

Specifications

Type: Dynamic microphone

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

Frequency response: 50 to 18,000 Hz (Figure 2)

Sensitivity: (at 1,000 Hz Open Circuit Voltage) -53 ± 2 dB, $1Pa=94$ dB SPL

Rated impedance: 250Ω

Max. SPL (1 kΩ load): 155 dB SPL (THD \leq 1% 1kHz)

Connector: Integral 3 pin male XLR type

Finish: Metal structure, grey, namel -painted , matte finished

Environmental conditions: The TM58 Series operates between -10 to $+50$ (14 to 122) with relative humidity between 0 to 95%.

Dimensions: $\Phi 51.0$ mm x 163.0mm (2.00 in. x 6.41in.)

Net weight: 320 g

RoHS | The TM58 Series including the product and packages follow the instruction of EU 2002/95/EC and comply to RoHS.

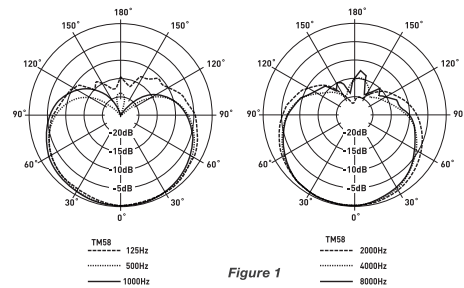


Figure 1

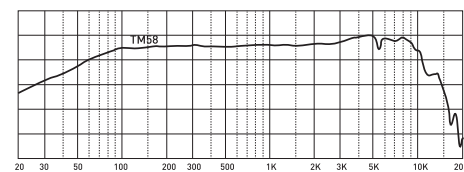


Figure 2

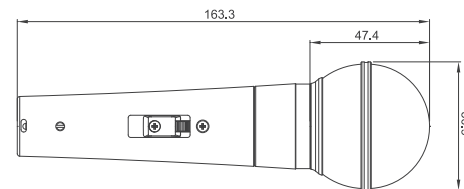


Figure 3

Description

TM58 series cardioid dynamic microphones are able to deliver authentic sound without any unnecessary sound coloration which are designed for speech and performance.

Equipped with tailored diaphragm and precise directivity, TM58 series give full and powerful sound. The higher SPL and high-grade transient response of TM58 series compared with other microphones will make the stage performance strong and the penetrating.

TM58 is the correct choice for the perfectionists no matter outdoors or indoors, speech or performance.

Features

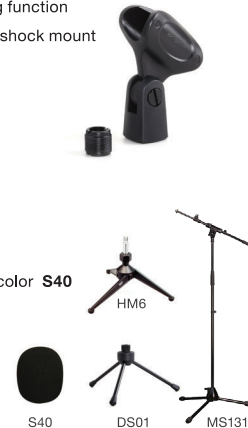
- Balanced and clear true sound
- Frequency response is good for intelligent recognition and the mid- high frequency band is bright, the low frequency band is solid powerful
- High SPL capacity
- On/off switch with locking function
- Newly-designed capsule shock mount

Accessories

Supplied Accessories
Microphone clip - **HM9A**
YA3 adaptor

Optional Accessories

Foam windscreen, various color **S40**
Table stand **HM6**
Table stand **DS01**
Microphone stand **MS131**



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



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 don't require power to operate.

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.

Directivity

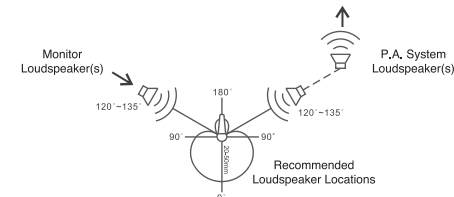


Cardioid

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

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 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.

