



SPEAKER SYSTEM KIT

50W / 3WAY 3 SPEAKER

10SA-1

MANUAL

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CORAL AUDIO CORPORATION

We thank you heartily for your signaling out our product, "Coral" Speaker System Kit 10SA-1.

The 10SA-1 is so designed as to be completed easily as a speaker system when being mounted on a cabinet of designated measurement.

We hope you will peruse this instruction, assemble the system rightly and enjoy the good sound for a long time.

Features of 10SA-1

This is a speaker system of 10 inch roll, free edge, high compliance type. The woofer used as the base has high input resistance and enough capacity, using specially treated fortified cone paper and a high input resistant 4 layer wound voice coil. On the mid-range is used a 5 inch cone with pressure cover resistant enough against the strong wind pressure caused by the vibration of the woofer cone paper. The tweeter uses 2 1/2" cone type voice coil wound with aluminum wires which can reproduce the high frequency range of sound.

The network is so designed as to match exclusively this kit. You are advised to assemble rightly the speaker system to enjoy the wonderful stereo sound.

List of component parts (10SA-1)

Speaker	10" woofer (10L-24)	X	2
	5" mid-range (5M-12)	X	2
	2 1/2" tweeter (2H-25)	X	2
Network	NT-31T	X	2
Accessories (in a bag)	Attachment cord, 3 m gray colored parallel cord	X	2
	Terminal	X	2
	Badge of "Coral"	X	2
Screws for mounting	For 2 1/2" tweeter (Cat. No. 166-1020)	X	2 bags
	For 10" woofer (Cat. No. 166-1030)	X	2 bags
	For 5" mid-range (Cat. No. 166-1110)	X	2 bags
	For network and terminal (Cat. No. 166-1140)	X	1 bag

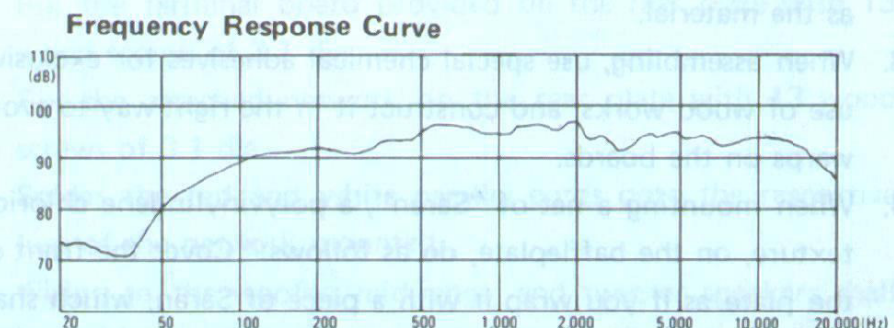
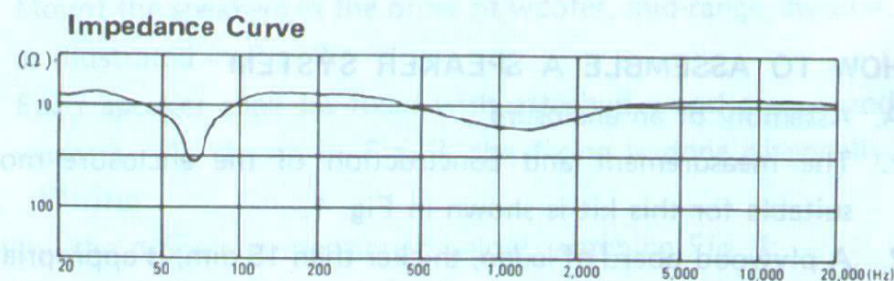
Ratings and Features (10SA-1)

