Glensound
Keeps Working

Dante commentary

PARADISO LITE
Commentary For Dante/AES67 Audio Networks

Dante Network Audio Interface + AES67	Low Noise Mic Amp with Referee Compressor	Windows 10 Remote Control App
Redundancy On Network Links & Power Supplies	Copper Network Interface	Analogue & AES3 I/O as well as Dante

Paradiso LITE is a commentators box for 3 commentators. It can be used by itself to provide the commentary facilities alongside an OB truck for small events or multiple Paradisos can be used at large events that require Worldwide broadcast coverage.

Audio links between the Paradiso LITE and other equipment are by Dante (AES67 compliant) complete with redundant copper links. Analogue I/O and AES3 I/O are also provided directly from the unit for local connections and/ or another layer of redundancy.

The Paradiso LITE has been designed to be intuitive & easy to use for Commentators' who would rather be talking about the game than working out how the equipment works, and is also built to our exacting rugged & robust standard to make it a reliable piece of broadcast equipment for the busy engineer.

Dante™

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Paradiso LITE
Commentators Box

Paradiso LITE Commentators' Box
- Dante (AES67 compliant) commentary box for 3 users
- System is scalable with multiple Paradisos as part of a large Dante network
- Can connect to any Dante compatible device.
- 32 Dante/AES67 network audio inputs and outputs
- 5 analogue audio inputs and outputs
- 1 AES3 (2 channels) of inputs & outputs
- Ultra low noise mic/line/48v inputs
- Our popular Referee compressor/limiter keeps even the loudest commentator sounding natural.
- 3 Headphone amplifiers each with 8 audio inputs each with their own headphone volume control.
- Each headphone input has panning between left/ right ear.
- Each commentator has 4 talkback circuits
- Multiple power options including PoE, Mains & External DC
- Network connections on Copper (Neutrik Ethercon Cat5)
- Primary & Secondary network connections allowing completely transparent network redundancy.
- Large bright PPM level meter
- Remote control via Windows 10 app for setup and live controls
- GPIO (General purpose inputs/outputs) interface for interaction with talkback systems or studio red lights.

DANTE Audio Network
- AES67 Compliant
- Multi channel, digital media network technology
- Offers compatibility with hundreds of systems from other manufacturers
- Scalable from a pair up to thousands of channels.
- Fully redundant glitch free audio transport
- Easy, reliable & free routing software for Point to point or point to

Paradiso LITE Unique Features

Fully Redundant Copper Network Connections
If an IP link fails you have no broadcast! Our system provides fully redundant glitch free audio & data transport across the 2 network interfaces.

Automatic Adjustment For High or Low Impedance Headphones
Our unique headphone amplifiers automatically provide the correct drive level to high or low impedance headphones.

Instinctive Mic Gain Setting Information
When adjusting a mic's input gain, the PPM automatically changes to display just the level of mic input currently being altered.

Multiple Power Sources
For complete failsafe redundancy the Paradiso can be powered from any of the following sources: PoE (2 off), Wide Range Mains or external DC.

Local Analogue & AES3 I/O
For 100% reliability local analogue & AES3 I/O is provided as complimentary audio connectivity to the network audio.

Referee Compressor/ Limiter
Glensound's World renowned Referee compressor limiter system keeps even the loudest commentators sounding great.

Paradiso LITE
Commentators Box

Front Panel Features

- **8 off Audio Volume Controls for Each Commentators with Pan**
  On the top panel are 24 rotary headphone volume encoders. Internally they are connected to a DSP matrix and the sources can be set depending upon your preference.
  On the top right of the panel is a row of bright clear LEDs. When an encoder is moved this LED row indicates the position of the encoder.
  ✍Turning the encoder adjusts the volume, and simultaneously pressing down and turning the encoder adjusts the pan.

- **Peak Programme Meter (PPM)**
  The source of the PPM can be customised but is normally the outgoing programme mix. When a front panel gain control is adjusted the PPM automatically shows just the level from that input.

- **Robust Mic on and Talkback Buttons**
  There are 4 off round bright illuminated talkback buttons and 1 large square illuminated mic on button for each of the 3 commentators. The audio circuits that the outputs of these switches are routed to can be fully configured. The operation of these switches (momentary, latching etc) and the interaction of these switches (i.e. pressing a talkback switches mutes the main mic) can be fully configured by the windows 10 app.

