

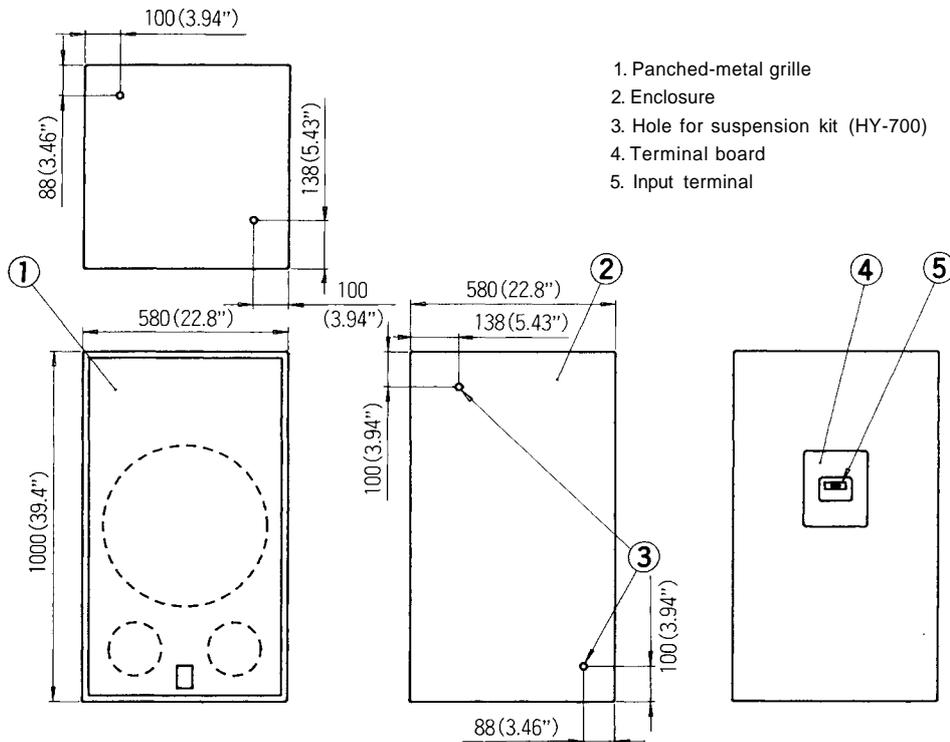
PROFESSIONAL SOUND SYSTEM



Low Frequency Enclosure

Model SB-46S

APPEARANCE

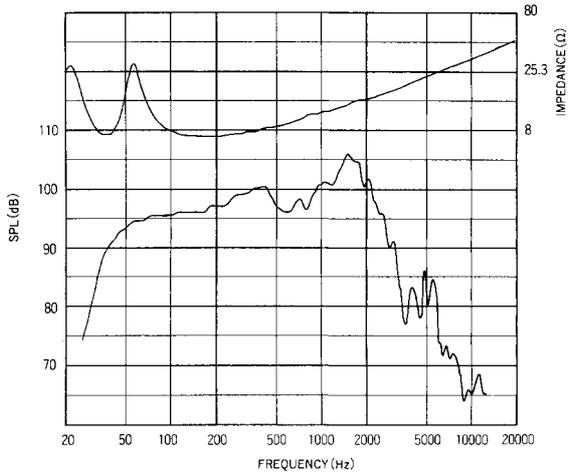


FEATURES

1. Low frequency, vented (bass-reflex) enclosure for permanent installation.
2. Creates a woofer system that reproduces low frequencies with high efficiencies when the HLS46S-8 woofer is mounted. The tuning frequency is 40 Hz. It can also be used as a sub-woofer system for ultra-low frequency output in large multi-way speaker system.
3. It is possible to suspend the SB-46S with the optional HY-700 suspension kit.
4. Large input screw terminal.
5. A protective punched-metal grille.
6. Leatherette finish.

