

IRDA-WELDER User Manual

Model: TX-999DM



DRAGON GROUP CHINA INTERNATIONAL

PUHUIT BGA DESK DEVICES DIVISION

<http://www.puhuit.com>

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1. Features

1. Use of infrared welding technology which is developed independently.
2. This machine is equipped with laser positioning and adopts 180°rotational lamp structure with flexible operation and easy control. It is suitable for any point of a plat component, especially BGA, SMD component.
3. Break through the traditional hot welder heating element removed cover, thermal shock big shortcoming. Technically use infrared heat lamp. Heat is easy to pierce and distribute evenly. Infrared heating do not have sirocco flow. So do not impact perimeter small component
4. This machine has 900W heating system. It can be used to unsolder BGA, SMD, CSP, LGA, QFP and PLCC, especially Micro BGA and SMD elements.
5. Don't need weld tools. This machine can weld all the plat components. Definitely can satisfy the demand to sealing off or repair the BGA of the computer, the notebook and any game console, xbox , playstation , Wii, PSP and so on.
6. Easily operate. Just need one day training to operate this machine.

2. Main Parameters

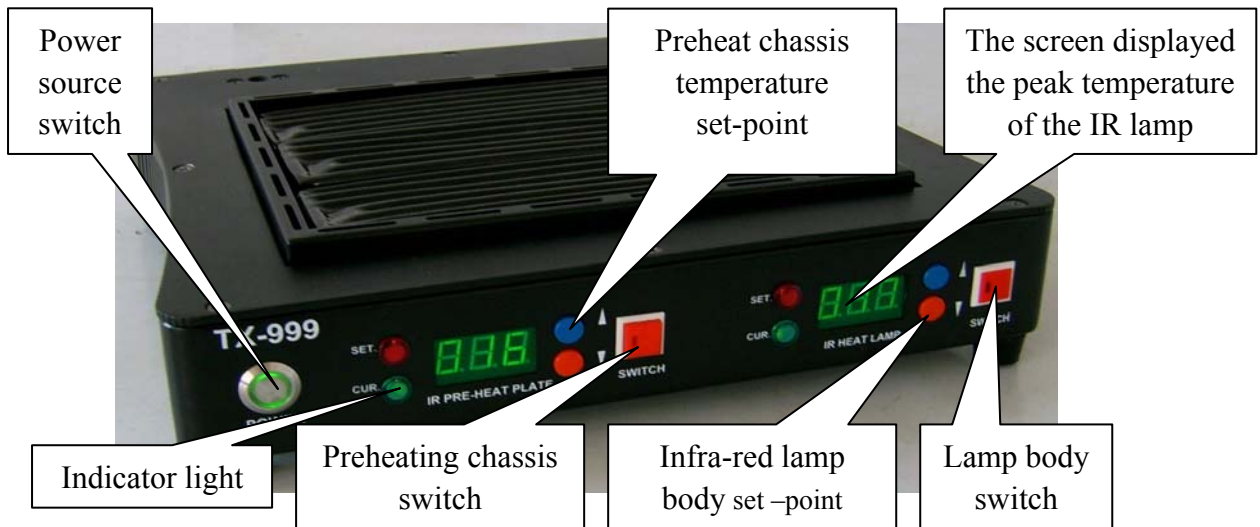
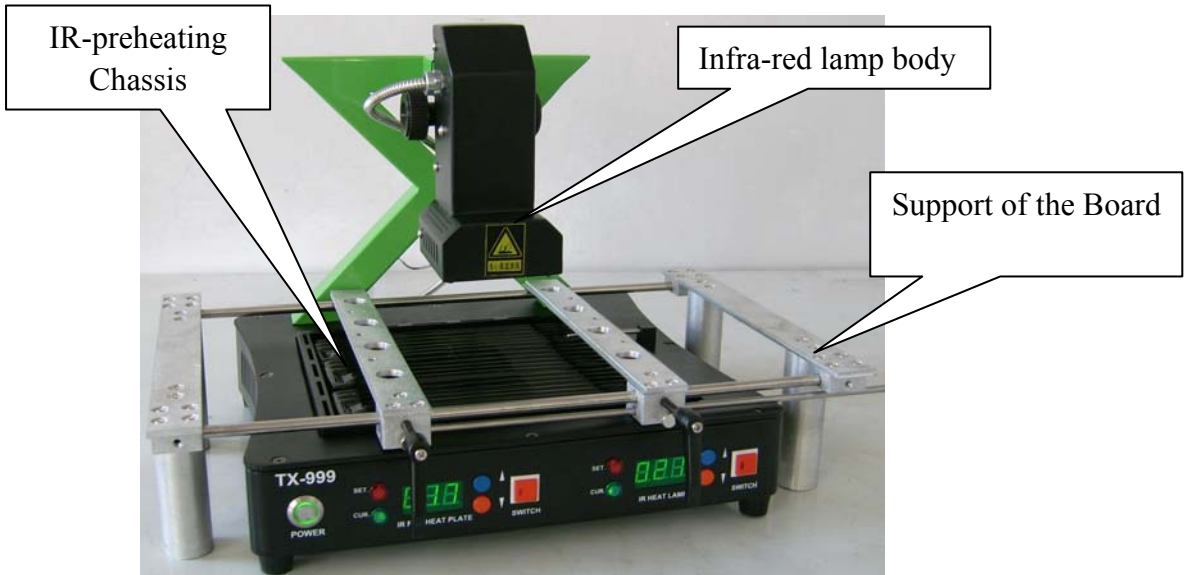
Work table size	360X328mm
Rated voltage and frequency	AC110/220-230v 50/60Hz
Whole power	1100W
Infra-red lamp body power	150W
Preheating chassis power	900W
Infra-red lamp body heating size	60x60mm
Preheating chassis heating size	260x212mm
Infra-red lamp body temperature adjustable	0°C-350°C
Preheating chassis temperature adjustable	0°C-350°C

