

AURA[®]

OWNER'S

MANUAL



HI POWER


AMH-88DSP

CAR BLUETOOTH / USB RECEIVER

WARNING!

PLEASE READ CAREFULLY BEFORE USING

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In order to improve product quality, product specifications and features are subject to change without notice.



The Directive WEEE 2012/19/EU on waste electrical and electronic equipment.

Waste electrical equipment should not be disposed of with your other household waste. Please recycle it. Please contact your local authority for the required information.

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

Product service life - 3 years.



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Precautions

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

1. While installing the device, avoid places with high temperature, humidity, or dusty places.
2. Make sure that the device and especially its installation accessories are out of the reach of children.
3. Do not drop the device and make sure do not hit it, as this may damage it.
4. The manufacturer will not be held liable for any loss of data caused by device damage, repairs or any other reason.
5. Do not disassemble the device yourself. This may void the warranty.
6. Do not use alcohol, solvents or gasoline for cleaning plastic parts and device. Use only dry soft cloth for cleaning.
7. Avoid contact with liquids.
8. The product is designed for use with 12-volt negative-grounded electrical systems only. Using the device on systems with a positive ground and / or voltage other than 12 volts may damage the vehicle and the device.

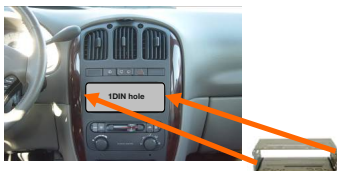


Package bundle and installation

Open the package and make sure that it contains:

1. USB receiver - 1 pc.
2. Remote control - 1 pc.
3. Keys for removing the receiver - 2 pcs.
4. ISO - connector - 1 pc.
5. Instruction
6. Warranty card
7. Cover for the front panel - 1 pc.
8. External VT microphone - 1 pc.

If the car has a standard 1DIN hole for installing the head unit, use it as described below.



1. Install the mounting cover into the 1DIN hole provided by the manufacturer. If the standard place has a 2DIN size, use adapter frames and adapters **AURΔ** brand
2. Use a screwdriver to pry out the metal tabs on the mounting cover to lock it in place.
3. Check electrical connections, ISO connector or individual wires (depending on the equipment of the specific car model).
If necessary, use ISO adapters **AURΔ** brand
4. Connect the ISO connector to the device. And check the functionality of the system before fixing it in the mounting box.
5. Insert the device into the mounting cover and slide it inward until it clicks into place.

Connection

1. Make sure that the on-board voltage of your vehicle is +12 volts
2. Remove the fuse from the device before connecting the wires.
3. Connect the yellow (**A4**) wire to the +12 Volt DC power circuit.
4. Connect the red wire (**A7**) to the ACC terminal of the ignition switch.
5. Connect the black wire (**A8**) to the metal part of the car body.
6. Blue wire (**A5**) - connect to the amplifier's remote turn-on input or the antenna motor control input
7. Connect the rest of the wires according to the diagram.

Note: Each time the yellow wire is disconnected from the 12 volt power circuit or the battery terminal is removed, the device will revert to factory settings.
To avoid increased current consumption and unstable operation of the receiver, do not connect the red wire (**A5**) to a constant +12 volt!

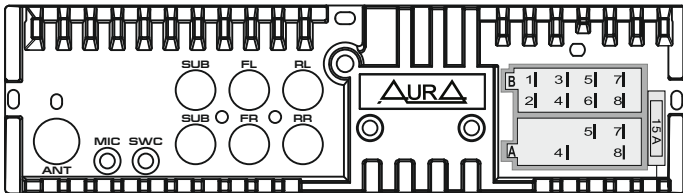
Connecting RCA wires

Mode 2 WAY (standard)

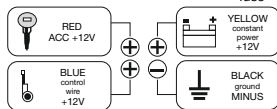
- SUB** - RCA subwoofer
- FL** - RCA front (left)
- FR** - RCA front (right)
- RL** - RCA rear (left)
- RR** - RCA rear (right)

Mode 3 WAY (network)

- SUB** - RCA subwoofer
- FL** - RCA mid-range speaker (left)
- FR** - RCA mid-range speaker (right)
- RL** - RCA tweeter (left)
- RR** - RCA tweeter (right)



- ANT** - radio antenna connection input (not included)
- MIC** - external microphone input (not included)
- SWC** - steering wheel control wired adapter input (not included)