Paradiso LITE
Commentators Box

Input Panel Features

- **Audio Inputs**
  There are 3 balanced audio inputs one for each commentator. Each of these inputs can be selected to accept a Microphone or Line level source. 48V phantom power can be turned on if in microphone mode.
  A very high quality remote controlled microphone amplifier has been used followed by exception analogue to digital convertor to make the audio quality the best that it can possibly be.

- **Gain Control**
  The gain control is a rotary encoder with a clear plastic shaft. When the gain control is operated the front panel PPM automatically solos the source to allow unambiguous gain settings. The clear plastic shaft has an internal red LED that is illuminated if an input level is close to clipping, thus allowing quick diagnostics of a gain level that has been set too high.

- **Intelligent Headphone Output Circuits**
  Our unique intelligent headphone output circuits automatically adjust the output level to suit both high and low impedance headphones. Traditional broadcast high impedance headphones require a large output level to produce enough volume in the headphones, whereas low impedance headphones require much less level to produce a proportional output level. This means that whatever headphones you connect to the Paradiso you'll enough audio output for even the loudest of environments.
  Plus our headphone amplifiers can accept mono as well as stereo headphones.

- **Aux In**
  In addition to the three commentators inputs there is a 4th 'Auxiliary' Input. This is provided on a stereo 3.5mm jack socket and is suitable for connection to the outputs of domestic recording devices such as a mobile phone.

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Paradiso LITE
Commentators Box

Rear Panel Features

- **Redundant Powering Options**
 The Pardiso can be powered from any of 4 different sources:
  1) Wide range Mains Input (suitable fo Worlwide use)
  2) PoE on the Primary CAT6 Network link
  3) PoE on the Secondary CAT6 Network link
  4) External 12V DC

- **Primary & Secondary Copper Network Connections with PoE**
  Two CAT6 connections on Neutrik Ethercons (that accept standard networking cables) are provided to allow copper connections to local network switches to carry the Dante/ AES67 audio. Two connections are fitted to allow redundant circuits to be used if required.
  Both these connectors can accept a PoE power source for providing the power to the Inferno.

- **Analogue Inputs & Outputs**
  Five analogue inputs and outputs are provided for backup or local I/O purposes. These circuits are routed internally via the DSP and therefore can be routed to and from any location including Dante circuits required.

- **AES & GPIO**
  A D9 socket provides 2 general purpose outputs (GPO) for connection to red lights & TB systems, 2 general purpose inputs (GPI) are also fitted for external triggering. The same D9 socket also has an AES3 input & output circuit for further audio connectivity.
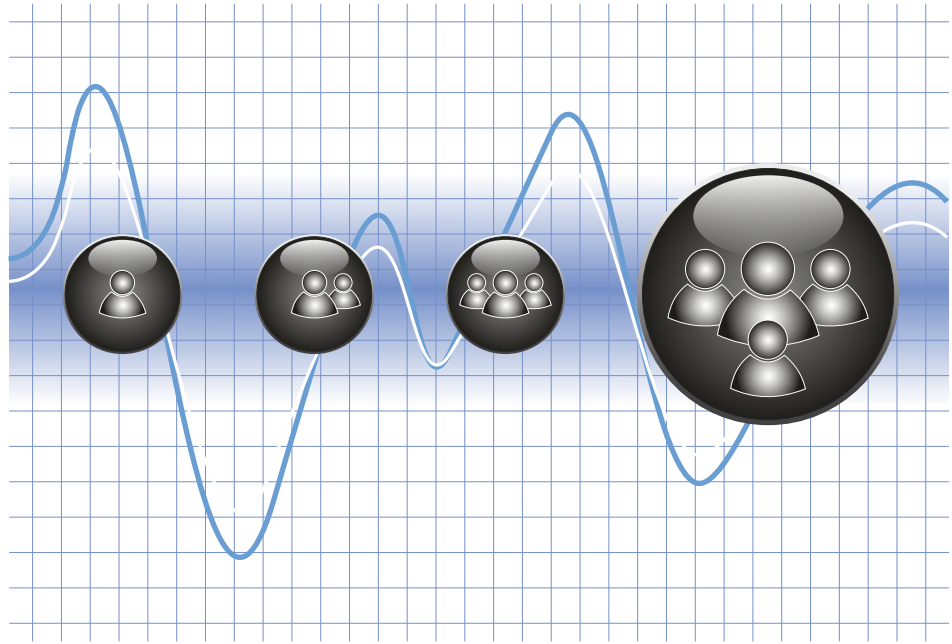
Audio Technology

- **Glitch Free Redundant Network Audio**
  Our Dante network audio interface provides 100% resilience with its primary & secondary network connections. If one connection is lost the other takes over completely free of any noise, dropped packets or audio glitches.

