



## When Inertia Is a Plus

**Denon DP-2500** two-speed (33 and 45 rpm) direct-drive single-play manual turntable ensemble with base and dust cover. Dimensions: 19 by 15 inches (top plate), 7½ inches high with cover closed; 17½ inches additional vertical clearance, 2¾ inches at rear, with cover fully open; approx. 2½-foot nondetachable signal cables. Price: \$525. Warranty: "limited," four years parts and labor. Manufacturer: Nippon Columbia Co., Ltd., Japan; U.S. distributor: American Audioport, 1407 N. Providence Rd., Columbia, Mo. 64201.

Hefting the packing crate in which a Denon DP-2500 arrives is the first hint that something unusual is afoot. Tipping the scales at nearly 28 pounds, this model surely belongs in the heavyweight class. Far from being there just to impress or as a brute-force effort to secure some isolation from external shock, the avoirdupois of the Denon seems to be an ingredient of a highly sophisticated isolation system. The system is so good, in fact, that when we inadvertently operated the turntable with its transit screws still in place, we got results that we could not complain about. And with the screws removed (the power transformer is thereby decoupled from the main chassis), the isolation is superb—barely acknowledging hard footfalls on the floor nearby, for example. And acoustic feedback is out of the question, even at heroic listening levels.

This level of behavior is probably to be expected from a component that is so single-mindedly performance-oriented—one that is expensive yet utterly devoid of frills, conveniences, and automatic features. You start and stop the

platter with a manual switch, and set the tone arm in the first groove and retrieve it from the last by hand as well. Thus, the Denon's blandishments are all technical: the quartz-controlled servo-AC direct drive, the proprietary DC platter-braking system, the damped tone arm, the antivibration platter mat said to have been designed with the aid of laser vibration analysis, and so on.

Laboratory tests confirm the unvarying speed: at both 33 and 45 rpm, and despite extremes of power-line voltage, as exact as can be measured. (No intentional speed alteration is possible.) Flutter and rumble are minimal. The motor provides enough torque to allow use of a record-cleaning brush during actual play with no alteration in speed. This same torque also provides very quick startup—including virtually instantaneous transition from 33 to 45 rpm, with the opposite transition nearly as rapid.

The DP-2500's tone arm measures 10 inches from pivot to stylus tip, promising reduced tracking error by comparison with 9-inch arms but, at the same time, increasing the mass. While the arm resonates right in the warp region (6.5 Hz for vertical motion), the damping confines the rise to a barely detectable level. Moreover, the unit proved itself by successfully tracking a severely warped disc that we save for such tests.

Accuracy of the stylus-force gauge is measurably perfect up to a setting of 2 grams. At one full turn of the counterweight, which seems to represent 2.5 grams, only a small error is detectable; higher settings can be dialed in by continuing into a second revolution. The counterweight, incidentally, is massive enough to balance moving-coil and other heavy pickups. Antiskating compensation, though not particularly linear, falls within the normal range, and cueing is above reproach.

**Put to work in our system**, the Denon performed flawlessly. Its effect, naturally enough, is elusive, but it gives our phono cartridges as stable a working environment as we have ever encountered and lets them work without gratuitous obstacles—and we cannot recall a turntable that let them do it better. Operating controls are located under the dust cover, but the smoothness of its hinge action and the imperturbability of the suspension make it easy to close the cover with the turntable in operation. The unit's weakest point is its bilingual (French and English) instruction manual, which must be deciphered with some care.

The DP-2500 surely is a winner. Its superb performance is clearly addressed to the purist who can afford as well as appreciate it and won't mind the lack of convenience features. If you fit this description, a trip to your Denon dealer may give great satisfaction.

### Denon DP-2500 Turntable

Speed accuracy no measurable error at either speed at 105, 120, or 127 VAC

#### Weighted peak flutter (ANSI/IEEC)

average 0.04%  
maximum 0.07%

Audible rumble (ARLL) -65 dB

Stylus force gauge accuracy  
calibrations to 2.0 grams no measurable error  
full counterweight revolution 2.45 grams

Tone-arm resonance  
vertical 6.5 Hz; 1-dB rise  
lateral 5.0 Hz; 1-dB rise

Tone-arm friction negligible

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