Mapleshade

SAMSON EQUIPMENT RACKS
OWNER'S MANUAL

PERFORMANCE AND DESIGN

In order to make better sounding CDs, we have been experimenting for 15 years with better ways of mounting audio equipment. Our experiments have shown:

- Most crucial is to provide an absolutely rigid, resonance free path for vibrational energy to flow out of the equipment into the shelf and down through the supporting uprights into floor. Any plastic, rubber or other damping material introduced for "isolation" into the path from the shelf to the floor induces muddy bass with smeared mids and highs.

- Wood shelves sound much better than metal, granite or glass. They also sound better than Corian, graphite/carbon fiber composite or damped plastic composites. Among the wood alternatives, the worst is particleboard, then MDF and plywood.

- The best of the available woods is maple. Air-dried maple is audibly better than kiln-dried (all lumber yard and butcher block maple is kiln-dried). The normal audio rack shelf thickness of 3/4" to 1″ is inadequately rigid.

- Uprights for supporting shelves must be solid, not hollow. Damping the very audible resonances of hollow metal supports with sand or lead fill introduces new problems: notably both dynamics and ambience are deadened and sustained notes are truncated.

- Uprights must be much more rigid than needed for load-bearing alone. To transfer vibrational energy cleanly into the floor, uprights must be terminated with massive footers, preferably brass.

- The overall rack structure must be unshakably rigid and stiff. Most

importantly, there must be absolutely no side-sway (nor fore-and-aft sway). This is a weak point for most audio racks.

The SAMSON addresses these crucial design issues quite simply:

- Shelves are 2" air-dried maple (4" is available as an option). Two inch is approximately 15 times as stiff as the 3/4" veneered MDF standard on most audiophile racks.

- Uprights are 1-1/4" solid steel, 8 times as stiff as the typical rack's 5/8" rod or 1" hollow square tubing. Total SAMSON mass is 105 pounds for a three shelf unit.

- Shelves are locked to the steel uprights by being captured with crushing force between two massive threaded brass cylinders at each corner. This yields a totally rigid vibration path and zero measurable side sway.

In direct head-to-head listening tests, the sonic qualities of the SAMSON exceed those of the best known audiophile brands of damped polymer racks, air-suspended racks, welded steel racks and, of course, any of the steel/glass or steel/MDF racks.

INSTALLATION AND SET-UP FOR BEST PERFORMANCE

1. Assemble the SAMSON on the exact spot where it will be used, if possible. This helps all four feet to conform to any floor irregularities.

2. Thread a brass cylinder onto each of the four uprights. Each cylinder should be screwed down about 3.5" from the end.

3. With the cylinder end down, poke the upright rods down through the four corner holes of the bottom shelf. Thread four brass footers up from below, one onto each upright, as far as they will go. Lightly finger-tighten the cylinders.

4. Measure and mark the space desired between bottom and second-lowest shelf on each of the uprights. Thread four more cylinders down to this

level. Drop the second shelf down onto the cylinders. If all four cylinders are not supporting the shelf equally (that is, if the shelf can be rocked), adjust the out-of-contact cylinder. If you are leveling the shelf for a turntable, you will want to use a bubble level for final shelf adjustments.

5. Screw four more cylinders down on top of the shelf and finger-tighten them.

6. Mark off the desired height of the next shelf up and repeat steps 4 and 5. When you are locking down the topmost shelf, use the cap cylinders (that is, those cylinders that don't have a threaded hole going all the way through).

7. Use the 1/4" steel rod supplied with the SAMSON as a wrench to tighten all four upper cylinders for each shelf. Start at the bottom shelf. Before you tighten the next shelf up, make sure its four supporting cylinders are evenly contacting the shelf's underside.

8. If the assembled SAMSON shows even the slightest tendency to rock on the floor, one of the four footers will need to be lengthened. Unscrew the one that's too short until it cures the rocking. Then unscrew it a quarter turn more and stuff small brass washers into the gap between the footer and the bottom shelf. You only need the washers at three points on the one circumference. Then tighten the footer hard. If it tightens more than a quarter turn, you'll need to loosen and add another washer at each of the three slim points.

9. For ultimate performance, add one of our maple platforms with Isoblock suspension on top of any SAMSON shelf carrying a particularly vibration-sensitive component (for example, a turntable, CD transport or DAC).

10. After two weeks, retighten all the cylinders. Check them for tightness two months later.