Superlux®
JUST PLAY IT

E 10A
E 10B

Headset Condenser Microphone

User Guide

GOANG-FANN CO., LTD.

LB100E10A01EN (Rev. 1)

Specifications

Type
Back electret condenser

Element
Pressure gradient,
FET preamplifier.

Polar pattern
E10A: Cardioid (Figure 1)
E10B: Figure 8,Noise-Canceling (Figure 2)

Frequency response
50 to 15,000 Hz (Figure 3, 4)

Sensitivity
(at 1,000 Hz Open Circuit Voltage)
E10A：-44dBV/Pa (6.31mV/Pa)
E10B：-42dBV/Pa (7.94mV/Pa)
*. 1Pa＝94dB SPL

Rated impedance
Phantom: 200Ω
Battery: 600Ω

Minimum load impedance
Phantom: 1,000Ω
Battery: 2,000Ω

Max. SPL (1,000Ω load)
E10A
Phantom: 139dB SPL
Battery: 129dB SPL
E10B
Phantom: 137dB SPL
Battery: 127dB SPL
*. 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

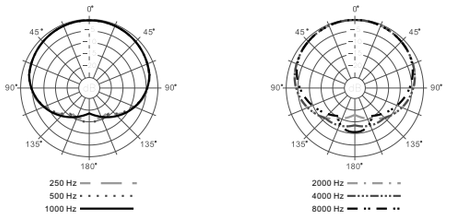
Dynamic range(1,000Ω load)
E10A
Phantom: 116dB SPL
Battery: 106dB SPL
E10B
Phantom: 114dB SPL
Battery: 104dB SPL

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

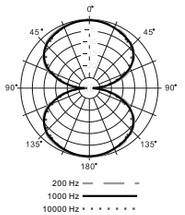
Power supply
E10ATQG/E10BTQG:
For wireless system
E10AXLR/E10BXLR:
Phantom 9 to 52V DC, 3.5mA
E10ADXLR/E10BDXLR:
Phantom 9 to 52V DC, 3.5mA;
Battery 1.5VDC (AA), 1200 hrs typical (alkaline).

Environmental conditions
The E10A and E10B operates between -10℃ to +50℃(14℉ to 122℉) with relative humidity between 0 to 95%.

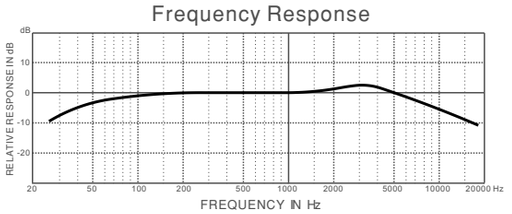
Net weight
30.0 grams (1.05 oz), accessories excluded.



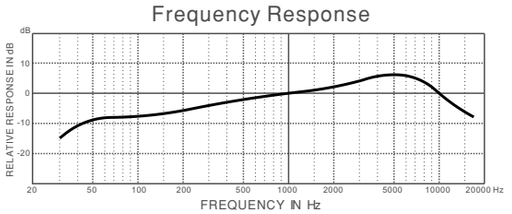
E10A
TYPICAL POLAR PATTERN (Figure 1)



E10B
TYPICAL POLAR PATTERN (Figure 2)



E10A
TYPICAL FREQUENCY RESPONSE (Figure 3)



E10B
TYPICAL FREQUENCY RESPONSE (Figure 4)

Description

The E10A/E10B is low impedance condenser head worn microphone designed for
close-up applications, such as sports, gym, interview, drama, speech, and musicians. The frequency response is wide and flat for nature sound.
Improved cable arrangement for simplicity and easy to hide for long-time Wearing.

Features

- Professional head worn microphone to free the hands for other tasks.
- The E10A is cardioids polar pattern to reject unwanted noise and increased gain before feedback.
- The E10B is bi-directional which is a pure pressure gradient that rejects distant noises, and provides the same clean sound from the front and rear side of the microphone.
- Low profile design, with multi-position rubber band to fit the microphone properly.
- 1.5 meter cable.
- The E10ATQG/E10BTQG are TA4F plug for wireless system.
- The E10AXLR/E10BXLR are TA3F plug adapts with PS418S power adapter and standard XLR3M plug for standard phantom power operation.
- The E10ADXLR/E10BDXLR are TA3F plug adapts with PS418D power adapter and standard XLR3M plug for standard phantom power and battery operation.
- The microphone and the package complies to EU 2002/95/EC and RoHS.

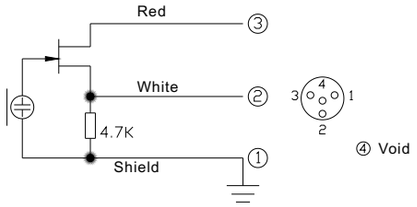
E10ATQG
E10BTQG
TA4F

E10AXLR/DXLR
E10BXLR/DXLR
TA3F

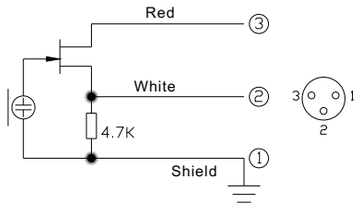
PS418S

PS418D

Wiring illustration



E10ATQG/E10BTQG
Wiring Diagram



E10AXLR/E10BXLR
E10ADXLR/E10BDXLR
Wiring Diagram

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 amatures. 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. E10A/E10B work with 9 to 48VDC phantom only and 1.5VDC battery. Please make sure your sound system provide adaquate power to the microphone.

About Frequency Response

Flat

Suitable for working at controlled environment, or for acoustic measurements. Although people persuit 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 emphasing are typical skill.

Variable response

Incorporating switchable filters to elliminates 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 excatly 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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