

Owner's Manual

Alpine Status

HDP-D90

14 CHANNEL AUDIO PROCESSOR AMPLIFIER



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Instructions

Warning

Points for Safe Use

- Please read this manual carefully before using the machine and system components. This manual contains instructions on how to use this product safely and effectively. If failure to follow the instructions in this manual causes malfunctions, Alpine will not assume any responsibility.
- This manual uses various icons to explain how to use this product safely, and reminds you to pay attention to the dangers that may be caused by improper connection and operation. The meaning of these icons will be explained below. A complete understanding of the meaning of these icons is very important for the correct use of this manual and this system.



Warning

- It is very dangerous to operate this system while driving. The user should stop before operating the software.
- Road conditions and laws take precedence over the information displayed on the map: When driving, you should abide by actual traffic restrictions and conditions.
- This software is specially designed for this machine and cannot be used in combination with other hardware.



Warning

This symbol indicates important instructions. Failure to heed these instructions can result in serious injury or even death.

Do not use any features that will distract you while driving

Any function that affects your concentration should only be used after the car has come to a complete stop. To use these functions, please park your vehicle in a safe place first. Otherwise, an accident may result.

Do not disassemble or modify

Otherwise, it may cause an accident, fire or electric shock.

The volume must be maintained at a level where the noise outside the car can be heard while driving

Inaudible emergency vehicle sirens and road warning signals (train intersections, etc.) are very dangerous and may cause accidents. In addition, excessive volume may cause hearing loss.

This product is only suitable for cars with 12V negative grounding

Otherwise, it may cause a fire and other accidents.

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

Swallowing small objects may cause serious injury. Once swallowed by mistake, please immediately medical.

When replacing the fuse, you must choose a fuse with the correct ampere value

Otherwise, it may cause a fire or electric shock.

Do not block the ventilation holes or heat sink

Otherwise, it may cause internal heat build-up and may cause a fire.

This product can only be used in 12V mobile applications

If used in non-designed applications, it may cause fire, electric shock or other injuries.

Make the correct connection

If it is not connected properly, it may cause fire or product damage.

Before wiring, disconnect the cable from the negative terminal of the battery

Otherwise, it may cause electric shock or injury due to electrical short circuit.

Do not let the cable be entangled with surrounding objects

Arrange the wires and cables in accordance with the requirements of the manual to prevent them from becoming obstructive while driving. Cables or wires that obstruct or hang on the steering wheel, shift lever, brake pedal, etc. are extremely dangerous.

Do not splice cables

Do not cut the cable insulation to supply power to other equipment. Otherwise, the current carrying capacity of the wire will be exceeded, resulting in fire or electric shock.

Do not damage the pipe or wiring when drilling

When drilling holes in the chassis for installation, be careful not to touch, damage or obstruct the pipes, fuel lines, fuel tanks or wires. If you don't pay attention, it can cause fire.

Do not use bolts or nuts in brakes or steering systems for grounding connections

Never use bolts or nuts used in brakes or steering systems (or any other safety-related systems) or fuel tanks for installation or grounding connections. The use of such parts will cause the car controller to fail, resulting in fire and so on.

Do not install on the steering wheel or gear lever, etc., which may hinder the operation of the car

Otherwise, it will obstruct the front line of sight or obstruct moving parts, etc., causing serious accidents.

**Notice**

This symbol indicates important instructions. Failure to heed these instructions may result in injury or major property damage.

When there is a problem, please stop using it immediately

Otherwise, it may cause personal injury or damage to the product. Please return this product to an authorized Alpine dealer or the nearest Alpine service center for repair.

Ask professionals for wiring and installation

The wiring and installation of this product require professional skills and experience. For safety reasons, please contact the dealer where you purchased the product for installation.

Use designated accessories and install securely

Make sure to use only designated accessories. The use of non-designated parts may cause internal damage to the device, or it may not be securely installed in place. This can cause parts to loosen and cause danger or product failure.

Arrange the wires to avoid crimping or being squeezed by sharp metal edges

The arrangement of wires and cables should be far away from moving parts (such as seat tracks) or sharp edges or corners. This will avoid crimping and damage to the wires. If the wiring passes through a metal hole, a rubber gasket should be used to prevent the wire insulation from being cut by the edge of the metal hole.

Do not install in high humidity or dusty locations

Avoid installing the device in a location with high humidity or dust. Moisture or dust invades the device and can cause product failure.

**Precautions**

Product cleaning

Please use a dry soft cloth to clean the product regularly. If the dirt is difficult to remove, soak a soft cloth with water only. Any other solvent may dissolve.

temperature

Before turning on the machine, please make sure that the temperature in the car is between +60°C and -20°C.

Maintain

If you encounter a problem, do not repair it yourself. Please return this product to an authorized Alpine dealer or the nearest Alpine service center for repair.

Installation location

- This machine cannot be installed in any of the following places:

- Near direct sunlight and heat sources
- Places with high humidity and near water sources
- Dusty places
- Locations subject to severe vibration






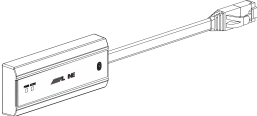
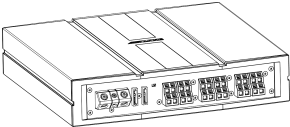
Copyright Notice

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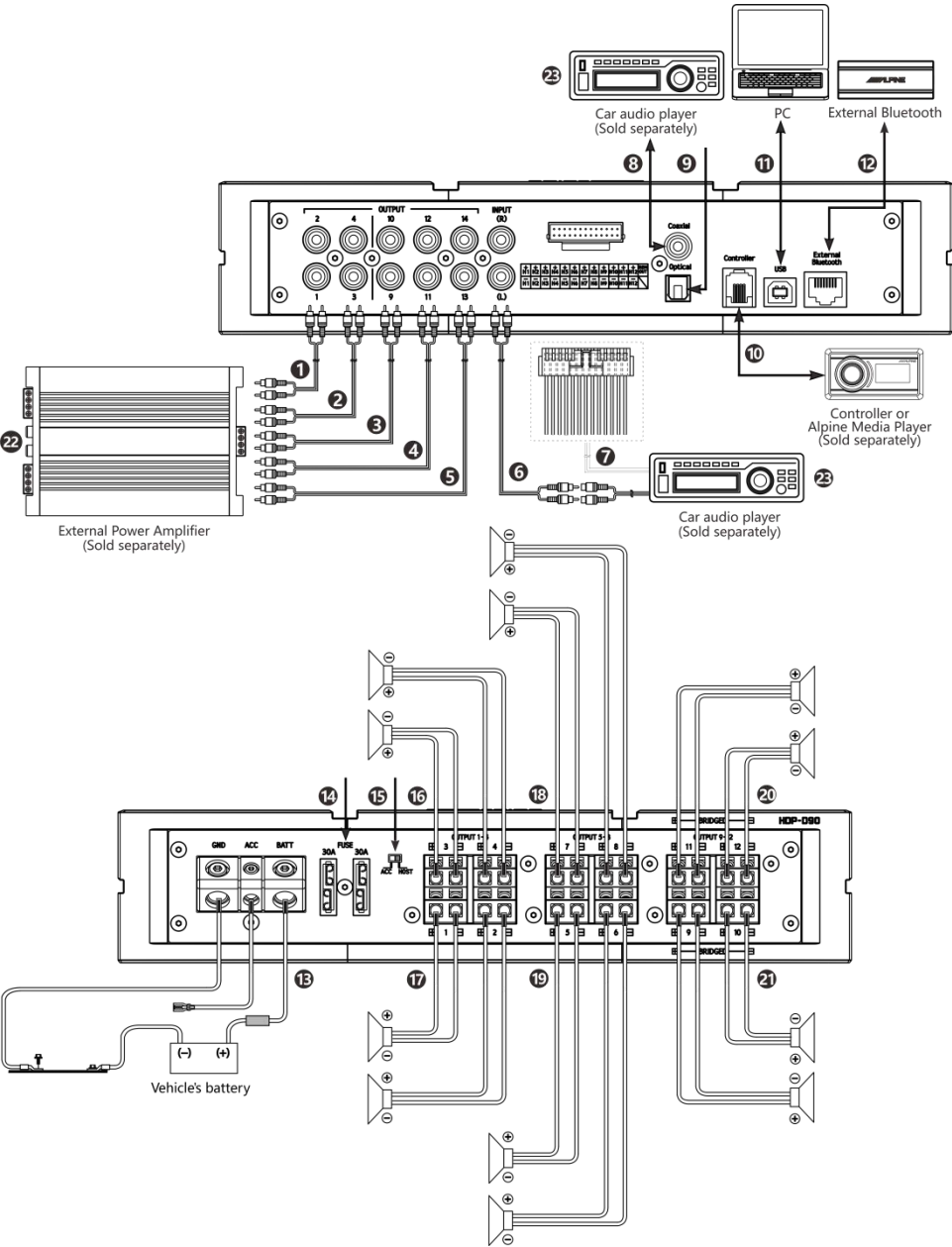
* Appropriate recycling channels should be adopted for the disposal of electronic products to reduce electronic waste pollution.

