

BGA IRDA-WELDER T-870A

User Manual



Puhui Technology (Taian). CO., LTD.

<http://www.puhuit.com>

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Features

1. Use of infrared welding technology which is developed independently.
2. Use of an infrared heat lamp. Heat is easy to pierce and distribute evenly, which overcomes disadvantage (burn out elements) of traditional welding machines.
3. Easy operation. You just need one-day training and you can operate it skillfully.
4. No need for unsolder tools. This machine can unsolder all components between 35 -50 mm.
5. This machine has 800W hot-melt system. Its preheating area is 240 x 180 mm.
6. Infrared heating without heated air flowing. No impact on circumjacent small elements. It is suitable for all of the elements, especially Micro BGA components.
7. The T-870A is suitable for a variety of computers, notebooks and the rework or repair of their BGA components, especially in a Northbridge /Southbridge chipset computer architecture.

Technical parameters

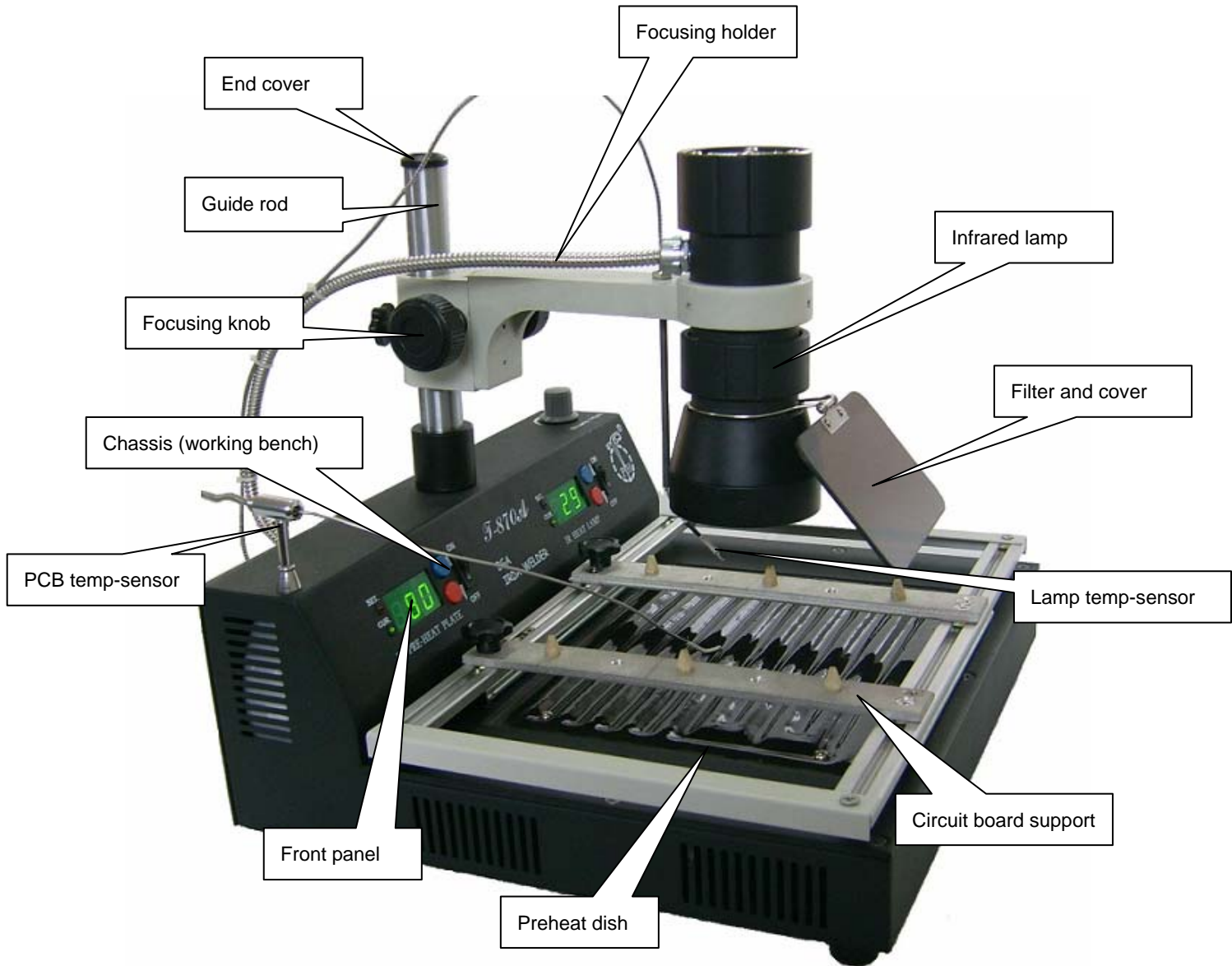
Work floor size	360X240mm
Rated voltage and frequency	AC220-230v 60/50Hz
Complete machine power	1000W
Infra-red lamp body power	150W
Preheating chassis power	800W
Infra-red lamp body heating size	Φ70mm(50x50mm)
Preheating chassis preheating size	240x180mm
Infra-red lamp body temperature range	200 -350
Preheating chassis temperature range	60 -200

