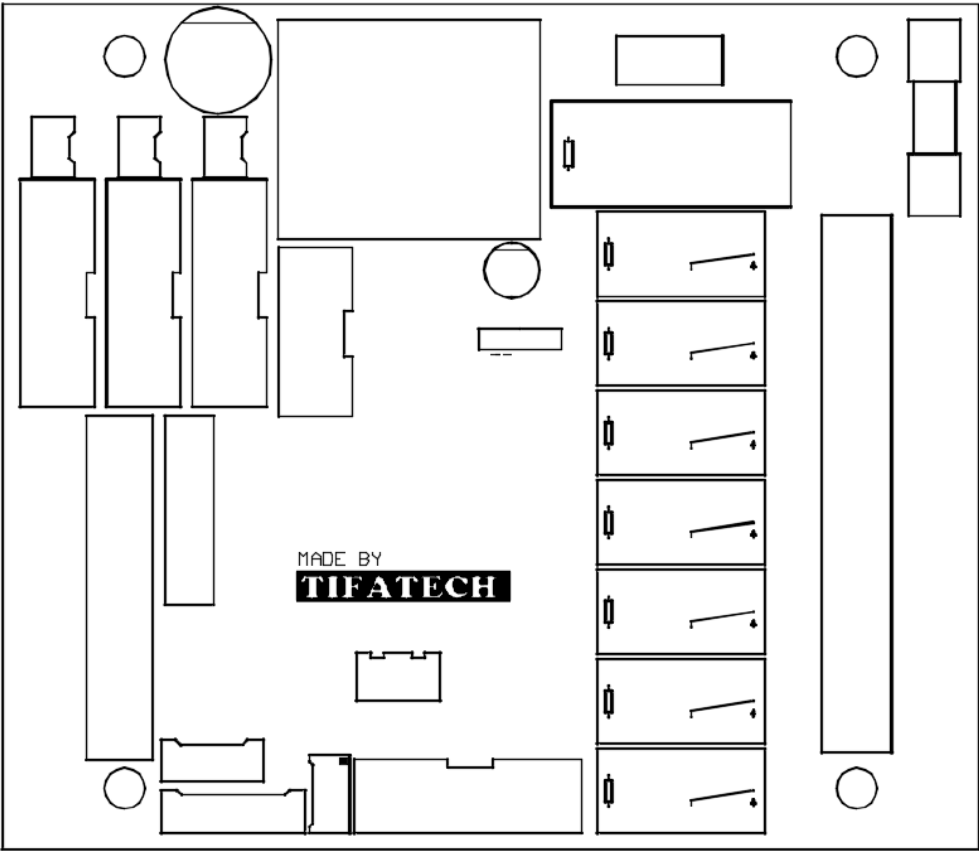


Coffee Machine Control Board

CLGL3G

Instruction Manual



PREFACE

Thank you for purchasing our **CLGL3G**, Control board for the Coffee machine.

This manual contains instructions for mounting, functions, operations, and notes when operating the **CLGL3G**. To ensure safe and correct use, thoroughly read and understand this manual before using this instrument.

To prevent accidents arising from the misuse of this instrument, please ensure the operator receives this manual.

HAZARD INTENSITY LEVELS

The level of risk and importance of the notification is determined by the following definitions. Always observe the warnings to ensure safety and prevent potential injury and product damage.



Important:

Alerts against unsafe practices. Observe *Important* notifications to prevent possible minor personal injury or damage to the board.



Warning:

Indicates a potentially hazardous situation that, if the *Warning* is ignored, could result in injury or death.



Note:

Gives additional information which may be helpful for the proper operation of the board.

**WARNINGS:**

Note: TIFATECH Co., Ltd declines all responsibility for damage to persons or property resulting from failure to follow the instructions and warning listed below when installing and using this board.

- Ensure every part of the machine including actuators and sensors is working properly before replacing the new control board.
- Ensure that the power supply voltage does not fluctuate by more than 6%.
- Before mounting or removing the control board, disconnect it from the power supply and wait a while for it to cool down.
- Do not remove any original electrical part of the board.
- Repairing, cleaning, or parts replacement should only be performed by **TIFATECH** or other qualified service personnel.
- Children should never be allowed to play with the board.
- This board is intended to only use for the espresso coffee machine control board. Do not use it for any other purpose.

**PRECAUTIONS****❖ Installation precautions**

Read thoroughly the following conditions before installing the **CLGL3G** board to the coffee machine.

