CXN-16

High Performance Monitor

VOICE ACOUSTIC

professional german loudspeaker systems

success through quality

Herzlichen Dank,
dass Sie ein Voice-Acoustic Produkt gekauft haben.
Seit dem Jahr 2006 entwickeln wir unsere Produkte
in der Überzeugung, dass es auf die Details ankommt.
Wir wünschen Ihnen viel Freude mit diesem Produkt.

Thank you very much,
for purchasing a Voice-Acoustic product.
Since 2006 we have been developing our
products in the firm belief that details matter.
May we wish you a lot of pleasure with this product.

Muchas gracias
por haber comprado un producto de Voice-Acoustic.
Desdel año 2006 estamos desarrollando nuestros productos
estando convencidos, que son los detalles que cuentan.
Le(s) deseamos mucha alegría usando este producto.

Merci beaucoup
d´avoir acheté un produit Voice-Acoustic.
Depuis 2006, nous développons des produits
avec la ferme conviction que les détails comptent.
Nous vous souhaitons beaucoup de plaisir à utiliser ce produit.

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Introduction

Working with Modular-15

Manufacturer‘s declaration

General Safety Instructions:
Loudspeakers produce a static magnetic field even if they are not connected or are not in use. Therefore make sure when erecting and transporting loudspeakers that they are nowhere near equipment and objects which may be impaired or damaged by an external magnetic field. Persons with cardiac pacemakers must maintain a safe distance.

The minimum recommended safety clearance is 1 m.

Never stand in the immediate vicinity of loudspeakers driven at a high level. Professional loudspeaker systems are capable of causing a sound pressure level detrimental to human health. Seemingly non-critical sound levels (from approx. 90 dB SPL) can cause hearing damage if people are exposed to it over a long period.

All connected cables must be laid in such a way that they cannot be crushed by objects and that nobody can step on them! Replace damaged cables immediately and do not use them!

Use only accessory parts specified by Voice-Acoustic or original accessory parts from Voice-Acoustic. Check all cabinets and accessories regularly for wear and replace them if necessary.

Do not set up the loudspeakers in places where they are permanently exposed to moisture, dust, dirt or direct sunlight.

Care
Wipe the surface of loudspeakers only with a damp cloth and pure water. In case of heavy pollution, repeat the above procedure several times if necessary. Do not use any chemical additives or aggressive detergents, as these may harm and damage the surfaces.

Transport and storage
When transporting and storing the unit, it is important to ensure that the surface and front grill of the loudspeaker are not damaged. Moisture can penetrate through exposed wood surfaces and cause the wood to swell. A bent or broken front grill will no longer adequately protect the sensitive speaker membranes. In addition, appreciable dust deposits may considerably impair the functionality of a loudspeaker membrane. 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 transport and storage are available from Voice-Acoustic:

- Transport cover for CXN-16 (Art.-Nr. 500162000)
- Heavy duty flightcase for up to 2 x CXN-16 (Art.-Nr. 501603000)

Note: *The original packaging is unsuitable as permanent storage and transport packaging!*

