

# USER MANUAL

## Switching Power Amplifier

D 6 K 4

D 10 K 4

D 14 K 2



Before using the amplifiers, be sure to read the USER MANUAL carefully. Please keep this USER MANUAL for future reference.



Warning: The inside of the product shell has non-insulated dangerous voltage, which produces a electric shock to the body, so the amplifier must be connected to a grounded socket outlet.

Power amplifiers are capable of producing hazardous output voltages. To avoid electrical shock, do not touch any exposed speaker wiring while the amplifier is operating. The external wiring connected to the speaker terminals shall be installed by a qualified instructed person or ready-made leads or cords of appropriate capacity shall be used. In addition, the speaker terminal should be covered with productive cover complying with the security operations and requirements of the electrical products.



The amplifier is very powerful and can be potentially dangerous to both loudspeakers and humans alike. Many loudspeakers can be easily damaged or destroyed by overpowering them. Always check the speaker's continuous and peak power capabilities. Although the amplifier's attenuators can be used to reduce the overall gain, an increase of the input signal can result in full output power, which may cause damage to connected speakers.



The device will emit radio frequency energy. So this product uses radio frequency energy and if not used or installed in accordance with these operating instructions, may cause interference to other equipment, such as radio and TV receivers. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or TV reception, which can be determined by turning the equipment on and off,

The user is encouraged to try to correct the interference by one or more of the following measures:

- ▲ Reorient or relocate the antenna.
- ▲ Increase the separation between the equipment and receiver.
- ▲ Connect the equipment to an outlet on a circuit different from that to which the receiver is Connected.
- ▲ Consult the dealer or an experienced radio or TV technician for help.



Do not remove top or bottom covers. Removal of the covers will expose hazardous voltages. The user can not repair the internal parts, please contact with the qualified professional person for help.



To avoid risk of fire or electric shock, please do not expose this apparatus to rain or moisture. For safe and reliable operation, the dust covers behind the front panel should be cleaned regularly. If the dust filters are not maintained there will be safety risks. For example the unit can ignite the dust and fire will occur due to high internal temperatures. There is also risk that the unit will malfunction since it is dependent on constant airflow not clean and the unit malfunctions, any resultant problems will not be covered by the warranty.

Thank you for choosing our power amplifiers. We are confident that you will be pleased with the performance, configuration flexibility and reliability.

This manual provides a comprehensive guide to the features and functionality of D-Serie Amps power amplifiers. Please read through it to become fully acquainted with the many configuration options and multiple layers of protection circuitry.

## **Main Features**

D - Serie amplifiers incorporate a number of sophisticated technologies (many of them to ensure the best possible operation ). Familiarizing yourself with these technologies will prove invaluable in setting up and optimizing your loudspeaker system.

### **Voltage Peak Limiter (VPL)**

The Voltage Peak Limiter (VPL) feature allows user adjustments that determine maximum voltage output, thus matching the amplifier to the connected speaker load.

### **Protection and performance optimization**

Appropriate and reliable power amplification is vital to any audio system. Inadequate or faulty power amplification could cause damage to the Loudspeakers, or in some cases to the power amplifiers themselves. To prevent any damage or costly service interruptions, D - Serie amplifiers offer advanced features to protect both internal circuits and any connected loads. These features even protect mains fuse that, in extreme cases, could be overloaded.

### **Following are short descriptions of standard built-in protection features:**

- ▲ **CPL**(Current Peak Limiter)ensures that the amplifier's output does not exceed the safe current handling parameters of amplifier components.
- ▲ **Temperature** protection ensures that the amplifier will not be damaged by exceeding thermal limits.
- ▲ **VHF**(Very High Frequency) protection circuits mute the output of the amplifier when nondynamic continuous signals above 10 kHz are detected.
- ▲ **DC protection** ensures destructive DC signals will not appear at the amplifier outputs. If such conditions occur an internal fuse opens and fault indication is displayed.
- ▲ **Low-impedance** (short circuit) protection provides a fault warning indication and shuts down the output stage when, for example, an input signal is present and a malfunctioning cable or driver is short circuiting the output.
- ▲ **High-impedance** warning reports an alert when, at the same time, output signal is high and no current draw is measured. This situation might occur when no speakers are connected, or when a driver is blown.

