GOYOJO UV-759

GOYOJO UV-759 UV Visible Double Beam Spectrophotometer Instruction Manual

Model: UV-759 | Brand: GOYOJO

1. Introduction

The GOYOJO UV-759 UV Visible Double Beam Spectrophotometer is an advanced instrument designed for precise laboratory testing and scientific research. This new generation intelligent instrument features a dual beam optical system, ensuring high stability and a strong signal-to-noise ratio. It offers high resolution and low stray light, making it suitable for daily analysis and various scientific applications.
This manual provides essential information for the safe and efficient operation of your spectrophotometer, including setup, operational procedures, maintenance, and troubleshooting.

Image 1.1: Overview of the GOYOJO UV-759 Spectrophotometer highlighting its scanning capabilities and product introduction.

2. Safety Information

Always observe the following safety precautions to prevent injury and damage to the instrument:

- Ensure the instrument is connected to a grounded power outlet with the correct voltage (220 V ± 10% 50 Hz ± 1 Hz).
- Do not operate the instrument in environments with excessive humidity, dust, or corrosive gases.
- Avoid direct exposure to the UV light source.
- Do not open the instrument casing unless instructed by qualified service personnel.
- Handle cuvettes and samples with care, especially when dealing with hazardous chemicals.

3. Package Contents

Verify that all components are present and undamaged upon unpacking:

- GOYOJO UV-759 Spectrophotometer Unit
- Power Cable
- USB Communication Cable (for RS232 interface)
- Cuvettes (quantity may vary)
- Instruction Manual
- Software CD (if applicable)

4. Setup

4.1 Unpacking and Placement

Carefully remove the spectrophotometer from its packaging. Place the instrument on a stable, level surface away from direct sunlight, vibrations, and strong electromagnetic fields. Ensure adequate ventilation around the unit.

