Bulipu SUNKKO 737G

Bulipu 737G+ 4.3KW Battery Spot Welder User Manual

Model: SUNKKO 737G

Introduction

This manual provides detailed instructions for the safe and effective operation, setup, maintenance, and troubleshooting of the Bulipu 737G+ 4.3KW Battery Spot Welder. This machine is specifically designed for precision welding of battery packs, including 18650 and 14500 lithium batteries.
Please read this manual thoroughly before operating the device to ensure proper usage and to prevent damage or injury.

Safety Precautions

- Always wear appropriate personal protective equipment (PPE), including safety glasses and gloves, when operating the spot welder.
- Ensure the work area is well-ventilated and free from flammable materials.
- Do not operate the welder in wet or damp conditions.
- Disconnect power before performing any maintenance or adjustments.
- Keep children and unauthorized personnel away from the operating area.
- The 737G+ can weld pure nickel, nickel plated steel, iron, etc. It**CANNOT** weld copper and aluminum.
- When adjusting the distance between welding pins or rods, always turn off the welder first to avoid short circuits.

Product Overview

The Bulipu 737G+ is an advanced spot welder featuring both fixed welding head and mobile welding pen options for versatile battery pack assembly. It offers precise pulse welding control for various nickel strip thicknesses.



Figure 1: Front view of the 737G+ spot welder with the mobile welding pen and foot pedal connected. The display shows "IP 40" for pulse settings.



Figure 2: The 737G+ spot welder in operation, showing a user welding a battery pack using the fixed welding head. The display shows "2P 50" for pulse settings.



Figure 3: Side view of the 737G+ spot welder illustrating its dimensions: 8.3 inches height, 9.1 inches depth, and 5.5 inches width.

Setup

1. **Unpacking:** Carefully remove all components from the packaging. Verify that all parts are present: main unit, mobile welding pen, fixed welding head, foot pedal, and power cord.
2. **Power Connection:** Connect the power cord to the welder and then to a standard AC 110V±10% power outlet.

3. **Welding Head/Pen Connection:**
    - For **Fixed Welding Head**: Insert the copper welding rods into the designated ports on the front panel. Ensure they are securely fastened.
    - For **Mobile Welding Pen**: Connect the mobile welding pen cable to the corresponding ports on the front panel.
4. **Foot Pedal Connection:** If using the foot pedal, plug it into the designated port on the rear or side of the unit. Note: When the foot pedal is plugged in, the unit operates in MT (Manual Trigger) mode; otherwise, it operates in AT (Automatic Trigger) mode.
5. **Electrode Adjustment:** Before powering on, adjust the distance between the welding pins on the mobile welding pen or the copper welding rods of the fixed head. Ensure they are not in contact with each other to avoid short circuits.

Operating Instructions

Welding Modes:

The 737G+ offers three primary welding methods:

Method 1: Fixed Welding Head with Foot Pedal (MT Mode)

This method is ideal for repetitive tasks and offers high precision. The foot pedal allows for precise timing of the weld. The fixed welding tips feature an LED light function for enhanced visibility and precise placement during welding.

- Ensure the foot pedal is plugged in.
- Adjust the pressure adjustor on the fixed head to optimize weld reliability and appearance.
- **Welding Range:** 0.15~0.35mm for nickel plated steel, 0.12~0.25mm for pure nickel strip.
- Place the nickel strip and battery in position under the fixed welding rods.
- Press the foot pedal to initiate the weld.

Method 2: Mobile Welding Pen with Foot Pedal (MT Mode)

The precise S70BN Mobile Welding Pen extends your welding area, suitable for larger battery packs or projects requiring flexibility. It features a double-click welding needle balance spring pressure for more balanced solder joints and adjustable solder joint distance.

- Ensure the foot pedal is plugged in.
- **Welding Range:** 0.05~0.2mm for nickel plated steel, 0.05~0.15mm for pure nickel strip.
- Position the mobile welding pen tips on the nickel strip and battery.
- Press the foot pedal to initiate the weld.

