

# E 322

## Gooseneck Condenser Microphone

# User Guide



## Specifications

### Type

Back Electret  
Condenser Microphone

### Element

Pressure gradient, FET preamplifier

### Polar pattern

Unidirectional (Cardioid), rotationally symmetrical about microphone axis, uniform with frequency. (Figure 1)

### Frequency response

40 to 20,000 Hz (Figure 2)

### Sensitivity

(at 1,000 Hz Open Circuit Voltage)  
-40 dBV/Pa (10 mV/Pa)  
1Pa=94dB SPL

### Rated impedance

600Ω

### Minimum load impedance

2,000Ω

### Equivalent noise level

(A-weighted)  
Less than 24dB (IEC/DIN 651)

### Max. SPL (1 kΩ load)

127dB SPL (THD ≤ 1% 1kHz)

### Dynamic range (1kΩ load)

103dB

### Low frequency roll-off

100 Hz, 12dB/OCT

### Power supply

9 to 48 VDC phantom power

### Current consumption

4mA

### Polarity

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

### Connector

Integral 3 pin male XLR type

### Environmental conditions

The E322 operates between -10°C to +50°C (14°F to 122°F) with relative humidity between 0 to 95%.

### Finish

E322L/W: white finish  
E322L/B: black finish  
E322M/W: white finish  
E322M/B: black finish

### Dimensions

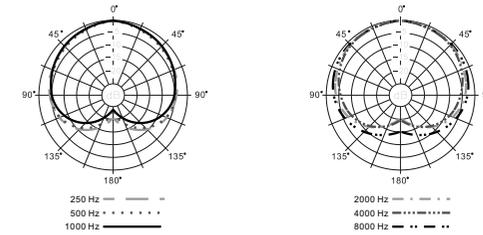
Figure 3

### Net weight

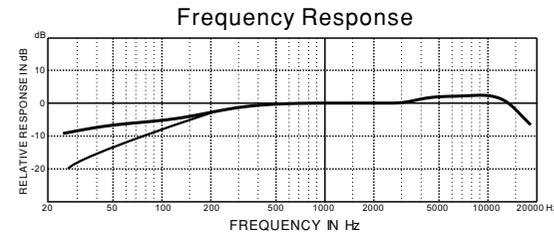
E322L: 220 grams (7.76 oz)  
E322M: 160 grams (5.64 oz)

### RoHS

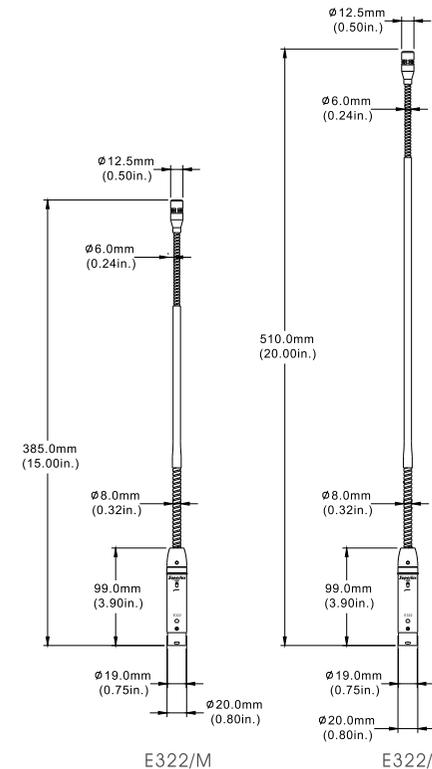
The E322 including the product and packages follow the instruction of EU 2002/95/EC and comply to RoHS.



TYPICAL POLAR PATTERN (Figure 1)



TYPICAL FREQUENCY RESPONSE (Figure 2)



Dimensions (Figure3)

## Description

The E322 is a miniature condenser capsule, gooseneck microphone for conference applications. Double bending for easy position setting. High quality electronics with integrated limiter for conference purpose designed frequency response. Cardioid pattern for high gain before feedback. The E32 is suitable for podium, speech, conference hall etc.

The E322 gooseneck structure is special treated to reduce the bending noise to minimum. Sleek stylish for modern decor style. 2 length versions matched with black or white finish to various demands.

External accessible low cut filter to filter out un-wanted noise.

Standard supplied accessories for popular applications and mounting. Optional accessories for various applications.

