

VFL-COMP 1K
VFL-COMP 2K
VFL-COMP 2.5K
VFL-COMP 3K
VFL-COMP 4K
VFL-COMP 5K
VFL-COMP 6K
VFL-COMP 8K
VFL-350.4

High Performance Digital Amplifier

I. 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 like to install the amplifiers by your self, Pls carefully read whole manual and follow.

2. FEATURES

2-1 DIGITAL MONOBLOCK

1 ohm stable D Class Mono-Block amplifier

Low Level Input & Output

Frequency Response : 20Hz - 350Hz

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

Remote gain controller

Two Amplifiers linkable connector & selector

Fuse Rating :

VFL-COMP 1K : 30A X 3 - Linked fuse : 180A, VFL-COMP 2K : 150A - Linked fuse : 300A

VFL-COMP 2.5K : 150A - Linked fuse : 300A VFL-COMP 3K : 200A - Linked fuse : 400A,

VFL-COMP 4K : 350A - Linked fuse : 700A VFL-COMP 5K : 400A - Linked fuse : 800A,

VFL-COMP 6K : 450A - Linked fuse : 900A VFL-COMP 8K : 700A - Linked fuse : 1400A

Working battery voltage (8.5V - 16V) : VFL-COMP 1K, VFL-COMP 2K, VFL-COMP 2.5K, VFL-COMP 3K.

Working battery voltage (8.5V - 18V) : VFL-COMP 4K, VFL-COMP 5K, VFL-COMP 6K, VFL-COMP 8K

2-2 VFL-350.4 4CHANNEL CLASS AB

High Power 4 Channel Full Range Amplifier

RMS Power at 4ohm : 175W x 4ch

RMS Power at 2ohm : 250W x 4ch

RMS Power at 4ohm mono : 500W x 2ch

Frequency Response : 20Hz ~ 20KHz

Dmapping Factor : 300 <

Signal to Noise Ratio : 105dB

Input Level : 6V ~ 0.2V

Variable High Pass Filter : 10Hz ~ 300Hz

X-over Selector : HP / FULL / BPF (Band Pass works)

Variable Low Pass Filter : 30Hz ~ 300Hz

Fuse Rating : 140A external fuses

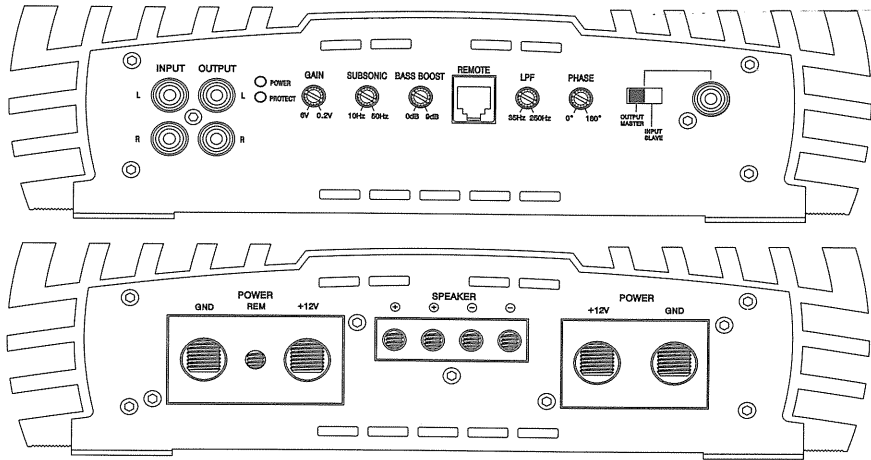
FR-4 double sided printed circuit board

High quality Mold type power / speaker terminal

This specification can be changed for better performing improvement without notice.

