DS Audio
We Will Create the Future of Analog Music
“40 years a dream, today, a reality…”

It has been over 40 years since Toshiba introduced the world’s first optical cartridge, a groundbreaking concept that captured the hearts and imaginations of passionate audio lovers.

These early designs showed us that a phono cartridge system which was completely free of magnets and their inherent negative side effects utilized an incredibly low mass generator design and also featured the simplest and cleanest possible electronic circuitry, could deliver overwhelming advantages in vinyl playback when compared to traditional phono cartridge technology.

DS Audio, inspired by these original optical designs and filled with a deep love and passion for music, has gone on to perfect and realize the true potential of optical cartridge technology. We have carefully and thoughtfully reimagined the optical cartridge using modern technological solutions, expanding on the benefits whilst eliminating the flaws present in the original optical designs.

We proudly present our range of optical cartridge systems, from the DS-E1, offering unbelievable performance and sharing many design elements pioneered in its stablemates, to the DS Master1, our flagship model which we believe represents the pinnacle of analogue vinyl reproduction.

We would be honored if you would join us and experience for yourself the wonder of what is truly possible in the realm of vinyl reproduction at the highest level.

DS Audio CEO  Tetsuaki Aoyagi
DS Audio Flagship model “Master 1”
Writing a new chapter in the history of Analog Music.
Our latest addition, recipient of ‘The world’s best cartridge award’
The DS002

The spiritual successor to the DS001, our original optical cartridge design.

<table>
<thead>
<tr>
<th>DS002 Optical Cartridge</th>
<th>DS002 Equalizer for Optical Cartridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal output channel separation</td>
<td>25db more (3MHz)</td>
</tr>
<tr>
<td>Signal output</td>
<td>Photo-electric Conversion</td>
</tr>
<tr>
<td>Weight</td>
<td>8.1g</td>
</tr>
<tr>
<td>Output signal level</td>
<td>More than 10kHz</td>
</tr>
<tr>
<td>Cartridge</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Body material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Stylus pressure</td>
<td>1.8g (1.7g is recommended)</td>
</tr>
<tr>
<td>Stylus</td>
<td>Shibata</td>
</tr>
<tr>
<td>Using vibration system of the same design as DS Master 1 and DS-W2</td>
<td></td>
</tr>
</tbody>
</table>
| DS002 has a wire suspension mechanism which is the same design as DS Master 1 and DS-W 2. By implementing this, you realize high channel separation and stable music playback. Moreover, by arranging the position of the slit close to the needle point, it is possible to retrieve information with higher tones.
| Aluminum Cantilever with Shibata stylus |
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| Enhanced power supply circuit |
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| Hand-made in Japan circuit board |
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| Each and every product is hand-made and quality assured by our skilled engineers. |
DS E1

DS Audio's first entry model product.

<table>
<thead>
<tr>
<th>DS E1: Specifications</th>
<th>DS E1: Equipped for Optimal Cartridge</th>
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<tbody>
<tr>
<td>Digital output</td>
<td>Phonoelectric Reflection</td>
</tr>
<tr>
<td>Output voltage</td>
<td>MC-20000A</td>
</tr>
<tr>
<td>Weight</td>
<td>1kg</td>
</tr>
<tr>
<td>Input signal level</td>
<td>0dB V/m (47kΩ)</td>
</tr>
<tr>
<td>Reproducibility</td>
<td>MC-20000A</td>
</tr>
<tr>
<td>Output signal</td>
<td>20mV (3kΩ)</td>
</tr>
<tr>
<td>Input signal</td>
<td>1kHz (3kΩ)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.4kg</td>
</tr>
</tbody>
</table>

Cartridge

The DS E1 is equipped with a range of cartridges for optimal performance. With MC-20000A cartridges, the DS E1 delivers a precise and natural sound, enhancing the listening experience.

Equalizer

The DS E1 features a versatile high-pass filter and a low-pass filter, allowing users to fine-tune their music experience according to their preferences.

