

audison APBX, APS Subwoofer Owner's Manual

audison

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APBX / APS

**OWNER'S MANUAL
SUBWOOFER**

The Prima logo, featuring the word "Prima" in a white, sans-serif font, positioned within a dark blue rectangular background.

audison.com



ideato,
progettato,
ingegnerizzato
in Italia

The Prima logo, featuring the word "Prima" in a white, sans-serif font, positioned within a dark blue rectangular background.

Congratulations on purchasing our product. Your satisfaction is the first requirement that our products must meet: the same satisfaction as the one gained by those who long for experiencing the car audio emotion. This manual has been drawn to provide the main instructions required to install and use the system properly. However, the range of possible applications is wide; for further information, please feel free to contact your trusted dealer or our technical support at the email support@elettromedia.it Before installing the components, please carefully read all of the instructions contained in this manual. Failure to respect these instructions may cause unintentional harm or damage to the product.

1. All components must be firmly secured to the vehicle structure. Do the same when installing any custom structures you may have built. Confirm your installation is solid and safe. A component coming loose while driving may cause serious damage to the passengers, as well as to other vehicles.
2. Always wear protective eyewear when using tools, as splints or product residue may become airborne.
3. In order to avoid incidental damage, keep the product in the original packaging until you are ready for the final installation.
4. Do not carry out any installation inside the engine compartment.
5. Before starting with the installation turn the head unit and all other audio system devices off, avoiding any possible damage.
6. Make sure that the location you choose to install the components does not interfere with the normal operation of any mechanical or electrical devices of the vehicle.
7. Do not install loudspeakers where they may be exposed to water, excessive humidity, dust or dirt.
8. Do not install the components or make cable run close to electronic or mechanical devices of the vehicle.
9. Be very cautious when drilling or cutting into the vehicle chassis, making sure there are no cables or structural elements essential to the vehicle underneath or in the selected area.

10. When routing cables, make sure that the cable does not come in contact with sharp edges or near moving mechanical devices. Make sure that it is firmly attached and protected along its entire length and its insulation is self-extinguishing.
11. Only use cables with the proper section (AWG) indicated herein.
12. When running the cable through a hole in the vehicle's chassis, protect the cable with a rubber ring (grommet). Be sure to provide proper protection for cables running close to heat-generating devices.
13. Do not run the wires outside of the vehicle.
14. Use top quality cables, connectors and accessories such as found in the Connection catalogue.
15. Make sure your car has 12 VDC voltage negative ground electric system.
16. Check your alternator and battery condition to ensure they can handle the increased consumption.
17. The amplifier can reach temperatures of around 80°C (176°F). Make sure it is not dangerously hot before touching it.
18. Periodically clean the amplifier without using aggressive solvents that might damage it. Don't use compressed air, since it would push solid parts in the amplifiers. Dampen a piece of cloth with water and soap, wring it and clean the amplifier.
Then use a piece of cloth dampened with water only; eventually clean the amplifier with a dry piece of cloth.
19. Pre-plan the configuration of your new amplifier and the best wiring routes to ease installation.
20. Using a cable with adequate AWG (see chart: Power Supply Cable), run the power wire from the battery location to the amplifier mounting location.
21. Connect the power supply with the correct polarity. connect (+) terminal to the cable coming from the battery and (-) terminal to the car chassis.
22. Put an insulated fuse holder 40 cm max far from the battery positive terminal; connect one end of the power cable to it after connecting the other end to the amplifier.
23. To ground the device (-) in the right way, use a screw in the vehicle chassis; scrape all paint or grease from the metal if necessary, checking with a tester that there is continuity between the battery negative terminal (-) and the fixing point. If possible, connect all components to the same ground point; this solution rejects most noise which can be generated during the audio reproduction.
24. Route all signal cables close together and away from power cables.
25. Connect the RCA input cables, the applied signal must be between 0.1 V RMS and 4 V RMS.
26. Connect the high level inputs using the proper plug. Applied signal must be between 1 V RMS and 22 V RMS. Don't use it if you are already using Pre In preamplified connection.
27. Connect the speaker output using 10 AWG max speaker cable.
28. The amplifier starts by connecting the remote turn on terminal to the source specific output. It starts automatically, without remote signal, also if using high level inputs (Speaker IN) by setting the switch that can be found on the "Hi-IN AUTO TURN ON" front panel to position ON.
29. When installation is over, check the system's wiring and make sure all connections were done in the right way.
30. Put the fuse into the fuse holder. The fuse value will have to be 30% higher than the amplifier built-in one. In case the cable supplies several amplifiers, the fuse value will have to be 30% higher than the sum of the values of all other fuses in the amplifiers.
31. Listening level calibration is made by adjusting the source volume up to $\frac{3}{4}$ of its maximum level; then, adjust the amplifier levels until you hear distortion.
32. Warranty certificate: For more information visit the Audison website.

SAFE SOUND

USE COMMON SENSE AND PRACTICE SAFE SOUND. PLEASE REMEMBER THAT LONG EXPOSURE TO EXCESSIVELY HIGH SOUND PRESSURE LEVELS MAY DAMAGE YOUR HEARING. SAFETY MUST BE AT THE FOREFRONT WHILE DRIVING.

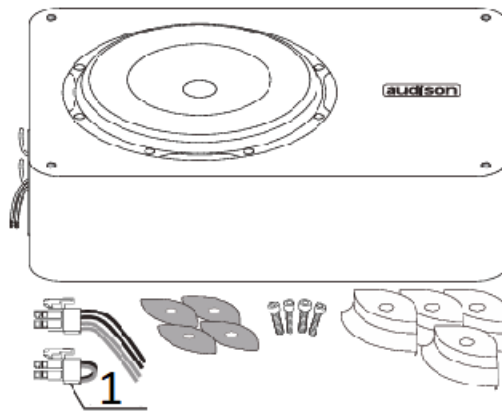


Information on electrical and electronic equipment waste (for those European countries which organize the separate collection of waste)

Products which are marked with a wheeled bin with an X through it can not be disposed of together with ordinary domestic waste. These electrical and electronic products must be recycled in proper facilities, capable of managing the disposal of these products and components. In order to know where and how to deliver these products to the nearest recycling/disposal site please contact your local municipal office. Recycling and disposing of waste in a proper way contributes to the protection of the environment and to prevent harmful effects on health.

