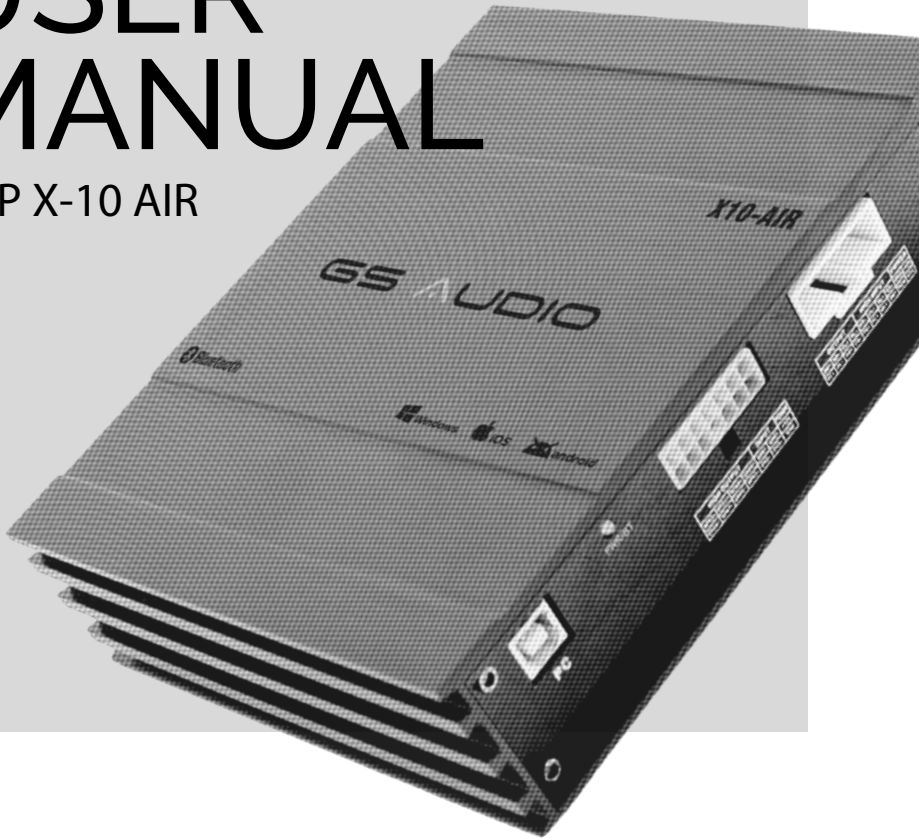




USER MANUAL

DSP X-10 AIR



1. Product Description

This DSP offers audio enthusiasts a versatile way to achieve precise control over their system's sound. It can add extra channels that are independently adjustable or enhance the sound of the existing channels.

2. Detailed Technical Data

Power Output @40hm:	8x30WRMS (@ 10% Thd)
Minimum Load Per Channel:	2 Ohm
Frequency Response:	10Hz>20KHz
Number of RCA output channels:	10
Number of EQ Bands:	31
Time Alignment Range:	0>25Ms
EQ Boost:	±6dB
Crossover Slope Range:	6>48dB/Oct
Input Type:	Balanced
Link L&R:	Yes
Bluetooth Firmware Version:	BT 5.0
Noise Gate:	-60>-120dB
Phase Control:	Switchable +/-
Operating Ambient Temperature:	-20~70°C
Signal To Noise Ratio :	>90db
Input Signal:	8 high level, 2 low level, USB play, HD 5.0 bluetooth (Do not connect the tuning bluetooth in the bluetooth setting of the mobile phone - will cause bluetooth connection failure)
Output Signal:	8 amplified high levels, 10 low levels
Output Signal Equalizer:	31 band EQ, Frequency range: 20Hz-20KHz, Q value: 0.3-50, Gain:-15.0dB+15.0dB
Output Signal Divider:	8 channel with Butterworth, Bessel & Linkwitz elbow shapes
RCA Voltage Output	4 Volt RMS
Filter Frequency Division point:	Crossover:20Hz-20KHz. Slope (db/oct) 12,24,36,48 dB/Oct