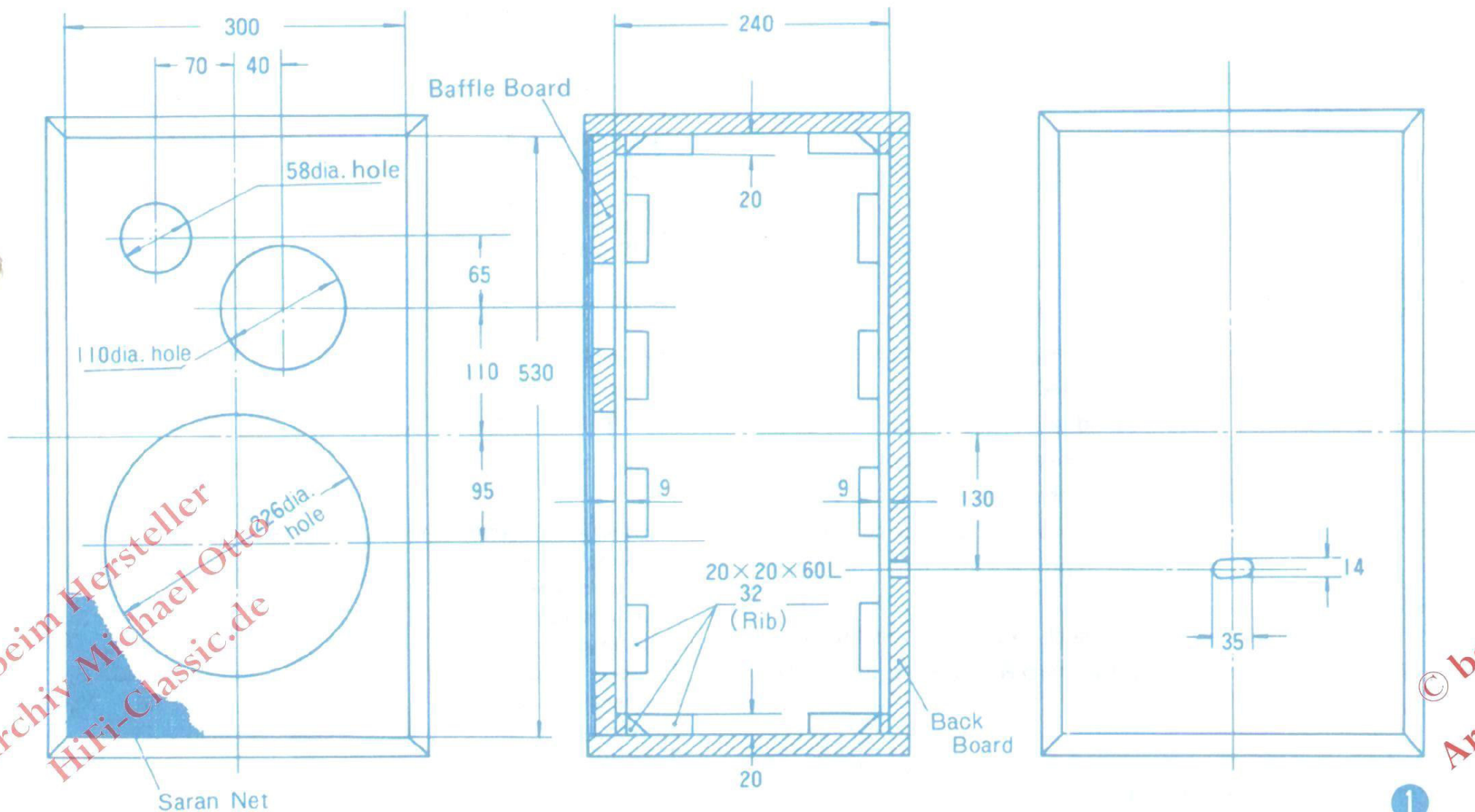
(The ratings of the speaker units are as follows:)

Type and Form	Woofer (10L-24)	Mid-range (5M-12)	Tweeter (2H-25)
Input impedance	8 Ohms	8 Ohms	8 Ohms
Resonant frequency	35 Hz	—	—
Output sound pressure (1W 1M) (*According to JIS C-5531)	93 dB	93 dB	92 dB
Frequency response	$f_0 \sim$ 2,000 Hz	800 ~ 12,000 Hz	5,000 ~ 20,000 Hz
Flux density	6,200 GAUSS	9,500 GAUSS	10,000 GAUSS
Total magnetic flux	90,000 MAXWELL	28,000 MAXWELL	20,000 MAXWELL
Weight	1,560 g	520 g	180 g

The features as assembled in a designated cabinet are as follows:
Features (10SA-1)

Type of cabinet	Closed type
Type of speaker	3 way 3 speaker
Input impedance	8 Ohms
Crossover frequency	2,000 : 6,000 Hz
Frequency response	40 ~ 20,000 Hz
Sensitivity	93 dB
Capacity	50 W





