

BLACK POWER SERIES



D20K AMPLIFIER OWNER'S MANUAL



BLACK POWER SERIES

D20K AMPLIFIER

IMPORTANT NOTE

WARNING NOTICES

SAFEGUARDS

Electrical energy can perform many useful functions. This unit has been engineered and manufactured to assure your personal safety. Improper use can result in potential electrical shock or fire hazards. In order not to defeat the safeguards, observe the following precautions for its installation, use and servicing.

Explanation of Graphical Symbols



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION
RISK OF ELECTRIC SHOCK:
OPEN ONLY IF QUALIFIED
AS SERVICE PERSONNEL

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE

IMPORTANT NOTE

ATTENTION: This unit must be protected from moisture because of the risk of fire and the possibility of electric shocks.

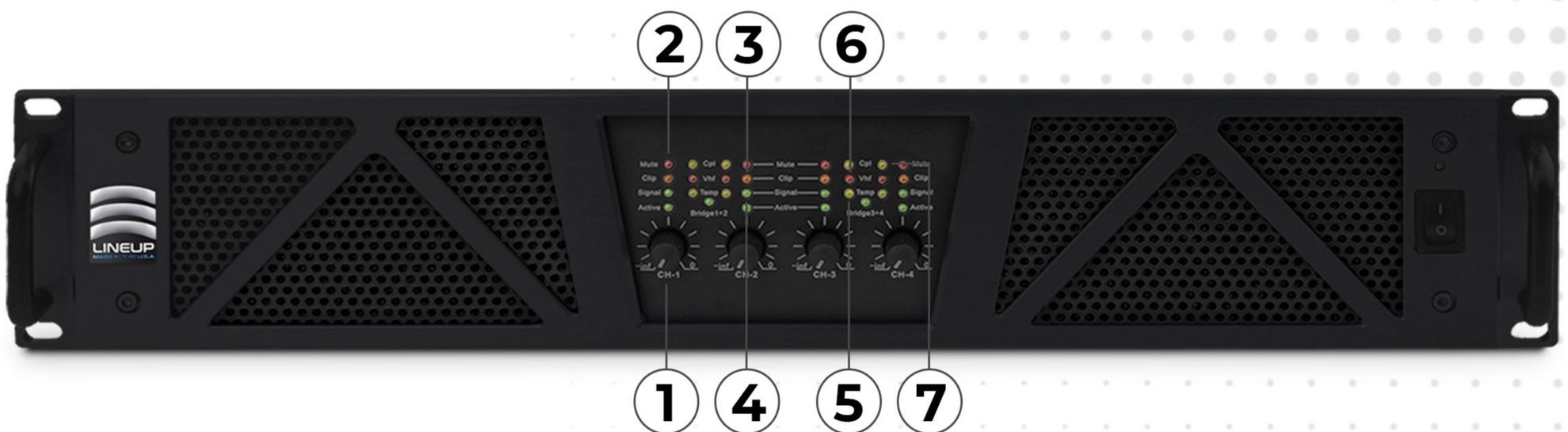
1. Make sure that you have the correct mains voltage. Only operate the unit at the mains voltage marked on the rear panel.
2. Make sure that nothing, especially metal objects are inserted into the device. This could result in electric shock or malfunction.
3. If the unit is subjected to extreme fluctuations of temperature e.g. On being transported from outside into a heated room, condensation can form. This unit should not be used until it has reached room temperature.
4. In the event of water or any other fluid being accidentally spilled on the unit, switch the unit off immediately and send it to a qualified service center for inspection.
5. Make sure that the unit is always well ventilated and never exposed to direct sunlight.
6. Do not use sprays to clean the unit as they have a detrimental effect on the unit and could cause it to ignite suddenly.
7. The machine uses a single power switch. Please cut off the power before service.
8. Please do not place anything with liquid above the amp to avoid leakage.

D20K AMPLIFIER

CONTROL ELEMENTS

FRONT PANEL

THE FRONT PANEL LED AREA INCLUDES THE FOLLOWING INDICATORS PER CHANNEL:



1 VOLUME CONTROL

Calibrated potentiometers to alter the total gain of the power amplifier. In order to avoid distortions in mixing consoles, these controls should normally be positioned between 0 and 10. The calibrated markings show the additional attenuation directly.

2 MUTE LED

MUTE protection under mute position.

3 CLIP/LIMIT INDICATOR

This indicator signals if the amplifier output is clipping or limiting. It has two different indication states: If the clip limiter is engaged, it has a short time constant, and it illuminates briefly.

