# TC22/HC24 多功能焊台

multifunctional precision soldering station

# 用户使用说明书

# user's Guide


APPRev:V1.3 2026/1/19

# 目录

# 1 注意事项

- 本产品使用三线接地插头，必须插入三孔接地插座内，接地不良时请使用接地线。
- 请勿弄湿焊台，禁止在潮湿环境下使用。
- 更换部件时，应采用原厂原件，切勿擅自改装焊台。
- 焊接时会有烟雾产生，工作环境应有良好的通风设施。
- 工作时注意液态锡飞溅，防止烫伤。
- 若长时间不使用本产品，请妥善放置于干燥环境下。
- 烙铁头具有高温，极易灼伤，禁止用手触摸，不使用时请关闭电源。
- 烙铁头的敲击、跌落都可能会造成烙铁头损坏。
- 切勿使用烙铁头进行焊接以外的工作，应按照操作说明使用本产品。
- 焊台工作时需要散热，请预留散热空间，控制单元发热属于正常现象。

# 2 产品功能简介

1、 支持多种工具及烙铁头，具体参考硬件设备型号。

2、 彩色液晶 IPS 屏（分辨率 320*240，TC22 使用 2.0 寸，TC24 使用 2.4 寸）。

3、 PID 温度控制，控温范围 100～480℃，温度稳定 ±1.5℃（稳定后）。

4、 温度记忆、三档快速温度设定。

5、 休眠（休眠座方式：将手柄置于烙铁架进入休眠，一定时间内手柄没有震动进入休眠状态，低温保温有利于延长焊咀使用寿命，拿起手柄休眠截止自动工作）。

6、 停机（休眠状态等待一段时间后停止加热，进入停机状态，等待时间可设置，短按旋钮可恢复工作）。

7、 动态温度补偿，此功能用于焊接大焊点，功率上升动态提升设定温度，加速化锡补偿焊点温度，焊点融化或离开后温度降低到设定温度，不必空载干烧。（默认关闭）

8、 焊台温度实时曲线显示，显示温度与输出状态度曲线。

9、 焊台软件提供升级服务，功能不断完善。

## 3 产品参数

### 焊台主机参数：

| 产品型号 | 设置温度范围 | 工作环境温度 | 存放温度 | 散热方式 | 烙铁头漏电电压 | 烙铁头接地电阻 |
|---|---|---|---|---|---|---|
| TC22 | 80-480℃ | 0-45℃ | -20-65℃ | 自然冷却 | 接地后小于 2mV | 小于 2Ω |
| HC24 | 80-480℃ | 0-45℃ | -20-65℃ | 智能风冷 | 接地后小于 2mV | 小于 2Ω |

| 产品型号 | 输入电压 | 输入电流 | 最大耗电功率 | 加热最大功率 | 主机重量 | 主机尺寸(mm) |
|---|---|---|---|---|---|---|
| TC22 | AC110V-240V | 1.5A | 272W | 240W | 450g | 150*92*45 |
| HC24 | AC110V/AC240V | 3A | 450W | 400W | 910g | 214*100*74 |

### 支持工具参数：

| 发热芯型号 | 手柄型号 | 功率 |
|---|---|---|
| T12 | T12 | 60W-70W |
| |  | |
| C470<br>(仅 HC24 支持) | T470 | 260-400W |
| |  | |
| C245 | T245 | 150W-230W |
| |  | |
| C210 | T210 | 40W-60W |
| |  | |
| C115 | T115 | 30W-35W |
| |  | |

以上手柄外观仅供参考，实际物品以收到为准

焊台的最大功率会大于烙铁头发热芯功率，焊台工具最大功率可调，但是需要注意不同厂家烙铁头所能承载功率不同，设置焊台工具的最大功率不要超过发热芯能承受功率。

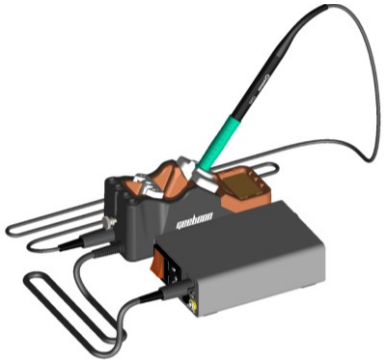
不同烙铁头发热芯阻值有所不同，根据公式 $P=U^2/R$，能达到的最大功率也不同。

# 4 产品介绍

## 4.1 设备安装

TC22 连接示意图

TC22 可以配套 SSD01 与 SDC02 两种烙铁架，使用 T115 手柄悬挂安装需要增加 T115 挂杆

TC22 主机搭配 SSD01 烙铁架

使用 C245\C210\T12

TC22 主机搭配 T115 挂架，整体连接侧示意图，烙铁架会增加一个 115 挂杆。

TC22 主机搭配 SDC02 烙铁架

使用 C245\C210\T12

接线局部示意图,需要将烙铁架通过休眠线连接到主机，接地接口连接到工作台地线，没有不接。

HC24 连接示意图

使用 T245/T470 时后侧示意图

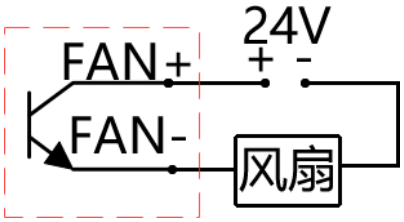
使用 T245/T470 时前侧示意图

风扇联动接口参照 4.2 主机功能介绍

## 4.2 主机功能

**TC22**


**HC24**


| | |
|---|---|
| 1 | **彩色屏幕**<br>TFT 真色彩 320*240 TC22:2 寸 TC24:2.4 寸 |
| 2 | **旋钮按键**<br>具体操作见 4.5 主要操作 |
| 3 | Type-c **数据线接口**软件升级使用 |
| 4 | **电源开关**<br>开启/关闭电源 |
| 5 | **保险丝插座**<br>10A250V |
| 6 | **AC 供电输入**<br>AC220V |
| 7 | **工具插口**<br>插入焊接手柄 |
| 8 | **休眠接口**<br>连接休眠座 |
| 9 | **接地接口**<br>ESD 接地线 |
| 10 | **快捷温度**<br>快速选择到温度，可自定义。（仅 HC24 支持） |
| 11 | **联动信号**<br>可自动扩展联动，工作时开关接通，休眠停机关闭。接线如图所示，最大 30V/500mA，风扇可替换为继电器驱动大功率电器。（仅 HC24 支持）<br>  |

