

Environmental Sound Test

Completed By

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Location Tested

**Valley View Farms
16 Walpole Drive
Haydenville, MA**

SCOPE :

The goal was to measure acoustic levels that are anticipated to be produced from entertainers (ie bands, dj's) using sound systems in the operation of the banquet hall.

The acoustic level data in this report will be used by the property owner and Town Planning Board for evaluation in the near future.

OUR COMPANY:

Tony Caliento is the President of ATC Audio, Video & Lighting since its inception in 1986. ATC provides sales, service, rentals, repair, design and installation of audio, video and lighting systems.

ATC provides services to Schools, Universities, Houses of Worship, Corporations, Entertainment Facilities, Sporting Arenas and other facilities using A/V technology. ATC is well known, has an excellent reputation and has worked with high profile clients throughout Western Mass. and Connecticut primarily.

For more information on ATC please visit www.atcaudio.com

LOCATION OF TEST AND SURROUNDINGS:

We interviewed the owner on June 22nd at 3:00 pm, surveyed the banquet hall, entire property and surrounding properties. Prior to visiting the location we received a Land Survey drawing completed by Holmberg & Howe, Williamsburg, MA.

The area is primarily a farm with gently sloping land with structures and a resident approx. 500 feet the test location (banquet hall).

The owner, Susan Fortgang, of the property was very courteous and informative when we visited for testing.

Test equipment used

Sound Level Meter- Galaxy Audio CM-150, ICE 651 Type II ANSI S1.4 Type II approved, calibrated pre-test. With associated computer logging software.

Rational Acoustics SMAART (System Measurement Acoustic Analysis Real-Time Tool) software, version 7.4.

Audix TM-1 Omni-directional test and measurement microphone.

QSC K12 12 inch two way powered speaker.

Syn-Aud-Con Test CD with Reference Signals.

TEST #1**Date, Time and Weather Conditions**

Environmental acoustic testing was completed on Wednesday, June 22nd between 3:00 – 5:30pm and June 30, 2016 between 7pm-9:30pm.

TEST CONDITIONS AND PROCEDURES :June 22, 2016, 3:00-5:30pm:

Average Temperature was 77 degrees, Humidity 31%, Pressure 29.82, dew point 44 degrees. Winds between 15-17 mph from the West North West with wind gusts up to 25 mph. Skies were sunny.

June 30, 2016, 7:00-9:00pm:

Average Temperature was 78 degrees, Humidity 35%, Pressure 30.00, dew point 39 degrees. Winds 8 mph from the West. Skies were clear.

Test Signals

June 22nd and 30th:

Ambient noise

Pink Noise

Band Pass Pink Noise, 0-200hz, 200-1khz, 1k-20khz

Pop Music Track

TEST June 22, 2016

Test #1

Ambient noise multi locations

Middle of Banquet hall

Ambient noise, A Scale measured at 40db

Ambient noise, C Scale measured at 49db

Bar area

Ambient noise, A Scale measured at 56db, cooler was running.

Ambient noise, C Scale measured at 61db, cooler was running.

Outside front door of Banquet hall

Ambient noise, A Scale measured average 48db.

Ambient noise, C Scale measured at 63.9db,(chain saw operating 200 ft. away)

See Test Logger Graph #1

West Rear tree line

Ambient noise, C Scale measured average

See Test Logger Graph #2 and photos

Route 9 business parking lot (Brassworks parking lot) time 4:22pm, medium passenger cars traffic conditions. **Distance of 1550 ft. from hall.**

Ambient noise, A Scale measured average 60.9db.

Ambient noise, C Scale measured at 68.6db.

See Test Logger Graph #3 & 4 and photos

Test #2

This test is to show the difference in level of signals inside and outside of the banquet hall and the construction to isolate noise leaking out. Tests are with band passed pink noise Low, Mid, High frequencies.

I set up a loud speaker to perform test signals through. This was a QSC K12 (12" 2 way powered loud speaker) in an area that would be commonly used as a set area for a sound system, the North West corner of the Banquet Hall. **All windows and doors were closed.**

All tests first started with a reference signal measures 3 feet away from speaker at 95db.

Pink noise test

Measurement Location – inside front door.

band passed pink noise 20-200hz

C scale -70db

band passed pink noise 200-1khz

A scale- 77db

C scale -83db

band passed pink noise 1k- 20khz

A scale- 78db

Measurement Location – outside N/W corner of Hall

band passed pink noise 200-1khz

A scale- 62db

band passed pink noise 20-200hz

C scale- 70db

June 30 2016, 7:45pm.

This test is to show the difference in noise and music levels inside the building and noise and music levels at nearby residents and property lines. Tests are with band passed pink noise Low, Mid, High frequencies and music. Data collection and listen test.

I set up a loud speaker to perform test signals through a QSC K12 (12" 2 way powered loud speaker) in an area that would be commonly used as a setup area for a sound system, the North West corner of the Banquet Hall. **All windows and doors were closed.**

Test #3

200hz – 1khz Band passed pink noise (mid-range) , 3 ft. away from speaker

A Scale 95db

C Scale 97db

Outside front door **NO** test signal

A Scale 45db

C scale 41db

With 200hz – 1khz pink noise (mid-range)

A Scale 50db

C Scale 61db

Pink noise no band pass

Outside front door of hall

C Scale 61db

Test #4

Music Test: Pop music played at 100db (simulating music for an event), measured 6 feet away from speaker.

Same Speaker setup position.

See Test Logger Graph #4-1

Frequency Response test #4-1

Measurement taken 6 feet outside front doors

C Scale – 76db

See Test Logger Graph #4-2

Frequency Response test #4-2

Time- 8:40pm

Conditions- Clear, Winds 3 mph from North West, 70 degrees, 57% Humidity, Dew point 55%

Measurement taken at Valley View Farm sign across from 13 Walpole Rd. residents. **Distance from hall 480ft.**

Ambient noise at location

C Scale – 48db

Music playing

C Scale- 57db

Measurement with front doors and rear windows of hall **OPENED**

C Scale- averages of 50db and peaks at 64db

See Test Logger Graph #4-3, #4-4, #4-5, #4-6

Frequency Response test #4-3 & #4-4

Photos & video taken if needed

Time- 8:50pm

Measurement taken at Equipment Barn at South side of property. **Distance from hall 450ft.**

Ambient noise at location

C Scale average – 37db

See Test Logger Graph #4-7

Music playing

C Scale- 42db

See Test Logger Graph #4-8

Frequency Response test #4-6

Photos & video taken if needed

Final remarks of tests:

Test #1 done on June 22nd show that Ambient noise at all locations is at fairly common levels for this type of environments.

Test #2, #3 and #4 shows that materials, windows and construction methods used with insulated walls and ceiling have good sound isolation and minimal leakage with a structure of this type.

Test #4 on June 30th shows if sound levels of 100db are present in the hall, with normal ambient noise levels 500 feet away, the sound should not create an annoyance and at 1300 feet (area of route 9) not noticeable.

If the audio levels in the Banquet Hall can be kept at an average of 98db C–Scale at middle of the hall (windows closed) there should not be any noise levels high enough to deserve the nearest residents to the property. If windows need to be opened I would suggest opening windows only on the North side of building.

As part of this test, you will be receiving a simple calibrated sound level meter to keep levels in check. Test the levels of sound at your events so you can communicate with the person responsible for setting levels on their sound system.

Thank you for using ATC Audio, if you have any questions regarding this test or any audio matters please feel free to contact me.

Tony Caliento.

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