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ONYX
USER MANUAL

TC1200 / TC2400

Multi-Cavity Hot Runner Temperature Controller

Quick Start up Guide

Congratulations on your purchase of your New Onyx Temperature Controller
We trust you will find the controller software easy to work with.
This booklet is a simple guide to getting you started using the system.

Before powering up the system, make sure you have the power plug connected
to a **230-240V** supply. Next make sure your hot runners cables are properly connected

On the back of the unit turn on the main power switch

The PCS logo will appear on your screen at startup
At this time you might hear the alarm sounding. This is normal. Touch the screen and it will change over
to the main screen. On the RH side you will find the alarm button. Touch it and the alarm will turn off.

The very 1st thing you will need to do each time you start the controller is to LOG in.
On the top tool bar touch the" **System**" Button / Next pick the "**Login**" button/ a window will pop up
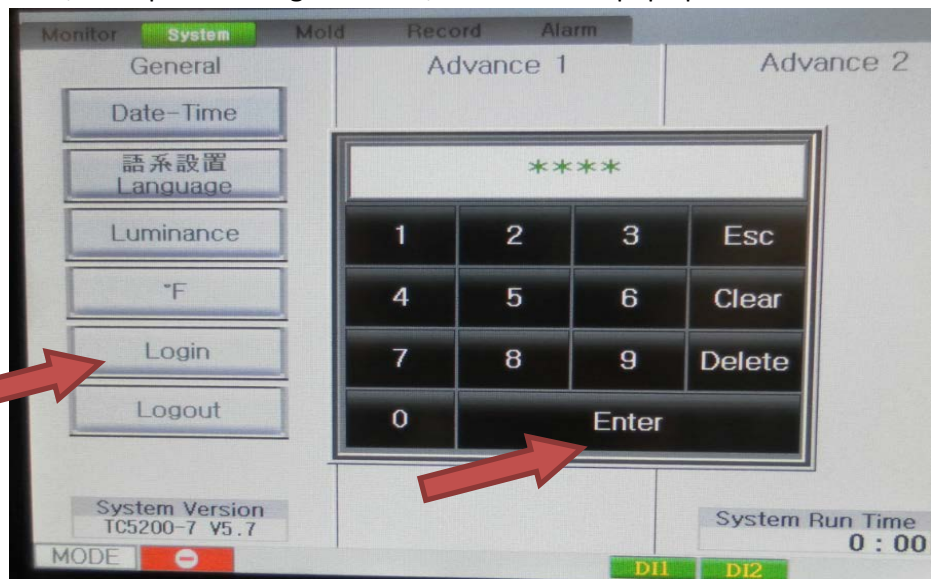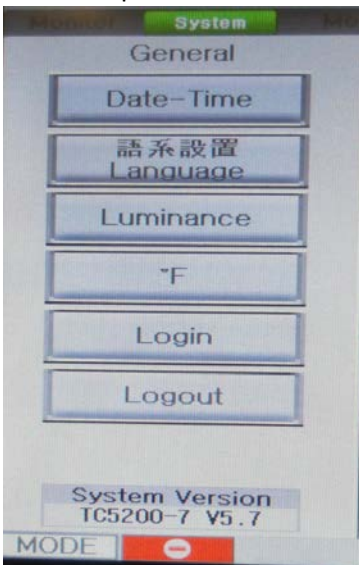
Type in the password and then Enter.
There are 3 levels of passwords

Level 1	type in (1,1,1,1) Enter	This is the basic level
Level 2	type in (2.2.2.2) Enter	This is the intermediate level
Level 3	type in (3,3,3,3,) Enter	This is the advanced / management level

You are now ready to set up the controller to run.

Pick the "**Monitor**" button on the top tool bar.

now pick in the darker gray area next to the zone number you want to set up.

Below is the view of the individual zone set up page.

On this page you will set up all the options to control this zone.

Step 1: Pick the type of heater you are setting up (TIP / M.F)

