ZXSYYDS 801H

ZXSYYDS 801H Pulse Spot Welder User Manual

Model: 801H

Introduction Safety Information Package Contents Product Overview Setup Operation Maintenance Troubleshooting Specifications Warranty & Support

1. Introduction

This manual provides detailed instructions for the safe and efficient operation of your ZXSYYDS 801H Pulse Spot Welder. This high-power automatic LED pulse spot welder is designed for precision welding tasks, particularly for 18650 and 14500 lithium batteries. Please read this manual thoroughly before using the device to ensure proper function and to prevent damage or injury.

2. Safety Information

Always observe the following safety precautions to prevent electric shock, fire, or injury.

- **Power Supply:** Ensure the power supply is stable. Do not use a power strip; connect the welder directly to a power socket to avoid triggering issues. The device supports universal voltage 110V-240V.
- **Work Area:** Operate the welder in a well-ventilated area. Keep the work area clean and free of flammable materials.
- **Personal Protective Equipment (PPE):** Always wear appropriate safety glasses or a welding helmet to protect your eyes from sparks and intense light. Wear protective gloves.
- **Soldering Pins:** Keep the surface of the soldering pins clean. Wipe off any oxide layer with sandpaper before use to ensure good conductivity and welding results.
- **Pressure Regulator:** Set the pressure regulator to the correct value as specified for your welding task to avoid poor welding results.
- **Children and Pets:** Keep the device out of reach of children and pets.
- **Maintenance:** Disconnect the power before performing any maintenance or cleaning.

3. Package Contents

Verify that all items listed below are included in your package:

- 1x 801H Spot Welding Machine
- 1x S73A Rocker Arm Down Pressure Welding Tool
- 1x S-75A Split Spot Welding Pen
- 1x Wire-controlled Foot Switch
- 1x Quick Charge Adapter
- 1x Spot Welder Base
- 2x Rocker Arm Lower Pressure Welding Pin
- 1x Soldering Pen Needle
- 20x Pure Nickel Strips
- 20x Nickel Aluminum Strips

4. Product Overview

The 801H Pulse Spot Welder is a high-performance tool designed for precise and reliable spot welding. It features a capacitor energy storage system for consistent pulse welding power.

4.1 Key Features

- **High Power Output:** Peak power of 21KW with a peak welding energy of 420J.
- **Wide Voltage Input:** Supports 110V-240V universal voltage.
- **Adjustable Parameters:** Welding parameters adjustable from 0-99 for precise control.
- **LED Color Display:** Intuitive display for monitoring parameters.
- **Industrial Grade Durability:** Designed for continuous use without overheating.
- **Dual Spot Welding Modes:** Fixed head spot welding (rocker arm) and mobile spot welding (split pen).
- **Dual-Pulse Function:** Cleans oxide layers and ensures consistent energy output for improved reliability.

