AUDIUM

Sub 12

Active / *Air Wireless*

User Manual

Thank you very much for your trust in AUDIUM products.

This AUDIUM Sub 12 is the link to fundamental sound bass reproduction. In the Active version, it can be seamlessly connected to stereo and surround sources. In the Air Wireless version, it allows a wireless link to AUDIUM Air Wireless speakers, as well as a comfortable configuration via computer / smartphone / tablet.

Please read this manual before installing your subwoofer.
It provides all the information and tips you need to set up and get the best music from your AUDIUM subwoofer.

Many Thanks,
Your AUDIUM team!

You'll find enclosed:
1x AUDIUM subwoofer
1x power cable
1x user manual
1x warranty card
4x spikes (M8 thread)
1x WiFi-Antenna (Air-Version only)

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General Information

Safety instructions

1. Read this manual and follow the instructions provided.
   Keep this manual for future reference.
2. Do not operate this device in damp locations or near water.
3. This device is intended for indoor use only.
   Do not operate it outdoors.
4. Do not operate the device near heat sources such as radiant heaters, chimneys, amplifiers, ... or other devices that produce heat.
5. Disconnect the device from the power supply when not using it for a long time and during thunderstorms.

Do not try to repossess the device yourself in case of damage or malfunction. Always contact your dealer or authorized service personnel.

WARNING - RISK OF ELECTRIC SHOCK!

To avoid the risk of electric shock, do not open the device.
Do not expose the device to rain or moisture. There are no parts inside which require service or care.

Warranty

By registering your product, you extend the warranty to 5 years for speakers and 3 years for electronics. This is independent of your dealer / distributor. Please visit www.audium.com/registration or fill out the enclosed warranty card within 2 weeks after purchase of this device.

Burn In Time

Loudspeakers are equipped with moving parts. Therefore, you need a so-called “burn-in-time” until the moving parts can move within their tolerances.

Play back broad-spectrum signals for at least 2 days. It is best to use special burn-in CDs (with "pink noise") or your FM radio after placing it on an unoccupied frequency.

Please note that after a prolonged period of inactivity, the moving parts can return to their original "Rigid". Then give your subwoofer a few hours' warm up time by playing music, and you'll surely notice the increase in fidelity.

Cleaning and Care of the Subwoofer

Please use for cleaning a soft slightly moistened cloth. Do not use aggressive cleaning agents as well as veneer cleaning solutions.

Terminology

Instructions fort the Air Wireless Version of the Subwoofer are printed
in blue Colour (Arrows / Headings).

Unpacking the Subwoofer

Do not use any sharp tools to open the subwoofer packaging. You could damage the contents or the surface of the subwoofer.

Screw the spikes completely into the nuts on the lower side of the subwoofer.
Place the sub on a flat, horizontal surface and adjust the spikes that it has a stable position.
At last, counter the spikes with the nuts.

Note: To prevent scratches on wooden floors we recommend using special discs under the spikes. Your HiFi Dealer has some for sure in his portfolio.
As a workaround you can use and metal disks.

Note: Please store the packaging of the Subwoofer in a dry place. Only with the packaging it is possible to transport the subwoofer in a save way and prevent it from damage.

Connecting the Subwoofer

You can connect the Subwoofer to your AV-Receiver, Preamp or Integrated/Power Amplifier through Cinch/RCA Cables, an XLR cable or by connecting it to the speaker binding posts of your integrated/power amplifier.
Always use high quality cables. In case of a long distance between your Subwoofer and your preamplifier we recommend using the XLR connection.

The Sub 12 Air Wireless does not need cable to connect to your existing Air Wireless speakers. How to perform the connection (“pairing”) is described in the chapter below.

Powering up the Subwoofer

After you made the necessary connections plug the AC cable in the socket on the back of the Sub and into a wall outlet. The Subwoofer will power up then.

