DSP8i

OWNER'S MANUAL

Before using this product, please read the instructions carefully and keep it for reference.


DSP8i

DSP8i

CONTENTS

WARNING

1. To prevent short circuit, please keep the device away from water or wet places.
2. If water or any other liquid soak into the device, cut off the power immediately, and call our service engineer of inspection, in case of emergency.
3. Users are not allowed to dismoun the device, please contact our service engineers when if it's necessary.

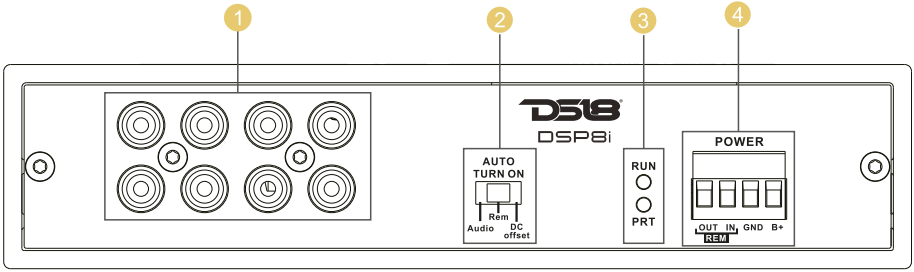
INCLUDED IN BOX

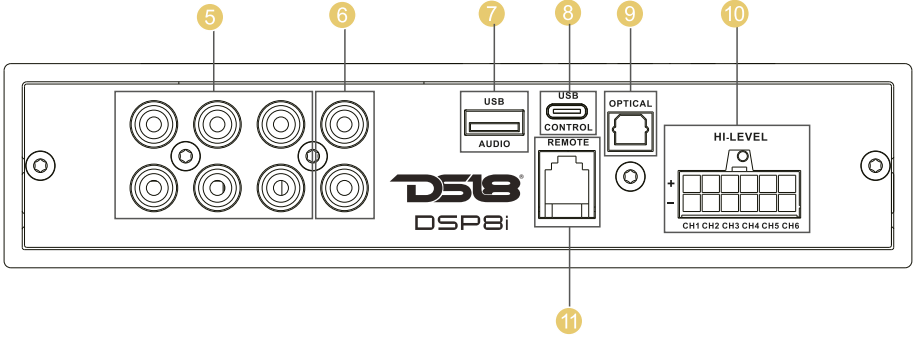
The following items should be placed in the box according to the model your purchased. If there is any missing, please inform the seller or manufacturer as soon as possible.

DSP8i

DSP8i	1pc
User Manual	1pc
Type-C USB cable(3m)	1pc
High level IN cable(12pin)	1pc
Remote controller	1pc
Connecting cable for remote controller (5m)	1pc
Installation Bracket	4pc
Black self tapping Screw	4pc
Hexagon socket screw	8pc
2.5mm Allen wrench	1pc

INTERFACE INTRODUCTION





NO.	OPERATIONS & CONTROLS
1	**Low Level Signal Output Terminal** Support maximum 8 channels
2	**Auto Turn ON/OFF Control Model Options** For auto turn on/off mode, it offers three options: DC OFFSET/REM/AUDIO. **REM:** When switched to REM, the remote control output terminal of the OEM source unit is connected to the REM IN terminal of the DSP / amplifier, which is the preferred starting method. **DC Offset:** If the OEM source unit has no REM signal output, you can choose DC OFFSET mode. DC OFFSET can turn on/off amplifier by detecting the 6V DC Offset from the OEM source unit terminal. **Audio:** This mode controls the power switch by detecting audio signals from the source unit. When using this mode, please pay attention to the volume settings of the source unit.
3	**Working Status Indicator** POWER: Working status indicator. When the processor finishes self-checking and go into proper working status, Blue LED will illuminate. ALARM: Protection status indicator. When this indicator flases, it indicates that the processor is in abnormal working state and there'll be no output signal.
4	**Power Supply Terminal** **B+:** Used to connect the positive terminal 12V car battery. In order to ensure adecuate power supply for the processor, special cable should be used to connect directly, to the positive pole of the battery, and the fuse should be connected in series within 20 centimeters from the positive pole of the battery.. **GND:** Used to connect amplifier grounding cable. The power supply grounding cable need to be firmly connected to the frame of the vehicle or other places with good conductivity. Please use the cable with same specifications as the power supply cable and connect to frame of the vehicle near the installation position of the processor.

