

awave

DSP16MAX

OWNER MANUAL DSP CAR POWER AMPLIFIERS



- Please read this quick guide before using the product
- For detailed tuning operations and settings, please refer to the DSP16MAX user manual on the website
- <https://www.awaveaudio.com>



Warning

This symbol indicates important instructions. Failure to pay attention may result in serious injury or death to persons.

If a problem occurs, stop using it immediately

Failure to do so may result in personal injury or damage to this product. Please return the product to an authorised dealer or to the nearest service centre for repair.

This product is only suitable for use in vehicles with a negative 12V ground

Failure to do so may cause a fire or other accident.

Wiring and installation by professionals

Wiring and installation of this product requires specialist skills and experience. For safety reasons, please contact the dealer from whom you purchased the product for installation.

Do not disassemble or modify

Failure to do so may result in an accident, fire or electric shock.

Small objects such as bolts or screws should be kept out of the reach of children

Swallowing small objects can lead to serious injury. If swallowed, seek immediate medical attention.

Do not use any function that will distract you while driving

Any function that interferes with your concentration should only be used when the car is fully stopped. If you wish to use these functions, park the vehicle in a safe place first. Failure to do so may result in an accident.

It is important to keep the volume at a level where you can still hear the noise outside the vehicle while driving.

Not being able to hear emergency vehicle sirens and road warnings (train crossings etc.) is very dangerous and can lead to accidents. In addition, excessive noise levels can lead to hearing damage.



Note

This symbol indicates important instructions. Failure to pay attention may result in serious injury or death to persons.

Product cleaning

Please use a dry, soft cloth to clean the product regularly. If the pollution is difficult to remove, please use water to wet the soft cloth. Other electronics cleaners can also be used.

Temperature

Make sure the temperature in the car is between +60 and -20°C before switching on the machine.

Repairs

If you encounter a problem, do not repair it yourself. Please take the product to your authorized dealer or a nearby service centre for repair.

Installation Location

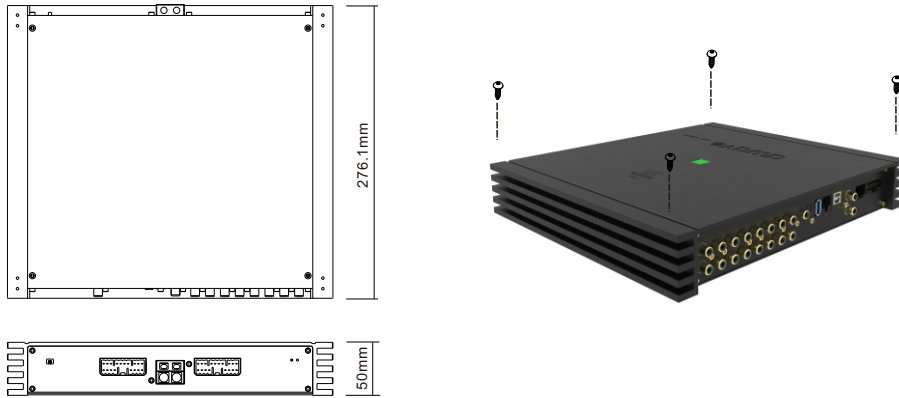
The machine must not be installed in any of the following locations.

- near direct sunlight and heat sources
- Places with high temperatures and near water sources
- Dusty places
- places subject to severe vibrations

