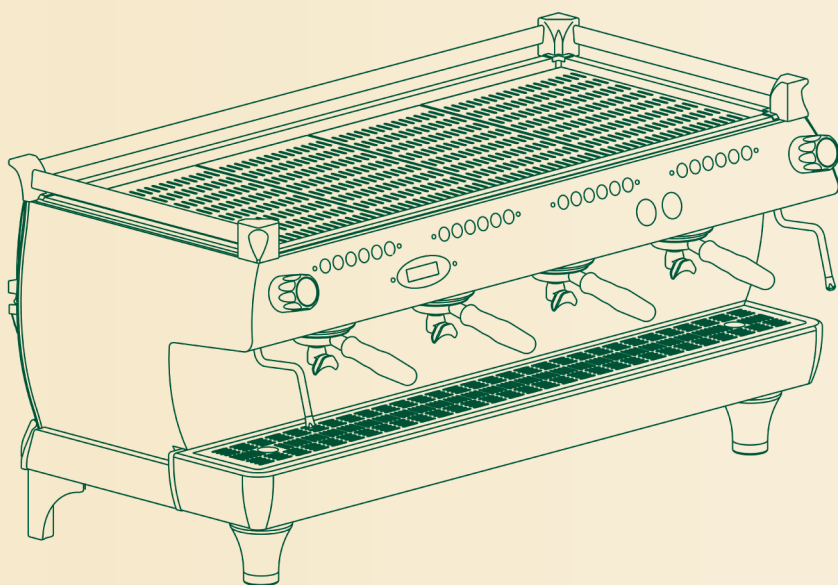
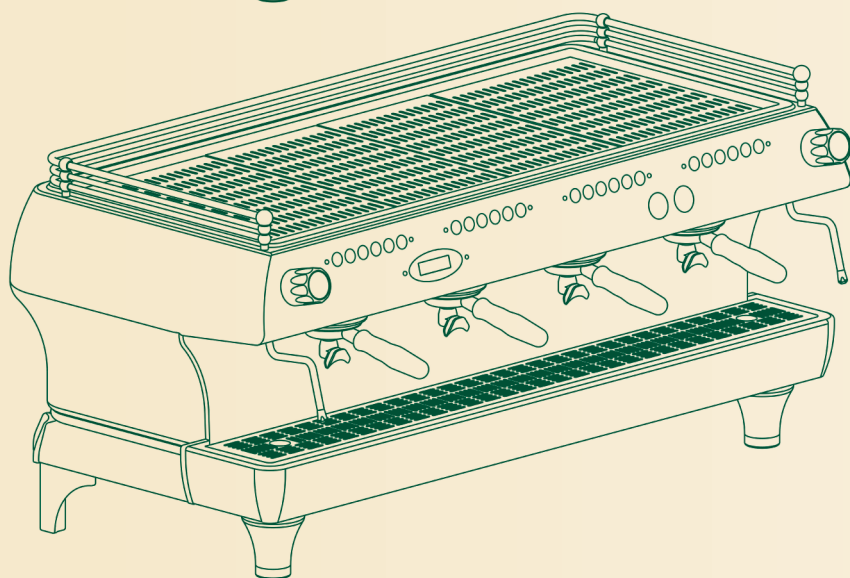




HANDMADE IN FLORENCE



GB/5



FB/80



SOFTWARE PROGRAMMING MANUAL

EE & AV

AVAILABLE



VER. 1.3



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Description

- This espresso machine has a very powerful CPU and many configurable settings.
- Additionally, there are many feedback controls employed in this espresso machine to troubleshoot problems should they occur.
- The following is a brief introduction to the controls and display and how they interact with the operator.

Digital Display






The digital display (display) is a backlit display capable of displaying 2 lines of 16 characters. The display enables the operator to interact with the espresso machine to visibly change parameter values. The display also provides valuable information to the operator. There are several warnings that can be displayed to alert the operator of an unusual condition or a fault. Additionally, simple messages are displayed alerting the operator that an action has been started or that a process needs to begin.


Programming Keypad





The programming keypad is always located as the group 1 controls (left most keypad). These are the buttons used to change values within the configurable parameters.

The  and the  buttons are used to change the values of the individual parameters.

The  button is used to scroll through the parameters. Additionally, this button also confirms some values within the parameters.

The  button confirms the values within the parameters. Additionally it is also used to scroll through the values within the parameters.

The  button is used to access the programming mode.

The  button is used to turn on and turn off the espresso machine. This button can also be used to exit the programming mode.



Programming Mode

Description

- To change any configurable parameter the operator must first enter into the programming mode.
- There are several levels within the programming mode that allow the restriction of specific parameters depending upon the password entered.

The four programming levels are as follows:

- *Barista Level* - No Password Necessary. Limited parameters are available.
- *Technician Level* - Technician password needed. Barista level parameters plus additional parameters are available.
- *Factory Level* - Factory password needed. Barista Level and Technician level parameters plus additional parameters are available.
- *Roaster Level* - Roaster password needed. A specific set of parameters are made available only to those entering this password.


Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad. After approximately 5 seconds the following display appears.
	2 This is the Barista Level. Press the button to scroll through the available parameters.
	3 When finished, press to exit programming mode.
	4 Press and hold the button on the group 1 keypad. After approximately 10 seconds the following display appears.
	5 Using a combination of the following buttons (the first 5 buttons on the group 1 keypad) enter the appropriate 5 digit password. <div></div>
	6 The parameters available after entering the password are dependant upon the password entered. If a technician password is entered then the technician level parameters will be made available....etc. Press to scroll through the available parameters.
	7 When finished, press to exit programming mode.



