Prelude

Online English Version
Issued April 2009 Revision 2

Technical Manual

Westomatic
The ultimate coffee house experience

PRELUDE

TECHNICAL MANUAL

Published by:

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Information contained herein is correct at time of print:

Revision list:

~~This manual~~	~~1st Issue~~	~~November 2007~~
New Brewer	2nd Issue	November 2008

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Issue: 2

1. Safety

- This document is intended for use as a reference book for qualified service engineers.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- Installation and service activity, including replacement of the mains cable, on this vending machine should only be undertaken by a competent person who is fully conversant with the potential dangers of working on live electrical equipment and mains pressure water systems.
- Westomatic Vending Services Ltd. further recommends that any person undertaking installation and/or service activity on this vending machine has previously attended a formal Westomatic Vending Services Ltd. training course specific to this vending machine type.
- Extension cables or longer mains leads must not be used to power this vending machine.
- The mains lead should be kept away from hot surfaces and sharp edges.
- Each new Prelude vending machine is supplied with a new mains water inlet hose. Do not reuse an existing or old water hose.
- Prior to any service activity, switch off and isolate the water and electrical supply. If in doubt refer to BS7671 for safe isolation procedures.
- Servicing of live equipment must **never** be undertaken.
- Precautions should always be taken by using insulated tools and insulated probes on test equipment. HSE Guidance Notes 38 provides guidance on the selection of suitable test probes, leads, lamps, voltage indicating devices and other measurement equipment used by electricians when working on or investigating power circuits.
- There are no user serviceable parts inside the Prelude vending machine.
- The prelude vending machine must be cleaned on a regular basis (refer to the section within this document on how to clean your machine).
- The Prelude vending machine must not be cleaned using a water jet.
- Do not make modifications or alterations to the Prelude vending machine, and not to use the vending machine for any other purpose for which it has been designed.
- In order to ensure reliable machine operation and ensure safe working practices, this technical manual and the associated Operator Instructions must be stored inside the purpose built document holder located within the vending machine and be accessible to all staff involved in the machine installation, operation, maintenance and cleaning at any time.

2. Preface

This document is intended to be used as a reference book for qualified installation engineers and service technicians to be able to safely transport, install, commission, program, maintain, repair and fault find the Prelude vending machine.

Information on the operation, the use of and cleaning of the machine can be found in the operational and cleaning sections of this manual.

2.1.   Prelude Documentation Available

The following technical documentation is available for the Prelude vending machine.

- Part number 350095 - This Manual
- Part number 350098 - Parts and Electrical Schematics Manual
- Part number 350089 - Quick Reference Guide
- Part number 350088 - Operator Guide
- Part number 350093 - Installation Guide

2.2.   Concepts and Definitions

Description	Definition
User	The customer or any other person who uses the machine exclusively for vending a drink. The user will have **NO** access to the inside of the machine.
Service Technician	A competent professional who has been trained on the machine and is aware of the dangers involved. The engineer must have a thorough knowledge of the electronics and mechanical parts of the machine and be qualified to install, commission, program, maintain and repair the machine.
Installation Engineer	The Installation Engineer is a competent professional who has been trained on the machine and is aware of the dangers involved. The engineer must have a thorough knowledge of the electronics and mechanical parts of the machine and be qualified to install, commission, program, maintain and repair the machine.
Operator	The Operator is a qualified individual who is responsible for the cleaning of the machine, knowledge of removing brewers for periodic cleaning and filling of ingredient and cups.
Service Operator	This person is someone who can carry out the duties of the Service Technician and the Operator, and therefore must be competent in both of these areas.

Westomatic Vending Services Ltd. offers training programs for the Prelude vending machine. Please contact your Regional Development Manager for more information.

3. Liability & Warranty

3.1. General

All details and indications for the operation, maintenance and cleaning of this vending machine have been made under consideration of our knowledge and experiences collected up to now.

Westomatic Vending Services Ltd. reserves the right to make technical changes to this machine type without notice as a result of continuous product development.

Text translations are made to the best of Westomatic Vending Services Ltd.'s knowledge. However, we exclude any liability for translation errors. The English version of the operation instructions shall prevail for warranty purposes.

The presented texts and drawings do not necessarily correspond to the scope of delivery. The drawings and graphics are not in the scale 1:1.

The user manual instructions contained herein must be carefully read before machine installation or operation is started.

Westomatic Vending Services Ltd. does not bear any liability for any damages or disturbances resulting from non-observance of the User Manual or Operator Instructions.

It is strictly forbidden to make this user manual or the operator instructions accessible to any third party. Non-observance will result in a claim for damages.

3.2. Spare Parts

Only genuine, original Westomatic Vending Services Ltd. spare parts should be used when servicing this machine.

ATTENTION!
Faulty or defective non-Westomatic spare parts may lead to incorrect machine operation or damage. In the case where non-Westomatic spare parts are used, all obligations of Westomatic Vending Services Ltd. such as warranties, service contracts etc. are void without prior notice & agreement.

4. Responsibility Of The Operating Company

In order to avoid faulty machine operation and ensure safe operator/cleaning practices, this user manual and the associated operator guide should be stored inside the purpose built document holder located within the vending machine and be accessible to all staff involved in the machine installation, operation, maintenance and cleaning at any time.

This vending machine must only be operated within a safe and reliable environment.

The information in this document relating to machine operational safety is based upon the essential health & safety requirements in force within the European Union at the time of publication. During the operating life of the machine, it is the responsibility of the operating company to assess any differences in any new legislation and update the operational safety instructions along with their own safe working practices accordingly. Outside the European Union, the regulations valid at the place of installation and the regional regulations therein must be observed.

5. Appropriate Use

Westomatic Vending Services Ltd. will only undertake machine operational liability when the machine is used appropriately and in accordance with the operating instructions to perform assembly, operational, servicing / maintenance and cleaning activities.

NOTE:
Any machine usage outside of the above scope is forbidden and is defined as 'not appropriate'. In this situation, any entitlement to damages against Westomatic Vending Services Ltd. and / or representatives because of inappropriate use will be excluded. The operating company alone is liable for all damages arising from inappropriate use.

ATTENTION!
The operating company is obliged to install the necessary safety installations to ensure the vending machine can be stopped immediately in the event of danger or disturbance.

6. Transport Inspection

6.1. Safety Instructions

- **WARNING! Danger of injury!**

- During lifting, swivelling and lowering of the vending machine the danger of injury exists by falling objects. The machine may be damaged or destroyed by inappropriate transport. Therefore, the following safety instructions must be observed:

- Only use permitted hoisting devices and slinging means with sufficient lifting capacity.

- Only fasten the machine at the designated suspension points. Pay attention to safe fitting of any sling apparatus.

- Ropes and belts have to be equipped with snap hooks. Do not use damaged or defective ropes.

- Do NOT fasten ropes and belts at sharp edges.

- Whilst attaching any sling apparatus keep in mind the centre of gravity of the machine.

- Do not lift, swivel or lower any load above the heads of persons.

- Always move the machine with the utmost attention and accuracy.

6.2. Inspection Upon Delivery

Once your machine has been delivered, please immediately check for completeness and possible damage caused by transportation.

In case of externally recognisable transport damages, please do not accept delivery or only under reservation. Note the extent of any damage on the transport documents/delivery note of the forwarding agent. If required, please contact Westomatic Vending Services Ltd.'s "*One Call Helpline*" as soon as possible to register any product damage as a customer complaint can only be asserted within the currently valid time limits.

7. Services

7.1.   Electrical Services

Maximum electrical demand for the Prelude Vending Machine is:

Supply Voltage   230VAC
Current   7.4 Amps
Power   1.7 Kilowatts (Maximum loading)
Frequency   50Hz
Internal Motor voltage   24Vdc
Water ingress protection   IPX0

A 13 Amp fused spur protected by a 30mA R.C.D. and wired in accordance with BS7671 must be used to supply power to the machine.

7.2.   Water Services

Water supply from a 15 mm (1/2") rising mains outlet.
Minimum water pressure   0.13MPa (20 p.s.i. / 1.40 Bar)
Maximum water pressure   0.84MPa (120 p.s.i. / 8.40 Bar)
See also section 8.6

NOTE:
Reference should be made to the Model Water Bylaws 1986 Statutory Instrument (SI) No.1147.

7.3.   Noise Levels

The Prelude has been designed to work within a user-friendly environment and will therefore not exceed a noise level of 70dB.

8. Machine Specification

8.1. External Features – Whole Bean / FB Tea/Coffee Machine
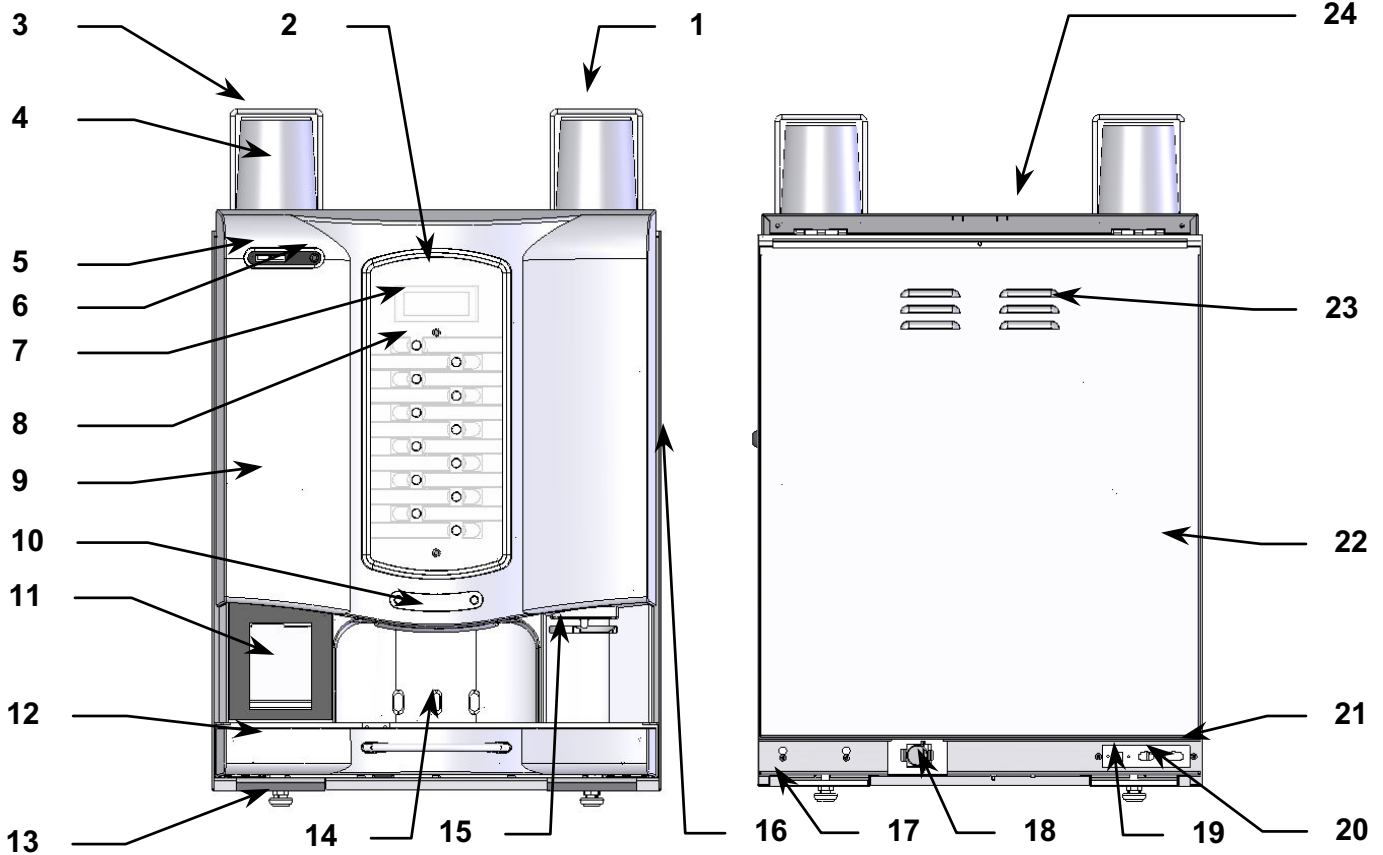
KEY:

1. Canister Anti-Tamper Bar*
2. Menu Panel
3. Fresh Brew / BTC Canister Lid*
4. Fresh Brew / BTC Canister Body*
5. Coin Entry**
6. Coin Reject Button**
7. LCD Screen
8. Selection Button (x12)
9. Door
10. Red Warning LED (x2)
11. Coin Return Flap**
12. Drip Tray
13. Adjustable Foot (X4)
14. Cup Sensor

15. Stationary Cup Arm**
16. Door Lock
17. Mains Power Input
18. Water Inlet
19. USB Type B**
20. MDB Connection
21. Base Cabinet Controls**
22. Rear Cover
23. Louver (X6)
24. Lid

*Not present on Instant only machines
**Optional

8.2. Internal Features – Whole Bean /FB Tea/Coffee Machine

Note: For information relating to positions P1 to P6, please refer to section 8.7.
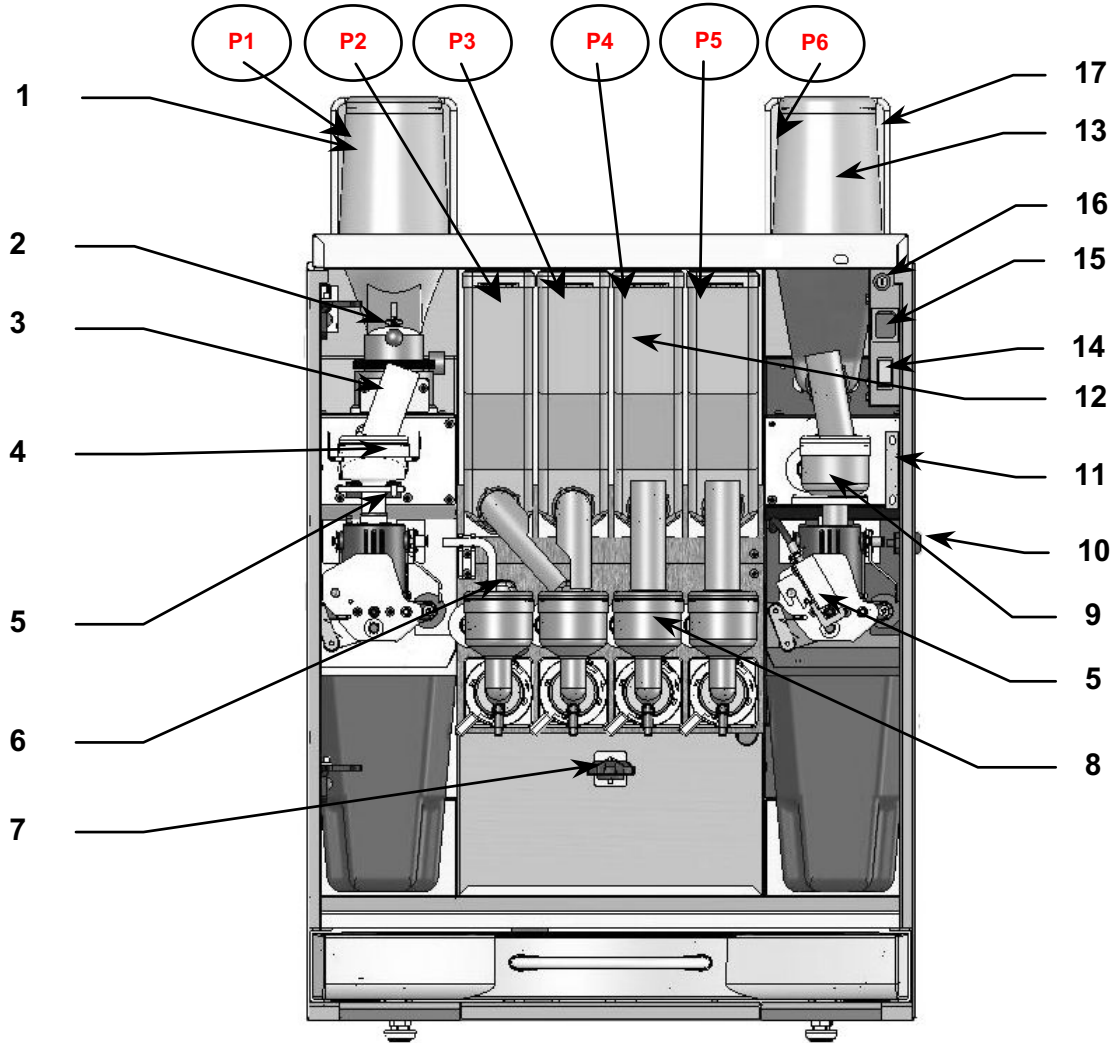
KEY:

1. BTC Canister (Or FB Canister)
2. Bean To Cup Canister Slide Plate
3. Ingredient shoot
4. Whole Bean Flexi-Bowl
5. FB Tea Pincher Mechanism
6. Cremer pipe
7. Fixed Dispense Head
8. Whipper Bowl
9. FB Tea Brewer
10. Door Lock (via a key)
11. Door Latch And Service Switch
12. Instant Canisters
13. Fresh Brew Canister
14. One Button Flush
15. On/Off Power Switch
16. Main Fuse Holder
17. Canister lid clamp.

8.3. Internal Features – Instant Only Machine

Note: For information relating to positions P1 to P6, please refer to section 8.7.
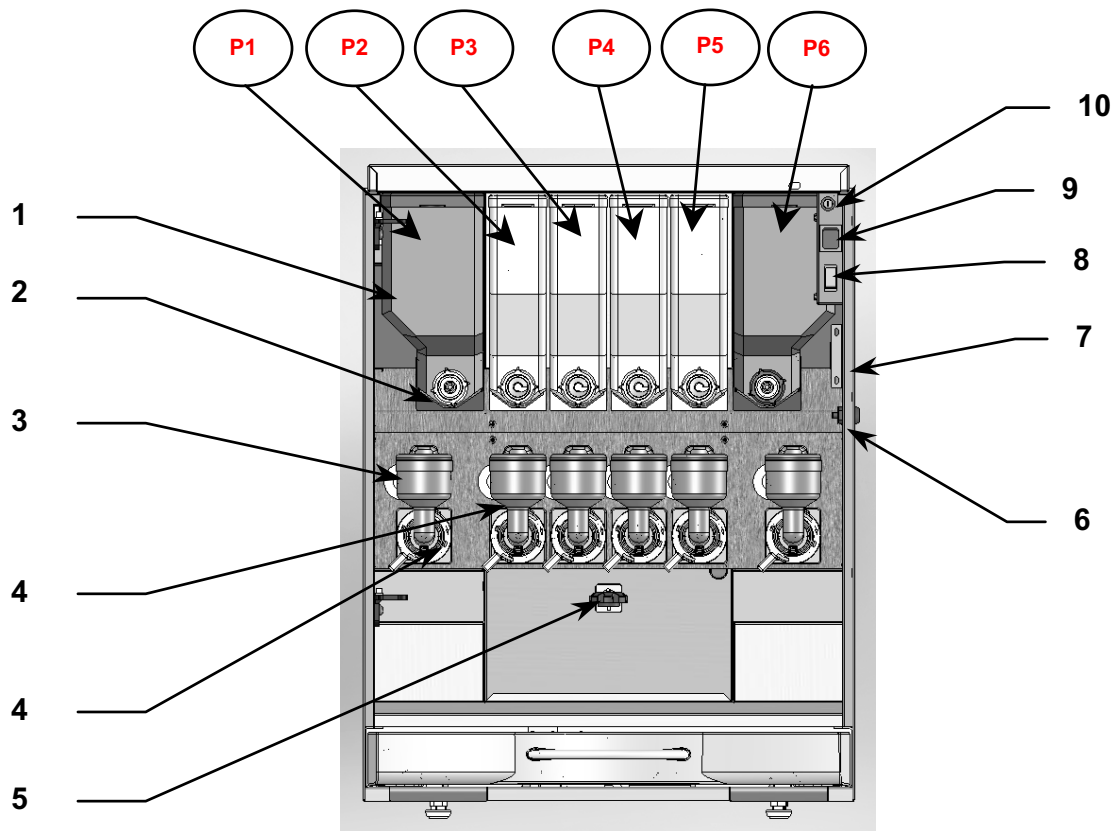
KEY:
1.   Instant Canister
2.   Instant Canister Auger
3.   Extraction Hood
4.   Whipper Bowl
5.   Fixed Dispense Head
6.   Door Lock (via a key)
7.   Door Latch And Service Switch
8.   One Button Flush
9.   On/Off Power Switch
10.   Main Fuse Holder

8.4. Keypad Layout – Operational Mode
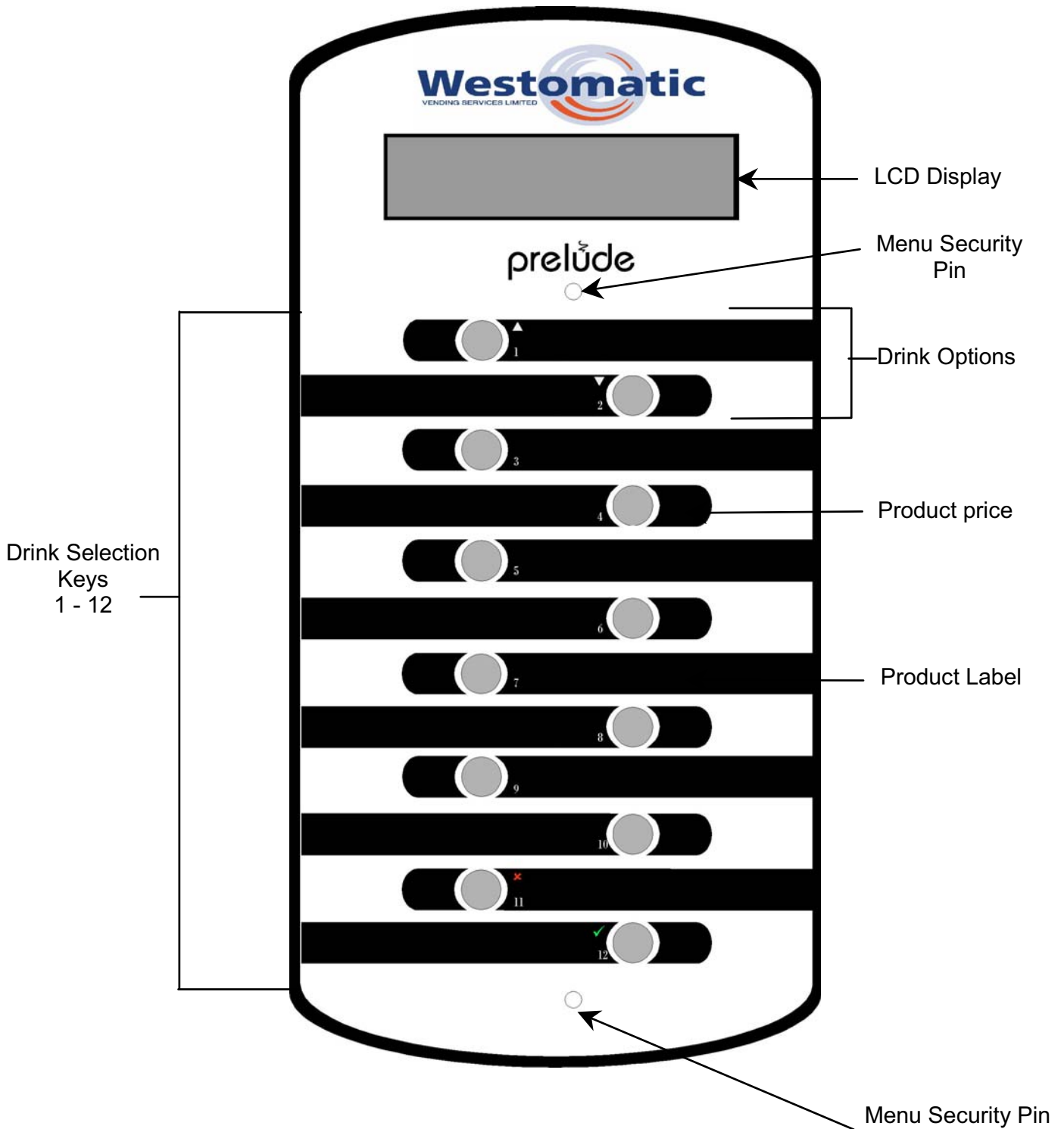
8.5. Keypad Layout - Test / Programming / Service Mode

LCD Display

prelude

↑ 'Scroll Up'
Button 1

↓ 'Scroll Down'
Button 2

'Dry Throw'
Button 10

X 'Cancel'
Button 11

✓ 'Enter' / 'Accept'
Button 12
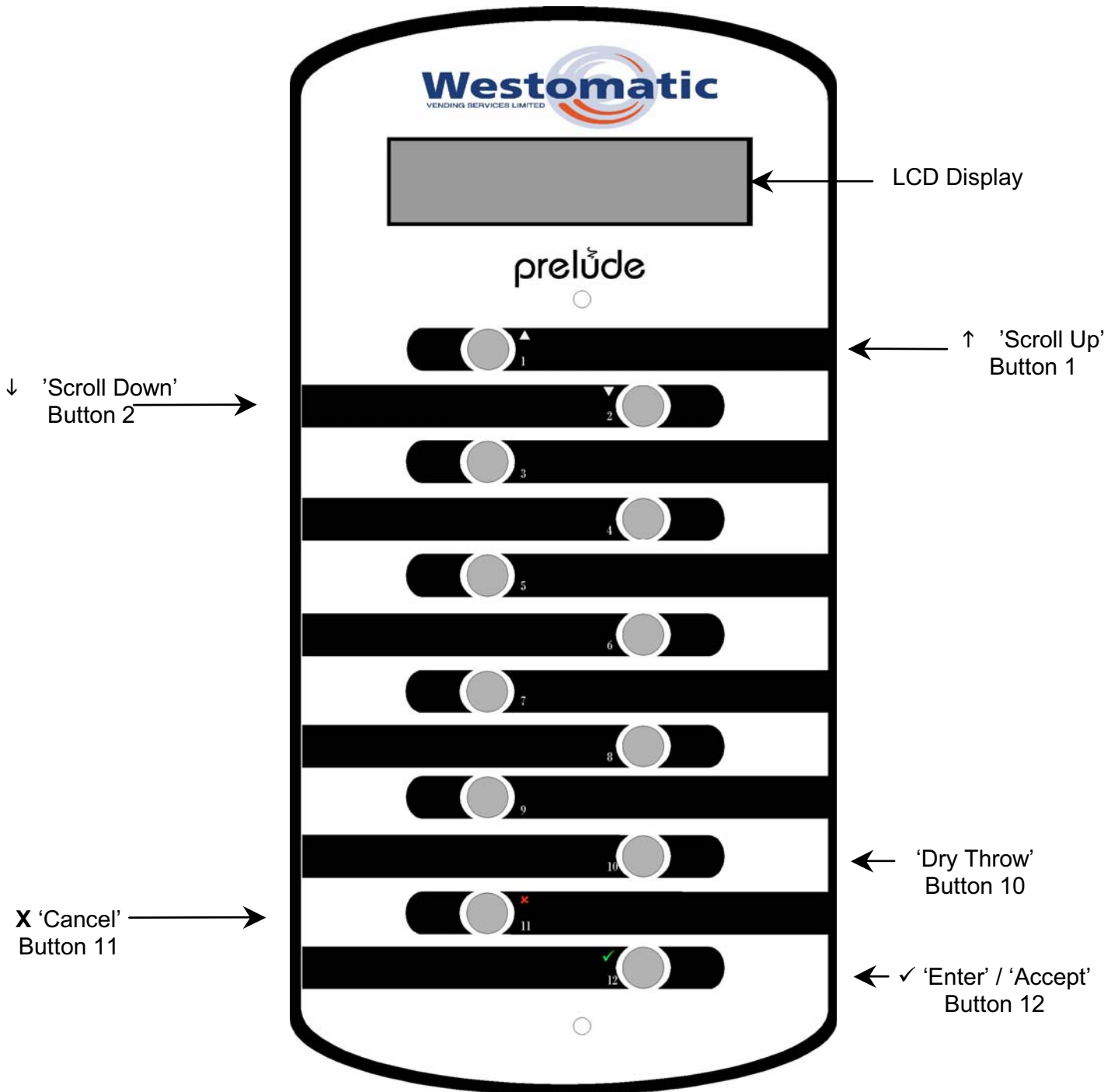
8.6. General Statistics

Service	Rating
Electrical Mains Supply	230VAC, 50HZ, 1.7Kw
Internally Operational Supply	24 V DC
Water Services	Water supply from a 15 mm rising mains outlet
Standing Water Pressure Operating Water Pressure MPa Operating Water Pressure Bar Operating Water Pressure psi	1.00 - 1.25 Bar (14.5 - 18.1 psi) 0.13 - 0.84 MPa 1.40 - 8.40 Bar 20 - 120 psi
Height – with FB / FG hoppers	870 mm (34.25 inches)
Height – without FB / FG hoppers	740 mm (29.13 inches)
Height required for lid raising	1120 mm (44.09 inches)
Width	562 mm (22.13 inches)
Cabinet depth (excl. door)	495 mm (19.49 inches)
Cabinet depth (incl. door)	660 mm (25.98 inches)
Maximum Weight (with ingredient)	75 kg
Boiler capacity	2.7 Litres
Drink capacities	7oz, 9oz & 12oz
Whole Bean / FB Coffee waste capacity	Typically 100 cakes
FB Tea waste capacity	Typically 100 cakes
Max. Noise level	70dB
Brewer Belt Replacement	7000 Vends

8.7.   Default Machine Type Configurations

When considering ingredient positions P1 to P6 in the table below, please refer to section 8.2 and 8.3. Machine types A, B, D and E are standard machine types.