- **Low Noise Microphone Amplifier With Remote Gain**
  We spent a long time optimising the performance of the THAT corporation microphone amplifier used in the Paradiso. It features very low noise & distortion circuit that we remote control the gain of in 0.5dB steps, which allows us to provide the remote Windows 10 app gain control as well as the front panel rotary encoders. We also optimised the circuits to allow correct source impedance switching depending on wether the input has been set as a mic or line input.

- **Referee Compressor Limiter**
  As with all our commentary units the Paradiso features our very popular Referee compressor limiter circuit. This circuit starts to compress the commentator's voice gradually and slowly increases the compression ratio as the input level becomes overly high resulting in a very natural sounding and distortion free audio output capable of taming even the loudest of commentators.

- **High Quality Analogue To Digital Converter (ADC)**
  Dante/ AES67 network audio is a digital circuit and as such the best analogue microphone amplifier would be wasted if we hadn't paired it up with the best analogue to digital converter. The ADCs job is in theory fairly simple however if you look at our tech spec you'll see that we've made ours work incredibly well.

- **Unique Headphone Amplifiers**
  The commentator's headphones are a vitally important tool so we take as much care with our headphone amplifiers as with our on air mic amps. Our unique headphone amplifier provides the correct output level regardless of the impedance of the attached headphones, meaning that broadcasters can now pick and choose between low impedance 'cheap' headphones and high impedance traditional broadcast ones.
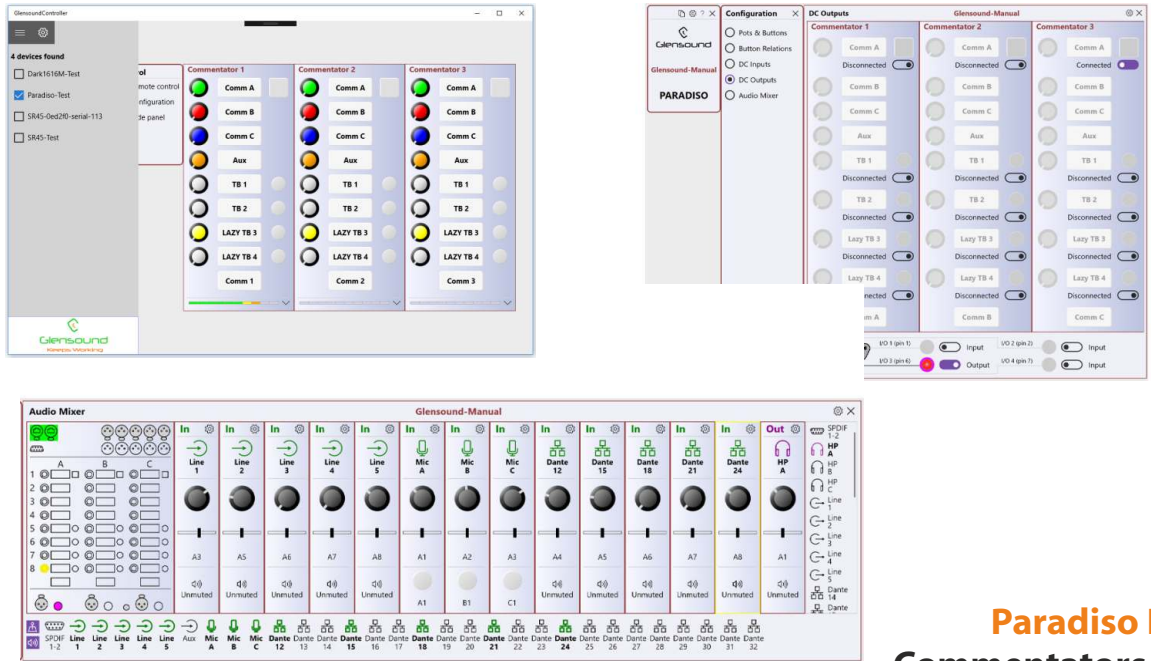
The sophisticated modern Windows 10 App allows full remote control and set up of all the features of the Paradiso.

