



Play

P84DSP



3 **3ASSHABIT**

THANK YOU FOR PURCHASING BASS HABIT

Thank you for purchasing this Play DSP from Bass Habit. Please read this manual carefully to ensure you get the best performance from your new product and to make sure all safety precautions are followed. We hope you enjoy using the P84DSP as much as we enjoyed developing it.

The Bass Habit P84DSP is a digital signal processor designed to deliver advanced tuning capability with high precision. The DSP offers real-time equalization, filtering, balancing, gain control, phase inversion, limiting, signal routing, and much more.

Before installing your new DSP, please read this entire manual. If you have questions regarding this product or any other Bass Habit product, contact your nearest Bass Habit dealer or distributor.

UNPACKING

INCLUDED IN THE PACKAGING

- Digital Signal Processor (P84DSP)
- Power Connection Cable
- USB Cable
- 4pcs Mounting screws
- User manual

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SAFETY & WARRANTY

DO NOT EXPOSE THIS PRODUCT TO EXCESSIVE DAMP OR MOISTURE

- Doing so may result in shock or damage to the product.

BEFORE WIRING, DISCONNECT THE CABLE FROM THE NEGATIVE BATTERY TERMINAL

- Failure to do so may result in electric shock or injury.

ENSURE GOOD AND CORRECT CONNECTIONS

- Failure to make the correct connections may result in permanent damage to the product.

DO NOT USE ANY FUNCTIONS THAT MAY TAKE YOUR CONCENTRATION AWAY FROM DRIVING YOUR VEHICLE

- Do not set up your DSP whilst driving. Doing so may result in an accident. For prolonged interaction with the product, make sure that your vehicle is stationary and parked in a safe location.

CAUTION

Never connect any speaker leads to the car chassis. This can cause severe damage to your car audio setup.

Before drilling or cutting any holes, investigate the vehicle structure thoroughly.

Use caution when working near fuel lines, brake lines, or electrical wiring

Observe the correct polarity when wiring. Improper phasing may cause a loss of bass response.

Ensure that no moving parts get caught on the subwoofer or grill.

WARRANTY

All Bass Habit products carry a full warranty depending on the conditions in the country where it's sold. The warranty is valid from the date of the original receipt as proof of purchase (warranty period differs depending on local warranty laws and policies). Contact your international Bass Habit dealer or distributor concerning specific procedures for your country's warranty policies.

WHAT IS NOT COVERED

- Damage due to improper installation
- Damage to or from other components
- Damage from moisture, excessive heat, chemical cleaners, or UV radiation
- Damage from negligence, misuse, accident, or abuse
- Repeated returns for the same non-defect issue
- Damage caused by amplifier clipping
- Items repaired or modified by unauthorized facilities
- Return shipping for non-defective items
- Products returned without an authorization number
- Damage from the use of sealant

WARNING

Bass Habit equipment is capable of sound pressure levels that can cause permanent damage to your hearing and those around you.

Please use common sense when listening to your audio system and practice safe sound. Keep the volume at a level so you can still hear outside noise. Failure to do this may result in an accident.

Bass Habit recommends caution when listening at a high volume. For safety and enjoyable listening the sound should be clear without distortion.

INTERNATIONAL TECHNICAL ENQUIRIES

Contact your local Bass Habit dealer or distributor for technical support.

INSTRUCTIONS

INSTALLATION EXPERIENCE

Installation of Bass Habit D84DSP may require experience with a variety of mechanical procedures including cable wiring, drilling, etc. This manual only provides general installation and operation instructions. If you have any reservations about your installation skills, please contact your local authorized Bass Habit dealer for help.

CHOOSING DSP MOUNTING LOCATIONS

- Select a location where the DSP cannot be damaged or obstructed.
- Do not mount the DSP outside the vehicle or in the engine compartment.
- Ensure good ventilation if installed in an enclosed space.
- When mounting under a seat, make sure no moving parts can touch the DSP.
- Always mount securely using screws, nuts, or bolts.

INSTALLATION PRECAUTIONS

- Wear protective eyewear when using tools.
- Turn off all audio/electrical equipment before installation.
- Disconnect the vehicle battery's negative terminal.
- Keep the DSP in its packaging until installation.
- Avoid using force when mounting the DSP.
- Locate fuel lines, brake lines, oil lines, and electrical wiring before drilling.
- Keep signal cables separated from power cables.
- Ensure all connections are secure and properly insulated.