▲**Low inrush current** ensures that the mains breaker will not trip when several power amplifiers are turned on simultaneously.

## Mounting

### Unpacking

Carefully open the shipping carton and check for any noticeable damage. Every amplifier is tested and inspected before leaving the factory and should arrive in perfect condition. If any damage is discovered, please notify the shipping company immediately. Only the consignee may institute a claim with the carrier for damage incurred during shipping. Save the carton and packing materials for the carrier's inspection.

### Mounting

Free airflow from front-to-rear of the amplifier must be possible. Therefore, no doors or rack-lids should be mounted in front of or behind the amplifiers.

Amplifiers may be stacked directly on top of each other. There is no need for spacing in between units, though this might enable more convenient installation of cabling on the rear panel.

It is recommended that rear supports be mounted for maximum long-term stability. Rear support brackets are included.

### Cooling

The amplifier uses a forced-air cooling system with air flow from front to rear, maintaining a low operating temperature within defined limits. Front-to-rear airflow is preferred as cooler air is present at the front in nearly all applications. Never attempt to reverse the airflow.

Make sure that there is an adequate air supply in front of the amplifier, and that the rear of the amplifier has sufficient space to allow the exhaust to escape. If the amplifier is rack-mounted, do not use covers or doors on the front or rear of the rack.

Should a heat sink overheat, the temperature sensing circuits will mute the overheating channel. If the power supply overheats, another sensing circuit will mute all output channels until the power supply cools to safe operating temperature.

Always make sure that the dust-filters behind the detachable front panel are clean to ensure maximum possible airflow.



### Operating Voltage

- 1、 The label placed to the right of the mains cable on the rear of the amplifier indicates the AC mains voltage for which the amplifier is wired and approved: 110 V or 220 V. Connect the power cable only to the AC source type referred to on the label. The warranty will not cover damage caused by connecting to an incorrect type of AC mains.

- 2、 The power amplifiers use primary switching. Because the mains power is rectified directly in front of the transformer, the amplifier is insensitive to mains frequency. It may be connected to 50 or 60 Hz sources, and actually will operate on line frequencies from DC to 400 Hz.
- 3、 If the power plug mounted at the factory is not appropriate for your country, it can be removed and the proper connector wired in its place.
- 4、 If you are not 100% confident of your competence to replace the mains plug, engage qualified personnel to do the job.
- 5、 Once a suitable AC supply is connected, the amplifier can be turned on using the front panel power switch. The amplifier then goes through a soft-start sequence as it self-checks its circuits. The fans will blow at high speed before dropping to idle, and the power LED will illuminate.
- 6、 There is no ground lift switch or terminal on the amplifiers. The signal ground is always floating, via a resistor, to chassis and therefore the grounding system is automatic.
- 7、 In the interests of safety, never disconnect the earth (ground) pin on the AC power cord.



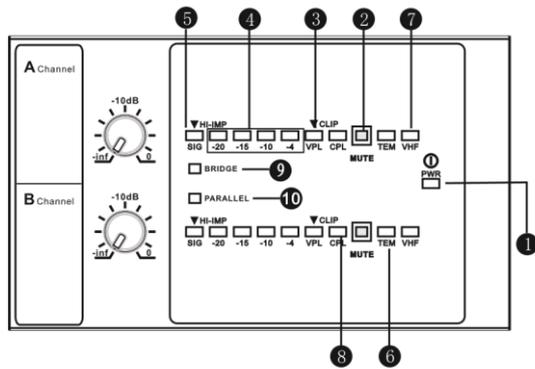
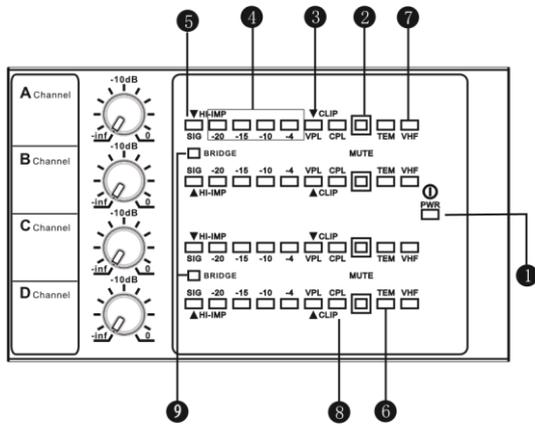
LED above the switch illuminates, it indicates the power is ON. When VPL or CPL indicators are not illuminated, and the VPL DIP-switches Conversely, when the green LED doesn't illuminate, it means they are set to maximum at the specified load, the amplifier channels are able to deliver maximum and rated output power.

