




ALPHARD DB-3012R D1 Subwoofer Owner's Manual

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ALPHARD

ALPHARD DB-3012R D1 Subwoofer



INTRODUCTION

Thank you for purchasing of this Deaf Bonce product! Our company is committed to the creation of extremely loud sound systems with no loss of quality.

To ensure proper use, please carefully read through this manual before using this product. It is especially important that you read and observe caution's in this manual. Please keep the manual in a safe and accessible place for future reference.

SAFETY INSTRUCTIONS

1. Fasten the subwoofer properly when installing it in the vehicle. If the component is disconnected during driving, it may cause serious damage to the passengers of the vehicle or another vehicle.
2. Before installing the components, if possible store the product in its original package to avoid accidental damage to the product.
3. Be careful when installing and dismantling the subwoofer! Do not let the subwoofer drop to avoid damage of its moving parts.
4. When working with tools follow safety rules.
5. Before the installation switch off the head unit and all other audio devices to avoid their damage.
6. Make sure that the location of the subwoofer does not hinder the proper operation of mechanical and electrical devices of the vehicle.
7. Do not install components in places exposed to water, excessive humidity, high or low temperature, dust or dirt. **ATTENTION!!!** The product may be operated at +5 °C (41F) to +40 °C (104F). In case of moisture condensation, let the product to dry.
8. When performing plumbing, drilling or cutting works with the car, make sure that there is no wiring, brake lines, fuel pipe or other structural elements under the place of work. Follow the safety rules! Use protective glasses and gloves.
9. When stretching back the speaker cables make sure that they are not in contact with sharp edges or moving mechanical devices. Make sure that they are firmly fixed and protected over the entire length.

10. The diameter of the speaker cables must be selected in accordance with the length and applied power.
11. Never stretch the cables outside of the car and near the moving parts of the car. This can lead to destruction of the insulating layer, short circuit and fire.
12. To protect the cables use rubber gaskets if the wire passes through a hole in the plate, or other similar materials if it lies close to the parts exposed to heat.

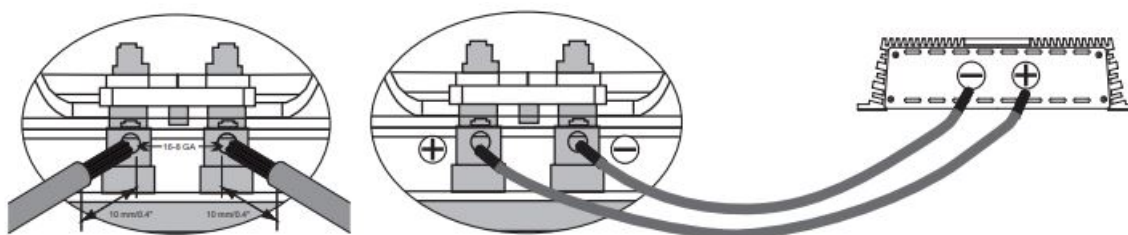
WIRING DIAGRAMS

Attention! You need to connect both voice coils of the subwoofer.

Do not expose your amplifier to loads below the value predetermined by the manufacturer.

Various examples of connection types are given at the pages below. Use these examples to determine the required load impedance of your connection.

Connection of terminals



Serial connection

Total impedance = $\Omega_{\text{Sub 1}} + \Omega_{\text{Sub 2}} + \Omega_{\text{Sub 3}} \dots$

Parallel connection

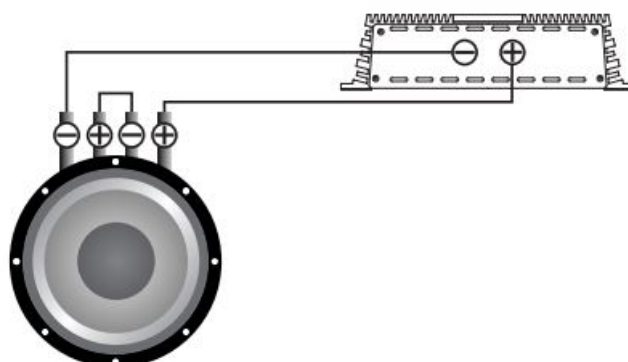
$$\frac{1}{\frac{1}{\Omega_{\text{Sub 1}}} + \frac{1}{\Omega_{\text{Sub 2}}} + \frac{1}{\Omega_{\text{Sub 3}}} \dots}$$

Voice coils 1+1, 2+2 Ohm

The subwoofer has voice coil D1 or D2.

