



VFL-COMP 20K
VFL-COMP 22K



HIGH PERFORMANCE AMPLIFIER

1. INTRODUCTION

Thanks you for purchasing VFL Audio amplifiers for your car audio system.

VFL Audio amplifiers are engineered and manufactured to ensure the years of uncompromised musical enjoyment, high performance and reliability.

VFL Audio amplifiers are high power audio amplifiers, so very loud music can cause hearing loss and intended for using in vehicles with 12 Volt, Negative ground electrical systems.

Attempting to connect or operate the amplifiers in another type of electrical system may cause damage to the amplifier or the electrical system.

If you would like to install the amplifiers by yourself, Please carefully read whole manual and follow.

2. FEATURES

High Power SPL Competition 1 ohm Stable D Class Mono-Block Amplifier

Low Level Input & Output

Frequency Response : 10Hz - 250Hz

Input Level : 0.2V - 6V

Variable Subsonic Filter : 10Hz - 50Hz at 24dB/Oct

Variable Low Pass Filter : 35Hz - 250Hz at 24dB / oct

Variable Bass Boost : 0 - 9dB at 45 Hz

Variable Phase shift : 0 - 180 degree.

Remote gain controller

Output master / Input slave strapping connection

Fuse Rating :

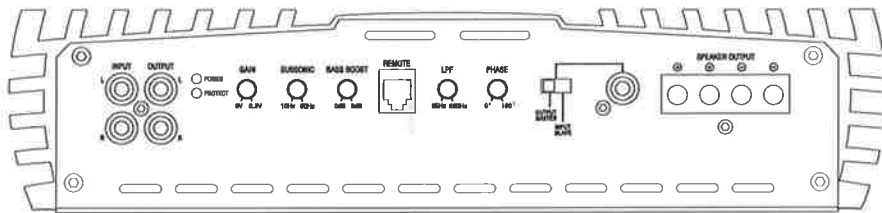
VFL-COMP 20K : 1000A - Linked Fuse Rate : 2000A

VFL-COMP 22K : 1000A - Linked Fuse Rate : 2000A

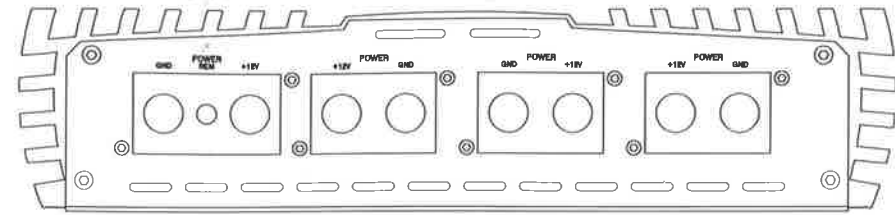
Working battery voltage : VFL-COMP 20K - 12V, VFL-COMP 22K-12V : 8.5V - 16Volts.

VFL-COMP 20K - 18V : 8.5V - 18Volts

3. Connections, Inputs & Controls



- | | |
|--|---|
| 1. Input Rca Jack L/R | 7. Bass Boost (0 - 9dB at 45Hz) |
| 2. Output Rca Jack L/R | 8. Remote Control Port |
| 3. Power Indicator (Green) | 9. Low Pass Filter (35Hz - 250Hz at 24dB/Oct) |
| 4. Protection Indicator (RED) | 10. Phase Shift (0 - 180 degree) |
| 5. Gain Control (6V - 0.2V) | 11. Output Master / Input Slave Connector |
| 6. Subsonic Filter (10Hz - 50Hz at 24dB/Oct) | 12. Speaker terminal. |



13. Power Terminals (+12V and Ground) - 0ga

14. Remote terminal

4. INSTALLATION

It is important that you read this manual very carefully and follow it for your installation. Before starting the installation, Please take it all consideration.

4-1. Disconnect Negative (-) battery cable before mounting the amplifier or making any connections. Check the battery and alternator Ground (-) connections.

4-2. Before selecting a mounting location, Please consider cooling efficiency and safety. VFL Audio amplifiers use heavy-duty and good heat radiation cosmetic design for avoiding excessive thermal from amplifier circuitry.

For better heat radiation performance, it is good to find the mounting location where you can install amplifiers vertically with the heatsink fins and better airflow.

For the safety, you have to find dry and well ventilated location and make sure any cables and car equipment are not interfaced with amplifier installation.

