



BETA-10 / BETA-8

10 Inch 2 Way Hi-Fi Speaker

8 Inch 2 Way Hi-Fi Speaker



*© beim Hersteller
Archiv Michael-Otto*

This is a top-performing Hi-Fi speaker developed by CORAL AUDIO CORPORATION. The world-renowned audio know-how and all the experiences of the CORAL are reflected in this speaker. It is no wonder, therefore, that this reproducer has been widely acclaimed in audio circles all over the world.

Theoretically, dividing the audio frequency range into two or more sections and using separate speakers to reproduce the different sections improve the directionality of a speaker system. This formula also makes it possible to do full justice to the piston motion characteristics of each speaker used. The phasic distortion which tends to occur around crossover frequencies constituting the most serious factor in sound reproduction but which does not show in frequency response curves or in other electric data, increases in higher frequencies and affects other vital factors. Thus, phasic interaction results in bad transient response and adversely affects overall reproduction. As a result, "sound harsh to hear" is generated and high fidelity reproduction cannot be hoped for.

The Coral Audio Corporation has gone all out and has mobilized all the technical know-how which its engineers possess. The result of their research over a long period of time is the new "Coral Beta Series" of speakers.

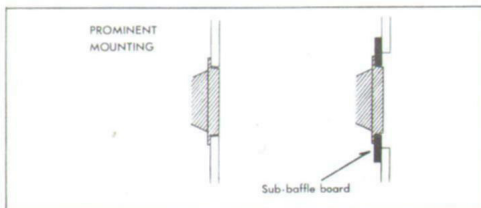
Each "Beta Series" speaker can certainly vie with any top-ranking foreign speaker used for studio monitoring purposes. The Coral Audio Corporation proudly asks studio professionals and educated audiophiles to try the new "Beta Series" reproducers in sound reproduction systems.

FEATURES

1. The "Beta Series" speakers employ the newly developed high-performance ceramic magnet, "FXD-4", in the magnetic circuit which decides driving performance. Thus, the magnetic flux of the magnet assembly of the "Beta Series" speakers is 20 per cent more powerful than conventional ceramic magnet.
2. Due to the unique free edge, the Coral "Beta Series" speakers do not cause distortion even if the speaker cone is subjected to violent vibrations. The result is rich bass.
3. In order to be free from the unevenness in thickness and density of the conventional speaker paper cone. The "Beta Series" speakers employ for this all-important part a paper which is of choice pulp, the main material of the cone, fortified by chemical fiber. Besides, the cone paper is undyed in order to prevent possible qualitative changes.
4. The whizzer which takes care of the reproduction of treble employs specially treated paper of high tension and density pulp. As a result, it reproduces silky and crisp sound. It is capable of reproducing tonal quality which is superior to many separate tweeters available on the market.
5. The directionality of treble sound which is a vital factor in stereo sound reproduction is uniform over a wide sphere due to a star-shaped diffuser incorporated.
6. The "Beta Series" speakers use a voice coil made of copper-coated aluminum wires, which combine the advantages of both copper and aluminum wires. Thus, natural sound reproduction throughout the entire range of the audio spectrum is possible.