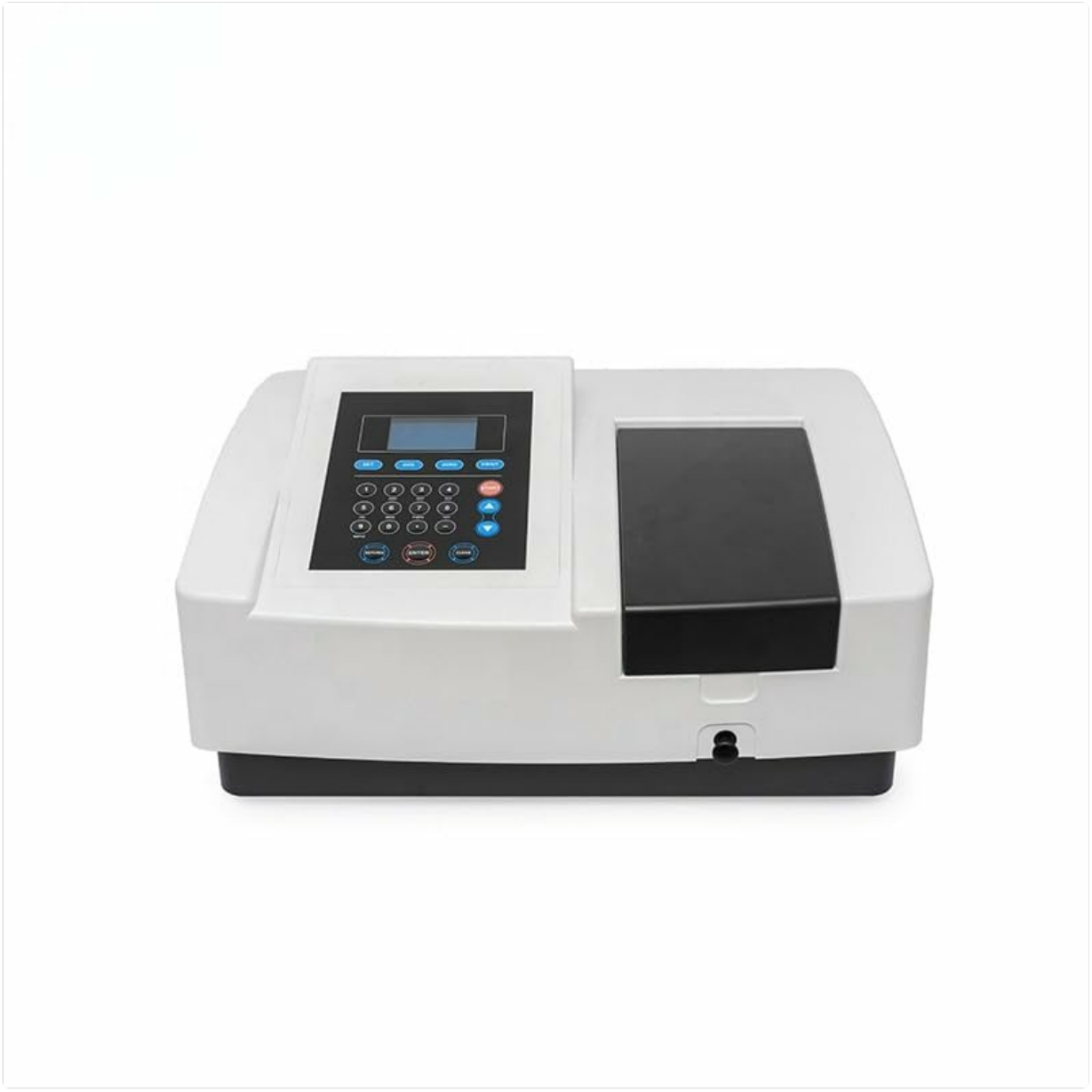

Image 4.1: Front view of the GOYOJO UV-759 Spectrophotometer, showing the main unit and control panel.

4.2 Power Connection

Connect the provided power cable to the power inlet on the rear of the instrument and then to a suitable grounded electrical outlet. Ensure the power switch is in the OFF position before connecting.

