

# *S*tudiomaster

**SX225**  
**SX235**

**Professional Power Amplifier**

# *S*tudiomaster

**Studioking Limited**  
**One New Street Luton Bedfordshire LU15DX England**  
**PHONE:+44 1582 404 202 FAX:+44 1582 412 799**  
**[www.studiomaster.com](http://www.studiomaster.com)**

## **USER GUIDE**

## F. TECHNICAL SPECIFICATIONS

MODEL		SX225	SX235
Item			
Stereo mode (dual channel) 1KHz	4 Ohms	800W×2	1000W×2
	8 Ohms	450W×2	580W×2
	2 Ohms	1200W×2	1500W×2
Bridge mono 1KHz	4 Ohms	2600W	3000W
	8 Ohms	1600W	2000W
Input sensitivity		0dB/0.775V	
Input impedance		10K Ω Unbalanced 20K Ω Balanced	
Frequency response (below 10dB rated power)		20Hz~20KHz ±0.5dB	
THD(SMPTE-1)		<0.1% (1KHz)	
Crosstalk damping		≥70dB (1KHz) or ≥45dB (20-20KHz)	
S/N ratio		100dB(A weighted) 88(bandwidth)	
Damping coefficient		300 @8Ω	300 @8Ω
Protection		DC protection, over drive/heat protection, short-circuit protection, clip protection.	
Control		Front panel: AC switch Each channel volume knob Rear panel: 1. stereo/bridge/parallel mode selecting switch 2. ground switch 3. Hi-pass selecting switch	
Indicator		Signal: 2×green LED PEAK: 2×red LED Power: 1×blue LED Level: 2×green LED Bridge: 1×yellow LED	
Connector		Input: electric balanced COMBO, 1/4 inch TRS and terminal block. Output: speak-on and binding posts.	
Power supply		220-240V AC 50Hz/60Hz	
Dimension		483×400×88.8mm(W×D×H)	
Weight		12.5kg	13kg

## 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**

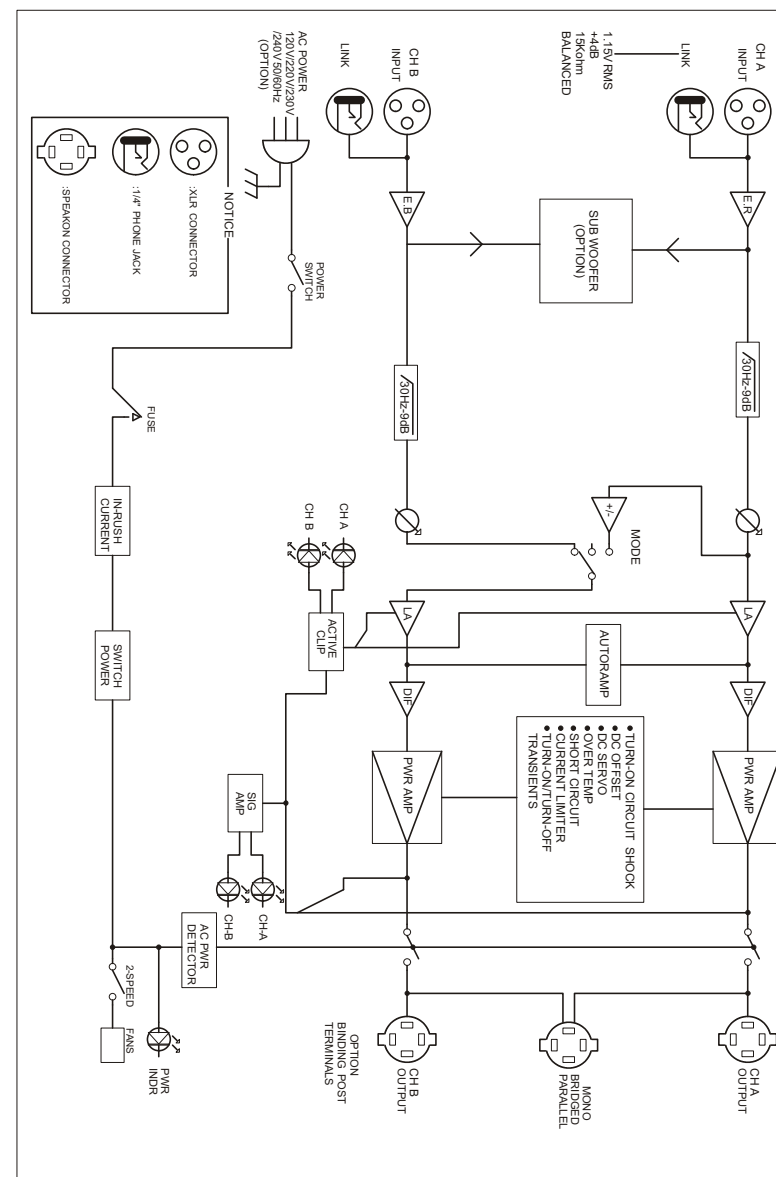
Clean only with a dry cloth. Do not use any solvents such as benzol or alcohol.