Preparation work

Accessory List

Machine Screw×4	Self-tapping Screw×4	Mounting Brackets ×2
		
2×13P Input Cable	USB 2.0 Cable	External Bluetooth Module
		
Main Unit		
		

Connections and Functions



Connections and Functions

①②③④⑤ Pre-Out jacks

5 groups of RCA audio signal output, which can be connected to an external power amplifier.

⑥ RCA Audio Input jacks

1 groups of RCA audio signal input, which can be connected to the RCA audio signal output of car audio player.

⑦ High Level Input Connector

Connect to the high-level output of the car audio player.

⑧ Coaxial Input jack

Connect the car audio coaxial cable, switch the audio source of the machine to the digital signal input, and play the coaxial digital signal.

⑨ Optical Input jack

Connect the car audio optical fiber cable, switch the audio source of the machine to the digital signal input, and play the optical digital signal.

⑩ Controller Connector (Sold separately)

System expansion interface.

⑪ USB 2.0 connector

It can be connected to a computer via a USB 2.0 cable for detailed tuning operations and settings.

⑫ External Bluetooth connector

Choose high-definition Bluetooth as the input signal, or connect HDP-D90 mobile phone tuning software. After the connection is successful, the Bluetooth is always on.

⑬ Power Supply Terminal

Connect the car battery.

⑭ Fuse

Insert two 30A fuses.

⑮ Input Select Switch

When the switch is pulled to the "ACC" terminal, ACC starts the machine; when it is pulled to the "HOST" terminal, the machine is started by the high level input signal H1-/H1+.

⑯⑰ CH1-4 Speaker Output Terminals

The amplifier output of the machine is connected to the speaker.

⑱⑲ CH5-8 Speaker Output Terminals

The amplifier output of the machine is connected to the speaker.

⑳㉑ CH9-12 Speaker Output Terminals

The amplifier output of the machine is connected to the speaker.

㉒ External Power Amplifier (Sold separately)

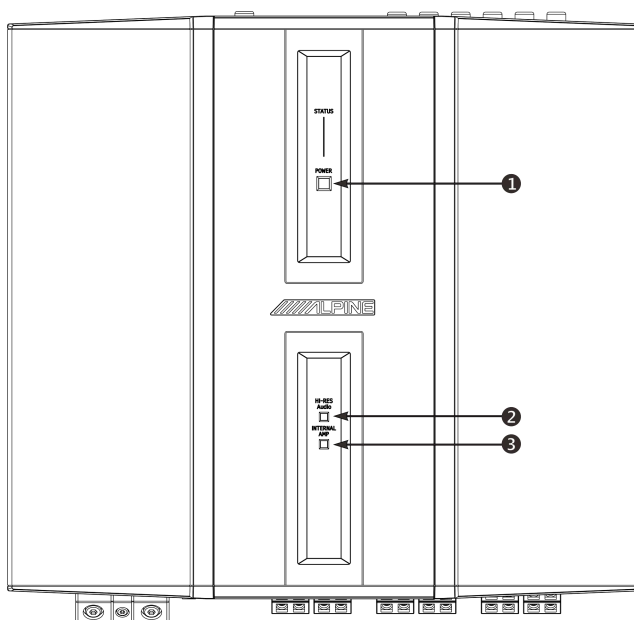
Connect an external power amplifier.

㉓ Car Audio Player (Sold separately)

Connect the car audio player.

To prevent external noise from entering the audio system.

- The installation position of the machine and the wiring arrangement should be at least 10cm away from the automobile wiring harness.
- Try to keep the battery power cord away from other wires.
- Securely connect the ground wire to the bare metal contacts of the car chassis (remove any paint, dirt or grease if necessary).
- If you want to attach an optional noise suppressor, please try to keep it away from the machine when connecting. Your Alpine dealer has various types of noise suppressors, please contact them for details.
- Your Alpine dealer is proficient in noise prevention methods, please consult your dealer for details.



① Power and Protection Indicator

Within 2 seconds of booting, the indicator light will show red;

In the protection state, the indicator light shows red light;

When working normally, the indicator light shows blue light;

When shutting down, the indicator light is off.

② Hi-Res Signal Indicator

When the optical fiber/coaxial input signal is Hi-Res standard signal, the indicator light is always on (red light);

When there is no Hi-Res standard signal for analog input and optical/coaxial input signal, the indicator light is off.

③ Internal Amplifier Indicator

When the Internal power amplifier is turned on, the indicator light is always on (red light);

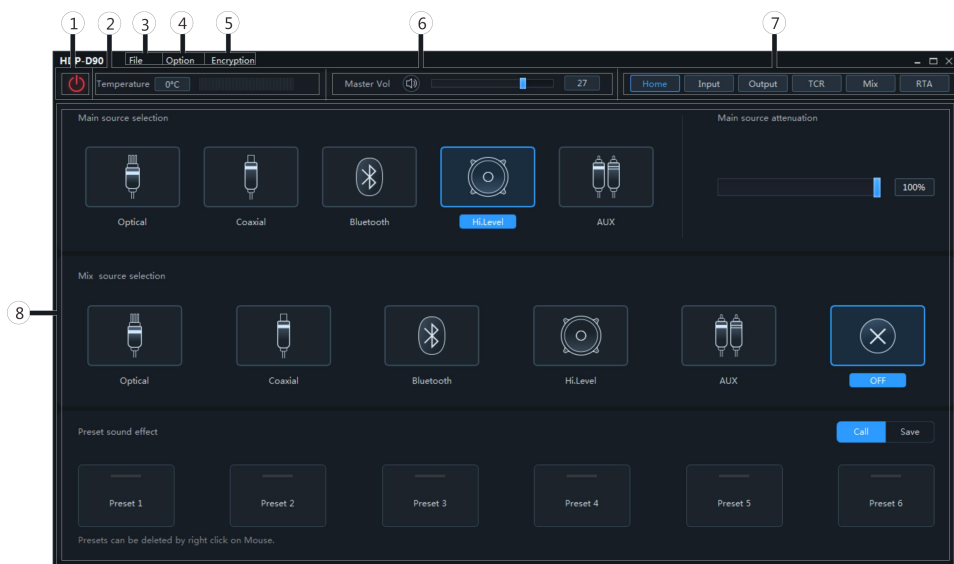
When the Internal power amplifier is turned off, the indicator light goes out.

Computer Software

Precautions installation

- The software can only be used under the Microsoft® Windows® operating system.
Operating system: Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10
CPU: 1.6GHz or higher
Memory card: 1GB or higher
Hard Disk: 512MB or more free space
Computer screen resolution: 1280*768 or higher
- Before connecting the HDP-D90 machine to the computer, please install the HDP-D90 computer software correctly.
- After installing the HDP-D90 software, you can tune and set the HDP-D90 machine on the computer.
*This function is mainly for manufacturers and distributors.

