



User Manual

ED-B3-MA-070612-001

Beta three

MUSIC PUBLIC ADDRESS AMPLIFIER

BA1602

DEAR CUSTOMERS:

Please read this user manual carefully before using this unit and follow the operation method. Any questions, please ask for the local distributor.

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1、 ATTENTIONS

Please make sure the local voltage and marked voltage on back panel same before connection. Meanwhile please make sure socket&cable perfect. Pull out the plug when turn off. Normal consumption power is 600VA.

- ▲ Do not open the cover because exist dangerous voltage,please ask the professional to repair
- ▲ Do not expose it to the raining or moisture
- ▲ Do not put it under the direct sunshine,high temperature or heat source
- ▲ Keep good ventilation,not stop the ventilating hole
- ▲ Note the local voltage must matched with the voltage required
- ▲ Please put off the plug if not use for a long time
- ▲ Connect with right load, not work under overload for a long time
- ▲ Do not let the obstacle into the unit, keep the unit away the obstacles
- ▲ Please stop using if the cable is damaged

■ Symbols:

- The equilateral triangle with lightning bolt warns the user of dangerous voltage levels localized within the cabinet.
- The equilateral triangle with exclamatory mark means the important operation on the user manual.

2、 FUNCTIONS&FEATURES

BA1602 is a high performance dual channel rated voltage post-amplifier, suitable for fire protection, meeting or multi area broadcast and etc, it is mainly used for high quality background music replaying, language program or meeting system:

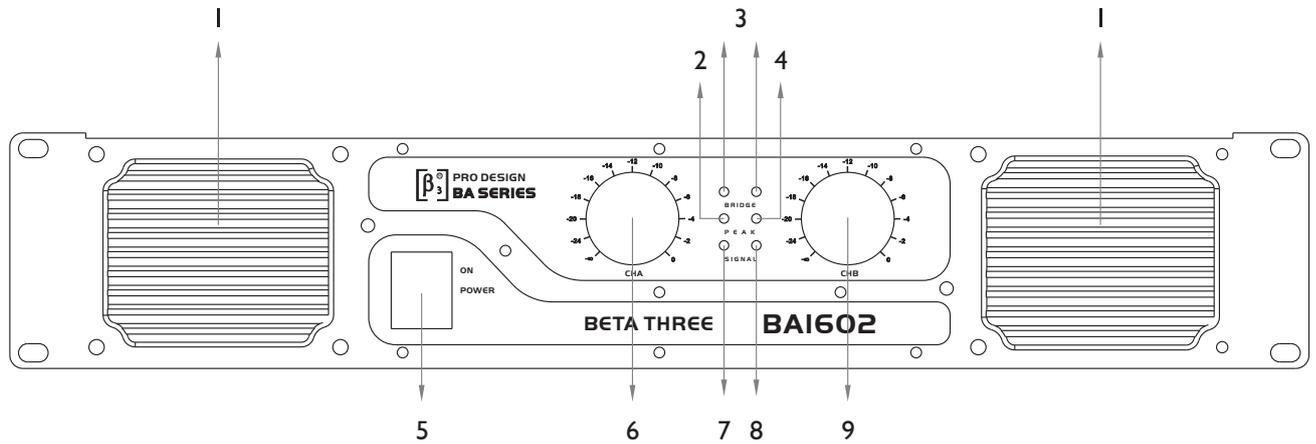
Functions and features as followings:

- 1> Balance input.
- 2> Dual channel rated voltage 100V,70V,50V, mono bridge rated voltage 200V,140V,100V.
- 3> Improved heatsink configuration and high quality cooling fan, make sure the long time working under big power.
- 4> Loading impedance-temperature-power- working voltage inter control function, fan speed is changed with the temperature inside, when the loading is too low or the temperature is too high,the unit can adjust the voltage of power supply and lower the impedance of power supply,to improve the sound quality and protect unit, enhance the reliability.
- 5> Output short circuit, overload, overheat protection function.
- 6> Low noise.
- 7> Small dimensions.

