



MANCHESTER Series

MC15-R

15" Point Source Array Element for Install and Touring

MC15-FB

Fly Bar for MC15-R enclosures

MC15-RS

Rigging Set for MC15-R

MC15-RC

Rigging Chain Bridle for MC15-R Loudspeaker clusters

MC15-WB

Wheel Board for MC15-R

EN

ES

FR

DE

PT

IT

NL

[EN] Safety Instruction

1. Please read and follow all instructions.
2. Keep the apparatus away from water, except for outdoor products.
3. Clean only with a dry cloth.
4. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
5. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
6. Use only attachments/accessories specified by the manufacturer.



7. Use only specified carts, stands, tripods, brackets, or tables. Use caution to prevent tip-over when moving the cart/apparatus combination.

8. Avoid installing in confined spaces like bookcases.
9. Do not place near naked flame sources, such as lighted candles.
10. Operating temperature range 5° to 45°C (41° to 113°F).

LEGAL DISCLAIMER

Music Tribe accepts no liability for any loss which may be suffered by any person who relies either wholly or in part upon any description, photograph, or statement contained herein. Technical specifications, appearances and other information are subject to change without notice. All trademarks are the property of their respective owners. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones and Coolaudio are trademarks or registered trademarks of Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 All rights reserved.

LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding Music Tribe's Limited Warranty, please see complete details online at community.musictribe.com/support.

[ES] Instrucción de seguridad

1. Por favor, lea y siga todas las instrucciones.
2. Mantenga el aparato alejado del agua, excepto para productos destinados al uso en exteriores.
3. Limpie solo con un paño seco.
4. No bloquee ninguna abertura de ventilación. Instale de acuerdo con las instrucciones del fabricante.
5. No instale cerca de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que generen calor.

6. Utilice solo accesorios especificados por el fabricante.



7. Use solo carros, soportes, trípodes, soportes o mesas especificados. Tenga precaución para evitar el vuelco al mover la combinación carro/aparato.

8. Evite la instalación en espacios confinados como estanterías.

9. No colocar cerca de fuentes de llama desnuda, como velas encendidas.

10. Rango de temperatura de funcionamiento de 5° a 45°C (41° a 113°F).

NEGACIÓN LEGAL

Music Tribe no admite ningún tipo de responsabilidad por cualquier daño o pérdida que pudiera sufrir cualquier persona por confiar total o parcialmente en la descripciones, fotografías o afirmaciones contenidas en este documento. Las especificaciones técnicas, imágenes y otras informaciones contenidas en este documento están sujetas a modificaciones sin previo aviso. Todas las marcas comerciales que aparecen aquí son propiedad de sus respectivos dueños. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones y Coolaudio son marcas comerciales o marcas registradas de Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 Reservados todos los derechos.

GARANTÍA LIMITADA

Si quiere conocer los detalles y condiciones aplicables de la garantía así como información adicional sobre la Garantía limitada de Music Tribe, consulte online toda la información en la web community.musictribe.com/support.

[FR] Consignes de sécurité

1. Veuillez lire et suivre toutes les instructions.
2. Gardez l'appareil éloigné de l'eau, sauf pour les produits destinés à une utilisation en extérieur.
3. Nettoyez uniquement avec un chiffon sec.
4. Ne bloquez aucune ouverture de ventilation. Installez conformément aux instructions du fabricant.
5. N'installez pas près de sources de chaleur telles que radiateurs, grilles de chaleur, cuisinières ou autres appareils (y compris les amplificateurs) qui produisent de la chaleur.
6. Utilisez uniquement les accessoires spécifiés par le fabricant.



7. Utilisez uniquement des chariots, des supports, des trépieds, des supports ou des tables spécifiés. Faites attention pour éviter le renversement lors du déplacement de la combinaison chariot/appareil.

8. Évitez l'installation dans des espaces confinés comme les bibliothèques.

9. Ne pas placer près de sources de flamme nue, telles que des bougies allumées.

10. Plage de température de fonctionnement de 5° à 45°C (41° à 113°F).

DÉNI LÉGAL

Music Tribe ne peut être tenu pour responsable pour toute perte pouvant être subie par toute personne se fiant en partie ou en totalité à toute description, photographie ou affirmation contenue dans ce document. Les caractéristiques, l'apparence et d'autres informations peuvent faire l'objet de modifications sans notification. Toutes les marques appartiennent à leurs propriétaires respectifs. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones et Coolaudio sont des marques ou marques déposées de Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 Tous droits réservés.

GARANTIE LIMITÉE

Pour connaître les termes et conditions de garantie applicables, ainsi que les informations supplémentaires et détaillées sur la Garantie Limitée de Music Tribe, consultez le site Internet community.musictribe.com/support.

[DE] Wichtige Sicherheitshinweise

1. Bitte lesen Sie alle Anweisungen sorgfältig durch und befolgen Sie diese.
2. Halten Sie das Gerät von Wasser fern, außer für Produkte, die für den Außeneinsatz vorgesehen sind.
3. Reinigen Sie es nur mit einem trockenen Tuch.
4. Blockieren Sie keine Belüftungsöffnungen. Installieren Sie gemäß den Anweisungen des Herstellers.
5. Installieren Sie nicht in der Nähe von Wärmequellen wie Heizkörpern, Heizregistern, Öfen oder anderen Geräten (einschließlich Verstärkern), die Wärme erzeugen.
6. Verwenden Sie nur Zubehörteile, die vom Hersteller angegeben sind.



7. Verwenden Sie nur spezifizierte Wagen, Ständer, Stative, Halterungen oder Tische. Achten Sie darauf, beim Bewegen der Wagen-Geräte-Kombination ein Umkippen zu vermeiden.

8. Vermeiden Sie die Installation in beengten Räumen wie Bücherregalen.

9. Nicht in der Nähe von offenen Flammenquellen platzieren, wie brennende Kerzen.

10. Betriebstemperaturbereich von 5° bis 45°C (41° bis 113°F).

HAFTUNGSAUSSCHLUSS

Music Tribe übernimmt keine Haftung für Verluste, die Personen entstanden sind, die sich ganz oder teilweise auf hier enthaltene Beschreibungen, Fotos oder Aussagen verlassen haben. Technische Daten, Erscheinungsbild und andere Informationen können ohne vorherige Ankündigung geändert werden. Alle Warenzeichen sind Eigentum der jeweiligen Inhaber. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones und Coolaudio sind Warenzeichen oder eingetragene Warenzeichen der Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 Alle Rechte vorbehalten.

BESCHRÄNKTE GARANTIE

Die geltenden Garantiebedingungen und zusätzliche Informationen bezüglich der von Music Tribe gewährten beschränkten Garantie finden Sie online unter community.musictribe.com/support.

[PT] Instruções de Segurança Importantes

1. Por favor, leia e siga todas as instruções.
2. Mantenha o aparelho longe da água, exceto para produtos destinados ao uso externo.
3. Limpe apenas com um pano seco.
4. Não bloqueie nenhuma abertura de ventilação. Instale de acordo com as instruções do fabricante.
5. Não instale próximo a fontes de calor, como radiadores, grelhas de calor, fogões ou outros aparelhos (incluindo amplificadores) que gerem calor.
6. Use apenas acessórios especificados pelo fabricante.



7. Use apenas carrinhos, suportes, tripés, suportes ou mesas especificados. Tenha cuidado para evitar tombamentos ao mover a combinação carrinho/aparelho.

8. Evite instalar em espaços confinados, como estantes.

9. Não coloque perto de fontes de chama nua, como velas acesas.

10. Intervalo de temperatura de operação de 5° a 45°C (41° a 113° F).

LEGAL RENUNCIANTE

O Music Tribe não se responsabiliza por perda alguma que possa ser sofrida por qualquer pessoa que dependa, seja de maneira completa ou parcial, de qualquer descrição, fotografia, ou declaração aqui contidas. Dados técnicos, aparências e outras informações estão sujeitas a modificações sem aviso prévio. Todas as marcas são propriedade de seus respectivos donos. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones e Coolaudio são marcas ou marcas registradas do Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 Todos direitos reservados.

GARANTIA LIMITADA

Para obter os termos de garantia aplicáveis e condições e informações adicionais a respeito da garantia limitada do Music Tribe, favor verificar detalhes na íntegra através do website community.musictribe.com/support.

[IT] Istruzioni di sicurezza importanti

1. Per favore, leggere e seguire tutte le istruzioni.
2. Mantenere l'apparecchio lontano dall'acqua, tranne per i prodotti destinati all'uso all'aperto.
3. Pulire solo con un panno asciutto.
4. Non ostruire alcuna apertura di ventilazione. Installare in conformità alle istruzioni del produttore.
5. Non installare vicino a fonti di calore come termosifoni, bocchette di calore, fornelli o altri apparecchi (compresi gli amplificatori) che producono calore.
6. Utilizzare solo accessori specificati dal produttore.



7. Usare solo carrelli, supporti, treppiedi, staffe o tavoli specificati. Prestare attenzione per evitare il ribaltamento durante lo spostamento della combinazione carrello/apparecchio.

8. Evitare l'installazione in spazi confinati come librerie.

9. Non posizionare vicino a fonti di fiamma nude, come candele accese.

10. Intervallo di temperatura di funzionamento da 5° a 45°C (41° a 113°F).

DISCLAIMER LEGALE

Music Tribe non si assume alcuna responsabilità per eventuali danni che possono essere subiti da chiunque

si affidi in tutto o in parte a qualsiasi descrizione, fotografia o dichiarazione contenuta qui. Specifiche tecniche, aspetti e altre informazioni sono soggette a modifiche senza preavviso. Tutti i marchi sono di proprietà dei rispettivi titolari. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones e Coolaudio sono marchi o marchi registrati di Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 Tutti i diritti riservati.

GARANZIA LIMITATA

Per i termini e le condizioni di garanzia applicabili e le informazioni aggiuntive relative alla garanzia limitata di Music Tribe, consultare online i dettagli completi su community.musictribe.com/support.

[NL] Belangrijke veiligheidsvoorschriften

1. Lees alsjeblieft alle instructies en volg deze op.
2. Houd het apparaat uit de buurt van water, behalve voor producten die bedoeld zijn voor buitengebruik.
3. Reinig alleen met een droge doek.
4. Blokker geen ventilatieopeningen. Installeer volgens de instructies van de fabrikant.
5. Installeer niet in de buurt van warmtebronnen zoals radiatoren, warmte registers, fornuizen of andere apparaten (inclusief versterkers) die warmte produceren.
6. Gebruik alleen accessoires die door de fabrikant zijn gespecificeerd.



7. Gebruik alleen gespecificeerde karren, standaards, statieven, beugels of tafels. Wees voorzichtig om kantelen te voorkomen bij het verplaatsen van de kar/apparaatcombinatie.

8. Vermijd installatie in afgesloten ruimtes zoals boekenkasten.

9. Plaats niet in de buurt van naakte vlambronnen, zoals brandende kaarsen.

10. Bedrijfstemperatuurbereik van 5° tot 45°C (41° tot 113°F).

WETTELIJKE ONTKENNING

Music Tribe aanvaardt geen aansprakelijkheid voor enig verlies dat kan worden geleden door een persoon die geheel of gedeeltelijk vertrouwt op enige beschrijving, foto of verklaring hierin. Technische specificaties, verschijningen en andere informatie kunnen zonder voorafgaande kennisgeving worden gewijzigd. Alle handelsmerken zijn eigendom van hun respectievelijke eigenaren. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones en Coolaudio

EN

ES

FR

DE

PT

IT

NL

zijn handelsmerken of gedeponeerde handelsmerken van Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 Alle rechten voorbehouden.

BEPERKTE GARANTIE

Voor de toepasselijke garantievoorwaarden en aanvullende informatie met betrekking tot de beperkte garantie van Music Tribe, zie de volledige details online op community.musictribe.com/support.

Viktiga säkerhetsanvisningar

- 1. Vänligen läs och följ alla instruktioner noggrant.
- 2. Håll apparaten borta från vatten, förutom för utomhusprodukter.
- 3. Rengör endast med en torr trasa.
- 4. Blockera inte några ventilationsöppningar. Installera enligt tillverkarens anvisningar.
- 5. Installera inte nära några värmekällor som element, värmeregistrar, spisar eller andra apparater (inklusive förstärkare) som genererar värme.
- 6. Använd endast tillbehör som anges av tillverkaren.



7. Använd endast specificerade vagnar, ställ, stativ, fästen eller bord. Var försiktig för att undvika att vagnen/ apparatkombinationen tippas när den flyttas.

- 8. Undvik installation i trånga utrymmen som bokhyllor.
- 9. Placera inte nära öppen låga, såsom tända ljus.
- 10. Driftstemperaturområde 5° till 45°C (41° till 113°F).

FRISKRIVNINGSKLAUSUL

Music Tribe tar inget ansvar för någon förlust som kan drabbas av någon person som helt eller delvis förlitar sig på någon beskrivning, fotografi eller uttalande som finns här. Tekniska specifikationer, utseenden och annan information kan ändras utan föregående meddelande. Alla varumärken tillhör respektive ägare. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones och Coolaudio är varumärken eller registrerade varumärken som tillhör Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 Alla Rättigheter reserverade.

BEGRÄNSAD GARANTI

För tillämpliga garantivillkor och ytterligare information om Music Tribes begränsade garanti, se fullständig information online på community.musictribe.com/support.

Ważne informacje o bezpieczeństwie

- 1. Proszę przeczytać i ściśle przestrzegać wszystkich instrukcji.
- 2. Trzymaj urządzenie z dala od wody, z wyjątkiem produktów przeznaczonych do użytku na zewnątrz.
- 3. Czyść tylko suchą szmatką.
- 4. Nie blokuj żadnych otworów wentylacyjnych. Instaluj zgodnie z instrukcjami producenta.
- 5. Nie instaluj w pobliżu źródeł ciepła, takich jak grzejniki, rejestratory ciepła, kuchenki lub inne urządzenia (w tym wzmacniacze), które generują ciepło.
- 6. Używaj tylko akcesoriów określonych przez producenta.



7. Używaj tylko określonych wózków, stojaków, statywów, uchwytów lub stołów. Uważaj, aby zapobiec przewróceniu się wózka/ aparatu podczas przemieszczania.

- 8. Unikaj instalacji w ciasnych miejscach, takich jak regały na książki.
- 9. Nie umieszczaj w pobliżu źródeł otwartego ognia, takich jak zapalone świece.
- 10. Zakres temperatury pracy od 5° do 45°C (41° do 113°F).

ZASTRZEŻENIA PRAWNE

Music Tribe nie ponosi odpowiedzialności za jakiegokolwiek straty, które mogą ponieść osoby, które polegają w całości lub w części na jakimkolwiek opisie, fotografii lub oświadczeniu zawartym w niniejszym dokumencie. Specyfikacje techniczne, wygląd i inne informacje mogą ulec zmianie bez powiadomienia. Wszystkie znaki towarowe są własnością ich odpowiednich właścicieli. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones i Coolaudio są znakami towarowymi lub zastrzeżonymi znakami towarowymi firmy Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2025 Wszystkie prawa zastrzeżone.

OGRANICZONA GWARANCJA

Aby zapoznać się z obowiązującymi warunkami gwarancji i dodatkowymi informacjami dotyczącymi ograniczonej gwarancji Music Tribe, zapoznaj się ze wszystkimi szczegółami w trybie online pod adresem community.musictribe.com/support.

