

一. 前言

欢迎使用ELA-082F线性阵列音箱,配套ELA-181F超低音箱,该系列音箱主要应用于演出、教堂、体育馆、大型多功能厅等较大扩声场合,常规的单只全频音箱,以声源类型来区分属“点声源”,在声波传播过程中,声能量在空气中传播产生衰减随距离增加一倍而造成声压衰减6dB;而线性阵列音箱系统,利用合理的声学构造并结合号角的高指向性设计,属“线性声源”,且灵敏度高、声压大,指向性强,声压随距离增加一倍仅衰减3dB,由此可见更适宜听众数量较多、面积较大的扩声场合使用,加上采用数字处理器中的电子分频功能进行分频,使系统具备更出众的音质。

二. 产品特性

ELA-082F

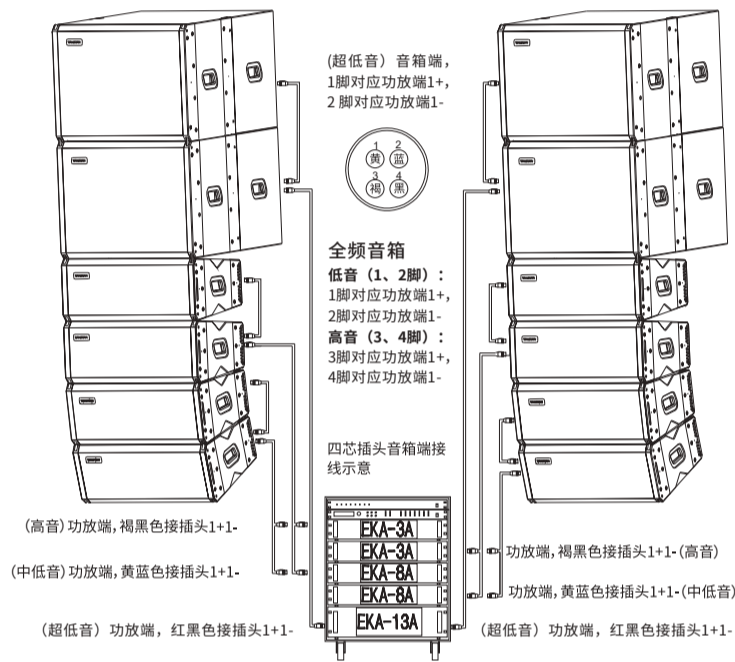
- 音箱通过IPX6防水认证等级,可全天候使用,箱体表面喷涂聚脲漆,防水防潮抗腐蚀,延长箱体使用寿命的同时满足更多的使用环境。
- 该款线性阵列全频音箱采用了两只8寸50mm音圈的中低音扬声器,该单元选用了声学特性优良的进口纸盆、音圈、弹波,以确保大功率工作时,具有优美音色的同时失真能降到最低;并选用了英国CELESTION高音驱动器,和特制的高指向性号角,全频音箱结合电子分频,免去了内置分频的音质损耗因素,使音箱整体具有较高的灵敏度、准确的中频表现、优异的高频解析力。
- 低音音圈采用耐高温玻璃纤维骨架并绕制耐高温无氧铜漆包线圈,低音纸盆折环采用均匀分布的压槽设计,提升布边的机械强度,并涂有阻尼胶,以增强扬声器对大动态、大功率的承受能力。
- 高音单元采用钕铁硼磁钢,一寸压缩喉口配合高指向性号角,在放大高频声压的同时,音质表现上高频平滑,穿透力强,以增强声波在空气中的传播距离。

ELA-181F

- 音箱通过IPX6防水认证等级,可全天候使用,箱体表面喷涂聚脲漆,防水防潮抗腐蚀,延长箱体使用寿命的同时满足更多的使用环境。
- 此款单18寸超低音箱的铝吊挂件与ELA-082F全频音箱铝吊挂件垂直尺寸吻合,可连接吊挂使用,在使用数量较多时,ELA-082F与ELA-181F可独立各吊挂一列,例如舞台左声道挂8只ELA-082F为一列,侧面可将四只ELA-181F吊成一列;右声道以同样方式吊挂。
- 该款超低音箱选用了一只灵敏度较高的18寸进口纸盆超低音单元,选用国内性能领先的航天磁钢;音箱箱体结构方面,采用导槽式设计,低频扬声器灵敏度高,声压足,动态大,力度和爆发力表现上佳。

