

# Ground Stacking:

## 6. The FB221 Ground Stack Foot Kit:

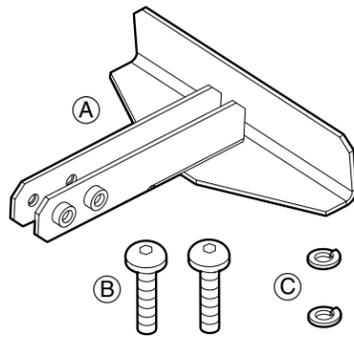
The FB221 Flybar requires the use of a supplied Ground Stack Foot Kit to ground stack HDA loudspeakers. This kit is made up of the following parts:

### FB221 Flybar Ground Stack Foot Kit contents:

Item	Quantity	Description
A	1	Assembly Bracket Foot FB221
B	2	Screw 6 M x 30 mm Lg
C	2	Locking washer 6 M

### Required Tools (not included):

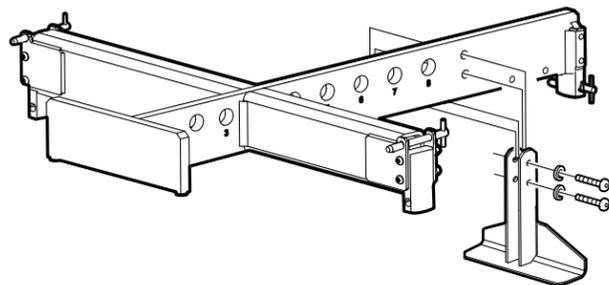
4 mm hex key



## 7. Attaching the Ground Stack Foot to the FB221 Flybar:

The Ground Stack Foot is mounted to the underside of the FB221 Flybar. The flybar is correctly oriented when the hole numbers are right side up and the flybar's fixed latches point down. The latches serve as additional feet in a ground stack application.

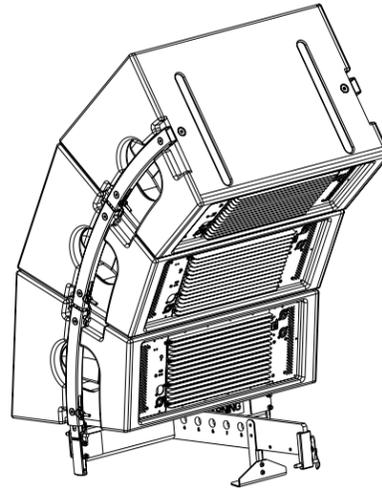
- With the edge of the foot facing front, fit the two (2) arms of the foot on each side of the flybar.
- Align the two (2) holes in the foot to the holes in the flybar.
- Insert both screws with their lock washers through the holes in the foot and flybar. Then thread the screws into the internal nuts on the second arm of the foot.
- Tighten the two (2) screws using the 4 mm hex key.



## 8. Ground stacking HDA loudspeakers on the FB221 Flybar:

A maximum of three (3) HDA loudspeakers may be stacked and locked on an FB221 Flybar. Only one (1) person is required to stack the first two (2) HDA loudspeakers on the flybar.

- Position an HDA loudspeaker on the flybar so its two (2) side rigging tubes are aligned above the fixed latches in the flybar.
- Remove the two (2) side quick release pins from the flybar. They may be inserted in the latch through holes for storage.
- Remove the two (2) side quick release pins from the sides of the HDA loudspeaker; the latches will drop and rest atop the flybar's fixed latches.

