



Glensound
Keeps Working

DARK8MAI MKI & DARK8MAIR

**DANTE[®] NETWORK AUDIO
8 INPUT MIC/LINE LEVEL ANALOGUE
INTERFACES**

PRODUCT DETAILS



GlenSound Electronics Ltd

Thank you for choosing a new GlenSound product.

All rights reserved.

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

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

GlenSound Electronics Ltd
The Design Buildings
1 – 6 Brooks Place
Maidstone
Kent
ME14 1HE
United Kingdom

Telephone: +44 (0) 1622 753662

EMAIL ADDRESSES

General and technical enquires: office@glenSound.com

Sales enquires: sales@glenSound.com

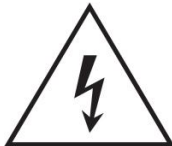
IMPORTANT SAFETY INSTRUCTIONS



This symbol is intended to highlight that there are important operating & maintenance instructions in the literature accompanying this unit.



This symbol is intended to highlight that the equipment must have a valid earth connection with the protective earthing conductor.



This symbol is intended to warn that dangerous voltages within the product are present and constitute a risk of electric shock.



High sound pressure
Hearing damage risk
Do not listen at high volume levels for long periods.

- 1) Read these instructions
- 2) Keep these instructions
- 3) Heed all warnings
- 4) Follow all instructions
- 5) This product is intended for indoor use only
- 6) The intended ambient operating temperature of this product is 0°C to 40°C
- 7) Do not use this apparatus near water
- 8) Clean only with a dry cloth
- 9) Do not block any ventilation openings. Install in accordance with manufacturer's instructions
- 10) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
- 11) 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
- 12) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus
- 13) The socket outlet used for mains power to this device must be easily accessible
- 14) Only use attachments/ accessories specified/ supplied by the manufacturer
- 15) 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
- 16) Unplug this apparatus during lightning storms or when unused for long periods of time
- 17) 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
- 18) Do not attempt to modify this product. Doing so could result in personal injury and/ or product failure



| | | |
|---|---|--|
| | CAUTION RISK OF ELECTRICAL SHOCK DO NOT OPEN | |
| <p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) . NO USER-SERVICABLE PARTS INSIDE. REFER TO SERVICING TO QUALIFIED PERSONNEL.</p> | | |

| |
|---|
| <p>WARNING:</p> <p>To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.</p> |
|---|

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.




EU DECLARATION OF CONFORMITY

DARK8MAI

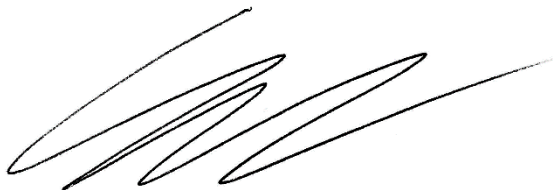
8 Channel Portable PoE Powered Network Mic Amp

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  marked and conforms to the following Union harmonisation legislation:

| | |
|------------------------|----------------------------|
| Low Voltage Directive: | EN60065 and EN62368-1:2014 |
| Emissions: | BS EN55032:2015 |
| Immunity: | BS EN55035:2017 |

Signed for and on behalf of Glensound Electronics Ltd.



Gavin Davis, Managing Director
Maidstone, Kent, England

Date: 04/01/2019




EU DECLARATION OF CONFORMITY

DARK8MAIR

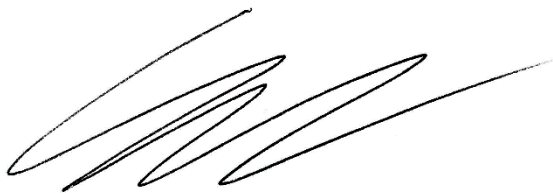
8 Channel 1RU Rackmount Network Mic Amp

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  marked and conforms to the following Union harmonisation legislation:

| | |
|------------------------|----------------------------|
| Low Voltage Directive: | EN60065 and EN62368-1:2014 |
| Emissions: | BS EN55032:2015 |
| Immunity: | BS EN55035:2017 |

Signed for and on behalf of Glensound Electronics Ltd.



Gavin Davis, Managing Director
Maidstone, Kent, England

Date: 04/01/2019

RoHS DIRECTIVE

RoHS 2 Directive 2011/65/EU restricts the use of the hazardous substances listed below in electrical and electronic equipment.

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% |

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT REGULATIONS 2006 (WEEE)

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

WEE/JJ0074UR

GLENSOUND DARK8MAI and MAIR

Handbook Contents

Issue 8

Description

Page No.

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OVERVIEW

The GlenSound DARK8MAI and DARK8MAIR are analogue to digital converters designed to connect mic/ line level analogue audio circuits to a Dante® / AES67 audio network.