INSTALLATION

1. Short wire: The "Beta Series" speakers are shipped out with their input terminals short-circuited in order to prevent the vibratory systems from breaking during transit. When the speakers are actually used, the short-circuiting devices must be removed.
2. Dust cover: When the "Beta Series" speakers are used where there is a considerable amount of dust around, they should be mounted in their enclosures without removing the supplied covers. The dust cover thus retained does not at all affect the performance of the speaker.
3. Enclosure: The quality of the enclosure in which a speaker is housed has a vital bearing upon sound reproduced. An enclosure constructed of such thin boards that they tend to resonate or a poorly insulated enclosure does not do justice to the speaker installed. Use an enclosure constructed of solid lauan, plywood, or chipwood boards with the thicknesses given in Enclosure Design Data or thicker ones. The enclosure should also be fully braced inside. The internal surfaces of the enclosure should be properly insulated, that is, covered with glass wool, felt, or other sound absorbent materials. The bass reflex type enclosure must have a proper cubature and a proper vent. An improper internal volume or vent causes sound distortion. If the baffle board of the enclosure is more than 20 mm thick, it is recommended that the exterior edge of the speaker opening on the baffle board be cut off to prevent spurious sound reflection. For the "Beta Series" speakers, optional "Multi-Duct Units" are available. The Multi-Duct Units will be found convenient by do-it-yourselfers or by those who are using ready-made enclosures. When a "Multi-Duct Unit" is used, a square opening should be made as indicated by dotted lines. Absorbents (such as glass wool and felt) should be attached to all inside walls of the enclosure in an undulating manner. The Saran grille used on the front of the speaker enclosure should be as much acoustically "transparent" as possible. The Saran grille should be fastened taut to the front of the speaker enclosure so that it will not vibrate.
4. Mounting: The "Beta Series" speakers employ a prominent frame. The speakers should be "flat mounted" on the baffle board. If "flat mounting" is impossible in a ready-made enclosure, make an opening on the baffle board adequately large and do the mounting by using the supplied baffle board since it is



difficult to remake the already present hole to suit the "Beta Series" speakers. If the distance between the frontal surface of the baffle board and the speaker cone should be great, "dips" might occur or spurious sound reflections might be generated. The result is impaired tonal quality.

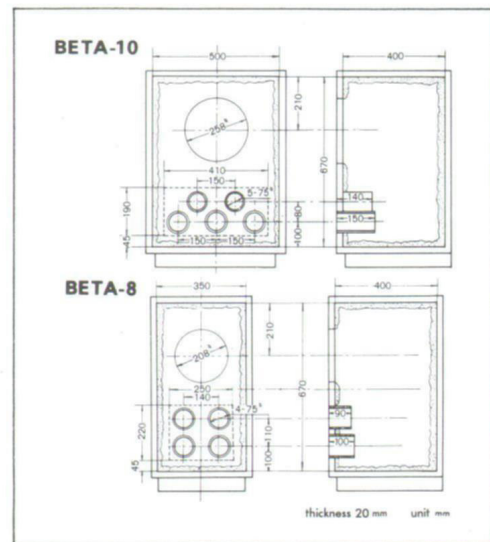
5. Polarity: The input terminals are marked ⊕ and ⊖. If the "Beta Series" speakers are used in stereo applications, utmost care should be taken to keep the left and right speakers in phase. Care should also be taken in connecting the speaker systems to the amplifier.
6. Listening room and howling: The speaker enclosure should be installed against a wall which does not resonate or vibrate. It is also important that furniture and window panes should not resonate. In highly reverberative rooms, it is recommended that rugs should be laid on the floor and that heavy drapes should be hung on the windows. If the speaker enclosures, the record player, and the amplifier are placed improperly, howling may occur, which might do damage to the speakers. Therefore, make sure that the vibrations of the speakers are not transmitted to associated equipment, especially the record player.
7. The cartridge and the amplifier which are used in the same system should be as free as possible of distortion. Especially, the amplifier should be adequately powerful so that it can handle program material peaks with ease.

