

modbar[®]
modular brewing systems

Operating Manual
Pour Over System

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Warnings and General Guidelines

- This machine is for professional use only, and should be installed in locations where its use and maintenance is restricted to trained personnel. Children are forbidden to operate or play with the machine.
- The equipment must be installed to comply with the applicable federal, state, or local electrical and plumbing code. The installation also must comply with the manufacturer's instructions, and must be performed by qualified and authorized personnel.
- Ensure that the specifications on the equipment name plate correspond to the main electrical supply to which you will connect the Modbar.
- Safe electrical operation of this device will be achieved only when the connection to the power outlet has been completed correctly and in observance of all local, national, and international electrical codes and safety regulations, and particularly by grounding the unit. Make sure grounding has been done properly as it represents a fundamental safety requirement. Ensure qualified personnel check such connection.
- Improper use or installation of Modbar equipment can cause product damage and or serious injury to end user. Modbar will not be held responsible for any damages or injuries occurring if equipment has been misused, installed improperly, or tampered with.
- When you receive your equipment, thoroughly inspect the packaging and equipment for any signs of damage. If damage is suspected, please contact Modbar support before attempting to install or operate the equipment.
- Modbar equipment is not intended for use outdoors or in an unconditioned environment where freezing temperatures may occur.
- Do not leave machine unattended during brewing processes.
- Do not use wet cloth to clean screens or switches on unit(s) as they are not waterproof.
- Repairs to Modbar equipment should be made only by trained technicians and use only Modbar approved parts.
- Incorrect installation may cause injury and/or damages to people, animals, or objects, for which the manufacturer shall not be held responsible.
- We do not recommend using adapters, multiple plugs and/or extension cords. If you cannot avoid using them, make sure that they are exclusively of the kind which conforms to local, national, and international electrical codes and safety regulations, being careful not to exceed the power and current ratings indicated on such adapters and extension cords.
- This device must be used exclusively for the functions which it has been designed and built for. Any other application is inappropriate and dangerous. The manufacturer shall not be responsible for any damages caused by improper and/or irrational use.

- Using any electrical device requires that certain fundamental rules be observed.
 - Do not touch the device with wet or humid hands and feet.
 - Do not use the device while having no shoes on your feet.
 - Do not use extension cords in bath or shower rooms.
 - Do not unplug the device from the power outlet by pulling on the power supply cable.
 - Do not expose the device to atmospheric agents (rain, sun, etc.).
 - Do not allow children or untrained people to use this device.
 - Do not clean the control panel with a wet cloth since it is not watertight.
- Before performing any maintenance and/or cleaning operations, turn the main power switch to the OFF position and disconnect the machine from the power source by unplugging the cord or by switching off the relative circuit breaker. For any cleaning operations, follow exclusively the instructions contained in the manual.
- If the equipment is operating in a faulty manner or breaks down, turn the main power switch to the off position, disconnect the machine from the power source (as described in the previous paragraph), and close the water supply valve. Do not attempt to repair it. Contact a qualified and authorized professional to perform any repair. Any repairs must be performed exclusively by the manufacturer or by an authorized technician using only original parts. Noncompliance with the above could compromise the safe operation of the equipment.
- Do not obstruct air intake and exhaust grilles.
- The machine's power supply cable must not be replaced by users. In the event that the power supply cable is damaged, shut off the equipment, disconnect the machine from the power supply by switching off the relative circuit breaker, and close the water supply valve. To replace the power supply cord, contact a qualified professional.

CAUTION – Risk of fire and electric shock. Replace only with manufacturer's cord set, part No. E-0118-01

ATTENTION - Risque d'incendie et de choc électrique . Remplacez-la uniquement avec le cordon de série du fabricant , partie n ° E-0118-01

Product Handling and Transportation

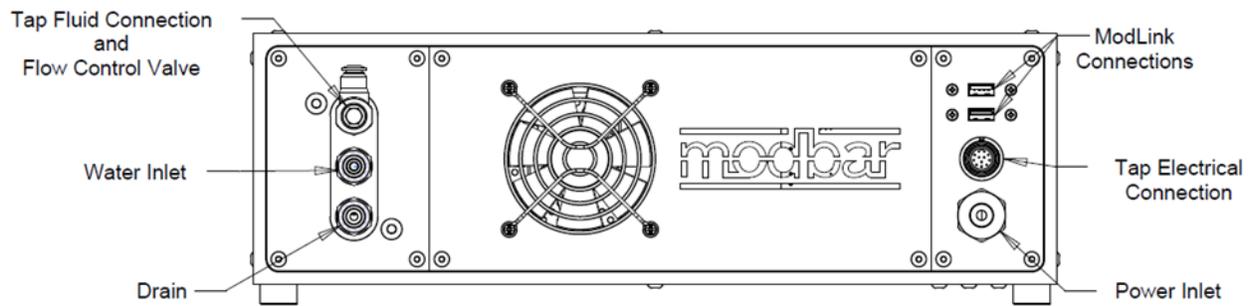
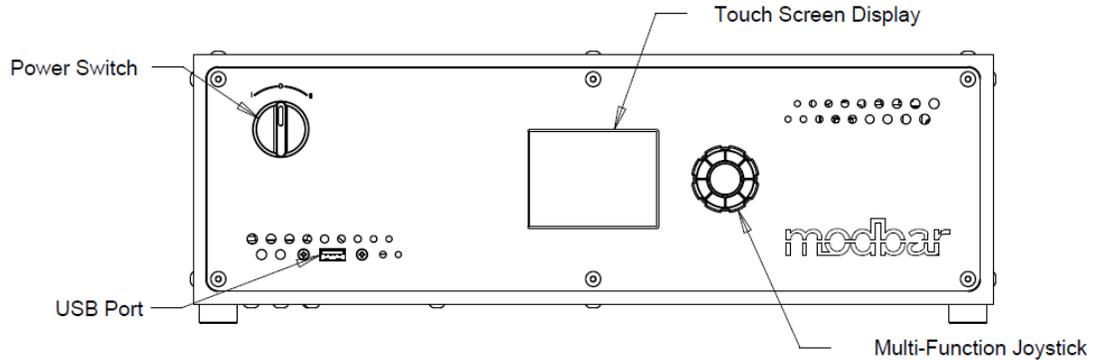
Modbar equipment is shipped in factory approved packaging. Upon receipt of equipment, thoroughly inspect the packaging for damage. If damage is suspected, contact Modbar immediately.

In the event that equipment needs to be returned to Modbar, or shipped for any reason, it should be shipped in the factory approved packaging. If you have discarded the packaging, please contact Modbar for replacements.

The equipment must be properly drained prior to shipment, to avoid damage from freezing. If you have questions about how to properly drain equipment for shipping, please contact Modbar support.

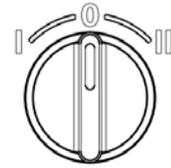
Do not store the equipment in places where temperature may cause water in the boilers to freeze.

Product Description



Power Switch Function

The three-position power switch on the Modbar module has three separate functions, as illustrated in the following image.



0 - Off

In this position, the module is in the off position.

I - Standby Mode

In this position, the module is in standby mode. When in standby mode, all operations functions as normal, but no power is applied to the heating elements. This mode is used for priming the system upon installation, and can also be useful for some diagnostic applications.

II - Operating Mode

In this position, the module is in operating mode. Power is applied to the heating elements, and all functions operate as normal.

Startup Instructions

Installation

Upon installation, the Modbar module must be primed before use. This is accomplished by the following steps.