"TIP" is for nozzles / "M.F" is for manifolds

It is important to select the correct heater type, so the control runs the soft start and auto tuning correctly
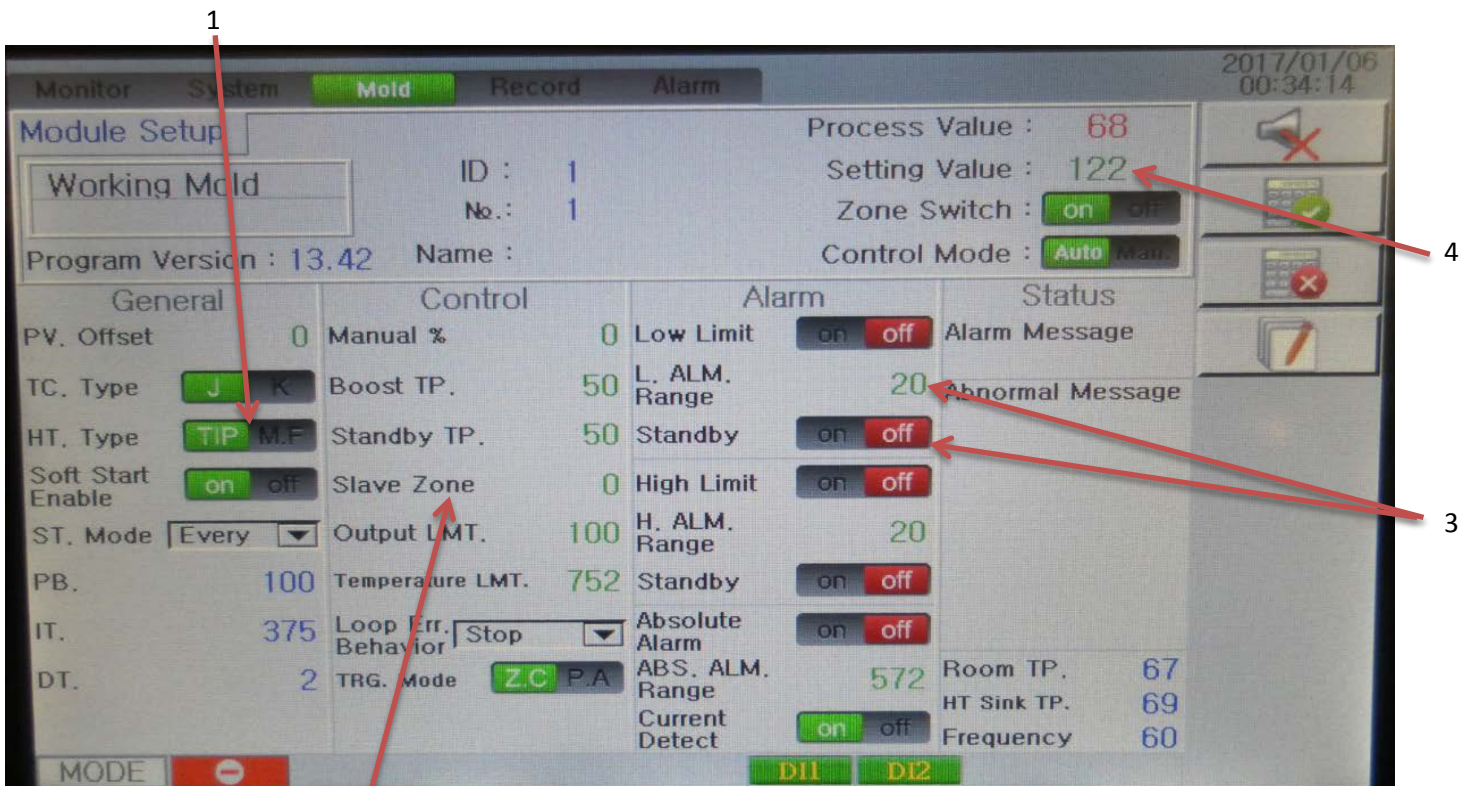
Step 2: We recommend you select a zone for each zone to Slave to, if you lose your TC on this heater zone

for example if zone 1 - 8 are nozzle zones you will want all of these zones to slave off another

nozzle zone. The system will automatically look for this zone when the TC fails and will keep running

Step 3: Under the alarm column, you may want to set up the upper and lower limits before the alarm activates.

If you set these points, make sure you turn on the alarms (green"on" / Red "off")

Step 4: Finally you will now set the temperature you want to run at. This is found on the top RH side

(set Value is the temperature you want the zone to run at)

Things to consider:

Under the Control column, there is the Manual setting / Boost setting / Standby set point.

Manual: If you know what power % works for this zone, program this setting

if the TC fails, the controller will automatically change to this setting.

Boost Temp. : Shows the amount above set point you would like the boost to go up by

You can put in the amount you feel would best work for your application.

Standby Temp. : This temp setting is the amount you want the heater to lower to, below set point

when the system would be sitting idol (not molding parts)

At this point you have made all the basic settings you want to control this zone. Now select the green check icon to save these settings.