HOW TO ASSEMBLE A SPEAKER SYSTEM

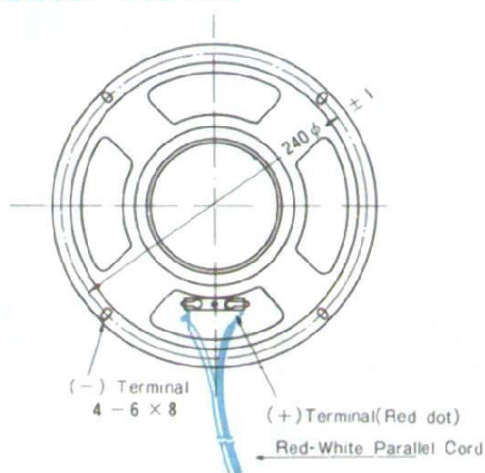
A. Assembly of an enclosure

1. The measurement and construction of the enclosure most suitable for this kit is shown in Fig. 1.
2. A plywood board of lauan, thicker than 15 mm, is appropriate as the material.
3. When assembling, use special chemical adhesives for exclusive use of wood-works, and construct it in the right way to avoid warps on the boards.
4. When mounting a net of "Saran", a polyvinylidene chloride texture, on the baffleplate, do as follows: Cover the front of the plate as if you wrap it with a piece of Saran, which shall be about 10 cm larger vertically as well as horizontally.

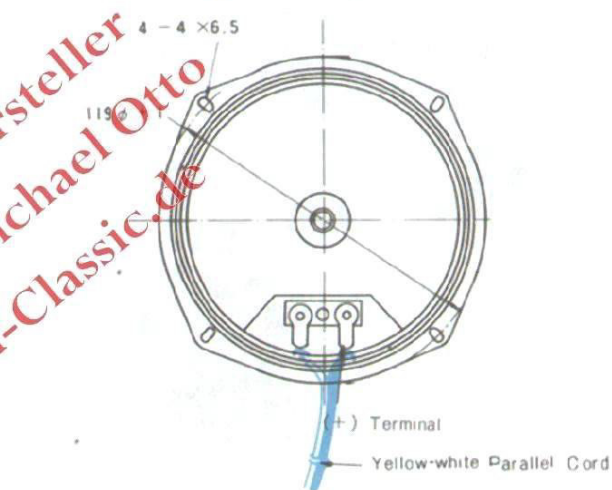
Stretch the Saran net tightly so that no slack will be left on the front side and fasten it to the plate by fixing the folds onto the back of the plate by a stapler. Fasten the baffleplate to the box body by fixing it onto the inside frame with wood screws.

5. The quality of Saran net influences functions of a speaker, so select a material of high sound transmittivity. If the quality is poor, there may be caused flapping at the low frequency range or deterioration at the high frequency range.
6. For sound absorption, use glass-wool or felt. Stick about 25 mm thick pieces of the material on the interior of the box as well as on the rear plate.

