


MULTI-CHANNEL DIGITAL POWER AMPLIFIER

User manual

MATTERS NEEDING ATTENTION

WARNING	
	The following basic requirements must be strictly observed, to avoid potential personal injury and equipment or property damages to you or any person nearby. The basic requirements include without limitation to the following:

Power source/power cable

- Please disconnect the device from power source by pulling the plug other than the power cord. Pulling the power cord may result in damages.
- Please keep the power cord away from heat source. Do not overbend the power cord or place it anywhere it can be stepped on or may cause to trip.
- This is connected to power source via the plug and any failure or danger occurs, the user can disconnect the device from power source by pulling out the plug out from the socket, therefore, it is required that the power socket should be located somewhere with easy access.
- The device is not completely disconnected from power source when it is switched "OFF". For sake of safety, please disconnect the device from the socket if it is not in user.

Positioning

- Please disconnect the device from power source before relocating the device.
- For avoiding deformation of panels and damages to internal components, please do NOT place the device where there is heavy dust or violent vibration, or where it is extremely cold or hot.
- Please keep this device off water drops or splash or vase filled with water or any other articles of similar nature.

Connection

- Please disconnect other equipment from power source before they are connected to this product. Please tune volume to its minimum level before the device is powered ON or OFF.
- All terminals on the device marked with ⚡ are live and dangerous, and should be connected by trained personnel.

When abnormal conditions are realized

- Please disconnect the device from power source immediately in case the power cord is worn or damaged or if the sound is suddenly cut off or any abnormal odour or smoke comes out from the device, and then have the device inspected and repaired by professional personnel.

Precautions in Operation

- Please do NOT insert any finger into any gap or opening of the device.
- Please prevent foreign objects (paper, plastics or metal etc.) from being inserted or falling into any gap or opening of the device. In such case, please cut off power source immediately.
- Please do NOT put the body or any heavy object on the device and do NOT operate the buttons or switches or connections with excessive force.

Do NOT open

- Please do NOT remove the cover of the equipment, otherwise you may get an electric shock.
- Do NOT attempt to remove any internal component from the device, or to modify the equipment in whatever manner. In case of any abnormal condition, please stop using the device immediately and have it inspected and repaired by professional personnel.

Other Precautions

- Our company shall not be responsible for data loss or damages due to improper use of unauthorized modification to the device.
- The images and screen display in this Manual are only for description and may be different from screen images in actual operation. The screen display depends on the product.