PRELUDE		INGREDIENT POSITION					
Default Machine Types		**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
A	All Instant	Whitener	Sugar	Instant Tea	Instant Coffee	Decaf Coffee	Chocolate
B	F.Brew Tea / Instant	F.B. Tea	Sugar	Instant Coffee	Decaf Coffee	Chocolate	Whitener
C	*F.Brew Coffee / Instant Tea*	*F.B. Coffee*	*Sugar*	*Instant Coffee*	*Decaf Coffee*	*Chocolate*	*Whitener*
D	F.Brew Coffee / F.Brew Tea	F.B. Coffee	Sugar	Whitener	Instant Coffee	Chocolate	F.B Tea
E	Whole Bean Coffee / F.Brew Tea	F.G. Coffee	Sugar	Whitener	Instant Coffee	Chocolate	F.B Tea
F	*Whole Bean Coffee / Instant Coffee*	*F.G. Coffee*	*Sugar*	*Instant Coffee*	*Decaf Coffee*	*Chocolate*	*Whitener*
G	*Whole Bean Coffee / Whole Bean Coffee*	*F.G. Coffee*	*Sugar*	*Whitener*	*Topping*	*Chocolate*	*F.G. Coffee*

8.8.   Ingredient Canister Capacities

Ingredient	Weight (Kg)
Coffee beans	1.45
Pre-ground coffee	2.41
Leaf Tea	2.41
Instant Coffee	0.48
Whitener	0.77
Sugar	1.57
Chocolate	1.47

8.9. Cup Carousel Capacities

Cup Size	Cup Carousel Capacity
200 ml (7 oz Tall)	205
200 ml (7 oz Squat)	215
250 ml (9 oz)	180

NOTE:
On no account should an attempt be made to turn the cup carousel by hand. If the carousel locator is damaged cup jams will almost certainly occur.

8.10. Cup Units

There are different cup units for different sizes of cups; these are colour coded as follows:

Cup Size	Cup Unit Insert Colour	Cup Catcher Identification
200 ml (7 oz Tall)	RED	198441
200 ml (7 oz Squat)	WHITE	198441
250 ml (9 oz)	GREY	198088

9. Installation

The Prelude has been designed to enable quick and easy installation and provide good quality, well-presented drinks from power up.

9.1. Moving the Machine

Machine weight unladen = 60 KG

Machine weight laden = 75 KG

The machine should only be lifted into its final resting position by a minimum of 2 people supporting the machine, one on either side, and each person with one hand under the front cabinet foot position and the other hand steadying with the rear of the cabinet. All current health & safety practices ascertaining to manual lifting must be observed at all times.

NOTE: Do not support the machine by holding the underside of door, as this may damage the door & door hinges.

9.2. Levelling

It is important that the machine is located on a stable, level surface. The machine should be levelled in both planes by adjustment of the four levelling feet. A spirit level should be used and placed on the cabinet roof.

Incorrect levelling can result in coin acceptance problems, door misalignment and inconsistent cup dispense issues.

9.3. Ambient Conditions

The Prelude Vending machine and H_2O base unit if fitted are designed for indoor use only.

Temperature range: $+10^oC$ to $+30^oC$

NOTE:
Continuously low ambient temperatures may cause condensation inside the machine, which may affect the ingredients and performance of the drink delivery system.

9.4.   Installation & Commissioning

The installation of a new machine is a critical time in the relationship that you as a technician and your company have with the client. First impressions count and last for many years. We recommend that as much site and machine preparation as possible is carried out before installing the machine. The Prelude is not suitable for outdoor use and / or an area where there is the risk a water jet could be used for cleaning.

The machine should be located to allow access to the appropriate electrical and water services with at least 100mm (4") of free space between the rear of the cabinet and the wall to allow adequate ventilation.

9.4.1.   Step 1: Connect water (& External water filter if supplied)

- Open the machine door.
- Ensure the machine On/Off switch is **OFF** before locating the machine.
- The machine should be connected to a 15mm (1/2") mains water supply from a rising main or other suitable potable water supply.
- There should be a minimum mains water pressure as defined in section 7.2.
- Flush the mains water line thoroughly before connecting.

Water Inlet

- Screw the 20mm fitting of the mains water supply hose to the rear of the machine.
- Screw the 15mm fitting of the mains water supply hose to the rising water mains via a stopcock. Do not reuse an old water hose .Use the new hose supplied with the machine.
- Turn on the water ensuring there are no water leaks.
- Ensure the water pressure measured on the machine is within the limits defined in section 8.6.
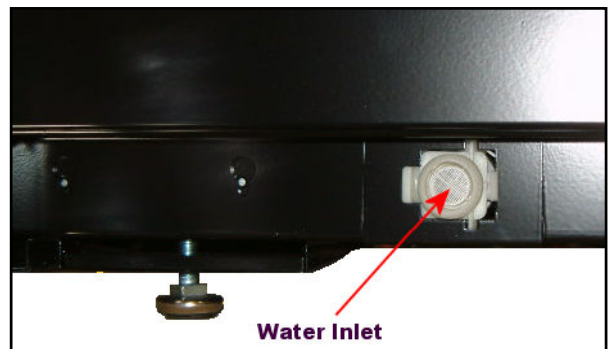
9.4.2.   Step 2: Connecting mains electrical power

- Ensure the On/Off switch is **OFF** before connecting to the electrical mains supply.
- Connect the mains power cord at the rear of the machine to an RCD protected mains supply and switch the On/Off switch to **ON** to initiate power to the machine.
- The machine boiler will now automatically fill with water.

Power Cord
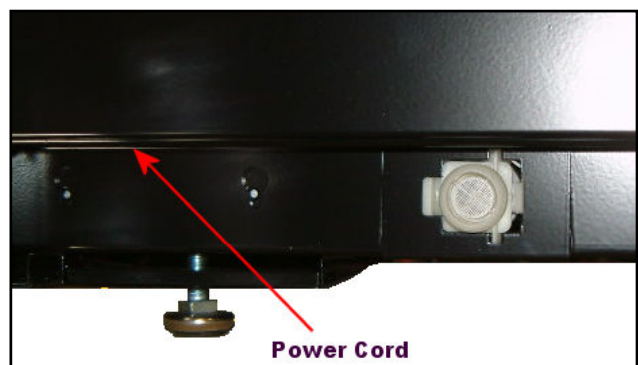
9.4.3.　　　　　　　Step 3: Check for leaks

- Check the machine internals for leaks during boiler filling and once filling has been completed.

9.4.4.　　　　　　　Step 4: Sanitise, Flush & Rinse

- Every effort is made by Westomatic to ensure that machines are clean and free from contaminants. We strongly recommend however that as part of the commissioning process, the machine is sanitised using a two-stage process thus:

  - Stage 1:　　　Biocide (For the removal of bio film build up)
  - Stage 2:　　　Sanitise (Neutralisation of bacteria)

- For details about flushing the machine, see sections 11.8 & 12.6

9.4.5.　　　　　　　Loading Cups (where fitted)

To check the operation of the cup carousel:

- Ensure the machine is switched OFF.
- Load ONE carousel sleeve only with cups, avoiding the dispensing position.
- Switch the machine ON.
- The carousel will automatically rotate until the cups have moved into the dispensing position and dropped into the cup ring; at this point, the carousel will stop rotating.
- The remaining carousel sleeves can then be filled with cups.

IMPORTANT:
- **Always ensure the carousel lid is fitted.**
- **Overfilling of the carousel will prevent the carousel lid from being fitted.**
- **On no account should an attempt be made to turn the cup carousel by hand. If the carousel is damaged cup jams will almost certainly occur.**

9.4.6.　　　　　　　Step 5: Set up button configurations

- Your machine arrives with a default range of drinks allocated to the selection buttons on the front of the machine. Each button can however be assigned to a different drink thereby enabling machine customisation.

- See sections 8.4, 8.5 and 10 for button allocation details.

9.4.7. Step 6: Fill the canisters with ingredient

- To fill any instant ingredient canisters it will be necessary to remove them from the machine. Whilst out of the machine, each canister must be primed by manually turning the augers such that ingredient is seen coming out of the canister dispense chute.

- To initially fill any fresh brew or bean to cup ingredient canisters it will be necessary to remove them from the machine. Whilst out of the machine, the fresh brew canister must be primed by manually turning its auger such that ingredient is seen coming out of the canister dispense chute. When filling the bean to cup canister, ensure the slide plate at the bottom of the canister is in the closed position to prevent beans falling out. Remember to pull the slide plate to the open position after replacing the canister back into the machine.

- Note that once any 'Fresh Brew' or 'Whole Bean' ingredient canisters have been primed with ingredient it is possible to refill them without removing them from the machine. This is achieved by opening the machine door, lifting and propping open the lid of the machine (via the lid stay) and removing the canister lids.

- See section 8.7 for the different machine type configurations.

9.4.8. Step 7: Customise the machine settings

The machine is now ready to be programmed to the customer's requirements, i.e.

- Operator mode
- Cup settings
- Hot water
- Drink strength
- Extra options
- Drink range
- Etc.

See sections 10, 11 and 12 for further details.

9.4.9. Step 8: Setting drink configurations

Each machine has a set of individual drink throw defaults according to the machine type programmed within ''Service Mode''. These default settings may require changing to meet with specific customer requirements.

To change ingredient throw defaults; open the machine door, press and hold buttons 1 & 12 and enter your password to get to the following machine menu:

► Service Mode
  └► Machine Settings
    └► Drinks
      └► Drink Setting   (for drink set-up menus)
      └► Throw Settings (for drink throw menus)

9.4.10.   Step 9: Test the drinks

Ensure all enabled drink selections have been tested during the installation, ensuring the water levels are correct and that all ingredients are properly cleared from their respective mixing bowls.

9.4.11.   Step 10: Instruct the customer/users in:

- General use and care of machine.
- Filling, cleaning and flushing procedures.
- Audit taking.

9.4.12.   Step 11: Wipe clean all surfaces

Presentation is paramount; before leaving your machine ensure that all surfaces are wiped clean and that your customer is presented with an excellent first impression.

9.5.   Label Layout For All Default Machines

The following tables show the label layouts for the Prelude default machine types:

A - INSTANT ONLY INGREDIENT			
Label	Buttons		Label
Sugar	1	2	Extra Strong
Cappuccino	3	4	Café Latte
Decaf Coffee Black	5	6	Decaf Coffee White
Espresso	7	8	Chocolate
Coffee Black	9	10	Coffee White
Tea White	11	12	Moccachino

E - F.BREW TEA / F.GROUND COFFEE INGREDIENT			
Label	Buttons		Label
Sugar	1	2	Americano
Café o Lait	3	4	FB Cappuccino
FB Café Latte	5	6	FB Espresso
FB Tea Black	7	8	FB Tea White
Chocolate	9	10	Instant Coffee White
Instant Coffee Black	11	12	Macchiato

B - F.BREW TEA / INSTANT INGREDIENT			
Label	Buttons		Label
Sugar	1	2	Extra Strong
Cappuccino	3	4	Café Latte
Decaf Coffee Black	5	6	Decaf Coffee White
Espresso	7	8	FB Tea Black
FB Tea White	9	10	Chocolate
Coffee Black	11	12	Coffee White

F - F.GROUND COFFEE / INSTANT INGREDIENT			
Label	Buttons		Label
Sugar	1	2	Extra Strong
FG Café Latte	3	4	FG Cappuccino
FG Coffee Black	5	6	FG Coffee White
FG Espresso	7	8	FG Mocha
Chocolate	9	10	Creamichoc
Tea Black	11	12	Tea White

C - F.BREW COFFEE / INSTANT INGREDIENT			
Label	Buttons		Label
Sugar	1	2	Extra Strong
FB Café Latte	3	4	FB Cappuccino
FB Coffee Black	5	6	FB Coffee White
FB Espresso	7	8	FB Mocha
Chocolate	9	10	Creamichoc
Coffee Black	11	12	Coffee White

G - F.GROUND DECAF / F.GROUND COFFEE			
Label	Buttons		Label
Sugar	1	2	Extra Strong
FG Café Latte	3	4	FG Cappuccino
FG Coffee Black	5	6	FG Coffee White
FG Espresso	7	8	FG Mocha
Chocolate	9	10	Creamichoc
FG Decaf Coffee Bk	11	12	FG Decaf Coffee Wh

D - F.BREW TEA / F.BREW COFFEE INGREDIENT			
Label	Buttons		Label
Sugar	1	2	Americano
Café o Lait	3	4	FB Cappuccino
FB Café Latte	5	6	FB Espresso
FB Tea Black	7	8	FB Tea White
Chocolate	9	10	Instant Coffee White
Instant Coffee Black	11	12	Macchiato

10. Menu Programming Guide

10.1. Using The External Keypad

- The Prelude keypad can be used to access and control different service functions. When the machine door is open and the power is ON, the LCD will display the message:

> DOOR OPEN ⇅
> DISPLAY AUDIT
> DRINK TESTING
> VERSION INFO

- The top line of the display is the **HEADER** line. You will notice this does not scroll, as this indicates the menu title currently entered on the machine.

- The header line also has arrows (⇅) in the top right corner of the display, this is a visual indication that there are more programming menus available.

- To view the available menus, scroll up or down using the Button 1 key for Up & Button 2 key for down (see section 8.5)

- The pointer (▶) on the left hand side is a visual indicator of the selected parameter.

- To **ENTER** or ACCEPT press Button **12** / OK key (✔)

- To **EXIT** or CANCEL changes press Button **11** (**X**)

- This symbol (▶) on the right of the screen indicates a submenu is available. Select '✔' to view the sub menu.

11. Door Open Mode

The operator who regularly services the machine has various menu options available to aid servicing the machine. On opening the door the machine will automatically revert to 'Door Open Mode' and display the following menu options.

NOTE:
Only those menu options previously enabled in 'Operator Functions' (see section 11.7 for further details) and available for the given machine type will be shown in 'Door Open Mode'.

> ** - Indicates permanently enabled options
> ++ - Indicates options available depending on machine type

11.1. ►Read Audit From Machine

```
AUDIT MODE              ⇅
> TOTAL DRINK COUNT
INDIVIDUAL DRINK
PAY VEND
```
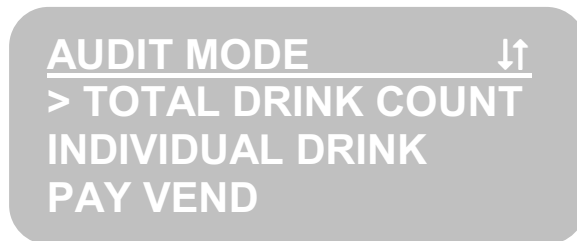
If enabled in the 'Operator Actions' menu (see section 12.1.2 for further details), this 'Operator Function' will enable the user to either scroll through the audit menus on the screen using buttons 1 or 2 (⇅ keys) or upload any audit data onto a formatted USB memory stick (see section 13 for further details on USB memory stick formatting and section 12.1.1.12 for further details on reading audit data from the machine).

The LCD display will show:

> **READ FROM MACHINE**
> **FILE:- P000000?.txt**
> **READING…**

NOTE:
To use this feature the machine must be fitted with a factory fitted USB kit.

11.2. ►Display Audit **

Use buttons 1 or 2 (⇅ keys) to select 'Display Audit ' and press '✔' to accept the function. The menu will then display the options shown below:

11.2.1. Total Drink Count

Use buttons 1 or 2 (⇅ keys) to select 'Total Drink Count ' and press '✔' to accept the function. The total number of ALL vends along with the date of the last audit will be shown on the screen.

11.2.2. Individual Drink

Use buttons 1 or 2 (⇅ keys) to select 'Individual Drink' and press '✔' to accept the function. Again using buttons 1 or 2 (⇅ keys) to scroll through the display, the various drinks enabled on the machine will be shown along with the number of vends and total revenue (if a payment system is fitted and enabled) for each variable.

11.2.3. Pay Vend

Use buttons 1 or 2 (⇅ keys) to select 'Pay Vend' and press '✔' to accept the function. The display will show the number of paid vends, free vends and test vends along with the total revenue (if a payment system is fitted and enabled) for each variable.

An example of the typical audit information layout is shown below:

TOTAL DRINK COUNT
Example:

INSTALLED	00/00/00
VENDS	000000
VALUE	000000.00
LAST AUDIT	00/00/00
VENDS	000000
VALUE	000000.00

INDIVIDUAL DRINK
Example:

Inst Black Coffee		
	Vends	000000
	Value	000000.00
Inst White Coffee		
	Vends	000000
	Value	000000.00
FB Black Coffee		
	Vends	000000
	Value	000000.00
FB White Coffee		
	Vends	000000
	Value	000000.00
FG Black Coffee		
	Vends	000000
	Value	000000.00
FG White Coffee		
	Vends	000000
	Value	000000.00
Inst Tea		
	Vends	000000
	Value	000000.00
DISCOUNT VALUE	Vends	000000
	Value	000000.00

PAY VEND
Example:

PAID	Vends	000000
	Value	000000.00
FREE	Vends	000000
	Value	000000.00
TEST	Vends	000000
	Value	000000.00

11.3.   Brew1 Belt Changed or Brew2 Belt Changed++

If either brewer 1 or 2 is fitted (optional depending upon machine type), it is possible to set the number of vends required before either brewer filter belt needs changing. This functionality is accessed via 'Service Mode' thus:

► SERVICE MODE <Enter 4-digit access code>
└►MACHINE SETTINGS
└►**BREWER 1 SETTINGS**
BREWER 2 SETTINGS

NOTE: The maximum, recommended vend count for a brewer belt before it needs changing is 7,000 (see also section 12.1.18 & 12.1.19).

Re-setting of either brewer filter belt vend counter will become necessary if either:

1.   The filter belt vend count is reached whilst in 'Door Closed Mode', or,
2.   The filter belt vend count needs to be re-set before the pre-set count is reached.

11.3.1.   Re-Setting Filter Belt Counter If Pre-Set Vend Count Is Reached

When in 'Vend Mode' and a brewer reaches its pre-set vend count, the machine LCD will display the following message indicating that a filter belt must be changed:

SELECTION SOLD OUT
BREWER FILTER CHANGE DUE

At this point the brewer will cease to be functional until the filter belt counter has been re-set.

NOTE:
- **The above message will only be visible when a brewer belt requires changing.**
- **All drink selections not requiring the use of this brewer will remain operational.**

The filter belt counter is re-set in 'Door Open Mode' using buttons 1 or 2 (⇅ keys) to locate the following message:

BREW1* FILTER BELT CHANGED
*Can be brewer 1 or 2

Once the above message has been located, pressing '✔' to accept the function will cause the following message to be displayed:

BREW1* FILTER BELT CHANGED
ACCEPT/CANCEL
*Can be brewer 1 or 2

Pressing '✔' again to accept the function will re-set the filter belt counter to zero and the LCD will automatically revert back to 'Door Open Mode'. The original "Selection Sold Out" message will no longer be visible and will only reappear when the filter belt again reaches its pre-set value.

11.3.2. Re-Setting Filter Belt Counter Before Pre-Set Vend Count Is Reached

If a brewer filter belt counter needs to be re-set before a pre-set vend count has been reached, this can be achieved in 'Door Open Mode' using buttons 1 or 2 (⇵ keys) to locate the following message:

BREW1* FILTER BELT CHANGED

*Can be brewer 1 or 2

Once the above message has been located, pressing '✔' to accept the function will cause the following message to be displayed:

BREW1* FILTER BELT CHANGED
ACCEPT/CANCEL

*Can be brewer 1 or 2

Pressing '✔' again to accept the function will re-set the filter belt counter to zero and the LCD will automatically revert back to 'Door Open Mode'.

> **NOTE: It should be noted that if a filter belt counter is always re-set to zero each time a brewer belt is cleaned there is a risk that the belt may be inadvertently used beyond its maximum recommended or indeed, desired number of usage cycles.**

11.4.   Brew Waste Emptied ++

If either brewer 1 or 2 is fitted (optional depending upon machine type), it is possible to set the number of vends required before the waste bucket for either brewer needs emptying. This functionality is accessed via 'Service Mode' thus:

▶ SERVICE MODE <Enter 4-digit access code>
└▶MACHINE SETTINGS
└▶ **BREWER 1 SETTINGS**
BREWER 2 SETTINGS

Note: The maximum number of brewer vends that can set before the brewer waste bucket needs emptying is 100 (see also section 12.1.18 & 12.1.19).

Re-setting of both brewer waste bucket counters will become necessary if either:

a.   The waste bucket vend count is reached whilst in 'Door Closed Mode', or,
b.   The waste bucket vend count needs to be re-set before the pre-set count is reached.

11.4.1. Re-Setting Waste Bucket Counter If Pre-Set Vend Count Is Reached

When in 'Vend Mode' and a brewer reaches its pre-set waste bucket vend count, the machine LCD will display the following message indicating that a waste bucket must be emptied:

<p align="center">SELECTION SOLD OUT
BREWER WASTE FULL</p>

At this point the brewer will cease to be functional until the waste bucket counter has been reset to zero. Resetting the waste counter to zero resets the counter for both waste buckets at the same time. It is important to remember to empty both waste bins where fitted before resetting the counter.

NOTE:
- **The above message will only be visible when a waste bucket requires emptying.**
- **All drink selections not requiring the use of this brewer will remain operational.**

The waste bucket counter is re-set in 'Door Open Mode' using buttons 1 or 2 (⇅ keys) to locate the following message:

<p align="center">BREW WASTE EMPTIED</p>

Once the above message has been located, pressing '✔' to accept the function will cause the following message to be displayed:

<p align="center">BREW WASTE EMPTIED
ACCEPT/CANCEL</p>

Pressing '✔' again to accept the function will re-set both waste bucket counter to zero and the LCD will automatically revert back to 'Door Open Mode'. The original "Selection Sold Out" message will no longer be visible and will only reappear when the waste bucket again reaches its pre-set value.

11.4.2. Re-Setting Waste Bucket Counter Before Pre-Set Vend Count Is Reached

If a brewer waste bucket counter needs to be re-set before a pre-set vend count has been reached, this can be achieved in 'Door Open Mode' using buttons 1 or 2 (⇅ keys) to locate the following message:

<p align="center">BREW WASTE EMPTIED</p>

Once the above message has been located, pressing '✔' to accept the function will cause the following message to be displayed:

<p align="center">BREW WASTE EMPTIED
ACCEPT/CANCEL</p>

Pressing '✔' again to accept the function will re-set the waste bucket counter to zero and the LCD will automatically revert back to 'Door Open Mode'. Resetting the waste counter to zero resets the counter for both waste buckets at the same time. It is important to remember to empty both waste bins where fitted before resetting the counter.

> **NOTE: If a brewer waste bucket counter is ever re-set to zero without the waste bucket being emptied, there is a risk that the waste bucket will overfill and cause waste material to spill into the machine. Resetting the waste counter to zero resets the counter for both waste buckets at the same time. It is important to remember to empty both waste bins where fitted before resetting the counter.**

11.5. ►Drink Testing**

```
DRINK TESTING          ⇅
> INST COFFEE
  FB COFFEE
  FG COFFEE
```

- Use buttons 1 or 2 (⇅ keys) to select 'Drink Testing' and press '✔' to enter.
- Use buttons 1 or 2 (⇅ keys) to select the drink to test & press '✔' to accept.
- The machine will then start to dispense the required drink.