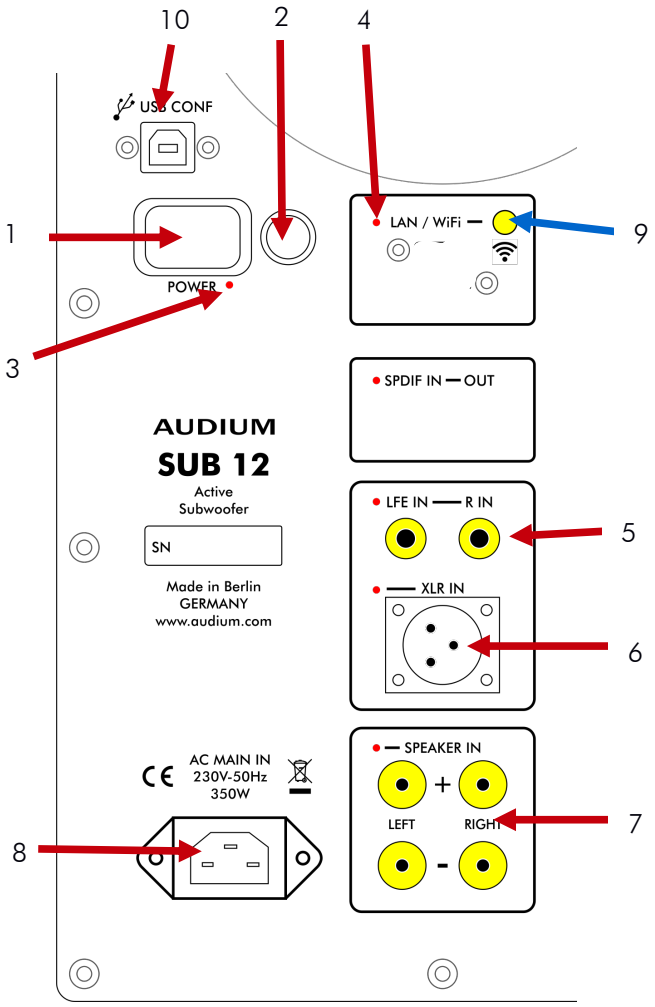
Controls and Connectors

1. Display: OLED graphic display shows the current device status
2. Knob / push button.
3. Power LED: lights red when subwoofer active, dimmed red in standby.
4. Input LEDs: indicate active input
5. Analog Input 1 (Coax LFE / Stereo): Connect these inputs to the Pre-Out of your pre-amp or the Sub / LFE outputs of your surround pre-amp.
6. Analog input 2 (XLR balanced): If your pre-amp has a balanced LFE output and a longer cable is required because your sub is further away from the system, this input is recommended.
7. Analog Input 4 (Speaker Stereo): if your amplifier has no Pre-Out or Sub/LFE Out, use this input
8. Power socket: Plug in the power cable here.
   Make sure that the voltage indicated next to the socket agrees with your mains voltage.

   Connectors, only available with Air Wireless variant:

9. SMA socket for WiFi antenna

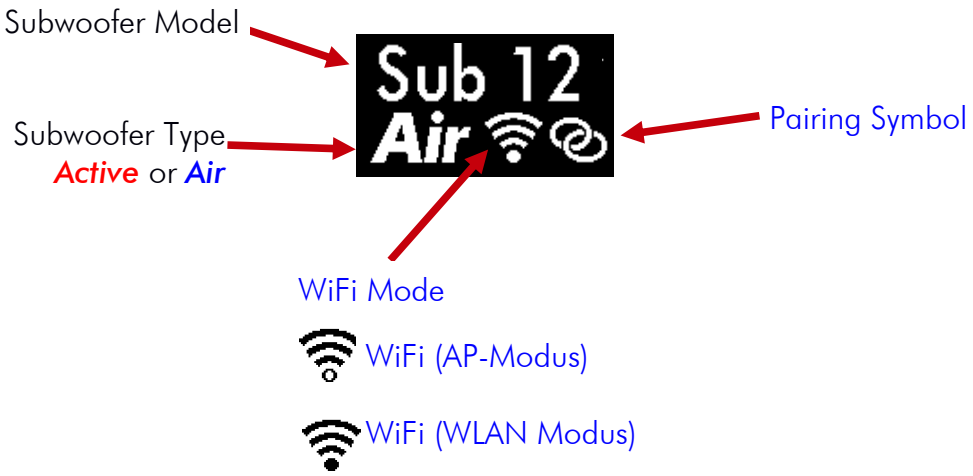
10. USB-B Socket – for remote controlling the Sub / Firmware Updates



Display

The display shows the current status, settings and the setup menu.

