Ortofon MC X20

Ortofon MC X20 Moving Coil Phono Cartridge

User Instruction Manual

1. INTRODUCTION

The Ortofon MC X20 is a high-performance Moving Coil (MC) phono cartridge designed to deliver exceptional audio fidelity for discerning audiophiles. Featuring a Nude Elliptical Diamond Stylus and advanced coil technology, the MC X20 is engineered for precise tracking and accurate sound reproduction from your vinyl records. This manual provides essential information for the proper installation, operation, and maintenance of your MC X20 cartridge to ensure optimal performance and longevity.

Figure 1.1: Ortofon MC X20 Moving Coil Phono Cartridge. This image shows the cartridge from an angled perspective, highlighting its black finish and the Ortofon branding with the diamond logo.

Key Features:

- **Pure Silver Coil System:** Utilizes high-purity silver wire for coils, ensuring exceptional signal clarity and precise sound reproduction.

- **Maximum Magnetic Efficiency:** Features a newly developed magnet system with a one-piece pole cylinder integrated into a rear magnet yoke, optimizing magnetic field for a clean and powerful signal.

- **Custom Developed Rubber Dampers:** Engineered to control coil movement, minimize unwanted vibrations, and enhance tracking stability for reduced distortion.

- **Nude Elliptical Diamond Stylus:** Provides excellent tracking ability and detailed sound retrieval from record grooves.

- **Robust Construction:** Designed for durability and stable performance within your audio setup.

2. SETUP AND INSTALLATION

Proper installation of your MC X20 cartridge is crucial for optimal performance. Please follow these steps carefully. If you are unsure, consult a qualified audio technician.

2.1 Mounting the Cartridge

1. Carefully remove the stylus guard from the cartridge. Store it in a safe place for future use.

2. Attach the cartridge to your tonearm's headshell using the supplied screws and nuts. Ensure the cartridge is securely fastened but do not overtighten.

3. Connect the tonearm wires to the corresponding pins on the back of the cartridge. Refer to the color coding:

   - Red (R+): Right channel, positive
   - Green (R-): Right channel, negative (ground)
   - White (L+): Left channel, positive
   - Blue (L-): Left channel, negative (ground)

Figure 2.1: Cartridge Connection Pins. This image displays the underside of the MC X20 cartridge, showing the four color-coded connection pins for the left and right audio channels and their respective grounds.

2.2 Alignment and Tracking Force

Accurate alignment and tracking force are critical for optimal sound quality and stylus longevity.

1. **Overhang and Azimuth:** Use a protractor to set the correct overhang and azimuth according to your tonearm's specifications. The cartridge body should be parallel to the record surface when viewed from the front and side.

2. **Tracking Force:** Set the tracking force using a reliable stylus force gauge. The recommended tracking force for the MC X20 is typically between 2.0 - 2.5 grams. Refer to the specifications section for the precise recommended range.