NOTE:
- **Only drink selections enabled in the machine set-up will be available for testing.**
- **The cup dropper and cup sensors are automatically disabled during drink testing so it is advisable to ensure that a suitable receptacle is placed under the dispense nozzle BEFORE a drink is tested.**

Drink test options are shown below.

INSTANT COFFEES	FB COFFEES	FG DECAF COFFEE
ESPRESSO,	ESPRESSO,	ESPRESSO,
ESPRESSO, + S,	ESPRESSO, + S,	ESPRESSO, + S,
ESPRESSO, + W,	ESPRESSO, + W,	ESPRESSO, + W,
ESPRESSO, + S & W.	ESPRESSO, + S & W.	ESPRESSO, + S & W.
COFFEE BLACK	COFFEE BLACK	COFFEE BLACK
COFFEE BLACK + S.	COFFEE BLACK + S	COFFEE BLACK + S
COFFEE WHITE	COFFEE WHITE	COFFEE WHITE
COFFEE WHITE + S.	COFFEE WHITE + S.	COFFEE WHITE + S.
CAPPUCCINO,	CAPPUCCINO,	CAPPUCCINO,
CAPPUCCINO, + S,	CAPPUCCINO, + S,	CAPPUCCINO, + S,
CAFÉ LATTE,	CAFÉ LATTE,	CAFÉ LATTE,
CAFÉ LATTE, + S,	CAFÉ LATTE, + S,	CAFÉ LATTE, + S,
MOCHA	MOCHA	MOCHA

INSTANT DECAF	FB DECAF COFFEE	TEAS
ESPRESSO,	ESPRESSO,	INSTANT TEA BLACK
ESPRESSO, + S,	ESPRESSO, + S,	INSTANT TEA BLACK + S
ESPRESSO, + W,	ESPRESSO, + W,	INSTNAT TEA WHITE
ESPRESSO, + S & W.	ESPRESSO, + S & W.	INSTANT TEA WHITE +S
		F'BREW TEA BLACK
COFFEE BLACK	COFFEE BLACK	F'BREW TEA BLACK +S
COFFEE BLACK + S.	COFFEE BLACK + S	F'BREW TEA WHITE
COFFEE WHITE	COFFEE WHITE	F'BREW TEA WHITE +S
COFFEE WHITE + S.	COFFEE WHITE + S.	
		CHOCOLATES
CAPPUCCINO,	CAPPUCCINO,	CHOCOLATE
CAPPUCCINO, + S,	CAPPUCCINO, + S,	CREAMICHOC
CAFÉ LATTE,	CAFÉ LATTE,	**SOUP**
CAFÉ LATTE, + S,	CAFÉ LATTE, + S,	SOUP
MOCHA	MOCHA	**WATERS**
		HOT WATER

Note:
+ S = with Sugar
+ W = with Whitener
+S&W = with Sugar & Whitener

11.6. ►Version Info**

This display provides information about the firmware version running on the machine and its release date. This information may be required by technical support in the event of future machine upgrades.

```
VERSION INFO
     PRELUDE  V 1.00.107
       23 March 2009
 * * * *              * * * *
```

11.7. ►Operator Functions**

```
OPERATOR FUNCTION⇅
> ALL PRICES        + / -
   CUP SIZE          9oz
   VEND TIME        + / - %
```

There are various 'Operator Functions' available, all of which can be accessed and enabled (for display when the machine is in 'Door Open Mode') via the 'Operator Actions' menu (see section 12.1.2 for further details).

11.8. ►One Button Flush

This is not a menu display option in 'Door Open Mode' but it is nonetheless possible to flush the machine with the door open without entering the operational menus. The flush button is located inside the cabinet, under the mains ON/OFF switch. When pressed, the flush button will sequentially flush each whipper bowl of the machine starting at position 1 on the left and finish at position 6 (left to the right viewed from the front of the machine). Brewers (where fitted) will flush twice to clean both sides of the filter belt.

NOTE:
- **Hot water is dispensed during flush cycles. When flushing the machine, ensure the waste tray is positioned in the 'out' position and a suitable receptacle is placed beneath the dispense head and hands are kept clear at all times.**
- **An audible warning signal will be emitted throughout the flush cycle to warn the operator of the presence of hot liquid.**

11.9. ►Vend Mode

It is possible to run the machine with the door open to simulate a door-closed mode of operation. This can be achieved in 'Door Open Mode' using buttons 1 or 2 (⇅ keys) to locate the following message:

<div align="center">

►VEND MODE

</div>

Once the above message has been located, pressing '✔' to accept the function will cause the machine to operate as if the door has been closed.

> This mode of operation is only for testing and machine validation and must not be used by the customer in order to obtain a drink. Hot water, pinch points and moving parts are exposed whilst the door is open.

To finish testing and revert to door closed mode for use by the customer simply close and lock the machine door.

To continue to change a menu option in the machine the vend mode will need to be cancelled. This is carried out by closing and re-opening the door. On opening the door the machine will revert to door open mode.

12. Service Mode

'Service Mode' is used to gain access to the machine settings and drink configurations and is only available to trained service technicians and installation engineers.

To gain access to 'Service Mode' it is necessary to open the door to display the 'Door Open Mode' menu. From here, simultaneously press and hold buttons 1 and 12 for at least 3 seconds until the 'Service Mode' pass code screen is displayed as shown below.

<div style="border:1px solid black; text-align:center;">

SERVICE MODE
????

</div>

Enter the appropriate pass code and accept (✔) to enter 'Service Mode'.

To access 'Service Mode', enter "**1 5 9 4**" and press '✔' (button 12)

Once in 'Service Mode' the following three menu options will become available:

> ► **MACHINE SETTINGS**
> ► **DRINKS**
> ► **FLUSH MACHINE**

12.1. ►Machine Settings

Individual functions can be configured in this menu to enable customisation of the machine and consists of the following sub-menu groups:

12.1.1. ►General Settings

This selects the machine type configuration, which in turn enables the appropriate software needed to control the whole bean brewers, instant ingredients or fresh brew brewers. Via the USB facility (if fitted), uploading and saving of machine software configurations and audit data along with language setting and asset/serial number programming can also be performed.

The various options available within 'General Settings' are as follows:

12.1.1.1. Machine Type

12.1.1.1.1. A – Instant Only

When enabled (✔), this option automatically sets the machine control software to an 'Instant Only' machine.

12.1.1.1.2. B – Instant/FB Tea

When enabled (✔), this option automatically sets the machine control software to an 'Instant / Fresh Brew Tea' machine.

12.1.1.1.3. C – Instant/FB Coffee

When enabled (✔), this option automatically sets the machine control software to an 'Instant / Fresh Brew Coffee' machine.

12.1.1.1.4. D – FB Tea/Coffee

When enabled (✔), this option automatically sets the machine control software to a 'Fresh Brew Tea / Coffee' machine.

12.1.1.1.5. E – FB Tea/FG Coffee

When enabled (✔), this option automatically sets the machine control software to a 'Fresh Brew Tea / Whole Bean Coffee' machine.

12.1.1.1.6. F – FG/Instant Coffee

When enabled (✔), this option automatically sets the machine control software to a 'Whole Bean Coffee / Instant Coffee' machine.

12.1.1.1.7. G – FG/FG Coffee

When enabled (✔), this option automatically sets the machine control software to a 'Whole Bean Coffee / Whole Bean Coffee' machine.

12.1.1.2. Language

12.1.1.2.1. Load Into Machine

- A formatted USB memory stick will be required with a pre-loaded language file(s) as required (contact your Westomatic Area Business Development Manager or Area Technical Manager for further details) as described in section 13.
- Open the machine door.
- Insert the formatted USB memory stick into the USB port positioned on the top inside right of the door.
- The machine will automatically recognise the insertion of the USB memory stick by beeping twice.
- From the 'LANGUAGE' sub-menu select "LOAD INTO MACHINE" and press enter (✔).

- Use scroll buttons 1 & 2 (⇅ keys) to highlight the appropriate language file to load into the machine.
- Confirm the action by pressing enter (✔).
- The display will show a language upload page thus:

<div align="center">

LOAD LANGUAGE
FILE: - ENGLISH.LNG
ACCEPT OR CANCEL?

</div>

- The filename used to store the language data will be visible (ENGLISH.LNG in the example above).
- Confirm the action by pressing enter (✔) after which the display will show:

<div align="center">

LOAD LANGUAGE
FILE: - ENGLISH.LNG
LOADING…

</div>

- When the language upload is complete the machine will emit an audible beep and return to the "LANGUAGE" sub-menu.
- Ensure the newly loaded language is enabled by pressing (✔).
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.
- Remove USB memory stick and close the door.

12.1.1.2.2. Read From Machine

- A formatted USB memory stick will be required as described in section 13.
- Open the machine door.
- Insert the formatted USB memory stick into the USB port positioned on the top inside right of the door.
- The machine will automatically recognise the insertion of the USB memory stick by beeping twice.
- From the 'LANGUAGE' sub-menu select "READ FROM MACHINE" and press enter (✔).
- The display will show a language read page thus:

<div align="center">

READ FROM MACHINE
FILE: - ENGLISH.LNG
ACCEPT OR CANCEL?

</div>

- The filename to be read will be visible (ENGLISH.LNG in the example above).
- Confirm the action by pressing enter (✔) after which the display will show:

<div align="center">

READ FROM MACHINE
FILE: - ENGLISH.LNG
READING…

</div>

- When the language upload is complete the machine will emit an audible beep and return to the "LANGUAGE" sub-menu.
- Press cancel (**X**) to exit back into 'Door Open Mode'
- Remove USB memory stick and close the door.

12.1.1.3. Time

This function allows the user to change the displayed time.

- To change the time setting use scroll buttons 1 & 2 (⇕ keys) to highlight the 'Time' display and press (✔) to accept.
- The time digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired time setting e.g.
  > If the time required is 14:33, press button 1 followed by button 4 followed by button 3 followed by button 3.
- Pressing (✔) to accept re-sets the time display and stops it flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.1.4. Date

This function allows the user to change the displayed date.

- To change the date setting use scroll buttons 1 & 2 (⇕ keys) to highlight the 'Date' display and press (✔) to accept.
- The date digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired date setting e.g.
  - o If the date required is 24th March 2008, press button 2 followed by button 4 followed by button 0 followed by button 3 followed by button 0 followed by button 8.
- Pressing (✔) to accept re-sets the date display and stops it flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.1.5. Default Clock

This function allows the user to default the machine time and date displays back to zero.

- To change the date setting use scroll buttons 1 & 2 (⇕ keys) to highlight the 'Default Clock' display and press (✔) to accept after which the display will show:

DEFAULT CLOCK
ACCEPT/CANCEL

- Pressing (✔) to accept re-sets the time and date displays to zero.
- The machine will emit an audible beep and return to the "DEFAULT CLOCK" display.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.1.6. Daylight Saving

When enabled (✔), this option automatically changes the time on the machine according to British Summer Time rules.

X = BST inactive.
✓ = Automatic set up on the last Sunday of March / October.

12.1.1.7. Site ID

The Site ID is a tracking number that can be assigned to all machines located on the same site and if assigned, will appear in the machine audit data thereby enabling collation of data for machines from the same site. Site ID's have to be numeric and can be up to 6 digits long.

- To assign a site ID use scroll buttons 1 & 2 (⇅ keys) to highlight the 'Site ID' display and press (✔) to accept.
- The site ID digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired ID setting e.g.
  - o If the site ID required is 123456, press button 1 followed by button 2 followed by button 3 etc.
- Pressing (✔) to accept sets the site ID display and stops it flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.1.8. Asset Number

The machine asset number is a machine reference number that can be used by customers to create databases of their machine stock. This is especially useful for keeping track of machine service records etc. Asset numbers have to be numeric and can be up to 8 digits long

- To assign an asset number use scroll buttons 1 & 2 (⇅ keys) to highlight the 'Asset No' display and press (✔) to accept.
- The asset number digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired ID setting e.g.
  - o If the asset number required is 12345678, press button 1 followed by button 2 followed by button 3 etc.
- Pressing (✔) to accept sets the asset number display and stops it flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.1.9. Serial Number

The machine serial number is unique machine reference number assigned to the CPU of each machine control board at the time of manufacture at the Westomatic factory. The same serial number will also be visible on the serial plate located on the inside of the machine.

NOTE:　The serial number cannot be erased or modified by users.

The machine serial number will be required if requesting parts covered under the Westomatic Warranty agreement for the machine.

12.1.1.10. Update Firmware

This function enables the user to upload new firmware onto the machine as would be necessary if firmware enhancements become available for the machine.

- A formatted USB memory stick will be required as described in section 13.
- Open the machine door.
- Insert the formatted USB memory stick into the USB port positioned on the top inside right of the door.
- The machine will automatically recognise the insertion of the USB memory stick by beeping twice.
- From the 'GENERAL SETTINGS' sub-menu select "UPDATE FIRMWARE" and press enter (✔).
- The display will show all available firmware files thus

> **UPDATE FIRMWARE**
> **►PRELUDE V 1.00.107**

- Use scroll buttons 1 & 2 (⇵ keys) to pick the appropriate file to load into the machine.
- Press enter (✔) to accept the chosen file.
- The display will show:

> **FOUND USB MEMORY**
> **PRELUDE.FMW**
> **LOADING…XX%***

- *Indicates the percentage completion of upload.

- The firmware upload will take approximately 60 seconds after which the machine will automatically re-boot and revert to "Door Open Mode".

12.1.1.11. Load / Read Config

NOTE: If it is necessary to change the CPU control board, all audit data and machine configuration settings will be lost. If it is possible, retrieve audit data and machine configuration using the USB port before removing the processor board. The audit data and configuration files can then be re-loaded into the replacement board to retain all machine data.

From time to time it will be necessary to change machine configuration settings and either save them to a USB memory stick for future reference or to transfer these settings to other machines. The information below describes how to load configurations into machines and how to read existing machine configuration data onto a USB memory stick.

12.1.1.11.1. Load Into Machine

- A formatted USB memory stick will be required as described in section 13.
- Open the machine door.
- Insert the formatted machine USB memory stick into the USB port positioned on the top inside right of the door.
- The machine will automatically recognise the insertion of the USB memory stick by beeping twice.
- From the 'LOAD/READ CONFIG' sub-menu select "LOAD INTO MACHINE" and press enter (✔).
- The display will show all available configuration files thus

> **SELECT FILE**
> **►PREL_XYZ.CFG**

- Use scroll buttons 1 & 2 (⇅ keys) to pick the appropriate file to load into the machine.
- Press enter (✔) to accept the chosen file.
- The display will show:

> **LOAD INTO MACHINE**
> **FILE: - PREL_XYZ.CFG**
> **ACCEPT OR CANCEL?**

- Pressing (✔) to accept will cause the display to show:

> **LOAD INTO MACHINE**
> **FILE: - PREL_XYZ.CFG**
> **LOADING…**

- When the config upload is complete, the machine will emit an audible beep and return to the "LOAD/READ CONFIG" sub-menu.
- Press cancel (**X**) to exit back to 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

- Switch **OFF** the machine.

- Remove the USB memory stick.

- Switch the machine back **ON** and close the door.

12.1.1.11.2.   Read From Machine

- A formatted USB memory stick will be required as described in section 13.

- Open the machine door.

- Insert the formatted machine USB memory stick into the USB port positioned on the top inside right of the door.

- The machine will automatically recognise the insertion of the USB memory stick by beeping twice.

- From the 'LOAD/READ CONFIG' sub-menu select "READ FROM MACHINE" and press enter (✔).

- The display will show:

> **READ FROM MACHINE**
> **► AUTO SELECT**
> **SELECT FILE**

- Selecting "AUTO SELECT" by pressing enter (✔) will cause the machine to automatically create a new, sequential config filename which when read/saved to the USB memory stick will contain all the config settings present on the machine at the time of saving.

- If "AUTO SELECT" is confirmed, the display will show:

> **READ FROM MACHINE**
> **FILE: - PREL_XYZ.CFG**
> **ACCEPT OR CANCEL?**

- Pressing (✔) to accept will cause the display to show:

> **READ FROM MACHINE**
> **FILE: - PREL_XYZ.CFG**
> **READING…**

- When the config upload is complete the machine will emit an audible beep and return to the "LOAD/READ CONFIG" sub-menu.

- Press cancel (**X**) to exit back into 'Door Open Mode'.

- Remove USB memory stick and close the door.

- If "SELECT FILE" is confirmed, The display will show all available configuration files thus:

> **SELECT FILE**
> **► PREL_XYZ.CFG**
> **PREL_ABC.CFG**
> **PREL_DEF.CFG**

- Use scroll buttons 1 & 2 (⬇⬆ keys) to pick the appropriate file to read from the machine.
- Press enter (✔) to accept the desired file.
- The display will show:

READ FROM MACHINE
FILE: - PREL_XYZ.CFG
ACCEPT OR CANCEL?

- Pressing (✔) to accept will cause the display to show:

READ FROM MACHINE
FILE: - PREL_XYZ.CFG
READING…

- When the config upload is complete the machine will emit an audible beep and return to the "LOAD/READ CONFIG" sub-menu.
- Press cancel (**X**) to exit back into 'Door Open Mode'.
- Remove USB memory stick and close the door.

12.1.1.11.3. Load Factory

This function allows the user to re-load the original customer defined configuration settings.

- From the 'LOAD/READ CONFIG' sub-menu select "LOAD FACTORY" and press enter (✔).
- The display will show:

LOAD FACTORY
ACCEPT/CANCEL

- Pressing (✔) to accept will cause the display to show:

LOAD FACTORY
ARE YOU SURE?

- Pressing (✔) to accept will cause the display to show:

LOAD FACTORY
*****BUSY*****

- The machine will automatically re-boot and revert to "Door Open Mode".

12.1.1.11.4.   Save As Factory

This function allows the user to overwrite the original customer defined configuration settings.

NOTE: Westomatic Vending Services cannot accept responsibility for any machine malfunction or unacceptable drink quality due to erroneous configuration settings produced by the user.

- From the 'LOAD/READ CONFIG' sub-menu select "SAVE AS FACTORY" and press enter (✔).
- The display will show:

> **"SAVE AS FACTORY**
> **ACCEPT/CANCEL"**

- Pressing (✔) to accept will cause the display to show:

> **SAVE AS FACTORY**
> **ARE YOU SURE?**

- Pressing (✔) to accept will cause the display to show:

> **SAVE AS FACTORY**
> ****BUSY****

- When the Factory Config settings have been overwritten, the machine will emit an audible beep and return to the "LOAD/READ CONFIG" sub-menu.

12.1.1.11.5.   Load Board Defaults

This function allows the user to load the original Westomatic factory configuration settings.

- From the 'LOAD/READ CONFIG' sub-menu select "LOAD BOARD DEFAULTS" and press enter (✔).
- The display will show:

> **LOAD BOARD DEFAULTS**
> **ACCEPT/CANCEL**

- Pressing (✔) to accept will cause the display to show:

> **LOAD BOARD DEFAULTS**
> **ARE YOU SURE?**

- Pressing (✔) to accept will cause the display to show:

> **LOAD BOARD DEFAULTS**
> ****BUSY****

- Pressing (✔) to accept will cause the factory board defaults to be loaded back into the machine.

- The machine will automatically re-boot and revert to "Door Open Mode".

12.1.1.12. Load/Read Audit

NOTE:

- **All Audit information conforms to EVA-DTS standards.**

- **If it is necessary to change the CPU control board, all audit data and machine settings will be lost. If it is possible, retrieve audit data and machine configuration using the USB port before removing the processor board. The audit data and configuration files can then be re-loaded into the replacement board to retain all machine data.**

12.1.1.12.1.   Load Into Machine

- A formatted USB memory stick will be required as described in section 13

- Open the machine door.

- Insert the formatted machine USB memory stick into the USB port positioned on the top inside right of the door.

- The machine will automatically recognise the insertion of the USB memory stick by beeping twice.

- From the 'LOAD/READ AUDIT' sub-menu select "LOAD INTO MACHINE" and press enter (✔).

- The display will show all available configuration files thus

> **SELECT FILE**
> **►P0000001.TXT**
> **P0000002.TXT**

- Use scroll buttons 1 & 2 (⇊⇈ keys) to pick the appropriate file to load into the machine.

- Press enter (✔) to accept the chosen file.

- The display will show:

> **LOAD INTO MACHINE**
> **FILE: - P0000001.TXT**
> **ACCEPT OR CANCEL?**

- Pressing (✔) to accept will cause the display to show:

> **LOAD INTO MACHINE**
> **FILE: - P0000001.TXT**
> **LOADING…**

- When the audit upload is complete the machine will emit an audible beep and return to the "LOAD/READ AUDIT" sub-menu.

- Press cancel (**X**) to exit back to 'Door Open Mode' to ensure the new settings are saved to the machine CPU.
- Switch **OFF** the machine.
- Remove the USB memory stick.
- Switch the machine back **ON** and close the door.

12.1.1.12.2. Read From Machine

- A formatted USB memory stick will be required as described in section 13.
- Open the machine door.
- Insert the formatted machine USB memory stick into the USB port positioned on the top inside right of the door.
- The machine will automatically recognise the insertion of the USB memory stick by beeping twice.
- From the 'LOAD/READ AUDIT' sub-menu select "READ FROM MACHINE" and press enter (✔).
- The display will show:

> **READ FROM MACHINE**
> **►AUTO SELECT**
> **SELECT FILE**

- Selecting "AUTO SELECT" by pressing enter (✔) will cause the machine to automatically create a new, sequential audit filename which when read/saved to the USB memory stick will contain all the audit data present on the machine at the time of saving.
- If "AUTO SELECT" is confirmed, the display will show:

> **READ FROM MACHINE**
> **FILE: - P0000001.TXT**
> **ACCEPT OR CANCEL?**

- Pressing (✔) to accept will cause the display to show:

> **READ FROM MACHINE**
> **FILE: - P0000001.TXT**
> **READING…**

- When the audit file has been read from the machine it will emit an audible beep and return to the "LOAD/READ AUDIT" sub-menu.
- Press cancel (**X**) to exit back into 'Door Open Mode'.
- Remove USB memory stick and close the door.

- If "SELECT FILE" is confirmed, The display will show all available configuration files thus:

SELECT FILE
►P0000001.TXT
P0000002.TXT
P0000003.TXT

- Use scroll buttons 1 & 2 (⇕ keys) to pick the appropriate file to read from the machine.
- Press enter (✔) to accept the desired file.
- The display will show:

READ FROM MACHINE
FILE: - P0000001.TXT
ACCEPT OR CANCEL?

- Pressing (✔) to accept will cause the display to show:

READ FROM MACHINE
FILE: - P0000001.TXT
READING…

- When the audit file has been read from the machine it will emit an audible beep and return to the "LOAD/READ AUDIT" sub-menu.
- Press cancel (**X**) to exit back into 'Door Open Mode'.
- Remove USB memory stick and close the door.

Westomatic
The ultimate coffee house experience

12.1.1.12.3.   Interpreting Audit Information

Example: Instant 1
PA1*1*25*Instant 1*0*0*0
PA2*598*14950*0*0
PA3*7*175*0*0
PA4*1626*40650*0*0
PA5*000000*0000*0
PA6*1**0*0*0

Example: Instant 1	01	02	03	04	05	06
PA 1	1	25	Instant1	0	0	0
PA 2	598	14950	0	0		
PA 3	7	175	0	0		
PA 4	1626	40650	0	0		
PA 5	000000	0000	0			
PA 6	1		0	0	0	

```
MR2*0*0
CB1*79        ****
BA1*****
OA5*0*0
PA1*REG_1*15* INST ESPRESSO    *0*0*0
PA2*0*0*0*0
PA3*2*30*2*30
PA4*0*0*0*0
PA5*000000*0000*0
PA6*REG_1**0*0*0*
PA1*REG_8*15* INST COFFEE BLACK *0*0*0
PA2*0*0*0*0
PA3*28*420*28*420
PA4*0*0*0*0
PA5*000000*0000*0
PA6*REG_8**0*0*0*
PA1*REG_10*15* INST COFFEE WHITE *0*0*0
PA2*0*0*0*0
PA3*37*555*37*555
PA4*0*0*0*0
PA5*000000*0000*0
PA6*REG_10**0*0*0*
PA1*REG_12*15* INST CAPPUCCINO  *0*0*0
PA2*0*0*0*0
PA3*8*120*8*120
PA4*0*0*0*0
PA5*000000*0000*0
PA6*REG_12**0*0*0*
PA1*REG_16*15* INST CAFE LATTE  *0*0*0
PA2*0*0*0*0
PA3*1*15*1*15
PA4*0*0*0*0
PA5*000000*0000*0
PA6*REG_16**0*0*0*
PA1*REG_58*15* DECAF COFFEE BLACK *0*0*0
```

Sample audit information:

PA101 Product Number. The product (i.e. selection) number should refer to a price line number or machine column designator.

PA102 Product Price The normal vend price of the product.

PA103 Product Identification. Product identification should identify the product itself, as in a name (chips /crisps) or an ID. number (barcode).

PA104 Maximum Product Capacity. Largest quantity of this type of product that can be stocked in the machine.

PA105 Standard Filling Level. Normal filling level of this type of product.

PA106 Standard Dispensed Quantity. The standard dispensed quantity for each Vend of this product

PA201 Number of Products Vended Since Initialization. The number of products of this type (PA1) vended where the sale is a paid sale. Non-Resettable.

PA202 Value Of Paid Product Sales Since Initialisation. The value of the products of this type (PA1) vended where the sale is a paid sale. Non-Resettable.

PA203 Num of Products Vended Since Last Reset. The number of products of this type (PA1) vended where the sale is a paid sale. Reset after each audit data collection

PA204 Value Of Paid Product Sales Since Last Reset. The value of the products of this type (PA1) vended where the sale is a paid sale. Reset after each audit data collection.

PA301 Number Of Test Vends Since Initialisation. The number of test vends of this product (PA1) performed. Non-Resettable.

PA302 Value Of Test Vends Since Initialisation. The value of the test vends of this product (PA1) performed. Non-Resettable.

PA303 Number Of Test Vends Since Last Reset. The number of test vends of this product (PA1) performed. Reset after each audit data collection

PA304 Value Of Test Vends Since Last Reset. The value of the test vends of this product (PA1) performed. Reset after each audit data collection.

PA401 Number Of Free Vends Since Initialisation. The number of free vends of this product (PA1) performed. Non-Resettable.

PA402 Value Of Free Vends Since Initialisation. The value of the free vends of this product (PA1) performed. Non-Resettable.

PA403 Number Of Free Vends Since Last Reset. The number of free vends of this product (PA1) performed. Reset after each audit data collection

PA404 Value Of Free Vends Since Last Reset. The value of the free vends of this product (PA1) performed. Reset after each audit data collection

PA501 Sold Out Date. The date that this product (PA1) sold out. In some implementations this may be the date of most recent sale.

