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PROFESSIONAL

SHOWMATCH SYSTEMS

USAGE AND APPLICATION GUIDE

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SHOWMATCH SYSTEMS USAGE AND APPLICATION GUIDE

WELCOME

From small ground-stacked setups in modest venues to outdoor music festivals and arena-scale events, ShowMatch DeltaQ systems can be found all around the world in a variety of sound reinforcement applications.



ShowMatch loudspeakers deliver outstanding vocal clarity with consistent frequency response and sound pressure level across a defined coverage area. And with integrated DeltaQ technology you can ensure consistent performance across the entire audience area at any venue.

Adaptable and scalable, ShowMatch loudspeakers are the ideal solution for rental and staging market applications. When an event calls for lower SPL capabilities in a more compact format, simply build a smaller ShowMatch array with the same vertical coverage as larger, higher-powered ShowMatch setups.

About this guide

We offer a complete integrated suite of software design tools, digital signal processing, tour-ready amplifier racks and transportation accessories to support ShowMatch loudspeakers. This guide gives an overview of them.

Optimized for use in the demanding rental and staging environment, ShowMatch system solutions allow you to easily transport, set up, configure and use ShowMatch loudspeakers in the fast-paced environment of the entertainment production industry. ShowMatch systems enable rental sound and A/V production service providers to give their clients a brand they know and trust, while delivering outstanding audio quality for a wide range of field applications.



Rock al Parque, Bogotá, Colombia
ShowMatch system owner - Iluminación, Jaime Dussan

TABLE OF CONTENTS

- Safety Information 2
- ShowMatch System Components 7
 - SM5, SM10, SM20, SMS118..... 7
- Connections and Wiring 8
 - Full-range modules 8
- Amplification..... 8
 - Recommended Amplification for Rental/Production Applications..... 9
 - Recommended Signal Processing for Rental/Production..... 9
 - Recommended Amplification for Installed Applications 10
 - Economy Setting 10
 - Performance Setting 11
 - Recommended Signal Processing for Permanent Installations..... 12
- Designing ShowMatch Systems 13
 - System Concept 13
- System Software..... 15
 - EASE Focus..... 15
 - PowerSoft ArmoniaPlus 16
 - Example 1: Outdoor Live Music Example 1..... 17
 - Example 2: Outdoor Live Music Example 2..... 18
 - Example 3: Indoor Live Music Example 1..... 19
 - Example 4: Indoor Live Music Example 2 20
 - Example 5: Corporate AV Example 1..... 21
 - Example 6: Corporate AV Example 2 22
- ShowMatch Tour Rack..... 23
 - ShowMatch Tour Rack Configuration 23
 - Input Priority and Routing 23
 - Initial System Configuration 23
 - Initial System Loudspeaker Configurations..... 24
 - Input Configurations..... 25
 - Loudspeaker Connections 25
- ShowMatch Tour Rack Connection 26
- ShowMatch System Presets 29
 - ShowMatch Array Presets 29
 - ShowMatch Module Presets 30
 - ShowMatch Subwoofer Presets 31
 - ShowMatch Cardioid Presets 31
- ShowMatch Transportation Accessories..... 32
 - Truck Pack Information 34
- ShowMatch Suspension Hardware 35
 - ShowMatch Array Frame (SMAF) 35
 - ShowMatch T-Bar Array Frame (SMAFT) 36
 - ShowMatch Array Pullback Bracket (SMPULL) 37
- Array Suspension..... 39
 - Connect Array Frame to Subwoofer 40
 - Connect Pull Back Bracket to Full-range Module 41
 - Center Rail Suspension Using the Array Frame Multipoint Bracket..... 42
- Ground Stack Arrays Installation 42
 - Product Dimensions 43
 - Adjust Ground Stack Bracket Angle 43
 - Attach Ground Stack Bracket to ShowMatch SMS118 44
 - Attach Ground Stack Bracket to ShowMatch Array Frame 45
- ShowMatch System Reference Guide 46
 - System Testing..... 46
 - Measurement Set Up..... 46
 - ShowMatch Loudspeakers Technical Specifications..... 47
 - ShowMatch Systems Service and Repair Parts List 48

SAFETY INFORMATION

Important Safety Instructions

1. Read these instructions.
2. Heed all warnings.
3. Do not use this apparatus near water.
4. Clean only with a dry cloth.
5. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Visual Inspection and Maintenance of Components

Bose ShowMatch systems should be assembled, installed and suspended by expert, trained personnel who are experienced in suspending loudspeaker systems of this type. Prior to suspending or mounting any loudspeaker system, always inspect all components (suspension frames and hardware, enclosures, brackets, pins, eyebolts, etc.) for corrosion, deformation, cracks or missing parts that could compromise the strength and safety of the loudspeaker system being suspended. Do not suspend or mount the system until corrective action has been taken.

Installed systems should be regularly inspected to determine that load-bearing elements do not exhibit any condition which may compromise the strength and safety of the suspended loudspeaker system, or as required by local regulations.

The components used in suspending a ShowMatch system must be load rated for the intended use. Suspension hardware can be obtained from industrial supply catalogs and specialized distributors. Hardware intended for overhead use will comply with ASME B30.20 and will be manufactured according to product traceability procedures. Hardware of this type will have a specified working load limit (WLL).

For all other materials used in the suspension of ShowMatch systems, refer to the hardware manufacturer's inspection and maintenance guidelines.

Bose Professional is not responsible for the application of its products for any purpose, or the misuse of this information. Furthermore, Bose Professional is not responsible for the conditions arising from avoiding regular maintenance and inspections, or any other abuse condition.

Attachment to Structures

ShowMatch system installations should utilize a licensed Professional Engineer who is familiar with local building and seismic codes as it applies to the suspension of objects from building structures. The hardware and methods of installation must conform to the specifications of the Professional Engineer retained for the project. Failure to install components in the manner specified may result in damage, injury or death.

Important Safety Instructions

Please read this installation guide carefully and save it for future reference.

This product is intended for installation by professional installers only! This document is intended to provide professional installers with basic installation and safety guidelines for this product in typical fixed-installation or portable-system applications. Please read this document and all safety warnings before attempting installation.

WARNINGS:



All Bose products must be installed in accordance with local, state, federal and industry regulations. It is the installer's responsibility to ensure installation of the loudspeakers and mounting system is performed in accordance with all applicable codes, including local building codes and regulations. Consult the local authority having jurisdiction before installing this product.

Unsafe mounting or overhead suspension of any heavy load can result in serious injury or death, and property damage. It is the responsibility of the installer to evaluate the reliability of any mounting method used for their application. Only professional installers with the knowledge of proper hardware and safe mounting techniques should attempt to install any loudspeaker overhead.

CAUTION:



Installed loudspeaker arrays require regular inspection and routine maintenance to ensure proper function and safe operation. Inspect mounting hardware and attachments for signs of corrosion, bending or any other condition that may decrease the structural integrity. Immediately replace worn or damaged components.

Do not make unauthorized alterations to this product; doing so may compromise safety, regulatory compliance, system performance, and may void the warranty.

Never exceed 24 ShowMatch full-range or 18 ShowMatch subwoofer modules using the integrated suspension system for arrays. Please refer to product labels for Working Load Limit data.

Visual Inspection and Maintenance of Components

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Installed systems should be regularly inspected to determine that load-bearing elements do not exhibit any condition which may compromise the strength and safety of the suspended loudspeaker system, frequency of inspection, or as required by local regulations.

The components used in suspending a ShowMatch system must be load rated for the intended use. Suspension hardware can be obtained from industrial supply catalogs and specialized distributors. Hardware intended for overhead use will comply with ASME B30.20 and will be manufactured according to product traceability procedures. Hardware of this type will have a specified working load limit (WLL).

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Attachment to Structures

ShowMatch system installations should utilize a licensed Professional Engineer who is familiar with local building and seismic codes as it applies to the suspension of objects from building structures. The hardware and methods of installation must conform to the specifications of the Professional Engineer retained for the project. Failure to install components in the manner specified may result in damage, injury or death.

Note: Always use recommended software to confirm safe working load limits with exact array configurations, pitch angles, and connection points.

Guidelines for Installation and Setup of ShowMatch DeltaQ Array Module Loudspeakers

Installation information contained in this document is only a general guideline and cannot, as such, represent all requirements and precautions. Accordingly, anyone using this material assumes all liability and is expressly responsible for the safety of all loudspeaker array designs and mounting configurations applied in practice.

Prior to the installation or portable-system setup of any overhead loudspeaker, a licensed Professional Engineer must approve the location and method of attachment to the building structure or support-truss structure and confirm they are consistent with all building codes and regulations. Ensure the mounting surface and the method of attaching the loudspeaker system to the surface is capable of supporting the total weight of the system. A safety factor of 10:1 is recommended.

Obtain all mounting system components from reputable manufacturers. Select a mounting system appropriate for your loudspeaker system and its intended application. We recommend Bose mounting accessories when available. A licensed professional engineer must review the design and fabrication of any custom mounting hardware.

Bose ShowMatch array module loudspeakers feature an integrated quick-pin suspension system, designed to facilitate loudspeaker array mounting by professional installers. Module to module connections should be made using only the integrated suspension link-bars with the included or optional load-rated "quick pin" fasteners. Unmarked (not rated for load bearing) fasteners should not be used.

Do not suspend loudspeaker using handles as attachment points. Handles are NOT designed for load bearing!

Use a safety cable, separately attached to the cabinet, at a point not in common with the load bearing attachment points of the mounting system to the loudspeaker. This is recommended even if not required by local regulation. Consult a licensed Professional Engineer or a suspension professional for proper design and installation.

Do not under any circumstances climb the array.

Instrucciones de Seguridad Importantes

Lea detenidamente esta guía de instalación y consérvela para consultarla en el futuro.

Este producto está diseñado para que solo instaladores profesionales realicen su instalación. Este documento está diseñado para proveer las pautas de seguridad e instalación básicas a los instaladores profesionales de este producto en aplicaciones de sistema portátil e instalación fija comunes. Lea este documento y todas las advertencias de seguridad antes de comenzar la instalación.

ADVERTENCIAS:



Todos los productos Bose deben instalarse según las reglamentaciones locales, estatales, federales y del sector. Es responsabilidad del instalador garantizar que la instalación del sistema de soporte y los altavoces se realice conforme a los códigos aplicables, incluidos los códigos y las reglamentaciones de construcción locales. Consulte a la autoridad local competente antes de instalar este producto.

El montaje inseguro o la suspensión en alturas de cualquier carga pesada puede provocar lesiones graves o la muerte, además de daños a la propiedad. Es responsabilidad del instalador evaluar la fiabilidad de cualquier método de montaje utilizado para su aplicación. Solo los instaladores profesionales con el conocimiento de los componentes físicos adecuados y las técnicas de montaje seguro deberían intentar instalar cualquier altavoz en altura.

PRECAUCIÓN:



Se deben inspeccionar regularmente los arreglos instalados de altavoz, además de realizarles mantenimiento de rutina con el propósito de garantizar su funcionamiento adecuado y operación segura. Revise los accesorios y los componentes físicos para instalación, y busque signos de corrosión, torcimiento o cualquier otra condición que pueda disminuir la integridad estructural. Sustituya inmediatamente los componentes desgastados o dañados.

Solo realice alteraciones autorizadas a este producto. De lo contrario, podría comprometer la seguridad, el cumplimiento de las reglamentaciones y el rendimiento del sistema; además, podría anular la garantía.

Nunca exceda 24 módulos de rango completo ShowMatch o 18 módulos de subwoofer ShowMatch usando el sistema de montaje integrado para los arreglos. Consulte las etiquetas de producto para obtener información sobre los datos del límite de carga de trabajo.

Nota: Utilice siempre el software Modeler o “Bose Array Tool” para confirmar los límites de seguridad de carga de trabajo con cada configuración del arreglo, ángulos de inclinación y los puntos de conexión.

Pautas de instalación y configuración de los altavoces de arreglo modular ShowMatch DeltaQ

La información de instalación incluida en este documento solo corresponde a pautas generales y, como tal, no puede representar todos los requisitos ni todas las precauciones. Por lo tanto, todo aquel que utilice este material asume toda la responsabilidad y es expresamente responsable de todos los diseños de arreglo y las configuraciones de montaje del altavoz realizadas en la práctica.

Antes de la instalación o la configuración del sistema portátil de cualquier altavoz en altura, un ingeniero profesional licenciado debe aprobar la ubicación y el método de fijación a la estructura del inmueble o a la estructura colgante, y confirmar que sean compatibles con todos los códigos y las reglamentaciones de construcción. Asegúrese de que la superficie de montaje y el método de fijación a la superficie del sistema de altavoces pueda soportar el peso total del sistema. Se recomienda un factor de seguridad de 10:1.

Obtenga todos los componentes de montaje del sistema de fabricantes acreditados. Seleccione un sistema de montaje adecuado para su sistema de altavoz y su aplicación prevista. Recomendamos que utilice accesorios de montaje de Bose si están disponibles. Un ingeniero profesional licenciado debe revisar el diseño y la fabricación de todos los componentes físicos personalizados para la instalación.

Los altavoces modulares ShowMatch incluyen un sistema de montaje de conexión rápida diseñado para facilitar el trabajo de los instaladores profesionales. Las conexiones modulares se deben realizar solo con las barras de conexión de montaje y las sujeciones de conexión rápida de carga incluidos u opcionales. No se deben utilizar sujeciones sin marcas (no aptas para soportar cargas).

No utilice las asas como puntos de fijación para suspender el altavoz. Las asas NO están diseñadas para soportar la carga.

Utilice un cable de seguridad, unido de forma independiente al gabinete, en un punto distinto del punto de fijación de la carga del sistema de montaje del altavoz. Esto se recomienda incluso si la reglamentación local no lo requiere. Consulte a un ingeniero profesional licenciado o a profesionales de andamiaje para realizar un diseño y una instalación adecuados.

Bajo ninguna circunstancia trepe el arreglo.

Instructions Importantes Relatives à la Sécurité

Consultez attentivement cette notice d'installation et conservez-la pour toute référence future.

L'installation de ce produit doit être effectuée par un technicien professionnel ! Ce document à l'intention des installateurs professionnels contient les directives de pose et de sécurité relatives à ce produit en installation fixe ou dans des applications portables. Veuillez lire ce document, ainsi que l'ensemble des avertissements de sécurité avant de procéder à l'installation.

AVERTISSEMENTS:



Tous les produits Bose doivent être installés dans le respect des réglementations professionnelles, locales et nationales. L'installateur est responsable du respect de tous les codes et règlements locaux et nationaux en vigueur applicables à l'installation et au montage des enceintes. Consultez les autorités locales compétentes avant d'installer ce produit.

Tout montage non sécurisé d'une lourde charge peut provoquer des dégâts matériels et des blessures graves, voire la mort. Il en va de la responsabilité de l'installateur d'évaluer la fiabilité de la méthode de montage utilisée, en fonction de l'application. Seul un installateur professionnel connaissant les accessoires et techniques de montage adaptés est qualifié pour installer des enceintes suspendues.

ATTENTION:



Une fois installées, les systèmes d'enceintes doivent faire l'objet d'une inspection et d'un entretien préventif afin d'assurer un fonctionnement en toute sécurité. Vérifiez que les composants et les points de fixation ne portent pas de traces de corrosion, de déformations ou autre signe de détérioration de leur intégrité structurelle. Remplacez immédiatement tout composant usé ou endommagé.

Toute modification non autorisée peut compromettre votre sécurité, le respect des réglementations et le bon fonctionnement de l'appareil, et en invalidera la garantie.

Ne connectez pas plus de 24 modules ShowMatch complets ou 18 caissons de basses ShowMatch au moyen du système de suspension intégré. Veuillez vous reporter à l'étiquetage des produits pour connaître les limites de charge.

Note: Toujours utiliser le logiciel Bose Modeler ou «Bose Array Tool» pour confirmer les limites sécuritaires d'accrochage ainsi que configurations, angles d'orientation et points de connexion.

Instruction d'installation et de configuration du module d'enceintes ShowMatch

Les directives d'installation contenues dans le présent document ne représentent que des conseils généraux et, à ce titre, ne présentent pas tous les critères et précautions de rigueur. En conséquence, toute personne utilisant ce document assume seule l'entière responsabilité de la sécurité d'installation de toutes les enceintes et de la configuration pratique de leur montage.

Avant l'installation d'un système portable ou d'une enceinte suspendue, il est nécessaire de faire approuver par un professionnel dûment autorisé l'emplacement et la méthode de fixation à la structure du bâtiment et de lui faire confirmer que cette fixation est conforme au code du bâtiment et aux réglementations. Il est important de s'assurer que la surface de montage et la méthode de fixation des enceintes à cette surface sont adaptées au poids total du système. Par sécurité, il est recommandé de respecter un rapport de poids de 10:1.

Tous les composants du système de montage doivent provenir d'un fabricant de bonne réputation. Le système de montage choisi doit être adapté aux enceintes et à l'utilisation prévue. Il est recommandé d'utiliser les accessoires de montage Bose disponibles. Faire contrôler par un professionnel qualifié la conception et la fabrication des accessoires de montage sur mesure.

Le module d'enceintes Array Bose ShowMatch est doté d'un système de suspension par goupilles « quick pin » intégré, destiné à en faciliter le montage par un installateur professionnel. Les connexions entre modules doivent être réalisées uniquement au moyen des barres de suspension intégrées, avec les goupilles « quick pin » résistantes à la charge fournies ou en option. Veillez à ne pas utiliser de fixations dont la classe de résistance à la charge n'est pas indiquée.

Ne pas utiliser les poignées de transport des enceintes comme points de suspension. Ces poignées ne sont pas conçues pour supporter une charge permanente!

Fixer un câble de sécurité, attaché séparément au coffret de l'enceinte, en un point autre que les points de fixation du système de montage de l'enceinte. Cette mesure est recommandée, même si elle n'est pas imposée par la réglementation locale. Pour la conception et la réalisation de l'installation, consulter un professionnel agréé.

Ne monter sur le système en aucune circonstance.

Wichtige Sicherheitshinweise

Bitte lesen Sie diese Montageanleitung sorgfältig durch und bewahren Sie sie zum späteren Nachschlagen auf.

Dieses Produkt darf nur von fachkundigen Monteuren installiert werden! Dieses Dokument soll fachkundigen Monteuren grundlegende Installations- und Sicherheitsrichtlinien für dieses Produkt in mobilen und festinstallierten Anwendungen bieten. Bitte lesen Sie dieses Dokument und alle Sicherheitshinweise vor der Installation durch.

WARNUNG:



Alle Produkte von Bose müssen gemäß lokalen und gesetzlichen Vorschriften sowie gemäß allen Branchenbestimmungen installiert werden. Der Monteur ist dafür verantwortlich, sicherzustellen, dass die Installation der Lautsprecher und der Halterung gemäß allen geltenden Vorschriften durchgeführt wird, einschließlich örtlicher Bauvorschriften und -bestimmungen. Wenden Sie sich vor der Installation dieses Produkts an die zuständige abnehmende Behörde.

Eine unsichere Befestigung schwerer Lasten oder deren Aufhängung über Kopf kann zu schweren oder tödlichen Verletzungen und Sachschäden führen. Der Monteur ist dafür verantwortlich, die Zuverlässigkeit der für die Anwendung verwendeten Befestigungstechniken zu prüfen. Nur fachkundige Monteure mit Wissen über sachgemäße Befestigungselemente und sichere Befestigungstechniken sollten Lautsprecher über Kopf installieren.

VORSICHT:



Installierte Lautsprecher erfordern regelmäßige Überprüfung und Routinewartung, um die ordnungsgemäße Funktion und den sicheren Betrieb zu gewährleisten. Überprüfen Sie die Befestigungselemente und das Zubehör auf Anzeichen von Korrosion, Verbiegen oder andere Anzeichen, die die mechanische Stabilität verringern können. Ersetzen Sie abgenutzte oder beschädigte Teile sofort.

Keine nicht autorisierten Veränderungen am Produkt vornehmen. Diese können die Sicherheit, die Einhaltung von Richtlinien und die Systemleistung beeinträchtigen. In diesem Fall kann die Garantie ungültig werden.

