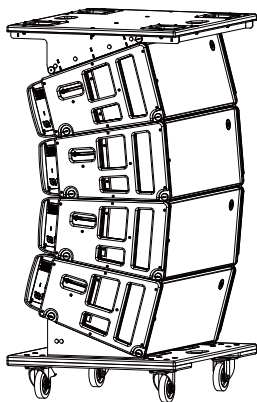


IWAC220P *ACTIVE SYSTEM*
IWAC220iP / IWAC220iPW

用户手册/User'/manual

Closer to music!



P/N:
06200000183000 (IWAC220P-4UVTS)
06200000148000 (IWAC220P单独包装)

电声部分

输入灵敏度: 1v
 短期猝发最大声压级: > 138dB (半空间下1米处的峰值水平)
 频率响应: LF: 80~3.2kHz HF: 1.5k~18kHz
 工作频响范围: 80~18kHz(-10dB)
 电源电压: 100~240v / 50~60Hz 自动适应
 扬声器: LF: 2x10"/8Ω/V.C.2.5"/钹内磁形驱动单元
 HF: 2x1"/8Ω/V.C.1.73"/钹外磁形驱动单元
 功放: 2x860W+2x220W@8Ω D类
 冷却方式: 自然对流
 音箱处理器: 内置可控制DSP数字处理器
 DSP最大延时: 5ms(1.7m); 10段PEQ; Q值 0.2~25;
 每段EQ具有: BES / BW 6~24dB/oct
 LR 12~24dB/oct 可选择
 每段EQ提供: Bell/Notch/Hi-shelf
 Lo-shelf/All Pass 滤波器可选择

连接接口

2xNEUTRIK® PowerCon®型电源螺旋座接口
 2xNEUTRIK®XLR音频信号接口
 DSP控制连接: USB-B型母座

箱体材质

数控加工, 入隼拼接, 15mm桦木多层胶合板
 沙质文理耐磨环保喷漆涂层

悬挂配件

箱体集成地面预置角度自锁悬挂专利系统、钢板拼接
 喷漆/电泳处理; 配4条 Ø10不锈钢安全磁力插销
 1°/步, 单机最大10°可调;
 最大吊挂数量: ≤12只

产品尺寸

IWAC220P: W742xH287xD513mm
 IWAC220P-4UVTS: W810xH1370xD660mm

重量

IWAC220P: 42kg
 IWAC220P-4UVTS: 204kg

IWAC220P是由双10寸中低频和双1.73寸高频单元组合而成的全频有源两分频垂直直线阵音箱模块。

IWAC线阵列崇尚以物理纠正和贴合应用的方法设计产品, 专业的安装设计、简单的应用调整、并具有优良的相位和频率响应, 令系统音质更亲和、耐听。

单个模块覆盖角是120°x10°, 专门配备了外挂式有源驱动模块, 4个独立通道的功放驱动其4个单元, 重点是全部采用一样的模块, 从而获到一致的群延时特性。

内置DSP处理器, 令使用更为方便。单个音箱最大猝发声压可达138dB (数据为单只模块1米距离测量)

整个箱体由桦木夹板隼拼结构和CNC加工制造, 加以砂质耐磨涂层, 外观质感优越。

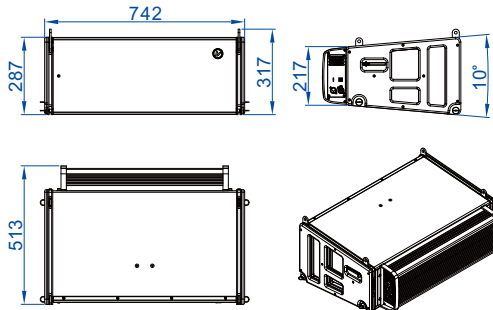
独有专利技术的地面预置角度整套快速安装悬架设计, 是同类产品的四倍安装速度, 甚至一个人就可安装到位。产品可涵盖各类型的中小型流动演出和各种需要一定中远程覆盖的扩声场合。

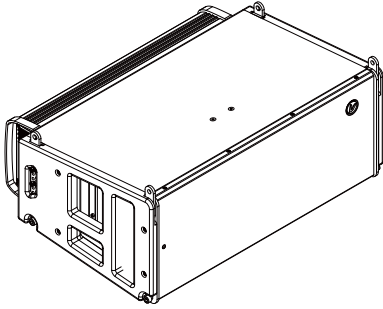
IWAC220P可配搭超低频音箱是SUB136TP。

接线板:



建议交叉频段点低频90Hz, 高频1.8~2kHz(>18dB/oct)





P/N:
060200000174000 (IWAC220iP)
060200000175000 (IWAC220iPW) 白色

电声部分

输入灵敏度: 1v
短期猝发最大声压级: >138dB(半空间下1米处的峰值水平)
频率响应: LF:80~3.2kHz HF:1.5k~18kHz
工作频响范围: 80~18kHz(-10dB)
电源电压: 100~240v /50~60Hz自动适应
扬声器: LF:2x10"/8Ω/V.C2.5"/钹内磁形驱动单元
HF:2x1"/8Ω/V.C1.73"/钹外磁形驱动单元
功放: 2x860W+2x220W@8Ω D类
冷却方式: 自然对流
音箱处理器: 内置可控制DSP数字处理器
DSP最大延时: 5ms(1.7m);10段PEQ;Q值 0.2-25;
每段EQ具有: BES / BW 6~24dB/oct
LR 12~24dB/oct 可选择
每段EQ提供: Bell/Notch/Hi-shelf
Lo-shelf/All Pass 滤波器可选择

连接接口

2xNEUTRIK® PowerCon®型电源螺旋座接口
2xNEUTRIK® XLR音频信号接口
DSP控制连接: USB-B型母座

箱体材质

数控加工, 入集拼接, 15mm桦木多层胶合板
沙质文理耐磨环保喷漆涂层

悬挂配件

箱体集成、钢板拼接, 喷漆;
配8颗M6、4颗M10螺钉
1°/步, 单机最大10°可调;
最大吊挂数量: ≤12只

产品尺寸/外包装尺寸

W730xH287xD514mm / W840xH625xD390mm

净量/毛重

32.5kg / 41kg

IWAC220iP是由双10寸中低频和双1.73寸高频单元组合而成的有源全频两分频线阵音箱模块。

i版本是专门为场馆固定安装设计的产品序列。其电器性能与流动版本一致。专业的安装设计, 简单的应用调整, 具有优良的相位和频率响应, 令你远距离聆听也倍感醇厚亲和。

单个模块设计覆盖角是120°x10°, 独立外挂式有源模块驱动, 单个模块具有最高达138dB的高声压输出。产品提供黑白两个颜色提供选择, 桦木集拼CNC加工、耐磨砂质涂层, 配件齐备。能适合大角度悬挂安装, 是各类中大型场馆固定安装扩声工程的首选。IWAC220iP可搭配超低频音箱是SUB136P。

接线板:



电源级联输出

电源开关

电源输入



模块故障灯

信号强度灯

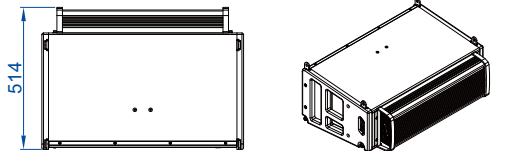
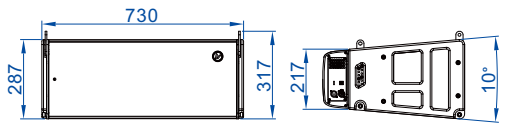
电源指示灯