3. Main Components

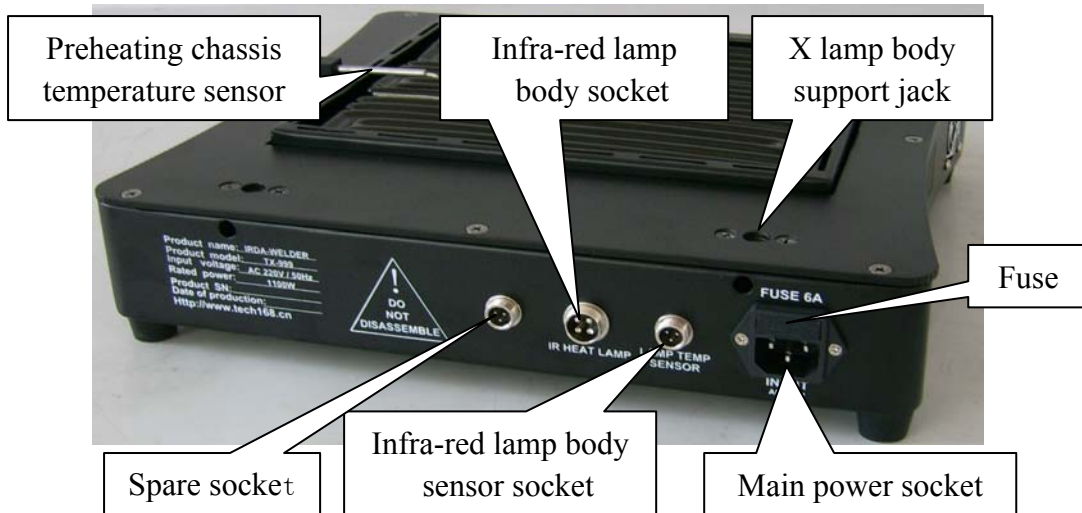
Welding table main body	1
Infra-red lamp body	1
Temperature sensor	1
Board support of the circuit	1
Power line	1
User's manual (Compact disc)	1