Nutzen Sie das integrierte Array-Verankerungssystem niemals für mehr als 24 ShowMatch Fullrange-Module bzw. 18 ShowMatch Subwoofer-Module. Angaben zur zulässigen Traglast entnehmen Sie bitte dem Typenschild.

Anmerkung: Verwenden Sie immer die Bose Modeler Software oder die "Bose Array Tool" Software, um die sicheren Lastbedingungen (Safe Working Load Limit) für eine Array-Konfiguration mit gegebenen Neigungswinkeln und Verbindungspunkten zu ermitteln.

Richtlinien für die Montage und Inbetriebnahme von ShowMatch Array Modul Lautsprechern

Die in diesem Dokument enthaltenen Installationsinformationen sind nur eine allgemeine Richtlinie und können daher nicht alle Anforderungen und Vorsichtsmaßnahmen darstellen. Demgemäß übernimmt jeder, der dieses Material verwendet, die gesamte Haftung und ist ausdrücklich verantwortlich für die Sicherheit aller Lautsprecher-Array-Designs und deren Montagetechniken, die in der Praxis eingesetzt werden.

Vor der Installation oder temporären Inbetriebnahme von Lautsprechern über Kopf muss ein zugelassener fachkundiger Techniker den Ort und die Art der Befestigung an der Gebäude- bzw. Trägerstruktur prüfen und bestätigen, dass diese allen Bauvorschriften und Bestimmungen entspricht. Vergewissern Sie sich, dass die Befestigungsfläche und die Art und Weise der Befestigung des Lautsprechersystems an der Fläche geeignet ist, das Gesamtgewicht des Systems zu tragen. Es wird ein Sicherheitsfaktor von 10:1 empfohlen.

Beschaffen Sie sich alle Komponenten der Halterung von zertifizierten Herstellern. Wählen Sie eine Halterung, die für Ihr Lautsprechersystem und die beabsichtigte Anwendung geeignet ist. Wir empfehlen Befestigungszubehör von Bose, sofern verfügbar. Ein zugelassener fachkundiger Techniker muss die Auslegung und die Herstellung der benutzerspezifischen Befestigungselemente überprüfen.

Bose ShowMatch Array Modul Lautsprecher verfügen über integrierte Montagepunkte mit Schnellverschlüssen, was die Installation des Lautsprecher-Arrays durch fachkundige Monteure erleichtern soll. Die Module dürfen untereinander ausschließlich mit den integrierten Verbindungsstangen sowie den im Lieferumfang enthaltenen bzw. optional erhältlichen und für die Last zugelassenen Schnellverschlüssen verbunden werden. Nicht gekennzeichnete (nicht für das Tragen von Lasten geeignete) Befestigungselemente dürfen nicht verwendet werden.

Hängen Sie die Lautsprecher nicht mithilfe von Griffen als Befestigungspunkte auf. Griffen sind NICHT als Montagepunkte vorgesehen.

Bringen Sie ein zusätzliches Sicherungsseil an der Box an. Verwenden Sie hierzu nicht die tragenden Befestigungspunkte, die die Halterung mit dem Lautsprecher verbinden. Wir empfehlen diese Sicherheitsmaßnahme auch dann, wenn diese von den örtlichen Behörden nicht vorgeschrieben ist. Wenden Sie sich wegen der sachgemäßen Auslegung und Installation an einen zugelassenen fachkundigen Techniker oder ein Fachunternehmen.

Besteigen Sie unter keinen Umständen das Array.

SHOWMATCH SYSTEM COMPONENTS

All ShowMatch System modules can be deployed for both fixed installation and portable/rental applications — from small clubs and houses of worship to outdoor concert venues to performing arts centers and corporate AV productions. ShowMatch DeltaQ arrays deliver more consistent coverage over a wide frequency range with outstanding vocal and musical clarity. Each two-way module requires two channels of amplification and associated DSP to provide full-range response from 59Hz-18 kHz.

Tour-sound output level — 4x Bose EMB2S compression drivers, improved with more HF output, and 2x8-inch neodymium high-power woofers allow array output up to 145 dB SPL¹.

Three-point "quick-pin" suspension — Fast, easy setup of up to 24 full-range modules with a 10:1 safety factor.

Side suspension guards/handles are easily removed for permanent installations, reducing width and creating a cleaner visual appearance.²

Changeable waveguides for the creation of DeltaQ arrays, or arrays with asymmetrical horizontal coverage.



SM5

ShowMatch SM5 full-range array modules provide 5° nominal vertical coverage with included changeable waveguides offering choice of 70° or 100° horizontal coverage with optional accessory 55° waveguides.

SM5 modules offer suspension overlap angle adjustment from 0 to 5°, in 1° increments, to provide increased throw distance and SPL.



SM5 Accessory Waveguide

The horizontal coverage pattern of ShowMatch full-range loudspeakers can be changed by replacing the factory-installed waveguides with the optional accessory waveguides. The SM5WG55 waveguide provides 55° horizontal coverage for the SM5 loudspeaker.



SM20

ShowMatch SM20 full-range array modules provide 20° nominal vertical coverage with included changeable waveguides offering 70° or 100° horizontal coverage and optional accessory 120° waveguides.



SM20 Accessory Waveguide

The horizontal coverage pattern of ShowMatch full-range loudspeakers can be changed by replacing the factory-installed waveguides with the optional accessory waveguides. The SM20WG12 waveguide provides 120° horizontal coverage for the SM20 loudspeaker.



SM10

ShowMatch SM10 full-range array modules provide 10° nominal vertical coverage with included changeable waveguides offering choice of 70° or 100° horizontal coverage.



SMS118

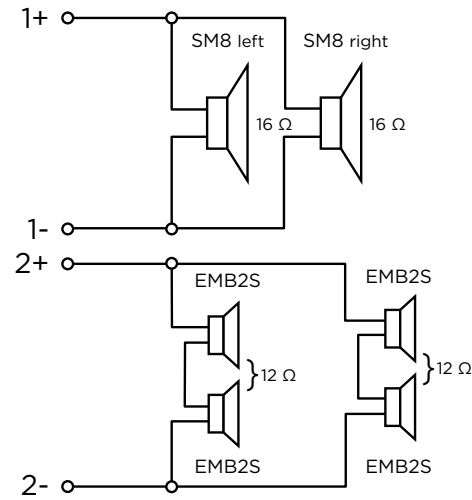
ShowMatch SMS118 subwoofers are designed to integrate with DeltaQ array loudspeakers and extend low-frequency response down to 29 Hz. The SMS118 enclosure width and integrated suspension allows fast integration in arrays with ShowMatch full-range modules using optional array frames and accessories. The portable-rated Baltic Birch enclosure may also be used for ground-stack applications.

¹ Calculated Peak SPL of 24-module array.

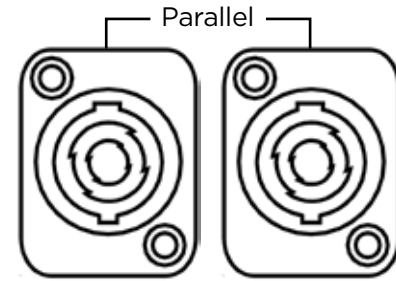
² Requires the use of short quick pins; Bose PN: 770304-0010.

CONNECTIONS AND WIRING

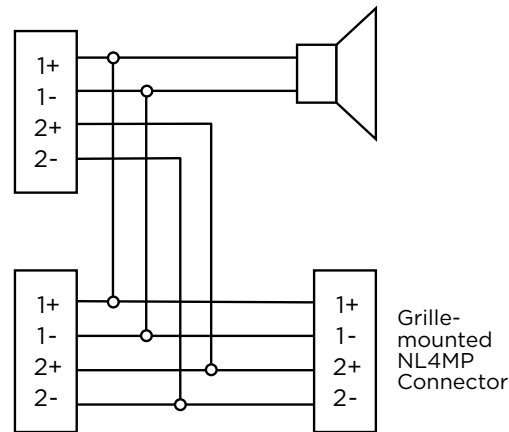
Full-range Modules



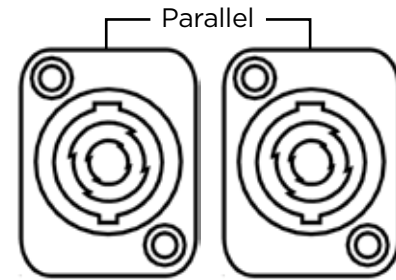
Bi-Amp	
LF+	1+
LF-	1-
HF+	2+
HF-	2-
Power Handling	
LF:	450 W
HF:	100 W
Impedance	
LF:	8 Ω HF: 6 Ω



Subwoofer Module



Discrete	
LF+	1+
LF-	1-
Thru	2+
Thru	2-
Power Handling	
LF:	750 W
Impedance	
LF:	4 Ω



AMPLIFICATION

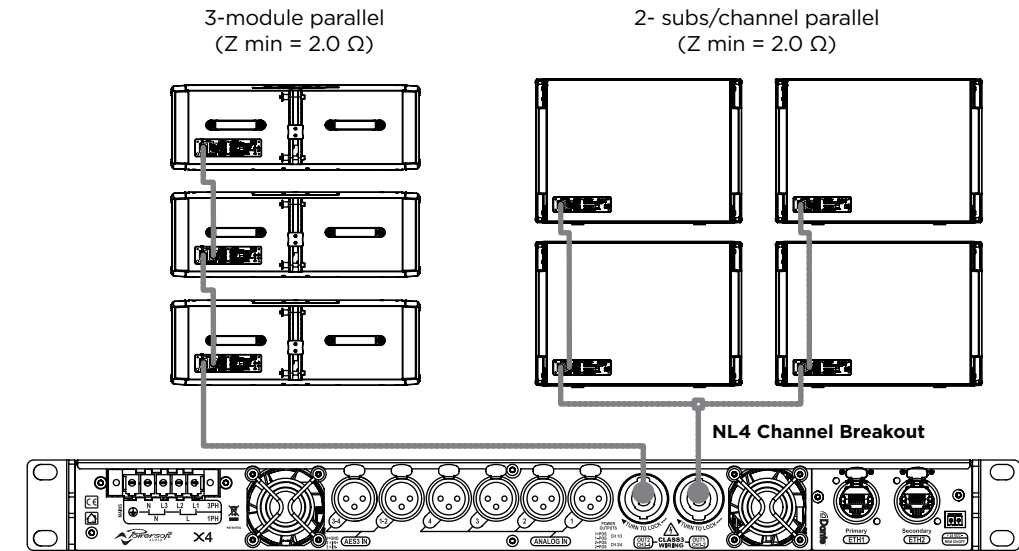
ShowMatch full-range modules require two (2) amplifier channels with external DSP active crossover filters (modules contain no passive crossover network). Each module contains series-parallel connections of four (4) compression drivers delivering nominal 6-ohm impedance, with a long-term power-handling rating of 100 watts and peak rating of 400 watts. The low-frequency section contains parallel connections of two (2) woofers delivering nominal 8-ohm impedance, with a long-term power-handling rating of 450 watts and a peak rating of 1800 watts.

ShowMatch subwoofer modules contain a single 18-inch woofer with nominal 4-ohm impedance, with a long-term power rating of 750 watts and a peak rating of 3000 watts.

Recommended Amplification for Rental and Production Applications

Bose Professional recommends the use of PowerSoft series amplifiers for rental and production applications. The ShowMatch Tour Rack includes three PowerSoft x4D amplifiers as the standard building block for a variety of system configurations.

(See Page 22 for additional information on the ShowMatch Tour Rack.)



Recommended Signal Processing for Rental and Production

Digital signal processing (DSP) equipment is required for infrasonic protection, crossover, equalization, and protection limiting functions.

A set of presets is available for various system configurations and are supplied as part of the preset library with PowerSoft Armonia software and Bose ControlSpace software. To select a preset within ArmoniaPlus software, use one of the following two methods:

Within the ArmoniaPlus application workflow select the **Design > Add** workflow step to access the design workspace. Select **Add Speaker** from the top menu and you are presented with the ArmoniaPlus preset library. Bose ShowMatch presets can be found here.



Once the preset is selected, the new virtual loudspeaker is added to the workspace.

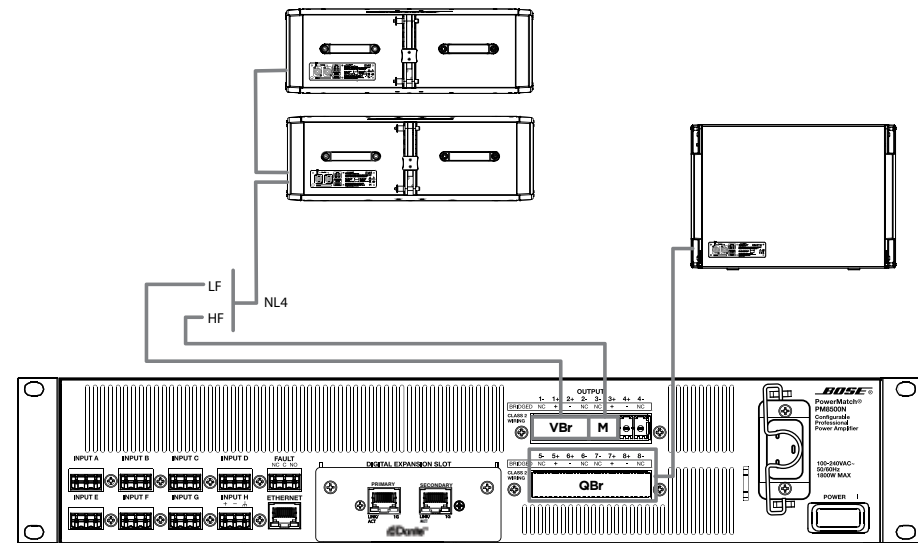
To load the preset into the amplifier you will need to assign the virtual loudspeaker to an amplifier within the **Design > Link** area of the workflow. This process automatically loads the correct LF and HF preset equalization.

Recommended Amplification for Installed Applications

Bose Professional recommends the use of Bose PowerMatch PM8500 series amplifiers for applications where the system will be permanently installed. Two configuration options are available:

Economy (-2.6 dB peak output in module LF)

This configuration is ideal for applications that do not require the full peak output of the LF section of the array to meet customer SPL requirements. In this set up a single Voltage Bridged (VBr) channel is used to drive two LF sections and a single Mono (M) channel is used to drive two HF sections within the array. A single Quad Bridge (QBr) channel is used for each SMS118 subwoofer.

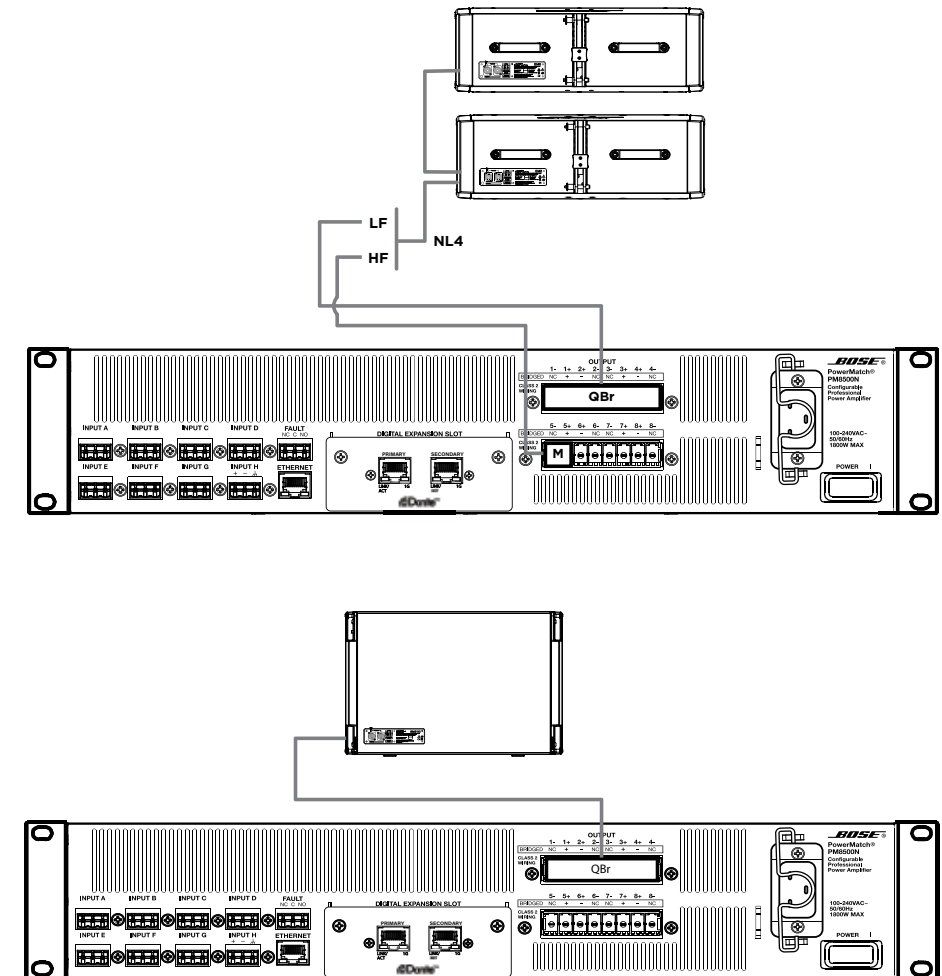


Performance

In this configuration, full peak power is delivered to the LF section of the array. This configuration is recommended for live music performance venues.

In this configuration, a single Quad Bridge (QBr) channel is used to power two LF sections and a single Mono (M) channel is used to power two HF sections of the array.

The SMS118 is powered by a single Quad Bridge channel.



Recommended Signal Processing for Permanent Installations

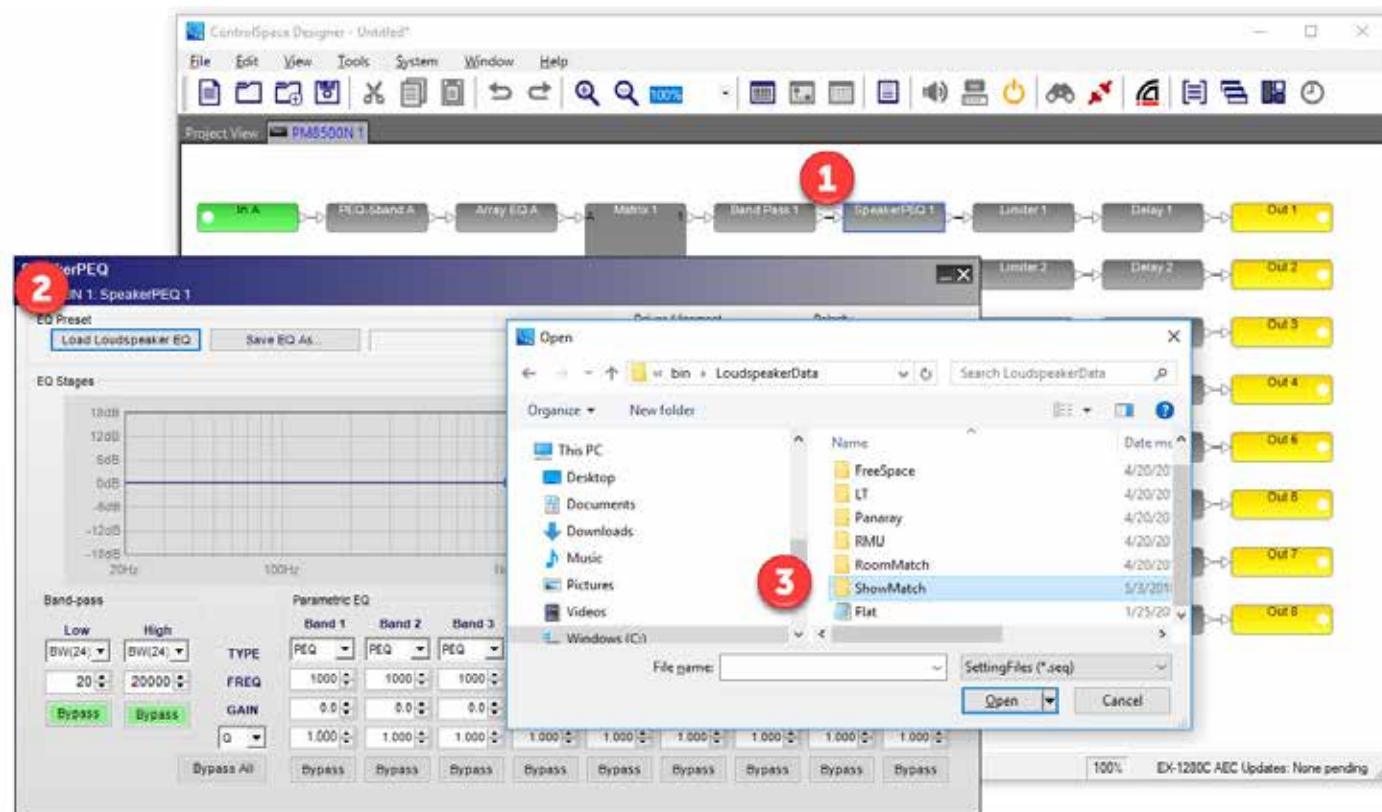
The Bose PowerMatch PM8500N power amplifier (sold separately) is easily configured to provide the recommended amplifier power for ShowMatch modules and arrays. The PM8500N also provides presets for all recommended signal processing, including active crossover, EQ, alignment delay, protection limiting, array compensation EQ settings, and cardioid subwoofer settings when used with the ShowMatch SMS118 subwoofer.