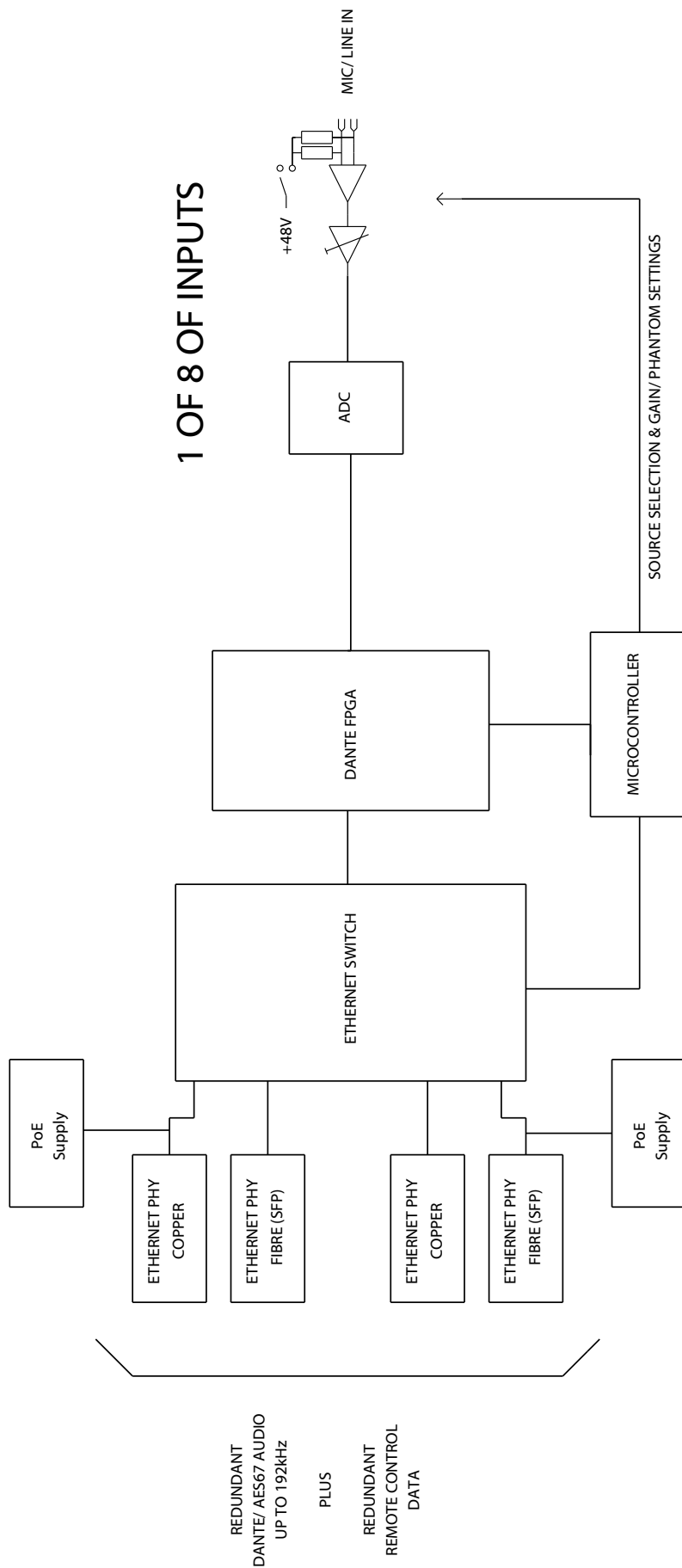
Dante® network audio is a common protocol for distributing high quality linear audio over standard IP networks and it is widely used by many audio equipment manufacturers. The GlenSound DARK8MAI and DARK8MAIR Dante® audio interface will be compatible with any other manufacturers Dante® audio interface. Further details of Dante® network audio can be found at www.audinate.com

Being designed for live on-air broadcast applications the units have been designed with multiple redundancy capabilities. They both feature fully redundant network connections for both Copper & Fibre circuits. They both can be powered by Power Over Ethernet (PoE) from either copper network port, additionally the rack mount DARK8MAIR has two internal mains power supplies.

The DARK8MAI and DARK8MAIR provide 8 balanced analogue audio inputs to the Dante® network and feature low noise remote control microphone amplifiers.

A Windows11 application called GlenController (that can be downloaded free from our web site) allows remote control of the gain settings of the microphone amplifiers and also provides level indication of each channel.

SIMPLIFIED BLOCK DIAGRAM

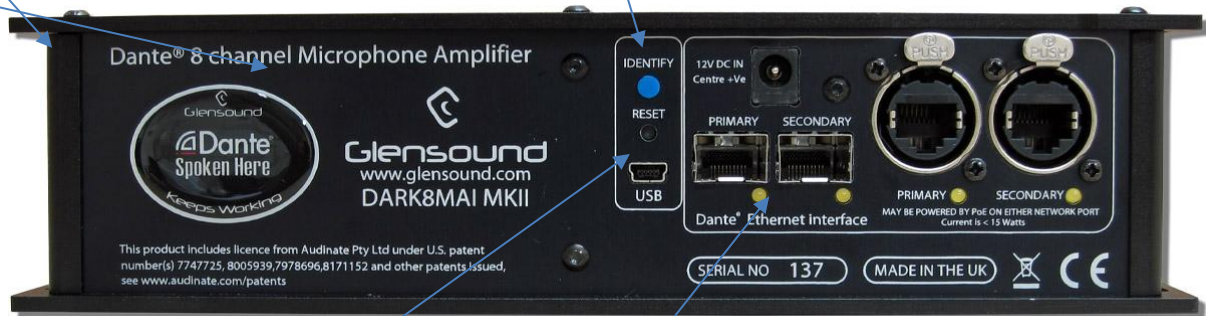


DARK8MAI CONNECTIONS

IDENTIFY
Pressing this highlights the device in GlenController (also used during firmware updates)

DC INPUT
Only needed if no PoE available

COPPER NETWORK INTERFACES
RJ45 sockets for connecting to your network. When connected to PoE switches or mid-span supplies will power the unit.



RESET & USB
Used for firmware updates

SFP NETWORK SLOTS
Fit SFP fibre network interfaces here (not supplied with unit)



AUDIO INPUTS
Analogue Mic/ Line audio inputs to the network

DARK8MAIR CONNECTIONS

IDENTIFY

Pressing this highlights the device in GlenController (also used during firmware updates)

SFP NETWORK SLOTS

Fit SFP fibre network interfaces here (not supplied with unit)

COPPER NETWORK INTERFACES

RJ45 sockets for connecting to your network. When connected to PoE switches or mid-span supplies will power the unit.



