

Quick Start Guide

EN

ES

FR

DE

PT

IT

NL

SE

PL



TQ Series

TQ15, TQ12, TQ10, TQ8

Full range 15"/12"/10"/8" Loudspeaker for Install and Touring

TQ15-SB, TQ12-SB, TQ10-SB, TQ8-SB

Swivel Bracket for TQ Loudspeakers

TQ15-YB, TQ12-YB, TQ10-YB, TQ8-YB

Yoke Bracket for TQ Loudspeakers

TQ-FB

Fly Bar for TQ and MC12-P Series Loudspeakers

SA-35

Stand Adapter for Turbosound Yoke Brackets to 35 mm Speaker Stands

EN

EN) Safety Instruction

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Use only attachments/accessories specified by the manufacturer.



10. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



11. 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.

12. Do not install in a confined space, such as a book case or similar unit.

13. Do not place naked flame sources, such as lighted candles, on the apparatus.

ES

ES) Instrucción de seguridad

1. Lea las instrucciones.
2. Conserve estas instrucciones.
3. Preste atención a todas las advertencias.
4. Siga todas las instrucciones.
5. No use este aparato cerca del agua.
6. Limpie este aparato con un paño seco.
7. No bloquee las aberturas de ventilación. Instale el equipo de acuerdo con las instrucciones del fabricante.
8. No instale este equipo cerca de fuentes de calor tales como radiadores, acumuladores de calor, estufas u otros aparatos (incluyendo amplificadores) que puedan producir calor.
9. Use únicamente los dispositivos o accesorios especificados por el fabricante.



10. Use únicamente la carretilla, plataforma, trípode, soporte o mesa especificados por el fabricante o suministrados junto con el equipo. Al transportar el equipo, tenga cuidado

para evitar daños y caídas al tropezar con algún obstáculo.



11. Cómo debe deshacerse de este aparato: Este símbolo indica que este aparato no debe ser tratado como basura orgánica, según lo indicado en la Directiva WEEE (2012/19/EU) y a las normativas aplicables en su país. En lugar de ello deberá llevarlo al

punto limpio más cercano para el reciclaje de sus elementos eléctricos / electrónicos (EEE). Al hacer esto estará ayudando a prevenir las posibles consecuencias negativas para el medio ambiente y la salud que podrían ser provocadas por una gestión inadecuada de este tipo de aparatos. Además, el reciclaje de materiales ayudará a conservar los recursos naturales. Para más información acerca del reciclaje de este aparato, póngase en contacto con el Ayuntamiento de su ciudad o con el punto limpio local.

12. No instale esta unidad en un espacio muy reducido, tal como encastrada en una librería o similar.

13. No coloque objetos con llama, como una vela encendida, sobre este aparato.

FR) Consignes de sécurité

1. Lisez ces consignes.
2. Conservez ces consignes.
3. Respectez tous les avertissements.
4. Respectez toutes les consignes d'utilisation.
5. N'utilisez jamais l'appareil à proximité d'un liquide.
6. Nettoyez l'appareil avec un chiffon sec.
7. Veillez à ne pas empêcher la bonne ventilation de l'appareil via ses ouïes de ventilation. Respectez les consignes du fabricant concernant l'installation de l'appareil.
8. Ne placez pas l'appareil à proximité d'une source de chaleur telle qu'un chauffage, une cuisinière ou tout appareil dégageant de la chaleur (y compris un ampli de puissance).
9. Utilisez exclusivement des accessoires et des appareils supplémentaires recommandés par le fabricant.



10. Utilisez exclusivement des chariots, des diables, des présentoirs, des pieds et des surfaces de travail recommandés par le fabricant ou livrés avec le produit. Déplacez

précautionneusement tout chariot ou diable chargé pour éviter d'éventuelles blessures en cas de chute.



11. Mise au rebut appropriée de ce produit: Ce symbole indique qu'en accord avec la directive DEEE (2012/19/EU) et les lois en vigueur dans votre pays, ce produit ne doit pas être jeté avec les déchets ménagers. Ce produit doit être déposé dans un

point de collecte agréé pour le recyclage des déchets d'équipements électriques et électroniques (EEE). Une mauvaise manipulation de ce type de déchets pourrait avoir un impact négatif sur l'environnement et la santé à cause des substances potentiellement dangereuses généralement associées à ces équipements. En même temps, votre coopération dans la mise au rebut de ce produit contribuera à l'utilisation efficace des ressources naturelles. Pour plus d'informations sur l'endroit où vous pouvez déposer vos déchets d'équipements pour le recyclage, veuillez contacter votre mairie ou votre centre local de collecte des déchets.

12. N'installez pas l'appareil dans un espace confiné tel qu'une bibliothèque ou meuble similaire.

13. Ne placez jamais d'objets enflammés, tels que des bougies allumées, sur l'appareil.

DE) Wichtige Sicherheitshinweise

1. Lesen Sie diese Hinweise.
2. Bewahren Sie diese Hinweise auf.
3. Beachten Sie alle Warnhinweise.
4. Befolgen Sie alle Bedienungshinweise.
5. Betreiben Sie das Gerät nicht in der Nähe von Wasser.
6. Reinigen Sie das Gerät mit einem trockenen Tuch.
7. Blockieren Sie nicht die Belüftungsschlitze. Beachten Sie beim Einbau des Gerätes die Herstellerhinweise.
8. Stellen Sie das Gerät nicht in der Nähe von Wärmequellen auf. Solche Wärmequellen sind z. B. Heizkörper, Herde oder andere Wärme erzeugende Geräte (auch Verstärker).
9. Verwenden Sie nur Zusatzgeräte/Zubehörteile, die laut Hersteller geeignet sind.



10. Verwenden Sie nur Wagen, Standvorrichtungen, Stative, Halter oder Tische, die vom Hersteller benannt oder im Lieferumfang des Geräts enthalten sind. Falls Sie einen Wagen benutzen,

seien Sie vorsichtig beim Bewegen der Wagen-Gerätkombination, um Verletzungen durch Stolpern zu vermeiden.



11. Korrekte Entsorgung dieses Produkts: Dieses Symbol weist darauf hin, das Produkt entsprechend der WEEE Richtlinie (2012/19/EU) und der jeweiligen nationalen Gesetze nicht zusammen mit Ihren Haushaltsabfällen zu entsorgen.

Dieses Produkt sollte bei einer autorisierten Sammelstelle für Recycling elektrischer und elektronischer Geräte (EEE) abgegeben werden. Wegen bedenklicher Substanzen, die generell mit elektrischen und elektronischen Geräten in Verbindung stehen, könnte eine unsachgemäße Behandlung dieser Abfallart eine negative Auswirkung auf Umwelt und Gesundheit haben. Gleichzeitig gewährleistet Ihr Beitrag zur richtigen Entsorgung dieses Produkts die effektive Nutzung natürlicher Ressourcen. Für weitere Informationen zur Entsorgung Ihrer Geräte bei einer Recycling-Stelle nehmen Sie bitte Kontakt zum zuständigen städtischen Büro, Entsorgungsamt oder zu Ihrem Haushaltsabfallentsorger auf.

12. Installieren Sie das Gerät nicht in einer beengten Umgebung, zum Beispiel Bücherregal oder ähnliches.

13. Stellen Sie keine Gegenstände mit offenen Flammen, etwa brennende Kerzen, auf das Gerät.

PT) Instruções de Segurança Importantes

1. Leia estas instruções.
2. Guarde estas instruções.
3. Preste atenção a todos os avisos.
4. Siga todas as instruções.
5. Não utilize este dispositivo perto de água.
6. Limpe apenas com um pano seco.
7. Não obstrua as entradas de ventilação. Instale de acordo com as instruções do fabricante.
8. Não instale perto de quaisquer fontes de calor tais como radiadores, bocas de ar quente, fogões de sala ou outros aparelhos (incluindo amplificadores) que produzam calor.
9. Utilize apenas ligações/acessórios especificados pelo fabricante.



10. Utilize apenas com o carrinho, estrutura, tripé, suporte, ou mesa especificados pelo fabricante ou vendidos com o dispositivo. Quando utilizar um carrinho, tenha cuidado ao mover o conjunto carrinho/dispositivo para evitar danos provocados pela terpedação.



11. Correcta eliminação deste produto: este símbolo indica que o produto não deve ser eliminado juntamente com os resíduos domésticos, segundo a Directiva REEE (2012/19/EU) e a legislação nacional. Este produto deverá ser levado para um centro de recolha licenciado para a reciclagem de resíduos de equipamentos eléctricos e electrónicos (EEE). O tratamento incorrecto deste tipo de resíduos pode ter um eventual impacto negativo no ambiente e na saúde humana devido a substâncias potencialmente perigosas que estão geralmente associadas aos EEE. Ao mesmo tempo, a sua colaboração para a eliminação correcta deste produto irá contribuir para a utilização eficiente dos recursos naturais. Para mais informação acerca dos locais onde poderá deixar o seu equipamento usado para reciclagem, é favor contactar os serviços municipais locais, a entidade de gestão de resíduos ou os serviços de recolha de resíduos domésticos.

Para mais informação acerca dos locais onde poderá deixar o seu equipamento usado para reciclagem, é favor contactar os serviços municipais locais, a entidade de gestão de resíduos ou os serviços de recolha de resíduos domésticos.

12. Não instale em lugares confinados, tais como estantes ou unidades similares.

13. Não coloque fontes de chama, tais como velas acesas, sobre o aparelho.

IT) Istruzioni di sicurezza importanti

1. Leggere queste istruzioni.
2. Conservare queste istruzioni.
3. Prestare attenzione a tutti gli avvisi.
4. Applicare tutte le istruzioni.
5. Non utilizzare questo dispositivo vicino l'acqua.
6. Pulire esclusivamente con un panno asciutto.
7. Non bloccare le aperture di ventilazione. Installare in conformità con le istruzioni del produttore.
8. Non installare vicino a fonti di calore come radiatori, termoregolatori, stufe o altri apparecchi (inclusi amplificatori) che producono calore.
9. Utilizzare esclusivamente dispositivi/accessori specificati dal produttore.



