



BSM Evolution USB



AEV On Air compact broadcast console

Guarantee

The equipment is warranted for a period of 2 years from the date of invoice (ex-works). The warranty does not cover faults provoked by carelessness, natural causes and parts subject to wear. In addition, the cost of shipment is not covered. The warranty will be voided if the equipment is mishandled.

Technical Support

If you require technical support, contact AEV SERVICE giving a clear and concise account of your specific problem. Quote the serial number of your equipment by referring to the AEV nameplate attached to the equipment itself as this is the most important piece of information to be provided.

Telephone: +39 051 6630904 Fax: +39 051 893605

Factory Service and Repairs

If problems arise while the equipment is being installed, consult this manual and check that the installation is being carried out properly. If the problems still cannot be solved, call the AEV SERVICE Department for further information. If the problem is a minor one we can a telephone call will probably suffice. If, on the other hand, the equipment is to be shipped to AEV for service or repairs.

Shipping Instruction

When shipping the equipment to AEV, use the original package in order to be certain that it will be fully protected during handling. If you need the original package, call us for a new one. If you ship the equipment in a different packing container, take care to provide a double package by interposing padding material between the two containers in order to fully protect the equipment during shipment. The package should be marked "FRAGILE" in red. Remember that the RMA number must be clearly visible on the package. If it is not, the equipment will not be accepted.

IMPORTANT: Carefully read this paragraph as it contains important instructions concerning operator safety and directions regarding the installation, operation and maintenance of the equipment.

Failure to observe the safety instructions and information given in this manual **constitutes an infringement of the safety rules and design specifications provided for this piece of equipment.**

AEV Broadcast Srl declines all responsibility if any one of the safety rules given here in is not observed.

AEV Broadcast Srl declines all responsibility if the end-user resells the product.

The equipment is to be used by people capable of operating it in a trouble-free manner and **it is assumed that they are aware of the following safety rules.**

- Keep this manual with the utmost care and close at hand so that it can be consulted whenever needed
- After unpacking the equipment, check it for condition.
- Avoid banging the equipment.
- The packing material (plastic bags, polystyrene, nails, etc.) must never be left within the reach of the children, as **these items are potential sources of danger.**
- Do not use the equipment in places where the temperature is not within the recommended range, as specified by the manufacturer.
- Before connecting the equipment, make sure the nameplate specifications correspond to the mains electricity supply (the nameplate is located on the equipment enclosure).
- Do not remove the sticker from the equipment as it contains important specifications and the relevant serial number.
- To join the equipment to the mains supply, use the power cord purchased with the equipment.
- The equipment must be used only for the purpose it was designed for.

- Abuse or misuse of the equipment is **extremely dangerous** for people, pets and property. The manufacturer declines all responsibility for damage and injury resulting from **improper use** and **mishandling**.
- Certain basic safety rules must be observed when using electrical equipment, in particular: - Never touch the equipment with wet and/or damp hands or other parts of the body.
 - Keep the equipment away from drops of water or sprinkling systems.
 - Never use the equipment near high heat sources or explosive material.
 - Do not introduce any extraneous matter into the equipment.
 - Do not allow children or untrained people to use the equipment.
- Before cleaning or servicing the equipment outside, disconnect it from the supply and wait at least 2 seconds before working on it, as recommended by current safety regulations.
- In the event of faults and/or improper operation, turn off the equipment, shut off the electrical power and call your dealer.
- Do not attempt to make repairs and/or adjustments when covers/guards or circuit boards are to be removed.
- Blown fuses inside the power supply indicate that there may be a fault in the power supply itself. The fuses must be replaced by qualified and authorised persons. It is advisable to call your nearest dealer.
- Call your dealer for any repairs and be certain original spare parts are used.

Failure to observe this rule may adversely affect the safety level of your equipment.

- The equipment is to be connected to the mains supply and provided with adequate and efficient earth conductors.
- The electrical wiring must be done in compliance with current electrical codes CEI 64-8 "Electrical specification for domestic buildings".
- When installing, leave a clearance of at least 1 cm around the equipment to allow air to pass freely.

NOTE. This piece of equipment has been manufactured to the highest standards of workmanship. It must be used properly and serviced as recommended to ensure long-term dependable operation.

The installation must be done in order to be able to guarantee an easy access to the cable of feeding.

The device of dissection of the equipment is the cable of feeding, so it must be unconnected from the equipment every time it is necessary to do any type of maintenance.



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Features

audio inputs:

6 double-channels
Microphones and line inputs, USB audio I/O interface

Faders:

Faders (100 mm) with A/B input selector, 2 bands tones control on each input.

Input functions and channels

- Four Microphone inputs (MIC1,...,MIC4)
- Six stereo line inputs (LIN1,...,LIN6)
- Two USB audio inputs (USB1, USB2)
- Two telephone hybrids (TEL1, TEL2)

Input channels configuration:

Channel 1 : MIC1 / LINE1
Channel 2 : MIC2 / LINE2
Channel 3 : MIC3 / LINE3
Channel 4 : MIC4 / LINE4
Channel 5 : USB1 / LINE5
Channel 6 : USB2 / LINE6

Input setting

All settings are independent for each input.

