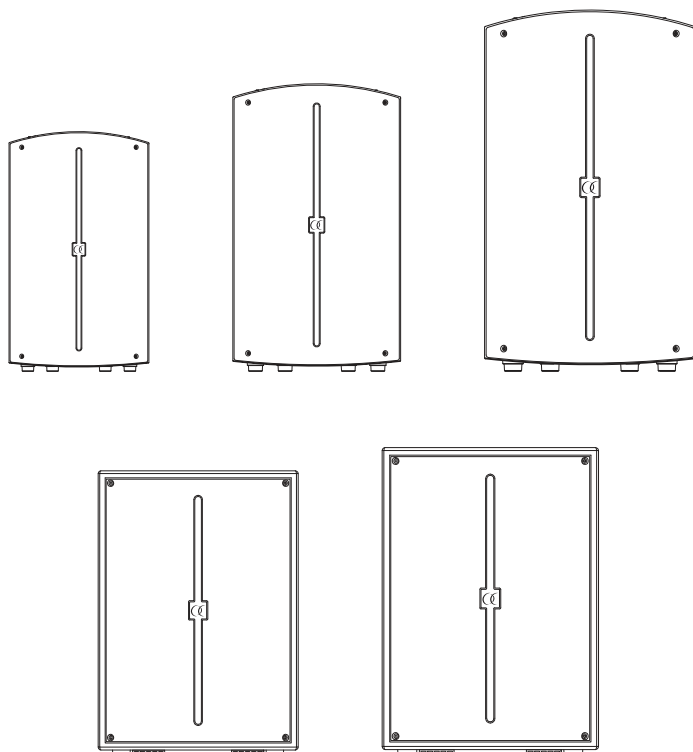


Enceintes amplifiées 10/12/15 pouces 2 voies bass reflex avec DSP  
Caissons de basses amplifiés 15/18 pouces bass reflex avec DSP



-  **ATOM 10A**
-  **ATOM 12A**
-  **ATOM 15A**
-  **ATOM 15ASUB**
-  **ATOM 18ASUB**

# 1 - Safety information

## Important safety information



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.



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.

## Symbols used



This symbol signals an important safety precaution.



The CAUTION symbol signals a risk of product deterioration.



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

## 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...



**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.

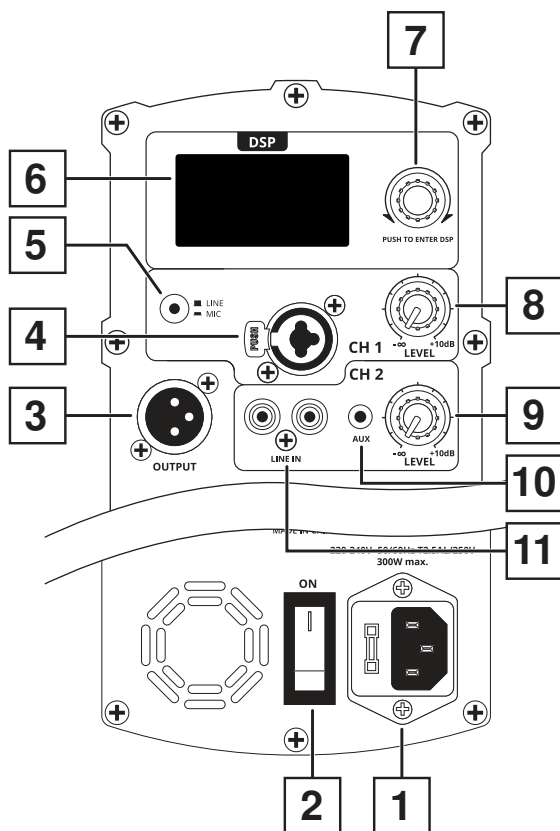
## 2 - Introduction

The ATOM Series speakers and subwoofers are the ideal solution for your live performances. With 300W for the ATOM10A, 400W for the ATOM12A, 400W for the ATOM15A, 600W for the ATOM15ASUB subwoofer and 600W for the ATOM18ASUB subwoofer, the ATOM series products deliver a powerful, clear and warm sound, suitable for both voice and live or recorded music. All equipped with an adjustable DSP, the elements of this series allow you to tune the sound reproduction in an ideal way whatever the configurations of your performances. Fast installation, lightweight and space-saving, they will quickly become the partners of your nomadic services, without compromising quality, power or possibilities.