10. Utilizzare solo carrelli, supporti, treppiedi, staffe o tavoli indicati dal produttore o venduti con l'apparecchio. Utilizzando un carrello, prestare attenzione quando si sposta la combinazione carrello/apparecchio per evitare lesioni dovute al ribaltamento.



11. Smaltimento corretto di questo prodotto: questo simbolo indica che questo dispositivo non deve essere smaltito insieme ai rifiuti domestici, secondo la Direttiva RAEE (2012/19 / UE) e la vostra legislazione nazionale. Questo prodotto deve essere portato in un centro di raccolta autorizzato per il riciclaggio di rifiuti di apparecchiature elettriche ed elettroniche (RAEE). La cattiva gestione di questo tipo di rifiuti potrebbe avere un possibile impatto negativo sull'ambiente e sulla salute umana a causa di sostanze potenzialmente pericolose che sono generalmente associate alle apparecchiature elettriche ed elettroniche. Nello stesso tempo la vostra collaborazione al corretto smaltimento di questo prodotto contribuirà all'utilizzo efficiente delle risorse naturali. Per ulteriori informazioni su dove è possibile trasportare le apparecchiature per il riciclaggio vi invitiamo a contattare l'ufficio comunale locale o il servizio di raccolta dei rifiuti domestici.

portato in un centro di raccolta autorizzato per il riciclaggio di rifiuti di apparecchiature elettriche ed elettroniche (RAEE). La cattiva gestione di questo tipo di rifiuti potrebbe avere un possibile impatto negativo sull'ambiente e sulla salute umana a causa di sostanze potenzialmente pericolose che sono generalmente associate alle apparecchiature elettriche ed elettroniche. Nello stesso tempo la vostra collaborazione al corretto smaltimento di questo prodotto contribuirà all'utilizzo efficiente delle risorse naturali. Per ulteriori informazioni su dove è possibile trasportare le apparecchiature per il riciclaggio vi invitiamo a contattare l'ufficio comunale locale o il servizio di raccolta dei rifiuti domestici.

12. Non installare in uno spazio ristretto, come in una libreria o in una struttura simile.

13. Non collocare sul dispositivo fonti di fiamme libere, come candele accese.

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NL Belangrijke veiligheidsvoorschriften

1. Lees deze voorschriften.
2. Bewaar deze voorschriften.
3. Neem alle waarschuwingen in acht.
4. Volg alle voorschriften op.
5. Gebruik dit apparaat niet in de buurt van water.
6. Reinig het uitsluitend met een droge doek.
7. Let erop geen van de ventilatie-openingen te bedekken. Plaats en installeer het volgens de voorschriften van de fabrikant.
8. Het apparaat mag niet worden geplaatst in de buurt van radiatoren, warmte-uitlaten, kachels of andere zaken (ook versterkers) die warmte afgeven.
9. Gebruik uitsluitend door de producent gespecificeerd toebehoren c.q. onderdelen.



10. Gebruik het apparaat uitsluitend in combinatie met de wagen, het statief, de driepoot, de beugel of tafel die door de producent is aangegeven, of die in combinatie met het apparaat wordt verkocht. Bij gebruik van een wagen dient men voorzichtig te zijn bij het verrijden van de combinatie wagen/apparaat en letsel door vallen te voorkomen.



11. Correcte afvoer van dit product: dit symbool geeft aan dat u dit product op grond van de AEEA-richtlijn (2012/19/EU) en de nationale wetgeving van uw land niet met het gewone huishoudelijke afval mag weggoeien. Dit product moet na afloop van de nuttige levensduur naar een officiële inzamelpost voor afgedankte elektrische en elektronische apparatuur (AEEA) worden gebracht, zodat het kan worden gerecycleerd. Vanwege de potentieel gevaarlijke stoffen die in elektrische en elektronische apparatuur kunnen voorkomen, kan een onjuiste afvoer van afval van het onderhavige type een negatieve invloed op het milieu en de menselijke gezondheid hebben. Een juiste afvoer van dit product is echter niet alleen beter voor het milieu en de gezondheid, maar draagt tevens bij aan een doelmatiger gebruik van de natuurlijke hulpbronnen. Voor meer informatie over de plaatselijke hulpbronnen. Voor meer informatie over de plaatselijke hulpbronnen. Voor meer informatie over de plaatselijke hulpbronnen. Voor meer informatie over de plaatselijke hulpbronnen.

12. Installeer niet in een kleine ruimte, zoals een boekenkast of iets dergelijks.
13. Plaats geen open vlammen, zoals brandende kaarsen, op het apparaat.

SE Viktiga säkerhetsanvisningar

1. Läs dessa anvisningar.
2. Spara dessa anvisningar.
3. Beakta alla varningar.
4. Följ alla anvisningar.
5. Använd inte apparaten i närheten av vatten.
6. Rengör endast med torr trasa.
7. Blockera inte ventilationsöppningarna. Installera enligt tillverkarens anvisningar.
8. Installera aldrig intill värmekällor som värme-element, varmluftsintag, spisar eller annan utrustning som avger värme (inklusive förstärkare).
9. Använd endast tillkopplingar och tillbehör som angetts av tillverkaren.



10. Använd endast med vagn, stativ, trefot, hållare eller bord som angetts av tillverkaren, eller som sålts till-sammans med apparaten. Om du använder en vagn, var försiktig, när du förflyttar kombinationen vagn-apparat, för att förhindra olycksfall genom snubbling.



11. Kassera produkten på rätt sätt: den här symbolen indikerar att produkten inte ska kastas i hushållssoporna, enligt WEEE direktivet (2012/19/EU) och gällande, nationell lagstiftning. Produkten ska lämnas till ett auktoriserat återvinningsställe för elektronisk och elektrisk utrustning (EEE). Om den här sortens avfall hanteras på fel sätt kan miljön, och människors hälsa, påverkas negativt på grund av potentiella risksubstanser som ofta associeras med EEE. Avfallshanteras produkten däremot på rätt sätt bidrar detta till att naturens resurser används på ett bra sätt. Kontakta kommun, ansvarig förvaltning eller avfallshanteringsföretag för mer information om återvinningscentral där produkten kan lämnas.

12. Installera inte i ett trångt utrymme, t.ex. i en bokhylla eller liknande enhet.
13. Placera inte källor med öppen eld, t.ex. tända ljus, på apparaten.

PL Ważne informacje o bezpieczeństwie

1. Proszę przeczytać poniższe wskazówki.
2. Proszę przechowywać niniejszą instrukcję.
3. Należy przestrzegać wszystkich wskazówek ostrzegawczych.
4. Należy postępować zgodnie z instrukcją obsługi.
5. Urządzenia nie wolno używać w pobliżu wody.
6. Urządzenie można czyścić wyłącznie suchą szmatką.
7. Nie zasłaniać otworów wentylacyjnych. W czasie podłączania urządzenia należy przestrzegać zaleceń producenta.
8. Nie stawiać urządzenia w pobliżu źródeł ciepła takich, jak grzejniki, piece lub urządzenia produkujące ciepło (np. wzmocniacze).
9. Używać wyłącznie sprzętu dodatkowego i akcesoriów zgodnie z zaleceniami producenta.
10. Używać jedynie zalecanych przez producenta lub znajdujących się w zestawie wózków, stojaków, statywów, uchwyty i stołów. W przypadku posługiwania się wózkiem należy zachować szczególną ostrożność w trakcie przewożenia zestawu, aby uniknąć niebezpieczeństwa potknięcia się i zranienia.



11. Prawidłowa utylizacja produktu: Ten symbol wskazuje, że tego produktu nie należy wyrzucać razem z zwykłymi odpadami domowymi, tylko zgodnie z dyrektywą w sprawie zużytego sprzętu elektrycznego i elektronicznego (WEEE) (2012/19/EU) oraz przepisami krajowymi. Niniejszy produkt należy przekazać do autoryzowanego punktu zbiórki zużytego sprzętu elektrycznego i elektronicznego. Niewłaściwe postępowanie z tego typu odpadami może wywołać szkodliwe działanie na środowisko naturalnej i zdrowie człowieka z powodu potencjalnych substancji niebezpiecznych zaliczanych jako zużyty sprzęt elektryczny i elektroniczny. Jednocześnie, Twój wkład w prawidłową utylizację niniejszego produktu przyczynia się do oszczędnego wykorzystywania zasobów naturalnych. Szczegółowych informacji o miejscach, w których można oddawać zużyty sprzęt do recyklingu, udzielają urzędy miejskie, przedsiębiorstwa utylizacji odpadów lub najbliższy zakład utylizacji odpadów.

12. Nie instaluj w ograniczonej przestrzeni, takiej jak półka na książki lub podobny zestaw.

13. Nie stawiaj na urządzeniu źródeł otwartego ognia, takich jak zapalone świece.

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 TQ loudspeaker and shows various options such as the TQ-FB fly bar, TQ-YB yoke bracket, TQ-SB swivel bracket, and SA-35 pole mount bracket, in readiness for suspending or pole mounting. These instructions shall only be used with these components.

The optional rigging components (TQ-FB fly bar, TQ-YB yoke bracket, TQ-SB swivel bracket, and SA-35 pole mount bracket) shall only be used in conjunction with Turbosound TQ 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 3 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 speaker 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

TQ8, TQ10, TQ12, and TQ15 full range speakers operate as a passive system and require only one amplifier channel and DSP for normal forward firing operation; Cardioid bass set ups will require additional amplifier and DSP channels.

