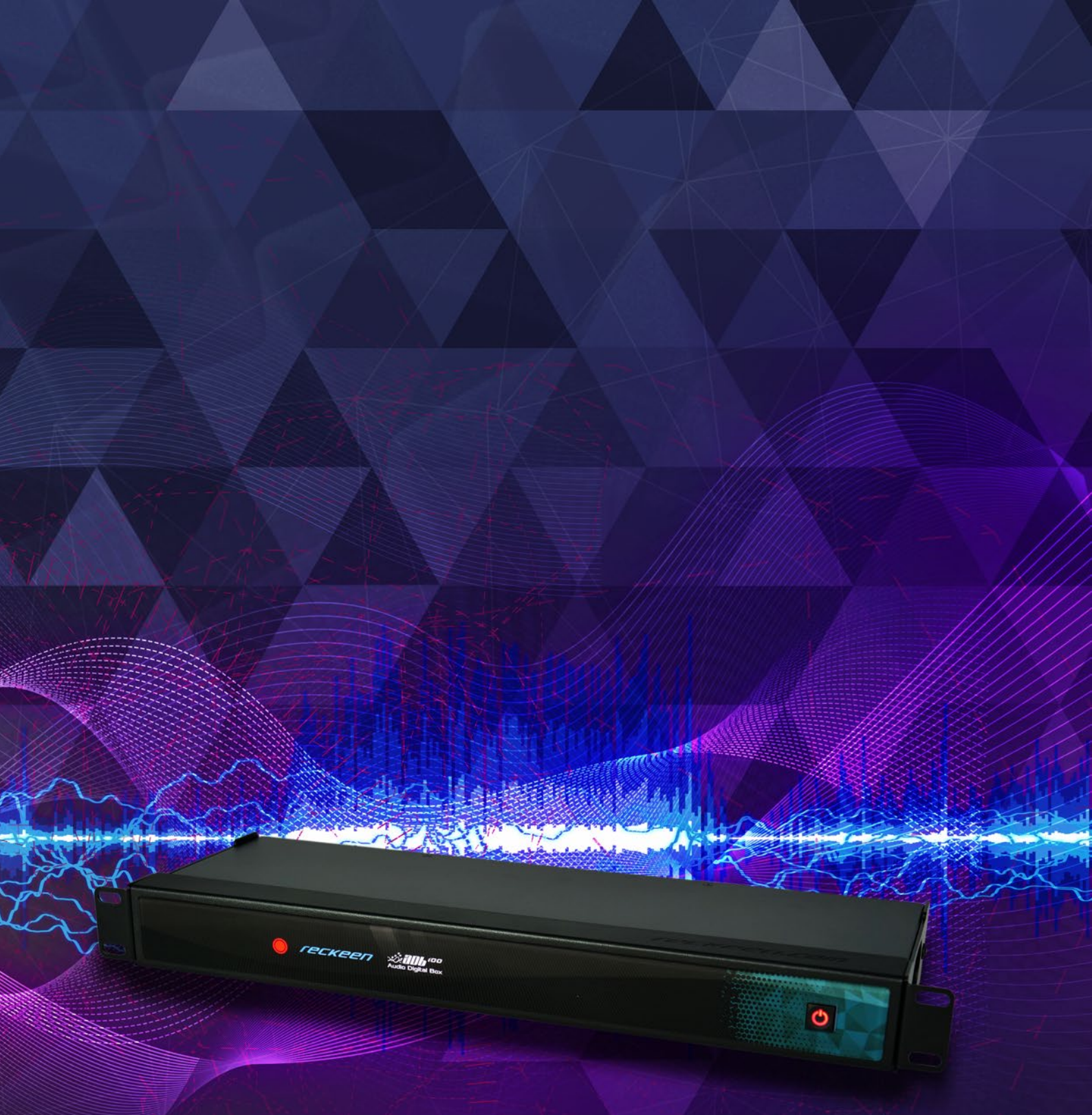

ADB 100

INSTRUCTION MANUAL

ver. 1.3.1118

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Disclaimer of Product and Services

