



# clarion

Owner's manual

## *EQ5746*

7-BAND STEREO  
EQUALIZER/CROSSOVER



Thank you for purchasing this **Clarion** product.

- Please read this owner's manual in its entirety before operating this equipment.
- After reading this manual, keep it handy, such as in your glove compartment.
- Save your sales receipt. The warranty at the end of this manual and your sales receipt are essential for warranty service.

## FCC Approval

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to consult the dealer or an experienced radio/TV technician for help.



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## 1. FEATURES

The Clarion EQS746 is a 7-band stereo equalizer/crossover specifically created for the mobile environment. The EQS746 provides powerful features in a compact size:

- Seven equalization bands (50Hz, 125Hz, 315Hz, 2.2KHz, 6kHz, and 16 kHz), each frequency adjustable from -12 to +12dB (-15 to +15dB for subwoofer frequencies)
- Subwoofer output uses a built-in 18dB per octave electronic crossover fixed at 60Hz or 90Hz.
- Three stereo RCA outputs to drive front, rear, and subwoofer audio amplifiers
- An auxiliary stereo RCA input for use with portable devices, such as an MP3 player or DVD player
- Separate controls for master volume, subwoofer volume (sub level), front/rear fader, and selection of main or auxiliary inputs
- Extended frequency response from 20 Hz to 30 kHz with exceptional 100 dB signal-to-noise performance
- Gold-plated RCA connectors to ensure the best audio signal output
- ISO mounting holes and removable trim ring for custom installation



## 2. PRECAUTIONS

- Do not operate this product in ways other than those described in this manual.
- Do not disassemble or modify this unit.
- Do not pour liquid or poke foreign objects into the unit. Water and humidity may damage internal circuitry.
- If the unit becomes wet, turn off all power and ask your authorized Clarion dealer to clean or service the unit.

Failure to observe these precautions may damage your car, the monitor, or the video source, and may void the warranty.

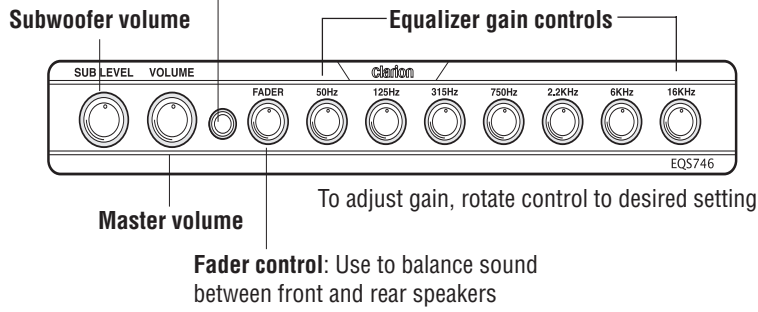
### Installation

Installation of mobile audio and video components requires experience with a variety of mechanical and electrical procedures. Although this manual provides general installation and operation instructions, it does not show the exact installation methods for your particular vehicle.

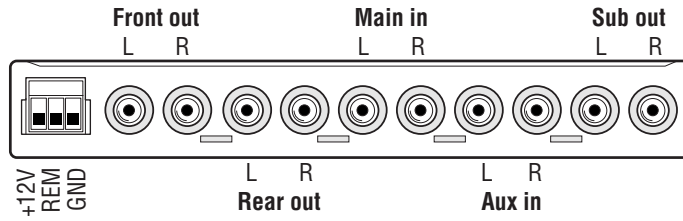
If you do not have the required knowledge and experience to successfully complete the installation, consult an authorized Clarion dealer about professional installation options.

