



788H

Battery Spot Welder with Lithium-ion Battery Pack Charging Function

Thank you for choosing Sunkko 788H battery spot welder, let's now make the building of Lithium battery pack more convenient and efficient.

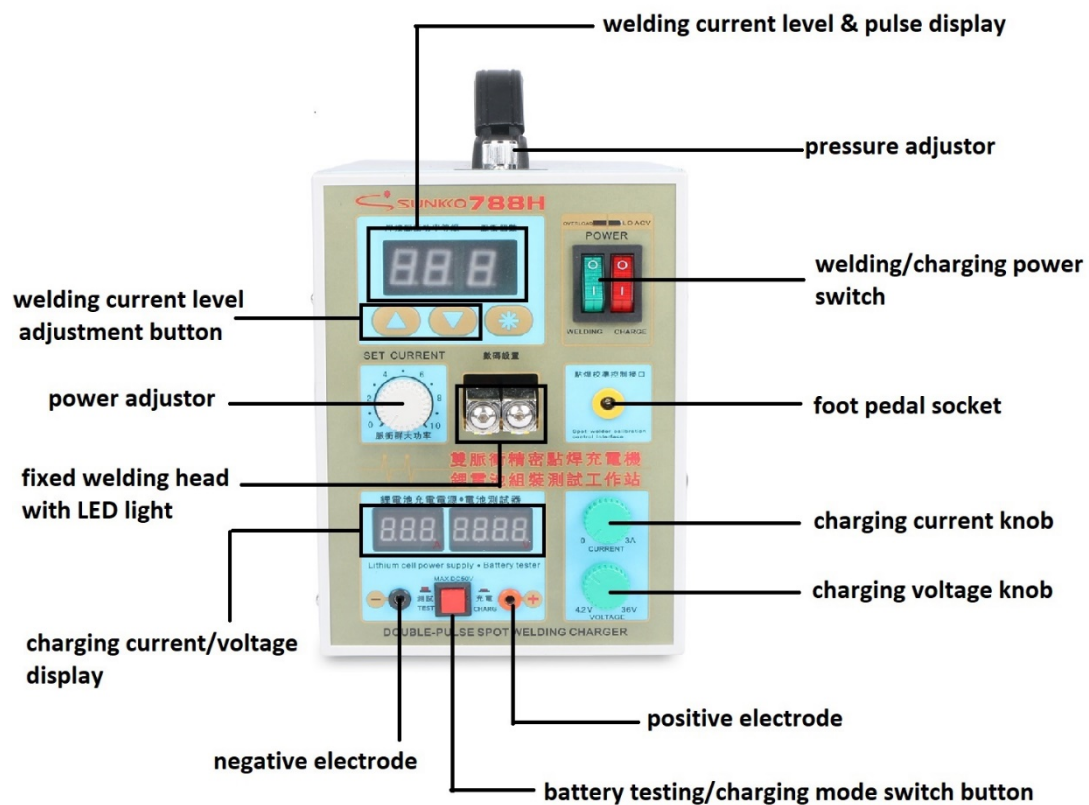


Summary

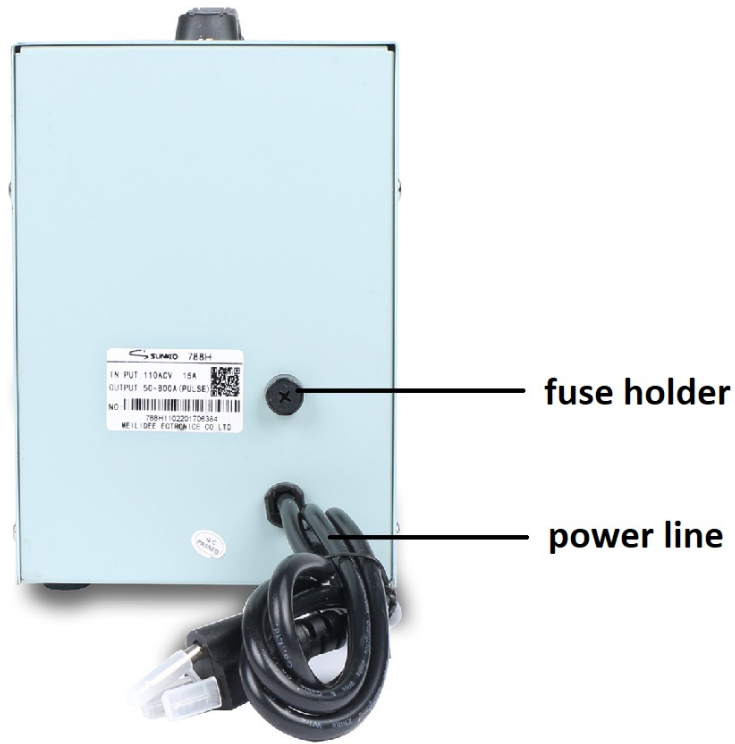
788H is our classic model which enjoys a good reputation and is highly evaluated by our beloved customers. It is specifically designed for battery welding (18650, 14500 battery, etc) and can be used to weld nickel strips with thickness between 0.05 and 0.2 mm for nickel plated steel or between 0.05 and 0.15 mm for pure nickel strip. With the built-in LED light, you can even work at night.