## 4.3 烙铁头安装


C245/C210/C115/T12 设备都使用快插安装，注意安装烙铁头需要安装到位，可使用烙铁架的辅助安装孔

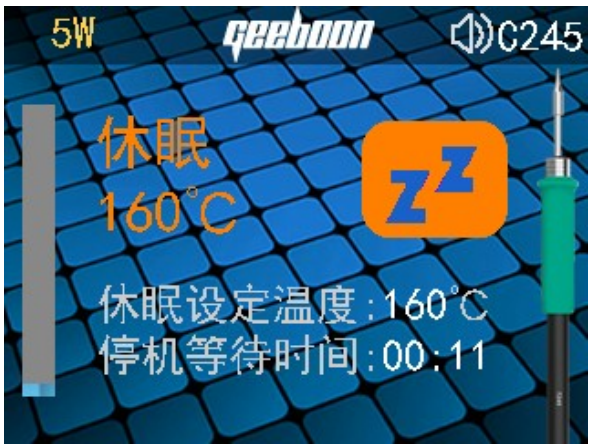
## 4.4 界面介绍

默认界面：


| |
|---|
| 1 加热功率 |
| 2 功率限制标志<br>当功率达到最大设定值时显示 |
| 3 当前温度 |
| 4 蜂鸣器开启标志 |
| 5 工具类型标志<br>C245/C210/T12/C115/C470 |
| 6 功率占比条 |
| 7 快捷温度选择 |
| 8 状态信息 |
| 9 工具图片 |

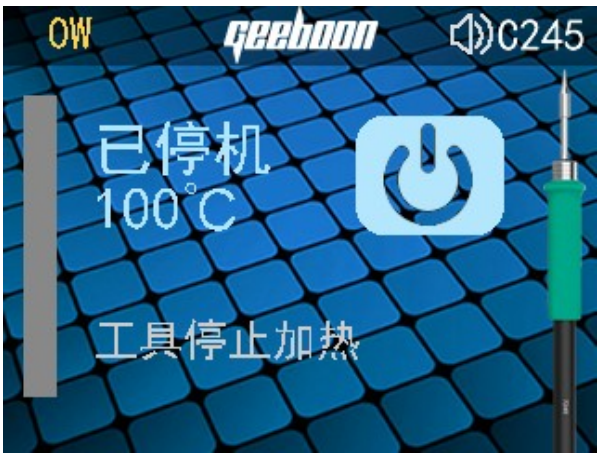
### 休眠：

工具放入烙铁架会进入休眠状态，温度自然下降到设定的休眠温度。（设置了休眠原始时间会有等待时间）

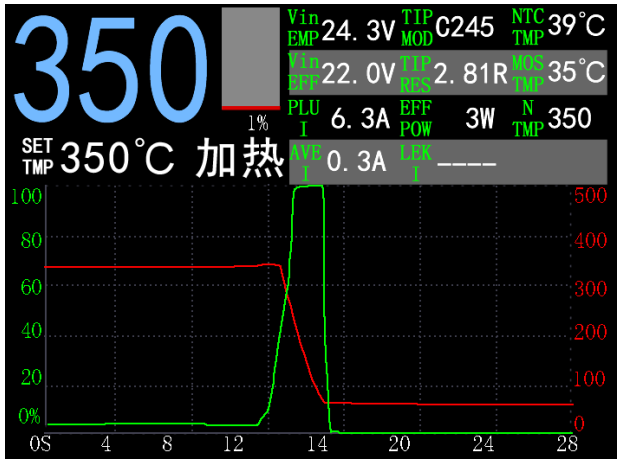



### 停机：

休眠后长时间不使用，会停止加热，温度下降到室温。



曲线图表




| |
|---|
| 1 工具温度 |
| 2 功率条 |
| 3 状态表 |
| 4 设置温度与状态 |
| 5 温度曲线<br>最大温度 500，功率调最大 100%<br>时间轴单元格 2 秒 |
| 状态表依次为：电压最大值、电压最小值 脉冲电流、平均电流、负载电阻、加热功率、工具类型、设备温度。 |

