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› ROROLL LY 810 Automatic Coil Winding Machine User Manual

ROROLL 1005005675309970

ROROLL LY 810 Automatic Coil Winding Machine User Manual

Model: LY 810 (1005005675309970)

1. INTRODUCTION

The ROROLL LY 810 is an economical and highly efficient computer-controlled automatic coil winding machine designed for precision winding of various coils, including those for spirals, motor coils, and guitar pickup coils. This machine features advanced synchronous winding technology, ensuring high accuracy and smooth operation even at high speeds. With its intelligent control system, the LY 810 offers extensive parameter setting capabilities and memory retention for up to 999 winding programs, making it a versatile tool for professional and hobbyist applications.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the machine. Failure to follow these instructions may result in injury or damage to the equipment.

- Always ensure the machine is properly grounded to prevent electrical shock.
- Disconnect power before performing any maintenance, cleaning, or adjustments.
- Keep hands, hair, and loose clothing away from moving parts during operation.
- Operate the machine in a well-ventilated area.
- Do not operate the machine if any parts are damaged or missing.
- Use appropriate personal protective equipment (PPE) such as safety glasses.
- Ensure the emergency stop button is easily accessible and functional.

3. PRODUCT OVERVIEW

The ROROLL LY 810 machine consists of several key components designed for efficient coil winding. Familiarize yourself with these parts for optimal operation.



Figure 3.1: Front view of the ROROLL LY 810 Automatic Coil Winding Machine, showing the main unit, control panel, and winding mechanism.

Computer Automatic Coil Winder Winding Machine



Figure 3.2: The LY 810 machine displayed with its standard accessories, including the foot pedal and Allen wrenches.



Figure 3.3: Rear view of the machine, highlighting the power input and ventilation fan.



Figure 3.4: The LY 810 machine shown with various types of wound coils, demonstrating its versatility.

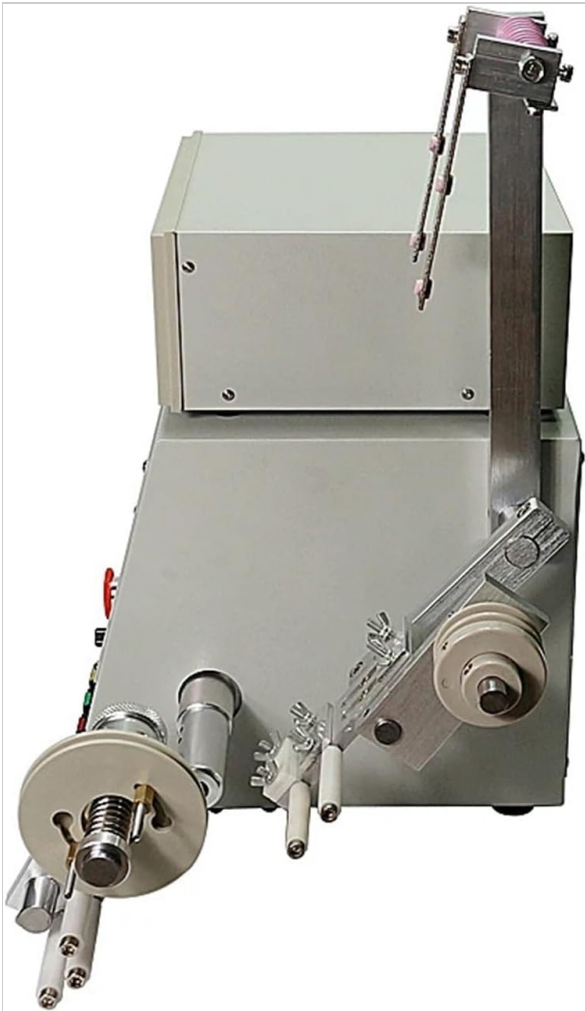


Figure 3.5: Side view of the machine, providing a clearer look at the winding displacement mechanism and wire guide.



Control Panel

Figure 3.6: Detailed view of the control panel, showing the digital displays, numeric keypad, and function buttons for programming and operation.