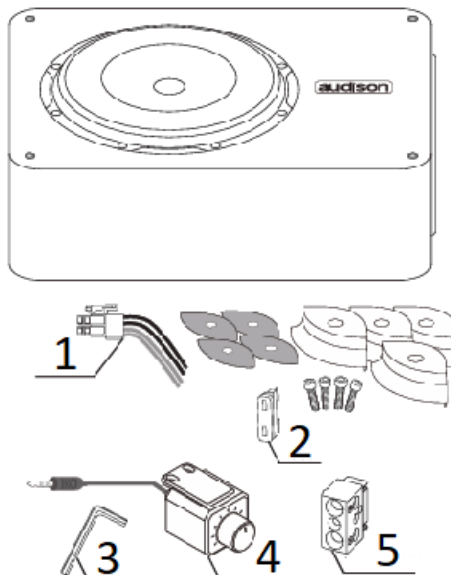
• Packaging contents

APBX 8 R / APBX 8 DS / APBX 10 DS / APBX 10 S4S



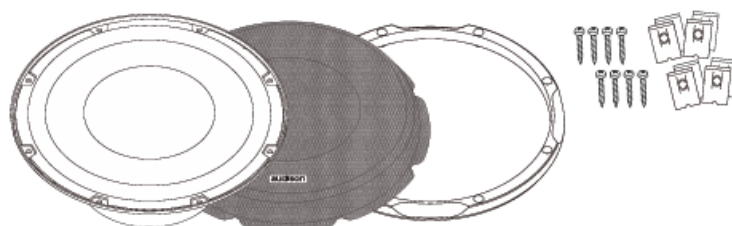
1. APBX 10 DS / APBX 8 DS only

APBX 8 AS₂ / APBX 10 AS₂

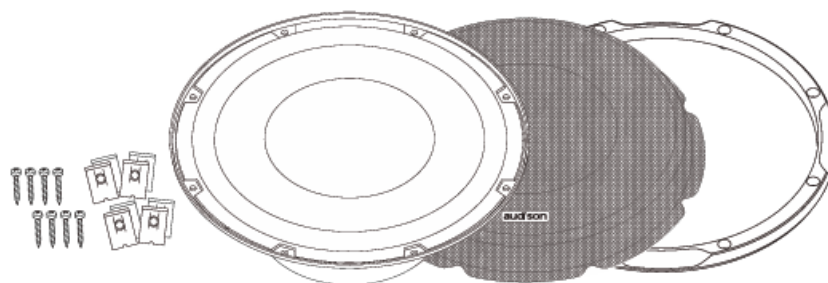


1. Hi Level
2. Fuse
3. Hex Key
4. HRC AP
5. Terminal block

APS 8 R / APS 8 D

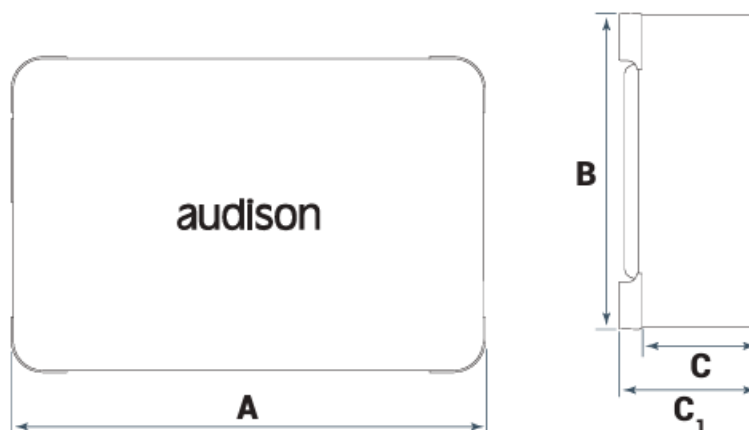


APS 10 D / APS 10 S4S



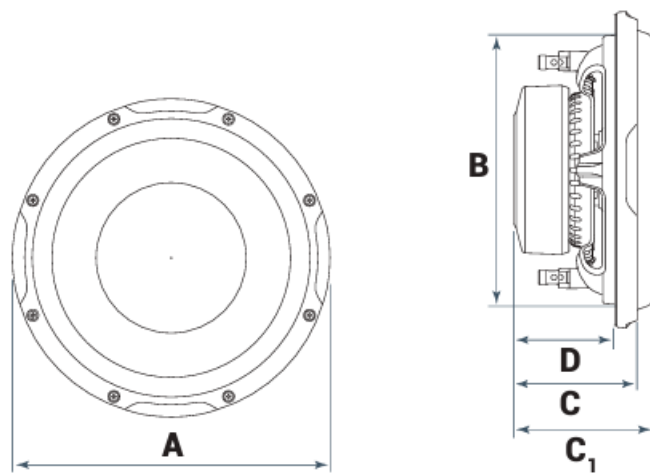
- Size

APBX 8 R / APBX 8 DS / APBX 10 DS / APBX 8 AS₂ / APBX 10 AS₂ / APBX 10 S4S



	A	B	C	C₁	
APBX 8 R	470	334	109	131	mm
	18.5	13.15	4.29	5.16	in.
APBX 8 DS	374	334	109	131	mm
	14.72	13.15	4.29	5.16	in
APBX 10 DS APBX 10 S4S	470	334	120	142	mm
	18.5	13.15	4.72	5.59	in.
APBX 8 AS₂	368	294	135	158	mm
	14.49	11.57	5.31	6.22	in.
APBX 10 AS₂	440	334	135	158	mm
	17.32	13.15	5.31	6.22	in.

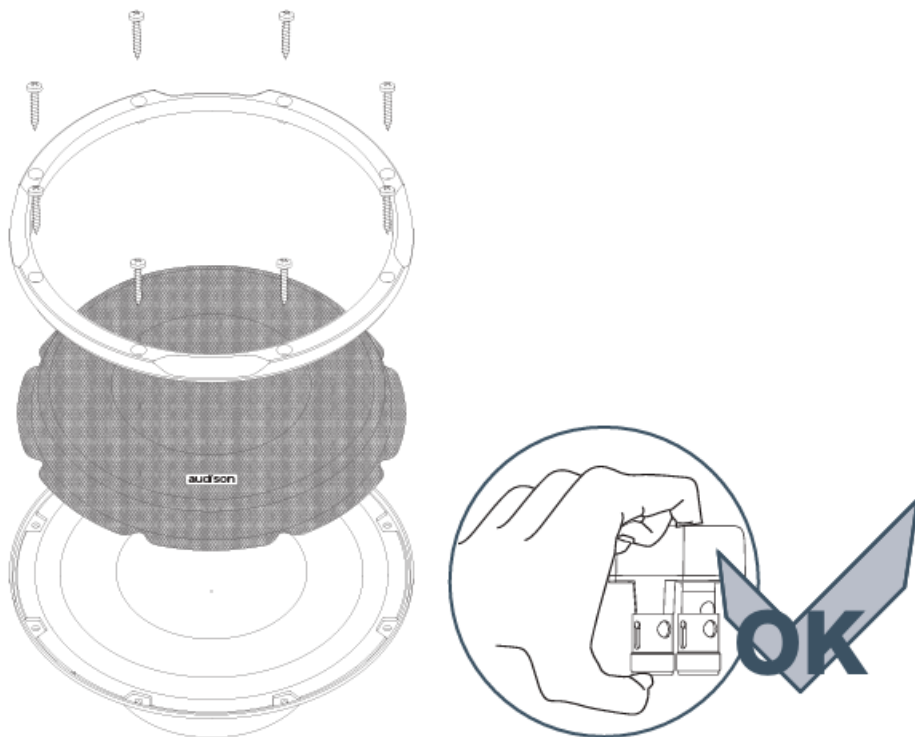
APS 8 R / APS 8 D / APS 10 D / APS 10 S4S



