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microSHIFT RD-R51M-BK

microSHIFT R10 Rear Derailleur User Manual

Model: RD-R51M-BK

1. PRODUCT OVERVIEW

The microSHIFT R10 Rear Derailleur is engineered for 10-speed road bicycle systems, offering reliable and precise shifting performance. Its construction features forged and CNC machined aluminum, ensuring both durability and a lightweight design. The steel cage enhances resistance to chain-rub wear, contributing to the derailleur's longevity.

This medium cage derailleur is designed to accommodate a maximum cog size of 34 teeth and provides a total chain wrap capacity of 39 teeth, making it suitable for a wide range of road cycling applications. It is compatible with Shimano 10-speed road systems, excluding the Tiagra 4700 series.



Figure 1: The microSHIFT R10 Rear Derailleur, showcasing its black finish, aluminum body, and steel cage with jockey wheels.

Key Features:

- Medium cage design with 39t chain wrap capacity.
- Supports a maximum cog size of 34 teeth.
- Constructed from forged and CNC machined aluminum for lightweight durability.
- Steel cage for enhanced resistance to chain-rub.
- Compatible with Shimano 10-speed road systems (excluding Tiagra 4700).

2. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. If you are unsure about any step, it is recommended to seek assistance from a qualified bicycle mechanic.

2.1 Tools Required:

- Hex key set (typically 5mm for mounting bolt)
- Cable cutters
- Cable crimps
- Torque wrench (recommended for precise tightening)

2.2 Installation Steps:

1. **Mounting the Derailleur:** Thread the derailleur onto the derailleur hanger on your bicycle frame. Ensure it is properly aligned and tighten the mounting bolt to the manufacturer's recommended torque specifications (typically 8-10 Nm).
2. **Chain Installation:** Install your 10-speed bicycle chain, ensuring it is the correct length for your drivetrain setup.
3. **Cable Routing:** Route the shifter cable from your shifter through the frame (if internal) and attach it to the cable fixing bolt on the derailleur. Pull the cable taut and secure it.
4. **Limit Screw Adjustment:**
 - **High Limit (H) Screw:** Adjust the H-screw so that the upper guide pulley aligns with the smallest cog when the chain is on it. This prevents the chain from shifting off the outside of the cassette.
 - **Low Limit (L) Screw:** Adjust the L-screw so that the upper guide pulley aligns with the largest cog when the chain is on it. This prevents the chain from shifting into the spokes.
5. **B-Tension Adjustment:** With the chain on the largest cog and smallest chainring, adjust the B-tension screw to set the gap between the upper guide pulley and the largest cog. A gap of 5-6mm is generally recommended, but consult your bicycle's specific requirements.
6. **Indexing Adjustment:** Fine-tune the shifting by adjusting the barrel adjuster on the shifter or derailleur. Shift through all gears, ensuring smooth and precise transitions.

3. OPERATING INSTRUCTIONS

The microSHIFT R10 Rear Derailleur operates in conjunction with your 10-speed road shifter to move the chain across the rear cassette cogs, allowing you to select different gear ratios.

3.1 Shifting Gears:

- To shift to a larger cog (easier gear), actuate your shifter to release cable tension.
- To shift to a smaller cog (harder gear), actuate your shifter to pull cable tension.
- Always pedal forward while shifting to ensure smooth chain movement and prevent damage to the drivetrain components.
- Avoid shifting under heavy load, such as climbing a steep hill, as this can cause stress on the chain and derailleur.

4. MAINTENANCE

Regular maintenance will extend the life of your microSHIFT R10 Rear Derailleur and ensure consistent performance.

4.1 Cleaning:

- After each ride, especially in wet or dirty conditions, wipe down the derailleur body and jockey wheels with a clean rag.
- Use a degreaser specifically designed for bicycles to remove stubborn grime from the jockey wheels and cage. Rinse thoroughly with water and dry.

4.2 Lubrication:

- Apply a small amount of bicycle-specific lubricant to the pivot points of the derailleur body and the jockey wheel bearings periodically.
- Avoid over-lubrication, as this can attract dirt. Wipe off any excess lubricant.

4.3 Inspection:

- Regularly check the derailleur hanger for alignment. A bent hanger is a common cause of poor shifting.
- Inspect the jockey wheels for wear. Worn teeth can lead to poor shifting and chain noise. Replace them if necessary.
- Check all bolts for tightness, including the mounting bolt and cable fixing bolt.

5. TROUBLESHOOTING

This section addresses common issues you might encounter with your rear derailleur.

Problem	Possible Cause	Solution
Poor or Slow Shifting	Incorrect cable tension Bent derailleur hanger Worn cable or housing Dirty or stiff derailleur pivots	Adjust barrel adjuster Check and straighten/replace hanger Replace cable and housing Clean and lubricate derailleur
Chain Rubbing/Noise	Incorrect limit screw adjustment Bent derailleur hanger Worn jockey wheels	Re-adjust H/L limit screws Check and straighten/replace hanger Replace jockey wheels
Chain Drops Off Cassette	Incorrect H or L limit screw adjustment Bent derailleur hanger	Re-adjust H/L limit screws Check and straighten/replace hanger

If these solutions do not resolve the issue, it is advisable to consult a professional bicycle mechanic.