PA502 Sold Out Time. The time that this product (PA1) sold out. In some implementations this may be the time of most recent sale.

PA503 Number of Times Sold Out Product Selected. The number of times a product selection is made when sold out. (Credit is available but not deducted). Reset after each audit data collection

PA601 Product Number. The product (i.e. selection) number should refer to a price line number or machine column designator.

PA602 Product Text. The product (i.e. selection) text should refer to a price line number or machine column designator.

PA603 VAT Group. VAT group number. 1 out of 4 VAT groups can be selected per price line number or machine column designator.

PA604 Product Status. Product sales status (price line number or machine column designator).
Status=0 means that the sale of the product is blocked.
Status=1 means that the product may be sold in a certain period.
Status=2 means that the product may be sold any time.

PA605 Free Vend. The product can be set to free vend (price line number or machine column designator).
Free vend=0 means that the product is not set to free vend.
Free vend=1 means that the product is delivered free of charge if a payment card is used.
Free vend=2 means that the product is delivered free of charge.

PA606 User Defined Field User Defined Data AN 01 12

12.1.2. ►Operator Actions

'Operator Actions' is reached via 'Service Mode' thus:

► SERVICE MODE <Enter 4-digit access code>
      └►MACHINE SETTINGS
           └►**OPERATOR ACTIONS**

When in 'Operator Actions' use buttons 1 or 2 (⇵ keys) to scroll through the available 'Operator Functions'. An 'Operator Function' can be enabled by selecting it and pressing '✔' to accept. Once enabled, the chosen 'Operator Function' will be automatically displayed within the 'Operator Functions' menu within 'Door Open Mode'. Furthermore, when an 'Operator Function' is enabled, it is possible for an operator to access and change the settings for the enabled function in 'Door Open Mode' without needing a security code.

NOTE:
'Operator Functions' will not be displayed when the machine is in 'Door Open Mode' unless AT LEAST ONE of the 'Operator Functions' has been enabled.

The various 'Operator Functions' available (when enabled) are as follows:

12.1.2.1. Asset/Serial

When enabled, this function will give the operator visual access to the machine's asset & serial numbers.

NOTE: The operator will not be able to change the asset/serial numbers, as they are read only values.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇵ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇵ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function. See section 12.1.1.8 for further details on asset numbers and section 12.1.1.9 for further details on serial numbers.

12.1.2.2. Price Settings

When enabled (✔), this function will allow the operator to edit all the drink selection prices from this one menu, without having to enter 'Service Mode'.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇵ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇵ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function. See section 12.1.3 for further details.

12.1.2.3. All Sugars + / - %

When enabled (✔), this function will allow the operator to increase or decrease all the sugar throw times from this one menu, without having to enter 'Service Mode' individual drink selections, i.e. +1%.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇅ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇅ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.4. All Whiteners + / - %

When enabled (✔), this function will allow the operator to increase or decrease all the whitener throw times from this one menu, without having to enter 'Service Mode' individual drink selections, i.e.   +1%.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇅ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇅ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.5. All Waters + / - %

When enabled (✔), this function will allow the operator to increase or decrease all the water throw times from this one menu, without having to enter 'Service Mode' individual drink selections, i.e. +5%.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇅ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇅ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.6. All Instant Ingredient + / - %

When enabled (✔), this function will allow the operator to increase or decrease all the main instant throw times from this one menu, without having to enter 'Service Mode' individual drink selections, i.e. +2%.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇅ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇅ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.7. All Fresh Brew Ingredient + / - %

When enabled (✔), this function will allow the operator to increase or decrease all the main fresh brew throw times from this one menu, without having to enter 'Service Mode' individual drink selections, i.e. +2%.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇅ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇅ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.8. All Fresh Ground Ingredient + / - %

When enabled (✔), this function will allow the operator to increase or decrease all the main Fresh Ground throw times from this one menu, without having to enter individual drink selections, i.e. +2%.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇕ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇕ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.9. Countdown Times + / - %

When enabled (✔), this function will allow the operator to increase the vend countdown time by the value (in seconds) entered in this menu, i.e. +3%.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇕ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇕ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.10. Cup Size (7oz (200ml) / 9oz (250ml) / 12oz (340ml))

When enabled (✔), this function will allow the operator to change the cup size from 7oz, 9oz or 12oz. This in turn will increase or decreases all drink throw times according to the Westomatic default factory settings without the operator having to enter 'Service Mode' to change individual drink throw times.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇕ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇕ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

NOTE:

- **A 12oz cup dropper is not available for the Prelude but a user's own 12oz cup can be utilised if the 12oz cup size is enabled.**
- **If a 12 oz cup size is enabled, it is important that the cup dropper is disabled. See section 12.1.12.3 for further details.**

12.1.2.11. Free/Discounts

When enabled (✔), this function will allow the operator to programme or change the Free Vend / Discount Vend periods according to the customer's requirements. See section 12.1.7 for further details.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇕ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇕ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.12. Audit Collection

When enabled (✔), this function will allow the operator to download audit data directly to a USB memory stick. See sections 11.1 and 11.2 for further details.

NOTE: This function is only possible if the machine was ordered with a factory fitted USB kit.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇅ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇅ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.2.13. Brewer Belt/Waste

When enabled (✔), this function will cause the machine to automatically warn users that any brewer belt (if fitted) needs either cleaning or changing. See section 11.3 for further details.

When enabled (✔), this function will also cause the machine to automatically warn users that any brewer waste bucket (if fitted) needs emptying. See section 11.4 for further details.

To enable/disable this function, enter the 'OPERATOR ACTIONS' sub-menu and use buttons 1 or 2 (⇅ keys) to highlight the function. Accept the function using button 12 (✔) and use buttons 1 or 2 (⇅ keys) to toggle it on or off as required. Pressing button 12 (✔) will save the chosen status of the function.

12.1.3.   ►Price Settings

This menu will allow the user to set the pricing structure for a payment system if fitted. It is possible to price all drinks and extra options as one generic price or price each drink individually. Price increases can also be carried out as a percentage increase or decrease of either a generic price or an individual price.

The machine allows the use of Regular drink sizes and Grande options thus:

- Regular drink prices are those cost values assigned to the machine's standard drink size.
- Grande prices are those cost values assigned to drinks that are the next size up from the Regular drink size, e.g.
    - o   If the Regular drink size is 7oz, the Grande drink option will be 9oz.
    - o   If the Regular drink size is 9oz, the Grande drink option will be 12oz.
    - o   If the Regular drink size is 12oz, there is no Grande option.

The various 'Price Setting' sub-menu options available are as follows:

12.1.3.1. All Regular Prices

12.1.3.1.1. Set All To

- To set all Regular drink prices to a given value, from the 'PRICE SETTINGS' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "ALL REGULAR PRICES" and press enter (✔).
- Use scroll buttons 1 & 2 (⇕ keys) to highlight the 'SET ALL TO' display and press (✔) to accept.
- The 'SET ALL TO' price digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
  - o If the price required is £1.50, press button 1 followed by button 5 followed by button 0.
- Pressing (✔) to accept sets the 'SET ALL TO' price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

For any given machine type, if this option is set to '0', any individual drink price can be set accordingly. However, assigning a value/price greater than '0' in this option will:

- a) Assign that drink price to **ALL** available drink selections and
- b) Automatically override **ALL** individual drink price settings otherwise assigned in section 12.1.3.3 below.

12.1.3.1.2. Increase By

For any given machine type, assigning a value in this option will INCREASE the value of ALL drinks by that that amount.

- To increase all regular drink prices by the same amount use scroll buttons 1 & 2 (⇕ keys) to highlight the 'INCREASE BY' display and press (✔) to accept.
- The 'INCREASE BY' price digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
  - o If the generic price increase required is £0.50, press button 5 followed by button 0.
- Pressing (✔) to accept sets the 'INCREASE BY' price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.3.1.3. Decrease By

For any given machine type, assigning a value in this option will DECREASE the value of ALL drinks by that that amount.

- To decrease all regular drink prices by the same amount use scroll buttons 1 & 2 (⇕ keys) to highlight the 'DECREASE BY' display and press (✔) to accept.

- The 'DECREASE BY' price digits will start to flash.

- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.

  - o If the generic price decrease required is £0.50, press button 5 followed by button 0.

- Pressing (✔) to accept sets the 'DECREASE BY' price digits and stops them flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.3.2. All Grande Prices

12.1.3.2.1. Set All To

- To set all Grande drink prices to a given value, from the 'PRICE SETTINGS' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "ALL GRANDE PRICES" and press enter (✔).

- Use scroll buttons 1 & 2 (⇕ keys) to highlight the 'SET ALL TO' display and press (✔) to accept.

- The 'SET ALL TO' price digits will start to flash.

- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.

  - o If the price required is £1.50, press button 1 followed by button 5 followed by button 0.

- Pressing (✔) to accept sets the 'SET ALL TO' price digits and stops them flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

For any given machine type, if this option is set to '0', any individual drink price can be set accordingly. However, assigning a value/price greater than '0' in this option will:

  a) Assign that drink price to **ALL** available drink selections and
  b) Automatically override **ALL** individual drink price settings otherwise assigned in section 12.1.3.3 below.

12.1.3.2.2. Increase By

For any given machine type, assigning a value in this option will INCREASE the value of ALL drinks by that that amount.

- To increase all Grande drink prices by the same amount use scroll buttons 1 & 2 (⇕ keys) to highlight the 'INCREASE BY' display and press (✔) to accept.

- The 'INCREASE BY' price digits will start to flash.

- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.

  - o If the price increase required is £0.50, press button 5 followed by button 0.

- Pressing (✔) to accept sets the 'INCREASE BY' price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.3.2.3. Decrease By

For any given machine type, assigning a value in this option will DECREASE the value of ALL drinks by that that amount.

- To decrease all Grande drink prices by the same amount use scroll buttons 1 & 2 (⇅ keys) to highlight the 'DECREASE BY' display and press (✔) to accept.
- The 'DECREASE BY' price digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
    - o If the price decrease required is £0.50, press button 5 followed by button 0.
- Pressing (✔) to accept sets the 'DECREASE BY' price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.3.3. Individual Prices

If a payment system is fitted, all individual drink prices can be set separately. To simplify the explanation of this function, only one drink type (chocolate) will be described below but the same procedure applies to all individual drink selections.

12.1.3.3.1. Chocolate

For any given machine type that contains this drink selection, if this selection is priced at '0', no chargeable price will be set and the selection will 'free-vend'. However, assigning a value/price greater than '0' in this option will assign that drink price to ONLY this particular drink selection.

> **NOTE: If a price value for this drink selection is assigned in the 'Set All To' option (as defined in section 12.1.3.1.1), any individual price value assigned in this menu will be overridden.**

- To set all individual drink prices to a given value, from the 'PRICE SETTINGS' sub-menu use scroll buttons 1 & 2 (⇅ keys) to highlight "INDIVIDUAL PRICES" and press enter (✔).
- The display will show:

```
            INDIVIDUAL PRICES
          ►CHOCOLATE              ►
            CREAM CHOC            ►
            FB TEA BLACK          ►
            ETC.                  ►
```

- Use scroll buttons 1 & 2 (⇅ keys) to highlight the desired drink and press (✔) to accept.
- The display will show:

> **CHOCOLATE**
> ►**REGULAR PRICE**   **0.00**
>   **GRANDE PRICE**   **0.00**

- Use scroll buttons 1 & 2 (⇅ keys) to highlight the desired drink size (Regular or Grande) and press (✔) to accept.
- The drink size price digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
  - o If the price required is £1.50, press button 1 followed by button 5 followed by button 0.
- Pressing (✔) to accept sets the chosen drink size price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.3.4. Extras Pricing

If a payment system is fitted, this menu will allow the user to set the pricing structure for any extra drink strength, whitener or sugar options that may be enabled.

The extras pricing sub-menu options available are as follows:

12.1.3.4.1. Extra Strong

- To set extra strength prices to a given value, from the 'PRICE SETTINGS' sub-menu use scroll buttons 1 & 2 (⇅ keys) to highlight "EXTRAS PRICING" and press enter (✔).
- The display will show:

> **EXTRAS PRICING**
> ►**EXTRA STRONG**   **0.00**
>   **EXTRA WHITE**   **0.00**
>   **EXTRA SUGAR**   **0.00**

- Use scroll buttons 1 & 2 (⇅ keys) to highlight the desired option and press (✔) to accept.
- The chosen extras option price digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
  - o If the price required is £0.10, press button 1 followed by button 0.
- Pressing (✔) to accept sets the chosen extras option price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.3.4.2. Extra White

- To set extra whitener prices to a given value, from the 'PRICE SETTINGS' sub-menu use scroll buttons 1 & 2 (⇅ keys) to highlight "EXTRAS PRICING" and press enter (✔).

- The display will show:

EXTRAS PRICING
EXTRA STRONG   **0.00**
► **EXTRA WHITE**   **0.00**
   EXTRA SUGAR   **0.00**

- Use scroll buttons 1 & 2 (⇅ keys) to highlight the desired option and press (✔) to accept.

- The chosen extras option price digits will start to flash.

- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
  - o   If the price required is £0.10, press button 1 followed by button 0.

- Pressing (✔) to accept sets the chosen extras option price digits and stops them flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.3.4.3. Extra Sugar

- To set extra sugar prices to a given value, from the 'PRICE SETTINGS' sub-menu use scroll buttons 1 & 2 (⇅ keys) to highlight "EXTRAS PRICING" and press enter (✔).

- The display will show:

EXTRAS PRICING
EXTRA STRONG   **0.00**
EXTRA WHITE   **0.00**
►**EXTRA SUGAR**   **0.00**

- Use scroll buttons 1 & 2 (⇅ keys) to highlight the desired option and press (✔) to accept.

- The chosen extras option price digits will start to flash.

- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
  - o   If the price required is £0.10, press button 1 followed by button 0.

- Pressing (✔) to accept sets the chosen extras option price digits and stops them flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.3.5. Decimals

This function allows the user to change the number of decimal places used to display all prices. Only '0', '1' and '2' decimal places are permissible.

- To change the number of decimal places used to display al prices, from the 'PRICE SETTINGS' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "DECIMALS" and press enter (✔).
- The decimals value digits will start to flash.
- Pressing either buttons 0, 1 or 2 will change the display to the desired value, e.g.
  - If all prices need to be displayed to 2 decimal places, press button 2.
- Pressing (✔) to accept sets the decimal place display digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.4. ►Discount Values

This will allow the user to set a discount pricing structure for a payment system if fitted. It is possible to set a price discount for ALL drinks for customers using their own cup during selected times of the day and for customers using the jug fill option. If a price discount is set, it will only be active if either a discount vend period (see section 12.1.7 for further details about setting discount vend periods), or a discount pin number has also been set.

The various 'Discount Values' sub-menu options available are as follows:

12.1.4.1. Supp. Period (Supplementary Period)

- To set a price discount for a defined discount period, from the 'DISCOUNT VALUES' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "SUPP. PERIOD" and press enter (✔).
- The 'SUPP. PERIOD' price digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
  - If the price discount required is £0.50, press button 0 followed by button 0 followed by button 5 followed by button 0.
- Pressing (✔) to accept sets the 'SUPP. PERIOD' price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.4.2. No Cup

- To set a price discount, for customers wishing to use their own cup, from the 'DISCOUNT VALUES' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "NO CUP" and press enter (✔).
- The 'NO CUP' price digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.

-      o   If the price discount required is £0.10, press button 1 followed by button 0.

- Pressing (✔) to accept sets the 'NO CUP' price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.4.3. Jug

- To set a price discount, for customers wishing to use a jug, from the 'DISCOUNT VALUES' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "JUG" and press enter (✔).
- The 'JUG' price digits will start to flash.
- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.
  - o   If the price discount required is £0.50, press button 5 followed by button 0.
- Pressing (✔) to accept sets the 'JUG' price digits and stops them flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.   ►Payment Settings

This menu will allow the user to set up a payment system if fitted. The machine has the ability to run the following types of payment systems:

- Free vend.
- A cashless card / key system.
- A coin mechanism with change giver.
- A coin acceptor.

For further information on what payment systems are available for this machine please contact your Westomatic Area Business Development Manager or Area Technical Manager.

The various 'Payment Settings' sub-menu options available are as follows:

12.1.5.1. Payment System

12.1.5.1.1. Free Vend

This sub-menu will allow the user to set the machine such that all drinks become free of charge to customers regardless of the price settings and / or any payment systems fitted.

- To set the machine to free vend, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "PAYMENT SYSTEM" and press enter (✔).
- The display will show:

PAYMENT SYSTEM
►FREE VEND   ✓
  CARD/COIN MECH   **X**
  COIN ACCEPTOR   **X**

- Use scroll buttons 1 & 2 (⇕ keys) to highlight the 'FREE VEND' option and press (✔) to accept.

- The disabled (**X**) and enabled (✔) displays for any given menu option are mutually exclusive. This means that if a menu option is already enabled but a different, currently disabled option needs to be enabled instead, it will first be necessary to highlight the desired disabled option using either of the two scroll buttons 1 or 2 (⇕ keys) and press (✔) to accept the setting.

- The display to the right of the chosen option will start to flash.

- Using either of the two scroll buttons 1 or 2 (⇕ keys) toggle the chosen option to the enabled condition (✔) and press (✔) to accept the setting.

- The original enabled option will then automatically revert to the disabled condition and the display to the right of the chosen option will now be enabled and stop flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.1.2. Card/Coin Mechanism

This sub-menu will allow the user to set the machine to use either a card reader or a coin mechanism (if fitted).

- To set the machine to use either a card reader or a coin mechanism, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "PAYMENT SYSTEM" and press enter (✔).

- The display will show:

PAYMENT SYSTEM
►FREE VEND   ✓
  CARD/COIN MECH   **X**
  COIN ACCEPTOR   **X**

- Use scroll buttons 1 & 2 (⇕ keys) to highlight the 'CARD/COIN MECH' option and press (✔) to accept.

- The disabled (**X**) and enabled (✔) displays for any given menu option are mutually exclusive. This means that if a menu option is already enabled but a different, currently disabled option needs to be enabled instead, it will first be necessary to highlight the desired disabled option using either of the two scroll buttons 1 or 2 (⇕ keys) and press (✔) to accept the setting.

- The display to the right of the chosen option will start to flash.

- Using either of the two scroll buttons 1 or 2 (⇕ keys) toggle the chosen option to the enabled condition (✔) and press (✔) to accept the setting.

- The original enabled option will then automatically revert to the disabled condition and the display to the right of the chosen option will now be enabled and stop flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

<center>12.1.5.1.3. Coin Acceptor</center>

This sub-menu will allow the user to set the machine to use a coin acceptor (if fitted). Coin acceptors can be programmed to accept tokens as a means of payment if required. Note, a coin acceptor does not give change.

- To set the machine to use either a coin acceptor, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight "PAYMENT SYSTEM" and press enter (✔).
- The display will show:

<center>

PAYMENT SYSTEM
►FREE VEND   ✔
  CARD/COIN MECH   **X**
  COIN ACCEPTOR   **X**

</center>

- Use scroll buttons 1 & 2 (⇕ keys) to highlight the 'COIN ACCEPTOR' option and press (✔) to accept.
- The disabled (**X**) and enabled (✔) displays for any given menu options are mutually exclusive. This means that if a menu option is already enabled but a different, currently disabled option needs to be enabled instead, it will first be necessary to highlight the desired disabled option using either of the two scroll buttons 1 or 2 (⇕ keys) and press (✔) to accept the setting.
- The display to the right of the chosen option will start to flash.
- Using either of the two scroll buttons 1 or 2 (⇕ keys) toggle the chosen option to the enabled condition (✔) and press (✔) to accept the setting.
- The original enabled option will then automatically revert to the disabled condition and the display to the right of the chosen option will now be enabled and stop flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.2. Coin Set

This sub-menu will allow the user to specify the range of coin values to be displayed on the machine LCD if a payment system is fitted. This is achieved by programming a certain 'COIN SET' number that corresponds to a fixed range of coins. It is important that the coin set number should be programmed to suit either:

   o The coin acceptance group programmed within any fitted coin mechanism
   or
   o The required message to suit any fitted card/key payment system.

The coin set numbers available are as follows:

0 = 1p, 2p, 5p, 10p, 20p, 50p and £1.00
1 = 1p, 2p, 5p, 10p, 20p, 50p, £1.00 and £2.00
2 = 5p, 10p, 20p, 50p and £1.00
3 = Enter Credit card
4= Custom coin set - the message to be displayed must be programmed on the second page of the advertising feature
5 = 5ct, 10ct, 20ct, 50ct and 1.00 Eu
6 = 5ct, 10ct, 20ct, 50ct 1.00 Eu and 2.00 Eu
7 = 5ct, 10ct, 20ct, 50ct and $1.00
8 = 5ct, 10ct, 20ct, 50ct $1.00 and $2.00

- To set the machine to use one of the above coin sets, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇅ keys) to highlight the "COIN SET" option and press enter (✔).
- The display to the right of the chosen option will start to flash.
- Use buttons 0 to 8 to programme the desired coin set number as given above.
- Pressing (✔) to accept sets the chosen display status and stops it flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.3. Coin Acceptance

12.1.5.3.1. Coin Type 01 to 16

The coin acceptance relates to the numbers 00 through to 16, which represent coin values determined by the coin mechanism.
00 = Inhibit coin acceptance and manual dispense.
01 = Coin acceptance, no manual dispense.
03 = Token Acceptance
11 = As above except acceptance is inhibited when in a low change condition.
02 = Coin acceptance and manual dispense
12 = As above except acceptance is inhibited when in a low change condition.

12.1.5.4. Coin Values

12.1.5.4.1. Coin 1 to 6

This sub menu is used when a coin acceptor is attached to the machine. This can be used to tell the VMC the coin value that the coin acceptor will accept. This same device can be used to assign a value to a token.

12.1.5.5. Coin Tube Setup

A typical MDB coin mechanism has three coin tubes assigned as A, B and C. These tubes represent the three LOWEST denominations of coins to be used such that when the vending machine is switched on, its CPU will automatically set the denomination values of tubes A, B and C after communicating with any fitted coin mechanism. This protocol means that the

denominations assigned to tubes A, B and C will only require altering if there is a need to identify further coins that are not the three lowest denominations.

The 'COIN TUBE SETUP' sub-menu will allow the user to assign the three lowest coin denominations to each of the tubes A, B and C within the coin mechanism.

The coin tube setup numbers available on the vending machine are as follows:

0 = Coin A, the lowest coin denomination assigned to a tube by a coin mechanism
1 = Coin B, the second lowest coin denomination assigned to a tube by a coin mechanism
2 = Coin C, the third lowest coin denomination assigned to a tube by a coin mechanism

The 'Coin Tube Setup' sub-menu options available are as follows:

12.1.5.5.1. Assign Tube A, B or C

- To assign a coin denomination to one of tubes A, B or C in the coin mechanism, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇅ keys) to highlight the "COIN TUBE SETUP" option and press enter (✔).
- The display will show:

  > **COIN TUBE SETUP**
  > **►ASSIGN TUBE A   0**
  > **ASSIGN TUBE B   1**
  > **ASSIGN TUBE C   2**

- Use scroll buttons 1 & 2 (⇅ keys) to highlight the 'COIN TUBE SETUP' option and press (✔) to accept.
- The display to the right of the chosen coin tube setup option will start to flash.
- Use buttons 0 to 2 to assign the desired coin tube setup number as given in section 12.1.5.5.
- Pressing (✔) to accept sets the chosen display status and stops it flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.5.2. Tube A, B or C Low

If a coin mechanism/acceptor is fitted, this sub-menu will allow the user to program the number of coins in each of tubes A, B and C below which the vending machine will deem the tube to have reached a low change level.

12.1.5.6. Change Equation

If a coin mechanism/acceptor is fitted, this sub-menu will allow the user to specify at what point the "EXACT CHANGE" message will be displayed on the machine LCD, based on when certain coin tubes in the coin mechanism/acceptor reach low change levels.

- To specify which tube combination will be used to enable the 'EXACT CHANGE' message to be displayed, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight the "CHANGE EQUATION" option and press enter (✔).
- The display will show:

<div align="center">

COIN TUBE SETUP

► **A or B and C**	✔
A and B and C	**X**
A and B	**X**
A and B or C	**X**
A only	**X**
A or B	**X**
A or B or C	**X**
A and C	**X**
A or C	**X**
B and C	**X**
B only	**X**
B or C	**X**
C only	**X**

</div>

- Use scroll buttons 1 & 2 (⇕ keys) to highlight the desired 'CHANGE EQUATION' option and press (✔) to accept.
- The disabled (**X**) and enabled (✔) displays for any given menu option are mutually exclusive. This means that if a menu option is already enabled but a different, currently disabled option needs to be enabled instead, it will first be necessary to highlight the desired disabled option using either of the two scroll buttons 1 or 2 (⇕ keys) and press (✔) to accept the setting.
- The display to the right of the chosen option will start to flash.
- Using either of the two scroll buttons 1 or 2 (⇕ keys) toggle the chosen option to the enabled condition (✔) and press (✔) to accept the setting.
- The original enabled option will then automatically revert to the disabled condition and the display to the right of the chosen option will now be enabled and stop flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.7. Exact Change Message

If a change-giving mechanism is fitted and it reaches the low change values assigned for tubes A, B or C (see section 12.1.5.5.2), this sub-menu will allow the user to specify whether the 'EXACT CHANGE' message which then appears is permanently displayed on the LCD screen or whether it is displayed as a message that alternates with any pre-programmed standby messages.

- To specify how the 'EXACT CHANGE' message is displayed, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇊⇈ keys) to highlight the "EXACT CHANGE MSG' option and press enter (✔).

- The display will show:

<div align="center">

EXACT CHANGE MSG
► ALTERNATING   X
   PERMANENT   ✔

</div>

- Use scroll buttons 1 & 2 (⇊⇈ keys) to highlight the desired 'EXACT CHANGE MSG' option and press (✔) to accept.

- The disabled (**X**) and enabled (✔) displays for any given menu option are mutually exclusive. This means that if a menu option is already enabled but a different, currently disabled option needs to be enabled instead, it will first be necessary to highlight the desired disabled option using either of the two scroll buttons 1 or 2 (⇊⇈ keys) and press (✔) to accept the setting.

- The display to the right of the chosen option will start to flash.

- Using either of the two scroll buttons 1 or 2 (⇊⇈ keys) toggle the chosen option to the enabled condition (✔) and press (✔) to accept the setting.