- Ensure that filtered water is supplied to the module.
- Ensure that the power switch is in the off position.
- Ensure that the module power cable is plugged into its appropriate power source.
- Turn the power switch counter-clockwise to place it in standby mode.
- Actuate the tap handle in manual mode, as described in the “Dispensing Operations” section of this guide.
- After water begins to pour from the tap (This may take some time on a new system) allow water to flow for at least 30 seconds to ensure that the system is primed.
- At this point, it is safe to turn the switch clockwise into operating mode.

General Use

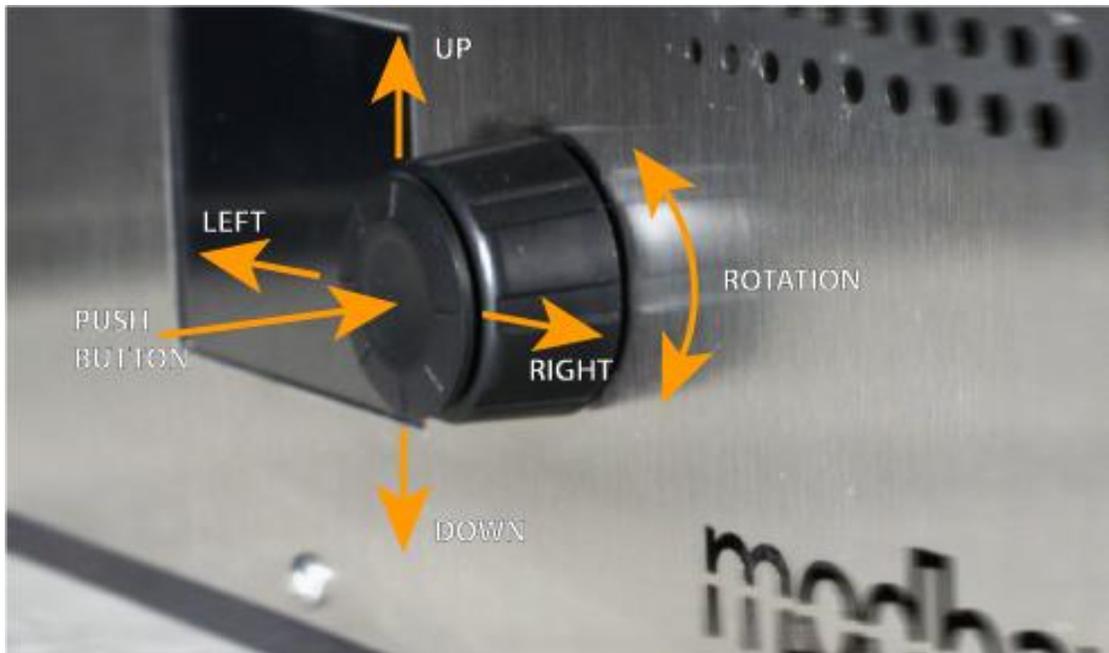
During general use, the module is already primed, and it is not necessary to prime the system. To start the module, follow these steps:

- Ensure that filtered water is supplied to the module.
- From the off position, turn the power switch clockwise to place it into operating mode.
- At this point, the elements will begin to heat. When each heat zone reaches set temperature, the module is ready for use.

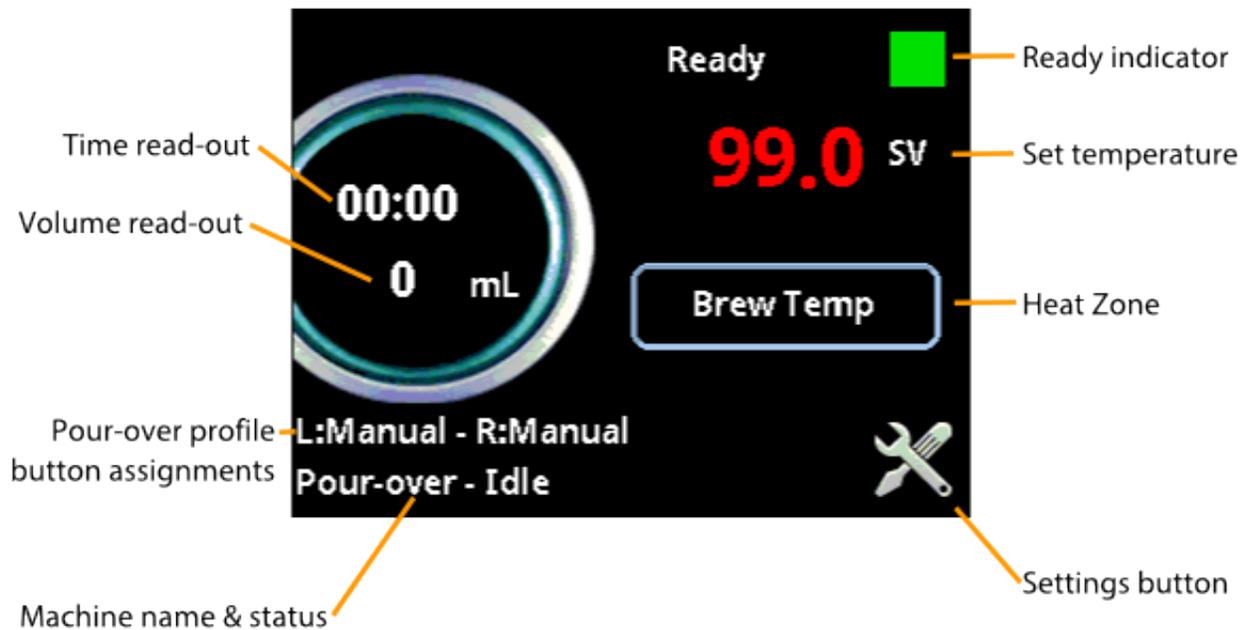
Operations and programming

Equipment Operation Interface

The touch screen is used for *selecting* and *displaying* data. The multi-function encoder is used for *editing* data. The functions of the encoder are shown below:



Home screen



Ready indicator: This square icon indicates whether the machine is at temperature to dispense. When first starting the machine, the indicator will remain red in color until all temperature zones are heated to set temperature. Once all zones are at temperature, the icon will turn green, indicating that we are now ready to dispense.

Temperature set value: This is the current set-point value in degrees for the active heat zone. The temperature shown here is only for reference. To change the temperature set value, refer to the section of this manual labelled *Steps to creating a new pour-over profile*.

Heat zone: In automatic temperature mode, this button has no function. In manual temperature mode, pressing this button cycles through the 2 heat zones on the pour-over system: Inlet Boiler and Outlet Boiler. (Refer to *Advanced preferences screen page 2*)

Settings button: This button navigates to the main settings screen.

Machine name & status: Displays the current name and status of the module & tap.

