

Temperature tester user manual ST-1090

# Specification:

Model	ST-1090		
Resolution	1°C/1°F		
Temperature range	0-800°C/32-1500°F		
Accuracy Temperature	±5°C/±9°F		
Sensing wire	K-type thermocouple		
Display	LCD		
Power	9V DC High-performance carbon battery		
Operating environment	0°C~40°C/32°F~104°F		
Size	75x143.5x41.5mm		
Weight	185g		
LCD Screen	d USB interface (convert serial communication, itter the computer needs to install the CH340 chip driver)		
Power			

When installing the sensor, insert the sensor into the putter and terminal (The red edge is inserted into the red terminal, and the blue is inserted into the blue terminal)

Temperature

Sensor

point

Push button

Putter
 Ring gasket

1

Terminal

# Instructions

- Open the battery cover on the back of the instrument, insert the battery and close the back cover. Please
  pay attention to the correct connection of the battery when inserting the battery.
- Put the sensor into the putter and terminal (red edge into the red terminal, blue into the blue terminal).
- Press the power and check the display screen. When the display shows room temperature, you can perform operation or measurement.
- 4. The soldering iron tip sticks the flux to the test point, and the temperature will be displayed within 2 seconds.
- 5. After use, press and hold the power button to shut down.

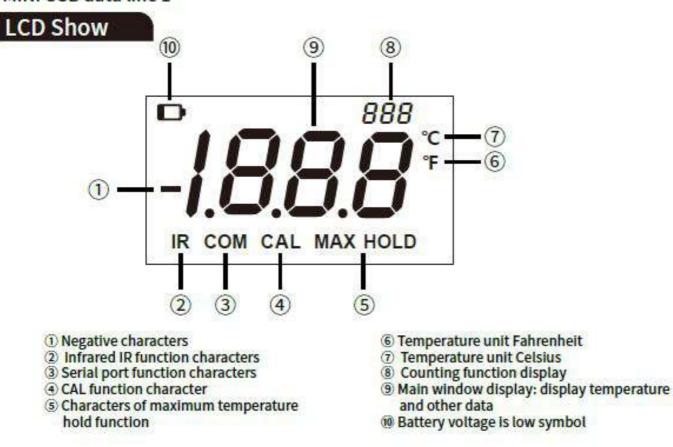
# Precautions

- 1. The sensor is made of very thin ( $\phi$ 0.2mm) metal wire. It should be used with care and not bend or break.
- 2. The housing of the thermometer is made of plastic. Do not touch the tip of the soldering iron.
- The sensor is a consumable item (life of about 50-60 times), long time use, the alloy layer is worn out, the measurement will be inaccurate, and need to be replaced New sensor.
- 4. Alcohol can be used to clean the flux attached to the terminal. Do not use thinner or volatile oil.
- If the display shows -1, it means that the temperature sensor has been scrapped (or no sensor is installed) and a new one needs to be replaced.
- 6. If it displays , it means the battery is low, and the temperature cannot be measured normally, and the battery needs to be replaced. It is recommended remove the battery if not to use it for a long time.
- The 191-212 temperature sensor is only suitable for measuring the temperature below 500°C, such as measuring higher temperature, please use the appropriate Temperature probe.
- Do not blow the hot air gun directly to the ST-1090 for measurement. Blowing directly will damage the ST-1090 host.

Note: Thermocouple and external temperature sensing wire cannot be used at the same time.

## Package list

Host ST-1090:1 Battery: 1 K-type thermocouple test wire:1 Sensor : 10 MINI USB data line 1



### Switch function

Short press the "POWER" button to turn on, the display shows the room temperature when turning on; you need to long press the "POWER" button to turn off.

### 

Short press the "MAX HOLD" key to open the maximum temperature hold interface, as shown in Figure 3-1, short press again to close and return to the working interface.

