

Stereo Power Amplifier MA-S160

Owner's Manual

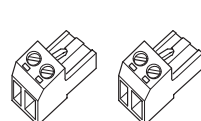
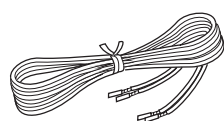
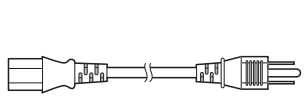
Thank you for purchasing the MA-S160.
In order to use the product in a safe manner, please read this Owner's Manual thoroughly before using.
Also, keep this manual for future reference.



Accessory Checklist

Before proceeding with the setup, make sure that the following accessory is included in the package. If it is missing, please contact the dealer whom you purchased the amplifier from, or Flying Mole Corp.

- AC Power Cable x 1
- Remote Connection Cable (2m) x 1
- Remote Power Control Connector x 2
- Owner's Manual (this booklet) x 1

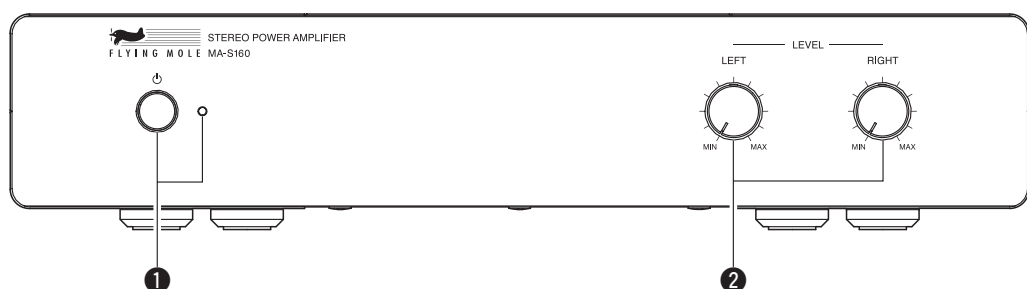


2 Features

- Independent power twin monaural construction
- Utilizing our original Bi-Phase PWM amplifier technology to realize a new level of high sound quality with superb high-speed responsiveness and wide dynamic range
- Fixed level (volume bypass) and Variable level are selectable
- Connect the amplifier in bridge (BTL) connection to use it as a 300W/8Ω mono bloc power amplifier
- Gorgeous parts for uncompromising standards

3 Component Names

Front Panel



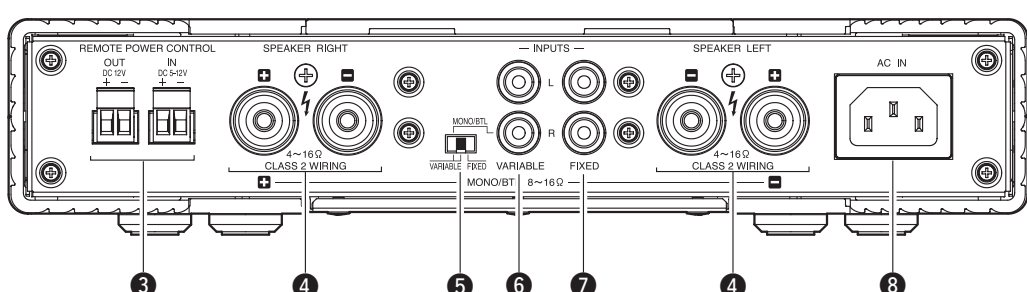
1 Power Switch / Power Indicator

Used to turn the amplifier's power ON or OFF. The indicator lights when the power is turned ON.

2 LEVEL Adjustment Knobs

Controls the input signal level. Setting the knob to "MIN" turns down the level to the minimum. These knobs don't work when the Mode switch 5 is set to "FIXED". When the Mode switch 5 is set to "MONO/BTL", only the [RIGHT] knob will work.

Rear Panel



1 Safety Instructions

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT.

THIS SYMBOL INDICATES THAT THERE ARE IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THE OWNER'S MANUAL WITH THIS UNIT.

WARNING : To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

The important safety instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operated normally, or has been dropped.

THE APPARATUS IS NOT WATERPROOF. TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE AND DO NOT PUT ANY WATER SOURCE NEAR THIS APPARATUS, SUCH AS VASE, FLOWER POT, COSMETICS CONTAINER AND MEDICINE BOTTLE, ETC.

IMPORTANT NOTICE

If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures :
Relocate either this product or the device that is being affected by the interference.
Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.
In the case of radio or TV interference, relocate/reorient the antenna.
If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.
If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Flying Mole Corporation.

