



# HIGH-PERFORMANCE CAR-AMPLIFIER

OWNER'S MANUAL

# C SERRIES AMPLIFIER

CO 60.4

CO 80.2

## Congratulations on your purchase of your new **C SERIES** amplifier.

Before installation your power amplifier, we recommend to read the manual's owner carefully and to follow the instructions regarding connection and fitting exactly.

We advice to accomplish the installation by an authorized service center, because a professional fitting and connection is the requirement for further warranty adjustments.

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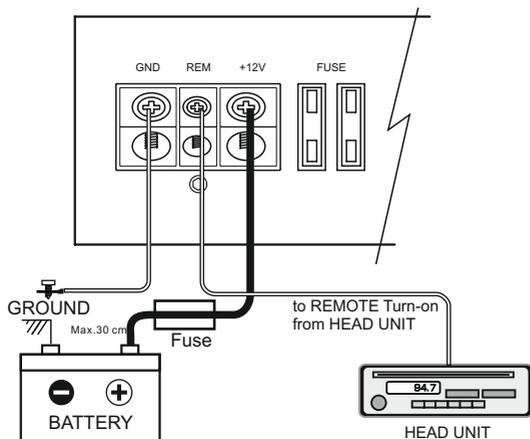
### **CO 80.2**

- \* 2-Channel High Power Class-AB amplifier with SMD technology
  - \* MOS-FET PWM Power Supply
  - \* Stable into 2 ohm stereo per channel and 4 ohm bridged mode
  - \* Variable switchable Low Pass Filter from 30 to 300 Hz
  - \* Variable switchable High Pass Filter from 30 to 300 Hz
  - \* Bass Boost: variable from 0 to 6 dB at 50 Hz
  - \* Input Sensitivity: variable 200 mV maximum to 6 V minimum
  - \* **Multi-Way Protection Circuitry**: overhead, over current, short circuitry and speaker DC protection
  - \* Operating Voltage : DC 10 ~ 16 V power input
  - \* Wired Remote Control **RTC** (optional)
  - \* High-Power-Input (normally original radio) with automatically „Turn-On“
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### **CO 60.4**

- \* 4-Channel High Power Class-AB amplifier with SMD technology
- \* MOS-FET PWM Power Supply
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## CO 80.2 / CO 60.4



### 1. Battery disconnection

First disconnect the power supply of the vehicle. This works out the best by removing the ground cable of the battery.

### 2. Ground connection

Connect the GND (ground) connection of the amplifier with the car chassis. Keep this cable as short as possible (not longer than 50 cm) and use a suitable cross section (AWG size 8 - 6). Make sure, that the connection with the vehicle chassis is free of paint, dirt and dust.

### 3. +12 V Power connection

Connect the +12 V contact of the amplifier with the supply cable via a fuse directly to the vehicle battery. Keep in mind, that the length of the cable from fuseholder to vehicle battery has to be a maximum of 30 cm.

Requirement for a perfect function of the amplifier is a qualitative high end fuse holder as well as a suitable cable cross section (AWG size 8 - 6).

This fuse protects the amplifier and the vehicle against the possibility of a short circuit in the power cable.

### 4. Remote connection

Connect the REM-terminal of the amplifier to the remote-output (automatic 12 V antenna-output) of the head unit. Therefore use a 0,5 - 1,5 mm power cable.

