Mapleshade

SAMSON EQUIPMENT RACKS
OWNER'S MANUAL

PERFORMANCE AND DESIGN

In 1986 we started exploring ways of mounting audio equipment to improve the sound of Mapleshade Studio recordings. Success led to 30 years of of further vibration control listening tests in pursuit of ever-better sound. Those tests have proved that:

• Most crucial is to provide an absolutely rigid, straight, 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.

• Any wood shelf sounds much better than metal, granite, slate or glass. Wood also sounds better than Corian, graphite/carbon fiber composite or highly damped composites. Solid wood is best. Plywood is a distant second with butcher block, MDF and particleboard increasingly poor-sounding.

• The best-sounding wood species is red maple, significantly better than rock maple, walnut, cherry, myrtle, spruce, pine, oak, mahogany, jojoba or other exotic tropical hardwoods. Air-dried maple is audibly better than kiln-dried (all lumber yard and butcher block maple is kiln-dried). No matter what the wood, the industry standard ¾" shelf thickness is inadequately rigid for first rate sound.

• To provide a clean, unbroken vibration path to the floor, the shelves must be rigidly locked to one piece uprights. Segmented modules spiked one on top of the other are never rigid enough--and seriously interrupt the vibration path.

• Uprights must be solid, not hollow--and much more rigid than needed for load-bearing alone. Damping the very audible resonances of any hollow metal support with sand or lead fill introduces new problems: notably both dynamics and ambience are deadened and sustained notes are truncated. To transfer vibrational energy cleanly into the floor, uprights must be terminated with massive pointed footers, preferably brass.

• The overall rack structure must be unshakably rigid and stiff. Most importantly, there must be absolutely no side-sway and no fore-and-aft sway. This is a weak point for almost every audio rack on the market.

The SAMSON addresses these crucial design issues quite simply:

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• Shelves are 2" and 4" air-dried maple. Two inch solid maple is over 40 times as stiff as the ¾" veneered MDF standard on most audiophile racks.

• Uprights are 1 ¼" solid steel, 8 times as stiff as the typical rack's 5/8" steel rod or 1" square hollow aluminum tubing.

• Shelves are locked to the 1 1/4" 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.

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. For stock SAMSON V.3 and V.5 racks, the

footers can be adjusted independent of the lowest shelf. For stock SAMSON V.1, V.2, and V.3 racks, following these shimming instructions:

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.