- The original enabled option will then automatically revert to the disabled condition and the display to the right of the chosen option will now be enabled and stop flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.8. Max Credit

This sub-menu will allow the user to specify the maximum value of change that can be dispensed if a coin mechanism is fitted, as a multiple of the lowest value coin accepted. The machine will reject any coins above the max credit limit.

- To set the maximum credit the machine will hold, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇊⇈ keys) to highlight the "MAX CREDIT" option and press enter (✔). If this option is not available, check the payment system is set to Pay Vends.

- The display to the right of the chosen option will start to flash.

- Use buttons 0 to 9 to programme the desired credit limit.

- Pressing (✔) to accept sets the chosen display status and stops it flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.9. Max Payout

This sub-menu will allow the user to specify the maximum value of change that can be dispensed if a coin mechanism/acceptor is fitted.

- To set the maximum credit the machine will dispense, from the 'PAYMENT SETTINGS' sub-menu use scroll buttons 1 & 2 (⇕ keys) to highlight the "MAX PAYOUT" option and press enter (✔).
- The display to the right of the chosen option will start to flash.
- Use buttons 0 to 9 to programme the desired pay-out limit.
- Pressing (✔) to accept sets the chosen display status and stops it flashing.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.5.10. Multi Vend

This sub-menu allows the user to specify the function of how to handle the money in the machine. With multi vend not enabled, (**X**) the machine will only dispense one drink, any change will be returned after the vend (*Depending on payment system*). With the multi vend enabled (✔), the machine will allow the user to dispense as may drinks as credit allows.

12.1.5.11. Force Vend

This sub-menu allows the user to specify the function of how to handle the money in the machine. With Force vend not enabled, (**X**) the machine will accept money and return the change or all the money entered without taking a vend. With the Force vend enabled (✔), the machine will not allow the money to be returned to the customer without first taking a vend.

12.1.5.12. Immediate Deduct

This option when enabled (✔) will immediately deduct the value of your drink as soon as the vend key or drink option has been pressed. If the vend is aborted your coins will be lost. If this option is not enabled (**X**) the coin value is deducted after a successful vend.

12.1.5.13. Escrow

Escrow is where money held in trust by a third party / coin mechanism until the vending machine delivers a drink.

Many coin mechanisms have an area where coins are stored until the vend has been completed this is called the Escrow area.

12.1.5.14. Card: Zero Val. Fix

Some older cashless payment systems have a method of issuing daily free vends via a token vend of 0.00p. This may not function correctly on the machine. In this case it may be necessary to enable (✔) this function on both the host and Slave machines to gain access to zero value vends.

12.1.6. ►Pin Code Set-up

This will allow the user to set the pricing to allow free, service and discount pin codes.

12.1.6.1. Discount Vend Pin Codes

Up to 6 four-digit pin numbers can be programmed to allow the machine to switch into discount vend mode.
All PIN codes can be individually audited for accounting purposes within the audit report.

12.1.6.2. Free Vend Pin Codes

Up to 6 four-digit pin numbers can be programmed to allow the machine to switch into free vend mode. To enter a free vend pin code, one of the function buttons on the front door must be programmed as "PIN ACCESS"

12.1.6.3. Free Time

Free Time sets up the maximum time the free vend by pin is available for after the PIN code is entered. This can be set to allow just one user at a time or multiple. Time settings are from 30s to 80Hours.

12.1.6.4. Service Pins

The Vending machine has four access levels for the user.

Level 1 is for the general user of the machine. Known as "Door Closed" mode. Only the drink selection buttons are available.

Level 2 is for the general maintenance of the machine, no pass codes are required. Access to this level is obtained by opening the door to the machine. Known as "Door Open" Mode.

Level 3 & 4 have user defined pass codes, which can be changed as required to limit access to the machine drink throws and set-up.

12.1.7. Vend Periods

This function will allow the user to set time periods throughout the day during which free and / or price discounts can be utilised for either all drinks, or a limited selection of drinks if a payment system is fitted.

Up to six 'free vend' periods OR six supplementary discount periods may be programmed although the two are mutually exclusive, i.e. if any free vend periods are programmed, the discount feature cannot be used, and vice versa.

The various 'Vend Periods' sub-menu options available are as follows:

12.1.7.1. Discount Period 1, 2, 3 etc.

- To set a price discount for a defined discount period, from the 'VEND PERIODS' sub-menu use scroll buttons 1 & 2 (⬍ keys) to highlight "DISCOUNT PERIOD 1" and press enter (✔).

- The display will show:

<div align="center">

DISCOUNT PERIOD 1

► MONDAY	X
TUESDAY	X
WEDNESDAY	X
THURSDAY	X
FRIDAY	X
SATURDAY	X
SUNDAY	X

</div>

- Use scroll buttons 1 & 2 (⬍ keys) to highlight the desired 'DISCOUNT PERIOD 1' day/option and press (✔) to accept.

- The machine default will show all discount periods as disabled (**X**). To enable a particular day and enabled (✔) displays for any given menu option are mutually exclusive. This means that if a menu option is already enabled but a different, currently disabled option needs to be enabled instead, it will first be necessary to highlight the desired disabled option using either of the two scroll buttons 1 or 2 (⬍ keys) and press (✔) to accept the setting.

- The display to the right of the chosen option will start to flash.

- Using either of the two scroll buttons 1 or 2 (⬍ keys) toggle the chosen option to the enabled condition (✔) and press (✔) to accept the setting.

- The original enabled option will then automatically revert to the disabled condition and the display to the right of the chosen option will now be enabled and stop flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

- The 'SUPP. PERIOD' price digits will start to flash.

- Pressing the appropriate buttons in numerical order will change the display to the desired value e.g.

  - If the price discount required is £0.50, press button 0 followed by button 0 followed by button 5 followed by button 0.

- Pressing (✔) to accept sets the 'SUPP. PERIOD' price digits and stops them flashing.

- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

To set a discount value enter 'Service Mode', Machine Settings, and Discount Values and enter the value of discount required.

12.1.7.2. Setting The Free / Discount Period

To programme any Free or Discount Period, enter 'Service Mode', Machine Settings, and Vend Periods.

Scroll through the menu to select the first free or discounted period you wish to programme.

Enable ✓ the day/s (Mon-Sun) of the free or discount period

Enter the Start Time (00:00) in 24hr clock

Enter the Duration (00:00) in hours and minutes

Repeat this process if you require more than one free & discount periods.

12.1.7.3. Free Vend Periods

The drinks available during a timed free vend or discount period are determined by the Individual 'Drink Set Up'.

Each active selection can be programmed to:

a)   Timed free vend available   ✓
b)   Timed free vend not available. **X**

By enabling the drinks individually you can choose which selections you wish to free vend during these periods. All drinks can be free vended if required.

Note: If all active selections are set to free (00.00), the standby message on the display will change to read 'Free Vend'. If any selection remains as a pay, the external display message will not change during the free vend period.

12.1.7.4. Free Vend By Key

If this option has been fitted, the vending machine will allow the user to vend free drinks by inserting your own free vend key.

12.1.8.   ►Power-Save

This will allow the user to enable pre-set times to allow the boiler to use a lower operating temperature.

During 'power saving' mode, the water temperature is reduced to the Sleep Temperature set in the boiler set up menu. This lower temperature is then maintained until 'power saving' mode is terminated, i.e. the 'boiler sleep' signal is switched off.

The objective of this mode is: -
To reduce power consumption and
To reduce lime scale formation.

There are two methods of initiating 'power saving' mode: –

12.1.8.1. PROGRAMMED WORKING DAY

The sites working hours can be programmed into the working day feature, by setting the shift day, start time and the duration. Upon the working day start time; the boiler temperature is raised to the programmed operational temperature.

All machines leave the factory with this facility programmed as inactive to accommodate locations that permanently operate for 24 hours. This may need to be altered to suit particular locations by entering: -

► Service Mode   −► Power Save
                     └► Working Day

Mon	✓
Tues	✓
Wed	✓
Thurs	✓
Fri	✓
Sat	X
Sun	X
Start Time	08:00
Duration	09 hrs

12.1.8.2. AUTO POWER DOWN

With the "AUTO SLEEP" setting in hours in the "boiler settings" – "set-up" menu. The boiler temperature will reduce to the sleep temperature after a pre-defined number of hours (with no vends) have elapsed.

12.1.9.   ►Diagnostics

This will allow the user to test machine outputs to check that motor and water valves are functioning correctly. A fault log captures all faults on the machine with an electronic time and date stamp.

12.1.10.   ►Miscellaneous

This will allow the user to set the allowable timeouts for both the MDB and water inlet valve opening (failsafe function). Also available within this section is the option of enabling or disabling the machine audible sounder.

12.1.11.   ►Dispense Arm

This will allow the user to enable a moving dispense head (only applicable to Sigma free-standing machines). This option is not available on the Prelude vending machine. There is no requirement to alter these settings.

12.1.12. ►Cup Settings

This will allow the user to set all the functions relating to cup settings. In this menu the user can enable different or dual cup sizes, enable the cup dropper and cup sensor, and determine what to do in the event of an early cup removal.

'Cup Settings' are reached via 'Service Mode' thus:

► SERVICE MODE <Enter 4-digit access code>
└►MACHINE SETTINGS
└►**CUP SETTINGS**

Use buttons 1 or 2 (⇅ keys) to scroll to the Cup Settings menu option. Press (✔) to enter the sub menu. This menu contains the following functions.

12.1.12.1. Def Cup Size

This function is used to change the size of the cup used in the machine. Its function is used as shown below.

- Use buttons 1 or 2 (⇅ keys) to select "Def Cup Size".
- Press button (✔) to enter. The cup size will flash.
- Use buttons 1 or 2 (⇅ keys) to select the cup size from the list.
- Press button (✔) to enter and save the setting.

12.1.12.2. Dual Cup Size

Enabling (✔) the dual cup size options allows the user to select a standard drink from the machine in addition to using their own cup to vend a larger drink. The dual cup size is the next cup size the machine can offer. If the cup size is set to 7oz the dual cup size (Grande) option will vend a 9oz drink.

12.1.12.3. Cup Dropper

This function is used to turn on / off the cup dropper. Its function is used as shown below.

- Use buttons 1 or 2 (⇅ keys) to select "Cup Dropper".
- Press button (✔) to enter. The option will flash.
- Use buttons 1 or 2 (⇅ keys) to enable (✔) or disable (**X**) the cup dropper.
- Press button (✔) to enter and save the setting.

12.1.12.4. Carousel T/Out

This function is used to change the time the machine takes looking for cups in the cup unit. If no cups are found within the time specified the machine would report a cup sold out error. Its function is used as shown below.

- Use buttons 1 or 2 (⇅ keys) to select "Carousel T/Out".
- Press button (✔) to enter. The "Carousel T/Out" will flash.
- Use buttons 1 or 2 (⇅ keys) to select the time out time.
- Press button (✔) to enter and save the setting.

12.1.12.5. Peeler T/Out and Level

This function is used to change the time the machine takes looking for cup peeler motor to find it home / parked position. If the cup peeler does not make contact with the switch within this time the machine would report an error. Its function is used as shown below.

- Use buttons 1 or 2 (⬇⬆ keys) to select "Peeler T/Out".
- Press button (✔) to enter. The "Peeler T/Out" will flash.
- Use buttons 1 or 2 (⬇⬆ keys) to select the time out time.
- Press button (✔) to enter and save the setting.

The peeler level is the number of cups that the machine will continue to dispense after the cups sold out switch has been activated. This figure must not include all cups available after the sold out switch has been activated. At least two cups must remain in the machine cup unit at all times. These cups will avoid the need to prime the cup unit when new cups are loaded.

Note: The first time the machine is set up and loaded with cups the first drink may not peel a cup properly until the peelers have completed at least one full cycle.

12.1.12.6. Sensor Active

This function is used to enable or disable the cup sensor to allow customers to use there own bottle and cup. Its function is used as shown below.

- Use buttons 1 or 2 (⬇⬆ keys) to select "Sensor Active".
- Press button (✔) to enter. The "Sensor Active" will flash.
- Use buttons 1 or 2 (⬇⬆ keys) to enable (✔) or disable (**X**) the cup sensor.
- Press button (✔) to enter and save the setting.

12.1.12.7. Placement Time

This function allow the operator to enter the maximum time allowed for the user to take the vended cup and place into the cup station under the dispense nozzle. The onscreen prompts instruct the user to place the cup between the flashing lights. If the timer times out the user will have to reselect there drink for a second time and repeat the above process.

12.1.12.8. Early Cup Removal

This function is used to instruct the VMC as to what you would like the machine to do in the event of a cup being removed before the end of a vend. If this function is not visible, you will need to enable the cup sensor see section 12.1.13.1 to enable the sensor. Its function is used as shown below.

- Use buttons 1 or 2 (⬇⬆ keys) to select "Early Cup Removal". Press button (✔) to enter the menu

The screen will show the following menu options:

EARLY CUP REMOVAL ⬇⬆
IGNORE REMOVAL

ABORT AND RINSE
MAX RINSE TIME

- Use buttons 1 or 2 (⇅ keys) to select "Ignore removal" or "Abort and Rinse" and press button (✔) to accept the changes.
- Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

12.1.12.8.1.   Ignore removal

This function will continue to vend a drink after the cup / Jug has been removed from the sensor. This can be used where users are unfamiliar with the cup placement and place the cup in the sensor and then remove it by accident.

NOTE: This function must be used with caution as hot / cold water can continue to vend after the cup / bottle has been removed.

12.1.12.8.2.   Abort and Rinse

This function aborts a vend as soon as the cup sensor does not see a cup during the vend cycle. Setting a time in the "Max rinse time" will flush the last used drink to clear any pipes and / or whipper bowls of ingredient.

12.1.13.   2nd Vend Same Cup

This function is used to instruct the VMC to either allow (✔) or not allow (**X**) a second vend into the same cup. With the 2nd vend same cup not enabled (**X**), the machine will not vend another drink into the last vend unless the cup has bee removed and replaced back into the cup station. This function stops the vending of a second drink and cup into the first if accidentally left in the cup station.

12.1.13.1. Cup Sensor

The Prelude is fitted with a cup sensor as standard.
The sensor can be adjusted by its own sensitivity dial or disabled in the programming

►Service Mode,
　　└►Machine settings,
　　　　└► Cup Settings
　　　　　　└►**Sensor Active**
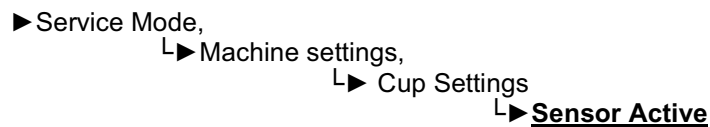
12.1.13.2. Sensor Setup Functions

Yellow LED
Output function indicator (receiver only): The LED comes on as soon as the output is active.

Potentiometer 6-turn adjuster
Used for setting the background suppression (BGS) respectively ranges of the receiver.
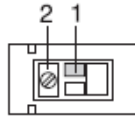
1 LED yellow: Output function indicator
2 Poti: BGS respectively range setting

12.1.13.3. Sensor Calibration

1:      Position the sensor at the desired distance
2:      Turn the potentiometer counter clockwise (Shortest range) so that the yellow LED turns off.
3:      Place a cup inside the beam path.
4:      Turn the potentiometer slowly clockwise (there may be more than 1 turn) until the yellow LED turns on. The object is now detected (position a).
5:      Remove the target: The yellow LED turns off.
6:      Continue turning the potentiometer clockwise (there may be more than 1 turn) until the yellow LED turns on: The background is detected (position b). If no background is detected, position b overlaps with the max. setting.
7:      Turn the potentiometer to the middle position C between A and B. The sensor is now ready.

12.1.14. ►Auto Clean

```
Auto Clean
        └────────► Active
        └────────► Monday
        └────────► Tuesday
        └────────► Wednesday
        └────────► Thursday
        └────────► Friday
        └────────► Saturday
        └────────► Sunday
        └────────► Start Time
```

'Auto Clean' is reached via 'Service Mode' thus:

► SERVICE MODE <Enter 4-digit access code>
      └►MACHINE SETTINGS
           └►**AUTO CLEAN**

Use buttons 1 or 2 (⇅ keys) to scroll to the Auto Clean menu option. Press (✔) to enter the sub menu. This function is used to automatically clean the machine. During an auto clean period the LCD will display the message:

**CLEANSING PROGRAM
IN PROGRESS...**

The beeper will also sound for the duration of the flush alerting people of its current activity. The coin mechanism if fitted will be inhibited.

During the period the machine cannot be used to vend a drink, if however a drink is being vended at the time the auto flush sequence is about to start. The flush cycle will not commence.

Use buttons 1 or 2 (⬇⬆ keys) to scroll through the Auto Clean menu. Press (✔) on the "Activate" option to enter, and then use buttons 1 or 2 (⬇⬆ keys) to enable (✔) or disable (**X**) the function.
Once enabled use buttons 1 or 2 (⬇⬆ keys) to select the day / days you want the auto flushing to take place.
Finally set the time for the auto flush to start. This time setting uses the 24Hour clock format.
Press cancel (**X**) to exit back into 'Door Open Mode' to ensure the new settings are saved to the machine CPU.

The auto clean function uses the flush times set in the flush menu option see section 12.1.16. The auto clean will flush all enabled hot water positions in number sequence 1,2,3,4,5,6. Brewers where fitted will flush twice.

12.1.15. ►Jug Settings

This will allow the user to enable the use of a jug and set up the number of cups to fill the jug.

12.1.15.1. Jug Facility / Operation

```
►Service Mode
   └►Machine settings
        └►Jug Settings
              └►Active
              └►Max Cups / Jug
              └►Free vend by pin
              └►Available for
```

To enable Jug Fill (If fitted); Enter 'Service Mode' −► Machine settings −► Jug Settings.
Scroll to enabled or disable as required ✔/**X**.
Enter also in the same menu the maximum number of cups per jug fill.

To operate the Jug Vend Facility, push-in the waste tray to the jug vend fill position and enter the number of cups per jug using the up and down arrows (⬇⬆ keys) buttons 1 and 2.

The jug facility can be used in 2 ways:
1. Pay vend
2. Free vend via Pin

For Pay vends, Insert your credit and make your jug selection or for Free vends via a pin code, enter a Personal Identification Number (PIN) to activate a 'free of charge' jug fill routine and press the drink selection required.

A maximum of six individual 4-digit PINs can be programmed within Jug set up menu. Each PIN is individually audited for accounting purposes within the audit report.

Note: To safeguard PINs, should 3 consecutive incorrect PINs be entered, the Jug key will become inactive for a 4-minute duration (PINs are not required for the jug facility if the machine is set to permanent free vend, or during a free vend period).

12.1.15.2. Jug Vend

The Prelude has a Jug facility that is activated by the 'push-in' drip tray. An internal switch detects that the drip tray has been pushed in. Only Jug vends will be dispensed once the switch has been activated.

Up to a maximum number of cups will then be dispensed into the jug. See:

```
►Service Mode,
     └►Machine settings,
              └► Jug Settings
                     └►Active           ← Enable Jug fill
                     └►Max cups / Jug   ← Cups per jug
                     └►Free vend by pin ← Free vend enabled
                     └►Available for    ← Jug availability
```

12.1.16.   ►Flush Settings

This will allow the user to set up the flush times for the water valves, whipper bowls and the brewers. These times are used for the "one button" and individual flushing in 'Service Mode'. See section 12.6 for further details.

12.1.17.   ►Boiler Settings

This will allow the user to set-up and monitor the boiler water level, leak detection and water temperature. See section 15.1, 15.2, 15.3 and 15.4 for further details.

12.1.18.   ►Brewer 1 Settings

This will allow the user to set up brewer 1 waste tray and filter belt counters (if fitted). This menu also enables the user to configure each brewer 1 as either a pressurised or non-pressurised brewer as required. By default, Tea brewers are not pressurised but all Whole Bean & Fresh Brew coffee brewers are pressurised.

12.1.19.   ►Brewer 2 Settings

This will allow the user to set up brewer 2 waste tray and filter belt counters (if fitted). This menu also enables the user to configure brewer 2 as either a pressurised or non-pressurised brewer as required. By default, tea brewers are not pressurised but all Whole Bean & Fresh Brew coffee brewers are pressurised.

12.1.20.   ►Button Allocate

This will allow the user to set up the function and drink buttons on the 12-way keypad. Each of the 12 buttons can be independently defined as a function or as any enabled drink type.

12.1.21.   ►Advertising

This will allow the user to set up a message that can be displayed on the front screen of the machine. Examples being to welcome visitors or to advertise contact telephone numbers negating the need of attaching labels to the machine.

12.1.21.1. Advertising Display Message

It is possible to enter your own advertising message onto the display of the machine. Once programmed the message will alternate from the standby message on the display every 5 seconds.

G O O D   M O R N I N G . . .

. . . .

1 2 3 4 5 6 7 8 9 0 . , ' " :

A B C D E F G H I J K L M

Advertising Function Keys:

Functions	Buttons		Functions
▲Scroll Up	**1**	**2**	Scroll Down ▼
◄Scroll Left	**3**	**4**	Scroll Right ►
No function	**5**	**6**	Previous Page
Reset Current Page	**7**	**8**	Next Page
Insert	**9**	**10**	Delete
Cancel / Exit	**11**	**12**	Enter / Save All

To Programme Your Advert,

Enter:
►Service Mode,
└►Machine settings,
　　└►Advertising
　　　　└►Advertising Editor　-　Enter / Exit Editing Mode
　　　　└►Advertising Display - 　Enable / Disable ✔/**X**　the display.

Scroll to highlight the Advertising Editor option.

Press enter '12' to enter 'Advertising Editor' and view the current blank display or programmed advert.

Move the cursor ▲, ▼, ◄ or ► to where you want the advert to start on the display or where you want to edit.

Press enter 'twice' to display the text characters available

　1234567890 . , ' ` : ; ( ) & ? / \ + - = £ $ * % Ä Ë Ï Ö Ü

ABCDEFGHIJKLMNOPQRSTUVWXYZ <Space>

Scroll ▲, ▼, ◄ or ► to highlight the text character you want to add to your advert. Press enter to add this text character into the advert.

Continue to scroll and edit text into the advert until the advertising message is complete.

To view the advert as it will be displayed in operational mode, press cancel '11'.

If the display requires editing, scroll using the ▲, ▼, ◄ or ► and insert or delete text via the insert and delete keys.

Press cancel 'twice' to save and take you back to Door Open Mode.

12.2. ►Drinks

The Drinks Menu is where all the drinks available on the Prelude vending machine are stored. Within this menu option each drink can be individually changed to give the correct drink make up. All drinks follow a recipe that can be configured to individual requirements.

SERVICE MODE
 └► **DRINKS**
    ├─► CHANGE ALL
    ├─► INSTANT COFFEES
    ├─► FG COFFEES
    ├─► FB COFFEES
    ├─► FB TEA
    ├─► INSTANT TEA BLACK
    ├─► INSTANT TEA WHITE
    ├─► CHOCOLATE
    ├─► CREAMI CHOC
    ├─► SOUP
    └─► WATERS

After selecting the required drink to modify, each drink selection menu splits into two sections:

 └► **DRINKS**
    └► < Drink Choice from above >
      ├►**DRINK SETUP**
      └►**DRINK THROWS**

12.3. ►Drink Setup

The drink set-up menu contains information about the drink make up. Here the user can enable the drink for use and for free vends. Both Decaf and Caffeinated have separate sections:
└► **DRINKS**
          └► < Drink Choice from above >
               └►**DRINK SETUP**

├► **REGULAR SETUP**		*(Caffeinated Set-up)*
Active	✓	*(Turn on/off Selection)*
Double Active	X	*(Allow double espressos)*
Time Free Vend	X	*(Allow free vending of this drink)*
Whipped	✓	*(Enable drink whipping)*
Use Brewer 2	X	*(Select which brewer to use 1 / 2)*
├► **DECAF SETUP**		*(Decaffeinated Set-up)*
Active	X	*(Turn on/off Selection)*
Double Active	X	*(Allow double espressos*
Time Free Vend	X	*(Allow free vending of this drink)*
Whipped	X	*(Enable drink whipping)*
Use Brewer 2	X	*(Select which brewer to use 1 / 2)*
└► **EXTRA TIME**	5s	*(Extra time added to end of vend)*

12.4. ►Drink Throws

12.4.1.   Main Ingredients

All drink selections have the same menu parameters required to set up the drink selection. i.e. throw times, delay's and pulses so for clarity only one option will be shown. Each drink is made up a several parts depending on the drink type; each part of the drink make up will consist of an ingredient motor a water valve and a whipper motor. Each one of these can be programmed independently. A typical programmable block is as below:

► **7oz Duration**	Ingredient / Water / Whipper on time (Throw) for 7oz drinks
► **9oz Duration**	Ingredient / Water / Whipper on time (Throw) for 9oz drinks
► **12oz Duration**	Ingredient / Water / Whipper on time (Throw) for 12oz drinks
► **Delay**	Ingredient / Water / Whipper Start delay time
► **PLS on**	Ingredient / Water / Whipper Throw pulse On duration
► **PLS off**	Ingredient / Water / Whipper Throw pulse Off duration
► **Triac**	Ingredient / Water / Whipper Triac output

This is the same for all ingredients, whitener, topping, sugar, tea, and coffee, chocolate, etc,

12.4.2.   Dry Throw Testing

Testing of the water, whipper or ingredient throws without running in door-closed mode or during drink testing can be carried out buy moving the edit cursor to the line required i.e. press (⇅ keys) buttons 1 and 2 so the edit cursor is at the line to be edited. Instead of pressing button 12 to edit the line, press button 10 to run the triac for the required time. Dry throws can be used to weigh the ingredient for correct gram throws and drink charges.

12.4.3.   Extra Ingredients

Extra ingredients consist of only the cup size that is altered. The value entered here is added to the main ingredient if the extras button is set and pressed.

► **7oz Duration**	Sugar / Whitener / Main ingredient extra throw for 7oz drinks
► **9oz Duration**	Sugar / Whitener / Main ingredient extra throw for 9oz drinks
► **12oz Duration**	Sugar / Whitener / Main ingredient extra throw for 12oz drinks

Any function buttons set as an extra strong option will if pressed allow additional ingredients to be dispensed. However, if the extra ingredients are set to zero, the machine will not display the strength options even if a button has be set up for it. Only if the extra options have been set will the options be displayed on the screen.

