LIVIAU

USER MANUAL

www.apex-liviau.com

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LIVIAU

Audio - Video controller

March 2016/ Order code for this document: 90-40-40-000101

Serial number of this product:

Important safety instructions

CAUTION: to reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of an un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the equipment.

Instructions

Before installing or operating the equipment, read all safety instructions, warnings and operating instructions. Heed all warnings. Follow all instructions. Keep all safety, installation and operating instructions for future reference.

Installing and operation location

Do not use this apparatus near water. Do not expose this apparatus to drips or splashes. Do not place any objects filled with liquids, such as vases, on the apparatus.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. No naked flames, such as lighted candles, should be placed on the apparatus.

Do not install the apparatus in a confined space such as a book case or similar unit. Do not block any ventilation openings.

Ensure that foreign objects and liquids cannot get into the equipment.

Install in accordance with the manufacturer’s instructions. Only use attachments/accessories specified by the manufacturer.

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 .

The apparatus should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time.

The mains plug, the appliance coupler or the mains switch is used as the disconnect device. Either device shall remain readily operable when the apparatus is installed or used.

Power source and grounding

This product should be operated only from the power source indicated on the apparatus or in the operating instructions. If you are not sure of the type of power supply to the premises where the equipment is to be used, consult your product dealer or local power company.

Do not defeat the safety purpose of the polarised or grounding-type plug. A polarised plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Connect Class I construction apparatus to an AC outlet with a protective grounding connection.

Do not overload wall outlets, extension cords or integral convenience receptacles, as this can result in a risk of fire or electric shock.

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

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

Cleaning, maintenance and servicing

Unplug the apparatus from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personal.

Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug 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.

Intended use

The equipment may only be used for the purpose described in the operation instructions. Never carry out any work on the equipment other than as specified in the operating manual.

Never push objects of any kind into this product through openings, as they may touch dangerous voltage points or short-cut parts, which could result in a fire or electric shock.

Children should never use the apparatus without close adult supervision.

WARNING: excessive sound pressure levels can cause hearing loss.

Environmental precaution

Electrical and electronic equipment may contain hazardous substances for humans and their environment.

The “crossed out wheelie bin” symbol present on the device and represented above is there to remind one of the obligation of selective collection of waste. This label is applied to various products to indicate that the product is not to be thrown away as unsorted municipal waste. At the end of life, dispose of this product by returning it to the point of sale or to your local municipal collection point for recycling of electric and electronic devices. Customer participation is important to minimize the potential affects on the environment and human health that can result from hazardous substances that may be contained in this product.

Please, dispose of this product and its packaging in accordance with local and national disposal regulations including those governing the recovery and recycling of waste electrical and electronic equipment. Contact your local waste administration, waste collection company or dealer.

Table of contents

Dear customer,

Thank you for buying Apex LIVIAU. LIVIAU represents new approach for Audio/Video control for bars, clubs, retail and corporate applications. A single, elegant touchscreen based unit combined with highly intuitive operation provides control over audio and video playback (including comprehensive scheduling), plus a fully integrated DMX controller for powerful and sophisticated lighting control.

Product highlights

- Video and audio playout scheduling
- DMX 512 control for intelligent lighting and dimmer packs
- Lighting effects controller
- Very high level of audio performance
- Balanced audio inputs for mics and line sources
- Multi-zone balanced outputs
- Integral 50 W/ch stereo amplifier
- Powerful audio DSP section
- Internal memory for commonly-accessed data
- USB port
- Wi-Fi enabled
- Network port
- Bluetooth connectivity
- HDMI input and output
- Control support for all common flat screen displays and projectors
- RS-232, IR and GPIO ports
- Silent in operation: very low power consumption

Foreword

The Apex Liviau is a single-unit solution for control of lighting, audio distribution and video presentations in bars, clubs, retail and corporate applications.
Liviau combines the functions of a comprehensive lighting controller, a fully equipped audio mixer/processor, an audio/video file server, an internet browser, a Wi-Fi hub and a stereo power amplifier in a single, compact and elegant unit.
The user interface is a 10.1" multi-touch screen, which displays a series of simple, icon-based pages. Each of these is deliberately designed to offer only the options required at any one time. The touchscreen display may be mirrored to other portable devices using the onboard Ethernet port or Wi-Fi connection, allowing the system to be controlled from elsewhere.
Liviau connects to a flat screen display or projector using HDMI, with control of the display device being via either RS-232 or infrared. Video may be sourced from a file stored in Liviau itself, or from elsewhere via a standard Ethernet network connection, from a USB memory device or wirelessly from another device - e.g., a laptop, tablet, iPhone® or other smartphone. An external source of HDMI video (and audio) such as a DVD player or DVR may alternatively be selected. Providing the network connection is Internet enabled, web pages may also be accessed and displayed, using Liviau's internal browser.
A comprehensive scheduler facility enables scheduling and playback of video and audio files from stored sources; ideal for use in retail outlets for example. It is also possible to schedule streams from the Internet via the built-in web browser. Operation is simple and straightforward via an uncluttered interface.
Liviau's audio performance is exemplary: the unit provides six balanced analogue inputs (two mic, four line), six balanced analogue audio outputs, a fully assignable audio mixing matrix and a high quality 50 W/channel stereo power amplifier. The outputs permit routing to four different zones in the facility. A 4-band parametric equaliser is included on every input and output, and additionally, each output has a limiter and crossover facility, thus permitting the use of high quality bi-amped loudspeakers. Master control of volume is always available with a virtual fader on all screen pages. Using Bluetooth, audio may also be sourced from other compatible portable devices elsewhere in the room. A configurable 'Push to Talk' button permits either microphone to be routed directly to any, or all zones for relaying announcements.

