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The Miracord 760 (Or: How to Save $60 Without Haggling)

The Equipment: Miracord Model 760, a three-speed (33, 45, 78) automatic record changer. Dimensions: 14⅛ by 12⅛ inches (chassis plate); requires 5½ inches above mounting board and 3¾ inches below. Price: $199.95. Accessories: VB-50 vinyl-laminated base, $12.95; WB-700 wood base, $19.95; DC-1 dust cover, $7.95; DCP-7 dust cover (can be used with changer in operation), $16.95; SA-383 changer spindle for large-hole 45s, $11.95. Warranty: one year on both parts and labor. Manufacturer: Elac, West Germany; U.S. distributor: Benjamin Electronic Sound Co., 40 Smith St., Farmingdale, N.Y. 11735.

Comment: The Miracord 760 is, knob for knob and screw for screw, almost identical to the 50H Mk II (HF test report, November 1972) with the exception of the motor. Whereas the 50H uses a hysteresis model, the motor in the 760 is of a high-performance nonsynchronous design. A hysteresis motor, it's true, will lock onto the power-line frequency (60 Hz) for ultrastable rotation speed (though sudden changes in power-line voltage can cause the "lock" to loosen momentarily), while an asynchronous motor will not. But the 760 has such good speed stability and is otherwise so excellent that many purchasers will cheerfully save the $60 by buying the newer model.

First, a brief recap of the 50H/760 operating features. Four buttons near the tone-arm rest are for selection of outer diameter for automatic operation (7, 10, or 12 inches) and stop. A switch at the front left has three positions for the operating speeds. A vernier knob at the back left adjusts rotation speed within a range of approximately ±3 per cent. (A strobe disc built into the platter cover is for 33 rpm with rings for both 60-Hz and 50-Hz lighting; no strobe rings are provided for the other speeds, though accessory strobe discs can be bought for the purpose.) An antiskating control knob near the arm pivot is calibrated in whole grams, and the tracking-force dial built into the pivot, in quarter grams. The control lever for a damped cueing system is just to the right of the tone arm. The arm rest locks the arm securely when not in use.

The unit comes with two spindles: a "Magic Wand" for changing records automatically and a stub spindle for single-play operation with or without all other automatic features. The stub can be inverted in the spindle hole, causing continuous repeat play of a record. No adapter is provided for large-hole 45s, but a changer spindle for them can be purchased as an accessory.

A clip-in adapter holds the cartridge in position in the arm and also makes the necessary electrical contacts. Calibrations on the adapter are aligned with the stylus for correct overhang, which is confirmed by contact between the stylus tip and a small cleaning brush mounted below the at-rest position. (The brush mount itself also serves as an overhang gauge as in past Miracords; the mounting's calibration seems preferable since a care-

less user conceivably could damage a stylus on the older gauge.) Balance is achieved via a rectangular counterweight; then tracking force and antiskating are set on their respective dials.

As the Additional Data table shows, CBS Labs found the tracking-force calibration to be quite accurate. Antiskating is a little on the high side for tracking forces below 0.5 grams (a range one would not normally need anyway), very close to "ideal" values for elliptical styli tracking between 0.5 and 1.0 grams, and close to ideal for spherical styli at 2.5 to 5 grams. The action therefore is most accurate in the ranges most owners may be expected to need. Ellipticals generally shouldn't track above 2 grams, where antiskating is somewhat below ideal values for them; nor are most sphericals designed for use in the 1-gram range, where antiskating will run a little high. If you do need to track these configurations in these ranges, however, and are fussy about antiskating, a *small* compensation could be made in the setting.

The changer action can be characterized as "slow but gentle." The cycle time at 33 rpm is 16 seconds, and damping in the cueing causes the arm to drift down onto the disc. Moreover, no side drift can be detected in the arm when the cueing lever is used manually to interrupt play. Both lateral and vertical planes have negligible arm friction (less than 20 milligrams). A mere 0.15 grams trips the changer cycle.

The dynamically balanced platter weighs 6 pounds, 2 ounces. Flutter averages at the low value (ANSI/IEEE weighting) of 0.05 per cent (0.1 per cent peak), and rumble is extremely low at −63 dB (CBS/ARLL), which in common with the best single-play units is the lowest rumble figure we have ever measured. In fact the 760 measures some 10 dB better than Miracord's own 50H Mk II. (The latter, however, was measured over a year ago; there may have been upgrading in the meantime.) Arm resonance (with a Shure V-15 Type II Improved cartridge) is entirely satisfactory: a 6-dB rise at 6.5 Hz.

The 760 is, all told, a very fine changer indeed, and it operated flawlessly during our tests. If you don't feel you need the fussier features (stylus wear indicator and adjustment of vertical tracking angle for the height of the record stack) of the 770H, and if you can live without the hysteresis motors of the 770H and the 50H Mk II, this is the Miracord to own.

Miracord 760 Additional Data

Speed accuracy	
33 rpm	0.5% slow at 105 VAC set exact at 120 VAC 0.2% fast at 127 VAC
45 rpm	1.1% slow at 105 VAC 0.4% slow at 120 VAC 0.2% slow at 127 VAC
78 rpm	1.3% slow at 105 VAC 0.6% slow at 120 VAC 0.1% slow at 127 VAC
Speed vernier range	
33 rpm	−2.5 to +2.9%
45 rpm	−3.3 to +2.6%
78 rpm	−3.0 to +2.2%

Stylus tracking-force gauge accuracy (grams)

Set	Measured
1	1.0
2	1.9
3	2.8
4	3.8
5	4.8
6	6.0