Component Names

3 REMOTE POWER CONTROL Jacks

- **OUT**
Remote output jacks used to interlock the power on another device with the activation/deactivation of the power on the amplifier. Connect these jacks to a Flying Mole product equipped with remote power control input jacks.
- **IN**
Remote input jacks used to interlock the power on the amplifier with the activation/deactivation of the power on another device. Connect these jacks to a Flying Mole product equipped with remote power control output jacks.

Turn "OFF" the power switch of the amplifier to use the amplifier with cables connected to these jacks.

- * Refer to the owner's manuals of the devices to be connected as well.
- * These jacks cannot be used with products from other manufactures or for other purposes than the above-mentioned purpose.

4 SPEAKER Connectors (* Be sure to check polarity before connection)

Used to connect the amplifier to the speaker. Connect one each speaker to the [RIGHT] and [LEFT] connectors when the Mode switch 5 is set to "FIXED" or "VARIABLE". Make sure that the speaker's impedance is between 4 ohms and 16 ohms. Connect one speaker to the two outermost connectors of the four [RIGHT] and [LEFT] connectors when the Mode switch 5 is set to "MONO/BTL". Make sure that the speaker's impedance is between 8 ohms and 16 ohms. Refer to the "4 Connections" for details.

5 Mode switch

Used to switch the operation mode of the amplifier. Select one of the following settings according to the connection.

• VARIABLE (Switch position: Center)

The amplifier works as a stereo power amplifier (100W/8 ohms x 2 CH). Use the INPUT jacks (VARIABLE) 6 as input jacks. The input signal level can be adjusted with the LEVEL adjustment knobs 2 on the front panel.

• FIXED (Switch position: Right)

The amplifier works as a stereo power amplifier (100W/8 ohms x 2 CH). Use the INPUT jacks (FIXED) 6 as input jacks. The LEVEL adjustment knobs 2 on the front panel are bypassed and inoperable.

• MONO/BTL (Switch position: Left)

The amplifier works as a monaural amplifier in BTL mode (300W/8 ohms x 1 CH). Use the [R] jack of the INPUT jacks (VARIABLE) 6 as the input jack. The input signal level can be adjusted with the [RIGHT] knob of the LEVEL adjustment knobs 2 on the front panel.

6 INPUT Jacks (VARIABLE)

Used to connect the input signal to the amplifier. Connect the jacks to the OUTPUT jacks on the preamplifier, etc. One each cable can be connected to the [R] and [L] jacks when the mode switch 5 is set to "VARIABLE". Connect only the [R] jack when the mode switch 5 is set to "MONO/BTL". These jacks are not to be used when the mode switch 5 is set to "FIXED".

7 INPUT Jacks (FIXED)

Used to connect the input signal to the amplifier. Connect the jacks to the OUTPUT jacks on the preamplifier, etc. One each cable can be connected to the [R] and [L] jacks when the Mode switch 5 is set to "FIXED". These jacks are not to be used when the Mode switch 5 is set to "VARIABLE" or "MONO/BTL".

8 AC IN Jack

Used to connect the supplied AC power cable to the amplifier. Connect the other end of the AC power cable to household AC outlet.