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The software described herein is governed by the terms of a separate user license agreement. Reckeen is not liable and will not compensate for any lost recordings or streamings made to your Reckeen 3D STUDIO or LITE , external recording media, or recording devices or any relevant losses, including when recordings are not made due to reasons including your Reckeen 3D STUDIO or LITE failure, or when the contents of a recording are lost or damaged as a result of your Reckeen 3D STUDIO or LITE failure or repair undertaken to your Reckeen 3D STUDIO or LITE . Reckeen will not restore, recover, or replicate the recorded or streamed contents made to your Reckeen 3D STUDIO or LITE , external recording media, or recording devices under any circumstances.

FCC NOTICE TO USERS

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warnings and Precautions

1. Read carefully all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
5. Do not use this unit in or near water.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord's rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
    - When the power cord is damaged or frayed;
    - When a liquid has spilled into the unit;
    - When the product has been exposed to rain or water;
    - When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
    - When the product has been dropped or the cabinet has been damaged;
    - When the product exhibits a distinct change in performance, indicating a need for service.

Warranty

For a period of one year from the original date of purchase of the product, Reckeen equipment is guaranteed against any manufacturing defects. The original purchase receipt or invoice or other documentary evidence is required. To obtain warranty service, you must deliver the product, in either its original packaging or packaging affording an equal degree of protection . You cover all mail , delivery , transportation and insurance costs. It is your responsibility to backup any data, software or other materials you may have stored or preserved on your unit. It is likely that such data, software, or other materials will be lost or reformatted during service and Reckeen will not be responsible for any such damage or loss. Our warranty doesn't cover damage caused by accidents or unauthorized modifications, installing any other software and repairs, misuse, sand, grit or water. All other claims of any nature are not covered by this warranty. This Warranty is valid only in the country of purchase. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. RECKEEN SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY . Accessories ,such as the battery or the cable, are excluded from the warranty. These terms do not affect your statutory rights.

DISPOSAL ELECTRICAL AND ELECTRONIC EQUIPMENT

SYMBOL FOR THE MARKING OF ELECTRICAL AND ELECTRONIC EQUIPMENT INDICATING SEPARATE COLLECTION: For Customers the countries within the EEA . EEA: European Economic Area, which comprises the EU member States plus Norway, Iceland and Liechtenstein.

WEEE Directive

The symbol – consists of the crossed-out wheeled bin, as shown above. The symbol is indicating that electrical and electronic equipment should not be disposed of as unsorted municipal waste, but segregated for separate collection. For more information about recycling of the product, please contact Reckeen office, the waste authority, the approved WEEE scheme or the dealer/distributor where you purchased the product.

2

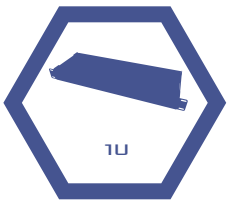
ADB 100 is a professional audio standard in your Reckeen Studio!

ADB 100 is an additional, external audio module extending functionality of the Reckeen 3D and LITE Virtual Studio. With its built-in Audio Link interfaces, this device can be installed directly in the studio as well as on the stage. The use of RJ 45 cable and Audio Link technology enables transferring all inputs and outputs stream to greater distances (with a single RJ45 cable). This enables you to separate a recording studio from a closed and acoustically insulated director's room in which the Reckeen Studio 3D or Lite station is installed. The sound transferred digitally from ADB 100 device through RJ 45 connector maintains the highest quality and avoids noise. An advanced but easy-to-manage application integrated with the Reckeen Virtual 3D Studio & Lite enables precise control over ADB 100 device. Intuitive operation and signals routing make this preamp extremely flexible and performing well with many types of recordings ADB 100 module is designed for professional producers, yet it maintains a size of 1U and a price at a reasonable level. The device is equipped with professional inputs and connections with the highest AES / EBU signal quality (AES3), used mainly in studio technology.

