



BRP9004

Owner's Manual

Bass Restoration Processor

This Owner's Manual gives you the basics to start using your BRP9004. Please visit www.dualav.com/support/manuals.php to download a complete owner's manual or call customer service at 1-866-382-5476 (Monday-Friday, 9AM-5PM EST).



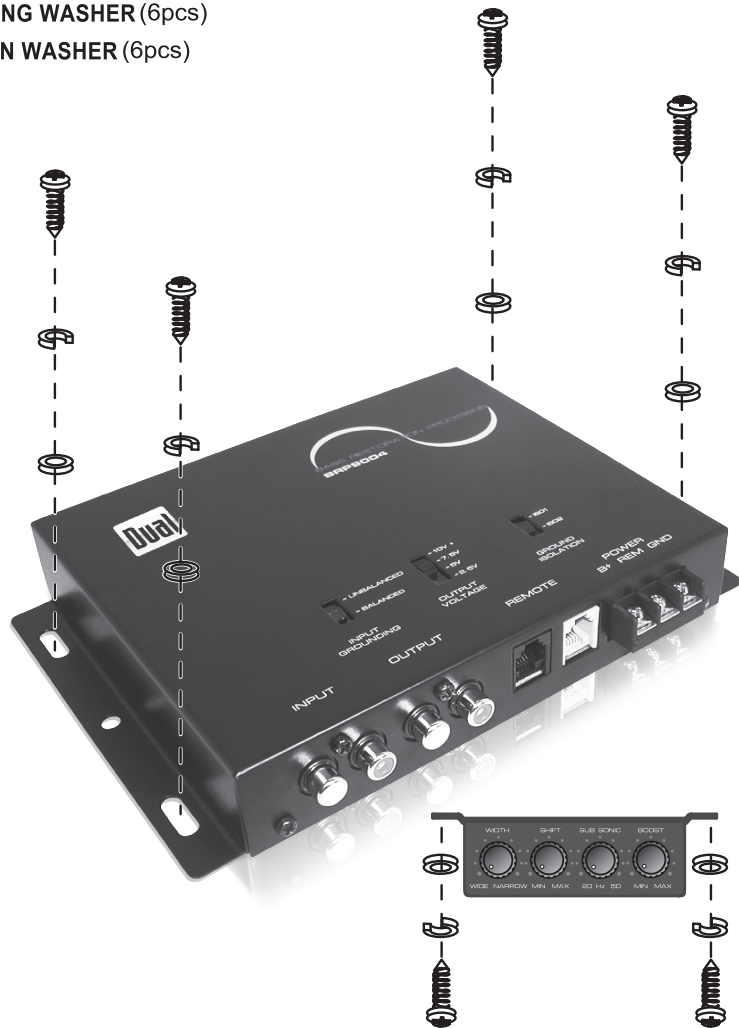
Customer Service Toll Free: 1-866-382-5476

Installation

TAPPING SCREW (6pcs)

SPRING WASHER (6pcs)

PLAIN WASHER (6pcs)



Features

Bass Driver

Bass Driver circuit accurately recreates low frequencies to give you more bass impact and higher SPL for your system.

Dash Mount Remote Control

Dash Mount Control gives you total control for tuning your bass system at your fingertips, also power indicating illuminated control knobs.

