

Furutech Monza, Furutech SK II, Furutech SK-Filter, Furutech Destat III & Sunhayato EG-5.



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Regardless of what one thinks about the quality of a vinyl-based analogue system, we all agree on one thing: The sense of using discs and devices plays an important role in the overall experience that one derives and is this "something more" in relation to digital systems, which is often enough to win you. Mechanically at their base and usually exposed to the environment much more than the records of a music collection, vinyls require - inherently - increased attention to handling and more care if one wants to keep them in good condition. The "sensitivity" of the instrument has consolidated a series of procedures which have now been institutionalized as rituals. Extracting the disc from the envelope, placing it on the floor, cleaning, handling the arm are the sides of an art you need to know if you want to belong to the analogue audiophiles club. Each ritual has its tools / symbols, and in the case of vinyls, these objects are clearly distinguishable around the deck itself: Each user has a disc cleaner and a range of other accessories according to his / her views. The minimalists will be pleased with a simple cloth, others are incompatible with nothing less than the edges as defined by a fully automated disc washer, an electronic yoke (with a centimeter gram accuracy) for adjusting the reading power and whatever else find yourself in more than imaginative product catalogs of specialized manufacturers. In this text we have tried to stay on the logical side of things. Static electricity and dust are actual (and quite annoying) disk problems, as is the need for mechanical stability. Based on this observation, the five products we tested may actually offer something more to the final quality offered by an analogue source.

Monza is a pocket for stabilizing the disc on the deck, the SK III scrubber also features cleaning and anti-static properties, the SK-Filter is a passive static electricity removal system and destat III is the latest version of the active antistatic / Furutech Powder Cleaner. The fifth device shown on these pages does not belong to Furutech and is more diagnostic than a therapeutic tool. It is a Sunhayato (EG-5) static electricity meter that will confirm the problem (giving an exact value in kV) and solve it when a discharge system is used.

Furutech Monza

Monza is a pretty heavy puck (350gr) which is made of a combination of three materials. The body is made of non-magnetic stainless steel and its two parts are tied with carbon fiber. The surface which comes into contact with the disc has a coating of a resilient material formed in sixteen concentric rings. The company says that this combination of materials (which is also used in other products such as the FI-50 series) has both mechanical and electrical damping characteristics, since it also has piezoelectric properties.

By the way, it is worth clarifying the difference between a clamp and a puck (like Monza) here. The first is a system designed to apply a force to the center of the disk through a mechanism which can take various forms such as a spring, an internal screw / clamp or even direct clamping on the plateau which requires shaft screwing and is usually used in clamps that accompany the device). The second is a system that depends on its mass to apply force to the center of the disk. Its name, probably - comes

from the word used by English-speaking people to describe very dense cylindrical objects (such as the "ice hockey" puck). It is obvious that a clamp can be very light and a pack must be heavy.



Monza is made of two stainless steel / non-magnetic steel sections that are bonded with carbon fiber.



The side of the Furutech puck, which comes into contact with the disc, has a layer of elastic material which is formed in rings and has piezoelectric properties.

Furutech Monza

The use of the clamp and its effect on the final sound effect is one of the favorite topics of discussion among the vinyl friends with the views occupying the full range, in that it has absolutely no use, until it is necessary (several manufacturers consider it important, however, as they include it as basic or optional equipment with their products).

Monza can improve the performance of a system in two areas: first to impose a better contact of the disc with the surface of the deck, minimizing the problems of the mechanical deformations of the first one (the skull), by reducing the phenomena due to them, the introduction of subsonic noise. In practice, this has been shown to have an effect provided that the deformations are small. Monza's heavyweight is working well in this direction. Secondly, the stabilization of the disc ensures better readability as the disc and the die approach more closely to the ideal condition that requires these two parts to react as one body without any relative movement between them.

We tried the Furutech clamp with two different analog systems, the Linn Sondek LP12 that we systematically use as a reference and a PE 1000 of Perpetuum Ebner that we are currently testing. The effect of Monza was positive in both cases in terms of reducing mechanical deformation of the discs and more important in the case of PE 1000 in terms of overall performance. Very low frequency noise dropped noticeably on specific problem discs and the speakers seemed less stressed while the PE 1000 improved on clarity in the stereo image and at the same time seemed to gain in presence in the low / midrange region.