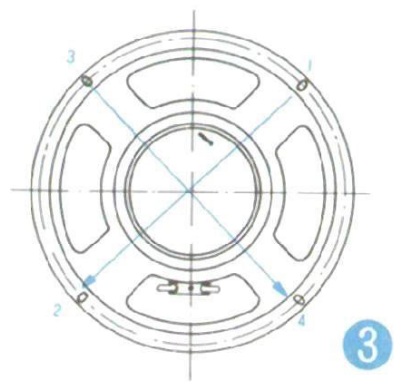
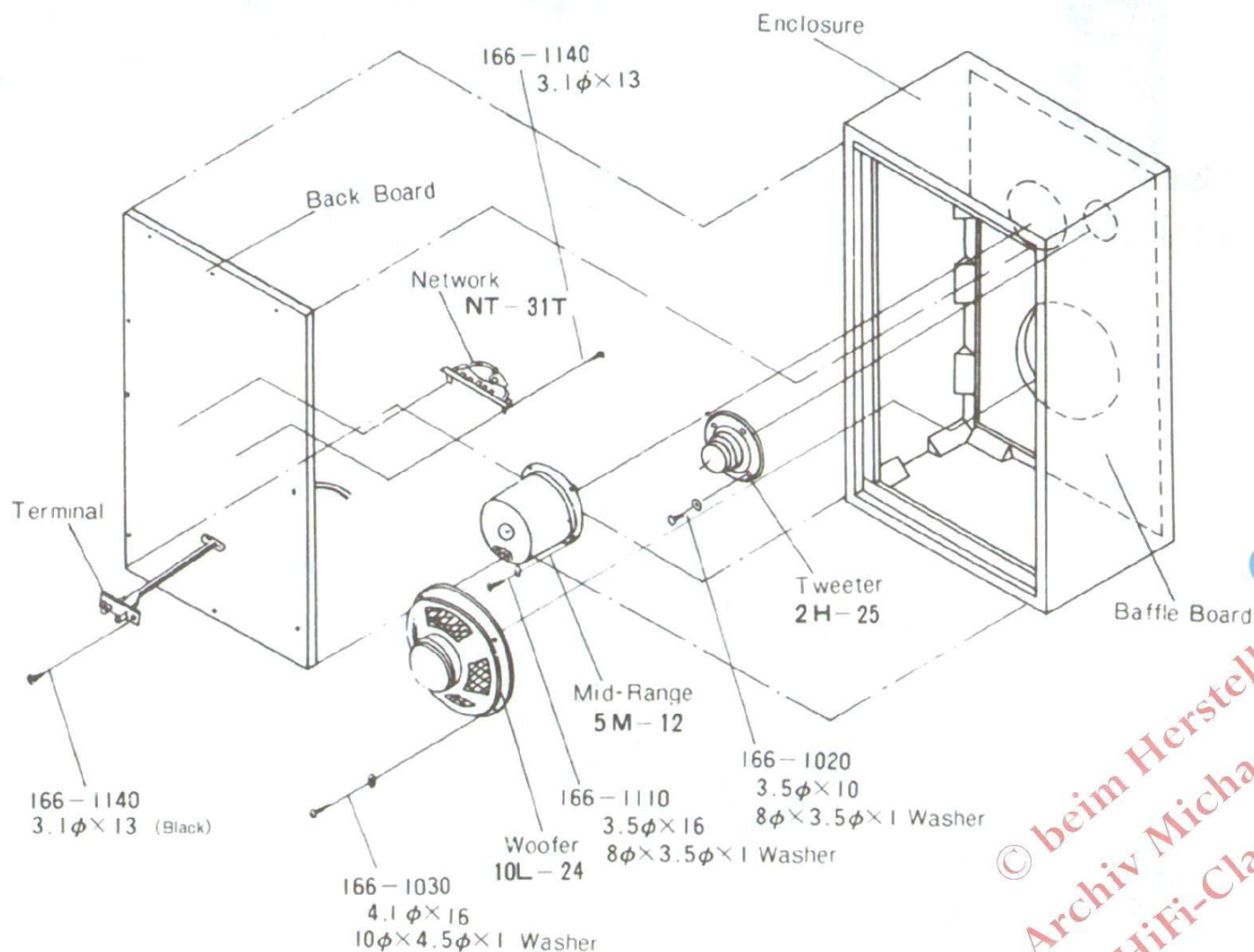
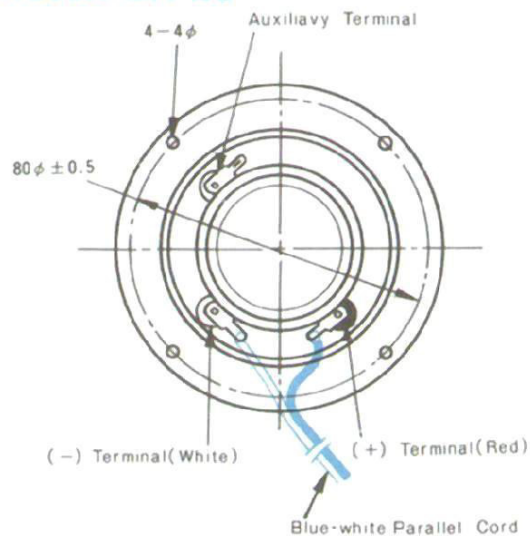
Woofer 10L-24



Mid-range 5M-12



Tweeter 2H-25



B. Mounting of speakers

1. Mount the speakers in the order of woofer, mid-range, tweeter, as illustrated in Fig. 2.
2. Each speaker shall be fixed with attached wood screws and washers. As shown in Fig. 3, the fixing is done diagonally.