MAINS POWER

Redundant mains inputs 100 – 240VAC Internally fused

RESET & USB

Used for firmware updates

AUDIO INPUTS

Analogue Mic/ Line audio inputs to the network



AVAILABLE POWER LEDs

LEDs indicate when a suitable power source is attached and turned on.

CONNECTING THE DARK8MAI(R) TO A DANTE® NETWORK

The DARK8MAI is a network audio device utilising 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 DARK8MAI(R) 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 DARK8MAI(R)s To The Network

DARK8MAI(R)s can be connected to the network that you are going to use for your audio distribution simply by plugging in either, and, or any of the network connections on the front. Once connected to the network it will be possible to see the DARK8MAI(R) from within the Dante® controller and route its' audio circuits.

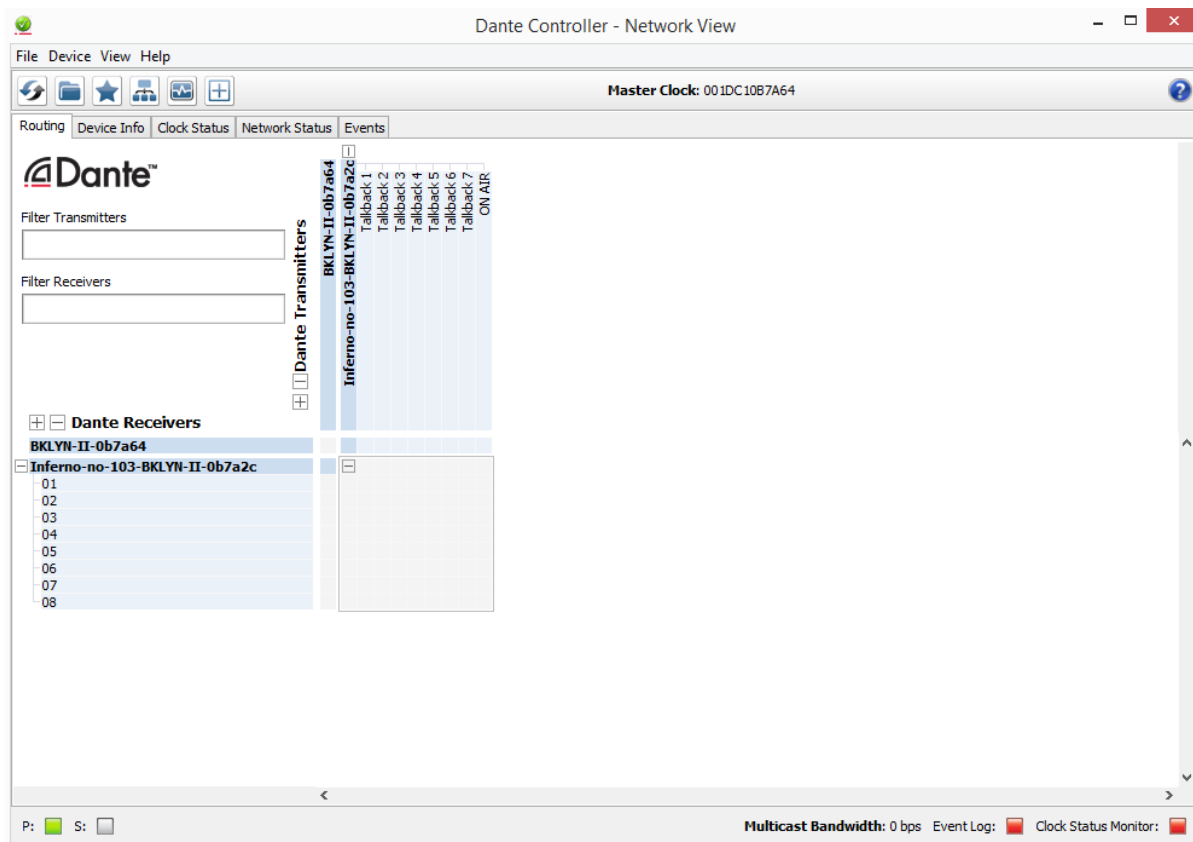
Audio Over IP Network

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.audinate.com

Running Dante® Controller

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



The DARK8MAI 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:

'DARK8MAI-no-103--ob7a2c'

Where 'DARK8MAI-no-103' refers to the Glensound product i.e. DARK8MAI and its serial no (in this case 103) and 'ob7a2c' refers to the units Dante Brooklyn II module and its MAC address.

Dante Controller TIP

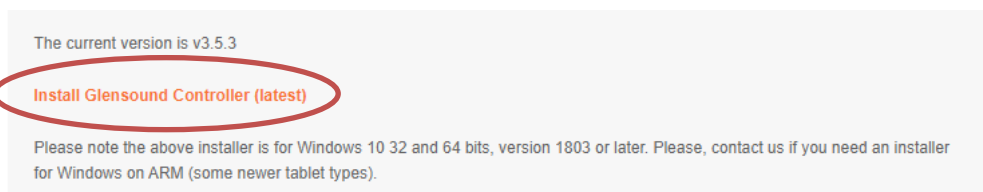
If you have never run Dante controller before then make sure that on the bottom left of the Dante controllers' screen 'P' or 'S' is next to a green square as this indicates that it is connected to a network. By clicking 'P' or 'S' a pop up box opens to allow you to set what network interface the controller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

WINDOWS 11 REMOTE CONTROL APPLICATION

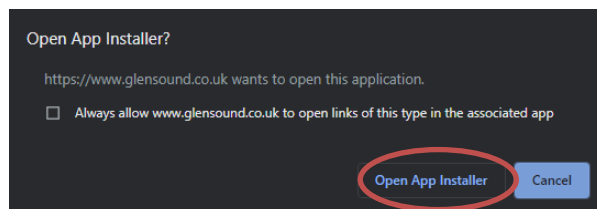
GlenSound Controller is a windows 10 & 11 application that allows remote control of some GlenSound products over a network. The DARK8MAI(R) has full remote-control functionality and can be operated from a remote location with only a windows PC and access to the network the DARK8MAI(R) is on.

