



E 105  
E 108

Headset Condenser Microphone

# User Guide



## Specifications

### Type

Back electret condenser

### Element

Pressure gradient,  
FET preamplifier.

### Polar pattern

E105: Cardioid (Figure 1)

E108: Figure 8, Noise-Canceling  
(Figure 2)

### Frequency response

80 to 18,000 Hz (Figure 3, 4)

### Sensitivity (at 3V 2.2K)

E105 : -46dBV/Pa (5.0mV/Pa)

E108 : -44dBV/Pa (6.3mV/Pa)

\*. 1Pa=94dB SPL

### Rated impedance

Phantom: 200Ω (PS418S test)

Battery: 600Ω (PS418D test)

### Minimum load impedance

Phantom: 1,000Ω (PS418S test)

Battery: 2,000Ω (PS418D test)

### Max. SPL (1,000Ω load)

E105

Phantom: 139dB (PS418S test)

Battery: 129dB (PS418D test)

E108

Phantom: 137dB (PS418S test)

Battery: 127dB (PS418D test)

\*. THD ≤ 1% 1kHz

### Equivalent noise level

(A-weighted)

Less than 23dB (IEC/DIN 651)

### Signal-to-noise ratio

(1,000 Hz at 1 Pa)

71 dB

### Dynamic range(1,000Ω load)

E105

Phantom: 116dB (PS418S test)

Battery: 106dB (PS418D test)

E108

Phantom: 114dB (PS418S test)

Battery: 104dB (PS418D test)

### Polarity

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

### Power supply

E105/E108: 3.5mm stereo plug  
wired as mono output.

E105TQG/E108TQG:

Tini Q-G (TA4F) socket

E105XLR/E108XLR:

Phantom 9 to 52V DC, 3.5mA

E105DXLR/E108DXLR:

Phantom 9 to 52V DC, 3.5mA;

Battery 1.5VDC (AA), 1200 hrs

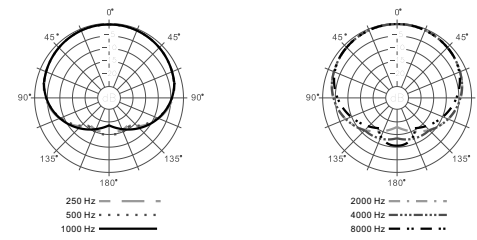
typical (alkaline).

### Environmental conditions

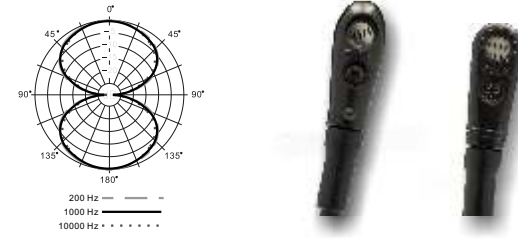
The E105 and E108 operates  
between -10°C to +50°C (14°F  
to 122°F) with relative humidity  
between 0 to 95%.

### Net weight

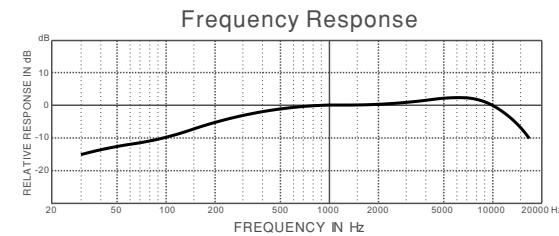
30.0 grams (1.05 oz),  
accessories excluded.