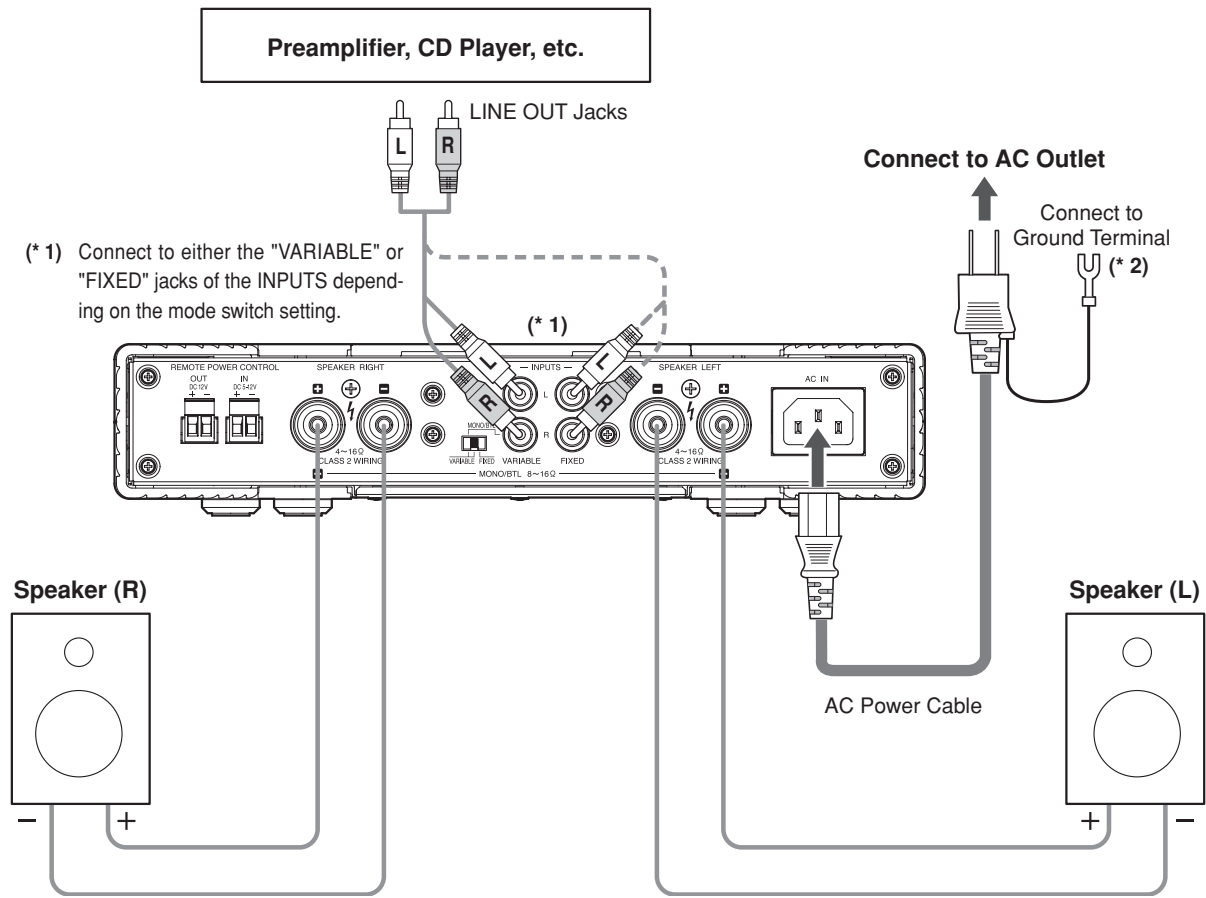
4 Connections

Connecting Devices

- Make sure the power of all related equipments is turned off, when wiring and checking their polarity.
- Make sure that the cable is not shorted, when connecting the speaker cable.
- Connect the power cable after all connections are complete.

Connection example 1: Common setting for playing stereo sounds

* Set the mode switch to "VARIABLE" or "FIXED".

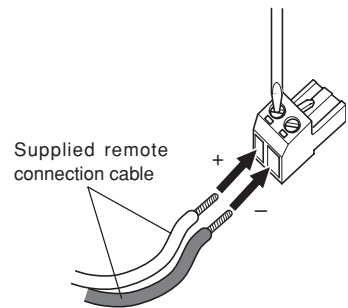


Connection of the REMOTE POWER CONTROL Trigger

By connecting the REMOTE POWER CONTROL Trigger, the activation/deactivation of power on a Flying Mole power amplifier equipped with REMOTE POWER CONTROL Trigger Input can be interlocked with the activation/deactivation of power on this device. Refer to the owner's manuals of the devices to be connected as well before connecting cables.

1. Remove the attachment to the REMOTE POWER CONTROL connectors.
2. Remove insulation material around the ends of the supplied remote connection cables and twist the wires until they are stranded securely.
3. Insert the wires into the holes in the attachment and tighten the screws to fix the cables. **(Be sure to check polarity before connection)**

* Connect the other ends of the cables to the connector for the device whose power is to be interlocked as in the steps 1 to 3 above. (The connector is also attached to the REMOTE POWER CONTROL jacks of the device to be connected.)