DSP控制口

信号输入

级联输出

建议交叉分频点低频90Hz, 高频1.8~2kHz(>18dB/oct)



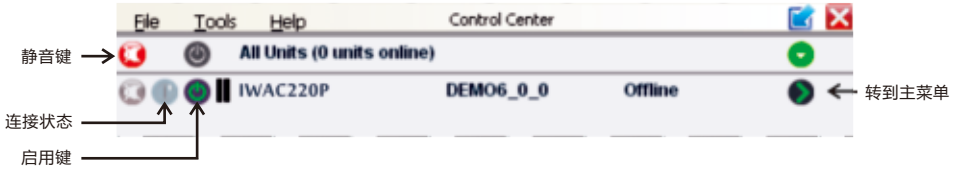
DSP软件使用说明

设备连接控制:

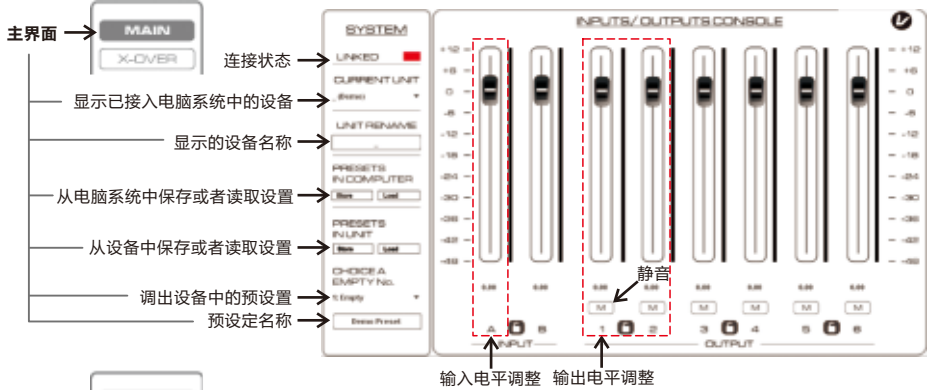
用USB HUB星形连接, 电脑端一路USB最多可连接并控制4台IWAC220P。



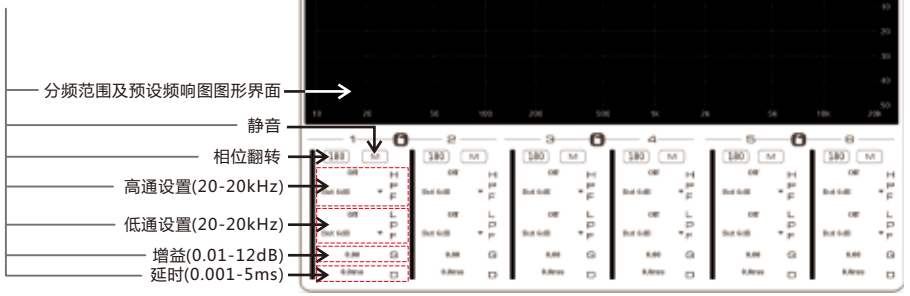
通过PC电脑USB连接的DSP设备，出现连接对应设备的对话框。



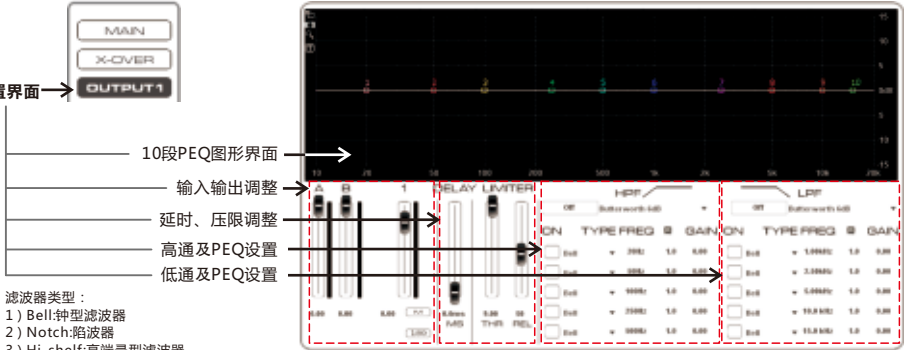
DSP控制对话框(硬件预置为A通道输入 1是10寸中低频单元通道输出, 2是高音单元通道输出)



分频设置界面



输出设置界面



- 滤波器类型:
- 1) Bell:钟型滤波器
 - 2) Notch:陷波器
 - 3) Hi-shelf:高端带型滤波器
 - 4) Lo-shelf:低端带型滤波器
 - 5) All Pass:全通滤波器