	A	B	C	C ₁	D	
APS 8 R APS 8 D	222	187	94,6	104	79	mm
	8.74	7.36	3.72	4.09	3.11	in.
APS 10 D APS 10 S4S	270	233	105	119	88	mm
	10.63	9.17	4.13	4.69	3.46	in

- **Mounting**

APS 8 R / APS 8 D / APS 10 D / APS 10 S4S

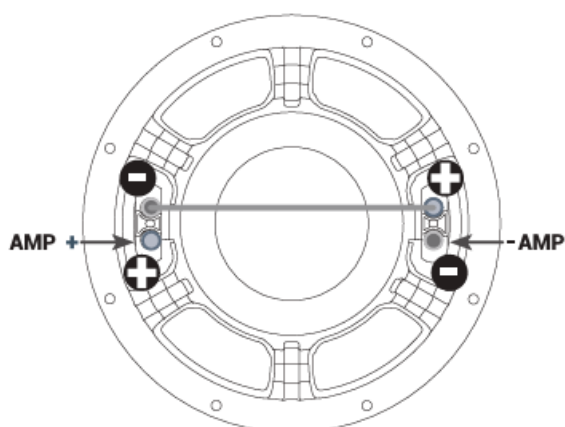


IMPEDANCE	APS 8 R APS 10 S4S	APS 8 D APS 10 D	
1 Speaker	4	4 + 4	Ω
1 Speaker series	–	8	Ω
1 Speaker parallel	–	2	Ω
2 Speakers series	8	–	Ω
2 Speakers parallel	2	–	Ω
2 Speakers parallel – parallel	–	1	Ω
2 Speakers series – parallel	–	4	Ω
3 Speakers series – parallel	–	2,6	Ω

