

CORAL

10L-60

10 inch high-compliance woofer



steller
Michael Otto

© beim Hersteller
Archiv Michael Otto

CORAL AUDIO CORPORATION

The 10L-60 is a 25cm-high compliance woofer that has been newly designed following our long experience with L-series woofers.

The new woofer unit incorporates light and strong cone paper that has been treated to create hardness by a special method developed by Coral, and a strong magnetic circuit that greatly improves resolution ability in the low-sound range. The excellent medium-range characteristics permit the easier composition of a 2-way or 3-way system. The 10L-60 may be called an ideal woofer that is fully equipped with all the characteristics required in a basic unit.

FEATURES

● Cone Paper

In order to obtain such fundamental requirements for a good woofer as a low "fo", which enables reproduction of impressive super-low sounds, and a lightweight cone paper, which permits rich clear low sounds, the cone paper is made from carefully selected high-quality pulp, and the surface is treated to provide hardness by a unique method developed by CORAL. This assures natural and top-quality sound reproduction.

● Roll Edge

CORAL has developed a new roll edge, composed of animal fibers, pulps, and resins, that forms an excellent high-compliance edge. The new roll edge successfully lowers "fo" and provides ideal following ability. In addition, a damping material is applied on the back of the edge, completely eliminating resonance and distortion.

● Long Voice Coil & Powerful Magnetic Circuit

The powerful magnetic energy of the 160mm ϕ high-performance ferrite magnet provides powerful drive force and braking force to the vibration system, permitting the system to demonstrate its full capacity. A long voice coil, which uses a lock wire that has excellent thermal resistivity, resists continuous power input and reproduces clear low sounds.

● Die Cast Frame

A thick aluminum alloy die-cast frame with sufficient strength supports the heavyweight magnetic circuit, giving it the full stability required to prevent unwanted resonance and bring about the reproduction of clear and sharp high sounds.

METHOD OF USE

The 10L-60 may be mounted either in an enclosed or bass-ref enclosure. An encloser kit (EK-55) and unholed baffle board (55B-1), which are designed for use with the 10L-60, are available from CORAL. Holes may be drilled in the baffle board to match with the tweeter to be used.

CAUTION

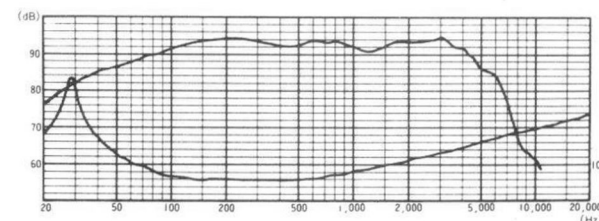
The positive wire should be connected to the red-colored terminal and the negative to the black, allowing the cone paper to move forward.

In cases where more than two speakers are used, such as for a stereophonic system, the wiring should be properly made so that the polarities of all speakers are identical.

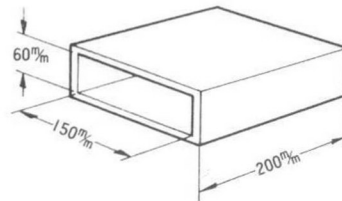
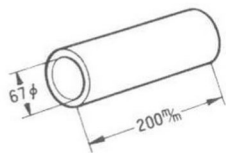
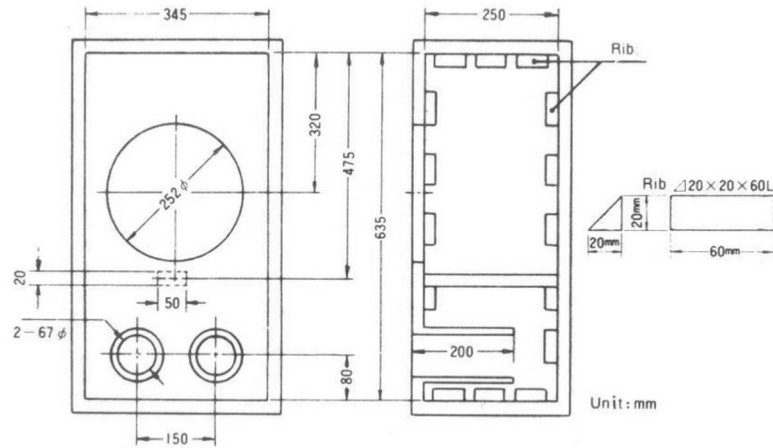
SPECIFICATIONS

Type	10 inch high-compliance woofer
Impedance	8 Ohms
Frequency response	$f_0 \sim 5,000\text{Hz}$
Lowest resonance frequency	28Hz
Rated sensitivity	94dB
Program input	60W
Crossover frequency	4,000Hz
Total magnetic flux	160,000 Maxwell
Baffle opening diameter	252mm (front mount)
Weight	4.5kg

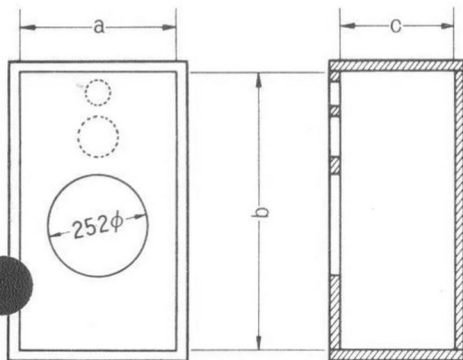
FIG. 1 Frequency response with the speaker mounted in a standard (JIS) enclosure



Enclosure dimensions for reference



Enclosed enclosure dimensions



- Any available material may be used. However, Lauan plywood board, with a thickness of more than 21mm, is most ideal.
- For the duct, two pipe ducts, each with an inside diameter of 67mm to 78mm and a length of 200mm, or one square duct, with inner dimensions of 60mm in height and 150mm in width, and an outside depth of 200mm, should be used.

