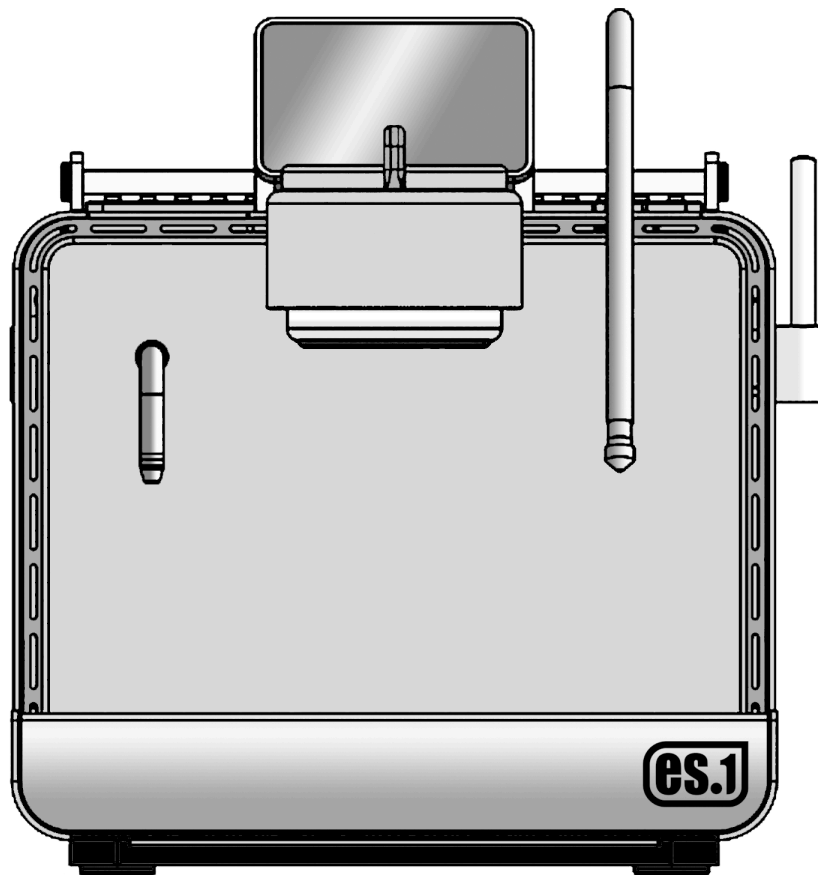


ES.1 User Manual



Contents

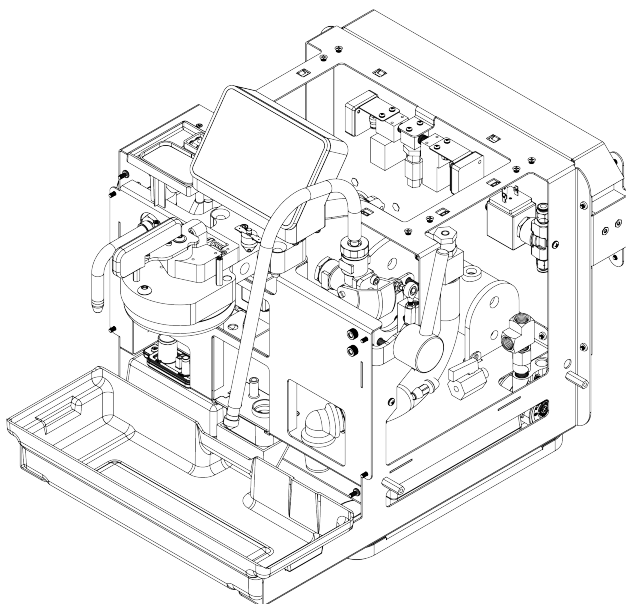
Introduction	3
Synesso Company Information.....	3
In The Box.....	4
Overview and Specifications.....	5
ES.1 Machine Details.....	5
ES.1 Machine Overview.....	6
Installation.....	8
Water Quality.....	9
ES.1 Warranty	10
Safety.....	10
Water Reservoir, Electrical Specifications, and Requirements, Optional Plumbing Kit	13
Getting Started With ES.1	15
Starting Up.....	15
Touch Screen Navigation.....	17
Pull A Manual Shot.....	18
Saving A Manual Shot.....	20
Programs Menu	23
Running A Program.....	24
Editing A Program.....	25
Create A Program.....	27
Software and Firmware Updates	30
Maintenance and Cleaning	31
Safe Mode.....	32
Auto Backflush.....	32
Preparing the ES.1 For Storage or Shipping.....	34
Menus, Settings, and Flowcharts	38

Introduction

Congratulations on the purchase of your new Synesso ES.1 Espresso machine. We hope you love the ES.1 as much as we do. Before using the ES.1, please read this User Manual carefully. This manual includes essential information regarding the safety, use, maintenance of the ES.1, and critical warranty information.



The ES.1 is a premium single group espresso machine that delivers unparalleled performance and can run off common commercial and residential power standards. The ES.1 includes an intuitive touch screen - making operation a breeze. Operate the ES.1 in manual mode or used a programmed recipe. Once you fine-tune the brewing process for your favorite beans: save the recipe and recreate that espresso shot every time.



Synesso Company Information

Synesso Contact Information for customer service and technical support.

Synesso, Inc.

851B SW 34th St

Renton, WA 98057

www.synesso.com

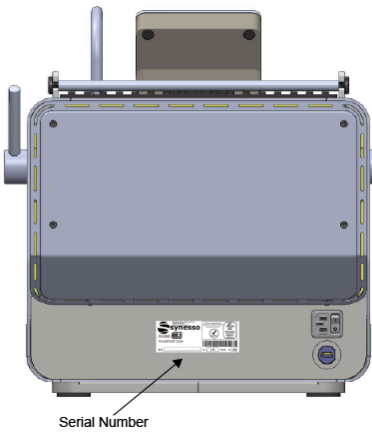
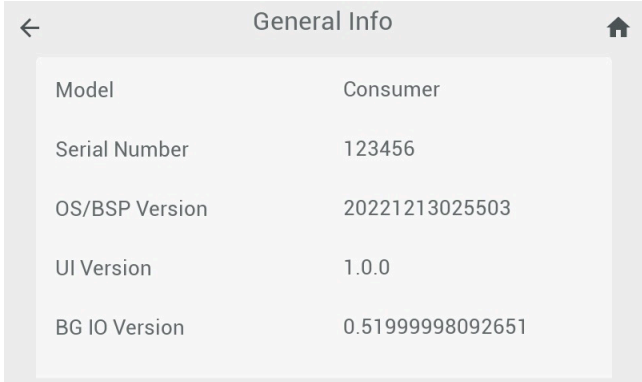
(206) 764 - 0600

For quick reference please write your Serial Number here: _____

Serial Number:

Your ES.1 has a unique serial number; this number can be located in two places:

Table 1. Serial Number Locations

Rear Panel	General Information												
 <p>The image shows the rear panel of the ES.1 espresso machine. A white label with the Synesso logo and a serial number is located at the bottom center. An arrow points from the text 'Serial Number' below to this label.</p>	 <p>The screenshot shows a 'General Info' screen with the following data:</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Model</td> <td>Consumer</td> </tr> <tr> <td>Serial Number</td> <td>123456</td> </tr> <tr> <td>OS/BSP Version</td> <td>20221213025503</td> </tr> <tr> <td>UI Version</td> <td>1.0.0</td> </tr> <tr> <td>BG IO Version</td> <td>0.51999998092651</td> </tr> </tbody> </table>	Field	Value	Model	Consumer	Serial Number	123456	OS/BSP Version	20221213025503	UI Version	1.0.0	BG IO Version	0.51999998092651
Field	Value												
Model	Consumer												
Serial Number	123456												
OS/BSP Version	20221213025503												
UI Version	1.0.0												
BG IO Version	0.51999998092651												

In The Box

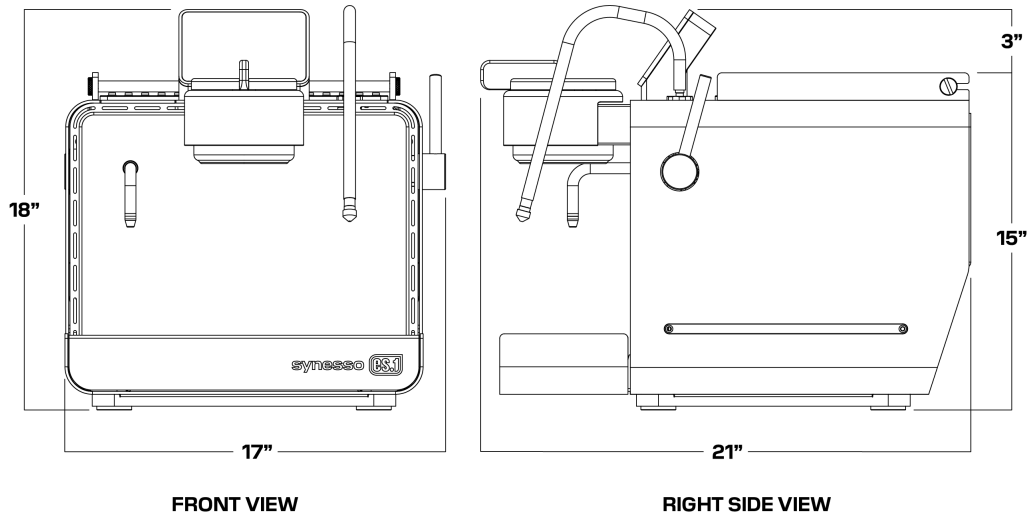
Included in the package with the ES.1, you will find the following:

- Electrical Plugs. You will receive an ES.1 with the appropriate cord and plug for your area. The plugs provided are dependent on location
- ES.1 Espresso Machine (includes water reservoir)
- Accessory Package: Synesso Tamper, Milk Pitcher, Bottomless Portafilter, Double Spout Portafilter, 18gm and 21gm Baskets, Blind Basket, Brew Head Cleaning Tool, Brew Head Cleaning Detergent, Synesso shot glass
- Synesso USB Thumb Drive with Manual Installed

Overview and Specifications

ES.1 Dimensions

Figure 1. Dimensional Drawing



ES.1 Machine Details

The ES.1 is a robust espresso machine that is small enough to fit onto a home kitchen counter. The ES.1 is made from food-safe materials, is available in 4 standard colors, and has 2 different voltage options that comply with local home and commercial use ordinances depending on region. Before plugging in your ES.1, please ensure that your machine voltage complies with local laws and regulations.

Table 2. Details

ES.1 Attributes	Details
Size	22" x 17" x 17.5"
Weight	80 lbs
Water Reservoir Volume	3.0 L
Drip Tray Volume	1.75 L
Low Temperature Tank Volume	0.5 L
Steam Tank Volume	3.25 L

Table 3. General ES.1 Materials Overview

Parts	Materials
Chassis Materials	Stainless Steel
Body Material	Stainless Steel and Aluminum
Water Reservoir Material	Polypropylene
Water Tubing Materials	PFA Teflon and Copper
Boiler Material	304L Stainless Steel
Brew Head Heating Block Material	Lead Free Brass

ES.1 Machine Overview

ES.1 Parts

Figure 2. ES.1 Overview

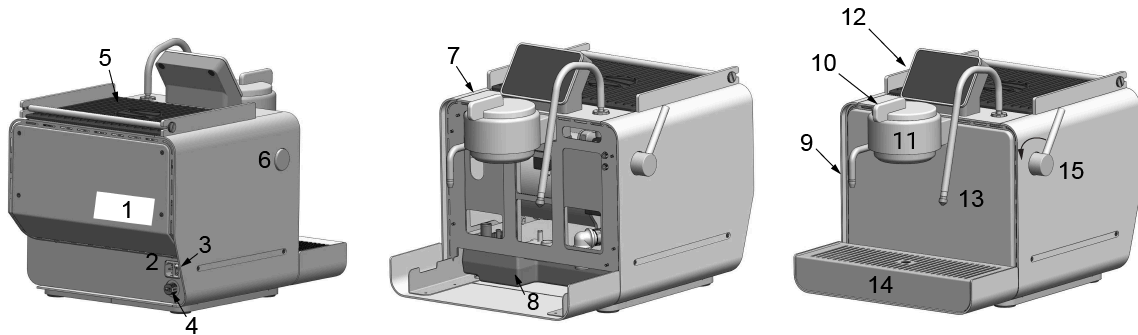
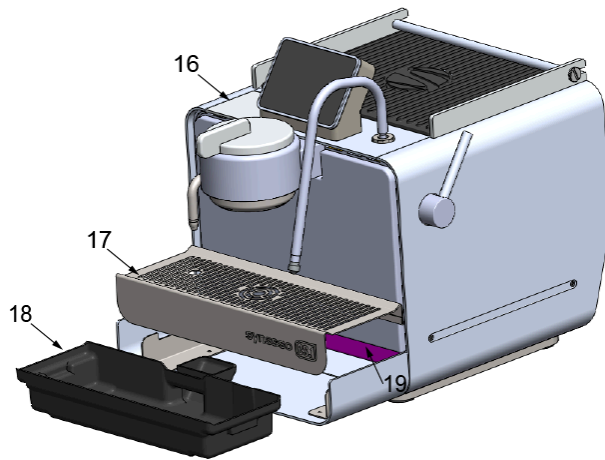


Table 4. ES.1 Part Labels

1. Serial Number	9. Tea Tap (dispenses hot water)
2. Power Cord Receptacle	10. Brew Paddle
3. On/Off Switch	11. Brew/Group Head
4. USB-A Port	12. Touch Screen
5. Cup Mat	13. Steam Wand
6. Tea Tap Button	14. Drain Tray
7. Water Intake Funnel	15. Steam Wand Actuator
8. Water Reservoir	

Figure 3. ES.1 Water Fill and Drip Pan



The drip pan cover quickly lifts out and off the machine, allowing you to pull the drip tray out to empty and clean.