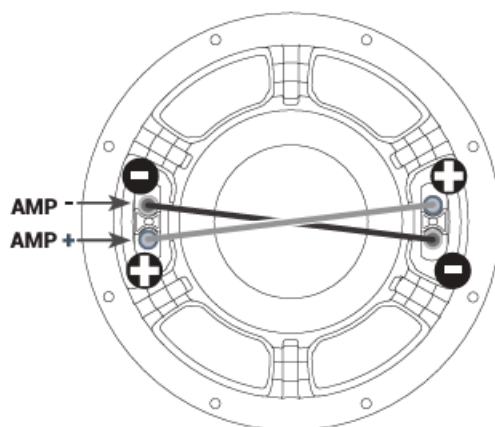
- Connections

APS 8 D / APS 10 D

SERIES

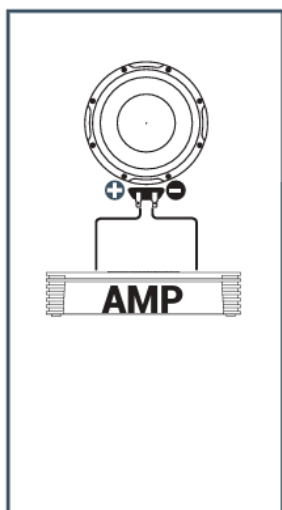


PARALLEL

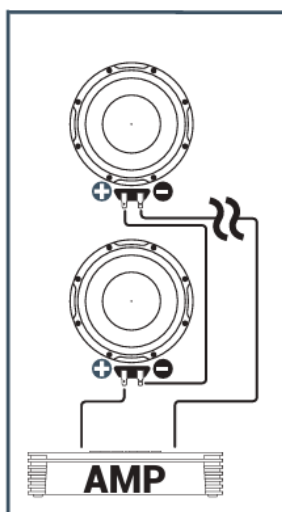


APS 8 R / APS 10 S4S

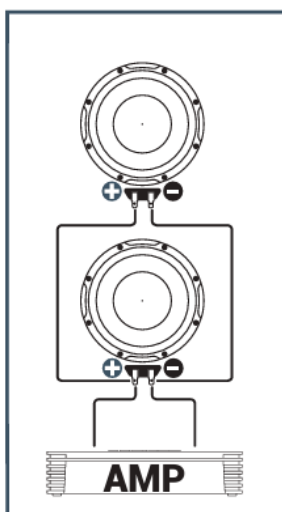
1 SPEAKER



SERIES

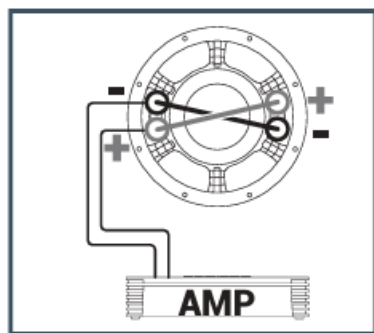


PARALLEL

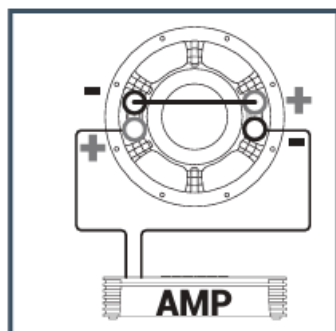


APS 8 D / APS 10 D

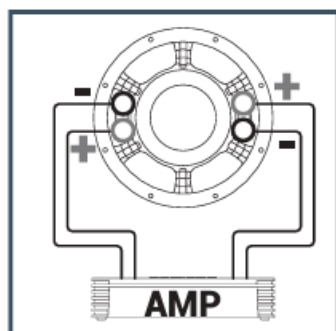
1 SPEAKER IN PARALLEL



1 SPEAKER IN SERIES

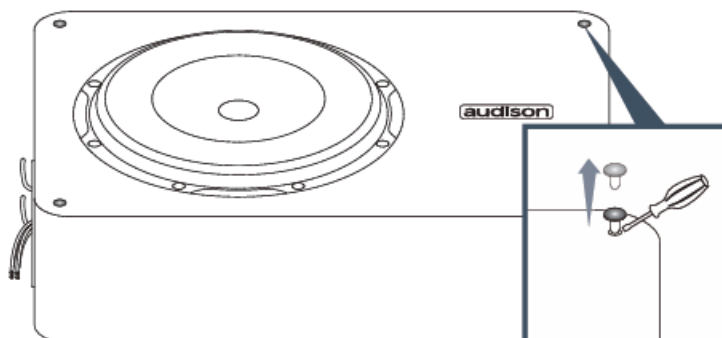


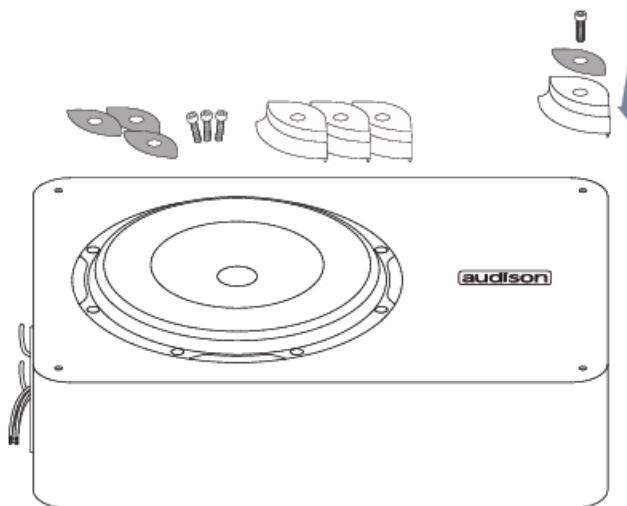
1 SPEAKER SEPARATE



- Mounting

APBX 8 R / APBX 8 DS / APBX 10 DS / APBX 8 AS₂ / APBX 10 AS₂ / APBX 10 S4S



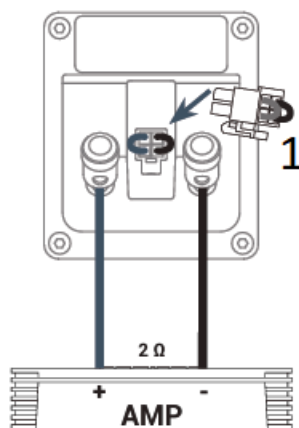


IMPEDANCE	APBX 8 R APBX 10 S4S	APBX 8 DS APBX 10 DS	
1 Speaker	4	4 + 4	Ω
1 Speaker parallel	—	8	Ω
1 Speaker series	—	2	Ω

- Connections

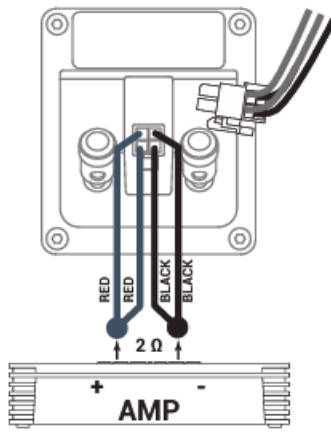
APBX 8 DS / APBX 10 DS

PUSH CONNECTION

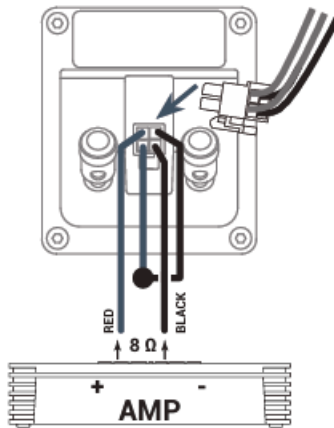


1. USE DUMMY PLUG

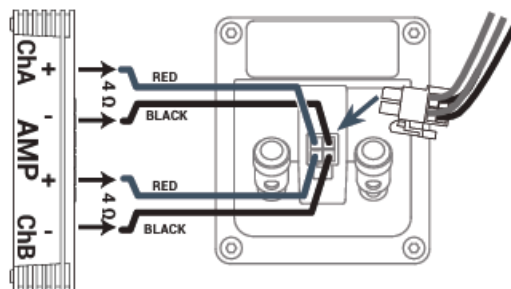
PLUG & PLAY CONNECTION (PARALLEL)



**PLUG & PLAY CONNECTION
(SERIES)**



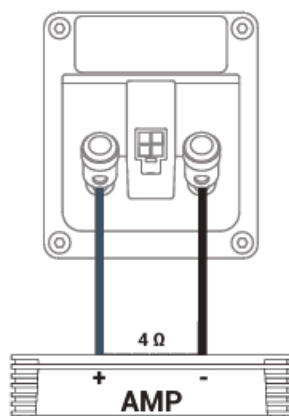
**PLUG & PLAY CONNECTION
(SEPARATE COILS)**



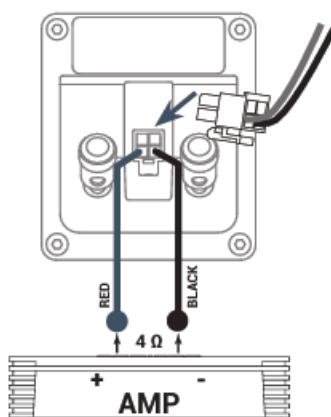
Do not use push and PLUG & PLAY CONNECTION at the same time.

