

PROFESSIONAL SYSTEMS DIVISION

DESIGN | PERFORMANCE | SUPPORT

BOSE
Better sound through research®

Bose Corporation

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For product technical support, call: 1-800-994-BOSE
For more information on our products, visit: pro.bose.com

BOSE
Better sound through research®

ABOUT BOSE CORPORATION

Wherever quality sound is important, Bose is there. Since our founding in 1964, Bose has been dedicated to setting the standard for innovation in every area of audio technology. Over the years, our passion for excellence and strong commitment to research have earned us a reputation worldwide as one of the most respected names in sound.

CONTENTS

05 FREESPACE®

05	FreeSpace product family
06	FreeSpace 3 Series I and Series II loudspeaker
07	FreeSpace DS 16F loudspeaker
07	FreeSpace DS 16S & DS 16SE loudspeaker
08	FreeSpace DS 40F loudspeaker
08	FreeSpace DS 40SE loudspeaker
09	FreeSpace DS100F loudspeaker
09	FreeSpace DS 100SE loudspeaker
10	FreeSpace 203® loudspeaker
10	FreeSpace 360 Series II loudspeaker
11	FreeSpace DXA 2120 digital mixer/amplifier
13	FreeSpace ZA 250-LZ/190-HZ
13	FreeSpace IZA 250-LZ/190-HZ
15-17	FreeSpace product family accessories
63	FreeSpace product family quick reference guide
67	FreeSpace amplifiers quick comparison guide

19 PANARAY®

19	Panaray product family
20	Panaray 302™ A loudspeaker
20	Panaray 402® Series II loudspeaker
21	Panaray 502®A loudspeaker
21	Panaray 802® Series III loudspeaker
22	Panaray MA12 mid/high modular line array
22	Panaray MA12EX full-range modular line array
23	Panaray MB4 modular bass loudspeaker
23	Panaray 502 B bass loudspeaker
24	Panaray 310M multi-position floor monitor
24	Panaray 620M multi-position floor monitor
26-27	Panaray product family accessories
64	Panaray product family quick reference guide

29 LT

29	LT Product Family
30	LT 6400 mid/high loudspeaker
30	LT 9400 mid/high loudspeaker
31	LT 6403 full-range loudspeaker
31	LT 9403 full-range loudspeaker
32	LT MB12 modular bass loudspeaker
32	LT MB24 modular bass loudspeaker
33	LT 3202® WR high-output mid/high loudspeaker
33	LT 4402® WR high-output mid/high loudspeaker

34	LT 9402™ WR high-output mid/high loudspeaker
34	LT 9702® WR high-output mid/high loudspeaker
35	LT MB12 WR modular bass loudspeaker
35	LT MB24 WR modular bass loudspeaker
65	LT product family quick reference guide

37 CONTROLSPACE®

37	ControlSpace product family
38	ControlSpace ESP-00 Series II engineered sound processor
39	ControlSpace ESP-880 engineered sound processor
40	ControlSpace ESP-1240 engineered sound processor
40	ControlSpace ESP-4120 engineered sound processor
42	ControlSpace SP-24 sound processor
42	ControlSpace product family user controls
43	ControlSpace product family accessories
68-69	ControlSpace engineered sound processors quick comparison guide

45 ROOMMATCH®

45	RoomMatch product family
46-47	RoomMatch product family full range modules
48-49	RoomMatch product family asymmetrical array modules
51	RoomMatch RMS215 subwoofer module loudspeaker
51	RoomMatch RMS218 VLF-subwoofer module loudspeaker
52	RoomMatch Utility RMU208 small-format foreground/fill loudspeaker
53	RoomMatch product family accessories

55 POWERMATCH®

55	PowerMatch product family
57	PowerMatch product family accessories
70-71	PowerMatch amplifiers quick comparison guide

59 L1®

59	L1 product family
60	L1 Compact portable line array system
60	L1 Model 1S portable line array system
60	L1 Model II portable line array system
61	L1 product family accessories
73	L1 portable line array systems quick comparison guide

FREESPACE® 3

SERIES I & II LOUDSPEAKER

Designed to provide surface/flush-mount bass augmentation for new and existing background music systems. Features one 5.25" (133 mm) woofer that delivers deep bass down to 40 Hz without audible distortion.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
50 Hz - 230 Hz

Frequency Range (-10 dB)
40 Hz - 315 Hz

Nominal Dispersion
Omni-directional below 200 Hz

Long-Term Power Handling
70/100 V: 200 W (800 W peak) mono
Low impedance 50 W (200 W peak) per channel stereo or 100 W (400 W peak) mono

Sensitivity (SPL / 1 W @ 1 m)
Per channel: 76 dB SPL
(Mono: 79 dB SPL)

Maximum SPL @ 1 m
Per channel: 96 dB SPL
(102 dB SPL peak)
Mono: 102 dB SPL (108 dB SPL peak)

Nominal Impedance
5 Ω mono direct (transformer bypassed)

Physical

Enclosure

High-density wood composite with solid color PVC laminate

Environmental
Indoor use only

Connectors
Screw terminal

Suspension / Mounting
Wall bracket included (attached to module)

Dimensions
14.0" H x 7.5" W x 13.5" D
(356 mm x 191 mm x 342 mm)
Width, bracket attached: 8.8" (222 mm)

Net Weight
17.5 lb (7.9 kg) - with bracket

Color
Black, White, Paintable

Package Contents
1 loudspeaker

FREESPACE® DS 16F

LOUDSPEAKER



Entry-level, full-range, flush-mount loudspeaker designed for background music and speech reproduction in a wide range of installed applications. Wide, even 140° conical pattern and frequency range down to 80 Hz.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
95 Hz - 17 kHz

Frequency Range (-10 dB)
80 Hz - 19 kHz

Nominal Dispersion
140° conical

Long-Term Power Handling
16 W (64 W peak)

Sensitivity (SPL / 1 W @ 1 m)
84 dB SPL

Maximum SPL @ 1 m
96 dB SPL (102 dB SPL peak)

Nominal Impedance
8 Ω (transformer bypassed)

Physical

Enclosure
PC/ABS

Environmental
Indoor use only

Connectors

Three-terminal barrier strip. Optional accessory available for use when ceramic connector and thermal fuse are required.

Wire gauge: 18 AWG (0.8 mm) to 14 AWG (2.0 mm)

Suspension / Mounting

Three integrated quick-install mounting arms. Three mounting points at the rear of the enclosure for use with optional accessory pendant mount kit. Safety cable attachment: .35" (8.9 mm) diameter hole on junction box

Dimensions

Outer flange diameter: 9.4 (239 mm)
Depth: 6.9" (176 mm)
Ceiling hole diameter: 8.0" (203 mm)

Net Weight
4.4 lb (1.9 kg)

Color
Black, White, Paintable

Package Contents
1 loudspeaker

FREESPACE DS 16S & DS 16SE

LOUDSPEAKER



Entry-level, full-range, surface-mount loudspeakers designed for background music and speech reproduction in a wide range of installed applications. Broad 170° x 160° coverage pattern and frequency range down to 80 Hz.

The DS 16S is for indoor applications only.

The DS 16SE is for indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
95 Hz - 17 kHz

Frequency Range (-10 dB)
80 Hz - 19 kHz

Nominal Dispersion
170° H x 160° V

Long-Term Power Handling
16 W (64 W peak)

Sensitivity (SPL / 1 W @ 1 m)
84 dB SPL

Maximum SPL @ 1 m
96 dB SPL (102 dB SPL peak)

Nominal Impedance
8 Ω (transformer bypassed)

Physical

Enclosure
PC/ABS (white), polypropylene (black); textured

Environmental
DS 16S: Indoor use only
DS 16SE: Outdoor per IEC 529 IP55

Connectors

Three-terminal barrier strip integrated on included mounting bracket. Optional accessories available for use when ceramic connector and thermal fuse are required.

Wire gauge: 18 AWG (0.8 mm) to 14 AWG (2.0 mm)

Suspension / Mounting

Included bracket allows for horizontal or vertical mounting positions, each with either pitch or yaw adjustment. Hole on rear of enclosure sized for #8 or M4 self-tapping screw for use with safety chain.

Dimensions

4.9" H x 9.9" W x 4.6" D
(124 mm x 250 mm x 117 mm)
Depth with wall-mount bracket: 6.4" (161 mm)

Net Weight
4.0 lb (1.8 kg)

Color
Black, White, Paintable

Package Contents
1 loudspeaker, mounting bracket



FREESPACE® DS 40F

LOUDSPEAKER



Versatile, high-performance, full-range, flush-mount loudspeaker designed for foreground and background music and speech reproduction in a wide range of installed applications. High output and 125° conical pattern with a frequency range down to 70 Hz.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
80 Hz - 17 kHz

Frequency Range (-10 dB)
70 Hz - 19 kHz

Nominal Dispersion
125° conical

Long-Term Power Handling
40 W (160 W peak)

Sensitivity (SPL / 1 W @ 1 m)
87 dB SPL

Maximum SPL @ 1 m
103 dB SPL (109 dB SPL peak)

Nominal Impedance
8 Ω (transformer bypassed)

Physical

Enclosure
Polypropylene (front baffle),
powder-coated steel (rear enclosure)

Environmental
Indoor use only

Connectors

Three-terminal barrier strip; two-terminal barrier strip (8 ohm variant). Optional accessory available for use when ceramic connector and thermal fuse are required. Wire gauge: 18 AWG (0.8 mm) to 14 AWG (2.0 mm)

Suspension / Mounting

Three integrated quick-install mounting arms. Three mounting points at the rear of the enclosure for use with optional accessory pendant mount kit. Safety cable attachment: .35" (8.9 mm) diameter hole on junction box

Dimensions

Outer flange diameter: 11.8" (300 mm)
Depth: 6.0" (153 mm)
Ceiling hole diameter: 10.5" (267 mm)

Net Weight

8.3 lb (3.7 kg)- with transformer

Color

Black, White, Paintable

Package Contents

1 loudspeaker

FREESPACE® DS 100F

LOUDSPEAKER



Premier high-performance, extended-range, flush-mount loudspeaker designed for foreground music and speech reproduction in a wide range of installed applications. High output and wide, 160° conical pattern with a frequency range down to 60 Hz.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
75 Hz - 18 kHz

Frequency Range (-10 dB)
60 Hz - 20 kHz

Nominal Dispersion
160° conical

Long-Term Power Handling
100 W (400 W peak)

Sensitivity (SPL / 1 W @ 1 m)
85 dB SPL

Maximum SPL @ 1 m
105 dB SPL (111 dB SPL peak)

Nominal Impedance
8 Ω (transformer bypassed)

Physical

Enclosure
Polypropylene (front baffle),
powder-coated steel (rear enclosure)

Environmental
Indoor use only

Connectors

Three-terminal barrier strip. Optional accessory available for use when ceramic connector and thermal fuse are required. Wire gauge: 18 AWG (0.8 mm) to 14 AWG (2.0 mm)

Suspension / Mounting

Three integrated quick-install mounting arms. Three mounting points at the rear of the enclosure for use with optional accessory pendant mount kit. Safety cable attachment: .35" (8.9 mm) diameter hole on junction box

Dimensions

Outer flange diameter: 11.8" (299 mm)
Depth: 8.2" (210 mm)
Ceiling hole diameter: 10.5" (267 mm)

Net Weight

13.0 lb (5.9 kg)

Color

Black, White, Paintable

Package Contents

1 loudspeaker

FREESPACE DS 40SE

LOUDSPEAKER



Versatile, high-performance, full-range, surface-mount loudspeaker designed for foreground and background music and speech reproduction in a wide range of installed applications. High output and 125° x 125° coverage pattern with a frequency range down to 70 Hz.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
80 Hz - 17 kHz

Frequency Range (-10 dB)
70 Hz - 19 kHz

Nominal Dispersion
125° H x 125° V

Long-Term Power Handling
40 W (160 W peak)

Sensitivity (SPL / 1 W @ 1 m)
87 dB SPL

Maximum SPL @ 1 m
103 dB SPL (109 dB SPL peak)

Nominal Impedance
8 Ω (transformer bypassed)

Physical

Enclosure
PC/ABS, textured

Environmental
Outdoor per IEC 529 IP55

Connectors

Three-terminal barrier strip integrated on included mounting bracket. Optional accessories available for use when ceramic connector and thermal fuse are required. Wire gauge: 18 AWG (0.8 mm) to 14 AWG (2.0 mm)

Suspension / Mounting

Included bracket allows for horizontal or vertical mounting positions, each with either pitch or yaw adjustment. Insert on rear of enclosure sized for M4 x 14 mm screw for use with safety chain

Dimensions

6.3" H x 12.8" W x 6.9" D
(159 mm x 326 mm x 175 mm)

Depth with wall-mount bracket:
9.4" (238 mm)

Net Weight

8.5 lb (3.9 kg)

Color

Black, White, Paintable

Package Contents

1 loudspeaker, mounting bracket

FREESPACE DS 100SE

LOUDSPEAKER



Premier, high-performance, full-range, surface-mount loudspeaker designed for foreground music and speech reproduction in a wide range of installed applications. Features a rotatable array that delivers a 180° x 75° coverage pattern and a frequency range down to 60 Hz.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
75 Hz - 18 kHz

Frequency Range (-10 dB)
60 Hz - 20 kHz

Nominal Dispersion
180° H x 75° V

Long-Term Power Handling
100 W (400 W peak)

Sensitivity (SPL / 1 W @ 1 m)
85 dB SPL

Maximum SPL @ 1 m
105 dB SPL (111 dB SPL peak)

Nominal Impedance
8 Ω (transformer bypassed)

Physical

Enclosure
PC/ABS, textured

Environmental
Outdoor per IEC 529 IP55

Connectors

Three-terminal barrier strip integrated on included mounting bracket. Optional accessories available for use when ceramic connector and thermal fuse are required. Wire gauge: 18 AWG (0.8 mm) to 14 AWG (2.0 mm)

Suspension / Mounting

Included bracket allows for horizontal or vertical mounting positions, each with either pitch or yaw adjustment. Insert on rear of enclosure sized for M4 x 14 mm screw for use with safety chain

Dimensions

7.0" H x 15.0" W x 8.5" D
(178 mm x 381 mm x 216 mm)
Depth with wall-mount bracket:
11.0" (280 mm)

Net Weight

14.0 lb (6.4 kg)

Color

Black, White, Paintable

Package Contents

1 loudspeaker, mounting bracket

FREESPACE® 203®

LOUDSPEAKER



Full-range surface-mount loudspeaker designed for foreground music and speech reproductions. Delivers high-fidelity sound, powerful bass and proven reliability in a compact, stylish cabinet. Features 115° x 150° coverage pattern and frequency range down to 45 Hz.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
65 Hz - 14 kHz

Frequency Range (-10 dB)
45 Hz - 17 kHz

Nominal Dispersion
115° H x 150° V

Long-Term Power Handling
100 W (400 W peak)

Sensitivity (SPL / 1 W @ 1 m)
84 dB SPL

Maximum SPL @ 1 m
104 dB SPL (110 dB SPL peak)

Nominal Impedance
6 Ω

Physical

Enclosure

MDF with solid color PVC laminate

Environmental

Indoor use only

Connectors

Barrier strip screw terminal

Suspension / Mounting

Quick install wall-mount bracket and hardware included

Dimensions

7.4" H x 12.8" W x 8.3" D
(187 mm x 325 mm x 211 mm)
Depth with transformer: 9.8"
(250 mm)

Net Weight

11.0 lb (5.0 kg)

Color

Gray, White, Paintable

Package Contents

2 loudspeakers, mounting brackets

FREESPACE® DXA 2120

DIGITAL MIXER/AMPLIFIER

The Bose® FreeSpace DXA 2120 digital mixer/amplifier features a 6-in by 2-out design that provides signal processing, mixing, routing, paging and two-channel amplification for installed applications. It offers three versatile operating modes and is easily configured using the controls on the front panel. No external computer is required.

