

ORTOFON SERIES 500 UNTRADITIONAL CARTRIDGES IN THE FINEST MOVING MAGNET TRADITION

It is generally accepted in the world hi-fi community that Compact Disc is an excellent new sound storage medium, especially as a convenience format. But experts also agree that, despite its impressive data specifications, Compact Disc seldom sounds like real music.

Lovers of the realistic reproduction of music in the home are discovering in increasing numbers that the analogue technology of the black vinyl record is still superior to the digital Compact Disc by a comfortable margin.

The brand new Ortofon Series 500 cartridges are for music lovers. For people who listen to music, not hi-fi. For people who appreciate the intimacy, the immediacy, the "liveness" of real music.

The Series 500 is the latest result of Ortofon's decades of experience as a leader in the field of magnetic cartridge design. The Series 500 cartridges incorporate innovative technology that sets new standards for the performance potential of a "traditional" cartridge.

520, 530, 540

The Series 500 consists of the Ortofon 520, the Ortofon 530 and the Ortofon 540. For universal turntable compatibility, all three cartridges are available in P-mount and standard 1/2" versions.

Since all three cartridges share the same electrical system, it is the shape of the diamond stylus that defines subjective performance as well as measured data. In the tradition of Ortofon's famed OM Series, the replaceable stylus units are fully interchangeable, allowing you to substantially improve your cartridge conveniently and inexpensively by changing to a more highly refined stylus tip profile whenever you choose.

TRADITION AND INNOVATION

Although the electrical system of the Series 500 is based on established moving magnet principles, our three new cartridges are far from traditional.

Sophisticated CAD/CAM technology (Computer Aided Design and Manufacture) has been employed to optimize crucial aspects of the Series 500. This has enabled us to reduce the mass of the moving assembly for greatly enhanced treble response and to optimize the moving assembly's center of rotation for the reproduction of a true, three-dimensional soundstage.

The results of these technological advances are easy to measure, and

even easier to hear and enjoy. The Series 500 cartridges convey that elusive, undefinable quality, a sense of involvement in the musical event.

THE MAGNETIC CIRCUIT AND THE COIL SYSTEM. ORIGINAL ORTOFON TECHNOLOGY

It has been a major objective in the design of the Series 500 to fully exploit our broad base of experience with moving magnet cartridges to reduce equivalent stylus tip mass. Low mass, in conjunction with the most advanced stylus geometries, has made possible a considerable extension of the high frequency response of the Series 500 cartridges.

However, extended high frequency response could only be achieved through radical improvements in the coil system and the magnetic circuit.

These problems were resolved by yet another Ortofon innovation: slit pole pins which drastically reduce the eddy currents which occur in solid pole pins.

Figures 3 and 4 illustrate the dramatic improvements slit pole pins make in the frequency response of the coil system (Fig. 3) and of the cartridge as a whole (Fig. 4).



Fig. 1. Solid pole pin with circulating eddy current.

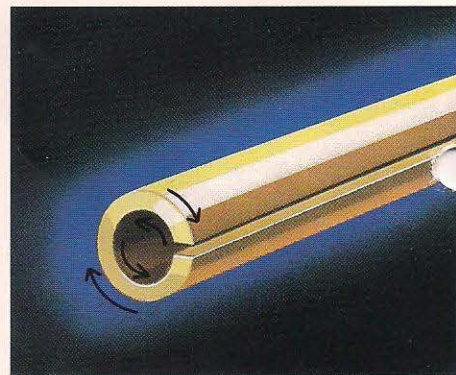


Fig. 2. Slit pole pin with new path of reduced eddy current.

Fig. 3. Illustrates the improvements slit pole pins make in the frequency response of the coil system (unbroken curve).

