

# Quick Start Installation & Setup Manual



for  
**VISIONS 3000**  
**Linux Software Rev 2.52**

When the Controller is turned on, the Standby screen is displayed.  
*This is a Touchscreen Display*

**Visions 3000 Hotrunner Controller**




Version 2.52m  
International Temperature Control  
2415 Huron Rd.  
P.O. Box 805  
Au Gres, MI 48703  
Ph.: (989) 876-8075


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Controller Name:  
ITC\_CONTROL\_005  
Controller IP address:  
192.168.1.10 (ethernet)


To commission a new tool, take the following steps:


Step 1  
Touch "Setup"


Quit 

Monitor 


Diagnose 

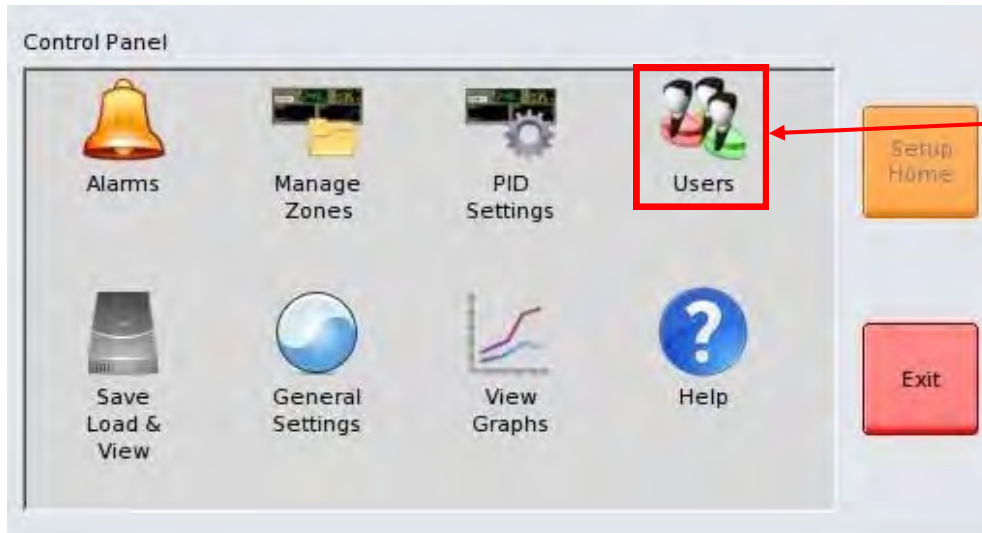
Soft Start 

**Setup** 

Help 

Controller Present.

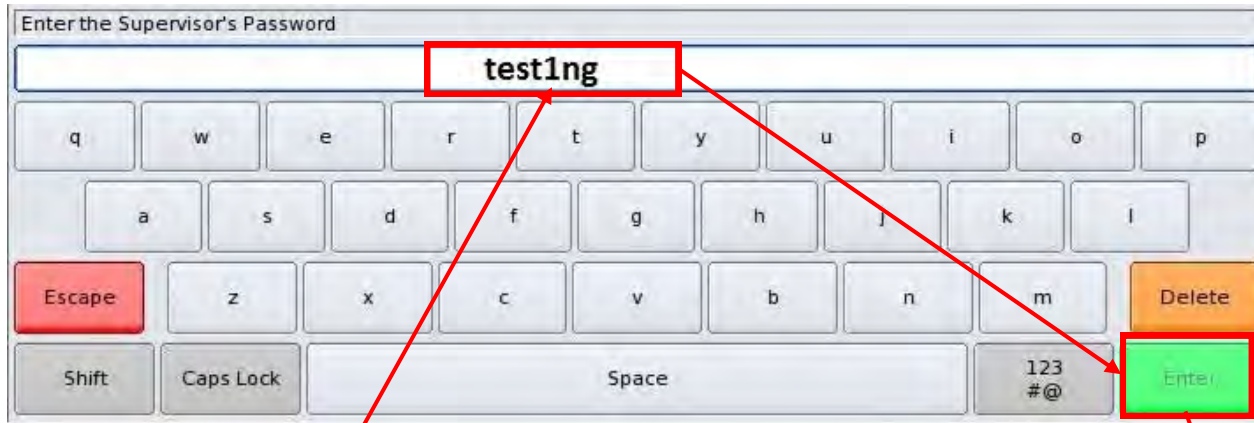
0 WH | 0.0 KW | Supervisor | \*testgh.efi\* |  21/04/2014 | 12:53:09



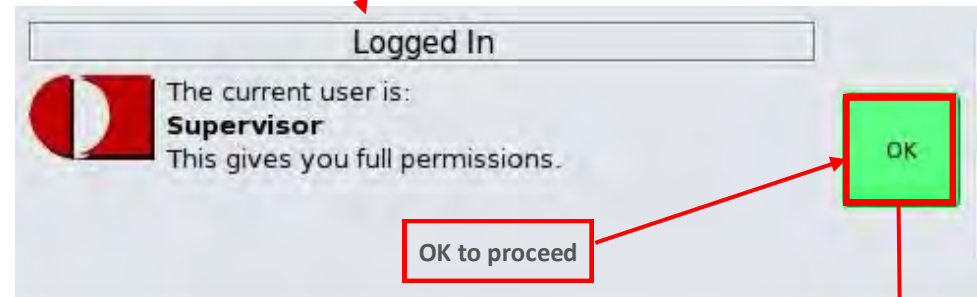
Step 2  
Touch "Users"



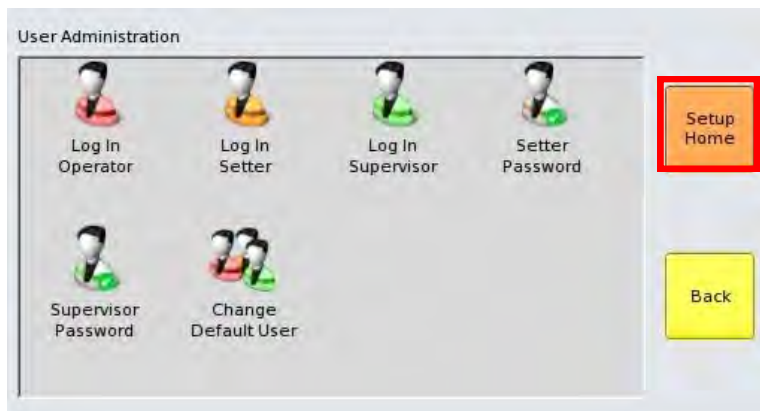
Step 3  
Touch "Log In Supervi-



Step 4  
Enter the Supervisor Password (Default = "testing")  
Then press "Enter"