安全指示

- 1. すべての指示を読んで、従ってください。
- 2. 屋外の製品を除き、機器を水から遠ざけてください。
- 3. 乾いた布でのみ清掃してください。
- 4. 通気口を塞がないでください。メーカーの指示に従ってインストールしてください。
- 5. 暖房器、ヒートレジスター、ストーブなどの発熱機器（アンプを含む）の近くには取り付けしないでください。
- 6. メーカーが指定したアタッチメント/ アクセサリーのみ使用してください。



7. 指定されたカート、スタンド、三脚、ブラケット、またはテーブルのみ使用してください。カート/機器の組み合わせを移動する際には、転倒を防ぐ

- よう注意してください。
- 8. 書棚などの密閉された空間には設置しないでください。
- 9. 裸火のような火の元の近くに置かないでください。
- 10. 動作温度範囲は摂氏 5 度から 45 度（華氏 41 度から 113 度）です。

法的放棄

ここに含まれる記述、写真、意見の全体または一部に依拠して、いかなる人が損害を生じさせた場合にも、Music Tribe は一切の賠償責任を負いません。技術仕様、外観およびその他の情報は予告なく変更になる場合があります。商標はすべて、それぞれの所有者に帰属します。Midas、Klark Teknik、Lab Gruppen、Lake、Tannoy、Turbosound、TC Electronic、TC Helicon、Behringer、Bugera、Aston Microphones および Coolaudio は Music Tribe Global Brands Ltd. の商標または登録商標です。© Music Tribe Global Brands Ltd. 2025 無断転用禁止。

限定保証

適用される保証条件と Music Tribe の限定保証に関する概要については、オンライン上 community.musictribe.com/support にて詳細をご確認ください。

安全须知

- 1. 请阅读、保存、遵守所有的说明，注意所有的警示。
- 2. 请勿在靠近水的地方使用本产品。
- 3. 请用干布清洁本产品。
- 4. 请只使用厂家指定的附属设备和配件。不要堵塞任何通风口。按照制造商的说明进行安装。



5. 请只使用厂家指定的或随货销售的手推车、架子、三角架、支架和桌子等。若使用手推车来搬运设备，请注意安全放置设备，以避免手推车和设备倾

- 倒而受伤。
- 6. 请勿安装在密闭空间，如书柜或类似装置。
- 7. 请勿将本产品安装在热源附近，如暖气片、炉子或其它产生热量的设备（包括功放器）。产品上不要放置裸露的火焰源，如点燃的蜡烛。
- 8. 如果液体流入或异物落入设备内，设备遭雨淋或受潮，设备不能正常运作或被摔坏等，设备受损需进行维修时，所有维修均须由合格的维修人员进行维修。

法律声明

对于任何因在此说明书提到的全部或部份描述、图片或声明而造成的损失，Music Tribe 不负任何责任。技术参数和外观若有更改，恕不另行通知。所有的商标均为其各自所有者的财产。Midas、Klark Teknik、Lab Gruppen、Lake、Tannoy、Turbosound、TC Electronic、TC Helicon、Behringer、Bugera、Aston Microphones 和 Coolaudio 是 Music Tribe Global Brands Ltd. 公司的商标或注册商标。© Music Tribe Global Brands Ltd. 2025 版权所有。

保修条款

有关音乐集团保修的适用条款及其它相关信息，请登陆 community.musictribe.com/support 网站查看完整的详细信息。

Welcome

Thank you for choosing a Turbosound loudspeaker product for your application. If you would like further information about this or any other product, please visit our website at turbosound.com.

Unpacking the Loudspeaker

After unpacking the unit, please check carefully for damage. If damage is found, please notify your supplier at once. You, the consignee, must instigate any claim. Please retain all packaging in case of future return shipment.

About this Quick Start Guide

This QSG describes details of the MC15-R loudspeaker and shows various options such as the MC15-FB fly bar, MC15-RS rigging set, MC15-RC rigging chain, and MC15-WB wheel board, in readiness for suspending. These instructions shall only be used with these components.

The optional rigging components (MC15-FB fly bar, MC15-RS rigging set, MC15-RC rigging chain) shall only be used in conjunction with Turbosound MC15-R loudspeakers as described in this quick start guide.

The instructions do not show details of external lifting equipment and do not contain details of safe lifting procedures or installation.

Possession of these instructions and procedures does not imply authorisation for their use.

General Safety

The operation of your product as part of a suspended system, if installed incorrectly and improperly, can potentially expose persons to serious health risks and even death. In addition, please ensure that electrical, mechanical and acoustic considerations are discussed with qualified and certified (by local, state or national authorities) personnel prior to any installation.

Installation and setup should only be carried out by qualified and authorised personnel observing the valid local, state and other safety regulations applicable in your country. If any parts or components are missing please contact your dealer before attempting to set up the system.

It is the responsibility of the person installing the assembly to ensure that the suspension/fixing points are suitable for the intended use.

We also recommend you schedule Turbosound training with our sales partners and applications team.

Equipment used to connect to the Turbosound rigging system must be properly rated and must conform to the local, state and other safety regulations. Do not use Turbosound rigging with other types or brands of loudspeakers. This practice may compromise safety standards and Music Tribe Global Brands Ltd will not be responsible for damage or injury so caused. Do not modify the accessories, or use them in a way other than that described in this QSG. Rigging components supplied as part of a complete assembly are non-interchangeable and must not be exchanged with the component parts of any other assembly.

Welding, or any other means of permanently fixing rigging components to each other or to cabinet fixing points is not allowed. Rigging components or assemblies must only be fixed to Turbosound loudspeaker cabinets using the cabinet fixing points.

Music Tribe Global Brands Ltd assumes no liability for any damage or personal injury resulting from improper use, installation or operation of the product. Regular checks must be conducted by qualified personnel to ensure that the system remains in a secure and stable condition. Make sure that, where the product is suspended, the area underneath the product is free of human traffic. Do not suspend the product in areas which can be entered or used by members of the public.

Always refer to EASE FOCUS modeling software error and warning indications prior to installation.

Secondary Safeties

All loudspeakers flown in theatres, studios or other places of work and entertainment shall, in addition to the principle load bearing means of suspension, be provided with an independent, properly rated, and securely attached secondary safety. Only steel wire ropes or steel chains of an approved construction and load rating shall be used as secondary safeties. Plastic-covered steel wire ropes are not permitted for use as secondary safeties.

The secondary safety suspension must be independent of the primary suspension points and capable of carrying the total system weight. The additional safety device must be mounted in a way that the loudspeaker is caught by the safety device without any drop and swing, in the event that the primary suspension fails.

Operational Safety

The procedures require the use of two or more authorised persons.

Produce a lift plan: before any lift takes place, you must formulate a lift plan that describes the exact steps and procedures that will be carried out.

The plan must be shared with all assistants and stake-holders in the lift so that each person will understand their responsibilities.

Observe all instructions given on the respective instruction labels of the rigging components and loudspeakers.

When using chain hoists, make sure nobody is directly underneath or in the vicinity of the loudspeakers.

During assembly pay attention to the possible risk of crushing.

Wear suitable protective clothing.

Safety Inspections

Carefully inspect rigging system components and cabinets for defects or signs of damage before proceeding to assemble the array to be flown. If any parts are damaged or suspect, or if there is any doubt as to the proper functioning and safety of the items DO NOT USE THEM and withdraw them from use immediately.

System Requirements

The MC15-R is a bi-amp 3-way loudspeaker with a passive network used on the mid and high frequency bands, and it requires 2 channels of amplifier and DSP in bi-amp mode.

All Manchester series Loudspeakers exclusively use LAKE pre-sets via Lab Gruppen PLM+ and D series L platforms. No other amplifier and DSP platforms are supported.

Manchester series has a powerful yet simple pre-set strategy utilizing the latest functionality of LAKE software (explained later in this QSG).

Pre-set data is found either via the LAKE LOAD Library or can be downloaded from www.turbosound.com

Recommended Lab Gruppen PLM+ models for Touring applications are the PLM12k44 and PLM20k44.

For installations using Lab Gruppen D series L models, please use Lab Gruppen ‘CAFE’ software - available for download from www.labgruppen.com - to determine the optimum amplifier configuration for your system.

System Cabling Requirements

To avoid wasting amplifier power, you should use heavy-duty speaker cable with a minimum wire size of 2.5 mm² (14 AWG), and preferably 4 mm² (12 AWG) for longer runs or where total cabinet input impedance is less than 8 ohms. For extreme cable lengths, be aware of cable impedance and resistive losses. Always observe the correct polarity.

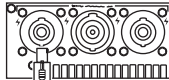
Use genuine 2 x NL4M Connectors for reliable operation.

Attach and support the speaker cables from your amplifiers to the loudspeaker cabinets, so that no significant additional weight or lateral force is applied to the array by the input wiring. Input cables or link cables should never be used to angle the array or used as rigging in any way.

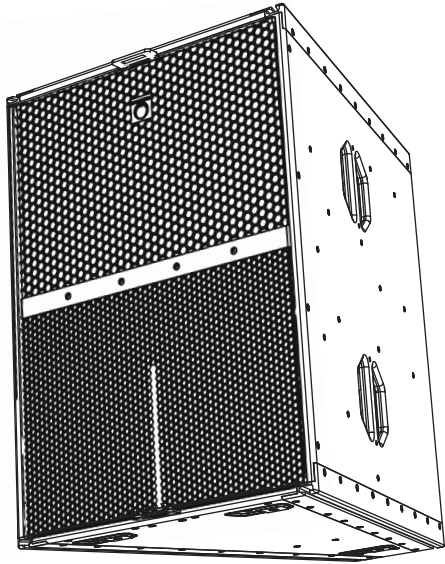
Bi-Amping

NOTE: Since the MC15-R cabinet is wired (1+/- = LF and 2+/- = MHF), it makes sense to use either (LF: 1 +/- HF: 2 +/-) or (LF: 3 +/- HF 4+/-) for the output patching from the Lab Gruppen PLM+ amplifier.

LAB GRUPPEN PLM + Series Amplifier outputs configured in LAKE software on Pins 1+/- and 2 +/-

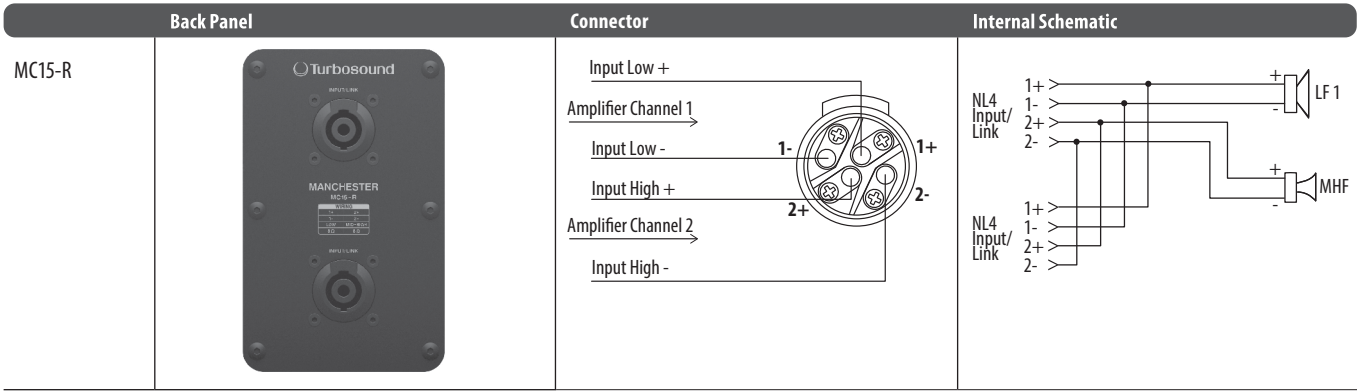


NL4 - NL4 four-conductor cable with standard wiring (1+/- to 1+/- and 2+/- to 2+/-)



Connections

Caution: It is mandatory to use the official factory Lake pre-set. Failure to do so will result in component failure of the MC15-R passive crossover and transducers. No other 3rd party DSP or Amplifiers are supported



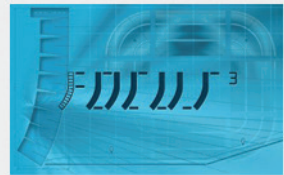
Rigging and Acoustic Simulation Software

The MC15-R has 3 main rigging accessories: the MC15-FB (Fly Bar), the MC15-RS (Rigging Set) and the MC15-RC (Rigging Chain) these accessories comply with BGV-C1 rigging standards.

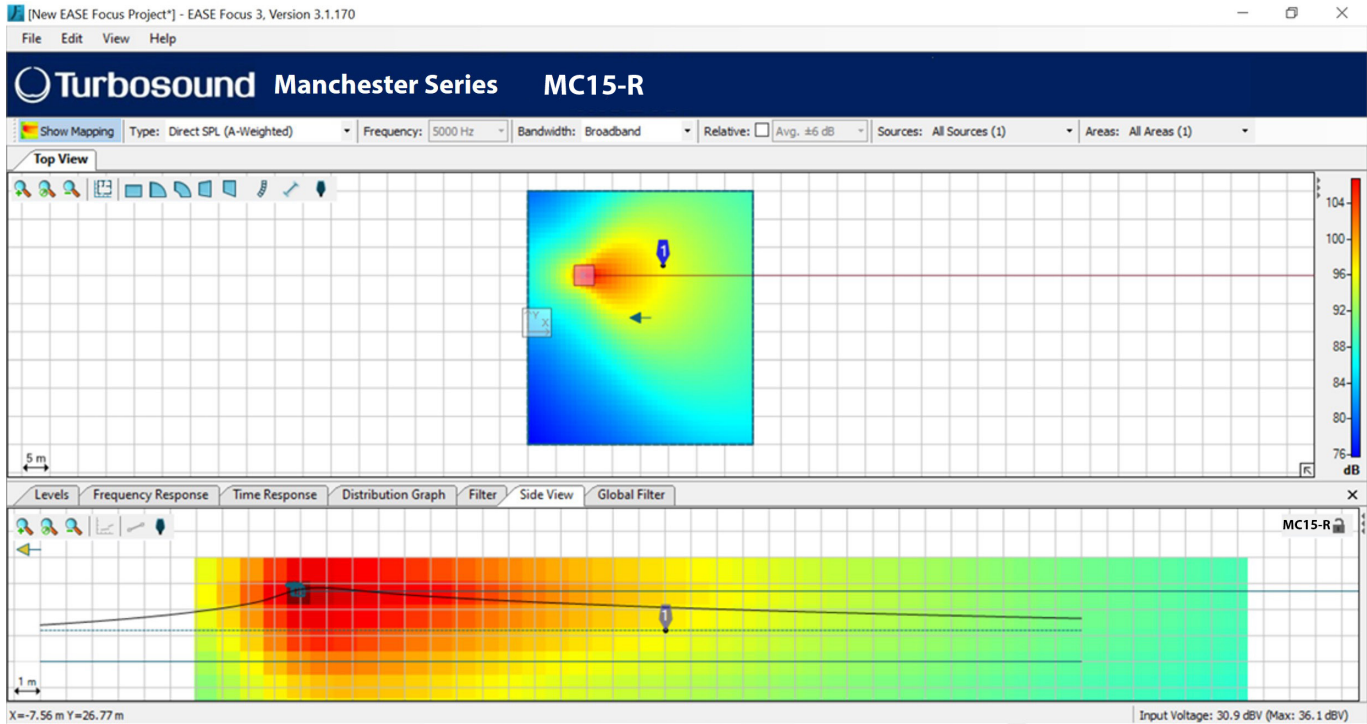
The MC15-R is an arrayable product, and it is supported in Ease Focus 3 for either stand alone use, with Manchester series subwoofers or as part of larger Manchester series systems.

EASE Focus 3 is an acoustic simulation program, available as a free download from <https://www.afmg.eu/en/ease-focus>

Note: The graph below is typical of EASE Focus 3 data. Use the actual program for exact data for these speakers.



Full EASE data can be downloaded from www.turbosound.com
This will allow acoustic prediction, array formation and suspension to be determined. Important safety information about WLL is also calculated by EASE Focus.



MC15-R Installation

! Safety Warning: Only authorised and certified personnel shall design and install suspended configurations. Incorrect installation may lead to death or permanent injury.

The use of a secondary safety is a mandatory safety requirement.

The optional accessories include the MC15-FB fly bar, the MC15-RS rigging set, and the MC15-RC rigging chain. These allow the MC15-R to be mounted in a number of different configurations, as shown below.

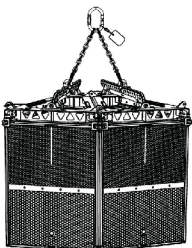
WARNING: Only these accessories shall be used to suspend the MC15-R loudspeaker and to form the arrays as shown.

WARNING: Only the eight combinations shown below are allowable. No other combinations shall be used.