## 4.5 主要操作

| TC22 | HC24 |
|---|---|
|  |  |





### 4.5.1 温度调节

开机进入显示界面，顺时针转动旋钮增加温度，逆时针转动旋转按钮降低温度，旋转一个刻度修改一个温度步进值（默认 5℃，进入菜单可修改步进值）。

### 4.5.2 快捷温度切换

TC22 单次按下旋钮，短按旋钮进行快捷温度切换。（要开启快捷温度）

HC24 单次按下切换默认界面/曲线图表。按下 CH 切换按键进行快捷温度切换。

### 4.5.3 进入菜单

长按旋钮 1 秒以上，进入主机菜单设置主机相关参数。旋钮顺时针旋转菜单选择向上移动，逆时针旋转菜单向下移动。

当主机设置有 4 位密码时，需要调整旋钮，输入成功后才能进入菜单调整。

进入选项，旋转旋钮可改变选项及数值，具体设置见菜单信息。

# 5 菜单信息

## 5.1 主机设置

主机设置信息参数，具体见下表：

| 菜单名称 | 功能 | 备注 |
| --- | --- | --- |
| 设定最大温度 | 转动旋钮调整温度的最大值<br>设置范围：200-480℃ | 默认：480℃ |
| 设定最小温度 | 转动旋钮的调整温度的最小值<br>设置范围：100-180℃ | 默认：100℃ |
| 调整温度步进值 | 转动旋钮调整温度时，一个单位刻度调整的温度值，每圈 20 刻度<br>设置范围：1-10℃ | 默认:5℃ |
| 电压保护 | 低于此电压时设备不进行加热<br>设置范围：5-60 V | 默认:9V |
| 默认主题 | 设置默认显示的主题界面<br>标准/曲线图表 | 默认：标准 |
| 停机唤醒 | 按钮唤醒：停机后智能按下旋钮唤醒设备工作；<br>退出休眠：使用手柄震动或离开休眠座唤醒设备工作； | 默认：退出休眠 |
| 蜂鸣器音量 | 设置蜂鸣器声音大小<br>设置范围：0-10 | 设置为 0 没有声音 |
| 屏幕亮度 | 设置屏幕显示亮度<br>设置范围：1-10 | 1：亮度最低<br>10：亮度最高 |
| 语言 | 设置系统语言模式 | |
| 温度锁 | 开启后在用户界面不能修改温度<br>设置范围：使能/关闭 | 默认：关闭 |
| 密码使能 | 开启后进入菜单需要输入密码<br>设置范围：使能/关闭 | 默认：关闭 |
| 密码修改 | 修改菜单密码 | 默认：0000 |

## 5.2 工具设置

自动识别工具类型，菜单加载当前工具参数，当未插入工具时此菜单不显示：

| 菜单名称 | 功能 | 备注 |
| --- | --- | --- |
| 休眠设定温度 | 进入休眠条件后，焊台目标温度：<br>设置范围：100-最大值 ℃ | 默认：160℃ |
| 休眠等待时间 | 当设置为震动传感器模式时，传感器静止等待进入休眠的时间 | 默认：2 分钟<br>设置 0,不进行休眠 |

| | | |
|---|---|---|
| | 设置范围：0-30 分钟 | |
| 停机等待时间 | 当焊台进入休眠模式后，等待此设定时间后停止加热；<br>设置范围：0-30 分钟 | 默认：10 分钟<br>设置 0 不停机 |
| 休眠方式 | ①手柄震动：适用于接有震动传感器的手柄，依靠休眠时间倒计时进入休眠。<br>②休眠座：适用于休眠信号接在休眠座，当手柄放入休眠座时，手柄进入休眠状态。<br>③功率检测：通过功率检测，判断焊台是否在工作，阈值可设置；休眠后唤醒需要时在湿海绵触碰一下，通过温度下降检测唤醒信号。 | 默认：<br>T12:手柄震动<br>C245\C210\C115\C470:休眠座 |
| 最大功率 | 主机限制功率输出<br>设置范围：<br>C470:100-400W<br>C245:20-240W　C210:20-60W<br>C115:20-45W　　T12:20-90W | 默认配置：<br>C470:380W　C245:180W　C210:40W<br>C115:35W　　T12:70W<br>此项参数根据用户使用的耗材设定，设定过高会导致耗材快速损坏 |
| 快捷温度设置 | 详见 5.2.1 | |
| 温度偏移 | 将当前实际温度做一个偏移值<br>设置范围：±80℃ | 默认：0℃ |
| 温度标定 | 详见 5.2.2 | |
| PID 设置 | 详见 5.2.3 | |
| 动态温度补偿 | 详见 5.2.4 | |
| 功率休眠阈值 | 仅设置功率休眠时可用，检测烙铁有没工作阈值，如果在休眠等待时间内没有超过这个阈值，进入休眠状态 | T12:20W<br>C245:20W<br>C210:15W<br>C115:15W |

### 5.2.1 快捷温度设置

主界面显示快捷温度选项，按下旋钮切换快捷温度。

| 菜单名称 | 功能 | 备注 |
|---|---|---|
| 快捷温度使能 | 开启/关闭快捷温度功能 | 关闭后标准面不显示 |
| 快捷温度 1 | 快捷温度的第一个温度值 | |
| 快捷温度 2 | 快捷温度的第二个温度值 | |
| 快捷温度 3 | 快捷温度的第三个温度值 | |

### 5.2.2 温度标定

| 温度设定 | 功能 | 备注 |
|---|---|---|
| 标定 150℃ | 调整热电偶 150℃的信号值 | 需要测量温度见界面 |

| | | |
|---|---|---|
| 标定 250℃ | 调整热电偶 250℃的信号值 | 需要测量温度见界面 |
| 标定 350℃ | 调整热电偶 350℃的信号值 | 需要测量温度见界面 |
| 标定 450℃ | 调整热电偶 450℃的信号值 | 需要测量温度见界面 |

进入温度标定界面，会出现稍等调整中，当调整到标定温度点时，显示测量温度为：xxx℃（这个温度为热电偶值与冷端值之和），此时测量温度如果高于显示温度，逆时针调整旋钮；低于显示温度，顺时针旋转。调整结束后再次测量，如果温度相同，按下旋钮保存温度。


调整校准点温度中，需要稍等一会儿


使用测温仪测量温度，偏差时请调整

### 5.2.3PID 设置

使用时一般只需要载入默认配置即可，如果对效果不满意支持自行调节。

注意：调节 PID 控制参数时需了解其工作原理，否则易导致系统不稳定。

| 菜单名称 | 功能 | 备注 |
|---|---|---|
| Kp | 比例调节系数<br>设置范围：1-1000 | 在 PID 调节器中起到加快系统的响应速度，提高系统的调节精度，快速调节误差的作用。 |
| Ki | 积分调节系数<br>设置范围：1-1000 | 在 PID 调节器中起到消除残差，调节稳态时间的作用。 |
| Kd | 微分调节系数<br>设置范围：1-1000 | 在 PID 调节器中起到改善系统的动态性能，预测误差趋势，提前修正误差的作用。 |
| PID 控制带 | PID 调节介入误差范围<br>单位:℃<br>设置范围：1-1000 | 例：参数设置为 50℃<br>目标温度设置为 350℃<br>温度低于 300℃时控制器退出 PID 进行全速加热，高于 400℃退出 PID 停止加热。 |

### 5.2.4 动态温度补偿

动态温度补偿用来补温温度传感器与烙铁尖之间温度差，在大功率输出下烙铁尖与温度检测位置存在温差较大，通过输出功率判断给出一个补偿温度，动态提高温度补偿烙铁尖温度，使烙铁尖温度更接近设定温度。

