

Kontrapunkt

MOVING COIL CARTRIDGES

ortofon
accuracy in sound



Johann Sebastian Bach.

On the occasion of the 250th anniversary of a giant of western music and the new millennium, Ortofon has taken up the theme of Bach's Kontrapunkt. We believe that our more than 80 years experience in analogue sound reproduction reflects, in its own way, the theme of this great music - the truly inexhaustible nature of the analogue record.

Over the years from cartridge to cartridge we have demonstrated how the same basic theme - Accuracy in Sound - can ring through for the sake of music in new and different

ways. Not limited by bits or sampling frequency rates, those same record grooves can go on yielding over and over again new dimensions of musical enjoyment.

We want to show, through these new models, which are related to each other like the Kontrapunkt themes but always different, how analogue the original source of recorded music - after more than 100 years has not exhausted itself. Thus like Bach's theme it still has something musically valid to say today.

As a consequence of this, and as a sign of respect to the greatest of Bach's last works, we have decided to use the letters from his name like he did himself, in the XIXth Contrapunctus - as the names for our new cartridge models.

In the following three bars from Bach's famous theme, the letters from his name appear in the upper voices.



Kontrapunkt MOVING COIL CARTRIDGES

Introduction

The first two Kontrapunkt models Ortofon has decided to launch, are identified by using the letters b and a. In design as well as in the basic structure the cartridges derive from the well known and successful Jubilee cartridge. Being faithful to the Kontrapunkt theme, the sound from these cartridges will represent variations over the fundamental and typical sound image - characteristic for the Jubilee model.

By implementing other diamonds, cantilevers and damping systems in the new models, we have been able to reveal new possibilities in performing the analogue information. We believe that our faithful and new customers will agree with us, and enjoy re-discovering information in the play back of their precious analogue records.

Kontrapunkt b



This model is special in having a very thin Ruby cantilever mounted with the super polished Nude FG 80 stylus. Coils are made from 6-Nines pure silver wire and the output is as high as 470 μ Volt at 5 cm/sec. by 1 kHz.

Compared to Jubilee the sound picture is more open, grandiose and dynamic with a very present perspective.

The musical performance of Kontrapunkt b is depending on the equipment, room and music programme. Also variations of the resistive load, can influence sound image to some extent, where higher values around 100-200 Ohm will open details further. Lower values but not less than 10 Ohm will tighten sound image. The cartridge seems to work well in small, soft rooms with loudspeakers having moderate tweeters.

Kontrapunkt a



In this model, an aluminium cantilever is mounted with a super polished Nude Fine Line stylus. Coils are made from 6-Nines pure silver wire, and the output is as high as 450 μ Volt at 5 cm/sec. by 1 kHz.

The sound picture of this cartridge is more relaxed, homogeneous and moderate dynamic in the perspective compared to the Kontrapunkt b and with great space and depth in the stereo image.

Again, depending on equipment, room and music programme resistive loads on 100 Ohm or much higher can influence perception of details. The cartridge seems to work well in combination with various rooms and loudspeakers.

TECNICAL DATA

	<i>Kontrapunkt b</i>	<i>Kontrapunkt a</i>
Output voltage at 1000 Hz, 5cm/sec.	470 μ V	450 μ V
Channel balance at 1 kHz	< 1,5 dB	< 1,5 dB
Channel separation at 1 kHz	> 25 dB	> 25 dB
Channel separation at 15 kHz	> 18 dB	> 15 dB
Frequency range at - 3dB	20-50.000 Hz	20-40.000 Hz
Frequency response	20-20.000 Hz +2,5/-1 dB	20-20.000 Hz +1,5 dB
FIM distortion at recommended tracking force, DIN 45.542	< 1%	< 1%
Tracking ability at 315 Hz at recommended tracking force	80 μ m	80 μ m
Compliance, dynamic, lateral	12 μ m/mN	12 μ m/mN
Stylus type	Nude FG 80/Ruby cantilever	Nude Fine Line/Al. cantilever
Stylus tip radius	r/R 5/80 μ m	r/R 8/40 μ m
Equivalent stylus tip mass	0,27 mg	0,30 mg
Tracking force range	2,2-2,7 g (22-27 mN)	2,2-2,7 g (22-27 mN)
Tracking force, recommended	2,5 g (25 mN)	2,5 g (25 mN)
Tracking angle	20°	20°
Internal impedance, DC resistance	5 Ohm	5 Ohm
Recommended load impedance	50-200 Ohm	50-500 Ohm
Cartridge body material	Stainless Steel	Stainless Steel
Cartridge colour	Blue	Black
Cartridge weight	10 g	10 g

Kontrapunkt c



The conical aluminium cantilever is fitted with a Nude FG 80 diamond stylus. Coils are wound from 99.9999% pure silver. A neodymium magnet and an output of 470 mV ensure an extremely high signal-to-noise ratio with any MC preamplifier.