Initial Installation

Description _____

- This is the initial display shown when first installing this espresso machine.
- NOTE: If machine has been bench tested by your local distributor you will not see this first display.

Display	Operating Procedure
<div>First installat. Enter to confirm</div> <div>OFF 09:30</div>	<div>1 Press the  button on the group 1 keypad to confirm that this in the initial installation of this espresso machine.</div> <div>2 Please refer to the section “Turning the Espresso Machine On” to continue</div>



Turning the Espresso Machine On

Description _____

- The following is the procedure for turning on the power to the espresso machine.
- Please follow the procedures carefully to avoid any damage to the espresso machine.

NOTE: If the message “First Installat. Enter to confirm” appears in the display, please see the preceding page entitled “Initial installation

English

Display	Operating Procedure
	<div>1 Turn the Main Switch to the On position.</div> <div></div> <div></div>
	<div>2 The message at left will be displayed briefly. This message indicates the revision level of the software installed in this espresso machine.</div>
	<div>3 To complete the turn on process, press the button and the display at left is shown. The machine begins to automatically fill the steam boiler until full. The display is asking if you have completed the coffee boiler air bleeding process of the coffee boiler. When this process is complete, press the enter button. If the screen does not change, wait until the steam boiler is completely full and try again.</div>
	<div>4 The espresso machine is now ON and you should see one of the two following displays.</div>
	<div>5 When the espresso machine reaches operating temperature the lights on all keypads will light indicating that the espresso machine is ready to use.</div>

WARNING

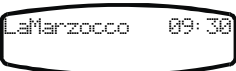



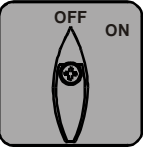
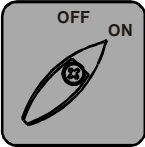
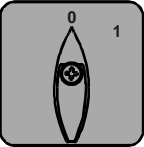
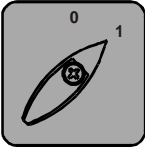

HAZARDOUS VOLTAGE DISCONNECT FROM POWER SUPPLY BEFORE SERVICING



Turning the Espresso Machine Off

Description _____

- The following is the procedure for turning off power to the espresso machine.
- Please follow the procedures carefully to avoid any damage to the espresso machine.
- This machine has two off settings. One setting turns off all of the components in the espresso machine and the other turns off power to the complete espresso machine.

Display	Operating Procedure
	1 The following is the procedure for safely turning off the espresso machine.
	2 Press and hold the  button (approximately 3 seconds). The display changes to the following:
	3 This is the OFF setting used in the normal operating conditions.
	4 During servicing or other conditions that warrant, the main switch should be turned to the OFF position. <div></div>
	5 The espresso machine is off and display should be blank. It is important to follow this procedure when turning off the machine. Failure to do so can damage the electronics.

**WARNING**

HAZARDOUS VOLTAGE DISCONNECT FROM POWER SUPPLY BEFORE SERVICING



Machine Size

Description _____

- This parameter is a factory set parameter that corresponds to the size of machine(number of groups).
- The possible settings are 1, 2, 3, or 4.

English









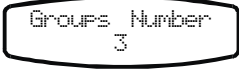
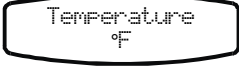
Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the or the button to change the size of the machine. Once the desired selection is displayed press the button to confirm the selection.
	4 When finished, continue to the next parameter or press to exit programming mode.



Temperature Measurement Units

Description _____

- This parameter is set at the factory at the request of the local distributor.
- This parameter has two options Celsius (°C) or Fahrenheit (°F)

Display	Operating Procedure
	<div>1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):</div> <div>2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:</div> <div>3 Press the  button on the group 1 keypad until the following appears (one time):</div> <div>4 Press the  or the  button to select between Celsius (°C) or Fahrenheit (°F). When the desired selection is displayed press the  button to confirm selection.</div> <div>5 When finished, continue to the next parameter or press  to exit programming mode.</div>
	
	
	



Nominal Coffee Boiler Temperature

English

Description

- This parameter is set at the factory at a preset nominal temperature.
- The set temperature of this parameter differs from the actual temperature of the water exiting the group to the coffee.
- The temperature of the boiler is measured at the most critical point in the boiler when temperature fluctuation is the greatest.
- The temperature of the water exiting the group head is held constant by means of the mass of the group casting. Even though the temperature of the boiler may vary a few degrees, the temperature of the water exiting the group is constant.
- To set the temperature of any espresso machine it is important to measure the temperature of the water exiting the group.









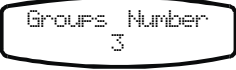

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (two times):
	4 Press the button to select the coffee boiler you wish to change temperature.
	5 Press the or the button to change the temperature on the displayed boiler. The measured temperature appears on the left and the set temperature appears on the right side of the display. Once the desired temperature is selected press the button to confirm the selection.
	6 Repeat procedure 5 for all subsequent boilers (if installed).
	7 When finished, continue to the next parameter or press to exit programming mode.



Proportional, Integral, Derivative (PID) Settings

Description _____

- This parameter is preset at the factory based upon theoretical calculations and physical experiments.
- It is not recommended that these numbers are changed.
- Changes to these parameters can cause unexpected results.
- Qualified technicians may wish to experiment with different values.
- It is important to write down the values before making changes to be sure you can return to the factory programming if unexpected results occur.

