



Reports on Noise Reduction (NR) and Insertion Loss (IL) of "Post-Box"

For: Sound Construction and Supply

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Post-Box NR

The "Post-Box" enclosure was tested using ASTM E596-96(2002) *Standard Test Method for Laboratory Measurement of Noise Reduction of Sound-Isolating Enclosures* as a guideline.¹

Description of Test Specimen

The "Post-Box" enclosure measures as follows:

Outside dimensions: 45-1/2" deep x 25" wide x 54-1/2" tall (including casters)

Inside dimensions: 43" deep x 20-1/2" wide x 46" tall

The enclosure has two (2) access doors, one (1) on the front with two (2) manual latches and one (1) on the rear. The front panel door consists largely of a viewing window. The side and top panels are solid wood. The rear panel door is wood and has vents for air exhaust. The bottom panel is wood and has a vent for air intake.

Holes on the back panel provided for cable pass-through were plugged with foam per the manufacturer's instructions.

Measurement Microphone Location

Due to the limited "useful volume" (less than 25 ft³), only one microphone measurement location was chosen for the inside of the enclosure, roughly in the center of the interior volume of the enclosure.²

Noise Reduction

The noise reduction (NR) measured for the enclosure in relevant³ octave bands is as follows:

| Octave Band | Post-Box NR |
|-------------|-------------|
| 250 Hz | 30 dB |
| 500 Hz | 31 dB |
| 1000 Hz | 36 dB |
| 2000 Hz | 36 dB |
| 4000 Hz | 31 dB |

It should be noted that the NR reported was measured under controlled laboratory conditions. No claims as to the real-world performance of the enclosure should be inferred.

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¹ Not in strict accordance per Section 10.1 of ASTM E596. Details available upon request.

² Location verified using Section 9.3.3 of ASTM E596 as a guideline.

³ Details available upon request.



Post-Box IL

The “Post-Box” enclosure was tested specifically to quantify the Insertion Loss (IL) in dB. As opposed to the E596 method of placing a measurement microphone in the box, noise from a source was first measured in the room. Then the noise was measured with the source placed inside the enclosure. No particular standard testing method was referenced.

Description of Test Specimen

The “Post-Box” enclosure measures as follows:

Outside dimensions: 45-½” deep x 25” wide x 54-½” tall (including casters)

Inside dimensions: 43” deep x 20-½” wide x 46” tall

The enclosure has two (2) access doors, one (1) on the front with two (2) manual latches and one (1) on the rear. The front panel door consists largely of a viewing window. The side and top panels are solid wood. The rear panel door is wood and has vents for air exhaust. The bottom panel is wood and has a vent for air intake.

Holes on the back panel provided for cable pass-through were plugged with foam per the manufacturer’s instructions.

Measurement Microphone Locations

Six microphone locations were chosen around the noise source (alone and in the enclosure). Noise at these six microphone positions was spatially averaged to determine the Insertion Loss.

Insertion Loss

The Insertion Loss (IL) measured for the enclosure in relevant⁴ octave bands is as follows:

| Octave Band | Post-Box IL |
|--------------------|--------------------|
| 250 Hz | 15 dB |
| 500 Hz | 20 dB |
| 1000 Hz | 23 dB |
| 2000 Hz | 23 dB |
| 4000 Hz | 24 dB |

It should be noted that the IL reported was measured under controlled laboratory conditions. No claims as to the real-world performance of the enclosure should be inferred.

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⁴ Details available upon request