当功率下降到触发功率以下，退出补偿。

升温过程中不进行温度补偿。

| 菜单名称 | 功能 | 备注 |
|---|---|---|
| 动态补温使能 | 开启/关闭 动态补温功能 | 默认：关闭 |
| 触发功率 | 补偿进入的最小功率<br>设置范围：1-100（W） | 默认：<br>C115:10W C210:10W C245:30W C470:60W T12:25W |
| 最小补偿温度 | 介入补偿后最小提升的温度<br>设置范围：1-100（℃） | 默认：5℃ |

| | | |
|---|---|---|
| 最大补偿温度 | 介入补偿后最大提升的温度<br>介入补偿后最小提升的温度<br>设置范围：1-100（℃） | 默认：50℃ |
| 补偿系数 | 补偿温度与当前输出功率关系 | 补偿温度=最小补偿温度+（当前功率-触发功率）*补偿系数；补偿温度大于最大补偿温度时，设置为最大补偿温度 |

### 5.3 切换主题

在曲线图表界面与标准界面之间切换。

### 5.4 恢复出厂

所有设置全部恢复到出厂时的配置。

### 5.5 关于

显示设备的版本信息及厂商信息。

## 6 固件升级

系统要求：Windows7、Windows10，无需软件。升级有风险，请安全操作。

从官方获取升级（.gbn）文件，存放至电脑，请确认文件正确。

Type-C 数据线插入电脑，关闭焊台电源，屏幕不显示为止，按下旋钮将 USB 数据线插入焊台主机，等待显示 UPDATA,松开再按一次显示 USB ON,待计算机识别到 U 盘后，将升级文件拷贝至 U 盘，主机屏幕下方显示升级进度，直到出现 UPDATA SUCCESS，升级成功。

如若升级失败，请使用 Windows 安全模式更新。

## 7 常见问题

| | |
|---|---|
| 错误 1：无工具 | 未插入手柄、工具上未安装发热芯、发热芯损坏、工具连线不良、手柄或发热芯未插接好 |
| 错误 2：工具错误 | 插入的发热芯不能识别、发热芯未安装好 |
| 错误 3：过流保护 | 发热芯损坏短路、发热芯安装不到位、工具接线损坏短路 |
| 错误 4：工具保护 | 工具加热状态不正常、发热芯不能加热、工具处于液体中、发热芯未安装好 |
| 屏幕不亮 | 查看设备是否处于息屏状态<br>检查电源，查看电源灯 |
| 温度值大幅度跳动 | 新发热芯需要老化、发热芯损坏 |

## 8 产品售后

设备自购买日期起(以购买凭证为准)主机保修一年，手柄、发热芯、烙铁架保修一个月。

保修服务只限于正常使用下有效。一切人为损坏,如使用不适配的配件、不依照说明使用、非经本公司授权维修、错误使用等造成的损坏不提供免费保修服务。

# 9 技术支持联系方式

东莞市博星电子科技有限公司

地址：广东省东莞市长安镇西禹街十巷 4 号 302 室

官方网站：www.geeboon.com

邮箱：geeboon@foxmail.com

# 1 Precautions

- This product uses a three-wire grounding plug, which must be inserted into a three-hole grounding socket . If the grounding is not good, please use the grounding wire.
- Do not get the soldering station wet, and it is forbidden to use in a wet environment .
- When replacing parts, the original parts should be used, and the soldering station should not be modified without authorization.
- Smoke will be generated during welding, and the working environment should have good ventilation facilities.
- Pay attention to liquid tin splashing during work to prevent burns.
- If you do not use this product for a long time, please place it in a dry environment.
- The tip of the soldering iron has high temperature and is easy to burn . It is forbidden to touch it with hands. Please turn off the power when not in use .
- Knocking and dropping of the soldering iron tip may cause damage to the soldering iron tip.
- Do not use the tip of the soldering iron for work other than soldering, and use this product according to the operating instructions.
- the soldering station is working, the shell needs to dissipate heat, please leave space for heat dissipation.

# 2 Product Function Introduction

1. Support T12/C115/C245/C210/C470 soldering iron tip,please refer to the hardware device model for details.
2. Color LCD IPS screen (resolution 320*240, TC22 uses 2.0 inches, TC24 uses 2.4 inches).
3. PID temperature control, temperature control range 100～480℃, the temperature is stable at ±1.5°C (after stabilization) .
4. Temperature memory, three temperature level.
5. Shut (Sleep stand mode: put the handle on the soldering Sleep stand to enter sleep , the handle will enter sleep after 2 minutes without vibration, low temperature insulation delays the service life of the welding tip,pick up the handle to work automatically , the default is 160℃ ).
6. Shutdown(stop heating after a period of time after hibernation, the time can be set,short press the knob to resume work after entering shutdown ).
7. Dynamic temperature compensation. This function is used to dynamically increase the set temperature when welding large solder joints as the power increases, accelerate the tinning to compensate for the solder joint temperature, and reduce the temperature to the set temperature after melting or leaving, without no-load dry burning. (Default closed)
8. the temperature of the soldering station shows the curve of temperature and output status.
9. The soldering station software provides upgrade services, and the functions are constantly improved.

## 3 product parameters

**Soldering station host parameters:**

| Model | Select Temperature range | Working environment temperature | Storage temperature | Tip leakage voltage | Tip grounding resistance |
|---|---|---|---|---|---|
| TC22 | 100-480℃ | 0-45℃ | -20-65℃ | Less than 2mV | Less than 2Ω |
| HC24 | 80 - 480 ℃ | 0-45 ℃ | -20-65 ℃ | Less than 2mV | Less than 2Ω |

| Model | Input voltage | Current | Peak power consumption | Peak Heating power | Weight | Size (mm) |
|---|---|---|---|---|---|---|
| TC22 | AC110V-AC220V | 1.5A | 272W | 240W（AC 220V） | 450g | 150*92*45 |
| HC24 | AC110V - 240V | 3A | 450 W | 400W | 910 g | 214*100*74 |

**Tool parameters:**

| **Tipmodel** | **Handle model** | **power** |
|---|---|---|
| T12 | T12 | 60W - 70W |
| |  | |
| C470 (HC24 support) | T470 | 260-400W |
| |  | |
| C245 | T245 | 1 50W -230W |
| |  | |
| C210 | T 210 | 40W - 60W |
| |  | |
| C115 | T 115 | 30W-35W |
| |  | |

The image is for reference only; the actual handle received shall prevail.