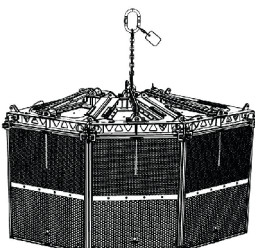
MC15-R Array Examples



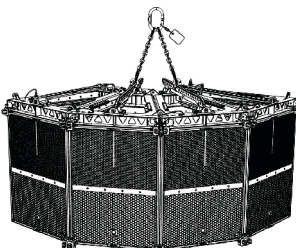
1 x 1



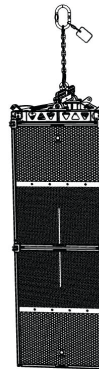
1 x 2



1 x 3



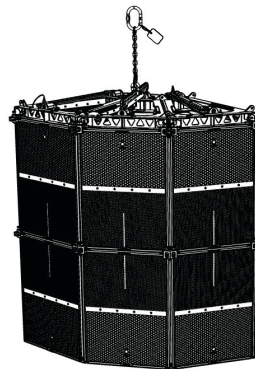
1 x 4



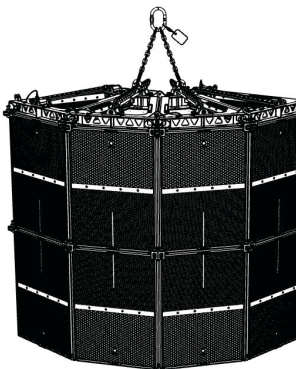
2 x 1



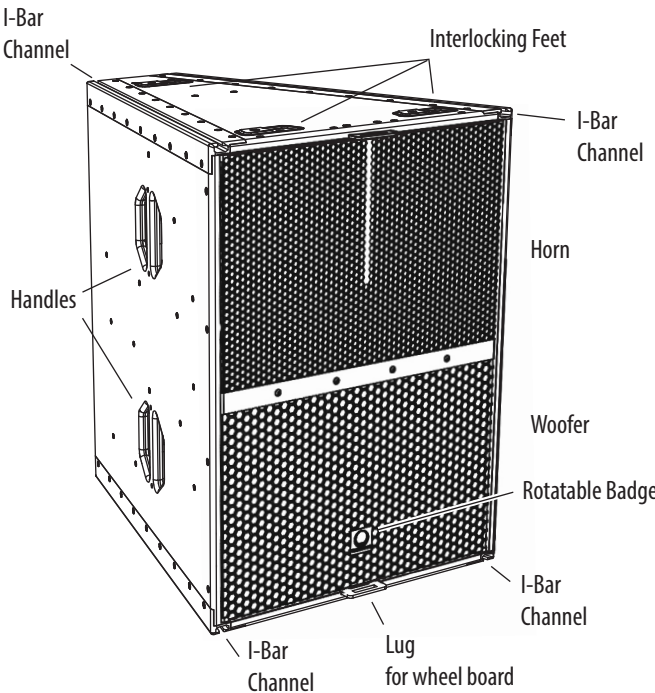
2 x 2



2 x 3



2 x 4



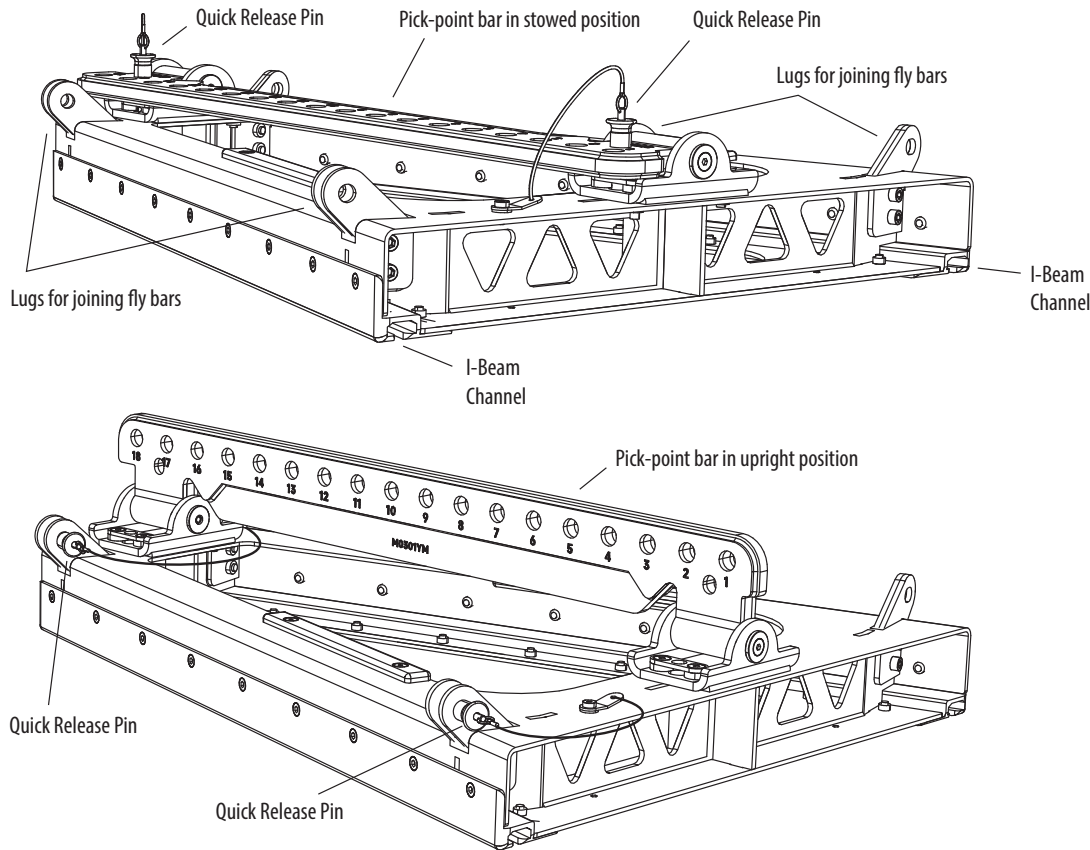
MC15-R Optional Accessories

Fly Bar MC15-FB

The optional MC15-FB fly bar allows the MC15-R speaker to be flown. It attaches to the top surface of the speaker using the MC15-RS rigging set.

Quick Release Pins (QRP) are used to lock multiple MC15-FB fly bars together to form an array, and to stow the pick-point bar in the stowed position.

The MC15-FB fly bar has an integral pick-point bar that is used to suspend the fly bar/speaker assemblies. If not used, the bar can be stowed and secured in place with either a single QRP or both QRP.

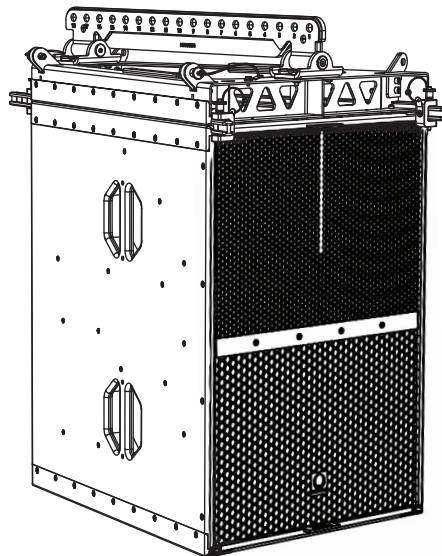
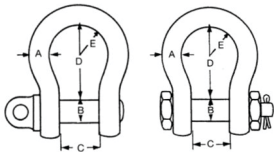


The MC15-FB fly bar has 18 x 14 mm diameter holes that are used as pick points for rigging shackles.

A standard 1.5 ton bow shackle can be used to pick up the MC15-R.

Either style of shackle will work:

W.L.L = 1.5 Ton
A = 11 mm
B = 12 mm
C = 18.5 mm
D = 43 mm



MC15-RS Rigging Set

The optional MC15-RS rigging set allows the MC15-R speaker to be attached to the MC15-FB fly bar, and to other MC15-R enclosures.

Each rigging set includes:

4 x I-Bars

The I-Bars slide into the I-Bar channel of the MC15-R and the MC15-FB to secure them together vertically. They secure MC15-R to MC15-R, and MC15-FB to MC15-R.

Each I-Bar has a single hole for the front QRP of the single-lock, or double-lock.

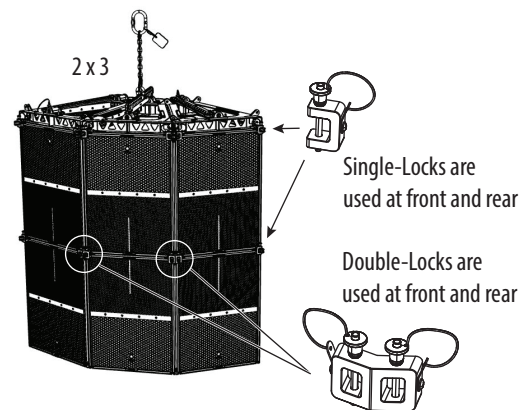
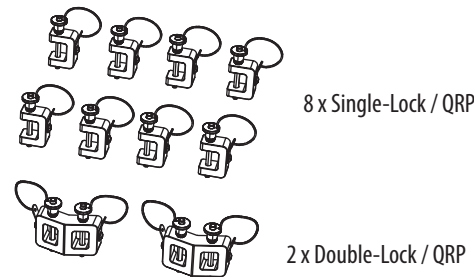
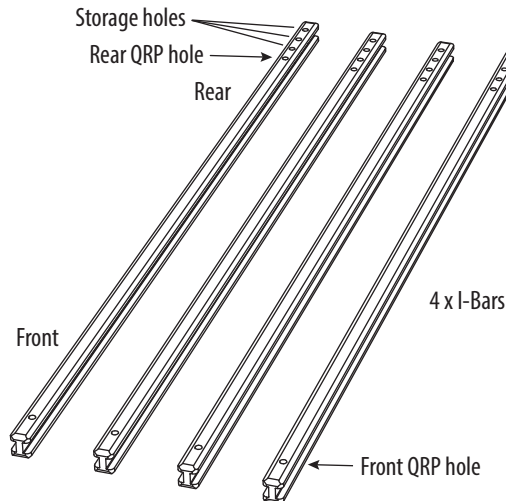
At the rear of each I-Bar, the last three holes are for storage of spare single-locks or double-locks. The fourth hole from the end is used for the rear QRP of the single-lock, or double-lock.

8 x Single-lock / QRP

Single-locks are used to secure the I-Bars used in joining an MC15-FB fly bar to an MC15-R, and in joining MC15-R to MC15-R.

2 x Double-lock / QRP

Double-locks are used to secure the I-Bars used in joining an MC15-R to an MC15-R, in cases where there are adjacent MC15-R. They are not used on the MC15-FB connections.



MC15-RC Rigging Chain Bridle for MC15-R Loudspeaker clusters

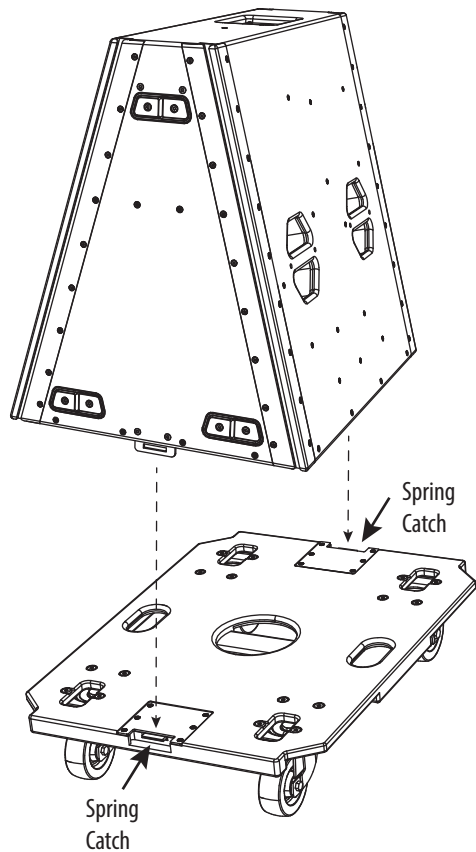
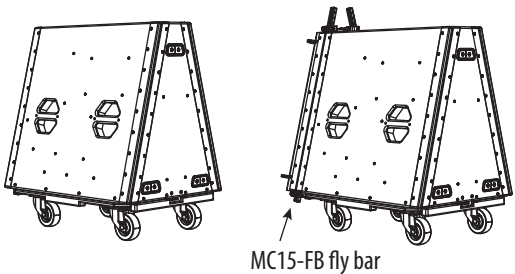
The optional MC15-RC is a 2-leg Rigging Chain Bridle used for 1 to 4 wide MC15-FB and MC15-R clusters.



Note: if using 2 motors to pick up a cluster, then two MC15-RC should be used, one in front hole #1 of each MC15-FB fly bar and one in the rear hole #18.

MC15-WB wheel board for MC15-R Loudspeakers

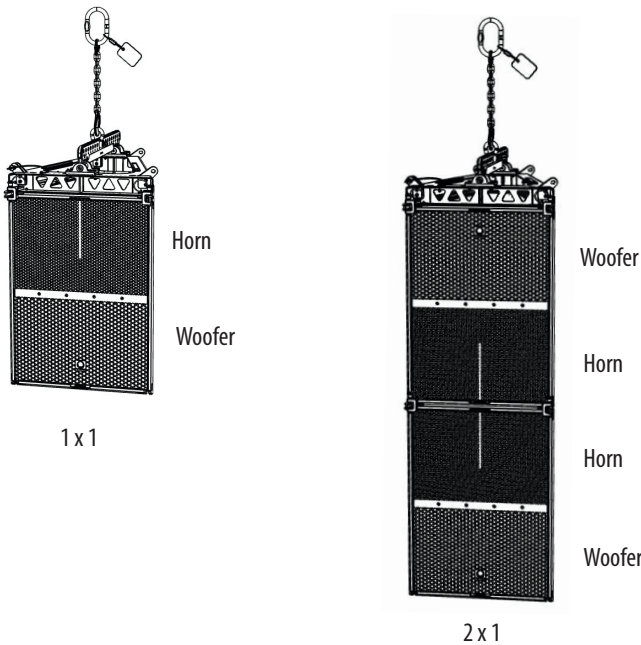
The optional MC15-WB wheel board allows the MC15-R loudspeakers to be easily transported. It fits onto two front lugs on the MC15-R, and is held in place by two spring-loaded catches. The wheel board can also be used with the MC15-FB fly bar attached to the MC15-R.



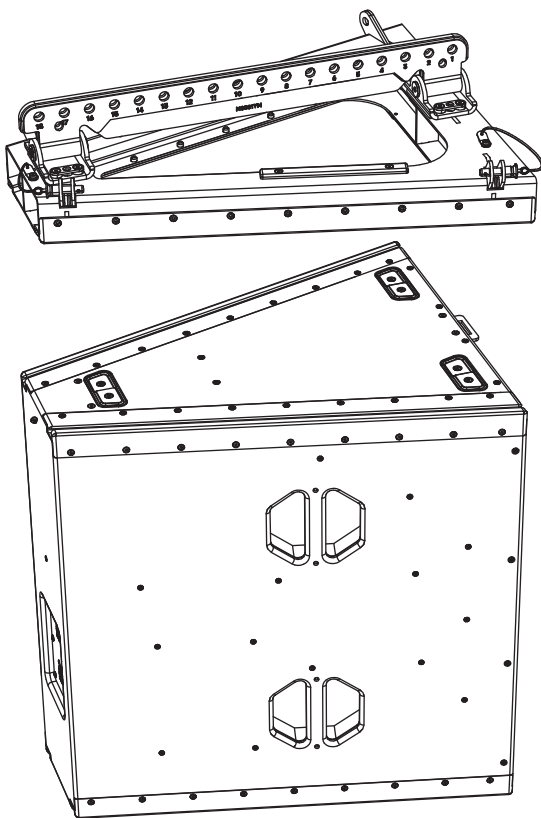
Connecting an MC15-FB fly bar to an MC15-R

The details below show how to attach an MC15-FB fly bar to an MC15-R speaker, using the MC15-RS rigging set.

