



DANTE NETWORK AUDIO SINGLE USER COMMENTARY BOX

PRODUCT DETAILS



GlenSound Electronics Ltd

Thank you for choosing a new GlenSound product.

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

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PRODUCT WARRANTY:

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

We have a policy of supporting products for as long as possible and guarantee to be able to support your product for a minimum of 10 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.



This equipment manufactured by GlenSound Electronics Ltd of Brooks Place Maidstone Kent ME14 1HE is **CE** marked and conforms to:

Low Voltage Directive: EN60065

Emissions: EN55103.1

Immunity: EN55103.2

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT REGULATIONS 2006 (WEEE)

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

WEE/JJ0074UR

RoHS DIRECTIVE

EC directive 2002/95/EC restricts the use of the hazardous substances listed below in electrical and electronic equipment.

This product conforms to the above directive and for this 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%

GLENSOUND VITA **Handbook Contents**

Issue 3

Description

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OVERVIEW

The Glensound Vita is a single user commentary box designed to connect to a Dante audio network. The Vita provides a single user headphone and microphone interface with a single talkback circuit, in a compact belt pack format. A very high quality microphone amplifier and compressor/limiter circuit are used in the Vita, designed specifically for the specialist requirements of commentators' equipment.

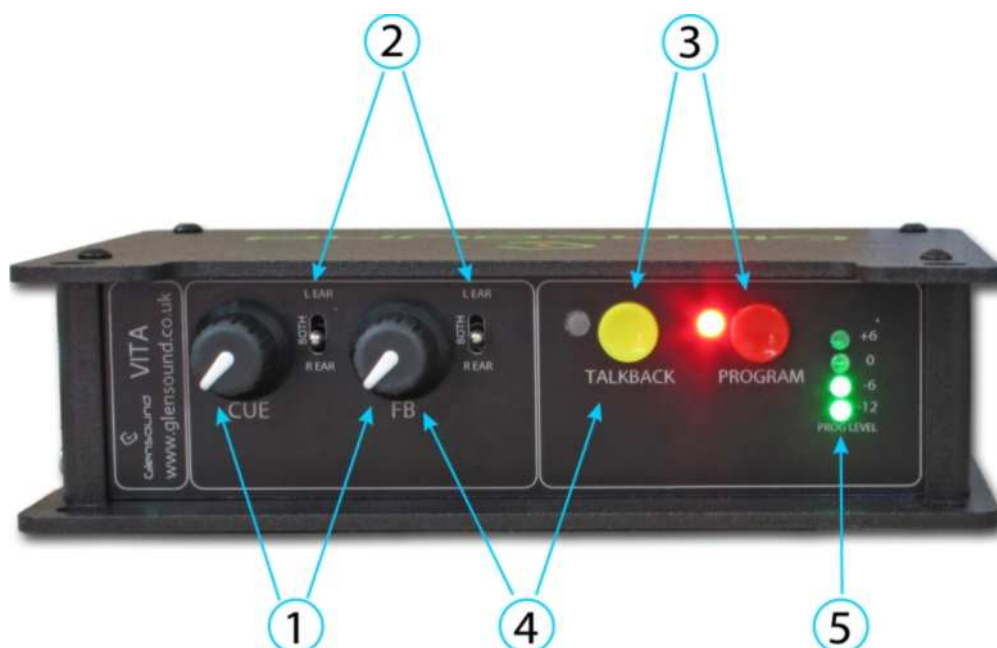
The audio inputs and outputs of the Inferno are Dante network audio circuits. Dante network audio is a common protocol for distributing high quality linear audio over standard IP networks and it is widely used by many audio equipment manufacturers. The Glensound Vita's Dante audio interface will be compatible with any other manufacturers' Dante audio interface.

Network audio routing is managed by the Dante Controller software. Further details of Dante network audio, and the Dante Controller software can be found at www.audinate.com

Being designed for live on-air broadcast applications, the Glensound Vita has been designed with backup power capabilities. It can be powered via the CAT5 connection with PoE or via a local external DC connection.

