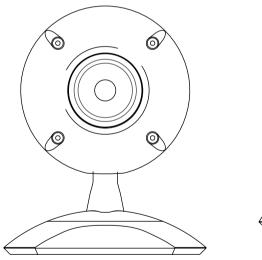
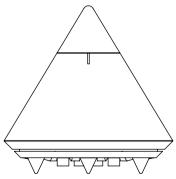


SPEAKER / AMPLIFIER







Thank you for purchasing the 508PA speaker/amplifier.

Please read this Owner's Manual before use.

Be particularly sure to read the Safety Instructions section.

Keep this Owner's Manual together with the Warranty in a safe place for later reference.

Foreword

Contents

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Accessories

8 cm dia. speaker x2	Speaker cable x4
[3 3/20"]	3 m single-wire (⊕: brown, ⊝: gray)
Amplifier x1	(10ft)
	Owner's Manual x1
AC adapter x1	
	Warranty x1
RCA cable x1	
(1.5 m, R: red, L: white)	
(5ft)	

WARNING: To avoid the danger of suffocation, keep plastic bags out of the reach of children.

(What is time domain theory?)

Time domain recreates the changes that occur in sound waves over time from the moment of output until their disappearance. Its purpose is to reproduce those sound waves that are as close as possible to the original recorded sound.

Time domain audio systems allow sound orientation and the nuances that are added by recorded performers to be faithfully reproduced.

^{*} This product is an amplifier system which has been designed using time domain theory in order to maximise quality of speaker operation and performance.

Important 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

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

ATTENTION

POUR EVITER LES CHOC ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

CAUTION (for customers who concerned)
TO PREVENT ELECTRIC SHOCK, MATCH WIDE
BLADE OF PLUG TO WIDE SLOT FULLY INSERT

1. Read instructions

All safety and operating instructions should be read before operating unit.

2. Follow instructions

All operating and other instructions should be followed.

3. Retain instructions

The safety and operating instructions should be retained for future reference.

4. Warnings

All warnings on the unit and in the operating instructions should be adhered to.

5. Power supply

Power supply should be operated only from the power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

6. General care of unit

Do not open or modify the unit as fire or electric shock may result. Do not place flower vases, potted plants, cups, cosmetics, drugs, containers holding liquids, or small metal objects on or near the unit. Do not place any objects on the unit and do not insert or drop metal, combustible objects or liquids into the unit as such actions can cause fire or electric shock. If liquid or foreign objects enter the unit, disconnect immediately since continued use may result in fire or electric shock. Do not place the unit on tuners, audio decks or other electric equipment. Do not use the unit as a step or seat. The unit may tip over and cause damage or injury. Consult a company customer service facility for interior inspection, adjustment or repair.

7. Where not to use unit

Do not use the unit in bathrooms, areas exposed to rain or snow, on the shore, near water or in humid conditions. Do not place the unit in unstable locations, in kitchens,near humidifiers, or in any location with likely exposure to smoke or steam. Do not place the unit in direct sunlight, near heating equipment or close to open flames. Fire, accident or malfunction may result. Do not place the unit in locations exposed to cold air or direct draft. Condensation, leakage current or thermal damage may result. Do not use the unit in dusty or dirty locations. Decreased heat ventilation can cause thermal damage

8. Unit heat

The bottom and sides of the unit can heat up during use and should not be touched. Burns may result. Only connect or disconnect speaker cables after the power supply has cooled down.

9. Moving the unit

When moving the unit, shut off power to all connected equipment, and disconnect power cords, connectoins cables, speaker cables and other wires. Moving the unit while cable are connected can cause damage to cables, fire or electric shock. The unit is heavy and care should be taken when unpacking, moving or lifting.

Manufacturing also creates sharp areas on the unit; use thorough care in handling.