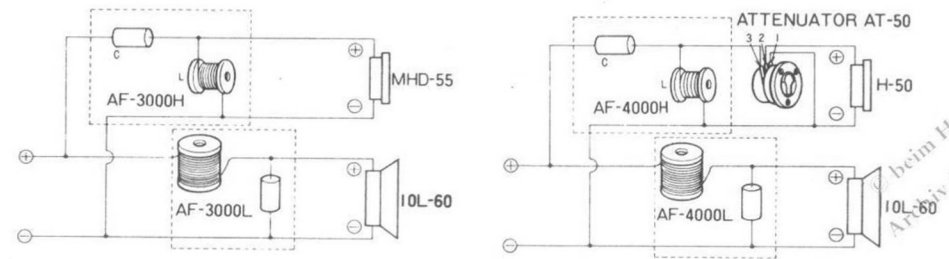
Dimensions (mm)	a	b	c	f_0 (Hz)	
Volume (l)					
55	345	635	250	60	*Approximate values when 10L-60 is used in an enclosed enclosure
75	386	678	288	50	
100	430	720	325	40	

Examples of Unit Combinations

Since the crossover frequency of the 10L-60 is lower than 4,000Hz, a tweeter that has a proper cut-off frequency should be selected. For 2-way or 3-way composition, a combination of various CORAL audio filters, according to the circuit diagrams shown below, is recommended. Use a CORAL attenuator for the level regulation of the tweeter.

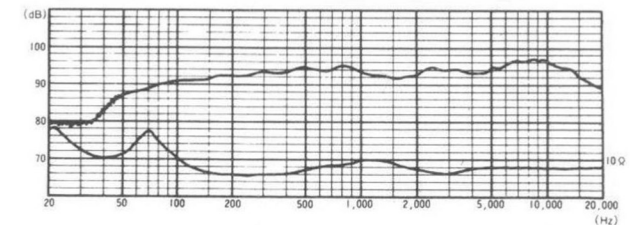
2-WAY SYSTEM

In a two-way system, the tweeter must be connected in reverse. The phase, however, must be determined by ear, since it varies, depending on the speaker layout.



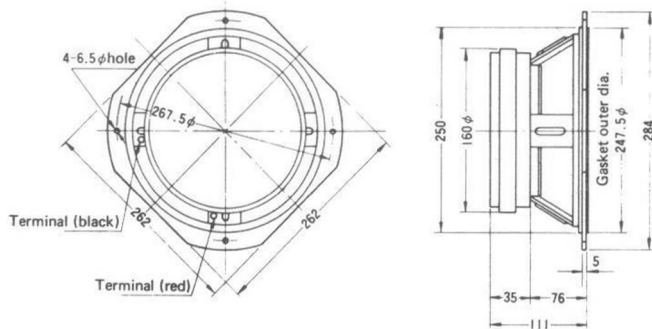
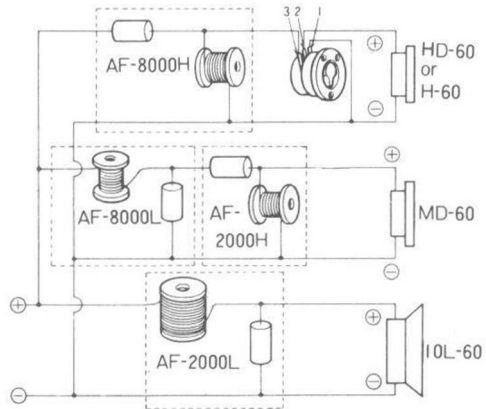
Components used:

- 10L-60 woofer
- H-50 tweeter
- AF-4000L audio filter
- AF-4000H audio filter
- AT-50 or AT-60 attenuator
- EK-55 (55l) enclosure
- 55B-1 baffle board (no holes)

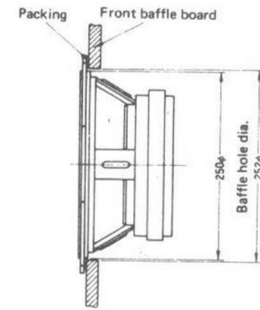


Frequency response of the system composed of the components listed at the left

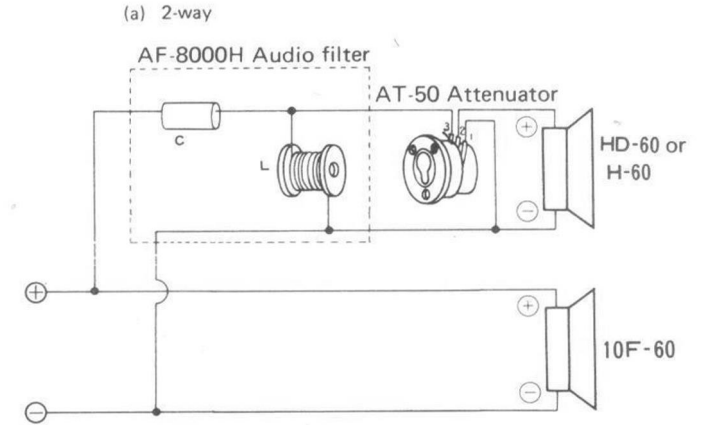
3-WAY SYSTEM



Mounting



Connections for multi-way system





CORAL AUDIO CORPORATION

1-1-6, Shibashimo, Kawaguchi-shi, Saitama-ken, Japan

© beim Hersteller
Archiv Michael Otto

© beim Hersteller
Archiv Michael Otto