Computer Software Introduction



- 1 The host is powered on.
- 2 Connect one end of the USB 2.0 cable to the “USB” port of the host, and connect the other end to the USB port of the computer.
- 3 Double-click the HDP-D90 software icon to open the software.
- ① Online switch.
- ② Temperature display.
- ③ Load or save the tuning file.
- ④ Select the function setting.
- ⑤ Encryption and decryption of tuning data.
- ⑥ Adjust the total volume.

- ⑦ Function page selection.
- ⑧ Editing area of function page

Connection and Temperature Display

Setting items:

Connection and temperature display

Setting content:

Connection/disconnected/temperature display

Connection Settings

- 1 Connect the USB cable and open the software, it will automatically go online. After the connection is successful, the connection icon will show green [🟢].
- 2 After online, click the connection icon to disconnect. When not online, the connection icon will display red [🔴], and click the connection icon again to go online again.

Temperature Display

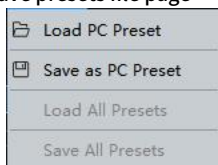
Detect the temperature on the surface of the machine and display the current temperature value.



File Settings

Click [File] to enter the loading or saving scene file page.

- Load or save presets file page



Setting items:File

Setting content:Load PC Preset/Save as PC Preset/Load All Presets/Save All Presets

Load PC Preset

The scene file previously saved on the

computer can be loaded as the current machine working scene.

Save as PC Preset

The current machine work scene file can be saved to the computer for later recall.

Load All Presets

Load the files of the entire machine previously saved on the computer to the machine (including the current working scene, machine preset scene, output channel configuration data, etc.), and copy all the machine data that has been debugged to the currently connected machine.

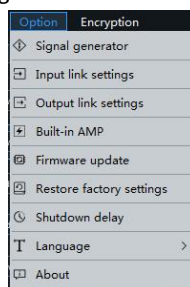
Save All Presets

Save all data on the current online machine as a computer file (including the current working scene, machine preset scene, output channel configuration data, etc.) for later recall when the whole machine is copied.

Option Setting

Click [Option] to enter the setting page.

- Setting page



<Setting item>

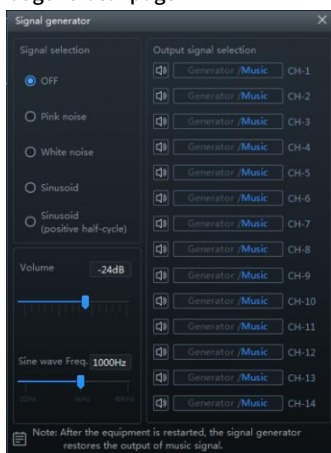
Signal generator	
	Signal selection
	Volume
	Sine wave frequency
	Output signal selection
Input link settings	
Output link settings	
Built-in AMP	
Firmware update	

Restore factory settings
Shutdown delay
Language
About

Signal Generator Settings

Select [Signal Generator] from the option page to enter the signal generator setting page.

■ Signal generator page



Test whether the output signal is normal when there is no music playing.

Signal Selection

Setting item: signal selection

Setting content: OFF (initial setting)/pink noise/white noise/sinusoid/sinusoid(positive half-cycle)

Volume

Setting item: volume

Setting content: -60dB~0dB (Initial setting: -24dB)

Sine Wave Frequency

Setting item: sine wave frequency

Setting content: 20Hz~40kHz (initial setting: 1000Hz)

Output Signal Selection

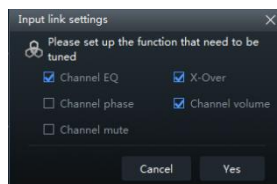
Setting item: output signal selection

Setting content: generator/music output (initial setting)

Input Link Settings

Select [Input link settings] from the option page to enter the input link settings page.

■ Enter the input link settings page



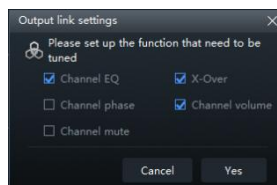
Setting items: setting the functions that need to be combined with input

Setting content: channel EQ/X-Over/channel phase/channel volume/channel mute

Output Link Settings

Select [Output link settings] from the option page to enter the output link settings setting page.

■ Output link settings setting page



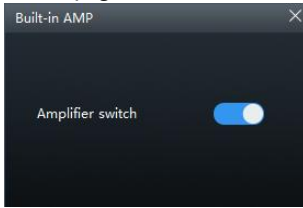
Setting item: Set the function that needs to be combined with the output

Setting content: channel EQ/X-Over/channel phase/channel volume/channel mute

Built-in AMP

Select [Built-in AMP] from the options page to enter the built-in power amplifier setting page.

■ Built-in AMP page



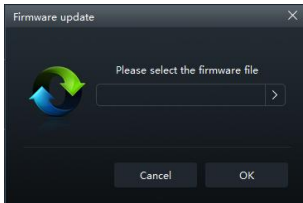
Setting item: Built-in AMP

Setting content: on (initial setting) / off

Firmware Update Settings

Select [Firmware Update] from the options page to enter the firmware update setting page.

■ Firmware update page



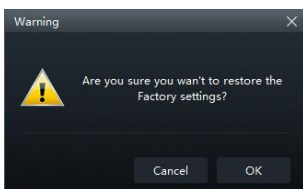
Setting item: Firmware update

- 1 Click the ">" button to select the upgrade file.
- 2 Click the "Update" button to upgrade the firmware. The upgrade progress reaches 100%, indicating that the firmware upgrade is successful.
- 3 Click the "OK" button to exit the firmware update. After the update, the machine will automatically restart to work.

Restore Factory Settings

Select [Restore Factory Settings] from the options page to enter the factory reset page.

■ Restore factory settings page



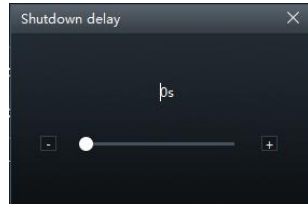
Setting item: restore factory settings

- 1 Click the "OK" button to restore all the data set in the machine to the factory default state.

Shutdown delay setting

Select [Shutdown Delay] from the options page to enter the shutdown delay setting page.

■ Shutdown delay page



Setting item: shutdown delay

Setting content: 0~255s (initial value: 0s)

Language Settings

Setting item: language

Setting content: Chinese/English

View About

Select [About] from the options page to enter the about page.

■ About page

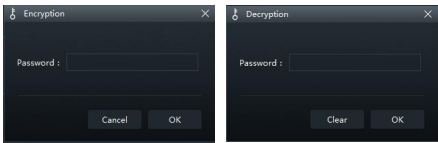


You can view the version number.

Encryption Settings

Click [Encryption] to enter the encryption page, and click [Decrypt] to enter the decryption page.

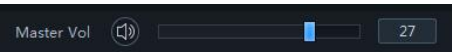
■ Encryption/decryption page



Setting item: encryption/decryption

- 1 Encryption: Enter the password to encrypt the tuning data.
- 2 Decryption: You can enter a password, clear data or restore factory settings.
- The initial password is: "888888".
- Encryption of EQ frequency, Q value, gain, delay, channel, phase equalizer and other tuning data.
- Encryption only encrypts a single group of audio data currently in use, not all data of the whole machine.
- The encrypted sound data data can be stored as preset sound effects or computer files, and copying and transmission will not affect the encrypted state.

Master volume setting



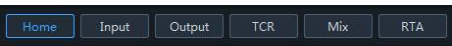
Setting item: Master volume

Setting content: 0~35 (initial value: 27)

- 1 You can adjust the total volume by pressing and holding the left mouse button, dragging the volume fader left or right, or scrolling the mouse wheel.
- 2 Click the main volume [M] button to set the total volume mute [M], click again to cancel the mute (it will automatically cancel the mute when the main volume is adjusted).

