Owner's Manual

DIGITAL DESIGNS
TRUE TO THE SOURCE

A1
A2
A4

DIGITAL DESIGNS A SERIES CLASS AB AMPLIFIER

Thanks you for purchasing Digital Designs amplifiers for your car audio systems using 12 Volts negative ground power supply.
Digital Designs has introduced our new A series line of the products
These products are single purpose designs with the sole goal of being the best tool for the job. No cutbacks and No wimps
Digital Designs Amplifiers are engineered and manufactured to ensure years of uncompomised musical enjoyment, high performance and reliability.
The high efficiency comes from paying close attention to every stage through the amplifiers' circuit.
High speed controller chipsets, efficient power devices,precise thermal management and best engineerings are the key to the A series design.

INDEX

1. FEATURES

2 ohm Stable Class AB Amplifier	
Frequency Response	:20Hz ~ 20KHz
Signal to Noise Ratio	: 100 <
Input Sensitivity	: 8V ~ 0.2V
High pass Crossover	: 12dB / Oct
High Pass Crossover Range	: 20Hz ~ 5KHz
High Pass Crossover Selector	: on / off
Low pass Crossover	: 12dB / Oct
Low Pass Crossover Range	: 50Hz ~ 5KHz
Low Pass Crossover Selector	: on / off
Clipping Indicator	: Yes
Mold type power, speaker terminal	: Yes
Fuse Rating	: A1 : 25A x 1 : A2 : 25A x 2 : A4 : 25A x 2

A Series Output Power

	Total Max Power
A1	800W
A2	1000W
A4	1600W

All features are subject to change in the continuing effort to imporve the products without notice

2. DESIGN FEATURES

* A series Amplifiers are working fully stable down to 4/2 ohm in Stereo Mode or 4 ohm mono in Mono mode

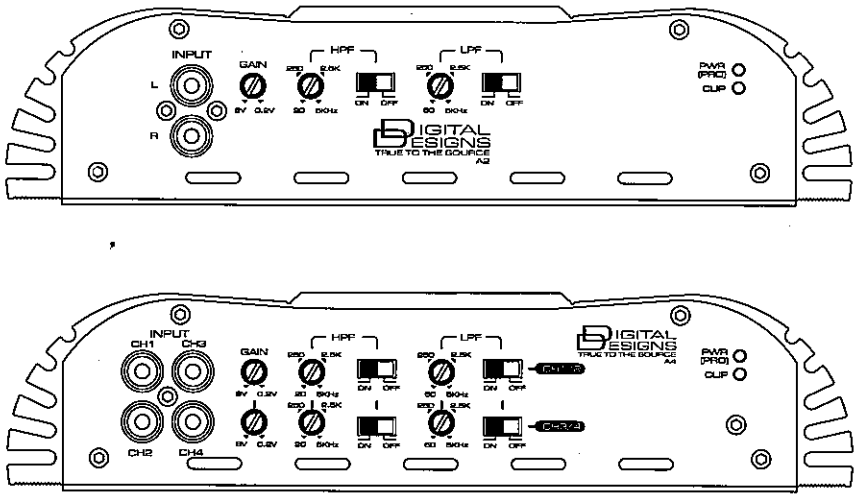
* A series amplifiers haev the possible highest performance and sufficient amount of the parts to maximize the performance and sound quality

* A series have 4 ways of acurate protection circuit, as speaker short, DC offset, Voltage and Thermal protection which are the most safe-guard.

* A series haev 12dB / Oct slope of crossover, High Pass Filter and Low Pass Filter as fully adjustable.

3. CONTROL & CONNECTION

3-1 CONTROL



INPUT
Connect preamp signal cables from the headunit to A series amplifier RCA input.

GAIN
Matching the output voltage of the headunit's RCA line-outs to A series input section.
Its range is 8V to 0.2V.

