Sndway SW-32B

Sndway SW-32B Automatic Level User Manual

Model: SW-32B

1. Introduction

Thank you for choosing the Sndway SW-32B Automatic Level. This precision optical instrument is designed for accurate horizontal leveling in various applications, including construction, surveying, and landscaping. Featuring a 32x magnification telescope, the SW-32B provides clear and precise readings, ensuring high accuracy for your projects. This manual will guide you through the proper setup, operation, maintenance, and troubleshooting of your new automatic level.

2. Safety Information

Please read and understand all safety instructions before operating the Sndway SW-32B Automatic Level. Failure to follow these instructions may result in injury or damage to the instrument.

- **Eye Protection:** Never look directly at the sun through the telescope, as this can cause severe eye damage.
- **Handling:** Handle the instrument with care. Avoid dropping or subjecting it to strong impacts, which can affect its calibration and accuracy.
- **Environmental Conditions:** Do not expose the instrument to extreme temperatures, humidity, or corrosive environments. Protect it from heavy rain and dust.
- **Cleaning:** Use only soft, lint-free cloths for cleaning optical components. Avoid abrasive materials or harsh chemicals.
- **Storage:** When not in use, store the instrument in its protective carrying case in a dry, secure location.

3. Package Contents

Verify that all items are present and in good condition upon opening the package:

- Sndway SW-32B Automatic Level (Quantity: 1)
- Protective Carrying Case (Quantity: 1)
- User Manual (This document)

- Adjusting Pin (for calibration, typically included)
- Plumb Bob (for centering over a point, typically included)

4. Product Overview

Familiarize yourself with the main components of the Sndway SW-32B Automatic Level:



Figure 4.1: Front View of SW-32B Automatic Level
This image displays the front of the Sndway SW-32B Automatic Level, highlighting the objective lens, the main focusing knob on the side, and the graduated horizontal circle at the base for angle measurements. The instrument is predominantly orange and grey.



Figure 4.2: Rear View of SW-32B Automatic Level
This image shows the rear of the Sndway SW-32B Automatic Level. Visible components include the eyepiece for viewing, the circular bubble level for initial coarse leveling, and the fine motion knobs for precise horizontal adjustments. The 'SNDWAY SW-32B' branding is clearly visible.



Figure 4.3: Automatic Level in Carrying Case
The Sndway SW-32B Automatic Level is shown securely nestled within its custom-fit red protective carrying case. The interior of the case features foam cutouts designed to hold the instrument firmly in place, preventing damage during transport and storage.



Figure 4.4: Protective Carrying Case Exterior
This image displays the exterior of the robust red carrying case for the Sndway SW-32B Automatic Level. It features sturdy latches and a black shoulder strap for convenient and secure transportation of the instrument.

Key Components:

- **Telescope:** The main optical component for viewing distant objects.
- **Objective Lens:** The front lens of the telescope.
- **Eyepiece:** The rear lens of the telescope, where the user looks.
- **Focusing Knob:** Adjusts the clarity of the image in the telescope.
- **Circular Bubble Level:** Used for coarse leveling of the instrument.

- **Leveling Screws (Foot Screws):** Three screws on the tribrach for precise leveling.
- **Horizontal Circle:** Graduated scale for measuring horizontal angles.
- **Fine Motion Knobs:** For precise horizontal rotation of the instrument.
- **Compensator:** An internal mechanism that automatically levels the line of sight once the instrument is roughly leveled.

5. Setup

Follow these steps for the initial setup of your Sndway SW-32B Automatic Level:

1. **Mounting on Tripod:** Securely attach the automatic level to a sturdy tripod. Ensure the tripod legs are spread wide for stability and the tripod head is roughly level.
2. **Coarse Leveling:** Adjust the tripod legs to bring the circular bubble level roughly to the center.
3. **Fine Leveling:** Use the three leveling screws (foot screws) on the instrument's base to precisely center the circular bubble. Turn two screws simultaneously in opposite directions to move the bubble, then use the third screw to complete the centering. The internal compensator will then automatically fine-level the line of sight.
4. **Focusing the Reticle:** Look through the eyepiece and turn the eyepiece focusing ring until the crosshairs (reticle) are sharp and clear.
5. **Focusing on Target:** Point the telescope towards a leveling staff or target. Turn the main focusing knob until the target appears sharp and clear.

6. Operating Instructions

Once the instrument is set up and leveled, you can begin taking measurements:

1. **Taking a Reading:** Look through the eyepiece and align the crosshairs with the leveling staff. Read the value indicated by the horizontal crosshair on the staff. This is your staff reading.
2. **Measuring Horizontal Angles (Optional):** If measuring angles, rotate the instrument using the fine motion knobs to align the vertical crosshair with your first target. Read the value on the horizontal circle. Rotate to your second target and read the new value. The difference between the two readings is the horizontal angle.
3. **Checking Level:** Periodically check the circular bubble level to ensure the instrument remains roughly level, allowing the compensator to function correctly.

7. Maintenance

Proper maintenance ensures the longevity and accuracy of your Sndway SW-32B Automatic Level:

- **Cleaning Lenses:** Use a soft, clean lens brush to remove dust from the objective and eyepiece lenses. For smudges, use a lens cleaning solution and a specialized lens cloth. Do not touch the lenses with your fingers.
- **Cleaning Body:** Wipe the instrument's body with a soft, damp cloth. Avoid using harsh detergents or solvents.
- **Storage:** Always store the level in its protective carrying case when not in use. Ensure the case is closed securely. Store in a dry, temperature-controlled environment.
- **Calibration Check:** Regularly check the instrument's calibration (e.g., two-peg test) to ensure accuracy. If adjustments are needed, refer to advanced calibration guides or contact a qualified technician.
- **Transportation:** When transporting the instrument, especially over rough terrain, ensure it is securely packed in its case to prevent shocks and vibrations.

8. Troubleshooting

Here are some common issues and their potential solutions:

Problem	Possible Cause	Solution
Image appears blurry or out of focus.	Incorrect focusing.	Adjust the main focusing knob for the target and the eyepiece focusing ring for the reticle.
Circular bubble cannot be centered.	Tripod not stable or ground uneven.	Ensure tripod is firmly set on stable ground. Adjust tripod legs for coarse leveling before using foot screws.
Readings are inconsistent or inaccurate.	Instrument not properly leveled; compensator malfunction; instrument out of calibration.	Re-level the instrument carefully. If issues persist, the compensator may need service or the instrument requires calibration. Contact Sndway support.
Dust or smudges on lenses.	Exposure to environment; improper handling.	Clean lenses using a lens brush and lens cloth/solution as described in the Maintenance section.

9. Specifications

Detailed technical specifications for the Sndway SW-32B Automatic Level:

- **Brand:** Sndway
- **Model:** SW-32B
- **Operation Mode:** Automatic
- **Magnification:** 32x Zoom
- **Material:** Metal, Plastic
- **Color:** Multi
- **Item Weight:** 3.15 Kilograms
- **Package Dimensions:** 36 x 23.4 x 23.2 cm
- **Batteries Required:** No
- **Item Package Quantity:** 1

10. Warranty and Support

Sndway products are manufactured to high-quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your purchase or visit the official Sndway website. In case of technical issues, repair, or calibration services, please contact your authorized Sndway dealer or Sndway customer support. When contacting support, please have your product model (SW-32B) and purchase information readily available.
For further assistance, you may visit the Sndway official website or contact their customer service department through the contact information provided on their packaging or website.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question