ADB 100 works well at home, in the director's room, in the studio, in the transmission car as well as on the stage. The richness of various analog and digital interfaces provides maximum flexibility and supports user productivity in the studio. With ADB 100 your Reckeen Studio is enriched with the highest professional sound quality without any distortions.

Its main features are:

- Area in a Rack type housing: 1U
- 12V power supply
- 4 x XLR four channels –professional balanced analogue audio two stereo differential output
- 4 x XLR four channels –professional balanced analogue audio two stereo differential input
- High - quality headphones output
- Digital outputs : 2 x AES/EBU, (AES3)
- Digital inputs : 2 x AES/EBU, (AES3)
- Audio Link (using RJ45 cable up to 50 m) galvanic isolation
- 4 8 V voltage at the microphone input,
- Professional balanced analogue audio stereo differential input ,dynamic and condenser microphone input ¼"
- Control over signal routing via dedicated software integrated with the Reckeen Studio 3D & Lite application
- Selectable reference level (-10dBV, or 4dBu)



Area in a Rack type housing: 1U

12V power supply

4 x XLR four channels – professional balanced analogue audio two stereo differential output

4 x XLR four channels – professional balanced analogue audio two stereo differential input

Audio Link (using RJ45 cable up to 50m) galvanic isolation

48V voltage at the microphone input,

High-quality headphones output

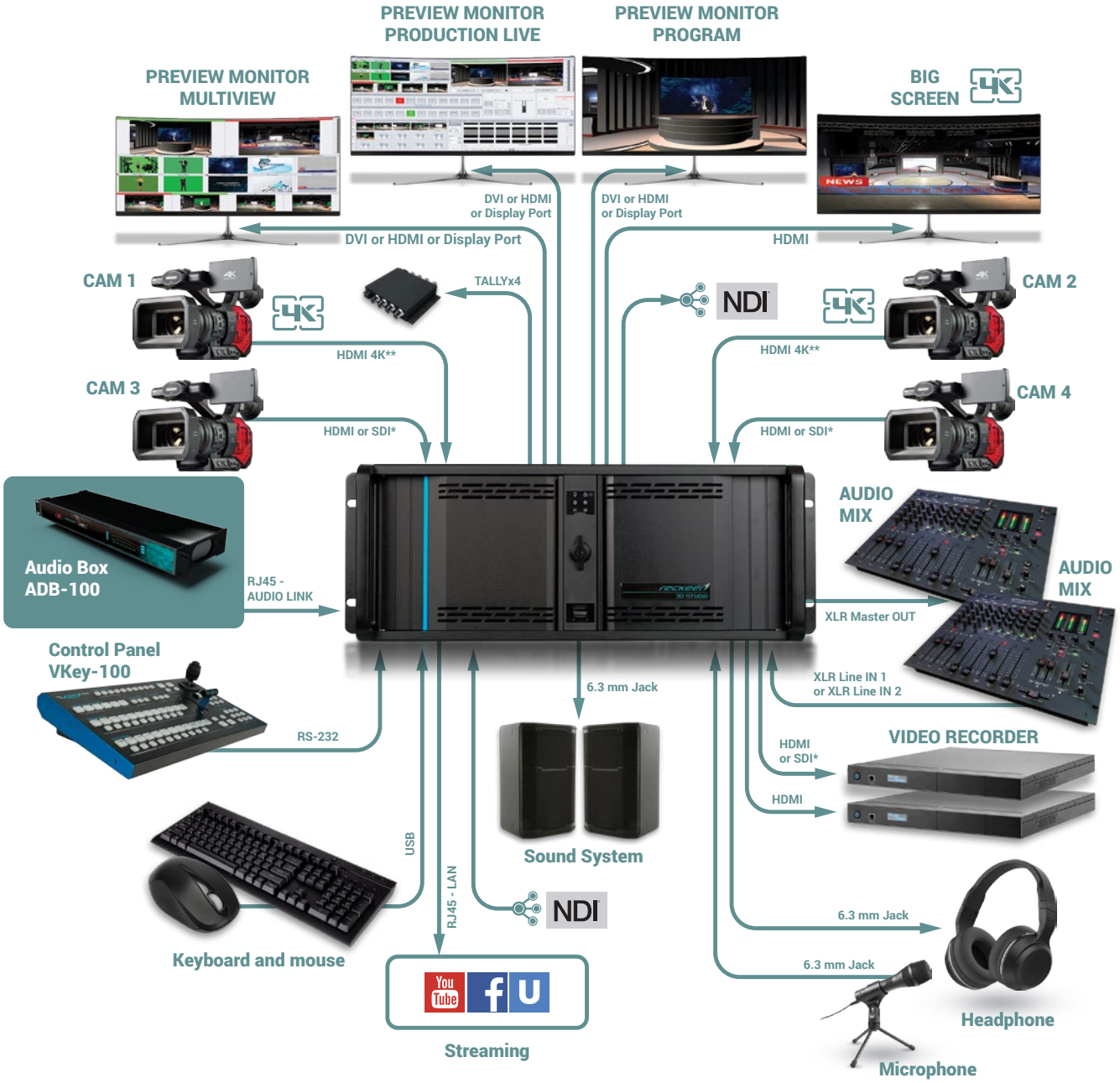
Digital outputs: 2 x AES/EBU, (AES3)