## 3 - Technical information of the full range speakers

	ATOM10A	ATOM12A	ATOM15A
Bi-amplification	250W RMS Class D for LF 50W RMS Class AB for HF	350W RMS Class D for LF 50W RMS Class AB for HF	350W RMS Class D for LF 50W RMS Class AB for HF
Total power output	1200W dynamic / 300W RMS	1600W dynamic / 400W RMS	1600W dynamic / 400W RMS
Frequency response	60 Hz - 20 KHz	50 Hz - 20 KHz	45 Hz - 20 KHz
Power supply	SMPS		
H x V Dispersion	90° x 60°		
Filter cutoff frequency	2,8 KHz	2,8 KHz	3,4 KHz
Sound Pressure Level	121 dB max.	123 dB max.	124 dB max.
Woofer	10" 2" coil 4 Ohms - 250W AES	12" 3" coil 4 Ohms - 350W AES	15" 3" coil 4 Ohms - 350W AES
Tweeter	1" compression 8 Ohms 50 W RMS	1,35" compression 8 Ohms 50 W RMS	
Input	1 entrée MIC/LINE1 COMBO XLR/JACK MIC/LINE input / 1 RCA/3.5 mini Jack input		
Output	1 XLR line output		
Settings	Multiple settings DSP (refer to paragraph 5 for more details)		
Protection	Short-circuit, thermal and limiter		
Construction and fastenings	2 monitor-specific 45° angles 1 top handle (ATOM10A / ATOM12A / ATOM15A) 1 side handle (ATOM12A et ATOM15A) 2 M10 rigging points (on top) 1 insert M10 derrière 36mm dual positions mounting plate for a speaker stand (0° and 7,5°)		
Dimensions	516 x 300 x 291 mm	619 x 360 x 351 mm	778 x 430 x 402 mm
Net weight	13 Kg	17 Kg	21 Kg

## 4 - Module d'amplification des enceintes



### 1 Power input socket

Allows you to connect the speaker to an electrical outlet. Use the supplied IEC cord, and make sure the voltage delivered by the outlet is in adequation with the value indicated by the voltage selector before turning on the built-in amplifier.

### 2 Power switch

Allows you to turn ON/OFF the built-in amplifier.

### 3 XLR LINE OUT socket

Allows you to retrieve the sum of each incoming signal and transmit it to another amplified speaker, mixing desk, or speaker/amplifier system.

### 4 MIC/LINE input via COMBO plug

The COMBO plug allows you to connect either a male XLR plug or male stereo/mono Jack plug.

### 5 LINE/MIC Selector

Allows you to adapt the impedance of the socket to the type of signal detected. When pressed, the entry level is adapted to a microphone, when released it is adapted to a line level signal.

### 6 Integrated DSP display

Displays the settings of the built-in DSP. The different settings of the DSP will be explained in paragraph 5.

### 7 DSP settings button

Press this button to access the available settings or to enter the different submenus. Then turn this knob to scroll through the values of each sub-menu. Press again to confirm your settings.

### **8 Channel 1 input level**

Make sure that the input level is not too high to avoid distorted sound.

### **9 Channel 2 input level 2**

Make sure that the input level is not too high to avoid distorted sound.

### **10 Auxiliary Input**

Stéréo 3.5 jack.

This input is used to connect a tablet, a mobile phone, an MP3 player,... etc.

### **11 RCA line input**

This input is used to retrieve a signal from a CD player, a mixer, etc...

## **ATOM10A/12A/15A input setting**

- 1 - Connect the loudspeaker to the mains via IEC plug / 2-pin + earth. Leave the power switch (2) in the OFF position.
- 2 - Set all LEVEL potentiometers (8 and 9) to the  $-\infty$  position.
- 3 - Connect your microphone or line level source or both. L'entrée ligne est accessible par le branchement  
The line input can be accessed via a 3-pin 6.35 mm (TRS) jack, RCA LINE IN or AUX input. To access the microphone preamplifier, use the XRL plug
- 4 - Switch on the line level source.
- 5 - Switch on the ATOM speaker.
- 6 - While you are speaking in a microphone or an audio signal is being played from your line-level source, turn the input level knob (s) until the display shows "Limit Signal", then turn it down just below that level.
- 7 - If you use a microphone, be careful not to stand too close to the speaker as this may result in feedback. If you do not use both inputs, it is recommended that you leave the level knob on the unused input at the  $-\infty$  position to prevent noise from entering the signal circuit.