If the clip limiter is not engaged, it has an increased time constant, and it illuminates for a longer period.

4 LED SIGNAL

Green SIG Indicates output signal levels in normal operating range.

5 TEMP

This LED lights up if the limiter has been activated and the power amplifier is being operated at the clip level. If the LED flashes briefly, this is not a cause for concern. If this LED is lit permanently, the volume should be reduced to avoid overload damages to the connected loudspeaker systems.

6 VHF

VHF-Very High Frequency protection active (output muted) (Yellow Constant)

7 CPL LED

CPL-(Orange constant with output muted): Low impedance/Short Circuit Detection Fault.

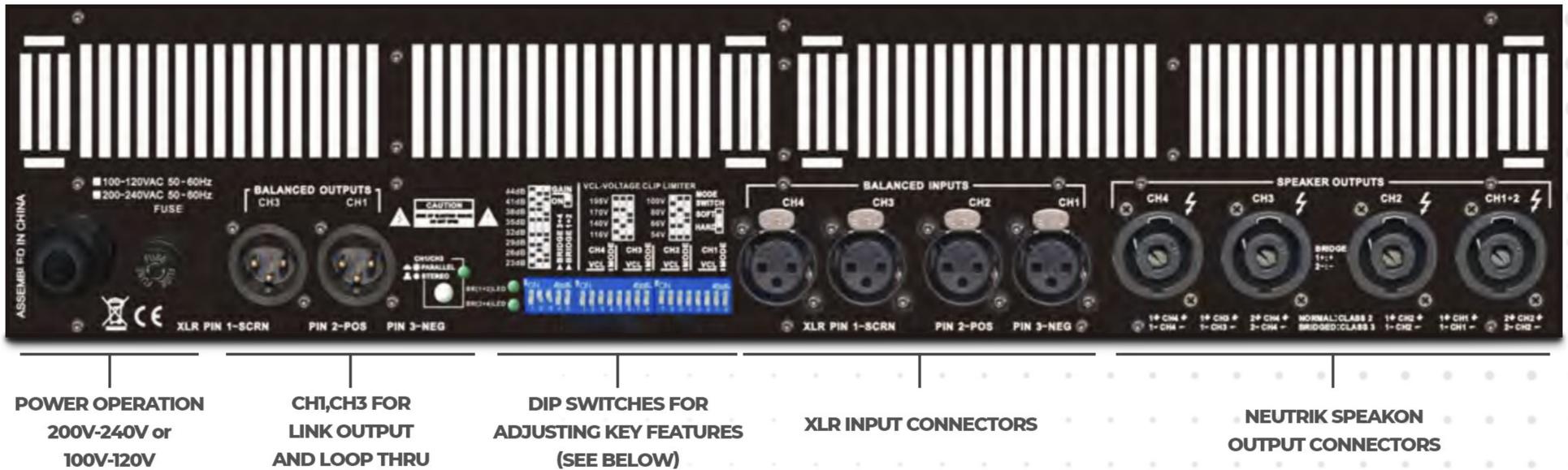
8 POWER SWITCH

Turn the unit power on or off.

