

MASSIVE[®]

5 BAND GRAPHIC EQUALIZER

EQ5XP



[®]



Thank you for purchasing this MASSIVE 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.

FCC Approval

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

EQ5XP

The EQ5XP is a 5-band stereo equalizer/crossover specifically created for the mobile environment. The EQ5XP provides powerful features in a compact size:

- Five equalization bands(70Hz,400Hz,1.5KHz,5KHz,16KHz) 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 30Hz or 250Hz.
- Three stereo RCA outputs to drive front, rear, and subwoofer audio amplifiers
- An Auxiliary stereo RCA input for use with portable devices, such as a MP3 player or a 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 20Hz to 30KHz 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
- Adjustable Active gain Preamp
- 8 Volt Output Line Driver

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 MASSIVE 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

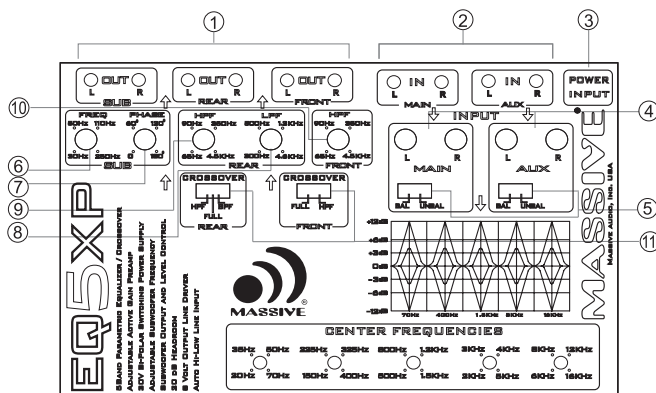
Installation of mobile audio and video components requires experience with a variety of mechanical and electrical procedures. Although this manual provides general installation and operation instructions, it does not show the exact installation methods for your particular vehicle.

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



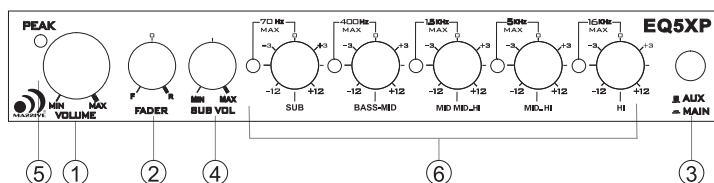
3. CONTROLS

EQ5XP



Top Panel Controls

1. Output RCA's (Subwoofer,Rear,Front)
2. Input RCA's (Main,Auxiliary)
3. Power input from remote power supply
4. Right and Left gain controls for Main and Aux inputs
5. Balanced or Un-Balanced input mode for Main and Aux inputs
6. Subwoofer crossover frequency control 30Hz~250Hz
7. Subwoofer phase control 0°~180°
8. Rear low pass filter (used only in bandpass mode)
9. Rear high pass filter
10. Front high pass filter
11. Front and rear crossover mode selectors



Front Panel Controls

- 1) Volume Control - ASP-Q1 volume control can be the system volume control for both main and Auxiliary inputs.
- 2) Fader Control - This balances front-to-rear or mids-to-highs, depending on the system setup
- 3) Main/Aux Input Selector
- 4) Subwoofer Output Level - This adjusts the subwoofer level independent of the mids/highs
- 5) LED Indicator for Power and Clipping
- 6) EQ controls for Boost/Cut (Knobs) and for Center Frequency control (inset slotted pots)

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 EQ5XP as the master (main) volume control. The EQ5XP 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

EQ5XP has five frequency ranges:

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 Equalizer to either 30Hz or 250Hz 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 EQ5XP 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 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.
7. Hi lever RCA(main input)

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 ether 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.

WARNING!

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:

- 5-band graphic equalizer (EQ5XP)
- 2 mounting brackets
- 8 Phillips-head screws
- Power box
- 1pc power cable

Before starting

Mounting precautions

This EQ5XP 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 EQ5XP 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 MASSIVE dealer or an authorized MASSIVE service center.

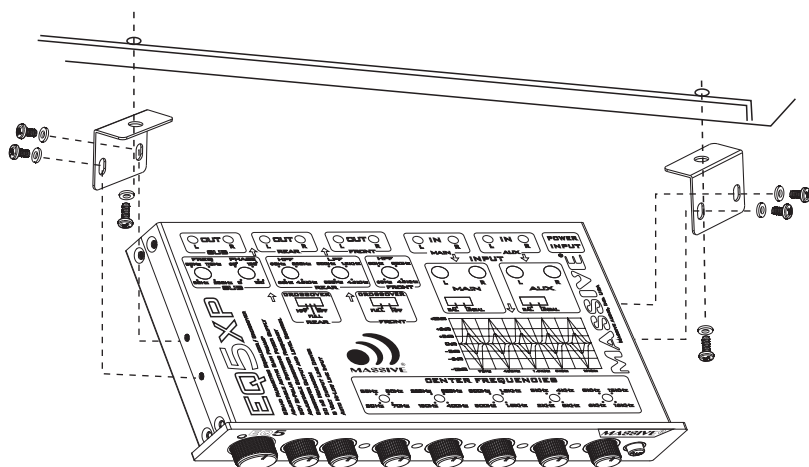
Tools and additional components

You will need:

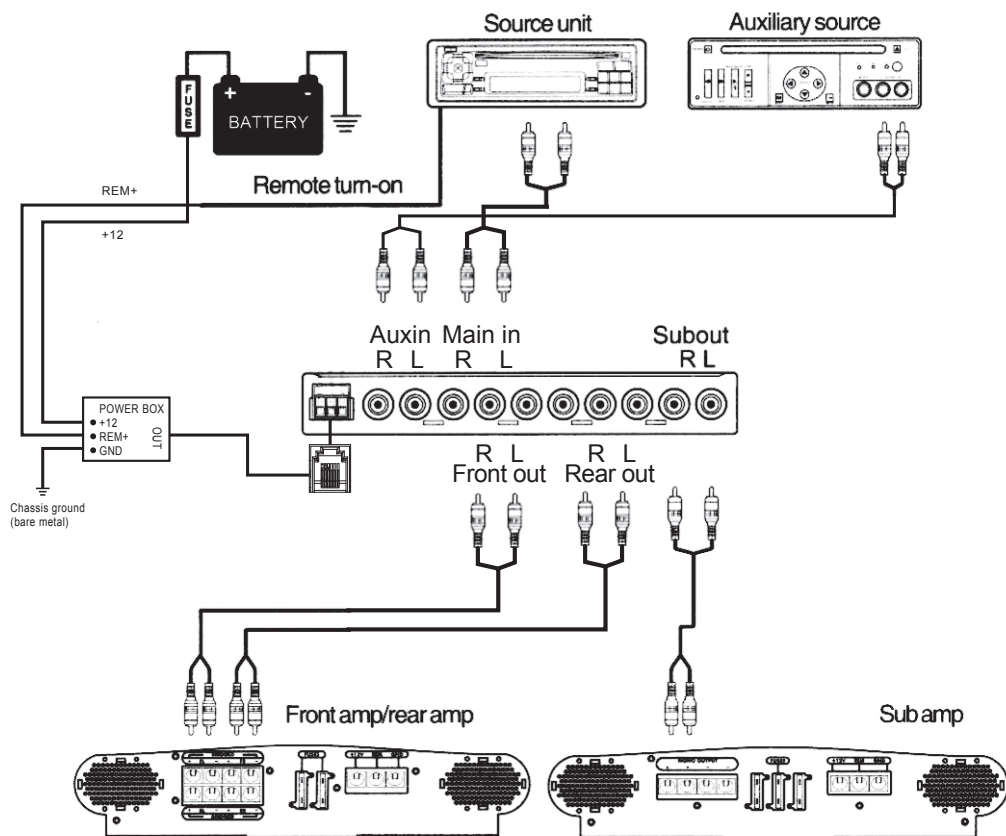
- A Phillips-head screwdriver when mounting the unit in the vehicle.
- A small flat-head screwdriver to adjust the AUX gain controls if you connect an MP3 player or video source.
- High-quality RCA input and output cables.

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



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 dealer.
- Speakers may be damaged. Consult your authorized MASSIVE 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.

EQ5XP

Specifications and Features

Maximum output level RMS	9.5V RMS
Maximum peak output level	14 Volts
THD+Noise	0.01%
Signal to Noise ratio	110dB
Stereo Separation	90dB
Frequency Response	10Hz~30KHz +0/-1dB
Input Impedance	20K Ohms
Output Impedance	1 K Ohms
Boost/Cut	18dB
Headroom	20dB
Input Sensitivity	1V for 9.5V out
Operating Voltage	11V~16V

Key Features

- Front-Rear Fader
- Independent subwoofer output control
- Subwoofer phase control 0~180
- Auxiliary input
- Separate input gain controls for Main-in and Aux-in
- Copper chassis for noise rejection
- Remote power supply w/copper chassis
- 5 bands of parametric equalization with variable frequencies: Bass-20~70Hz, MidBass-150~400Hz, Mid Range 500~1.5KHz, MidHi-2k~5KHz, High-6K~16K
- Selectable 2-way or 3-way electronic crossover w/Bandpass
- Subwoofer crossover control 30Hz~250Hz
- Front-HP 65Hz~4.5KHz or Full range
- Rear-HP 65Hz~4.5KHz/LP 300Hz~4.6KHz or Full range





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