PANEL LAYOUT & FUNCTIONS

PLEASE NOTE AS THE UNIT IS CONFIGURABLE IT IS POSSIBLE TO CHANGE THE OPERATION OF SOME OF THE CONTROLS SHOWN HERE. THEREFORE THE FOLLOWING IS MEANT AS A GUIDE ONLY.



1. Source Level Controls

These two potentiometers adjust the headphone volume of the two input circuits being received from the Dante network.

2. Input Routing Controls

Left-Both-Right headphone routing. This control routes the associated headphone source to either the left only, right only or both (centre) of the commentator's headphones.

3. Program/Talkback Switches

The 2 round talkback switches route the commentator's mic to the output of the Vita i.e. channels 1 or 2 of the Dante network.

The operation of these talkback switches (momentary, latching, intelligent, etc) can be set using Vita Controller software (see page 11).

4. Sidetone Level Control

The feedback pot and talkback switch are also used to adjust the audio level of the commentators' microphone in their own headphones. It has no effect on the outgoing audio level and is used just for confidence monitoring.

To adjust the sidetone level, hold down the talkback button, whilst adjusting the feedback pot to the desired level.

5. Peak Programme Meter (PPM)

A 4 LED PPM indicating the output level of the main program circuit. The -12 to +6 scale shows the output level in dBs. Each LED covers a 6dB range.



6. Peak Programme Meter (PPM)

A 2nd 4 LED PPM indicating the output level of the main program circuit is included on the right side to assist with level indication to the user when the Vita is used clipped to a belt. The -12 to +6 scale shows the output level in dBs. Each LED covers a 6dB range.

7. Power LED

A single blue LED indicates that the Vita is receiving power.



8. CAT5 Network Port

An EtherCON RJ45 socket allows the audio connection to the Dante network. The Vita has 2 audio inputs and 2 audio outputs on this connection. If the device the VITA is connected to provides PoE, it will also power the Vita on this connection. An LED indicates the network connection status.

9. Mini USB Socket & Update/Reset Buttons

A mini USB socket and the recessed push buttons allow PC connections for future firmware upgrades. Visit www.glensound.co.uk/product-details/vita/ for the latest information.

10. DC Input Socket

A 2.5mm barrel connector (centre positive), is for connection of an external 10-15VDC power supply.



11. Headphone Socket

A 6.35mm jack socket is available for a headphone connection, with a recommended impedance range of 32-1000 ohms.

Stereo & mono headphones can be used, or single earpieces.

A sophisticated headphone amplifier design maintains the same output level, regardless of the impedance of the earpiece or headphones used.

12. Input Selector Switch

A 3 position switch selects the gain of the input amp, depending on the type of input connected. With the input gain control in the centre position the following gains are applied:

INPUT SELECTED	GAIN OF MIC AMP	OUTPUT LEVEL
MIC	58dB	0dB
MIC + PH PWR	40dB	0dB
LINE	0dB	0dB

13. Input Gain Control

A small pot adjusts the gain of the input amplifier

14. Input Connector

A 3 pin Neutrik XLR is for connecting the mic or line input to the Vita.

VITA CONTROLLER WINDOWS 10 APPLICATION

Vita Controller enables remote control of key functions, and configuration of a single or multiple Vita's connected to the network. It is PC software that runs on Windows 10 machines.

Downloading

The Vita controller application must be downloaded. It is a zipped file, which contains 32 & 64 bit Windows versions of the app, a security certificate for Windows and installation instructions. To download the file please use the following address:

www.glen sound.co.uk/Software/Dante/Vitacontroller.zip

- 1) Check whether you have a 32 bit or 64 bit installation of Windows.
- 2) Run File Explorer.
- 3) Select 'This PC' from the left hand column.
- 4) Right click and select 'properties'.
- 5) 'System type' will show a 32 bit or 64 bit system installed.
- 6) Download the Vita Controller software for your operating system onto your local machine.

Installation

Make sure the correct Vita Controller download files are in a folder on your local machine.

