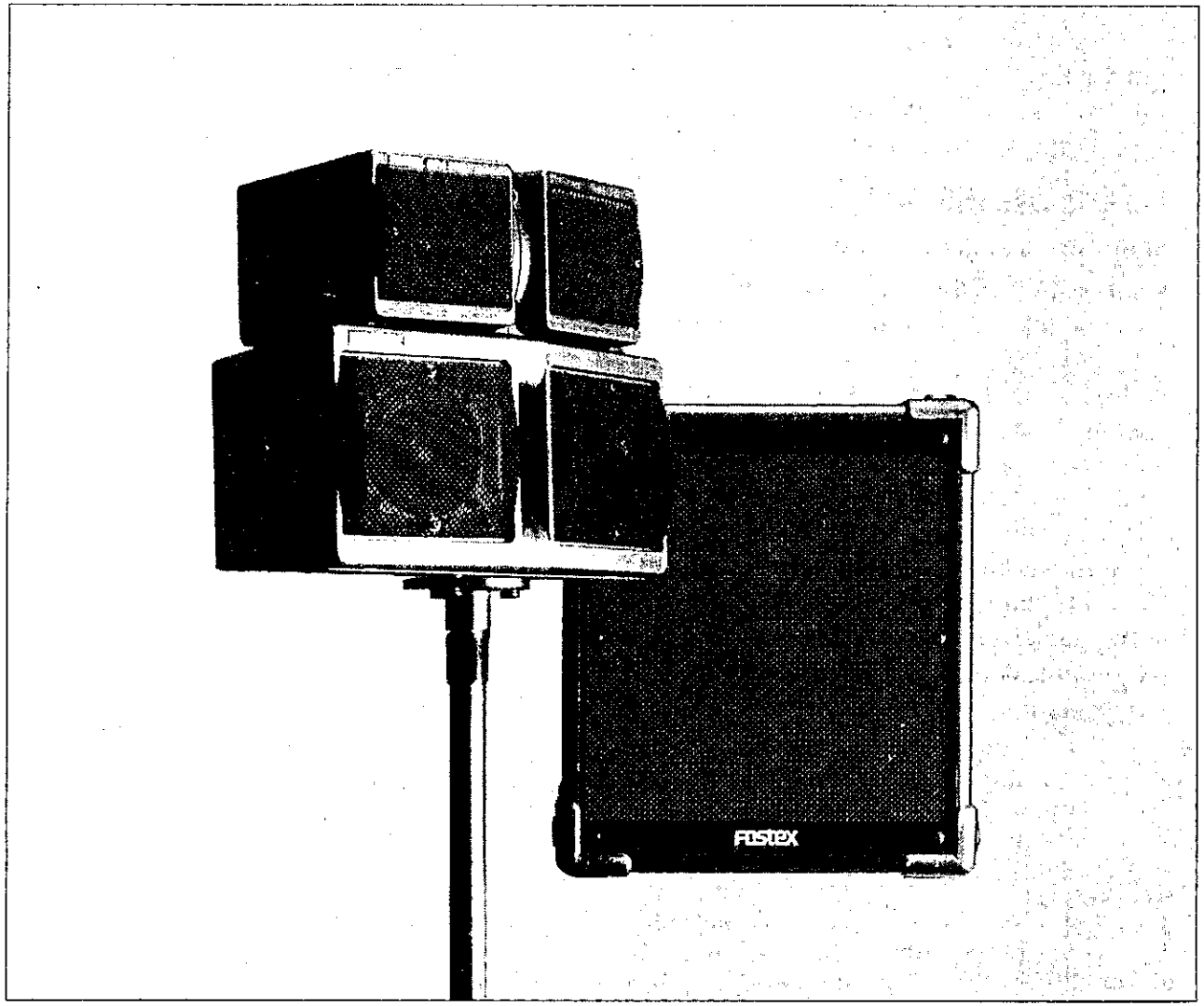
SOUND REINFORCEMENT MINI SPEAKER SYSTEMS

SPA11/SPA707/SPA303



FOSTEX

We appreciate your purchase of the Fostex produce. Please read through this manual for correct operation.

Model SPA11 is a speaker system with two 10cm heavy duty full range units and containing a large output amplifier. It has a line input and mic input, and a sound volume control. It is highly portable and performs well as a high quality sound reinforcing system.

Model SPA707 is a woofer system containing a small size, lightweight but large output power amplifier and employes a 30cm large diameter woofer to reproduce heavy lows. Its performance is further extended by system up with the SPA11.