Function Page Selection

The function page can be switched.

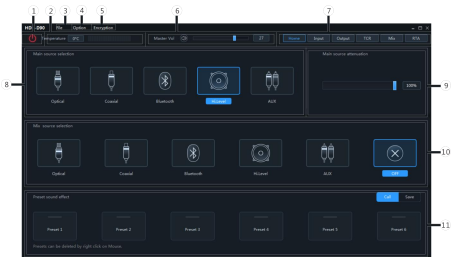


<Setting item>

Home page	Main source selection
	Main source attenuation setting
	Mix source selection
	Preset sound effects
Input EQ	Type selection
	Channel mute
	Link settings
	EQ adjustment
	Equalizer settings
	Channel settings
	X-Over settings
Output EQ	Stereo and bridge switching
TCR	Delay value adjustment
	Delay group selection
	Channel mute
Mix	Active input and passive input switching
	Combined frequency volume adjustment
RTA	Fixed and follow switch
	Signal gain selection
	Sensitivity selection
	Channel selection

Home Page

■ Home page



Setting items:Homepage

Setting content:Main source selection/
Main source attenuation/Mix
source selection/Preset sound effects

Main Source Selection



Setting items: Main source selection

Setting content: Optical/Coaxial/Bluetooth/
High Level/AUX

Main Source Attenuation Setting



You can press and hold the left button of the mouse to move the fader left or right or scroll the mouse wheel, or press the up and down keys of the keyboard to set the attenuation. The Mix source is equivalent to mixing. The greater the attenuation of the main sound source, the lower the main volume, adjustable value: 0%~100%.

Setting items: Main source attenuation

Setting content: 0% to 100% (default 100%)

- Note: When the current audio source mode is selected, the audio source mode can no longer be superimposed, otherwise the Mix source is invalid, and the optical fiber and coaxial cannot be mixed and superimposed.

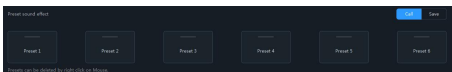
Mix Source Selection



Setting items: Mix source selection

Setting content: Optical/Coaxial/Bluetooth/
High Level/AUX/OFF

Preset Sound Effect Settings



- 1 Click [Call] to recall the pre-stored sound

effects.

- 2 Click [Save] to store the adjusted sound effect data.
 - 3 Click the right mouse button to delete the preset sound effects. Or [Save] 6 groups of preset sound effects can be set
- Setting items: Preset sound effect settings
Setting content: Call/save/delete

Enter EQ

Enter EQ page



Setting items: Enter EQ

Setting content: Type selection/channel
mute/link setting/EQ adjustment/equalizer
setting/channel setting/X-Over setting

- ① Click to enter the input type selection box.
- ② Customize the input channel type.
- ③ Mute button.
- ④ Joint adjustment button.
- ⑤ EQ gain step selection.
- ⑥ Channel display selection button.
- ⑦ EQ editing and display area.
- ⑧ Equalizer settings.
- ⑨ X-Over.
- ⑩ Channel settings.

Type selection

Custom input channel type

You can configure your favorite channel type according to your hobby.

Input type custom page



- 1 Click the channel type custom box.
- 2 Select the input channel type in the pop-up window. Set the input type in the input type setting dialog box. There are tweeter, midrange, woofer, subwoofer and full-range options in the front; tweeter, midrange, woofer, subwoofer and full-range options are available in the rear; F/C-tweeter, F/C-midrange, R/C-tweeter and R/C-midrange options are available in the center; L-subwoofer, R-subwoofer and C-subwoofer options are available in the subwoofer; L-surround and R-surround options are available in the surround;

Input type selection

■ Input type selection page



- 1 Select the desired channel type.
- 2 Click the [Enter] button to configure the channel type. At this time, the input channel type is fixed and cannot be configured.
- 3 Select Customized or [Clear] to clear all input channel types. At this time, you can customize the input channel types.

Channel Mute Setting

Setting items:Channel mute
Setting content:Mute/off

Link Settings

■ Link group page



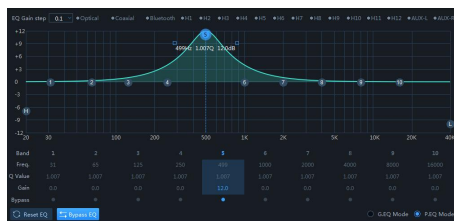
- 1 Select the input link function in the options, refer to "Input link settings" (refer to page 10).
- 2 Click the link button.
- 3 Select the link group on the link selection page.

Setting items:Link

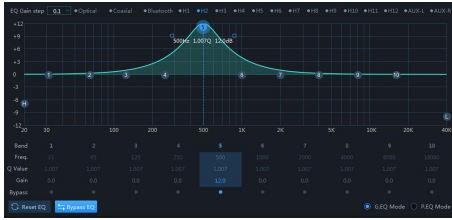
Setting content:Joint debugging 1/
joint debugging 2/joint 3/joint 4/joint 5/joint
6/joint 7/joint 8/cancel link

EQ Adjustment

The input has 10 bands of EQ adjustable, and there are two interfaces of graphic equalization and parametric equalization.



PEG page



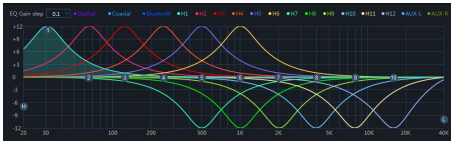
GEQ page

EQ gain step

Setting items:EQ gain step

Setting content:0.1 (initial setting)/0.5/1

EQ curve display



Click the channel display selection button to display the curve of the channel.

EQ settings

- 1 Select the input channel to be adjusted.
- 2 When the mouse moves to the serial number position, hold down, drag up and down to adjust the equalizer gain, drag left and right to adjust the equalizer frequency; when the mouse moves to the left and right blue boxes, hold down and drag to adjust the equalizer Q value. You can also set the frequency, Q value and gain by directly inputting the value, scrolling the mouse wheel, and the up and down keys on the keyboard.

Adjustable frequency range: 20Hz~40kHz;

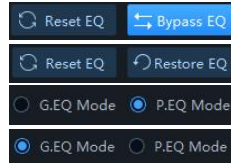
Adjustable range of Q value: 0.404~28.852;




Gain adjustable range: -12.0 dB ~+12.0 dB.

- Note: The gain is adjustable in the graphic equalization interface, and the frequency and Q value are not adjustable. In the parameter equalization interface, the frequency, Q value and gain are

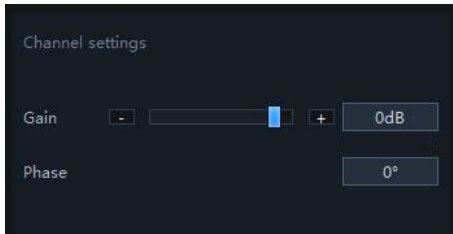
adjustable.

Equalizer Settings



1. When there is EQ adjustment, the direct equalization button appears.
2. Through Equalization: When the current channel equalizer is turned on, this button will be displayed [], click [Through Equalization] or the through dot to make all equalizers of the current channel inactive (through).
3. After clicking the "Yes" button, the button will be restored to the [Restore Balance] state [ ]. Then click [Restore EQ] and all equalizers of the current channel will return to the last activated state.
4. Click [Reset EQ], the parameters of all equalizers of the current channel return to the initial state: the frequency is evenly distributed, the input Q value is 2.515, the output Q value is 1.007, and the gain is 0.0dB.
5. Click [Parametric Equalization] to pop up a warning box "Confirm GEQ to PEQ mode?", press OK to switch to [Graphic Equalization], click [Graphic Equalization] to pop up a warning box "Confirm PEQ to GEQ mode?", press OK to confirm Switch [parameter equalization]. In the parametric equalization mode, the frequency, Q value and gain are adjustable, while in the graphic equalizer mode, the frequency and Q value are fixed, and only the equalizer gain can be adjusted.