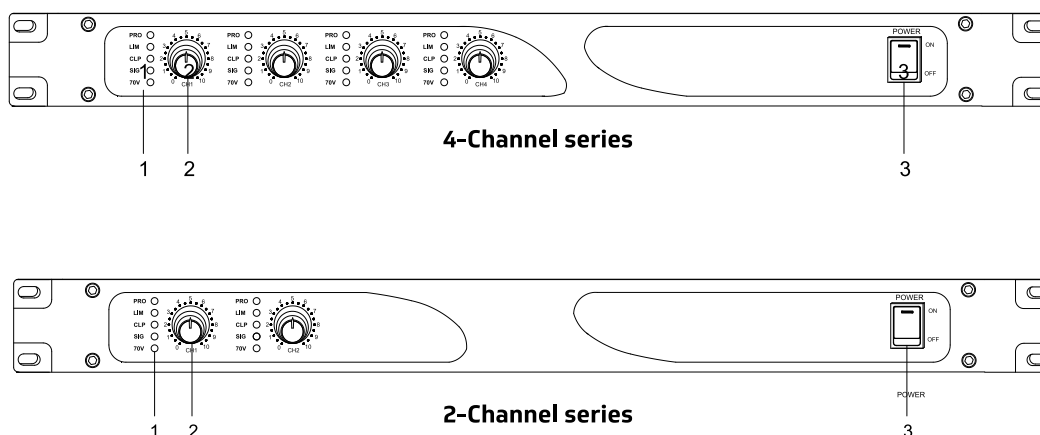
PRODUCT DESCRIPTION

FEATURES

- Multi-channel: 4-channel or 2-channel;
- 5-unit LED for status;
- Advanced active PFC (power factor correction);
- Efficient switching power supply;
- Efficient CLASS D amplifier;
- Support DC 24V power supply;
- Adjust fan speed with temperature;
- Equipped with voltage limit circuit;
- All-protected circuit design;
- Support real-time switch of 70/100V output;
- Input sensitivity: 775mVRMS;
- Both line input and output interfaces adopt HT-3.81 phoenix;
- 100VRMS prior line input;
- Balanced prior line input;
- Balanced line input;
- 7.62-4P fence output socket with cover is adopted for power output.

APPEARANCE

FRONT PANEL



1. Indicator

PRO: Signal indicator(signal output); After being powered on and input with signal, if the protection indicator (PRO) and LIM are on first, go out after a few seconds, and are on again, the output short circuit fault occurs, and the above phenomena will repeat if the fault is not removed. Now, power off immediately, and re-power on after troubleshooting.

LIM: Limit indicator;

A. Both LIM and PRO are on: Amplifier is in short circuit or over-current protection.

B. LIM is on while PRO is off: After the continuous repeated signal makes the output power reach or exceed rated power for 2-4s, the power limits the start of circuit and halves the rated output power automatically. This circuit will not be started with audio and music applications under rated power.

CLP: Clip indicator, please reduce the gain properly to avoid severe clip;

SIG: Input level indicator, for audio output level;

70V: Gear indicator, if it is always on, the current gear is 70V output voltage.

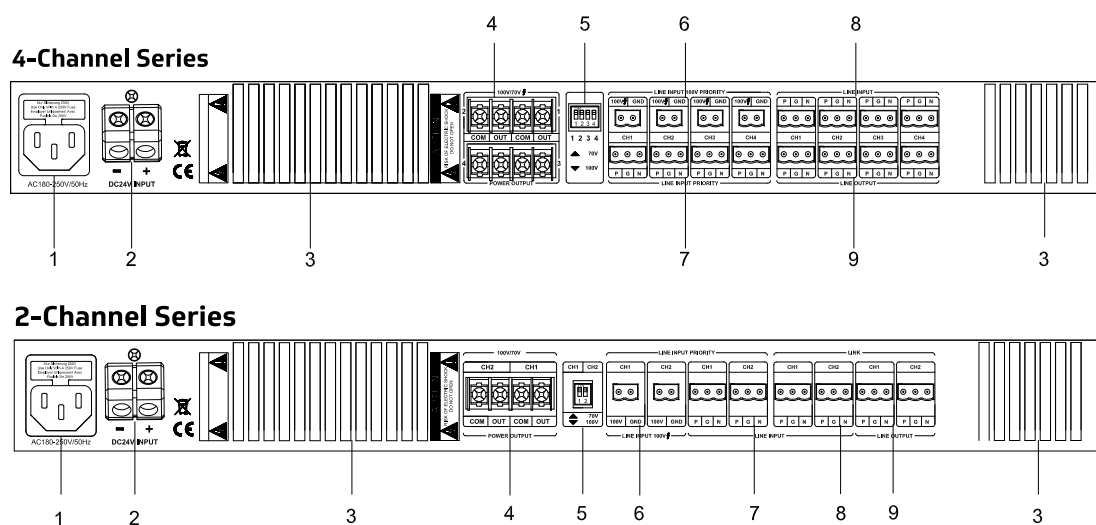
2. Channel volume control knob

Name the volume control knob (CH1) by the number of channels with an analogy, such as Ch1, Ch2...

