CERWIN-VEGA!

CVP SERIES AMPLIFIERS

MANUAL

Warranty

CERWIN VEGA (a division of CV & DA Holdings, Inc.) warrants this product to be free from defects in material and workmanship for a period of one (1) year from the original date of purchase provided, it was purchased from an authorized Cerwin Vega, retailer within the United States.

THIS WARRANTY IS NOT TRANSFERABLE AND APPLIES ONLY TO THE ORIGINAL PURCHASE OF THIS PRODUCT IN ITS ORIGINAL INSTALLATION. The original purchaser must reside in the United States and be able to provide proof of purchase and installation with the sales from the authorized Cerwin Vega retailer and completion of online registration that sold and installed the product.

Should a manufacturing defect occur during above said warranty period, Cerwin Vega will replace or repair the defective product with a product of the same or equivalent value and performance.

Damage or failure caused by any of the following is not covered under this warranty policy: burnt voice coils, negligence, improper use, abuse, product modification, unauthorized repair attempts, accident, acts of God, misrepresentations by Cerwin Vega retailers, and improper/inadequate packaging during return shipping.

Introduction

Cerwin-Vega is proud to introduce the new, totally reimagined CVP Series amplifiers—an exceptional fusion of power, performance, and affordability. Traditionally, these three qualities rarely coexist without compromise, so the engineers at Cerwin-Vega redefined the formula with CVP. Engineered with a compact footprint, CVP amplifiers fit virtually any installation environment without sacrificing output. The remarkable power-to-size ratio delivers clean, high-impact sound that punches well above its class. Combine that with premium sound quality, versatile features, and unbeatable value, and you have an amplifier line that shatters expectations. Whether you're building a system for everyday driving or high-performance competition, CVP amplifiers offer the perfect balance of strength, style, and substance.

We reserve the right to change the products and specifications at any time without notice.
Images may or may not include optional equipment.

WARNING: Prolonged exposure to sound pressure levels in excess of 100dB can cause permanent hearing loss. Cerwin Vega amplifiers can exceed that level so please exercise restraint when listening and enjoying your new amplifier.

GENERAL PRECAUTIONS

- This unit is designed for negative ground 12V DC operation only. (some older english vehicles have a positive ground!)
- Total system impedance must not be less than 2 ohm, in a bridged OR stereo configuration (monoblocks are 1 ohm stable)
- Avoid installing the unit where:
  - It would be subject to high temperatures, such as from direct sunlight or hot air from the heater.
  - It would be exposed to rain or moisture.
  - It would be subject to dust or dirt.
- Do not cover the amplifier with carpet or wires.
- Do not use the amplifier with a weak car battery. Optimum performance depends on a normal battery supply voltage.
- For safety reasons, keep the volume of your car audio system moderate while driving your vehicle so that you can still hear normal traffic sounds and emergency vehicles outside your car.

MOUNTING PRECAUTIONS

Although Cerwin Vega CVP amplifiers incorporate heat sinks and protection circuits, mounting the amplifier in a tight space without any air movement can still damage internal circuitry over time. Choose a location that provides adequate ventilation around the amplifier. For easy system set-up, mount the amplifier so the side panel controls will be accessible after installation. To increase thermal run times on low impedance loads, an additional fan is recommended, remember any moving air across the amplifier will reduce heat. In addition, observe the following precautions:

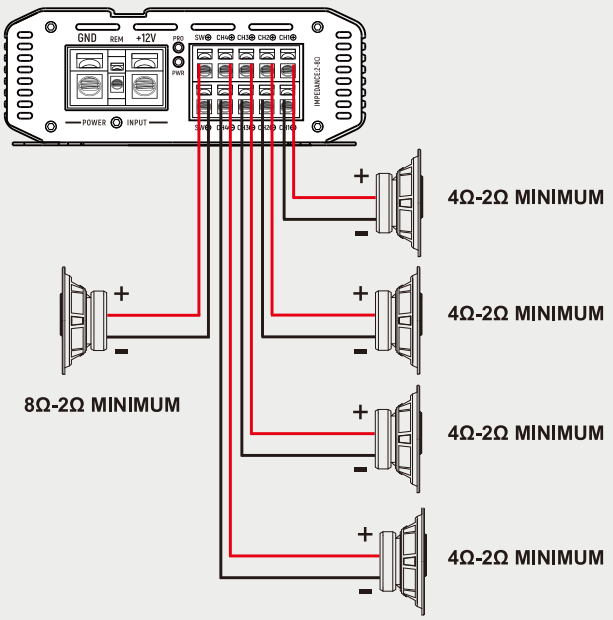
1. Using a felt pen mark, mark the mounting hole locations.
2. Mounting the amplifier on carpet will significantly reduce air flow, resulting in reduced thermal run times.
3. Mount the amplifier on a solid surface. Avoid mounting to sub woofer enclosures or areas prone to vibration. Do not install the amplifier on plastic or other combustible materials.
4. Prior to mounting the amplifier, make sure not to cut or drill into the fuel tank, fuel lines, brake lines (under chassis) or electrical wiring.

WIRING PRECAUTIONS

1. Before installation, make sure the source unit power switch is in the OFF position.
2. Disconnect the negative (-) lead of the battery before making any power connections.
3. When making connections, be sure that each one is clean and secure. Insulate all of your connections. Failure to do so may damage your equipment.
4. A secure clean ground connection is critical to the performance of your amplifier. Connect the ground directly to the car chassis to minimize resistance and avoid any noise problems.
5. Add an external fuse on the amplifier's positive (+) power lead and connect it as close as possible to the vehicle's (+) battery terminal. 18 inches is the usual dimension. Use a rating that equals the total current consumption at full output of all amplifiers in the system. This external fuse will protect the vehicle from short circuits that can cause a fire.

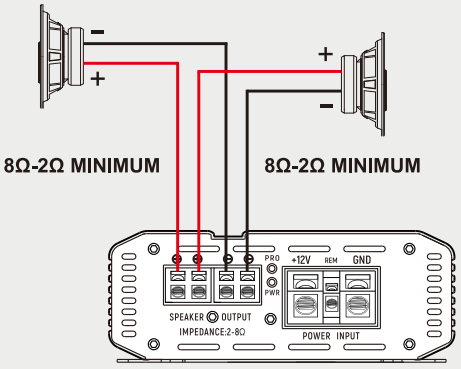
MODEL	CVP700.2	CVP1400.4	CVP2400.1	CVP2400.4	CVP2700.5	CVP3600.1
Amplifier class	D	D	D	D	D	D
Max Power	700W Max	1400W Max	2400W Max	2400W Max	2700W Max	3600W Max
RMS output for 4ch @4 OHM + ch5 @4 OHM	-	-	-	-	80Wx4+220W	-
RMS output for 4ch @2 OHM + ch5 @2 OHM	-	-	-	-	130Wx4+400W	-
RMS output at 4Ω,1 KHz@1% THD	80Wx2	80Wx4	370Wx1	120Wx4	80Wx4+200W	500Wx1
RMS output at 4Ω,1 KHz@10% THD	90Wx2	90Wx4	410Wx1	130Wx4	90Wx4+350W	580Wx1
RMS output,at 2Ω.1 KHz@3% THD	160Wx2	140Wx4	660Wx1	210Wx4	-	900Wx1
RMS output,at 4Ω.1 KHz@Bridge 3% THD	310Wx1	290Wx2	-	410Wx2	-	-
Number Of Channels	2/1 Channel	4/3/2 Channel	MONO	4/3/2 Channel	5 Channel	MONO
Channel Seperation	>60dB	>60dB	>60dB	>60dB	>60dB	>60dB
Freq. Response(+/- 3dB)	10Hz～30KHz	10Hz～30KHz	10Hz～400Hz	10Hz～30KHz	10Hz～30KHz	10Hz～400Hz
S/N Ratio @A/W 30k	≥90dB	≥90dB	≥90dB	≥90dB	≥90dB	≥90dB
Sensitivity	250mV～6V	250mV～6V	250mV～6V	250mV～6V	250mV～6V	250mV～6V
High Pass Filter(- 6dB) / SUBSONIC	52～400Hz	52～400Hz	10～50Hz	52～400Hz	10～250Hz	10～50Hz
Low Pass Filter(- 12dB)	52～400Hz	52～400Hz	52～400Hz	52～400Hz	52～400Hz	52～400Hz
Bass boost	12dB	-	12dB	-	12dB	12dB
Short Circuit and Thermal Protection	Yes	Yes	Yes	Yes	Yes	Yes
Sub Level Remote control	-	-	Yes	-	Yes	Yes
Fuse	30A*1	30A*2	25A*3	35A*3	30A*3	25A*4
Dimension(L x W x H)	7.28"x4.92"x1.93" (185x125x49mm)	7.28"x4.92"x1.93" (185x125x49mm)	8.86" × 4.92" × 1.93" (225x125x49mm)	8.86" × 4.92" × 1.93" (225x125x49mm)	9.65" × 4.92" × 1.93" (245x125x49mm)	9.65" × 4.92" × 1.93" (245x125x49mm)