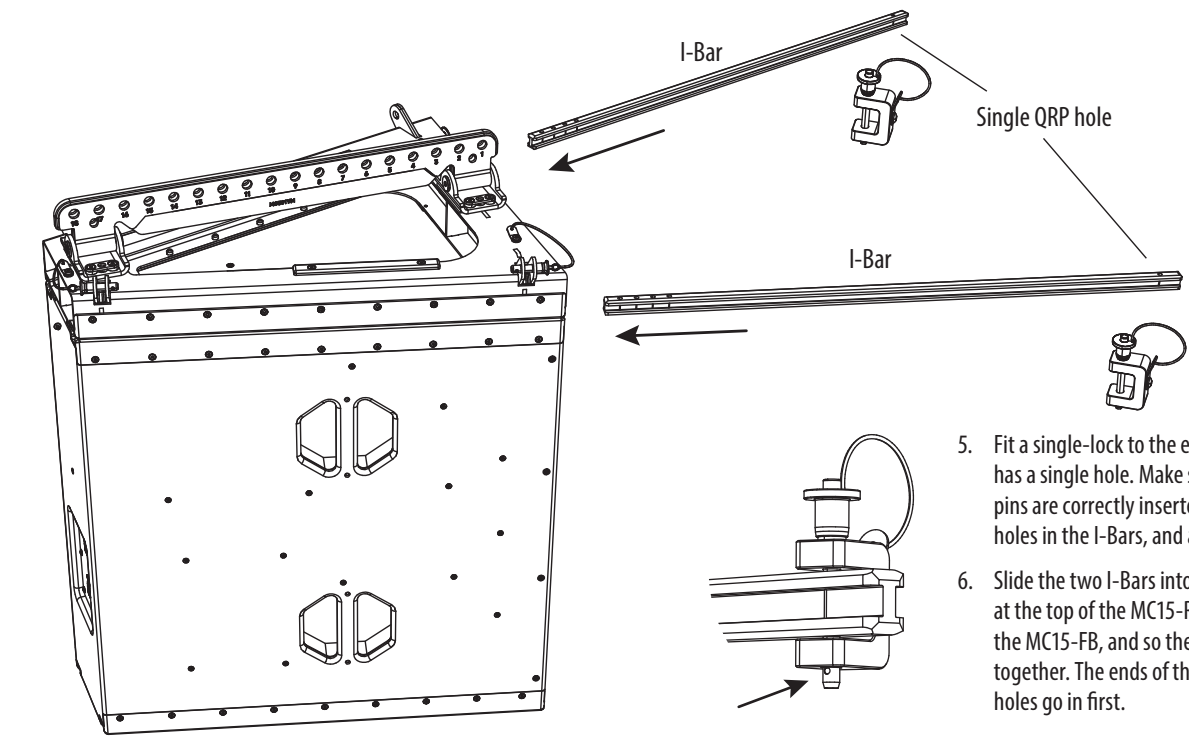
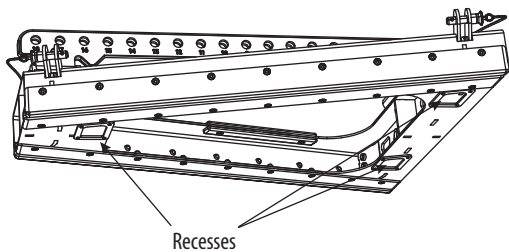
WARNING: Only the MC15-RS rigging set shall be used for this assembly. No other method or equipment shall be used.



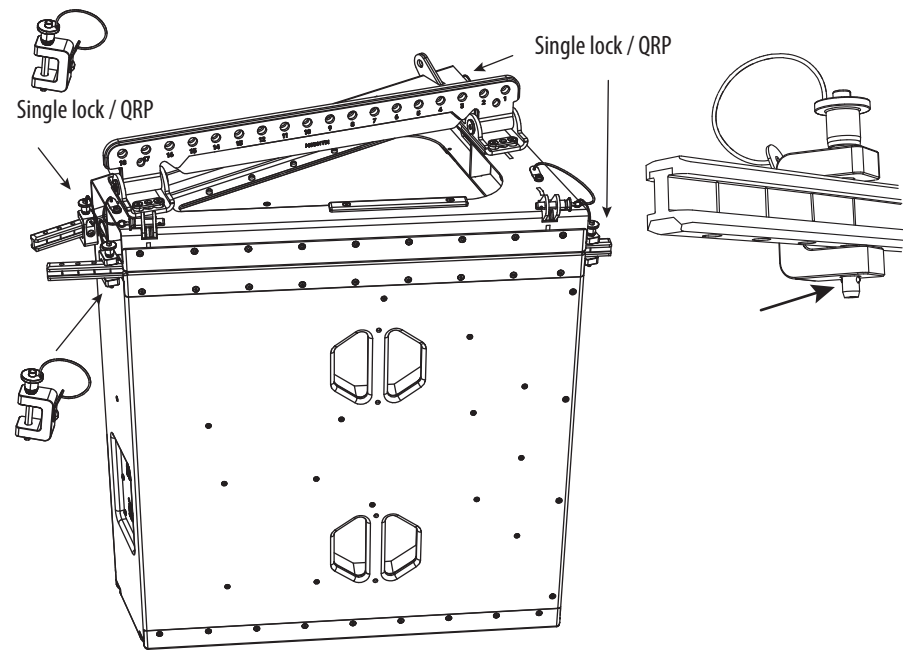
1. For a single row array, orient the MC15-R with the horn at the top, and the woofer at the bottom.
2. For a two-high array, invert the top MC15-R, so the woofer is at the top, and the horn at the bottom. The two MC15-R speakers are Horn-to-Horn.



3. Make sure the MC15-R is oriented the desired way up, either horn-up for a single row array, or woofer up for a two-high array.
4. Fit the MC15-FB fly bar onto the top of the MC15-R, and make sure it is aligned correctly, with no gap between them. The bottom of the fly bar has three recesses which help to align with the three feet in the top of the MC15-R.



5. Fit a single-lock to the end of each I-Bar which has a single hole. Make sure the quick release pins are correctly inserted all the way into the holes in the I-Bars, and are securely in place.
6. Slide the two I-Bars into the I-channels formed at the top of the MC15-R and the bottom of the MC15-FB, and so they securely join them together. The ends of the I-Bars which have four holes go in first.
7. Fit a single-lock to each I-Bar at the rear of the speaker, and make sure they are fitted to the fourth hole from the end of the I-Bar. Make sure that the quick release pins are correctly inserted all the way into the holes in the I-Bars, and are securely in place.



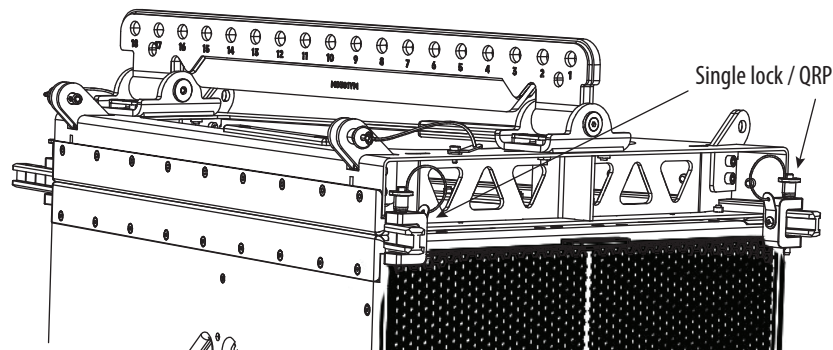
The three extra holes in the I-Bars can be used for storage of unused single and double-locks.

Note that only the single-locks are used to secure the MC15-FB to the MC15-R.

WARNING: Double-check that both I-Bars are correctly inserted between the MC15-FB fly bar and the MC15-R speaker, securely joining them together, with no gap between them.

Double-check that there is a single-lock securely fitted to the front of each I-Bar, and another single-lock is securely fitted at the rear of each I-Bar, in the fourth hole from the end of the I-Bar.

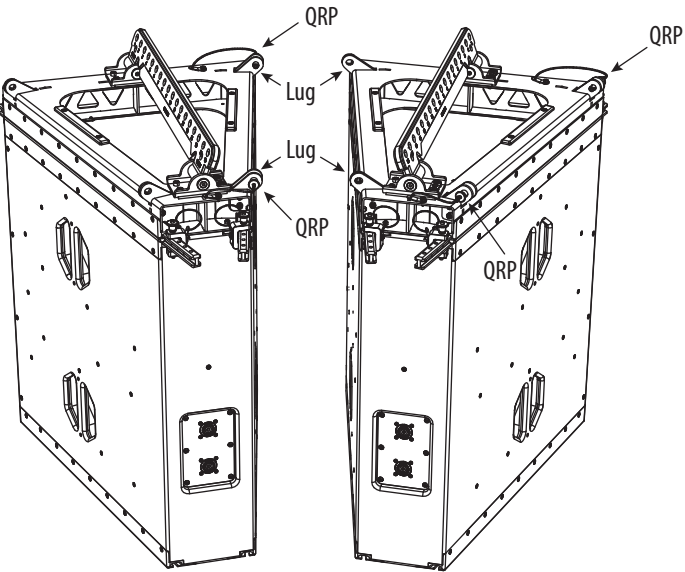
Failure to follow these instructions may lead to an I-Bar falling out, and failure of the MC15-FB and MC15-R assembly, with the possibility of death or permanent injury.



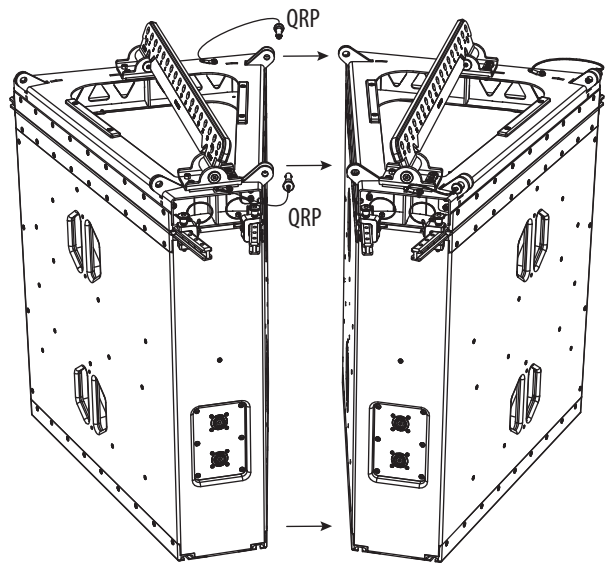
Assembling a one-high MC15-R cluster

The details below show how to assemble an MC15-R cluster, using previously assembled MC15-FB fly bar and MC15-R speaker, using the MC15-RS rigging set.

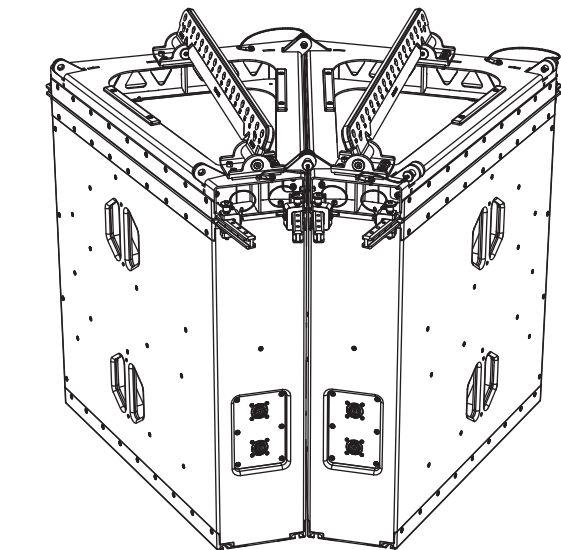
WARNING: Only the MC15-RS rigging set shall be used for this assembly. No other method or equipment shall be used.



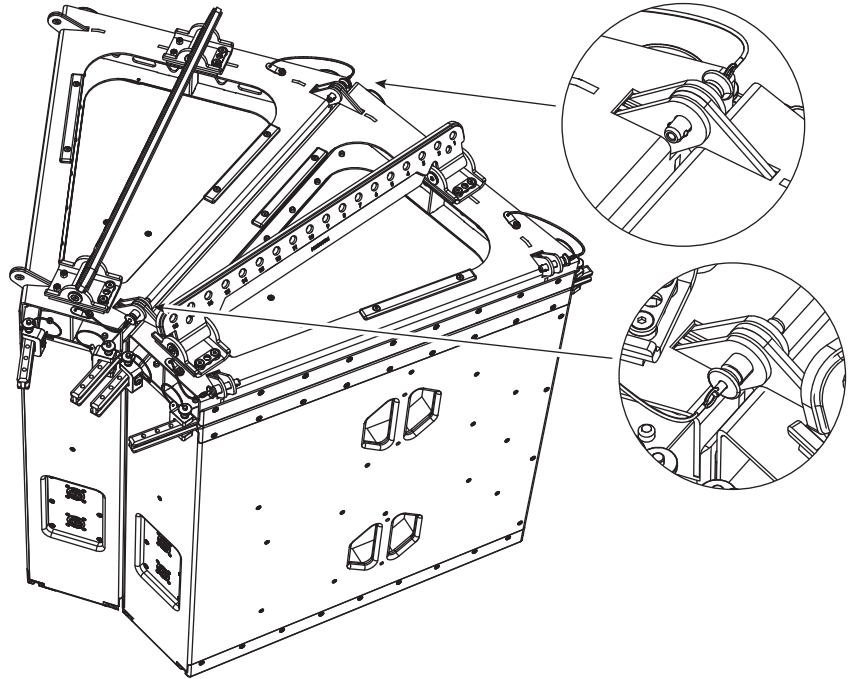
1. Assemble the MC15-FB fly bar and an MC15-R as shown in the previous instructions. The horn is at the top, and the woofer at the bottom.
2. Make sure all connections are made correctly. There shall be two I-Bars and four single-lock/QRP holding the MC15-FB securely to the top MC15-R. All four QRP should be correctly inserted and secure.
3. Remove the QRP that hold the pick-point bars in the stowed position. The QRP can be fitted onto the two lugs on the side of each MC15-FB fly bar.



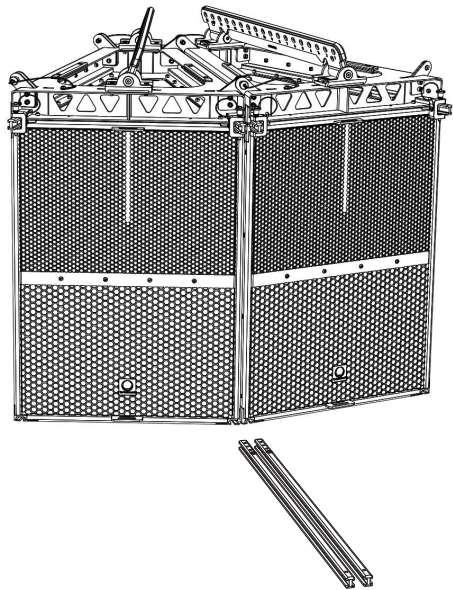
4. Remove the two QRP from the lugs between the two assemblies.
5. Carefully push the assemblies together until the lugs of one MC15-FB fly bar fit into the lugs of the other MC15-FB fly bar, and the QRP holes line up.



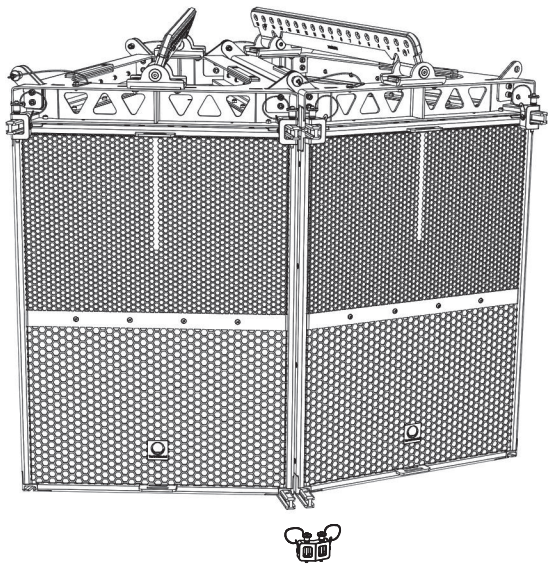
6. Insert the QRP into the lugs of each MC15-FB fly bar to join them together. Make sure that the QRP are correctly inserted all the way in on each lug, joining them together securely.



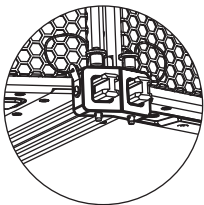
7. Double-check that the lugs of both MC15-FB fly bars are joined together securely with two QRP.



