

Quick Start Installation & Setup Manual

for

Visions 3000

Linux Software Rev. 2.12



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

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"



Monitor



Diagnose



Soft Start



Setup



Help



Controller Present.

0 WH

0.0 KW

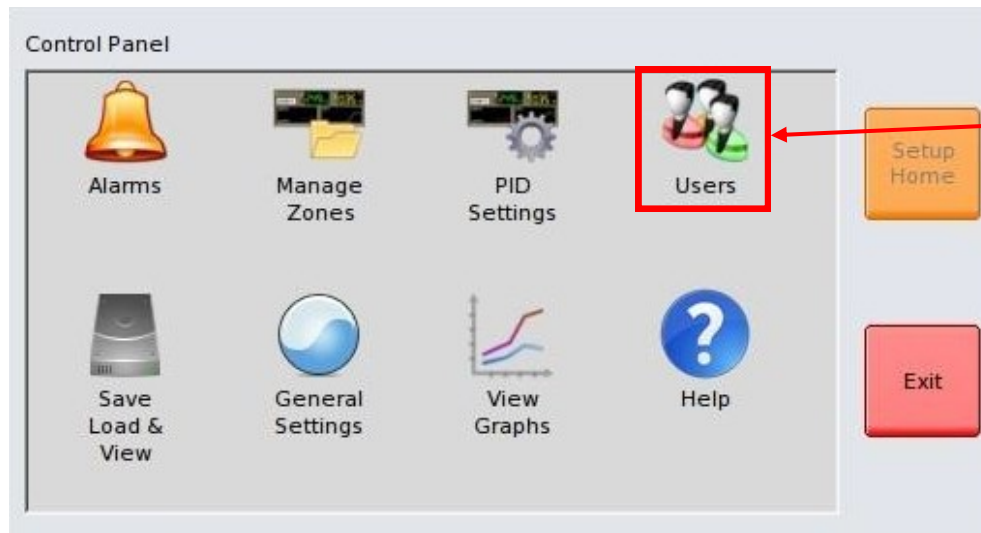
Supervisor

testgh.efi

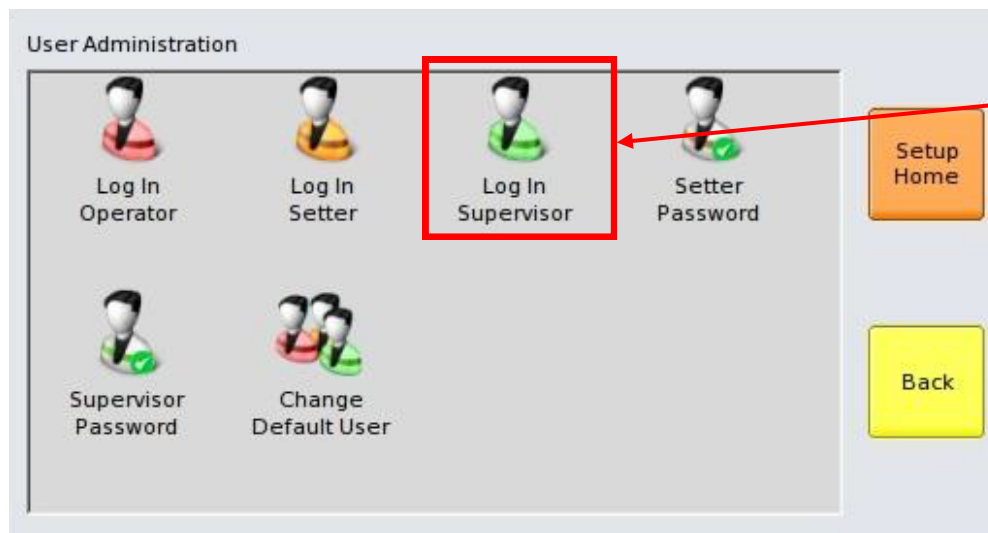


21/04/2014

12:53:09



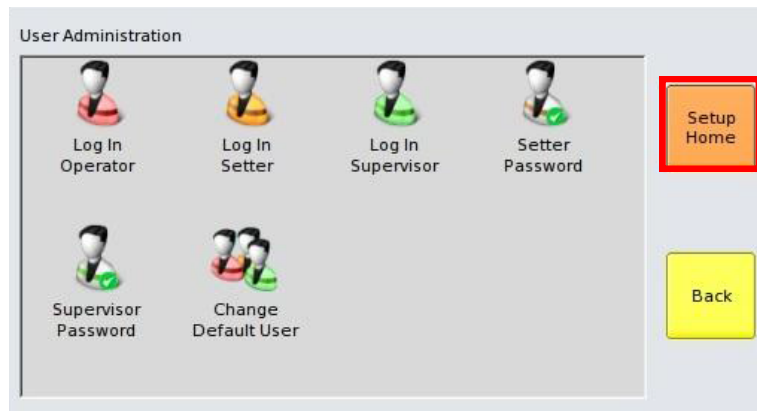
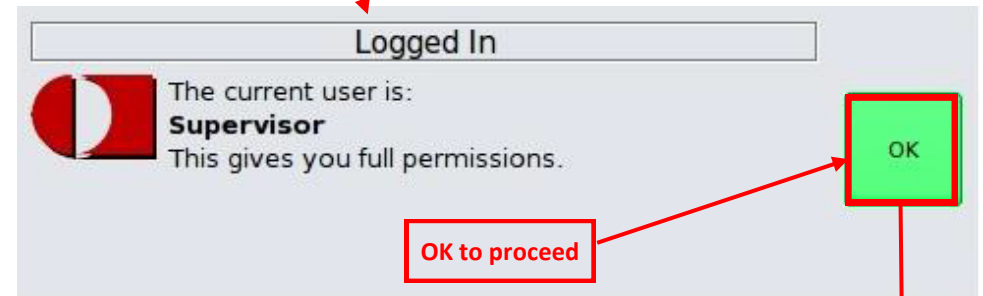
Step 2
Touch "Users"



Step 3
Touch "Log In Supervi-



Step 4
Enter the Supervisor Password (Default = "test1ng")
Then press "Enter"



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



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

Enter the number of cavities.

Maximum 128

4

Escape Del Clear

7 8 9

4 5 6

1 2 3

0 Enter

Enter the number of manifolds.

Maximum 128

4

Escape Del Clear

7 8 9

4 5 6

1 2 3

0 Enter

Current value: 4

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

Setup Home

Back

Enter the minimum allowed setpoint for cavities.

Min: 0°C Max: 470°C

Off °C

Escape Del Clear

Cavity Power Limit

Please enter the power limit

70 %

Escape Del Clear

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

Escape Del Clear

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

Escape Del Clear

7 8 9

Manifold Standby Temperature

Please enter the standby temperature

Escape Del Clear

7 8 9

Enter the Manifold Pre-Heat Temperature

Min: 0°C
Max: 471°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.

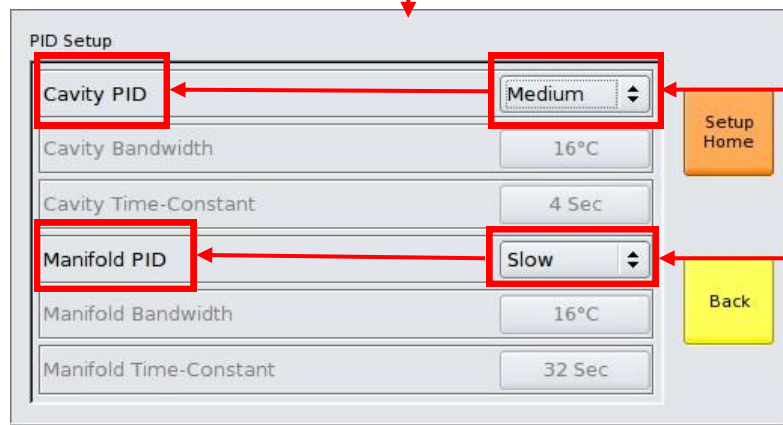
If manifold pre-heat function is not required, enter "0" on the keypad to disable it.