Installation of Vita Controller is a two stage process as all Windows 10 applications must have a digital certificate. If this is the first time you have installed Glen sound applications, then you must first load the Glen sound App Certificate. This will allow you to install Vita Controller and any further Glen sound Windows 10 applications. If you already have the Glen sound digital certificate you can go straight to Stage 2.

Stage 1 – Installing the Glen sound App Certificate

- 1) Make sure that you have administrator rights on your system. If not, please contact your system administrator.
- 2) Windows 10 must allow 'sideloading' applications.

To do this, open the Settings app and select the 'Update & security icon'. Then go to the 'For developers' tab. Select 'Sideload apps'. NB Sideload apps will also work if 'Developer mode' is selected but this is not recommended.

- 3) From the files downloaded from the Glensound website, double-click on 'GlensoundApp.cer'.
 - a. Click Install Certificate.
 - b. Select 'Local Machine' and click 'Next'.
 - c. Select the option "Place all certificates in the following store" and then click Browse.
 - d. Select the "Trusted Root Certification Authorities" store and click OK then Next.
 - e. Click 'Finish'.
 - f. You will get a Security Warning asking if you want to install the certificate. Click 'Yes'.
 - g. Click 'OK'.

The Glensound App Certificate will now be installed. Certificates for the current user can be managed by starting 'certlm.msc'.

Stage 2 – Installing The Vita Controller Application

- 1) From the files downloaded from the Glensound web site, unzip the files to a local folder.
- 2) Select the 32 bit or 64 bit folder that is appropriate for your operating system.
- 3) Right-click on the 'Vita Controller Setup.ps1' file and select 'Run with PowerShell'.
 - a. If you do not have permissions to run scripts on your machine, you may get an error at this point, even though this file is digitally signed. If so, please contact your System Administrator to change the Execution Policy to a less restrictive one to allow Vita Controller to be installed. This can be changed back after installation.
- 4) If you get an 'Execution Policy Change' warning, press 'Y' and then 'enter' to accept. This should only happen on the first application installation after installing the Glensound App Certificate.
- 5) The installation folder can now be deleted.
- 6) To run Vita Controller, click the Windows icon in the bottom left corner of the screen, and find it in the 'All apps' list and double click.

Uninstalling Vita Controller

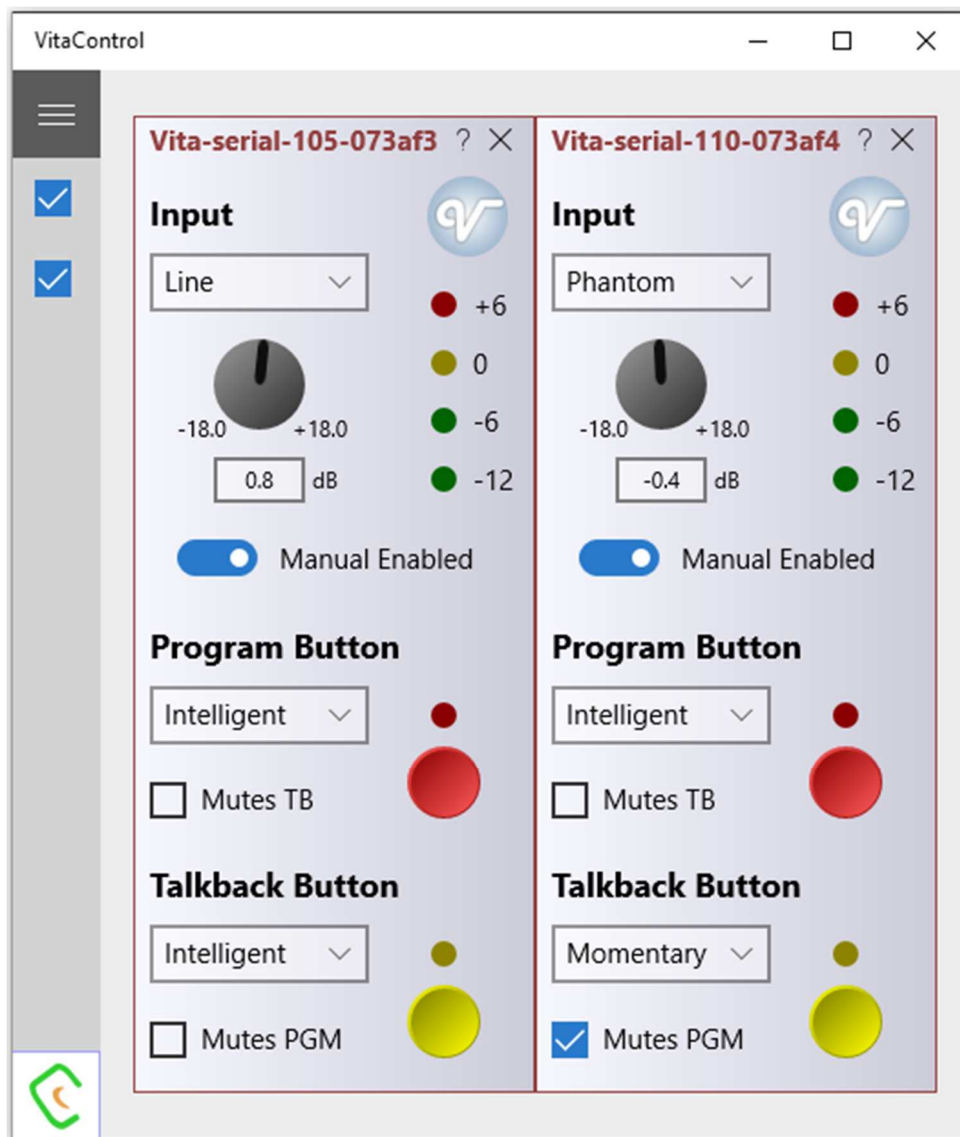
Find the app in the 'All apps' list then right-click and select 'Uninstall'.