Professional balanced analogue audio stereo differential input, dynamic and condenser microphone input ¼"

Control over signal routing via dedicated software integrated with the Reckeen Studio 3D & Lite application

Selectable reference level (-10dBV, or 4dBu)

Digital inputs: 2 x AES/EBU, (AES3)



*SDI connectors only in Reckeen Studio version with HDMI-SDI card
**Virtual LITE studio offers a Full HD resolution.
By purchasing additional License Key, You can upgrade it to 3D Studio &LITE with 4K resolution.

3

AUDIO LINK Interface

With its built-in Audio Link interfaces, this device can be installed directly in the studio as well as on the stage. The use of RJ 45 cable and Audio Link technology enables transferring all inputs and outputs stream to greater distances (with a single RJ45 cable). This enables you to separate a recording studio from a closed and acoustically insulated director's room in which the Reckeen Studio 3D or Lite station is installed. The sound transferred digitally from ADB 100 device through RJ 45 connector maintains the highest quality and avoids noise.

If you connect an additional ADB-100 device to Audio Link connector, you can expand the Reckeen system adding additional inputs and outputs:

- two digital inputs on XLR connector (AB Digital 1, AB Digital 2)
- two analog inputs on XLR connector (AB Analog In 1 stereo, AB Analog In 2 stereo)
- microphone input for dynamic and condenser microphone
- two digital outputs on XLR connector
- two analog outputs on XLR connector (stereo output 1, stereo output 2)
- stereo headphone output