Channel Settings

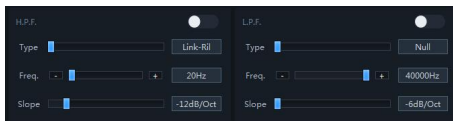


Setting items: Preset sound effect settings

Setting content: Gain/phase

1. Gain setting: The gain can be adjusted by directly inputting the value, scrolling the mouse wheel, the up and down keys on the keyboard, or clicking "-" or "+". Adjustable range: -60dB~6dB.
2. Phase setting: normal phase or reverse phase switch.

X-Over



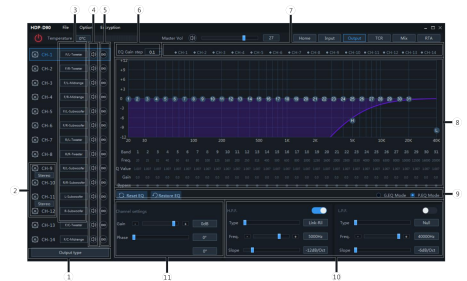
Setting items: X-Over settings

Setting content: Type/frequency/slope

1. Type settings: Link-Ril, Bessel and Butter-W.
2. Frequency setting: The frequency can be adjusted by directly inputting the value, scrolling the mouse wheel, the up and down keys on the keyboard, or clicking "-" or "+". Adjustable range: 20Hz~40000Hz.
3. Slope (slope) setting: the drop-down menu options are -6dB/Oct, -12dB/Oct, -18dB/Oct, -24dB/Oct, -30dB/Oct, -36dB/Oct, -42dB/Oct, -48dB/Oct is optional.
 - Note: When the slope is -6 dB/Oct, the type is displayed as "Null".

Output EQ

■ Output EQ page



Setting items: Output EQ

Setting content: Type selection/channel mute/link setting/EQ adjustment/Bridge Mode equalizer setting/channel setting/X-Over setting

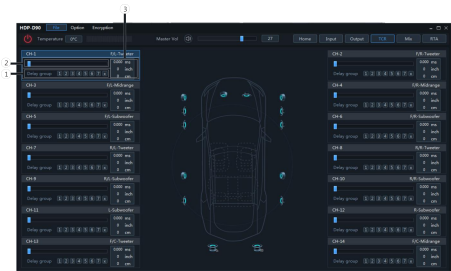
- ① Click to enter the output type selection box.
- ② Stereo and handover switch.
- ③ Customize the output channel type.
- ④ Mute button.
- ⑤ Joint debugging button.
- ⑥ EQ gain step selection.
- ⑦ Channel display selection button.
- ⑧ EQ editing and display area.
- ⑨ Equalizer settings.
- ⑩ X-Over.
- ⑪ Channel settings.

Type selection of output EQ settings, channel mute, joint tuning settings, EQ adjustment, equalizer settings, channel settings, filter settings refer to "Input EQ Settings" (page 13 to page 16)

Bridge Mode

The output channel 9 can be bridged with the output channel 11, and the output channel 11 can be bridged with the output channel 12. The power can be increased in bridge mode.

Delay



- ① Delay adjustment.
- ② Delay group selection.
- ③ Delay value display window.

Setting items: Delay setting

Setting content: Delay/delay group

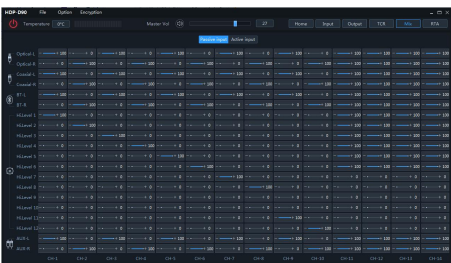
- 1. Delay adjustment: The delay can be adjusted by directly inputting the value, scrolling the mouse wheel or the up and down keys on the keyboard.
- 2. Delay group: select the delay group, and the channels with the same delay group can be adjusted together.
- 3. The delay units are ms (milliseconds), inch (inches) and cm (centimeters).

Delay range: 0.000~20.000 milliseconds;

0~692 cm;

0~273 inches.

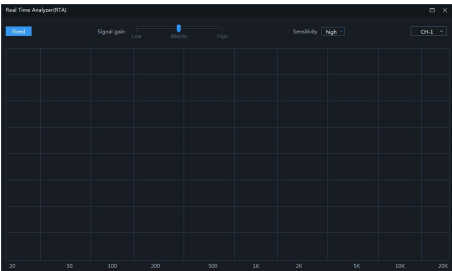
Mix



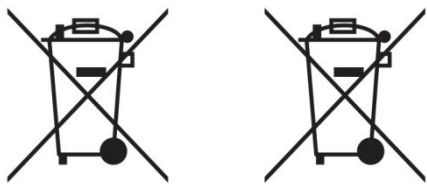
After the HDP D90 machine sets the sound source signal into the audio processor, it is divided into the volume of each output channel,

and the purpose of mixing and mixing can be achieved by adjusting the volume of each sound source in the channel. In the passive input mode, the frequency division is set by the PC terminal; in the active input mode, the frequency division is set by the original vehicle host itself.

RTA



- 1. Display window: The window size can be the largest screen and can be zoomed freely.
- 2. Select the display channel:
 - (1) Output: Click the drop-down list to select the spectrum dynamics of the output channel.
 - (2) Fixed: Only the spectrum dynamics of the currently selected output channel can be displayed, and other output channels cannot be switched.
 - (3) Follow: Follow the output channel clicked by the mouse to switch and display the spectrum dynamics of the selected output channel.
 - (4) Signal gain: hold down the mouse and push the fader left and right to adjust the signal gain.
 - (5) Sensitivity: There are high, medium and low options. The higher the sensitivity, the more sensitive the frequency spectrum jumps.



Information on the disposal of waste electrical and electronic equipment and batteries (applicable to countries that adopt a garbage collection system) If you want to dispose of this product, do not mix it with general household waste. In accordance with regulations that require proper disposal, recycling and recycling, there is a separate collection system for waste electronic products. Please contact your local authorities to find the location of the recycling facility closest to you. Proper recycling and waste disposal help conserve resources while preventing harmful effects on human health and the environment.

Specifications

Performance		
Power Output	Rated: 4Ω, 14.4V, 10%THD	CH1~8: 50W, CH9~12: 80W
THD+N	RCA: 1W into 4Ω	≤0.01%
S/N	RCA: A-wt	≥100dB
Input Voltage	High level	26Vpp
	RCA	8Vpp
Output Voltage	High level	CH1~8: 40Vpp, CH9~12: 50Vpp
	RCA	10Vpp
Frequency Response	1W into 4Ω	20Hz~40kHz
General		
Input Impedance	High level	14Ω
	RCA	10kΩ
System Sampling Rate		192kHz/32bit
Operating Voltage		9~16V
Standby Power Consumption		≤0.1W
REM Start Input		High level(H1-/H1+),ACC optional
REM Start Output		12V(0.2A)
Weight		4.5kg
Dimensions	Width	278mm
	Depth	256mm
	Height	58mm

Function Parameter

Inputs	12ch High-level 2ch RCA Optical / Coaxial Digital Signal Bluetooth Audio
Outputs	12ch High-level 10ch RCA
Output Channel Signal Gain	Range: -60dB~+6dB
Output Signal Equalizer	Type: Parametric / Graphic Equalizer Frequency: 20Hz~40kHz (1Hz steps) Q value: 0.404~28.852 Gain: -12.0dB~+12.0dB (0.1dB steps)
Output Signal Divider	pass independent filters, Filter type: Link-Ril, Bessel, Butter-W Filter crossover point: 20Hz~40kHz (1Hz steps) Filter slope: -6dB/Oct~-48dB/Oct
Output Phase	Normal phase or reverse phase (0°~360°)
Output Delay	0.000~20.000ms, 0~692cm, 0~273inch
Preset Sound Effects	6 sound data presets



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EN

FR

ES

CS

Alpine Status

HDP-D90

14 CHANNEL AUDIO PROCESSOR AMPLIFIER

QUICK REFERENCE GUIDE
GUIDE DE RÉFÉRENCE RAPIDE
GUÍA DE REFERENCIA RÁPIDA
快速参考指南

Instructions

Warning

Points for Safe Use

- Please read this manual carefully before using the machine and system components. This manual contains instructions on how to use this product safely and effectively. If failure to follow the instructions in this manual causes malfunctions, Alpine will not assume any responsibility.
- This manual uses various icons to explain how to use this product safely, and reminds you to pay attention to the dangers that may be caused by improper connection and operation. The meaning of these icons will be explained below. A complete understanding of the meaning of these icons is very important for the correct use of this manual and this system.