All TQ series loudspeakers exclusively use Lake pre-sets via Lab Gruppen PLM+ and D series L platforms, Lab Gruppen IPX Series pre-sets will be released in due time.

No 3rd-party amplifier and DSP platforms are supported, no raw pre-set data is released or supported.

TQ series has a powerful yet simple pre-set strategy utilizing the latest functionality of LAKE XP software.

Pre-set data is found either via Lake LOAD Library (<https://www.labgruppen.com/downloads.html>) or can be downloaded from <https://www.turbosound.com/downloads.html>

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 NEUTRIK SPEAKON CONNECTORS for reliable operation.

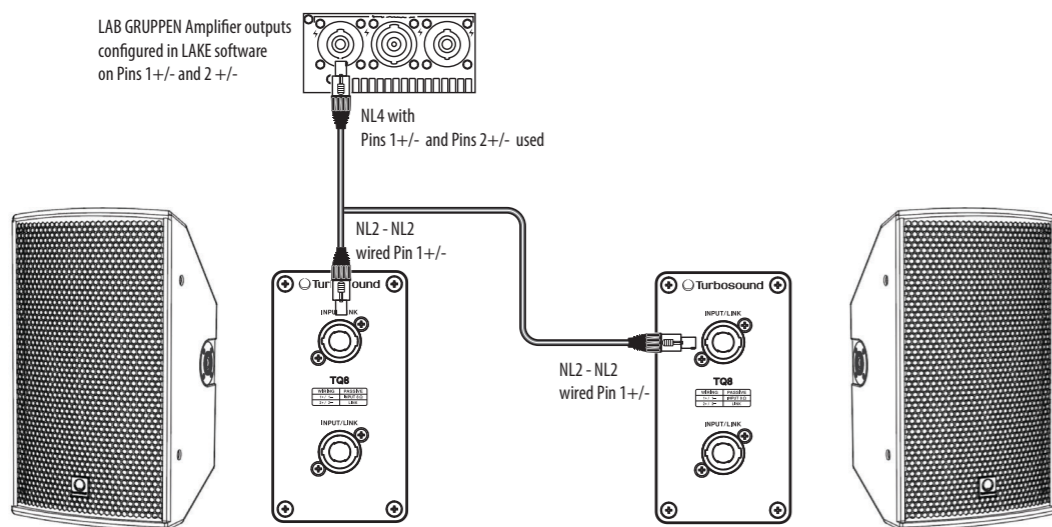
Attach and support the speaker cables from your amplifiers to the loudspeaker cabinets, so that no significant additional weight or lateral force is applied to the speakers by the input wiring. Input cables or link cables should never be used to angle the speakers or used as rigging in any way.

Stereo System Example

NOTE: Since the TQ cabinet is wired (1+/- = FR and 2+/- = Link), use (Speaker Output 1: 1 +/- and Speaker Output 2: 2 +/-) for the output patching from the Lab Gruppen amplifier

Depending on how the other channels are used, it may be useful to use an "NL4 to 2-NL2 breakout splitter cable," as shown in the example below.

The NL4 end uses Pin 1 +/- and Pin 2 +/- and both NL2 ends need to be wired Pin 1 +/-



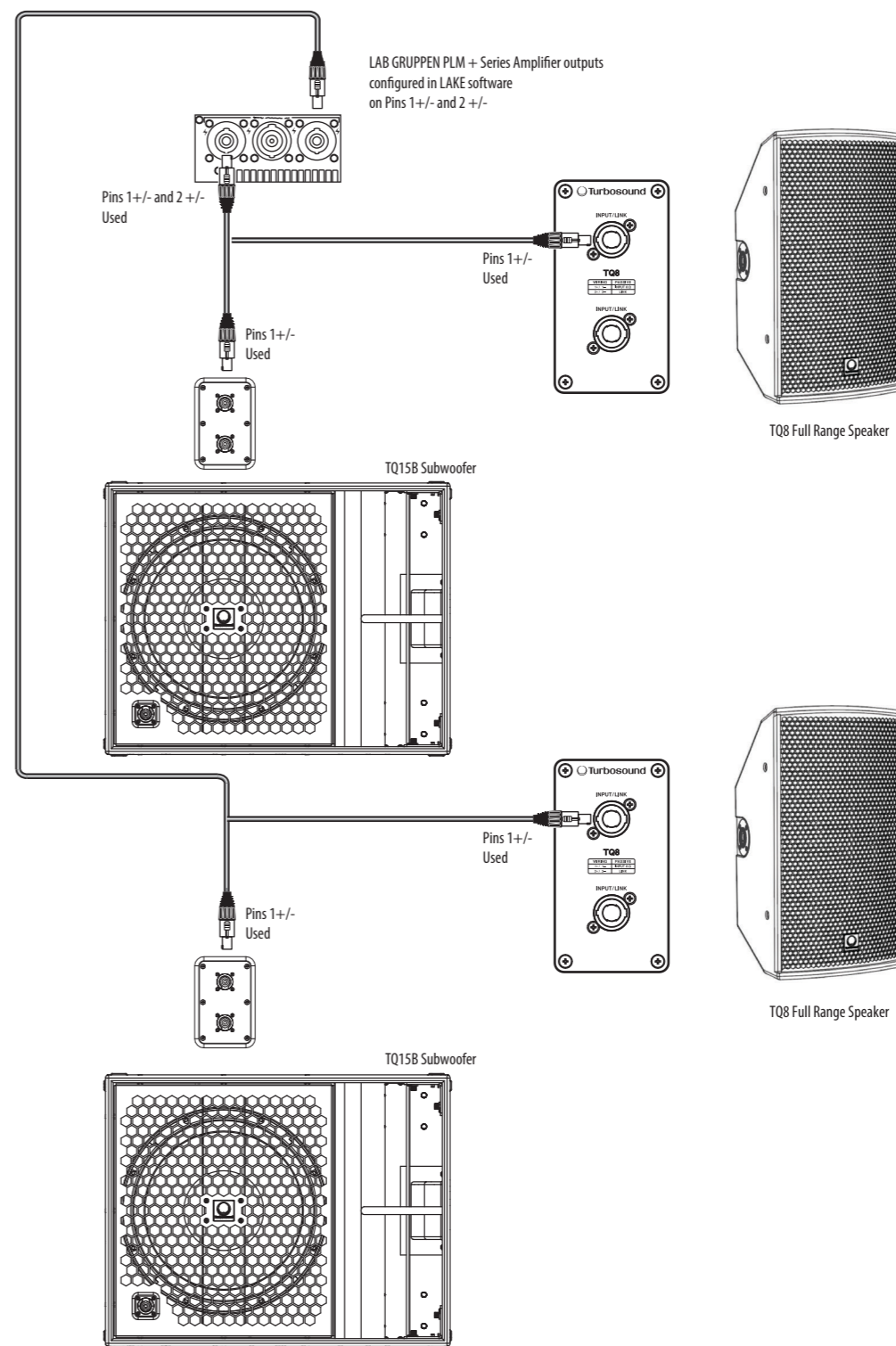
Stereo System Example with Subwoofers

Note: Since the TQ cabinet is wired (1+/- = FR and 2+/- = link), the output patching can be selected from any of the 4 options (1, 2, 3, 4 +/-) from the Lab Gruppen PLM+ amplifier.

Depending on how the other channels are used (for example in a stereo system with two TQ8 and two TQ15B subwoofers) it may be useful to use "NL4 to 2-NL2 breakout splitter cables," as shown in the example below.

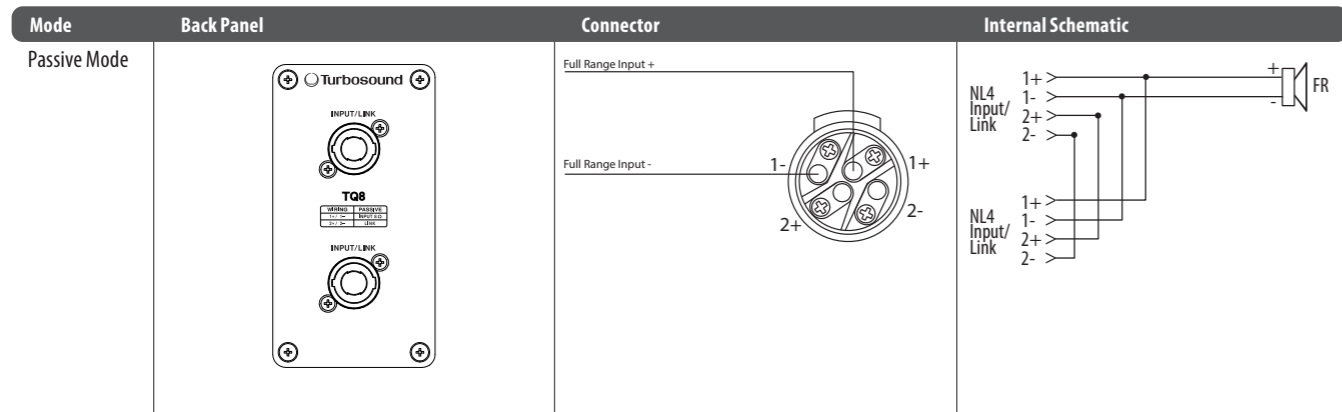
The NL4 end uses Pin 1 +/- and Pin 2 +/- and both NL2 ends need to be wired Pin 1 +/-

Note: in this case, do not use the TQ subwoofers front input, as it uses Pin 2+/- connected to the woofer.