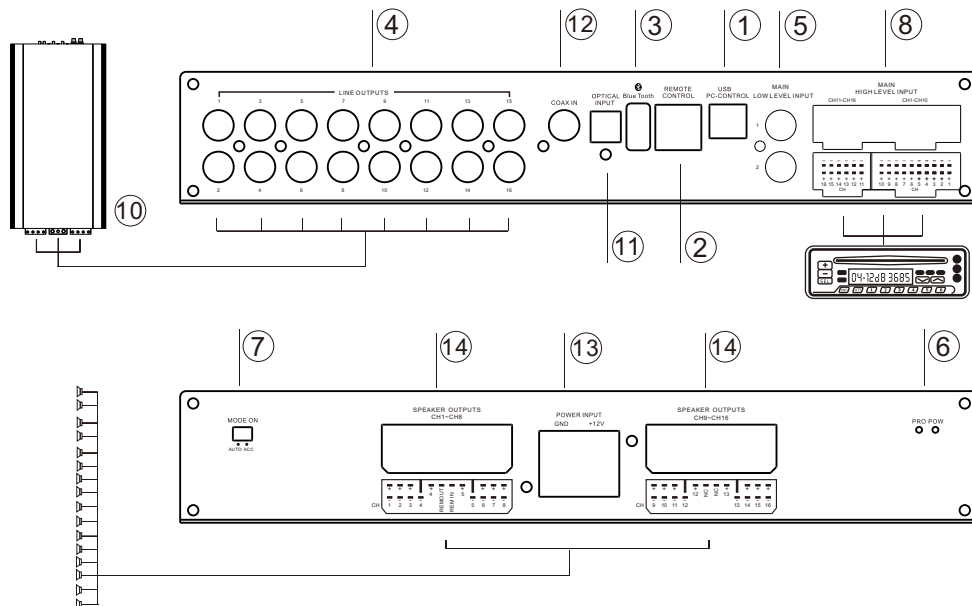
*Disposal of electronic products should be through proper recycling channels to reduce e-waste pollution.

Machine Introduction

Dimension Installation instruction



Machine interface illustration



*The machine has built-in Bluetooth

Machine Introduction

Introduction to machine interfaces and functions

- ① **USB port**
It can be connected to a PC via USB cable for detailed tuning operations and settings.
- ② **System extension interface**
- ③ **Bluetooth**
- ④ **RCA audio output connector**
16 sets of RCA audio signal outputs for connection to external amplifiers.
- ⑤ **RCA audio input connector**
2 sets of RCA audio signal inputs, can be connected to the RCA audio signal output of the car CD/DVD player.
- ⑥ **Power indicator**
- ⑦ **Input selector switch**
When the switch is set to "ACC", the machine is started by ACC; when the switch is set to AUTO, the machine is started by the high level input signal FL-/FL+.

- ⑧ **High level inputs are connected to the vehicle CD/DVD**
- ⑨ **Car CD/DVD player**
- ⑩ **External amplifier**
- ⑪ **OPTICAL INPUT**
- ⑫ **COAX IN**
- ⑬ **GND +12V**
- ⑭ **SPEAKER OUTPUT**

1 INPUT +	1 INPUT -
2 INPUT +	2 INPUT -
3 INPUT +	3 INPUT -
4 INPUT +	4 INPUT -
5 INPUT +	5 INPUT -
6 INPUT +	6 INPUT -
7 INPUT +	7 INPUT -
8 INPUT +	8 INPUT -
9 INPUT +	9 INPUT -
10 INPUT +	10 INPUT -
11 INPUT +	11 INPUT -
12 INPUT +	12 INPUT -
13 INPUT +	13 INPUT -
14 INPUT +	14 INPUT -
15 INPUT +	15 INPUT -
16 INPUT +	16 INPUT -

SPEAKER OUTPUTS CH1-CH8	
CH1 OUT-	CH1 OUT+
CH2 OUT-	CH2 OUT+
CH3 OUT-	CH3 OUT+
CH4 OUT-	CH4 OUT+
CH5 OUT-	CH5 OUT+
CH6 OUT-	CH6 OUT+
CH7 OUT-	CH7 OUT+
CH8 OUT-	CH8 OUT+

SPEAKER OUTPUTS CH9-CH16	
CH9 OUT-	CH9 OUT+
CH10 OUT-	CH10 OUT+
CH11 OUT-	CH11 OUT+
CH12 OUT-	CH12 OUT+
CH13 OUT-	CH13 OUT+
CH14 OUT-	CH14 OUT+
CH15 OUT-	CH15 OUT+
CH16 OUT-	CH16 OUT+

Accessory list

The following accessories should be included in the **DSP16MAX BOX**. If there is any shortage, please contact the authorized supplier.