**PWR**-Power on (Blue)



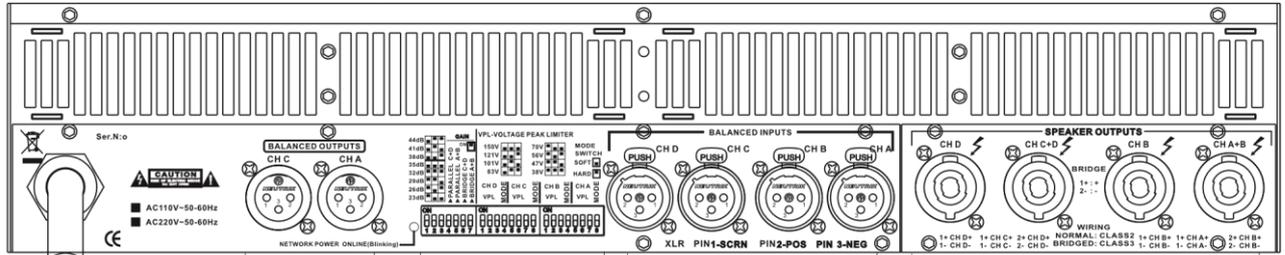
Front Panel LED Field

The amplifier should never be operated **MUTE**-Channel filters in place. **VPL**-Voltage Peak Limiter(VPL) active



- ① mutes due to a fault condition(Red) without the dust-
  - ②
  - ③
  - ④ **SIG**-Signal levels -40dB(sig) to -4 dB
  - ⑤
  - ⑥
  - ⑦
  - ⑧ **HI-IMP**-High impedance/open load detected
  - ⑨
  - ⑩ **TEM**-Temperature mute(Yellow constant)
- VHF**-Very High Frequency protection active (output mute) (Red constant)
- CPL**-Current Peak Limiter(CPL) active (Red flashing) or Low impedance/short circuit fault detected (Red constant with output muted)
- BRIDGE**-Output in bridge mode
- PARALLEL**-Input in parallel mode

## Rear Panel for 4-Channel Amplifier



Main input  
110V-220V  
operation  
(not selectable)

Balanced signal output

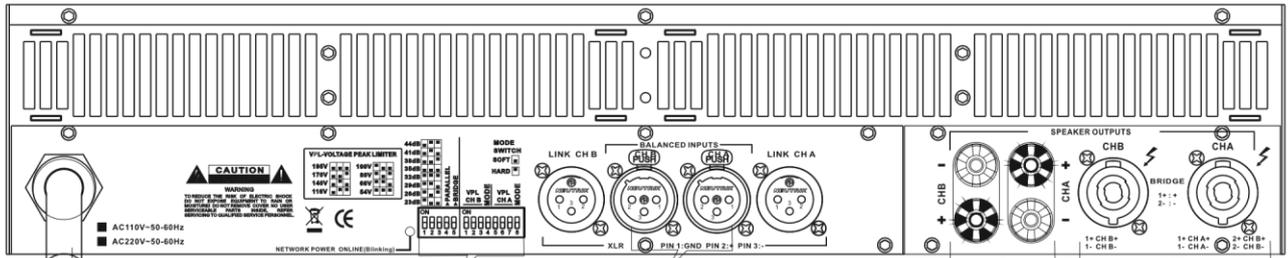
DIP switches for  
adjusting key features  
(see below)

Neutrik XLR connectors  
for inputs and loop thru

Neutrik SPEAKON  
connectors for outputs



## Rear Panel for 2-Channel Amplifier



Main input  
110V-220V  
operation  
(not selectable)

