



User's manual

# d:facto™

d:facto™ II Vocal Microphone

d:facto™ II Handle

d:facto™ II Adapters for Wireless Systems



## **Application and use**

The DPA d:facto™ II vocal mic is a high quality stage microphone with extraordinary natural sound, high separation from nearby sound sources and extreme sound level handling.

It is a dedicated vocal stage mic with exceptionally controlled directional quality. Combined with superb definition, true dynamics and sound color, the d:facto II is equally suitable for PA amplification and recording. The integrated 3-step pop protection grid effectively removes unwanted noise.

d:facto II ships with our standard recommendation, the supercardioid MMC4018V capsule, but due to the d:facto II's modular design, many variants of DPA d:dicat capsules are available.

Furthermore, the d:facto II offers brilliant flexibility in choices of either a P48 phantom powered DPA handle for wired use or adapters to utilize the microphone head with various professional wireless bodies.

## **Proximity effect**

The DPA d:facto II vocal mic is designed primarily as a handheld vocal microphone and the frequency response is tailored to match this application. At short distances all directional microphones will create a bass level boost. This phenomenon is known as proximity effect or close-talk, and will give a bigger, more powerful sound at short distances, but needs to be controlled in order to avoid a boomy sound.

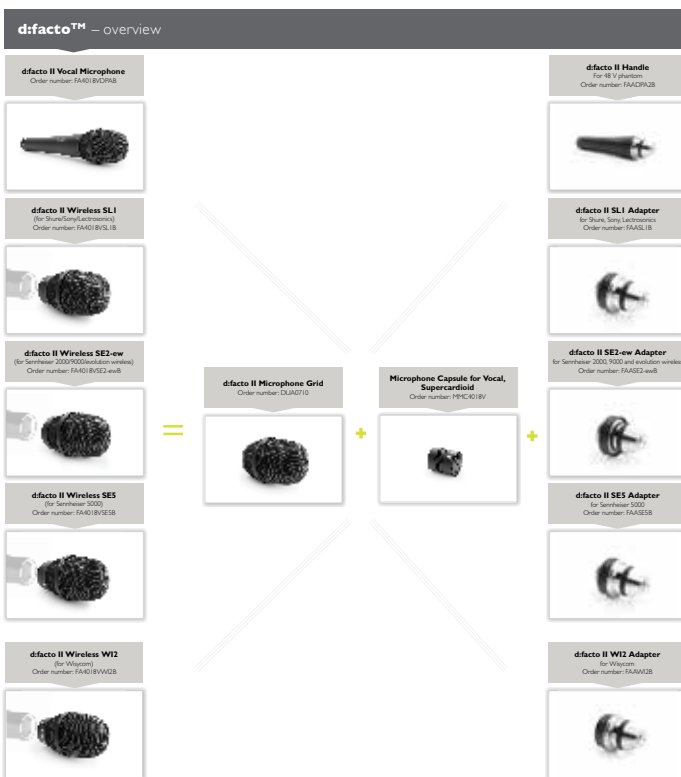
Keep in mind that the low-frequency level will change according to the distance to the mouth, but be assured that the microphone has been designed and factory fine-tuned to match this use. Also, to avoid acoustic distortion from your lips, keep a distance of about 2 cm (1 in) from the microphone head's mesh.

## **Miking and recording voice**

When using microphones it is important to know some of the parameters characterizing the source you are recording, its surroundings and the characteristics of the tools you use to record it. For tips and background info on voice miking, please visit [www.dpamicrophones.com/applicationguide](http://www.dpamicrophones.com/applicationguide).

## Wired to wireless

The d:facto II vocal microphone can be used both wired and wireless with full flexibility. The microphone grid, the microphone capsule and the preamp (as either a DPA adapter to 3rd party wireless bodies or the DPA Handle for wired use) are all separate components.



## 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 bodies. 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 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 body.



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 recommended capsule for d:facto II is the MMC4018V, optimizing the performance of the d:facto II to close miking vocal on stage. The result is an applicable opening angle around the center axis as wide as a cardioid with its maximum 3dB attenuation at  $\pm 60^\circ$ . This means that a pleasant tolerance around the center axis is obtained for the singer; whereas the rear rejection is as high as – or higher – than other supercardioids. The rear lobe opening normally seen on supercardioids at  $180^\circ$  angle is extremely uniform and controlled.

The MMC4018V has roughly 8 dB attenuation at 90 degrees and has its highest rejection at approximately  $\pm 140$  degrees off-axis. The gain-to-feedback ratio is extremely high due to the controlled rear attenuation, which is carried out between  $120^\circ$  and  $240^\circ$  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 project to the rear of the d:facto II.