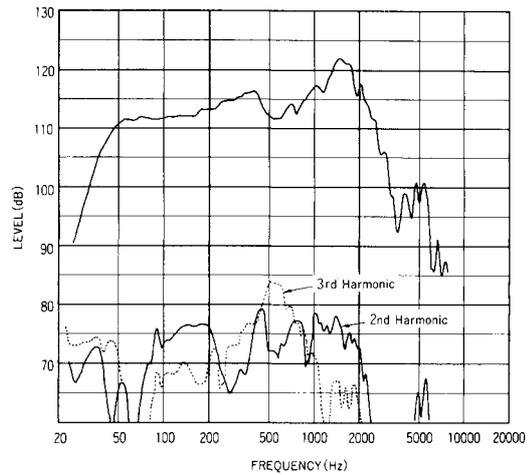
● Characteristic Diagrams (Assembled the HLS46S-8 Low-Frequency Loudspeaker)

● Frequency Response • Impedance Curve



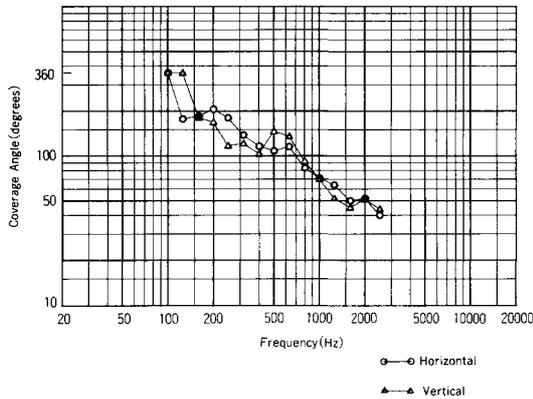
Measured in an anechoic environment at 1 watt and 1 meter.

● Harmonic Distortion

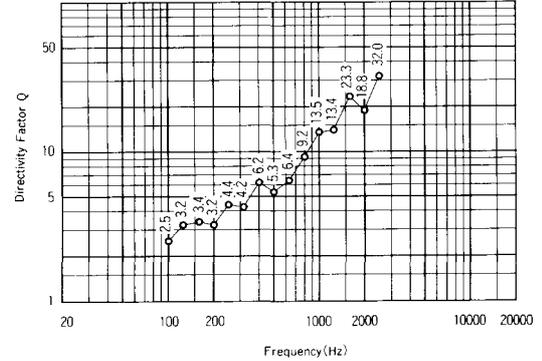


Measured at 60 watts (-10dB power), 1 meter.

● Coverage Angle vs Frequency (-6 dB)