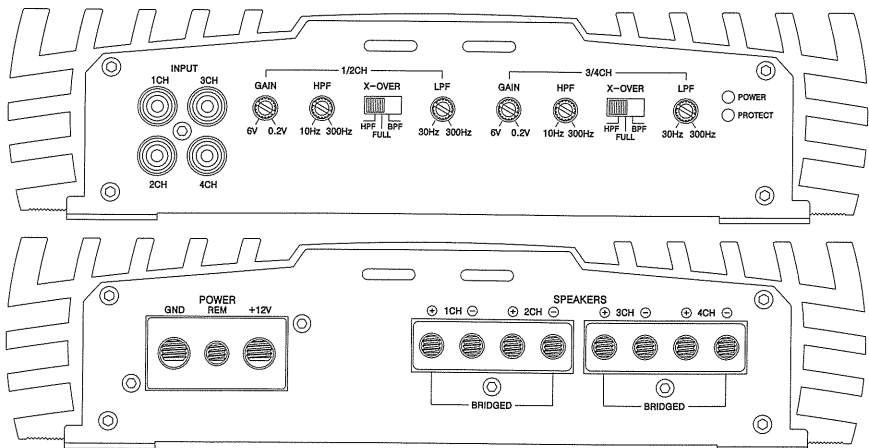
3. Connections, Inputs & Controls

3-1. DIGITAL MONOBLOCK End Plate Diagram



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

3-2. VFL-350.4 4CHANNEL



- I. Input Rca Jack L/R
- 2. Gain Control (6V ~ 0.2V)
- 3. High Pass Filter : 10Hz ~ 300Hz
- 4. X-over Selector : HPF / FULL / BPF
- 5. Low Pass Filter : 30Hz ~ 300Hz
- 6. Power / protect Indicator
- 7. Power Terminals (+12V and Ground)
- 8. Remote terminal
- 9. Speaker 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 into 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 wires 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 1K & VFL-350.4 are designed to use 4 gauge power cables and equipped with the fuses.

VFL-COMP 2K, VFL-COMP 2.5K, VFL-COMP 3K, VFL-COMP 4K, VFL-COMP 5K, VFL-COMP 6K & VFL-COMP 8K are designed to use 0 gauge power cables and not equipped with the fuses, so you should use external fuses.

So you have to connect the fuse 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.

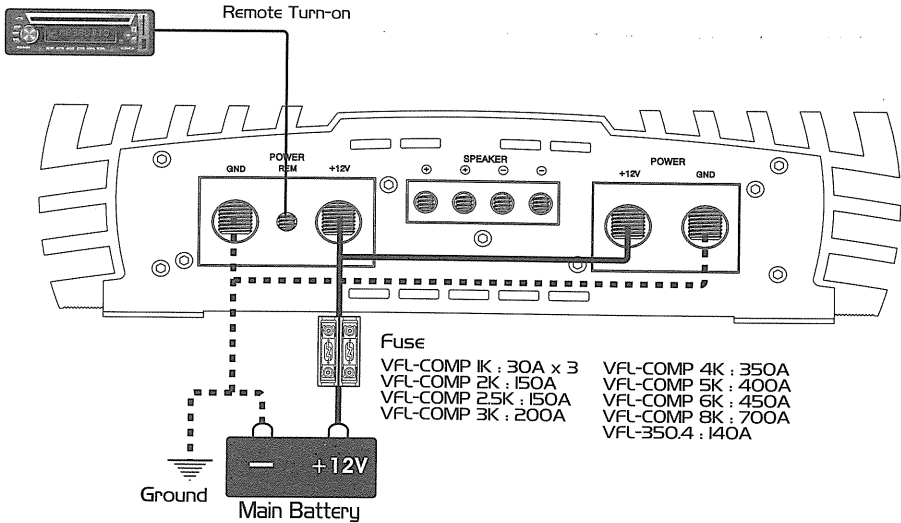
4-5. REMOTE CONNECTION (REM)

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.

POWER, GROUND & REMOTE CONNECTION DIAGRAM



4-6. SPEAKER CONNECTION

VFL Audio amplifiers are recommended to use minimum 12 gauge speaker cables.

