

# NHMD600.1

**User Manual** 



# CLASS-D MONO BLOCK POWER AMPLIFIER

# **INTRODUCTION**

Thank you for your purchase of our Nakamichi product and we warmly welcome you to the Nakamichi family! Do keep your original invoice and purchase receipt in a safe place in case of future service and warranty claims. You may also contact your appointed Nakamichi service agent for any future technical support requirements.

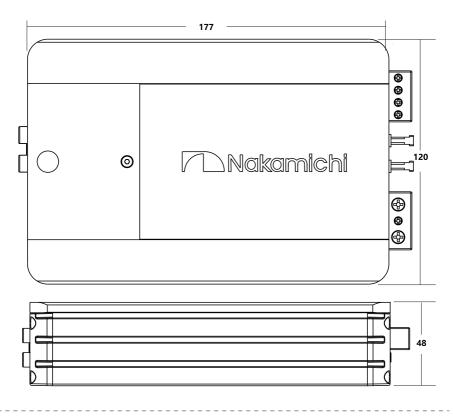
### **ACCESSORY LIST**

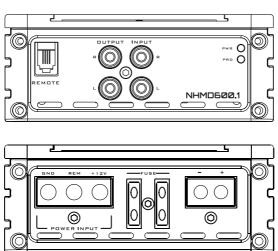
1. User Manual	2pcs
2. Amplifier	lpc
3. Mounting Screw(Φ4x20mm)	4pcs
4. Mounting Bracket Screw(Φ4x6mm)	4pcs
5. Remote Control	lset
6.Fixing frame (34x20mm)	lpcs
7.L-type wrench(L=90mm)	1pcs

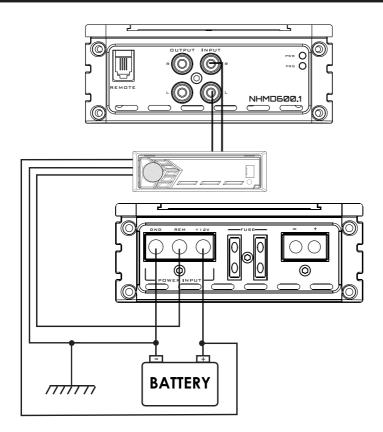
### **SPECIFIATIONS**

N-power Output@4Ω	400Wx1
N-power Output@2Ω	600Wx1
Max Output Power	3600W
Full Frequency Response	5Hz-20KHz
SUB Frequency Response	30-250Hz
Signal To Noise Ratio +N	≥90dB
Sensitivity	0.32V-6.5V
Unit Dimensions(LxHxW)	195x120x48mm
Net Weight	Approx. 1.3kg
Box Dimensions (LxHxW)	265x218x75mm
Gross Weight	Approx. 2.4kg

All specifications subject to change without notice.







### Notes on the power supply

Connect the +12V power input lead only after all other leads have been connected. Be sure to connect the ground wire of the unit securely to a meatal part of the car. A lose connection may cause a malfunction of the amplifier.

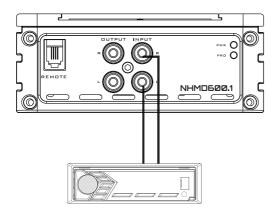
### REMOTE:

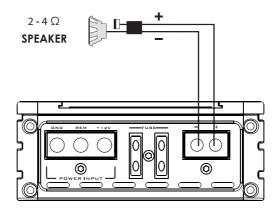
The unit is turned on by applying +12Volts to this terminal. This terminal does not draw heavy current like the two power terminal so a thinner connecting wire is acceptable. Standard 18 GAUGE is fine and the standard colour is yellow. If the radio is equipped with a power antenna control wire, it can drive this terminal. If the power antenna wire is already in use, you can still splice into it. With this method, the unit will turn on automatically with the radio.

