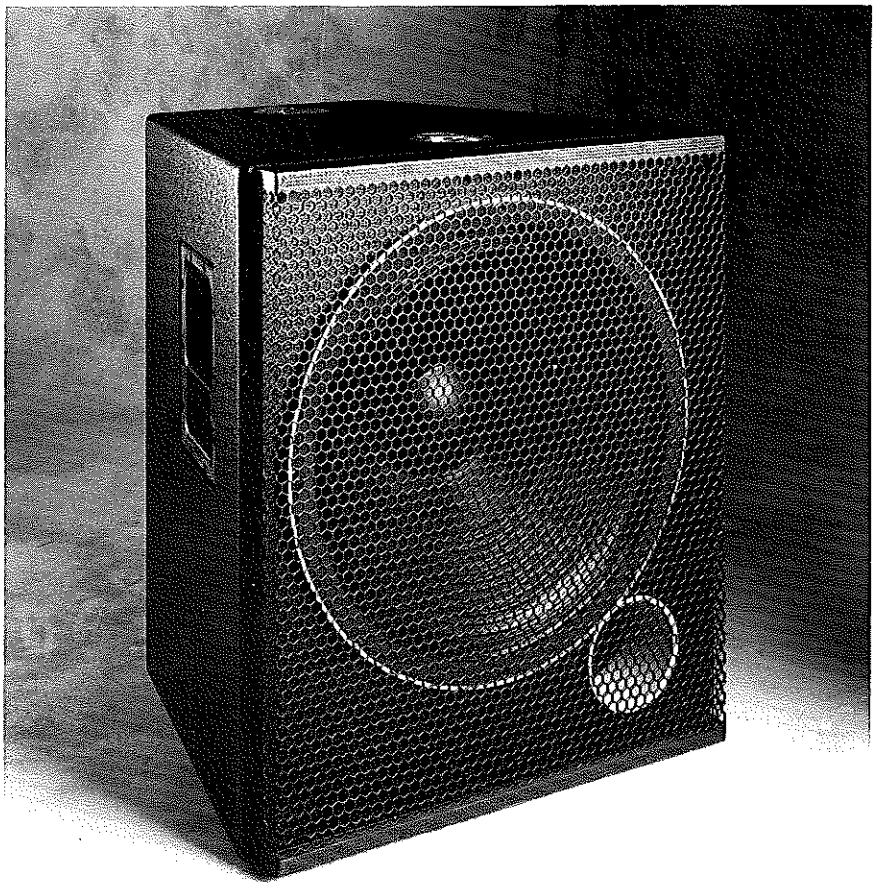
MSW-2 Reinforcement Subwoofer

Operating Instructions



The Meyer Sound MSW-2 is a compact high-power subwoofer loudspeaker designed to extend the power bandwidth of Meyer Sound reinforcement systems to 35 Hz. The system consists of one 18-inch cone driver in a heavily braced 2.3 cu. ft. vented enclosure. The arrayable cabinet is fitted with handles and four rigging plates securely attached to steel brackets integral to the cabinet.

The MSW-2 is designed to be operated as a system with the Meyer Sound B-2EX Control Electronics Unit. The B-2EX comprises electronic crossover, Meyer Sound exclusive SpeakerSense™ driver protection circuitry, and amplitude and phase response alignment circuitry optimized for the loudspeaker.

Meyer Sound

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Amplifier Requirements

The MSW-2 requires a professional quality two-channel power amplifier capable of delivering up to 400 watts continuously into 8 ohms. Use of amplifiers of lower power will not allow the full power and headroom of the MSW-2 system to be realized. Conversely, use of amplifiers rated at significantly more than 400 watts into 8 ohms may endanger the loudspeaker, and is not recommended.

Connections

The connection terminals of the 18-inch driver appear on an EP-type 4-pin connector located on the rear of the MSW-2 cabinet. Pin assignments for this connector are:

Pin 1 — Common (–)
Pin 2 — nc
Pin 3 — nc
Pin 4 — Hot (+)

(When the cabinet is fitted with an EP-5 connector, pin 5 is unconnected.)

