

Data sheet

## **XM-4** high performance stage monitor



# X-Series

Mobile Speakers *active + passive.*



## XM-4 high performance stage monitor



The Fohhn® XM-4 is an extremely high-performance stage monitor system in a very compact housing that combines efficiency, speech intelligibility and sound quality with design of the highest quality.

### Description

The Fohhn® XM-4 is an extremely resilient 2-way high-performance stage monitor system with extremely compact dimensions, low weight and an amazingly natural sound. The XM-4 is fitted with a 12" bass/mid chassis and 3.5" high-frequency driver with 1.4" CD horn. When combined with the extremely sophisticated passive crossover and integral electronic speaker protection, this proven speaker configuration guarantees maximum sound and dynamics of speech and drums while at the same time achieving an outstanding level of transparency. The defined sound dispersion characteristics provide maximum protection against feedback, even at extreme sound levels and the dispersion angle of 80° x 60° reaches the target area on the stage with extreme accuracy. The XM-4 is manufactured with a high degree of precision, is flexible and boasts perfect handling and an outstanding sound. It is fitted with the latest Neodymium chassis and weighs only.

The XM-4 is well suited to full-range speech and music applications. The compact speaker also produces outstanding sound when used in a drum fill system with subwoofers (XS-4 active sub, XS-4 passive). The XM-4 has 2 setup angle as a monitor with 55° and 35°. Rubber feet protect the housing on 3 sides and prevent the monitor from sliding.

The housings are manufactured from quality multiplex birch wood, have a waterproof construction and a scratch-resistant plastic coating. A sturdy metal grille behind the acoustic foam protects the speaker. 2 recessed handles and minimum weight make the speaker extremely easy to transport.

### Controlling

For maximum sound performance and operating reliability, we recommend our digital DSP amplifiers. (e.g. D-2.1500 and D-4.1200) We always integrate a sophisticated passive crossover with electronic high-frequency protection so XM-4 can be operated with any professional amplifier.

### Applications

Stage monitor, live-music, playback, speech

### Connections

2x NL4 Neutrik Speakon left and right to connect very easy and safe to the next speaker XM-4 stage monitor.

### Accessories

Padded high-quality transport cover; flight case for always 2 monitors in trucking space version.



## XM-4 high performance stage monitor

### Technical specifications

#### electro-acoustical features

acoustic design	passive stage monitor, 2-way, bass reflex
components <sup>[1]</sup>	12" / 1,4" on rotatable CD-horn, with self-resetting IPC <sup>[1]</sup> -HF protection, fully neodym
power rating (nominal) <sup>[1]</sup>	500 W
power rating (program) <sup>[2]</sup>	1000 W
power rating (peak) <sup>[3]</sup>	2000 W
sensitivity <sup>[4]</sup>	100 dB
maximum SPL <sup>[3]</sup>	131 dB
frequency range <sup>[5]</sup>	45 Hz – 20 kHz
nominal dispersion (h x v) <sup>[6]</sup>	80° x 60°
nominal impedance	8 ohms

#### features

enclosure	asymmetric, multifunctional, birch plywood cabinet
protection grille	metal, powder coated finish
connections	2x Neutrik NL4 Speakon, left and right
standard colour	scratch-resistant plastic coating, black
frontal design	acoustic foam
dimensions (W x H x D)	590 x 340 x 450 mm
handles	2 deep-set handle
setup angle as a monitor	55° and 35°
speaker stand pole	integral, ø 36 mm
weight <sup>[7]</sup>	23 kg

The manufacturer reserves the right to make technical modifications according to legal regulations stipulating the continual improvement of product features.

<sup>[1]</sup> according to IEC-60268-5 long term

<sup>[2]</sup> according to IEC-60268-5 short term

<sup>[3]</sup> 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

<sup>[4]</sup> 2,83 V at 8 ohms (2 V at 4 ohms, 4 V at 16 ohms) at a distance of 1 meter under anechoic fullspace conditions

<sup>[5]</sup> -10 dB under anechoic halfspace-conditions

<sup>[6]</sup> horizontal x vertical at -6 dB, rotatable horn

<sup>[7]</sup> net weight without optional equipment

<sup>[1]</sup> Intelligent Protection Circuit. Voltage-controlled semiconductor circuit protecting the HF-driver against overload highly effective and with very short attack time.



