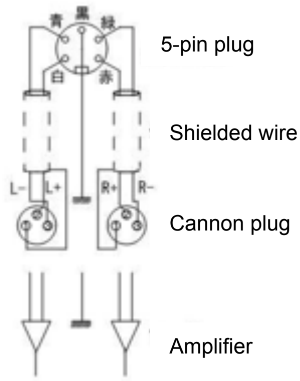
Differential Output Cord

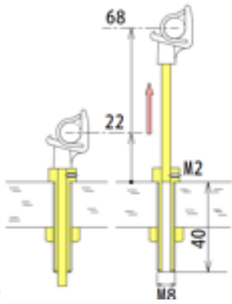
MH-BC1.2 cord 1.2m
MH-BC1.5 cord 1.5m



Tonearm Rest

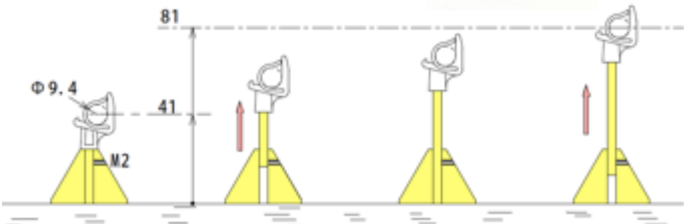
MH-R4S

Material - stainless-steel



MH-RO4S

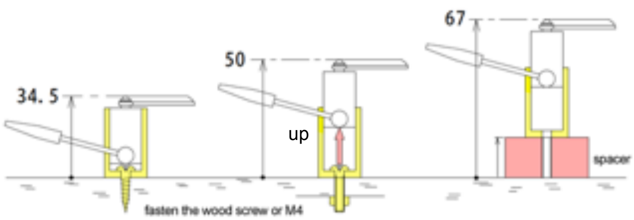
Material - stainless-steel
Because the mounted arm rest receiver is heavy, it is stable as it is; however, it would be more secure to determine its position and secure it with double-sided tape.



Tonearm Lifter

MH-L4S

Material - stainless-steel



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A legendary brand is reborn

GLANZ

GUIDE

MH-94S
MH-104S
MH-124S
THE GLANZ

2018.10

FEATURES

Solving the problem of harmonic distortion caused by the loss of mechanical vibration

A sound groove is engraved on an analogue disc. In order to faithfully reproduce the signal, the most important factor is the rigidity and mass of the tonearm, which should be integral with the cartridge. In general, mechanical vibration generated at the cantilever cannot be converted at the point of power generation, so vibration is left in the tonearm, and sound loss occurs. This causes the rise of the sound to deteriorate, adds a loss of harmonic overtone (distorted sound), and results in a shift to the high range, which leads to symptoms such as no low sound and no fine sound. THE GLANZ focused on solving these specific problems, utilising all of the technology and know-how that we had developed over many years.

Using our finely-honed skills to find a solution to the swirls and leaps of resonance transmission

The deep insight of a skilled craftsman has allowed us to design THE GLANZ with special attention to the physical integration of the cartridge and tonearm. THE GLANZ specifications impose strict conditions on all aspects of manufacture – from understanding the centre of gravity and moment, and the point where the resonance is transmitted, selecting and combining damper materials to counteract each other, as well as the composition of the stainless steel which is the material used in the body of the arm, right up to its machining accuracy and cutting processes.
Of course it goes without saying that each piece is individually hand finished to the highest possible degree, as though it were a precious work of art.
For the final hurdle, we undertake very stringent listening tests of well known records representing every genre of music, and then make the final delicate adjustments.

Creating a pure clean sound that pierces through silence

THE GLANZ product, constructed in this precise way, rejects all things wasteful and extravagant, and represents the culmination of simplicity & beauty. You may add to this the sophisticated design of the arm lifter. However, if you desire, you can omit the arm lifters and other accessories, and thereby enjoy simple styling with sound quality as the highest priority. You can choose from a heavy weight Ortofon cartridge, right through to a lightweight type cartridge.