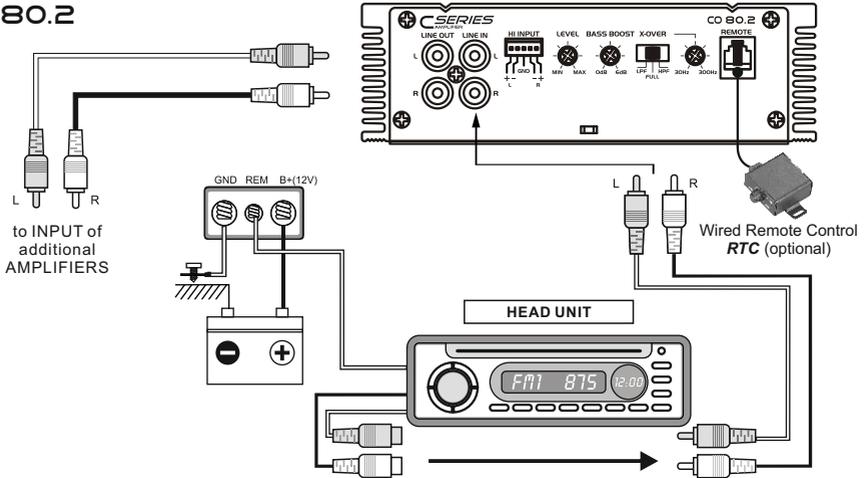


**Caution**

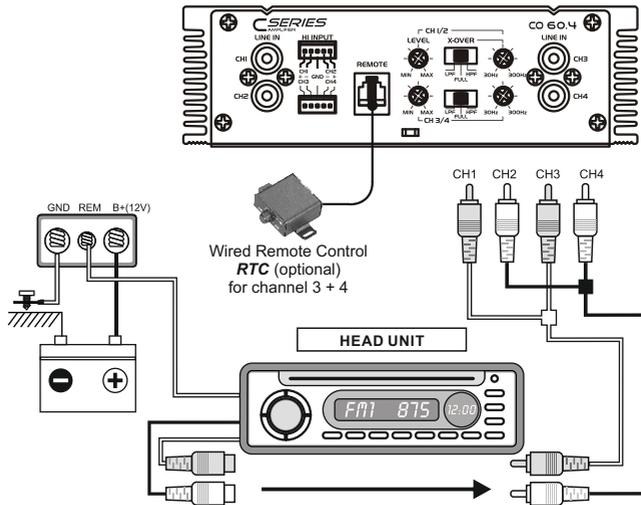
**Please follow the instructions during the installation of your amplifier:**

- a) Take care of a professional attachment. Pay attention, that no electrical cable, gas tank, hydraulic brakes or other components get damaged.
- b) There has to be enough cooling and air circulation. Avoid the installation in small closed boxes or close to heating parts.
- c) Protect the amplifier from fluids, wetness, heat and foreign material as well as from other influences.
- d) The amplifier is only to be built into vehicles with a 12 V DC power supply.
- e) Never install the power supply cable with other original wires of the vehicle (gas cables), fan motors, brand control moduls etc.
- f) Install the signal cable (cinch cable) as well as the speaker cable far away of the power cables to avoid troubles with the music signal.
- g) The cables of your amplifier have to be installed, so that there is no danger of binding, squeezing or breaking.

**CO 80.2**



**CO 60.4**



The **C SERIES** amplifier offers RCA-Inputs, which are connected through cinch cables with the preamplifier-outputs of the head unit. If the head unit (OEM-RADIO) has no RCA-Output, than it is possible to connect the speaker output direct to „High-Input“. If signal is presented, the amplifier automacally turns on.

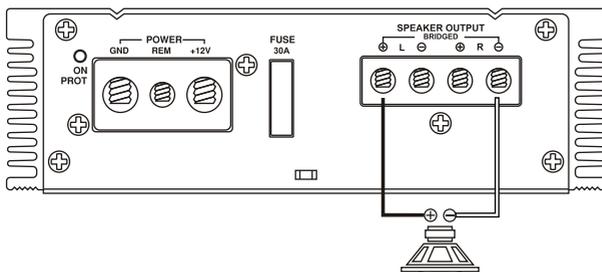
The RCA-outputs provide the possibility to transfer the signal of the head unit to a 2. amplifier via a cinch cable (not possible for **CO 60.4**).

With the aid of the shiftable high- and lowpassfilter, the gain-controller and the bassboost you are able to adjust the amplifier on to your prepered taste of hearing, the circumstances of the vehicle and to the speakers.

In this regard, **AUDIO SYSTEM GERMANY** recommends to adjust your amplifier through a specialized service center, dealer or a specialist.

