Owner's Manual

CLASS D MONO CHANNEL FULL RANGE AMPLIFIER
FAN COOLING SYSTEM

DDM 2000.1
DDM 3500.1
DDM 6500.1
DDM 10000.1

Manual size : 150 x 210mm

Installation

In case you install the amplifier by yourself, please read the user manual carefully and follow the outlined instructions.

Mounting Preparation

Disconnect the negative (-) battery cable before mounting or making any connections.
Check the battery and alternator ground (-) connections. Make sure they are properly connected and free of corrosion. Before selecting a mounting location for the amplifier, please take cooling and safety into consideration.
Avoid installing the amplifier on speaker boxes with excessive vibration !

The amplifier has been designed with a good heat dissipating heatsink.
In order to avoid excessive heating, it is recommended that amplifier is installed in a well ventilated space.

+12V(B+), GND, REM CONNECTION

+12V / B+ (POWER CONNECTION)
Before mounting the amplifier, disconnect the negative (-) wire from the battery to protect any accidental damage to the amplifier or the audio system. The amplifier is equipped with 0 AWG or 4 AWG power and ground terminals. Connect the power cables to power terminal labeled as + 12V.
As the amplifier is not equipped with fuses, external fuses are required.
Connect one end of the fuse holder to the power cable and the other end of the fuse holder to the positive battery terminal within 20 cm of the same cable.
This fuse location will protect the system and the vehicle against the possibility of a short circuit in the power cable.

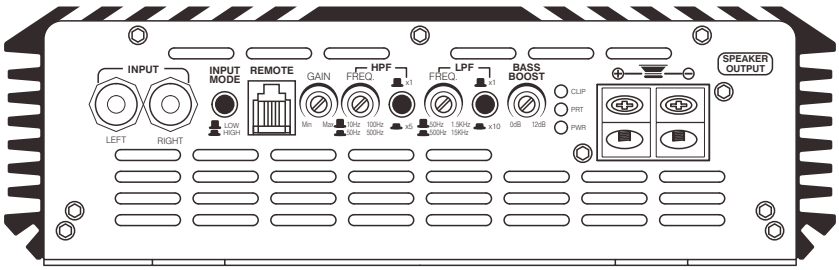
Make sure that the fuses and the fuse holder are appropriate and sufficient for the desired application.

GND (GROUND CONNECTION)
Locate a secure grounding connection as close as possible to the amplifier.
Make sure the location is clean and provides a direct electrical connection to the chassis of the vehicle.
Connect one end of an equal sized cable as the positive cable to the location of ground.
It is important that the ground cable is as short as possible but no longer than 75 cm at maximum.
Run one end of the cable to the grounding point.
Run the other end of the cable to the mounting location.
Connect the ground cable to the terminal labeled as GND.

REM (REMOTE CONNECTION)
Run a remote turn on cable from the switched + 12V source.
This may be a toggle switch, a relay, the source unit's remote ouput cable or power antenna trigger cable.
Connect the remote turn on cable to the power terminal labeled as REM.

Panel Layout

(DDM 2000.1/ DDM 3500.1 / DDM 6500.1 / DDM 10000.1)



1) INPUT
Connect preamp signal cables from head unit to RCA input of amplifier.
Minimum level input of 0.2V is essential for correct operation.

2) INPUT MODE
Push Input Mode switch for High Level Input and release switch for Low Level Input application

3) GAIN (8V ~ 0.2V)
Matches the output voltage of the head unit's RCA line-outs to the input section.

4)BASS BOOST
Variable bass boost with 0-12 dB @ 45Hz

5)HIGH PASS FILTER
Controls the High pass points for speaker outputs.

6)HIGH PASS MULTIPLIER (x1, x 5)
Push the x5 switch to multiply high pass frequencies by five and likewise, release the switch to use the original high pass frequencies.

7)LOW PASS FILTER
Controls the low pass points for speaker outputs.