3. Power switch

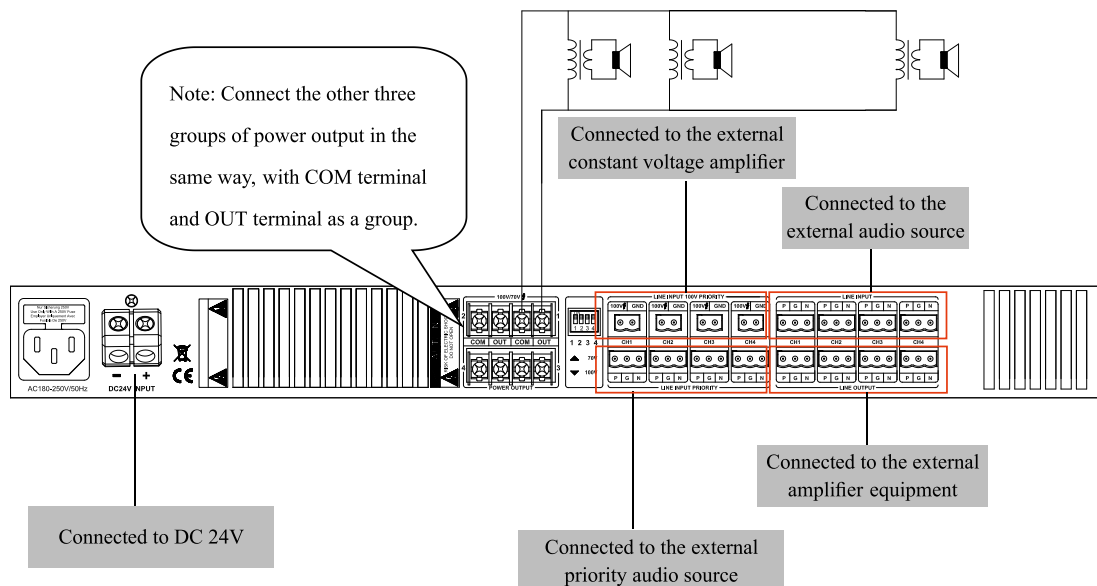
Power switch is provided with power indicator, when placing it in ON position, its internal power indicator will be on.

REAR PANEL



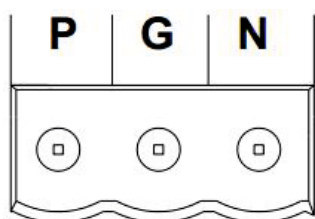
1. AC power input (with fuse holder)
2. 24V DC power input (Max. access core is $\phi 6\text{mm}$)
3. Air outlet of fan
4. 70V/100V voltage output
5. 70V/100V output switch
6. Prior 100VRMS single unbalanced line input (2-position 3.81 phoenix)
7. Prior balanced line input (3-position 3.81 phoenix, priority signal 6 and 7 are directly mixed. After the priority signal amplitude exceeds threshold, the balanced line inputs enter the mute status, and the balanced signal recovers output after it is lower than threshold for 2-3s)
8. Balanced line input (3-position 3.81 phoenix)
9. Balanced line output (3-position 3.81 phoenix)

CONNECTION

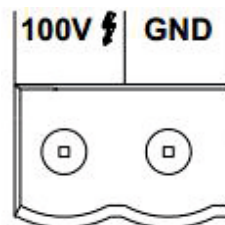


INPUT CONNECTION

All line inputs and outputs should be connected to the 3-position 3.81 phoenix (Fig. 1) or 2-position 3.81 phoenix (Fig. 2) on the machines' rear panel.



(Fig. 1) 3-position 3.81 Phoenix



(Fig.2) 2-position 3.81 Phoenix

P— Signal (+)

G— Ground

N— Signal (-)

100V— 100V output terminal (hot terminal) of external constant voltage amplifier

GND— Output ground (cold terminal)

OUTPUT CONNECTION

Output terminal locates on the rear panel and can be directly connected with wire. COM is common terminal and OUT is hot terminal.

Note: Never connect two “hot terminals” together.