Model SPA303 is a tweeter system with an internal power amplifier, designed same as with SPA707, for combination with SPA11. With a front mask coordinated in appearance with SPA11, two horn tweeters are mounted at an angle to cover a wide area.
A compact, wide range, small PA system can be constructed by combining SPA11 with SPA707+SPA303.

Model

SPA11

Outstanding Features

• Internal high power amplifier • Two input ports • A line output connector • Extra AC outlet (100/120 volt spec. only) • Sound control pot

Names and functions of the rear panel controls

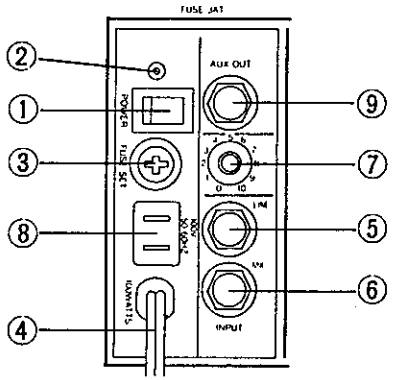


Fig. 1

① Power switch
② Power supply indicator LED
③ Power supply fuse
④ AC cord
⑤ LINE INPUT
⑥ MIC INPUT
⑦ Sound volume control
⑧ AC outlet (100/120V spec. only)
⑨ AUX OUT

Block diagram

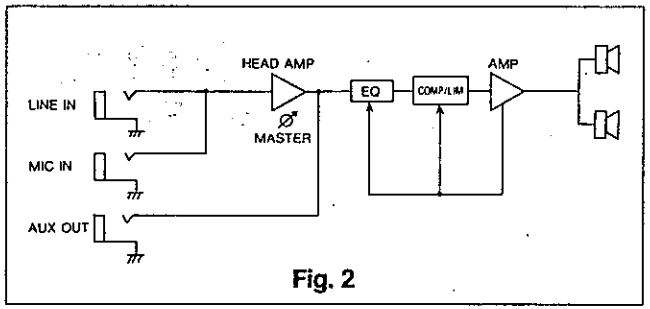


Fig. 2

How to use the SPA11

Single use and at recording

• Either LINE INPUT or MIC INPUT is selected according to the source to be connected.
• LINE INPUT and MIC INPUT can be used in parallel. As both input sensitivities are fixed, the levels must be balanced by adjusting the LINE input side signal with the output level control on the recorder or mixing console. Adjust the overall sound volume with the sound volume control on the SPA11.
• The public address sound can be recorded by connecting the recorder to the AUX OUT connector.

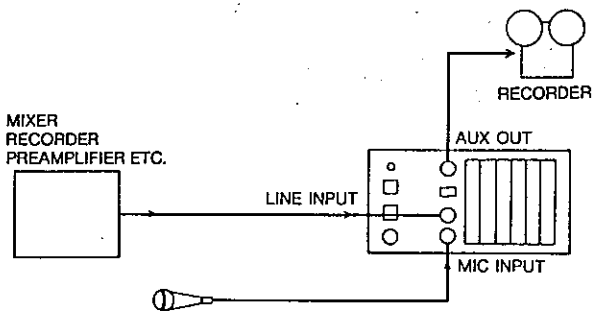
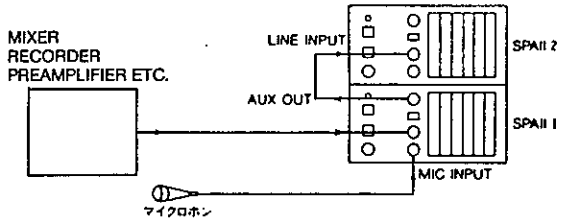


Fig. 3

When using more than two

• When connecting more than two in parallel, the first unit AUX OUT is connected to the second unit LINE INPUT. The second unit AUX OUT is then connected to the third unit LINE INPUT, and so on.
• The sound volume controls from the second unit and after it should be set at MAX. Overall sound volume is then controlled with the first sound volume pot.
• Input signals are applied to LINE INPUT and MIC INPUT of the first unit.
• When using the MIC INPUTS of the second unit and after, the volume control pot for each mic must be separately adjusted.