DS Audio's DS E1 is a premium turntable designed to deliver an exceptional listening experience. Its advanced features and high-quality components make it a top choice for audiophiles seeking the ultimate auditory享受.
The ST-50 Stylus Cleaner is equipped with a micro-dust cleaning gel specially designed for laboratory clean-room applications.

The ST-50’s cleaning gel is made of a urethane resin developed especially for the purpose of atmospheric micro-dust control in clean rooms. Extremely effective cleaning properties are required to meet the specified standards for such applications. The ST-50 gives you the very best in stylus cleaning performance.

Many stylus cleaners apply excessive force to the stylus and cantilever during the cleaning process. The DS Audio ST-50 cleans your stylus at the tracking force set on the tone arm. Optimize your vinyl playback system and enjoy the highest levels of aural satisfaction. This exclusive design will complement your audio system, an essential for all vinyl audio fanatics.

The casing is crafted from an aluminum block before being carefully buffed to perfection. It is then nickel-plated and the precision laser cut markings and leather cushion are installed. The finished article is a beautiful item that reflects the high quality standards DS Audio represents.

**ST-50 Stylus cleaner**

- Size L42mm×W42mm×H13mm
- Weight 28g
- Gel size L28mm×W28mm×H3mm
- Case material Aluminum (Nickel treatment)

Washable Urethane Cleaning Gel

The DS Audio ST-50 gives you the best stylus cleaning performance every time. The urethane gel is washable and re-usable. Simply rinse it gently under tap water and let it dry for 30 minutes at room temperature. Its cleaning performance will be completely restored.

Top class materials incorporated into a fantastic new design

Optimize your tonearm playback system and enjoy the highest levels of sound satisfaction. This exclusive design will complement your audio system, an essential for all vinyl audio fanatics. The casing is crafted from an aluminum block before being carefully buffed to perfection. It is then nickel-plated and the precision laser cut markings and leather cushion are installed. The finished article is a beautiful item that reflects the high quality standards DS Audio represents.

Solid Head Shell HS-001

Vertical pin structure achieves uniform pressure of electrical contacts. Contact surface stabilized by spherical washer

Conventional head shells have the connecting pin attached only to the upper side, causing uneven contact pressure between the arm and the head shell. However, the HS-001 Solid Head Shell adopts both an upper and lower pin structure, equalizing the pressure on the contacts and applying force evenly across the connection to the tonearm. Moreover, by using the spherical head shell washer developed by DS Audio independently at the contact point with the tonearm, stable contact is achieved over the entire circumference of the contact point, providing improved stability and resonance control.

**HS-001 Solid head shell**

- Material Ultra Duralumin
- Connector part Aluminum
- Connector terminal Gold plating
- External dimensions H 21 × W 40 × D 55 mm
- Screw Stainless steel bolt M 2.6 L 8 × 2, M 2.6 L 12 × 2
- Hand soldered Litz signal leads

After extensive listening tests within the company, DS Audio chose a Japanese made Litz wire. Further advances were realized by hand soldering this delicate lead wire to preserve signal integrity for the optimal in sound performance. (Lead wires and connector parts are available unsoldered as well, by dealer request.)

Machined Ultra Duraluminum

DS Audio precision machines each HS-001 out of a solid billet of duralumin for the ultimate in rigidity and resonance control.

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Vinyl Ionizer

ION-001

Vinyl records have a surface static electricity charge created by friction. Two common sources of the friction that create static buildup are: the actual drag that occurs during record playback as well as simply removing records from their jackets and storing them. The Dolby Ion unit is patented and removes static electricity from the record surface. The unique "Ion ION" design allows for simple operation for continuous use while playing records. Additionally, the ION-001 prevents charge removal for Compact Discs.

Note: The degree of electrostatic charge may vary depending upon factors including style of player, vinyl record materials, temperature and humidity, etc.

High power ionizer with low ozone emission

The ION-001 is a very high-power device, equipped with a total of 6 ionizers. It is such for positive and negative ions. The ION-001 utilizes a specialized power supply controller which suppresses the generation of ozone gases, preventing unusual emissions.

