

**Rigging COHEDRA® Compact Systems**

Please read these instructions carefully before you begin setting up the system!

**1 USE****1.1 INTENDED USE**

Specifications for intended use include the following:

- When rigging enclosures, make sure that the load is centered directly under the suspension point on the rigging frame.
- The rigging frame may be tilted (not to be confused with curved!) no more than 10% (6°). Note that the specifications for intended use require you to read and heed all of the operating instructions and comply with inspection and maintenance requirements.

Any use other than specified is unintended.

The manufacturer shall not be liable for damages resulting from unintended use.

**1.2 UNINTENDED USE**

Improper use of rigging frames and incorrect handling of this load-carrying equipment can pose a serious danger. Never

- use rigging frames to exert diagonal force or tension on loads,
- use a crane to dislodge stuck or immovable loads,
- lift people,
- strike, knock or dent rigging frames,
- heat-treat or weld rigging frames,
- exceed the truss's maximum load-carrying capacity.

Note that in addition to the above specifications, the operational safety regulations of VBG 9 (accident prevention regulations of the German employers' liability insurance association) apply.

**2 WARRANTY AND LIABILITY**

HK AUDIO® shall not be held responsible for damages due to improper use or non-compliance with the safety specifications for setup and operation.

All warranty and liability claims for personal injury and property damages are excluded if attributable to one or several of the following:

- non-compliance with operating manual instructions, voiding product liability and warranty claims
- unintended use of rigging frames
- non-compliance with operating manual instructions regarding transportation, storage, initial setup, operation, maintenance and repair of rigging frames
- unauthorized structural modifications performed on rigging frames
- unauthorized modification of the parameters indicated in the operating manual
- inadequate or improper repairs

**IMPORTANT NOTES ON SAFETY**

Original COHEDRA® rigging accessories have been certified as a complete and cohesive system by the safety standards authority TÜV. The COHEDRA® rigging system's provisions for use require that it be installed in accordance with the following specifications. Before you begin installation, ensure that the rigging points (for example, a chain hoist) on the stage roof or the venue's ceiling comply with BGV-C1 accident prevention regulations and that the safety standards authority TÜV has certified them for the full load (see table 1). Prior to every installation, inspect all components to ensure they are in good operating condition, taking particular care to confirm that all quick-release pins and hardware connectors are undamaged.

The principle requirement for safe handling and trouble-free operation of rigging frames is a thorough understanding of fundamental operating safety and safety regulations.

This operating manual contains important instructions on the safe operation of rigging frames.



Figure 1: COHEDRA® Compact Mid/High case

## 2.1 RESPONSIBILITIES OF THE OPERATOR

As the operator, you are obligated to allow only those persons to work with rigging frames who are

- 16 years of age or older,
- physically and mentally able, familiar with the basic rules of industrial safety and accident prevention, and trained in the handling of rigging frames.

Be sure to regularly review and confirm personnel's working safety awareness.

In addition, task personnel with specific responsibilities for setting up, putting into service, operating, maintaining, and repairing equipment.

Ensure that personnel are trained to work with the rigging frame only under the supervision of a proficient and experienced technician. Ensure also that defects, flaws and other damage that could impede safety are repaired immediately.

## 2.2 STORAGE, MAINTENANCE, INSPECTION AND REPAIR OF COHEDRA® COMPACT RIGGING HARDWARE

### Storage and safekeeping when not in use

When not in use store the rigging frame in a safe place where it cannot be tipped over and is protected from exposure to the elements.

### Inspections

§ 39, VBG 9a of the German employers' liability insurance association's accident prevention regulations requires that load-carrying equipment be inspected by a qualified expert and possible defects be eliminated prior to initial commissioning by the recipient.

§ 40, VBG 9a requires that load-carrying equipment be inspected at least annually for cracks.

When used in dynamic applications, equipment must be inspected for cracks every six months.

### Maintenance

You are authorized to replace easily serviceable wearing or standard parts in accordance with the manufacturer's instructions. Use original parts for this purpose.

Tighten screws and bolted connections whenever necessary.

### Repair

In the event that parts of the load-carrying equipment have been deformed, it is up to the manufacturer to determine if they are repairable.

Solely the manufacturer is authorized to perform welding and repair jobs on load-carrying equipment.