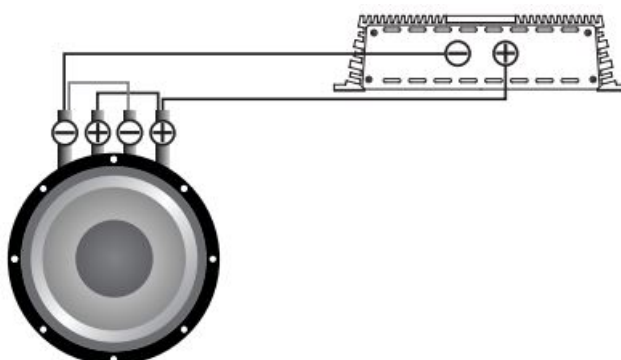


One subwoofer, coils in series



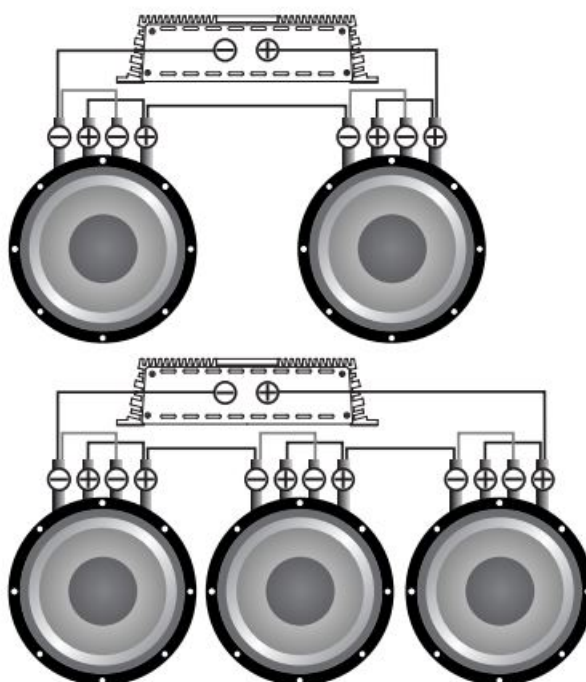
Voice coils	Total impedance
1+1 Ohm	2 Ohm
2+2 Ohm	4 Ohm

One subwoofer, coils in parallel



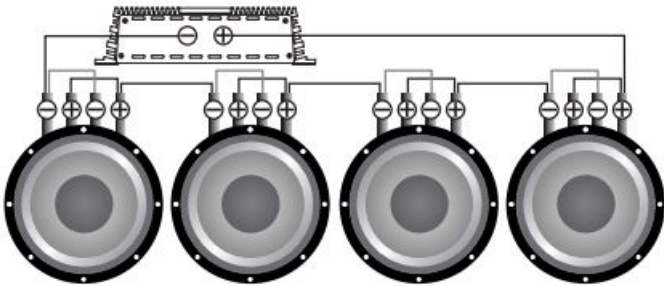
Voice coils	Total impedance
1+1 Ohm	0.5 Ohm
2+2 Ohm	1 Ohm

Subwoofers in series, coils in parallel



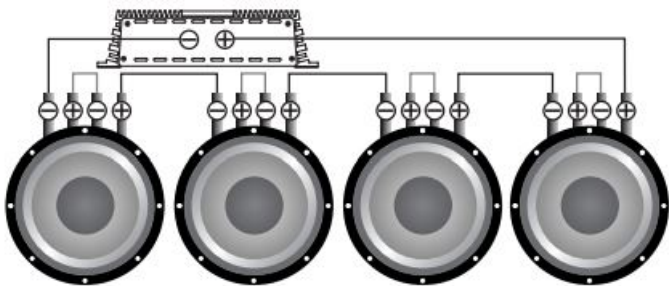
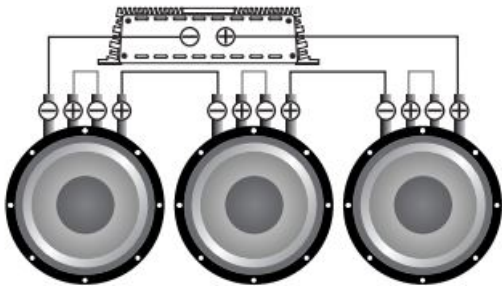
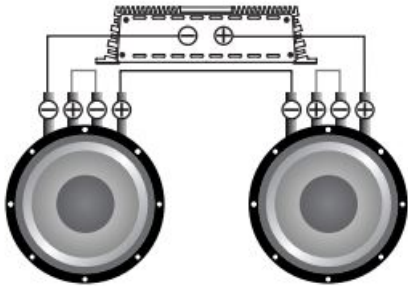
Voice coils	Total impedance
1+1 Ohm	1 Ohm
2+2 Ohm	2 Ohm