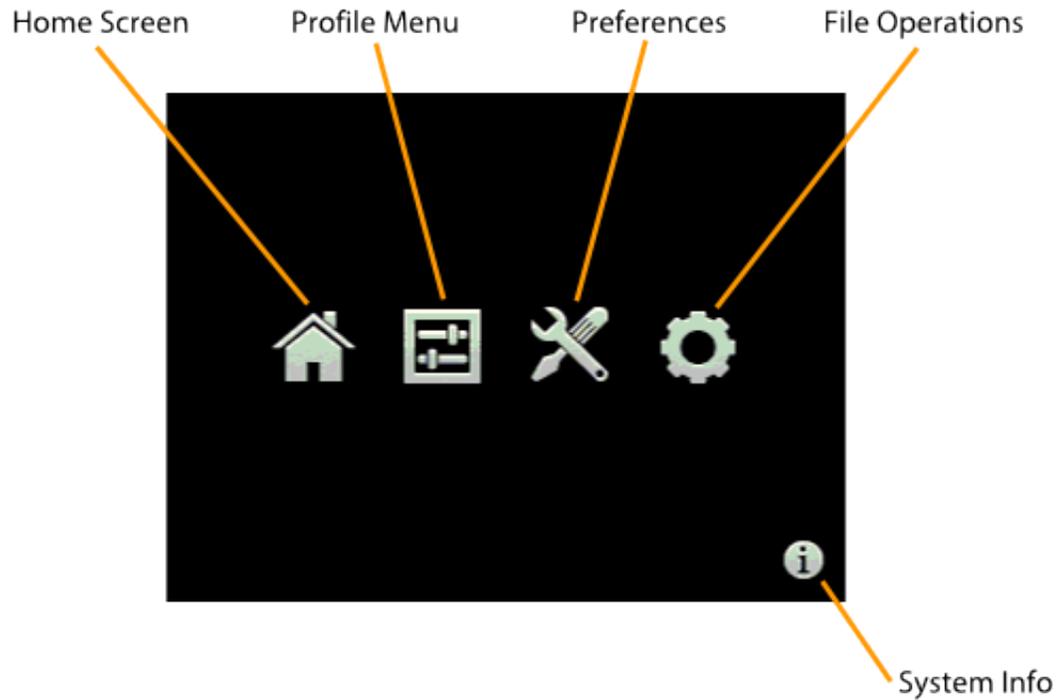
Pour-over profile button assignments: Displays which pour-over program (profile) is selected for each of the dispensing switches (L = Left switch, R = Right switch).

Time read-out: Displays the current time from the start of the dispensing readout.

Volume read-out: Displays real-time fluid volume information during a dispensing cycle.

Main settings screen:

home -> main settings



Home screen: This button navigates back to the home screen / dashboard.

Profile menu: This button navigates to the profile selection menu.

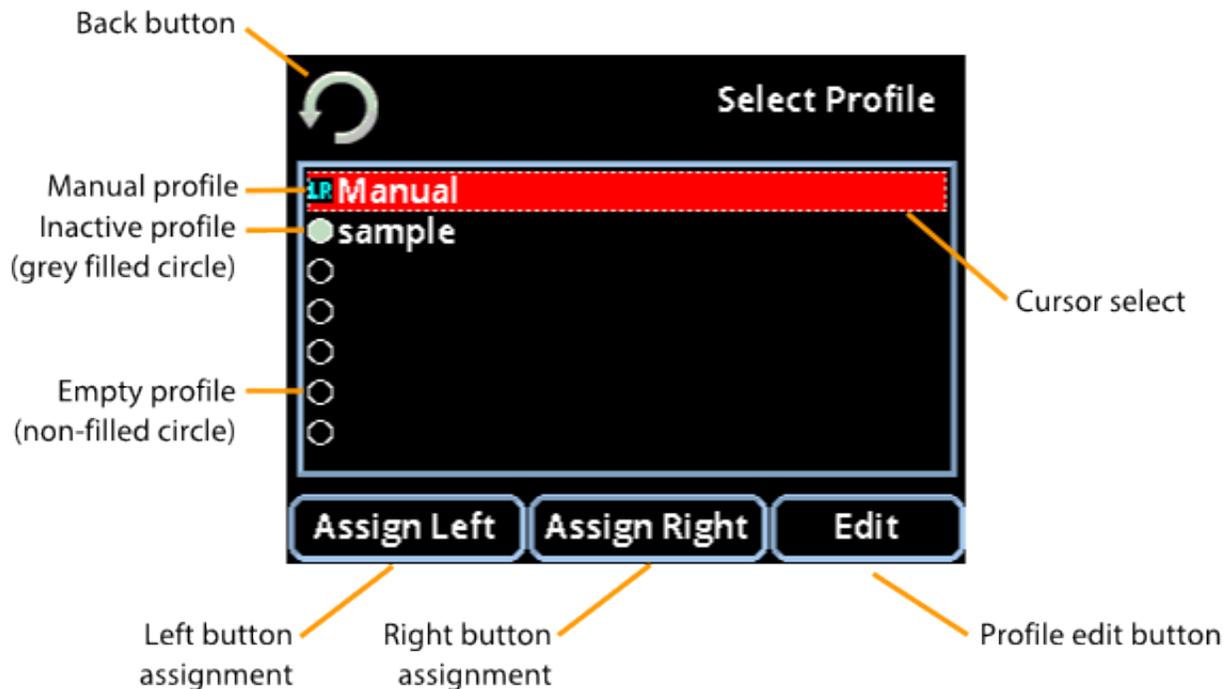
Preferences: This button navigates to the system preferences page.

File operations: This button navigates to the file operations page.

System info: This button displays the system version and software information.

Profile Selection Screen:

home -> main settings -> profile selection



Back button: Wherever you see the back button it will take you to the previous screen.

Manual profile: This is a factory set profile. When assigned to either of the dispensing switches (or both) the switch(s) will operate in a simple on/off (manual) dispensing mode. For this profile only temperature edit is allowed. In this example the Manual Profile is assigned to both the Left and Right switches, indicated by a teal blue “L” and “R” next to the profile name

Inactive profile: This is a profile that has profile information but is not active, indicated by a purple/grey filled circle.

Empty profile: These are empty profile slots and may not be used until profiling data is entered. Empty profiles are indicated by a non-filled circle.

Assign Left: Pressing this button will assign the current cursor selected profile to the Left dispensing switch. (You cannot assign an empty profile)

Assign Right: Pressing this button will assign the current cursor selected profile to the Right dispensing switch.

Profile edit: Press the profile edit button to edit the profile data for the current cursor selected profile.

Cursor select: The dotted outline *cursor select* indicates which profile is selected on screen. You may use the rotary encoder or up/down function of the joystick to navigate the profiles list. Pressing the pushbutton will activate a selected profile.

Steps to creating a new pour-over profile:

1. Select an empty profile (indicated by a non-filled circle) and choose **edit**.
2. Touch next to the Profile Name field and enter a name for the profile. Use the joystick and encoder wheel to navigate the alpha-numeric character set.

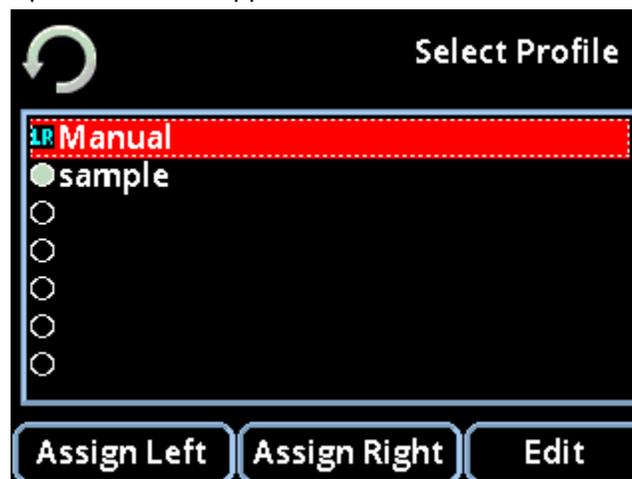


3. Set the heat zone temperatures if desired. To change the set temperature, simply touch the temperature value on the screen and the value will be highlighted. Rotate the encoder left or right to change the value in 1-degree increments. Press the joystick up or down to change the temperature in 1/10 degree increments. Press the center button on the joystick to save the change.