## 2.3 TECHNICAL SPECIFICATIONS OF COHEDRA® COMPACT RIGGING HARDWARE

Load-carrying capacity of the rigging frame: 350 kg

Test load: 2,100 kg

Ambient temperature when in operation: min. -10° C, max. + 60° C

## 2.4 MAXIMUM PERMISSIBLE NUMBER OF FLOWN COHEDRA® COMPACT MID/HIGH UNITS

No more than 16 mid/high range enclosures may be flown in a stacked array.

- Up to 16 mid/high range enclosures may be flown in a stacked array with the standard rigging frame.
- No more than 6 mid/high range enclosures may be flown in a stacked array when using the light-weight rigging frame.
- No more than 6 mid/high range enclosures may be flown in a stacked array when using quick-release pins. In addition, be sure to mind the quick-release pins' maximum permissible load!

### Warning:

Flying more than 16 enclosures in a stacked array voids the safety standards authority TÜV's certification!

Refer to table 1 to determine flown loads. The sum of the weights of COHEDRA® Compact mid/high enclosures plus the weight of the rigging frames equals the total load.

**Note:** Ensure that you add the weights of chain hoists, motors, cables and further stops to determine total weight!

Quantity	Weight [kg]	[lbs.]
1	18	40
2	36	79
3	54	119
4	72	158
5	90	198
6	108	238
7	126	277
8	144	317
9	162	356
10	180	396
11	198	436
12	216	475
13	234	515
14	252	554
15	270	594
16	288	634

Weight of the standard rigging frame with shackles:  
10.5 kg/ 23.10 lbs.

Table 1: Weights of COHEDRA® Compact mid/high enclosures

**2.5 MAXIMUM PERMISSIBLE NUMBER OF FLOWN COHEDRA® COMPACT CDR 210 C SUBWOOFERS**

- No more than six CDR 210 C subwoofers may be flown in stacked array with the standard rigging frame.

**Warning:** Flying more than six subwoofers in stacked array voids the safety standards authority TÜV's certification!

CDR 210 C subwoofers and CDR 108 C mid/high units may also be flown together on one rigging frame. Refer to table 2 to determine flown loads. The sum of the weights of CDR 210 C subwoofers and COHEDRA® Compact mid/high enclosures plus the weight of the rigging frames equals the total load.

**Note:** Ensure that you add the weights of chain hoists, motors, cables and further stops to determine total weight!

Quantity	Weight [kg]	[lbs.]
1	48	105.6
2	96	211.2
3	144	316.8
4	192	422.4
5	240	528
6	288	633.6

Weight of the standard rigging frame with shackles: 10.5 kg/ 23.10 lbs.

Table 2: Weights of COHEDRA® Compact CDR 210 C subwoofers

**2.6 PICK POINTS FOR FLYING COHEDRA® COMPACT ENCLOSURES**

Use only the top rigging frame's shackles to attach motors, chain hoists and straps. Shackles are inserted into the elongated holes in the center rail! Clear the area below arrays immediately of people before raising or lowering loads. Lift and lower flown mid/high enclosures smoothly, avoiding abrupt stops or jerky motions. Secure the flown array with straps to prevent it from moving, for example, in the event of wind.

**2.7 STRUCTURAL MODIFICATIONS OF COHEDRA® COMPACT RIGGING HARDWARE**

No structural modifications may be made without the manufacturer's consent. This also applies to welding work performed on supporting parts. Structural alterations require the manufacturer's written approval. Use original replacement and wearing parts only.

**2.8 ORIGINAL HK AUDIO®**

**ACCESSORIES**

Use original HK AUDIO® parts only (see chapter 3)! The safety standards authority TÜV has not certified any other parts for use! Always install parts in accordance with these installation instructions! Compile and store all documents pertaining to the system in a safe place!

**2.9 INITIATION AND OPERATION**

§ 39, VBG 9a of the German employers' liability insurance association's accident prevention regulations requires that load-carrying equipment be inspected by a qualified expert and possible defects be eliminated prior to initial commissioning by the recipient.

§ 41 VBG 9a requires that load-carrying equipment be subjected to a non-routine inspection following damage, repair work and other incidents that can affect load-carrying capacity.