8. Attach the MC15-RC rigging chain bridle to hole 8 of each pick point bar, and lift the assembly just a little off the ground.
9. Slide two I-Bars into the I-channels at the bottom of each MC15-R. The ends of the I-Bars which have four holes go in first.

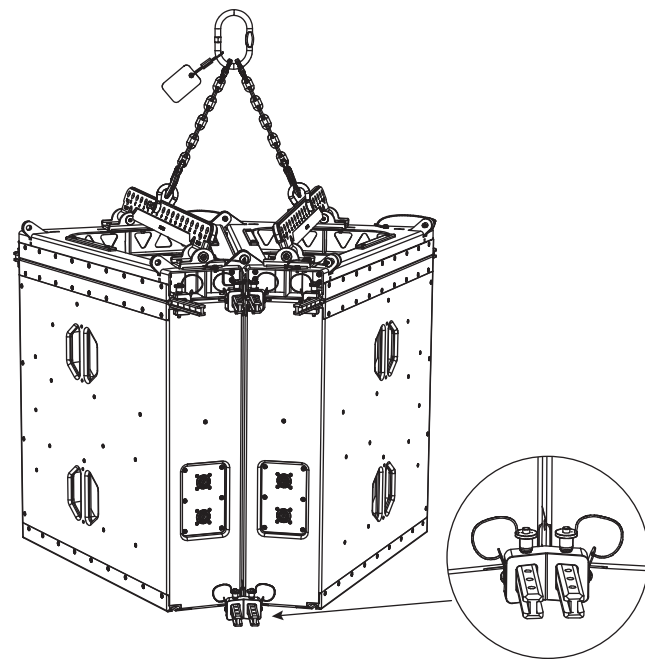


10. Fit a double-lock to the end of each I-Bar. Make sure the quick release pins are correctly inserted all the way into the holes in the I-Bars, and they are securely in place. When the double-lock is secured to both I-bars, push the I-Bars all the way in.



continued

Assembling a one-high MC15-R cluster continued



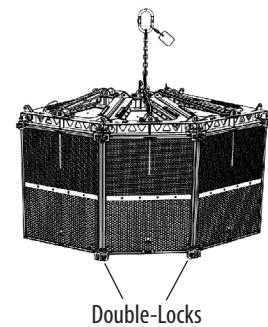
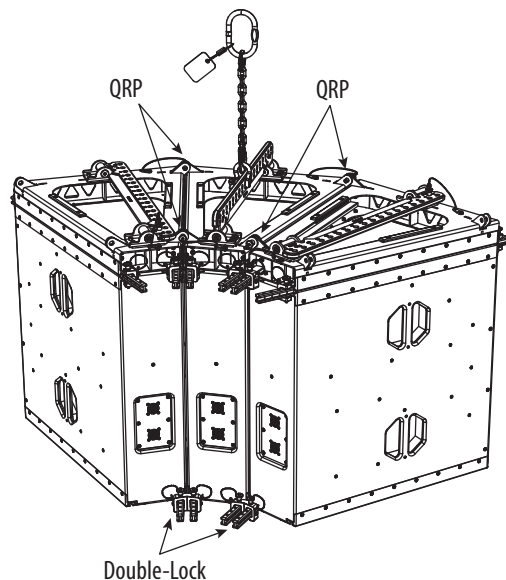
11. Fit a double-lock to join the two I-Bars at the rear of the speaker, and make sure it is fitted to the fourth hole from the end of each I-Bar. Make sure that the quick release pins are correctly inserted all the way into the holes in the I-Bars, and are securely in place.

12. The three extra holes in the I-Bars can be used for storage of unused single and double-locks.

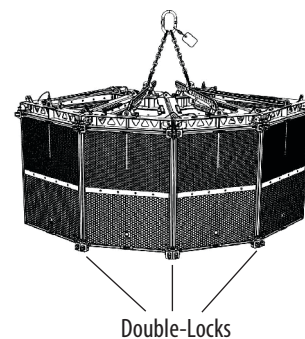
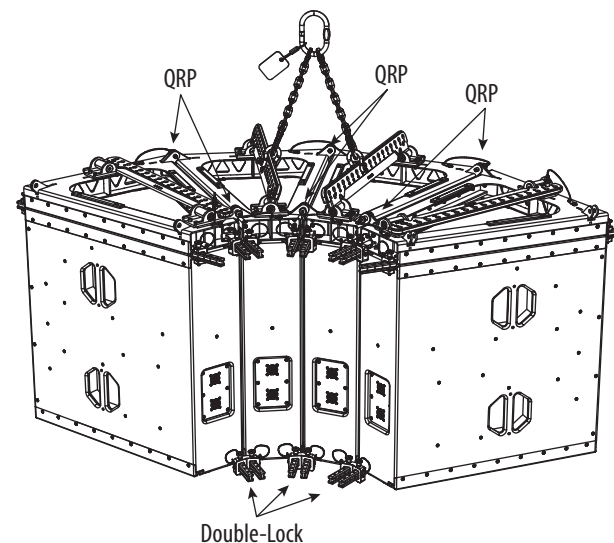
WARNING: Double-check that both I-Bars are correctly inserted in the channel at the bottom of each MC15-R.

Double-check that there is a double-lock securely fitted to the front of the I-Bars, and another double-lock is securely fitted at the rear of the I-Bars, in the fourth hole from the end of the I-Bars.

Failure to follow these instructions may lead to an I-Bar falling out, and failure of the MC15-FB and MC15-R assembly, with the possibility of death or permanent injury.



Double-Locks



Double-Locks

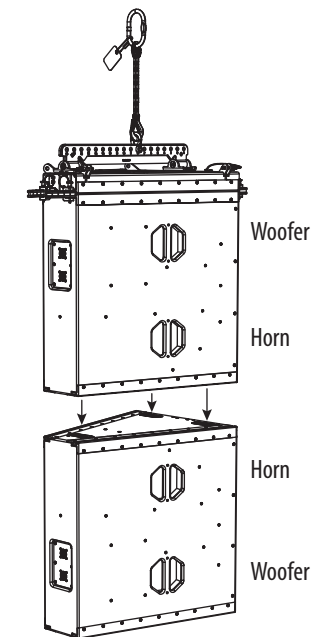
1. To assemble a three-wide array, add another MC15-FB/MC15-R in the same way as described above.
2. Make sure that the MC15-FB fly bars are joined together using two QRP in the MC15-R lugs. The pick-point bars that are not used can be stowed using one QRP. In this way, there will be two QRP available to connect each MC15-FB fly bar to each other.
3. Add two more I-Bars in the channels at the bottom, and add a double-lock at front and back.
4. Double-check all connections.

1. To assemble a four-wide array, add another MC15-FB/MC15-R in the same way as described above.
2. Make sure that the MC15-FB fly bars are joined together using two QRP in the MC15-R lugs. The pick-point bars that are not used can be stowed using one QRP. In this way, there will be two QRP available to connect each MC15-FB fly bar to each other.
3. Add two more I-Bars and a double-lock at front and back.
4. Double-check all connections.

Assembling a two-high MC15-R/ MC15-FB

The details below show how to connect a second MC15-R to an MC15-FB fly bar and MC15-R speaker assembly, using the MC15-RS rigging set.

WARNING: Only the MC15-RS rigging set shall be used for this assembly. No other method or equipment shall be used.



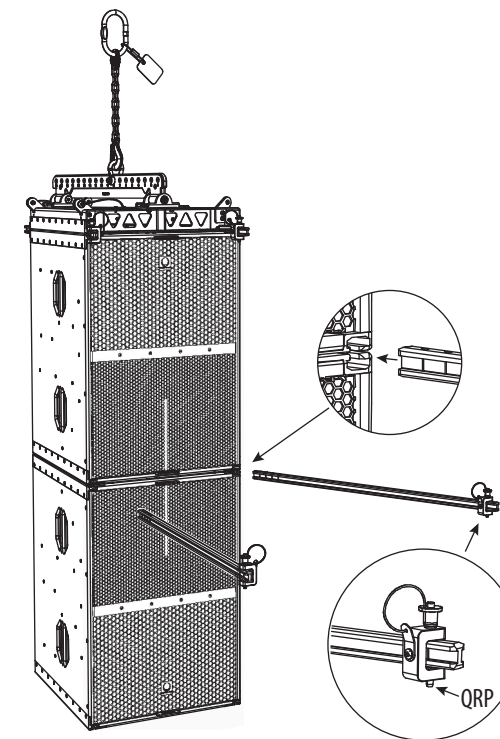
Woofers

Horn

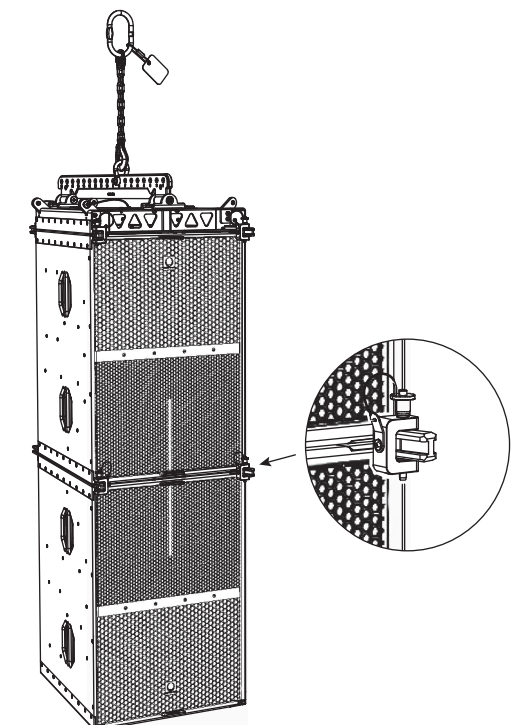
Horn

Woofers

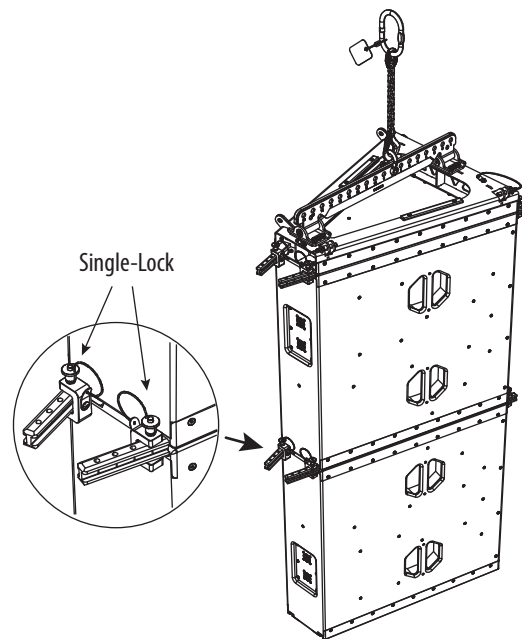
1. Assemble the MC15-FB fly bar and an inverted MC15-R as shown in the previous instructions. The woofer is at the top, and the horn at the bottom.
2. Make sure all connections are made correctly. There shall be two I-Bars and four single-lock/QRP holding the MC15-FB securely to the top MC15-R. All four QRP should be correctly inserted and secure.
3. Make sure that the lower MC15-R is oriented with the horn at the top.
4. Lift the MC15-FB/MC15-R assembly onto the lower MC15-R, and make sure it is aligned correctly, with no gap between them. The bottom of the top MC15-R has three interlocking feet which help to align with the three interlocking feet in the top of the lower MC15-R.



5. Fit a single-lock to the end of each I-Bar which has a single hole. Make sure the quick release pins are correctly inserted all the way into the holes in the I-Bars, and are securely in place.
6. Slide the two I-Bars into the I-channels formed at the bottom of the top MC15-R and the top of the lower MC15-FB, and so they securely join them together.



continued



7. Fit a single-lock to each I-Bar at the rear of the speaker, and make sure they are fitted to the fourth hole from the end of the I-Bar. Make sure that the quick release pins are correctly inserted all the way into the holes in the I-Bars, and are securely in place.

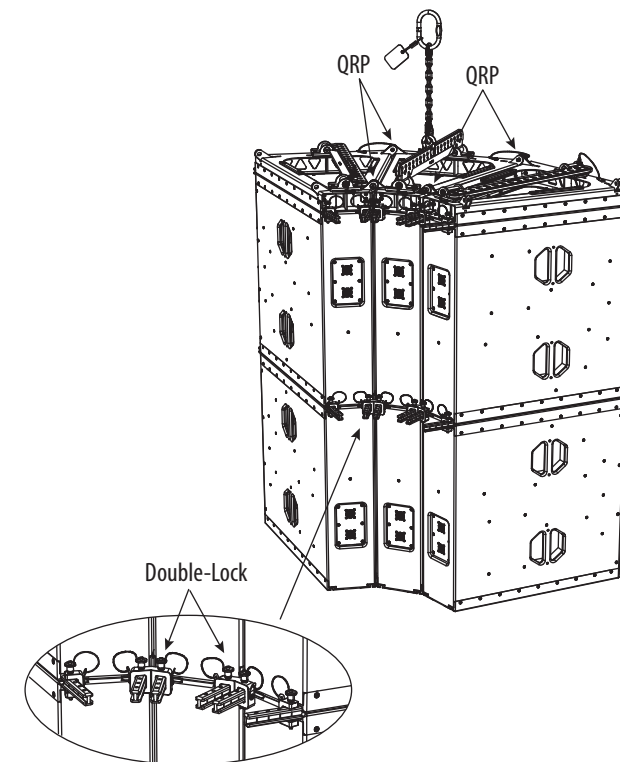
The three extra holes in the I-Bars can be used for storage of unused single and double-locks.

Note that only the single-locks are used to secure the MC15-R to the MC15-R in this initial assembly. Some are replaced with double-locks when forming an array, as shown in instructions below.

WARNING: Double-check that both I-Bars are correctly inserted between the top MC15-R and the lower MC15-R, securely joining them together, with no gap between them.

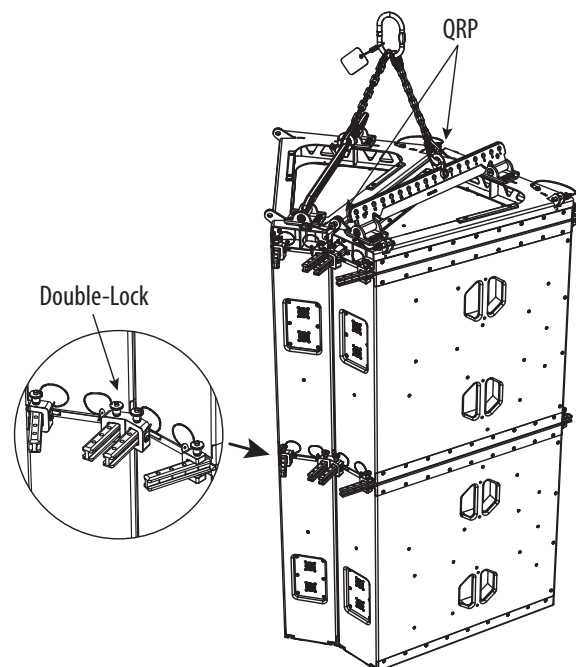
Double-check that there is a single-lock securely fitted to the front of each I-Bar, and another single-lock is securely fitted at the rear of each I-Bar, in the fourth hole from the end of the I-Bar.

Failure to follow these instructions may lead to an I-Bar falling out, and failure of the MC15-FB and MC15-R assembly, with the possibility of death or permanent injury.