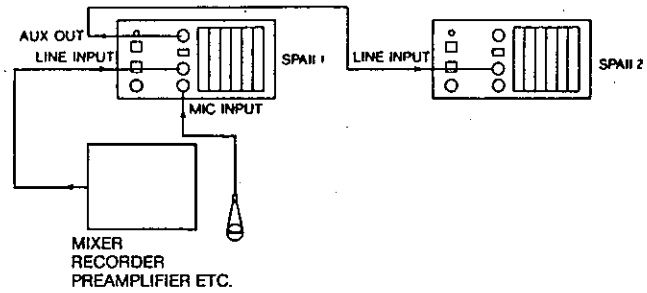


Fig. 4

Directivity of SPA11

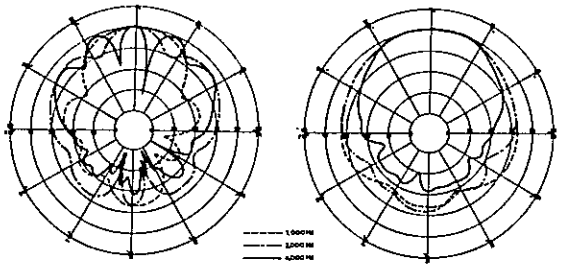


Fig. 5

Frequency response of SPA11

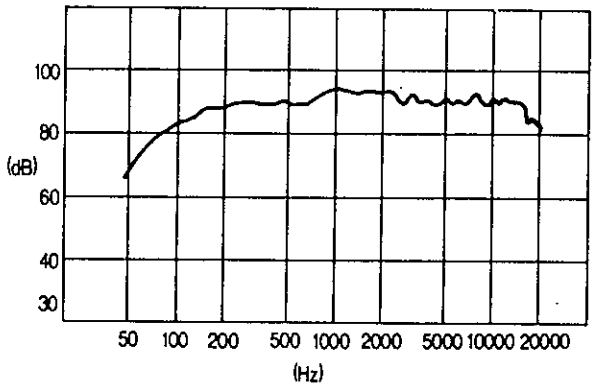


Fig. 6

How to assemble the SPA11

Rubber feet included in the accessory kit are used when stacking the units. It also allows stable setting on a flat surface such as a table, instead of stacking, if the rubber feet is attached.

(1) Attaching the rubber feet

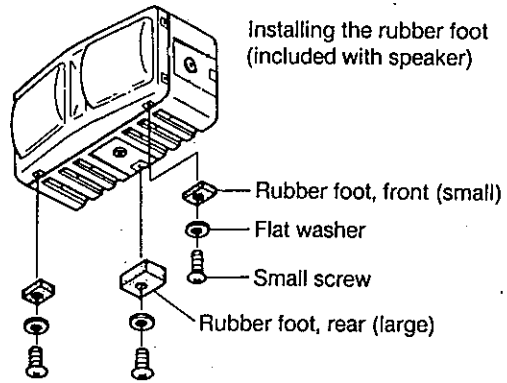
Install the rubber feet included in the accessory kit as shown in the drawing below. The rubber feet can be installed on all surfaces at top, bottom, left or right.

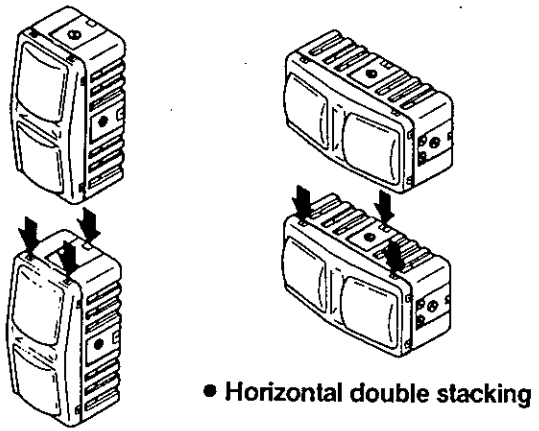
(2) Stacking two units

There are indentations at top, bottom, left and right of the unit in which the rubber feet can fit. When stacking, the rubber feet mounted on one unit is fit into the other unit's indentation.

Be sure to use the joining hardware, Model P64 for horizontal stacking and Model P63 for vertical stacking.

• Method of mounting





• Vertical double stacking

• Horizontal double stacking

Fig. 7

Component	Amount
Front rubber foot (small)	2
Rear rubber foot (large)	1
Flat washer	3
Mounting screw	3

Setting and service area of SPA11

As SPA11 can freely be stacked and position set vertically and horizontally, setting its service area is simple and full PA performance matching the objective source can be obtained.

