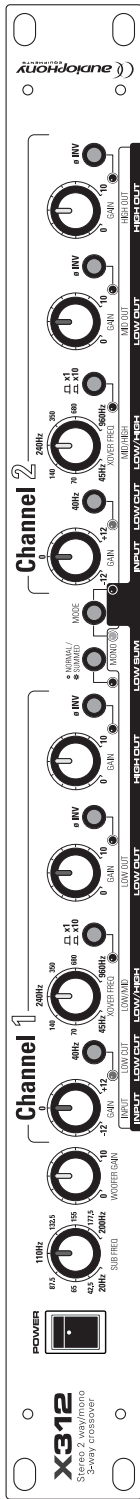


2-way stereo or 3-way mono active filter



X312



1 - Safety information

Important safety information



This unit is intended for indoor use only. Do not use it in a wet, or extremely cold/hot locations. Failure to follow these safety instructions could result in fire, electric shock, injury, or damage to this product or other property.



Any maintenance procedure must be performed by a CONTEST authorised technical service. Basic cleaning operations must thoroughly follow our safety instructions.



This product contains non-isolated electrical components. Do not undertake any maintenance operation when it is switched on as it may result in electric shock.

Symbols used



This symbol signals an important safety precaution.



The WARNING symbol signals a risk to the user's physical integrity. The product may also be damaged.



The CAUTION symbol signals a risk of product deterioration.

Instructions and recommendations

1 - Please read carefully :

We strongly recommend to read carefully and understand the safety instructions before attempting to operate this unit.

2 - Please keep this manual :

We strongly recommend to keep this manual with the unit for future reference.

3 - Operate carefully this product :

We strongly recommend to take into consideration every safety instruction.

4 - Follow the instructions:

Please carefully follow each safety instruction to avoid any physical harm or property damage.

5 - Avoid water and wet locations :

Do not use this product in rain, or near washbasins or other wet locations.

6 - Installation :

We strongly encourage you to only use a fixation system or support recommended by the manufacturer or supplied with this product. Carefully follow the installation instructions and use the adequate tools.

Always ensure this unit is firmly fixed to avoid vibration and slipping while operating as it may result in physical injury.

7 - Ceiling or wall installation :

Please contact your local dealer before attempting any ceiling or wall installation.

8 - Ventilation :

The cooling vents ensure a safe use of this product, and avoid any overheating risk. Do not obstruct or cover these vents as it may result in overheating and potential physical injury or product damage. This product should never be operated in a closed non-ventilated area such as a flight case or a rack, unless cooling vents are provided for the purpose .

9 - Heat exposure :

Sustained contact or proximity with warm surfaces may cause overheating and product damages. Please keep this product away from any heat source such as a heaters, amplifiers, hot plates, etc...

CAUTION

RISK OF ELECTRIC SHOCK

DO NOT OPEN

WARNING : This unit contains no user-serviceable parts. Do not open the housing or attempt any maintenance by yourself. In the unlikely even your unit may require service, please contact your nearest dealer.

In order to avoid any electrical malfunction, please do not use any multi-socket, power cord extension or connecting system without making sure they are perfectly isolated and present no defect.

Sound levels

Our audio solutions deliver important sound pressure levels (SPL) that can be harmful to human health when exposed during long periods. Please do not stay in close proximity of operating speakers.

Recycling your device

- As HITMUSIC is really involved in the environmental cause, we only commercialise clean, ROHS compliant products.
- When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

10 - Electric power supply :

This product can only be operated according to a very specific voltage. These information are specified on the label located at the rear of the product.

11 - Power cords protection:

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at lugs, convenience receptacles and the point where they exit from the fixture.

12 - Cleaning precautions :

Unplug the product before attempting any cleaning operation. This product should be cleaned only with accessories recommended by the manufacturer. Use a damp cloth to clean the surface. Do not wash this product.

13 - Long periods of non use :

Disconnect the unit's main power during long periods of non use.

14 - Liquids or objects penetration :

Do not let any object penetrate this product as it may result in electric shock or fire. Never spill any liquid on this product as it may infiltrate the electronic components and result in electric shock or fire.

15 - This product should be serviced when :

Please contact the qualified service personnel if :

- The power cord or the plug has been damaged.
- Objects have fallen or liquid has been spilled into the appliance.
- The appliance has been exposed to rain or water.
- The product does not appear to operate normally.
- The product has been damaged.

16 - Inspection/maintenance :

Please do not attempt any inspection or maintenance by yourself. Refer all servicing to qualified personnel.

17 - Operating environment :

Ambient temperature and humidity: +5 - +35°C, relative humidity must be less than 85% (when cooling vents are not obstructed). Do not operate this product in a non-ventilated, very humid or warm place.