- Front speakers
- B3** Right channel + (gray)
 - B4** Right channel - (gray-black)
 - B5** Left channel + (white)
 - B6** Left channel - (white-black)

- Rear speakers
- B1** Right channel + (purple)
 - B2** Right channel - (purple-black)
 - B7** Left channel + (green)
 - B8** Left channel - (green-black)



WARNING
DO NOT OPEN



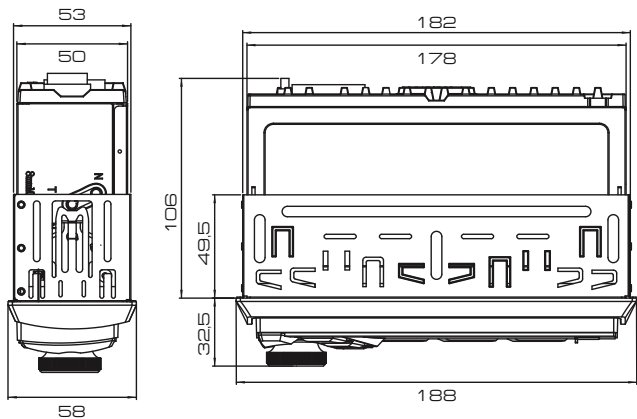


Control elements



1. Return
2. Switching radio bands (FM1 / 2, FM3 (VHF), AM1 / 2)
3. Type of information on the display / Turn off the display
4. Next track / Fast forward / Radio tuning
5. Microphone
6. IR receiver
7. LCD display
8. Answering / ending a call / Voice assistant
9. Search
10. Muting the sound (Mute)
11. Adjust volume / Switch settings / Confirm selection
12. Previous track / Rewind / Radio tuning
13. Turn on / off device / Select source
14. Preset button 1 / Next folder
15. Preset button 2 / Previous folder
16. Preset Button 3 / Repeat Mode
17. Preset button 4 / Shuffle mode
18. Preset button 5 / Pause
19. Preset button 6 / Track scan mode
20. AUX input
21. USB connector
22. Front panel release button

Overall sizes



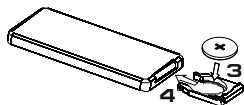
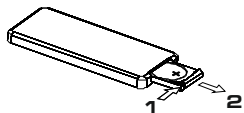
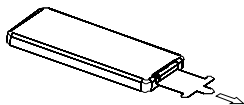
Remote control

Removing the battery protection (**CR-2025**).
Remote control supplied with battery protection.
The remote control will not work until the protection is removed.

Battery replacement:

1. When the lithium battery has lost capacity, replace it as shown in the figure.
2. Press and hold the release latch in the direction of arrow 1.

At the same time, pull the compartment out of the remote control in the direction of arrow 2.
3. Replace the old battery with a new one. Observe polarity! Make sure the (+) is on top!
4. Insert the battery holder into the remote control.





Remote control

1. Turn on/ off the device
2. Volume control
3. Switching radio bands
/ answer call
4. Previous track / Rewind
/ Radio setup
5. Source selection
6. Next track / Fast forward
/ Radio setup
7. Mute mode
8. End call / Clock
9. Preset 1 button / Pause
10. Preset 2 button
/ Track scanning mode
11. Preset 3 button / Repeat mode
12. Preset 4 button / Shuffle mode
13. Preset 5 button
/ Skip back 10 tracks
14. Preset 6 button
/ Skip forward 10 tracks
15. Radio reception mode (mono / stereo)
16. Loudness (LOUD)
17. Scanning stations in memory / Automatic search and storage of stations (AMS)
18. Source selection
19. Selecting a preset equalizer
20. Attenuation of the tuner sensitivity (LOC)




Using the remote control (RC):

- Place the emitting window of the remote control in the direction of the sensor window on the device.
- The working angle for receiving remote control signals is about 30 degrees.
- Distance between the emitting window of the remote control and the touch window of the device should be less than 5 meters.
- A depleted battery can damage the remote control.
- Keep batteries out of the reach of children!

Main functions

ON / OFF Power

Press any button to turn on the device.

Press and hold the button (13)  /SRC, to turn on the device.

Volume control

Rotate the volume knob to set the desired level.

Source selection

Press the (13)  / SRC button to switch between sources

playback: Radio -> USB -> AUX in -> Bluetooth.

Mute mode

Press the button (11) 

Settings menu

Press the volume knob button and rotate to select desired setting section: AUDIO (sound settings), DISPLAY (display settings), TUNER (radio settings), CLOCK (clock), BEEP (button sound), ANIMATION (display animation), DEMO MODE (demo mode).