The App connects to the Paradiso via the same network as the Dante audio circuits and provides a reliable redundant control system via both the primary and secondary network interfaces, meaning that even if one of the 2 networks were to become disconnected the remote control would continue to work.

One App can connect to multiple Paradisos and multiple Apps running on different PCs can connect to a single Paradiso. The App provides the ability to lock out other users from controlling a Paradiso and this facility can be password protected, meaning only authorised personnel can change the settings on a Paradiso.

For users regularly using the units at different events and functions settings can be saved, and assigned names for quick recall and imported/ exported between different Paradisos.

The App provides day to day operation such as turning mics on/off adjusting microphone gains, seeing PPM levels, viewing/ adjusting headphone level controls and changing graffity on the ePaper displays.

It also provides full facilities to allow complete customisation of the Paradisos features, including but not limited to:

Switch operation settings (momentary, latching, cough etc)
Switch interaction (pressing TB switch turns off Mic on etc)
GPIO setup
Headphone volume complete attenuation (or not)
Routing/ mixing audio circuits to the Dante/ AES67 network
Routing/ mixing audio circuits to the analogue & digital outputs
Routing/ mixing audio circuits from the Dante/ AES67 network
Routing/ mixing audio circuits from the analogue & digital inputs

PARADISO LITE
Designed For Sport News & Events

Specification

AUDIO

Mic Input Gain Range
-40dB to +40dB

Dynamic Mic Line Up
30dB

Mic + Phantom Power Line Up
30dB

Line Input Line Up
0dBu (Gain range +/-20+dB)

Mic Input Impedance
2k4

Line Input Impedance
100k

Equivalent Input Noise
127dBu (22-22kHz RMS terminated 300 Ohms)

Maximum Input Level Before Clipping
Dynamic Mic: +10dBu
Mic + 48V PH: +18dBu
Line: +18dBu

Frequency Response
Mic: > +/-0.25dB 50Hz to 22kHz
        (-2 @ 25Hz)
Line: >= -0.1dB 22Hz to 22kHz

THD + Noise (Ref +8dBu)
100Hz = 0.023%
1kHz = 0.012%
10kHz = 0.014%

POWER

External Mains PSU
Filtered IEC, 100 to 240VAC (+/-10%)
47 - 63Hz

AC Consumption
<25 Watts

DC Input
2.5mm Barrel, Centre +Ve, 9 - 15 Volts

Power On LED
Bright Blue

INCLUDED ITEMS

Handbook
Physical A4 (download also available)

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

Rj45 Network Cable
2 metre Cat5 Rj45plug /Rj45plug cable

Headphone Impedance
16 to 1000 Ohms
(Auto output level to match impedance)

Maximum Headphone Output
+12dB into 600 Ohms

Headphone Frequency Response
>= -0.1dB 22Hz to 22kHz

Headphone Noise
-76.6dB @ lineup (residual noise)

Headphone THD + Noise (ref =8dBu)
0.008% @ 1kHz

Headphone Volume Pot Range
+10dB to Off (+10dB to -30dB configuration option)

Headphone Impedance
200 - 2000 Ohms

Dante/AES67 Network Interface
Sample Frequency: 48kHz
Resolution: 24 Bit
Can be configured for AES67
32 audio channels on/off the network

PHYSICAL

Size
256 x 285 x 115mm (WxDxH)

Weight
2.75Kg

Mechanics
All aluminium construction, anodized and laser etched, powder coated sides

Shipping Carton
Rugged export quality cardboard carton 610 x 420 x 170mm (WxDxH)

Shipping Weight
4.5Kg

OPTIONAL ITEMS

Carrying Case
Long life Polypropylene Carrying Case

Fibre Modules
Multi Mode instead of Single Mode
(No cost option)

External Power Supply
Desktop style switch mode PSU

E & OE

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