One last observation concerns the effect of Monza's mass on suspension operation (if the platform has such a shock-absorbing mechanism). Increasing the suspended mass is expected to reduce the resonant frequency and hence the effect of the mechanical filter on ambient noises. If your platform uses a suspension, before you buy Monza (or any clamp / puck in this case), try it in practice.



Monza belongs to the puck category, based exclusively on its mass to stabilize the disk.

Furutech SK-Filter

The accumulation of static charges on a surface (in this case the surface of a LP) is a phenomenon with many causes, the main one being friction. It can be caused, for example, by the insertion and extraction of the disk from the envelope, and it is related to the humidity in the atmosphere (the drier the latter is the more intense the phenomenon) but, of course, mainly due to the friction of the disc with the spike and the atmosphere itself and secondarily (depending on the fabrication of the platform) with the friction of the belt.

In "difficult" cases a continuous discharge system is required and that's what SK-Filter does. It is a swinging swab (not touching the disk surface) which can be positioned as a "second" arm to discharge the disc during playback. Its anti-static effect is based on the use of a fiber called Thunderon. Thunderon has been created by Sanmo and among its features are the great possibilities of discharging through the corona phenomenon. It is manufactured by immersing a synthetic fiber (acrylic or nylon) in a sulfur-copper compound. The resemblance of the principle of operation with that of SK III is obvious, but Furutech does not make clear whether the latter uses Thunderon fibers or not.



The corona phenomenon (air discharge without physical contact) is also used by the SK Filter, which is based on a special synthetic fiber called Thunderon.

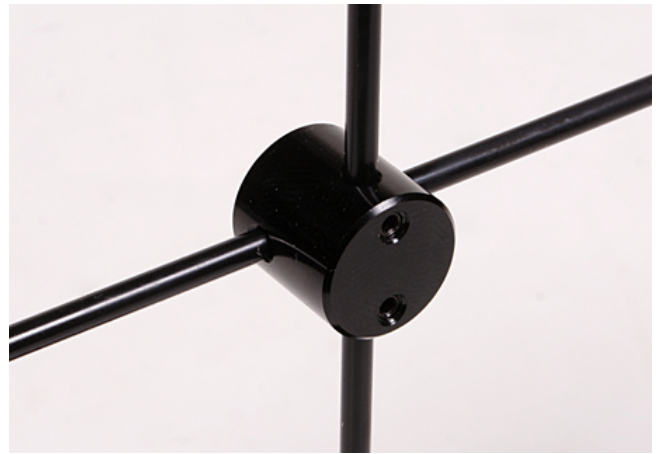
Furutech SK Filter

The SK Filter is designed to operate at the same time as the platform to ensure continuous discharging of the disk from static electricity generated during playback. Before you buy it you have to make sure it can be placed on your deck. Furutech says the maximum height is 20 centimeters and should be set so that the pile is a few millimeters away from the surface of the disc without touching it. The settings are made up even in the horizontal plane through a hinge and four small allen for which there is a suitable key in the package. All he needs to do is to remove a protective thread that is loosely sewn between the fibers before using the SK Filter for the first time. The base of the system is heavy enough to minimize the possibility of an accident and offers the possibility of rotation of the swab so as to move away from the surface of the disk and to facilitate the user as well as the possibility of complete removal of the mechanism without tools and without need to move itself.

The effectiveness of the SK Filter depends to a large extent on the static electricity problem faced by the user. In our case, the disk remained without static loads during its playback and, in addition, it discharged at a fast rate even when we charged it (in a few turns we saw the tendency to drop from about 11kV to about 0.1kV and to stay there). The only problem you will have with this system is that its use does not allow the conventional covers that are found on most platforms to come down.



The placement of the SK-Filter must be done in such a way that the blade does not touch the surface of the disc. The base is particularly heavy so it does not easily move / drift.