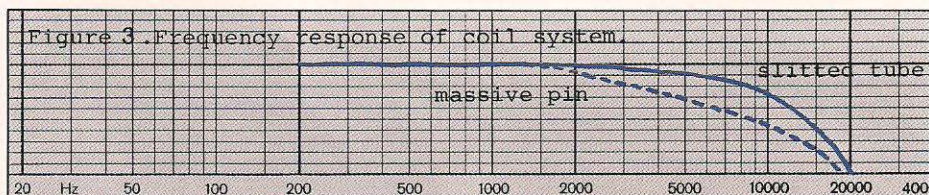
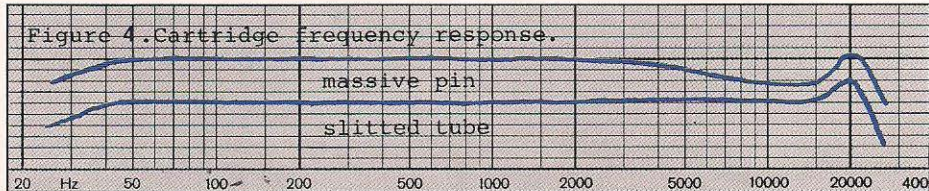
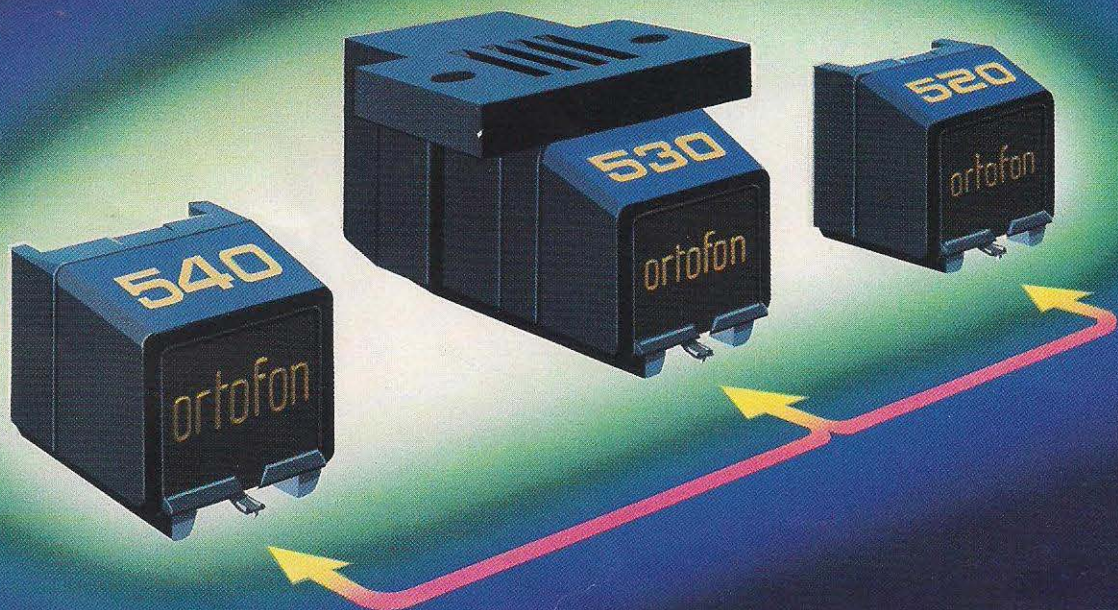


Fig. 4. Upper curve illustrates the typical frequency response of a cartridge with solid pole pins. The "sagging" that appears between 3 kHz and 10 kHz is very obvious.



The lower curve illustrates how slit pole pins in the same cartridge compensate for this, and thus level out the frequency response.



THREE STYLUS PROFILES

There is an almost infinite variety of stylus shapes to choose from today. All of them are created with the same goal in mind, to design a playback stylus with almost the same areas of contact in the record groove as the original master cutting stylus.

A narrower and higher contact area means more precise tracking and accurate signal retrieval. At the same time the stylus must not be so narrow and so sharp that it actually strips the groove walls.

Production methods and price are factors which limit just how close any design can come to meeting these conflicting demands.

The Elliptical, Fine Line and Fritz Gyger Type II stylus shapes selected for Ortofon's Series 500 are among the finest stylus types available.

The Ortofon 520 employs a nude Elliptical stylus, while the Ortofon 530 incorporates a nude Fine Line shape and the Ortofon 540 is fitted with a newly-developed, nude Fritz Gyger Type II stylus.

The specifications on the following page show just how big a difference stylus geometry makes in the measured performance of a cartridge.

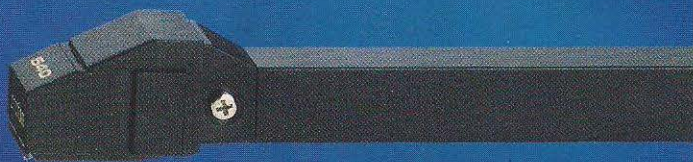
REPLACING THE STYLUS UNIT

Each Series 500 stylus unit comes equipped with a patented stylus guard which also doubles as a locking mechanism to fix the stylus unit firmly to the cartridge body.

In its "down" position the stylus guard protects the stylus from damage.

When removing or installing the stylus unit the guard should be pointed straight out in front of the cartridge. This is the "unlocked" position.

When playing records the stylus guard should be turned straight up for tight, vibration-free connection of the stylus unit to the cartridge body.



In order to allow the widest possible number of music lovers to employ our new 500 models, the Series is also available in P-mount versions for easy fitting in tonearms with T4P standard sockets.

SERIES 500

THE MAGNETIC FUTURE

ortofon
accuracy in sound

CARTRIDGE MOUNTING

The 520 P, 530 P and 540 P are P-mount plug-in cartridges designed for T4P standard arms.

Models 520, 530 and 540 (without the P) have integral mounting brackets for two bolts with standard 1/2" spacing.

