

# AURA<sup>®</sup>

OWNER'S

MANUAL



## DSP-2x6

External Digital Sound Processor



**WARNING!**

PLEASE READ CAREFULLY BEFORE USING

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WEEE directive 2012/19/EU on waste electrical and electronic equipment

End-of-life electrical equipment should not be disposed of with other household waste. Please recycle it.

Please contact your local authorities for the necessary information.

All illustrations in this manual are schematic representations of objects and may differ slightly from their actual appearance.

Service life of a product - 3 years.



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## **Precautions**

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The user manual contains important safety advice and information about the correct use of the device. Please carefully follow all instructions in this manual.

1. When installing the device, avoid high temperature, high humidity, or dusty places.
2. Keep the device, and especially its mounting accessories, out of the reach of children.
3. Do not drop the device or subject it to impact, as this may damage it.
4. The manufacturer does not bear any responsibility for any loss of data due to damage to this device, its repair, or for any other reason.
5. Do not disassemble the device yourself. This may void the warranty.
6. Do not use alcohol, thinners or benzine to clean the device.  
Use only a dry soft cloth for cleaning.
7. Avoid contact of the device with liquids.
8. The product is designed for use with 12 volt negative ground electrical systems only.  
Use of the device in systems with a positive ground and/or voltage other than 12 volts may damage the vehicle and the device.



Open the package and make sure that inside are:

1. DSP processor - 1 pc.
2. Power connector - 1 pc.
3. Instruction.
4. Fasteners.

### Power connection

1. Make sure your vehicle's onboard voltage is +12 volts.
2. Connect the **+12V** terminal to constant +12 volts.
4. Connect the **REM** terminal to the remote output of the head unit.
5. Connect the **GND** terminal to the metal part of the car body.

#### Note:

To avoid increased current consumption and unstable operation of the device, do not connect the **REM** terminal to constant +12 volts!

### Connecting RCA

#### Режим 2 WAY (regular)

**SUB** - RCA subwoofer  
**FRONT-L** - RCA front (left)  
**FRONT-R** - RCA front (right)  
**REAR-L** - RCA rear (left)  
**REAR-R** - RCA rear (right)

#### Режим 3 WAY (network)

**SUB** - RCA subwoofer  
**FRONT-L** - RCA MF speaker (left)  
**FRONT-R** - RCA MF speaker (right)  
**REAR-L** - RCA tweeter (left)  
**REAR-R** - RCA tweeter (right)