三. 音箱与功放连接示意图

图1



1. 左、右声道各两只超低音、四只线性阵列全频音箱。超低音每只8Ω,用连接线并联后总阻抗值4Ω;全频音箱每两只音箱连接一条连接线,并联后,低音和高音分别是阻抗值为8Ω。
2. 采用两台300W二通道功放(拨到单通道档位),一台用于左声道高音,一台用于右声道高音;两台800W二通道功放(单通道档位),一台用于左声道中低音,一台用于右声道中低音;一台1300W二通道功放(立体声档位)用于四只超低音音箱。
3. 全频音箱的音箱线必须使用四芯音箱电缆线接四芯插头,例如四芯线内有褐、黑、黄、蓝四种颜色,每两种颜色线为一组(若线材实际颜色与说明书不同,取任意两色为一组),例如黄、蓝色线分别接插头的脚1、脚2(用于接中低音)褐、黑色线接脚3、脚4(用于高音),每条线统一接法,若接错,音箱音质不正常的同时存在导致烧毁高音扬声器的可能;以上是音箱线接音箱的一端。
4. 四芯线接功放的一端时,将黄蓝和褐黑分为两组二芯线,由于功放仅1+1-输出信号,所以黄、蓝线必须接插头的1+1-,再接入中低音功放(图中的EKA-8A)的信号输出插座。红、黑线为高频线,接四芯插头的1+、1-端接入EKA-3A功放。

图2: (系统连接示意图)

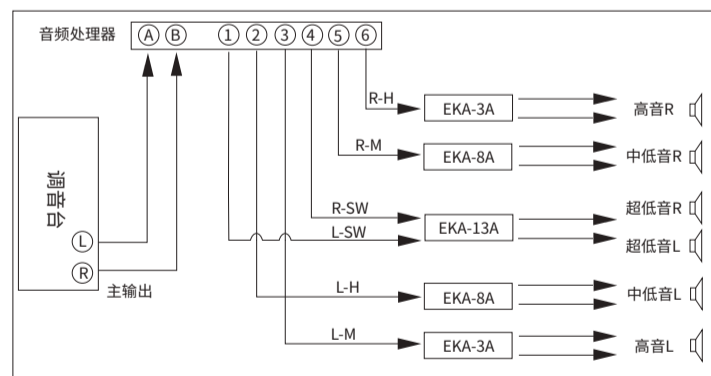


图3:

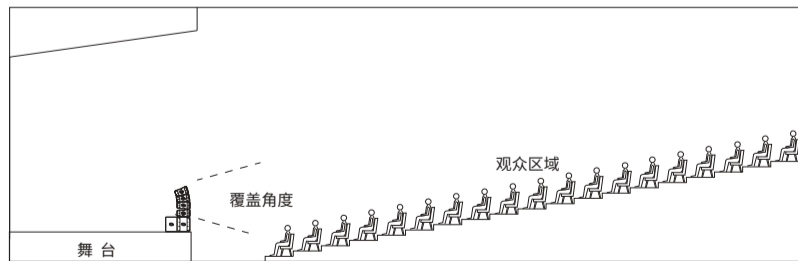
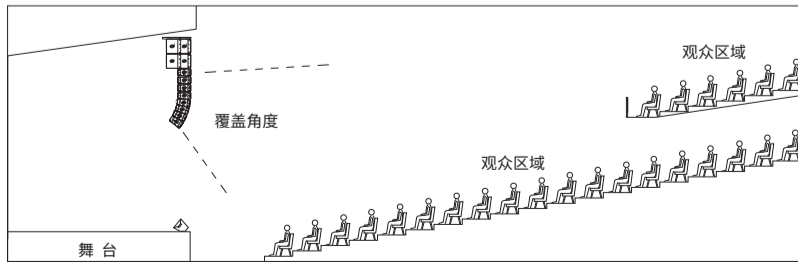
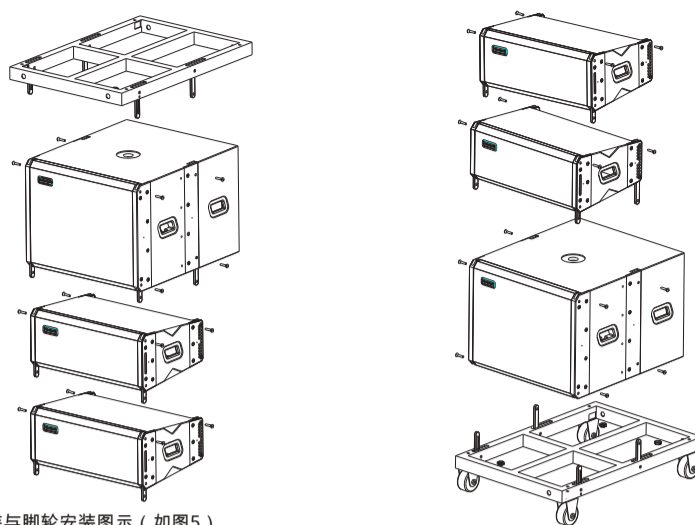