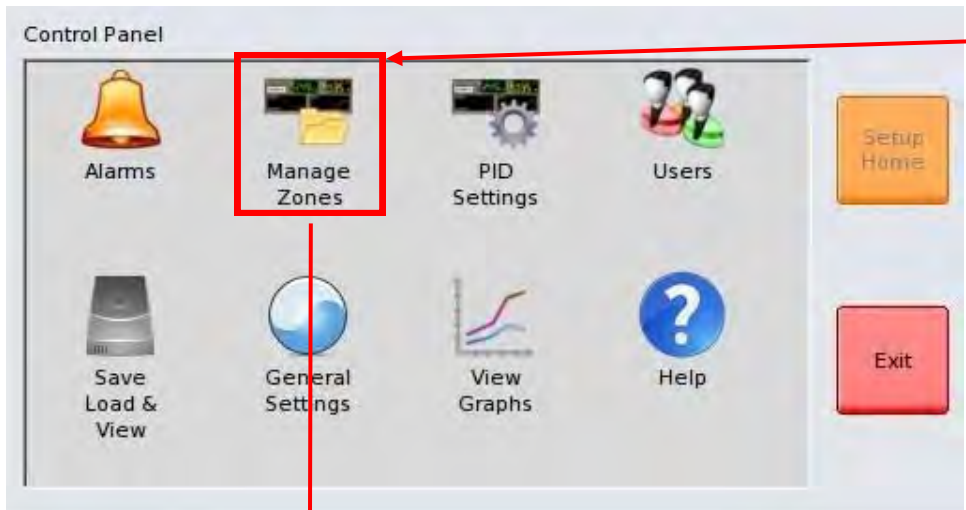


OK to proceed

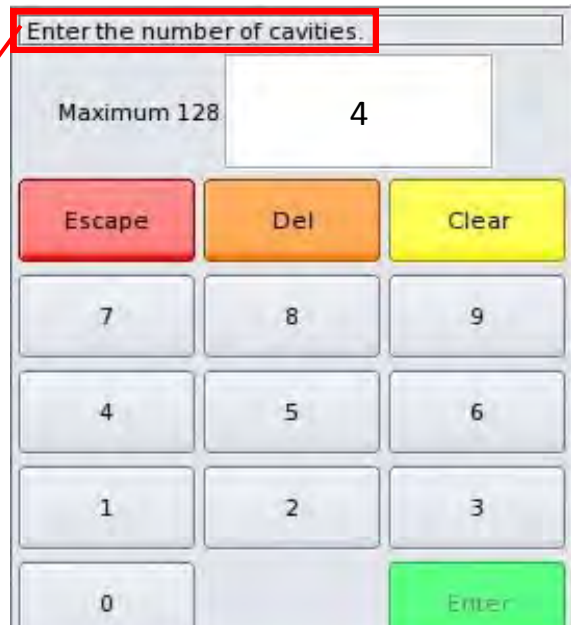
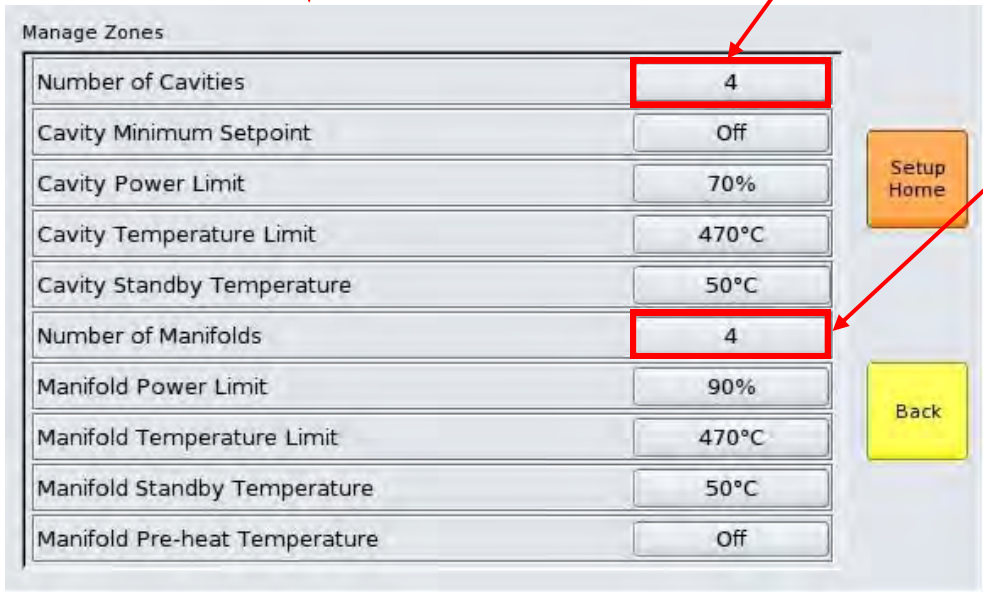


After Logging in as Supervisor,  
Touch "OK"  
Then touch "Setup Home" to return to the main  
setup screen





Touch " Manage Zones



Cavity Minimum Setpoint is set to prevent users from turning off unused zones and creating a cold spot in the mold.

Enter a low temperature to activate this feature

Users cannot turn off zones, but instead have to enter the minimum setpoint.

To deactivate this feature, select "0" on the keypad

Manage Zones	
Number of Cavities	4
Cavity Minimum Setpoint	Off
Cavity Power Limit	70%
Cavity Temperature Limit	470°C
Cavity Standby Temperature	50°C
Number of Manifolds	4
Manifold Power Limit	90%
Manifold Temperature Limit	470°C
Manifold Standby Temperature	50°C
Manifold Pre-heat Temperature	Off

Buttons: Setup Home, Back

Enter the minimum allowed setpoint for cavities.