Use the *rotary knob* to make settings on the subwoofer: Turn clockwise or anticlockwise to navigate through the menu / change values. You can also use this feature to lock or mute the subwoofer (see " *Muting and locking the subwoofer* " section). shows the speaker model and the current speaker status:



Muting and locking of the Subwoofer

Muting the Subwoofer

If you press the rotary knob while the status is displayed, the subwoofer will be muted. So you can simply stop the playback to hear the difference in music playback with or without subwoofer. Press again to cancel the muting.
This also happens automatically after 10 seconds (this value can be changed in the settings menu).

Locking the Subwoofer

To prevent unwanted changes to the parameters, you can lock the subwoofer. Press and hold the knob while the speaker is displaying the statute. The knob is then locked (preventing you from adjusting the subwoofer by your children!). To unlock, press and hold the knob again.
If the power supply is interrupted, the lock is released again.

Muted	Unmuted	Locked	Unlocked

Automatic Power On and Off

The subwoofers have built-in music signal detection. If no music is played back, the subwoofer switches to standby after 15 minutes (this value can be changed in the settings menu). If music signal is detected, the subwoofer automatically switches on again.

If you disconnect the subwoofer from the mains, you have nothing to consider. Restarting / plugging brings your subwoofer back to its last state. All parameters (except the subwoofer lock - see above) are stored in a long-term memory that does not lose its contents.

The Setup menu

Navigation through the menu is extremely straightforward: turn the knob while the status is displayed, then open the settings menu.
Navigate by turning the knob in the menu. When you have found the parameter, you want to change, press the knob, and change the value. Press again to save the value.

Also, open submenus by pressing the knob and exit by:

The menu is automatically exited after a certain time (timeout)

Air Wireless Speaker Link

Your Air Wireless Sub has a wireless digital audio link which receives the audio being transmitted by the master. The display shows the status of this audio-link through the “Double-Ring” symbol. If both are connected, is blinks at a very slow rate (every 7-8 seconds). Otherwise, it blinks each second (e.g. when the master is powered off).
In association (pairing) mode it blinks at a high rate.

How to link your subwoofer to an Air Wireless Speakers

To connect your Sub 12 to an Air Wireless Master, do the following:
On both - the master speaker and the subwoofer - go to Setup-Menu, choose Air Setup, and scroll to the “Pair” menu entry:

Now push the knob FIRST at the Subwoofer. The Ring Symbol starts to blink very fast.
THEN push the knob at the master. After this, at the Sub the Ring Symbol will blink ca. every second. After another 20 seconds the master will exit the pairing mode.
When the link is successful, the ring symbol will now blink slowly every 7-8 seconds.

Input Selection

The Sub 12 has 3 analogue inputs: Cinch / LFE, XLR and Loudspeaker Inputs.
The Sub 12 Air Wireless has the additional audio link.
You can select he deserved input by entering the Menu, choosing Input, and then select the input. A red LED close to the connectors indicates which one is active.

Profiles

The AUDIUM Sub 12 has predefined profiles which simplify a combination with other AUDIUM loudspeakers. To do this, select the menu item "Profiles". In the following submenu you will find an entry for Comp3, 5, 7, 8 and 9. If you select the entry (by pressing the rotary knob) you will be given the option to select the item "Load" or "Back".

"Load" then loads the selected profile. This means that the current values of frequency, slope, high-pass, phase, and polarity are overwritten with the values of the profile. The menu entry then changes to "Active" (until you change one of the parameters).

"Back" lets you return to the profile selection.

If you want to save your current settings before loading a predefined profile, save them in one of the 3 user memories.

User Memories

The AUDIUM Sub 12 has 3 user memories in which all set parameters can be stored. This means that in addition to frequency, slope, high-pass, phase and polarity, the selected input, volume, and all other parameters such as display brightness, mute duration, ...
Select the menu item "Memory". In the following submenu you will find an entry for User1, User2 and User3. If you select the entry (by pressing the rotary knob) you will be given the option to select the item "Load", "Save" or "Back".
"Load" then loads all settings from the user memory.
"Memory" stores all settings in the user memory.
"Back" lets you return to the profile selection.
If a user memory has been loaded or saved, the menu item changes to "Active" (until you change one of the parameters).

Adjustable Parameters

The AUDIUM Sub 12 offers a variety of audio / filter parameters. They can be adjusted easily with the encoder and the display. The list of parameters ca be found in Appendix 1.
If you have a Sub 12 Air Wireless, it is much more comfortable to adjust them with the AUDIUM v2 App. Therefor see the Chapter about the App.