Presets may be selected from either the front panel of the PM8500N or through the ControlSpace Designer software.

From the front panel interface select Menu > DSP > Speaker Presets > ShowMatch to access the loudspeaker preset library for ShowMatch systems.

Within ControlSpace Designer, while connected to the amplifier via either USB or Ethernet, loudspeaker presets are applied within the loudspeaker processing block of the output processing section for the desired channel.

- 1) Open the SpeakerPEQ block for the channel where the preset EQ will be applied
- 2) Select Load Loudspeaker EQ
- 3) Navigate to the ShowMatch directory to access the ShowMatch system presets.



ShowMatch systems utilize two preset components, a low frequency section, and a high frequency section. When working with ControlSpace Designer or the front panel interface of the PowerMatch amplifier you will need to load the preset for each section, (LF or HF), separately.

For additional information on system presets see Section 6.2, ShowMatch System Presets in this guide.

DESIGNING SHOWMATCH SYSTEMS

System Concept

ShowMatch systems feature next-generation array technology to deliver the scalability and flexibility needed to support live music reproduction in a variety of venue shapes and sizes. Each ShowMatch array module includes two eight-inch high-power neodymium woofers and four proprietary EMB2-S compression drivers capable of delivering array output up to 145 dB SPL¹.

Available in three vertical angles of 5, 10 and 20-degrees, each ShowMatch array module features changeable horizontal waveguides that can be preconfigured to create both standard and DeltaQ line arrays.

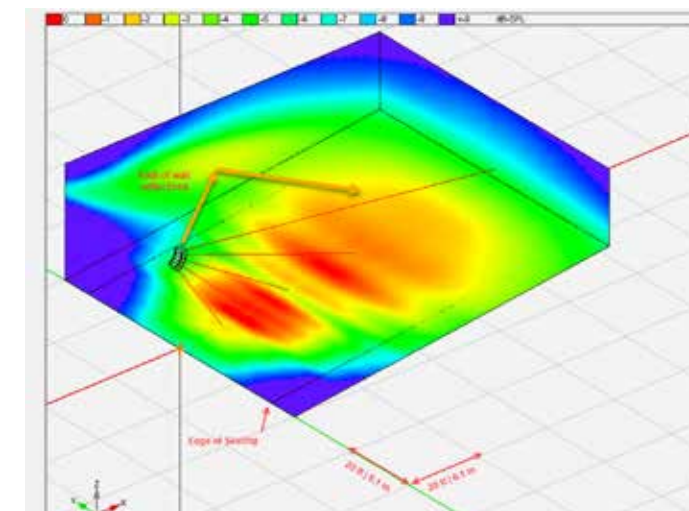
DeltaQ line arrays provide consistent coverage and tonality across the coverage area by utilizing loudspeaker directivity, Q, rather than electronic gain and module splay angles. This concept is particularly useful in installed applications where the system designer's intent is to fine tune the coverage of the array to the shape of the audience area. Optimizing the coverage of the array further improves performance by reducing unwanted room reflections which cause an inconsistent response and drive reverberation, reducing both speech and musical clarity.

ShowMatch array modules are offered in three vertical and four horizontal coverage patterns which can be configured as shown in the following table:

	Available Horizontal Angles			
	55°	70°	100°	120°
SM5	Accessory	Pre-installed	Included with module	NA
SM10	NA	Included with module	Pre-installed	NA
SM20	NA	Included with module	Pre-installed	Accessory

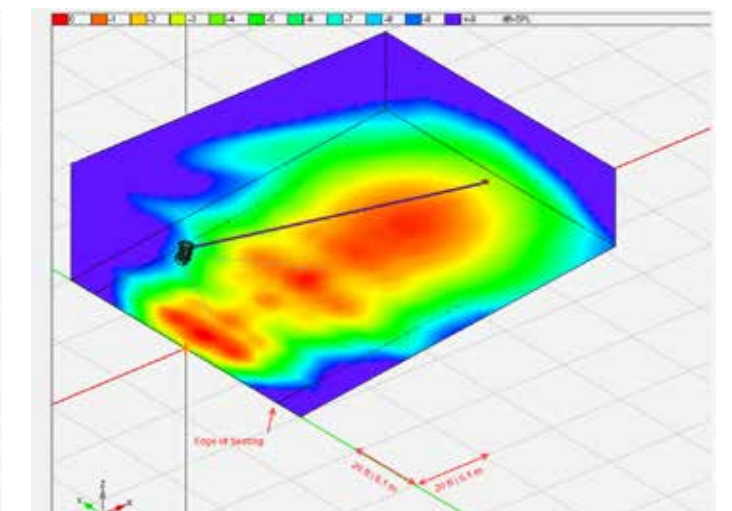
Using the various module configurations, it is possible to create a system design which focuses the energy on the audience and minimizes the energy placed on side walls. The following illustration compares a ShowMatch DeltaQ line array to a traditional line array comprised of modules which use the same vertical and horizontal angle.

Traditional Line Array with Fixed Horizontal Angles



Mid-band (1-4 kHz) coverage for traditional array with fixed vertical and horizontal angles. To provide a consistent level across the coverage area, the input to individual modules varies.

DeltaQ Array



Mid-band (1-4 kHz) coverage for a ShowMatch DeltaQ array. In this case the horizontal and vertical coverage vary across the length of the array. A consistent level across the audience area is achieved with acoustic gain rather than drive level from the amplifier.

¹ Calculated peak SPL for a 24 module array.

In rental and touring applications the DeltaQ concept offers the same consistency of coverage and response across the coverage area, and in smaller, low-ceiling applications this concept can be used to deploy smaller arrays, which deliver wide vertical coverage, as compared to arrays constructed of traditional line array modules.

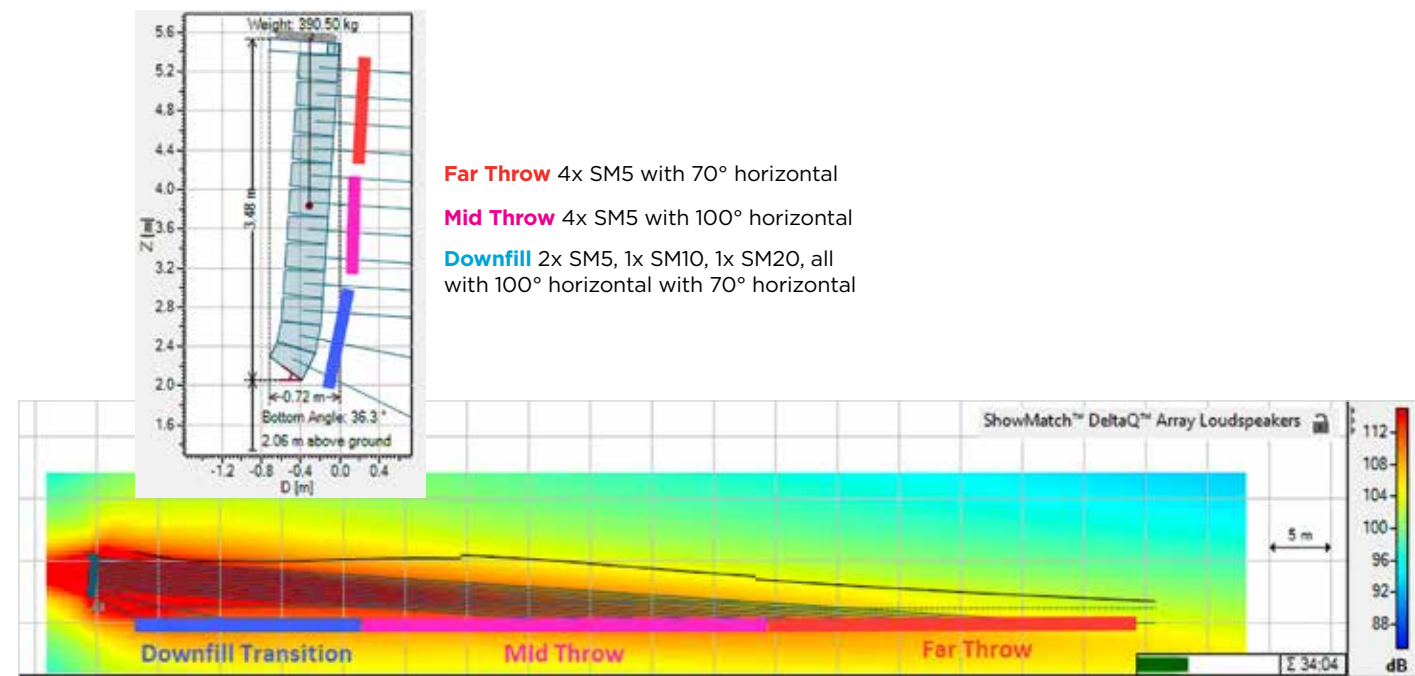
A typical rental inventory includes all the fundamental components to build arrays of various sizes and output levels. These components can be easily mixed and matched, transported, and configured for different applications.

Each array is comprised of three primary components:

Far Throw array sections are comprised of SM5 modules with a 70-degree horizontal coverage angle. The overall size and throw distance required for the application will determine the quantity of modules configured in this way.

Mid Throw array sections constitute the main portion of the array and are comprised of SM5 modules with a 100-degree horizontal coverage angle.

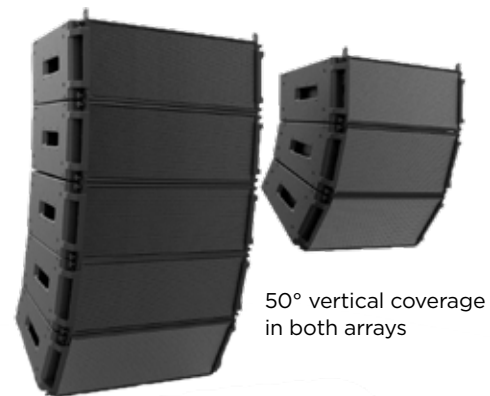
Downfill Transition is the final section of the array and uses four modules to deliver 40 degrees of vertical coverage to the nearest audience area. This is accomplished with two SM5 modules, one SM10 module, and one SM20 module, where all modules have a 100-degree horizontal coverage angle.



Typical ShowMatch array for outdoor concert supporting an audience of up to 5,000 people.

In low-ceiling applications, a DeltaQ array can be deployed to deliver an array with a wide vertical coverage angle using fewer modules than traditional systems. In applications where the SPL level can be met with this approach, a DeltaQ array offers the following advantages:

- Reduced array weight
- Improved sight lines
- Reduced set-up and installation time



¹ For a detailed technical explanation of DeltaQ arrays see the AES paper "The influence of the directional radiation performance of the individual speaker modules, and overall array, on the tonal balance, quality and consistency of sound reinforcement systems," presented at the 131st AES Convention in New York City, October, 2011.

SYSTEM SOFTWARE

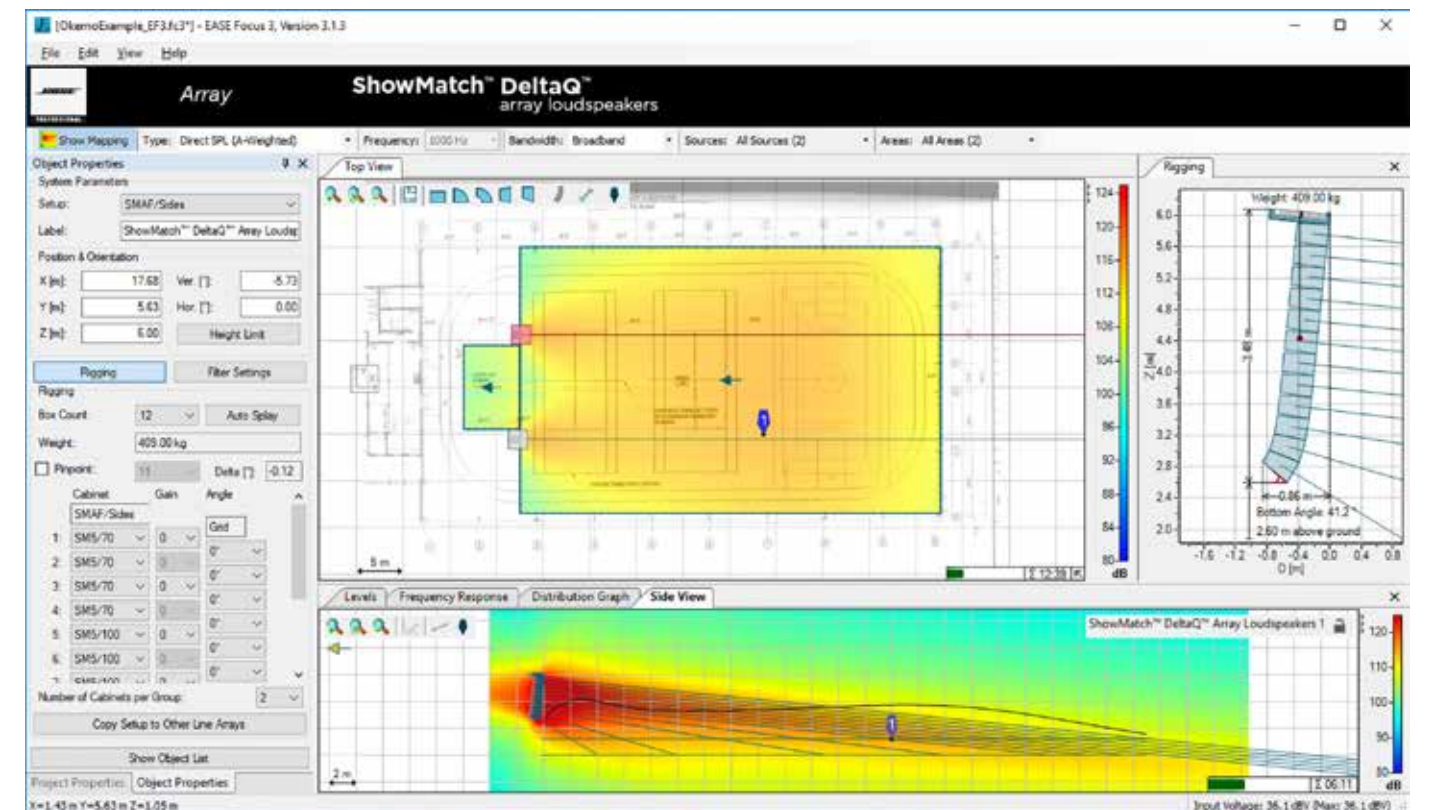
EASE Focus

EASE Focus 3 software allows 3D modeling of audience areas, predictions of acoustic direct-field coverage, sound levels, and frequency response.

Once an array has been created, inter-box splay angles may be configured manually or using automated splay calculation. SMS118 cardioid subwoofer presets are available within the software for the creation of cardioid subwoofer arrays.

At the completion of the design a customizable report can be generated which contains the necessary details for proper placement, aiming and configuration of array parameters.

The Bose ShowMatch GLL files are licensed to allow use in both Focus and "full" EASE software.



PowerSoft ArmoníaPlus

PowerSoft ArmoníaPlus software provides ShowMatch system owners with the ability to set up and remotely control and operate ShowMatch systems for rental applications and serves as the primary interface to the ShowMatch Tour Rack.

Preset files are available with EQ, crossover, and limiter settings for all ShowMatch modules and subwoofers. In addition, sample system configuration files are available for typical array configurations.

PowerSoft Armonía software is available for download at www.Armonia.powersoft.it/download-Armonia/

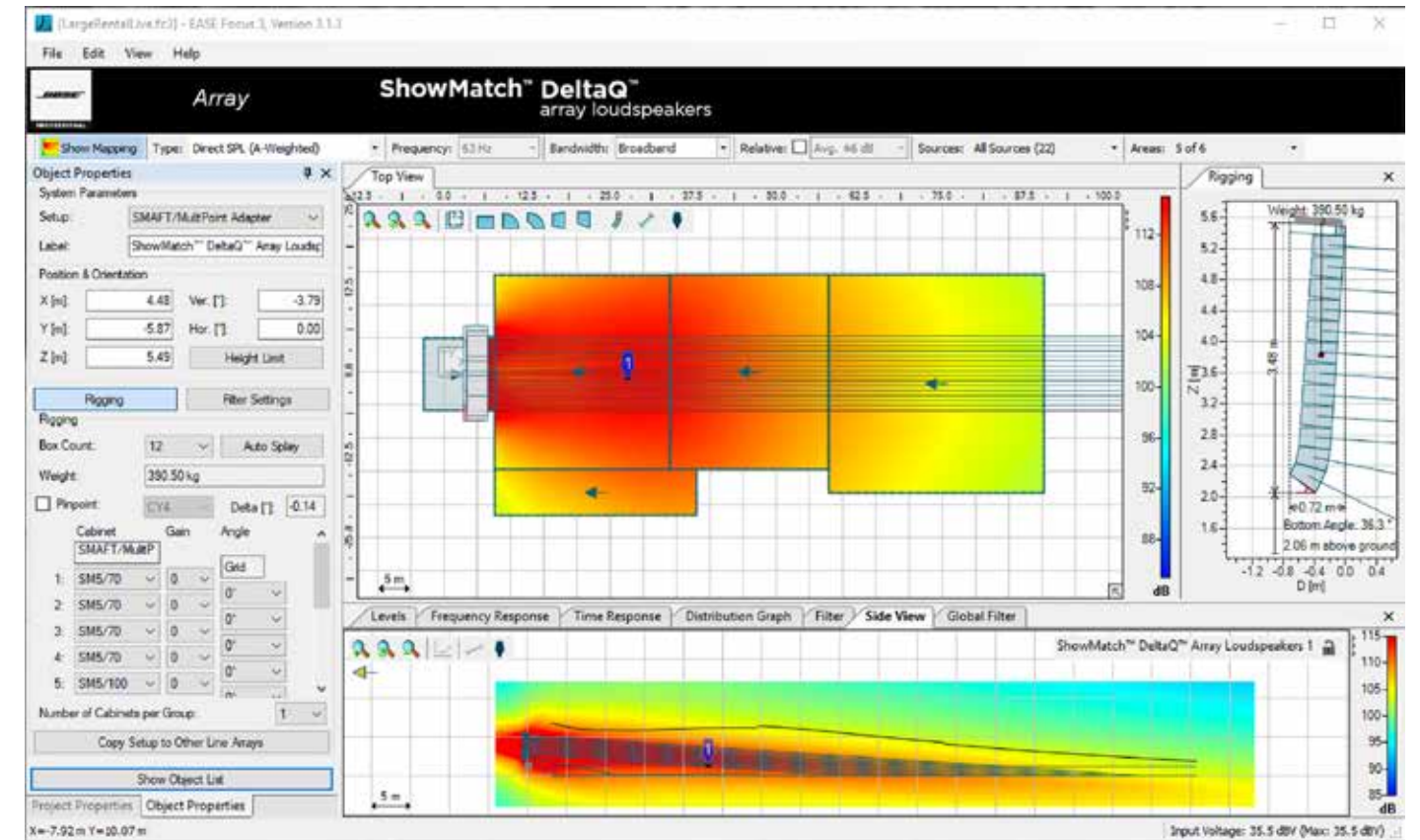


Preset downloads are available at PRO.BOSE.COM.