This joint allows the user to place the SK-Filter in the correct position relative to the disk surface.

Furutech SK II

Dust and static electricity on the surface of a disc (LP, CD) or even a screen are intertwined. If a surface is for some reason charged, it draws particles from the environment and the only way to stay clean is to discharge, preferably at the same time as cleaning it. SK II is a simple tool to use for this purpose, although its construction is more complex than it seems. It consists of a combination of natural and artificial fibers on the side that comes into contact with the surface to be cleaned and a metal housing which allows the user to "ground" the load.

The fibers made up of SK II come in part from goats and are particularly soft (and at high cost, the company notes) and, for the rest, are made of an acrylic material that has become conductive by dipping it in a copper compound. The natural fibers come in contact with the surface of the disc and remove the dust particles while the acrylics simply discharge the surface through the corona effect which does not require physical contact.



SK II uses two different types of fiber, a natural one that comes in contact with the disc and an artificial one that discharges through the crown phenomenon.

Furutech SK II

Using SK II could not be simpler: Just use it to remove dust and unload the surface of the disk before using it. The natural fibers that come in contact with the disc are really very flexible and soft and are unlikely to cause any wear even after prolonged, frequent use. Also, the friction that creates in the disc if the cleaning is done with the latter rotating is minimal, therefore, it does not bear any strain on the crank engine.

SK II proved to be particularly effective in removing foreign particles from the disk surface and seemed to minimize static electricity when it moves at standard / standard levels (charging the disk surface depends on many factors, including atmospheric humidity and the place where the tests are done does not favor the phenomenon) and the sense of its use is perhaps the best we had of a similar system. It is of course not effective if the disc has other dirt on its surface (finger marks, sediment from cleaning fluids or other more persistent deposits). In this case one should think of using a cleaning fluid or a dishwasher.



Here are the two different types of fiber that make up SK II. The metal binder allows high-conductivity contact between the user and the fibers for better discharge.

Furutech destat III

Furutech's destat has been on the market for over a decade and is a good example of how an industrial process can be transferred to the home user. The discharge of a non-conductive surface from the static loads can be done by placing it in an airflow that contains ionized (negative and positive) particles. In the industry, large ion generators are used in conjunction with fans generating this flow and a sector (not unrelated to audio), where such a process is applicable is the manufacture of printed circuits.

In its third version, the destat includes an ion generator (Furutech calls it Balanced Ion Flow Generator, referring to the simultaneous production of negative and positive ions) and a fan that creates a mild flow. The only thing the user needs to do is to approach the device on the surface that wants to discharge and push the switch. The process takes about fifteen seconds and destat III is deactivated by itself. The device is powered by four AA batteries.



Destat III is the home version of an industrial process of discharging surfaces from static electricity, which is based on an ion generator and a stream of air.



The underside of destat reveals the fan that advances the ions to the surface to be discharged. At the same time it removes dust particles.

Furutech destat III

Furutech's active static electricity removal system is as user-friendly: All you need is to keep it close to the vinyl or CD / DVD and press the single switch once. The ion generator and fan operate for about fifteen seconds and loads are neutralized. Its use is meaningful when conditions favor high static loading (very low humidity, tray loading covers, woolen carpets), so a simple passive system (like SK III) is probably not enough. In addition, the air stream generated during use removes free particles and other dirt (not adhered to the surface of the disc).

Destat III was particularly effective in vinyl and optical discs but also on other surfaces where we tried it. The best method of use, however, seems to be to combine it with another simpler system that will be used on a regular basis (for example, whenever a tray is placed on the deck) leaving the destat periodic / conservative discharging when needed.



The use of destat III is simple. All you need is to press the switch and move it to the surface of the disc. Operation is automatically interrupted in about 15 seconds.

Sunhayato EG-5

Η στενή σχέση του στατικού ηλεκτρισμού με τα τυπωμένα κυκλώματα (που αναφέρθηκε πιο πάνω με αφορμή το destat III), εξηγεί την ύπαρξη μιας εταιρίας όπως η Sunhayato στις σελίδες αυτές. Η Sunhayato κατασκευάζει βιομηχανικό εξοπλισμό για την κατασκευή πλακετών και οθονών LCD, και το EG-5, το μόνο αξεσουάρ που δεν ανήκει στην Furutech, είναι ένα όργανο μέτρησης του στατικού φορτίου σε επιφάνειες και κατ'επέκταση της αποτελεσματικότητας των διαφόρων μεθόδων απομάκρυνσής του. Στην πραγματικότητα, η κατοχή και η χρήση του EG-5 αποκλειστικά στο περιβάλλον ενός ηχοσυστήματος είναι -πιθανώς- υπερβολή, αλλά και οι υπερβολές έχουν το ενδιαφέρον τους!

Η συσκευή είναι ιδιαίτερα απλή στην χρήση της καθώς το μόνο που χρειάζεται είναι να στρέψεις τον αισθητήρα προς την επιφάνεια που σε ενδιαφέρει και να διατηρήσεις μια σταθερή απόσταση περίπου πέντε εκατοστών από αυτήν. Η στατική φόρτιση (σε V ή kV) εμφανίζεται στην οθόνη. Η τροφοδοσία της συσκευής γίνεται από τέσσερις μπαταρίες AA.



The EG-5 sensor allows measurement without the need for surface contact. The ideal distance is, according to the company, five centimeters.



The Sunhayato EG-5 static electricity meter is small and very easy to use. The result is displayed on the display directly in kV.

Sunhayato EG-5

As part of the need to quantify a phenomenon, we found EG-5 particularly interesting in its use. While the discussion of static electricity is often theoretical and rarely empirical (when the disk is highly charged, you often feel it on your skin or discharge with discharge when you reach the platform), with

the Sunhayato meter per hand, you see things are clear and you can have an objective sense of the problem and how to deal with it.

Its use is simple and the most difficult part is to install the batteries as the device uses a peculiar connection system between the pack and the measuring head, but that is enough - of course - to read the instructions ... All you need to do the user is to keep the device sensor at a close distance from the surface the load wants to measure (the company says the ideal distance is five centimeters) and read the result on the screen, directly in kV (negative or positive , depending with charging). The package includes, in addition to the case and a special surface that is easily charged (rubbing it for example with a cloth) so that the user can confirm that the sensor is working.

Perhaps more critical than using EG-5 is to interpret the measurements. Low static charge values (above 500V and up to 1-3kV) are completely "logical" due to the handling of the discs (when importing and exporting to the folders). Discharging the disc can be done with a simple antistatic. Large values (of 10kV) are due to particular environmental conditions and should be treated drastically, first because they attract particles of pollutants from the atmosphere and, secondly, because they can cause hearing problems during reproduction. This level of static electricity is best addressed by an ionization system (like destat III). Finally, the loading of the disk surface during playback is partly due to the function of the deck itself and should, when detected, be handled appropriately, for example with a device such as the SK Filter or with an operation on the device itself example, using a different mat).



Trends that occur when charging a surface with static electricity can be very high. Here, the EG-5 counts more than 14kV (for the needs of the photo, we loaded the disc and unplugged the ground).

Technical Specifications (by manufacturer)

Furutech Monza:	Puck, 350gr, made of non-magnetic stainless steel and carbon fiber, elastic material with piezoelectric properties on the disc contact surface.
Furutech SK III:	Disk cleaner with anti-static properties. Combination of natural and artificial fibers (goat / acrylic), only the first of which come in direct contact with the disc.
Furutech SK-Filter:	Suspendable discharge knob with adjustable capability. Fibers by Thunderon.
Furutech destat III:	Active surface discharge system using ion / air generator. Automatic operation, possibility to use on LP, CD / DVD and other surfaces.
Sunhayato EG-5:	Static electricity measuring instrument.

Price - Information

Furutech:	€450,- (Monza), €130,- (SK II), €480,- (SK-Filter), €350,- (destat III).
Sunhayato:	€330,- (EG-5)
Information :	HiFi Power, tel.: 210-384.5272, web: http://www.hifipower.gr/ , http://www.furutech.com/ , http://www.sunhayato.co.jp/