The maximum power of a soldering station can be greater than the power of the heating element in the soldering iron tip. The maximum power of the soldering station tool is adjustable, but it should be noted that different manufacturers' soldering iron tips have different power carrying capacities. Therefore, when setting the maximum power of the soldering station tool, it should not exceed the power that the heating element can withstand.The resistance values of the heating elements in different soldering iron tips vary, and according to the formula $P=U^2/R$, the maximum power that can be achieved also differs.

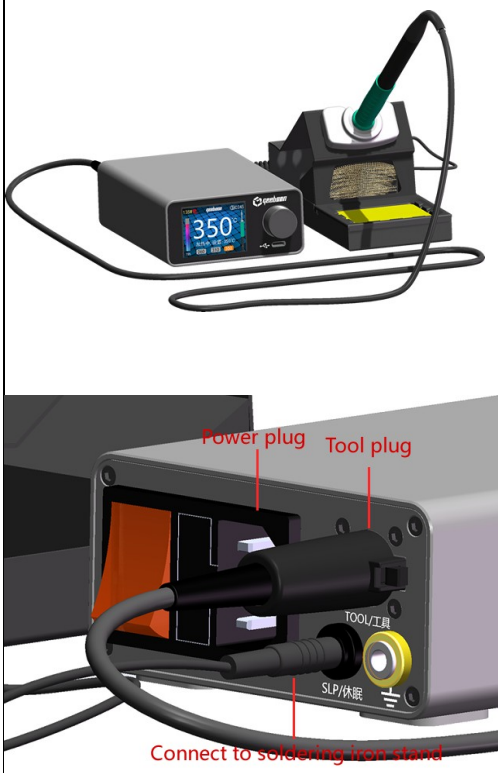
# 4 Product introduction

## 4.1 Equipment Installation

TC22 connection diagram

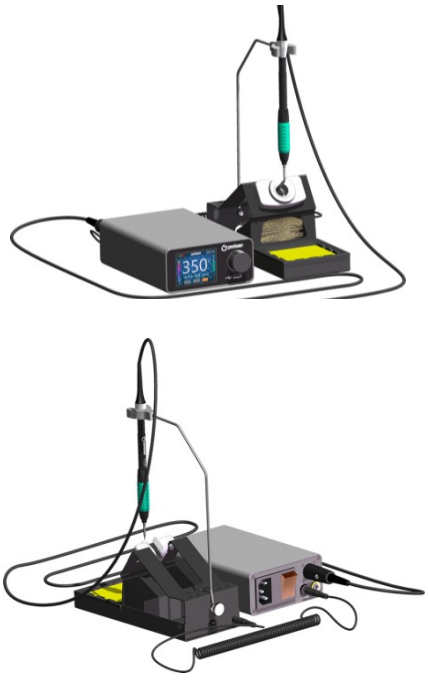
The TC22 is compatible with both SSD01 and SDC02 soldering iron stands.

For mounting with a T115 handle, a T115 hanging rod is required.

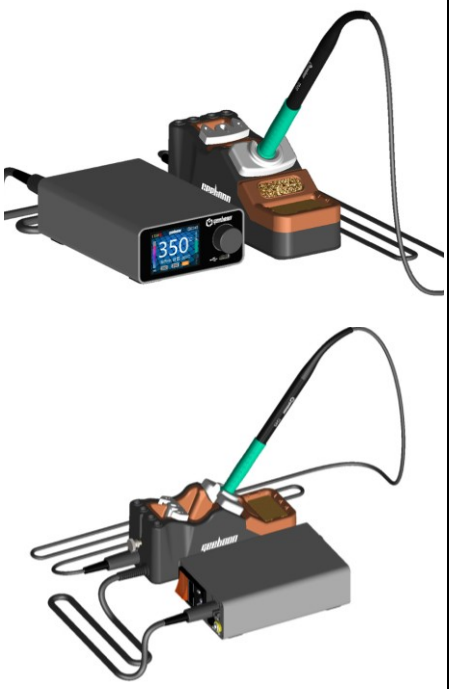



TC22 control unit with SSD01

USE T245\T210\T12 handle.



The TC22 control unit is paired with the SSD01 and T115 bracket.



TC22 control unit with SDC02 iron stand.Compatible with C245\ C210\ \T12 handle.

The wiring diagram shows that the soldering iron stand needs to be connected to the host SLP interface via the sleep cable, and the grounding interface needs to be connected to the workbench ground wire. If the workbench does not have an interface, do not connect it.