Press the volume knob to select the desired section.

AUDIO - sound settings

IMPORTANT! Before entering the AUDIO menu when the AUDIO section name is displayed on the screen, press and hold the volume knob button to select 2-way or 3-way crossover configuration mode:

2 WAY (normal) or 3 WAY (network).

Manual EQ (Equalizer) -equalizer setting

Manual setting of 25 band equalizer (from -9 dB to +9 dB).

Tuning is possible at frequencies: 32 / 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-factor - Q-factor setting

Setting the value of the quality factor (quality factor).

Values: 1 / 1.5 / 2.5 / 3.5.

Preset EQ - pre-set equalizer.

Values: Custom / Natural / Rock / Pop / Easy / Top 40

Bass boost

Turns on and adjusts the bass boost (5 levels).



AUDIO - sound settings

Loudness

Turn on and adjust loudness (2 levels).

Subwoofer set

Turns on / off the subwoofer.

Fader

Adjusts the relative volume between front and rear speakers.

Balance

Adjusts the relative volume between left and right channels.

SW level

Adjusts the volume level of the subwoofer (from -13 dB to +13 dB).

X-over

Setting low and high pass filters (LPF and HPF).

The settings for this menu item will be different for **2-WAY / 3-WAY!**

2-WAY (Standard)

Tweeter - treble setting

FRQ (FREQUENCY) - Frequency selection: 1 / 1.6 / 2.5 / 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 - setting the HPF of the front speakers

F-HPF FRQ - Cutoff frequency: TROUGH (off) / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 120 / 150 / 180 / 220 / 250 Hz.

F-HPF SLOPE - Slope: 6 / 12 / 18 / 24 dB per octave.

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

Rear HPF - setting the HPF of the rear speakers

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

R-HPF SLOPE - Slope: 6 / 12 / 18 / 24 dB per octave.

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

Subwoofer LPF - setting the LPF and subwoofer phase.

SW LPF FRQ - Cutoff frequency: TROUGH (off) / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 120 / 150 / 180 / 220 / 250 / 300 / 400 / 500 / 600 / 700 / 800 Hz.

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

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

SW LPF SLOPE - Slope: 6 / 12 / 18 / 24 dB per octave.

AUDIO - sound settings

3-WAY (Network)

Tweeter - setting the HPF for the tweeters.

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

SLOPE - Slope: 6 / 12 / 18 / 24 dB per octave.

PHASE - electrical phase switching: 0 ° / 180 °

GAIN (HF LEVEL) - the volume level of the HF speakers, from -8 dB to 0 dB.

Mid range - setting the HPF and LPF of the midrange

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

HPF SLOPE - Slope: 6 / 12 / 18 / 24 dB per octave.

LPF FRQ - Cutoff frequency: THROUGH (off) 1 / 1.6 / 2.5 / 3.15 / 4 / 5 / 6.3 / 8 / 10 / 12.5 kHz.

PHASE - electrical phase switching: 0 ° / 180 °

LPF SLOPE - LPF slope: 6 / 12 / 18 / 24 dB / oct.

GAIN (MF LEVEL) - volume level of midrange speakers, from -8 dB to 0 dB.

Woofers - setting low-pass filter (LPF) and subwoofer phase

LPF FRQ - Cutoff frequency: THROUGH (off) / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100 / 120 / 150 / 180 / 220 / 250 / 300 / 400 / 500 / 600 / 700 / 800 Hz.

SLOPE - Slope: 6 / 12 / 18 / 24 dB per octave.

PHASE (SAB PHASE) - switching the electrical phase: 0 ° / 180 °

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

DTA setting

Channel-by-channel setting of signal time delays.

The settings for this menu item will be different for **2-WAY / 3-WAY!**

2-WAY (Standard)

Position - choice of listening position.

All / Front Left / Front Right / Front All.

Delay - value for each channel.

FL (FRONT LEFT) - front left

FR (FRONT RIGHT) - front right

RL (REAR LEFT) - rear left

RR (REAR RIGHT) - rear right

SUB-L - subwoofer left

SUB-R (SUB. RIGHT) - subwoofer right



AUDIO - sound settings

Gain - volume value of each channel

FL - front left / FR - front right / RL - rear left

RR - rear right / SUB-L - subwoofer left / SUB-R - subwoofer right.

Data reset - reset settings.

Delay unit - selection of the unit of measurement.

Centimeters or milliseconds.