The mounting location must be:

- No flammable, explosive gases
- No exposure to water.
- An ambient temperature of 0 to 70°C that does not change rapidly, and no icing.
- An ambient non-condensing humidity of 35 to 85 %RH.

❖ Operation and Maintenance Precautions

- Do not touch live terminals. This may cause an electrical shock or problems in operation.

- Ensure the board surface is completely dry before powering.
- Periodic cleaning will reduce the risk of damaging the board.

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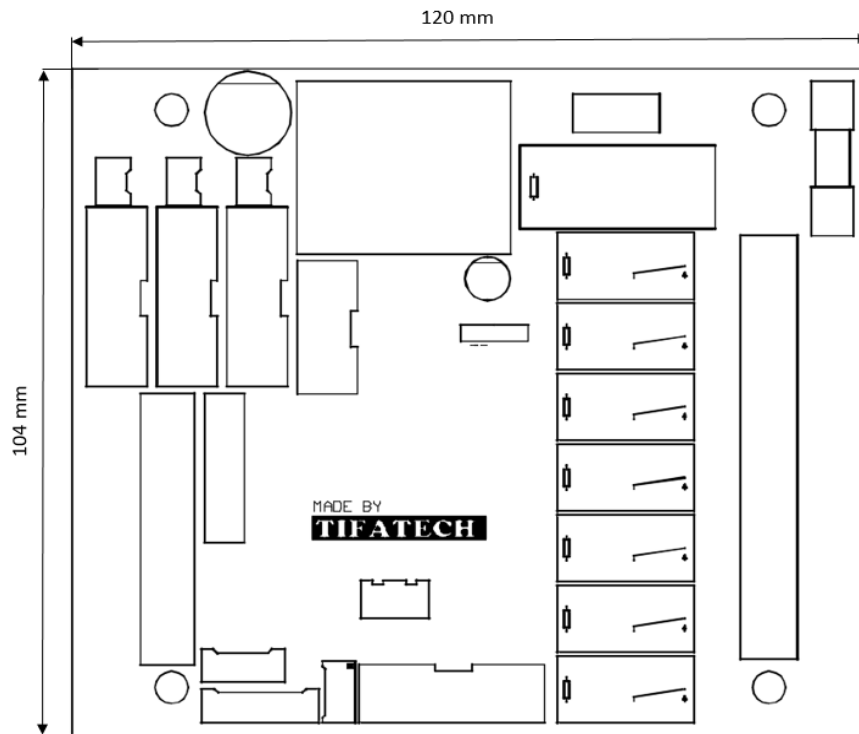
I. GENERAL

1. Introduction

- This manual contains important instructions regarding the safe intended use of the machine.
- If any damage or loss to this manual, request a copy from the **TIFATECH** manufacturer.

