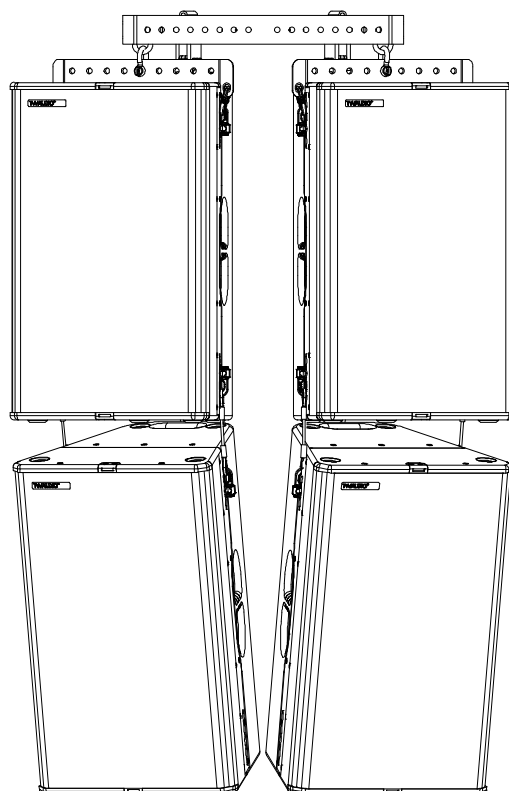


T24(N)-system | **Rigging manual**



Introduction

Thank you for choosing a high-quality product “MADE IN GERMANY” from the brand TWAUDIÖ.

In an era when line arrays dominate, does it still make sense to use conventional horn-loaded tops? At TWAUDIÖ our response is a resounding yes.

No matter how prevalent line arrays become, some audio challenges will always be best met by the use of conventional horn tops. In particular, the TWAUDIÖ T-series has size and efficiency on its side to help you create optimal audio solutions up to a certain size both quickly and simply.

Adding to this flexibility is the ability to interchange and rotate our 60 × 40 and 90 × 50 degree mid-high range horn tops without the need for tools.

In addition, TWAUDIÖ offers an extensive range of accessories to support T-series users, serving every conceivable setup and installation variation you may require.

But don't take our word for it – try it for yourself and discover how simple in use the T-series can be.

If you lend your product to another party, inform that party of the safety-related operating procedures and hand over this assembly guide. If you require additional copies of this manual, you can obtain them free of charge from TWAUDIÖ or download them from www.twaudio.de

Instructions in this user manual

Strictly adhere to the instructions contained in this operating manual that are marked as follows:



This symbol in combination with the signal word “Warning” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to serious injury or even death.



This symbol in combination with the signal word “Warning” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to serious injury or even death.



This symbol in combination with the signal word “Warning” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to serious injury or even death.



This symbol in combination with the signal word “Warning” identifies a potentially hazardous situation for persons with a pacemaker. Failure to comply with this safety instruction can lead to serious injury or even death.



This symbol in combination with the signal word “Caution” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to light or moderate injury.



This symbol in combination with the signal word “Note” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to product damage.



This symbol in combination with the signal word “Tip” identifies additional information or notes that will simplify working with TWAUDIO products on the basis of practical experience.

Notes on the products

Read manual before use!

Before using all the rigging components, carefully read the rigging book and keep it with the components.

General information

Rigging manual: Rm-T24(N)-system

Version 2.0 en, 07/2023

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All information contained in this operating manual was correct to the best of our knowledge at the time of printing.

Quality warranties or assurance of suitability for a certain type of use based on the technical specifications, dimensions and weights are not granted by TW AUDIO.

TW AUDIO also shall not assume liability for any secondary damage (property damage and/or personal injury) nor for the failure to comply with this operating manual!

TW AUDIO reserves the right to update this document based on recent developments.

TW AUDIO INTERNATIONAL GmbH
Osterholzallee 140-2
71636 Ludwigsburg (Germany)

Phone : + 49 (0) 71 41-48 89 89 0
Fax: + 49 (0) 71 41-48 89 89 99
E-Mail: info@twaudio.de
WWW: www.twaudio.de

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1. Safety | Intended use

Please adhere to the following safety instructions to avoid risks when using accessories.

The rigging components are developed for use in professional sound systems. The rigging components may only be used by trained and qualified personnel.

Note the operating modes described in this assembly instructions. Other uses are not permissible.

Damage caused by improper use is not covered by TW AUDIO.



Before every operation, check the integrity of each rigging component(s) and ensure that all parts are in perfect condition.

The scope of delivery includes specified components. Only use the recommended and certified components.



This rigging manual describes how to use the rigging components correctly. Any other use shall be deemed improper and may result in damage or even injury.

Modifications or alterations to individual parts of the rigging components are not permitted! Danger to life!



The rigging components are designed both for indoor and outdoor use.



The rigging components may only be used by trained and qualified personnel. Personnel must check the component(s) for suitability before each use.



When visible damage to any part of the rigging components are detected, they must be decommissioned immediately.



Please keep all elements of the rigging components away from children! The small parts can easily be swallowed and lead to suffocation!



Every rigging component has a certified payload / Safe Working Load (SWL). Do not exceed this payload.

The respective maximum payload (SWL) can be found in the subchapters in chapter 2.1.



Before mounting the rigging components check that walls, ceilings, tripods etc are capable of carrying the payload of the components.



Make sure that no water pipes, electrical lines or any other lines are behind the intended place of mounting.



Only use wall plugs and screws which are suitable for the intended mounting and structural fabric. All screws must be set and tightened properly. Ensure that the fixing holes have the correct depth and diameter. Always use all fixing holes.



When moving (assembling, dismantling, maintaining) the rigging components, ensure sufficient space to prevent collisions with other objects.



Do not squeeze or twist the electrical cables of the loudspeakers during the installation of the rigging components. The respective national electrotechnical rules and regulations are applicable.



All screw connections should be checked each time the rigging components are installed. Tighten all loose screws. If this is no longer possible, the mounting elements must be replaced.



When assembling and disassembling your system setups, make sure that you never carelessly remove the quick-locking pins of the BBT24 bracket with your fingers, hands or other body parts or reach between the speakers. Due to the gravity of the upper part, it can fall backwards or forwards.

There is a danger of crushing!



Check the Double Stud connections each time you install the rigging components. They must be firmly engaged and secured with a safety locking splint. If this is no longer possible, the Double Stud connections with the safety locking splints must be replaced.

Please adhere to the following safety instructions to avoid risks when operating loudspeakers.

The T24(N) loudspeaker was developed for use in professional sound systems. The loudspeaker may only be used by trained and qualified personnel.

Note the operating modes described in this operating manual. Other uses are not permissible.

Damage caused by improper use is not covered by TW AUDiO.



Loudspeakers generate an electromagnetic field. Persons with pacemakers are not permitted to remain in the immediate vicinity of loudspeakers as the electromagnetic fields can cause pacemakers to malfunction.



When working with heavy loads exceeding 20 kg (44 lbs.), use suitable aids (dollies, hoisting slings, etc.). Multiple persons may be required depending on the situation.

