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**TAKSTAR ESA-036 Line Array Speaker** 



### Introduction

Introducing the ESA-036 line array speaker, paired with the ESA-151 subwoofer. Designed for amplification scenarios such as medium to small- to small-sized banquet halls, multi-purpose halls, sports arenas, and large conference rooms, 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, this linear array design reduces attenuation to just 3dB, making it suitable for large venues with many audiences. Read this manual thoroughly before use to have a better understanding of the product. If you have any questions or suggestions, please contact our local sales outlet.

#### **Features**

#### **ESA-036**

- Composed of six 3" paper cone woofers + six 3" aluminum-magnesium alloy tweeters.
- Fatigue-resistant elastic woofer spider surround for quick response and wide dynamics.
- Aluminum-magnesium tweeter diaphragm for bright, smooth, detailed highs.
- Tweeter array for controlled vertical dispersion and near-linear summation over

distance.

- Symmetrical design magnetic circuit results in low harmonic distortion.
- Low-loss crossover capacitors (CBB/PET) and inductors (OFC air-core) for stable sound quality.
- Trapezoidal enclosure with acoustic batting reduces standing waves for cleaner midrange.
- Compact and adjustably mounted via flybars and latches from -2° to 0° to 10° in 7 steps for optimized venue coverage.

#### **ESA-151**

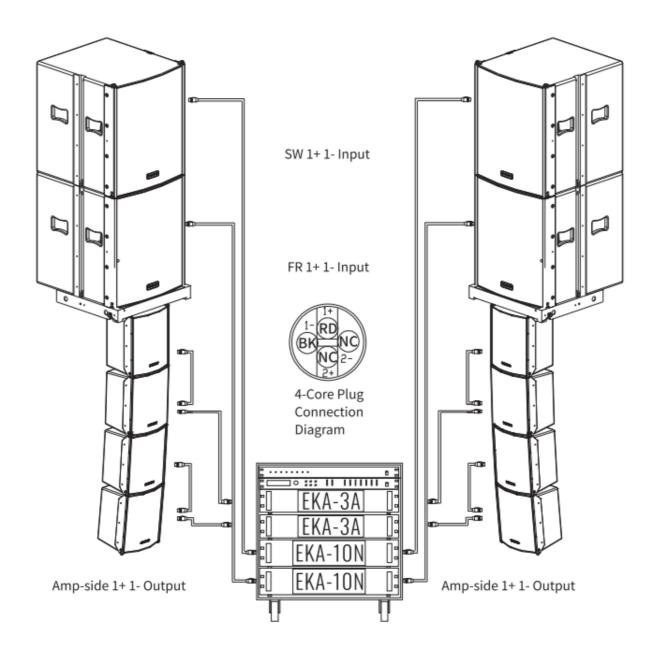
- Single 15" paper cone low-frequency driver with 100mm voice coil.
- Cone with fatigue-resistant cloth surround delivers deep, powerful lows.
- Symmetrical design magnetic circuit results in low harmonic distortion.
- Long excursion voice coil provides high transducer efficiency.
- Reflex port design with precise acoustic modeling ensures high bass efficiency and response times.
- Compact enclosure connects easily with aluminum flybars for flexibility in determining the number of units based on venue size.

### **Applications**

Medium to small-sized banquet halls, multi-purpose halls, sports arenas, and large conference rooms.

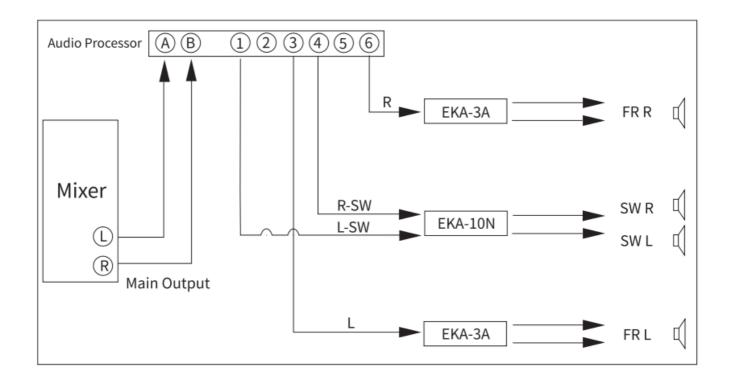
# **Operating Instructions**

Wiring Speaker & Power Amp

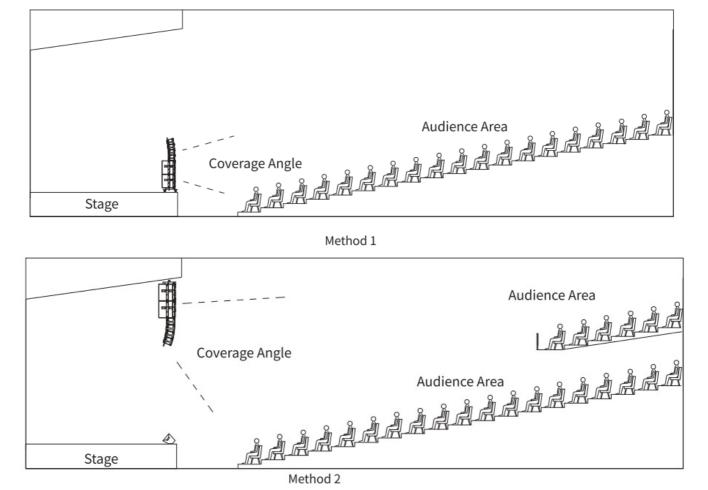


- 1. Left and right channel each consists of two subwoofers (80 impedance each) and four full-range line array speakers.
- 2. Connect two full-range speakers (120 impedance each) in parallel using one cable for a combined impedance of 60.
- 3. Use two 300W dual-channel amplifiers (set to bridged mono mode), and connect a pair of full-range speakers to one channel of the amplifier.
- 4. Connect one subwoofer speaker to one channel of two 1000W dual-channel amplifiers (set to bridged mono mode).
- 5. Connect the subwoofers using a two-core speaker cable, using the red wire for positive (1+) and the black wire for negative (1-).
- 6. Connect the full-range speakers using a two-core speaker cable, using the red wire for positive (1+) and the black wire for negative (1-).