Outdoor Live Music Example 1

An outdoor live music application with an audience size of 5,000. In this application, two 12-module arrays are flown, one to the left of the stage and one to the right with 16 SMS118 subwoofers arrayed in the front.

The expected SPL at the front-of-house position is 114 dBA with program material.

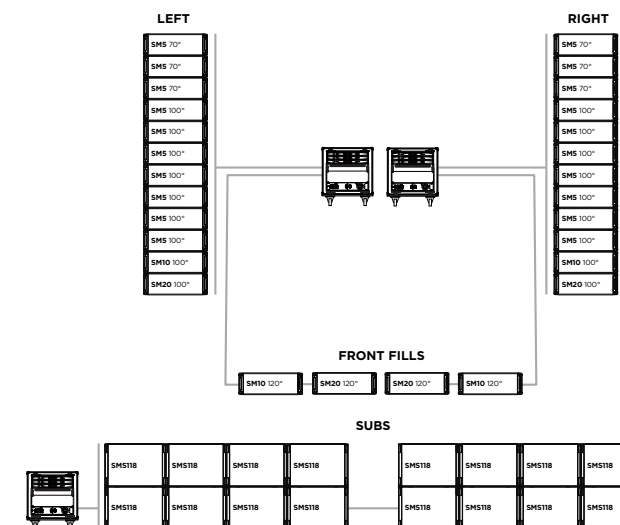


Main Arrays (x2)
10x SM5 Module
1x SM10 Module
1x SM20 Module

Subwoofer
16x SMS118

Amplification
3x ShowMatch Tour Rack

Front Fill
4x SM20 Module

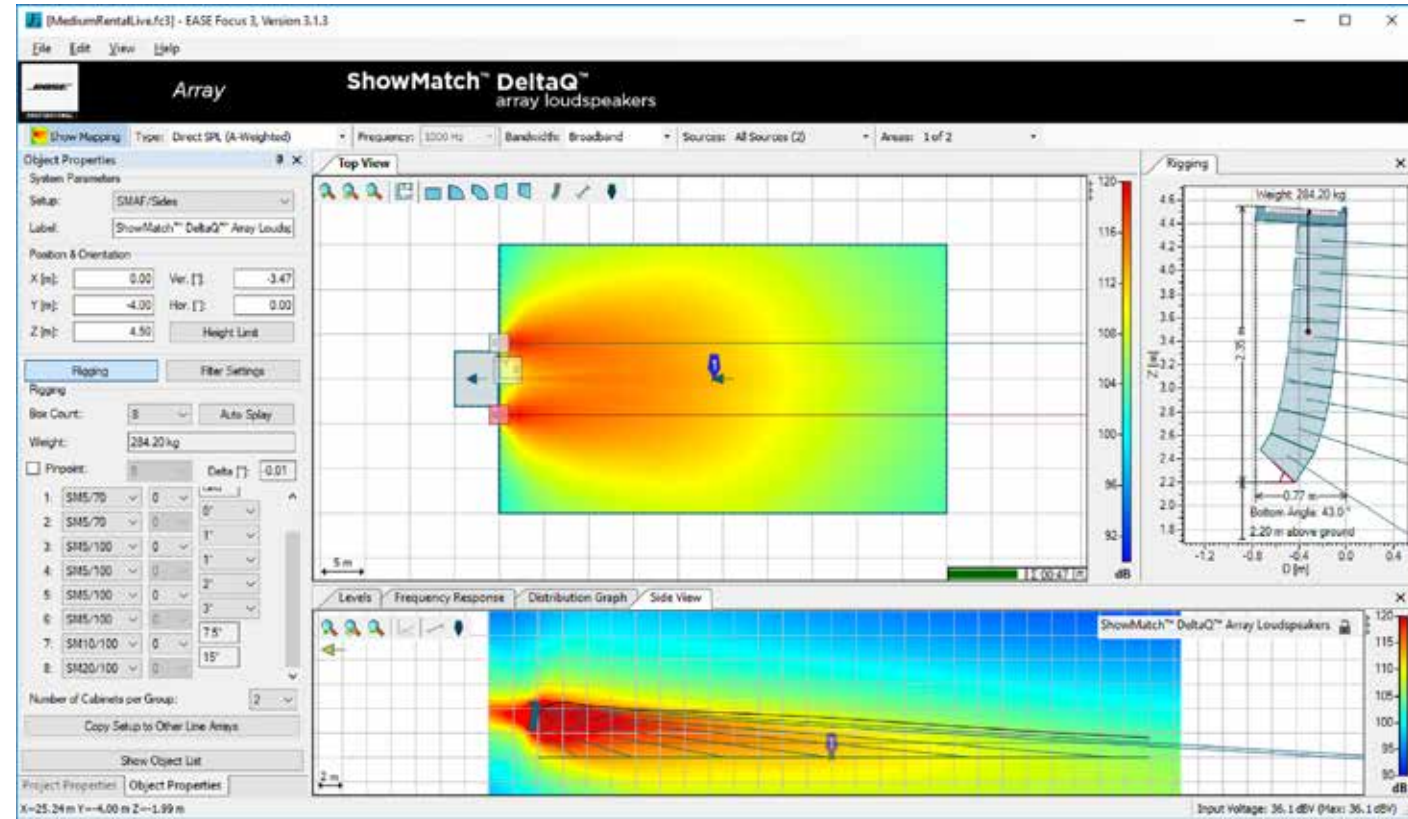


Preset Guide

Arrays	Array 65 Hz HPF
Front Fills	Front Fill SM20_120 150 Hz HPF
Subs	SMS118 Sub 65 Hz LPF

Outdoor Live Music Example 2

In this example, a StageLine SL75 is used as the main stage for the production and two eight-module arrays are flown, one to the left of the stage, one to the right. Ten ShowMatch SMS118 subwoofers are arrayed in the front of the stage. The expected SPL at the front-of-house position is 112 dBA with program material.

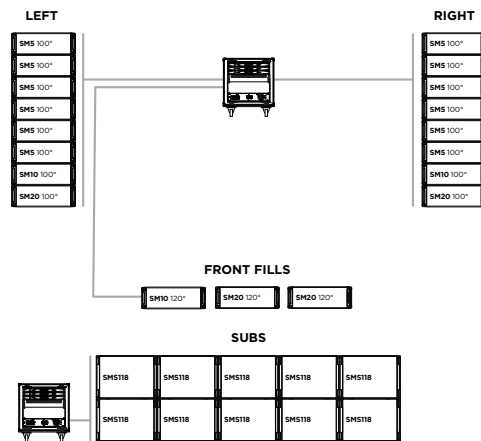


Main Arrays (x2)
6x SM5 Module
1x SM10 Module
1x SM20 Module

Subwoofer
10x SMS118

Amplification
3x ShowMatch Tour Rack

Front Fill
3x SM20 Module

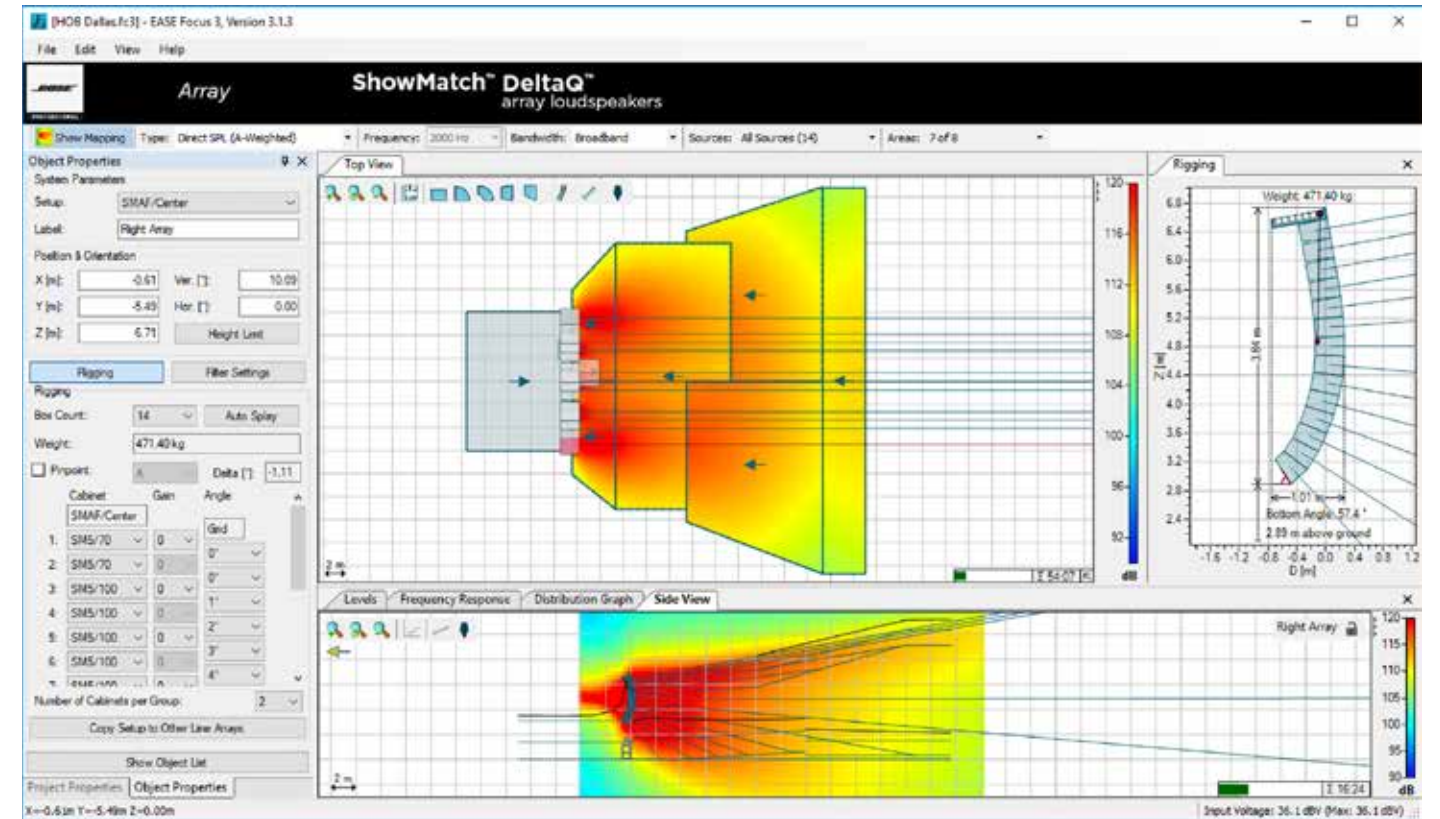


Preset Guide

Arrays	Array 65 Hz HPF
Front Fills	Front Fill SM20_120 150 Hz HPF
Subs	SMS118 Sub 65 Hz LPF

Indoor Live Music Example 1

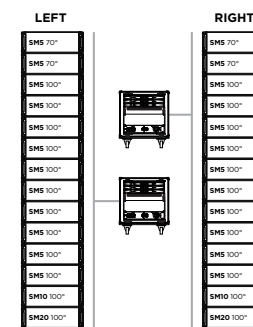
A 2,500-person-capacity live music venue with a general admission main floor and seated balcony area hosts live music, comedy and special events throughout the year. In this example, the main arrays each use 14 ShowMatch modules and a total of 18 showmatch subs are placed directly below the stage lip. The system is capable of providing levels of 118 dBA at the front-of-house position.



Main Arrays (x2)
12x SM5 Module
1x SM10 Module
1x SM20 Module

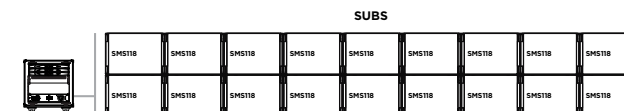
Subwoofer
18x SMS118

Amplification
3x ShowMatch Tour Rack



Preset Guide

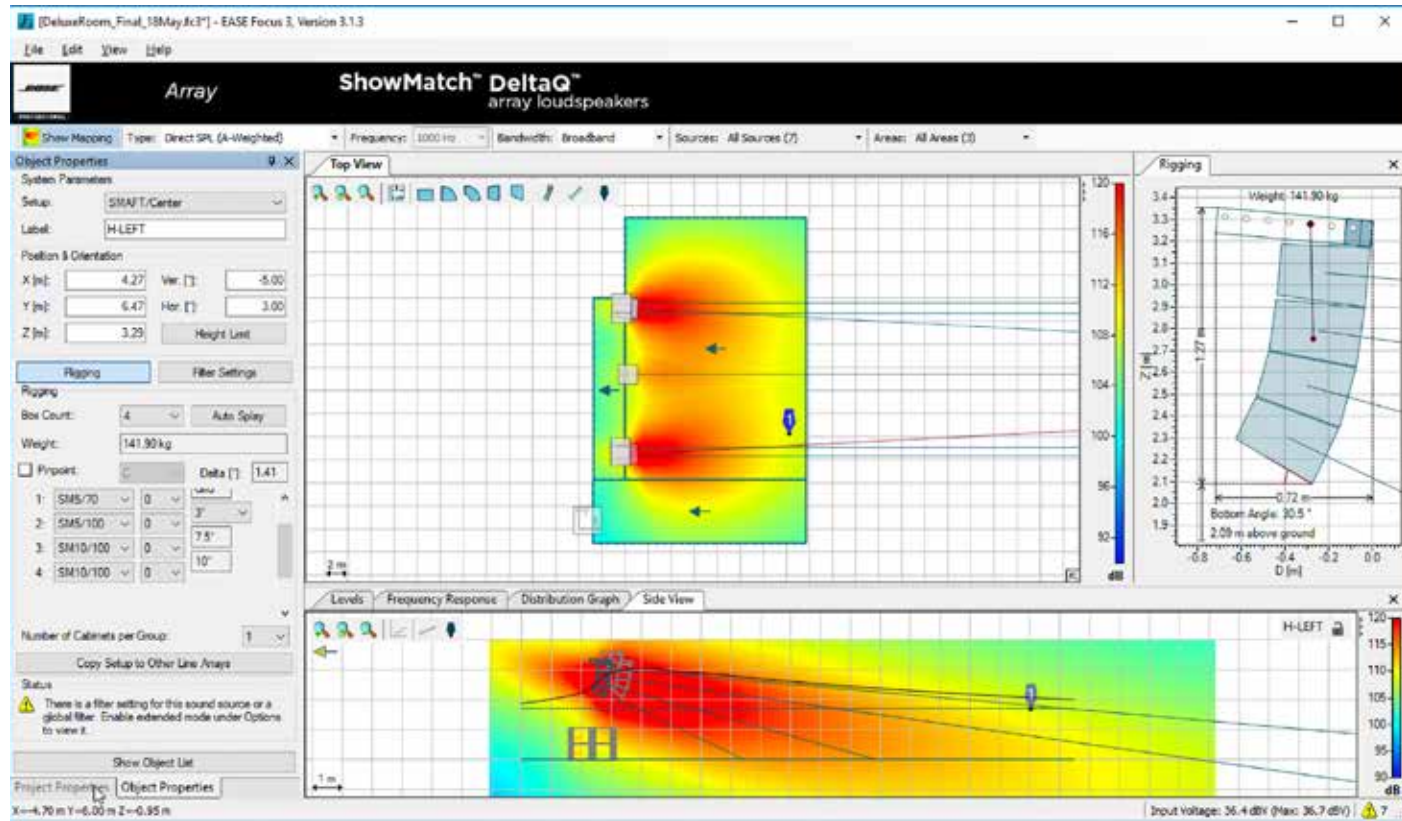
Arrays	Array 65 Hz HPF
Subs	SMS118 Sub 65 Hz LPF



Indoor Live Music Example 2

This 700-person-capacity live music venue uses two four-module arrays to the left and right of the stage with four SMS118 subwoofers ground stacked underneath the arrays.

The expected SPL is 110 dBA with program material.

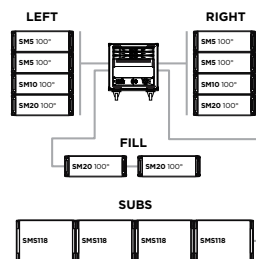


Main Arrays (x2)
2x SM5 Module
1x SM10 Module
1x SM20 Module

Subwoofer
4x SMS118

Amplification
1x ShowMatch Tour Rack

Front Fill
2x SM20 Module

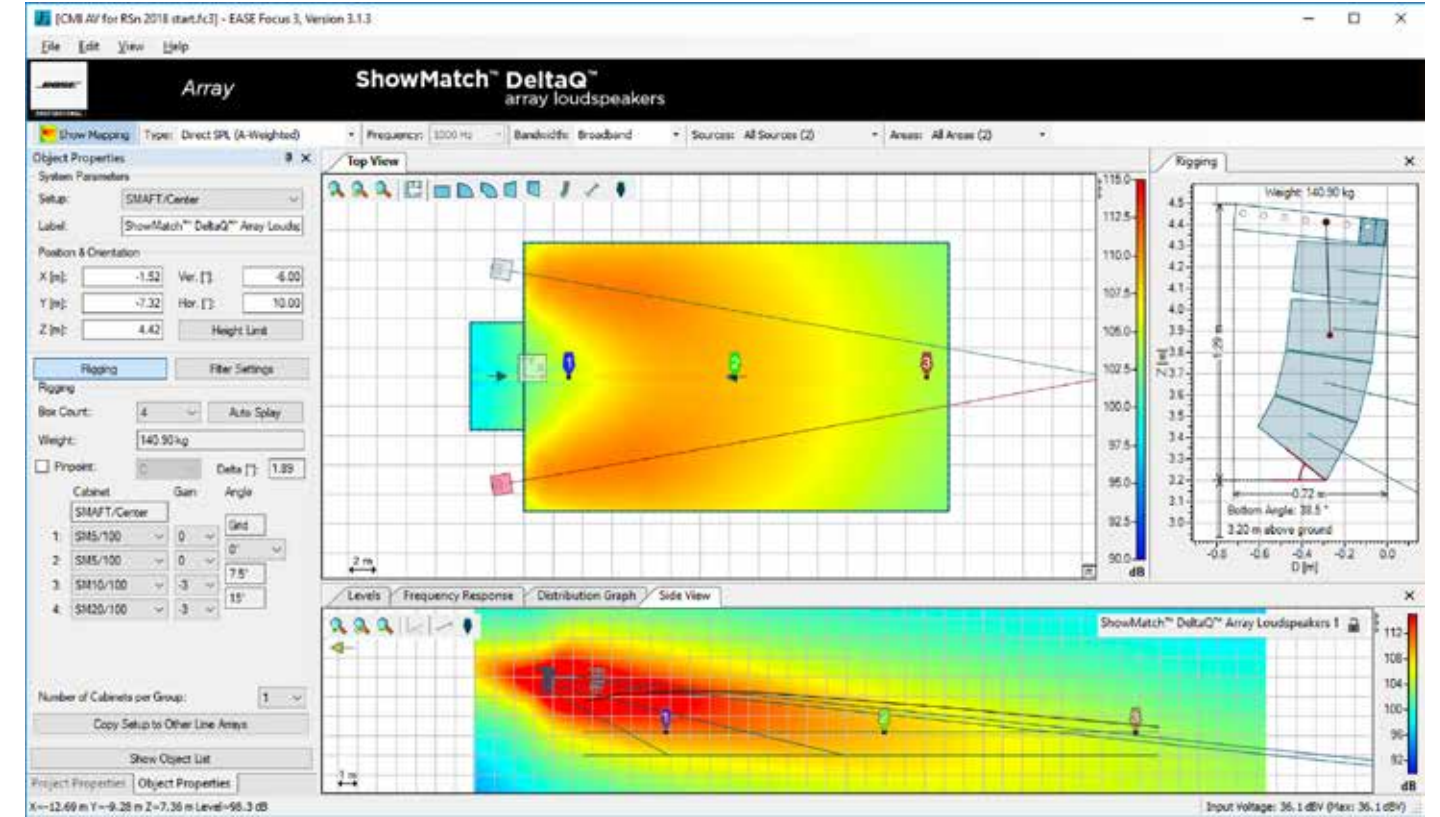


Preset Guide

Arrays	Array 65 Hz HPF
Front Fills	Front Fill SM20_120 150 Hz HPF
Subs	SMS118 Sub 65 Hz LPF

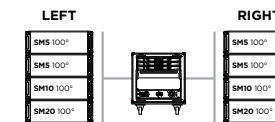
Corporate AV Example 1

A corporate presentation within a hotel ballroom is the environment for this example. Arrays are flown at 14.5 feet (4.4 m) using the provided rigging points to the left and right of the presentation area to provide coverage for the seated audience. In this example, each array consists of two SM5, one SM10 and one SM20 module and subs are not used as the system is primarily for voice reinforcement.