Connecting the Sub to your WLAN

To allow configuration of your Sub 12 via the AUDIUM v2 App,
you have to connect him to your WLAN.

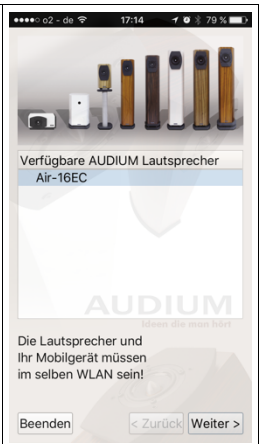
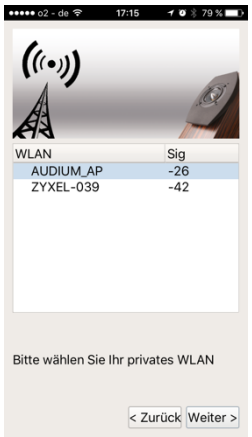
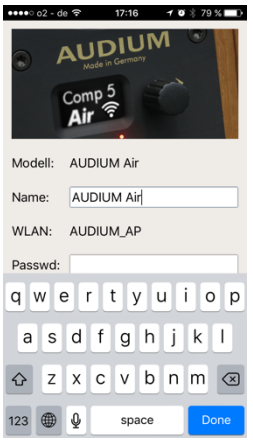
Via the App

1. Download and install the AUDIUMv2 App on your PC or Mac (from the www.audium.com webpage) or on your iPhone/iPad (from the App Store) or Android Phone/Tablet (from the Play Store).
2. Then go to network settings and select the AUDIUM-AIR-WLAN-xxxx as WLAN network.
3. Start the AUIDUMv2 App, select the Sub, get back to the first Tab, push the "WiFi >" button, select your WiFi Network, and then enter the password of your WLAN network. You can also enter a Name for your Subwoofer as you wish.

After confirming these settings, the Sub will join the WiFi – indicated by a blinking antenna symbol. The AUDIUM-AIR-WLAN will disappear, and the Sub will join your home-WiFi.

The Antenna symbol will change from AP Mode to WiFi Mode

When you enter the wrong password, the Sub will fall back to AP Mode after ca 1min. Connect your Smartphone/tablet again to the AUDIUM-AIR-WLAN and start the procedure again.

				
Select WLAN	Start App	Select Speaker, switch back to the first Tab and tap on "WiFi >"	Select WLAN	Enter Password

You can now use the AUDIUM App for setting all speaker parameter!
Try, it is intuitive!

Via WPS

You can connect your Sub to your home WLAN network through WPS, too.
Therefore, navigate in the menu to the WPS entry which is in the Air Setup submenu.

Enter Setup → Air Setup → WPS Setup

WAIT! Now push the WPS button of your router / WLAN access point to switch it into WPS mode, then push the encoder to activate WPS setup on the Air Master.
After a short time both devices will connect, and your Air Speakers are in your home WLAN.