Maintenance

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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指向特性的考量

心型指向

對於正面有最強的靈敏度，對於側面則稍弱，對於背後最不敏感，很適合一般現場擴聲使用，有明顯的近講效應，適合歌唱者加強低頻的真實感。

距離音源的考量

近場收音與遠距收音的音感差別很大。歌唱錄音或者現場演唱通常都採用近場收音。適當的臨近效應是其中一個需要的效果，同時較少的回授問題則是現場擴聲的需要。遠距收音常見於錄音，特別是單點立體聲錄製大型團體，例如交響樂團或者合唱團等。

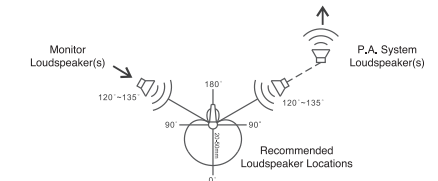
遠距收音若採用壓力梯度麥克風(型心、8字型、槍型均屬之)，因為聲學特性，缺少了臨近效應，將會有比較弱的低頻響應。採用壓力型麥克風(無指向)在遠距離收音將會有比較豐富的低頻響應，因為此類麥克風對於遠近之間，均有相同的頻率響應。

手持式麥克風使用需知

為了獲得最佳信噪比，麥克風應盡量靠近所需聲源。為了獲得理想的反饋前增益，並且充分隔離背景雜音，麥克風應盡量對準聲源，偏離干擾雜音(參看下圖)。麥克風採用超心型極座標響應，對麥克風正面的聲源最為敏感，對麥克風 120~135 度處的聲源最不敏感。

為了獲得最純正的聲音復制效果，每個聲源最好只使用一個麥克風，整個場合所使用的麥克風數量應盡量少。為了減少串音，麥克風 A 到音源 A 的距離設定為“1”，任何其他麥克風到音源 A 的距離必須是三倍以上。

單指向麥克風靠近音源時，低頻響應會增強，這效應稱之為臨近效應。有經驗的歌者利用此優勢以增加自身聲音的磁性魅力，或者藉此增強樂器低頻的輸出，如同使用了極高品質的均衡器。同樣的想法，在有需要的時候，也可藉由拉長距離來降低低頻響應，改變了聲音的感覺。



架設麥克風

壓力梯度麥克風對於振動十分敏感。適當的防震架對於高性能的麥克風達到極低噪音的錄音是不可或缺的。堅固穩定的腳架可以將麥克風準確地固定在最佳收音點。選擇重量級的麥克風架用於錄音室電容麥克風，因為這類麥克風的重量遠高於一般手持麥克風。

舒伯樂提供多樣的麥克風架以符合各類型的需要。大腳威力腳架特別設計給大振膜電容麥克風，可以同時使用 2 支大振膜麥克風加上立體錄音架，適用於單點立體錄音。附加 E 字的麥克風架具備一支可延伸腳，讓重量級的錄音室麥克風也可用於空間受限的現場擴聲用途。

保養麥克風

電容式麥克風應存放於低濕度的環境中，以維持最佳聲音性能。麥克風應存在空調房間或者除濕箱內以去除水氣。清潔的空氣也是重要的因素，遠離吸菸的環境以避免焦油殘留物在振膜上面。

概述

TM58 系列心型動圈式麥克風，無多餘的聲音渲染，可實現原音重現，專為演講和演唱設計。使用特殊膜片，加上準確的指向特性，使得音色豐滿有力。具備較高的耐聲壓級及優質的瞬態反應，使得聲音具有強大的穿透力，能輕鬆表現舞台人聲。無論室內室外，演唱演講，均為專業人士的正確選擇。

