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AWithZ UK1

AWithZ UK1 Mini Portable Spot Welder Instruction Manual

Model: UK1

1. INTRODUCTION

The AWithZ UK1 Mini Portable Spot Welder is a versatile and compact tool designed for precise spot welding applications, particularly for battery pack assembly and repair. Featuring a 9000W output, it offers stable welding performance while protecting battery cells. Its intuitive knob control and dual operating modes (automatic and pedal) make it suitable for both beginners and experienced users.

This manual provides essential information on the safe and effective use of your AWithZ UK1 spot welder. Please read it thoroughly before operation.



AWithZ

Saldatrice a punti più recente - Serie UK

01 Poggiapiedi standard

02 Interruttore rotativo

03 Design modulare

-UK1/ UK3/ UKF10 -

The image shows three AWithZ UK1 Mini Portable Spot Welders arranged on a light blue stepped platform. One is on the top step, one on the middle step, and one on the bottom step. The device is black with a silver knob and a small display. The text 'AWithZ' and 'UKF10' are visible on the device. The background is a light blue gradient.

Figure 1: AWithZ UK1 Mini Portable Spot Welder with key components.

2. SAFETY INFORMATION

- Always wear appropriate personal protective equipment, including safety glasses, during operation to protect against sparks.
- Ensure the work area is well-ventilated and free from flammable materials.
- This spot welder is **not suitable** for welding copper, gold, silver, or jewelry.
- When welding pure nickel, a flux may be required to achieve optimal results.
- Do not attempt to weld materials thicker than the specified limits to avoid damaging the device or producing weak welds.
- Keep the device away from water and high humidity.
- Do not disassemble or modify the device. Refer all servicing to qualified personnel.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x AWithZ UK1 Spot Welding Unit
- 2 x WP110 Spot Welding Pens
- 1 x Foot Pedal
- 1 x Nickel-Plated Strip (approx. 2m)
- 1 x USB-C Charging Cable (approx. 0.5m)
- 1 x Sandpaper
- 1 x Instruction Manual
- 1 pair of spare Soldering Pins



Servizio One-Stop

Set completo di accessori, risparmiando la fatica la preoccupazione e lo sforzo di dover acquistare separatamente,

- Saldatrice a punti (UK1) x1
- Penne di saldatura x2
- Lamiera nichelata x1
- Pedale x1
- Cavi di ricarica x2
- Manuale di istruzioni x1

Figure 2: All included components in the AWithZ UK1 package.

4. PRODUCT OVERVIEW

The AWithZ UK1 is designed for portability and ease of use. It features a compact body with an intuitive control interface.

4.1 Physical Characteristics

- **Dimensions:** Approximately 150mm (length) x 100.5mm (width) x 48mm (height).
- **Weight:** Approximately 370g (main unit).
- **Battery:** Built-in high-quality Lithium-polymer battery.

4.2 Interface and Controls

- **Adjustment Knob/Button:** Used for powering on/off, toggling options, and adjusting parameters. Rotate clockwise to increase, counter-clockwise to decrease. Short press to confirm selections.
- **Display Screen:** LED display showing current mode, gear (power level), trigger settings, and continuous weld count.
- **Trigger Interface:** Port for connecting the foot pedal.
- **Type-C Charging Port:** For charging the internal battery.
- **Spot Welding Pen Installation Interface:** Ports for connecting the welding pens.



Figure 3: Detailed view of the AWithZ UK1 unit with dimensions and interface labels.

5. SETUP

5.1 Initial Charging

Before first use, fully charge the spot welder. Connect the provided USB-C charging cable to the Type-C charging port on the device and to a suitable USB power adapter (not included).

- The display will indicate charging status. A full circle on the display indicates 100% charge.
- It is recommended to charge the device regularly, even during periods of inactivity, to maintain battery health.

5.2 Connecting Welding Pens

Insert the two spot welding pens into the designated installation interfaces on the front of the unit. Ensure they are securely connected.

5.3 Connecting Foot Pedal (Optional)

If using the foot pedal for manual welding, plug its connector into the Trigger Interface port on the unit.

6. OPERATING INSTRUCTIONS

6.1 Power On/Off

To power on or off the device, **long press** the adjustment knob.

6.2 Parameter Adjustment

The AWithZ UK1 offers precise control over welding parameters via its single knob interface. The display shows four main adjustable parameters: Mode, Gear, Trigger, and Cont Welds.