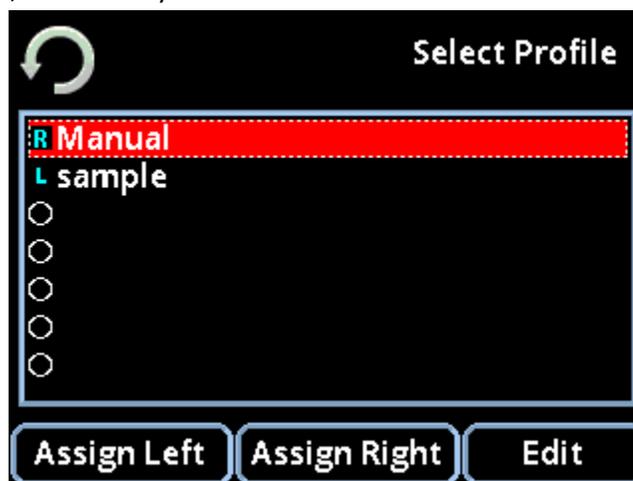
- In manual temperature mode, both boiler heat zones will be displayed. Set the Inlet Boiler Temperature (Inlet-T) and Outlet Boiler Temperatures (Outlet-T) if so desired.
- In automatic temperature mode, only one temperature will be displayed. Set the brew temperature (Temp) if so desired.

(Refer to "Advanced preferences screen page 2" for temperature mode information)

4. Choose "Save & Exit"
5. The newly created profile will now appear in the Profile Select menu



- Assign the profile to one of the dispensing switches by selecting the new profile with the cursor and choosing “Assign Left” or “Assign Right”. In this example the profile is assigned to the Left dispensing switch, indicated by the teal colored “L”.



- Now that new profile has been created in the menu and assigned to the switch you may perform the profile that will be stored.
- Prepare the coffee and device you wish to use for this profile.
- Rinse the paper or filter basket to warm the device and pour-over tap plumbing.
- Press and hold the dispensing switch that you assigned to the profile (left or right) for approximately 3 seconds until the button begins to flash. (*Flashing* indicates you are in “recording” mode)
- Momentarily pressing the dispensing switch will stop the flow of water, pressing again will resume the flow, all the while volumetric and time based data are being stored in the profile memory. Also note that the total volume of water dispensed is displayed on the module display in real time. This value may be used to assist in performing your brew cycle.
- When you are finished with the brewing cycle momentarily press the dispensing switch to stop the flow of water (the switch will still flash). Then hold the dispensing switch down until both the left and right dispensing switches flash. This indicates the program has been stored to the selected profile.
- To repeat this brew cycle simply momentarily press the dispensing switch. The switch’s light will now *pulse* to indicate that it is playing back the profile (contrary to recording). If you wish to overwrite the existing profile you may do so by repeating steps 10 through 12.

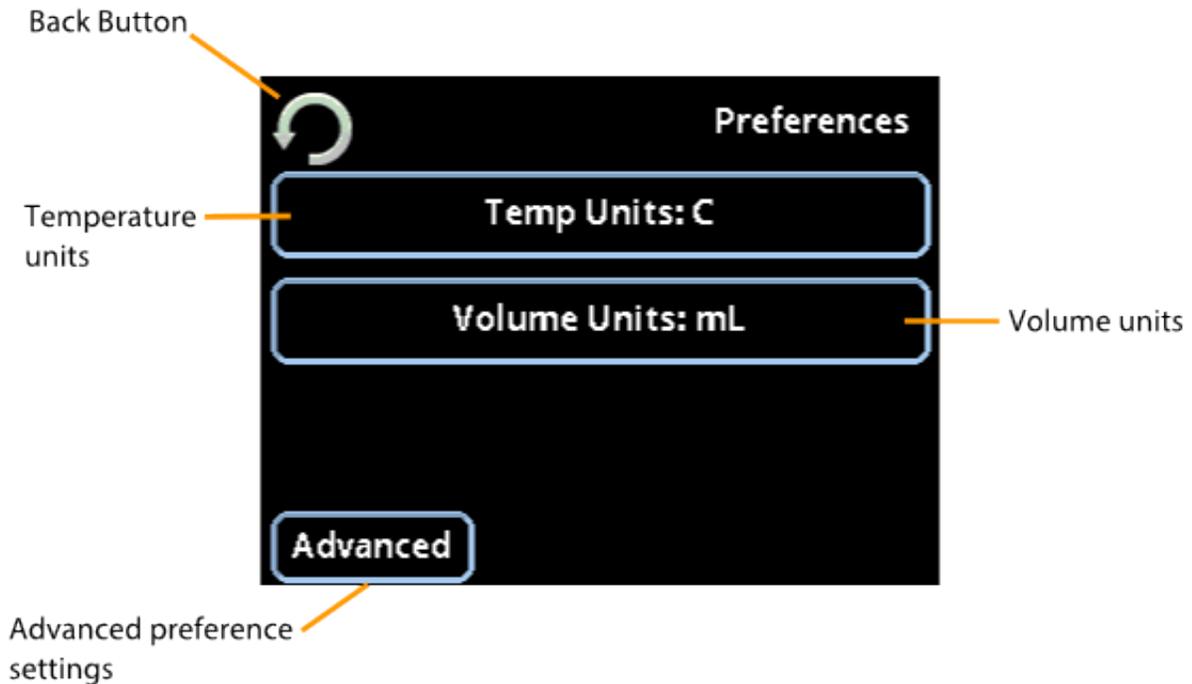
Optionally, you can now lock the profile to prevent accidental reprogramming by entering the profile edit menu and then selecting the prevent programming checkbox.

For a demonstration of this procedure and other video tutorials, please visit:

www.modbar.com/support

Preferences screen:

home -> main settings -> preferences



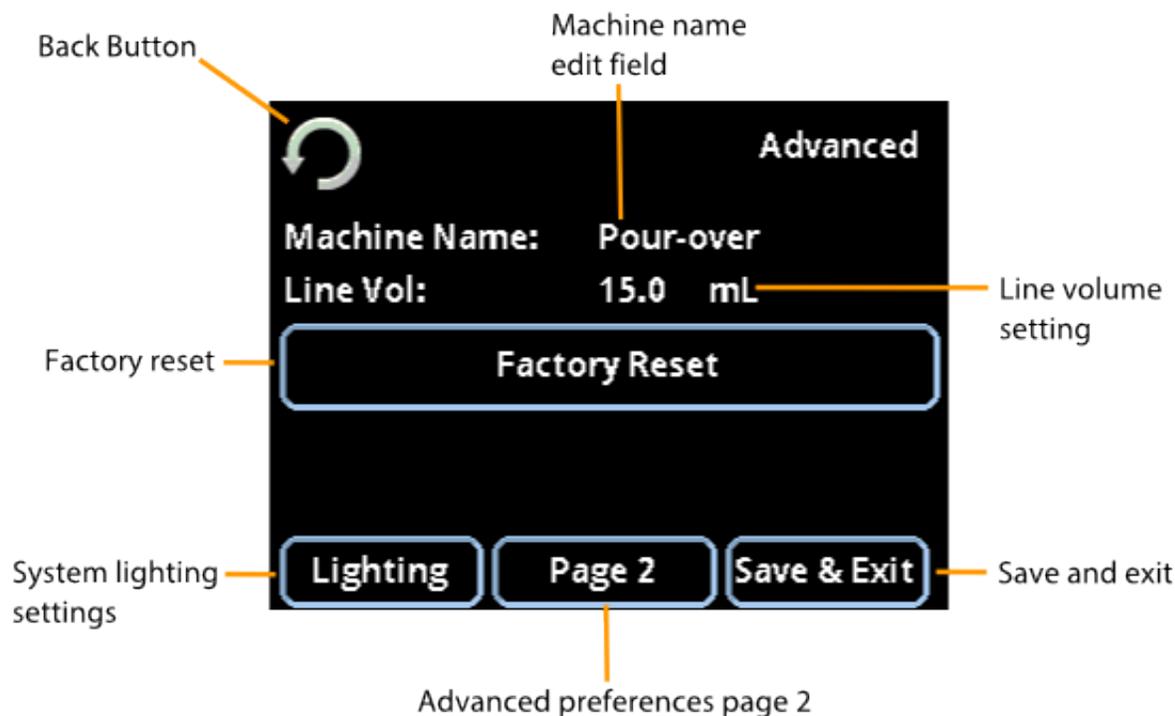
Temperature units: This button sets the system’s temperature units, in: Celsius (C), Fahrenheit (F) or Kelvin (K)

