

USERGUIDE

tempTrac Plus Thermolator Water Temperature Controller Guide to Operations Addendum



WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

INTRODUCTION

The tempTrac - PLUS is a digital version of the same PROVEN control system found in the tempTrac. This upgraded controller provides simultaneous display of Setpoint, or Set Value (SV) and Process Value (PV), which is the actual temperature To Process. In addition, the control comes standard with user-adjustable High and Low deviation alarm capabilities (A/V alarm hardware optional), or optional SPI communication protocol.

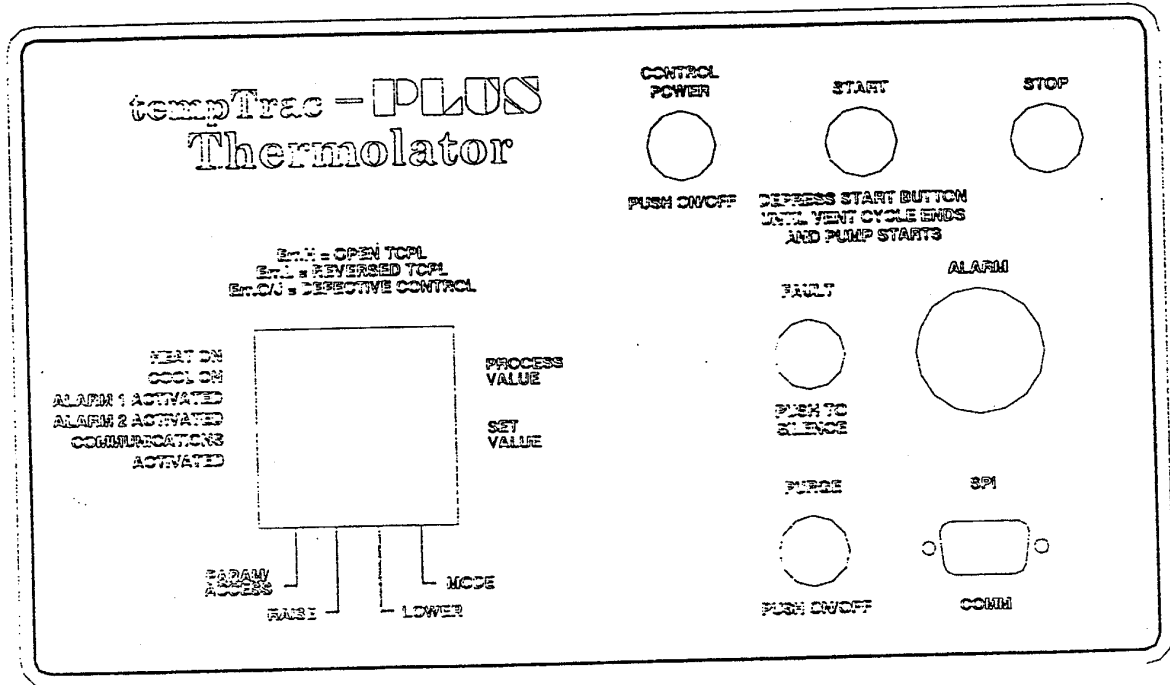
This addendum is intended to supplement the tempTrac Guide to Operations and detail the operation of the tempTrac - PLUS controller. The remaining physical and mechanical details of the system can be found in the aforementioned manual.

LAYOUT & FUNCTION OF THE CONTROL PANEL

The tempTrac - PLUS control panel consists of two main areas that provide process and control information. These two areas are:

CONTROL DISPLAYS

OPERATOR LED'S



CONTROL DISPLAYS

PROCESS VALUE

This display will continuously monitor and show the To Process temperature.

SET VALUE

This display shows the temperature setpoint selected by the operator via the Raise and Lower arrow keys.

OPERATOR LED'S

There are two categories of LED's in this area; LED's that monitor the action of the Thermolator and LED's that indicate that a problem has occurred.

The action monitoring LED's are; HEAT ON (01 on controller display)
COOL ON (02 on controller display)
SPI COMM (F1/F2 on display)
POWER ON (Amber LED)
PUMP ON (Green LED)
*MOLD PURGE ON (Amber LED)

The alarm LED's are; HIGH DEVIATION (A1 on controller display)
LOW DEVIATION (A2 on controller display)
*FAULT (Red LED)

* Indicates Optional Equipment, not included on all units.

OPERATION DETAILS

CONTROL POWER SWITCH: This Amber-colored illuminated push-button is a "latching" type switch. Depressing once will lock the switch on, illuminating the pilot light. Depressing again will unlatch the switch and open power to the control circuit. **NOTE**: With control power off, line voltage is still present within the electrical enclosure. Disconnect three phase power for any service requirements.