List of content

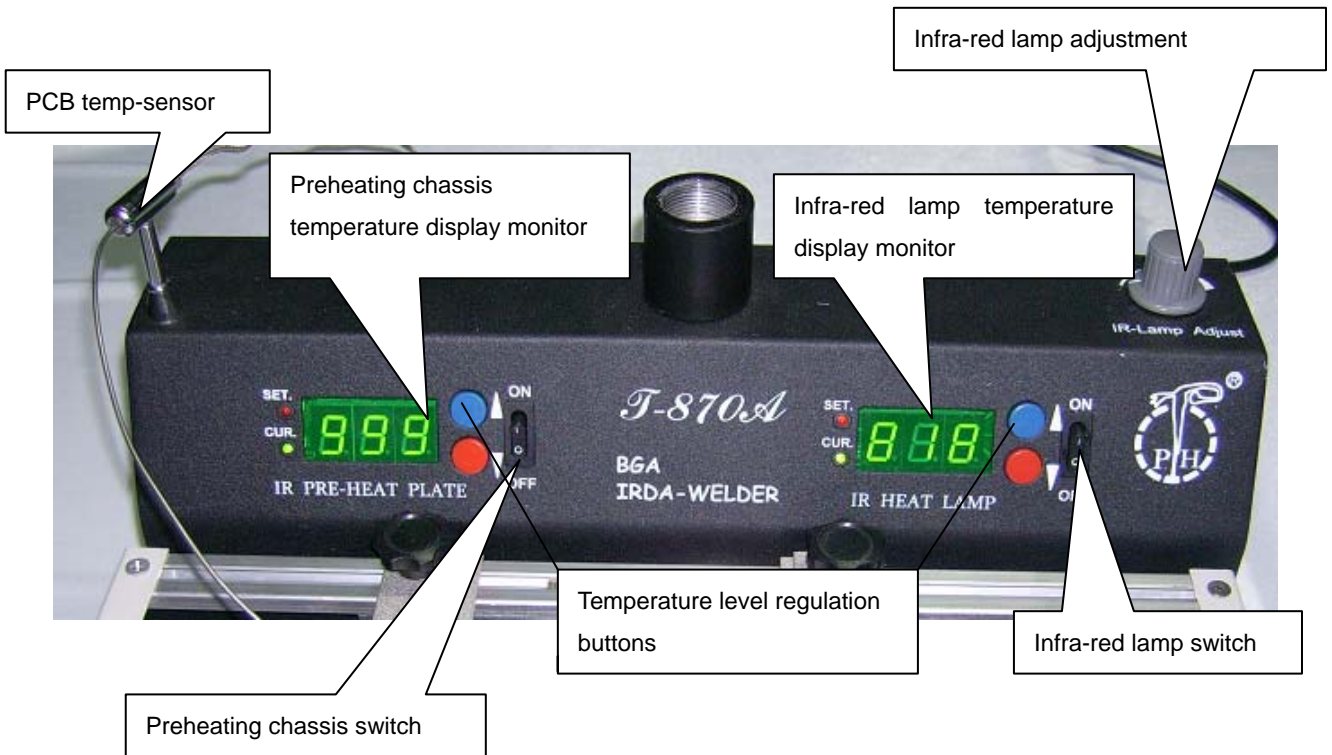
Welding table main body	1
Infra-red lamp body	1
Temperature sensor	1
Board support of the circuit	1
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Description of the main parts