12.4.4.   Brew Time

Brewers where fitted have a brewing pot to enable tea or coffee to brew for a preset period of time to allow for infusion, the settings for the brewers are:

12.4.5.   Brew Drain Time

Used only for the Tea brewer

► **7oz Duration**	Brew pot outlet clamps for this duration for 7oz drinks
► **9oz Duration**	Brew pot outlet clamps for this duration for 9oz drinks
► **12oz Duration**	Brew pot outlet clamps for this duration for 12oz drinks
► **Delay**	Brew pot outlet clamp start delay usually 0s
► **PLS on**	Brew pot outlet clamp Pulse On usually 0s
► **PLS off**	Brew pot outlet clamp Pulse Off usually 0s
► **Triac**	Pincher Triac output will release after time duration above

12.4.6.   Brew Home Delay

► **7oz Duration**	Delay time before the brewer pot raises for 7oz drinks
► **9oz Duration**	Delay time before the brewer pot raises for 9oz drinks
► **12oz Duration**	Delay time before the brewer pot raises for 12oz drinks

12.4.7. Air Pump

Used only for the Coffee brewers. This is to set the time the air pump comes on for during brewing.

► **7oz Duration**	Air pump is on for this duration for 7oz drinks
► **9oz Duration**	Air pump is on for this duration for 9oz drinks
► **12oz Duration**	Air pump is on for this duration for 12oz drinks
► **Delay**	Air pump on start delay usually 0s
► **PLS on**	Air pump Pulse On usually 0s
► **PLS off**	Air pump Pulse Off usually 0s
► **Triac**	Air pump Triac output will switch off after time duration above

12.4.8. Pressure Pincher

Used only for the Coffee brewers. This is to set the time the pressure pincher is on for during the brewing cycle.

Software safety interlocks prevent the pressure pincher being on for longer than the Brewer Home delay to prevent damage to the brewer.

► **7oz Duration**	Pressure pincher is on for this duration for 7oz drinks
► **9oz Duration**	Pressure pincher is on for this duration for 9oz drinks
► **12oz Duration**	Pressure pincher is on for this duration for 12oz drinks
► **Delay**	Pressure pincher start delay usually 0s
► **PLS on**	Pressure pincher Pulse On usually 0s
► **PLS off**	Pressure pincher Pulse Off usually 0s
► **Triac**	Pressure Pincher Triac will release after time duration above

12.5. Triacs (Digital Outputs)

The machine menus use triacs to refer to a machine output number. Each output is wired to a specific part of the machine and is only used once.

The pictorial representation of the Prelude machine is shown below with a view of the machine from the front, each of the numbers represent a triac number for that station.

	Station 1	Station 2	Station 3	Station 4	Station 5	Station 6
Ingredient	13	14	15	16	17	18
Water	06	07	08	09	10	11
Whipper	19	20	21	22	23	24
Pinch	30	X	X	X	X	29
Air Pump	31					32
Air Pincher	04		View looking from the front of machine with the front door open.			05
	BAY 1					BAY 2

The diagram below shows a typical representation of the Triac output of the machine and it's relevant connections. Although the diagram shows a whipper motor, any part of the machine connected to a triac output is wired in the same way (although fuse values will vary).
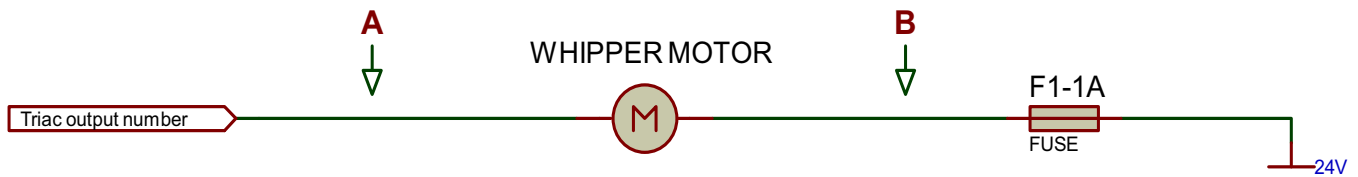
12.5.1.1. Triac – Output Off

24v dc supply is permanently connected via a fuse to point B of the motor. The triac output when not active will float high, this will produce 24v dc at point A, and the motor will not spin.
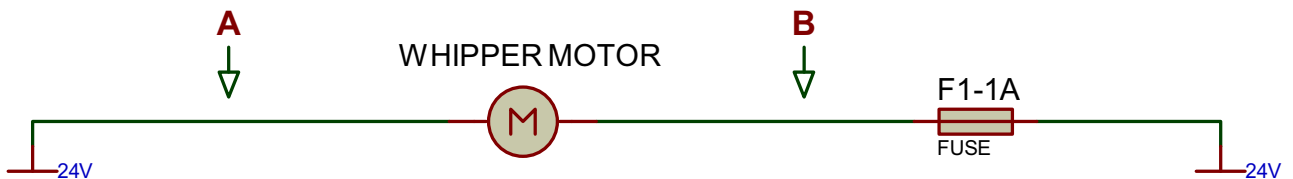
12.5.1.2. Triac – Output On

24v dc supply is permanently connected via a fuse to point B of the motor. The triac output when active will sink low, this will produce 0v dc at point A, therefore the motor will spin.

12.6. ►Flush Mode

> **FLUSH MODE**
> **' CAUTION FLUSHING'**
>
> **1 2 3 4 5 6**
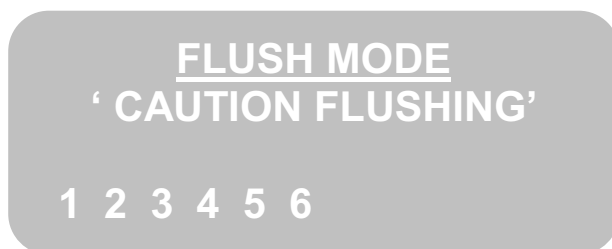
Note:

- Hot water is dispensed during flush cycles. When flushing the machine, ensure the waste tray is positioned in the 'out' position and a suitable receptacle is placed beneath the dispense head and hands are kept clear at all times.

- An audible warning signal will be emitted throughout the flush cycle to warn the operator of the presence of hot liquid.

- Use buttons 1 or 2 (⇅ keys) to select 'Flush Mode'; press button 12 (✓) to enter the function.

- When in 'Flush Mode' the keypad will become active allowing the user to initiate flush cycles. Pressing the different keys will execute the following cycles:

Button	Function
1*	Flush water station 1 & whipper 1. (If a brewer is fitted in this position the brewer will run twice to clean both sides of the brewer platform.
2*	Flush water station 2 & whipper 2
3*	Flush water station 3 & whipper 3
4*	Flush water station 4 & whipper 4
5*	Flush water station 5 & whipper 5
6*	Flush water station 6 & whipper 6 (If a brewer is fitted in this position the brewer will run twice to clean both sides of the brewer platform.
7*	Flush water station 7 (Hot water flush when enabled)
8	Cup drop test.
9	N/A
10	N/A
11	Cancel 1st press - Cancels the flush sequence 2nd press - Cancels flush mode and returns to ''Service Mode''

*Queued Flush

- It is possible to select more than one flush option at a time although queued flush is only active for valves 1 - 7 when enabled.

- Each selected flush option will be displayed on the LCD.

- Only one flush will be activated at any one time.

- A 5 second warning will be given before the flush sequence commences.

- It is possible to cancel all flush sequences at any stage by pressing button 11.

- To return to the previous menu press button 11 to cancel.

- Only enabled / used ingredient stations can be flushed.

13. Formatting USB Memory Sticks

13.1.   USB Memory Stick Folder Layout And Text Format

In order to upload software, up/download audit and machine configuration files from the machine, it is necessary to create a 'main' machine folder in the root directory of the machine USB memory stick that contains four 'sub' folders called 'Audit', 'Config', 'Firmware' and 'Language' as shown below:

- **Audit**   - This is where all the uploaded machine audit information is stored
- **Config**   - This is where the machine set-up is stored for machine cloning.
- **Firmware**   -This is where new software is stored ready for uploading.
- **Language**   - This is where foreign languages are stored for uploading.

The above folders can be created on the USB memory stick using any PC that has a USB port and the 'Windows Explorer' utility.

14. Water Layout
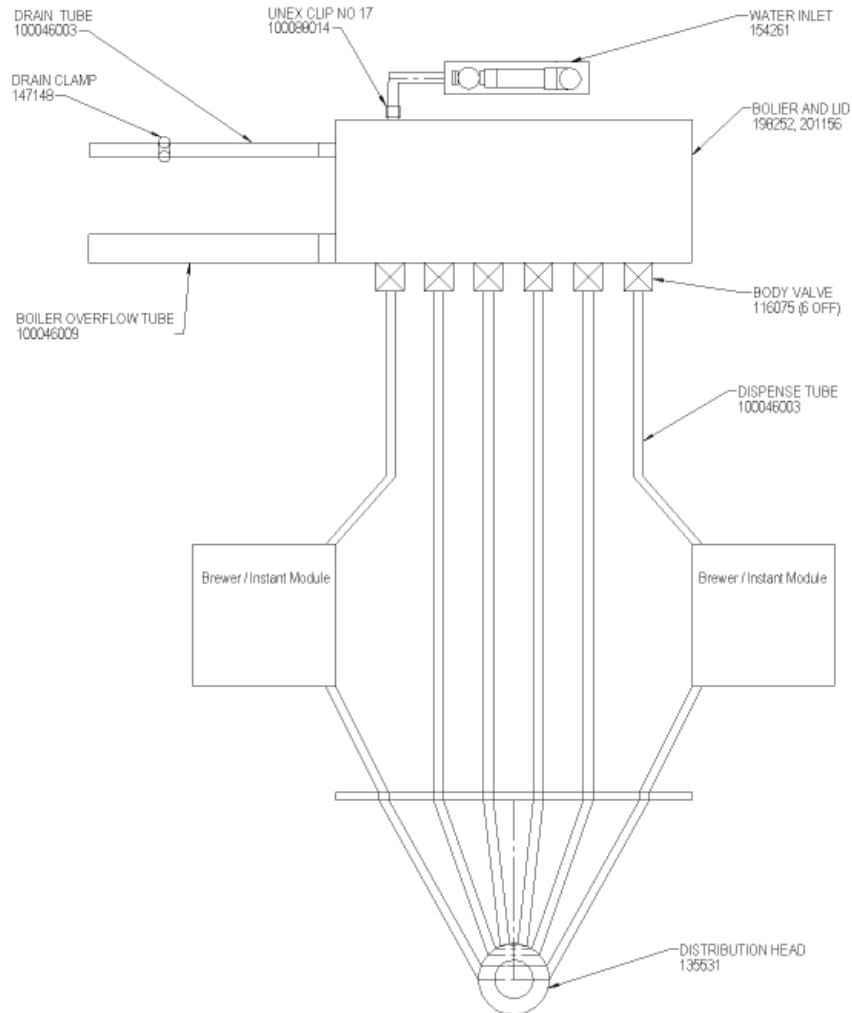
Care should be taken when working on live equipment; Up to 240VAC is present on the Prelude Boiler water heating and extraction systems. Isolate the mains electrical supply before working on the machine.

The cold water system (optional feature) within the Prelude Base Cabinet can comprise of one of two purifying filters. These can be either a Brita Compact or Brita Aqua quell fitted externally to the Prelude or fitted into the Base unit with the cold water unit. The Base unit also comprises of a UV water treatment filtration system as well as a water filter. These filters remove odour, hard water elements and organic pollutants.

14.1.   No-Cup Facility

If a cup is placed in the cup station before a drink is selected, it will automatically activate a no-cup vend. If desired, a discount feature for drinks dispensed without a cup may be programmed within 'Service Mode', Machine settings, Discount values, No-Cup option and enter the value of discount required.

14.2.   Extra Options

There are three menus used to programme the extra options.
1.   ✔ Enable / **X** Disable Drink Options.
2.   Extra shots – To programme the number of extra shots available 1, 2 or 3.
3.   Options (Before / After) – Allows you to select sugar / strength options either before or after the drink selection has been made.

Any function buttons set as an extra option will if pressed allow additional ingredients to be dispensed. However, if the extra options are set to zero, the machine will not display the options even if a button has be set up for it. Only if the extra options have been set to any value other than 0.0s will the options be displayed on the screen.

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15. Technical Features

15.1.   Boiler Control

5 sensors located in the boiler lid control water levels and temperature. These sensors use a 5V AC supply from the I/O board emitted by the Common (Longest) probe.

CAUTION: The boiler probe is close to a 230Vac supply. When working on the boiler probe set, remove and isolate the electrical supply to the machine as a precaution against exposure to the element connections on top of the boiler lid.

15.2.   Level Control Sensor

The processor controls the water level by monitoring continuity between the 'Common' (longest probe) and the ' Level' probe. It switches the water inlet valve on (open) 0.2 seconds after an open circuit is detected. It switches power off (valve closed) 0.2 seconds after continuity is detected.

If water fill takes longer than 120 seconds (programmable), an 'ERROR CODE 13' message is displayed (see section 21) and the machine is disabled to safeguard against flooding (e.g. if an internal leak has occurred).

15.3.   Boiler Leak detection

►Service Mode,
    └►Machine settings,
        └►Boiler Settings
            └►Setup
                └►**Leak Detection**
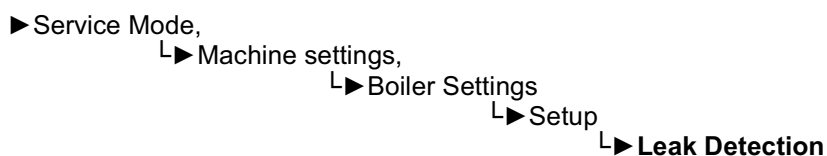
The software has within the Boiler settings menu above a "Leak" function; this value in seconds will monitor the main inlet water valve for any operations during standby mode. Should a water valve drip due to scale build up, the main water inlet valve will open to fill the boiler. Should the main water inlet valve be operating for more than the time set in the Leak menu during a 15 minute period then the machine will shut down and report a Boiler leak fault Error 21. Every 15 minutes or the vending of a drink will reset the Leak timer.

15.4. Temperature Control

An NTC sensor located in the boiler sensor block controls temperature. Measuring resistance in line with the table can test its operation.

Table: NTC Thermistor

Temperature vs. Resistance Chart Thermistor @ 25°C		
°F	°C	Ohms Resistance 10K
OPEN		INFINITE
32	0	32,630
41	5	25,380
50	10	19,890
59	15	15,710
68	20	12,490
77	25	10,000
86	30	8,057
95	35	6,531
104	40	5,326
113	45	4,368
122	50	3,601
131	55	2,985
140	60	2,487
149	65	2,082
158	70	1,751
176	80	1,255
194	90	917
212	100	680
SHORT		NONE

NTC Temperature vs. Resistance
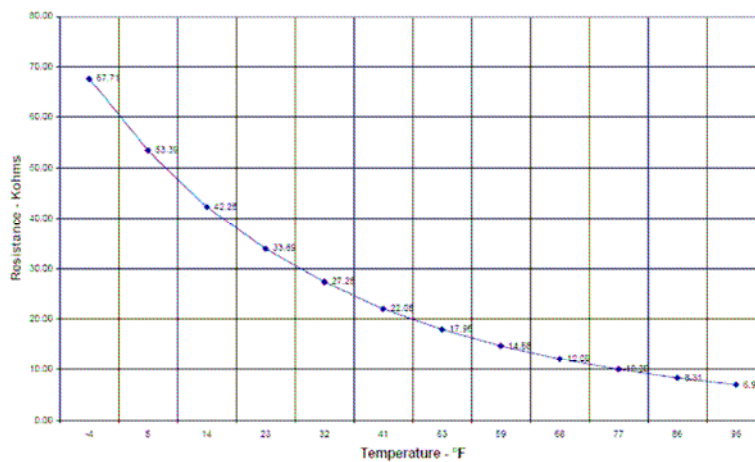
16. H$_2$O Base Cabinet

The Prelude H$_2$O contains a Chiller unit housed within the lower section of the pedestal. Utilising a dedicated cold water dispense head, the Prelude H$_2$O has been designed to provide 'Press n Hold' chilled filtered UV treated water on demand. The filtered water is also used to fill the boiler for improved drinking quality in areas of poor water quality.

The base cabinet contains two tubes of cups that dispense clear 7oz cups for the water dispenser. The water dispenser is a free of charge, point of use water unit available in two formats. One comes with a Chiller unit and cup dispensers, the other unit has no Chiller unit and has a shelf to store cups and / or ingredient to supply the Prelude fitted above.

16.1. H$_2$O Base Cabinet Controls

The base cabinet has a very simple mode of operation.

Place your own cup or use on from the cup tubes and place it in the cup station. Press and hold the water control button until the desired fill level is achieved then release the button. Remove your cup from the cup station and enjoy.

The base cabinet has two status Led's to indicate the condition of the machine. The Blue Cup station Led performs two tasks.
1   To provide an ambient glow.
2   To provide indication that power to the prelude is OK and that no faults have been found. If the prelude develops a fault the base cabinet switches off and the Blue Led goes out.
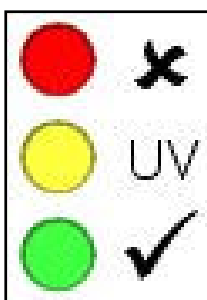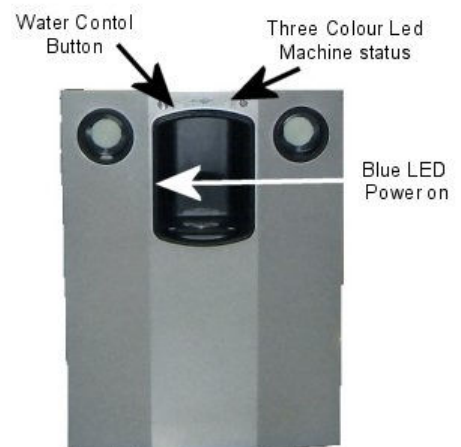
The second status Led is the three-coloured Led indicating the condition of the machine. The three colours are Red, Yellow and Green.

Red   – Waste bucket is full and the machine will not vend cold drinks.
Yellow   – The UV lamp is operational.
Green   – The machine is ready to vend.

Westomatic
The ultimate coffee house experience

16.2. Base cabinet Internal and external layout
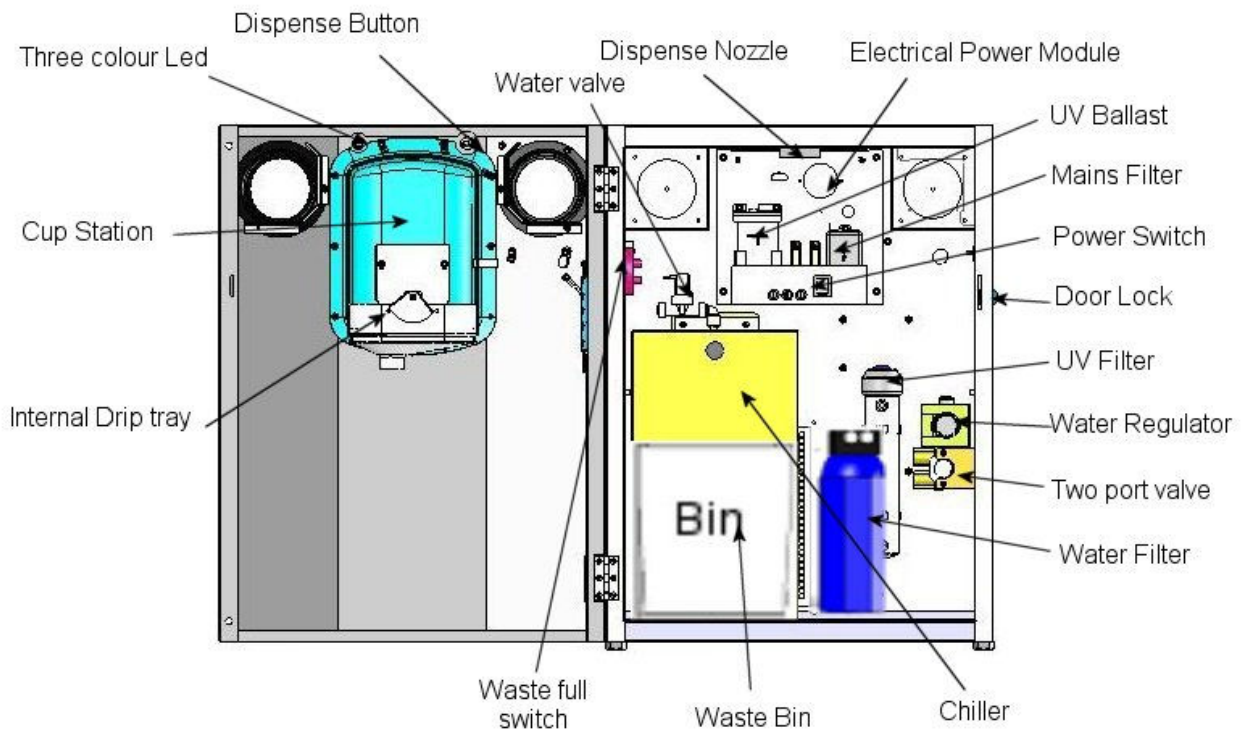
The dispense nozzle has a quick release thumb wheel to enable the nozzle to be removed from the machine and cleaned with ease.
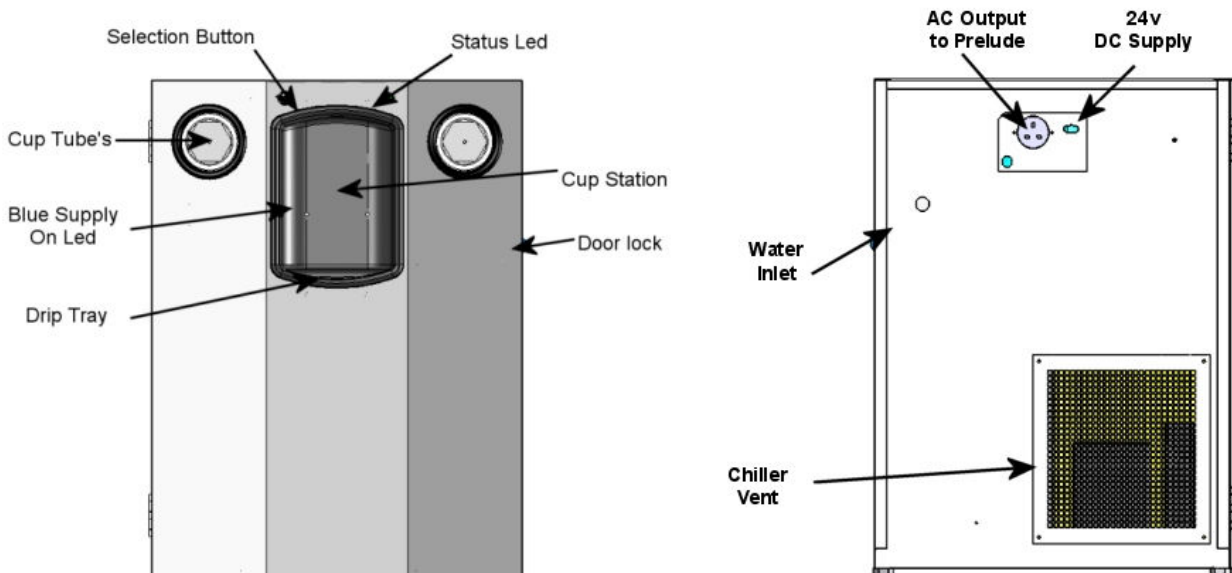
16.3.   Connecting the Prelude and the Base Cabinet supplies

The Prelude and it's base cabinet share a common AC mains electrical and mains water supply. This reduces the demand for site services and will speed up the installation process.

Base Cabinet DC Supply

AC Supply Input

AC Supply for the Prelude
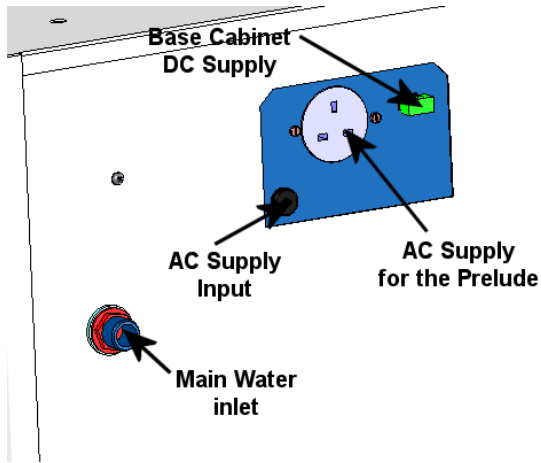
Main Water inlet

Connect the water hose with the check valve from the rising main to the main water inlet in the base cabinet. The ¾" hose at the top of the base cabinet is connected to the Prelude.

The Ac supply for both unit is connected via the base cabinet. The AC supply is connected to an RCD protected 13A fused supply. The Prelude mains lead plugs into the AC supply outlet at the rear of the Base cabinet.

Under no circumstances must any other device be plugged into the socket outlet other than the Prelude.

16.4.   Internal Water Layout

The Prelude Base cabinet contains a water filter for both the Base cabinet cold water and the Prelude boiler to improve the drink quality. The base cabinet also contains a UV treatment process to remove 99.99% of Bacteria's.

Base Cabinet Water regulator

Base Cabinet Water supply

Filtered Water supply Inlet

Prelude Water supply
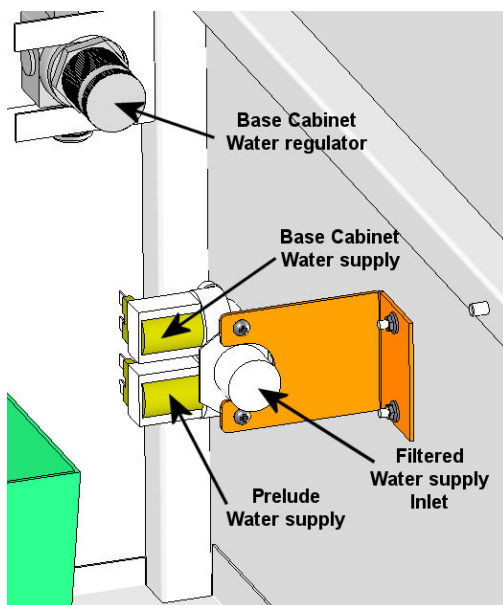
The main water supply enters the base cabinet via a filter to a two-way valve shown on the left. This two-ported valve controls the water for the prelude and the base cabinet.

When there is a demand for water for the boiler, the lower of the two solenoids turns on to fill the boiler of the Prelude.

The upper water valve goes through a water regulator to step down the flow rate for the delivery of water into the cup.