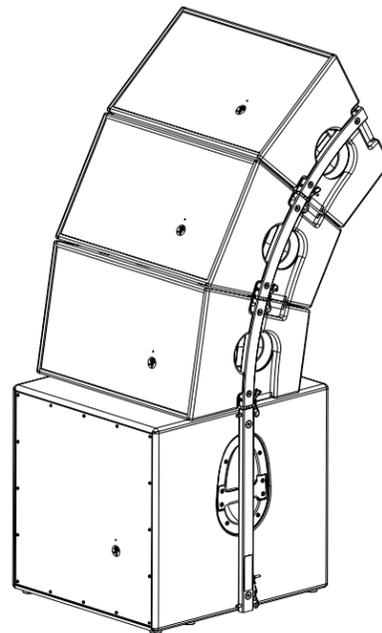


- Align the holes in the HDA's latches and the holes immediately above the flybar's latches. Lock the loudspeaker in position by fully inserting the quick release pins removed in the preceding step.
- Stack additional HDA loudspeakers as required. Note that the HDA only has two (2) rigging tubes and latches. This procedure is similar to those outlined in sections 3b through 3d.

## 9. Ground stacking an HDA / HD1801 loudspeaker array:

The FB221 Flybar is not required for this application, as the HD1801 (with the ACC-R180S Rigging Kit) is used as the ground stack base.

A limit of three (3) HDA loudspeakers may be stacked on up to two (2) HD1801 subwoofers. Two (2) people are required to lift and stack the loudspeakers in a mixed array. Loudspeaker stacking and locking procedures outlined in sections 3a through 3d in these instructions should be followed.



# FB221 Installation & Rigging Instructions



**WARNING:** Installation should only be done by experienced licensed professionals. Improper installation may result in damage to the equipment, injury or death. Make sure the loudspeakers are installed in a stable and secure way in order to avoid any conditions that may be dangerous for persons or structures.

Before suspending the loudspeaker(s), make all of the necessary calculations to ensure that all of the components are used within their nominal work load range. Remember that the weakest component determines the safety level of the entire installation. Additionally, EAW Resolution software should be downloaded, installed and utilized to help make these decisions: <http://www.eaw.com/products/Resolution>

## Introduction

HDA and HD1801 loudspeakers may be suspended below a hoisted FB221 Flybar. The flybar is also used as a base for HDA loudspeakers when arrayed on the floor. The HD1801 is placed directly on the floor with no need for the FB221 Flybar.

These instructions will first explain how to suspend loudspeakers from the FB221 Flybar, then explain how to use the flybar as a base on which to stack an HDA array. Note that a foot assembly must be attached to the flybar before using the FB221 Flybar as a ground stack base. Installation is explained in the second half of these instructions.

Before installing and using this product, please read these instructions carefully and keep them on hand for future reference. Additionally, refer to the product manual(s) for detailed product-specific information. Failure to follow the precautions in these documents may result in injury or damage to the loudspeaker, the FB221 Flybar, or even you!

### FB221 Flybar Kit (Part No. 2036411) contents:

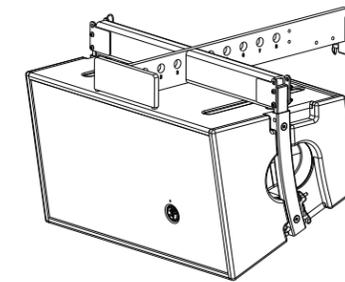
Item	Quantity	Description
A	1	FB221 Flybar
B	1	Ground Stack Foot Kit

### Required Accessories (not included):

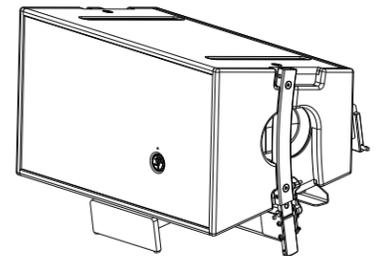
ACC-R280S Rigging Kit  
(one per HD1801 subwoofer)

### Required Tools (not included):

4 mm hex key  
10 mm (or small adjustable) wrench



HDA loudspeaker suspended from the FB221 Flybar



HDA loudspeaker ground stacked on the FB221 Flybar



**WARNING:** Two (2) HD1801s and four (4) HDAs in succession suspended by the FB221 Flybar have been tested to a Working Load Limit (WLL) of 485 lb / 220 kg with a design factor of 10:1. Never apply a load that exceeds the WLL.



**WARNING:** Four (4) HDAs in succession suspended by the FB221 Flybar have been tested to a Working Load Limit (WLL) of 265 lb / 120 kg with a design factor of 10:1. Never apply a load that exceeds the WLL.

