



*Unbroken Superiority*

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## **USER'S MANUAL**

**SK2500/SK3000/DX4000/DX5000**

### **Professional Power Amplifier**



Virgin UK Global Electronics Ltd constantly seeks ways to enhance our products' quality so as to keep & maintain the unbroken superiority of our virgin products which we have done for more than a decade. To achieve our mission, we reserve the right to change or alter any specification in this manual without prior notice.

*Thanks for choosing virgin product*

## F. TECHNICAL SPECIFICATION

Item		SK2500	SK3000	DX4000	DX5000
Stereo mode (dual channel) 1kHz	4 Ohms	750W×2	1100W×2	1500W×2	2000W×2
	8 Ohms	500W×2	700W×2	1050W×2	1200W×2
Bridge mono 1kHz	8 Ohms	1500W	2200W	3000W	4000W
Input sensitivity		1.414V, 32dB, 26dB			
Input impedance		10KΩ Unbalanced 20kΩ Balanced			
Frequency response (below 10dB rated power)		20Hz~20kHz ±0.5dB			
Distortion(SMPTE-1)		<0.1% (1kHz)			
Crosstalk attenuation		≥60dB (1kHz)			
S/N ratio		100dB (A weight)			
Damping coefficient		>300 (1kHz 8Ω)			
Protection		DC protection, over drive/heat protection, short-circuit protection, clip protection.			
Control		Front panel: AC switch, Volume knob per channel. Rear panel: 1. stereo/bridge/parallel select switch 2. grounding switch 3. sensitivity transfer switch			
Indicator		Signal: 2×green LED Clip: 2×red LED Power: 1×blue LED Protection: 2×red LED			
Connector		Input: electric balanced COMBO, 1/4-inch TRS and terminal block. Output: speak-on and binding posts.			
Power consumption (4ohms stereo 1kHz)		2600W	3500W	4800W	6000W
Power supply		refer to silkscreen			
Dimension(W×D×H)		SK2500: 483×320×88.8mm SK3000: 483×380×88.8mm DX4000: 483×380×133mm DX5000: 483×495×133mm			
Net Weight		17kg	21.5kg	31kg	38kg

## IMPORTANT SAFETY SYMBOLS



The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions, which maybe sufficient to constitute the risk of electric shock or death.

The symbol is used in the service documentation to indicate that specific component shall be replaced only by component specified in that documentation for safety reasons.

Protective grounding terminal

Alternating current/voltage

Hazardous live terminal

**ON:** Denotes the apparatus is turned on

**OFF:** Denotes the apparatus is turned off.

**WARNING:** Describes precautions that should be observed to prevent the danger of injury or death to the operator.

**CAUTION:** Describes precautions that should be observed to prevent danger of the apparatus.

## 1. IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.

- Keep these instructions.

- Heed all warning.

- Follow all instructions.

- **Water & Moisture**

The apparatus should be protected from moisture and rain, can not used near water, for example: near bathtub, kitchen sink or a swimming pool, etc.

- **Heat**

The apparatus should be located away from the heat source such as radiators, stoves or other appliances that produce heat.

- **Ventilation**

Do not block ventilation areas. Failure to do so could result in fire. Always install accordance with the manufacturer's instructions.

- **Object and Liquid Entry**

Objects do not fall into and liquids are not spilled into the inside of the apparatus for safety.

- **Power Cord and Plug**

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Do not defeat the safety purpose of the polarized or grounding-type plug.

- **Power Supply**

The apparatus should be connected to the power supply only of the type as marked on the apparatus or described in the manual. Failure to do so will result in damage to the product and possibly to user.

Unplug this apparatus during lightning storms or when unused for long periods of time.

- **Fuse**

To prevent the risk of fire and damaging the unit, please use only the recommended type of fuse as described in the manual. Before replacing the fuse, make sure the unit is turned off and Type disconnected with AC outlet.

- **Electrical Connection**

Improper electrical wiring may invalidate the product warranty.