图4:



5. 两种不同安装方式的覆盖角度示意图 (如图3、图4)。

图5:



6. 吊挂安装与脚轮安装图示 (如图5)

四. 注意事项

1. 确保功率放大器和音箱的功率、阻抗相匹配,失衡搭配可导致扬声器损坏或损坏音质。
2. 音箱吊挂或倒置于舞台使用时,全频音箱必须调成弧形面,具体弧度视现场而定(如图3、图4)
3. 音箱的安装需由专业工程人员进行,应固定牢靠。
4. 搬运音箱时,请小心轻放,保护好音箱不受损坏。
5. 非专业技术人员请勿私自接线或使用设备。
6. 系统的音质效果取决于调试者的专业技术、音乐鉴赏水平等综合能力。
7. 音箱使用完后,音箱上的插销、连接杆固定在音箱上,以免丢失。

五. 技术参数

类别	项目	超低音	中低音扬声器	高音	
扬声器参数	外径	18寸	8寸	90mm	
	音圈直径	100mm	50mm	44mm	
	磁钢	铁氧体220mm	铁氧体160mm	钕铁硼	
	灵敏度	99dB	98dB	113dB	
	额定阻抗/功率	8Ω/1300W	8Ω/220W	8Ω/80W	
	频率响应	30Hz-1000Hz	73Hz-4KHz	1.2KHz-19KHz	
音箱参数	音箱型号	ELA-181F	ELA-082F		
	用量	1PC	2PCS	2PCS	
	音箱阻抗	8Ω	16Ω (两只低音串联)	16Ω (两只高音串联)	
	指向性	无	90°x8°		
	额定/峰值功率	1300W (AES) /5200W	440W(AES) /1600W	160W(AES)/640W	
	匹配功放	1300W*2, 两只音箱并联	800W x 2, 两只音箱并联	300W x 2, 两只音箱并联	
	分频范围		25Hz-100Hz	80Hz-2300Hz	2300Hz-17000Hz
			以上为建议值, 超低与中低音分频选在80-130Hz范围内均可, 但频率要相互衔接。		
	滤波选择	高通Bwt24、低通Bwt24	高通Bwt24、低通Lk/R24	高通Lk/R24、低通Lk/R24	
	板材	25+18mm夹板	18mm夹板		
	尺寸	700*650*510mm (W*D*H)	450 x 650 x 270mm (W x D x H)		
接线座	2PCS, IN: 1脚/2脚	2PCS, IN: 中低音: 1脚/2脚, 高音: 3脚4脚			
线材	1.5mm ² 二芯音频电缆线	1.5mm ² 四芯音频电缆线			
防水等级	IPX6				

注:以上数据由得胜实验室测试得到,并拥有最终解释权!