Voice coils	Total impedance
1+1 Ohm	1.5 Ohm
2+2 Ohm	3 Ohm



Voice coils	Total impedance
1+1 Ohm	2 Ohm
2+2 Ohm	4 Ohm

Subwoofers in series, coils in series

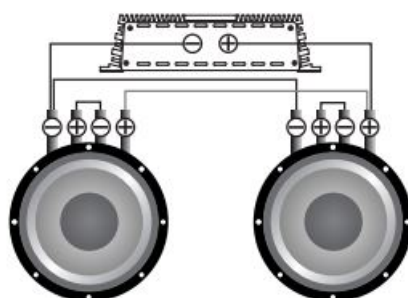


Voice coils	Total impedance
1+1 Ohm	4 Ohm
2+2 Ohm	8 Ohm

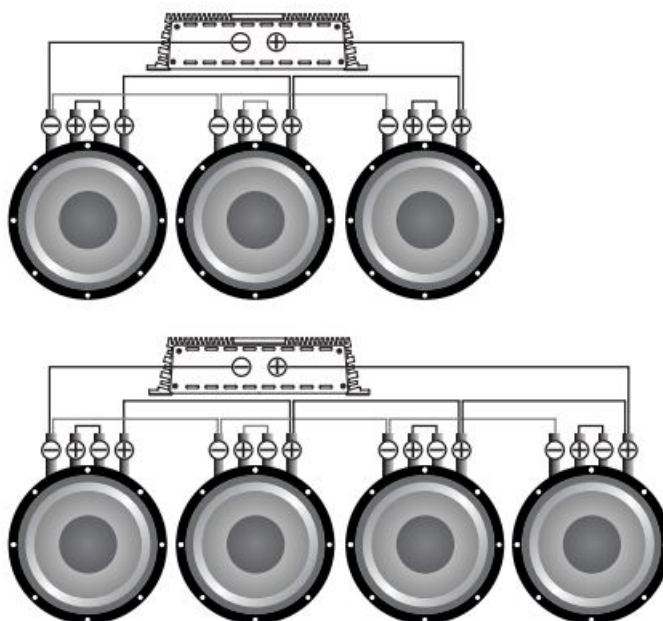
Voice coils	Total impedance
1+1 Ohm	6 Ohm
2+2 Ohm	12 Ohm

Voice coils	Total impedance
1+1 Ohm	8 Ohm
2+2 Ohm	16 Ohm

Subwoofers in parallel, coils in series



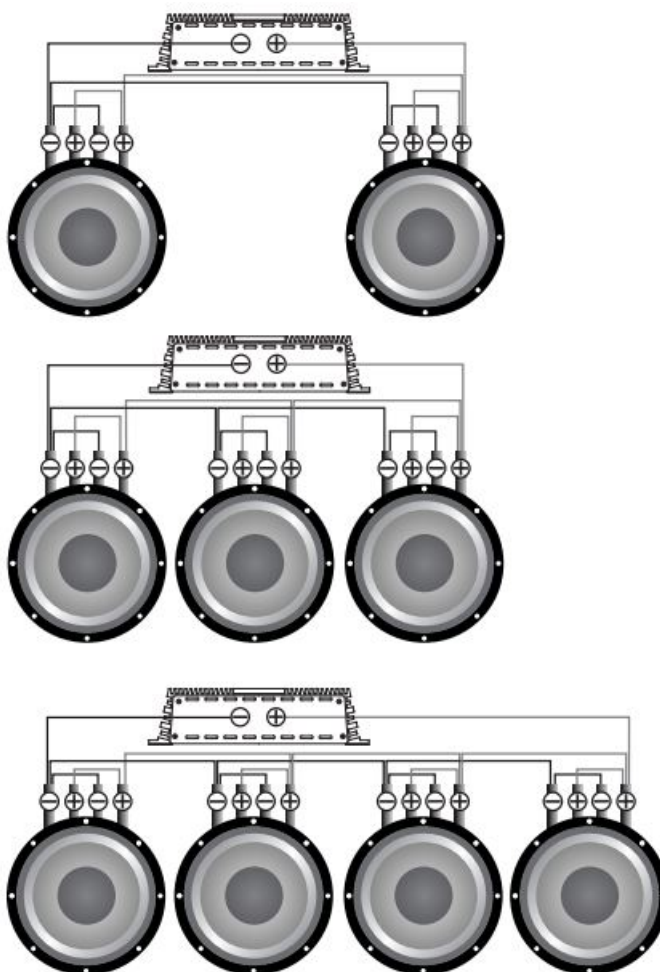
Voice coils	Total impedance
1+1 Ohm	1 Ohm
2+2 Ohm	2 Ohm