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Figure 2: 16 COHEDRA® – CDR 108 C



Figure 5: COHEDRA® Compact lightweight rigging frame



Figure 6: Optional quick-release pins for flying up to six CDR 108 C enclosures



Figure 7: Shackles for attaching motors, straps



Figure 8: Lashing strap for curving the array in compression mode

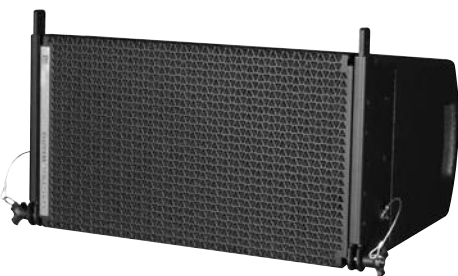


Figure 3: CDR 108 C with integrated rigging attachments



Figure 4: COHEDRA® Compact standard rigging frame



Figure 9: Quick-release pin

### 3 COMPONENTS AND APPLICATIONS OF COHEDRA® COMPACT RIGGING HARDWARE

COHEDRA® Compact rigging hardware consists of the following parts:

- a standard rigging frame with two shackles for attaching motors, lashing straps or chain hoists. The rigging frame also serves as the base for ground stacks if the array is not stacked on CDR 210 C subwoofers.
- an optional lightweight rigging frame for flying up to eight CDR 108 C enclosures.
- side-mounted, recessed rigging points designed to accept optionally available quick-release pins for up to six CDR 108 C enclosures.
- an optional two-part lashing strap for curving the array in compression mode.
- integrated rigging points on the side and back for flying COHEDRA® Compact enclosures
- four quick-release pins per CDR 108 C for connecting the enclosure to rigging frames.

**Important note on pins:** Quick-release pins serve to connect rigging hardware and speaker enclosures, and their proper function must be tested and verified. The pins must always engage fully in the (fitted) hole. Under no circumstances may these pins release on their own when subjected to tractional forces. The nib in the center of the pinhead must always be depressed to insert pins; it releases the ball detents in front. Once the pin engages in the hole, the nib must glide back to its initial position.

#### 3.1 FLYING ENCLOSURES USING QUICK-RELEASE PINS

##### Small Applications

For small applications (up to six CDR 108 C), you may use two quick-release pins instead of a rigging frame. These are inserted into the top enclosure's designated side holes. The holes accept 10-mm pins (see Fig. 6). Be sure to mind the quick-release pins' permissible load as well as the manufacturer's safety guidelines!

**Setting Up a Horizontal Array**

You can configure up to three CDR 108 C enclosures in a horizontal array using quick-release pins. Connect three CDR 108 C enclosures and set the splay between the enclosures for fixed mode and in accordance with the given requirements. To learn more about this, read the chapter Determining the Splay Between Two CDR 108 C Enclosures. To do this, you will need two quick-release pins with 10-mm uptake and adequate load-carrying capacity. Mount these to the outermost enclosures, where they will serve as fixing points for flying the rig (see Fig. 10).

**3.2 FLYING ARRAYS WITH LIGHTWEIGHT RIGGING FRAMES**

As an alternative to the standard rigging frame that flies up to sixteen CDR 108 C enclosures, you can opt to use the lightweight rigging frame designed to accommodate up to six CDR 108 Cs. The rigging procedure is the same as for the standard rigging frame. However, the lightweight rigging frame may be adjusted to the 0° position only on the rear rigging connector!

**4 DETERMINING THE SPLAY BETWEEN TWO CDR 108 C ENCLOSURES**

You have two options for setting the splay between CDR 108 C enclosures - compression mode and fixed mode. In compression mode, the angle is easily adjusted after the array has been flown. This requires a lashing-strap or chain hoist. In fixed mode, the angle is determined during setup and the flown array cannot be adjusted later. This option does not require a lashing-strap or chain hoist. Compression mode is recommended for setups comprising 12 to 16 mid/high enclosures; fixed mode for smaller configurations.

**4.1 COMPRESSION MODE**

Determine the splay between two enclosures by adjusting a single pin (Set Angle). One person can easily perform the entire process of curving arrays.

The following angles may be adjusted between two CDR 108 C enclosures: 0°, 1.5°, 3°, 4.5°, 6°, 7.5° and 9°.

The rigging equipment is designed so that the splay can be adjusted when COHEDRA® Compact arrays have been lifted.

**How is this done?**

The pin that determines the splay (Set Angle) is merely a predefined stop for the flexible connector component when the entire COHEDRA® Compact

array is compressed accordion-style at the back and thereby adjusted using a lashing strap or chain hoist.

