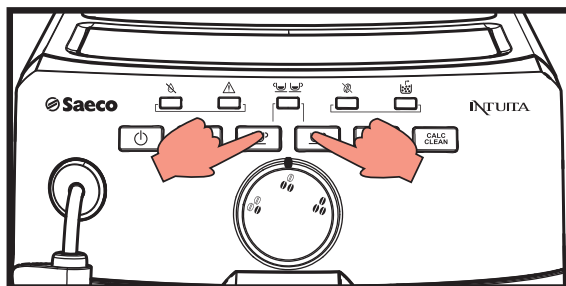### 5.1.4.   Intuita

To enter Test Mode

The machine enters in test mode by pushing the ESPRESSO and COFFEE buttons and then turning ON the AC power.

As long as the buttons are pressed the machine shows LED Double Service flashing.

When the buttons are released the machine passes to the first level of the test.

There are 6 different level, in each level the coffee-machine can execute different commands

Level 0: The machine tests the LED:
a)Turn ON every LED
b)Turn OFF every LED
c)Sequence turn ON every LED

Level 1: The machine tests the buttons:
a)Button Hot Water
b)Button Espresso
c)Button Coffee
d)Button Steam
e)Button Calc Clean

Level 2: The machine tests the other input signals:
a)Capacitive sensor in water tank
b)Switch door close / open
c)Switch brewing unit presence
d)Switch dump box presence

Level 3: The machine tests the aroma trimmer:
a)Aroma position 1 bean
b)Aroma position 2 beans
c)Aroma position 3 beans

Level 4: The machine tests the water circuit:
a)EV
b)Pump (plus flux meter)
c)Brewing unit moves to work
d)Brewing unit moves to home

Level 5: The machine tests the coffee powder circuit:
a)Heater (plus NTC sensor)
b)Grinder (plus rotation pick up)

The user can switch the level by pressing the ON/OFF button, the machine shows the level of the test:

a) Level 1: LED No Water
b) Level 2: LED No Water, LED Error
c) Level 3: LED No Water, LED Error, LED Double
d) Level 4: LED No Water, LED Error, LED Double, LED No Beans
e) Level 5: LED No Water, LED Error, LED Double, LED No Beans, LED Dump Box

	TEST MODE Level 0	
Pressing botton ON/OFF		
	TEST MODE Level 1	
Pressing botton ON/OFF		
	TEST MODE Level 2	
Pressing botton ON/OFF		
	TEST MODE Level 3	
Pressing botton ON/OFF		
	TEST MODE Level 4	
Pressing botton ON/OFF		
	TEST MODE Level 5	
Pressing botton ON/OFF		
	TEST MODE Level 0	
Pressing botton ON/OFF		

Level 0 (LED)

Description :
Verify keyboard LED
Action :
LED ON/OFF always blink during the test.
The others LED blink once, then only one LED is ON starting from No Water, Error, Double, No Beans, Dump Box, Calc Clean, Steam, Coffee, Espresso, Hot Water.
The sequence is always repeated.
Note

LED	COLOR
No Water	RED
Error	RED
Double	GREEN
No Beans	RED
Dump Box	RED
Calc Clean	YELLOW
Steam	GREEN
Coffee	GREEN
Espresso	GREEN
Hot Water	GREEN
ON/OFF	RED

Pressing ON/OFF button moves to next level
On ERROR verify:
Cable connection
Power supply
Driver 74HC595 presence and welding
Driver 74HC595 orientation
LED presence and welding
LED orientation
Polarization resistor presence and welding

Level 1 (Buttons) [LED No Water ON]

Description:
Verify the keyboard buttons (each button has a rear LED)
Action:
Pressing the button where the rear LED is ON changes the LED OFF, follow the moving LED
If you are not able to turn the LED OFF detects an error condition over the button switch
Start condition
All LED are OFF
Pressing ON/OFF button moves to next level
On ERROR verify:
Cable connection
Power supply
Push button presence and welding

Level 2 (switch) [LED No Water + Error ON]
Description:
Verify the security switch connection

Action:
Mechanical move the switch and verify the relative electrical feedback
Start condition (no water tank, no BU, no dump box, door open)
All LED are blinking (because every switch is OFF)
Closing every switch turns ON the LED

Switch	LED
Water presence	hot water
BU presence	espresso
Door open	coffee
Dump box	steam

Press ON/OFF button moves to next level

On ERROR verify:
Cable connection
Power supply

Level 3 (Aroma trimmer) [LED No Water + Error + Double ON]
Description:
Verify the aroma trimmer
Action:
Rotate aroma trimmer, 3 position 3 LED
Start condition none

Aroma	LED
1 bean	hot water
2 beans	hot water + espresso
3 beans	hot water + espresso + coffee

Press ON/OFF button moves to next level

On ERROR verify:
Cable connection
Power supply

Level 4 (Water Circuit) [LED No Water + Error + Double + No Beans ON]
Description:
Verify the water circuit component: flux meter, pump, electro valve, brewing unit
Action:
Turn on and off actuators along water and coffee beverage circuit.

Start condition (water tank full, BU, dump box, door closed)

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
OK	OFF	OFF	OFF	OFF	OFF	OFF

Press one time Hot Water button to open electro valve

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
OK		ON				

Press Epresso button to turn on pump

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
During the test			BLINK			OFF
OK			ON			OFF
ERROR (no flux meter feedback)			ON			ON

Press one time Hot Water button to close electro valve

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
OK		OFF				

Move BU to work position. Press Coffee button to move BU to work position

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
During the test				BLINK		OFF
OK				ON		OFF
Work position not reached				ON		ON
Overcurrent (with or without BU)				ON		BLINK

Move BU to home position. Press Steam button to move BU to home position

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
During test					BLINK	OFF
OK					ON	OFF
Home position not reached					ON	ON
Overcurrent (with or without BU)					ON	BLINK

Move BU to rest position. Press Calc Clean button to move BU to rest position

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
OK				BLINK	BLINK	

Press ON/OFF button moves to next level
On ERROR verify:
Cable connection
Power supply

Level 5 (Grinder & Heater)
[LED No Water + Error + Double + No Beans + Dump Box ON]
Description:
Verify temperature increase in the heater and grinder rotation
Action:
Turn on and off actuators

Start condition (water tank full, BU, dump box, door close)

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
OK	OFF	OFF	OFF	OFF	OFF	OFF

Press once Hot Water button to check heater NTC sensor

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
During the test		BLINK				OFF
OK		ON				OFF
ERROR NTC open or short circuit		ON				ON

Press Espresso button to check heater power on (you need current sense / measure)

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
OK CURRENT SENSE > 1 A			ON			OFF
Heater already hot						BLINK
ERROR CURRENT SENSE > 1 A			ON			OFF

Press Coffee button to check grinder rotation

LED	ON/OFF	Hot water	Espresso	Coffee	Steam	Calc clean
During the test				BLINK		OFF
OK				ON		OFF
No grinder rotation				ON		ON

Press ON/OFF button moves to next level (level 0)
On ERROR verify:
Cable connection
Power supply