Channel setting:

- Gain / Level adjustment -12÷+12 dB
- Input balance -12÷+12 dB
- tone equalizer High, Low -14÷+14 dB
- C. Room Mute ON (microphone inputs)
- ST MU ON (microphone inputs)
- Tally ON (microphone inputs)
- Talk back on C.Studio ON
- Phantom Power (only for Micro inputs) OFF/ON for each channel activable with dip switch

Also you can to select the Bus assignment pushing the following buttons:

- PGM
- UTL
- AUX
- CUE

Master Outputs

PGM: Analog balanced stereo with XLR connectors

UTL: Analog unbalanced stereo with RCA connectors

AUX: Analog unbalanced stereo with RCA connectors

Auxiliary outputs

- Control Room:** Analog unbalanced stereo with RCA connectors
- Control Studio:** Analog unbalanced stereo with RCA connectors
- Mute C. Studio:** Analog unbalanced stereo with RCA connectors
- Headphone:** Analog stereo with Jack 6,3 mm connector

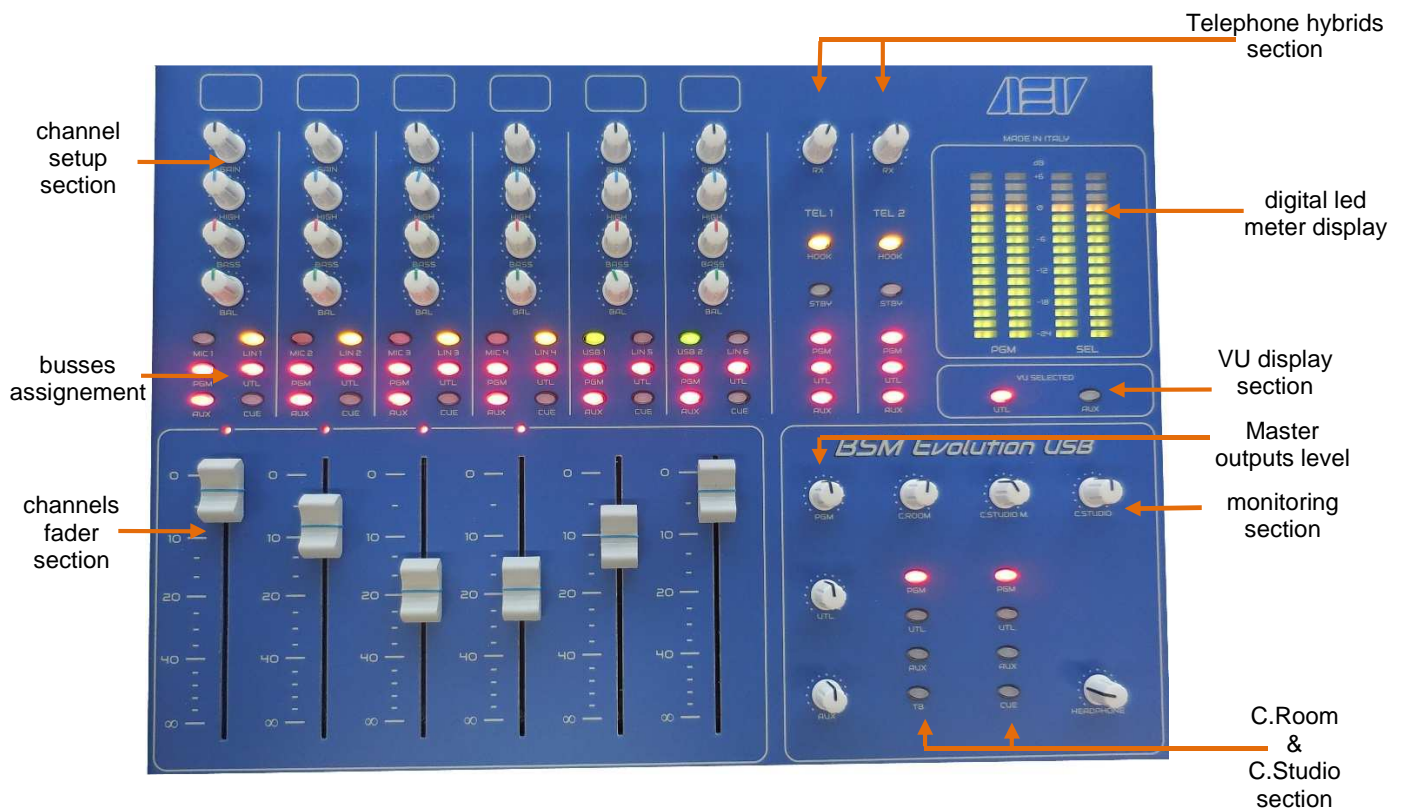
External controls

- GPO Opto-isolated logic outputs

Monitoring

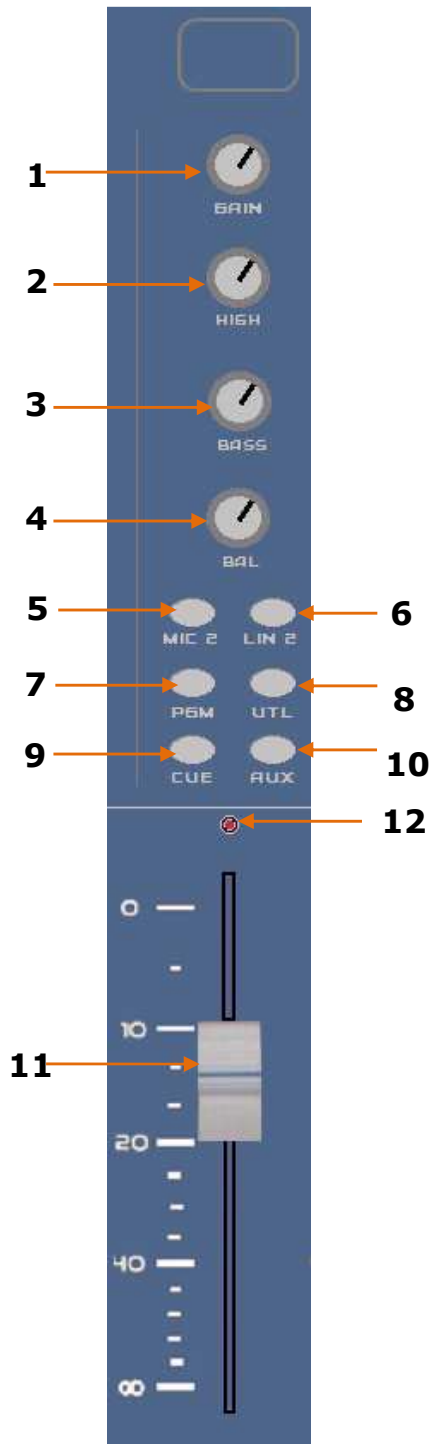
- Level control for headphone, Control Room, Control Studio and Control Studio mutable
- Headphone with integrated amplifier
- double stereo digital VU-Meter on the led display PGM (fixed) SEL (CUE, UTL, AUX)

Front panel



Micro - Line channel (channels 1 – 4)

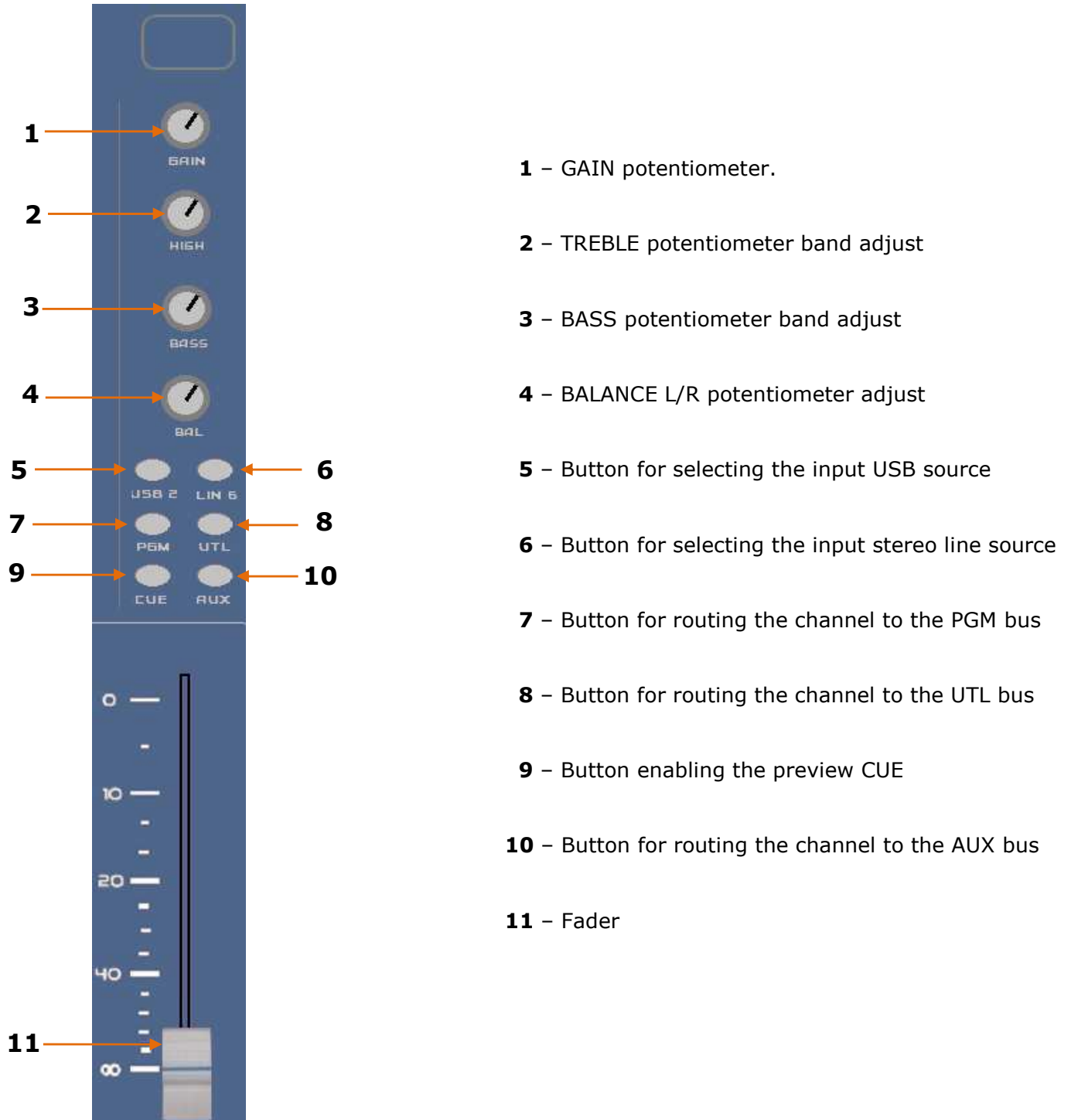
All controls on the Micro-Line input channel are described below.