Ensure that the units are in a stable position and are firmly attached. A falling loudspeaker can result in serious personal injury and property damage.

When using and assembling TWAUDiO loudspeakers, only use materials specified by TWAUDiO. These tasks must be performed by qualified personnel. Adhere to the applicable safety regulations.



When setting up loudspeakers, ensure that they are not exposed to the following ambient conditions:

- Direct sunlight
- Humidity
- Jolting
- Dust



Keep away from the immediate vicinity of loudspeakers that are operated at high sound pressure levels. These loudspeaker systems are capable of endangering your health. Sound levels beginning as low as approximately 90 dB SPL can lead to long-term hearing impairment.



Avoid:

- Feedback
- Distorted signals (clipping) and
- Peaks resulting from switching on devices, plugging in devices or unplugging devices during operation.

Such signals can lead to loudspeaker overload and ultimately to loudspeaker failure.



Ensure that the loudspeaker is not exposed to permanent thermal overloads. Thermal overloads may cause a fire and result in serious personal injury and property damage.

Note that TW AUDiO does not provide a warranty for damage that can be attributed to this type of overload and therefore cannot be held liable for any secondary damage.



A permanent magnetic field is present in the immediate vicinity of loudspeakers. Ensure that objects which react sensitively to magnetic fields are not located in the immediate vicinity of the loudspeaker. In particular, this applies to magnetic storage media, magnetic stripe cards such as debit cards and CRT displays. A distance of approximately one meter is sufficient to avoid damage.

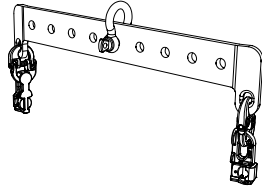


Check loudspeakers and accessory parts regularly for visible wear. This is essential to ensure continuing fault-free operation. Worn parts should be replaced immediately. Spare parts are available from TWAUDiO.

2. System components

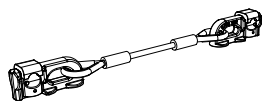
2.1 Rigging components

2.1.1 CBT24 Cradle bar for flying

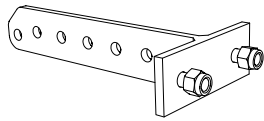


Maximum load capacity: (without other rigging components)	1x T24(N)
Maximum load capacity: in combination with: 1x BCT24 rigging adapter and 1x BBT24 bracket	1x T24(N)
Maximum load capacity: in combination with: 1x BCT24 rigging adapter, 6x BBT24 bracket and 10x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	6x T24(N)
Dimensions (h x w x d)	407 x 77 x 8mm [19.02 x 3.03 x 0.31 in]
Weight	1,7 kg [3.75 lbs]
Surface	Powder-coated

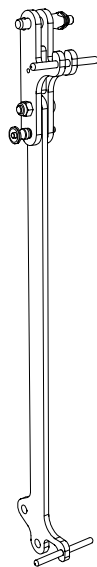
2.1.2 BLT24 Boxlink connector rope



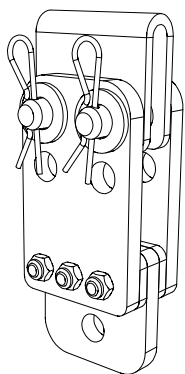
Description	For hanging T24(N) among each other, with Double Studs and safety splints
Rope load capacity	135 kg
Diameter	ø5 mm
Dimensions (h x w x d)	280 x 30 x 30 mm [11.02 x 1.18 x 1.18 in]
Weight	0,3 kg [0.66 lbs]

2.1.3 BCT24 Rigging adapter

Maximum load capacity: in combination with: 1x CBT24 cradle bar for flying and 1x BBT24 bracket	1x T24(N)
Maximum load capacity: in combination with: 1x CBT24 cradle bar for flying, 6x BBT24 bracket and 10x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	6x T24(N)
Dimensions (h x w x d)	260 x 126 x 48 mm [10.24 x 4.96 x 1.89 in]
Weight	1,0 kg [2.20 lbs]
Surface	Powder-coated

2.1.4 BBT24 Bracket

Maximum load capacity: for 1x BBT24 bracket in combination with: 1x CBT24 cradle bar for flying and 1x BCT24 rigging adapter	1x T24N
Maximum load capacity: for 6x BBT24 bracket in combination with: 1x CBT24 cradle bar for flying, 1x BCT24 rigging adapter and 10x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	6x T24N
Dimensions (h x w x d)	731 x 105 x 98 mm [28.78 x 4.13 x 3.86 in]
Weight	2,1 kg [4.62 lbs]
Surface	Powder-coated

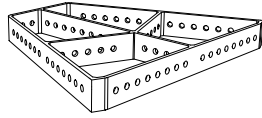
2.1.5 BAT24 Adapter

Standard variant:	
Maximum load capacity: for 1x BAT24 adapter	
in combination with: 1x MCT24 main-cradle-frame, 1x CBT24 cradle bar for flying, 2x BBT24 brackets and 2x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	2x T24N
Maximum variant:	
Maximum load capacity: for 1x BAT24 adapter	
in combination with: 1x MCT24 main-cradle-frame, 1x CBT24 cradle bar for flying, 6x BBT24 brackets and 10x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	6x T24N
Dimensions (h x w x d)	148 x 56 x 50,5 mm [5.83 x 2.2 x 1.99 in]
Weight	1,2 kg [2.6 lbs]
Surface	Powder-coated

2.1.6 ASK44 Sling chain

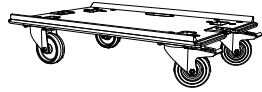
Description	Sling chain 4-strand for suspending the MCT24 from a suspension point. incl. 1 x SK 20 and 4 x SK10 shackles
Maximum load capacity	1,12 t
Dimensions (h x w x d)	510 x 80 x 80 mm [20.08 x 3.15 x 3.15 in]
Weight	2,7 kg [5.95 lbs]

2.1.7 MCT24 Main-cradle-frame



Standard variant: Maximum load capacity: in combination with: 2x CBT24 cradle bar for flying 2x BAT24 adapter, 4x BBT24 bracket and 4x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	4x T24(N)
Maximum variant: Maximum load capacity: in combination with: 2x CBT24 cradle bar for flying 2x BAT24 adapter, 12x BBT24 bracket and 20x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	12x T24(N)
Standard variant with 2x MCT24 Maximum load capacity: in combination with: 3x CBT24 cradle bar for flying 3x BAT24 adapter, 6x BBT24 bracket and 6x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	6x T24(N)
Maximum variant with 2x MCT24 Maximum load capacity: in combination with: 3x CBT24 cradle bar for flying 3x BAT24 adapter, 9x BBT24 bracket and 12x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers	9x T24(N)
Dimensions (h x w x d)	60 x 582 x 473mm [2.36 x 22.91 x 18.62 in]
Weight	9,2 kg [20.28 lbs]
Surface	Powder-coated

2.1.8 FDB30 Frontdolly



Description	Dolly can be clamped on T24(N) front grill. Four 100 mm swivel castors, two of it with stopper, two handles.
Maximum load capacity	1x T24(N)
Dimensions (h x w x d)	700 x 440 x 150mm [27.56 x 17.32 x 5.91 in]
Weight	7,4kg [16.31 in]

2.1.9 CoverT24 Cover

Description	Protective cover for T24(N) for transport on FDB30
-------------	--

2.1.10 CaseT24 Case

Description	Case for 2x T24(N)
Dimensions (h x w x d)	960 x 920 x 480mm [37.80 x 36.22 x 18.90 in]
Weight	40kg [88.18 in]

2.2 Loudspeaker

2.2.1 T24

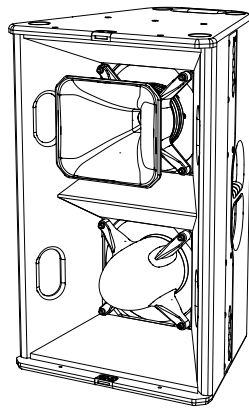


The T24 was discontinued and replaced by its successor T24N!



