

BBE[®] 3012
SONIC MAXIMIZER

*Brings out all the brilliance, clarity,
texture and detail in your music.*

FEATURES OF THE BBE 3012

Your BBE 3012 contains the BBE System, a major technological breakthrough which a well-known magazine recently called "the most hearable advance in audio technology since high-fidelity itself". BBE Systems are used by broadcasting companies, recording studios, in live concerts and anywhere that top quality sound is important.

The patented BBE System compensates for phase (time) characteristics and amplitude problems inherent in the physical characteristics of loudspeakers. The result is a sparkling, richly detailed and faithful reproduction of the original performance revealing the subtle nuances which make each performance unique.

- **BBE FUNCTION ON/OFF SWITCH.**
- **POWER LED TO INDICATE A PROPER POWER CONNECTION.**
- **FADER TO CONTROL THE SOUND LEVEL IN FRONT AND REAR SPEAKERS.**
- **4 FEMALE RCA OUTPUT JACKS FOR FRONT AND REAR SPEAKERS.**
- **PROCESS TO COMPENSATE FOR DIFFERENT LISTENING ENVIRONMENTS.**
- **LO FREQ TO CONTROL THE AMOUNT OF TIME ALIGNED BASS RESPONSE.**
- **MOUNTING BRACKETS ARE PROVIDED FOR EASY INSTALLATION.**

INSTALLATION OF THE BBE 3012

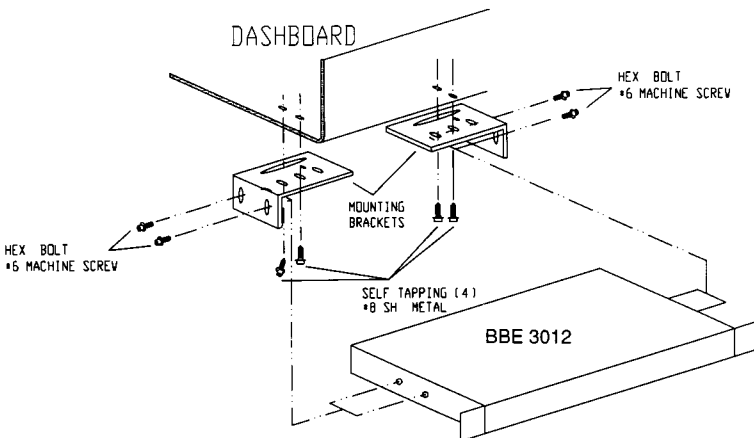
Your new BBE 3012 comes with a complete installation kit. Check all the necessary parts and tools, then begin installation according to the following procedures:

Kit consists of the following:

- 1) 4 Hexagon slotted screws (#6, machine type A, 3/8" length)
- 2) 4 Hexagon slotted screws (#8, sheet metal, 1/4" length)
- 3) 2 mounting brackets

Under - Dash Installation (Fig. 1)

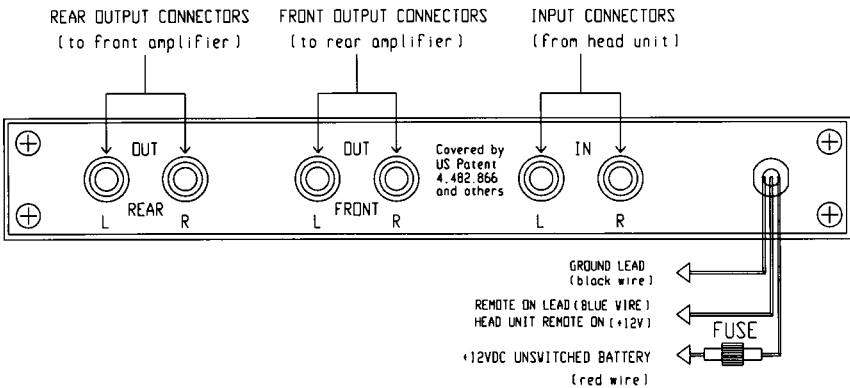
- 1) Hold the brackets under the dashboard at the proper distance (refer to specifications). Mark the holes with a pencil. Insure no obstructions are behind the marked holes to be drilled.
- 2) Drill the holes for #8 sheet metal screws and secure brackets to dashboard.
- 3) Insert the BBE 3012 into the brackets and secure the brackets to the sides of the BBE 3012 with the #6 hex screws.



In-Dash or In-Console Installation

- 1) Cut an opening, referring to the **CHASSIS dimensions not the front panel dimensions** (see SPECIFICATIONS section for proper dimensions. **DO NOT** cut the opening too large!).
- 2) Mount the brackets in the dash and insert the BBE 3012 into the cut slot. Secure the brackets as described in the section above.
- 3) When installed the front panel of the BBE 3012 which protrudes from the chassis should be flush with the console or dash.