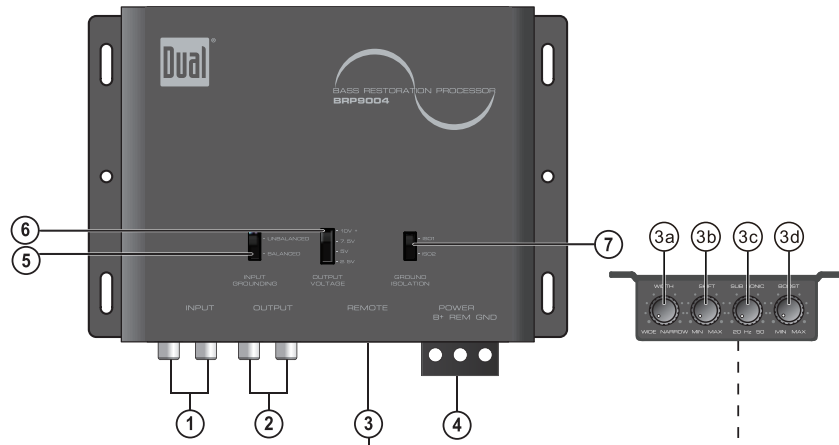
Subsonic Filter Control

This feature will let you fine tune and remove unwanted subsonic frequencies and help clean up your bass without stressing or overloading your speakers.

Bass Output Control

This unit will produce deep rich bass by adding a 45Hz Boost and Phase Shift to maximize your speaker output so that your system reaches it's peak performance.

THE OUTSIDE



① Inputs

The inputs of BRP9004 use a balanced input circuit to help minimize induced noise. The are also designed to handle very high signal voltages up to 15 volts.

② Outputs

RCA connectors should be connected to a crossover, EQ, or amplifier.

③ Dash Remote Control

3a. The WIDTH knob adjusts how wide of a frequency range the BRP9004 will effect. The Dash Remote gives you control of Bass Boost, Subsonic Filter, and Phase Shift. Shift will control the bass wave to give you better control of when the bass reaches the listener and Width will let you widen or narrow the wave depending on the type of system, vehicle, position, ect...

3b. The SHIFT knob allows you to pick the center frequency that you want the BRP9004 bass restoration circuit to maximize.

3c. The PFM Subsonic Filter Control This Subsonic Filter Control set with frequencies selections from 20Hz~50Hz. On most systems, setting at 33Hz is fine. If you want to protect your speaker system even more, you should try a higher frequency. Often a higher frequency actually sounds louder and cleaner.

3d. Bass Level Control

④ Power Connector

⑤ Input Grounding

For most systems you can leave this switch set in the BALANCED position. In some systems, the source unit may look for a ground through the RCA connectors. In this event, you should go ahead and change the switch to the UNBALANCED position.

⑥ Bass Output Control Switch

Not all systems are designed the same, some systems are designed strictly for SPL (sound pressure level) while others are a little more tame. The Bass Maximizer circuit can either increase or decrease the signal voltage of the Bass Restoration Circuit. Depending upon your system, you may opt to change these switch to a higher or lower setting to maximize your bass output and protect your speakers. In most systems the factory setting will suit you fine. We recommend you try the factory setting first.

⑦ Ground Isolation Switch

Occasionally alternator whine may appear in a system because the source unit and amplifier may use different grounding. To help in this situation, we have provided alternative grounding connections. Made sure your system is turned OFF before you move these switch.

WARNING: Selecting over 5v may damage some amplifiers, please refer to your amplifier specs for maximum input voltage, in some cases when using multiple amplifiers proper tuning is needed for the 10v setting.

Phase Shift

The bass response in a system is affected by four factors:

- (1) The acoustics of the vehicle
- (2) The locations of the speakers
- (3) The music on the tape
- (4) Speakers and speaker enclosures

Because of the variations in the recording process, we developed BRP9004 to help restore any low frequencies lost during the recording process, however, the acoustics of various environments are different.

The Sweep control allows you to select a center frequency (the frequency most affected) between 27 and 63Hz. The Width control then allows you to control the shape of the filter centered around the Sweep frequency.

Setting the bass output control

BRP9004 is the most powerful bass component. This device equipped with several different Bass Output selections. If you should need to change the settings, please use the chart below for guidance. It is recommended : listen to the factory setting before changing your Bass Output settings.