8)LOW PASS MULTIPLIER (x1, x10)
Push the x10 switch to multiply the low pass frequencies by ten and likewise, release the switch to use the original low pass frequencies.

9) REMOTE LEVEL CONTROL PORT
Used for connecting to external wired remote controller.

10) REMOTE CONTROL
Turn knob clockwise to increase level and likewise, turn knob counter clockwise decrease level.

11) POWER & PROTECTION & CLIP INDICATOR
When device is powered on, LED will light on green. If device enters into protection, LED will light red and if clipping occurs, the LED will light orange.

12)SPEAKER OUTPUTS
Amplifier connection to loudspeakers. Minimum size of speaker cable is 8 gauge.
Minimum impedance is 1Ω.

+12V(B+), GND, REM

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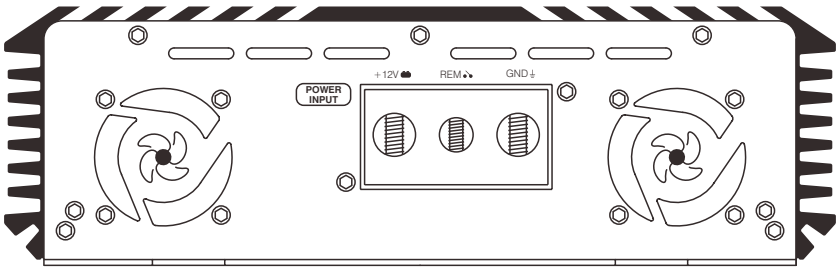

GND (GROUND CONNECTION)
For connection to chassis ground. For optimum performance, 0 gauge cable is recommended.

REM (REMOTE)
Connect to switched +12V from the head unit.

+12V / B+ (POWER CONNECTION)
For connection to positive terminal of battery (+12).
For optimum performance, 0 gauge cable is recommended.

⚠ CAUTION

Before attempting to make any connections to power supply, input and output connectors, make sure the amplifier is in OFF state. Check polarity of cables carefully as using reversed polarity will cause damage to amplifier. And to prevent power loss and overheating of wiring, always use the recommended wire gauges.

⚠ CAUTION

Installation of the amplifier should be done in the following steps:

1. Ensure that the ground is appropriate, then connect it to the amplifier.
2. Next step is to connect the +12V wire. Ensure all power terminals are used. This cable has to be fused at the battery for safety precautions.
3. The final step is connecting the switched remote.

+12V(B+), GND, REM Connection

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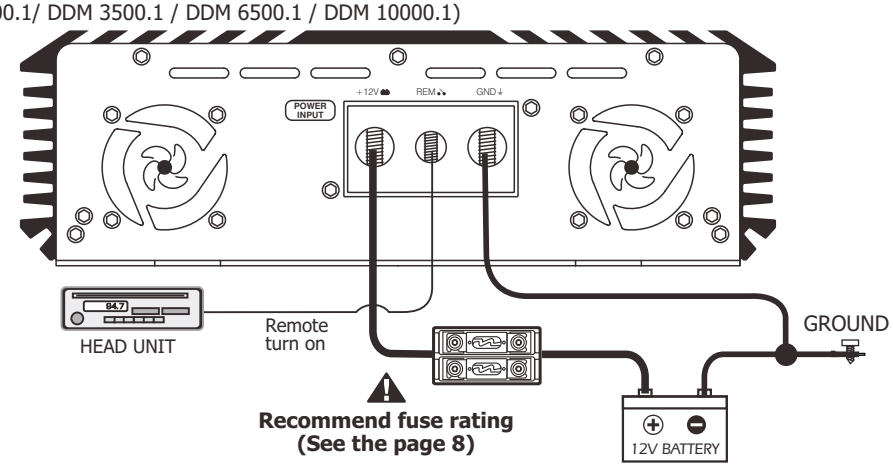
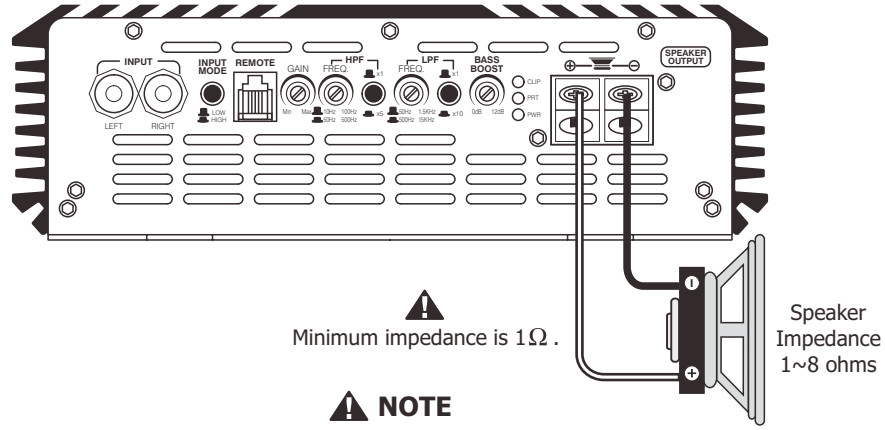