10. Power cord

Only use the power cord supplied and do not bend, twist, modify it for repair, or pin it under the unit. Heavy objects, heat or tension may also damage the power cord and cause fire or electric shock. When disconnecting the power cord from an outlet, do not pull the cord. Pulling on the cord can damage it and cause fire or electric shock. Do not touch the power cord with wet hands. Do not place the power cord near heating equipment and do not use the unit. If the plug fits loosely in an electric outlet or the plug or cord is hot. If the cord is damaged replace it as continued use may result in fire or electric shock.

11. Unit plug

Insert the plug into an outlet all the may to its

base. Incomplete insertion can cause heat production, and dust build-up can cause fire. Contact with the prongs of the plug can also cause electric shock. Do not connect the unit to an outlet where the connection is loose even when the plug is inserted all the way to its base. Do not use the unit if the plug is hot. Heat production can cause fire.

If dust or metal accumulates on or near the prongs of the plug, wipe the plug with a dry cloth after disconnection. Continued use may cause fire or electric shock.

12. Danger signs

If you notice a strange noise, smoke, unusual odour or other abnormal condition, shut off the unit, disconnect the power cord from the outlet and have the unit inspected. Continued use may result in fire or electric shock.

13. Electric storms

During electrical storms disconnect the unit and avoid contact with the antenna and power cord. Lightning can cause fire, electric shock and malfunction.

14. Internal temperature rise

To avoid internal temperature rise when installing the unit, leave space between the unit and walls or other equipments. When installed in a rack or similar fixture, leave a 10cm (4") or larger gap on top and at sides since internal temperature rise can result in fire. The unit is provided with ventilation holes to prevent internal temperature rise. Blockage of these holes decreases ventilation and can result in fire. Note the following:

- * Do not place the unit in a poorly ventilated
- *Do not place the unit on carpeting or on bedding
- * Do not obstruct the ventilation holes
- * Do not tilt the unit or turn upside down

15. AC Adapter

Only use the AC adapter supplied and ensure that you use it in a well-ventilated location free from dampness.

16. Extended non-use

If the unit is likely to be unused for an extended period, shut off power and disconnect from power supply.

17. Volume Adjustment

If abnormal noise is produced during play at high volume, reduce the volume level. Distorted sound can cause overheating of speakers and amplifier. Before switching power supply on, set the amplifier volume to minimum. Sudden, loud noise can cause damage to hearing.

18. Connecting TV/other audio equipment

When connecting a TV or other audio equipment, always shut off power, read the operating manual for each device and follow the instructions for connection. Use only designated cables.

Use of non-designated cables or extension cables can cause heat production, burns, and fire.

19. Antenna

An outdoor antenna should be located away from power lines.

20. Maintenance.

Before undertaking maintenance disconnect from power supply. Have the interior of the unit cleaned approximately once a year by qualified personnel. Accumulated dust inside and long intervals without cleaning can cause fire or malfunction. Before cleaning this product make sure that the power is turned off and the power cord is disconnected from the wall outlet. Clean with a soft cloth. If the product is particularly dirty, moisten the cloth and wring out before use. Complete by wiping with a soft, dry cloth. Do not use liquid solvents such as alcohol or thinner to clean this product, as such chemicals can damage the cabinets.

21. Servicina

The unit should be serviced by qualified personnel when:

- *The power-supply cord or plug has been damaged, or
- * Objects or liquid have entered the unit, or
- * The unit has been exposed to rain; or
- * The unit is malfunctioning, or
- *The unit has been dropped or the cabinet has been damaged.

22. Children

Use particular care in households where children are present.

23. Temporary Fault

If this product receives a strong external

shock (such as from an impact, static electricity or a power surge due to lightning), or if this product is used incorrectly, it may stop working properly.

In such cases, press the power button to turn the power off and then back on again, and check if this product is working normally.

Notes on Use

Volume Setting

Before switching ON minimise the volume. Sudden, large output can damage the speakers.

Volume Etiquette

To avoid disturbance in your neighbourhood, enjoy your unit at an appropriate volume.

Remember that at night, even low volume carries into surrounding areas.

Help to maintain a pleasant living environment.