4.2 Control Panel and Display

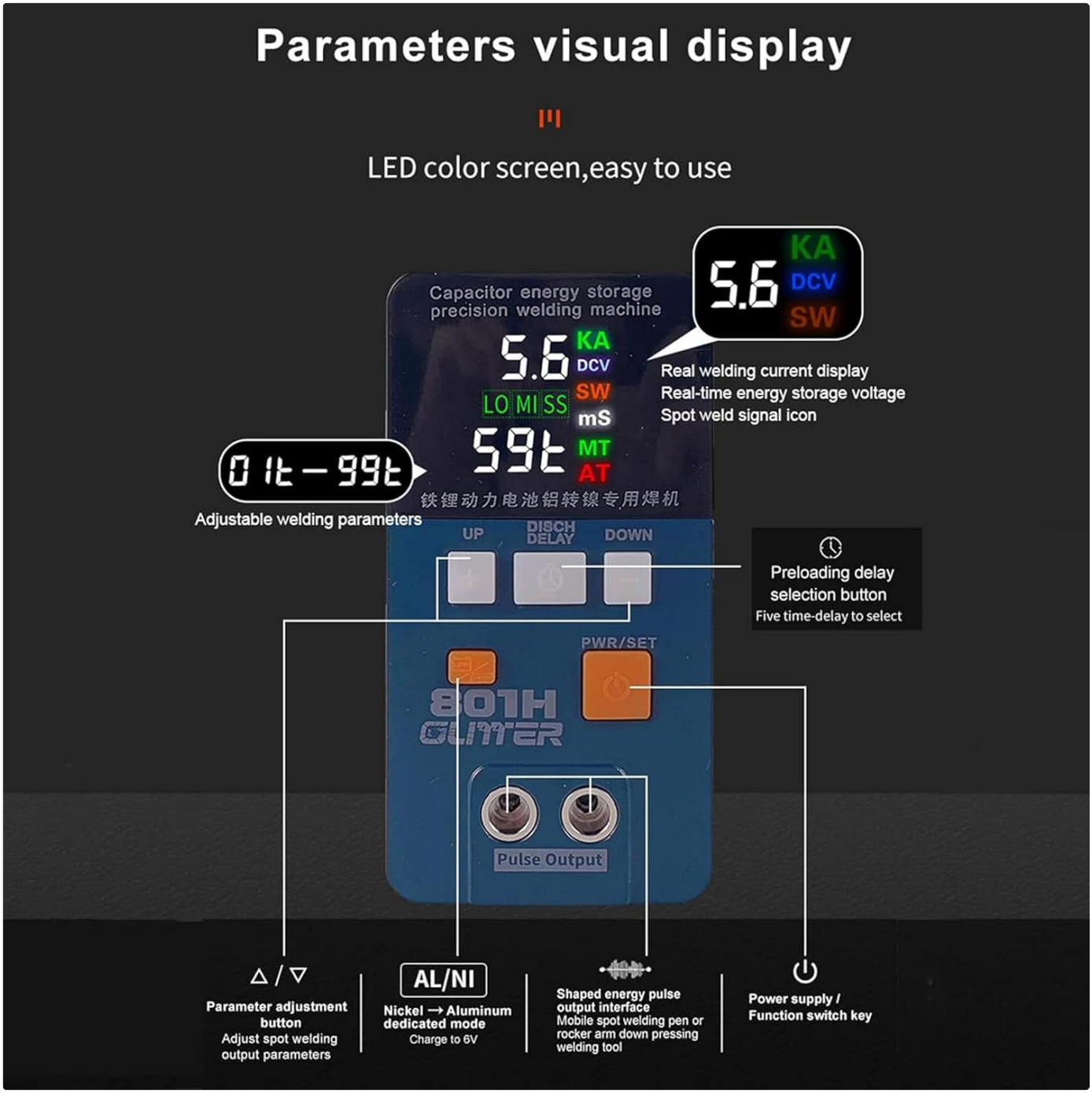


Image Description: This image shows the control panel of the 801H Pulse Spot Welder. The LED color display shows parameters such as welding current (KA), energy storage voltage (DCV), pulse time (ms), and trigger mode (MT/AT). Below the display are 'UP' and 'DOWN' buttons for parameter adjustment, a 'DISCH DELAY' button for preloading delay selection, and a 'PWR/SET' button for power and settings. Two output ports for welding tools are visible at the bottom.

The LED color display provides real-time information on welding current, energy storage voltage, and pulse time. Use the 'UP' and 'DOWN' buttons to adjust welding parameters (0-99 range) and the 'DISCH DELAY' button to select preloading delay.

5. Setup

Follow these steps for initial setup of your spot welder:

1. **Unpack:** Carefully remove all components from the packaging and verify against the package contents list.
2. **Placement:** Place the spot welding machine on a stable, flat, and non-flammable surface in a well-ventilated area.
3. **Power Connection:** Connect the Quick Charge Adapter to the welder and then directly to a stable 110V-240V power socket. Avoid using power strips.