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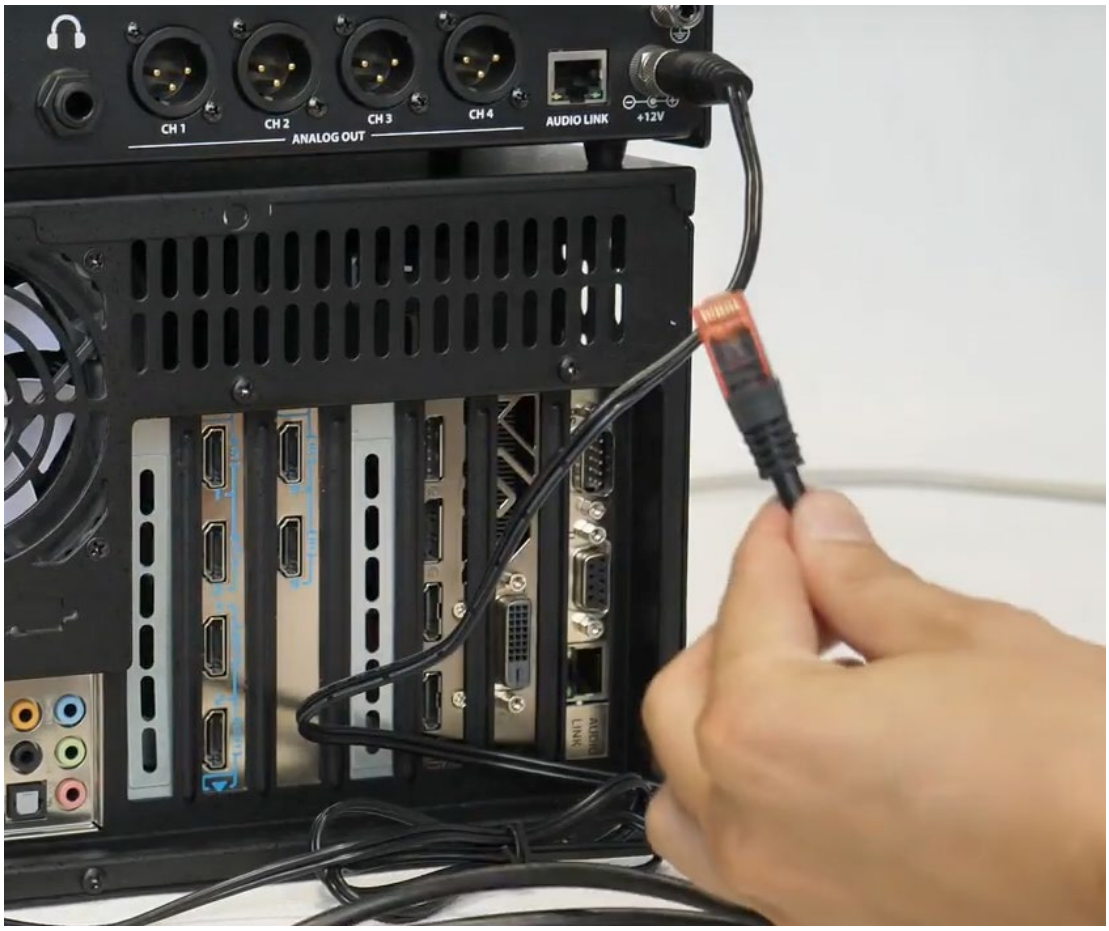
Connection

First connect the power supply plug to the ABD 100 device power socket. Picture below.

Bolt the locking screw. Picture below.

Next connect the power supply unit to the electrical outlet. Picture below.

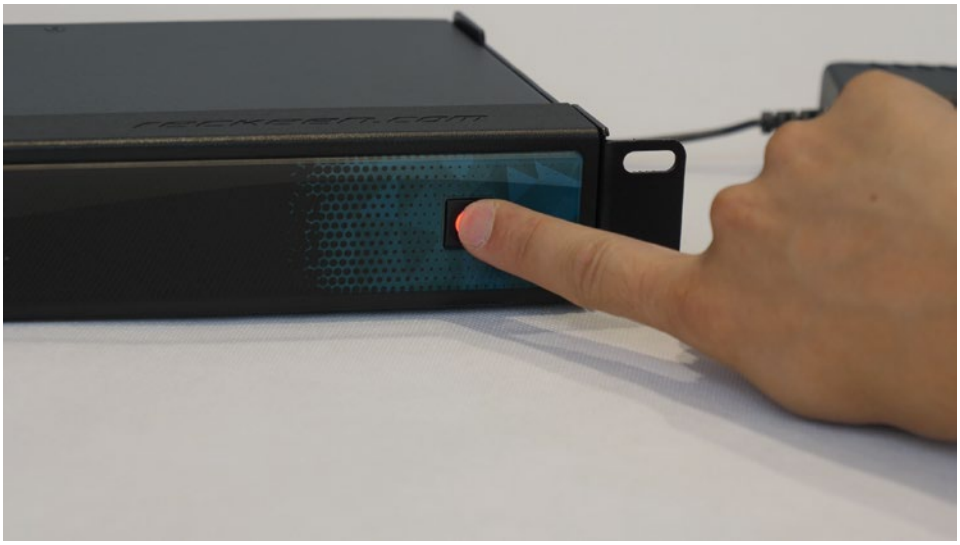
Connect the ADB-100 to the system using Straight-through RJ45 communication cable. Picture below.