Table 5. Water Fill and Drip Pan Part Labels

16. Water Fill	18. Drip Tray
17. Drip Tray Cover	19. Water Reservoir

Portafilters

The ES.1 includes with 2 portafilters and 3 different baskets:

Table 6. Included Portafilter Parts

Bottomless Portafilter	21 gram Basket
Double Spout Portafilter	Blind Basket - for Auto Backflush cleaning process
18 gram Basket	

Figure 4. Portafilter Parts Overview

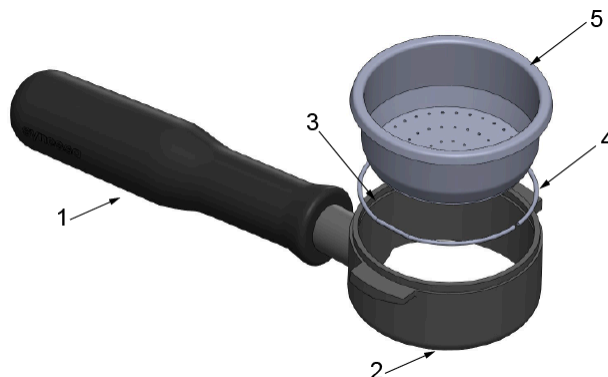


Table 7. Portafilter Parts

1. Handle	4. Spring
2. Head	5. Basket
3. Spring Groove	

Baskets press into the portafilter head and are held in place by the spring. To swap baskets, push the current basket out from below, choose the basket you want to use, and push the basket into the portafilter head, ensuring the spring stays in the groove.

Installation

Installation For The Home User

Preparation:

The ES.1 is 22" x 17" x 17.5 and weighs 80lbs. We recommend preparing space on your kitchen counter for the machine with these things in mind:

1. You will need enough space on your counter for the machine and room for the power cord coming out of the rear of the ES.1.
2. The ES.1 needs to be electrically grounded; make sure that you have appropriate outlets available for the ES.1.
3. The ES.1 can operate with either a water reservoir or be plumbed into your water system.
4. The Drain Tray holds 1.75 L and needs to be periodically emptied. Optionally, The ES.1 drain can be plumbed into your sewer drain.



Important: If you want to plumb the ES.1 then you will need to work with a Service Technician to ensure installation complies with local plumbing ordinances. Please contact our customer service team and we can help find a Service Technician in your area.

Water Quality

The ES.1 requires filtered water to be used in the machine. The use of unfiltered water will limit the performance and longevity of the ES.1. Unfiltered water can result in minerals building up inside the ES.1, resulting in clogs, and will damage the machine. See our recommended water quality standards listed in the next section. If your water does not conform to our recommended standards you can do the following:

- Install a water filtration system
- Use bottled water
- Use distilled water with the addition of mineral packets made specifically for espresso machines

If you plan on plumbing your ES.1 we strongly recommend that you install a water filtration system and to not rely on tap water.

Water Quality

Water Quality Standards for the ES.1. Using water that complies with the water quality standards listed below will help increase the longevity of your ES.1 as well as help ensure your coffee tastes great. Failure to adhere to the listed water quality standards will void the warranty of this machine.

Water Standards:

Total Dissolved Solids (TDS)	30 - 200 ppm (parts per million)
Total Hardness - in ppm	50 - 85 ppm
Total Hardness - in grains	3 - 5 grains (divide ppm by 17.1 to get grains)
pH	6.5 pH - 8 pH
Chloride	5 - 15 ppm (any Chlorides can be corrosive and harmful)
Total Alkalinity	Less than 100 ppm
Chlorine	0 ppm
Iron	0 ppm

ES.1 Warranty

13 Month Warranty

Warranty Information:

Synesso and/or your distributor warrants to the original purchaser that Synesso espresso machines are free from defects in materials and workmanship under normal use and service for the period, commencing upon the date of shipping and continuing for 13 months from the original date of shipment. Synesso will make a good faith effort for prompt correction or other adjustments with respect to any non-wearing part that proves to be defective within the limited warranty period. The limited warranty is conditional upon the purchaser's proper use of the machine. The limited warranty does not cover defects or damage resulting from accidents, misuse, abuse, shipping damage, neglect, unusual physical, electrical, or electromechanical stress, unauthorized customer modifications, or improper water filtration, or gross negligence.

In order to get the performance and longevity out of your ES.1, we strongly recommend the following:

1. Have a qualified Synesso Technician must complete annual Preventative Maintenance.
2. Water used in the ES.1 must meet our recommended water quality standards. Our water quality standards are listed below.

Liability

Many jurisdictions have codes and regulations governing the sales, construction, installation, and/or use of products for certain purposes, which may vary from area to area. While Synesso attempts to ensure that its products comply with such codes, it cannot guarantee compliance and cannot be responsible for how the product is used or installed. Synesso's liability is limited to the purchase price of the product, and shall not be held liable for damages that extend beyond the product itself. Synesso's liability of consequential, incidental damages, indirect or direct damages for personal injury, inability to properly use this product, loss of business profits, or interruption to business is expressly disclaimed.

Safety

The ES.1 is a high powered electric appliance, please follow these precautions to ensure your safety.

- Disconnect the ES.1 from power before cleaning or servicing.
- Read the entire manual before operating this machine.
- Steam and condensation from the Steam Wand discharge will be scalding and may cause burns.
- The Steam Wand tip and base heat up during use: do not touch these surfaces.
- Cover the Steam Wand tip or submerge the tip the tip beneath liquid in a pitcher to safely divert steam before opening the steam valve.
- Never remove the Steam Wand from the liquid that is being heated when the valve is open.
- Never remove the portafilter from the brew head during the active brewing process.
- Keep water and moisture away from any electrical device or live power.
- Steam Tank water is heated to 250°F (121°C) or more; use caution near the steam tank.

- The brew group delivers water as hot as 210°F (99°C). Avoid exposure to this water.
- Household type

Safety Warnings

- !** **Warning:** The manufacturer declines any responsibility for any event leading to liability suits whenever electrical grounding has not been completed according to current local, national, and international regulations and electrical codes or if other electrical parts have been improperly connected.

Table 8. Electric and Usage Safety Warnings

- !** **Warning: When Using electrical appliances, basic safety precautions should always be followed, including the following:**

Read all instructions.

Do not touch hot surfaces. Use handles or knobs.

To protect against fire, electric shock, and injury to persons or property, do not immerse cord, plugs, or ES.1 espresso machine in water or other liquid.

Close supervision is necessary when any appliance is used by or near children.

Unplug from the outlet when not in use and before cleaning. Allow to cool before putting on or taking off parts, and before cleaning the appliance.

Do not operate the ES.1 with a damaged cord or plug or after the appliance malfunctions, or has been damaged in any manner. Return the appliance to the nearest authorized service facility for examination, repair, or adjustment.

The use of accessory attachments not recommended by the appliance manufacturer may result in fire, electric shock, or injury to persons.

Do not use outdoors.

Do not let cord hang over edge of table or counter, or touch hot surfaces.

Do not place on or near a hot gas or electric burner, or in a heated oven.

Always attach plug to appliance first, then plug cord into the wall outlet. To disconnect, turn any control to "off," then remove plug from the wall outlet.

Do not use this appliance for other than intended use.

Hazardous Voltage. Disconnect the machine from the A/C power supply before servicing.

This machine must be installed to comply with applicable local, national, and international plumbing codes.

The machine must be installed so a qualified service technician can easily access it for maintenance.

Table 8. Electric and Usage Safety Warnings (continued)



Warning: When Using electrical appliances, basic safety precautions should always be followed, including the following:

Water emitting from the Tea Tap and Brew Head can be as hot as 210°F / 99°C.

Save these instructions.

Water Reservoir, Electrical Specifications, and Requirements, Optional Plumbing Kit

It is essential to the operation of the ES.1 to meet local plumbing and electrical requirements.

Water Reservoir

Each ES.1 is shipped from our factory pre-programmed to be used with the included 3L Water Reservoir located in the bottom of the machine.

- All water used in the reservoir should meet the specified water quality standards.

Electrical Requirements

The ES.1 was designed to optimize the espresso experience. The ES1 is available in 100-120V and 200-240V setups. An electrical socket and matching plug, rated at the proper voltage and amperage, are required within three feet of the machine. Incorrect voltage can cause malfunction or damage to the ES.1. Plug or means of isolation must be easily accessible. ES.1 includes an appropriate cord and plug depending on region.

Table 9. Electrical Specifications


ES1 Model	Voltage	Frequency	Current (Amps)	Watts (Max)	Current Phases	Power Cord
120 V	100-120 VAC	50-60 Hz	14.8 A	1800 W	Single	US 120 V Plug
240 V	200-240 VAC	50-60 Hz	9.9 A	2400 W	Single	Plug Depending on Region

Optional Plumbing Kit

Plumbing Requirements

The ES.1 is shipped standard to be used with the included internal water reservoir located at the bottom of the machine.

There is an optional plumbing kit available upon request. This kit is intended to be installed by a service technician. If you want to plumb your ES.1 please contact our customer service team for assistance. We can help find a service technician in your area.

-  **Important:** When installing the ES.1 with the optional plumbing kit to connect to the ES.1 to your water mains instead of using the internal reservoir, all national and local ordinances should be followed, with particular attention to limiting back siphoning of water in the appliance back into the water supply. Use only ASSE 1022 certified or equivalent devices, such as the Watts Type SD-2 or Zurn Wilkin Type 740 backflow preventers. Installation should be performed by a Service Technician. If you are interested in plumbing your ES.1 please contact our customer service team so we can help you find a Service Technician in your area.

The ES.1 requires a water supply capable of delivering water at 30 gals (120 L) per hour.



Note:



Synesso sells a “Euro-hose” adaptor hose and fitting, which converts from a 3/8” tube fitting to a pipe fitting, suitable for most non-US plumbing.

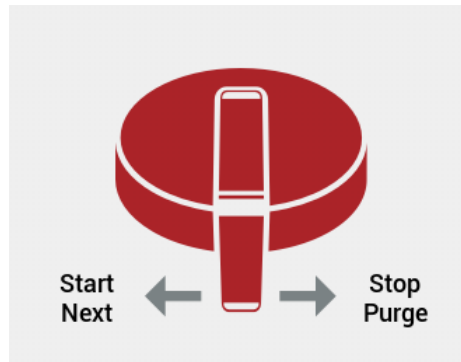
Getting Started With ES.1

The ES.1 is quick and easy to set up.

Plug in and fill up the water reservoir (or plumb the machine into a water supply), turn the ES.1 on, and follow the touch screen prompts. Soon you will be pulling espresso shots like a pro.