Assembling two-high MC15-R/ MC15-FB clusters

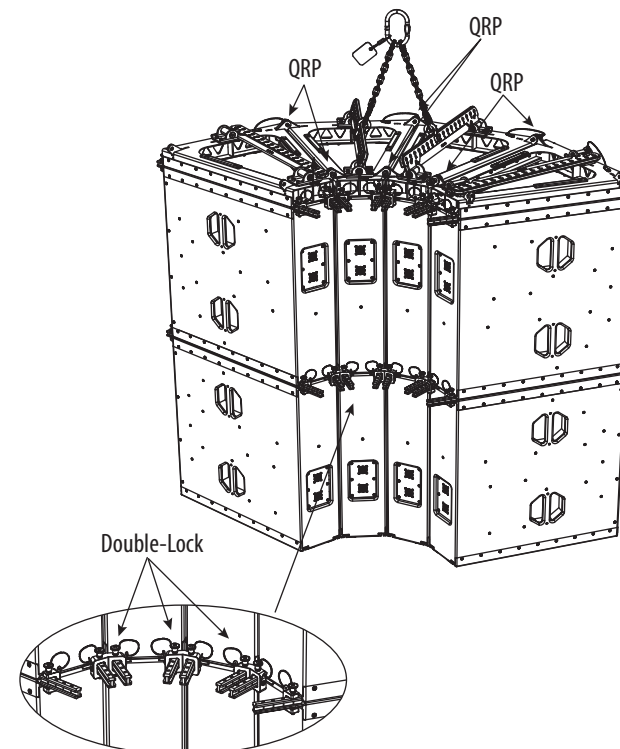
The details below show how to create two-high clusters.



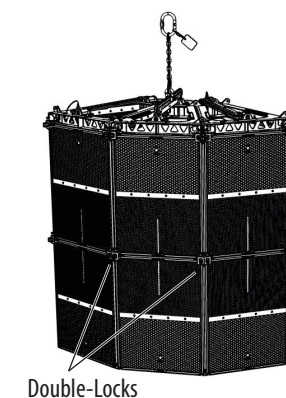
1. Create MC15-FB/MC15-R/MC15-R assemblies using the instructions above.
2. These can be joined together in the same way as shown for the one-high clusters. Make sure that the MC15-FB fly bars are joined together using two QRP in the MC15-R lugs.
3. Remove the two lower center single locks and replace them with a double-lock. Make sure that the quick release pins are correctly inserted all the way into the holes in the I-Bars, and are securely in place.
4. This joins the two center I-Bars together. Do this for the front and the rear of the two center I-Bars.
5. Double-check all connections.



Double-Lock

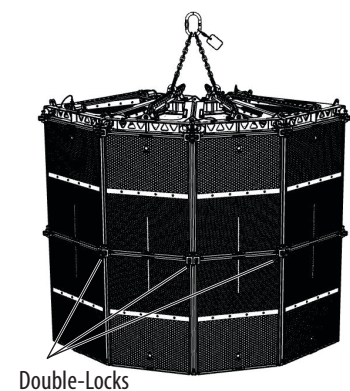


1. To assemble a three-wide array, add another MC15-FB/MC15-R/MC15-R in the same way as described above.
2. Make sure that the MC15-FB fly bars are joined together using two QRP in the MC15-R lugs. The pick-point bars that are not used can be stowed using one QRP. In this way, there will be two QRP available to connect each MC15-FB fly bar to each other.
3. Remove the two lower center single locks and replace them with a double-lock. Make sure that the quick release pins are correctly inserted all the way into the holes in the I-Bars, and are securely in place. This joins the two center I-Bars together. Do this for the front and the rear of the two center I-Bars.
4. Double-check all connections.



Double-Locks

1. To assemble a four-wide array, add another MC15-FB/MC15-R/MC15-R in the same way as described above.
2. Make sure that the MC15-FB fly bars are joined together using two QRP in the MC15-R lugs. The pick-point bars that are not used can be stowed using one QRP. In this way, there will be two QRP available to connect each MC15-FB fly bar to each other.
3. Remove the two lower center single locks and replace them with a double-lock. Make sure that the quick release pins are correctly inserted all the way into the holes in the I-Bars, and are securely in place. This joins the two I-Bars together. Do this for the front and the rear of the two I-Bars.
4. Double-check all connections.



Double-Locks

Array-Angle Selection Tables

The pick-point bar of each MC15-FB fly bar has 18 holes available to attach a shackle and the MC15-RC rigging chain bridle. Each hole is marked with a number, with 1 at the front, and 18 at the rear. The hole selection will determine the angle of the array, when using a single motor.

Warning: All shackles used shall have a Working Load Limit (WLL) of no less than 1.5 tons.

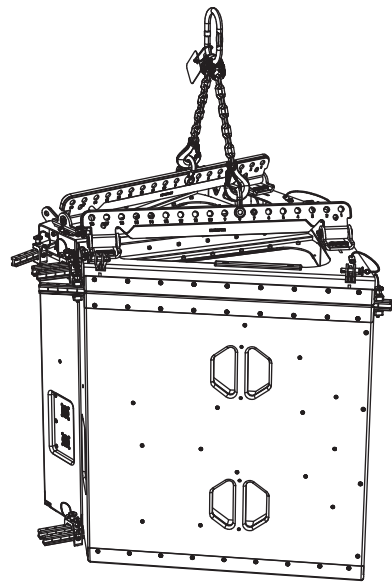
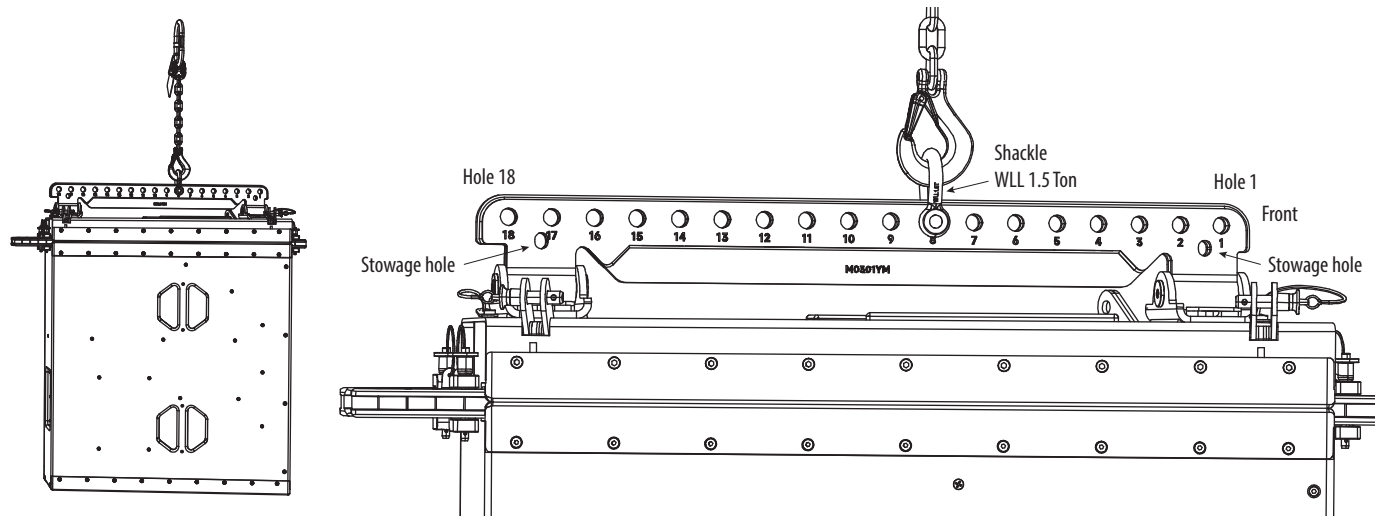
Warning: Arrays with an even number of columns (2 or 4) use the pick-point bars from two MC15-FB fly bars. Make sure that the exact same pick-point hole number is used for each shackle.

Note: Arrays with an odd number of columns (1 or 3) use the pick-point bar from MC15-FB fly bar.

Note: If you are using two motors, then use pick-point holes 1 and 18, and ignore this table. Use the motors to adjust the angle.

The table below shows the angle of the MC15-R array up, down, or level (zero), for each of the pick-point holes. This is shown for each of the eight possible array combinations.

As an example of how to use this table, for an array that is one high and three wide, choose pick point number 10 for it to be level, choose hole 14 for it to tilt down 20 degrees, choose hole 6 for it to tilt up 18 degrees.

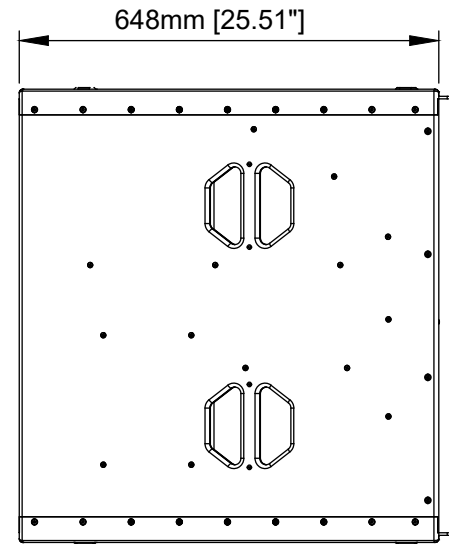


Warning: Arrays with an even number of columns (2 or 4) use the pick-point bars from two MC15-FB fly bars. Make sure that the exact same pick-point hole number is used for each shackle.

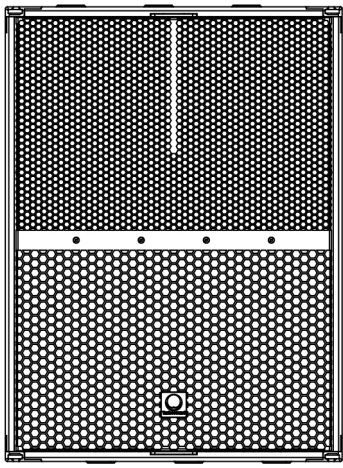
EN

[illegible][illegible]

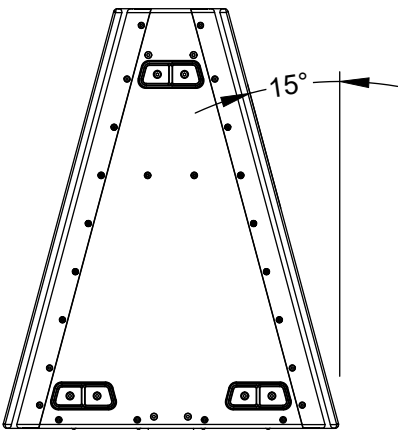
Dimensions
MC15-R



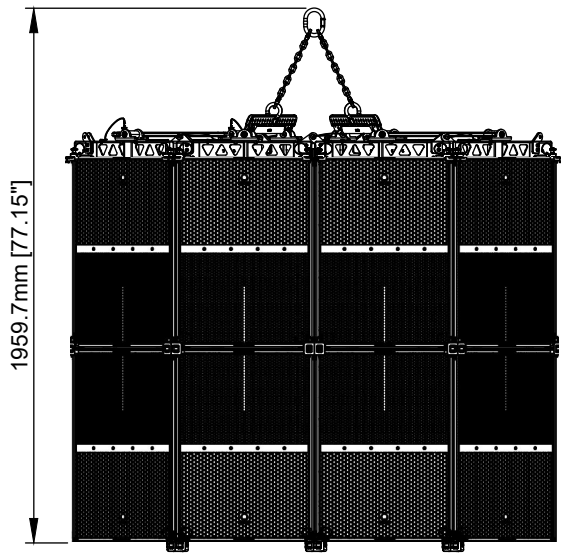
SIDE



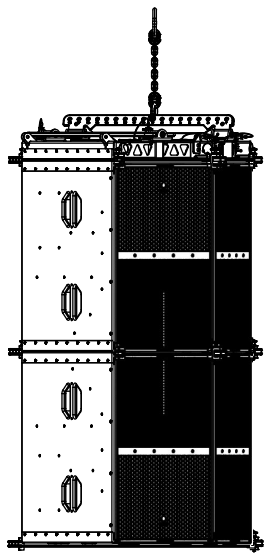
FRONT



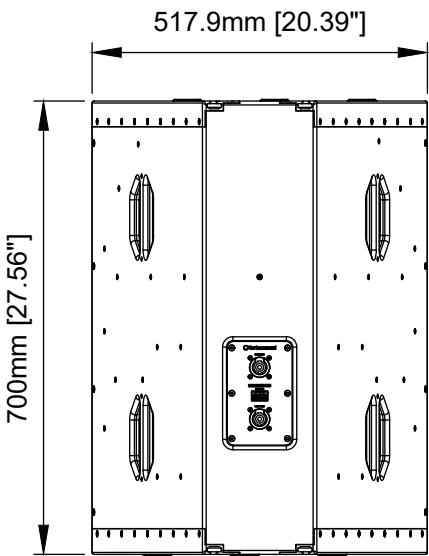
TOP



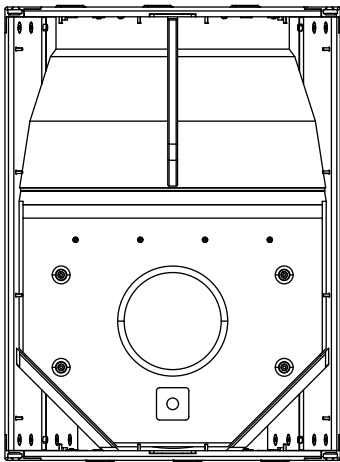
FRONT



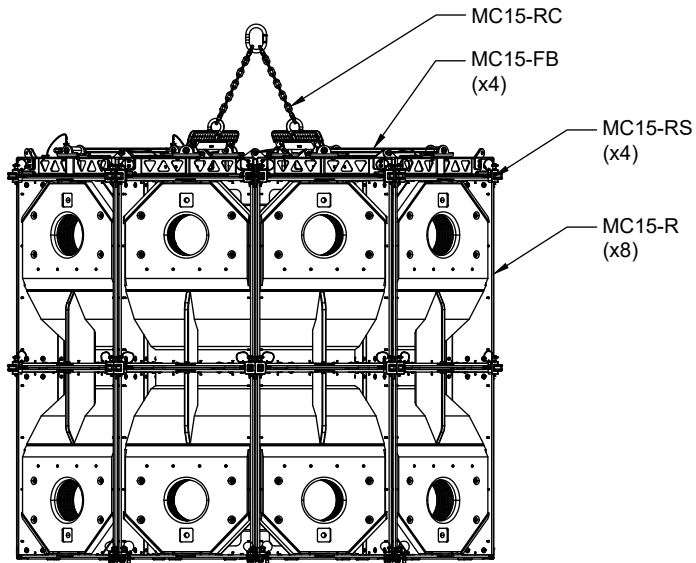
SIDE



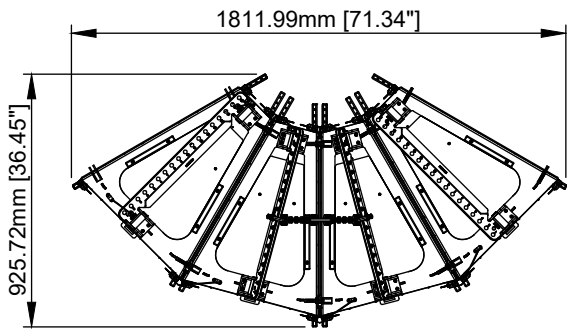
BACK



FRONT
(Grille removed for clarity)