Min: 0°C Max: 470°C

Off °C

Buttons: Escape, Del, Clear

Cavity Power Limit

Please enter the power limit

70 %

Buttons: Escape, Del, Clear

Keypad: 7, 8, 9, 4, 5, 6, 1, 2, 3, 0, Enter

Current value: 70%

Cavity Temperature Limit

Please enter the temperature limit

470 °C

Cavity Standby Temperature

Please enter the standby temperature

50 °C

Buttons: Escape, Del, Clear

Keypad: 7, 8, 9, 4, 5, 6, 1, 2, 3, 0, Enter

Current value: 50°C

Manage Zones	
Number of Cavities	4
Cavity Minimum Setpoint	Off
Cavity Power Limit	70%
Cavity Temperature Limit	470°C
Cavity Standby Temperature	50°C
Number of Manifolds	4
Manifold Power Limit	90%
Manifold Temperature Limit	470°C
Manifold Standby Temperature	50°C
Manifold Pre-heat Temperature	Off

Setup Home

Back

**Manifold Power Limit**

Please enter the power limit  %

Escape Del Clear

7 8 9

**Manifold Temperature Limit**

Please enter the temperature limit  °C

Escape Del Clear

7 8 9

**Manifold Standby Temperature**

Please enter the standby temperature  °C

Escape Del Clear

7 8 9

**Enter the Manifold Pre-Heat Temperature**

Min: 0°C  
Max: 471°C  °C

Escape Del Clear

7 8 9

4 5 6

1 2 3

0 Enter

Current value: Off

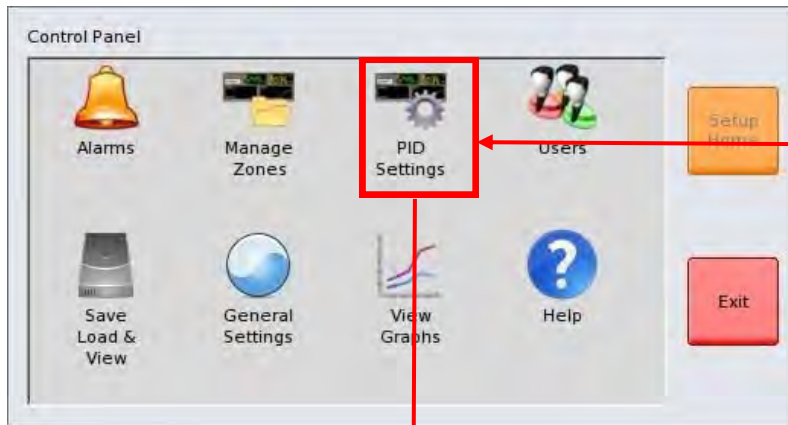
Manifold Pre-heat is used to automatically Pre-heat the manifolds during the initial mold warm up.

When pre-heat temperature is reached, the cavity heaters will be activated and will commence heating.

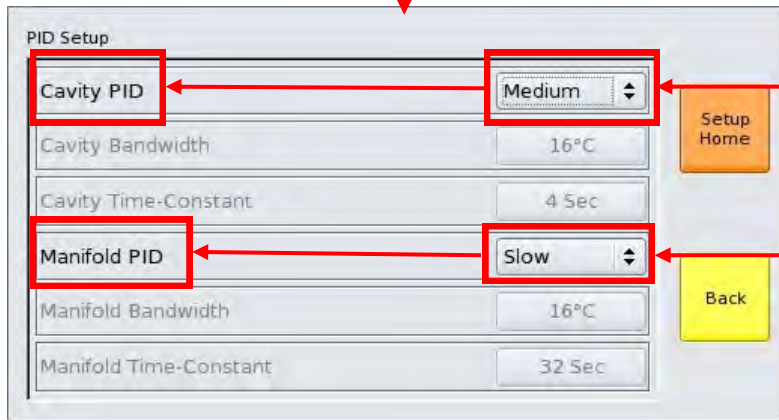
If manifold pre-heat function is not required, enter "0" on the keypad to disable it.



Touch "Setup Home" after completing all Managed Zone Entries

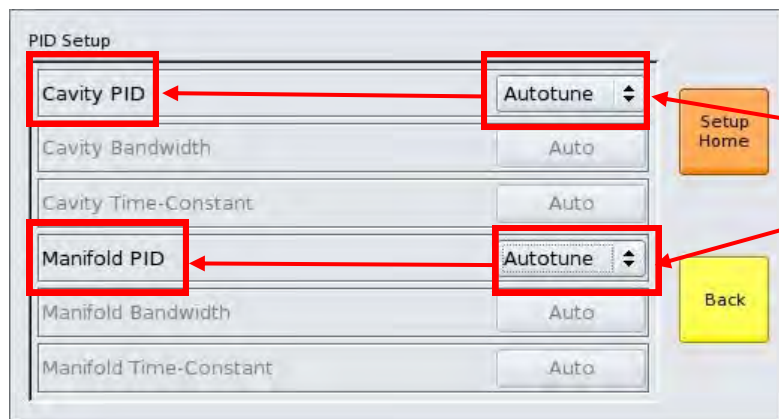


Touch  
"PID Settings"



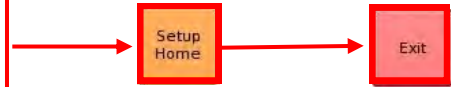
Select  
"Medium"

Select  
"Slow"



If you want to use the Auto  
P.I.D. tuning, just select  
"Autotune" from the menu

When you've selected the  
P.I.D., touch "Setup Home" then  
touch "Exit"





Now connect the Cables between the Controller and the Tool.  
Next run the diagnostic program to confirm that all cables are connected correctly  
and that the tool heaters and thermocouples are functioning correctly

**Visions 3000 Hotrunner Controller**



Version 2.52m  
International Temperature Control  
2415 Huron Rd.  
P.O. Box 805  
Au Gres, MI 48703  
Ph.: (989) 876-8075

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Controller Name:  
ITC\_CONTROL\_005  
Controller IP address:  
192.168.1.10 (ethernet)

- Quit
- Monitor**
- Diagnose
- Soft Start
- Setup
- Help

Step 7  
Touch Diagnose

Controller Present. 0 WH 0.0 KW Supervisor \*testgh.efi\* 21/04/2014 12:53:09

1	Testing...	12 Ω	22°C
2	Testing...	12 Ω	22°C
3	Testing...	12 Ω	23°C
4	Testing...	12 Ω	23°C
5	Testing...	12 Ω	23°C
6	Testing...	12 Ω	23°C
7	Testing...	12 Ω	23°C
8	Testing...	12 Ω	23°C

The controller waits for the heater Temperature to settle before beginning the Diagnostic test

1	-> 1 Up, 25 Sec	312 Ω	35°C
2	Heating...	370 Ω	27°C
3	Sensing...	358 Ω	27°C
4	Sensing...	367 Ω	28°C
5	Sensing...	398 Ω	28°C
6	Sensing...	319 Ω	28°C
7	Sensing...	380 Ω	28°C
8	Sensing...	68 Ω	28°C
9	Sensing...	45 Ω	21°C

When each zone has been tested, it will turn green or red to indicate weather it has passed or failed the test. If a zone fails, it will turn red and the reason for the failure will be given.