3-WAY (Network)

Position - choice of listening position.

All / Front Left / Front Right / Front All.

Delay - value for each channel.

FL - MF / LF left | FR - MF / LF right | RL - HF left | RR - HF Right

SUB-L - left subwoofer | SUB-R - right subwoofer.

Data reset - reset settings.

Delay unit - selection of the unit of measurement.

Centimeters or milliseconds.

Volume limit - selection of the value of the maximum possible volume level (3 - 40 units).

Turn on vol. - selection of the volume level value when the receiver is turned on (3 - 40 units).

Car type - choice of car type.

Sedan / Wagon / Minibus.

DISPLAY - display settings

Color select - customize the color of the RGB backlight.

Spectrum - frequency spectrum display, incl. / off.

Language - selection of menu display language.

Version - viewing the current software (firmware) version.

TUNER - radio function settings

Local seek - local search incl. / off.

Mono set - mono mode incl. / off.

Regional - selection of the broadcasting region (Europe, USA, Asia, Russia).

RDS - turning on the text messaging system.

TA - traffic announcements. *

AF - moves to more stable frequencies. *

EON - auto switch to traffic announcement channels. *

Radio text - displays text information.

PI regional - displays the station name.

PTY search - search by program type. *

* the function is not supported in Russia.

CLOCK - time settings

Clock format - select the clock display format (12/24 hours).

Clock adjust - set the hours / minutes.

Data format - select the date display format.

Data set - sets date values.

Time sync - synchronize accurate time using RDS.

Beep - sound of buttons

On / Off the sound when pressing buttons.

Animation - animation on main display

Turning on and setting the delay interval before the animation is played on the device display: No / 15 / 30 sec. / 1 / 2 / 4 min.

Demo mode

On / Off demo mode.

Radio

Range selection

Press the (3) **BAND** button to select the broadcasting range of radio stations: FM1, FM2, FM3 (VHF), AM1, AM2.

Saving and recalling radio stations

Press and hold one of the number buttons (1-6) to store the current radio station.

Press one of the number buttons (1-6) to recall the current radio station.

It is possible to store 6 radio stations in each broadcasting range.

Automatic station search

Press the (11) ◀◀ or (12) ▶▶ button to quickly search for stations.

Search and save stations automatically

Press and hold the (3) **BAND** button for more than 2 seconds.

The unit will quickly search for and automatically store 18 FM and 12 AM radio stations with strong signals.



Manual station search

Press and hold the button (12) or (4) for more than 2 seconds to switch to manual setting mode.

Press button (12) or (4) to change the frequency step by step.

Hold down the (12) or (4) button to change the frequency step by step.

USB

Connect a USB storage device to the connector on the front of the device.

Supported file formats will start playing automatically.

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

Switching tracks

Press the button (12) or (4) to skip to the previous or next track.

Rewind

Press and hold the button (12) or (4) to rewind or fast forward.

Play / Pause

Press the button (18) to stop playback.

Press again to resume playback.

Track scanning

Press the **INT** button (19) to play 10 seconds of each track in sequence.

Click again to stop scanning.

Repeat play

Press the button (16) to select the repeat play mode:

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

Repeat one (repeat track) - Repeat playback of the current file.

Repeat all — Repeat playback of all files on the media.

Shuffle play

Press the button (17) to turn on the random play mode.

Press again to turn off.

Switching folders and tracks

Press the (14) or (15) button to switch to the previous or next source folder.

Press and hold the button (14) or (15) to move 10 tracks backward or forward.

BLUETOOTH

Pairing with your phone


Pair your phone with the AMH-88DSP receiver:

1. Turn on Bluetooth on your mobile device.
2. Find "AMH-88DSP" in the list of available BT devices and connect to it.
PIN-code for authorization: 1234.
3. In case of successful connection, the "BT" indicator on the display of the receiver will stop blinking and will light up constantly.
4. The audio signal from the mobile device (music and calls) will be transmitted to the car speakers.

Outcoming call

Dial the subscriber's number on your phone.
The call will be made through the speakerphone.


Incoming call

When an incoming call arrives, the caller's number will be displayed on the receiver's screen. Press the button (8)  to receive the speakerphone call.

End call

To reject an incoming call or end a conversation, press and hold the button (8)  .

Calling the last dialed number


Press and hold the button (8)  on the receiver to call the last number in the list of outgoing calls on your phone.

Press the button (8)  on the receiver to activate the Siri function.

