



ACUO MB

Digital DSP Broadcast Audio console



AEV On Air broadcast console

AEV Broadcast Srl, via della Tecnica 33 – 40050 Argelato (BO) Italy

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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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MAIN UNIT

Features

audio inputs:

Main unit: 8 double-channels + 2 telephone hybrids/Telco
balanced Micro and line inputs, digital AES/EBU, USB audio I/O interface, TELCO I/O

Faders:

Faders (100 mm) with A/B input selector, 4 bands tones control on each input.

Input functions and channels

- Six Microphone inputs (MIC1,...,MIC6)
- Eight stereo balanced line inputs (LIN1,.....LIN8)
- Two digital AES/EBU input (DIG1, DIG2)
- Two USB audio inputs (USB1, USB2)
- Two IP Dante input (OPTIONAL) (DAN1, DAN2)
- Two telephone hybrid/TELCO (TEL1, TEL2)

Input channels configuration:

Channel 1 : MIC1 / LINE 1
Channel 2 : MIC2 / LINE 2
Channel 3 : MIC3 / LINE 3 / DANTE 1
Channel 4 : MIC4 / LINE 4 / DANTE 1
Channel 5 : MIC5 / LINE 5 / DIG AES 1
Channel 6 : MIC6 / LINE 6 / DIG AES 2
Channel 7 : USB1 / LINE7
Channel 8 : USB2 / LINE8

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

- **PGM1**
- **PGM2**
- **PGM3**
- **PGM4**
- **PFL**

Master Outputs

PGM1: Analog balanced stereo with XLR connectors

PGM2: Analog balanced stereo with RJ45 connector

PGM3: Analog balanced stereo with RJ45 connector

PGM4: Analog balanced stereo with RJ45 connector

Dig1/2 OUT: digital AES/EBU stereo with RJ45 connector

Auxiliary outputs

Control Room: Analog balanced stereo with RJ45 connector

Control Studio: Analog balanced stereo with RJ45 connector

Mute C. Studio: Analog balanced stereo with RJ45 connector

Headphone: Analog stereo with Jack 6,3 mm connector

Auxiliary input

External : Analog balanced stereo with RJ45 connector

External controls

- Remote Fader with logic controls, (START/STOP) with RJ45 connector
- GPI Opto-isolated logic inputs
- GPO Opto-isolated logic outputs

Monitoring

- Level control for headphone, Control Room, Control Studio mutable
- External inputs for Monitor
- Headphone with integrated amplifier
- double stereo digital VU-Meter on the TFT display PGM1



Expansion unit

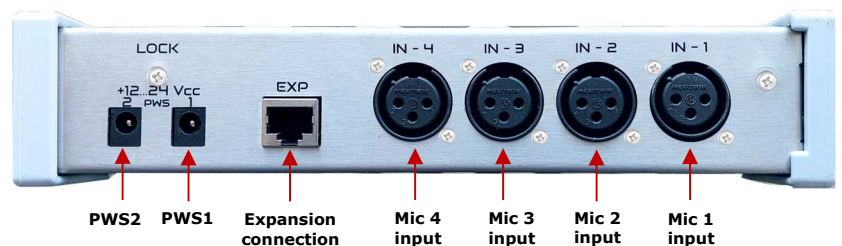
The ACUO MB serie allow to connect until two Expansion unit inputs faders. With this smart solution the audio console configuration could allow to expand the inputs channel configuration:

- Only Main Unit: 8 faders
- Main unit + one Exp unit: 12 faders
- Main unit + two Exp units: 16 faders

Each Expansion unit supply 4 Micro/Mono channels

The connection with the Main unit is a simple ethernet cable; the CPU of the Main unit will detect the connection with Expansion and automatically update the inputs channels menu.

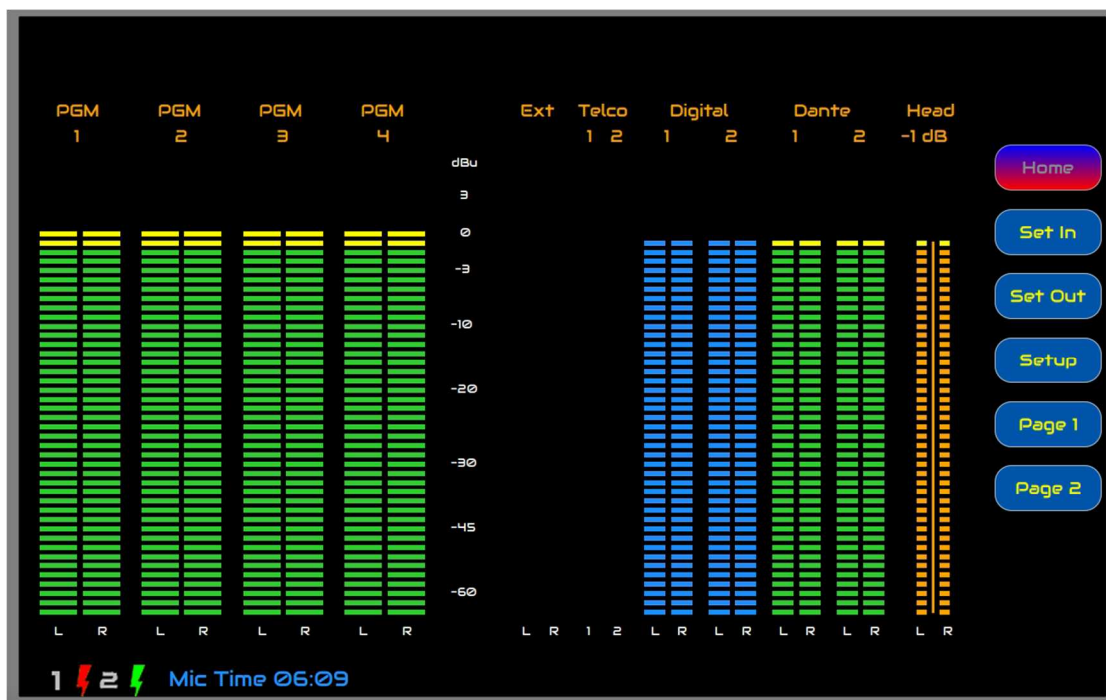
The Expansion unit allow two redundant PWS connection.



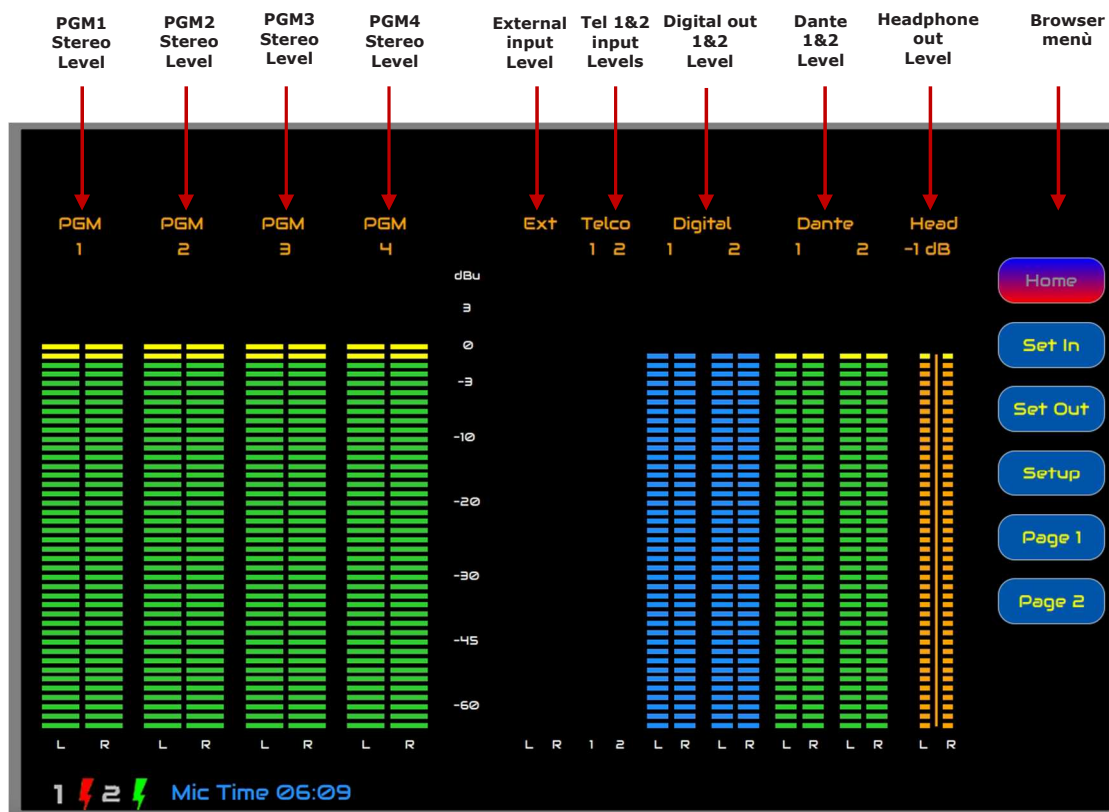
General display – Home page

All feature and settings are available in the display LCD.