Packing List of 2-channel Series

No.	List	Quantity
1	5×19 whole machine fixing screw	4 pcs
2	10A National Standard MP-P power line	1 pc
3	3.81-2P plug	2 pcs
4	3.81-3P plug	6 pcs
5	User manual	1 copy
6	Plastic washer (Black)	4 pcs

Packing List of 4-channel Series

No.	List	Quantity
1	5×19 whole machine fixing screw	4 pcs
2	10A National Standard MP-P power line	1 pc
3	3.81-2P plug	4 pcs
4	3.81-3P plug	12 pcs
5	User manual	1 copy
6	Plastic washer (Black)	4 pcs

SPECIFICATION

Model	NVS-20100252AM	NVS-20110502AM	NVS-20011002AM	NVS-20130244AM	NVS-20140504AM	NVS-20151004AM
Number of channels	2	2	2	4	4	4
Rated output power of each channel	120W	250W	500W	60W	120W	250W
Input sensitivity	775mVRMS (0dBV/ all balanced input) 100VRMS (100V unbalanced input)					
SNR (signal-to-noise ratio)	>80dB (100VRMS output)					
Input impedance	60K ohms (balanced) 20K ohms (balanced priority) 100K ohms (100V unbalanced)					
Channel separation	>70dB (1KHz)					
Frequency response	80Hz-15kHz (±3dB normal operating conditions)					
THD THD (total harmonic distortion)	<0.3 % (1kHz normal operating conditions)					
Up speed	>29V/us					
Priority threshold	>10mVp (prior balanced line input) >1000mVp (prior 100VRMS line input)					
Indicators	"Protection", "L imit", "V oltag e limit ", "Signal", "70V gear"					
Protection	Power-on, high temperature, DC, short circuit					
Power supply	AC 220 V/50Hz DC24V (rated output power -3dB)					
Overall dimensions (mm)	552×510×105 (L×W×H)					
Machine dimension (mm)	483×435×44 (L×W×H) (not including machine legs)					
Machine legs	Four 6.5mm high soft plastic machine legs, can be removed as needed					
Power Consumption (AC 220V)	339W	610W	1270W	347.6W	653W	1240W
Power Consumption (DC 24V)	206.4W	350.4W	720W	223.2W	398.4W	708W
Static power consumption (AC 220V)	38W	38W	42W	57.5W	63.5W	57W
Static power consumption (DC 24V)	38.4W	38.4W	43.2W	60W	62.4W	57.6W
Gross Weight (Kg)	7.4	7.4	7.4	8	8	8
Net Weight (Kg)	6.4	6.4	6.4	7	7	7

Performance specifications are subject to change without notice.

Note:

Maximum hot dissipation = Rated power consumption — Rated power output per channel × number of channels
 When emitting a voice or playing music, the heat dissipation power can be calculated at a third of the maximum heat dissipation.

Rated power consumption test conditions: AC220V power supply, input 1KHZ sine wave, output to reach the rated power;

DC24V power supply, input 1KHZ sine wave, output to reach rated power -3dB. Rated power error: ±10%.

CAUTION

- When the power switch is placed in "OFF" position, the equipment is not completely disconnected with network source; for safety, please pull out the power line plug from socket when it is not used.
- Please keep it away from water, and never put articles like vase filled with water on it.
- To avoid electric shock, please don't open the machine's cover plate at will. It shall be repaired by the professional with professional certificate when necessary.
- The terminals marked with on the equipment mean that they are dangerous and electrified, and they should be connected by the trained personnel.
- Since the equipment is connected to network source through power line plug, just pull the power line plug to disconnect it with power network in case of its fault or danger, therefore, please put the power socket in the place where power line is easy to plug.



Norden Communication UK Ltd.

Unit 13 Baker Close, Oakwood Business park, Clacton-On-Sea,
Essex CO15 4BD, United Kingdom
Tel +44 (0) 1255 474063 | E-mail: support@norden.co.uk