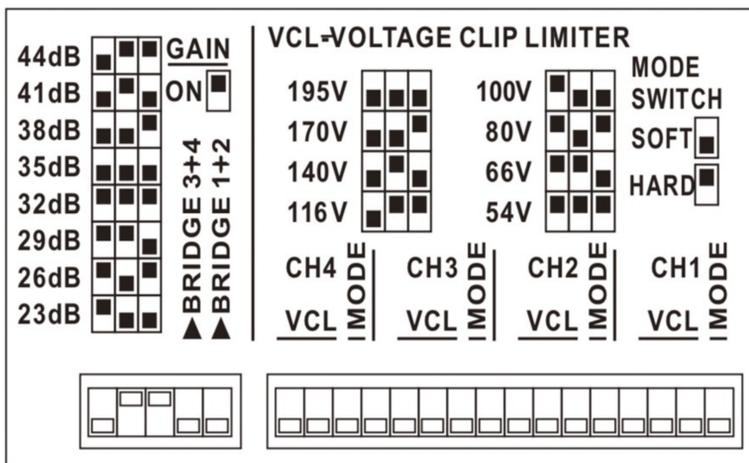
D20K AMPLIFIER

REAR PANEL FEATURES INTRODUCTION

REAR VIEW OF 4-CHANNEL MODEL FITTED WITH SPEAKON CONNECTORS



THE DIP SWITCH FEATURES



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

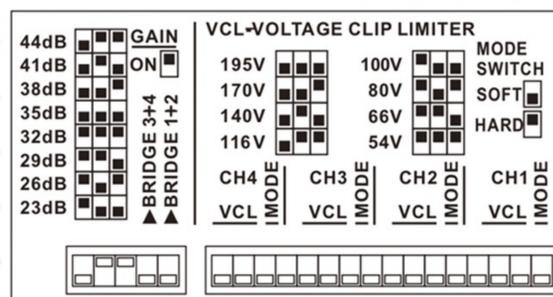
Gain-Globally set for all channels, from +23 dB to +44 dB in 3 dB steps.

Bridge 1+2 and 3+4 Switches the channel pairs into bridge mode operation an automatic -6 dB gain compensation is applied.

REAR PANEL FEATURES INTRODUCTION

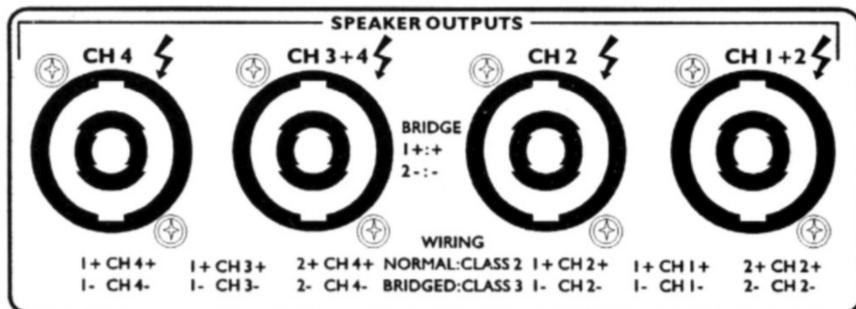
VCL-Voltage Clip Limiter adjustment is provided for eight discrete levels for each channel. Select the setting most appropriate for connected speakers.

Mode-Select VCL mode to either 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.