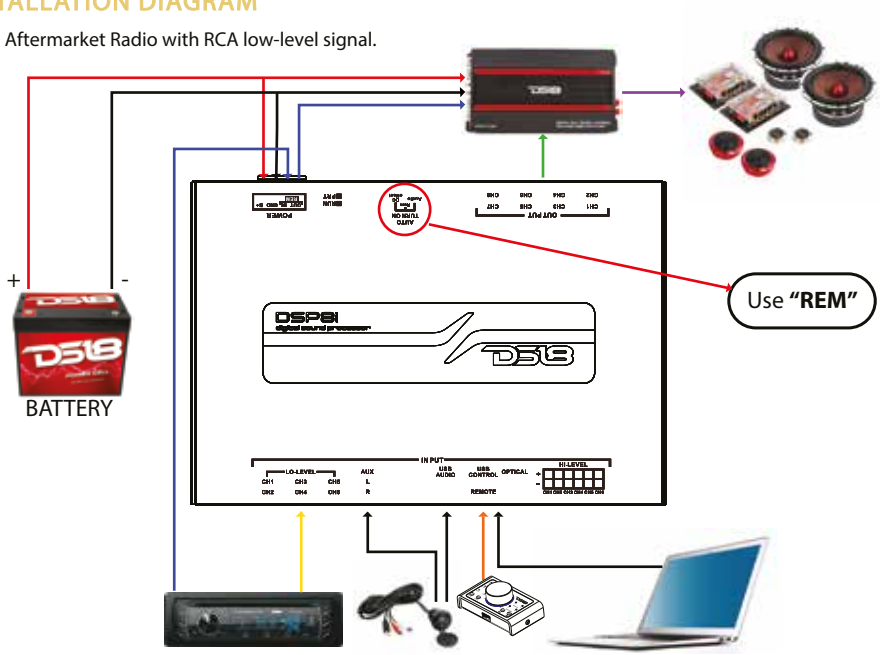
NO.	OPERATIONS & CONTROLS
	Before connecting the power supply, you must confirm that the power supply meets the designated power requirements and connect in strict accordance with the equipment instructions. Otherwise, the equipment may be damaged and may cause accidents such as fire, electric shock, etc. **Remote Turn-ON Singal In/Out** REM IN: Connect it to the ACC control output Singal. The processor will switch on/off automatically with vehicle ACC signal on/off. REM OUT: It provides separate REMOTE signal output to the other amplifiers to control other amplifiers switch turn on/off. Note: the starting signal of the external power amplifier must be taken from the REM OUT terminal of this equipment.
5	**Low Level Signal Input Terminal** Support maximum 6 channels
6	**AUX Lower Signal Input Terminal** Support 2 channels RCA stereo input.
7	**External USB Drive Port** It can read music files from USB Drive, support four formats of audio files of APE/WAV/WMA/MP3. If the USB Drive failed to read, please format USB Drive into FAT 32. External USB Drive can support up to 64G.
8	**USB External Computer Control** This DSP can be directly connected and tuned using a type-c USB connection via the standard USB 3.0 interface.
9	**Optical Stereo Digital Signal Input Port** Switching amplifier audio source to optical input can play stereo digital signal output from vehicle CD or external sound source. Optical sampling rate supports 24 Bit / 96 KHz.
10	**High Level Signal Input Terminal** Support maximum 6 channels.
11	**External Wired Controller Port** Using standard accessory wired controller, you can select input source select presets, adjust total volume and slave volume, Mute, and switch between the last song and the next song from Bluetooth/USB Drive.