## 5 - Full range speaker menu

### MENUS

### MENU OPTION

#### MODE menu

This menu is used to select one of the preset :

NORMAL	HF:0dB
POLE	LF:0dB
<b>ATOM10A</b>	
◀ MODE LOCATION TREBLE B ▶	




Push to Save and Return

- **NORMAL** : The equalisation is flat (default value).
- **LIVE** : The bass is attenuated and the treble is raised to obtain a "concert" sound.
- **CLUB** : The bass is slightly raised and the treble slightly attenuated to obtain a warmer sound.
- **SPEECH** : The bass is very attenuated, the midrange is slightly raised and the treble is not modified to obtain a more intelligible sound by the human ear.

#### Menu LOCATION

This menu allows you to choose the behavior of the speaker according to how it is positioned.

NORMAL	HF:0dB
POLE	LF:0dB
<b>ATOM10A</b>	
◀ E LOCATION TREBLE B ▶	



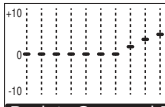
Push to Save and Return

- **POLE** : Choose this option when using the speaker on a stand (default setting).
- **MONITOR** : Choose this option when using the speaker as a stage return.
- **BRACKET** : Choose this option when the speaker is mounted on a wall mount.

#### Menu TREBLE

This menu is used to adjust the treble level.  
Values range from -10dB to +10dB.

NORMAL	HF:0dB
POLE	LF:0dB
<b>ATOM10A</b>	
◀ TION TREBLE BASS LED ▶	

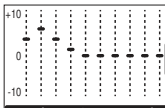


Push to Save and Return

#### Menu BASS

This menu is used to adjust the bass level.  
Values range from -10dB to +10dB.

NORMAL	HF:0dB
POLE	LF:0dB
<b>ATOM10A</b>	
◀ ON TREBLE BASS LED RES ▶	



Push to Save and Return

#### Menu LED

This menu is used to adjust the behaviour of the LED on the front panel.

NORMAL	HF:0dB
POLE	LF:0dB
<b>ATOM10A</b>	
◀ TREBLE BASS LED RESET ▶	

Front Panel LED is always "Black Out"

OFF
ON
LIMIT

Push to Save and Return

- OFF** : The LED never lights up.
- ON** : LED is constantly lit in blue.
- LIMIT** : The LED lights blue and red when the limiter is switched on.

#### Menu RESET

This menu is used to reset all settings to the original values.

NORMAL	HF:0dB
POLE	LF:0dB
<b>ATOM10A</b>	
◀ REBLE BASS LED RESET ▶	

Are you sure ?  
Restore the device to the factory default settings

YES
NO

Push to Save and Return

#### Menu INFO

This menu is used to display the internal software version.

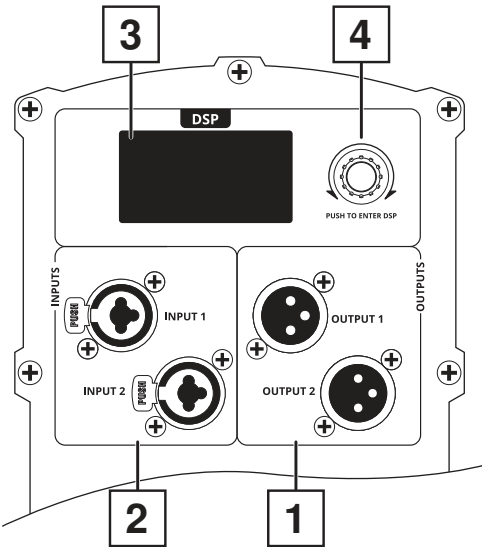
NORMAL	HF:0dB
POLE	LF:0dB
<b>ATOM10A</b>	
◀ EBLE BASS LED RESET ▶	

**ATOM10A**  
Firmware Ver 2.1.0  
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Push to Return

6 - Caractéristiques techniques des caissons

	ATOM15ASUB	ATOM18ASUB
Amplification	Class D / 2000W dynamic / 600W RMS	Class D / 2000W dynamic / 600W RMS
Frequency response	45 Hz - 160 KHz	35 Hz - 150 KHz
Power supply	SMPS / 100-240V ~ 50-60Hz	
SPL	126 dB max.	127 dB max.
Woofers	15" 18" 8 Ohms - 600W AES	18" Bobine de 3" 8 Ohms - 600W AES
Entrées	2 x COMBO 6.35 XLR	
Sortie	2 XKR output	
Réglages	multiple settings DSP (refer to paragraph 8 for more details)	
Protection	Short-circuit, thermal and limiter	
Construction et accrochages	5mm Cubic plywood housing Integral grid 35mm mounting plate for speaker coupling rod 2 side handles Ground stacking device	
Dimensions	612 x 430 x 595 mm	662 x 510 x 615 mm
Poids net	32 Kg	38 Kg