VITA CONTROLLER OPERATION OVERVIEW

When Vita Controller is run, it will scan the network looking for any connected Vita's. These will show up on the left hand side and each can be selected by clicking down the tabs.

Names of each device can be changed for something appropriate within Audinate's Dante controller software – the operators name, for example.

The operation of Vita Controller is real time and any changes made will be instantly applied. Simply click on the graphic to make real time changes to the function selected.



Key Vita Controller Features

- Change input type to mic/mic+48v/phantom
- Adjust mic input gain
- Turn the mic or talkback on/off
 - Pressing the red or yellow buttons on Vita Controller has exactly the same effect as pressing the buttons on the unit does.
- Set the mode of the Program and Talkback buttons
 - Latching
 - Momentary push to talk
 - Intelligent
 - Quick push is a latch, a longer push is momentary
 - Always on and mutes when pressed (cough button)
 - Pressing one of the buttons mutes the other
 - This is when you use the talkback circuit and want your on air mic muted when you press the talkback button
- Lock all the local controls on the Vita so Vita Controller has exclusive control.
- PPM meter

CONNECTING THE VITA TO A DANTE NETWORK

The Vita is a network audio device 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.audinate.com

Getting Dante Controller

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

Connecting Vita's To A Network

Vitas can be connected to the network that you are going to use for your audio distribution simply by plugging in the network connection on the rear. Once connected to the network it will be possible to see the Vita from within the Dante controller and route the audio circuits.