Installing the app

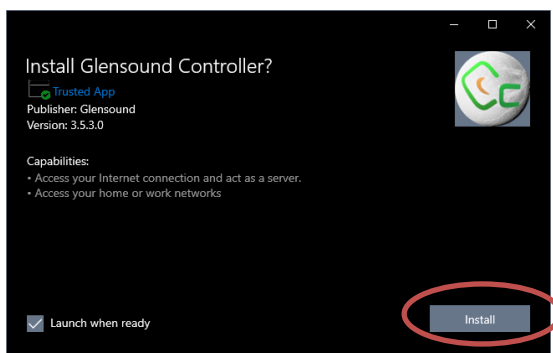
1. To install the latest version of GlenSound Controller go to the 'Download' tab at <https://www.glenSound.co.uk/product-details/glencontroller/> and click on the highlighted orange text "Install GlenSound Controller".



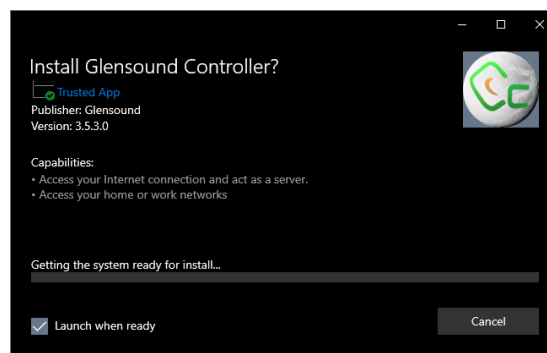
2. Next click "Open App Installer" if prompted.



3. Then simply click "Install"



4. The app will install and open when ready

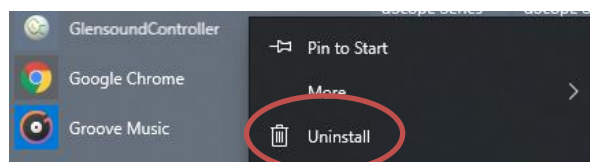


Sideloading

Some windows machines may be required to enable 'sideloading' of programs if it has been disabled by your organization. To enable, go to → **Windows Start** → **Settings** → **Update and Security** → **For developers** → Select '**Sideload apps**'.

Uninstalling the app

To uninstall GlenSound Controller open the windows start menu and find GlenSound Controller, right click and choose "Uninstall".



GLENSOUNDCONTROLLER App

The DARK8MAI has a remote control utility called GlensoundController. This app allows the DARK8MAI to be set up and controlled remotely, things such as mic gain, phantom power, filtering and metering can all be controlled/ seen via the app.

The below guide is meant as an indication of the facilities available on the app but being software developments are likely to be constantly evolving.

Runng The App

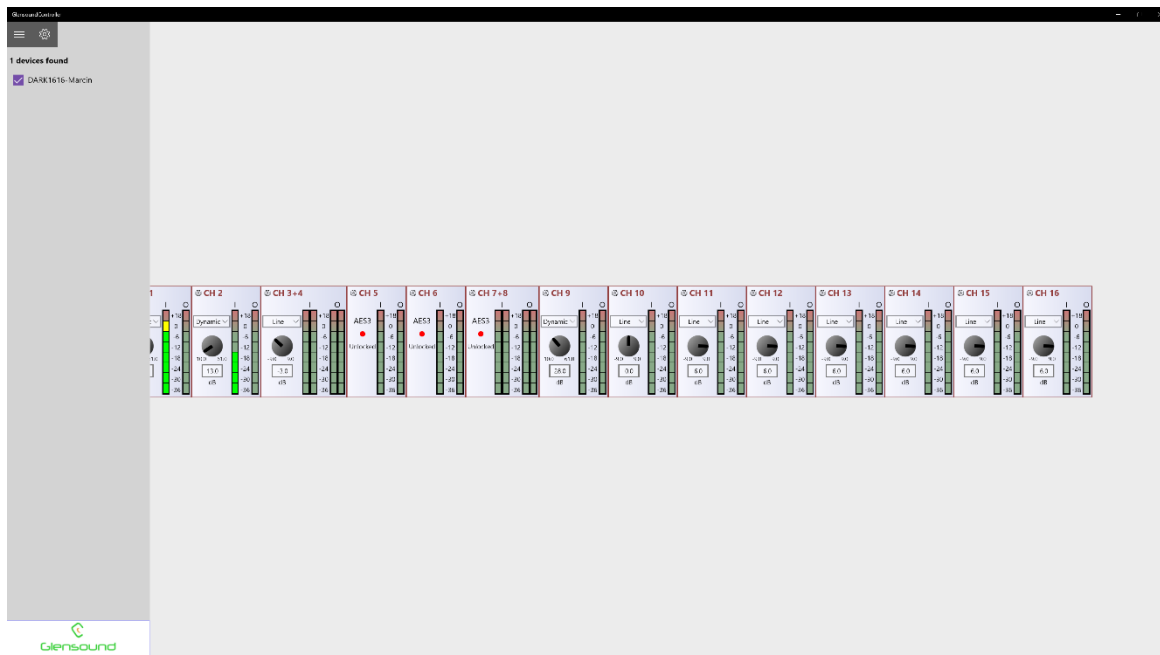
To run GlensoundController, click the Windows icon in the bottom left corner of the screen, and find it in the 'All apps' list and double click.

Starting The App

When the app first starts it looks for compatible devices across your network, and it will show a list of any available units that it can connect to on the left hand side of the screen.