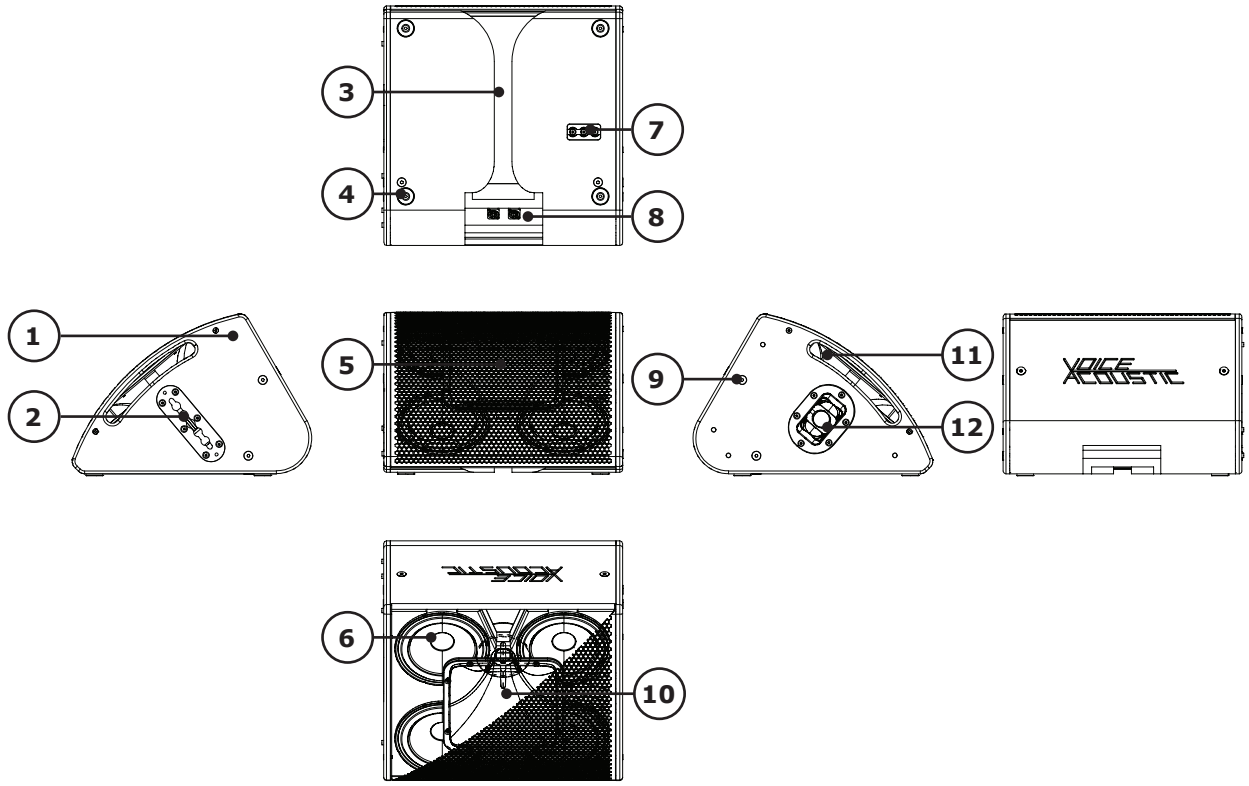
Warranty
The warranty period is 24 months from date of delivery.

On our choice we will eliminate any lack of conformity with repair or with replacement of the faulty goods. The place of performance for warranty services is Voice-Acoustic headquarters in Dörverden. In case of remedy of defects, the buyer shall bear all costs resulting from transportation of the goods to Voice-Acoustic headquarters in Dörverden.

The ordering party is not entitled to remedy the defect by itself or to organise a replacement and to charge such activities to Voice-Acoustic. In case of self remedy by the ordering party the warranty given by Voice-Acoustic becomes void.

Warranty doesn’t apply to parts of wear and tear, such as threaded points, such as threaded points, flying tracks, tilting pole socket, rubber feet and the SpeakON® connectors.

Components



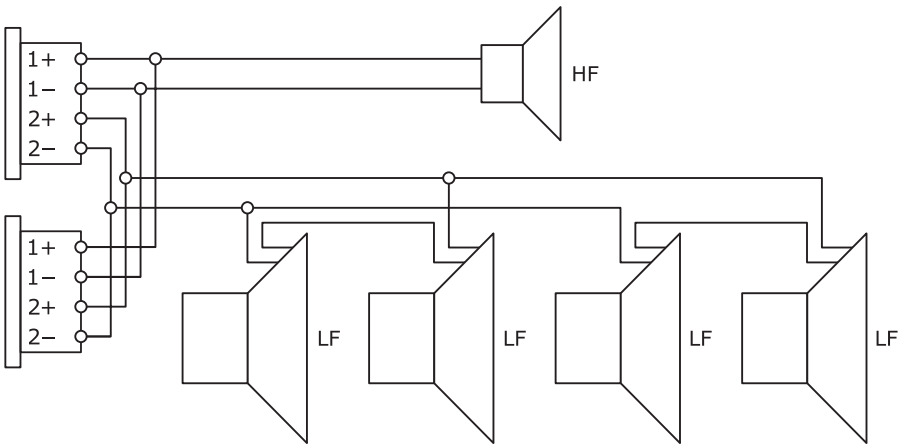
1. 24 and 15 mm multiplex cabinet, Warnex textured paint finish
2. Easyfly flying track for vertical suspension
3. Cable bushing on the underside
4. 4 x rubber feet on the underside
5. Tread-proof front grille 2 mm with 10 mm acoustic foam
6. 8" Neodym woofer
7. Safety point for safety rope with Single-Stud
8. Connector panel with two SpeakON® connectors and Type plate with serial number
9. 8 x M10 mounting points with internal steel brackets
10. 1,4" Neodym compression driver with horn 60° x 40°
11. recessed grips on both sides
12. Tilting pole socket +/- 18°

