

Garrard Model GT55 Automatic Turntable



MANUFACTURER'S SPECIFICATIONS

Speeds: 33-1/3 & 45 rpm.
Number of Records: 6.
Wow & Flutter: 0.05 percent.
Rumble: -66 dB (DIN B).
Motor: D.C. servo.
Tonearm: Magnesium, low mass.
Dimensions: 15-5/16 in. (38.9 cm) x 14-1/8 in. (35.8 cm).
Price: \$249.95, base & dustcover \$39.95.

The GT55 is now the top-of-the-line Garrard automatic turntable and, at the moment anyway, is the only one using the tangential tracking arm. Unlike other straight-line tracking systems such as the Rabco, Schlumberger and B & O, which use a mechanism to move the pick-up arm across the record on a bar, the GT55 has a twin articulated arm. This kind of arm was first used, if my memory serves me correctly, by Burne-Jones in England in the 1950s but the advantages were more than nullified by the high friction from the various bearings. The Garrard Zero 100, introduced about seven years ago, was the first example of a successful unit using a twin arm in which the angle between the cartridge holder and arm was varied to maintain a true tangential relationship with the record groove. The arm used on the GT55 is a greatly improved version made of magnesium to bring the mass down to the incredibly low figure of 14 grams. It is mounted by a gimbal suspension having jewel bearings in the vertical pivot and double ball bearings in the horizontal mode. The motor is a high speed d.c. servo type coupled to the turntable by a belt. Styling is attractive with a charcoal black and silver finish, making a nice contrast with the well-made walnut base. (Both base and dustcover are optional.)

Quite apart from the tangential arm, the GT55 has a number of rather unusual features. The cueing rate is variable in both directions, being controlled by a small knob located just behind the arm rest, and the anti-skating device consists of a magnet which is offset so the force decreases as the stylus moves towards the center of the turntable because skating force decreases towards the center of the record. The adjustment control, which governs the spacing of the magnet relative to the arm, is just behind the arm base, and it is calibrated for both elliptical and conical styli. The arm itself has another interesting design feature which is not apparent at first sight; the rear section with the balance weight is set below the axis of the main portion. This is said to improve trackability with warped records. "Trackability" is not a word I like to use here but, well, there it is!

On the left hand side, at the front, is a small panel on which are mounted the two-position speed change lever and a neat thumb-wheel variable speed control. Over to the right is a group of four controls set in a similar panel. The first one is the cue lift lever, and the second is the auto start control. Number three adjusts the mechanism for record size, 7, 10 or 12 inches, and the last one is the mode switch with positions for *Repeat*, *Auto*, *Manual*, and *Off*. The strobe window is located dead center, right in front of the platter, which incidentally, is dynamically balanced and weighs four pounds. It is driven by a belt from the 1000 rpm

motor mentioned earlier. At the rear, to the left of the arm base, is a small plastic platform on which the records rest in the automatic playing mode. Two center spindles are supplied, a short one for manual play and a longer one for automatic. Accessories supplied include cartridge mounting hardware, alignment gauge, 45-rpm adaptor, and a tiny container of oil for the spindle.

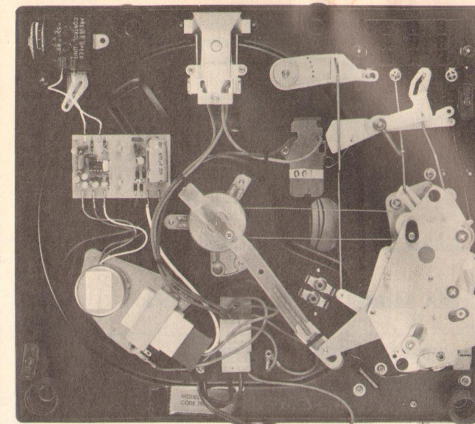
Measurements

The cartridge holder is the flat slide-in type used on other Garrard models, and an Audio-Technica AT-12S was used for most of the tests which included CD-4 records as the connecting cables are special low-capacity types. The anti-skating dial is calibrated for CD-4 styli, and both it and tracking force were set to 1 1/2 grams—the highest recommended figure.

The first test was for wow and flutter, and the figure came out at 0.04 per cent, slightly better than claimed. Rumble measured -59 dB (ARRL) which is about 2 dB better than the 66 dB DIN B figure quoted as the DIN standard is something like 9 dB higher than the ARRL figure. The stylus force adjustment on the counterweight was found to be 5 per cent low which is well within normal tolerances, and the anti-skating dial was quite accurate. Both lateral and vertical arm friction were too low to measure accurately, but they were certainly less than 30 mg. Tonearm resonance, with the AT-12S cartridge was 8.5 Hz. Speed variation was +4 and -3 per cent and because of the servo control it was not affected by power line variations.

Listening and Use Tests

Tangential tracking is important for the lowest distortion but it is even more important for CD-4 discs, which is why I



selected a CD-4 cartridge for most of the tests. Some of my early RCA releases are a little warped and are difficult to play with many turntable-arm combinations but the GT55 coped with them all, except for the worst specimen, with no trouble. It would seem that the vertical offset arm with accurate tangential tracking really works! In the automatic mode, cycling time is about 10 seconds, and the records are handled very gently. The cue lift is nice and positive with heavy damping in both directions and of course, the adjustment control is a refinement not found on many turntables.

All-in-all, the Garrard GT55 is a worthy successor to this long line of high quality units. It is well-made, very quiet in operation and the carefully engineered mechanism with the minimum of moving parts should give years of trouble free service. The total design concept is called "Generation Two" and many of the features will be incorporated in future models. We look forward to testing them.

George W. Tillett

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