BLUETOOTH AUDIO

The P84DSP includes a built-in Bluetooth receiver. Select **"P84DSP"** on your mobile device.

Bluetooth audio overrides other audio inputs.

To unpair:

- Disconnect Bluetooth on your mobile device, or
- Change the DSP input mode.

POWER CONNECTIONS

GROUND CONNECTION (GND):

Connect the DSP Ground (GND) terminal to a solid point on the vehicle's metal chassis, near the DSP. Remove any paint from this location for best conductivity.

- Recommended wire size: 2.5 mm² (13 AWG)

BATTERY CONNECTION (+BAT):

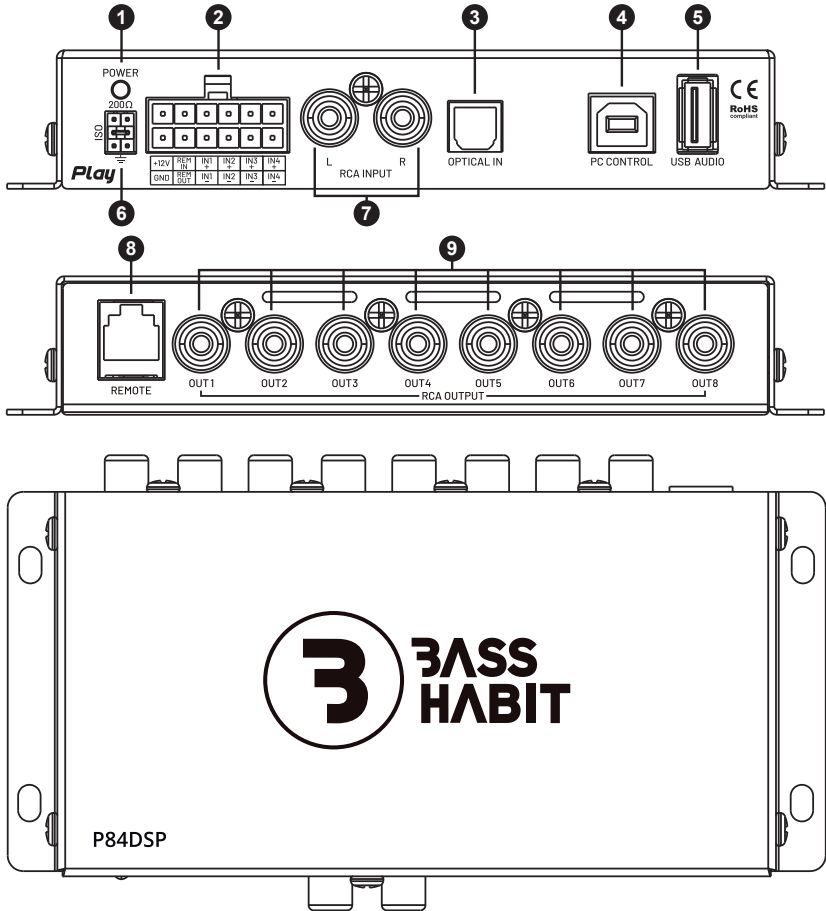
Connect a wire directly to the vehicle's 12V positive battery terminal. Install a A fuse within 30 cm/12" from the battery terminal. Use grommets when routing through metal.

- Recommended wire size: 2.5 mm² (13 AWG)

REMOTE TURN-ON CONNECTION (REM IN):

Connect the DSP Remote (REM IN) terminal to the head unit's remote output using a minimum wire size of 0.75 mm² (18 AWG). If the head unit does not have a remote output, use a +12V switch.