6. SPECIFICATIONS

Specification	Value
Brand	microSHIFT
Model Number	RD-R51M-BK
Drivetrain Speeds	10-Speed

Specification	Value
Cage Length	Medium
Chain Wrap Capacity	39 teeth
Largest Cog (Max)	34 teeth
Rear Der/Shifter Compatibility	Road (Shimano 10-speed, not Tiagra 4700)
Mount Type	10x1 Standard (Direct Mount)
Material	Forged and CNC machined Aluminum (body), Steel (cage)
Color	Black
Item Weight	16 ounces (approx. 454g)
Package Dimensions	7 x 5 x 2 inches

7. WARRANTY AND SUPPORT

For specific warranty information regarding your microSHIFT R10 Rear Derailleur, please refer to the warranty documentation provided with your purchase or visit the official microSHIFT website. Warranty terms and conditions may vary based on region and retailer.

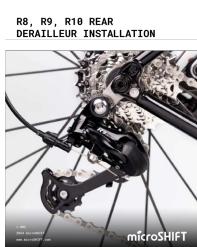
If you require technical assistance, have questions about installation, or need to report a defect, please contact the retailer from whom you purchased the product or microSHIFT customer support directly. When contacting support, please have your product model number (RD-R51M-BK) and proof of purchase readily available.

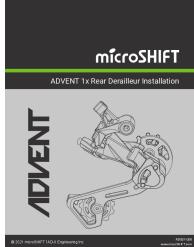
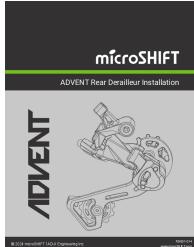
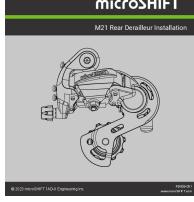
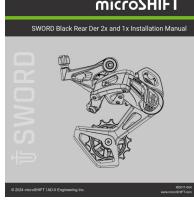
For additional resources and product information, you may visit the microSHIFT official website or consult reputable bicycle repair guides.

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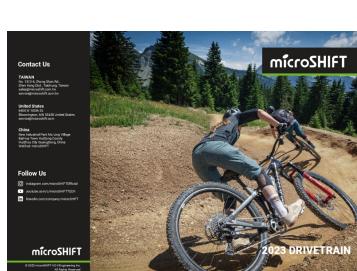
This manual is for informational purposes only. Specifications are subject to change without notice.

Related Documents - RD-R51M-BK

 <p>R8, R9, R10 REAR DERAILLEUR INSTALLATION</p>	<p>microSHIFT R8, R9, R10 Rear Derailleur Installation Guide Bicycle Component Setup</p> <p>A detailed guide for installing and adjusting microSHIFT R8, R9, and R10 rear derailleurs on bicycles. Covers tools, attachment, cable routing, chain sizing, and limit screw adjustments for optimal performance.</p>
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	<p>microSHIFT ADVENT 1x Rear Derailleur Installation Guide RD001-008</p> <p>Step-by-step installation instructions for the microSHIFT ADVENT 1x Rear Derailleur (model RD001-008). Covers tools, attachment, cable setup, limit and B-tension adjustments, chain sizing, and service parts.</p>
	<p>microSHIFT XLE-XCD Rear Derailleur Installation Manual</p> <p>Comprehensive installation guide for the microSHIFT XLE-XCD rear derailleur, covering attachment, adjustments, cable routing, and chain sizing for optimal bicycle performance.</p>
	<p>microSHIFT ADVENT Rear Derailleur Installation Guide</p> <p>Comprehensive installation guide for the microSHIFT ADVENT rear derailleur, detailing steps for attachment, limit screw adjustments, cable routing, chain sizing, and shifting optimization. Includes required tools and version-specific instructions for bicycle mechanics.</p>
	<p>microSHIFT M21 Rear Derailleur Installation Guide</p> <p>This guide provides step-by-step instructions for installing the microSHIFT M21 Rear Derailleur. It covers necessary tools, derailleur attachment (standard and bracket mount), cable routing and installation, chain installation, and adjustment procedures including high limit, low limit, and B-tension settings. Includes important safety reminders.</p>
	<p>microSHIFT SWORD Black Rear Derailleur 2x and 1x Installation Manual</p> <p>Comprehensive installation guide for the microSHIFT SWORD Black Rear Derailleur, covering 2x and 1x setups. Includes steps for attachment, limit screw adjustment, cable routing, chain sizing, and shifting adjustments.</p>

Documents - microSHIFT – RD-R51M-BK



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