7 - Subwoofer amplifler modèle



**Note :** The power input and power button are the same as on the full range speakers.

- 1


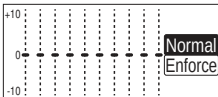
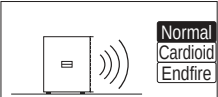
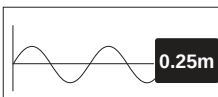
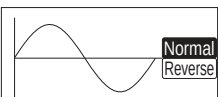


**Sorties 1 et 2**  
 These line level outputs are used to retrieve the input signals and re-inject them to another amplification system (see OUTPUT menu on page 8).  
 Output 1 corresponds to input 1 and output 2 corresponds to input 2.
- 2

**Entrée 1 et 2**  
 Line-level left and right inputs via COMBO sockets. COMBO sockets allow you to either connect a mono/ stereo male XLR or male Jack plug. These are balanced inputs.
- 3

**Integrated DSP display**  
 Displays the settings of the built-in DSP. The different settings of the DSP will be explained in paragraph 8.
- 4

**DSP settings button**  
 Without pressing this button, you adjust the subwoofer level.  
 Press this button to access the available settings or to enter the different submenus.  
 Then turn this knob to scroll through the values of each sub-menu.  
 Press again to confirm your settings.

## 8 - Subwoofers DSP Menu

MENUS	MENU OPTIONS				
<p><b>LEVEL menu</b></p> <table border="1"> <tr><td>NORMAL</td><td>150 Hz</td></tr> <tr><td>NORMAL</td><td>NONE</td></tr> </table> <p><b>ATOM15ASUB</b></p> <p> 0 dB</p>	NORMAL	150 Hz	NORMAL	NONE	<p>This menu appears when the subwoofer is initialized and allows you to adjust the subwoofer's amplification level. It is not necessary to press the button to make this setting. The value varies from MUTE (no amplification) to +10dB.</p>
NORMAL	150 Hz				
NORMAL	NONE				
<p><b>MODE menu</b></p> <table border="1"> <tr><td>NORMAL</td><td>150 Hz</td></tr> <tr><td>NORMAL</td><td>NONE</td></tr> </table> <p><b>ATOM15ASUB</b></p> <p>◀MODE LOCATION DELAY▶  Push to Save and Return</p>	NORMAL	150 Hz	NORMAL	NONE	<p>This menu allows you to choose the behavior of the cabinet according to how it is positioned.</p> <ul style="list-style-type: none"> <li>- <b>NORMAL</b> : Choose this option when using the cabinet in front of the sound system.</li> <li>- <b>ENFORCE</b> : Choose this option when using the cabinet in front of the sound system.</li> </ul>
NORMAL	150 Hz				
NORMAL	NONE				
<p><b>Menu LOCATION</b></p> <table border="1"> <tr><td>NORMAL</td><td>HF:0dB</td></tr> <tr><td>POLE</td><td>LF:0dB</td></tr> </table> <p><b>ATOM15ASUB</b></p> <p>◀DE LOCATION DELAY PD▶  Push to Save and Return</p>	NORMAL	HF:0dB	POLE	LF:0dB	<p>This menu allows you to optimize the response of ATOM15S and ATOM18S when used alone or in groups.</p> <ul style="list-style-type: none"> <li>- <b>NORMAL</b> : Choose this option when using the subwoofer in nongroup mode.</li> <li>- <b>CARDIOLD</b> : Choose this option for a cardioid effect with the pedestals in grouped mode.</li> <li>- <b>ENDFIRE</b> : Choose this option when using two subwoofers in longitudinal radiation one behind the other.</li> </ul>
NORMAL	HF:0dB				
POLE	LF:0dB				
<p><b>Menu DELAY</b></p> <table border="1"> <tr><td>NORMAL</td><td>150 Hz</td></tr> <tr><td>NORMAL</td><td>NONE</td></tr> </table> <p><b>ATOM15ASUB</b></p> <p>◀TION DELAY POLARITY X▶  0.25m Push to Save and Return</p>	NORMAL	150 Hz	NORMAL	NONE	<p>This menu allows you to add a delay time to the subwoofer to align it over time. The value of the delay is expressed in metres. By default no delay time is applied.</p>
NORMAL	150 Hz				
NORMAL	NONE				
<p><b>Menu POLARITY</b></p> <table border="1"> <tr><td>NORMAL</td><td>150 Hz</td></tr> <tr><td>NORMAL</td><td>0.25 m</td></tr> </table> <p><b>ATOM15ASUB</b></p> <p>◀DELAY POLARITY X-O▶  Normal Reverse Push to Save and Return</p>	NORMAL	150 Hz	NORMAL	0.25 m	<p>This menu allows you to reverse the polarity of the sum of the signals present at the input..</p>
NORMAL	150 Hz				
NORMAL	0.25 m				
<p><b>Menu X-OVER</b></p> <table border="1"> <tr><td>NORMAL</td><td>150 Hz</td></tr> <tr><td>NORMAL</td><td>0.25 m</td></tr> </table> <p><b>ATOM15ASUB</b></p> <p>◀LARITY X-OVER OUTPU▶  150Hz Push to Save and Return</p>	NORMAL	150 Hz	NORMAL	0.25 m	<p>This menu is used to set the upper limit of the frequency range of the subwoofer. The optimum setting is the minimum value of the frequency range correctly reproduced by the full range speakers. Among the available values for this setting you will find each of the ATOM series full range speakers.</p>
NORMAL	150 Hz				
NORMAL	0.25 m				
<p><b>Menu OUTPUT</b></p> <table border="1"> <tr><td>NORMAL</td><td>150 Hz</td></tr> <tr><td>NORMAL</td><td>0.25 m</td></tr> </table> <p><b>ATOM15ASUB</b></p> <p>◀Y X-OVER OUTPUT UN▶  100 Hz Push to Save and Return</p>	NORMAL	150 Hz	NORMAL	0.25 m	<p>This menu is used to set the low limit of the frequency range sent to outputs 1 and 2.</p>
NORMAL	150 Hz				
NORMAL	0.25 m				

