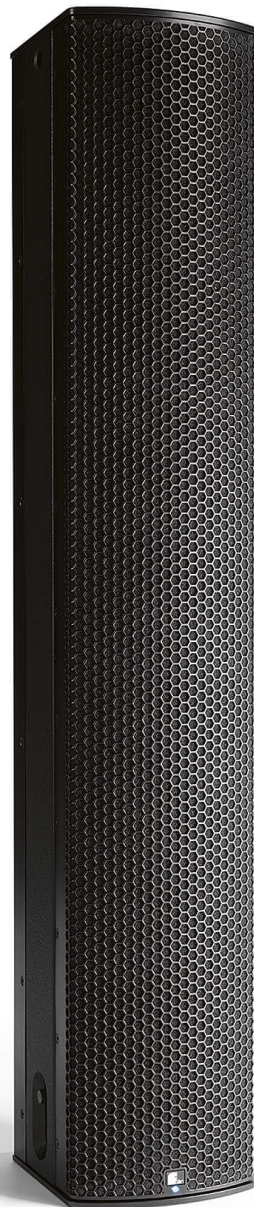


# Focus Modular

## DFM-110

Active high frequency module with Beam Steering, 16 × 1" compression driver



# Focus Modular DFM-110

DFM-110 is an active high frequency module with Fohhn Beam Steering technology. It can be flexibly combined with the low-mid modules DFM-400. The new generation of our renowned Focus Modular system is now fully digitized and provides further developed Fohhn DSP and digital signal connections. Acoustically redesigned and equipped with even more powerful drivers, DFM delivers excellent, audiophile sound and best speech intelligibility. A high-quality and high-performance solution for larger conference rooms, theaters and even open-air concerts. And all of this with an enclosure that is just about 22 cm wide and can be flown straight and integrated seamlessly thanks to beam steering.

## Main features

- 16 × 1" compression drivers with 1.75" voice coil, hornloaded with waveguide
- 16 integrated class-D amplifiers
- Optimized Fohhn DSP structure inside
- Fully digital signal flow from input to amplifier
- Max. SPL single module: 148 dB (108 dB @ 100 m)
- Vertical dispersion controlled in real time via Fohhn Audio Soft
- Vertical beam width: 0° to 90°, sound inclination angle: -40° to +40° (adjusted in 0.1° increments)
- two separate beams can be controlled
- Fohhn Side Lobe Free Technology
- Easy rigging thanks to the Fohhn Quicklock System



Available with the following color options



Black

Equipped with the following Fohhn technologies



Fohhn Beam  
Steering  
Technology



Fohhn Airea



Fohhn DSP  
inside



Flyable product



Special colors  
optional



Auto Power  
Save

Possible input interfaces for this product

AES/EBU

**AIREA**

# Technical data

## Electroacoustic features

|  |  |
|--|--|
| acoustic design                                  | electronically steerable line array speaker                        |
| components                                       | 16 × 1" (1.75" VC) compression drivers Hornloaded Waveguide Design |
| maximum SPL                                      | 148 dB (108 dB @ 100 m)  |
| frequency range                                  | 1.7 kHz – 16 kHz   |
| operational mode                                 | active, 16-channel DSP-amplifier, Class-D                          |
| horizontal dispersion                            | 90°  |
| vertical beam width, digitally controlled        | 0° – 90° in 0.1° increments  |
| vertical inclination angle, digitally controlled | -40° – +40° in 0.1° increments                                     |
| acoustic centre                                  | 0% (bottom) to 100% (top) movable, both beams                      |

## Physical features

|                        |  |
|------------------------|--|
| enclosure              | multiplex birch plywood, Aluminium   |
| front design           | hexagonal perforated steel grille in enclosure colour, backed by acoustically transparent foam |
| protection grille      | steel grille, ball impact resistant, powder-coated   |
| weight                 | 41 kg  |
| standard colours       | textured paint / powder coating, black   |
| mounting points        | integrated flying tracks, 4 × M8-threads at rear   |
| dimensions (W × H × D) | 224 × 1285 × 274 mm  |