### 3. CONTROLS

**AUX (auxiliary) switch:** Press to select auxiliary or main inputs

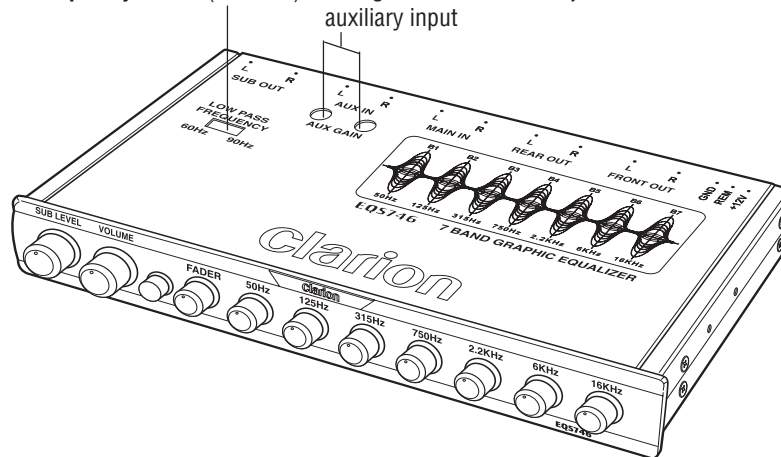


Front panel controls



Rear panel connections

**Low-pass frequency switch (60/90Hz)** **AUX gain control:** Gain adjustment for left and right auxiliary input



Top panel



## 4. OPERATIONS

### Setting system volume

1. Turn the master volume and subwoofer level controls to their minimum settings.
2. Turn the source unit on and increase the volume until you hear distortion.
3. Reduce the volume to just below the distortion point (approximately 80% of full volume).

This is the maximum usable musical signal for the source unit. Turning the volume beyond this point increases noise and distortion without increasing the musical signal.

#### Note

*Once you set the source unit volume, do not change it. Always use the volume control on the EQS746 as the master (main) volume control. The EQS746 has better electronics, a higher sound to noise ratio, and is more linear than the volume settings on any source unit available.*

### Adjusting the controls

The EQS746 provides a graphic adjustment band for each of seven frequency ranges: sub, low, mid, mid-high and high frequency. You can adjust the center of each frequency band to fine tune the acoustical response to your vehicle's interior.

1. Set all frequencies to the center position. The small dot on the control knob should be set at 12 o'clock.
2. Play your favorite music track and adjust the individual controls to suit your taste. Avoid extreme settings, which can distort musical peaks.
3. Increase or decrease the equalizer gain controls to suit your taste.
4. If your system includes a subwoofer, slowly increase the subwoofer level until you hear a solid bass.
5. If your system includes rear speakers, adjust the fader control to add rear sound. Set it so most of the music comes from the front and only fills the rear.

## Setting the low-pass frequency

Set the low pass frequency switch on the top of the EQS746 to either 60Hz or 90Hz depending on the subwoofer and subwoofer amplifier requirements.

## Connecting an MP3 player or video unit

1. Plug the MP3 player or video unit into the auxiliary RCA input on the back of the EQS764 unit.
2. Make sure the auxiliary button on the front of the unit is out, ready to receive input from the main RCA input (not the auxiliary RCA input).
3. Turn the EQS764 master volume to a normal listening level.
4. Press the play button on the auxiliary source.
5. Push in the AUX button to change to the auxiliary source.
6. Using a small flathead screwdriver, adjust the AUX gain controls located on the top of the unit so that the volume of the auxiliary source matches the volume of the main source.

## Care and maintenance

### *Cleaning the cabinet*

Use a soft, dry cloth to gently wipe dust and dirt from the unit.

Do not use benzene, thinner, car cleaner, or other cleaners. These substances may damage the unit or cause the paint to peel.

### *Servicing the equalizer/crossover unit*

In the event that trouble arises, never open the case or disassemble the unit. The internal parts are not serviceable by the user. Opening any components will void the warranty.

### CAUTION!

***Changes or modifications to this product that are not approved by the manufacturer will void the warranty and will violate FCC approval.***





## 5. INSTALLATION AND WIRING

Read these instructions and the following precautions carefully.

### What is included in the box

In addition to this manual, the box contains:

- EQS746 7-band graphic equalizer
- 2 mounting brackets
- 8 Phillips-head screws

### Before starting

#### Mounting precautions

The EQS746 can be mounted next to the source unit or under the dash using the mounting brackets. The front panel controls should be easily accessible from the driver's seat. In addition:

- This unit requires additional mobile audio components for proper operation.
- Always use great care when attaching anything to a vehicle! Check clearances in front of, behind, and on both sides of the planned installation before drilling any holes or installing any screws.