六. 标准配置

- 田字架 (每只含卸扣4只、脚轮4只,插销4只,吊带2条,连接杆4条, M12螺丝螺母4套), 共()只; 每列线性阵列音箱配一只田字架。
- 全频音箱 (每只含前后连接杆共 4条、插销 6只), 共()只;
- 超低音音箱 (每只含前后连接杆共 4条、插销 6只), 共()只;
- 二芯音箱线, 每两只超低音音箱配一条 (两端接四芯插头), 共()条, 每条长 0.7米;
- 四芯音箱线, 每两只全频音箱配一条, 共()条、每条长 0.35米; 两端接四芯插头。
- 每两只全频音箱配一条, 共()条、每条长()米 (用于音箱与功放连接, 选配);
- 说明书一份。

备注: 视每次订单数量或使用数量而定, 出厂前填写以上数据。

七. 安全警示

为避免电击、高温、着火、辐射、爆炸、机械危险以及使用不当等可能造成的人身伤害或财产损失,使用本产品,请仔细阅读并遵守以下事项:

1. 使用产品时请确认所连接设备与本产品功率是否匹配以及合理调整音量大小,不要在超过产品功率及大音量下长时间使用,以免造成产品异常和听力损伤;
2. 使用中若发现有异常(如冒烟、异味等),请立即关闭电源开关并拔掉电源插头,然后将产品送经销商检修;
3. 本产品及配件都应放置在室内干燥通风处,勿长期存放在潮湿、灰尘多的环境,使用中避免靠近火源、雨淋、进水、过度碰撞、抛掷、振动本机及覆盖通风孔,以免损坏其功能;
4. 若产品需要固定于墙壁或天花板上时,请确保固定到位,防止因固定强度不足导致产品发生坠落危险;
5. 使用该产品时需遵守相关安全规定,法律法规明确禁止使用场合请勿使用本机,以免导致意外事故;
6. 请不要自行拆机改装或维修,以防止出现人身伤害,如有问题或服务需求请联系当地经销商跟进处理。

注意事项:

1. 本单为保修凭证, 请用户妥善保管, 如有遗失, 恕不保修或退换。
2. 保修期限: 购买之日起十二个月内。
3. 除了不可抗力事件损坏外, 由本公司负责, 免费维修。
4. 如属保管不善或使用不当造成的损坏, 维修点将酌收费用。
5. 擅自拆卸维修者, 不予保修。
6. 以上保修条款仅限于中国市场适用 (不含港澳台地区)。

产品服务保证书

姓名: _____ 电话: _____ 地址: _____
商品: _____ 型号: _____ 购买日期: _____ 年 _____ 月 _____ 日

维修记录栏 (由维修员填写)	维修员签名	日期

◆广东得胜电子有限公司 ◆电话: 400-6828-333 ◆地址: 广东省惠州市博罗县龙溪街道富康一路2号



I. Preface

Introducing the ELA-082F line array speaker, paired with the ELA-181F subwoofer. Designed for larger venues like concerts, churches, stadiums, and multipurpose halls, this system provides high sensitivity, powerful sound, and focused coverage. Unlike traditional "point source" speakers that experience a 6dB attenuation for every doubling of distance, the linear array design reduces this attenuation to just 3dB. With digital signal processing and electronic crossover, the system delivers exceptional sound quality.