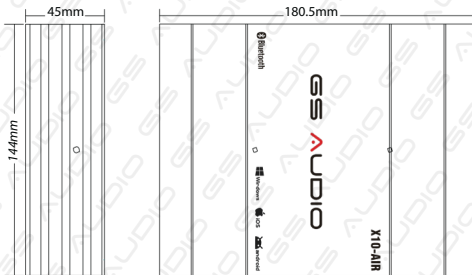
Output Phase And Delay :

Positive/reverse phase: (0°-180°)
Delay: 0.000-6ms (0-204cm/0-80.3inch)

Editable and preselectable memories:

6 configurable memories

3. Technical & Cautions



Total Height:	45mm
Total Length:	180mm
Total Depth:	144mm
Approx Weight	0.9kg

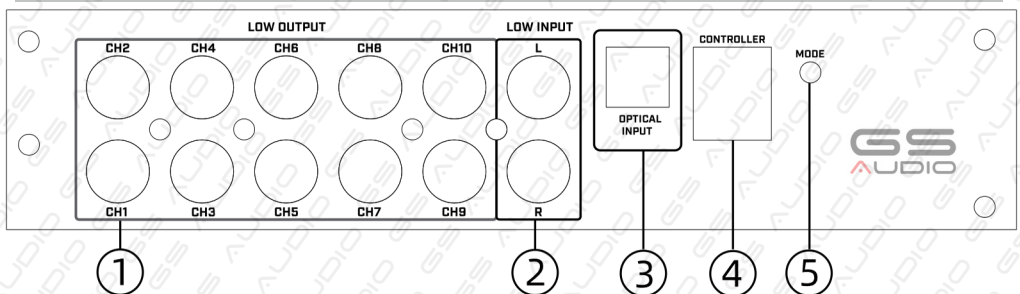


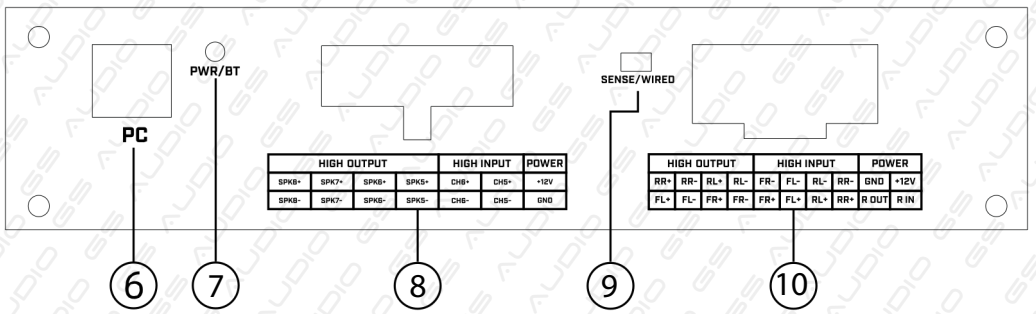
The DSP must be kept away from excessive humidity. It does not contain user-repairable parts. During operation, the unit may overheat; therefore, it is recommended to avoid placing it in a confined space.

4.DSP Setup Tips

- Clearly define your goals before starting the installation. The DSP offers a wide range of options, each with unique cabling and amplification requirements based on your choices. Taking time to plan ahead will definitely be beneficial.
- Ensure the DSP is connected to a secure, high-quality ground point that is independent of the vehicle's systems. The DSP must unify and compensate for potential signal ground variations, requiring a stable power supply as a reference.
- Do not let unused uninsulated cables in the Molex connectors come into contact with each other, as this could cause serious damage to the circuits.
- When adding additional processing, it's crucial to ensure that the system is properly set for gain and level matching. Use the highest outputs possible from the source unit into the DSP without causing clipping, and then set the highest output possible from the DSP (again, without clipping) to the amplifiers. The amplifiers should be adjusted to gain as little as necessary to achieve optimal performance. To incorporate flexibility for different media into the gain structure, it is recommended to use a recording that was captured at the desired headroom level.