Liviau features a fully integrated DMX controller for powerful and sophisticated lighting control. As well as architectural lighting, up to sixteen intelligent lighting devices may be controlled. Moving heads, strobes, RGB devices, lasers, dimmers and other DMX enabled devices are all controllable via the DMX512 control screens. In addition to the DMX controller, Liviau also incorporates a programmable lighting mixer offering 24 cues, 16 fixtures, a sequencer with fade time and an effects generator with pan & tilt.

There are also four GPOs, two GPIs and two GP ports that may be defined at installation as either inputs or outputs. These may be used to control Digital Voice Announcement systems for example.

Liviau can be installed as a free-standing unit, integrated into furniture or wall-mounted. It is built in a very stylish, custom aluminium enclosure, and includes an ambient light sensor to adjust screen brightness and a proximity sensor to wake the system. Liviau is silent in operation (no fans) and is powered by a separate external 24 V PSU (supplied).

About this manual

Carefully read all instructions and warnings before operating this appliance. Keep this manual in a safe place so that it can be referred to when required.

The latest manual revision can be downloaded from the download section of the Apex website:

http://www.apex-liviau.com

This manual describes use of LIVIAU fitted with firmware version Update 1A.

Applicable versions

This manual covers the LIVIAU S and LIVIAU R devices.

Inspection and unpacking

This appliance has been carefully packed in the factory and the packaging was designed to withstand rough handling. Should the unit appear to have been damaged in transit, do not discard any of the packing material and notify the carrier immediately as they will be responsible.

Save all the packing materials for future use if you ever need to ship the unit again.

Please check the list below against the contents of the packaging. If any items are missing or damaged, contact the Apex dealer or distributor where you purchased the unit.

- 24V DC power supply
- LIVIAU device
- Device Stand part
- Phoenix contact plugs
- 1 microHDMI to HDMI cable (5m)
- Screws
- Two Ty-Raps
- User manual

Operating environment

This appliance is designed to operate in most normal climates, at a temperature between 0 °C and 25 °C (32 - 77 °F), with relative humidity between 10% and 60%.

LIVIAU uses passive cooling with heat dissipation over device's aluminum body. Due to significant mass of the device body lot of heat will be accumulated in it so device will attain stabile working temperature for around half an hour of active operation.

It is necessary to provide enough free space around the device for air circulation. LIVIAU uses internal temperature sensors to provide internal temperature monitoring and power limitation in case of overheating.

Power requirements

BEFORE you connect any unit to the mains, please make sure that the voltage of your local AC supply is within the acceptable range of the unit.

The LIVIAU device is powered by 24V/120W AC-DC Industrial Adaptor provided with the device. Do not use other power supply without consultation with producer of the device.

Precautions should be taken so that the appliance is properly grounded at all times. **This unit must be earthed.**

Installation

If the unit is brought into a warm room from a cold environment, internal condensation may occur. Ensure that the unit has been allowed to reach ambient temperature before switching it on.

Device is intended for mounting on the provided stand part or for wall mounting with provided wall mount part. Please use the screws provided with the device.
When mounting on the stand cables should go through the hole in the stand part and through the appropriate hole in the table.
Be careful when screwing the stand part to the case as the holes on the device body part are bored at an angle. Inserting the screws at the wrong angle can damage the thread.

LIVIAU device is passively cooled over device's aluminum body. Hence, it should not be placed in confined part of the space in order not to prevent circulation of the air around device.

Product features

Liviau is a completely new approach to AV control for bars, clubs, retail and corporate applications. A single, elegant touchscreen-based unit combined with highly intuitive operation provides control over audio and video playback (including comprehensive scheduling), plus a fully integrated DMX controller for powerful and sophisticated lighting control. Liviau is simple to install, energy-efficient, great to look at and very cost-effective in comparison with other commercial control systems available.

Advertising

Load multiple video files for advertising/promotional use and scheduling. Videos can be individually configured to play just once or be looped. Source your clip from a variety of media, including networked devices, USB memory sticks and onboard memory.

Press to Talk

Use one of the two available microphone inputs to page to all audio outputs (zones).

Lighting Cues

Each scheduled event can include one lighting cue controlling up to 16 fixtures. Each cue can consist of up to six individual steps, while each fixture can incorporate RGB colour selection, plus pan and tilt, gobo, dimmer, iris, prism, focus, shutter and effects controls.