The brew paddle on the brew head is the primary mechanism you will use to operate the ES.1. Pressing the paddle to the left will start the brewing process. Each press of the paddle to the left will advance the ES.1 through the brewing process: Pre-Infusion, Infusion, and Ramp Down. Pressing the paddle to the right will stop the brew process or purge the brew head.

Figure 5. Brew Paddle



Sensors regulate the internal temperatures and pressures of both the Low-Temperature Tank and Steam Tank of the ES.1.

The touch screen provides detailed information about the brewing process, including summary reports of each shot pulled, charts depicting the recorded changes in pressure and temperature that result as the brewing process progresses, and gauges that will help guide you through the brewing process itself. The touch screen allows for the fine-tuning and adjustment of the parameters that drive the brewing process.


Starting Up


Follow the steps listed below to power and set up your ES.1 for use.

Follow these steps every time you start up the ES.1 after it has been stored or unused with the tanks drained of water. The process will take about 30 minutes, including the time needed for temperatures and pressures to stabilize within the ES.1

To complete Start Up you will need the following items on hand:

- The power cord that shipped with the ES.1
- Grounded Outlet
- 1.5 - 2 gal or 5.5-7.5 L of water

1.  Locate the plug in the packaging. It should be nestled in the drain tray of the ES.1. Connect the plug to the back of the ES.1 and plug the ES.1 into your outlet.

 **Warning:** The ES.1 needs to have a grounded connection



2.  Use filtered water to fill the water reservoir. The fill inlet is located on the top panel of the ES.1 to the left of the touch screen.
3.  Press the ON button located near the plug on the back panel. The ES.1 will begin to fill the Steam and Low-Temperature tanks.
4. The touch screen will turn on. You will see the Synesso logo pop up, followed by a screen with the ES.1 logo about 20 seconds later.
5. When the ES.1 is turned on for the first time, the on boarding sequence is activated. Follow the screen prompts to set up your ES.1

Table 10. ES.1 Onboarding

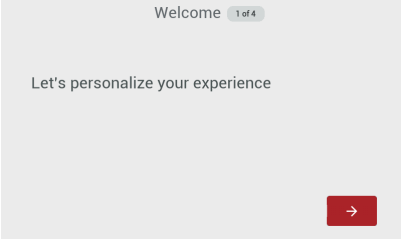
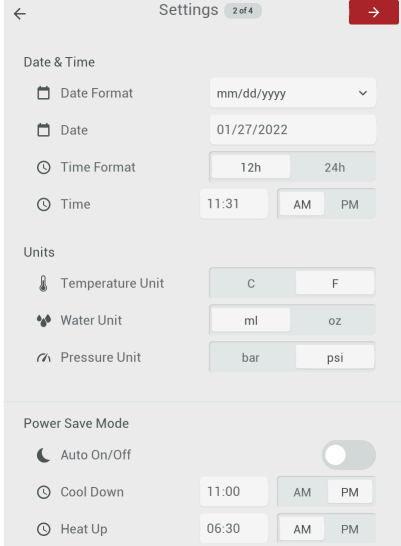

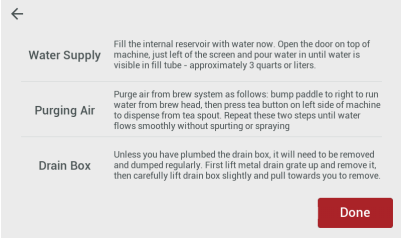
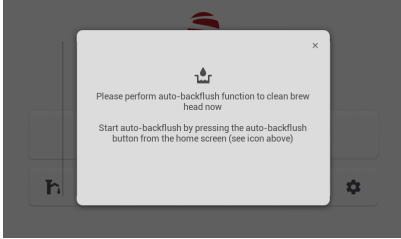
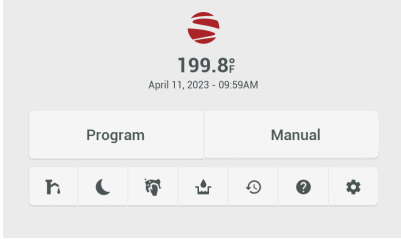
Welcome	Settings	Owners Hub
		

Table 11. On Boarding Continued

Start Up Info	Auto Backflush	Home Screen
		

6. After the ES.1 tanks have filled and the pump has stopped running, refill the water reservoir.
7. Purge the ES.1 of any air bubbles in the internal tanks and tubing.
 - a. Press the Tea Tap Button and run for 15s, or until all of the air sputtering noises stop.
 - b. Purge the Brew Head by pressing the Brew Paddle to the right. Do this 4-6 times.

8. While you are removing air from the system, the ES.1 will continue to heat the two internal boilers.
9. If needed: Top off the water reservoir one final time.
10. The ES.1 will be ready to brew when the internal temperature has stabilized around 200°F or 93°C. This process will take about 30 minutes.

While the ES.1 is filling, heating and pressurizing the Touchscreen will walk you through the initial on-boarding process. This process will allow you to set the following items:

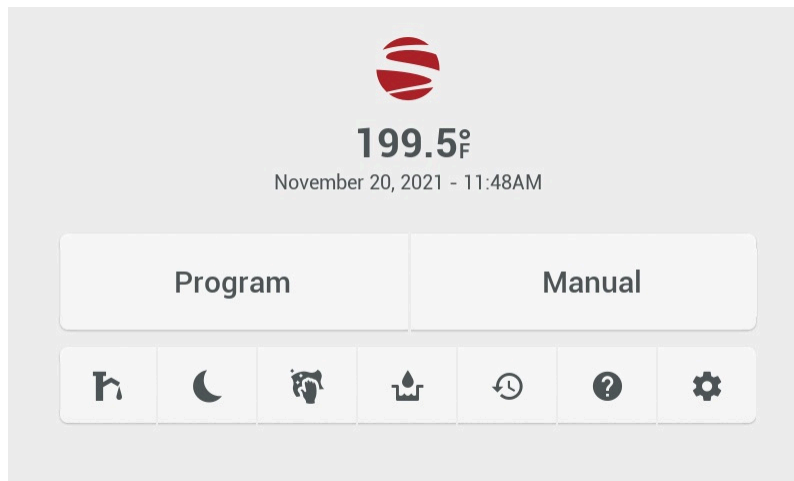
1. Language
2. Measurement Units for Temperature, Volume, and Pressure
3. Date format and Date
4. Time
5. Power Save Mode Settings
6. You will be prompted to run the Automatic Backflush Process. To do so, tap on the Automatic Back Flush Button and let the machine run through the backflush cycle. This ensures the ES.1 is clean before use.
7. Fill or top off the water reservoir to ensure there is enough water for operation.

The ES.1 is now ready for operation.

Touch Screen Navigation

Navigating and Operating the ES1 via the Touch Screen and Icons

Start Screen Overview



The Home Screen is the main navigational start point for the ES1. The screen lists the set brewing temperature of the ES1, the date and time, and has two menus:








1. Type of Brew Process: Program or Manual
2. List of buttons with icons that will open up important settings and functions of the ES1.

The Program button opens up a menu of saved espresso program recipes. Programs can be created and/or edited in Programs, or they can be created by saving a Manual Shot. A Program will automatically pull a shot

based off saved parameters including time, temperature, and pressure. Once you select a program, hit the paddle to the left to start the program. The ES.1 will automatically advance through the extraction process.

The Manual button opens up the process to guide you through pulling an espresso short where you will advance through each extraction phase by tapping the paddle to the left .

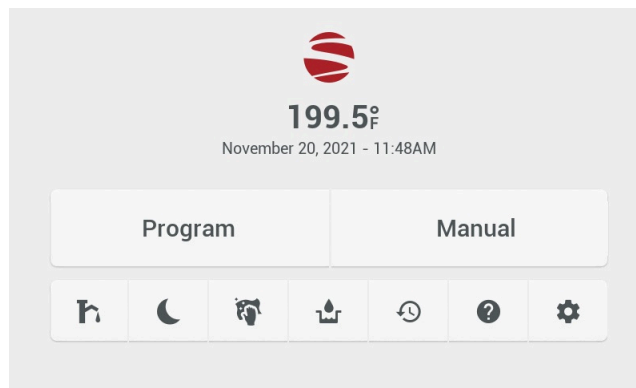
Table 12. Home Screen Icons meaning and functions

Icon	Meaning	Functions
	Tea Tap	Opens the Tea Tap Settings Menu
	Power Save	Turns on power saving mode.
	Screen Cleaning	Locks the touch screen so the screen can be wiped down and cleaned.
	Back flush	Guides the user through the Auto-Back Flush system to clean the Brew Head internals.
	History	Opens the History screen to show a list of recent shots. A second tab shows error/warning history.
	Help	Opens up a screen with a QR code that leads to the Synesso website and knowledge base.
	Settings	Opens up the Settings menu.

Pull A Manual Shot

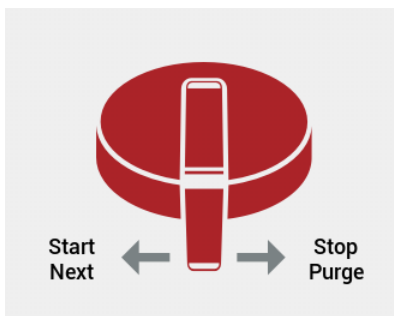
Operating the ES.1 in Manual Mode.

Figure 6. Home Screen

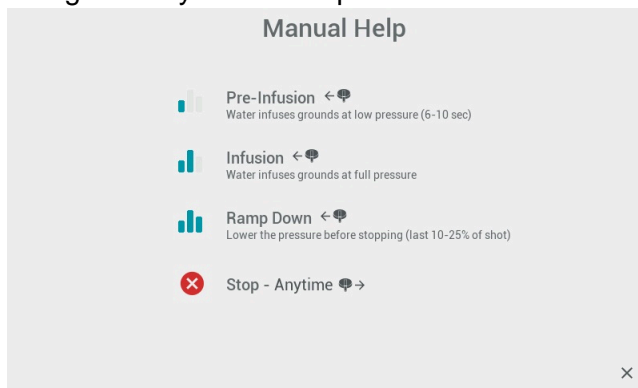


From the start screen, the ES.1 can be operated as a fully manual espresso machine, or run a saved program. To pull a manual shot follow these instructions.

Figure 7. Brew Paddle



1. Press the paddle to the left to start the brewing process. The duration gauge will run the entire time continuously.
2. Press the paddle to the left advance through each brew process step: Pre-Infusion, Infusion, Ramp Down. Press the paddle to the right at any time to stop the shot.



Note: Below are some general guidelines for the duration of each step in the brew process. The duration gauge on the left side of the screen will not stop or restart when you advance to the next stage in the brew process.

3. Watch the touchscreen gauges as you progress through the brew process to keep track of duration, pressure and temperature.

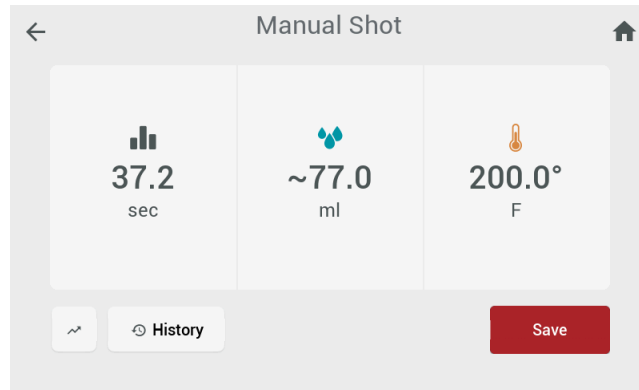
Table 13. Brew Process Screens

Step 1: Pre-Infusion (typically 3-5s)	Step 2: Infusion (typically 15-25s)	Step 3: Ramp Down (typically 1-3s)



Note: The approximate times listed above are guidelines. Any of the suggested times might be too short or long depending on your preferences, type of coffee beans, and bean grind.

- When you have completed the brew process, and the ES.1 has ramped down, a Shot Summary Readout will appear on the touch screen.