Method 3: Mobile Welding Pen with Automatic Trigger (AT Mode)

This mode allows for quick, one-handed operation without the need for a foot pedal. The weld triggers automatically when both soldering pen's tips touch the interface components, making it suitable for quickly welding large power battery packs.

- Ensure the foot pedal is **unplugged**.
- **Welding Range:** Same as Method 2 (0.05~0.2mm for nickel plated steel, 0.05~0.15mm for pure nickel strip).
- Touch both welding pen tips simultaneously to the nickel strip and battery to trigger the weld.

General Operation Steps:

1. **Power On:** Turn on the main power switch. The digital display will illuminate.
2. **Set Current:** Use the "SET CURRENT" adjustment buttons (up/down arrows) to set the desired welding current

(120 ~ 1200 A). Start with lower settings and increase as needed based on material thickness.

3. **Set Pulse Quantity:** Adjust the pulse quantity (Max. 18 pulses) using the appropriate controls. More pulses generally result in stronger welds for thicker materials.
4. **Test Welds:** Always perform test welds on scrap material of the same type and thickness before welding your actual battery pack. Inspect the welds for strength and appearance.
5. **Welding:** Proceed with welding according to your chosen method.
6. **Power Off:** After use, turn off the main power switch and disconnect from the power outlet.

Maintenance

- **Electrode Cleaning:** Regularly clean the welding tips of both the fixed head and mobile pen to remove any residue or oxidation. This ensures consistent weld quality.
- **Electrode Sharpening/Replacement:** If welding tips become dull or pitted, sharpen them using a fine-grit abrasive or replace them with new ones. Dull tips can lead to poor welds.
- **Ventilation:** Ensure the ventilation slots on the unit are clear of dust and debris to prevent overheating. Use compressed air to clean if necessary.
- **Cable Inspection:** Periodically inspect all cables and connections for signs of wear, fraying, or damage. Replace any damaged components immediately.
- **Storage:** Store the welder in a dry, clean environment away from direct sunlight and extreme temperatures.

Troubleshooting

Problem	Possible Cause	Solution
No power	Power cord disconnected, faulty outlet, internal fuse blown.	Check power cord connection. Test outlet. Consult qualified technician for fuse replacement.
Weak or inconsistent welds	Insufficient current setting, dirty/dull welding tips, incorrect pressure, wrong material.	Increase current setting. Clean or sharpen tips. Adjust pressure. Ensure material is weldable (nickel, nickel-plated steel, iron).
Excessive sparking or burning	Too high current setting, tips too sharp, poor contact.	Decrease current setting. Slightly dull tips if too sharp. Ensure firm contact with workpiece.
Welder does not trigger in AT mode	Foot pedal is plugged in.	Unplug the foot pedal.
Welder triggers automatically in MT mode	Foot pedal is not plugged in or faulty.	Ensure foot pedal is securely plugged in. Test foot pedal.

Specifications

Feature	Value
Input Voltage	AC 110 V±10%

Feature	Value
Welding Current	120 ~ 1200 A
Single Pulse Time	5ms
Max. Pulse Quantity	18
Welding Needle Distance (Adjustable)	2 - 7 mm
Cable Cross Sectional Area	16mm²
Fixed Head Welding Range (Nickel Plated Steel)	0.15~0.35mm
Fixed Head Welding Range (Pure Nickel Strip)	0.12~0.25mm
Mobile Pen Welding Range (Nickel Plated Steel)	0.05~0.2mm
Mobile Pen Welding Range (Pure Nickel Strip)	0.05~0.15mm
Item Weight	14.01 pounds
Package Dimensions	13.39 x 13.07 x 7.17 inches
Manufacturer	Sunkko
Model Number	SUNKKO 737G

Warranty and Support

For warranty information and technical support, please contact Bulipu customer service. Refer to your purchase documentation for specific warranty terms and contact details.
Manufacturer: Sunkko
Model: SUNKKO 737G
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