

Imada ESL-200

Imada ESL-200 Handheld Digital LED Stroboscope User Manual

Model: ESL-200

1. INTRODUCTION

The Imada ESL-200 is a handheld digital LED stroboscope designed for precise measurement of rotating, reciprocating, and linear motion. It is suitable for applications in production, quality control, and preventive maintenance. This unit features a bright, long-lasting LED light source, a wide measuring range, adjustable flash duration for sharper images, and selectable units (FPM or Hz).





A front view of the Imada ESL-200 Handheld Digital LED Stroboscope, showing its digital display and control buttons.

2. SAFETY INFORMATION

- **Eye Protection:** Avoid direct exposure to the stroboscope's flashing light, as it can cause discomfort or temporary vision impairment. Do not stare directly into the light source.
- **Operating Environment:** Use the device in a well-lit area to minimize the effect of the flashing light. Avoid use in explosive or hazardous environments unless specifically rated for such conditions.
- **Power Source:** Use only the specified battery type and ensure correct polarity during installation. Do not mix old and new batteries or different battery types.
- **Maintenance:** Do not attempt to open or repair the device. Refer all servicing to qualified personnel.
- **Trip Hazard:** When using with a tripod, ensure the setup is stable to prevent tipping.

3. PACKAGE CONTENTS

Verify that all items are present upon unpacking:

- Imada ESL-200 Handheld Digital LED Stroboscope
- User Manual
- Carrying Case (if included with specific model variant)
- Batteries (not included, purchase separately)

4. PRODUCT FEATURES

- LEDs produce an extremely bright, long-lasting light source.
- Push-button operation with x2 and /2 buttons allowing for quick adjustments of flash rates.
- Stores up to nine flash rates for both FPM (Flashes Per Minute) and Hz (Hertz) for quick retests.
- Highly stable, drift-free operation provides precision accuracy.
- Rugged aluminum housing withstands challenging industrial environments.

5. SETUP

5.1 Battery Installation

1. Locate the battery compartment cover on the device.
2. Open the cover and insert the required batteries (not included) according to the polarity markings (+/-).
3. Securely close the battery compartment cover.

5.2 Tripod Mounting

The ESL-200 features a 1/4"-20 UNC thread on its base, allowing for mounting on a standard camera tripod. This provides stability for extended use or precise positioning.

1. Attach the stroboscope to a compatible tripod by screwing the tripod's mounting screw into the thread on the stroboscope's base.
2. Ensure the stroboscope is securely fastened to prevent accidental detachment.

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

- To power on the device, press the **POWER** button. The digital display will illuminate.
- To power off, press and hold the **POWER** button until the display turns off.

6.2 Adjusting Flash Rate

The flash rate can be adjusted in either Flashes Per Minute (FPM) or Hertz (Hz).

- Use the **UP** and **DOWN** arrow buttons to incrementally increase or decrease the flash rate.
- For rapid adjustments, press the **x2** button to double the current flash rate or the **/2** button to halve it.
- To switch between FPM and Hz units, press the **UNIT** button.

6.3 Storing Flash Rates

The ESL-200 can store up to nine frequently used flash rates for quick recall.

- To store a flash rate, adjust to the desired rate, then press and hold the **STORE** button. Select a memory location (1-9) using the arrow buttons and press **STORE** again to confirm.
- To recall a stored flash rate, press the **RECALL** button, select the desired memory location, and press **RECALL** again.

6.4 Adjusting Flash Duration

The adjustable flash duration feature allows for sharper images of fast-moving objects.

- Consult the device's on-screen menu or dedicated button (if available) to access flash duration settings.
- Increase or decrease the flash duration as needed to achieve the clearest image of the target.

7. MAINTENANCE

7.1 Cleaning

- Wipe the exterior of the stroboscope with a soft, dry cloth.
- Do not use abrasive cleaners, solvents, or harsh chemicals, as these can damage the housing or display.
- Keep the LED light source clean and free of dust for optimal performance.

7.2 Storage

- When not in use for extended periods, remove the batteries to prevent leakage.
- Store the stroboscope in its carrying case (if applicable) in a cool, dry place, away from direct sunlight, extreme temperatures, and high humidity.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Replace batteries with fresh ones, ensuring correct polarity.

Problem	Possible Cause	Solution
Inaccurate or unstable readings.	Incorrect flash rate setting, improper distance to target, or ambient light interference.	Adjust flash rate to synchronize with target motion. Ensure appropriate distance and minimize external light sources. Use tripod for stability.
Display is dim or flickering.	Low battery power.	Replace batteries.

9. SPECIFICATIONS

- **Model:** ESL-200
- **Display:** 5-digit LCD
- **Light Source:** LED
- **Flash Range:** 12 to 150,000 FPM (Flashes Per Minute) / RPM
- **Units:** Selectable FPM or Hz
- **Flash Duration:** Adjustable
- **Memory:** Stores up to 9 flash rates
- **Housing:** Rugged aluminum
- **Power Source:** Battery Powered (Batteries not included)
- **Mounting:** 1/4"-20 UNC Tripod Thread
- **Product Dimensions:** Approximately 11"L x 9.75"W x 3.5"H
- **Item Weight:** Approximately 1.6 ounces

10. WARRANTY AND SUPPORT

10.1 Warranty

The Imada ESL-200 Handheld Digital LED Stroboscope is covered by a **1-Year Universal Guarantee** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

10.2 Technical Support

For technical assistance, troubleshooting, or warranty claims, please contact Imada customer service. Refer to the Imada official website for the most current contact information.