FX Gen

An FX Generator can be configured to control any of the available lighting fixtures. This can include circular rotation, linear sweeps (such as creating a wave effect) and figure of eight movements. These can be stored into presets and a single preset can be triggered from an event within the scheduler.

Events

Create up to 16 events and trigger these at any time of the day and on any day of the week. Each event can be named and can trigger the playout of a video clip, lighting cue, lighting effect and also up to six GPOs.

Play Music

Select and play music from any media source, including from mobile devices using Bluetooth. Using the intuitive audio mixing screens and route the audio to any output or zone.

Scheduler

Comprehensive scheduling of video and lighting control is provided for in-store promotions, general advertising, ambience control, or the provision of general safety notices etc.

Apps

Access a variety of third-party applications, such as the well-known music streaming provider, Spotify.

GPO

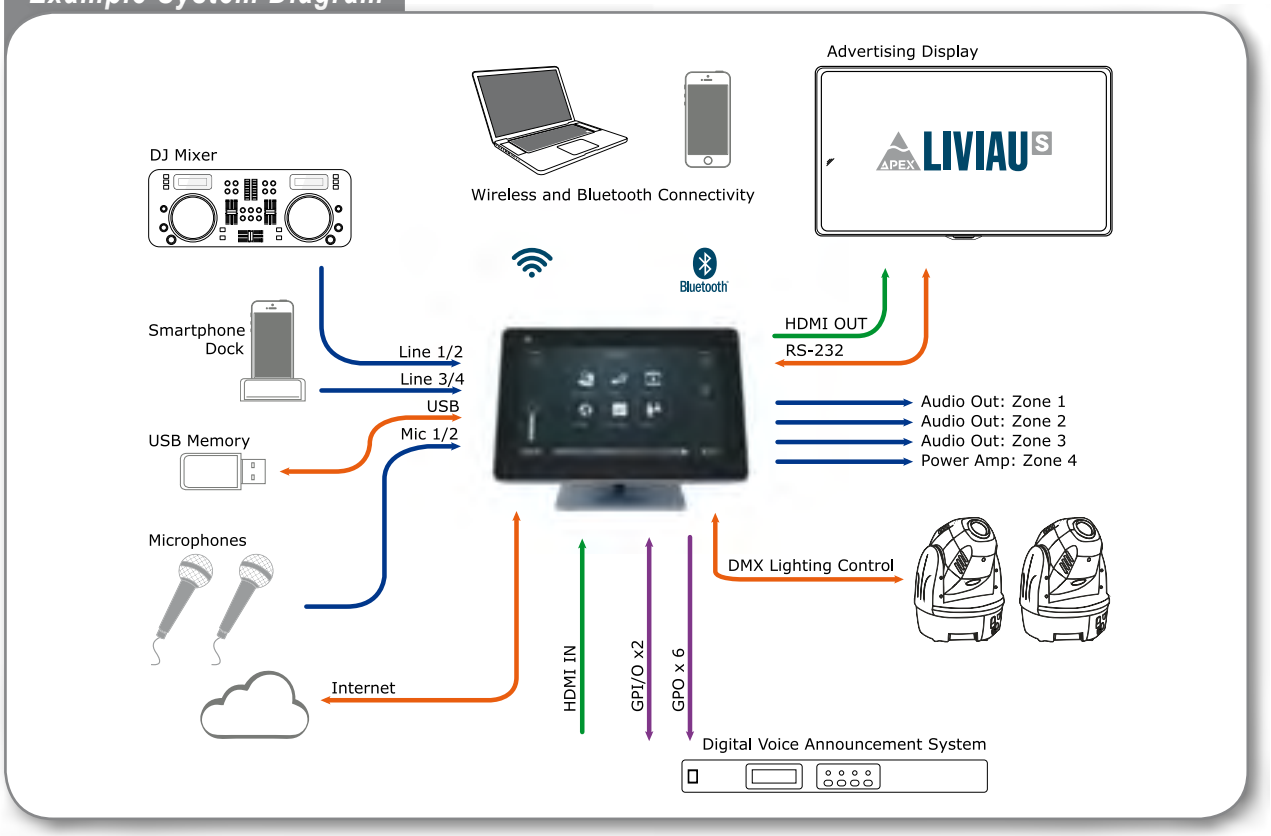
Six General Purpose Outputs (GPOs) are available for control via the scheduler. This enables the Liviau to control third-party equipment and provide functions such as opening/closing blinds, switching on or off signs (e.g., ‘OPEN’) etc. Each scheduled event can control any of the six available GPOs.

Video

Liviau permits one of twelve individual video clips to be assigned to a scheduled event. Video clips can be configure to play once or to loop continuously until another scheduled event is triggered. The outgoing video and audio is available on the HDMI output, while the audio content can also be mixed to any of the available line outputs or directly to the two internal 50W amplifiers.

Principles of operation

Example System Diagram



Lighting

Control

As well as regular architectural lighting, up to sixteen intelligent lighting devices may also be controlled from the Liviau, including moving heads, strobes, RGB devices, lasers, dimmers and more.