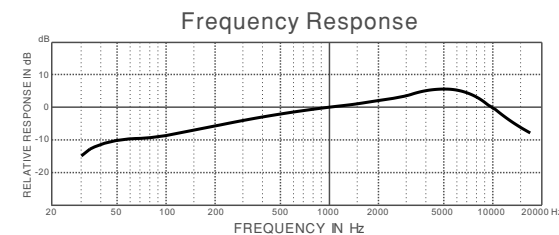
E10A  
TYPICAL POLAR PATTERN (Figure 1)



E10B  
TYPICAL POLAR PATTERN (Figure 2)



E105  
TYPICAL FREQUENCY RESPONSE (Figure 3)



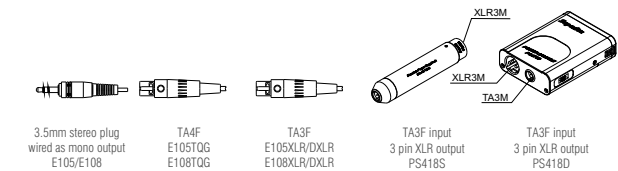
E108  
TYPICAL FREQUENCY RESPONSE (Figure 4)

## Description

The E105/E108 are back electrets condenser, head worn microphones. They were designed for close-up speech for constant distance sound pick up such as sports, interviews, live stage and personal PA package sound reinforcements. Newly design wiring for sleek and low profile appearance and long time wearing. Elastic spring wire to fit all head sizes, an excellent way for the sporty users..

## Features

1. High quality head worn microphone for hands free applications.
2. The E105 features cardioids polar pattern to reject side and rear sound that increase gain before feedback.
3. The E108 features figure of 8 polar pattern with the same sensitivities of both side and rejects sound from the side or distant sound (ambience).
4. Scratch resist and stainless low profile design.
5. 1.5 meters cable.
6. None suffix: Stereo 3.5mm plug wired as mono.
7. TQG suffix: TA4F plug for wireless system.
8. XLR suffix: TA3F plug with PS418S power adapter for phantom power operation.
9. DXLR suffix: TA3F plug with PS418D power adapter for phantom and battery power operation.
10. Microphone assembly, accessories, and packaging complied to EU 2002/95/EC code and complies to RoHS.



3.5mm stereo plug  
wired as mono output  
E105/E108

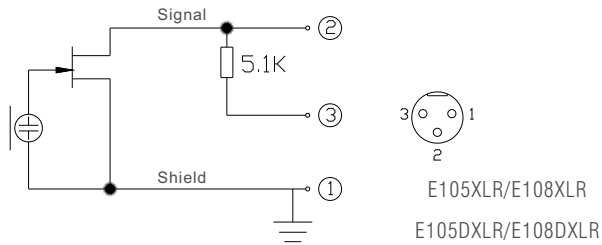
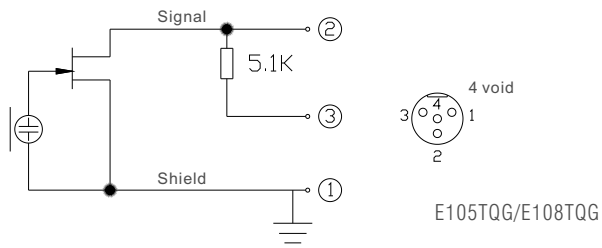
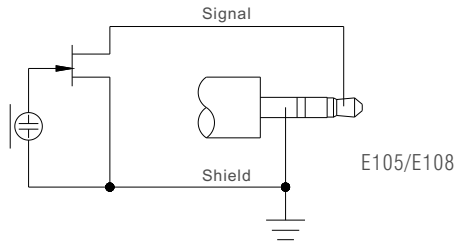
TA4F  
E105TQG  
E108TQG

TA3F  
E105XLR/DXLR  
E108XLR/DXLR

TA3F input  
3 pin XLR output  
PS418S

TA3F input  
3 pin XLR output  
PS418D

## Wiring illustration



## Supplied accessories

- Pop screen ----- S23  
1.5V alkaline battery(DXLR) ----- AA (UM3)



S23  
Pop screen



AA(UM3)  
1.5V alkaline battery

## 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. E105/E108 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 non-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



#### 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.



#### Figure 8, bi-directional

Equal sensitive to both ends, and rejects the sides. Good to noisy environment to reject distant noise and low frequency. Also a good choice for stereo recordings, such as Blumlein. Typical pressure gradient characteristic.

### 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.

**Superlux®**

marketing and sales

Superlux, Taiwan

+886-2-26931323

sales@superlux.com.tw

manufacturing & logistics.

Superlux Enterprise

Development(Shanghai)Co., Ltd.

superlux.tw