

# TTC

## International interface

### Advanced Setup/Troubleshooting



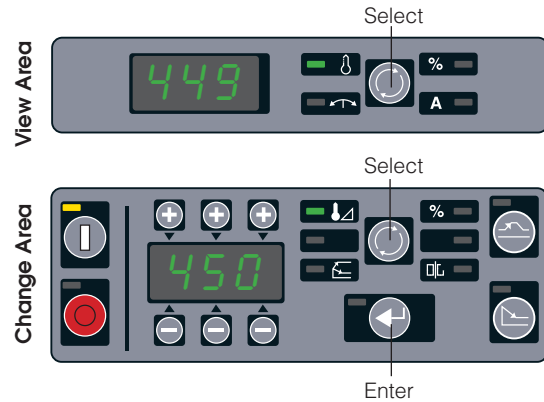
## TTC Scrolling

### 1 Row Scrolling

Select zones to scroll  
Press both view area select and enter together  
Selected rows will scroll  
View zone(s) in a group  
View rows automatically

### 2 Zone Scrolling

Select zones to scroll  
Press both change area select and enter together  
Selected zones will scroll  
View zone(s) in a group individually



## Errors



### Power Up Error

E-0 = No zones found  
E-1 = Configuration mismatch

### Solutions (Change Area - Enter)

Instruct the interface to do one of the following:  
1 - Read configuration from system (recommended)  
2 - Send configuration to system from interface  
3 - Locate zones (zone finder)

### Menu Load Error

E-2 = Menu mismatch, will not load, press enter to clear

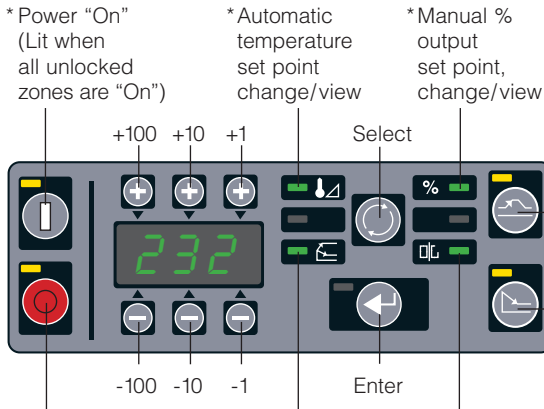
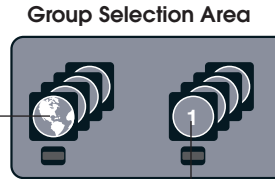
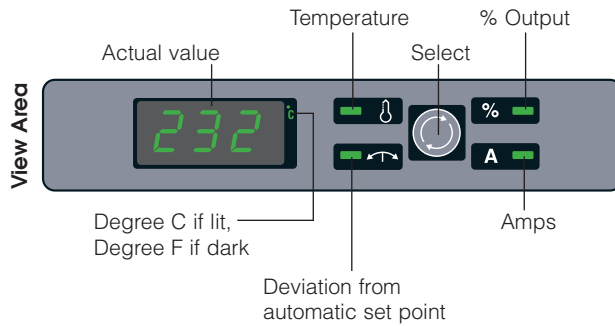
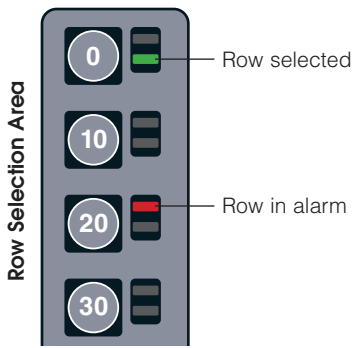


