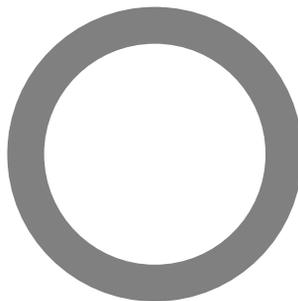


**ASTM E-90-99** Laboratory Measurement of Airborne Sound Transmission of Building Partitions and Elements

**ASTM E-413-87** Classification for Rating Sound Insulation

**Orfield** Laboratories Inc



**Design Research Testing**

Acoustics / Vibration / Vision / Lighting / Architecture / Market Research

**TEST**

Manufacturer: **Audio Alloy L.L.C.**  
 Report Date: **May 9, 2005**  
 Test Date: **April 14, 2005**  
 Test Number: **05-0414**

**ACCREDITATION**



For the scope of accreditation under NVLAP code 200248-0

**RESULT SUMMARY**

**STC=56**

**CLIENT ADDRESS**

Audio Alloy, L.L.C.  
 Fargo, ND USA  
 Phone: (989) 832-1602  
 email: tedwhite@audioalloy.com

**PREPARED BY**

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The information included in the following report are the results of a sound transmission class (STC) test conducted on one (1) interior wall assembly.

**Prepared by:**

**David M. Berg**  
 Laboratory Manager

**Reviewed by:**

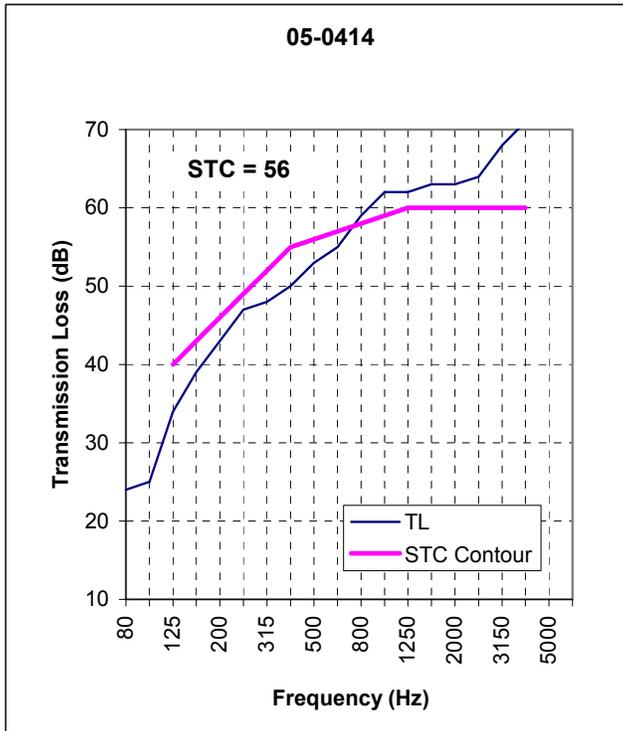
**Derrick Knight**  
 Quality Manager





**TEST RESULTS**

Manufacturer: **Audio Alloy, L.L.C.**  
 Specimen: **Interior wall assembly**  
 Date Tested: **April 14, 2005**  
 Method: **ASTM E 90, ASTM E 413**  
 Test Number: **05-0414**



Frequency (Hz)	TL (dB)	Def.	*95% conf.
80	24	n/a	1.63
100	25	n/a	1.15
125	34	6	0.95
160	39	4	1.27
200	43	3	1.24
250	47	2	0.65
315	48	4	0.65
400	50	5	0.62
500	53	3	0.40
630	55	2	0.50
800	59	0	0.40
1000	62	0	0.25
1250	62	0	0.25
1600	63	0	0.32
2000	63	0	0.44
2500	64	0	0.35
3150	68	0	0.31
4000	71	0	0.49
5000	71	n/a	0.35
		29	

\*from room qualification data



FOR THE SCOPE OF ACCREDITATION UNDER NVLAP LAB CODE 200248-0



## SPECIMEN DESCRIPTION

Representatives of the client constructed and installed the specimen into the laboratory test opening. The specimen assembly consisted of the following:

### Source Room Sheeting

2 layers 5/8 Type X gypsum mounted on 1/8" heavy putty  
2 Tubes (58 fl. Oz.) Green Glue between layers  
screw spacing 16" on center, seams sealed with caulk

### Wall Structure

2x4 studs @ 24" OC  
3 1/2" R13 fiberglass insulation

### Receieve Room Sheeting

2 layers 1/2" Gypsum  
2 Tubes (58 fl. Oz.) Green Glue between layers  
screw spacing 16" on center, seams sealed with caulk

The whole specimen weighed approximately 608 lbs. and was 63 ft<sup>2</sup> in area.

## TEST METHOD

The testing was conducted in accordance with ASTM Standard E90-02, "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements". The calculation of the single-number STC rating was obtained in accordance with ASTM E413.

Test results pertain to this sample only.

*Orfield Laboratories, Inc. has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under their National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. This report shall not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.*

## TEST CHAMBERS AND ENVIRONMENT

Source Room Volume: 4150 ft<sup>3</sup>  
Receiver Room Volume: 8282 ft<sup>3</sup>

Data for test chamber flanking limits and reference specimen results are available upon request.



The following environmental conditions were present in the test chambers during testing:

**Environmental Conditions**

Date	April 14, 2005
Temperature	20° C
Relative humidity	50%

**REMARKS**

Representatives of the client demolished the test sample.

**CONFIDENTIALITY**

The client has full control over this information and any release of information will be only to the client. The specific testing results are deemed to be confidential exclusively for the client's use. Reproduction of this report, except in full, is prohibited.