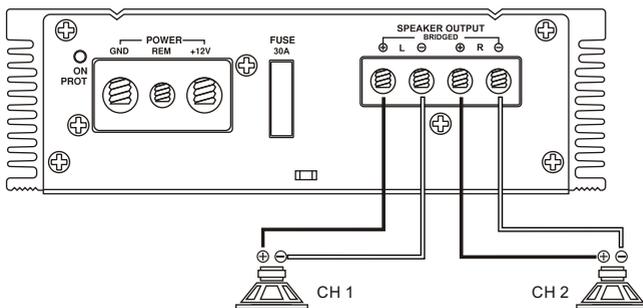
## CO 80.2

### 1-Channel Bridged



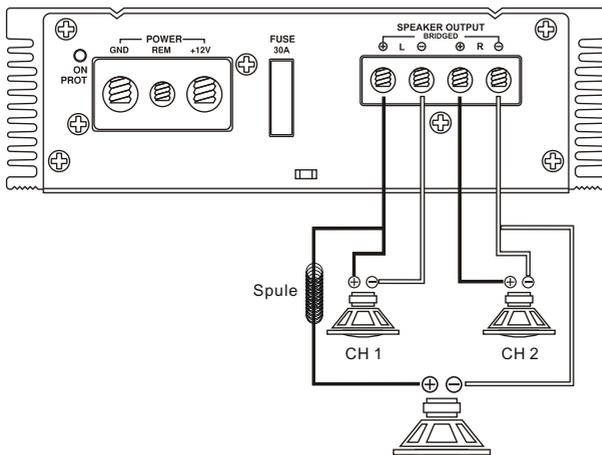
speaker impedance  
4 ~ 8 Ohm

### 2-Channel Stereo



speaker impedance  
2 ~ 8 Ohm

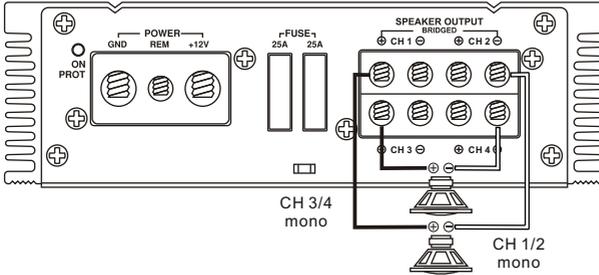
### Tri-Mode



speaker impedance  
4 ~ 8 Ohm

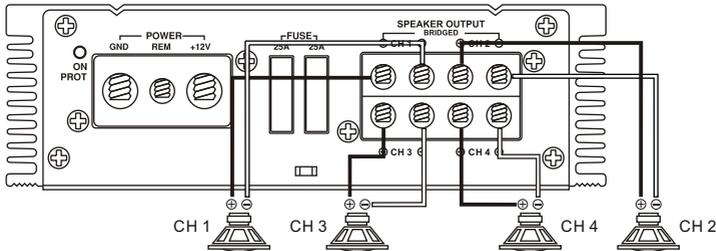
**CO 60.4**

**2-Channel Mono**



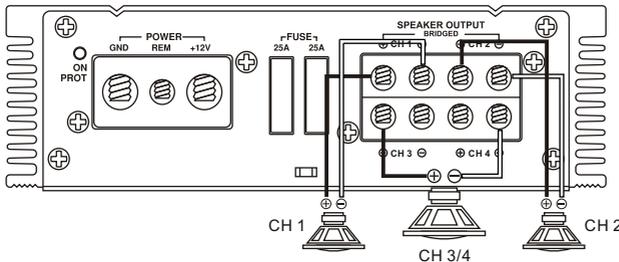
speaker impedance  
4 ~ 8 Ohm

**4-Channel Stereo**



speaker impedance  
2 ~ 8 Ohm

**2-Channel Stereo + 1-Channel Mono Bridged**



speaker impedance  
4 ~ 8 Ohm

This power amplifier is featured with a efficient protection system to prevent any damages like over-heating, overvoltage, short-circuit and DC at the loudspeaker output.

Occuring an error the protection-LED will light in red.

