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microSHIFT RD-M21SS

microSHIFT M21 Rear Derailleur User Manual

Model: RD-M21SS | Brand: microSHIFT

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your microSHIFT M21 Rear Derailleur. Designed for 6- and 7-speed bicycle drivetrains, this derailleur offers reliable shifting performance for both road and mountain bike applications. Please read this manual thoroughly before installation and use to ensure proper function and longevity of your component.

2. KEY FEATURES

- Robust Construction:** Features durable composite and steel components for enhanced longevity.
- Wide Compatibility:** Compatible with 6- and 7-speed mountain and road systems.
- Short Cage Design:** Optimized for efficient chain wrap capacity and improved ground clearance, especially beneficial for smaller wheel sizes.
- Standard Mount:** Utilizes a 10x1 standard rear derailleur mount type for broad bicycle frame compatibility.

3. PACKAGE CONTENTS

Verify that all components are present before beginning installation:

- 1 x microSHIFT M21 Rear Derailleur (Model: RD-M21SS)
- (No additional accessories are typically included with this component)

4. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance. If you are unsure about any steps, consult a professional bicycle mechanic.

4.1 Tools Required

- Hex Key Set (typically 5mm)
- Cable Cutters
- Chain Tool
- Torque Wrench (recommended)

4.2 Mounting the Derailleur

1. Ensure your frame's derailleur hanger is straight and undamaged.
2. Thread the derailleur's mounting bolt into the derailleur hanger.
3. Tighten the mounting bolt securely. Refer to your frame manufacturer's specifications for torque values, typically around 8-10 Nm.



Image 1: microSHIFT M21 Rear Derailleur, showing the mounting bolt and cage. This image illustrates the overall appearance of the derailleur from a side angle, highlighting the microSHIFT branding and the short cage design.

4.3 Installing the Chain

1. Route the chain through the derailleur cage, ensuring it passes over the upper pulley and under the lower pulley.
2. Connect the chain using a master link or chain pin, following the chain manufacturer's instructions.

4.4 Connecting the Shift Cable

1. Route the shift cable from your shifter through the cable housing and into the derailleur's cable stop.
2. Pull the cable taut and secure it with the cable fixing bolt on the derailleur. Do not overtighten.
3. Trim any excess cable, leaving approximately 2-3 cm, and crimp an end cap onto the cable to prevent fraying.



Image 2: microSHIFT M21 Rear Derailleur, showing the cable routing and adjustment screws. This view provides a closer look at the cable attachment point and the limit screws, which are essential for fine-tuning the derailleur's movement.

5. OPERATING AND ADJUSTMENT

Fine-tuning your derailleur ensures smooth and precise shifting.

5.1 Limit Screw Adjustment (H and L)

The H (High) and L (Low) limit screws prevent the chain from shifting beyond the smallest and largest cogs, respectively.

1. **H-Screw (High Limit):** Shift the chain to the smallest cog. Turn the H-screw clockwise until the upper guide pulley aligns directly under the smallest cog. Turn counter-clockwise if the chain cannot reach the smallest cog.
2. **L-Screw (Low Limit):** Shift the chain to the largest cog. Turn the L-screw clockwise until the upper guide pulley aligns directly under the largest cog. Turn counter-clockwise if the chain cannot reach the largest cog.

5.2 B-Tension Adjustment

The B-tension screw adjusts the gap between the upper guide pulley and the cogs. This gap should be optimized for smooth shifting across all gears.

1. Shift the chain to the largest cog on the cassette and the smallest chainring on the crankset.
2. Adjust the B-tension screw (located on the derailleur body) until there is a small, consistent gap (approx. 5-6mm) between the upper guide pulley and the largest cog.

5.3 Indexing Adjustment

Indexing ensures that each click of the shifter corresponds to a precise shift between cogs.

1. Shift the chain to the second smallest cog.
2. While pedaling, use the barrel adjuster (located on the shifter or derailleur) to fine-tune the cable tension.
3. Turn the barrel adjuster counter-clockwise to increase tension (moves derailleur inward) or clockwise to decrease tension (moves derailleur outward) until shifting is smooth and quiet.

6. MAINTENANCE

Regular maintenance will extend the life and performance of your derailleur.

- **Cleaning:** Regularly clean the derailleur, especially the pulleys, to remove dirt and grime. Use a degreaser and a brush.
- **Lubrication:** Apply a light lubricant to the pivot points of the derailleur and the pulley bearings periodically. Avoid over-lubrication, which can attract dirt.
- **Cable and Housing:** Inspect shift cables and housing for fraying, kinks, or corrosion. Replace them if necessary, as damaged cables can impair shifting performance.
- **Derailleur Hanger:** Periodically check the derailleur hanger for alignment. A bent hanger is a common cause of poor shifting and can be straightened by a bike shop.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Chain won't shift to smallest cog.	H-limit screw too tight; insufficient cable tension.	Loosen H-screw; increase cable tension with barrel adjuster.
Chain won't shift to largest cog.	L-limit screw too tight; excessive cable tension.	Loosen L-screw; decrease cable tension with barrel adjuster.

Problem	Possible Cause	Solution
Noisy or rough shifting.	Incorrect indexing; bent derailleur hanger; dirty components.	Adjust indexing; check/straighten hanger; clean and lubricate.
Chain rubs on derailleur cage.	Incorrect B-tension; bent derailleur hanger.	Adjust B-tension; check/straighten hanger.

8. SPECIFICATIONS

Feature	Detail
Model Name	RD-M21SS
Drivetrain Speeds	6-speed, 7-speed
Cage Length	Super Short Cage
Largest Cog Capacity	Up to 32T
Chain Wrap Capacity	21T
Rear Derailleur Mount Type	10x1 Standard
Material	Composite and Steel
Color	Black
Weight	241g (approx. 8.5 oz)

9. WARRANTY AND SUPPORT

The microSHIFT M21 Rear Derailleur comes with a Limited Warranty. For specific details regarding warranty coverage, terms, and conditions, please refer to the official microSHIFT website or contact their customer support directly.

For technical support, troubleshooting assistance, or spare parts inquiries, please visit the microSHIFT official website or contact their authorized service centers.

Official Website: www.microshift.com