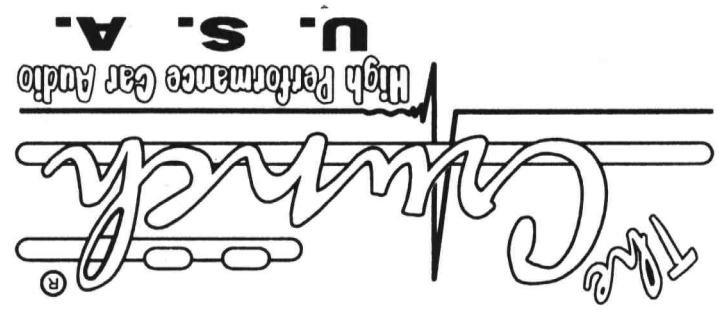


*10 Band Passive Equalizer*

**CEQ110**

# **OWNER'S MANUAL**



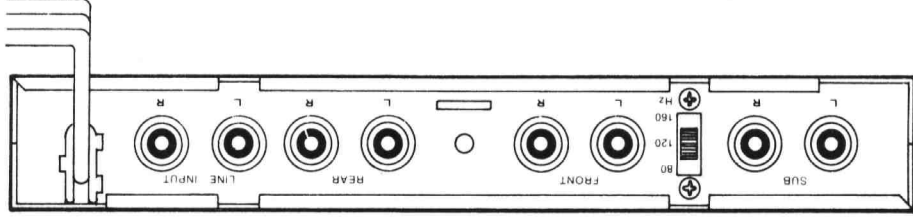
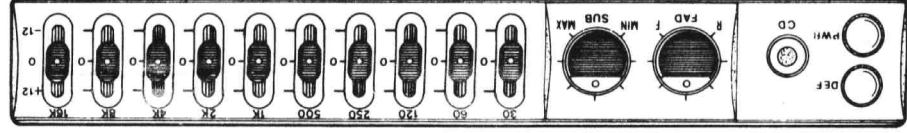
## FEATURES & FUNCTIONS

- 1. Fader Control**  
Rotary mechanism to control the balance between the front and rear speakers. This fader will override the fader in your car stereo.
- 2. Subwoofer Output Control**  
Rotary mechanism to control the amount of subwoofer gain at the predetermined crossover point. The subwoofer can be adjusted from minimum to maximum by turning the knob.
- 3. Subwoofer Active Electronic Crossover**  
The three position switch on the rear of the unit adjusts the crossover point for your subwoofer system. The CEQ110 features separate dual RCA output for the subwoofer channel so that the subwoofers can run on a separate amplifier or separate channels of a multi-channel amplifier. The crossover switch is adjustable to either 80, 120 or 160 Hz. Depending on your subwoofer frequency response adjust this switch to the proper setting.
- 4. Night Illumination**  
The CEQ110 features full night illumination in amber color. The illumination comes on when the power is applied to the unit. The illumination is present around the fader and subwoofer knobs. Each band control also features an LED in the center for illumination.

- 5. Frequency Band Control**  
The CEQ110 has 10 bands of frequency control attenuated by individual sliders. The CEQ110 is a full octave equalizer. The band width controls are 30Hz, 60Hz, 120Hz, 250Hz, 500Hz, 1KHz, 2KHz, 4KHz, 8KHz, 16KHz. The center decibel position represents 0dB boost. By sliding the fader up or down you can either increase (up) or decrease (down) the amount of boost by 10dB. Your personal preference is the general rule to set the equalizer band controls. The CEQ110 will allow you to tailor the sound to your particular listening pleasure and will help compensate for unwanted peaks and dips found in car music systems.
- 6. CD Input JACK (3.5mm)**  
Connect your portable CD player to the CD input JACK on the front panel by a stereo path cord with a stereo mini plug at both ends. Turn on your CD player and then turn on the equalizer.

Thank you for purchasing the Crunch Model CEQ110 Full Octave Graphic Equalizer. The CEQ110 was designed and engineered in the United States and will give you years of dependable service. The CEQ110 was manufactured at our exclusive facility to strict quality standards. Each unit is quality checked and burned in at the factory to insure that it will work perfectly when installed in your vehicle. We are so confident in the quality of our product that we back it with a limited five year warranty! See back cover for warranty details and information.