One (1) FB221 Flybar weighs 25 lb / 11 kg.  
One (1) HD1801 weighs 110 lb / 50 kg.  
One (1) HDA weighs 59 lb / 27 kg.

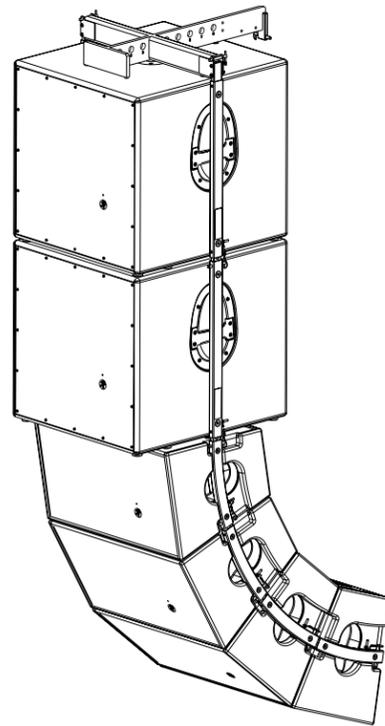
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# Suspending HD1801 and HDA loudspeakers

Combinations of HD1801 and HDA loudspeakers may be suspended in the same array. When doing so, HD1801(s) are always suspended above HDA(s). Therefore, the HD1801 is attached to the FB221 Flybar first.



Remember that a maximum of two (2) HD1801s and four (4) HDAs may be attached to a suspended FB221 Flybar.

## 1. Positioning a Flybar Shackle:

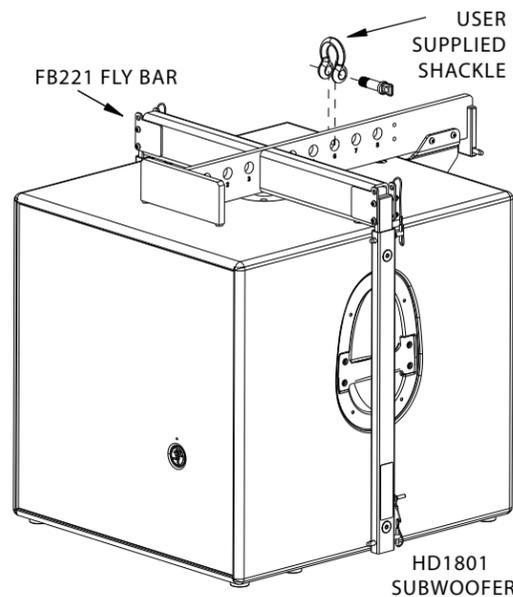
The Flybar is suspended by a user-supplied shackle. Its position on the flybar's numbered center bar is determined by the required Array Configuration and aiming angle. Refer to the EAW Resolution software for appropriate shackle positioning.

## 2. Attaching the shackle and hoist cable:

A user-supplied screw pin anchor shackle or safety bolt anchor shackle is used to affix a hoist motor and/or cable to the flybar.

Allowable shackle sizes are:

Minimum: 0.75 T, 9 mm / 0.31 in  
Maximum: 3.25 T, 16 mm / 0.63 in



## 3. Suspending HD1801 Arrays:

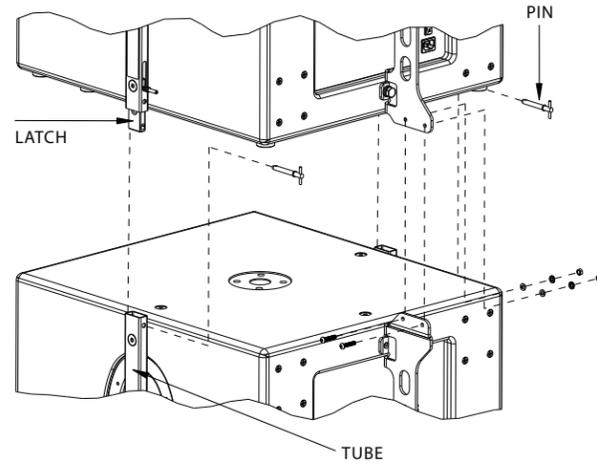
At least two (2) people are required to lift, stack and ready HD1801 subwoofers for suspension from the FB221 Flybar.

a. Place an HD1801 subwoofer on the floor or similar stable surface below the desired rigging point.