II. TECHNICAL SPECIFICATIONS

1. Dimensions (mm)



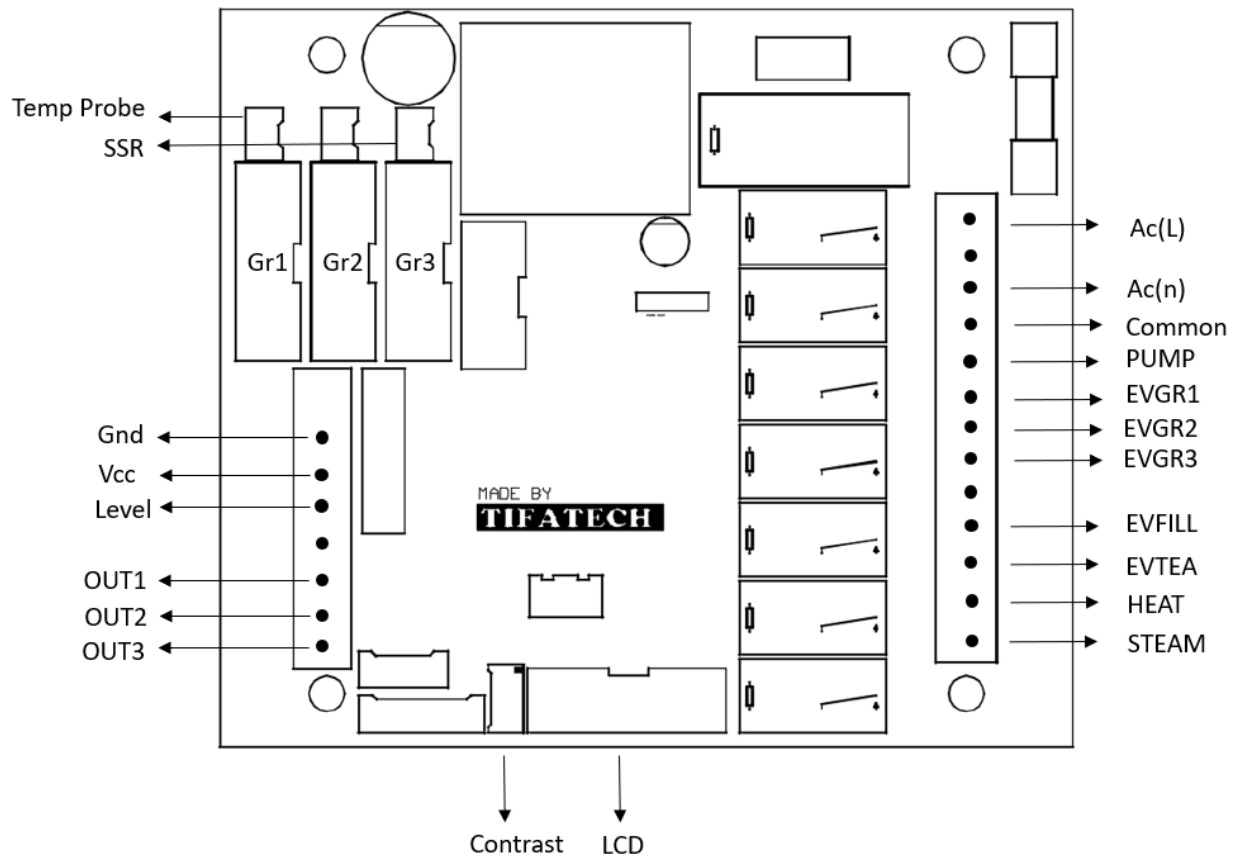
2. Specifications

- ❖ Power supply: 230V AC 50/60Hz
- ❖ Actuator voltage: 230V AC



Note: Please contact us if your country doesn't support the power supply requirement above.

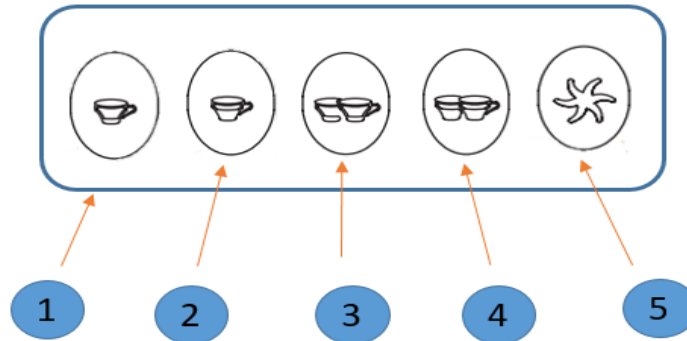
III. WIRING



Important: Any mistake in connecting actuators will affect the normal operation of the coffee machine, and even cause damage.


Terminal	Description
Gr1	Key + LED input of group 1
Gr2	Key + LED input of group 2
Gr3	Key + LED input of group 3
Gnd	Ground
Vcc	12V output
Level	Water level probe input
Temp prb	Temperature probe
OUT1	Water flow meter input of Group1
OUT2	Water flow meter input of Group2
OUT3	Water flow meter input of Group3
SSR	Solid state relay
Common	Load common
PUMP	Pump
EVGR1	Solenoid valve of group1
EVGR2	Solenoid valve of group2
EVGR3	Solenoid valve of group3
EVFILL	Solenoid valve of filling
EVTEA	Solenoid valve of tea
HEAT	Heating element
STEAM	Solenoid valve of steam
Ac(L), Ac(N)	Power supply AC 230V

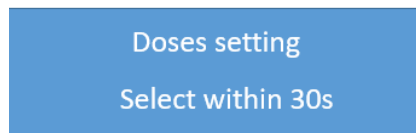
IV. PROGRAMMING AND USE



1. Programming the standard doses

To program coffee doses dispensed automatically by each drink button, follow the steps below:

Step 1: Press and hold the  button for 5 seconds to enter the setting mode. This button light starts to blink at 1 second period. The display will be like this:



Step 2: Press the dispensing option that you wish to program. The selected button light will be on along with the fifth button. The display will show the details on the programming button and its dispensing time:



Step 3: After reaching the desired dose, press the concerned button to save its dose.