The CEQ110 is a 10-band graphic equalizer with active built-in electronic subwoofer crossover with boost/cut control. It also features CD JACK for your CD player and fader control. All packaged in a compact 1/2 DIN chassis to fit into your car dashboard under the radio. The CEQ110 also comes with special mounting brackets if you wish to mount the unit under the dashboard or in your glove compartment.



7. Equalizer Control  
 When depressing the DEF switch to the on position, the equalizer controls are de-  
 feated and are not being deployed. Amplifier operation at this point is essentially  
 flat. When releasing this switch to the off position the equalizer flat. When releasing  
 this switch to the off position the equalizer controls are once again employed and  
 the amplified signal is set to the equalizer frequency band settings.

8. Rear Panel Input Controls  
 The CEQ110 accepts the Low Level High Impedance RCA inputs.

If your radio has RCA Jack Output use these to input the signal into the CEQ110  
 RCA inputs. By doing this you will be bypassing the fader control of your head  
 unit and the fader operation will be controlled by the CEQ110. This will also allow  
 you to use the speaker outputs of your radio to power your front speakers if you  
 so choose, eliminating the need for a separate amplifier for your front speakers.  
 (This is really only recommended if your head unit is a high power model otherwise  
 you will lose the front staging effect because the rear speakers attached to your  
 amplifier will outplay your front speakers being driven by the head unit. You will  
 also not have any equalizer effect on the front speakers playing through the head  
 unit.)

Seeing Diagram A for RCA input configuration.

If your radio does not have RCA output jacks as in the case of most standard  
 CEM radios you can use the speaker outputs from those head units to power the  
 CEQ110 by interfacing them with a high/low level impedance adaptor. Be sure to  
 use the correct adaptor so that if you have a high power radio it will be able to  
 reduce the level low enough not to cause any noise problems in the installation.

See Diagram B for Speaker Level input configuration.