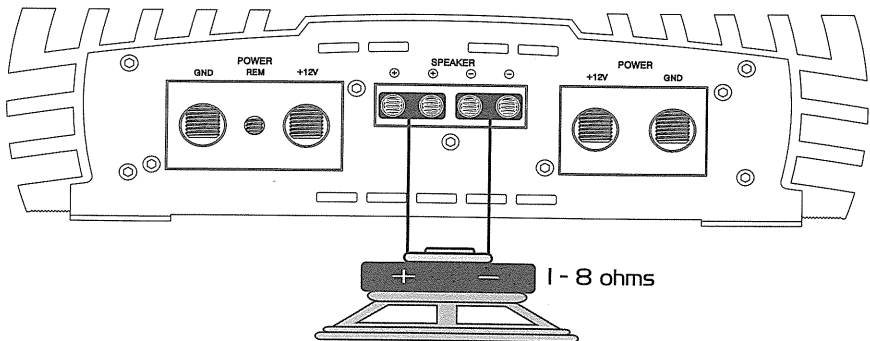
Run 12 gauge speaker wires from speakers to amplifiers mounting location. Keep speaker wires away from power cables and amps' input cables

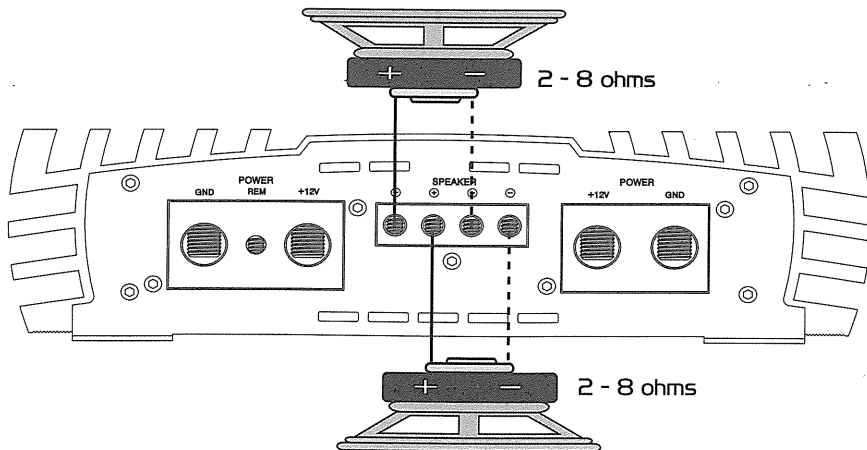
Use grommets anywhere the wires pass through the holes in the metal frame or sheet metal. Connect to the speakers to the terminals on each speakers.

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





5. VFL AUDIO AMPLIFIERS CONNECTIONS

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

5-1. FUNCTIONAL SIDE CONNECTION.

MASTER AMPLIFIER : VFL Audio amplifier connected from headunit is master amplifier.

SLAVE AMPLIFIER : VFL Audio amplifier connected to master amplifier is slave amplifier

Step 1. Connect headunit to master amplifier's input and set master amplifier's output master / input slave selector switch to **OUTPUT MASTER** position.

Step 2. Set slave amplifier's output master / input slave selector switch to **INPUT SLAVE** position.

Step 3. Connect Rca cable from master amplifier's output master / input slave rca jack to slave amplifier's rca jack as below diagram.

5-2. SPEAKER CONNECTION.

Step 1. Connect speaker cable (+) of master amplifier to subwoofer's (+) terminal

Step 2. Connect speaker cable (+) of slave amplifier to subwoofer's () terminal.

Step 3. Connect speaker cable (-) of master amplifier to speaker cable (-) of slave amplifier.

CAUTION !!