CVP2700.5- 5 Channel Speaker Conection

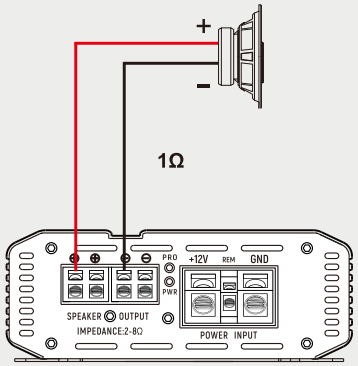


CVP2400.1/CVP3600.1 - Mono Channel Speaker Conection

Multiple Speaker Conection



Single Speaker Conection



VEHICLE ELECTRICAL SYSTEM

Amplifiers (regardless of brand name) will put an increased load on the vehicle's battery and charging system. Cerwin Vega recommends checking your alternator and battery condition to ensure that the electrical system has enough capacity to handle the increased load of your stereo system. Original equipment electrical systems which are in good condition should be able to handle the extra load of any CVM amplifier without problems, although battery and alternator life can be reduced depending on your individual listening habits. To maximize the performance of your amplifier, we suggest the use of a reserve power "Stiffening"capacitor (1 Farad per 1000W).

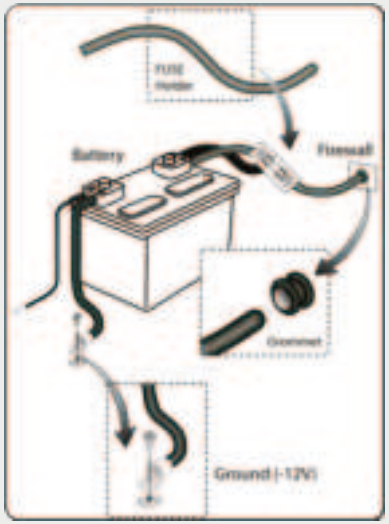
WARNING:

Avoid running power wires near the low level input cables, antenna, power leads, sensitive equipment or harnesses. The power wires carry substantial current and could radiate noise into the audio system through the audio cables.

1. Plan the wire routing as described in the "Importance of Pre-Planning" section. Keep RCA cables close together but isolated from the amplifier's power cables and any high power auto accessories, especially electric motors. This is done to prevent coupling the noise from radiated electrical fields into the audio signal. When feeding the wires through the firewall or any metal barrier, protect them with plastic or rubber grommets to prevent short circuits. Leave the wires long at this point to adjust for a precise fit at a later time.

2. Prepare the power wire for attachment to the amplifier by stripping 5/8 inch (15.9mm) of insulation from the end of the wire. Insert the bare wire into the B+ terminal And tighten the set screw to secure the cable in place.