(1) Horizontal setting

It presents superior performance over a wide area of 60° horizontally. It presents the same service area in the two stack format.

(2) Vertical setting

It presents extremely good horizontal directivity across a 120° angle and superior transmission characteristics whereas sound balance within the service area is almost uniform. In the vertical two stack format, the characteristic is identical to a column speaker, presenting an extremely clear information transmission capability.

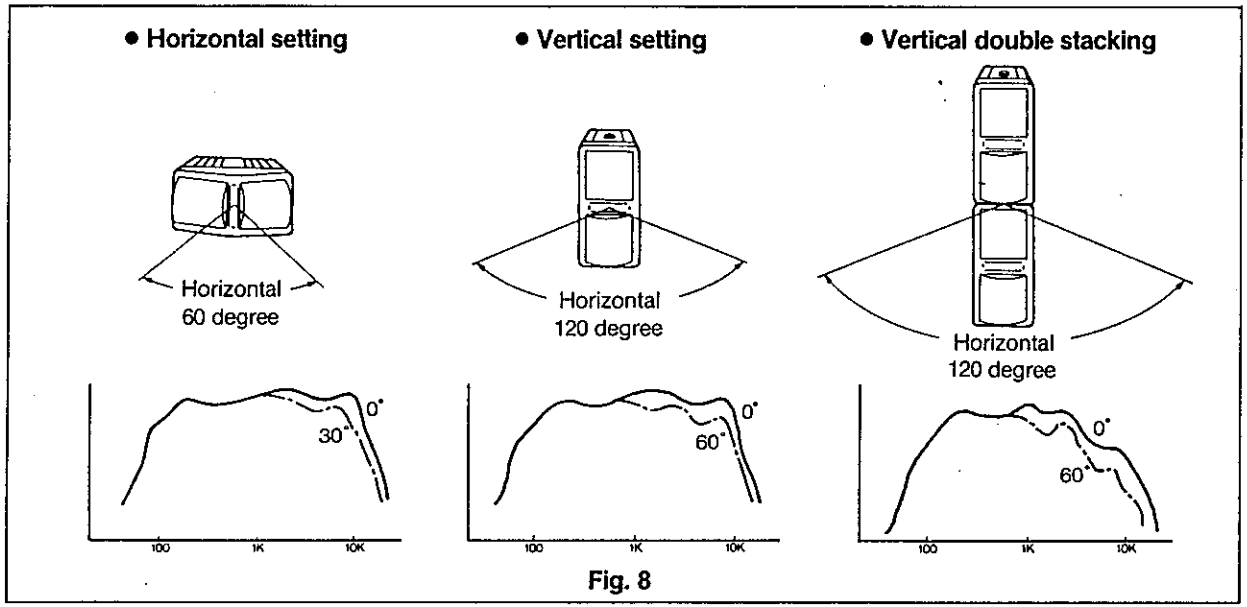


Fig. 8

Accessory list exclusive to SPA11

Model	Application
P53 CLAMP MOUNT	For overhead hanging
P58 STAND ADAPTOR	For mounting SP11MKII/SPA11 on SF202
P60 U-BRACKET KIT	For wall/ceiling mount in vertical use
P61 U-BRACKET KIT	For wall/ceiling/stage mount in horizontal use
P62 L-BRACKET KIT	For wall/ceiling mount and universal with P60/P61
P63 STACKING KIT	For two SP11MKII/SPA11 in vertical
P64 STACKING KIT	For two SP11MKII/SPA11 in horizontal
SF152 FLOOR STAND	For SP11MKII/SPA11 including mounting adaptor (Height—1.83 m max.)
SF202 FLOOR STAND	For SP21/SPA22 including mounting adaptor (Height—2.0 m max.)

Model SPA707

Outstanding features

• Small size, lightweight, portable design • Inputs for HIGH and LOW level • HPF and AUX outputs • Phase selector switch or woofer • Boost switch • Contains a high performance power amplifier • Sound volume control

