



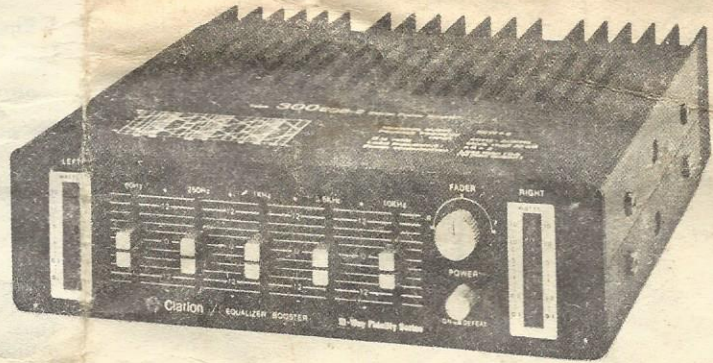
Clarion

Owner's guide

300 EQB-2  
GRAPHIC EQUALIZER/BOOSTER  
FOR CAR STEREO

CONGRATULATIONS!

You are now the owner of a unique accessory that will make a major advance in car Hi-Fi systems. Please read this Owner's Guide fully for proper installation and operation.



### SPECIFICATIONS

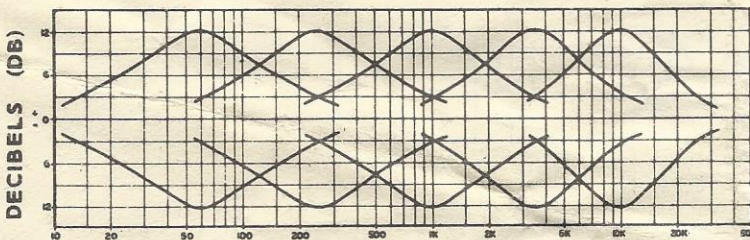
#### EQUALIZER SECTION:

Control Frequencies: 60 Hz, 250 Hz, 1KHz, 3.5KHz, 10KHz  
Control Range: 12 dB (min), boost or cut  
Control Type: Slide; center detent for 'flat' setting

#### BOOSTER AMPLIFIER SECTION (Equalizer set flat):

Power Output: 30 Watts RMS per channel; less than 1% THD  
35 Watts RMS per channel; peak power output  
4 ohm load, 13.8V DC  
Frequency Response: 40-30,000 Hz  
Amplifier: Transformer-coupled  
Voltage Gain: nominal + 12dB  
(2.5V RMS input for rated output)  
22 ohms (DC coupled)  
Input Impedance: Minimum load per channel, 4 ohms  
Load Impedance: (2-spkr system—min 4 ohms per output lead)  
(4-spkr system—min 8 ohms per output lead)  
Power Supply Voltage: DC 13.8V (10.8V-15.6V) negative (-) ground  
Power Consumption: Idle: less than 0.6A  
Max Output: less than 10A  
Semiconductors: 6 IC's; 16TR's; 13LED's; 2 DIODES  
Weight: 2.5Kg (5.5lbs)  
Dimensions: W: 180mm (7.1")  
H: 47 mm (1.85")  
D: 165 mm (6.5")

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



EQUALIZER RESPONSE — (HZ)

### FEATURES

#### \* 5-BAND GRAPHIC EQUALIZER

Equalizer permits limitless sound-shaping possibilities and visually displays frequency response curve.

#### \* POWERFUL 30 WRMS • 35 W PEAK/CHANNEL

Advanced-design amplifier provides a full 30 watts RMS per channel with very low distortion.

#### \* FRONT/REAR SPEAKER FADER

Built-in fader control for four-speaker installations balances sound between front speakers and rear speakers.

#### \* COMPACT SIZE

Requires minimum mounting space. Bracket allows under/over mounting.

#### \* BEFORE/AFTER COMPARISON

Power switch allows instantaneous comparisons of the system with and without the 300 EQB-2

#### \* SHORT CIRCUIT PROTECTION

This unit has built in self-protection for the output stages in cases of inadvertent shorting or grounding of the output leads. Should the output leads be shorted or grounded, the unit automatically shuts its output stages off and thus nothing is heard on the speakers. To reset the self-protection circuitry, the 300 EQB-2 must be turned off for a minimum of 5 seconds and then turned back on. If the short circuit has been corrected, the unit will then play normally.

#### \* LED POWER INDICATORS

Both channels are provided with six LED's that light up progressively as the output power is increased to 30 WRMS/channel. These lights will fluctuate on and off as the power level varies in direct relation to the music being played.