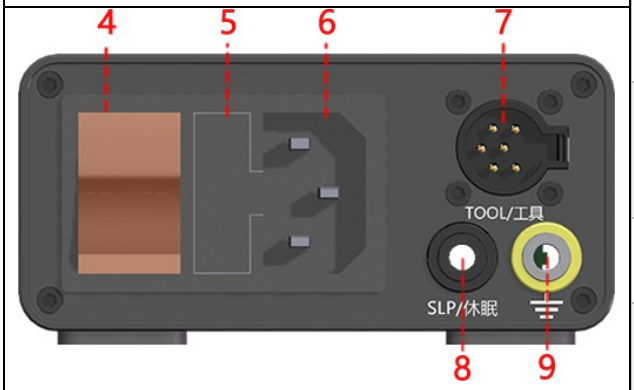
HC24 connection diagram

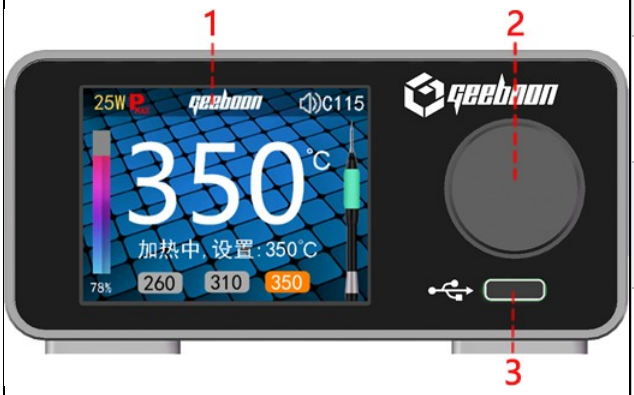
Rear side diagram when using T245/T470

Front side diagram when using T245/T470

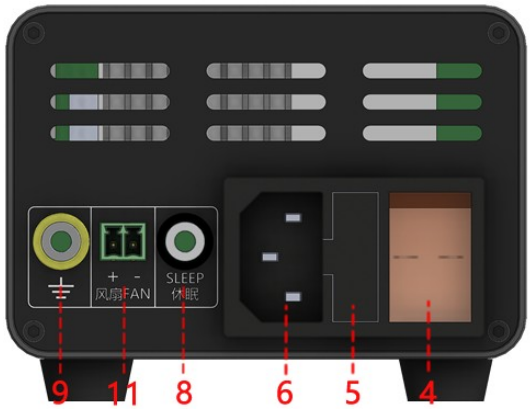
4.2 Appearance introduction

**TC22**

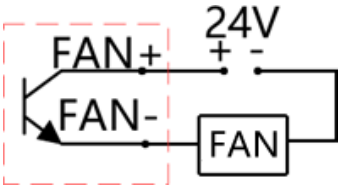



**HC24**





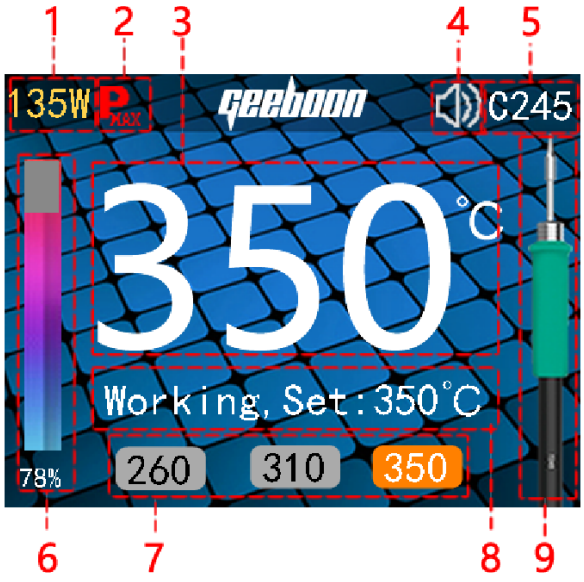
| | |
|---|---|
| 1 | Color screen<br>IPS 320*240 TC22:2.0 inch TC24:2.4 inch |
| 2 | Knob button<br>For specific operations, see 4.5 Main Operations |
| 3 | Type-c data line interface software upgrade |
| 4 | Power switch<br>Power on/off |
| 5 | Fuse socket<br>3A 250 V |
| 6 | AC power input<br>AC220 V |
| 7 | Tool socket<br>Insert welding handle |
| 8 | Sleep interface<br>Connect to sleep station |
| 9 | Grounding interface<br>ESD ground wire |
| 10 | Quick temperature<br>Quickly select temperature, customizable . (supported by HC24 only ) |
| 11 | Linkage signal<br>It can be automatically extended and linked,the switch is turned on when working, and closed when dormant.The wiring is shown in the figure,the maximum is 30 V / 500mA ,and the fan can be replaced by a relay to drive a high-power electrical appliance.(Only supported by HC24 )<br>  |

## 4.3 Soldering Iron Tip installation


C245/C210/C115/T12 devices are all installed using quick-insert installation. Please note that the soldering iron tip needs to be installed in place. You can use the auxiliary installation hole of the soldering iron stand.

## 4.4 Interface Introduction

**The default work interface.**

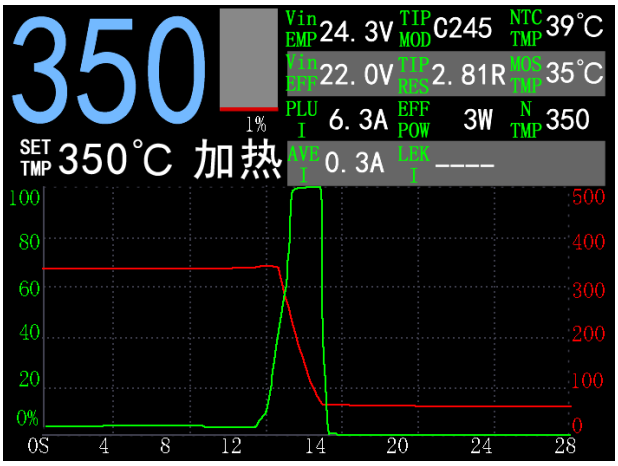



| |
|---|
| ① Working Power |
| ② Peak power flag<br>Displayed when power is limited to maximum |
| ③ Current Temperature |
| ④ Buzzer on flag |
| ⑤ Tool type mode<br>C245/C210/T12/115/C470 |
| ⑥ Power ratio bar |
| ⑦ Temp level |
| ⑧ Work state |
| ⑨ Tool icon |

**Sleep interface:**


**Stop interface:**

## Graphics:




| |
|---|
| ① Temperature |
| ② Power bar |
| ③ State table |
| ④ Set temp and status |
| ⑤ Temperature curve<br>The maximum temperature is 500 the maximum power adjustment is 100 %<br>Timeline cell 2 seconds |
| The state table is as follows: maximum voltage, minimum voltage, pulse current , average current , load resistance , heating power , tool type , equipment temperature . |

## 4.5 Main Operations

| TC22 | HC24 |
|---|---|
|  |  |





### 4.5.1 Temperature regulation

Turn on the power and enter the display interface. Turn the knob clockwise to increase the temperature, turn the knob counterclockwise to decrease the temperature, and rotate one scale to modify a temperature step value (the default is 5° C, enter the menu to modify the step value).