# Gammaflux®



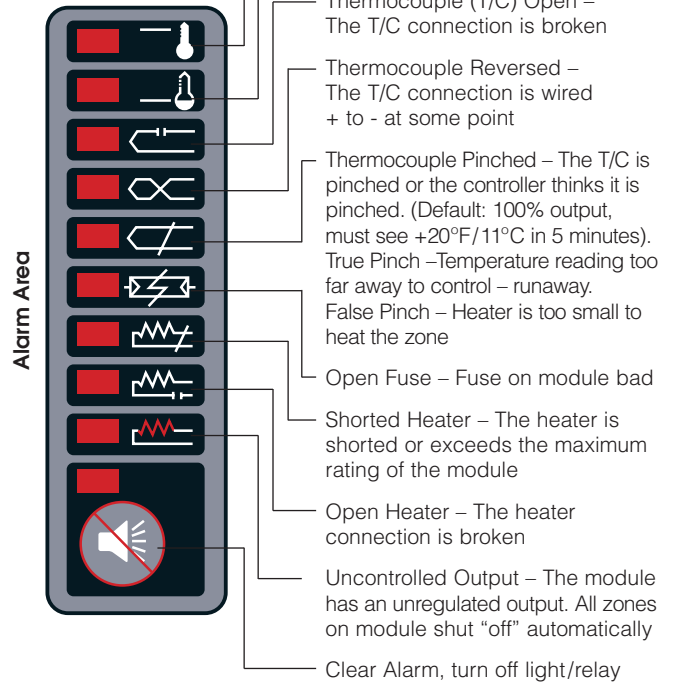
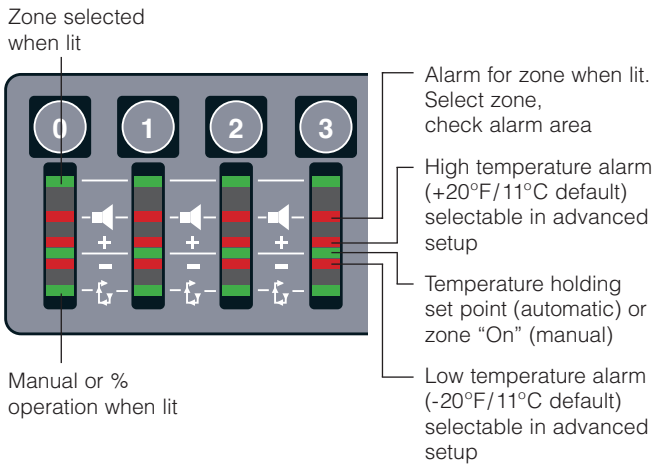
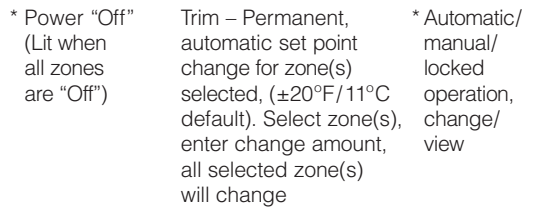
### Gammaflux

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"All Group" – Selects all zones in the system

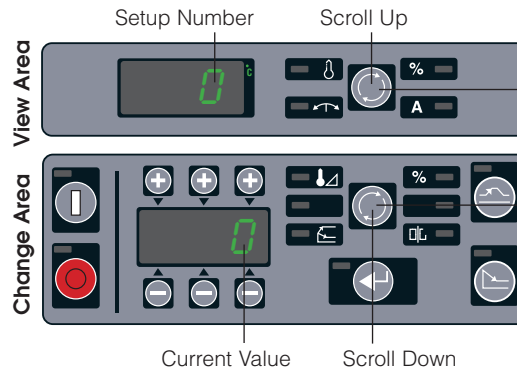
\* "Custom Group" – Stores user zone group. Select zones to save, press custom group button until flashes (5 seconds)



\* Saved in menu

# Advanced Setup

The TTC International interface is shipped to the customer so that no setup work is required for basic operation. Set points in automatic and manual may be entered and the zone will be controlled by turning "On" the zone power. Many customers require advanced features to satisfy their operation. This page will describe the basics of "Advanced Setup". Please note that security levels are not standard. To place security on the TTC International Interface you must activate security by selecting your own personalized security codes.



**Access/Exit Advanced Setup**  
Press both select buttons at the same time, hold and release. Selection LED's go dark in advanced setup mode.