Display	Operating Procedure
	<div>1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):</div> <div>2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:</div> <div>3 Press the  button on the group 1 keypad until the following appears (three times):</div> <div>4 Press the  or the  button to change the value of the flashing parameter. When the desired value is displayed press to  confirm and advance to the next value.</div> <div>5 When finished, continue to the next parameter or press  to exit programming mode.</div>
	
	
	



PID Range

Description

- This parameter sets a range in which the PID algorithm is active.
- This parameter is preset at the factory based upon theoretical calculations and physical experiments.
- It is not recommended that this number is changed.
- Changes to this parameter can cause unexpected results.
- It is important to write down the number before any changes are made to make sure you can return to the factory programming if unexpected results occur.
- Experienced technicians may wish to experiment with different values.
- The lowest value for this parameter is 3.6.

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (four times):
	4 Press the or the button to change the value of the parameter. When the desired value is displayed press to confirm value.
	5 When finished, continue to the next parameter or press to exit programming mode.



Coffee Boiler Heating Timeout

Description

- This parameter is a safety feature designed to turn off the machine when the coffee boiler does not reach a set temperature within a set amount of time.
- This parameter consists of two values. The first value is the threshold temperature. The second value is a time interval in minutes.
- This parameter is set at the factory and should not be changed. Incorrect values for this parameter could disable the safety protection provided by this feature.
- The machine will shut down when a particular coffee boiler does not reach the threshold temperature within the set time interval.
- If machine shuts down the error message: “Coffee Boiler 1 Temperature” is displayed (where the number 1 indicates which boiler is affected).

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (five times):
	4 Press the button on the group 1 keypad to access the settings for this parameter.
	5 Press the or the button to change the value of the flashing parameter. When the desired value is displayed press to confirm the value and advance to the next value.
	6 Press the button on the group 1 keypad to cycle through identical settings for all coffee boilers and repeat procedure 5 to change values.
	7 When finished, continue to the next parameter or press to exit programming mode.



Description

- Autosteam is an option that may be ordered from the factory.
- Autosteam is a process that monitors the temperature of milk while steaming and shuts off when the milk reaches the preset temperature.
- When incorrectly configured or when there is a problem with the Autosteam the error message, "Autosteam 1 Temperature" is displayed (where the number 1 indicates which Autosteam is effected).

NOTE: Autosteam option contains many components. Setting the value to ENABLED without the complete assembly will result in an error message on the display






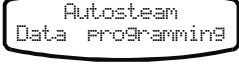

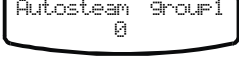


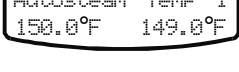





Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (six times):
	5 Press the or the button to change to ENABLED or DISABLED. Once the desired condition is displayed press the button to confirm.
	5 When finished, continue to the next parameter or press to exit programming mode.



Autosteam Parameter Settings

Description _____

- When the parameter Autosteam is set to ENABLED, this parameter is enabled.
 - This parameter is set at the factory when the Autosteam option is ordered.
 - To accurately measure milk temperature, an external temperature measuring device should be used. Changes to the values contained in this parameter should be done based upon the external temperature measuring device
- Each Autosteam wand may be assigned to a specific keypad. The 6th button on the assigned keypad activates the Autosteam function. There is a maximum of 2 Autosteam steaming wands.

Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the  button on the group 1 keypad until the following appears (about seven times):
	4 Press the  button on the group 1 keypad to access the settings for this parameter.
	5 Press the  or the  button to change the value of the flashing parameter. The first value assigns the Autosteam function to a specific keypad (0 = non-active).
	6 Press the  button on the group 1 keypad to access the temperature value. The current measured temperature appears on the left and the set temperature appears on the right (flashing). Press the  or the  button to adjust the temperature then press to confirm. 
	7 When finished, continue to the next parameter or press  to exit programming mode.



Nominal Steam Boiler Settings

Description _____

- This parameter is set at the factory at a preset nominal temperature.
- This parameter is only active when the parameter “Steam heat. Type” is set to “Temp Probe”.
- The temperature of saturated water is proportional to the pressure. Therefore it is possible to regulate the pressure of the steam boiler by means of a temperature probe.

NOTE: It is NOT AVAILABLE on GB/5 and FB/80 because there is a Pressure Switch that control the Steam Boiler

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about eight times):
	4 Press the or the button to change the temperature. The measured temperature appears on the left and the set temperature appears on the right side of the display. Once the desired temperature is displayed press the button to confirm the value.
	5 When finished, continue to the next parameter or press to exit programming mode.

DANGER




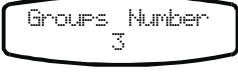

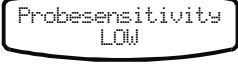





THE STEAM BOILER CONTAINS WATER AT ELEVATED TEMPERATURES. WATER TEMPERATURE OVER 125°F CAN CAUSE SEVERE BURNS INSTANTLY OR DEATH FROM SCALDING.



Steam Boiler Level Probes Sensitivity

Description _____

- This parameter allow the user to set the probe sensitivity depending of the hardness of the water.

Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the  button on the group 1 keypad until the following appears (about seven times):
	4 Press the  button on the group 1 keypad to access the settings for this parameter.
	5 Press the  or the  button to change the level of the probe sensitivity. When the desired value is displayed press  to confirm .
	6 When finished, continue to the next parameter or press  to exit programming mode.



Steam Boiler Level Probe Delay

Description _____

- This parameter is a safety feature that considers the waving motion of the water inside of the boiler.

English









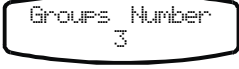
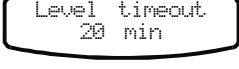
Display	Operating Procedure
	<div>1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):</div> <div>2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:</div> <div>3 Press the button on the group 1 keypad until the following appears:</div> <div>4 Press the or the button to change the value of the parameter. When the desired value is displayed press to confirm value.</div> <div>5 When finished, continue to the next parameter or press to exit programming mode.</div>



Steam Boiler Level Timeout

Description _____

- This parameter is a safety parameter designed to turn off the machine when the steam boiler does not fill to the correct level within the programmed time interval.
 - This parameter consists of one value. The value is measured in minutes.
 - The machine will shut down and display the error message: “Steam Boiler Timeout” when the steam boiler does not reach the preset level within the programmed time interval.
- This parameter is set at the factory and should not be changed.
 - Incorrect values for this parameter could disable the safety protection provided by this parameter.