Designed for quick installation

The architectural tower design provides placement of the ION-001 easily in your home by quick installation, allowing easy changing of vinyl records. The tower design is equipped with a wide range of turntables featuring overall plane height up to 18 cm or 7". With turntables exceeding this plane height, please use a hand/cloth to properly position the ION-001.

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**Technological aspects of DS Audio Optical Cartridges**

The technological principle behind the DS Audio Optical cartridge fundamentally differs from traditional MM/MC cartridges, where the needle motion is detected by electromagnetic force. Our optical cartridges utilize a beam of light to detect needle motion.

**Advantages:**

- **No magnetic resistance:** MM/MC cartridges suffer from electromagnetic inductive force, which acts against the needle’s motion. No matter what the design, it is an intrinsic property that all MM/MC cartridges are affected by. Optical cartridges, however, are totally free from such problems.

- **Extremely low moving mass:** MM/MC cartridges function on the basis of the detection of electromagnetic forces or needle motion within a magnetic field. Since the optical cartridge requires only a tiny light-deflecting plate of 100 microns or less in thickness, it is able to detect the needle’s motion with the finest accuracy and optimal response time.

- **Simplicity:** the parent sound source starts from using the simplest, cleanest circuit design. Technically speaking, MM/MC cartridges are classified as “voltage proportional analog reproduction systems,” whereas optical cartridges are classified as “amplitude proportional analog reproduction systems.” The difference is as follows: in MM/MC cartridge systems, the change in the speed of the needle’s motion is converted to Analog sound. As a result of this, MM/MC cartridges produce very week output signals in low frequency ranges (base sounds), and stronger output signals in higher frequency ranges. These uneven output characteristics require extra electronic treatment in order to balance the varying output signals across all the frequency ranges of the recorded information. This job is performed by the pre-amplifier in MM/MC systems and the quality of this correction process carried out by the pre-amplifier determines your sound quality in playback.

In “amplitude proportional analog reproduction systems,” such as our optical cartridg e, the output signal is based on the position of the needle, or displacements of the needle. This is to say that the output signal from our optical cartridge is purely based on the shape of the recorded grooves, not on the speed change of the motion of the needle. There is no imbalance in output levels across the frequency range of the recorded sound on disc. Therefore, almost no conventional processing is required.

For this reason, our optical cartridge technology has the further advantage that the simplest and cleanest electronic circuit is required to perform the RIAA correction.

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**Digital Stream**

Digital Stream Corporation has 30 years of corporate history. We started as a laser optics R&D company and developed the optical disc evaluation system in 1986. Thanks to this disc evaluation system, Digital Stream has become the only provider of the standard optics for CD/DVD/HDDV and CRD/VRD industries.

Besides the optical disc market, Digital Stream successfully developed the optical mouse concept in 1999 together with the Microsoft Corporation. This, as you know, became the leading input device used throughout the world.

Since then, Digital Stream Corporation has expanded its R&D field to focus on not only the PC market, but also the Medical and Robotica markets.

In 2018, the Ministry of Economy, Trade and Industry-Japan selected Digital Stream as one of “100 Advanced Small-Medium Manufacturers” in Japan. In April 2017, NHK (Japan Broadcasting Corporation) made a 30 minute long feature focusing on Digital Stream Corporation through their worldwide broadcast (Program name J-TBC).

We are proud to be one of the leading companies in the most advanced realm of laser optics R&D and a leading manufacturer of state-of-the-art laser optics devices in the world.

- **Main awards etc.:**
  - Outstanding Engineering Excellence 1985, Microsoft
  - 300 Excellence companies in manufacturing, 2008 Ministry of Economy, Trade and Industry
  - NHK International Broadcasting J-TBC (Digital Stream feature), 2017, NHK (Japanese national broadcaster)

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[Digital Stream Co., Ltd. was certified in 2008 by the Ministry of Economy, Trade and Industry as "350 Excellence companies in manufacturing"]

Digital Stream Co., Ltd. was introduced in NHK International broadcasting in April 2017.

Digital Stream Corporation
http://www.digitalstream.co.jp/
DS Audio
http://www.ds-audio-wbiz.com

DS Audio may make changes to specifications and product design at any time, without notice.