Mixer

In addition to the in-built DMX512 controller, Liviau also incorporates a programmable lighting mixer offering 24 cues, 16 fixtures, a sequencer with fade time and an effects generator with pan & tilt.

Video

Video

Whether the Liviau is installed in a retail outlet, house of worship, restaurant/bar or commercial facility; having a way of playing video content in a managed and structured way to help convey your message can be exceptionally beneficial. The power of Liviau allows this, and with ability to select the appropriate video clip to your scheduled event, the Liviau can create exactly the right ambiance in which to deliver your message.

Audio

Inputs

Audio input connectivity includes two microphone and four line level inputs, plus two inputs sourced from the HDMI input connector. Two additional internally sourced audio inputs are also provided for routing internally stored audio.

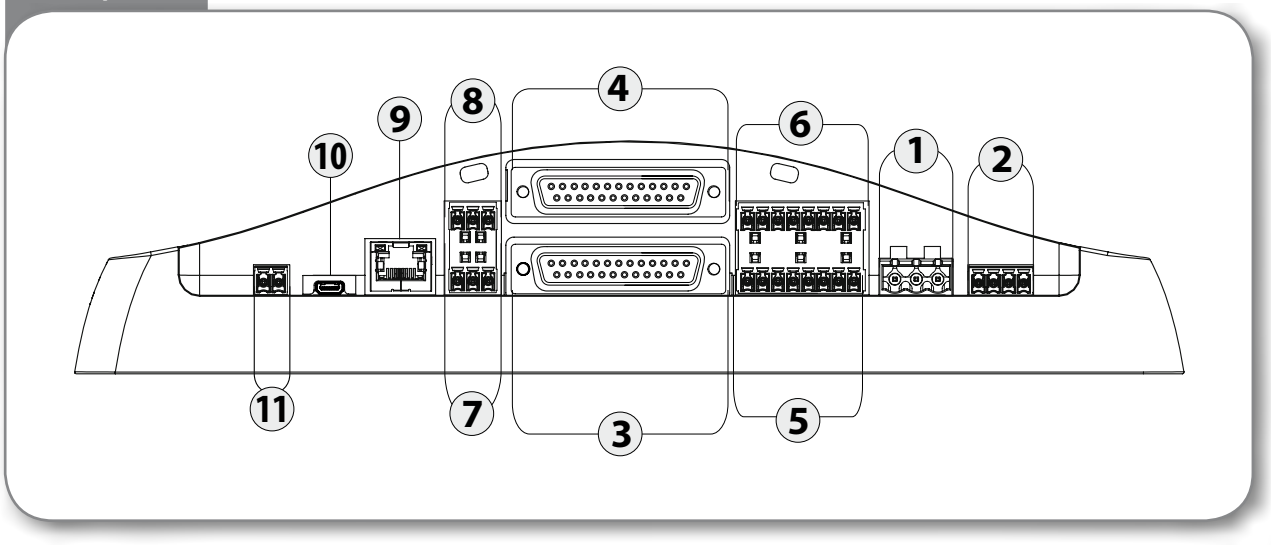
Outputs

Six line level outputs are provided, plus the outputs of the internal 50 W/channel stereo amplifier and internally sourced audio files. Routing - All inputs can be combined and routed at will to any output using the audio mixing page.

Equaliser

Professional audio quality 4-band parametric EQs are available on every input and output channel.

Rear panel



Rear panel

All connections to LIVIAU, with the exception of the side panel USB and HDMI input ports are made via the rear panel.

① Phoenix Contact power connector – use the 24V DC power supply provided with LIVIAU device and connect it by using the wiring diagram in the wiring section

② Audio amplified outputs – connect your passive speakers via Phoenix Contact 1x4 connector plug using the schematic in the wiring section. Audio signal on this terminal is amplified to the speaker signal level by a 2x50W @4Ω internal amplifier.

③ Audio Out DB-25 – provides balanced audio LINE output signals used for connecting the device onto stable amplified platforms such as Hi-Fi amplifiers and receivers, PA systems, 100V amplifiers, powered speakers, headphones, etc. Line out signal is an alternating current signal without a DC offset. Line output signals have a maximum level of 20dBu.

④ Audio In DB-25 – Input channels 1 and 2, also known as MIC channels, are intended for use with electronically balanced microphone audio signals, in addition channels 3 to 6 are intended for use with LINE in audio signals. Differential input resistance for MIC channels is 9.2kΩ and is designed to meet the requirements of low level microphone signals that are amplified and brought up to line level. LINE in differential input resistance is 16kΩ and is designed to allow 20dBu line level signals. It is intended by designers that the line in of one device be connected to the line out of another.

General purpose input/output connection

⑤ Negative Terminal (–) - Each negative terminal is coupled with positive terminal above it.

⑥ Positive Terminal (+) - General input output pins that are electrically isolated via optocoupler.

There are four dedicated outputs, two dedicated inputs and two software selectable input/outputs. GPIOs are designed for controlling 24V devices. Inputs do not have current limiting resistors so these must be provided outside the device.