Tick the box against the name of the device that you want to control and it will appear in the main screen area:

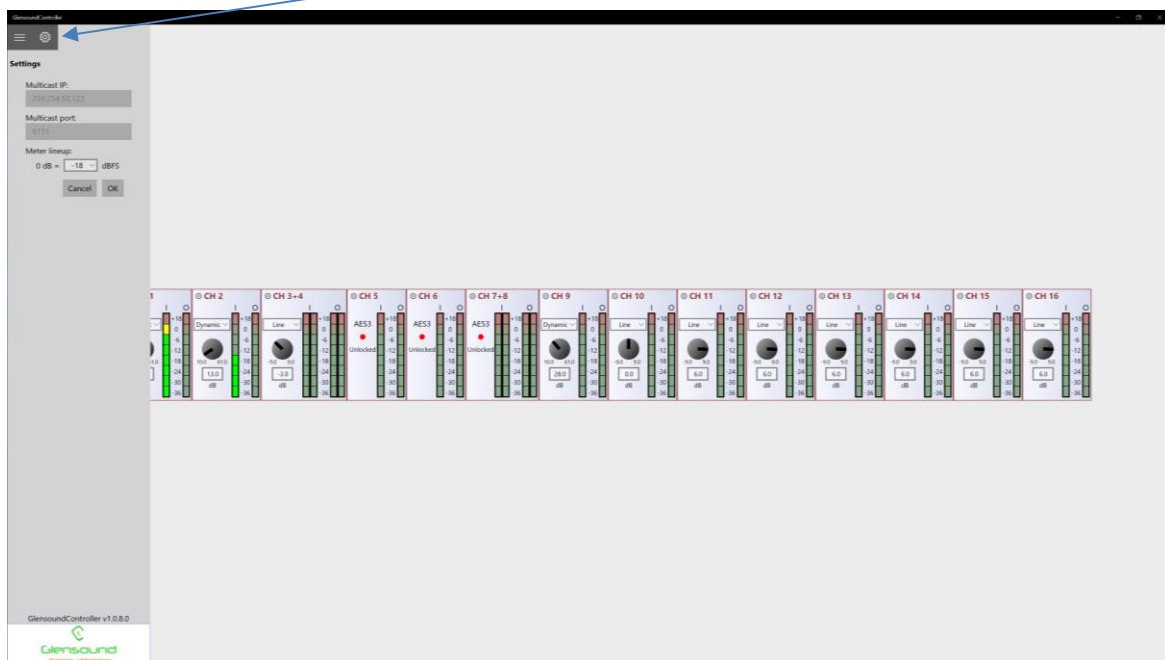


App Controls

Pressing this button toggles the side bar in and out:

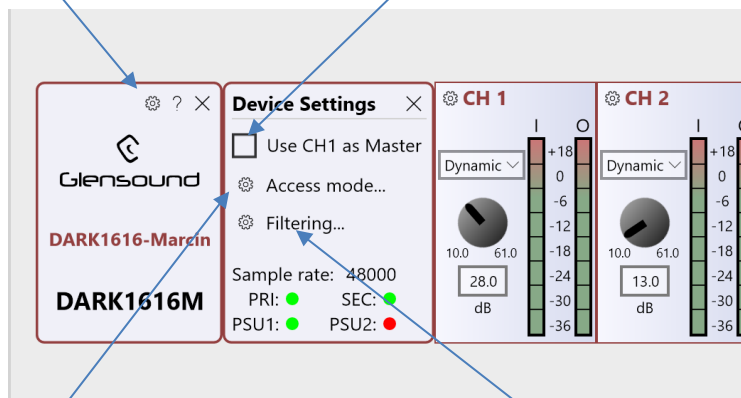


Pressing the settings button, shows app version details, multicast ip address & port and meter setup information.



Pressing the settings button opens up device settings

'Use CH 1 as Master' if this tick box is selected the all channels settings follow CH 1



Access mode setup allows sole or shared control of the Dark1616M by different PCs running the App and the control can also be password protected

Filtering setup allows access to the filtering controls for the ADCs (analogue to digital convertors), changing these settings only alters the analogue inputs

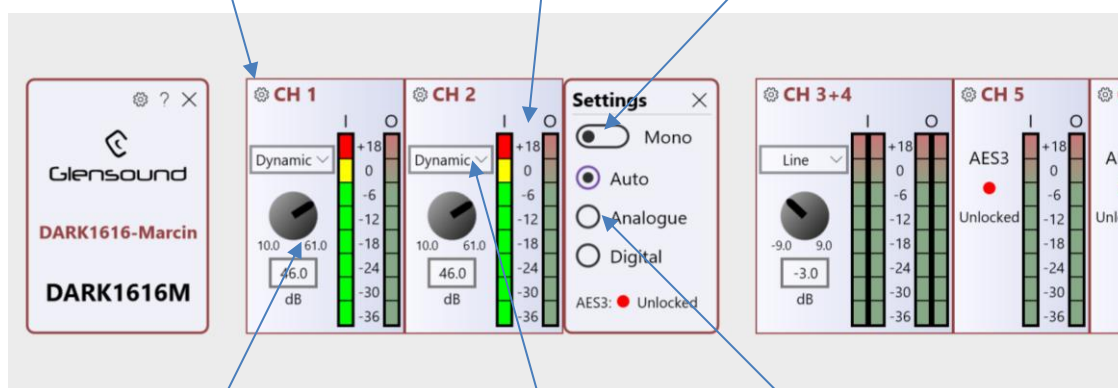
Channel Controls

Pressing this button toggles the side bar in and out:

Pressing the settings button opens on 1 channel opens up a stereo pair of channels settings

The 'I' meter shows the level of the channels input. Which can be adjusted using the gain control.
The 'O' meter shows the output level of the source received from the Dante network.

