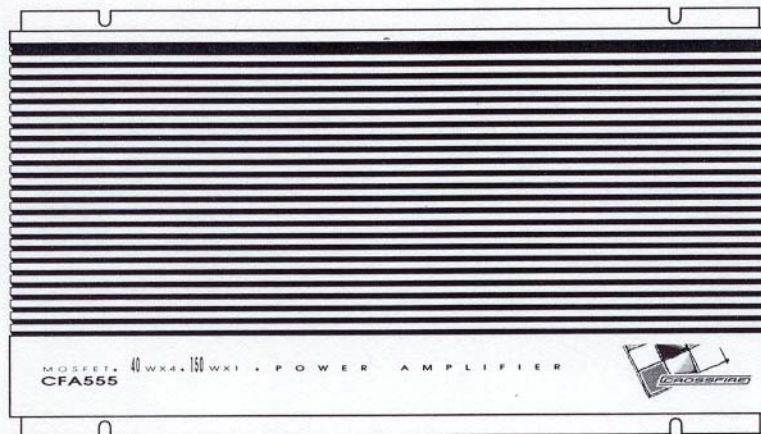


INSTALLATION MANUAL

MOSFET POWER

Amplifier



MODEL : CFA555

CROSSFIRE



Thank you and congratulations for choosing **CROSSFIRE** car audio for your amplification needs. **CROSSFIRE** amplifiers have been significantly improved throughout the years to assure quality and reliability. The latest in technology has been incorporated into every **CROSSFIRE** product providing you with incredible power and unparalleled sound quality. Our simple, yet highly developed circuitry contributes to low distortion and the ultimate in efficiency. This is why we are sure that your new **CROSSFIRE** amplifier will provide you with a sound value you will enjoy for years to come.

FEATURES

- Military Spec Audiophile Grade Components
- High Efficiency Mosfet Power Supplies
 - Multi-stranded power torroids
 - IRFZ44 MOSFET transistors
- Double Sided Circuit Board
- Oversized Capacitor Banks
- Wire Free PC Board Layouts
- Fully 2 Ohm Stable Stereo Operation
- Gold Plated Input and Output Connectors
- Electronic Crossover
- Simultaneous Mono/Stereo Operation Capability
- Port For Optional CFR-2 Bass Remote
- Internally Bridgeable
- 6 way Protection Circuitry
- Soft Remote On/Off Circuitry
- Two Year Limited Warranty

IMPORTANT

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION !

The quality of installation may affect the performance and reliability of your **CROSSFIRE** amplifier. Please take a few minutes to read the manual carefully. The time you spend on your installation will prove to be worthwhile when it's time to listen to your investment. Remember to heed all wire and fuse requirements suggested in this manual. Warranty may be void if proper installation technique is not used (refer to warranty section in the rear of this manual). If you have any doubts or questions regarding installation, you may wish to contact your authorized **CROSSFIRE** dealer or **CROSSFIRE** at 562-483-8111 for further assistance.

CFA555 SPECIFICATIONS

RMS Power @ 4 ohms	
front and rear channels	40 watts x 4
Subwoofer(mono) channel	150 watts x 1
RMS Power @ 2 ohms	
front and rear channels	70 watts x 4
Subwoofer(mono) channel	260 watts x 1
T.H.D.	0.08 %
Bandwidth	10 Hz to 38 KHz
Signal to noise Ratio	> 97dB
Damping Factor	
front and rear channels	> 200
subwoofer channel	> 310
Channel Separation	> 68 dB
Input Sensitivity	210 mV to 4.5 V
Input Impedance	20 Kohms
Fuse Requirements	2 x 30 amps
Dimensions	W: 17.5 in. H: 2.0 in. L: 9.5 in.
Crossovers	
Front	120 Hz or 180 Hz highpass, or full range
Rear	100 Hz or 150 Hz highpass, or full range
Subwoofer	70 Hz or 100 Hz lowpass, or full range

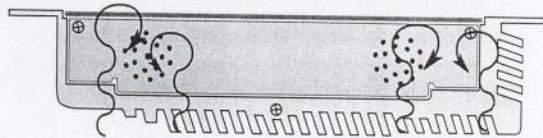
MOUNTING

Appropriate mounting of the CFA555 is very important for prolonged life expectancy. Select a location of applicable space that allows sufficient airflow and provides protection from moisture. Keep in mind that an amplifier should never be mounted upside down. Upside down mounting will compromise heat dissipation through the heatsinks and will engage the thermal protection circuit much sooner. Excessive heat will shorten your amplifier's life. To maximize heat dissipation, be sure to leave at least 2.5 inches of clearance around the amplifier. Fans should be used in correspondence with an escape duct for the heat when mounting in an enclosed or restricted area.