- **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.

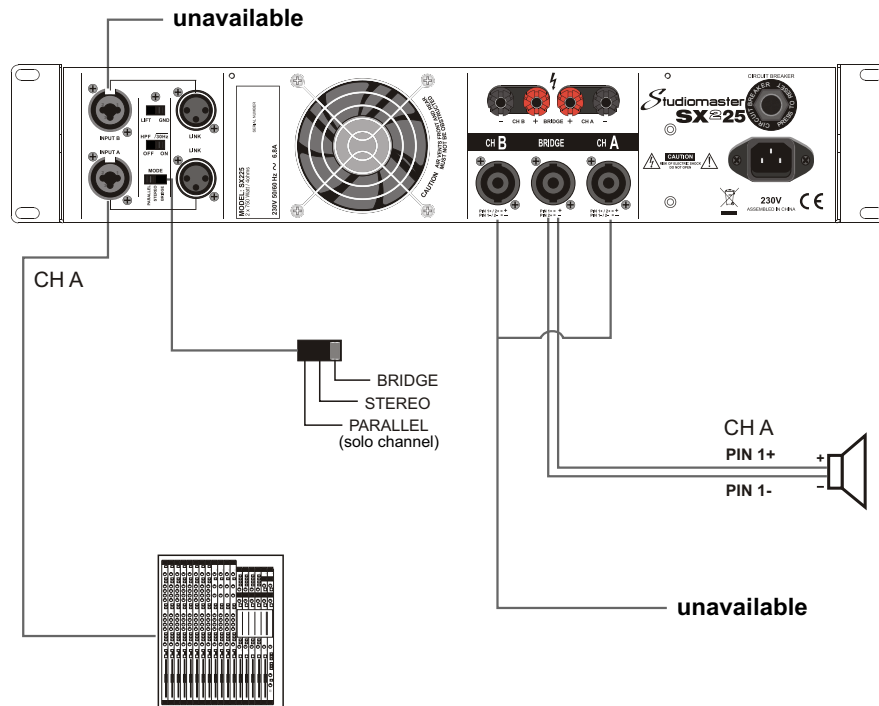
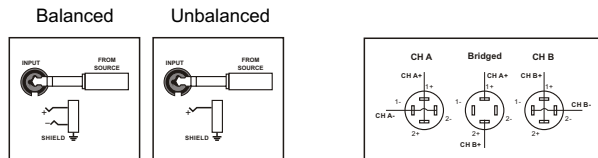
## E. BLOCK DIAGRAM



## How to connect bridge mode?

Under bridge mode, signals that input from CH A, can be output from CH A+ and CH B+ or bridged output connector. Volume is controlled by volume knob of CH A. In order to avoid crosstalk, please turn down CH B's volume to lowest. Please set mode selecting switch to right position (BRIDGE) before bridge mode operating. For further information, please refer to following diagram:

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



## A. INTRODUCTION

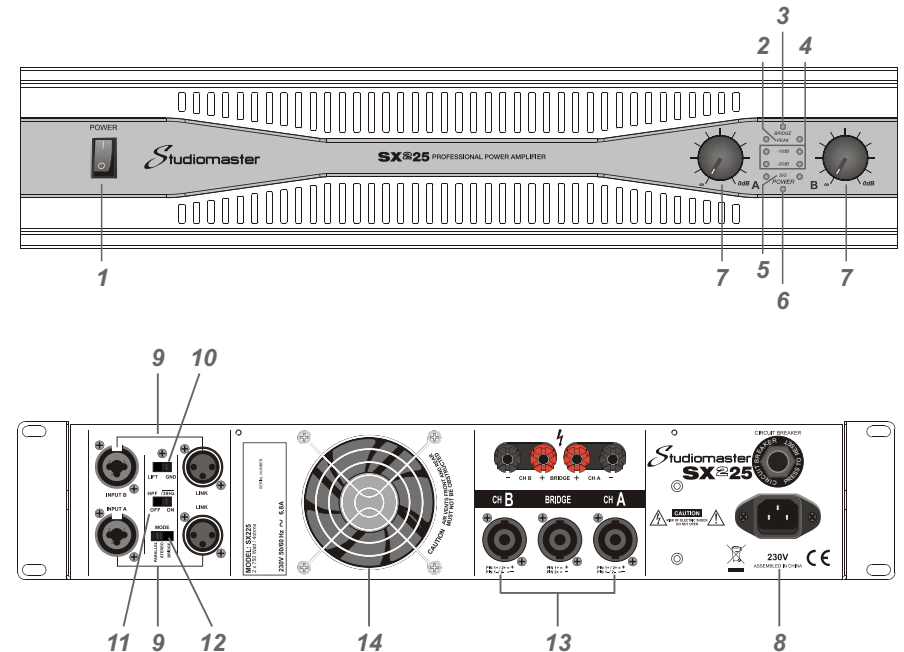
Thanks for purchasing our this series professional power amplifier.

With many years amplifier R&D experience, the product adopts advanced professional technology, which can guarantee its cost performance is higher than similar products in market. The internal part of product adopts high effect software switch technology that makes product be light and stable, and features multiple protect functions: clipping & limiting protect, overdrive/overheat protect, HF protect and short-circuit protect etc. apparatus is simple and elegant, operation is convenient and clear. Panel: power switch, each channel (channel A/B) volume control knobs, clipping indicator, signal indicator, power indicator and bridge indicator. Rear panel: combo/wiring terminal blocks/TRS input socket, speak-on/binding-post output socket, parallel/bridge/stereo mode transfer switch, limit transfer switch etc.

In order to have a good understand of product's features, please read carefully the manual before operating the apparatus.

## B. CONTROLS

Front/rear panel controls





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

Power switch, is used for turning on/off amplifier power. When turn on apparatus power, power indicator illuminates.

Note: to avoid damaging your apparatus, please turn down volume before turning on amplifier power.

### 2. peak indicator (PEAK)

Both Channel A and channel B feature a peak indicator. When input signal reach or pass over peak level (signal distortion  $\geq 0.5\%$ ), corresponding channel indicator illuminates. Please adjust level control to avoid distortion.

### 3. bridge indicator (BRIDGE)

When bridges, indicator illuminates.

### 4. level indicator (-10dB, -20dB)

Indicates signal strength that inputs to power amplifier.

### 5. signal indicator(SIG)

Each channel feature a signal indicator, when output signal passes 500mV (or input signal to input path ), indicator of corresponding channel illuminates.

### 6. power indicator (POWER)

When turn on apparatus power, the blue indicator illuminates.

### 7. volume control (CHA/CHB)

Both Channel A and channel B feature a volume control knob, turn the knob to adjust input sensitivity of corresponding channel. The adjustable scope is:  $-\infty \sim 30\text{dB}$ . turn anti-clock to OFF position, at which can protect your loudspeaker when turn on any system.

### 8. AC input socket

Connect standard 3PIN IEC power connector to main power system through accessible power cable.