HPF CROSSOVER FREQUENCY
Controls the high pass point for the speaker outputs. The crossover range is 20~5KHz @ 12dB/Oct Slope

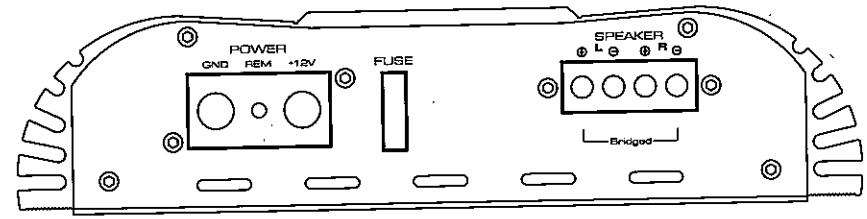
HPF CROSSOVER SELECTOR
When used for Stereo mode, It is switched to on posititon, for Mono use, It is set to off position

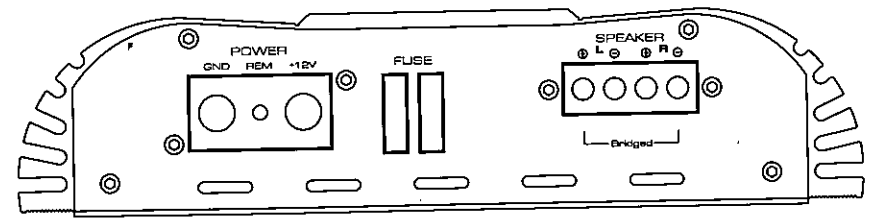
LPF CROSSOVER FREQUENCY
Controls the low pass point for the speaker outputs. The crossover range is 50~5KHz @12dB/Oct Slope

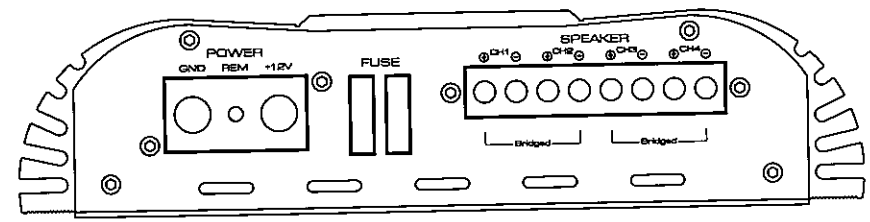
LPF CROSSOVER SELECTOR
it is switched to on position for mono use

POWER & PROTECTION INDICATOR
Using dual color LED for Power and Protection.
Power LED, Green-lit shows correct operation.
But Dual color LED turns to RED-lits showing general malfunction.
Faulty connection and thermal protection.
Clip LED is blinking when amplifier is close to clipping condition. when Clip LED is blinking so fast, it can be protected shortly.
Please take a close look at clip LED and adjust the gain down when it blinks fast and safe use.

3-2. CONNECTION







GND (GROUND CONNECTION)
It is connected to the Negative or ground cables of the Vehicle.
Recommended cable is 4 guage

+12V (POWER CONNECTION)
This must be connected to the fuse positive terminal (+12V) of the battery.
Recommended wire is 4 guage

FUSES
Fuses are built in to protect amplifier

REM (REMOTE)
It is connected to switched +12V with a Trigger cable coming from the head unit

SPEAKER OUTPUTS
it connects amplifier to speakers.
Minimum speaker cable is 12 guage.
and Stereo minimum impedance is 2 ohm.
Minimum impedance at mono use is 4 ohm.

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 (-) connection.

4-2. Before selecting a mounting location, Please consider the cooling efficiency and safety for avoiding excess thermal from amplifier.
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 air flow
For the safety, you have to find dry and well ventilated location and make sure any wires and car equipment are not interfaced with the amplifier installation.
Be sure the mounting location and drilling of the pilot cables will not present a harzard to any wires, control cables, fuel lines, tanks, hydraulic lines or other vehicle systems and components

4-3. Power Connection (+ 12V)

Before installing the amplifiers, disconnect the Negative (-) wires from the battery to protect any accidental damage to your amplifiers and system.
A series are designed to use 4 AWG power cables and are equipped with the fuses.
Connect power cables to the amplifier's power terminal labeld as +12V
The Fuses will protect the audio system and vehicle against the possibility of a short circuit in the power cables.
Be sure to use fuses adequate for the amplification.