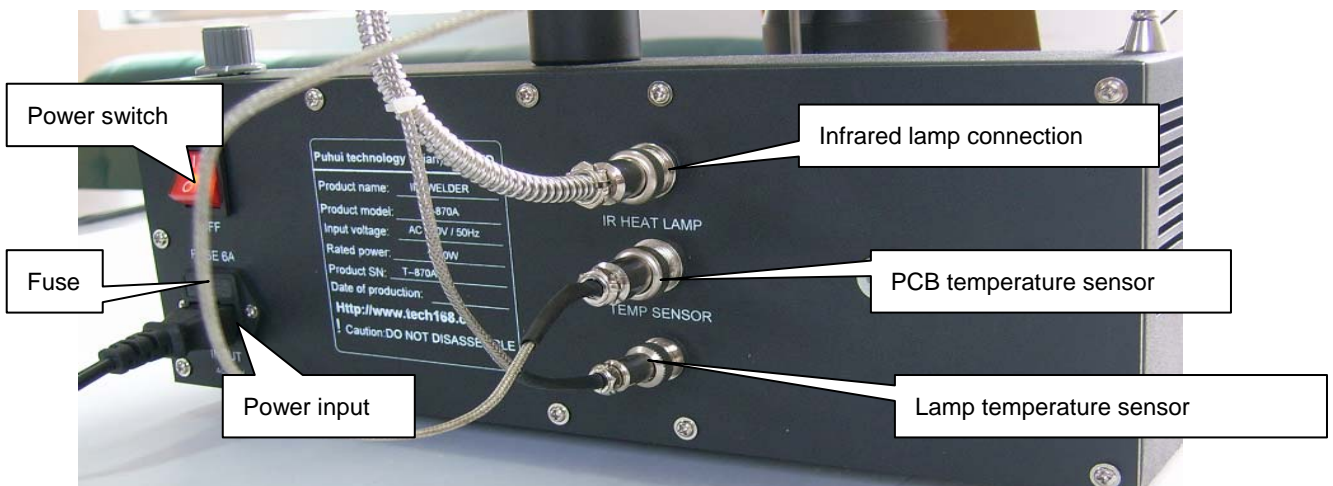
1. Welding table main body



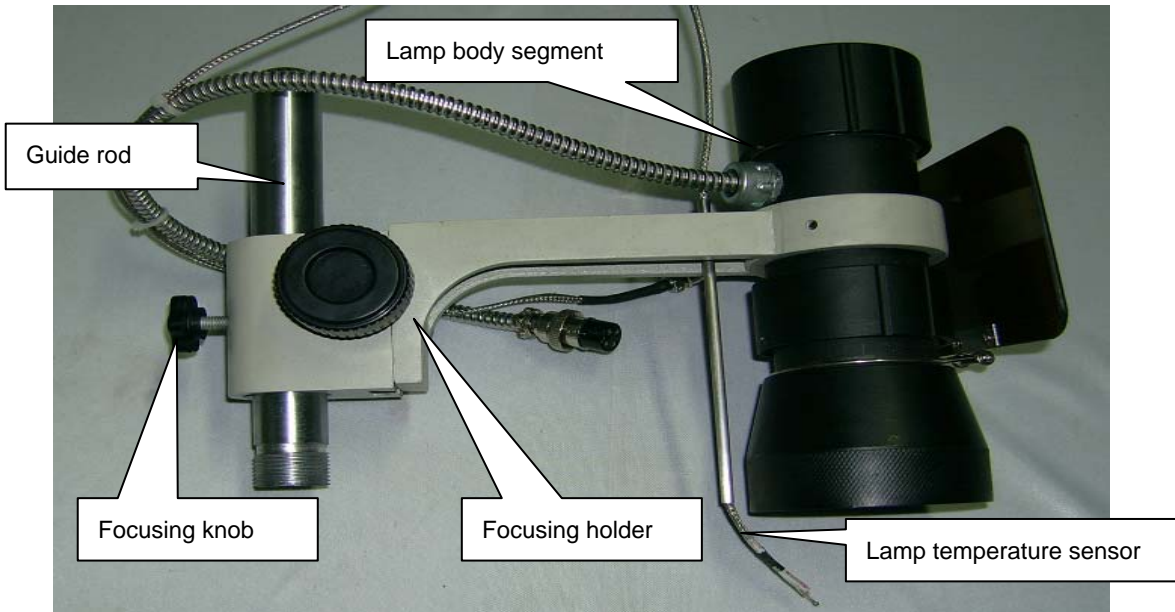
2. Front panel



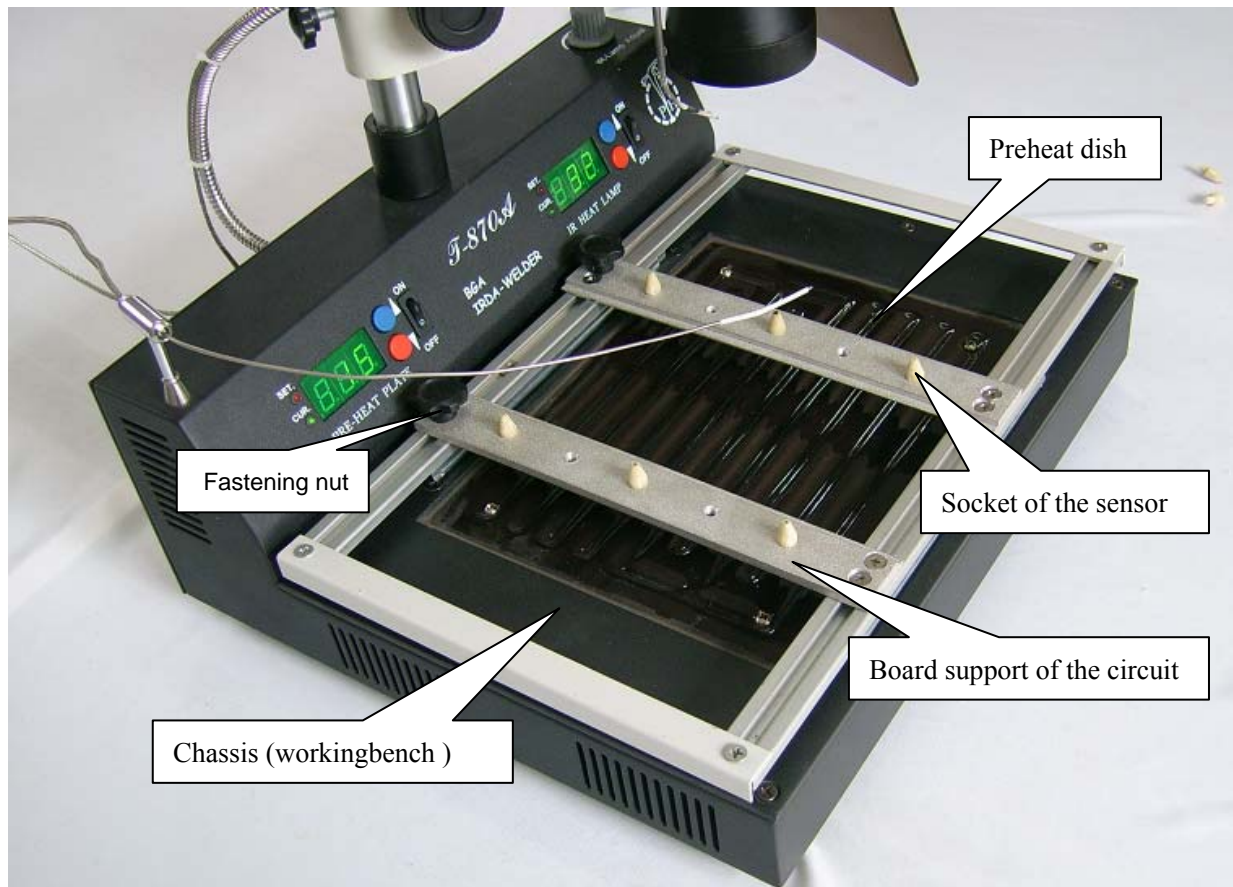
3. Back panel



4. Focusing support and lamp body



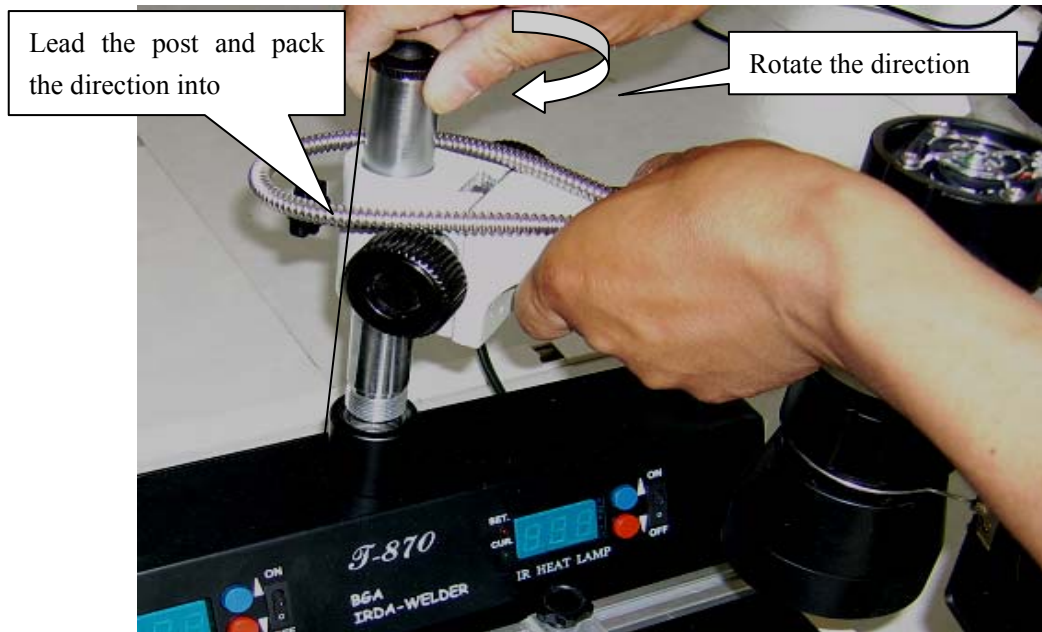
5. Circuit board support



Installation

