d:facto™

Handheld Microphones

for vocal performances

d:facto™ Vocal Microphone
d:facto™ Linear Vocal Microphone
d:facto™ Handle
d:facto™ Adapters for Wireless Systems

User's Manual

Application and use
d:facto™ Handheld Microphones are high-quality stage microphones with extraordinary natural sound, high separation from nearby sound sources and extreme sound-level handling.

The d:facto™ features exceptionally controlled directional quality. Combined with superb definition and true dynamics, the d:facto™ is equally suitable for PA amplification and recording. The integrated 3-step pop-protection grid effectively removes unwanted noise.

Furthermore, the d:facto™ offers brilliant flexibility of choice. Use either a P48 phantom-powered DPA Handle for wired use or adapters to use the microphone head with various professional wireless handles.

Proximity effect
d:facto™ Handheld Microphones are designed primarily as hand-held vocal mics and the frequency response is tuned to match this application.

At short distances, all directional microphones will create a bass-level boost – at longer distances, the proximity effect will act as a long-distance low cut. This phenomenon is known as proximity effect or close-talk. This gives a deeper / warmer sound at short distances and a more thin-sounding voice as the distance increases.

So keep in mind that the low-frequency level will change according to the distance to the mouth but be assured that the microphone has been designed and factory fine-tuned to match this. The d:facto™ is fine tuned to be flat at 12 cm (4.7 in).

Also, to avoid acoustic distortion from your lips, keep a distance of about 2 cm (1 in) from the microphone head's grid.

Miking and recording voice
When using microphones, it is important that you know some of the parameters characterizing the source you are amplifying / recording, its surroundings and the characteristics of the tools you using. For tips and background info on voice miking, please visit:
dpamicrophones.com/micuni

Wired to wireless

d:facto™ Handheld Microphones can be used both wired and wireless with full flexibility. The microphone grid, the microphone capsule and the preamplifier (either a DPA Adapter to 3rd-party wireless handle or the DPA Handle for wired use) are all separate components.

DUA0710 d:facto™ Microphone Grid

DUA0710N d:facto™ Microphone Grid, Nickel

DUA0710G d:facto™ Microphone Grid, Gold

MMC4018V Microphone Capsule for Vocal, Supercardioid

MMC4018VL Microphone Capsule for Vocal, Supercardioid

FAASE5B d:facto™ Adapter SE5

FAASE2-ewB d:facto™ Adapter SE2-ew

FAASL1B d:facto™ Adapter SL1

FAAWI2B d:facto™ Adapter WI2

DUA0715 Clip for d:facto™ Vocal Microphone

FAADPA2B d:facto™ DPA Handle

DUA0703 Foam Windshield for d:facto™

Assembly guide

In the wired version, the grid and capsule can be unscrewed from the handle and exchanged with a variety of adapters to fit professional 3rd-party wireless handles. In wireless versions, the grid and capsule can be unscrewed from the adapter and exchanged with the DPA Handle for wired use.

1. Unscrew the outer grid.

2. Unscrew the capsule from either the adapter or handle. Don't try to unscrew at the base below the capsule.

3. Attach the selected capsule to either the DPA Handle for wired use or a DPA Adapter for a 3rd-party wireless handle.

Please note that all electric and acoustic specifications apply to the wired DPA Handle unless otherwise stated. The DPA Handle is designed with a permanent 3rd-order low-cut filter (-3 dB at 80 Hz) to remove unwanted handling, pop and wind noise.

Directionality
The MMC4018V capsule is made to optimize the performance of the d:facto™ for close miking vocals on stage. The result is an applicable opening angle around the center axis as wide as a cardioid with its maximum 3 dB attenuation at ±60°. This means that a pleasant tolerance around the center axis is obtained for the singer, whereas the rear rejection is higher than other supercardioids. The rear lobe opening, normally seen on supercardioids at 180° angle, is extremely uniform and controlled.

The MMC4018V has roughly 8 dB attenuation at 90° and has its highest rejection at approximately ±140° off-axis. The gain-to-feedback ratio is extremely high due to the controlled rear attenuation, which is carried out between 120° and 240° off-axis in a wide and uniform frequency range. No frequency is less than 12 dB attenuated in this area, most frequencies are attenuated 15-30 dB. No extra care is needed with regards to angling the microphone to stage monitors, as long as they are aimed towards the rear of the d:facto™.

Grid and windscreen
The d:facto™ has a very effective 3-step pop protection grid incorporated, which effectively removes unwanted pop noise. When used outdoors or with performing artists with pronounced wind or pop noise, use the optional foam windscreen.

Phantom power
The d:facto™ is a condenser microphone and will, when used on the wired DPA Handle, need 48V phantom power from the mixing console or from an external power supply unit. Mute the channel on the console before supplying phantom power to avoid crackling noise.

When using the d:facto™ with an adapter for wireless systems, power will be supplied from batteries in the wireless transmitter handle.

Cleaning
Keep the microphone dry – away from water and cleaning fluids. Do not use spray or fluid containing chemicals that could remove static electricity on or near the microphone. This could cause permanent damage.

To clean the grid properly, without risk of causing damage to the capsule, you have to unscrew it from the microphone body (see page 5). Be aware that the microphone capsule itself should not be cleaned in any way, as it will influence the performance of the microphone.