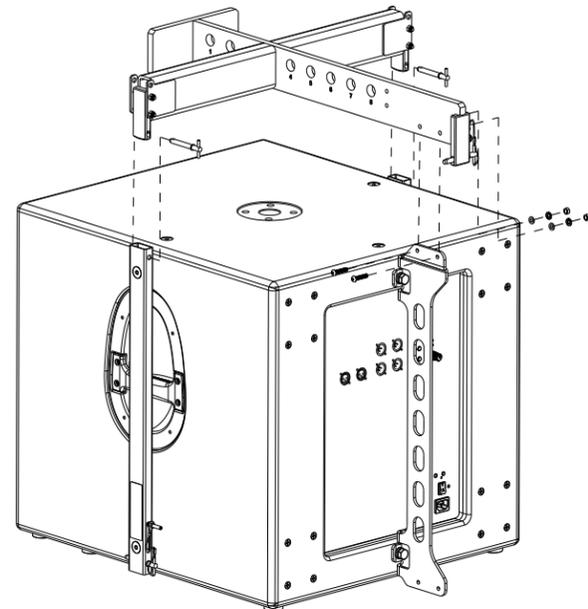
b. Install the ACC-R180S Rigging Kit on each HD1801 subwoofer as described in the document that accompanied the kit.

c. Stack an additional HD1801 subwoofer, if desired.

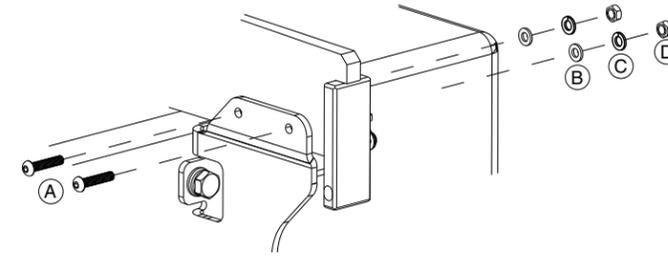
d. Each HD1801 subwoofer has latches stored at the bottom of the two (2) rigging tubes. These latches are held in their stored position by quick release pins. When using two subwoofers in the array, remove the two (2) pins of the top subwoofer. The latches will release and slide into the two (2) tubes of the subwoofer below them. Align the holes in the tubes to those in the latches and lock them together by fully inserting the quick release pins.



e. Remove the FB221 Flybar's quick release pins and insert its front two fixed latches into the top HD1801's rigging tubes. Align the holes in the tubes to those in the latches and lock them together by fully inserting the quick release pins.



f. Attach the rear bracket (previously assembled to the HD1801 subwoofer as part of the ACC-R280S Rigging Kit) to the back of the flybar with M6 screws (A), flat washers (B), lock washers (C) and hex nuts (D) provided in the ACC-R280S Rigging Kit, as shown below. If a second HD1801 subwoofer is suspended, the rear brace on that subwoofer should be attached to the bottom of the rear brace on the HD1801 above, also using the hardware supplied in the ACC-R280S Rigging Kit. Tighten all screws using the 4 mm hex key and 10 mm (or small adjustable) wrench.



g. Hoist the array to the desired trim height or to the working height needed for the next applicable procedure.