3、PARAMETERS

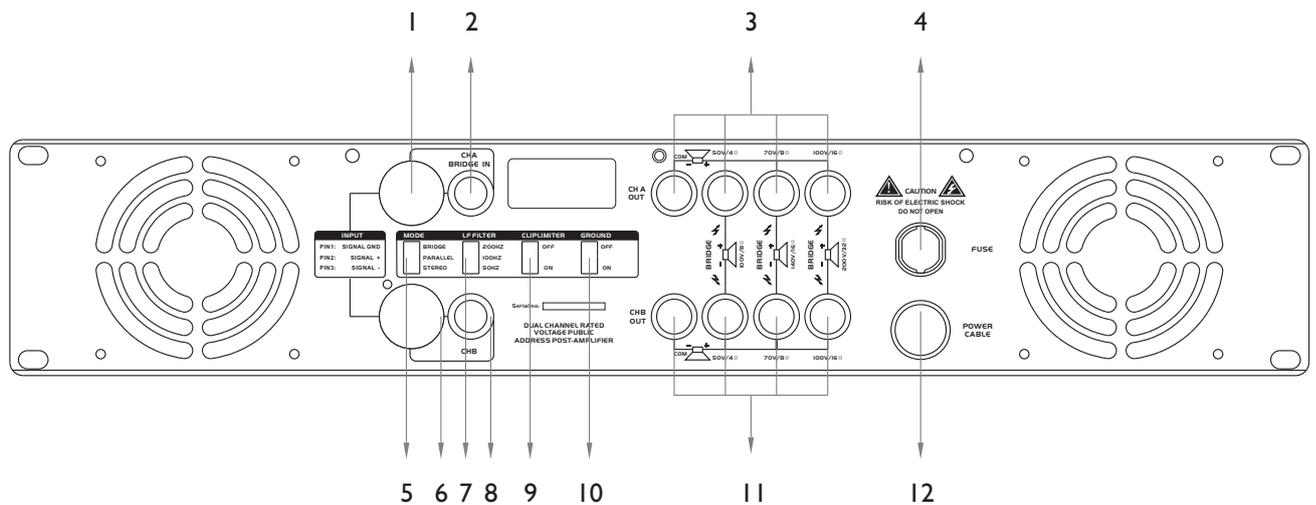
| | |
|---------------------------------------|---|
| MODEL | BA1602 |
| (THD<1%)RMS | 625W×2(dual channel) /1250W(bridge) |
| Frequency response (+0/-3dB) | 50Hz-18kHz,<+/-3dB |
| THD | <0.5% (normal working conditions) |
| Intermodulation distortion | <1% (f=60/7kHz,4:1,normal working conditions) |
| Separation | >60dB |
| S/N ratio | >105dB(A weight) |
| Input sensitivity | 1V |
| Input impedance | 10kΩ(unbalance input),20kΩ(balance input) |
| Input terminal | 3pins XLR,6.35mm socket |
| Output terminals | binding post(dual channel:50V,70V,100V,bridge:100V,140V,200V) |
| Cooling method | four fans,stepless speed, airflow from front to back |
| Control on front panel | AC switch,gain control |
| Control on back panel | dual channel/parallel/bridge choosing,LF filter,limit,grounding |
| Indicators on front panel | green—signal,red—overload,yellow—bridge |
| Amplifier protection | short circuit,overload,overheat etc |
| Dimensions(W×D×H) | 483×375×88mm |
| Net weight | 22kg |
| Power supply | AC 220V/230V,50/60Hz,600VA |
| Environment temperature | work temperature:-10℃~40℃,store temperature:-25℃~80℃ |
| Environment humidity | <90% |