SPECIFICATIONS

Technical Summary

Amplifier Power

2 x 120 W @ 4 Ω, 2 x 100 W @ 70/100 V

Signal-to-Noise Ratio

75 dB (below rated power, A-weighted)

THD

≤0.5 % (at full rated power)

Dynamic Range

80 dB

Input Channels

6 channels

Output Channels

2 channels

Physical

Dimensions

3.5" H x 16.5" W x 13.8" D
(90 mm x 420 mm x 349 mm)

Net Weight

32 lb (14.4 kg)

FREESPACE 360 SERIES II

LOUDSPEAKER



Full-range environmental loudspeaker designed to blend with landscaping for in-ground or above-ground applications, such as shopping malls, outdoor restaurants, resorts and theme parks. Features 360° horizontal coverage and frequency range down to 60 Hz.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
70 Hz - 10 kHz

Frequency Range (-10 dB)
60 Hz - 15 kHz

Nominal Dispersion
360° H x 50° V

Long-Term Power Handling
80 W (320 W peak)

Sensitivity (SPL / 1 W @ 1 m)
87 dB SPL

Maximum SPL @ 1 m
100 dB SPL (106 dB SPL peak)

Nominal Impedance
4 Ω (transformer bypassed)

Physical

Enclosure

Glass-reinforced polypropylene, textured

Environmental

Outdoor per IEC 529 IP35

Connectors

External multi-wire cable with wire nuts included

Suspension / Mounting

Three (3) #10 (M4) holes in base
Three #10 M4 screws required

Dimensions

Diameter: 14.5" (368 mm)
Height: 14.9" (379 mm)

Net Weight

14.5 lb (6.6 kg)

Color

Green

Package Contents

1 loudspeaker





FREESPACE® ZA 250-LZ/190-HZ

ZONE AMPLIFIER

Bose® FreeSpace ZA 250-LZ and ZA 190-HZ zone amplifiers are designed to provide basic amplification and sound system expansion when using front-end signal processing from products such as the FreeSpace IZA 250-LZ / IZA 190-HZ integrated zone amplifiers, the FreeSpace 4400 business music system and ControlSpace® engineered sound processors.

SPECIFICATIONS

Technical Summary

Amplifier Power

FreeSpace ZA 250-LZ zone amplifier: 2 x 50 W @ 4 Ω, 2 x 25 W @ 8 Ω

FreeSpace ZA 190-HZ zone amplifier: 1 x 90 W @ 70/100 V

Frequency Response

FreeSpace ZA 250-LZ zone amplifier: 20 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)
FreeSpace® ZA 190-HZ zone amplifier: 60 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)

THD+N

FreeSpace ZA 250-LZ zone amplifier: ≤0.3% (at full rated power)
FreeSpace ZA 190-HZ zone amplifier: ≤1% (at full rated power)

Dynamic Range

FreeSpace ZA 250-LZ zone amplifier: 88 dB
FreeSpace ZA 190-HZ zone amplifier: 88 dB

Input Channels

1 Unbalanced

Physical

Rack Space Units

1 RU high, half rack wide

Dimensions

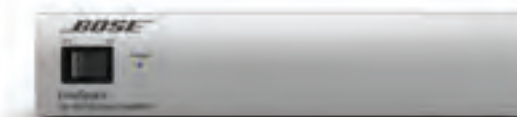
1.8" H x 8.4" W x 11.9" D
(45 mm x 214 mm x 302 mm)

Net Weight

FreeSpace ZA 250-LZ zone amplifier: 4.4 lb (2.0 kg)
FreeSpace ZA 190-HZ zone amplifier: 6.7 lb (3.0 kg)

Cooling System

Natural convection



FREESPACE IZA 250-LZ/190-HZ

INTEGRATED ZONE AMPLIFIER

For background/foreground music and paging applications, the Bose FreeSpace IZA 250-LZ and IZA 190-HZ integrated zone amplifiers are designed to deliver premium sound, provide simplified setup and easy daily operation, and offer the flexibility to expand when more loudspeakers are required. When used with FreeSpace DS 16 and DS 40 loudspeakers, even further sound optimization is possible through onboard selectable EQ presets.

SPECIFICATIONS

Technical Summary

Amplifier Power

FreeSpace IZA 250-LZ integrated zone amplifier: 2 x 50 W @ 4 Ω, 2 x 25 W @ 8 Ω

FreeSpace IZA 190-HZ integrated zone amplifier: 1 x 90 W @ 70/100 V

Frequency Response

FreeSpace IZA 250-LZ integrated zone amplifier: 40 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)
FreeSpace IZA 190-HZ integrated zone amplifier: 60 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)

THD+N

FreeSpace IZA 250-LZ integrated zone amplifier: ≤0.3% (at full rated power)
FreeSpace IZA 190-HZ integrated zone amplifier: ≤1% (at full rated power)

Dynamic Range

FreeSpace IZA 250-LZ integrated zone amplifier: 88 dB
FreeSpace IZA 190-HZ integrated zone amplifier: 88 dB

Built-in Loudspeaker EQ

Bose FreeSpace DS 16 or DS 40, No EQ

Input Channels

Line Inputs: 2 Unbalanced line
Mic/Line Inputs: 1 Balanced mic/line
Page Inputs: 1 Balanced mic
Auxiliary Input: 1 Unbalanced line

Physical

Rack Space Units

1 RU high, half rack wide

Dimensions

1.8" H x 8.4" W x 12.2" D
(45 mm x 214 mm x 310 mm)

Net Weight

FreeSpace IZA 250-LZ integrated zone amplifier: 4.8 lb (2.2 kg)
FreeSpace IZA 190-HZ integrated zone amplifier: 7.0 lb (3.2 kg)

Cooling System

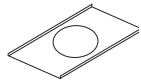
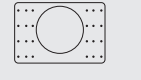



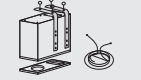
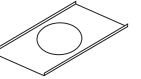









Natural convection









FREESPACE® PRODUCT FAMILY






ACCESSORIES

FreeSpace 3 system accessories		Product Code	Color	Quantity
	FS3BF flush-mount Acoustimass® module tile bridge	029854	n/a	6-pack
	FS3BF flush-mount Acoustimass module rough-in pan marks loudspeaker locations on ceiling joists	029855	n/a	6-pack
	FS3BF surface-mount kit for wall-mounting with the FS3BF only. Cover and hardware included	029829	White	Single
	FS3BF surface-mount kit for wall-mounting with the FS3BF only. Cover and hardware included	029828	Black	Single
	FS3BF pendant-mount kit for suspension in open ceilings. Cover and hardware included (for Acoustimass module only)	030100	White	Single
	FS3BF pendant-mount kit for suspension in open ceilings. Cover and hardware included (for Acoustimass module only)	030099	Black	Single
	FS3BF pendant-mount kit for suspension in open ceilings. Cover and hardware included (for Acoustimass module only)	037084	White	Single
	FS3BF pendant-mount kit for suspension in open ceilings. Cover and hardware included (for Acoustimass module only)	037083	Black	Single
	FS3BS surface-mount Acoustimass module install kit provides a bracket for ceiling installation	026623	n/a	Single
	FS3F flush-mount satellite tile bridge	029832	n/a	6-pack
	FS3F flush-mount satellite rough-in pan marks loudspeaker locations on ceiling joists	029853	n/a	6-pack
	FS3F flush-mount satellite cosmetic cover for conduit or thread-rod mounting	030098	White	Pair
	FS3F flush-mount satellite cosmetic cover for conduit or thread-rod mounting	030097	Black	Pair
FreeSpace DS 40F & 100F loudspeaker accessories		Product Code	Color	Quantity
	DS 40F & 100F tile bridge	041864	n/a	6-pack
	Adjustable tile bridge DS 40F & 100F	323205-0010	n/a	Pair
	DS 40F & 100F rough-in pan	041993	n/a	6-pack
	DS 40F & 100F pendant-mount kit	041863	White	Single
	DS 40F & 100F pendant-mount kit	041862	Black	Single

FREESPACE® PRODUCT FAMILY

ACCESSORIES CONTINUED



FreeSpace DS 40SE & 100SE loudspeaker accessories		Product Code	Color	Quantity
	DS 40SE & 100SE on-wall junction box	041866	White	6-pack
		041865	Black	6-pack
	DS 40SE & DS 100SE in-wall junction box	041868	White	6-pack
		041867	Black	6-pack
	Ceiling-mount bracket DS 40 & 100S/SE	323206-0210	White	Single
		323206-0110	Black	Single
	Pole-mounting kit - DS40SE & DS100S/SE	323208-0210	White	Single
		323208-0110	Black	Single



FreeSpace DS 16F loudspeaker accessories		Product Code	Color	Quantity
	DS 16F tile bridge	029830	n/a	6-pack
	Adjustable tile bridge DS16F	323205-0010	n/a	Pair
	DS 16F rough-in pan marks loudspeaker locations on ceiling joists	029831	n/a	6-pack
	DS 16F pendant-mounting kit for easy installation in open ceilings	030095	White	Single
		030094	Black	Single
	DS 16F retrofit kit for installation in 20 to 30cm (8 to 12 inch) holes	030096	White	6-pack

FREESPACE® PRODUCT FAMILY

ACCESSORIES CONTINUED

FreeSpace DS 16S/SE loudspeaker accessories		Product Code	Color	Quantity
	DS 16S/SE on-wall junction box	041866	White	6-pack
		041865	Black	6-pack
	DS 16S/SE in-wall junction box	041868	White	6-pack
		041867	Black	6-pack
	Ceiling-mount bracket DS 16S/SEIHG	323206-0210	White	Single
		323206-0110	Black	
	Pole-mounting kit DS 16S/SE	323208-0210	White	Single
		323208-0110	Black	

FreeSpace DXA 2120 digital mixer/amplifier accessories		Product Code	Color	Quantity
	Bose® wall-mounted user interface with a volume control that fits into a standard U.S. double-gang junction box	041966	White	Single
	Bose wall-mounted user interface with a volume control and A/B select switch that fits into a standard U.S. double-gang junction box	041967	White	Single

FreeSpace IZA 250-LZ / 190-HZ integrated zone amplifier accessories		Product Code	Color	Quantity
	FreeSpace rack-mount kit – allows one or two FreeSpace IZA or ZA zone amplifiers to be mounted into a 1 RU rack space. Comes with 2 link brackets and rack ears	353689-0410	White	Single
	Volume control with A/B switch user interface – wall-mountable plate with volume control and an A/B source select knob for remote source selection	041967	White	Single

PANARAY® 302™ A

LOUDSPEAKER



Full-range, two-way loudspeaker designed primarily for background/foreground music. It is appropriate for both indoor and outdoor applications. Its Articulated Array® design provides a wide 175° x 90° pattern to effectively cover a broad area with a single loudspeaker.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
75 Hz - 16 kHz

Frequency Range (-10 dB)
60 Hz - 19 kHz

Nominal Dispersion
175° H x 90° V
Long-Term Power Handling
100 W (400 W peak)

Sensitivity (SPL / 1 W @ 1 m)
82 dB SPL

Maximum SPL @ 1 m
102 dB SPL (108 dB SPL peak)

Nominal Impedance
6 Ω

Physical

Enclosure

Mica-reinforced structural foam, textured

Environmental

Outdoor per IEC 529 IP35D

Connectors

Screw-terminals

Suspension / Mounting

Quick install U-bracket with transformer and hardware. Provides 30° pitch when mounted vertically or 90° pitch when mounted on a horizontal surface.

Dimensions

13.4" H x 5.7" W x 12.0" D
(340 mm x 144 mm x 304 mm) - with bracket

Net Weight

13 lb (3.9 kg) - including transformer and bracket

Color

Black, White

Package Contents

2 loudspeakers, mounting brackets

PANARAY® 502® A

LOUDSPEAKER



Mid/high-frequency loudspeaker designed for indoor permanent installations that require a small form factor for aesthetic and audience sight line considerations. Its Articulated Array® design provides a wide 120° x 70° pattern to effectively cover many smaller venues with a single loudspeaker.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
150 Hz - 17 kHz

Frequency Range (-10 dB)
110 Hz - 20 kHz

Nominal Dispersion
120° H x 70° V

Long-Term Power Handling
150 W (600 W peak)

Sensitivity (SPL / 1 W @ 1 m)
90 dB SPL

Maximum SPL @ 1 m
112 dB SPL (118 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Mica-reinforced structural foam, textured

Environmental

Indoor use only

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon® connectors
Two (2) parallel-wired barrier strips

Suspension / Mounting

Four (4) 8 mm threaded inserts (back)

Dimensions

23.8" H x 5.8" W x 7.1" D
(603 mm x 146 mm x 179 mm)

Net Weight

15 lb (6.8 kg)

Color

Gray, White, Paintable

Package Contents

1 loudspeaker

PANARAY 402® SERIES II

LOUDSPEAKER



Full-range loudspeaker designed for either permanent installations or portable sound reinforcement. It is appropriate for both indoor and outdoor applications. Its Articulated Array® design provides a wide 120° x 60° pattern to effectively cover many smaller venues with a single loudspeaker.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
90 Hz - 17 kHz

Frequency Range (-10 dB)
70 Hz - 20 kHz

Nominal Dispersion
120° H x 60° V

Long-Term Power Handling
120 W (480 W peak)

Sensitivity (SPL / 1 W @ 1 m)
89 dB SPL

Maximum SPL @ 1 m
115 dB SPL (121 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Mica-reinforced structural foam, textured

Environmental

Outdoor per IEC 529 IP55

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon® connectors

Suspension / Mounting

Four (4) M8 x 1.25 inserts
(2 back, 2 bottom)

Dimensions

23.3" H x 8.2" W x 8.0" D
(592 mm x 208 mm x 202 mm)

Net Weight

15 lb (7.0 kg)

Color

Black, White

Package Contents

1 loudspeaker

PANARAY 802® SERIES III

LOUDSPEAKER



Full-range loudspeaker designed for permanent installations and portable sound reinforcement, for both indoor and outdoor applications. The Articulated Array® speaker configuration provides a wide 120° x 100° pattern to effectively cover many smaller venues with a single loudspeaker.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
60 Hz - 15 kHz

Frequency Range (-10 dB)
50 Hz - 16 kHz

Nominal Dispersion
120° H x 100° V

Long-Term Power Handling
240 W (960 W peak)

Sensitivity (SPL / 1 W @ 1 m)
91 dB SPL

Maximum SPL @ 1 m
116 dB SPL (122 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Mica-reinforced structural foam, textured