Main Arrays (x2)
2x SM5 Module
1x SM10 Module
1x SM20 Module

Amplification
1x ShowMatch Tour Rack

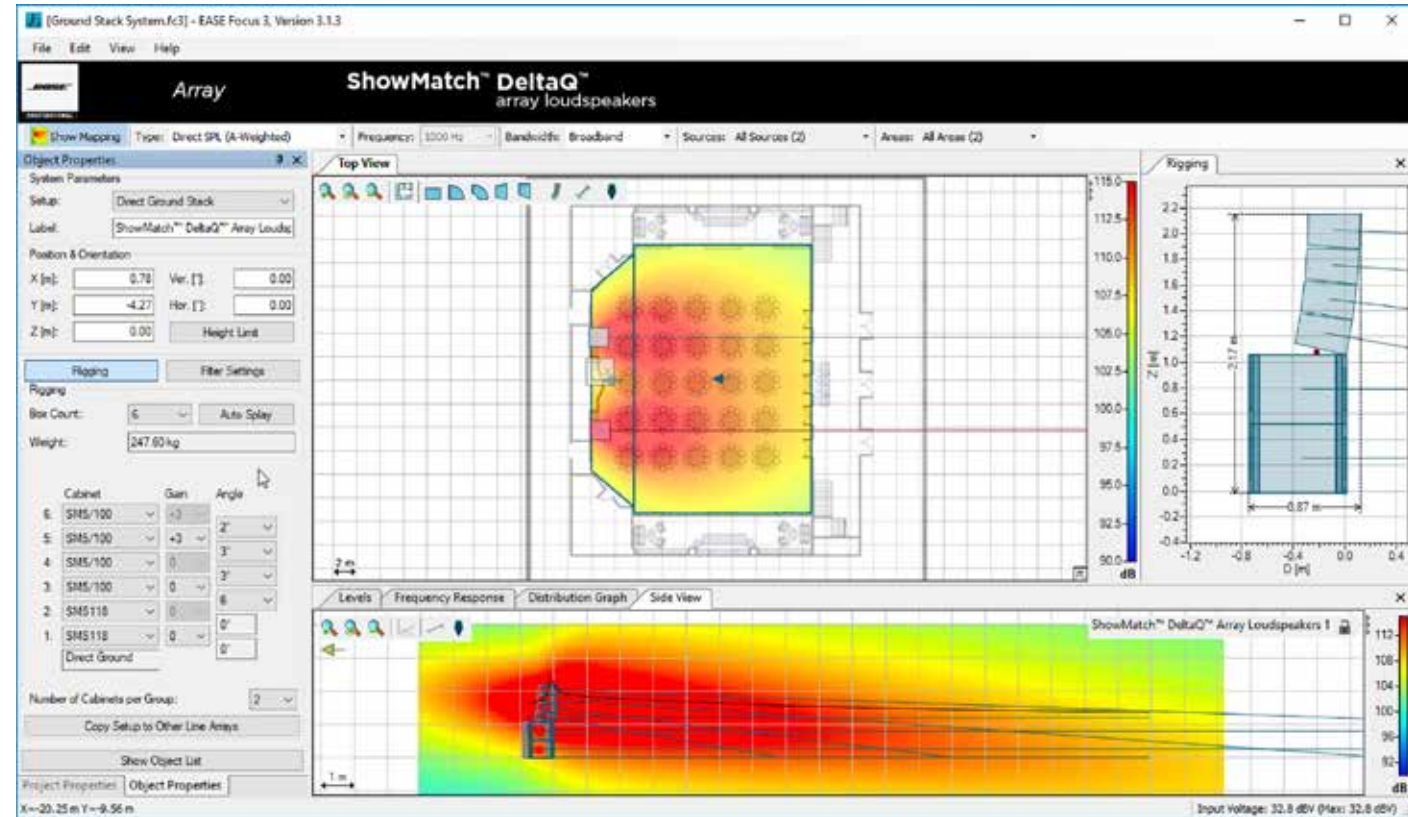


Preset Guide

Arrays	Array 65 Hz HPF
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Corporate AV Example 2

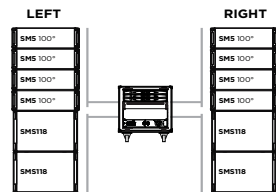
A ground stack system is used to provide voice and music playback for a corporate function within a traditional hotel ballroom. A ground-stack system provides voice and music playback for a corporate function within a traditional hotel ballroom. The system has two ground stacks, one at the left of the stage, one at the right. Each contains four SM5 modules and two SMS118 subwoofers.



Ground Stack Arrays (x2)
4x SM5 Module

Amplification
1x ShowMatch Tour Rack

Subwoofer
2x SMS118



Preset Guide	
Arrays	Ground Stack 90 Hz HPF
Sub	SMS118 Sub 90 Hz LPF

SHOWMATCH TOUR RACK

Product Description

ShowMatch loudspeaker systems are compatible with the ShowMatch Tour Rack, which is available in 120-volt and 230-volt versions. The ShowMatch Tour Rack is a fundamental system building block and has been engineered to support a variety of system configurations.



Each ShowMatch Tour Rack includes:

- Power Distribution Unit
- Three (3) PowerSoft X4D amplifiers
- Cisco SG350-28 Managed Network Switch
- AES Splitter & Signal Distribution Unit
- Loudspeaker Distribution Unit

ShowMatch Tour Rack Configuration

The ShowMatch Tour Rack ships ready to power a ShowMatch system with input routing and loudspeaker processing preconfigured, allowing for "plug and play" operation for a system.

Input Priority and Routing

The system is preconfigured to auto-detect signal at the analog, AES and Dante® input points and will automatically switch to the backup when input signal is lost. The PowerSoft X4D platform offers four input-signal-detection points: Analog, AES, Dante Ch. 1-8, and Dante Ch. 9-16. Default input routing is configured for a basic system setup comprised of Left, Right, Sub, and Fill input signals.

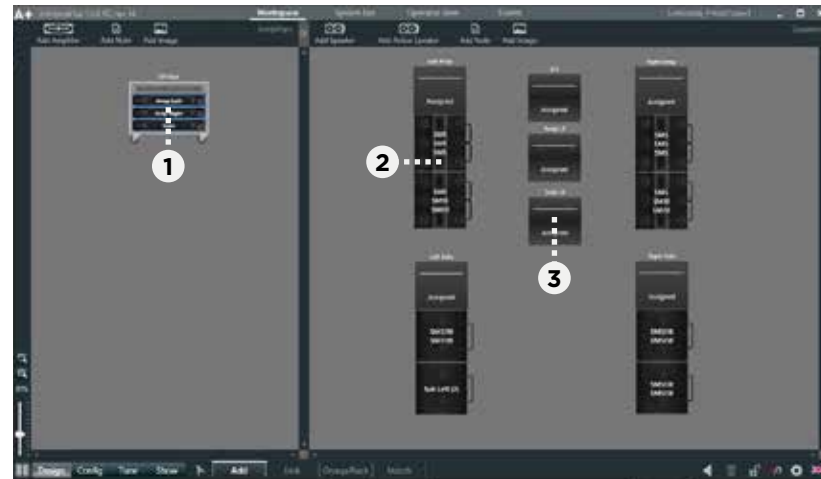
The following charts describe the input priority and routing that is preconfigured within the ShowMatch Tour Rack:

Input Priority		Routing	
Priority	Input	System	Input Channel
1	Analog	Left	1
2	AES	Right	2
3	Dante Ch 1-8	Sub	3
4	Dante Ch 9-16	Fill	4
Mode:	Auto Detection		

Initial System Configuration

The initial system configuration is for a stereo system comprised of two six-module arrays with a total of 8 SMS118 subwoofers. A PowerSoft ArmoniaPlus project file is available for download at www.Armonia.powersoft.it/download-Armonia/, which can be used to control the operation of the ShowMatch Tour Rack. If the file is not available, connecting to the system will provide full operational control, however the devices shown in the Design workflow will not be present.

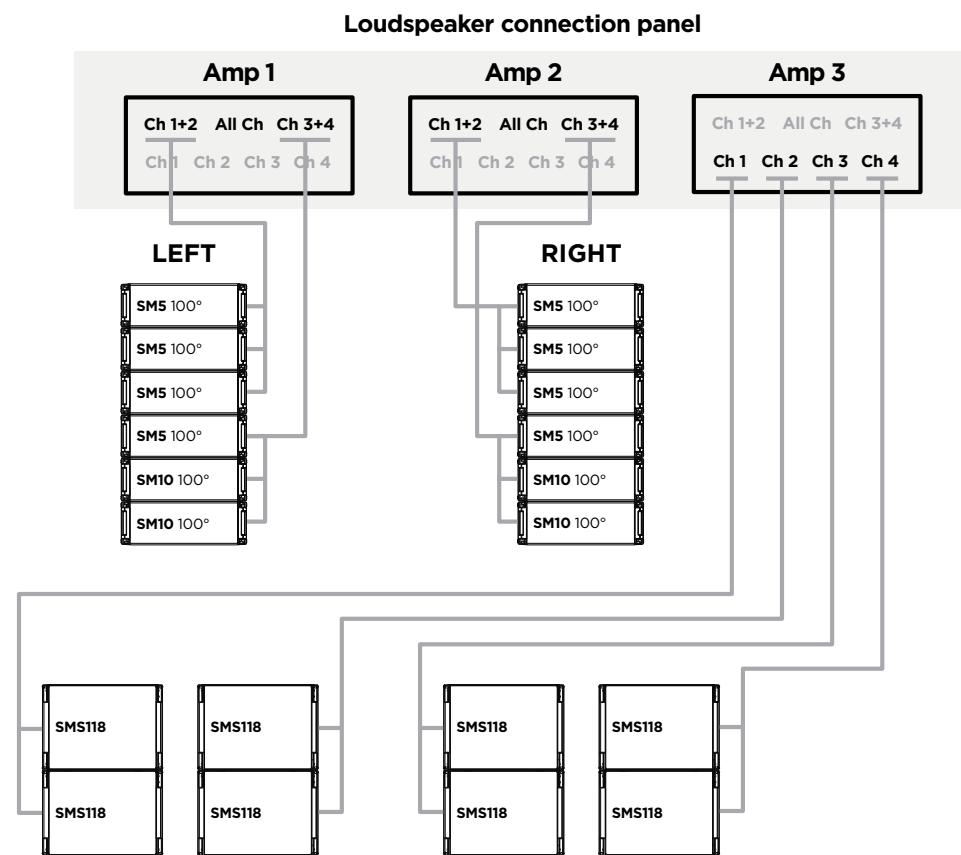
NOTE: System outputs are muted in the initial configuration of the ShowMatch Tour Rack. Outputs can be unmuted using the ArmoniaPlus software or by pressing the channel mute/unmute on the front panel of the PowerSoft X4D amplifier. See the PowerSoft X4D Owner's Manual for additional details.



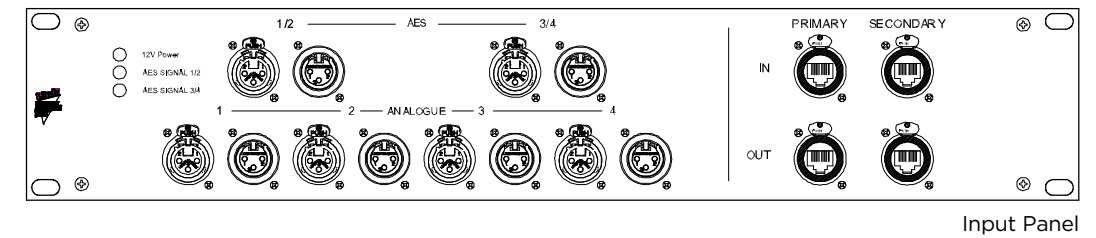
- 1 Virtual Representation** of ShowMatch Tour Rack.
- 2 Virtual Loudspeaker Group** — each array and sub section is grouped and includes an advanced group control for Polarity, EQ, Delay and Gain of this section.
- 3 Advanced Group Control** for subs, arrays and full system. Each contains Polarity, EQ, Delay and Gain.

Initial System Loudspeaker Connections

Loudspeakers are connected via the Loudspeaker Connection Panel. The following diagram details the connections between the ShowMatch Tour Rack, arrays and subs based on the pre-loaded configuration.



Input Connections

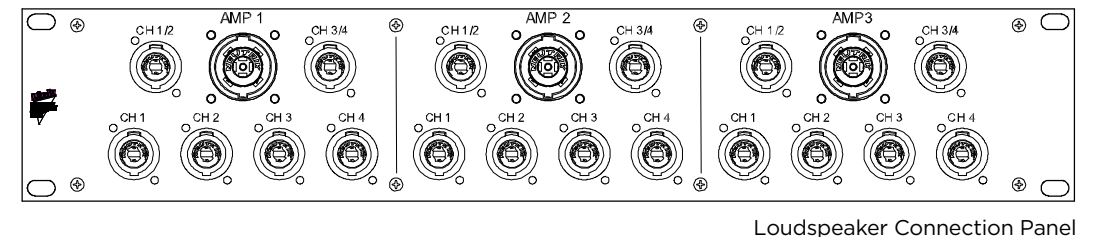


AES Inputs — Two AES pairs (1/2 and 3/4) are provided for connection of external AES devices. Each input pair is transformer-isolated, electronically re-clocked and buffered to the AES inputs of the amplifiers.

Two transformer-isolated outputs are provided for linking of AES signals to another device in the ShowMatch Tour Rack.

Analog Inputs — Four analog inputs and four parallel link outputs are provided for connection of external analog devices. The inputs are wired to the analog inputs of the amplifiers.

Dante Network (primary/secondary) — Neutrik EtherCON RJ45 connectors are wired using shielded cable to the Cisco® Network switch where they are distributed to the amplifiers. Output connections are provided to link multiple ShowMatch Tour Rack units.



Loudspeaker Connections

The Loudspeaker Connection Panel is divided into three identical sections, one for each amplifier.

Loudspeaker Outputs — Each amplifier output section is wired in parallel to provide flexibility in system configuration wiring. Each output connection contains the following connections:

- 1 - NL8 - Carries all Output Channels
- 1 - NL4 - Carries Channels 1+2
- 1 - NL4 - Carries Channels 3+4
- 4 - NL4 - Each carries a single amplifier channel

The following describes the channel connector wiring and maximum channel loading:

Single Channel Connection			Channel Pair Connection			Quad Channel Connection		
Connector	Channel	Pin Out	Connector	Channel	Pin Out	Channel	Connector	Pin Out
NL4	1	1±	NL4	1	1±	1	NL8	1±
NL4	2	1±			2±			2±
NL4	3	1±			1±			3±
NL4	4	1±			2±			4±
Max Loading per Connection			Max Loading per Connection			Max Loading per Connection		
Qty	Type		Qty	Type		Qty	Type	
2	SWS118 ¹		3	ShowMatch Module (bi-amped)		6	ShowMatch Module (bi-amped)	
			4	SWS118 ^{1,2}		8	SWS118 ^{1,2}	

1) Subs run in parallel, requires jumper to second unit

1) Requires breakout cable
2) Subs run in parallel, requires jumper to second unit

1) Requires breakout cable
2) Subs run in parallel, requires jumper to second unit

SHOWMATCH TOUR RACK CONNECTION

Operation and configuration of the ShowMatch Tour Rack is accomplished using the ArmoniaPlus software, available for download at www.PowerSoft-audio.com. When connecting to the ShowMatch Tour Rack use the following steps:

1. Make sure that the ShowMatch Tour Rack is powered on and an active Ethernet connection is established between the PC and the rack.¹
2. Open the ArmoniaPlus software and open the Bose ShowMatch Rack configuration file. The ShowMatch rack ships preconfigured for operation.



3. You will need to associate the amplifier in the ShowMatch Tour Rack with the virtual devices in the configuration file. To accomplish this first select "Match" from the workflow selections along the bottom edge of the screen.



4. Amplifiers will be automatically detected and displayed on the right-hand side of the screen. If amplifiers are not present, check your network settings.

Select the top-most amplifier within the virtual rack. It will be selected and display the number 1. Then select the link/pair button on the front panel of the corresponding amp within the rack.



The two devices are now logically linked; a successful link is indicated when the paired devices are green.



Repeat this process for remaining amplifiers. Once you have completed this for all amplifiers, the system is ready for operation.

5. The ShowMatch Tour Rack is preconfigured to operate a system comprised of six ShowMatch modules per side with four subwoofers per side.

The system is muted by default to prevent damage to system components during set up.

¹ Make sure that the PC is not running a fixed IP address. All devices in the ShowMatch Tour Rack are configured for DHCP operation and will automatically default to an address in the range of (169.254.xxx.yyy) when no DHCP server is present. The PC will do the same, allowing you to communicate with the amplifiers within the ShowMatch Tour Rack. For detailed connection and configuration instructions for the PowerSoft X4 Dante amplifier see the PowerSoft X Series User Guide.



To unmute the system, select the Tune option within the workflow along the lower left of the screen. Then select Mute All group control to unmute the system.



6. The system is now ready for operation.



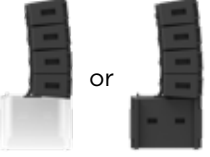
SHOWMATCH SYSTEM PRESETS

Presets are available for various configurations of ShowMatch systems and are found within both the ControlSpace Designer software, used for PowerMatch amplifiers, and Armonia+ software for PowerSoft X4D amplifiers. The preset libraries are identical, but, in some cases, small naming differences are present.

ShowMatch Array Presets



All array presets have been optimized to provide a balanced response throughout the listening area. Preset choice is based on the high pass selection for the array.

ShowMatch Array Presets - ShowMatch Constant Curvature Arrays

Preset name	HF / LF	Example	Notes
Array	65 Hz HPF 90 Hz HPF		For use with flown ShowMatch arrays. Includes a Mid Frequency Coupling, (MFC) adjustment to compensate for Mid Frequency Coupling based on array length.
Array Downfill SM20_120	65 Hz HPF 90 Hz HPF		For use with SM20x120 module when used as downfill module within in a ShowMatch array. This requires that two (2) amp channels be devoted to the SM20x120 since this EQ is different from other modules within the array.
Ground Stack	65 Hz HPF 90 Hz HPF		For use with ShowMatch modules in a ground stack configuration. Includes a Mid Frequency Coupling, (MFC) adjustment to compensate for mid frequency coupling based on array length.





ShowMatch Module Presets

ShowMatch module presets are optimized for specific applications and are named accordingly. Preset choice is based on the high pass selection for the module.

Preset name	HF / LF	Example	Notes
Front Fill SMx_100	150 Hz HPF		For use with SM5 10 20 when deployed as a front fill.
Front Fill SM20_120	150 Hz HPF		For use with SM20x120 when deployed as a front fill

ShowMatch Subwoofer Presets

ShowMatch subwoofer presets are named according to their application and allow the creation of custom cardioid configurations, or pre-configured cardioid arrays.

