SXHF218
Hybrid® Horn/Reflex Flown, Dual-driver Subwoofer

Features

• Ultra-high output flown 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

The SXHF218 is an extremely powerful subwoofer capable of producing 148dB peak output at 1m. It is essentially the flown version of the SXH218 and is the ideal partner for Wavefront Precision WPL arrays where maximum low frequency output is required.

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.

The enclosure is constructed from multi-laminate plywood and coated with hard-wearing textured black polyurea. A rigid perforated steel grille protects the front of the enclosure, while integral flying hardware alongside use of the WPL GRIDT means it can be incorporated at the top of a WPL array, or more commonly flown as a separate array alongside, again using the WPL GRIDT. Like the ground-stack version, a combination of forward and rear-facing enclosures can be configured with specific directional properties. By adding an outrigger kit, SXHF218’s can also be ground-stacked beneath WPL enclosures to form a powerful ground-based system.

The 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. SXHF218 settings are determined by a predetermined parameter set in Vu-Net when used in conjunction with an iK42, or 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 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
- **FITTINGS**: Two skids on base, with mating channels on top
- **DIMENSIONS (INCL SKIDS)**: (W) 1148mm x (H) 604mm x (D) 1027mm (45.2in x 23.8in x 40.4in)
- **WEIGHT**: 138kg (304lbs), with castors 146.5kg (323lbs)
- **ACCESSORIES**: Transit cover

Architectural Specifications

The loudspeaker shall be a flyable subwoofer consisting of two 18”/4.5” voice coil, long-excision, 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 flown or ground-stacked subwoofer arrays with specific directional properties.

Dimensions including skids, excluding castors (W x H x D) shall be 1148mm x 604mm x 1027mm (45.2in x 23.8in x 40.4in). Dimensions including skids and castors (W x H x D) shall be 1148mm x 604mm x 1155mm (45.2in x 23.8in x 45.5in). Weight shall be 138kg (304lbs), with castors 142kg (313lbs). The loudspeaker shall be the Martin Audio SXHF218.

**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.
- (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) Calculated at 1 metre.
- (9) Measured in half (2pi) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
- (10) Measured in open (4pi) space at 2 metres using band limited pink noise, then referred to 1 metre.
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Recommended Amplifier Technical Specifications

### iK42 Amplifier

<table>
<thead>
<tr>
<th>General</th>
<th>Type</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>
<td>4 x 3000W into 4 ohms, all channels driven</td>
</tr>
<tr>
<td>Digital Signal Processing</td>
<td>96kHz DSP on all inputs and outputs</td>
<td></td>
</tr>
<tr>
<td>Cooling</td>
<td>Dual vari-speed fans, front-to-back airflow</td>
<td></td>
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<tr>
<td>Maximum Ambient Temperature</td>
<td>40°C (104°F)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audio Inputs/Outputs</th>
<th>Analogue In/Link (4 Channels)</th>
<th>4 x female, 4 x male Neutrik™ XLR</th>
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</thead>
<tbody>
<tr>
<td>Analogue Input Impedance</td>
<td>20kΩ balanced to ground</td>
<td></td>
</tr>
<tr>
<td>Maximum Analogue Input Level</td>
<td>+20dBu</td>
<td></td>
</tr>
<tr>
<td>Nominal System Gain</td>
<td>32dB</td>
<td></td>
</tr>
<tr>
<td>AES3 In/Link (2 Channels)</td>
<td>1 x female, 1 x male Neutrik™ XLR, balanced</td>
<td></td>
</tr>
<tr>
<td>DANTE™ (4 Channels)</td>
<td>2 x shielded RJ45, primary and secondary</td>
<td></td>
</tr>
<tr>
<td>Amplifier Outputs</td>
<td>4 x Neutrik Speakon™ NL4</td>
<td></td>
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<tr>
<th>Control and Monitoring Network</th>
<th>Protocol</th>
<th>Ethernet</th>
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<tbody>
<tr>
<td>Control Application</td>
<td>Martin Audio VU-NET™</td>
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<thead>
<tr>
<th>Power Supply</th>
<th>Type</th>
<th>High performance Series Resonant</th>
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<tbody>
<tr>
<td>AC Input Operating Range</td>
<td>85 – 240V – AC, 47 - 63Hz</td>
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<tr>
<td>Mains Inrush Current</td>
<td>6A at 115V, 12A at 230V (max for &lt;10ms)</td>
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<tr>
<td>Mains Connector</td>
<td>Neutrik 32A Powercon™</td>
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<thead>
<tr>
<th>Physical</th>
<th>Dimensions</th>
<th>(W) 482 x (H) 2U/88mm x (D) 441mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>12.5kg (27.5lbs)</td>
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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.
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Wiring Two SXH218s from independent channels of an iK42 with 4-core speaker cables

SCHEMATIC