To avoid slipping and scratching your new **CROSSFIRE** amplifier, predrill your mounting holes with either a #29 or 9/64" diameter drillbit when using the screws supplied in the accessory kit. Be sure to investigate your mounting area thoroughly for electrical wires, vacuum lines, and brake or fuel lines to prevent any expensive mistakes.

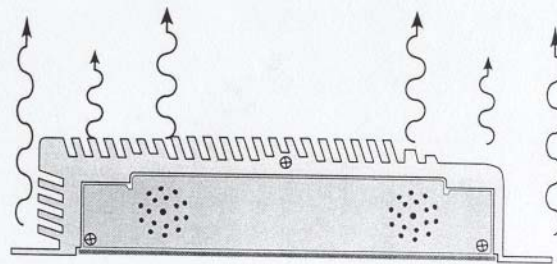
✗ INCORRECT MOUNTING

Heat is trapped inside if the amplifier, shortening the life of the electronic components.



○ CORRECT MOUNTING

Heat is lifted from the amplifier.



POWER SUPPLY CONNECTIONS

The **CROSSFIRE** CFA555 is designed to work within 9 to 16 volts DC. Before any wires are connected, the vehicle's electrical system should be checked for correct voltage supply with the help of a volt meter. First check the voltage at the battery terminals with the ignition in the off position. The volt meter should read no less than 12 volts. Next check the battery with the engine running between 1500 and 2000 rpms. The volt meter should now read between 13.5 and 14.5 volts. If your vehicle's electrical is not up to these specifications, we recommend having it checked by an automotive mechanic before you further the installation.

Once the vehicle is checked, proper wire size should be chosen. We recommend the 8 awg for lengths up to 14 feet and 4 awg for lengths up to 24 feet. If a longer length is needed, a larger gauge wire may need to be used.

POWER

Wire your **CROSSFIRE** CFA555 directly to the vehicle's battery using the wire requirements listed on page 4. Start at the amplifier and run the power wire through the vehicle to the battery. **CROSSFIRE** recommends the use of grommets when passing the power wire through any metal wall and to avoid sharp corners or sharp body parts which may easily cut through the insulation on the wire. Avoid running the power wire over engine components and near heater cores.

The use of an inline fuse will eliminate the risk of a fire caused by a short in your power wire. Connect the fuse holder as close to the battery positive as possible. Use a fuse of equal value as that found on the chassis of your **CROSSFIRE** amplifier. You may now connect the wire to the battery, but remember to leave the fuse out until all other wire connections are made.

GROUND

When grounding your **CROSSFIRE** CFA555 amplifier, locate a metal area close to the amplifier that is a good source of ground (preferably the floor). Once again, investigate the area you wish to use for electrical wires, vacuum lines, and brake or fuel lines.

Using either a wire brush or sandpaper, eliminate unwanted paint to supply a better contact for your ground. Use the same gauge wire for ground as you did for the power. Terminate the ground wire using the correct size ring terminal and attach it to the bare metal using a #8 sheet metal screw. It is important for this connection to be solid.

Complete the job, spread silicon over the screw and bare metal to prevent rust and moisture from entering the vehicle.

Now it's time to connect the power and ground wires to the amplifier. Cut the power and ground wires to the desired length. Using wire strippers, remove approximately 1/2" of insulation from the wire. Place the power and ground in the correct terminals. Tighten the set screw down securely. Double check their tightness by giving them a slight tug.

REMOTE

To the right of the +12 volt is a remote turn-on terminal. This terminal must be connected to a switched +12 volt source. Typically, remote turn-on leads are provided at the source unit which will turn on and off the amplifier in correspondence with the source. If a radio does not have a remote turn-on, then a power antenna wire may be used. Yet if neither of these leads are available at the source, a switched +12 volt supply must be used.