Plug the end of the cable to the input / output card. Picture below.

Plug the second end of the cable to the Audio Link Connector in ADB 100. Picture below.

To turn the device on, hold the power button for 1 second (turn it off about 3 seconds).Picture below.



In case the device is not connected, a 'ADB-100' graphics is displayed in the tab along with a message about a lack of communication with the device below it. Picture below.

When all the cables are correctly connected and a power button on the ADB-100 device is pressed, then instead of graphics, an audio mixer for this device will be automatically displayed. Picture below.

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Digital Inputs and outputs

In case of digital inputs and outputs 0 level corresponds to -20dBFs.

Digital In 1 input on the XLR connector. Picture below.

Digital In 2 input on the XLR connector. Picture below.

Digital output 1 on the XLR connector. Picture below.

Digital output 2 on the XLR connector. Picture below.

6

Analog inputs and outputs

You can adjust the sound in the range of -40 to +10 dB, where the 0 level (Analog In 1, Analog In 2) corresponds to -10 dBV (-7.8 dBu or 0.316 V RMS) in the case of a consumer level, or 4dBu (1.78 dBV or =1.23 volts RMS) in the case of a professional level analog inputs/outputs on ADB -100 panel. It depends on audio level settings in Configuration Window: Audio Tab. Picture below.

Analog In 1 input on the XLR connector (left and right channel).Picture below.

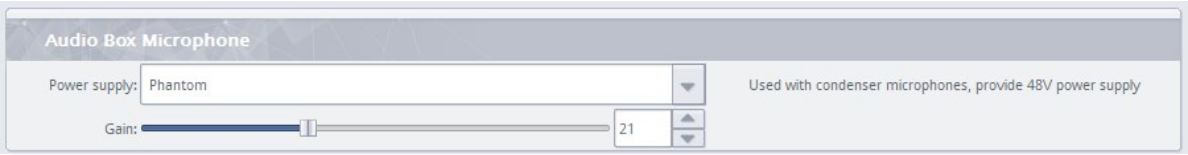
Analog In 2 input on the XLR connector (left and right channel).Picture below.

Analog output 1 on the XLR connector (left and right channel).Picture below.

Analog output 2 on the XLR connector (left and right channel).Picture below.

MIC input Jack 6,3 mm stereo. Picture below.

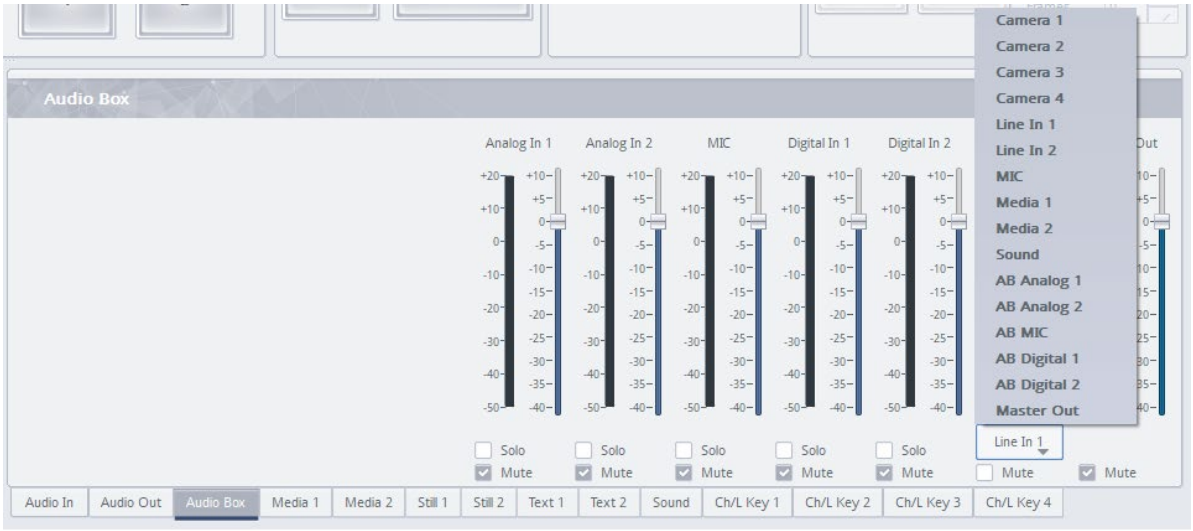
In Configuration Window you can find Microphone settings for the microphone connected to AUDIO BOX panel (ADB -100).Picture below. There are two operating modes: a None mode with a dynamic microphone, for which you can set the Gain value with a slider, and a Phantom mode with a condenser microphone. When you switch to the Phantom mode, you will be warned that a voltage of 48 V will be applied to the speech insert. A red LED lights up on the ADB 100.



