



## Model: 709AD+

### Battery Spot Welder with Soldering Function

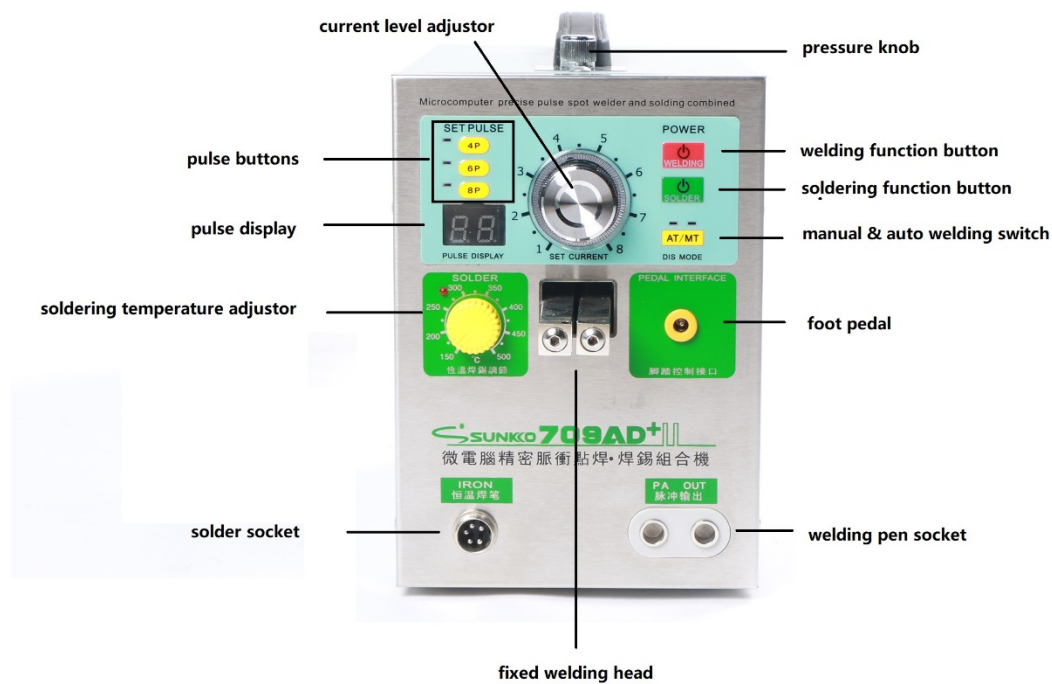
Thank you for choosing Sunkko 709AD+ battery spot welder, let's now make the building of Lithium battery pack for our ebike more convenient and efficient.

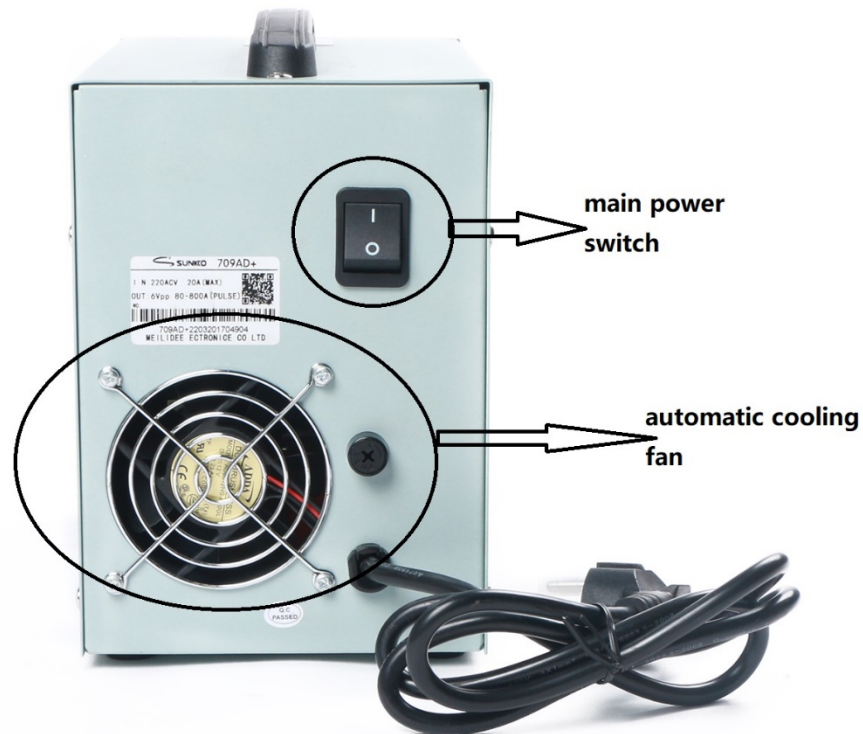


# Summary

709AD+ is our classic model which enjoys a good reputation and is highly evaluated by our beloved customers. It is specifically designed for battery welding (18650, 14500 and any other lithium batteries, etc) and can be used to weld nickel strips with thickness between 0.05 and 0.3 mm for nickel plated steel or between 0.05 and 0.25 mm for pure nickel strip. With the built-in LED light, you can even work at night.

We understand that after a battery pack is done, the next step would be solder a BMS to it, which is why 709AD+ is equipped with a solder.