Old T24 loudspeakers can still be used with the accessories described here in this rigging manual.

2.2.2 T24(N)



	Operating mode	
	Biamp	Passive
Drivers	2x 12" LF / 1x 1,4" HF	
Frequency response	65 - 18000Hz	
Power handling (program/Peak)	1400 / 2800W LF 220 / 440W HF	1400 / 2800W
Impedance	4 Ω LF 8 Ω HF	4 Ω
Coverage angles (h x v)	60° x 40° or 90° x 50°	
Max. SPL / 1m	143dB	
Dimensions (h x w x d)	706 x 440 x 440mm [27,8 x 17,3 x 17,3in]	
Weight	33,1 kg [73lbs]	
Surface	Warnex textured paint	

3. Commissioning

3.1 Setup

The rigging components CBT24, BLT24, BCT24, BBT24, BAT24, ASK44 and MCT24 are designed for hanging operation.

There are various accessories for all rigging components at TWAUDIÖ to securely attach them.



Please note that setting up all rigging components always requires two persons!



TWAUDIÖ recommends using only the accessories specified by TWAUDIÖ for securing and mounting loudspeakers.

3.2 Wind load



Before setting up the system outdoors, consider unforeseeable wind conditions at the operation site!

Disassemble your system immediately when wind forces exceed 8 bft (34 to 40 kn – 38.5 to 46 mph) and also secure them!

Make sure that there are no persons in the immediate vicinity of the system structure!



Make sure that your system structures are not operated over the audience at wind forces in excess of 6 bft (22 to 27 kn – 24.2 to 30.45 mph!).

Make sure that there are no persons in the immediate vicinity of the system structure!

3.4 General safety instructions for setting up the following rigging variants.

In the following chapters you will find a description of the possibilities for hanging the T24(N) loudspeaker.

First, we will describe how to suspend a single T24(N) loudspeaker.

Then follow the chapters with the individual steps for hanging multiple T24(N) loudspeakers.



Before starting the mounting of your system setup, always observe the respective safety instructions!

This rigging manual contains all general safety instructions for all rigging components are summarized in chapter 1.

In addition, before each assembly of the individual rigging components, observe their operating and safety instructions!



Use shackles that are designed according to the payload for each system setup.



For the secondary safety component, the respective national electrotechnical regulations apply.



Attach this secondary safety component by using one furthermore shackle, chain sling or chain hoist on another pin point.



Any influences on your system setup, such as leaning against objects (or people) and flying objects around, be refrained from!

3.5 Mounting direction CBT24 cradle bar for flying at T24(N) loudspeaker



Mount the CBT24 cradle bar for flying to the T24(N) loudspeaker as shown in figure 3.8.



Observe the mounting direction of the CBT24 cradle bar for flying! It can only be mounted in this direction!

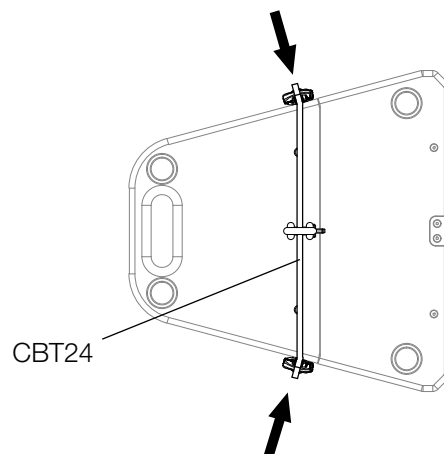


Figure 3.5.1 - Mounting direction CBT24 at T24(N) loudspeaker

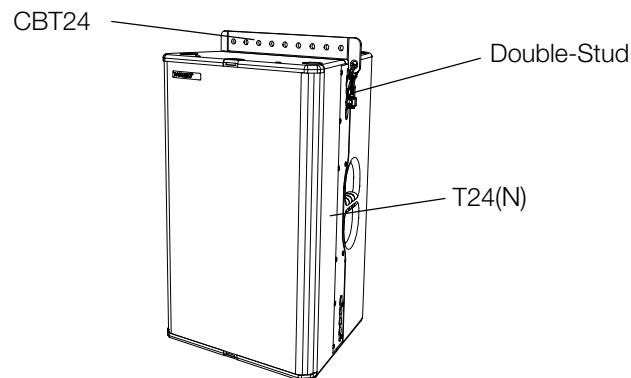


Figure 3.5.2 - Front view, after mounting CBT24 cradle bar for flying at T24(N) loudspeaker



Snap all Double Studs firmly into the flight panels of the T24N loudspeakers! Secure all Double Studs with the safety locking splints attached to safety wire ropes!



Check that all Double Studs are engaged and that they have been secured with safety locking splints!

3.6 CBT24 at 1x T24(N) loudspeaker - no possibility to angle

Note that with this variant 1 there is no possibility to specifically angle the T24(N) loudspeaker with fixed degrees.

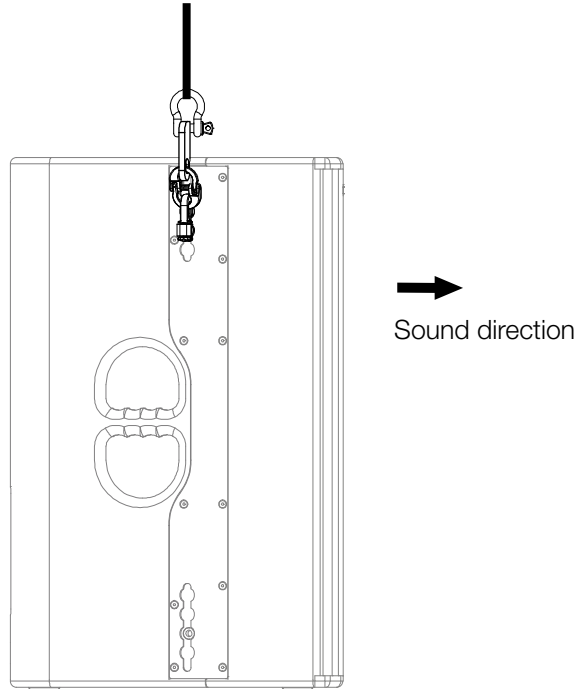


Figure 3.6 - Sound direction

Shall be angled anyway:



To angle the T24(N) loudspeaker, mount a tension strap, safety rope, etc. on the bottom handle. Here you can angle only by feel.