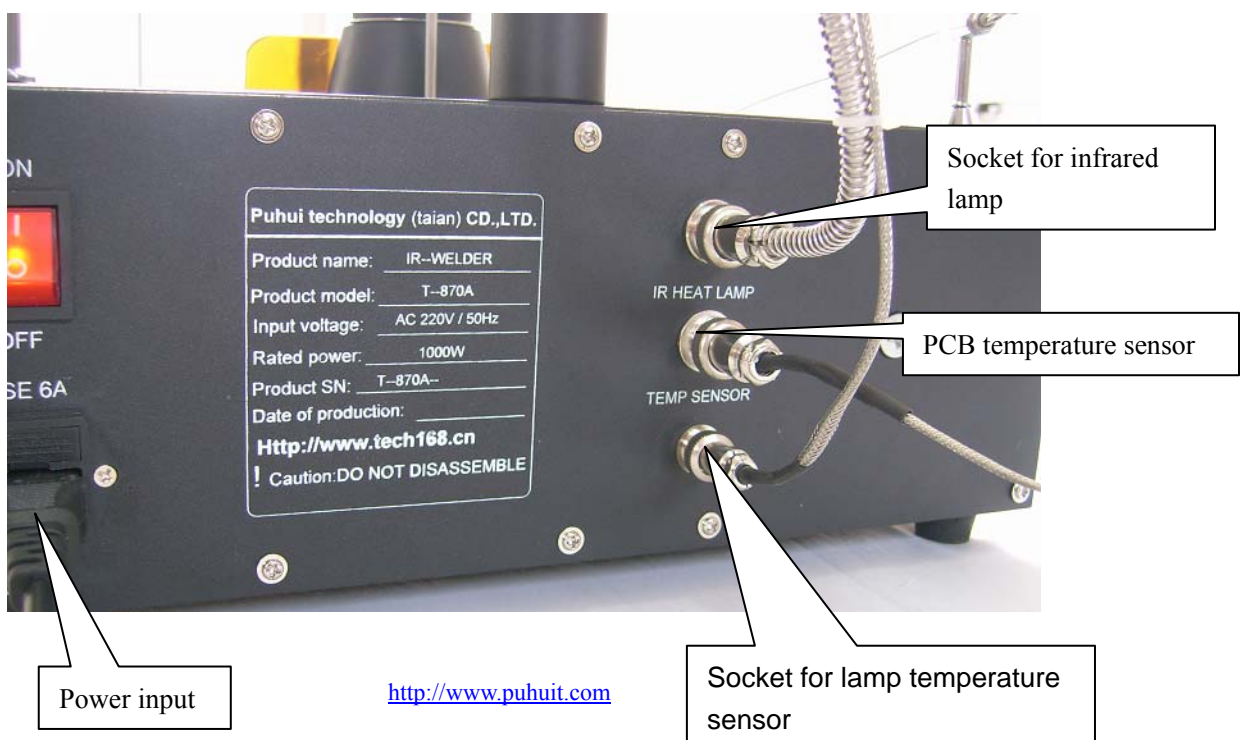
1. Lamp body and main body assembly

- ① Loosen the pinch nut of focusing support.
- ② Pick up focusing support, make the guide rod aim at the corresponding nut on the base, then rotate the guide rod.
- ③ Fasten the focusing support by rotating pinch nut of it.