- **Cleaning**

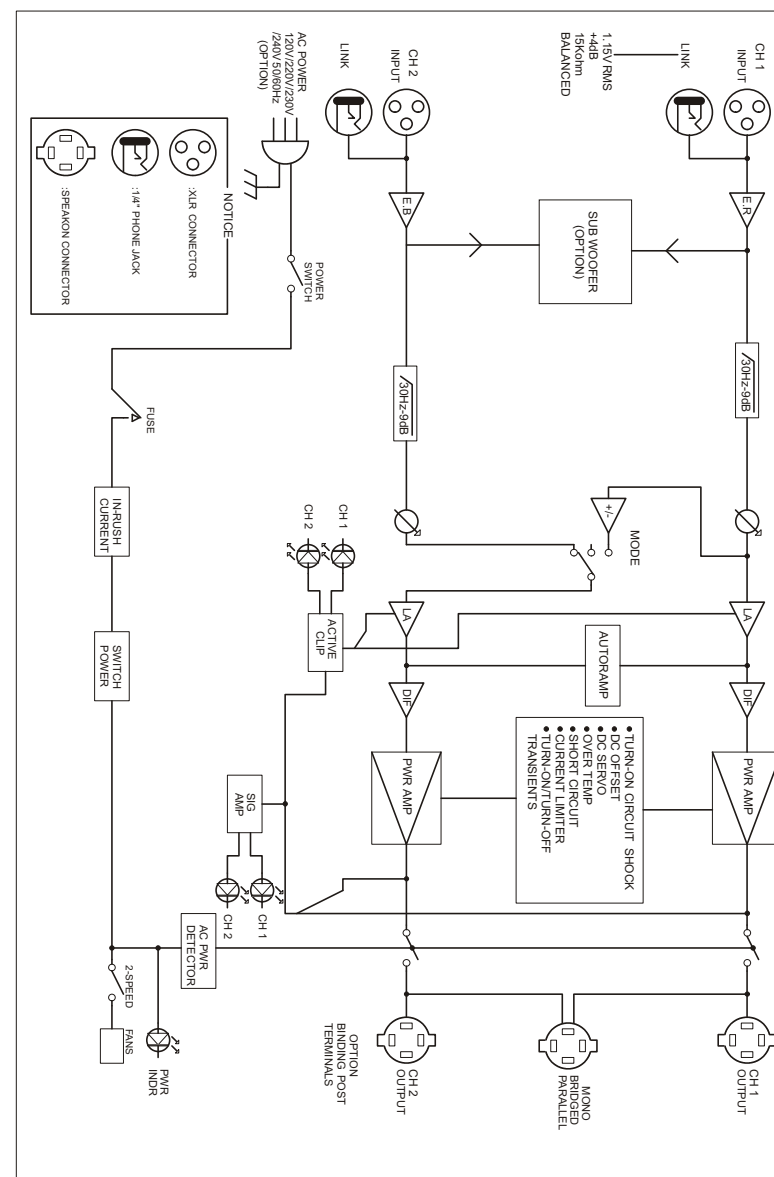
Clean only with a dry cloth. Do not use any solvents such as benzol or alcohol.

- **Maintenance**

Do not accept any servicing other than that described in the manual. Consult with a qualified service personnel only.

- Only use accessories or parts recommended by the manufacturer.

## E. BLOCK DIAGRAM

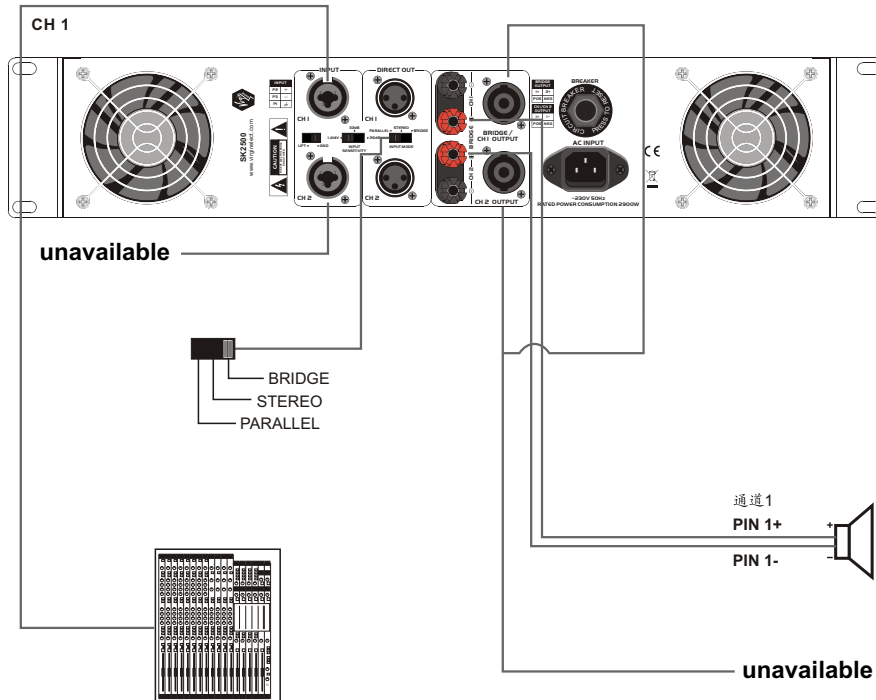
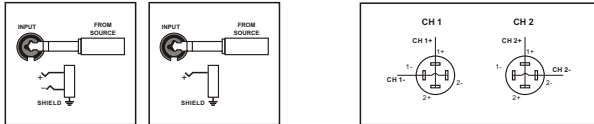


