



# E 524D

XY Stereo Electret Microphone

# User Guide



## Specifications

### Type

X/Y stereo microphone

### Element

Pressure gradient,  
FET preamplifier

### Capsule

2 x 16mm black electret

### Polar pattern

Cardioid per capsule (Figure 1)

### Frequency response

20 to 20,000 Hz (Figure 2)

### Sensitivity

(at 1,000 Hz Open Circuit Voltage)  
-48dBV/Pa (4.0mV/Pa) ±3dB  
1Pa=94dB SPL

### Rated impedance

200Ω

### Minimum load impedance

1,000Ω

### Equivalent noise level

(A-weighted)

Less than 21dB (IEC/DIN 651)

### Max. SPL (1 kΩ load)

127dB SPL (THD ≤ 0.5% 1kHz)

### Dynamic range (1 kΩ Load)

106dB

### Signal-to-noise ratio

73 dB

### Phantom power supply

9 to 48VDC, 1.5 mA

### Battery

1.5V AA/UM3 · 1.5 mA (alkaline  
battery, 720 hours or more)

### Connector

5 pin male XLR type

### Finish

Metal construction with gray  
painted finish

### Environmental conditions

The E524D operates between  
-10°C to +50°C (14°F to 122°F)  
with relative humidity between 0  
to 95%.

### Dimensions

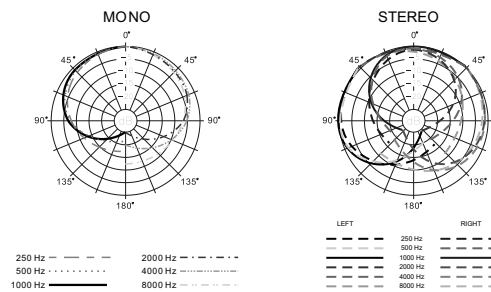
Figure 3

### Net weight

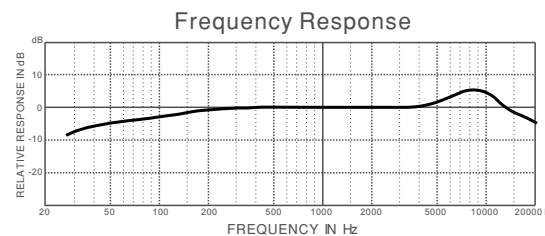
340g (12.00oz.)

### RoHS

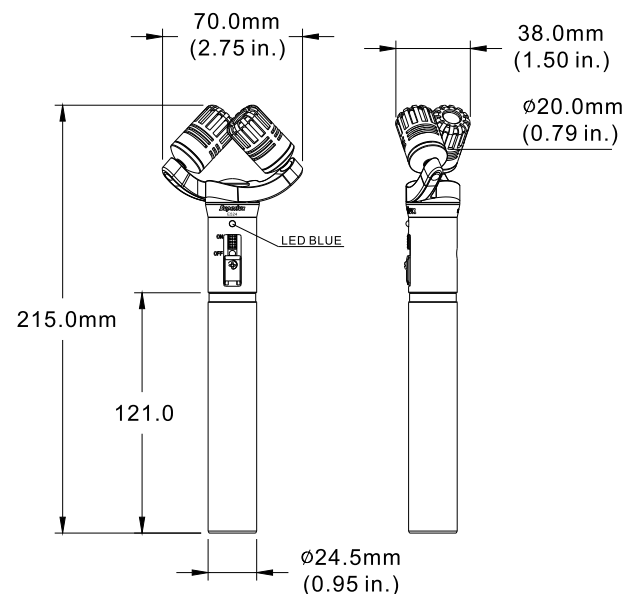
The E524D including the product  
and packages follow the  
instruction of EU 2002/95/EC and  
comply to RoHS.



TYPICAL POLAR PATTERN (Figure 1)



TYPICAL FREQUENCY RESPONSE (Figure 2)



Dimensions (Figure 3)

The E524D incorporating 2 electret condenser capsules in an XY 90° arrangement. This popular arrangement provides easy to achieve stereo Hi-Fi result. Suitable for choir, orchestra, drum sets, solo instrument or chamber music recording, with good background and spacious capture.

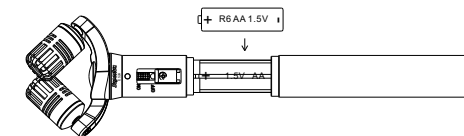
Cardioid left and right channels emphasis on-axis sound and suppress rear bound sound that brings the on-axis performance to the audience and captures minimum direct sound from audience seats.

Matched capsules is vital for stereo microphone, XY arrangement picks up most sound around axis that demands uniform polar response across frequency bands in order to reproducing nature sound. The matched capsules on E524D enable the user to record nature stereo sound easily.

The E524D's low inherent noise and high sound pressure level allows to record in very quiet background noise and sustain very high playing level. The power source can be internal battery or external phantom power. The package including an XLR5F to 2 XLR3M cable that connects both channels to the recording device or mixer. Phantom power to both channel shall be turn-on at the same time. The E524D works with 9 to 48VDC. The internal battery is ok to leave it in the unit when using phantom power. The battery can be a automatic back-up power for phantom power. Phantom power provides better operating condition, and user don't need to worry the battery capacity.

