

Magneplanar DW 1 Woofer Instruction Manual

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1. Introduction/General Description

The Magneplanar DW 1 is a dipole, thin-film planar/magnetic woofer which is a derivative of the MG 20.1 DiPlanar woofer technology. The DW 1 can be driven simultaneously by 3 separate amplifiers (typically the front left, center and right channels).

The DW 1 is a "fast" woofer with flat response to 5 kHz which makes the DW 1 ideal for blending with all Magneplanar on-wall models or center channels that have limited bass response.

2. Carton Contents

- 1 - DW 1 Loudspeaker
- 1 - Magnepan "Shaped" Pink Noise CD Test Disk
- 1 - Hex Wrench
- 1 - Speaker Logo
- 1 - Owner's Manual

3. Packaging

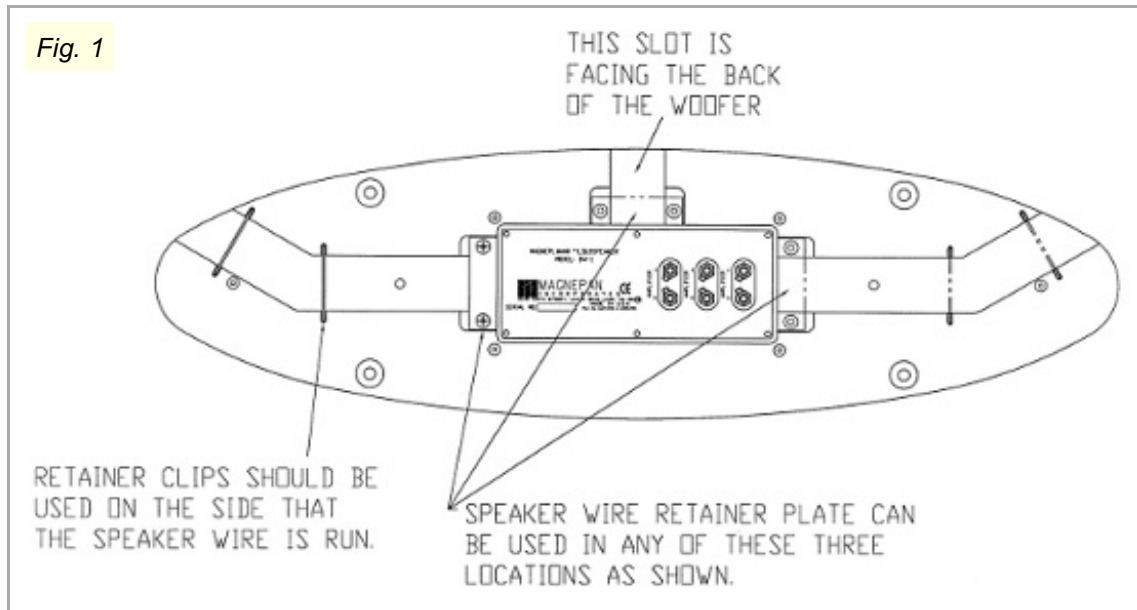
Save all packaging. The DW 1 can be shipped safely only in the original packaging. Should you discard it, packaging is available from Magnepan.

4. Hookup

To install the speaker cable, first strip off approximately 1/4-inch of insulation from the speaker cable end. Remove the metal hold-down and wire retainers from the bottom of the DW 1 with a Phillips screw driver and pliers. See Fig. 1.

Cosmetically, the front and back of the DW 1 are identical. To identify the back of the speaker and ensure proper phasing, the back of the DW 1 can be identified as shown in Fig. 1.

Connect the output of a high pass crossover (such as the Magneplanar XO 2) to the input of the DW 1, observing correct polarity. However, due to different crossover designs, following correct polarity does NOT ensure that the DW 1 will be in correct acoustical phase. See "Phasing" below.