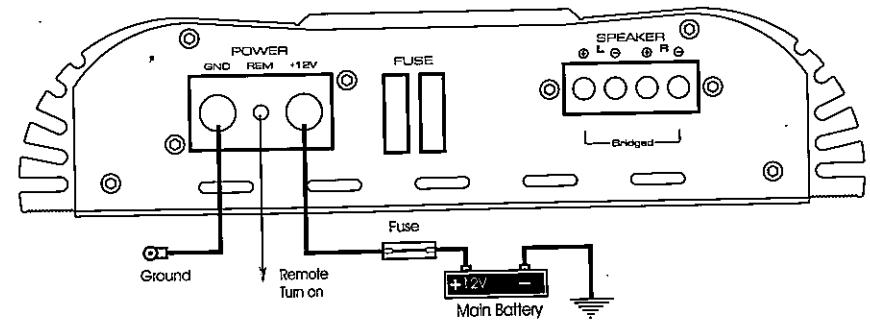
4-4. Ground Connection (GND)

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 the a short piece of the same size cables as the power cables to the ground point.
Run the other end of the cable to the amplifier's mounting location
Connect the ground cable to the screw terminal labeled as GND.

4-5. REMOTE CONTROL (REM)

Run a remote turn on cable from the switched +12V source. it is used for automatic turn on.
Connect the remote turn on cable to the terminal labeled as REM
Run this lead to the amplifier mounting location by using 16 AWG wire or larger

A series Power, Ground & Remote Connection diagram

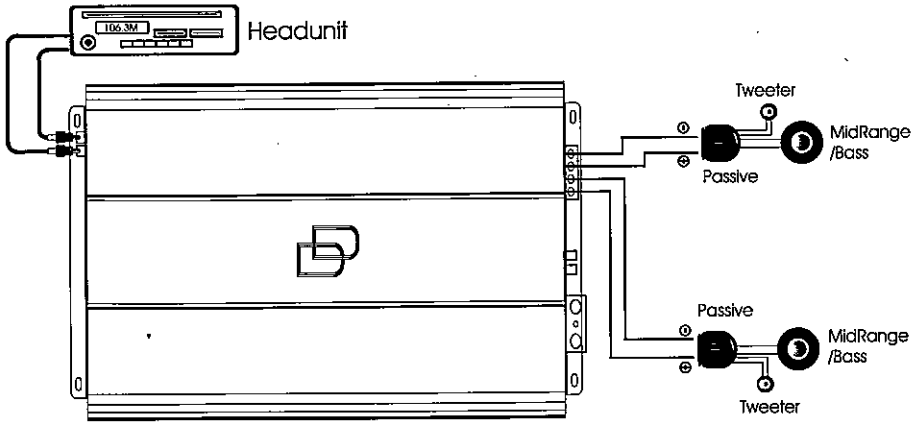


4-6. SPEAKER CONNECTIONS

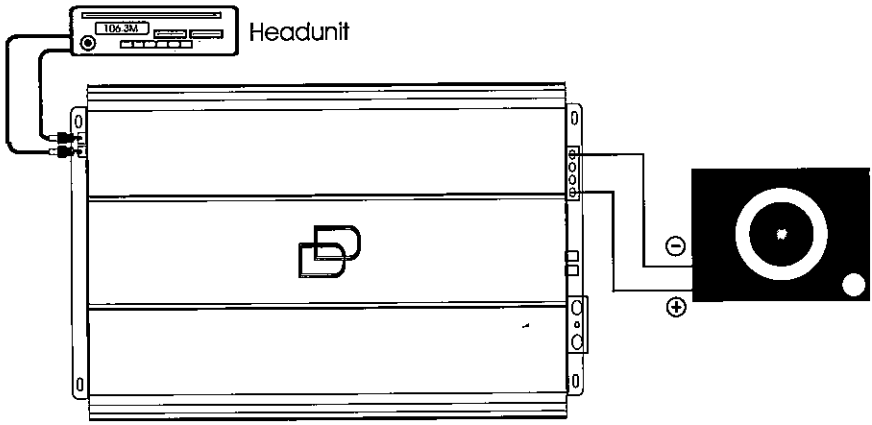
A series are recommended to use 12 AWG speaker connection cables.
Run 12 AWG speaker wires from speakers to amplifiers' mounting location.
Keep speaker wires away from the power cables and amplifiers' input cables
Use grommets anywhere the wires pass through the holes in the metal frame or sheet metal.
Connect to the speakers to the terminals on each speakers.
Strip 3/8 inches 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 which can cause the short circuit
Crimp spade lugs over the wires' ends or tin the ends with the solder to provide a secure termination.
Connect the wires' ends to the amplifiers as speaker system diagram.

Caution !! : A series are highly recommended to use 2 ohm stereo
or 4 ohm Mono.