II. Features

ELA-082F

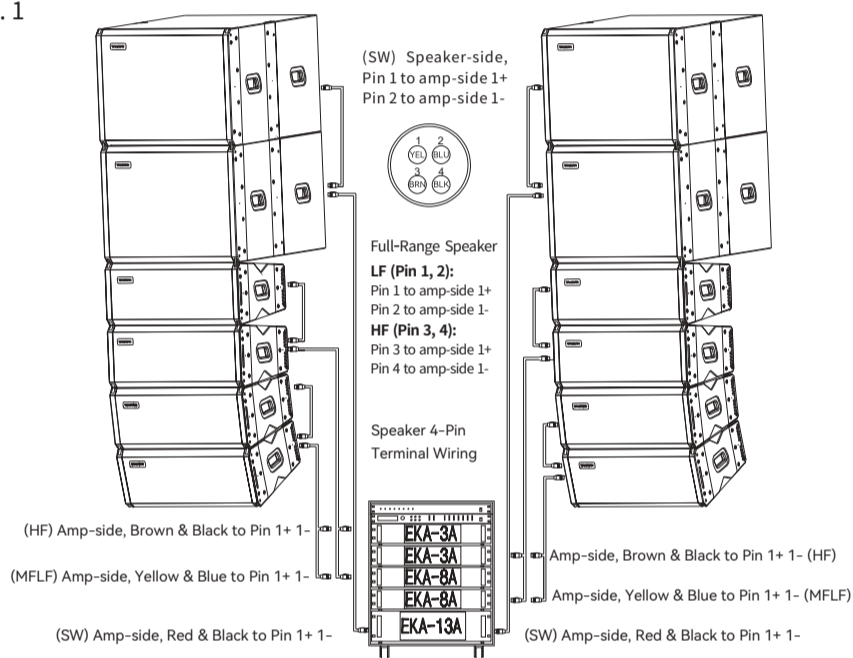
- IPX6 certified for all-weather use, with a polyurea coating that protects against moisture and corrosion, extending lifespan in various environments.
- Dual 8-Inch Woofers with 50mm voice coils and high-quality imported paper cones, ensuring rich sound with minimal distortion at high power. Paired with a Celestion tweeter and a high-directionality horn, this design eliminates sound quality loss from built-in crossovers, resulting in high sensitivity and clear mids and highs.
- Woofer features a high-temperature fiberglass frame and high-temperature oxygen-free copper wire. The woofer cone's surround has a groove design for enhanced strength and is coated with damping glue to handle high dynamics and power.
- Tweeter utilizes a neodymium iron-boron magnet and a one-inch throat with a high-directionality horn, delivering smooth high frequencies with strong penetration and improved sound propagation distance.

ELA-181F

- IPX6 certified for all-weather use, with a polyurea coating that protects against moisture and corrosion, extending lifespan in various environments.
- Aluminum mounting bracket compatible with ELA-082F full-range speaker, allowing for hanging installation. When using multiple units, the ELA-082F and ELA-181F can each be hung in separate columns (e.g., eight ELA-082Fs on left channel and four ELA-181Fs on its side; same setup for right channel).
- Features a highly sensitive 18-inch imported paper cone driver and leading domestic aerospace-grade magnets. Ported cabinet design for optimal low-frequency response, resulting in high sensitivity, strong sound pressure, and excellent dynamic performance.

III. Wiring Speaker & Power Amp

Fig. 1



1. Left and right channels each with 2 subwoofers and 4 full-range speakers. Each subwoofer (SW) is 8Ω, connect pairs in parallel for 4 Ω total impedance. Each pair of full-range speakers is connected with a cable, creating a parallel connection with LF and HF at an impedance of 8Ω.
2. Use the following power amplifiers: Two 300W 2-channel amplifiers (mono mode) for left and right highs (HF). Two 800W 2-channel amplifiers (mono mode) for left and right mids/lows (MFLF). One 1000W 2-channel amplifier (stereo mode) for all four subwoofers.
3. Full-range speaker must use four-core cables with 4-pin connector. For example, if the four cores are of brown, black, yellow and blue colors, use two colors as a pair (choose any two colors in pairs if different from the example here). Say, yellow & blue wires each to connector Pin 1 & 2 (for MFLF), brown & black to Pin 3 & 4 (for HF), and follow the same color-combination wiring across all speakers. Make sure to connect the cables correctly to avoid damaging the speakers or amplifier.
4. Connect the four-core cable to the amplifier by separating the yellow and blue wires from the brown and black ones into two groups. Since the amplifier outputs a 1+1- signal, connect the yellow and blue wires to the 1+ and 1- terminals of the plug, then to the EKA-8A MFLF amplifier output. The red and black wires are for high frequencies; connect them to the 1+ and 1- terminals of the four-core plug for the EKA-3A amplifier.