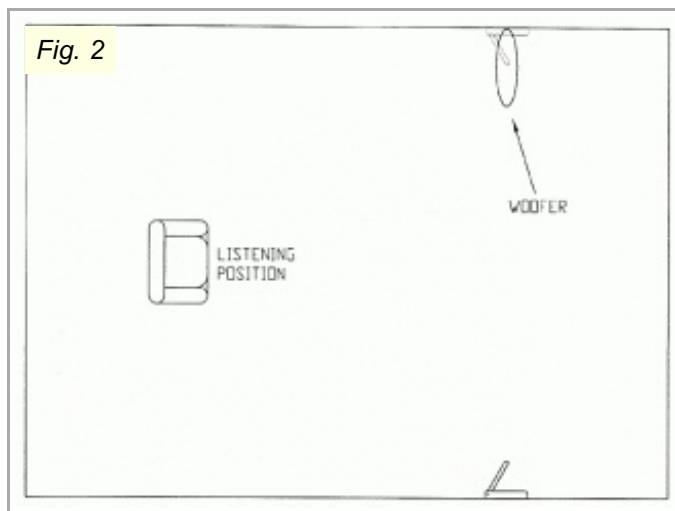
5. Installation and Placement

It is generally understood that placement of subwoofers is very flexible. While subwoofers do offer more latitude in placement due to the long wavelengths at low frequencies, technically, there is an ideal place in a given room for optimum subwoofer performance. The DW 1 is a woofer, not a subwoofer. And the superior performance of the DW 1, as compared to a subwoofer, is due in part, to extremely wide bandwidth (flat to 5 kHz). The DW 1 can seamlessly cross over at a higher frequency to any of the limited bandwidth "Maggie" models. However, the higher crossover points require proper time alignment to achieve the most seamless blend between the DW 1 and the limited bandwidth Magneplanar. Therefore, the DW 1 should be equi-distance from the listener to limited bandwidth Magneplanar. Minor adjustments from that position are often necessary for "fine tuning" as described under "Phasing" below.

As a general rule, dipole speakers produce the deepest and most linear bass and midbass when positioned approximately 4-6 feet from the front wall or 1/3 of the way into a room. This rule may conflict with the necessity to have correct time alignment with the "small" Maggies. Since rooms vary greatly, these setup instructions are principles of operation and specific and detailed instructions are not possible. Magneplanar and our dealers can provide advice on the specifics of your room.

The DW 1 will give the lowest frequency response if a boundary is used to reduce dipole cancellation of bass frequencies. A placement along a wall or next to a cabinet or piece of furniture as shown in Fig. 2 will reduce dipole cancellation.

The DW 1 should be oriented so it is perpendicular to the side wall and playing down the length of the room as shown in Fig. 2. By placing the speaker perpendicular to the sidewall, the speaker is off-axis to the listener and achieves a faster roll-off rate of higher frequencies.