APBX 8 R / APBX 10 S4S

PUSH CONNECTION



PLUG & PLAY CONNECTION



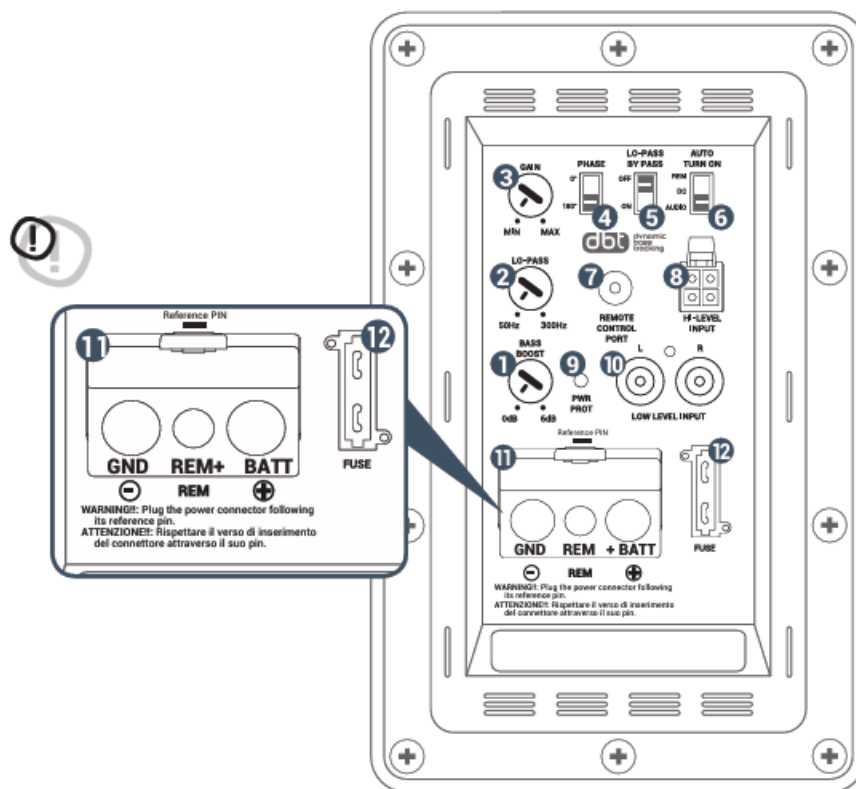
Do not use push and PLUG & PLAY CONNECTION at the same time.

- Control panel Overview

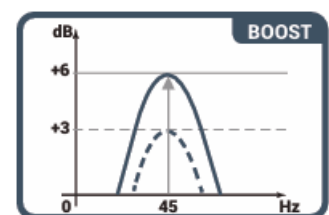
APBX 8 AS₂ / APBX 10 AS₂

DBT

See page 44 for DBT features



(1) **BASS BOOST**: adjustable Bass Boost control, 0÷6 db @ 45Hz.

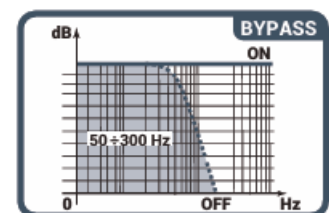


(2) **LO-PASS**: 12dB/Oct frequency adjustable Butterworth low-pass filter (50÷300 Hz).







(3) **GAIN**: gain adjustment: Lo-level input (0.1÷4 VRMS); Hi-Level input (0.2÷8 VRMS)

(4) **PHASE**: output phase switch (0 – 180°).

(5) **LO-PASS BYPASS**: switch to disable the lo-pass filter (**OFF**= Filter enabled; **ON**= Filter disabled). When it is set to ON, it allows the use of an external adjustable SUB signal, coming from a DSP device or an amplifier (eg AP 8.9 / 4.9 bit).



(6) **Auto Turn ON**: three different automatic turn-on modes can be selected using the “Auto Turn ON” switch: REM / DC / AUDIO. Refer to the below Auto turn-on table.

AUTO TURN ON	GND +BATT REM 	LOW LEVEL INPUT 	HI-LEVEL INPUT 	NOTE	
	✓	✓	✓	Use the Remote turn-on signal available from the source.	Function available for both HI and LO level input signals.
	✗	✗	✓	To be used in case the REM signal is not available.	The DC voltage of the source HI-level output needs range between 2÷5 V DC.
	✗	✓	✗		The audio signal of the source LO-level output needs to range between 4÷10 mV AC.

Auto turn on table

(7) REMOTE CONTROL PORT: Input for REMOTE SUB VOLUME CONTROL. Connect the sub volume control HRC AP supplied.

(8) HI-LEVEL INPUT: HI-level inputs for speaker signals, Left and Right channels. If the source does not feature pre-amplified outputs, connect to the HI-level speaker outputs (0.2÷8 VRMS). Left & Right signals are summed into the amplifier to obtain a mono signal for the subwoofer.

(9) PWR-PROT: Status led. Power on (blue colour) – Protection mode (red colour): the amplifier will automatically shut down when overheating – over/under power supply voltage occur.

(10) LOW-LEVEL INPUT: Left and Right pre-amplified input channels. Connect to pre-amplified audio source unit output. Gain adjustment: 0.1÷4 VRMS. Left & Right signals are summed into the amplifier to obtain a mono signal for the subwoofer.

(11) POWER CONNECTOR (GND; REM; + BATT): power supply connections.

GND: terminal block for the amplifier power supply negative pole connection. Connect the battery negative pole or a wire connected to the vehicle chassis. The terminal accepts cables up to 4 AWG.

REM: REMOTE IN terminal block for the remote cable coming from the device which manages the amplifier auto turn-on. The terminal accepts cables up to 8 AWG.

+ BATT: terminal block for the amplifier power supply positive pole connection (10÷16V DC). Connect the battery positive pole. The terminal accepts cables up to 4 AWG.

(12) FUSE: 20 A blade type protection fuse for APBX 8 AS₂ (30 A for APBX 10 AS₂).

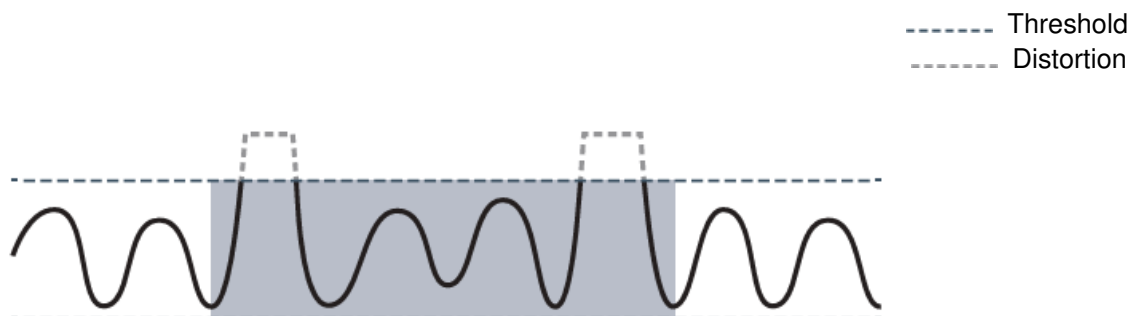
APBX 8 AS₂ / APBX 10 AS₂ Dynamic Bass Tracking