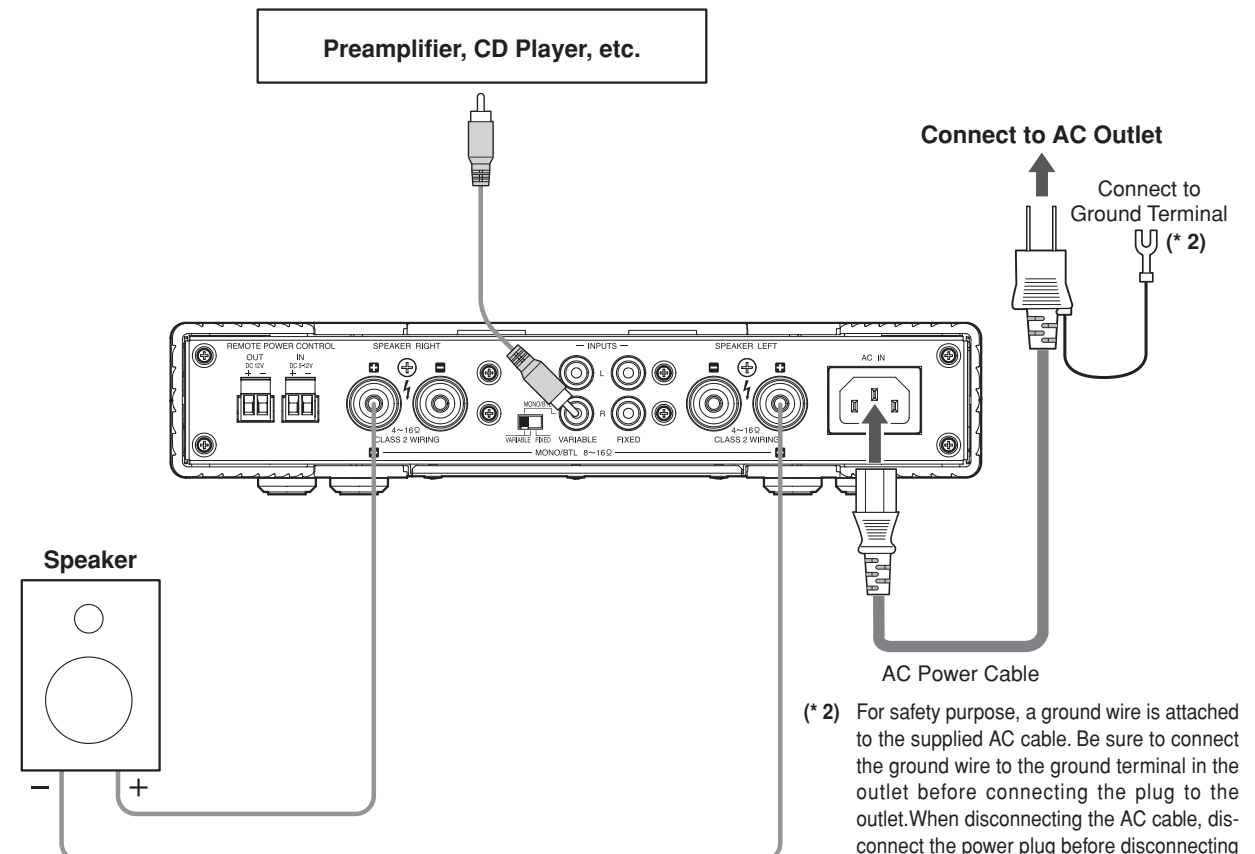
* Be sure to check polarity before connection. Connect the black cable to the negative terminal.

4. Disconnect the connectors to the REMOTE POWER CONTROL jacks of the amplifier and of the other product.
 - To control the power of the amplifier from the other product, connect the connectors to the "IN" of this product and to the "OUT" of the other product.
 - To control the power of the other product from this product, connect the connectors to the "OUT" of the amplifier and to the "IN" of the other product.

* Commercially available vinyl insulated cables can be used as well. • Compatible cable type is AWG24 to AWG12. Refer to the steps 1 through 4 above when connecting cables and make sure that the polarity is correct.

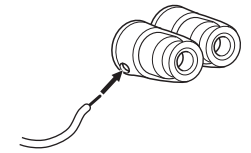
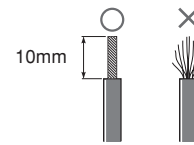
Connection example 2: Bridge (BTL) connection

* Set the mode switch to "MONO/BTL".



Connecting a Speaker Cable

1. Strip the cover of the cable by about 10mm (3/8").
2. Twist the wires until they are stranded securely.
3. Turn a speaker connector counterclockwise to loosen it.
4. Insert the whole stranded wires of the cable and turn the speaker connector clockwise to tighten it.



* Twist the wires of the speaker cable until they are stranded securely and take care not to leave any part of the stranded wires out of the speaker connector when connecting the speaker cable. If the wires come in contact with the rear panel or the wires at the positive terminal come in contact with the wires at the negative terminal, the protection circuit may be activated to stop the normal operation of the product.

Caution

- This product has DC amplifier circuit construction. (Sound signal goes through no capacitor from input to the speaker output.) Therefore, a little noise may be heard when the power is turned on or off depending on the connected device.
- This product processes digital signals. This product may cause harmful interference to other equipment depending on environments where they are used. If interference is caused, install the product where the interference is minimized. In general, it is effective to keep the product as far away from the interfered equipment as possible. Bad receiving condition may be experienced, especially if an indoor antenna or a feeder line is used for TV or radio broadcasting, because their receiver sensitivity of airwaves tends to be low and is vulnerable to external influence. In such a case, an outdoor antenna or a coaxial cable is recommended.