## Optional features

|                  |  |
|------------------|--|
| optional colours | RAL Classic / NCS / Pantone on request |
|------------------|--|

## CAAD simulation data

|                 |                      |
|-----------------|----------------------|
| simulation data | EASE, Fohhn Designer |
|-----------------|----------------------|

**Electronic features**

|                      |  |
|----------------------|--|
| amplifier type       | Pure Path Digital PWM  |
| audio inputs         | AES/EBU  |
| audio outputs        | AES/EBU  |
| amplifier power      | 16 × 120 W   |
| DSP channels         | 16   |
| frequency response   | 20 Hz – 20 kHz   |
| signal/noise ratio   | >105 dB/A  |
| auto power save      | adjustable from 1 s to 12 h, or never active                               |
| protective circuit   | soft start, overtemperature, short circuit, overload                       |
| power supply         | 100 V – 240 V AC 50/60 Hz, power supply with Power Factor Correction (PFC) |
| inrush current       | 7,5 A (230 V) / 3,8 A (115 V)  |
| power consumption    | 500 W RMS, idle 30 W, standby 10 W   |
| heat dissipation     | 140 W, 482 BTU/h, 121 kcal/h   |
| temperature range    | 0 – 40° C  |
| cooling              | temperature-controlled fan   |
| weight (electronics) | 5.5 kg   |

**Controller**

|                              |  |
|------------------------------|--|
| digital signal processors    | 2  |
| independent limiters         | 6  |
| FIR filter                   | yes  |
| gain                         | -80 dB – +12 dB  |
| EQ                           | 10-band parametric EQ, gain, +/-12 dB, frequency 10 – 20 kHz, Q 0.1 – 100                    |
| selective 3-band limiting    | bass / mid / high  |
| limiter / compressor         | yes  |
| noise gate                   | yes  |
| delay                        | Input: 0 – 350 ms (0 – 120 m); Output: 0 – 640 ms (0 – 220 m)                                |
| X-over                       | Linkwitz-Riley 4th order (24 dB / octave), high pass 10 Hz – 20 kHz, low pass 10 Hz – 20 kHz |
| system latency               | 1.2 ms   |
| band-specific time constants | yes  |
| filter technology            | 80-bit double precision  |
| input                        | AES/EBU 32 kHz – 96 kHz, 16/24 bit   |
| input DSP processing         | yes  |

**Remote control and remote monitoring**

|                   |  |
|-------------------|--|
| remote control    | Fohhn Audio Soft, Fohhn Net  |
| remote monitoring | temperature, protect, signals, power supply, Fohhn Net, Fohhn Audio Soft |
| simulation beam   | Fohhn Net, Fohhn Audio Soft  |

## Connections and controls

|                  |   |
|------------------|---|
| controls         | mains switch (remote-controllable via Aire Connect)                             |
| mains connection | 1 × PowerCON mains in, 1 × PowerCon mains out                                   |
| inputs           | 1 × etherCON Aire Connect / stack link, 1 × XLR AES/EBU, 1 × etherCON Fohhn Net |
| outputs          | 1 × etherCON stack link, 2 × XLR AES/EBU, 2 × etherCON Fohhn Net                |
| signal inputs    | AES/EBU 32 kHz – 96 kHz, 16/24 bit  |
| signal outputs   | AES/EBU link-out from input   |

## Display LEDs

|   |  |
|---|--|
| Sign LED (connector panel and front grille) | blue = power on, blue flashing = sign                        |
| status LED                                  | green = ready, red = protect / standby, red flashing = fault |
| receive / send LED                          | receive / send remote control LED                            |
| audio error LED                             | red = no AES/EBU   |
| remote power LED                            | green = Aire Connect active, remote power on                 |
| on (stack link) LED                         | green = stack link active                                    |

power rating (peak); maximum SPL: peak, 20 ms with bandpass filtered pink noise signal according to IEC 60268-2 at one octave above the lower limit of the frequency range, with speaker preset

frequency range: -10 dB under anechoic halfspace-conditions with speaker preset

weight: net weight without optional equipment

heat dissipation: pink noise, 6 dB crest, 1/4 Pmax

nominal dispersion: -6 dB compared to the main dispersion axis

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