Names and functions of the rear panel controls

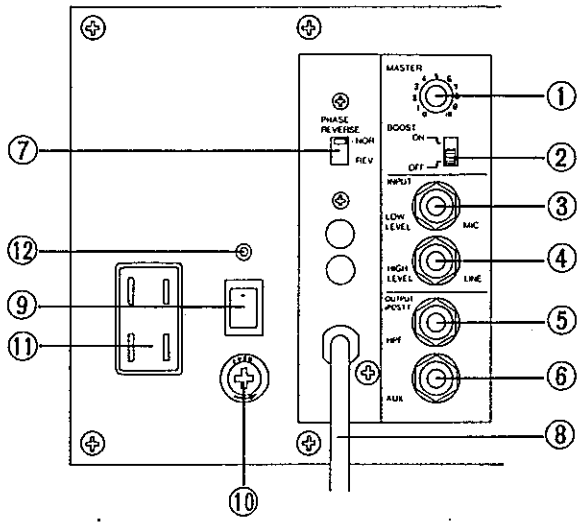


Fig. 9

① Sound volume control
② Boost switch
③ INPUT (MIC IN)
④ INPUT (LINE IN)
⑤ OUTPUT (HPF)
⑥ OUTPUT (AUX)
⑦ Phase selector SW

⑧ Power cord
⑨ Power supply fuse
⑩ Fuse
⑪ AC outlet (for 100/120V spec. only)
⑫ Power supply indicator LED

Block diagram

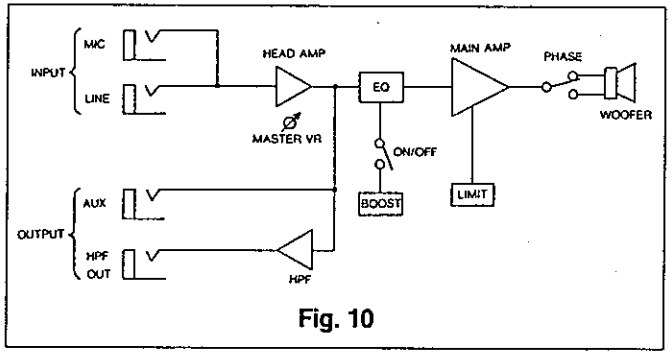


Fig. 10

How to use Model 707

Connection to SPA11

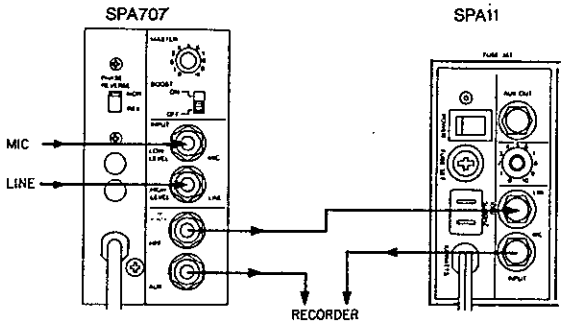


Fig. 11

- Depending on the source to be connected, the LOW LEVEL (MIC) or HIGH LEVEL (LINE) connector is used.
- The output signal from SPA707 for SPA11 is taken from HPF (High pass output: cutoff frequency 125Hz) and applied to the LINE INPUT connector of SPA11. In this case, since the SPA707 output is post fader, its sound volume control pot will be the master pot to control both SPA707 and SPA11.
- If the PA sound is to be recorded, the tape recorder is connected to AUX OUT of either SPA707 or SPA11.

On the woofer phase selector switch

- Occasionally, a reverse phase between the SPA707 sound and another sound source depending on the phase relationship with the companion equipment or positioning of the equipment. In such a case, switch the SPA707 phase selector to NOR or REV whichever corrects the phase difference (This switch changes the SPA707 speaker output phase only).

NOR . . . . . Phase same as input.
REV . . . . . Phase in reverse of input.

On the boost switch

- SPA707 is provided with a switch for boosting the low region.
  Boosting is 3dB up at 100Hz (Refer to response curve).