FUSE WIRE DIAGRAM



WARNING:

The B+ cable MUST be fused 18" or less from the vehicle's positive battery post. Choose a location to install a waterproof fuseholder under the hood and ensure connections are water tight. If you do not use the appropriate fuseholder, the connection will eventually suffer corrosion from moisture and heat.

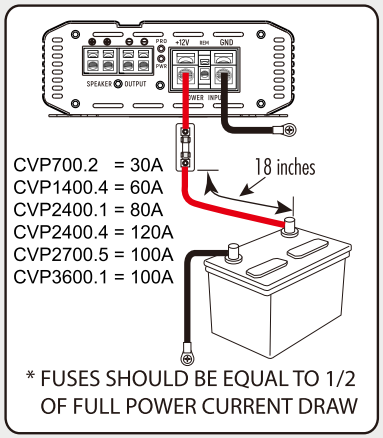
3. Trim the power cable within 18 inches (45.7mm) of the positive battery post and splice an in-line fuse holder. DO NOT install the fuse at this time.

4. Strip 1/2 inch (12.7mm) from the battery end of the power cable. Crimp and soldier a large ring terminal to the cable. Connect the ring terminal to the positive (+) battery post.

5. Prepare the ground wire for attachment to the amplifier by stripping 5/8" of insulation from the end of the wire. Always use a wire of the same gauge as the power connection, never smaller. Insert the bare wire into the GND terminal and tighten the set screw to secure the cable in place. Prepare the chassis ground by scraping any paint from the metal surface and thoroughly clean the area of all dirt and grease. Strip the other end of the wire, crimp and soldier a ring connector. Fasten the cable to the chassis using a non-anodized screw with a star washer.

WARNING: It is important to upgrade the ground connection between the negative (-) battery post and the vehicle body or chassis to achieve optimum electrical performance.

FUSE CONNECTION DIAGRAM

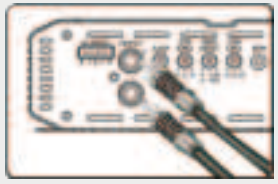


6. Prepare the REM turn-on wire for attachment to the amplifier by stripping 5/8 inch (15.9mm) of insulation from the end of the wire. Insert the bare wire into the REM terminal and tighten the set screw to secure the wire in place. Connect the other end of the REM wire to a switched 12 volt positive source. The switched voltage is usually taken from the source unit's remote amp turn on lead. If the source unit does not have this output available, the recommended solution is to wire to an accessory terminal in the car's fuse block using a relay to isolate the amplifer from the vehicles accessory circuit. This however will turn the amplifier on and off with the ignition key, regardless of whether the car stereo is on or off.

7. Securely mount the amplifier to the vehicle or amp rack. Be careful not to mount the amplifier on cardboard or plastic panels. Doing so may enable the screws to pull out from the panel due to road vibration or sudden vehicle stops.

8. Connect from source signal by connecting the RCA audio cables (or speaker wires) to the input jacks at the amplifier.

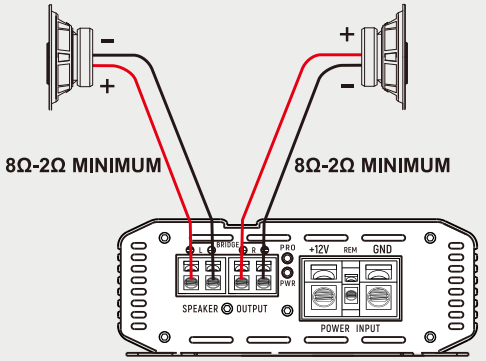
RCA CONNECTION DIAGRAM



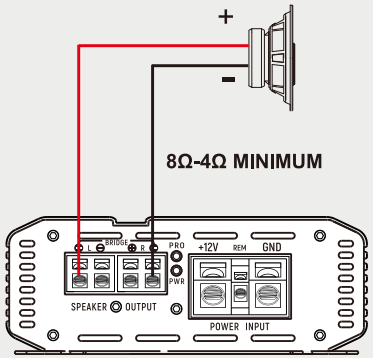
9. Connect the car speakers. Speakers impedance should NEVER be less than 2 Ohms stereo, 4 Ohms bridged(the mono block's are stable into 1 ohms). For most applications 18 gauge wire is adequate for the speaker leads. For leads in excess of ten feet, 16 gauge wire is recommended. Strip the speaker wires 1/2" (12.7mm) and insert into the speaker terminal block, then tighten the set screw to secure into place. When wiring the speakers, pay careful attention to the polarity of the terminals on the speakers and make certain they correspond to the polarity on the amplifier. DO NOT chassis ground any of the speaker leads as unstable operation or damage to the amplifier and/or speaker may result.