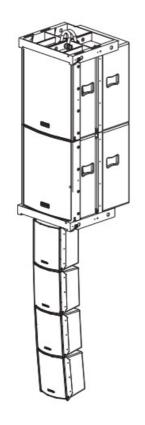
# **System Connection Diagram**

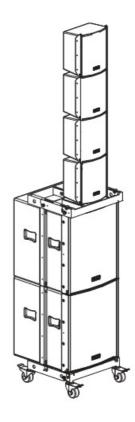


1. Coverage angles for two types of installation:



2. Rigging and caster wheel mounting:





#### **Cautions**

- 1. To ensure safe suspension, do not exceed a maximum of 16 full-range speakers on one side.
- 2. Ensure proper matching of power and impedance between the power amplifier and speakers. Mismatched combinations can result in equipment damage or poor sound quality.
- 3. Installation of the speakers should be carried out by professional technicians, ensuring secure fixation and placement in areas that are not easily accessible.
- 4. During use, position the speakers with the tweeter horn facing the audience area to achieve an optimal sound experience.
- 5. Handle the speakers with care during transportation to prevent impact or damage.
- 6. After use, secure the locking pins and connecting rods on the speakers to prevent loss.

### **Specifications**

| Туре           | Item              | SW Subwoofer  | MFLF Woofer         | HF Tweeter |  |  |  |
|----------------|-------------------|---|---------------------|------------|--|--|--|
| Driver<br>Spec | Outer Dia.        | 15"   | 3"                  | 1"         |  |  |  |
|                | Model             | ESA-151   | ESA-0               | 36         |  |  |  |
|                | Impedance         | 8Ω  | 12Ω                 |            |  |  |  |
|                | Freq.Response     | 60Hz-500Hz  | 120Hz-20kHz         |            |  |  |  |
|                | Crossover Mode    | Null  | Passive two-way     |            |  |  |  |
|                | Crossover Point   | Null  | 1600Hz              |            |  |  |  |
|                | Sensitivity       | 103dB   | 98dB                |            |  |  |  |
|                | Max SPL           | 133dB   | 122dB               |            |  |  |  |
| Speaker        | Rated Power (AES) | 1000W 240W  |                     |            |  |  |  |
|                | Directivity       | Null H110°×V10°   |                     |            |  |  |  |
|                | Crossover Range   | 60Hz-200Hz 145Hz-20kHz  |                     |            |  |  |  |
|                | External Filter   | Low Pass BW-24, High Pass BYPASS  Low Pass BW-24, High Pass BYPASS            |                     |            |  |  |  |
|                | Finish            | Black Polyurethane Paint  |                     |            |  |  |  |
|                | Installation      | Suspension Bracket Suspension Bracket, -2°-0°-10° Vertical Angle Adjust (7 St |                     |            |  |  |  |
|                | Panel             | 18mm Plywood  | 12mm Plywood        |            |  |  |  |
|                | Dimensions        | 462*530*545mm (W*D*H)   | 245*187*295 (W*D*H) |            |  |  |  |
|                | Net Weight        | About 29.5KG  | About 7.5KG         |            |  |  |  |
|                | Wiring Method     | 2PCS,IN:1+/1-   | 2PCS,IN:1+/1-       |            |  |  |  |
|                | Audio Cable       | Two-Core Cable  | Two-Core            | e Cable    |  |  |  |

**Note:** the above data are measured by Takstar Laboratory, which has the final interpretation right!

# **Package Contents**

**Rigging Frame** (each contains 4 shackles, 2 slings, 4 connecting rods, 4 pins for ESA-151, and 3 pins for ESA-036); each line of speaker array should be supplied with two rigging frame.

Full-Range Speaker (each speaker includes 4 connecting rods and 3 pins)

**Subwoofer** (each contains 4 front/rear connecting rods and 4 pins)

**User Manual** (one in each standalone packaging)

# **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 that of this product before operation.
- 2. Adjust the volume to the proper level during operation. Do not operate at over-power or high-volume levels for extended periods to avoid product malfunction or hearing

impairment.

- 3. If there is any abnormality during use (e.g., smoke, strange odor), please turn off the power switch and unplug from the power source, then send the product to the local after-sales service for repair.
- 4. Keep this product and its accessories in a dry and ventilated area. Do not store in a humid or dusty area for an extended time.
- 5. Keep away from fire, rain, liquid intrusion, bumping, throwing, vibrating, or blocking any ventilation openings, to prevent malfunction.
- 6. The product must, when installed on walls or ceilings, be fixed firmly in place at adequate strength to prevent it from falling.
- 7. Please abide by safety rules during operation. Do not use the product in places prohibited by laws or regulations to avoid accident.
- 8. 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.

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# **Documents / Resources**



TAKSTAR ESA-036 Line Array Speaker [pdf] Instruction Manual ESA-036, ESA-036 Line Array Speaker, Line Array Speaker, Array Speaker, Speaker

### References

User Manual

Array Speaker, ESA-036, ESA-036 Line Array Speaker, Line Array Speaker, speaker,

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