Amp Controller-Series
DSP-Amplifiers + DSP-Controller.

Data sheet
D-4.750 D-Series
D-4.750 DSP amplifier

Description

Perfectly adapted amplifiers and DSP technology.

The Fohhn® D-4.750 DSP-controlled CLASS D amplifier was developed to fulfill the most demanding requirements concerning sound quality and reliability. Fohhn DSP amplifiers guarantee an excellent sound quality, maximum reliability and offer a host of possibilities for adapting your sound system to various room acoustics.

The D-4.750 is extremely lightweight (only 11.1 kg) with blue 4-line front display, operation or remote control via a laptop.

The D-4.750 CLASS D with 4x 750 W / 4 ohms, 4x 390 W / 8 ohms is fitted with the new Fohhn Audio DSPs as well as 2 DSP Aux outputs for controlling an additional standard amplifier.

Sound quality. Reliability. Intelligent control.

- 4 input channels
- 4 amplifier outputs, each with 750W at 4 ohms (output channels 1-4)
- 2 DSP Aux outputs (output channel 5+6)
- State-of-the-art CLASS D amplifier technology
- Integrated Fohhn DSPs guarantee maximum sound performance
- 5 premium audio tools such as Parametric EQ are integrated
- Integral speaker database for maximum operating reliability
- Remote monitoring/operation, network-compatible
- Minimal heat development, extremely quiet fans
- Fohhn® Mains Control - integrated mains supply monitoring

Each of the 4 input channels can be routed to the 4 amplifier outputs (1-4) and Aux outputs (5-6). Each channel can be edited separately or in combination with other channels.

2 DSP Aux outputs

The D-4.750 has 2 outputs “Aux5” and “Aux6” for connecting an external amplifier. Knowing the data (amplification, maximum output voltage) of your D-4.750 amplifier is essential to protect your speakers. The D-4.750 gives you the option of storing and accessing the performance data of up to 100 amplifiers, which can be viewed on the display, edited if necessary and then saved under a different name. The stored data can then be loaded to output channels Aux5 and Aux6. You can of course assign a separate amplifier to each output channel. Once you have loaded an amplifier preset, the performance and speaker data is evaluated and the multiband limiter on the D-4.750 is preset automatically.

Plug & Play

With remarkable reductions in generated heat and an incredibly low weight and compact dimensions combined with characteristically high levels of output power, we recommend this new Class D DSP amplifier for an unlimited range of applications, including AV & media, concerts, opera houses, theatres, churches, cinemas, theme parks, television studios, delay lines, stage monitoring and industrial applications. Rapid DSP access via the 4-line display transforms a mobile application into a simple, reliable Plug&Play system. The D-4.750 is extremely quiet thanks to temperature-controlled ventilators and an adjustable noisegate!

The new amplifiers save you having to use/adapt external DSPs, EQs and crossovers as well as using cables, and in smaller installations, you can also realise your projects quickly and reliably with a comparatively simple microphone mixer.

Accessories

User software, USB adapter, Ethernet adapter

Applications

Perfectly adapted amplifiers and DSP power for all your mobile and fixed installation projects with Fohhn speaker systems.
Remote control / Remote monitoring
The system’s network compatibility and remote control options via
a laptop provide you with assistance while you work. You also have
the option of linking the D-4.750 to a media control system.

The Fohhn Audio DSP.
Dual DSP power for excellent sound quality and optimal reliabil-
ity.
Integrated Fohhn DSP technology offers a host of possibilities for
implementing your sound concepts. The equipment includes two
separate stereo DSP engines and integrated speaker database for
all Fohhn speaker types, which is what makes our amplifiers so
unique.
The speaker database is based on an algorithm specially developed
for each speaker, which protects bass, mid and high frequency dri-
viers in all performance classes and guarantees outstanding sound
and maximum operational reliability.
5 professional audio devices offer valuable benefits on an every
day working level: 10-band parametric EQ, delay, compressor/limi-
ter, noise gate and crossover allow the user to adapt the audio
system perfectly to sound requirements, room acoustics or personal
preferences. Cable faults, cumbersome rack cabinets and tangled
cables are a thing of the past. The integrated technology reduces
the weight and dimensions of the unit and guarantees stress-free
operation. In addition, the operating status display gives you com-
plete control in monitoring the temperature and operating time.