The minimum wire size for connections between the MSW-2 and the power amplifier should be 14 gauge.

Note: If you are using standard Meyer Sound loudspeaker cables and adapters, simply connect the female end of the loudspeaker cable to the MSW-2, the male end of the cable to the Meyer Sound subwoofer pigtail adapter, and the banana connector of the adapter to your amplifier outputs. For connections between the B-2EX and the power amplifier, refer to the B-2EX Operating Instructions.

Verifying System Polarity

All Meyer Sound loudspeaker systems are thoroughly tested in all stages of manufacture and the correct polarity of individual cabinets is assured. However, polarity reversal is possible in systems with multiple amplifier connections. A single cabinet or component that is out of polarity with the rest of the system will cause phase cancellation, resulting in a noticeable decrease in SPL and possible component damage.

The polarity of individual cabinets may be tested with a 9 volt battery, and Meyer Sound's SIM® System II or a spectrum analyzer can be used, with a noise source, to test for correct polarity between cabinets.

1. Single cabinets.

First verify polarity of the driver by connecting a 9 volt battery at the end of the loudspeaker cable:

Cannon connector	Battery
Pin 1	- terminal
Pin 4	+ terminal

The woofer cone should move outward toward the cabinet front face.

2. Multiple cabinets.

- Each cabinet should first be tested as above.
- Input the pink noise source to the B-2EX.
- Connect one cabinet and advance the pink noise to a convenient measuring level. Position the measuring microphone on the axis between two adjacent cabinets, and about 6 feet distant. Note the frequency response and overall level
- Leaving the first cabinet connected, connect the adjacent one and observe the analyzer display. The entire curve should jump up in level, indicating correct addition between the loudspeakers. A polarity reversal between the loudspeakers will show up as severe cancellation.

Similarly, connect the rest of the cabinets in the array one by one, looking for correct addition as each loudspeaker is connected. (It will be necessary to reposition the microphone.)

Note: A polarity reversal within a subwoofer system can result in severe damage to the drivers. It is strongly recommended that polarity testing be done at low levels and with the appropriate equipment.

Rigging

The MSW-2 loudspeaker has four steel rigging brackets internally mounted as an integral part of the cabinet design, and the cabinet is supplied with either aircraft pan fittings (ring and stud) or 3/8"-16 (or M10) nut plates, according to user preference. A flat plate is installed when no rigging hardware is specified. All plates are held in place by six Phillips-head machine screws and are interchangeable. The handles on the MSW-2 cabinet are provided solely for moving and carrying the loudspeaker, and are **not** to be used for rigging purposes.

The rigging hardware is so designed that a single point can support the normal load for the cabinet. In the case of the MSW-2, the recommended maximum load is 420 lbs (186 kg). Any of the individual rigging points is capable of supporting this load with an adequate safety margin. However, Meyer Sound strongly recommends that safety lines be run to the other points. If the structural integrity of any cabinet has been compromised by damage or negligence, then the safety of the rigging cannot be assured. **All rigging should be done by competent professionals.**

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Specifications

Acoustical — MSW-2/B-2EX System

Frequency Response[1]	35 to 110 Hz ±4dB
Maximum SPL[2]	
Continuous	125 d8
Peak	130 dB

MSW-2 Loudspeaker

Driver Complement	One MS-18 18" cone driver
Minimum Impedance	8 ohms
Enclosure	2.3 cu. ft. vented, multi-ply Finnish Birch plywood
Finish	Black textured or weather protected (optional)
Physical Dimensions	21¼"W x 24¼"H x 20¼"D with grill frame and foam
Weight	66 lbs (30 kg)
Protective Grill	Perforated steel screen, charcoal-gray foam covering
Connector	EP-4 male (EP-5 male, Europe only)
Rigging (optional)	Aircraft pan fittings or ⅜" (or M10) nut plate

Notes:

1. **Measured 1 meter on axis, half space conditions, pink noise input, in third octave bands.**
2. **Loudspeaker driven by power amplifier rated at 400 W into 8 ohms, weighted noise signal source.**

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