BLUETOOTH AUDIO STREAMING

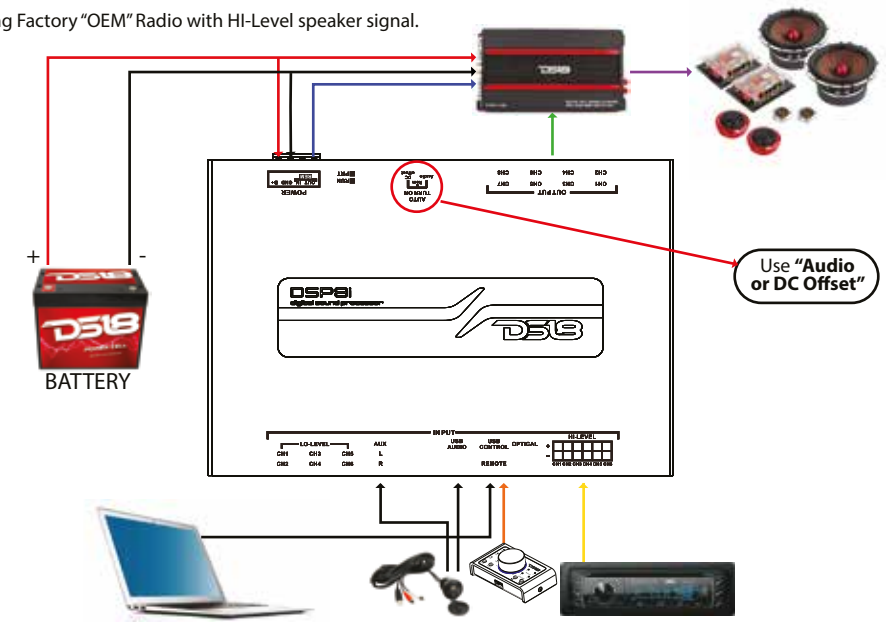
The DSP8i has Bluetooth connectivity to play all your favorite audio from your smartphone, tablet, or PC. Use it directly with the DSP8i as a main or auxiliary source of audio.
Pairing: Go to the bluetooth menu in your device and start to scan for any new BT devices. You will foind a device named “DS18-DSP8i.” Select this device to start the pairing process. It may be required to enter a password for the first time. The password is “1234.”
Using the DSP8i remote control, select BT source and adjust the desire volume. Now. start to stream or play any kind of audio from your device. On the DSP8i Remote Control you can use the forward and backward buttons to control your music.

INSTALLATION DIAGRAM

Using Aftermarket Radio with RCA low-level signal.



Using Factory "OEM" Radio with HI-Level speaker signal.

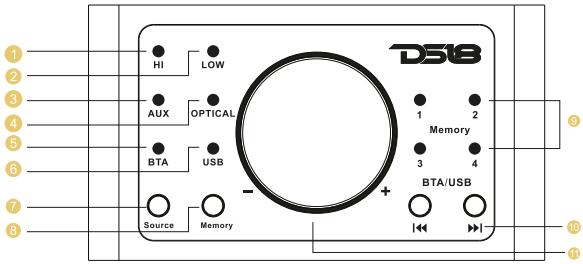


WIRED MULTI-FUNCTION CONTROLLER

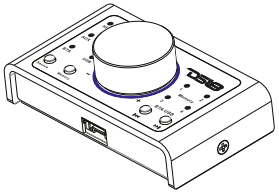
With the remote controller connected to the DSP, you can enjoy the following operation to the DSP:

1. Main volume control, Slave volume control, Mute
2. Switch between the last song and next song from Bluetooth/USB Drive
3. Switch Input source
4. Switch Presets

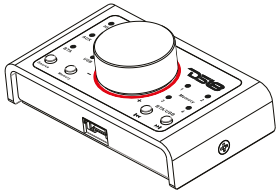
Panel Introduction



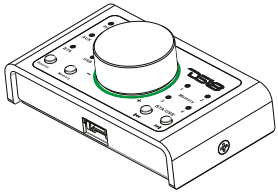
1. **HI:** High level input
2. **LOW:** Low level input
3. **AUX:** AUX input
4. **OPTICAL:** Optical input
5. **BTA:** Bluetooth Audio Streaming
6. **USB:** USB Drive Audio Player
7. **Source:** Input source switch
8. **Memory:** DSP Presets switch
9. **Memory1.2.3.4:** DSP presets
10. **Previous and next song:** only for Bluetooth audio and USB Drive audio input.
11. **Knob in the middle:** Main level control, Group level control, Mute.