Preset name	HF / LF	Example	Notes
SMS118	65 Hz LPF 90 Hz LPF		SMS118 - (2 per channel)
SMS118 Cardioid Element	65 Hz LPF 90 Hz LPF		SMS118 used as cardioid cancellation unit within a gradient cardioid subwoofer array.
SMS118 x2 Cardioid Stack	65 Hz LPF 90 Hz LPF		Two SMS118 modules stacked in to deliver gradient cardioid performance. Requires two amplifier channels FR - Front Firing SMS118 BA - Rear Firing SMS118
SMS118 x Cardioid Stack	65 Hz LPF 90 Hz LPF		Three SMS118 modules stacked in to deliver gradient cardioid performance. Requires two amplifier channels FR - Front Firing SMS118 BA - Rear Firing SMS118

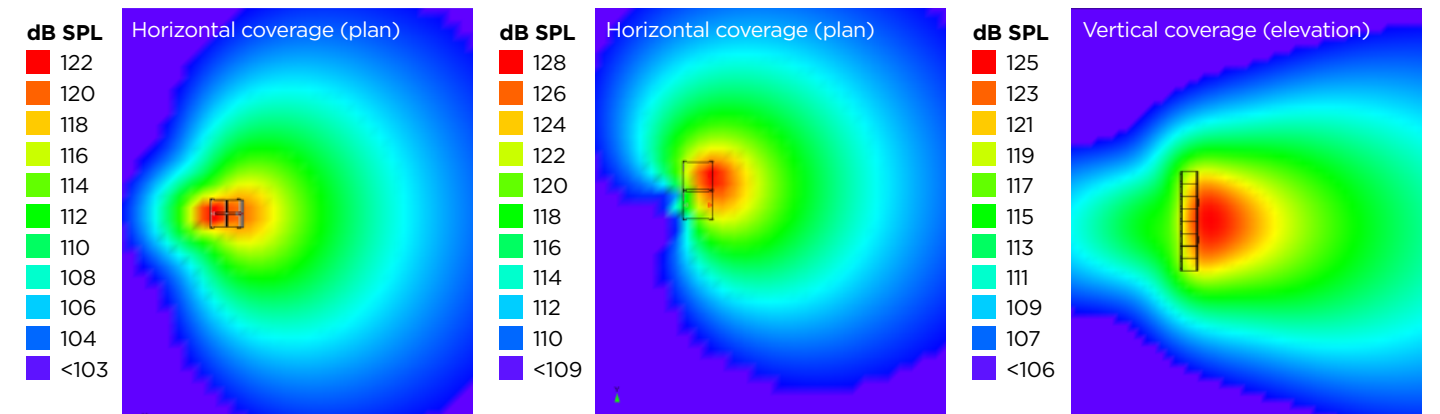
ShowMatch Cardioid Subwoofer Presets

The cardioid presets provided employ the gradient cardioid method to achieve the maximum amount of rejection behind the array within the array's passband. The standard and cardioid presets can be used as building blocks to create a variety of array configurations and coverage patterns. The following are few of the most common applications.

2 Module Cardioid Ground Stack

Side Stage Block Array

Vertical Column Flown



Preset Guide

Array	Ground Stack
Sub	SMS118 x2 Cardioid Stack

Preset Guide

SMS118	(Front)
SMS118	Cardioid Element (Back)

Preset Guide

SMS118	(Front)
SMS118	Cardioid Element (Back)

SHOWMATCH TRANSPORTATION ACCESSORIES



Transport Cart, 4xSM5 Modules

The 4xSM5 Array transport cart carries four ShowMatch SM5 array modules locked together using their suspension hardware with rear link bars pinned at zero degrees, (0°).



Transport Cart, 2xSM5+10/20 Downfill

The 4xShowMatch Module downfill cart carries an SM20, SM10 and two SM5 array modules preconfigured as the downfill section of a larger ShowMatch Array.



Designed to be easily broken down and stacked for storage, each cart is constructed of aluminum to reduce weight while the top and bottom plates are constructed of 5/8-inch (15-mm) Baltic Birch plywood. A high-density polyurethane seat captures the bottom module and prevents damage to the loudspeaker enclosure. Each cart includes four locking casters.



Transport Case, 3xSM Modules

Bose Professional ShowMatch 3xSM5 transport cases carry three ShowMatch SM5 modules that have been locked together using their suspension hardware with rear link bars pinned at zero degrees, (0°). The ATA-style transport case is constructed of 1/2-inch (12-mm) Baltic Birch plywood with a protective PVC laminate and includes snap-back handles to assist with cover removal and transportation, and four locking casters. The top cover includes a recessed nameplate to accommodate a 7x5-inch tour label.



Transport Case, 2xSM Modules

Bose Professional ShowMatch two-module transport cases carry any combination of two ShowMatch SM5/10/20 array modules. Internal EVA foam is custom cut to module profiles, allowing them to sit securely within the case during transport. The ATA-style transport case is constructed of 5/8-inch (15-mm) Baltic Birch plywood with a protective PVC laminate and includes snap-back handles to assist with cover removal and transportation and four casters. The top cover includes a recessed nameplate to accommodate a 7x5-inch tour label.



ShowMatch Transport Case - 2x Frames and Pullbacks

Bose Professional ShowMatch Array Frame transport cases carry either two ShowMatch full array frames or two T-bar array frame, and two ShowMatch array pullback brackets. The ATA-style transport case is constructed of 1/2-inch (12mm) Baltic Birch plywood with a protective PVC laminate and includes snap-back handles to assist with cover removal and transportation, and four non-locking casters. The top cover includes a recessed nameplate to accommodate a 7x5-inch tour label.



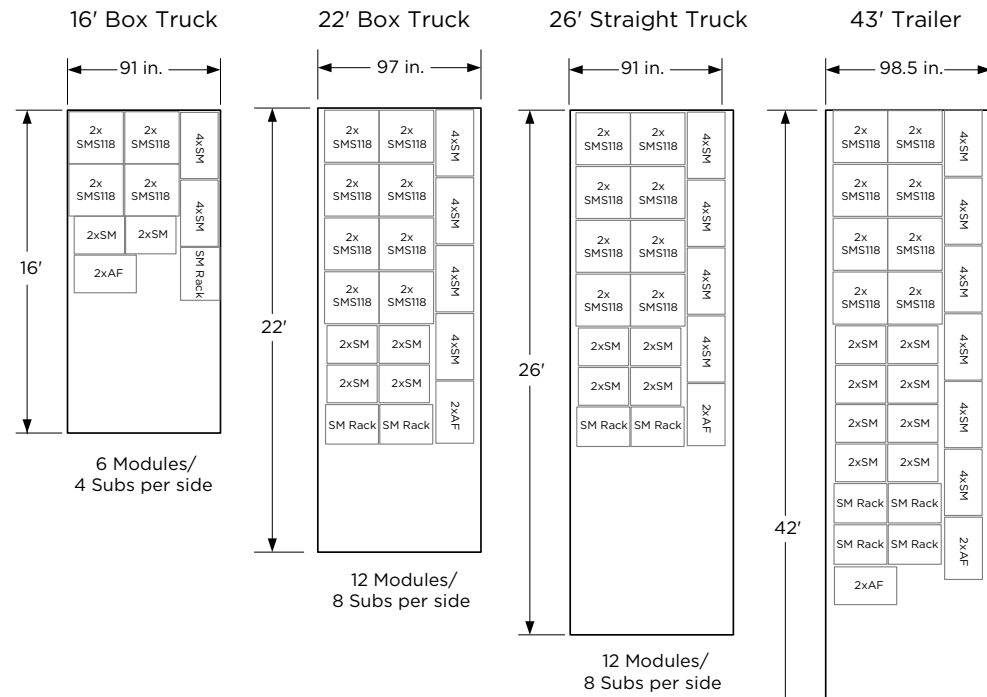
Transport Dolly, 1-3 SMS118 Subs

Bose Professional ShowMatch SMS118 dolly carries either one, two or three ShowMatch SMS118 subwoofers. SMS118 dollies contain integrated attachment points, allowing the SMS118 to be pinned directly to the dolly; additional subwoofers are pinned to each other. When not in use, SMS118 dollies can be stacked for storage. The SMS118 dolly is constructed of powder-coated steel with high density Polyurethane to reduce the risk of damage to subwoofers.

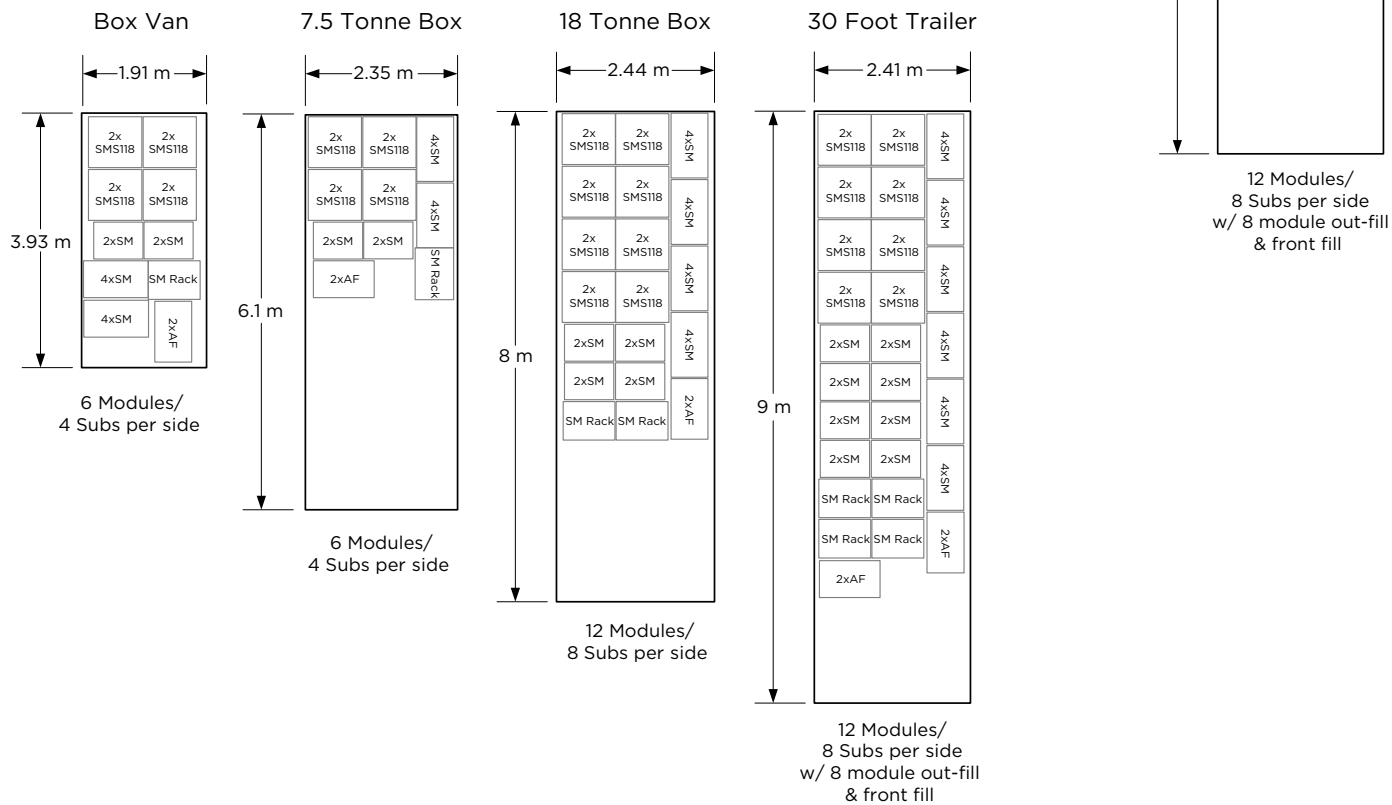
Truck Pack Information

Examples of truck pack configurations for various ShowMatch systems are shown below.

ShowMatch Truck Pack, North America



ShowMatch Truck Pack, Europe



SHOWMATCH SUSPENSION HARDWARE



Array Frame

Use the ShowMatch Array Frame (SMAF) to create overhead suspended arrays that contain subwoofer modules, or to create ground stack arrays that use any combination of subwoofer modules, mid/high modules, or both.



T-Bar Array Frame

Use the ShowMatch T-Bar Array Frame (SMAFT) to create overhead suspended arrays that contain mid/high modules only.



Pullback Bracket

Connect the ShowMatch Array Pullback Bracket (SMPULL) to the bottom full-range array module to provide third-point suspension to building structure. This allows more extreme downward angle of arrays than possible from two-point, gravity-hang suspension.



Multipoint Bracket

The ShowMatch Array Frame Multipoint Bracket (SMAFMP) expands the number of rigging points along the center rail of the Array Frame (SMAF) or T-Bar Array Frame (SMAFT) from 7 to 45 possible points.



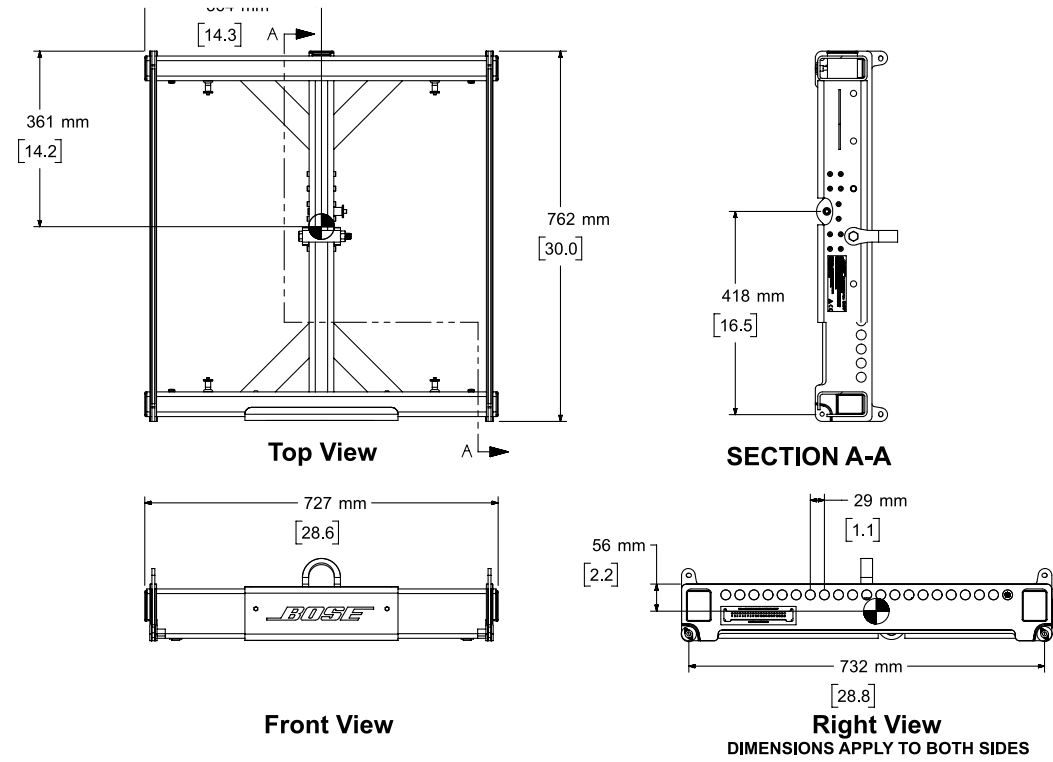
Ground Stack Bracket

Use the ShowMatch Ground Stack Bracket (SMGSB) to build ground stack arrays that contain ShowMatch DeltaQ full-range loudspeaker modules (SM5, SM10, and SM20), subwoofer modules (SMS118), or a combination of both.

ShowMatch Array Frame (SMAF)

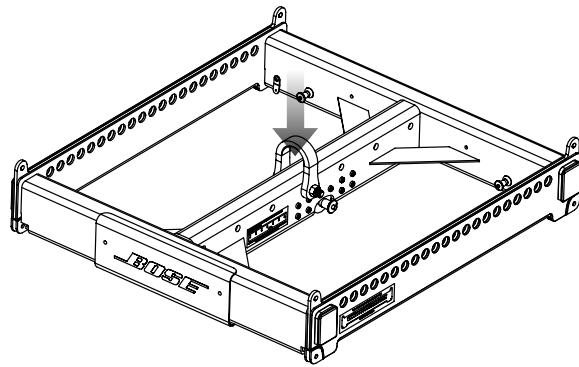
Product Weight: 83.0 lbs (37.6 kg).

Product weight includes one shackle adapter. Each shackle adapter is 1.5 lbs (0.7 kg).

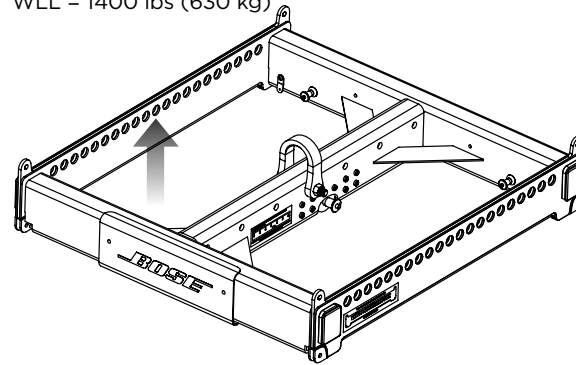


Single Point, 10:1 Working Load Limit (in accordance with ANSI E1.8-2012).

ShowMatch Array Frame (SMAF)
 Center Rail
 WLL = 1800 lbs (815 kg)



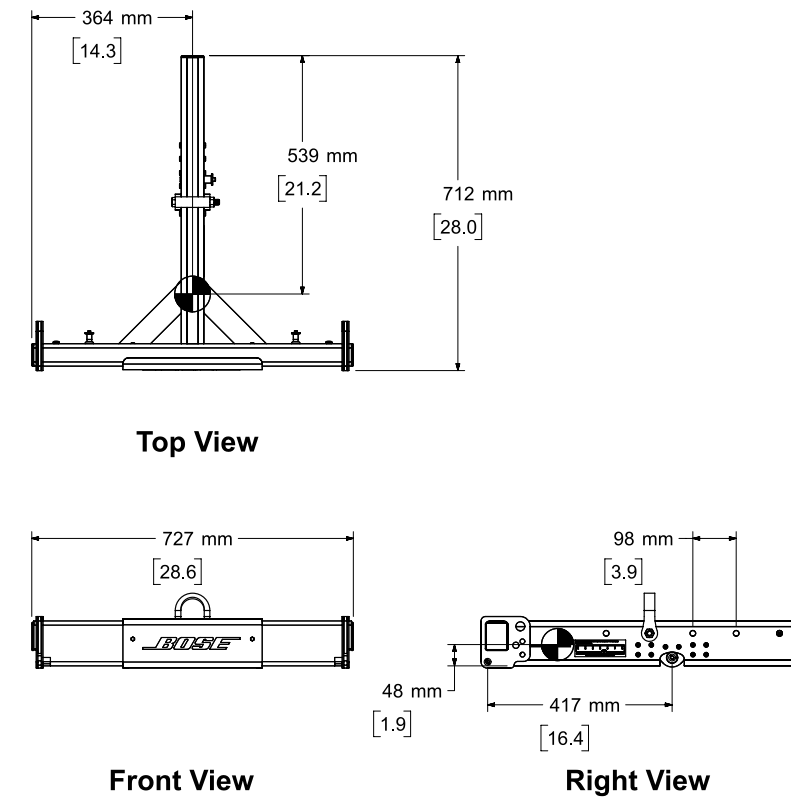
ShowMatch Array Frame (SMAF)
 Side Rail
 WLL = 1400 lbs (630 kg)



ShowMatch T-Bar Array Frame (SMAFT)

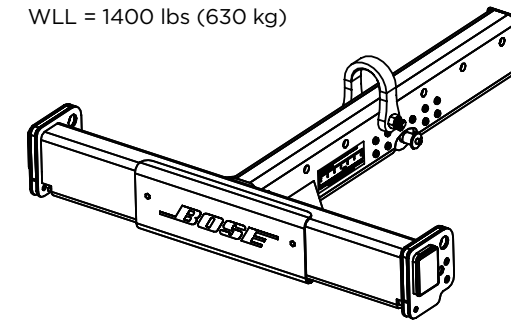
Product Weight: 40.5 lbs (18.4 kg).

Product weight includes one shackle adapter. Each shackle adapter is 1.5 lbs (0.7 kg).