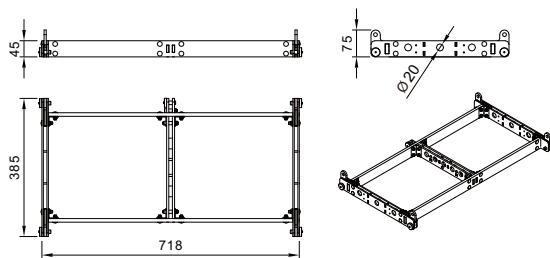
系统配件

IWAC220-FF音箱吊架

这个吊架担负悬挂IWAC220或IWAC220i的主吊架，同时也可以作为大角度悬挂时的辅助架用。而连接起重葫芦必须由美标5/8"马蹄形卸扣担当。

净重：9.1kg

P/N:
060800000061000

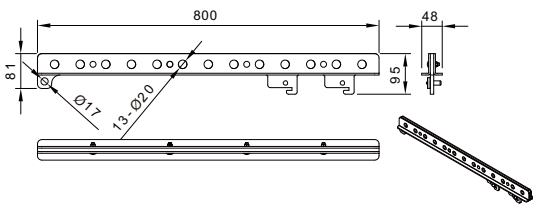


IWAC220-EB吊架延长杆

这个延长杆是为延伸主吊架吊挂点而设计的。在总弯曲角 > 30°时建议采用。而连接起重葫芦必须由美标5/8"马蹄形卸扣担当。

净重：5.3kg

P/N:
060800000060000

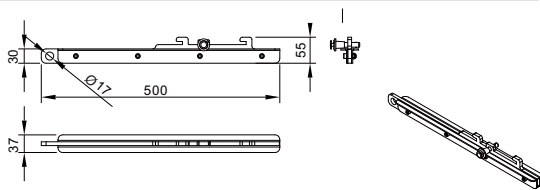


IWAC220-PR吊架拉杆

这个220P专用的主吊架拉杆。是专门为线阵底部安装吊架后延长其作用点之用。

净重：1.8kg

P/N:
060800000064000

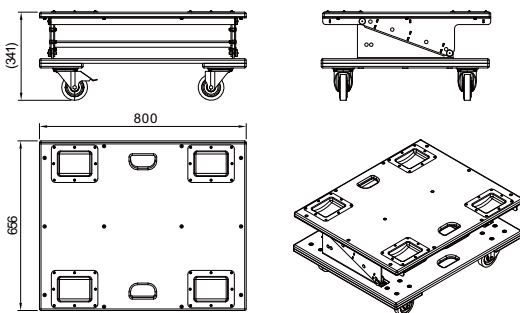


IWAC220-VT垂直组合运输车

是专门以IWAC220音箱4只为一组堆叠一起的以垂直方式组合的运输车，同时也是整组快速吊挂安装的基础保证。

净重：33.3kg

P/N:
040300000013100

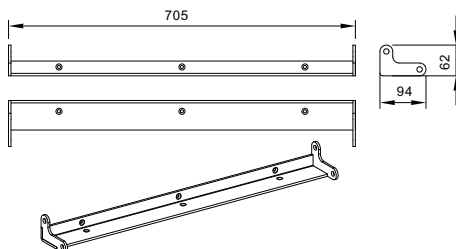


IWAC220-136-SA 堆叠架

这个配件是专为以SUB136为超低频配置时用于地面堆叠的支撑件。

净重：2.4kg

P/N:
060800000067000

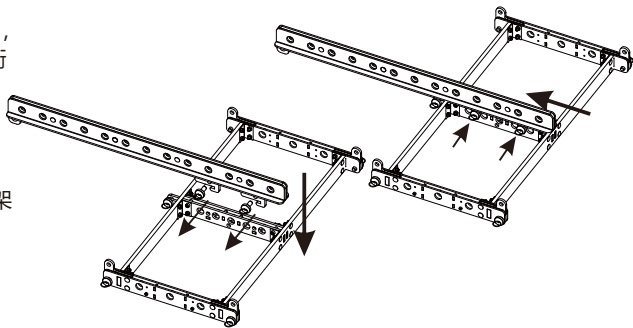


延长杆安装：

当音箱超过4个时，因为重心后移，需要安装延长杆，并在相对的平衡点安装卸扣悬挂。

按右图所示件IWAC220-EB扣入吊架中樑，插入插销即可。

IWAC220-PR用同样的方式于吊架底部安装。



IWAC220P侧架功能：

专利的设计可以让你在地面预先设置好需要悬挂的角度以4只音箱为一组进行整组安装。抛弃了以往逐个安装的浪费的时间，同时节省了人力资源成本。

a:悬挂角度预置限位滑块(音箱左右侧架各一组)
推动拨杆，拨到你需要的角度即可；

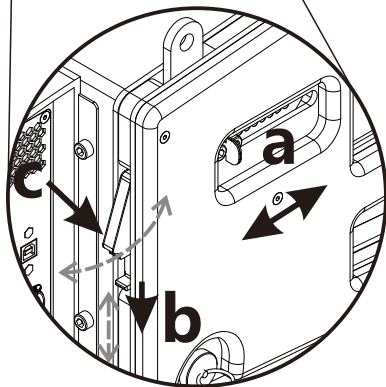
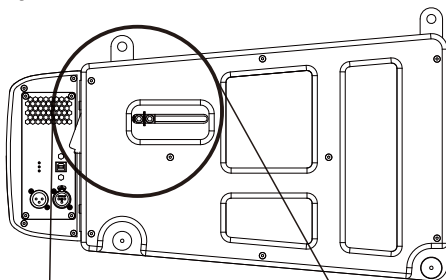


务必做到左右设置角度一致
若不一致，将会有一端起不到悬挂点作用，导致受力不一致，严重时甚至会危及安全！

b/c:后连杆回落限位锁(音箱左右侧架各一组)

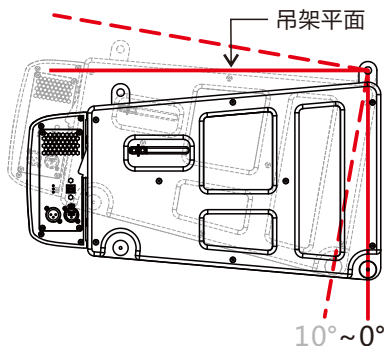
b:按下=释放c:按下=锁定，弹出=释放；

此锁主要限制了后连杆在伸出时只能单向运动，确保在地面堆叠时能保持堆叠角度。

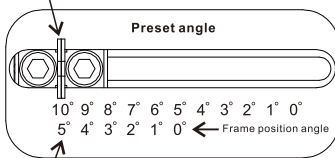


音箱角度图解：

0°：线阵音箱正面垂直吊架（地面）平面。
1°-10°：线阵音箱向吊架（地面）倾斜1°-10°
在作为与吊架连接的第一只音箱时，可以设置和吊架平面0°-5°夹角



滑块拨杆



作为与吊架连接的第一只音箱时预设角度

悬挂安装：

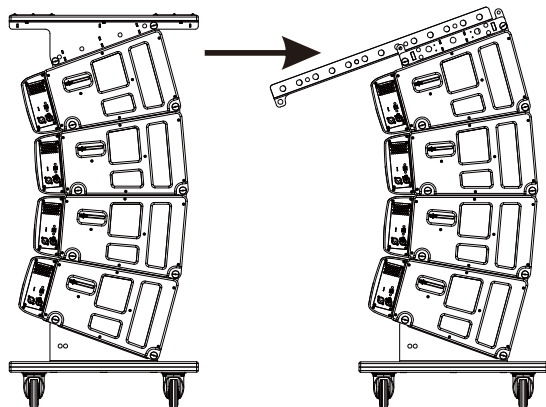
①将音箱组推到安装悬挂点并卸去顶盖；

②安装吊架和连杆并设定好每只音箱的角度；

③挂上起重葫芦

(选择挂点位置。非常重要)

