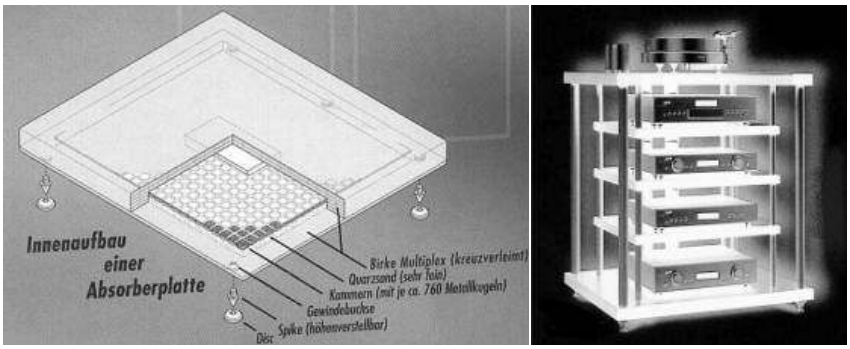
Flexy Table Reference

The Flexy Table Reference – A simple but effective construction taken to the max.

After moving house, my previous double width Flexy Table + didn't fit into the space I now had available so I needed a new equipment rack that was less wide. Also I had been playing with the idea to build a rack using a combination of quartz sand fill and Hawaphon. Hawaphon is a sound damping material by the Swiss company Hawa, and is an extensional damping material consisting of moulded synthetic foil 13x13mm compartments filled with fine steel shot of 1mm diameter. Hawaphon is supplied in sheets and is easy to cut to the appropriate size with a knife. The fact that the compartments are filled loosely guarantees a low flexural strength. It is intended for use on doors, roller blind boxes, wooden beamed ceilings, facings on solid walls, facades, dividing walls and cupboard partitions. Panel size measures 1149x730x5mm. Weight per panel 9.2 kg (11kg/m2). I still need the ability to make adjustments any time in the future should I acquire new or different-shaped equipment or just feel the need for a change, and being one of those Audio-Nuts this is a serious issue. Most of the pre-built equipment racks have all the shelf heights either predetermined or fixed. For looks I quite like the Creaktiv Big Reference, by coincidence their shelves and equipment platforms also contain quartz sand and Hawaphon and are made of Baltic Birch plywood – I used Russian birch plywood in the so called B/BB quality. This has one side that has a veneer quality finish, free from any imperfections; the other side (which I mounted inwards) has "repairs" where things like knots used to be.

Hawaphon.



Creativ construction and Big Reference Rack.

The construction

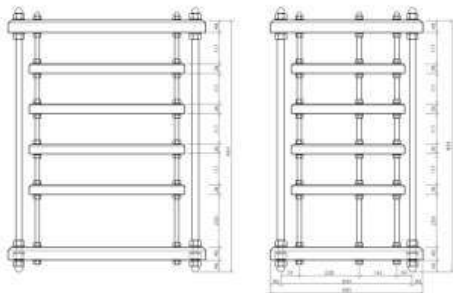
This rack consists of four shelves of 590x430x36mm and two shelves of 750x580x48. The Baltic Birch sheet thickness is 12mm, using three layers for the in-between shelves and four layers for the top and bottom shelves. The middle layer (for the 48mm thick shelves: the middle two layers) has two sections cut out which will be filled with fine dry sand and Hawaphon. This filling procedure is a tedious job that will take a couple of hours to do properly. The important thing is to make sure there will be no cavities in the sand later on. Therefore the sand must be compacted extremely well. I can't stress this enough, the idea being that the top and bottom panels of each shelf must at all times make contact with the sand or Hawaphon inside so that vibrations are absorbed in these materials. I found the best way to fill the shelves is to drop them on their edges on the floor and then top them up again with more sand. Keep repeating this until the sand stops disappearing out of sight. It is a bit noisy and if you have downstairs neighbours you must do it when they are not at home but I found that you can get much more sand into the shelves this way than by just tapping them with a rubber hammer or something. After you have "dropped" the shelves then start on trimming and bevelling the edges with a router. As a finish I used "Glitsa Acryl Trappenlak" – a clear water based varnish reinforced with polyurethane. This gives a nice semi-matt finish that, after about 4 to 5 layers and lots of fine sanding, will feel as smooth as ……. something very smooth.





Various stages of construction.

A combination of six 1000mm long M16 and four 1000mm long M24 all-thread metal rods support the shelves. An all-thread is a long piece of round metal with a continuous thread running its entire length. They are available in standard lengths of 1000mm and 2000mm. The use of this continuously threaded rod makes it very easy to adjust shelf placement any way you want. Each shelf is clamped between two nuts with corresponding size washers per threaded rod. The M24 rods only connect the top and bottom shelf. At the top and bottom of each M24 all-thread there is a M24 capped-nut. The bottom ones give the possibility of height and level adjustment so that the Flexy Table + can be set perfectly level. The rack will also have minimal contact with the floor as it is resting on six little metal ball-shaped "spikes".



A higher resolution drawing is available on request.

The sound

I have discussed the way in which a rack can improve the sound of your system with my previous Flexy Table Plus, these things were also apparent with the Flexy Table Reference but there is one thing that really stood out with this rack and that is the large improvement on "peace and quiet". My system now sounds more relaxed, its as if all the sharp edges have been polished smooth without loosing any detail, it makes listening to music more peaceful. Maybe it has something to do with the Hawaphon with its different characteristics compared to a sand-only rack, maybe it's the steel shot acting as a sort of barrier for electromagnetic influences between components. I'm just guessing here, but anyway I'm very happy with the result!

NOTE: This design is strictly for the home DIY enthusiast and not to be used professionally without my permission!

Tony Gee, The Netherlands

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