Technical data

Components	4 x 8" Neodym woofer (LF) with 2,5" voice coil 1 x 1,4" Neodym compression driver (HF) with 3" voice coil
Frequency response	63 Hz - 17,3 kHz 80 Hz - 14 kHz
Coverage range (h x v)	40° x 60° lying as monitor 60° x 40° flown or mounted on a tripod
Monitor angles	50° and 10°
Powerhandling	LF: 1.000 W AES / 2.000 W program / 4.000 W peak at 8 Ω HF: 110 W AES / 220 W program / 440 W peak at 16 Ω
Sound pressure	131 dB SPL AES / 134 dB SPL program / 137 dB SPL peak
Dimensions / Weight	360 (h) x 540 (w) x 540 mm (d) / 25,6 kg
Finish	Polyurea coating in RAL 9005, Special colors in Warnex textured paint

Connections

The speaker has four loop-through Neutrik NL4 SpeakON® IN/OUT connectors. They use the 1+/1- connection pins. Additional loudspeakers can be looped through via the second connector.



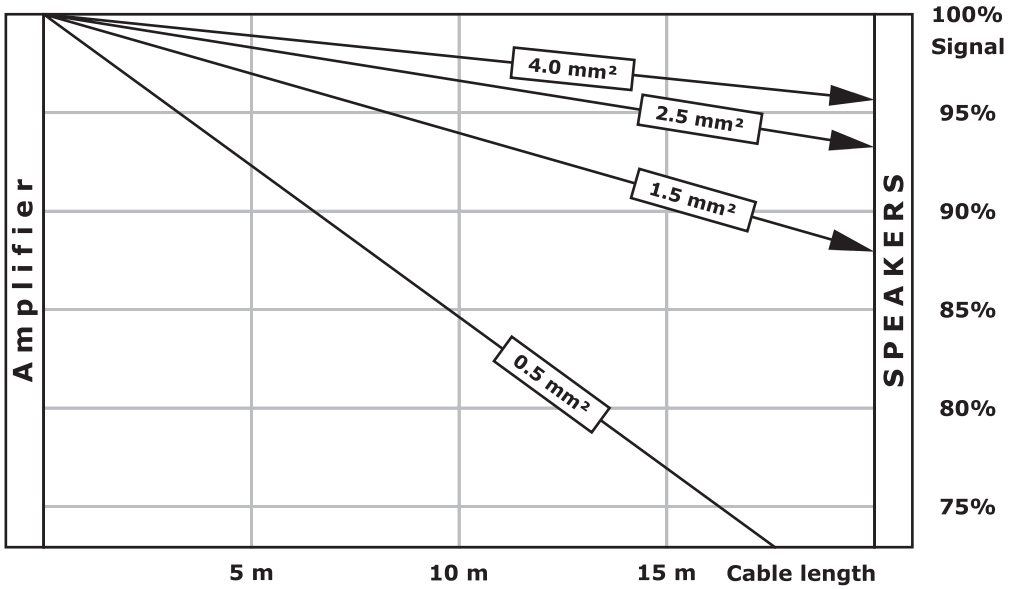
Setup
The Modular-15 loudspeaker is designed for standing, vertical and horizontal operation. A variety of accessories is available from Voice-Acoustic to securely attach the loudspeaker safely on tripods, distance rods or hanging it from on trusses, ceilings and walls. Ensure that the loudspeakers are securely attached to prevent personal injury and damage of property.