Run a minimum of 18 gauge wire from CFA555 to the source of the switched +12 volt lead. If possible, route this wire on the same side of the vehicle as your power wire. Connect the remote output of the source to the wire. Go back to the amplifier and cut the wire to length.

Remove approximately 1/2" of insulation from the remote turn-on wire using wire strippers. Insert into the terminal marked **REM** and tighten the set screw securely.

SIGNAL CONNECTIONS

INPUT SELECT

Between the rear output and the sub inputs you will find a switch marked input select. This switch lets you control the input section of the subwoofer. Selecting INT or internal, the CFA555 will only accept input into the front and rear and internally sum both inputs for the subwoofer. This means you no longer need to supply the sub inputs with signal. Use INT when connecting the source unit directly to the amplifier. Choosing EXT or external, the CFA555 requires all inputs to be used. This setting is useful when external electronic crossovers are used. Refer to system diagrams.

INPUTS

Choose the correct length and style of RCA patch cables for your needs. Better RCA's have either multiple layers of shielding or twisted pair wiring and gold plated terminals for better noise rejection and outstanding contact (consult your dealer).

Be extra careful when running your RCA patch cables. Car environments are notorious for poorly insulated wires. This means that hiss, engine noise, and fan noise can easily be picked up through RCA cables if ran incorrectly. As a precaution, avoid placing your RCA's near large wire looms and electric fans. Be sure to run your patch cables on the opposite side of the vehicle as you did the power wire. Double check for correct balance (red is right and black or white is left) when connection the RCA's to both the source unit and the CFA555.

SPEAKER OUTPUT

OPERATION

The **CROSSFIRE** CFA555 is a five channel amplifier; 40 watts into each of the front and rear channels and 150 watts into the subwoofer channel at 4 ohms. You may also configure this amplifier to operate in 4 channel mode or 3 channel mode by bridging the front and/or rear channels. Choose the best mode that suits your needs (refer to system diagrams).

LOAD

Keep in mind **CROSSFIRE** CFA555 is a high power amplifier and not high current amplifier. In other words impedance levels of no less than 2 ohms at all 5 channels must be maintained to operate trouble free. If bridging the front or rear channels you

must maintain a minimum of 4 ohms. Too low of an impedance will send your **CROSSFIRE** amplifier into protect mode and possibly damage it. So remember to check your speaker's impedance ratings before connecting them.

WIRING

Choose the correct speaker wire for your application. Most applications will require a minimum of 16 gauge. Route these wires using the same precautions as you did when you ran the power wires. Terminate these wires at the speaker end using insulated speaker terminals (not supplied) or by soldering the connection. Make sure the speaker connections are positive to positive and negative to negative. At the amplifier end, cut the wire to the desired length. Use wire strippers to remove approximately 1/2" of insulation from the wire. With a phillips screwdriver, loosen the set screws on the amplifier. Slide the speaker wires into the correct terminals and tighten the screws securely. Check to make sure you've maintained proper polarity and balance.

CROSSOVERS

CROSSFIRE eliminated the need for external crossovers (in most systems) by adding a two way, front and rear, electronic crossover. These crossovers may be set to the following:

Front highpass filter (HPF)	120 Hz, 180 Hz, or FULL
Rear highpass filter (HPF)	100 Hz, 150 Hz, or FULL
Subwoofer lowpass filter (LPF)	70 Hz, 100 Hz, or FULL

If your System design requires the use of an external crossover, set the crossover switch to FULL on each section.

GAIN CONTROL

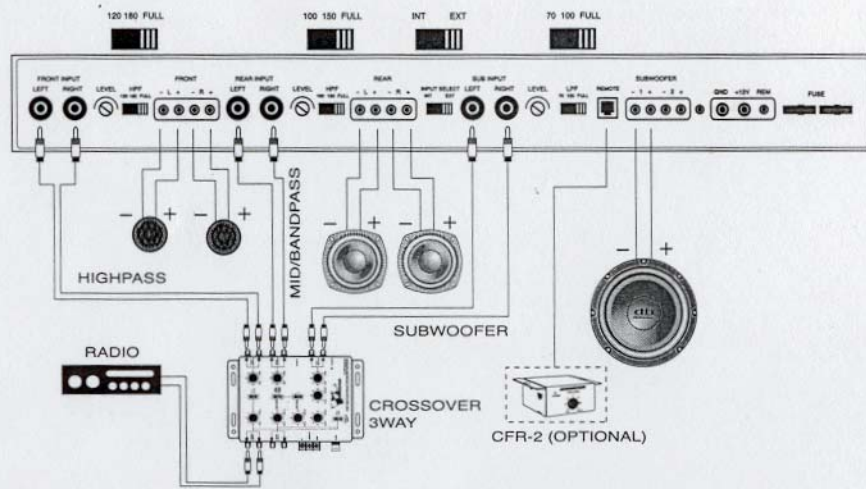
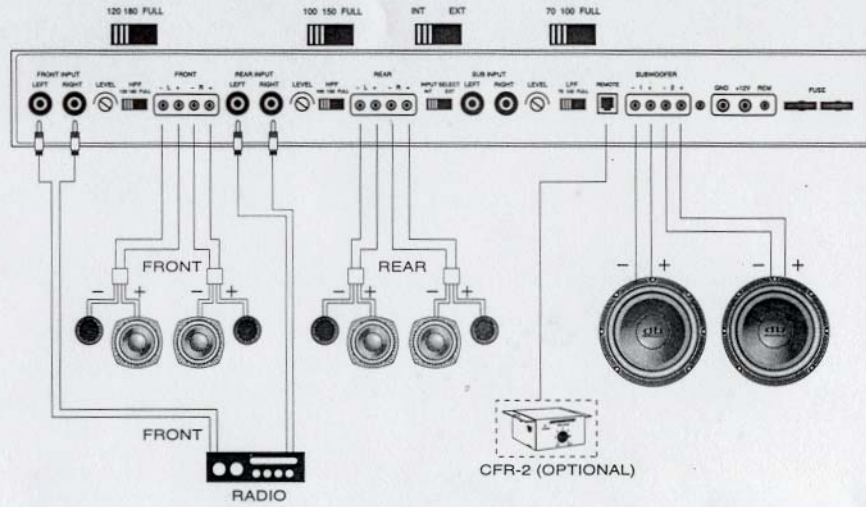
Now that you have finish all of the wiring, It's time to insert the fuses and start adjusting the level controls.

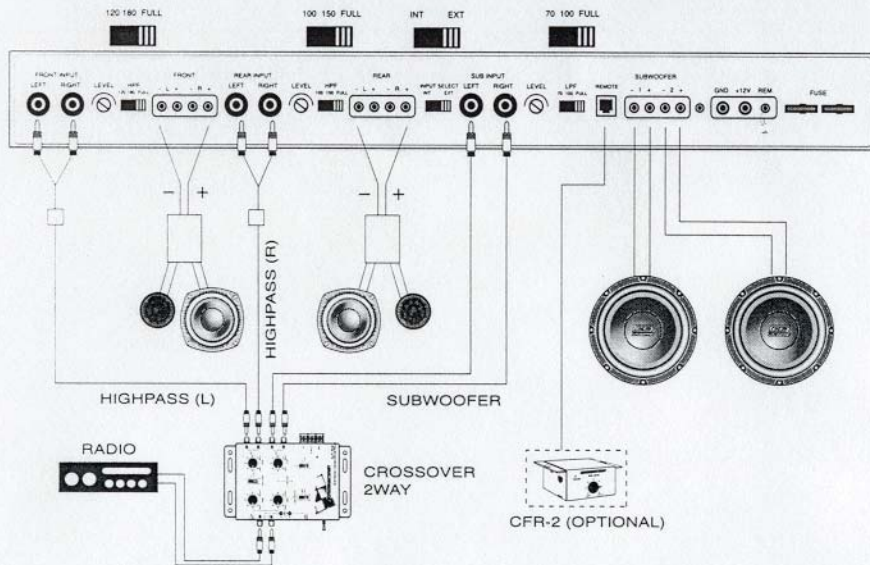
Next to the inputs are the level controls, also known as gain controls. These controls allows you to match the input level of the amplifier to the output level of your source unit. Matching the input can be accomplished in three simple steps:

1. Turn gain controls all the way down.
2. Turn on the source unit and adjust to 2/3 of max. volume.
3. Adjust each the gain control until desired volume is achieved without audible distortion

Remember, the gain control is not a volume knob. Ignoring the three steps above may leave you with damaged speakers and possibly a damaged amplifier.