Frequency response of SPA707

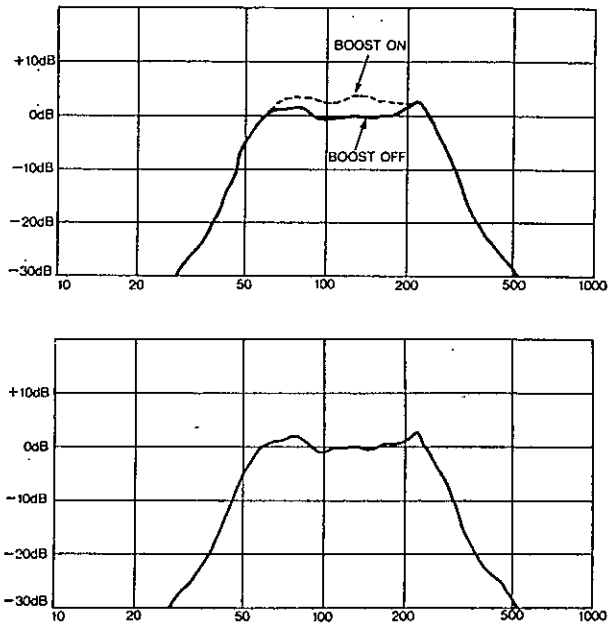


Fig. 12

Model

SPA303

Outstanding features

• Small size, lightweight design • Employes the clear sound quality horn tweeter • Simple mounting on SPA11 with one screw • Extra output connectors for multiple unit connections • Appearance is matched with SPA11 • Provided with sound volume control pot • Internal high power amplifier

Names and functions of the rear panel controls

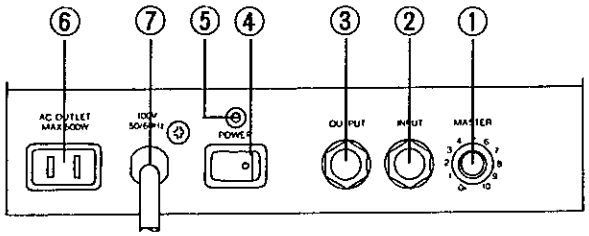


Fig. 13

① Sound volume control
② INPUT
③ OUTPUT
④ Power switch
⑤ Power supply indicator LED
⑥ AC outlet (100/120V spec. only)
⑦ Power cord

Block diagram

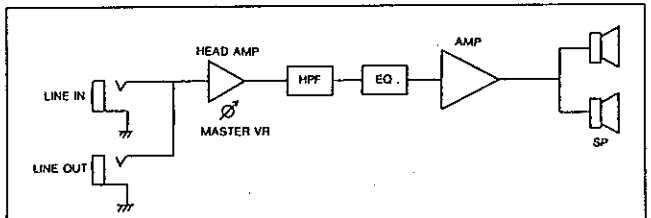


Fig. 14

Application and connecting method of Model SPA303

Using it in a full system together with SPA11 and SPA707

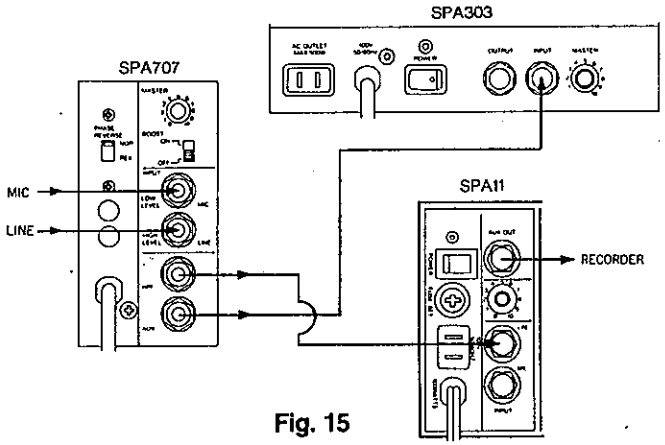


Fig. 15

• Use the LOW LEVEL or HIGH LEVEL input connector depending on the source to be connected.
• When using in a full system, the SPA707 OUTPUT (HPF) is connected to the SPA11 INPUT as shown in the schematic (A 125Hz crossover frequency is output from HPF).
• When connecting to SPA303, the SPA707 AUX OUT is connected to the SPA303 INPUT (The full frequency range is output from AUX OUT).
• Each output of SPA707 can be adjusted by its volume control pot as they are post fader signals.
• In this connection example, sound volume of each equipment can be controlled using the SPA707 volume control pot as the master control.

How to combine SPA11 and SPA303 (stacking)

• Mount the rubber foot included with SPA11 at three locations shown in the drawing.
• Using the bolt included with SPA303, mount on the SPA11.
NOTE: Be careful not to over tighten the bolt when securing SPA303 onto SPA11 as the enclosure may be damaged.
• When stacking on the speaker stand, it is recommended to use the Model SF152 Speaker Stand or the SF202 + P58 combination which are designed to withstand the weight of the stacked speakers.

