Kailh Box Jellyfish Switches

Kailh Box Jellyfish Mechanical Keyboard Switches User Manual

Model: Box Jellyfish Switches

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of Kailh Box Jellyfish Mechanical Keyboard Switches. These switches are part of the Kaihua master series, featuring a fully transparent design for enhanced light transmission, making them ideal for keyboards with RGB lighting. The series includes both linear (Jellyfish Y) and clicky (Jellyfish X) variants.

2. PRODUCT OVERVIEW

Kailh Box Jellyfish switches are designed for mechanical keyboards, offering durability and a distinct typing experience. Their transparent housing allows for vibrant backlighting effects. They are waterproof and dustproof, contributing to their longevity.

Figure 2.1: A single Kailh Box Jellyfish mechanical keyboard switch, showcasing its transparent housing and stem.

2.1. Variants

- **Jellyfish Y Switch (Linear):** Provides a smooth, consistent keystroke without a tactile bump or audible click.
- **Jellyfish X Switch (Clicky):** Features a distinct tactile bump and an audible click sound, providing clear feedback with each key press.

3. SETUP AND INSTALLATION

Proper installation ensures optimal performance and longevity of your switches. These switches are compatible with most mechanical keyboard PCBs.

3.1. Pre-Installation Checks

- Ensure your keyboard PCB is compatible with 3-pin or 5-pin mechanical switches.
- Verify that the PCB supports hot-swappable switches if you do not intend to solder.
- Inspect each switch for any bent pins. If a pin is bent, gently straighten it with tweezers before installation.

3.2. Installation for Hot-Swappable Keyboards

1. Align the pins of the switch with the corresponding holes on the hot-swap socket on the PCB.

2. Gently press the switch down until it clicks into place. Ensure it is seated flush with the PCB.

3. Avoid excessive force, as this can bend or damage the switch pins or the hot-swap socket.

4. Test each installed switch by pressing it to ensure proper function.

3.3. Installation for Soldered Keyboards

1. Align the switch pins with the holes on the PCB.

2. Insert the switch and ensure it is seated correctly.

3. Solder each pin to the PCB using appropriate soldering techniques. Ensure a clean and secure connection.
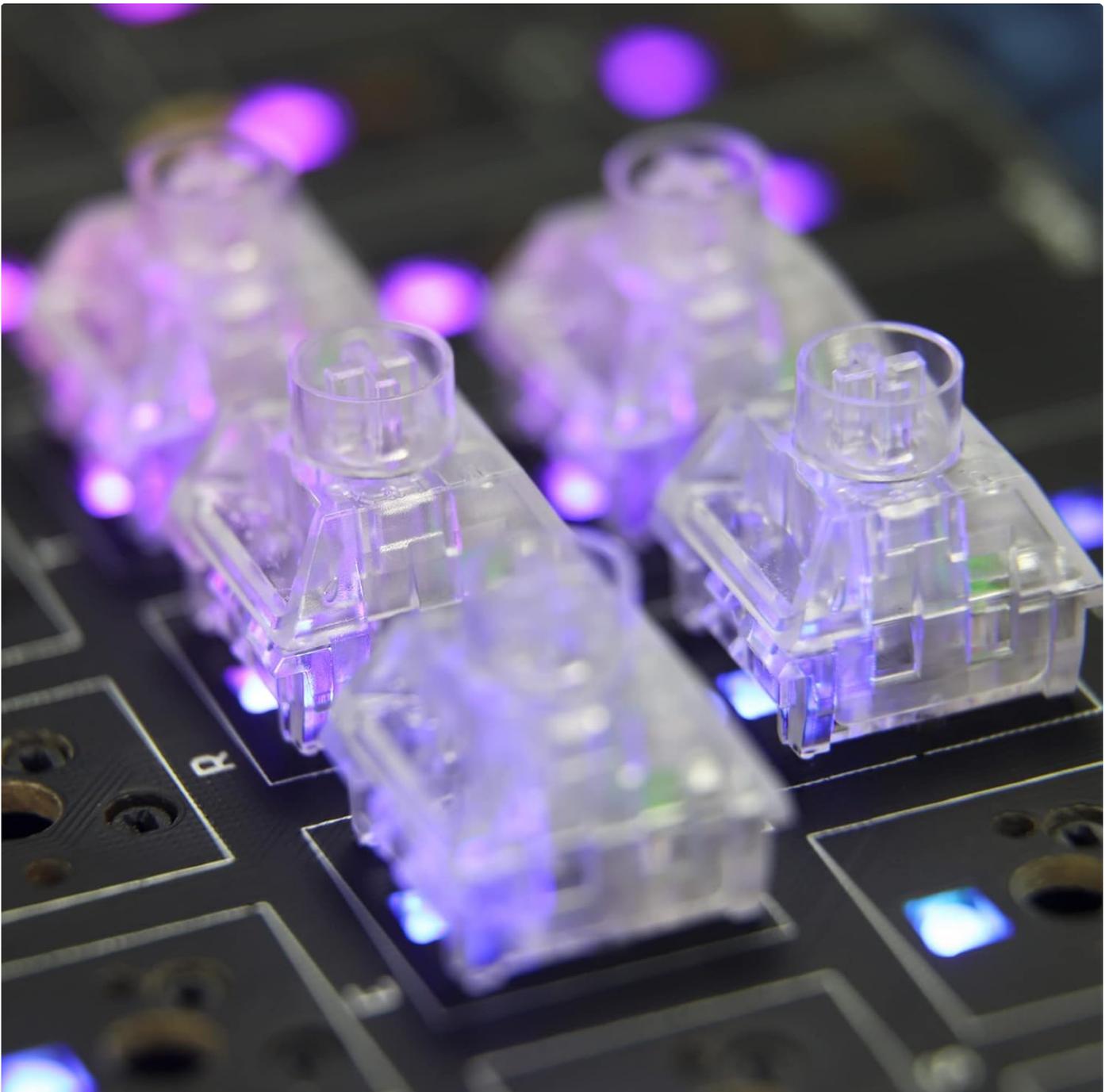