Fig. 2: (System Connection Diagram)

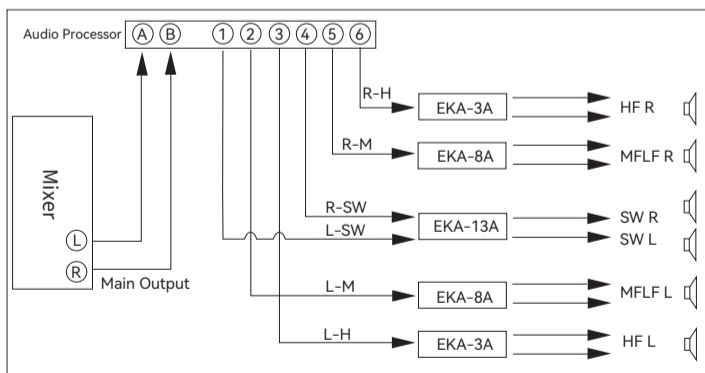


Fig. 3:

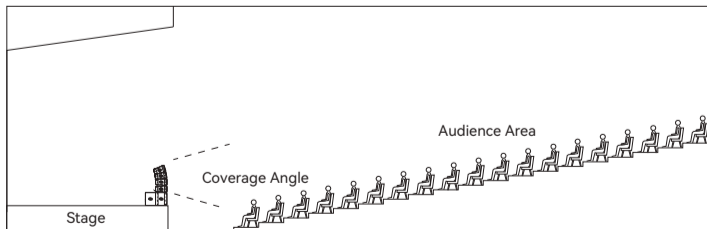
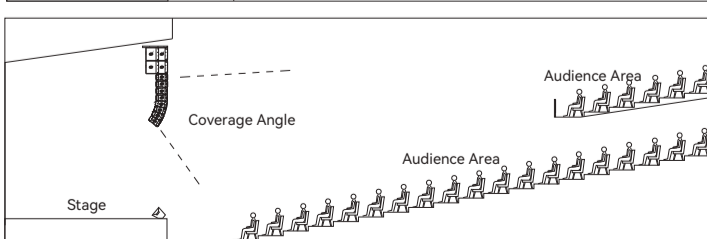
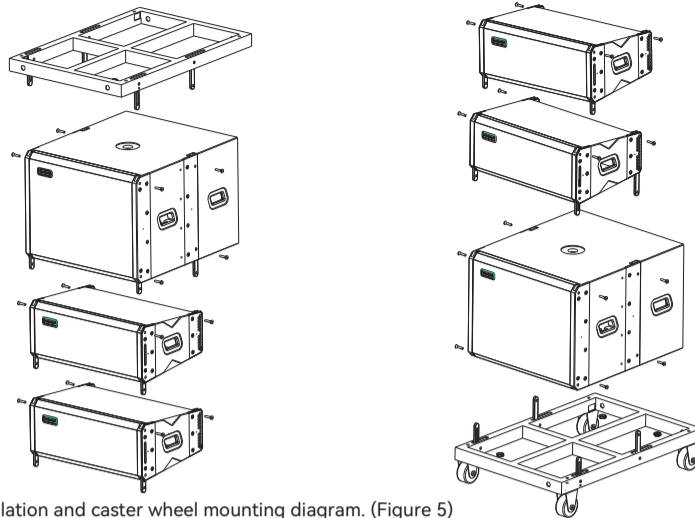


Fig. 4:



5. Coverage angle of two different installation methods as shown in Figs. 3-4.

Fig. 5:



6. Hanging installation and caster wheel mounting diagram. (Figure 5)

IV. Cautions

1. Match amplifier power and impedance to speakers to prevent equipment damage or degraded sound quality.
2. For suspended or inverted stage installation, adjust full-range speakers to required curvature (Figs. 3-4).
3. Secure speakers firmly in place by qualified installers.
4. Handle speakers carefully to prevent transport damage.
5. Leave wiring and setup to qualified technicians.
6. System sound depends on the tuning skills of the technician.
7. Secure pins and fasteners after use to prevent loose or lost parts.