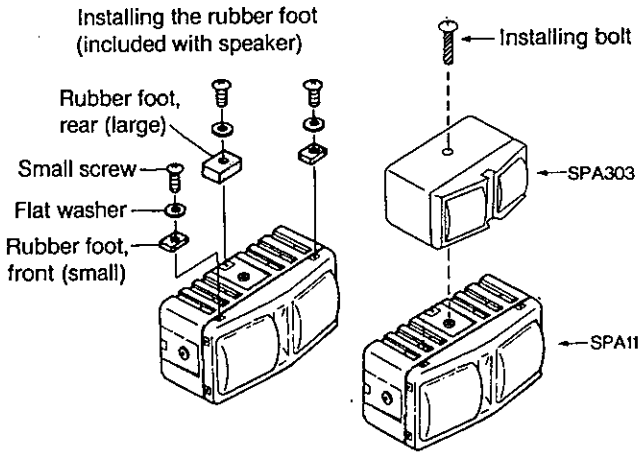
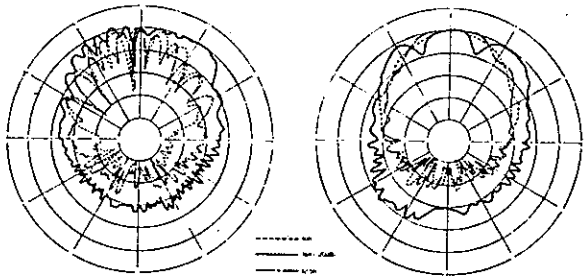


Fig. 16

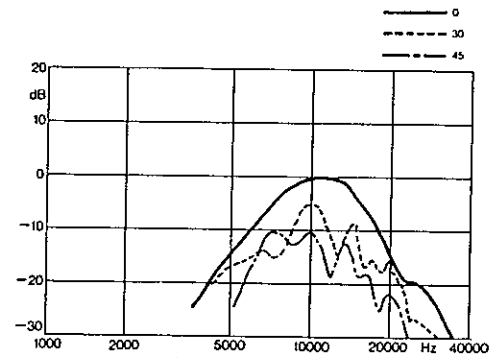
Directivity of the SPA303



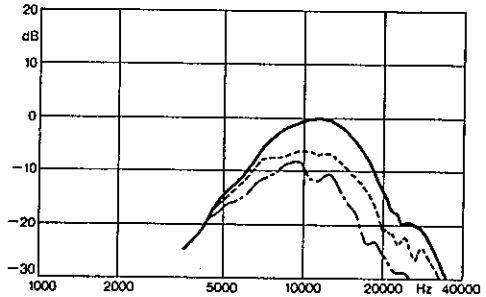
Horizontal plane Vertical plane

Fig. 17

Frequency response of SPA303



Horizontal plane



Vertical plane

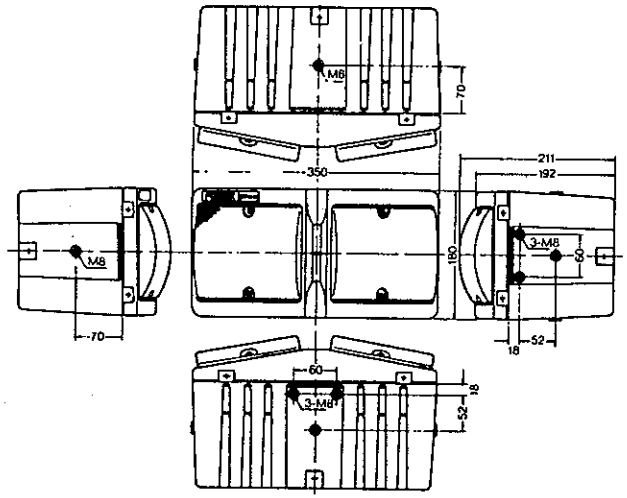
Fig. 18

Precautions in using SPA11/SPA707/SPA303

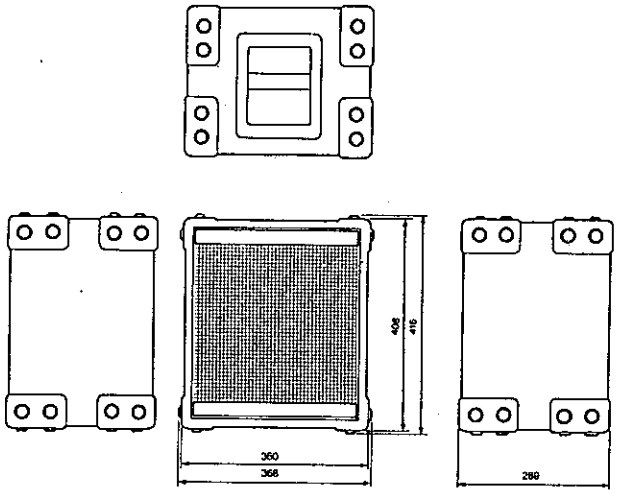
- Be sure to fully retard the volume control when switching power ON-OFF and connecting the cables to the input connectors. You may damage the speaker unit and amplifier if the above procedures are done with the volume control raised.
- Do not connect AUX OUT to LINE INPUT or MIC INPUT of the same unit. It could damage the internal amplifier if you do.
- FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE FUSE.
  If the fuse burns out again on switching ON the power after replacing it, please contact our Service Department as there is a possibility of damage in the internal circuits.

