Dryer
SimpliTouch Computer Programming and Operating Instructions
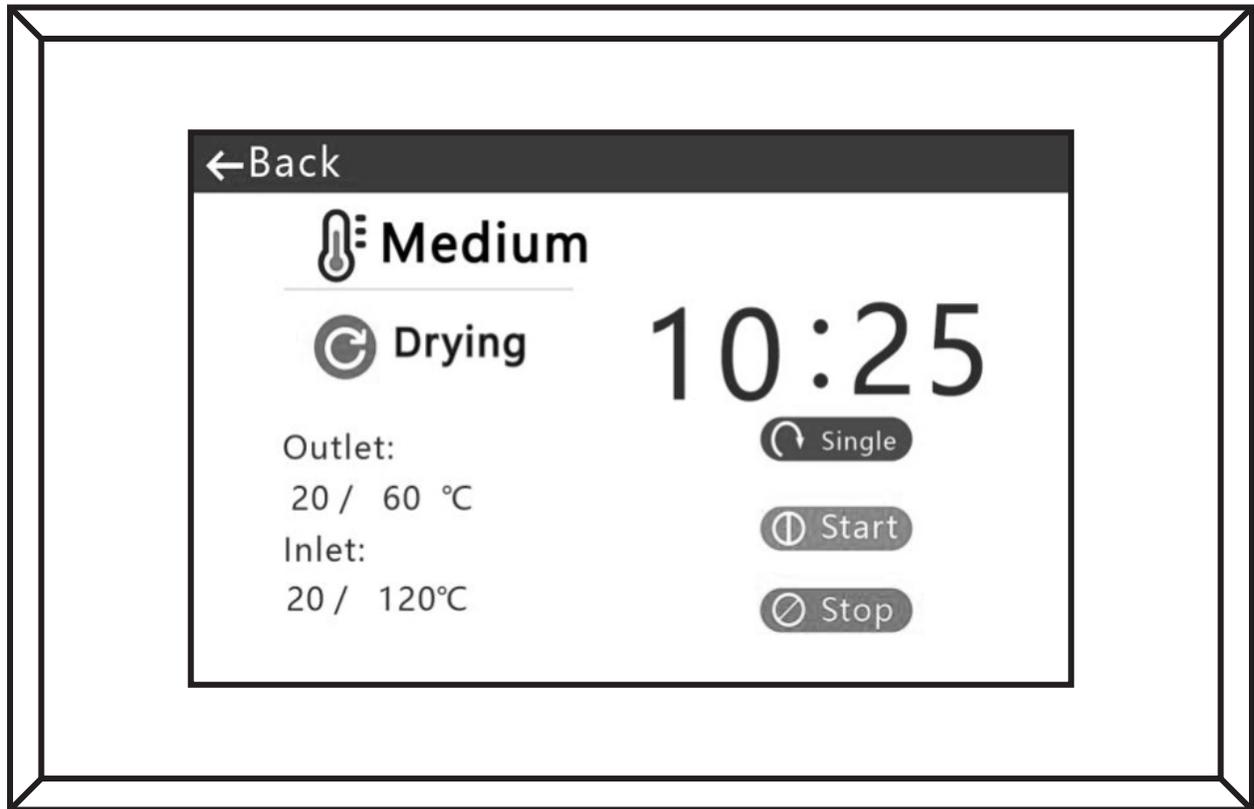
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SAFETY INFORMATION

Explanation of Key Safety Symbols
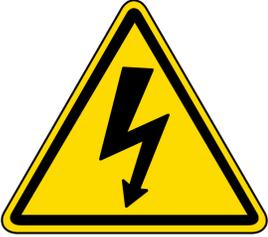
The lightning flash and arrowhead within the triangle is a warning sign alerting you of the presence of dangerous voltages.

This warning symbol indicates the presence of hot surfaces that could cause serious burns. Stainless steel and steam lines can become extremely hot and should not be touched.

The exclamation point within the triangle is a warning sign alerting you of important instructions concerning the machine and possible dangerous conditions.

This warning symbol indicates the presence of possible dangerous pinch-points. Moving mechanical parts can crush and/or sever body parts.

This warning symbol alerts you to the presence of possible dangerous drive mechanisms within the machine. Guards should always be in place when the machine is operation. Be careful when servicing any drive mechanism.
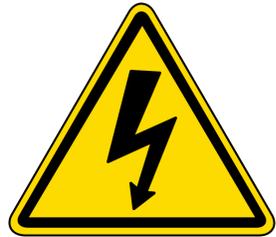
Before servicing any equipment, make certain it is disconnected from the electrical power source. Never allow operation of the machine when any safety device is malfunctioning. Never bypass safety devices.