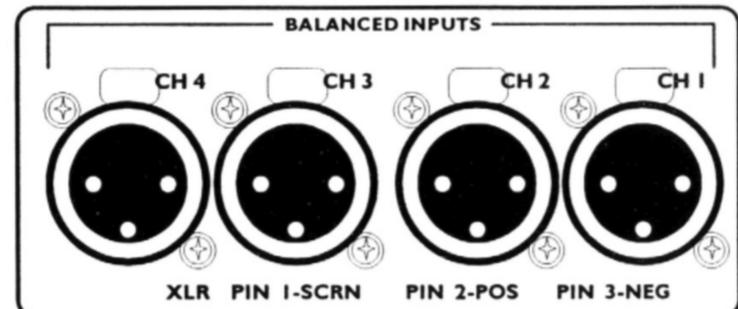
D20K AMPLIFIER

OUTPUT CONNECTORS



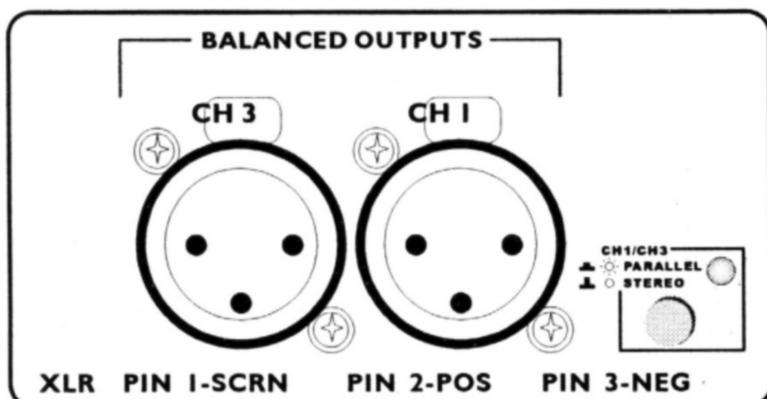
SPEAKON OUTPUTS

INPUT CONNECTORS



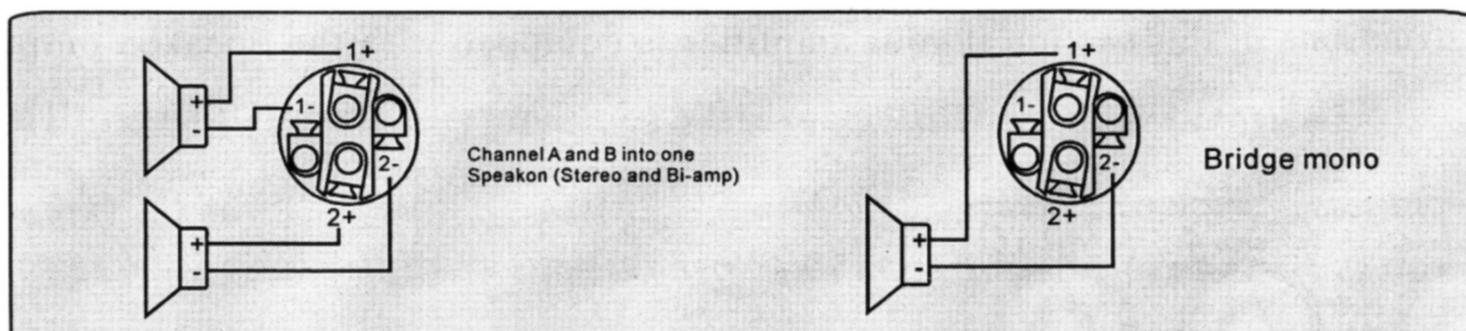
AUDIO INPUTS

SPEAKON OUTPUTS PARALLEL OR STEREO MODELS



Speakon outputs PARALLEL or STEREO models:

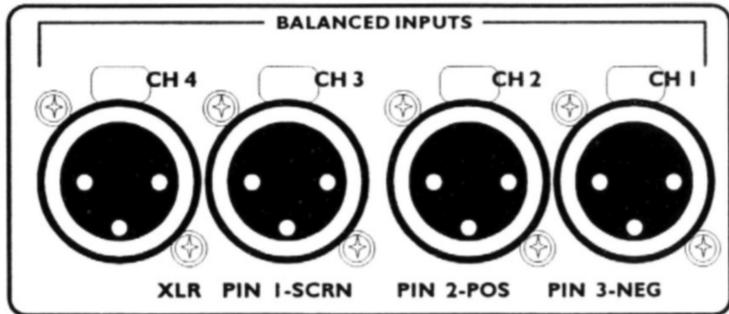
In stereo models, the signal input into channel 1 can be output from channel 1 only, similarly, the signal channel 3 is the same. In parallel models, the signal input into channel 1 or channel 3 can be output from channel 1 and channel 3.



Four-channel amplifiers Additional connectors are provided for channel 3 and channel 4. Channel 3 functions as channel 1 above, and channel 4 as channel 2 above.

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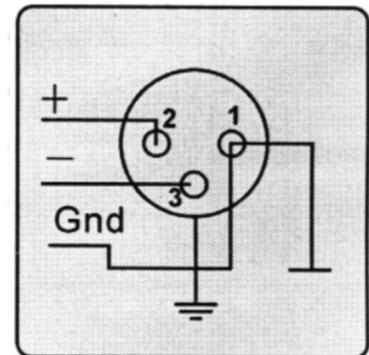
AUDIO INPUT AND OUTPUT CONNECTIONS



AUDIO INPUTS

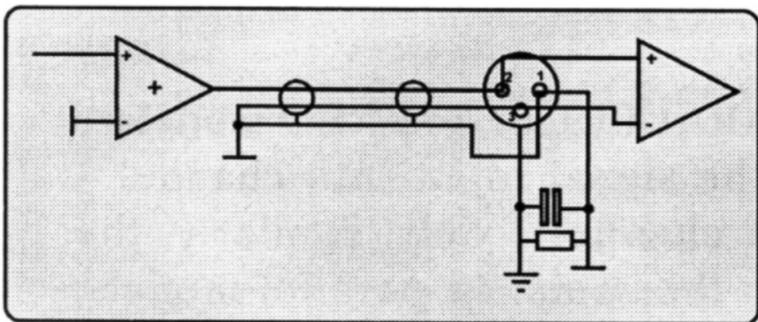
The XLR input connectors are electronically balanced, and wired according to the IEC 268 standard (pin 2= hot). XLR input connectors should be wired follows:.

Pin 1 Ground/Shield
Pin 2 Hot (+)
Pin 3 Cold (-)



When linking the same source signal to several input channels, be aware that there is a limit to the number of channels an output source can "drive". A typical output source (e.g. a DSP crossover unit) can drive up to four amplifier channels before external line-drivers might be required to buffer the signal.