Fohhn® Mains Control
The integrated mains supply monitoring system.
During use, the supply to the amplifier is constantly monitored.
If at any time it exceeds the maximum permitted range (180-255
VAC), the supply will be interrupted. During power up it also mini-
mizes the input surge current by switching on at the mains Vage
zero crossing.
**Technical specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>D-4.750</td>
</tr>
<tr>
<td><strong>amplifier technology</strong></td>
<td>Class D</td>
</tr>
<tr>
<td><strong>EIA amplifier power</strong></td>
<td>4x 750 W / 4 ohms, 4x 390 W / 8 ohms (1 kHz, THD+N &lt; 1%, 230 V mains)</td>
</tr>
<tr>
<td><strong>minimum impedance</strong></td>
<td>4 ohms</td>
</tr>
<tr>
<td><strong>outputs</strong></td>
<td>4 + 2 DSP</td>
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<tr>
<td><strong>inputs</strong></td>
<td>4</td>
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<td><strong>DSP channels, Fohhn Audio DSP</strong></td>
<td>6</td>
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<tr>
<td><strong>amplification</strong></td>
<td>32 dB</td>
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<tr>
<td><strong>input sensitivity</strong></td>
<td>1.4 V</td>
</tr>
<tr>
<td><strong>frequency response</strong></td>
<td>20 Hz - 20 kHz</td>
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<tr>
<td><strong>S/N Ratio</strong></td>
<td>&gt;105 dB/A</td>
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<tr>
<td><strong>protection circuit</strong></td>
<td>switch-on delay, soft start, impedance- and short-circuit protection, DC protect</td>
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<tr>
<td><strong>remote control</strong></td>
<td>Fohhn-Net, Fohhn Audio Soft</td>
</tr>
<tr>
<td><strong>remote monitoring</strong></td>
<td>temperature, protect, signals</td>
</tr>
<tr>
<td><strong>power supply</strong></td>
<td>AC 230V, 195 V - 250 V AC 50/60 Hz, switch mode power supply</td>
</tr>
<tr>
<td><strong>temperature range</strong></td>
<td>0 - 45°C</td>
</tr>
<tr>
<td><strong>cooling</strong></td>
<td>temperature-controlled fan</td>
</tr>
<tr>
<td><strong>weight</strong></td>
<td>11.1 kg</td>
</tr>
<tr>
<td><strong>dimensions (W x H x D)</strong></td>
<td>2HE, 88.9 x 483 x 380 mm</td>
</tr>
<tr>
<td><strong>controller</strong></td>
<td>6 digital signal processors, 24 independent limiters, selective 3-band limiting (bass/mid/high), band specific time constants, 56-bit double precision filter technology, AD/DA 24 bit/48 kHz</td>
</tr>
<tr>
<td><strong>controls</strong></td>
<td>Select potentiometer, 4 buttons for DSP handling, Power on/off switch, 6 buttons for channel select</td>
</tr>
<tr>
<td><strong>indicators</strong></td>
<td>4 line display, 12x Signal/Level LED, 4x Clip LED, 1x ready LED, 6x channel select LED, 1x over-temperature LED, receive/send remote control LED</td>
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<tr>
<td><strong>dynamic range</strong></td>
<td>110 dB, A-weighted 20Hz-20kHz</td>
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<td><strong>propagation delay</strong></td>
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<td><strong>calculation depth</strong></td>
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<td><strong>input impedance</strong></td>
<td>10 kOhm</td>
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<td><strong>output impedance</strong></td>
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<td><strong>input clipping Level</strong></td>
<td>+15 dBu</td>
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<tr>
<td><strong>output clipping Level</strong></td>
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<tr>
<td><strong>internal clipping Level</strong></td>
<td>+38 dBu</td>
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<tr>
<td><strong>THD</strong></td>
<td>THD &lt; 0.002%, THD+N = 0.02%, +3 dBu, 1kHz, +3 dBu, 20Hz to 20kHz</td>
</tr>
</tbody>
</table>