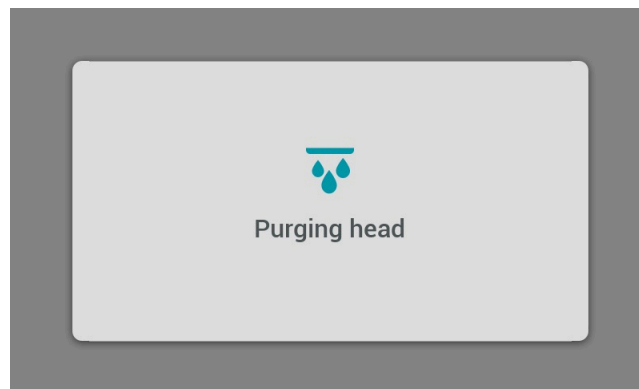
- From the Shot Summary Screen, you can save the shot as a preset, view a detailed graph readout of the shot by pressing the Shot Graph button located to the left of the History button, view Shot History, or tap the back button to return to the Start Screen.

Table 14.

Shot Graph - Pressure and Flow v. Temp	Shot History

- When the brewing process is complete, remove the portafilter and dump the grounds. Then purge the brew head. While the brew head is purging use the purge water to rinse off the portafilter.

Figure 8. Purging the Brew Head

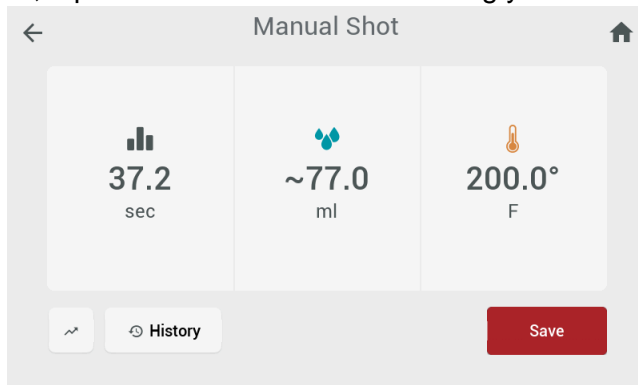


If you are satisfied with your espresso, you can follow the steps in the next section to save the shot. After you save the shot it will be a saved Program you can access again via the Program button on the Start Screen.

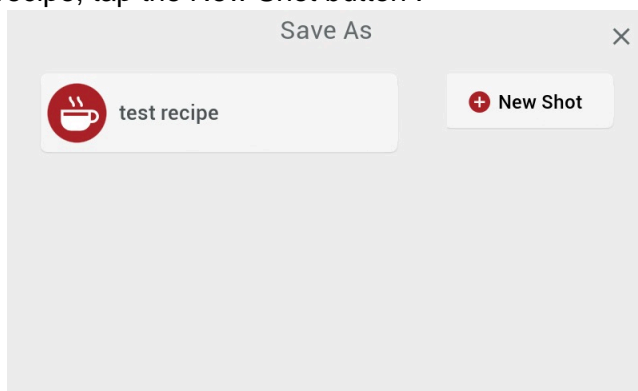
Saving A Manual Shot

Follow these steps to save successful espresso shots to the Programs Menu.

1. Pull a manual espresso shot.
2. On the Shot Summary screen, tap the Save button. This will bring you to the Save As screen.



3. On the Save As screen, you can save or update an existing shot or save it as a new shot. Unless you want to update an existing recipe, tap the New Shot button .



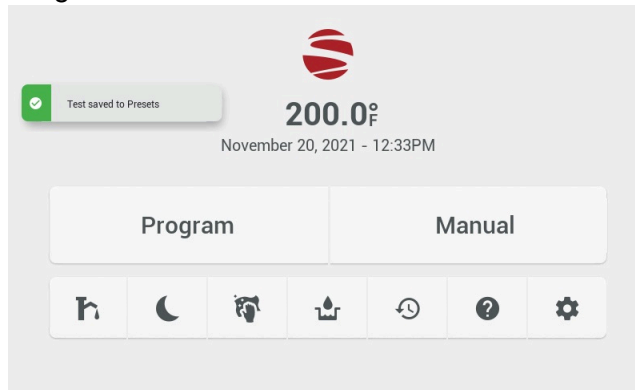
4. You will be prompted through a 3-step process to save the shot.

Table 15. Save A Shot To A Program

Name Program	Select Image/Icon	Add Notes
<p>The screenshot shows the 'Name Program' screen. It has a title bar with 'Name 1 of 3' and a close 'X' button. Below the title bar is a text input field containing the word 'Test'. Below the input field is a standard QWERTY keyboard with a red arrow button on the right.</p>	<p>The screenshot shows the 'Select Image' screen. It has a title bar with 'Select Image 2 of 3' and a close 'X' button. Below the title bar are two tabs: 'Icons' and 'USB'. Below the tabs are four circular icons: a coffee cup, a coffee cup with steam, a coffee cup with a spoon, and a coffee cup with a lid.</p>	<p>The screenshot shows the 'Shot Settings' screen. It has a title bar with 'Shot Settings 3 of 3' and a close 'X' button. Below the title bar is a text input field containing the text 'Test notes'. Below the input field is a standard QWERTY keyboard with a red arrow button on the right.</p>

5. Name Program. Type a name and tap the arrow/enter button to proceed to the next screen.
6. Select an icon for the program, and then tap the arrow button.
7. The last step is adding notes. Type in any relevant notes like bean roaster, variety, and grind setting, or anything else to help recreate the shot.

8. Press the save button. The confirmation screen should pop up. You now have a saved program you can access anytime via the Program button on the Start Screen.



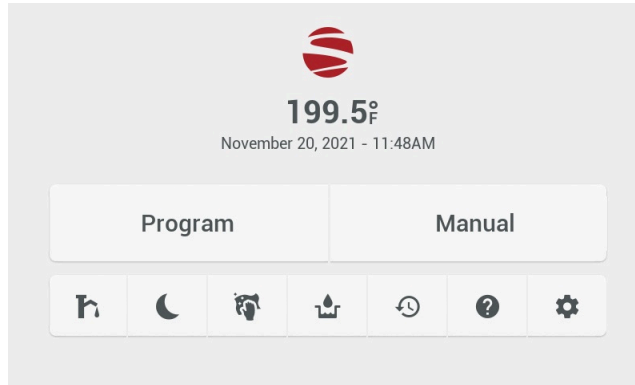
Programs Menu

Navigate, Edit and Organize the Programs Menu

The ES.1 has unlimited memory for Programs. Programs save shot settings such as temperature, pressure, and time so you can consistently pull the same shot using your specified settings.

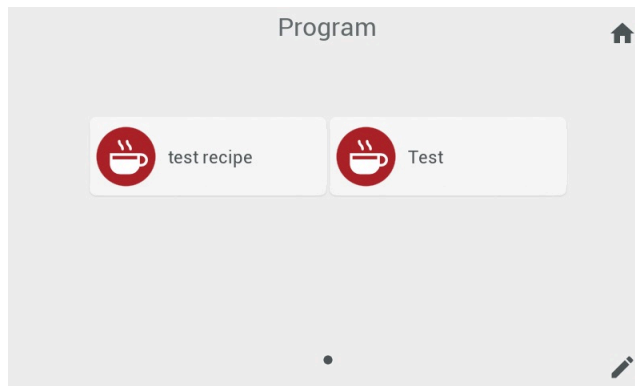
1. Click the Program button on the Home Screen.

Figure 9. Home Screen



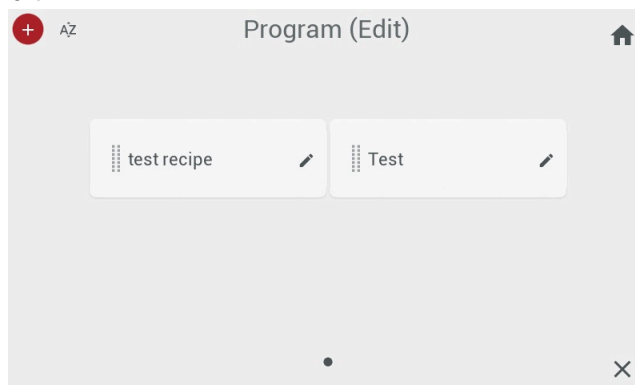
2. If any Programs have been saved, they will be listed on the menu. To edit the menu, click on the pencil icon in the lower right-hand corner.

Figure 10. Program Menu



3. The Programs (Edit) Menu will open. From this menu, you can rearrange saved Programs or edit and update those Programs.

Figure 11. Program Menu Edit



4. To rearrange the Programs, click the AZ icon next to the Plus sign. An option will pop up, allowing you to arrange from newest to oldest or in alphabetical order. You can also press and drag a Program to a different location.
5. If you tap the Plus (+) icon, you can create and save a new program.

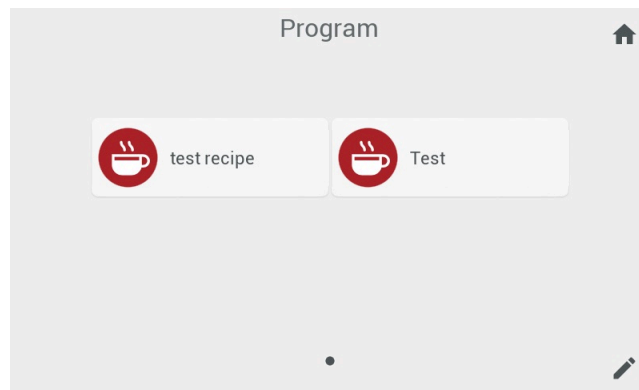
You can pull shots from saved Programs, update existing Programs, or create new Programs from the Programs Menu. See the instructions Pulling Shots From Programs, Creating Programs, and Editing Programs.

Running A Program

Brewing a shot from a program is as easy as tapping on your desired program and tapping the paddle to the left.

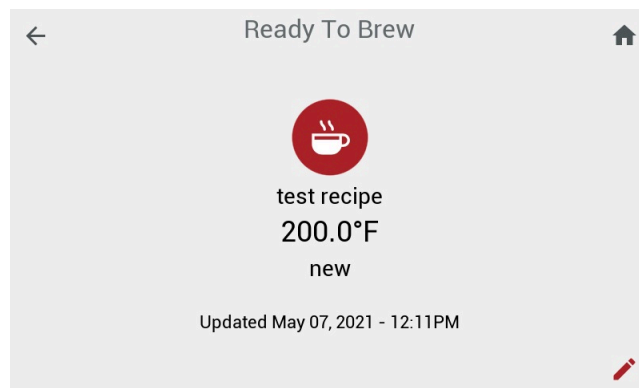
1. Grind and then pack coffee into the portafilter. Load the portafilter into the Brew Head.
2. Tap on the Programs Button to view saved Programs.

Figure 12. Program Menu



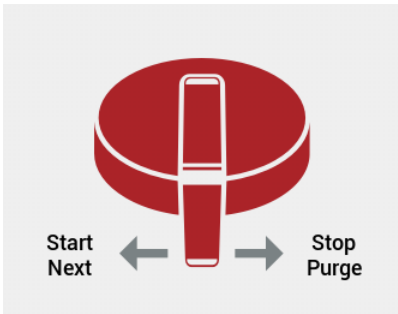
3. Tap on the program you want to run. This will open up the program and display any essential information about the program, including any notes saved.

Figure 13. Saved Program



4. Press the Brew Paddle to the left. This will start the brewing process. The ES.1 will run the complete program and automatically progress through the entire extraction process.

Figure 14. Brew Paddle



5. After the shot has been pulled, the portafilter has been removed, and the grounds tossed, purge the brew head and rinse the portafilter to clean out any residual grounds and oils from the coffee beans.

If you want to adjust any of the parameters of the preset shot, you can edit the shot from the Shot Summary Page.