Volume units: This button sets the system’s volume units to: Milliliters (mL) or Fluid Ounces (oz.)

Advanced: This button navigates to the advanced preference settings page.

Advanced preferences screen:

home -> main settings -> preferences -> advanced



Machine name: This is a descriptive name for the module, touch the name to highlight the field, use the encoder wheel and push-button to rename the machine if desired.

Factory reset: This will return *all of the system settings* to their original factory values. **ATTENTION!** You will lose all stored pressure profiles and other settings. A confirmation screen is presented to confirm the operation of Factory Reset.

Line volume: This value is used to accommodate for water in the line between the pour-over module and the pour-over tap.

The line volume setting may also be used to correct discrepancies between volume of water yielded during a pour-over pour and volume displayed on the module.

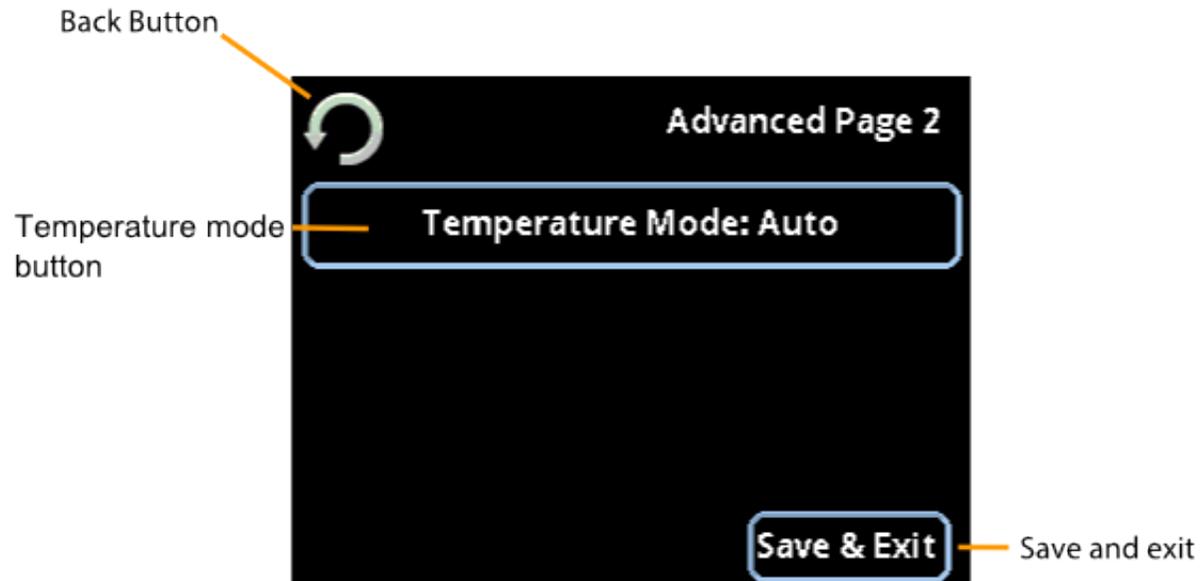
Lighting: This button navigates to the lighting settings screen.

Advance preferences page 2: This button will navigate to page 2 of the advanced preferences screen.

Save & Exit: You guessed it! This button saves the settings changes and exits the current screen.

Advanced preferences screen:

home -> main settings -> preferences -> advanced



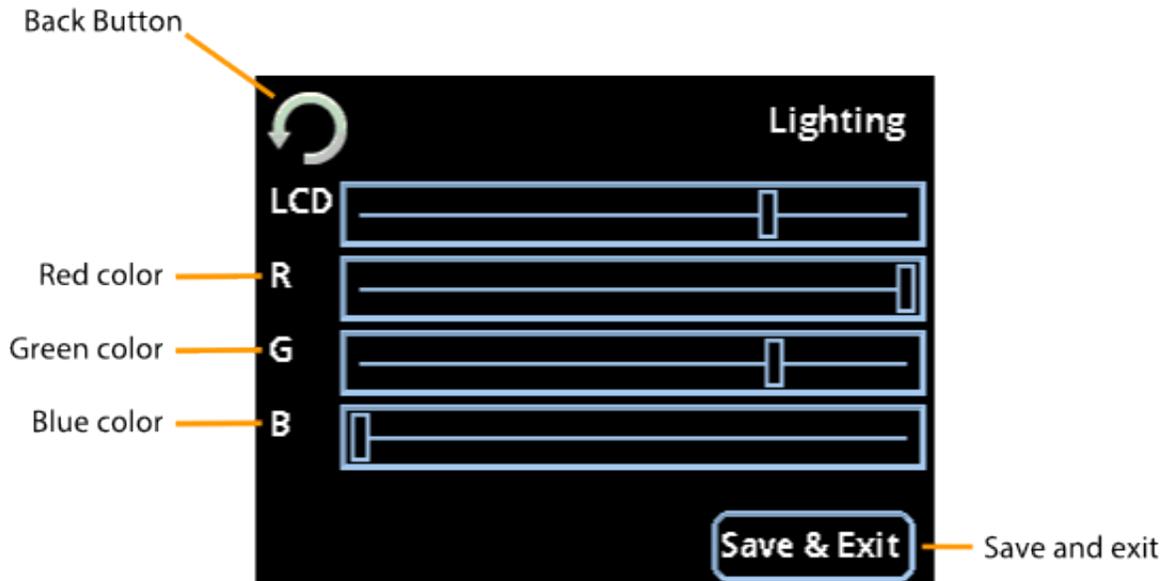
Temperature mode button: This button will toggle between Automatic and Manual temperature modes.

Automatic temperature mode is calibrated at the factory to deliver the best temperature performance using a single temperature setting.

Manual temperature mode gives you independent control over the set points of each temperature zone from the home screen: Inlet boiler and outlet boiler. At the home screen, pressing the Heat Zone button will allow you to cycle through each zone and set its temperature independently.

