



## DSP10D MAX

### 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 DSP10D MAX 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**

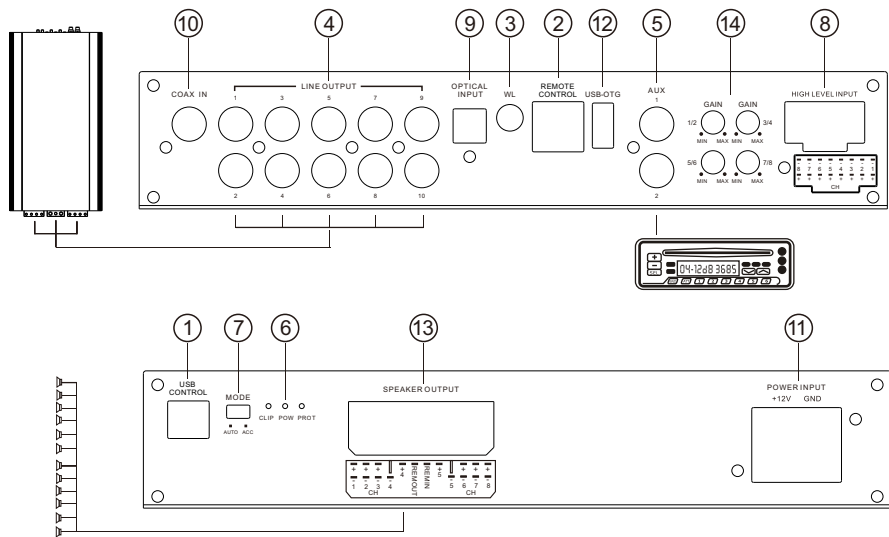
The machine must not be installed in any of the following locations.

- 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

Machine interface illustration



# Specification

|                                     |                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HI-End level components             | ADI high-performance DSP chip<br>Analog to Digital Converter (ADC): AKM5538 HI End 768Khz/32-bitdigital signal<br>ital to Analog Converter (DAC): AKM4458 HI End 768Khz/32-bit<br>Professional audio operational amplifier<br>Hi End Professional Audio Capacitor                                                                                                                        |
| Input channel                       | 8 high-level inputs, 2 aux inputs<br>Fiber optic input, coaxial input, supports 192kHz/32-bit<br>OTG input, supports 192khz/24bit<br>Bluetooth input                                                                                                                                                                                                                                     |
| High level input combined frequency | Each channel supports up to 8 independent input combined frequencies                                                                                                                                                                                                                                                                                                                     |
| Bluetooth                           | Bluetooth 5.0<br>Bluetooth protocol : A2DP/AVRCP<br>Bluetooth format : aptx/aptx HD/AAC/SBC                                                                                                                                                                                                                                                                                              |
| Output channel                      | 8 high-level outputs, 10 RCA outputs                                                                                                                                                                                                                                                                                                                                                     |
| Amplifier output                    | D-class amplifier: 8CHx90W(4Ω,14.4V, 1kHz, 1%THD)<br>8CHx135W(2Ω,14.4V, 1kHz, 1%THD)                                                                                                                                                                                                                                                                                                     |
| Signal to noise                     | ≥100dB                                                                                                                                                                                                                                                                                                                                                                                   |
| Total ramp distortion               | ≤0.01%                                                                                                                                                                                                                                                                                                                                                                                   |
| Input sensitivity                   | RCA/Cinch : 1-8V High level: 8-32V                                                                                                                                                                                                                                                                                                                                                       |
| Input impedance                     | RCA/Cinch : 22k High level: 3.3-100Ω                                                                                                                                                                                                                                                                                                                                                     |
| RCA output voltage                  | 1.5v                                                                                                                                                                                                                                                                                                                                                                                     |
| Operating Voltage                   | 9~18V                                                                                                                                                                                                                                                                                                                                                                                    |
| Input channel equalizer             | Each input channel has an independent 5-segment equalizer<br>Filter type: PE (peak)/LS (low rack)/HS (high rack)/1st order, 2nd order ALLPASS (all pass filter)<br>Center frequency point: 20Hz~20KHz<br>Q value: 0.3~15<br>Gain: -15db~+15db                                                                                                                                            |
| Dynamic Loudness (DLC)              | High level, AUX, fiber optic, coaxial, Bluetooth, OTG and other input source (DLC) parameter settings                                                                                                                                                                                                                                                                                    |
| Intelligent audio mixing            | Intelligent recognition and automatic switching of save modes for any multiple input audio sources                                                                                                                                                                                                                                                                                       |
| Spatial audio                       | 8-channel input<br>Each channel independently adjusts the output volume gain: -40dB~0dB<br>Each channel independently adjusts polarity: positive/negative phase<br>Each channel independently adjusts the delay, with a delay range of 0-20ms<br>The spatial audio channels are: front sound field, rear sound field, center sound field, starry sky surround sound field, and subwoofer |
| Output signal divider               | Each channel is independently adjustable<br>Filter type: Butterworth/Nink-Rein/Bessel<br>Filter frequency: 20Hz~20KHz<br>Filter slope: 6dB/Oct~48dB/Oct                                                                                                                                                                                                                                  |

|                                |                                                                                                                                                                                                                                         |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output channel equalizer       | Each channel has an independent 31 segment equalizer<br>Filter type: PE (peak)/LS (low rack)/HS (elevated)/1st order, 2nd order ALLPASS (all pass filter)<br>Center frequency point: 20Hz~20KHz<br>Q value: 0.3~15<br>Gain: -15dB~+15dB |
| Equalizer joint debugging mode | Independent adjustment / absolute linkage adjustment / relative linkage adjustment / crossover point linkage adjustment                                                                                                                 |
| Output phase                   | Independent adjustment for each channel: 0 °~360 °                                                                                                                                                                                      |
| Output polarity                | Each channel is independently adjustable: positive/negative                                                                                                                                                                             |
| Output delay                   | Independent adjustment for each channel: 0~20ms                                                                                                                                                                                         |
| Output volume                  | Single channel output volume: mute, -40dB~0dB<br>Single channel subwoofer: mute, -40dB~0dB<br>Total volume of subwoofer: mute, -40dB~+12dB<br>Total volume adjustment: mute, -40dB~+12dB                                                |
| Line control extend            | Mode selection, total volume control, bass total volume control                                                                                                                                                                         |
| Computer tuning                | Windows system, XP system, USB interface, no drive required                                                                                                                                                                             |

# 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                            | O  | O  | O      | O   | O    |
| Accessories ×                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | X                            | O  | O  | O      | O   | O    |
| This form is prepared in accordance with the requirements of SJ/T 11364<br>○ : 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<br>× : 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.<br>Components marked with an "×" 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  |