Editing A Program

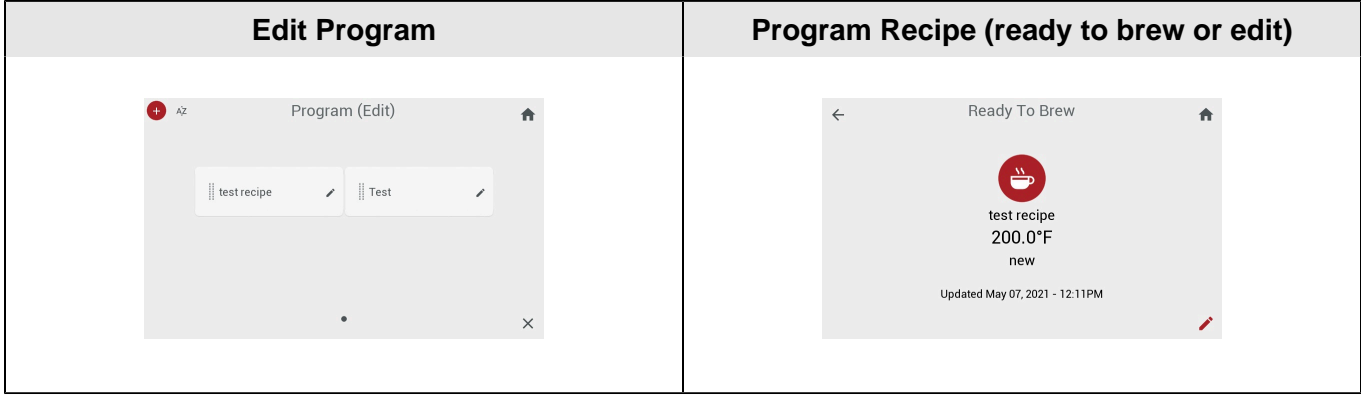
Edit and update a saved program.

1. Tap on the Program button located on the Home Screen.



2. On the Programs Menu, tap on the pencil/edit icon in the screen's lower right-hand corner.

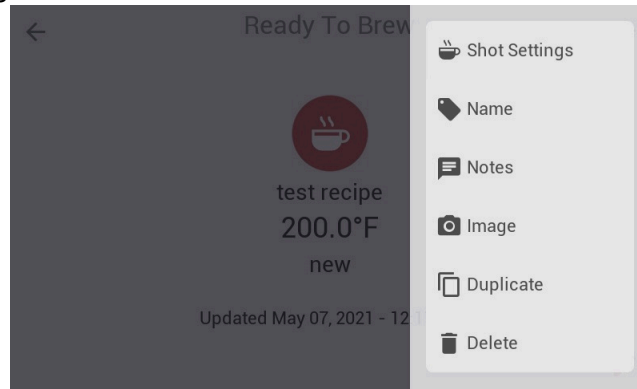
3. The screen will update, and each program will have two rows of dots running along the left-hand edge of the Program Button and a Pencil icon at the lower right-hand corner.



4. In the lower right-hand corner of the saved Program is the pencil/edit icon. Tap on the icon.

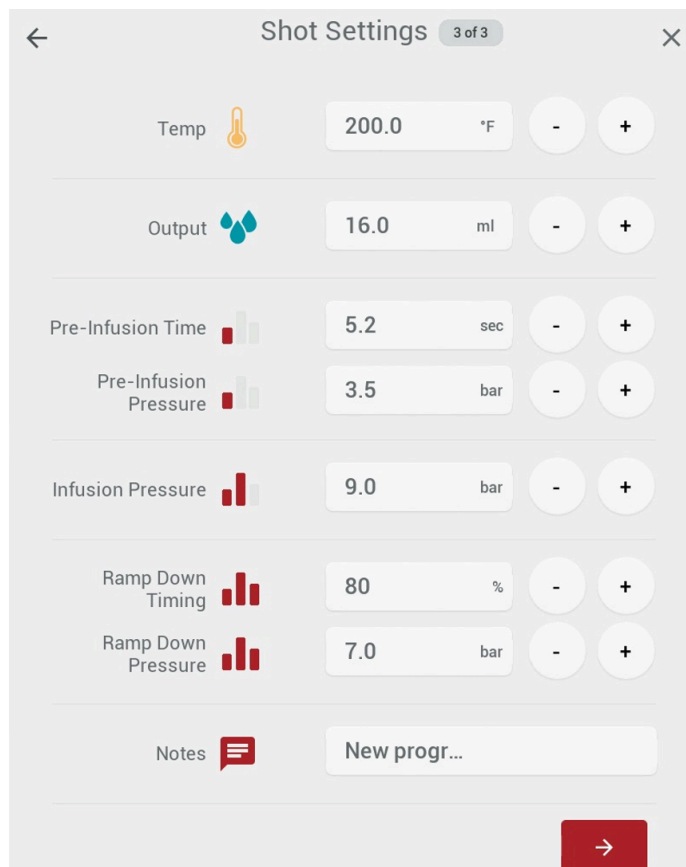
5. A pop-up menu will open with the following options: Shot Settings, Name, Notes, Image, Duplicate, and Delete.

Figure 15. Edit Shot Settings



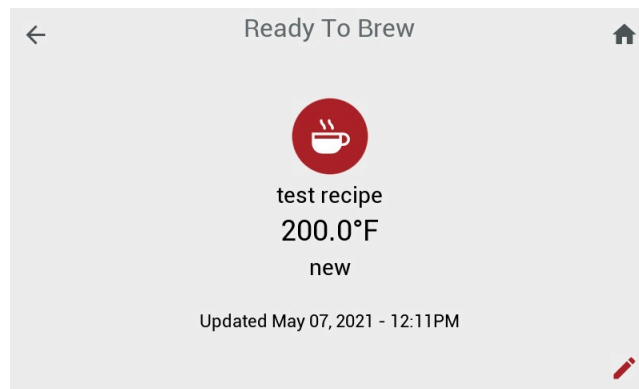
6. Tap on the menu item you want to update and follow the screen prompts to complete the change.

Figure 16. Shot Settings



7. If you want to update the parameters of the shot, tap on Shot Settings. Here you can adjust the parameters: Temperature, Volume Output, Pre-Infusion Time, Pre-Infusion Pressure, Infusion Pressure, Ramp Down Time, and Ramp Down Pressure.
8. Adjust the parameters with the minus (-) and plus (+) buttons on the right-hand side of the screen.
9. When you have finished updating the shot, tap on the arrow button at the bottom of the screen.

Figure 17. Read To Brew



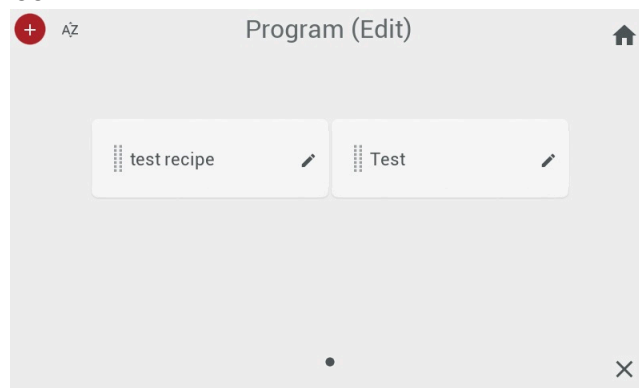
10. Brew the updated shot by pressing the Brew Paddle to the left.
11. After the shot has been pulled, the portafilter has been removed, and the grounds tossed, purge the brew head and rinse the portafilter to clean out any residual grounds and oils from the coffee beans.

Create A Program

Quick steps for creating a new brew program.

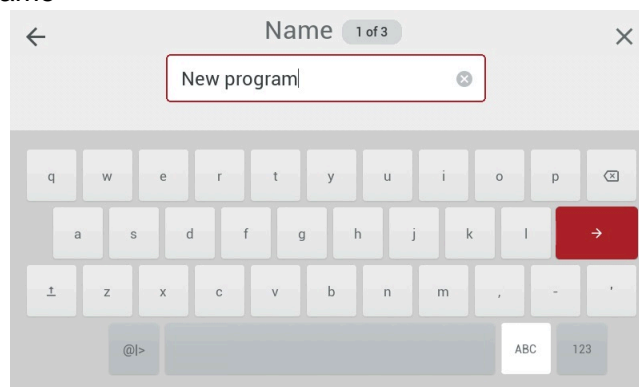
1. On the Program (Edit) screen, tap the Plus (+) button in the upper left-hand corner.

Figure 18. Program Edit Screen



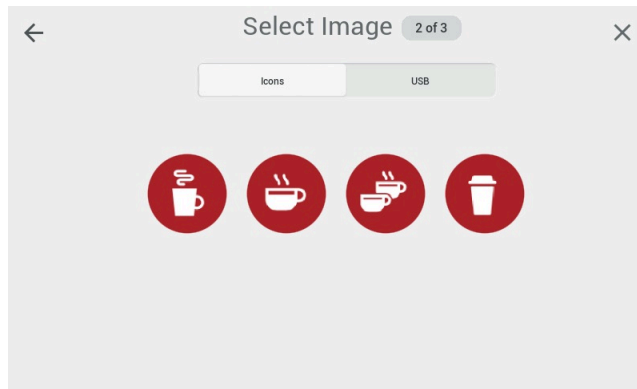
2. Enter a name for the new shot program in the Name screen. Then tap the arrow button.

Figure 19. New Program Name



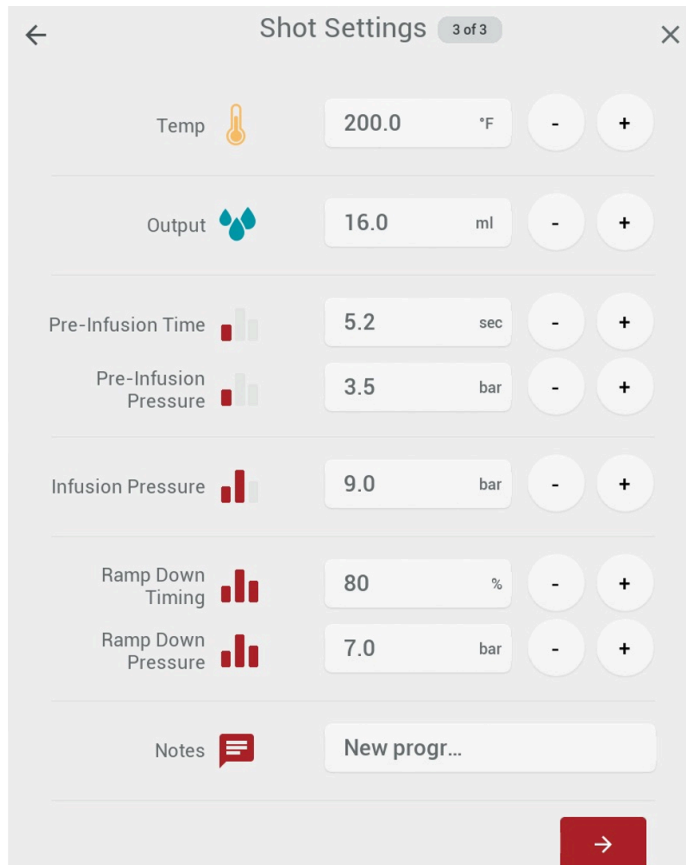
3. Choose an Icon for the program.

Figure 20. Select Icon



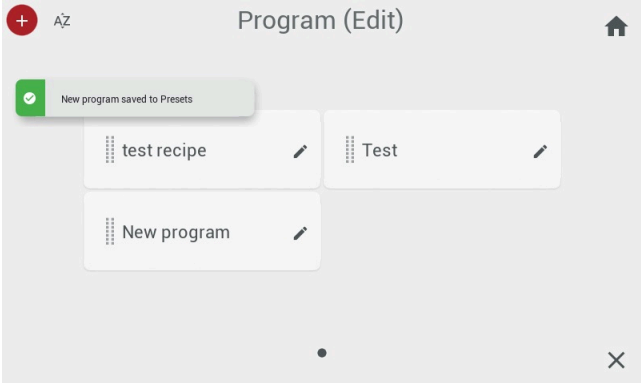
4. Set program parameters by scrolling through and adjusting the Shot Settings with the plus and minus icons. After the parameters have been set and any notes added, tap the arrow button to save the new program.

Figure 21. Shot Settings



5. The new shot is saved and will be ready on the Program Menu.

Figure 22. New Program Saved



Software and Firmware Updates

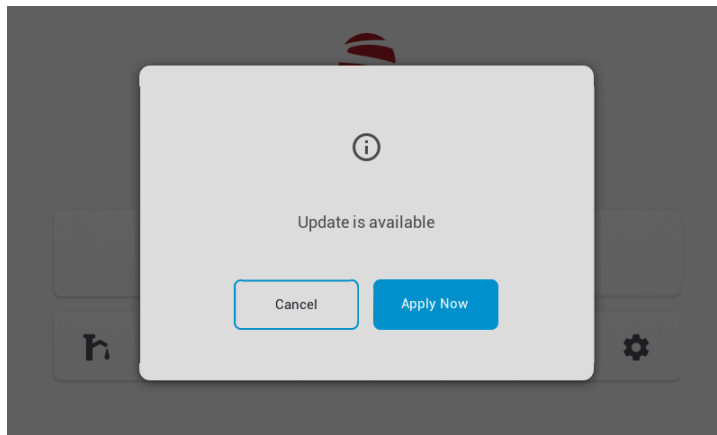
How to update the software and firmware on the ES.1

The ES.1 will have periodic software and firmware updates as we add new features and capabilities to the machine. Currently, the ES.1 needs to be updated via USB, but in the future this will be done via WIFI. In the meantime each ES.1 will ship with a USB thumb drive

Software and Firmware updates will be announced and available for download on the ES.1 website in the Owner's hub.