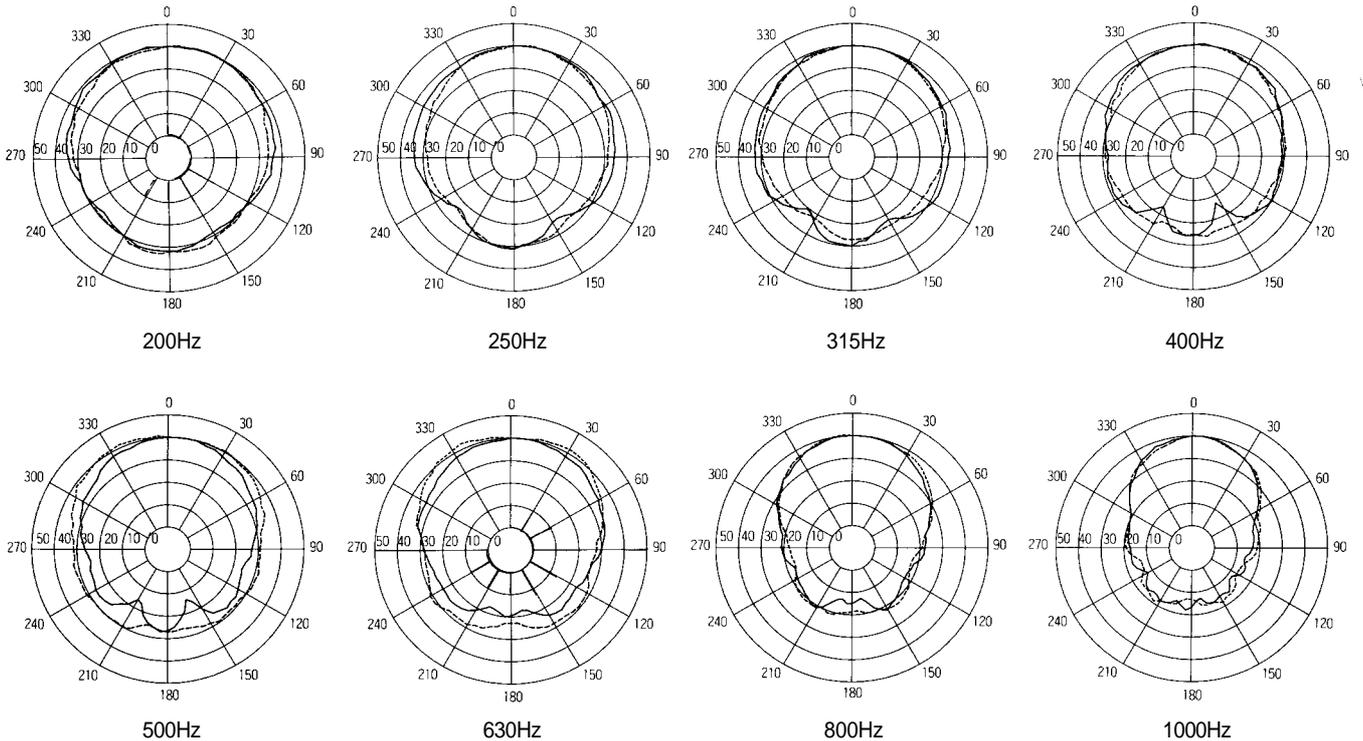


● Directivity Factor (Q) vs Frequency



● Polar Response (1/3 Octave Pink Noise)

—— Horizontal - - - - Vertical



● Specifications (Assembled the HLS46S-8 Low-Frequency Loudspeaker)

Enclosure : Vented (bass-reflex) type
Tuning Frequency : 40 Hz
Applicable Speaker Unit: HLS46S-8
Nominal Impedance: 8 ohms
Power Handling¹ : 600 W continuous pink noise
Sensitivity² : 98 dB (1W/1m)
Frequency Range : 35 Hz ~3,000 Hz
Highest Recommended Crossover Frequency : 500 Hz

Note

1. AES Standard (60 to 600 Hz)
2. Sensitivity is based on a band-limited (100 to 800 Hz) pink noise signal.
3. Specifications are subject to change without notice.

Input Terminal: 2P screw terminal (M5)
Material: Particle board
Finish : Leatherette, dark grey
Dimensions : 1,000(H) x 580(W) x 580(D) mm
39.4(H) x 22.8(W) x 22.8(D) in.

Weight

Including speaker unit : 61 kg (134 lb.)
Only enclosure : 44 kg (97 lb.)

Accessories

Rubber spacer : 4
Instruction manual : 1
Warranty card : 1

● Installation Examples

The SB-46S is a fixed enclosure for reproducing low frequencies. A high-efficient low frequency speaker system consists of the SB-46S and one HLS46S-8 woofer. It also displays high-quality characteristics when used as a sub-woofer system for ultra-low frequency output in large multi-way speaker system. When driving the speaker system with multi-amplifier operation, the time alignment and speaker system phase can be set to their optimum performance conditions by using our integrated sound processor "SAORI" as a divider.

● Mounting the Low-Frequency Loudspeaker

1. Detach the protective punched-metal grille.
2. Connect the cables to the speaker unit. Connect the red cable to the red terminal and connect the black cable to the black terminal.
3. Mount the speaker unit to the enclosure and tighten the screws to the eight locations. Use the screws provided with the speaker unit.
4. Mount the protective punched-metal grille to the enclosure and tighten the screws to the 14 locations.