## Features

- Uni-directional, reducing feedback and environmental noise.
- Wide and uniform frequency response, large dynamic range for clean vocal pick-up.
- Balanced output, for long cable connection without interference
- 2 length versions, double bending sections.
- Repeating bending to various angle without mechanical noise, and with no rebound.
- Miniature capsule maintaining minimum visual blocking.
- Supplied with standard conference mounting flange and wind screen.

## Supplied accessories

Standard base ----- HM22  
Anti-shock cover with lock-in device ----- HM23  
Foam windshield ----- S21F

## Optional accessories

XLRF embedding socket with naked cable ends ----- HM24  
XLR3F fixing base ----- GT6F  
Gooseneck microphone base ----- DS002



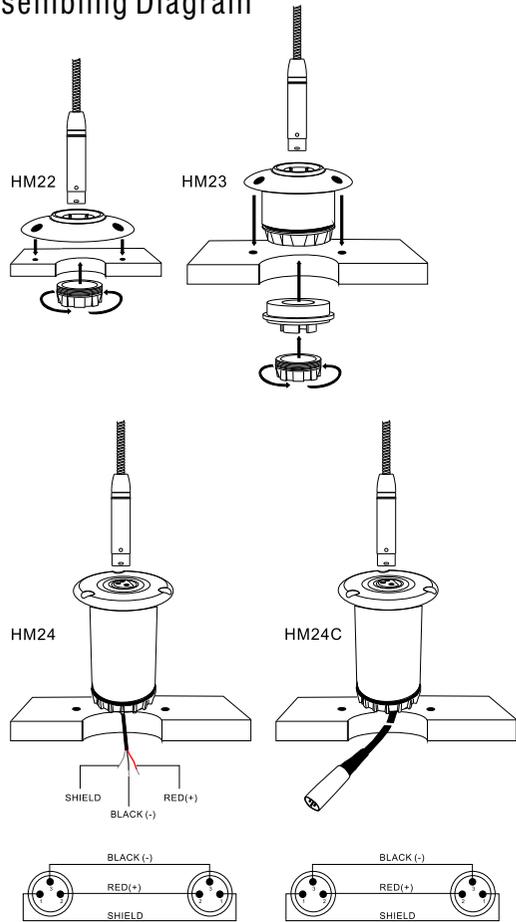
HM22 Standard base

HM23 Anti-shock cover with lock-in device

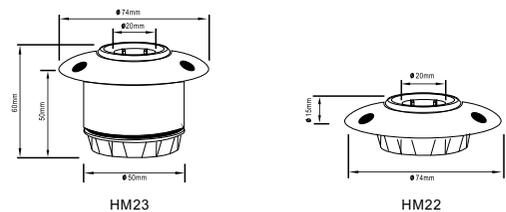
S21F Foam windshield



## Assembling Diagram



## Assemble dimensions



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## 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. E322 work with 9~48VDC 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 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.

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## Directivity



#### 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.

### Using condenser gooseneck microphone

Uni-directional condenser microphone features very high sensitivity at -40 dBV/Pa for high intelligible speech application. Reduced off-axis sensitivity to keep lower background noise and maximized on-axis sensitivity for highest gain before feedback in live sound system.

User shall keep 15 cm to 40 cm from microphone, and maintain average speech level. Up close will result excessive bass due to proximity effect which interfere intelligibility. Maintain their speaking in front of the microphone for high gain before feedback.

Quality conference microphone incorporating built-in limiter to prevent distortion due to exciting user or close up speaker.

Choices of gooseneck for various demands. For aesthetic, single or double bend goosenecks are better choice over fully bend design. Low bending noise is another important feature of good gooseneck microphone. User shall not bend the gooseneck to hard or rush which may generate excessive noise which disturbs the audience.

In most cases, each attendee has his own microphone or share a microphone every 2 attendee. Although there are numbers of microphones in one space which is not a good criterion for feedback problem, system operator shall keep as less turn-on microphone as possible for best result. Auto-mixer is a good choice for multiple microphones installation which limit the number of turn-on microphone at the one time. Advanced auto mixer features dynamic threshold and auto gain reduction according to the number of turn-on microphones to keep the same system gain.

Wind screen is vital for windy environment such as outdoor or close to air-conditioning fan.

Keep capsule and wind screen clean for good audio performance.

### 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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