This warning symbol indicates the presence of possible dangerous chemicals.   Proper precautions should be taken when handling corrosive or caustic material.

⚠ DANGER

Lock out and tag out MUST be performed during set-up, maintenance, and repair.
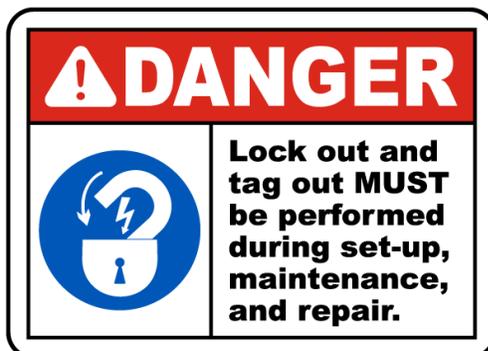
For good safety, a lock out and tag out must be performed during set-up, maintenance and repair of the machines. This eliminates unintended operation of the machine.

SAFETY INFORMATION

Installation
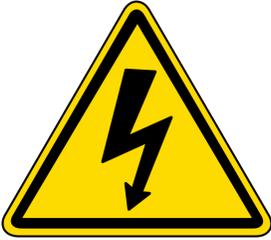
Please attach the controller firmly to avoid damage.

Install the controller on a flame resistant material.

Do not install a damaged controller.

Provide adequate space for cooling and wiring.

The electrical cabinet temperatures should be between 10-50 C (50-122F). If higher install a cooling fan if necessary.

Prevent the controller from sunlight, strong airflow and moisture. Protect the controller from corrosive airflow such as sulfide gas and/or salt mist.
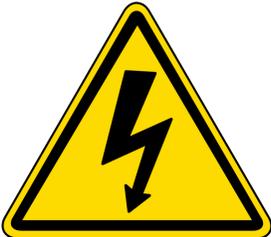
Make sure power is removed while installing or wiring the controller.

Only properly trained technicians should service the controller.

Supply adequate power for the controller.

Do not bypass safety interlocks or circuit protections to avoid dangerous or deadly situations.

Separate the controller from heat, high voltage and electrical noise.

Separate the low voltage signal wires from the high voltage wires.

Please use only UL approved wire.

RS485 communication wire should be a shielded wire, and only one shielded end should be connected to the ground, not both.

Connect the ground according to the applicable national and local standards.

Set the parameters according to the machine configuration. See parameter settings.

Incorrect parameters could result in machine failure.

SAFETY INFORMATION
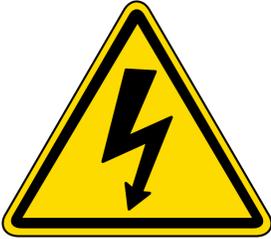
Installation

Confirm that the incoming voltage matches the serial decal before turning on the power.

Confirm proper power supply and installation location before operation.

Do not charge the parameters without consulting B&C Technologies.

Do not attempt to repair the controller. Contact B&C Technologies for assistance.

Do not pull or twist the power and the communication lines.

Do not touch the electronic parts of the controller directly to prevent static damage.
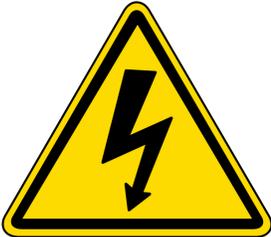
Do not try to repair the controller without proper static protection.

Test should only be performed in a laboratory environment.

SAFETY INFORMATION
Specifications

SPECIFICATIONS

- Power Supply: Main output board 10.5 VAC or 13.4 VDC, 15W. Controller 12 VDC, 5W

- Digital Inputs: NPN NO (NPN output, normally open)

- Digital Outputs: Relay outputs, DC or AC load less than 5 Amp

- Temperature Measurement: NTC sensor, Range -20℃ to 150℃ (-4 to 300F). Accuracy 1℃.
- Work Environment: Temperature range 10℃ to 50℃ (50-122°F). Humidity 80% non-condensating.
- Stock Environment: Temperature range -20℃ to 70℃ (-4 to 125°F). Accuracy 1℃.

PRODUCT OVERVIEW

SIMPLITOUCH

The SIMPLITOUCH is a microprocessor controller specifically designed for commercial OPL and vended dryers. It is composed of an industrial control board and an operation panel with a 7-inch color touch screen that makes programming and setting parameters easy. The large buttons and font on the display make operation simple.