3.7 Mounting order of the rigging components



Note the following subchapters, in them the work processes are divided into individual mounting steps.

First follow chapter 3.6 and then continue your mounting process at chapter 3.8.

3.8 BCT24 - Rigging adapter: mounting on the CBT24 cradle bar for flying



Note that the BCT24 rigging adapter can only be used in conjunction with the CBT24 cradle bar for flying as well as the BBT24 bracket for suspending the T24(N) loudspeaker!



Mount the BCT24 rigging adapter to the CBT24 cradle bar for flying using both bolts and nuts as shown in Figure 3.8.



Check that both screws are tightly screwed with the nuts and cannot loosen!

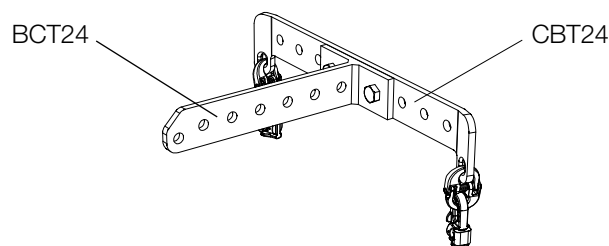


Figure 3.8 - Mounting BCT24 Rigging adapter at CBT24 cradle bar for flying
Grafic shown without T24(N) loudspeaker

3.9 Preparing BBT24 bracket



Loosen both quick-locking pins on the upper part of the bracket and fold it open as shown in figure 3.9.



When assembling and disassembling your system setups, make sure that you never carelessly remove the quick-locking pins of the BBT24 bracket with your fingers, hands or other body parts or reach between the speakers. Due to the gravity of the upper part, it can fall backwards or forwards.

There is a danger of crushing!

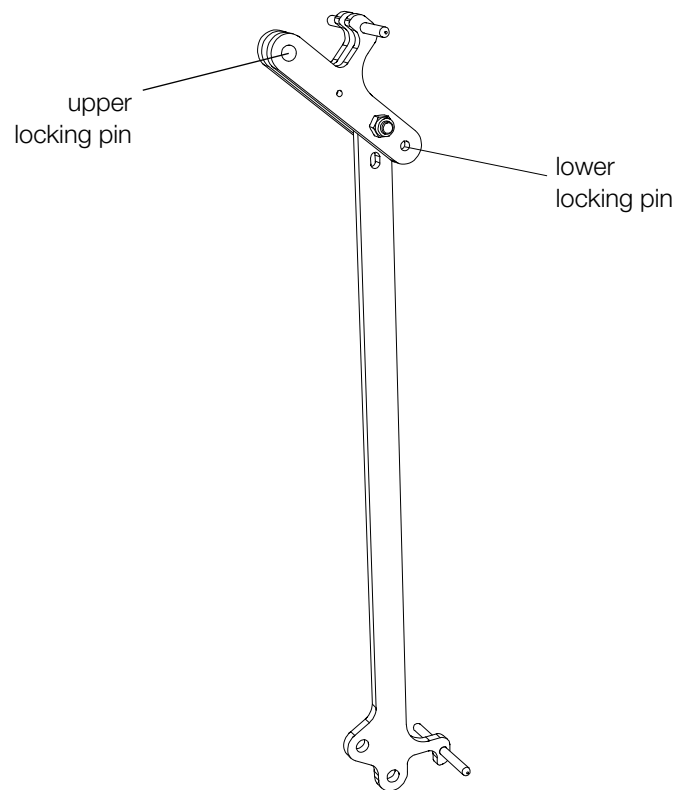


Figure 3.9 - Loosen the quick-locking pins

3.10 BBT24 - Bracket: mounting steps

3.10.1 Mounting step 1



NOTE

Place the T24(N) loudspeaker on a non-slip surface and hook the BBT24 bracket into the lower handle of the T24(N) loudspeaker as shown in Figure 3.10.1.

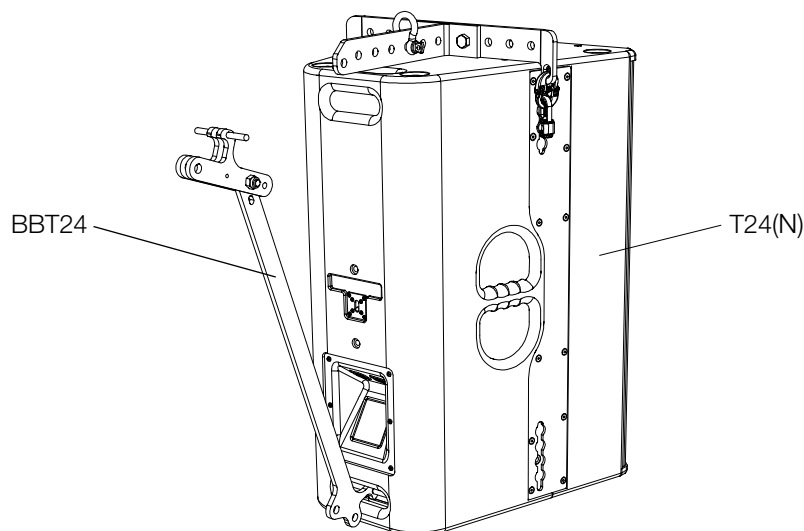


Figure 3.10.1 - Hook the BBT24 bracket in the lower handle

3.10.2 Mounting step 2



NOTE

Fold the upper part of the BBT24 bracket forward and hook it with the hook in the upper handle of the T24(N) speaker as shown in figure 3.10.2.

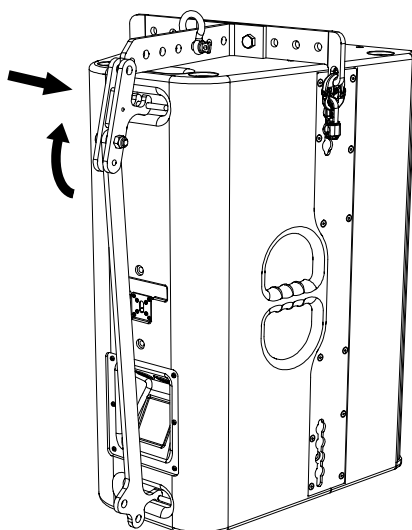


Figure 3.10.2 - Hook the BBT24 bracket in the upper handle

3.10.3 Mounting step 3



Re-insert the upper and lower quick-locking pins into the BBT24 bracket as shown in figure 3.10.3, thus locking the BBT24 bracket.



Check that all quick-locking pins are always completely inserted!