3. **Anti-Skating:** Adjust the anti-skating mechanism on your tonearm to match the set tracking force. This prevents the stylus from being pulled towards the center of the record.
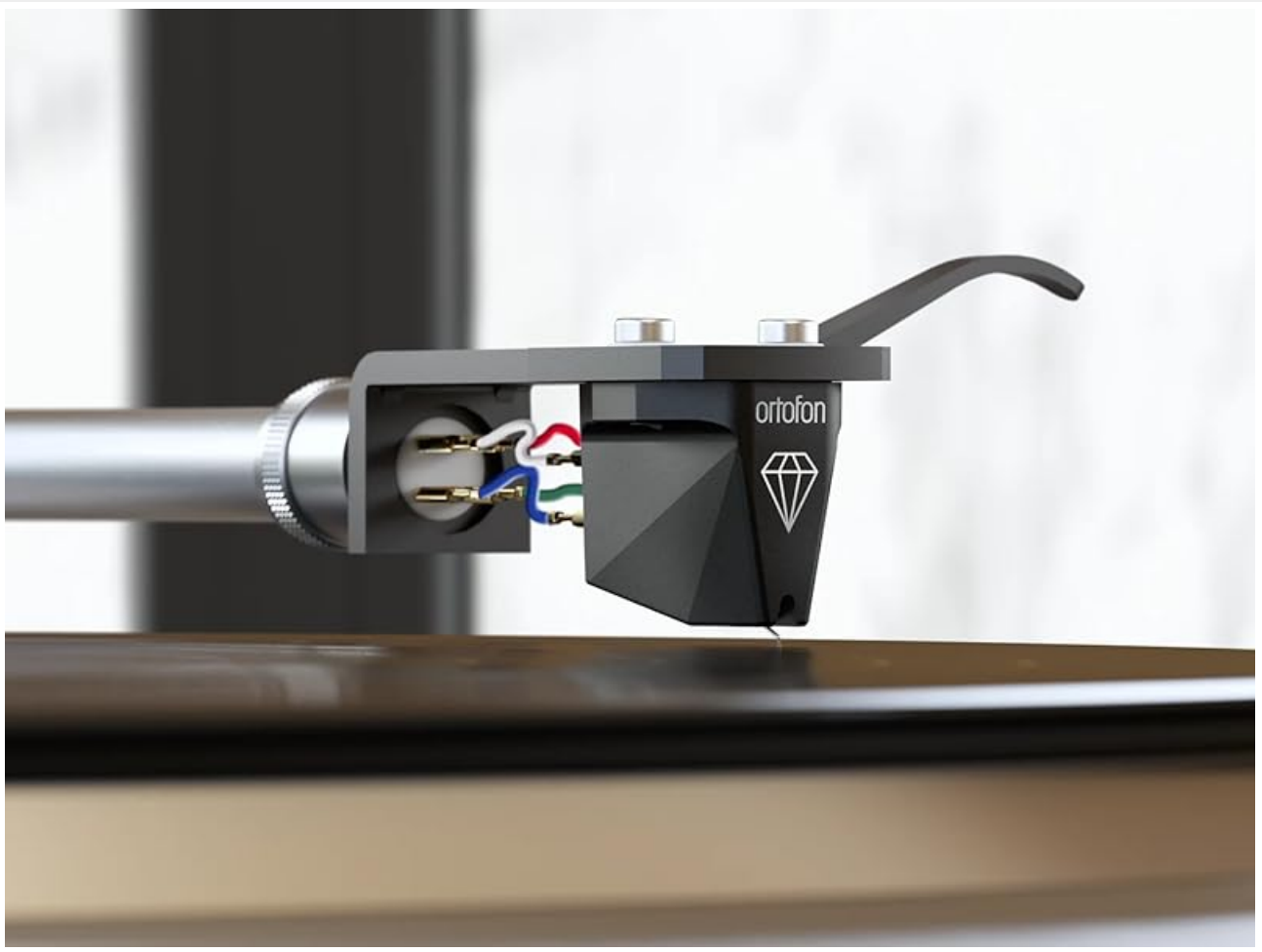

Figure 2.2: Cartridge Mounted on Tonearm. This image shows the MC X20 cartridge securely mounted to a turntable's tonearm, illustrating its integration into a complete playback system.

3. OPERATING INSTRUCTIONS

Once properly installed and aligned, the Ortofon MC X20 cartridge operates as part of your turntable system. Ensure your turntable, phono preamplifier, and amplifier are correctly connected and powered on.

- **Record Playback:** Gently lower the tonearm onto the record's lead-in groove using the tonearm lift mechanism. Avoid dropping the tonearm directly onto the record.

- **Stylus Care During Playback:** Do not touch the stylus with your fingers. Handle the tonearm with care to prevent damage to the stylus or cantilever.

- **Ending Playback:** At the end of a record side, use the tonearm lift to raise the tonearm and return it to its rest.

4. MAINTENANCE

Regular maintenance will help preserve the performance and lifespan of your MC X20 cartridge.

4.1 Stylus Cleaning

Dust and debris can accumulate on the stylus, affecting sound quality and potentially damaging records. Clean the stylus regularly.

- Use a dedicated stylus cleaning brush or fluid.
- Always brush from the back of the stylus towards the front (the direction the record spins), never side-to-side or front-to-back.
- Apply cleaning fluid sparingly if using.

Figure 4.1: Stylus Detail. This close-up image highlights the delicate Nude Elliptical Diamond Stylus of the MC X20 cartridge, which is responsible for reading the grooves of a vinyl record.