Auto Page
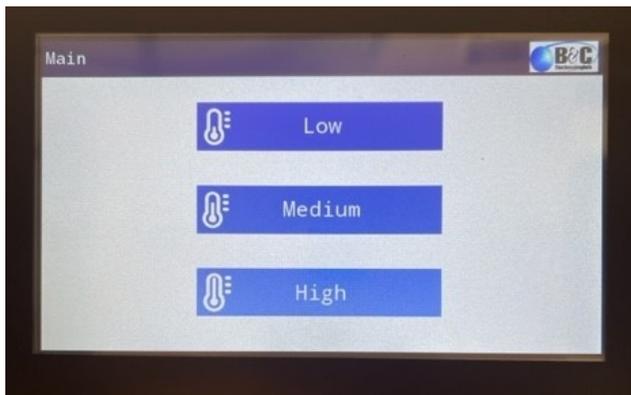
Settings Pages
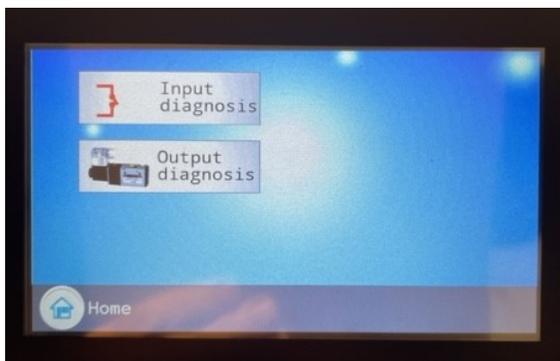
FEATURES

- Industrial control board and touch panel

- 7-inch color touch screen display

- Water resistant

- Settings and parameters can be downloaded and uploaded via USB drive (B&C use only)

- Software can be updated via USB drive (B&C use only)

FUNCTIONS

- Auto, formula, edit, diagnosis, user login

- USB compatibility

- Touch screen operation

- Password protection

- I/O diagnosis

- Multiple languages

- Coin statistics (Not on OPL dryers)

- Full coin box alarm (Not on OPL dryers)

How To Get The Most Out Of Your Dryer

There are many different variables to consider when attempting to maximize the productivity and efficiency of your dryer. Refer to the following list when installing and operating your machine:

- Know whether your washer is low or high extracting, as this will impact the moisture content of the goods going into the dryer. Low extraction in the washer means longer time in the dryer, and high extraction means faster drying and less energy consumption. Productivity will increase considerably when using a high extraction washer.

- When installing the dryer, the exhaust duct should be as short as possible, minimizing elbows, as they reduce the airflow.

- The dryer filter should always be clean in order to maintain efficient drying.

- Installing a humidity sensor will stop the machine when the minimum humidity is reached, resulting in less over-drying and increased productivity.

- Overloading the dryer will cause tangling, reducing heat and airflow though the goods while drying and causing the goods to wrinkle and require more time in the dryer. Do not overload the dryer, the goods should clearly tumble and fall in the dryer when in operation. Always remove the goods immediately after the cooldown to avoid wrinkling.

- Make sure the temperature is set correctly for the goods being dried. Refer to the table below for the standard LOW, MEDIUM, and HOT cycle information, as well as which goods should be dried in each cycle.

Standard Program Cycles for Various Textile Loads

DRY CYCLE	TOTAL CYCLE TIME	TEMP	COOL DOWN TIME	DRYER LOAD
HOT	45 min	82°C / 180°F	5 min	• Towels and heavy cotton bed sheets and pillows cases
MEDIUM	45 min	71°C / 160°F	5 min	• Blended polyester sheets and other similar materials
LOW	45 min	60°C / 140°F	5 min	• Synthetic and sensitive materials such as silk

<u>Operating Instructions</u>

POWER ON AND AUTO PAGE

- Once the device powers on, the display will light up and enter the Auto page, where the operator can select a desired temperature level and start the cycle.

DRYING

- Once the cycle has started, the drying page will display. This page displays the set temperature and the remaining time. If the machine is equipped with a humidity sensor, the screen will also show the humidity percentage.

- "Dual" means the machine will rotate forward and reverse. By pressing "Dual" twice, the machine will go into the "Single," non-reversing mode.

- If the door is opened, the machine will stop but the countdown timer will not stop.

- By pressing the temperature icons, the user can select between the Low, Medium, and High preset temperatures.

- Touch the temperature or the time on the screen and a number pad will pop up that allows the operator to change their values. Input the desired temperature or time, then the number pad will disappear. The temperature can only be changed to a lower value than the preset, and changed time or temperatures will revert back to their preset values on the next cycle.

- The cooldown process will begin automatically when the drying countdown timer reaches zero, or when the humidity reaches 5% (default setting) if the machine is equipped with a humidity sensor.