# **POWER CONNECTION LEADS**

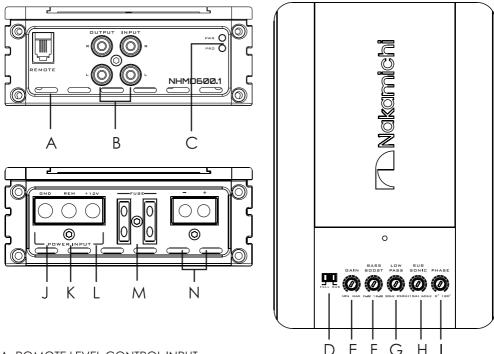
Use the power supply lead with a fuse attached whose value is the same as original fuse. Place the fuse in power supply lead as close as possible to the car battery. During a full power operation, MaxImum current will run through the system. Therefore. Make sure the that the leads to be connected to the +12V and GND terminals of the unit respectively must be larger than 8-Gauge(AWG.8).

### **CONNECTION 1: 1-SPEAKER MODE**





## PANEL CONTROLS AND FEATURES



### A. ROMOTE LEVEL CONTROL INPUT

Attached the included remote level control here to cantrol the volume level to the subwoofer independently.

#### BLOW LEVEL RCA INPUT

These RCA input jacks connect with your source unit RCA low level outputs or via optional adapter with your source unit speaker high level outputs. The use of high quality twisted pair car audio cables is recommended to reduce the possibility of audio signal degration.

### C. POWER AND PROTECTION INDICATOR

The protection red LED will light up, if there is a fault present in the amplifier. Please disconnect the amplifier and resolve the foult before reconnecting the amplifier. The power indicator green LED will light up when the amplifier is working correctly.

### D. SPEAKER CROSSOVER CONTROL

Depending on the selected switch the amplfier will operate at full or sub mode.

### PANEL CONTROLS AND FEATURES

#### E. SPEAKER GAIN CONTROL

The gain control will match the amplifiers sensitivity to the source signal voltage.

#### F. BASS BOOST

The BASS BOOST feature will increase the sound level in the bass frequencies.

#### G. SPEAKER LOW PASS CROSSOVER FREQUENCY

Controls low frequency of the amplifier between 30Hz to 250Hz.

### H. SUBSONIC FILTER CONTROL

This control allows you to filter out unwanted low frequencies from 15Hz to 60Hz, this allows you to increase the power handing of your installed woofers.

### I. PHASE

Controls phase of the amplifier between 0° to 180°.

### J. GND(-) = GROUND CONNECTION

Connect this coble directly to the metal frame of the vehicle, ensuring that the metal frame has been strpped of all paint down to the bare metal. Use the shortest distance possible. It is atways a good idea to replace the vehicle battery groudn terminal or any other factory ground points.

### K. REM(0N/0FF) REMOTE CONTROL

When using low level inputs, the amplifier REM-IN should be connected to the REM-OUT of the source unit. The source unit will control the amplifier to automatically turn on or off.

#### L. +12V = POWER SUPPLY

Connect this terminal through a fuse or circuit beraker to the positive terminal of the vehicle battery or the positive terminal of an isolated audio system battery.

#### M. FUSE

Do not use a fuse with a different value and NEVER replace the fuse with a wire or coin.

### N. SPEAKER CONNECTIONS

Connect your speakers and woofers to there terminals, ensuring proper polarity during connection. Never connect the speaker cables to the chassis ground.

### **INTERFERENCE**

All cables can create interference. The power cable and cinch / RCA audio cables are very prone to interference from other sources, while remote cables are less prone. Interference is often caused by the generator, ignition, or any other electronic parts or systems. Most of these problems can be eliminated by correct and careful wiring during setup. Here are some guidelines to follow.

- Use only a shielded audio cable for the wiring between the low level input of the amplifier and the RCA or DIN output of the radio.
- Lay the signal, speaker and power cables separately with enough distance from one another and also from each other car cable. Ir not possible, you can lay the circuit and ground cable together with the serial cables. Audio and speaker cable should be as far away from these as possible. The REM cable to the automatic antenna output of the radio can be laid together with the signal cables.
- Avoid ground loops by laying the ground wiring of all components towards a central point in a star layout. You can locate fne best point by measuring the voltage directly at the battery, and comparing the voltage value with the chosen ground point and the positive terminal of the amplifier. If the measured voltage is only slightly different, you've found the correct central location. Other wise please look for another point. You should measure with the ignition point

for earth switched on.