Connecting cables
When connecting the cables to the loudspeaker, ensure that the polarity (+/-) and pin assignment (1/2) is correct. Incorrect connection results in a significant change in the loudspeaker sound characteristics and may damage the compression driver.

The two connection sockets on the back of the loudspeaker can be used to link multiple loudspeakers on a single amplifier. Note that parallel connection reduces the total impedance (Ω) seen by the amplifier. The total impedance of loudspeakers connected in parallel must not drop below the minimum operating impedance of the amplifier.

Voice-Acoustic recommends to use the available 4 x 4 mm² Speakon cables for mobile use.

We recommend wiring the basses with at least 4 mm² in installations. The cables of the tops in installations must be sufficiently dimensioned according to impedance, power and cable length.



Simplified display without consideration of loudspeaker impedances

Operation
The CXN-16 is exclusively intended for operation with Voice-Acoustic system electronics with internal DSP controller: the HDSP power amplifiers or powered by the free 800 W amplifier channels of the self-powered subwoofers.

Make sure the appropriate preset has been selected before connecting the speaker to the system power amp or self-powered subwoofer.

Using the wrong preset can damage parts of the loudspeaker.

Note: *If the CXN-16 is not operated on the intended Voice-Acoustic system electronics, the manufacturer's warranty for the loudspeaker expires!*

Overview of presets

Display name	CH1 2.400 W		CH2 800 W		CH3 800 W		Description of the preset
CXN Wedge	4 x 8"	IN1	1,4"	IN1	-	IN2	Normal mode as floor monitor for Musician.
CXN WedgeEasyMic	4 x 8"	IN1	1,4"	IN1	-	IN2	With a modified frequency response to match the treble boost of most vocal microphones without having to make filter settings. Higher gain before fee-dback. A little less brilliant compared to music.
CXN Drumfill/EDM	4 x 8"	IN1	1,4"	IN1	-	IN2	CXN-16 lying on Paveosub-118 as monitoring for drummers and DJ`s.
CXN top/midhigh	4 x 8"	IN1	1,4"	IN1	-	IN2	For use of the CXN-16 as a linear top with bass support.
CXN CH2,3 Pav218	2 x 18"	IN1	4 x 8"	IN2	1,4"	IN2	Floor monitor in Half Power Mode. Paveosub-218 for front sound.
CXN CH2,3 Pav118	1 x 18"	IN1	4 x 8"	IN2	1,4"	IN2	Floor monitor in Half Power Mode. Paveosub-118 for front sound.

Normal Mode
In normal mode, the floor monitor is bi-amping on two channels (2.400 W + 800 W/4 Ω) of the HDSP-6 or HDSP-4 amplifier. To do this, connect it to the **lower** SpeakON® connector.

Half Power Mode
In half power Mode, the floor monitor is bi-amping on two channels (800 W + 800 W/4 Ω) of the HDSP-6 amplifier and used on the upper SpeakON® connector.

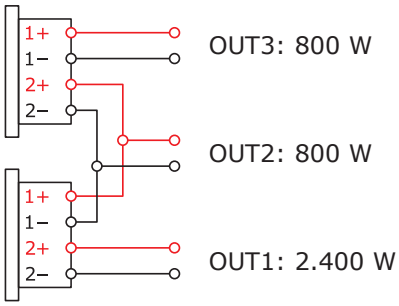
The 2.400 W channel of the lower SpeakON® connector is available for subwoofers.