Display	Operating Procedure
	<div>1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):</div> <div>2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:</div> <div>3 Press the  button on the group 1 keypad until the following appears (about nine times):</div> <div>4 Press the  or the  button to change the value of the flashing parameter. When the desired value is displayed press the button  to confirm the value.</div> <div>5 When finished, continue to the next parameter or press  to exit programming mode.</div>
	
	
	










Cup Heating Time Settings

English

Description

- The cup heater is an optional feature that adds a resistance type heating capacity to the espresso machine cup storage area.
- If installed, the cup heater turns on and off for during a programmed cycle time.
- This parameter has three settings.
- The first setting is “Cup heating on”. This is a time, in minutes, that the cup heater is turned on during a cycle.
- The second setting is “Cup heating off”. This is a time, in minutes, that the cup heater is turned off during a cycle.
- The third setting is “Cup Heating Initialization (Int.)”. This is a time interval, in minutes, that the cup heater will delay when the espresso machine is turned on. This feature is provided to reduce the amount of power required when the espresso machine is heating the water in the boilers.
- This parameter is set at the factory and should not be changed.










Display	Operating Procedure
LaMarzocco 09:30	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
Password ?????	2 Enter the 5 digit factory password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
Groups Number 3	3 Press the  button on the group 1 keypad until the following appears (about eleven times):
Cup heating Times	4 Press the  button on the group 1 keypad to access the settings for this parameter.
Cup heating on 3 min	5 Press the  or the  button to change the setting of the flashing value. When the desired value is displayed press  to confirm and advance to the next value.
Cup heating Off 3 min	6 Repeat procedure 5 for the remaining two values.
Cup heating Ini 30 min	7 When finished, continue to the next parameter or press  to exit programming mode.



Water Volume Programming

Description

- This parameter allows the operator to program the water volume (shot volume) for the individual buttons on the keypad.
- The saved program is a number. This number relates to the number of pulses the flowmeter delivers to the CPU. Once the programmed number of pulses is received by the CPU, the flow of water is stopped.

Display	Operating Procedure
 	<div><div>1</div><div>Press and hold the  button on the group 1 keypad until the following is displayed (approximately 5 seconds):</div></div> <div><div>2</div><div>Press the  button on the group 1 keypad again. The lights on the first 4 buttons will light and the light on the continuous button will begin flashing. The flashing light indicates the keypad is in programming mode</div></div> <div><div>3</div><div>While in programming mode, press any of the first 4 buttons. When the desired amount of water has been dispensed, press the same button again to stop the flow of water. Continue this same procedure for all buttons that programming is desired.</div></div> <div><div>4</div><div>Once the first 4 buttons are programmed, press the  button to exit programming mode</div></div> <div><div>5</div><div>To program the tea water dispense button, repeat procedure 1 then press the  button on the corresponding keypad that you wish to program. When the light begins to flash, press the  button. When the desired amount of water has been dispensed, press the  button again to stop the flow of water. When finished, press the  button to exit programming mode.</div></div> <div><div>NOTE:</div><div>The programming completed for group 1 keypad will be copied to all subsequent keypads. If other programming is desired for subsequent keypads, follow procedure 1 and 2 substituting the subsequent group keypad number for procedure 2.</div></div>

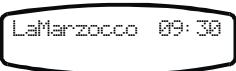










Cup Heating

Description _____

- This parameter allows the user to enable or disable the cup heating routine.
- The cup heater is an option ordered from the factory.
- Additional parameter settings are available in the factory level parameters under Cup Heating Times.

English

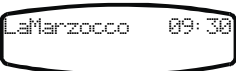



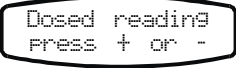



Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 5 seconds):
	2 Press the  button on the group 1 keypad until the following appears (one time):
	3 Press the  or the  button to change to ENABLED or DISABLED. Once the desired condition is displayed press the  button to confirm.
	4 When finished, continue to the next parameter or press  to exit programming mode.



Doses Reading

Description _____

- This parameter allows the user to review the total doses dispensed for each button.
- The number displayed is the total number of time the individual button has been activated.

Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 5 seconds):
	2 Press the  button on the group 1 keypad until the following appears (two times):
	3 Press the  or the  button to scroll through the values for each button.
	4 When finished, continue to the next parameter or press  to exit programming mode.



Clock Adjust

Description _____

- This parameter allows the user to set the time of day and the day of the week.
- This parameter is used by the “Auto On/Off” parameter

English

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Press the button on the group 1 keypad until the following appears (three times):
	3 The hour value should be flashing. Press the or the button to change the hour.
	4 Press the button to change to minute value and again to change to the day of the week value. Follow step 3 to change these values.
	5 When finished, continue to the next parameter or press to exit programming mode.



Auto On/Off

Description _____

- This parameter allows the user to program the espresso machine to turn on at a preset time and turn off at a preset time.
- This feature also allows the espresso machine to remain in the off condition for one repeating closed day.









Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 5 seconds):
	2 Press the button on the group 1 keypad until the following appears (four times):
	3 The hour value should be flashing. Press the or the button to change the hour for the "On" time.
	4 Press the button to change to the minute value. Follow step 3 to change this value.
	5 Press the button again to change to hour value for the "Off" time. Follow step 3 to change this value.
	6 Press the button again to change to minute value for the "Off" time. Follow step 3 to change this value.
	7 Press the button again to change to the "Closed On" value. Follow step 3 to change this value.
	8 When finished, continue to the next parameter or press to exit programming mode.