Setup Home

Touch "Setup Home" after completing all Managed Zone Entries

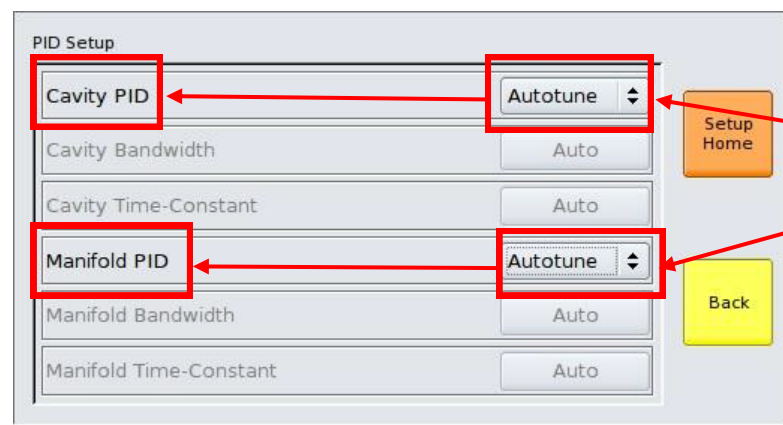


Touch
"PID Settings"



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



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Controller Name:
ITC_CONTROL_005
Controller IP address:
192.168.1.10 (ethernet)

Step 7
Touch Diagnose

Quit


Monitor



Diagnose


Soft Start


Setup


Help


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

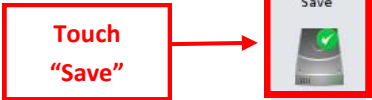
The controller waits for the heater Temperature to settle before beginning the Diagnostic test

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



Save Diagnostics.

Diagnostic files on disk:

Files:

DiagReport.txt

testrig.txt

Location: Internal Drive

File: test1.txt

q

w

e

r

t

y

u

i

o

p

a

s

d

f

g

h

j

k

l

Escape

z

x

c

v

b

n

m

Delete

Shift

Caps Lock

Space

123 # @

Enter

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

Enter Tool name or number

Step 8
Touch "Monitor"

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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

