Making a soundproof room with cardboard Saito / Horie / Makita / Yoneda

Motive/Purpose

We are interested in music, so we want to make a soundproof room easily with popular materials at small cost. We aim at making one where we can play the guitar.

Policy of Experiment

Soundproof room is so large that it is not good for finding the most effective acoustic insulation. First, in experiment 1, we discovered it with the small experimental equipment. After that, in experiment 2, we measured the effect of the (large) soundproof room with the material.

Experiment 1

By a small experimental equipment, we measured the sound level from the equipment made of acoustic insulation.



urethane without acoustic insulation newspaper 80 ₇₅ The low frequency side: The high frequency sid Lessure Level (Newspaper made SPL fall Urethane is effec by 20 dB **Å** 50 **punos** 40 3150 1000 1250 2000 4000 5000 1600 2500 Frequency(Hz) **Result of experiment 1**

Experiment 2

We confirmed the effect of the acoustic insulation, attaching it with inside of the wall.





Soundproof

equipment

wspape

Soundproof equipment (large)





Conclusion

- From the experiment1, we found that newspaper is suitable for the acoustic insulation.
- From the experiment2, we found that we can make useful soundproof room by a low expense.

Discussion

To improve the work efficiency to make a soundproof room and the performance, we should research into according problems:

- 1. Addition of the candidate of the acoustic insulation
- 2.Putting the plural material together

3.Influence of the shape of the acoustic insulation in itself