## Controlling X-Series speakers

### 1. Fohhn system DSP amplifiers

Fohhn offers a range of specially adapted system DSP amplifiers for controlling speaker systems, which guarantee maximum sound performance and operational reliability for your Fohhn products. As manufacturers of speaker, amplifier and DSP technology, we know our systems inside and out right down to the smallest detail and are therefore in a perfect position to provide our users with the best overall system.

#### Fohhn System DSP amplifier are offering following advantages:

##### Integrated high-performance DSP technology:

- quick set-up,
- minimal space requirements in electronics cabinet,
- minimal cable requirements,
- fewer cable faults,
- controller and amplifier can be controlled and monitored using the same software.

##### Dual DSP technology

The DSP amplifiers contain 2 separate DSP engines with enormous capacity and processing power for 5 digital audio devices (DSP-1) and Fohhn specific speaker databases (DSP-2).

##### Remote monitoring and control

Integrated temperature and operating time monitor, status indicator / protection, remote control capability / network compatibility using a laptop, wall installation modules or media control systems.

### Fohhn® dual DSP technology

#### DSP-1: Integrated digital audio devices

Each amplifier channel has a:

- programmable 10 band parametric EQ,
- compressor/limiter/noise gate,
- delay,
- X-over function,
- top-quality pink noise and sweeptone generator

#### DSP-2: Speaker management

An integrated speaker database guarantees excellent sound quality and protection for all Fohhn speaker types. A sophisticated algorithm developed by Fohhn engineers and adapted to each speaker allows the individual monitoring and adjustment of bass, mid and high ranges.

### 1.1 Amplifier recommendations for the X-Series



#### D-2.1500

**2 channel operation**, 2x 1500 W / 4 ohms, 2x 900 W / 8 ohms

Fohhn Audio DSP, display, remote control

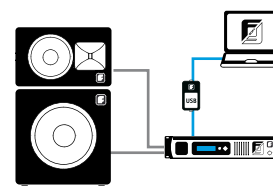
#### D-4.1200

**4+2 channel operation**, 4x 1200 W / 4 ohms, 4x 750 W / 8 ohms

**2x DSP line out channels for controlling a conventional amplifier**

Fohhn Audio DSP, display, remote control

	X-Tops							X-Subs	
	XT-1	XT-10	XT-22	XT-33	XT-4	XT-5	XM-4	XS-30 passive	XS-40 passive
D-2.750	x	x	x						
D-4.750	x	x	x						
D-2.1500				x	x	x	x	x	x
D-4.1200				x	x	x	x	x	x



1x Sub passive / 1x Top passive  
1x DSP amplifier

### 2. Standard amplifiers combined with Fohhn controllers

#### Standard amplifiers / 100V amplifiers / multichannel amplifiers combined with Fohhn FC-8 DSP system controllers

All of the Fohhn speaker systems can be operated in combination with standard amplifiers (e.g. Bittner amplifiers). Each Fohhn speaker model has a linear design, neutral sound adaptation function and is fitted with an integrated crossover with electronic tweeter protection.

We recommend integrating the FC-8 Fohhn DSP system controller for applications involving standard multichannel amplifiers, 100V amplifiers or monitored amplifiers according to EN 60849.

The FC-8 guarantees maximum sound quality, operational reliability and performance features that no other standard controller can offer in combination with our Fohhn speakers.

#### Advantages of the FC-8 controller:

##### Perfect adaptation to all standard amplifiers

Automatic amplifier calibration function and integrated amplifier database for perfect adaptation.

##### Dual DSP technology

The FC-8 contains 2 separate DSP engines with enormous capacity and processing power for Fohhn specific speaker databases and 5 digital audio devices.