Speaker Cord Connection

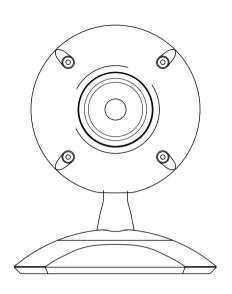
Always connect speaker systems with power OFF.

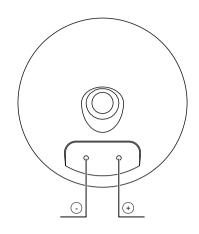
If a speaker cable is inadvertently shorted, the protection circuit in the amplifier will operate, and audio output will stop temporarily.

In this event, disconnect the power cord from the outlet, correct the shorted area and reconnect the power cord to the outlet.

The output of this amplifier is in BTL format; avoid connecting the negative side to the negative side of another device by a speaker selector or the like (the negative side is not GND voltage).

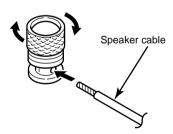
Part Names and Functions/Connections



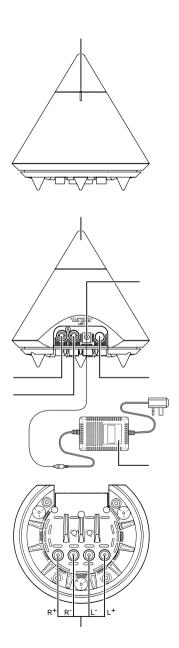


, Speaker input terminals

When connecting the speakers, insert the ends of the speaker cables so that they do not touch neighbouring terminals.



It is recommended that the accessory speaker cables are used. (These cables are designed to provide optimum sound quality for this system.)



Power indicator

Power button "ON": indicator lights

Power button "OFF"

Volume control knob.

Turn to the right...Increases volume.

Turn to the left...Decreases volume.

Line input terminal (R)

Connect to audio source using cable with RCA pin jack.



Line input terminal (L)

Connect to audio source using cable with RCA pin jack.



Power button

Turns power ON and OFF.

Power connector

Connect power supply here.

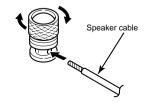
* Do not connect anything other than the AC adapter, otherwise it may cause problems with operation and/or fire.

AC adapter

* Input voltage and the shape of plug vary in the destination.

Speaker output terminals

When connecting the speakers, insert the ends of the speaker cables so that they do not touch the speaker body or neighbouring terminals.



Specifications

Specifications

Specifications and appearance are subject to change without prior notification.

[Amplifier]

Rated output: 12W

(at 8Ω load, T.H.D: 0.1%)

Max. output: 15W

(at 8Ω load, T.H.D : 10%)

Output type: BTL

Total high harmonic distortion:

Frequency characteristics:

10Hz -- 100kHz (± 3dB)

Input sensitivity:

200mVrms (at 12W output)

Signal-to-noise ratio: 65dBSeparation rate: 60dBInput impedance: $10k\Omega$ Applicable load impedance: 8Ω

Dimensions: 159mm(W)x142mm(D)x158mm(H)

 $[6^{1/4}"(W)x5^{19/32}"(D)x6^{7/32}"(H)]$

Weight: Approx. 1.5kg (3¹/₄lbs)

[AC Adapter]

Input voltage: $230V \pm 10\%(50Hz)$

Output voltage: +15V DC
Output current: 3A DC

Dimensions: 130mm(W)x92mm(D)x67mm(H)

 $[5^{1}/8"(W)x3^{5}/8"(D)x2^{5}/8"(H)]$

Weight: Approx. 1.6kg (3¹/₂lbs)

[Speakers]

Diameter: 8cm $(3^3/20^{\circ})$ Type: Bass ref/box

Input resistance: Rated 12W/Maximum 24W

(with box)

Impedance: 8Ω

Dimensions: 191mm(W)x221mm(D)x236mm(H)

 $[7^{1/2}"(W)x8^{11/16}"(D)x9^{5/16}"(H)]$

Weight: Approx. 2kg (4¹/₂lbs)

MEMO

ENGLISH