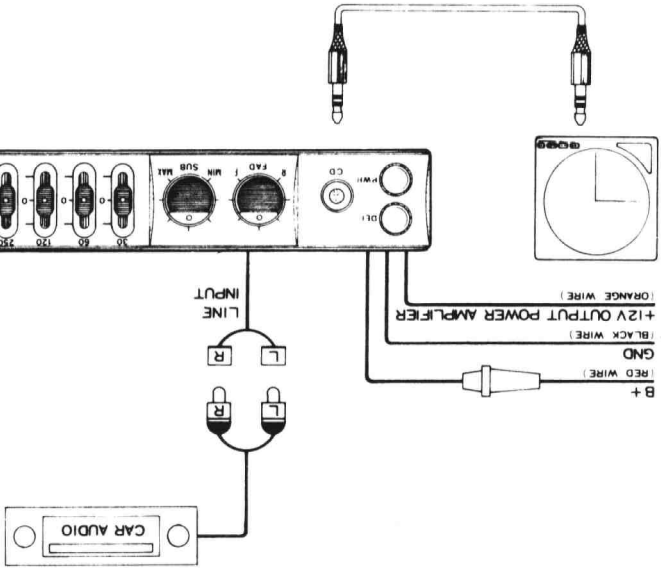


DIAGRAM A

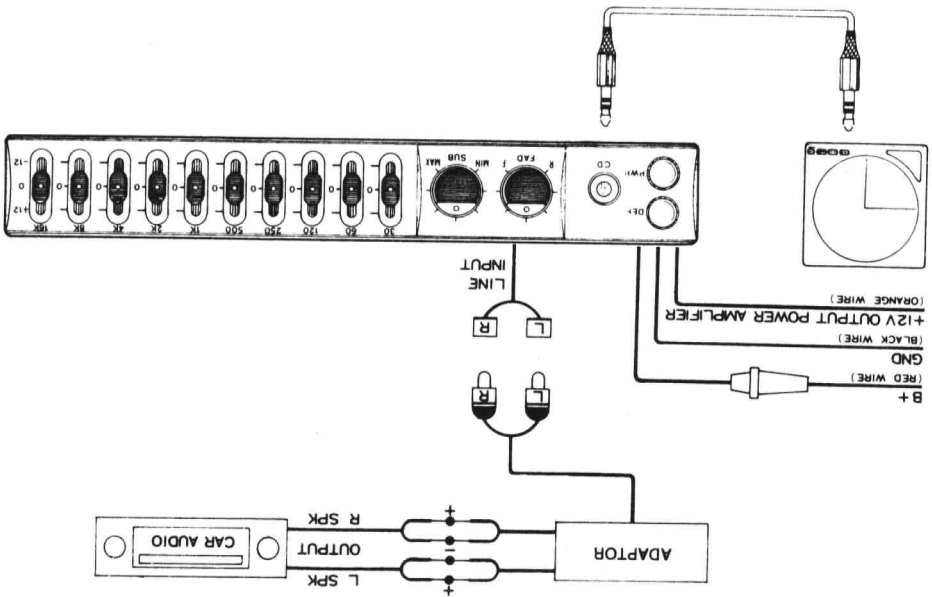


DIAGRAM B

1. Rear Panel Output Controls  
 here are six RCA output jacks. The six RCA output jacks are divided into three segments. The first segment controls the front output of the amplifier, the second segment controls the rear output of the amplifier. The third segment controls the subwoofer amplification. You do not have to use all six outputs for the CEQ110 to provide your input signal into six output channels. You can thus configure your amplification system into 3 separate 2-channel amplifiers or one four-channel amplifier for the front and rear segment and a separate subwoofer amplifier for the subwoofer output. Or you can choose three separate two-channel amplifiers. This is the beauty of the CEQ110. It affords you the choice of an almost innumerable amount of amplifier configurations.

See Diagram C for sample amplifier installations.

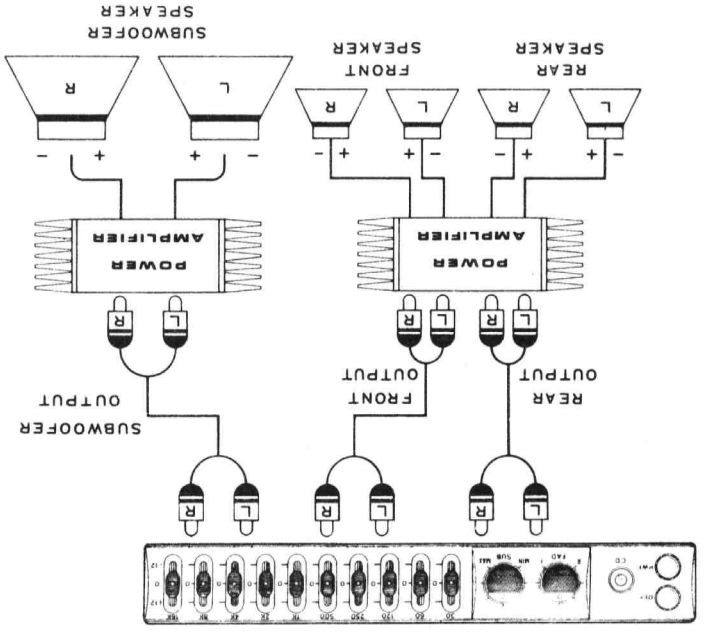
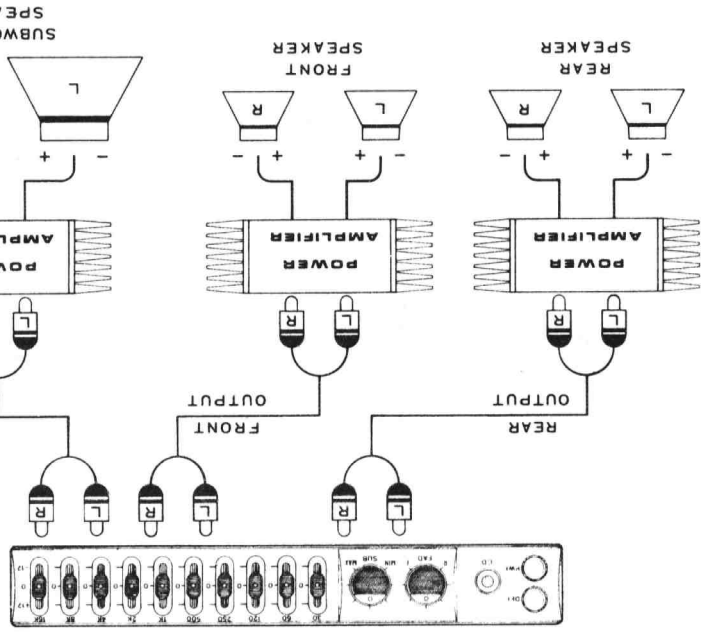


DIAGRAM C

**MOUNTING/WIRING INSTRUCTIONS**

The CEQ110 is a Half DIN sized unit. It can be mounted in the dashboard with your head unit in most cases. Use of an auxiliary installation kit is needed like those made by American International® or Scoche® products.