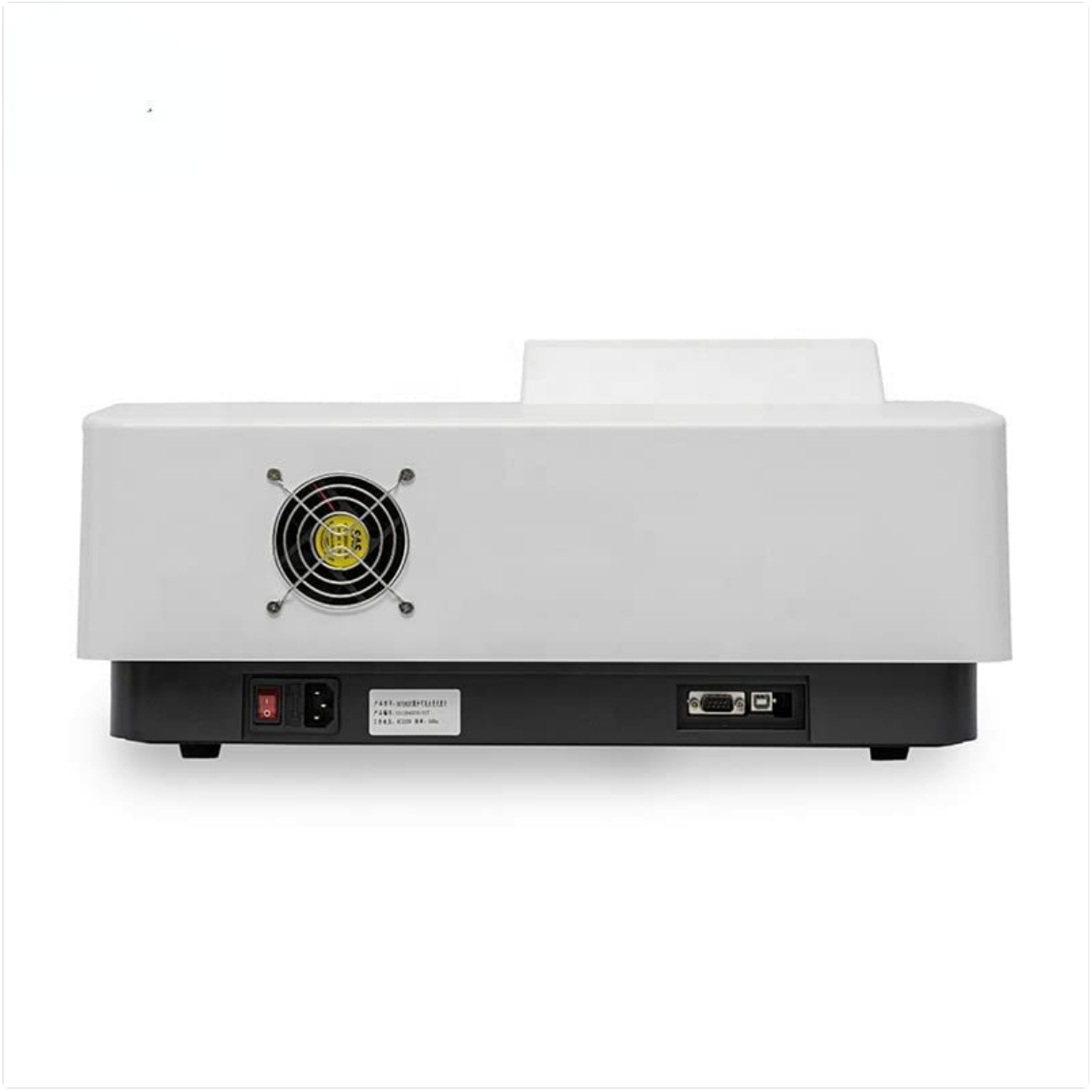

Image 4.2: Rear panel of the spectrophotometer, illustrating the power input and RS232 communication port.

4.3 Communication Setup (Optional)

If connecting to a computer for data acquisition or control, use the provided USB cable to connect the RS232 communication port on the instrument to your computer. Install any necessary drivers or software as per the instructions provided with the software package.

5. Operating Instructions

5.1 Powering On and Initial Warm-up

1. Flip the power switch on the rear of the instrument to the ON position.
2. The instrument will perform a self-test. Allow approximately 15-30 minutes for the lamps to warm up and stabilize for accurate measurements.
3. The display will show the main menu or a ready state once warm-up is complete.

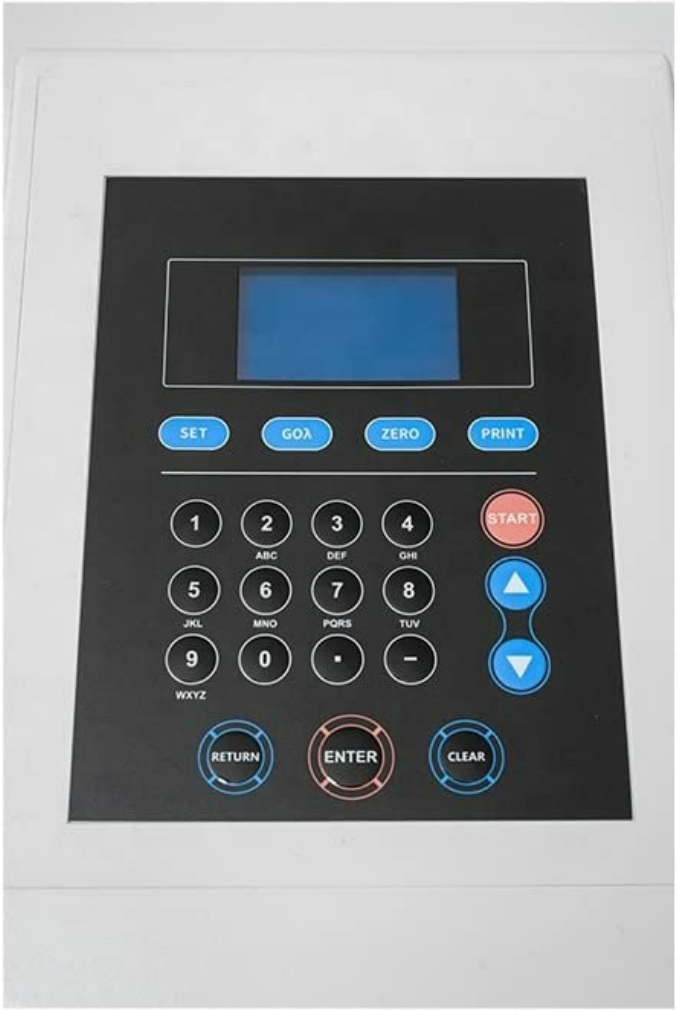

Image 5.1: Detailed view of the control panel, including the LCD screen and function keys.