The screen will go back to showing all the zones. If you want to use these same settings on other zones ,
open the same zone you just set up. Now look for the white note pad on the RH side. Select this icon
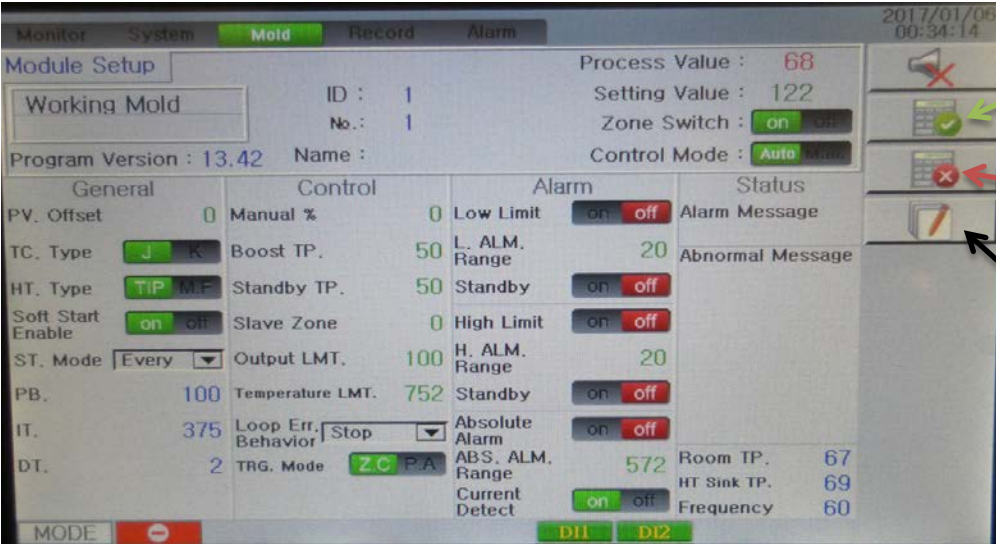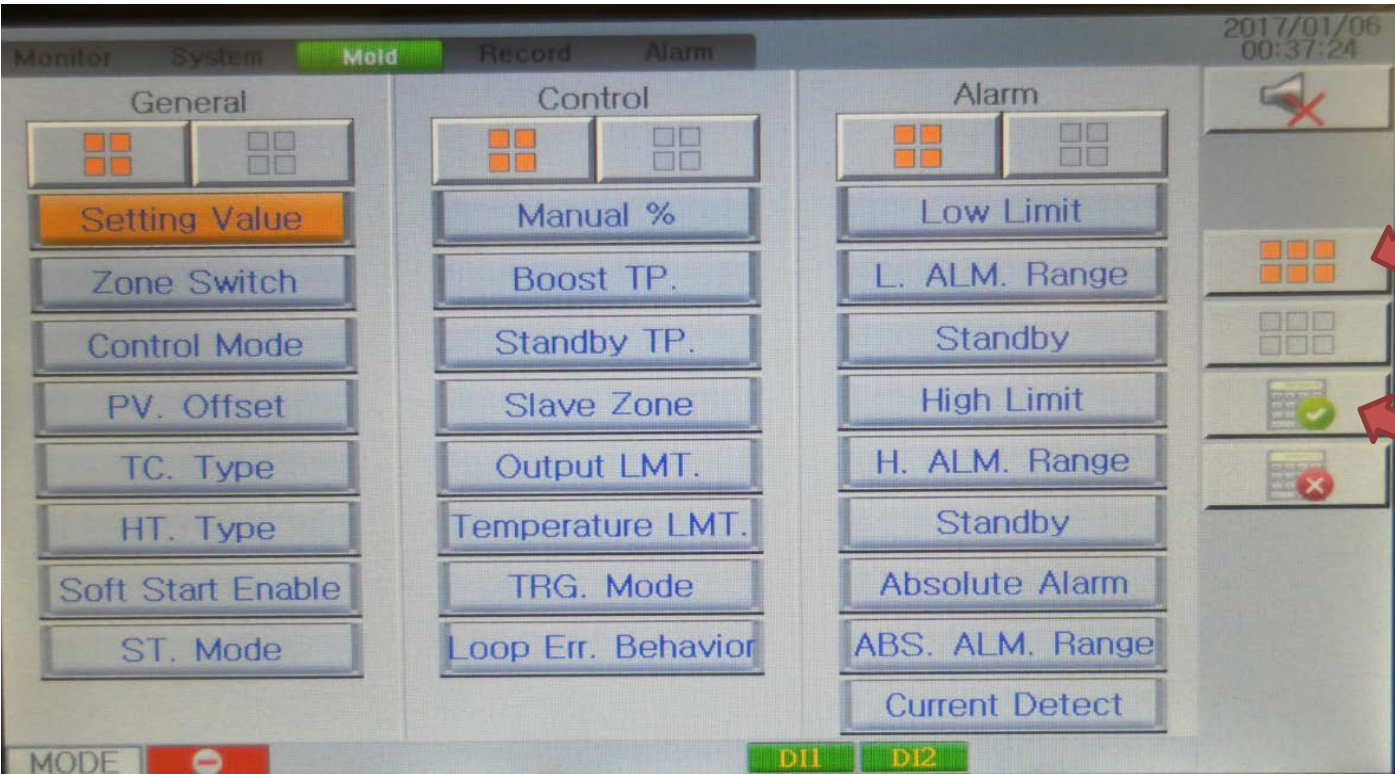