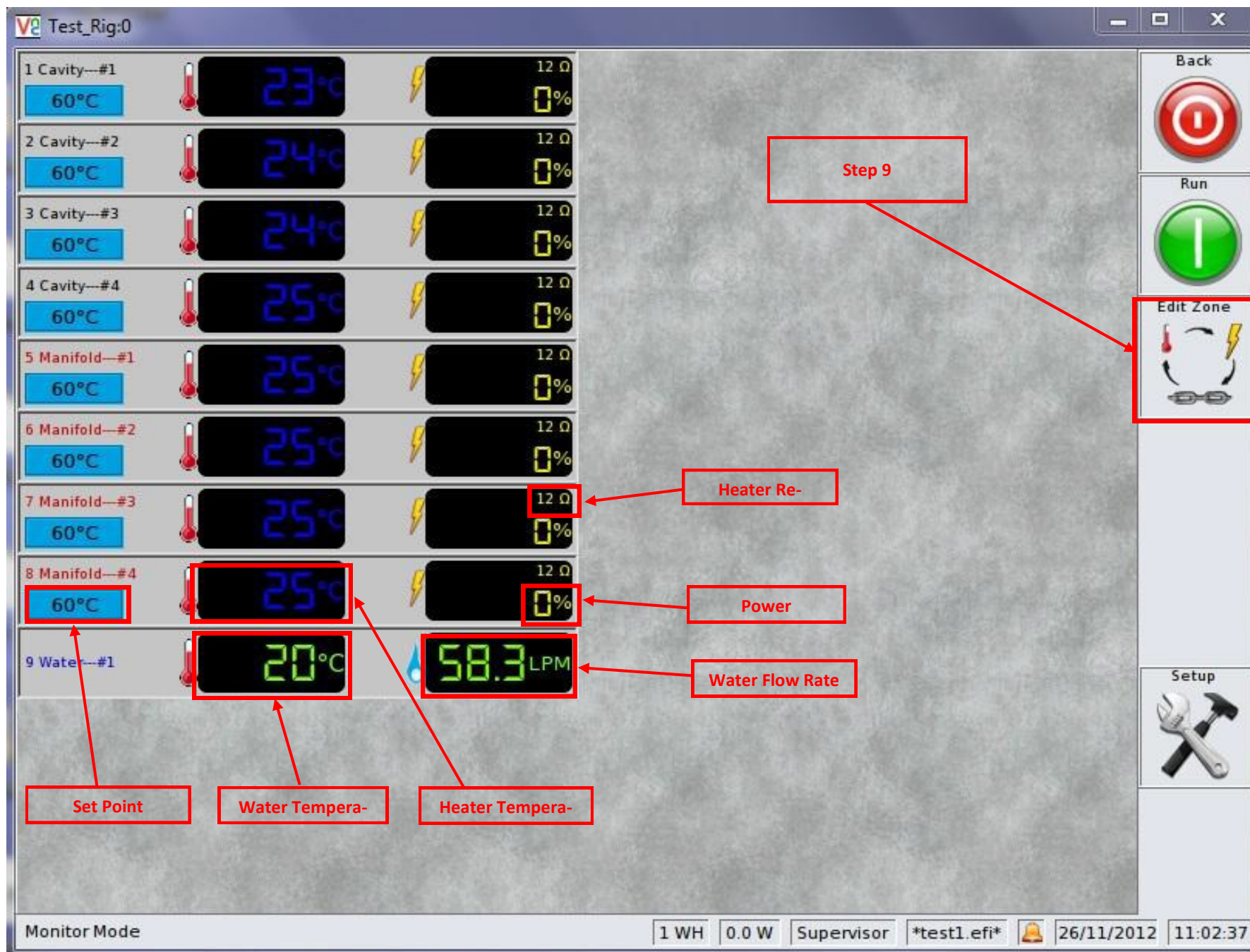
Supervisor

testgh.efi



21/04/2014

12:53:09



Select "Temperature Mode"

Enter the mode and setpoint for selected zones.

Zone Selection

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'.

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

Cavities

Manifolds

All Zones

Clear Selection

Touch "Escape" to finish

Touch "Manifold"
Type the Set Point on keypad
Then touch "Enter"

Touch "Cavities"
Type Set-Point on the keypad
The touch "Enter"

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

Back

Run

Edit Zone

Setup

Enter the mode and setpoint for selected zones.