REMARKS AND NOTES

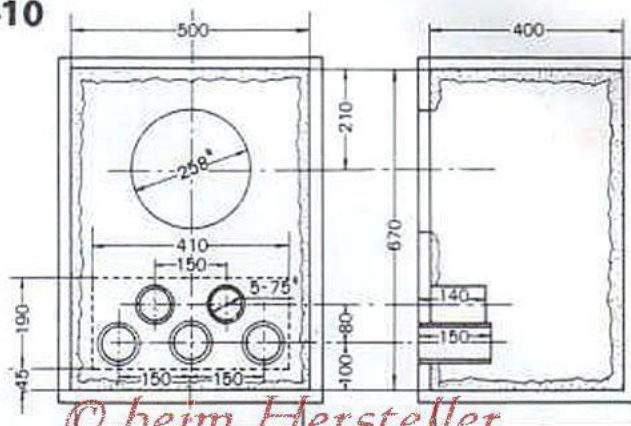
1. The "Beta Series" speakers employ the newly developed high-performance FXD-4 ceramic magnet. Minor "cracks", if any, on the magnet assembly have no effect whatsoever on the performance of the speaker. Therefore, do not let them, if any, worry you.
2. The vibratory assembly (especially, the cone and "surround") are so delicately made that the slightest deformation of this part may exert quite serious influence on overall performance. Therefore, make sure that the assembly is handled with care. Never touch it with fingers, etc.
3. When the "Beta Series" speakers are fed by an oscillator, care should be taken not to make the input too large. The bare "Beta Series" speakers should not be fed by an oscillator with lower frequency signals.
4. In "Fast Forward" operation, a tape recorder causes a large treble output, which can damage the speaker connected. Therefore, when the tape recorder is put in "Fast Forward" operation, amplifier volume should be turned down.
5. If the "Beta Series" speakers should be suspected of being defective, do not disassemble the unit but return it to the dealer.
6. CORAL AUDIO CORPORATION will not take responsibility for the performance of units which have been remodelled or any of which parts have been removed.
7. The specifications of the "Beta Series" speakers are subject to changes without notice because of improvements.

SPECIFICATIONS

	BETA-10	BETA-8
Nominal Size:	25 cm (10 inches)	20 cm (8 inches)
Frequency Response:	25 ~ 20,000 Hz	30 ~ 20,000 Hz
Resonance Frequency:	25 ~ 40 Hz	30 ~ 45 Hz
Mechanical Crossover Frequency:	6,000 Hz	6,000 Hz
Sensitivity:	103 dB	101 dB
Music Power Input:	40 Watts	35 Watts
Impedance:	8 Ohms	8 Ohms
Effective Mass of Vibrating Assembly:	16 g	8.5 g
Q _o :	0.5 (35 Hz)	0.5 (40 Hz)
Flux Density:	15,500 gauss	15,500 gauss
Total Flux:	105,500 Maxwell	90,500 Maxwell
Overall Diameter:	285 mm (11 1/8")	233 mm (9 1/4")
Mounting Diameter:	240 mm (9 3/8") 272 mm (10 3/4")	193 mm (7 5/8") 222 mm (8 3/4")
Baffle Opening Diameter:	228 mm (8 1/2") 258 mm (10 1/8")	180 mm (7 1/8") 208 mm (8 1/8")
Depth:	133 mm (5 1/8")	113 mm (4 3/8")
Net Weight:	4.6 kg (11.1 lbs)	3.3 kg (7.3 lbs)

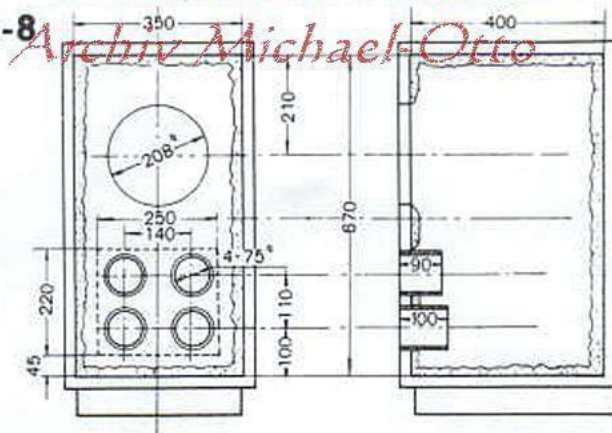


BETA-10



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BETA-8



thickness 20 mm unit mm

 **Coral.**

BETA-10 / BETA-8



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FULL RANGE SPEAKER UNIT

BETA SERIES

CORAL's own free edge, star-shaped directivity-expanding diffuser, magnetic force-increasing magnet, and other superior features comprise this epochmaking series of full range speakers.