16.5. Base Cabinet Water layout

BASE CABINET WATER LAYOUT DIAGRAM H20

BRITA COMPACT

CHILLER /DISPENSE PIPE PRE FITTED TO CHILLER

1 x 145104----JOHN GUEST LOCKING CLIP 3/8" RED
1 x 100054184-----TUBE-3/8 X 1/4 HOSE STEM
1 x 100054091----O CLIP-13.3
1 x 154209---- STEM ELBOW 3/8 x 5/16
1 x 154268---JOHN GUEST LOCKING CLIP 5/16 RED

DGB DOLOMITE CHILLER

1 x 129005----JOHN GUEST LOCKING CLIP 1/4" RED
1 x 100048143----JOHN GUEST-1/4in TUBE TO 1/4in HOSE ELBOW
1 x 100054091---O CLIP-13.3

154226--INLET VALVE DBL SOLENOID 24 VDC 3/8

1 x 100098014---- UNEX CLIP NO 17
1 x 100054076---STEM BARB 3/8X3/8JUG
1 x 145104---JOHN GUEST LOCKING CLIP 3/8" RED

2 x UNEX CLIP NO 17
100098014

3 x 100098014--- UNEX CLIP NO 17
3 x 100054076---STEM BARB 3/8X3/8JUG
3 x 145104---JOHN GUEST LOCKING CLIP 3/8" RED

154219---3/8 TWO WAY DIVIDER

1 x 129005----JOHN GUEST LOCKING CLIP 1/4" RED
1 x 100054074---1/4 TUBE TO 1/4 HOSE STEM
1 x 100054091---O CLIP-13.3

1 x 129005----JOHN GUEST LOCKING CLIP 1/4" RED
1 x 100054074---1/4 TUBE TO 1/4 HOSE STEM
1 x 100054091---O CLIP-13.3

RD119057---WATER REGULATOR 0.8 BAR

1 x 129005----JOHN GUEST LOCKING CLIP 1/4" RED
1 x 100048143----JOHN GUEST-1/4in TUBE TO 1/4in HOSE ELBOW
1 x 100054091---O CLIP-13.3

149042 (UV FILTER COLD WATER)

1 x 145271--- 1/4 TWO WAY DIVIDER

TO PRELUDE

1 x 100098014---- UNEX CLIP NO 17
1 x 100054076---STEM BARB 3/8X3/8JUG
1 x 145104---JOHN GUEST LOCKING CLIP 3/8" RED

1 x 100054082--- ELBOW-3/8IN STEM TO 1/4IN BARB
1 x 100054091---O CLIP-13.3
1 x 145104--- JOHN GUEST LOCKING CLIP 3/8 RED FOR STRT

100046094---HOSE-ASSEMBLY 3/4 INCH BSP X 1.5M

1 x 100049031---MANIFOLD-BRITA 3/4in BSP

100046094---HOSE-ASSEMBLY 3/4 INCH BSP X 1.5M

1 x 100048143--- JOHN GUEST-1/4in TUBE TO 1/4in HOSE ELBOW
1 x 100054091---O CLIP-13.3
1 x 129005---JOHN GUEST LOCKING CLIP 1/4 RED

16.6. Base Cabinet Electrical Wiring
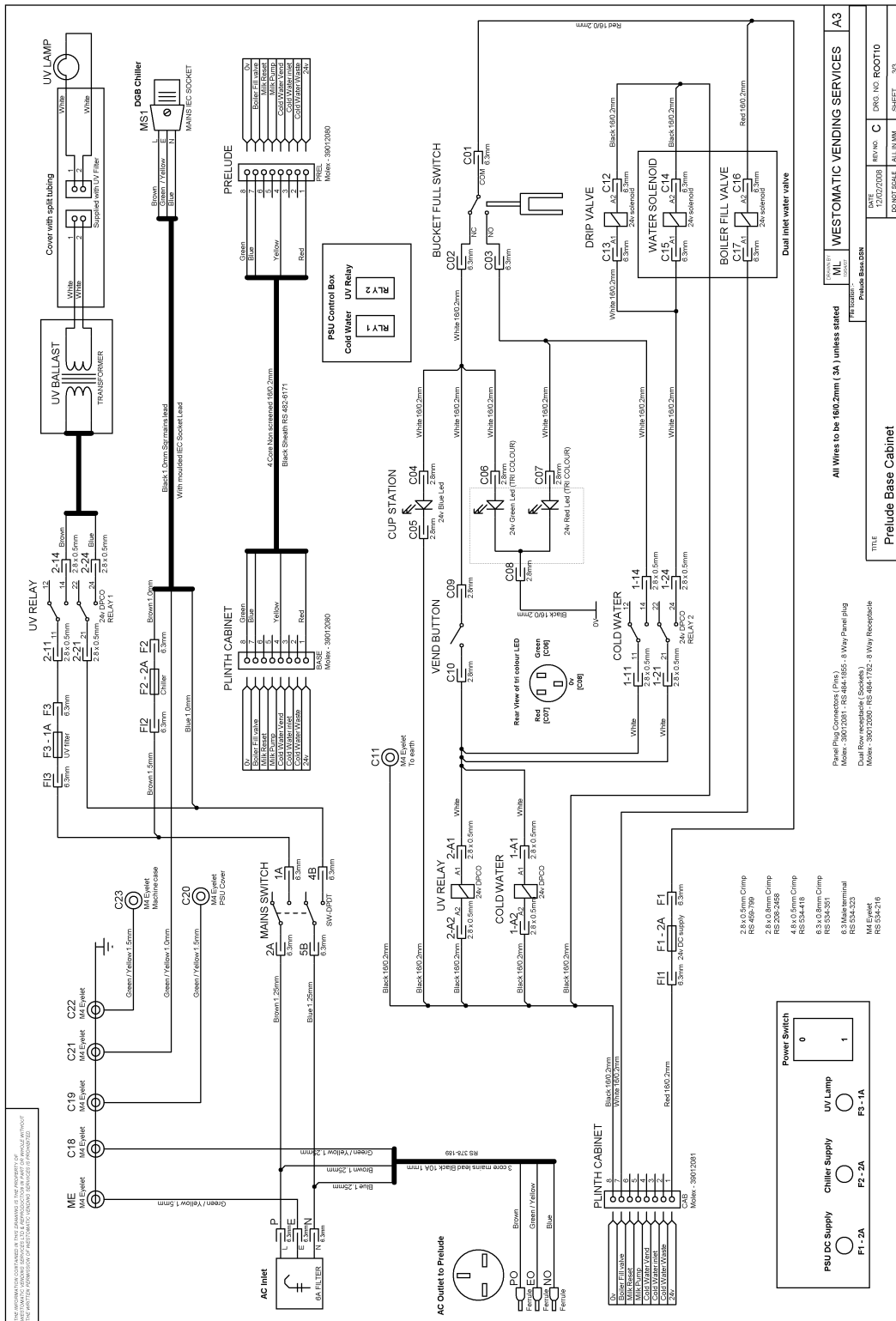
17. Fresh Brew & Fresh Ground Multi Brewer

Tea	
Grind	N/A
Gram throw	10 grams
Temperature	85 Degrees C
Home cycle delay	45 seconds

Coffee	
Grind	Fine
Gram throw	8 grams
Temperature	89 Degrees C
Home cycle delay	30 seconds

BREWER VEND SEQUENCE
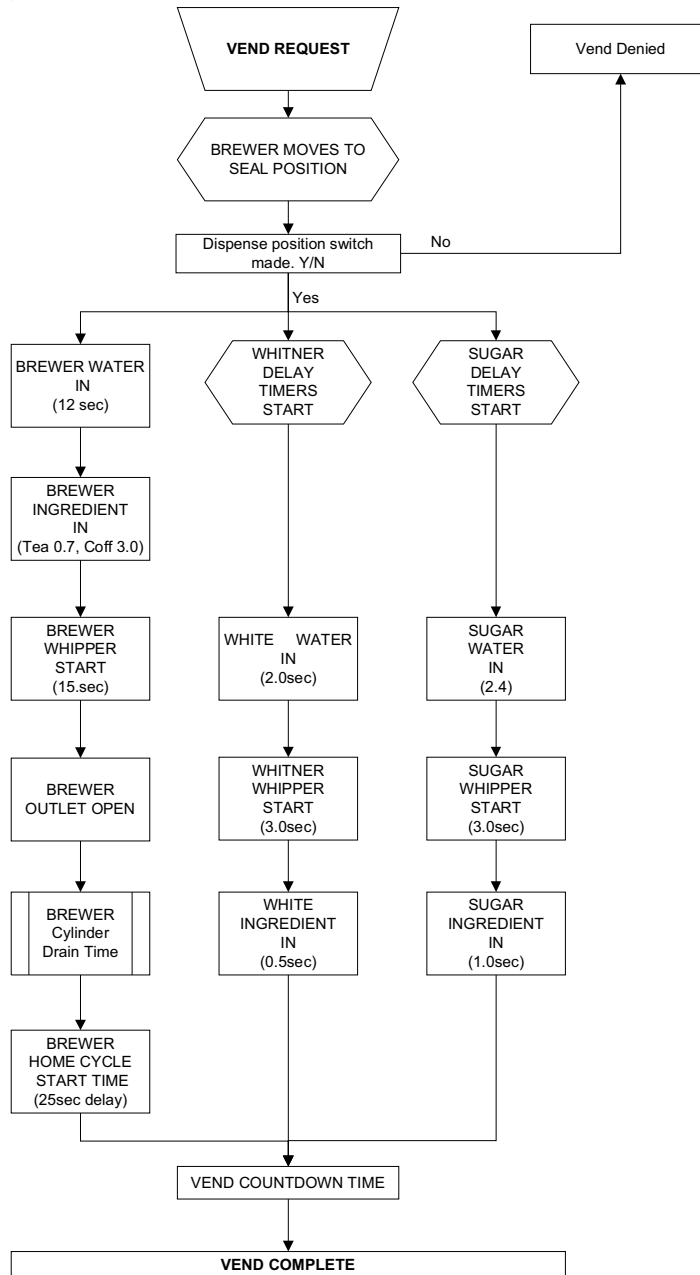
18. Machine Maintenance

ALWAYS SWITCH OFF AND DISCONNECT THE MACHINE FROM THE MAINS ELECTRICITY SUPPLY BEFORE CLEANING.

18.1. Daily Recommended Cleaning Routine

18.1.1. Brewer Waste Buckets (If Fitted) And Drip Tray

- Switch off the electrical power supply to the machine.
- Remove, empty and thoroughly clean the brewer waste bucket/s and drip tray.
- Before refitting the waste buckets, clean the interior of the cabinet thoroughly with hot water and an appropriate cleaning agent/sanitizer.

18.1.2. Instant Ingredient Canister Positions

- Switch off the electrical power supply to the machine.
- Remove all the ingredient dispense chutes from the outlets of the ingredient canisters by turning the chutes to point upwards (if a closed elbow type) or horizontally (if a through hole type) and pulling them towards you.
- Clean off any dry ingredient residue from the canister outlets with a **dry** scraper.
- Remove the silicon rubber delivery tubes to each whipper position.

- To release a one-piece whipper bowl, rotate the locking arm located on the whipper base anti-clockwise.
- The whipper bowl can now be removed.
- Remove all whipper impellors by pulling them away from the whipper base.
- If any parts are scratched, cracked or badly stained, replace immediately.
- Place all removed items into a bucket of warm water and an appropriate cleaning agent/sanitizer. Clean thoroughly, rinse and dry.

Rotate locking arm anti-clockwise

- Ensure the seals on each whipper base are clean and intact.
- If any parts are scratched, cracked or badly stained, replace immediately.

Clean whipper seals
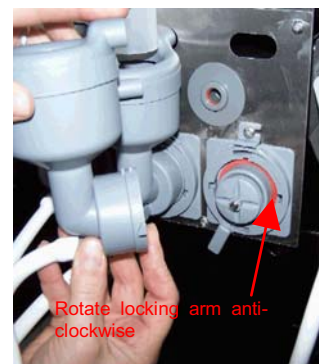
- Remove the instant ingredient canisters by tilting them backwards to lift the front locating peg from its hole. Pull the canister towards you, whilst lifting the front of the canister by 10mm. The canister(s) can now be removed and placed onto a clean, dry surface.

- Shake the instant canisters to loosen any compacted ingredient. Fill the canisters with dry, fresh ingredient to the required level and replace the lid.
  NOTE: Never compact the Ingredients as this could result in a vending malfunction.

- Before refitting the canisters, ensure their exterior is free from dirt and also clean the interior of the cabinet thoroughly with hot water and an appropriate cleaning agent/sanitizer.

- Replace each whipper impellor and one-piece whipper bowl in the reverse order to removal. When re-fitting the whipper bases, ensure the locking lever is in the correct position before pushing the base into place on the whipper housing. To lock the base into place rotate the lever clockwise until the 8 o'clock position is reached. Ensure that the pip on the whipper impellor is aligned with the flat on the whipper motor shaft before pushing it on fully.

- Re-fit the silicon rubber delivery tubes to each whipper position.

- Switch on the machine and test for correct operation.

18.1.3. FB Tea Brewer Positions (Where Fitted)

- Switch off the electrical power supply to the machine.

- Remove all the ingredient dispense chutes from the outlets of the FB Tea canister by turning the chutes horizontally and then pulling towards you.

- Clean off any dry ingredient residue from the canister outlets with a **dry** scraper.

- Remove the metal mixing bowl retainer plate and remove the mixing bowl as shown left.

- Place all removed items into a bucket of warm water and an appropriate cleaning agent/sanitizer. Clean thoroughly, rinse and dry.

- If any parts are scratched, cracked or badly stained, replace immediately.

- Re-fit all removed items.

- FB Tea canisters only need to be removed if filling in situ is not practical. If removal is required, lift the machine lid and drop the lid support arm into the cutout slot.

- Remove the canister by lifting it upwards and towards you, ensuring a hand is placed on top of the canister lid to prevent any ingredient from spilling.

- Upon replacement of the canister, ensure the dispense shoot is rotated back into position within the mixing bowl.

- Switch on the machine and test for correct operation.
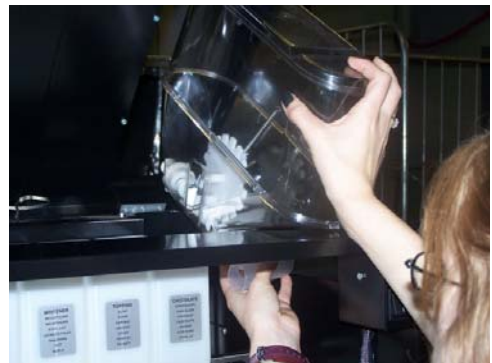
18.1.4. Whole Bean and FB Coffee Brewer Positions (Where Fitted)
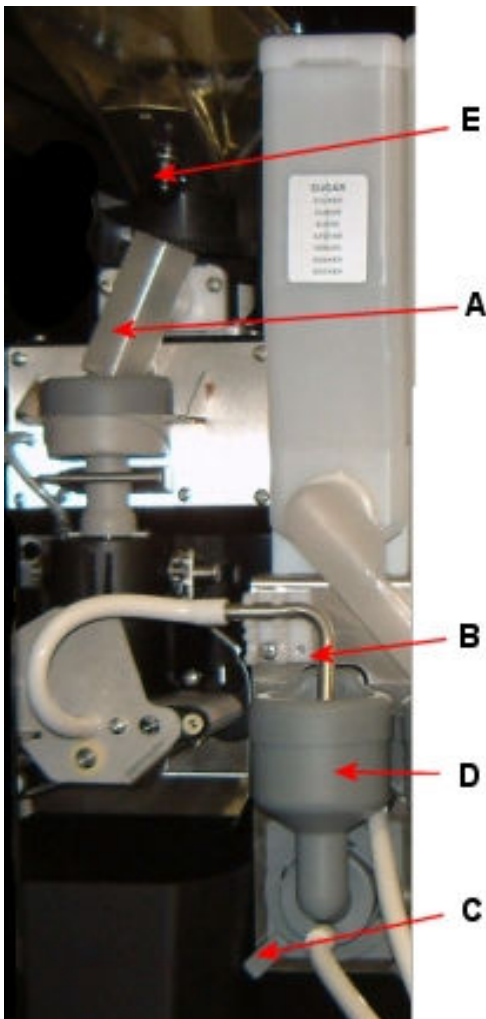
- Switch off the electrical power supply to the machine.
- Remove all the ingredient dispense chute (A) from the outlet of the Whole Bean / FB canister(s) by turning the chute horizontally and then pulling towards you.
- Clean off any dry ingredient residue from the canister outlets with a **dry** scraper.
- Remove the dispense pipe (B) by pulling towards you and remove from metal tube from the silicon pipe. Remove the one piece whipper bowl (D) by turning the release arm (C) anticlockwise.
- Place all removed items into a bucket of warm water and an appropriate cleaning agent / sanitizer. Clean thoroughly, rinse and dry.
- If any parts are scratched, cracked or badly stained, replace immediately.
- Re-fit all removed items in the reverse order to removal.
- FB and Whole Bean canisters only need to be removed if filling in situ is not practical. If removal is required, lift the machine lid and drop the lid support arm into the cut-out slot.
- For Whole Bean canisters, ensure the shut off flap (E) is closed to prevent beans from being spilt before removing by pushing the ball forwards.
- Remove the Whole Bean or FB canister by lifting it upwards and towards you, ensuring a hand is placedon top of the canister lid to prevent any beans or FB ingredient from spilling.
- Upon replacement of the Whole Bean canister, ensure the shut off flap (E) is returned to the open position.
- Switch on the machine and test for correct operation.

18.1.5. Dispense Head

Station 3
Station 2 (Hot Water)
Station 1 (Bay 1)
Station 4
Station 5
Station 6 (Bay 2)
Dispence Head Manifold
Retaining Pin
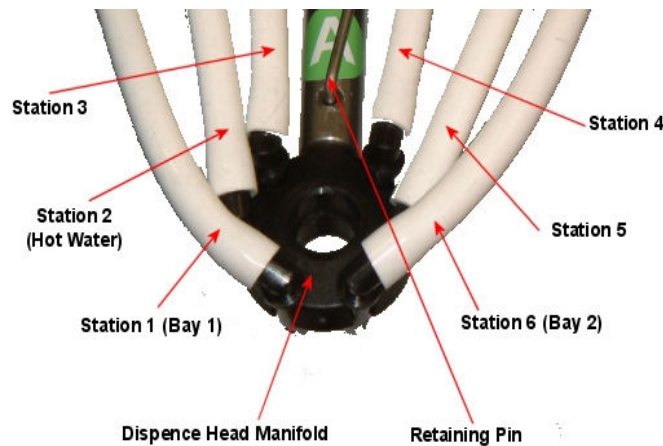
- Switch off the electrical power supply to the machine.
- Remove all dispense head nozzles, remove the retaining pin and remove the dispense head manifold from the dispense arm by pulling towards you.
- Place all removed items into a bucket of warm water and an appropriate cleaning agent / sanitizer. Clean thoroughly, rinse and dry.
- Re-fit the dispense head manifold and secure with the retaining pin.
- Re-fit the dispense nozzles to the silicon rubber delivery tubes and then insert the nozzles fully into the dispense head manifold.
- Re-Fit and pipe clamps where used to retain pipes clear of obstruction.
- Switch on the machine flush and test for correct operation.

18.1.6. Cup Dispenser (If Fitted)

- Switch off the electrical power supply to the machine.
- Disengage the cup dispenser by lifting the unit's spring-loaded latch and swinging the whole assembly outwards.
- Ensure the cup dispenser is clean. Any dirt should be wiped away with warm water and an appropriate cleaning agent/sanitizer
- Ensure the cup dispenser is replenished with the correct cup type and size. Do not mix cup types in the different cup positions within the cup dispenser.
- Do not force empty cups from the cup unit. Use the Manual flush menu and perform a cup drop see section 12.6
- When cleaning and replenishment has been completed, return the cup dispenser to its locked position.
- Switch on the machine and test for correct operation. Note that sometimes the first cup will not be peeled correctly from the cup unit.

18.1.7. Cabinet And Door
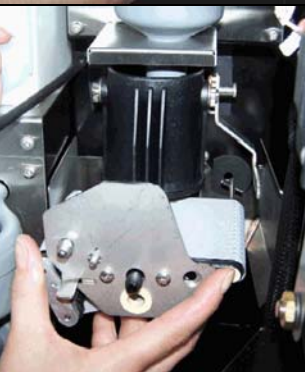
- Switch off the electrical power supply to the machine.
- The cabinet door area and cup station molding should be wiped over with warm water and an appropriate cleaning agent / sanitizer.
- Care must be taken to thoroughly clean the cup platform; cup sensor lens, splashguard drip tray and cup drop area.
- Switch on the machine and test for correct operation.

18.1.8. Flushing The Machine

- With the door open, switch on the machine.
- Place an appropriate container under the dispense nozzles.
- Enter 'Flush Mode' by pressing the internal flush button once.
- If further flushes are required, repeat the above sequence.
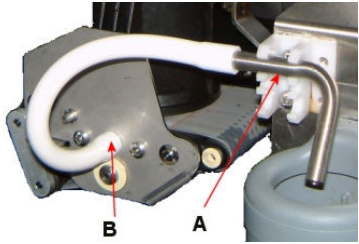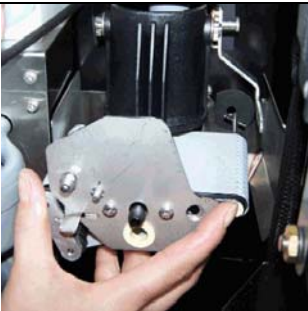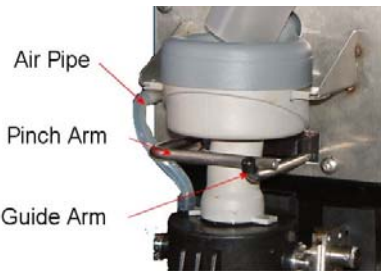
18.2.   Every 1250 Vends

18.2.1.   FB Tea Brewer Positions (Where Fitted)

		• Switch off the electrical power supply to the machine. • Remove, clean and refit all brewer parts as described in section 18.1.3. • Unhook the pincher mechanism from the brewer platform by sliding it upwards and to the left, thereby releasing it from the captive dome nut on the front of the brewer platform. The pincher should remain hanging on its pinch cable.
		• Pull the white silicon pipe off the front of the brewer platform.
		• Push the slide bar lever (located on the LHS of the brewer platform) to the left to disengage the brewer locking mechanism. • **NOTE: When refitting the brewer platform, ensure the slide bar lever is correctly positioned to ensure the carriage is securely located.**
		• The complete brewer platform can now be carefully pulled outwards and removed from the machine. • Place all removed items into a bucket of warm water and an appropriate cleaning agent/sanitizer. Clean thoroughly, rinse and dry. • If required, the filter roll can be removed from the brewer platform (see section 18.3.1).

	• To remove the brewer cylinder, gently pull it forwards towards you such that the engagement lugs on either side come away from the brewer arms. • Place all removed items into a bucket of warm water and an appropriate cleaning agent/sanitizer. Clean thoroughly, rinse and dry. • Ensure the rubber seal at the bottom of the brewing cup is clean and in tact. Also check the brewer cylinder seating face for signs of damage - replace if necessary.
	• Remove the rear metal waste plate by pulling it outwards. • Place all removed items into a bucket of warm water and an appropriate cleaning agent/sanitizer. Clean thoroughly, rinse and dry.
	• Refit all parts. • Switch on the machine and wait for the boiler to reach operating temperature. • Flush the brewer to check for correct operation and remove any cleaning residue. • Reset the filter belt counter and the waste bin counter in "Door Open" mode and test the machine for correct operation.

18.2.2. Whole Bean And FB Brewer Positions (Where Fitted)

	• Switch off the electrical power supply to the machine. • Remove, clean and refit all brewer parts as described in section 18.1.4 • Remove the dispense nozzle "A" by pulling toward you. • Pull the white silicon pipe off the front of the brewer platform "B"
	• Push the slide bar lever (located on the LHS of the brewer platform) to the left to disengage the brewer locking mechanism. • **NOTE: When refitting the brewer platform, ensure the slide bar lever is correctly positioned to ensure the carriage is securely located.**
	• The complete brewer platform can now be carefully pulled outwards and removed from the machine. • Place all removed items into a bucket of warm water and an appropriate cleaning agent / sanitizer. Clean thoroughly, rinse and dry. • If required, the filter roll can be removed from the brewer platform (see section 18.3.1).
	• To remove the brewer cylinder, gently lift the Pinch Arm above the end of the Guide Arm. Then pull it forwards towards you such that the Pinch arm has no more travel. From this position the Pinch arm can be lifted up out of the way of the silicon-mixing bowl. • Remove the Air pipe from the brewing pot. • Place all removed items into a bucket of warm water and an appropriate cleaning agent/sanitizer. Clean thoroughly, rinse and dry. • Ensure the rubber seal at the bottom of the brewing cup is clean and in tact. Also check the brewer cylinder seating face for signs of damage - replace if necessary.
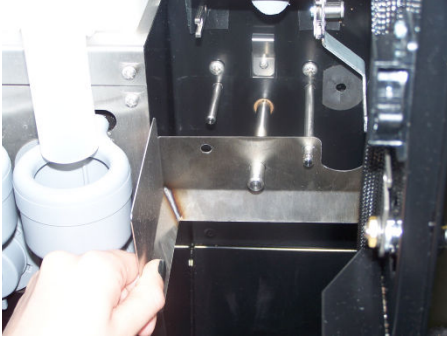
	• Remove the rear metal waste plate by pulling it outwards. • Loosen the puck cutter thumb wheel and slide the puck cutter off the brewer arm. • Place all removed items into a bucket of warm water and an appropriate cleaning agent/sanitizer. Clean thoroughly, rinse and dry.
	• Refit all parts in the reverse order to above. • Remember to replace the pinch arm back onto the guide rail before switching on the machine. Failure to do so will result in the brewer system not performing correctly. • Position the dispense tube into the next missing bowl as shown, ensuring that the coffee is not directed straight down on top of the whipper. • Switch on the machine and wait for the boiler to reach operating temperature. • Flush the brewer to check for correct operation and remove any cleaning residue. • Reset the filter belt counter and the waste bin counter in "Door Open" mode and test the machine for correct operation.

18.3. Every 7000 Vends

18.3.1. Filter Belt Replacement: *Where Fitted*
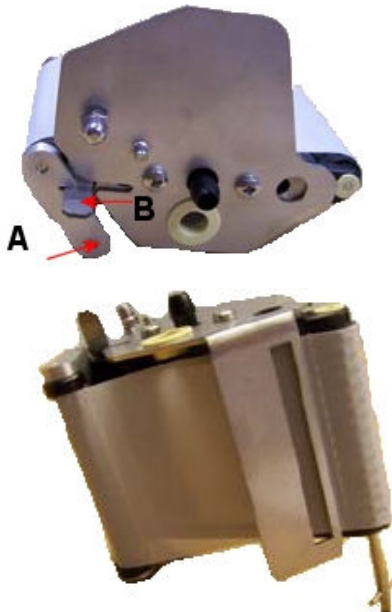
- Remove, clean and refit all brewer parts as described in sections 18.1.3 and 18.2.1.