Environmental

Outdoor per IEC 529 IP55

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon® connectors

Suspension / Mounting

Four (4) M8 x 1.25 inserts
(2 back, 2 bottom)

Dimensions

13.1" H x 20.5" W x 12.9" D
(334 mm x 520 mm x 327 mm)

Net Weight

37 lb (16.8 kg)

Color

Black

Package Contents

1 loudspeaker



PANARAY® MA12

MID/HIGH MODULAR LINE ARRAY

Wide 145° horizontal coverage. Designed to provide outstanding vocal intelligibility in acoustically demanding spaces. Slim column enclosure blends with almost any décor.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
155 Hz - 12 kHz

Frequency Range (-10 dB)
100 Hz - 16 kHz

Nominal Dispersion
145° H x 20° V

Long-Term Power Handling
300 W (1200 W peak)

Sensitivity (SPL / 1 W @ 1 m)
88 dB SPL

Maximum SPL @ 1 m
113 dB SPL (119 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure
Powder-coated aluminum, black or white

Environmental
Indoor use only

Connectors
Two (2) parallel-wired NL4 Neutrik® Speakon® connectors
One (1) two-conductor barrier strip

Suspension / Mounting

Four (4) x M6 threaded inserts (back)

Dimensions
38.8" H x 4.2" W x 5.0" D
(984 mm x 105 mm x 128 mm)

Net Weight
19 lb (8.5 kg)

Color
Black, White, Paintable

Package Contents
1 loudspeaker



PANARAY® MB4

MODULAR BASS LOUDSPEAKER

Compact, low-frequency loudspeaker designed primarily to provide bass augmentation for Bose® Panaray and DS systems in small to medium-size indoor permanent installations. It can also be used as portable sound reinforcement.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
45 Hz - 310 Hz

Frequency Range (-10 dB)
35 Hz - 350 Hz

Nominal Dispersion
Omni-directional below 200 Hz

Long-Term Power Handling
200 W (800 W peak)

Sensitivity (SPL / 1 W @ 1 m)
87 dB SPL

Maximum SPL @ 1 m
110 dB SPL (116 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure

High-density wood composite with solid color PVC laminate, high-impact polypropylene end caps

Environmental

Indoor use only

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon® connectors

Suspension / Mounting

Four (4) M8 threaded inserts (2 top, 2 bottom)

Dimensions

26.7" H x 10.2" W x 18.2" D
(678 mm x 260 mm x 463 mm)

Net Weight
45 lb (20 kg)

Color
Black, White, Paintable

Package Contents
1 loudspeaker



PANARAY MA12EX

FULL-RANGE MODULAR LINE ARRAY

Articulated Array® speaker configuration provides wider 160° horizontal coverage, and weather-resistant components allow use in outdoor applications. Designed to provide outstanding vocal intelligibility in acoustically demanding spaces. Slim column enclosure blends with almost any décor.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
75 Hz - 13 kHz

Frequency Range (-10 dB)
58 Hz - 16 kHz

Nominal Dispersion
160° H x 20° V

Long-Term Power Handling
150 W (600 W peak)

Sensitivity (SPL / 1 W @ 1 m)
87 dB SPL

Maximum SPL @ 1 m
109 dB SPL (115 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure
Powder-coated aluminum, black or white

Environmental
Outdoor per IEC 529 IPX5

Connectors
Two (2) parallel-wired NL4 Neutrik® Speakon connectors
Two (2) two-conductor barrier strips

Suspension / Mounting
Six (6) x M6 threaded inserts (back)

Dimensions

38.8" H x 4.1" W x 5.5" D
(985 mm x 104 mm x 139 mm)

Net Weight
21 lb (9.4 kg)

Color
Black, White, Paintable

Package Contents
1 loudspeaker



PANARAY 502 B

BASS LOUDSPEAKER

Low-frequency loudspeaker designed for indoor permanent installations. The 502 B loudspeaker features patented Acoustimass® speaker technology to deliver non-localizable bass to 45 Hz.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
50 Hz - 140 Hz

Frequency Range (-10 dB)
45 Hz - 160 Hz

Nominal Dispersion
Omni-directional below 200 Hz

Long-Term Power Handling
450 W (1800 W peak)

Sensitivity (SPL / 1 W @ 1 m)
90 dB SPL

Maximum SPL @ 1 m
116 dB SPL (122 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Vinyl-wrapped, high-density wood composite

Environmental

Indoor use only

Connectors

Two (2) parallel-wired barrier strips

Suspension / Mounting

Eight (8) 8 mm threaded inserts (4 top, 4 bottom), 20 mm depth

Dimensions

31.0" H x 14.0" W x 15.5" D
(787 mm x 356 mm x 394 mm)

Net Weight
85 lb (38.6 kg)

Color
Gray, White, Paintable

Package Contents
1 loudspeaker



PANARAY® 310M

MULTI-POSITION FLOOR MONITOR



Articulated Array® speaker configuration provides 120° x 60° coverage. Flexible placement options and unobtrusive styling allow for a variety of professional applications.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
70 Hz - 16 kHz

Frequency Range (-10 dB)
55 Hz - 19 kHz

Nominal Dispersion
60° H x 120° V

Long-Term Power Handling
100 W (400 W peak)

Sensitivity (SPL / 1 W @ 1 m)
91 dB SPL

Maximum SPL @ 1 m
111 dB SPL (117 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Molded textured polyethylene material

Environmental

Indoor use only

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon® connectors

Dimensions

12.5" H x 14.2" W x 8.3" D
(318 mm x 361 mm x 211 mm)

Net Weight

14 lb (6 kg)

Color

Black

Package Contents

1 loudspeaker

PANARAY 620M

MULTI-POSITION FLOOR MONITOR



Articulated Array® speaker configuration provides 120° x 40° coverage. Flexible placement options and unobtrusive styling allow for a variety of professional applications.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
70 Hz - 16 kHz

Frequency Range (-10 dB)
55 Hz - 18 kHz

Nominal Dispersion
40° H x 120° V

Long-Term Power Handling
200 W (800 W peak)

Sensitivity (SPL / 1 W @ 1 m)
90 dB SPL

Maximum SPL @ 1 m
113 dB SPL (119 dB SPL peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Molded textured polyethylene material

Environmental

Indoor use only

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon connectors

Dimensions

12.5" H x 20.6" W x 10.5" D
(318 mm x 523 mm x 266 mm)

Net Weight

22 lb (10 kg)

Color

Black





Package Contents






1 loudspeaker







PANARAY® PRODUCT FAMILY

ACCESSORIES

Panaray 402® series II loudspeaker accessories		Product Code	Color	Quantity
	TK-402 transit kit with portable grilles.	027566	Black	Single
	SB-4 suspension bracket	027068	White	Single
		027066	Black	Single
	WBP-4 bi-pivot wall bracket	027067	White	Single
		027065	Black	Single
	SS-10 speaker stand with nylon bag and mounting plate.	027343	Black	Single


Panaray 502® A loudspeaker accessories		Product Code	Color	Quantity
	CSB-5A suspension bracket	035103	White	Single
		035674	Grey	Single
	WBP-5 bi-pivot wall bracket	023955	White	Single
		035673	Grey	Single
	WCB-5 U-bracket	035104	White	Single
		035675	Grey	Single
	PSA-5 adapter for use with SS-10 speaker stand	036103	Black	Single
	SS-10 speaker stand with nylon bag and mounting plate (requires PSA-5 adapter)	027343	Black	Single

Panaray 802® series III loudspeaker accessories		Product Code	Color	Quantity
	SB-8 suspension bracket	027062	Black	Single
	WBP-8 bi-pivot wall bracket	027061	Black	Single
	SB-82 suspension bracket for stacked pairs of 802 loudspeakers.	027063	Black	Single
	SS-10 speaker stand with nylon bag and mounting plate.	027343	Black	Single

PANARAY® PRODUCT FAMILY

ACCESSORIES CONTINUED

Panaray MAI2 & MAI2EX modular line array loudspeaker accessories		Product Code	Color	Quantity
	WB-MAI2 wall bracket with 0-10° of pitch	028334	White	Single
		028333	Black	Single
	CB-MAI2 coupling bracket MAI2 only	028338	White	Single
		028337	Black	Single
	PSA-12 adapter for use with SS-10 speaker stand	029229	Black	Single
	CVT-MAI2 70V / 100V transformer with 19W, 38W, 75W and 150W tap settings. Use (I) CVT-MAI2 for single or stacked MAI2 only	040191	White	Single
		040190	Black	Single
	SS-10 speaker stand with nylon bag and mounting plate	027343	Black	Single
	WB-MAI2/MAI2EX pitch only bracket	318418-0200	White	Single
		318418-0100	Black	Single
	WMB2-MAI2/MAI2EX pitch lock upper bracket	318	White	Single
		318337-0100	Black	Single
	WBM-MAI2/MAI2EX bi-pivot bracket	318338-0200	White	Single
		318338-0100	Black	Single
	MAI2EX coupling bracket MAI2EX only	317088-0200	White	Single
		317088-0100	Black	Single
	MAI2EX 70/100V transformer for single or stacked MAI2EX only	315338-0200	White	Single
		315338-0100	Black	Single

Panaray MB4 loudspeaker accessories		Product Code	Color	Quantity
	MB4 wall bracket U-bracket for wall mounting.	027057	White	Single
		027056	Black	Single

Panaray 502® B loudspeaker accessories		Product Code	Color	Quantity
	CSB-5B suspension bracket	006443	Black	Single



LT PRODUCT FAMILY

The LT loudspeaker family delivers high SPL and a choice of dispersion patterns to meet the unique demands of medium and large venues worldwide. These loudspeakers are designed to meet the aesthetic requirements of many different venues

and facilities. As a result, LT loudspeakers deliver the acoustic performance and visual appeal you need to exceed customers expectations in a variety of applications.

	Restaurants Nightclubs	Hospitality	Houses of Worship	Education	Large Venues	Special Events	Theme Parks
LT 6400	✓		✓	✓	✓	✓	✓
LT 9400	✓		✓	✓	✓	✓	✓
LT 6403	✓	✓	✓	✓	✓	✓	✓
LT 9403	✓	✓	✓	✓	✓	✓	✓
LT MB12	✓	✓	✓	✓	✓	✓	✓
LT MB24	✓	✓	✓	✓	✓	✓	✓
LT 3202® WR					✓	✓	✓
LT 4402® WR			✓		✓	✓	✓
LT 9402™ WR			✓		✓	✓	✓
LT 9702® WR			✓		✓	✓	✓
LT MB12 WR	✓	✓	✓		✓	✓	✓
LT MB24 WR	✓	✓	✓		✓	✓	✓

LT 6400

MID/HIGH LOUDSPEAKER



Medium-format waveguide and 60° x 40° pattern designed for downfill applications with LT Coherent Zone arrays in medium to large permanent installations, or as the primary reinforcement source along with MB low-frequency loudspeakers in smaller arrays and venues.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
190 Hz - 16 kHz

Frequency Range (-10 dB)
170 Hz - 18 kHz

Nominal Dispersion
60° H x 40° V

Sensitivity (SPL / 1 W @ 1 m)
105 dB SPL

Maximum SPL @ 1 m
125 dB SPL (131 dB SPL peak)

Long-Term Power Handling
100 W (400 W peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Baltic birch plywood, 11-ply, 13 mm

Environmental
Indoor use only

Connectors
Two (2) parallel-wired NL4 Neutrik®
Speakon® connectors

Suspension / Mounting
Sixteen (16) points SAE 3/8" - 16
threaded inserts (4 each: top,
bottom, sides), steel

Dimensions
25.2" H x 24.1" W x 22.6" D
(640 mm x 612 mm x 574 mm)

Net Weight
82 lb (37.2 kg)

Color
Black, White, Paintable
(available by special order)

Package Contents
1 loudspeaker

LT 6403

FULL-RANGE LOUDSPEAKER



Medium-format waveguide and 60° x 40° pattern designed as the primary reinforcement source for smaller venues, or for use with other LT loudspeakers to form Coherent Zone arrays in medium to large venues.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
50 Hz - 16 kHz

Frequency Range (-10 dB)
42 Hz - 18 kHz

Nominal Dispersion
60° H x 40° V

Sensitivity (SPL / 1 W @ 1 m)
96 dB SPL

Maximum SPL @ 1 m
123 dB SPL (129 dB SPL peak)

Long-Term Power Handling
500 W (2000 W peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Baltic birch plywood, 13-ply, 18 mm

Environmental
Indoor use only

Connectors
Two (2) parallel-wired NL4 Neutrik®
Speakon® connectors

Suspension / Mounting
Sixteen (16) points SAE 3/8" - 16
threaded inserts (4 each: top,
bottom, sides), steel

Dimensions
34.4" H x 24.1" W x 22.6" D
(873 mm x 612 mm x 575 mm)

Net Weight
148 lb (67.1 kg)

Color
Black, White, Paintable
(available by special order)

Package Contents
1 loudspeaker

LT 9400

MID/HIGH LOUDSPEAKER



Medium-format waveguide and 90° x 40° pattern designed for downfill applications with LT Coherent Zone arrays in medium to large permanent installations, or as the primary reinforcement source along with MB low-frequency loudspeakers in smaller arrays and venues.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
190 Hz - 16 kHz

Frequency Range (-10 dB)
170 Hz - 18 kHz

Nominal Dispersion
90° H x 40° V

Sensitivity (SPL / 1 W @ 1 m)
104 dB SPL

Maximum SPL @ 1 m
124 dB SPL (130 dB SPL peak)

Long-Term Power Handling
100 W (400 W peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Baltic birch plywood, 11-ply, 13 mm

Environmental
Indoor use only

Connectors
Two (2) parallel-wired NL4 Neutrik®
Speakon connectors

Suspension / Mounting
Sixteen (16) points SAE 3/8" - 16
threaded inserts (4 each: top,
bottom, sides), steel

Dimensions
25.2" H x 24.1" W x 22.6" D
(640 mm x 612 mm x 574 mm)

Net Weight
82 lb (37.2 kg)

Color
Black, White, Paintable
(available by special order)

Package Contents
1 loudspeaker

LT 9403

FULL-RANGE LOUDSPEAKER



Medium-format waveguide and 90° x 40° pattern designed as the primary reinforcement source for smaller venues, or for use with other LT loudspeakers to form Coherent Zone arrays in medium to large venues.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
50 Hz - 16 kHz

Frequency Range (-10 dB)
42 Hz - 18 kHz

Nominal Dispersion
90° H x 40° V

Sensitivity (SPL / 1 W @ 1 m)
95 dB SPL

Maximum SPL @ 1 m
122 dB SPL (128 dB SPL peak)

Long-Term Power Handling
500 W (2000 W peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Baltic birch plywood, 13-ply, 18 mm

Environmental
Indoor use only

Connectors
Two (2) parallel-wired NL4 Neutrik®
Speakon connectors

Suspension / Mounting
Sixteen (16) points SAE 3/8" - 16
threaded inserts (4 each: top,
bottom, sides), steel

Dimensions
34.4" H x 24.1" W x 22.6" D
(873 mm x 612 mm x 575 mm)

Net Weight
142 lb (64.4 kg)

Color
Black, White, Paintable
(available by special order)

Package Contents
1 loudspeaker

LT MB12

MODULAR BASS LOUDSPEAKER



Compact 1 x 12" (305 mm) configuration designed to provide bass augmentation for Bose® LT arrays and other subwoofer applications. Allows minimal-height arrays when used with LT mid/high loudspeakers.