This drawing is for illustration purposes only!
We recommend using 12 AWG speaker cables to obtain increased performance.
Run 12 AWG speaker cables from your speakers to the amplifier's mounting location
Keep the speaker cables separate from the power cables and and the amplifier's input cables.
Use grommets where the cables have to penetrate the vehichle chassis.
Connect the speaker wires according to the terminals on each speaker.
Strip 1cm, 3/8" of insulation of the end of each cable and twist the cables strands together tightly.
Make sure there are no stray strands that might touch other cables or terminals and cause short circuit.
Connect the cable ends to the amplifier as shown in the speaker wiring diagram.

Speaker connection

(DDM 2000.1/ DDM 3500.1 / DDM 6500.1 / DDM 10000.1)



NOTE

Impedances lower than the specified rating (1 ohm) at the output can activate the short-circuit protection. Likewise, excessive signal distortion will activate the internal protection system leading to product shutdown. In this case, turn amplifier off, attenuate level and then turn on amplifier.

Troubleshooting

Assure that the Power LED is on, if so please proceed with step # 3, if not, continue with the steps below;
1. Check the in line fuse (s) on the battery's positive cable, replace if needed.
2. Assure that the Ground is properly attached to the vehicle's chassis on a clean metal point, tighten or grind the connection point once again.
3. Our amplifiers have a high voltage protection. Make sure that the operating voltage is between 9V~ 15.8V and voltages above this range will cause the amplifier to go into protect.

Protect LED is on

1. The Protect LED will come on due to the possible circumstances;
   a) The impedance connected is under the specified load.
   b) Thermal (Overheat), allow for a more suitable mounting as recommened in the install section. Thermal may also appear if the impedance is under the specified or the voltage is inadequate.
   c) Short circuitry, voltage and DC offset.
      - Short circuitry, go through all cables including speaker wires, GND, battery's positive cable. Voltage, please check step # 3, for DC offset, make sure that a voltage of no more than 4V is available. Remove the RCA from the input and check whether the amplifier comes out of protect. If so, check if the output from the Head unit has a DC of 4V, replace / repair if needed.

Audio output (no sound)

1. Assure that RCA connections from the Head unit and the amplifier is properly connected. Check the entire cable for damages or its like. Test the RCA inputs for DC volts with the source unit on, replace / repair if needed.
2. Check the routing of the cables, fuses and verify that all connections are connected accordingly.
3. Check whether the speakers are functional.

Turn on thump

1. Disconnect the signal input to the amplifier, then turn it on and off.
   a) If the noise is cancelled, then connect a delay turn on module on the REM wire running from the source unit to the amplifier.
   b) Use another 12V source for REM lead to the amplifier. If the noise is cancelled, use a relay to isolate the amplifier from the turn on thump.