The grid consists of three parts; the outer black metal mesh, a foam windscreen and an inner, cylindrical pop filter. First pull out the filter (with finger torque only) from the brass ring underneath. This reveals the foam part that can also be taken out. All three parts may now be cleaned separately. When remounting, take care to tighten the grid firmly, which secures the inner filter properly.



Accessories included

DUA0715 Clip for d:facto™ Vocal Microphone

Accessories available

DUA0703 Foam Windscreen for d:facto™
DUA0710 d:facto™ Microphone Grid, Complete Assembly
DUA0710G d:facto™ Microphone Grid, Complete Assembly, Gold Finish
DUA0710N d:facto™ Microphone Grid, Complete Assembly, Nickel Finish

Modular Microphone Capsules

MMC4018V Microphone Capsule, for Vocal, Supercardioid
MMC4018VL Microphone Capsule, for Linear Vocal, Supercardioid

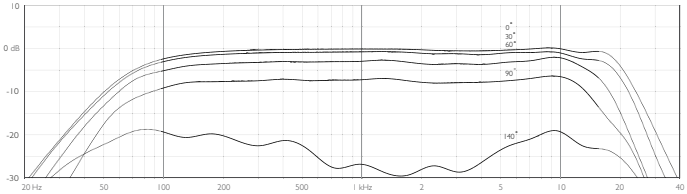
Modular Microphone Preamplifier

FAADPA2B d:facto™ DPA Handle

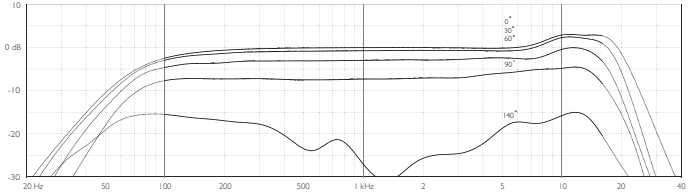
Adapters

FAASL1B d:facto™ Adapter SL1 (Shure/Sony/Lectrosonics/Line6)
FAAWI2B d:facto™ Adapter WI2 (Wisycom)
FAASE2-ewB d:facto™ Adapter SE2-ew (Sennheiser 2000/9000/evolution wireless)
FAASE5B d:facto™ Adapter SE5 (Sennheiser 5200)

Frequency response

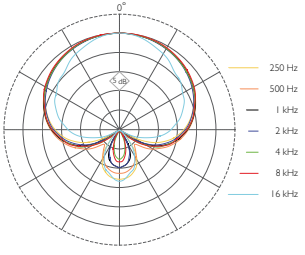


Typical on- and off-axis frequency of d:facto™ Linear Vocal Microphone at 12 cm (4.7 in)

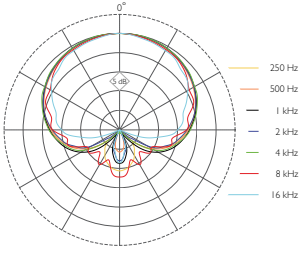


Typical on- and off-axis frequency of d:facto™ Vocal Microphone at 12 cm (4.7 in)

Polar pattern



d:facto™ Linear Vocal Microphone



d:facto™ Vocal Microphone

Specifications (With wired DPA Handle)

d:facto™ Handheld Microphones

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Directional pattern
Supercardioid
Principle of operation
Pressure gradient
Cartridge type
Pre-polarized condenser
Frequency range (with DPA Handle)
20 Hz - 20 kHz , permanent 3rd-order high pass filter at 80 Hz
Frequency range, ±2 dB, at 12 cm (4.7 in)
d:facto™ Linear Vocal: 100 Hz - 16 kHz
d:facto™ Vocal:100 Hz - 16 kHz with 3 dB soft boost at 12 kHz
Sensitivity, nominal, ±2 dB at 1 kHz
5 mV/Pa; -46 dB re. 1 V/Pa
Equivalent noise level, A-weighted
Typ. 19 dB(A) re. 20 µPa (max. 21 dB(A))
S/N ratio A-weighted, re. 1 kHz at 1 Pa (94 dB SPL)
Typ. 75 dB(A)
Total harmonic distortion (THD)
< 1% up to 139 dB SPL peak
Dynamic range
Typ. 120 dB
Max. SPL, peak before clipping
160 dB
Output impedance
< 100 Ω
Minimum load impedance
1 kΩ
Cable drive capability
100 m (328 ft)
Output balance principle
Impedance balancing with Active Drive
Common mode rejection ratio (CMRR)
> 50 dB at 1 kHz

Power supply (for full specifications)
48 V Phantom power (±4 V)
Current consumption
max 2 mA
Connector
XLR-3M. Pin 1: shield, Pin 2: signal + phase, Pin 3: - phase
Color
Matte black (grid available in black, gold and nickel finish)
Weight
With DPA Handle 309 g (10.9 oz)
Microphone diameter
52 mm (2.05 in)
Capsule diameter
19 mm (0.75 in)

Service & repair
If you are not satisfied with the characteristics exhibited by this product, please go to dpamicrophones.com/service for instructions.

Warranty
The d:facto™ Vocal Microphone is covered by a five-year limited warranty.

CE marking
This product conforms with all relevant directives approved by the European Commission.

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DPA MICROPHONES

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