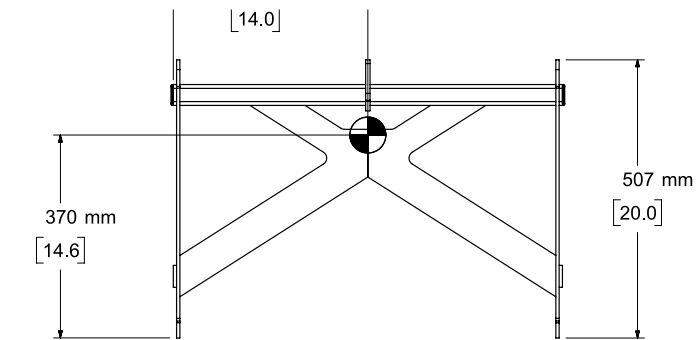
Single Point, 10:1 Working Load Limit (in accordance with ANSI E1.8-2012).

ShowMatch T-Bar Array Frame (SMAFT)
 Center Rail
 WLL = 1400 lbs (630 kg)

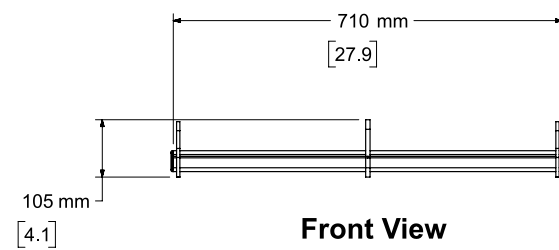


ShowMatch Array Pullback Bracket (SMPULL)

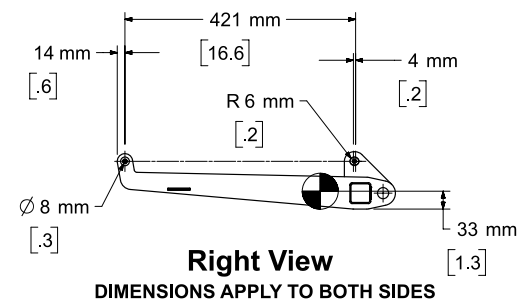
Product Weight: 15 lbs (18.4 kg).



Top View



Front View

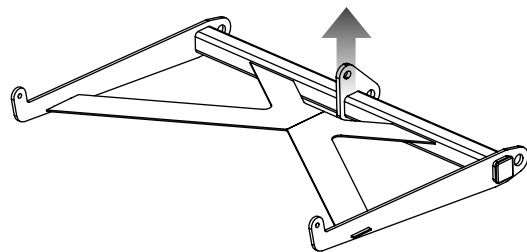


Right View

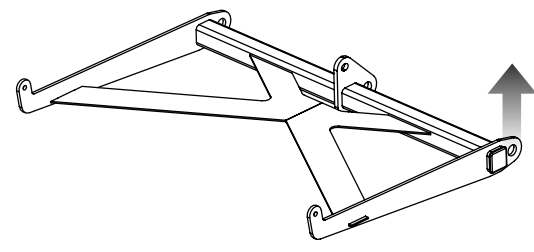
DIMENSIONS APPLY TO BOTH SIDES

Single Point, 10:1 Working Load Limit (in accordance with ANSI E1.8-2012).

ShowMatch Array Pullback Bracket (SMPULL) Center Suspension Point
WLL = 700 lbs (315 kg)



ShowMatch Array Pullback Bracket (SMPULL) Side Suspension Point
WLL = 600 lbs (270 kg)



ARRAY SUSPENSION

ShowMatch DeltaQ array loudspeakers are shipped with integrated link-bar suspension hardware. The suspension system is designed to allow fast set up of typical concert-touring or fixed-installation arrays of up to 24 full-range or 18 subwoofer modules while maintaining a 10:1 safety factor when used with Bose ShowMatch Array Frame suspension accessories.

Note: Always confirm safe working load limits with exact array configurations, pitch angles, and connection points using either Bose Modeler or Bose Array Tool software.

Note: Bose ShowMatch loudspeakers and suspension accessories are intended for installation by professional installers only!

Note: All lifting operations require two individuals positioned on each side of the loudspeaker.

Refer to PRO.BOSE.COM for additional product installation and setup information.

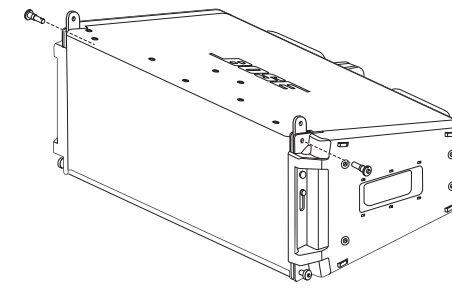


Fig. 1. Raise links on module.

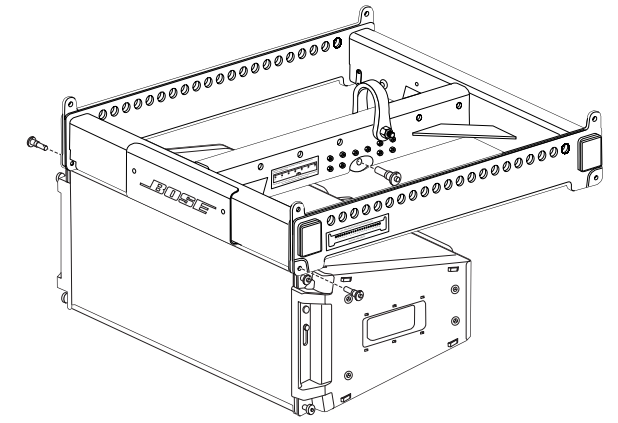


Fig. 2. Insert pins to attach module to frame.

Connect Array Frame or T-bar Array Frame to Full-range Module

The ShowMatch Array Frame (SMAF) contains four connection points for subwoofer modules (all four corners), and three connection points for full-range modules (two front corners and a center location). Each side rail provides 21 suspension points, labeled according to the image printed on the frame. The center rail provides seven suspension points and is expandable to up to 45 points using the Multipoint Bracket Accessory (SMAFMP). For more information about the Multipoint Bracket Accessory, see PRO.BOSE.COM.

The ShowMatch T-Bar Array Frame (SMAFT) contains three suspension points for full-range array modules (two front corners and rear center). The center rail provides seven suspension points and is expandable to up to 45 points using the Multipoint Bracket Accessory. The T-Bar Array Frame is compatible with full-range modules (SM5, SM10, and SM20) only. Do not use the T-Bar Array Frame with subwoofer modules (SMS118). To create an array with subwoofer modules, use the ShowMatch Array Frame.

The Array Frame and the T-Bar Array Frame each include two (2) shackle adapters to attach the frame to chains or standard shackles, and four (4) quick pins to connect an array module to the frame. To create a narrower array, remove the side end caps and tethered quick pins that are factory-installed on each loudspeaker module, and use the optional Short Quick Pin Accessory Kit (SMQPS). For more information about the Short Quick Pin Accessory Kit, see PRO.BOSE.COM.

To connect a ShowMatch Array Frame or T-Bar Array Frame to a full-range loudspeaker module:

1. Use Bose Modeler software or the Bose Array Tool to determine appropriate suspension points on array frames for required aiming angles and to confirm that array does not exceed load limits of frame. For more information on Modeler and the Bose Array Tool, see PRO.BOSE.COM.
2. Place array frame directly under chain motors.
3. Attach included frame shackle adapters to array frame at suspension points determined by software.
4. Lower chain motors and attach chains to shackle adapters installed on array frame.
5. Raise array frame to a height slightly greater than that of the first (top) module to be installed.
6. With one person per side, place first module directly under suspended array frame.
7. Raise the links on module: Remove the pins, slide the link switch from the STOW position to the LINK position, and replace the pins. See Fig. 1.

8. Lower array frame onto first module.
9. Adjust module position to align pin holes of module and frame.
10. Insert two front pins (one on each side), then insert rear center pin to secure module to frame. See Fig. 2.
11. Raise array frame to a height slightly greater than that of the next module.
12. With one person per side, place next module directly under suspended array.
13. Lower array onto next module.
14. Align pin holes of second (bottom) module to pin holes of first (top) module.
15. Insert two front pins (one on each side), then insert rear center pin to secure .
16. Repeat steps to install additional modules in the array. Do not exceed load limits of frame.

Connect field wiring, test loudspeaker operation, and then elevate array assembly to final operating position.

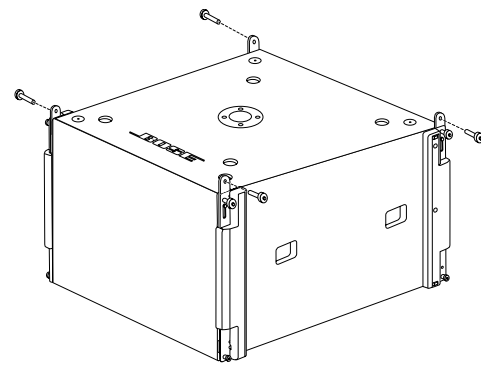


Fig. 3. Raise links on subwoofer.

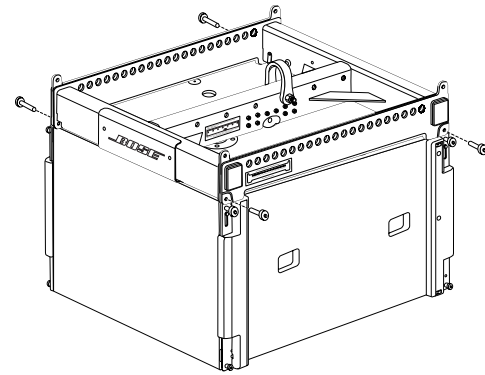


Fig. 4. Insert pins to attach subwoofer to frame.

Connect Array Frame to Subwoofer

The ShowMatch Array Frame (SMAF) provides four connection points for SMS118 subwoofers (one in each corner) and 21 suspension points on each side rail, labeled according to the image printed on the frame. The center rail provides seven suspension points and is expandable to up to 45 points using the Multipoint Bracket Accessory (SMAFMP).

Note: Subwoofers are compatible with the ShowMatch Array Frame only. Do not use a T-Bar Array Frame with subwoofer modules.

When flying an array that contains both full-range and subwoofer modules, the subwoofer modules must be in the top positions of the array.

To connect a ShowMatch Array Frame to a subwoofer:

1. Use Bose Modeler software or the Bose Array Tool to determine appropriate suspension points on array frames for required aiming angles and to confirm that array does not exceed load limits of frame. For more information on Modeler and the Bose Array Tool, see PRO.BOSE.COM.
2. Place array frame directly under chain motors.
3. Attach included shackle adapters to array frame at suspension points determined by software.
4. Lower chain motors and attach chains to shackle adapters installed on array frame.
5. Raise array frame to a height slightly greater than that of the subwoofer.
6. With one person per side, place subwoofer directly under suspended array frame.
7. Raise each of the four corner links on the subwoofer by removing the pin, sliding the link switch from the STOW position to the LINK position, and replacing the pin. See Fig. 3.
8. Lower array frame onto subwoofer.
9. Adjust subwoofer position to align pin holes of module and frame.
10. Insert two front pins (one on each side), then insert two rear pins (one on each side) to secure subwoofer to frame. See Fig. 4.

11. Raise array frame to a height slightly greater than that of the next module.
12. With one person per side, place next module directly under suspended array.
13. Lower array onto next module.
14. Align links of second (bottom) module to links of first (top) module.
15. Insert two front pins (one on each side), then insert rear center pin to secure bottom module.
16. Repeat steps to install additional modules in the array. Do not exceed load limits of frame.
17. Connect field wiring, test loudspeaker operation, and then elevate array assembly to final operating position.

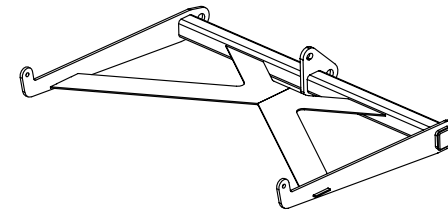


Fig 5. Pullback bar positioned with connection tabs facing up.

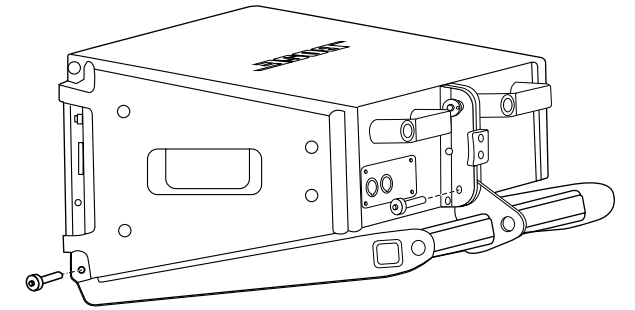


Fig 6. Insert pins to attach pull back bracket to module.

Connect Pull Back Bracket to Full-range Module

Attach the ShowMatch Pull Back Bracket (SMPULL) to the bottom full-range array module to provide a third structural attachment point when creating an array with a more extreme downward tilt.

The pull back bracket provides three suspension points along the rear to connect a pullback cable or the Transition Bracket Accessory (SMSTK). For more information about the Transition Bar Accessory, see PRO.BOSE.COM.

When connecting a pullback cable, it is recommended to use either the center suspension point, both side suspension points, or all three suspension points. The primary suspension points of the array frame should be as close as possible to the center of gravity of the array to minimize the tension load in the pullback cable.

Use Bose Modeler software or the Bose Array Tool to determine if the pull back bracket is required and to confirm that the pullback angle and working load is within acceptable safe limits. For more information on Modeler and the Bose Array Tool, see PRO.BOSE.COM.

Note: The Pull Back Bracket is not intended to provide primary structural support for the entire array!

To connect the pull back bracket to a full-range array module:

1. Assemble the array on the Array Frame or T-Bar Array Frame by following the instructions in this manual and on PRO.BOSE.COM.
2. Position the pull back bracket with the connection tabs facing up (toward the array). See Fig. 5.
3. Align the three connection tabs on the pull back bracket with the three connection points on the bottom full-range array module (two in front, one in the rear center).
4. Insert two front pins (one on each side), then insert one rear pin to secure pull back bracket to module. See Fig. 6.
5. Attach pullback cable(s) to the bracket using the included shackles.
26. Connect field wiring, test loudspeaker operation, and then elevate assembly to final operating position.
7. Adjust length of pullback cable attached to the pullback bracket as required for desired array tilt angle.

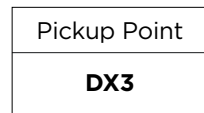


Fig. 1. Pickup point DX3.

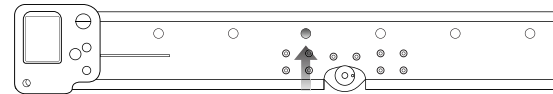


Fig. 2. Center rail rigging point D.

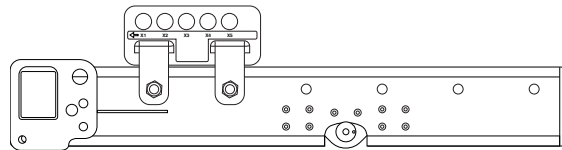


Fig. 3. Multipoint bracket orientation X.

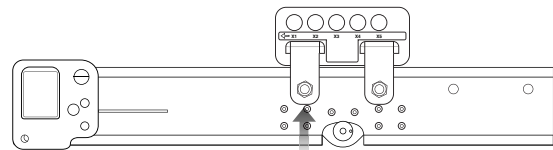


Fig. 4. Center rail rigging point D and orientation X.

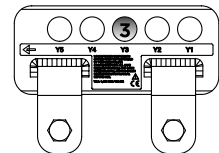


Fig. 5. Rigging point X3.

The shackles provided with the ShowMatch Array Frame and T-Bar Array Frame should not be used for suspension with the multi-point adapter.

Center Rail Suspension Using the Array Frame Multipoint Bracket

The ShowMatch Array Frame Multipoint Bracket (SMAFMP) expands the number of rigging points along the center rail of the Array Frame (SMAF) or T-Bar Array Frame (SMAFT) from 7 to 45 possible points. Use Bose Modeler software or the Bose Array Tool to determine the correct position and orientation of the multipoint bracket on the array frame to achieve the required aiming angles and to confirm the array does not exceed load limits of the frame.

The first letter in the pickup point (A through F) indicates a rigging point on the center rail of the array frame; see Fig. 2. The second letter in the pickup point (X or Y) indicates the correct orientation of the multipoint bracket on the center rail. When oriented correctly, the arrow printed on the multipoint bracket points to the front of the array; see Fig. 3. Place the multipoint bracket on the center rail in the orientation indicated by the design software. Align the front hole of the bracket with the rigging point specified in Step 3, and secure using the included bolts and bolt pins.

Example for a required pickup point of DX3.

1. DX3 is the specified pickup point to achieve the required array angle; see Fig. 1.
2. Locate center rail position D; see Fig. 2.
3. Orient the multipoint adapter for the X orientation; see Fig. 3.
4. Install the front mounting point of the multipoint adapter in position D using provided bolts, nuts and bolt pins; see Fig. 4.
5. Use a graded 5/8" anchor shackle in position X3 of the multipoint adaptor to suspend the array; see Fig. 5.

GROUND STACK ARRAYS INSTALLATION

Use the ShowMatch Ground Stack Bracket (SMGSB) to build ground stack arrays that contain ShowMatch DeltaQ full-range loudspeaker modules (SM5, SM10, and SM20), subwoofer modules (SMS118), or a combination of both.

The ground stack can include up to eight full-range modules. When using subwoofer modules, one subwoofer module replaces two full-range modules. For example, the ground stack can include a maximum of 1 subwoofer and six full-range modules, or two subwoofers and four full-range modules, etc.

If the ground stack contains one or more subwoofer modules, the subwoofers must be placed on the bottom of the stack. You can place the bottom subwoofer module directly on the ground, or attach the subwoofer module to a ShowMatch Array Frame (SMAF) and place the frame on the ground. If you use an array frame as the stack base, it is recommended to attach the included leveling feet to the bottom of the frame.

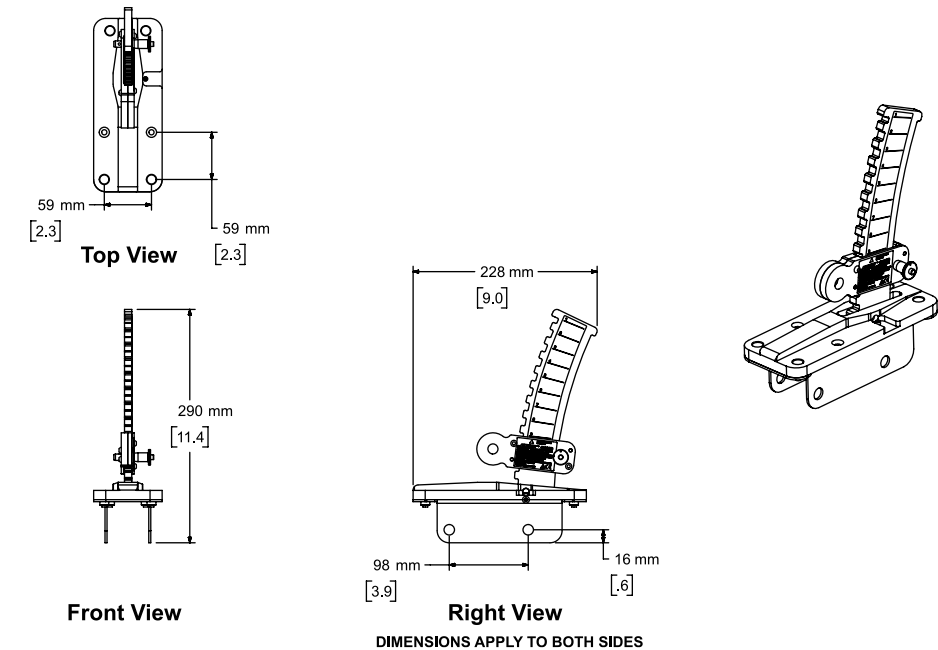
If the ground stack contains one or more subwoofers and one or more full-range modules, you must use the ground stack bracket to attach the full-range modules. You can attach the ground stack bracket directly to the top subwoofer, or attach a ShowMatch Array Frame (SMAF) to the top subwoofer, and then attach the bracket to the frame.