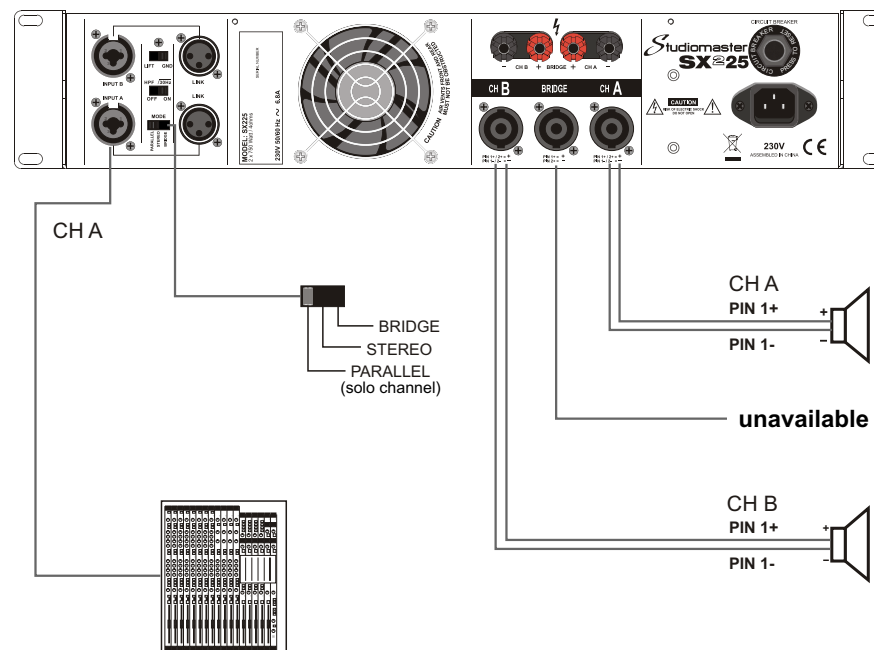
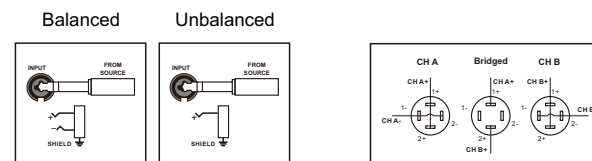
Please confirm if the voltage is correct before connecting power.

**Note: to avoid shock or fire damages, please make sure amplifier and related apparatus all connect to ground.**

### How to connect parallel mode?

Under parallel mode, signals that input to CH A or CH B, can be output from CH A and CH B. Volume is controlled by volume knob of each channel. Please set mode selecting switch to left position (PARALLEL) before parallel mode operating. For further information, please refer to following diagram:

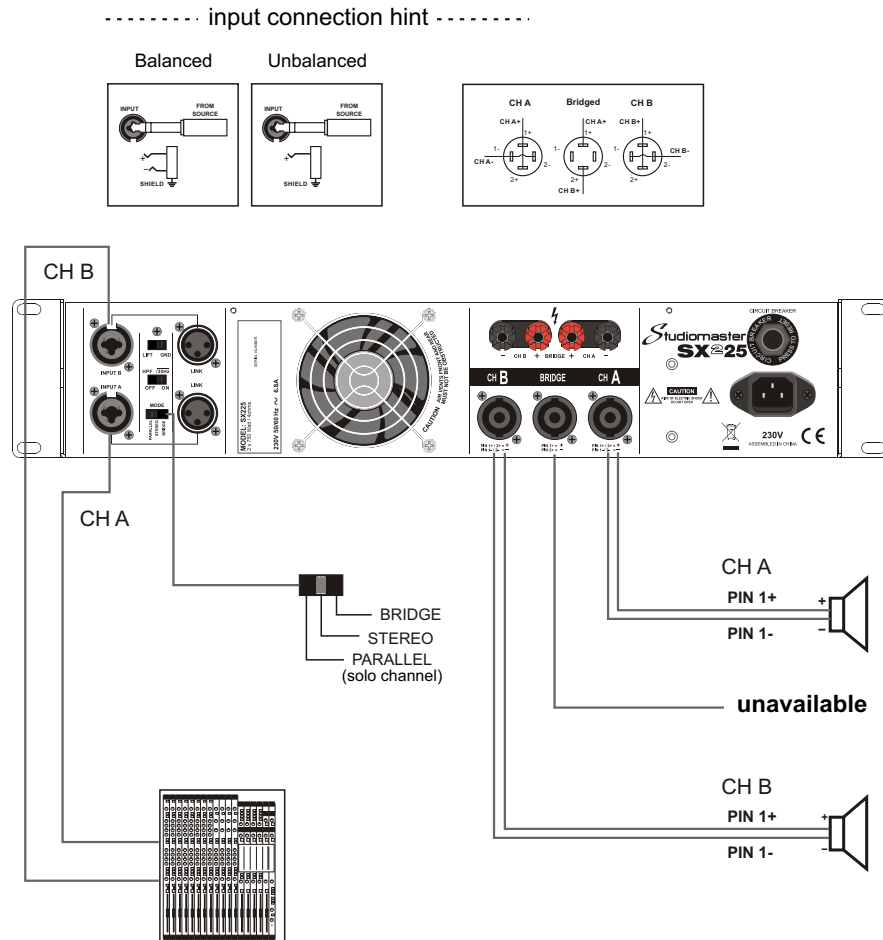
----- input connection hint -----



### How to connect stereo mode?

Under stereo mode, CHA and CHB work separately, Signals that input from CHA, outputs from CHA; Signals that input from CHB, outputs from CHB. Volume is controlled by volume knob of each channel. Please set mode selecting switch to the middle position (STEREO) before stereo mode operating.