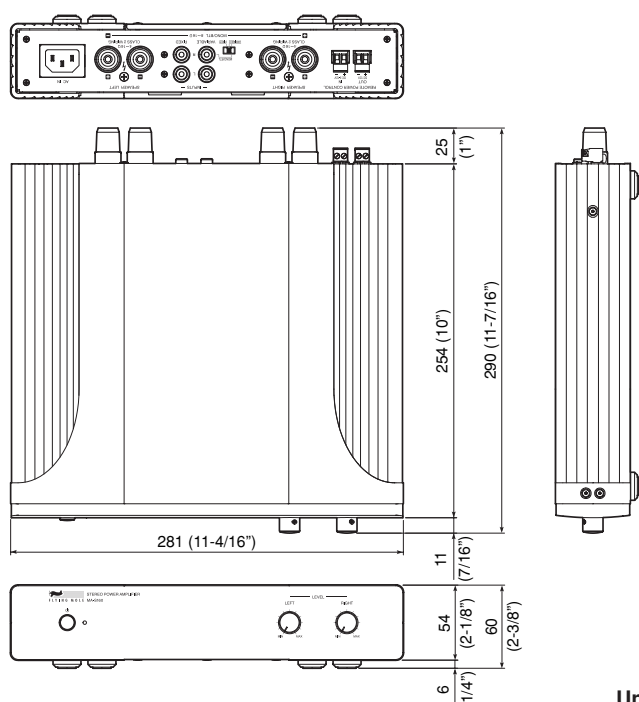
5 Specifications

Rated Output	160W x 2 / 4Ω, 100W x 2 / 8Ω, 300W x 1 / 8Ω (During bridge connection)
Total Harmonic Distortion	0.05% (@50W/8Ω/1kHz)
Frequency Response	DC-20kHz (+0dB / -0.5dB) / (8Ω) DC-50kHz (+0dB / -3dB) / (8Ω)
Channel Separation	>70dB (20kHz)
S/N Ratio	120dB (IHF-A)
Input Sensitivity	1V
Input Impedance	VARIABLE : 47kΩ (Vol MAX), FIXED : 100kΩ
Power Consumption	?
Power Supply	AC 120V 60Hz (U.S.A. & Canadian model) / AC 230V 50Hz
Use Environment	0°C - 40°C
Max. Dimensions inch / mm	11-1/16" (W) x 2-3/8" (H) x 11-7/16" (D) 281 (W) x 60 (H) x 290 (D)
Weight	4.2 kg (9.3 lbs)

* Nameplate is on the bottom of the product.

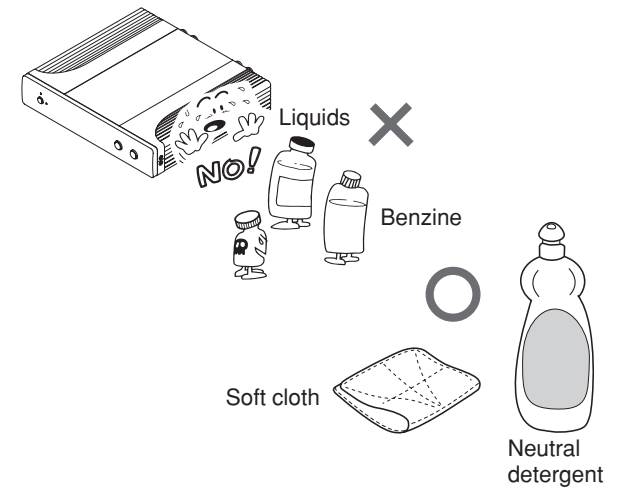
* Due to product improvement, specifications and/or product design are subject to change without notice.

6 Dimensions



7 Maintenance

Never use liquids such as benzene, thinners, etc., chemically treated cloths, and do not spray any aerosol type insecticides on the amplifier. Clean the case using only a soft, dry cloth. If the amplifier becomes soiled, mix a solution of water and a neutral detergent then dampen a soft cloth in the solution, wring out as much of the solution as possible, and clean the amplifier. Then use a soft, dry cloth to wipe the surface dry.



8 Questionnaire

There is a questionnaire in the "Support" section in our website. This is for helping us serve you better by developing new products. We look forward to your access to the following URL.

<http://www.flyingmole.co.jp>

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