MB12 for indoor applications only.

MB12 WR for indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
40 Hz - 280 Hz

Frequency Range (-10 dB)
36 Hz - 290 Hz

Nominal Dispersion
Omni-directional below 200 Hz

Sensitivity (SPL / 1 W @ 1 m)
91 dB SPL

Maximum SPL @ 1 m
117 dB SPL (123 dB SPL peak)

Long-Term Power Handling
400 W (1600 W peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Baltic birch plywood, 13-ply, 18 mm (Exterior grade for MB12 WR)

Environmental

MB12: Indoor use only
MB12 WR: Outdoor per IEC 529 IPX5

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon® connectors

Suspension / Mounting

Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), steel (stainless steel for MB12 WR)

Dimensions

14.7" H x 20.0" W x 25.4" D (374 mm x 508 mm x 646 mm)

Net Weight

78 lb (35.4 kg)

Color

Black, White, Paintable (MB12 WR available in Black only)

Package Contents

1 loudspeaker

LT MB24

MODULAR BASS LOUDSPEAKER



Compact 2 x 12" (305 mm) configuration designed to provide bass augmentation for Bose® LT arrays and other subwoofer applications. Allows minimal-height arrays when used with LT mid/high loudspeakers.

MB24 for indoor applications only.

MB24 WR for indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
40 Hz - 280 Hz

Frequency Range (-10 dB)
36 Hz - 290 Hz

Nominal Dispersion
Omni-directional below 200 Hz

Sensitivity (SPL / 1 W @ 1 m)
94 dB SPL

Maximum SPL @ 1 m
123 dB SPL (129 dB SPL peak)

Long-Term Power Handling
800 W (3200 W peak)

Nominal Impedance
4 Ω

Physical

Enclosure

Baltic birch plywood, 13-ply, 18 mm (Exterior grade for MB24 WR)

Environmental

MB24: Indoor use only
MB24 WR: Outdoor per IEC 529 IPX5

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon connectors

Suspension / Mounting

Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), steel (stainless steel for MB24 WR)

Dimensions

28.1" H x 20.0" W x 25.4" D (713 mm x 508 mm x 646 mm)

Net Weight

142 lb (64.4 kg)

Color

Black, White, Paintable (MB24 WR available in Black only)

Package Contents

1 loudspeaker

LT 3202® WR

HIGH-OUTPUT MID/HIGH LOUDSPEAKER



Large-format waveguide and narrow 30° x 20° pattern designed for use with other LT loudspeakers to form Coherent Zone arrays in medium to large permanent installations requiring precise coverage and high intelligibility.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
220 Hz - 16 kHz

Frequency Range (-10 dB)
150 Hz - 18 kHz

Nominal Dispersion
30° H x 20° V

Sensitivity (SPL / 1 W @ 1 m)
110 dB SPL

Maximum SPL @ 1 m
134 dB SPL (140 dB SPL peak)

Long-Term Power Handling
280 W (1120 W peak)

Nominal Impedance
16 Ω

Physical

Enclosure

Exterior-grade Baltic birch plywood, 11-ply, 15 mm

Environmental

Outdoor per IEC 529 IPX5

Connectors

Two (2) parallel-wired NL8 Neutrik® Speakon® connectors

Suspension / Mounting

Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), stainless steel

Dimensions

42.2" H x 22.5" W x 39.2" D (1072 mm x 573 mm x 997 mm)

Net Weight

195 lb (88.4 kg)

Color

Black, Paintable

Package Contents

1 loudspeaker

LT 4402® WR

HIGH-OUTPUT MID/HIGH LOUDSPEAKER



Large-format waveguide and narrow 40° x 40° pattern designed for use with other LT loudspeakers to form Coherent Zone arrays in medium to large permanent installations requiring precise coverage and high intelligibility.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
180 Hz - 16 kHz

Frequency Range (-10 dB)
150 Hz - 18 kHz

Nominal Dispersion
40° H x 40° V

Sensitivity (SPL / 1 W @ 1 m)
108 dB SPL

Maximum SPL @ 1 m
129 dB SPL (135 dB SPL peak)

Long-Term Power Handling
140 W (560 W peak)

Nominal Impedance
8 Ω

Physical

Enclosure

Exterior-grade Baltic birch plywood, 11-ply, 15 mm

Environmental

Outdoor per IEC 529 IPX5

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon connectors

Suspension / Mounting

Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), stainless steel

Dimensions

34.0" H x 18.5" W x 27.3" D (864 mm x 471 mm x 693 mm)

Net Weight

112 lb (50.6 kg)

Color

Black, Paintable

Package Contents

1 loudspeaker

LT 9402™ WR

HIGH-OUTPUT MID/HIGH LOUDSPEAKER



Large-format waveguide and 90° x 40° pattern designed for use with other LT loudspeakers to form Coherent Zone arrays in medium to large permanent installations requiring precise coverage and high intelligibility.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary
Frequency Response (+/-3 dB)
 180 Hz - 16 kHz
Frequency Range (-10 dB)
 150 Hz - 18 kHz
Nominal Dispersion
 90° H x 40° V
Sensitivity (SPL / 1 W @ 1 m)
 106 dB SPL
Maximum SPL @ 1 m
 127 dB SPL (133 dB SPL peak)
Long-Term Power Handling
 140 W (560 W peak)
Nominal Impedance
 8 Ω

Physical

Enclosure
 Exterior-grade Baltic birch plywood, 11-ply, 15 mm
Environmental
 Outdoor per IEC 529 IPX5
Connectors
 Two (2) parallel-wired NL4 Neutrik® Speakon® connectors
Suspension / Mounting
 Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), stainless steel
Dimensions
 34.6" H x 22.5" W x 27.1" D
 (879 mm x 572 mm x 688 mm)
Net Weight
 114 lb (51.6 kg)
Color
 Black, Paintable
Package Contents
 1 loudspeaker

LT 9702® WR

HIGH-OUTPUT MID/HIGH LOUDSPEAKER



Large-format waveguide and 90° x 70° pattern designed for use with other LT loudspeakers to form Coherent Zone arrays in medium to large permanent installations requiring precise coverage and high intelligibility.

For indoor and outdoor applications.

SPECIFICATIONS

Technical Summary
Frequency Response (+/-3 dB)
 220 Hz - 16 kHz
Frequency Range (-10 dB)
 170 Hz - 18 kHz
Nominal Dispersion
 90° H x 70° V
Sensitivity (SPL / 1 W @ 1 m)
 105 dB SPL
Maximum SPL @ 1 m
 126 dB SPL (132 dB SPL peak)
Long-Term Power Handling
 140 W (560 W peak)
Nominal Impedance
 8 Ω

Physical

Enclosure
 Exterior-grade Baltic birch plywood, 11-ply, 15 mm
Environmental
 Outdoor per IEC 529 IPX5
Connectors
 Two (2) parallel-wired NL4 Neutrik® Speakon connectors
Suspension / Mounting
 Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), stainless steel
Dimensions
 34.6" H x 22.5" W x 17.8" D
 (879 mm x 572 mm x 451 mm)
Net Weight
 93 lb (42.3 kg)
Color
 Black, Paintable
Package Contents
 1 loudspeaker

LT MB12 WR

MODULAR BASS LOUDSPEAKER



Compact 1 x 12" (305 mm) configuration designed to provide bass augmentation for Bose LT arrays and other subwoofer applications. Allows minimal-height arrays when used with LT mid/high loudspeakers.

MB12 for indoor applications only.

MB12 WR for indoor and outdoor applications.

SPECIFICATIONS

Technical Summary
Frequency Response (+/-3 dB)
 40 Hz - 280 Hz
Frequency Range (-10 dB)
 36 Hz - 290 Hz
Nominal Dispersion
 Omni-directional below 200 Hz
Sensitivity (SPL / 1 W @ 1 m)
 91 dB SPL
Maximum SPL @ 1 m
 117 dB SPL (123 dB SPL peak)
Long-Term Power Handling
 400 W (1600 W peak)
Nominal Impedance
 8 Ω

Physical

Enclosure
 Baltic birch plywood, 13-ply, 18 mm (Exterior grade for MB12 WR)
Environmental
 MB12: Indoor use only
 MB12 WR: Outdoor per IEC 529 IPX5
Connectors
 Two (2) parallel-wired NL4 Neutrik® Speakon connectors
Suspension / Mounting
 Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), steel (stainless steel for MB12 WR)
Dimensions
 14.7" H x 20.0" W x 25.4" D
 (374 mm x 508 mm x 646 mm)
Net Weight
 78 lb (35.4 kg)
Color
 Black, White, Paintable (MB12 WR available in Black only)
Package Contents
 1 loudspeaker

LT MB24 WR

MODULAR BASS LOUDSPEAKER



Compact 2 x 12" (305 mm) configuration designed to provide bass augmentation for Bose LT arrays and other subwoofer applications. Allows minimal-height arrays when used with LT mid/high loudspeakers.

MB24 for indoor applications only.

MB24 WR for indoor and outdoor applications.

SPECIFICATIONS

Technical Summary
Frequency Response (+/-3 dB)
 40 Hz - 280 Hz
Frequency Range (-10 dB)
 36 Hz - 290 Hz
Nominal Dispersion
 Omni-directional below 200 Hz
Sensitivity (SPL / 1 W @ 1 m)
 94 dB SPL
Maximum SPL @ 1 m
 123 dB SPL (129 dB SPL peak)
Long-Term Power Handling
 800 W (3200 W peak)
Nominal Impedance
 4 Ω

Physical

Enclosure
 Baltic birch plywood, 13-ply, 18 mm (Exterior grade for MB24 WR)
Environmental
 MB24: Indoor use only
 MB24 WR: Outdoor per IEC 529 IPX5
Connectors
 Two (2) parallel-wired NL4 Neutrik® Speakon connectors
Suspension / Mounting
 Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), steel (stainless steel for MB24 WR)
Dimensions
 28.1" H x 20.0" W x 25.4" D
 (713 mm x 508 mm x 646 mm)
Net Weight
 142 lb (64.4 kg)
Color
 Black, White, Paintable (MB24 WR available in Black only)
Package Contents
 1 loudspeaker



CONTROLSPACE® PRODUCT FAMILY

The Bose® line of ControlSpace ESP engineered sound processors offers advanced signal processing that meets today's strict requirements for low-latency, high-quality digital conversion, and low-noise/high dynamic range audio applications. With the option of choosing between three single-rack-space fixed analog I/O models or one flexible card-frame model that can be customized with up to 64 analog or digital audio channels, ControlSpace ESP processors provide a solution for nearly any project.

Bose ESP products offer multiple network audio options with Dante™, AVB and CobraNet® (CobraNet for ControlSpace ESP-00 II only) expansion cards for routing audio between Bose ESP processors, PowerMatch® amplifiers, and third-party products. ESPLink connectivity, available across all ESP processor models, provides a convenient 8-channel bus for distributing digital audio to same-rack PowerMatch amplifiers.

All ControlSpace ESP products leverage an open-architecture DSP platform with a library of audio signal processing algorithms; all enabled using Bose ControlSpace Designer™ software.

ControlSpace Designer software is used to configure both signal processing and control capabilities of ControlSpace ESP processors, as well as applying firmware updates and upgrades that enhance and extend the capabilities of ControlSpace ESP processors. ControlSpace Designer software makes it easy to design, configure and control a complete system comprised of Bose Engineered Sound processors, PowerMatch amplifiers and a variety of Bose user controls, using an intuitive drag and drop interface — without any time-consuming programming or scripting.

All ControlSpace ESP processors have built-in serial (RS-232 or Ethernet) and general-purpose I/O connectivity, allowing external customization and integration with industry-standard control systems. Three elegant Bose wall-mounted user interfaces — the CC-64, CC-16 and CC-4 control centers — can be used to control any Bose networkable device.



CONTROLSPACE® ESP-00 SERIES II

ENGINEERED SOUND PROCESSOR

The Bose® ControlSpace ESP-00 Series II engineered sound processor offers high-quality signal processing through a flexible I/O audio platform. Up to eight mixed analog and digital audio expansion cards (input and/or output) can be installed to create customized audio systems. Onboard connectivity includes Ethernet, RS-232, expandable GPIO, and support for elegant Bose control centers and volume controls.

SPECIFICATIONS

Technical Summary

Signal Processor

Four 32-bit floating-point digital signal processors, 200 MHz

Sample Rate

48 kHz

PC Configuration Software

ControlSpace Designer™ software

Expansion Slots

8 analog/digital audio, 2 GPIO (1 occupied)

Audio Channel Capacity

64 (bi-directional, digital and/or analog)

Physical

Dimensions

3.5" H x 19.0" W x 13.0" D
(88 mm x 483 mm x 331 mm)

Net Weight

10.8 lb (4.9 kg)

CONTROLSPACE® ESP-880

ENGINEERED SOUND PROCESSOR

The Bose® ControlSpace ESP-880 engineered sound processor is a single-rack-space DSP with an 8x8 analog audio configuration, built-in ESPLink output, and an open digital expansion slot ready to accommodate optional Dante™ or AVB network audio cards. This model meets today's strict requirements for high-quality signal processing and control in a cost-effective package. The ESP-880 is designed for a wide variety of applications ranging from small self-contained projects to larger networked applications.

SPECIFICATIONS

Technical Summary

Signal Processor

32-bit fixed/floating-point DSP + ARM, 456 MHz

Dynamic Range

> 115 dB A-weighted 20 Hz – 20 kHz, analog through

Input Channels

8 analog (balanced, mic/line level), 16 digital (via optional card)

Output Channels

8 analog (balanced, line level), 8 ESPLink, 16 digital (via optional card)

PC Configuration Software

ControlSpace® Designer™ software

Physical

Dimensions

1.7" H x 19" W x 8.5" D
(44 mm x 483 mm x 215 mm)

Net Weight

5.8 lb (2.6 kg)



CONTROLSPACE® ESP-1240

ENGINEERED SOUND PROCESSOR

The Bose® ControlSpace ESP-1240 engineered sound processor is a single-rack-space DSP with an 12x4 analog audio configuration, built-in ESPLink output and an open digital expansion slot ready to accommodate optional Dante™ or AVB network audio cards. This model meets today's strict requirements for high-quality signal processing and control in a cost-effective package. The ESP-1240 is designed for a wide variety of applications ranging from small, self-contained projects to larger networked applications.

SPECIFICATIONS

Technical Summary

Signal Processor
32-bit fixed/floating-point
DSP + ARM, 456 MHz

Dynamic Range
> 115 dB, A-weighted 20 Hz – 20 kHz,
analog through

Input Channels
12 analog (balanced, mic/line level),
16 digital (via option card)

Output Channels
4 analog (balanced, line level), 8
ESPLink, 16 digital (via optional card)

PC Configuration Software
ControlSpace Designer software

Physical

Dimensions
1.7" H x 19.0" W x 8.5" D
(44 mm x 483 mm x 215 mm)

Net Weight
5.8 lb (2.6 kg)



CONTROLSPACE ESP-4120

ENGINEERED SOUND PROCESSOR

The Bose ControlSpace ESP-4120 engineered sound processor is a single-rack-space DSP with a 4x12 analog audio configuration, built-in ESPLink output, and an open digital expansion slot ready to accommodate optional Dante or AVB network audio cards. This model meets today's strict requirements for high-quality signal processing and control in a cost-effective package. The ESP-4120 is designed for a wide variety of applications ranging from small, self-contained projects to larger networked applications.