The mono/ stereo switch selects if a pair of inputs should be treated as a stereo pair.



Gain Control:
Adjusting the gain 'knob' controls the gain applied to the channels input in 3dB steps.
The box below shows the actual gain currently being applied.

Use this drop down box to select the input type

The 'Auto', 'Analogue', 'Digital' selection assigns which input is selected, In 'Auto' mode Digital takes priority if a valid AES3 locked signal is received.

UPDATING FIRMWARE

The microcontroller code is the main firmware that operates the device. It can be updated via GlenController over an IP network. Make sure your PC is connected to the same network and can see the device in GlenController.

You may need internet access for GlenController to automatically obtain the latest code from the database.

If you require offline updating please contact office@glen sound.com and we can provide a manual offline method.

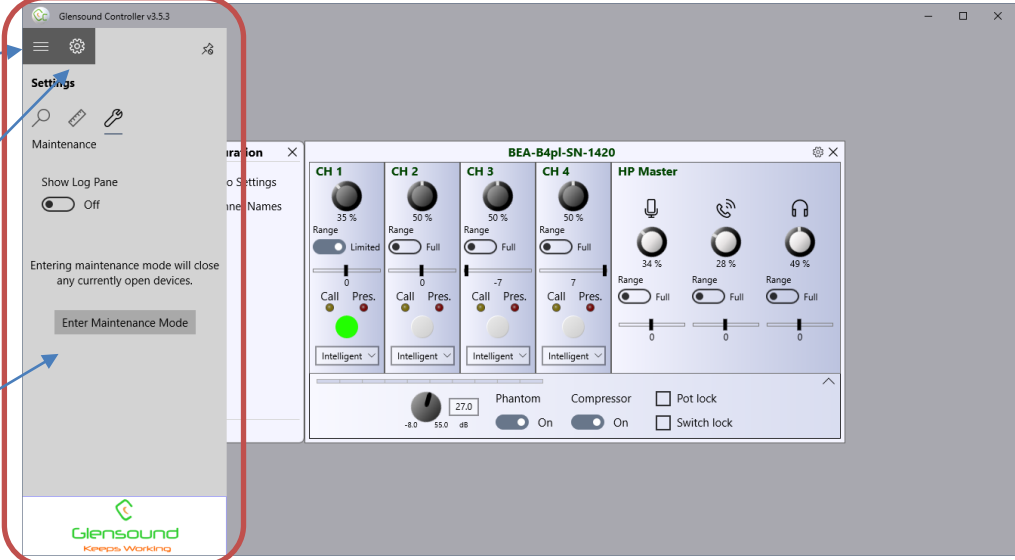
Instructions

1.

A. Click the sidebar icon to access the sidebar

B. Click the cog icon to open the settings page

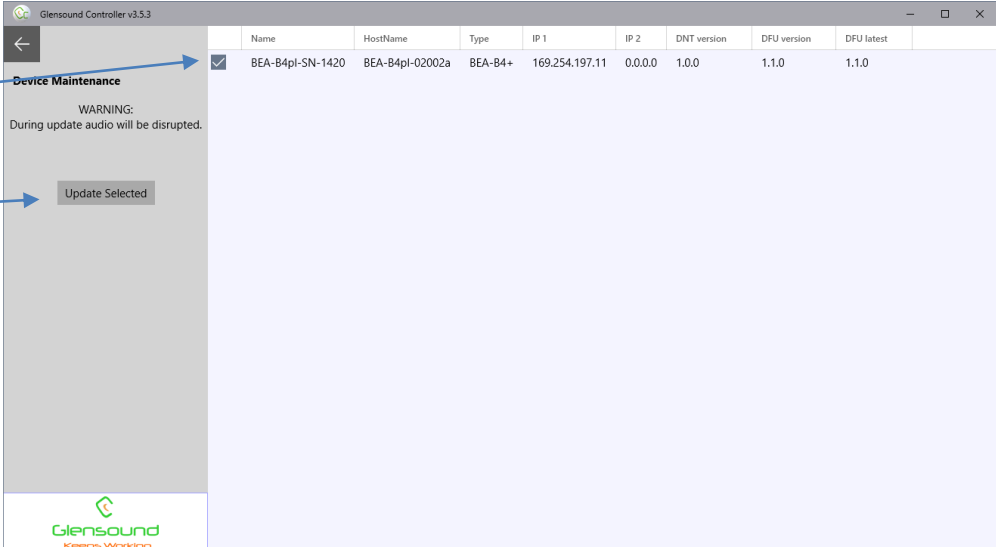
C. Click to enter maintenance mode

The screenshot shows the GlenController v3.5.3 interface. On the left, a sidebar is open with a 'Settings' section containing a cog icon and an 'Enter Maintenance Mode' button. On the right, a control panel for 'BEA-B4pl-SN-1420' is visible, featuring four channels (CH 1, CH 2, CH 3, CH 4) and an HP Master section with various sliders and buttons. A red box highlights the sidebar area.

2.

A. Select the device you wish to update

B. Click to update your device

The screenshot shows the 'Device Maintenance' screen in GlenController v3.5.3. A table lists the available devices for update. The first device, 'BEA-B4pl-SN-1420', is selected with a checkmark. Below the table, there is a 'WARNING: During update audio will be disrupted.' and an 'Update Selected' button. A blue arrow points to the selected device in the table, and another blue arrow points to the 'Update Selected' button.