- BETA-10** 25cm Full Range Speaker Unit
- BETA-8** 20cm Full Range Speaker Unit
- BETA-6** 16cm Full Range Speaker Unit

FLAT MARK II SERIES

Each unit of the series has the white cone paper that demonstrates outstanding linearity and an ample power capacity, permitting clear and expressive sound reproduction.

- FLAT-10 II** 25cm Full Range Speaker Unit
- FLAT-8 II** 20cm Full Range Speaker Unit
- FLAT-6 II** 16cm Full Range Speaker Unit
- FLAT-5 II** 12cm Full Range Speaker Unit

F & A SERIES

They are designed for wide range of use at economic cost. They present articulate and bright tone quality.

- 6F-1W** 16cm Full Range Speaker Unit
- 6F-1B** 16cm Full Range Speaker Unit
- 4F-1W** 10cm Full Range Speaker Unit
- 4F-1B** 10cm Full Range Speaker Unit
- 4F-1R** 10cm Full Range Speaker Unit
- 4A-70** 10cm Full Range Speaker Unit
- 4A-60** 10cm Full Range Speaker Unit



	BETA-10	BETA-8	BETA-6	FLAT-10 II	FLAT-8 II	FLAT-6 II	FLAT-5 II
Impedance	8Ω	8Ω	8Ω	8Ω	8Ω	4Ω/8Ω	4Ω/8Ω
Max input power (Music)	40W	35W	30W	55W	35W	30W	20W
Resonant frequency	32Hz	37Hz	50Hz	35Hz	40Hz	45Hz	70Hz
Frequency range	32-20,000Hz	37-20,000Hz	50-20,000Hz	35-20,000Hz	40-20,000Hz	45-20,000Hz	70-18,000Hz
SPL	97dB/W·m	95dB/W·m	93dB/W·m	96dB/W·m	95dB/W·m	92dB/W·m	91dB/W·m
Flux density	15,500gauss	15,500gauss	12,300gauss	12,000gauss	12,000gauss	11,000gauss	11,000gauss
Total flux	105,500maxwell	90,500maxwell	83,000maxwell	139,000maxwell	70,000maxwell	54,700maxwell	33,000maxwell
Weight	4.6kgs	3.3kgs	1.42kgs	2.8kgs	2.0kgs	1.4kgs	0.75kgs
Effective cone radius (a)	10.7cm	8.3cm	6.7cm	10.5cm	8.25cm	6.45cm	4.82cm
Mo	16g	8.5g	6.5g	17.5g	10.3g	6.5g	3.1g
Qo	0.5	0.5	0.36	0.5	0.5	0.52	0.55

	6F-1W	6F-1B	4F-1W	4F-1B	4F-1R	4A-70	4A-60
Impedance	4Ω/8Ω	4Ω/8Ω	8Ω/16Ω	4Ω/8Ω	4Ω/8Ω	4Ω/8Ω/16Ω	4Ω/8Ω/16Ω
Max input power (Music)	70W	70W	50W	50W	50W	40W	18W
Resonant frequency	45Hz	45Hz	70Hz	70Hz	70Hz	85Hz	80Hz
Frequency range	45-20,000Hz	45-20,000Hz	70-20,000Hz	70-20,000Hz	70-20,000Hz	85-20,000Hz	80-18,000Hz
SPL	93dB/W·m	93dB/W·m	92dB/W·m	92dB/W·m	92dB/W·m	90dB/W·m	91dB/W·m
Flux density	10,500gauss	10,500gauss	12,000gauss	12,000gauss	12,000gauss	11,000gauss	12,200gauss
Total flux	95,000maxwell	95,000maxwell	70,000maxwell	70,000maxwell	70,000maxwell	75,000maxwell	51,100maxwell
Weight	1.26kgs	1.26kgs	0.8kgs	0.8kgs	0.8kgs	1.1kgs	0.56kgs
Effective cone radius (a)	5.4cm	6.4cm	4.55cm	4.55cm	4.55cm	4.45cm	4.15cm
Mo	6.7g	6.7g	3.1g	3.1g	3.1g	2.7g	2.6g
Qo	0.42	0.42	0.37	0.37	0.37	0.42	0.34