1. **Rotate the knob** to cycle through the available options (Mode, Gear, Trigger, Cont Welds).
2. **Short press the knob** to select the flashing option and enter adjustment mode for that parameter.
3. **Rotate the knob** to adjust the parameter value (clockwise to increase, counter-clockwise to decrease).
4. **Short press the knob** again to confirm the new setting and exit adjustment mode for that parameter.



Figure 4: Knob operation for parameter adjustment.

Parameter Details:

- **Mode:** Selects between Automatic (A) and Pedal (M) welding modes.

- **Gear:** Adjusts the welding power level from 1 to 100. Higher numbers indicate more power.
- **Trigger:** (Only for Automatic Mode) Sets the delay time (0.5-5 seconds) before a weld is triggered after the pens contact the material.
- **Cont Welds:** Sets the number of continuous welding pulses (1 or 2) for a single trigger.

6.3 Welding Process

The AWithZ UK1 is suitable for welding nickel-plated steel (0.1-0.35mm), pure nickel (0.1mm), and steel (0.1-0.3mm) for battery pack assembly and repair. It is commonly used for 18650 battery welding.

1. **Prepare the Material:** Ensure the nickel strip and battery terminals are clean and free of oxidation. Use the included sandpaper if necessary.
2. **Position the Strip:** Place the nickel strip firmly onto the battery terminal where the weld is desired.
3. **Position Welding Pens:** Hold the welding pens perpendicular to the nickel strip, with the tips making firm contact with the strip, directly above the battery terminal. Ensure the tips are close to each other but not touching.
4. **Initiate Weld:**
 - **Automatic Mode:** The weld will trigger automatically after the set delay once both pen tips make contact.
 - **Pedal Mode:** Press the foot pedal to trigger the weld. This offers more precise control over the timing.
5. **Inspect Weld:** After welding, gently test the strength of the weld. Adjust the 'Gear' (power level) as needed for stronger or weaker welds.

Your browser does not support the video tag.

Video 1: Demonstration of AWithZ UK1 Spot Welder operation, including interface, charging, and welding in both manual and auto modes.

AWithZ Battery Spot Welder UK1

Ideal for repairing/replacing battery packs

Battery-Care | Stable | Efficient



with 2 spot welding modes:



Auto Mode



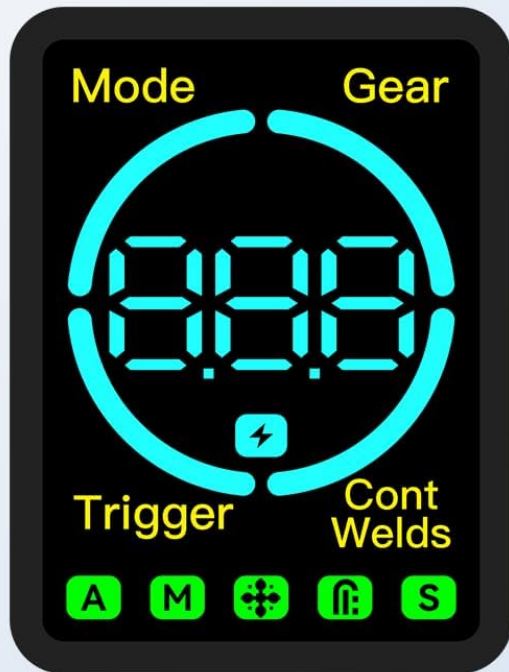
Foot Pedal Mode

Figure 5: Illustration of Auto Mode and Foot Pedal Mode for welding.