## Advanced Setup Guide – Level 2 Security to Change

#	Limit (default)	Explanation (*saved in menu)	Set individually by zone
(0)	0-10 (0)	Restore mold setup – access advanced setup. 0 – view area. Select menu 1-10. Enter to restore	
(1)	0-10 (0)	Save mold setup – access advanced setup. 1 – view area. Select menu 1-10. Enter to save	
(2)	+/-100°F/55°C (20°F/11°C)	* Boost temperature set point. 2 – view area. Amount of temperature added to automatic set point during a boost	
(3)	0-300 seconds (60)	* Boost time set point. 3 – view area. The amount of time boost is active	
(4)	-31 to 27 (0)	Algorithm set point (view only). View auto tuning selection or manual tuning value.	
(5)	0-1000°F/537°C (20°F/11°C)	* Temperature deviation alarm set point. Actual temperature activates individual zone alarm at this amount +/- set point	
(6)	0-1000°F/537°C (220°F/104°C)	* Standby set point (individual). When standby is activated, all automatic zones in the standby group will control to this set point	
(7)	-31 to 27 (0)	* Control algorithm adjustment (individual). 0 = auto selection. To view actual tuning value select code 4 Manual Selections: 10 to 17 fast tuning with increasing lag. 20 to 27 slow tuning with increasing lag -1 = very fast tuning; -17 to -10 fast manifold tuning with increasing lag. -27 to -20 very fast tuning with increasing lag -30 and -31 ultra fast low mass tuning. P = auto selection tune performed (view area)	
(8)	0 to 54.0 minutes (5)	T/C pinched detection time (individual). 0 = normal (98+% output, 20°F/11°C in 5 minutes). Change alarm timer amount	
(9)	0-1000°F/537°C (999°F/537°C)	* Critical over temperature alarm. If this temperature is exceeded for 8 seconds, all zones in automatic are turned "Off"	
(10)	0-1000°F/537°C (999°F/537°C)	* Automatic set point limit. The maximum set point an operator can enter in automatic	
(11)	0-100% (100%)	* Manual set point limit. The maximum set point an operator can enter in manual	
(12)	0-1000°F/537°C (50°F/28°C)	* Boost limit. The maximum amount of degrees an operator can raise or lower the zone(s) during a boost	
(13)	0-1000°F/537°C (100°F/56°C)	* Trim limit. The maximum amount of degrees an operator can permanently change the zone(s) during a trim	
(14)	0 or 1 (0)	* Enable material protection input. Must see input repeat in time selected or will activate standby group. 0 = "Off"; 1 = "On"	
(15)	0 to 1000 seconds (0)	* Material protection time. Amount of time from 22-132 VAC/VDC input signal to activate standby group unless signal repeats	
(16)	0-2 (0 = all zones)	* Set standby group. Select zone(s) to go into standby when activated by remote input. 0 = all; 1 = display; 2 = store	
(17)	0-2 (0 = all zones)	* Set slaved power-up group. Select zone(s) to heat within 20°F/11°C of one another until set point. 0 = all; 1 = display; 2 = store	
(18)	0-4 (0)	* Power Priority™. 0 = (off). 1-4 = increased smoothing of power output. A = Power Priority™ is active (view area)	
(19)	0 or 1 (0)	Enabled slaved power-up. 0 = "Off"; 1 = "On"	
(20)	0 or 1 (0)	* Degree F or C selection. 0 = "degree F"; 1 = "degree C"	
(21)	0 or 1 (0)	Type J or K thermocouple selection. 0 = "type J"; 1 = "type K"	
(22)	0 or 1 (0)	Zone power status on power up. 0 = "all zones turned Off"; 1 = "zones On when shut down last, stay On"	
(23)	---	* Reserved for future use	
(24)	---	Reserved for future use	
(25)	0-999 (none)	Security code level 1. You must be in level 2 to change. Refresh procedure available, call Gammaflux	
(26)	0-999 (none)	Security code level 2. You must be in level 2 to change. Refresh procedure available, call Gammaflux	
(27)	0-999 (custom)	Zone finder (locate zones). Finds new hardware, to activate enter 999. Displays number of zones available in the system	
(28)	0 (0)	LED test. To activate, enter 0. Turns "On" all LEDs for troubleshooting	
(29)	---	Output module software version number (display only), select zone, version displayed	
(30)	---	Output module software revision number (display only), select zone, revision displayed	
(31)	---	T/C input software version number (display only), select zone, version displayed (16 zones per module)	
(32)	---	T/C input software revision number (display only), select zone, revision displayed (16 zones per module)	
(33)	---	Data concentrator software version number (display only), select zone, version displayed	
(34)	---	Data concentrator software revision number (display only), select zone, revision displayed	
(35)	---	Operator panel software version number (display only), version displayed	
(36)	---	Operator panel software revision number (display only), revision displayed	
(37)	000-999 (level 2)	Security level indicated. 0 = lockout; 1 = operator; 2 = supervisor; 0 - enter, drops one level Elevate one security level at a time with your customized code	