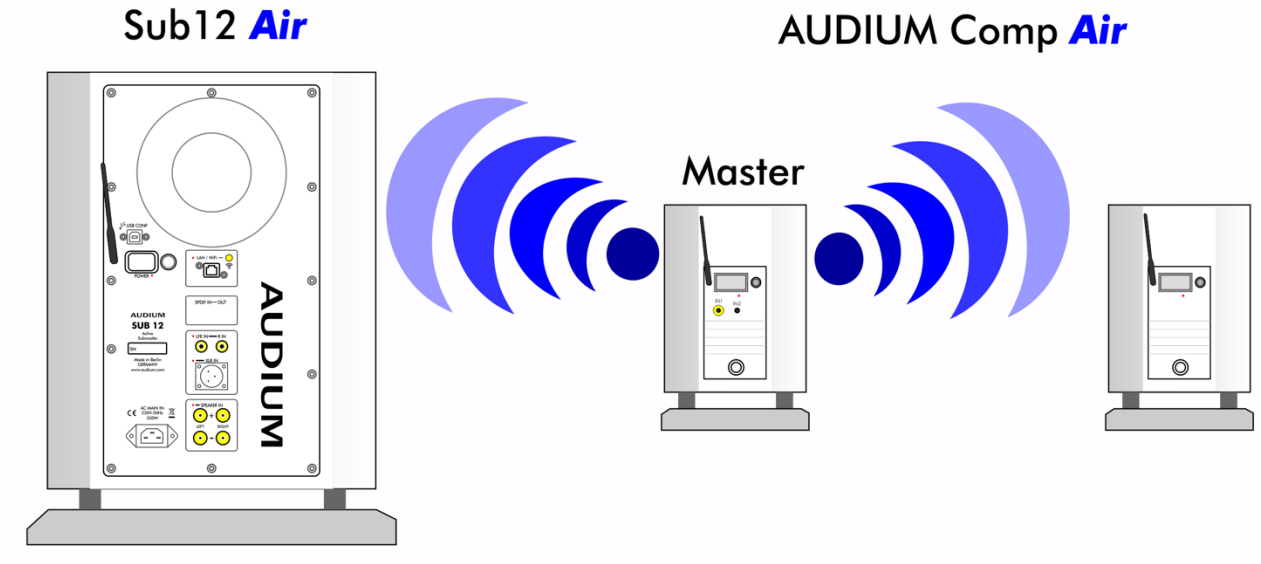
Note: Modern Routers have both 2.4G and 5G WLANs. If you perform WLAN access through this method, it is not clear whether the Air Speakers will select the 2.4G or 5G WiFi Network. This can lead to "confusions" in the data transfer between your Audio Source and the Speakers, or the AUDIUMv2 App and the speakers. To be sure which WLAN network will be selected you should use the manual method via the App.

Connection Setups

Depending on the existing audio equipment, different connection options are available.
If possible, try to keep cable routes short and avoid ground loops.

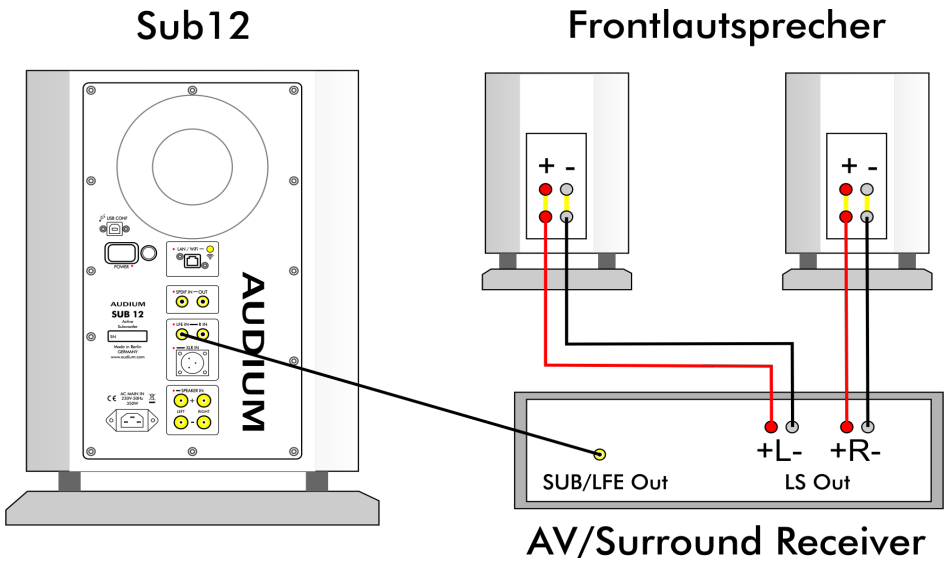
Option 1: Stereo Setup with Air Wireless Speakers

The Sub 12 Air is intended to be connected to your existing AUDIUM Air Wireless System. You then have the opportunity to place your Sub at the best place without the need of audio cables.