SPECIFICATIONS

Technical Summary

Signal Processor
32-bit fixed/floating-point
DSP + ARM, 456 MHz

Dynamic Range
> 115 dB, A-weighted 20 Hz – 20 kHz,
analog through

Input Channels
4 analog (balanced, mic/line level),
16 digital (via optional card)

Output Channels
12 analog (balanced, line level), 8
ESPLink, 16 digital (via optional card)

PC Configuration Software
ControlSpace Designer software

Physical

Dimensions
1.7" H x 19.0" W x 8.5" D
(44 mm x 483 mm x 215 mm)

Net Weight
5.75 lb (2.6 kg)



CONTROLSPACE® SP-24 SOUND PROCESSOR

The Bose® ControlSpace SP-24 sound processor makes optimizing 2x4 installed and portable sound systems easy. Use the purposefully simple front-panel interface for basic operations, or the intuitive SP-24 Editor software for full access to all signal processing settings.

SPECIFICATIONS
Technical Summary
 Dynamic Range
 107 dB (typical)
 Sample Rate
 48 kHz
 Input Channels
 2 channels
 Output Channels
 4 channels

Physical
Dimensions
 1.8" H x 19" W x 8.6" D
 (45 mm x 483 mm x 218 mm)
Net Weight
 5.9 lb (2.7 kg)



CONTROLSPACE PRODUCT FAMILY USER CONTROLS



CONTROLSPACE CC-4

An elegant, easy-to-use, wall-mounted room controller is now available for volume control and source selection



CONTROLSPACE CC-16

The Bose ControlSpace CC-16 zone control center is an elegant, programmable, networked controller that provides end-user control of ControlSpace systems.





CONTROLSPACE CC-64

The Bose ControlSpace CC-64 control center is an elegant, programmable, networked controller that provides users with a simple and logical interface to their ControlSpace system.

CONTROLSPACE® PRODUCT FAMILY ACCESSORIES

ControlSpace ESP-00 Series II accessories		Product Code	Color	Quantity
	ControlSpace ESP Dante™ network card Provides Dante™ network connectivity for up to 32 channels of digital audio. Dual ports can be configured for switched (default) or redundant networking.	359843-0020	n/a	Single
	ControlSpace ESP-00 CobraNet® I/O expansion card Provides up to 32 channels of CobraNet digital audio.	311506	n/a	Single
	ControlSpace ESP-00 ESPLink 8-Ch output card Provides eight channels of digital audio over a single optical cable for sending audio to one or more ESPLink-equipped PowerMatch® amplifiers.	350513-0010	n/a	Single
	ControlSpace ESP 4x4 mic/line input/output card series II Occupies two audio slots. Provides four microphone or line-level inputs (software-selectable), and four line-level outputs. Expands the number of available analog I/O channels. ESP-00 II can support a total of four 4x4 cards for a total of 16 mic/line inputs and 16 line outputs.	041915	n/a	Single
	ControlSpace ESP-00 SDR 4-Ch mic/line input card Provides four microphone or line-level inputs (software-selectable).	041917	n/a	Single
	ControlSpace ESP-00 SDR 4-Ch output card Provides four line-level outputs.	041916	n/a	Single
	ControlSpace ESP-00 EDR line-level input card Provides four extended dynamic range line level outputs.	041764	n/a	Single
	ControlSpace ESP-00 EDR line-level output card Provides four extended dynamic range line level outputs.	041763	n/a	Single
	ControlSpace ESP-00 AES-3 eight-channel input card Provides eight channels of AES-3 digital audio input.	037537	n/a	Single
	ControlSpace ESP-00 AES-3 eight-channel line output card Provides eight channels of AES-3 digital audio output.	041766	n/a	Single
	ControlSpace ESP-00 surround sound decoder input card Provides surround sound decoding for Dolby 5.1, DTS 5.1, and DTS 6.1 over coaxial and S/PDIF, eliminating the need for an external decoder and integrating all audio processing within the ESP-00 II.	302210	n/a	Single
	ControlSpace ESP-00 GPIO card Installs in the available GPIO2 slot. Augments the standard GPIO card by adding eight additional control inputs and eight additional control outputs on a second card.	041768	n/a	Single

ControlSpace ESP-880/1240/4120 accessories		Product Code	Color	Quantity
	ControlSpace ESP-880/1240/4120 network control card Adds a rear panel network connection to single-rack ControlSpace ESP processors. Allows network pass through from the front-panel RJ-45 port.	359841-0010	n/a	Single
	ControlSpace ESP-880/1240/4120 Dante™ network card Provides Dante™ network connectivity for up to 32 channels of digital audio (16x16). Dual ports can be configured for switched (default) or redundant networking.	359842-0020	n/a	Single

ROOMMATCH® PRODUCT FAMILY

RoomMatch Array Modules deliver superb audio quality for fixed-installations in almost any room size, shape, acoustic requirement or budget. Overcoming the acoustic limitations of both line array and point-source conventional designs, RoomMatch Modules form a new class of curvilinear array that allows seamless audio quality, with consistent front-to-back and side-to-side tonal balance.

KEY FEATURES

Concert-Quality Sound:

New Bose® patented technologies combine to provide audio quality equaling that of the best concert-sound systems, in a fixed-installation format

RoomMatch Waveguide Technology:

5 vertical and 4 horizontal coverage pattern choices plus 22 asymmetrical coverage pattern choices allow arrays to direct sound precisely to desired listening areas, improving audio quality by reducing unwanted acoustic reflections

Progressive Directivity Arrays:

A new class of curvilinear array in which the coverage and directivity index of each module is selected to optimize room coverage and system efficiency

Continuous-Arc Diffraction-Slot (CADS) Manifold:

Bose patented design provides interference-free acoustic summation of 6 compression drivers and acoustically equal spacing of diffraction slots across multiple modules

Bose EMB2 and LF10 Drivers:

Patented new Bose transducers combine to deliver the vocal clarity of 3-way systems with the improved polar response

Specifications for the RoomMatch product family

Frequency Range	(-10 dB) 55 Hz - 16 kHz
Frequency Response	(+/-3 dB) 60 Hz - 16 kHz
Long-Term Power Handling Low Frequency	500 W (2000 W peak)
Long-Term Power Handling High Frequency	150 W (600 W peak)
Nominal Impedance Low Frequency	4 Ω
Nominal Impedance High Frequency	8 Ω
Sensitivity (SPL / 1 W @ 1 m) LF No EQ	94 dB SPL
Sensitivity (SPL / 1 W @ 1 m) LF With EQ	93 dB SPL
Sensitivity (SPL / 1 W @ 1 m) HF No EQ	111 dB SPL
Sensitivity (SPL / 1 W @ 1 m) HF With EQ	108 dB SPL
Maximum SPL @ 1 m LF No EQ	121 dB SPL (127 dB SPL peak)
Maximum SPL @ 1 m LF With EQ	120 dB SPL (126 dB SPL peak)
Maximum SPL @ 1 m HF No EQ	133 dB SPL (139 dB SPL Peak)
Maximum SPL @ 1 m HF With EQ	130 dB SPL (136 dB SPL Peak)
Driver Complement	HF: 6 x Bose EMB2 extended mid-band, high-frequency compression drivers (2-inch voice coil) LF: 2 x Bose LF10 ultra-linear 10-inch woofers (3-inch voice coil)
Enclosure	Baltic birch plywood, engineered plastics, and steel frame
Finish	Two-part spray polyurethane coating on plywood, black
Grille	19-gauge (1.0 mm) perforated steel, powder-coated finish, black
Environmental	Indoor use only
Connectors	Two (2) parallel-wired NL4 Neutrik® Speakon® connectors
Suspension / Mounting	Integrated side-plate rigging hardware; optional array frame accessories
Dimensions*	16.9" H x 39.1" W x 23.6" D (428 mm x 993 mm x 598 mm)
Net Weight*	123 lb (55.8 kg)
Shipping Weight*	180 lb (81.6 kg)- approximate with pallet



RoomMatch ground stack kit accessory

*Note – These specifications pertain to the RM5505. Please refer to the relevant Technical Data Sheet for the details of the particular model.

ROOMMATCH® PRODUCT FAMILY

FULL RANGE

Model	Dispersion	
RM5505	RoomMatch 55° x 05° array module loudspeaker	
RM5510	RoomMatch 55° x 10° array module loudspeaker	
RM5520	RoomMatch 55° x 20° array module loudspeaker	
RM5540	RoomMatch 55° x 40° array module loudspeaker	
RM5560	RoomMatch 55° x 60° array module loudspeaker	
RM7005	RoomMatch 70° x 05° array module loudspeaker	
RM7010	RoomMatch 70° x 10° array module loudspeaker	
RM7020	RoomMatch 70° x 20° array module loudspeaker	
RM7040	RoomMatch 70° x 40° array module loudspeaker	
RM7060	RoomMatch 70° x 60° array module loudspeaker	

ROOMMATCH® PRODUCT FAMILY

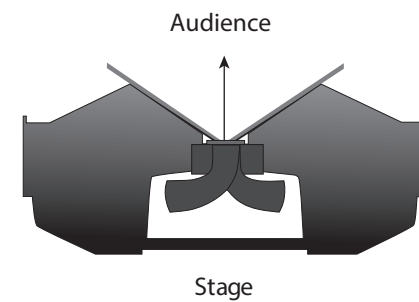
FULL RANGE

Model	Dispersion	
RM9005	RoomMatch 90° x 05° array module loudspeaker	
RM9010	RoomMatch 90° x 10° array module loudspeaker	
RM9020	RoomMatch 90° x 20° array module loudspeaker	
RM9040	RoomMatch 90° x 40° array module loudspeaker	
RM9060	RoomMatch 90° x 60° array module loudspeaker	
RM12005	RoomMatch 120° x 05° array module loudspeaker	
RM12010	RoomMatch 120° x 10° array module loudspeaker	
RM12020	RoomMatch 120° x 20° array module loudspeaker	
RM12040	RoomMatch 120° x 40° array module loudspeaker	
RM12060	RoomMatch 120° x 60° array module loudspeaker	

ROOMMATCH® PRODUCT FAMILY

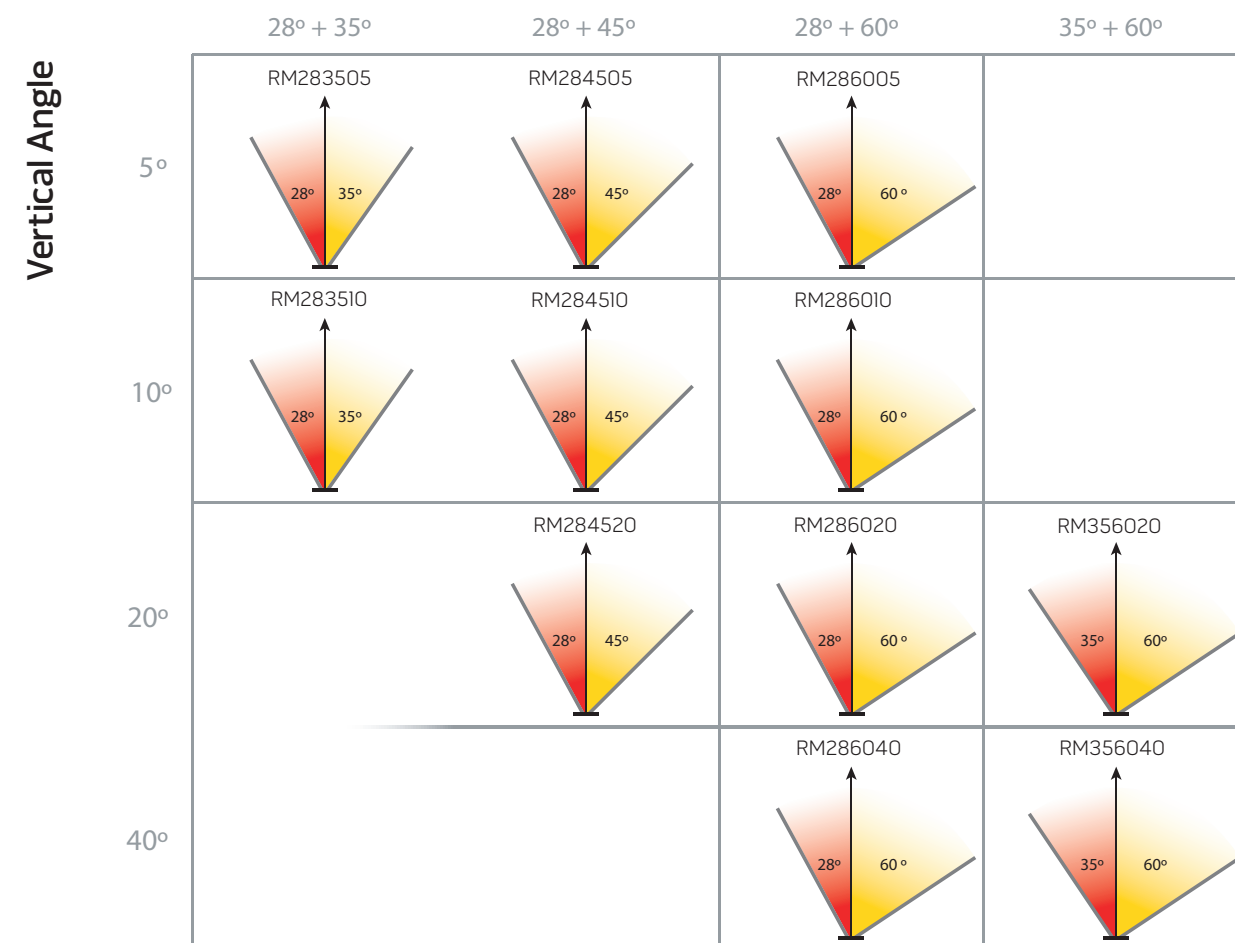
ASYMMETRICAL ARRAY MODULES

Bose® RoomMatch asymmetrical array modules expand the original 20 RoomMatch full-range array modules with the addition of 22 different horizontally asymmetrical coverage patterns. Eleven left and right pairs provide 22 horizontally asymmetrical coverage patterns, allowing improved sound quality by reducing side-wall reflections in many room shapes. Additionally, these asymmetrical patterns can improve stereo soundstage effects when used in left/right pairs and left/center/right arrays.



STAGE LEFT ARRAYS

Horizontal Left Angles*



STAGE RIGHT ARRAYS

Horizontal Right Angles*



*Asymmetrical horizontal coverage angles are defined from stage-view perspective (standing on stage looking out into the audience area). The Left + Right horizontal angles are referenced from the horizontal center line of the module, with the sum of left and right angles defining the total horizontal coverage angle. Typically, asymmetrical patterns are used in left and right pairs for stereo soundstage effects, with the narrow angles toward the room walls. Thus, modules with narrow left and wide right angles are termed "Stage Left" arrays; modules with wide left and narrow right angles are termed "Stage Right" arrays.



