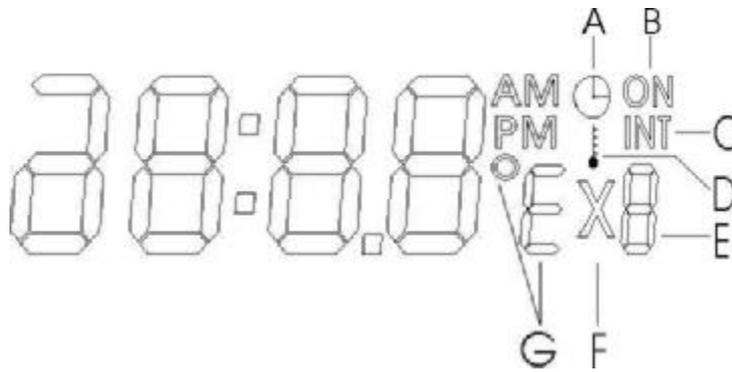


## User Manual of Thermo-Timer ET01

The ET01 Thermo-Timer is a very versatile product that can control both temperature and timer independently and in cohesion. Its sophisticated internal program allows users many different combinations for various applications. The external water proof temperature probe with cable allows temperature measurement in remote environment. Following is the description of the operation of the ET01.

### LCD display



- A) Thermo-Timer in Timer mode icon
- B) Thermo-Timer in ON state
- C) Thermo-Timer in OFF state
- D) Thermo-Timer in Temperature mode icon
- E) Timer/Temperature control pair number
- F) Timer/Temperature control disable
- G) C/F icon

### 1. Power On and normal Display Modes

When an AAA battery is first inserted, all LCD display segments will be on for a brief period then the display jumps to show clock time and an icon INT (means control is interrupted or disabled). By pressing the MODE key once, the display can also be diverted to show the temperature value which is the temperature measured by the probe. The display can therefore be toggled between time and temperature by pressing the MODE key.

## 2. Clock Set

In the clock mode, press the SET key once, an icon C will shown blinking. This is the set clock mode. Hours and minutes values can now be entered by pressing the keys h/▲ and m/▼. Press SET key once to return to normal clock display.

## 3. Modes of Operation

There are in total three control modes of operation in ET01 selectable by the user to fit his application requirement.

- Thermo mode
- Timer mode
- Thermo-Timer mode

Each mode is independent of the other and at each time only one mode can be in operation. Activate one mode means automatically disabling the other previously active mode.

Mode 1 – Temperature control mode – symbol is (  )

To enter this mode, in normal clock or temperature display mode, press SET key once to see the flag C blinking. Now press the MODE key once to see the display changes to set temperature value mode which shows 18 ° C as the default value. A thermometer flag is shown blinking denoting the user he is in temperature set mode. The temperature value can now be changed up or down by the h/▲ or the m/▼ keys. The settable range is 40° C to 0° C. After the desired value is set, press SET key once to leave the temperature set mode and returns to normal temperature display mode. The thermometer flag  is now showing steadily. If the control temperature set value is higher than the temperature measured by the probe, the flag ON will be shown to inform the control output is now active. Otherwise the INT flag is maintained. The temperature control activity can be temporarily suspended by first entering the set temperature mode, then press the Manual Override key once, a cross  flag will appear to inform the temperature control action is now suspended.

Mode 2 - Timer Control Mode – symbol is (  )

To enter this mode, in normal clock or temperature mode, press SET key once to see the flag C blinking. Now press the MODE key twice to enter the Timer Control Mode. The timer symbol  is shown blinking together with the value of the first ON timer value which is shown in the following diagram if no value has been entered before:



Use keys h/▲ and m/▼ to enter the hours and minutes of the ON time for the first timer pair. Press SET once to enter the value of OFF (INT) time for the first pair. In like manner the ON time and OFF time of the three timer pairs can be entered. Each ON and OFF times can be suspended by using the Manual Override key during time setting. A X symbol is shown to denote this condition.

The control output is activated each time the real clock time matches the set timer time. This means three time periods can be controlled for ON and OFF.

Mode 3 - Thermo-Timer mode - symbols is (   )

This is a combined operation mode of mode 1 and mode 2. In this mode three time pairs with three different temperature values can be set so that three temperatures in three periods of time can be controlled.

To enter this mode, press SET key once in normal mode to see the blinking C. Now press the MODE key three times to see the flags  and . The timer flag is blinking to notify that the timer value can be set. After setting the ON time, press SET key to enter temperature value set where the flag  is blinking. Enter the desired temperature value then press SET key again to set the OFF time. In like manner all three pairs of timers and temperature values can be set. All values can be suspended by using the Manual Override key as before.

## Manual Override Function

During operation, the output condition of the ET01 can be altered by press the Manual Override key once, if the flag ON is shown then it will change to INT and blinking. If the INT is on, then it will switch to ON and blinking.

### Notes of Importance:

1. The product can be completely reset by press down SET and MODE together and release. It will return to the POWER ON condition and all set values will be lost.
2. If the display seems dim then it is time to change the battery. All set values will be lost after battery change and needs to be re-entered
3. The temperature probe is protected by a metal shield and plastic cover. Make sure they are not damaged so that water proofing is not longer possible. Store the probe and cable inside the compartment at the bottom of the ET01 if not used.
4. Maximum probe length is 1 meter and control range is from 20° C to 40° C.