Superlux®
JUST PLAY IT

PRA318

Omni-directional Dynamic Microphones
for Broadcasting and Interviewing

User Guide

GOANG-FANN CO., LTD.
2009, SUPERLUX Inc.
LB100318S01EN (Rev. 2)

Specifications

Type
Dynamic microphone

Polar pattern
Omni-directional, rotationally symmetrical about microphone axis, uniform with frequency. (Figure 1)

Frequency response
50 to 15,000 Hz (Figure 2)

Sensitivity (at 1,000 Hz Open Circuit Voltage)
-53dBV/Pa (2.2mV/Pa) ±3dB , 1Pa=94dB SPL

Rated impedance
500Ω

Connector
Integral 3 pin male XLR type

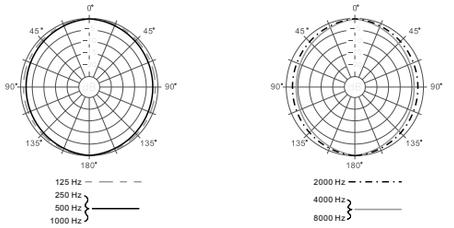
Finish
Black paint

Environmental conditions
The PRA318 operates between -10℃ to +50℃(14℉ to 122℉) with relative humidity between 0 to 95%.

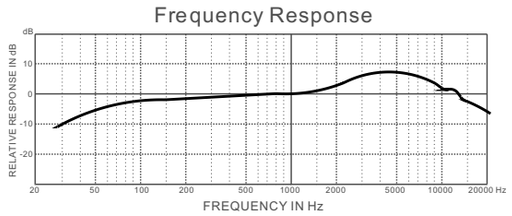
Dimensions
PRA318/S: Φ34mm x 180mm (Max. Φ1.34in x 7.09in.)
PRA318/L: Φ34mm x 230mm (Max. Φ1.34in x 9.06in.) Figure 3

Net weight
PRA318/S: 110 grams (3.9 oz.) ; PRA318/L: 140 grams (4.9 oz.)

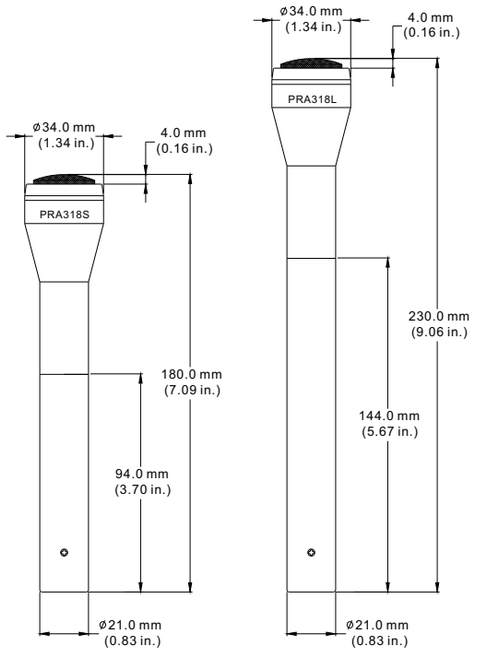
RoHS
The PRA318 including the product and packages follow the instruction of EU 2002/95/EC and comply to RoHS.



TYPICAL POLAR PATTERN (Figure 1)



TYPICAL FREQUENCY RESPONSE (Figure 2)



Dimensions (Figure 3)

Description

The PRA318S and PRA318L are broadcast interview microphone with omni dynamic design. Light weight and black aluminum alloy body for easy and long-term handheld applications. En-lengthen version provides further reach without interview' s hand in the shot. Omni design provides maximum voice clarity with no proximity effect. Excellent for broadbast, ENG, news interviews…

Features

- Tailored frequency response for voice clarity.
- Omni dynamic with no proximity effect.
- Shock mount capsule to reduce handling noise.
- Aluminum alloy shaft, light weight and sturdy.
- Unique wind noise prevention, suitable for outdoor applications.
- RoHS compliance. Environmental friendly product.

Accessories

Supplied accessories

Microphone clip ---------- HM30
Foam windscreen ---------- S07

HM30
Microphone clip

S07
Foam windscreen

Optional accessories

Shotgun mount ---------- HM35
Video camera fixing adaptor ---------- HM35C
Extension Bracket ---------- HM32
Table stand ---------- HM6
Suspending frame ---------- HM33
Cable ---------- FM5FP

HM35
Shotgun mount

HM35C
Video camera fixing adaptor

HM32
Extension Bracket

HM33
Suspending frame

FM5FP
XLR3F～6.3mm
Cable

HM6
Table stand

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

Dynamics

Durable and simple structure, operates in all kinds of environments. A good dynamic microphone is capable to operate at very high sound pressure level without distortion. Due to structure limit, dynamics cannot be built as small as condenser, but dynamics doesn require power to operate.

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

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.

Using a handheld microphone

For best signal to noise ratio, distance from the handheld microphone to the sound source shall be as short as possible.

For higher gain before feedback and lowest background noise, the microphone shall be pointed directly to the sound source. (refer to the illustration below) The sensitivity of a super cardioid microphone is highest on axis and lowest at 120 to 135 degrees.

To avoid interference between multiple microphones, each sound source shall be picked-up by one microphone, use as less microphones as possible in one space, or turn-on as less microphones as possible at the same time.

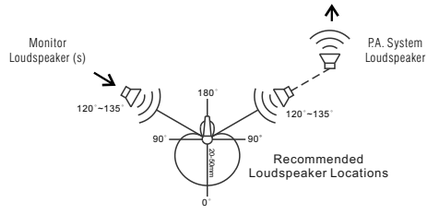
To reduce crosstalk between microphones, an 1:3 guide line shall be follow: The distance between microphone A to the sound source A is "1", the distance between any other microphone to the sound source A shall be more than 3 times.

When the (super) cardioid microphone get closer to the sound source, the low frequency response is boosted, as so call "proximity effect". Experience singer takes advantages of the proximity effect to improve the richness of his/her voice or to increase the bass of the instrument as if an extremely high quality equalizer is used. Same idea to reduce the bass by increase the distance to reduce the bass when needed.

Reflecting surface affect sound as well. Beware of these surfaces such as wall, table, or floor. Place the microphone away from the hard surfaces or directly contact these surfaces to form a pressure zone microphone.

When using the microphone outdoor or in windy environment, additional foam wind screen helps to reduce wind noise.

Keep grill pop screen clean to avoid degrading the sound quality. Do not expose the microphone at high humidity/temperature environment to avoid damage.



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

Dynamic 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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