CONNECTIONS OF THE BBE 3012



- 1) Connect the rear output RCA jacks of the BBE 3012 to the rear speakers power amplifier inputs.
- 2) Connect the front output RCA jacks of the BBE 3012 to the front speakers power amplifier inputs.
- 3) Connect the input RCA jacks of the BBE 3012 to the output connectors of the head unit. (i.e. tuner, tape, cd, etc.)

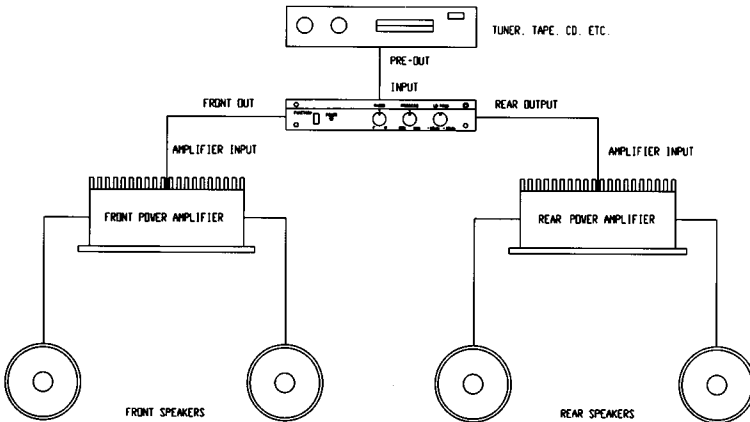
4) Connect the ground lead (black wire) of the BBE 3012 to the car chassis ground. BBESI recommends using the same ground point as the head unit. If you experience ground loop problems or engine noise, simply disconnect the black wire.

5) Connect the red fused lead of the BBE 3012 to an unswitched +12Vdc source such as the power amplifier's direct battery connection.

6) Connect the blue remote on lead of the BBE 3012 to the remote on lead of the head unit or to the ignition switch of the car. This allows the user to turn on and off the BBE 3012 using the head unit or the ignition switch in the same manner as the power amplifier.

Note: the BBE 3012 will not turn on unless both the red and blue leads are connected to a +12Vdc power source.

SYSTEM CHART



Notes on connecting with equalizers or other processors:

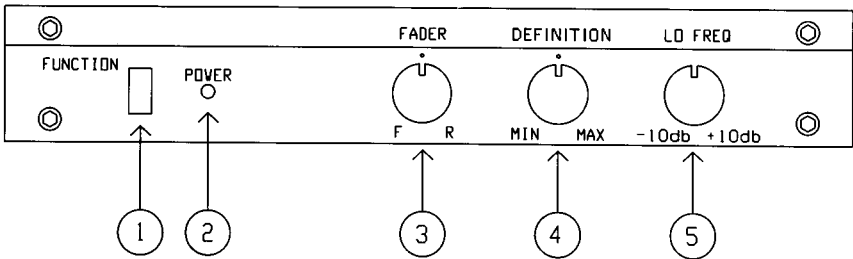
Most people find that after installing the BBE 3012, equalization is no longer needed.

As the BBE 3012 expects to see a flat frequency

response from the head unit, set the tone controls on the head unit flat. BBE Sound Inc. recommends normally placing any equalizers or processors after the BBE 3012. Placing an equalizer before the BBE 3012 with a radically altered frequency response could possibly deceive the BBE 3012, impairing its ability to function properly. However, connecting an equalizer before the BBE 3012 can be done if the EQ settings are not too radical. The benefit of this arrangement is that the BBE 3012 is the last device before the power amplifier retaining proper phase shift into the amplifier.

Whether you place the equalizer or signal processor before or after will not harm the BBE 3012 and may take some experimentation to suit your listening needs.

CONTROLS OF THE BBE 3012



1) **FUNCTION:**

This push-button allows a comparison of the unprocessed sound to the BBE processed sound. Depressing the switch to the "IN" position engages the BBE circuitry while the "OUT" position bypasses the BBE process.

2) **POWER:**

This LED illuminates when power is being supplied to the BBE 3012. (See connections section.)

3) **FADER:**

This control regulates the ratio of front to rear volume levels. If more volume is desired in the front speakers, turn towards "FRONT". If more volume is desired in the rear speakers, turn towards "REAR". This setting can be adjusted to individual taste.

4) **PROCESS:**

This knob controls the amount of the BBE process introduced into the system. Turn clockwise from minimum towards maximum until the desired sound is achieved.

5) **LO-FREQ:**

This control adjusts the amount of boost or cut of the phase compensated low frequencies (20hz-150hz). Turning clockwise towards "+" boosts these frequencies while turning towards "-" cuts these frequencies. This setting can be adjusted to individual taste.

OPERATION OF BBE 3012

- 1) The BBE 3012 is turned on and off automatically when the remote-on lead of the head unit (tuner, tape, cd, etc.) is connected to the BBE 3012 remote on power lead. (See connections section for proper installation.)
- 2) Insure the POWER led is illuminated and unit is ready for use.
- 3) With the FUNCTION switch OUT (bypass mode) engage power on the head unit and while listening set the FADER control for the desired balance. For installation

with one set of speakers connect the BBE 3012 to amplifier with either the REAR OUT or FRONT OUT RCA jacks. Turn the FADER all the way towards REAR or FRONT depending on the system configuration.