ROOMMATCH® RMS215

SUBWOOFER MODULE LOUDSPEAKER



RoomMatch RMS215 subwoofer module is designed primarily to extend the low-frequency response of Bose® RoomMatch arrays to 40 Hz. The RMS215 subwoofer module features dual Bose LF15 15-inch, high-excursion woofers, with a proprietary port design that minimizes distortion and improves perceived transient impact.

The durable Baltic birch enclosure with 2-part polyurethane coating allows reliable ground-stack applications.

SPECIFICATIONS

Technical Summary

Frequency Range (-10 dB)
40 Hz - 280 Hz

Nominal Dispersion
Omni-directional below 100 Hz

Long-Term Power Handling
1000 W (4000 W peak)
Per woofer: 500 W (2000 W peak)

Nominal Impedance
2 x 8 Ω (discrete connection per woofer)

Sensitivity (SPL / 1 W @ 1 m) Array
Array position (free field): 97 dB SPL
Ground Stack (half space):
103 dB SPL

Maximum SPL @ 1 m
Array Position (free field):
127 dB SPL (133 dB SPL peak)
Ground Stack (half space):
133 dB SPL (139 dB SPL peak)

Physical

Enclosure 13-ply Baltic birch plywood

Finish

Two-part spray polyurethane coating, black

Grille

18-gauge (1.2 mm) perforated steel, powder-coated finish, black

Environmental

Indoor use only

Connectors

Two (2) parallel-wired NL4 Neutrik® Speakon® connectors

Suspension / Mounting

Sixteen (16) M10 threaded inserts (4 each: top, bottom, sides); optional RMSFLY kit for RoomMatch array integration

Dimensions

17.6" H x 37.1" W x 21.5" D
(446 mm x 942 mm x 546 mm)

Net Weight

132 lb (59.9 kg)

Color

Black, Paintable

Package Contents

1 loudspeaker

ROOMMATCH RMS218

VLF-SUBWOOFER MODULE LOUDSPEAKER



The RoomMatch RMS218 VLF-subwoofer is designed primarily to extend the low-frequency response of Bose RoomMatch arrays down to 25 Hz. It features dual Bose LF18 18-inch, high-excursion woofers, and a V-baffle design that reduces distortion while minimizing enclosure width. The durable Baltic birch enclosure with 2-part polyurethane coating integrates with all RoomMatch modules for reliable ground-stack applications. Use the RMS218 VLF-subwoofer with RMS215 subwoofer and full-range modules to create RoomMatch 4-way systems.

SPECIFICATIONS

Technical Summary

Frequency Range (-10 dB)
25 Hz - 250 Hz

Nominal Coverage Pattern
Omni-directional below 100 Hz

Power Handling, Peak
6000 W (3000 W per woofer)

Sensitivity (SPL / 1 W @ 1 m)
96 dB

Calculated Maximum SPL @ 1 m, peak
Array Position (free field) 4: 134 dB
Ground Stack (half space) 4: 140 dB
Array Position (free field) 5: 136 dB
Ground Stack (half space) 5: 142 dB

Nominal Impedance
2 x 4 Ω
(discrete connection per woofer)

Physical

Enclosure Material

18 mm Baltic birch exterior-grade plywood

Environmental

Indoor use only

Connectors

2 x Neutrik NL4 wired parallel

Suspension / Mounting

24 x M10 threaded inserts (6 each: top, bottom, sides) optional RMSFLY218 kit for RoomMatch Array integration

Dimensions

21" H x 37" W x 41.5" D
(534 mm x 940 mm x 1055 mm)

Net Weight

203 lb (92.1 kg)
248 lb (112.5 kg) with fly kit

Package Contents

1 loudspeaker

ROOMMATCH® UTILITY RMU208

SMALL-FORMAT FOREGROUND/FILL LOUDSPEAKER

The RoomMatch Utility RMU208 small-format sound reinforcement loudspeaker is intended for use in high-quality foreground music, under-balcony, zone fill and vocal-range floor monitor applications. The design features a single Bose EMB2 compression driver to provide mid/high-frequency voicing similar to that of RoomMatch full-range array modules. Dual 8-inch woofers provide full-range output and a multi-angle enclosure increases mounting flexibility.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
80 Hz -16,000 Hz

Frequency Range (-10 dB)
70 Hz -16,000 Hz

Nominal Coverage Pattern (H x V)
90° x 60° (rotatable high-frequency horn)

Power Handling, Long-Term Continuous
Bose extended-lifecycle test (4): 300 W
AES component test (5): 400 W

Power Handling, Peak
Bose extended-lifecycle test (4): 1200 W
AES component test (5): 1600 W

Sensitivity (SPL / 1 W @ 1 m)
Bose extended-lifecycle test (4): 94 dB
AES component test (5): 94 dB

Calculated Maximum SPL @ 1 m
Bose extended-lifecycle test (4): 119 dB
AES component test (5): 120 dB

Calculated Maximum SPL @ 1 m, peak
Bose extended-lifecycle test (4): 125 dB
AES component test (5): 126 dB

Nominal Impedance
8 Ω

Physical

Finish

Two-part spray polyurethane coating, black

Grille

18-gauge (1.2 mm) perforated steel, powder-coated finish, black

Environmental

Indoor use only

Connectors

1 x Neutrik® NL4 and 1 x barrier strip, wired parallel

Suspension / Mounting

2 x M8 threaded inserts (1 each side) for U-bracket

Dimensions

9.3" H x 27.0" W x 10.5" D
(236 mm x 686 mm x 267 mm)

Net Weight

36 lb (16.3 kg)
42 lbs (19.1 kg) with U-bracket

ROOMMATCH® PRODUCT FAMILY

ACCESSORIES

RoomMatch accessories	Product Code	Color	Quantity
 RMAFLG — large-array frame	330038-0110	Black	Single
 RMAFSM — small-array frame	330039-0110	Black	Single
 RMBRKT — surface-mount bracket kit	348159-0110	Black	Pair
 RMPINS — quick release pins kit	344511-0010	Black	4 Units
 RMPULL — pull-back bracket	330041-0110	Black	Single
 RMXLNG — long extender bar	344056-0110	Black	Pair
 RMXSRT — short extender bar	344057-0110	Black	Pair
 RMSHAD — gain shading kit	344058-0110	Black	Single
GroundStack accessories	Product Code	Color	Quantity
 RMGSBK — ground stack base kit	356016-0110	Black	Pair
 RMGSCK — ground stack caster kit	356514-0110	Black	4 units
 RMGSPB — ground stack pitch brackets	356019-0110	Black	Pair
 RMGSSB — ground stack subwoofer brackets	356018-0110	Black	Pair





POWERMATCH® PRODUCT FAMILY

ADVANCED, PROVEN DESIGN WITH SUPERIOR SOUND.

The Bose® PowerMatch line of configurable professional power amplifiers deliver premium sound for a wide variety of fixed-installation sound reinforcement systems.

Engineers at Bose used several proprietary technologies to develop PowerMatch amplifiers with the best possible tonal balance for the demanding needs of live performances.

The PeakBank™ power supply with fast-tracking Power Factor Correction (PFC), together with a sophisticated dual voltage and current feedback circuit, enable PowerMatch amplifiers to safely and efficiently manage the current drawn from the AC mains. This system gives the amplifiers the capability to run continuously at full power when driving real-world program material – all without fluctuation or reduction of available power.

The result? A redesigned Class-D amplifier with premium Class-AB performance, delivering a combination of wide dynamic range, flat frequency response, low distortion, outstanding transient response and bass reproduction – regardless of the amplifier configuration, loudspeaker load or output level.

MULTIPLE CHANNEL AND POWER OPTIONS.

PowerMatch amplifiers are uniquely flexible, offering output channel configurability over a total of four different models with different channel counts and power capabilities.

Since output power can be combined among output channels and drive a range of loudspeaker loads, 2/4/8 ohm and 70/100V distribution lines (in bridged operation), customers can simplify their product selection around channel count and total power requirements, making for easier system design and installation.

An integrated DSP with loudspeaker processing provides analog/digital audio routing, loudspeaker and room EQ, crossover, delay and limiting. A subset of parameters can be configured from the front panel with full access to parameters via a USB connection with Bose ControlSpace® Designer™ software running on a PC.

Network amplifier versions allow systemwide control and monitoring of multiple amplifiers, direct use with ControlSpace CC-64 control centers, and the capability to communicate with control systems. A digital expansion slot creates an interface for use with optional Bose ESPLink or digital audio networking cards.

MORE THAN JUST A POWER AMPLIFIER.

From project design to installation and implementation, Bose PowerMatch amplifiers are loaded with features to assist in the process, even well beyond the project finish date.

System troubleshooting is built into PowerMatch amplifiers via a set of remote monitoring and fault-reporting utilities. Issues logged by the amplifier, such as power line and loudspeaker wiring faults, are reported on the front panel. Reporting can also be accomplished via an Ethernet connection with Bose ControlSpace Designer software or using Serial over Ethernet with third-party control and monitoring systems.





In addition, a convenient load sweep tool can measure and store the load impedance of each output for system diagnostic and documentation purposes. Password protection of all settings with front-panel lockout allows the system to be secure from unauthorized tampering, and a unique internal airflow design minimizes fan noise and dust capture without the use of filters, making the amplifier more reliable with less service required.





POWERMATCH® PRODUCT FAMILY

ACCESSORIES

PowerMatch accessories	Product Code	Color	Quantity
 <p>PowerMatch ESPLink 8-channel input card Accessory card installs into the digital input slot of the PowerMatch amplifiers. Receives eight digital audio channels from a ControlSpace® ESPLink output card. Includes optical cable.</p>	349898-0010	N/A	Single
 <p>PowerMatch Dante™ network card The Dante™ card for PowerMatch amplifiers uses the digital expansion card slot to receive up to 8 channels of streaming audio using the Dante networking solution. Dual ports can be configured for switched (default) or redundant networking.</p>	359844-0020	N/A	Single
 <p>PowerMatch CobraNet® card The CobraNet card for PowerMatch configurable professional power amplifiers inserts into the digital expansion card slot and provides a connection of up to 16 (8 input and 8 output) channels of uncompressed digital audio using industry-proven CobraNet audio networking.</p>	345975-0010	N/A	Single
 <p>ControlSpace® CC-64 The Bose ControlSpace CC-64 control center is an elegant, programmable, networked controller that provides users with a simple and logical interface to their ControlSpace system.</p>	041760	N/A	Single



LI[®] PRODUCT FAMILY

Bose[®] LI systems are complete, portable PA systems that deliver clear, balanced sound and set up in minutes. A proprietary articulated line array delivers 180-degree coverage, consistent tonal balance and less SPL drop-off than conventional systems. Models are available for audiences of 100 to 500. The line array's wide coverage and high resistance to feedback allows you to position the system behind you and hear what your audience hears. The lightweight components connect easily without the

need for speaker stands and are built to withstand the rigors of the road.

The LI Compact system is ideal for audiences of up to 100, while the LI Model IS system is ideal for audiences up to 300. The LI Model II system reaches an audience of up to 500. Each model offers a different level of integrated I/O, overall performance and portability.



L1® COMPACT PORTABLE LINE ARRAY SYSTEM

Our smallest and most portable system for an audience of up to 100. It has a six-speaker articulated line array, and it includes an integrated two-channel mixer with ToneMatch® presets on each channel. Carry it in one trip. Set it up in one minute. Fill the room with one system.

For indoor applications only.

SPECIFICATIONS

Physical

Dimensions
8.22" H x 6.52" W x 2.66" D
(209 mm x 165 mm x 67 mm)

L1 MODEL 1S PORTABLE LINE ARRAY SYSTEM

Our L1 system that offers a unique combination of performance and portability for an audience of up to 300. With a 12-speaker articulated line array providing 180 degrees of clear, even sound, the system is also designed to work with the T1 ToneMatch audio engine, as well as a choice in bass modules. Easy to transport, and set up in minutes.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
40 Hz - 12 kHz

Frequency Range (-10 dB)
32 Hz - 14 kHz

Nominal Dispersion
195° H x 10° V

Maximum SPL @ 1 m
112 dB SPL (118 dB SPL peak)

Physical

Enclosure

Power stand: Polypropylene cover with cast aluminum legs and steel chassis base

Loudspeaker array and bottom extension: Aluminum enclosure with ABS baffle

Dimensions
Assembled height: 79.4" (2018 mm)

Net Weight
Top array and bottom extension: 25 lb (11.3 kg)
Power stand: 23.7 lb (10.7 kg)
B1 bass module: 26.6 lb (12.1 kg)
B2 bass module: 45 lb (20.41 kg)

Color
Black

Package Contents
1 system

L1 MODEL II PORTABLE LINE ARRAY SYSTEM

Our most advanced L1 system for an audience of up to 500. With a 24-speaker articulated line array providing 180 degrees of clear, even coverage, it combines our best sound reproduction with easy transport and setup. Designed to work with the T1 ToneMatch audio engine, which provides four additional inputs, our largest library of ToneMatch presets and a complete suite of studio-class effects and processing.

For indoor applications only.