该点决定了最终整个音箱组的角
度，通常的使用建议在
延长杆的中间前后两个孔
之间选择；也可以采用两个卸
扣挂相邻两个孔，这样更能
容易掌握水平角度；



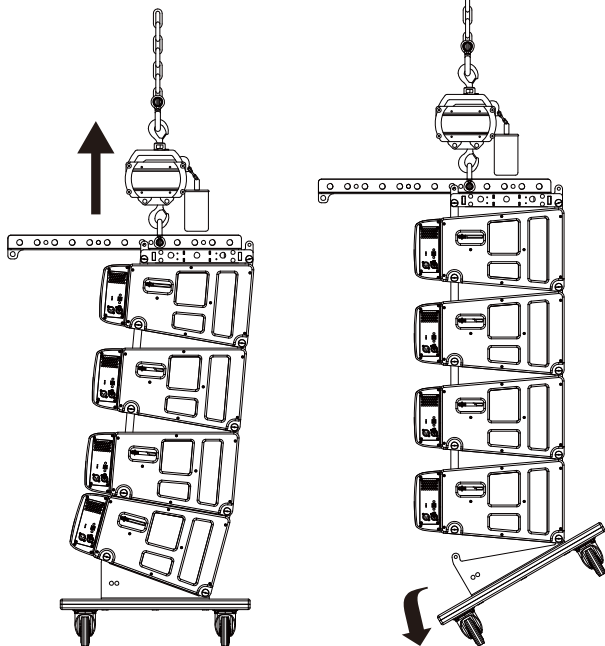
将音箱组推到悬挂位置

安装吊架和延长杆

④升起葫芦令音箱组离开地面并拆卸底部的板车；

⑤升起音箱组，再推入第二组音箱，降下音箱组，首先对接前连杆，并用插销紧固；

⑥继续小心下降音箱组，进行后连杆对接。



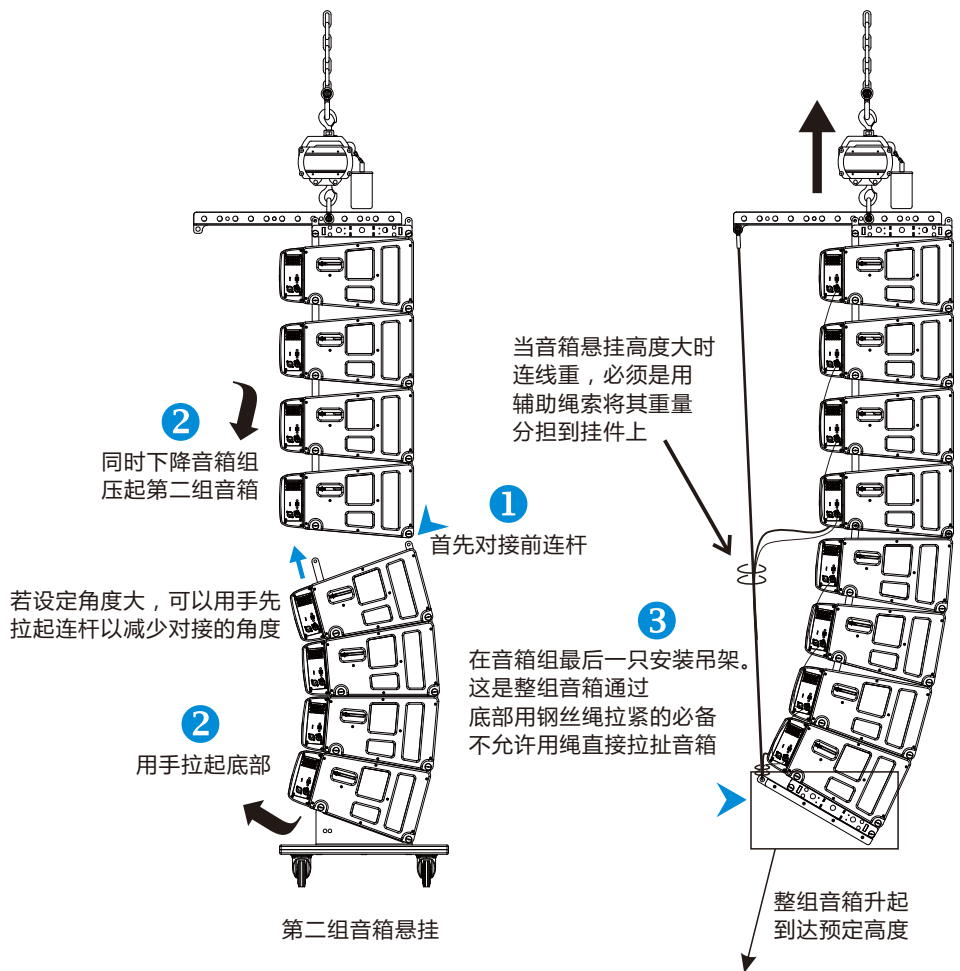
选择合适吊点
通过起重葫芦升起音箱组

拆卸底部板车



对接技巧：

用手在下降音箱组的同时拉起底部板车令第二组音箱的后部贴近第一组音箱的底部，此时注意失去平衡的第二组音箱用力问题，动作需要缓慢并注意安全。

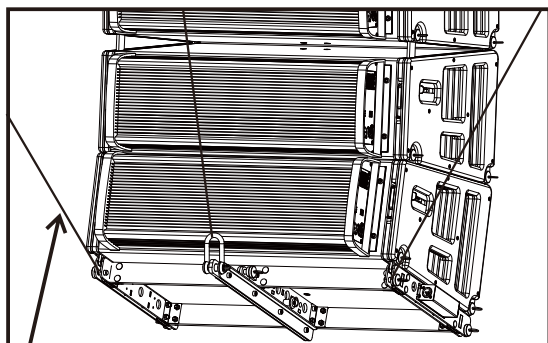


底部安装吊架的重要性：

①是为紧固音箱在设计水平
辐射角而设定。

重要的是不能贪图方便，直接
将绳拉在音箱上，若是力很大
这样会对音箱结构产生不利影
响。

②在大角度悬挂时，作为音箱
的另一端吊架使用。



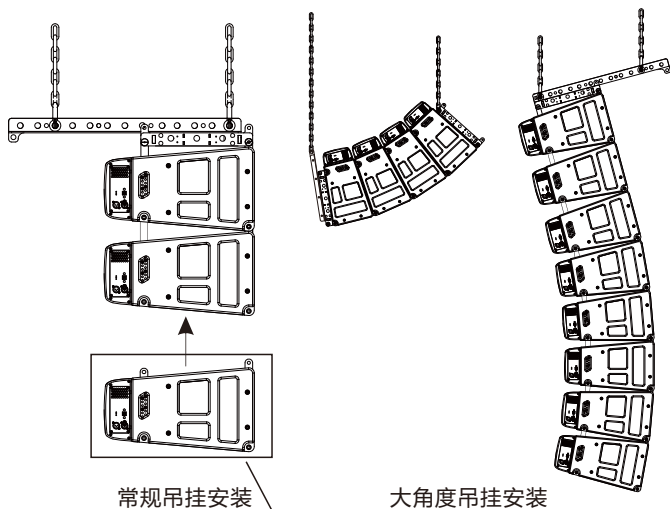
用拉绳调整
适合的水平角

音箱安装

固定悬挂安装：

IWAC220i(W)是专门为固定安装工程设计的。挂件从插销连接改为螺丝连接，具有简单可靠，一劳永逸的特点。

吊架通用流动版本的，但每只音箱都需要按传统方式逐一安装。



①调整后连杆：

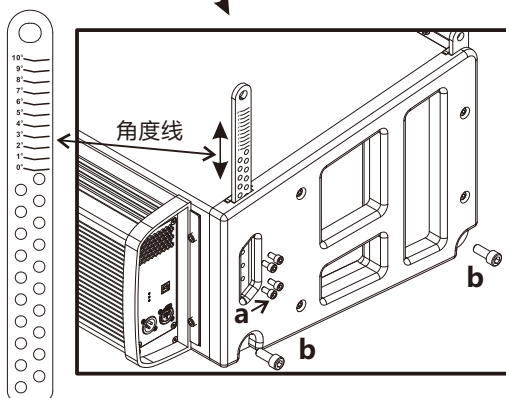
卸下螺丝**a**，拔出后连杆，仔细观察丝印指示的角度，调整需要的角度后紧固螺丝即可完成角度设置。



务必做到左右两侧设置角度一致

②逐个音箱组合：

拆卸螺丝**b**，连接前后连杆并紧固即可。



堆叠安装：

通用于流动版本和固定安装版本

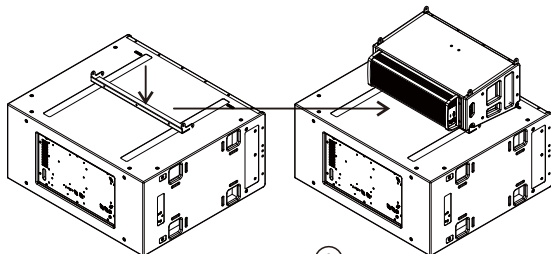
①拆卸SUB136P顶板上的M6螺丝

②安装支撑架

第一只音箱角度设计

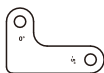
下图A安装0°，图B=-5°

③逐个堆叠安装上IWAC220iP，紧固螺丝或者插销即可



堆叠数量限制：

视整体堆叠重心而定，不宜超过4只

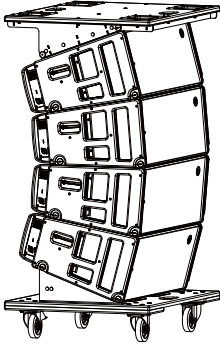


图A=0°



图B=-5°

SPECIFICATIONS



P/N:
060200000183000 (IWAC220P-4UVTS)
060200000148000 (IWAC220P)