The display is a TFT 7", optionally is available also the model 10"



Home page description



Display Setup inputs microphone channel



By pressing the **Set In** button on the right of the Home page, the input channel configuration menu opens, then the button corresponding to the input to be configured is selected.

The image shows the configuration page of a microphone input.

- **Mic ADJ**: allows you to adjust the sensitivity level of the selected microphone channel
- **Riserva**: not available to the user
- **Phantom**: Activating phantom power to use condenser microphones
- **Phase**: input signal phase adjustment
- **C.Room-> C.St.**: the microphone associated with the channel is enabled for private communication (Talk Back) from the C. Room to the Studio
- **C.St. -> C.Room**: the microphone associated with the channel is enabled for private communication (Talk Back) from the Studio to the C. Room
- **Mute C.Room**: when the microphone associated with the channel is in START, the microphone audio on the C.Room output is muted
- **Mute C.Studio**: when the microphone associated with the channel is in START, the microphone audio on the C.Studio M. output is muted
- **Mute PFL**: When the microphone associated with the channel is activated the PFL command, the microphone audio on the C. Studio output is muted
- **Speech**: the channel configured as **Speech**, if the auto fader function is enabled on this channel, increases the audio level when its fader is raised and simultaneously lowers all the channels configured as **Music**

- **Private Tel.:** the microphone associated with the channel is enabled to communicate with the phone in Private mode without going to the Master output buses (PGM1, PGM2, PGM3 and PGM4)
- **Auto Start/Stop:** the input associated with the channel automatically switches to **Start** state when the fader is raised and returns to **Stop** state automatically when the fader is completely lowered
- **Tally 1:** When the channel switches to the Start state, it closes the GPO **Tally 1** contact
- **Tally 2:** When the channel switches to the Start state, it closes the GPO **Tally 2** contact
- **Set Processor:** microphone process activation

Display Setup inputs stereo line channel



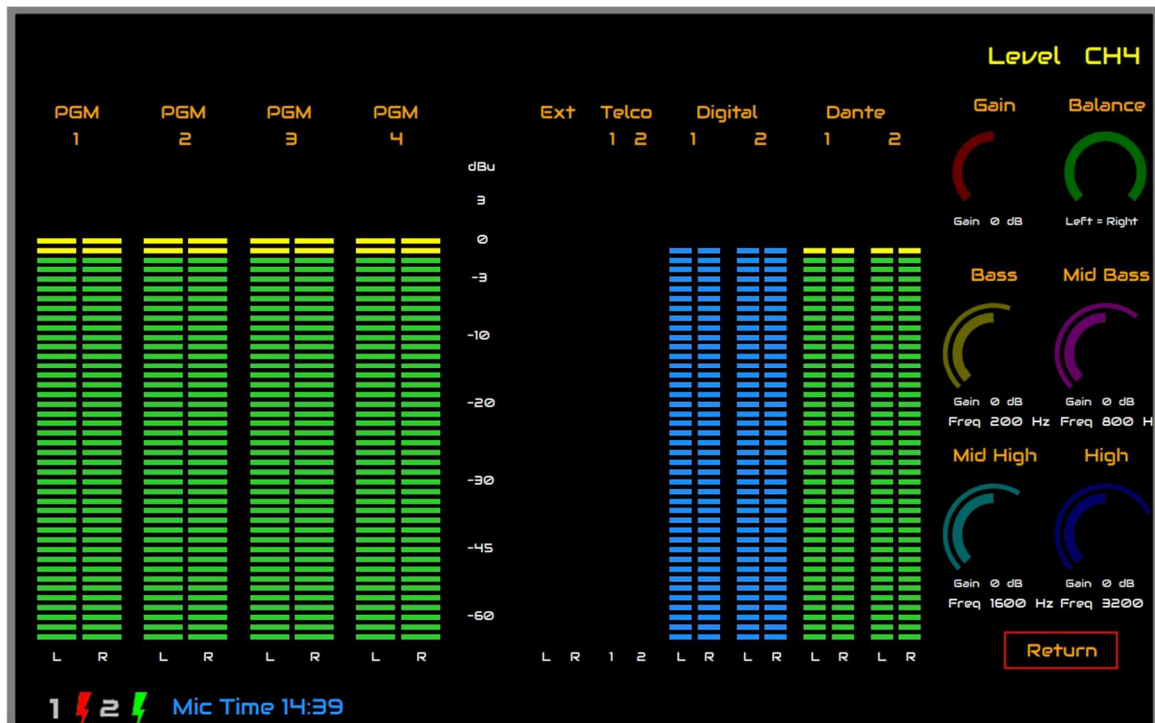
The image shows the configuration page of a line input.

- **Riserva:** not available to the user
- **Stereo:** to set in STERO or in MONO the line input associated to the channel
- **Phase:** input signal phase adjustment
- **Speech/Music:** the channel configured as **Speech**, if the auto fader function is enabled on this channel, increases the audio level when its fader is raised and simultaneously lowers all the channels configured as **Music**, If, however, the channel is configured as **Music**, its audio level will be influenced by the activation of a channel set as **Speech**

- **Auto Start/Stop:** the input associated with the channel automatically switches to **Start** state when the fader is raised and returns to **Stop** state automatically when the fader is completely lowered
- **Tally 1:** When the channel switches to the Start state, it closes the GPO **Tally 1** contact
- **Tally 2:** When the channel switches to the Start state, it closes the GPO **Tally 2** contact
- **Set Processor:** audio process activation

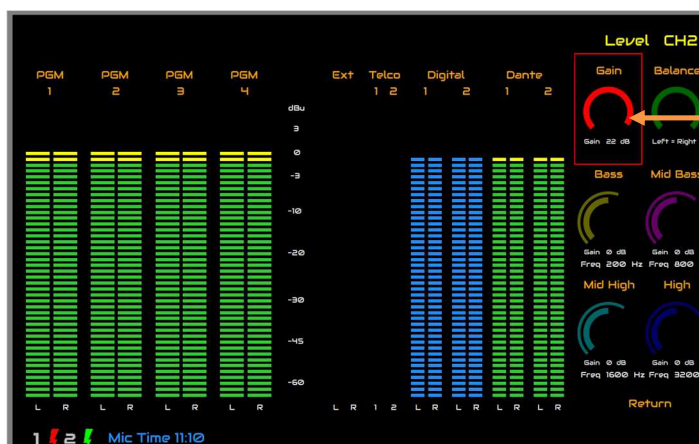
Adjusting the input channel audio levels

By pressing the encoder knob of an input channel, the input signal parameter settings open next to the home page.

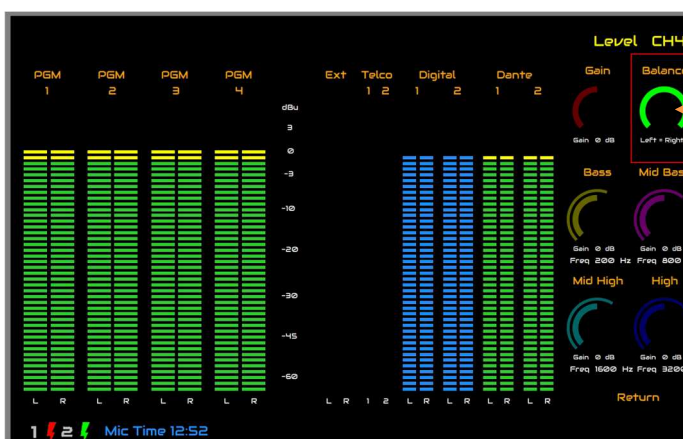


By rotating the channel encoder knob, the function to be adjusted is selected. When the red selection box is on the chosen position, a subsequent press of the knob activates the adjustment of the chosen value.

Channel Gain Adjustment:



Channel Balance Adjustment:



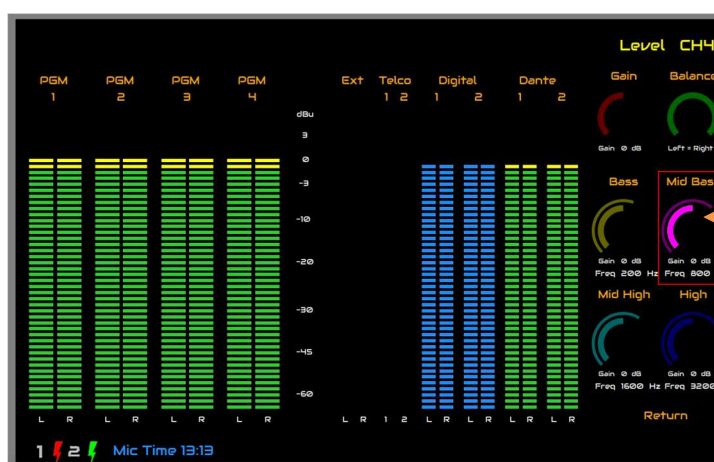
Parametric EQ - Bass Band Gain Adjustment:



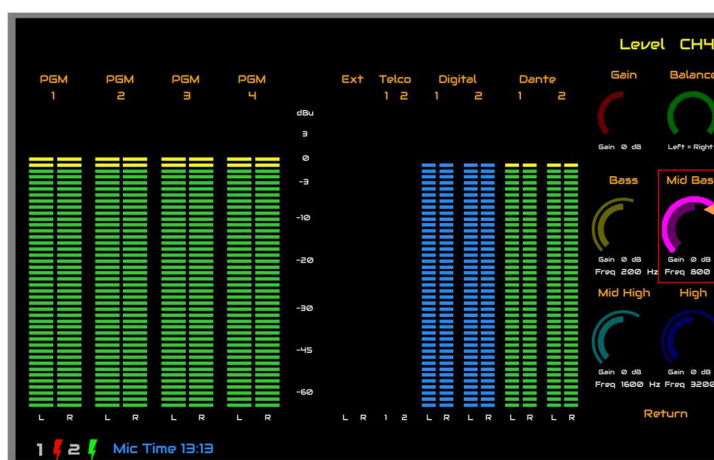
Parametric EQ - Adjusting the center frequency of the Bass band:



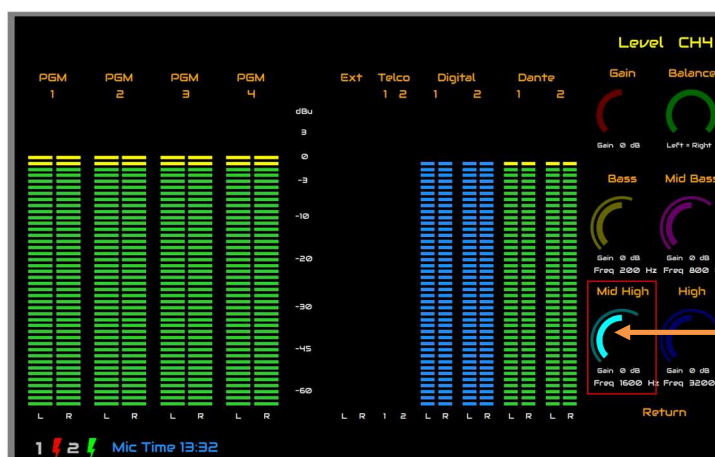
Parametric EQ – Medium Bass Band Gain Adjustment:



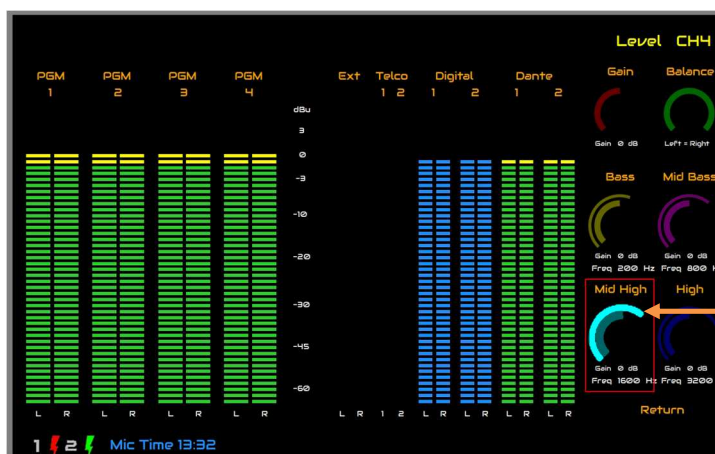
Parametric EQ - Adjusting the center frequency of the Bass band:



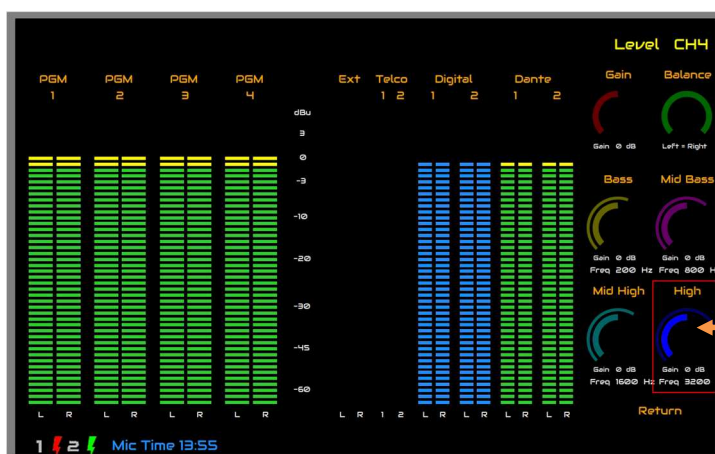
Parametric EQ – Mid High Band Gain Adjustment:



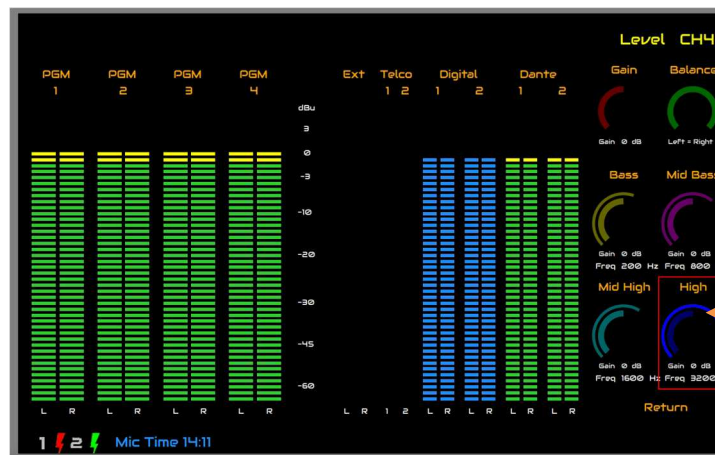
Parametric EQ - Adjusting the center frequency of the Mid High band:



Parametric EQ – High Band Gain Adjustment:



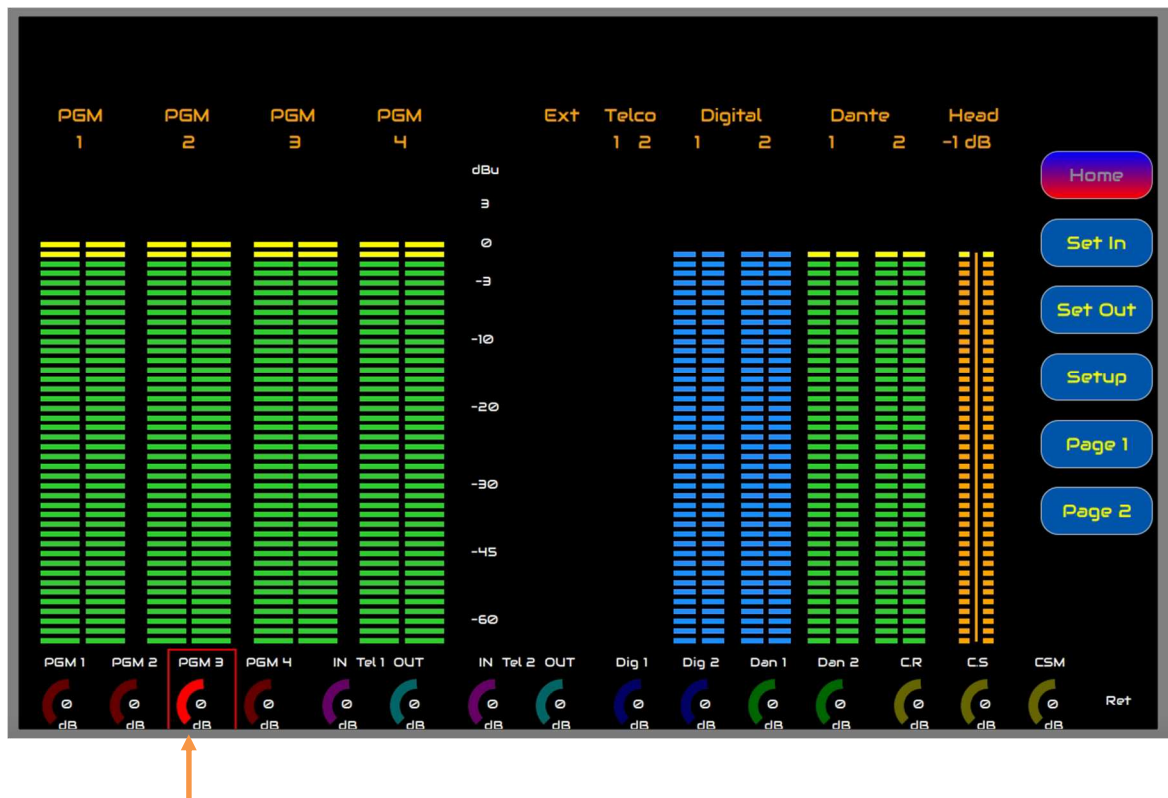
Parametric EQ - Adjusting the center frequency of the High band:



Outputs level management

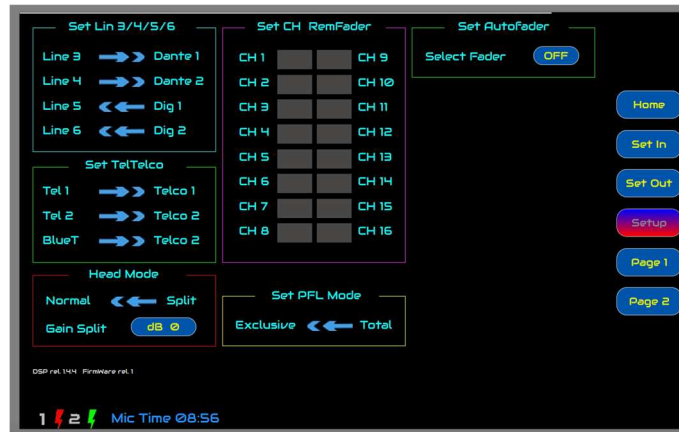
Pressing the Master encoder knob opens the adjustment of all output signals.

Rotating the knob positions the box on the signal to be adjusted. Pressing the knob again activates the adjustment of the selected signal.



Input management Telco, Digital AES, Dante, Headphones, Remote Fader

In this mask you can manage the assignment of digital channels and Dante IP channels, you can also choose the telephone channel mode, the headphone mode, the association between input channels and the Remote Fader unit and, finally, the application mode of the PFL function.



Assigning the Auto-Fader function to the Remote Fader slider:

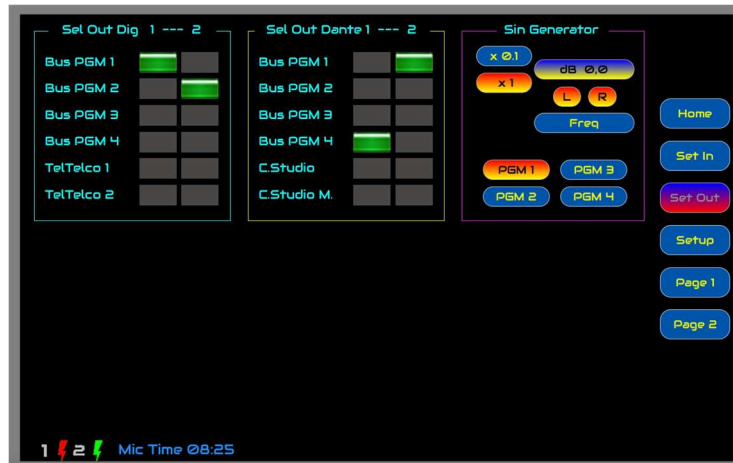


Assigning the Auto-Fader function to a input slider (IN 5):



Output management Digital AES, Dante, and Signal Generator

The following figure shows the mask for assigning the Digital AES output signals with the Bus Master PGM and Telco; the assignment of the Dante outputs to the Bus Master PGM and C. Room, C. Studio and the configuration of the TEST sinusoidal signal generator with the assignment of the output Bus PGM.



in the generation section you can configure the frequency, the amplitude, on which right and/or left channels it is emitted and the outputs to send the tone to

Preset Configuration

In the Preset configuration section, you can save various configurations.

STO (storage) command to save the current configuration.

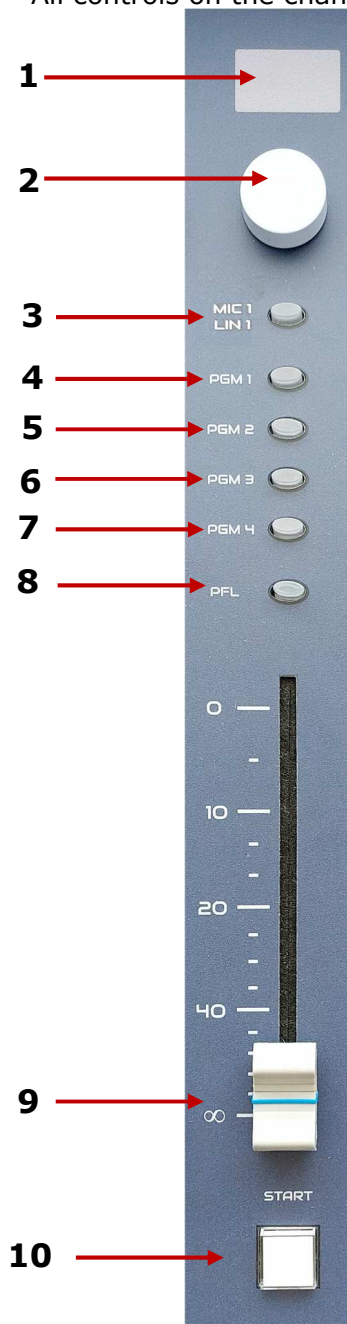
RCL (recall) command to recall a configuration.

DEL (delete) command to delete a configuration.



Channel 1

All controls on the channel 1 input channel are described below.



1 – label box

2 – knob jog to open the level channel setup, to set gain, balance, parametric equalization

3 – Button to switch the input source signal between the microphone (green light) or stereo (orange light)

4 – PGM1 button for routing the channel to the PGM1 bus. Red light

5 – PGM2 button for routing the channel to the PGM2 bus. Red light

6 – PGM3 button for routing the channel to the PGM3 bus. Red light

7 – PGM4 button for routing the channel to the PGM4 bus. Red light

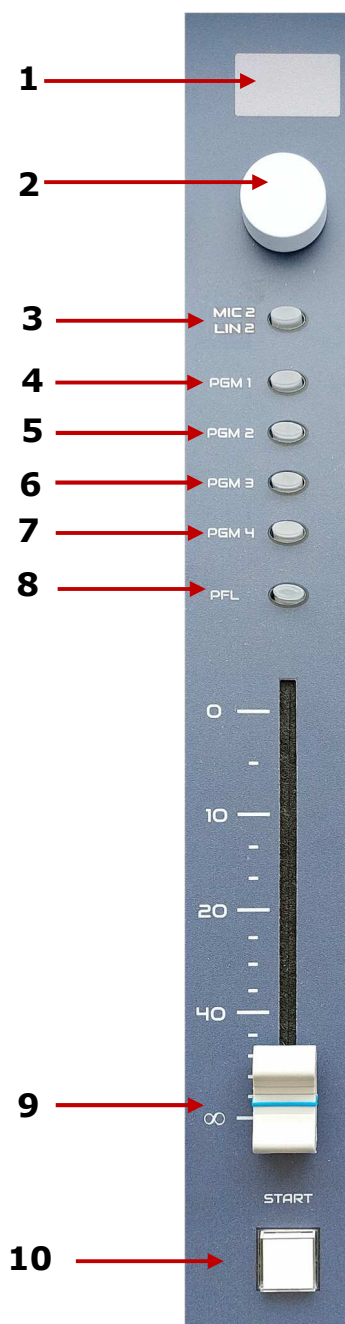
8 – Button enabling the preview PreFaderListen. Blue light

9 – Fader 100 mm

10 – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Channel 2

All controls on the channel 2 input channel are described below.



1 – label box

2 – knob jog to open the level channel setup, to set gain, balance, parametric equalization

3 – Button to switch the input source signal between the microphone (green light) or stereo (orange light)

4 – PGM1 button for routing the channel to the PGM1 bus. Red light

5 – PGM2 button for routing the channel to the PGM2 bus. Red light

6 – PGM3 button for routing the channel to the PGM3 bus. Red light

7 – PGM4 button for routing the channel to the PGM4 bus. Red light

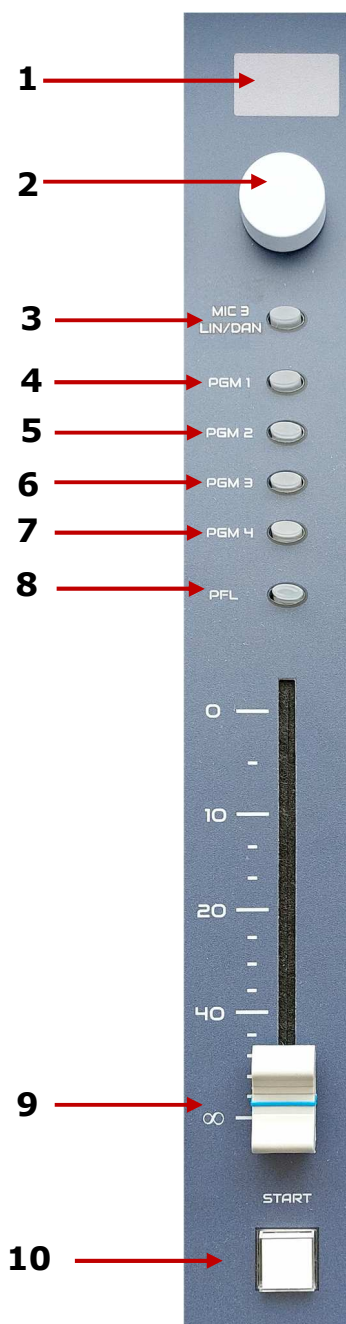
8 – Button enabling the preview PreFaderListen. Blue light

9 – Fader 100 mm

10 – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Channel 3

All controls on the channel 3 input channel are described below.



1 – label box

2 – knob jog to open the level channel setup, to set gain, balance, parametric equalization

3 – Button to switch the input source signal between the microphone (green light) or stereo (orange light) or Dante (if it is installed the option Dante card)

4 – PGM1 button for routing the channel to the PGM1 bus. Red light

5 – PGM2 button for routing the channel to the PGM2 bus. Red light

6 – PGM3 button for routing the channel to the PGM3 bus. Red light

7 – PGM4 button for routing the channel to the PGM4 bus. Red light

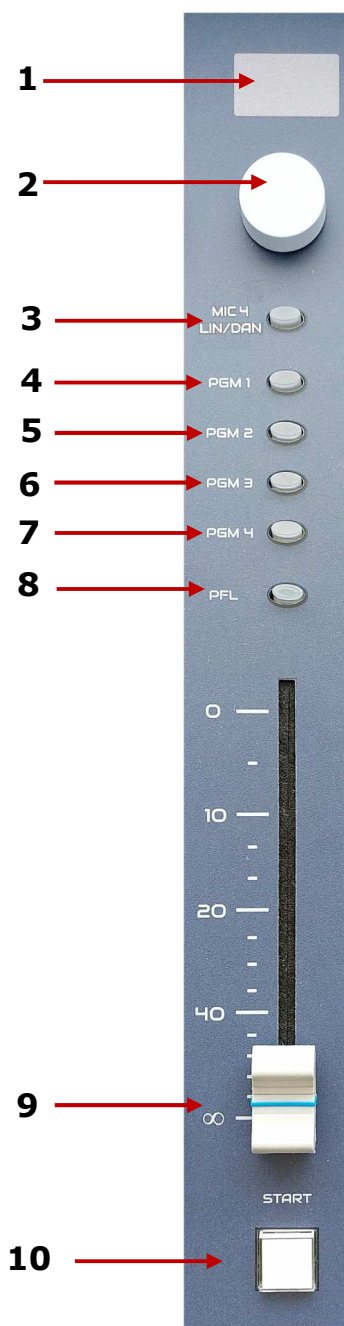
8 – Button enabling the preview PreFaderListen. Blue light

9 – Fader 100 mm

10 – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Channel 4

All controls on the channel 4 input channel are described below.



1 – label box

2 – knob jog to open the level channel setup, to set gain, balance, parametric equalization

3 – Button to switch the input source signal between the microphone (green light) or stereo (orange light) or Dante (if it is installed the option Dante card)

4 – PGM1 button for routing the channel to the PGM1 bus. Red light

5 – PGM2 button for routing the channel to the PGM2 bus. Red light

6 – PGM3 button for routing the channel to the PGM3 bus. Red light

7 – PGM4 button for routing the channel to the PGM4 bus. Red light

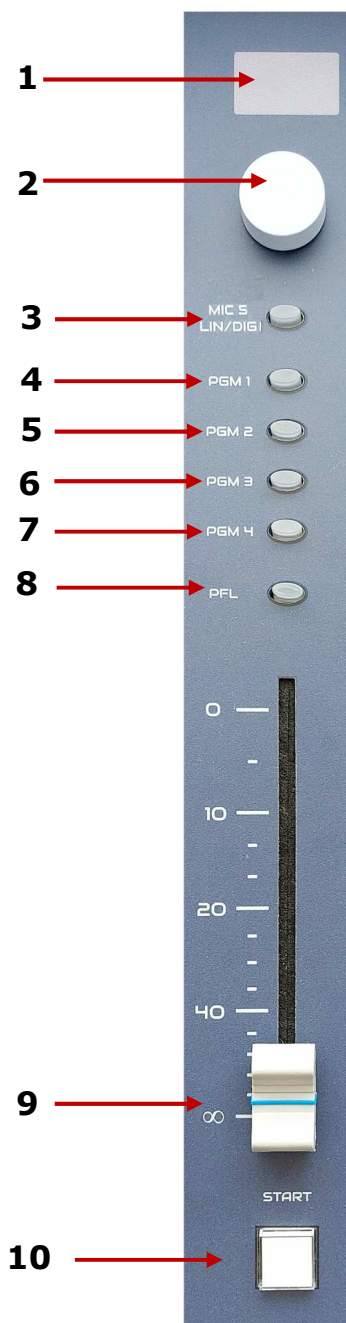
8 – Button enabling the preview PreFaderListen. Blue light

9 – Fader 100 mm

10 – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Channel 5

All controls on the channel 5 input channel are described below.



1 – label box

2 – knob jog to open the level channel setup, to set gain, balance, parametric equalization

3 – Button to switch the input source signal between the microphone (green light) or stereo (orange light) or digital 1 AES

4 – PGM1 button for routing the channel to the PGM1 bus. Red light

5 – PGM2 button for routing the channel to the PGM2 bus. Red light

6 – PGM3 button for routing the channel to the PGM3 bus. Red light

7 – PGM4 button for routing the channel to the PGM4 bus. Red light

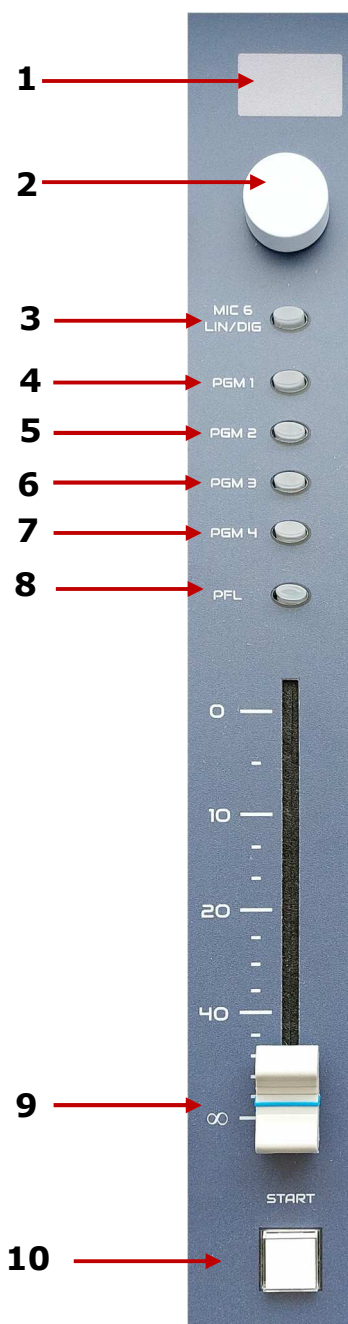
8 – Button enabling the preview PreFaderListen. Blue light

9 – Fader 100 mm

10 – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Channel 6

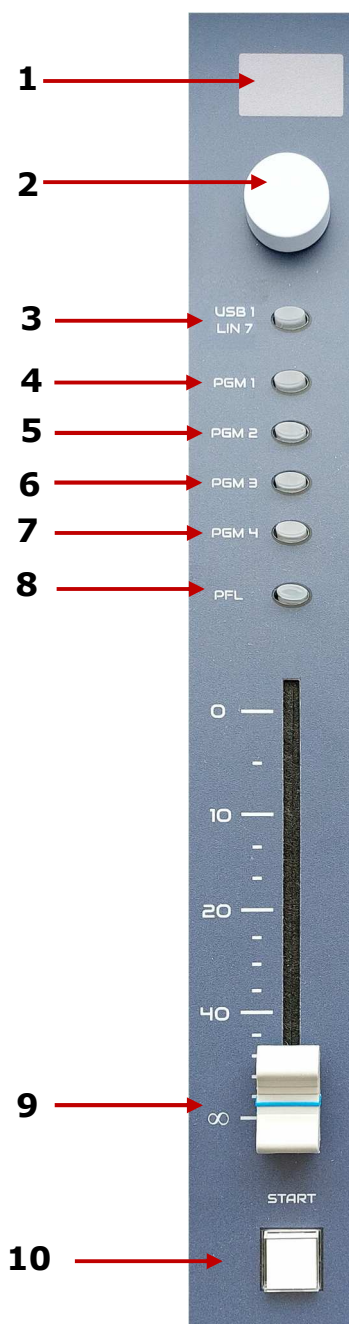
All controls on the channel 6 input channel are described below.



- 1** – label box
- 2** – knob jog to open the level channel setup, to set gain, balance, parametric equalization
- 3** – Button to switch the input source signal between the microphone (green light) or stereo (orange light) or digital 1 AES
- 4** – PGM1 button for routing the channel to the PGM1 bus. Red light
- 5** – PGM2 button for routing the channel to the PGM2 bus. Red light
- 6** – PGM3 button for routing the channel to the PGM3 bus. Red light
- 7** – PGM4 button for routing the channel to the PGM4 bus. Red light
- 8** – Button enabling the preview PreFaderListen. Blue light
- 9** – Fader 100 mm
- 10** – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Channel 7

All controls on the channel 7 input channel are described below.



1 – label box

2 – knob jog to open the level channel setup, to set gain, balance, parametric equalization

3 – Button to switch the input source signal between the USB1 (green light) or stereo (orange light)

4 – PGM1 button for routing the channel to the PGM1 bus. Red light

5 – PGM2 button for routing the channel to the PGM2 bus. Red light

6 – PGM3 button for routing the channel to the PGM3 bus. Red light

7 – PGM4 button for routing the channel to the PGM4 bus. Red light

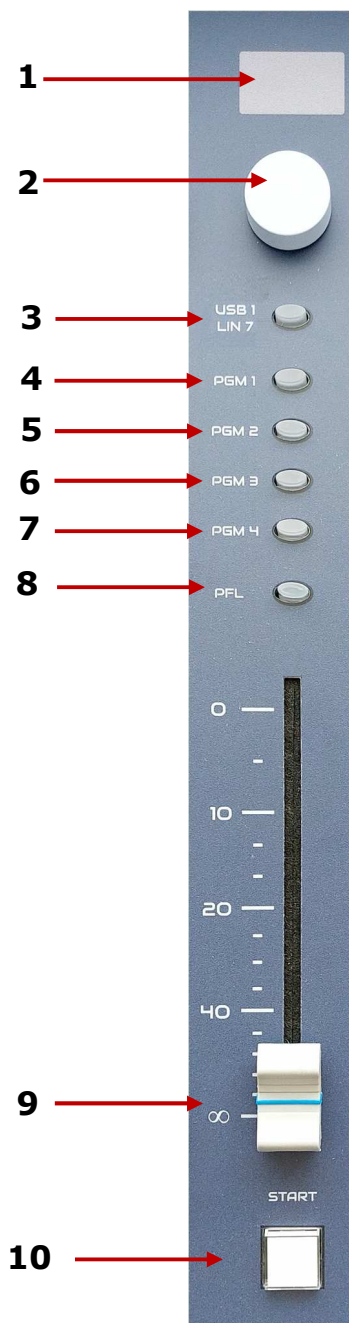
8 – Button enabling the preview PreFaderListen. Blue light

9 – Fader 100 mm

10 – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Channel 8

All controls on the channel 8 input channel are described below.



1 – label box

2 – knob jog to open the level channel setup, to set gain, balance, parametric equalization

3 – Button to switch the input source signal between the USB2 (green light) or stereo (orange light)

4 – PGM1 button for routing the channel to the PGM1 bus. Red light

5 – PGM2 button for routing the channel to the PGM2 bus. Red light

6 – PGM3 button for routing the channel to the PGM3 bus. Red light

7 – PGM4 button for routing the channel to the PGM4 bus. Red light

8 – Button enabling the preview PreFaderListen. Blue light

9 – Fader 100 mm

10 – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Expansion unit



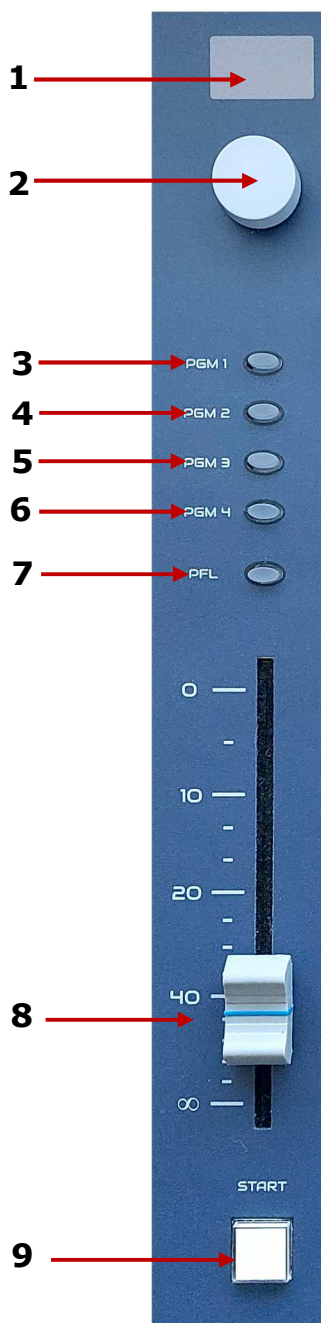
The Expansion inputs unit allow to add four channels microphone/mono inputs the the Main Unit.

It is possible to connect until two Expansion input units, so it is possible to manage the Acuo MB audio console System with:

- Main Unit, eight faders; inputs:
 - 6 microphone
 - 8 stereo line
 - 2 digital AES/EBU
 - 2 Dante stereo (optional)
 - 2 USB stereo
 - 2 telephone hybrids
 - 2 Telco interface
 - 1 bluetooth interface
- Main Unit + 1 x Expansion Unit, twelve faders
 - As Main unit configuration + 4 mono inputs
- Main Unit + 2 x Expansion Units, sixteen faders
 - As Main unit configuration + 8 mono inputs

Expansion Channels 9 to 16

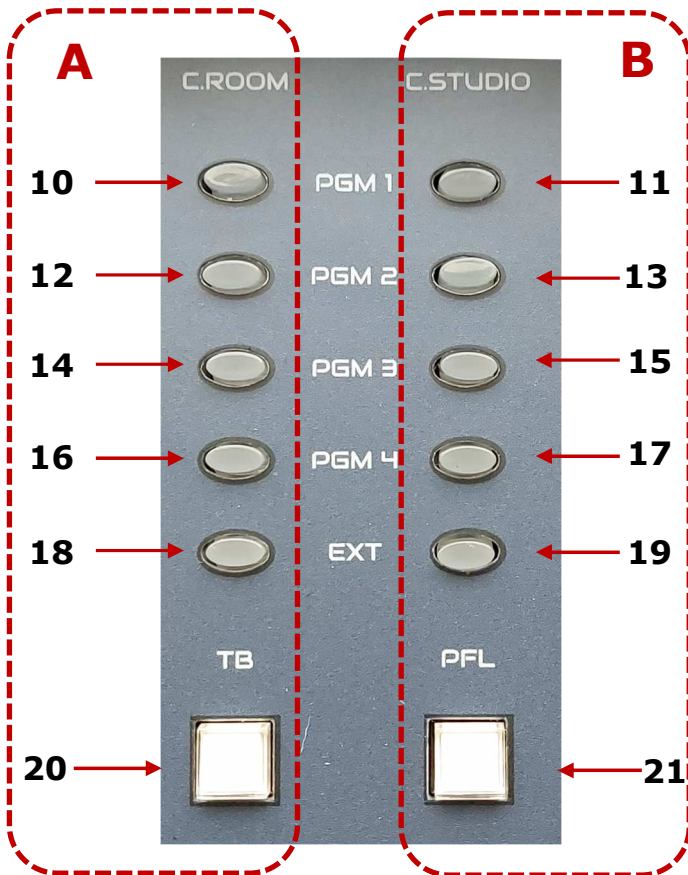
All controls on the Expansion input channel are described below.



- 1** – label box
- 2** – knob jog to open the level channel setup, to set gain, balance, parametric equalization
- 3** – PGM1 button for routing the channel to the PGM1 bus. Red light
- 4** – PGM2 button for routing the channel to the PGM2 bus. Red light
- 5** – PGM3 button for routing the channel to the PGM3 bus. Red light
- 6** – PGM4 button for routing the channel to the PGM4 bus. Red light
- 7** – Button enabling the preview PreFaderListen. Blue light
- 8** – Fader.
- 9** – START/STOP button; In Stop mode the button is illuminated with a green light, in START mode the button is illuminated with a red light

Monitoring section

In this section it will be possible to select the audio bus to monitor it



Section A – Control Room

10 - Button for selecting the PGM1 bus to C.Room output and Master Headphone

12 - Button for selecting the PGM2 bus to C.Room output and Master Headphone

14 - Button for selecting the PGM3 bus to C.Room output and Master Headphone

16 - Button for selecting the PGM4 bus to C.Room output and Master Headphone

18 - Button for selecting the External audio input bus to C.Room output and Master Headphone

20 - Button to active the Talk Back communication, C.Room to Studio

Section B – Control Studio

11 - Button for selecting the PGM1 bus to C.Studio output

13 - Button for selecting the PGM2 bus to C.Studio output

15 - Button for selecting the PGM3 bus to C.Studio output

17 - Button for selecting the PGM4 bus to C.Studio output

19 - Button for selecting the External audio input bus to C.Studio output

21 - Button to drive the channel with the PFL active to C.Studio output

Talk Back

Talk back Regia to Studio:

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

- Channel with function talkback to studio

What happens:

- If it is present and connect the Remote Fader unit, the Talk back button of the remote fader lights up
- the previous selection of the Control Studio flashes
- anyway the audio signal present in the Control studio is replaced by the channel selected in TB

Talk back Studio to Control Room:

(need the Remote Fader unit)

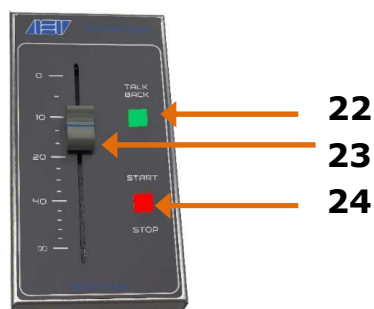
- Channel connected to the Remote Fader unit with talkback function activated

What happens when the remote TB (talk back) button is pressed:

- the Talk back button of ACUO flashes
- the previous selection of the Control Room flashes
- the audio signal present in the Control Room is replaced by the channel connected to the Remote Fader unit
- the signal of the enabled microphone is sent to the Control Room output.

Remote Fader ACUO serie

In order to optimize the operativity, it is possible to connect the option Remote Fader unit to the console with a simple ethernet cable



22 talk Back button Remote

Fader

23 ducking slider

24 START/STOP button

20 Talk Back button on



With the Remote fader it is possible to command the START/STOP state of the assigned channels, in every channel it is possible to active the assignment in the channel setup

Raising the slider increases the audio of the microphone channels set as SPEECH, and at the same time decreases the audio of the audio channels set as MUSIC

Talk back Studio to Regia :

- Channel connected to the Remote Fader unit with talkback function activated

What happens when the remote TB (talk back) button of the REMOTE Fader unit **(22)** is turn ON:

- the Talk back button of ACUO **(20)** flashes
- the previous selection of the Control Room flashes
- the audio signal present in the Control Room is replaced by the channel connected to the Remote Fader unit

Talk back Regia to Studio:

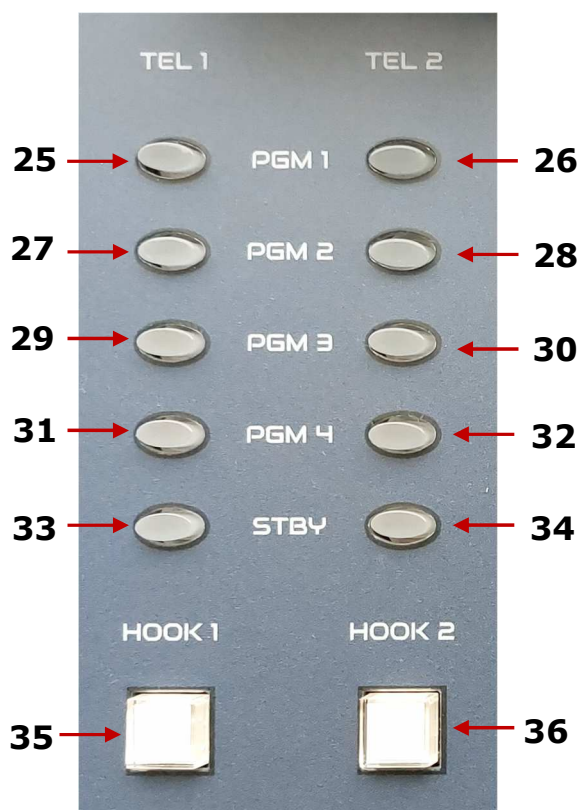
When the TB (talk back) button in the ACUO console **(20)** is ON, the signal of the enabled microphone is sent to the Control Studio output.

- Channel with function talkback to studio

What happens:

- the Talk back button of the remote fader lights up **(22)**
- the previous selection of the Control Studio flashes
- the audio signal present in the Control studio is replaced by the channel selected in TB

Telephone/Telco Hybrids section



25 - Button for assigning the TEL1 to the PGM1 bus

26 - Button for assigning the TEL2 to the PGM1 bus

27 - Button for assigning the TEL1 to the PGM2 bus

28 - Button for assigning the TEL2 to the PGM2 bus

29 - Button for assigning the TEL1 to the PGM3 bus.

30 - Button for assigning the TEL2 to the PGM3 bus

31 - Button for assigning the TEL1 to the PGM4 bus.

32 - Button for assigning the TEL2 to the PGM4 bus

33 - Button to set in STANBY the telephone line 1

34 - Button to set in STANBY the telephone line 2

35 - Hook Button to connect the call on telephone channel 1.

36 - Hook Button to connect the call on telephone channel 2



F1 functions button

- if the caller is hook on the telephone line 1, turn ON it to activate the PRIV-TEL (purple light)
- if the call is NOT hook, the button select the tel set to telephone line 1 (green light)

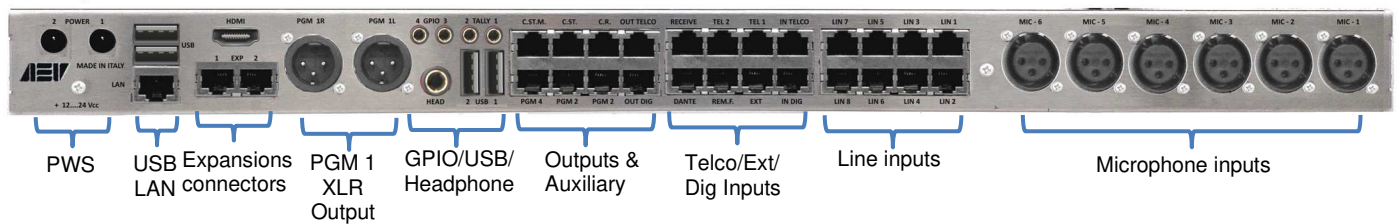
F2 functions button

- if the caller is hook on the telephone line 2, turn ON it to activate the PRIV-TEL (purple light)
- if the call is NOT hook, the button select the tel set to telephone line 2 (green light)

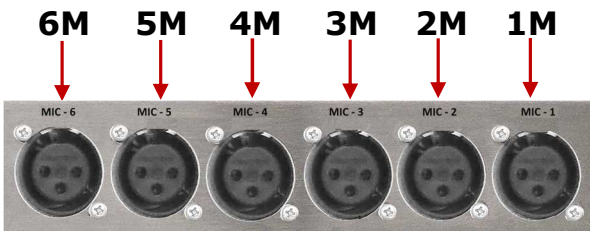
How to manage phone calls

- 1) the call arrives on Telephone line 1
- 2) I hook the call with the **HOOK1** button, at this stage the call is hooked on the mixer with the STBY (standby) button automatically active, that is, the caller listens to the active buses on the telephone bar but his audio does not enter the active buses on the telephone channel
- 3) To broadcast the call on enabled buses, simply deactivate the **STBY** (standby) button; if from the Control Room I want to communicate privately with the caller on line 1, I activate the PRIV-TEL 1 (**F1**) button, in this configuration, only the audio from the external caller reaches the headphones, while the caller only receives the audio from the microphone on which the PRIV TEL function has been enabled; from PRIV-TEL, deactivating **STBY** automatically disables PRIV-TEL
- 4) If, while the call is on air, the Director wants to communicate directly and privately with the caller, simply activate the PRIV-TEL button, in which case the STBY button will also automatically activate; if I deactivate only the PRIV-TEL button, the call will still remain in **STBY**, but if I deactivate the **STBY**, the PRIV-TEL will also automatically deactivate.