Idle Page
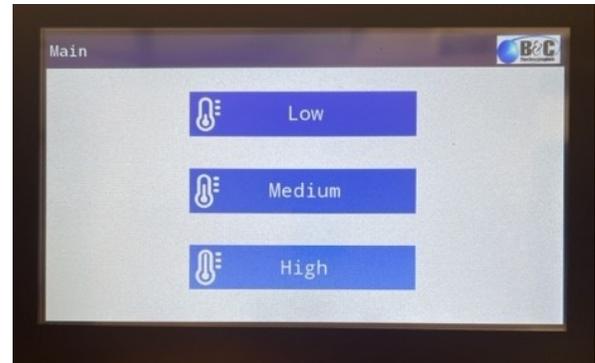
Drying Page
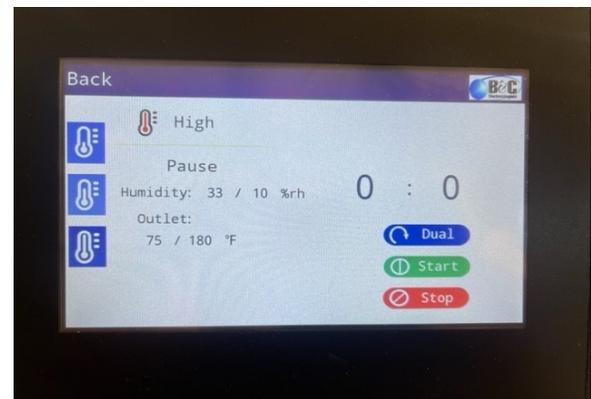
Time / Temperature Change Screen

9

Operating Instructions

COOLDOWN

- Set temperature and remaining time will be displayed.

- Preset cooldown time is 5 minutes, but this can be changed in the parameter settings.

- User can change the temperature level up to a maximum of 48℃ / 120°F.

- If the door is opened, the machine will stop but the countdown timer will not stop.

- The machine will automatically stop once the cooling down process countdown timer reaches zero.
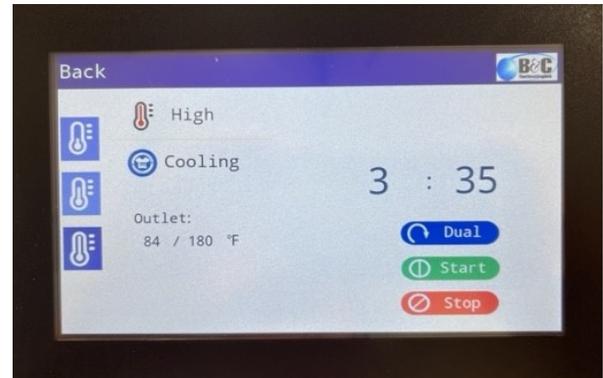
CYCLE END

- When the cycle ends, the buzzer will sound and the controller will be ready to start the next cycle. The user can now open the door and unload their goods.

- To start a new cycle, press "Back" to return to the auto page, allowing the user to select a program.

Cooldown Page

Paused Screen

Idle Page and Drying Page

IDLE PAGE

In the idle page, press High, Medium, or Low to select a temperature, then press start.

DRYING PAGE

After pressing start, the following page will be displayed throughout the duration of the cycle.

The information displayed:

1. Selected temperature level

2. Time remaining on cycle

3. Step time, temperature (setting value and actual value)

4. Machine status

While drying, press "Start" to pause the cycle, and press it again to resume the cycle.

"Dual" means the machine will rotate forward and reverse. By pressing "Dual" twice, the machine will go into the "Single" non-reversing mode.

Main Menu

MAIN MENU
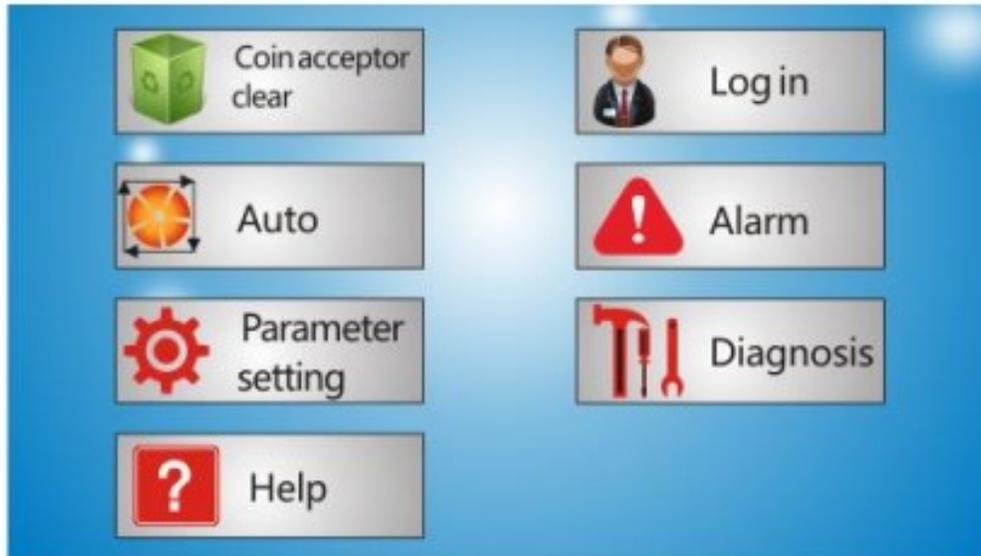
In the main menu, the operations below are available:

1. Press "Log in" to log in as one of the users. The default user is set to operator.

2. Press "Alarm" to see the current alarms.

3. Press "Diagnosis" to check the inputs, outputs, levels, temperature, and communications.

4. Press "Help" to see information on the device, such as the software version.

5. Press "Auto" to enter automatic operation.

6. Press "Coin acceptor clear" to reset all of the statistics to zero.

7. Press "Parameter setting" to set user parameters and transfer data via USB drive, such as software updates and parameter uploads/downloads.

INTERFACE

User Login

After powering on the device, press the top left corner of the touchscreen once when the page below appears. You will hear a beep if successful.
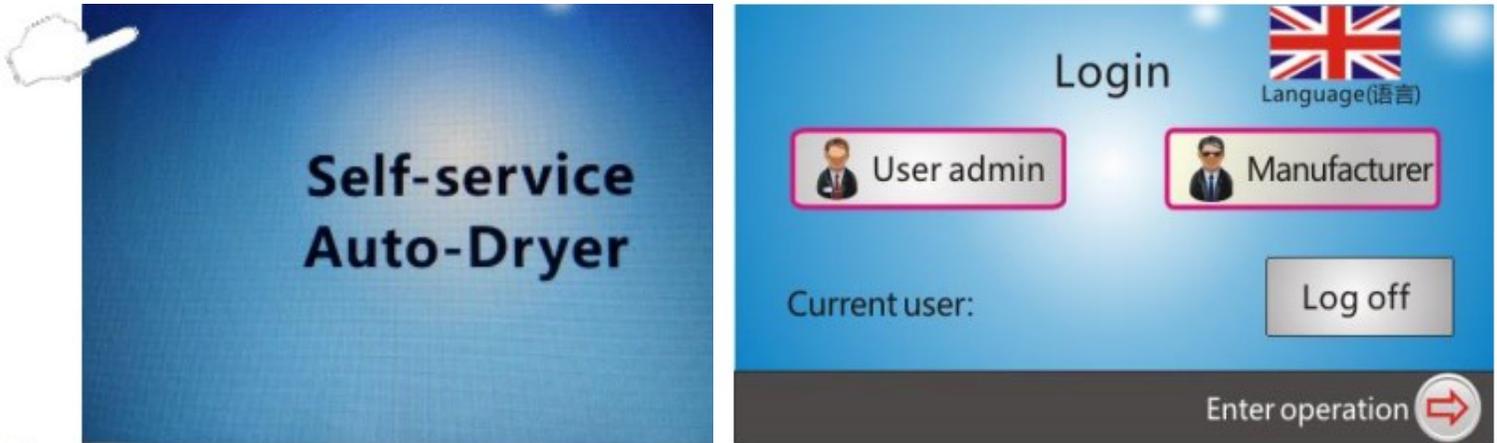
Wait a few seconds and the login page will display. Now, a user can be chosen to login:

1. Select a user to login. Two examples are given above, "User Admin" and "Manufacturer (Factory)."

2. Press "Enter operation" to enter the operation page.

3. After logging in successfully, the user can change the language in this page.

4. The user can modify the passwords in this page.

Default Passwords

USER	PASSWORD
User Administrator	123
Manufacturer	812

INTERFACE
Alarm Page

ALARM PAGE

The page below will display if and when an error occurs.

Alarm Page Operations:

1. List of current alarms.

2. Reset: Press to reset the alarm information. The alarm will still be listed on the display if the error has not been resolved. User can press "Start" to continue running the cycle if the error has been resolved.