Zone Selection

Cavities

1. Cavity---#1

2. Cavity---#2

3. Cavity---#3

4. Cavity---#4

5. Manifold---#1

6. Manifold---#2

7. Manifold---#3

8. Manifold---#4

Manifolds

All Zones

Change Mode

☒ Absolute

☐ Increment

☐ Decrement

Control Mode

☒ Temperature

☐ Power

☐ Linked

Escape

Del

Clear

7

8

9

4

5

6

1

2

3

0

Enter

Clear Selection

240 °C

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

Monitor Mode

1 WH

0.0 W

Supervisor

test1.efi

26/11/2012

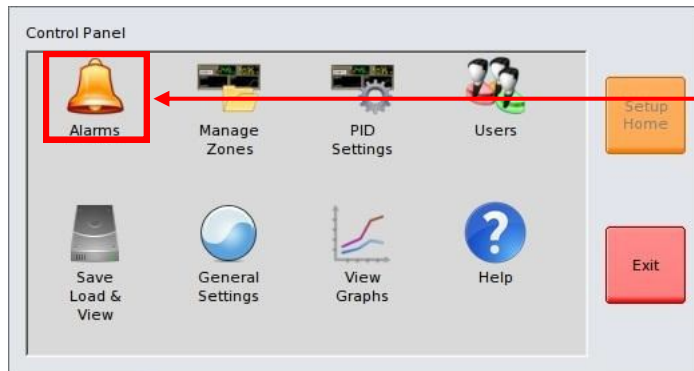
11:09:47

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

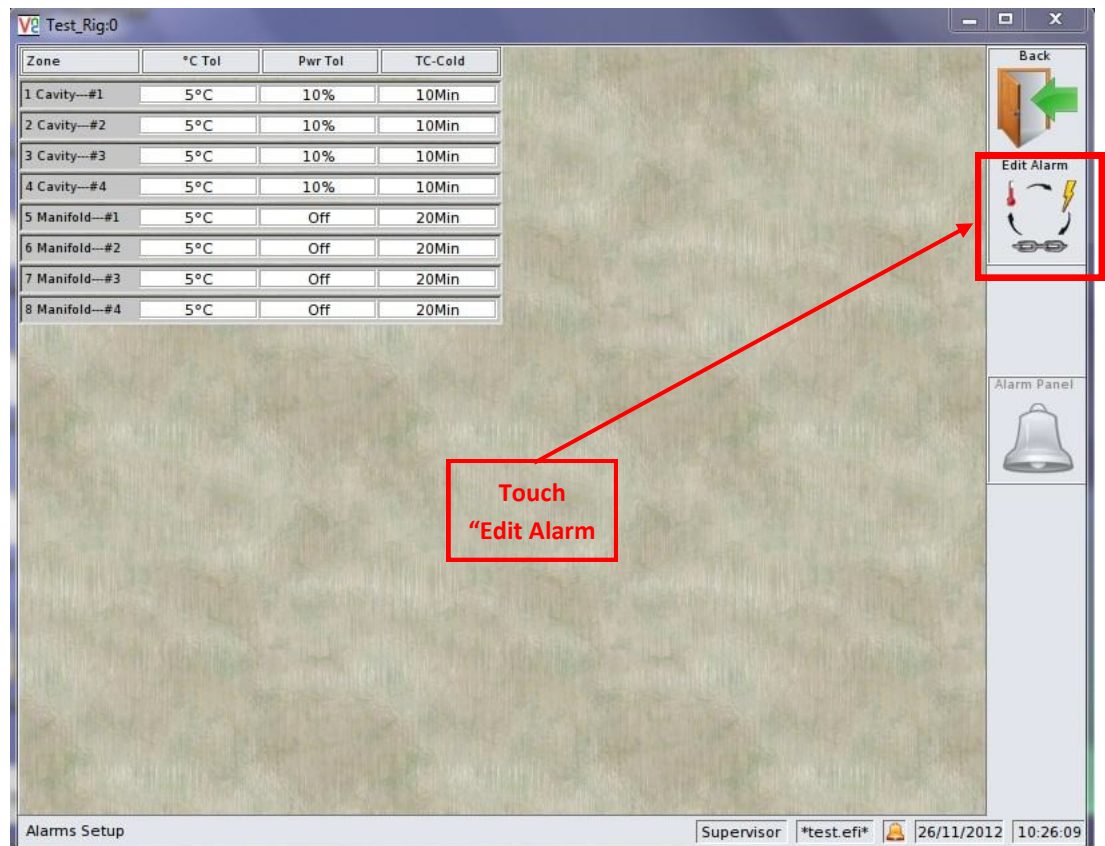
To de-select a zone, touch it again, or touch "Clear Selection" from the Edit Zone Screen

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



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

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

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

Manifolds

All Zones

Clear Selection

Alarm Type

☒ Temperature Tolerance ☐ Power Tolerance ☐ Cold TC Time

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

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

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

Enter the Alarm
Tolerance then touch
"Enter"

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

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

Touch "Escape"

Touch "Back"

Touch "Alarm Actions"

Alarms

Alarm Panel Alarm Setup Alarm Actions Alarm Log Setup Home

Water Zone Configuration Water Zone Alarm Actions Back

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

Test_Rig:0

Alarm Actions

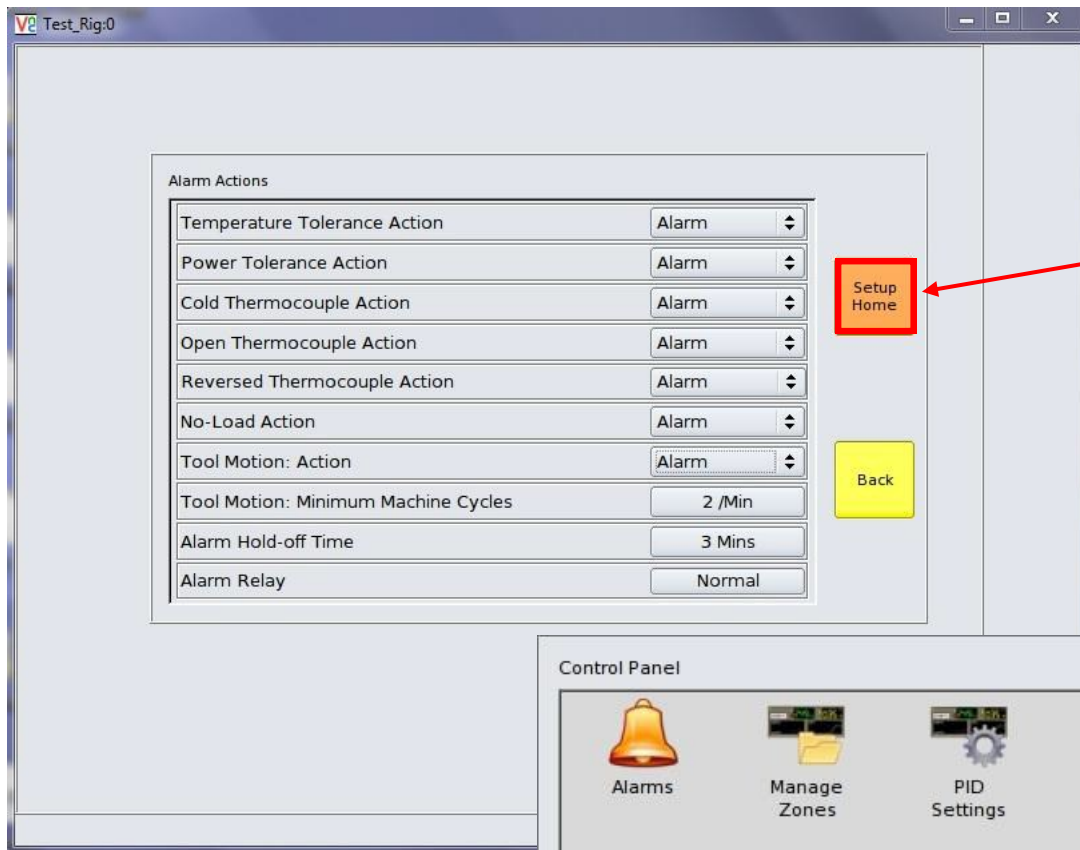
Temperature Tolerance Action	Alarm
Power Tolerance Action	Alarm
Cold Thermocouple Action	Alarm
Open Thermocouple Action	Alarm
Reversed Thermocouple Action	Alarm
No-Load Action	Alarm
Tool Motion: Action	Alarm
Tool Motion: Minimum Machine Cycles	2 /Min
Alarm Hold-off Time	3 Mins
Alarm Relay	Normal