4. **Attach Welding Tool:**
    - For **Fixed Head Spot Welding**: Attach the S73A Rocker Arm Down Pressure Welding Tool to the designated output ports. Ensure the rocker arm lower pressure welding pins are securely installed.
    - For **Mobile Spot Welding**: Attach the S-75A Split Spot Welding Pen to the designated output ports. Ensure the soldering pen needle is securely installed.
5. **Foot Switch (Optional):** If using the foot trigger mode, connect the wire-controlled foot switch to its designated port on the welder.
6. **Preparation:** Ensure the surfaces of the welding pins/needles are clean. Use fine-grit sandpaper to remove any oxidation if necessary.

6. Operating Instructions

The 801H offers versatile welding modes and precise control for various applications.

6.1 Power On and Initial Settings

1. Press the 'PWR/SET' button to power on the device.
2. The LED display will illuminate, showing current parameters.
3. Adjust the welding parameters (0-99) using the 'UP' and 'DOWN' buttons according to the material thickness and type.
4. Select the preloading delay using the 'DISCH DELAY' button if required.

6.2 Welding Modes (AT/MT)



Image Description: This image illustrates the two welding modes: Foot-controlled spot welding (MT mode) and Automatic trigger spot welding (AT mode). The MT mode is shown with a foot pedal and is suitable for precision welding. The AT mode is shown with the welding pen making contact, indicating user-friendly operation with preloading delay control.

The 801H supports two trigger modes: Automatic Trigger (AT) and Foot Trigger (MT).

- **Automatic Trigger (AT) Mode:** The welder automatically detects contact with the workpiece and triggers the weld after a preloading delay. This mode is suitable for general use and offers user-friendly operation.
- **Foot Trigger (MT) Mode:** Welding is initiated by pressing the foot switch. This mode provides precise control over the welding timing, ideal for delicate or precision tasks.