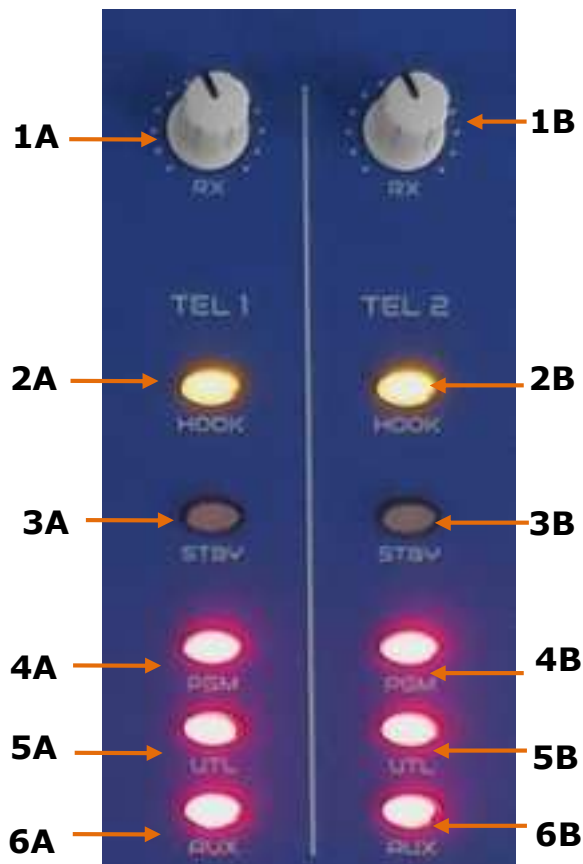
- 1** - GAIN potentiometer.
- 2** - TREBLE potentiometer band adjust
- 3** - BASS potentiometer band adjust
- 4** - BALANCE L/R potentiometer adjust
- 5** - Button for selecting the input microphone source
- 6** - Button for selecting the input stereo line source
- 7** - Button for routing the channel to the PGM bus
- 8** - Button for routing the channel to the UTL bus
- 9** - Button enabling the preview CUE
- 10** - Button for routing the channel to the AUX bus
- 11** - Fader
- 12** - Start channel led

USB - Line Channel (channels 5 – 6)

All controls on the USB-Line input channel are described below.



Telephone hybrids section



1A - level adjust receive for telephone line 1.

1B - level adjust receive for telephone line 2.

2A - HOOK button for telephone line 1 hook-up

2B - HOOK button for telephone line 2 hook-up

2A - Button for Stanby state for telephone line 1.

3B - Button for Stanby state for telephone line 2.

4A - Button for assigning the tel1 to the PGM bus.

4B - Button for assigning the tel2 to the PGM bus.

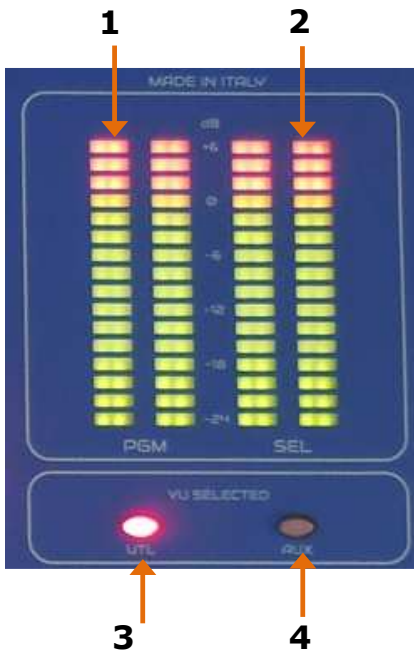
5A - Button for assigning the tel1 to the UTL bus.

5B - Button for assigning the tel2 to the UTL bus.

6A - Button for assigning the tel2 to the AUX bus.

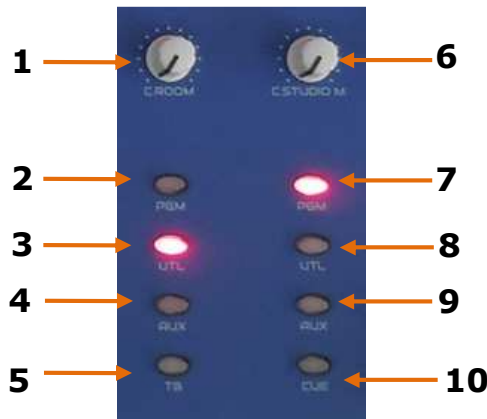
6B - Button for assigning the tel2 to the AUX bus.

