

# **AEQ BC-2500**

## **Broadcast Audio Mixer**

**USER'S MANUAL**

**ED. 01/03**



**AEQ**

A.E.Q., S.A. manufacturer of this equipment is a Registered Company with UNE EN - ISO-9001 by AENOR ER-080/1/96 standard.

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## **1. GENERAL**

### **1.1. General precautions**

The following cautionary and security measures must be observed during all phases of operation and maintenance of the unit. Failure to follow the instructions that are highlighted in this manual could affect the specification and function of the equipment. AEQ. S.A. accept no responsibility for damage or injury caused by incorrect operation of the equipment.

#### **1.1.1. Read all the instructions.**

To obtain the optimum performance and reliability from the moment of installation, and to prevent injury, incorrect operation or damage to the equipment, it is absolutely indispensable to thoroughly read all the instructions contained in this manual before connecting and operating the equipment.

#### **1.1.2. Power supply and earth connections.**

To reduce the risk of electric shock, the power supply of this unit should be connected to earth. The equipment is supplied with an earth connection socket. If it is necessary to change the connection it should be noted that the cable to earth is marked yellow/green.

**Note:** The console must only be connected to the power supply module with the cable supplied by the manufactures for this purpose. Cables of greater length may be ordered from the manufactures if required.

#### **1.1.3. Protection from excessive supply voltage variation.**

In areas which are subject to frequent variations in the supply voltage it will be necessary to incorporate additional external protection for the equipment, to ensure that the equipment receives the voltage as specified in this manual.

#### **1.1.4. Protection against water and humidity.**

This equipment is not recommended for use in areas subject to ingress of rain, water etc., or sites with humid floors, or in places that are subject to a high degree of atmospheric humidity that is condensing.

#### **1.1.5. Ventilation, fire and inflammable vapours.**

The equipment must not be place close to a source of heat. The use of electrical or electronic equipment near a source of fire or in atmosphere containing inflammable vapours is extremely dangerous and must be avoided at all cost.

All the ventilation grilles must remain unobstructed to permit sufficient ventilation and allow the dissipation of heat to the exterior of the equipment.

### 1.1.6. Maintenance

The maintenance operations of this unit should only be carried out by qualified technical personnel. **AEQ S.A.** does not accept responsibility for any damage or injury to the equipment caused by maintenance by unauthorized persons, not for any damage or injury to other equipment or persons caused by any unauthorized repair or maintenance operation.

**Caution.** A risk of severe electrical shock exists due to very high voltages that are present in the interior of the power supply unit. Therefore proceed with absolute caution when manipulating this unit.

The **AEQ BC-2500** mixing console does not require preliminary adjustment, after programming has been carried-out as described in this manual either by the maintenance technician or the manufacturer, no additional operations whatsoever are necessary to obtain optimum performance.

However it is advisable to periodically desmagnetize the input transformers of the various modules, due to the influence this factor has on the final distortion ratio of the equipment. This operation can be performed effectively by applying a 25 Hz signal at a level sufficient to saturate the transformer core and then slowly diminish the signal level until annulment is achieved. It is recommended that this operation is performed annually.

**Note:** In the event that the maintenance technician requires to change the location of the unit or incorporate new modules in the equipment, the following procedure must be adopted:

- 1) Turn off the equipment using the on/off switch located at the rear of the power supply module **BC-2523**.
- 2) Proceed to the removal of the module(s) for interchange by removing the chassis fixing screws located at both end of the panel.
- 3) Disconnect the internal bus by loosening the ribbon cable connector located in the lower middle part of the printed circuit board and the rear mounted connectors if fitted. Module replacement is effected by the direct reversal of the operations described above.

### 1.1.7. Guarantee.

Guarantee period: The terms and conditions are as stated in the APPENDIX 1 of this manual.

## **2. EQUIPMENT POWER SUPPLY**

### **2.1. General**

A description of the module to power supply connection is detailed in Section 5.7 and 5.8.

#### **2.1.1. Before connection to the mains supply**

**Caution:** Before the equipment is connected to the power supply, the voltage selector must be checked and if necessary set for the supply voltage as in Section 2.1.2. and the DC power supply cable connected between module **BC-2578** and the power supply **BC-2523**. The procedures detailed in this section must be followed carefully before connecting and operating the equipment.

#### **2.1.2. Voltage selection.**

The **AEQ BC-2500** mixer is designed to operate with a 110/220 V AC power supply. Set the **VOLTAGE SELECTOR** (see Section 5.8 of this manual) to appropriate network supply voltage.

If the 110 V AC supply voltage is selected, the fusible link fitted as standard to the equipment must be replaced by the alternative that can be found in the plastic bag containing this manual, and following these instructions. Remove the fuseholder located in the rear of the power supply module **BC-2523** (see section 5.8 of this manual), and replace the existing fuse with the alternative as mentioned previously.

**Remember: 220 V AC Power supply = 1.6 A Fuse    Type T**  
**110 V AC Power Supply = 2.5 A Fuse    Type T**

**Note:** The equipment can be supplied with 220 AC or 110 AC volts supply.

**Note:** The power supply cable is supplied with a European Standard mains interconnecting plug. In certain countries it could be necessary to exchange this plug to adapt to the prevailing local standards. If this is the case, the substitution of the plug should be carried-out before proceeding.

**Note:** Signalling circuit has its own fuse. This one is a 1 Amp fuse.

#### **2.1.3. Switching on the equipment.**

Once the checks and/or modifications indicated in the Section 2.1.2. have been accomplished the equipment is prepared for connection to the electric supply network. Prior to connection ensure that power supply switch **POWER** is in the off position.

Activate the power supply switch **POWER**. If all the previous instruction have been correctly followed, the LED's labelled as **+ANALOG** and **- ANALOG** of the control module **BC-2578** will illuminate, indicating that the equipment is receiving power supply.

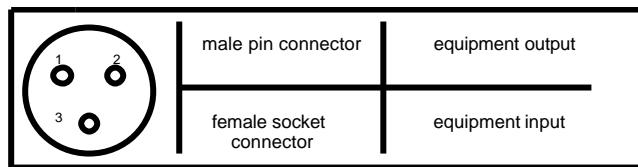
**Note:** For the location of the power switch and LED's indicators mentioned above, refer to sections 5.7. and 5.8. of this manual.

### 3. AUDIO CONNECTIONS

#### 3. 1. General

The audio connections of the **AEQ BC-2500** mixer comply with the AES 14-1992 (ANSIS 4.48-1992) recommendations. This recommendation is based on IEC 268-12 of 1987. *Equipment for sound systems part 12, application of connectors for radio broadcast and similar uses.*

The audio connection cables should be checked for compatibility with the standards indicated. If this is not the case they must be exchanged or modified since problems could be encountered with the phase of the audio signal.



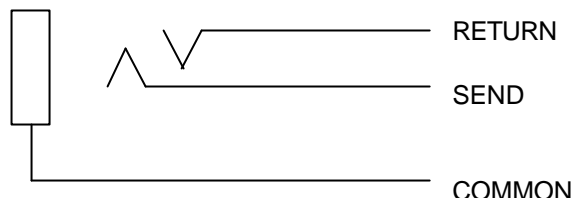
**PIN NUMBER**

Application & Power Supply	1	2	3	<b>NOTE 1*</b> If a balanced microphone is connected to an unbalanced amplifier input, the input contact 3 is connected to contact 1.
Balanced Mono Channel	Screen	Positive Polarity	Return	
Unbalanced Mono Channel	Screen & Return	Positive Polarity	NOTE 1*	
Balanced Mono Channel. Phantom Power	Screen & Negative Power	Polarity & Positive Power	Return & Positive Power	
Balanced Mono Channel Power A-B	Screen	Polarity & Positive Power	Return & Negative Power	

#### 3. 2. Other audio connections.

The BC-2578 module multipin connector wiring layout is described in section 5.7.2. of this manual.

The BC-2511 module 1/4" jack connectors are wiring according to the following diagram:



#### **4. MIXER DESCRIPTION**

##### **4.1. Basic design concepts.**

The **AEQ BC-2500** Audio Mixer has been designed for use in radio broadcast studios together with mobile units, television and sound installations where the quality and reliability of the equipment are fundamental factors.

The criteria base for development and fabrication of the audio mixer were based on our extensive experience in the field of radio broadcasting and direct contact with the professionals in the sector. This has allowed us to capture the necessity of an audio mixer for radio and television in line with current technology and with the highest performance.

The design and configuration assures rapid assimilation of the mixer functions by the user. The logical distribution of the controls and the automatic monitor and signal cut features simplify the operator tasks.

The modular concept allows the extraction of any module for repair or replacement in a few moments. The high quality of the components used in manufacture guarantees the prolonged service life of the equipment.

The **AEQ BC 2500** audio mixer is user configurable according to the specific requirements. Beginning with the standard ex-works configuration, it is easily upgraded by incorporating new input modules or it can be redistributed according to operator preferences.

The following details some of the characteristics that make the **AEQ BC 2500** mixer an excellent piece of equipment for utilization in radio and television broadcasters.

- Programmable micro input channels for autocontrol or announcer control by means of internal programmable bridges.
- Fader control of VCA signal.
- Indirect control of the principal outputs.
- Electronically balanced buses.
- Transformed balanced inputs and outputs.
- External inputs 1 and 2 Electronically balanced.
- Input channel RF filters.
- Lock-in metal XLR connectors.
- Output to auxiliary programmable pre or post fader by internal bridges.
- Remote Mute and PFL from the announcer.
- Input module saturation and "clipping" indicators.
- Stereo pre-listening.
- Input/output module compatible with an external hybrid telephone, with independent control and PFL for both input and output.
- Output modules with simultaneous stereophonic/monophonic function.
- Output modules with simultaneous stereophonic/monophonic function with exterior stereo input which is "bypassable" to the stereo output.
- Independent headphone controls for the controller, the primary and secondary announcers.
- 4 way intercom for communication of instructions to or from the exterior, co-ordination of mobile units, microphone lines, etc...
- Automatic signal activation ON AIR through input modules, programmable by internal bridges.
- 24 volts power supply for signaling.

## 4.2. Initial Configuration

The **AEQ BC-2500** audio mixer is supplied with two basic configurations:

### BC-2500 FM-AUTOCONTROL

1	BC-2501FM	Chassis with capacity for 24/20 modules, with audio meters and PFL monitor loudspeakers.
1	BC-2578	Control, monitor and “intercom” module for controller and announcer. (occupies three module space)
2	BC-2511	Micro/line mono input module.
5	BC-2522	Double switchable stereo input module.
1	BC-2533	External hybrid telephone input/output and control module.
2	BC-2560-A	Stereo plus added mono output module.
7	BC-2502	Blank module.
1	BC-2523	External power supply module. (This module does not occupy chassis space)

### BC-2500 FM ANNOUNCER-CONTROL

1	BC-2501FM	Chassis with capacity for 24/20 modules, with audio meters and PFL monitor loudspeakers.
1	BC-2578	Control, monitor and “intercom” module for controller and announcer.
2	BC-2511	Micro/line mono input module.
6	BC-2522	Double switchable stereo input module.
2	BC-2533	External hybrid telephone input/output and control module.
2	BC-2560-A	Stereo plus added mono output module.
3	BC-2502	Blank module. (This module does not occupy chassis space)
1	BC-2523	External power supply module.

Other configurations are available on demand, only limited by the spatial capacity of the chassis. The minimum functional requirement is the inclusion of one BC-2501 or BC-2501FM module, one BC-2578 module, one input and one output module, an external power supply and blanking plates to complete the chassis.

## 5. MODULE DESCRIPTION

### 5.1. BC-2511 MICRO/LINE MONO INPUT MODULE.

#### 5.1.1. Functional description.

The micro/line mono input module **BC-2511** permits the connection of two independent inputs; one microphone level **(21)** and the other line level **(22)**, selection being carried-out by means of the switch **(1) MICRO/LINE**.

Push-button **(3) HFF** activates a radiofrequency filter. (100 Hz)

Once the input type is selected, the level is adjusted by the potentiometer **(2) GAIN**, an external signal can then be introduced through the connector **(20) INSERT**, subsequently the equalization can be adjusted by the potentiometers **(4, 5, 6 and 7) TREBLE, MID/FREQ, MID/GAIN and BASS**, corresponding to the treble level, mid frequencies gain and bass level respectively, whenever the equalization circuit is activated by the switch **(8) EQ ON**.

With the aim of avoiding saturation an LED indicator **(9) CLIP** illuminates on reaching maximum signal level. If required this signal can be monitored by activating Push-button **(16) PFL ON**, to send it to the pre-listen bus. This status is confirmed by the illumination of led indicator **(17)**.

Potentiometer **(12) BALANCE** regulates the left/right channel output signal balance.

The output signal can be directed to the following outputs whenever the operative channel selector **(18) CHANNEL ON** is activated:

Master 1, adjusts the send level with fader **(19)** and pushing the switch **(13) MASTER 1**

Master 2, adjusts the send level with fader **(19)** and pushing the switch **(14) MASTER 2**

Telephone buses 1 and 2, adjust the send level with fader **(19)** and pushing the switch **(15) PHONE**.

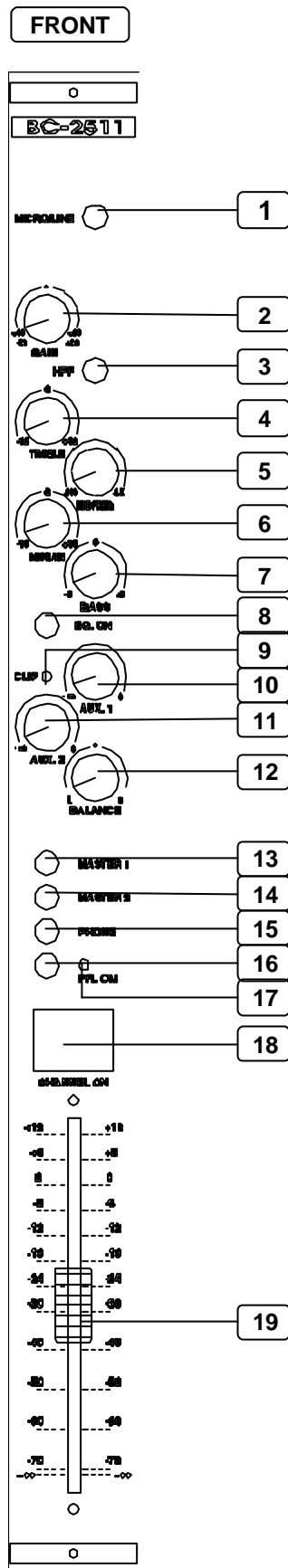
This signal can also be sent to the following auxiliary outputs:

Auxiliary 1, the send level is adjusted with potentiometer **(10) AUX 1** if working with the Auxiliary 1 send programmed pre-fader or the send level is adjusted with fader **(19)** once the send level to Auxiliary bus 1 is set with potentiometer **(10) AUX 1** when working with the send to auxiliary 1 programmed as post-fader and whenever the channel operative switch **(18) CHANNEL ON** is activated.

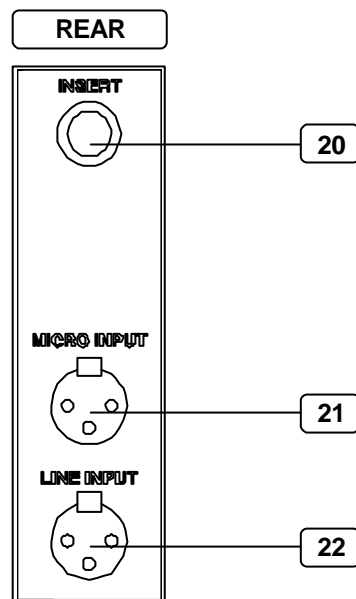
Auxiliary 2, the send level is adjusted with potentiometer **(11) AUX 2** if working with the Auxiliary 2 send programmed pre-fader or the send level is adjusted with fader **(19)** once the send level to Auxiliary bus 1 is set with potentiometer **(11) AUX 2** when working with the send to auxiliary 1 programmed as post-fader and whenever the channel operative switch **(18) CHANNEL ON** is activated.

The position of the programming bridges and their functions are described in Section 7 of this manual.

### 5.1.2. Description of Controls and Connectors.



- 1.- Input switch MICRO/LINE
- 2.- Gain adjusting potentiometer GAIN
- 3.- Radiofrequency switch HFF
- 4.- Treble frequency level adjusting potentiometer TREBLE
- 5.- Middle frequency parametric equalizer potentiometer MID/FREQ
- 6.- Middle frequency level adjusting potentiometer MID/GAIN
- 7.- Bass frequency level adjusting potentiometer BASS
- 8.- Equalizer activation switch EQ.ON
- 9.- Saturation level led indicator CLIP
- 10.- Send to auxiliary 1 bus potentiometer AUX. 1
- 11.- Send to auxiliary 2 bus potentiometer AUX. 2
- 12.- Balance level adjusting potentiometer BALANCE
- 13.- Send to master 1 output bus switch MASTER 1
- 14.- Send to master 2 output bus switch MASTER 2
- 15.- Send to telephone bus switch PHONE
- 16.- Send to pre-listen bus push-button PFL ON
- 17.- Pre-listen active led indicator PFL ON
- 18.- Channel activation switch CHANNEL ON
- 19.- Output level slide potentiometer FADER
- 20.- Input/output connector socket INSERT
- 21.- Microphone input connector MICRO
- 22.- Line input connector LINE





## 5.2. BC-2521 DOUBLE LINE EQUALIZED STEREO INPUT MODULE.

### 5.2.1. Functional description

The Double Line Equalized Stereo Input Module **BC-2521** permits the connection of two stereo inputs A and B. These lines are connected to **(23) INPUT A (L)** and **(24) INPUT A (R)** for the left and right Line A channels and **(26) INPUT B (L)** and **(27) INPUT B (R)** for the left and right Line B channels, selection is by switch **(1) INPUT A/B**. If the selector is at rest input A is active, when the selector is depressed input B is selected.

The gain of the selected input is adjusted with potentiometer **(3) GAIN**.

It is possible to convert this signal to mono by activating switch **(2) ST/MONO**

Switch **(4) HFF** activates a radiofrequency filter. (100 Hz)

Subsequently the equalization can be adjusted by the potentiometers **(5, 6, 7 and 8) TREBLE, MID/FREQ, MID/GAIN & BASS**, corresponding to the treble level, mid frequencies, mid frequencies gain and bass level, respectively, whenever the equalization circuit is activated by the switch **(9) EQ ON**.

With the aim of avoiding saturation a led indicator **(10) CLIP** illuminates on reaching maximum signal level. If required this signal can be monitored by activating Push-button **(18) PFL ON**, to send it to the pre-listen bus. This status is confirmed by the illumination of led indicator **(19)**.

Potentiometer **(12) BALANCE** regulates the left/right channel output signal balance. This function is activated when switch **(14) BALANCE ON** is activated.

The output signal can be directed to the following outputs whenever the operative switch **(20) CHANNEL ON** is activated:

Master 1, adjusts the send level with fader **(21)** and pushing the switch **(15) MASTER 1**

Master 2, adjusts the send level with fader **(21)** and pushing the switch **(16) MASTER 2**

Telephone buses 1 and 2, adjust the send level with fader **(21)** and pushing the switch **(17) PHONE**.

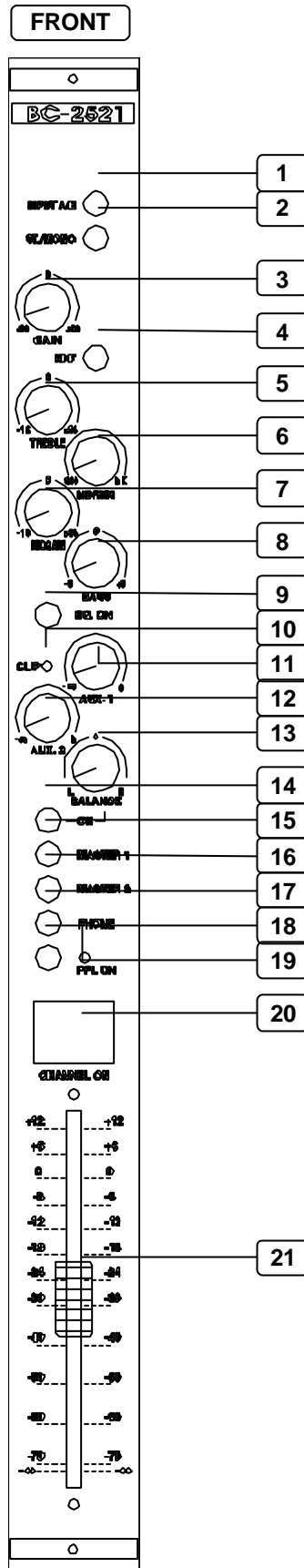
This signal can also be sent to the following auxiliary outputs:

Auxiliary 1, the send level is adjusted with potentiometer **(11) AUX 1** if working with the Auxiliary 1 send programmed pre-fader or the send level is adjusted with fader **(21)** once the send level to Auxiliary bus 1 is set with potentiometer **(11) AUX 1** when working with the send to auxiliary 1 programmed as post-fader and whenever the channel operative switch **(20) CHANNEL ON** is activated.

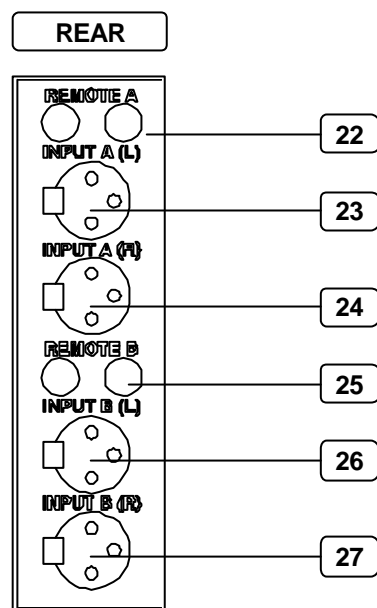
Auxiliary 2, the send level is adjusted with potentiometer **(12) AUX 2** if working with the Auxiliary 2 send programmed pre-fader or the send level is adjusted with fader **(21)** once the send level to Auxiliary bus 1 is set with potentiometer **(12) AUX 2** when working with the send to auxiliary 1 programmed as post-fader and whenever the channel operative switch **(20) CHANNEL ON** is activated.

The position of the programming bridges and their functions are described in Section 7 of this manual.

### 5.2.2. Description of Controls and Connectors.



- 1.- A/B Input selector switch INPUT A/B
- 2.- Mono/stereo selector switch ST/MONO
- 3.- Gain adjusting potentiometer GAIN
- 4.- Radiofrequency switch HFF
- 5.- Treble frequency level adjusting potentiometer TREBLE
- 6.- Middle frequency parametric equalizer potentiometer MID/FREQ
- 7.- Middle frequency level adjusting potentiometer MID/GAIN
- 8.- Bass frequency level adjusting potentiometer BASS
- 9.- Equalizer activation switch EQ.ON
- 10.- Saturation level led indicator CLIP
- 11.- Send to auxiliary 1 bus potentiometer AUX. 1
- 12.- Send to auxiliary 2 bus potentiometer AUX. 2
- 13.- Balance level adjusting potentiometer BALANCE
- 14.- Balance activation switch BALANCE ON
- 15.- Send to master 1 output bus switch MASTER 1
- 16.- Send to master 2 output bus switch MASTER 2
- 17.- Send to telephone bus switch PHONE
- 18.- Send to pre-listen bus push-button PFL ON
- 19.- Pre-listen active led indicator PFL ON
- 20.- Channel activation switch CHANNEL ON
- 21.- Output level slide potentiometer FADER
- 22.- Line A remote connectors REMOTE A
- 23.- Line A left input connector INPUT A(L)
- 24.- Line A right input connector INPUT A (R)
- 25.- Line B remote connectors REMOTE B
- 26.- Line B left input connector INPUT B (L)
- 27.- Line B right input connector INPUT B (R)



### 5.3. BC-2522 DOUBLE LINE STEREO INPUT MODULE.

#### 5.3.1. Functional description

The Double Line Stereo Input Module **BC-2522** permits the connection of two stereo inputs A and B. These lines are connected to **(18) INPUT A (L)** and **(19) INPUT A (R)** for the left and right Line A channels and **(21) INPUT B (L)** and **(22) INPUT B (R)** for the left and right Line B channels, selection is by switch **(1) INPUT A/B**. If the selector is at rest input A is active, when the selector is depressed input B is selected.

The gain of the selected input is adjusted with potentiometer **(3) GAIN**.

It is possible to convert this signal to mono by activating switch **(2) ST/MONO**

Switch **(4) HFF** activates a radiofrequency filter. (100 Hz).

With the aim of avoiding saturation a led indicator **(5) CLIP** illuminates on reaching maximum signal level. If required this signal can be monitored by activating Push-button **(13) PFL ON**, to send it to the pre-listen bus. This status is confirmed by the illumination of led indicator **(14)**.

Potentiometer **(8) BALANCE** regulates the left/right channel output signal balance. This function is activated when switch **(9) BALANCE ON** is activated.

The output signal can be directed to the following outputs whenever the operative channel selector **(15) CHANNEL ON** is activated:

Master 1, adjusts the send level with fader **(16)** and pushing the switch **(10) MASTER 1**

Master 2, adjusts the send level with fader **(16)** and pushing the switch **(11) MASTER 2**

Telephone buses 1 and 2, adjust the send level with fader **(16)** and pushing the switch **(12) PHONE**.

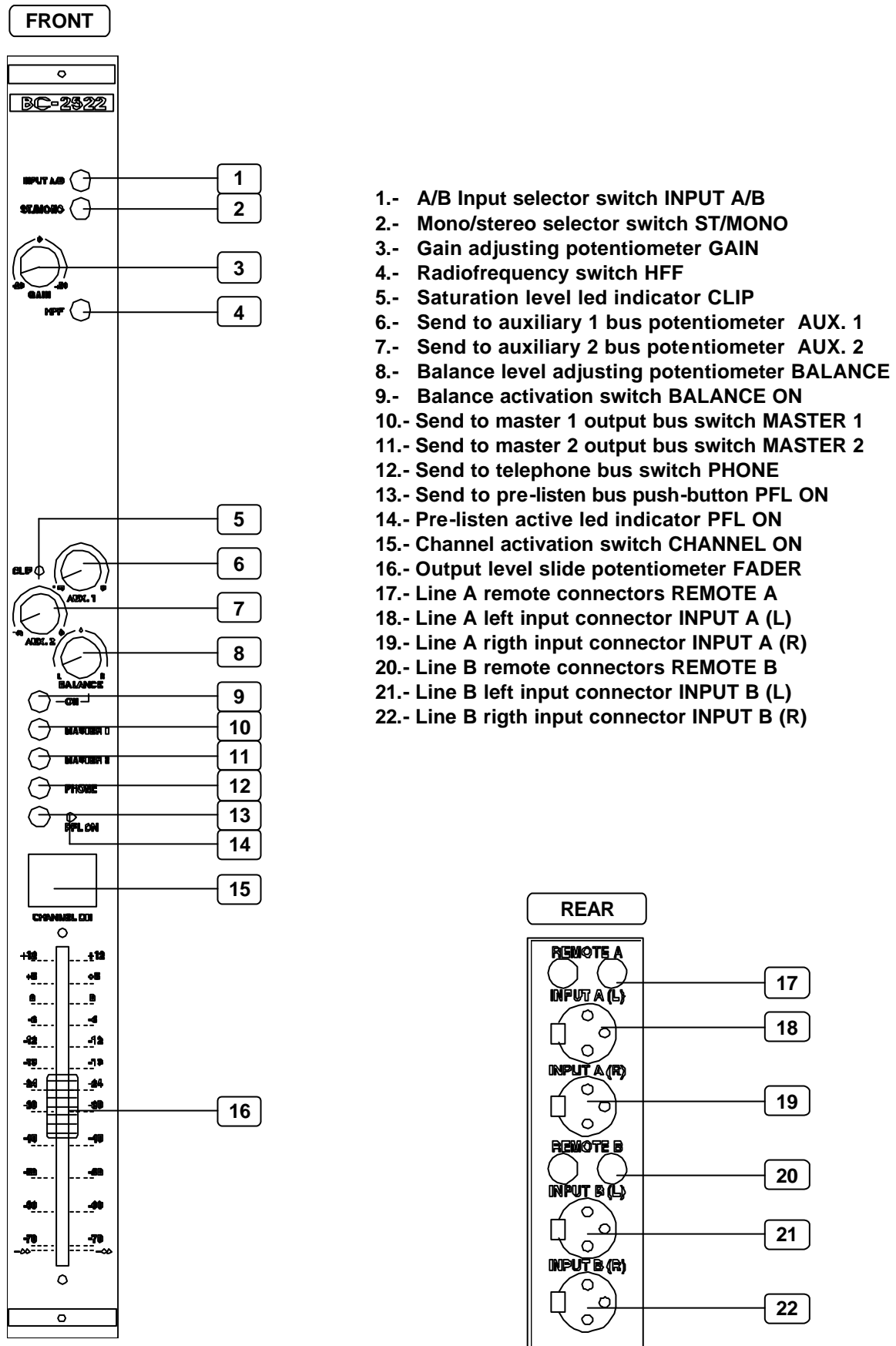
This signal can also be sent to the following auxiliary outputs:

Auxiliary 1, the send level is adjusted with potentiometer **(6) AUX 1** if working with the Auxiliary 1 send programmed pre-fader or the send level is adjusted with fader **(16)** once the send level to Auxiliary bus 1 is set with potentiometer **(6) AUX 1** when working with the send to auxiliary 1 programmed as post-fader and whenever the channel operative selector **(15) CHANNEL ON** is activated.

Auxiliary 2, the send level is adjusted with potentiometer **(7) AUX 2** if working with the Auxiliary 2 send programmed pre-fader or the send level is adjusted with fader **(16)** once the send level to Auxiliary bus 1 is set with potentiometer **(7) AUX 2** when working with the send to auxiliary 1 programmed as post-fader and whenever the channel operative switch **(15) CHANNEL ON** is activated.

The position of the programming bridges and their functions are described in Section 7 of this manual.

### 5.3.2. Description of Controls and Connectors.



## 5.4. BC-2533 HYBRID TELEPHONE INPUT/OUTPUT MODULE.

### 5.4.1. Functional description

The Hybrid Telephone Input/Output Module **BC-2533** permits the adaptation of an external analogue or digital hybrid telephone to the other modules that make up the system. An audio input **(20) INPUT FROM LINE** is available for the signal from the external hybrid telephone at line level. This input can be monitored by activating the push-button **PFL INPUT (16)** the status is shown by the illumination of the PFL led. **PFL INPUT (14)**.

The output signal can be directed to the following outputs whenever the operative channel selector **(17) CHANNEL ON** is activated:

Master 1, adjusts the send level with fader **(18)** and pushing the switch **(11) MASTER 1**

Master 2, adjusts the send level with fader **(18)** and pushing the switch **(12) MASTER 2**

Auxiliary 1, the send level is adjusted with potentiometer **(9) AUX 1** if working with the Auxiliary 1 send programmed pre-fader or the send level is adjusted with fader **(18)** once the send level to Auxiliary bus 1 is set with potentiometer **(9) AUX 1** when working with the send to auxiliary 1 programmed as post-fader and whenever the channel operative switch **(17) CHANNEL ON** is activated.

Auxiliary 2, the send level is adjusted with potentiometer **(10) AUX 2** if working with the Auxiliary 2 send programmed pre-fader or the send level is adjusted with fader **(18)** once the send level to Auxiliary bus 1 is set with potentiometer **(10) AUX 2** when working with the send to auxiliary 1 programmed as post-fader and whenever the channel operative switch **(17) CHANNEL ON** is activated.

Press button **(5) MULTIPLEX**. When this function is activated in two BC-2533 modules (if both are available in the console) the telephone lines associated with each one of them are interlinked.

The output signal from this module is the sum of all the sends in the telephone buses 1 and 2 **PHONE**, from the type **BC-2511, BC-2521 & BC-2522** input modules. The monitoring of the same is through the pre-listen bus activated by the push-button **(15) PFL OUTPUT**, the status is reflected by the illumination of the led **(13) PFL OUTPUT**. The signal outputs via connector **(21) OUTPUT TO LINE** and is sent to the external hybrid telephone; the level is adjusted by the potentiometer **(1) OUTPUT LEVEL**.

This module also disposes of a remote control interface to allow control of an external hybrid telephone of one or two lines and it has the controls and indicators necessary for this function, namely:

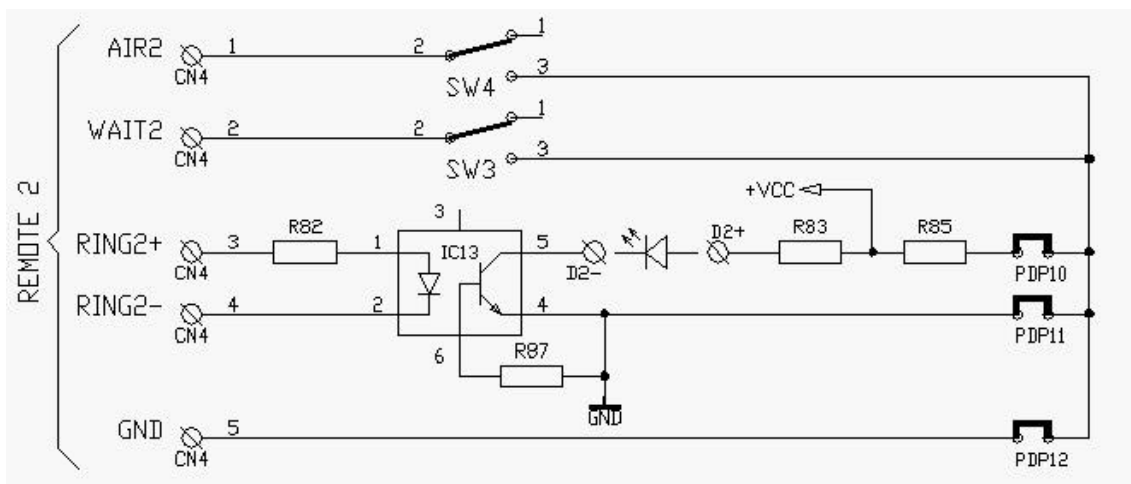
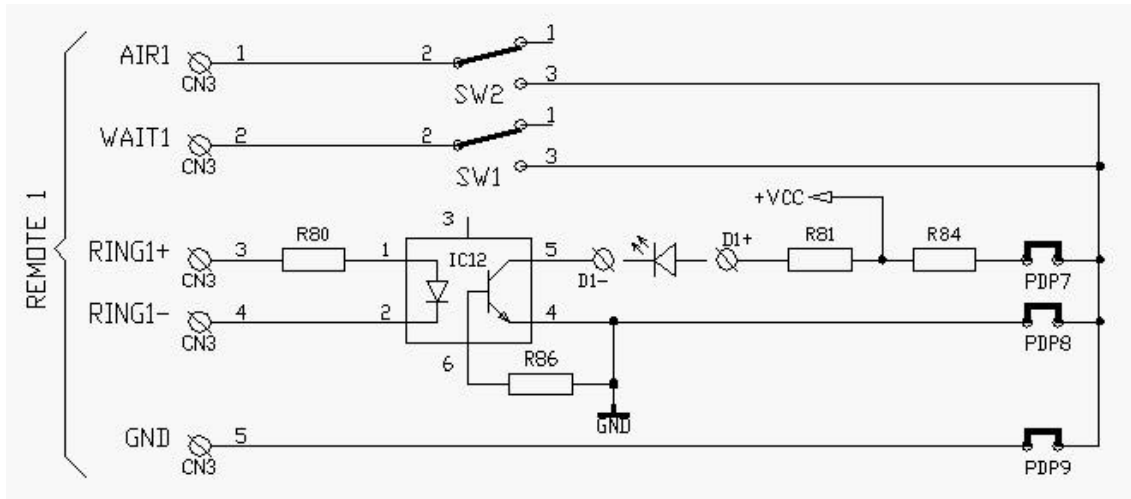
Luminous led indicators **(3) and (7) RING** to signal incoming calls on line 1 and/or line 2.

Input "to air" switches **(4) AIR 1** and **(8) AIR 2** in order to effect the connection of the hybrid to telephone lines one and two (line busy / line available).

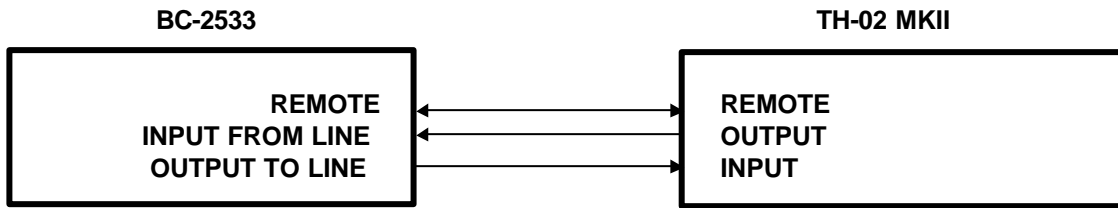
Call waiting switches **(2) WAIT 1** and **(6) WAIT 2** to pass to the communications on line one and/or two of the hybrid phone on hold. **(This function is not available unless the Hybrid is an AEQ TH-02 and the remote connectors for these functions are properly wired for both the Hybrid and the Module)** When this function is activated the callers are able listen to the module output, but are not able to intervene, since the input remains blocked.

**Note:** The **BC-2533** module can be programmed for connection to telephone bus 1 or 2. This operation is performed during manufacture. To alter this specification our Technical Service department should be consulted. **It should be noted that two BC-2533 modules must never be connected to the same telephone bus.**

These are the diagrams of the internal configuration of the remote signals:



### 5.4.2. Example of remote connection of the Hybrid AEQ TH-02 MKII

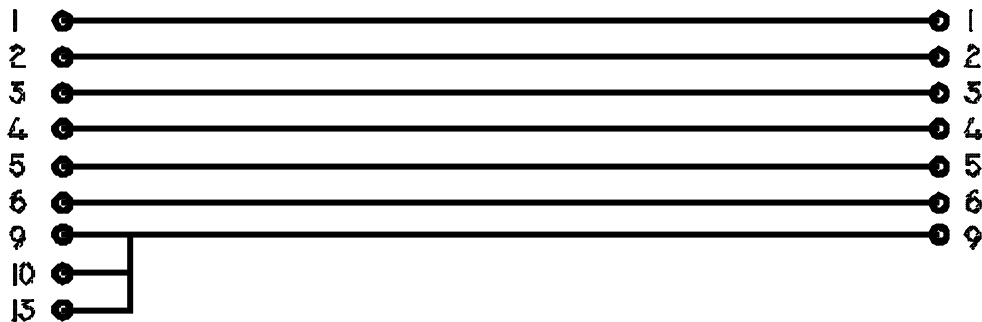


Module.

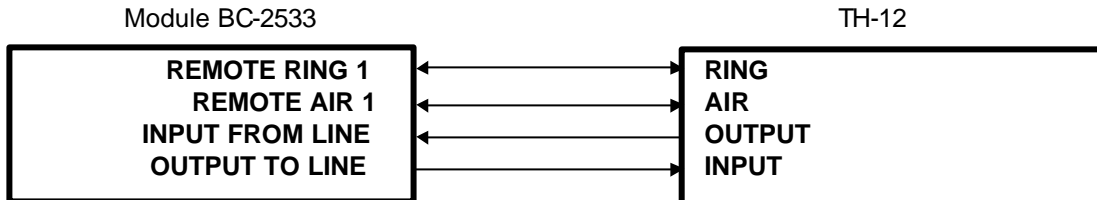
Hybrid pin connector.

BC-2533

TH-02/EX



### 5.4.3. Example of remote connection of the Hybrid AEQ TH-12

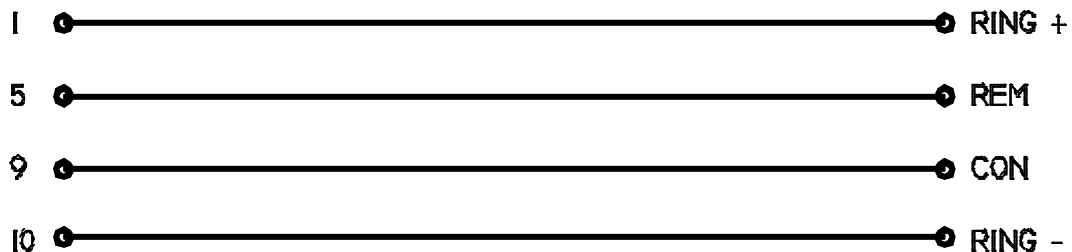


Module.

Hybrid pin connector.

BC-2533

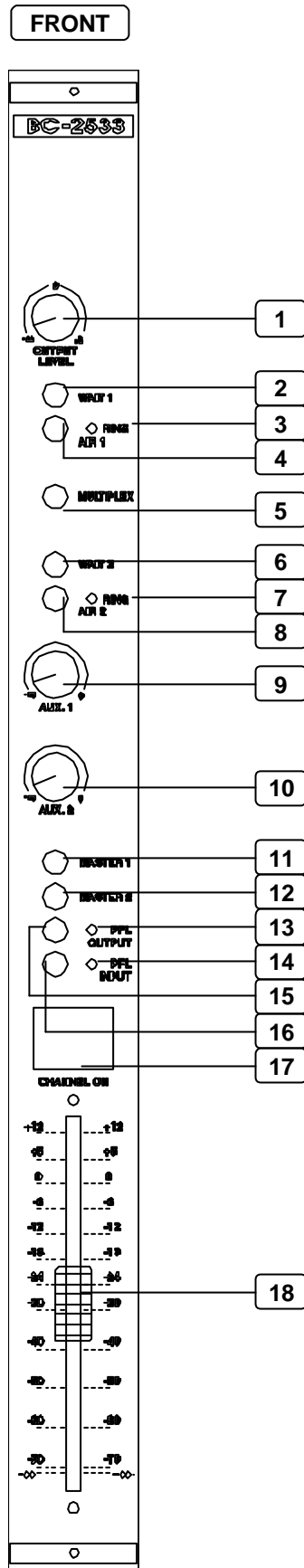
TH-12



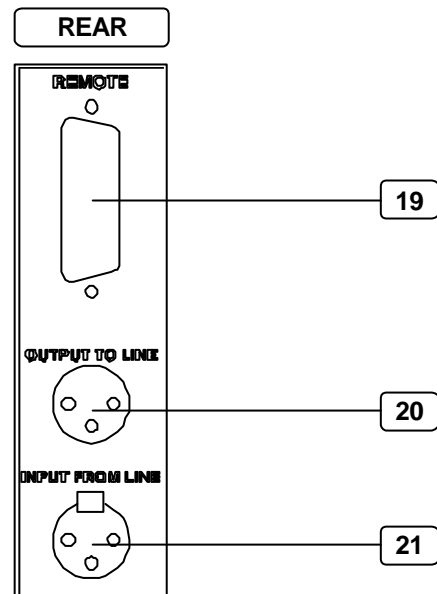
**Note:** The situation of P.D.P. (program bridges) varies according to the AEQ external hybrid model selected. Consult Section 7 for further explanation.

If you own an EAGLE ISDN Audiocodec, you can use it as an hybrid. Read EAGLE Users Manual in order to make the connection.

### 5.4.4. Description of Controls and Connectors.



- 1.- Output level adjusting potentiometer OUTPUT LEVEL
- 2.- Wait 1 switch WAIT 1
- 3.- Call on line 1 luminous indicator RING
- 4.- Line 1 "TO AIR" switch AIR 1 (line busy)
- 5.- Interconnection with a second BC-2533 switch MULTIPLEX
- 6.- Wait 2 switch WAIT 2
- 7.- Call on line 2 luminous indicator RING
- 8.- Line 2 "TO AIR" switch AIR 2
- 9.- Send to auxiliary 1 bus potentiometer AUX.1
- 10.- Send to auxiliary 2 bus potentiometer AUX.2
- 11.- Send to master 1 output bus switch MASTER 1
- 12.- Send to master 2 output bus switch MASTER 2
- 13.- Output pre-listen activated led indicator PFL OUT
- 14.- Input pre-listen activated led indicator PFL IN
- 15.- Output pre-listen activation push-button PFL OUT
- 16.- Input pre-listen activation push-button PFL IN
- 17.- Channel activation switch CHANNEL ON
- 18.- Output level slide potentiometer FADER
- 19.- Hybrid remote control connector REMOTE. DB15-Male pin
- 20.- Line output connector OUTPUT TO LINE
- 21.- Line input connector INPUT FROM LINE



AEQ BC-2500  
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## 5.5. BC-2560-A STEREOPHONIC + SUM MONOPHONIC OUTPUT MODULE

### 5.5.1. Functional description

The Stereophonic + Sum Monophonic **BC-2560-A** output module combines all the signal inputs it receives.

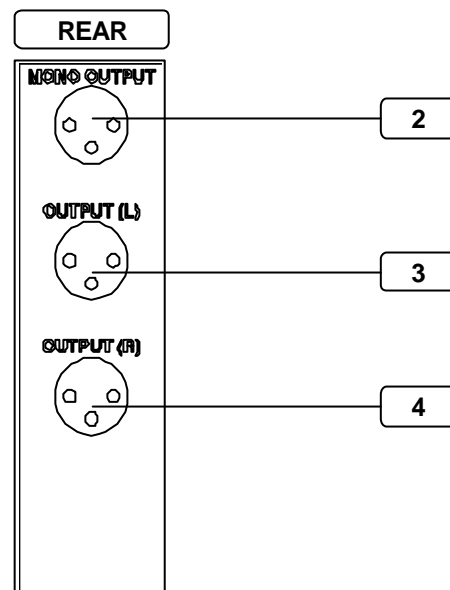
The **BC-2560-A** can be programmed for connection to any of the output buses: Master 1, Master 2, Auxiliary 1 and Auxiliary 2. This operation is performed during manufacture. To alter this specification consult section 7. **It should be noted that two BC-2560-A/C modules must never be connected to the same bus.**

The output level is controlled by the slide fader **(1)**. The monophonic output at connector **(2) MONO OUTPUT**, together with the stereo output at connector **(3) OUTPUT (L) and (4) OUTPUT (R)** corresponding to the left and right channels respectively are delivered to the output.

5.5.2. Description of Controls and Connectors.



- 1.- Output level slide potentiometer FADER
- 2.- Mono line output connector MONO
- 3.- Left line output connector LEFT
- 4.- Right line output connector RIGHT



## 5.6. BC-2560-C STEREOPHONIC + SUM MONOPHONIC OUTPUT+INPUT BYPASS MODULE

### 5.6.1. Functional description

The Stereophonic + Sum Monophonic + Input Bypass **BC-2560-C** output module performs the function of combining all the inputs signals assigned to it and a switch allows the signal or these signals combined, or and external input, to be sent to the output.

The normal use of this module is Master 1 output.

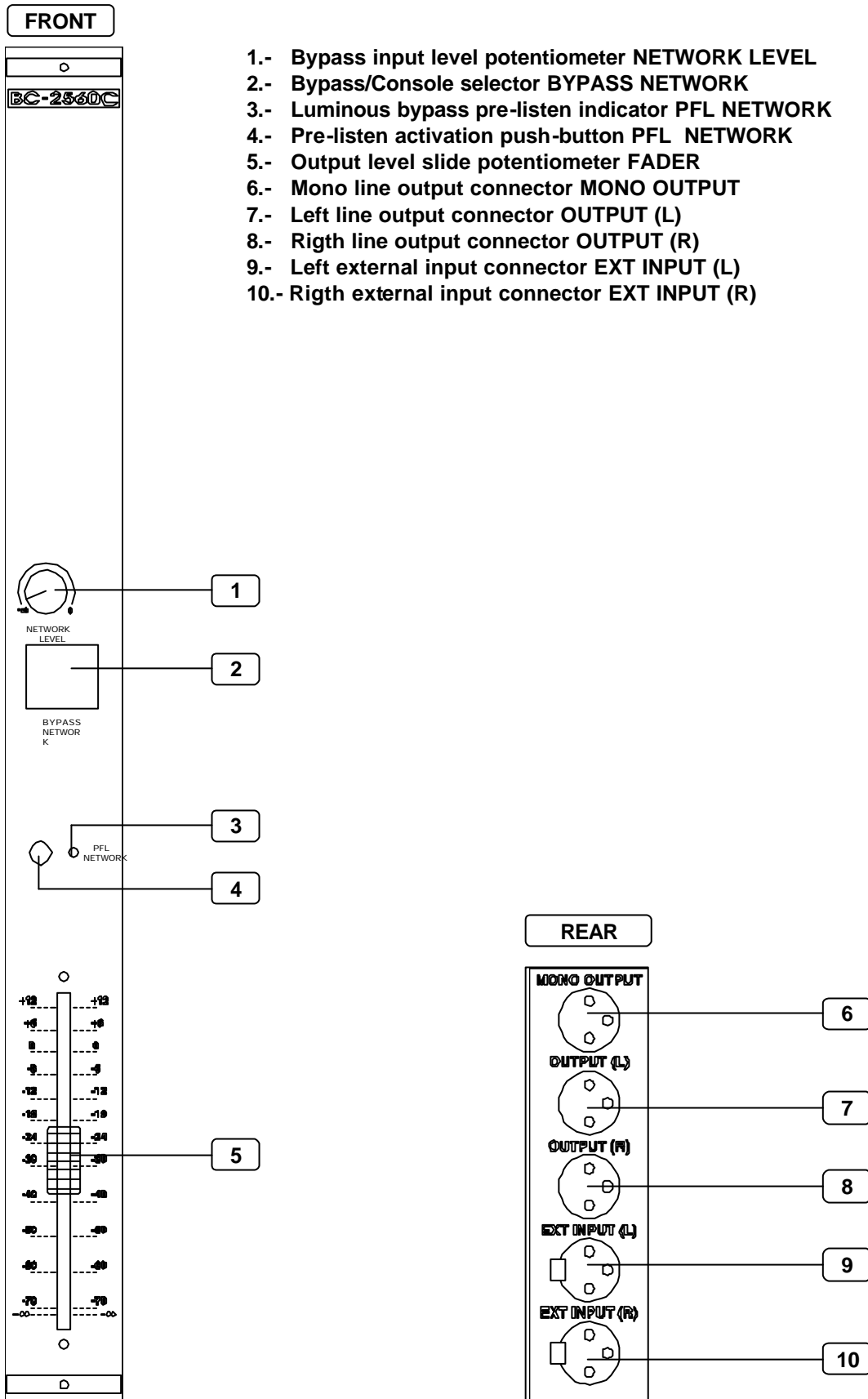
This switched output function permits, in the case of networks with chain programming, to use their chain input, switchable directly with the output, to send this program in chain directly to “air” and to free mixing console to carry out other functions.

The **BC-2560-C** can be programmed for connection to any of the output buses: Master 1, Master 2, Auxiliary 1 and/or Auxiliary 2. This operation is performed during manufacture. To alter this specification consult section 7.1. **It should be noted that two BC-2560-A modules must never be connected to the same bus.**

The output level is controlled by the slide fader **(5)**. The monophonic output at connector **(6) MONO OUTPUT**, together with the stereo output at connector **(7) OUTPUT (L) and (8) OUTPUT (R)** corresponding to the left and right channels respectively are delivered to the output.

The external chain signal input enters by connector **(9) EXT INPUT (L) and (10) EXT INPUT (R)** and is activated by switch **(2) BYPASS NETWORK**. The input gain is controlled by potentiometer **(1) NETWORK LEVEL** and a push-button **(4) PFL NETWORK** to send to pre-listen bus, the status is reflected by the illumination of the led **(3) PFL NETWORK**.

5.6.2. Description of Controls and Connectors.



AEQ BC-2500  
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## **5.7. BC-2578 MONITORING, CONTROL AND SIGNALING MODULE.**

### **5.7.1. Functional description**

The function of the Monitoring, Control and Signaling **BC-2578** module is the monitoring of the studio and control, management of the command and intercom sends, control of the oscillator, input of time schedules and administration of the signal circuit. It also controls the VU-meters and pre-listen loudspeakers situated at the front of the chassis.

This module has two external stereo inputs for the monitoring of external signals.

The module can be subdivided into the following blocks:

- Control Monitor, Meters and Pre-listen Block
- Studio Monitor Block
- Command, Intercom, Oscillator and Time-signal administration Block
- Signal, Studio and Control Monitor cut Administration Block
- Remote functions Block

#### **5.7.1.1. Control Monitor, Meters and Pre-listen Block.**

This unit administers the sends to the control monitor output, the sends to the VU-meter panel particularly the signal selected by the monitor selector **SELECT**, and control of the loudspeakers and reset of the pre-listen circuit.

The following signal can be monitored:

- Master 1, by selecting **(3) MASTER 1**
- Master 2, by selecting **(4) MASTER 2**
- Auxiliary 1, by selecting **(5) AUX.1**
- Auxiliary 2, by selecting **(6) AUX.2**
- External Input 1, by selecting **(7) EXT.1**
- External input 2, by selecting **(8) EXT.2**
- Pre-listen, by selecting **(9) PFL**

The level of the signal or signals selected for monitoring is adjusted by the potentiometer **(10) MONITOR LEVEL**.

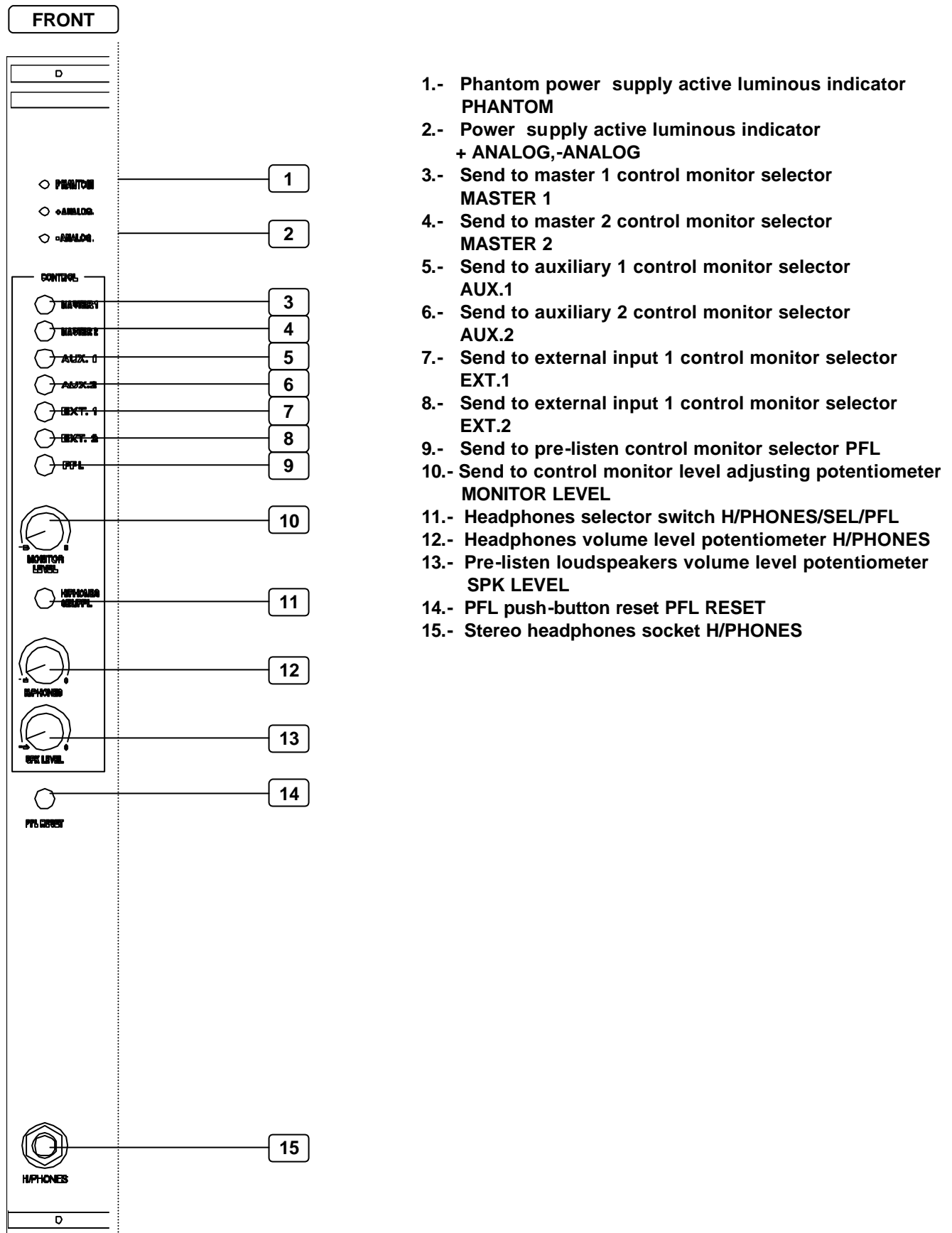
The output for the headphones **(15) H/PHONES** is situated at the lower part of the module, the output level is adjusted with the potentiometer **(12) H/PHONES**.

The signal for headphone monitoring is selected by **(11) H/PHONES SEL/PFL**. When this feature is not activated the signals selected by the selector are monitored and when activated, the signals sent to the PFL bus from any of the input modules are monitored.

The volume of the pre-listen monitor loudspeakers is regulated with potentiometer **(13) SPK LEVEL**.

Push-button **(14) PFL RESET** can de-activate, in one action, all the PFL push-button that have been pushed.

5.7.1.1.1. Description of Controls.



### 5.7.1.2. Studio Monitor Block

This unit controls the sends to the principal studio monitor outputs together with the primary and secondary headphone circuits.

The following signals can be monitored:

- Master 1, by selecting **(1) MASTER 1**
- Master 2, by selecting **(2) MASTER 2**
- Auxiliary 1, by selecting **(3) AUX.1**
- Auxiliary 2, by selecting **(4) AUX.2**
- External Input 1, by selecting **(5) EXT.1**
- External input 2, by selecting **(6) EXT.2**
- Pre-listen, by selecting **(7) PFL**

The level of the signal or signals selected for monitoring is adjusted by the potentiometer **(8) MONITOR LEVEL.**

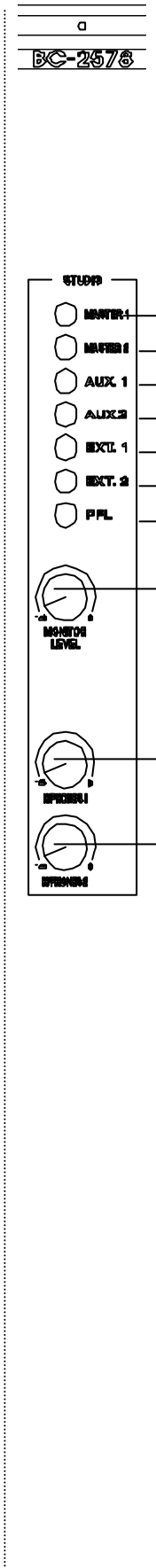
**Note:** This monitor is disconnected when a **BC-2511** module is activated in **MICRO** position and programmed to operate in studio area.

The output connector for the primary headphones is situated at the rear connector of the module; the output level is adjusted with the potentiometer **(9) H/PHONES 1**

The output connector for the secondary headphones is situated at the rear connector of the module; the output level is adjusted with the potentiometer **(10) H/PHONES 1**

5.7.1.2.1. Description of controls.

**FRONT**



- 1.- Send to master 1 studio monitor selector MASTER 1
- 2.- Send to master 2 studio monitor selector MASTER 2
- 3.- Send to auxiliary 1 studio monitor selector AUX.1
- 4.- Send to auxiliary 2 studio monitor selector 2 AUX.2
- 5.- Send to external input 1 studio monitor selector EXT.1
- 6.- Send to external input 2 studio monitor selector EXT.2
- 7.- Send to pre-listen studio monitor selector PFL
- 8.- Principal studio monitor send level adjustment potentiometer MONITOR LEVEL
- 9.- Principal headphone volume level adjustment potentiometer H/PHONES 1
- 10.- Secondary headphone volume level adjustment potentiometer H/PHONES 2

### 5.7.1.3. Command, Intercom, Oscillator and Time-signal administration Block

This block administers the command sends and intercom circuit returns, the oscillator circuit sends and the reception of time signal tones.

The command circuit signals are generated by the microphone **(18) MICRO TALKBACK** that is activated by the push-button switch **(20) TALKBACK** and can be directed to all or any of the following outputs:

- Master 1 activating the switch **(8) MASTER 1**
- Master 2, activating the switch **(9) MASTER 2**
- Auxiliary 1, activating the switch **(10) AUX.1**
- Auxiliary 2, activating the switch **(11) AUX.2**
- Telephone 1, activating the switch **(12) PHONE 1**
- Telephone 2, activating the switch **(13) PHONE 2**
- Studio monitor activating the switch **(14) STUDIO**
- Principal headphones activating the switch **(15) H/PHONES 1**
- Secondary headphones activating the switch **(16) H/PHONES 2**
- Intercom output activating the switch **(17) INTERCOM OUTPUT**

**Note:** To avoid the effects of microphone feedback to the control loudspeakers, the monitor signal level is attenuated when the control microphone is activated.

The intercom circuit input is activated by the switch **(21) INTERCOM INPUT**. When an audio signal is received it is heard in the PFL monitors.

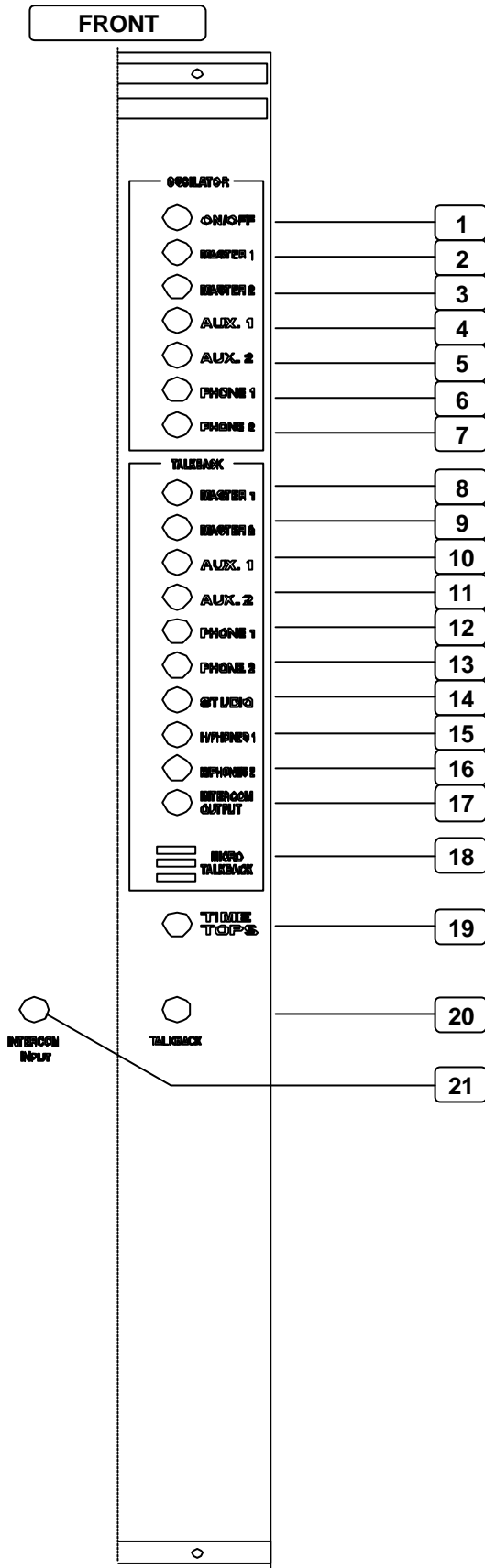
The audio signals generated by the oscillator circuit are activated with switch **(1) ON/OFF** and can be directed to all or any of the following outputs:

- Master 1, activating the switch **(2) MASTER 1**
- Master 2, activating the switch **(3) MASTER 2**
- Auxiliary 1, activating the switch **(4) AUX.1**
- Auxiliary 2, activating the switch **(5) AUX.2**
- Telephone 1, activating the switch **(6) PHONE 1**
- Telephone 2, activating the switch **(7) PHONE 2**

**Note:** The output level is adjusted with the fader corresponding to the output that is activated.

This module has an input for the introduction of the output or outputs previously programmed by P.D.P. (programmable bridges) of the audio signals corresponding to the time signal tones. This input is activated with the switch **(19) TIME TOP'S**.

### 5.7.1.3.1. Description of Controls.



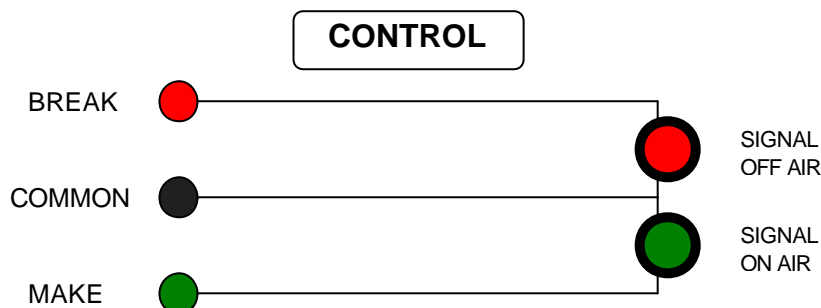
- 1.- Oscillator activation switch ON/OFF
- 2.- Oscillator send to master 1 switch MASTER 1
- 3.- Oscillator send to master 2 switch MASTER 2
- 4.- Oscillator send to auxiliary 1 switch AUX. 1
- 5.- Oscillator send to auxiliary 2 switch AUX. 2
- 6.- Oscillator send to teleph 1 switch PHONE 1
- 7.- Oscillator send to teleph 2 switch PHONE 2
- 8.- Commands send to master 1 switch MASTER 1
- 9.- Commands send to master 2 switch MASTER 2
- 10.- Commands send to auxiliary 1 switch AUX.1
- 11.- Commands send to auxiliary 2 switch AUX.2
- 12.- Commands send to telephone 1 switch PHONE.1
- 13.- Commands send to telephone 2 switch PHONE.2
- 14.- Commands send to studio switch STUDIO
- 15.- Commands send to primary headphones switch H/PHONES 1
- 16.- Commands send to secondary headphones switch H/PHONES 2
- 17.- Commands send to intercom switch INTERCOM OUTPUT
- 18.- Command microphone MICRO TALKBACK
- 19.- Time signal input switch TIME TOP'S
- 20.- Command microphone activation switch TALKBACK
- 21.- Intercom input activation switch INTERCOM INPUT

#### 5.7.1.4. Signal, Studio and Control Monitor cut Administration Block

This block administers the Control and Studio monitor cut and Signal circuits. There are two independent signal “ON AIR” circuits, Studio and Control that is activated when signals are received from programmed **BC-2511**, **BC-2521** and **BC-2522** input modules.

The rear panel houses the connectors necessary to feed a direct 24-volt power supply, without external transformers or relays, to two luminous signaling circuits. Each of the **CONTROL** and **STUDIO** circuits is provided with connections for two signal outputs, **(1) BREAK**, **(2) MAKE** and **(3) COMMON**.

Operational outline diagram of the CONTROL circuit:



A potential difference of 24 volts exists between the **MAKE** and **COMMON** connectors when one of the programmed channel is active (see Section 7.1.). When the programmed channels are disabled the **BREAK** and **COMMON** outputs will have a potential difference of 24 volts.

The functional diagram for the **STUDIO** circuit is similar to the channels that are programmed to activate the signal circuits.

This block also administers the **CONTROL** and **STUDIO** monitor cut. The operation is associated to the activation of the signal circuits, i.e. when the Control circuit output **MAKE** is activated, the output to the monitors in the same area is deactivated. This avoids the possibility of the monitors feeding back to the microphones connected to the channels programmed to function in the Control area in order to operate in the zone of Control.

The operation of **STUDIO** monitor cut is similar for the channels that are programmed to operate in the Studio area.

**Note:** The maximum permissible combined 24V circuit load is 30VA. For higher loads an external relay must be used.

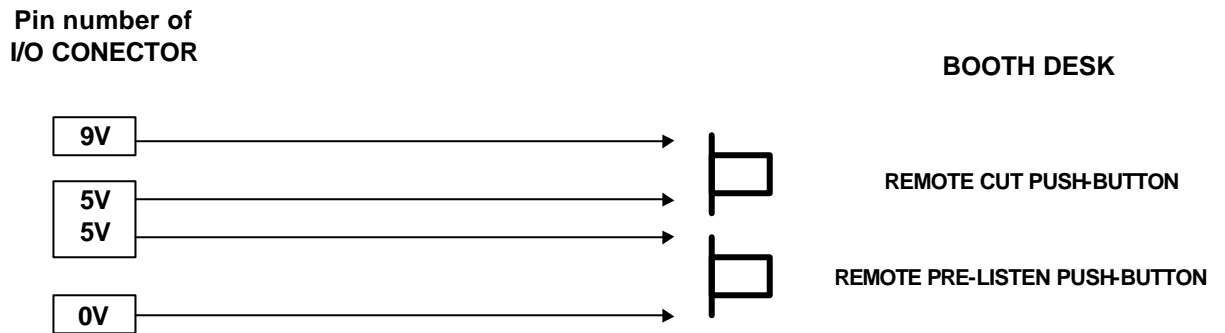
**Note:** The fuse that protects the 24v circuit is located in the BC2523 power supply module. See chapter 5.8.2.

### 5.7.1.5. Remote functions Block.

This module has the following remote functions:  
Remote Cut (**REMOTE MUTE**) and Remote Pre-listen (**PFL REMOTE**).

The relevant connectors are situated in the rear connector **I/O CONNECTOR**

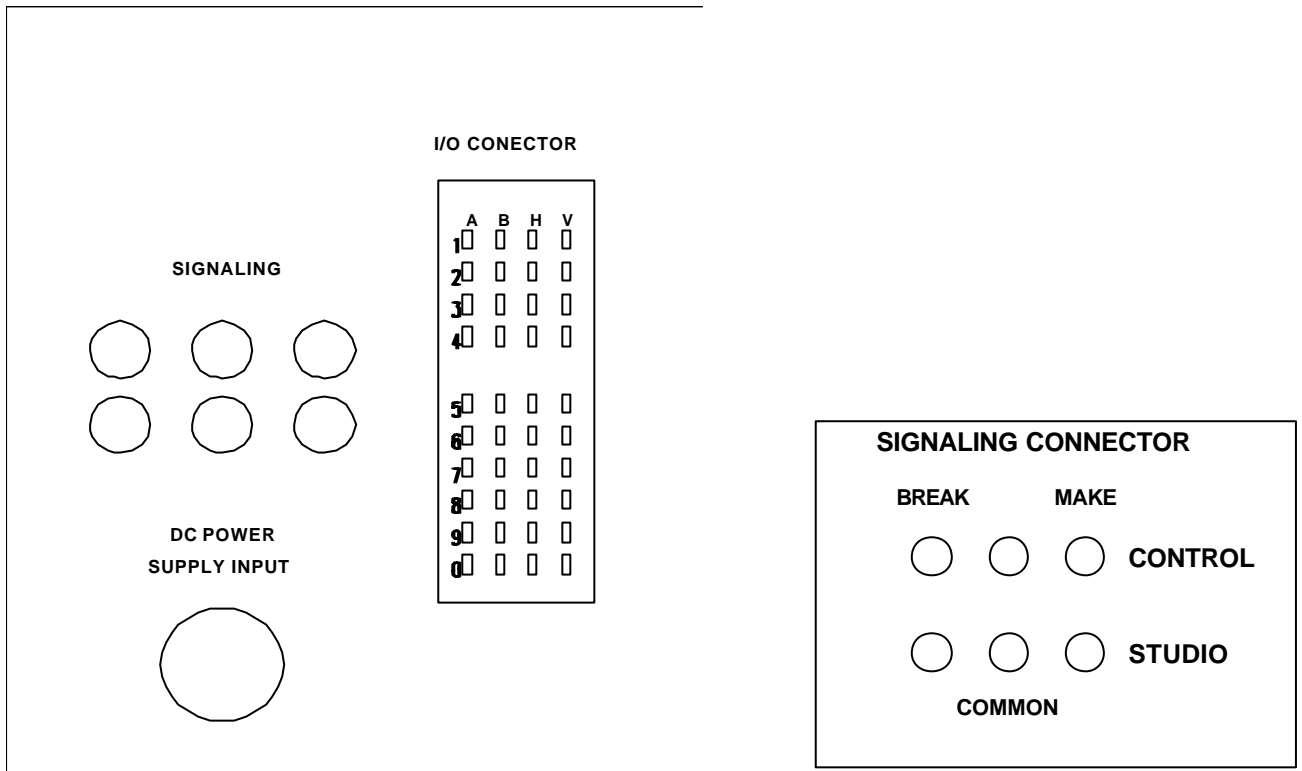
Operational outline diagram of the Remote Cut and Remote Pre-listen circuit:



When the Remote Cut push-button is activated all the programmed input channels are deactivated (see section 7.1.).

When the Remote Pre-Listen push-button is activated, the pre-listen for all the programmed channels are activated (see section 7.1.).

### 5.7.2. Description of rear connectors.



#### I/O CONNECTOR

1A- Primary headphones (Left)  
 2A- Primary headphones (Right)  
 3A- Secondary headphones (Left)  
 4A- Secondary headphones (Right)  
 5A- Common headphones  
 6A- Intercom input (V+)  
 7A- Intercom input (V-)  
 8A- Intercom output (V+)  
 9A- Intercom output (V-)  
 0A- Intercom common

1B- Studio monitor output left (V+)  
 2B- Studio monitor output left (V-)  
 3B- Studio monitor output right (V+)  
 4B- Studio monitor output right (V-)  
 5B- Studio monitor common  
 6B- Control monitor output left (V+)  
 7B- Control monitor output left (V-)  
 8B- Control monitor output right (V+)  
 9B- Control monitor output right (V-)  
 0B- Control monitor common

1H- Left external input 1 (V+)  
 2H- Left external input 1 (V-)  
 3H- Right external input 1 (V+)  
 4H- Right external input 1 (V-)  
 5H- External input 1 common  
 6H- Left external input 2 (V+)  
 7H- Left external input 2 (V-)  
 8H- Right external input 2 (V+)  
 9H- Right external input 2 (V-)  
 0H- External input 2 common

1V- Not Used  
 2V- Not Used  
 3V- Time-top's input (V+)  
 4V- Time-top's input (V-)  
 5V- Time-top's input common/ cut and pre-listen  
 6V- Not Used  
 7V- Not Used  
 8V- Not Used  
 9V- Remote Cut  
 0V- Remote Pre-listen

## 5.8. BC-2523 EXTERNAL POWER SUPPLY MODULE.

### 5.8.1. Functional description.

The external power supply module **BC-2523** supplies the power required by the console functions and the signaling circuits (*on air/off air*).

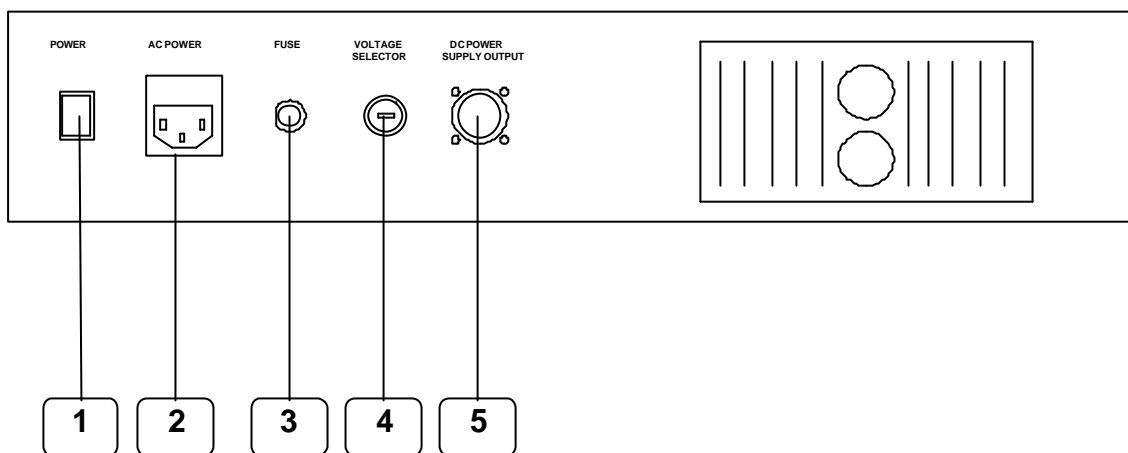
The following are situated on the module rear panel:

The ON/OFF switch **POWER (1)**, the power cable connector and fuseholder **AC POWER (2)**, the signalling fuseholder **FUSE (3)**, the voltage selector **VOLTAGE SELECTOR (4)** and the power output connector **DC POWER SUPPLY OUTPUT (5)**.

**Note:** The console is connected by a multi-strand cable with the relevant connectors and cross section for this specific purpose. This cable must not be modified or changed. However if a longer cable is required, contact the **AEQ S.A.** Technical Department. Maximum length is 2,5 meters.

### 5.8.2. Description of Controls and Connectors.

#### REAR PANEL



- 1.- Power supply switch POWER/ON
- 2.- AC power connector and fuseholder AC POWER
- 3.- Signalling Fuseholder FUSE
- 4.- Voltage selector VOLTAGE SELECTOR
- 5.- Console power supply output connector DC POWER SUPPLY OUTPUT

220v AC power fuse = 1.6A Slow (T)

110v AC power fuse = 2.5A Slow (T)

24V DC Signalling fuse = 1A

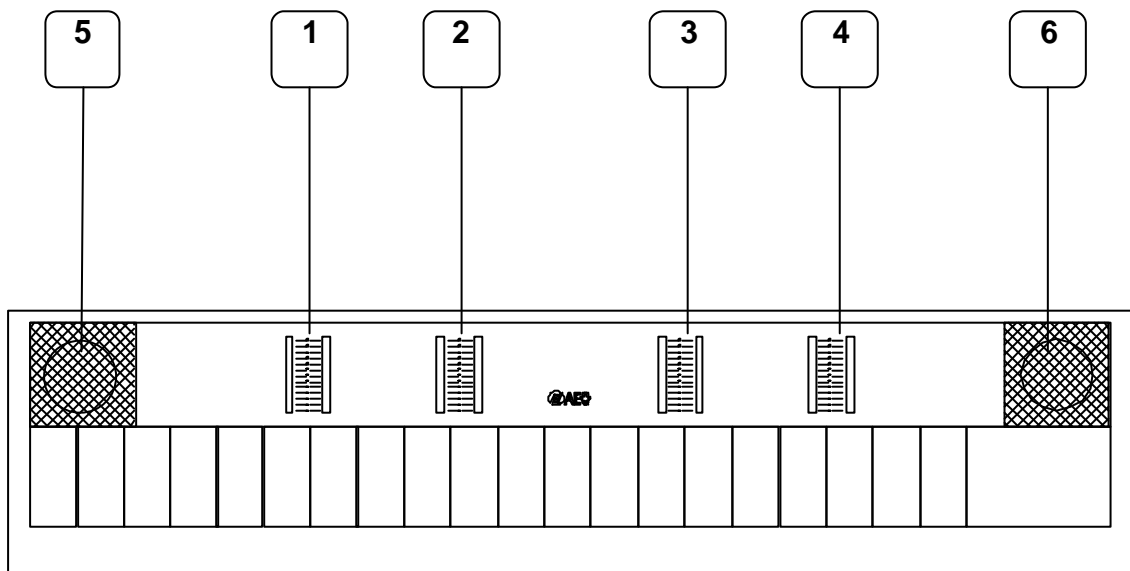
## 5.9. BC-2501 CHASSIS AND METER PANEL MODULE.

### 5.9.1. Functional description

The **AEQ BC-2500** console is constructed on a metallic chassis with a capacity of 20 modules (BC-2501 FM or 24 modules (BC-2501) always occupy a minimum of 4 modules, being the minimum number necessary for console operation (modules **BC-2578 & BC-2560**).

The chassis incorporates a panel housing the console pre-listen stereo loudspeakers and meters.

The meter panel houses 4 meters with stereo bar-graph and simultaneous displays for monitoring the outputs from: Master 1 **MASTER 1 (1)**, Master 2 **MASTER 2 (2)**, pre-listen or pre-listens activated **PFL (3)** and the parameters selected by the monitor module and **SELECT (4)** control (see chapter 5.7. section 5.7.1.1.).



- 1.- Master 1 output meter MASTER 1
- 2.- Master 2 output meter MASTER 2
- 3.- Selected pre-listen meter PFL
- 4.- Selected control monitor meter SELECT
- 5.- Left channel pre-listen loudspeaker
- 6.- Righth channel pre-listen loudspeaker

## 6. TECHNICAL SPECIFICATIONS

### 6.1 INPUTS

#### 6.1.1. Microphone input.

Transformer Balanced.

Input Impedance:	>3 Kohms	
Input Range:	-91 dBv	Fader max, Master = 0
	-17 dBv	
Equivalent noise:	-122 dBv. 200 Ohms, 20 Hz-20 KHz	
Fader Range:	-∞ / +12 dB	

#### 6.1.2. Line Input.

Transformer Balanced.

Input Impedance:	>6K5 Ohms	
Input Range:	-34 dBv	Fader max, Master = 0
	+25 dBv	
Fader Range:	-∞ / +12 dB	

#### 6.1.3. Input/Output in BC-2511 Module.

Output Impedance:	< 1K8 Ohms	
Nominal Output Level:	-6 dBv	Input 0 dBv, Fader = 0 Master = 0
Input Impedance:	> 50 Kohms	
Input Range:	-12 dBv	Fader max, Master = 0
	+25 dBv	

#### 6.1.4. Hybrid telephone IN/OUT in BC-2533 Module.

Output Impedance:	< 100 Ohms	
Output Level:	+4 dBv	Fader Master = 0, Fader Channel = 0. phone channel send max. Gain 2533 max.
Input Impedance:	> 8 Kohms	
Input Range:	-18 dBv	Fader max, Master = 0
	+25 dBv	

#### 6.1.5. External Inputs 1 and 2 in BC-2578 Module.

Electronic Symmetry.

Input Impedance:	> 5 Kohms	
Input Level:	+ 1dB for 4 dBv in monitor output	

#### 6.1.6. Sends and Equalization.

Send Auxiliary 1:	-∞ / +12 dBv
	-∞ / 0 dBv pre-fader
Send Auxiliary 2:	-∞ / +12 dBv
	-∞ / 0 dBv pre-fader
Send Phone 1:	-∞ / +12 dBv
Send Phone 2:	-∞ / +12 dBv
Send Master 1:	-∞ / +12 dBv
Send Master 2:	-∞ / +12 dBv.
Equalization:	Bass: +/-16 dB to 150 Hz Treble: +/-16 dB to 10 KHz Middle: Parametric 300 Hz / 6 KHz +/-9 dB

#### 6.1.7. Network Input.

Transformer Balanced.

Input Impedance:	>6K5 Ohms
Input Level:	0 dBv for +4 dB output



**Note:** Master Output Level = + 4 dBv



## 6.2 OUTPUTS

### 6.2.1. Master and Auxiliary Stereo Outputs.

Output Impedance: < 75 Ohms  
Nominal Output Level: +4 dBv  
Maximum Output Level: + 18 dBv: D<0.2%, 30 Hz-20 KHz  
+ 25 dBv: D<0.2%, 60 Hz-20 KHz  
+ 27 dBv: D<0.2%, 72 Hz-20 KHz  
Band Width to 1.5 dB: 20 Hz-20 KHz  
Absolute Output noise: -70 dBm.20 Hz-20 KHz, Fader master max  
(all sends cut)  
-78 dBm.20 Hz-20 KHz, Fader master 0  
(all sends cut)  
-95 dBm.20 Hz-20 KHz, Fader master -70  
(all sends cut)

### 6.2.2. Control/Studio Monitor Outputs.

Control Monitor Output Impedance: < 75 Ohms  
Output Level: +4 dBv Maximum Monitor Level.  
Absolute Noise: <-72 dBv  
Headphone Output Impedance : <70 Ohms  
Output Level: +20 dBv Max H/Phones Level.

### 6.2.3. Intercom.

Input Impedance: >4 Kohms  
Input Sensitivity: 10 dBv  
Output Impedance: <75 Ohms  
Output Level: +20 dBv. max

## 6.3. Signaling.

Signal Voltage: +24 VDC, 30 VA, 1A type F fuse

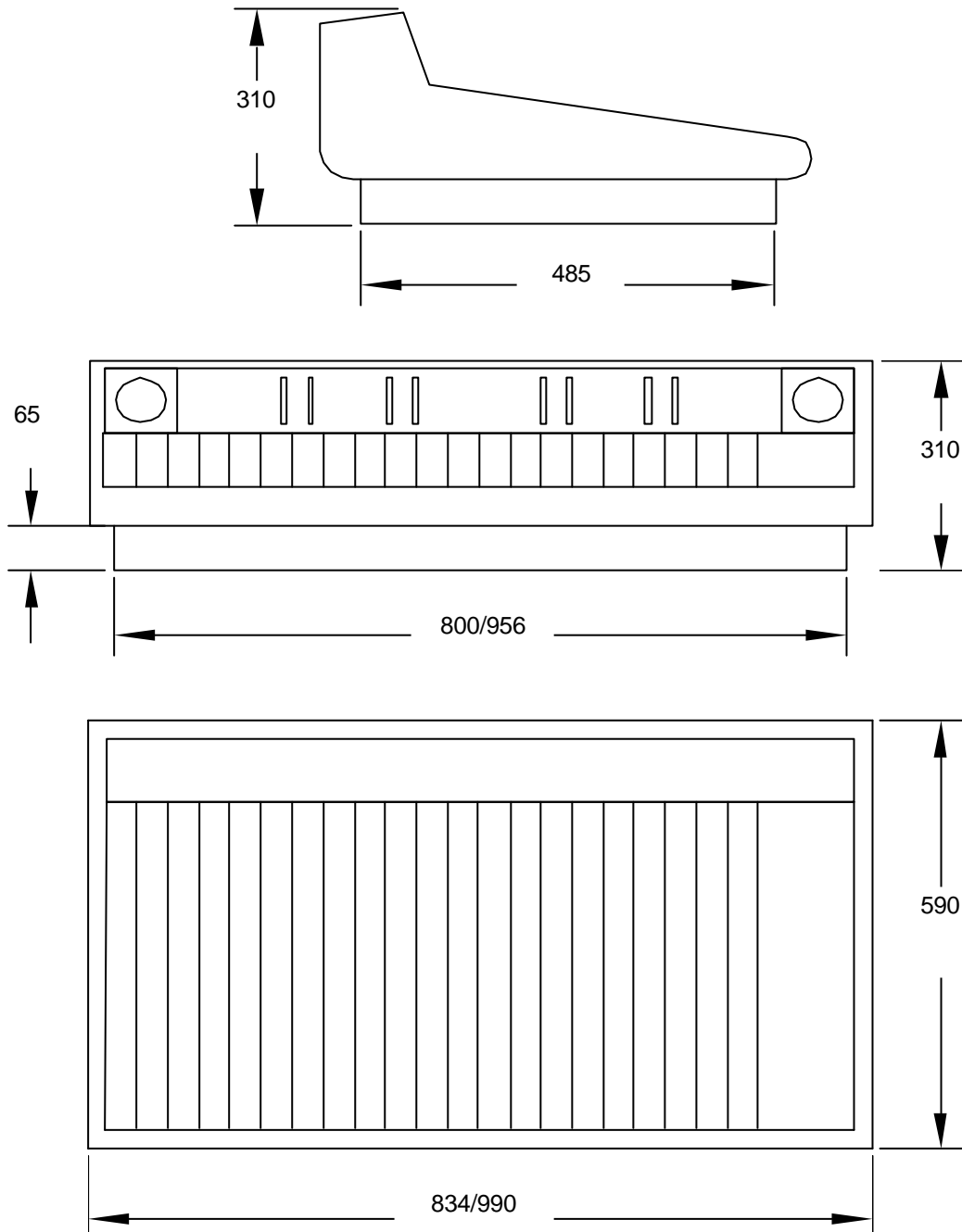
## 6.4. Power Supply.

Power Supply: 110/220 V AC, +6%-10%, 50/60 Hz 220 VA  
**220v AC power fuse = 1.6A Slow (T)**  
**110v AC power fuse = 2.5A Slow (T)**

## 6.5. Dimensions

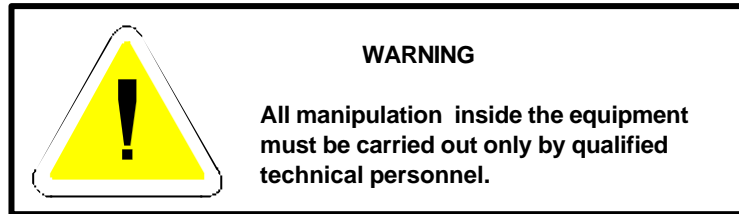
### 6.5.1. 20/24 Module chassis diagram.

AEQ BC-2500 Mixer 20/24 module dimensional chassis diagram. (BC-2501FM/BC2501 of 20 or 24 modules, respectively).




**Note:** All measurements in millimetres.

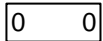
## 7. CONFIGURATION PROGRAMMING BRIDGES



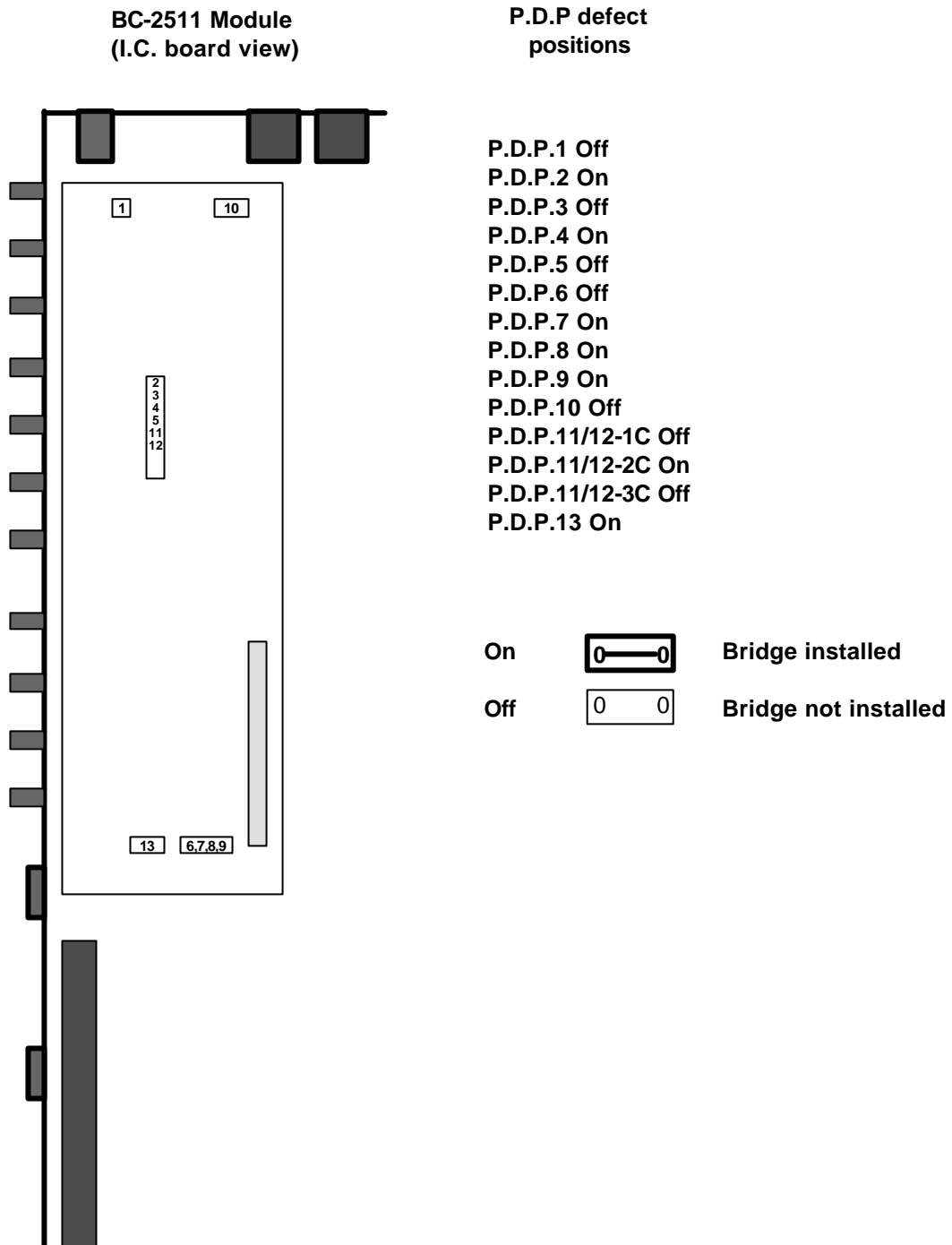
### 7.1. BC-2511 programming bridges.

FUNCTION	P.D.P. position for function activation
Activation of the signal circuit in LINE position .....	<b>P.D.P. 1 On</b>
Deactivation of the signal circuit in LINE position .....	<b>P.D.P. 1 Off</b>
Send to AUX 1 POSTFADER:.....	<b>P.D.P. 2 On &amp; P.D.P. 3 Off</b>
Send to AUX 1 PREFADER:.....	<b>P.D.P. 3 On &amp; P.D.P. 2 Off</b>
Send to AUX 2 POSTFADER:.....	<b>P.D.P. 4 On &amp; P.D.P. 5 Off</b>
Send to AUX 2 PREFADER:.....	<b>P.D.P. 5 On &amp; P.D.P. 4 Off</b>
Activation of the signal circuit and cut the CONTROL zone :.....	<b>P.D.P. 6 On</b>
Deactivation of the signal circuit and cut the CONTROL zone :.....	<b>P.D.P. 6 Off</b>
Activation of the signal circuit and cut the STUDIO zone:.....	<b>P.D.P. 7 On</b>
Deactivation of the signal circuit and cut the STUDIO zone:.....	<b>P.D.P. 7 Off</b>
Activation of the MUTE REMOTE:.....	<b>P.D.P. 8 On</b>
Deactivation of the MUTE REMOTE:.....	<b>P.D.P. 8 Off</b>
Activation of the PFL REMOTE:.....	<b>P.D.P. 9 On</b>
Deactivation of the PFL REMOTE:.....	<b>P.D.P. 9 Off</b>
Activation of MICRO input PHANTOM power supply:.....	<b>P.D.P. 10 On</b>
Deactivation of MICRO input PHANTOM power supply :.....	<b>P.D.P. 10 Off</b>
 The send is activated when the switch CHANNEL ON and FADER are activated:....	 <b>P.D.P. 11-12 On in position 1C</b>
The send is only activated when the CHANNEL ON switch is activated :.....	<b>P.D.P. 11-12 On in position 2C</b>
The send is always activated independent of the CHANNEL ON switch and FADER:.....	<b>P.D.P. 11-12 On in position 3C</b>
Send to BUS PHONE 2 :.....	<b>P.D.P. 13 On</b>

On  **Bridge installed**

Off  **Bridge not installed**


7.2. Position of the BC-2511 module programming bridges.






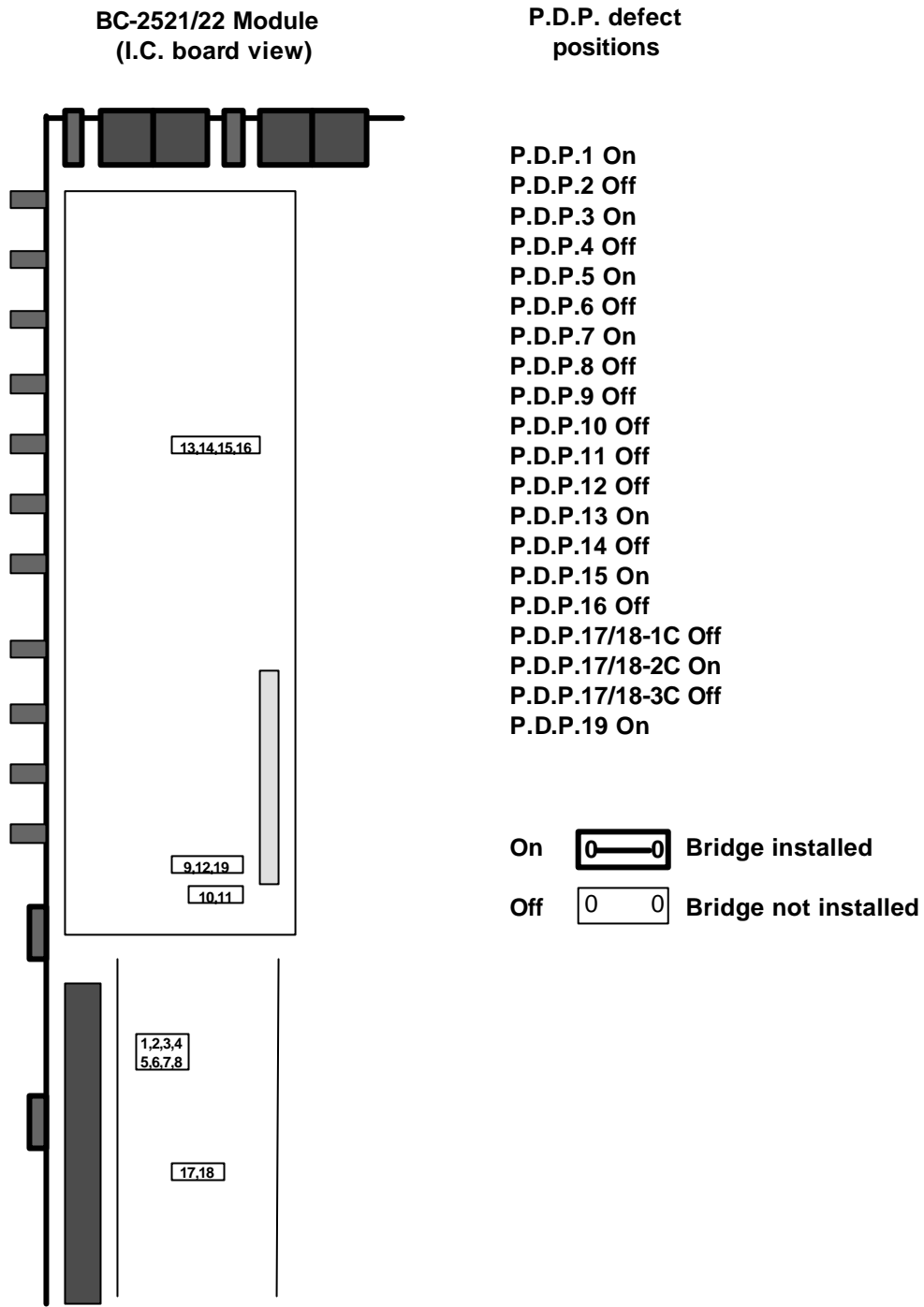
### 7.3. BC-2521/22 programming bridges.

FUNCTION	P.D.P. position for function activation
Send to AUX 1L POSTFADER:.....	P.D.P. 1 On & P.D.P. 2 Off
Send to AUX 1R POSTFADER:.....	P.D.P. 3 On & P.D.P. 4 Off
Send to AUX 1L PREFADER:.....	P.D.P. 2 On & P.D.P. 1 Off
Send to AUX 1R PREFADER:.....	P.D.P. 4 On & P.D.P. 3 Off
Send to AUX 2L POSTFADER:.....	P.D.P. 5 On & P.D.P. 6 Off
Send to AUX 2R POSTFADER:.....	P.D.P. 7 On & P.D.P. 8 Off
Send to AUX 2L PREFADER:.....	P.D.P. 6 On & P.D.P. 5 Off
Send to AUX 2R PREFADER:.....	P.D.P. 8 On & P.D.P. 7 Off
Activation of PFL REMOTE:.....	P.D.P. 9 On
Deactivation of PFL REMOTE:.....	P.D.P. 9 Off
Activation of the signal circuit and cut the CONTROL zone:.....	P.D.P. 10 On
Deactivation of the signal circuit and cut the CONTROL zone:.....	P.D.P. 10 Off
Activation of the signal circuit and cut the STUDIO zone:.....	P.D.P. 11 On
Deactivation of the signal circuit and cut the STUDIO zone:.....	P.D.P. 11 Off
Activation the MUTE REMOTE :.....	P.D.P. 12 On
Deactivation the MUTE REMOTE:.....	P.D.P. 12 Off
REMOTE A output when the contacts are open:.....	P.D.P. 13 On & P.D.P. 14 Off
REMOTE A output when the contacts are closed:.....	P.D.P. 14 On & P.D.P. 13 Off
REMOTE B output when the contacts are open:.....	P.D.P. 15 On & P.D.P. 16 Off
REMOTE B output when the contacts are closed :.....	P.D.P. 16 On & P.D.P. 15 Off
The send is activated when the switch CHANNEL ON and FADER are activated:...	P.D.P. 17-18 On in position 1C
The send is only activated when the CHANNEL ON is activated.:.....	P.D.P. 17-18 On in position 2C
The send is always activated independent of the CHANNEL ON switch and the FADER:.....	P.D.P. 17-18 On in position 3C
Send to BUS PHONE 2 :.....	P.D.P. 19 On

On  Bridge installed

Off  Bridge not installed

#### 7.4. Position of the BC-2521/22 module programming bridges





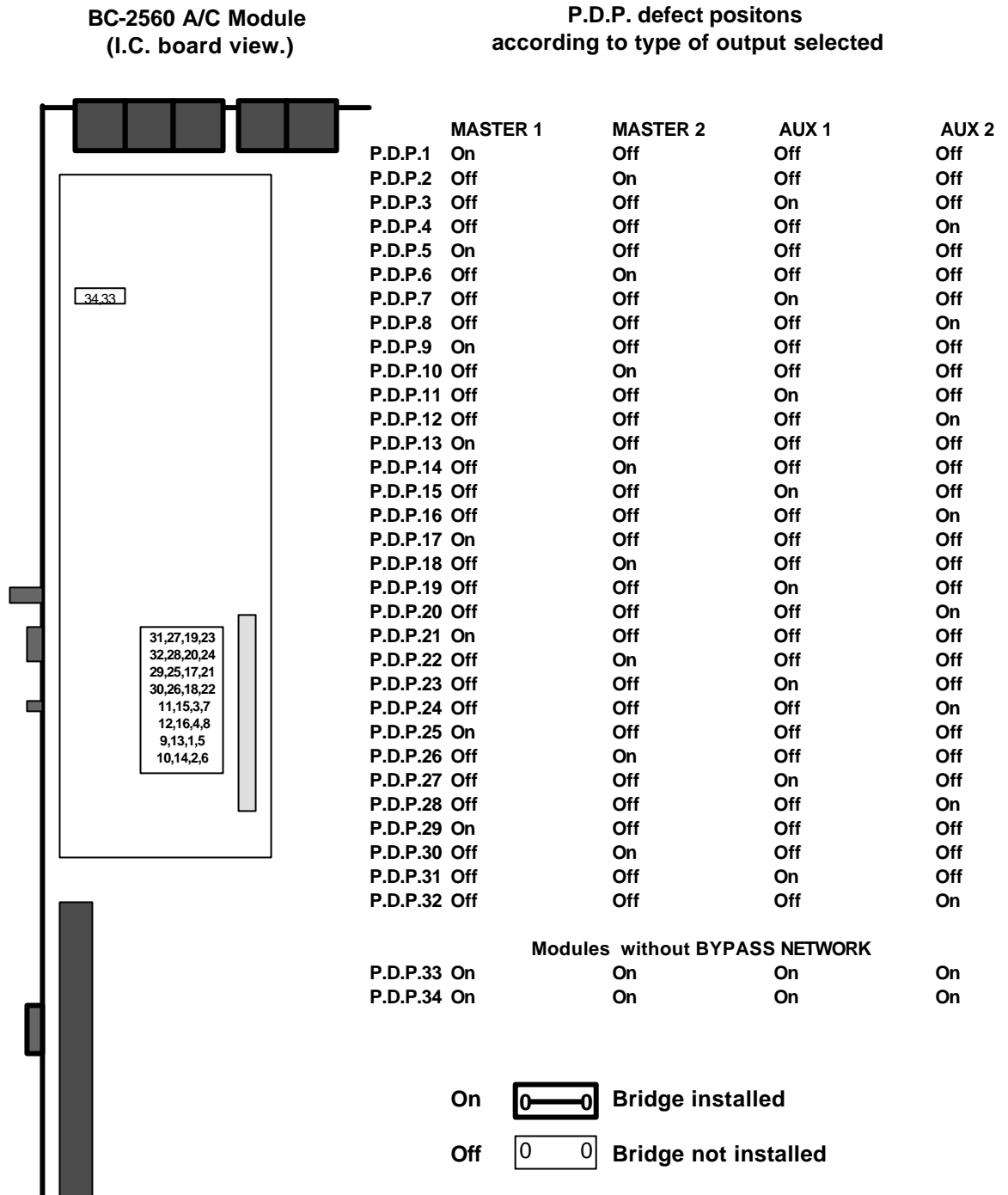
**7.5. BC-2560 A/C programming bridges.**

<b>FUNCTION</b>	<b>P.D.P. position for function activation</b>
Module programmed as output MASTER 1:.....	<b>P.D.P. 1,5,9,13,17,21,25,29,33,34 On.</b>
Module programmed as output MASTER 1 with BYPASS NETWORK option .....	<b>P.D.P. 1,5,9,13,17,21,25,29 On,33 and 34 Off.</b>
Module programmed as output MASTER 2:.....	<b>P.D.P. 2,6,10,14,18,22,26,30,33,34 On.</b>
Module programmed as output MASTER 2 with BYPASS NETWORK option.....	<b>P.D.P. 2,6,10,14,18,22,26,30 On 33 and 34 Off.</b>
Module programmed as output AUXILIARY 1:...	<b>P.D.P. 3,7,11,15,19,23,27,31,33,34 On.</b>
Module programmed as output AUXILIARY 1 with BYPASS NETWORK option .....	<b>P.D.P. 3,7,11,15,19,23,27,31 On 33 and 34 Off.</b>
Module programmed as output AUXILIARY 2:...	<b>P.D.P. 4,8,12,16,20,24,28,32,33,34 On.</b>
Module programmed as output AUXILIARY 2 with BYPASS NETWORK option .....	<b>P.D.P. 4,8,12,16,20,24,28,32 On 33 and34Off.</b>

**Note:** Two **BC-2560 A/C** modules must never be programmed together for the same type of output (MASTER 1, MASTER2, AUXILIARY 1 or AUXILIARY 2).


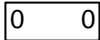
- On  **Bridge installed**
- Off  **Bridge not installed**

### 7.6. Position of the BC-2560 A/C module programming bridges



**Note:** Two **BC-2560 A/C** modules must never be programmed together for the same type of output (MASTER 1, MASTER2, AUXILIARY 1 or AUXILIARY 2).

**7.7. BC-2533 programming bridges.**

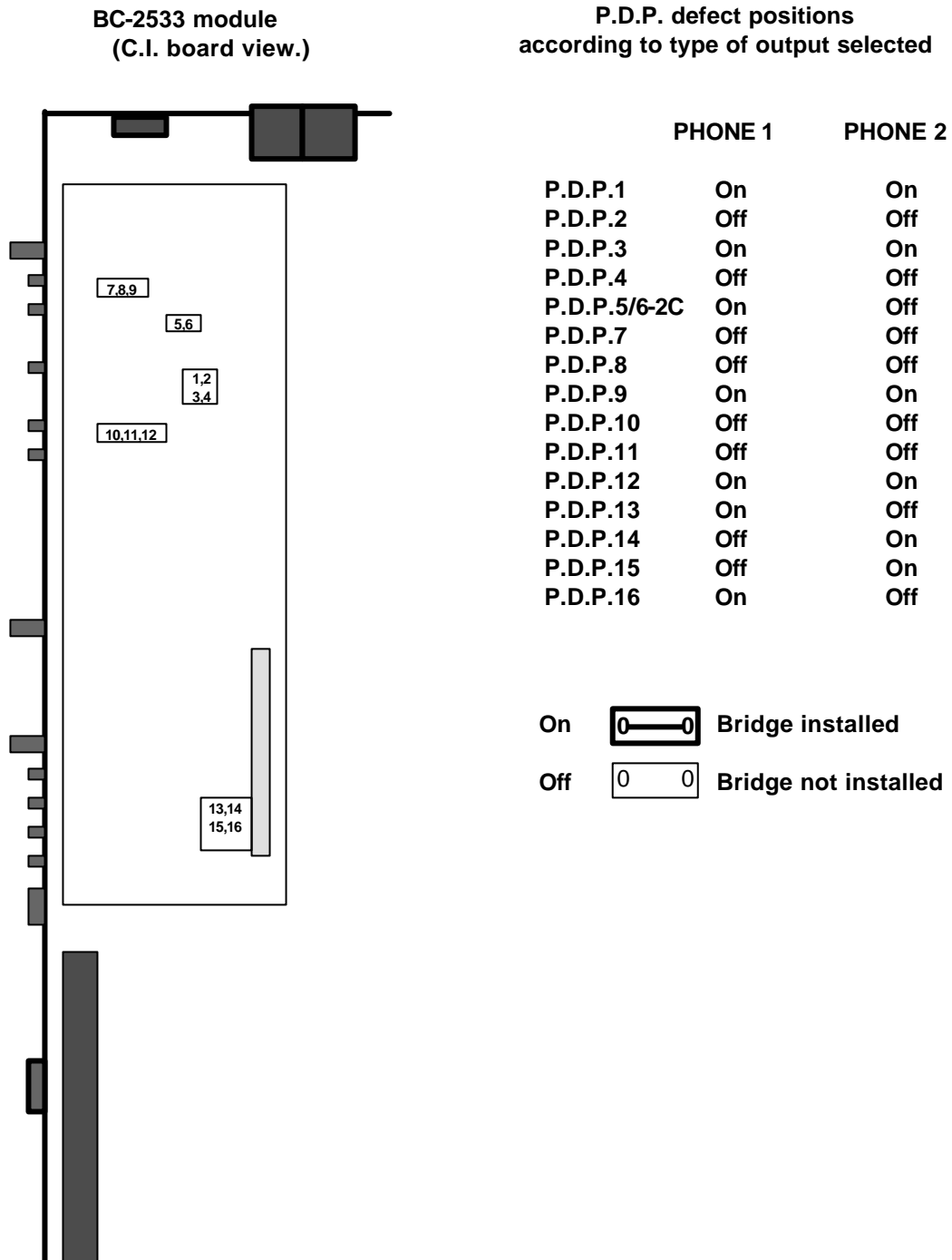
<b>FUNCTION</b>	<b>P.D.P. position for function activation</b>
Send to AUX 1 POSTFADER:.....	<b>P.D.P. 1 On &amp; P.D.P. 2 Off</b>
Send to AUX 1 PREFADER:.....	<b>P.D.P. 2 On &amp; P.D.P. 1 Off</b>
Send to AUX 2 POSTFADER:.....	<b>P.D.P. 3 On &amp; P.D.P. 4 Off</b>
Send to AUX 2 PREFADER:.....	<b>P.D.P. 4 On &amp; P.D.P. 3 Off</b>
The send is activated when the switch CHANNEL ON and FADER are activated :.....	<b>P.D.P. 5-6 On in position 1C</b>
The send is only activated when the CHANNEL ON is activated :.....	<b>P.D.P. 5-6 On in position 2C</b>
The send is always activated independent of the CHANNEL ON switch and the FADER:.....	<b>P.D.P. 5-6 On in position 3C</b>
Programmed module to remote control an AEQ TH-12 hybrid AIR1 .....	<b>P.D.P. 7 Off, P.D.P. 9 On &amp; P.D.P.8 Off</b>
Programmed module to remote control an AEQ TH-12 hybrid AIR2 .....	<b>P.D.P. 10 Off, P.D.P.12 On&amp;PDP11 Off</b>
Activation of pin 5 of the module sub-d remote control connector as contact closer for AIR 1 function when an AEQ TH-02 hybrid is connected:.....	<b>P.D.P. 9 On, P.D.P. 7 Off &amp; PDP8 Off</b>
Activation of pin 3 of the module sub-d remote control connector as contact closer for AIR 2 function when an AEQ TH-02 hybrid is connected:.....	<b>P.D.P.12 On,P.D.P.10 Off&amp;P.D.P11 Off</b>
Module programmed as PHONE 1.....	<b>P.D.P. 13 On &amp; P.D.P. 14 Off</b>
Module programmed as PHONE 2.....	<b>P.D.P. 14 On &amp; P.D.P. 13 Off</b>
Activation of the MULTIPLEX function with a second module programmed as PHONE 2 in a module programmed as PHONE 1:.....	<b>P.D.P. 16 On &amp; P.D.P. 15 Off</b>
Activation of the MULTIPLEX function with a second module programmed as PHONE 1 in a module programmed as PHONE 2:.....	<b>P.D.P. 15 On &amp; P.D.P. 16 Off</b>
On  <b>Bridge installed</b>	
Off  <b>Bridge not installed</b>	



**Note 1:** Two **BC-2533** modules must never be programmed together as PHONE 1.

**Note 2:** Two **BC-2533** modules must never be programmed together as PHONE 2.

### 7.8. Position of the BC-2533 module programming bridges



**Note 1:** Two BC-2533 modules must never be programmed together as PHONE 1.

**Note 2:** Two BC-2533 modules must never be programmed together as PHONE 2.



**7.9. BC-2578 programming bridges**

FUNCTION	P.D.P. position for function activation
T'Back microphone send from T'Back selector to MASTER 1:	<b>P.D.P. 1,2,3 &amp; 4. On.</b>
T'Back microphone send from T'Back selector to MASTER 2:	<b>P.D.P. 5,6,7 &amp; 8. On.</b>
T'Back microphone send from T'Back selector to AUXILIARY 1:	<b>P.D.P. 9,10,11 &amp; 12. On.</b>
T'Back microphone send from T'Back selector to AUXILIARY 2:	<b>P.D.P. 13,14,15 &amp; 16. On.</b>
Time-Top's input signal send to MASTER 1 output :.....	<b>P.D.P. 17,18,19 &amp; 20.</b>
<b>On.</b>	
Time-Top's input signal send to MASTER 2 output.....	<b>P.D.P. 21,22,23 &amp; 24.</b>
<b>On.</b>	
Time-Top's input signal send to AUXILIARY 1 output.....	<b>P.D.P. 25,26,27 &amp; 28. On.</b>
Time-Top's input signal send to AUXILIARY 2:output.....	<b>P.D.P. 29,30,31 &amp; 32.</b>
<b>On.</b>	
Oscillator output tone send to PHONE 2 output when sending to the PHONE output:.....	<b>P.D.P. 33. On.</b>
Talk-Back microphone send from the output PHONE 2 when sending to the PHONE output:.....	<b>P.D.P. 34. On.</b>
Console with PHONE 1 installed.....	<b>P.D.P. 35. Off</b>
Console without PHONE 1 installed .....	<b>P.D.P. 35 On</b>
Console with PHONE 2 installed.....	<b>P.D.P. 36. Off</b>
Console without PHONE 2 installed.....	<b>P.D.P. 36 On</b>

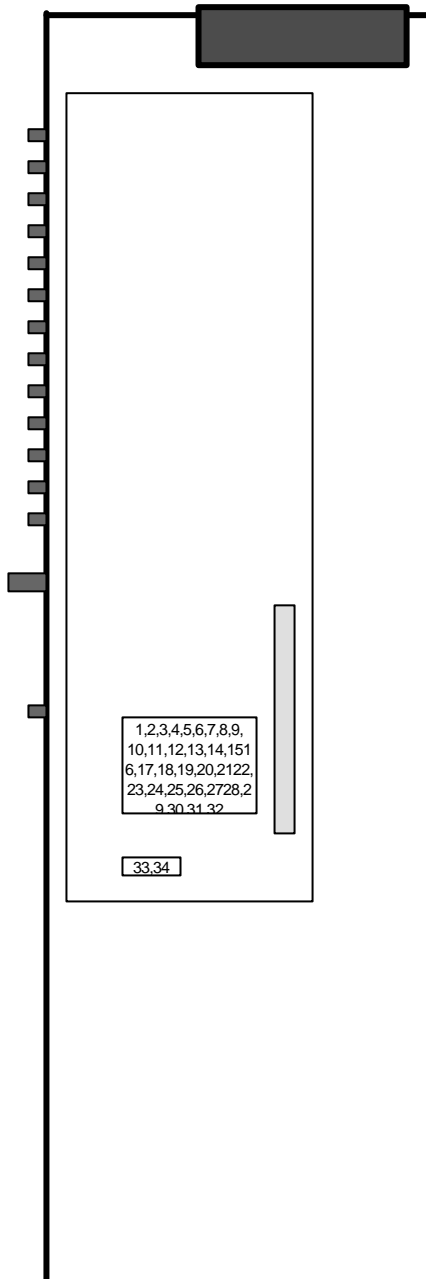
- On  Bridge installed
- Off  Bridge not installed



7.10. Position of the BC-2578 module programming bridges

BC-2578 module  
(I.C. board view)

P.D.P. defect position



- P.D.P.1 On
- P.D.P.2 On
- P.D.P.3 On
- P.D.P.4 On
- P.D.P.5 On
- P.D.P.6 On
- P.D.P.7 On
- P.D.P.8 On
- P.D.P.9 On
- P.D.P.10 On
- P.D.P.11 On
- P.D.P.12 On
- P.D.P.13 On
- P.D.P.14 On
- P.D.P.15 On
- P.D.P.16 On
- P.D.P.17 On
- P.D.P.18 On
- P.D.P.19 On
- P.D.P.20 On
- P.D.P.21 Off
- P.D.P.22 Off
- P.D.P.23 Off
- P.D.P.24 Off
- P.D.P.25 Off
- P.D.P.26 Off
- P.D.P.27 Off
- P.D.P.28 Off
- P.D.P.29 Off
- P.D.P.30 Off
- P.D.P.31 Off
- P.D.P.32 Off
- P.D.P.33 On
- P.D.P.34 On





## **APPENDIX 1: AEQ WARRANTY**

AEQ guarantees that this product has been designed and manufactured under a certified Quality Assurance System and according to the ISO 9001/2002 Standard. AEQ therefore Guarantees that the necessary test protocols to assure the proper operation and the specified technical characteristics of the product have been followed and accomplished. This includes that the general protocols for design and production and the particular ones for this product are conveniently documented.

1. - The present guarantee does not exclude or limit in any way any legally recognized right of the client.

2. - The period of guarantee is defined to be twelve natural months starting from the date of purchase of the product by the first client. To be able to apply to the established in this guarantee, it is compulsory condition to inform the authorized distributor or –to its effect- an AEQ Sales office or the Technical Service of AEQ within thirty days of the appearance of the defect and within the period of guarantee, as well as to facilitate a copy of the purchase invoice and serial number of the product.

It will be equally necessary the previous and expressed conformity from the AEQ Technical Service for the shipment to AEQ of products for their repair or substitution in application of the present guarantee. In consequence, return of equipment that does not comply with these conditions will not be accepted.

3. -AEQ will at its own cost repair the faulty product once returned, including the necessary labour to carry out such repair, whenever the failure is caused by defects of the materials, design or workmanship. The repair will be carried out in any of the AEQ authorized Technical Service Center. This guarantee does not include the freight charges of the product to or from such Authorized Technical Service Center.

4. – No Extension of the Guarantee Period for repaired product shall be applied. Nor shall a Substituted Products in application of this Guarantee be subject to Guarantee Period Extension.

5. - The present guarantee will not be applicable in the following situations:  
Improper use or Contrary use of the product as per the User or Instruction Manual; violent manipulation; exhibition to humidity or extreme thermal or environmental conditions or sudden changes of such conditions; electrical discharges or lightning; oxidation; modifications or not authorized connections; repairs or non-authorized disassembly of the product; spill of liquids or chemical products.

6. - Under no circumstances, whether based upon this Limited Guarantee or otherwise, shall AEQ, S.A. be liable for incidental, special, or consequential damages derived from the use or from the impossibility of using the product.

AEQ shall not be liable for loss of information in the disks or data support that have been altered or found to be inexact, neither for any accidental damage caused by the user or other persons manipulating the product.