⑦ DMX512 connection – LIVIAU can be used to control DMX512 enabled devices such as those used in stage lighting or in office ambient light level equipment. Phoenix Contact connector is intended for use with XLR-3 ready systems. Use the wiring diagram in the wiring section to determine the right pinout.

⑧ RS232 transceiver – used for serial communication and UART3 loopback testing.

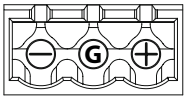
⑨ Ethernet port - The rear panel Ethernet port allow the LIVIAU to be connected to a Gigabit Ethernet network and gain access to the internet. Although it has wireless network capabilities built in, it is always preferred to have a stable, wired, network access.

⑩ HDMI output connection – standard HDMI port that utilizes a type D Micro HDMI connector. Used for connecting HDMI compatible devices such as computer monitors, video projectors, digital TVs, etc.

⑪ Infrared connection – used for connecting external infrared controller units. Pin+ has a stable voltage of 5V DC @200mA max current, and Pin- outputs a modulated data signal with peak voltage of +5V.

Wiring the unit

① **Phoenix Contact power plug**
Wire the plug by the provided diagram.



Power connector

PIN (+) positive terminal of the power supply
PIN (–) negative terminal of the power supply
PIN (G) ground terminal of the power supply

LIVIAU has pins PIN(–) and PIN(G) shorted out, and since the power supply outputs a 24V DC voltage with negative terminal connected to Earth it is sufficient to only wire PIN(+) and PIN(–) to the power supply.

② **Phoenix Contact 1x4 plug** for audio amplified output
Wire the plug by the provided diagram.

Amp audio output

(L) and **(R)** Left and Right passive speaker
(+) and **(–)** positive and negative terminal of passive speakers.

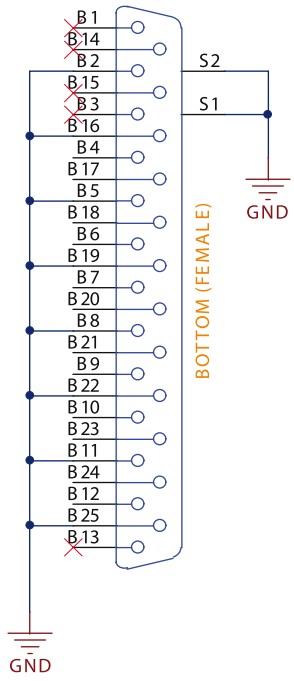
Audio DB-25 connectors

Both input and output connectors use the AES59 “8-way connections” standard pinout, but with a slight difference of some of the pins not being used in this case.

Pinout used here is **intended for use with electrically balanced** audio equipment. You should not, under any circumstances, use or connect the device to a peace of audio equipment that has COLD (–) and GND pins shorted out in order to create a balanced to an unbalanced apparatus.

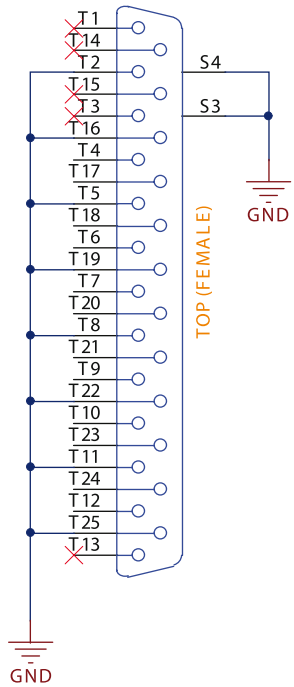
Check the diagram and the pinout table below for more information.

③ **Audio Out DB-25 pinout**



DB-25 Pin	#ch / terminal
B1	n/c
B2	GND
B3	n/c
B4	LINE OUT 6+
B5	GND
B6	LINE OUT 5-
B7	LINE OUT 4+
B8	GND
B9	LINE OUT 3-
B10	LINE OUT 2+
B11	GND
B12	LINE OUT 1-
B13	n/c
B14	n/c
B15	n/c
B16	GND
B17	LINE OUT 6-
B18	LINE OUT 5+
B19	GND
B20	LINE OUT 4-
B21	LINE OUT 3+
B22	GND
B23	LINE OUT 2-
B24	LINE OUT 1+
B25	GND
Shield	GND

④ **Audio IN DB-25 pinout**

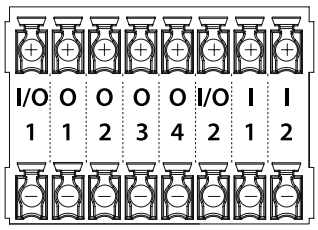


DB-25 Pin	#ch / terminal
T1	n/c
T2	GND
T3	n/c
T4	LINE IN 6+
T5	GND
T6	LINE IN 5-
T7	LINE IN 4+
T8	GND
T9	LINE IN 3-
T10	LINE IN 2+
T11	GND
T12	MIC IN 1-
T13	n/c
T14	n/c
T15	n/c
T16	GND
T17	LINE IN 6-
T18	LINE IN 5+
T19	GND
T20	LINE IN 4-
T21	LINE IN 3+
T22	GND
T23	LINE IN 2-
T24	MIC IN 1+
T25	GND
Shield	GND

General purpose input/output connection
Wire the plug by the provided diagram.