A. When connected to DSP unit, the LED will light up blue color when the amplifier is turn on. This is Main (all channels) output level control mode.



B. Push the knob to Mute (LED changed to red color), push again back to Main level output control.



C. Long push the knob for over 3 seconds the LED change to green for Group level control mode.

Note: Group level control mode only control the output level of the channels that chosen on the software as SLAVE. If no channel is chosen as SLAVE on DSP setup, there'll be no fuction at this mode.

SOFTWARE INTRODUCTION

1. Software download and installation instructions
Download tuning software from the website ***ds18.tools***
Follow the instructions to complete installation and double click the shortcut icon to start operations as shown below.

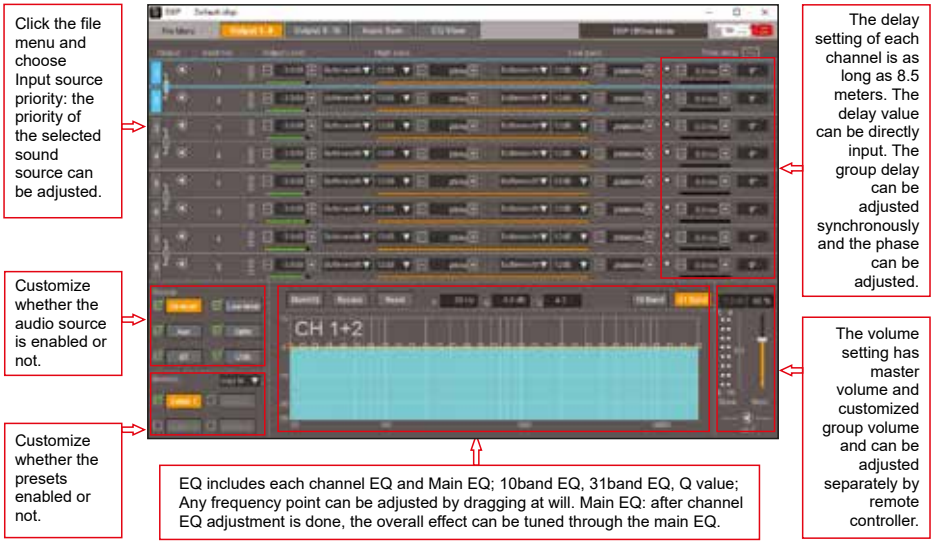
2. Important Instructitons for Software Installation
Software Interface Introductions

1. Software is run only in Microsoft Windows System.
   Configuration requirement for PC: OS: Windows XP, Windows 7, 8 or 10.
   CPU: 1.6 GHz or Higher.
   Memory card: 1GB or higher.
   Hard disk: 512MB or more space.
   PC resolution: 1280x768 or higher.
2. Before connecting amplifier to PC, please install PC tuning software first.

Software Interface Introductions
DSP software support DSP products tuning up to 16 channels. The system will automatically identifies the model of the DSP products on which is connected and adjust the settings accordingly (i.e input source type, number of input/output channels). Open software to enter into the software operation interface.

As shown in the next chart the main functions of the software interface include channel filter selection, sound source selection, EQ, delay, phase, input configuration (mixing), EQ preview, automatic switchging of sound source, 8-bit password protection can be set to prevent the tuning file from being tampered etc.

SOFTWARE INTERFACE INTRODUCTIONS



SOFTWARE INTERFACE INTRODUCTIONS

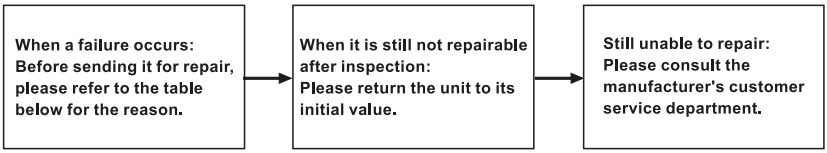
Input mix switch settings, Input level settings, synchronous source switching during mixing. The system will automatically identifies the model of the DSP products on which is connected and automatic shields redundant channel display.