Electroacoustic

Input sensitivity:1v
Short term max SPL:> 138dB
(Peak level at 1 m under half space)
Frequency Range:LF:80~3.2kHz HF:1.5k~18kHz
Frequency Response:80~18kHz(-10dB)
Electric power:100~240V/AC 50~60 Hz
Diffusion Angle:H120°xV10°(1 Box)
Speaker Drivers:
LF:2x10"Neodymium driver (V.C:2.5"8Ω)
HF:2xNeodymium compression drivers
(V.C:1.73";Throat:1";8Ω)
Amplifier:2x860W+2x230W@8Ω CLASS D
Cooling:Natural convection
Processor:24 Bit DSP
DSP Max Delay:5ms(1.7m);
10 bands PEQ;Q:0.2-25 adjustable;
Bes/BW 6~24dB/oct & L-R 12~24dB/oct Optional
Bell/Notch/Hi-shelf/Lo-shelf/All Pass Optional

Connector

2x**NEUTRIK**® PowerCon®
2x**NEUTRIK**®XLR
DSP control:USB-B

Cabinet

CNC made 15mm birch wood sandy wear-resisting
environmental polyurea spray paint

Hanging side frame

Auto-locking Suspension System
Laser processing steel plate joining together
with black paint Have 4PCS Ø10 stainless steel

Application

Minimum 1,maximum 12 units line array

Product Dimensions

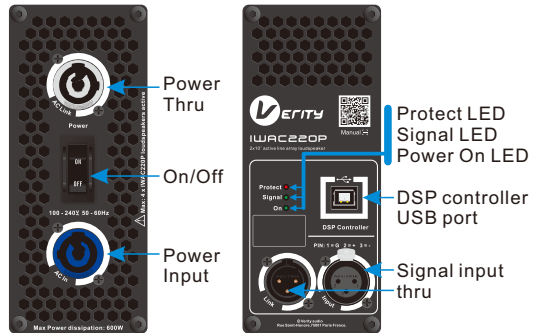
IWAC220P:W742xH287xD513mm
IWAC220P-4UVTS:W810xH1370xD660mm

Weight:

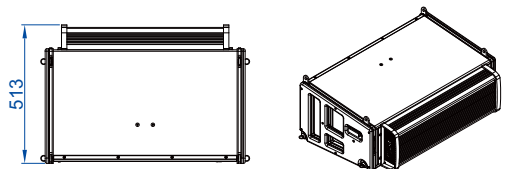
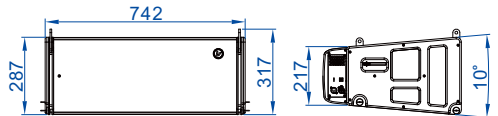
IWAC220P:42kg(1 box)
IWAC220P-4UVTS:204kg

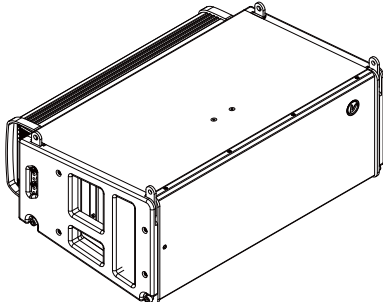
IWAC220P is a full frequency vertical linear array loudspeaker which is composed of dual 10"mid-low frequency and dual 1.73"compression driver. It has professional installation design and easy to use, with excellent phase and frequency response which make you have impressive experience even in far field Module have the design with H120°xV10°frequency coverage angle,independent external active amplify module drive, maxoutput up to 138dB with single module.4 independent channels of power amplifier drive its 4 speaker drive, because of use the same module that can achieve consistent group delay Built-in DSP processor for easy use. Birch plywood cabinet with CNC manufacturing process. A patented auto-locking mechanism allows the selection of angles while components are on the ground, Almost four times the installation efficiency of similar products, even one person can install. IWAC220P will have good performance when it works with SUB136TP.

Connection panel:



Recommended crossover point:
LF:90Hz ; HF:1.8~2kHz (>18dB/oct)





P/N:
060200000174000 (IWAC220iP)
060200000175000 (IWAC220iPW) white

Electroacoustic

Input sensitivity:1v
Short term max SPL:> 138dB
(Peak level at 1 m under half space)
Frequency Range:LF:80~3.2kHz HF:1.5k~18kHz
Frequency Response:80~18kHz(-10dB)
Electric power:100~240V/AC 50~60 Hz
Diffusion Angle:H120°xV10°(1 Box)
Speaker Drivers:
LF:2x10"Neodymium driver (V.C:2.5"8Ω)
HF:2xNeodymium compression drivers
(V.C:1.73";Throat:1";8Ω)
Amplifier:2x860W+2x230W@8Ω CLASS D
Cooling:Natural convection
Processor:24 Bit DSP
DSP Max Delay:5ms(1.7m);
10 bands PEQ;Q:0.2-25 adjustable;
Bess/BW 6~24dB/oct & L-R 12~24dB/oct Optional
Bell/Notch/Hi-shelf/Lo-shelf/All Pass Optional

Connector

2x**NEUTRIK**® PowerCon®
2x**NEUTRIK**®XLR
DSP control:USB-B

Cabinet

CNC made 15mm birch wood sandy wear-resisting environmental polyurea spray paint

Hanging side frame

Laser processing steel plate joining together with black paint
Equipped with 8x(M6x12)/4x(M10x25) screws

Application

Minimum 1,maximum 12 units line array

Product Dimensions/Package Dimensions

W730xH287xD514mm/W840xH625xD390mm

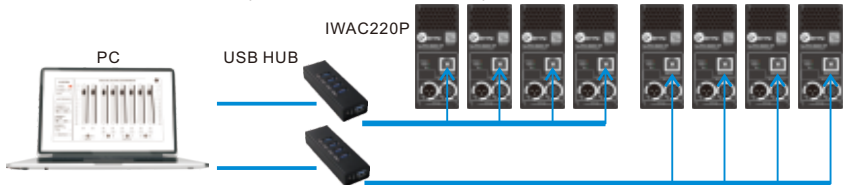
N.W/G.W:

32.5kg / 41kg

DSP Software guide

Device connection:

With USB HUB star connection, the USB port can connect and control up to 4 IWAC220P.



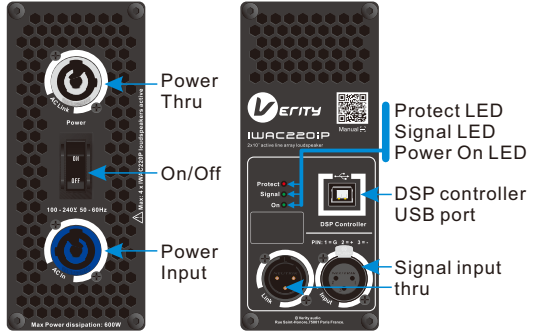
IWAC220iP is an active full-range two-way line array loudspeaker composed of dual 10-inch mid-bass and dual 1.73-inch high-frequency units.

The i version is a product specially designed for fixed installations.

Has consistent acoustic performance with the touring version. It has professional installation design and easy to use, with excellent phase and frequency response which make you have impressive experience even in far field. Module have the design with H120°xV10° frequency coverage angle, independent external active amplify module drive, maximum output up to 137dB with single module. The product is available in two colors, black and white, birch plywood cabinet with CNC manufacturing process, emery spraying craft. It can be installed at a big angle and is the best choice for fixed installation of sound reinforcement application in all kinds of medium and large venues.