Step 4: Repeat the steps above to program for other options. Otherwise, move to the next step.

Step 5: Wait for at least 30 seconds to finish the setting process.




Note: The dispensing options that are not programmed will be kept as the default setting. The new coffee doses will be valid just on the setting group, the others will be retained as before.

2. Coffee dispensing

- Press any drink button between 1 and 4 to start to dispense coffee. The light on the pressed button is on and the rests are off. The display will show its information and the brewing time:

BREWING	GR:1
Coffee	1

- Press the  key to stop dispensing immediately or it will stop automatically when reaching the programmed dosage. All lights return to on state.

3. Pre-infusion

3.1 Machines equipped with display

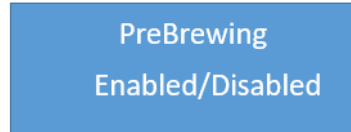
- Switch off the machine by pressing the third button while keeping the fifth button pressed so that the display shows OFF

OFF	hh:mm
-----	-------

- Hold down the fifth button longer than 10 seconds until the “*Language*” message is displayed

Language
English

- Press the button 5 repeatedly until the “*PreBrewing*” message display





- Use the first and second buttons to switch between “*Enabled*” and “*Disabled*” state

3.2 Machine is not equipped with display


- ❖ Turn off the power switch and hold down the:
 - Button 1 for enabling the pre-infusion function.
 - Button 2 for disabling the pre-infusion function.
- ❖ Turn the power switch on again and release it when all lights blink.


4. Switch to teapresso mode

Press and hold the key  of the desired group for 5 seconds until all the LEDs on the keyboard start flashing, to toggle between tea brewing and coffee brewing modes.

 *Note:* The tea brewing mode can be activated in the **Advanced Settings** section. Please refer to sections **11.25**, **11.26**, **11.27** for more details.

5. Tea brewing time programming

 *Note:* Please switch to tea brewing mode (*refer to section 10.w, 10.x, 10.y*) before proceeding the setup on the selected group.

Step 1: Press and hold  key for 5 seconds until its light starts to flash.

Step 2: Press one of the buttons 1-4 to start setting the brewing time for that button.

- Upon the first press, the machine will activate both the pump and group head to start brewing. When the desired brewing time is reached, press again to

start the infusion process; the pump and group head will turn off. The display will show its information and the brewing time:

Setting	Gr1
Tea	2

- Repeat this cycle for subsequent brew/infusion cycles. You can set up to 8 brew/infusion cycles.
- During brewing, the corresponding button light will be solid; during infusion, it will blink.

Step 3: Press and hold the Stop key for 3 seconds to save the brewing time on the selected button. Return to step 2 to set other buttons or proceed to step 4 to finish.

Step 4: Wait for at least 30 seconds to finish the setting process.

6. Brewing tea

Press one of the dose buttons 1-4 to start brewing with the preset time.



The display will show its information and the brewing time:

Extracting	Gr1
Tea	2

During the brewing process, the pump and group valve will turn on and off according to the corresponding ON/OFF time of each cycle.

The brewing process will automatically stop when the preset number of cycles on the pressed button is reached.


7. Automatic group cleaning

Press the  and  keys at the same time to activate the function.

The display will be like this:

A blue rectangular button with the word "Cleaning" centered in white text.

8. Time setting

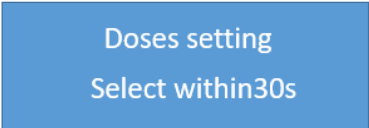
 *Note:* This setting can only be done on the keypad of Group 1

If your machine is in standby mode, follow the first step. Otherwise, move to the second one

- Press button 3 at the same time so that the display is like below:

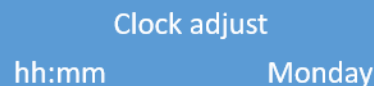
A blue rectangular display area showing "120°C" on the left, "11:23" on the right, and "SELECT DOSES" centered below them.

- Keep pressing the button 5 until the display shows:

A blue rectangular display area showing "Doses setting" on the top line and "Select within30s" on the bottom line.

To enter the function programming mode:

- Continuously press the fifth button until “*Clock adjust*” showing on your display:

A blue rectangular display area showing "Clock adjust" on the top line, "hh:mm" on the bottom left, and "Monday" on the bottom right.