#### Wiring precautions

Disconnect the ground (-) terminal on the vehicle's battery.

#### WARNING!

***To prevent short circuits during installation, always disconnect the vehicle's negative (-) battery lead before making any connections.***

- This unit is exclusively for vehicles with a negative ground, 12V battery system.
- A good chassis ground connection is critical to minimize resistance and avoid noise problems. Use the shortest wire possible and securely connect it to the car chassis and the source unit ground.
- When routing RCA cables, keep the cables away from the power cables and output speaker wires.
- If you are using a source unit without a remote turn-on lead, the EQS746 can be turned on with a switched accessory lead. This accessory power source is located in the factory harness at the back of the radio. This lead turns on and off with the ignition key.
- Do not open the case. There are no user-serviceable parts inside. If you require assistance, consult your Clarion dealer or an authorized Clarion service center.

EQS746

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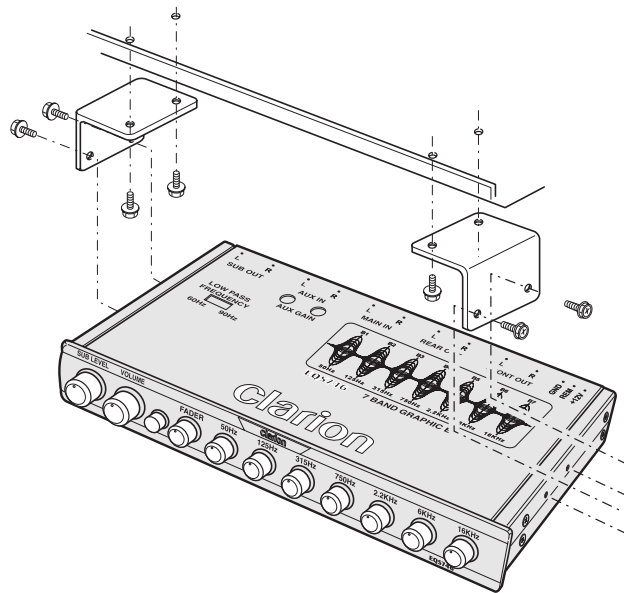
## Tools and additional components

You will need:

- A Phillips-head screwdriver when mounting the unit in the vehicle
- A small flat-head screwdriver to adjust the AUX gain controls if you connect an MP3 player or video source
- High-quality RCA input and output cables

Extra cable can cause signal loss and act as an antenna for noise. Use only high-quality RCA cables that are no longer than necessary to make a direct connection with the source unit and amplifiers.