1	-> 1 Up, 25 Sec	12 Ω	32°C
2	-> 2 Up, 16 Sec	12 Ω	34°C
3	-> 3 Up, 18 Sec	12 Ω	36°C
4	-> 4 Up, 18 Sec	12 Ω	38°C
5	-> 5 Up, 21 Sec	12 Ω	47°C
6	-> 6 Up, 15 Sec	12 Ω	52°C
7	-> 7 Up, 19 Sec	12 Ω	44°C
8	-> 8 Up, 16 Sec	12 Ω	30°C

When all zones have been tested, the user will be invited to save the results

Touch "Save"



Save Diagnostics.

Diagnostic files on disk:

Files:

- DiagReport.txt
- testrig.txt

Location: Internal Drive      File: test1.txt


Enter a name for the file, or select an existing file to overwrite.

Enter Tool name or number



Step 8  
Touch "Monitor"

### Visions 3000 Hotrunner Controller



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Controller Name:  
ITC\_CONTROL\_005  
Controller IP address:  
192.168.1.10 (ethernet)

Quit

Monitor

Diagnose

Soft Start

Setup

Help

Controller Present. 0 WH 0.0 KW Supervisor \*testgh.efi\* 21/04/2014 12:53:09

Test\_Rig:0

1 Cavity--#1	60°C	23°C	12 Ω	0%
2 Cavity--#2	60°C	24°C	12 Ω	0%
3 Cavity--#3	60°C	24°C	12 Ω	0%
4 Cavity--#4	60°C	25°C	12 Ω	0%
5 Manifold--#1	60°C	25°C	12 Ω	0%
6 Manifold--#2	60°C	25°C	12 Ω	0%
7 Manifold--#3	60°C	25°C	12 Ω	0%
8 Manifold--#4	60°C	25°C	12 Ω	0%
9 Water--#1		20°C		58.3 LPM

Back

Run

Edit Zone

Setup

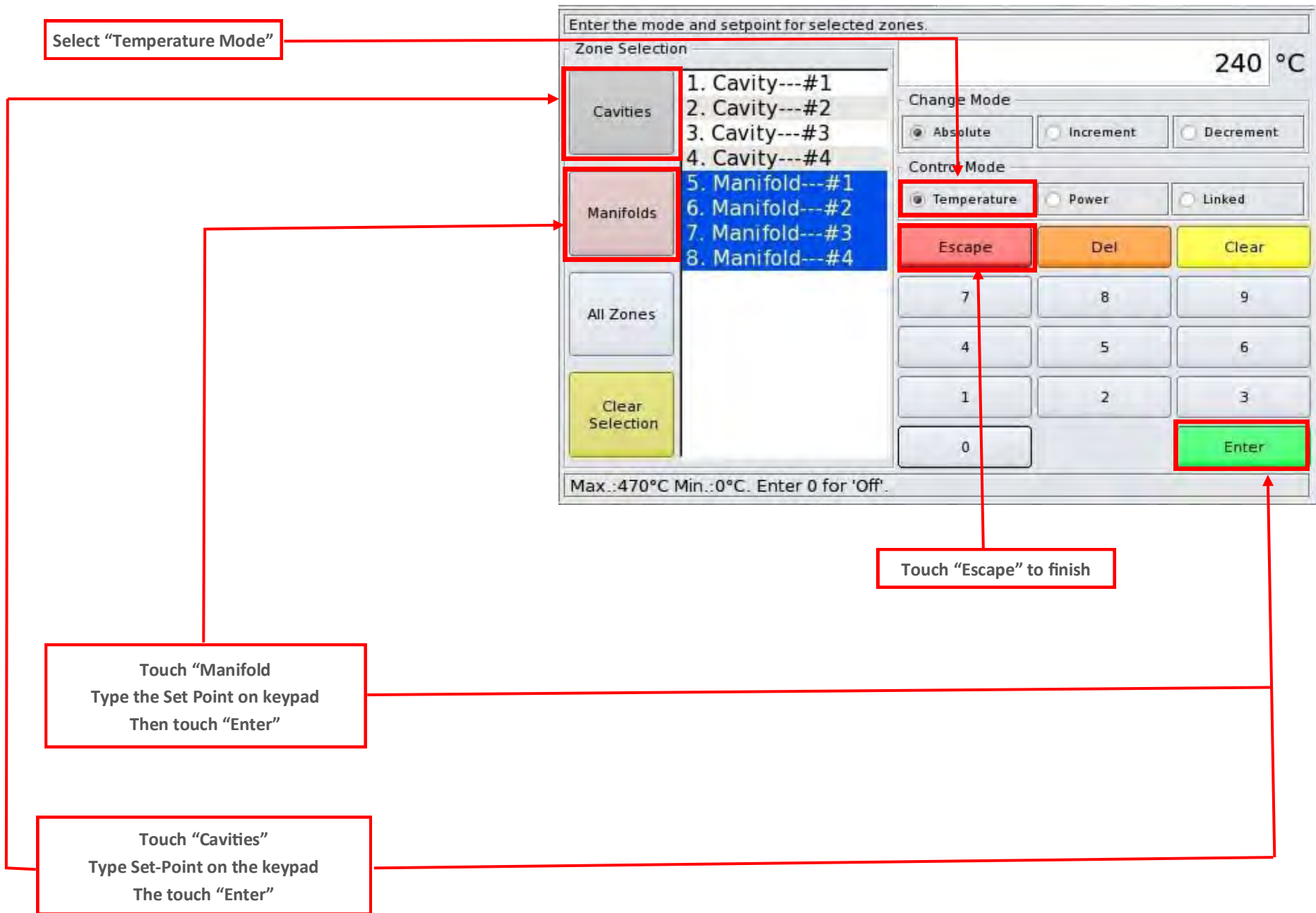
Monitor Mode

1 WH 0.0 W Supervisor \*test1.efi\* 26/11/2012 11:02:37

Annotations:

- Step 9 (points to Edit Zone button)
- Heater Re- (points to 12 Ω)
- Power (points to 0%)
- Water Flow Rate (points to 58.3 LPM)
- Set Point (points to 60°C)
- Water Tempera- (points to 20°C)
- Heater Tempera- (points to 25°C)





Test\_Rig:0

1 Cavity---#1	60°C	23°C	12 Ω	0%
2 Cavity---#2	60°C	23°C	12 Ω	0%
3 Cavity---#3	60°C	24°C	12 Ω	0%
4 Cavity---#4	60°C	24°C	12 Ω	0%
5 Manifold---#1	60°C	24°C	12 Ω	0%
6 Manifold---#2	60°C	24°C	12 Ω	0%
7 Manifold---#3	60°C	24°C	12 Ω	0%
8 Manifold---#4	60°C	24°C	12 Ω	0%
9 Water---#1		21°C		58.4 LPM

Alternatively, you can touch individual zones on the run screen or touch "Hold" and drag to select multiple zones. The selected zones will be highlighted automatically when you proceed to the Edit Zone Screen

To de-select a zone, touch it again, or touch "Clear Selection" from the Edit Zone Screen

Enter the mode and setpoint for selected zones.

Zone Selection

- 1. Cavity---#1
- 2. Cavity---#2
- 3. Cavity---#3
- 4. Cavity---#4
- 5. Manifold---#1
- 6. Manifold---#2
- 7. Manifold---#3
- 8. Manifold---#4

240 °C

Change Mode:  Absolute  Increment  Decrement

Control Mode:  Temperature  Power  Linked

Escape Del Clear

7 8 9

4 5 6

1 2 3

0 Enter

Max.:470°C Min.:0°C. Enter 0 for 'Off'.

When you have entered all Set-Points, touch "Setup"

Back

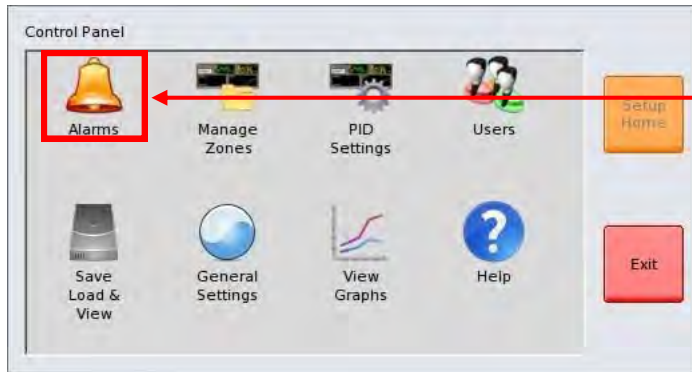
Run

Edit Zone

Setup

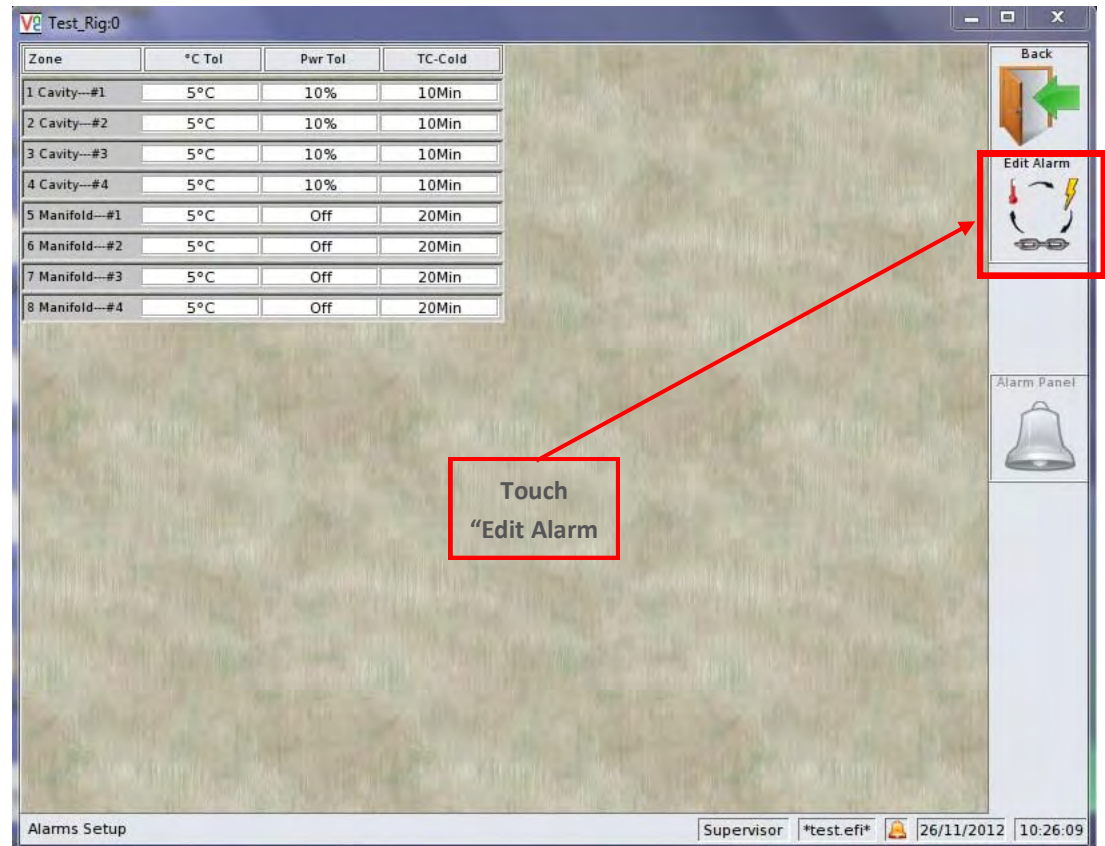
Monitor Mode

1 WH 0.0 W Supervisor \*test1.efi\* 26/11/2012 11:09:47



Touch "Alarms"

Touch "Alarm Settings"



Touch "Edit Alarm"



Zone	°C Tol	Pwr Tol	TC-Cold
1 Cavity—#1	5°C	10%	10Min
2 Cavity—#2	5°C	10%	10Min
3 Cavity—#3	5°C	10%	10Min
4 Cavity—#4	5°C	10%	10Min
5 Manifold—#1	5°C	Off	20Min
6 Manifold—#2	5°C	Off	20Min
7 Manifold—#3	5°C	Off	20Min
8 Manifold—#4	5°C	Off	20Min

Select Temperature Tolerance and zones applied to. This same procedure applies to "Power Tolerance" and "Cold T/C Time"

Enter the temperature alarm tolerance then touch "Enter"

The Temperature Tolerance is the maximum acceptable deviation from Set Point. If any temperature exceeds the entered value and remains out of limits for more than 5 seconds, the (temperature alarm will be triggered.