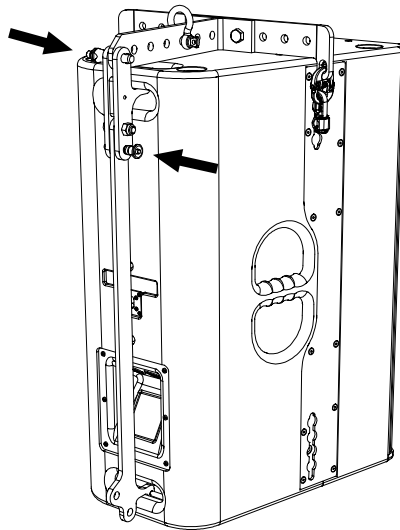


Figure 3.10.3 - Re-insert of the quick-locking pins

3.11 Variant: 1x BBT24 bracket with 1x T24(N) loudspeaker

After you have carried out mounting step 3, the T24(N) loudspeaker can now be suspended. With the help of a shackle designed according to the total weight and attached to a pin point of the BCT24 rigging adapter, the T24(N) speaker can now be angled.



Use the simulation software EASE Focus to determine the degree of the T24(N) loudspeaker which matches your application, and the appropriate pin point of the BCT24 rigging adapter.

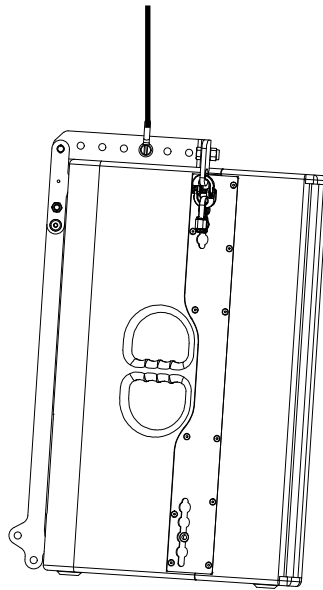


Figure 3.11 - Variant 1x BBT24 with T24(N) loudspeaker

3.12 Standard as well as maximum Variant



The standard variant has established itself in which two T24(N) loudspeakers are used with two BBT24 brackets, a CBT24 cradle bar for flying and a BCT24 rigging adapter. (See figure 3.12)



Use the simulation software EASE Focus to determine the number and degrees of the T24(N) loudspeaker system which matches your application and the appropriate pin point of the BCT24 rigging adapter.

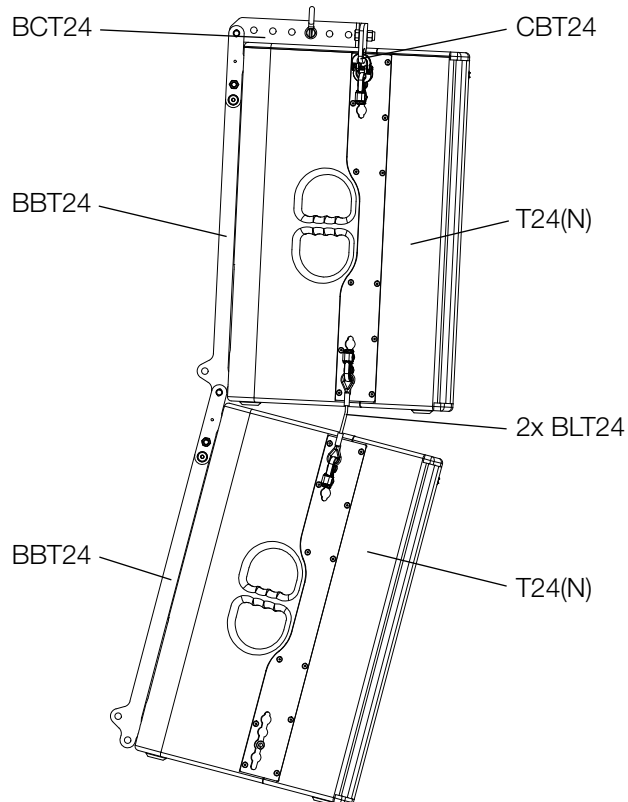


Figure 3.12 - Standard variant



Connect a maximum of six T24(N) loudspeakers to each other using the BBT24 brackets (6 pieces) and the BLT24 Boxlink connector cables (10 pieces). The BLT24 Boxlink connector cables on both sides of the T24(N) loudspeakers.

3.13 Mounting ASK44 sling chain at one MCT24 main-cradle-frame



Note that for the MCT24 main-cradle-frame you cannot determine the number of T24(N) loudspeakers which matching your application as well as the appropriate pin points using the EASE Focus simulation software!



Make sure that the MCT24 main-cradle-frame is held in the horizontal position with the ASK44 sling chain in every application with your system setup!

Determine always the pin points you require before setting up the system!



Then attach the ASK44 sling chain with the shackles to four another pin points on the MCT24 main-cradle-frame, as shown for example in Figure 3.13.

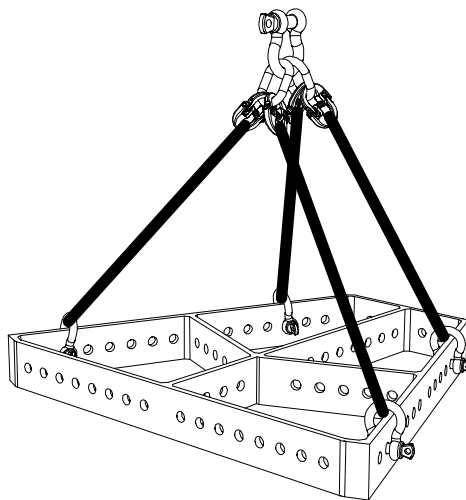


Figure 3.13 - Mounting ASK44 sling chain at one MCT24 main-cradle-frame

3.14 Preparing BAT24 adapter



Loosen positions 1 to 4 (see figure 2.1) as shown in figure 3.14. To do this, follow the sequence a to d.

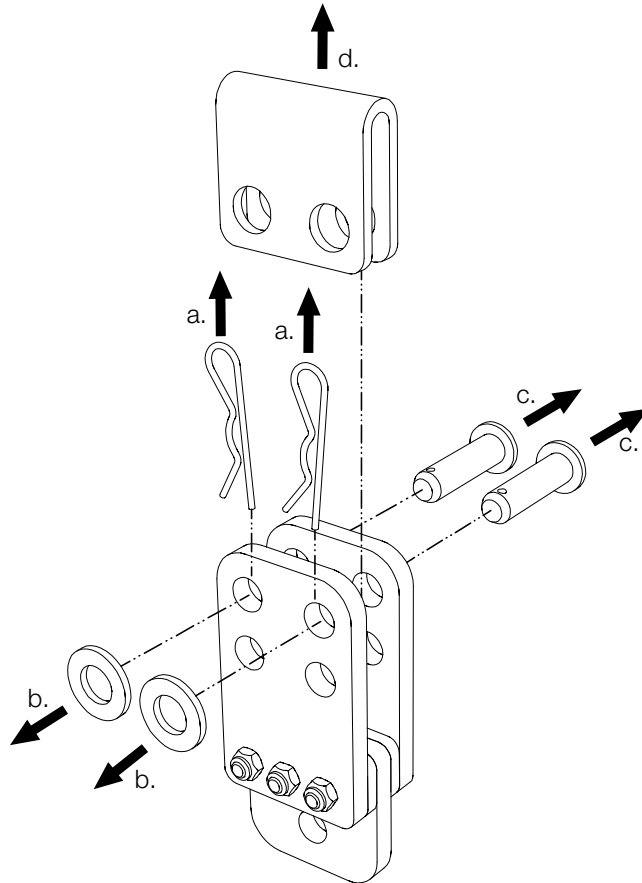


Figure 3.14 - Loosen positions 1 to 4

3.15 Mounting step 1 - BAT24 adapter to MCT24 main-cradle-frame

3.15.1 Mounting step 1



NOTE

Place the MCT24 main-cradle-frame on a non-slip surface. Then insert the pre-mounted lower part (see assembly instructions BAT24, figure 2.1 - pos.5) of the BAT24 adapter from below to one of the side beams of the MCT24 main-cradle-frame as shown in figure 3.15.1.