CVP700.2- 2 Channel Speaker Conection

Stereo Mode

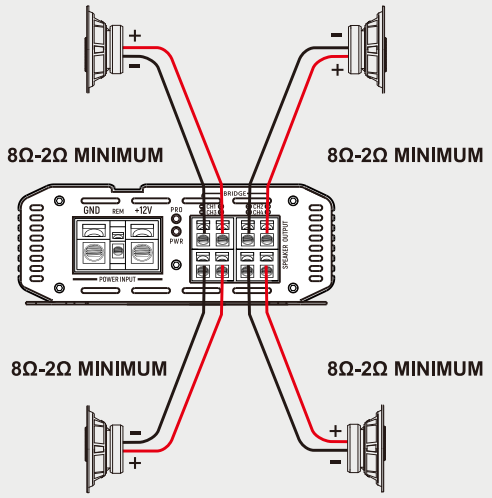


Bridged Mode

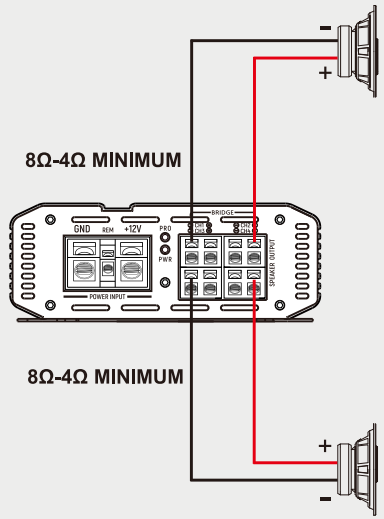


CVP1400.4/CVP2400.4 - 4 Channel Speaker Conection

Stereo Mode



Bridged Mode



To adjust the gain setting, set the LPF to an aubitrary frequency, 80Hz is a good start.turn the amplifier gains all the way down (counterclockwise). If using a remote level control (All VEGA MonoBlocks), plug the level control into the amplifier and turn it to the "MAX" position. Next turn the source unit(headunit) volume up to almost full volume (usually about 2/3rds of the way up) or until the output starts to distort on an oscilloscope (or audible subwoofer distress for those without a scope).

This will be NEARLY full volume on most source units, perhaps one or two "clicks" down from maximum volume. Next, increase the amplifier gain setting until adequate volume is achieved, or until distortion is audible and then turn it down a bit until the distortion is inaudible.

NOTE:

Ideal signal to noise and dynamic range are achieved with the gain at minimum. Most users find adequate gain and volume is achieved at less than halfway in the adjustment range. Avoid setting the amplifier gain very high as noise and distortion will increase significantly. REMEMBER that GAIN is gain, NOT power. There is NO "1/2 gain", or "3/4 gain" !!!

For a more in depth level setting (gain adjustment) procedure, visit the CV website.

The LPF crossover adjustment can now be fine tuned. Depending on vehicle, system configuration and taste there are thousands of possibilities. There is NO wrong frequency. It is up to your taste. But generally a lower crossover frequency (below 60Hz) will give you a tighter sound and crossing over higher (above 70 Hz) will be more robust, tubbier sounding. To each their own !!!

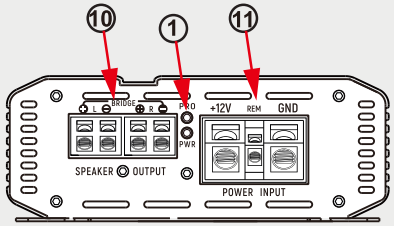
After setting the input gain adjustment and crossover, you may choose to add a small amount of " Bass Boost" in the low frequency region. Remember that the Bass Boost/EQ filter feature will not fix a poorly designed subwoofer enclosure or subwoofers that didn't sound good to begin with.