**L-IN** - RCA-input (left)  
**R-IN** - RCA-input (right)

**USB** - USB part  
**RST** - reset, except sound



RST



USB



POWER

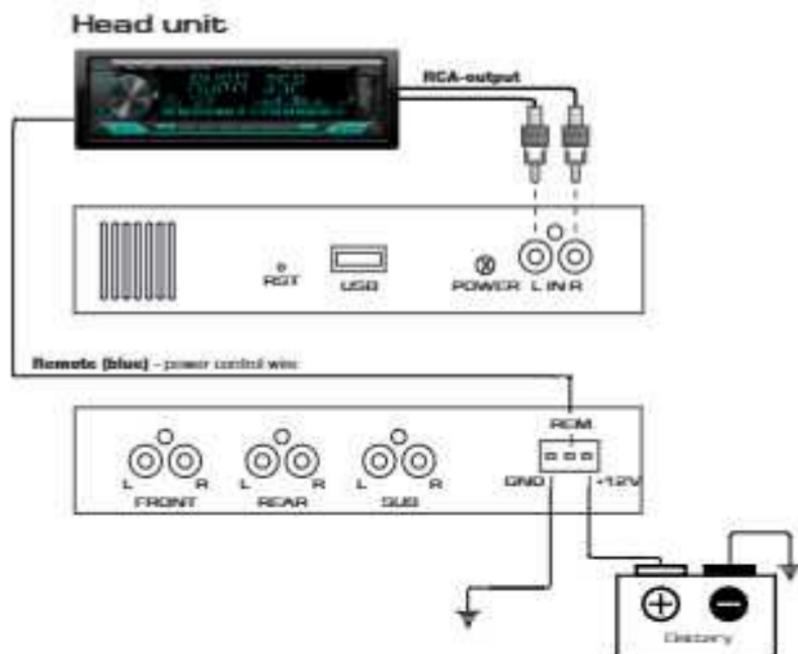
L IN R



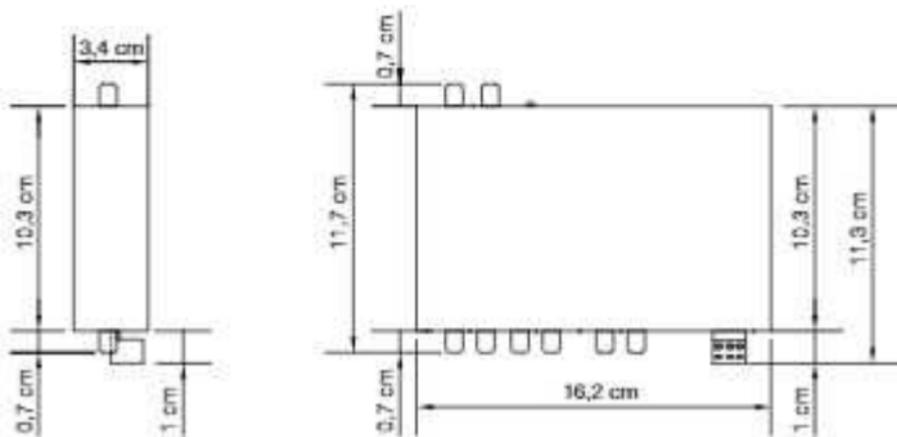
**WARNING**  
DO NOT OPEN



## Connecting to head unit



## Sizes





Pair your smartphone with the DSP-2x6:

1. Turn on Bluetooth on your mobile device.
2. Find "DSP-2x6" in the list of available BT devices and connect to it.  
Authorization PIN: 1234 .
3. The audio signal from the mobile device will be transmitted to the car's speakers.



### Phone app

All device settings are available in the AurA Audio mobile app for Android or iOS.

1. Install the AurA Audio app from Google Play or the App Store.
2. Pair your smartphone and processor via Bluetooth.
3. Launch the AurA Audio app to control the processor.



### Source selection

Click on the icon of the desired sound source.



### Volume control

Rotate the volume knob to set the desired level.

### Subwoofer level adjustment

Turn the Sub Level control knob to set the desired level.





## X-OVER

Setting the low and high pass filters (LPF and HPF). The settings of this menu item will be different for configurations **2-WAY / 3-WAY!**

### 2-WAY (Regular)

**Tweeter** - treble setting

FRQ - frequency selection: 1 / 1.6 / 2.5 / 3.15 / 4 / 5 / 6.3 / 8 / 10 / 12.5 kHz.

GAIN LEFT - volume level (left channel), from -8 to 0 dB.

GAIN RIGHT - volume level (right channel), from -8 to 0 dB.

**Front HPF** - HPF setting for the front speakers

F-HPF FRQ - cutoff frequency: TROUGH (off) / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 120 / 150 / 180 / 220 / 250 / 315 / 400 / 500 / 630 / 700 / 800 Hz.

F-HPF SLOPE - steepness of the decline: 6 / 12 / 18 / 24 dB per octave.

F-HPF GAIN - volume level, from -8 dB to 0 dB.

**Rear HPF** - HPF setting for the rear speakers

R-HPF FRQ - Cutoff frequency: TROUGH (off) / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 120 / 150 / 180 / 220 / 250 / 315 / 400 / 500 / 630 / 700 / 800 Hz.

R-HPF SLOPE - the slope of the decline: 6 / 12 / 18 / 24 dB per octave.

R-HPF GAIN - volume level, from -8 dB to 0 dB.

**Subwoofer LPF** - low-pass filter (LPF) and subwoofer phase adjustment.

SW LPF FRQ - Cutoff frequency: 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 120 / 150 / 180 / 220 / 250 / 315 / 400 / 500 / 630 / 700 / 800 Hz / TROUGH (off).

SW LPF PHASE - electrical phase switching: 0° / 180°

SW LPF GAIN - volume level, from -8 dB to 0 dB.

SW LPF SLOPE - steepness of the decline: 6 / 12 / 18 / 24 dB per octave.

### 3-WAY (Network)

**Tweeter** - HPF setting for tweeters.

HP FRQ - Cutoff frequency: 500 / 630 / 700 / 800 / 1 / 1.6 / 2.5 / 3.15 / 4 / 5 / 6.3 / 8 / 10 / 12.5 kHz.

SLOPE - the steepness of the decline: 6 / 12 / 18 / 24 dB per octave.

PHASE - electrical phase switching: 0° / 180°

GAIN - volume level of the tweeters, from -8 dB to 0 dB.