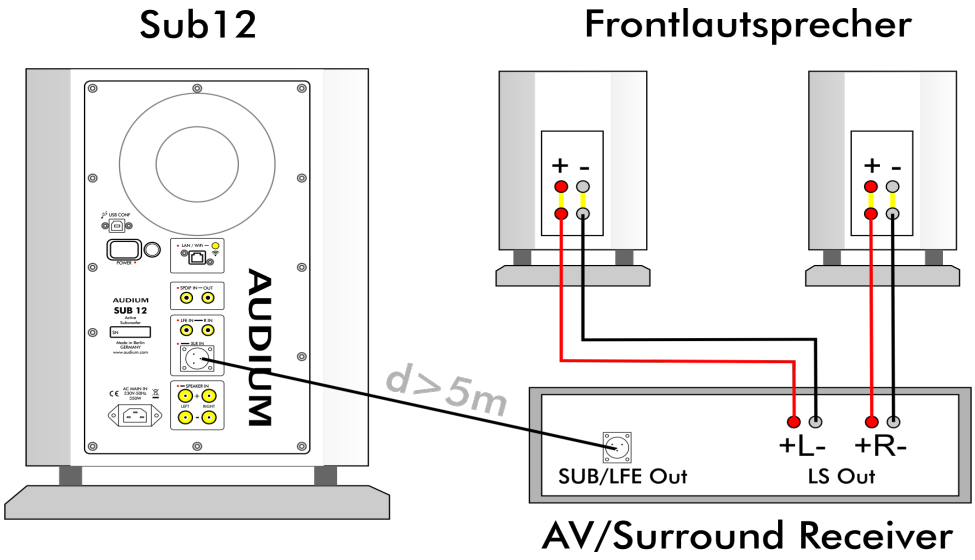
Option 2: AV / Surround / Preamp with Sub / LFE Out as RCA

This is a standard scenario for home theatre applications.



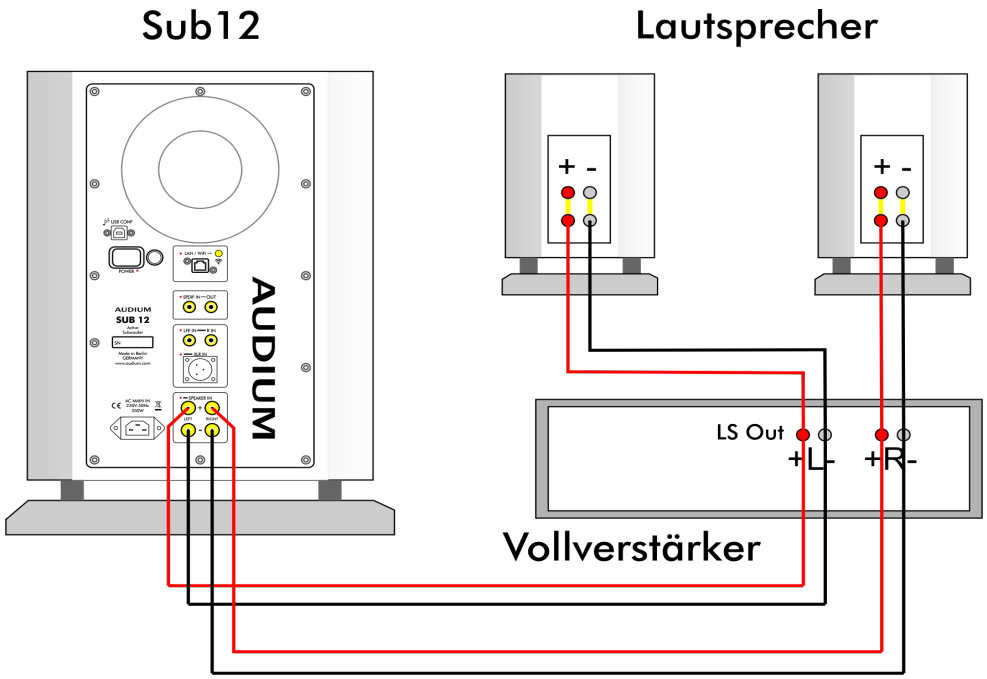
Option 3: AV / Surround / Preamp with Sub / LFE Out as XLR

This scenario is recommended in the presence of a balanced sub-output and greater distance between preamp and subwoofer.