3. Home Page: Press to return to the home page/Main page

Parameter Setting Page

PARAMETER SETTING PAGE

Parameters can be modified if the user logs in successfully as "User Administrator" or "Manufacturer."
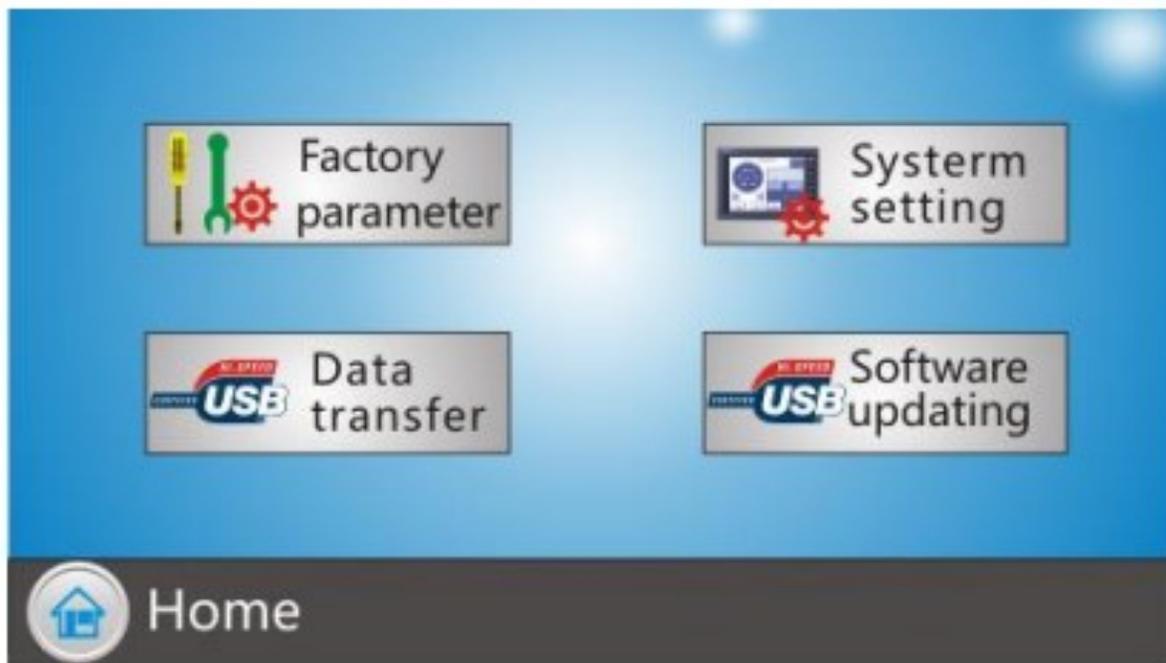
Parameter Setting Page Operations:

1. Factory Parameter: Enter factory settings

2. System Setting: Parameter initialization

3. Data Transfer: Upload or download parameters via USB drive

4. Update: Update the software via USB drive

5. Home: Press to return to the home page/Main menu

PARAMETERS
Parameter Initialization

PARAMETER INITIALIZATION

In the parameter settings page, press "System Setting" to enter the system setting page, then press "Parameter Initialization" to initialize all of the parameters. Only the manufacturer can initialize parameters and they will be the default after this operation.

DATA TRANSFER VIA USB DRIVE

In the parameter settings page, press "Data Transfer" to enter the data transfer page. Data transfer includes parameters upload and download between the controller and USB drive.
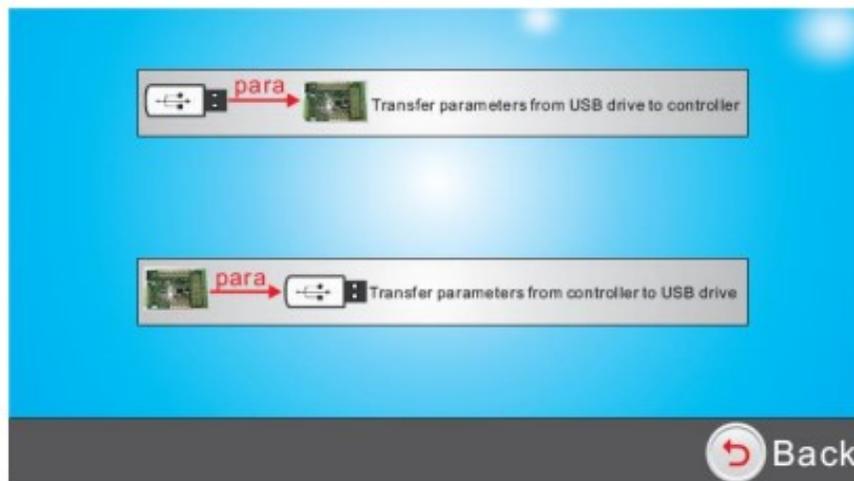
Data transfer includes two different functions:

1. Transfer parameters from USB drive to controller

2. Transfer parameters from controller to USB drive

SOFTWARE UPDATE VIA USB DRIVE

1. Insert the USB drive into the controller while powered off.

2. Turn power on to the dryer.

3. Log in as a user.

4. Go to parameter settings

5. Select software update and hit okay to begin uploading.

6. Once the display shows 100%, remove the USB drive and cycle the power to the dryer.

PARAMETERS
Parameter Settings

<u>PARAMETER SETTINGS</u>

If the user logs in as "User Administrator" or "Manufacturer," they will be able to access the parameter settings from the top menu, with some parameters being labelled as "user" parameters, while others are "factory" parameters and can only be changed if the user is logged in as "Manufacturer."