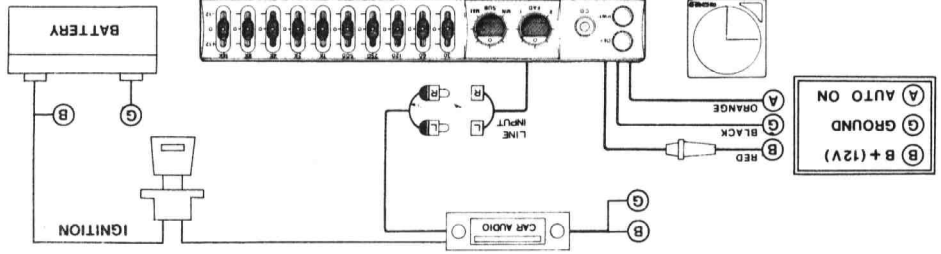
The CEQ110 is also supplied with mounting brackets giving you the option to mount the equalizer under your dash, or on the console or in your glove compartment.

There are three power wires coming out of the back of the unit. The red wire with the inline fuse is for 12 Volts DC into the unit. This wire should be hooked up to an accessory line which turns on only when the car is running or a key of the car is in the accessory position.

The Black wire is the ground wire. Attach this wire to either the same ground of your head unit or to a clean chassis point located in the dashboard or on the fire all. The shorter the ground wire connection the better chance of not having any interference or noise problems.

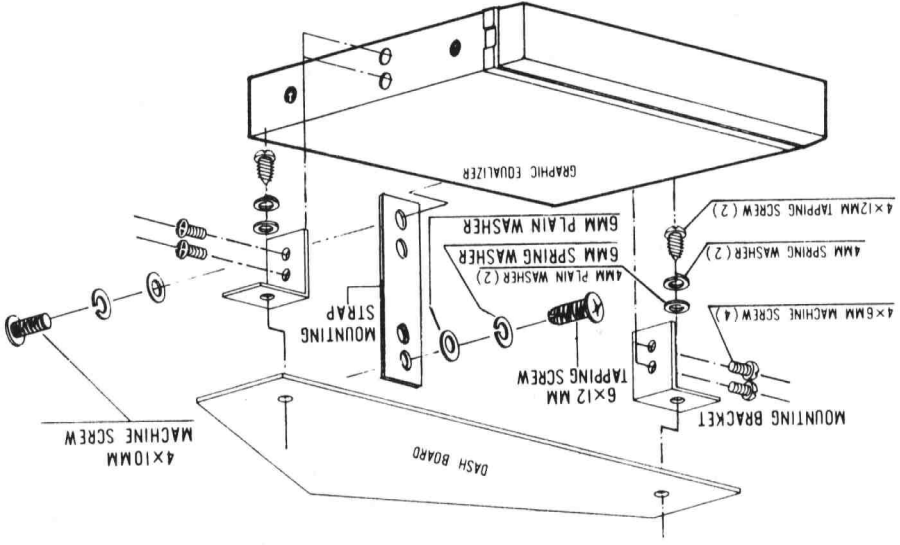
The Orange wire the remote start for your amplifier. This wire should be attached to the remote turn on circuit of your amplifiers or crossovers. This way when the CEQ110 is turned on it will automatically power on your amplifier system.

See Diagram D for wiring directions.



**INSTALLATION**

**DIAGRAM D**



## TECHNICAL SPECIFICATIONS

All specifications at: Source Voltage—14.4 VDC  
Load Impedance—10K Ohms  
Reference Voltage—400 mV  
Input Impedance : 10K Ohm  
Control Frequencies : 30Hz/60Hz/120Hz/250Hz/500Hz  
1KHz/2KHz/4KHz/8KHz/16KHz  
Subwoofer Frequency Crossover Points : 80/120/160Hz  
Filter Roll Off : 12dB per octave 2nd order Butterworth  
Control Range : 10dB Boost/Cut  
Frequency Response : 20Hz—20KHz  
Signal to Noise ratio : 90dB (A—Wtd)  
Input Sensitivity for 200mV Output : 400mV  
Power Requirement : 11-16 Volts negative ground  
Dimensions : 178×25×145mm (W.H.D.)