SXH218
Hybrid® Horn/Reflex, Dual-driver Subwoofer

Features

• Ultra-high output ground-stacked subwoofer
• Hybrid® horn/reflex loading for maximum acoustic efficiency and low frequency extension
• Dual long-excursion 18” (460mm)/4.5” (115mm) voice coil neodymium drivers
• Forward or rear-facing operation

Applications

• Outdoor festivals
• Stadiums, arenas and theatres
• Concert halls
• Nightclubs
• Outdoor restaurant, bar and hotel entertainment areas
• Concourses and Theme Parks

The SXH218 is an extremely powerful subwoofer capable of producing 148dB peak output at 1m. It is the ideal partner for Wavefront Precision WPC and WPL arrays where maximum low frequency output is required as well as a standalone solution for premium permanent installations such as nightclubs.

Its Hybrid® horn/reflex loading combines the acoustic efficiency and impact of bass horn technology with the low frequency extension of a reflex design, enabling it to produce significantly higher output levels than a traditional reflex-loaded subwoofer. With an operating range of 32-150Hz + 3dB, it features dual long-excursion 18” (460mm)/4.5” (115mm) voice coil neodymium drivers, with water resistant cones and triple roll surrounds.

Also available is the SXHF218, a version of the SXH218 with flying hardware. It can be incorporated at the top of a WPL array, or more commonly flown as a separate array alongside. Like the ground-stack version, a combination of forward and rear-facing enclosures can be configured with specific directional properties.

Both the SXH218 and SXHF218 can be powered by either a single channel of a Martin Audio iK42 4-channel amplifier, or a bridged pair if maximum output is required. Its connector sockets are wired so that one four-core cable from the amplifier will power two subwoofers. Subwoofer settings are determined by a pre-determined parameter set in Vu-Net when used in conjunction with iK42, or settings are available from the Martin Audio website when used with alternative amplifiers.

By adding the input board cover accessory, the subwoofer is fully weather resistant and suitable for permanent outdoor usage.
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Technical Specifications

**TYPE**
Hybrid® horn/reflex subwoofer

**FREQUENCY RESPONSE** (1)
32Hz – 150kHz ±3dB -10dB @ 27Hz

**DRIVERS**
2 x 18” (460mm)/4.5” (115mm) voice coil, long excursion, neodymium magnet, waterproof cone

**RATED POWER** (2)
3000W AES, 12000W peak

**RECOMMENDED AMPLIFIER**
IKON iK42

**Sensitivity** (10)
107dB

**MAXIMUM SPL** (9)
148dB peak (at 1m half space)

**Nominal Impedance**
4 Ohms

**Dispersion** (-6dB)
Omnidirectional/or Cardioid (paired)

**ENCLOSURE**
Multi-laminate birch/poplar ply

**FINISH**
Textured Black Polyurea

**PROTECTIVE GRILLE**
Black perforated steel

**CONNECTORS**
2 x NL4

**PIN CONNECTIONS**
Input: +1/-1, refer to input panel for four-core cable link diagram

**FITTINGS**
Two skids on base, with mating channels on top
Four rear-mounted 100mm (4in) castors
6 x bar handles, 3 on each side
4 x fittings for optional transit cover

**DIMENSIONS (INCL SKIDS)**
(W) 1112mm x (H) 609mm x (D) 1023mm (1151mm incl. castors)
(W) 43.8in x (H) 24in x (D) 40.3in (45.3in incl. castors)

**WEIGHT**
116kg (256lbs), with castors 120kg (265lbs)

**ACCESSORIES**
Transit cover

Notes
(1) Measured on-axis in half (2pi) space at 2 metres, then referred to 1 metre.
(3) Measured in half (2pi) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
(4) Measured in half (2pi) space at 2 metres using band limited pink noise, then referred to 1 metre.
(5) Measured on-axis in open (4pi) space at 2 metres, then referred to 1 metre.
(6) Measured in open (4pi) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
(7) Measured in open (4pi) space at 2 metres using band limited pink noise, then referred to 1 metre.
(8) Measured in open (4pi) space at 2 metres with 2.83v input, using band limited pink noise, then referred to 1 metre.
(9) Calculated at 1 metre.
(10) Measured in half (2pi) space at 2 metres with 2.83v input, using band limited pink noise, then referred to 1 metre.