## How to connect bridge mode

In this mode, signal input from channel 1, and output from channel 1+, channel 2+, or bridged output connector. Volume is adjusted by volume knob of channel 1. To avoid crosstalk, please turn down the volume knob of channel 2 to lowest. Before operating bridge mode, please set mode select switch to the right position BRIDGE. About details, please take reference to the following figure.

----- input connection hint -----

Balanced unbalanced



## A. INTRODUCTION

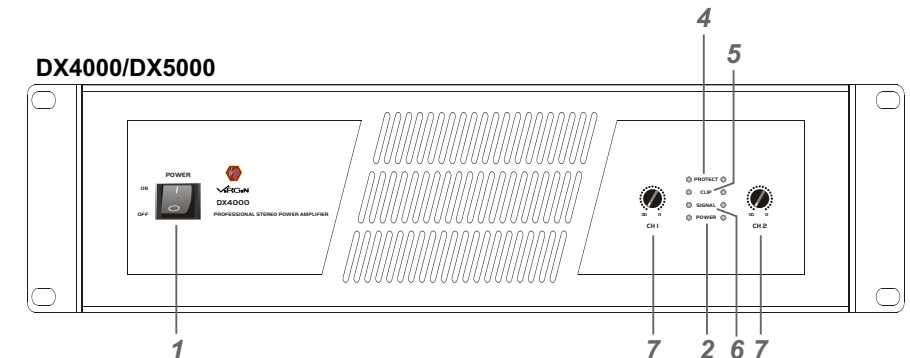
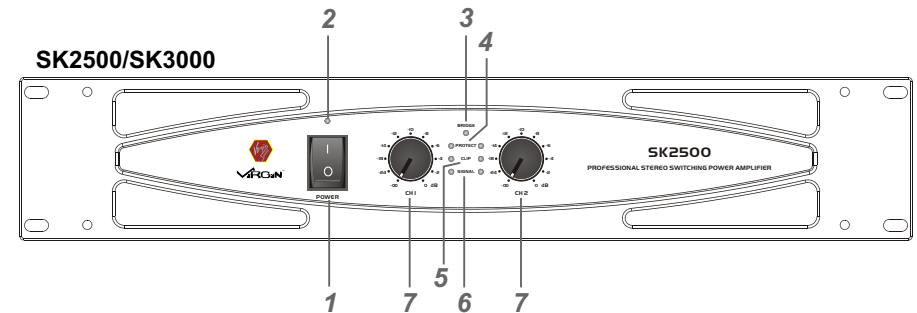
Thank you for purchasing the professional power amplifier.

This product is based on many years of R&D experience and the current professional technology to ensure the high performance cost ratio. The high efficiency soft switch makes the product light weight and reliable, compact, easy to operate. Protections includes clip/limit protection, thermal protection, over-load protection. It is equipped with power switch, CH1/2, volume control, clip LED, signal LED, power LED, protection LED. Rear panel: TRS connector, speak-on/binding-post output, parallel/bridge/stereo mode switch, sensitivity switch, etc.

Please read the manual carefully before operation.

## B. CONTROLS PART

Front panel controls





### 1. Power switch(ON/OFF)

Turns on/off power switch. When turned on, power LED lights up.

Note: please set the volume control to minimum position to avoid device damage.

### 2. Power LED (POWER)

When the amplifier turned on, blue LED lights up.

### 3. Bridge LED

This LED lights up yellow when power amplifier operates in Bridge Mode.

### 4. Protection LED (PROTECT)

When the power amplifier is in protection the corresponding LED lights up.