# Basic Troubleshooting

Thermocouple (T/C) Open – The T/C connection is broken, follow general troubleshooting

Thermocouple Reversed – The T/C connection is wired + to - at some point. Visually inspect each connection, for type J US standard, red wire should connect to red wires, not red to white

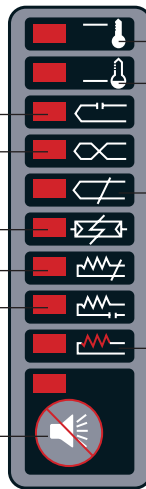
Open Fuse – Fuse on module bad. Turn “Off” main disconnect. Locate module, check all fuses. (Locate module light – press clear alarm button with zone selected)

Shorted Heater – The heater is shorted or exceeds the maximum rating of the module, follow general troubleshooting

Open Heater – The heater connection is broken, follow general troubleshooting

Clear alarm, turn off light/external relay. Press to illuminate “find this module light” on zone selected for 15 seconds

## Alarm Area



High Temperature (+20°F/11°C default) – The temperature of the zone exceeds the deviation band in advanced setup

Low Temperature (-20°F/11°C default) – The temperature of the zone is below the deviation band in advanced setup

Thermocouple Pinched – The T/C is pinched or the controller thinks it is pinched. (Default: 98+% output, must see +20°F/11°C in 5 minutes). True pinch – the T/C is sensing the temperature further away from the heat source than intended. Without alarm, temperature reads low, controller applies power, runaway heat. False T/C pinch – heater is too small to heat the zone or the T/C is located too far away. Replace heater; move T/C or adjust alarm. Selectable detection times in advanced setup

Uncontrolled Output – The module has an unregulated output. All zones on module shut “Off” automatically

When the high temperature alarm is also illuminated (flashing), the critical over temperature alarm has been activated

# General Troubleshooting – Turn “Off” Main Disconnect

- 1 Check resistance from pin to pin, at the mold. T/C should read 3-50 ohms at room temperature. Heater should read greater than 8 ohms. If there is no continuity (open line) = broken connection, open heater or open T/C
- 2 Check resistance from pin to ground, at the mold. Heaters only – no continuity (open line) = good. Some resistance is bad, heater shorted
- 3 Reattach the cable to the mold, detach the cable from the controller. Check resistance from pin to pin on the cable. T/C should read 3-50 ohms at room temperature. Heater should read greater than 8 ohms. If there is no continuity (open line) = broken connection, open heater or open T/C. The connection is broken in the cable set or the connectors/pins are not making contact
- 4 Reattach the cable to the mold, detach the cable from the controller. Check resistance from pin to ground on the cable. Heaters only – no continuity (open line) = good. Some resistance is bad, heater shorted. The wires are either shorted in the cable set or the connectors are shorting to ground
- 5 At this point if everything is fine, the problem is in the controller. (1) turn “Off” main disconnect, (2) locate problem module, (3) check fuses on module, (4) swap bad module into a known good location, (5) turn “On” main disconnect, (6) test the zone. If the problem follows the module = bad module. If the problem stays with the original zone, the error is between the module and the connectors on the rear of the enclosure. If available, try replacing the T/C input module for that module or the data concentrator (communications module) for that module
- 6 If the problem is not explained, or you need spare parts, please contact:

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- 1 Output module
- 2 Thermocouple input module
- 3 Data concentrator
- 4 Power supply
- 5 Module communications cable
- 6 Module power input/output connector
- 7 Main disconnect
- 8 Thermocouple input connector
- 9 Power output connector
- 10 Auxiliary input connector
- 11 Auxiliary output connector
- 12 Interface power connector
- 13 Interface communications connector
- 14 Ground lug
- 15 Fan