2 - Our recommendations

The X312 is a device allowing you to modify the volume and structure of an audio signal. This process can create distortions that can be harmful to your sound system.

Please make sure the outgoing signal of your X312 is clear, without distortion, and the output level is adapted to the devices receiving the signal. However, checking the output volume is not enough as a saturated signal can damage your material or cause hearing impairments.

3 - Main characteristics

2-way stereo + Sub or 3-way mono + Sub active filter - 19" edge-rackable.

The X312 is a powerful tool able to separate an audio signal by frequency range.

It is also able to process a stereo audio signal via 2 separated ways or a mono signal via 3 separated ways while handling the basses via an independent output.

- XLR balanced inputs and outputs: +4 dB
- Stereo mode (2 ways + subwoofer) or mono mode (3 ways + subwoofer)
- **Stereo mode:**
 - Incoming signal volume control
 - Basses and trebles cutoff frequency settings per side
 - Basses and trebles volume control per side
 - (Optional) Use the SUB output with gain control and cutoff frequency settings
- **Mono mode:**
 - Incoming signal volume control
 - Basses, mediums and trebles cutoff frequency settings per side
 - Basses, mediums and trebles volume control per side
 - (Optional) Use the SUB output with gain control and cutoff frequency settings

4 - Preparation and installation

4.1 - Checking the contents

The package must contain the following articles:

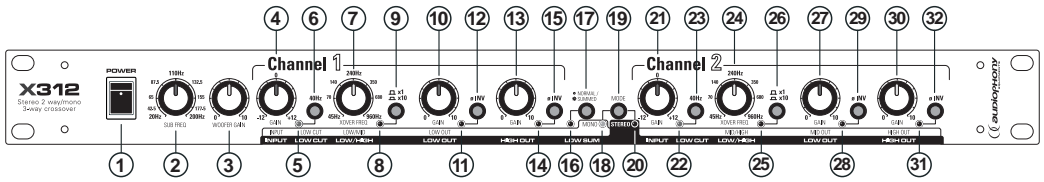
- The X312
- The user guide
- 1 power cord

4-2 - Installing the unit

a - Set up the X312 over a flat surface or within racks.

b - Please make sure the unit is installed in a properly ventilated place, unexposed to sunlight rays, excessive temperatures or humidity.

5 - Description of the command panel



[19] - Allows you to switch from Mono (3 ways) to Stereo (2 ways) mode.
LEDs [18] and [20] indicate the current mode.

5.1 - 2-way Stereo mode:

[1] - Power button

Turns the unit ON or OFF.

[2] - SUB FREQ button

Allows you to configure the cutoff frequency of the SUB OUT socket.

[3] - WOOFER GAIN knob

Allows you to configure the volume of the SUB output.

[4] and [21] - INPUT GAIN knob

Allows you to adjust the volume of each channel by +/-12dB.

[6] and [23] - LOW CUT button

Applies a 40 Hz low frequency filter.

[5] and [22] - LOWCUT LED indicator

Lights up when the LOWCUT function is activated.

[7] and [24] - LOW/HIGH knob

Allows you to configure the bass/treble cutoff frequency.

[8][9] and [25][26] - x10 Multiplier

Multiplies by 10 the frequencies operated by the fader. The frequency range then becomes 450-9600 Hz. A LED indicator lights up when this function is activated.

[10] and [27] - LOW OUT knob

Allows you to control the bass output: +/-12 dB

[12] and [29] - INV button

Allows you to invert the phase of the bass/medium output.

[11] and [28] - INV LED

Lights up when the INV function is activated.

[13] and [30] - HIGH OUT knob

Allows you to control the treble output: +/-12 dB

[15] and [32] - INV button

Allows you to invert the phase of the treble outputs.

[14] and [31] - INV button

Allows you to invert the phase of the treble outputs.

[17] - LOW SUM button

Activates the addition of low frequencies. Once activated, the low frequencies of both inputs are added up and sent as mono signals to both channels. In doing so, it allows you to use only one channel for basses.

[16] - LOW SUM LED

Lights up when the LOW SUM function is activated.

5.2 - 3-way Mono mode:**[1] - Power switch**

Turns the unit ON/OFF.

[2] - SUB FREQ button

Allows you to configure the cutoff frequency of the SUB output.

[3] - WOOFER GAIN knob

Allows you to configure the volume of the SUB output.

[4] - INPUT GAIN knob

Allows you to adjust the volume of each channel by +/-12dB

[6] - LOW CUT button

Applies a 40 Hz low frequency filter.

[5] - LOWCUT LED indicator

Lights up when the LOWCUT function is activated.

