**C-02X Specifications**

<table>
<thead>
<tr>
<th>Analog Audio Inputs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Impedance</td>
<td>LINE: 10k/Ω (RCA) / 22k/Ω (XLR)</td>
</tr>
<tr>
<td>Maximum Input Level</td>
<td>12V</td>
</tr>
</tbody>
</table>

**Analog Audio Outputs**

<table>
<thead>
<tr>
<th>Output Impedance</th>
<th>470Ω (RCA) / 100Ω (XLR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Harmonic Distortion</td>
<td>0.0006% (RCA) / 0.0004% (XLR)</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>116dB (2V input, A-weighted)</td>
</tr>
</tbody>
</table>

**General**

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>230V AC, 50Hz / 120V AC, 60Hz / 220V AC, 60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Output Level</td>
<td>7.5V (RCA output, 1kHz, 0.003%) / 15V (XLR output, 1kHz, 0.003%)</td>
</tr>
<tr>
<td>Rated Output</td>
<td>2V</td>
</tr>
<tr>
<td>Gain</td>
<td>MM: 52dB / MC: 72dB</td>
</tr>
<tr>
<td>Input Sensitivity</td>
<td>MM: 5mV / MC: 0.5mV</td>
</tr>
</tbody>
</table>

**S-02 Specifications**

<table>
<thead>
<tr>
<th>Analog Audio Input Jacks</th>
<th>RCA ×1 pair / XLR ×1 pair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Impedance</td>
<td>22k/Ω (RCA) / 44k/Ω (XLR)</td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>0.003% (1kHz, 8/Ω, 145W)</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>115dB (IHF-A)</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>5Hz − 100kHz (+0dB, -3dB, 8/Ω)</td>
</tr>
</tbody>
</table>

**General**

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>230V AC, 50Hz / 120V AC, 60Hz / 220V AC, 60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power Output</td>
<td>580W + 580W (2/Ω) / 290W + 290W (4/Ω)</td>
</tr>
<tr>
<td>Rated Power Output</td>
<td>145W + 145W (8/Ω)</td>
</tr>
<tr>
<td>Gain</td>
<td>29dB</td>
</tr>
<tr>
<td>Damping Factor</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Included Accessories**

- Power cord ×1
- Felt pads ×4
- Owner’s manual ×1
- Warranty card ×1
- Power cord support bracket ×1
- Remote control (RC-1315) ×1
- AAA batteries ×2

**Upgrade Service**

An applicable service is available to owners of the C-02 Stereo Linestage Preamplifier which allows for the internal inclusion of specified and related parts to be retrofitted to the earlier model.

**Applicable Model: C-02**

<table>
<thead>
<tr>
<th>Contents</th>
<th>Additions of S-02X (power compensation) and exchange of power supply boards for the ability to upgrade to equivalent of C-02X.</th>
</tr>
</thead>
</table>

**Auxiliary Phono Modules**

MM/MC-compliant phono module boards are also available.

- Installation of a MM/MC module is a dual mono configuration.
- The module can be switched for remote control operation.
- High-quality 4-layer board design with optimized power rectification.
- Can be configured for remote control operation.
- Independent L & R boards designed in dual mono configuration.

**Main Specifications**

- Analog Audio Input Jacks: RCA ×1 pair / XLR ×1 pair
- Input Impedance: 22k/Ω (RCA) / 44k/Ω (XLR)
- Gain: 29dB
- Total Harmonic Distortion: 0.003% (1kHz, 8/Ω, 145W)
- Signal-to-Noise Ratio: 115dB (IHF-A)
- Frequency Response: 5Hz − 100kHz (+0dB, -3dB, 8/Ω)
- Maximum Power Output: 580W + 580W (2/Ω)
- Rated Power Output: 145W + 145W (8/Ω)
- Damping Factor: 1000
- Weight: 48kg (105 7/8 lb)

**Included Accessories**

- Power cord ×1
- Felt pads ×4
- Owner’s manual ×1
- Warranty card ×1
- Remote control (RC-1315) ×1
- Batteries for remote control (AAA) ×2
- Power cord support bracket screw ×2

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**Audio expression, symphonic beauty, artistic passion, the concert hall’s spatial feel, the excitement of the audience. Esoteric’s Master Sound Works is an audio product concept that recreates all of the music information in original master recordings with the most state-of-the-art technology available today.**

**TEAC -0209**

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**Super Audio CD** and **DSD** are registered trademarks.

Design and specifications are subject to change without notice.
Grandioso Lineage

Representing the next generation in a proud lineage of audio excellence, the C-02X Stereo Linestage Preamplifier and S-02 Stereo Power Amplifier feature state-of-the-art circuitry in a discrete dual mono configuration that dramatically conveys all the power and energy of music.

Assembled one at a time in Esoteric’s Tokyo factory and incorporating all the knowledge and technology of the flagship Grandioso line, these two new models accentuate the refined qualities of audio reproduction with expert craftsmanship and handmade precision.
Stereo Linestage Preamplifier

C-02X

Independent Dual Mono Design

The C-02X’s DC power supply features a fully independent dual mono design that completely eliminates inter-channel interference. Its dedicated banks of five generously-rated power transformers for each channel also block noise from the power line, enabling source-rendezvous sound. Grassroots technology reveals itself in such detailed refinements as the careful layout of the power supply circuit boards, which further contributes to the C-02X’s superb sound quality.

Fully-Balanced Configuration Provides Excellent S/N Ratio

The preamplifier’s source signal is first received by dedicated buffer amplifiers integrated with each input, from which the circuit configuration is balanced at each stage. Through the elimination of common-mode noise and reductions in circuit impedance, a pure, noise-free signal is fed to the gain amplifiers via the shortest path possible, for an exceptionally high signal-to-noise ratio.