<u>Parameter Group: Machine Functions</u>

ITEM	DESCRIPTION	DEFAULT	RANGE	LOGIN	NOTES
1	Temperature Units	1 - Fahrenheit	0 - Celsius; 1 - Fahrenheit	User	Temperature unit.
2	Coin display face	0 - Coin num	0 - Coin num 1 - Money sum 2 - Buy time 3 - Money need	User	Select the information displayed on the idle page.
3	RunDispTime	0 sec	0 - 255 sec	Factory	Display purchased time.
4	RunDispTemperature	0 sec	0 - 255 sec	Factory	Display temperature.
5	Coinbox name	0 - Coinbox door	0 - Coinbox door 1 - Dust door	Factory	Define the function of input signal of JP5-3.
6	FanDoorChkDly	0 sec	0 - 5000 sec	Factory	The fan door signal will be checked, and an alarm will sound if the fan door is open.
7	O.HeatProtect	0 min	0 - 255 min	Factory	The time before the roller and fan stop once the temperature reaches its set maximum. A value of 0 means there will be no time limit and the roller and fan must be stopped manually.
8	ProgEndPrompt	0 sec	0 - 255 sec	Factory	Signal time at the end of the cycle.
9	Set temp when running	No	No / Yes	User	Set temperature when running.

PARAMETERS
Parameter Settings

Parameter Group: Input Status

ITEM	DESCRIPTION	DEFAULT	RANGE	LOGIN	NOTES
1	Door closed	0 - N.C.	0 - N.O.; 1 - N.C.	Factory	
2	Coinbox door closed	0 - N.C.	0 - N.O.; 1 - N.C.	Factory	
3	Wind door closed	0 - N.C.	0 - N.O.; 1 - N.C.	Factory	
4	Motor overload	0 - N.C.	0 - N.O.; 1 - N.C.	Factory	
5	Over heat	0 - N.C.	0 - N.O.; 1 - N.C.	Factory	
6	Fire fail	0 - N.C.	0 - N.O.; 1 - N.C.	Factory	

Parameter Group: Dry and Temperature

ITEM	DESCRIPTION	DEFAULT	RANGE	LOGIN	NOTES
1	Run time	35 sec	0 - 255 sec	Factory	Time of motor rotation.
2	Stop time	7 sec	0 - 255 sec	Factory	Time of motor pause. When set to 0, the motor will remain spinning forward.
3	Dry out high temp	180F	0 - 200F	User	Set the high temperature for the outlet temperature sensor.
4	Dry out medium temp	160F	0 - 200F	User	Set the medium temperature for the outlet temperature sensor.
5	Dry out low temp	140F	0 - 200F	User	Set the low temperature for the outlet temperature sensor.

PARAMETERS

Parameter Settings

Parameter Group: Dry and Temperature

ITEM	DESCRIPTION	DEFAULT	RANGE	LOGIN	NOTES
6	Out heat diff	10F	0 - 300F	User	The difference between the outlet and set temperature. Once reached, the heat will turn on.
7	Stop fan temp	110F	0 - 300F	Factory	Temperature setting value for stopping the fan. The fan will not stop until the temperature is lower than this value. 0 means that the fan will stop when the machine stops.
8	In drum sensor	0 - No	0 - No; 1- Yes	Factory	Use the inlet temperature sensor.
9	Dry in high temp	32F	0 - 390F	User	Set the high temperature for the inlet temperature sensor.
14	Dry in medium temp	32F	0 - 390F	User	Set the medium temperature for the inlet temperature sensor.
15	Dry in low temp	32F	0 - 390F	User	Set the low temperature for the inlet temperature sensor.
10	In heat diff	10F	0 - 210F	Factory	The difference between the outlet and set temperature. Once reached, the heat will turn on.
11	Out alarm temp	200F	0 - 350F	Factory	Max outlet temperature. When the temperature is higher than the set value, the controller will alarm.
12	In alarm temp	300F	0 - 350F	Factory	Max inlet temperature. When the temperature is higher than the set value, the controller will alarm.