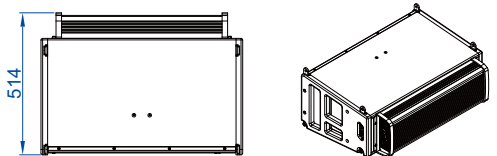
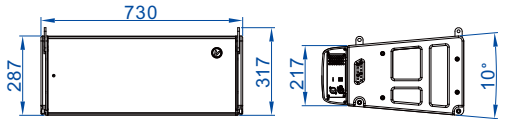
IWAC220iP will have good performance when it work with SUB136P

Connection panel:

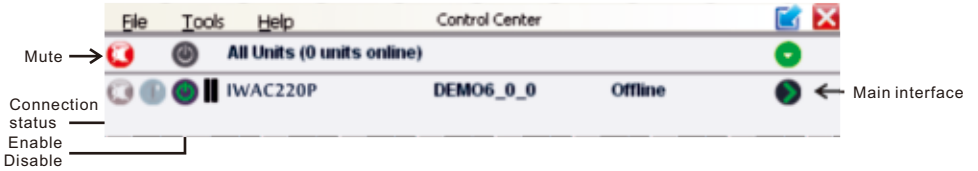


Recommended crossover point:

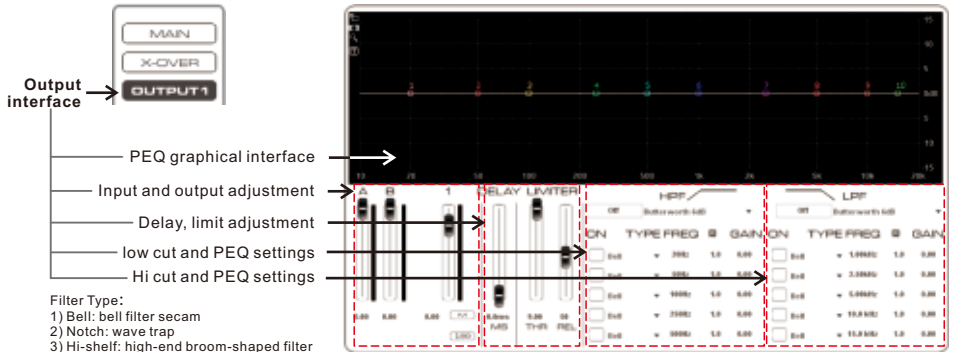
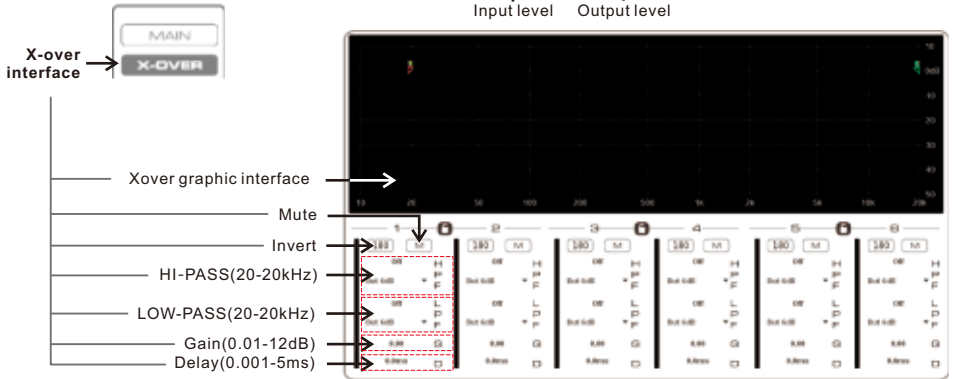
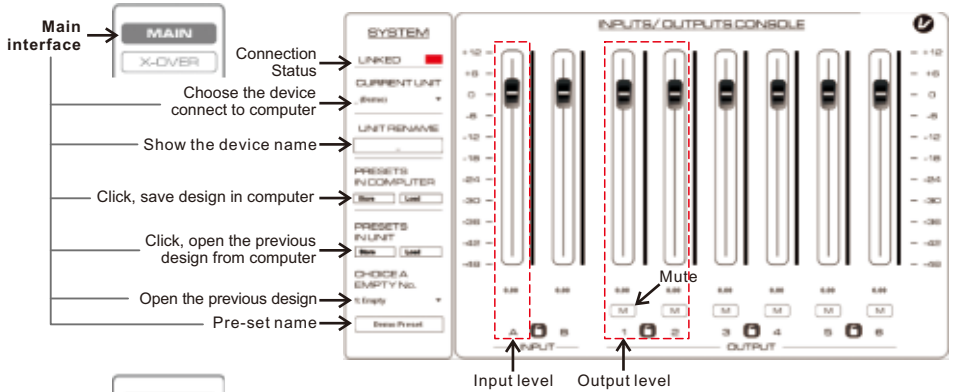
LF:90Hz ; HF:1.8~2kHz (>18dB/oct)



Equipment state control panel



DSP Control dialog (hardware preset for A channel input and 1&2 channel output)



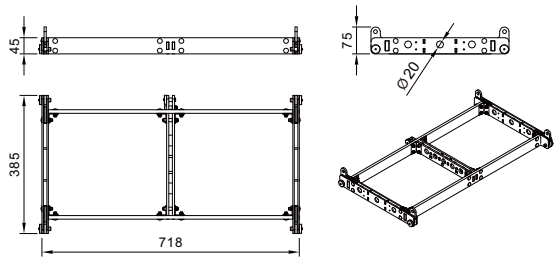
- Filter Type:
- 1) Bell: bell filter secam
 - 2) Notch: wave trap
 - 3) Hi-shelf: high-end broom-shaped filter
 - 4) Lo-shelf: low-end broom-shaped filter
 - 5) All Pass: all pass filter

ACCESSORIES

IWAC220-FF(Array flying frame)

This flying frame is the main part to hand the IWAC220 or IWAC220i, which can use as auxiliary frame when it used in large angle situation, it must use the ANSI 5/8" shackle to link electric hoist.

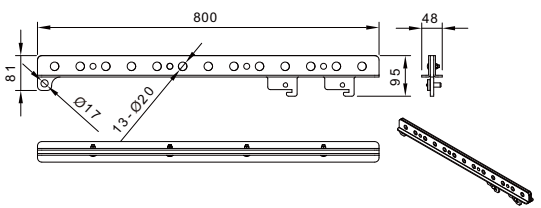
N.W:9.1kg P/N: 060800000061000



IWAC220-EB(Array frame extension bar)

The extend bar is designed to extend the hanging point of flying frame. It is recommended to use this part when the bending angle > 30°. It must use the ANSI 5/8" shackle to link electric hoist.

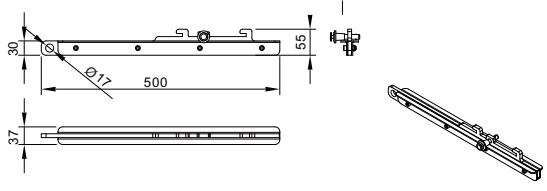
N.W:5.3kg P/N: 060800000060000



IWAC220-PR(Flying frame pull rod)

IWAC220-PR flying frame pull rod the special design for iwac220p flying frame it's specially used to extend the role of flying frame after installing flying frame at the bottom of line array.