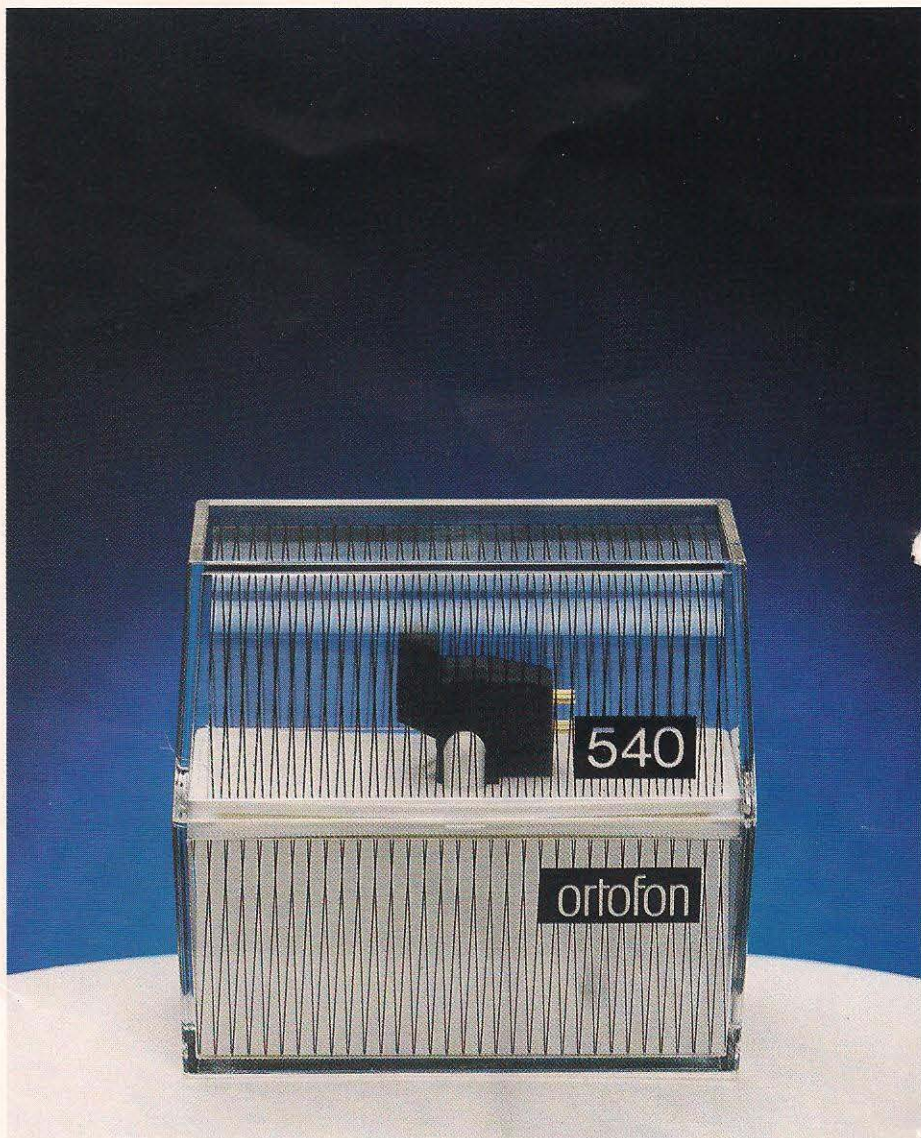
The short cartridge body and overall compact design mean that there is ample space at the rear of the cartridge for connecting the tone-arm cable to the cartridge pins.

ORTOFON SERIES 500 A MUSICAL EXPERIENCE

To sum it all up, the Ortofon Series 500 cartridges are designed for precise, accurate retrieval of the delicate information in the record grooves.

You owe it to yourself to experience the Series 500 cartridges. Revel in the warmth, the natural ease and uncanny realism with which they play music. Most cartridges can play records, but only a select few let you forget hi-fi and enjoy music.

Let Ortofon's Series 500 bring you closer to the music.



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	520	530	540	520P	530P	540P
Weight	5 g	5 g	5 g	6 g	6 g	6 g
Type of stylus	E Nude	FL Nude	FG II Nude	E Nude	FL Nude	FG II Nude
Equivalent stylus tip mass	0.3 mg	0.3 mg	0.3 mg	0.3 mg	0.3 mg	0.3 mg
Frequency response	20-23,000 Hz	20-25,000 Hz	20-27,000 Hz	20-23,000 Hz	20-25,000 Hz	20-27,000 Hz
Output voltage at 1000 Hz per 5 cms/sec.	3 mV	3 mV	3 mV	3 mV	3 mV	3 mV
Channel separation at 1000 Hz	23 dB	25 dB	25 dB	23 dB	25 dB	25 dB
Channel balance at 1000 Hz	1.5 dB	1.5 dB	1.5 dB	1.5 dB	1.5 dB	1.5 dB
Compliance, dynamic, lateral (10 Hz)	25 µm/mN	30 µm/mN	30 µm/mN	25 µm/mN	30 µm/mN	30 µm/mN
Recommended tracking force	1.5 g	1.5 g	1.5 g	1.5 g	1.5 g	1.5 g
Tracking force range	1.25 g-1.75 g	1.0 g-1.5 g	1.0 g-1.5 g	1.25 g-1.75 g	1.0 g-1.5 g	1.0 g-1.5 g
Tracking ability at 315 Hz lateral	70 µm	80 µm	90 µm	70 µm	80 µm	90 µm
Vertical tracking angle	20°	20°	20°	20°	20°	20°
FIM distortion	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%

E = Elliptical FL = Fine Line FG = Fritz Gyger