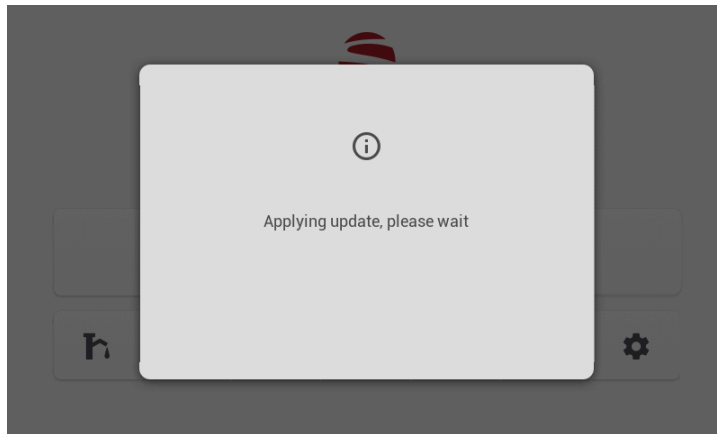
1. Download and save the software and/or firmware update a thumb drive.
2. Plug the thumb drive into the USB receptacle located on the back panel of the ES.1.
3. When the ES.1 detects the USB and saved software and/or firmware files a notification screen will pop up on the ES.1 touch screen.

Figure 23. Available Update



4. Click the "Apply Now" button.
5. Another screen will appear as the update is being applied to the ES.1.

Figure 24. Applying Update



6. When this screen disappears the update process is complete.


Maintenance and Cleaning

The ES.1 needs regular maintenance for optimal performance and machine longevity.

ES.1 Machine Cleaning and Maintenance Schedule

Table 16. Cleaning and Maintenance Schedule

Frequency	Tasks
Hourly/After Each Use	<ol style="list-style-type: none"> 1. Purge the brewhead. 2. Purge and wipe off the Steam Wand. 3. Rise the Portafilter.
Daily	<ol style="list-style-type: none"> 1. Purge the Brew Head. 2. Auto Backflush the machine, rinse, brush, and wipe down the visible parts of the inside of the brewhead like the dispersion screen and gasket. 3. Thoroughly clean portafilters and baskets. 4. Soak the tip of the Steam Wand in soapy water or milk cleansing agent and then purge the Steam Wand.
Weekly	<ol style="list-style-type: none"> 1. Auto Backflush with coffee detergent. Follow the directions provided on the detergent packaging 2. Soak portafilters for 30 minutes in a coffee detergent solution. Then scrub and rinse the portafilters 3. Thoroughly clean the dispersion screen and dispersion plate with coffee detergent, and then purge the Brew Head. To clean remove the screw holding the dispersion screen and plate in place. Rinse of any remaining detergent or coffee grounds. Use a towel if necessary to clean the dispersion plate behind the screen to ensure a clean group head. Replace screen and screw, and do not over tighten.
Monthly	<ol style="list-style-type: none"> 1. If the ES.1 is plumbed, check to ensure your water filtration system is working properly and change water filters as needed. 2. Clean or replace as needed: dispersion screen, brew head gasket, portafilter spring.
Yearly	<ol style="list-style-type: none"> 1. Descale the ES.1 once a year. Calcium and other minerals will build up in the machine. 2. Perform and complete the yearly parts maintenance checklist.

 **Warning:** Do not use dish detergent in the ES.1. Only use coffee detergent. Dish detergent can leave residue that will break down and destroy coffee bean oils. While the build up of oils that will go rancid is terrible, coffee bean oils are important for flavor. Purge and regularly clean your ES.1 to prevent coffee oils from going rancid.

Safe Mode

Safe Mode is a special operating mode where the pump is disabled. Safe mode is primarily used in 2 instances:

1. Starting Up

a. Use Safe mode if you are turning on the machine with an unknown configuration (plumbed or water reservoir). If the machine is set up to be plumbed, safe mode will make sure the pump does not turn on without a water source.

i. To activate Safe Mode

1. Turn on the ES.1.

2. When the ES.1 logo screen appears, press the tea button for at least 3 seconds.



Note: You must press the Tea button within 1 second after the ES.1 logo appears.



Note: There is no penalty for pressing the button too early, or for holding the button for longer than 3 seconds.

ii. You are now in safe mode. From here you can determine if the ES.1 is set up to be plumbed into a water source or not. If the ES.1 is set up to be plumbed, you can safely connect the ES.1 to the water source and turn the water source.

b. Deactivate Safe Mode by pressing the Exit button on the home screen. Then proceed with booting up the ES.1. The pump will run and the ES.1 will fill with water and heat up.

2. Depressurizing and Draining

a. Safe Mode is automatically activated as part of the de-pressurize and drain procedure.

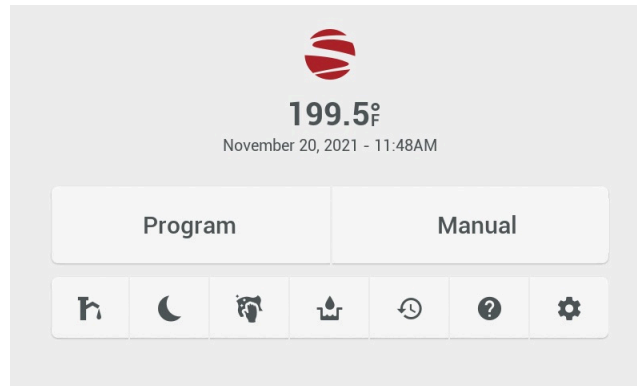
b. Follow instructions for Preparing the ES.1 for Storage or Shipping.

Auto Backflush

Backflushing the ES.1 is essential for cleaning the machine.

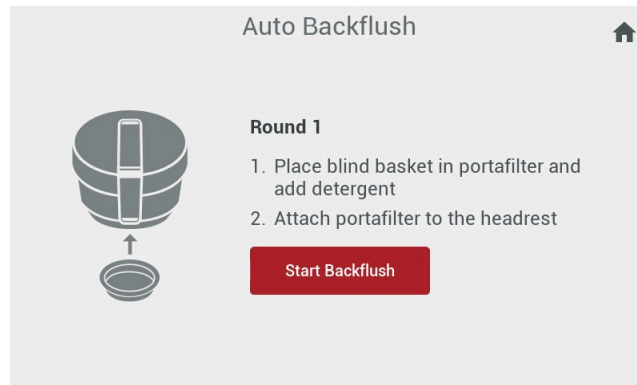
1. Click on the Auto Backflush icon on the Home Screen to start the process. Follow the screen prompts to completion. A full overview of the Auto Backflush work flow can be found here: [Auto Backflush \(on page 40\)](#)

Figure 25. Home Screen



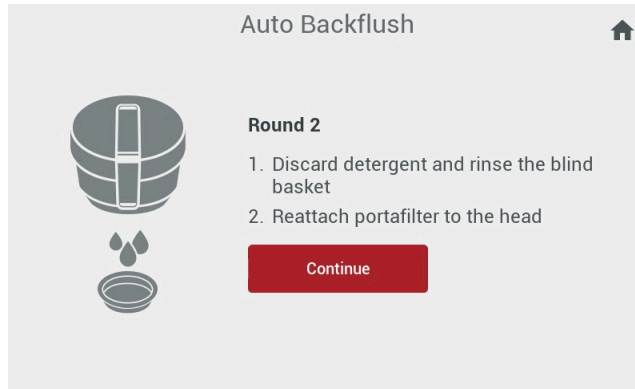
2. The first screen to pop up will be Auto Backflush Round 1. Follow the directions:

Figure 26. Auto Backflush Round 1



3. Install the blind basket in the portafilter and add 2 grams of coffee detergent to the portafilter.
4. Add a little bit of water to the portafilter to dissolve the coffee detergent.
5. Lock in the portafilter to the brew head.
6. Press the Start button located at the bottom of the screen.
7. The first Backflush round will commence. You can watch the gauge on the touchscreen to monitor progress.
8. When the first Backflush round is complete, a screen will prompt you to start round 2.

Figure 27. Auto Backflush Round 2



9. Rinse the blind basket to discard detergent.

10. Lock in the portafilter to the brew head.

11. Press the Continue button. Round 2 will commence.

12. When Round 2 is finished, a screen will pop up letting you know that the Backfush Process is complete.

The Auto Backflush cleaning process is now complete. This should be done frequently to help prevent coffee oil build up. We recommend weekly for home users with light usage, multiple times a week for moderate usage, everyday for commercial applications, and multiple times a day for heavy commercial usage.

After you have completed the Auto Backflush process, soak and clean the portafilters and baskets in coffee detergent. Scrub and rinse.

Preparing the ES.1 For Storage or Shipping

Drain and Prep the ES.1 for shipping.

These instructions assume you are starting with a machine powered up and connected to a water source (plumbed or water reservoir). The pump could be damaged if the ES.1 tries to power up and fill without a water source. To mitigate any danger to the pump, put the ES.1 into safe mode when you turn on the ES.1. If the ES.1 is already off, it will try to fill and heat up when you turn it on during the boot-up process.

Table 17. Tools Needed For Removing Right Panel Of The ES.1

Philips Head Screw Driver	Flat Head Screw Driver
Bucket	

1. Put ES.1 into safe mode.

2. If ES.1 is attached to a plumbed water source, turn off the water supply so there is no more incoming water pressure.

3. Remove the Knurled-Head Thumb Screw and Cup Rail (numbers 1 and 3 on the diagram below).

4. Unscrew and remove the Steam Actuator handle (number 4 on the diagram below).

5. Loosen and remove the 4 screws on the top and side of the right panel (numbers 2 and 5 on the diagram below).

6. Remove Right Side Panel.

Figure 28. ES.1 Top and Right Side Panel

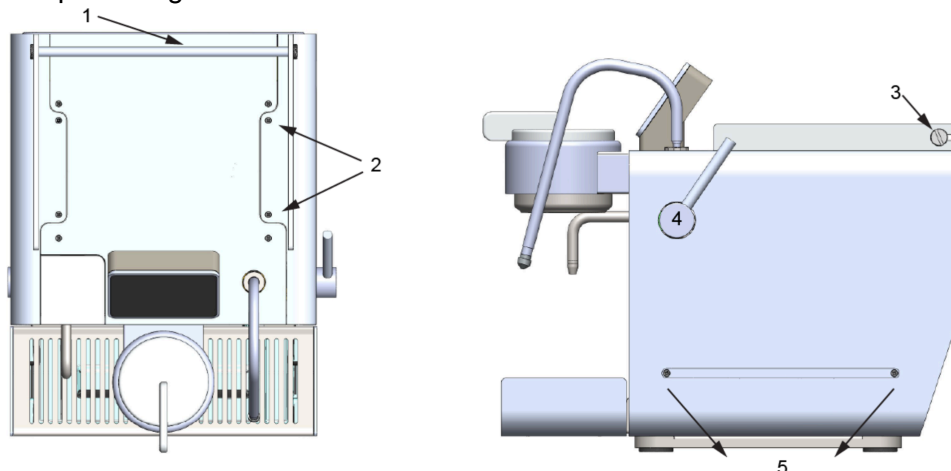


Table 18. Figure 1 Key

1 - Cup Rail	4 - Steam Actuator handle and knob
2 - Philips Head Screws Securing Right Panel	5 - Philips Head Screws Securing Right Panel
3 - Knurled-Head Thumb Screw	