THE GLANZ – as perfect as a work of art

A gentle, beautifully curved line, well-balanced size and weight, and the finest stainless steel gloss to give you goosebumps. In the end (and this is no word of exaggeration) this single tonearm has become a natural conduit for experiencing “original pure sound”. When you finally experience it, you will be thrilled by the quality of sound that can never be described as merely an “accessory”.
With its traditional name revived to meet the present age, ‘THE’ GLANZ takes centre stage wearing its new crown!

A little bit about my design philosophy

My name is Masataka Hamada. I am a developer, and I have been involved with “sound” for more than half a century!

As I am approaching my 70th birthday this year, I decided to gather together the knowledge and experiences that I have gained until now, and write them down in a way that is as easy to understand as possible. I am an engineer, so I am not very good with words, and some of it may be a little difficult to understand, but please take a look at what I have written.

DESIGN CONCEPT

First of all, everyone is aware of afterimages that occur in a picture on a TV screen.

Just to explain this to you, an afterimage on a screen occurs when the camera quickly pans, and for a brief time the image remains on screen, and then disappears like a ghost. When this happens, you are aware of the afterimage, aren't you?

Many still find it hard to understand the concept of 'reverberation' (sound distortion) in terms of acoustics.

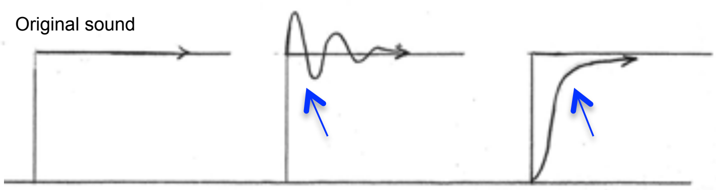
When you are trying to listen to an announcement in a gymnasium, you will often feel that it is hard to hear clearly because of the reflected sounds. This is reverberation. This same phenomenon also occurs during lectures, concerts, and events, for example.

From the moment when a sound is picked up by the microphone, until it emerges from the speakers, many reverberations occur, and it is a fact that the sound we hear is far removed from the original sound.
Please refer to the conceptual diagram of distorted sound (Fig. 1).

The phenomena which generate reverberation are so incredibly numerous, they are hard to understand. I refer to reflected sound, reverberation, etc. collectively as 'sound distortion', but my aim is to take each one individually, to understand the phenomenon, and then to eliminate it, or reduce it as much as possible.

Sound distortion arises due to various parts and factors. When I find a large distortion, I make it my priority to improve it.

I've been asked by several people why they can't hear any difference when they change to a good quality cartridge, having been told that it will improve the sound. Because they are still hearing large sound distortion from other parts of the equipment, rather than from the cartridge, simply changing the cartridge to a better one does not improve the sound. If you read my design philosophy, you will find the answer to such questions.



A: Sound distortion: 'zero' = original sound

B: The further away from the horizontal axis, sound distortion is more harsh

C: The greater the distance from the vertical axis, sound distortion is more dull

Fig. 1: Conceptual diagram of sound distortion
(Horizontal axis = TIME, vertical axis = VOLUME)

Concerning the sound distortion of the tonearm

When the the cantilever of the cartridge needle does not properly capture information about the sound, due to the vibration of the body, the output of the sound information is not complete, and the result is increased loss. The vibration of the arm supporting the cartridge can be compared to a spring (see Fig. 2). The vibration of the spring results in the loss of sound information.

If we liken 'loss' to a calculation formula, we get:
(Power generation signal output) = (amplitude of the needle) - (vibration of the cartridge body)

The vibration (loss) of the cartridge body impairs the sound rise.
(Fig. 2A: Vibration of the cartridge gives rise to electric signal loss)
The loss makes the arm vibrate, and the reflected sound produced by the vibration returns to the cartridge as reverberation, and it is played back.(See Fig. 2B)

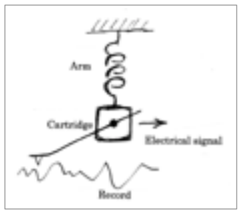


Fig 2 (A) Conceptual diagram of signal loss and sound distortion due to vibration of the arm

Records have warpage

In order to follow the warp of the record disc, it is essential that the arm has a small mass. However, in order to minimise the electric signal loss in the audible range, the mass of the arm must be increased, and vibration should be eliminated as much as possible.
In other words, in order to follow the warp of the record, the key is to improve the sensitivity to movement of the cantilever of the arm, and to increase the mass in the audible range to eliminate the electric signal loss.
In order to improve the movement sensitivity of the cantilever section, I use bearings to improve the preliminary sensitivity at ultra low frequencies.