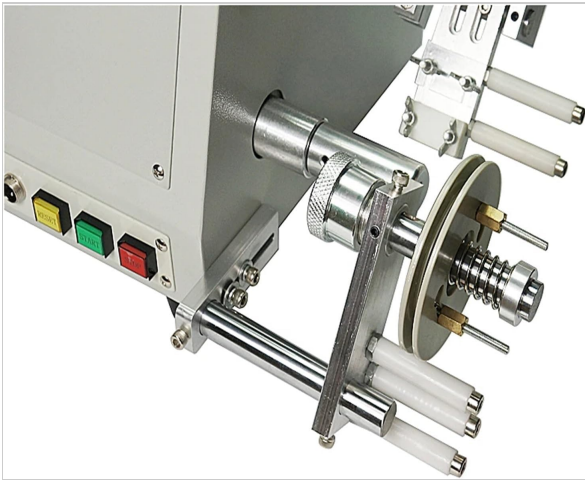


Figure 3.7: Close-up of the winding spindle and wire guide assembly, illustrating the precision components involved in the winding process.

4. SPECIFICATIONS

Feature	Specification
Cop Motor	Three-phase machine, 400W (1/2hp)
Winding Displacement Machine	Step-servo motor
Spindle Motor	Brushless DC
Number of Cops	1
Windable Wire Gauge	0.03 - 1.2 mm
Maximum Winding Width	110 mm
Maximum Screw Diameter	120 mm
Maximum Turning Speed of Cop	6000 circles/minute (speed adjust function)
Storable Winding Groups	999 groups (with off-power memory retention)
Counting Resolution	0.1 circle
Complete Appliance Weight	30 kg (66.1 pounds)
Dimensions (L x W x H)	510 x 490 x 450 mm (20.08 x 19.29 x 17.72 inches approx.)
Package Dimensions	1.18 x 0.79 x 0.39 inches (Note: This seems to be an error in source data, likely referring to a small component)
Country of Origin	China

5. SETUP

1. **Unpacking:** Carefully remove the machine and all accessories from the packaging. Retain the original packaging for future transport or storage.
2. **Placement:** Place the machine on a stable, level, and sturdy workbench capable of supporting its weight (approx. 30 kg). Ensure adequate space around the machine for operation and ventilation.
3. **Power Connection:** Connect the power cord to the machine's power input (refer to Figure 3.3). Ensure the power supply matches the machine's voltage requirements. Plug the power cord into a grounded electrical outlet.
4. **Foot-Switch Connection:** Connect the foot-switch cable to the designated port on the machine (refer to Figure 3.2 for the foot-switch and its connection). The foot-switch provides convenient start/stop control during winding.
5. **Initial Inspection:** Before powering on, visually inspect all components for any signs of damage during shipping. Ensure all connections are secure.
6. **Emergency Stop Check:** Verify that the emergency stop button (red button, typically on the front left, see Figure 3.6) is easily accessible and functions correctly by pressing it and ensuring the machine powers down or stops immediately.

6. OPERATING INSTRUCTIONS

The LY 810 features an intuitive control panel for setting winding parameters and controlling operations. Refer to Figure 3.6 for control panel layout.

6.1. Control Panel Overview

The control panel includes digital displays for step, RPM, quantity, and other parameters. A numeric keypad allows for data input, and dedicated buttons control various functions like START, STOP, RESET, AUTO, BRAKE, NEXT, PREVIOUS, DATA SEL, EDIT, etc.

6.2. Setting Winding Parameters

The machine allows for precise control over winding parameters. These can be set independently for each step of a winding program.

- **Starting Point:** Define the initial position for the winding.
- **Wire Gauge:** Input the diameter of the wire being used (0.03-1.2mm).
- **Winding Displacement Width:** Set the total width the wire will traverse during winding.
- **Circles (Turns):** Specify the number of turns for each winding layer or segment.
- **Speed Settings:**
 - *Speed of Starting the Winding:* Initial winding speed.
 - *Stopping Slow-Speed:* Reduced speed before stopping.
 - *Winding Speed:* Main operating speed (up to 6000 circles/minute).
 - *Slow Lathe Speed:* A slower speed setting for delicate operations.
- **Winding Displacement Direction:** Choose the direction of the wire guide movement.
- **Winding Direction:** Set the rotation direction of the spindle.
- **Two-Terminal Stopping:** Configure stopping behavior at the ends of the winding path.