Be sure the mounting location and drilling of pilot cables will not present a hazard to any wires, control cables, fuel lines/tanks, hydraulic lines or other vehicle systems and components.

4-3. POWER CONNECTION (+12V)

Before installing amplifiers, disconnect the Negative (-) wires from battery to protect any accidental damage to your amplifiers and system.

VFL-COMP 20K & VFL-COMP 22K are designed to use 0 gauge power and ground cables and not equipped with the fuses so that you should use external fuses.

You have to connect the fuses on the power cable one end of the fuse holder and the other end of the fuse holder to the positive (+) battery within 20 cm.

Connect power cable to the amplifier power terminal labeled as +12V

The fuse will protect the audio system and vehicle against the possibility of a short circuit in the power cable. Be sure to use Fuses and Fuse Holder adequate for the application

4-4. GROUND CONNECTION (GND)

Locate a secure grounding connection as close to the amplifiers as possible.

Make sure the location is clean and provides a direct electrical connection to the vehicle's frame.

Connect one end of a short piece of the same size cable as the power cable to the ground point.

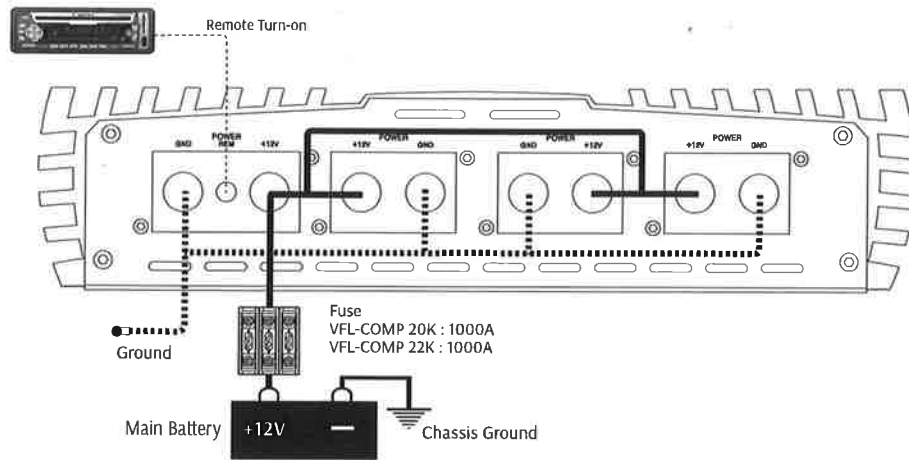
Run the other end of the cable to the amplifier mounting location.

Connect the ground cable to the screw terminal labeled as GND.

4-5. REMOTE CONNECTION (REM)

Run a remote turn on cable from the switched +12V source. you will be using to turn on the system components. This may be a toggle switch, a relay or head-unit's remote trigger wire or power antenna wire. Connect the remote turn on cable to the power terminal labeled as REM. Run this lead to the amplifier mounting location. Use 12 gauge wire or larger.