Display Monitoring section



- 1 - PGM digital stereo led meters
- 2 - Selected signal digital stereo led meters
- 3 - Button for selecting the Master UTL output on switched digital led meters.
- 4 - Button for selecting the Master AUX output on switched digital led meters

Control Room & Control Studio section



C.Studio

- 1 -Control Room output level potentiometer
- 2 - Button for selecting the master PGM output for routing it to the Control Room output.
- 3 - Button for selecting the master UTL output for routing it to the Control Room output.
- 4 - Button for selecting the master AUX output for routing it to the Control Room output.
- 5 - Button to active the Talkback function to the C.Studio output.

Control Room

- 6 -Control Studio Mute output level potentiometer
- 7 - Button for selecting the master PGM output for routing it to the Control Studio output.
- 8 - Button for selecting the master UTL output for routing it to the Control Studio output.
- 9 - Button for selecting the master AUX output for routing it to the Control Studio Room output.
- 10 - Button for selecting the CUE bus for routing it to the Control Studio Room output.

Monitoring & Service section



11 - level potentiometer the Control Studio outputs

12 - level potentiometer of the headphone

Talk back Regia to Studio:

When the TB (talk back) button is pressed, the signal of the enabled microphone is sent to the Control Studio output.

- Channel with microphone talkback to studio
- Channel in STOP
- What happens:
 - the previous selection of the Control Studio flashes
 - the audio signal present in the Control studio is replaced by the channel selected in TB
 -

Talk back Studio to Regia :

- Contact TB Studio closed. What happens when the remote TB (talk back) button is pressed:
 - - the Talk back button on the console flashes
 - - the previous selection of the Control Room flashes
 - - the audio signal present in the Control Room is replaced by the Studio microphone channel
 - - the signal of the enabled microphone is sent to the Control Room output.

Master Outputs section

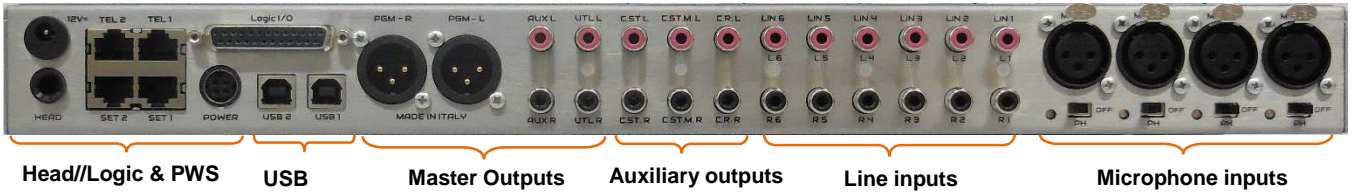


13 - level potentiometer the PGM outputs.

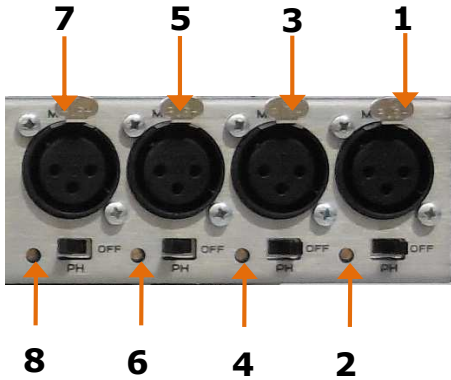
14 - level potentiometer the UTL outputs.

15 - level potentiometer the AUX outputs..

Rear panel – connections

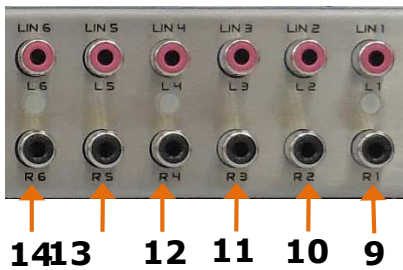


Microphone inputs connection



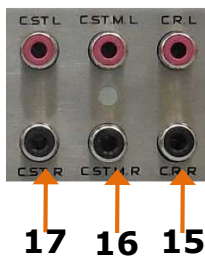
- 1 – Microphone 1 input XLR F connector.
- 2 - Trimmer adjusting the MIC 1 input level from 0 ÷ to +30 dB for very low volume microphones.
- 3 – Microphone 2 input XLR F connector.
- 4 - Trimmer adjusting the MIC 2 input level from 0 ÷ to +30 dB for very low volume microphones.
- 5 – Microphone 3 input XLR F connector.
- 6 - Trimmer adjusting the MIC 3 input level from 0 ÷ to +30 dB for very low volume microphones.
- 7 – Microphone 4 input XLR F connector.
- 8 - Trimmer adjusting the MIC 4 input level from 0 ÷ to +30 dB for very low volume microphones