Voice coils	Total impedance
1+1 Ohm	0.66 Ohm
2+2 Ohm	1.33 Ohm

Voice coils	Total impedance
1+1 Ohm	0.5 Ohm
2+2 Ohm	1 Ohm

Subwoofers in parallel, coils in parallel



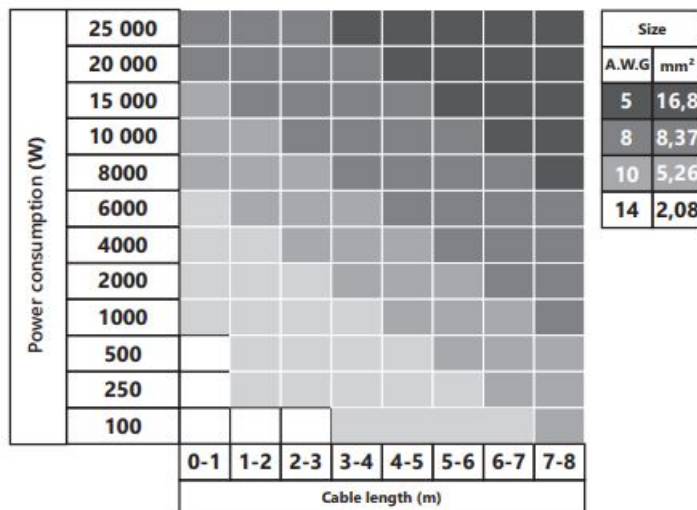
Voice coils	Total impedance
1+1 Ohm	0.25 Ohm
2+2 Ohm	0.5 Ohm

Voice coils	Total impedance
1+1 Ohm	0.16 Ohm
2+2 Ohm	0.33 Ohm

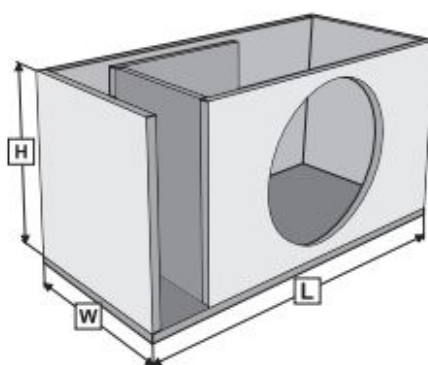
Voice coils	Total impedance
1+1 Ohm	0.125 Ohm
2+2 Ohm	0.25 Ohm

Selection of the diameter of speaker cable

Use the table below to select the desired diameter based on the length and the power consumption.



RECOMMENDED ENCLOSURE PARAMETERS



Bass reflex box $L \cdot W \cdot H$ = body volume

Parameters/Model	DB-3012R D1/D2	DB-3015R D1/D2	DB-3512R D1/D2	DB-3515R D1/D2	DB-4515R D1/D2	DB-4518R D1/D2
The recommended volume, liters / ft3	55 / 1.94	100 / 3.53	55 / 1.94	95 / 3.35	95 / 3.35	160 / 5.65
Port area, cm² / inch²	200 / 31	300 / 46.5	230 / 35.6	325 / 50.4	350 / 54.3	450 / 69.7
Port length, cm / inch	70 / 27.6	65 / 25.6	83 / 32.7	86 / 33.8	85 / 33.5	70 / 27.6
Hz setting	35	32	35	32	32	30