##### Integrated speaker database

Guarantees excellent sound quality and protection for all Fohhn speaker types.

A sophisticated algorithm developed by Fohhn engineers and adapted to each speaker allows the individual monitoring and adjustment of bass, mid and high ranges.

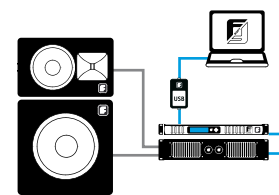
##### Remote monitoring and control

Remote control capability / network compatibility using a laptop, wall installation modules or media control systems.

##### 4 inputs / 6 outputs (24 nodes)

A programmable 10-band parametric EQ, compressor/ limiter/noise gate, delay, X-over function, top-quality pink noise and sweptone generator are available at each output, allowing you to conveniently adapt the Fohhn system to the room acoustics or your own personal requirements.

#### FC-8 DSP system controller

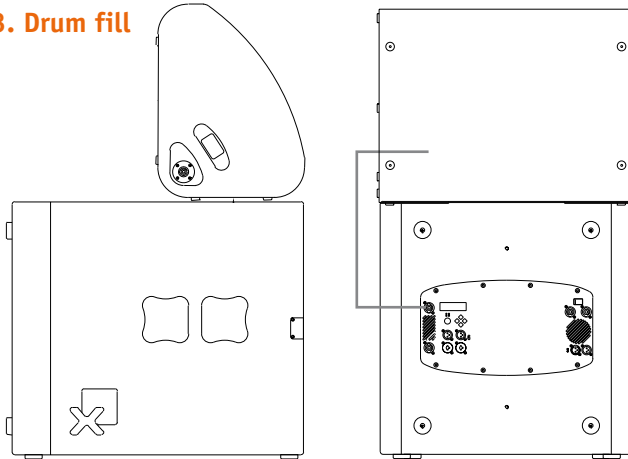


1x Sub *passive* / 1x Top *passive*

1x standard amplifiers

1x DSP system controller FC-8

### 3. Drum fill



#### Self-powered drum fill

Xperience drum fill is an extraordinary active PA system with integral digital amplifiers and digital signal processors from the latest generation and is compact, lightweight and easy to operate. Xperience drum fill can be used in a wide range of applications and can be extended or combined in a multitude of different ways. Xperience was developed for sound companies, musicians and professional Djs who require a powerful Plug & Play system that is capable of achieving perfect sound reproduction for events at venues ranging from hotels to concert halls. Thanks to state-of-the-art digital technology (Fohhn Audio DSPs), Xperience comprises a large number of audio devices that would otherwise have to be transported in external racks. At the same time, Xperience is much lighter, occupies less loading space and can be set up in no time at all. The system also minimises the amount of cables and therefore reduces the number of possible sources of error. The integral audio devices allow you to adapt the Xperience to continually changing sound requirements. You can connect XM-4 stage monitor, small, medium or large mid-high speakers to the active bass, depending on the area size and visual requirements. Perfectly adapted performance presets that can be activated at the press of a button are available for every speaker type. You can also adjust the system sound to suit your own requirements or adapt it to the room acoustics. Preprogrammed or configurable sound presets will provide you with assistance here. Several Xperience systems can be connected in series and controlled centrally from one location. The Xperience can generally be operated in 2 ways: via the clearly laid out blue 4-line display or via a laptop using the remote control. Xperience makes sound reproduction easier and more versatile than ever.

>The self-powered subwoofer XS-4 – it is the lightest in it's class.<

Extremely powerful 18" subwoofer, state-of-the-art Neodym technology, extremely lightweight as a result and at only 39 kg, as lightweight as a conventional 15" subwoofer. Integral 1500W CLASS D digital amplifier and Fohhn Audio DSPs. The active Sub can be combined with all Fohhn Top speakers. A corresponding preset is available for each Top. Access to the Fohhn Audio DSP functions such as presets, equalisers etc. via a user-friendly 4-line display direct on the active Sub or via a remote control/laptop. Software is included. Transport cover with wheels is also available to protect the electronics system. Recessed transport handles allow for extremely good handling. Outstanding manufacturing quality „Made in Germany“.

