Quick Start Guide









PQ Series

PQ10, PQ12, PQ15

2 Way 10"/12"/15" Full Range Loudspeaker for Tour and Live Sound Applications

PQ18B 18" Reflex Loaded Subwoofer for Tour and Live Sound Applications

PQ10-SB, PQ12-SB, PQ15-SB Steel Swivel Bracket for PQ Loudspeakers

PQ10-YB, PQ12-YB, PQ15-YB Steel Flying Yoke for PQ Loudspeakers

TQ-FB Fly Bar for PQ, TQ and MC12-P Series Loudspeakers

SA-35 Stand Adapter for Turbosound Loudspeakers



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).



Warning!

Assembly should be carried out by qualified personnel only. Wrong assembly can lead to personal injury or damage. Screws or other fasteners are not included. Choose screws or fasteners suited to the material in your mounting surface; make sure your screws and fasteners have sufficient holding power. If you are uncertain, contact your local specialized retailer.

Warning! This appliance has been designed for VERTICAL MOUNTING ONLY. To avoid potential injury from falling equipment, DO NOT attempt to mount your speaker cabinet horizontally. The operation of your speaker cabinet as part of a flown 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 or flying. Make sure that speaker cabinets are set up and "flown" by qualified and certified personnel only, using dedicated equipment and original parts and components delivered with the unit. If any parts or components are missing please contact your Dealer before attempting to set up the system.

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.

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 PQ10, PQ12, PQ15 loudspeakers and the PQ18B subwoofer. The QSG also shows various options such as the TQ-FB fly bar, PQ-YB yoke bracket, PQ-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, PQ-YB yoke bracket, PQ-SB swivel bracket, and SA-35 pole mount bracket) shall only be used in conjunction with Turbosound PQ 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

PQ10, PQ12, and PQ15 full range speakers and the PQ18B subwoofer 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 PQ 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.

The PQ 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 PLM8k44, 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 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 PQ 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 +/-



10 PQ Series

Stereo System Example with PQ18B Subwoofers

Note: Since the PQ 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.

This example of a stereo system shows two PQ12 speakers and two PQ18B subwoofers. Use standard NL4 cables to connect the subwoofer's PINS SWAP LINK to the INPUT of the PQ12.

Note: in this case, do not use the PQ18B subwoofer front input, as it uses Pin 2+/- connected to the woofer.



Subwoofer Cabling

NOTE: The PQ18B subwoofer is wired 1+/- = LF and 2+/- = LINK. The PIN SWAP LINK connector is used in order to power multiple enclosures using standard NL4 cables.

To power one subwoofer per amplifier channel, a standard NL4 cable from Lab Gruppen bi-wired NL4 outputs (Channel 1 = 1 + /-; Channel 2 = 2 + /-) connects to the first subwoofer, then another standard NL4 cable is connected via the PIN SWAP LINK to the INPUT of the second subwoofer.

To power two subwoofers per amplifier channel, standard NL4 link cables from Lab Gruppen bi-wired NL4 outputs (Channel 1 = 1 + /-; Channel 2 = 2 + /-) can be used in used; refer to wiring diagrams below for further details.

One subwoofer per amplifier channel



Two subwoofers per amplifier channel



Cardiod BFF (back, forward, forward)

Using 4-Core NL4 cable, 2 DSP and 2 amplifier channels



Connections

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

Mode	Back Panel	Connector	Internal Schematic
Passive Mode	Iurbosound Imput/Law Imput/Law Imput/Law	Full Range Input +	NL4 Input/ Link NL4 1- 2+ 2- FR H+ Input/ 1+ 2+ 2+ 2- FR H+ 2+ 2+ 2+ 2+ 2+ 2+ 2+ FR



Rigging and Acoustic Simulation Software

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

The PQ speakers and the PQ18B subwoofer are not arrayable products. They are 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

The graphs below are 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.