PRODUCT OVERVIEW



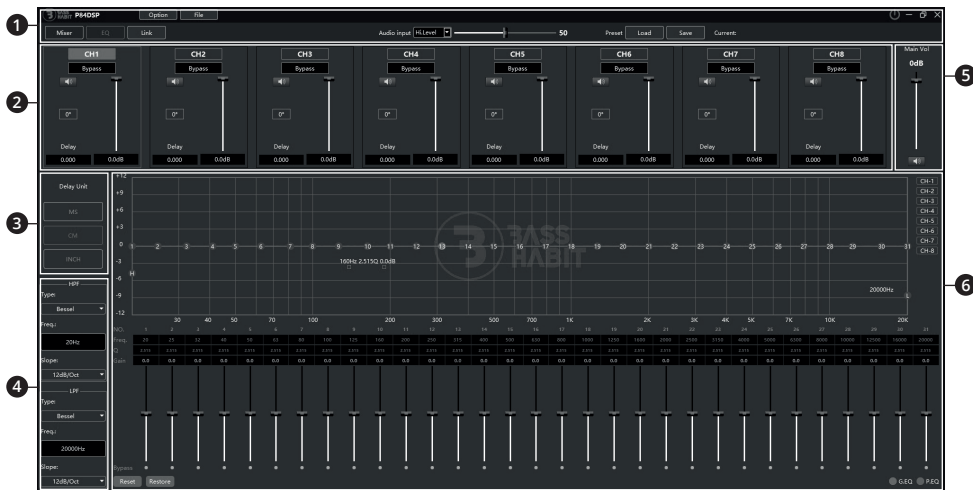
- 1 **Power LED** - Indicates operational status
- 2 **Input Connector** - Power and high-level speaker inputs
- 3 **Optical Input**
- 4 **PC Control Port**
- 5 **USB Audio**
- 6 **Ground Lift** - Separates signal ground from power ground to reduce noise
- 7 **RCA Input**
- 8 **Remote** - For external remote controller
- 9 **RCA Outputs** - Channels 1-8

AUDIO PROCESSING

PC SOFTWARE CONTROL

To control the unit from your computer and access all DSP functions, download and install the Bass Habit P84DSP PC Software from: www.basshabit.com

Connect the unit to your PC using the supplied USB cable. Once the software is launched, the main interface will appear, giving you access to all available features such as EQ, crossover settings, time alignment, input/output routing, presets and more.



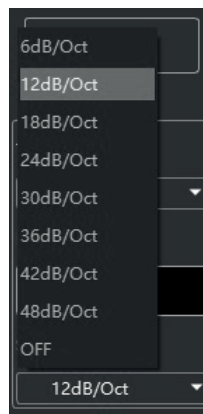
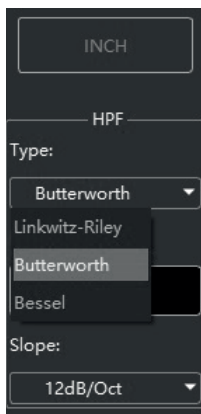
SOFTWARE FEATURES

- 1) Intuitive single-window layout
- 2) Channel configuration & speaker assignment
- 3) Select delay units (ms / cm / in)
- 4) X-over control (HPF/LPF/BPF)
- 5) Main volume control
- 6) 31-band PEQ/GEQ

X-OVER MANAGEMENT

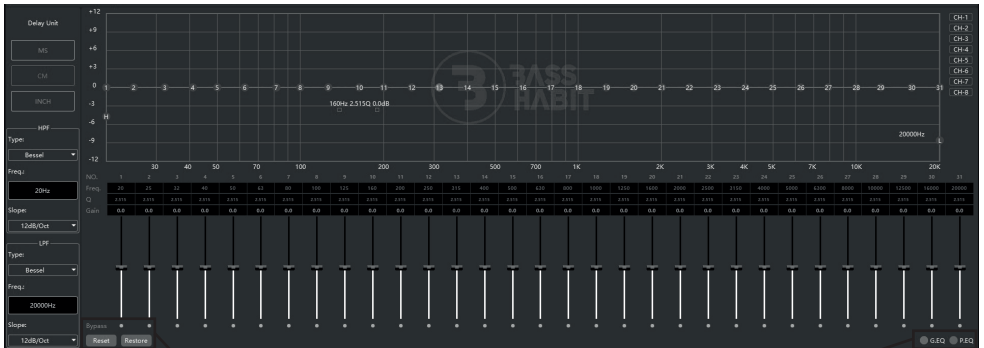
Provides independent high pass (HPF), low pass (LPF) and band pass (BPF) filter setup per channel for achieving seamless integration and accurate phase response in multi-way audio systems.

Filter types: Bessel, Butterworth, Linkwitz-Riley
Slopes: 6 dB/oct to 48 dB/oct



31-BAND EQUALIZER

The EQ section offers full spectrum tuning with both PEQ and GEQ modes.



RESET EQ

Restores all EQ bands to Bypass (0 dB).

RESTORE EQ

Toggles between the active EQ curve and Bypass for quick A/B comparison.