Figure 3.1: Kailh Box Jellyfish switches installed on a keyboard PCB, demonstrating their transparent design with active RGB lighting.

4. OPERATION

The Kailh Box Jellyfish switches are designed for consistent and reliable performance. Understanding their operational characteristics can enhance your typing experience.

4.1. Key Characteristics

- **Smooth Actuation:** Both variants offer a smooth travel path.
- **Consistent Feel:** Engineered for uniform force distribution across the keypress.
- **High Durability:** Rated for 100 million operations, ensuring a long lifespan.

4.2. Operational Specifications

Characteristic	Jellyfish Y (Linear)	Jellyfish X (Clicky)
Operation Force	45gf	47gf
Tactile Force	N/A	75gf
Pretravel	1.8±0.3mm	1.8±0.3mm
Resilience	≥15gf	≥15gf
Total Travel	3.6±0.3mm	3.6±0.3mm
Operating Life	100 million	100 million
Silver Spring Length	18mm	18mm

5. MAINTENANCE

Regular maintenance can help preserve the feel and performance of your Kailh Box Jellyfish switches.

5.1. Cleaning

- **Keycap Removal:** Carefully remove keycaps using a keycap puller to avoid damaging the switch stems.
- **Dust Removal:** Use compressed air to blow away dust and debris from around and inside the switches.
- **Surface Cleaning:** Wipe the exterior of the switches and keyboard plate with a microfiber cloth lightly dampened with isopropyl alcohol. Ensure no liquid enters the switch housing.

5.2. Lubrication (Optional)

For users seeking to modify the feel or sound of their switches, lubrication can be applied. This process typically involves disassembling the switch.

1. **Disassembly:** Use a switch opener tool to carefully separate the top housing, stem, and spring from the bottom housing.
2. **Lubricant Application:** Apply a thin, even layer of specialized switch lubricant (e.g., Krytox 205g0 for linear, lighter lube for clicky) to the stem rails, spring, and inside the bottom housing. Avoid over-lubricating.
3. **Reassembly:** Carefully reassemble the switch components, ensuring the spring is correctly seated and the stem is oriented properly.

Figure 5.1: Components of a disassembled Kailh Box Jellyfish switch, including the top housing, stem, spring, and bottom housing.

6. Troubleshooting

This section addresses common issues you might encounter with your mechanical keyboard switches.

6.1. Switch Not Registering

- **Check Seating:** For hot-swappable keyboards, ensure the switch is fully seated in its socket. Gently press down on the switch until it clicks into place.
- **Inspect Pins:** Remove the switch and carefully inspect its pins for any bends or damage. Straighten bent pins with fine-point tweezers.
- **Test with Another Switch:** If possible, swap the problematic switch with a known working one to determine if the issue is with the switch or the PCB socket.
- **Soldering (for soldered PCBs):** If soldered, inspect the solder joints for cold joints or bridges. Re-solder if necessary.

6.2. Inconsistent Feel or Sound

- **Dust/Debris:** Clean the switch thoroughly as described in the Maintenance section.

- **Lubrication:** If the switch feels scratchy, consider lubricating it. Ensure consistent application if you choose to lubricate.

- **Spring Issues:** A bent or improperly seated spring can cause inconsistent feel. Disassemble and reassemble the switch, ensuring the spring is correctly positioned.

7. SPECIFICATIONS

Detailed technical specifications for the Kailh Box Jellyfish Switches.

Specification	Detail
Brand	Kailh (Distributed by Mechkeeb)
Model	Box Jellyfish Switches (Y - Linear, X - Clicky)
Operation Mode	Mechanical
Current Rating	10 Milliamps
Operating Voltage	5 Volts
Contact Type	Normally Closed
Connector Type	Plug In
International Protection Rating	IP65 (Waterproof and Dustproof)
Compatible Devices	Keyboard
Switch Type	Push Button
Material	Silver (Spring)
Product Dimensions	5.91 x 3.94 x 2.36 inches (Package)
Item Weight	5.3 ounces (Package)
Operating Life	100 million keystrokes

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your keyboard or contact the retailer/manufacturer directly. Ensure you retain your proof of purchase for any warranty claims.