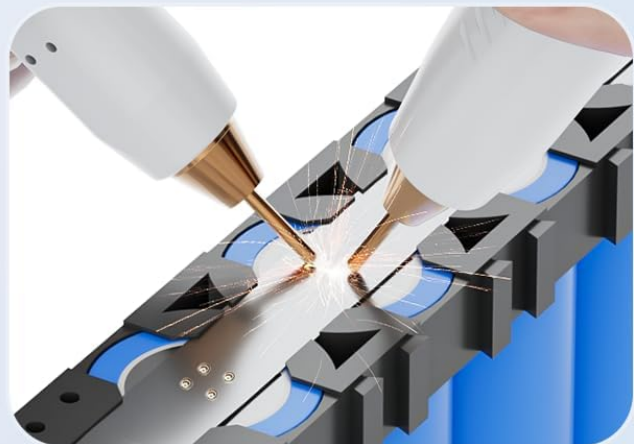
1~100 Welding power levels

Easily make battery packs

Supports connection welding points 1-2



welding materials & thickness



Cont Welds 1

Cont Welds 2

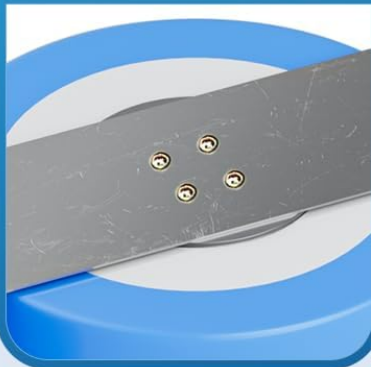


0.1~0.2mm

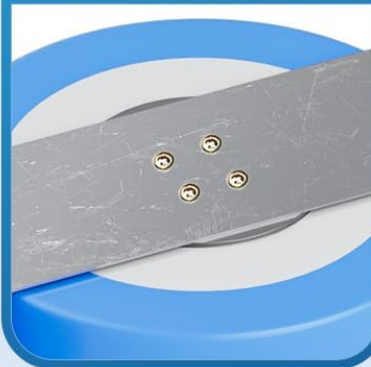


0.2~0.3mm

Nickel-plated
0.25mm (Max)



Pure nickel
0.1mm (Max)



Steel
0.2mm (Max)

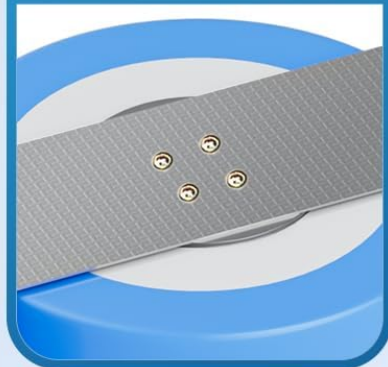


Figure 6: Welding power levels and material compatibility.

7. MAINTENANCE

7.1 Electrode Tip Maintenance

Over time, the welding tips may oxidize or become worn, affecting weld quality. Use the provided sandpaper to gently polish the tips to remove any oxide layer. Replace the soldering pins if they become excessively worn or damaged.

Modular & Removable Design

Easy to replace parts

- Safe | Durable | Stable -



Knob switch

Can be rotated clockwise or counterclockwise to **adjust** parameters.

You can press it down like a button to confirm the selection.

Detachable spot welding pen

Spot welding machine can be **disassembled** for easy storage, and even if the pen is damaged during use, it can be **replaced** with a new one.



Welding needle detachable

After several rounds of welding oxidation, simply replace the welding **needle** to make the welding pen look brand new.

Figure 7: Detachable welding pen and replaceable welding needle.

7.2 Storage

Store the device in a cool, dry place when not in use. Detach the welding pens for easier storage and portability.

8. TROUBLESHOOTING

- **Weak or Inconsistent Welds:**
 - Ensure welding tips are clean and polished.
 - Increase the 'Gear' (power level) setting.

- Verify the material thickness is within the specified range.
- Ensure firm contact between welding pens, nickel strip, and battery terminal.
- **Device Not Powering On:**
 - Check battery charge level and recharge if necessary.
 - Ensure the power button (knob) is long-pressed correctly.
- **Overheating:** The device features intelligent thermal protection and auto-shutoff after 8 minutes of inactivity to prevent overheating. Allow the device to cool down if it becomes excessively warm.

9. SPECIFICATIONS

Feature	Detail
Manufacturer	AWithZ
Model	UK1
Product Dimensions (L x W x H)	15 x 10 x 4.8 cm
Weight (Main Unit)	Approx. 370 grams
Battery Type	Lithium-polymer (included)
Power Output	9000 Watts
Weldable Nickel-Plated Steel Thickness	0.1 - 0.35 mm
Weldable Pure Nickel Thickness	0.1 mm
Weldable Steel Thickness	0.1 - 0.3 mm
Operating Modes	Automatic, Pedal (Manual)
Power Adjustment Levels	1 - 100

10. WARRANTY AND SUPPORT

AWithZ is committed to providing reliable products and excellent customer service. If you have any questions, concerns, or require technical assistance regarding your UK1 Mini Portable Spot Welder, please contact AWithZ customer support through the retailer where you purchased the product.