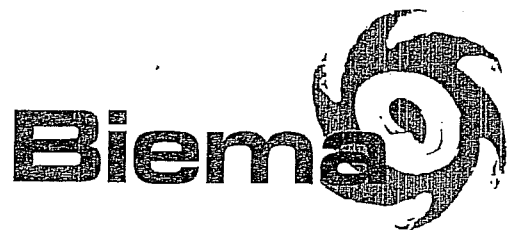
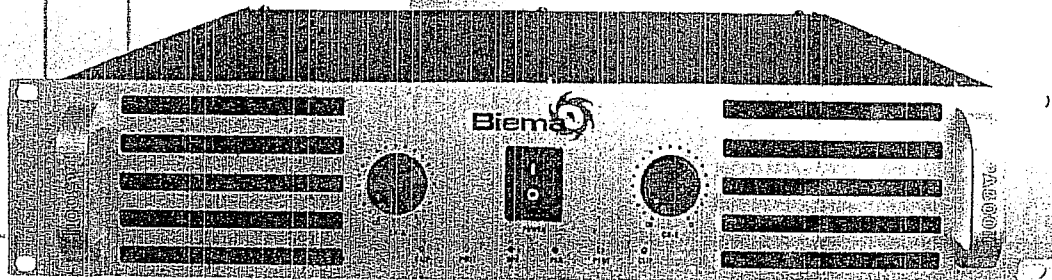


OWNER'S MANUAL

AMPLIFIER PA SERIES

PA500 I PA600 II PA700 II



AMPLIFIER PA SERIES PROFESSIONAL AMPLIFIER

PA500 II
PA600 II
PA700 II

OWNER'S MANUAL

The information furnished in this manual does not include all of the details of design, production, or variations of the equipment, Not does it cover every possible situation that may arise during installation, operation or maintenance. If you need special assistance beyond the scope of this manual, please contact our Technical Support Group.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

TO PREVENT ELECTRIC SHOCK DO NOT REMOVE COVER OR BACK. NO USER SERVICEABLE PARTS INSIDE REFERS SERVICING TO QUALIFIED SERVICE PERSONNEL.

MAGNETIC FIELD

CAUTION! Do not locate sensitive high-gain equipment such as preamplifiers or tape decks directly above or below the unit. Because this amplifier has a high power density, it has a strong magnetic field, which can induce hum into unshielded devices that are located nearby. The field is strongest just above and below the unit.

If an equipment rack is used, we recommend locating the amplifier(s) in the bottom of the rack and the preamplifier or other sensitive equipment at the top.

WATCH FOR THESE SYMBOLS:



The lightning bolt triangle is used to alert the user to risk of electric shock



The exclamation point triangle is used to alert the user to important operating or maintenance instructions.



WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE!

INTRODUCTION

The PA amplifier represents a major step forward in power amplifier technology and design. In 1987 Mr. Biema collaborated with the Electroacoustics Research Center, Princeton University in establishing the Biema center for Acoustics Development, Biema has now been introduced into the Chinese market. Biema professional amplifier series, which is able to produce excellent sound effect and sold at reasonable price. It offers quality guarantee and technological support for the apparatus you are using.

Quiet operation

High quality of the power transformers reduce external magnetic field radiation, which can, in other power amplifiers, induce audible hum into associated equipment and cabling. In addition, the latest technology components are incorporated throughout the design to ensure extremely low noise generation Biema all force series power amplifiers.

DC Voltage Protection

If an amplifier channel detects DC voltage at output terminals, the output relay will immediately open to prevent loudspeaker damage. The protection LED will light.

Reliable Power Supply

The Biema series amplifier has a ladder like power supply. All the four power supplies have experienced DC automatic regulation, which grants Biema series amplifier excessive reliability. The Biema series amplifiers can be wired for 240V 50-60Hz AC power supply, because the Biema series amplifier has reliable DC power supply stabilizer.

GENERAL

Biema's new PA series amplifier is high performance and high efficiency's top quality amplifiers. And to get the good effecting and highest work efficiency, exceptionally developed servo system of power supply and servo cooling system which is constantly adjusted the fan speed regardless of output level. PA series amplifier has its comprehensive protect function include that.