Warning

- It is very dangerous to operate this system while driving. The user should stop before operating the software.
- Road conditions and laws take precedence over the information displayed on the map: When driving, you should abide by actual traffic restrictions and conditions.
- This software is specially designed for this machine and cannot be used in combination with other hardware.



Warning

This symbol indicates important instructions. Failure to heed these instructions can result in serious injury or even death.

Do not use any features that will distract you while driving

Any function that affects your concentration should only be used after the car has come to a complete stop. To use these functions, please park

your vehicle in a safe place first. Otherwise, an accident may result.

Do not disassemble or modify

Otherwise, it may cause an accident, fire or electric shock.

The volume must be maintained at a level where the noise outside the car can be heard while driving

Inaudible emergency vehicle sirens and road warning signals (train intersections, etc.) are very dangerous and may cause accidents. In addition, excessive volume may cause hearing loss.

This product is only suitable for cars with 12V negative grounding

Otherwise, it may cause a fire and other accidents.

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

Swallowing small objects may cause serious injury. Once swallowed by mistake, please immediately medical.

When replacing the fuse, you must choose a fuse with the correct ampere value

Otherwise, it may cause a fire or electric shock.

Do not block the ventilation holes or heat sink

Otherwise, it may cause internal heat build-up and may cause a fire.

This product can only be used in 12V mobile applications

If used in non-designed applications, it may cause fire, electric shock or other injuries.

Make the correct connection

If it is not connected properly, it may cause fire or product damage.

Before wiring, disconnect the cable from the negative terminal of the battery

Otherwise, it may cause electric shock or injury due to electrical short circuit.

Do not let the cable be entangled with surrounding objects

Arrange the wires and cables in accordance with the requirements of the manual to prevent them from becoming obstructive while driving. Cables or wires that obstruct or hang on the steering wheel, shift lever, brake pedal, etc. are extremely dangerous.

Do not splice cables

Do not cut the cable insulation to supply power to other equipment. Otherwise, the current carrying capacity of the wire will be exceeded, resulting in fire or electric shock.

Do not damage the pipe or wiring when drilling

When drilling holes in the chassis for installation, be careful not to touch, damage or obstruct the pipes, fuel lines, fuel tanks or wires. If you don't pay attention, it can cause fire.

Do not use bolts or nuts in brakes or steering systems for grounding connections

Never use bolts or nuts used in brakes or steering systems (or any other safety-related systems) or fuel tanks for installation or grounding connections. The use of such parts will cause the car controller to fail, resulting in fire and so on.

Do not install on the steering wheel or gear lever, etc., which may hinder the operation of the car

Otherwise, it will obstruct the front line of sight or obstruct moving parts, etc., causing serious accidents.



Notice

This symbol indicates important instructions. Failure to heed these instructions may result in injury or major property damage.

When there is a problem, please stop using it immediately

Otherwise, it may cause personal injury or damage to the product. Please return this product to an authorized Alpine dealer or the nearest Alpine service center for repair.

Ask professionals for wiring and installation

The wiring and installation of this product require

professional skills and experience. For safety reasons, please contact the dealer where you purchased the product for installation.

Use designated accessories and install securely

Make sure to use only designated accessories. The use of non-designated parts may cause internal damage to the device, or it may not be securely installed in place. This can cause parts to loosen and cause danger or product failure.

Arrange the wires to avoid crimping or being squeezed by sharp metal edges

The arrangement of wires and cables should be far away from moving parts (such as seat tracks) or sharp edges or corners. This will avoid crimping and damage to the wires. If the wiring passes through a metal hole, a rubber gasket should be used to prevent the wire insulation from being cut by the edge of the metal hole.

Do not install in high humidity or dusty locations

Avoid installing the device in a location with high humidity or dust. Moisture or dust invades the device and can cause product failure.



Precautions

Product cleaning

Please use a dry soft cloth to clean the product regularly. If the dirt is difficult to remove, soak a soft cloth with water only. Any other solvent may dissolve.

Temperature

Before turning on the machine, please make sure that the temperature in the car is between +60°C and -20°C.

Maintain

If you encounter a problem, do not repair it yourself. Please return this product to an authorized Alpine dealer or the nearest Alpine service center for repair.

Installation location

- This machine cannot be installed in any of the following places:
- Near direct sunlight and heat sources
- Places with high humidity and near water sources
- Dusty places
- Locations subject to severe vibration



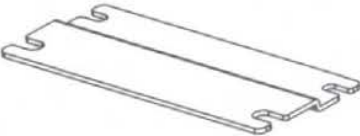


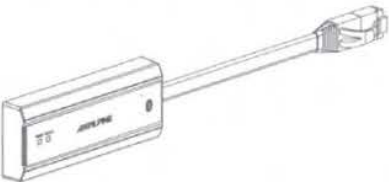
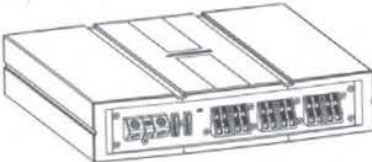
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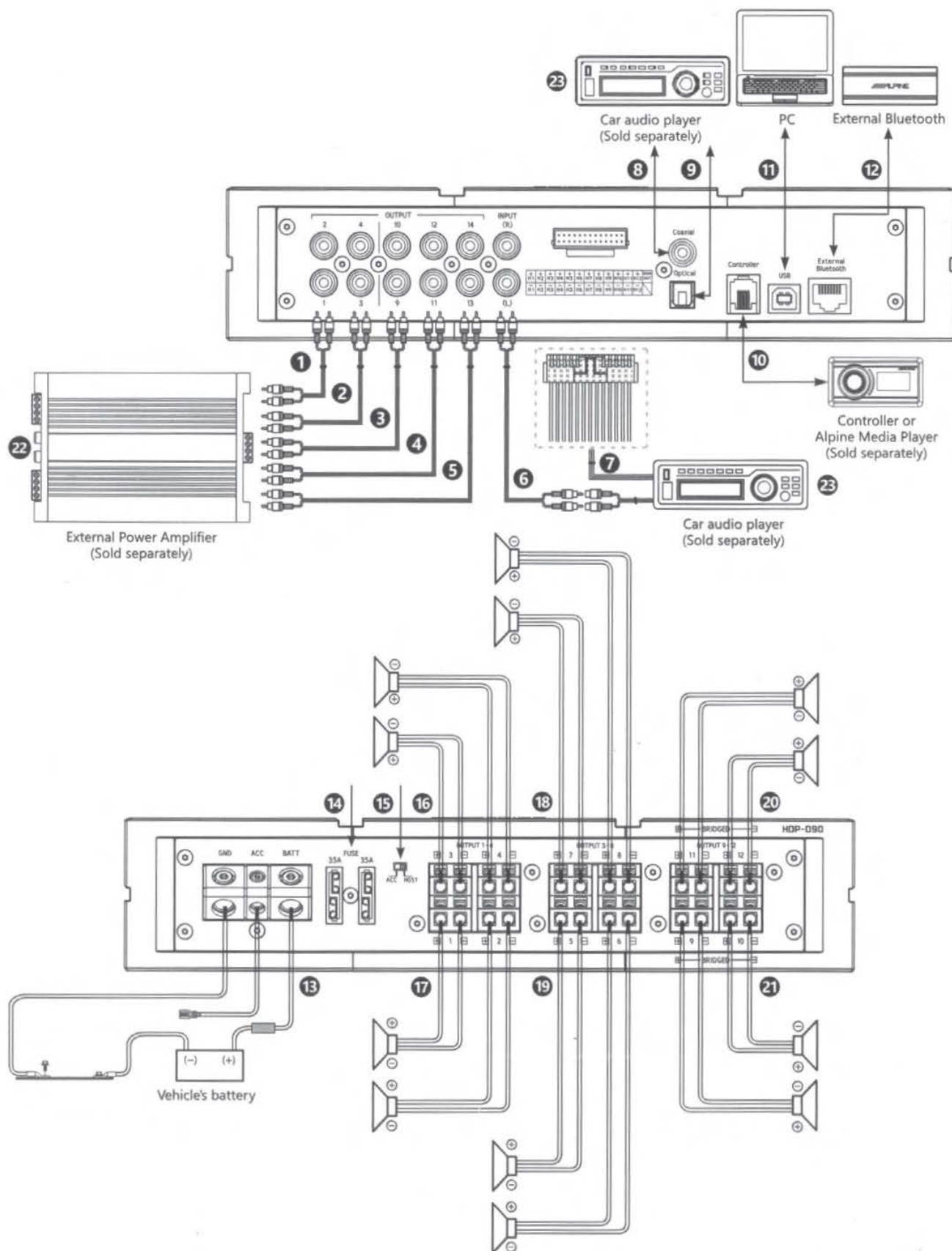
*Appropriate recycling channels should be adopted for the disposal of electronic products to reduce electronic waste pollution.