Setup Home

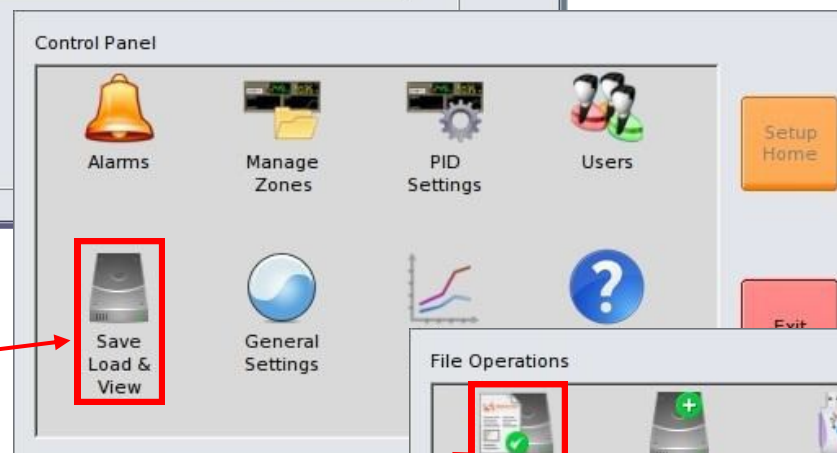
Back

Supervisor *test.efi* 26/11/2012 10:34:06

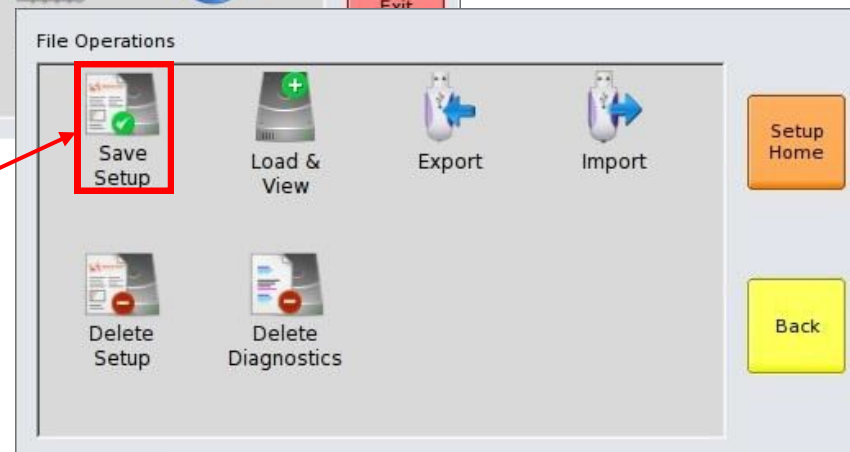
Turn "Off" if not using the Machine Interface