**Mid range** - adjusting the high-pass filter (HPF) and low-pass filter (LPF) of the midrange speakers

HPF FRQ - HPF cutoff frequency: THROUGH (off) / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 120 / 150 / 180 / 220 / 250 / 315 / 400 / 500 / 630 / 700 / 800 Hz.

HPF SLOPE - the steepness of the decline: 6 / 12 / 18 / 24 dB per octave.

LPF FRQ - cutoff frequency: 500 / 630 / 700 / 800 / 1 / 1.6 / 2.5 / 3.15 / 4 / 5 / 6.3 / 8 / 10 / 12.5 kHz / THROUGH (off).

PHASE - electrical phase switching: 0° / 180°

LPF SLOPE - the slope of the LPF slope (LPF): 6 / 12 / 18 / 24 dB / oct.

GAIN - the volume level of the midrange speakers, from -8 dB to 0 dB.

**Woofer** - low-pass filter (LPF) and subwoofer phase adjustment

LPF FRQ - cutoff frequency: 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 120 / 150 / 180 / 220 / 250 / 315 / 400 / 500 / 630 / 700 / 800 Hz THROUGH (off).

SLOPE - the steepness of the decline: 6 / 12 / 18 / 24 dB per octave.

PHASE - electrical phase switching: 0° / 180°

GAIN - subwoofer volume level, from -8 dB to 0 dB.

## DTA SETTING

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### Delay units

Select the unit of measurement: centimeters or milliseconds.

### Car type

Vehicle type selection: Sedan / Station Wagon / Minibus.

Per-channel setting of signal time delays. The settings of this menu item will be different for configurations **2-WAY / 3-WAY!**

**IMPORTANT!** The delay setting starts from the speaker farthest from the listening position (usually a subwoofer).

The farthest speaker does not need additional delay.

The rest of the speakers must be corrected according to the difference between the distance from the farthest speaker and the distance from the calculated speaker to the listening position.

Do the necessary calculations for all speakers, then make the settings in the AurA Audio app.

### **2-WAY (Regular)**

**Position** - listening position selection.

All / Front Left / Front Right / Front All.

**Delay** - value for each channel.

Front left

Front right

Rear left

Rear right

Sub-W left - left subwoofer

Sub-W right - right subwoofer

**Gain** - volume value of each channel

Front left

Front right

Rear left

Rear right

Sub-W left - left subwoofer

Sub-W right - right subwoofer

### **3-WAY (Network)**

**Position**

Listening Position Selection: All / Front Left / Front Right / Front All.

## DTA SETTING

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**Delay** - value for each channel:

Front left - MF/LF left

Front right - MF/LF right

Rear left - HF left

Rear right - HF right

Sub-W left - left subwoofer

Sub-W right - right subwoofer.

**Gain** - volume value of each channel

Front left - MF/LF left

Front right - MF/LF right

Rear left - HF left

Rear right - HF right

Sub-W left - left subwoofer

Sub-W right - right subwoofer.

## EQ SETTING

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**Custom** - manual adjustment of the 24-band equalizer (from -9 dB to +9 dB).

Tuning is possible at frequencies: 45 / 63 / 100 / 125 / 160 / 250 / 315 / 400 / 500 / 630 / 800 / 1 / 1.25 / 1.6 / 2.5 / 3.15 / 4 / 5 / 6.3 / 8 / 10 / 12.5 / 16 / 20.

Q - setting the value of the quality factor (quality factor).

Values: 1 / 1.5 / 2.5 / 3.5.

Preset - saving settings to one of 6 memory cells.

Presets:

**Natural, Rock, Pop, Easy,**

**Top 40, JAZZ, Powerfull.**



### **Fader**

Adjusts the relative volume between the front and rear speakers (only active in **2-WAY** crossover mode).

### **Balance**

Adjust the relative volume between the left and right channels.

### **Preset:**

Driver, Passenger, Center, Rear Left, Rear Right.