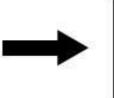




### Ξ.The display interface of the number of times the sensor wire is used

Each time the temperature is tested, the upper right display area of the main window will increase the number of times, up to 999 times, long press "RESET"The combination key can be reset to zero times. (When used 50 times, it flashes to prompt to replace the sensing wire)







### 四.IR and serial port use display interface

After testing the temperature, short press the SEND key to send the data, the IR character will be displayed as shown in Figure 4-1 (support ST-3150 soldering station)





Figure4-1

Figure4-2 (Serial communication baud rate 9600)

The serial port data line is connected to the thermometer and the computer, the thermometer displays COM as shown in Figure 4-2; the thermometer sends to the computer every 100ms temperature data.



ATTEN serial port assistant

Download ATTEN serial port assistant from the official website(You can also use other serial port assistants)

Note:convert serial communication, the computer needs to install the CH340 chip driver

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#### 五.Low battery display interface

When the battery power is low, the low battery symbol is displayed in the upper left corner, prompting that the battery needs to be replaced as soon as possible to avoid affecting the use (Low battery temperature measurement is not accurate).



六.The sensor wire is damaged or there is no sensor wire display interface



七.Automatic shutdown function

When the thermometer is not in use, it enters the shutdown countdown until the set shutdown time (default 15 minutes, can be set), the thermometer automatic shut-down.

Long press the "MAX HOLD" key to enter Figure 7-1, the "POWER" key shortens the time, and the "SEND" key extends the time (time setting range 1~240 minutes). After the setting is completed, long press the "MAX HOLD" button to exit and return to the working interface.



Figure7-1

#### /\.Temperature unit switch setting interface

Long press the "MAX HOLD" key to enter Figure 7-1, press the "MAX HLOD" key again to enter Figure 8-1, and press the "SEND" key.Switch °C/°F; after switching, press and hold the "MAX HOLD" key to exit and return to the working interface.

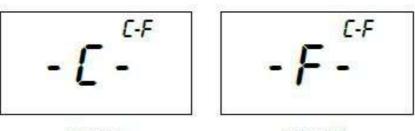
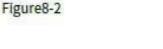


Figure8-1



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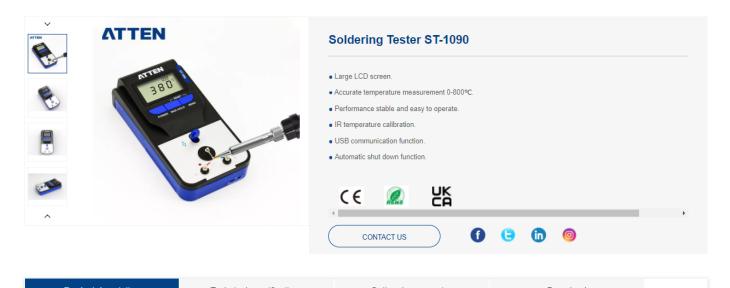
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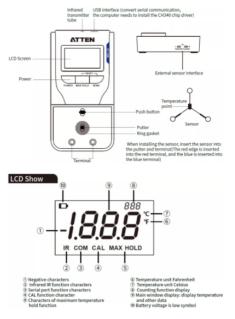
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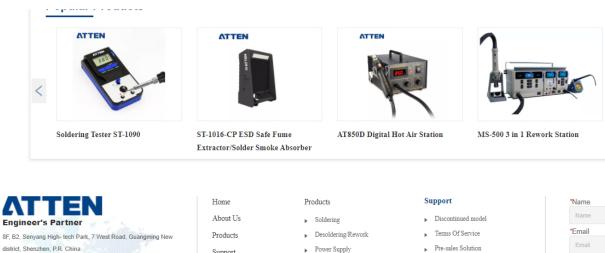
Product description	lechnical specifications	Optional accessories	Download
Features:			

- Power on/off function. °C/°F is available and exchangeable.
- $\blacklozenge\,$  MAX HOLD function, to grab and display the maximum temperature.
- ♦ Max 999 times sensing wire used character can be shown on screen.
- When the sensing wire is used for 50 times, it will flash to prompt to replace the sensing wire.
- Connect computer with USB to realize automatic data collection.
- Infrared (IR) temperature calibration function, can be used with ST-3150, to calibrate temperature.
- It will tell you when the battery is running low.
- Automatic error reporting, when sensing wire damaged or no sensing wire.



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