● Suspending the Enclosure

Before mounting the speaker unit, mount the HY-700 suspension kit to the enclosure. For details on mounting, refer to the HY-700's instruction manual.

When suspending this speaker, make sure to suspend it after investigating structure of installation locations, and confirming that the suspending wires or belts are heavy-duty to this speaker.

● Installing the Enclosure

If necessary, attach the provided rubber spacer to the four locations at the bottom of the enclosure.

● Use Example of Sub-woofer System

The following illustration shows an example of use as a sub-woofer system in a standard speaker system GS-3806W.

● Components Configuration

Sub-woofer system

SB-46S : Low-frequency enclosure

HLS46S-8 : Low-frequency speaker unit

Standard speaker system : GS-3806W

● SAORI Setting

1. When driving the speaker system with multi-amplifier operation using SAORI, set the channel divider module for a long delay type (IS-110DL4 and IS-110DL2) as shown in the following diagram. (F1 as sub woofer system, F2 as low-frequency and F3 as high-frequency)
2. The delay value of each frequency band is determined by setting the sub-woofer system right next to standard speaker system. Adjustment may be required depending on the positioning of each unit.
3. Since the level setting value is set to standard values which are used the same type amplifier's output power for each band, it may have to be adjusted according to the location and condition of the area in which it is used.

MF	DCD1	LINK [A]				TLV	%	dB	GTH	S	OFF	dB
CFQ	OFF	F1	F2	F3	F1	F2	F3	Hz				
SLP	12L	12W	12W	24S	18W	12L						
LEV	0.00		-6.00		-14.00							
POL	R		N		N							
DLY	0.000		0.854		0.021							
HEQ	0dB		0dB		TYPE 1							

Note

CFQ : Crossover frequency of each filter

SLP : Slope characteristics of each filter

24S : 24dB/oct Bessel

18W : 18dB/oct Butterworth

12W : 12dB/oct Butterworth

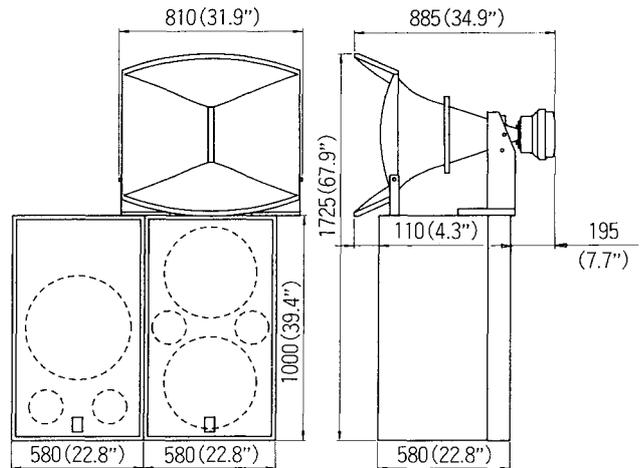
LEV : Output level of each band

POL : Polarity of each band

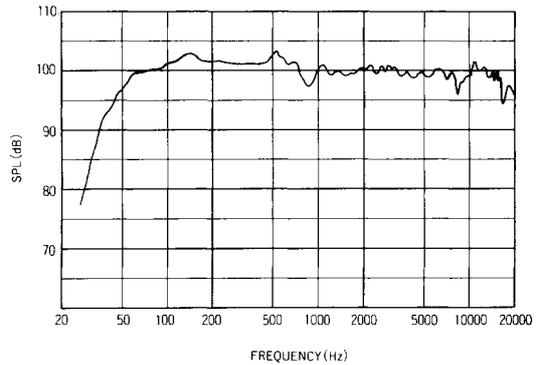
DLY : Delay value of each band

HEQ : Horn equalizer

● Appearance



● Frequency Response (Multi-Amplifier Drive Using the SAORI)



Measured at 1 watt (at 200Hz) and 2 meters.
SPL shows the converted level into 1W/1m.



TOA Corporation
KOBE, JAPAN