Green Icon to
 save the settings

Red icon not to
save the settings

White note pad to copy all
the settings from this page
to other pages.

The next window that will appear will list all the features of each zone. You can pick the feature / features you want to copy to other zones or you can pick the yellow boxes on the RH side to pick all features.

After you pick the items to copy select the green check icon to accept.

The next window will allow you to pick which zones you want to copy your settings to.
Again you select each zone individually or pick the orange box on the RH side to select all
Finally select the green check icon to accept and copy all your settings to the other zones

Once you've completed this step, you should have all your (TIP) nozzle zones set up to the same profile
follow the same steps to set your manifold (M.F) zones. When you look at the main window, you will see
that the nozzles will look like nozzles and the manifold zones will look like manifolds.
If you have a Feeder bushing on your system, set this zone as your last zone and set it as a nozzle zone.

Start Button

Manifold zones
(M.F)

Nozzle zones
(TIP)

Now that you have customized all your zones you are ready to run. Click the big green button in the
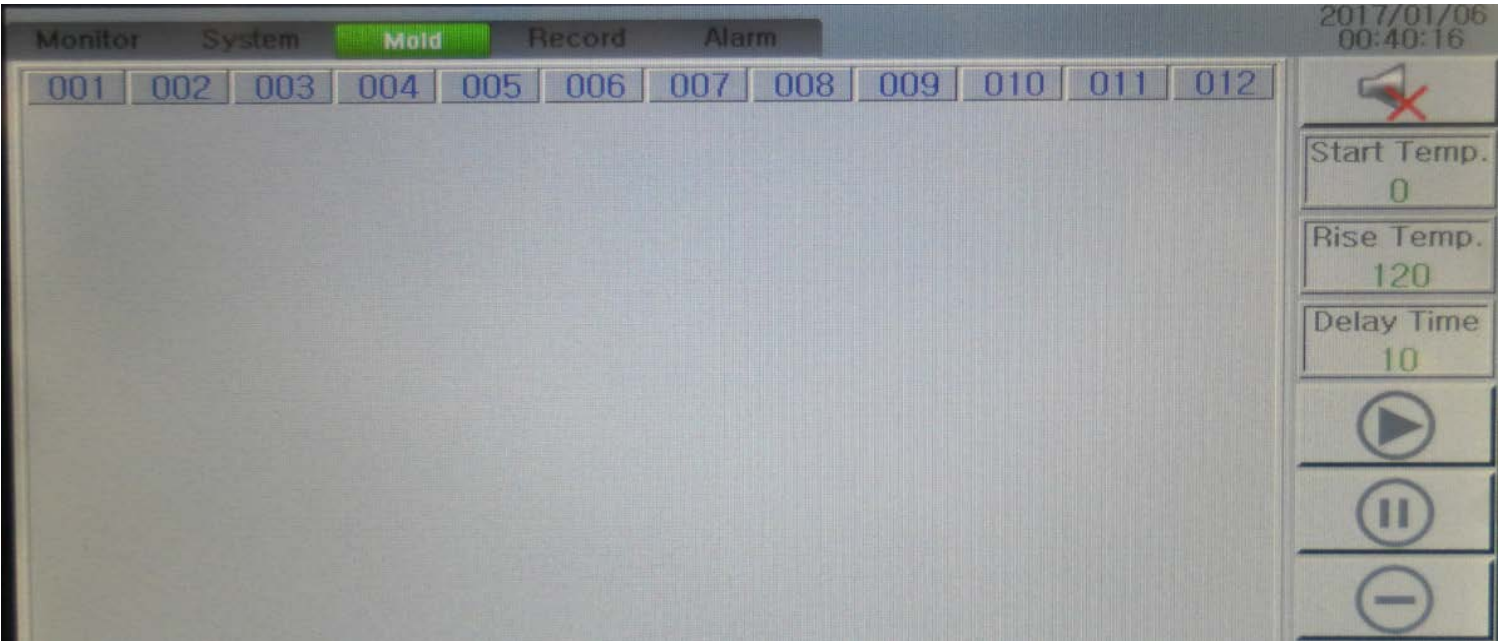Top RH corner to start the system running.

