

Technics RS-7500US Stereo Elcaset Deck

Developed by a consortium of Japanese audio manufacturers, the Elcaset system is intended to overcome the major limitations of the conventional compact tape cassette. One of the members of the consortium is Matsushita Electrical Industrial Co Ltd, manufacturer of the Technics RS-7500US Elcaset deck reviewed here.

"Elcaset" is derived from "large cassette", which correctly describes this new type medium developed by a consortium of well-known Japanese audio manufacturers — JVC, Matsushita (Technics), Sony and Teac. As shown in the photograph on the following page, the Elcaset is a whopper compared to the conventional cassette.

The Elcaset is designed to overcome the disadvantages of the conventional cassette, some of which are low tape speed, narrow track width and the need for the tape heads to move and contact the tape rather than vice versa. This last characteristic means that there is great difficulty in ensuring correct tape azimuth and alignment — these two parameters can vary each time a cassette is inserted into a typical deck mechanism.

And until the application of considerable ingenuity by some Japanese manufacturers, it was not possible to have separate recording and playback heads. In spite of all these disadvantages, the once-lowly cassette has been highly refined.

By using twice the tape speed, 9.5cm/sec and almost double the tape width, 6.3mm, the Elcaset gains the advantage of greatly improved freedom from high frequency saturation. The tape heads can also be somewhat larger and have bigger gaps, which makes for easier manufacturing while still maintaining high performance.

Since the tape is pulled out of the Elcaset when it is inserted into a deck, the tape heads are rigidly fixed and it is easier to provide a separate playback head, without the jiggery-pokery

necessary in a conventional cassette deck.

As our "see-through" diagram of the Elcaset shows, it is also considerably more complex than the conventional cassette. The two tape hubs are locked by a ratchet mechanism when the Elcaset is removed from the transport mechanism. The Elcaset housing has identification holes to indicate (to the tape deck) whether it is a Dolby recording, and the type of tape formulation (so the deck can adjust bias and frequency compensation levels). The housing also has end-of-tape detection windows and retractable erase prevention tabs. Finally, for the sake of the purblind user, there is an identification hole to indicate side one.

If you have found it hard to accept the large size disparity between Elcaset and standard cassette, you will find it even harder to comprehend the size of the Technics RS-7500US. It is really big: 483mm wide, 252mm high, including rubber feet and 350mm deep, including knobs and other projections. Nor is it a lightweight, at 14kg.

Like a good deal of other high fidelity equipment, the RS-7500US Elcaset deck