Lighting screen:

home -> main settings -> preferences -> advanced -> lighting

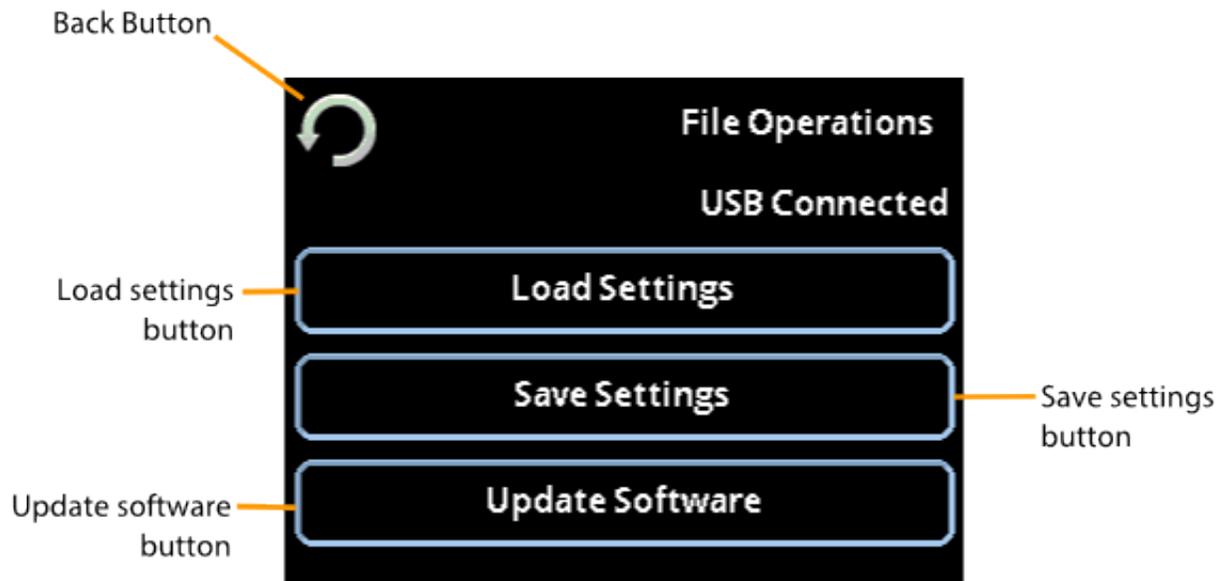


LCD backlight: Use this slider to control the brightness of the touch screen display.

RGB: Using the RGB color sliders you can create any color of the rainbow for the module's internal LED lighting.

File operations screen:

home -> main settings -> file operations



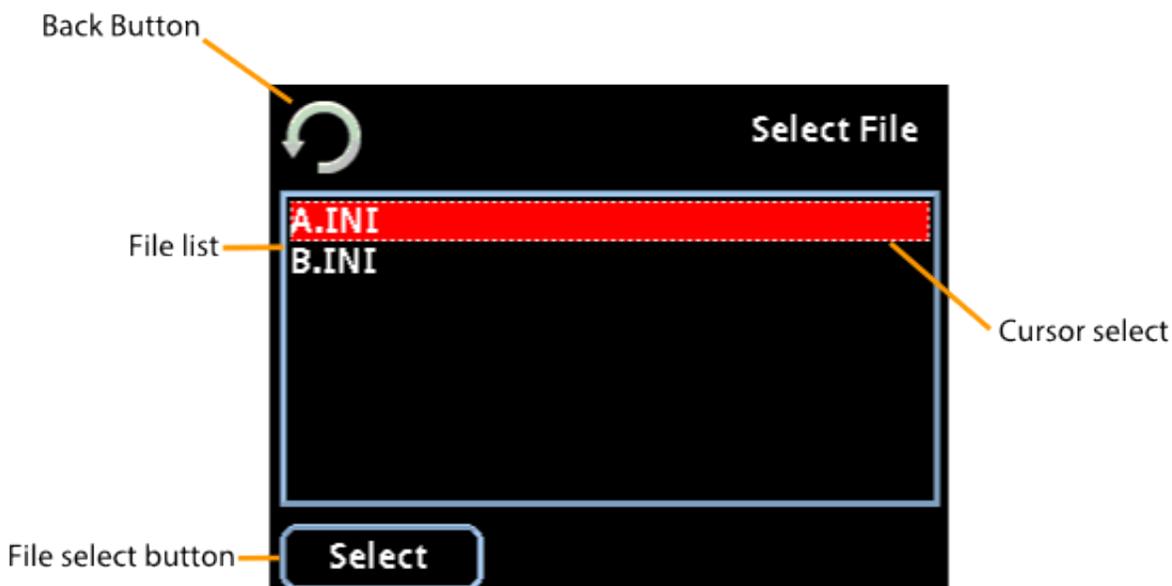
Load settings: This button will navigate to the load settings screen.

Save settings: This button will navigate to the save settings screen.

Update software: This button will navigate to the update software screen.

Load settings screen:

home -> main settings -> file operations -> load settings



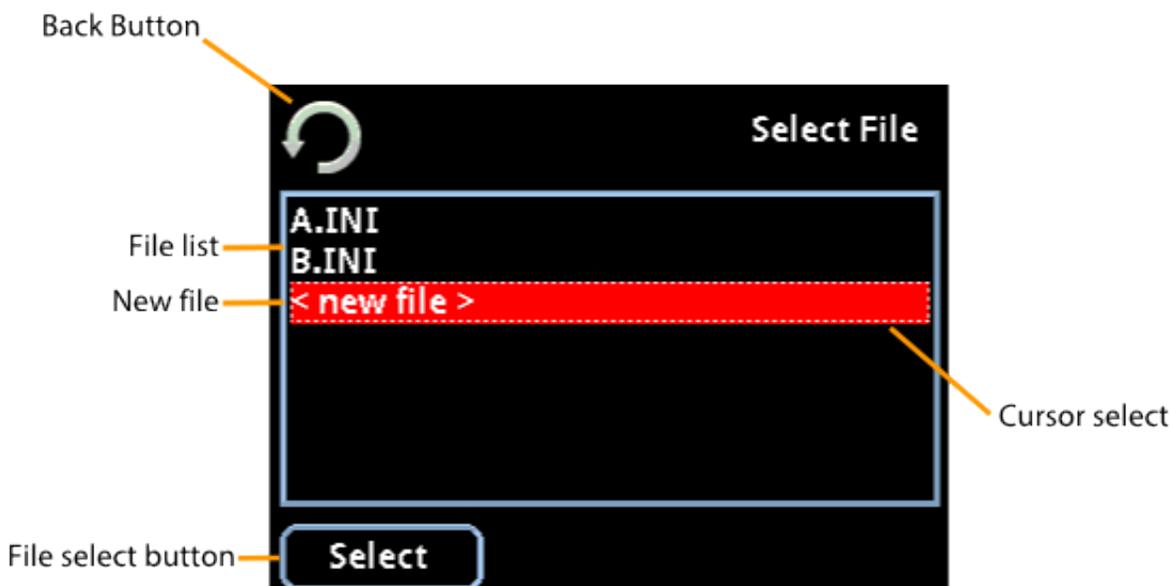
File list: This area displays all of the settings files that are currently saved to the USB drive.

Cursor select: The dotted outline cursor select indicates which file is selected on screen. You may use the rotary encoder or up/down function of the joystick to navigate the file list.

File select button: Pressing select will load the currently selected settings file. This includes profiles and all other user accessible settings and preferences. Note: existing profiles will be overwritten.

Save settings screen:

home -> main settings -> file operations -> save settings



File list: This area displays all of the settings files that are currently saved to the USB drive.

New file: This option allows the creation of a new settings file. To create a new settings file, highlight the < new file > option, and select it by either pressing the center encoder button or the file select button on the touch screen.