Recommended Settings

Setting	Amplifier Input Voltage	Minimum Speaker Size
2.5Volt	3Volt or less	8"
5Volt	5Volt or less	10"
7.5Volt	7.5Volt or less	12"
10Volt	10 Volt or less	Multiple 12" and up

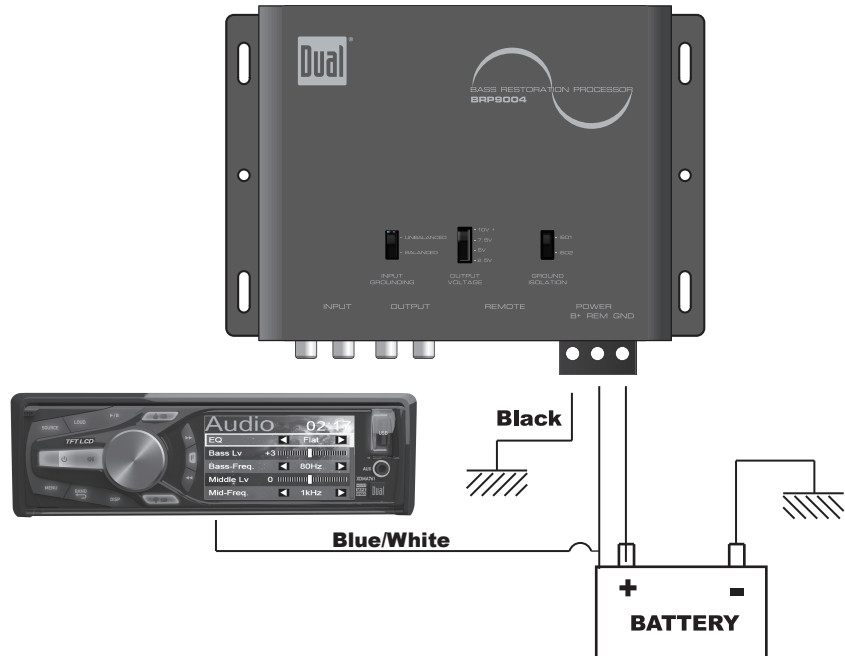
Electronic connections & wiring

Power connection

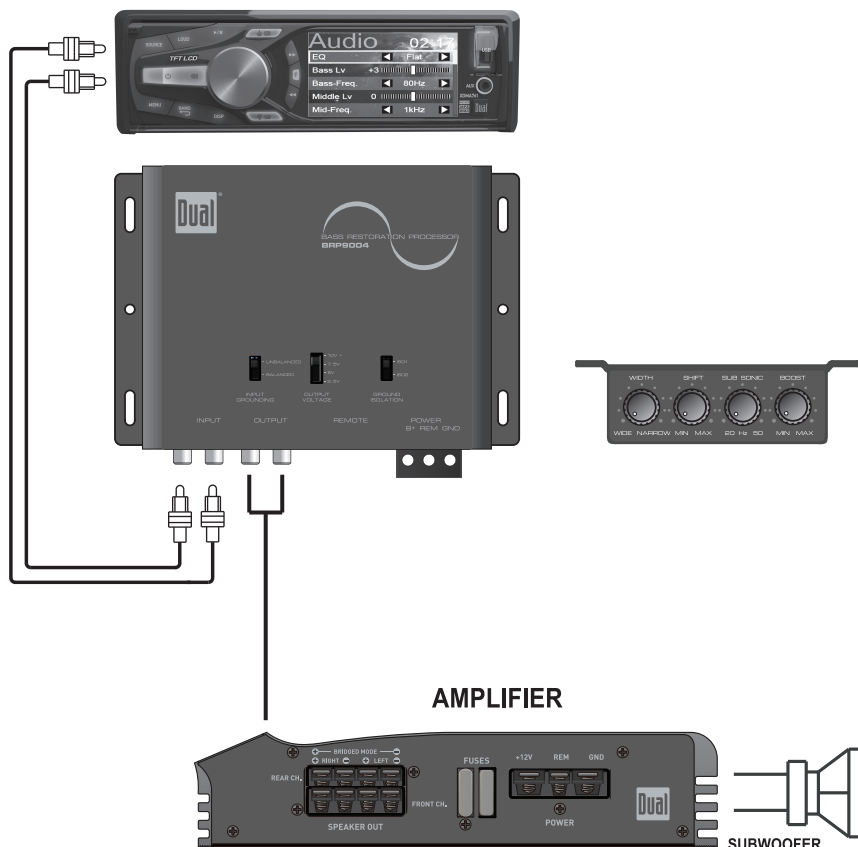
- B+(12V)
Connect a red wire to the car battery or other power source.