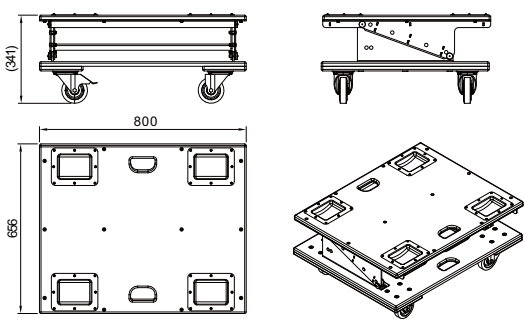
N.W:1.8kg P/N: 060800000064000



IWAC220-VT(Vertical transporter)

The IWAC220-VT is the special designed transporter to carry 4 units IWAC220; it is also the basic guarantee for the whole group fast and easy to hand.

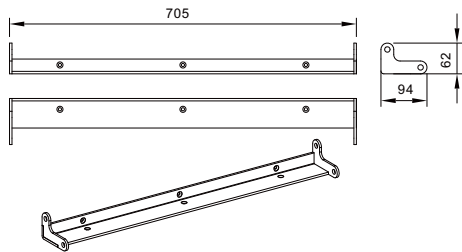
N.W:33.3kg P/N: 040300000013100



IWAC220-136-SA (Stack adapter)

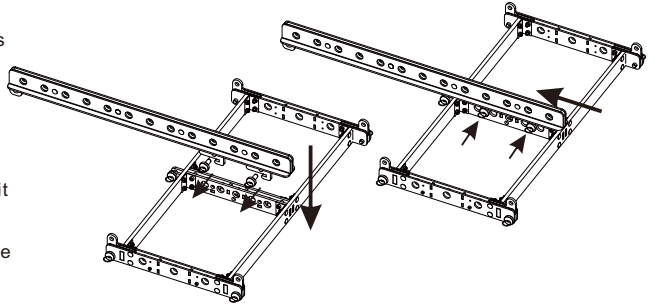
The part is designed for ground stacking with SUB136(T)

N.W:2.4kg P/N: 060800000067000



IWAC220-EB install

It needs to install extension rod because the center of gravity moves backward When the number of speakers over 4 pcs, and install the hoisting suspension at the relative point of balance. According to the picture shown in the right side, it need put the IWAC220-EB into the middle of the flying frame then lock it with the magnet pin.



IWAC220-PR is installed in the same way on the bottom of flying frame.

IWAC220P slide frame

The patented slide frame design allows it to use 4 speakers as a group to hang at the preset angle. These not only reduce labor costs, but also improve installation efficiency.

a: Limit slider to preset the suspend (each slide frame have one)
put the rod on the limit slider to select the angle you need



Be sure to set the same angle in the left and right sideframes. If they are different, it will endanger personal safety because imbalance load on both sides

b/c:Rear connection rod limit lock(each slide frame have one)

b:press=unlock **c**:press=lock,eject=unlock c;

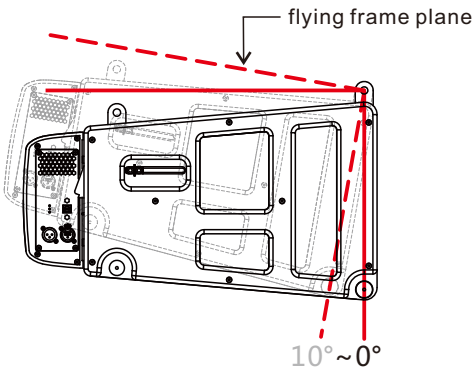
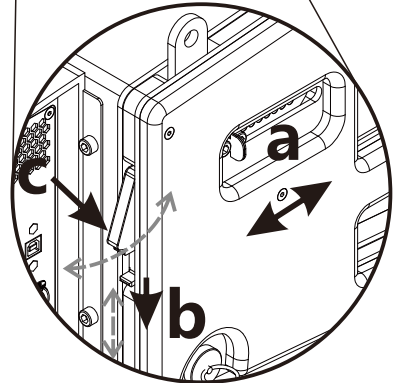
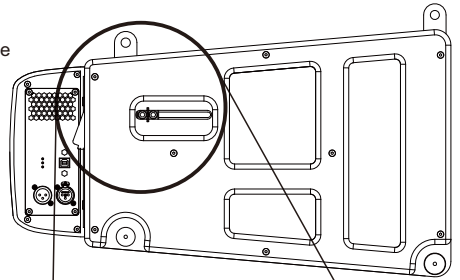
The Reset & Limit device mainly function is restrict the connecting rod only move in the single direction when it stretch out

The graphic of angle

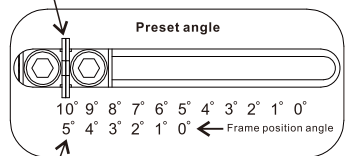
0°:The front side of line array speaker is Vertical to flying frame(Ground)

1°- 10°:The tilt angle of line array speaker to flying frame (Ground)

It can be set to 0~5°when the first cabinet is hang with the flying frame



Slider lever



The preset angle when the first cabinet is connected to the flying frame

INSTALLATION

Hanging installation:

① Move one set cabinets to the right place and remove top cover of the VT.

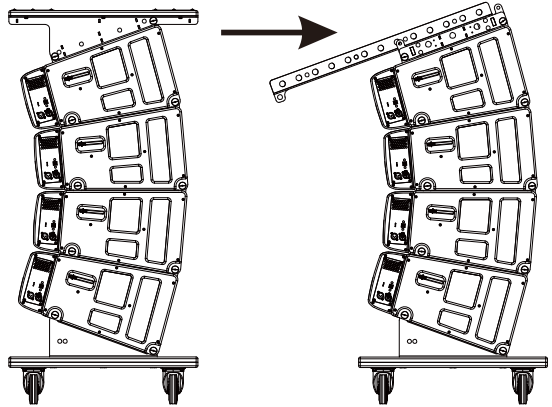
② Fixed the Flying Frame and Extension bar to the cabinet and preset the angle of each cabinet.

③ Suspension the electric hoist (Select the suspension position. It very important) This point determines the final angle of the entire linear array. It is generally recommended to choose between the two holes in the middle of the extension bar. It can also use two shackles to hang two adjacent holes which makes it easier to adjust the horizontal angle.

④ Lift the electric hoist make the cabinets off the ground and remove the bottom part of the VT.

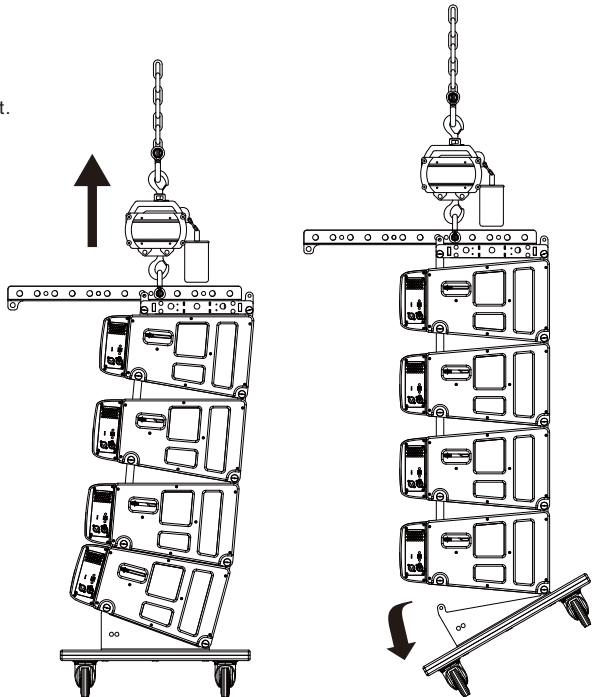
⑤ Lift the first cabinets group and move the second cabinets group below the first array cluster, and then carefully lower the suspended cabinets group when front attachment points come together and use the magnet pin locked it.