For further information, please refer to following diagram:



### 9. audio input/output connector

CHA and CHB electric balance COMBO (compliance XLR and 1/4"), terminal block input connectors, used for connecting external audio signal.

These connectors internal parallel, can receive balanced and unbalanced audio signal. The amplifier adopts low noise electric balanced circuit, wide dynamic scope make it can receive signal of any audio level.

### 10. Ground separating switch

ON means connecting apparatus ground with case, OFF means apparatus ground isn't connecting with case (mainly used for decreasing noise when system allocates).

### 11. Hi pass selecting switch

Under ON state, can filter infrasonic wave below 30Hz, and protect bass unit effectively.

### 12. mode selecting switch

The switch supplies three operation modes, parallel, stereo and bridge.

Please select according to requirement.

#### 1) Parallel mode:

Under the mode, there are one solo channel input, and two channels output; that is, signals that input to CHA or CH B, can be output from CHA and CHB. Volume is controlled by volume knob of each channel.

#### 2) Stereo mode:

Under the mode, CH A and CH B operate separately. Signals that input from CH A, outputs from CHA; Signals that input from CH B, outputs from CH B. Volume is controlled by volume knob of each channel.

#### 3) Bridge mode:

Under the mode, there are one solo channel input, and one solo channel output; signal that inputs from CHA, and outputs from CHA+, CH B+ or bridge output socket. The volume is controlled by CH A volume control knob. Turn down CH B knob to lowest to avoid cross talk. Specific operation, please refer to chapter 4 of the manual.

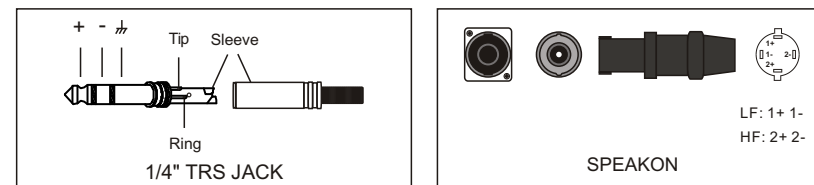
### 13. audio output connector

Output connector of standard speak-on and binding post connector, which is used for outputting audio signal amplified to external speaker. in order to avoid damage of your device, please pay attention to impedance matching, don't make it is pay attention to impedance matching, don't make it is lower than lowest impedance.

### 14. fan

Fan can adjust speed automatically according to internal temperature.

Wind direction: front board rear board



## C. EQUIPMENT AND CONNECTION

### 1) cabinet equipment

amplifier's height is 19" 2U, is suitable for standard cabinet equipment. In order to avoid overheat, please make sure that power amplifier have enough room to cool down, don't block ventilation.

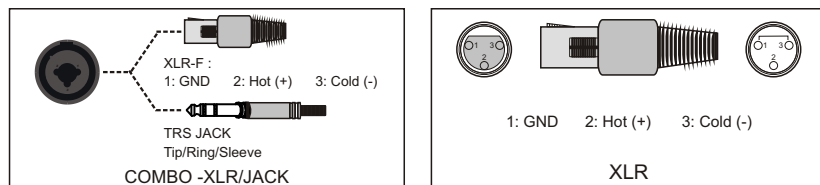
### 2) Audio connection

Power amplifier features COMBO, 1/4" TRS and terminal block input connection, speaker-on as well as binding post output connector, which is convenient for different connecting.

### 3) Power connection

Please check if voltage is correct, before connecting amplifier to power. Voltage and fuss should be the same as indicated at rear panel. please use power cable recommended by manufacture. It adopts standard IEC plug, which is qualified for national ISM standard.

#### • Wiring configuration



## D. OPERATION

1) Please confirm before connecting,

- ⊙ AC voltage is correct;
- ⊙ all device connect to ground rightly;
- ⊙ operation mode is correct;
- ⊙ volume knob sets on appropriate position. Usually, in order to avoid damaging of speaker, two volume knobs should be turned to lowest before turning on power amplifier.

2) Turn on power switch of amplifier.

3) Adjust volume knob of amplifier to the best S/N ratio.

4) Turn off power after operating.