PARAMETERS
Parameter Settings

Parameter Group: Dry and Temperature

ITEM	DESCRIPTION	DEFAULT	RANGE	LOGIN	NOTES
13	FireFailChkDly	3 sec	0 - 255 sec	Factory	The set time of Firefailure. When the time of signal firefailure is longer than the set value, the controller will alarm.
16	Humidity sensor	No	No / Yes	Factory	
17	High temp humidity	5	0 - 100% RH	Factory	
18	Medium temp humidity	5	0 - 100% RH	Factory	
19	Low temp humidity	5	0 - 100% RH	Factory	

Parameter Group: Cooldown Setup

ITEM	DESCRIPTION	DEFAULT	RANGE	LOGIN	NOTES
1	Cool time for high temp	5 min	0 - 300 min	User	
2	Cool time for medium temp	5 min	0 - 300 min	User	
3	Cool time for low temp	5 min	0 - 300 min	User	

PARAMETERS

Parameter Settings

Parameter Group: Manual Setup

ITEM	DESCRIPTION	DEFAULT	RANGE	LOGIN	NOTES
1	Dry time high temp	45	0 - 600 min	User	
2	Dry time medium temp	45	0 - 600 min	User	
3	Dry time low temp	45	0 - 600 min	User	
4	Dry time default temp	45	0 - 600 min	User	
5	Cool time high temp	5	0 - 300 min	User	
6	Cool time medium temp	5	0 - 300 min	User	
7	Cool time low temp	5	0 - 300 min	User	
8	Cool time default temp	5	0 - 300 min	User	
9	Dry out default temp	170F	0 - 300F	User	

PARAMETERS

USB Function Alarms

USB FUNCTION ALARMS

The alarms below may occur when the controller software is updated via USB drive. Please resolve any problems according to the methods and information below. Please contact your machine supplier for further assistance if the alarm condition cannot be remedied.

NO.	ERROR NAME	RESET	REASONS	TROUBLE SHOOTING
1	USB not found	Manually	The USB drive isn't detected	1. Check if the USB drive is inserted firmly. 2. Try again with a different USB drive.
2	File not found	Manually	File path or name is not correct	1. Check if the file name is correct. 2. Check if the file is in the correct directory.
3	USB status error	Manually	USB system error	1. Contact supplier.
4	Unknown error	Manually	USB system error	1. Contact supplier.
5	File data wrong	Manually	Data is incorrect.	1. Copy a new file to the required file path and try again.

ALARMS
Information and Troubleshooting

ALARM RESET

In the top menu, press "Alarm" to enter the alarm page. Current alarms will be listed on the display, including current alarm number and alarm name. Press "Reset" to update the alarms list. The buzzer will stop, but alarm information will still be displayed on the alarms list until the errors are eliminated.

Alarm Information and Troubleshooting

NO.	ALARM NAME	TROUBLE SHOOTING
2	OutDrumSensor	Please check the outlet temperature sensor.
3	InDrumSensor	Please check the inlet temperature sensor.
4	MotorOverload	Please check the capacity of the machine, or check the input of overload.
5	Overheat	Please check the input of overheat.
6	OutDrumTmpHi	The outlet temperature is higher than the set maximum temperature for outlet sensor.
7	InDrumTmpHi	The inlet temperature is higher than the set maximum temperature for inlet sensor.
9	Inflame fail	Please check input of inflame fail.
10	WindDrOpen	Please check input of fan door.
11	DustDoorOpen	Please check the input of fan door (dust door).
49	CommOvertime	Can't receive replay data from I/O Board. Please check the wiring between HMI and I/O Board.
50	Comm intfer	Please check the connection between the boards.
51	Paramet. err	Please contact supplier.
52	Program err	Please contact supplier.
53	System err	Please contact supplier.

ALARMS
Servicing the Dryer

Label all wires prior to disconnection when servicing. Wiring errors can cause improper and dangerous operations. Verify proper operation after servicing.

Machine Troubleshooting

SYMPTOM	PROBABLE CAUSE	SUGGESTED REMEDY
Drum does not turn	1. Loading door 2. Lint compartment door 3. Drive belts	1. Check that the loading door is completely closed 2. Check that the lint compartment door is completely closed
Drum turns, but no burner flame is present	1. Gas shut-off valve 2. Ignition mode	1. Make sure the gas shut-off valve is in the open position 2. Follow the procedure for checking the ignition cycle listed in the dryer ignition section of the main
Slow drying	1. Control 2. Lint screen 3. Airflow restrictions 4. Exhaust	1. Check that proper temperature settings are present 2. Clean lint screen 3. Follow instruction guidelines for static back pressure and make-up air 4. Check exhaust for obstructions, follow installation
Fault codes on display	1. Temperature sensor 2. Control error 3. Drying temperature error	1. Check instruction manual or contact B&C distributor 2. Check fault code in this manual or contact B&C distributor 3. Check fault code in this manual or contact B&C
Preventative Maintenance	1. Instructions	1. Check the service manual for daily, weekly, monthly, quarterly, and annual maintenance

Much more information is available on our website:
www.bandctech.com