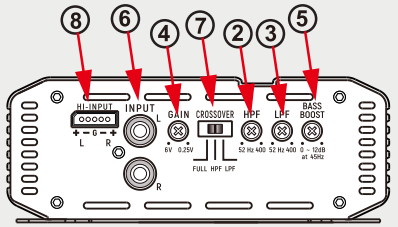
1. Make sure any bass EQ or low frequency equalization from the source unit is set to OFF or FLAT.

2. While playing the same musical selections used during the gain setting process, slowly increase the level of the Bass EQ/EQ filter . You should be able to notice a obvious change between 0 and +18 dB, especially if you have set the EQ below 50Hz. If you do not notice much difference, then it will not serve any benefit to increase the boost further.

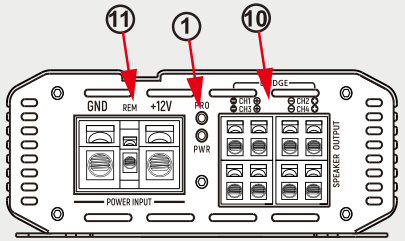
3. If the boost has audible benefits without adding appreciable distortion, find a level that suits your taste. Remember: it's much easier to construct the right subwoofer enclosure for your listening preferences than relying on a bass boost control to do the job!

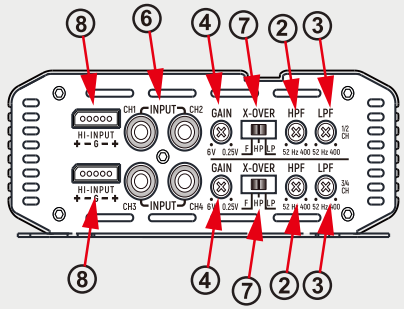
CVP700.2
2 CHANNEL



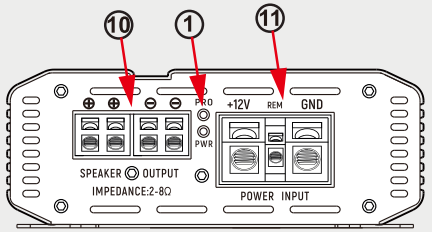


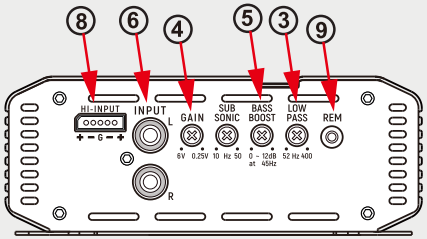
CVP1400.4
4 CHANNEL





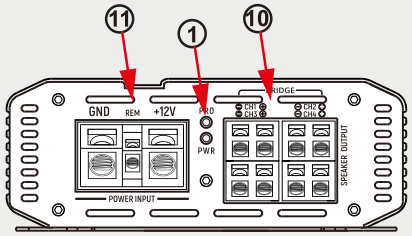
CVP2400.1
MONOBLOCK

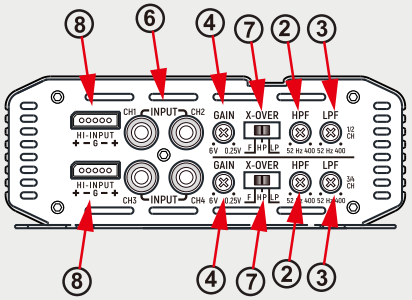




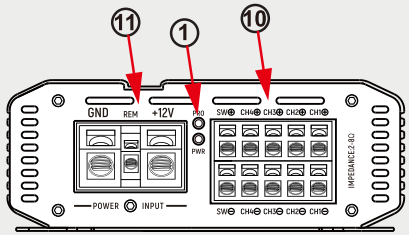
Features

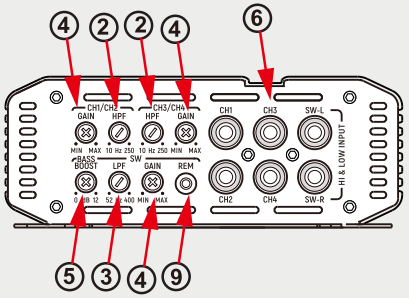
CVP2400.4
4 CHANNEL



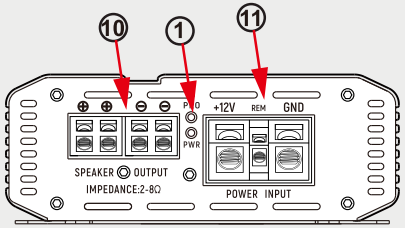


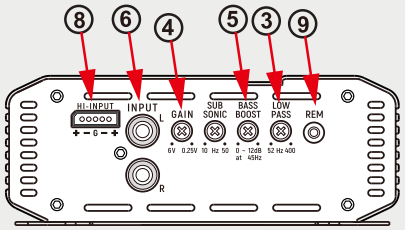
CVP2700.5
5 CHANNEL





CVP3600.1
MONOBLOCK





① **Status LED's** - These lights indicate when the amplifier is powered up (green) normally and when there is a protection fault (red). The Protect LED is laminated when there is a problem with your amplifier. Please contact your authorize CV dealer or call CV's technical support.

② **HPF Crossover Adjustment** - Use this adjustment to select the crossover point. Remember that you must adjust the High Pass position (HPF) as the HPF is ALWAYS engaged.
The HPF range is 52–400 Hz for CVP700.2, CVP1400.4, CVP2400.4, while CVP2700.5 have an HPF range of 10–250 Hz. And the HPF range is 10–50 Hz for CVP2400.1 and CVP3600.1.

③ **LPF Crossover Adjustment** - Use this adjustment to select the crossover point. Remember that you must adjust the Low Pass position (LPF) as the LPF is ALWAYS engaged.