Caution! Audio will be interrupted during the device update

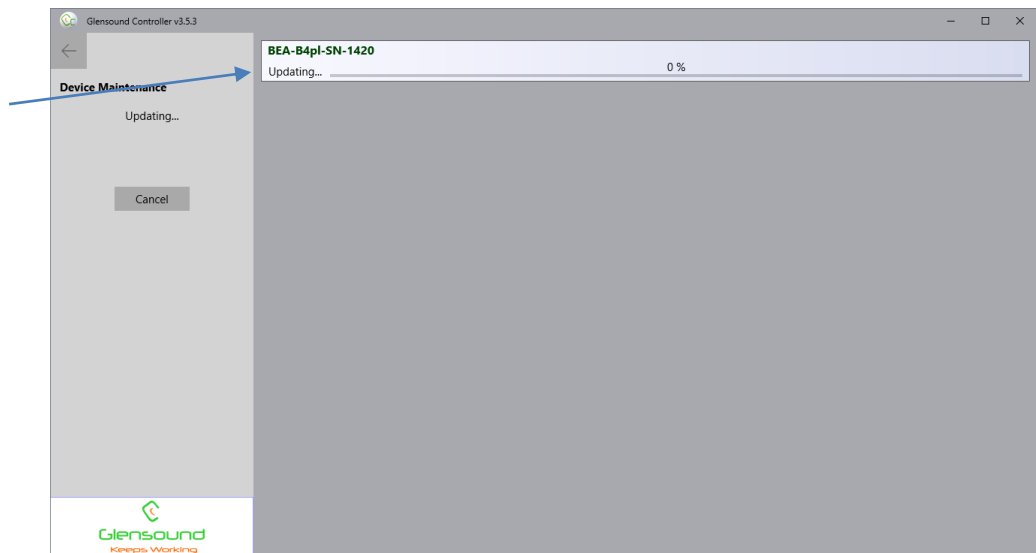
3.

Click start to begin updating



4.

Update progression bar



5.

Update finished, device will now restart automatically



Updating The Dante firmware

Dante specific firmware runs on the Dante chipset in the device. This is updated separately from the main device firmware.

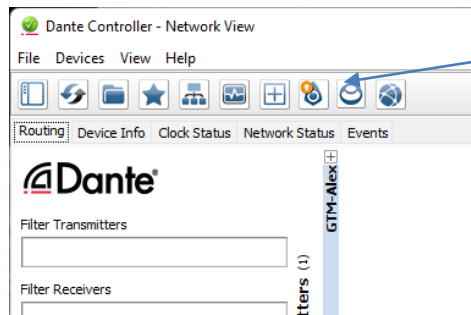
Updating the device

The firmware that runs in the Dante Chipset can be updated using the built-in Dante Updater in Dante Controller. Please ensure you have a connection to the internet.

If you want to update devices on a Dante network that is not connected to the Internet, you can download the files ahead of time to your computer, move the computer to the offline network, and then update the devices using the downloaded files.

Dante Updater displays a list of all online firmware files in the Library tab, so you can choose which files to download, or even download the entire database if you are not sure which files you will need. For further details please visit www.audinate.com

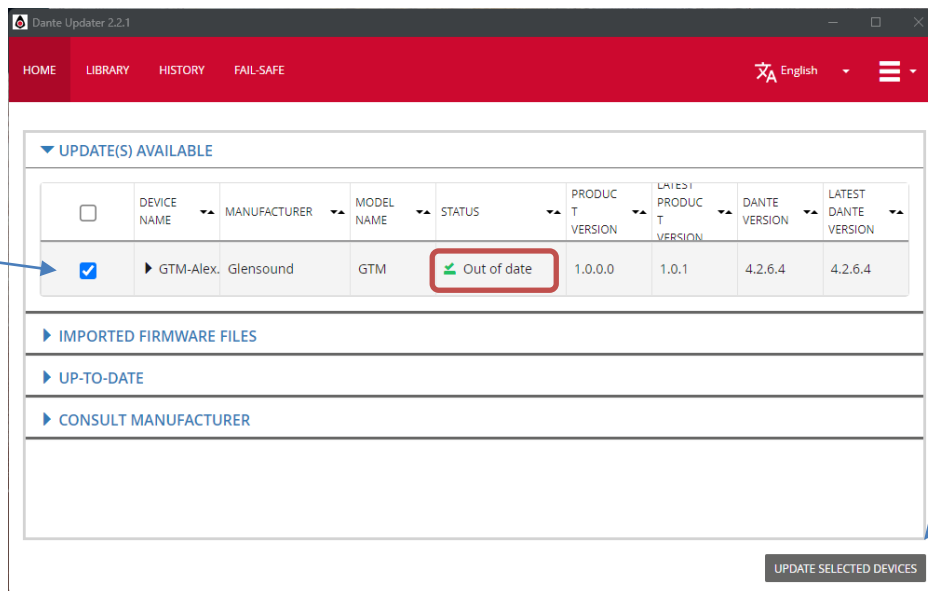
1.



Dante controller notifies you if a device on your network is out of date.