1. Power ON/OFF transient, prevent the surge assault.
2. Thermal cut off protection, the amplifier will cut off the link with speakers when the temperature is more than 100°C.
3. Short circuit current limited protection.
4. The muting circuit prevents switching noise by turning the amplifier on or off.
5. DC protection at speaker output, the amplifier will cut off the link with speakers when the amplifier is unusual.
6. Limited, providing voltage of 30dB compression without distortion, the amplifier will not clip.

AMPLIFIER PA SERIES PROFESSIONAL AMPLIFIER

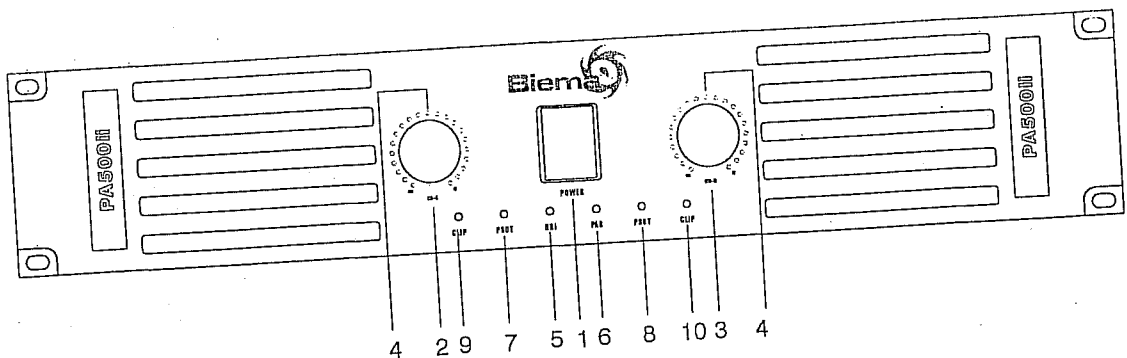
PA500 II
PA600 II
PA700 II

PRECAUTIONS

1. Don't stack thing up the amplifier on its back.
2. Always use a power source of adequate capacity.
3. Don't turn ON/OFF the power of continuous at the same time, never allow the ventilation holes on the front of the amplifier to obstructed in any way.
4. Input level adjust controls are provided on each channel.
5. Output can use binding posts and SPEAKON posts.
6. When the amplifier works in STEREO, BRIDGE-mono or PARALLEL-mono mode, the switch must be on the same.
7. Fan's rotational speed may be increased to light sound the noise, which is normal when continuous output large power as amplifier give out heat.
8. General high gain switch adjust: input level potential 0.77V, output full negative charge 1.4V, fixed gain 26dB.
9. To clean amplifier, wipe it with a dry cloth, if the case is very dirty, disconnect the AC cord form the power source, then wipe it with a cloth water or mild soapy water, then wipe it thoroughly. Never use solvents or chemical cloth, never spray insecticides as they may cause discoloration or peeling.
10. If any trouble is found, disconnect the power cord and contact your distributor.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

Front Panel



1. Power ON/OFF switch
When you turn on the amplifier, the power ON/OFF transient protection starts working. After 3-4 minute you can hear a voice of "kniak". And 1-2 minutes later, you can hear a voice of "kniak" once more the amplifier has been connected with the speakers.
2. CH-A input level control
Adjust this control to the voice you need, when you're far away form the speakers, you can adjust it with the calibrated markings on the front panel indicate the amount of attention applied to the input signal. Then allows proper volume sitting of the speakers when the input signal source is at its rated level.
Use this control when running the amplifier in BRIDGE or PARALLEL mode only.
3. CH-B input level control
As same as CH-A.
4. Power ON indicator lamp (white)
Indicates that the amplifier is turned on.
5. BRIDGE-mono mode indicator lamp (green)
Indicates that the amplifier is working in BRIDGE mode.
When using Bridge mode the input signal must be applied the CH-A only.
6. PARALLEL-mono mode indicator lamp (green)
Indicates that the amplifier is working in PARALLEL mode when using PARALLEL mode the input signal must be applied.
- 7.8. CH-A CH-B PROTECT indicator lamps (yellow)
The LEDs will be light in the four situations.
 - 1) After turning on the power in 4-6 minutes and after turn off the power.
 - 2) As the power transistor's temperature is over 100°C.
 - 3) It is possible that it is short circuit for loading.
 - 4) Something is wrong with the amplifier.
- 9.10. CH-A CH-B peak value indicator lamps (red)

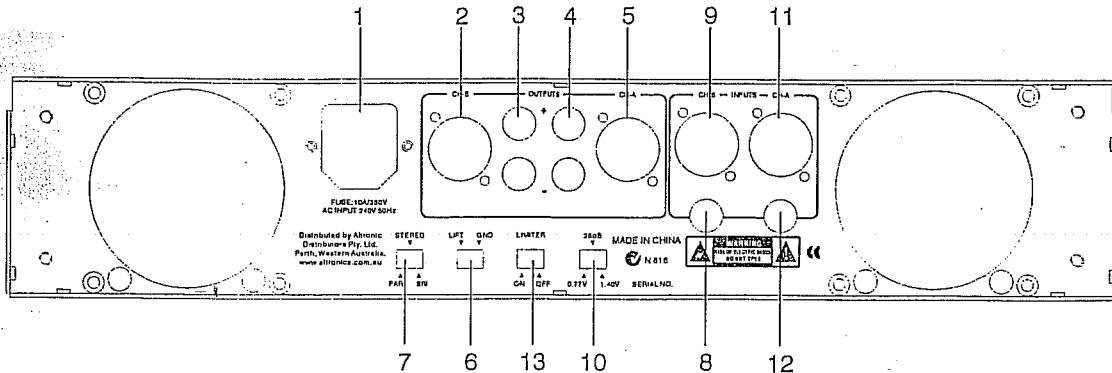
AMPLIFIER PA SERIES

PROFESSIONAL AMPLIFIER



- 1) When the output signal has reached its clipping level, the LED lights; possibly resulting in distortion, should this occur, either adjust the input level control so that the PEAK LED turn off.
- 2) As the signal has been input, the PEAK LED lights continuously, but the speakers in no voice, it is possible that it is short circuit for loading. You should turn off the amplifier, find out where is the trouble and renew the works.

Rear Panel:



1. Fuse
When occurs a problem on this appliance the fuse is cut off power to prevent from a problem, to replace; use standard fuse as specified on this appliance.
2. CH-B SPEAKON output socket
As the work is in STEREO mode, can use SPEAKON for connecting, the way of connecting is
1+ 2+; 1- 2-
3. CH-B binding output
Red + black -
4. CH-A binding output
Red + black -
5. CH-A SPEAKON output socket
As the work is in STEREO mode, can use SPEAKON for connecting, the way of connecting is
1+ 2+; 1- 2-
6. ground lift switch
Setting tubs switch to "Ground" "Lift" you can break the "Group Loop" between the amplifier and the chassis grounds of various components. Its 1M Ω .
7. Mode selection switch
The mode switch will be selected in the three situations: PARALLEL mode, STEREO mode and BRIDGE mode.
 - 1) When using STEREO mode, it works in CH-A in/CH-A out, CH-B in/CH-B out
 - 2) When using BRIDGE mode, the input signal must be applied to use over load impedance 8 ohm.
 - 3) When using PARALLEL mono, the output is two channels phasing the same signal, and that apart to drive a speaker.
8. CH-B input connector
Using by 1/4 "standard unbalanced connector, you can use unbalance and balance
Tip=signal+ ring=signal- sleeve=ground
9. CH-B input connector
Electronically balanced inputs accept a standard XLR male connector
Pin1=ground, pin2=positive, pin3=negative
10. Input mains gain switch
Three shift to choose:
 - 1) Input level is 0.77V, full power putting out;
 - 2) Regular 26dB;
 - 3) Input level is 1.4V, full power putting out.
11. CH-A input connector
Electronically balanced inputs accept a standard XLR male connector
Pin1=ground, pin2=positive, pin3=negative
12. CH-A input connector
Using by 1/4 " standard unbalanced connector. You can use unbalance and balance.
Tip=signal+ ring=signal- sleeve=ground
13. Limiter switch
Set the switch position to the on, the amplifier power output rating of max in the safety phase.

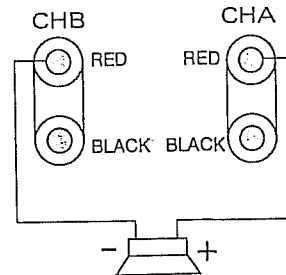
AMPLIFIER PA SERIES PROFESSIONAL AMPLIFIER

PA500 II
PA600 II
PA700 II

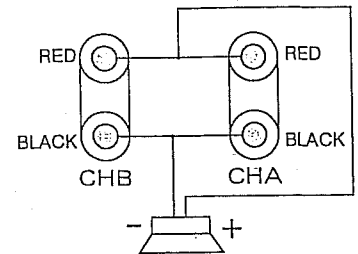
OPERATION COURSE OF BRIDGE-MONO AND PARALLEL-MONO MODE

1. BRIDGE-MONO wiring

- 1) Turn amplifier off.
- 2) Set mode switch to BRIDGE-MONO.
- 3) Speaker "+" connect with CH-A output red terminal.
- 4) Speaker "-" connect with CH-B output red terminal.
- 5) Input signal cut in CH-A socket.
- 6) Turn amplifier on.



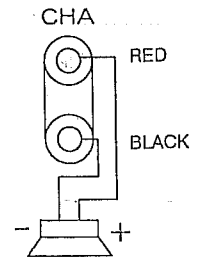
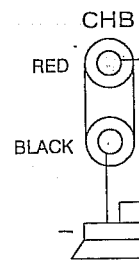
BRIDGE-MONO MODE



PARALLEL-MONO MODE

2. PARALLEL-MONO wiring.

- 1) Turn amplifier off.
- 2) Set mode switch to PARALLEL-MONO.
- 3) Speaker "+" connect to CH-A and CH-B red terminal.
- 4) Speaker "-" connect to CH-A and CH-B black terminal.
- 5) Input signal cut in CH-A socket.
- 6) Turn amplifier on.



STEREO MODE

3. STEREO wiring

- 1) Turn amplifier off.
- 2) Set mode switch to STEREO-mode.
- 3) Speaker "+" connect with CH-A/CH-B out red terminal.
- 4) Speaker "-" connect with CH-A/CH-B out black terminal.
- 5) Stereo input signal cut in CH-A and CH-B socket.
- 6) Turn amplifier on.

SPECIFICATIONS

MODEL	PA500 II	PA600 II	PA700 II
Output power STEREO 8 OHMS	500W+500W	600W+600W	700W+700W
TA 1KHz THD≤1% 4 OHMS	750W+750W	900W+900W	1050W+1050W
BRIDGE 8 OHMS	1500W	1800W	2100W
Frequency response	10Hz-50KHz-1.5dB	10Hz-50KHz-1.5dB	10Hz-50KHz-1.5dB
Input sensitivity	0.77V/26dB/1.4V	0.77V/26dB/1.4V	0.77V/26dB/1.4V
Maximum input level	21dBV/9V	21dBV/9V	21dBV/9V
Input impedance active balanced	20K OHMS	20K OHMS	20K OHMS
Signal/noise ratio a-weighted RMS	> 90dB	> 90dB	> 90dB
Crosstalk at rated output power 8 ohm 1kHz	> 70dB	> 70dB	> 70dB
Damping factor f=1kHz 8ohms	> 300	> 300	> 300
Slew rate internal	60V/μS	60V/μS	70V/μS
Protection	SHORT CIRCUIT, CURRENT LIMITED DC FAULT AC LINE FUSE, THERMAL CUT OFF, POWER UP/DOWN TRANSIENTS, SLOW START		
Indicators	POWER(WHITE) PROTECT(YELLOW) CLIP(RED) RIDGE(GREEN) PARALLEL(GREEN)		
Cooling	VARIABLE SPEED FAN		
Front panel controls	LEVEL ACH, BCH, POWER SWITCH		
Rear panel controls	STEREO/BRIDGE/PARALLEL MODE SWITCH, 0.77V/26dB/1.4V INPUT SENSITIVITY SWITCH, GROUND/LIFT SWITCH		
Connector	BAL XLR INPUT, BAL 1/4"INPUT, 5 WAY BINDING, POST SPEAKON		
Power consumption half power 8 ohms	< 670W	< 800W	< 940W
Power supply	AC 240V 50-60Hz		
Dimensions(W×D×H)mm	482×506×88		
N.W	21.8kg	23.6kg	24.1kg

TECHNICAL PARAMETERS CHANGERS ARE NOT INFORMED.