Line inputs connection



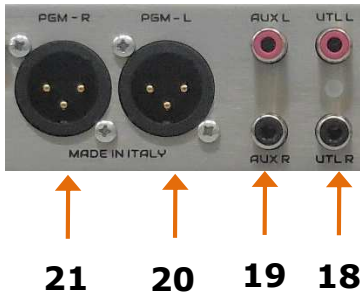
- 9 – Stereo line 1 input RCA connector.
- 10 – Stereo line 2 input RCA connector.
- 11 – Stereo line 3 input RCA connector.
- 12 – Stereo line 4 input RCA connector.
- 13 – Stereo line 5 input RCA connector.
- 14 – Stereo line 6 input RCA connecto

Ausiliary Outputs connections



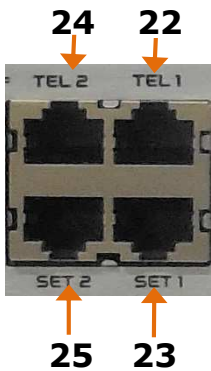
- 15 – Control Room outputs RCA connectors.
- 16 – Control Studio Mutable outputs RCA connectors.
- 17 – Control Studio outputs RCA connectors.

Master Outputs connections



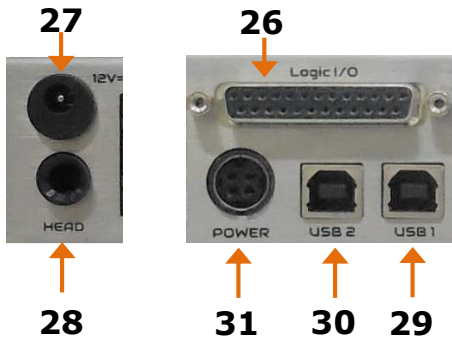
- 18 – Master UTL output RCA connectors.
- 19 – Master AUX output RCA connectors.
- 20 – Master PGM Left output XLR connector.
- 21 – Master PGM Right output XLR connector.

Telephone connection



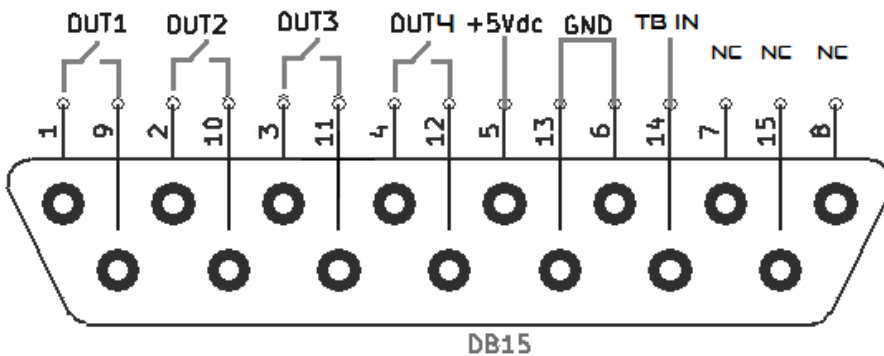
- 22 - Connector RJ45 for telephone line 1.
- 23 - Connector RJ45 for telephone service 1.
- 24- Connector RJ45 for telephone line 2.
- 25- Connector RJ45 for telephone service 2.

USB/Logic & PWS connections

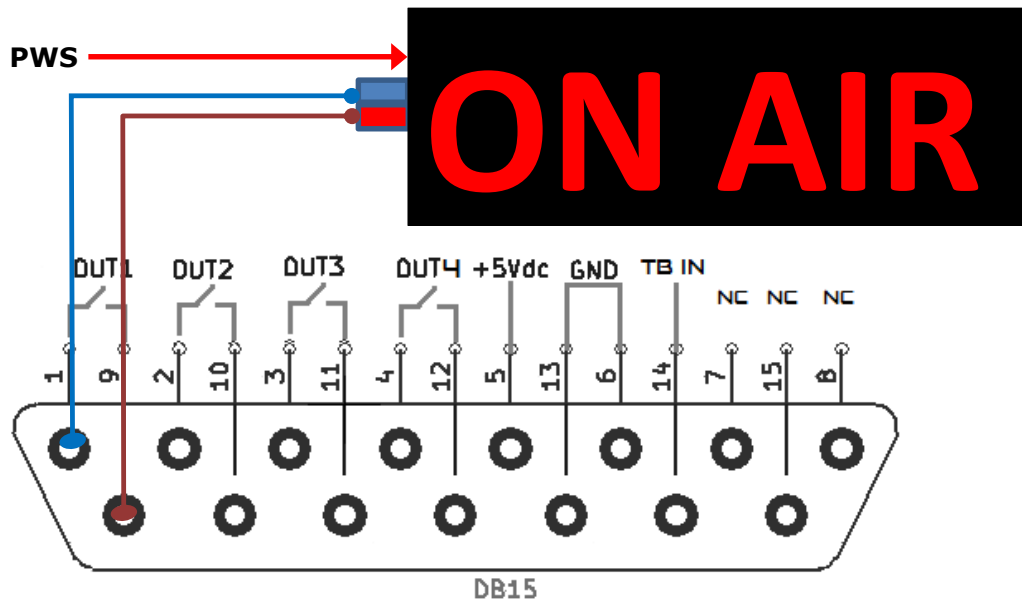


- 26 – Logic I/O DB15 connector.1.
- 27 – PWS connector.
- 28 – Headphone jack 6,3 mm connector.
- 29 – USB 1 connector.
- 30 – USB 2 connector.
- 31 – Auxiliary PWS connector