4.2 General Care and Storage

- Always use the stylus guard when the turntable is not in use or when moving the cartridge.
- Keep the cartridge and turntable in a clean, dust-free environment.

- Avoid exposing the cartridge to extreme temperatures or direct sunlight.

5. TROUBLESHOOTING

If you encounter issues with your MC X20 cartridge, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
No sound or very low sound	Incorrect wiring; Phono preamp not connected/selected; Damaged stylus/cantilever.	Check cartridge wiring to tonearm; Ensure phono preamp is correctly connected and input selected; Inspect stylus for damage.
Distorted or muddy sound	Incorrect tracking force/anti-skating; Dirty stylus; Improper alignment; Worn stylus.	Adjust tracking force and anti-skating; Clean stylus; Re-align cartridge; Consider stylus replacement if worn.
Humming or buzzing noise	Grounding issue; Proximity to electrical interference; Loose connections.	Ensure turntable and phono preamp are properly grounded; Move components away from power sources; Check all cable connections.
Skipping or mistracking	Incorrect tracking force/anti-skating; Damaged stylus; Dirty record; Uneven turntable surface.	Adjust tracking force and anti-skating; Inspect stylus for damage; Clean record; Ensure turntable is level.

6. SPECIFICATIONS

The following are typical specifications for the Ortofon MC X20 Moving Coil Phono Cartridge. For the most precise and up-to-date specifications, please refer to the official Ortofon product page or included documentation.

Characteristic	Value
Product Model	MC X20
Cartridge Type	Moving Coil (MC)
Stylus Type	Nude Elliptical Diamond
Output Voltage (at 1 kHz, 5 cm/s)	0.3 mV (typical)
Channel Balance (at 1 kHz)	< 1.0 dB
Channel Separation (at 1 kHz)	> 25 dB
Frequency Response	20 Hz - 20 kHz (+/- 2 dB)
Tracking Force Range	2.0 - 2.5 g (recommended 2.3 g)
Internal Impedance	5 Ohm (typical)
Recommended Load Impedance	10 - 200 Ohm
Cartridge Weight	9 g

Characteristic	Value
Color	Black

7. WARRANTY AND SUPPORT

Ortofon products are manufactured to the highest standards and undergo rigorous quality control. For specific warranty terms and conditions applicable to your MC X20 cartridge, please refer to the warranty card included with your product or visit the official Ortofon website.

Customer Support:

If you require technical assistance, have questions about your product, or need to arrange for service, please contact Ortofon customer support through their official website or authorized distributors. Provide your product model (MC X20) and any relevant purchase information when contacting support.

For more information, visit: www.ortofon.com

Related Documents - MC X20

Ortofon VNL Moving Magnet Cartridge User Guide
Comprehensive user guide for the Ortofon VNL Moving Magnet Cartridge, detailing mounting, stylus care, and technical specifications for turntablists and portablists.

Ortofon Moving Magnet Cartridges: OM 5S, OM 5E, Super OM 5 - User Guide and Specifications
Comprehensive guide to Ortofon Moving Magnet phono cartridges, including installation, stylus care, and detailed technical specifications for the OM 5S, OM 5E, and Super OM 5 models.

Ortofon 2M Stylus User Guide
User guide for Ortofon 2M series phono cartridges, detailing stylus replacement procedures and recommended tracking force specifications for various models.

Ortofon 2M Series Phono Cartridges: Technical Specifications and User Guide
Detailed technical specifications, mounting instructions, and care guide for the Ortofon 2M series of high-performance phono cartridges, including models like 2M Red, Blue, Bronze, Black, and Mono.

	[Ortofon 2M Series Phono Cartridge User Guide	Installation & Specifications](#) Comprehensive user guide for Ortofon 2M series phono cartridges, covering installation, wiring, tracking force specifications for models like 2M Red, Blue, Bronze, Black, LVB 250, 78, and Mono, along with support information.
	[Ortofon MC 90X Phonograph Cartridge: Technical Specifications and Support Information](#) Detailed technical specifications, features, and support resources for the Ortofon MC 90X high-fidelity phonograph cartridge. Includes output voltage, stylus details, compliance, tracking force, and manufacturer contact.