- REM
Connect an blue/white wire to the remote turn-on wire of the car receiver.

- GND
Connect a black wire to the car chassis for ground connection.



Signal connections



Specifications

Maximum Input Level	-----	15V RMS
Maximum Output Level	-----	13.5V peak
Frequency Response	-----	10Hz - 100KHz ; +/-1dB
Total Harmonic Distortion	-----	0.003%
Signal to Noise Ratio	-----	-130dB
Balanced Input Noise Rejection	-----	>60dB
Input Impedance	-----	10k Ohm
Output Impedance	-----	150 Ohms
Power Supply	-----	High headroom PWM
Power Draw	-----	150mA
Recommend Fuse Rating	-----	1 Amp

Trouble shooting guide

If the Unit does not turn-on, and / or the power indicator LED is NOT illuminated, do this :

- (1) Check and make sure that B+ and GND are not reversed
- (2) Check that all power wires are properly connected and has the appropriate potential (11-16 volts)
- (3) Check that the fuse is intact.

If you experience high audible distortion or low output volume :

- (4) Check that the input and output levels are set correctly. Input should match the source and output should match the sensitivity of the host.
- (5) Check the crossover settings; make sure they are correct; for high "Q" systems, set the crossover half an octave above the desired point and for low "Q" systems, set it 1 octave or more above.

If you experience whining or engine noises :

- (6) Verify that the GND connection is secure, the conductor (wire) is not too thin and unnecessarily long.
- (7) Check that the B+ wire is not too thin and unnecessarily long.
- (8) Change the power source; try taking power from a different point.

One-Year Limited Warranty

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

Dual Electronics Corp. warrants this product to the original purchaser to be free from defects in material and workmanship for a period of one year from the date of the original purchase.

Dual Electronics Corp. agrees, at our option, during the warranty period, to repair any defect in material or workmanship or to furnish an equal new, renewed or comparable product (whichever is deemed necessary) in exchange without charges, subject to verification of the defect or malfunction and proof of the date of purchase. Subsequent replacement products are warranted for the balance of the original warranty period.

Who is covered? This warranty is extended to the original retail purchaser for products purchased from an authorized Dual dealer and used in the U.S.A.

What is covered? This warranty covers all defects in material and workmanship in this product. The following are not covered: software, installation/removal costs, damage resulting from accident, misuse, abuse, neglect, product modification, improper installation, incorrect line voltage, unauthorized repair or failure to follow instructions supplied with the product, or damage occurring during return shipment of the product. Specific license conditions and copyright notices for the software can be found via www.dualav.com.

What to do?

1. Before you call for service, check the troubleshooting guide in your owner's manual. A slight adjustment of any custom controls may save you a service call.
2. If you require service during the warranty period, you must carefully pack the product (preferably in the original package) and ship it by prepaid transportation with a copy of the original receipt from the retailer to an authorized service center.
3. Please describe your problem in writing and include your name, a return UPS shipping address (P.O. Box not acceptable), and a daytime phone number with your shipment.
4. For more information and for the location of the nearest authorized service center please contact us by one of the following methods:
 - Call us toll-free at 1-866-382-5476
 - (Monday-Friday, 9:00 a.m. to 5:00 p.m. EST)
 - E-mail us at cs@dualav.com

Exclusion of Certain Damages: This warranty is exclusive and in lieu of any and all other warranties, expressed or implied, including without limitation the implied warranties of merchantability and fitness for a particular purpose and any obligation, liability, right, claim or remedy in contract or tort, whether or not arising from the company's negligence, actual or imputed. No person or representative is authorized to assume for the company any other liability in connection with the sale of this product. In no event shall the company be liable for indirect, incidental or consequential damages.