Click the icon

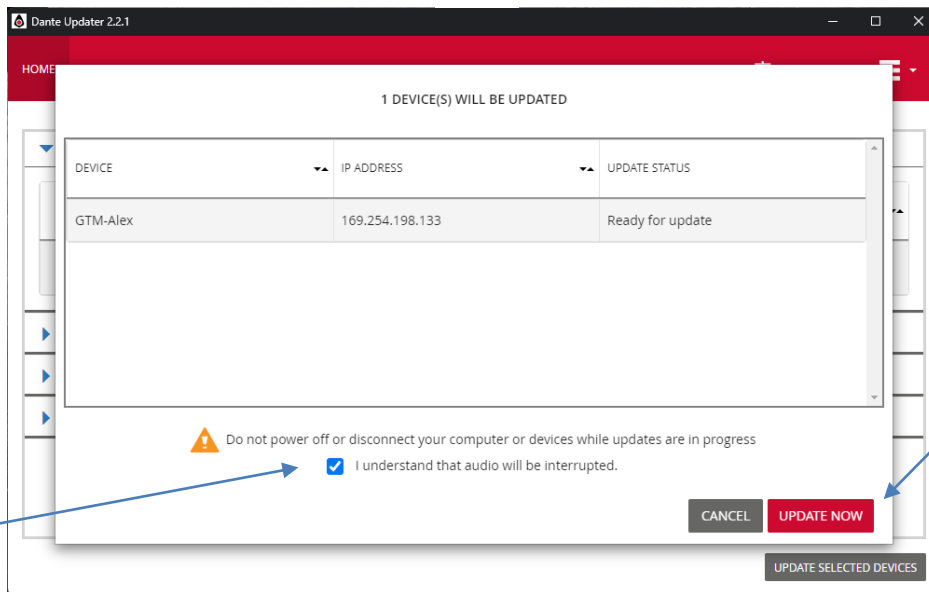
2.



A. Tick the box to choose your unit for updating

B. Press to update device

3.

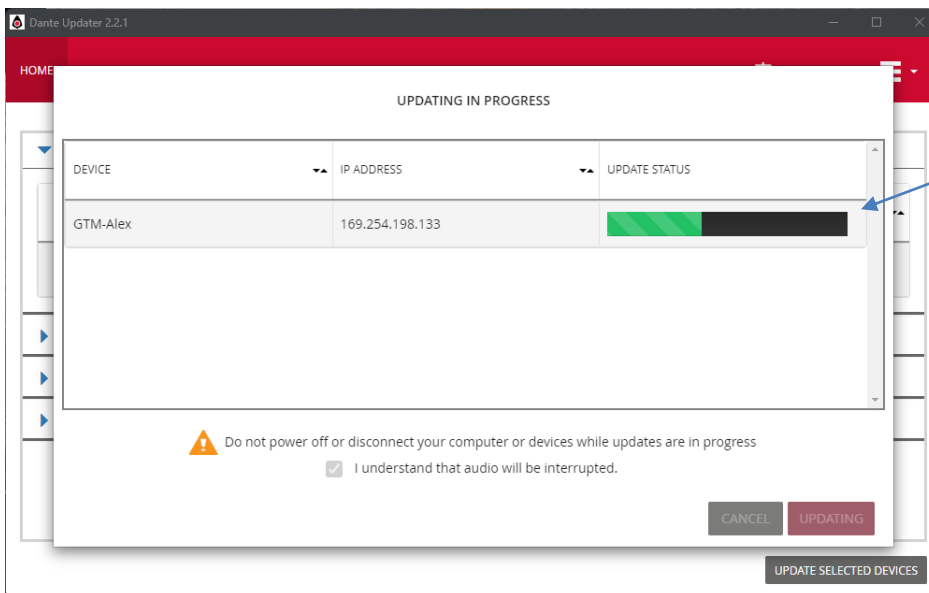


Caution! Audio will be interrupted during the device update

A. Tick box to confirm

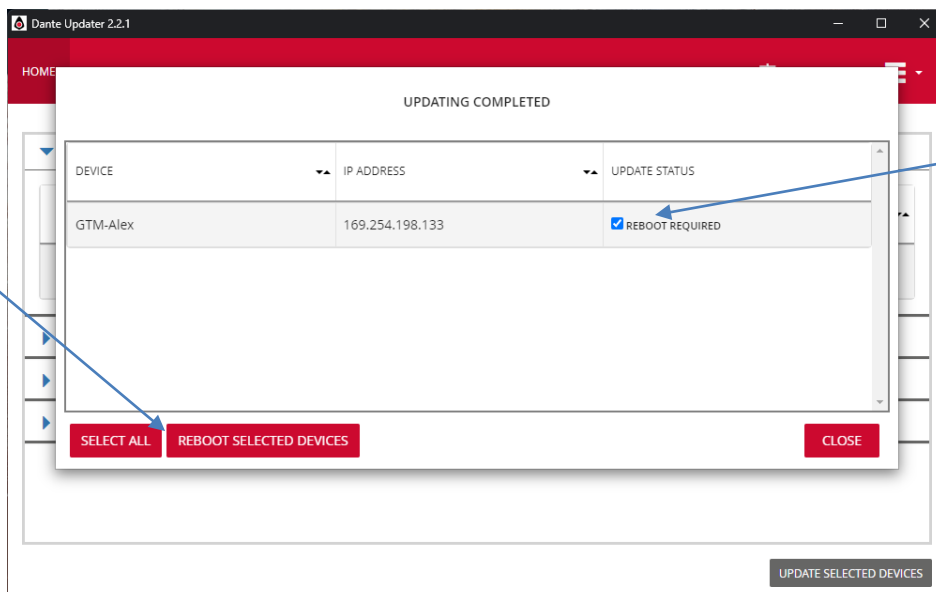
B. Press to update device

4.



Update is in progress

5.



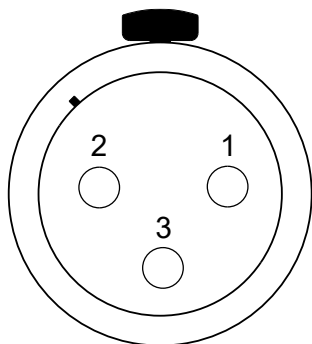
A. Update finished. Tick box to continue

B. Press to reboot device

Update finished, device will now reboot

WIRING INFORMATION

XLR & JACK Wiring



XLR SOCKET (FEMALE)

STANDARD XLR AUDIO PINOUTS:

1: Ground/ Earth

2: INPHASE/ POSITIVE/ MIC +

3: MATE/ NEGATIVE/ MIC -

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