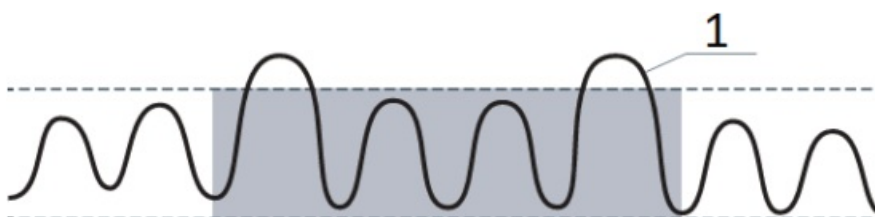
Input stage DBT (Dynamic Bass Tracking) technology allows fully use of the he-li high efficiency amplifier power of

APBX 10 AS₂ / APBX 8 AS₂ to enjoy a tense and dynamic bass even at very high listening volumes. DBT monitors the input signal in real time by detecting in advance the peaks which, if not processed, will bring the amplifier / subwoofer system into uncontrolled distortion, when it is pushed to maximum power. DBT prevents this critical condition by processing the attack and release of the peak in advance according to parameters optimized based on the perception of sound by the auditory system. The result is amazing, the perception of pressure and acoustic quality are greatly emphasized thanks to the intervention of the (DBT), which “favors” the extremely dynamic and defined reproduction of low frequencies, even at maximum power.

SIGNAL WITHOUT DBT



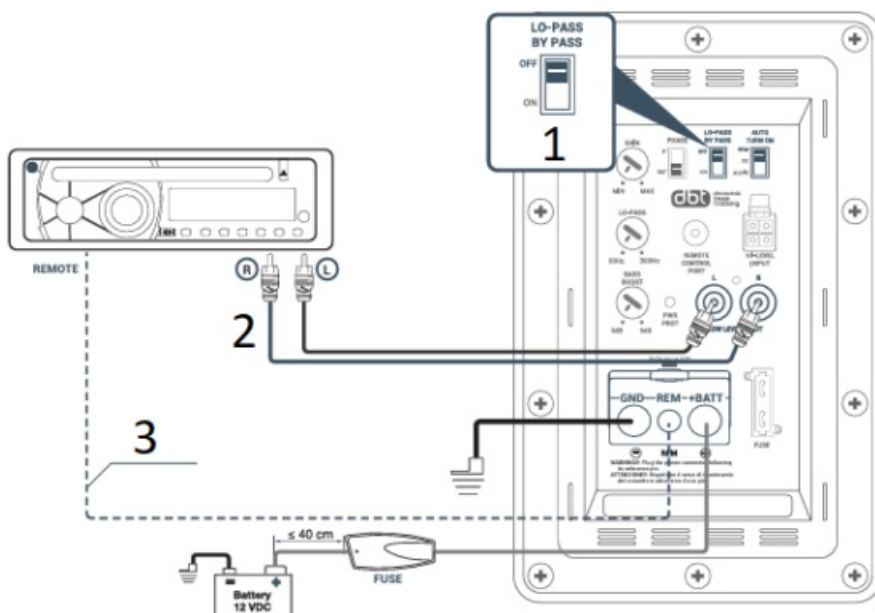
dbt SIGNAL PROCESSED BY DBT (DINAMIC BASS TRACKING)



1. Improved perception

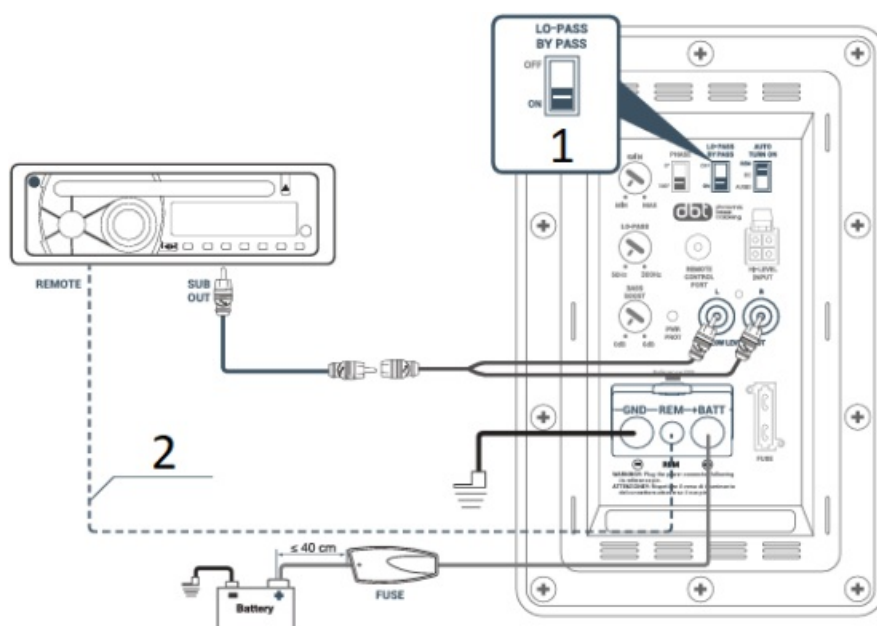
• Connections

Low-Level IN (Stereo out)



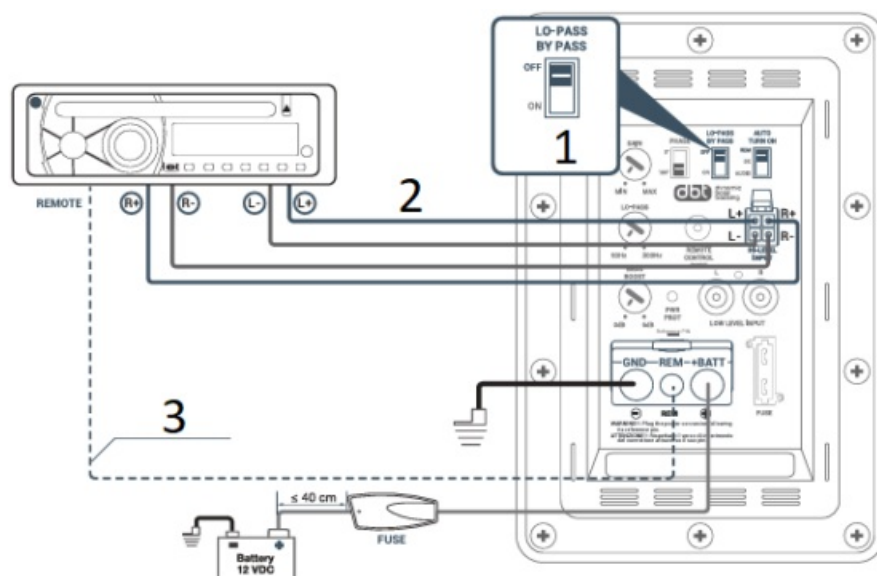
1. When the Head-unit does not feature a Low-Pass filter
2. Stereo Low Level Output
3. Refer to auto turn-on table, pag. 43