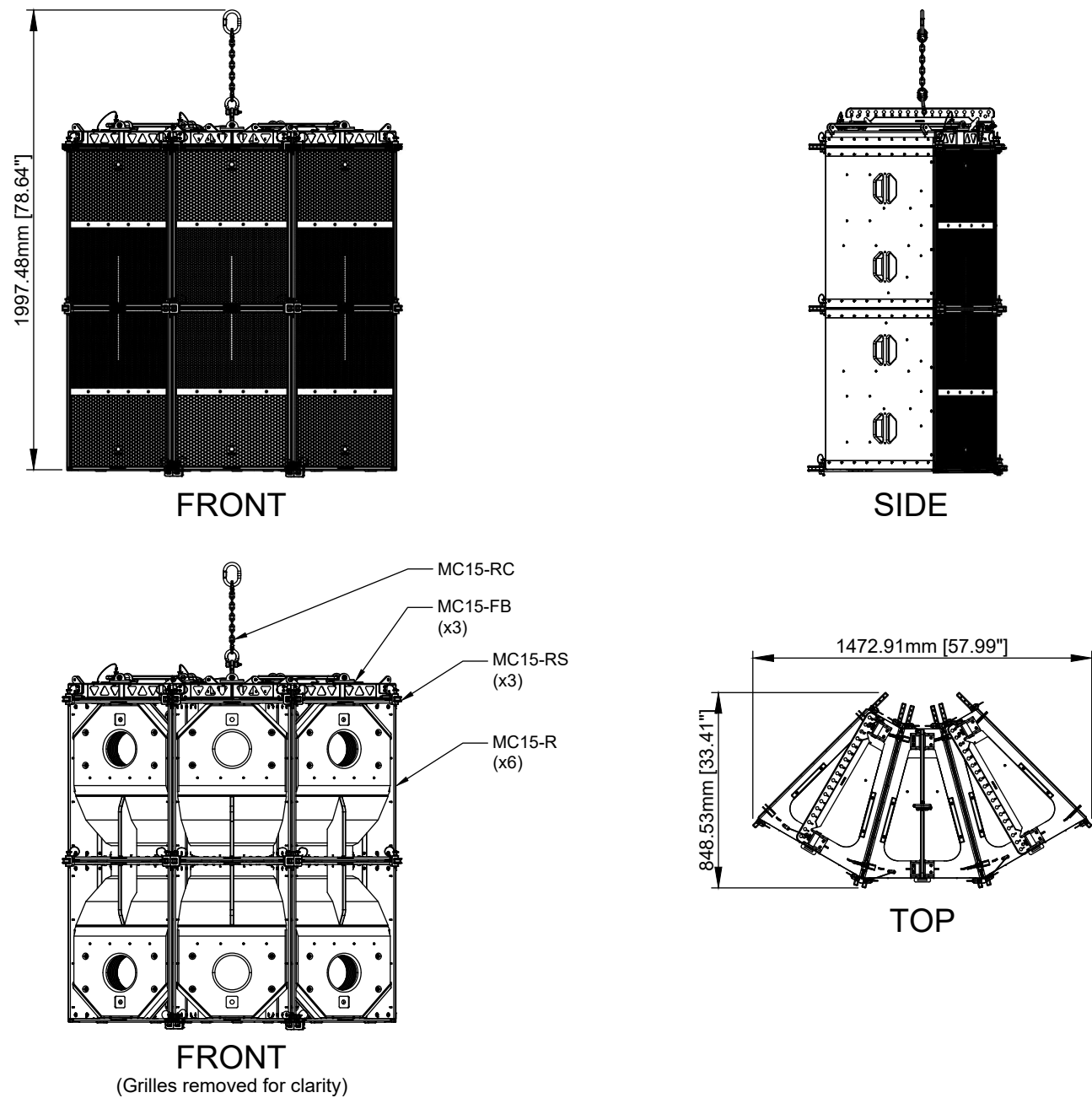


FRONT
(Grilles removed for clarity)



TOP

Dimensions
MC15-R



Lake Preset Overlays and Application Notes

All Manchester series Loudspeakers exclusively use Lake XP pre-sets via Lab Gruppen PLM+ and D series L platforms. No other amplifier and DSP platforms are supported.

The Manchester series has a powerful yet simple pre-set strategy utilizing the latest functionality of Lake software, along with new acoustic compensation overlays for length of array and throw distances required.

Pre-set data is found either via the Lake Load Library, or can be downloaded from www.turbosound.com

MV212, MV212-XV, MV210-HC & MC15-R loudspeakers each have individual Bi-AMP FIR base pre-sets: Full range with or without MS Subwoofers.

The MC15-R also has presets for bi-amping (2 channel DSP/AMP) with two options: TOP and DOWN. TOP is used for the TOP row of a 2-high cluster of MC15-R. It is also used for the single row in a 1-high cluster of MC15-R. DOWN is used for the DOWN row in a 2-high cluster of MC15-R.

CAUTION: Do not combine MV212 / MV212XV / MV210-HC / MC15-R loudspeakers on the same amplifier / DSP circuit. Failure to follow these instructions may lead to damage to the equipment.

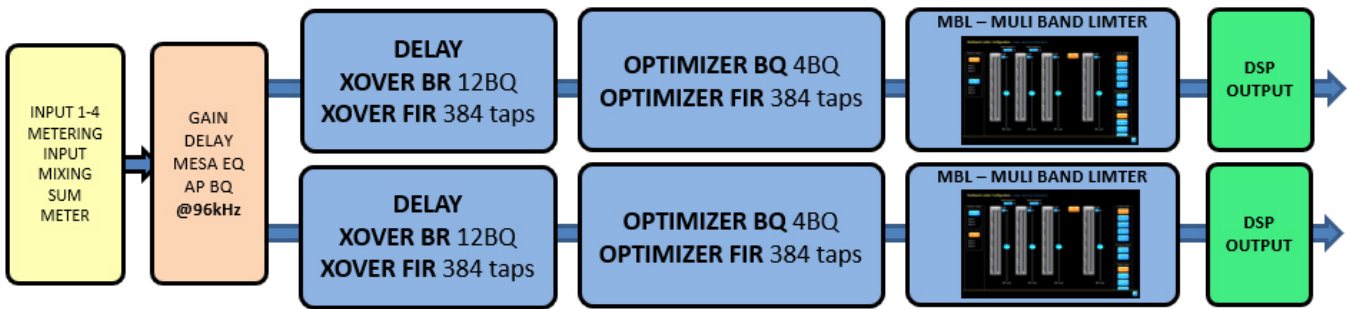
CAUTION: Pay careful attention to output patching.

MV212, MV212-XV, MV210-HC, MC15-R, and MS Subwoofer modules are based on the XP module from Lake software.

This QSG refers to REV2.1 XP presets.

CAUTION: REV1.1 (older 'FIR3way' modules) and REV2.1 XP modules ARE NOT COMPATIBLE IN THE SAME SYSTEM.

Lake software V7.0.7 or above must be used.



Lake XP signal flow:

The download of the Lake controller includes the Lake Controller Operation Manual, which is a full tutorial of the Lake Controller and compatible hardware such as PLM+ series amplifiers

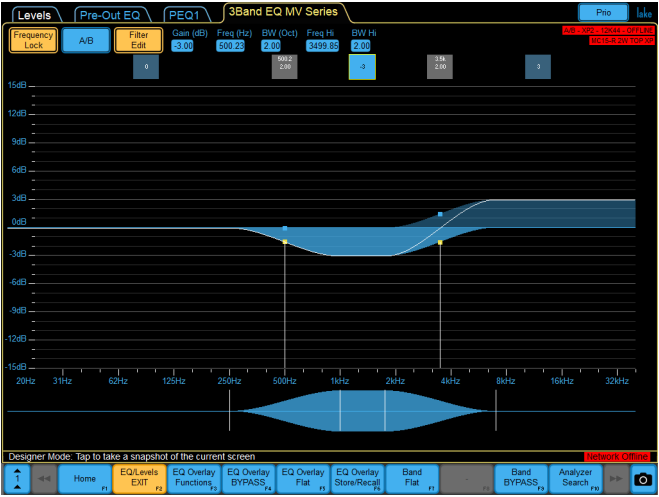
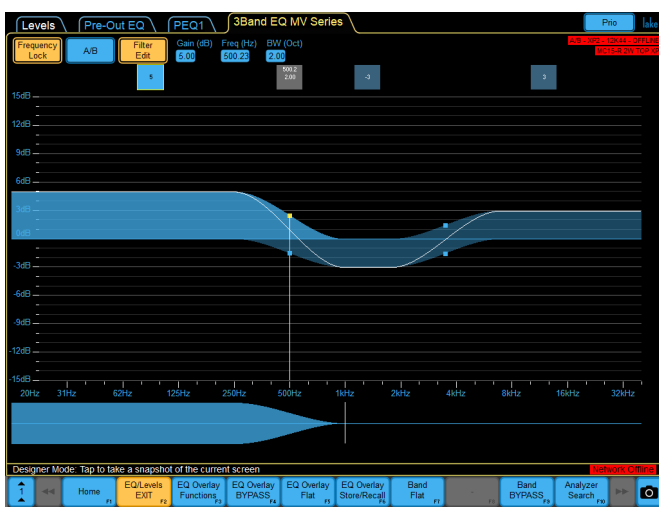
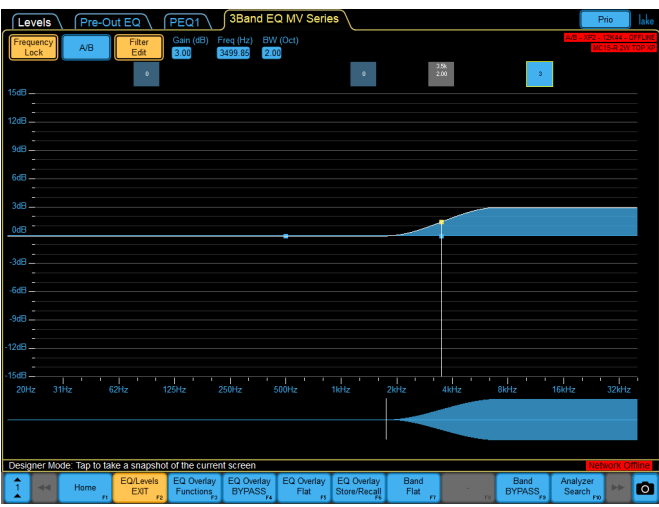
Within this QSG, we focus on the Turbosound Manchester series workflow and pre-set strategy, and assume basic working knowledge of the Lake Controller.

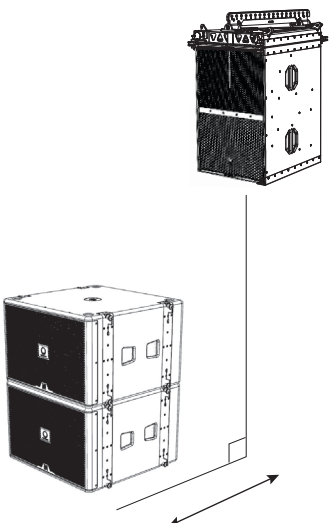
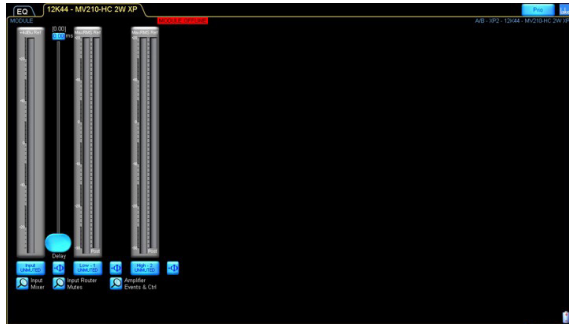
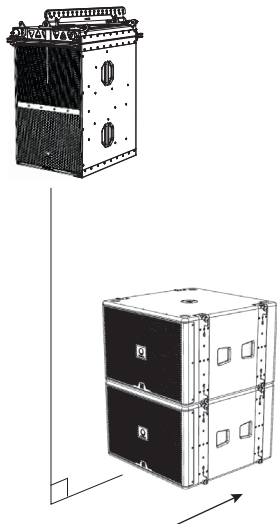
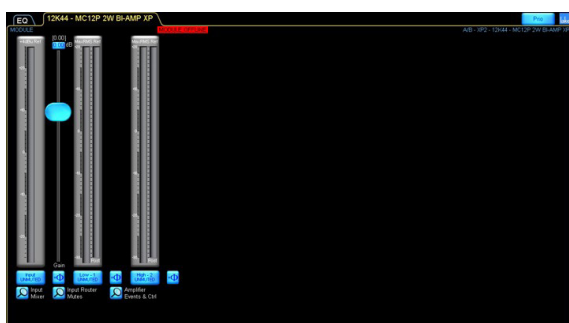
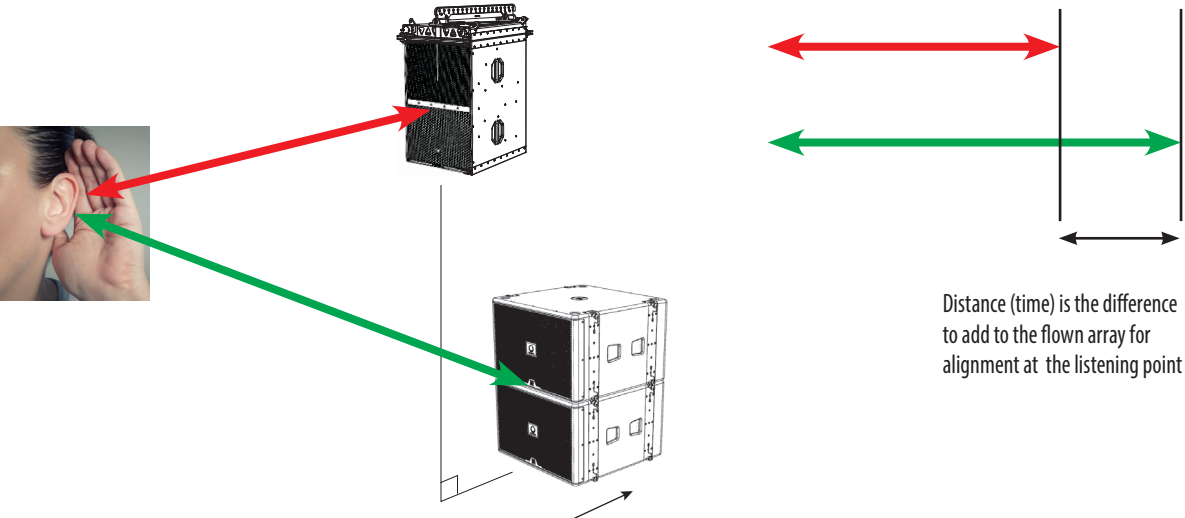
DESCRIPTION	OVERLAY
1.1: Frame (Amplifier) is in the Main workspace page Here we can see a default PLM12k44 frame with no DSP pre-set modules loaded.	
How to load a module from the Lake Load Library: Left-click on Module A in the frame. Module A is now outlined in yellow, and the buttons at the bottom of the workspace show various module options. The Modules button is also highlighted there.	
To Load a module: Click the 'Module Store/Recall' button.	

DESCRIPTION	OVERLAY
Folders now appear, and these allow you to select where to recall the module (pre-set) from. Double click the "Lake Load Library 5.10" folder.	
Scroll using the arrow keys >> << along the bottom, to find the "Suitable for Turbosound Loudspeakers" folder, then double click to open it.	
Now scroll again >> << to find the "Manchester REV2.4 XP" folder, then double click to open it.	

DESCRIPTION	OVERLAY
Three folders appear. Double click "Modules" CAUTION: Do not open "Array Size Comp" or "Distance EQ." These are EQ overlays for the other speakers in the Manchester series.	
The available module folders are displayed. The Manchester MC15-R has two options: TOP and DOWN. TOP is used for the TOP row of a 2-high cluster of MC15-R. It is also used for the single row in a 1-high cluster of MC15-R. DOWN is used for the lowest row in a 2-high cluster of MC15-R. NOTE: in a 2-high cluster of MC15-R, the top row of cabinets must be inverted so they are "Horn to Horn" with the lower row. Left-click on either of these to show more details about the module set up. This example shows the TOP option. TIP: Please read the information!	
DOWN is used for the lowest row in a 2-high cluster of MC15-R. NOTE: in a 2-high cluster of MC15-R, the top row of cabinets must be inverted so they are "Horn to Horn" with the lower row.	
Double-clicking the desired 'modules' folder will open the module pre-set in the highlighted module of the Frame (amplifier) Press 'YES' to proceed –the selected pre-set module is loaded!	