Description _____

- This parameter allows the technician to change the language of the display.

English

Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the  or the  button to change the display language. You may choose from Italiano, Francaise, English or Deutsch. Once the desired selection is made press the  button to confirm the selection.
	4 When finished, continue to the next parameter or press  to exit programming mode.



Temperature Correction

Description

- This parameter allows the technician to adjust the temperature of the individual coffee boilers.
- This procedure is best completed with an external temperature measuring device that measures the water exiting the group at the point of contact with the coffee.

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (one time):
	4 Press the button on the group 1 keypad one time and the following appears:
	5 Press the or the button to adjust the temperature higher or lower. Each block is equal to 0.5°F. Once the desired setting is made press the button to confirm and advance to the next boiler (if available).
	6 Repeat procedure 5 for all subsequent boilers.
	7 When finished, continue to the next parameter or press to exit programming mode.



Autosteam Temperature Adjustment

English

Description

- When the parameter Autosteam is set to ENABLED, this parameter is enabled.
- To accurately measure milk temperature, an external temperature measuring device should be used. Changes to the values contained in this parameter should be done based upon the external temperature measuring device.
- There is the possibility to install two Autosteam steaming wands; Autosteam 1 and Autosteam 2. Each Autosteam works independantly and must be set separately.
- If it is not possible to achieve the desired temperature setting please contact your local La Marzocco dealer for help troubleshooting this issue.

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about two times):
	4 Press the button on the group 1 keypad one time and the following appears:
	5 Press the or the button to adjust the temperature higher or lower. Each block is equal to 0.5°F. Once the desired setting is made press the button to confirm.
	6 Repeat procedure 5 to adjust the temperature of Autosteam 2 (if installed).
	7 When finished, continue to the next parameter or press to exit programming mode.



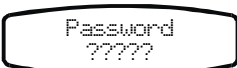
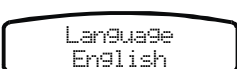

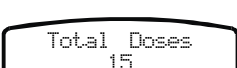

Technician Level Parameters



Total Doses

Description

- This parameter keeps a count of each dose that is produced with this espresso machine.
- This number can be an important reference when troubleshooting the espresso machine.
- This number can not be adjusted nor reset.

Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the  button on the group 1 keypad until the following appears (about two times):
	4 The number displayed is the total number of doses that this machine has produced
	5 When finished, continue to the next parameter or press  to exit programming mode.



Cronos Function

Description _____

- When enabled, this parameter displays a timer that times each shot.
- The corresponding timer is reset each time a button on the corresponding keypad is pressed
- When enabled, the Crono Function is continuously displayed. The time of day will not be displayed when this parameter is enabled.

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about three times):
	4 Press the or the button to change to ENABLED or DISABLED. Once the desired condition is displayed press the button to confirm.
	5 When finished, continue to the next parameter or press to exit programming mode.
	NOTE: When this parameter is ENABLED the display will be changed to the following (3 group version shown here):

Technician Level Parameters



User Name

Description

- This parameter allows the technician to program a 16 character user name.
- The user name is displayed continuously on the display on the second line.
- The user name is not displayed when the Crono Function is ENABLED.

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about two times):
	4 The first character in the user name is flashing. Press the or the button to change the character. Once the desired character is displayed press the button to advance to the next
	5 When finished, continue to the next parameter or press to exit programming mode.
	<p>The following is a listing of the available characters:</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789() : ; ' * + , - . / ! " # \$ % & ' () = > ? @ (BLANK SPACE)</p>



Pre-Brewing

English

Description _____

- This parameter allows the technician to enable or disable the pre-brewing (also called pre-infusion) function.
- Pre-brewing has two values to adjust. T(tot) is the total time for pre-brewing. T(on) is the amount of time that the brew valve is open during T(tot). The off time is calculated by subtracting T(on) from T(tot).



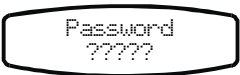
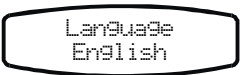















Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about three times):
	4 Press the or the button to change to ENABLED or DISABLED. Once the desired condition is displayed press the button to confirm.
	5 If ENABLED is chosen, the display then shows the values for T(tot) and T(on) for each button. Press or to adjust a value and press to advance to the next value.
	6 Repeat procedure 5 for each button (key) that you wish to activate pre-brewing. A setting of T(tot) = 0 and T(on) = 0 disables pre-brewing on the individual button.
	7 When finished, continue to the next parameter or press to exit programming mode.
	NOTE: The unit of measure for these values is 1/10 sec. Therefore a value of 10 equals 1 second.



Filter Alarm

Description

- This parameter allows the technician to preprogram an alarm that notifies the user when the water filter requires service or replacement.
- When the programmed volume of water has passed through the espresso machine the error message "Change Filter" is displayed.
- A value of 0 (zero) disables the filter alarm parameter.







Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the  button on the group 1 keypad until the following appears (about six times):
	4 Press the  button on the group 1 keypad until the following appears (about six times):
	5 Press the  or the  button to change the volume of water required before filter servicing/ replacing is recommended. When finished press  to confirm.
	6 Press the  or the  button to change the estimated flow rate of water. Normally this value should not be changed. When the desired value is displayed press  to confirm.
	7 When finished, continue to the next parameter or press  to exit programming mode.
	Note: To reset the function turn off the machine with  the button (press and hold approximately 3 seconds). Next, press and hold the  button while turning on using  the button.