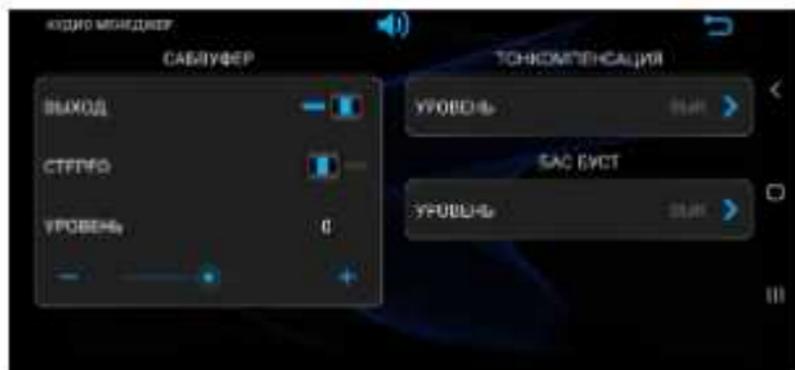


You can save 6 independent settings (presets) and quickly switch between them. **IMPORTANT!** The settings are retained when the battery power is turned off.

1. Adjust the EQ, delay and crossover settings.
2. To save the current settings to the Preset 1 memory location, hold down the Preset 1 button for 2 seconds.
3. Change the EQ, delay and crossover settings.
4. To save the current settings to the Preset 2 memory location, hold down the Preset 2 button for 2 seconds.
5. Briefly press the Preset 1 button to recall the settings stored in Preset 1.
6. Briefly press the Preset 2 button to recall the settings stored in Preset 2.

The preset menu is accessed from the tab of each source.





### **Subwoofer:**

Sub-W output - enable/disable the subwoofer.

Sub-W stereo - subwoofer RCA output mode (Mono/Stereo).

Sub-W level - subwoofer volume setting.

### **Loudness**

Turning on and adjusting loudness (2 levels).

### **Bass boost**

Enable and adjust bass boost (5 levels).

## Software update

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We are pleased to offer the possibility of firmware updates to ensure maximum performance and the latest features for your device.

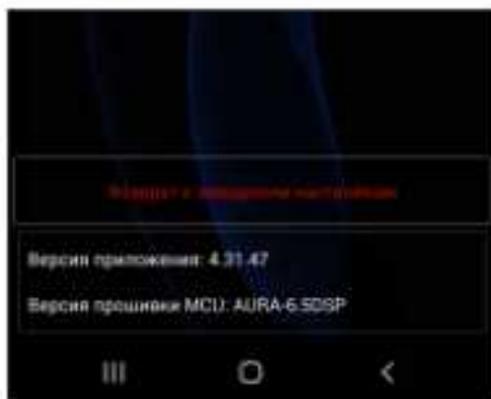
Please check the availability of the new software version on the website [www.aurael.ru](http://www.aurael.ru)

## Reset settings

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Press and hold for 10 seconds **RST** button on the case to reset all device settings, except sound settings, to factory settings.

To reset the rest of the device settings to their default values, perform a Factory Reset on the Settings tab..



## Application Version

Viewing the current version of the AurA Audio application.

## Software version

Viewing the current software version of the device.



Connect a USB storage device to the **USB** connector.

Playback of supported file formats will start automatically.

The USB connector supports charging mobile devices. Charging current - up to 1A.

**IMPORTANT!** There are many free and other software for encoding FLAC, Mp3 and WAV files on the market, and depending on the encoding status and file format, you may experience poor playback quality or noise during playback. In some cases, playback is not possible.



#### Play/Pause

Press the button  to stop playback.

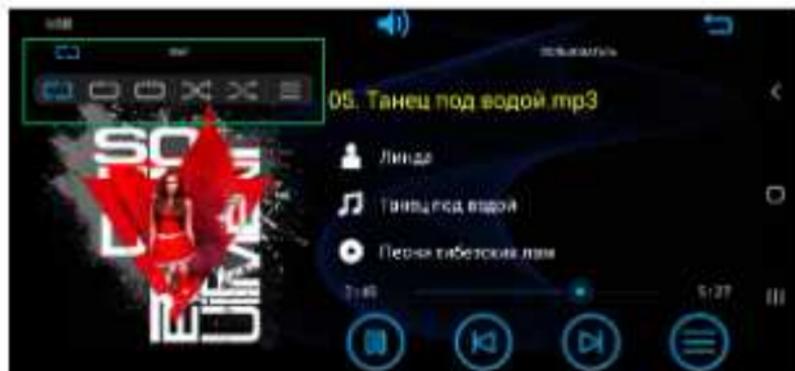
Press again to resume playback.

#### Switching tracks

Press the  or  button to skip to the previous or next track.

#### Folder switching

Hold down the  or  button to switch to the previous or next source folder.



### Repeat:

Press the button  to select the repeat playback mode:

Repeat all - repeat playback of all files on the media.