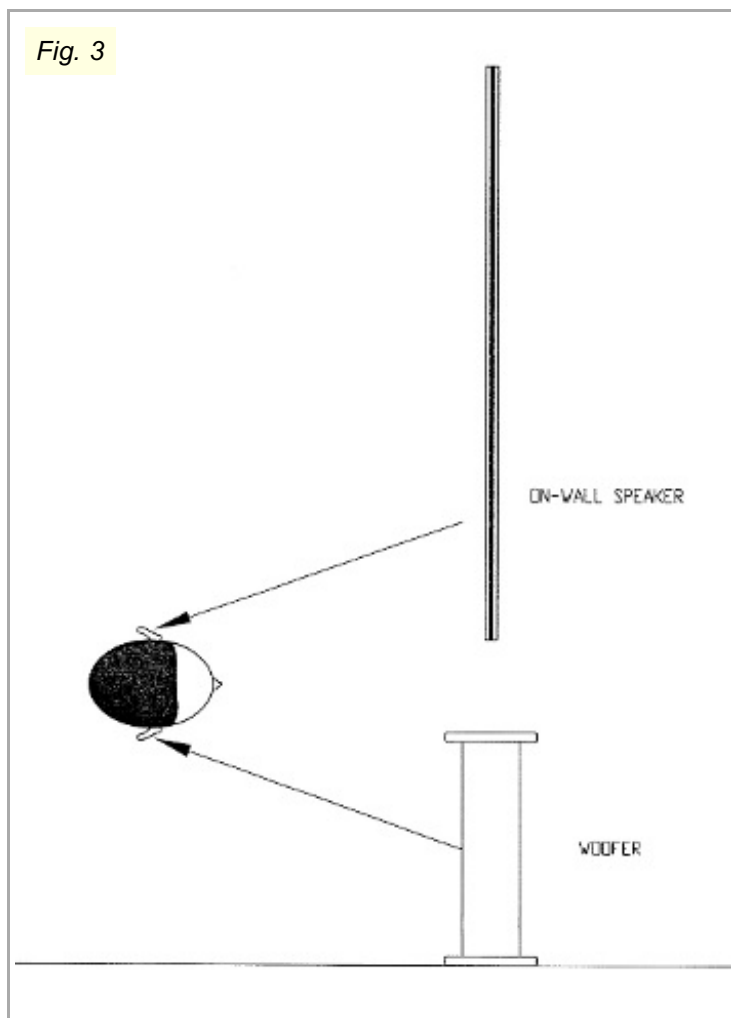


6. Phasing

The Magneplan Pink Noise CD Test Disk included with your DW 1 can be used to determine if the DW 1 is in ACOUSTICAL phase with your limited bandwidth Magneplanar. The test CD has a 9 db peak at 80-100 Hz that draws attention to the frequencies which will be depressed in an out-of-phase condition. Place the DW 1 next to your limited bandwidth Magneplanar and change the phase. (It is much easier to detect an out-of-phase condition when the "small" speaker is physically next to the Woofer.) Since the DW 1 is a dipole woofer, the easiest way to determine if the DW 1 is in-phase is by simply turning the woofer around (180 degrees). The speakers are in-phase when the peak is the loudest.

If you are uncertain if the acoustical phase is correct, a technique which can help is by leaning over and positioning your head between the Magneplanar Woofer and the "small" Magneplanar as shown in Fig. 3 below. The left and right ears are equi-distance to the respective speakers. High frequencies will appear to be up and low frequencies will appear to be down. Midbass frequencies, if in phase, will appear to be in the middle (and louder).

Depending upon the location of the DW 1 with respect to the limited bandwidth Magneplanar, the DW 1 might be 90 degrees out of phase with the "small" Magneplanar and changing the phase does not make a noticeable difference in the loudness of the pink noise peak. It may be necessary to move the DW 1 with respect to the Magneplanar to achieve a better acoustical in-phase condition.



7. Service and Shipping

In the unlikely event you should need service for your DW 1 Woofer, we recommend you return it through your dealer. He is experienced in providing service and can assist you if the speaker must be returned to the factory. If you determine you need to return it directly to Magnepan, ship the speaker freight prepaid to:

Magnepan, Incorporated

1645 Ninth St.

White Bear Lake, MN 55110

1-800-474-1646

Include a note describing the nature of the problem. *Please include your name, address, and a **daytime** telephone number.*

8. Specifications

System Description: Planar-magnetic dipole woofer.

Frequency Response: 40 Hz-5 kHz*

Recommended Power: See F.A.Q. on web site www.magnepan.com

Sensitivity: _____dB @2.83V/1 Meter/50 Hz

Impedance: 4 Ohms

Dimensions: 26 " width, 18 3/4 " height, 7 1/4 " depth

Warranty: Limited 3-year to original owner

Shipping Weight: 31 lbs.

*Bass response will vary depending upon placement near walls, cabinet or furniture.

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