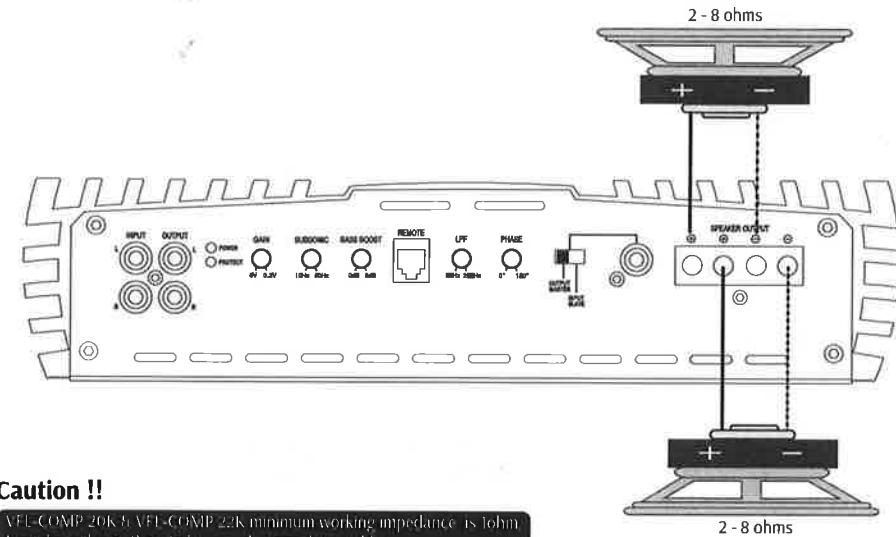
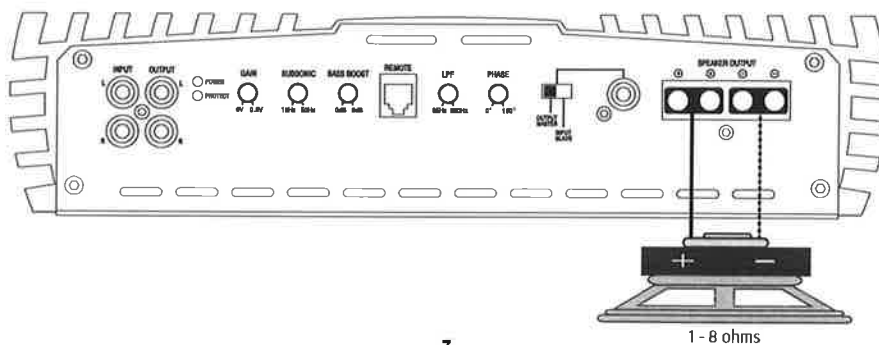
+12V, GROUND & REMOTE CONNECTION DIAGRAM



4-6. SPEAKER CONNECTIONS.

VFL Audio is recommended to use minimum 12 gauge speaker cables. Run 12 gauge speaker wires from speakers to amplifiers mounting location. Keep speaker wires away from power cables and amplifiers' input cables. Use grommets anywhere the wires pass through the holes in the metal frame or sheet metal. Connect to the speakers to the terminals on each speakers. Strip 3/8" of insulation on end of each wire and twist the wire strands together tightly. Make sure there are no stray strands that might touch other wires or terminals and cause a short circuit. Crimp spade lugs over the wires' ends or tin the ends with solder to provide a secure termination. Connect the wires' ends to amplifiers as speaker system diagram.

SPEAKER CONNECTION DIAGRAMS



Caution !!

VFL-COMP 20K & VFL-COMP 22K minimum working impedance is 1ohm. Impedance lower than 1 ohm can damage the amplifier.

5. VFL-COMP 20K & VFL-COMP 22K LINK CONNECTION.

VFL Audio amplifiers' link connection makes 2 pcs of VFL Audio amplifiers linkable to 2ohm and doubles the power of single VFL Audio amplifiers' 1 ohm power. Single unit of VFL Audio amplifier minimum working impedance is 1 ohm. Link connection of 2 pcs of VFL Audio amplifier minimum working impedance is 2 ohm. Please read the following connection steps and diagram carefully to make the correct connection.

5-1. FUNCTIONAL SIDE CONTROL CONNECTION.

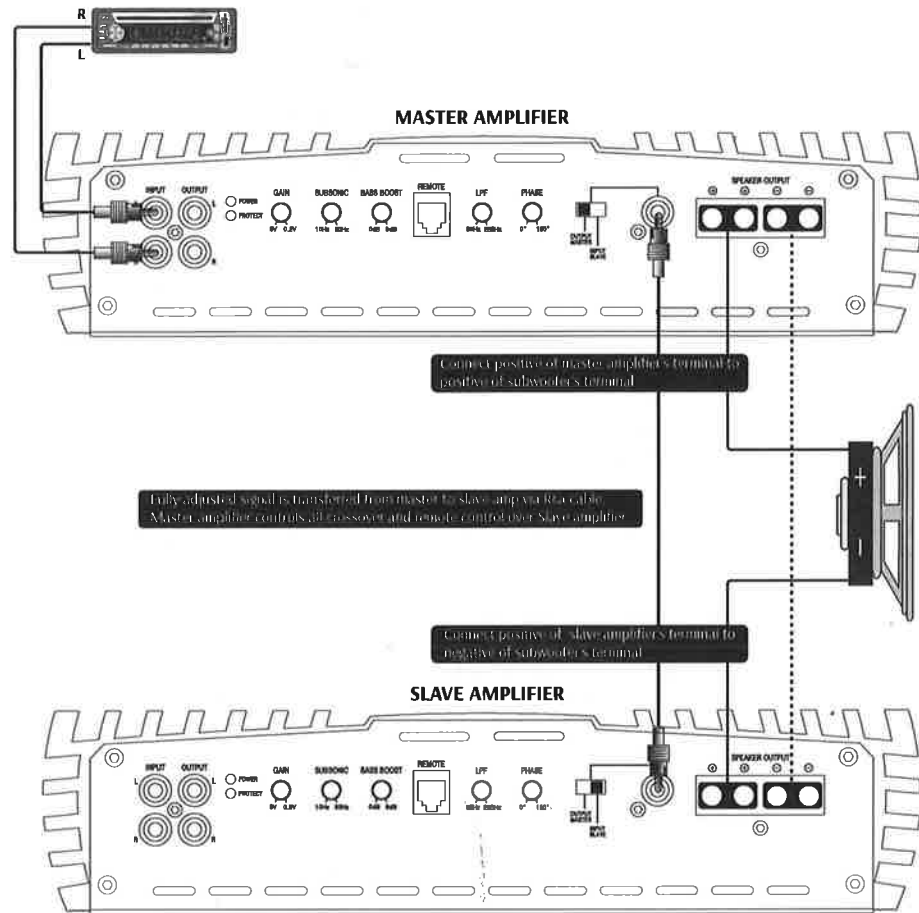
MASTER AMPLIFIER : VFL Audio amplifier connected from headunit is called as master amplifier.
SLAVE AMPLIFIER : VFL Audio amplifier connected to master amplifier is called as slave amplifier