Connections

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



Rigging and Acoustic Simulation Software

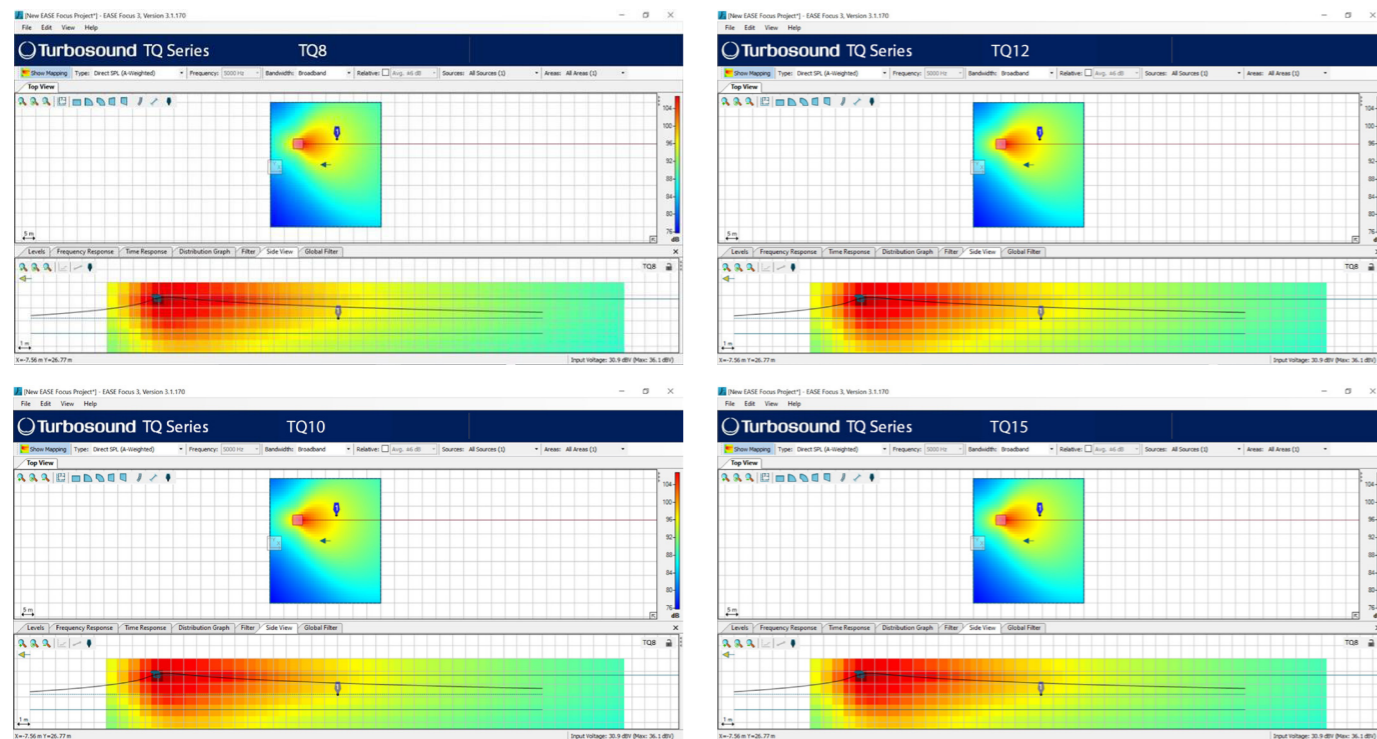
The TQ speakers have 3 optional rigging accessories: TQ-FB fly bar, TQ-YB yoke bracket, and the TQ-SB swivel bracket. These accessories comply with BGV-C1 rigging standards.

The TQ speaker is not an arrayable product. It is supported in Ease Focus 3 in stand-alone use, with Manchester series subwoofers, or as a fill or delay speaker 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>



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.



TQ Installation

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

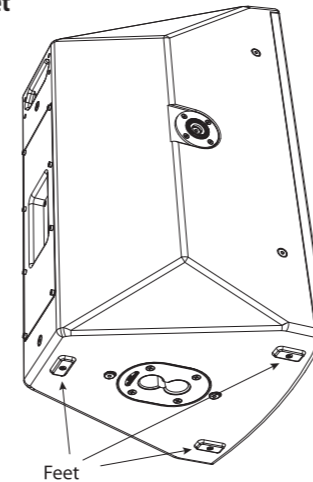
The use of a secondary safety is a mandatory safety requirement.

The versatile TQ speaker has three feet on the bottom for standing the speaker on a flat surface, two integral pole mount holes, and M10 mounting holes with fitted hex socket head screws.

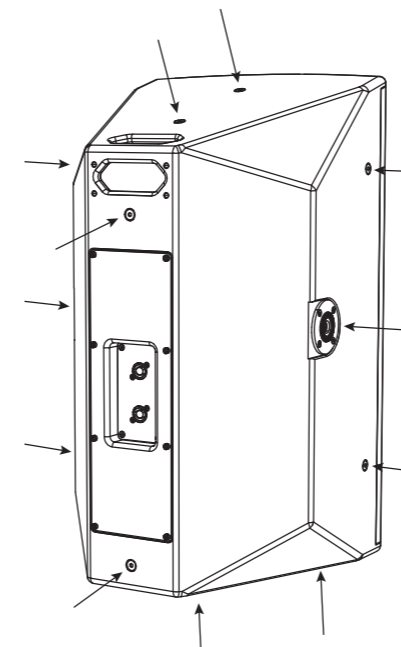
TQ series cabinets are designed with multiple internal rigging points to suit many possible mounting methods in permanent installations. All cabinets can be simply suspended using optional M10 shoulder eyebolts coupled to the internal rigging points provided. Remove the appropriate countersunk screws and replace them with eyebolts, which must have a thread length of at least 18 mm. Cabinets may be hung upside down if required.

The optional accessories allow the TQ speaker to be mounted in a number of different configurations.

Feet

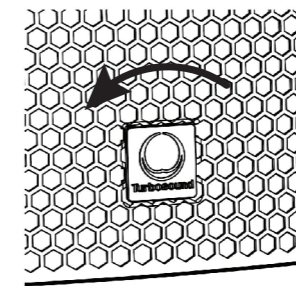


M10 Mounting Holes with Screws



Badge Rotation

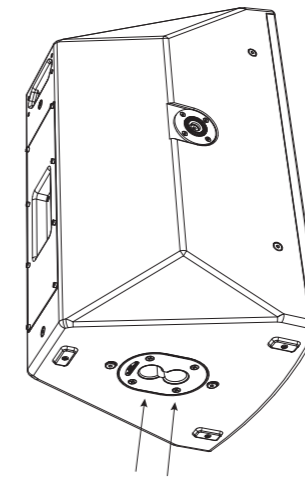
The Turbosound badge is spring-loaded and can be rotated by hand to suit vertical or horizontal positioning.



Pole Mount

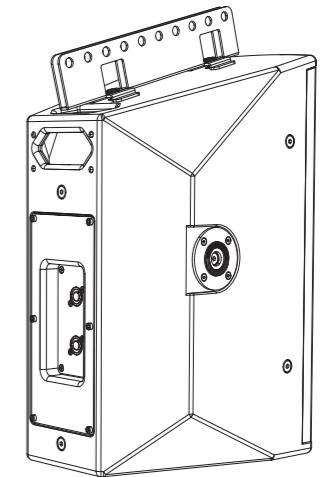
Two 35 mm holes are provided for pole mounting, one in the vertical position, and one with the TQ tilted forward. The TQ can be pole mounted on an MS121 subwoofer, or on a suitable tripod stand.

We recommend using a 35 mm pole with an M20 thread at the lower end. This type provides more security and will screw into the top receptacle of the MS121 subwoofer.

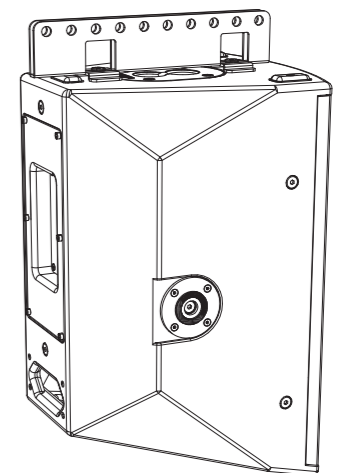
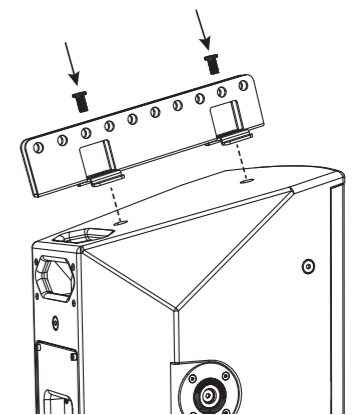


Fly Bar TQ-FB

The optional TQ-FB fly bar allows the speaker to be flown. The TQ-FB fits the TQ8, TQ10, TQ12, and TQ15 speakers. It has ten pick points for attaching shackles, and it bolts to the top or bottom of the TQ speaker.



The fly bar fits to the top or bottom of the TQ speaker using two of the existing M10 screws as shown. Securely tighten both screws.



The flybar has 10x 12.5 mm diameter holes that are used as pick points for rigging shackles. The space between each rail of the TQ-FB allows for a standard 1 ton bow shackle to be used to pick up the TQ.