NOTE

Use the pin points of the MCT24 main-cradle-frame that are appropriate for your application.

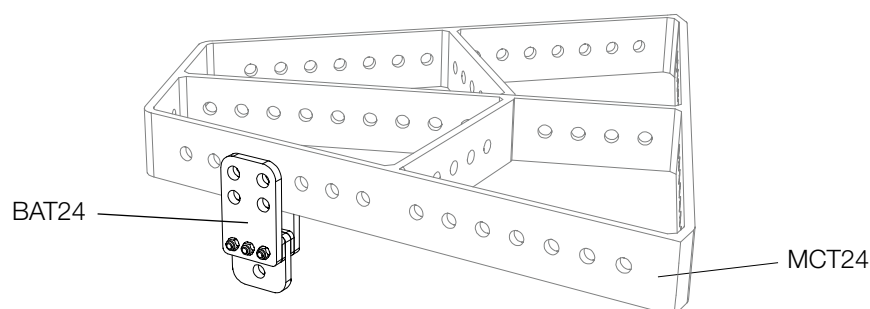


Figure 3.15.1 - Insertion of the BAT24 adapter

3.15.2 Mounting step 2



NOTE

Then insert the distance plate (see figure 2.1 - Pos.1) of the BAT24 adapter from above onto the side support of the MCT24 main-cradle-frame as shown in figure 4.7.

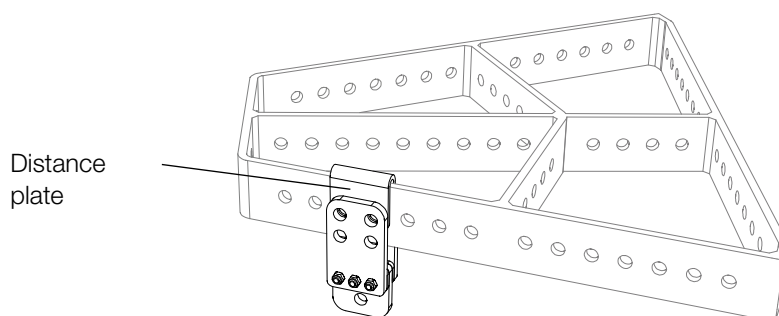


Figure 3.15.2 - Inserting the distance plate of the BAT24 adapter

3.15.3 Mounting step 3

Re-insert the splint bolts as well as washers (2x each, see figure 2.1 - Pos.2 and 3) into the BAT24 adapter as shown in figure 3.15.3.

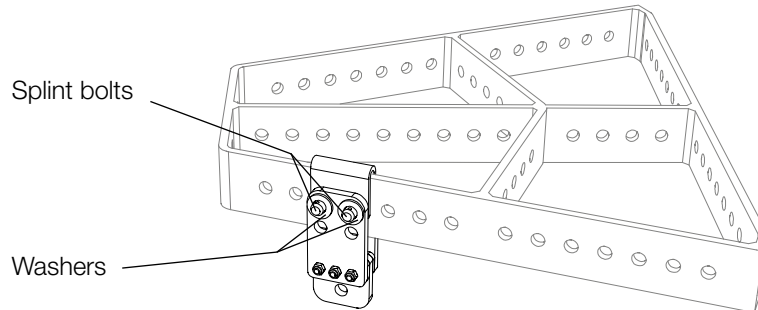


Figure 3.15.3 - Re-insert the splint bolts and washers

3.15.4 Mounting step 4

Then secure the splint bolts with the washers again using the safety locking splints (2x each, see figure 2.1 - Pos.4) as shown in figure 3.15.4.



Check that all splint bolts and washers are pushed through and that they have been secured with safety locking splints!

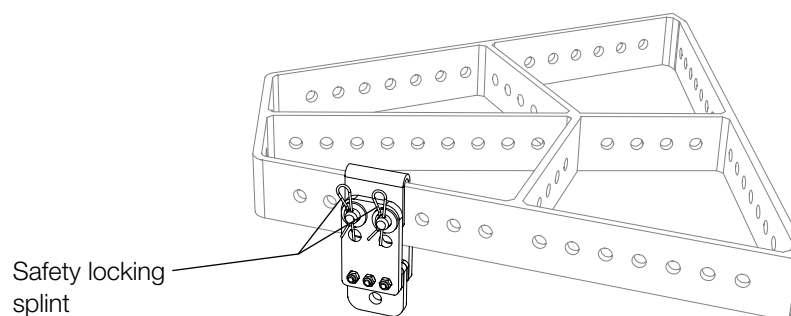


Figure 3.15.4 - Securing the splint bolts and washers with safety locking splints

3.16 Mounting sequence with one MCT24 main-cradle-frame

Be sure to follow the assembly sequence below to mount the T24(N) loudspeakers to the MCT24 main-cradle-frame via the CBT24 cradle bar for flying:



1. Attach the shackle of the CBT24 cradle bar for flying to another pin point with another shackle designed according to the total weight.
2. Before mounting the BAT24 adapter, observe its assembly and safety instructions!
3. Before mounting the BBT24 bracket, observe its assembly and safety instructions!
4. Now connect the BBT24 bracket with the BAT24 adapter via the upper quick-locking pin of the BBT24 bracket!

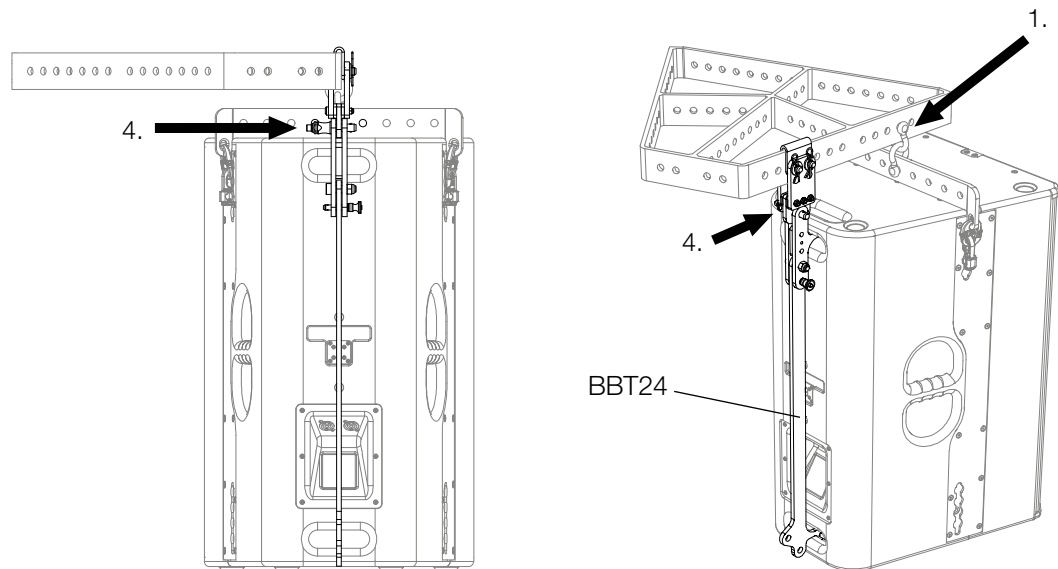


Figure 3.16 - Mounting T24(N) to MCT24 with CBT24 and BAT24
Grafic shown without ASK44 sling chain.