When no force is exerted, the entire mid/high array is suspended at 0°, meaning that the pin (Set Angle) is easily repositioned (see Fig. 11)!

Important note: The pin labeled Link connects individual CDR 108 C cabinets. Ensure this pin is inserted, otherwise the enclosures will not be connected to each other and may swing forward!

**Preparations**

The following section describes how to set up an array in compression mode. Use COHEDRA® CAPS to select rigging frame pick points for determining the angles between CDR 108 C enclosures.

Move the open case with the CDR 108 C enclosures in position. Remove the top cover.

**Mounting the Rigging Frame**

The tasks described below require two people. Remove the quick-release pins from the rigging frame and the two pins on the back of the top CDR 108 C enclosure. Set the rigging frame on the enclosure. First attach the two front connectors. Turn the rigging frame's connector component down and slide it into the rear rigging connector.

**Important:**

The standard rigging frame's connector component is longer than that of mid/high cabinets. This means that you can also set ascending angles, for example, for covering balconies, terraces, etc. Bear in mind that a 0° angle between rigging frames and the first 1 CDR 108 C enclosure is set using the hole labeled 9° on the mid/high unit (see Table 3)! To mount the rigging frame, always employ the fixed mode option as follows:

Insert the first pin through the hole labeled 9° on the enclosure and attach the connector component by inserting the second pin through the slot into the hole labeled 6° (see Fig. 13).

Attach to the top rigging frame the shackle destined to accept the motor hook (see Fig. 14). Your choice of pick point depends on how sharply you aim to curve the array later.



Figure 10: Horizontal array comprising three CDR 108 Cs



Figure 11: CDR 108 C set angle in compression mode: 4.5°



Figure 12: Open case with four CDR 108 C enclosures

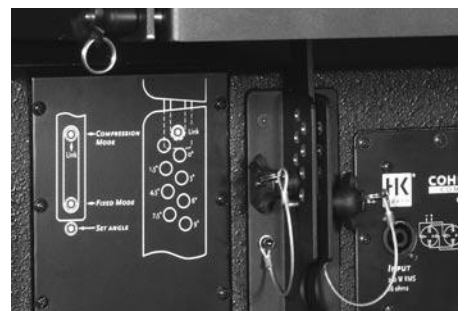


Figure 13: Rigging frame set to 0°

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Figure 14: Setting an interim angle



Figure 15: Mounting the standard rigging frame

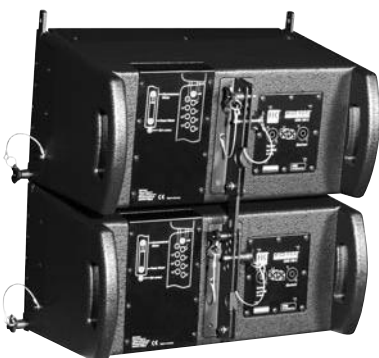


Figure 16: Setting the splay to curve a CDR 108 C array



Figure 17: Hoisting the top four COHEDRA® Compact Enclosures



Figure 18 a: Rigging additional CDR 108 C enclosures



Figure 18 b



Figure 18 c

**Note:** Depending on application, you may not be able to select a pick point with a shackle. In this case, use two shackles and a suitable O ring as shown in Figure 14.

Check all pins on the top rigging frame to ensure they are firmly seated and attach the motor to the shackle.

**Important:** Ensure the motor's chain bag hangs freely and does not rest on the rigging frame!

Remove the two front pins of the lowest enclosure and fold down its connector component. Now you can rig the second two-cabinet block. Curve the four CDR 108 C enclosures as desired for the given application by setting the pins on the back accordingly (see chapter 3.1). Determine the desired angle using the pin labeled Set Angle.

This is also a good time to connect the speaker cords to the four enclosures that will later be at the top of the array. Bear in mind that you must attach one of the shackles on the rigging frame to the lashing strap or chain hoist that will later serve to pull back the ends of the array to curve out its front face. Do this now.

**Tip:** If you intend to rig additional CDR 108 C enclosures, it is recommended that you attach all the required speaker cords to the top rigging frame now because this task is made more difficult as the height of the array increases. Be sure to use cords of sufficient length!

#### Rigging Additional COHEDRA® Compact Enclosures

Hoist the mid/ high cabinets to a height that allows you to roll a second case holding four CDR 108 C enclosures under the array. Remove the two front pins from the lowest flown enclosure.