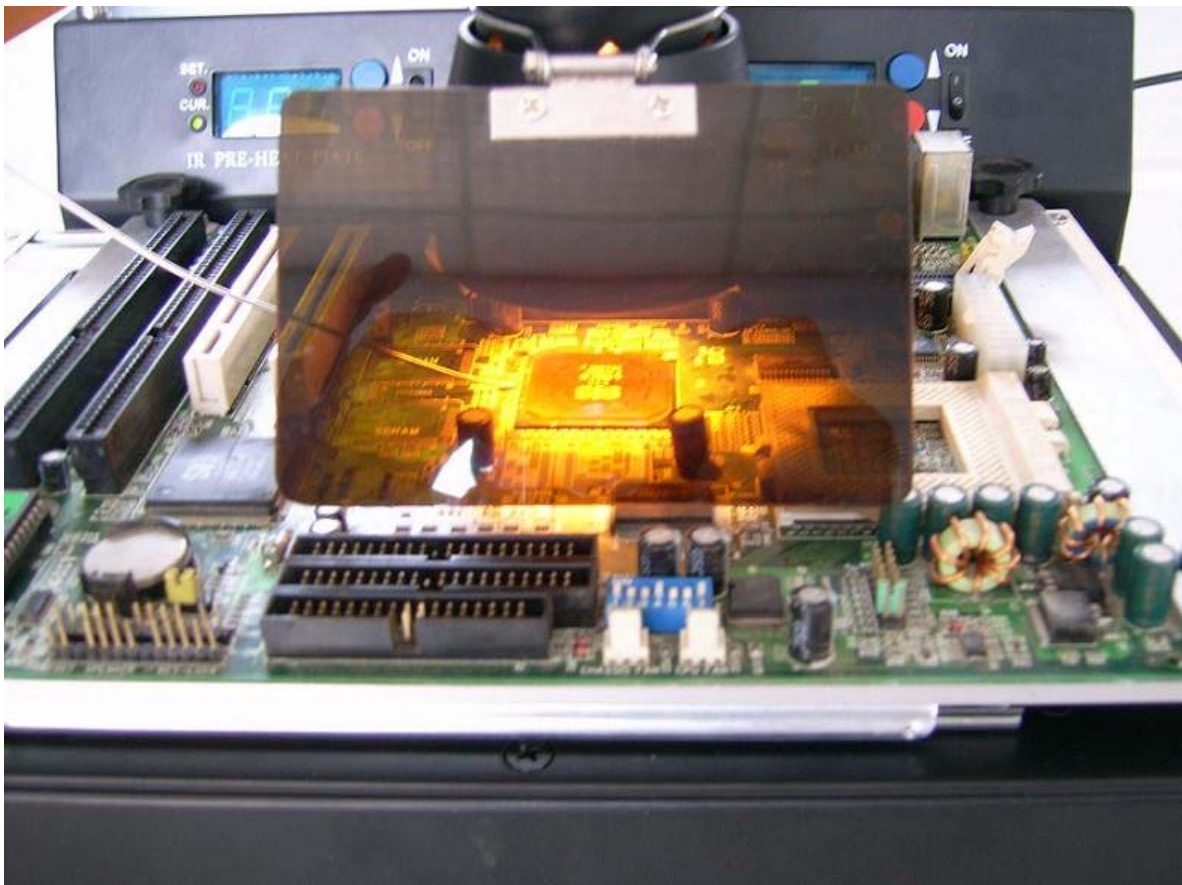
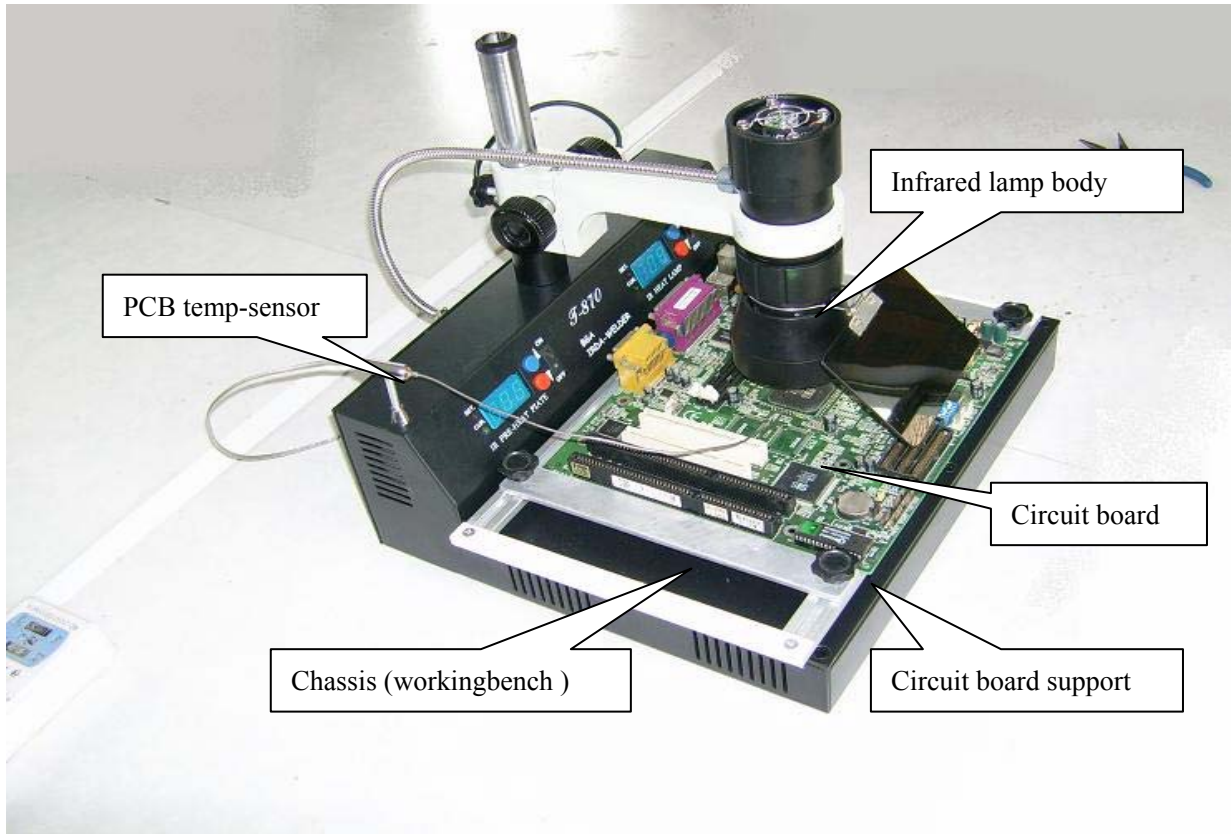


2. Connection of infra-red lamp body cable and temperature sensor

- Get the adapter of connecting wire plug in the socket of infrared lamp connecting wire
- Rotate set screw clockwise.