DIP switches for  
adjusting key features  
(see below)

Neutrik XLR connectors  
for inputs and loop thru

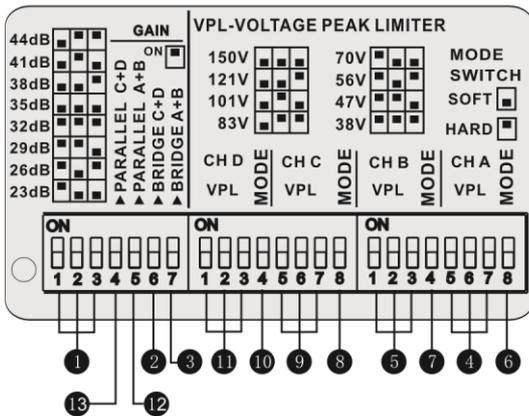
Binding posts for output

Neutrik SPEAKON  
connectors for outputs



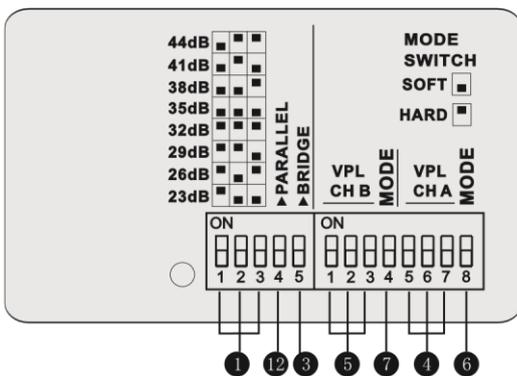
Never connect an output terminal to ground, or to any other input or output.

### DIP-switch field(4-Channel)



- 1 GAIN switches
- 2 BRIDGE switch for CH C + CH D
- 3 BRIDGE switch for CH A + CH B
- 4 VPL switches for CH A
- 5 VPL switches for CH B
- 6 MODE switch for CH A
- 7 MODE switch for CH B
- 8 MODE switch for CH C
- 9 VPL switches for CH C
- 10 MODE switch for CH D
- 11 VPL switches for CH D
- 12 PARALLEL switch for CH A + CH B
- 13 PARALLEL switch for CH C + CH D

### DIP-switch field(2-Channel)



## The DIP-switches features

The following features may be adjusted via the DIP-switches on the rear panel of the amplifier.

**GAIN**—Globally set for all channels, from +23dB to +44dB in 3dB steps

**Bridge A+B and C+D**—Switches the channel pairs into bridge mode operation. An automatic -6dB gain compensation is applied.

**VPL**—The Voltage Peak Limiter provides optimum peak voltage settings for each channel. These settings make it convenient to drive loudspeakers with different power handling capability.

**MODE**—Select VPL mode to HARD or SOFT operation. For channels driving sub-woofers and low frequency drivers, it is recommended to use the HARD setting for optimal operation. For mid and high frequency drivers, always select SOFT.

D 6 K 4							
Voltage Peak Limiter			Output power per channel (W)				
VPL Setting	V peak	V <sub>rms</sub>	Load				
			16 Ω	8 Ω	4 Ω	2 Ω	
101 V	101	70	320	640	1275	1500	
83 V	83	59	215	430	860	1500	
70 V	70	49	155	305	615	1225	
56 V	56	40	100	195	390	785	
47 V	47	33	70	140	275	550	
38 V	38	27	45	90	180	360	