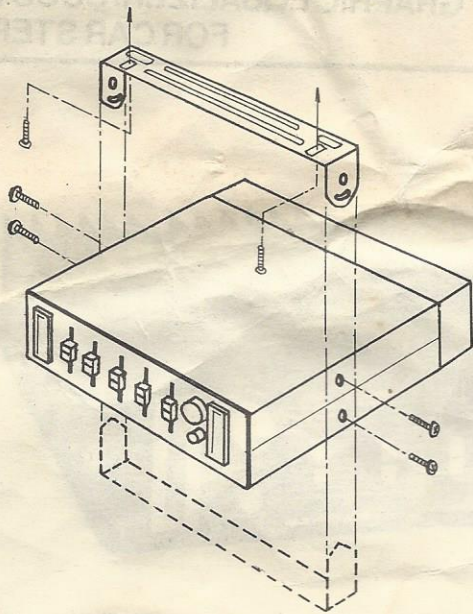
#### \* INPUT FLOATING FOR BTL OUTPUT SYSTEM

This unit has been specially designed, can be used for not only BTL output system but non-BTL car stereos.

#### \* LINE INPUT

The LINE INPUT JACKS can be for use only with radio/tape players that have line output connections.

## INSTALLATION



## CONNECTIONS

The 300EQB-2 is different from most car stereo equipment in that a peak current of up to 10 amps may be drawn from the car's electrical system. Because of this, all wiring for the power (BLUE) and ground (BLACK) leads should use at least #18 wire, and power should not be obtained through a standard alternator filter choke (such as the NS-1 or CH-1), nor through a fuse for some other accessory. Tap into the power lead as close to the fuse block as is practical.

### FOR 4-SPEAKER INSTALLATIONS:

The speaker load connected to each output cable of the 300EQB-2 must have an impedance of not less than **8 ohms**. Be certain that none of the speaker leads are connected to ground (chassis) to prevent damage. Use two-conductor wire from each speaker.

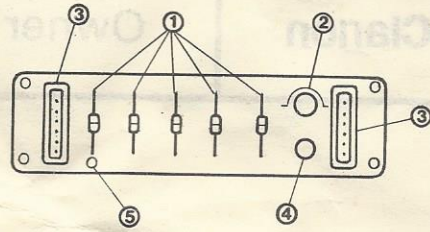
### FOR 2-SPEAKER INSTALLATIONS:

The speaker load connected to each output cable of the 300EQB-2 must have an impedance of not less than **4 ohms**. The front and rear output leads of each channel may be connected together (striped-to-striped; unstriped-to-unstriped) if it is desired to render the fader control inoperative. Otherwise, all unconnected output leads of the 300EQB-2 **MUST** be taped up or insulated by some other means. Be certain that none of the speaker leads are connected to ground (chassis) to prevent damage. Use two-conductor wire from each speaker.

### FOR BTL OUTPUT SYSTEM INSTALLATIONS:

- Do not connect the INPUT GROUND LEADS when BTL (BRIDGE) radio amplifier is used.
- Connect these wires only when using a radio/tape player that does not have a BTL (BRIDGE) amplifier, i.e., uses common ground connections for speaker hookup.

## OPERATION



### 1. Equalizer Controls

Each slide control affects a different frequency band. A detent in the center position of each control locks it to the "flat" setting. Sliding the control knob upwards boosts sounds in that frequency band; sliding it downwards cuts sounds in that band. Lines on the faceplate indicate the amount of boost or cut (in dB) at the center frequency. The position of the slide control knobs provides a visual representation of the frequency response.

### 2. Front/Rear Fader Control

Turning this knob counter-clockwise brings up the level of the front speakers and lowers the level of the rear speakers. Turning it clockwise has the opposite effect. At mid-position, both sets of speakers are at maximum level.

### 3. LED Output Power Indicators

These lights will fluctuate on and off as the power level varies in direct relation to the music being played.

### 4. Power Switch

Depressing this button turns the 300EQB-2 on and off. With the button in, the unit is on and all controls may be used. With the button out, the unit is off. In the off position, the speakers are re-connected to the car stereo unit, and the fader control is still functional. This feature allows a "before and after" comparison.