Cursor select: The dotted outline cursor select indicates which file is selected on screen. You may use the rotary encoder or up/down function of the joystick to navigate the file list.

File select button: Pressing select will save the current settings to the selected file. This includes profiles and all other user accessible settings and preferences.

New file screen:

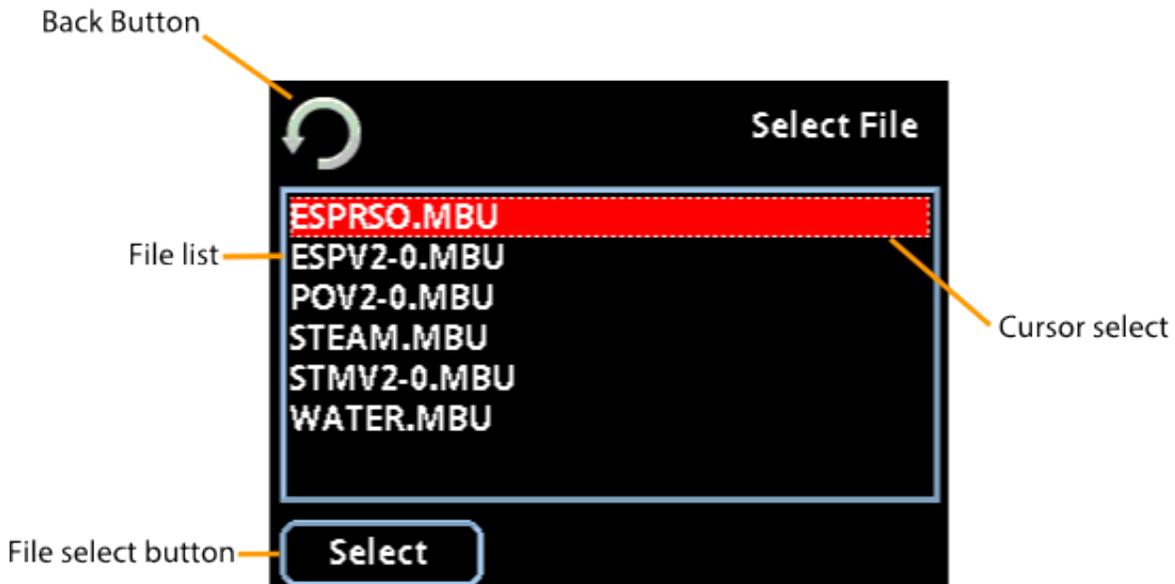
home -> main settings -> file operations -> save settings -> new file



File name: This is a descriptive name for the settings file. Touch the name to highlight the field, use the encoder wheel and push-button to rename the file if desired.

Update software:

home -> main settings -> file operations -> update software



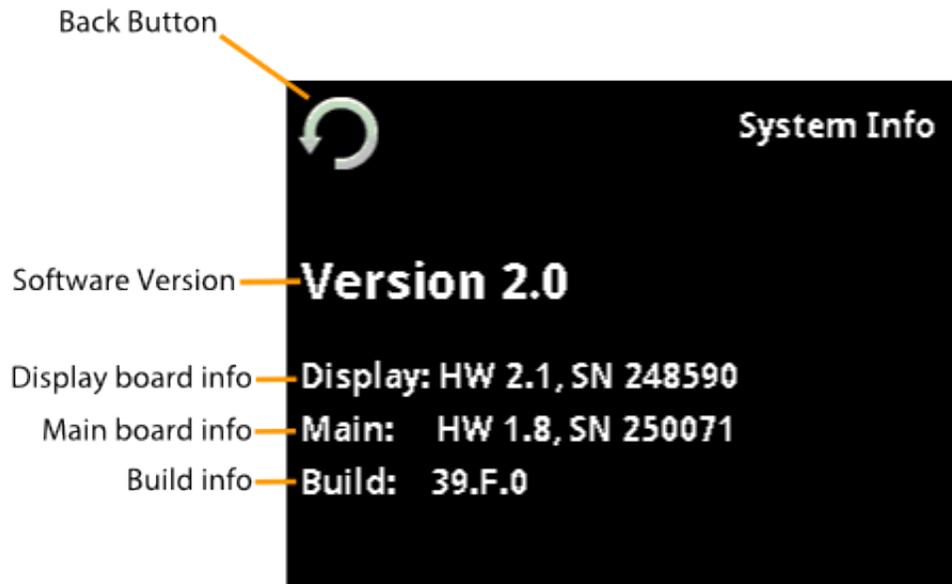
File list: This area displays all of the software update files that are currently saved to the USB drive.

Cursor select: The dotted outline cursor select indicates which file is selected on screen. You may use the rotary encoder or up/down function of the joystick to navigate the file list.

File select button: Pressing select will install the selected software update on the system. The software update process is complete when the machine reboots, displaying the Modbar logo on the module touch screen display.

System info screen:

home -> main settings -> system info



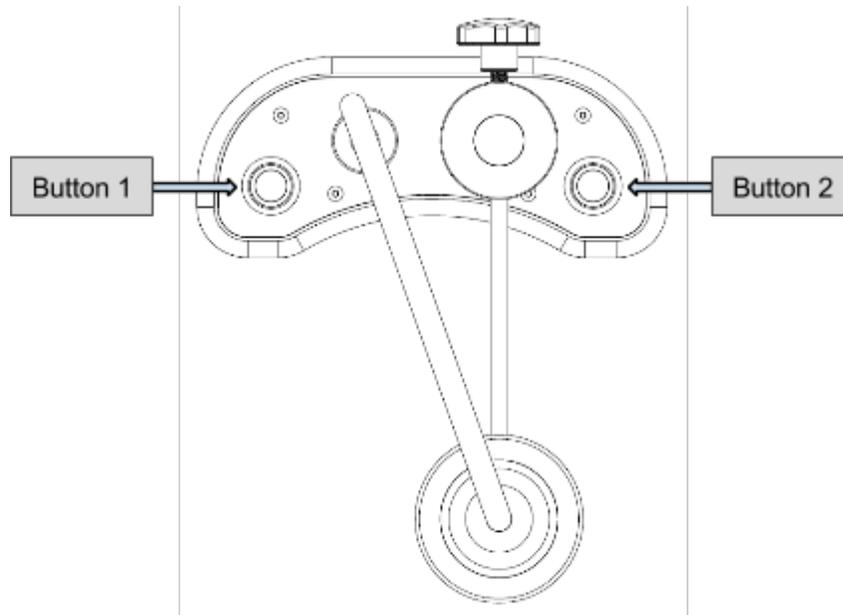
Software Version: This field displays the current software version loaded on the machine.

Display board info: This field displays the hardware version and serial number of the display board.

Main board info: This field displays the hardware version and serial number of the main board.

Build info: This field displays the software build of each of the circuit boards in the system.