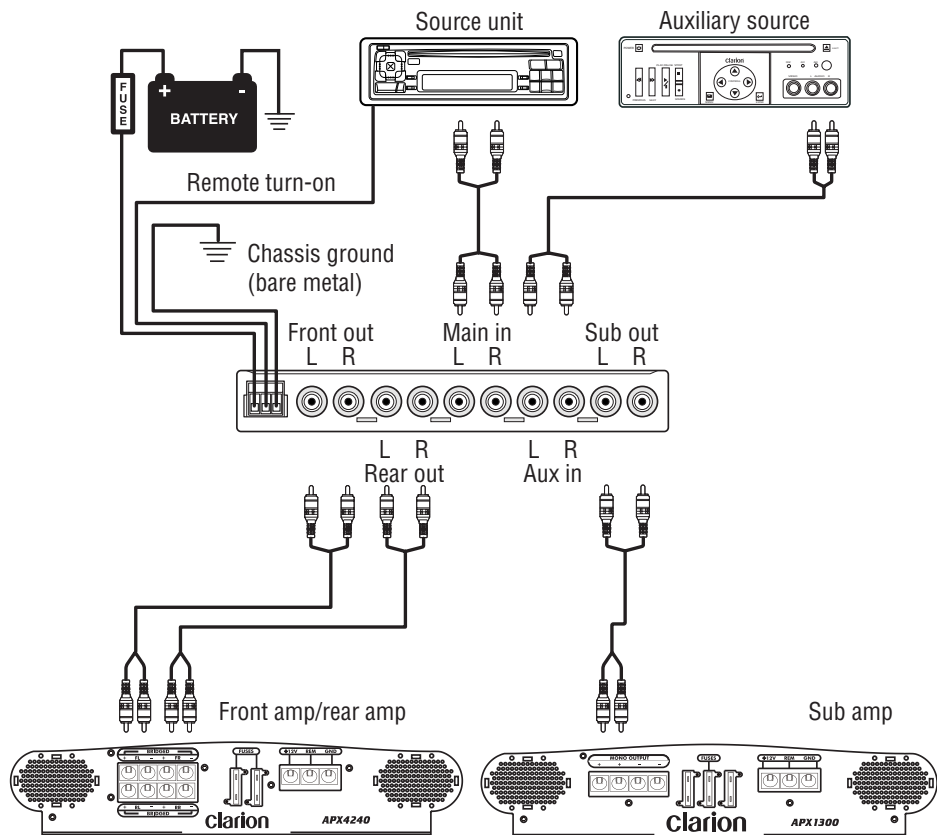
## Mounting diagram





# Wiring diagram

English



## 6. Troubleshooting

### The unit does not work; no lights

The power wires may not be connected. Check the power and ground wiring, then retest.

### Sound is distorted

- The source unit volume may be set too high. Reduce the source unit volume.
- Equalizer gain controls are set too high. Turn the equalizer controls to the center position and listen for distortion again. If the problem still occurs, see your authorized Clarion dealer.
- Speakers may be damaged. Consult your authorized Clarion dealer.

### No sound coming from the unit

- The wrong input is selected. Press the AUX switch to turn the main inputs on.
- No remote-on. Using a voltmeter, check for +12V from the remote-on source.



## 7. Glossary

*Crossover:* A device that limits the range of frequencies sent to a speaker or amplifier.

*Equalization:* the process of boosting or cutting sound signal frequencies to improve the quality of the sound. The term comes from the filters used to add back high frequencies at the receiving end of analog transmissions over wires.

*Equalization band:* the frequency range impacted by a specific filter.

*dB:* decibel, a measurement of the relative difference in power or intensity between two acoustic signals

*Gain control:* gain is the amount of amplification (voltage, current or power) of an audio signal expressed in dB

*Graphic equalizer:* a multi-band variable equalizer that uses mechanical controls to adjust amplitude.

*Hz:* Abbreviation for Hertz, a unit of frequency equal to one cycle per second.

*Octave:* the musical principle of dividing sound frequencies into the eight notes of the musical scale.

*OEM:* Original Equipment Manufacturer

*RCA input/output:* port through which sound travels in and out of the system; "RCA" refers to the type of connector, which was originally manufactured by Radio Corporation of America.

*Slope:* how fast the sound changes rated in dBs. The higher the dB number, the faster the frequency drops off.

## 8. Specifications

**Note**

*The technical data and the design of the equipment may change without prior notice for the sake of technical improvements.*

Graphic center frequencies: 50Hz, 125Hz, 315Hz, 750Hz, 2.2kHz, 6kHz, 16kHz

Boost/cut: 12dB

S/N ratio: 100dB

Frequency response: 10Hz-50kHz +/-1dB

Maximum output voltage: 7V

THD: 0.005%

Input sensitivity: 50mV - 3V

Head room: 20dB

Input impedance: 20kOhms

Output impedance: 2kOhms

Stereo separation: 82dB/1kHz

Operating voltage: 11V-15V negative ground

Size: 7" wide by 4 1/8" deep by 1" high



## 9. LIMITED WARRANTY INFORMATION

For USA and Canada only

Except as noted, Clarion products purchased from an authorized Clarion dealer are warranted against all defects in materials and workmanship for a period of one (1) year from date of original purchase.

The following Clarion products noted below \*\* are warranted against all defects in materials and workmanship for a two (2) year period from the date of original purchase when purchased from **AND** installed by an authorized Clarion dealer.