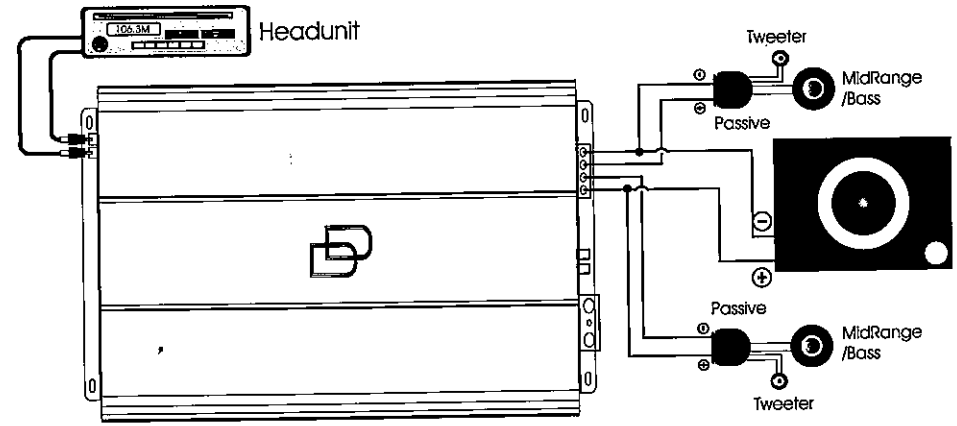
A1 & A2 2CH Speaker System Diagram I



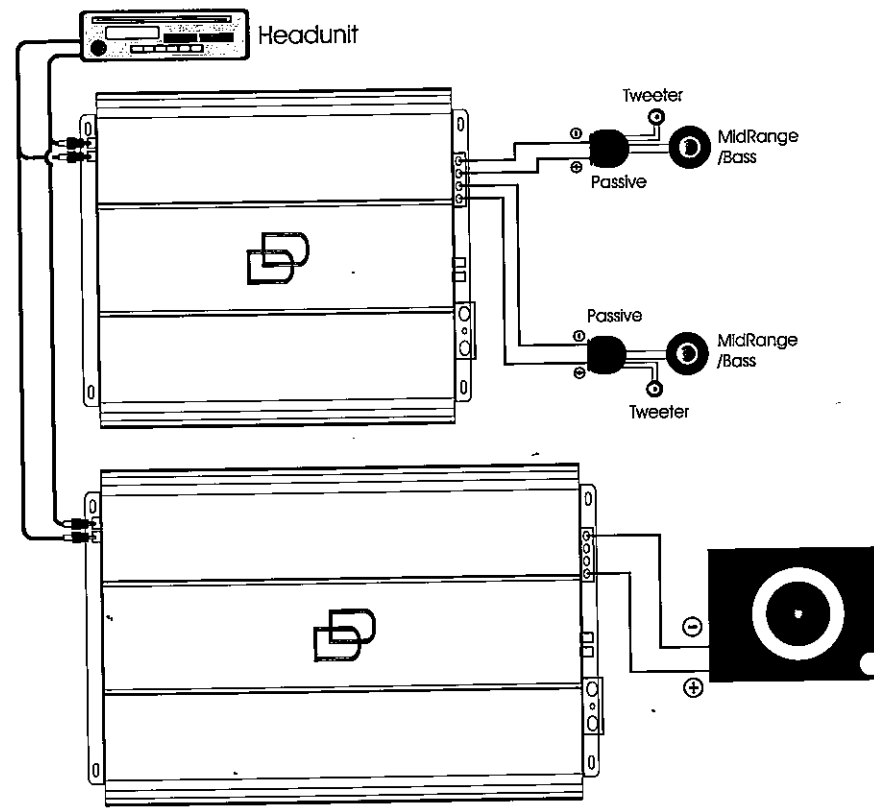
A1 & A2 2CH Speaker System Diagram II



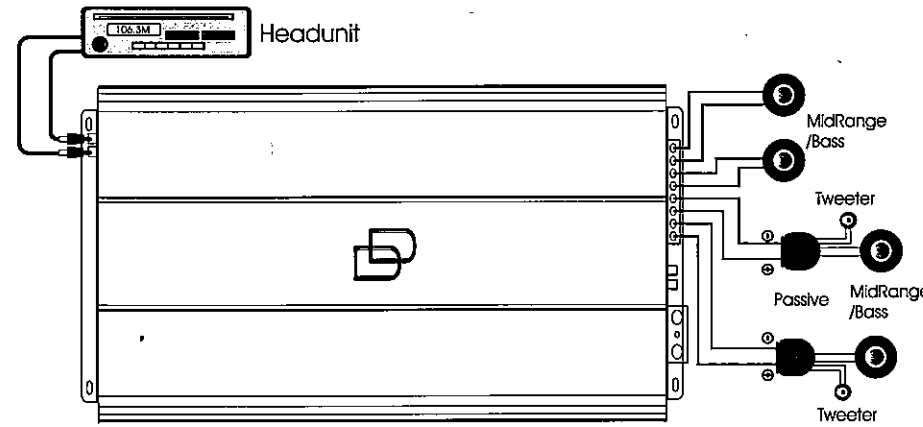
A1 & A2 2CH Speaker System Diagram III



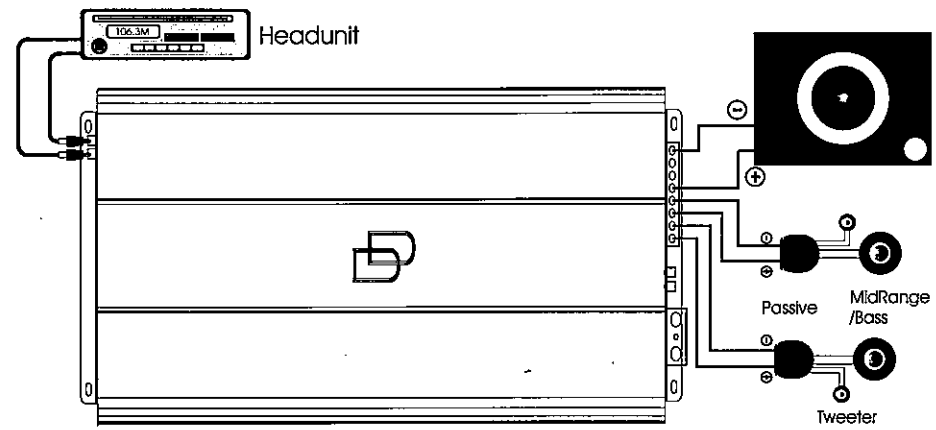
A1 & A2 2CH Speaker System Diagram IV



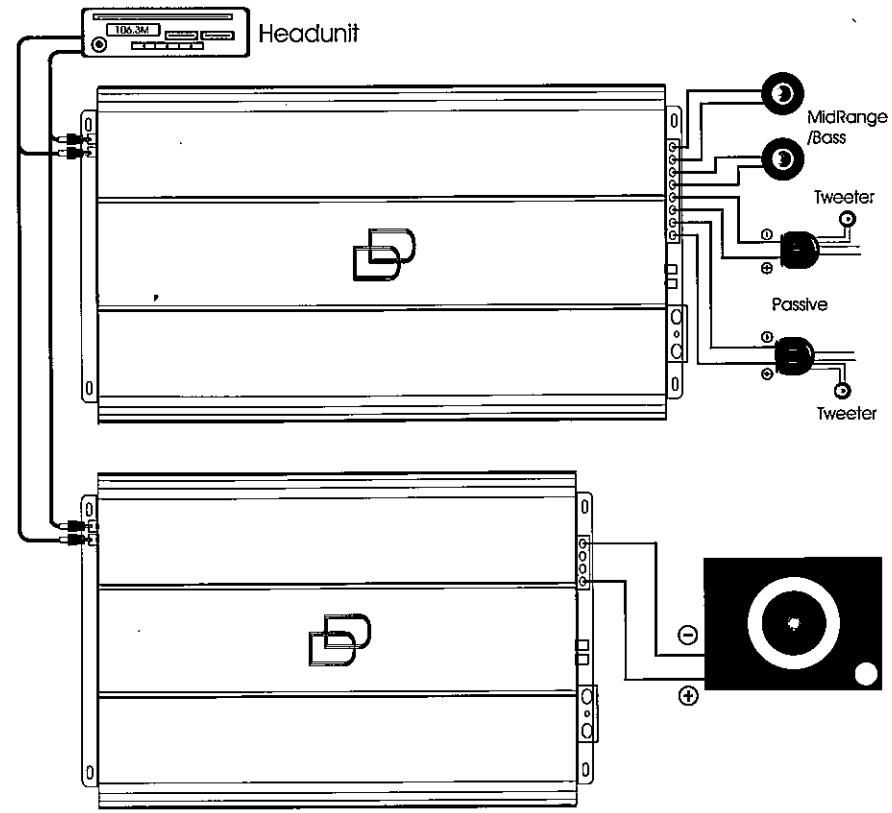
A4 4CH Speaker System Diagram I



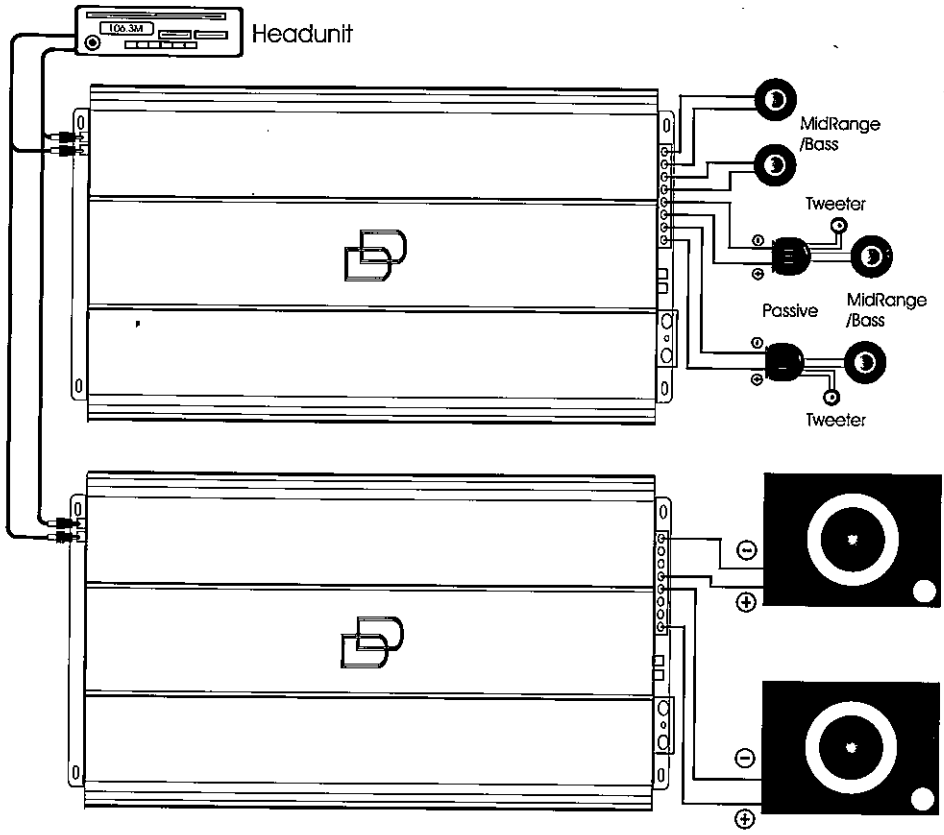
A4 4CH Speaker System Diagram II



A4 4CH Speaker System Diagram III



A4 4CH Speaker System Diagram IV



5. TROUBLE SHOOTING

Problem	Cause	Solution
No Sound	+12V, Ground or remote is not properly connected	Check all connections and Voltage at amplifier and Source Unit
	Blown Fuses	Check the fuses and replace them
	Wiring problem	Check all connections and short circuit
	Speaker problem	Check speakers on another amplifiers and replace with new one
Shut down	Protection	Check overload and overheat Check short circuit
Distortion	Input Level is not properly adjsuted	Readjust amplifier input level
	Speaker damage	Check the speaker quality at another amplifiers an replace with new one
Poor Bass Response	Speakers out of Phase	Check speaker wires reverse polarity of one channel
Bussing Sound	Bad Ground Contact	Check amplifiers or headunit's ground contact
	Insufficient shield of Rca Jack and bad routing	Check Rca jack and replace with new one and rerout Rca jack
Whining Noise	Engine noise by poor grounding of amplifier, headunit, other component, battery or alternator	Check all Grounding Connections

Notice ;
Thermal protection : Amplifier will turn off and several minutes later will come back on
In this case, Ensure that there is nothing blocking airflow around amplifier and itself
No obstruction should be within 2 inches of the amplifier on all sides .

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