Architectural Specifications

The loudspeaker shall be a subwoofer consisting of two 18”/4.5” voice coil, long-exursion, low frequency transducers in a hybrid horn/bass reflex configuration. The on-axis frequency response shall be 32Hz-150kHz +/- 3dB and the loudspeaker shall produce a maximum SPL of 148dB peak calculated at 1 metre.

Power handling shall be 3000W AES, 12000W peak. Rated impedance shall be 4 ohms. The rear connector panel shall be fitted with two NL4 type connectors and the loudspeaker shall be operated in conjunction with a dedicated controller amplifier.

The loudspeaker shall be capable of forward and rear-facing operation to enable the construction of ground-stacked subwoofer arrays.

The loudspeaker enclosure shall be constructed from multi-laminate plywood with a textured black polyurea coating. The drivers shall be protected by a perforated steel grille and the enclosure shall be fitted with bar handles and skids.

Dimensions including skids, excluding castors (W x H x D) shall be 1112mm x 607mm x 1013mm (43.8in x 23.9in x 39.9in).

Dimensions including skids and castors (W x H x D) shall be 1112mm x 607mm x 1140mm (43.8in x 23.9in x 44.9in).

Weight shall be 120kg (264lbs).

The loudspeaker shall be the Martin Audio SXH218.
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Recommended Amplifier Technical Specifications

iK42 Amplifier

<table>
<thead>
<tr>
<th>General</th>
<th>Four-channel Class D amplifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER OUTPUT</td>
<td>4 x 5000W into 2 ohms, all channels driven</td>
</tr>
<tr>
<td></td>
<td>4 x 3000W into 4 ohms, all channels driven</td>
</tr>
<tr>
<td></td>
<td>4 x 1500W into 8 ohms, all channels driven</td>
</tr>
<tr>
<td>DIGITAL SIGNAL PROCESSING</td>
<td>96kHz DSP on all inputs and outputs</td>
</tr>
<tr>
<td>COOLING</td>
<td>Dual vari-speed fans, front-to-back airflow</td>
</tr>
<tr>
<td>MAXIMUM AMBIENT TEMPERATURE</td>
<td>40°C (104°F)</td>
</tr>
<tr>
<td>Audio Inputs/Outputs</td>
<td>4 x female, 4 x male Neutrik™ XLR</td>
</tr>
<tr>
<td>ANALOGUE IN/LINK (4 CHANNELS)</td>
<td>balanced to ground</td>
</tr>
<tr>
<td>ANALOGUE INPUT IMPEDANCE</td>
<td>20kΩ balanced to ground</td>
</tr>
<tr>
<td>NOMINAL SYSTEM GAIN</td>
<td>32dB</td>
</tr>
<tr>
<td>AES3 IN/LINK (2 CHANNELS)</td>
<td>1 x female, 1 x male Neutrik™ XLR, balanced</td>
</tr>
<tr>
<td>DANTE™ (4 CHANNELS)</td>
<td>2 x shielded RJ45, primary and secondary</td>
</tr>
<tr>
<td>AMPLIFIER OUTPUTS</td>
<td>4 x Neutrik Speakon™ NL4</td>
</tr>
</tbody>
</table>

Control and Monitoring Network

| PROTOCOL               | Ethernet |
| CONTROL APPLICATION    | Martin Audio VU-NET™ |

Power Supply

| TYPE                    | High performance Series Resonant |
| AC INPUT OPERATING RANGE| 85 – 240V – AC, 47 – 63Hz |
| MAINS INRUSH CURRENT    | 6A at 115V, 12A at 230V (max for <10ms) |
| MAINS CONNECTOR         | Neutrik 12A Powercon™ |

Physical

| DIMENSIONS              | (W) 482 x (H) 2U/88mm x (D) 441mm |
|                        | (W) 18.98in x (H) 2U/3.46in x (D) 17.35in |
|                        | incl handles and optional rear support |
| WEIGHT                 | 12.5kg (27.5lbs) |

Trade Descriptions Act

Due to Martin Audio’s policy of continuing improvement, we reserve the right to alter these specifications without prior notice. Martin Audio is committed to refining state-of-the-art sound reinforcement, combining in-depth product and field applications research with advanced manufacturing techniques. Every Martin Audio product is built to the highest manufacturing standards and rigorously tested to ensure that it meets the performance criteria specified in the design.
Wiring Two SXH218s from independent channels of an iK42 with 4-core speaker cables