Either style of shackle will work:

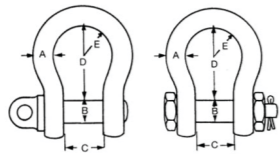
W.L.L = 1 Ton

A = 10 mm

B = 11 mm

C = 17 mm

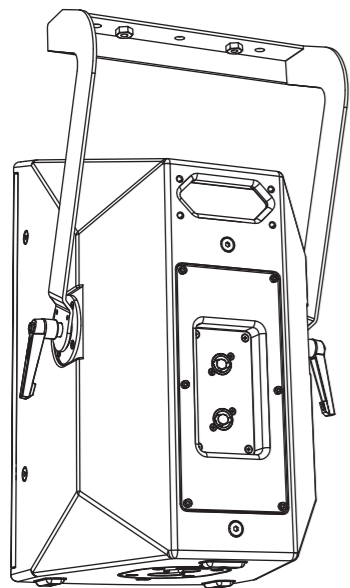
D = 36.5 mm



Yoke Bracket TQ8-YB, TQ10-YB, TQ12-YB, and TQ15-YB

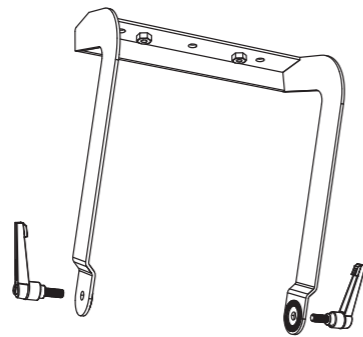
The optional yoke bracket allows the TQ speakers to be flown using suitable hook clamps or couplers to securely mount to a flown truss. The yoke bracket is available in 4 sizes to fit each of the speakers in the TQ series: TQ8-YB, TQ10-YB, TQ12-YB, and TQ15-YB.

Ratcheting handles are provided on either side to help angle the speakers accurately and secure them.



The yoke bracket fits to the sides of the TQ speaker, by screwing the handles into the existing M10 mounting holes on each side. Note that the yoke bracket is oriented as shown.

Adjust the speaker tilt to the desired angle, and then tighten the handles to secure the speaker in position.

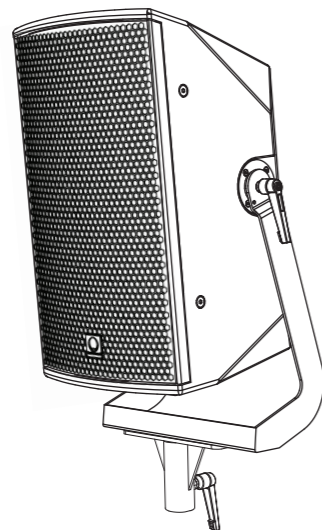


If the yoke bracket is to be bolted to a ceiling or other surface, then secure the yoke bracket first.

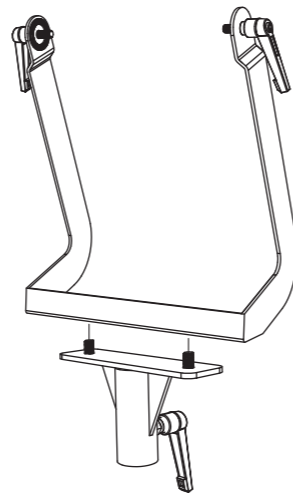
Then lift the speaker and attach it to the yoke bracket with the handles. Adjust the speaker angle and tighten the handles.

Pole Mount SA-35

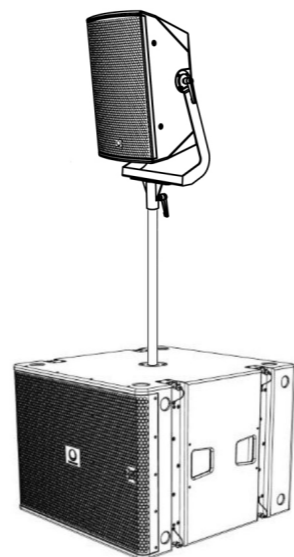
The optional SA-35 bracket allows the yoke bracket to support the TQ speaker on a 35 mm pole mount or tripod. Note that the yoke bracket is oriented as shown.



The SA-35 bracket attaches to the yoke bracket with two screws.



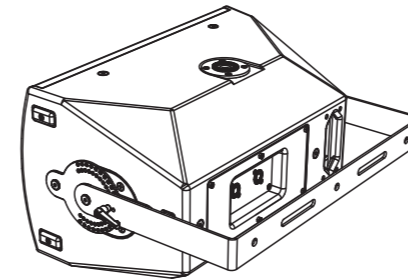
The assembly can then be added to a 35mm pole mounted to an MS121 subwoofer, or to a suitable tripod. Tighten the SA-35 ratchet handle to secure the assembly to the pole or tripod. Adjust the speaker tilt as desired and tighten the handles on each side.



Swivel Bracket TQ8-SB, TQ10-SB, TQ12-SB, and TQ15-SB

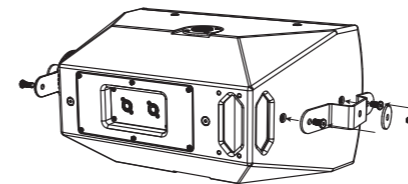
The optional swivel bracket allows the TQ speakers to be ceiling or wall mounted horizontally, or truss-mounted using suitable hook clamps. The swivel bracket is available in 4 sizes to fit each of the speakers in the TQ series: TQ8-SB, TQ10-SB, TQ12-SB, and TQ15-SB.

The speaker angle can be accurately set and clamped in position. Two concentric rows of holes allow for a wide range of angle adjustment, and this is held in position with a clamp/handle screw.

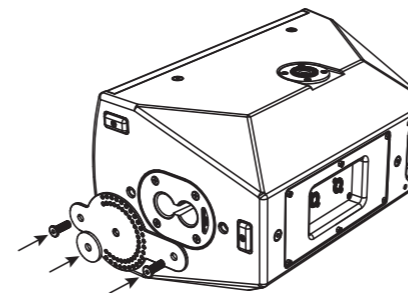


If the swivel bracket is to be bolted to a ceiling or other surface, then secure the bracket first.

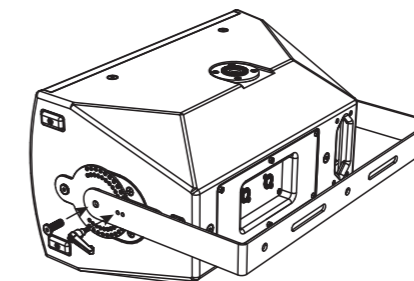
Add the small bracket to the top side of the TQ speaker, using the existing M10 mounting screws as shown. There is a large washer there as well.



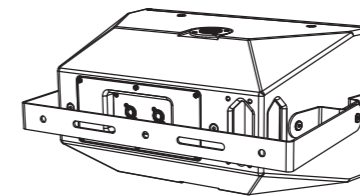
Attach the large plate to the bottom of the speaker, using the existing M10 screws. It covers the pole mount holes as shown.



Center the large washer, and then add the swivel bracket and secure it with the center screw and the handle screw.



Secure the other end of the swivel bracket with the supplied screw. Set the speaker at the desired angle and tighten the handle screw and center screws on either end of the swivel bracket.

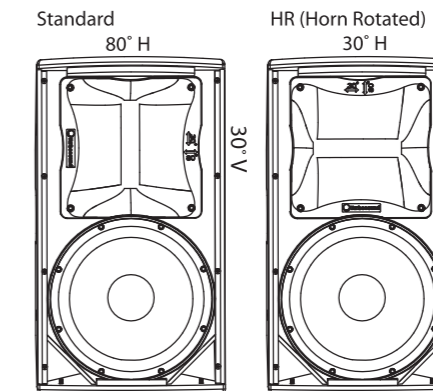


Horn Rotation

The MF/HF Horn assembly provides an 80 degree horizontal beamwidth, and a 30 degree vertical beamwidth, when the TQ is mounted vertically (portrait).

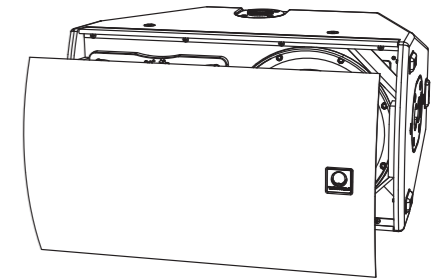
The horn assembly can be removed and reinstalled in a different orientation to suit desired configurations and coverage. For example, if the speaker is used in landscape mode, you can rotate the horn to maintain the 80 degrees horizontal and 30 degree vertical beamwidths. (This is a typical example of the need for horn rotation.)

The horn is marked on the front with the beamwidth angles.

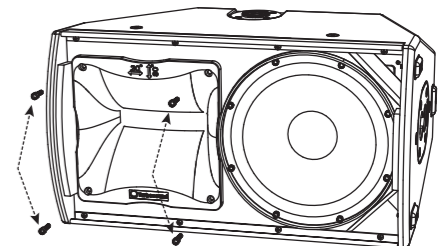


Follow the procedure below to rotate the horn:

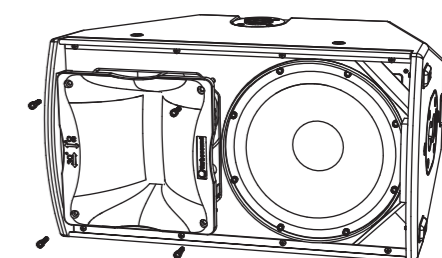
Remove the grille by pressing on any corner and carefully prying it out with a generic trim removal tool.



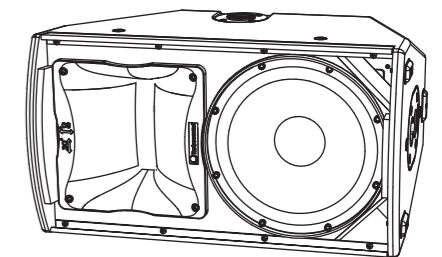
Remove the screws in each corner of the horn assembly.



Carefully pull the horn assembly forward, just enough to be able to rotate the assembly to the desired orientation.



Reinstall the horn with the 4 screws. Make sure the wiring is intact and not pinched.



Reinstall the grille, and make a note that the speaker has been modified.

Lake Preset Overlays and Application Notes

All TQ series loudspeakers exclusively use Lake XP pre-sets via Lab Gruppen PLM+ and D series L platforms and the forthcoming IPX FiR-X pre-sets.

No other amplifier and DSP platforms are supported.

The TQ series has a powerful yet simple pre-set strategy utilizing the latest functionality of Lake software, along with new BLEQ overlays.

