



E 3 2 3
E 3 2 4

Boundary Microphone

User Guide

Specifications

Type

Back Electret
Condenser Microphone

Polar pattern

E323: Half-Cardioid (fig. 1)
E324: Half-Omnidirectional (fig. 2)

Frequency response

60 to 14,000 Hz (Figure 3, 4)

Sensitivity

(at 1,000 Hz Open Circuit Voltage)
E323: -35dBV/Pa (17.8mV/Pa)
E324: -30dBV/Pa (32mV/Pa)
1Pa=94dB SPL

Rated impedance

200Ω

Minimum load impedance

1,000Ω

Equivalent noise level

(A-weighted)
Less than 26dB

Max. SPL (1 kΩ load)

132dB SPL (THD ≤ 1% 1kHz)

Dynamic range at 1 kΩ Load

106dB

Power supply

12 to 48 Vdc phantom power

Current consumption

< 2mA

Polarity

Pin 2 output positive voltage
(related to pin 3) when diaphragm
receives positive pressure.
(Diaphragm moving inward)

Connector

3 pin male XLR type

Finish

E323/W: Durable white paint
E323/B: Durable black paint
E324/W: Durable white paint
E324/B: Durable black paint

Environmental conditions

The E323 and E324 operates
between -10°C to +50°C (14°F
to 122°F) with relative humidity
between 0 to 95%.

Dimensions

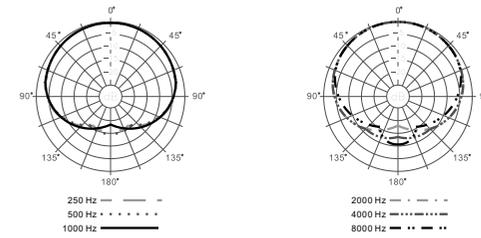
Figure 5

Net weight

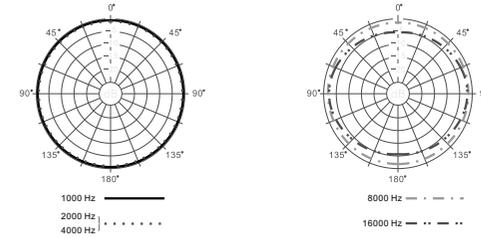
65 grams (2.3 oz.)

RoHS

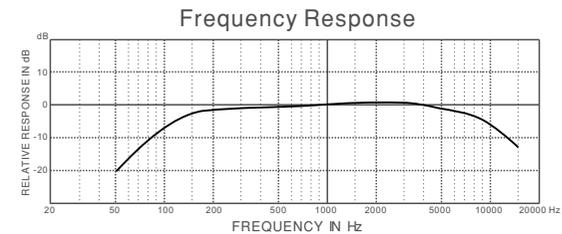
The E323 and E324, including the
product and packages follow the
instruction of EU 2002/95/EC and
comply to RoHS.



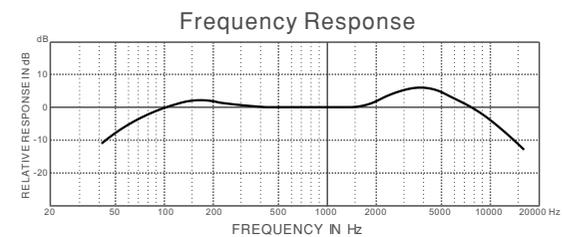
E323
TYPICAL POLAR PATTERN (Figure 1)



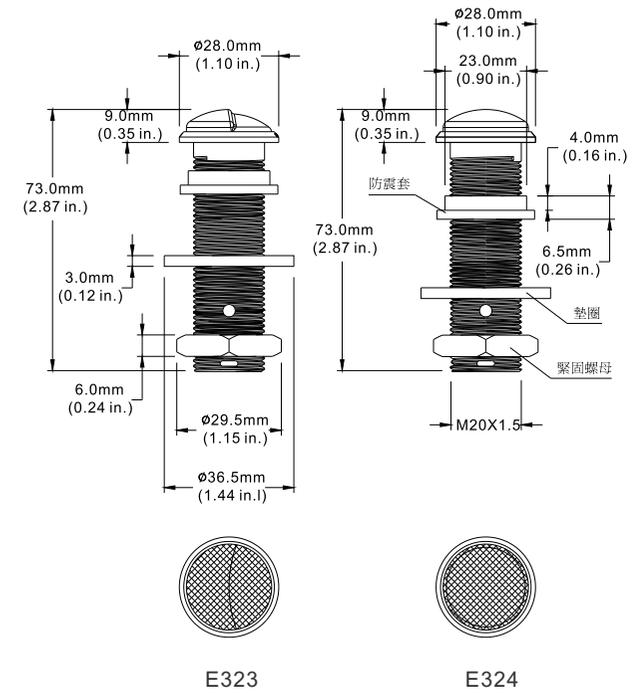
E324
TYPICAL POLAR PATTERN (Figure 2)



E323
TYPICAL FREQUENCY RESPONSE (Figure 3)



E324
TYPICAL FREQUENCY RESPONSE (Figure 4)



E323 E324

Dimensions (Figure 5)

The E323, E324 compact size, flush mount boundary microphones are designed for flat surface mounting. Such as tables, walls, or ceiling. Suitable for professional recording, video conference, television productions...etc. applications.

The E323 is a half cardioids, uni-directional microphone for live sound applications, or for reducing un-wanted environment noise.

The E324 is omni directional microphone that picks up all sound.

These microphones incorporating RF shielding, and low impedance, balanced output that works with standard 9~52VDC phantom power.

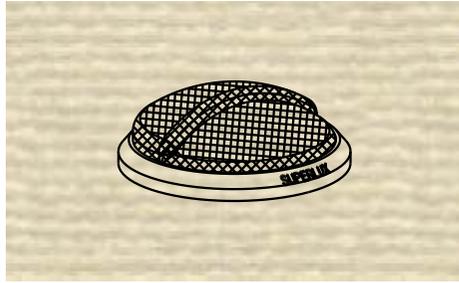
Sturdy metal and double layer mesh grill allows the microphones to be used in challenging situations.

Pair with vibration reduction rubber that reducing the structure bound interference.

Finished with none gloss paintings, black or white.

Mounting hole shall be 23.5mm diameter for mounting with vibration reduction rubber ring. For mounting without the ring, the diameter shall be 20.5mm. Maximum mounting thickness is 55mm.

Aim the triangle pointer on the E323 toward the sound source. This pointer indicating the axial direction.



E323 on a conference table



E324 mounted onto the ceiling

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. E323/324 work with 12~48VDC phantom only. 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 pursue 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.



Omni

Equal sensitivity to all direction, so that the microphone doesn't need to pointing toward the sound source. Low handling and wind noise. Welcome by news gathering, and music recording applications.

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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