5. Connections & Layout





- 1) CH1-CH10 low-level output interface.
- 2) 2CH low input.
- 3) Optical signal input.
- 4) Control panel interface.
- 5) Built-in sound switching.
- 6) PC tuning interface.
- 7) Power indicator & Bluetooth working signal light.
- 8) 5CH, 6CH, 7CH, 8CH high-level output & 5CH, 6CH high-level input & power input. If using terminal block "8," connect the positive and negative of the POWER.
- 9) Automatic power on with high input / power on with cable on wire "R IN."
- 10) 4CH high-level input from car radio & 4CH amplified output & power and remote connection lock.

6.Introduction to PC Software

Hardware & software requirements:

Screen resolution greater than 1280*768, Windows.

The screenshot shows the GS Audio software interface. Key features include:

- File Menu:** Contains options like 'Option' (2), 'Main source', 'Mix source', 'Default output', 'Clear output', 'Link', 'Mixing', 'Master Vo', and 'Connect'.
- Channel Selection:** Channels 1-10 are listed with their respective speaker types (e.g., FL Tweeter, FR Tweeter, FL Mid, FR Mid, FL Woofer, FR Woofer, RL Full, RR Full, C Full, SW).
- Frequency Response Graph:** Shows the frequency response for CH1, with a green line indicating the current setting. The x-axis represents frequency from 20 to 20kHz, and the y-axis represents gain from -18 to +18 dB.
- Controls:** Includes a delay control (0 units), treble boost (0dB), mid boost (0dB), bass boost (0dB), and SW boost (0dB).
- Filter Settings:** For CH1, the HPF is set to 2199.0Hz with a ButterWorth type and 12dB/Oct slope. The LPF is set to 20000.0Hz with a ButterWorth type and OFF slope.
- Additional Features:** Includes Noise Gate (-120dB), Turn on Delay (0ms), EQ Reset, EQ Bypass, and PEQ Mode.
- Software Information:** Version v5.7.7, Modification date: 2024-05-30, Firmware version.

- 1) Source selection.
- 2) Language selection, restore to factory settings & firmware upgrade.
- 3) Source mixing.
- 4) EQ main function window.
- 5) Master volume level.
- 6) Time alignment window, CH1-CH10.
- 7) Tone controls.
- 8) Preset controls.
- 9) Crossover settings window.
- 10) Noise gate controls.
- 11) EQ mode settings.

7. Resolving Common Issues

Resetting the unit to factory settings after powering it down can often resolve software and connection issues. If you experience no sound, make sure that the mute function is not activated. The audio source priority is as follows: USB, Bluetooth, and then the original car source. If the USB software connection fails, verify that your computer recognizes the cable connection by listening for a chime sound.

6. Download the APP

The DSP X10 Air is offered as a standalone unit that can be controlled via PC software or mobile app. These applications are developed and maintained by a third party, which means we have no control over them. As a result, we cannot take responsibility for the publisher removing the apps from their respective stores or for technological advancements that may render them incompatible with newer devices. We recommend downloading the PC application and keeping a backup for future use.



**Direct link to the
APP STORE**



**Link to download an
.apk file**



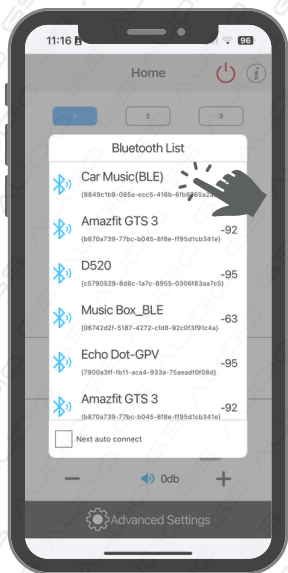
**Link to download an
.exe file**

2 Enable/allow location access

3 Enable/allow Bluetooth access

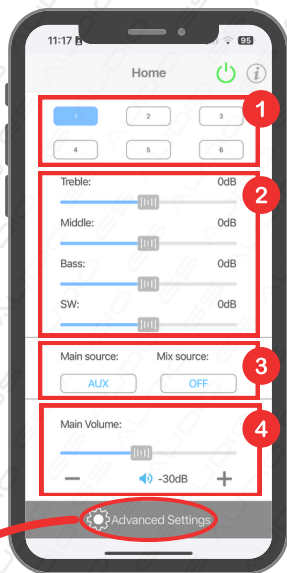
④

The app will display the following screen: select the processor **Car Music(BLE)**