To gain full flexibility of your d:facto II, more MMC modular capsules are available, but only the MMC4018V has been tweaked for close vocal use with lowered sensitivity and application tailored low frequency response.

## Grid and windscreen

The d:facto II has a very effective 3-step pop protection grid incorporated that 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 II 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 the crackling noise.

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

## Cleaning

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

To clean the grid properly without the 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 not in any way should be cleaned, 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 II Vocal Microphone

## Accessories available

DUA0702 d:facto II Windscreen  
DUA0710 d:facto II Microphone Grid, Complete Assembly  
DUA0711 d:facto II Pop Filter  
DUA0712 d:facto II Foam Protection  
DUA0713 d:facto II Microphone Grid (Metal Only)

## Modular Microphone Capsules

MMC4018V Modular Microphone Capsule, Supercardioid for Vocal

## Modular Microphone Preamp

FAADPA2B d:facto II DPA Handle

## Adapters

FAASL1B d:facto II Adapter SL1 (Shure/Sony/Lectrosonics)  
FAAW12B d:facto II Adapter W12 (Wiscom)  
FAASE2-ewB d:facto II Adapter SE2-ew (Sennheiser 2000/9000/  
evolution wireless)  
FAASE5B d:facto II Adapter SE5 (Sennheiser 5000)

## Specifications

With wired DPA Handle

### Directional pattern

MMC4018V: Supercardioid

### Principle of operation

Pressure gradient

### Cartridge type

Pre-polarized condenser

### Frequency range

20 Hz - 20 kHz

### Frequency range, $\pm 2$ dB, at 12 cm (4.7 in)

100 Hz - 16 kHz with 3 dB soft boost at 12 kHz.

Permanent 3rd order low-cut filter (-3 dB at 80 Hz)

### Sensitivity, nominal, $\pm 2$ dB at 1 kHz

5 mV/Pa; -46 dB re. 1 V/Pa

### Equivalent noise level, A-weighted

Typ. 19 dB(A) re. 20  $\mu$ Pa (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  $\Omega$

### Minimum load impedance

1 k $\Omega$

## 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 ( $\pm 4$  V)

## Current consumption

Max 2 mA

## Connector

XLR-3M. Pin 1: shield, Pin 2: signal + phase, Pin 3: - phase

## Color

Matte black

## Weight

309 g (10.9 oz)

## Microphone diameter

52 mm (2.0 in)

## Capsule diameter

19 mm (0.75 in)

## Microphone length

205 mm (8.1 in)

## Output voltage, RMS

> 6 V

## Polarity

+V at pin 2 for positive sound pressure

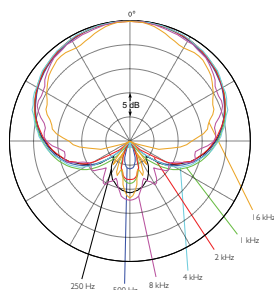
## Temperature range

-40 °C to 45 °C (-40 °F to 113 °F)

## Relative Humidity (RH)

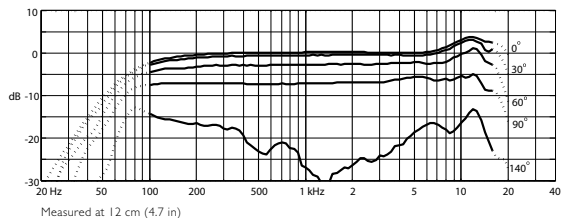
Up to 90%

## Polar Pattern



Directional characteristics of dfacto II Vocal Microphone.

## Frequency Response



Typical frequency responses of dfacto II Vocal Microphone.



## Service & repair

If you are not satisfied with the characteristics exhibited by this product, please go to [www.dpamicrophones.com/service](http://www.dpamicrophones.com/service) for instructions.



**Head Office**

DPA Microphones A/S  
Gydevang 42-44  
DK-3450 Allerød, Denmark  
Tel: +45 4814 2828  
Fax: +45 4814 2700  
info@dpamicrophones.com  
www.dpamicrophones.com

**US Sales Office**

DPA Microphones, Inc.  
1500 Kansas Avenue, Unit 3 A-D  
Longmont, Colorado 80504  
Tel: +1 303 485 1025  
Fax: +1 303 485 6470  
info-usa@dpamicrophones.com  
www.dpamicrophones.com

**APAC Sales Office**

DPA Microphones Ltd.  
Unit 801-2, 8/F, Asia Orient Tower  
33 Lockhart Road, Wanchai  
Hong Kong  
info-apac@dpamicrophones.com  
www.dpamicrophones.com