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

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**Fohhn® Mains Control**

The integrated mains supply monitoring system. During use, the supply to the amplifier is constantly monitored. If at any time it exceeds the maximum permitted range (180-255 VAC), the supply will be interrupted. During power up it also minimizes the input surge current by switching on at the mains Vage zero crossing.

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**Passive Loudspeaker with DSP System Amplifier D-4.750 with 2 DSP Outputs and standard amplifier**
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.

The unique Fohhn 2-stage DSP concept:

DSP-1: Integrated digital audio devices
High-quality audio devices. Settings can be modified and saved as presets. Auxiliary status display and sound generator.
- 10-band parametric EQ
- Compressor / limiter / noise gate
- Delay
- Crossover
- Status display: operating time

DSP-2: Speaker Management System
Fixed default programs. Updatable. Select at the touch of a button.
- Speaker database for all Fohhn speakers. Specially developed algorithm for maximum protection and sound quality.

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 sweep tone 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.
D-4.750 DSP amplifier

D-4.750 DSP amplifier
CLASS D, 4+2 channel operation, 4x 750 W / 4 ohms, 4x 390 W / 8 ohms
2x DSP line out channels for controlling a conventional amplifier
Fohhn Audio DSP, display, remote control

Integrated in the D-4.750 is a complete FC-8 System Controller with 6 DSP channels.

2x DSP line out for external amplifiers, active speakers, etc. All DSP functions are available.
Remote control and network ability of Fohhn devices with integrated DSP

**FR-10**

remote control wall panel designed for the remote operation of Fohhn devices with integrated DSP.

**FR-20**

19" remote control unit can be controlled via conventional external buttons or switches.

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**Description**

The FR-10 is a wall mount remote control module designed for the remote operation of Fohhn DSP amplifiers, DSP controllers and active Fohhn speakers systems. The FR-10 is extremely easy to operate because the controls are so well arranged. It is virtually impossible for the end customer to make operating errors because the only operating elements are the 8 labelled buttons.

**Easy handling**

Control up to 32 Fohhn devices individually with this stylish FR-10 wall panel. 8 programmable buttons can be configured to control the overall volume of a system, the volume in different zones or presets for different room effects, for example. The system also has a special function that confirms whether all commands have been executed successfully. The buttons indicate this by changing red or green shortly after they are pressed. For example, if a device is not switched on, the button changes red to indicate that a command could not be executed. This additional monitoring function ultimately contributes to the overall operating reliability of your system. The wall panel is easy to configure using a standard computer with intuitive Fohhn-Net Remote software installed.

**Connections**

Two terminal strips (paralleled). Alternative connection via standard 4-wire telephone cable.

**Applications**

The FR-10 is ideal for training rooms, hotels, churches, halls, restaurants or any venue where a simple, efficient system is required to control your audio equipment from a central location. The FR-10 is also ideal for projects where complex media control systems are not viable or inappropriate, but the user wishes to control the speaker system centrally.

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**Description**

The FR-20 allows the convenient integration of all DSP-controlled Fohhn devices into media control systems (e.g. AMX, Crestron) by means of switching contacts or RS-485 interface. Presets stored in the connected Fohhn DSP devices are activated simultaneously and settings for different scenarios such as speech, music, empty room, full room, etc are loaded when the buttons/switches are pressed. You can also adjust the volume quickly and easily in 1 dB increments using the FR-20. A maximum of 31 Fohhn devices connected to the network can be activated simultaneously at the press of a single button.

**Integration in a media control system**

The FR-20 allows the convenient integration of all DSP-controlled Fohhn devices into media control systems (e.g. AMX, Crestron) by means of switching contacts or RS-485 interface.