Menu UNIT

NORMAL	150 Hz
NORMAL	0.25 m

ATOM15ASUB

◀VER OUTPUTUNITLED RE▶

Use "Meter(m)" as the unit of the "DELAY" 

Meter(m) Feet(ft)

Push to Save and Return

This menu allows you to select the unit used by the DELAY menu : meter or foot.

Menu UNIT

NORMAL	150 Hz
NORMAL	0.25 m

ATOM15ASUB

◀R OUTPUTUNITLEDRESET▶

Front Panel LED is always "Black Out" 

OFF ON LIMIT

Push to Save and Return

This menu is used to adjust the behaviour of the LED on the front panel.  
**OFF** : The LED never lights up.  
**ON** : LED is constantly lit in blue.  
**LIMIT** : The LED lights blue and red when the limiter is switched on.

Menu RESET

NORMAL	150 Hz
NORMAL	0.25 m

ATOM15ASUB

◀OUTPUTUNITLEDRESET▶

Are you sure ? Restore the device to the factory default settings 

YES NO

Push to Save and Return

This menu is used to reset all settings to the original values.

Menu INFO

NORMAL	150 Hz
NORMAL	0.25 m

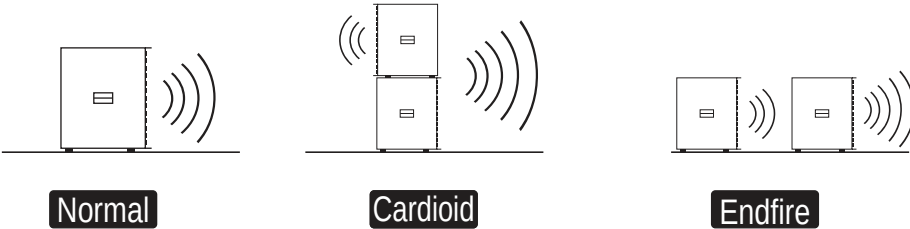
ATOM15ASUB

◀UTUNITLEDRESETHINFO▶

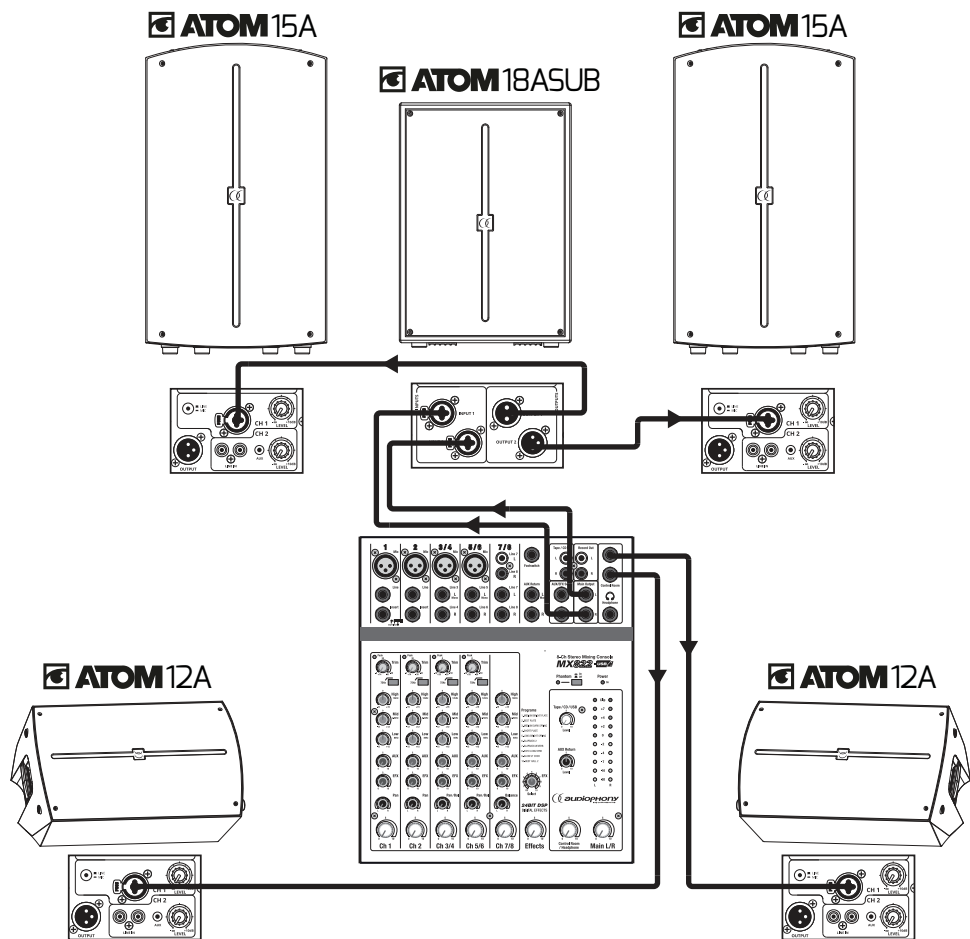