### 5. Clip LED (CLIP)

Clip LED for each channel. When input signal reaches or surpasses clip level (distortion  $\geq 0.5\%$ ), the corresponding channel LED lights up. Please adjust the level control to avoid distortion.

### 6. Signal LED (SIG)

One LED for each channel. When output signal surpasses 3V (or input track has a input signal), the corresponding LED lights up.

### 7. Volume control (CH1/CH2)

One control for each channel. Turn the control to adjust the input sensitivity.

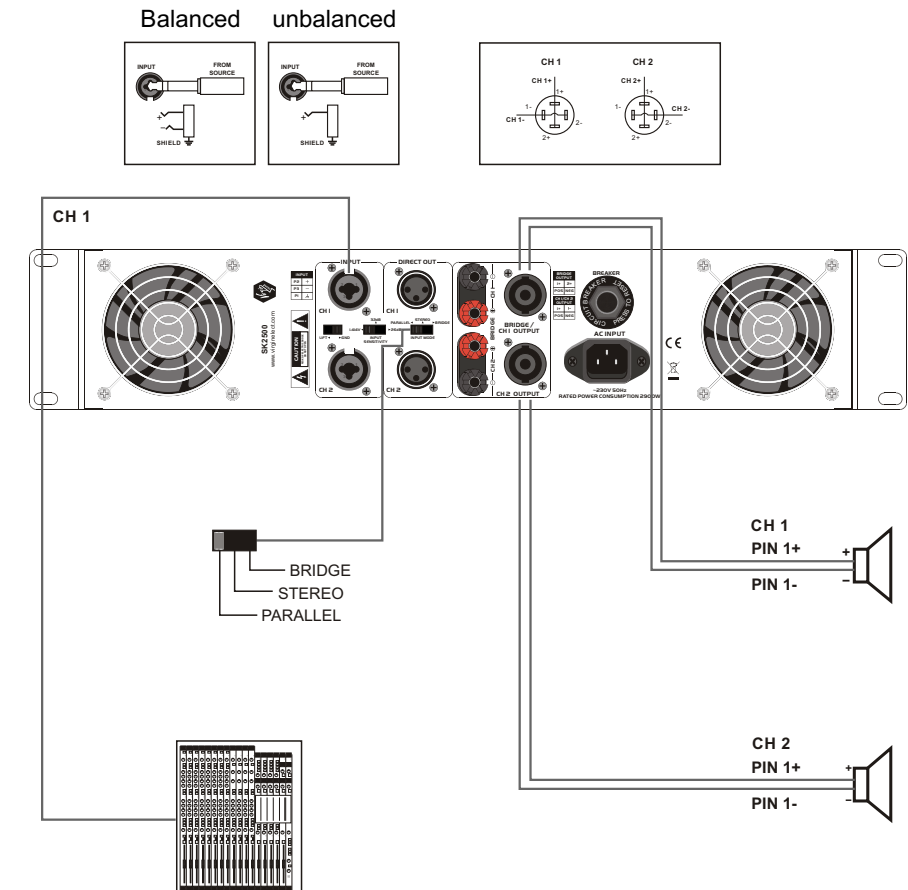
Adjustable range:  $-\infty \sim 0\text{dB}$ . Turn counterclockwise to end is OFF.

This setting can protect loudspeaker.

## How to connect parallel mode

In the mode, signal that input from CH1 or CH2, and output from CH1 and CH2 output outlet. Volume is controlled separately by volume knob of each channel. Before operating parallel mode, please set mode select switch to left position (PARALLEL), details please take reference to the following figure.