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

TQ8, TQ10, TQ12, TQ15 loudspeakers each have individual 1 way passive FIR base pre-sets (1 channel DSP/AMP), full range with or without Subwoofers.

CAUTION: Do not combine TQ8, TQ10, TQ12, TQ15 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.

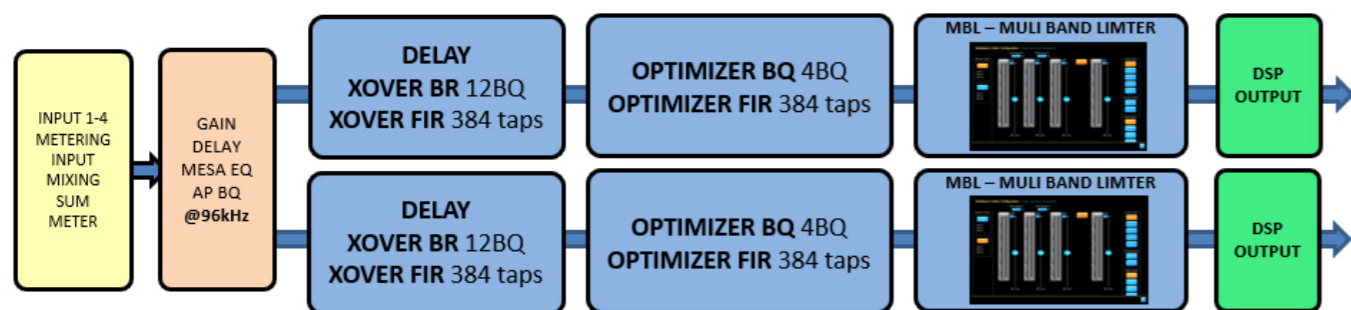
CAUTION: Pay careful attention to the HF Horn orientation, and select the HR preset if the HF Horn has been rotated.

TQ8, TQ10, TQ12, TQ15 modules are based on the XP module from Lake software.

This QSG refers to REV1.1 XP presets.

Lake software V7.0.7 or above must be used.

Lake XP signal flow:

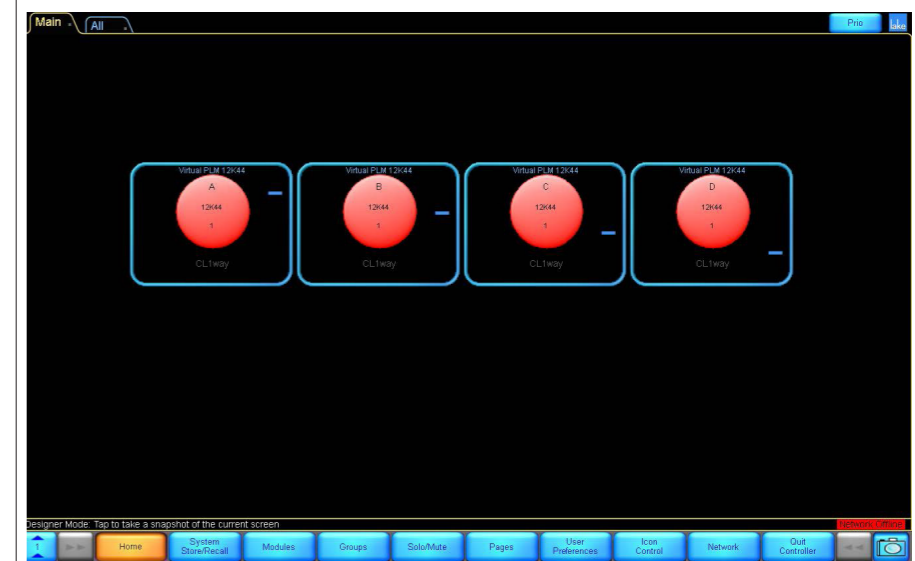


The download of the Lake controller includes the Lake Controller Operation Manual, which is a full tutorial of the Lake Controller and compatible hardware such as PLM+ series amplifiers

Within this QSG, we focus on the Turbosound TQ 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.



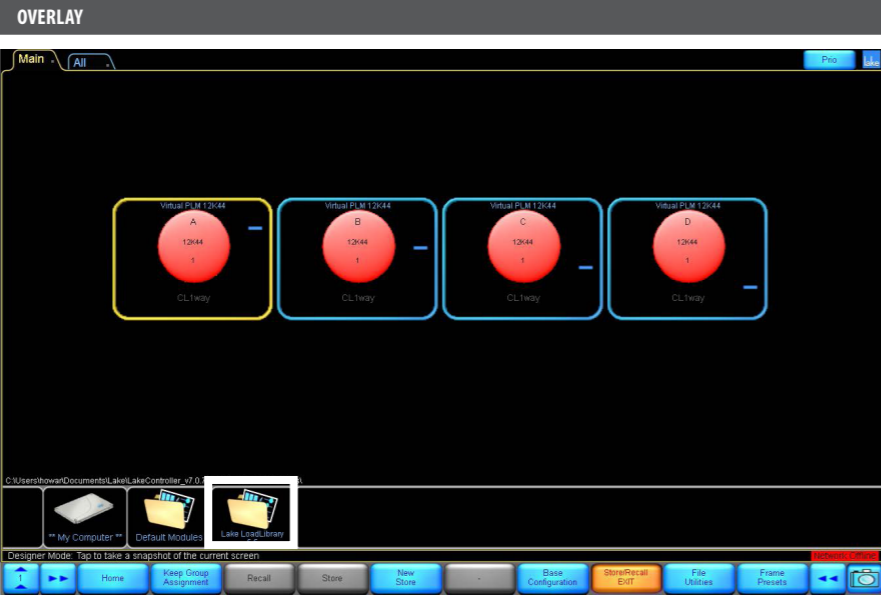
To Load a module :

Click the 'Module Store/Recall' button.

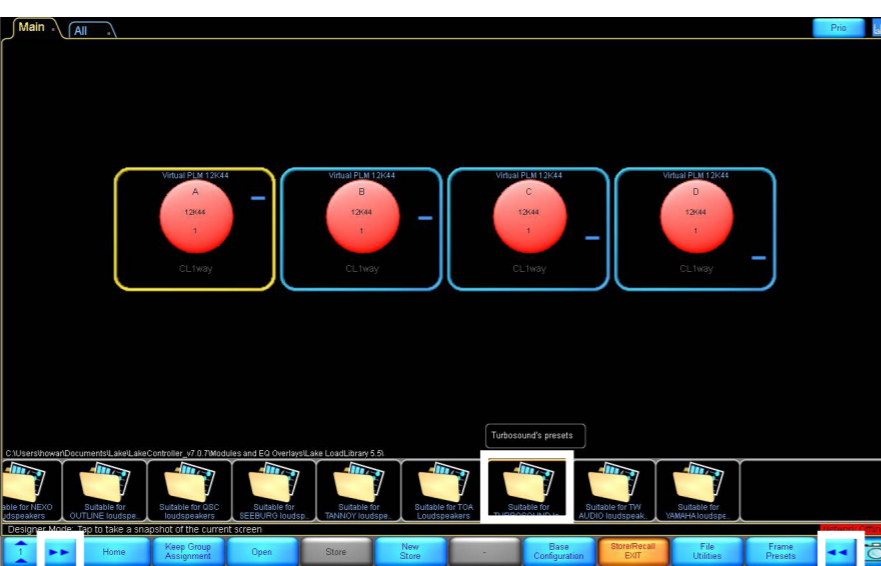


DESCRIPTION

Folders now appear, and these allow you to select where to recall the module (pre-set) from.
Double click the "Lake Load Library 5.5" folder.



Scroll using the arrow keys >> << along the bottom, to find the "Suitable for TURBOSOUND Loudspeakers" folder, then double click to open it.

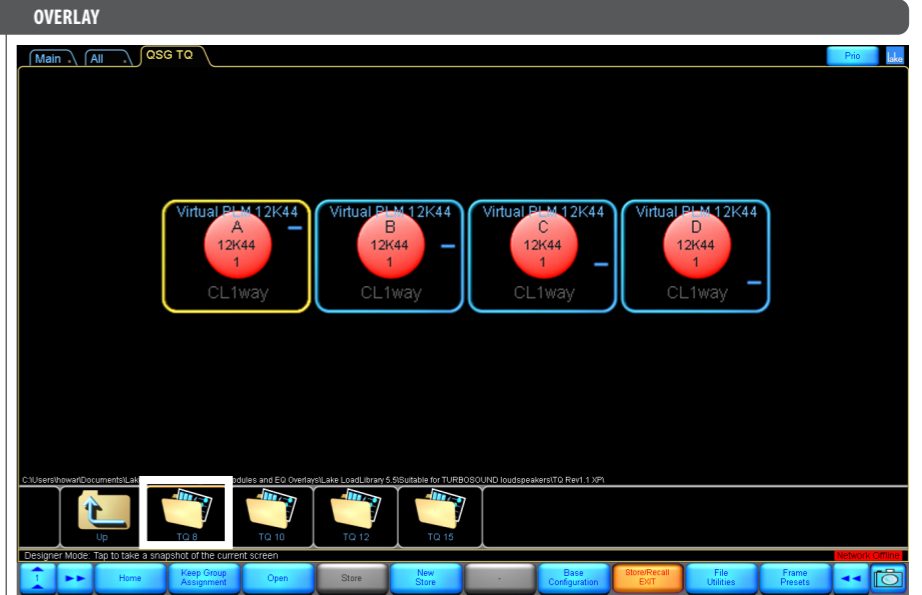


Now scroll again >> << to find the "TQ REV1.1 XP" folder, then double click to open it.



DESCRIPTION

Four folders appear, one for each speaker in the series: TQ8, TQ10, TQ12 and TQ15. Double-click the appropriate folder for your speaker.



