



SME

Model 20/12 Precision turntable

A larger and more massive version of our well known Model 20/2. It will accept nine, ten and twelve-inch arms but is especially directed at the exciting Model 312S. This offers a performance some 27% better than a nine-inch arm in respect of angular error distortion. The wand and headshell are pressure die-cast in magnesium and are 27g lighter than they would be in aluminium. Probably the stiffest and lightest twelve-inch arm ever made these dual problems are at last addressed and on listening, the benefits of minimal tracking error and harmonic distortion are clearly revealed.

'This arm/turntable combo is the most graceful-sounding analogue front-end I've heard'.

Ken Kessler Review - Hi-Fi News, Volume 51 No. 5.

Uncoloured sound— The art of blackness

SME MODEL 20/12 PRECISION TURNTABLE

- ◆ Stable four point suspension.
- ◆ Sub-chassis suspended on eighty strands of rubber in the form of forty purpose moulded 'O'-rings.
- ◆ Trimming screws for suspension adjustment.
- ◆ Central fluid damper controls sub-chassis motion and offers resistive ground-path for acoustic signals.
- ◆ For transport lock down screws secure the sub-chassis and seal the damper.
- ◆ 19mm diameter main spindle machined from high-chrome steel hardened, ground and super finished. Runs in a sealed oil bath.
- ◆ Reflex clamping system minimises record resonance.
- ◆ 6.5Kg (14.3lb) machined platter with unique Isodamp face.
- ◆ Generous use of extensional damping and resistive loop construction ensure sonic neutrality.
- ◆ Adjustable ball feet with optional compliant inserts.
- ◆ Four jacking screws built into the sub-platter allow the thrust bearing to be off loaded for transit.
- ◆ Driven by a 3-phase, 6 pulse, inductance motor, with 8 pole Neodymium magnets and 3 integrated Hall position sensors.
- ◆ The power supply houses an electronic controller using a high performance microcomputer, optimised for motor control. Closed loop speed control is implemented using a pseudo sine wave commutation sequence and a proportional-plus-integral (PI) algorithm.
- ◆ New design incorporates a 4 layer surface mount technology pcb with on-board user adjustable speed variation control.
- ◆ Large diameter strobe disc supplied allows precise adjustment of standard speeds.
- ◆ Speeds ranges: 33.3, 45 and 78 rpm.



A turntable should address the problems of extraneous vibrations. These emanate from numerous sources including air and structural vibration from loudspeakers, groove modulation, stray electrical fields and mechanical imperfections in moving parts. In the Model 20/12, superb instrument quality machining is allied with fundamental physics. The higher the mass and stiffness of a body the less it will flex and vibrate; the duration of a vibration can be shortened by suitable damping.

Model 20/12 weighs approximately 33.5Kg (73.7lb), significant in relation to its size because it is density that matters. For example, the same weight of metal spread over a large enough area would be aluminium foil! The sub-chassis measures only 20 1/2" (520mm) by 14 3/4" (375mm) but weighs 8.0Kg (17.6lb). Its thickness, 5/8" (16mm) resists flexing at low frequencies whilst high frequency resonance is attenuated by efficient extensional damping.

Model 20/12 has no 'sonic footprint'. The sub-chassis is suspended on forty purpose moulded 'O' rings which ensure freedom from feedback. A large centrally placed fluid-damper disciplines sub-chassis movement with a pleasing sense of security when handling records on and off the platter.

In addition to a cartridge's electrical output, mirror image acoustic signals reacted in the arm and record, will pass into the sub-chassis in the course of dissipation. However the usual closed loop design does not address the problem of their differing phase so in the

Model 20/12 the structural interfaces concerned have received special attention to provide paths of the required impedance.

This control of vibration is fundamental to the design of the player and goes much of the way to explaining the stunning tonal and dynamic neutrality that it exhibits.

Model 20/12 is available in two formats

MODEL 20/12

Equipped for but not including a pick-up arm.

MODEL 20/12A

As above but fitted with Series 300 Model 312S precision pick-up arm.

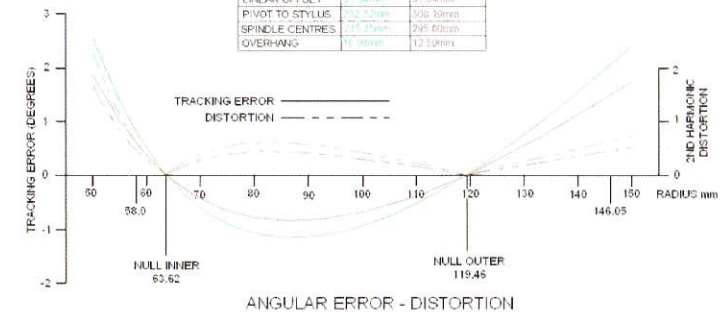
Dimensions: 520 x 375 x 173.5mm.

Packing: Substantial case.

Net weight with power supply: 35.5kg (78lb)

Shipping weight approximately: 45.5kg (100lb)

SERIES 300	MODEL 308	MODEL 312S
EFFECTIVE MASS	2.90g	12.0g
OFFSET ANGLE	0.28°	17.33°
LINEAR OFFSET	0.68mm	91.54mm
PIVOT TO STYLUS	252.52mm	500.00mm
SPINDLE CENTRES	210.25mm	225.00mm
OVERHANG	21.06mm	12.50mm



Graph compares angular error distortion of typical nine-inch and twelve-inch arms, with null points selected to equalize distortion at maximum and minimum recorded diameters.

Model 20/12 precision turntable is available in the U.K. from leading audio stockists only. Availability outside the U.K. is made through appointed distributors in the countries concerned. Please contact our sales department for further information.