Step 1. Connect headunit to master VFL Audio amplifier's input and set master VFL Audio amplifier's output master / input slave selector switch to OUTPUT MASTER position.
Step 2. Set slave VFL Audio amplifier's output master / input slave selector switch to INPUT SLAVE position.
Step 3. Connect Rca cable from master VFL Audio amplifier's output master / input slave rca jack to slave VFL Audio amplifier's rca jack as below diagram.

5-2. SPEAKER CONNECTION.

Step 1. Connect speaker cable (+) of master VFL Audio amplifier to subwoofer's (+) terminal
Step 2. Connect speaker cable (+) of slave VFL Audio amplifier to subwoofer's (-) terminal.
Step 3. Connect speaker cable (-) of master VFL Audio amplifier to speaker cable (-) of slave VFL Audio amplifier.

LINK CONNECTION DIAGRAMS



Caution !!

In linked connection,
Minimum working impedance is 2ohm.
Impedance lower than 2ohm can damage the amplifiers.

⚠ CAUTION !!

Working Voltage,
VFL-COMP 20K - 12V & VFL-COMP 22K - 12V : 8.5V - 16Volts.
VFL-COMP 20K - 18V : 8.5V - 18Volts.

6. TROUBLE SHOOTINGS

NO OUTPUT

- 1) Check Remote turn-on voltage at amplifier and head-unit, when remote turn-on voltage is low or no turn-on voltage, there is no sound.
- 2) Check fuses at the battery side or external fuses and all wire connections.
- 3) Check RCA Input is properly connected.

PROTECTION

- 1) Pls check Power, GND and Remote wire connection and other wires properly connected.
- 2) When DC over 4 V come into amplifier, it is DC protected, Check whether amplifier works after removing RCA-Input. If amplifier work, then check DC by checking RCA-input. When DC is over 4V at input, try by replacing head-unit or source.
- 3) When amplifier is over-heated, it goes into the thermal protection. But amplifier will be turned on in some minutes later after cooling down. Please install amplifier in better ventilation and make it cool.
- 4) VFL-COMP 20K & VFL-COMP 22K has minimum working impedance as 1 ohm as single unit. Linkable use is 2 ohm. Make sure the impedance
- 5) VFL-COMP 20K-12V & VFL-COMP 22K-12V have low and high voltage protection as 8.5V - 16Volts. VFL-COMP 20K-18V has low and high voltage protection as 8.5V - 18Volts. Tolerance will be as +/- 0.2V.
- 6) Make sure Chassis and Remote use same Ground

DISTORTION & NOISE

- 1) Pls readjust amplifier input level which is printed on endplate
- 2) Make sure good ground contact of amplifier or head-unit
- 3) Use sufficiently shielded RCA interconnects and good RCA Routing
- 4) Check all ground connections of all other audio components

POOR BASS RESPONSE

- 1) Check speaker wiring and reverse polarity