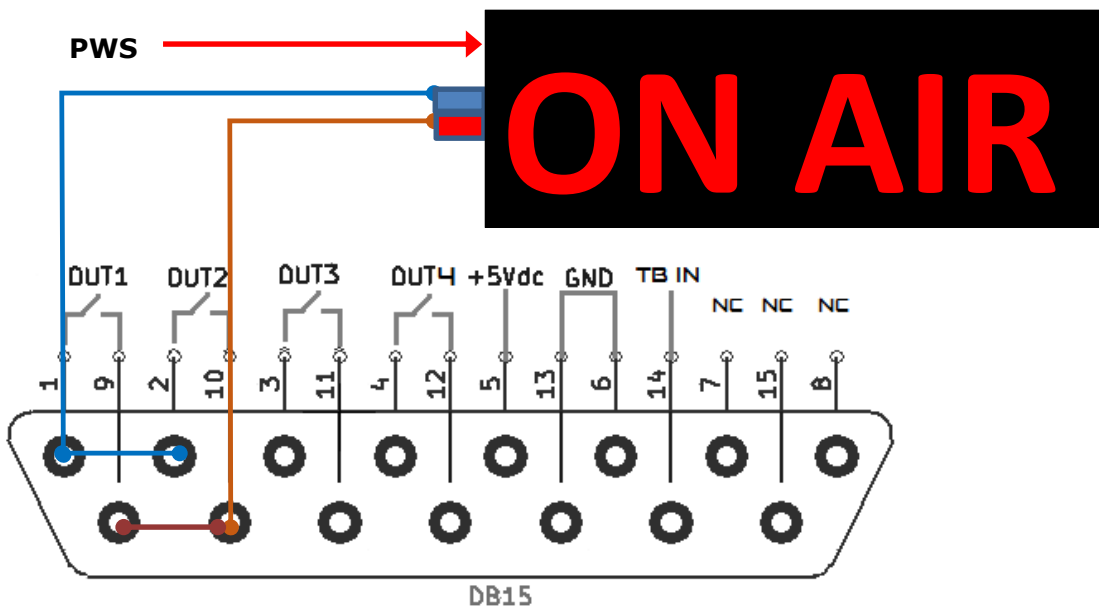
Logic I/O pinout



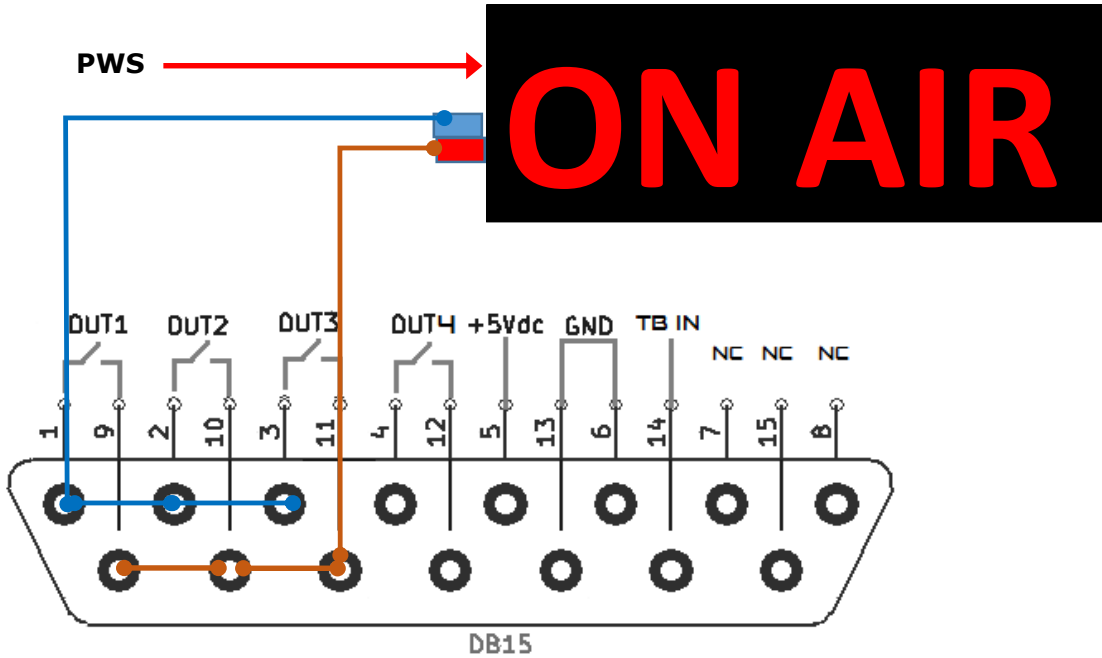
Connection START channel 1 to OnAirLight contact:



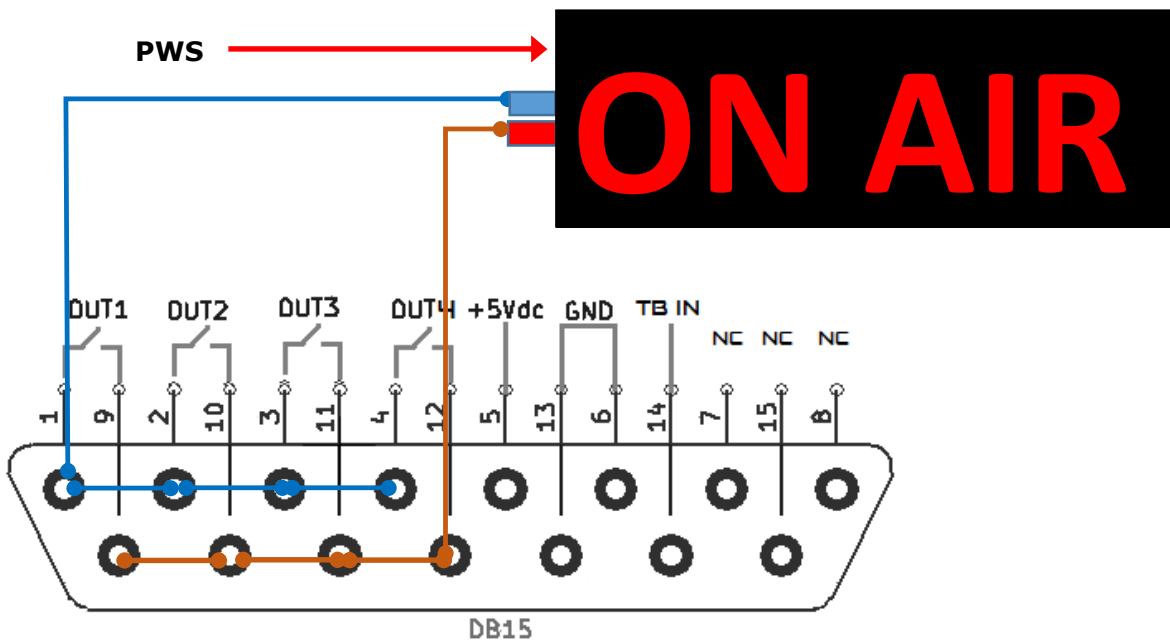
Connection START channels 1 & 2 to OnAirLight contact:



Connection START channels 1, 2 & 3 to OnAirLight contact:



Connection START channels 1, 2, 3 & 4 to OnAirLight contact:





TECHNICAL SPECIFICATIONS

Microphone Inputs

| | |
|-------------------------|--|
| Input configuration | Electronically balanced |
| Input Impedance | 200 Ω |
| Sensitivity Level Range | Adjustable from -70 ÷ -40 dBu (Trimmer adj.) |
| Input Level Range | ± 12 dBu (Digital adj. step 0,5 dB) |
| Maximum Input Level | - 30 dBu |
| Phantom Supply | 48 Vdc selectable |
| Fader | 100 mm |
| Connector | XLR Female |

Line Inputs

| | |
|---------------------|---------------|
| Input configuration | unbalanced |
| Input Impedance | 10 K Ω |
| Input Level Range | ± 12 dBu |
| Headroom | + 18 dBu |
| Fader control | 100 mm |
| Connector | pins RCA |

Telephone Hybrid

| | |
|---------------------|---|
| Input configuration | Opto-coupled |
| Input impedance | 600 Ω Bal |
| Line Compensation | Automatically (max 5 Km) |
| Tx Level | ± 12 dBu |
| Rx Level Range | ± 12 dBu |
| Frequency response | 300 Hz ÷ 3400 Hz (-2 dB) ; 300 Hz ÷ 3400 Hz (-1.5 dB) |
| Distortion | < 1.5 % |
| Noise | -60 dB. |

Analog Outputs

| | |
|----------------------------------|-------------------------|
| PGM Output configuration | Electronically balanced |
| Output Impedance | 100 Ω |
| PGM Output Level Range | -12 ÷ +12 dBu |
| Connector | XLR male |
| UTL/AUX Output configuration | unbalanced |
| UTL/AUX Output Level Range | -12 ÷ +12 dBu |
| Connectors | pins RCA |
| C. Studio & C.Room configuration | unbalanced |
| Control Studio Mut.Output Lev. | - 12 ÷ +12 dBu |
| Connectors | pins RCA |
| C Room Mut.Output Lev. | - 12 ÷ +12 dBu |
| Connectors | pins RCA |
| C Studio Output Lev. | - 12 ÷ +12 dBu |
| Connectors | pins RCA |

Headphones

| | |
|--------------------|-------------------------------------|
| configuration Type | Stereo unbalanced (C.Room no Muted) |
| Output Impedance | 50 Ω |
| Connector | JACK 6,3 mm |

Logic I/O

| | |
|---------------|-------------------------|
| Configuration | Optic solid state relay |
| Max Voltage | 50 Vdc/ac |
| Max Current | 100 mA |
| Connector | DSUB 15 pole female |

USB Port 2 x USB 2.0 interface

Dimensions 484 x 310 x 45 mm Weight: 5 Kg