Low-Level IN (Sub out)



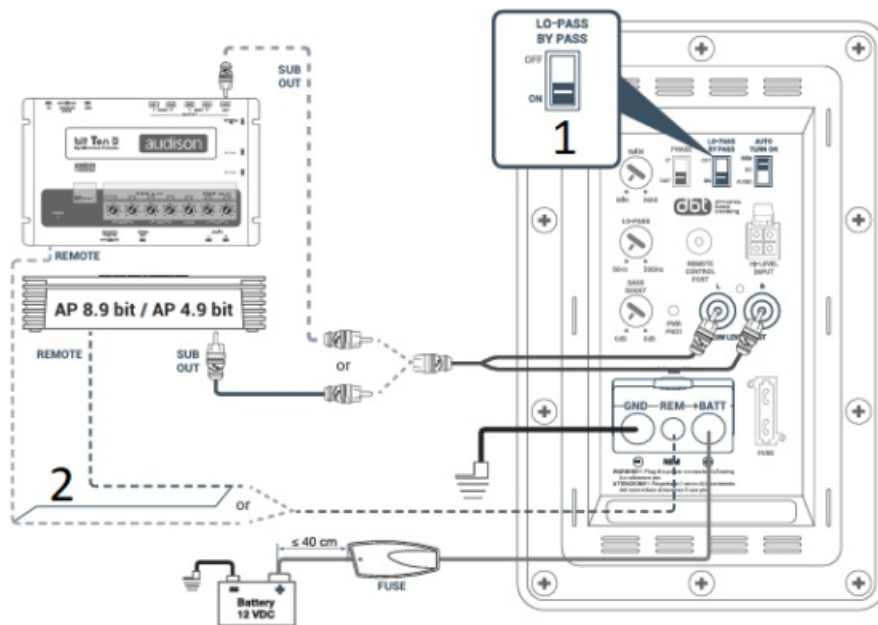
1. When the Head-unit features a Low-Pass filter
2. Refer to auto turn-on table, pag. 43

Hi-Level IN



1. When the Head-unit does not feature a Low-Pass filter
2. Speaker Outputs
3. Refer to auto turn-on table, pag. 43

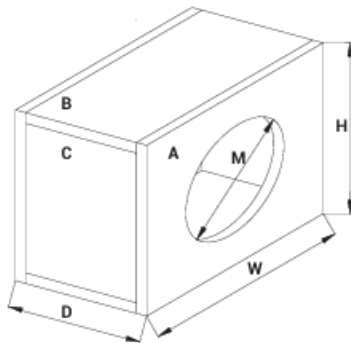
AP Bit Connection or bit DSP



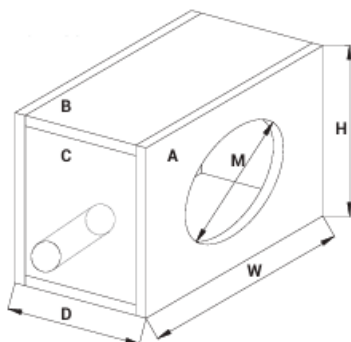
1. When the Head-unit features a Low-Pass filter
2. Refer to auto turn-on table, pag. 43

ENCLOSURE DESIGN

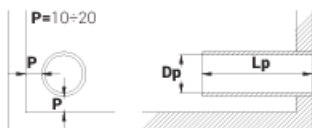
SEALED BOX ASSEMBLY



REFLEX BOX ASSEMBLY



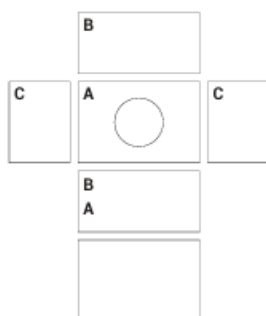
SUGGESTED PORT POSITION/DIMENSION



BOX TECH DATA

	Vb	Fb	Qtc	External dimensions			Mounting Hole – M	Wood Thickness	Dp-Tube inner diameter	Lp-Tube length	Damping Material
				W	H	D					
	l (cu. ft.)	H z		mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	
APS 8 R	10,6 (0.37)	35	—	567 (22.32)	300 (11.81)	106 (4.17)	187 (7.36)	16 (0.63)	60 (2.36)	500 (19.68)	1 foil on bottom panel
APS 8 D	8,5 (0.30)	62	0,85	462 (18.19)	300 (11.81)	106 (4.17)	187 (7.36)	16 (0.63)	—	—	1 foil on bottom panel
APS 10 D APS 10 S4S	12 (0.42)	56	0.97	482 (18.98)	350 (13.78)	116 (4.57)	233 (9.17)	16 (0.63)	—	—	1 foil on bottom panel

PANELS LAYOUT



PANELS CUT LIST

	A	Qty	B	Qty	C	Qty
	mm (in.)	Pcs	mm (in.)	Pcs	mm (in.)	Pcs
APS 8 R	567 x 300 (22.32 x 11.81)	2	567 x 74 (22.32 x 2.91)	2	268 x 74 (10.55 x 2.91)	2
APS 8 D	462 x 300 (18.19 x 11.81)	2	462 x 74 (18.19 x 2.91)	2	268 x 74 (10.55 x 2.91)	2
APS 10 D APS 10 S4S	482 x 350 (18.98 x 13.78)	2	482 x 84 (18.98 x 3.31)	2	318 x 84 (12.52 x 3.31)	2

• **Technical specifications**

	Com pone nt	S iz e	Power handling		Impe danc e	Magnet S ize	Voice Coil Ø	Magnet	Dome/Cone	Weight of one component
			P e a k	Conti nuou s						Kg (lb.)
		m m (i n.)	W	W	Ω	mm (in.)	mm (in.)			
APS 8 R	Subw oofer	2 0 0 (8)	5 0 0	250	4	120 x 50 x 28 (4.72 x 1. 97 x 1.1)	40 (1.57)	High density flux ferrite	Water repellent pressed paper	3,04 (6.7)
APS 8 D	Subw oofer	2 0 0 (8)	5 0 0	250	4 + 4	120 x 50 x 28 (4.72 x 1. 97 x 1.1)	40 (1.57)	High density flux ferrite	Water repellent pressed paper	3,1 (6.83)
APS 10 D	Subw oofer	2 5 0 (1 0)	8 0 0	400	4 + 4	140 x 70 x 30 (5.51 x 2. 76 x 1.18)	60 (2.36)	High density flux ferrite	Water repellent pressed paper	5,24 (11.56)
APS 10 S4 S	Subw oofer	2 5 0 (1 0)	8 0 0	400	4	140 x 70 x 30 (5.51 x 2. 76 x 1.18)	60 (2.36)	High density flux ferrite	Water repellent pressed paper	5,24 (11.56)