Kontrapunkt c incorporates Ortofon's newly developed FSE (Field Stabilizing Element) to achieve optimal frequency response linearity by stabilizing the magnetic field around the armature – especially during complex crescendo passages – and to ensure consistently high channel separation across the frequency band.

Kontrapunkt c is a true high end reference cartridge, conveying music with supreme precision, impact and dynamics. Its stereo imaging capabilities illuminate the furthest corners of the soundstage in all three dimensions.

A high resolution audio system is required to fully explore the information retrieval potential of this cartridge.

As a starting point, we recommend a 100 Ohm load – but as always this is a matter of personal preference. A higher load offers enhanced openness, while a lower load offers increased focus.

The cartridge shares design and external features with the Kontrapunkt b and a.

Kontrapunkt h



Ortofon's Nude Fine Line elliptical diamond stylus mounted on an aluminium cantilever (as in Kontrapunkt a) in conjunction with our innovative FSE (Field Stabilizing Element) provides exceptionally open bass and midrange with smooth, natural overtones.

The Kontrapunkt family resemblance is obvious with outstanding channel separation across the fundamental frequency range and into the extreme upper frequencies, contributing to sublime dynamics and musical clarity.

This cartridge is recommended to enthusiasts who prefer a degree of mildness and smoothness, as opposed to the Kontrapunkt c with its more expressive approach to such parameters as dynamic high-frequency detail.

A 100 Ohm load is recommended as a starting point, but higher values may be preferred for added "air" around the performers.

Output is 470 mV from coils of 99.9999% pure silver and a Neodymium magnet.

The cartridge shares design and external features with the Kontrapunkt b and a.

Kontrapunkt c	Kontrapunkt h
470 µV	470 µV
< 1 dB	< 1,5 dB
> 25 dB	> 25 dB
> 23 dB	> 17 dB
20-50.000 Hz	20-45.000 Hz
20-20.000 Hz +2/-1 dB	20-20.000 Hz +1,5 dB
< 1%	< 1%
80 µm	80 µm
12 µm/mN	12 µm/mN
Nude FG 80 on tapered Al. cantilever	Nude Fine Line on Al. cantilever
r/R 5/80 µm	r/R 8/40 µm
0,27 mg	0,30 mg
2,2-2,7 g (22-27 mN)	2,2-2,7 g (22-27 mN)
2,5 g (25 mN)	2,5 g (25 mN)
20°	20°
5 Ohm	5 Ohm
50-200 Ohm	50-200 Ohm
Stainless Steel	Stainless Steel
Green	Violet
10 g	10 g

General product information

For customers not familiar with the design elements in the Ortofon Jubilee cartridge, we want to point out that for the first time in cartridge production, Ortofon has succeeded in using the very new Metal Injection Moulding (MIM) process for the housing elements as well as for magnetic circuit parts.

The great advantage of this process is the fact that precise and tiny parts can be made in either stainless steel or highly conductive magnetic materials, by injecting a mixture of a polymer and fine metal powder into a mould. In many ways the process is similar to the way of injection moulding pure polymer parts. After sintering, the material will appear as solid metal, strong but lightweight because of thin dimensions. The advantages concerning this process in design are almost unlimited, and was utilized by Ortofon, when developing the very rational and untraditional design of the Jubilee cartridge two years ago.

All parts in this Ortofon design are pressed together to form the most stable and solid unit. A new magnetic circuit was developed with all the oscillating parts mounted inside the very strong Neodymium magnet itself in order to concentrate magnetic strength around the armature and coils. By doing so magnetic leakage was reduced and output raised from the cartridge, still keeping the impedance at the typical low Ortofon level.

When looking around this cartridge design, you will find several interesting features making correct mounting and adjustment very easy and safe. The stylus is well protected against accidents, but at the same time very visible when searching the groove. The terminal pins have been moved forward into the housing in order to give more space for the lead wires. On the bottom side of the cartridge a conductive carbon fibre part will help eliminating electro-static clicks from the record. Besides, this part has a lower position compared to the metal parts, this in order to protect the record if the cartridge should be dropped by accident.

On the mounting side the cartridge has 2.5 mm threaded holes and three elevated points in a triangular position to stabilize head shell contact. This gives the possibility of adjusting the correct vertical position (azimuth) over the record when mounting in either fixed or detachable head shells. This is very important for optimum channel separation. Because of the little ridge on the mounting side in front of the screw holes, the cartridge can be tilted about two degrees to each side. This is done by fastening and unscrewing either of the screws and, at the same time, observing the reflected image of the cartridge in the record surface.

Kontrapunkt