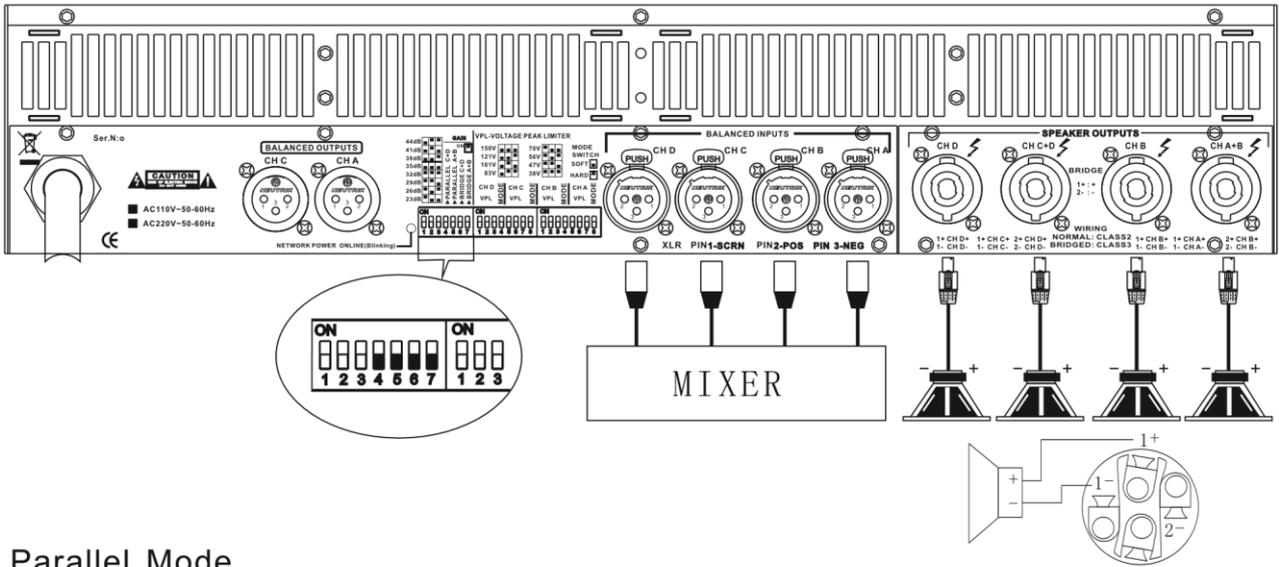
  

D 10 K 4							
Voltage Peak Limiter			Output power per channel (W)				
VPL Setting	V peak	V <sub>rms</sub>	Load				
			16 Ω	8 Ω	4 Ω	2 Ω	
150 V	150	106	650	1300	2485	2500	
121 V	121	86	435	870	1740	2500	
101 V	101	70	315	625	1250	2500	
83 V	83	59	225	450	900	1805	
70 V	70	49	160	315	630	1260	
56 V	56	40	110	220	435	870	
47 V	47	33	80	155	315	625	
38 V	38	27	55	110	220	440	