Use the numeric keypad and navigation buttons (NEXT, PREVIOUS, DATA SEL, EDIT) to input and adjust these parameters. The machine's vernier caliper functions can assist in measuring winding width and starting points.

6.3. Program Memory

The LY 810 can store up to 999 groups of winding parameters. This memory has off-power retention, meaning your programs will not be lost when the machine is turned off. Use the "DATA SEL" or similar function to recall stored programs.

6.4. Automatic Functions

- **Automatic Reset:** Resets the winding counter or position to zero.
- **Automatic Start (Job-hopping winding):** Initiates the winding process automatically based on programmed settings.
- **Excessive Speed Detection:** The machine can detect excessive winding speed and automatically reduce it to a stable state, preventing wire breakage or winding errors.

6.5. Operation Steps

1. Power on the machine using the main power switch.
2. Select or create a winding program using the control panel. Input all necessary parameters (wire gauge, turns, speeds, etc.).
3. Mount the bobbin or core onto the winding spindle.
4. Thread the wire through the wire guide and secure it to the bobbin/core.
5. Press the "START" button on the control panel or use the foot-switch to begin the winding process.
6. Monitor the winding process. The machine's self-inspecting functions will help detect errors.
7. To pause or stop, press the "STOP" button or release the foot-switch. For emergency, press the emergency stop button.
8. Once winding is complete, carefully remove the wound coil.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your LY 810 machine.

- **Cleaning:** Regularly clean the machine's exterior, especially the winding area, to remove dust, wire fragments, and debris. Use a soft, dry cloth. For stubborn dirt, a slightly damp cloth can be used, ensuring no moisture enters electronic components.
- **Lubrication:** Periodically apply a small amount of machine oil to moving parts, such as the winding displacement guide rails and spindle bearings, as recommended by general machine maintenance practices. Avoid over-lubrication.
- **Fuse Replacement:** If the machine fails to power on or experiences electrical issues, check the fuse located near the power input (refer to Figure 3.6 for fuse location). Disconnect power before inspecting or replacing the fuse. Use only fuses of the specified type and rating.
- **Wire Guide Inspection:** Inspect the wire guides and tensioning mechanisms for wear or damage. Worn guides can scratch wire and affect winding quality. Replace if necessary.
- **Cable Inspection:** Check all power and control cables for fraying, cuts, or damage. Replace any damaged cables immediately.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your LY 810 machine.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Machine does not power on.	No power supply; Blown fuse; Loose power cable.	Check power outlet; Replace fuse (refer to Maintenance section); Ensure power cable is securely connected.
Winding speed is inconsistent or too fast/slow.	Incorrect speed setting; Machine detecting excessive speed.	Adjust speed parameters on the control panel; Allow the machine's automatic speed detection to stabilize.
Wire displacement is erratic or not moving.	Incorrect displacement width setting; Obstruction in wire path; Step-servo motor issue.	Verify winding displacement width setting; Clear any obstructions; Contact support if motor issue is suspected.
Machine displays an error code.	Internal system error; Sensor malfunction.	Refer to the machine's internal error code list (if available in a separate manual); Try restarting the machine; If persistent, contact support. The machine has self-inspecting functions for errors.
Winding quality is poor (uneven turns, loose coils).	Incorrect wire tension; Incorrect winding parameters (turns, width); Worn wire guides.	Adjust wire tension; Re-check and adjust winding parameters; Inspect and replace worn wire guides.

For issues not listed here or if troubleshooting steps do not resolve the problem, please contact customer support.

9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided at the time of purchase or contact your retailer. ROROLL is committed to providing high-quality products and customer satisfaction. If you require technical assistance, have questions about operation, or need to report a problem, please contact ROROLL customer support through the vendor from whom you purchased the machine. Please have your model number (LY 810 / 1005005675309970) and purchase details ready when contacting support.