Check that all quick-locking pins are always completely inserted!



Check that all Double Studs are engaged and that they have been secured with safety locking splints!

3.17 Standard and maximal variant with one MCT24 main-cradle-frame



The standard variant has established itself in which four T24(N) loudspeakers are used with two CBT24 cradle bar for flying, four BBT24 brackets, two BAT24 adapter and four BLT24 Boxlink connector cables. (See figure 3.17)

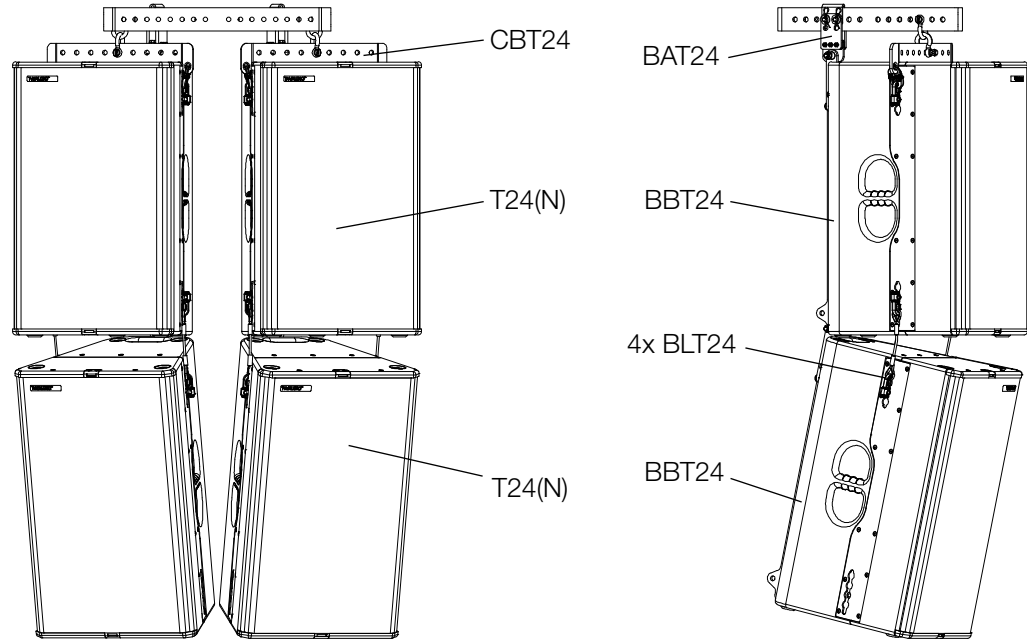


Figure 3.17 - Standard variant

Graphic shown without ASK44 sling chain.



Connect a maximum of 12x T24(N) loudspeakers to each other using the BBT24 brackets (12 pieces) and the BLT24 Boxlink connector cables (20 pieces). The BLT24 Boxlink connector cables on both sides of the T24(N) loudspeakers.

3.18 Mounting of two MCT24 main-cradle-frame

For applications where the T24(N) system cluster needs to be extended laterally, two MCT24 main-cradle-frames can be bolted together at the side beams.



Before screwing the two MCT24 main-cradle-frames together, always note the pin points that match your application. Also note that your system setup is held in the horizontal position with the ASK44 sling chain!

Determine always the pin points you require before setting up the system!
Only then screw the two MCT24 main-cradle-frames together!



Screw the two MCT24 main-cradle-frames to the side beams as shown for example in figure 3.18. For this purpose, use the hexagon screws and nuts included in the scope of delivery.

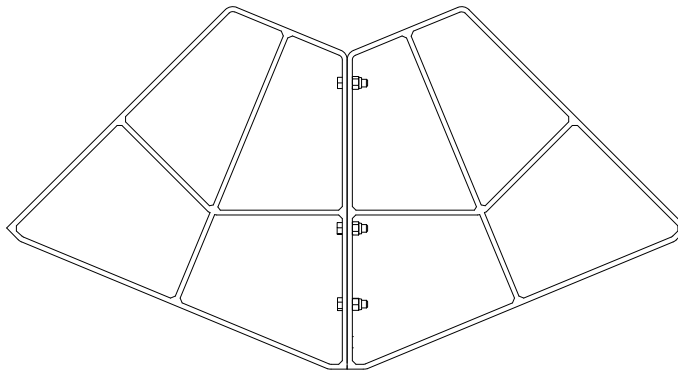


Figure 3.18 - Bolting two MCT24 main-cradle-frames together

3.19 Mounting ASK44 sling chain on two MCT24 main-cradle-frames

Note that for the MCT24 main-cradle-frame you cannot determine the number of T24(N) loudspeakers which matching your application as well as the appropriate pin points using the EASE Focus simulation software!



Make sure that the two MCT24 main-cradle-frames are held in the horizontal position with the ASK44 sling chain in every application with your system setup!

Determine always the pin points you require before setting up the system!



Then attach the ASK44 sling chain with the shackles to four another pin points on the center supports of the two MCT24 main-cradle-frames, as shown for example in figure 3.19.

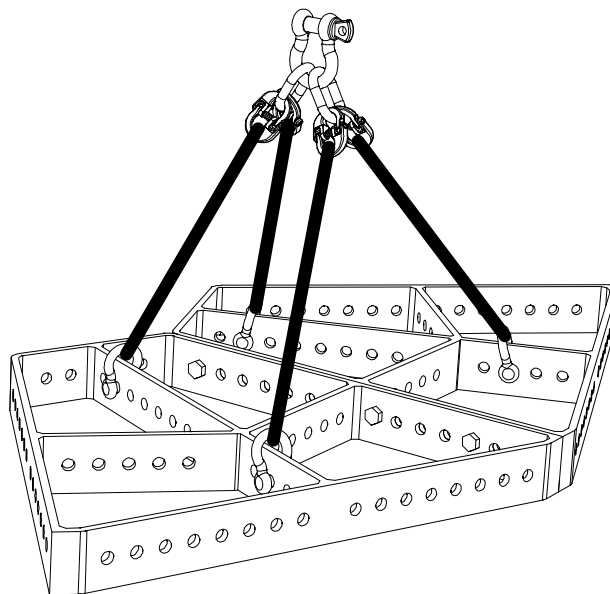


Figure 3.19 - Mounting ASK44 sling chain at two MCT24 main-cradle-frames

3.20 Mounting BAT24 adapter to two MCT24 main-cradle-frames

For applications where the T24(N) system cluster has been extended laterally, three CBT24 system setups, each with two T24(N) loudspeakers, can now be attached to the two MCT24 main-cradle-frames.