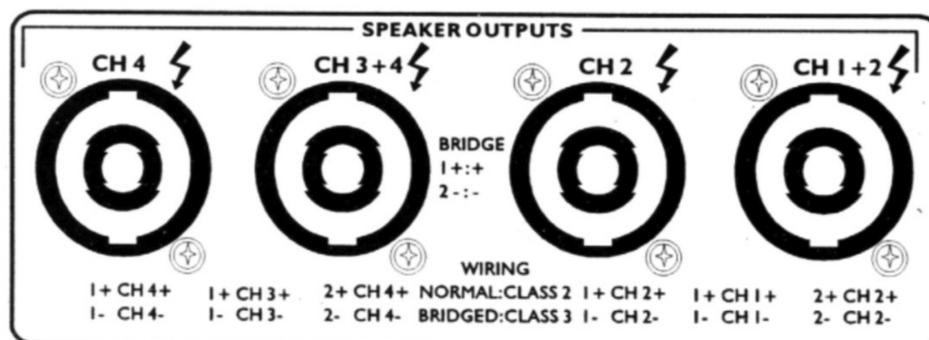
UNBALANCED INPUT CONNECTIONS



To connect an input to an unbalanced source, it is possible to connect pins 1 and 3 in the XLR plug at the amplifier end of the cable. However, a better method is to connect pin 3 to the shield at the source end of the cable, as this usually results in better hum and noise rejection. Balanced input connections are recommended whenever possible.

SPEAKON OUTPUT CONNECTIONS

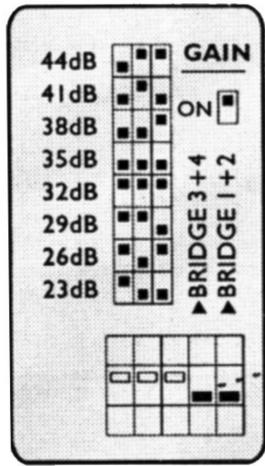
REFER TO THE INSTRUCTIONS IN THIS SECTION IF YOUR AMPLIFIER IS EQUIPPED WITH THE SPEAKON OUTPUT CONNECTORS.