If the ground stack contains full-range modules only, use the ShowMatch Array Frame (SMAF) as the base and attach the ground stack bracket to the frame.



CAUTION: Always evaluate the safety and stability of the array to ensure it is within acceptable limits before building. For support with evaluating array safety, contact your local Bose Sales Engineer.

Product dimensions



Adjust Ground Stack Bracket Angle

Adjust the Ground Stack Bracket before installation of the first full-range module to control the pitch angle of the array. The range of pitch angles depends on the first full-range module in the stack.

To adjust the Ground Stack Bracket angle, follow these instructions:

6. Remove the quick pin from the Ground Stack Bracket.
7. Position the top of the adjustable link directly under the line that corresponds to the desired position. The indicator arrow on the adjustable link points to the position number; see Fig. 1. Refer to the table in Fig. 2 for the corresponding pitch angle for each full-range module.
8. Replace the quick pin to lock the adjustable link in place.

Note: A negative angle measurement indicates that the module is aimed down. A positive angle measurement indicates that the module is aimed up; see Fig. 3.

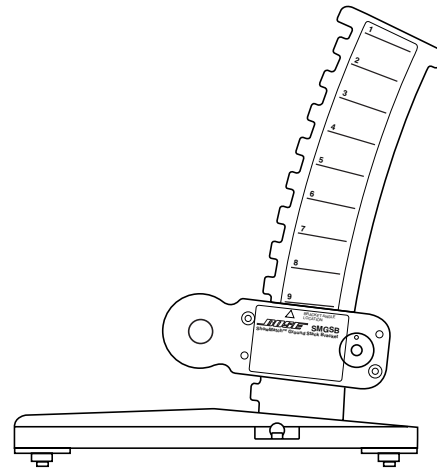


Fig. 1. Position number.

Position	SM5	SM10	SM20
1	-22.5°	-20°	-15°
2	-20°	-17.5°	-12.5°
3	-17.5°	-15°	-10°
4	-15°	-12.5°	-7.5°
5	-12.5°	-10°	-5°
6	-10°	-7.5°	-2.5°
7	-7.5°	-5°	0°
8	-5°	-2.5°	2.5°
9	-2.5°	0°	5°
10	-0°	2.5°	7.5°

Fig. 2. Pitch angle by position and module.

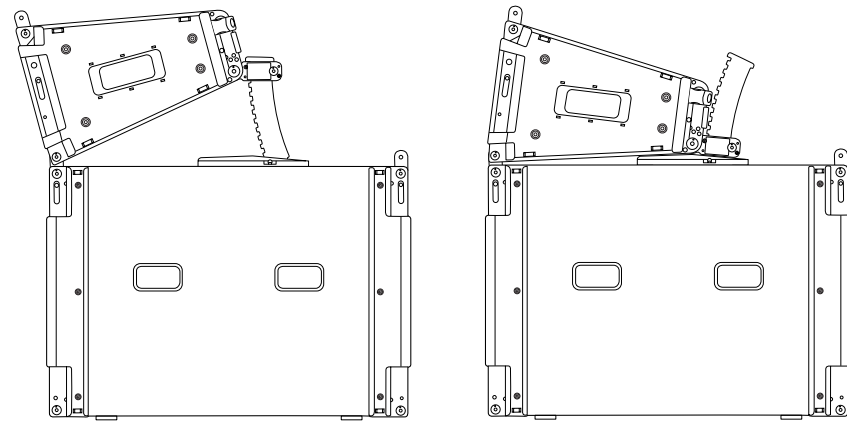


Fig. 3. Negative and positive angle measurements.

Attach Ground Stack Bracket to ShowMatch SMS118

To attach the Ground Stack Bracket directly to the ShowMatch SMS118 subwoofer, follow these instructions:

- Remove the four screws that attach the frame bracket to the base of the ground stack bracket; see Fig. 4.
- Separate the ground stack bracket from the frame bracket. The base of the ground stack bracket should now be flat.
- Remove the four screws connecting the pole mount to the top of the subwoofer. Do not remove the actual pole mount; see Fig. 5.
- Attach the ground stack bracket to the subwoofer using the screws removed from the pole mount.

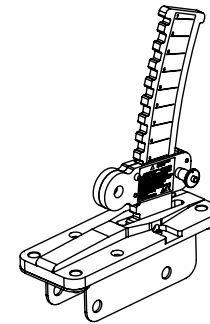


Fig. 4. Remove screws from bracket.

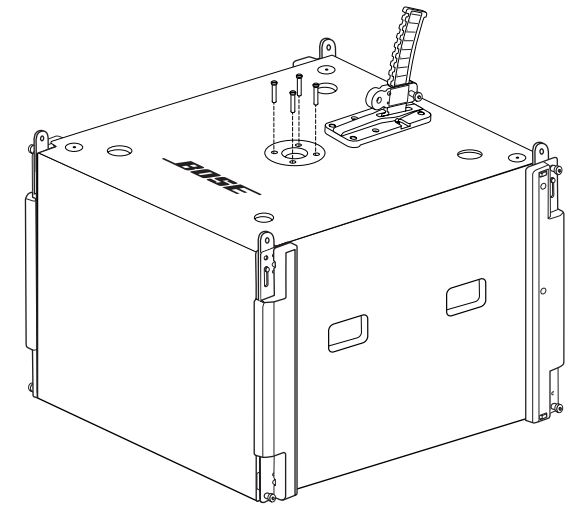


Fig. 5. Remove pole mount screws.

Attach Ground Stack Bracket to ShowMatch Array Frame

To attach the Ground Stack Bracket to the ShowMatch Array Frame, follow these instructions:

- Attach the leveling feet to the bottom of the frame; see Fig. 6. Fully tighten each screw to ensure the feet are level.
- Align the Ground Stack Bracket with the holes along the center rail as indicated. The front ground stack hole should be placed at Location D.
- Attach the ground stack using the bolts and nuts from the array frame.
- Use the included safety pins to ensure security of the bolts.
- Connect the front two rigging locations of the first (bottom) Full-range module to the two front rigging locations on the frame. Then connect the back of the module to the ground stack bracket.

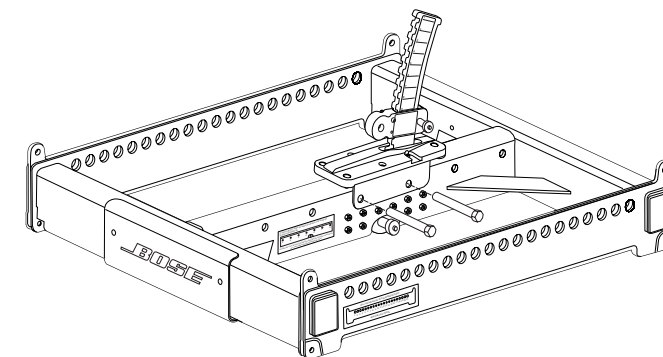


Fig. 6. Ground Stack Bracket on array frame.

SHOWMATCH SYSTEM REFERENCE GUIDE

System Testing

Periodic testing of the ShowMatch system components is required to assure that the system will deliver the desired performance during operation. While the system is designed to provide a high level of reliability, it is recommended that ShowMatch array modules and subwoofers be tested periodically to verify that all components are operational.

A recommended periodic check is to measure the DC resistance of the loudspeakers using a digital multimeter. This test, when performed on individual modules, will provide an accurate reading of whether the devices are properly wired and operating within their operating tolerances. Note that these measurements only validate the electrical performance of the drivers and not the mechanical performance. For information related to performing mechanical tests, e.g. rub and buzz, consult the ShowMatch DeltaQ Array Loudspeakers service manual.

Measurement Set Up

Test the ShowMatch module prior to operation and at room temperature using a digital multimeter. To test the LF section place the probes across the 1 +/- pins; to test the HF place the probes across the 2 +/- pins. Note that it may be necessary to make a breakout cable comprised of an NL-4 to either banana or pig-tail with the connections labeled appropriately.



NL4 to banana breakout test cable

ShowMatch Full Range Modules (SM5, 10, 20)

LF Section (1 +/-)			
Wiring	Condition	DC Resistance (Ohms)	Tolerance
	All Drivers Functioning	5.1	0.5
	1 x LF Driver Open	10.2	0.9
	2 x LF Driver Open	INF	--
	Any Driver Shorted	0	--

HF Section (2 +/-)			
Wiring	Condition	DC Resistance (Ohms)	Tolerance
	All Drivers Functioning	7.2	
	1 x HF Driver Open	14.4	
	2 x HF Driver Open	INF or 14.4	
	3 x HF Driver Open	INF	
	4 x HF Driver Open	INF	
Any Driver Shorted	0		

ShowMatch SMS118 Subwoofers

SMS 118 LF Driver (1 +/-)			
Wiring	Condition	DC Resistance (Ohms)	Tolerance
	Functioning Woofer	3.3	0.4
	Open	INF	--
	Short	0	--

ShowMatch Loudspeakers Technical Specifications

Single Module Performance	Common for all Full-range Modules		SMS118	
Frequency Response (+/- 3 dB) ⁽¹⁾	70 - 17,000 Hz		32 - 250 Hz	
Frequency Range (-10 dB)	60 - 17,000 Hz		29 - 300 Hz	
Transducers				
Low Frequency	2 x Bose SM8 neodymium 8-inch woofers (3-inch voice coil)		1 x 18" neodymium woofer (4.5 inch voice coil)	
High Frequency	4 x Bose EMB2S extended-HF neodymium compression driver (2-inch voice coil)		None	
Nominal Impedance	8 ohms + 6 ohms (LF/HF)		4 ohms	
Recommended Crossover	800 Hz (acoustic; requires active 2-way crossover in DSP)		70 Hz for ShowMatch	
Recommended High-Pass Protection Filter	70 Hz with minimum 12 dB / octave filter		30 Hz with minimum 12 dB / octave filter	
Power Handling, Long-term Continuous	Low Frequency	High Frequency		
	450 W	100 W	750 W	
Power Handling, peak	1800 W	400 W	3000 W	
Enclosure				
Enclosure Material	Baltic Birch plywood		Baltic Birch plywood	
Finish	Two-part spray polyurethane coating, black		Two-part spray polyurethane coating, black	
Grille	16-gauge (1.5 mm) perforated steel, powder-coated finish, black		16-gauge (1.5 mm) perforated steel, powder-coated finish, black	
Environmental	IPx4		IPx4	
Connectors	2 x Neutrik NL4 wired parallel		2 x Neutrik NL4 wired parallel	
Suspension / Mounting	Integrated 3-point quick-pin rigging		Integrated 4-point quick-pin rigging	
Nominal Coverage Pattern	SM5	SM10	SM20	
	70°H x 5°V (or 100°H; optional 55°H)	100°H x 10°V (or 70°H)	100°H x 20°V (or 70°H; optional 120°H)	Omni with cardioid array configurations
Sensitivity (SPL / 1 W @ 1 m) ⁽²⁾	Low Frequency	High Frequency	Low Frequency	High Frequency
	94 dB	106 dB	94 dB	104 dB
Calculated Maximum SPL @ 1 m ⁽³⁾	121 dB	126 dB	121 dB	124 dB
Calculated Maximum SPL @ 1 m, peak	127 dB	132 dB	127 dB	130 dB
Dimensions (H x W x D) - mm	270 x 793 x 467 mm / W: 757 mm ⁽⁵⁾	282 x 793 x 465 mm / W: 757 mm ⁽⁵⁾	303 x 793 x 461 mm / W: 757 mm ⁽⁵⁾	540 x 765 x 775 mm / W: 757 mm ⁽⁵⁾
Dimensions (H x W x D) - inches	10.6 x 31.2 x 18.4" / W: 29.8" ⁽⁵⁾	11.1 x 31.2 x 18.3" / W: 29.8" ⁽⁵⁾	11.9 x 31.2 x 18.1" / W: 29.8" ⁽⁵⁾	21.2 x 30.1 x 30.5" / W: 29.8" ⁽⁵⁾
Net Weight	30.6 kg (67.5 lbs)	29.7 kg (65.5 lbs)	29.0 kg (64.0 lbs)	61.9 kg (136.5 lbs)

Footnotes

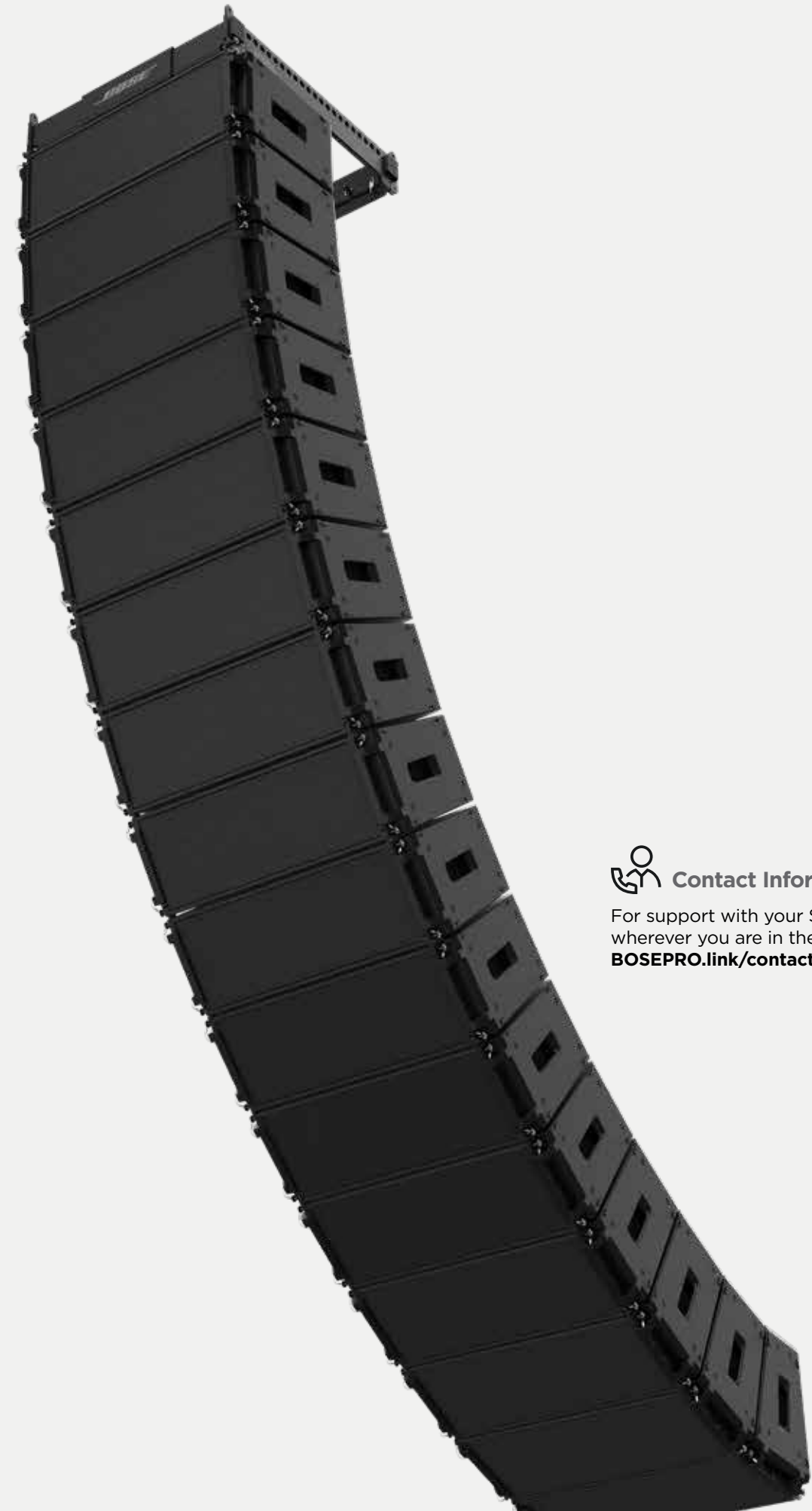
- (1) Frequency response and range measured on-axis in anechoic environment with recommended bandpass and EQ
- (2) Bose extended-lifecycle test using pink noise filtered to meet IEC268-5, 6 dB crest factor, 500 hour duration
- (3) Sensitivity measured in anechoic environment with recommended bandpass and EQ
- (4) Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression
- (5) Width dimensions with side caps removed

ShowMatch Systems Service and Repair Parts List

The service parts listed below are available for order from authorized Bose ShowMatch Master Resellers.

SKU	QTY	DESCRIPTION
ShowMatch Modules		
751195-051S	1	1 ASSY, GRILLE, 5 DEG, SVCE
751195-101S	1	ASSY, GRILLE, 10 DEG, SVCE
751195-201S	1	ASSY, GRILLE, 20 DEG, SVCE
766712-2410	1	ASSY, HORN PANEL 55X05
762707-541S	2	ASSY, HORN PANEL, 70X5, SVCE
762707-551S	2	ASSY, HORN PANEL, 70X10, SVCE
762707-561S	2	ASSY, HORN PANEL, 70X20, SVCE
762706-841S	2	ASSY, HORN PANEL, 100X5, SVCE
762706-851S	2	ASSY, HORN PANEL, 100X10, SVCE
762706-861S	2	ASSY, HORN PANEL, 100X20, SVCE
766713-9610	1	ASSY, HORN PANEL, 120x20
756151-001S	2	WOOFER, 8 IN. 18 SOUND, SVCE
770438-011S	4	EMB2S COMPRESSION DRIVER
	2	HANDLE, LIFTING
754285-001S	2	PIN, QUICK RELEASE, 12MM DIA, 38MM, SVCE
757313-001S	4	PIN, QUICK RELEASE, 8MM DIA.,16MM, SVCE
752363-011S	1	ASSY, INPUT/OUTPUT PANEL, 5 DEG, SVCE
752363-012S	1	ASSY, INPUT/OUTPUT PANEL, 10 DEG, SVCE
752363-013S	1	ASSY, INPUT/OUTPUT PANEL, 20 DEG, SVCE
768863-051S	2	ASSY, END CAP, 5 DEG
768863-101S	2	ASSY, END CAP, 10 DEG
768863-201S	2	ASSY, END CAP, 20 DEG
SMS118		
298548	1	CONN, SPEAKON, 4 POS, MALE, 240V, 30A, BLK, SVCE
751086-011S	1	GASKET, CONNECTOR, NL4MP, SVCE
757729-011S	1	ASSY, GRILLE, SVCE
344052-001S	1	WOOFER, 18 INCH, B&C SPKRS, 18SW115, SVCE
367239-0110	8	SCREW, INSERT, RIGGING, BLK
740899-011S	4	FOOT, NESTING, SVCE
768875-012S	2	ASSY, END CAP, SVCE
757313-001S	8	PIN, QUICK RELEASE, 8MM DIA, 16MM LGTH, SVCE
748626-011S	1	ASSY, PANEL, I/O, SUB, SVCE

SKU	QTY	DESCRIPTION
Suspension Hardware		
	1	ARRAY FRAME SCHACKLE WITH BOLT AND CAPTURE
	2	ARRAY FRAME RUBBER END-CAPS
	2	XXX BOLT WITH CAPTURE PIN
	1	ARRAY FRAME LOGO PLATE
	8	SCREW, INSERT, RIGGING, BLK
	4	FOOT, NESTING, SVCE
ShowMatch Amplifier Rack		
	1	10RU SHOWMATCH TOURING RACK - UNLOADED
	1	INPUT SIGNAL DISTRIBUTION
	1	SPEAKER SIGNAL DISTRIBUTION
	1	CISCO SG350-28 LAYER 3 SWITCH
	1	RACK POWER DISTRIBUTION UNIT - 120V
	1	RACK POWER DISTRIBUTION UNIT - 240V
	1	NETWORK CABLE SET
	1	X4 AC SUPPLY CABLE SET
	1	SIGNAL DISTRIBUTION CABLE SET
ShowMatch Transport Carts, Cases & Dollies		
	1	REPLACEMENT ALUMNIUM UPRIGHT
	4	REPLACEMENT CASTER



Contact Information

For support with your ShowMatch system wherever you are in the world, visit us at [BOSEPRO.link/contact](https://www.bosepro.com/contact).



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