	Component	Size	Power handling		Impedance	Dimensions W x H x D	Voice Coil Ø	Magnet	Dome/Cone	Weight of one component
			Peak	Continuous						Kg (lb.)
		mm (in.)	W	W	Ω	mm (in.)	mm (in.)			
APB X 8 R	Passive Subwoofer Reflex box	200 (8)	50	250	4	470 x 131 x 334 (18.5 x 5.16 x 13.15)	40 (1.57)	High density flux ferrite	Water repellent pressed paper	6,64 (14.64)
APB X 8 DS	Passive Subwoofer Sealed box	200 (8)	50	250	4 + 4	374 x 131 x 334 (14.72 x 5.16 x 13.15)	40 (1.57)	High density flux ferrite	Water repellent pressed paper	6,22 (13.71)
APB X 10 DS	Passive Subwoofer Sealed box	250 (10)	80	400	4 + 4	470 x 142 x 334 (18.5 x 5.59 x 13.15)	60 (2.36)	High density flux ferrite	Water repellent pressed paper	8,63 (19.03)
PBX 8 AS₂	Active Subwoofer Sealed box with dynamic bass tracking	200 (8)	50	250	0,4	368 x 158 x 294 (14.49 x 6.22 x 11.57)	40 (1.57)	High density flux ferrite	Water repellent pressed paper	6,3 (13.89)
APB X 10 AS₂	Active Subwoofer Sealed box with dynamic bass tracking	250 (10)	80	400	0,16	440 x 158 x 334 (17.32 x 6.22 x 13.15)	60 (2.36)	High density flux ferrite	Water repellent pressed paper	9,4 (29.72)
APB X 10 S4S	Passive Subwoofer Sealed box	250 (10)	80	400	4	470 x 142 x 334 (18.5 x 5.59 x 13.15)	60 (2.36)	High density flux ferrite	Water repellent pressed paper	8,63 (19.03)

			APBX 8 AS2	APBX 10 AS2
POWER SUPPLY	Power supply voltage	VDC	10 ÷ 16V	10 ÷ 16V
	Idling current	A	0.4	0.4
	Idling current when off	mA	4	4
	Consumption @ 14,4 V DC Max musical power	A	18	30
	Remote IN		5 – 16 V DC 2 mA max	5 – 16 V DC 2 mA max
	Fuse	A	20	30
AMPLIFIER STAGE	Distortion – THD	%	0.5	0.5
	Bandwidth	Hz	20 ÷ 300	20 ÷ 300
	S/N ratio (A weighted)	dB	100	100
	Input sensitivity (Pre IN)	VRM S	0.1 ÷ 4	0.1 ÷ 4
	Input sensitivity (Hight IN)	VRM S	0.2 ÷ 8	0.2 ÷ 8
	Input impedance (Pre IN)	Ω	17k	17k
	Input impedance (Hight IN)	Ω	220	220
	Output power (RMS) @ 14,4 VDC, 1% THD	W	250 @ 0.4Ω	400 @ 0.16Ω
SIGNALS INPUTS / FILTER	Inputs		RCA / Hi-Level	RCA / Hi-Level
	Filters (Lo-Pass) continuous adjustable		50 ÷ 300 Hz 12dB/Oct-bypass	50 ÷ 300 Hz 12dB/Oct-bypass
	Subsonic (Hi-Pass) fixed		16 Hz @ 24 dB Oct	16 Hz @ 24 dB Oct
	Phase switch		0 – 180°	0 – 180°
	Sub remote volume control		HRC AP included	HRC AP included
	Bass boost		0 ÷ 6 dB @ 45 Hz	0 ÷ 6 dB @ 45 Hz

- Electro-Acoustic parameters

	APS 8 R	APS 8 D *	APS 10 D *	APS 10 S4S
D mm	173	173	220	220
Xmax mm	± 8.8	± 8.8	± 12,6	± 12,6
Re Ω	3.7	2.1	2.2	3,7
Fs Hz	32	30	27	28,5
Le mH	1.45	1.1	1.5	1,9
Vas l	26.5	25.5	41	39,62
Mms g	80	85	170	160
Cms mm/N	0.33	0.3	0.2	0,2
BL T•m	11.5	8.8	10.4	11,9
Qts	0.41	0.44	0.52	0,68
Qes	0.43	0.46	0.58	0,75
Qms	5.1	5.1	4.7	6,9
Spl dB	84	83.5	84	83,5

*The Thiele and Small parameters are measured with coils in parallel. For series coils specification multiply Re and Le by 4 and BL by 2, all other specifications remain the same.

The Thiele and Small parameters are measured after the speaker has been conditioned by a specific signal and represent the expected long term parameters after a short period of use.

Note



JBL009_Rev.N

- **Audison Warranty**

The Audison products are warranted, under normal functioning conditions, for the period of time as set by the laws in force, against defects concerning materials or their manufacturing. The warranty is valid from the date of purchase, certified by receipt.

The warranty is not valid if:

- the product is damaged by incidents, installations and/or improper use, or by any other causes not depending on materials or manufacturing defects;
- the product is modified or tampered with by unauthorised people;
- its serial number has been altered or cancelled.

While the product is under warranty, defective parts will be repaired or replaced at the manufacturer's discretion. The defective product, along with notification about it, must be returned to the dealer from which it was purchased together with the warranty certificate duly filled in. If the product is no longer under warranty, it will be repaired at the current costs.

Elettromedia s.r.l. does not undertake any liability for damages due to transportation.


Elettromedia s.r.l. does not take any responsibility for: costs or loss of profit due to the impossibility to use the product, other accidental or consequential costs, expenses or damages suffered by the customer.

Warranty according to laws in force.

For more information visit the Audison website.

All specifications subject to change without notice

Documents / Resources

	<p>audison APBX, APS Subwoofer [pdf] Owner's Manual APBX10S4S, APBX 10 S4S, APBX APS Subwoofer, APBX APS, Subwoofer</p>
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References

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- [User Manual](#)

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