5.2 Basic Measurement Procedure

1. **Select Mode:** From the main menu, select the desired measurement mode (e.g., Absorbance, Transmittance, Concentration, or Quantitative).
2. **Set Wavelength:** Use the keypad to enter the desired wavelength for your measurement. Press ENTER.
3. **Prepare Blank:** Fill a clean cuvette with your blank solution (e.g., solvent). Insert it into the sample compartment.
4. **Zero/Calibrate:** Press the "ZERO" or "CAL" button to set the baseline or zero the instrument with the blank.
5. **Prepare Sample:** Remove the blank and insert a cuvette containing your sample solution into the sample compartment.
6. **Measure:** Press the "START" or "MEASURE" button to initiate the measurement. The result will be displayed on the screen.
7. **Repeat:** For multiple samples, repeat steps 5 and 6.

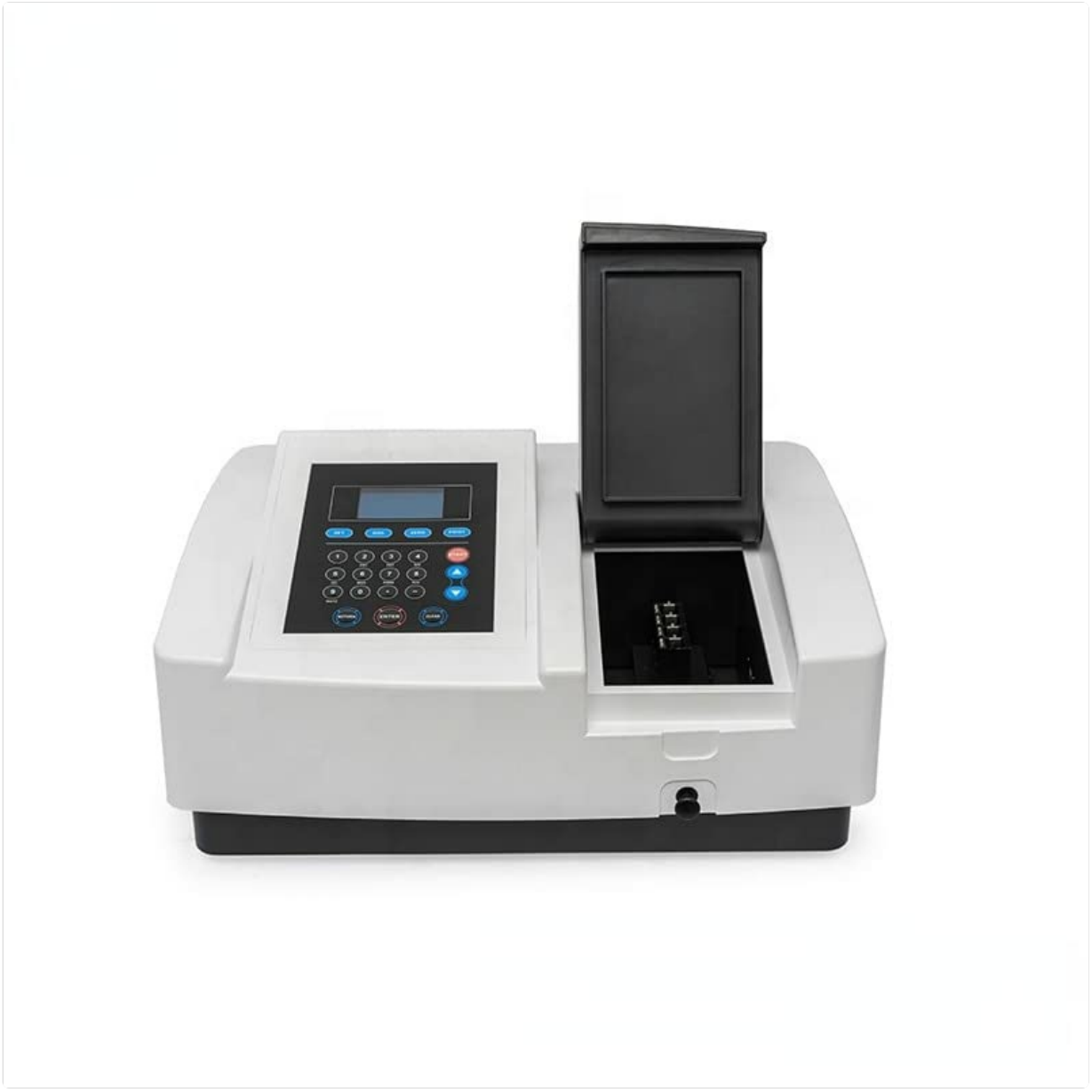

Image 5.2: The sample compartment opened, revealing the cuvette holder for sample insertion.

5.3 Advanced Functions

Refer to the detailed software manual (if applicable) for instructions on advanced functions such as spectral scanning, kinetics, and multi-wavelength analysis. These functions typically require connection to a computer and specialized software.

6. Maintenance

6.1 Cleaning

- **Exterior:** Wipe the exterior surfaces with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Sample Compartment:** Keep the sample compartment clean and dry. Use a lint-free cloth to remove any spills.
- **Cuvettes:** Always use clean cuvettes. Rinse them thoroughly with appropriate solvent and dry them before use.

6.2 Lamp Replacement

The UV and Visible lamps have a finite lifespan. When lamp performance degrades (e.g., unstable

readings, low energy), they may need replacement. This procedure should ideally be performed by qualified service personnel or by following specific instructions in a service manual, as it involves sensitive optical components.

6.3 Storage

When not in use for extended periods, power off the instrument, disconnect it from the power supply, and cover it with a dust cover to protect it from dust and environmental contaminants.