#### Advantages of the Subs active:

##### Integrated high-performance DSP technology:

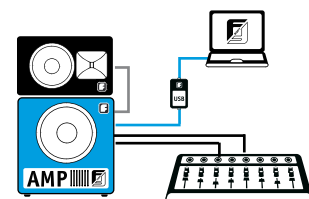
- quick set-up
- light weight
- Plug & Play system
- fewer cable faults,
- integral class-D amplifiers
- A corresponding preset is available for each Top
- controller, amplifier and X-Subs can be controlled and monitored using the same software

##### Dual DSP technology

The DSP amplifiers contain 2 separate DSP engines with enormous capacity and processing power for 5 digital audio devices (DSP-1) and Fohhn specific speaker databases (DSP-2).

##### Remote monitoring and control

Integrated temperature and operating time monitor, status indicator / protection, remote control capability / network compatibility using a laptop, wall installation modules or media control systems.



1x Sub active / 1x Top passive

## Accessories for XM-4

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### Transporthülle

Padded high-quality transport cover.

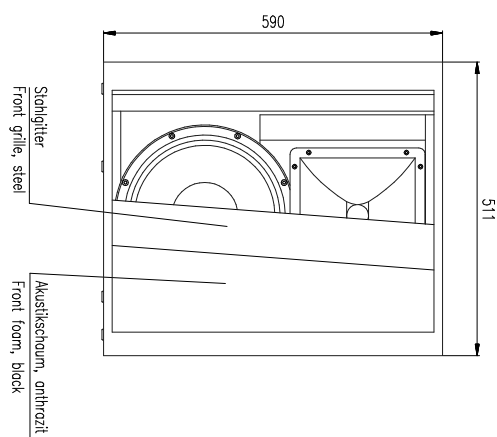


### Transport case

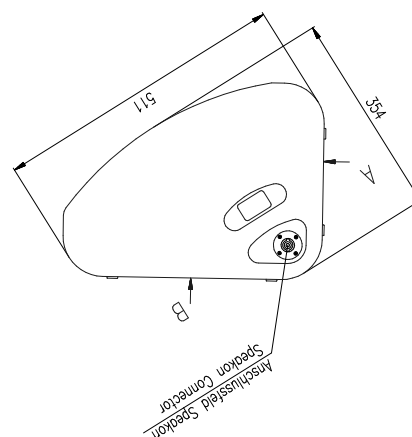
Flight case for always 2 monitors in trucking space version.

## Views of XM-4

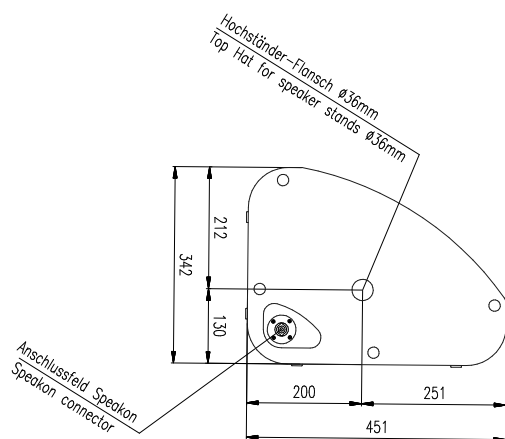
Top view



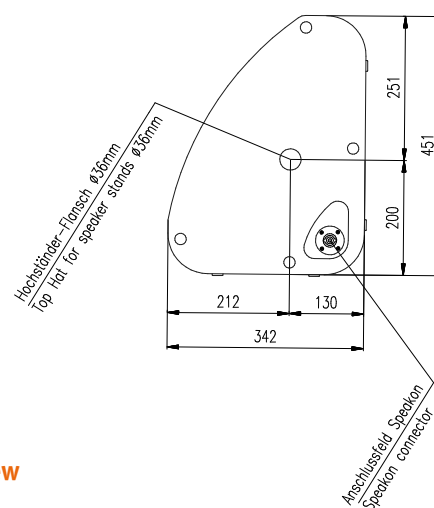
Side view right, setup angle as a monitor = 35°