6.3 Dual-Pulse Dual-Mode Function

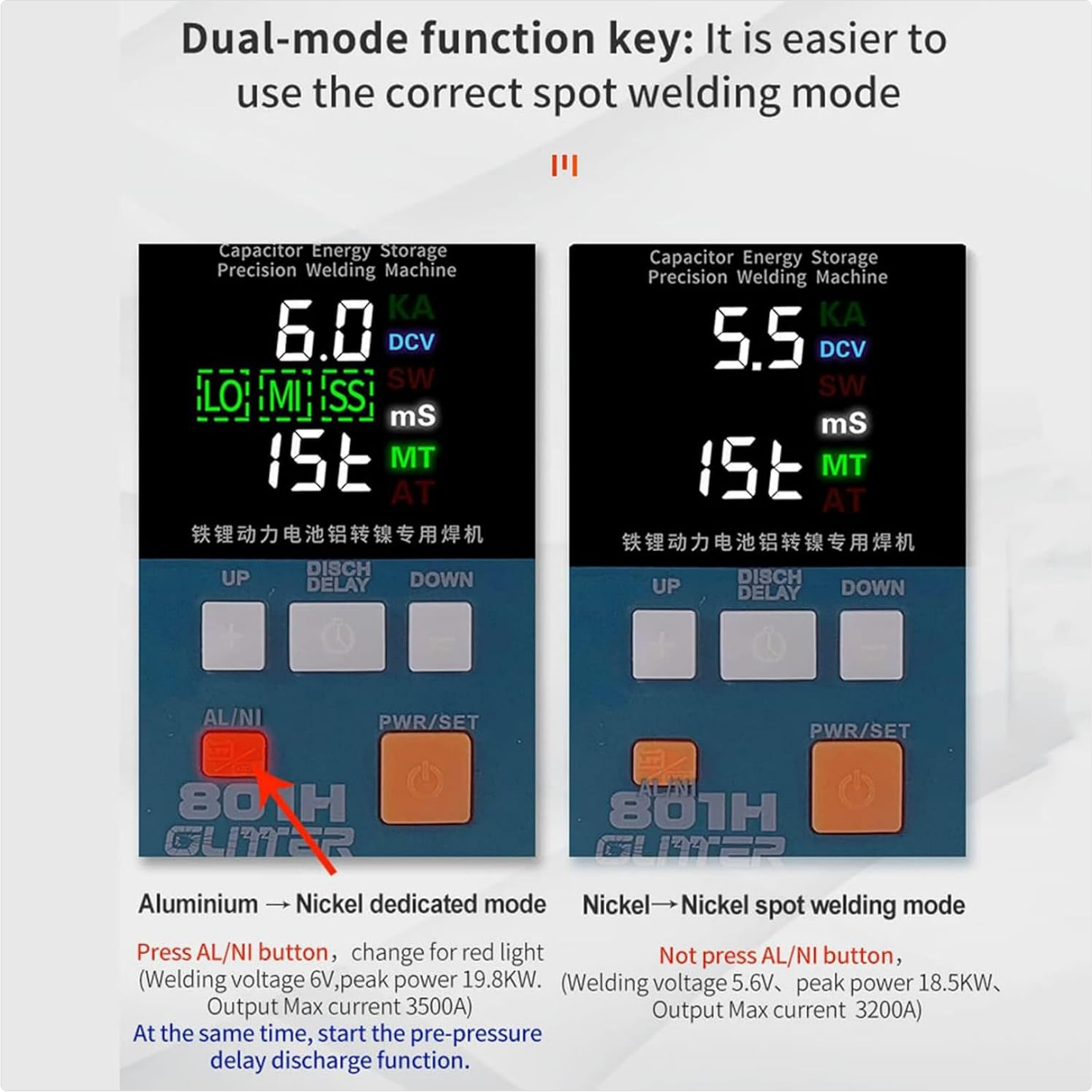


Image Description: This image displays two control panel configurations for the dual-mode function. The left panel shows the "AL/NI" button pressed, indicating the Aluminium to Nickel dedicated mode (welding voltage 6V, peak power 19.8KW, output max current 3500A). The right panel shows the "AL/NI" button not pressed, indicating the Nickel to Nickel spot welding mode (welding voltage 5.6V, peak power 18.5KW, output max current 3200A). This button allows switching between modes for different material combinations.

The 801H features a dual-pulse function with specific modes for different materials:

- **Ni-Aluminum Special Mode:** For welding nickel-plated to aluminum. Press the 'AL/NI' button. This mode operates at a welding voltage of 6V, peak power of 19.8KW, and a maximum output current of 3500A. It includes a pre-pressure delay discharge function.
- **Nickel-Nickel Special Mode:** For welding pure nickel or nickel-plated materials to nickel. This is the default mode when the 'AL/NI' button is not pressed. It operates at a welding voltage of 5.6V, peak power of 18.5KW, and a maximum output current of 3200A.

In both modes, the dual-pulse function releases two pulses: the first pulse cleans the oxide layer on the weldment surface, and the second pulse performs the weld, ensuring consistent energy output and improved welding reliability.



Image Description: This image shows the 801H spot welder in operation, performing nickel-to-nickel welding on a battery pack. The welding pen is applying pressure to a nickel strip on top of cylindrical batteries. The display shows welding parameters. The text indicates this mode is suitable for welding pure nickel and nickel-plated sheets of ternary lithium batteries, capable of soldering 0.3mm pure nickel, 0.4mm nickel-plated, and 0.5mm stainless steel with high welding reliability and no blackening at the weld spot.

6.4 Using the Fixed Rocker Arm Welding Tool (S73A)



Image Description: This image demonstrates the use of the fixed rocker arm push-down welding tool. A hand is shown pressing down on the rocker arm, which applies pressure to the welding pins on a nickel strip over a battery pack. The text highlights its ability to "Weld thicker! Weld more firmly!" and specifically mentions "0.4mm pure nickel welding firmly" with "3500A Current!".