Move the second case with four additional CDR 108 C enclosures into position. Slowly lower the top four cabinets until the two front connectors engage. Insert the two front pins first, ensuring that they engage fully and securely (see Fig.e 18 a). You may have to shift the two enclosures slightly to ease the pins into position. In order to attach the rear connector component, you must swivel it out of the rail so that the round end faces up and the slot faces down (see Fig. 18 b). To connect the two blocks, insert the pin through the connector's elongated hole and through the hole labeled Link.

Hoist the COHEDRA® Compact array with the eight enclosures just high enough to remove it from the case.

Insert the pins on the back of the bottom four enclosures' Set Angle holes to achieve the desired curving angle. Connect the remaining speaker cords. Repeat the above procedure to configure even more CDR 108 enclosures in a flown stacked array.

**Raising the System**

The enclosures are rigged, speaker cords are all connected, and the pins are set in the required configuration. If you want to use the lashing strap to curve the COHEDRA® Compact array, connect one of its hooks to the rigging frame. Using a shackle (an 8-mm bolt), attach the hook on the other end to the bottom bin (best to the connector component).

Tighten the strap until it exerts enough force to curve the array as desired.

Once you have hoisted the COHEDRA® Compact array, secure it against gusts of wind or accidental twisting using two lashing straps or ropes.

**4.2 FIXED MODE**

To determine the splay between two enclosures in fixed mode, you must insert one pin (Set Angle) and fix the connector component in place with the second pin. To fix the selected angle, insert the pin into the neighboring hole labeled Link above the selected angle (Set Angle). This fixes the connector component in place so that it is immobile in all directions (See Fig. 20).

This option gives you the same splay options between two CDR 108 C enclosures to choose from – that is, angles of 0°, 1.5°, 3°, 4.5°, 6°, 7.5° and 9°.

To set up the system, follow the same procedure described for compression mode. Often when arrays are sharply curved it becomes difficult to rig additional blocks. In this event, you must mount enclosures separately from below.



Figure 19: Attaching the lashing strap

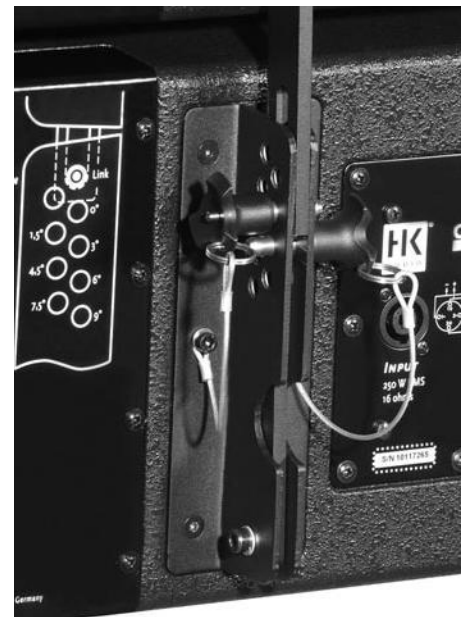


Figure 19: Example fixed mode application with 4.5° angle

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Figure 21: CDR 210 C Rigging Set

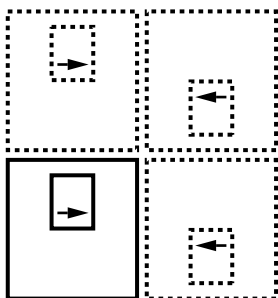


Figure 22: Setting up CDR 210 C subwoofers in a cluster

## 5 FLYING CDR 210 C SUBWOOFERS

### 5.1 COMPONENTS

The following components are required to fly CDR 210 C subwoofers:

- a standard rigging frame.
- the pick points on the side panels of COHEDRA® Compact CDR 210 C subwoofers
- the CDR 210 C Rigging Set consisting of four connector components and eight pins

### 5.2 AS AN INDEPENDENT BASS ARRAY ON A SECOND RIGGING FRAME

The standard rigging frame is certified to fly up to six CDR 210 Cs in stacked array. Read and heed also the safety regulations in chapter C of the manual.