GEQ MODE

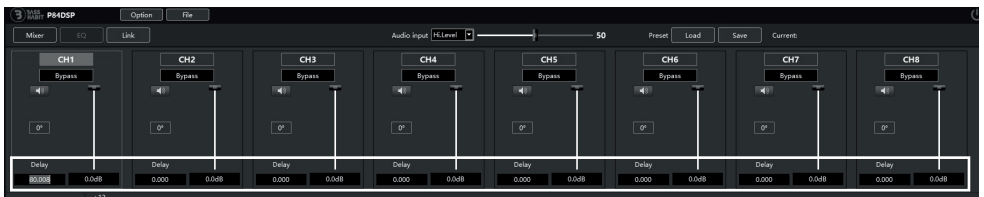
Adjust gain only — frequencies and Q are fixed.

PEQ MODE

Adjust frequency, Q, and gain per band.

TIME ALIGNMENT

Time alignment ensures that sound from all speakers reaches the listening position simultaneously, improving imaging and coherence.



- 1) Measure distance from listening position to each speaker.
- 2) Set the farthest speaker to 0 ms or 0 cm or 0 inches.
- 3) Calculate distance differences
Example: If the farthest speaker is 150 cm away and others are at 70/80/90/100/120 cm:
 - $150 - 70 = 80$ cm
 - $150 - 80 = 70$ cm
 - $150 - 90 = 60$ cm
 - $150 - 100 = 50$ cm
 - $150 - 120 = 30$ cm

TIME ALIGNMENT

4) Convert to delay (34 cm/ms)

Sound travels $_ 34$ cm/ms ($_ 343$ m/s at ~ 20 °C). Delay (ms) = Offset (cm) \div 34:

- $80 \div 34 = 2.35$ ms
- $70 \div 34 = 2.06$ ms
- $60 \div 34 = 1.76$ ms
- $50 \div 34 = 1.47$ ms
- $30 \div 34 = 0.88$ ms

5) Enter delay values into the DSP

Fine-tune by ear after applying calculated settings.

SPEAKER ASSIGNMENT & CHANNEL CONFIGURATION

Assign output channels to your vehicle's speaker positions for correct routing and optimal acoustic performance.



1) Speaker type & position 2) Output level 3) Mute 4) Polarity (0° / 180°) 5) Time delay (ms/cm/in)

These adjustments optimize imaging, staging, and balance in the sound system.

APP CONTROL

To control the unit and adjust all DSP functions from your mobile device, download and install the “**Bass Habit P84DSP**” App on your Android or iOS device.

The app allows you to access settings such as EQ, crossover settings, time alignment, input/output routing, presets, and more — all directly from your smartphone or tablet. You can find the app in:

- Google Play Store (Android)
- Apple App Store (iOS)

Make sure your device has Bluetooth function enabled before launching the app.

ADDITIONAL FEATURES

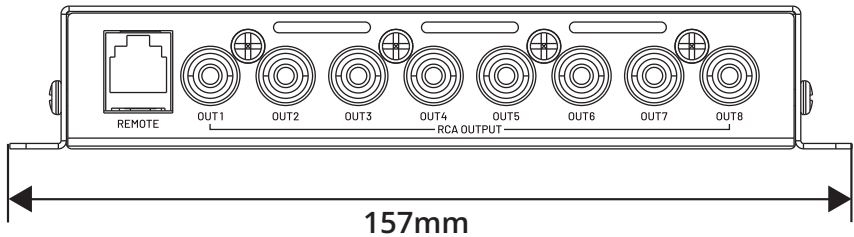
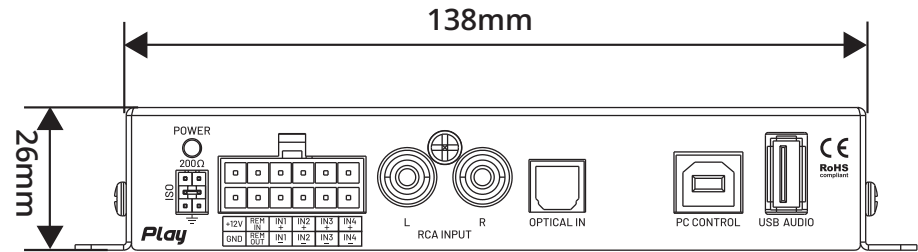
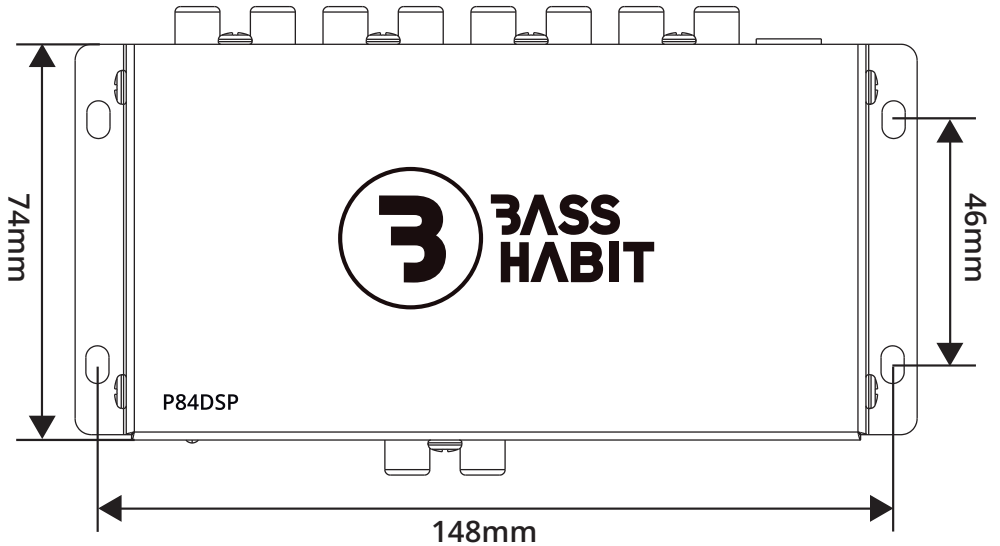
From the main menu:

- Input/Output Mixer
- Input source selection
- Language selection
- Preset save & load
- Firmware update
- Factory reset
- Input Sensitivity Adjustment

SPECIFICATIONS

Voltage Range:	9V-16V
Input Channel:	4-Channels High Level 2-Channel Low Level (RCA) Optical input Bluetooth 5.4 USB Audio
Output Channel:	8-Channel Low Level Output (RCA)
Low Level Output Voltage:	≥ 2.5V
High Level Input Impedance:	≤ 33 Ohm
RCA Input Impedance:	≥ 20K Ohm
RCA Input S/N:	≥ 100dBA
High Level Input S/N:	≥ 98dBA
T.H.D	<0.01%
RCA Input Sensitivity:	1.4V-2.5V
Speaker Input Sensitivity:	6V-10V
Preset mode:	6
Bluetooth:	BT 5.4
Sampling Frequency:	48KHz
DSP Resolution:	32Bit
Crossover:	Butterworth 6/12/18/24/36/48 dB / Oct Linkwitz-Riley 12/24/36/48 dB/ Oct Bessel 6/12/18/24/36/48 dB / Oct
Graphic / Parametric EQ:	8x31 Band Gain ±12dB, Q Factor 0.4 to 28.8
Time Delay:	0 to 7.3ms (254cm) - Step 0.021ms (1cm)
Phase Inversion:	0 or 180°
Frequency Response:	10Hz-23KHz
Tuning Software:	Windows PC
App Control:	Android / iOS
Turn-ON:	REM IN / DC IN
LED Indication:	Power Supply (Green)
Product Size:	157(W) x 92(L) x 27(H) mm
Weight:	0.4kg

DIMENSIONS



TROUBLESHOOTING

Symptom	Check / Control
No sound / No active unit	<ul style="list-style-type: none">• Measure +12V and REM IN voltage (10–16V DC).• Check ground connection.• Check external fuse.• Verify input signal and cables.• Check if channel is muted (red indicator).• Check gain settings in the software.
Noise or Distorted sound / Low output	<ul style="list-style-type: none">• Check if the input indicator is RED. (Lower the input signal).• Check crossover and gain settings.• Check amplifier gain structure.• Verify grounding of all audio components.



The crossed-out wheeled bin symbol means that the product, literature and packaging included must be taken to a separate collection at the end of their working life. Do not dispose of these products as unsorted municipal waste: dispose of them at a recycling point. For info on your nearest recycling point, check with your local waste authority.

Products marked with the RoHS symbol complies with the relevant provisions of the RoHS Directive for the European Union. In common with all Electrical and Electronic Equipment (EEE) the product should not be disposed of as household waste. Alternative arrangements may apply in other jurisdictions.

The product with the CE mark indicates that it has passed the corresponding conformity assessment procedure and the manufacturer's declaration of conformity, and it complies with the relevant EU directives, and is used as a pass for the product to be allowed to enter the European Community market. Relevant directives require industrial products to be affixed with the CE mark. Those that do not have the CE mark shall not be marketed.

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