

# User Manual

## Tanner 100 Histo-Trimmer



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## 1. General Description

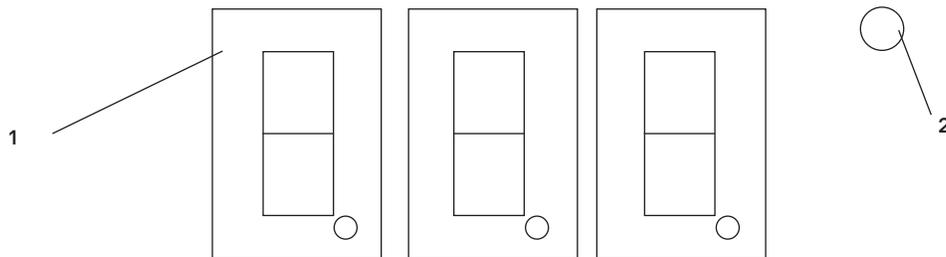
The TN-100 control system is composed of an STC89C51 controller and surrounding parts. The advanced inner PID controls the heating of the unit evenly and accurately.

## 2. Technical Parameters

- Size of surface: 1500 × 220mm
- Range of temperature: ambient ~90°C
- Precision: ±1%
- Voltage: 110V±10% 60HZ
- Power: 120W
- Current: 0.5A
- Fuse: F1A/AC250V
- Overall dimension: 220L × 160W ×175H mm
- Net Weight: 2.5kg

## 3. Display Interface

The display interface is composed of three nixie tubes and one LED luminous diode. The nixie tube shows the present temperature and set temperature. The LED shows the heating state. This system is simple and easy to use.

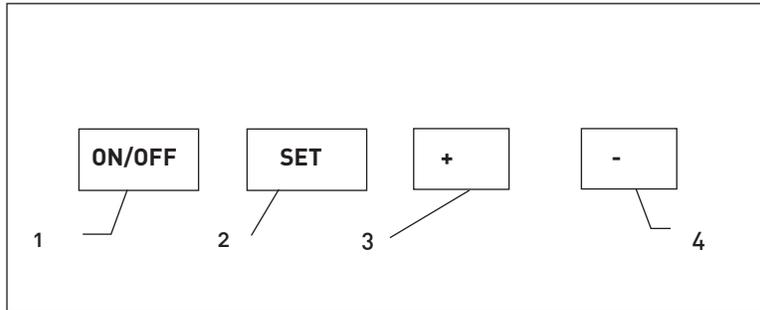


1. When the SET key is pressed, the three nixie tubes show set temperature. This temperature can be adjusted by pressing –or+ key to reach the required value. When the heating control deactivates, the display shows the present temperature.

When SET Key is pressed, the LED is green, indicating that the device is in setting mode. The temperature value can then be set to the desired value. When the heating control starts or stops, the LED flashes red and the flashing frequency changes with each temperature change. The LED turns orange when the device reaches set temperature. The LED will then turn off when system stops heating.

## 4. Setting Control Panel

The control panel has four keys which operates the following functions: 1. **ON/OFF** (*power on or off*); 2. **SET** (*set program*); 3. **+** (*increase temperature*); and 4. **-** (*decrease temperature*).



1. **ON/OFF** key, press this key and the instrument will start, press again, the instrument turn off.
2. **SET** key: This key is active when system is in “stop heating” mode. Press this key to enter into the temperature setting state. The LED will turn green, displaying a set temperature value. This temperature value can adjusted by - or + Key . This key is inactive when unit is in heating state.
3. **Plus key: (+)** Active when system is set on temperature setting state. Press this key to change the value of temperature. Key is inactive in any other state.
4. **Minus key: (-)** The - key is active when system is in the temperature setting state. Press this key to reduce the value of temperature. Key is inactive in any other state.

## 5. Operation

Connect the power line then turn on the power switch. The LED light indicates the instrument has been powered on. The Unit is then in a “stop heating” state and shows the displays current temperature.

1. Press the **SET** key. The LED light turns green and displays the set temperature. To adjust the temperature value, press the - or + keys until the required temperature is reached.
2. Press **ON/OFF** key again. The instrument will then start heating and the set temperature value is now saved and always available. The temperature does not need to be reset when turning unit on the next time. If the present temperature is lower then the set temperature, the LED is red and flashes. The frequency of the flashing changes with temperature. When the present temperature reaches the set temperature, the LED turns orange. This indicates that the system is now stable and will only fluctuate within 1 degree.
3. To stop heating, press **ON/OFF** key again and the LED turns off. The system will now stop heating.

## 6. Appendix

The warranty period of one year from delivery is only valid for normal usage according to the specified conditions for the instrument and the circumstances it was made for, following the various regulations specified in the operations manual.

Warranty terms are not applicable for damage caused by misuse or improper operation of instrument and our company cannot be responsible for above-mentioned damages.