4. Description of function about main parts

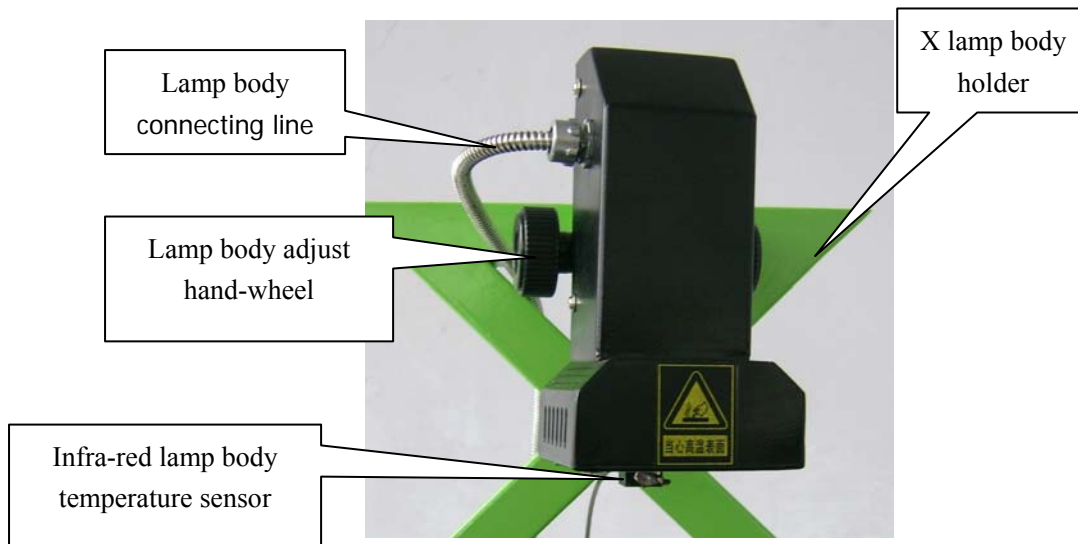
1. Welding table main body



3. Back panel



4. Lamp body



5. Installation

1. X Lamp support assembly

According to the following picture, insert vertically X lamp body support into the X lamp body support socket on the panel. Keep X lamp body and panel vertically. Inert a screwdriver into the reserved hole in the back panel, and then tighten the screw clockwise.



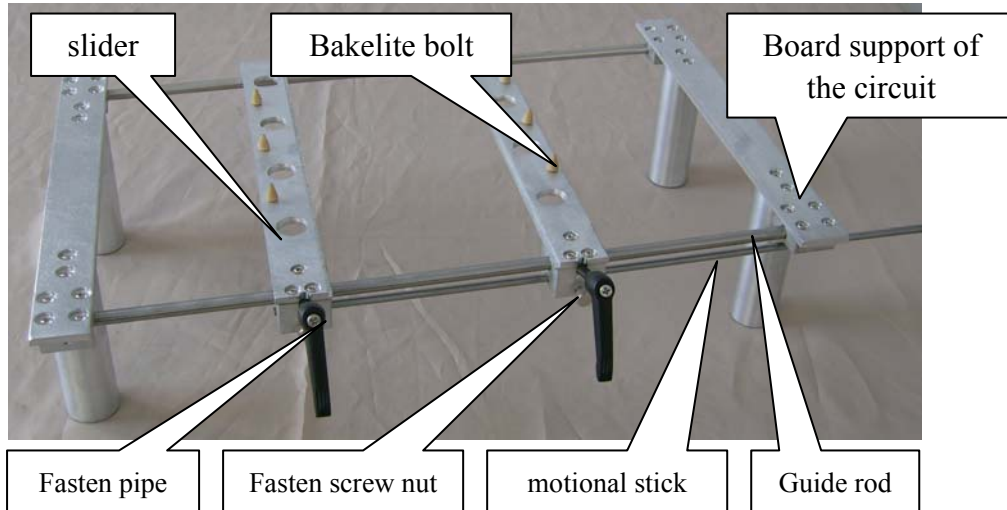
2. Connection lamp body and plug of lamp sensor

According to the following picture, respectively insert the four-core-plug of Infra-red lamp body and the three-core-plug of sensor into the corresponding aeronautic plug, and tighten the screw clockwise.



3. Assemble circuit board support

According to the following picture, assemble the components of circuit board support and tighten the screw.



6. Operating instructions

1. Examination and starting

(1). Inspect the infrared lamp body, temperature sensor and power line and see if they are in good condition.

Attention: the temp-sensor must be connected with the preheating chassis.