Steam Boiler Automatic Fill

Description

- This parameter allows the technician to select the activation of the water pump during the steam boiler auto- fill cycle.
- Only under unusual circumstances would the option of “without pump” be chosen.
- The electronics installed in this espresso machine give priority to the brew boiler for pressure. The activation of the auto-fill cycle during the brewing process can reduce the overall dispensing pressure in the brew boiler.
- During the auto-fill cycle, if a brew cycle is chosen, the auto-fill cycle is delayed until all brew cycles are complete.

Display	Operating Procedure
LaMarzocco 09:30	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
Password ?????	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
Language English	3 Press the  button on the group 1 keypad until the following appears (about seven times):
Filling-up with PUMP	4 Press the  or the  button to change to “with pump” or “without pump”. Once the desired condition is displayed press the  button to confirm.
	5 When finished, continue to the next parameter or press  to exit programming mode.



Tea Water

Description

- This parameter allows the technician to select the activation of the water pump during hot water dispensing.
- When hot water is drawn from only the steam boiler this parameter should be set to “without pump”
- If the optional adjustable temperature hot water dispense valve is installed, this parameter is set to “with pump”.

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about eight times):
	4 Press the or the button to change to “with pump” or “without pump”. Once the desired condition is displayed press the button to confirm.
	5 When finished, continue to the next parameter or press to exit programming mode.



Steam Boiler Pressure Regulation

English

Description

- This espresso machine comes with the option of either a pressure switch or a temperature probe for maintaining pressure in the steam boiler.
- The pressure switch is standard on all espresso machines. In some cases a temperature probe may be used.
- The pressure switch regulates pressure via a diaphragm type pressure switch. The pressure may be adjusted via a small screw on the switch.
- When a temperature probe has been installed the pressure in the steam boiler is regulated by adjusting the temperature of the steam boiler via the display.
- Since the temperature of saturated water is proportional to the pressure it is possible to control the pressure of the steam boiler via a temperature probe.

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about nine times):
	4 Press the or the button to change the value to "Pressure-switch" or "Temp. Probe" then press to confirm selection. Normally this value should not be changed
	5 When finished, continue to the next parameter or press to exit programming mode.
	NOTE: When this parameter is set to "Temp. Probe" an additional parameter named "Steam Temp. Cor." is activated. When changing from Temp Probe to Pressure Switch it is required to cycle power off and on through the main switch to reset the steam boiler over temperature alarm.



Steam Boiler Temperature Correction

Description

- This parameter allows the technician to adjust the pressure of the steam boiler by raising or lowering the temperature of the steam boiler.
- This parameter is only active when the parameter "Steam heat.Type" is set to "Temp Probe".

Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about eight times):
	4 Press the or the button to adjust the temperature higher or lower. Each block is equal to 0.5°F. Once the desired setting is made press the button to confirm the setting.
	5 When finished, continue to the next parameter or press to exit programming mode.



CAUTION



The saturation temperature of water will vary will ambient atmospheric pressure. Tables in this manual are created for atmospheric pressure at sea level. Slight adjustment in temperature will be required for elevations other than sea level.



DANGER



THE STEAM BOILER CONTAINS WATER AT ELEVATED TEMPERATURES. WATER TEMPERATURE OVER 125° F CAN CAUSE SEVERE BURNS INSTANTLY OR DEATH FROM SCALDING.



Technician Password Assignment

English

Description _____

- This parameter allows the technician change the password necessary to access the Technician Level Parameters



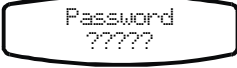










Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (about eleven times):
	4 Press the button and you will be prompted to enter the new password. Enter a new 5 digit password using a combination of the first 5 buttons on the group 1 keypad.
	5 When finished, continue to the next parameter or press to exit programming mode.



Coffee Credit

Description

- This parameter allows the coffee roaster to use coffee credits as a method of purchase.
- This parameter has two settings; ENABLED or DISABLED.
- When enabled an additional parameter named "CoffeeCred.Stock" is enabled. This additional parameter allows to coffee roaster to enter a specific amount of credit to the operator.
- When the coffee credit is zero the error "Coffee Credit Exhausted" is displayed and the keypad functions are disabled.

Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit roaster password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the  or the  button to change to ENABLED or DISABLED. Once the desired condition is displayed press the  button to confirm.
	4 If ENABLED is selected, press the  button to access the following setting
	5 Press the  or the  button to change the value. Once the desired value is displayed press the button  to confirm.
	6 When finished, continue to the next parameter or press  to exit programming mode.



Coffee Counter

Description _____

- This parameter allows the coffee roaster to monitor the amount of coffee credits used by the operator.
- This parameter is resettable.
- This parameter should be reset when new credits are input. If only additional credits are input, the valve can remain.

English







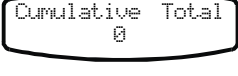
Display	Operating Procedure
	1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit roaster password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the button on the group 1 keypad until the following appears (one time):
	4 Press the button to reset the value.
	5 Press the button to confirm that reset is required.
	6 Once confirmed, the value will be set to zero.
	7 When finished, continue to the next parameter or press to exit programming mode.



Cumulative Total

Description _____

- This parameter allows the coffee roaster to monitor the total amount of coffee credits used by the operator.
- This parameter is not resettable.