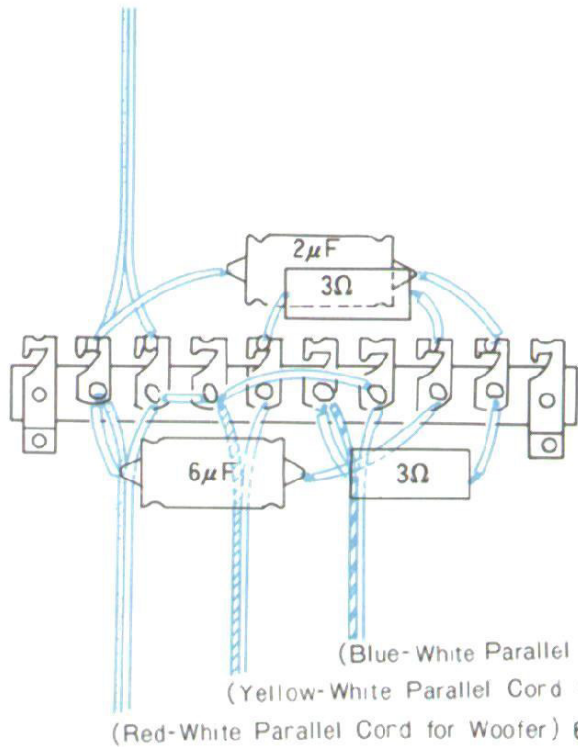
C. Wiring

Follow the process as mentioned below, watching Fig. 4:

1. Fix the terminal board provided on the rear plate with 13 wood screws of 3.1 dia.
2. Fix the attached network on the rear plate with 13 wood screws of 3.1 dia.
3. Solder the red and white parallel cords onto the respective lugs of the network mounted.
4. Wiring to the woofer, mid-range, and tweeter speakers shall be soldered after tying up their respective wires, through

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(Red-White Parallel Cord for Input terminal) 15cm

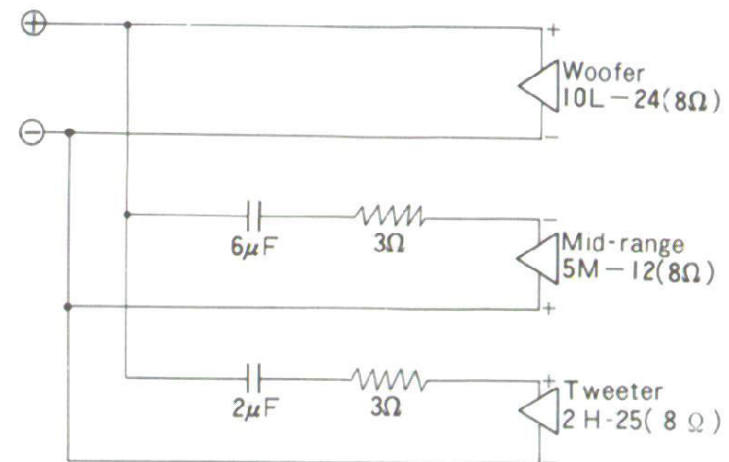


(Blue-White Parallel Cord for Tweeter) 60cm 2H-25

(Yellow-White Parallel Cord for Mid-range) 60cm 5M-12

(Red-White Parallel Cord for Woofer) 60cm 10L-24

Diagram



4

careful checking of the corresponding colors of parallel cords and the polarity according to the illustration on Fig. The white color means the cord is minus.

5. When wiring is finished, the rear plate shall be fixed firmly with wood screws.

D. Performance Test

1. The impedance of this kit is 8 Ohm. So employ an amplifier of optimum load impedance near to 8 Ohm.
2. Connect the input terminal of the assembled speaker system to the output terminal of the amplifier with a cord provided, checking the correct polarity.
3. Connect to a good quality music source, such as FM broadcast, a tape, a record, etc., make volume of the amplifier minimum, and then put on the amplifier.
4. Level up the volume gradually, and if every speaker of woofer,

mid-range, and tweeter brings out well-balanced sound, the system is working well.

5. In case no sound comes out or any troubles occur, make the amplifier off, and check the connection cords and wiring on the speaker system.

E. Notes for use

1. When using the speaker system in plural number, in the case of stereo use for example, you have to be specially nervous about conformity of the polarity. The plus-minus of the output terminal of the amplifier must correspond rightly to the plus-minus of the input terminal of the speaker system. Otherwise, the phase differs, marring the functions of the speaker system, thus greatly disturbing the stereo effect.
2. Avoid the use with the rear plate removed. In unavoidable cases of using it without rear plate, minimize the input power.

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