DESCRIPTION	OVERLAY
Output Configuration: Now you can patch the DSP module output to the frame's amplifier outputs We want Low to pins 1 and high to pins 2. The patch is highlighted in yellow boxes Once you have finished the correct output patch, press enter to close the output configuration The pre-set module is recalled and loaded into A/B hardware modules Note: you will get access to the screen once you go through the same process to load other pre-set modules into the free C & D modules or via the IO option button.	
Note: 2 channels of DSP and Amplifier are required	

EQ STRATEGY	ILLUSTRATION
The MC15-R has a 3 band EQ (BLEQ) inserted on both options of the module The BEQ acts as a level control for LF/MF/HF and the 3 centre frequencies of the BLEQ relate to the crossover points of the LF/MF/HF The level control for the LF and MHF has been disabled to maintain optimum phase response hence the BLEQ is offered for users to adjust tonal balance of the system along with PEQ overlay and group overlays (system design dependant) This example shows a cut in the MF band, and a boost in the HF band	
This example shows a boost in the LF band, a cut in the MF band, and a boost in the HF band	
This example shows a boost in the HF band	

SUBWOOFER TIME ALIGNMENT	ILLUSTRATION	OVERLAY
The MS121 subwoofer pre-sets use all-pass filters to set the initial time alignment (assuming the fronts of the cabinets are in line) this greatly reduces system latency. For example: If the fronts of the MC15-R and MS121 are aligned, then in both pre-sets, the delay should be set to the default, which is 0ms. However, it is not always possible to have the flown speakers and the ground stacked bass aligned in the vertical plane. 1. In this example, the MS121 subs are ‘forward’ of the MC15-R, and so the MS121 subs need to be delayed.	1. Subs are forward 	 Delay adjustment of subwoofers
2. In this example, the flown MC15-R is ‘forward’ of the MS121 ground stacked subs, and so the MC15-R needs to be delayed. How do you find the correct delay time to align the flown speakers to the ground stacked bass? Some basic knowledge of delay units can get you an acceptable result by measuring the distance between the fronts of the flown speaker and the front of the ground stacked array. Remember within Lake software you can choose the delay unit; ms, m, or feet. 1 ms (milliseconds) = 0.343 m (meters) = 1.125 ft (feet) Further fine-tuning can be done by using one of the many industry standard measurement software systems, reference microphones and sound-cards. Lake software offers integration to many of these software systems, and further information can be found at www.labgruppen.com	2. Flown MC15-R is forward 	 Delay adjustment of MC15-R
 Distance (time) is the difference to add to the flown array for alignment at the listening point		

Specifications

MC15-R	
System	
Frequency response (-3 dB) ¹	55 Hz - 20 kHz
Frequency response (-10 dB) ¹	42 Hz - 20 kHz
Nominal dispersion @ -6 dB points	30 degrees (H) x 0/-30 degrees (V)
Power handling ((IEC) PASSIVE)	LF:800 W continuous, 3200 W peak
	MHF: 190 W continuous, 380 W peak
	Combined: 990 W continuous, 3960 W peak
Sensitivity	LF: 102 dB (1 W @ 1 m) ²
	MHF: 114.5 dB (1 W @ 1 m) ²
Maximum SPL (FR)	144 dB ³
Impedance	LF: 8 Ω
	MHF: 12 Ω
Crossover type	External bi-amp
Components	1 x 15" (380 mm) LF driver
	1 x 1.4" (35 mm) exit, large format dual compression driver
IP Rating	IP54
UV Rating	4-5 (ASTM G155)
Enclosure	
Connectors	2 x NL4M
Wiring	Bi-amp mode: Pins 1+ / 1- LF, pins 2+ / 2- MHF
Dimensions H x W x D	700 x 522 x 648 mm (27.6 x 24 x 18.1")
Net weight	47.2 kg (104.05 lbs)
Construction	12 mm and 15 mm (½" and ⅝") plywood
Finish	Black textured PU paint
Grille	Powder coated perforated steel
Flying hardware	Rail and track custom
Accessories (Optional)	
Fly bar	MC15-FB, weight 14.9 kg (32.8 lb)
Rigging system	MC15-RS, weight 3.33 kg (7.34 lb)
Rigging chain	MC15-RC, weight 1.42 kg (3.13 lb)
Wheel board	MC15-WB, weight 9.82 kg (21.6 lb)

- Notes
1. Average over stated bandwidth. Measured at 1 metre on axis.

2. SPL level at 1 m under free field conditions, using pink noise with crest factor 4, with dedicated pre-set.

3. Average Peak level over overlap bandwidth. Measured at 1 metre on axis with dedicated pre-set.

Other important information

EN Important information

- 1. Register online.** Please register your new Music Tribe equipment right after you purchase it by visiting musictribe.com. Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently. Also, read the terms and conditions of our warranty, if applicable.

2. Malfunction. Should your Music Tribe Authorized Reseller not be located in your vicinity, you may contact the Music Tribe Authorized Fulfiller for your country listed under “Support” at musictribe.com. Should your country not be listed, please check if your problem can be dealt with by our “Online Support” which may also be found under “Support” at musictribe.com. Alternatively, please submit an online warranty claim at musictribe.com BEFORE returning the product.

3. Power Connections. Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

FR Informations importantes

- 1. Enregistrez-vous en ligne.** Prenez le temps d’enregistrer votre produit Music Tribe aussi vite que possible sur le site Internet musictribe.com. Le fait d’enregistrer le produit en ligne nous permet de gérer les réparations plus rapidement et plus efficacement. Prenez également le temps de lire les termes et conditions de notre garantie.

2. Dysfonctionnement. Si vous n’avez pas de revendeur Music Tribe près de chez vous, contactez le distributeur Music Tribe de votre pays : consultez la liste des distributeurs de votre pays dans la page “Support” de notre site Internet musictribe.com. Si votre pays n’est pas dans la liste, essayez de résoudre votre problème avec notre “aide en ligne” que vous trouverez également dans la section “Support” du site musictribe.com. Vous pouvez également nous faire parvenir directement votre demande de réparation sous garantie par Internet sur le site musictribe.com AVANT de nous renvoyer le produit.

3. Raccordement au secteur. Avant de relier cet équipement au secteur, assurez-vous que la tension secteur de votre région soit compatible avec l’appareil. Veillez à remplacer les fusibles uniquement par des modèles exactement de même taille et de même valeur électrique — sans aucune exception.

ES Aspectos importantes

- 1. Registro online.** Le recomendamos que registre su nuevo aparato Music Tribe justo después de su compra accediendo a la página web musictribe.com. El registro de su compra a través de nuestro sencillo sistema online nos ayudará a resolver cualquier incidencia que se presente a la mayor brevedad posible. Además, aproveche para leer los términos y condiciones de nuestra garantía, si es aplicable en su caso.

2. Averías. En el caso de que no exista un distribuidor Music Tribe en las inmediaciones, puede ponerse en contacto con el distribuidor Music Tribe de su país, que encontrará dentro del apartado “Support” de nuestra página web musictribe.com. En caso de que su país no aparezca en ese listado, acceda a la sección “Online Support” (que también encontrará dentro del apartado “Support” de nuestra página web) y compruebe si su problema aparece descrito y solucionado allí. De forma alternativa, envíenos a través de la página web una solicitud online de soporte en periodo de garantía ANTES de devolvernos el aparato.

3. Conexiones de corriente. Antes de enchufar este aparato a una salida de corriente, asegúrese de que dicha salida sea del voltaje adecuado para su modelo concreto. En caso de que deba sustituir un fusible quemado, deberá hacerlo por otro de idénticas especificaciones, sin excepción.

DE Weitere wichtige Informationen

- 1. Online registrieren.** Bitte registrieren Sie Ihr neues Music Tribe-Gerät direkt nach dem Kauf auf der website musictribe.com. Wenn Sie Ihren Kauf mit unserem einfachen online Formular registrieren, können wir Ihre Reparaturansprüche schneller und effizienter bearbeiten. Lesen Sie bitte auch unsere Garantiebedingungen, falls zutreffend.

2. Funktionsfehler. Sollte sich kein Music Tribe Händler in Ihrer Nähe befinden, können Sie den Music Tribe Vertrieb Ihres Landes kontaktieren, der auf musictribe.com unter „Support“ aufgeführt ist. Sollte Ihr Land nicht aufgelistet sein, prüfen Sie bitte, ob Ihr Problem von unserem „Online Support“ gelöst werden kann, den Sie ebenfalls auf musictribe.com unter „Support“ finden. Alternativ reichen Sie bitte Ihren Garantieanspruch online auf musictribe.com ein, BEVOR Sie das Produkt zurücksenden.

3. Stromanschluss. Bevor Sie das Gerät an eine Netzsteckdose anschließen, prüfen Sie bitte, ob Sie die korrekte Netzspannung für Ihr spezielles Modell verwenden. Fehlerhafte Sicherungen müssen ausnahmslos durch Sicherungen des gleichen Typs und Nennwerts ersetzt werden.

PT Outras Informações Importantes

- 1. Registre-se online.** Por favor, registre seu novo equipamento Music Tribe logo após a compra visitando o site musictribe.com Registrar sua compra usando nosso simples formulário online nos ajuda a processar seus pedidos de reparos com maior rapidez e eficiência. Além disso, leia nossos termos e condições de garantia, caso seja necessário.

2. Funcionamento Defeituoso. Caso seu fornecedor Music Tribe não esteja localizado nas proximidades, você pode contatar um distribuidor Music Tribe para o seu país listado abaixo de “Suporte” em musictribe.com. Se seu país não estiver na lista, favor checar se seu problema pode ser resolvido com o nosso “Suporte Online” que também pode ser achado abaixo de “Suporte” em musictribe.com. Alternativamente, favor enviar uma solicitação de garantia online em musictribe.com ANTES da devolução do produto.

3. Ligações. Antes de ligar a unidade à tomada, assegure-se de que está a utilizar a voltagem correcta para o modelo em questão. Os fusíveis com defeito terão de ser substituídos, sem qualquer excepção, por fusíveis do mesmo tipo e corrente nominal.

IT Informazioni importanti

- 1. Registratevi online.** Vi invitiamo a registrare il nuovo apparecchio Music Tribe subito dopo averlo acquistato visitando musictribe.com. La registrazione dell’acquisto tramite il nostro semplice modulo online ci consente di elaborare le richieste di riparazione in modo più rapido ed efficiente. Leggete anche i termini e le condizioni della nostra garanzia, qualora applicabile.

2. Malfunzionamento. Nel caso in cui il rivenditore autorizzato Music Tribe non si trovi nelle vostre vicinanze, potete contattare il Music Tribe Authorized Fulfiller per il vostro paese, elencato in “Support” @ musictribe.com. Se la vostra nazione non è elencata, controllate se il problema può essere risolto tramite il nostro “Online Support” che può anche essere trovato sotto “Support” @ musictribe.com. In alternativa, inviate una richiesta di garanzia online su musictribe.com PRIMA di restituire il prodotto.

3. Collegamento all’alimentazione. Prima di collegare l'unità a una presa di corrente, assicuratevi di utilizzare la tensione di rete corretta per il modello specifico. I fusibili guasti devono essere sostituiti, senza eccezioni, con fusibili dello stesso tipo e valore nominale.

Other important information

NL Belangrijke informatie

1. Registreer online. Registreer uw nieuwe Music Tribe-apparaat direct nadat u deze hebt gekocht door naar musictribe.com te gaan. Door uw aankoop te registreren via ons eenvoudige online formulier, kunnen wij uw reparatieclaims sneller en efficiënter verwerken. Lees ook de voorwaarden van onze garantie, indien van toepassing.

2. Storing. Mocht uw door Music Tribe geautoriseerde wederverkoper niet bij u in de buurt zijn gevestigd, dan kunt u contact opnemen met de door Music Tribe Authorized Fulfiller voor uw land vermeld onder “Support” op musictribe.com. Als uw land niet in de lijst staat, controleer dan of uw probleem kan worden opgelost door onze "Online Support", die u ook kunt vinden onder "Support" op musictribe.com. U kunt ook een online garantieclaim indienen op musictribe.com VOORDAT u het product retourneert.

3. Stroomaansluitingen. Voordat u het apparaat op een stopcontact aansluit, moet u ervoor zorgen dat u de juiste netspanning voor uw specifieke model gebruikt. Defecte zekeringen moeten zonder uitzondering worden vervangen door zekeringen van hetzelfde type en dezelfde waarde.

SE Viktig information

1. Registrera online. Registrera din nya Music Tribe-utrustning direkt efter att du köpt den genom att besöka musictribe.com. Att registrera ditt köp med vårt enkla onlineformulär hjälper oss att behandla dina reparationsanspråk snabbare och mer effektivt. Läs också villkoren i vår garanti, om tillämpligt.

2. Fel. Om din Music Tribe-auktoriserade återförsäljare inte finns i din närhet kan du kontakta Music Tribe Authorized Fulfiller för ditt land listat under “Support” på musictribe.com. Om ditt land inte är listat, kontrollera om ditt problem kan hanteras av vår “Onlinesupport” som också finns under “Support” på musictribe.com. Alternativt kan du skicka in ett online-garantianspråk på musictribe.com INNAN du returnerar produkten.

3. Strömanslutningar. Innan du ansluter enheten till ett eluttag, se till att du använder rätt nätspanning för just din modell. Felaktiga säkringar måste bytas ut mot säkringar av samma typ och märkning utan undantag.

PL Ważna informacja

1. Zarejestrować online. Zarejestruj swój nowy sprzęt Music Tribe zaraz po zakupie na stronie musictribe.com. Zarejestrowanie zakupu za pomocą naszego prostego formularza online pomaga nam szybciej i efektywniej rozpatrywać roszczenia dotyczące naprawy. Przeczytaj również warunki naszej gwarancji, jeśli dotyczy.

2. Awaria. Jeśli Twój autoryzowany sprzedawca Music Tribe nie znajduje się w pobliżu, możesz skontaktować się z autoryzowanym dostawcą Music Tribe dla swojego kraju, wymienionym w sekcji „Wsparcie” na stronie musictribe.com. Jeśli Twojego kraju nie ma na liście, sprawdź, czy Twój problem może zostać rozwiązany przez nasze „Wsparcie online”, które można również znaleźć w sekcji „Wsparcie” na stronie musictribe.com. Alternatywnie, prześlij zgłoszenie gwarancyjne online na musictribe.com PRZED zwrotem produktu.

3. Połączenia zasilania. Przed podłączeniem urządzenia do gniazdka sieciowego upewnij się, że używasz odpowiedniego napięcia sieciowego dla danego modelu. Wadliwe bezpieczniki należy bez wyjątku wymienić na bezpieczniki tego samego typu i wartości.

JP その他の重要な情報

1. 登録。 新しい Music Tribe 機器をご購入後、すぐに musictribe.com にアクセスしてオンライン登録を行ってください。シンプルなオンラインフォームでの登録は、修理請求の処理をより迅速かつ効率的に行うために役立ちます。また、適用される場合は、保証の利用規約をお読みください。

2. 故障。 お近くに Music Tribe 認定販売店がない場合は、musictribe.com の "サポート" セクションに記載されている国別の Music Tribe 認定代理店にお問い合わせください。お住まいの国がリストにない場合は、"オンラインサポート" から問題が解決できるか確認してください。こちらも "サポート" セクションにございます。あるいは、製品を返品する前に、musictribe.com でオンライン保証請求を提出してください。

3. 電源接続。 ユニットを電源コンセントに差し込む前に、モデルに適した正しい電圧を使用していることを確認してください。ヒューズが故障した場合は、必ず同じ種類と定格のヒューズに交換してください。

CN 其他的重要信息

1. 在线注册。 购买后, 请访问我们的网站立即注册新的 Music Tribe 设备。使用我们简单的在线表格注册您的购买信息有助于我们更快, 更有效地处理您的维修索赔。另外, 请阅读我们保修的条款和条件 (如适用)。

2. 无法正常工作。 如果您所在地区没有 Music Tribe 授权的经销商, 您可以联系您所在国家/地区的 Music Tribe 授权履行者, 其联系方式在 musictribe.com 的 “支持” 部分列出。如果您的国家/地区未列出, 请检查您的问题是否可以通过我们的 “在线支持” 解决, 该选项也可以在 musictribe.com 的 “支持” 部分找到。或者, 您也可以在退回产品之前在 musictribe.com 提交在线保修索赔。

3. 电源连接。 将本设备连接电源前, 请确保使用的电压正确。保险丝需要更换时, 必须使用相同型号及定额的保险丝。



Hereby, Music Tribe declares that this product is in compliance with General Product Safety Regulation (EU) 2023/988, Directive 2011/65/EU and Amendment 2015/863/EU, Directive 2012/19/EU, Regulation 519/2012 REACH SVHC and Directive 1907/2006/EC, and this passive product is not applicable to EMC Directive 2014/30/EU, LV Directive 2014/35/EU.

Full text of EU DoC is available at <https://community.musictribe.com/>

EU Representative: Empower Tribe Innovations DE GmbH
Address: Otto-Brenner-Strasse 4a, 47877 Willich, Germany

UK Representative: Empower Tribe Innovations UK Ltd.
Address: 5 Brindley Road Old Trafford, Manchester, United Kingdom, M16 9UN



Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same

time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.