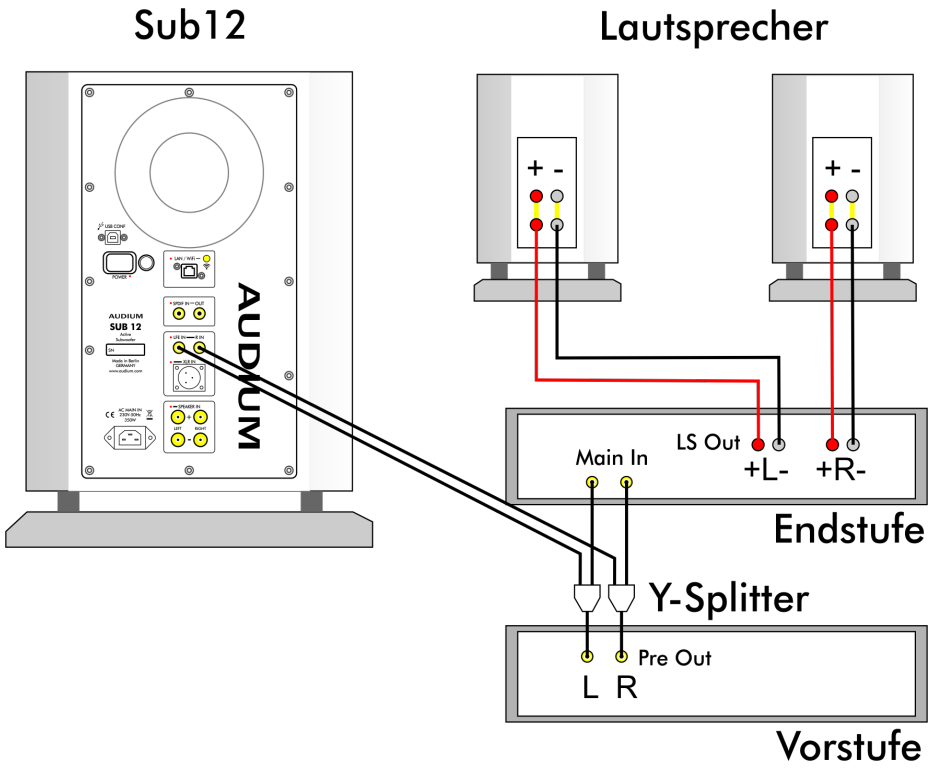
Option 4: Integrated amplifier without pre-out

In case your amplifier does not have a pre-out, connect the speaker outputs of the integrated amplifier to the speaker inputs of the subwoofer. These are no additional burden on the amplifier.



Option 5: Pre / final stage combination with only one pre-out

In this setup, use 2 Y splitters between preamplifier and power amp to divert the signal for the sub or connect the sub to the power amp as in option 3.



Appendix 1: The Setup Menu

Main Menu

Symbol	Menu	Description	Comment
Input	Input	Selects the active input for audio signals.	Cinch, XLR, LS, AIR
Profile	Profile	If you operate your Sub 12 with AUDIUM loudspeakers, you can call up predefined profiles (frequency, slope, high pass) here.	Attention - their current settings will be replaced by these values.
Volume	Volume	Bass playback volume.	0...100
Frequ. f_s	Cut-off Frequency	The upper limit frequency of the subwoofer.	30...180 Hz
Steep. f_s	Slope	The steepness of the filter above the cutoff frequency.	6, 12, 18 or 24 dB / Octave
Highp. f_{HP}	HighPass	This 12dB filter can be used to reduce the lowest frequencies.	20...50 Hz.
Phase	Phase	Changes the phase position. Serves to adapt to the main speakers.	0...180 °
Polarity	Polarity	Inverts the audio signal.	Normal / Inverse
EQ	EQ	A customizable EQ filter to reduce the drone slope of a given (room-dependent) frequency.	ON/OFF Frequency Q 1...10 Gain +3...-20dB
Memory	Memory	Memory for your personal settings.	3 memories
Setup	Setup	More Settings.	Auto Off, Display, Info, ...
Air Setup	Air Setup	More Settings for the Air Model.	WLAN Reset, Pairing, ...
Back	Exit	Exit Menu.	

Setup Menü

Symbol	Menu	Description	Comment
	Auto Off	Time after which the subwoofer goes into standby without an audio signal.	Default value 15 minutes.
	Mute Time	Duration after which the mute is released again.	Default value 10sec.
	Display brightness	Changes the brightness of the display.	Standard is 5 (Maximum).
	Display fade time	Time after which the display is automatically faded to dark.	Standard: Display is always on (the lying 8 means infinity).
	Language	Language of the display messages.	
	Info	Information about this device.	
	Exit	Exit Menu.	