Pin configuration upper SpeakON® connector:

1+/1- OUT CH3, 800 W
2+/2- OUT CH2, 800 W

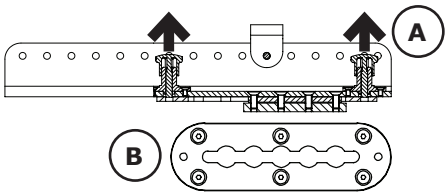
Pin configuration lower SpeakON® connector:

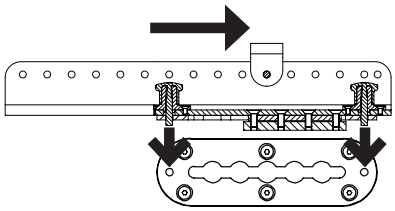
1+/1- OUT CH2, 800 W
2+/2- OUT CH1, 2.400 W



Note: *A Voice-Acoustic self-powered subwoofer can power a floor monitor bi-amping in half power mode. The single basses require a Y-adapter cable to connect the 800 W channels (1+/1-) connectors into a 4-pole Speakon cable (LF 2+/2-, HF 1+/1-).*

The Pavesub-218sp can be connected to a floor monitor in half power mode directly with a 4-pin Speakon cable. The 2.400 W channel is not output on the 218sp and the right SpeakON® connection is occupied by both 800 W channels.

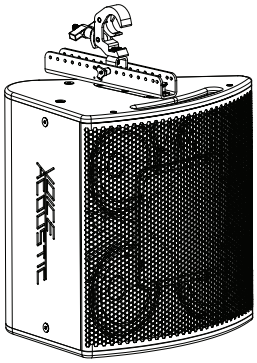




Easyfly mechanics
Tool-less flight mechanism for clicking in and exact alignment of the loudspeaker in the horizontal and vertical axis.

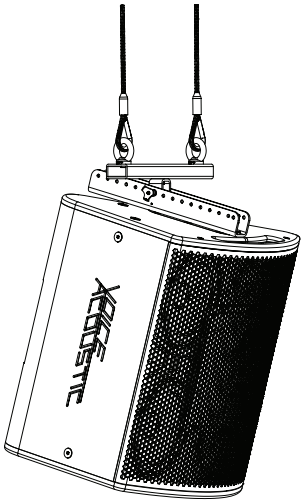
1. Pull the two locking bolts (A) upwards and let them engage by turning them slightly.
2. Insert the Easyfly mechanics into the flying track (B).
3. Slide the mechanics backwards as far as it will go.
4. Let the two locking bolts snap into the intended holes on the flying track.

Note: *Notice that the two locking pins (A) are engaged to prevent the Easyfly-Mechanics from slipping out.*



Installations with Easyfly mechanics
Installation with self-lock clamp (C) on trusses.

1. Mount the self-lock clamp to the Easyfly mechanics using an M10 threaded screw and lock nut.
2. Hang the clamp and holder into the mechanics using ball lock bolts.
3. Hang the loudspeaker into the truss.
4. Adjust the inclination by fixing the holder on the top hole rail with the ball locking pin.