Physical dimensions

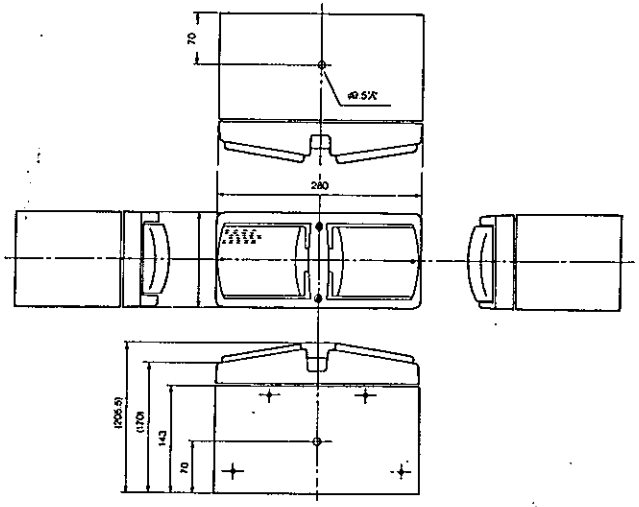
SPA11



SPA707



SPA303



Maintenance

- Do not use solvents such as lacquer thinners and benzine for cleaning.
- Clean with a cloth soaked in a thin solution of detergent and tightly wrung out.

Specifications

Model	SPA11	SPA707	SPA303
SPEAKER SECTION			
Speaker	10cm cone type full range woofer (16Ω)×2	30cm cone type woofer (6Ω)	Horn type tweeter (8Ω)×2
Reproduce frequency range	60~18,000Hz	45~300Hz	6,000~18,000Hz
Max. output sound pressure level	112dB/−20dBm (LINE INPUT at 700Hz)	114dB/−20dBm (LINE INPUT at 100Hz)	109dB/−30dBm (at 12Hz)
Enclosure type	Bass reflex	Bass reflex	—
Enclosure material	Special fortified synthetic resin	High relative strength wood board	High relative strength wood board
Dimensions	350W×180H×211D	368W×416H×289D	280W×130H×205.5D
Weight	7.6kg	14kg	3.8kg
Input jack	LINE INPUT: 1/4" phone jack (−20dBm) MIC INPUT: 1/4" phone jack (−50dBm)	HIGH LEVEL: 1/4" phone jack (−20dBm) LOW LEVEL: 1/4" phone jack (−50dBm)	INPUT: 1/4" phone jack (−30dBm)
Output jack	AUX OUT: 1/4" phone jack (−20dBm)	HPF: 1/4" phone jack (−20dBm) AUX: 1/4" phone jack (−10dBm)	AUX: 1/4" phone jack (−30dBm)
AMPLIFIER SECTION			
Input impedance	LINE INPUT: 33kΩ MIC INPUT: 1kΩ	HIGH LEVEL: 33kΩ LOW LEVEL: 1 kΩ	INPUT: 3.3kΩ
Harmonic distortion	0.1% (1kHz, 100W)	0.1% (100Hz, 150W)	0.1% (10kHz, 25W)
S/N ratio	80dB (IHF-A) LINE INPUT	97dB (IHF-A) LINE INPUT	90dB (IHF-A) LINE INPUT
AC ling/wattage	100VAC 50/60Hz 65W 120VAC 60Hz 90W 220VAC 50Hz 185VA 240VAC 50Hz	100VAC 50/60Hz 100W 120VAC 60Hz 160W 220VAC 50Hz 400VA 240VAC 50Hz	100VAC 50/60Hz 30W 120VAC 60Hz 36W 220VAC 50Hz 115VA 240VAC 50Hz
Power cord	2.3m	2.3m	2.3m

- Specifications and physical appearance are subject to change without notice.

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