We understand that after the pack is done, the next step would be charging and testing, which is why 788H is equipped with a fast charging port whose voltage and current are adjustable for your convenience and with a testing mode in which you can measure the voltage and calculate the resistance of the battery pack.

Main Interface



Backside



◆ Now let's talk about the welding part.

1. The 788H welder can weld nickel strip with thickness under 0.2mm for nickel plated steel, or 0.05 - 0.15 mm for pure nickel strip.
2. Two ways of welding: fixed welding head; fixed welding head with foot pedal.
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.
Different users may have different welding habits, so we added a foot pedal to 788H. 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.

In general, there are three methods to improve the output power of spot welding: adjusting welding current, adjusting pulse quantity and adjusting power. 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 the welding part:

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

Primary current: 2 ~ 15 A

Welding current: 50 ~ 800 A

Single pulse time: 1 ~ 19 ms

Max. pulse quantity: 36

Max. power output: 2.88 KW (instantaneous)

Welding thickness for nickel plated steel: 0.05 ~ 0.2 mm

Welding thickness for pure nickel: 0.05 ~ 0.15 mm

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, welding current level and power 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.

◆ Battery testing & charging part:**Specification:**

Voltage output: 4.2 ~ 36 V

Current output: 0 ~ 3 A (Max)

Precision of constant current: \pm 2.5%

Voltage stability: \pm 1.5%

Measurement error: \pm 1.5%

Testing mode: in this mode, users can test the current actual voltage of a lithium-ion battery pack, and the testing range is under 50 volts.

Charging mode: in this mode, you can charge your lithium-ion battery pack whose voltage is between 4.2 and 36 volts, and the charging current can be adjusted from 0 ~3 A.

When you plug in the charging cables and connect them to your battery pack, the LCD voltage display will show the battery pack's current voltage. Once the displayed voltage gets close to the rated voltage of the battery and the current decreases to the

finishing rate (usually 5 amperes per 100 Ah of rated capacity), your charging process is done.

For example, I need to charge a 4800 mAh battery pack which is 3 volts but has a rated voltage of 4.2 volts, and its full capacity is.

I set the rated voltage to 4.2 volts and the charging current to 2.4 A through the knobs. When the battery pack is getting full, the value from the voltage display increased from 3 to 4.2 volts and the value from the current display decreased from 2.4 A to 0.24 A, or even lower.

Things you need to know before charging your battery or battery pack:

✧ **For battery or battery pack without BMS**

- ✓ If you want to fully charge a battery or battery pack, you need to adjust the charging voltage based on the maximum charging voltage. For example, if you need to charge a 3.6 volts (nominal voltage) lithium battery whose maximum voltage is 4.2 volts, you should set the charging voltage to 4.2 volts. Only in this way can the battery be fully charged.

(788H can fully charge a battery pack with a nominal voltage of up to 30 volts, assuming this battery pack does not have a BMS.)

- ✓ In most instances, users should adjust the charging current according to the specific battery pack, the relationship between charging current and battery pack's capacity is generally 1 amperes per 2 Ah of rated capacity and it cannot exceed 1 ampere per Ah of rated capacity. For example, if the capacity of your battery pack is 5000 mAh, we should set the charging current between 2.5~5 A, and in general, we set the charging current to 2.5 A.

✧ **For battery, battery pack or power bank equipped with BMS**

- ✓ Users should adjust the charging voltage and current to match the standard of BMS. Otherwise the BMS and battery packs may be damaged.

- ✧ **Do NOT charge a battery pack if you do not know its capacity.**

◆ **Packing List:**

788H main machine: 1 pc

Copper welding rods: 2 pairs

Battery fixture: 1 pc

Charging cables: 1 pair

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.
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!](#)

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