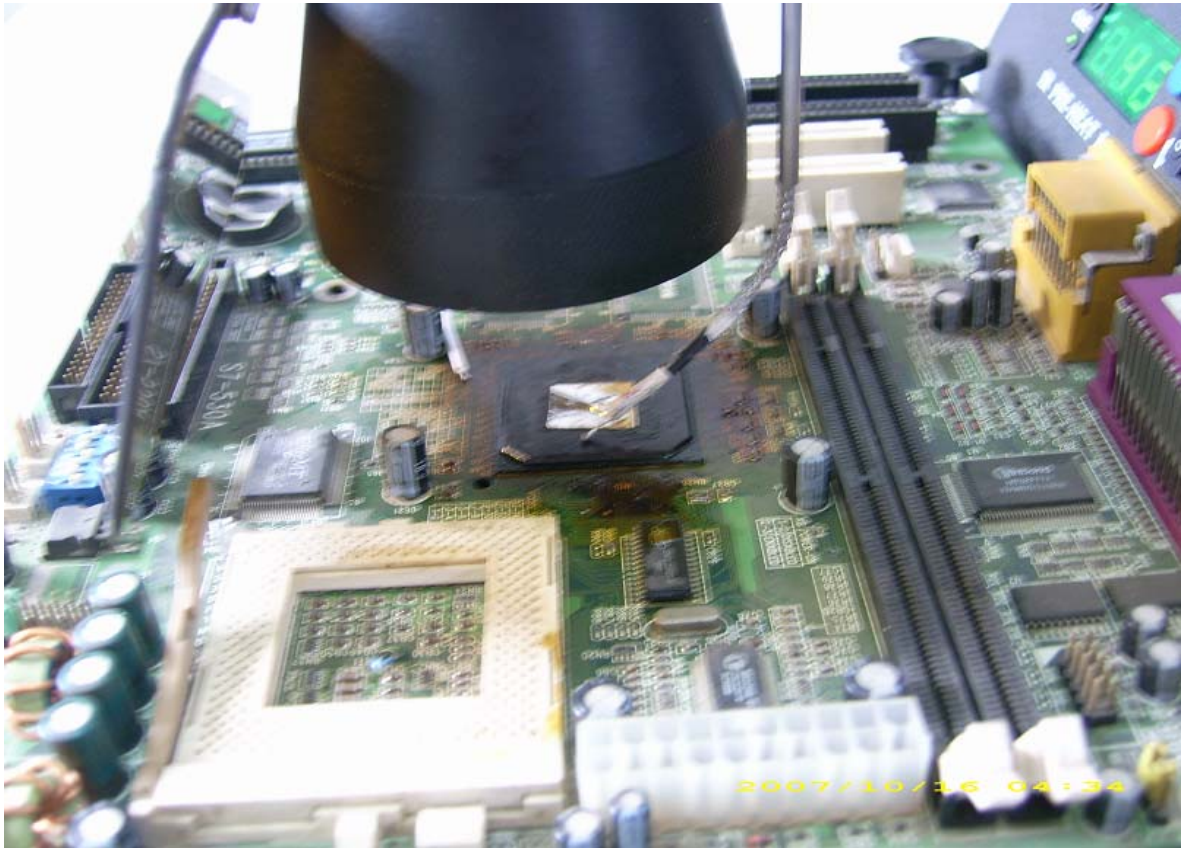


Operating instructions

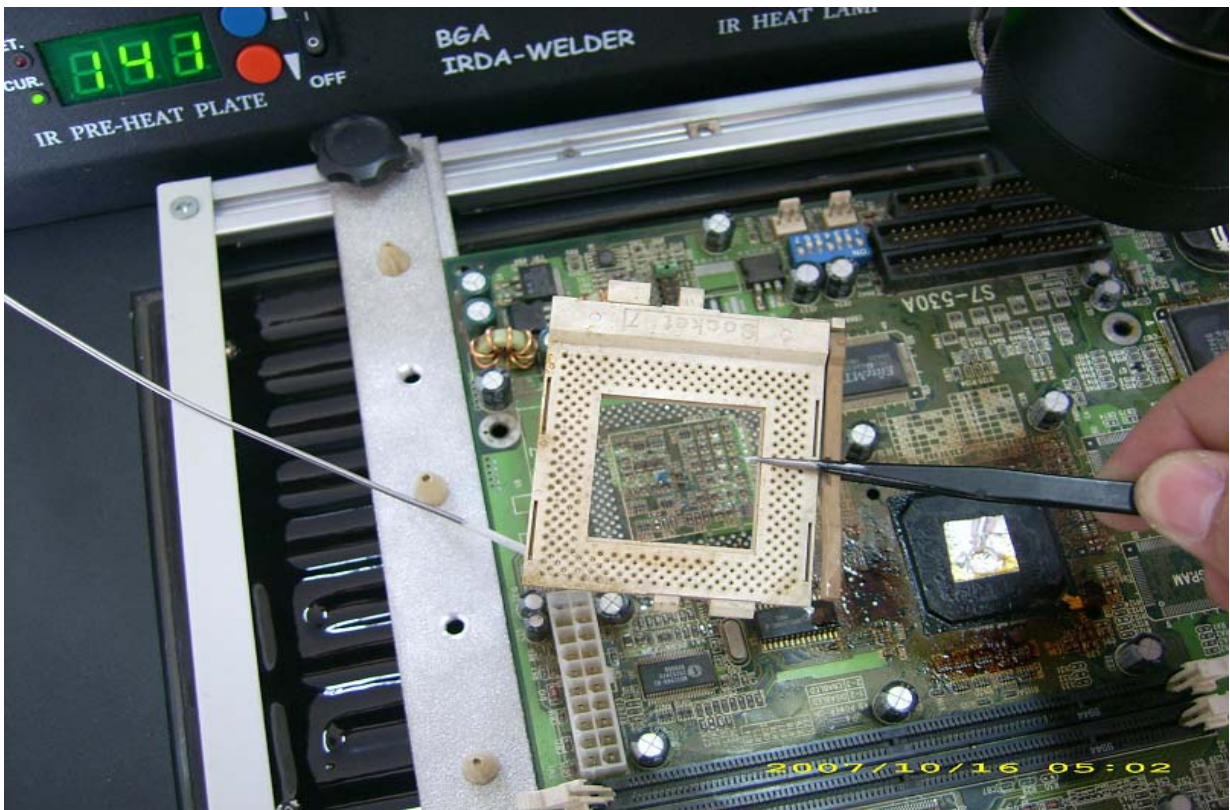


North bridge repair scene

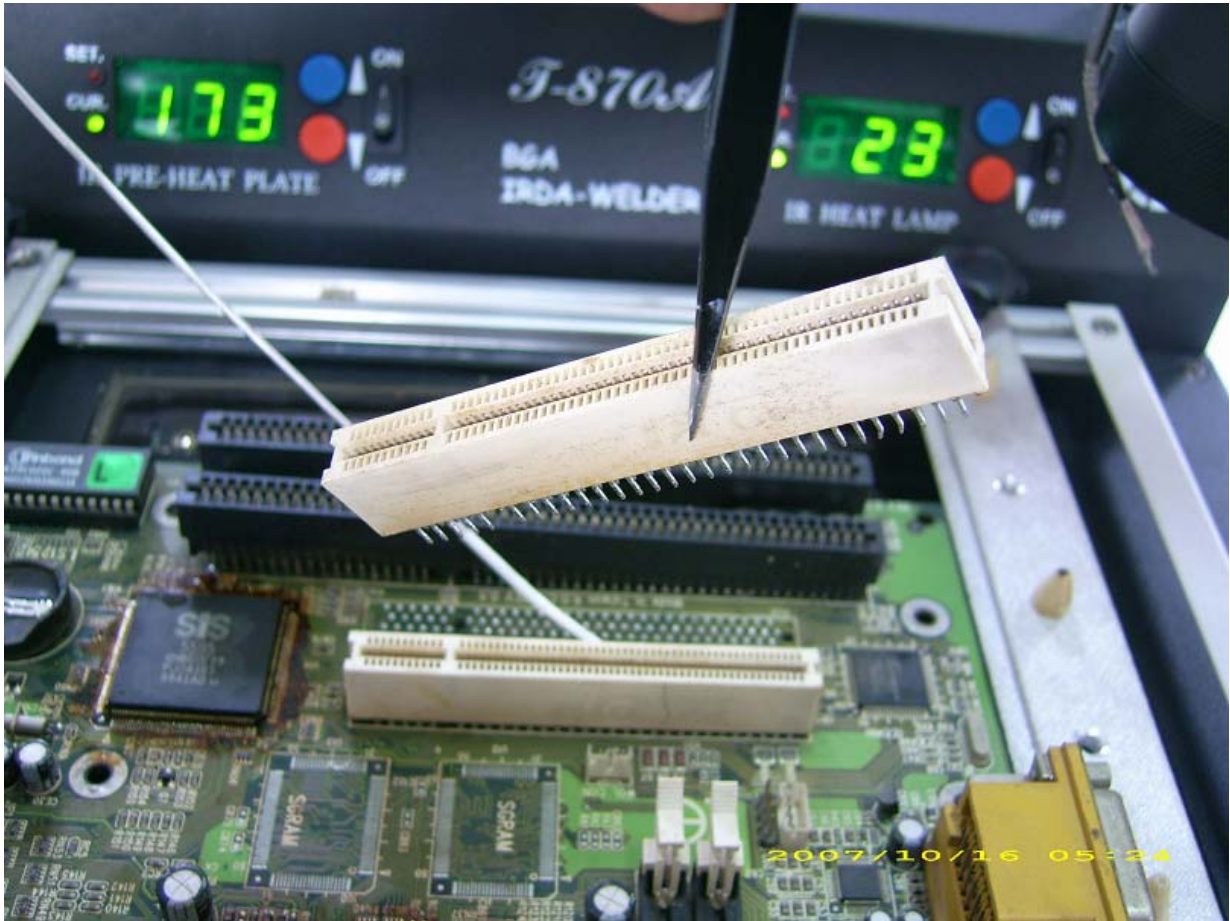