7. Locate Ball Valves.

Figure 29. ES.1 Steam Tank Valve and Low-Temperature Tank Valve

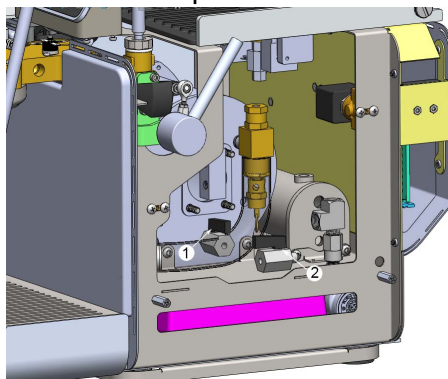


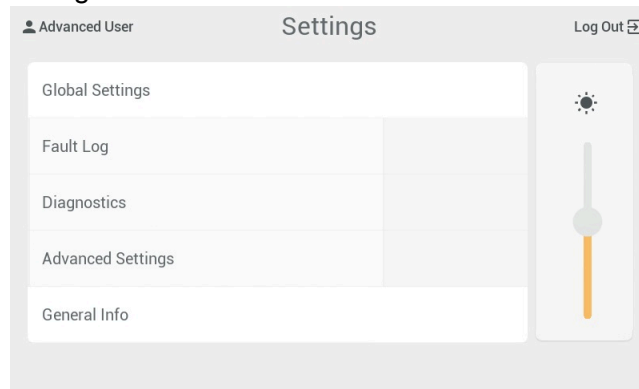
Table 19. Figure Key

1. Steam Ball Valve (in opened position)	2. Low-Temperature Tank Ball Valve (in opened position)
------------------------------------------	---------------------------------------------------------

8. On the Home Screen, press the Settings Button (gear shape). Enter the Advanced User Password: 1111

9. Within settings screen, tap “diagnostics”.

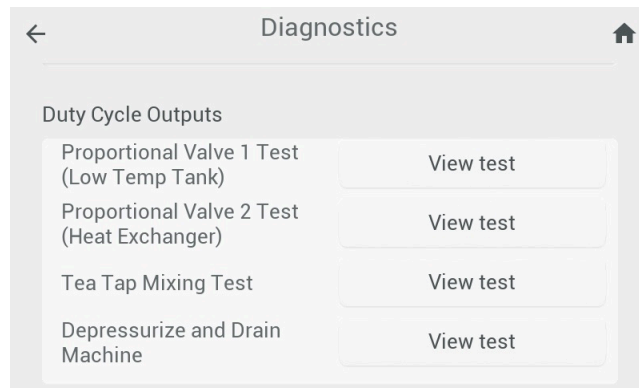
Figure 30. Advanced User Settings



10. Within diagnostics screen, choose "Tests" from the three options across the top.

11. Tap "View Test" next to Depressurize and Drain.

Figure 31. Diagnostics Tests

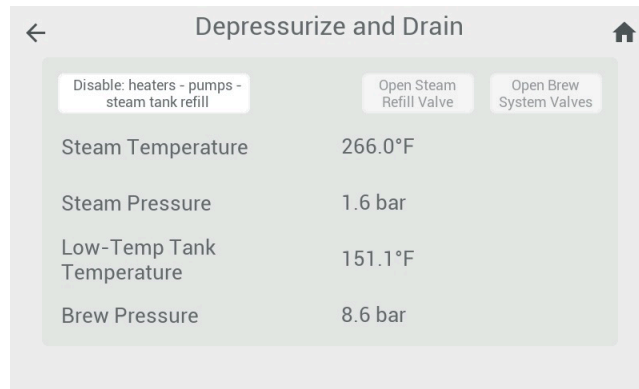


- A warning message will prompt you to wait until the steam take has dropped in pressure down to 212° F and to disconnect the plumbed connections if the ES.1 is plumbed.
 - When you are ready to proceed, press "OK". The ES.1 will automatically be put into "safe mode" preventing the pump from running.
- The ES.1 will start to cool down and depressurize.

12. Wait for the ES.1 to cool down. We recommend waiting until the temperature reads 212° F / 100°C or below.

13. Open Steam Pressure Valve / Steam Wand by twisting the steam actuator knob towards the front of the ES.1. Allow steam to dispense until there is no more steam coming out of the Steam Wand (you can continue several other steps below while steam is running).

Figure 32. Depressurize and Drain



14. Press the Open Brew System Valves. This will open the valves without running the pump so the ES.1 can continue to depressurize.
 15. After there is no more steam coming out of the Steam Valve / Steam Wand, the machine has depressurized enough to proceed and begin draining the ES.1.
 - Open mechanical ball valves (2 total) for the Low-Temperature tank drain and Steam Tank drain.
 - Let water drain.
 16. Once machine is completely drained:
 - Turn machine off.
 - Close mechanical ball valves on steam tank and LT tank.
 - Replace panels as needed.
- Warning:** Do NOT leave the settings->diagnostics screen in the middle of this process, or machine will try to refill and/or re-heat unexpectedly!

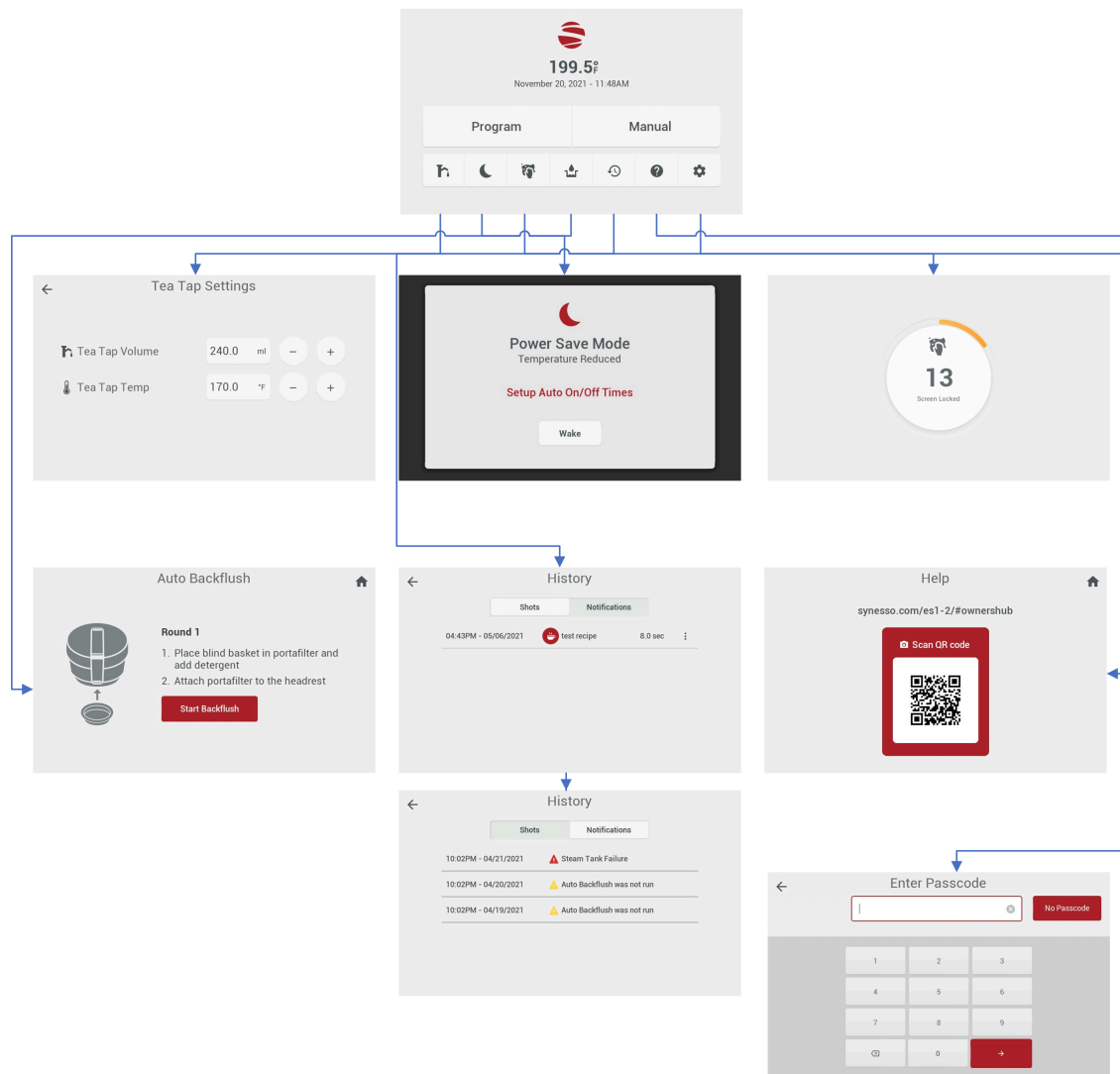
Menus, Settings, and Flowcharts

Flowcharts showing detailed views of all the screens, menus and settings available on the ES.1.

Home Screen Menu

The Home Screen has buttons allowing access to all functions of the ES.1.

Figure 33. ES.1 Home Screen



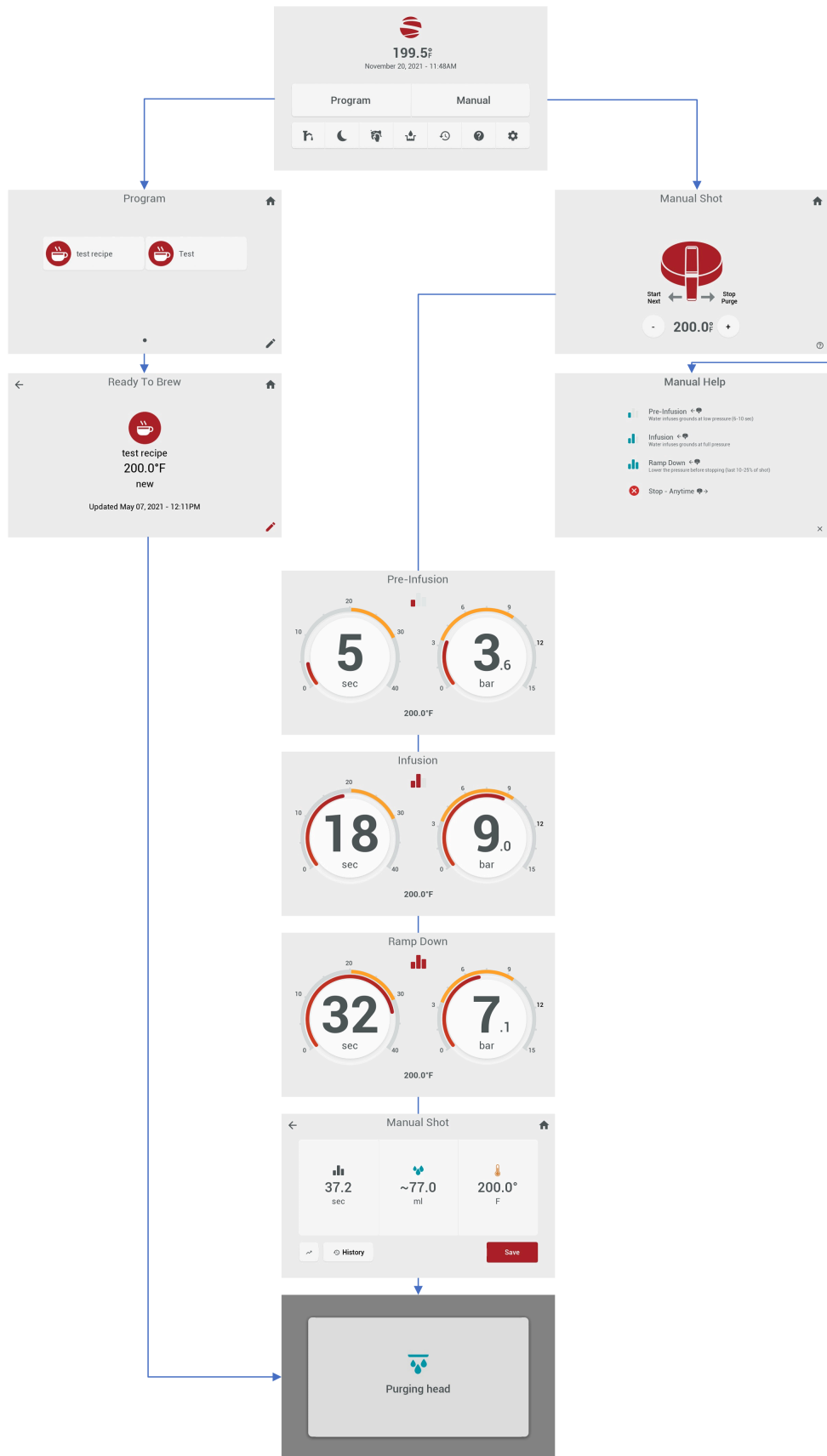
ES.1 Brewing Process

This flow chart shows the detailed process of pulling a manual or programmed shot.