Warning ! It is recommended not to connect or disconnect a microphone to the ADB-100 during the time the red LED is lit up. You can safely connect a microphone only in NONE mode.

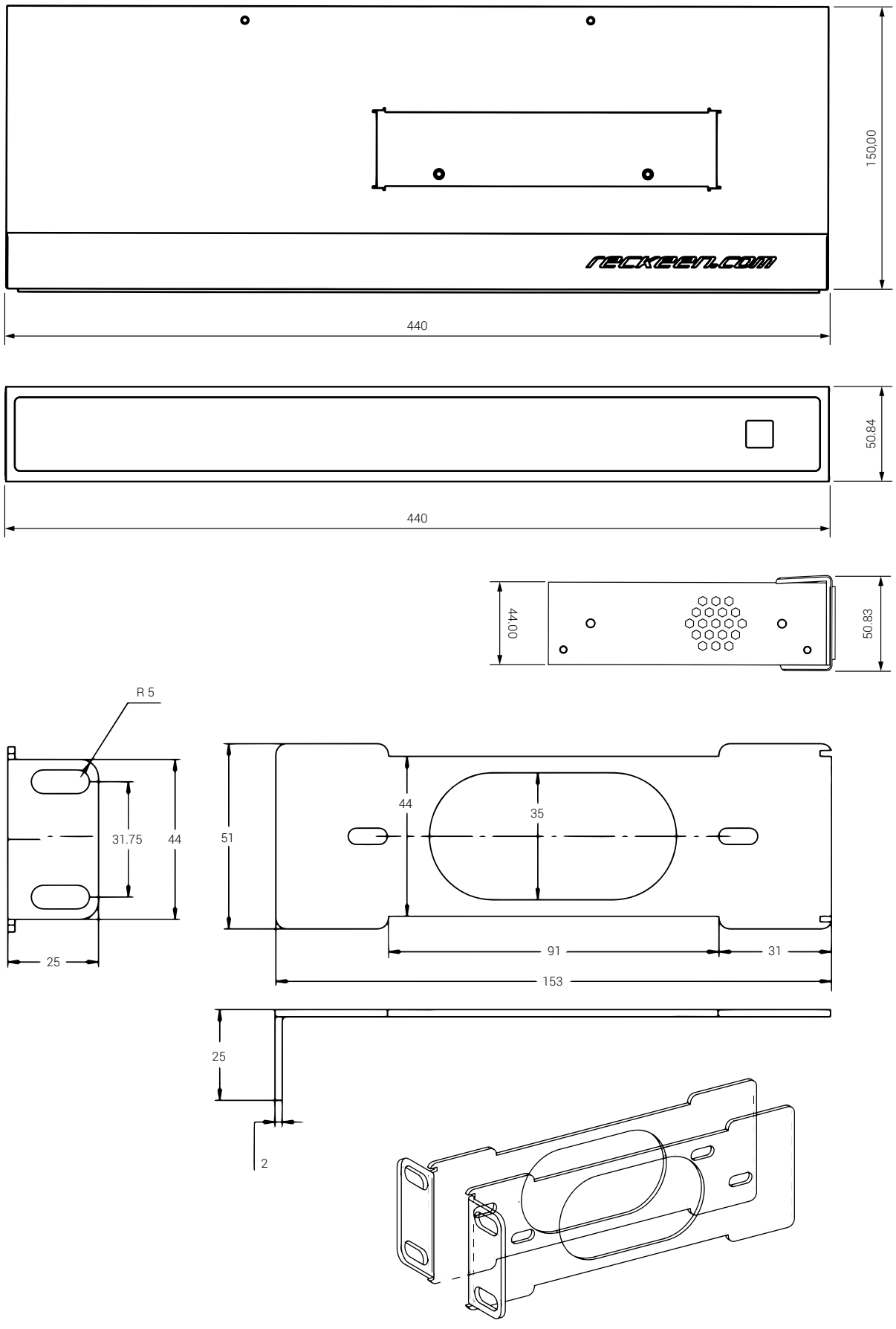
Headphone output Picture below.