8.1 Real-time clock setting

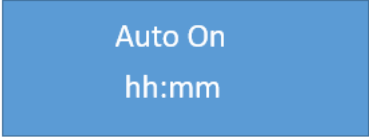
There are 3 setting items:

- Current hour
- Current minute
- Current weekday

Press button 3 to move to the desired one or buttons 1, 2 to change its value.

8.2 Auto ON

Continue to press button 5 until showing:




Auto On
hh:mm

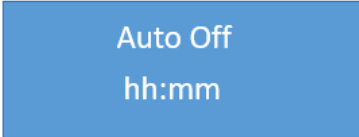
If the machine is in standby mode and the current time is greater than or equal to the programmed time, it will switch ON automatically.

Set the setting value to blank to cancel the timer. The following options will also be hidden.

8.3 Auto OFF

 *Note:* This setting is available only if auto ON is enabled.


Continue to press button 5 until showing:



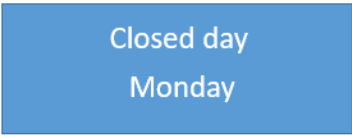
Auto Off
hh:mm

Press button 3 to move to the desired setting or buttons 1, 2 to change its value.

8.4 Closed day

 *Note:* This setting is available only if auto ON is enabled.

Continue to press button 5 until showing:



Closed day
Monday

If the current day of the week is equal to the set day, the machine will not automatically turn on at the set time on that day.

Use buttons 1, and 2 to adjust to the desired day.

9. Reset to the factory default

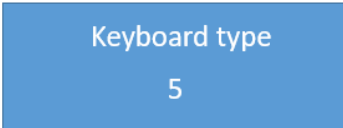
- Switch off the machine while pressing buttons 1, 3, and 5 at the same time
- Keep holding down buttons 1, 3, and 5 at the same time and turn the machine on again. Release if the display likes below.

A blue rectangular display showing the text "Reset complete" in white.

10. Choose the keyboard type

Switch off the machine then do the following instructions for choosing the keyboard type:

- *5 button:* Press and hold buttons 1, 2, and 5 at the same time then turn the machine ON again until the display likes below:

A blue rectangular display showing the text "Keyboard type" and the number "5" in white.

- *6 button:* Press and hold buttons 1, 2, and 6 to activate the 6 buttons keyboard type:

A blue rectangular display showing the text "Keyboard type" and the number "6" in white.

Restart the machine to work on the new setting.

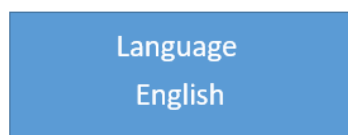
11. Advanced settings

To access this function, follow the steps below:

- If your machine is not in standby mode, press buttons 3 and 5 simultaneously.
The display would be like:



- Keep hitting down button 5 for 15 seconds until the display looks like the following:



11.1 Choose language

Change the system language using buttons 1 and 2. Press button 5 to confirm your change and move to the next setup.

There are 2 language options: *English, and Vietnamese.*

11.2 Publicity information (upper line)

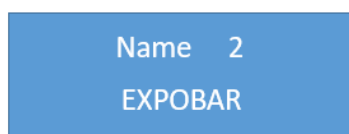
From the previous setup, press button 5 so that the display shows the message:



Use button 1 or 2 to change each character and button 3 to move the cursor to the next position.

11.3 Publicity information (lower line)

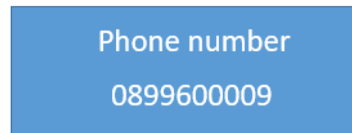
From the previous setup, press button 5 to display the message:



Do similarly as the upper line for adjusting characters.

11.4 Phone number

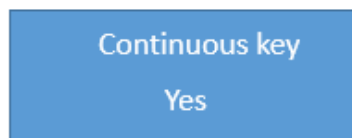
From the previous setup, press button 5 until the display shows:



Use button 1 or 2 to change each character and button 3 to move the cursor to the next position.

11.5 Continuous dispensing button

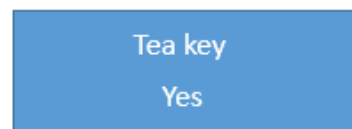
From the previous setup, press button 5 until the display shows:



Use button 1 or button 2 to enable or disable the continuous dispensing button respectively.