SPECIFICATIONS

Technical Summary

Frequency Response (+/-3 dB)
40 Hz - 12 kHz

Frequency Range (-10 dB)
32 Hz - 14 kHz

Nominal Dispersion
195° H x 0° V

Maximum SPL @ 1 m
115 dB SPL (121 dB SPL peak)

Physical

Enclosure

Power stand: Polypropylene cover with cast aluminum legs and steel chassis base

Cylindrical radiator: Aluminum enclosure with ABS baffle

Dimensions

Assembled height: 84.0" (2134 mm)

Net Weight
Power stand: 23.7 lb (10.7 kg)
Cylindrical radiators (pair): 33.7 lb (15.3 kg)
B1 bass module: 26.6 lb (12.1 kg)
B2 bass module: 45 lb (20.41 kg)

Color
Black

Package Contents
1 system

L1® PRODUCT FAMILY ACCESSORIES

L1 accessories	Product Code	Color	Quantity
 B1 bass module Includes slip cover and cable to connect module to power stand.	032494	Black	Single
 B2 bass module Includes slip cover and cable to connect module to power stand.	353927-0110	Black	Single
 T1 ToneMatch audio engine Digital multichannel mixer designed for use with Bose® L1 systems. Note: T1 ToneMatch audio engine power supply is required for use with the L1 Compact and L1 Model I systems, and for standalone use.	042826	Black	Single
 T1 ToneMatch audio engine mic stand bracket Enables T1 ToneMatch audio engine to be mounted to a microphone stand.	042535	Black	Single
 T1 ToneMatch audio engine power supply Provides power for the ToneMatch audio engine when used with an L1 Compact or L1 Model I system, or for standalone use. Power rating: AC 100-240V.	042533	Black	Single
 PackLite® amplifier Powers up to two additional B1 bass modules. Includes 1/4" TRS cable and nylon carry pouch.	039057	Black	Single



FREESPACE® PRODUCT FAMILY

QUICK REFERENCE GUIDE

	Applications	Bandwidth	Maximum Output	Equalization	Power Handling	Installation	Mounting	Colors
FreeSpace 3 system	Background music Foreground music	50 Hz –16 kHz	93 dB-SPL (99 dB-SPL peak)	Use with 40-Hz high-pass filter	200W @ 70/100 or 100W @ 6Ω	Indoor	Flush, Ceiling, Surface, Pendant	Black or White Paintable
DS 100F	Background music Foreground music Paging	75 Hz –18 kHz	105 dB-SPL (111 dB-SPL peak)	Recommended active EQ	100W @ 70/100V or 8Ω	Indoor	Flush	Black or White Paintable
DS 100SE	Background music Foreground music Paging	75 Hz –18 kHz	105 dB-SPL (111 dB-SPL peak)	Recommended active EQ	100W @ 70/100V or 8Ω	Indoor/ Outdoor	Surface	Black or White Paintable
DS 40F	Background music Foreground music Paging	80 Hz –17 kHz	103 dB-SPL (109 dB-SPL peak)	Recommended active EQ	40W @ 70/100V or 8Ω	Indoor	Flush, Ceiling, Pendant	Black or White Paintable
DS 40SE	Background music Foreground music Paging	80 Hz –17kHz	103 dB-SPL (109 dB-SPL peak)	Recommended active EQ	40W @ 70/100V or 8Ω	Indoor/ Outdoor	Surface	Black or White Paintable
DS 16F	Background music Paging	95 Hz –17 kHz	96 dB-SPL (102 dB-SPL peak)	Recommended active EQ	16W @ 70/100V or 8Ω	Indoor	Flush Ceiling Pendant	Black or White Paintable
DS 16S & DS 16SE	Background music Paging	95 Hz –17 kHz	96 dB-SPL (102 dB-SPL peak)	Recommended active EQ	16W @ 70/100V or 8Ω	Indoor/ Outdoor (SE Only)	Surface	Black or White Paintable
203®	Background music Foreground music	65 Hz –14 kHz	104 dB-SPL (110 dB-SPL peak)	Use with 70-Hz high-pass filter	200W @ 70/100V or 100W @ 6Ω	Indoor	Surface	Black or White Paintable
360P series II	Background music Foreground music	70 Hz –10 kHz	100 dB-SPL (106 dB-SPL peak)	Use with 70-Hz high-pass filter	80W @ 70/100V	Indoor/ Outdoor	Inground	Green

PANARAY® PRODUCT FAMILY

QUICK REFERENCE GUIDE

	Application	Bandwidth	Maximum Output (pink noise @ 1m @ rated power)	Equalization	Dispersion (H x V)	Power Handling	Installation	Colors
302™ A	Background music	75Hz - 16kHz	102dB SPL	75Hz high-pass filter	178° x 93°	200W @70/100V	Indoor/Outdoor	Black or White
402® series II	Background music Foreground music	90Hz - 17kHz	115dB SPL	Loudspeaker active EQ required	120° x 60°	120W @ 8Ω	Indoor/Outdoor	Black or White
502® A	Background music Foreground music	150Hz - 17kHz	112dB SPL	Loudspeaker active EQ required	120° x 70°	150W @ 8Ω	Indoor	Black or White
802® series III	Background music Foreground music	60Hz - 15kHz	116dB SPL	Loudspeaker active EQ required	120° x 100°	240W @ 8Ω	Indoor/Outdoor	Black
MA12	Background music Foreground music	155Hz - 12kHz	113dB SPL	Loudspeaker active EQ required	145° x height of array	300W @ 8Ω	Indoor	Black or White
MA12EX	Background music Foreground music	75Hz - 13kHz	109dB SPL	Loudspeaker active EQ required	160° x height of array	150W @ 8Ω	Indoor/Outdoor	Black or White
MB4	Background music Foreground music	45Hz - 310Hz	110dB SPL	Loudspeaker active EQ required	360°	200W @ 8Ω	Indoor	Black or White
502® B	Background music Foreground music	50Hz - 140Hz	116dB SPL	Loudspeaker active EQ required	360°	450W @ 8Ω	Indoor	Black or White
310M	Floor array	70Hz - 16kHz	116dB SPL	Not Required	See Specs P24	100W @ 8Ω	Indoor	Black
620M	Floor array	70Hz - 16kHz	113dB SPL	Not Required	See Specs P24	200W @ 8Ω	Indoor	Black

LT PRODUCT FAMILY

QUICK REFERENCE GUIDE

	Application	Bandwidth	Maximum Output (pink noise @ 1m @ rated power)	Equalization	Dispersion (Nominal) (H x V)	Power Handling	Installation	Colors
LT 6400	Foreground music	190Hz - 16kHz	125dB SPL	Recommended loudspeaker EQ available	60° x 40°	100W @ 8Ω	Indoor	Black
LT 9400	Foreground music	190Hz - 16kHz	124dB SPL	Recommended loudspeaker EQ available	90° x 40°	100W @ 8Ω	Indoor	Black
LT 6403	Foreground music	50Hz - 16kHz	123dB SPL	Recommended loudspeaker EQ available, or use with 50Hz high-pass filter	60° x 40°	500W @ 8Ω	Indoor	Black
LT 9403	Foreground music	50Hz - 16kHz	122dB SPL	Recommended loudspeaker EQ available, or use with 50Hz high-pass filter	90° x 40°	500W @ 8Ω	Indoor	Black
LT MB12	Foreground music	40Hz - 280Hz	117dB SPL	Recommended loudspeaker EQ available, or use with 250Hz low-pass filter	Omni Directional	400W @ 8Ω	Indoor	Black or White
LT MB 24	Foreground music	40Hz - 280Hz	123dB SPL	Recommended loudspeaker EQ available, or use with 250Hz low-pass filter	Omni Directional	800W @ 4Ω	Indoor	Black or White
LT 3202® WR	Foreground music	220Hz - 16kHz	134dB SPL	Recommended loudspeaker EQ available	30° x 20°	280W @ 16Ω	Indoor/Outdoor	Black
LT 4402® WR	Foreground music	180Hz - 16kHz	129dB SPL	Recommended loudspeaker EQ available	40° x 40°	140W @ 8Ω	Indoor/Outdoor	Black
LT 9402® WR	Foreground music	180Hz - 16kHz	127dB SPL	Recommended loudspeaker EQ available	90° x 40°	140W @ 8Ω	Indoor/Outdoor	Black
LT 9702® WR	Foreground music	220Hz - 16kHz	126dB SPL	Recommended loudspeaker EQ available	90° x 70°	140W @ 8Ω	Indoor/Outdoor	Black
LT MB12 WR	Foreground music	40Hz - 280Hz	117dB SPL	Recommended loudspeaker EQ available, or use with 250Hz low-pass filter	Omni Directional	400W @ 8Ω	Indoor/Outdoor	Black
LT MB24 WR	Foreground music	40Hz - 280Hz	123dB SPL	Recommended loudspeaker EQ available, or use with 250Hz low-pass filter	Omni Directional	800W @ 4Ω	Indoor/Outdoor	Black

FREESPACE® AMPLIFIERS

QUICK COMPARISON GUIDE

	FreeSpace® DXA 2120 digital mixer/amplifier	FreeSpace® IZA integrated zone amplifier	FreeSpace® ZA zone amplifier
			
Back panel view			
Output channels, power	2 channels (5-pin Euroblock) 2 x 120 W @ 4 Ω, 2 x 100 W @ 70/100 V2 x 120 W @ 4 Ω, 2 x 100 W @ 70/100 V	ZA 250-LZ: 2 channels (terminal strip) 2 x 50 W @ 4 Ω, 2 x 32 W @ 8 Ω IZA 190-HZ: 1 channel (2-pin Euroblock) 90 W @ 70/100 V	ZA 250-LZ: 2 channels (terminal strip) 2 x 50 W @ 4 Ω, 2 x 32 W @ 8 Ω ZA 190-HZ: 1 channel (2-pin Euroblock) 90 W @ 70/100 V
Frequency response	40 Hz - 16 kHz (+0/-3 dB)	IZA 250-LZ: 40 Hz - 20 kHz (+0/-3 dB) IZA 190-HZ: 60 Hz - 20 kHz (+0/-3 dB)	ZA 250-LZ: 20 Hz - 20 kHz (+0/-3 dB) ZA 190-HZ: 60 Hz - 20 kHz (+0/-3 dB)
Signal to noise ratio	75 dBA (below rated power)	88 dBA (below rated power)	88 dBA (below rated power)
THD	<0.5% (at full power)	IZA 250-LZ: ≤0.3% (at full power) IZA 190-HZ: ≤1% (at full power)	ZA 250-LZ: ≤0.3% (at full power) ZA 190-HZ: ≤1% (at full power)
Input/output	Mic/Line In: (4) balanced 3-pin Euroblock Line In: (4) dual RCA (summed to mono) Page In: (1) balanced 4-pin Euroblock Direct In: (1) balanced 3-pin Euroblock Auxiliary Out: (1) 3-pin Euroblock (fixed)	Line In: (2) dual RCA Mic/Line In: (1) combo XLR-TRS Page In: (1) balanced 4-pin Euroblock Auxiliary In: (1) 1/8" (3.5mm) stereo Auxiliary Out: (1) dual RCA	Line In: (1) dual RCA
Control	Remote connector for accessory user interfaces, RS-232 (updates only)	Remote connector for accessory user interfaces, Mute	N/A
DSP functions	Remote connector for accessory user interfaces, RS-232 (updates only)	Bose® DS 16/DS 40 loudspeaker EQ, Opti-voice® paging, dynamic EQ	N/A
Optional PC	N/A	N/A	N/A
Dimensions	13.8"D x 16.5"W x 3.5"H (340mm x 420mm x 90mm)	12.2"D x 8.4"W x 1.8"H (310mm x 214mm x 45mm)	11.9"D x 8.4"W x 1.8"H (302mm x 214mm x 45mm)
Net weight	32 lb (14.4 kg)	IZA 250-LZ: 4.8 lb (2.2 kg) IZA 190-HZ: 7.0 lb (3.2 kg)	ZA 250-LZ: 4.4 lb (2.0 kg) ZA 190-HZ: 6.7 lb (3.0 kg)
Primary applications	Retail Stores, Restaurants and Bars, Conference Centers, Hotels, Lobbies, Conference Rooms	Retail Stores, Restaurants and Bars, Shopping Centers, Hospitality Venues, Conference Centers	Retail Stores, Restaurants and Bars, Hospitality Venues, Conference Centers, Schools, Auxiliary Zones
Accessories	Volume control with A/B switch (PC 041966) Volume control (PC 041967)	Rack Mount Kit (PC 344958-0410) Volume control with A/B switch (PC 041966)	Rack Mount Kit (PC 344958-0410)



CONTROLSPACE® ENGINEERED SOUND PROCESSORS

QUICK COMPARISON GUIDE

ControlSpace® ESP-00 Series II engineered sound processor ControlSpace® ESP-880 engineered sound processor



Back panel view		
Audio channel capacity	64 (bi-directional, digital and/or analog)	56 (16 analog, 8 ESP Link, 16x16 digital with expansion card)
Signal processor	Quad 32-bit floating-point DSPs, 200MHz	32-bit fixed/floating-point DSP + ARM, 456 MHz
Maximum calculation	6.4 GIPS / 4.8 GFLOPS	3.6 GIPS / 2.7 GFLOPS
Analog I/O	Five analog card options (4x4 mic / line input / output card used here for comparison)	8-channel analog mic/line input, 8-ch line output
Dynamic range	108 dB (typical, A-weighted, 20-20 kHz)	115 dB (typical, A-weighted, 20-20 kHz)
Max. input/output level	+24 dBu	+24 dBu
THD (+N)	0.01% (at +4 dBu, A-weighted, 20 Hz - 20 kHz)	0.002% (at +4 dBu, A-weighted, 20 Hz - 20 kHz)
Delay	288 seconds	43 seconds
Audio latency	860µs (analog in to analog out)	860µs (analog in to analog out)
PC configuration software	ControlSpace® Designer™ software	ControlSpace® Designer™ software
Control inputs/outputs	8 input, 8 output (0.5 mA source / 10mA sink)	5 input, 5 output (10 mA source / 100mA sink)
Network control	Ethernet (RJ-45), 10Base-T, rear panel	Ethernet (RJ-45), via front panel (10Mbps) or option cards
Communication ports	RS-232 (DB9M, DTE) Bose CC-16 (5.08 mm Euroblock 3-pin)	RS-232 (DB9M, DTE) Bose CC-16 (3.81 mm Phoenix Contact®, 3-pin)
Expansion slots	8 analog/digital audio, 2 GPIO (1 occupied)	1 control/audio network (optional)
Dimensions	3.5" H x 19.0" W x 13.0" D (88 mm x 483 mm x 331 mm)	1.7" H x 19" W x 8.5" D (44mm x 483mm x 215mm)
Net weight	10.8 lb (4.9 kg)	5.75 lb (2.6 kg)
Primary applications	Auditoriums, houses of worship, resorts and hospitality venues, retail stores, schools and universities, multi-purpose spaces	Auditoriums, houses of worship, resorts and hospitality venues, retail stores, schools and universities, multi-purpose spaces
Accessories	Cards: Dante™, AVB, Cobra Net®, ESP Link, 4x4 in/out, 4-ch SDR mic/line in, 4-ch SDR line out, EDR line in, EDR line out, AES3 in, AES3 out, Surround Decoder, GPIO expansion User Controls: CC-64 control centre, CC-16 zone controller, CC-4 room controller	Cards: Dante™, AVB, ControlSpace Network Control User Controls: CC-64 control centre, CC-16 zone controller, CC-4 room controller, Volume with A/B, Volume, CC-PSI

CONTROLSPACE® ENGINEERED SOUND PROCESSORS

QUICK COMPARISON GUIDE

ControlSpace® ESP-1240 engineered sound processor ControlSpace® ESP-4120 engineered sound processor



Back Panel View		
Audio channel capacity	56 (16 analog, 8 ESP Link, 16x16 digital with expansion card)	56 (16 analog, 8 ESP Link, 16x16 digital with expansion card)
Signal processor	32-bit fixed/floating-point DSP + ARM, 456 MHz	32-bit fixed/floating-point DSP + ARM, 456 MHz
Maximum calculation	3.6 GIPS / 2.7 GFLOPS	3.6 GIPS / 2.7 GFLOPS
Analog I/O	12-channel analog mic/line input, 4-ch line output	4-channel analog mic/line input, 12-ch line output
Dynamic range	115 dB (typical, A-weighted, 20-20 kHz)	115 dB (typical, A-weighted, 20-20 kHz)
Max. input/output level	+24 dBu	+24 dBu
THD (+N)	0.002% (at +4 dBu, A-weighted, 20 Hz - 20 kHz)	0.002% (at +4 dBu, A-weighted, 20 Hz - 20 kHz)
Delay	43 seconds	43 seconds
Audio latency	860µs (analog in to analog out)	860µs (analog in to analog out)
PC configuration software	ControlSpace® Designer™ software	ControlSpace® Designer™ software
Control inputs/outputs	5 input, 5 output (10 mA source / 100mA sink)	5 input, 5 output (10 mA source / 100mA sink)
Network control	Ethernet (RJ-45), via front panel (10Mbps) or option cards	Ethernet (RJ-45), via front panel (10Mbps) or option cards
Communication ports	RS-232 (DB9M, DTE) Bose CC-16 (3.81 mm Phoenix Contact®, 3-pin)	RS-232 (DB9M, DTE) Bose CC-16 (3.81 mm Phoenix Contact®, 3-pin)
Expansion slots	1 control/audio network (optional)	1 control/audio network (optional)
Dimensions	1.7" H x 19" W x 8.5" D (44mm x 483mm x 215mm)	1.7" H x 19" W x 8.5" D (44 mm x 483 mm x 215 mm)
Net seight	5.75 lb (2.6 kg)	5.75 lb (2.6 kg)
Primary applications	Auditoriums, houses of worship, resorts and hospitality venues, retail stores, schools and universities, multi-purpose spaces	Auditoriums, houses of worship, resorts and hospitality venues, retail stores, schools and universities, multi-purpose spaces
Accessories	Cards: Dante™, AVB, ControlSpace Network Control User Controls: CC-64 control centre, CC-16 zone controller, CC-4 room controller, Volume with A/B, Volume, CC-PSI	Cards: Dante™, AVB, ControlSpace Network Control User Controls: CC-64 control centre, CC-16 zone controller, CC-4 room controller, Volume with A/B, Volume, CC-PSI