Display	Operating Procedure
	<div>1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):</div> <div>2 Enter the 5 digit roaster password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:</div> <div>3 Press the  button on the group 1 keypad until the following appears (three times):</div> <div>4 When finished, continue to the next parameter or press  to exit programming mode.</div>
	
	
	



Coffee Credit Warning Threshold

English

Description _____

- This parameter allows the coffee roaster to input a number to warn the operator that there is only a certain amount of credit available.
- Once the coffee credit is less then or equal to the Warning Threshold the error “Coffee Credit Outrunning” is displayed until additional credit is input






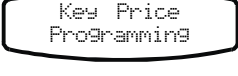

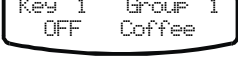




Display	Operating Procedure
	<div>1 Press and hold the button on the group 1 keypad until the following is displayed (approximately 10 seconds):</div> <div>2 Enter the 5 digit roaster password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:</div> <div>3 Press the button on the group 1 keypad until the following appears (three times):</div> <div>4 Press the or the button to change the value. Once the desired value is displayed press the button to confirm.</div> <div>5 When finished, continue to the next parameter or press to exit programming mode.</div>



Individual Button Price Programming

Description

- This parameter allows the coffee roaster to use coffee credits as a method of purchase.
- This parameter has two settings; ENABLED or DISABLED.
- When enabled an additional parameter named “CoffeeCred.Stock” is enabled. This additional parameter allows to coffee roaster to enter a specific amount of credit to the operator.
- When the coffee credit is zero the error “Coffee Credit Exhausted” is displayed and the keypad functions are disabled.

Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit roaster password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the  button on the group 1 keypad until the following appears (four times):
	4 Press the  button to access the settings in this parameter.
	5 Press the  or the  button to change the value. Once the desired value is displayed press the button  to confirm and to advance to the next button (key).
	6 When finished, continue to the next parameter or press  to exit programming mode.






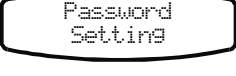





Coffee Roaster Password Assignment

Description _____

- This parameter allows the coffee roaster to change the password necessary to access the roaster Level Parameters.

English

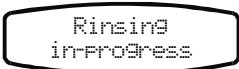



Display	Operating Procedure
	1 Press and hold the  button on the group 1 keypad until the following is displayed (approximately 10 seconds):
	2 Enter the 5 digit technician password using buttons 1-5 on the group 1 keypad. Once accepted the following appears:
	3 Press the  button on the group 1 keypad until the following appears (five times):
	4 Press the  button and you will be prompted to enter the new password. Enter a new 5 digit password using a combination of the first 5 buttons on the group 1 keypad. 
	5 When finished, continue to the next parameter or press  to exit programming mode.



Pre-Programmed Rinsing (Back Flushing) Routine

Description _____

- This espresso machine has a group rinsing (backflushing) routine built into the electronics.
- The rinsing routine is provided to give the operator more flexibility and freedom surrounding this operation.

Display	Operating Procedure
	<div><div><div>1</div><div>To activate the rinsing routine, press and hold the  button, then press the  button. This activates the rinsing routine on the individual group.</div></div><div><div>2</div><div>When activated, the water pump will turn on and the electric valve, for the specific group being rinsed, will cycle on and off. There are approximately 30 cycles preprogrammed at a 4 second interval. To stop the rinsing manually, press the  button.</div></div></div> <div><p>NOTE: To properly rinse the groups, place a small amount of cleaning detergent in a Blind portafilter basket and insert into the group to be rinsed prior to activating the rinsing routine.</p><p>CAUTION</p><p>Most detergents cause foaming during the cleaning process. This foam collects at the drain box and can prohibit waste water from draining properly. Rinse only one group at a time. Rinsing multiple groups simultaneously could cause the drain box to overflow.</p></div>

Description

- This espresso machine is equipped with several feedback mechanisms that alert the operator when an unusual condition occurs. Additionally the espresso machine will warn the operator when certain parameters fall below or above the programmed point. These errors and warnings will appear as a message in the display
- The following section will describe errors and warnings that may appear in the display

Message	Description	Remedy
First installat. Enter to confirm	This is the first installation of the espresso machine and the CPU is asking for verification of this event.	Press the ENTER button on group 1 keypad to confirm. Then will initialize the CPU and boot the electronics.
Coffee boiler filled?	This message is displayed after the boilers have been drained. The CPU is verifying that the coffee boiler is full.	Fill the coffee boiler with water (see operating manual for detailed instructions). Ensure that all air is bled from the coffee boiler using the air bleed screw atop each group casting. The CPU will display this message to ensure that the coffee boiler is full before supplying power to the coffee boiler heating element.
Corrupted Data	This message is displayed when the CPU does not understand an instruction.	Most likely the machine power was disconnected without first turning off the machine through the keypad and display. Turn off machine using main switch to cycle power on and off. This should clear the error
Filling-up in progress	This message is displayed when the steam boiler autofill cycle is activated and water is entering the steam boiler.	No action is required when this message is displayed. This message is only displayed to notify the operator of the active process.
Filling-up Alarm	This message is displayed when the CPU does not detect a full signal from the steam boiler within the set time interval.	When this message is displayed the CPU also shuts down and turns off power to the machine (see the parameter "Level Timeout"). Press the ON/OFF button to reset this error.
Steam Boiler Empty	This message is displayed when the CPU does not receive any signal from the Safety Probe in the steam boiler.	When this message is displayed the CPU turns off power to the steam boiler heating element. The only way to reset this error is to repair the Safety Probe to restore the signal to the CPU.
Steam Boiler Temperature	This message is displayed when the steam boiler temperature exceeds the maximum allowed temperature.	When this message is displayed call an authorized service technician to repair this fault. The also CPU turns power off to the steam boiler.
Flowmeter Alarm	This message is displayed when the CPU does not receive the appropriate signal from the flowmeter.	When the flowmeter alarm is displayed, the light on the corresponding button that initiated the brew cycle will begin to flash. This problem is a result of water not flowing through the flow meter. This can be caused by the coffee packed too tightly, a blockage in the tubes, a malfunctioning water pump, a faulty valve, or a damaged flowmeter. Call a service technician to fix this problem.
Coffee Boiler 1 Heating	This message is displayed when the coffee boiler does not reach the minimum temperature with the programmed time interval.	See the parameter "Heating Timeout" for more information. The number on the display corresponds to the number of the faulty coffee boiler.
Coffee Boiler 1 Temperature	This message is displayed when the coffee boiler temperature exceeds the maximum allowed temperature.	If this happens call an authorized service technician to repair this fault. When this message is displayed the CPU turns power off to the coffee boiler displayed. The number in the display corresponds to the faulty coffee boiler.
Autosteam 1 Temperature	This message is displayed when the autosteam temperature exceeds the maximum allowed temperature.	If this happens call an authorized service technician to repair this fault. The number in this message indicates the faulty Autosteam assembly.
Wrong Password	This message is displayed when password entered does not match the programmed password.	This error message will be displayed anytime an incorrect password is entered. The display will reset automatically after 3 seconds. Then an additional attempt may be made.