If pulling a manual shot then you will need to tap the paddle to the left to advance the ES.1 through the extraction process.

When running a programmed shot, the ES.1 will automatically progress through each stage of the extraction process to complete the shot.

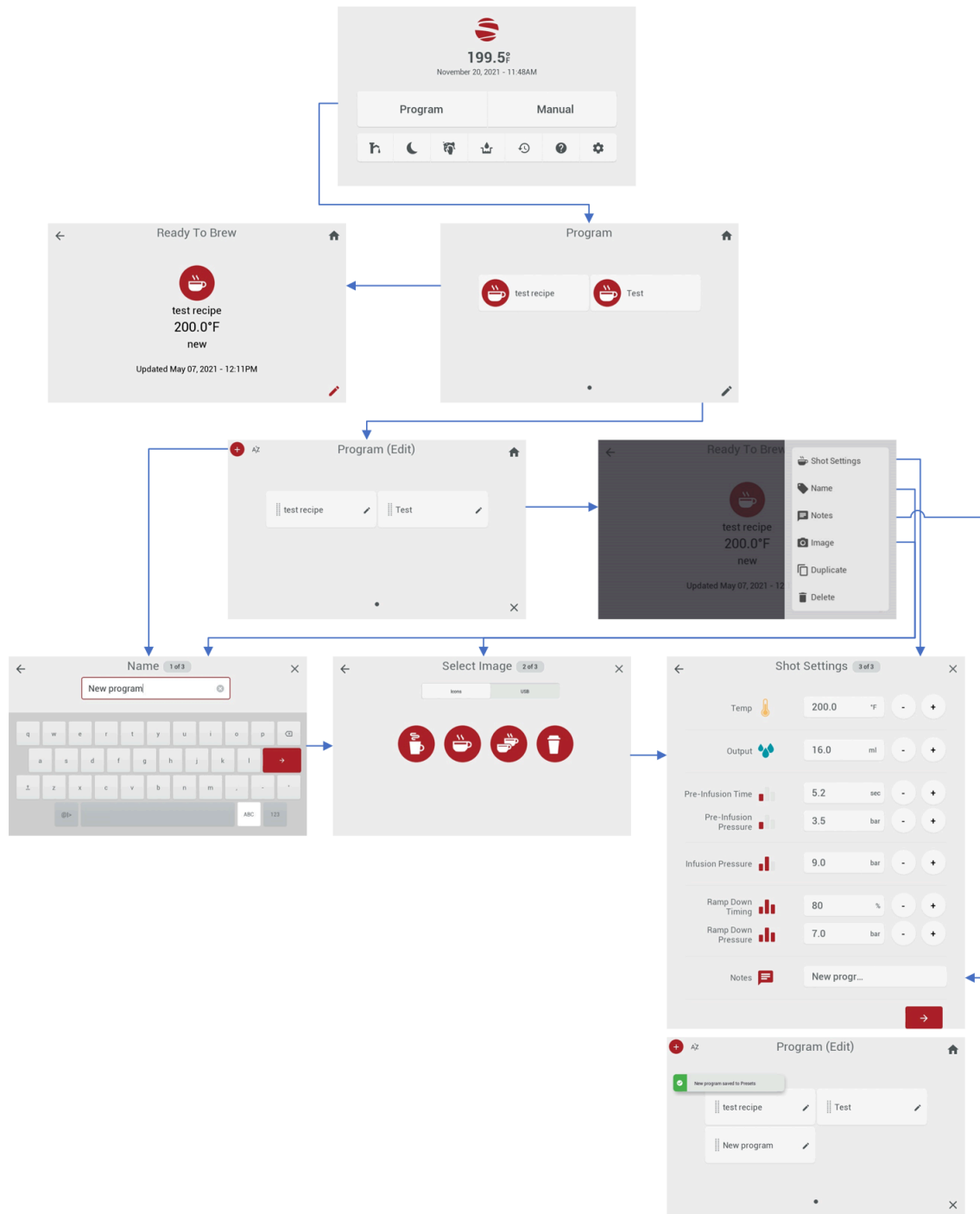
Figure 34. ES.1 Brew Process



Programs Menu

The Program Menu is where all of your recipes will be stored.

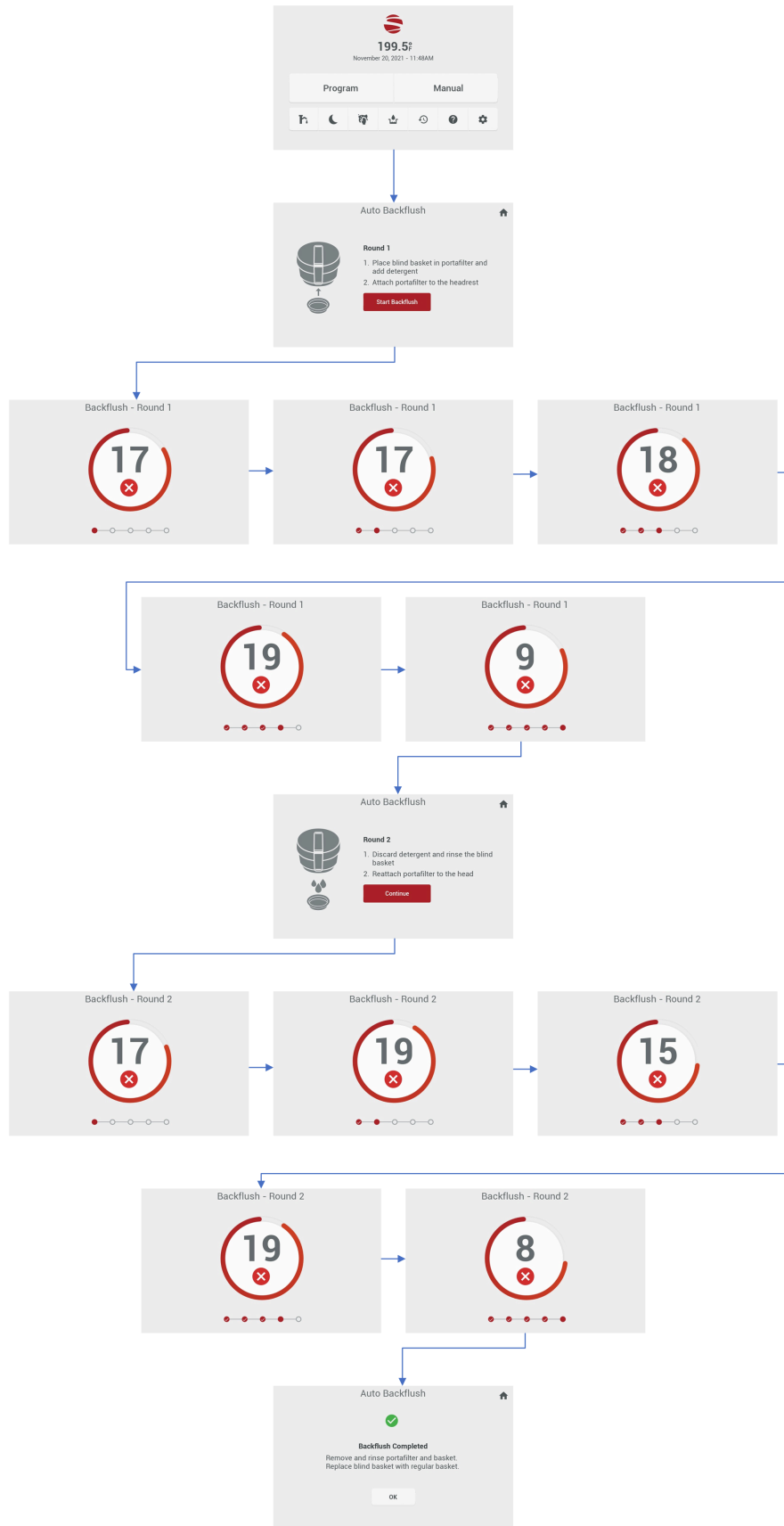
Figure 35. ES.1 Programs



Auto Backflush

Auto Backflush is a cleaning function that should be regularly performed.

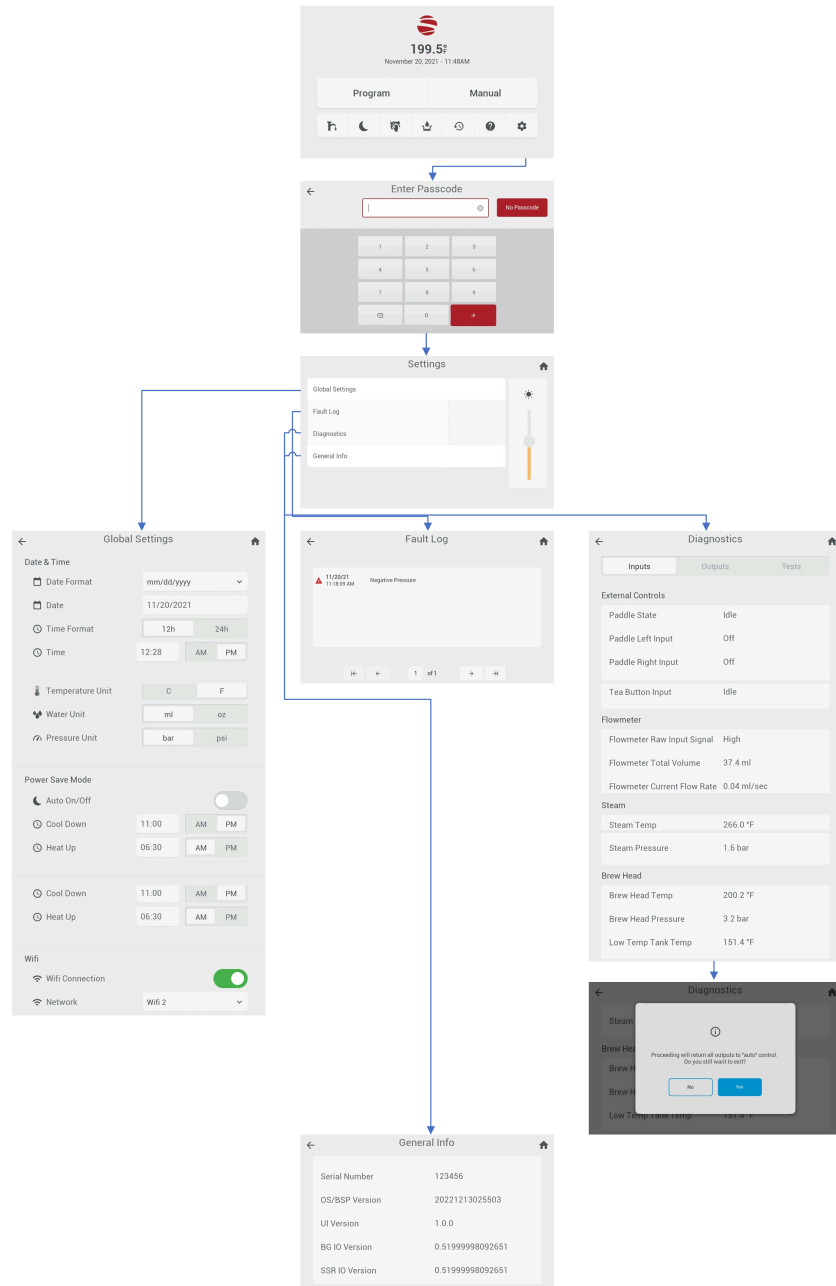
Figure 36. ES.1 Auto Backflush



User Settings

User Settings is where you can adjust the Power Save Mode, Time and Date, and preferred measurement units such as Fahrenheit vs Celsius.

Figure 37. ES.1 User Settings



Advanced User Settings

Advanced User Settings are password protected and offer a more comprehensive range of settings. The password is 4444

CAUTION: Adjusting some of these settings can result in ES.1 machine failure including burning out the pump.

Figure 38. Advanced User Settings