V. Specifications

Type	Item	Subwoofer (SW)	MFLF Driver	HF Driver (Tweeter)	
Driver Spec	Outer Dia.	18"	8"	90mm	
	Voice Coil Dia.	100mm	50mm	44mm	
	Magnet	Ferrite 220mm	Ferrite 160mm	NdFeB	
	Sensitivity	99dB	98dB	113dB	
	Rated Impedance /Power	8Ω/1300W	8Ω/220W	8Ω/80W	
	Frequency Response	30Hz-1000Hz	73Hz-4KHz	1.2KHz-19KHz	
Speaker Spec	Model	ELA-181F	ELA-082F		
	Quantity	1PC	2PCS	2PCS	
	Impedance	8Ω	16Ω (two LF connected in series)	16Ω (two HF connected in series)	
	Directivity	无	90°x 8°		
	Rated/Peak Power	1300W (AES) /5200W	440W(AES) /1600W	160W(AES)/640W	
	Matching Power Amp	1300W * 2, two speakers in parallel	800W * 2, two speakers in parallel	300W * 2, two speakers in parallel	
	Crossover Range	25Hz-100Hz	80Hz-2300Hz	2300Hz-17000Hz	
		Above is the recommended value, but subwoofer and MFLF crossover can be selected between 80-130Hz as long as their frequencies are continuous.			
	Filter Preset	High Pass Bwt24, Low Pass Bwt24	High Pass Bwt24, Low Pass Lk/R24	High Pass Lk/R24, Low Pass Lk/R24	
	Panel	25+18mm Plywood	18mm Plywood		
	Dimensions	700*650*510mm (W*D*H)	450 x 650 x 270mm (W x D x H)		
	Connector	2PCS, IN: Pin 1 & 2	2PCS, IN: MFLF Pin 1 & 2, HF Pin 3 & 4		
	Cable	1.5mm ² Two-Core Audio Cable	1.5mm ² Four-Core Audio Cable		
Waterproof Rating	IPX6				

Note: The above data are measured by Takstar laboratory which has the final interpretation right!

VI. Standard Configuration

Rigging Frames: Each contains 4 shackles, 4 castors, 4 pins, 2 slings, 4 connecting rods, and 4 sets of M12 screws and nuts), in total () PCS; Each line array should be supplied with one piece of rigging frame.
Full-Range Speakers: Each speaker includes a total of 4 front and rear connecting rods and 6 quick-release pins; in total () PCS
Subwoofer (each contains 4 connecting rods, 6 pins): in total () PCS.
Two-Core Speaker Cable (four-pin connector on both ends): One for every two subwoofers, each is 0.7m long, in total () PCS.
Four-Core Speaker Cable: One for every two full-range speakers, each is 0.35m long, in total () PCS. Four-pin connectors on both ends.
Audio Cable: One for every two full-range speakers, each at () m long, in total () PCS. (Used for connection between speaker and amplifier; optional).
User Manual × 1

Note: The above data will be filled out prior to shipment, depending on the quantity or intended usage specified in each order.

VII. Safety Instructions

To avoid electric shock, overheat, fire, radiation, explosion, mechanical risk and injury or property loss due to improper use, please read and observe the following items before use:

1. Please check if the power of the connected equipment matches with that of this product before operation. Adjust the volume to proper level during operation. Do not operate at over-power or high-volume level for extended time to avoid product malfunction or hearing impairment.
2. If there is any abnormality during use (e.g., smoke, strange odor), please kill the power switch and unplug from power source, then send the product to the local after-sales service for repair.
3. Keep this product and its accessories in a dry and ventilated area. Do not store in a humid or dusty area for extended time. Keep away from fire, rain, liquid intrusion, bumping, throwing, vibrating, or from blocking any ventilation openings, to prevent malfunction.
4. The product must, when installed on walls or ceilings, be fixed firmly in place at adequate strength to prevent from falling.
5. Please abide by safety rules during operation. Do not use the product in places prohibited by laws or regulations to avoid accident.
6. Do not disassemble or repair the product by yourself to avoid injury. If you have any questions or require any services, please contact our local after-sales service.