In order to check the problem, first turn down all levels of the head unit, afterwards turn it off.

**AMPLIFIER IS NOT POWERED UP, NO LED IS LIGHTENING**

- ground connection professional connected?
- +12V powercable professional connected?
- remote cable professional connected?
- fuses inserted and alright?
- analyze voltage on the amplifier.

**PROTECTION LED ILLUMINATES GREEN WHILE AMPLIFIER IS SOUNDLESS**

- cinch cable alright and professional connected?
- loudspeaker professional connected?
- head unit alright?

**PROTECTION LED ILLUMINATES RED WHEN AMPLIFIER IS POWERED UP**

- amplifier too hot?
- short-circuit at the loudspeaker output?
- short-circuit caused by loudspeaker cable with vehicle chassis (ground)?
- input voltage too high (e.g.faulty lighting dynamo)?

**OVERHEATING (PROTECTION LED ILLUMINATES RED WHEN AMPLIFIER IS POWERED UP)**

- impedance alright?
- loudspeaker error?
- adequate airflow of the amplifier?

**! CAUTION !**

After cooling down, the amplifier turns on automatically.

**ERROR IN AMPLIFIER FUSE**

- ground professional connected?
- loudspeaker impedance alright?

**! CAUTION !**

Make sure when changing fuses to use the same value.

**SOUND TOO LOW OR LOW-DISTORTED SOUND**

- input level control "GAIN" is set to match the head unit?
- output level control of the head unit alright?
- loudspeaker error?
- loudspeaker cable checked?
- crossover frequencies has been properly set?  
(Check head unit, ampliflier, DSP, soundprozessor, equalizer, frequency bandpassfilter...)

**HIGH HISS-ENGINE NOISE IN SPEAKERS**

- ground connection professional connected?
- short-circuit caused by loudspeaker cable with vehicle chassi (ground)?
- cinhcable (RCA) and/or loudspeaker cabel installed too close to the power connection cable?
- cinch ground (RCA) of the head unit alright?

## **CAUTION**

Please contact your specialist dealer if the amplifier is still not working after it has been checked with the error list!

For warranty adjustement / repairs the original invoice has to be attached!

**Opening the power amplifier is leading to a lost of warranty in either case!**

**CO 80.2**

Power Supply Voltage .....	10 - 16 V
Rated Power Output at 14,4 V	
-RMS power @ 4 ohm stereo .....	2x 80 W
-RMS power @ 2 ohm stereo .....	2x 125 W
-RMS power @ 4 ohm bridged .....	1x 250 W
Signal to Noise Ratio .....	>95 dB
Low Pass Crossover .....	30 ~ 300 Hz
High Pass Crossover / Subsonic filter .....	30 ~ 300 Hz
Bass Boost Control @ 50 Hz .....	0 ~ 6 dB
Frequency Response .....	10 Hz ~ 45 KHz (+/-1 dB)
THD@RMS Watts .....	< 0,049%
Channel Separation .....	75 dB
Fuse Rating .....	30 A x 1
Input Sensitivity .....	200 mV ~ 6 V (+/- 5%)
Dimensions .....	240(W) x 53(H) x 171(L) mm

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**CO 60.4**

Power Supply Voltage .....	10 - 16 V
Rated Power Output at 14,4 V	
-RMS power @ 4 ohm stereo .....	4x 60 W
-RMS power @ 2 ohm stereo .....	4x 100 W
-RMS power @ 4 ohm bridged .....	2x 200 W
Signal to Noise Ratio .....	>95 dB
Low Pass Crossover .....	30 ~ 300 Hz
High Pass Crossover / Subsonic Filter .....	30 ~ 300 Hz
Bass Boost @ 45 Hz .....	0 ~ 6 dB
Frequency Response .....	10 Hz ~ 45 KHz (+/-1 dB)
THD@RMS Watts .....	< 0,052%
Channel Separation .....	75 dB
Fuse Rating .....	25 A x 2
Input Sensitivity .....	200 mV ~ 6 V (+/- 5%)
Dimensions .....	300(W) x 53(H) x 171(L) mm