Choose the alarm type and enter the new value for selected zones.

Zone Selection

Cavities

Manifolds

All Zones

Clear Selection

1. Cavity---#1  
2. Cavity---#2  
3. Cavity---#3  
4. Cavity---#4  
5. Manifold---#1  
6. Manifold---#2  
7. Manifold---#3  
8. Manifold---#4

Alarm Type

Temperature Tolerance  Power Tolerance  Cold TC Time

Escape Del Clear

7 8 9

4 5 6

1 2 3

0 Enter

5 °C

Select some zones from the list.



Zone	°C Tol	Pwr Tol	TC-Cold
1 Cavity--#1	5°C	10%	10Min
2 Cavity--#2	5°C	10%	10Min
3 Cavity--#3	5°C	10%	10Min
4 Cavity--#4	5°C	10%	10Min
5 Manifold--#1	5°C	Off	20Min
6 Manifold--#2	5°C	Off	20Min
7 Manifold--#3	5°C	Off	20Min
8 Manifold--#4	5°C	Off	20Min

Select Power Tolerance and Cavities

Enter the alarm tolerance then touch "Enter"

The Power Tolerance monitors power consumption of each individual cavity heater and compares it to other cavity heaters. An increase in power consumption of an individual heater, is the first sign of a developing thermocouple fault. The value entered is the maximum average acceptable difference in power consumption between cavity heaters. Any deviation from this value will trigger an alarm

Choose the alarm type and enter the new value for selected zones.

Zone Selection

- Cavities
- Manifolds
- All Zones
- 

1. Cavity---#1
2. Cavity---#2
3. Cavity---#3
4. Cavity---#4
5. Manifold---#1
6. Manifold---#2
7. Manifold---#3
8. Manifold---#4

Alarm Type

Temperature Tolerance
  Power Tolerance
  Cold TC Time

10 °C

Escape Del Clear

7 8 9

4 5 6

1 2 3

0 Enter

Select some zones from the list.

Zone	°C Tol	Pwr Tol	TC-Cold
1 Cavity—#1	5°C	10%	10Min
2 Cavity—#2	5°C	10%	10Min
3 Cavity—#3	5°C	10%	10Min
4 Cavity—#4	5°C	10%	10Min
5 Manifold—#1	5°C	Off	20Min
6 Manifold—#2	5°C	Off	20Min
7 Manifold—#3	5°C	Off	20Min
8 Manifold—#4	5°C	Off	20Min

Select "Cold T/C Time:  
then "Cavities"

Enter the Alarm  
Tolerance then touch  
"Enter"

The "T/C Cold Time" is used during the initial mold warm up. During the mold warm up the controller is monitoring the tool for any unresponsive thermocouples. If after continuously applying power for the duration of the time entered and not temperature increase is detected, the "Cold T/C alarm is triggered.

Appropriate time values should be set for both Cavity and Manifold zones

Choose the alarm type and enter the new value for selected zones.

Zone Selection

- Cavities
- Manifolds
- All Zones
- Clear Selection

1. Cavity---#1
2. Cavity---#2
3. Cavity---#3
4. Cavity---#4
5. Manifold---#1
6. Manifold---#2
7. Manifold---#3
8. Manifold---#4

Alarm Type

Temperature Tolerance     Power Tolerance     Cold TC Time

10 °C

Escape    Del    Clear

7    8    9

4    5    6

1    2    3

0    Enter

Select some zones from the list.

Choose the alarm type and enter the new value for selected zones.

Zone Selection

Cavities

1. Cavity---#1
2. Cavity---#2
3. Cavity---#3
4. Cavity---#4

Manifolds

5. Manifold---#1
6. Manifold---#2
7. Manifold---#3
8. Manifold---#4

All Zones

Clear Selection

Select some zones from

Alarm Type

Temperature Tolerance  Power Tolerance  Cold TC Time

Escape Del Clear

7 8 9

4

Zone	°C Tol	Pwr Tol	TC-Cold
1 Cavity---#1	5°C	10%	10Min
2 Cavity---#2	5°C	10%	10Min
3 Cavity---#3	5°C	10%	10Min

Alarms

Alarm Panel Alarm Setup Alarm Actions Alarm Log Setup Home

Water Zone Configuration Water Zone Alarm Actions Back

Touch "Escape"

Touch "Back"

Touch "Alarm Actions"