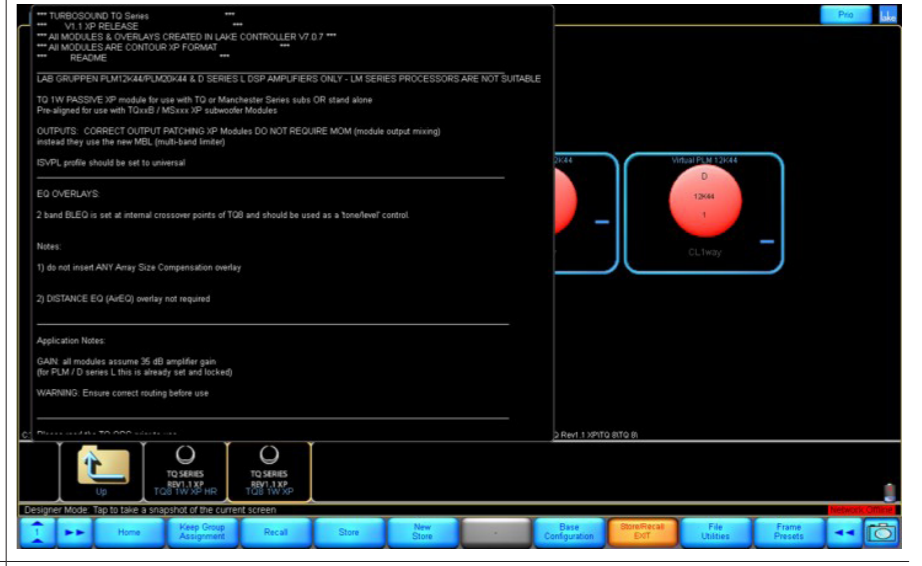
The available module folders are displayed.

Each TQ series speaker has two options, and this depends upon the Horn rotation: Standard, and HR (Horn Rotated).

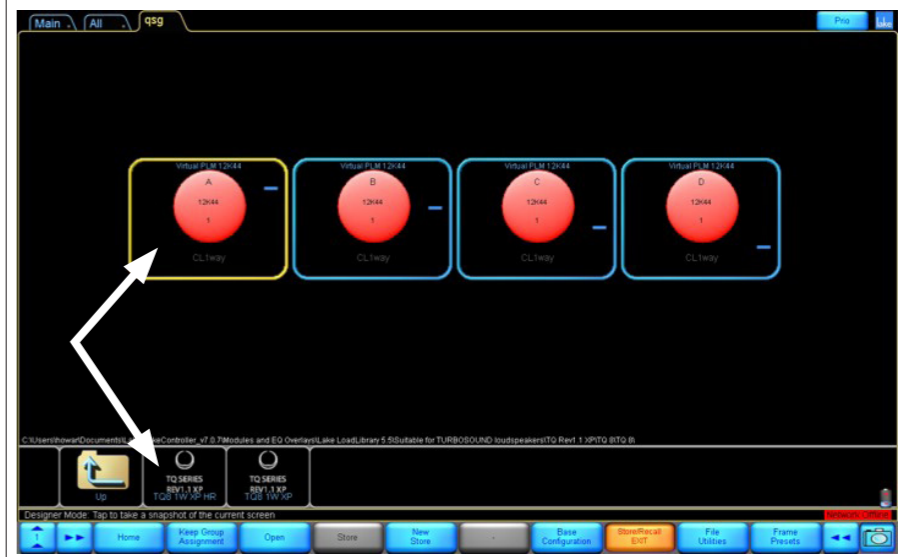
Left-click on either of these to show more details about the module set up. This example shows the Standard option, where the horn assembly has not been altered from its factory setting.

The horn rotation procedure is shown on page xx of this quick start guide.

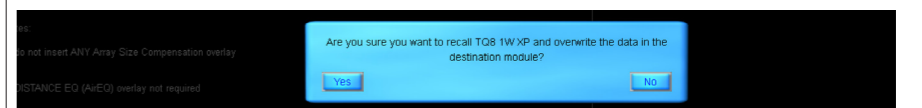
TIP: Please read the information!



Double-clicking the desired folder will open the module pre-set in the highlighted module of the Frame (amplifier)

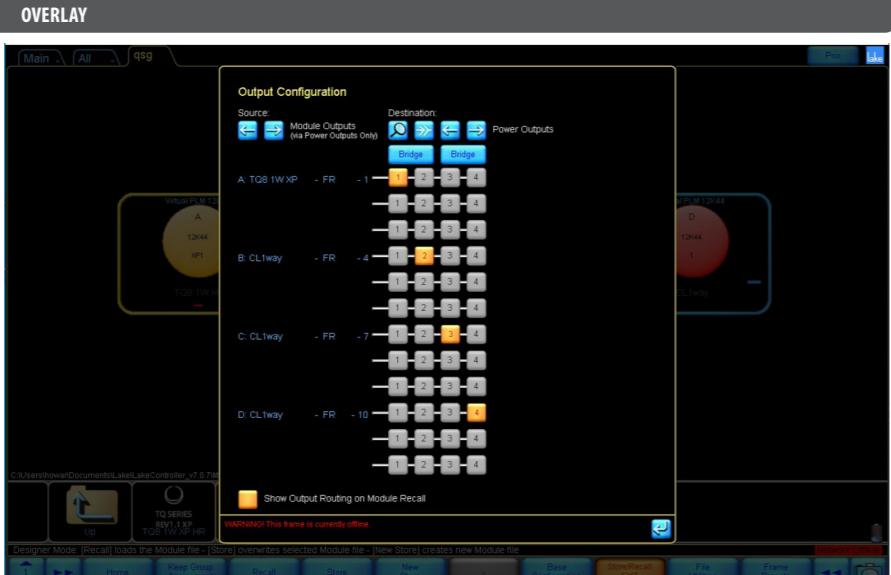


Press 'YES' to proceed –the selected pre-set module is loaded!

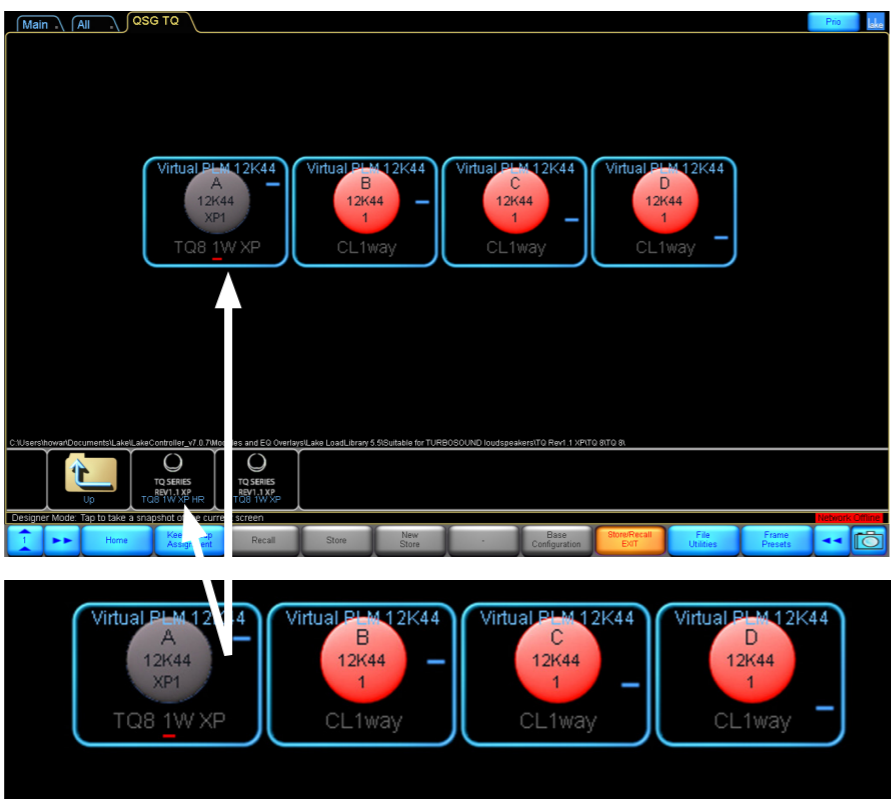


DESCRIPTION

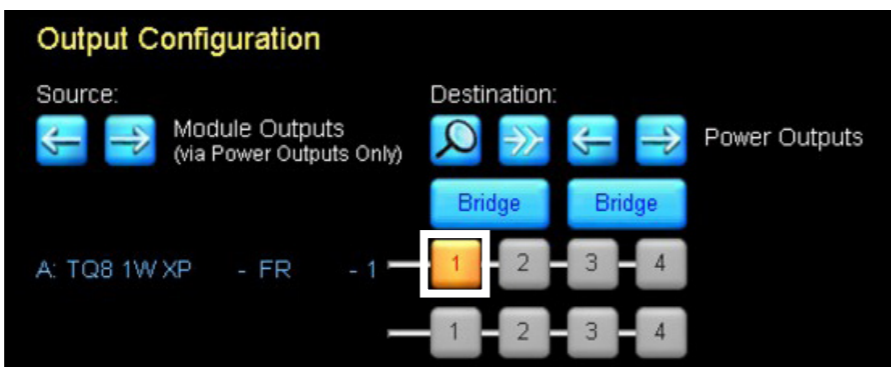
Output Configuration:
 Now you can patch the DSP module output to the frame's amplifier outputs
 For the full range TQ series speakers we want full range to pins 1. The patch is highlighted in yellow boxes with red text
 Once you have finished the correct output patch, press enter to close the output configuration
 Note: you will get access to the screen once you go through the same process to load other pre-set modules into the free B, C, and D modules or via the IO option button



Now you can see the pre-set module is recalled and loaded into A/B hardware modules



