

Practical guidance for testers

Part 2

Dan Saunders

The less technical stuff.....

- Speakers and their location
- Tapping machine
- Planning and Recording

Loudspeakers

- Location

The distance between the room boundaries and the source centre shall be not less than 0,5 m. Small irregularities of the room boundaries may be neglected.

The distance between different loudspeaker positions shall be not less than 0,7 m.

Different loudspeaker positions shall not be located within the same planes parallel to the room boundaries.



NB. Other loudspeakers are available

Loudspeakers

- Location

Deviating from the above-mentioned requirements concerning the distance between the room boundaries and the source, especially in small rooms it is often of advantage for the practical execution of the measurements to use loudspeaker positions in the corners of the source room. Take special care with regard to possible influence on the flanking transmission and with regard to unwanted increase of level fluctuations in the source room.



NB. Other loudspeakers are available

Loudspeakers (no. of)

- Pros & Cons

At least two positions shall be not less than 1,4 m apart.

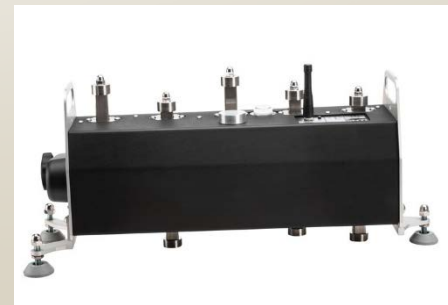
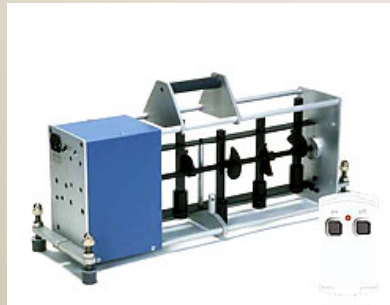
and omnidirectional, as specified in **A.1.3**. It is permissible to use multiple sound sources simultaneously, provided that they are of the same type and are driven at the same level by similar, but uncorrelated, signals. When using a single sound



NB. Other loudspeakers are available

Tapping Machine

- On-site conformance check



NB. Other tapping machines are available

Tapping Machine

- On-site conformance check



Tapping Machine

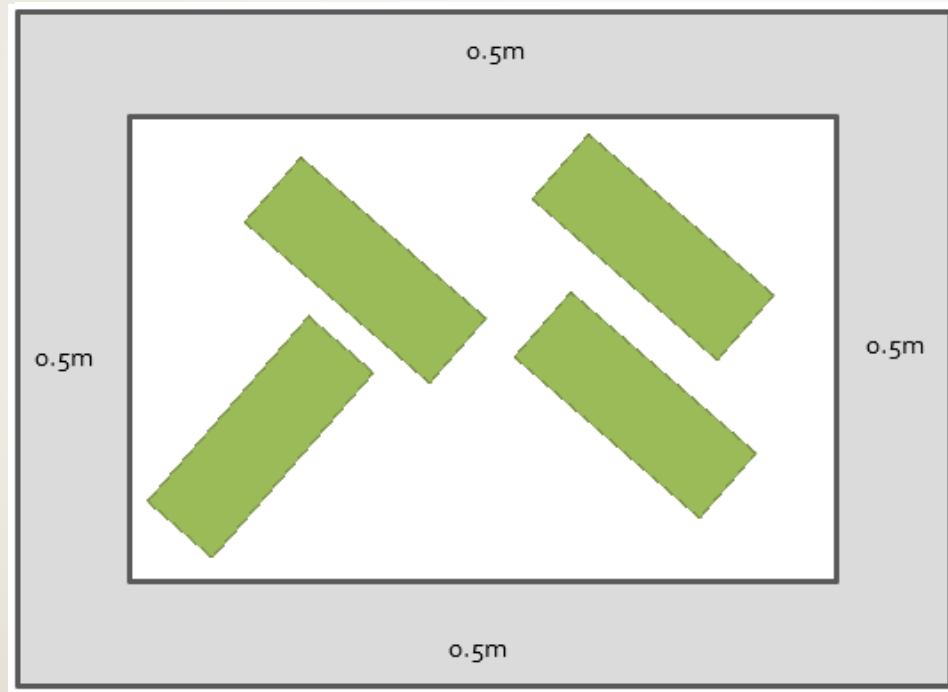
- Location

The tapping machine shall be placed in at least four different positions randomly distributed on the floor under test. The distance of the tapping machine from the edges of the floor shall be at least 0,5 m. In the case of anisotropic floor constructions (with ribs, beams, etc.), more positions may be necessary. The hammer connecting line should be orientated at 45° to the direction of the beams or ribs.