HOW TO USE

The correct choice of the amplifier, its settings and enclosure design prolongs the lifetime of your subwoofer. You should select an amplifier with a nominal power below the nominal power of the subwoofer. Proper coordination of the head unit (HU) with the amplifier will provide clean, undistorted signal fed to the subwoofer, which prevents overheating and voice coil damage. Like any other speaker the subwoofer has moving and stationary parts. We strongly recommend that the moving parts of the subwoofer should be warmed up at the beginning of operation. Be extra careful when warming up the parts. Warm up the subwoofer using musical material for 40 hours at medium power. If you feel strange smell during operation at maximum volume, you should lower the volume of the subwoofer and let the device to cool down at a low volume.

Recommended settings of the amplifier and HU: Volume of HU should not exceed 80%. The amplifier sensitivity

should be set to 50%, subsonic filter frequency (Subsonic) should be set to 5 Hz below the port settings. For example, if you configure the port at 30 Hz, Subsonic should be set to 25 Hz. The low pass filter LPF (the filter that cuts all frequencies above those set for the filter) should be set to 63-80 Hz, bassboost should be set to 0.

SPECIFICATIONS

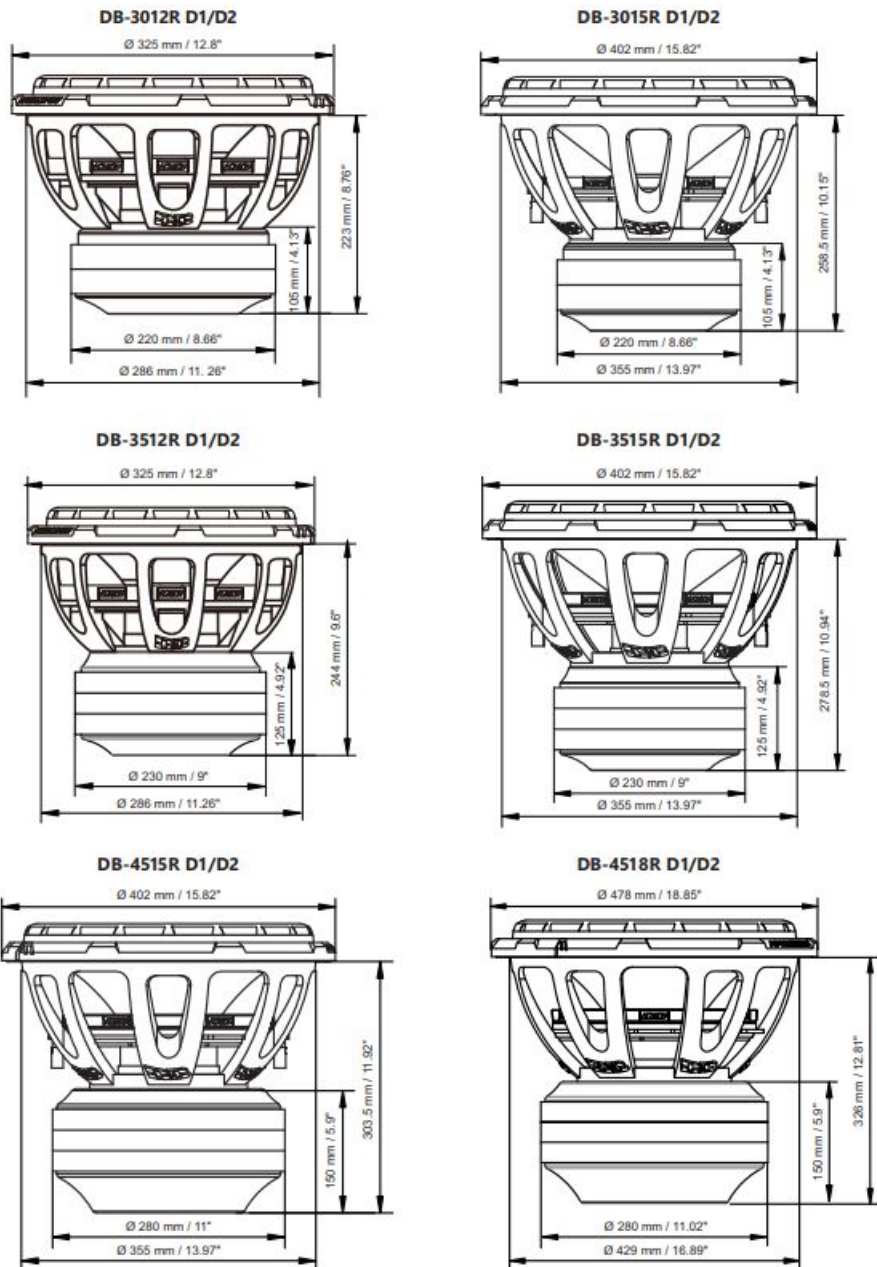
Model	DB-3012R D 1/D2	DB-3015R D1 /D2	DB-3512R D 1/D2	DB-3515R D 1/D2	DB-4515R D1 /D2	DB-4518R D1/D2
Size (Inch)	12	15	12	15	15	18
Surround material	Foam	Foam	Foam	Foam	Foam	Foam
Cone material	Pressed paper	Pressed paper	Carbon fiber	Carbon fiber	Carbon fiber	Carbon fiber
Frame material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Magnet type	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite
Power RMS (W)	2800	2800	3500	3500	4500	4500
Power MAX (W)	5600	5600	7000	7000	9000	9000
Voice coil size (Inch)	3	3	3.5	3.5	4.5	4.5
Voice coil wire	CCAR	CCAR	CCAR	CCAR	CCAR	CCAR

