

■ 前言

尊敬的用户：

感谢您选购得胜ECA-F系列防水防尘线性阵列全频音箱，配套ECA-F系列防水防尘超低音音箱，为了您能够更好地了解使用本产品，建议您在使用前仔细阅读本说明书。

若存在有疑问或者您有宝贵的建议，可通过拨打得胜官方服务热线400 6828 333或微信扫描二维码关注得胜官方公众号与我们联系。



■ 产品特性

ECA-F系列防水防尘全频音箱

- ECA-F系列防水防尘全频音箱，通过IP56级防水防尘认证，可全天候使用，箱体表面喷涂聚脲漆，防水防尘防潮抗腐蚀，延长箱体使用寿命的同时满足更多的使用环境；
- 音箱采用两只低音和一只75芯压缩高音单元，频响范围宽，穿透力强；
- 音箱内置无源高频激励器，拨动开关可对高频提升0dB、+3dB、+6dB；
- 音箱内外分频设计并配置切换开关，可灵活选择系统分频方式，系统搭配更自由；
- 低音采用弹性与耐疲劳性俱佳并附特殊涂层处理的布边折环，中低频反应迅速、动态足；
- 高音采用航空材料膜片，穿透力强，高频透亮平滑、细腻耐听，细节表现力好；
- 配上特定指向性平面波导号角，能有效控制垂直指向性，多只组合近似线性声源，远距离传播衰减小；
- 磁路采用对称设计，谐波失真小；
- 分频器元件采用了损耗值较低的无氧铜空心电感、高品质聚丙烯及聚酯电容，使分频网络稳定，音质出众；
- 箱体采用梯形结构，内壁贴附吸音棉能减少驻波的产生，使中低频在听感上表现得更干净，频响上更平坦；箱体结构紧凑，采用吊挂件连接，配备插销，垂直角度-2°至10°七挡可调，可根据场地大小灵活调节辐射角度。

ECA-F系列防水防尘超低音箱

- ECA-F系列防水防尘超低音箱，通过IP56级防水防尘认证，可全天候使用，箱体表面喷涂聚脲漆，防水防尘防潮抗腐蚀，延长箱体使用寿命的同时满足更多的使用环境；
- 音箱采用18寸低音单元，配套ECA-F系列全频音箱使用；
- 低音采用弹性与耐疲劳性俱佳并附特殊涂层处理的布边折环，低频饱满，反应迅速、动态足；
- 磁路采用对称设计，谐波失真小；
- 音箱箱体结构方面，采用导相式设计，并在箱体前方增加一开口腔体结构，以达到号角的作用；导相管低频声波与扬声器正面声波叠加后，在前腔体压缩后辐射而出，提高了低频往正前方传输的声能量，并提升了低频声压和力度。

■ 技术参数

参数/型号	ECA-082F	ECA-102F	ECA-212F	ECA-1808F/ECA-1810F	ECA-182F
防水防尘等级	IP56				
功率 (AES)	900	1500	2100	1500	3000
阻抗 (内)	8Ω				4Ω
频率范围 (内)	70Hz-20kHz	60Hz-20kHz	52Hz-20kHz	38Hz-500Hz	38Hz-500Hz
低音频响 (外)	70Hz-4kHz	60Hz-4kHz	52Hz-3kHz	/	/
高音频响 (外)	700Hz-20kHz			/	/
灵敏度 (dB)	104	107	109	104	107
最大声压级	138	144	146	142	148
指向性 (H*V)	100*10	100*10	100*10	/	/
安装方式	吊挂/堆叠		吊挂	吊挂/堆叠	落地
垂直调节角度	-2°~+10°			/	/
低音	8寸×2	10寸×2	12寸×2	18寸×1	18寸×2
高音	75芯×1			/	
接线方式	2×NL4speakon (IN1+、1-, LINK1+、1-)				
箱体板材 (mm)	15			18	
表面处理	喷黑色聚酯漆				
规格 (W*D*H)	636*400*260mm	636*505*331mm	1080*450*350mm	636*570*543mm	1250*625*550mm
净重 (Kg)	22.6kg	31.5kg	43.6kg	41.2kg	71kg

注：以上数据由得胜实验室测试得到，并拥有最终解释权！

■ 适用场合

室外体育场馆、操场、文旅景区、主题公园等户外场所

■ 标准配置

音箱1台
说明书1份
防水接头2个

■ 使用说明

一、内外分频选择

1. 如需要使用外分频,需将音箱背部分频模式拨动开关拨动到左边“外置”模式下,此时需要使用4芯线连接音箱。

音箱输入端:1、2分别连接低音喇叭“+”和“-”;