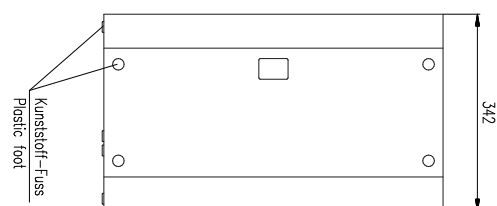
Side view left, setup angle as a monitor = 35°



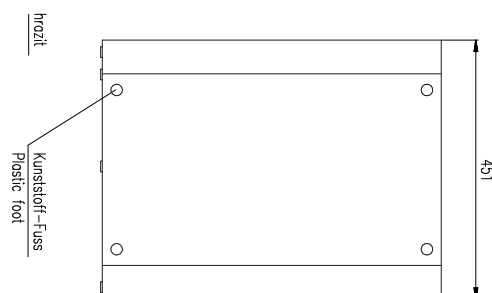
Side view left, setup angle as a monitor = 55°



Rear view



Bottom view





## Tender specifications

### 12", 1,4" CD High-performance speakers

High-performance speakers manufactured using modern 2-way technology, suitable for fullrange applications. Fitted with a long excursion 12" bass-mid speaker with neodymium magnet and a 1.4" compression driver with 3.5" voice coil and neodymium magnet. Constant directivity horn with square front, 90° rotation, defined dispersion characteristics of 80° x 50° or 60° x 50° (H x V).

Time-aligned speaker arrangement, adapted bass reflex housing with flow-optimised reflex ports. Integrated phase-optimised crossover with active electronic semi-conductor protective circuit (IPC technology) for the high-frequency driver. High-quality housing made from multiplex birch wood, waterproof assembly. Rounded sides and edges. Steel brackets fitted to the housing interior for reinforcement. Resistant textured paint, available in black or white. All RAL colours available on request. Alternatively available with optional, weatherproof polyurethane coating and impregnated speaker membranes.

The housing is fitted with a robust, sound-permeable front steel grill and acoustic foam to protect the speakers and electronics effectively against moisture and dust. 11 x M8 threaded inserts for attaching rings and system brackets are integrated in the base, rear and top of the housing. The speaker system is also available in 100V technology and different performance classes up to 240W.

Connections: 2 x Neutrik NL4 Speakon, 1 x 8-way Phoenix terminal strip. The sockets are recessed and well protected under a flap on the rear. System brackets available for ceiling and wall installation. Simulation data available for ULYSSES and EASE.

#### electro-acoustical features

acoustic design	passive loudspeaker, 2-way, bass reflex
components	12" / 1,4" on rotatable CD-horn, with self-resetting IPC-HF protection, fully neodym
power rating (nominal)	500 W
power rating (program)	1000 W
power rating (peak)	2000 W
sensitivity	100 dB
maximum SPL	131 dB
frequency range	45 Hz – 20 kHz
nominal dispersion (h x v)	80° x 50° or 60° x 50°
nominal impedance	8 ohms

#### features

enclosure	birch plywood cabinet, metal strengthened
protection grille	ball impact resistant metal, powder coating
rigging points	9x M8 und 3x M6 thread
connections	2x Neutrik NL4 Speakon and 8-pole Phoenix connector
frontal design	acoustic foam, same colour as enclosure
dimensions (W x H x D)	380 x 585 x 410 mm
weight	23 kg

#### optional features

integrated 100 V-transformer	120/60/30 W or 240/120/60 W
optional colours	all RAL-colours
weather protection	scratch-proof plastic coating, impregnated speaker membranes

#### CAAD simulation data

ULYSSES, EASE

#### Make

Fohhn Audio AG


#### Type

XM-4

# SOUNDS PERFECT. is PERFECT.

Fohhn audio systems. The ultimate all-round audio experience.



 German quality  
 engineered and made  
 by Fohhn®

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