



## WH5

Classical Vocal Microphone

# **User Guide**

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2007. SUPERLUX Inc. LB1000WH501EN (Rev. 1)

rotationally symmetrical about microphone axis, uniform with frequency. (Figure 1, 2, 3)

Unidirectional (Super Cardioid),

**Specifications** 

Dynamic microphone

Polar pattern

Type

Polarity

Connector

Finish

95%.

Dimensions

Net weight 750g (26.45oz.)

gloss finish.

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

(Diaphragm moving inward)

Integral 3 pin male XLR type

Metal construction with chrome

Environmental conditions

The WH5 operates between -10°C

to  $+50^{\circ}C(14^{\circ}F \text{ to } 122^{\circ}F)$  with

relative humidity between 0 to

Φ80.0mmx76.5mmx200mm

(3.15in.x3.00in.x7.87in.)

#### Frequency response

Drum: 30 to 10,000 Hz (Figure 4) Instrument: 20 to 12,500 Hz (Figure 5) Vocal: 50 to 16,000 Hz (Figure 6)

#### Sensitivity

(at 1,000 Hz Open Circuit Voltage) Drum: -62dBV/Pa (0.8mV/Pa) Instrument: -55dBV/Pa (1.8mV/Pa) Vocal: -54dBV/Pa (2.0mV/Pa) 1Pa=94dB SPL

#### Rated impedance

 $200\,\Omega$ 

THD≦1% 1kHz

Max. SPL  $(1, 000\Omega \text{ load})$ Drum: 147 dB SPL Instrument: 134 dB SPI Vocal: 134 dB SPL

500 Hz • • • • • •



#### TYPICAL DRUM POLAR PATTERN (Figure 1)



TYPICAL INSTRUMENT POLAR PATTERN (Figure 2)









**Frequency Response** FREQUENCY IN Hz TYPICAL VOCAL FREQUENCY RESPONSE (Figure 6)





4000 Hz -----8000 Hz — ·· — ··

TYPICAL VOCAL POLAR PATTERN (Figure 3)



### Description

Professional microphone users tend to use different microphones for different sound sources so that to achieve a desired sound character. With Superlux WH5 microphone, a trilogy concept microphone with 3 different capsules built-in so that the user can select one of the capsule for the sound he preferred. Classical appearance integrated with latest microphone technology for artist demanding a unique "oldies" appearance with "goodies" music performance.

A 3-position switch on the back to switch between percussion. instrument, or vocal setting. On/off switch on the base for artist to control the sound at his/her reach.



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#### Features

- 3 different frequency response capsules in one body. Always a sound meet your demand.
- Typical application for percussion, instrument and vocal.
- Classical appearance, latest technology.
- On/off control, and 3-position capsule selection control.
- Internal shock mount for reducing handling noise.
- 5/8" thread of standard microphone stands.
- Tilt limit, and position set mechanism for 45 degree forward and 80 degree backward setting.
- Chrome polish finish for long-term operation and collection.

#### Supplied accessories



#### **Related** accessories



#### 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.



#### 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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