OTurt	Dosound PQ S	eries PQ12			
Show Mapping	Type: Direct SPL (A-Weighted)	Frequency: 5000 Hz + Bandwidth: Broadband	• Relative: Avg. ±6 dB - Sources:	All Sources (1) • Areas: All An	eas (1) •
	• ~ 1 0000		0		
5 m					ß
Levels Freq	suency Response Time Response	Distribution Graph Filter Side View Global Fi	lter		TQ8
4- 1m			9		

OTurbosound PQ	Series	P	Q18B				
Show Mapping Type: Direct (Pl, (2)	Prequency: 40Hz	Bandwidth: 3/3 Octave	• Relatives David and all de	 Sources: Al Sources (t) 	• Areas: Al Areas (1)	•	
11 PD040 0 / /	•						1
							10
							1
							3
	1		+			-	13
							т
							1
							-11
							1
3.0.							E IEMSE
Levels Frequency Response Time Respons	e Distribution Graph Filter	SideView					
							M\$218

Installation PQ10, PQ12, PQ15

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 PQ speaker has two sets of four feet for tilting the speaker as a stage monitor, two integral pole mount holes, and M10 mounting holes with fitted hex socket head screws.

PQ 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 PQ 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 PQ tilted downwards. The PQ can be pole mounted on a PQ18B or 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 PQ18B subwoofer.



Vertical Tilted Downwards





Fly Bar TQ-FB

The optional TQ-FB fly bar allows the speaker to be flown. The TQ-FB fits the PQ10, PQ12, and PQ15 speakers. It has ten pick points for attaching shackles, and it bolts to the top or bottom of the PQ speaker.



The fly bar fits to the top or bottom of the PQ 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 PQ.

Either style of shackle will work:

- W.L.L = 1 Ton
- A= 10 mm
- B= 11 mm
- C= 17 mm
- $D = 36.5 \, \text{mm}$



Yoke Bracket PQ10-YB, PQ12-YB, PQ15-YB

The optional yoke bracket allows the PQ speakers to be flown using suitable hook clamps or couplers to securely mount to a flown truss. The yoke bracket is available in 3 sizes to fit each of the speakers in the PQ series: PQ10-YB, PQ12-YB, and PQ15-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 PQ 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 PQ 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 35 mm pole mounted to a PQ18B subwoofer, or to a suitable tripod stand. Tighten the SA-35 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 PQ10-SB, PQ12-SB, and PQ15-SB

The optional swivel bracket allows the PQ speakers to be ceiling mounted horizontally, or truss-mounted using suitable hook clamps. The swivel bracket is available in 3 sizes to fit each of the speakers in the PQ series: PQ10-SB, PQ12-SB, and PQ15-SB.

The speaker angle can be accurately set and clamped in position with the 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 PQ speaker, using the existing M10 mounting screws as shown.

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 50 degree vertical beamwidth, when the PQ 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 50 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.





Reinstall the horn with the 12 screws. Make sure the wiring is intact and not pinched.

Reinstall the grille using its ten screws, and make a note that the speaker has been modified.



Follow the procedure below to rotate the horn:

each side.

Remove the grille by removing the five screws on

Remove the 12 screws of the horn assembly.



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

Installation

PQ18B

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 if installing this product with the M10 rigging points.

The PQ18B has interlocking feet on the bottom and one side for stacking subwoofers or standing them on a flat surface. There is one integral pole mount hole, and M10 mounting holes with fitted hex socket head screws.



Groundstacking

The PQ18B can be groundstacked in the horizontal or vertical orientation.

In the vertical orientation, stack only two of them and in the horizontal, stack a maximum of three.

Suitable racket straps looped around the group of cabinets is advised as an additional safety measure.



Badge Rotation

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



Suspension

The PQ18B cabinet 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 40 mm. Cabinets may be hung upside down if required.







Pole Mount

One 35 mm hole is provided for pole mounting.

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 PQ18B.



Transport Wheels (option)

An optional kit allows four wheels to be mounted as shown.



Lake Preset Overlays and Application Notes

All PQ 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 PQ 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

PQ10, PQ12, PQ15 loudspeakers each have individual 1 way passive FIR base pre-sets (1 channel DSP/AMP), full range with or without Subwoofers.

The PQ18B subwoofer has an individual 1 way passive FIR base pre-set (1 channel DSP/AMP).

CAUTION: Do not combine PQ10, PQ12, PQ15 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.

PQ10, PQ12, PQ15, and PQ18B 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 PQ series workflow and pre-set strategy, and assume basic working knowledge of the Lake Controller.

PQ Series



20



22 PQ Series







EQ STRATEGY	ILLUSTRATION
The PQ10/12/15 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 dependent)	

Examples of BLEQ use Flat





LF Cut and HF Boost



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.

CE

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.