START SWITCH: This Green-colored illuminated push-button is a momentary switch. To start operation, depress and hold this switch while the vent sequence timer elapses (30 seconds). The switch will latch itself when the timer has elapsed and the pump has started. Should the pump overload trip, the Green light will be extinguished, and if so equipped, the Red Fault LED will illuminate. The overload must then be manually reset and the Starting sequence must be repeated.

FAULT INDICATOR: This Red-colored illuminated push-button serves dual function as the main alarm indicator, and the silence push-button for the audible alarm. Note that this does not reset or cure an alarm condition. This general indicator is illuminated for any of the following conditions;

- | | |
|---|---|
| A)High Deviation (10+ degrees above setpoint) | D)Pump overload |
| B)Low Deviation (10+ degrees below setpoint) | E)Electromechanical high temp safety (optional) |
| C)Low water pressure (< 15 psi) | |

MOLD PURGE: This Amber-colored illuminated push-button is a "latching" type switch identical to the Control Power Switch. When depressed, the mold purge cycle is initiated, introducing customer-supplied compressed air into the piping system to evacuate entrained water from the piping. The Purge cycle will run until the switch is unlatched. NOTE: The Mold Purge Switch is inactive unless the unit is in the STOP mode. ALSO note the WARNING in the main manual regarding shut-off of the COOLING WATER IN line PRIOR to purging.

CONTROLLER DETAILS

CONTROLLER KEYS: Param/Access - Allows access to controller programming values.

Raise - Increases the selected parameter.
Continued depressing will cause the parameter to increment at a faster rate.

Lower - Decreases the selected parameter.
Continued depressing will cause the parameter to decrement at a faster rate.

Mode - Depress while in program menus to return to normal operation. Also used to initiate "Auto-Tune" to find the optimum control PID values for the particular application. First depress Mode for 3 seconds placing control in "Standby" condition. Depress for 6 seconds to place control in "Tune" mode. After completing Auto-Tuning, the control will return to normal control automatically.

PROGRAM MENUS

After depressing and holding the Param/Access key for 8 seconds access is gained to the program parameters. The 8 second delay is built-in to prevent accidental entry to the program. **CAUTION: Entering program menus can allow accidental mis-calibration of the controller, or improper program parameters resulting in incorrect control operation.** When access is gained, the display will flash "Ac.Cd 01" meaning you have entered Menu 01, the starting point in the menus.

A brief description of the program menus follows;

Menu 00 - exiting the program while in this menu enables the Keylock on the controller keypad. Locks out changes to setpoint and Autotuning, but access to program can be regained by holding Param/Access for 8 seconds.

Menu 01 - entry and "normal" exit point to/from the program menus (see Menu 00 above)

Menu 02 - PID parameter programming

Menu 03 - Alarm values and setpoint limits

Menu 04 - SPI communications parameter programming

Menu 05 - Control action, alarm type and sensor setup

CONSULT FACTORY FOR FURTHER PROGRAMMING DETAILS

SPI COMMUNICATIONS PROGRAMMING

Each Thermolator in the communication loop must be programmed with it's own **unique** Network Address and the appropriate Baud Rate. The tempTrac - PLUS controller is capable of operating with a 1200 (programmed as 12.n.8) or 2400 (programmed as 24.n.8) Baud Rate. Network Addresses are available from 32 to 99-decimal, (programmed as id.No. 00 to 67). Device type must be S20 for a water temperature controller.

Access program Menu 04 to enter these values by pressing Param/Access for 8 seconds. When display flashes Ac.Cd 01, press the Raise key until display shows Ac.Cd. 04. To enter Menu 04, press Param/Access once. The display will now show id.No. and the appropriate address can be entered. Pressing Param/Access once will advance the program to the Baud Rate and this can be similarly set by the Raise or Lower keys.

Exit this portion of the program by pressing **Mode**. **Ac.Cd. 04** should now be displayed. Press the **Lower** key until **Ac.Cd 01** is displayed; this is the exit point of the programming. Press **Mode** once to return to normal operation.

Again use caution to **NOT** enter portions of the program that are not SPI related as there is a possibility that improper programming may result, greatly affecting the operation of the unit.

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

WE'RE HERE TO HELP

To contact Customer Service personnel, call:



HOW TO CONTACT CUSTOMER SERVICE

From outside the United States, call: 814-437-6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

If you do have a problem, please complete the following checklist before calling Conair:

- Make sure you have all model, serial and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- Make sure power is supplied to the equipment.
- Make sure that all connectors and wires within and between loading control and related components have been installed correctly.
- Check the troubleshooting guide of this manual for a solution.
- Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.
- Check that the equipment has been operated as described in this manual.
- Check accompanying schematic drawings for information on special considerations.

BEFORE YOU CALL ...

Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Departments for a nominal fee.

EQUIPMENT GUARANTEE

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

PERFORMANCE WARRANTY

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

WARRANTY LIMITATIONS

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