EQ curve display: including level, channel EQ curve, main EQ curve, and simulated actual output summation curve.

Output Signal Gain	Gain Range: Mute, -40dB to 0dB
Output Signal EQ	10 bands or 31 bands EQ：
	Frequency Range: 20Hz～20KHz, 1Hz Accuracy
	Q Value(Slope) 0.1～20
	Gain : -25.0dB ～10.0dB，0.1dB Accuracy
Output Signal Crossover	Each output is equipped with high-low pass independent filter
	Professional filter type: Butterworth, Linkwitz-Riley
	Filter Crossover Point: 20Hz～20KHz,Resolution 1Hz
	Filter Slope Setup: 6dB/Oct to 48dB/Oct
Output Phase and Time Alignment	Adjust phase and time alignment for every output channel Phase: In Phase or Out Phase(0°~180°) Time Alignment: 0.000 to 25ms, 0 to 850cm; 0 to 334 inch
Presets	Save 4 presets into the device

TROUBLESHOOTING

Check all the cables and ports all perfectly safe before you switch on the power.
Common troubleshooting procedure:



Troubleshooting method

No.	Malfunction	Reason and Solution
1	No Power	①Check the power connection ②Check the ACC connection
2	No Sound	①Is it in mute mode ? ②Have you choose the right input signal channel.
3	Unable to connect USB	①Check the USB connection. ②Check if the driver “HID-compliant device”has been installed in your PC.

FILES SUPPORTED

File format	Coding	Sampling rate(Hz)	Bit rate(Kbps)
APE	Fast	≤48K	≤812Kbps
	Normal	≤48K	≤758Kbps
	High	≤48K	≤750Kbps
	Extra High	≤32K	≤586Kbps
MP3	Layer1	≤48K	≤320Kbps
	Layer2	≤48K	≤320Kbps
	Layer3	≤48K	≤320Kbps
WAV	IMA ADPCM	≤48K	≤384Kbps
	MS ADPCM	≤48K	≤384Kbps
	G711 ALAW	≤48K	≤768Kbps
	G711 ULAW	≤48K	≤768Kbps
	PCM	≤48K	≤4096Kbps
WMA	standard wmaV1	≤48K	≤320Kbps
	standard wmaV8	≤48K	≤320Kbps
	standard wmaV9	≤48K	≤320Kbps

SPECIFICATIONS

Power supply

Working voltage	DC 7.5-16V
REM input voltage	9-16V
REM output voltage	DC12.8V (0.5A)

Signal Processing

THD @1KHz, 1V Rated power output	0.02%
Band width @-3dB	10 ~ 22KHz
Signal-to-noise ratio @ A weighted, high level input	97dB
Signal-to-noise ratio @ A weighted, low level input	96dB
Signal-to-noise ratio @ A weighted, AUX input	95dB
Signal-to-noise ratio @ A weighted, Optical input	99dB
Channel Separation @ 1 kHz	80dB
Input sensitivity (low level)	0.12V - 3V
Input sensitivity (AUX in)	0.2V - 2V
Input sensitivity (high level)	0.4V - 10V
Input impedance (low level)	22 KΩ
Input impedance (high level)	36 Ω
Maximum output level (RMS) @ 0.1% THD	2V

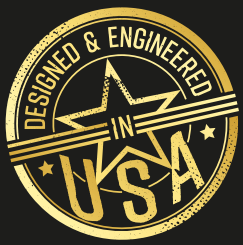
Input/output

Low level input	Up to 6channel
High level input	Up to 6channel
Auxiliary input	Stereo
Optical Input	Stereo(96kHz/24bit)
Bluetooth input	Stereo
Low level output	Up to 8channel

Dimension

Length x Width x Height	136mm x 200mm x 45mm

The contents of this manual and the specifications of this product are subjet to change without notice. DS18 Company reserves the right to make changes to the specifications and materials contained therein without notice.



FOR MORE INFORMATION
PLEASE VISIT

DS18.COM

WE LIKE IT LOUD