Only 1 channel of DSP and Amplifier are required

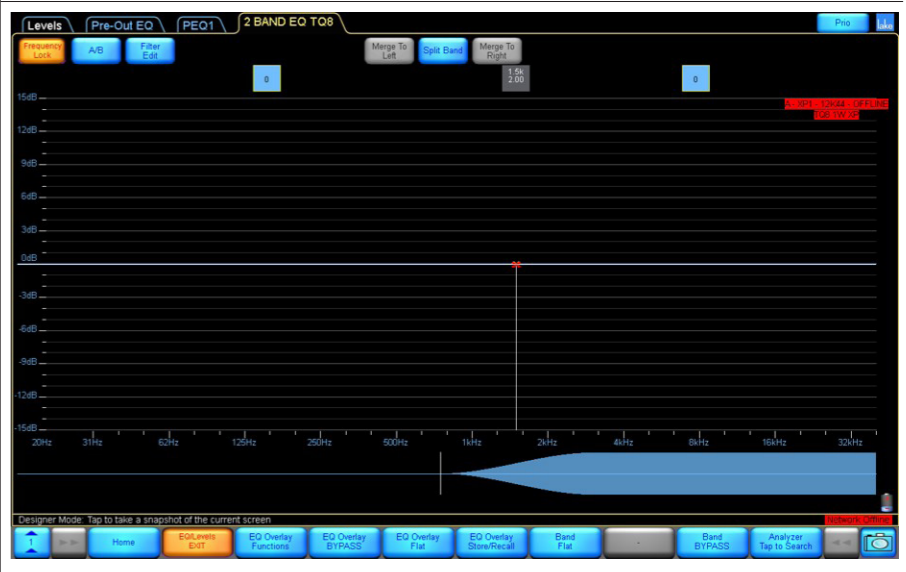


EQ STRATEGY

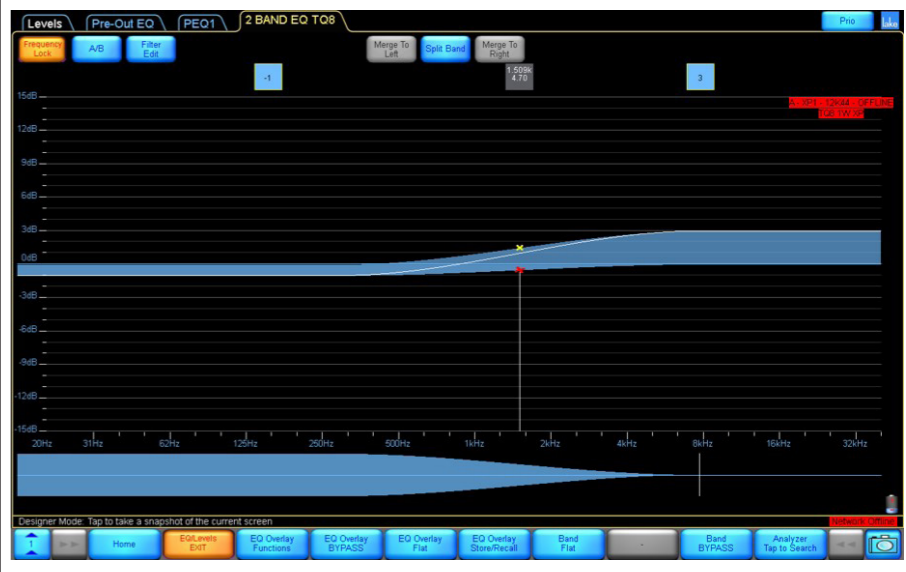
The TQ8/10/12/15 speakers have a 2 band EQ (BLEQ) inserted.
 The BLEQ acts as a level control for LF/HF and the 2 centre frequencies of the BLEQ relate to the crossover points of the LF/HF.
 The BLEQ is offered for users to adjust tonal balance of the system along with PEQ overlay and group overlays (system design dependant)

ILLUSTRATION

Examples of BLEQ use
 Flat



LF Cut and HF Boost



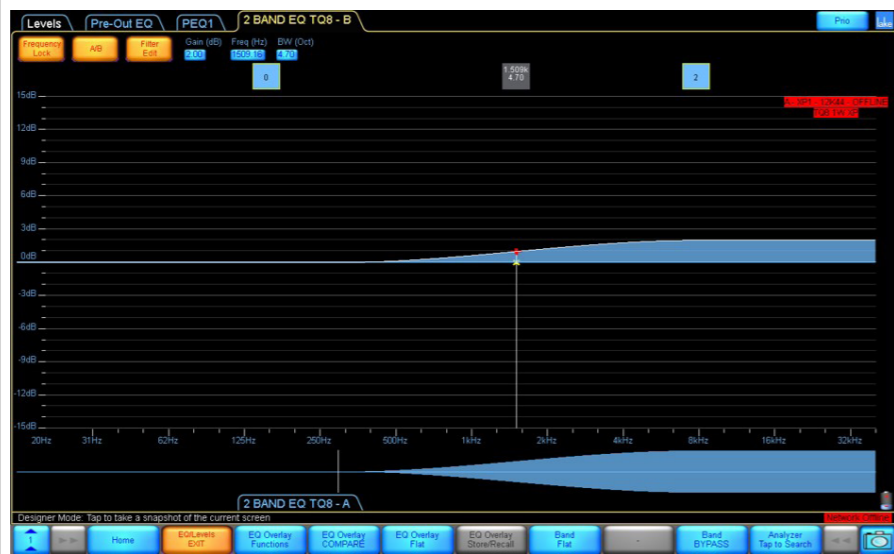
EQ STRATEGY

ILLUSTRATION

HF Cut



HF Boost



SUBWOOFER TIME ALIGNMENT

ILLUSTRATION

OVERLAY

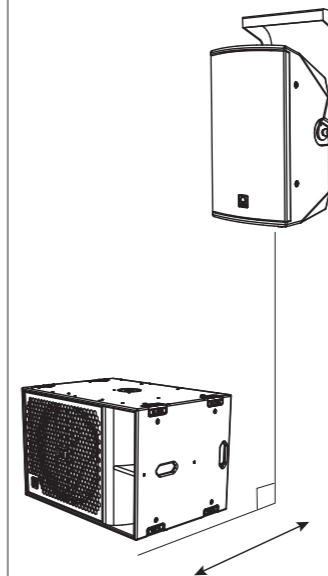
The TQ15B/TQ18B subwoofer pre-sets use all-pass filters to set the initial time alignment (assuming the fronts of the cabinets are in line) this greatly reduces system latency.

For example: If the fronts of the TQ speaker and TQ15B/TQ18B subwoofer 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 TQ15B/TQ18B subs are 'forward' of the TQ speakers, and so the TQ15B/TQ18B subs need to be delayed.

1. Subs are forward



Delay adjustment of subwoofers

2. In this example, the flown TQ speaker is 'forward' of the TQ15B/TQ18B ground stacked subs, and so the TQ needs to be delayed.

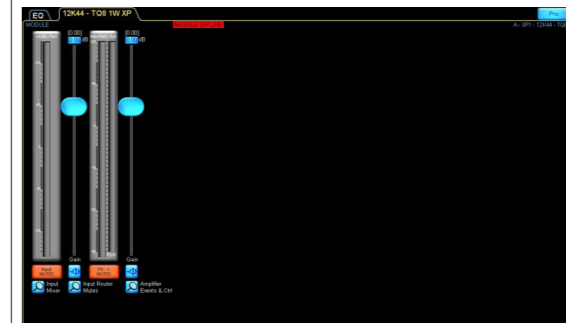
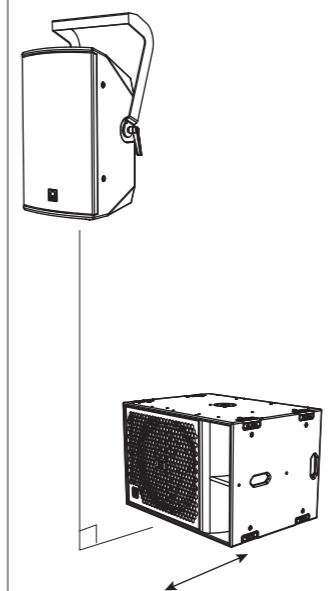
How do you find the correct delay time to align the flown speakers to the ground stacked bass?

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.

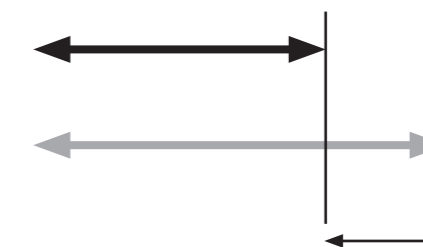
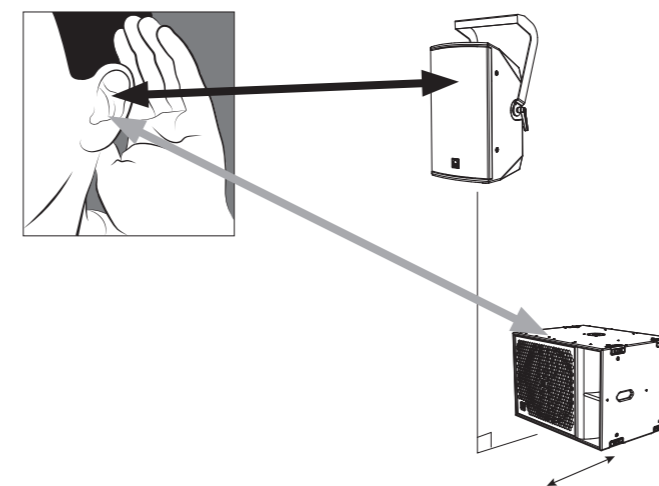
1 ms (milliseconds) = 0.343 m (meters) = 1.125 ft (feet)

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 TQ is forward



Delay adjustment of TQ speaker



Distance (time) is the difference to add to the flown array for alignment at the listening point