特徵

- 平衡、清晰真實的聲音
- 頻率響應具有語音特徵，中高頻音質明亮，低音純正有力
- 耐聲壓級高
- 有鎖定功能
- 新設計的音頭防震安裝系統，以減少手持噪音

隨供附件

麥克風夾子 HM9A

轉換螺母 YA3

選購附件

手握麥克風海綿頭 S40

麥克風桌架 HM6

麥克風桌架 DS01

麥克風斜架 MS131



認識您的麥克風

舒伯樂提供各種款式麥克風供專業人士與玩家選用。認識您手中的麥克風，是成功收音的第一步。

換能方式的考量

動圈式

構造簡單，耐用，環境適應力強。良好的動圈式麥克風，可以承受極大的音壓而不失真。適用性廣，唯結構限制，小型化的極限不如電容式可以縮小到更微小的外型。一般大多不需要電源就能工作。

頻率響應特性的考量

平坦

適合在完全控制良好的環境下錄音、或者聲學測量。雖然是一般期待的完美特性，但是在實際狀況下，對於非專業使用者，將是挑戰。

調整適用對象的響應

來自各方面多年的實務經驗，得出的經驗值。使得麥克風製造成某一類性的響應，特別適合某些應用。並且透過限制頻寬排除非必要噪音，或者強調某些重要資訊。一般多屬此類。

可變響應

通常透過可設定的濾波器，以減去干擾信號，例如超低頻濾波，最常被用來減少空調、地板震動、手持、風聲等噪音。而在受控制場合，又可以展開頻寬，完全收錄音音。

技術數據

類型：動圈式

指向性：心型，繞麥克風軸旋轉並對稱，頻率均勻。(圖 1) 頻率響應：50~18,000 Hz (圖 2)

靈敏度 (1kHz 開路電壓)：-53±3dB, 1Pa=94dB SPL

標稱阻抗：500Ω

最大聲壓級 (1kΩ 負載)：155 dB SPL (THD ≤ 1% 1kHz)

輸出接插件：3 pin male XLR 型

外觀顏色：金屬結構，塗深灰漆

環境要求：麥克風的工作溫度範圍 -10°C ~ 50°C

(14 °F ~ 122 °F)，相對濕度範圍 0~95%

外型尺寸：Φ51.0mm x 163.0mm (2.00 in. x 6.41in.)，

圖 3

淨重量：320 g

環保：TM58 系列麥克風組件，包括麥克風本身和包裝，嚴格執行歐盟 2002/95/EC 指令，符合 RoHS 標準。

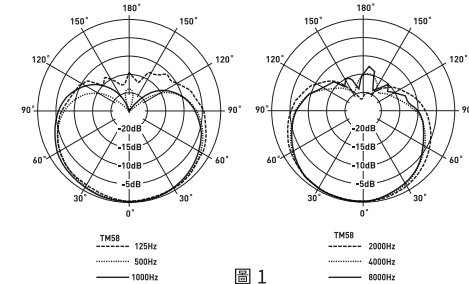
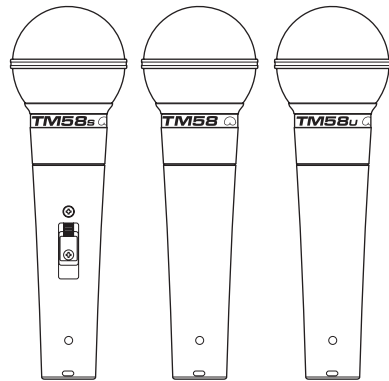


圖 1

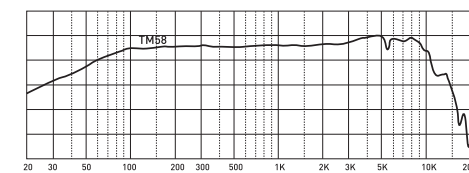


圖 2

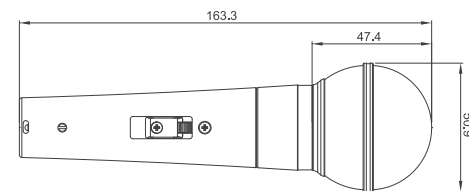


圖 3

Superlux®

TM58 Series

Vocal Microphone User Guide

動圈式人聲麥克風 使用手冊