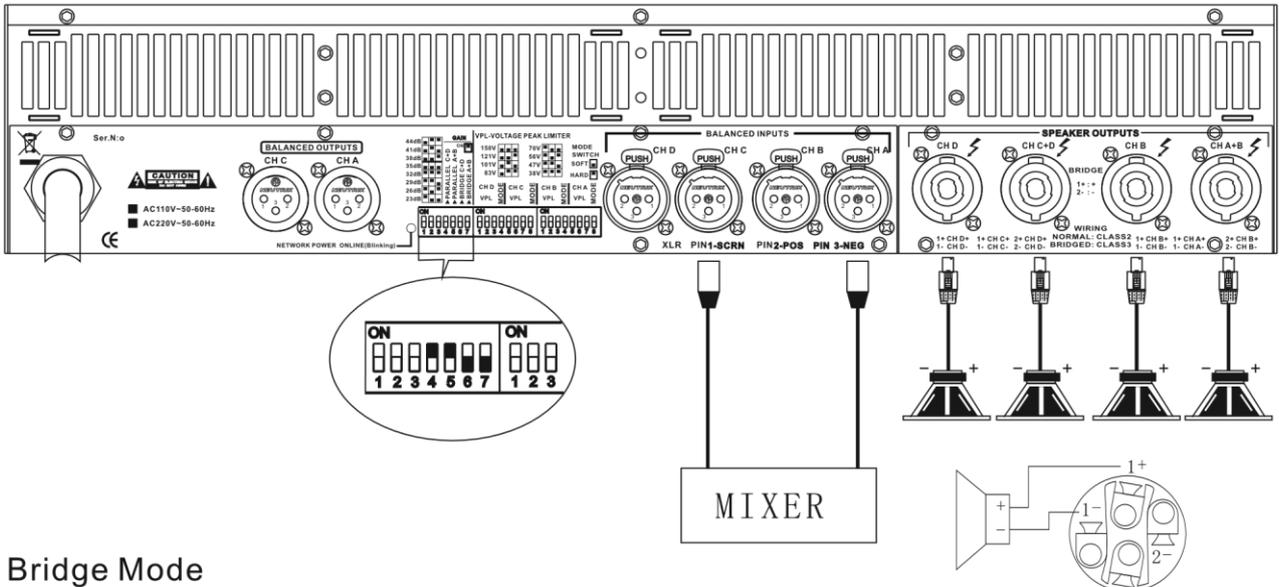
  

D 14 K 2							
Voltage Peak Limiter			Output power per channel (W)				
VPL Setting	V peak	V <sub>rms</sub>	Load				
			16 Ω	8 Ω	4 Ω	2 Ω	
195 V	195	138	1200	2400	4800	6500	
170 V	170	120	860	1720	3445	6500	
140 V	140	99	620	1245	2485	4970	
116 V	116	82	445	885	1770	3540	
100 V	100	70	320	640	1275	2550	
80 V	80	57	230	460	925	1850	
66 V	66	47	170	340	665	1330	
54 V	54	38	120	240	480	960	

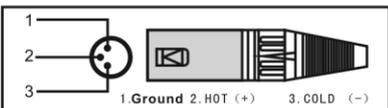
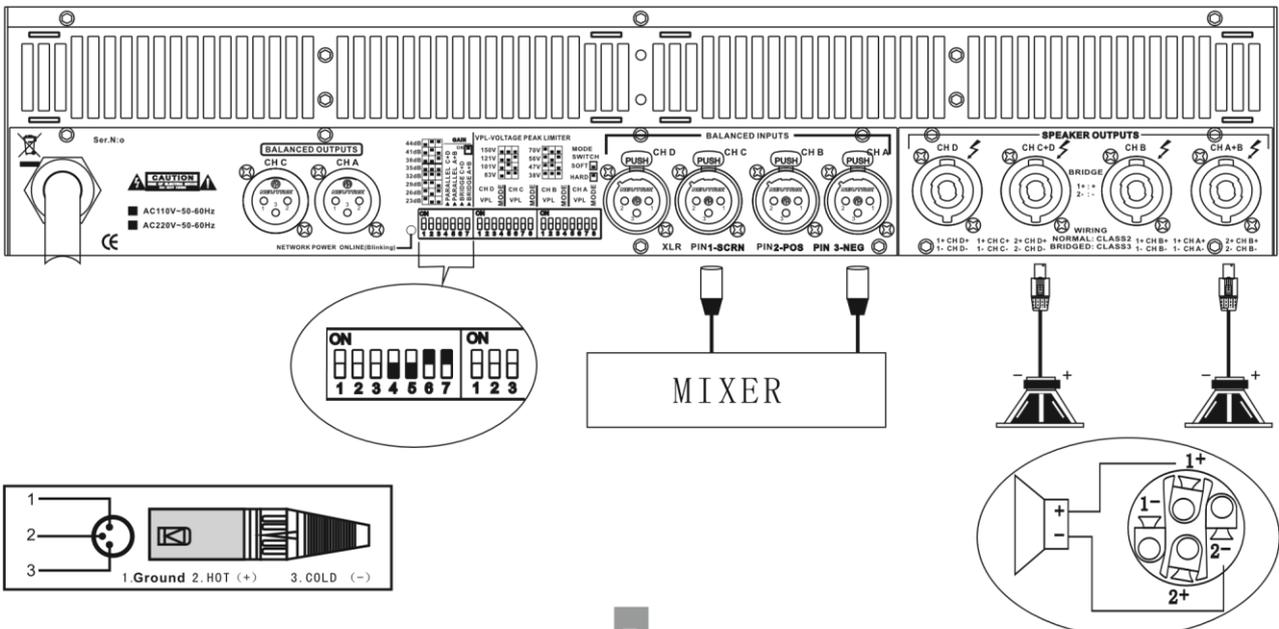
## Stereo Mode