11.6 Hot water button

From the previous setup, press button 5 until the display shows:



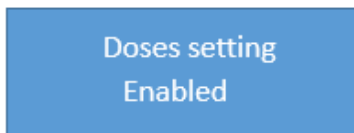
Use button 1 or 2 to confirm “Yes/No”



Note: Yes option is just available for machines controlling the tea delivery by a separate solenoid valve.

11.7 Dose programming

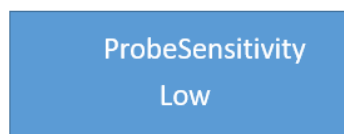
From the previous setup, press button 5 until the display shows:



Use button 1 and button 2 to “*Enabled/Disabled*” the dose programming function respectively.

11.8 Probe sensitivity

From the previous setup, press button 5 until the display shows:

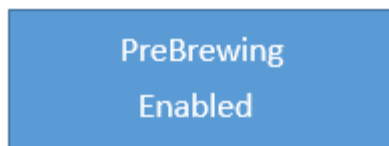


Use buttons 1 and 2 to change values between “*Low/Medium/High*”

The lower the water sensor sensitivity, the longer the filling mode switching time will be, and vice versa.


11.9 Pre-infusion

From the previous setup, press button 5 until the display shows:

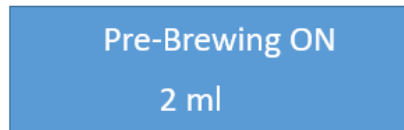


Use button 1 and button 2 to “*Enabled/Disabled*” the dose programming function respectively.

11.10 Water amount of pre-infusion

 *Note:* This setting is only available when the pre-infusion mode is enabled.


From the previous setup, press button 5 until the display shows:



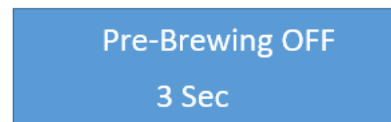
Pre-Brewing ON
2 ml

Use button 1 and button 2 adjust the water quantity of the pre-infusion.

11.11 Pre-infusion OFF time

 *Note:* This setting is only available when the pre-infusion mode is enabled.

From the previous setup, press button 5 until the display shows:

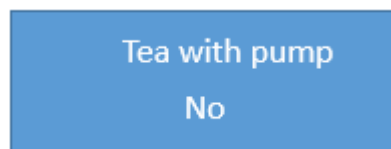


Pre-Brewing OFF
3 Sec

Use button 1 and button 2 change the pause of brewing in the infusion phase.

11.12 Tea with pump

From the previous setup, press button 5 until the display shows:



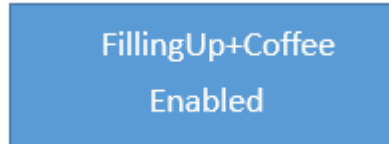
Tea with pump
No

Use button 1 and button 2 to “*Enabled/Disabled*” the dose programming function respectively.

If this function is enabled, the pump will also be opened along with a tea solenoid valve when delivering hot water.

11.13 Dispensing while filling

From the previous setup, press button 5 until the display shows:



FillingUp+Coffee
Enabled

Use button 1 and button 2 to “*Enabled/Disabled*” the dose programming function respectively.

If this setting is disabled, it can’t dispense coffee while in the filling process.

11.14 LED flashing sequence (Only for 5-button keyboard)

From the previous setup, press button 5 until the display shows:




Rotation LED
Disabled

Use buttons 1 and 2 to change between the “*Enabled*” and “*Disabled*” states.

 *Note:*

- When “*Enabled*”, all lights will flash in sequence if the machine is in a normal state
- When “*Disabled*”, all LEDs will be OFF instead.

11.15 Heating relay control

 *Note:* Only change this function when the heating element is controlled by relay.




Heat Relay Ctrl
By Temperature


- “By Filling”: Heating element is always on when the boiler is full of water and only turns off when the boiler is empty.
- “By Temperature”: Heating relay operates in sync with the SSR.

11.16 Display temperature

From the previous setup, press button 5 until the display shows:

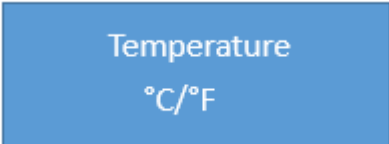


Disp.Temperat.
Enabled

 *Note:* All the next setting items will be ignored if the temperature display is disabled.

11.17 Temperature unit

From the previous setup, press button 5 until the display shows:



Temperature
°C/°F

Use buttons 1 or 2 to select the desired unit.