4、 FRONT PANEL



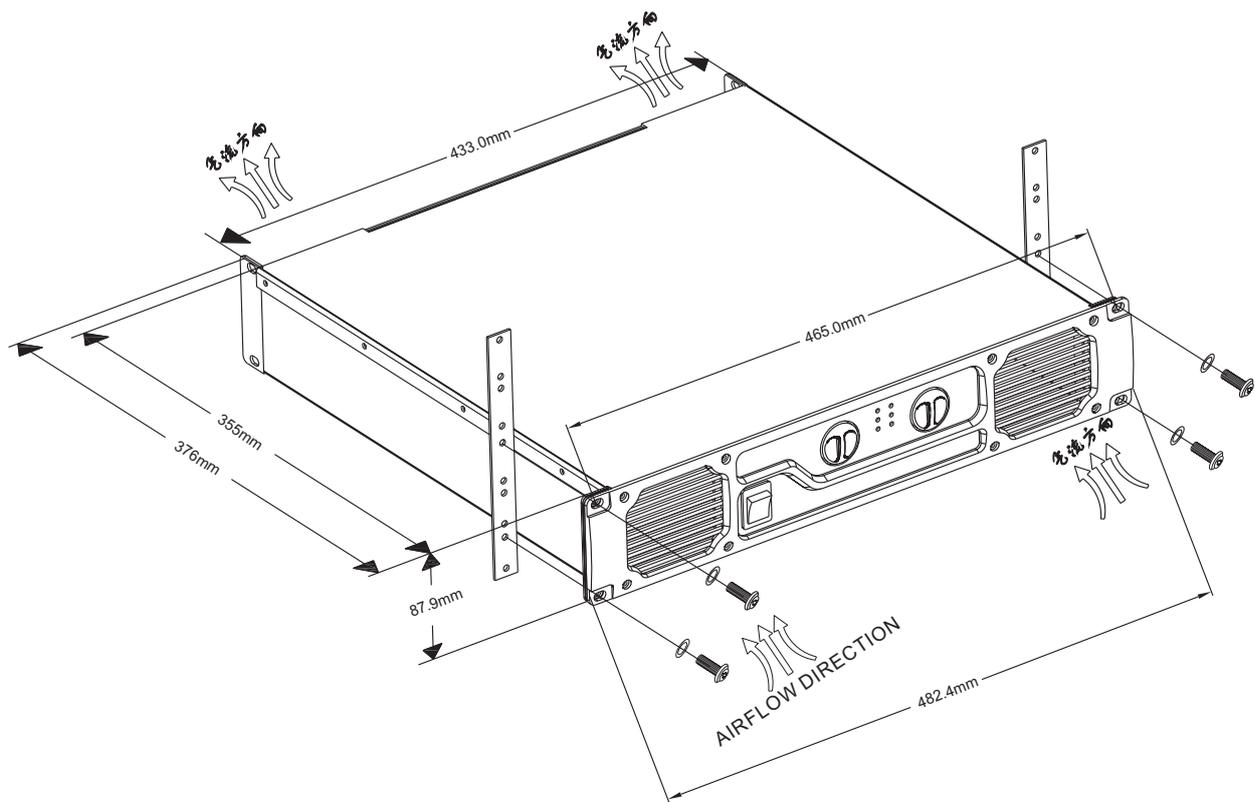
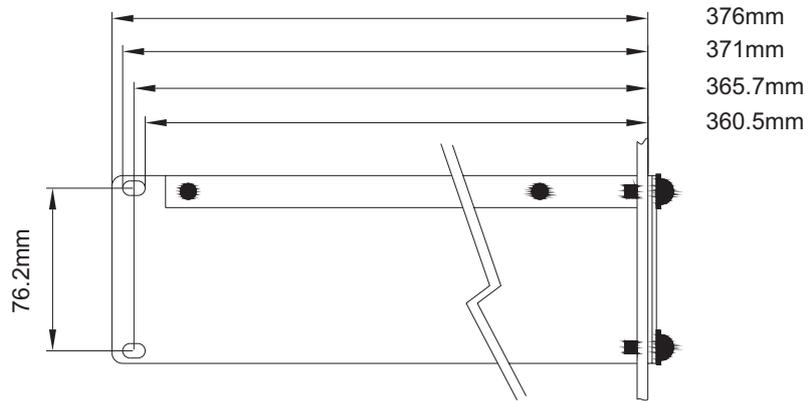
- | | | |
|--------------------------------|-------------------------------|-----------------------------|
| 1> Ventilation hole | 4> Overload indicator of CH B | 7> Signal indicator of CH A |
| 2> Overload indicator of CH A | 5> Power on/off | 8> Signal indicator of CH B |
| 3> Bridge connection indicator | 6> Gain adjust of CH A | 9> Gain adjust of CH B |

5、 BACK PANEL



- | | |
|---|---|
| 1> Signal input jack of CH A | 7> Filter switch |
| 2> Signal input jack of CH A(6.35 Mic socket) | 8> Signal input socket of CH B(6.35 Mic socket) |
| 3> Signal output of CH A(banding post) | 9> Limit switch |
| 4> Fuse case | 10> Grounding switch |
| 5> Working mode switch | 11> Signal output of CH B(binding post) |
| 6> Signal input jack of CH B(XLR) | 12> Power supply Cable |