POWERMATCH® AMPLIFIERS

QUICK COMPARISON GUIDE

PowerMatch PM8500/8500N
configurable power amplifier



PowerMatch PM8250/8250N
configurable power amplifier



Back panel view		
Output channels, total power	8 channels, 4000W, configurable Supports 2/4/8Ω and 70/100 V loads	8 channels, 2000W, configurable Supports 2/4/8Ω and 70/100 V loads
Mono mode output power	500 W (2 Ω and 4 Ω) 300 W (8 Ω)	250 W (2 Ω, 4 Ω, 8 Ω)
V-bridge mode output power	1000 W (4 Ω, 8 Ω, 100 V) 800 W (70 V)	500 W (4 Ω, 8 Ω, 100 V) 400 W (70 V)
I-share mode output power	1000 W (2 Ω)	500 W (2 Ω)
Quad mode output power	2000 W (4 Ω, 100 V) 1600 W (70 V)	1000 W (4 Ω, 100 V) 800 W (70 V)
Frequency response	20 Hz - 20 kHz (+/-0.5 db)	20 Hz - 20 kHz (+/-0.5 db)
Signal to noise ratio	>102 dBA (below rated power)	>99 dBA (below rated power)
THD	<0.4% (at 1 W, 20 Hz to 20 kHz)	<0.4% (at 1 W, 20 Hz to 20 kHz)
Input channels	(8) Balanced 3-pin Euroblock, Digital expansion card slot	(8) Balanced 3-pin Euroblock, Digital expansion card slot
Control	Fault-notification output, Ethernet control, and serial over Ethernet	Fault-notification output, Ethernet control, and serial over Ethernet
DSP functions	Bose® loudspeaker EQ, mixer/router, speaker array EQ, input EQ, delay, limiting, signal generator	Bose loudspeaker EQ, mixer/router, speaker array EQ, input EQ, delay, limiting, signal generator
PC configuration software	ControlSpace® Designer™ software	ControlSpace Designer™ software
Dimensions	20.7" H x 19.0" W x 3.5" D (525 mm x 483 mm x 88 mm)	20.7" H x 19.0" W x 3.5" D (525 mm x 483 mm x 88 mm)
Net weight	28.4 lb (12.9 kg)	28.3 lb (12.8 kg)
AC mains requirement	100 to 240 VAC (50/60 Hz), 20A (120 V) or 16A (230 V)	100 to 240 VAC (50/60 Hz), 15A (120 V) or 10A (230 V)
Primary applications	Auditoriums, performance arts venues, theaters, houses of worship, arenas, hospitality venues	Houses of worship, retail locations and malls, restaurants, auxiliary zones, conference and hospitality venues
Accessories	PM CobraNet® card (PC 345975-0110) PM ESPLink 8-Ch input card (PC 349898-0110) ControlSpace CC-64 control center (PC 041760)	PM CobraNet® card (PC 345975-0110) PM ESPLink 8-Ch input card (PC 349898-0110) ControlSpace CC-64 control center (PC 041760)

POWERMATCH® AMPLIFIERS

QUICK COMPARISON GUIDE

PowerMatch PM4500/4500N
configurable power amplifier



PowerMatch PM4250/4250N
configurable power amplifier






Back panel view		
Output channels, total power	4 channels, 2000W, configurable Supports 2/4/8Ω and 70/100 V loads	4 channels, 1000W, configurable Supports 2/4/8Ω and 70/100 V loads
Mono mode output power	500 W (2 Ω and 4 Ω) 300 W (8 Ω)	250 W (2 Ω, 4 Ω, 8 Ω)
V-bridge mode output power	1000 W (4 Ω, 8 Ω, 100 V) 800 W (70 V)	500 W (4 Ω, 8 Ω, 100 V) 400 W (70 V)
I-share mode output power	1000 W (2 Ω)	500 W (2 Ω)
Quad mode output power	2000 W (4 Ω, 100 V) 1600 W (70 V)	1000 W (4 Ω, 100 V) 800 W (70 V)
Frequency response	20 Hz - 20 kHz (+/-0.5 db)	20 Hz - 20 kHz (+/-0.5 db)
Signal to noise ratio	>102 dBA (below rated power)	>99 dBA (below rated power)
THD	<0.4% (at 1 W, 20 Hz to 20 kHz)	<0.4% (at 1 W, 20 Hz to 20 kHz)
Input channels	(4) Balanced 3-pin Euroblock, Digital expansion card slot	(4) Balanced 3-pin Euroblock, Digital expansion card slot
Control	Fault-notification output, Ethernet control, and serial over Ethernet	Fault-notification output, Ethernet control, and serial over Ethernet
DSP functions	Bose® loudspeaker EQ, mixer/router, speaker array EQ, input EQ, delay, limiting, signal generator	Bose loudspeaker EQ, mixer/router, speaker array EQ, input EQ, delay, limiting, signal generator
PC configuration software	ControlSpace® Designer™ software	ControlSpace Designer™ software
Dimensions	20.7" H x 19.0" W x 3.5" D (525 mm x 483 mm x 88 mm)	20.7" H x 19.0" W x 3.5" D (525 mm x 483 mm x 88 mm)
Net weight	24.4 lb (11.1 kg)	24.4 lb (11.1 kg)
AC mains requirement	100 to 240 VAC (50/60 Hz), 15A (120 V) or 10A (230 V)	100 to 240 VAC (50/60 Hz), 15A (120 V) or 10A (230 V)
Primary applications	Auditoriums, performance arts venues, theaters, houses of worship, arenas, hospitality venues	Houses of worship, retail locations and malls, restaurants, auxiliary zones, conference and hospitality venues
Accessories	PM CobraNet® card (PC 345975-0110) PM ESPLink 8-Ch input card (PC 349898-0110) ControlSpace CC-64 control center (PC 041760)	PM CobraNet® card (PC 345975-0110) PM ESPLink 8-Ch input card (PC 349898-0110) ControlSpace CC-64 control center (PC 041760)



L1® PORTABLE LINE ARRAY SYSTEMS

QUICK COMPARISON GUIDE

	L1 Compact system 	L1 Model 1S system 	L1 Model II system 
Positioning	Our smallest, lightest and easiest-to-set-up L1 system featuring a 6-speaker curved articulated line array, providing smooth tonal balance and coverage, weighing just 29 pounds.	A unique combination of performance and portability that includes our 12-speaker articulated line array, providing smooth tonal balance, coverage and high output.	Our most advanced system featuring our 24-speaker articulated line array, providing our best tonal balance, coverage and highest output.
Audience Size	Up to 100	Up to 300	Up to 500
Applications	<ul style="list-style-type: none"> • Acoustic musicians • Secondary PA for mobile DJs • Public speaking • Business presentations/classrooms • Backyard parties 	<ul style="list-style-type: none"> • Musicians • Mobile DJs • Public speaking • Professional A/V applications 	<ul style="list-style-type: none"> • Musicians • Mobile DJs • Public speaking • Professional A/V applications
Array Performance	The L1 Compact loudspeaker array is smaller than those in the L1 Model 1S and Model II systems, yet produces comparable horizontal sound coverage. The L1 Model 1S and Model II systems project sound further and with less volume drop-off than the L1 Compact system.	The 12-speaker articulated line array provides 180 degrees of horizontal sound coverage, while at the same time offering tight vertical control resulting in less drop-off in volume over distance than conventional loudspeakers.	The articulated 24-speaker line array provides 180 degrees of horizontal sound coverage, while at the same time offering extremely tight vertical control that results in less drop-off in volume over distance than conventional loudspeakers.
Coverage	180° H x 40° V	195° H x 10° V	195° H x 0° V
Max SPL	106 dB (Continuous), 112 dB (Peak)	112 dB (Continuous), 118 dB (Peak)	115 dB (Continuous), 121 dB (Peak)
Low-Frequency (-3dB)	65 Hz	40 Hz (with B1 or B2)	40 Hz (with B1 or B2)
Bass	The L1 Compact system features an integrated bass speaker in the power stand. Not compatible with the B1 or B2 bass modules.	The Model 1S power stand can drive 2 B1s or a single B2 bass module.	The Model II power stand can drive 2 B1s or a single B2 bass loudspeaker. It also features a dedicated bass line out, allowing it to be used with the A1 Packlite® amplifier to add two additional B1 bass modules or an additional B2 bass module.
I/O	<ul style="list-style-type: none"> • 1 x microphone input • 1 x 1/8" balanced analog input • 1 x RCA stereo input • 1 x 1/4" analog input • 1 x 1/4" mono analog output • 1 x RCA output 	<ul style="list-style-type: none"> • 1 x 1/4" analog input • 1 x NL4 bass module out • 1 x ToneMatch port • 1 x trim control • 1 x power switch 	<ul style="list-style-type: none"> • 1 x 1/4" analog input • 1 x NL4 bass module out • 1 x 1/4" bass line out • 1 x ToneMatch® port • 1 x trim control • 1 x power switch
System Includes	<ul style="list-style-type: none"> • L1 Compact loudspeaker array • L1 Compact system power stand with slip cover • L1 Compact system extensions with protective carry bag 	<ul style="list-style-type: none"> • L1 Model 1S top array and bottom extension • L1 Model 1S power stand • AC power cord • Protective carrying bags/covers • B1 or B2 bass module with cable and slip cover 	<ul style="list-style-type: none"> • L1 Model II top and bottom loudspeaker arrays • L1 Model II system power stand • AC power cord • Protective carrying bags/covers • B1 or B2 bass module with cable and slip cover

LIMITED PRODUCT WARRANTY

BOSE PROFESSIONAL SYSTEMS LOUDSPEAKERS AND ELECTRONICS ARE DESIGNED TO DELIVER YEARS OF SUPERB PERFORMANCE IN DEMANDING APPLICATIONS. WARRANTY DETAILS FOR SPECIFIC PRODUCT LINES ARE DESCRIBED BELOW. FOR MORE INFORMATION, PLEASE CONTACT YOUR LOCAL BOSE REPRESENTATIVE.

WHAT IS COVERED / FOR HOW LONG

Bose warrants, for the periods of time set forth below, that this product, when delivered to you in new condition, in original packaging, from a Bose authorized reseller and used in normal conditions, is free from defects in manufacturing, material and workmanship.

- The Bose® Limited Warranty for Professional Systems products that are designated weather-rated or environmental lasts two years from the purchase date for exterior finish or appearance of speaker enclosures and speaker brackets, and five years for the speaker components.
- The Bose® Limited Warranty for Professional Systems products lasts five years from the purchase date for speaker components that are not self-powered (amplified).
- The Bose® Limited Warranty for Professional Systems products lasts two years from the date of purchase for electronic products, and accessories.
- The Bose® Limited Warranty for Professional Systems products lasts five years from the date of purchase for the PowerMatch® amplifiers, the ControlSpace® SP-24 sound processor, and the FreeSpace® IZA and ZA amplifiers.
- The Bose® Limited Warranty for Professional Systems products lasts two years from the date of purchase for powered component speakers for the electronics and five years for the speaker components.

WHAT IS NOT COVERED

This warranty does not cover defects resulting from improper or unreasonable use or maintenance; failure to follow installation or operating instructions; failure to install products in accordance with applicable laws, regulations and codes; accidents; extreme moisture; extreme temperatures; extreme environments; marine environments; insects; lightning; power surges; connections to improper voltage supply; unauthorized alteration or modification of original condition; damage caused by inadequate packing or shipping procedures; loss of, damage to or corruption of stored data; damage caused by improper use with non Bose products; product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications; installation or use of indoor-rated products in indoor water facility areas (including, without limitation, indoor pools, indoor water parks, hot tub rooms, saunas, steam rooms and indoor skating rinks); and products purchased from unauthorized dealers.

WHAT WILL WE DO

During the warranty period, we will, at our sole option, repair or replace (using new or refurbished replacement parts) any defective parts within a reasonable period of time and free of charge.

WHAT WE WILL NOT DO

Pay shipping, insurance or transportation charges from you to us, or any import fees, duties and taxes.

WHAT YOU MUST DO TO OBTAIN LIMITED WARRANTY SERVICE

Return product, with proof of purchase from an authorized Bose dealer, using the following procedure:

Contact the Bose organization in your country/region for specific return and shipping instructions.

Label and ship the product, freight prepaid, to the address provided by the Bose organization in your country.

Place any necessary return authorization number prominently on the outside of the carton. Cartons not bearing a return authorization number, where required, will be refused.

OTHER CONDITIONS

This limited warranty is fully transferable provided the current owner furnishes the original proof of purchase from an authorized Bose dealer. THE PROVISIONS OF THIS LIMITED WARRANTY ARE IN LIEU OF ANY OTHER WARRANTY, WHETHER EXPRESSED OR IMPLIED, WRITTEN OR ORAL, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BOSE CORPORATION'S MAXIMUM LIABILITY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID BY YOU FOR THE PRODUCT. IN NO EVENT SHALL BOSE BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES HOWSOEVER CAUSED INCLUDING WITHOUT LIMITATION, LOSS OF REVENUE; LOSS OF ACTUAL OR ANTICIPATED PROFITS; LOSS OF BUSINESS; LOSS OF OPPORTUNITY; LOSS OF, DAMAGE TO OR CORRUPTION OF STORED DATA; THE REPLACEMENT OF EQUIPMENT AND PROPERTY, AND ANY COSTS OF RECOVERING, PROGRAMMING OR REPRODUCING ANY PROGRAM OR DATA STORED IN OR USED WITH YOUR BOSE PRODUCT. This warranty is void if the label bearing the serial number has been removed or defaced.

OTHER LEGAL RIGHTS

This limited warranty gives you specific legal rights, and you also may have other rights that vary from state to state or country to country. Some places do not allow limitations on implied warranties, or the exclusion or limitation of incidental or consequential damages.

Bose Corporation

For sales and order information, call: 1-800-996-BOSE

For product technical support, call: 1-800-994-BOSE

For more information on our products, visit: pro.bose.com

