compressor/ Limiter** Dynamic Mic: Mic + 12V PH: **Compressor/ Limiter** **THD + NOISE**	On mic inputs	**Consumption**	20W
Line Inputs		**Power On LED**	Display
Line Inputs	0.05%		
Line Outputs	0.05%	**ENVIRONMENTAL**	
Headphone Volume Pot Range	70dB	**Operating Temperature**	0 to +50C

Headphone Impedance	32-1000 Ohms	**Storage Temperature**	-10 to +50C
Maximum Headphone Output		**PHYSICAL**	
600 Ohms:	+18dBu	**Size**	445 X 163 X 44.5mm (WxDxH)
Headphone Frequency Response	20Hz-16kHz	**Weight**	1.61kg (unpacked)
		Mechanics	All aluminium construction , anodized and laser etched, powder coated sides
INCLUDED ITEMS			
Handbook	Available by download		
RJ45 Network Cable	2 metre Cat5 Rj45 plug /Rj45 plug cable		

WIRING INFORMATION

XLR & JACK Wiring



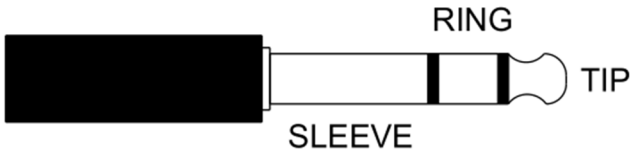
XLR SOCKET (FEMALE)

STANDARD XLR AUDIO PINOUTS:

1: Ground/ Earth

2: INPHASE/ POSITIVE/ MIC +

3: MATE/ NEGATIVE/ MIC -

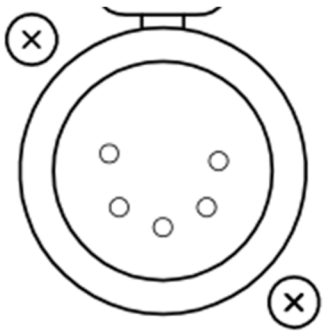


STANDARD HEADPHONE WIRING:

TIP: A/ LEFT Ear

RING: B/ RIGHT Ear

SLEEVE: Common/ Earth



5 PIN XLR AUDIO PINOUTS (Option):
Female XLR fitted to Beatrice, mates with cable mounted male

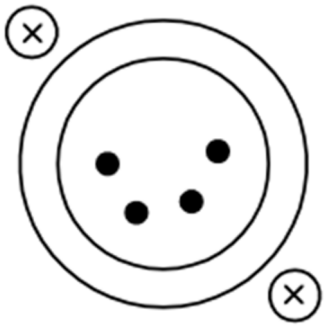
1: MATE/ NEGATIVE/ MIC -

2: INPHASE/ POSITIVE/ MIC +

3: GROUND/ EARTH

4: HEADPHONE LEFT

5: HEADPHONE RIGHT



4 PIN XLR AUDIO PINOUTS (option):
Male XLR fitted to Beatrice, mates with cable mounted female

1: MIC GND/ MIC –

2: INPHASE/ POSITIVE/ MIC +

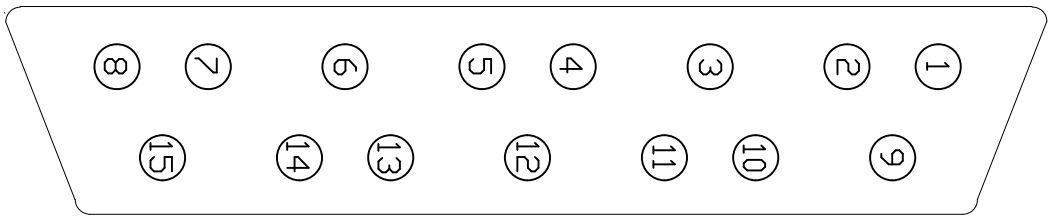
3: HEADPHONE GND

4: POSITIVE/ HEADPHONE +

Using The Beatrice R12 MkII With Remote Connections – GPIO

The Beatrice R12 MkII allows for 8 x remote connections with external devices for inputs and outputs. In page 9 of the setup menu, you can assign GPIO 1-8 with any of the 12 channels.

D15 Socket Loop Input Wiring



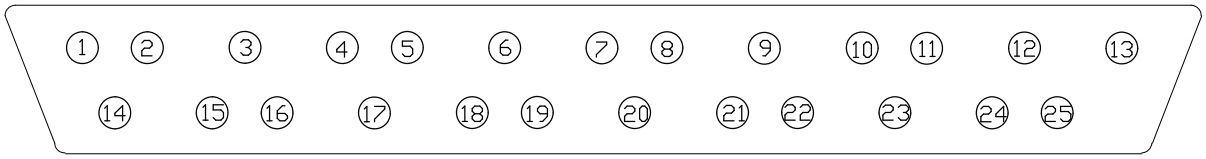
PIN Number	Function
1	GPI1
2	GPI2
3	GPI3
4	GPI4
5	GPI5
6	GPI6
7	GPI7
8	GPI8
9	Speak to Group
10	Speak to All
11	Cut Internal LS / HP Out
12	Cut EXT SPKR Out
13 - 14	Not connected
15	Ground/ Earth

The 12 active loop input pins work in Parallel with the front panel switches.

To operate an external loop just connect the input that you want to operate to the Ground/ Earth.

D25 Plug Loop Output Wiring

GPO mode selects either Call or Speak mode. It does what you expect, and is global.



PIN Numbers	Function
1 & 14	Call Received / Speak Ch 1
2 & 15	Call Received / Speak Ch 2
3 & 16	Call Received / Speak Ch 3
4 & 17	Call Received / Speak Ch 4
5 & 18	Call Received / Speak Ch 5
6 & 19	Call Received / Speak Ch 6
7 & 20	Call Received / Speak Ch 7
8 & 21	Call Received / Speak Ch 8
12 & 25	Speak Key On
13	Ground/ Earth
9, 10, 11, 22, 23 & 24	Not Connected

Loop outputs are connected internally to solid state relays which are wired normally open. Therefore the PIN Numbers in the above table refer to either side of the switched relay output that will become joined together if the associated output is active.

The maximum voltage handling for each relay is 48V.

The maximum current handling for each relay is 100mA.