#### Rigging

Set the standard rigging frame on the CDR 210 C subwoofer with the rubber feet facing down. Remove the four pins on the rigging frame. Attach the four (optional) connector components between the rigging frame and the CDR 210 C using the pins. Attach the shackles for the motor to the rigging frame. Attach the motor to the shackle and lift the subwoofer. Now you can rig additional CDR 210 C bins below this subwoofer. To do this, you need four connector components and eight pins for each subwoofer. (=1Set)

### 5.3 IN COMBINATION WITH CDR 108 C MID/HIGH

Configuring subwoofers and mid/high units together in a single array can be a viable option, depending on application. Subwoofers must be rigged on top of the flown array for this application. Mind the rigging frame's maximum permissible load. Before you begin, add up the individual components' weights to determine total system weight. Refer to tables 1 and 2 for weight specifications.

## 6 CONFIGURING CDR 210 C SUBWOOFERS IN CLUSTERS

CDR 210 C enclosures have been optimized for setting up clusters comprising four subwoofers. When configuring a cluster, set up the bins so that the bass reflex apertures point toward each other. This ensures the various subwoofers' low-frequency signals couple for maximum sonic effect. To this end, set one row of speakers bottom side up (see Fig. 22). The housings are equipped with feet on the bottom and top panels. Refer to the labels on the connector panel for details.



## 7 GROUND-STACKING

This option is recommended for smaller venues, for example, in which enclosures cannot be flown, or when you want to align the array to cover galleries, terraces or balconies. You can configure stacks with or without CDR 210 C subwoofers, as the given application may require. In both cases, you must use a standard rigging frame as the base for the mid/high cabinets.

### 7.1 WITHOUT SUBWOOFERS

Set the standard rigging frame, without shackles and with the rubber feet facing down, on the ground, bass bins or stage so that the rigging frame's center connector component for the CDR 108 C enclosures faces up.

Remove the front pins from the rigging frame and mount the CDR 108 C enclosures upside down. Proceed as you would to rig a flown system, except that you do not need a lashing strap to curve the array. The enclosures' weight enables the array to be curved. Maximum stability is achieved in fixed mode.

**Note:**

You can shift the mid/high stack's center of gravity inwards to make it more stable. Use the two holes on the sides of the rigging frame to do this. They are located about 70 mm inwards, measured from the rear edge (see Fig. 24 a, b).

What's more, you can adjust the rigging frame's center connector component on the lowest CDR 108 C enclosure to tilt the stack 9° downwards. To do this, use the set angles in fixed mode! The table below indicates which angle between the rigging frame and the first mid/high unit will give you the desired down-tilt:

Desired down-tilt	Label on the CDR 108 C
0° (horizontal)	9°
1.5°	7.5°
3°	6°
4.5°	4.5°
6°	3°
7.5°	1.5°
9° (maximum)	0°

Table 3: Angle between the rigging frame and the first mid/high unit

**Caution:**

Always secure ground stacks with a suitable lashing strap to prevent slippage!

### 7.2 WITH CDR 210 C SUBWOOFERS

Depending on application, use two or three CDR 210 C subwoofers as the base of the stack. Stack the desired number of subwoofers and then mount the standard rigging frame using four connector elements by following the procedure described in section 7.1 for stacking mid/high cabinets.

**Important note:**

When configuring ground stacks comprised of three CDR 210 Cs and four to six CDR 108 Cs, subwoofers must be linked using connector elements!



Figure 23: Groundstack with flying frame

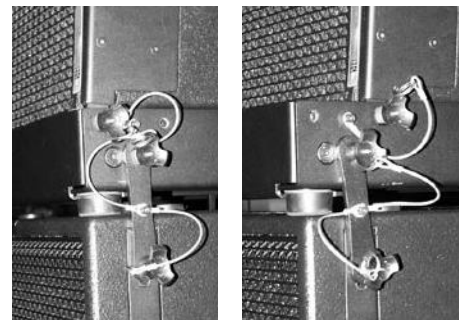


Figure 24 a): normal pin position, b): shifted pin position



Figure 25: Groundstack with CDR 210 C subwoofer

## 8 OPERATING THE SYSTEM

We recommend the following procedure to help prevent errors and troubleshoot problems quickly. The adverse effect of a mid/high cabinet dropping out or an incorrect connection can seriously degrade a line array's performance!

### 8.1 CONNECTING SPEAKER CORDS

Always ensure cables are laid out clearly and orderly! You should be able to attribute enclosures to their connected power amp channel and/or amp rack at any time. This ensures flaws such as defective cords can be pinpointed and repaired swiftly.