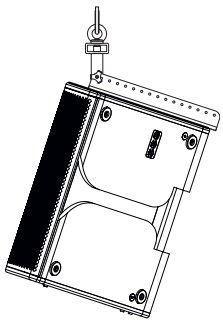
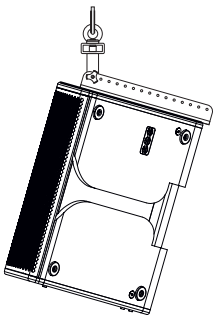
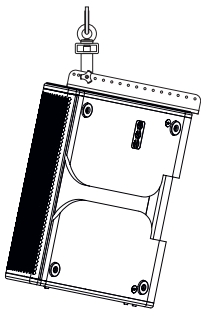
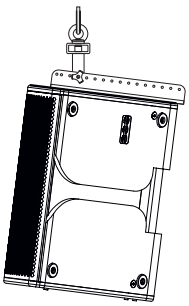
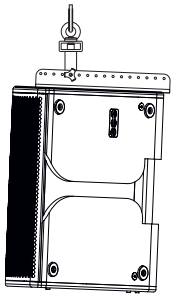
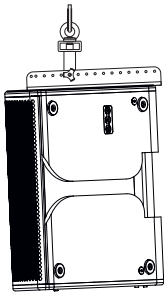
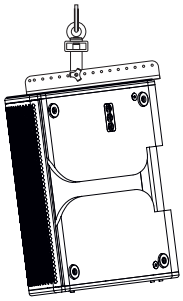
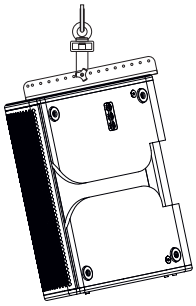
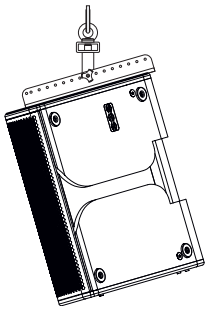
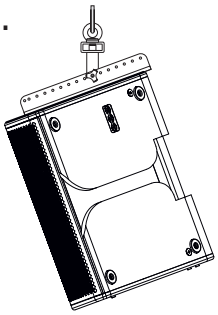
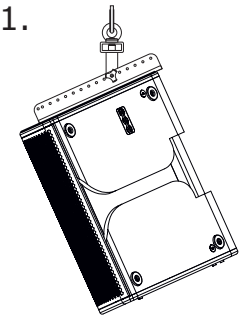
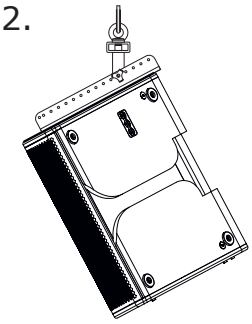
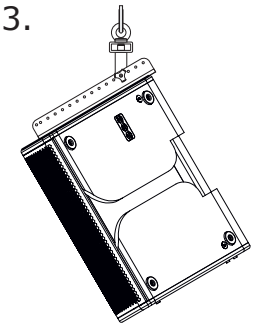
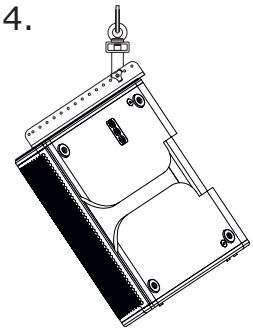
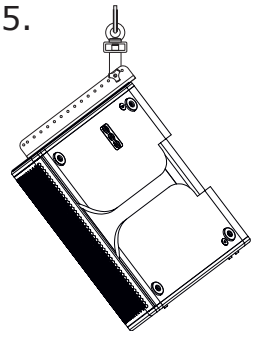
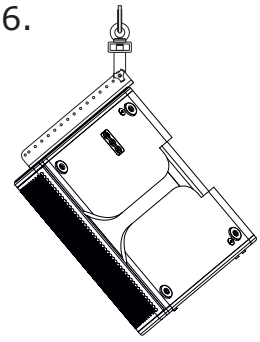
Installation with universal suspension arrangement for flight mechanics (D) on high ceilings

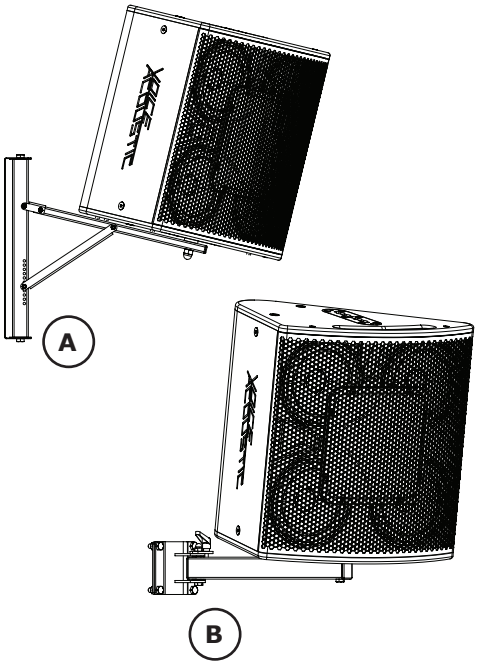
1. Mount the universal suspension arrangement for flight mechanics with an M10 threaded screw and lock nut to the mounting of the Easyfly mechanics.
2. Hang the suspension device and holder into the mechanics using ball locking bolts.
3. Hang the loudspeaker into the installed chains.
4. Adjust the inclination by fixing the holder on the top hole rail with the ball locking pin.