[7] - LOW/MIDDLE knob

Allows you to configure the bass/medium cutoff frequency.

[8] & [9]- x10 Multiplier

Multiplies by 10 the frequencies operated by the fader. The frequency range then becomes 450-9600 Hz. A LED indicator lights up when this function is activated.

[10] - LOW OUT knobs

Allows you to control the bass output: +/-12 dB

[12] - INV button

Allows you to invert the phase of the bass/medium output.

[11] - INV LED

Lights up when the INV function is activated.

[13] - HIGH OUT knob

Deactivated in mono mode.

[15]- INV button

Deactivated in mono mode.

[14] - INV LED

Deactivated in mono mode.

[17] - LOW SUM button

Activates the addition of low frequencies. Once activated, the low frequencies of both inputs are added up and sent as mono signals to both channels. In doing so, it allows you to use only one channel for basses.

[24] - MID/HIGH knob

Allows you to configure the medium/treble cutoff frequency.

[25] & [26]- x10 Multiplier

Multiplies by 10 the frequencies operated by the fader. The frequency range then becomes 450-9600 Hz. A LED indicator lights up when this function is activated.

[27] - MID OUT knob

Allows you to control the medium output: +/-12 dB

[29] - INV button

Allows you to invert the phase of the bass/medium output.

[28] - INV LED

Lights up when the INV function is activated.

[30] - HIGH OUT knob

Allows you to control the treble output: +/-12 dB

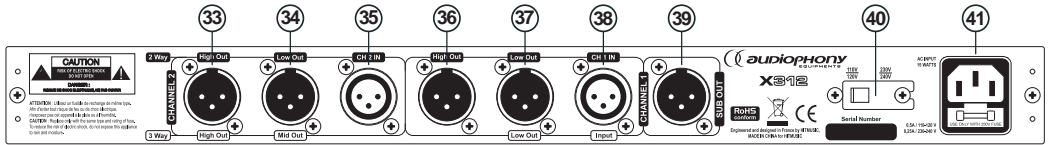
[32] - INV button

Allows you to invert the phase of the treble outputs.

[31] - INV button

Allows you to invert the phase of the treble outputs.

6 - Connectors



6.1 - 2-way Stereo mode:

[33] - HIGH OUT

Channel 2 high frequencies output

[34] -LOW OUT

Channel 2 low frequencies output

[35] - CH2 IN

Channel 2 input

[36] - HIGH OUT

Channel 1 high frequencies output

[37] -LOW OUT

Channel 1 high frequencies output

[38] - CH1 IN

Channel 1 input

[39] - SUB OUT

Subwoofer output

[40] - Voltage selector

Allows you to switch from 110 V to 220 V. Please check the incoming voltage before using this selector.

[41] - Power input socket

Only connect the power cord supplied with the X312. If need to change the fuse, replace it with one with the exact same characteristics.

6.2 3-way Mono mode:

[33] - HIGH OUT

High frequencies mono output

[34] -MID OUT

Medium frequencies mono output

[35] - No function

[36] - No function

[37] -LOW OUT

Low frequencies mono output

[38] - INPUT

Filter input in mono mode

[39] - SUB OUT

Subwoofer output

[40] - Voltage selector

Allows you to switch from 110 V to 220 V. Please check the incoming voltage before using this selector.

[41] - Power input socket

Only connect the power cord supplied with the X312. If need to change the fuse, replace it with one with the exact same characteristics.

8 - Technical specifications

Gentle reminder: 0dBu = 0,775 V RMS

- **Inputs:**
 - XLR connectors
 - Impedance: > 50 kOhms (balanced) - 25 kOhms (unbalanced)
 - Max level: +22 dBu
- **Outputs:**
 - XLR connectors
 - Impedance: balanced 200 Ohms , unbalanced 100 Ohms
 - Max level: +21 dBu
- **Frequency response:**
 - Frequency response: 20 at 20 KHz ; +/- 0,5 dB
 - Bandwidth: 3 Hz at 90 KHz ; +/- 3 dB
- **Noise level :**
 - <-94dBu, 22Hz at 22kHz unweighted
- **Crossover frequency:**
 - Stereo mode: 45 Hz at 960 Hz or 450 Hz at 9.6 kHz
 - Mono Mode:
 - Low/Mid: 45 Hz at 960 Hz or 450 Hz at 9.6 kHz
 - Mid/High: 45 Hz at 960 Hz or 450 Hz at 9.6 kHz
- **Type of filter:**
 - Linkwitz-Riley, 24 dB/Octave
- **Additional characteristics:**
 - Power supply: 230V - 50/60 Hz
 - Power consumption: 15 Watts
 - Dimensions: 483 x 175 x 44 mm
 - Weight: 2 kg

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