THIELE-SMALL PARAMETERS

Impedance (Ohm)	1+1 / 2+2	1+1 / 2+2	1+1 / 2+2	1+1 / 2+2	1+1 / 2+2	1+1 / 2+2
Re (Ohm)	0.8+0.8 / 1.6+1.6	0.8+0.8 / 1.6+1.6	0.8+0.8 / 1.6+1.6	0.8+0.8 / 1.6+1.6	0.8+0.8 / 1.6+1.6	0.8+0.8 / 1.6+1.6
SPL (dB)	86 / 86.5	88 / 88.3	86.8 / 86.9	87.3 / 87.5	87.7 / 87.8	88.9 / 89
Xmax (Mm)	19	19	22.5	22.5	22.5	22.5
Fs (Hz)	33 /33.8	32 /32.5	32.5 /32.8	32 /32.3	32 /32.4	29 /29.4
Vas (L)	29.5 / 30.2	68 / 69.7	28.9 / 29.6	68.3 / 69	67 / 68.4	149 / 153
Qts	0.41 / 0.43	0.45 / 0.47	0.39 / 0.4	0.38 / 0.39	0.35 / 0.36	0.33 / 0.34
BL	23.8 / 26	23 / 26.1	24.8 / 26.9	23.9 / 27.2	26.2 / 27.9	26.4 / 28

This specified sensitivity is not directly connected with the sound pressure in the vehicle and therefore should not be used as the sole indicator for comparison with other subwoofers.

DIMENSIONS



BOX CONTENTS

1. Subwoofer – 1 pc.
2. Owner's Manual -1 pc.
3. Warranty card – 1 pc.

WARRANTY AND MAINTENANCE INFO

Deaf Bonce products are warranted against defects concerning materials and their manufacturing under normal functioning conditions.


While the product is under warranty, defective parts will be repaired or replaced at the manufacturer's decision. 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, complete with the original packaging. If the product is no longer under warranty, it will be repaired at the current costs.

Our company does not undertake any liability for damages due to transportation. Our company 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 our website and carefully read warranty card.

10. INFORMATION ON DISPOSAL OF THE ELECTRICAL AND ELECTRONIC EQUIPMENT (FOR THE EUROPEAN COUNTRIES WITH SEPARATE WASTE COLLECTION)

Items marked “crisscrossed wheeled bin” are not allowed to be disposed of together with usual household waste. These electrical and electronic products should be disposed of in special reception centers, equipped for recycling such products and components. For information about the location of the nearest disposal/recycling spot and the rules of delivery of waste please contact your local municipal office. Recycling and proper disposal help to protect the environment and prevent harmful effects on health.

Documents / Resources

	<p>ALPHARD DB-3012R D1 Subwoofer [pdf] Owner's Manual DB-3012R D1, D2 DB-3015R D1, D2 DB-3512R D1-D2, DB-4515R D1-D2, DB-3012R D1 Subwoofer, DB-3012R D1, Subwoofer</p>
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References

-  [Alphard - Professional Car Audio. Speakers, Subwoofers, Amplifiers](#)