Note: *The inclination depends on the hole in which you fix the Easyfly mount on the hole rail!*

Adjusting the inclination with the Easyfly mechanic

The Easyfly mechanic have 16 locking holes which can be used to determine the inclination.

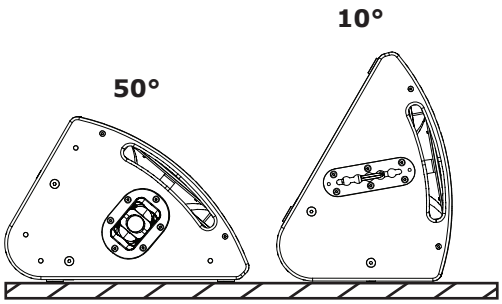
1.  **-18.1°**	2.  **-15.9°**	3.  **-11.5°**	4.  **-7.1°**
5.  **-2.3°**	6.  **2.4°**	7.  **7.2°**	8.  **11.8°**
9.  **16.1°**	10.  **20.2°**	11.  **24.2°**	12.  **27.9°**
13.  **30.2°**	14.  **33.6°**	15.  **37.1°**	16.  **40.0°**



Mounting on box wall or traverse holder

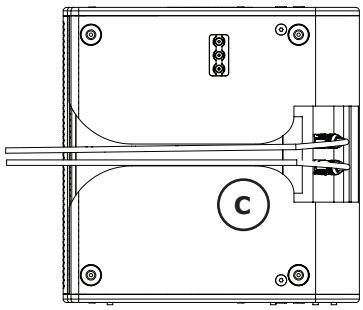
1. When mounting the brackets on the wall (A) or truss (B), follow the manufacturer's operating instructions.
2. Place the loudspeaker with the tilting pole socket on the wall- and truss holder.
3. Adjust the inclination with the tilting pole socket.

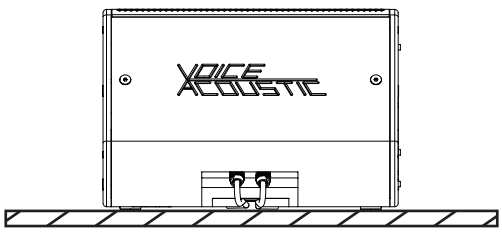
Note: *The tilting pole socket snaps into place by the weight of the loudspeaker. If you want to adjust the tilt, you have to raise the loudspeaker slightly.*



Monitoring with CXN-16

Two housing slopes are available for monitor operation, 50° and 10°. In 50° operation, the cables can be routed forward (C) through the cable gland on the underside.





Overview Accessories

Transport cover for CXN-16 (Art.-Nr. 500162000)

Heavy duty flightcase for up to 2 x CXN-16 (Art.-Nr. 501603000)

Easyfly mechanics (Art.-Nr. 409991001)

Carrying bag for up to two Easyfly mechanisms with accessories (Art.-Nr. 409992000)

Self lock clamp for pipe 48-51mm, 30mm wide, max. 250 kg (Art.-Nr. 999950731)

Universal suspension arrangement for flight mechanics (Art.-Nr. 409992001)

Wall bracket, max. 50 kg, slewable and 22° tiltable (Art.-Nr. 999924120)

Wall- and truss holder, max. 50 kg, slewable (Art.-Nr. 999924150)

Safety 6/1000 mm (Art.-Nr. 999963100)

Single stud fitting (Art.-Nr. 999957450)

Imprint

All specifications in this manual are based on information available at the time of publishing for the features and safety guidelines of the described products. Technical specifications, measurements, weights and properties are not guaranteed.

The manufacturer reserves the right to make technical modifications according to legal regulations stipulating the continual improvement of product features. For the safe operation of the unit, this manual and all other required information must be available to all users at the time of assembly and disassembly of the unit, and during operation. Assemble or operate the unit only after reading and understanding this manual, and keeping it at hand at all times at the site.

We are happy to receive your suggestions and proposals for the enhancement of this manual.

Please send us your ideas to the following address:

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