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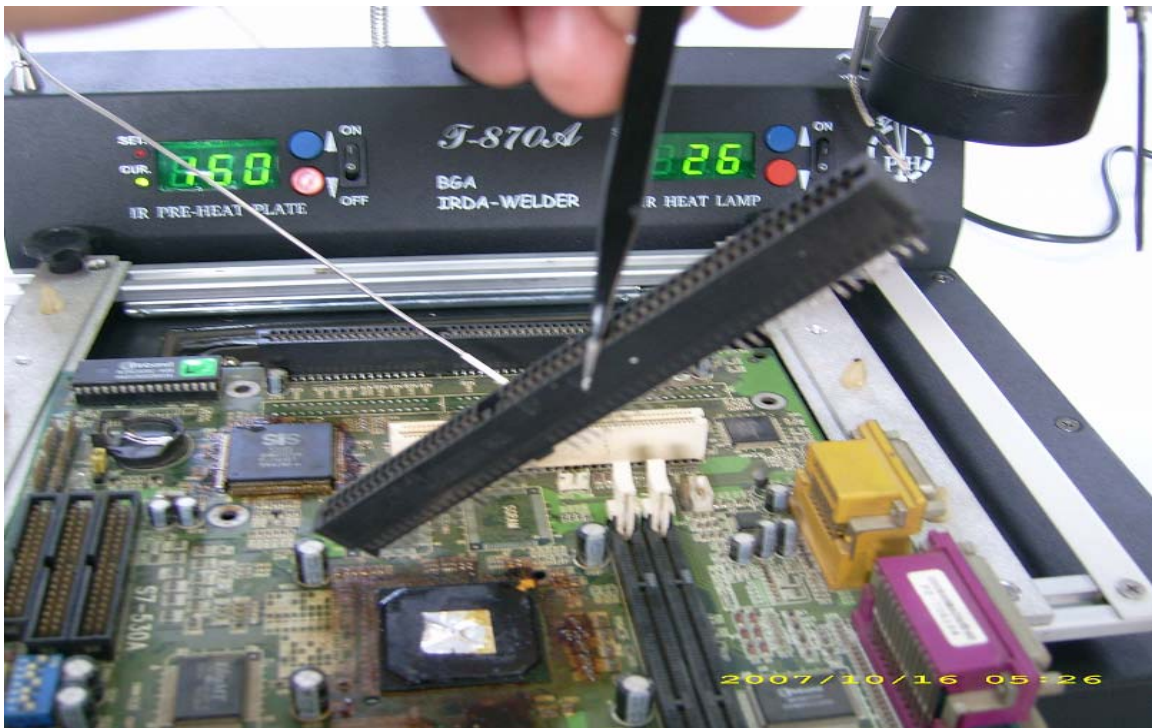
Position of infrared lamp temperature sensor