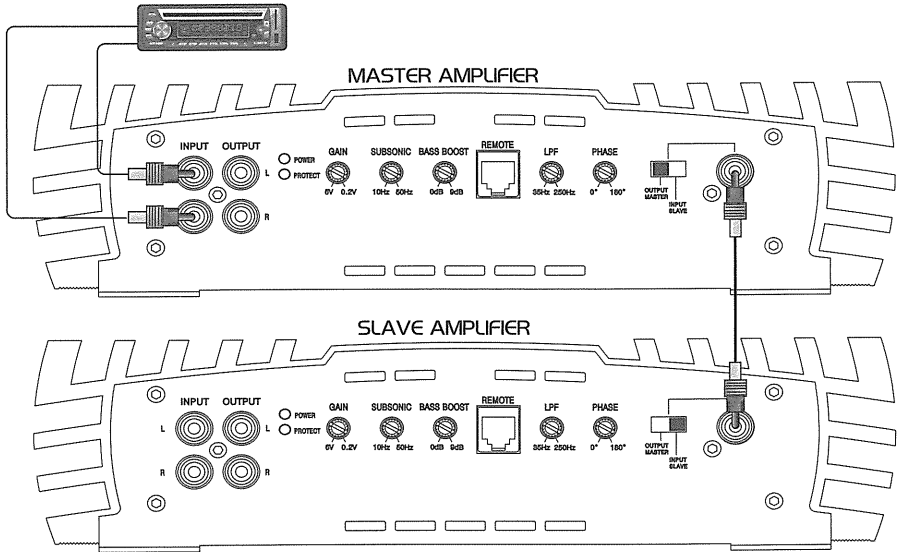
Daisy chain connection minimum impedance is 2 ohm.

Do not use daisy chain connection in 1 ohm.

VFL-COMP 1K, VFL-COMP 2K, VFL-COMP 2.5K & VFL-COMP 3K working voltage is 8.5V - 16V.

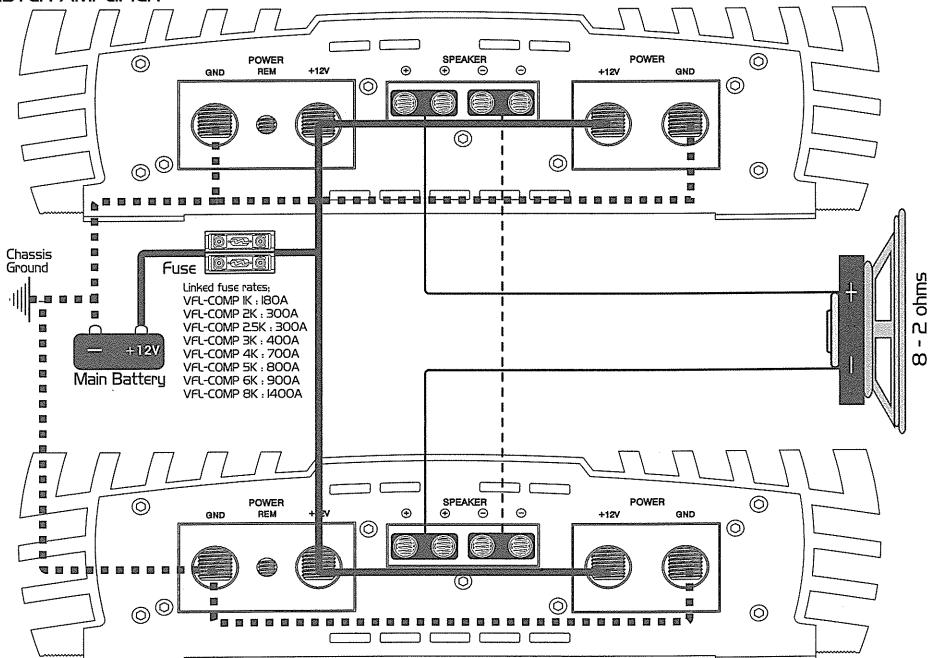
VFL-COMP 4K, VFL-COMP 5K, VFL-COMP 6K & VFL-COMP 8K working voltage is 8.5V - 18V.