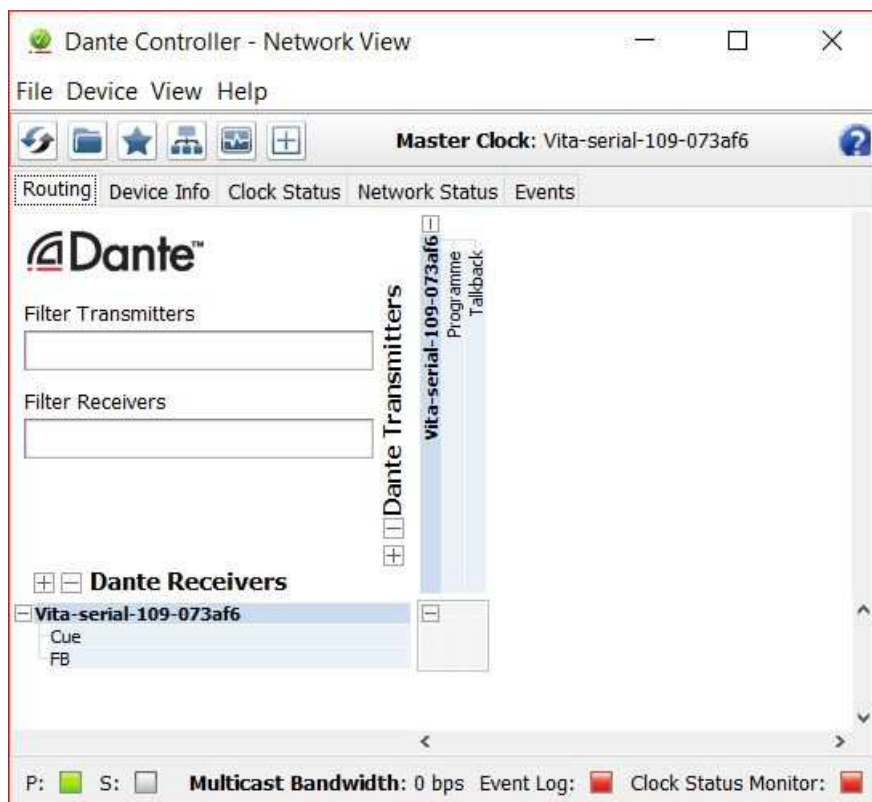
Audio Over IP Network

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.audinate.com

Running Dante Controller

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



The Vita 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:

'Vita-serial-XXX-YYY'. 'XXX' will be the units 3 digit serial number, and 'YYY' will be the Vita's 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.

UPDATING FIRMWARE

The Vita is a network audio device utilizing the reliable and versatile Dante protocol. It may be necessary to install the latest version of Vita Firmware from time to time.

The firmware is the code that runs internally in the Vita and provides the structure for the Microcontroller. The firmware can be updated without the need to return the unit to Glensound.

1. Finding Out Current Installed Version

Run the Vita remote control App and select the Vita that you want to know this information for.

In the device view screen press the ? next to the X. The devices information will then be shown as detailed below.



2. Finding Out What The Latest Available Version Is

Go the Vita's web page at <http://www.glensound.co.uk/product-details/vita/> and open the 'Firmware Latest Version' Tab.

This will give both the latest version numbers/ file names and also the location to download the file from.

3. How to Update the Firmware

- 1) Get the new firmware from Glensound's web site.
Using your browser download the .dfu from the following location: (Note the following locations were correct at the time of writing this manual but will change as the firmware is updated).

http://www.glensound.co.uk/Software/Dante/Vita_v1.1.0.0.dfu

Note: The above addresses are just file locations there is no web page associated with it, so you may see 'page not found'.
Make sure you know where your browser has downloaded and saved the file to as you'll need it in a minute.

- 2) Install on a pc a program called Dfuse. This is a program that is supplied by ST Microelectronics who are the manufacturer of the intelligent microprocessor that we use in the Vita. Just googling Dfuse should provide the link to ST Microelectronics Dfuse download page. The programme to download is 'DFUSE DEMO'. Follow the download instructions to download and install Dfuse on your PC.
- 3) Make sure you know where the latest version of the Vita's firmware is located on your pc (this is a .dfu file). This is a file that you downloaded in step 1.
- 4) Connect the USB 'UPDATE' port on the rear of the Vita that you want to update to a USB port on your PC.
- 5) Press and hold the recessed 'UPDATE' button. While pressing the 'UPDATE' button press and release the recessed 'RESET' button (you'll need a pencil or pointed object to push the recessed buttons. Do not press too hard, they only move a small amount).
- 6) If this is the first time you have connected the Vita to the PC then windows will load drivers for it.
- 7) Open the Dfuse software and in the top drop down list select the device shown (there should only be one device available called something like '*STM device in DFU Mode*').
- 8) Under the 'Upgrade or Verify Action' box at the bottom right area of the Dfuse software use the 'choose' button to locate the downloaded .dfu file.
- 9) Tick the 'Verify after download' box
- 10) Use the 'update' button (next to the choose button) in the Dfuse software to start the update.
- 11) Wait for the update to be completed.
- 12) Turn the Vita off/on....the new firmware will now be loaded.