Accessory List

EN

Machine Screw×4	Self-tapping Screw×4	Mounting Brackets ×2
		
2×13P Input Cable	USB 2.0 Cable	External Bluetooth Module
		
Main Unit		
		

Connections and Functions



Connections and Functions

EN

① ② ③ ④ ⑤ Pre-Out Jacks

5 groups of RCA audio signal output, which can be connected to an external power amplifier.

⑥ RCA Audio Input Jacks

1 groups of RCA audio signal input, which can be connected to the RCA audio signal output of car audio player.

⑦ High Level Input Connector

Connect to the high-level output of the car audio player.

⑧ Coaxial Input Jack

Connect the car audio coaxial cable, switch the audio source of the machine to the digital signal input, and play the coaxial digital signal.

⑨ Optical Input Jack

Connect the car audio optical fiber cable, switch the audio source of the machine to the digital signal input, and play the optical digital signal.

⑩ Controller Connector

System expansion interface.

⑪ USB 2.0 Connector

It can be connected to a computer via a USB 2.0 cable for detailed tuning operations and settings.

⑫ External Bluetooth Connector

Choose high-definition Bluetooth as the

input signal, or connect HDP-D90 mobile phone tuning software. After the connection is successful, the Bluetooth is always on.

⑬ Power Supply Terminal

Connect the car battery.

⑭ Fuse

Insert two 35A fuses.

⑮ Input Select Switch

When the switch is pulled to the "ACC" terminal, ACC starts the machine; when it is pulled to the "HOST" terminal, the machine is started by the high level input signal H1-/H1+.

⑯ ⑰ CH1-4 Speaker Output Terminals

The amplifier output of the machine is connected to the speaker.

⑱ ⑲ CH5-8 Speaker Output Terminals

The amplifier output of the machine is connected to the speaker.

⑳ ㉑ CH9-12 Speaker Output Terminals

The amplifier output of the machine is connected to the speaker.

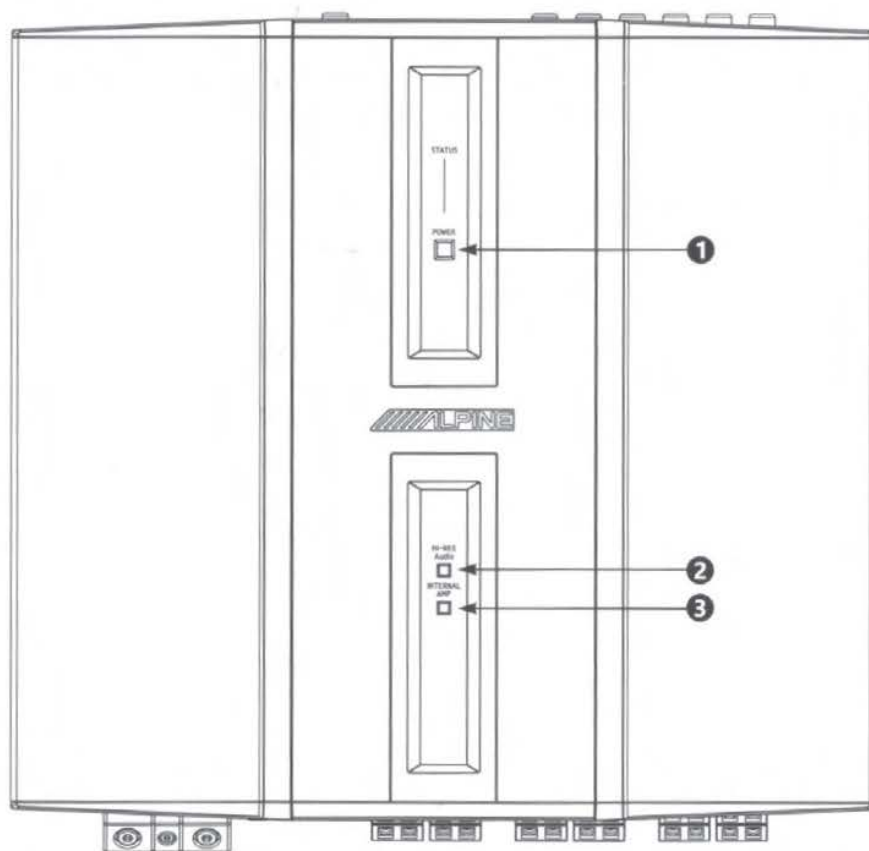
㉒ External Power Amplifier (Sold separately)

Connect an external power amplifier.

㉓ Car Audio Player (Sold separately)

Connect the car audio player.

Indicators



❶ Power and Protection Indicator

Within 2 seconds of booting, the indicator light will show red;
In the protection state, the indicator light shows red light;
When working normally, the indicator light shows blue light;
When shutting down, the indicator light is off.

❷ Hi-Res Signal Indicator

When the optical fiber/coaxial input signal is Hi-Res standard signal, the indicator light is always on (red light);
When there is no Hi-Res standard signal for analog input and optical/coaxial input signal, the indicator light is off.

❸ Internal Amplifier Indicator

When the internal power amplifier is turned on, the indicator light is always on (red light);
off, the When the internal power amplifier is turned indicator light goes out.