Headphone connector is Jack 6,3 mm stereo. The Mute function works for each input source and the master output. Selected sources are mixed, and create a Master Out signal. On the Headphones you can hear the signal from any input or Master Out output. In this case, the Mute function will not work for the Headphones, despite the checkboxes are on . You can listen any channel on the Headphones with Mute function enabled. Picture below.


Audio Box
Analog In 1
Analog In 2
MIC
Digital In 1
Digital In 2
Out
Solo
Mute
Line In 1
Camera 1
Camera 2
Camera 3
Camera 4
Line In 1
Line In 2
MIC
Media 1
Media 2
Sound
AB Analog 1
AB Analog 2
AB MIC
AB Digital 1
AB Digital 2
Master Out
Audio In
Audio Out
Audio Box
Media 1
Media 2
Still 1
Still 2
Text 1
Text 2
Sound
Ch/L Key 1
Ch/L Key 2
Ch/L Key 3
Ch/L Key 4

7

ADB-100 specification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2

Audio Input

- **Digital inputs**
  - 2 x AES/EBU
- **Analog**
  - 4x XLR Four channels – professional balanced analogue audio differential input (-10dBV, or 4dBu)
  - Two type of microphones dynamic and condenser with +48V phantom power

Audio Output

- **Digital inputs**
  - 2 x AES/EBU
- **Analog**
  - 4x XLR Four channels – professional balanced analogue audio differential output (-10dBV, or 4dBu)
  - 1 Jack 6,3 mm – Stereo Headphone output

Other

- **I/0 Port**
  - Audio Link (using RJ45 up to 50m straight trought cable) galvanic isolation
- **General**
  - Pro level: 4dBu reference
  - Frequency response (from 40 Hz to 15 kHz): -0.57, -0.69 dB
  - Noise level: -100.5 dB (A)
  - Dynamic range: 100.5 dB (A)
  - THD: 0.0014 %
  - THD + Noise: -90.2 dB (A)
  - IMD + Noise: 0.0036
  - Stereo crosstalk: -99.4 dB
  - IMD at 10 kHz: 0.0047
- **Power**
  - DC12V
- **Power Consumption**
  - 40W
- **Working Temperature**
  - 0 °C ~ +40 °C
- **Storage Temperature**
  - -20 °C ~ +60 °C

- **Relative Humidity**
  - ≤ 90% (non-condensation)
- **Net Weight**
  - 2,250 kg
- **Accessories**
  - Transmission Cable
  - DC In Power Adaptor

ADB100 Accessory List

No	Item	Qty
1	ADB100 Unit	1
2	DC 12V power adaptor	1
3	USB stick with user manual	1
4	Power cable	1
5	Straight-trought RJ45 communication cable with lenght 1,5m	1
6	Reckeen holder T4K-K1U-03-01	2
7	Fastening screw for the holder M4x6 Imbus, black finish	4

Warning! The ADB100 uses RJ45 cable but does not use the LAN protocol.

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