Switch between phone and speakerphone

During a call, press the button (8)  to transfer the audio signal from the speakerphone to your phone or from the phone to the speakerphone.

Volume control

Rotate the volume knob during a call to adjust the level volume. Press the button (10)  to mute the sound.



Bluetooth music (A2DP)

The AMH-88DSP receiver supports the Bluetooth A2DP audio transmission protocol. After successfully pairing your mobile device with the receiver, you can play music from your phone on the car audio system.

To switch tracks, press buttons (4) ◀◀ or (12) ▶▶ .

Press the (18) ▶/|| button to stop playback.

AUX

You can connect an external source to the 3.5mm jack on the front of the receiver using the AurA AUX cable (optional).

Reset settings

Press the **reset** button to reset the device to factory settings.

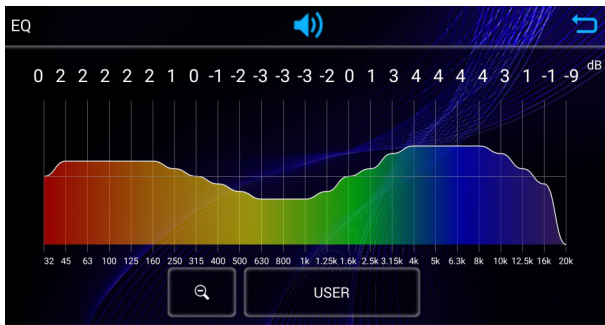
Phone App

Most of the device settings are available in the AurA mobile application for Android or IOS.

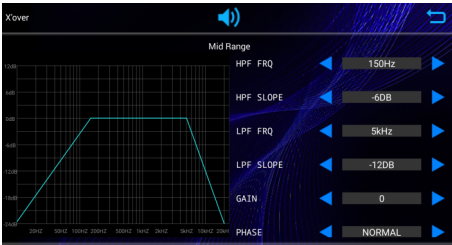
You can control the AMH-88DSP receiver from your smartphone:

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

25-band equalizer

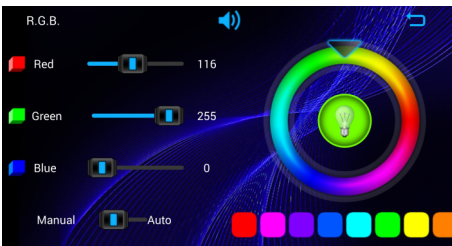
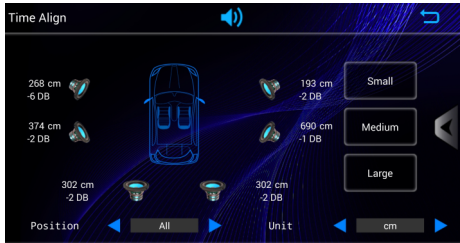


Phone App



3-band crossover

Time delays



RGB lights



ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

General

Working supply voltage:	12 V (9.6 - 15 V allowable)
Fuse:	15 A
Maximum output power:	4 x 61 W (4 ohms)
Rated output power:	4 x 20 W (4 Ohm)
Speaker Impedance:	2 - 8 Ohm
Frequency Response Range:	20 Hz - 20 kHz
Display viewing angle:	vertical $\pm 30^\circ$, horizontal $\pm 15^\circ$
Audio signal input (AUX, stereo):	one (front, 3.5mm)
Line Out (RCA):	6-channel (3 pairs)
RCA Output Level:	3.5V
Maximum current consumption:	15 A
Dimensions (W x H x D):	178 x 108 x 50 mm
Temperature (working):	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 64Gb
ID3 Tag Support:	English language, Russian language

Bluetooth

Version:	4.2
Profiles:	A2DP, AVRCP, HFP
Frequency:	2.4 GHz

Radio receiver FM (VHF), AM

Tuning memory for radio stations:	18 FM, 12 AM
FM frequency range:	87.5 - 108.0 Mhz
VHF frequency range:	65 - 74 Mhz
Received frequency range AM:	522 - 1620 kHz
Antenna impedance:	75 Ohm

Audio signal output AUX IN

Audio input level::	500 mV (max 2 V)
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DSP:

Crossover	30-12500 Hz, 6-24 dB / oct.
Equalizer	25 bands, 32-20000 Hz gain from -9 dB to +9 dB, step 0.1 dB
Phase reversal	0/180 °
Time delays	0-25 ms, 0-850 cm



www.aurael.ru



Due to continuous product development and improvement, all specifications are subject to change

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