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

(3). The front panel has two switches: one controls the pre-heating plate, the other the infrared lamp separately. Press the “▲” (blue button) or “▼” (red button) on the “IR PRE-HEAT PLATE” on the front panel to choose a temperature between **0 and 350°C** for preheating plate. Press the “SWITCH” button (the indicator light works) and the preheating plate

will start to warm up. Press it again, the plate will shut down. Press the “▲”(blue button)or “▼”(red button)on the “IR PRE-HEAT PLATE” on the front panel to choose a temperature between **0 and 350°C** for lamp. Press the “SWITCH” button (the indicator light works) and the lamp will start to warm up. Press it again, the plate will shut down.

2. Sealing off/repair operation

(1). Adjustment before sealing off/repair:

I. Put the PCB board on the slider, and move it right and left to choose a appropriate work place, then tighten the fasten pipe to fix the PCB board.

II. The machine uses laser positioning to adjust the position of the infrared lamp cap. This makes infrared laser beam aims at the center of the welding thing. Adjust the height of lamp body, and keep the height of lamp cap and the welding thing between 30 and 50mm.

(2). Sealing off process:

I. According to the product technological requirement or PCB board size, set the temperature of the preheating chassis. After opening the preheating chassis for 3 to 5 minutes, the temperature can reach and keep around the pre-setting temperature.

II. According to PCB board size or the product technological requirement, set the output temperature of infrared lamp (0-350C adjustable), and open the lamp to heat the chip.

III. When the temperature reach the setting number or the chip tin melt ,

use the vacuum nozzle or tweezers to take the chip away, and close the infrared lamp body and the preheating chassis and so on. Turn off the power off after complete cooling.

Attention:

When the chip spreads has the waterproof solid sealing compound, must first open the preheating chassis to melt rubber. The melt rubber temperature should not be excessively high, generally for 120-140°C, according to sol temperature which the factory provides, carries on sol processing, for suitable, preheat interval 3 - 5 minutes or longer, after rubber being heated soften or the pulverization, clean it up, also can use sol hydrosol and so on other measures. Must pay attention to control the temperature during the welding, avoiding to move the sensor lead to the measuring temperature is not exact. And avoiding heating the chip for long time, the temperature is too high, or the chip will be broken.

(3). Reflow operation process:

The process is basically the same to the sealing off process. The difference is: first clean the pad, then reballing, preheat the PCB board, and correct laying aside chip, according to the tin ball welding temperature to preheat, weld and cool.

May enhance temperature **20-30C** regarding the non-lead solder component

3. Caution and related introduction:

- (1). When sealing off/repair bigger PCB board chip, for example, the computer board, XBOX360 motherboard, and so on, must certainly carry on the whole board preheat and dry, or according to the factory technological requirement, also may depend on the experience to process. Only then processes appropriately, can prevent effectively the PCB board distortion and produces from this faulty soldered joint, chip rake when sealing off/repair chip.
- (2). To the simple packaging chip, please pre-post aluminized paper on the middle of the chip avoiding to heat the chip too hot to crack. The aluminized paper size should be a little bigger than the chip. Insure the size isn't too big, or it will affect the result of welding.
- (3). In the sealing off/repair process, the infra-red lamp shines in the region, all plastic plug-in unit, carries on the cover using the aluminum tin foil, prevented high temperature infrared dries the distortion or the harm. But it is not wraps completely.
- (4). After the sealing off/repair PCB board cool down, first clean, dryly and then test. If is not good, may return welds again.
- (5). Around the work, in such a case not put the PCB board, do not a long time opening infra-red lamp, be able to reduce the lamp the service life; Forbid shining the counter-optical very strong reflection with the infra-red lamp long time, otherwise can affect the lamp seriously the life.

7. Maintenance

(1). Main body 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.

(2). Preheating plate 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.

8. Caution

1. Do not cut the power off right after the work finished. Please wait until the fan cools down the lamp body.
2. Insure the cooling fan is unobstructed and clean.
3. Be careful of operating under high temperature condition.
4. Pull out the power plug if you don't use it for a long term.

9. Warranty

The complete machine has a warranty period of 1 year from the time of purchase in malfunctions (not external case issues – bend – stains or consequences of shipping) and lifelong service support as well as a

long-term factory spares supply. The life of the infrared lamp should be around 1000 working hours, guaranteed usable for 3 months minimum with no issues. We provide online Q/A and troubleshooting support and technical advice service.

Statement:

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