The S73A rocker arm tool is designed for stable and firm welding, especially for thicker materials. Position the workpiece under the welding pins. Apply firm, even pressure using the rocker arm. The welder will trigger automatically in AT mode, or you can use the foot switch in MT mode.

6.5 Using the Mobile Spot Welding Pen (S-75A)

The S-75A split spot welding pen offers flexibility for various welding positions. Hold the pen firmly, ensuring both electrodes make simultaneous contact with the workpiece. Apply light pressure. The weld will trigger based on the selected mode (AT or MT).

7. Maintenance

Proper maintenance ensures the longevity and performance of your spot welder.

- **Cleaning Welding Pins:** Regularly inspect and clean the welding pins/needles. Use fine-grit sandpaper to remove any accumulated oxides or residue. Clean pins ensure optimal conductivity and welding quality.
- **General Cleaning:** Keep the main unit clean and free of dust and debris. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Storage:** When not in use, store the welder and its accessories in a dry, cool place, away from direct sunlight and moisture.
- **Cable Inspection:** Periodically check all cables and connections for any signs of wear, damage, or loose connections. Replace damaged components immediately.

8. Troubleshooting

If you encounter issues with your 801H Pulse Spot Welder, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Poor welding results (weak welds, blackening)	◦ Dirty or oxidized welding pins. ◦ Incorrect pressure setting. ◦ Incorrect welding parameters (pulse time, power). ◦ Unstable power supply.	◦ Clean welding pins with sandpaper. ◦ Adjust pressure regulator to the correct value. ◦ Adjust welding parameters (0-99) as needed for material. ◦ Ensure direct connection to a stable power socket, not a power strip.
Welder does not power on	◦ Power cable not connected. ◦ No power from the outlet. ◦ Faulty power adapter.	◦ Check power cable connection. ◦ Test outlet with another device. ◦ Contact customer support if adapter is suspected faulty.
Welder triggers unexpectedly or not at all	◦ Incorrect trigger mode selected (AT/MT). ◦ Foot switch not connected or faulty (MT mode). ◦ Poor contact with workpiece (AT mode).	◦ Verify selected trigger mode. ◦ Check foot switch connection and functionality. ◦ Ensure firm and simultaneous contact of both electrodes with the workpiece.

9. Specifications

Technical specifications for the ZXSYYDS 801H Pulse Spot Welder:

Feature	Detail
Model	801H
Peak Power	21KW
Peak Welding Energy	420J
Welding Thickness Range	0.05-0.5mm
Pulse Time	0-20ms
Trigger Mode	Automatic (AT) / Foot Trigger (MT)

Feature	Detail
Spot Welding Method	Fixed Head Spot Welding / Mobile Spot Welding
Input Voltage	110V-240V (Universal)
Item Weight	8.8 pounds (approx. 4 kg)
Package Dimensions	3.94 x 3.94 x 3.94 inches (approx. 10 x 10 x 10 cm)