⑤

The DSP is now connected. You can now manage your audio system using the following control panel.



1- Configurable memories

It is possible to save up to 6 different memory presets and reload them.

2- From this panel, you can make quick and easy adjustments to the bass, mid, treble, and sub.

3- To select the main source and, if needed, add an audio mix from a second source.

4- This is a master volume, it controls all output levels simultaneously.



Here you can select the output channels to configure the parameters.

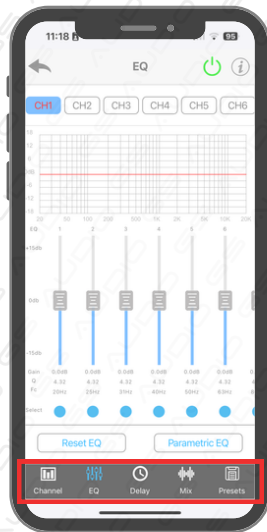
Here you can select the high-pass and low-pass cutoff for each channel.

Additionally, you can copy the L/R channel, invert the phase, and map the channel/speaker position, displaying its location within the vehicle.

Below, you will find the gain level control for the selected channel.

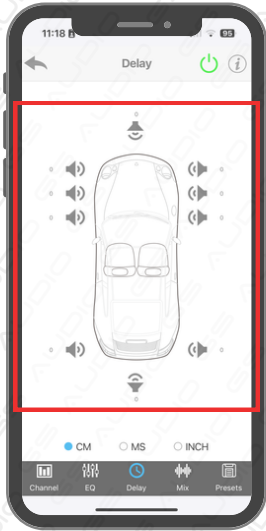
Other DSP setup

At the bottom, you can select between channel configurator and frequency cuts, equalizer, time delays, routing and channel mix, and preset memories.



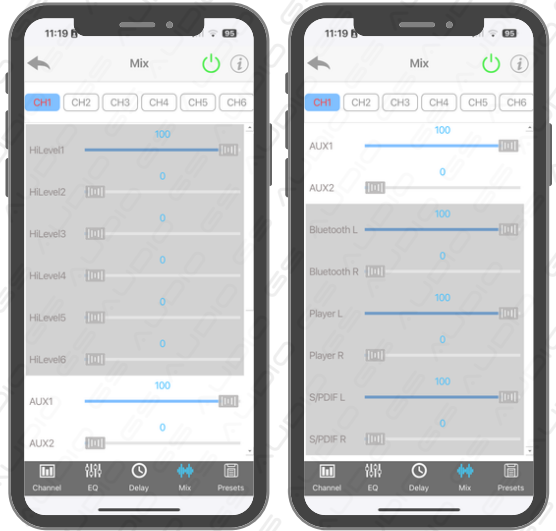
This manual is created by GS Audio, ensuring unique and reliable information for your product.

Time delays



Here you can set the time delay for each individual channel to adjust the listening point.

Routing and Channel Mix



Here you can select the volume for each input channel and mix them simultaneously.

Preset memories



It is possible to save up to 6 different memory presets and reload them.

6. Purchase DRC

If you have purchased the DRC, the following screens will display its main operating functions. Please note that the primary function of the DRC is reading from SD and USB. Its audio control functions are limited to: source selection, master volume, general equalizer, and subwoofer boost.



Press and hold the main button for 3 seconds to access the functions.



- EQ Mode
- SOURCE Mode
- BASS vol

Select your EQ preset



Select the SOURCE



Adjust the BASS volume



www.gsaudio.it

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find out more