UPDATING THE ULTIMO CHIPSET

The Ultimo chipset is a device supplied by Audinate that does most of the processing for the actual Dante/ AES67 network audio streams. There is one Ultimo chipset in each Vita. We supply special code (a .dnt file) that sets up/ initiates the Ultimo chipset and makes it work in particular way.

1. Finding Out Current Installed Version

Using Dante Controller look under the 'Device Info' tab and then the 'Dante Version' column to see what version of Dante firmware is currently installed.

2. Finding Out What The Latest Available Version Is

Go the Vita's web page at <http://www.glen sound.co.uk/product-details/vita/> and open the 'Firmware Latest Version' Tab.

This will give both the latest version numbers/ file names and also the location to download the file from.

3. Updating the Ultimo Chipset

The firmware that runs on the Ultimo Chipset is updated using Audinate's Firmware updating tool. The updating tool and a user guide can be downloaded from Audinate's website:

<https://www.audinate.com/products/firmware-update-manager>

The actual firmware to install using the above tool can currently be downloaded from:

http://www.glen sound.co.uk/Software/Dante/Vita_v1.2.0_Dante_v4.0.8.19.dnt

When downloading the above file please make sure that you know where your computer has saved it.

Please note we strongly advise that when you do the update that only your PC and the Paradiso that you want to update are on the network to save accidentally updating the wrong Dante device.

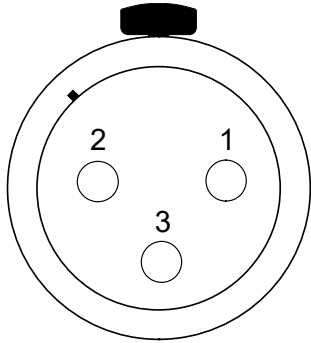
AES67 MODE

The Virgil uses a chipset from Audinate called Ultimo for its network audio interface. Audinate are the company behind Dante and as such the chipsets's primary network audio protocol is Dante, however Audinate have enabled their chipset to comply with AES67 and therefore the Vita 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.

If you want to use your Vita 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 Vita to open the Device View window where you will find an AES67 tab to enable AES67 support.

WIRING INFORMATION



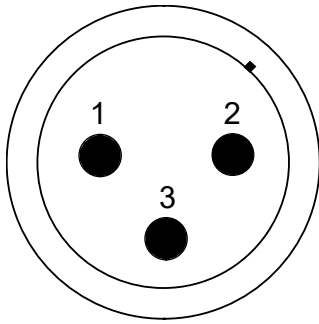
XLR SOCKET (FEMALE)

STANDARD XLR AUDIO PINOUTS:

1: Ground/ Earth

2: INPHASE/ POSITIVE/ MIC +

3: MATE/ NEGATIVE/ MIC -



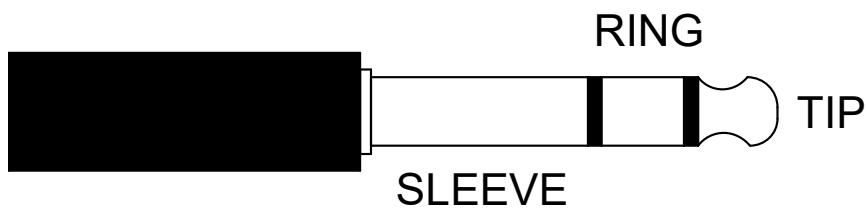
XLR PLUG (MALE)

STANDARD HEADPHONE WIRING:

TIP: A/ LEFT Ear

RING: B/ RIGHT Ear

SLEEVE: Common/ Earth



Inferno External DC power input: 2.5mm Barrel, Centre +Ve, 9 to 15 Volts, 1 Amp