Air Setup Menu

Symbol	Menu	Description	Comment
	WPS-Setup	Activate WPS-Setup Mode.	Also push WPS on your router to connect speakers to WiFi .
	Pairing	Activate Pairing Mode.	To connect your Sub with Air Wireless Loudspeakers.
	Reset	Reset the WiFi receiver.	Speaker Settings (bass, position, ...) remain unchanged.
	Exit	Exit the Menu.	

Appendix 2: Glossar

Access Point	" Base Station" for wireless transmission. Gives access to your wireless LAN. Abbreviated as AP. Often included in a router.
AP Mode	" Access Point Mode" - your Air Master Speaker builds a WLAN on its own. No access pointer / router necessary.
AirPlay	Wireless Audio Transmission, developed by Apple Inc. Wireless Audio Transmission, developed by Apple Inc..
AUDIUM App	The APP to configure your Air for your home Wi-Fi
Detection circuit	Electronics that detects audio signal
Digital Amplifier	Electronics to amplify music digitally with high efficiency. Low heat production, low space.
DLNA	Digital Living Network Alliance (similar to UPnP) - a standard to stream music over a LAN
DSP	Digital Signal Processor - a computer processor optimized for calculations on digital audio signals
Input Priority	Priority of audio input at the Air Master speaker
LAN	Local area network - cable based local network infrastructure
Master Speaker	The Speaker with the WiFi / WiFi Receiver and coax. SPDIF and Toslink input connector.
Priority Scheme	Assignment of priorities to the inputs
PSU	Power Supply Unit
Router	Device that connects your LAN to the Internet. Often has a Access-Point built inside.
Slave Speaker	The Speaker which has only a single digital in- and output
SPDIF	Sony/Philips Digital Interface: a customer standard for transmission of digital audio signals over a cable
TosLink	Toshiba Link (or optical SPDIF): a customer standard for transmission of digital audio signals via fibre-optics, designed by Toshiba.
UPnP	Universal Plug and Play (similar to DLNA) – a standard to stream music over a LAN
WiFI / WLAN	Wireless LAN – wireless network infrastructure
WiFi Mode	Your Air Master speaker is connected to an existing WLAN.

Appendix 3: Questions and Answers

Q: The subwoofer has 2 RCA inputs (LFE and R), but my surround pre-amp only has a subwoofer output. Is it OK to leave an entrance open?

A: Yes, that is not a problem. You can, however, double the pre-amp signal with a Y-splitter and feed it into both RCA inputs of the subwoofer. The bass reproduction then doubles as a result

Q: My surround pre-amp has both a cinch and XLR output. Which one should I use?
A: If the cable length between the preamplifier and subwoofer is more than 5m, or if you hear interference from the subwoofer with cinch cable connection, you should use a balanced XLR cable.

Appendix 4: Technical Data

Property	**Sub 12 *Active***	**Sub 12 *Air Wireless***
Woofer ∅	300mm (12")	300mm (12")
Power Supply	250W	250W
Max Power Woofer	230W	230W
User Interface	Display+Encoder	App, Display+Encoder
Inputs analogue	2x RCA, XLR, Loudspeaker	2x RCA, XLR, Louspeaker
Supply Voltage	230V / 50 Hz	230V / 50 Hz
Dimensions	58 x 50 x 62 cm	58 x 50 x 62 cm
Weight	25kg	25kg
Wireless Specs		
Frequency Bands	-	2.4G & 5G
WiFi	-	IEEE 802.11a/b/g/n/ac
Bluetooth	-	V4.2 (HS) with integrated Class 1.5/Class 2 PA + Bluetooth Low Energy (BLE)
Max. Transmit Power WiFi	-	16 dBm @ 2.4G, 12 dBm @ 5G
Max. Transmit Power BT	-	8 dBm @ 2.4G

Appendix 5: Disclaimer

CE-Marking

The CE marking certifies the conformity with low tension directive 2004/108/EC, directive CEM 89/336/CEE and national transpositions.

This Product has been manufactured by:
AUDIUM
Siegesleitner & Urban GbR
Grossbeerenstrasse 146
12277 Berlin
Germany
Planet Earth

Disposal of old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate collection systems).
This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead, it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

The AUDIUM WEEE Registration number is DE 83106685.

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Notice

This manual can be subject to change without notice.
Misprints and errors excepted.
You can download the newest version from https://speakers.audium.com/

Thursday, 15 February 2024 A.D.

AUDIUM

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