- 4) Set all other tone and equalization controls flat.
- 5) With the PROCESS control set at minimum and the LO-EQ set at the middle position, depress the FUNCTION switch IN thus engaging the BBE 3012 circuitry.
- 6) Slowly turn up the PROCESS control until the desired amount of clarity and definition is achieved. The final setting of the PROCESS control is purely subjective and left to the listeners discretion.
- 7) The LO-FREQ control can be adjusted. If more bass response is desired, turn this control towards the "+" mark on the dial. If less bass response is desired, turn this control towards the "-" mark on the dial. When the LO-FREQ control is set at the middle position, the bass frequencies yield a flat response. The final setting of this control is determined by the listeners' taste.
- 8) While the BBE 3012 is operating, readjust the tone or equalization controls to the desired level.

BBE 3012 SPECIFICATIONS

ELECTRICAL CHARACTERISTICS:

FREQUENCY RESPONSE:

(FUNCTION OUT)20HZ - 20KHZ (+/- 0.5dBu)

FREQUENCY RESPONSE:

(FUNCTION IN)PROGRAM CONTROLLED

INPUT SENSITIVITY(-40dBu) 7.75mVrms

INPUT IMPEDANCE47K ohms

OUTPUT IMPEDANCE10K ohms

MAXIMUM INPUT/OUTPUT LEVEL4 Vrms

SIGNAL TO NOISE RATIO-83dBu (BELOW 0dBu)

TOTAL HARMONIC

DISTORTION< 0.2%(20HZ-20KHZ, @ 245mV)

LO FREQ CONTROL RANGE ...+/- 10dBu (20HZ - 150HZ)

POWER REQUIREMENTS12-15Vdc, @ 30mA

PHYSICAL CHARACTERISTICS:

CHASSIS SIZE7"(W) X 1.1"(H) X 5"(D)

178mm(W) X 28mm(H) X 127mm(D)

FRONT PANEL SIZE7.5"(W) X 1.2"(H) X 0.1"(D)

191mm(W) X 30mm(H) X 2.54mm(D)

WEIGHT(538gr.) 1 lb. 3 oz.

NOTE: DUE TO CONTINUING PRODUCT IMPROVEMENT, SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Limited Warranty

WARRANTY

For one year from the date of purchase (the "warranty period"), BBE Sound, Inc. warrants that all products sold by BBE Sound, Inc. will be repaired or replaced at BBE Sound, Inc.'s option, without charge to you for parts and labor if they fail to function under normal use due to a manufacturing defect and they were installed and operated according to the Owner's Manual.

LIMITS

In the event service is required, the product must be delivered, transportation prepaid, within the warranty period of BBE Sound, Inc. You will be responsible for removal and reinstallation of the product. BBE Sound, Inc. will pay the cost of returning the repaired or replacement product to you.

This warranty covers the product during the warranty period whether the product is in the possession of the original or any subsequent owner.

The warranty does not cover cosmetic or appearance items or damage to the product resulting from alterations, accidents, misuse, abuse or any other outside those specified in Owner's Manual.

ALL EXPRESS AND IMPLIED WARRANTIES FOR THIS PRODUCT INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO A PERIOD OF ONE YEAR FROM THE DATE OF PURCHASE, AND NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THIS PERIOD. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

IF THIS PRODUCT IS NOT IN GOOD WORKING ORDER AS WARRANTED ABOVE, YOUR SOLE REMEDY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED ABOVE IN NO EVENT WILL BBE SOUND, INC. BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF OR INABILITY TO USE SUCH PRODUCT, EVEN IF BBE SOUND, INC. OR AN AUTHORIZED COLLINS DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, OR FOR ANY CLAIM BY ANY OTHER PARTY.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE RIGHTS WHICH MAY VARY FROM STATE TO STATE.

TO OBTAIN SERVICE

Contact either in writing or by phone:

CUSTOMER SERVICE DEPARTMENT
BBE SOUND, INC.
5500 Bolsa Ave., Suite #245
Huntington Beach, CA 92649
(714) 897-6766

You will be directed by the Customer Representative as to specific instructions for packaging and returning the product. Please include a proof of date and place of purchase (sales receipt) along with your name, address, and phone number. All products must be returned freight prepaid. BBE Sound, Inc. will pay the freight to return your product to you upon completion of the repair.

DO NOT RETURN ANY PRODUCT TO THE ABOVE ADDRESS WITHOUT INSTRUCTIONS AND AUTHORIZATION ISSUED BY THE ABOVE LOCATION.

BBE Sound, Inc.

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Huntington Beach, CA 92649
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Covered by U.S. Patent 4,482,866 and other U.S. and Foreign patents pending.
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