SYSTEM DIAGRAMS





CROSSFIRE CFR-2 REMOTE BASS LEVEL CONTROL

Is the bass in your vehicle not adequate for some of the music you listen to? Would you like to have more control, say from the front seat of your vehicle? Well then, we've the answer for you--the optional CFR-2 remote bass level control designed especially for the CFA555 amplifier.

The CFR-2 comes in a small metal casing and includes a 18 ft. cables so you can easily mount the unit under the dash and have complete control over your subwoofers. The LED illuminates when the system is in the on position so it easily be located at night. All this and an installation time of approximately fifteen minutes.

Connecting the CFR-2 is easy. This kit is designed to be mounted under the dash, in the center console, or maybe you would prefer it in the glove box. Use the CFR-2 as a template and drill two 1/8" holes for mounting. Use the screws supplied in the kit to mount the unit. After mounting the CFR-2, run the twenty foot section of cables to the CFA555. Plug this end into the port labeled "remote." Turn the lowpass level control on the CFA555 up just a little for more bass control. Now your finished.

Enjoy the music!



CROSSFIRE LIMITED WARRANTY

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This Warranty is only valid on **CROSSFIRE** products purchased in the U.S.A. from an authorized **CROSSFIRE** dealer.

All **CROSSFIRE** products are warranted to be free from defects in materials and workmanship under normal use and serviced for a period of (2) years when the unit is installed by an authorized **CROSSFIRE** dealer.

Non-authorized dealer installed products carry a (1) year parts and labor limited warranty.

The extent and conditions of **CROSSFIRE**'s limited warranty are as follow:

I. **CROSSFIRE** will either repair or replace (at its option) any unit which **CROSSFIRE** has examined and found to be defective and under warranty, to the original purchaser, provided the defect occurs within (2) years of the date of purchase when the unit is installed by an authorized **CROSSFIRE** dealer. This warranty includes both parts and labor and applies to the original purchaser only.

II. **CROSSFIRE** will either repair or replace (at its option) any unit which **CROSSFIRE** has examined and found to be defective and under warranty, to the original purchaser, provided the defect occurs within (1) year of the date of purchase when the unit is installed by a non-authorized **CROSSFIRE** dealer. This warranty includes both parts and labor and applies to the original purchaser only.

III. This warranty will be void to any unit found with the original factory serial number removed, altered or defaced. All units received by **CROSSFIRE** for warranty with their original serial numbers removed will not be repaired and returned to sender freight collect.

IV. The provisions of this warranty shall not apply to products used for any industrial, professional or commercial purpose or any other uses for which it was not designed.

V. This warranty does not cover costs for removal of product for repair or reinstallation of the product after repair, nor does it cover the cost of returning the product to **CROSSFIRE**'s service center for repair.

VI. This warranty does not apply to repairs or replacements necessitated by any cause beyond the control of **CROSSFIRE** including, but not limited to, any malfunction, defect or failure caused by or resulting from unauthorized service or parts, improper maintenance, operation contrary to furnished instructions, shipping or transit accidents, incorrect power line voltages, fire, flood or any other acts of nature, or normal wear and tear.

VII. The foregoing is in lieu of all other expressed warranties and **CROSSFIRE** does not assume or authorize any party to assume for it any other obligation or liability. The duration of any warranties which may be implied by law (including the warranties of merchantability and fitness) is limited to the term of this warranty. In no event shall **CROSSFIRE** be liable for special, incidental or consequential damages arising from obligations under this warranty due to cause beyond its control. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusions or limitation of consequential damages, so the above limitations and exclusions may not apply to you.

VIII. Return Policy

Your unit will be serviced free of charges on an in-warranty basis only. If improper operation occurs, contact your authorized **CROSSFIRE** dealer for assistance with the return and factory repair of your **CROSSFIRE** product. If an authorized **CROSSFIRE** dealer is not available, the following procedure must be followed: phone (562-483-8111) or fax (562-483-8106) in your name, address, telephone number and the model number of the item to be returned to receive a return authorization number. Your return authorization number must be clearly written on the outside of the packing box returned to **CROSSFIRE**. All returned products must be accompanied by a dated purchase invoice or the product may be subject to costs of parts and labor. Return the unit, prepaid postage, in the original protective carton or a carton with ample protection. Please include a brief description of the problem and send your repair to: **CROSSFIRE**

12737 Moore Street,
Cerritos, CA 90703