Dispensing Operations

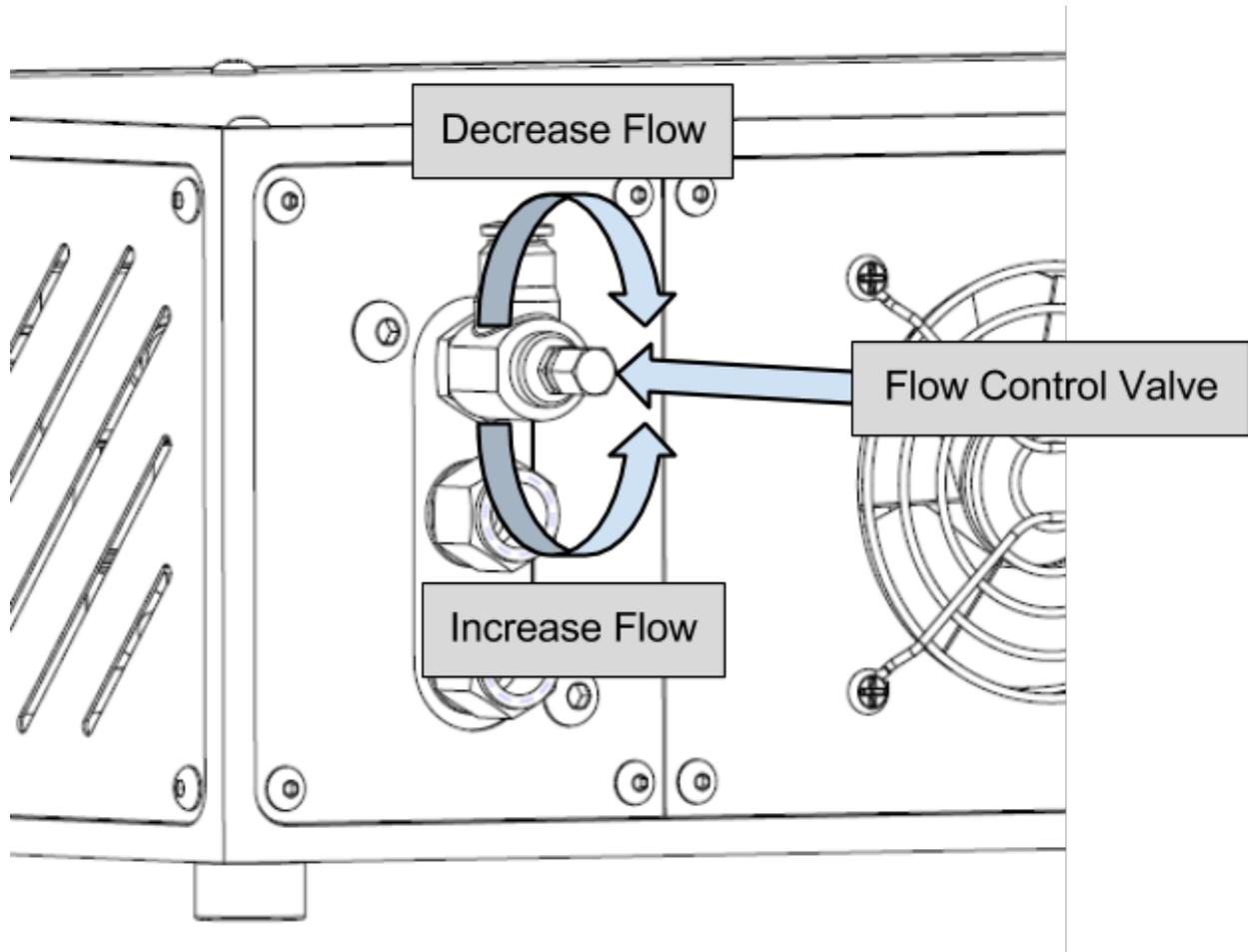


Dispensing

Dispensing can be actuated by pressing either Button 1 or Button 2. The buttons can be set to dispense a pre-recorded program, or to dispense manually. (See *Profile Selection Screen*)

To begin dispensing, press the desired button. Dispensing can be cancelled at any time by pressing the button again.

Flow Control



Flow rate can be adjusted via the flow control valve located on the tap port on the back of the module. To restrict flow, turn the flow control nut on the end of the valve clockwise. To increase flow, turn the flow control nut counter-clockwise.

Note: If machine has been in use, this valve may be hot!

Maintenance

General service/maintenance safety guidelines

- Before performing any maintenance and/or cleaning operations, turn the main power switch to the OFF position and disconnect the machine from the power source by unplugging the cord or by switching off the relative circuit breaker. For any cleaning operations, follow exclusively the instructions contained in the manual.
- Always use care when performing maintenance, as the equipment may be hot. We recommend allowing the equipment to fully cool before performing any maintenance procedures.

Regular cleaning procedures

Regular cleaning procedures are important to both the longevity of the equipment and to the quality of the beverages which it produces. Following these procedures will help ensure long life and great tasting beverages.

Cleaning the spray head

- Put 2 or 3 teaspoons of detergent powder for coffee machines in about 1/2 a liter of water inside a heat-resistant container and boil.
- Dip spray head(s) in the boiled solution and leave them fully submerged for about 30 minutes.
- Rinse thoroughly with clean water and run hot water through the dispenser several times with the tips in place.

Cleaning the exterior of the equipment

The exterior of the taps and modules should be periodically cleaned. We recommend wiping the equipment with a damp microfiber cloth. Do not use cleaning solutions containing strong acids or caustic solutions. Take care not to use excessive liquid when cleaning around electronics, so as not to damage them.

Water Filtration/Softener

It is very important that the media for your water filtration is replaced on a regular basis, in accordance with the manufacturer's recommendations. Please refer to the documentation for your filtration system for proper operating and cleaning instructions.

Preventative maintenance

It is important that periodic maintenance be performed to keep your equipment in peak operating condition. Maintenance should be carried out by a qualified technician. Depending on usage, schedules may vary, but we recommend the following:

Every 3-4 Months

<ul style="list-style-type: none"> - Check brew temperature - Check water quality - Check all switches for proper operation 	<ul style="list-style-type: none"> - Inspect water dispensing solenoid valve - Inspect plumbing for leaks or clogs
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Every Year

<ul style="list-style-type: none"> - Inspect electrical wiring 	<ul style="list-style-type: none"> - Inspect boiler safety switches - Remove and clean/inspect boiler temperature probes
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Every 3 Years

<ul style="list-style-type: none"> - Check the interior of the boilers, and if necessary rinse out with a proper cleaning product allowed for food and beverage appliances

Water Quality

Water quality is very important to the proper function of your Modbar equipment. Improper water filtration can lead to serious problems with both your equipment and the quality of the coffee produced. At a minimum, the following water standards need to be met.

Value	Units	Minimum	Maximum
T.D.S.	ppm	90	150
Total Hardness	ppm	70	100
Total Iron	ppm	0.0	0.02
Free Chlorine	ppm	0.0	0.05
Total Chlorine	ppm	0.0	0.1
pH		6.5	8
Alkalinity	ppm	40	80
Chloride	ppm	0	30

For more detailed information about water quality, please visit www.modbar.com/support.

Basic diagnostics

Module not heating

Verify that the power switch is turned clockwise to the operating mode position and not counter-clockwise to the standby mode position.

Note on safety reset switches:

The pour-over module features two safety reset thermostat controlled switches, one on each boiler. If a boiler does not heat it may be due to the activation of one of these switches, which is triggered by excess temperature and signifies abnormal operation and possibly failed components. The safety switches mentioned are all internal to the pour-over module and *are not* user re-settable. If you believe a safety switch has been activated, the module or tap may require service by an authorized technician. Please contact Modbar for additional support and information.

Tap not dispensing

Verify that the water supply to the module is turned on. If you are still having trouble dispensing, verify that the flow control valve on the tap connection is not all of the way closed.

Button only dispenses in manual.

Verify that you have a program assigned to the button in question. Check this in the profile screen, and verify that the profile is assigned left or right.