3、4分别连接高音喇叭“+”和“-”。

功放输出端:均连接功放1+1-输出(功放特殊设计除外)。

2. 如需使用内分频,需将音箱背部分频模式拨动开关拨动到右边“内置”模式下,此时使用2芯线材连接音箱。

音箱输入端:1+、2-

功放输出端:1+1-

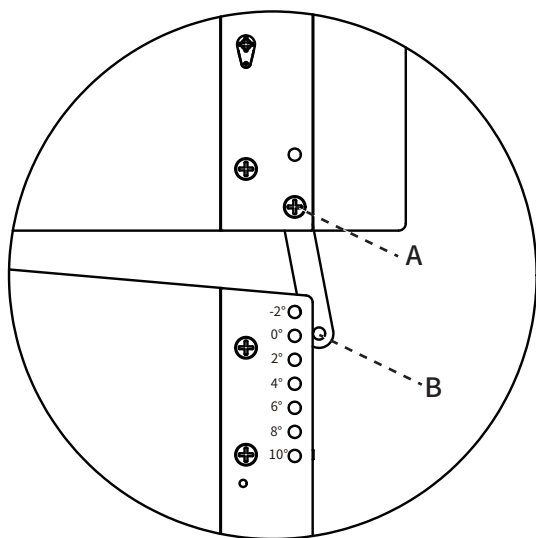
二、高频激励选择

ECA-F系列全频音箱,特有设计的无源高频激励器,可根据场地的大小需要辐射的远近,以及喜欢的音色,选择相应的高频增益,在内置分频模式下为音箱高频提供+3dB,0dB,+6dB三个挡位增益选择,拨动开关到对应刻度即可。

三、安装角度调节方式:

1. 全频音箱之间用吊挂件四点连接,其中后板吊挂件通过插销从上到下可进行垂直角度-2°至0°至10°七档可调(见下图)

2. 调节方法,由于A端是固定位置无需变动,如需要调节音箱垂直角度,只需要将B端插入相应所需角度孔位即可



■ 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。
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。
8. 该线性阵列音箱推荐最大吊挂数量为4只超低+8只全频音箱。

■ 环保说明

产品中有害物质或元素的名称及含量标识表

部件名称	有毒有害物质或元素									
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)	邻苯二甲酸二正丁酯(DBP)	邻苯二甲酸二异丁酯(DIBP)	邻苯二甲酸丁基酯(BBP)	邻苯二甲酸二(2-乙基己基)酯(DEHP)
塑料部件	○	○	○	○	○	○	○	○	○	○
金属部件	×	○	○	○	○	○	○	○	○	○
电路板组件	×	○	○	○	○	○	○	○	○	○
线缆	×	○	○	○	○	○	○	○	○	○

注1: ○表示该有害物质在该部件所有均质材料中的含量均不超过国家电子产品有害物质限制使用标准要求。
注2: ×表示该有害物质至少在该部件的某一均质材料中的含量超出国家电子产品有害物质限制使用标准要求。
注3: 以上未列出的部件,表明其有害物质含量均不超过国家电子产品有害物质限制使用标准要求。

此标志为产品的环保使用期限标志,且此环保使用期限只适用于产品正常工作的温度和湿度等条件。

■ 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,使用本产品前,请仔细阅读并遵守以下事项:

1. 使用产品时请确认所连设备与本产品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;
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,然后将产品送售后服务网点检修;
3. 本产品及配件都应放置在室内干燥通风处,请勿长期存放在潮湿、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时,请确保固定到位,防止因固定强度不足导致产品发生跌落危险;
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产品,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售后服务网点跟进处理。

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

◆ 广东得胜电声有限公司 ◆ 电话: 400-6828-333 ◆ 地址: 中国广东省惠州市博罗县龙溪街道夏寮村委会大门村复照(得胜创业园)

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,维修点将酌情收费。
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)。



■ Preface

Dear Customer,

Thank you for purchasing Takstar ECA-F Series Dustproof and Waterproof Full-Range Line Array Speaker, matched with ECA-F Series Dustproof and Waterproof Subwoofer. In order to better understand and use the product, please read this manual carefully.

If you have any questions or suggestions, please contact our local dealer.

■ Features

ECA-F Series Dustproof and Waterproof Full-Range Speaker

- IP56-certified ECA-F series waterproof and dustproof line array full-range speaker for all-weather use. Its polyurea-coated cabinet is waterproof, dustproof, moisture-proof, and anti-corrosion, extending service life and adapting to more environments.
- Equipped with two woofers and one 75-core compression tweeter for wide frequency response and strong penetration.
- Built-in passive HF exciter with a toggle switch for 0dB, +3dB, +6dB high-frequency boost.
- Switchable internal/external crossover for flexible system configuration.
- Woofers feature specially coated cloth surrounds with excellent elasticity and durability for fast, dynamic mid-low response.
- Tweeter diaphragm made of aviation-grade material for smooth, detailed, and transparent highs.
- Equipped with a directional plane waveguide horn to control vertical directivity; multiple units combine to form a near-linear sound source with reduced long-distance attenuation.
- Symmetrical magnetic circuit design for low harmonic distortion.
- Crossover uses low-loss oxygen-free copper air-core inductors and high-quality PP/PET capacitors for stable performance and superb sound.
- Trapezoidal cabinet with internal acoustic foam reduces standing waves for clean mid-bass and flat frequency response; compact cabinet with flying hardware and pins, vertical angle adjustable in 7 steps from -2° to 10° for flexible radiation control.