Attach the three BAT24 adapters to two pin points on each of the side beams of the two MCT24 main-cradle-frames, as shown for example in figure 3.20.

Use the two lower holes of the BAT24 adapter for this purpose!



Note that the distance plate of the middle BAT24 adapter is not used! (see assembly instructions BAT24 - page 7 - chapter 2.1 - pos.1)

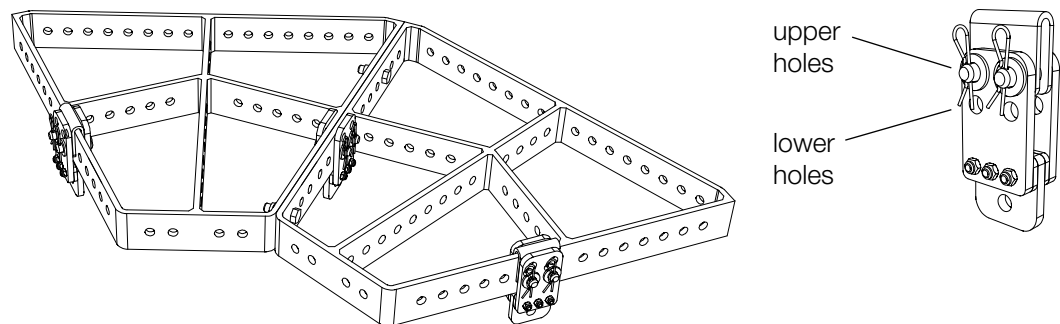


Figure 3.20 - Mounting of three BAT24 at two MCT24
Grafic shown without ASK44 sling chain.



Be sure to follow the mounting sequence of chapter 3.16 on page 32 to mount the T24(N) loudspeakers to the MCT24 main-cradle-frame via the CBT24 cradle bar for flying.



Check that all quick-locking pins are always completely inserted!



Check that all Double Studs are engaged and that they have been secured with safety locking splints!

3.21 Standard and Maximum variant with two MCT24 main-cradle-frames



The standard variant has established itself in which six T24(N) loudspeakers are used with three CBT24 cradle bar for flying, six BBT24 brackets, three BAT24 adapter and six BLT24 Boxlink connector cables. (See figure 3.21)

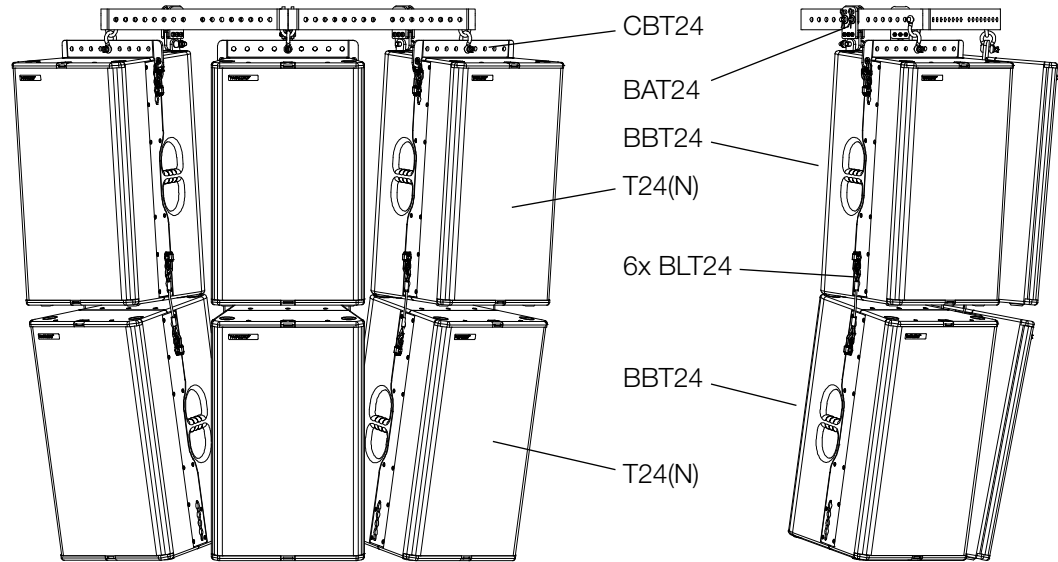


Figure 3.21 - Standard variant

Grafic shown without ASK44 sling chain.



Connect a maximum of nine T24(N) loudspeakers to each other using the BBT24 brackets (9 pieces) and the BLT24 Boxlink connector cables (12 pieces). The BLT24 Boxlink connector cables on both sides of the T24(N) loudspeakers.

4. Transport and Storage



Ensure that the surfaces of all rigging components are not damaged during transport and storage. Moisture may penetrate where steel surfaces are exposed by scratches and result in corrosion.

For this reason, the loudspeakers should be transported and stored in a safe, careful, dry and largely dust-free manner.

The following accessory parts for the various rigging components are available from TWAUDIÖ:

CBT24:

- Shackle SK10
- SAF-connector with Double Stud and splint
- Boxlink connector wire rope BLT24
- Suspension chain ASK4

BCT24:

- Hexagon screw M12 x 30
- Hexagon nut M12

BBT24:

- Locking pin 8 x 30
- Locking pin 12 x 30
- Shoulder screw M10 x 25
- Hexagon nut M10

BAT24:

- Washer (metal)
- Splint bolt
- Safety locking splint

MCT24:

- Shackle SK10
- Hexagon screw M12 x 40
- Hexagon nut with clamping part M12

The original packaging is unsuitable as permanent storage and transport packaging.

5. CE Conformity Declaration

Copy and translation of the original CE Conformity Declaration:



We hereby declare that the below-referenced components by virtue of their design and construction, and in the configuration placed on the market by us, satisfy the safety and health requirements of the applicable EC directives. This declaration becomes invalid in case of modifications that have not been approved by us.

This declaration applies to the following components

- CBT24
- BLT24
- BCT24
- BBT24
- BAT24
- MCT24

as well as all model variants based on these, provided that they correspond to the original factory models and have not been technically modified in any way.

Applicable directives:

- 2001/95/EG
- 2011/65/EU

Applicable national standards and technical specifications:

- DIN EN 18800
- DIN EN ISO 12100
- DGUV Vorschrift 17 und 18
- EN 50581: 2013-02

Berlin, Germany, January 1st, 2021

Bernhard Wüstner

6. Disposal

If you have any question regarding the disposal of used devices, please contact us under the following telephone number:

+49 (0) 71 41 - 48 89 89 0

In countries outside of the European Union, comply with local regulations.

TW AUDiO INTERNATIONAL GmbH
Osterholzallee 140-2
71636 Ludwigsburg (Germany)

Phone: + 49 (0) 71 41-48 89 89 0

Fax: + 49 (0) 71 41-48 89 89 99

E-Mail: info@twaudio.de

WWW: www.twaudio.de