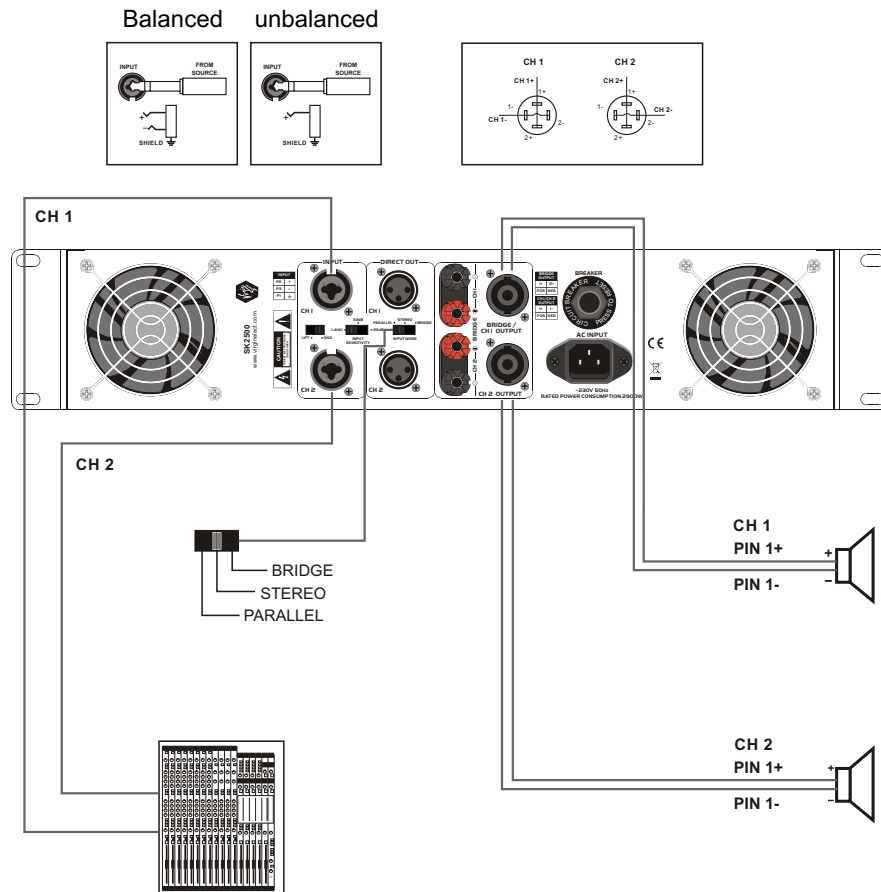
----- input connection hint -----



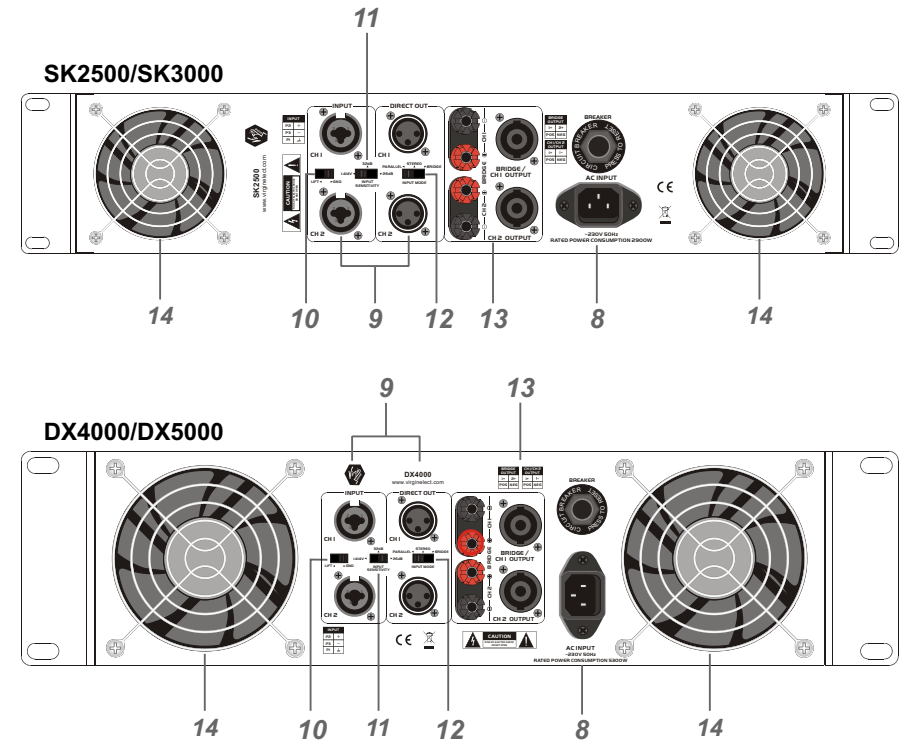
## How to connect stereo mode

In stereo mode, channel1 and channel 2 work separately, signal that input from CH1 would output from CH1, signal that input from CH2 would output from CH2. Volume is controlled by volume knob of each channel. Before connecting stereo mode, please set mode select switch to the middle position--- STEREO. About details, please take reference to the following figure.