Test\_Rig:0

Back

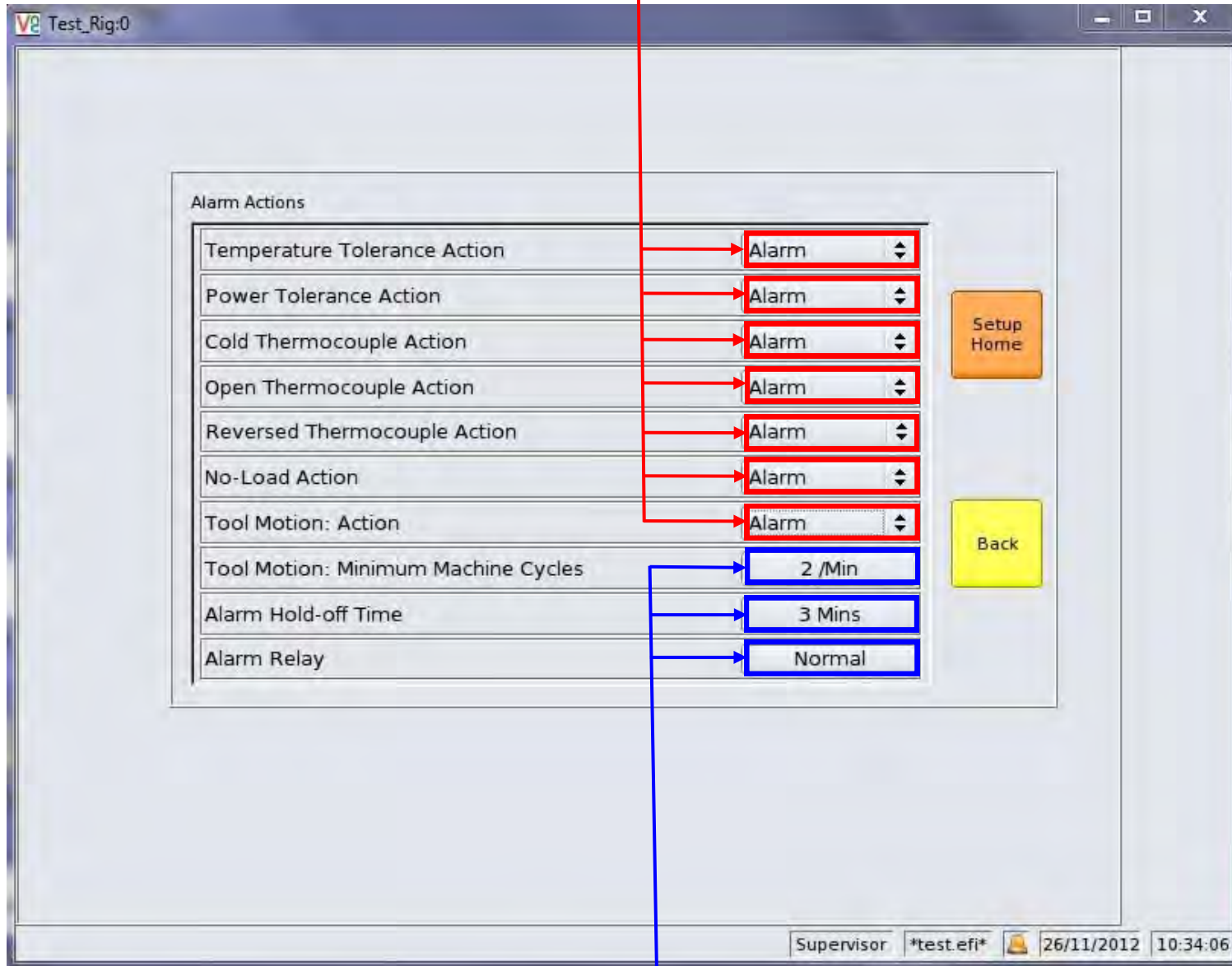
Edit Alarm

Alarm Panel

Alarms Setup Supervisor \*test.efi\* 26/11/2012 10:26:09

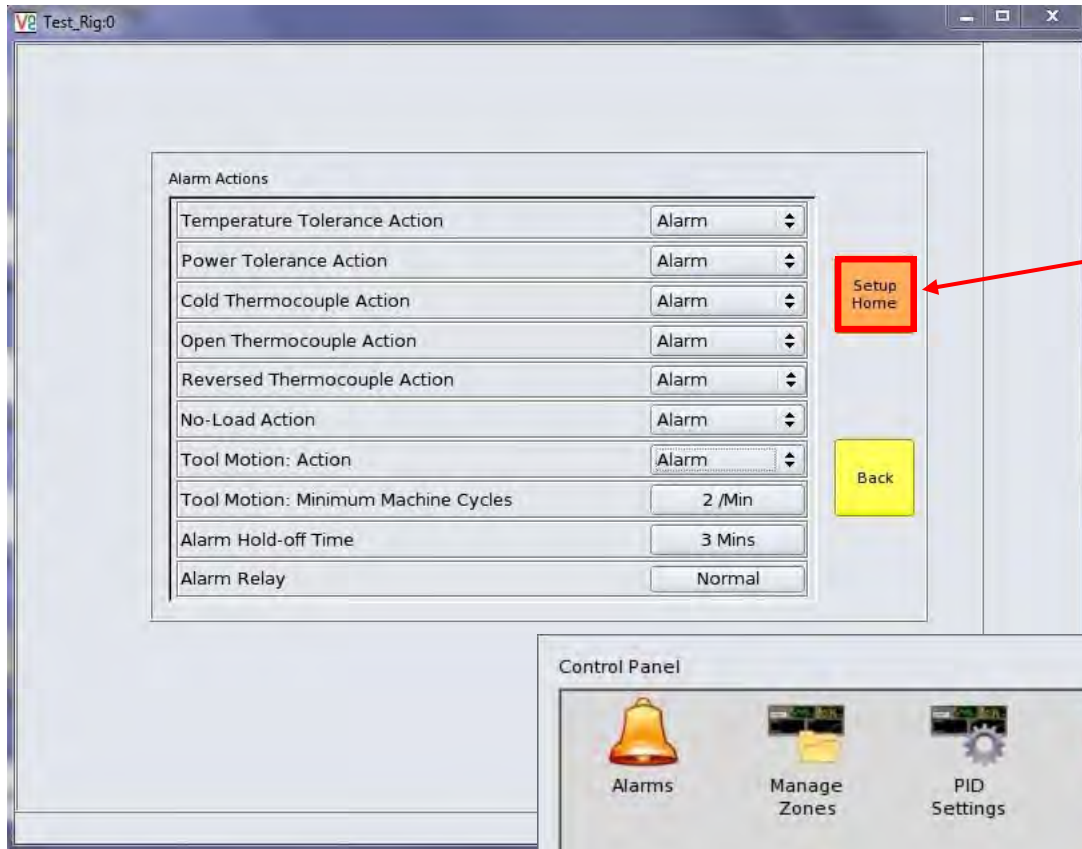


Set an appropriate response for each alarm

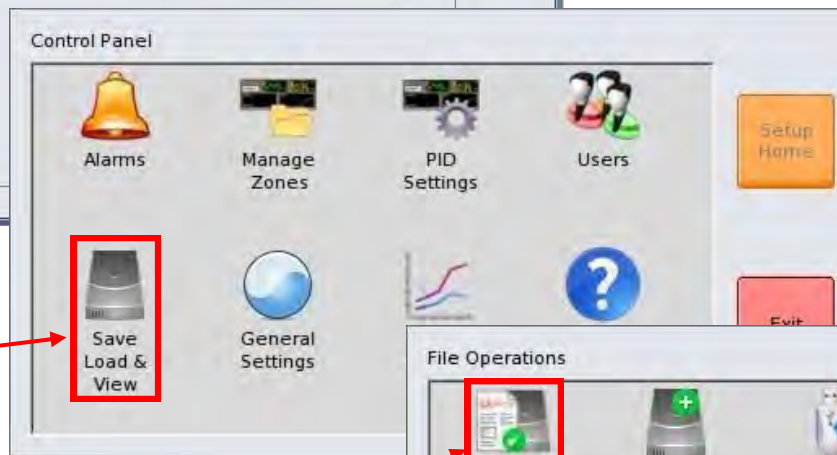


Turn "Off" if not using the Machine Interface

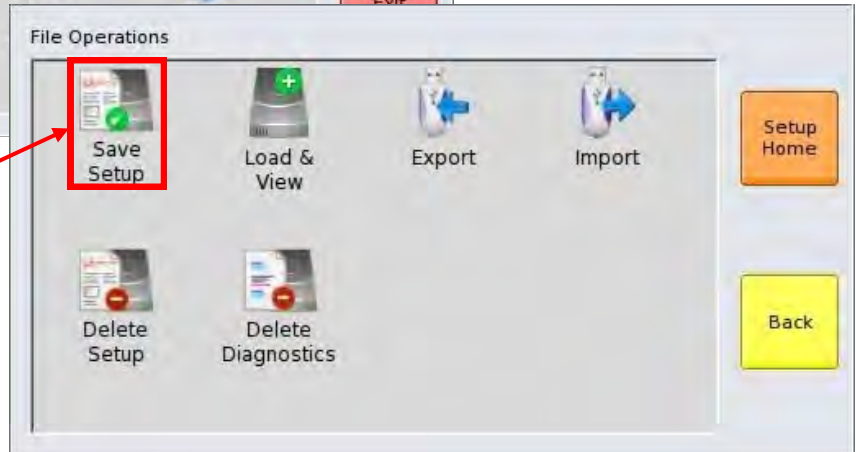




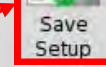
Touch  
"Set up Home"

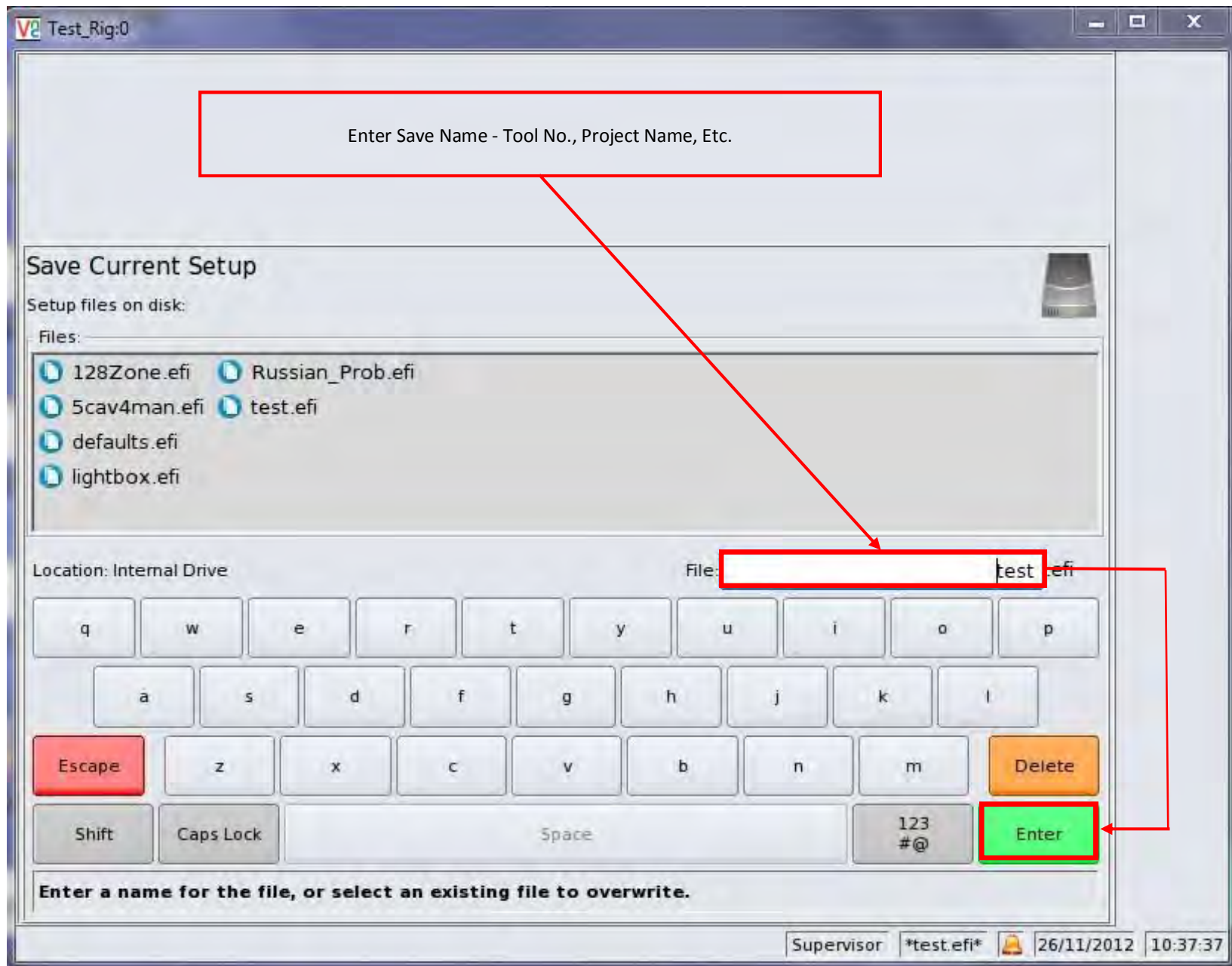


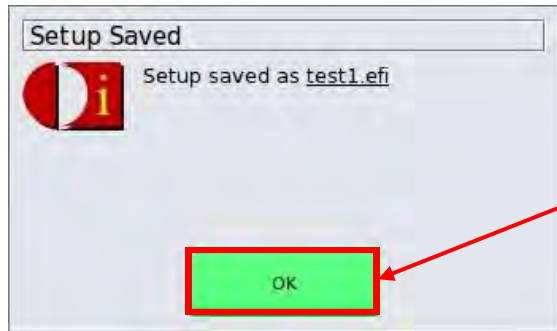
Touch  
"Save Load & View"



Touch  
"Save Set up"







Touch "OK" to confirm



Touch "Exit"



Congratulations, your controller is now set-up and the file has been saved. Now touch "Run". After the mold has reached set-point temperature, check for correct P.I.D control setting, adjust as necessary





**International Temperature Control, Inc.**

**P.O. Box 805 2415 E. Huron Rd.**

**Au Gres, MI 48703**

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