#### Example setup using a PB 5:

Channel 1 drives the array's four (two or three) top mid/high units, while channel 2 drives the four units below that, and so forth. Thus, one HK AUDIO® LS cable can serve to drive a total of four mid/high units per channel.

If more cabinets are connected, they are addressed by an additional PB 5, and the channel 1-to-4 numbering system is repeated. See the chapter on the PB 5 in the manual to learn more about how to assign power amp channels to the PB 5's channels 1 to 4.

Take the same systematic approach when connecting CDR 210 C subwoofers.

### 8.2 ACTIVATING AMP RACKS PR 8 AND PR 16

Ensure the VX 2400s' power switches are off and the gain knobs are turned all the way down. Check the Phase switches on the PB 5s or PB 2s. They must all be set to +2 (or +3)! Once you have done this, switch on the PS 32 circuit breakers on the back of the amp racks. The DFCs and the PB 5 patch bays are now supplied with power. First select the appropriate filter for your setup on all DFCs (making sure you select the same set on each!). If you are unsure of how the amp rack or DFC was used in the previous application (delays, EQ, etc. settings), as a precaution carry out a hot reset on all DFCs and then select the filter set on the DFCs! Read the chapter on the DFC in the manual to learn more about how to do this.

Before you can continue, you must first connect to the amp racks the DFCs' remote line and all of the system's audio cords.

### 8.3 CHECKING INDIVIDUAL MID/HIGH ENCLOSURES

The best method of checking cabinets is to play a familiar song on a CD, routing the signal into the mixer and out via the master channel. Set the master level to a low-to-medium setting.

- Turn up channel 1's gain knob. You will hear the signal rendered by the array's four top mid/high cabinets. The display of the DFC assigned to this pair should indicate incoming signal levels.

**Important note:** If you are located outside the high frequency signal's directivity radius, you will not be able to hear this signal! This system check is best performed with a helper positioned a suitable distance from the array.

The rule of thumb is, if you can see the bottom of the mid/high unit as a plane surface, you are outside its directivity radius!

- Turn the channel 1 gain knob back down after hearing the signal!
- Follow the same procedure for all other power amp channels that you want to use. Be sure to turn the gain knob down after each successful test!

**Note:** With this procedure, you are checking mid/high cabinets in descending order; that is, from top to bottom. A cabinet's height affects its directivity, so the lower the cabinets, the closer the listener should move in towards the array.

- Follow the same procedure for the subwoofers.
- Once you have checked all cabinets successfully, turn up all gain knobs, one after the other.
- Start with the channel 1 gain knob for the top mid/high units, and then turn up the channel 2 gain knob, and so forth. With every additional channel that you activate, you should hear a boost in low midrange response. If not, this may be due to a phase inversion in the NF (or in extreme cases, in the speaker cords)! Also check the PB 5's or PB 2's Phase switch again.
- Proceed in the same manner for the subwoofer channels.

### 8.4 CONFIGURING THE CONTROLLER NETWORK USING AUDIO CONTROLLER SOFTWARE

Once you have performed these tests, you can configure the controller network. The type and size of the configuration of course depends on the given sound reinforcement task (PA left/right, center, out-fills, etc.).

Read the chapter on DFC software in the manual to learn more about networking controllers, creating groups and setting delays and levels.

## 9 TEARING DOWN AND TRANSPORTING THE SYSTEM

As the somewhat clichéd but certainly true adage goes: To disassemble the system, proceed in the reverse order of assembly.

These tips should make the task of tearing down the mid/high array easier:

- 1 Lower the array until the bottom of the mid/high case fits under it.
- 2 Engage the motor or chain hoist to relax the tension on the strap that is curving the array.  
**Caution:** The array may belly out towards the front!
- 3 Disconnect at least the four lower cabinets' cords.
- 4 Set the Set Angle pins that are determining the array's curving to 0°. This way the array will not buckle when lowering and setting it on the bottom of the case. This also makes it easier to dismantle the four-cabinet block.
- 5 Always insert the front pins into the holes on the rigging connector to ensure they are not damaged or torn off when the array is lowered onto the case!
- 6 Carefully lower the array into the case. First remove the rear Link pin connecting the two mid/high units. Then remove the two front pins. Raise the array slightly so that the lower four-bin block can be rolled away.