ECA-F Series Dustproof and Waterproof Subwoofer

- IP56-certified ECA-F series waterproof and dustproof subwoofer for all-weather use. Its polyurea-coated cabinet is waterproof, dustproof, moisture-proof, and anti-corrosion, extending service life and adapting to more environments.
- Features one 18" woofer, designed for use with ECA-F series full-range speaker.
- Woofer uses specially coated cloth surrounds with excellent elasticity and durability for full, fast, and dynamic low frequencies.
- Symmetrical magnetic circuit design ensures low harmonic distortion.
- Employs a bass-reflex design with an additional front chamber opening that functions as a horn; the combined output of the port and driver is compressed and radiated through the front chamber, enhancing forward energy transmission and improving low-frequency SPL and impact.

■ Specifications

Parameters/Model	ECA-082F	ECA-102F	ECA-212F	ECA-1808F/ECA-1810F	ECA-182F
IP Rating	IP56				
Power (AES)	900	1500	2100	1500	3000
Impedance (Internal)	8Ω				4Ω
Frequency Range (Internal)	70Hz-20kHz	65Hz-20kHz	52Hz-20kHz	38Hz-500Hz	35Hz-500Hz
LF Response (External)	70Hz-4kHz	60Hz-4kHz	52Hz-3kHz	/	/
HF Response (External)	700Hz-20kHz			/	/
Sensitivity (dB)	104	107	109	104	107
Maximum SPL	138	144	146	142	148
Directivity (H×V)	100°×10°	100°×10°	100°×10°	/	/
Mounting	Flying/Stacking		Flying	Flying/Stacking	Floor
Vertical Angle	-2° to +10°			/	/
Woofer	8"×2	10"×2	12"×2	18"×1	18"×2
Tweeter	75-core×1			/	
Wiring Method	2×NL4 speakon (IN: 1+, 1-; LINK: 1+, 1-)				
Cabinet Material (mm)	15			18	
Surface Finish	Black polyester paint				
Dimensions (W×D×H)	636*400*260mm	636*505*331mm	1080*450*350mm	636*570*543mm	1250*625*550mm
Net Weight (kg)	22.6kg	31.5kg	43.6kg	41.2kg	71kg

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

■ Applications

Suitable for outdoor venues such as stadiums, playgrounds, cultural tourism scenic spots, and theme parks.

■ Package Contents

- 1 × Speaker
- 1 × User Manual
- 2 × Waterproof Connectors

■ Operating Instructions

I. Internal/External Crossover Selection

1. For external crossover: slide the crossover switch on the rear panel to the left "External" position. Use a 4-core cable to connect the speaker. Speaker input: terminals 1 and 2 connect to woofer +/-; terminals 3 and 4 connect to tweeter +/-.

Amplifier output: connect to amplifier 1+/1- (except specially designed amplifiers).

2. For internal crossover: slide the crossover switch to the right "Internal" position. Use a 2-core cable to connect the speaker.

Speaker input: 1+/2-

Amplifier output: 1+/1-

II. High Frequency Boost Selection

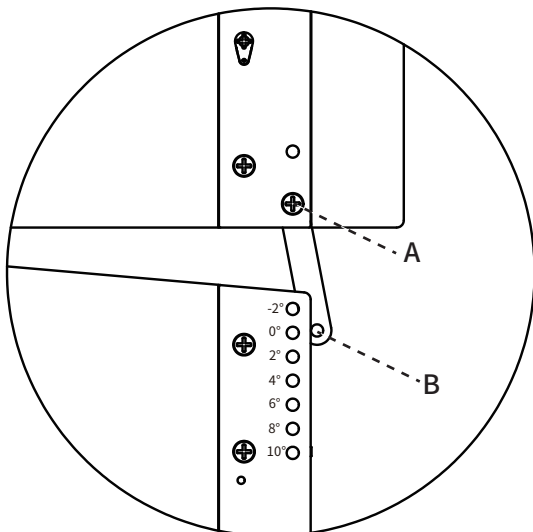
ECA-F series full range speakers are equipped with a dedicated passive high frequency exciter. You may select the appropriate high frequency gain according to venue size, radiation distance, and tonal preference. In Internal Crossover mode, three gain settings are available:

+3dB/0dB/+6dB. Slide the switch to the corresponding mark to select.

III. Installation Angle Adjustment

1. Full-range speakers are connected at four points using hanging brackets. The rear hanging bracket allows vertical angle adjustment from -2° to 0° to 10° in seven steps via a pin (see diagram below).

2. Adjustment method: End A is fixed and requires no movement. To adjust the vertical angle, simply insert End B into the corresponding angle hole.



■ Cautions

1. Match amplifier power and impedance to speakers to prevent equipment damage or degraded sound quality.
2. For flown or inverted stage installation, adjust full-range speakers to required curvature.
3. Speakers must be secured firmly in place by qualified installers.
4. Handle speakers carefully to prevent damage during transport.
5. Wiring and setup should be performed by qualified technicians.
6. System sound quality depends on the technician's technical expertise and musical appreciation.
7. Secure pins and fasteners after use to prevent loose or lost parts.
8. The recommended maximum flown configuration is 4 subwoofers + 8 full-range speakers.

■ Safety Instructions

To avoid electric shock, overheating, 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.
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.