## 4. Attaching HDA loudspeakers to a suspended HD1801 subwoofer:

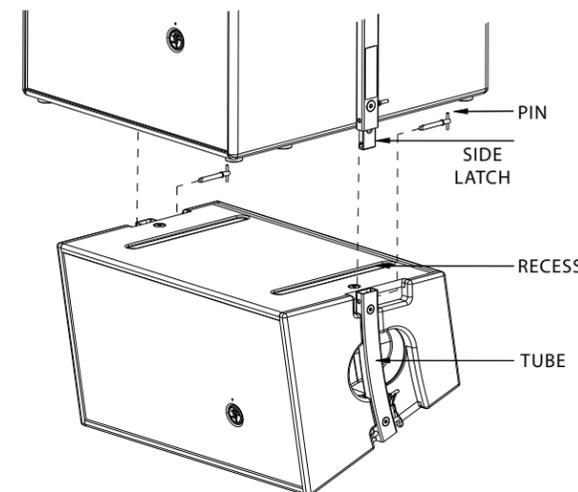
At least two (2) people are required to lift and attach an HDA loudspeaker to a suspended HD1801 subwoofer.

a. The two (2) side latches on the bottom suspended HD1801 subwoofer must be lowered from their stored position. Do this by removing the two (2) bottom quick release pins; the latches will drop to their ready position. The bottom rear latch should remain pinned in its stored position.

b. Lift and position the HDA loudspeaker so its rigging tubes capture the two (2) side latches of the HD1801 subwoofer. Align the holes in the tubes to those in the latches and lock them together by fully inserting the quick release pins.

c. Repeat steps 4a and 4b for any additional HDA loudspeakers to be added to the array.

d. Hoist the array to the desired trim height.



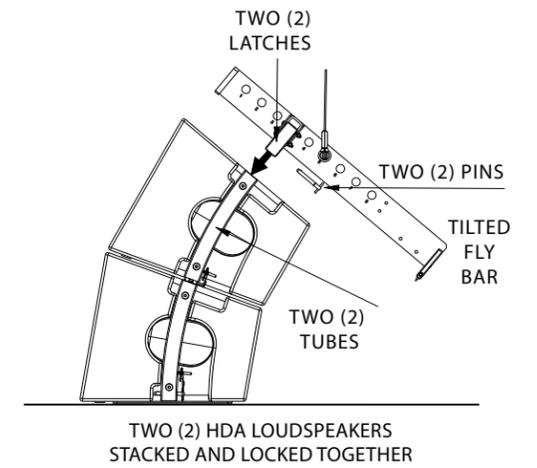
## 5. Attaching HDA loudspeakers to the FB221 Flybar:

Only one (1) person is required to suspend the first two (2) HDA loudspeakers from the FB221 Flybar. If a third (3) or fourth (4) HDA loudspeaker is to be suspended, then two (2) people are required to lift and attach those.

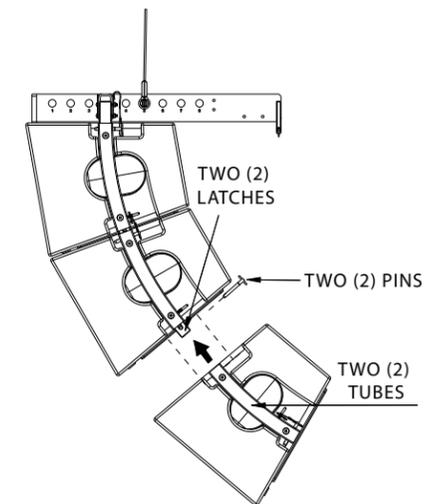
a. Attach a lifting apparatus to the FB221 Flybar at the desired rigging point and hoist the flybar above head height.

b. Stack and lock together up to two (2) HDA loudspeakers on the floor or similar stable surface below the flybar. This procedure is similar to those outlined in sections 3b through 3d.

c. Lower and position the FB221 Flybar. Remove the flybar's two (2) side quick release pins and insert its two (2) fixed latches into the rigging tubes of the top HDA loudspeaker. Align the holes in the tubes to those in the latches and lock them together by fully inserting the quick release pins.



d. Hoist the array to the desired trim height.



If a third (3) or fourth (4) HDA loudspeaker is added, they must be individually lifted and locked to the bottom of the array by two (2) people. This procedure is similar to those outlined in sections 4a through 4c.