⑤ **Negative Terminal (–)**
Each negative terminal is coupled with positive terminal above it.

⑥ **Positive Terminal (+)**
General input output pins that are electrically isolated via optocoupler.



Positive Terminal (+)

Negative Terminal (–)

General purpose input/output

Phoenix Contact 2x3 plug
Wire the plug by the provided diagram.

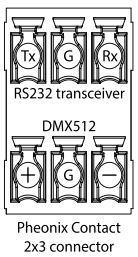
⑦ **RS232 transceiver - top**
Wire the plug by the provided diagram.

⑧ **XLR3 for DMX 512 - bottom**
DMX512 is intended for use with 3 pin XLR connection capable devices, on which

DMX+ and DMX- are often swapped. The most commonly encountered pinout is given below.

1 - Ground
2 - Data 1- (Primary Data Link)
3 - Data 1+ (Primary Data Link)

"check your equipment's product documentation, electrical schematics and wiring diagram for exact wiring procedures."

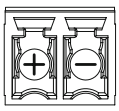


Pheonix Contact 2x3 connector

TOP - RS232 transceiver
(Tx) and **(Rx)** transmit and receive terminal
(G) ground

BOTTOM
(+) and **(–)** positive and negative terminal of the DMX512.
(G) ground

⑨ **Infrared connection**
Wire the plug by the provided diagram.



Infrared connection

Wire the anode **(+)** of the LED facing the positive terminal of the connector and cathode **(–)** facing the negative.

If you intend to use a LED diode, as a transmitter, make sure to have a resistor connected in series to limit the current through the LED, otherwise it will burn out.

"read the component's datasheet in order to gain knowledge of the typical forward voltage."

The resistor value, R is given by:

$$R = (V_s - V_f) / I$$

R = resistor value in ohms (Ω)
V_s = supply voltage
V_f = LED typical forward voltage
I = LED current in amps (A)

"read the component's datasheet in order to gain knowledge of the required values."

The LED current must be less than the maximum permitted for your LED.
If the calculated value is not available choose the nearest standard resistor value which is greater, so that the current will be a little less than you chose.

For example
If the supply voltage V_s = 5V, and you have an infrared LED (usually V_f = 1.5V), requiring a current I = 40mA = 0.040A, R = (5V – 1.5V) / 0.04A = 87,5Ω, so choose 91Ω (the nearest standard value which is greater).

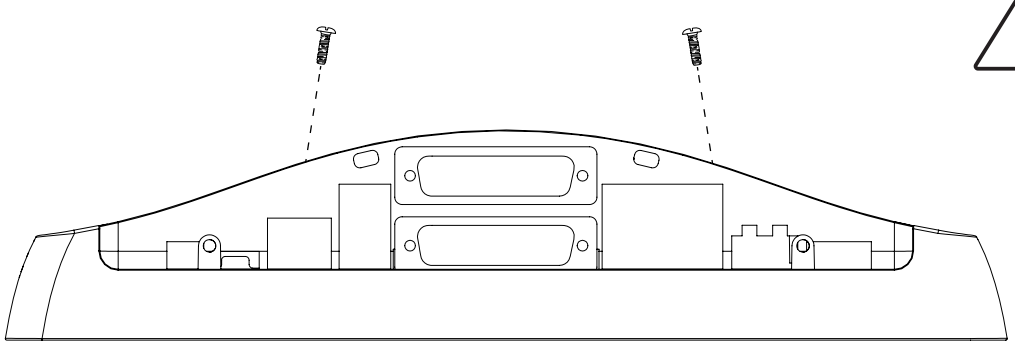
Stand assembly

Device is intended for mounting on the provided stand part. Please use the screws provided with the device.

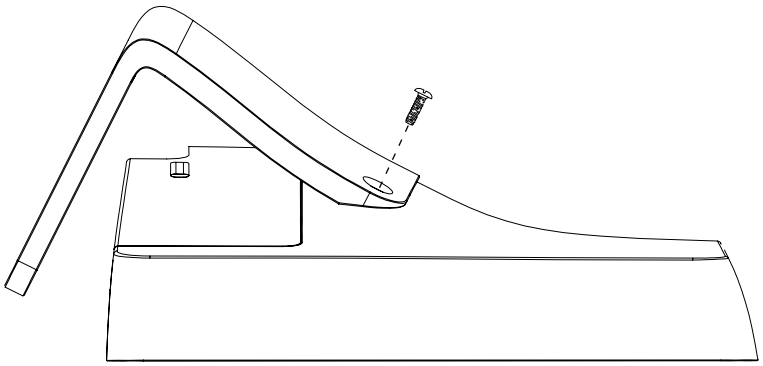
When mounting on the stand cables should go through the hole in the stand part and through the appropriate hole in the table.