**Integration in an EIB bus technology**

One building, one concept, one system.

Fohhn systems equipped with a FR-20 distribution switch comply with the „European installation bus technology“ standard, including all operating comforts.

**Applications**

The FR-20 is ideal for training rooms, hotels, churches, halls, restaurants, clubs, bars and many other venues. For simple, reliable remote operation of your audio system without having to install complex, expensive media control systems.
Maximum control

Easy, convenient handling. Laptop and Fohhn Audio Software for intuitive control and monitoring of all connected Fohhn audio devices with integrated DSP. Clear graphical user interface for rapid access to the speaker database, status display and all audio devices integrated in the Fohhn DSP. A sound generator with pink noise and sweeptone function is also integrated. Connection via Fohhn USB adapter or Ethernet adapter.

Software updates for free at:

www.fohhn.com / Downloads
Fohhn Audio Soft
Easy, convenient handling for Fohhn Audio Software for intuitive control and monitoring of all connected Fohhn audio devices with integrated DSP. Clear graphical user interface for rapid access to the speaker database, status display and all audio devices integrated in the Fohhn DSP.

NA-1
USB adapter and Fohhn Audio Soft on CD Rom. Extensionable with XLR microphone cable. Aluminium housing and adapter cable.

NA-3
NA-3 Fohhn-Net Ethernet Adapter for local Ethernet network, Fohhn Audio Soft on CD Rom. Extensionable with XLR microphone cable. Aluminium housing, adapter cable and power adapter. The NA-3 can be connected to a WLAN router or access point to enable wireless operation using Fohhn Audio Soft installed on a laptop.

Amplifier Recommendations

<table>
<thead>
<tr>
<th>Arc-Tops</th>
<th>Linea</th>
<th>X-Tops</th>
<th>Road Perform Tops</th>
<th>Arc-Subs</th>
<th>X-Subs</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-05, CS-04</td>
<td>AT-07, AT-08</td>
<td>AT-09, AT-10</td>
<td>AT-11, AT-12, AT-13</td>
<td>AT-14, AT-15, AT-16</td>
<td>AT-17, AT-18, AT-19, AT-20</td>
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<tr>
<td>D-2.750</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>D-4.750</td>
<td>x</td>
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<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>D-2.1500</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>D-4.1200</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tbody>
</table>

**Accessories for D-4.750 and amplifier recommendations**

**Fohhn Audio Soft**
Easy, convenient handling for Fohhn Audio Software for intuitive control and monitoring of all connected Fohhn audio devices with integrated DSP. Clear graphical user interface for rapid access to the speaker database, status display and all audio devices integrated in the Fohhn DSP.

**NA-1**
USB adapter and Fohhn Audio Soft on CD Rom. Extensionable with XLR microphone cable. Aluminium housing and adapter cable.

**NA-3**
NA-3 Fohhn-Net Ethernet Adapter for local Ethernet network, Fohhn Audio Soft on CD Rom. Extensionable with XLR microphone cable. Aluminium housing, adapter cable and power adapter. The NA-3 can be connected to a WLAN router or access point to enable wireless operation using Fohhn Audio Soft installed on a laptop.

**Amplifier Recommendations**

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<td>x</td>
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<td>x</td>
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<tr>
<td>D-2.1500</td>
<td>x</td>
<td>x</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tbody>
</table>
Views of D-4.750

Front view

Rear view

Top view

Side view
Tender specifications

Digital 4+2 channel DSP amplifier with network connection

High efficient digital DSP amplifier with 4 channels and 2 additional DSP controlled NF outputs. Class D construction with 750 W at 4 ohms per channel. 19”/2 HE design enclosure with blue backlit display and control elements to adjust all audio parameters. Remote controlling and monitoring via external controller possible. Network compatible in connection with all active Fohhn devices. Integrated two-stage Fohhn Audio DSPs per output channel with all necessary tools for a perfect adjustment of a speaker system: full-parametric 10-band EQ, delay, variable high-/lowpass-filter, dynamic processor with compressor and noise gate, 180° phase inversion, sinus and noise generator. In addition, the operating status display gives complete control in monitoring the temperature and operating time. Integrated management system with factory presets for all Fohhn speakers to protect the connected speakers via selective multiband-limiting separately for the high-/mid- and sub frequency band. Perfect for mobile applications because of an incredibly low weight and maximum power efficiency for fixed installations.