----- input connection hint -----



## Front/rear panel controls



**8. AC input socket:** Standard 3PIN IEC power connector, which connects to main power network through attached power cable. Please make sure the power is right before connecting to voltage.

**Note:** to prevent shock or fire, please make sure amplifier and all related device all connect to ground.

**9. audio input/output connector:** CH 1 and CH 2 electrical balanced COMBO (compliance XLR and 1/4" ), terminal input connector, is used for connecting external audio signal. These connectors internally parallelize and can receive balanced and unbalanced audio signal. The amplifier adopts electrical balanced circuit of low noise, wide dynamic processing scope can make it receive signal of any audio level.

**10. grounding Separated switch:** GND indicates apparatus ground connect with external shell, LIFT indicates external shell doesn't connect with apparatus ground (mainly used for decreasing noise in system matching )

**11. sensitivity transfer switch:** According to different signals input size, select different sensitivity, make sure power amplifier is not at state of peak clipping.

**12. mode select switch:** The select switch supplies three operating modes: parallel, stereo and bridge. Please select appropriate operating mode according to requirements.

1) PARALLEL mode:

In the mode, there are on solo input, two channels output, that is, signals that input from CH1 or CH2, can output from CH1 and CH2, the volume can be adjusted by volume knobs of each channel.

2) STEREO mode

In the mode, CH1 and CH2 operates separately, signal that input from CH1 can output from CH1 outlet; signal that input from CH2 would output from CH2 socket. The volume is adjusted separately by volume knob of each channel.

3) BRIDGED mode

In the mode, there is one solo input and one solo output, that is , signal that input from CH1 can output from CH 1+, CH 2+ or bridged output socket, the volume is adjusted by CH1 volume knob. To avoid crosstalk, please turn down CH2 volume knob to lowest. Concrete operation please takes reference to the fourth chapter of the manual.

**13. audio output connector:** Standard speaker socket (speak-on) and binding post output connector, usually used for outputting amplified audio signal to external speaker. To avoid damage your apparatus, please pay attention to impedance matching, don't make it be lower than minimum impedance.

**14. fan:** The fan can adjust speed automatically according to apparatus inside temperature. Wind direction: front panelrear panel.

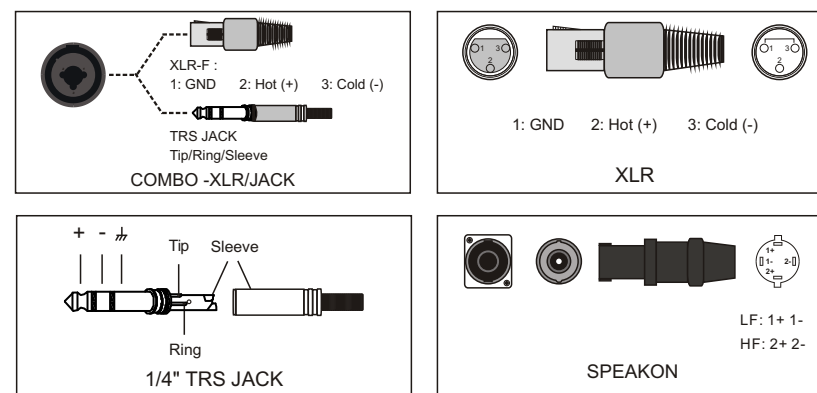
## C. INSTALLATION AND CONNECTION

**1) cabinet installation:** the 19" 2U of PA is fit for standard cabinet installation. To avoid too hot, please keep PA have enough space for cooling. And don't block ventilation of PA.

**2) audio connection:** PA equips with COMBO, 1/4" TRS and terminal input connector, speaker socket (speak-on) and binding post output connector, all these are convenient for different connecting ways.

**3) power connection:** Before connecting PA with power, please check if the voltage is correct. Voltage and fuss should be the same as marked on rear panel. Please use manufacture's power cable, it equips with a standard IEC plug, which meets international safety standard.

● Wiring configuration



## D. OPERATION

1) please confirm before operating:

- AC voltage is correct
- all apparatus are grounded rightly
- operating mode is right
- volume knob is on right position, usually, before turning on PA, two volume knobs should be set to minimum to avoid damaging speaker.

2) turn on the power switch of PA.

3) adjust PA volume knob to optimal S/N ratio.

4) after operating, please turn off power.