Poor bass response

1. Check that the polarity of the speaker cables are correct. Speakers connected in anti-phase will cancellate each other, thus the bass response will be absent.

Engine noise

1. Ensure that all signal transferring wires (RCA, speaker cables etc) are kept separately / away from the power and the ground wires.
2. Bypass all electrical components between the Head unit and the amplifier. Connect the Head unit directly to the amplifier's input. If the noise is eliminated, the unit bypassed is the one causing the noise.
3. Remove the existing ground wires for all electrical components installed. Ensure that the point of ground is 100% metal which has been grinded free of rust, paint etc.
4. Replace the ground cable from the OEM battery / alternator and ensure it is grounded accordingly.
5. Test the battery and alternator load (can be carried out by a professional). Ensure that the vehicle's electrical system is in a good condition, this includes distributor, spark plugs / wires, voltage regulators etc.

Specifications

MODEL CODE	DDM 2000.1	DDM 3500.1
Continuous power output		
-RMS power, 1 ohm mono @12.6V	: 1500W x 1CH	: 3000W x 1CH
-RMS power, 1 ohm mono @13.8V	: 1800W x 1CH	: 3600W x 1CH
-RMS power, 1 ohm mono @14.4V	: 2000W x 1CH	: 3800W x 1CH
Signal to Noise Ratio	: >90dB	: >90dB
Low pass frequency crossover with 1 x 10 range	: 50Hz~15KHz	: 50Hz~15KHz
High pass frequency crossover with 1 x 5 range	: 10Hz~500Hz	: 10Hz~500Hz
Bass boost @ 45Hz	: 0~12dB	: 0~12dB
Frequency response	: 10Hz~15KHz (+/- 1dB)	: 10Hz~15KHz (+/- 1dB)
T.H.D Continuous @ 4 ohm, 1KHz	: <0.7%	: <0.7%
Efficiency @ 4 ohm, 1KHz	: 92%	: 92%
Input Sensitivity	: Variable 200mV~8V (+/- 5%)	: Variable 200mV~8V (+/- 5%)
Dimensions (mm)	: 230(W) x 70(H) x 260(L)	: 230(W) x 70(H) x 320(L)
Operating Voltage	: DC 9V~15.8V	: DC 9V~15.8V
Recommend Fuse Rating	: 200A	: 300A

MODEL CODE	DDM 6500.1	DDM 10000.1
Continuous power output		
-RMS power, 1 ohm mono @12.6V	: 5000W x 1CH	: 8000W x 1CH
-RMS power, 1 ohm mono @13.8V	: 6000W x 1CH	: 9600W x 1CH
-RMS power, 1 ohm mono @14.4V	: 6500W x 1CH	: 10500W x 1CH
Signal to Noise Ratio	: >90dB	: >90dB
Low pass frequency crossover with 1 x 10 range	: 50Hz~15KHz	: 50Hz~15KHz
High pass frequency crossover with 1 x 5 range	: 10Hz~500Hz	: 10Hz~500Hz
Bass boost @ 45Hz	: 0~12dB	: 0~12dB
Frequency response	: 10Hz~15KHz (+/- 1dB)	: 10Hz~15KHz (+/- 1dB)
T.H.D Continuous @ 4 ohm, 1KHz	: <0.7%	: <0.7%
Efficiency @ 4 ohm, 1KHz	: 92%	: 92%
Input Sensitivity	: Variable 200mV~8V (+/- 5%)	: Variable 200mV~8V (+/- 5%)
Dimensions (mm)	: 230(W) x 70(H) x 410(L)	: 230(W) x 70(H) x 540(L)
Operating Voltage	: DC 9V~15.8V	: DC 9V~15.8V
Recommend Fuse Rating	: 600A	: 1000A

MADE IN KOREA