11.18 Boiler temperature

From the previous setup, press button 5 until the display shows:



Boiler Temp
110 °C

Use buttons 1 and 2 to change to the expected temperature.


11.19 Proportional band (P)

From the previous setup, press button 5 until the display shows:



Use buttons 1 and 2 to change to the desired number.

11.20 Hysteresis (HYS)

 *Note:* This setting is only available when the P value is set to be equal to 0

From the previous step, press button 5 until the display shows:



Use buttons 1 and 2 to change to the desired number.

11.21 Integral time (I)

From the previous setup, press button 5 until the display shows:



Use buttons 1 and 2 to change to the desired number.

11.22 Derivative time

From the previous setup, press button 5 until the display shows:




Setd
50

Use buttons 1 and 2 to change to the desired number.

11.23 Proportional cycle

From the previous setup, press button 5 until the display shows:

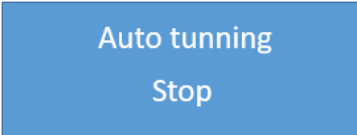


Set cyc
3

Use buttons 1 and 2 to change to the desired number.

11.24 Automatic PID tuning

From the previous setup, press button 5 until the display shows



Auto tuning
Stop

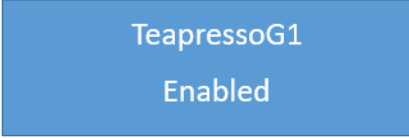
When using for the first time, users should activate the PID tuning mode (using the 1, 2 keys) to allow the machine to automatically search for the best PID parameter set, helping the temperature control process to be more precise when operating.



Note: All coffee brewing and hot water extraction functions on the machine are blocked when in this mode.

11.25 Tea mode on Group1

From the previous setup, press button 5 until the display shows:

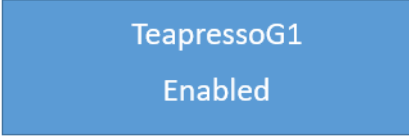
A blue rectangular display showing the text "TeapressoG1" on the top line and "Enabled" on the bottom line.

Use buttons 1 and 2 to change between the “*Enabled*” and “*Disabled*” states.

- “*Enabled*”: Group1 works in tea brewing mode.
- “*Disabled*” Group1 works in coffee brewing mode.

11.26 Tea mode on Group2

From the previous setup, press button 5 until the display shows:


A blue rectangular display showing the text "TeapressoG1" on the top line and "Enabled" on the bottom line.

Use buttons 1 and 2 to change between the “*Enabled*” and “*Disabled*” states.

- “*Enabled*”: Group2 works in tea brewing mode.
- “*Disabled*” Group2 works in coffee brewing mode.

11.27 Tea mode on Group3

From the previous setup, press button 5 until the display shows:

A blue rectangular display showing the text "TeapressoG1" on the top line and "Enabled" on the bottom line.

Use buttons 1 and 2 to change between the “*Enabled*” and “*Disabled*” states.

- “*Enabled*”: Group3 works in tea brewing mode.
- “*Disabled*” Group3 works in coffee brewing mode.

12. Alarms

Description	Display
Flow meter error	Alarm Flowmeter Gr1
Temperature probe error	T.probeUnconnect
Pump is opened over 120 over	Time-out alarm Pump TooLong
Filling process is over 120 seconds	Time-out alarm Boiler FillingUp

V. ERROR DETECTION AND TROUBLESHOOTING

1. Water flow meter error

1.1 Error symptom

❖ *When programming:*

The programming process will also start normally but the coffee amount on the error group won't be saved afterward.

The key which is programmed in error condition will be locked after that.

❖ *When dispensing:*

- When dispensing, if it has malfunction at the water flow meter, the process won't stop automatically.

1.2 Solution

Check if the connection to the water flow meter is correct and stable.

Ensure the water flow meter still works properly on another group. Otherwise, you need to replace it with a new one.

2. Autofill problem

2.1 Error symptom

- The boiler is overfull of water.
- The boiler is underfull of water.



Warning: Any error above needs to be handled instantaneously. Otherwise, it will interrupt your machine's operation and even cause damage to the pump.

2.2 Solution

- Water level probe: Removing the level probe and checking for continuity, replace the new one if needed.
- Autofill solenoid: If the water pump is running and the machine is trying to fill but not making any progress, the solenoid may be stuck shut, not allowing water to fill the boiler. Correct or replace if needed.

TIFATECH Co., Ltd

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