Be careful when screwing the stand part to the case as the holes on the device body part are **bored at an angle**. Inserting the screws at the wrong angle can **damage the thread**.

Rear view



Side view

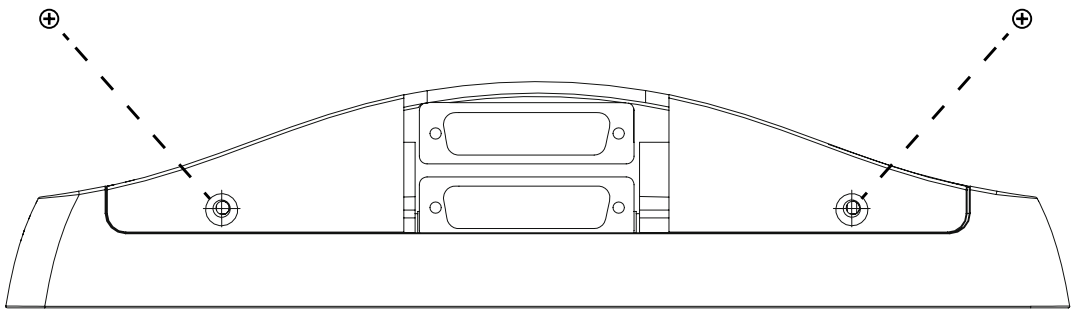


Wall mount assembly

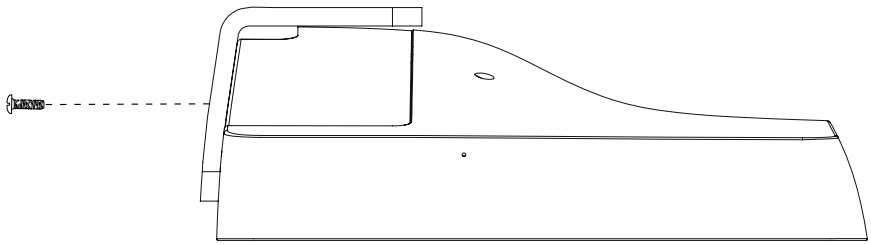
Device is intended for mounting on walls with the provided wall mount part. Please use the screws provided with the device.

When mounting on wall cables should go through the hole in the wall mount part and through the appropriate hole in the wall.

Rear view



Side view



Technical Specifications

General

Display	10.1” multi-touch capacitive screen; ambient light sensor for backlight control
Cooling	Passive
Processor	Quad core Cortex A9

Comms

Network	Gigabit Ethernet port
USB	1 x USB Type ‘A’
Wi-Fi	Compliant with 802.11 a/b/g/n, 2.4/5.0 GHz MIMO
Bluetooth	4.0/BLE

Video

Input	1 x HDMI 1.4a, 1920 x 1080p
Output	1 x HDMI 1.4a

Audio - I/O

Mic inputs - type	2 x balanced, Zin > 10 kohms
Line inputs - type	4 x balanced, Zin > 5 kohms
Max input level	+18 dBu (mic and line)
Line outputs – type	6 x balanced, Zout <50 ohms
Max. output level	+18 dBu (line outs)
Power amplifier outputs	2 x 50 W into 4 ohms

Audio - processing

Sample rate	96 kHz
Matrix	6 x 6
EQ	4-band parametric on all inputs and outputs
Limiters	On all outputs
Crossovers	On all outputs
Recorder	24-bit, 48 kHz; 128 kbps AAC. Max duration approx. 500 hours (internal)

Other I/O

Lighting control	DMX 512
GPOs	Four, volt-free, 24 V, max current 100 mA, isloation 1.5 kV
GPIs	Two, volt-free, 24 V, on current 3.2mA, max current 50mA
GPIOs	Two, configurable as inputs or output
Serial port	RS-232C, bi-directional
Infra red port	1 x IR, for standard IR LED emitter

Other

Wake up	By proximity sensor
Power requirements	24 V dc @ 6 A max., via supplied AC PSU
Dimensions	(w x h x d) 273 mm x 177 mm x 58.3 mm (without stand)