- If there are pickups from external electrical sources into the speaker cables, divide the core leads and twist them together.
- If there are noises from the car electrics, add an interference suppression choke into the power wiring.
- If there are humming noises, use thicker ground cables or add further ground cables to the chassis.
- To reduce contact resistance and bad and loose contacts, please solder the cable ends or use multi core cable ends, spade terminals or others. Gold Plated spade terminal are free of corrosion and have the lowest contact resistance.
- Should all these measures not bring about any success, the use of a ground loop isolator may solve the problem.

# **TROUBLESHOOTING**

If you experience operation or performance problems with this product, compare your installation with the electrical wiring diagram on the previous pages. If problems persist, read the following troubleshooting tips which may help eliminate the problems.

SYMPTOM	POSSIBLE CAUSE	ACTION TO TAKE		
	•Low or no remote turn-on input	Check remote turn-on voltage output at amplifier and		
	20W of the ferriore form-off impor	correct as needed		
	• Fuse blown	Check power wire integrity and reversed polarity, repair		
	• Fose blown	as needed and replace fuse		
NO OUTPUT	Power wires not connected	•Check power wire and ground connections and repair		
	-Fower wiles not confidence	of replace as needed		
	•Audio input not connected or no	•Check input connections and signal integrity, repair or		
	output from source	repalce as needed		
	Speaker wires not connected	Check speaker wires and repair or replace as needed		
	•Speaker are blown	Check system with known working speaker and repair		
AUDIO	-speaker are blown	or replace speaker as needed		
CYCLES	•Thermal protection engages when	•Make sure there is proper ventilation for amplifier and		
ON AND	amplifier heat sink temperature	improve ventilation as needed		
OFF	exceeds 75°C			
	•Loose or poor audio input	•Check input connections and repair or replace as		
	1 20030 of poor addio inpor	needed		
	<ul> <li>Amplifier lecel sensitivity set too high;</li> </ul>	•Reset gain referring to the turning section of the manual		
	exceeding maximum output capability	for detailed instructions		
	of amplifier			
		•Check speaker impedance load, if below $2\Omega$ stereo or		
	•Impedance load to amplifier too low	$4\Omega$ mono rewire speakers to achieve a higher		
DISTORTED		impedance		
OUTPUT	•Shorted speaker wires	Check speaker wire connections and repair or replace		
	on on our operation through	as needed		
	•Speaker not connected to amplifier	Check speaker wiring and repair of replace as needed		
	properly	refer to the installation section of this manual for		
	· · ·	detailed instructions		
	•Internal crossover not set properly for	•Reset crossovers referring to the multi-cross crossover		
	speaker	configuration section of this manual		
DISTORTED	•Speaker are blown	Check system with known working speaker and repair		
OUTPUT (CONT'D)	·	or replace as needed		
	Speaker wired wrong polarity causing	Check speaker polarity and repair as needed Reset		
POOR BASS	cancellation at low frequencies	crossovers referring to the multi-cross		
RESPONSE	Crossover set incorrectly	Crossover configuration secrion of this manual for		
		detailed instructions		
		•Check speaker impedance load, if below $2\Omega$ stereo		
	•Impedance load to amplifier too low	or 4Ω mono rewire speaker to achieve a higher		
		impedance		
	•Short in power wire or incorrect power	Check power and ground connections and repair as		
DISTORTED	connections	needed		
OUTPUT (CONT'D)	•Fuse used is smaller than	Replace with proper fuse size		
	recommended	•Check speaker impedance load, if below 2Ω stereo		
	•Too much current being drawn			
	Too moch conem being drawn	or $4\Omega$ mono rewire speaker to achieve a higher		
		impedance		
	•Short in power wire of incorrect	Check power and ground connections and repair as needed		
		needed		



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