DAISY CHAIN CONNECTION DIAGRAMS I



DAISY CHAIN CONNECTION DIAGRAMS II

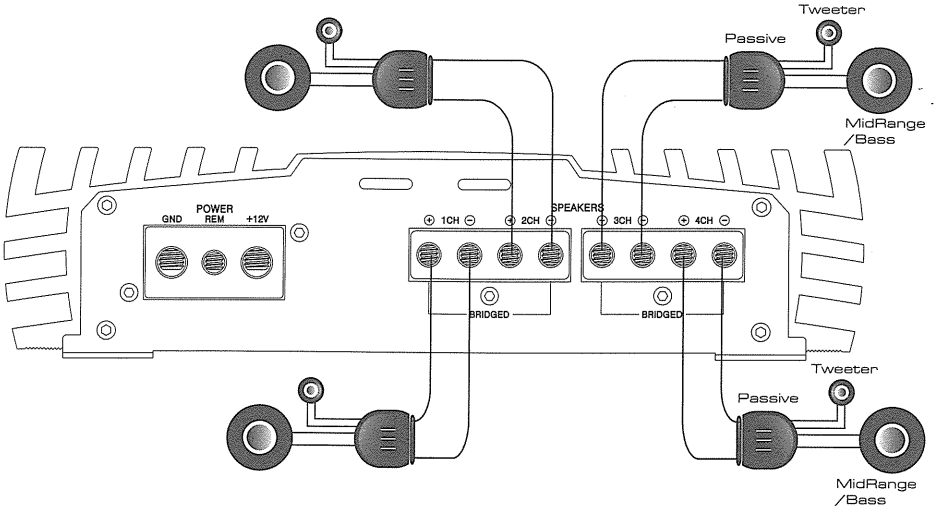
MASTER AMPLIFIER



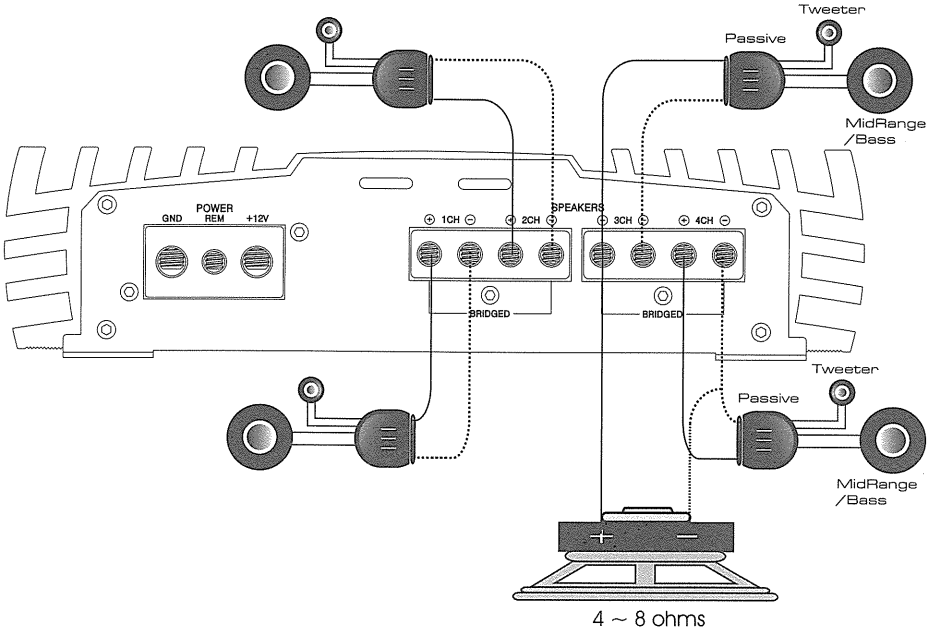
SLAVE AMPLIFIER

5-3. VFL-350.4 SPEAKER CONENCTION

VFL 350.4 SPEAKER CONNECTION 4CH MODE.



VFL 350.4 SPEAKER CONNECTION 5CH MODE.



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, Amplifier 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, Amplifier 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 1K, VFL-COMP 2K, VFL-COMP 2.5K, VFL-COMP 3K, VFL-COMP 4K, VFL-COMP 5K, VFL-COMP 6K & VFL-COMP 8K have minimum working impedance as 1 ohm as single unit. Linkable use is 2 ohm. Make sure the impedance
VFL-350.4 has minimum working impedance is 2ohm stereo or 4ohm mono.
- 5) VFL-COMP 1K, VFL-COMP 2K, VFL-COMP 2.5K, VFL-COMP 3K & VFL-350.4 have voltage protection circuit at low and high voltage as 8.5V - 16V.
VFL-COMP 4K, VFL-COMP 5K, VFL-COMP 6K & VFL-COMP 8K has low and high voltage protection as 8.5V - 18V.
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 Rounting
- 4) Check all ground connections of all other audio components

POOR BASS RESPONSE

- 1) Check speaker wiring and reverse polarity