◆ **Now let's talk about the welding part.**

1. The 709AD+ welder can weld nickel strip with thickness under 0.3mm for nickel plated steel, or 0.05 - 0.25 mm for pure nickel strip.

2. Four ways of welding:

**Fixed welding head:** You can build your battery pack with the fixed welding head, in this case, you need to adjust the pressure adjustor to make the spots more reliable and elegant.

**Fixed welding head with foot pedal:** Different users may have different welding habits, so we added a foot pedal to 709AD+. Coordinating hands and feet at the same time will also make the long-term spot welding process not so tiring, plus the use of foot pedal during battery welding improves the precision of spot welding.

**Mobile welding pen with foot pedal(MT):** The mobile welding pen effectively extends your welding area, and this design is popular among electric hobbyist, because they can build large lithium battery packs for their e-bikes or other projects.

**Mobile welding pen without pedal(AT):** In this mode, you need to unplug the foot pedal

first, and switch welding mode from MT to AT via the "AT/MT" button. Once the welding pen attaches nickel strip, the welding pen will release the energy and weld automatically, you just need to give a little pressure to the pen just like you are writing.

In general, there are two methods to improve the output power of spot welding: adjusting welding current level through current knob or adjusting pulse quantity. You may need to play with them a bit to get the best combination for your specific use. **(Attention:** This spot welder can be used to weld pure nickel, nickel plated steel, nickel plated iron, iron and other alloys. It CANNOT weld metal like copper and aluminum.)

### **Specification for welding part:**

Input voltage: AC 110 V/220 V $\pm$ 10%

Welding current: 50 ~ 800 A

Single pulse time: 5ms

Max. pulse quantity: 18

Max. power output: 3.2 KW (instantaneous)

Fixed welding part:

Welding thickness for nickel plated steel: 0.05 ~ 0.3 mm

Welding thickness for pure nickel: 0.05 ~ 0.25 mm

Mobile welding part:

Welding thickness for nickel plated steel: 0.05 ~ 0.2 mm

Welding thickness for pure nickel: 0.05 ~ 0.15 mm

### **Specification for mobile welding pen:**

Welding needle distance (adjustable): 4 - 10 mm

Total length: 22.4"

Cable cross sectional area: 16 mm<sup>2</sup>

Dimension of welding needle: 1.5 x 7 mm

### **Specification for soldering part:**

Temperature range: 150~500°C (302~932°F) (up to 300°C within 7 seconds)

Soldering station power: 50 W

Output voltage: DC 20 V

Tips for soldering part:

1. You need to keep the welding part on before you use the soldering function.
2. The core and the case of soldering pen are separable, for new products, if the soldering pen doesn't work, it may be caused by the poor connection between case and

core due to transportation. Please pull out the core and then insert it back into case, and try again.

### **Preparation steps before welding:**

1. Fit the fixed welding head with copper welding rods before the machine powers on.
2. Turn on the welding power switch.
3. Adjust the pulse quantity and welding current level to make the spots more reliable and elegant.

### **How is the pressure knob works?**

The pressure knob regulates the pressure between copper welding rods and nickel strip. Generally speaking, the thinner the nickel strip, the smaller the pressure. A proper pressure between nickel strip and welding rods can also make the spots more elegant.

### **The differences between 709A and 709AD+:**

1. 709AD+ is equipped with a pulse LCD display under the pulse buttons, this display can monitor welder's working status.
2. 709AD+ is equipped with a auto cooling fan, the fan will work automatically when the welder's inner temperature gets to a certain value.
3. A mini grinder is included in 709AD+'s package, this grinder is used for removing the oxidation layer on copper welding rods.
4. 709AD+ has automatic welding function.

### **◆ Packing List:**

709AD+ main machine: 1 pc  
Soldering pen with stand: 1pc  
70B mobile welding pen: 1pc  
Copper welding rods: 2 pairs  
Mini grindr: 1pc  
USB cable: 1pc  
Battery fixture: 1 pc  
Foot Pedal: 1 pc  
Fuse: 2 pcs  
Hexagon wrench: 1 pc  
0.15 x 8 x 100 mm (nickel plated) 50 pcs  
0.1 x 4 x 100 mm (nickel plated) 50 pcs  
Manual: 1pc

### **◆ Notice**

1. When building battery pack with Sunkko welders, if the home circuit system keeps

tripping, please replace your Circuit Air Breaker. For 110V version machine, the Circuit Air Breaker in your circuit system should be higher than 40 A. For 220V version machine, the Circuit Air Breaker in your circuit system should be higher than 30 A.

2. Please put on gloves and mask during your battery pack welding process to protect yourself (Sparks may occur during welding process).
3. Unplug the welder when you are not using the welder.
4. During your welding process, the instantaneous large current generated by the welder may cause the lighting equipment under the same power system flash and it is considered normal.
5. Do not short circuits during spot welding or charging.
6. Do not use Sunkko welders with a voltage transformer as Sunkko welders are not compatible with the common voltage transformers in the market.
7. Continuously spot weld too fast will speed up the loss of internal components of the spot welder. We recommend that the time between each spot welding should be 3 seconds or longer.

#### [Warranty information](#)

If you still have questions on sunkko products, please go to the [blog](#) category on <https://www.sunkko.net/> or email [service@sunkko.net](mailto:service@sunkko.net). We are happy to assist you.