Firmware Ver 2.1.0  
Copyright(C) 2018  
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Push to Return

This menu is used to display the internal software version.

Different positions of the LOCATION menu



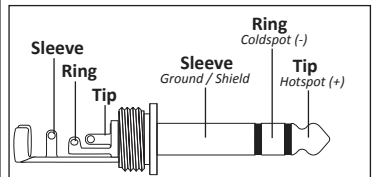
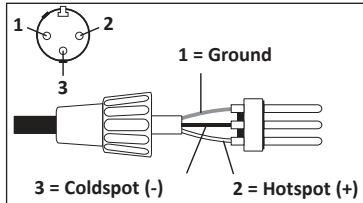
## 9 - Principle diagram



## 10 - Connectors

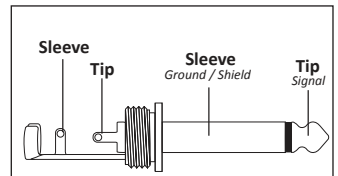
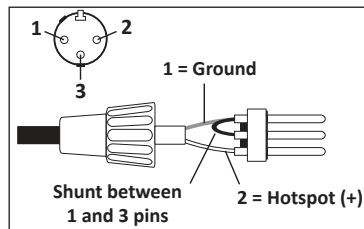
### 10.1 - Balanced

The COMBO sockets are symmetrical. This type of connectors allows you to transmit a signal over long runs of cables without altering its quality, that is why we recommend to use symmetrical signals. The figures opposite describe the balanced wiring of the XLR or Jack 6.35 plugs.



### 10.2 - Unbalanced

If you do not have any source with symmetrical signal, please do not use cables longer than 1.5 m. The figures opposite describe the unbalanced wiring of the XLR or Jack 6.35 plugs.



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