7. Troubleshooting

Problem	Possible Cause	Solution
Instrument does not power on	Power cable disconnected; Power switch off; No power from outlet	Check power cable connection; Ensure power switch is ON; Verify power outlet functionality
Unstable readings	Instrument not warmed up; Dirty cuvettes; Air bubbles in sample; Lamp nearing end of life	Allow adequate warm-up time; Clean cuvettes thoroughly; Remove air bubbles; Consider lamp replacement
No light detected / Error message	Lamp failure; Sample compartment lid open; Optical path blocked	Check lamp status; Ensure sample compartment lid is closed; Verify no obstructions in optical path
Communication error with PC	Incorrect cable; Driver not installed; Software settings incorrect	Use correct USB/RS232 cable; Install necessary drivers; Configure software communication settings

8. Specifications

The following table outlines the key technical specifications for the GOYOJO UV-759 UV Visible Double Beam Spectrophotometer:

Image 8.1: Key technical specifications of the spectrophotometer.

Parameter	Value
Product Name	UV Visible Double Beam Spectrophotometer
Model	UV-759 (MAKIT-82530)
Wavelength Range	190-1100 nm
Wavelength Accuracy	± 0.3 nm
Wavelength Repeatability	0.1 nm

Parameter	Value
Spectral Bandwidth	1.8 nm
Transmittance Accuracy	± 0.3% T
Photometric Range	-3 ~ 3a, 0-200% T, 0 ~ 9999c
Baseline Straightness	± 0.001 A/h
Stray Light	0.05% T@220nm, 360nm
Stability	± 0.001 A/h @ 500nm
RS232 Communication	USB interface
Power Supply	220 V ± 10% 50 Hz ± 1 Hz, 70 W
Weight	18 kg

9. Warranty and Support

9.1 Warranty Information

GOYOJO products are manufactured to high-quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or contact GOYOJO customer service. Keep your purchase receipt as proof of purchase.

9.2 Customer Support

If you encounter any issues not covered in this manual or require technical assistance, please contact GOYOJO customer support. Provide your product model (UV-759) and serial number (if applicable) when contacting support for faster service.
For contact information, please visit the official GOYOJO website or refer to your product packaging.