\*\* DRZ9255 DXZ865MP DXZ765MP DXZ665MP DXZ465MP DFZ675MC DPX1150 DPX1800 DPX2250

All Clarion cables, wires and other accessories if purchased from an authorized Clarion dealer are warranted against all defects in materials and workmanship for ninety (90) days from the date of original purchase.

**ALL PURCHASES OF CLARION PRODUCTS FROM NON-AUTHORIZED CLARION DEALERS ARE SUBJECT TO FURTHER WARRANTY RESTRICTIONS AS DESCRIBED BELOW.**

The conditions of this Limited Warranty and the extent of responsibility of Clarion Corporation of America ("Clarion") under the Limited Warranty are as follows:

1. **PROOF OF DATE OF PURCHASE FROM AN AUTHORIZED CLARION DEALER WILL BE REQUIRED FOR WARRANTY SERVICE OF THIS PRODUCT. IN THE CASE OF THE TWO (2) YEAR LIMITED WARRANTY FOR THE CLARION PRODUCTS NOTED ABOVE, PROOF OF DATE OF PURCHASE AND PROOF OF INSTALLATION BY AN AUTHORIZED CLARION DEALER IS REQUIRED. INFORMATION ABOUT CLARION AUTHORIZED WARRANTY SERVICE CENTERS MAY BE OBTAINED BY CONTACTING CLARION AT THE ADDRESS LISTED BELOW.**
2. This Limited Warranty will become void if service performed by anyone other than an approved Clarion Warranty Service Center results in damage to the products.
3. This Limited Warranty does not apply to any product which has been subject to misuse, neglect or accident, or which has had the serial number altered, defaced or removed, or which has been connected, installed, adjusted or repaired, other than in accordance with the instructions furnished by Clarion.
4. This Limited Warranty does not cover car static or other electrical interferences, tape head or laser pick-up cleaning or adjustments, or labor costs for the removal or reinstallation of the unit for repair.
5. The sole responsibility of Clarion under this Limited Warranty shall be limited to the repair of the product or replacement of the product, at the sole discretion of Clarion.
6. Product must be shipped in its original carton or equivalent carton, fully insured, with shipping charges prepaid. Clarion will not assume any responsibility for any loss or damage incurred in shipping.
7. CLARION PRODUCTS PURCHASED FROM A SOURCE OTHER THAN AN AUTHORIZED CLARION DEALER, INCLUDING ANY AND ALL PURCHASES VIA THE INTERNET FROM A NON INTERNET AUTHORIZED CLARION DEALER, SHALL NOT BE COVERED BY ANY CLARION LIMITED WARRANTY TO THE EXTENT ALLOWED BY APPLICABLE LAW. IN THE EVENT AND TO THE EXTENT APPLICABLE LAW PROHIBITS ELIMINATION OF WARRANTIES UNDER THESE CIRCUMSTANCES, THE APPLICABLE LIMITED WARRANTY PERIOD SHALL BE DEEMED TO BE FIFTEEN (15) DAYS FROM THE DATE OF ORIGINAL PURCHASE.
8. ALL IMPLIED WARRANTIES EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW SHALL HAVE NO GREATER DURATION THAN THE WARRANTY PERIOD SET FORTH ABOVE. UNDER NO CIRCUMSTANCES SHALL CLARION BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT. BECAUSE SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.
9. **THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.**
10. The laws of the state of California shall govern and control this Limited Warranty, its interpretation and enforcement.
11. Should you have any difficulties with the performance of this product during the warranty period, please call Clarion or visit our web site for a listing of Authorized Warranty Service Centers in your area. You may also contact Clarion Customer Service at the address listed below for any service you may need with Clarion products.

In USA  
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Attn: Customer Service Manager  
661 W. Redondo Beach Blvd.  
Gardena, CA. 90247-4201  
1-800-GO-CLARION (310)327-9100  
www.clarion.com

In Canada  
Clarion Canada, Inc.  
Warranty Service Center  
2239 Winston Park Drive  
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