An explanation about the properties of materials

Amongst the materials which have a large mass, and are soft, we have lead. Lead has a large mass at low frequencies, but at high frequencies it becomes a sound absorbing material like rubber, so sound information is not transmitted, and becomes loss.

Alternatively, what about a glass-like material? Certainly it remains hard even at high frequencies, its resonance is intense, and resonating sound returns to the cartridge as reflected sound.
(See Fig. 2B), where the signal resonated by the vibration returns to the cartridge. This will also be described later in Fig. 7C)

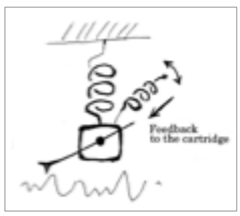


Fig 2 (B) Conceptual diagram of signal loss and sound distortion due to vibration of the arm

In the audible range from bass to treble, to convert sound into an electric signal without loss, we need to use a heavy and leak-proof mass to block the pathway along which sound is transmitted.

Stainless steel 304 is such a material - it is both hard, yet ductile, and combines these conflicting qualities in just the right way.

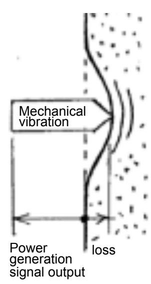


Fig 3 Conceptual of sound block

However, when you use stainless steel, not all the results are good. If you make stainless steel material thin or light, or make the cantilever section of the arm into a needle shape or a blade shape, this affects the sound. I have tried using a pivot type bearing, but the outcome is poor. You have to increase the number of ball bearings, and bring them as close to the surface as possible. To make spot contact where you join parts to each other also affects the sound. If you bond the joints with adhesive, the adhesive becomes a damper.
As I mentioned earlier, stainless steel has characteristic vibrations in its various forms, and because it is hard, sound distortion is transmitted directly, without being altered.
Thus, if we construct a structure that improves the rise, isn't it also clear that the sound distortion becomes more obvious? If you do not establish a vibration-damping / vibration-absorbing structure that improves the sound distortion, you will hear the distorted sound return to the cartridge as reflected sound. In order to bring it closer to "original sound", I have been continuing to develop a finely-tuned balance between the positive rise and the sound distortion.

Main sound pathway and parallel damper structure

In my tonearm, the damper is inserted in parallel with the main sound pathway for vibration isolation and vibration absorption (Fig. 4).

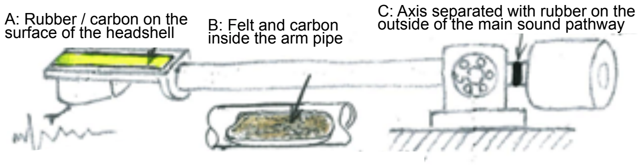


Fig. 4: Parallel damper structure

The main pathway that conveys vibration loss. (Here, the main pathway is not the path of the electrical signals that carries sounds from the record and transmits them until they exit from the speakers, but refers to the sound pathway of flowing mechanical vibration signals.)

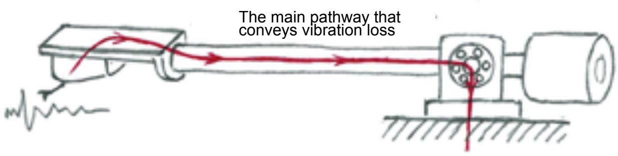


Fig. 5: Tonearm main pathway

Effect of series damper structure on sound

A series damper is a structure in which the material of the headshell itself is made of carbon or aluminium, the material of the arm pipe itself is carbon, aluminium or wood, and floats on rubber which is used to support the bearings of the cantilever of the arm, or is fixed with adhesive; in other words, the structure itself becomes a damper. (FIG. 5). And this damper causes a great deal of loss in the electric signal of the sound.
If you place a damper in series in this way, namely, when you place such a structure in one place on the main pathway, the "transient characteristics" will be poor, and the sound will become muffled.