Optional items to consider.

A)

Mold Self Diagnostics: This feature is found under the "Mold" button on the top tool bar.
Any time you are starting a new hot runner system up or a system that has just been worked on, it would be a good idea to run this program. This feature will heat up each zone to the temperature you set it up for (rise Temp.) The delay time is the time the system waits before going to the next zone to test. When the test is done you will have the zone number in green if it is good, red if there is an issue.
To start the test push the arrow button on the RH side.

If you want to review the details of the test or save them, go under the Mold button at the top tool bar and select Diagnosis Record. If you want ,you can save this onto a Flash Drive

ZONE	AMP	VOL	OHM	WATT	TC	HT	FUSE	TRIAC	WIRE 1	WIRE 2
001	0.0	0	0	0	OK	OK	OK	OK	0	0
002	0.0	0	0	0	OK	OK	OK	OK	0	0
003	0.0	0	0	0	OK	OK	OK	OK	0	0
004	0.0	0	0	0	OK	OK	OK	OK	0	0
005	0.0	0	0	0	OK	OK	OK	OK	0	0
006	0.0	0	0	0	OK	OK	OK	OK	0	0
007	0.0	0	0	0	OK	OK	OK	OK	0	0
008	0.0	0	0	0	OK	OK	OK	OK	0	0
009	0.0	0	0	0	OK	OK	OK	OK	0	0
010	0.0	0	0	0	OK	OK	OK	OK	0	0

- ZONE: Zone No.
- AMP: Heater amperage
- VOL: Heater voltage
- OHM: Heater resistance
- WATT: Heater power rating
- TC: Thermocouple status
- HT: Heater status
- FUSE: Fuse status
- TRIAC status
- WIRE 1: Wiring error 1
- WIRE 2: Wiring error 2

B)

Synchronous Heating: Under the "**Systems**" button on the top tool bar, turn this feature on.
This will restrict the nozzles to heat up at the same pace of the Manifold heater zones.

C)

Slave Zone: This feature is good to set up when you program you system at the start. For each zone you are using it is a good idea to give the zone the name of another zone that runs the same. For example your nozzle zones run all the same. For Nozzle 1 you would put nozzle 2 as the slave zone. If the TC fails while the system is running, then this heater will follow the TC from zone 2 Automatically

D)

Manual Mode: It is a good idea to put the power % you want to run your zone at, if a TC fails.
The controller will automatically switch to slave the zone or manual run the zone when the TC fails, if you have made these settings at the beginning. During the 1st run, you can watch the % of each zone on the main screen. This will show you what % the zone works at to maintain temperature.

E)

Zone Labeling or naming: If you would like to put a label on the zones that will show up on the main page, select the "**Mold**" button on the top tool bar. Next select the "**Zone Name Set**" button.
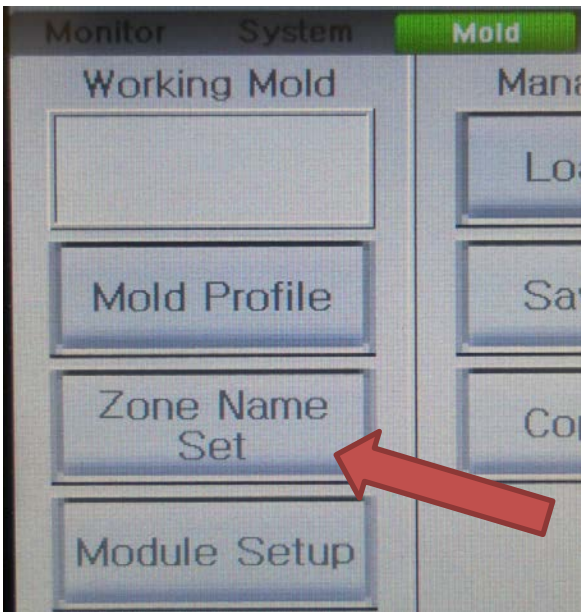
Now pick the zone you want to name (yellow blocks) / a window will pop up. Type in the name you want to call this zone and then Ent. Do this for all the zones.

For example, you can pick zone one and label this nozzle 1 / or you can call this cavity 1.

If you have a Bi Level manifold system you can label the zones based on which manifold you are controlling manifold A or B or bridge manifold.

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