Accessories	Quantity
Input output line	4 unit
USB cable 5M	1 unit
Fixing bracket	4 pcs
Instruction manual	2 books

Specification

Dynamic range	≤100dB
Signal to Noise (RCA)	≥100dB
Total ramp distortion	≤0.01%
Input Voltage	High level:32Vpp; RCA: 6Vpp
Output voltage	High level:28Vpp; RCA: 8Vpp
Power rating	16CHx80W(4Ω,14.4V, 1kHz, 10%THD)
Maximum power	16CHX120W(4Ω,14.4V, 1kHz, 10%THD)
Input/output sensitivity (RCA)	1:1.3 (without power amplification)
Frequency Response	20Hz~20KHz
System sample rate	192kHz/32bit
Input Impedance	High level:10Ω; RCA:47kΩ,
Output impedance	51Ω
Operating voltage	9~16V
Standby power	≤0.1W
REM start input	ACC or High level: (FL-/FL+)
REM start output	3~16V
Start-up time	10S
Operating ambient temperature	-20~60°C
Storage temperature	-40~85°C
Net weight	5.1kg
Size	307mmX276.1mmX50mm

Specification

Input signal	16-channel high level, 2-channel RCA universal, HD Bluetooth frber Coaxial input
Output signal	16-channel high level, 16-channel RCA audi
Output signal gain	Range : Mute, -40dB to +12dB
Input signal equaliser	Type : Parametric equalisation, graphical equalisation Frequency: 20Hz to 20kHz, resolution 1Hz Q-value (slope or gradient) : 0.3 to 15 Gain: -15dB to +15dB, resolution 0.1dB
Output signal equaliser	Type : Parametric equalisation, graphical equalisation Frequency: 20Hz to 20kHz, resolution 1Hz Q-value (slope or gradient) : 0.3 to 15 Gain: -15dB to +15dB, resolution 0.1dB
Input signal divider	Multiple independent high and low pass filters for each output channel. Filter type: Nink-Rein, Bessel, Butterworth Filter crossover point: 20Hz to 20kHz, resolution 1Hz Filter slope (slope): 6dB/Oct to 48dB/Oct
Output signal divider	Multiple independent high and low pass filters for each output channel. Filter type: Nink-Rein, Bessel, Butterworth Filter crossover point: 20Hz to 20kHz, resolution 1Hz Filter slope (slope): 6dB/Oct to 48dB/Oct
Input phase	Positive or negative phase (+/-)
Input Delay	0.00~15ms
Output phase	Positive or negative phase (+/-)
Output Delay	0.00~15ms
Preset sound	Machine can save up to 8 sets of pre-programmed sound data

Harmful substance composition

Name and content of harmful substances or elements in the product.

Component name	Harmful substance or element					
	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
Circuit board components	X	O	O	O	O	O
Housing components	O	O	O	O	O	O
Display components x	X	O	O	O	O	O
Accessories x	X	O	O	O	O	O

This form is prepared in accordance with the requirements of SJ/T 11364

- O : Indicates that the content of the hazardous substance in all homogeneous materials of the part is below the limit requirements specified in GB/T 26572
- X : means that the content of the hazardous substance in at least one homogeneous material of the part exceeds the limit specified in GB/T 26572.
Components marked with an "x" have been found to exceed the limit because there is currently no proven alternative technology available to the industry.

Repair Station Information

- For inquiries regarding repairs, please refer to the "Repair Station Information" below.
- The name, telephone number and address of the repair station are subject to change.

No	Repair Station	Address	Contact person	Phone number
01	Guangzhou, China	No.102, 1F, Block 16, North Zone, Hesbian Tongda Business Park, Baiyun District, Guangzhou, China	After Sales	19866009958