Specifications

EN

Performance		
Power Output	Rated: 4Ω, 14.4V, 10%THD	CH1-8: 50W, CH9-12: 80W
THD+N	RCA: 1W into 4Ω	≤0.01%
S/N	RCA: A-wt	≥100dB
Input Voltage	High level	26Vpp
	RCA	8Vpp
Output Voltage	High level	CH1-8: 40Vpp, CH9-12: 50Vpp
	RCA	10Vpp
Frequency Response	1W into 4Ω	20Hz ~ 40kHz
General		
Input Impedance	High level	14Ω
	RCA	10kΩ
System Sampling Rate		192kHz/32bit
Operating Voltage		9 ~ 16V
Standby Power Consumption		≤0.1W
REM Start Input		High level (H1-/H1+), ACC optional
REM Start Output		12V (0.2A)
Weight		4.5kg
Dimensions	Width	278mm
	Depth	256mm
	Height	58mm

Function Parameter

Inputs	12ch High-level 2ch RCA Optical / Coaxial Digital Signal Bluetooth Audio
Outputs	12ch High-level 10ch RCA
Output Channel Signal Gain	Range: -60dB ~ +6dB
Output Signal Equalizer	Type: Parametric / Graphic Equalizer Frequency: 20Hz ~ 40kHz (1Hz steps) Q value : 0.404 ~ 28.852 Gain: -12.0dB ~ +12.0dB (0.1dB steps)
Output Signal Divider	Each output channel is equipped with multi-order high and low pass independent filters, Filter type: Link-Ril, Bessel, Butter-W Filter crossover point: 20Hz ~ 40kHz (1Hz steps) Filter slope : -6dB/Oct~-48dB/Oct
Output Phase	Normal phase or reverse phase (0°~360°)
Output Delay	0.000~20.000ms, 0~692cm, 0~273inch
Preset Sound Effects	6 sound data presets



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English : Corrections and Clarifications for the Quick Reference Guide.
 Français : Corrections et clarifications pour le Guide de référence rapide.
 Español : Correcciones y Aclaraciones para la Guía de Referencia Rápida.

<p>EN (Page-6)</p>	<p>(Incorrect)</p> <p>⑫ External Bluetooth connector Choose high-definition Bluetooth as the input signal, or connect HDP-D90 mobile phone tuning software. After the connection is successful, the Bluetooth is always on.</p>	<p>(Correct)</p> <p>⑫ External Bluetooth connector Choose high-definition Bluetooth as the input signal. After the connection is successful, the Bluetooth is always on.</p>
<p>FR (Page-6)</p>	<p>(Incorrect)</p> <p>⑫ Interface d'entrée Bluetooth externe Choisissez Bluetooth haute definition comme signal d'entrée ou connectez le logiciel de réglage de volume de téléphone portable HDP-D90. Une fois la connexion établie, le Bluetooth est toujours activé.</p>	<p>(Corriger)</p> <p>⑫ Interface d'entrée Bluetooth externe Choisissez Bluetooth haute définition comme signal d'entrée. Une fois la connexion établie, le Bluetooth est toujours activé.</p>
<p>ES (Página-6)</p>	<p>(Incorrecto)</p> <p>⑫ Interfaz de entrada Bluetooth externa Seleccione Bluetooth HD como señal de entrada o conecte el producto al software de sintonización de teléfonos móviles HDP-D90. Una vez conectado, el indicador de Bluetooth está encendido.</p>	<p>(Correcto)</p> <p>⑫ Interfaz de entrada Bluetooth externa Seleccione Bluetooth HD como señal de entrada. Una vez conectado, el indicador de Bluetooth está encendido.</p>



LIMITED WARRANTY

ALPINE ELECTRONICS OF AMERICA, INC. ("Alpine"), is dedicated to quality craftsmanship and is pleased to offer this Warranty. We suggest that you read it thoroughly. Should you have any questions, please contact your Dealer or contact Alpine at one of the telephone numbers listed below.

● PRODUCTS COVERED:

This Warranty covers Car Audio Products and Related Accessories ("the product"). Products purchased in the Canada are covered only in the Canada. Products purchased in the U.S.A. are covered only in the U.S.A.

● LENGTH OF WARRANTY:

This Warranty is in effect for one year from the date of the first consumer purchase.

● WHO IS COVERED:

This Warranty only covers the original purchaser of the product, who must reside in the United States, Puerto Rico or Canada.

● WHAT IS COVERED:

This Warranty covers defects in materials or workmanship (parts and labor) in the product.

● WHAT IS NOT COVERED:

This Warranty does not cover the following:

- ① Damage occurring during shipment of the product to Alpine for repair (claims must be presented to the carrier).
- ② Damage caused by accident or abuse, including burned voice coils caused by over-driving the speaker (amplifier level is turned up and driven into distortion or clipping). Speaker mechanical failure (e.g. punctures, tears or rips). Cracked or damaged LCD panels. Dropped or damaged hard drives.
- ③ Damage caused by negligence, misuse, improper operation or failure to follow instructions contained in the Owner's manual.
- ④ Damage caused by act of God, including without limitation, earthquake, fire, flood, storms or other acts of nature. Any cost or expense related to the removal or reinstallation of the product.
- ⑤ Service performed by an unauthorized person, company or association.
- ⑥ Any product which has the serial number defaced, altered or removed.
- ⑦ Any product which has been adjusted, altered or modified without Alpine's consent.
- ⑧ Any product not distributed by Alpine within the United States, Puerto Rico or Canada.
- ⑨ Any product not purchased from an Authorized Alpine Dealer.

● HOW TO OBTAIN WARRANTY SERVICE:

- ① You are responsible for delivery of the product to an Authorized Alpine Service Center or Alpine for repair and for payment of any initial shipping charges. Alpine will, at its option, repair or replace the product with a new or reconditioned product without charge. If the repairs are covered by the warranty, and if the product was shipped to an Authorized Alpine Service Center or Alpine, Alpine will pay the return shipping charges.
- ② You should provide a detailed description of the problem(s) for which service is required.
- ③ You must supply proof of your purchase of the product.
- ④ You must package the product securely to avoid damage during shipment. To prevent lost packages it is recommended to use a carrier that provides a tracking service.

● HOW WE LIMIT IMPLIED WARRANTIES:

ANY IMPLIED WARRANTIES INCLUDING FITNESS FOR USE AND MERCHANTABILITY ARE LIMITED IN DURATION TO THE PERIOD OF THE EXPRESS WARRANTY SET FORTH ABOVE AND NO PERSON IS AUTHORIZED TO ASSUME FOR ALPINE ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THE PRODUCT.

● HOW WE EXCLUDE CERTAIN DAMAGES:

ALPINE EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES CAUSED BY THE PRODUCT. THE TERM "INCIDENTAL DAMAGES" REFERS TO EXPENSES OF TRANSPORTING THE PRODUCT TO THE ALPINE SERVICE CENTER, LOSS OF THE ORIGINAL PURCHASER'S TIME, LOSS OF THE USE OF THE PRODUCT, BUS FARES, CAR RENTALS OR OTHERS COSTS RELATING TO THE CARE AND CUSTODY OF THE PRODUCT. THE TERM "CONSEQUENTIAL DAMAGES" REFERS TO THE COST OF REPAIRING OR REPLACING OTHER PROPERTY WHICH IS DAMAGED WHEN THIS PRODUCT DOES NOT WORK PROPERLY. THE REMEDIES PROVIDED UNDER THIS WARRANTY ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS.

● HOW STATE/PROVINCIAL LAW RELATES TO THE WARRANTY:

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state and province to province. In addition, some states/provinces do not allow limitations on how long an implied warranty lasts, and some do not allow the exclusion or limitation of incidental or consequential damages. Accordingly, limitations as to these matters contained herein may not apply to you.

● IN CANADA ONLY:

This Warranty is not valid unless your Alpine car audio product has been installed in your vehicle by an Authorized Installation Center, and this warranty stamped upon installation by the installation center.

● HOW TO CONTACT CUSTOMER SERVICE:

Should the product require service, please call the following number for your nearest Authorized Alpine Service Center.

CAR AUDIO	1-800-ALPINE-1 (1-800-257-4631)
NAVIGATION	1-888-NAV-HELP (1-888-628-4357)

Or visit our website at; <http://www.alpine-usa.com>

● For European Customers

Should you have any questions about warranty, please consult your store of purchase.

● For Customers in other Countries

IMPORTANT NOTICE

Customers who purchase the product with which this notice is packaged, and who make this purchase in countries other than the United States of America and Canada, please contact your dealer for information regarding warranty coverage.

ALPINE ELECTRONICS OF AMERICA, INC., 1500 Atlantic Blvd, Auburn Hills, Michigan 48326, U.S.A.

Do not send products to this address.

Call the toll free telephone number or visit the website to locate a service center.

68-35792Z64-B (Y_A5)



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