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Description

- This espresso machine has a very powerful CPU and many configurable settings.
- Additionally, there are many feedback controls employed in this espresso machine to troubleshoot problems should they occur.
- The following is a brief introduction to the controls and display and how they interact with the operator.

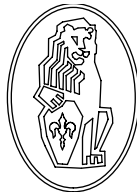
Digital Display



The digital display (display) is a backlit display capable of displaying 2 lines of 16 characters. The display enables the operator to interact with the espresso machine to visibly change parameter values. The display also provides valuable information to the operator. There are several warnings that can be displayed to alert the operator of an unusual condition or a fault. Additionally, simple messages are displayed alerting the operator that an action has been started or that a process needs to begin.

Programming Keypad

BREW BUTTON



TEA BUTTON



The first group and the second group buttons are used to change the values of the individual parameters. The first one decrease the value, the second one decrease it. Use these button even if it's a 3 or 4 group coffee machine.



The button is used to scroll through the menu. Additionally, this button also confirms some values within the parameters.



EE Programming Mode

Description

- To change any configurable parameter the operator must first enter into the programming mode.
- There are two levels within the programming mode that allow the restriction of specific parameters depending upon procedure entered.

The two programming levels are as follows:

- *Barista Level.* Limited parameters are available.
- *Factory Level.* Technician level parameters plus additional parameters are available.

Parameters description: See the Table of Contents of AV Model

The parameters are the same of the AV Model, the only difference is the use of the push buttons as described on previous page.

Operating Procedure

Barista Level

- 1** Turn off the main-switch (O position/ Off position)
- 2** Press and hold the tea button and turn on the main switch (1 position/On position) until the first of the following menu appears:
 - 1 COFFEE BOILER T.
 - 2 CUP HEATING
 - 3 TOTAL COFFEE
 - 4 TOTAL TEA
 - 5 LANGUAGE
 - 6 TEMPERATURE C/F
 - 7 CRONO FUNCTION (AVAILABLE FROM THE 1.06 SOFTWARE VERSION)
 - 8 USER NAME
 - 9 OFF

Factory Level

- 1** Turn off the main-switch (O position/ Off position)
- 2** Press and hold the first and the second brew button from the left and turn on the main switch (1 position/On position) until the first of the following menu appears:
 - 1 COFFEE BOILER T.
 - 2 CUP HEATING
 - 3 TOTAL COFFEE
 - 4 TOTAL TEA
 - 5 LANGUAGE
 - 6 TEMPERATURE C/F
 - 7 CRONO FUNCTION (AVAILABLE FROM THE 1.06 SOFTWARE VERSION)
 - 8 USER NAME
 - 9 TEMPERATURE CORRECTION
 - 10 FILLING UP
 - 11 TEA WATER FILLING
 - 12 GROUP NUMBER
 - 13 KP KI KD
 - 14 PID RANGE
 - 15 HEATING TIME OUT
 - 16 LEVEL PROBE DELAY
 - 17 LEVEL TIME OUT
 - 18 OFF


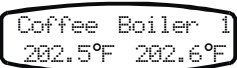






When finished, scroll through the OFF parameter with the tea button and push any BREW BOTTON to turn the machine ON.



(Barista Level Example) Nominal Coffee Boiler Temperature

Description

- This parameter is set at the factory at a preset nominal temperature.
- The set temperature of this parameter differs from the actual temperature of the water exiting the group to the coffee.
- To set the temperature of any espresso machine it is important to measure the temperature of the water exiting the group.


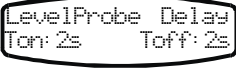







Display	Operating Procedure
 	<p>1 Turn off the main-switch (O position/ Off position)</p> <p>2 Press and hold the  button and turn on the main switch (1 position/On position) until the following is displayed (approximately 10 seconds):</p> <p>3 Press the first  or the second  button from the left to change the temperature on the displayed boiler. The measured temperature appears on the left and the set temperature appears on the right side of the display. Once the desired temperature is selected press the  button to confirm the selection and go through the menu.</p> <p>4 When finished, scroll through the OFF parameter with the  button and push any  button</p>



(Factory Level Example) Steam Boiler Level Delay

Description _____

- This parameter is safety feature that consider the motion of the water inside of the steam boiler.

Display	Operating Procedure
 	<p>1 Turn off the main-switch (O position/ Off position)</p> <p>2 Press and hold the first  and the second  button and turn on the main switch (1 position/On postion) until the following is displayed (approximately 10 seconds):</p> <p>3 Press the  or the  button to change the value of the parameter. When the desired value is displayed press to  confirm value.</p> <p>4 When finished, scroll through the OFF parameter with the  button and push any  button</p>



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