Rear panel – connections

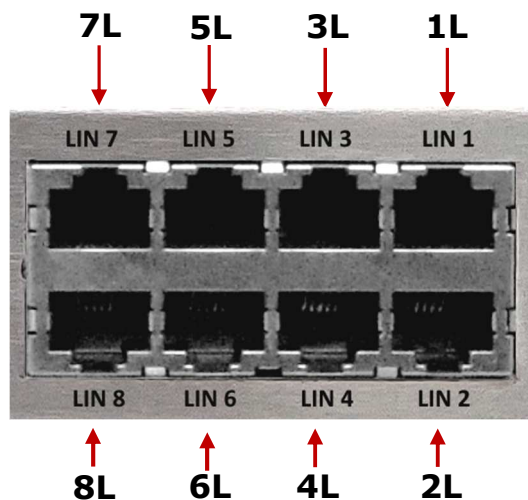


Microphone inputs connection



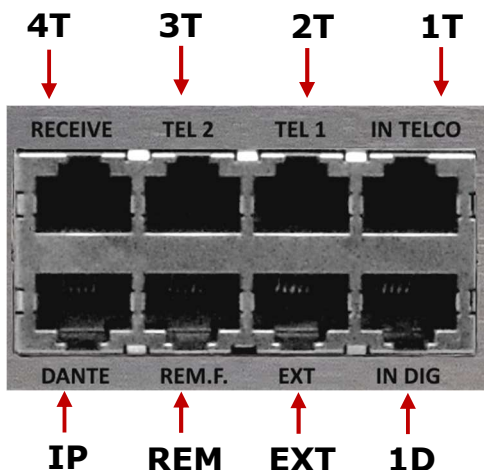
- 1M** – Microphone 1 input XLR F connector.
- 2M** – Microphone 2 input XLR F connector.
- 3M** – Microphone 3 input XLR F connector.
- 4M** – Microphone 4 input XLR F connector.
- 5M** – Microphone 5 input XLR F connector.
- 6M** – Microphone 6 input XLR F connector.

Line inputs connection



- 1L** – Stereo Line 1 input RJ45 connector.
- 2L** – Stereo Line 2 input RJ45 connector.
- 3L** – Stereo Line 3 input RJ45 connector.
- 4L** – Stereo Line 4 input RJ45 connector.
- 5L** – Stereo Line 5 input RJ45 connector.
- 6L** – Stereo Line 6 input RJ45 connector.
- 7L** – Stereo Line 7 input RJ45 connector.
- 8L** – Stereo Line 8 input RJ45 connector.

Telco / Ext / Dig Inputs



- 1T** – Telco 1/2 inputs RJ45 connector.
- 2T** – Telephone line 1 RJ45 connector.
- 3T** – Telephone line 2 RJ45 connector.
- 4T** – Telephone dialer RJ45 connector.

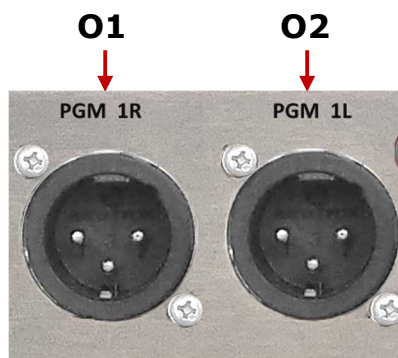
- 1D** – AES digital 1/2 inputs RJ45 connector.
- EXT** – External Line input RJ45 connector.
- REM** – Remote Fader RJ45 connector.
- IP** – Dante RJ45 connector.

GPIO /USB/ Headphone connections



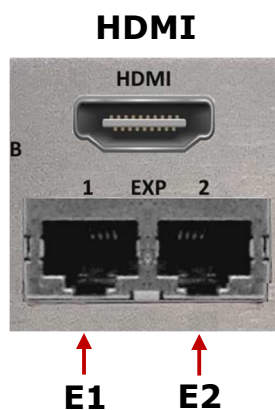
- 1** – GPO Tally1 TTRS connector (Max 60V, 100 mA)
- 2** – GPO Tally2 TTRS connector (Max 60V, 100 mA)
- G3** – GPIO 3 TTRS connector (Max 60V, 100 mA)
- G4** – GPIO 4 TTRS connector (Max 60V, 100 mA)
- U1** – USB 1 connector.
- U2** – USB 2 connector.
- HD** – Headphone jack 6,3 mm connector.

Master PGM 1 output connection



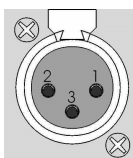
- O1** – PGM1 right output, XLR connector.
- O2** – PGM1 left output, XLR connector

HDMI EXP



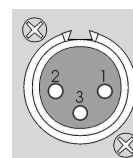
- HDMI** – HDMI video output (optional)
- E1** – Expansion 1 RJ45 connector.
- E2** – Expansion 2 RJ45 connector

Sample connection Analog & AES/EBU



INPUT & OUTPUT pins

- 1 = GROUND
- 2 = INPHASE
- 3 = RETURN



Unbalanced Input connection:

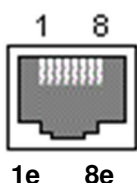
- A) connect the PIN 1 & 3 together or
- B) leave pin 3 disconnected, in this case the input signal decrease (-6dB)

Unbalanced Output connection:

DO NOT connect the PIN 1 & 3 together, to avoid breaking the electronic balancing circuit, leave pin 3 disconnected, leave pin 3 so the signal level decrease (-6 dB), but you will save the electronic balanced output driver

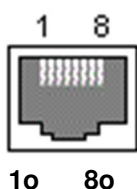
Pin out RJ45 connectors

Line&DigIn/Ext RJ45



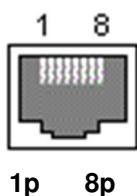
- 1e** – left channel +
- 2e** – left channel -
- 3e** – right channel +
- 4e** – GND
- 5e** – N.C.
- 6e** – right channel -
- 7e** – N.C.
- 8e** – N.C

PGM2/ PGM3/ PGM4/C.Room/C.Studio



- 1o** – left channel +
- 2o** – left channel -
- 3e** – right channel +
- 4o** – GND
- 5o** – N.C.
- 6o** – right channel -
- 7o** – N.C.
- 8o** – N.C

Remote fader



- 1p** – +5v
- 2p** – IN
- 3p** – Start/Stop L
- 4p** – Start/Stop S
- 5p** – Talk Back L
- 6p** – Talk Back S
- 7p** – GND
- 8p** – GND

Connection GPO TALLY on START channels to to **RELAIS BOX** to other brand devices :



TECHNICAL SPECIFICATIONS

DSP features

48 channels IN/OUT
32bit with 192 khz sample rate
8 ASRC input, TDM format
Ratio 139 dB, PLL clock generators
SPI control

Microphone Inputs

Input configuration
Input Impedance
Sensitivity Level Range
Input Level Range
Maximum Input Level
Phantom Supply
100 mm Fader
Connector

Electronically balanced with transformer
> 2 K Ω
Adjustable from -60 ÷ 0 dBu (Trimmer adj.)
 ± 24 dBu (Digital adj. step 0,5 dB)
0 dBu
48 Vdc selectable
Digital controlled
XLR Female

Line Inputs & External Input

Input configuration
Input Impedance
Input Level Range
Headroom
100 mm Fader control
Connector

Electronically balanced
10 K Ω
 ± 24 dBu (Digital adj. step 1,0 dB)
+ 10 dBu
Digital controlled
RJ-45

Digital inputs

Input configuration
Sample Rate
100 mm Fader control
Connector

AES/EBU, IEC958,S/PDIF & EIAJ CP340/1201
Automatic 32, 44.1, 48, 96 KHz converter
Digital controlled
RJ-45

Telephone Hybrid / Telco

Input configuration
Input impedance
Line Compensation
Tx Level
Rx Level Range
Frequency response
Distortion
Noise

Opto-coupled
600 Ω Bal
Automatically (max 5 Km)
 ± 12 dBu (Digital adj. step 0,5 dB)
 ± 12 dBu (Digital adj. step 0,5 dB)
300 Hz ÷ 3400 Hz (-2 dB); 300 Hz ÷ 3400 Hz (-1.5 dB)
< 0.5 %
-60 dB.

Analog Outputs

Output configuration	Electronically balanced
Output Impedance	50 Ω
PGM1/2/3/4 Output Level Range	-24 ÷ +24 dBu
Connector	PGM1: XLR male, PGM2/3/4: RJ45
C.Studio Output Level Range	-24 ÷ +24 dBu
Connector	RJ-45
C Room Mut.Output Lev.	- 24÷ +24 dBu
Connector	RJ-45

Digital Outputs

Output configuration	AES/EBU, IEC958,S/PDIF & EIAJ CP340/1201
Sample Rate	Automatic 32, 44.1, 48, 96 KHz converter
Connector	RJ-45

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	TTRS 3,5 female
USB Port	2 x USB 2.0 interface
Dimensions	690 x 360 x 44 mm (L x D x H)