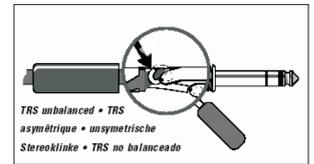
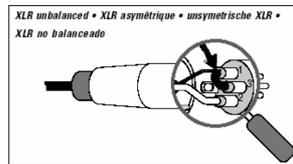
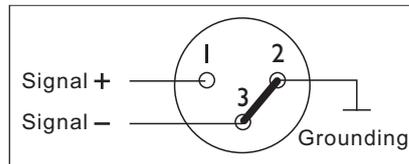
6、 INSTALLATION DIAGRAM



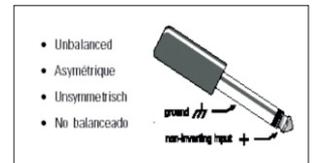
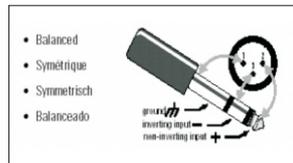
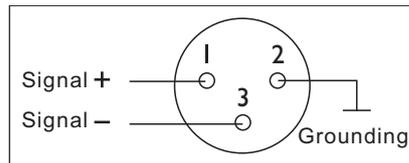
7、 FUNCTION SETUP AND CABLE CONNECTION

1> Mode option and signal cable connections

Unbalance input as the following:

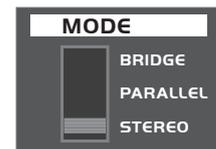


Balance input as the following:

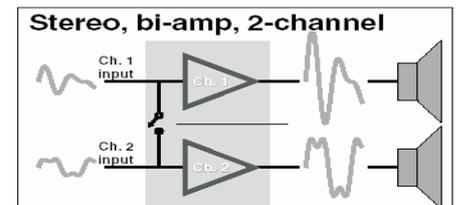


A: Dual channel mode

Set the switch on stereo, as the diagram

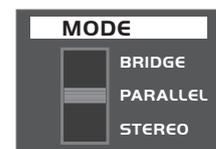


Under the dual channel mode, the signal on two channel is separate, the signal of CH A just output CH A, signal of CH B just can output CH B as the diagram

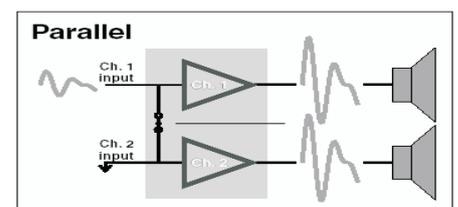


B: Mono parallel mode

Set the switch on parallel, like the diagram:



Under mono mode, the input of CH A and B is same, The signal from CH A can provide to output A, also can provide to output B, the same as the signal from CH B. But please not input the signal from A&B at the same time.



NOTE:

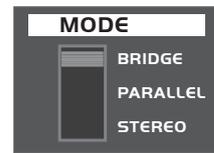


Mono parallel mode just mean input signal parallel, please not parallel the output terminals. like the diagram:

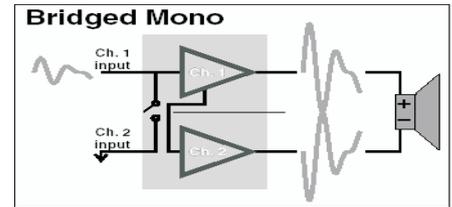
7、 FUNCTION SETUP AND CABLE CONNECTION

C: Bridge mono mode:

please set the option switch on bridge,
like the pictures:



Under bridge mono mode, signal just can input from CH A, if input the signal from Channel B, there will be no output. Anode of output CH A is the anode of bridge output, the anode of output B is the cathode of bridge output, like the attached pictures:



NOTE:



Under bridge mono mode, output voltage is very high, will cause the electric shock, so please put off the unit before connection.

D: Input ports

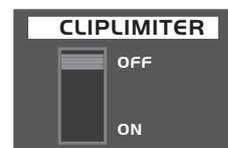
- The XLR and 1/4" mic socket in the same channel are paralleled.
- The signal can be input from any input ports, and output from the another port in same channel for the extended connection.
- The sound quality will reduced if the extended amplifiers are too much. Please not input the signal from the two ports in same channel.

E: Output port

- The binding post and NL4 socket in same channel are paralleled.
- Please not connect the loading on the two ports of same channel at the same time.
- The red end of binding post is connected with anode of speaker, black end of binding post is connected with cathode of speaker.
- Only the suitable loading can be connected to output port.

2> The setup of limit ON/OFF

If set the switch at OFF like the picture, the limit circuit is not functional, if the input signal is too big, it will cause the clip distortion.



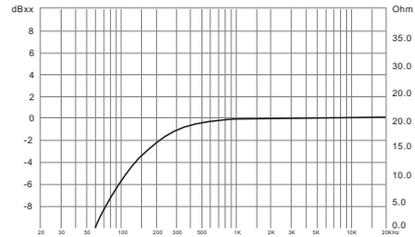
If the switch is at ON, the limit circuit is functional, if the input signal is too big, the limit circuit will control and adjust the gain and reduce the distortion, the MAX. signal input is 26dB(15V).



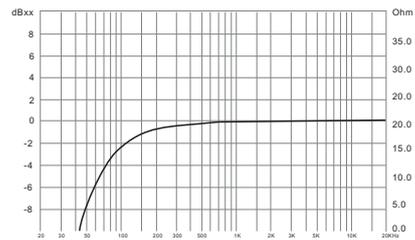
7、 FUNCTION SETUP AND CABLE CONNECTION

3> The setup of LF filter

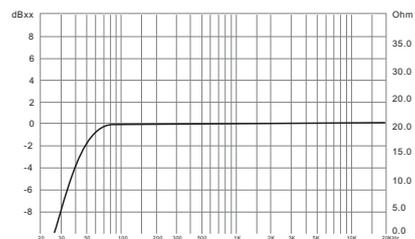
When the switch is at 200Hz, it is same as the series connecting a 200Hz high pass filter on the input circuit, will attenuate signal under 200Hz, which make the sound more clear, like the following diagram:



When switch is at 100Hz, it is same as series connecting a 100Hz high pass filter on the input circuit, will attenuate signal under 100Hz, like the pictures



When switch is at 50Hz, it is same as series connecting a 50Hz high pass filter on the input circuit, will attenuate signal under 50Hz, like the pictures



8、 PROTECTION FUNCTION

BA1602 has the perfect protection function to avoid the damage of speaker and amplifier caused by short circuit, overload and overheat.

- 1> Short circuit:** When short circuit on output loading, the unit will turn off the output to protect the unit.
- 2> Overload:** When the output loading is too low, the unit will turn off the output to protect the unit.
- 3> Overheat protection:** If the temperature of heatsink is over the standard, the sensor will let the protection circuit to close the output to avoid the damage for human and unit, when the temperature of heatsink recovered, the unit will turn on automatically.

9、 INDICATORS ON THE FRONT PANEL

- 1> The flash of signal indicator indicate the existing of signal on two channels.
- 2> The flash of peak volume indicator indicate the input voltage level too high, should reduce the volume
- 3> Bridge indicator lit up means that the unit is under the bridge mode.

10、 OPERATION PROCEDURE

Please follow the below operation procedure:

1> Turn ON

- a> Connect and setup the unit with correct method according to the above procedure.
- b> Check if there is short circuit on the connection, or the loading is too low.
- c> Check local voltage.
- d> Make sure the power switch at "O", and turn the volume at Min.
- e> Connect the power supply, open the sound source equipment, pre equipment and effect equipment and make sure the above equipments woke smoothly.
- f> Open the switch of power supply.
- g> Turn the volume knob to proper position colockwise.

2> Turn OFF

- a> Turn the volume knob to Min.
- b> Close the power supply switch.
- c> Close the pre, effect, sound source equipment.

11、TROUBLE AND TROUBESHOOTING

| TROUBLE | NO. | TROUBLE SHOOTING |
|--|-----|---|
| No sound, the power supply light is not lit up | 1 | Check the connection between plug and socket |
| | 2 | Check if there is 220V/230V AC on the socket |
| | 3 | Check the fuse |
| No sound, the power supply indicator is lit up, output level indicator is not lit up | 1 | Check signal cable |
| | 2 | Check the power supply of sound source equipment and the volume control |
| | 3 | Check the volume position |
| Clip overload indicator is lit up, abnormal sound | 1 | The sound source output is too high or not |
| | 2 | Check the sensitivity switch position |
| Lf is not enough | 1 | Check the LF filter switch |
| No sound in one channel under parallel | 1 | The mode choosing is at parallel or not |
| The indicator is normal, no sound | 1 | Check the output and loading |
| Fuse burning | 1 | Check local voltage |
| Other trouble | 1 | Check the connection |
| | 2 | Ask for the professional service or check the information on our website. |

**IF THE ABOVE METHOD IS NOT FUNCTIONAL FOR YOUR UNIT,
PLEASE ASK FOR THE PROFESSIONAL AT THE REPAIR CENTER.**

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