- Remove the filter belt from the brewer platform by compressing the belt retainer flat spring (A) whilst at the same time sliding the slide bar lever to the left to hold the spring in place (B). This will ensure the belt tension is relaxed so that it can be slid off the brewer platform

- Discard the old belt and replace with a new one. Making sure that the belt stitching (Seam) is not on the top face of the belt.

- When fitting a new filter belt or replacing an existing one, ensure it passes between the steel scraper and the brewer platform otherwise the unit will not operate correctly.
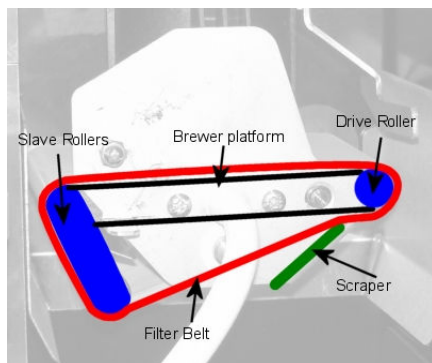
- Also ensure the filter belt sits centrally on the brewer platform.

- Whilst again compressing the belt retainer spring (A) , slide the slide bar lever back to the original position to re-instate belt tension (B).

- Re-check the position of the filter belt to ensure it is central on the brewer platform; adjust if required.

- Remove and discard the "Flexi-Bowl" , replace with a new one and fit it to the brewer pot before placing in the machine.

- Re-fit the brewer platform.

- Switch on the machine, reset the filter belt counter and test the machine for correct operation.

18.4. Summary - Recommended Cleaning Procedures

ALWAYS SWITCH OFF AND DISCONNECT THE MACHINE FROM THE MAINS ELECTRICITY SUPPLY BEFORE CLEANING.

THE PRELUDE MUST NOT BE CLEANED USING A WATER JET.

A. DAILY

- Empty & clean brewer waste buckets (if fitted) and drip tray.
- Reset waste bucket counters
- Clean ingredient dispense chutes
- Shake and refill ingredient canisters
- Clean canister outlets
- Clean whipper bowls
- Clean whipper impellors
- Soak / clean silicon delivery tubes
- Clean Whole Bean / Fresh Brew mixing bowl / retainer plate (if fitted)
- Refill Whole Bean / Fresh Brew canisters (if fitted) as necessary
- Clean dispense head nozzles & manifold
- Clean inside & outside of cabinet & door
- Flush the machine at least once

B. EVERY 1250 VENDS

- Clean brewer platform/filter belt
- Reset filter belt counter

C. EVERY 7000 VENDS

- Replace filter belt
- Replace the "Flexi-Bowl"
- Reset filter belt counter

Please note that there are many factors that may affect the frequency of machine sanitisation, some of which are as follows:

- Is the water supply to the machine of good microbiological quality?
- Is the water supplied from unsuitable storage cisterns?
- Is the supplied pipe work excessive in length?
- Is the supplied pipe work subject to localised warming?
- Does the supply pipe work have a dead leg, which is subject to stagnation?
- Does the operator routine include flushing of the cold waters regularly?
- Is the water delivery nozzle cleaned and sterilised regularly?
- Is the machine sited in a suitable location?
- Is the ambient temperature excessive?

- Is the area dusty?
- Does the machine enjoy high volumes of sales of hot drinks? "The greater the better'.
- After long periods of time when the machine is not in use (long week-ends, etc.), is the machine flushed?

Further information can be obtained from the following AVA publications:

- Drinks Vending Machines: Code of Practise on Hygiene and Water Quality.
- Food and Drink Vending Machines: Code of Practise for Hygiene Machine Operation.
- Food and Drink Vending Machines: Code of Practice for Good Machine Design: RECOMMENDED SIX-MONTHLY ROUTINE MAINTENANCE PROCEDURES.

18.5. Coffee Grinder: *Where fitted*

- Remove and clean bean canister, grind coarse adjuster and grinding teeth. To ensure trouble-free vending all of the brewer 'O' rings/seals should be replaced every 6 months and the grinder teeth should be replaced every 100,000 vends.
- Remove and clean dispense tubes.
- Clean complete extraction system including removal and cleaning of extractor fan motor assembly and Baffle box.
- Remove and clean grinder.
- Re-assemble unit and test for correct operation.

18.6. Cup Unit: Where Fitted

- Check cup arm housing assembly adjustments and security of components and fixings.
- Check operation of cup drop and delivery. (Test in flush mode)
- Check for correct operation and adjustment of cup transfer.

18.7. Chiller Unit: *Where Fitted*

- Clean condenser grilles.
- Check for correct operation of unit and its components; including correct product dispense volumes and temperatures.
- Clean and check delivery pipes and dispense nozzle.

18.8. Coin Mechanism: *Where Fitted*

- Clean validator.
- Strip and clean coin separator (where applicable).

- Check operation of exact change indication.
- Check programming of mechanism is correct for its requirements.
- Coin test mechanism checking change payout of each available coin.
- Check coin path for change and cash box, ensuring all coins go to their destination.

18.9. General

It is strongly advised that the following points are observed according to your company procedures:

- Only authorised personnel should undertake the portable appliance earth continuity and insulation tests (PAT) of the Prelude vending machine.
- Check the 'change date' of any fitted water filter - replace if necessary.
- Periodically, remove the boiler and check for scale. De-scale or replace the boiler as necessary.
- Check the dispense valves for scale/leaks. Fit valve repair kits or replace valves as necessary.
- Check all fuses (including I/O, PSU and CPU board) are of the correct value.
- Check security of loom connectors and machine components.
- Check for any faulty/damaged wiring - correct as necessary.

Test vend each main selection checking:
- Correct dispense of ingredients and waters.
- That leaks do not occur during dispense.
- All brewer mechanisms operate correctly - check and adjust timings if necessary.
- Correct in-cup product volumes.
- Correct product water temperatures.

Test selections with door closed, checking:
- Correct cup delivery.
- Correct dispense of product into cup.
- Cup sensors correctly adjusted to detect cup in position.
- The mains electrical supply is to be checked for correct polarity, presence of earth and voltage.
- Check operation of double pole safety switch.
- Check operation of the mains incoming RCD supply.

18.10. Freezing Temperatures

To avoid the Prelude boiler from freezing the machine should be sited in a warm location. If the risk of freezing is high then the boiler should be left on so the water within the boiler remains hot or at standby temperature see section 12.1.8 on how to set up power save mode. If this is not possible the boiler should be drained and the mains water connection removed from the machine to prevent damage to the boiler.

18.10.1.   Thawing The Boiler

In the event the boiler freezes. **DO NOT** switch on the vending machine. To relieve any pressure and determine how extensive the problem is, remove the rear panel and open the drain valve into a bucket. If no water comes out you can assume that the pipes or boiler is frozen. Locate where un-insulated water lines pass through an un-insulated space. Examine pipes adjacent to un-insulated foundation walls or in or adjacent to exterior walls, check the boiler for damage especially at the corners and where the temperature probes enter the boiler at the top.

Warm the pipes and boiler slowly wherever you have access to them. Work from the drain valve toward the frozen area. Possible approaches include hair dryers, heat lamps, towels soaked in hot water, electric heat tapes wrapped around pipes and boiler, and space heaters. **DO NOT** user the boiler elements to defrost the boiler. If the frozen pipes extend into walls or floors, heating the pipe adjacent to where it enters and exits the wall will eventually thaw the section within the wall. Also turn up the heat in the room.

Let the water from the boiler run out until the boiler has been drained. Then turn the drain valve off. Look for leaks everywhere you can see. Listen very carefully for hissing sounds where hidden pipes pass through walls or floors. Remove the boiler, element , probes and boiler valves and check for damage.

Once you are sure that the water pipes and boiler are free from defects , and all water pipes are frost free , the vending machine can be switched on and the boiler refilled and heated. Allow the machine to sit for a while to warm up the sounding area and then flush the machine prior to use.

19. Using The Prelude Vending Machine

19.1.   Single Choice Keypad

The Prelude vending machine has a single choice keypad on the front of the machine. The user selects a drink by pressing the button next to the drink required. Should any options such as sugar and extra strength be required, the onscreen display will prompt the user in pressing the buttons accordingly. Should these options not be required then pressing the same drink button for a second time will bypass the drink options and vend a drink.

> **Pressing the same drink button for a second time will bypass all the drink options and vend a drink without options quicker.**

19.2.   Drink vending

If the user does not place there own cup in the cup station before pressing the drink button a cup will be peeled from the cup unit and dispensed on the right side of the machine. From this position the user must take the cup and place it in the cup station. The on screen prompts will alert the user that this must be carried out. In the event that that user does not place the cup in the time allowed then the vend is aborted, and any credit will be returned.

To restart the vend again, place the previously vended cup in the cup station and select your drink again, the machine will vend a no cup option and dispense your drink.

> **Place your own cup in the cup station before selecting a drink to vend the drink into your own cup / mug.**

19.3.   Jug Fill

If enabled, push the drip tray back into the machine this will turn on the jug fill facility on the machine. The display will ask you for a drink selection and the number of cups to vend. The number of cups can be increased or decreased by the up and down arrows on the keypad
                    Button 1 (▲ - up) and Button 2 (▼- Down)
Press button 12 (✔) to accept and vend the drink into the jug.

Failure to request a drink after a time out period after the drip tray has been pushed back will result in an error being displayed. The drip tray must be returned to the out position and the process repeated.

> **Remember to replace the drip tray to the out position after vending a jug fill. Failure to do so may result in drips contaminating the surrounding areas.**

20. Prelude menu map

Door Open
└► Read Audit from Machine
└► Display Audit
      ├──────► Total Drink Count
      ├──────► Individual drink
      └──────► Pay vend
└► Brew 1 Belt changed
└► Brew 2 Belt changed
└► Brew 1 Waste Emptied
└► Brew 2 Waste Emptied
└► Drink Testing
└► Version Info
└► Operator Functions
      ├──────► Price Settings
      ├──────► All Sugars
      ├──────► All Whiteners
      ├──────► All Waters
      ├──────► All Instant ingredient
      ├──────► All FB Ingredient
      ├──────► All FG ingredient
      ├──────► Countdown times
      ├──────► Asset / Serial
      ├──────► Cup Size
      ├──────► Free / Discount Periods
      ├──────► Audit collection
      └──────► FB Filter change

Service Mode

Machine Settings

General Settings
└► Machine Type
      ├──────► A – Instant Only
      ├──────► B – Instant / FB Tea
      ├──────► C – Instant / FB Coffee
      ├──────► D – FB Tea / Coffee
      ├──────► E – FB Tea / FG Coffee
      ├──────► F – FG / Instant Coffee
      └──────► G – FG / FG Coffee
└► Language
      ├──────► Load into Machine
      └──────► Read from Machine
└► Time
└► Date
└► Default Clock
└► Daylight saving
└► Factory Defaults
└► Save as Defaults
└► Board Defaults
└► Site ID
└► Asset Number
└► Serial Number
└► Update Firmware
└► Load / Read Config
      ├──────► Load into Machine
      ├──────► Read from Machine
      ├──────► Load Factory
      ├──────► Save as Factory
      └──────► Load Board Defaults
└► Load / Read Audit
      ├──────► Load into Machine
      └──────► Read from Machine

Operator Actions
└► Asset / Serial
└► Price Settings
└► All Sugars
└► All Whiteners
└► All Waters
└► All Instant ingredient
└► All FB Ingredient
└► All FG ingredient
└► Countdown times
└► Cup Size
└► Free / Discount Periods
└► Audit collection
└► Brewer Belt / Waste

Price Settings
└► All Prices

```
└────────────► Set all to
└────────────► Increase By
└────────────► Decrease By
└► Individual Prices
        └────────────► Instant Cappuccino
        └────────────► Instant Coffee Black
        └────────────► Instant Coffee White
        └────────────► Instant DBL Espresso
        └────────────► Instant Espresso
        └────────────► Instant Latte
        └────────────► Instant Mocha
        └────────────► Instant Decaf Cappuccino
        └────────────► Instant Decaf Coffee Black
        └────────────► Instant Decaf Coffee White
        └────────────► Instant Decaf DBL Espresso
        └────────────► Instant Decaf Espresso
        └────────────► Instant Decaf Latte
        └────────────► Instant Decaf Mocha
        └────────────► Instant Tea Black
        └────────────► Instant Tea White
        └────────────► Chocolate
        └────────────► Creami Choc
        └────────────► FB Cappuccino
        └────────────► FB Coffee Black
        └────────────► FB Coffee White
        └────────────► FB DBL Espresso
        └────────────► FB Espresso
        └────────────► FB Latte
        └────────────► FB Mocha
        └────────────► FB Decaf Cappuccino
        └────────────► FB Decaf Coffee Black
        └────────────► FB Decaf Coffee White
        └────────────► FB Decaf DBL Espresso
        └────────────► FB Decaf Espresso
        └────────────► FB Decaf Latte
        └────────────► FB Decaf Mocha
        └────────────► FB Tea Black
        └────────────► FB Tea White
        └────────────► FG Cappuccino
        └────────────► FG Coffee Black
        └────────────► FG Coffee White
        └────────────► FG DBL Espresso
        └────────────► FG Espresso
        └────────────► FG Latte
        └────────────► FG Mocha
        └────────────► FG Decaf Cappuccino
        └────────────► FG Decaf Coffee Black
        └────────────► FG Decaf Coffee White
        └────────────► FG Decaf DBL Espresso
        └────────────► FG Decaf Espresso
        └────────────► FG Decaf Latte
        └────────────► FG Decaf Mocha
        └────────────► Hot Water
└► Extras pricing
        └────────────► Extra Strong
        └────────────► Extra White
        └────────────► Extra Sugar
└► Decimals
```

Discount Values
```
└► Supp. Period
└► No cup
└► Jug
```

Payment Settings
```
└► Payment system
        └────────────► Free Vend
        └────────────► Card / Coin Mech
        └────────────► Coin Acceptor
└► Coin Set
        └────────────► 0 = 1,2,5,10,20,50p , £1
        └────────────► 1 = 1,2,5,10,20,50p , £1 , £2
        └────────────► 2 = 5,10,20,50p , £1
        └────────────► 3 = Enter credit card
        └────────────► 4 = Custom coin set
        └────────────► 5 = 5,10,20,50ct , €1
        └────────────► 6 = 5,10,20,50ct , €1 €2
        └────────────► 7 = 5,10,20,50ct , $1
        └────────────► 8 = 5,10,20,50ct , $1 $2
└► Coin acceptance
        └────────────► Coin Type 01
        └────────────► Coin Type 02
```

```
                              ► Coin Type 03
                              ► Coin Type 04
                              ► Coin Type 05
                              ► Coin Type 06
                              ► Coin Type 07
                              ► Coin Type 08
                              ► Coin Type 09
                              ► Coin Type 10
                              ► Coin Type 11
                              ► Coin Type 12
                              ► Coin Type 13
                              ► Coin Type 14
                              ► Coin Type 15
                              ► Coin Type 16
    └► Coin Values
                              ► Coin 1
                              ► Coin 2
                              ► Coin 3
                              ► Coin 4
                              ► Coin 5
                              ► Coin 6
    └► Coin tube setup
                              ► Assign tube A
                              ► Assign tube B
                              ► Assign tube C
                              ► Tube A Low
                              ► Tube B Low
                              ► Tube C Low
    └► Change Equation
                              ► A or B and C
                              ► A and B and C
                              ► A and B
                              ► A and B or C
                              ► A only
                              ► A or B
                              ► A or B or C
                              ► A and C
                              ► A or C
                              ► A and B
                              ► B only
                              ► B or C
                              ► C only
    └► Exact change Message
                              ► Alternating
                              ► Permanente
    └► Maximum Credit
    └► Maximum Payout
    └► Multi vend
    └► Force vend
    └► Immediate cup deduction
    └► ESCROW
    └► CARD: Zero Val. Fix
```

Pin code Setup
```
    └► Discount Pins
                              ► Pin 1
                              ► Pin 2
                              ► Pin 3
                              ► Pin 4
                              ► Pin 5
                              ► Pin 6
    └► Free vend pins
                              ► Pin 1
                              ► Pin 2
                              ► Pin 3
                              ► Pin 4
                              ► Pin 5
                              ► Pin 6
    └► Free vend 0x30s
    └► Service pins
                              ► Access Level 3
                              ► Access Level 4
                              ► Reset service pins
```

Vend Periods
```
    └► Discount Period 1
                              ► Monday
                              ► Tuesday
                              ► Wednesday
                              ► Thursday
                              ► Friday
                              ► Saturday
```

```
└───────────► Sunday
└───────────► Start Time
└───────────► Duration
└► Discount Period 2
        └───────────► Monday
        └───────────► Tuesday
        └───────────► Wednesday
        └───────────► Thursday
        └───────────► Friday
        └───────────► Saturday
        └───────────► Sunday
        └───────────► Start Time
        └───────────► Duration
└► Discount Period 3
        └───────────► Monday
        └───────────► Tuesday
        └───────────► Wednesday
        └───────────► Thursday
        └───────────► Friday
        └───────────► Saturday
        └───────────► Sunday
        └───────────► Start Time
        └───────────► Duration
└► Discount Period 4
        └───────────► Monday
        └───────────► Tuesday
        └───────────► Wednesday
        └───────────► Thursday
        └───────────► Friday
        └───────────► Saturday
        └───────────► Sunday
        └───────────► Start Time
        └───────────► Duration
└► Discount Period 5
        └───────────► Monday
        └───────────► Tuesday
        └───────────► Wednesday
        └───────────► Thursday
        └───────────► Friday
        └───────────► Saturday
        └───────────► Sunday
        └───────────► Start Time
        └───────────► Duration
└► Discount Period 6
        └───────────► Monday
        └───────────► Tuesday
        └───────────► Wednesday
        └───────────► Thursday
        └───────────► Friday
        └───────────► Saturday
        └───────────► Sunday
        └───────────► Start Time
        └───────────► Duration
└► Free Period 1
        └───────────► Monday
        └───────────► Tuesday
        └───────────► Wednesday
        └───────────► Thursday
        └───────────► Friday
        └───────────► Saturday
        └───────────► Sunday
        └───────────► Start Time
        └───────────► Duration
└► Free Period 2
        └───────────► Monday
        └───────────► Tuesday
        └───────────► Wednesday
        └───────────► Thursday
        └───────────► Friday
        └───────────► Saturday
        └───────────► Sunday
        └───────────► Start Time
        └───────────► Duration
└► Free Period 3
        └───────────► Monday
        └───────────► Tuesday
        └───────────► Wednesday
        └───────────► Thursday
        └───────────► Friday
        └───────────► Saturday
```

```
            └────────────► Sunday
            └────────────► Start Time
            └────────────► Duration
 └► Free Period 4
            └────────────► Monday
            └────────────► Tuesday
            └────────────► Wednesday
            └────────────► Thursday
            └────────────► Friday
            └────────────► Saturday
            └────────────► Sunday
            └────────────► Start Time
            └────────────► Duration
 └► Free Period 5
            └────────────► Monday
            └────────────► Tuesday
            └────────────► Wednesday
            └────────────► Thursday
            └────────────► Friday
            └────────────► Saturday
            └────────────► Sunday
            └────────────► Start Time
            └────────────► Duration
 └► Free Period 6
            └────────────► Monday
            └────────────► Tuesday
            └────────────► Wednesday
            └────────────► Thursday
            └────────────► Friday
            └────────────► Saturday
            └────────────► Sunday
            └────────────► Start Time
            └────────────► Duration
```

Power Save
```
 └► Working day
            └────────────► Monday
            └────────────► Tuesday
            └────────────► Wednesday
            └────────────► Thursday
            └────────────► Friday
            └────────────► Saturday
            └────────────► Sunday
            └────────────► Start Time
            └────────────► Duration
```

Diagnostics
```
 └► Display Fault Log
 └► Clear Fault Log
 └► Reset Audit Log
 └► Last drink selection
 └► Triac Testing
```

Miscellaneous
```
 └► Vend start delay
 └► MDB Timeout
 └► Master timeout
 └► Water filter
 └► Enable sounder
```

Dispense arm
```
 └► Active
 └► Home Delay
 └► Home Position
 └► Move Timeout
 └► Switch invert
```

Cup Settings
```
 └► Def cup size
 └► Dual Cup Size
 └► Cup Dropper
 └► Carousel T/out
 └► Peeler  T/out
 └► Peeler level
 └► Sensor active
 └► Placement time
 └► Early cup removal
            └────────────► Ignore removal
            └────────────► Abort and rinse
            └────────────► Max rinse time
```

Jug settings
```
 └► Active
 └► Max cups / Jug
 └► Free vend by pin
```

└► Available for

Flush Settings
　└► Instant water
　└► Instant whipper
　└► Brew water
　└► Brew whipper
　└► Brew whip delay
　└► Brew Drain Delay
　└► Brew Home delay
　└► Hot/cold water

Auto Clean
　└► Active
　└► Monday
　└► Tuesday
　└► Wednesday
　└► Thursday
　└► Friday
　└► Saturday
　└► Sunday
　└► Start Time

Boiler Settings
　└► Temperature
　　　　　　　────► Operating
　　　　　　　────► Sleep
　　　　　　　────► Current
　　　　　　　────► Hysterisis
　　　　　　　────► Allow Vend
　　　　　　　────► Max
　└► Set up
　　　　　　　────► Boiler Fill
　　　　　　　────► Auto Sleep
　　　　　　　────► Boiler Exceed
　　　　　　　────► Heat Timeout
　　　　　　　────► Pulse Level
　　　　　　　────► Pulse Time
　　　　　　　────► Raise Level
　　　　　　　────► Leak
　└► Calibrate Boiler
　└► Calibration Reset

Brewer 1 Settings
　└► Filter Change
　└► Invert Switch
　└► Waste Tray
　└► Waste tray full
　└► Sold out active
　└► Pressurised
　└► Capacity

Brewer 2 Settings
　└► Filter Change
　└► Invert Switch
　└► Waste Tray
　└► Waste tray full
　└► Sold out active
　└► Pressurised
　└► Capacity

Button Allocate
　└► Drink Buttons
　　　　　　　────► Button 1
　　　　　　　────► Button 2
　　　　　　　────► Button 3
　　　　　　　────► Button 4
　　　　　　　────► Button 5
　　　　　　　────► Button 6
　　　　　　　────► Button 7
　　　　　　　────► Button 8
　　　　　　　────► Button 9
　　　　　　　────► Button 10
　　　　　　　────► Button 11
　　　　　　　────► Button 12
　└► Function Buttons
　　　　　　　────► Drink Select
　　　　　　　　　　　　────► Before
　　　　　　　　　　　　────► After
　　　　　　　────► Extra options
　　　　　　　────► Extra Shots
　　　　　　　────► Button 1
　　　　　　　────► Button 2
　　　　　　　────► Button 3
　　　　　　　────► Button 4

```
├──────────────►  Button 5
├──────────────►  Button 6
├──────────────►  Button 7
├──────────────►  Button 8
├──────────────►  Button 9
├──────────────►  Button 10
├──────────────►  Button 11
├──────────────►  Button 12
└──────────────►  Clear all Buttons
```

Advertising

```
├──────────────►  Edit Advert
└──────────────►  Display Advert
```

Drinks

Change All
```
└►  All Prices
              ├──────────────►  Set all to
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  All Throws
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  All Sugars
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  All Whiteners
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  All Waters
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  All inst Ingredient
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  All FB Ingred
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  All FG Ingred
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  Countdown Times
              ├──────────────►  Increase By
              └──────────────►  Decrease By
└►  Def Cup size
```

Instant Coffee
```
└►  Instant Espresso
              └►  Drink Setup
                            └►  Regular Setup
                                          └►  Active
                                          └►  Double Active
                                          └►  Time free vend
                                          └►  Whipped
                            └►  Decaf Setup
                                          └►  Active
                                          └►  Double Active
                                          └►  Time free vend
                                          └►  Whipped
                            └►  Extra Time
              └►  Drink Throws
                            └►  Regular Ingredient
                                          └►  7oz
                                          └►  9oz
                                          └►  12oz
                                          └►  Delay
                                          └►  Pulse On
                                          └►  Pulse Off
                                          └►  Triac
                            └►  Regular Ingredient Extra
                                          └►  7oz
                                          └►  9oz
                                          └►  12oz
                            └►  Decaf Ingredient
                                          └►  7oz
                                          └►  9oz
                                          └►  12oz
                                          └►  Delay
                                          └►  Pulse On
                                          └►  Pulse Off
                                          └►  Triac
                            └►  Decaf Ingredient Extra
```

└▶ 7oz
└▶ 9oz
└▶ 12oz

└▶ Regular Main Water

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Decaf Main Water

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Main Whipper

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Decaf whipper

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Whitener

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Extra Whitener

└▶ 7oz
└▶ 9oz
└▶ 12oz

└▶ Whitener Water

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Whitener Whipper

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Sugar ingredient

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Extra Sugar

└▶ 7oz
└▶ 9oz
└▶ 12oz

└▶ Sugar Water

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay

```
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                              └► Sugar Whipper
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                              └► Top up Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                              └► Spare Throw
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
└► Instant Coffee Black
        └► Drink Setup
                              └► Regular Setup
                                                              └► Active
                                                              └► Time free vend
                                                              └► Whipped
                              └► Decaf Setup
                                                              └► Active
                                                              └► Time free vend
                                                              └► Whipped
                              └► Extra Time
        └► Drink Throws
                              └► Regular Ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                              └► Regular Ingredient Extra
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                              └► Decaf Ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                              └► Decaf Ingredient Extra
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                              └► Regular Main Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                              └► Decaf Main Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                              └► Main Whipper
```

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Decaf Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Extra Sugar

└► 7oz
└► 9oz
└► 12oz

└► Sugar Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Spare Throw

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► **Instant Coffee White**

└► Drink Setup

└► Regular Setup

└► Active
└► Time free vend
└► Whipped

└► Decaf Setup

└► Active
└► Time free vend
└► Whipped

└► Extra Time

└► Drink Throws

└► Regular Ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Regular Ingredient Extra

```
                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
        └► Decaf Ingredient

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
                                            └► Pulse On
                                            └► Pulse Off
                                            └► Triac
        └► Decaf Ingredient Extra

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
        └► Regular Main Water

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
                                            └► Pulse On
                                            └► