

ZORNHER ZH870

ZORNHER ZH870 Wireless Mechanical Gaming Keyboard User Manual

Model: ZH870 | Brand: ZORNHER

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of your ZORNHER ZH870 Wireless Mechanical Gaming Keyboard. Please read this manual thoroughly before using the product to ensure optimal performance and longevity.



Figure 1: ZORNHER ZH870 Wireless Mechanical Gaming Keyboard (White Spider Web variant).

2. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x Fully Assembled Keyboard
- 1 x Type-C Cable (1.8m nylon)
- 1 x 2.4GHz Receiver
- 1 x Keycap Puller
- 3 x Replace Switches
- 1 x Dust Cover
- 1 x Instruction Manual (this document)

3. SETUP AND CONNECTIVITY

The ZORNHER ZH870 keyboard offers three connection modes: 2.4GHz wireless, Bluetooth 5.0, and USB-C wired. It supports connection to up to 5 devices and is compatible with Windows and macOS operating systems.

3.1 Charging the Keyboard

The keyboard is powered by a built-in 4000mAh battery. To charge, connect the supplied USB-C cable to the keyboard's USB-C port and the other end to a powered USB port on your computer or a wall adapter. The keyboard can be used while charging.

3.2 Connection Modes

Switch between modes using the toggle switch located on the top edge of the keyboard (refer to Figure 2 for location).

TRIPLE MODEL CONNECTION

Support 5 Devices at the Same Time

5

2.4Ghz Wireless

BT5.0 Bluetooth

Type-c Wired



Figure 2: The ZORNHER ZH870 keyboard demonstrating its triple connection capabilities (2.4GHz wireless, Bluetooth 5.0, and USB-C wired) and compatibility with various devices.

3.2.1 2.4GHz Wireless Mode

1. Locate the 2.4GHz USB receiver in the package.
2. Plug the receiver into an available USB port on your computer.
3. Toggle the switch on the keyboard to the 2.4GHz wireless mode. The keyboard should automatically connect.

3.2.2 Bluetooth 5.0 Mode

1. Toggle the switch on the keyboard to the Bluetooth mode.
2. On your device (PC, laptop, smartphone, tablet), enable Bluetooth and search for new devices.
3. Select "ZORNHER ZH870" from the list of available devices to pair.
4. The keyboard can store up to 3 Bluetooth connections. Refer to the quick start guide for specific key combinations to switch between paired Bluetooth devices.

3.2.3 USB-C Wired Mode

1. Connect the supplied USB-C cable to the keyboard's USB-C port.

2. Connect the other end of the USB-C cable to an available USB port on your computer.
3. The keyboard will automatically switch to wired mode and begin charging.

4. OPERATING THE KEYBOARD

4.1 Key Features

- **80% Layout:** Compact design retaining essential F-row, arrow, and navigation keys.
- **IMD PC Keycaps:** High-purity PC keycaps with spider web pattern and shine-through legends, resistant to wear and fading.
- **Creamy Linear Switches:** Factory-lubed switches providing soft keystrokes with crisp feedback.
- **Hot-Swappable:** Compatible with 3-pin and 5-pin mechanical switches, allowing for easy switch replacement without soldering.
- **Gasket Mount:** Enhances typing feel and sound.

PIONEERING KEYCAP TECHNOLOGY-IMD

The shine through pattern ever on a keycap

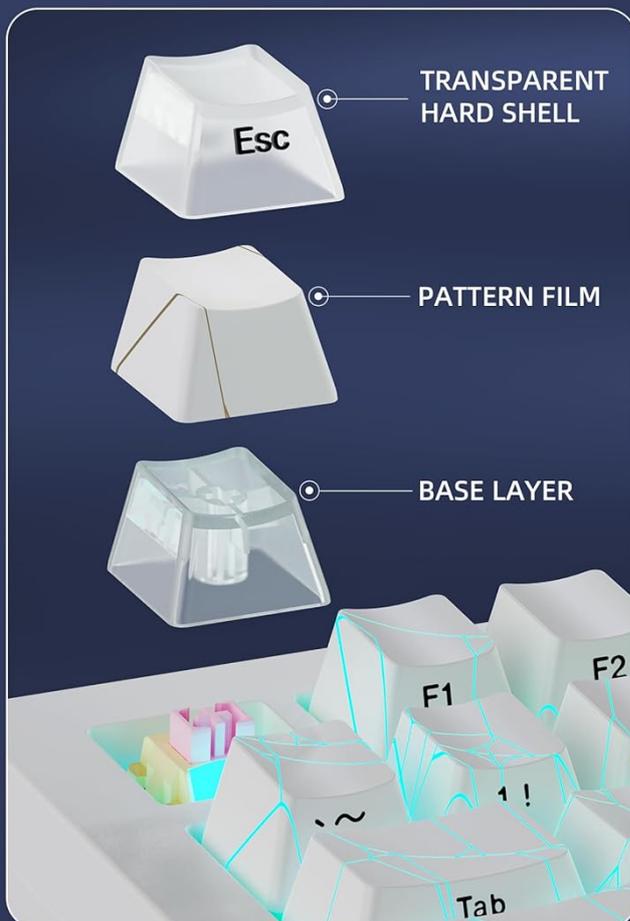


Figure 3: Detailed view of the IMD PC keycap technology, illustrating the transparent hard shell, pattern film, and base layer for durable shine-through legends.

SAKURA LINEAR

Very Keystroke Sounds Like a Melodic Companion



1.2mm
Quick Actuation
(NORMAL 2.0mm)

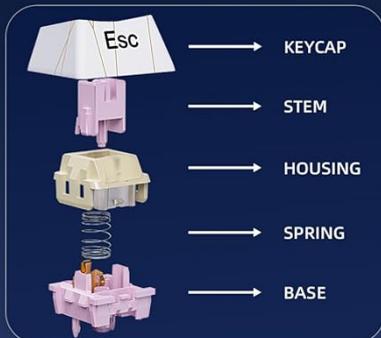
3.8mm
Total Travel
Smooth linear keystroke, consistent 45g actuation force, rapid rebound

5 - Pin
Hot - swappable
Crisp yet subdued sound, suitable for gaming and office

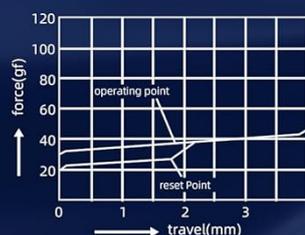
Figure 4: The Sakura Linear switch, highlighting its quick actuation (1.2mm), total travel (3.8mm), and 5-pin hot-swappable design for a smooth and responsive typing experience.

CREAMY LINEAR

Silky & Quiet Feel



Total Travel:
 $4.00 \pm 0.4\text{mm}$
Operating Travell:
 $2.25 \pm 0.4\text{mm}$
Operating Force:
 $40 \pm 5\text{gf}$
Long Life:
80,000,000 Cycles



Supports 3 pins or 5 pins switches.

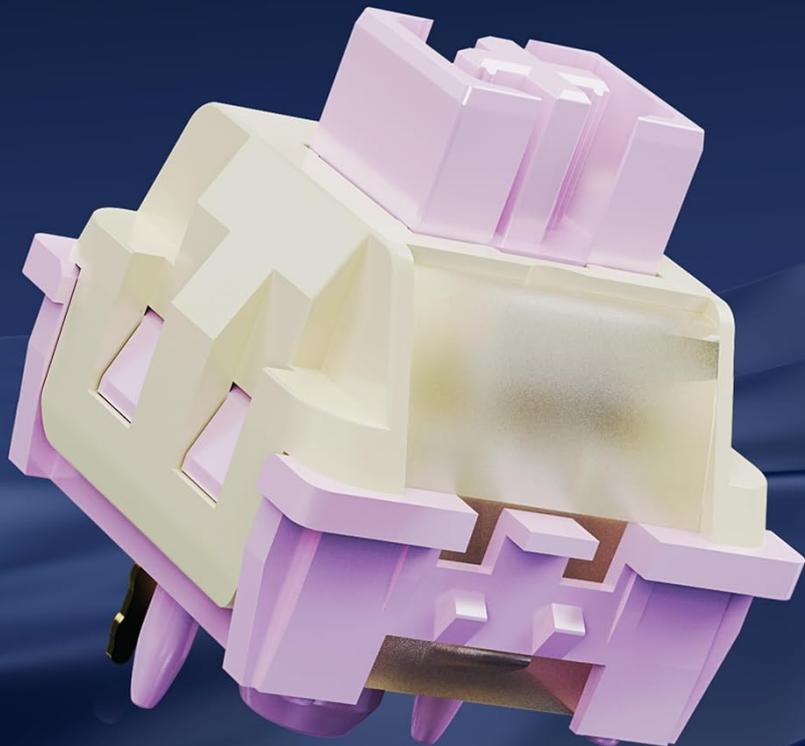


Figure 5: Illustration of the hot-swappable feature, showing a switch being removed from the ZORNHER ZH870 keyboard, compatible with both 3-pin and 5-pin switches.

4.2 RGB Backlighting

The ZH870 features 22 preset RGB lighting effects, including side-glow and south-facing LEDs. These can be customized directly on the keyboard or through dedicated driver software.

COLOR

Multi-Color Experience

Make life more cool



Figure 6: The ZORNHER ZH870 keyboard showcasing its multi-color RGB lighting capabilities, with various color schemes illuminating the keycaps.

22 RGB LIGHT EFFECTS MACRO



22 RGB Models

Lighting effects



Macro

Recording & Editing



Music

Audio visualizer effect



Custom Profile

Set up exclusive typing experience

Figure 7: The ZORNHER ZH870 keyboard's RGB lighting effects, demonstrating the 22 available modes and the potential for macro recording and custom profile setup via software.

For advanced customization, including key remapping, macros, and personalized lighting modes, driver software is available. Please refer to the official ZORNHER website for software downloads and instructions.

4.3 Ergonomics and Stability

The keyboard features OEM-profile keycaps and stable large-key tuning for lasting comfort. Its weight of approximately 3.67 pounds (1.66 kg) ensures stability during use.

3.17LB

Durable and Stable Crisp Hand Feel



Cleaner sound

experience the authentic auditory perception brought by the structure.

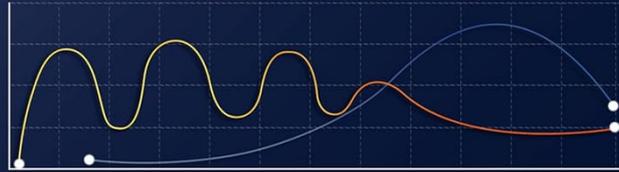


Figure 8: The ZORNHER ZH870 keyboard, emphasizing its durable and stable build with a weight of 3.67 pounds, contributing to a crisp hand feel and reduced movement during typing.

5. MAINTENANCE

Proper maintenance ensures the longevity and performance of your ZORNHER ZH870 keyboard.

5.1 Cleaning

- Use the provided dust cover when the keyboard is not in use to prevent dust accumulation.
- For general cleaning, use a soft, dry cloth.
- To clean between keycaps, use compressed air or a small brush.

5.2 Keycap and Switch Replacement

The keyboard comes with a keycap puller and spare switches for easy replacement.

1. **Removing Keycaps:** Gently use the keycap puller to grip the keycap and pull upwards.
2. **Removing Switches:** After removing the keycap, use a switch puller (often integrated with the keycap puller or a separate tool) to carefully unclip the switch from the PCB.
3. **Installing Switches:** Align the pins of the new switch with the holes on the PCB and press down firmly until it clicks into place. Ensure pins are straight to avoid bending.
4. **Installing Keycaps:** Align the keycap over the switch stem and press down gently until it is secure.

6. TROUBLESHOOTING

If you encounter issues with your ZORNHER ZH870 keyboard, refer to the following common solutions:

6.1 Connectivity Issues

- **Keyboard not responding:** Ensure the keyboard is charged. Try connecting via USB-C cable to rule out wireless issues.
- **2.4GHz connection unstable:** Ensure the USB receiver is plugged directly into a USB port on your computer, not a hub. Move the keyboard closer to the receiver.
- **Bluetooth pairing failure:** Ensure Bluetooth is enabled on your device and the keyboard is in Bluetooth pairing mode. Remove previous pairings from your device's Bluetooth settings and try again.

6.2 Lighting Issues

- **RGB lights not working:** Check if the keyboard is sufficiently charged. Ensure lighting effects are enabled via keyboard shortcuts or software.
- **Inconsistent lighting:** This may be due to specific lighting modes. Try cycling through different preset modes.

6.3 Key Functionality Issues

- **Key not registering:** The hot-swappable nature allows for easy replacement. Try replacing the switch under the non-functioning key with one of the spare switches provided.
- **Keycap legends difficult to read:** While the IMD PC keycaps offer unique aesthetics, some users may find certain legends less visible under specific lighting conditions. Adjusting RGB brightness or color may help.

6.4 Software and Driver Issues

- **Driver not found:** Visit the official ZORNHER website to download the latest driver software for your ZH870 model.
- **Customization not applying:** Ensure the software is running and the keyboard is connected in a mode that supports software control (usually wired or 2.4GHz wireless).

7. SPECIFICATIONS

Feature	Detail
Model Number	ZORNHER ZH870

Product Dimensions	16.65 x 7.99 x 2.75 inches
Item Weight	3.67 pounds
Connectivity Technology	Bluetooth 5.0, 2.4GHz Wireless, USB-C Wired
Compatible Devices	Laptop, PC, Smartphone, Tablet
Keyboard Description	Mechanical
Number of Keys	88
Keyboard Backlighting	RGB (22 modes)
Special Features	Ergonomic, Hot-Swappable, Rechargeable
Battery	1 Lithium Ion battery (4000mAh, included)
Manufacturer	ZORNHER
Date First Available	April 12, 2025

8. OFFICIAL PRODUCT VIDEO

Watch the official ZORNHER Mechanical Keyboard video for a visual overview of its features and functionality.

Your browser does not support the video tag.

Video 1: ZORNHER Mechanical Keyboard overview. This video demonstrates the keyboard's design, RGB lighting effects, and the sound profile of its switches. It also shows the physical switch for changing connectivity modes.

9. WARRANTY AND SUPPORT

The ZORNHER ZH870 Wireless Mechanical Gaming Keyboard is backed by a **2-year warranty** from the date of purchase. This warranty covers manufacturing defects and ensures worry-free ownership.

For technical support, warranty claims, or further inquiries, please visit the official ZORNHER website or contact their customer service through the details provided on their website or product packaging.

You can also visit the [ZORNHER Store on Amazon](#) for more product information and support resources.



[pdf] Specifications Test Report

Test Report BLE 1M Dongguan Zuohe Electronics Co Ltd ZH870 Mechanical keyboard 2BMMG
2BMMGZH870 zh870

Shenzhen CTA Testing Technology Co., Ltd. Room 106, Building 1, Yibaolai
Industrial Park, Qiaotou Co ... o.....: CTA24112700201 FCC

ID..... : 2BMMG-**ZH870** Compiled by position printed name
signature ..: File administrators Xudong Zhang Supervised ...

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