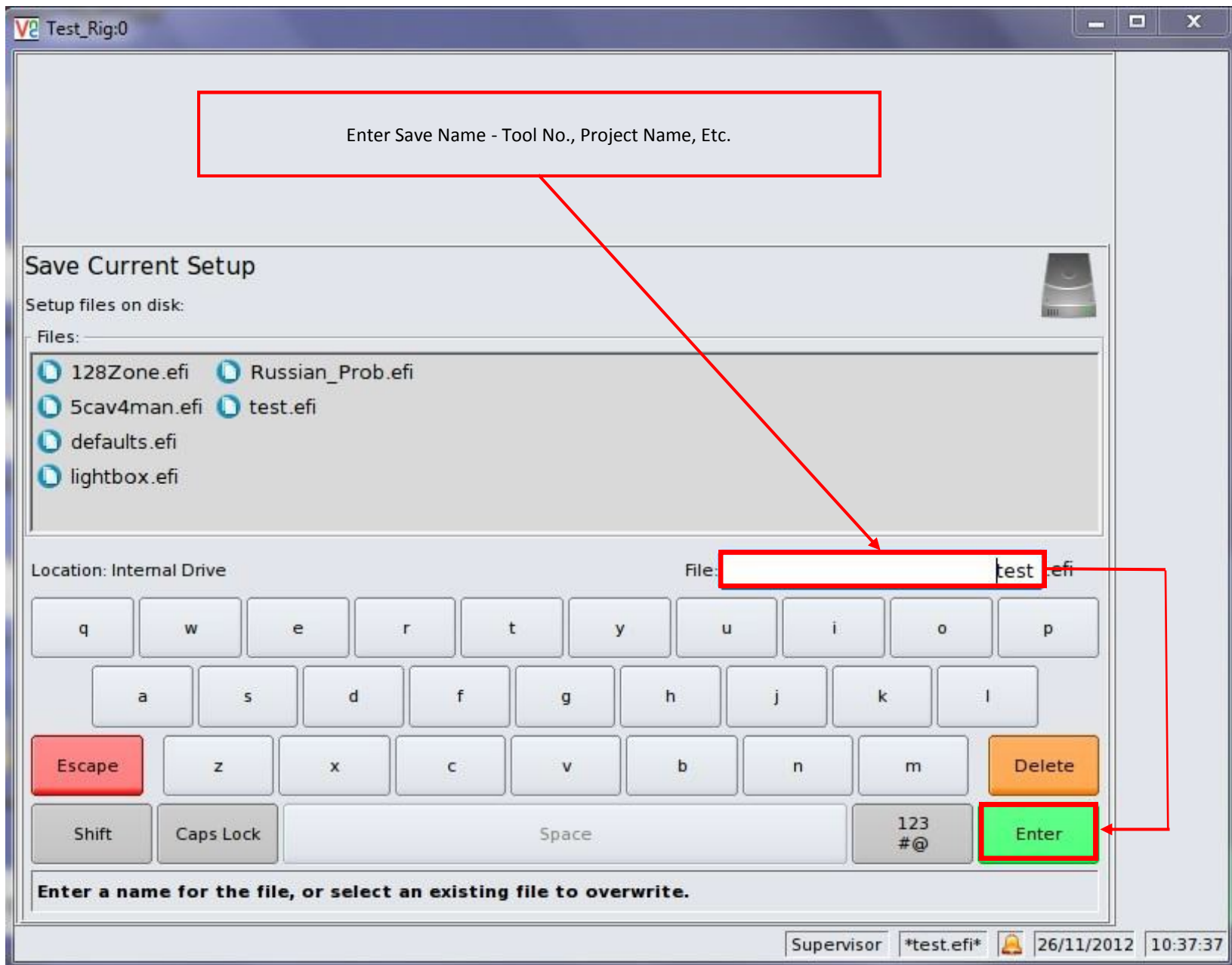
Touch
"Set up Home"

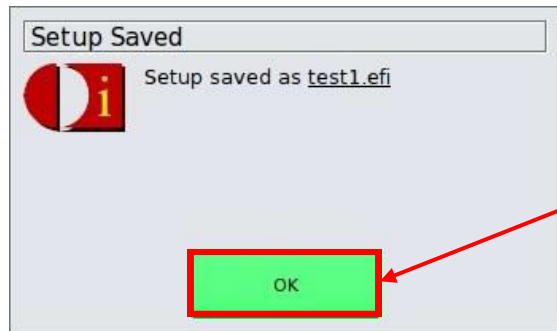


Touch
"Save Load & View"



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



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