The LPF limited between 52-400Hz.

④ **GAIN** - This control matches the preamp stage of the Cerwin Vega amplifier to your source unit. **This is NOT a volume control.** The range is between approx. 0.25V to 6V. Use a speaker to RCA adapter (NOT an LOC!).

⑤ **Bass Boost** - This control adds 0 to +12dB of boost at 45Hz. Be cautious when adding boost to some subwoofer systems as they may not be able to handle the additional low frequency boost. In the OdB position, no bass boost is added.

⑥ **RCA INPUT** - The RCA jacks allow for a normal Left and Right channel signal input. Both HI (speaker level) or LO (RCA's). Simply connect to the source unit using RCA type audio cables (twisted pair is recommended), or use speaker to RCA adapters. Make sure to keep them away from power wiring wherever possible to reduce risk of noise.

⑦ **XOVER** - This switch allows you to select the crossover function. HPF (High Pass Filter) LPF (Low Pass Filter) or FLAT(no filter), HPF is for filtering out bass for midrange/mid bass drivers. LPF is for filtering out hlgh frequencies for subwoofers.

⑧ **High-level input interface:** Specifically designed to receive analog audio signals from the vehicle's head unit with auto-turn on 4-8V.

⑨ **Remote Level Control** - This port is for the remote level control. The control is intended to allow the user to control the level of gain up to the maximum adjustment level set on the amplifier. The control does not add additional boost, it only attenuates the setting that is fixed at the amplifier's control panel.

⑩ **SPEAKER OUTPUT** - Connect your speakers to these terminals. Stereo connections are connected as labeled. Bridged connections use the LEFT + and RIGHT - as the two connections.

⑪ **POWER INPUT** - These connections are for input power, chassis ground, and remote turn-on. Use a minimum of 8 gauge wiring for power and ground connections. 4 Guage is recommended for the mono block. The terminals will handle up to 4 gauge wiring with no problem whatsoever. Be sure any wiring that passes through metal has a grommet! DO NOT USE CCA power/ground wire !!