### 4.5.2 Quick temperature switching

TC22 single press knob, short press knob for quick temperature switching. (To turn on quick temperature)

HC24 single press to switch the default interface / curve chart. Press the CH switch button to quickly switch the temperature.

### 4. 5 3 Enter the menu

Press and hold the knob for more than 1 second to enter the host menu to set host related parameters . Rotate the knob clockwise to move the menu up, and rotate it counterclockwise to move the menu down .

When the host is set with a 4-digit password, you need to adjust the knob and enter the menu adjustment only after successful input.

Enter the options and rotate the knob to change the options and values. For specific settings, see the menu information.

# 5 menu information

## 5.1 Station

Host setting information parameters, see the following table for details:

| menu name | Function | Remark |
|---|---|---|
| Set max temp | Turn the knob to adjust the maximum temperature<br>Setting range: 200-480 ℃ | Default: 480 |
| Set min temp | Turn the knob to adjust the minimum temperature<br>Setting range: 80-180 ℃ | Default: 100 |
| Set Temp step | When turning the knob to adjust the temperature, the temperature value adjusted by one unit scale, 20 scales per circle<br>Setting range: 1-10℃ | Default configuration :<br>5℃ |
| Min input Voltag | The device does not heat up below this voltage<br>Setting range: 5-60 V | Only battery mode is valid.<br>Default configuration :<br>9V |
| theme | Set the theme interface displayed by default<br>Default/Curve Chart | Default: Standard |
| Shut wake up | PressKnob: press the knob to wake up the device to work after shutdown;<br>ExitSleep:Use the handle to vibrate or leave the sleep Stand to wake up the device to work; | |
| Buzzer volume | Set the volume of the buzzer sound<br>Setting range: 0-10 | Set 0 for no sound |
| LCD brightness | Set LCD screen display brightness<br>Setting range: 1-10 | 1:minimum brightness<br>10:maximum brightness |
| Language | Set system language mode<br>中文/Enlish | |
| Temp Lock | Temperature cannot be modified in the | Default: Disable |

| | | |
|---|---|---|
| | user interface after Enable.<br>range:Enable/Disable | |
| PIN Enable | Enable, entering the menu requires entering PIN Code.<br>Enable/Disable | Default: Disable |
| PIN Change | Change menu PIN code | Default: 0000 |

## 5.2 Tools

The tool type is automatically identified, and the menu loads the current tool parameters. This menu does not display when no tool is inserted:

| **menu name** | **Function** | **Remark** |
|---|---|---|
| Set Sleep Temp | After entering the sleep mode, the target temperature of the Tool:<br>Setting range: 0 - maximum value | Default: 160 |
| Delay Sleep time | Shock sensor mode:the sensor is still waiting for the time to enter sleep.<br>Sleep stand mode: handle in stand to delay time.<br>Unit: Second Setting range: 0 -2000 | Shock sensor mode:<br>Default:60.Set to 0,do not sleep<br>Sleep stand mode:<br>Default:60.Set to 0,handle in stand do not delay. |
| Delay Shut time | When the soldering station enters sleep mode, wait for the set time and stop heating;<br>Unit: minute Setting range: 0-30 | Default: 10<br>Set to 0 , do not shut |
| Sleep mode | ① Shock sensor: Applicable to the handle connected with the vibration sensor, relying on the countdown of the dormancy time to enter the dormancy.<br>② Sleep stand: It is suitable for the dormant signal to be connected to the dormant seat. When the handle is placed in the dormant seat, the handle enters the dormant state.<br>③PDST: Through power detection, it can be judged that the soldering station is working, and the threshold can be set; when it wakes up after sleep, it needs to be touched with a wet sponge, and the temperature wakes up to detect whether there is a wake-up signal. | default:<br>T12 : Shock sensor<br>C245\C210\C115\C470: Sleep stand |

| | | |
|---|---|---|
| Peak power | Host peak power output<br>Setting range: Power W<br>C245:20-400W<br>C245:20-240W C210:20-60W<br>C115:20-45W T12:20-90W | Default configuration:<br>C470 380W<br>C245:180W C210:40W<br>C115:35W T12:70W |
| Temp level | See 5.2.1 for details | |
| Offset Temp | Make an offset value of the current actual temperature<br>Unit: ℃ | Default: 0 |
| Calibration | See 5.2.2 for details | |
| PID | See 5.2.3 for details | |
| PDST Value | only available when the power is set to sleep. It detects whether the soldering iron has a working threshold. If it does not exceed this threshold during the sleep waiting time, it enters the sleep state. | |

### 5.2.1 Quick temperature setting

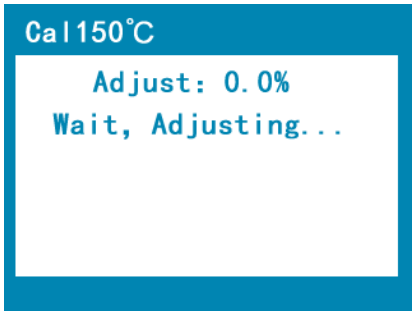
The main interface displays shortcut temperature options, press the knob to switch the shortcut temperature.

| menu name | Function | Remark |
|---|---|---|
| Temp level Enable | Turn Disable/Enable the shortcut temperature function | The standard surface is not displayed after closing |
| Temperature level 1 | The first temperature value of the shortcut temperature | |
| Temperature level 2 | The second temperature value of the shortcut temperature | |
| Temperature level 3 | The third temperature value of the shortcut temperature | |