The 1.5V battery is an extremely convenient tool for field assignments, with the same frequency response and same high SPL ability.

A blue LED power indicator shows the power condition, it will flash once during power-up. When the microphone doesn't work or signal become weaker, it is the time to replace with a new battery. Please insert the battery according to the polarity indication. When the microphone is not in use, please switch off the power switch to save power. If the microphone will not be used for an extended period, please remove the battery to prevent leakage damage. A good quality



When use the microphone at outdoor, be careful excess handling noise and wind noise. Same as other condenser directional microphone, E524D is sensitive to wind, so please place the included foam wind screen to reduce the wind noise when use the microphone exposed to windy environment. To reduce shock noise, please refer to the extended selections of accessories from Superlux.

## Applications

- For drum sets, place the E524D above the drummer's head and pointing toward the drums. Very easy to achieve stereo drum pick-up.
- For recording choir in a studio or stage. Please the microphone at the middle of the performers, arrange the distance to be as uniform as possible. Please refer to the "Consideration of distance" for future set-up reference.
- For recording piano, place the E524D to the opening of the piano and move around for your sweet spot.
- For duet, trio, quartet, quintet... place the microphone at the center and equal distance with direct view to all performers.

## Supplied accessories

5-meter long, 5 conductors under two shields, vinyl-jacketed, stereo cable with 5-pin XLR-F-type connector at microphone end, two 3-pin XLR-M-type connectors at output end

HM38 Mic clip

DS01 Table stand

S25 Wind screen

Mic pouch soft leather



Mic cable  
XLR5F TO 2 XLR3M

HM38  
Mic clip

DS01  
Table stand

S25  
Wind screen

Mic pouch

## Related accessories

Power supply ----- PS2A  
Table stand ----- HM6  
Instrument boom stand ----- MS104

## Knowing your microphone

Superlux provides variety selection of microphones for professionals and amateurs. To know your microphone is the first step to successful result.

### Type of transducer



#### Condenser

Extremely light weight diaphragm, very sensitive to sound. Very small versions available for hiding applications. High performance condenser microphones are regarded as standard equipment of recording studios for extreme detail capturing. Operates with power, such as phantom or battery.

### Powering microphone

Condenser microphones work with power. Professional standard is 48VDC phantom power. Some microphones work with lower voltage as low as 1.5VDC, such as battery power model. E524D work with 9 to 48VDC phantom only and 1.5VDC battery. Please make sure your sound system provide adequate power to the microphone.

### About Frequency Response

#### Flat

Suitable for working at controlled environment, or for acoustic measurements. Although people pursuit flatness, but for none-professionals, it is a challenge to makes it works as expectation.

#### Popular curve response

Based on years of practical experience of pro users. There are curves to be build for various applications, so that it is very simple to use the microphone for the purpose. Limiting bandwidth, and emphasizing are typical skill.

#### Variable response

Incorporating switchable filters to eliminates interference, such as sub-sonic filter to cut air-conditioner and floor vibrations. And allows full flat when used in controlled environment.

## Directivity

Select or set the directivity of your microphone for stereo recording, for various music instrument, vocal, speech, and environmental sound pick-up. Pair of spaced omni for A/B stereo, pair of near coincident cardioid for ORTF, and pair of coincident XY for Blumlein stereo.



#### Cardioid

Picks up most signal on axis. Rejects side and picks up least to the back. Suitable for live sound re-inforcement. Apparent proximity effect and most singer likes to take this bass boost advantages which is not good for speech.

### Distance to source

Close miking or distant miking sound very differently. Vocal recording or live performance practice close miking mostly. Suitable proximity effect is one desired target, and lower feedback problem is another factor for live sound application.

While distant miking is common practice for recording, especially stereo pair recording with large group of performers, such as orchestra or choir.

Distant miking generally picks up less bass section with pressure gradient type of microphone (cardioid, figure-8, shotgun...) due to acoustic nature and lack of proximity effects.

Rich bass with distant miking can be recorded with pressure type of microphone (Omni), which performs the same frequency response with close or distant pick-up.

## Mounting the microphone

Pressure gradient microphone is very sensitive to vibration. Suitable shock mount for high performance microphone is necessary for extreme low noise recording. Sturdy stand can set the microphone exactly at the sweet spot and keep it there. Choose heavy duty microphone stand for studio condenser microphone which weights much more than handle microphone.

Superlux provides wide range of microphone stands for various demands. Big Foot Willie is specially developed for large condenser microphones that able to support 2 large microphones with stereo bracket for single point stereo recording.

Extension foot on all the 'E' versions serve to mount heavy studio microphone in limit space live sound applications.

## Maintainence

Condenser microphone shall be kept in low humidity environment for best sound performance. Store the condenser microphones in airconditioned room or dehumidifier to keep away form moisture. Clean air is another important factor. Keep away from smoking environment to avoid tar residuals.

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