NB. Other tapping machines are available

Tapping Machine



NB. Other tapping machines are available

Tapping Machine (Regs)

If the test surface is covered with an extremely soft covering or if the surface is very uneven so that the hammers are not able to fall down the requisite 40 mm to the surface on which the supports rest, pads may be used under the supports to ensure the correct falling height of 40 mm.

B2.13 Impact sound insulation tests should be conducted on a floor without a soft covering (e.g. carpet, foam backed vinyl) except in the case of (a) separating floor type 1, as described in this Approved Document, or (b) a concrete structural floor base which has a soft covering as an integral part of the floor.

B2.14 If a soft covering has been installed on any other type of floor, it should be taken up. If that is not possible, at least half of the floor should be exposed and the tapping machine should be placed only on the exposed part of the floor.

Tapping Machine (guidance)

5.2.3 Proprietary underlay materials.

Proprietary underlay materials are intended to provide the airborne sound insulation of lightweight floors, particularly conversions, by providing a cushioning layer to reduce footfall noise to the floor. They are therefore an integral part of the overall floor construction and it would be unreasonable to expect the underlay material to be removed in order to carry out an impact test. The underlay material should normally be glued to the floor so that it remains in place for the life of the building.

Impact tests may be undertaken on proprietary underlay materials by placing a rigid board beneath the tapping machine. The board should be any rigid material such as MDF or plywood and at least 12 mm thick. The board should be similar in density and hardness to most commonly available laminated flooring materials. The area of the board should be at least larger than the footprint of the tapping machine e.g. 1.0 m x 0.5 m.

The test procedure must be fully documented in the test report.

NOT TYPE 1
TYPE 2 OR 3 OK

Tapping Machine (guidance)

5.2.4 Carpeted floors in Rooms for Residential Purposes.

Where carpet is fitted to lightweight (Type 3) floors and removed, as can occur in hotels and student accommodation, the tapping machine should be placed directly on the carpeted floor. The test should be undertaken with the permission of the Building Control authority. The test procedure must be fully and clearly documented in the test report. The reasons given for the deviation.

When entering the test results or ANCE data, select the 'soft covering' option to avoid skewing of the statistical data.

NOT TYPE 1

TYPE 2 OR 3 OK

Tapping Machine (guidance)

5.2.5 Can we test carpeted floors generally?

The short and simple answer is “NO” as this is clearly a deviation from ADE.

The more considered answer is “possibly” provided this is with the approval of Building Control and it is made clear in the test report that the tests represent a deviation from the requirements of Approved Document E and are FOR RESEARCH PURPOSES ONLY as the test results will be meaningless in the context of the Building Regulations.

Test the floor with the tapping machine placed on the carpeted surface. DO NOT use a rigid board. When entering the test results on the ADVANCE database, select the ‘soft covering’ option to avoid skewing of the test data for statistical analysis.

The test procedure must be fully documented in the test report with clear reasons given as to why the carpet could not be removed.

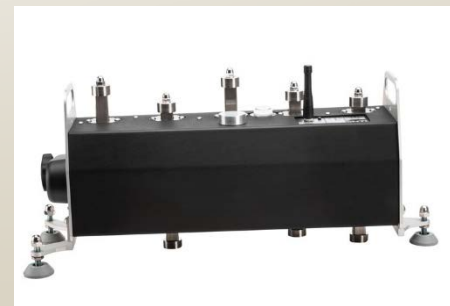
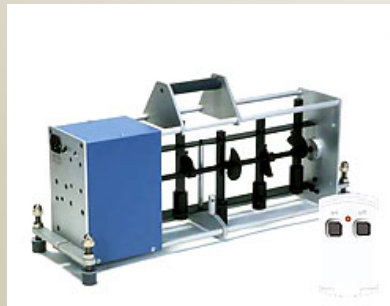
Tapping Machine (guidance)

5.2.6 Mixed floor finishes in open plan kitchen/living rooms.

Where different floor finishes occur in the same room, they should be treated as separate tests. For example, the kitchen area in an open plan kitchen/living room may have a vinyl finish or a ceramic tiled finish, in which case the living area and the kitchen area should be tested separately, or just carry out the impact test on the portion of floor which has no overlay. DO NOT mix impact tests on different surface finishes and average the results.

If the living room area is carpeted and the kitchen area has a hard floor finish which can't be removed, then it should be sufficient to just test the kitchen area, as this will be 'worst case'.

Tapping Machine



NB. Other tapping machines are available

Planning & Recording

**BEING ORGANISED
IS NOT**

**ABOUT PERFECTION IT
IS ABOUT
FINDING WHAT
YOU NEED WHEN
YOU NEED IT.**

PaperClip Professional Organisers©

Planning & Recording



THANK YOU
Dan Saunders

dsaunders@clarkesaunders.com