SPEAKON OUTPUT

D20K AMPLIFIER

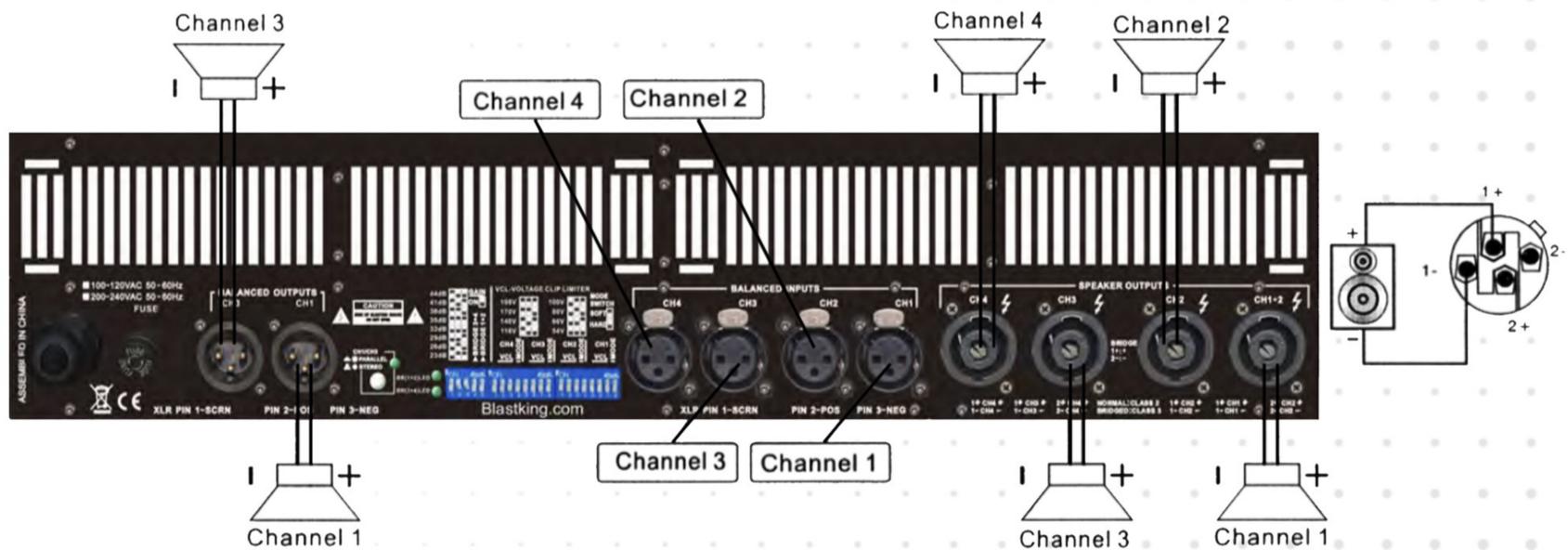
OUTPUT MODE



PICTURE 1

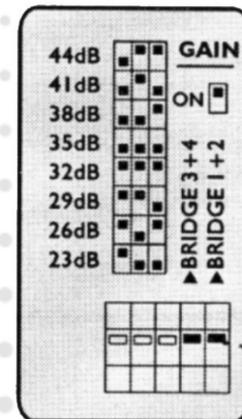
STEREO MODE

Before setting the mode, please turn off the amplifier and slide the mode select switch to the down position (Picture 1). In this mode, Channel 1 and Channel 2 operate independently (traditional stereo amplifier).

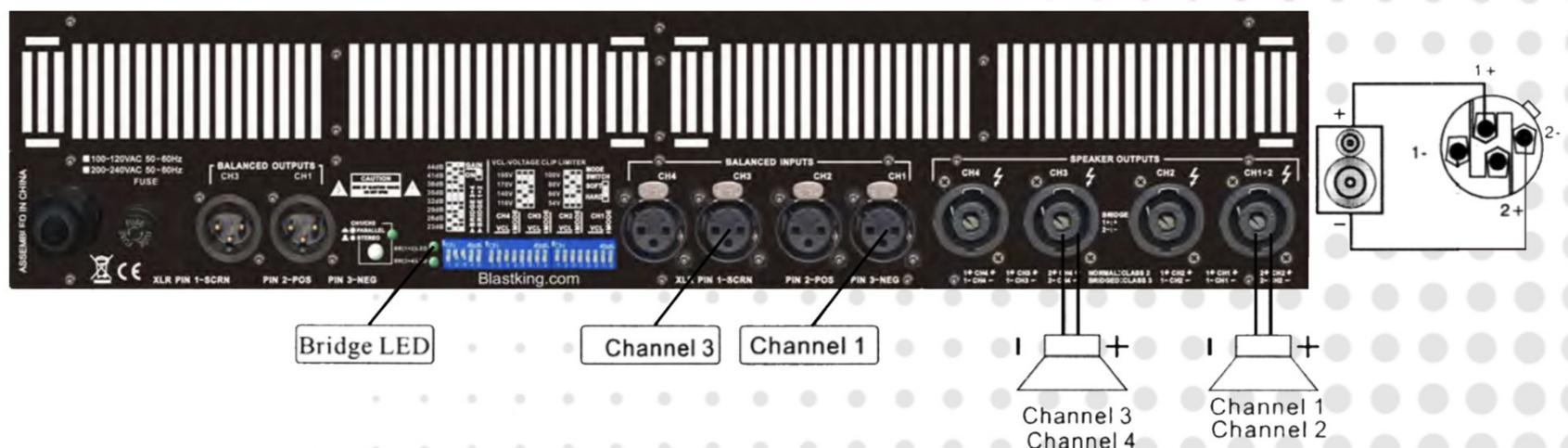


BRIDGE MODE

Before setting the mode, please turn off the amplifier and slide the mode select switch to the up position (Picture 2), channel 1 and channel 2 are bridged, channel 3 and channel 4 are bridged. Now, the signal input into channel 1 and channel 3 will be output from the bridge end. On the other hand, the output level control of channel 2 and channel 4 should be turned down to low. Only the volume control of channel 1 and channel 3 are used to control the volume of the whole system.



PICTURE 2





BLACK POWER SERIES

D20K AMPLIFIER

PROFESSIONAL POWER AMPLIFIER SPECIFICATIONS

MODEL	D20K
Output Power	
8Ω Stereo Power	4×2100W
4Ω Stereo Power	4×4000W
8Ω Bridged Mono Power	2×10000W
Frequency Response	20Hz-20kHz ±0.5dB
THD+N (Rated power,4Ω/KHz)%	0.10%
Signal Noise Ratio (dB)	110dB
Input Impedance	20KΩ Balanced / 10kΩ Unbalanced
Output Connectors	Speakon Connectors(NEUTRIK)
Power Requirement	100-120V-50-60Hz or 200-240V-50-60Hz
Dimension	19x14.8x3.5 in / 483x377x88mm
Net weight	28.6 lb / 13kg