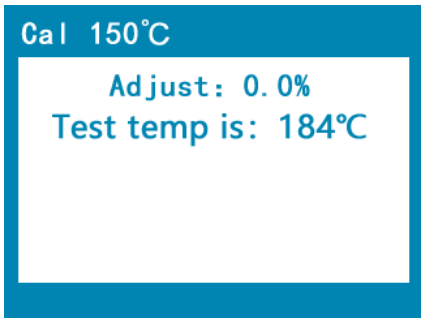
### 5.2.2 Temperature Calibration

| menu name | Function | Remark |
|---|---|---|
| Cal 150 ℃ | Adjust the signal value of thermocouple 150℃ | Need to measure temperature see interface |
| Cal 250 ℃ | Adjust the signal value of the thermocouple 250 °C | Need to measure temperature see interface |
| Cal 350 ℃ | Adjust the signal value of the thermocouple 350 °C | Need to measure temperature see interface |
| Cal 450 ℃ | Adjust the signal value of the thermocouple 450 °C | Need to measure temperature see interface |

Enter the temperature calibration interface, it will appear that the adjustment is waiting, when it is adjusted to the calibration temperature point, it will display the measured temperature as: xxxs℃ (this temperature is the sum of the thermocouple value and the cold junction value), and measure the temperature at this time, if the temperature is high When the temperature is displayed, adjust the knob counterclockwise; if it is lower than the displayed temperature, turn it counterclockwise; measure after adjustment, if the temperature is the same, press the knob to save the temperature.




The temp of the calibration point is being adjusted to reach the calibration point, it will take a while.




At this time, use a thermometer to measure the temperature. If it is not on time, please adjust it.

### 5.2.3 PID

Generally, you only need to load the default configuration when using it. If you are not satisfied with the effect, you can adjust it yourself.

Note: When adjusting PID control parameters, it is necessary to understand its working principle, otherwise it will easily lead to system instability.

| menu name | Function | Remark |
|---|---|---|
| Kp | Scale adjustment coefficient<br>Setting range: 1-1000 | In the PID regulator, it can speed up the response speed of the system, improve the adjustment accuracy of the system, and quickly adjust the error. |
| Ki | Integral adjustment coefficient<br>Setting range: 1-1000 | In the PID regulator, it can eliminate the residual error and adjust the steady state time. |
| Kd | Differential adjustment coefficient<br>Setting range: 1-1000 | In the PID regulator, it can improve the dynamic performance of the system, predict the error trend, and correct the error in advance. |
| PID control zone | adjustment intervention error range<br>Setting range: 1-1000℃ | Example: The parameter is set to 5 0°C<br>The target temperature is set to 3 50°C<br>the temperature is lower than 300 degrees Celsius, the controller exits PID for full-speed heating, and when the temperature is higher than 400 degrees Celsius, exits PID and stops heating. |

### 5.2.4 Dynamic temperature compensation（DTC）

temperature compensation

Dynamic temperature compensation is used to compensate the temperature difference between the temperature sensor and the soldering iron tip. Under high power output, the temperature difference between the soldering iron tip and the temperature detection position increases. A temperature compensation is given by judging the output

power, and the dynamic compensation temperature increases the temperature of the soldering iron tip. Temperature, so that the temperature of the soldering iron tip is closer to the set temperature.

When the power returns below the trigger power, exit the compensation.

No temperature compensation is performed in the second pass.

Maximum compensation temperature The maximum temperature increase after intervention in compensation

| menu name | Function | Remark |
|---|---|---|
| DTC Enable | Turn Disable / Enable the dynamic supplementary temperature function | Default: Disable |
| DTC Inter | Minimum power to trigger power compensation entry | Default:<br>C115:10W C210:10W C245:30W C470:60W T12:25W |
| DTC Min Temp | Minimum compensation temperature The minimum temperature raised after compensation is involved | Default:5℃ |
| DTC Max Temp | Maximum compensation temperature The maximum temperature increase after intervention in compensation | Default:50℃ |
| DTC Ratio | Compensation coefficient The relationship between compensation temperature and current output power | Compensation temperature = minimum compensation temperature + (current power - trigger power) * compensation coefficient; when the compensation temperature is greater than the maximum compensation temperature, set it to the maximum compensation temperature |

### 5.3 Change Theme

Switch between Graphics interface and standard interface.

### 5.4 Restore

All settings are restored to factory defaults.

### 5.5 About

Displays the version information and manufacturer information of the device.

## 6 Firmware upgrade

System Requirements: Windows 7 , Windows 10 , no software required.

Getting (.gbn ) file from the official website and save it to the computer.

the Type -C data cable into the computer, turn off the power of the welding station , until the screen does not display, press the knob to insert the USB data cable into the main unit of the welding station until UPDATA is displayed , release it and press it again to display USB ON, wait for the computer to recognize U Disk, copy the upgrade file to the U disk, the upgrade progress will be displayed at the bottom of the host screen until UPDATA appears SUCCESS, the upgrade was successful.

If the upgrade fails, please use Windows Safe Mode to update.

## 7 FAQs

| | |
|---|---|
| Fault 1: No Tools | The handle is not inserted, the Soldering Iron Tip is not installed on the tool, the Soldering Iron Tip is damaged, the tool is not well connected, and the connection is not good |
| Fault 2 : Tool Error | Inserted Soldering Iron Tip cannot be recognized, and the Soldering Iron Tip is not installed properly |
| Fault 3: Overcurrent Protection | The Soldering Iron Tip is damaged and short circuited, the Soldering Iron Tip is not installed properly, and the tool wiring is damaged and short circuited |
| Fault 4: Tool Protection | The heating state of the tool is abnormal, the Soldering Iron Tip cannot be heated, and the tool is in liquid |
| Screen is off | Check if the device is in the off-screen state<br>Check the power supply, look at the power light |
| The temperature value jumps sharply | The new Soldering Iron Tip needs aging, and the Soldering Iron Tip is damaged |

## 8 After-sales service

From the date of purchase of the equipment (subject to the purchase certificate), the host is guaranteed for one year , and the handle, Soldering Iron Tip, and soldering iron stand are guaranteed for one month .

Warranty service is only valid under normal use. All man-made damages , such as the use of unsuitable accessories , use not in accordance with the instructions , repairs not authorized by the company , wrong use , etc. , do not provide free warranty service.

## 9 Technical support contact information

Dongguan Geeboon Electronic Technology Co., Ltd.
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Dongguan Geeboon Electronic Technology Co., Ltd.