Each input is provided with its own dedicated buffer amplifier, ensuring that the signal travels the shortest distance to the gain amplifiers. This configuration reduces the impact of common-mode noise and improves the signal-to-noise ratio, resulting in a pure, noise-free signal.

Ultra-Low-Noise Logic Control

Built into the front panel, the logic control section is fully isolated, both physically and electronically, from the preamplifier module by way of an optocoupler. To assure low-noise operation, it also shuts completely down when not in actual operation, thus eliminating all possible influence on the C-02X’s audio circuitry.

Highly Responsive Low-Noise, Low-impedance Power Circuit

Five independent high-capacity power transformers, coupled with large banks of reservoir capacitors, provide power supply circuits that have exceptionally low output impedances and very clean and stable outputs. The low-noise silicon carbide (SiC) Schottky barrier diodes used in the high-speed rectifier circuit further enhance resolution and the signal-to-noise ratio for significant improvements in sound quality.

ESOTERIC-QVCS

The C-02X’s Esoteric-QVCS® volume control employs four precision switched resistor ladder networks, which change in unison as the volume knob is rotated. This arrangement allows the signal paths for the left and right channels and their positive and negative phases to be kept totally independent and as short as possible. Consequently the sound has superb clarity, excellent channel separation and highly accurate phase characteristics. The elimination of audio board wiring to the volume control further contributes to a reduced signal path, while preventing degradation of sound quality and helping to maintain the low distortion one would expect of a reference model.

High-Precision Ball Bearing Controls

The C-02X’s elegant volume controls are considered a reference model. Their control shafts use a precise ball bearing mechanism that guarantees both high-precision rotation, with no mechanical play in their movements. Rotational torque has also been fine-tuned to provide a luxurious analog control feel in keeping with this high-end preamplifier.

C-02X Block Diagram (1Channel)

Optimized 3D Chassis Configuration

The C-02X’s optimized chassis design features a 2-layer 5-cell configuration that houses each circuit block in its own compartment. This structure shortens the signal path to help minimize inter-circuit interference. The chassis’ mm-thick steel bottom plate and thick aluminum exterior panels are supported at 4 points by Esoteric’s own patented Pinpoint Feet (patent No.: JP4675477), which enhance chassis rigidity while effectively suppressing resonant vibrations.

Top

The preamplifier is a crucial component that determines the “sound” of an audio system, and represents the passion and commitment of its makers. As the crowning achievement of the Esoteric Sound, the Grandioso C1 opened new horizons for ‘Made in Japan’ preamplifiers. Now, this expressive power gives birth to the next-generation C-02X; a stereo preamplifier created to transcend the concept of high fidelity and resonate with the refined sensibilities of engineers and musicians alike.

Bottom
The Sound of Life Unleashed —
High Power Creates Spaciousness and Dynamism

The indescribable feeling of spaciousness that comes when sound is truly unleashed and the sense that the music you’re hearing is truly live, can only be generated by amplifiers that offer abundant power to properly drive the loudspeakers. Esoteric’s amplifiers use the finest components and massive power supplies to achieve the high output power this demands. Faithfully incorporating the design philosophy of our Monoblock M1 amplifier, the new S-02 reaps every nuance of sound, and impacts to music all the vibration and richness of life.

Exceptional Power Linearity for Outstanding Dynamics

Loudspeaker impedance can vary widely depending on the frequencies being reproduced. The fast attack of deep bass imposes demanding loads on an amplifier, requiring not only continuous high power output, but also repeated bursts of peak power. Unless the amplifier’s power supply is capable of consistently meeting these demands, musical dynamics will be compromised. The S-02’s power transformer is selected for the full-bodied, high-quality characteristics that contribute to accurate reproduction of subtle tonal qualities.

Large-Capacity Custom Power Transformer — The Heart of the Finest Power Amplifiers

A robust power supply is critical to an amplifier’s ability to deliver high power in a linear manner. This is especially true for the power transformer, so great attention was paid to the material selection, core size and even mounting of the S-02’s generous power supply capacity enables this normally rated 145W into 8 ohms transformer to deliver an impressive 180W into 2 ohms — a testament to the linearity of a power supply that faithfully reproduces the full spectrum of sound dynamics at all volume levels.

Large Bipolar LAPT Transistors

Deliver 34 Amperes of Instantaneous Output Current

The S-02’s large bipolar LAPT* transistors are twice the size of more commonly used power transistors. They also boast an exceptional continuous current capacity of 17 amps and an instantaneous peak capacity of 34 amps. In addition, they offer superior high-frequency characteristics that contribute to accurate reproduction of subtle tonal qualities.

Balanced Input Stage Configuration

Ensures High-Clarity Signal Amplification

The S-02’s audio input signal enters through discrete balanced input buffer amplifiers and is relayed to the amplification stage by way of a balanced low-impedance signal path. An outstanding dynamic range is assured by clean, noise-free signal amplification that provides the fine sensitivity needed to reproduce nuanced gradations between musical crescendos and decrescendos.

LIDSC (Low Impedance Drive Stage Coupling) Provides Outstanding Speaker Driving Power

Ensures Accurate Damping for Large Woofers

To prevent large fluctuations in the drive (current amplification) stage from affecting overall sound quality, the preceding voltage amplification stage receives a lower-level signal from the input stage, and derives its power from a dedicated power supply equipped with its own toroidal power transformer. This isolation ensures a stable supply of power to the voltage amplification stage for greatly enhanced resolution of fine instrument details, even when reproducing full orchestral crescendos.

Minimized Negative Feedback (NFB)

For a More Energyful and Natural Sound

Simplifying the amplifier circuitry and reducing the previous stage’s gain removes unwanted negative feedback, which further enhances the natural flow of the music, while eliminating internal noise.