Removal of CPU block



Removal of AGP slot



Removal of expansion slot

1. Examination and starting

Inspect the infrared lamp body, temperature sensor and power line and see if they are in good connection.

Turn on the power switch, then use self-checking first (the previous setting value demonstrated on the keyboard display monitor after you turn on the machine).

The front panel has two switches: one controls the pre heating dish, the other the infrared lamp separately. Press the ▲ or ▼ buttons on the “**IR PRE-HEAT PLATE**” on the front panel to choose a temperature between 60 and 200 °C for the pre heating dish. Press the “**ON**” button and the pre heating dish will start to warm up. Press “**OFF**” and the heater will shut down.

Press the ▲ or ▼ buttons on the “**IR HEAT LAMP**” on the front panel to choose a temperature between 200 and 350 °C for the lamp. Press the “**ON**” or “**OFF**” buttons accordingly to switch the lamp on or off.

2. Sealing off/repair operation

Inserting of the PCB board:

Put PCB on the corresponding notch in PCB support, and adjust the pinch nuts of locating ring and fasten with the hand wheel. Make sure the PCB board is in a secured position.

Before starting with sealing off/repair

Adjusts the PCB board position, so that it's centre is vertically aligned with the infra red lamp. Adjust the height of infrared lamp body, the ideal height between lamp and the component is 20-30mm.

Place the temperature sensor of the infrared lamp near the chip in a suitable position. If the circuit board is adhered by solid sealing colloid, you can switch on the pre heater plate to melt the colloid. If not, please take other proper measures. The temperature to melt colloid can't be too high; generally the ideal temperature should be between 120 to 140 . The preheat interval is approximately 3 - 5 minutes.

③**Sealing off/repair process:** According to product technological requirement or PCB board size, adjust the temperature of the preheating chassis to about 60-200 ; switching it on about 3-5 minutes in advance will stabilize the temperature.

Select the suitable heating temperature of infrared lamp between 200-350°C, according to the chip size that need to be unsoldered. For general guidance: According to the chip size, adjusts the infra-red lamp temperature to about 22 and the preheating chassis temperature to about 60-200 .

When you unsolder chips which are smaller than 20 x 20 mm, you adjust the infrared lamp's temperature to 220-240 .

When working on bigger chips like 30x30mm, according to your experience, you may adjust the infra-red lamp to 240-260 ; preheat the dish to about 140-200 first for 3 - 5 minutes. Once the temperature has stabilized, you may complete the sealing off/repair process very conveniently. Please pay attention to the timing to prevent the chip from burning out.

④ **Soldering process**

Clean up the welding plate with the brush. Put the tin ball and spread soldering flux (not too thick, only a thin layer of it) on the soldering plate. Put the chip in the accurate place after the solvent volatilizes out of soldering flux, heat the tin ball until it melts, once the tin ball melts, the chip will be soldered in the right place automatically. Pick out the PCB to check if the chip works after it cools down. If not, solder it again.

3. Maintenance

Complete machine maintenance:

After the machine has been used for a period of time, clean the focusing frame, the guide rod, the PCB board support and the sliders and treat them with a lubricant to protect them from rust.

Preheating chassis and infra-red lamp body maintenance:

Clean the pre heating chassis and in particular the infrared lamp body with dehydrated alcohol. Otherwise residue from evaporated soldering paste could otherwise decrease the effectiveness of the infrared lamp.

Infra-red lamp replacement:

Use a special inside caliper gauge or a pair of long mouth pliers to first take out the inside spring. Then push the lamp gently out of the body through the air vent.

Cautions

1. Do not cut the power off right after the work finished. You need to wait until the fan cools down the lamp body.
2. Keep the lamp body clean and the ventilation opening free of any obstructions.
3. The guide rod and the focusing support should be spread with lubrication regularly.
4. Pull out the power plug if you don't use it for a long term.
5. Be careful of operating under high temperature conditions.

Warranty:

The complete machine has a warranty period of 1 year from the time of purchase and lifelong service support as well as a long-term factory price supply.

The life of the infrared lamp should be around 1000 working hours, guaranteed usable for 3 months. We provide online Q/A and troubleshooting support and technical advice service.

Reminder: These machines are very heavy, between 8 to 15 kilograms and are not designed to be shipped on airplanes, but in containers that do not move. We are not the shipping company, the airplane crew, the customs agent or the carrier in your country and therefore take no responsibility for damage caused in transit.

Corollary: When our machines leave QC, they are tested, 100% new and in perfect condition.

These machines consist of modules. Should you receive a faulty or damaged module, we will be happy to replace it. However, we will not replace the complete machine; this is not covered by our warranty.

Any of these machines are extremely sensitive to power stability. You need to use professional power source DC benches to plug in these machines. The IRDA heating could burn out or malfunction if you do not have the right power source DC bench machine. DGC is responsible to give proper guidance of the use and installation of the machine; if you don't follow these, it will void the warranty.

Statement

The images and screenshots in this product manual may vary slightly from the actual purchased product.