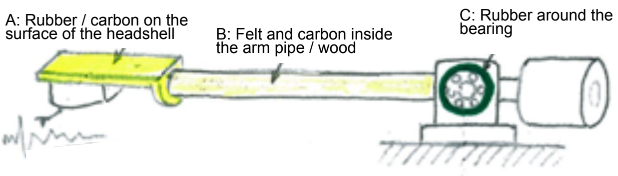


Fig 6: Series damper structure

Actually, this series damper structure is also used for cartridges. If the cartridge case is connected with a soft material such as ABS plastic or aluminium, the sound will surely be at the level of that material.
If a sheet of rubber is placed underneath the record platter, the sound distortion will be low, but the rise will deteriorate. This is also a series connection. In the past, we used materials like rubber to eradicate resonance distortion such as flutter, but in pursuit of "original sound", I think that we should use stainless steel.
In order to improve the rise, we must connect the various parts using a hard material, and if we mould the vibration absorbing material so it is attached to the vibrating section, in this way the distortion component is absorbed. This is a parallel damper structure.

To be more specific:

1. Add rubber or carbon to the surface of the head shell (Fig. 4A, Fig. 7B).
2. Snugly line the inner surface of the arm pipe with felt or carbon (Fig. 4B, Fig. 7B).
3. Insulate the structures which are not connected to the main pathway, with rubber, ABS plastic, aluminium, etc. (Fig. 4C, Fig. 7C).

I am repeating myself, but it is important that you do not undertake vibration absorption using a series arrangement at any place between the entry point of the sound and the point where the sound exits the speakers (Figure 7A). If you put a damper at any point here, the level of the sound rise will be that of the damper material. The electronic circuit also becomes a series damper when applying negative feedback.

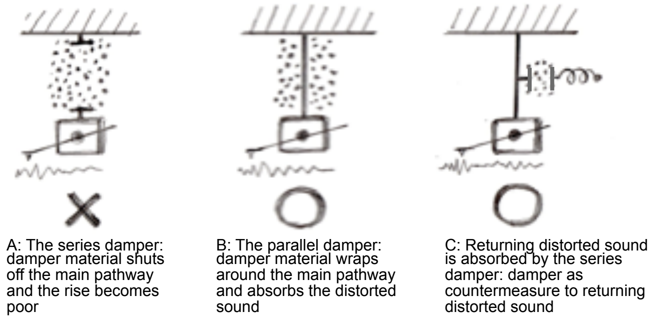


Fig. 7 : Conceptual diagram of the damper. (Dots in the figure are damper materials)

'Simple is best' when it comes to taking counter-measures against reflected sound

The loss portion of the distorted sound transmitted along the main pathway creates vibration of the various structures of the arm. This vibration sound returns to the cartridge as a reflected wave, and sits on top of the power generating signal of the sound.
In order to prevent this reflected sound, firstly it is necessary to simplify the structure; secondly it is important not to make a structure that easily vibrates like a spring; thirdly it is essential to remove unavoidably vibrating objects from the main pathway, dampen with a soft material, and make it an insulated structure so that distorted sound does not return (Fig. 7C).

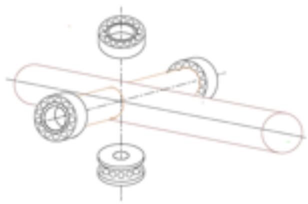
Despite awareness, there has been no commercialisation

There are many technicians who are aware of distorted sounds, and they produce equipment, but then end up withdrawing it immediately from the market. As the sound becomes clearer, the distortion of the peripheral devices becomes more apparent, so they withdraw the goods from the market, apparently because they are sometimes criticised for having bad products.
I would like to argue that, if we face up squarely to the issues I have already explained, and yet still do not pursue 'original sound', then I believe we have made no progress in electronic acoustics.
Having reached this great age, I decided to pick up my pen in order to explain my thoughts clearly and firmly to you. Thank you for your kind attention.