⑥ After front attachment points is locked carefully lower suspended cabinets until the rear attachment points come together and use the magnet pin locked it.



Move the cabinet group to a hanging position

Installation flying frame and extension rod



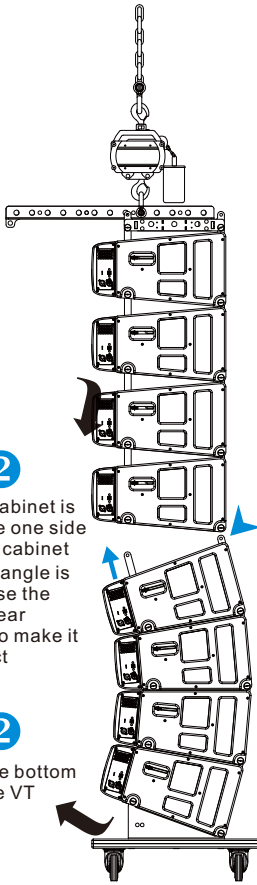
Choosing the right lifting point to raise the cabinet group through electric hoist

Remove the bottom part of the VT



Suspension skill:

It can use hand to pull up the bottom part of the VT and make the second cabinets group cabinet rear attachment points close the rear attachment point of the first cabinets group cabinet. It need be careful about the safely when pull up the second cabinets group cabinet.



2

The first group cabinet is lower it will make one side of second group cabinet off ground. If the angle is large, you can use the hand to pull up rear connecting rod to make it easier to connect

2

Pull up the bottom part of the VT

Next set of Loudspeakers installed

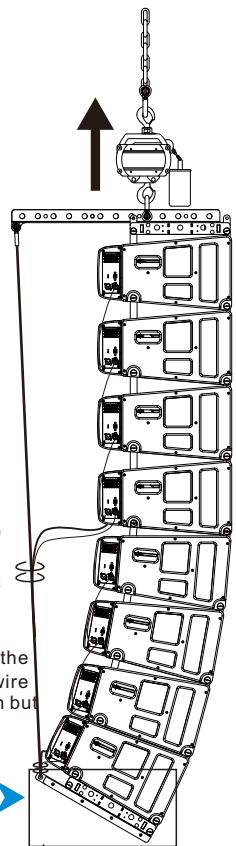
It must use auxiliary rope to share the weight of cables When cabinets suspended in high sky

1

Fixed the front attachment points of first group cabinet and the second group cabinet

3

Assemble the flying frame on the last cabinet, it must be use wire rope to keep it in right position but not allow to tighten cabinets directly by wire rope

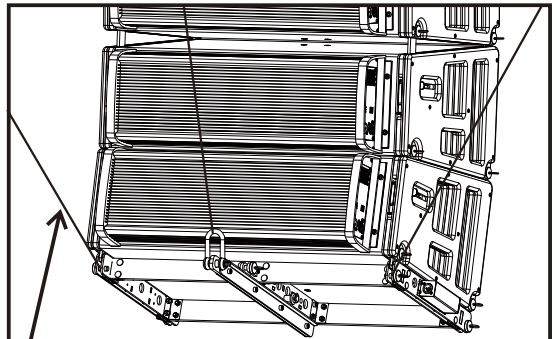


Lift the cabinets to predetermined height

The importance of assemble flying frame at the bottom

① Special design flying frame for Horizontal radiation angle, it must be use wire rope to keep it in right position but not allow to tighten cabinets directly by wire rope

② It can use as flying frame when it work in large angle



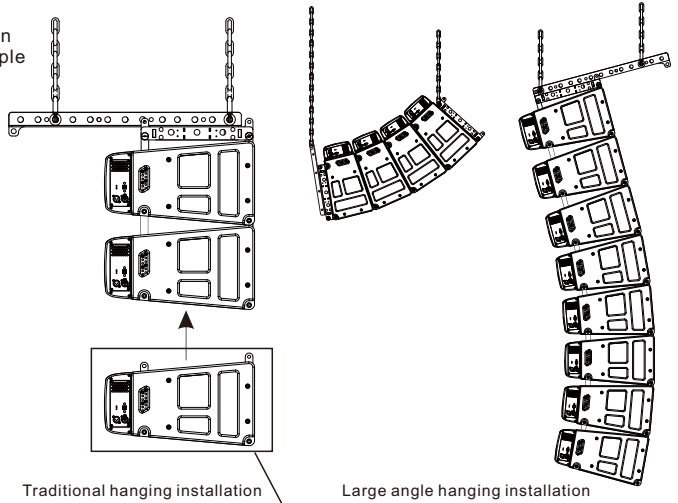
Using wire rope to adjust the appropriate horizontal angle

INSTALLATION

Fixed installation:

IWAC220i(W) is the special design for fix installation and it has simple and reliable characteristic

It is the same flying frame as tour version but each cabinet need install like traditional way

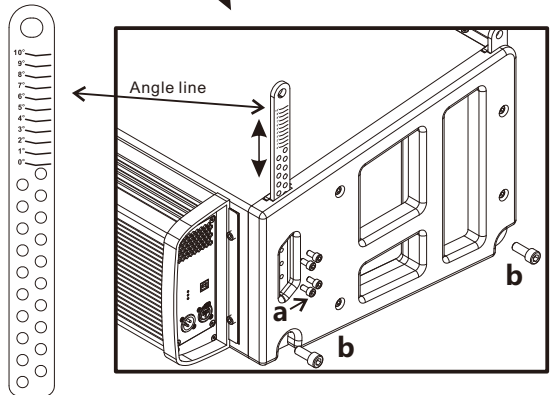


- ① Adjust the rear connection rod:
Remove screw **a**, pull out connection rod and adjust the angle what it need and lock it with screw **a**



Be sure to set the same angle in the left and right side frames

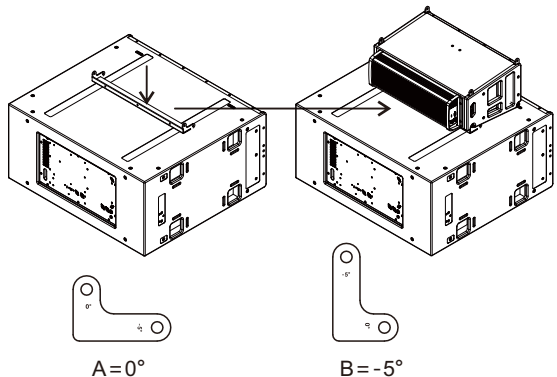
- ② Cabinet installation
Remove screw **b** and then connect the front and rear connecting rod and fix it by screw **b**



Stacked installation:

It can apply for tour version and installation version

- ① Remove the M6 screw on top panel.
② The first cabinet angle is depending on the SA position as below picture picture A 0°, picture B - 5°.
③ Stacking and installing IWAC220 one by one and use screw or magnet pin to lock it.



Maximum stacking units:

We recommend not exceed 4 cabinets to stacking because of the center of gravity of the whole stack.

Verity Audio reserves the right to make any changes to the product specifications without prior notice.
Final specifications to be found in the user manual.