Environment

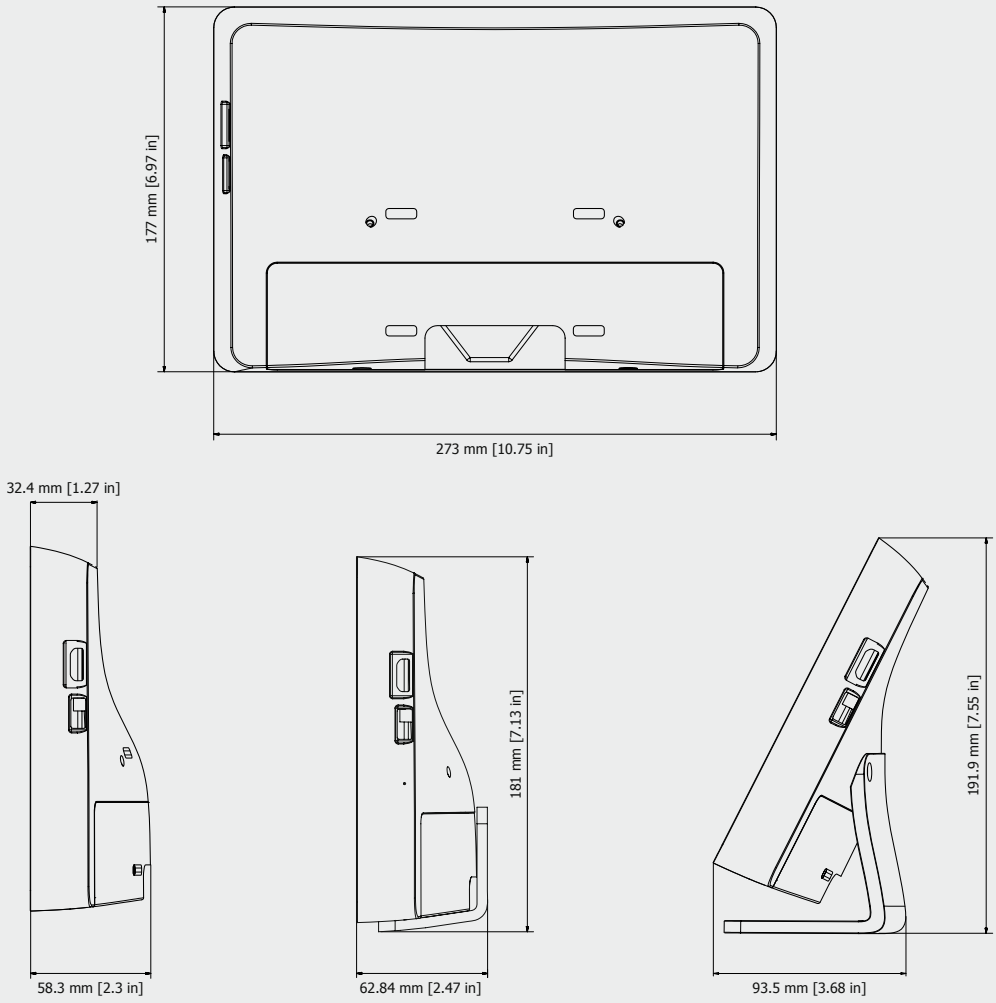
Operating

Temperature:	0 to 25 °C (32 to 77 °F)
Relative humidity:	10 to 60%, non-condensing

Storage

Temperature:	-20 to 60 °C (-20 to 140°F)

Mechanical specifications



Dimensions

Unit

Width	273 mm (10.75 in)
Height	177 mm (6.97 in)
Depth	58.3 mm (2.3 in)

Package

Width	590 mm (23.23 in)
Height	120 mm (4.72 in)
Depth	400 mm (15.75 in)

Weight

Unit	
Nett	1,72 kg
With stand and cable cover	2.18 kg
Gross (Shipping)	4 kg

In the interest of product development, GiVa BVBA reserve the right to modify or improve specifications of this product at any time, without prior notice and without any obligation to change or update equipment already delivered.

Limited warranty

GiVa BVBA ("GiVa") warrants you, the original purchaser, or any party that purchases the device from you, that its products are free from defects in material and workmanship under normal use for a period of two (2) years from the date of original purchase. The date of purchase is the date which appears on the first invoice or any other proof of purchase provided by a GiVa approved dealer.

Subject to the conditions and limitations set forth below, GiVa will, at its discretion, either repair or replace any part of its products that prove to be defective, provided that the product is returned with proof of purchase, shipping prepaid, to an authorised GiVa approved service facility.

Warranty cover of any repairs will only extend to the end of the original warranty period.

We will be happy to provide you with a list of authorised dealers to whom you can return the defective unit or who will give you a returns note to enable you to send the unit to the factory.

Service turn-around time will be as fast as reasonably possible. If you are not satisfied with the repair, contact GiVa.

Exclusions and limitations

This limited warranty covers only repair or replacement for defective products manufactured by GiVa. GiVa is not liable for, and does not cover under warranty, any loss of data or any costs associated with determining the source of system problems or removing, servicing or installing GiVa products. This warranty excludes 3rd party software, connected equipment or stored data. GiVa does not warrant that the operation of the product will be uninterrupted or error-free. In the event of a claim, GiVa's sole obligation shall be replacement of the hardware.

This limited warranty does not cover:

(1) any damage to this product that results from improper installation, accident, abuse, misuse, natural disaster, insufficient or excessive electrical supply, abnormal mechanical or environmental conditions or other external causes;
(2) any damage caused by operating the product outside the permitted or intended uses described by GiVa;
(3) any damage caused by any unauthorized disassembly, repair, or modification;
(4) consumable parts, such as batteries;
(5) any cosmetic damage.

GiVa is not liable for consequential damages.

This limited warranty also does not apply to any product on which the original identification information (including serial number) has been altered, obliterated or removed or any product that has not been handled or packaged correctly.

Warranty services will be furnished only if the product is accompanied by a copy of the original retail dealer's invoice.

Warranty claims other than those indicated above are expressly excluded.