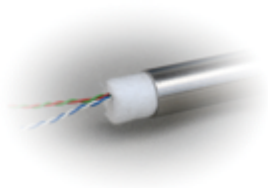
DESIGN STRUCTURE

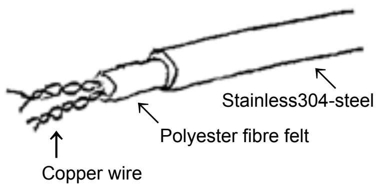
The material of the main body is made of hard stainless steel. The process of scraping has been extremely difficult, but as a result, but we are proud to say that the sound quality has reached an unparalleled level. If the fulcrum, which is essential for sound quality, is a weak structure, it will reverberate and directly impact the overall sound quality. In this machine, the four large bearings are firmly supported, preventing resonance and shake, and enhancing tracing ability.

In particular, the lower bearing in the vertical axis uses a high-precision thrust bearing, giving a strut structure which allows heavy arms to move with high sensitivity, greatly enhancing the tracing capability.



The arm pipe is very sensitive to the sound quality. The inner surface of the arm is vibration-proof due to a high-grade poly fibre lining.

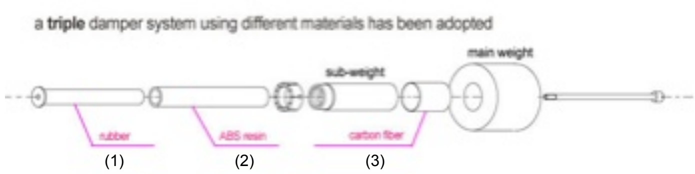




The points where each part joins another are designed to be in tight surface contact to avoid using adhesive as much as possible. In particular, the assembly of the bearings requires meticulous sensitivity.

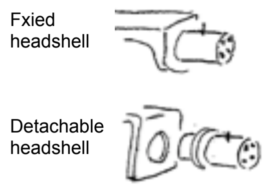
We took pains to ensure that the curvature of the arm did not exert any additional force. This is easier to understand if you imagine how an extra twisting force is applied by your hand when you manipulate an L-shaped rod rather than a straight one. On top of that, we placed "vibration absorbing structures" in the most suitable place, thereby effectively damping the resonance.

S model uses a triple damper structure to take into account the broadband frequency.
For the weight section we use different damper materials in (1), (2), and (3), and these are constructed to absorb vibration over a wide area. The rubber material in (1) is firmly held in place by long screws, thus eliminating anxiety that it will become slack as it ages.

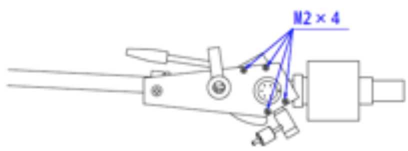


By making the headshell into a single structure through the scraping process, we were able to greatly reduce vibration loss. Moreover, by trimming away unnecessary material as much as possible, we have devised a weight reduction similar to that of aluminium (although the material is actually stainless steel), resulting in an extremely light structure that can firmly support the entire cartridge. Rubber in the S Model and carbon in the SD Model both absorb unnecessary signals in the upper part of the structure.

Because this slim design (just 10 mm in width, that can be supported near the very centre of the cartridge), can be connected directly to the centre point, the vibration loss is reduced and the sound quality is further improved.

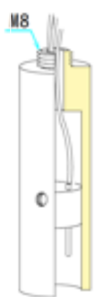


Based on the motto "Simple is best", the structure is such that removal of the inside force canceller, the arm rest, and the arm lifter, for example, can be easily done. (The picture on the bottom right shows the tonearm with the inside force canceller, arm rest, and arm lifter removed.) Please remove the four counter-sunk screws (labelled M2) and try it out. You will hear a clearer sound quality!



When the arm rest and arm lifter are removed, we can offer an optional arm rest receiver and arm lifter as a separate purchase. Because the mounted arm rest receiver is heavy, it is stable as it is; however, It is more secure to determine its position and secure it with double-sided tape. Generally speaking, when the tonearm has no extra attachments, sound distortion is reduced.

The mounting section for the output cord under the pivot has an extremely simple structure. You can attach this section to a variety of record players without using the supplied base, as long as you make a base that fits with the player at screw M8, where the lead wires pass through the core.



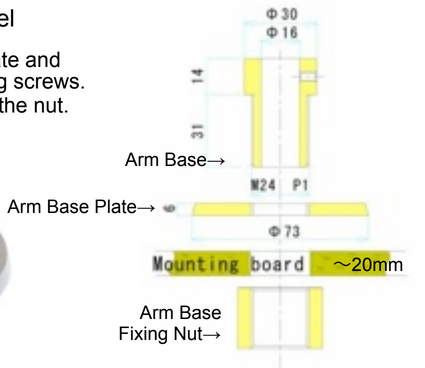
GLANZ

Optional Base

MH-B244S

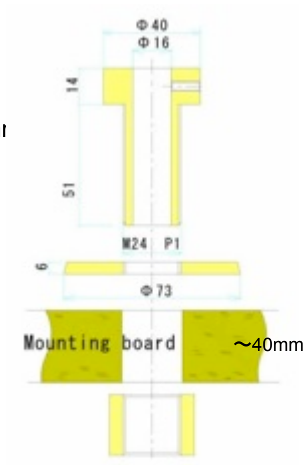
Installation hole size Φ25mm
Installation board thickness ~ 20mm
Material - stainless-steel

Drill a hole in the base plate and attach it to the board using screws.
It is not necessary to use the nut.



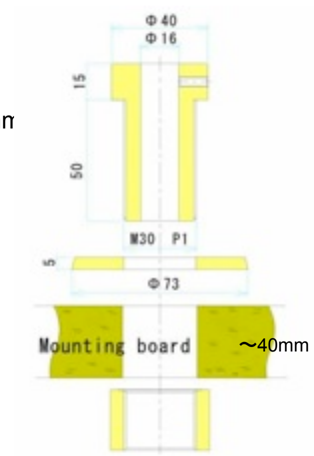
MH-B244LS

Installation hole size Φ25mm
Installation board thickness ~ 40mm
Material - stainless-steel



MH-B304LS

Installation hole size Φ31mm
Installation board thickness ~ 40mm
Material - stainless-steel



Flutter

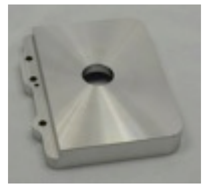
MH-T310S

Material : stainless-steel
Size : Φ30cmxt1cm
Weight : 5.4kg

Optional Plate

MH-10S1000R

Technics SL-1000R
10 inch tonearm
Material : stainless-steel
Installation hole size : Φ30mm
Weight : 1.7kg

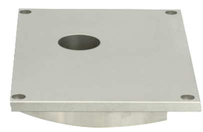


MH-12S1000R

Technics SL-1000R
12 inch tonearm
Material : stainless-steel
Installation hole size : Φ30mm
Weight : 1.8kg

MH-SH10B3

Panasonic SP-10mk3
10 inch tonearm
Material : stainless-steel
Installation hole size : Φ30mm
Size : 171mm×124mm×t20mm



MH-124STOB

TRANSROTOR Tourbillion
12 inch tonearm
Material : stainless-steel
Installation hole size : Φ30mm
Size : 196mm×108mm×t20mm

MH-124SZET3

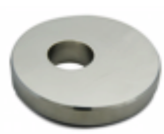
TRANSROTOR ZET-3
12 inch tonearm
Material : stainless-steel
Installation hole size : Φ30mm
Size : 172mm×118mm×t20mm

MH-124SZET3A

TRANSROTOR ZET-3 SET
12 inch tonearm
Material : stainless-steel
Installation hole size : Φ30mm
Set : Platex2, screw, prop

MH-94SCLOV

Clearaudio Ovation
9 inch tonearm
Material : stainless-steel
Installation hole size : Φ30mm
Size : Φ85mm×t20mm(14mm)



MH-124SSM

Ortofon Solid
12 inch tonearm
Material : stainless-steel
Installation hole size : Φ30mm
Size : Φ85mm×t20mm(14mm)