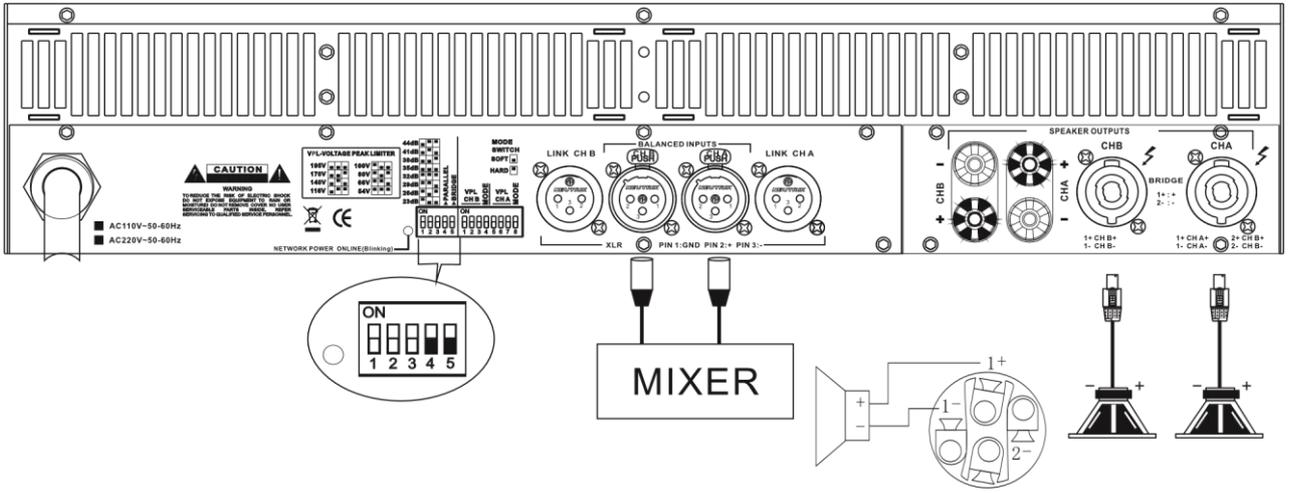
## Parallel Mode



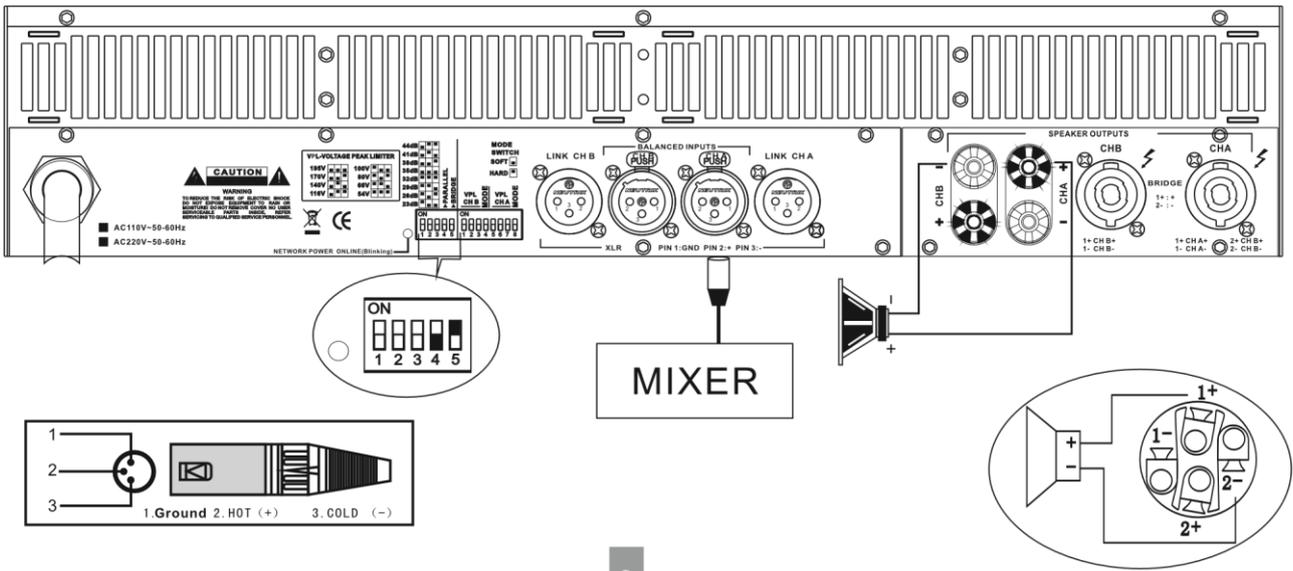
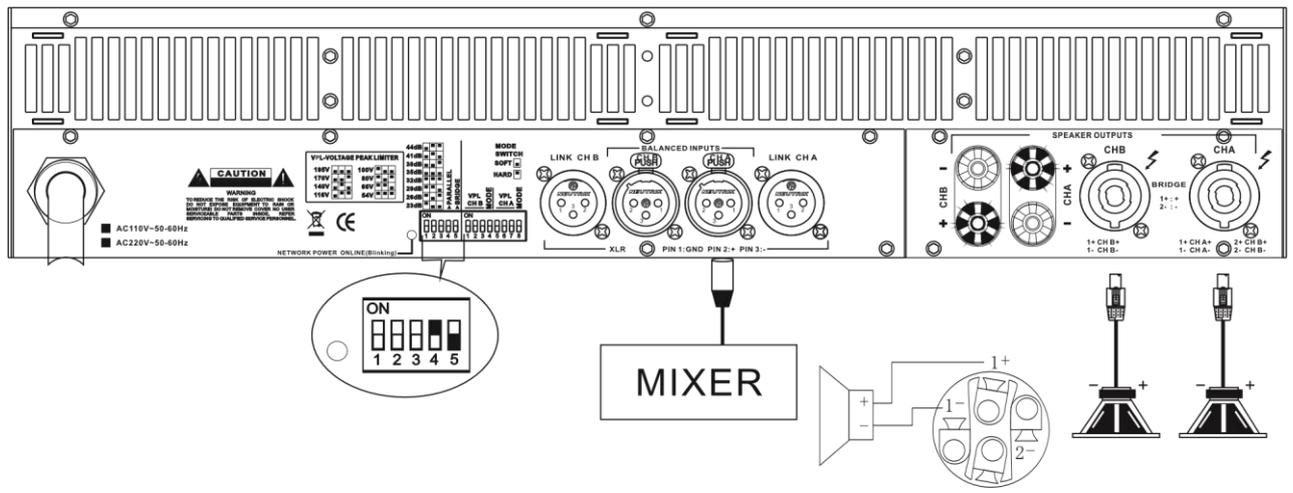
## Bridge Mode



## Stereo Mode



## Parallel Mode



Bridge Mode

## Technical Specifications

<b>Model</b>	<b>D 6 K 4</b>	<b>D 10 K 4</b>	<b>D 14 K 2</b>
8 $\Omega$ Stereo Power	4 x 750 W	4x1300W	2x2400W
4 $\Omega$ Stereo Power	4x1275W	4x2485W	2x4800W
2 $\Omega$ Stereo Power	4x1500W	4x2500W	2x6500W
8 $\Omega$ Bridged Power	2x2650W	2x4400W	8800W
4 $\Omega$ Bridged Power	2x2800W	2x4800W	14000W
Frequency Response	20Hz-20KHz $\pm$ 0.5dB		
Input Impedance	20K $\Omega$ Balanced, 10K $\Omega$ Unbalanced		
<b>THD+N</b> (Rated power, 4 $\Omega$ /1KHz)	0.10%		
<b>S/N Ratio</b>	90dB	110dB	
<b>Damping Factor</b>	800		
<b>Protection</b>	Short Circuit, DC Voltage, Thermal, VHF, Current Inrush, Turn-On/Off transient, Open Circuit		
<b>Operating Voltage</b>	AC 110-220V /50-60Hz		
<b>Dimensions(HWD)</b>	88x483x380mm		

Packing Dimensions(HWD)	175x575x485mm		
Net Weight(kgs)	12.5	13.27	13.27
Gross Weight(kgs)	13.75	14.5	14.5

\*Specifications subject to change without notice.