<table>
<thead>
<tr>
<th>Specification</th>
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<td>Amplifier technology</td>
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<td>EIA amplifier technology</td>
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<tr>
<td>Minimum impedance</td>
<td>4 ohms</td>
</tr>
<tr>
<td>Outputs</td>
<td>4 + 2 DSP</td>
</tr>
<tr>
<td>Inputs</td>
<td>4</td>
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<td>DSP channels, Fohhn Audio DSP</td>
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<td>Amplification</td>
<td>32 dB</td>
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<td>Power supply</td>
<td>AC 230V, 195 V - 250 V AC 50/60 Hz, switch mode power supply</td>
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<td>Temperature range</td>
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<td>Cooling</td>
<td>temperature-controlled fan</td>
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<td>Weight</td>
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<td>2 HE, 88,9 x 483 x 380 mm</td>
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<td>2 digital signal processors, 8 independent limiters, selective 3-band limiting (bass/mid/high) band specific time constants 56-bit double precision filter technology AD/DA 24 bit/48 kHz</td>
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<td>4 line display, 12x signal/level LED, 4x clip LED, 6x channel select LED, 1x ready LED 1x over-temperature LED receive/send remote control LED</td>
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<tr>
<td>Make</td>
<td>Fohhn Audio AG</td>
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<tr>
<td>Type</td>
<td>D-4.750</td>
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</tbody>
</table>

Fohhn Audio AG
D-SERIES
SOUND QUALITY. RELIABILITY. INTELLIGENT CONTROL.

D-4.750 DSP amplifier
CLASS D, 2 channel operation, 2x 750 W / 4 ohms, 2x 390 W / 8 ohms
Fohhn Audio DSP, display, remote control

D-4.750 DSP amplifier
CLASS D, 4+2 channel operation, 4x 750 W / 4 ohms, 4x 390 W / 8 ohms
2x DSP line out channels for controlling a conventional amplifier
Fohhn Audio DSP, display, remote control

D-2.1500 DSP amplifier
CLASS D, 2 channel operation, 2x 1500 W / 4 ohms, 2x 900 W / 8 ohms
Fohhn Audio DSP, display, remote control

D-4.1200 DSP amplifier
CLASS D, 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
The intuitive operating concept

Net Remote-Series

The intuitive Fohhn operating concept incorporates cable connected and wireless remote control options for fixed and mobile Fohhn sound systems. The remote control devices are extremely user-friendly and give the user complete control over the audio system from a central location. Individual devices and entire systems can be operated synchronously from one of several devices, opening up a whole range of different application possibilities.

All Fohhn active speaker systems, DSP amplifiers and DSP controllers are equipped with two Fohhn-Net network interfaces as standard, which can be used to monitor and remotely operate each individual device. If you are using several Fohhn devices, you can easily interlink and monitor or remotely operate them from a central location.

The Fohhn-Net system is nothing more than a control network, no audio data is transferred, only control data. Fohhn-Net can operate a maximum of 254 devices simultaneously via cable at distances of up to 1800 m. At live events, you can use any available microphone cable or your multicore and for fixed installations, you can use conventional telephone or network cables. Bus or star networks are also an option here. A circular cabling arrangement will achieve additional redundancy and ensure that the star network will function correctly if interrupted at any point. The Fohhn-Net was designed in line with established industrial standards and is very reliable due to a stable transfer protocol and permanent monitoring (continuous feedback during data transfer).
SOUNDS PERFECT. IS PERFECT.

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