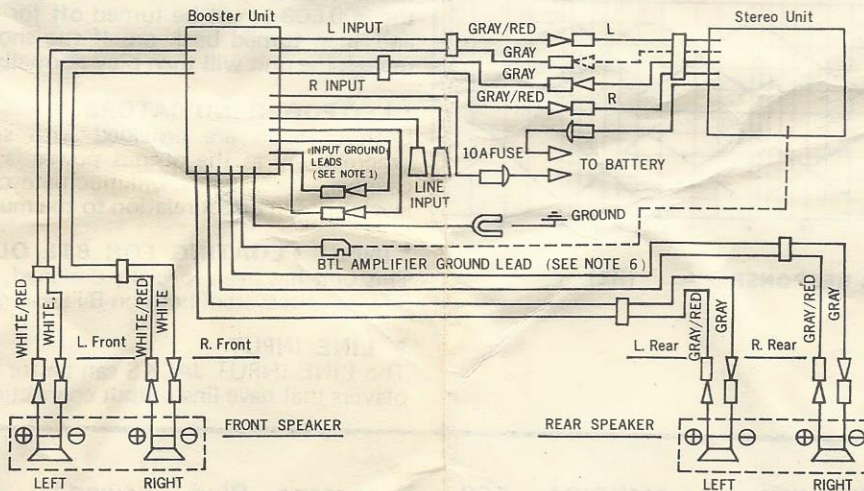
### 5. Power Indicator

Light-emitting diode with Clarion mark glows orange whenever the 300EQB-2 is turned on.

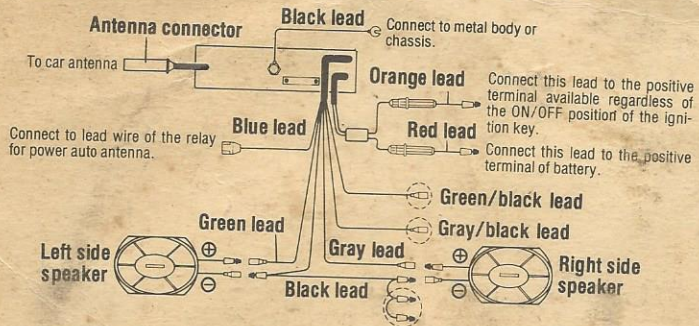
**NOTE:** In installations which use only one set of speakers, the fader control should be turned to the position which provides the loudest sound and left in that position.

## CAUTION — PLEASE NOTE

- Do not connect the INPUT GROUND LEADS when BTL (BRIDGE) radio amplifier is used.
- Do not connect the LINE INPUT JACKS to regular speaker output leads as doing so would result in a highly distorted sound level.
- For best results, speakers should be rated to safely handle the additional power output provided by the 300EQB-2. Speakers with a low power rating may be damaged.
- This equipment is intended for use in 12-volt DC negative ground electrical systems only. The use of voltage or polarity converters is discouraged. Heavy gauge wire should be used when connecting the power and ground leads.
- As much as possible, avoid mounting locations which would subject the unit to high temperature or expose the unit to water.
- Connect the BTL AMPLIFIER GROUND LEAD securely to the chassis of radio/tape player.
- The RCA socket leads of the 300EQB-2 must be away from all the transmission of the car.

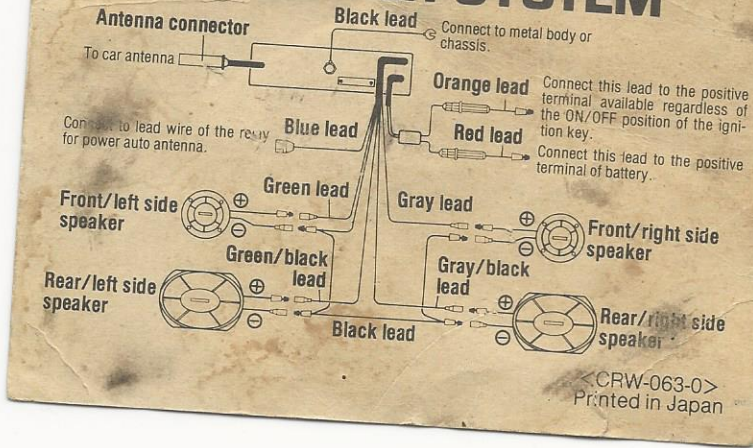


## 2 SPEAKER SYSTEM



**CAUTION:** Do not connect anything to the circled terminal. Cover the terminal with tape to prevent a short circuit.

# 4 SPEAKER SYSTEM



CRW-063-0  
Printed in Japan