Repeat folder - Repeat playback of all files in the current folder.

Repeat one - repeat playback of the current file.

### Random play mode

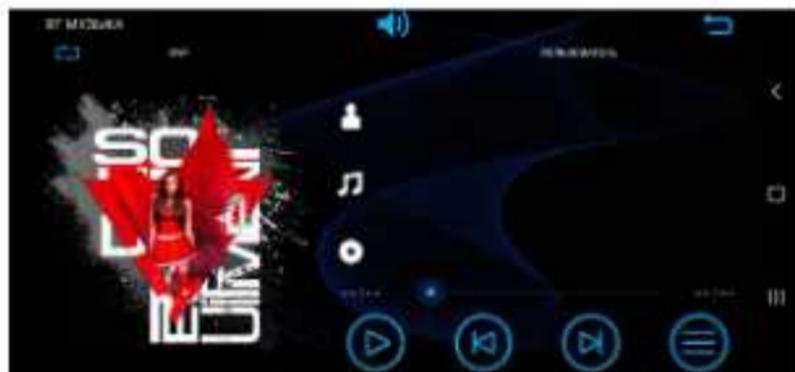
Press  button to select random play mode:

Random All / Random folder / Random Off.

### Scanning tracks

Press the  button to play 10 seconds of each track in sequence.

Click again to stop scanning.



Your device supports the Bluetooth audio protocol. After successfully pairing your mobile device with the processor, you will be able to play music from your phone on the car audio system. To switch tracks, press the  or  buttons.

To stop playback, press the button .

This tab allows you to manage files located in the internal memory of your smartphone.

However, it does not provide full control.

For a more comfortable listening to music on the BT channel, we recommend using third-party applications: Yandex Music, VK music, and others. In this case, control is carried out by means of such applications.

## **ANALOG IN**

You can connect an external source to the RCA connector on the body of the device using an Aura RCA cable (sold separately).

## Specifications

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### Main

Operating supply voltage:	12 V (allowable limits 9.6 - 15 V)
Frequency response:	20 Hz - 20 kHz
Audio signal input (RCA):	2-channel (1 pair)
Line output (RCA):	6-channel (3 pairs)
RCA output level:	up to 3.5 V
Maximum current consumption:	5 A
Dimensions (W x H x D):	162 x 117 x 34 mm
Temperature (working):	From 0°C to +60°C
Humidity (working):	from 45% to 80%

### USB

Supported media:	USB
Supported formats:	FLAC, WAV, APE, AAC, MP3
File system:	FAT16, FAT32
USB stick:	USB 2.0, USB 3.0, up to 128Gb
ID3 Tag Support:	English, Russian

### Bluetooth

Version:	4.2
Profiles:	A2DP
Frequency:	2,4 GHz

### Процессор:

Crossover	30-12500Hz, 6-24dB/oct.
Equalizer	24 bands, 45-20000 Hz
Gain	-9dB to +9dB, 0.1dB step
Phase rotation	0 / 180°
Time delays	0-25ms, 0-850cm



## WARRANTY CARD

Model name

Serial No.

Buyer name

Buyer address  
Phone No.

Sales date

Signature

Seller name/stamp



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## TERMS OF WARRANTY SERVICE

The manufacturer guarantees the high quality and reliability of the products, subject to the technical requirements described in the operating instructions. This warranty is issued for a period of one year from the date of purchase and is provided in the event that the product is found to be defective due to inadequate quality of materials or workmanship of the manufacturer.

Obligations under this warranty are performed on the territory of the Russian Federation by the manufacturer, Selling organizations - authorized dealers of the manufacturer and service centers indicated on the manufacturer's website.

The product is not subject to warranty repair if it has the following features:

1. The fact that water or other liquids get inside the product;
2. Incorrectly completed warranty card or its absence;
3. Unqualified installation (connection of the product is not appropriate power section of wires, placement in place, hindering product cooling).
4. Intervention in the design of the product.

In case of disputes for reasons not included in the above list, the decision is made by the Authorized Service Center after a technical examination.

Parts with a limited life span (batteries, fuse links, etc.) are not covered by this warranty.

This warranty is not valid if the product is used for industrial purposes. All terms of this warranty are in accordance with applicable consumer protection laws.

**Additional information on the website [www.aurael.ru](http://www.aurael.ru)**



EAC



 App Store

 Google Play



[www.aurael.ru](http://www.aurael.ru)



Due to continuous product development and improvement, all specifications and appearance are subject to change without notice.

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