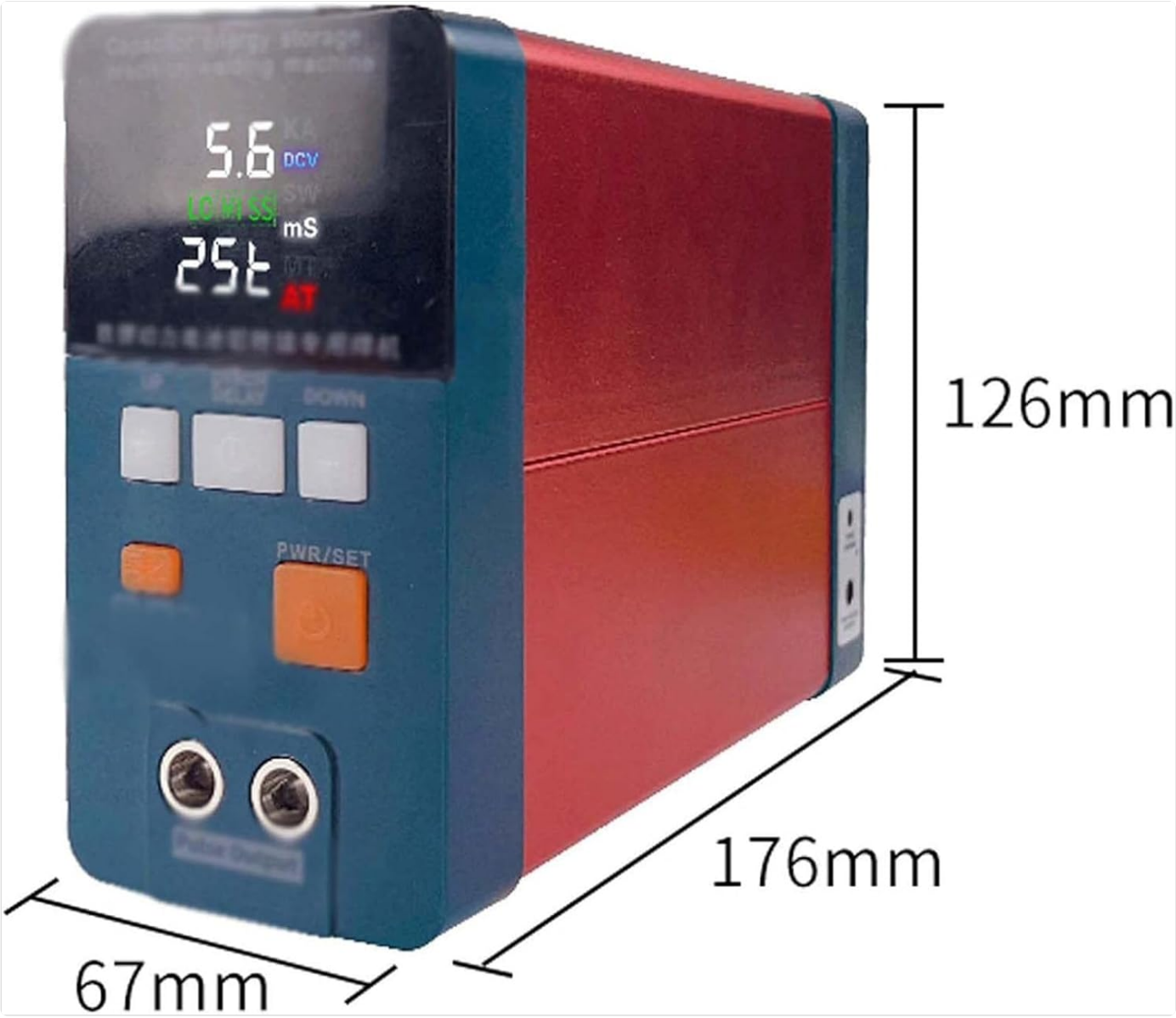


Image Description: This image provides the physical dimensions of the 801H Pulse Spot Welder. The main unit measures approximately 176mm in length, 67mm in width, and 126mm in height.



Image Description: This image highlights the power supply capabilities of the 801H Pulse Spot Welder. It shows a voltage range from 100V to 240V, emphasizing its 45W low input and high energy efficiency. The text states "zero interference" and suitability for "any power supply environment" due to its high-frequency inverter energy storage super capacitor discharge technology, which eliminates interference to the AC power supply and prevents switch tripping.

10. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact ZXSYYDS customer service. Keep your purchase receipt as proof of purchase.
Contact Information: Please refer to the seller's contact details on your purchase platform or the official ZXSYYDS website for support.

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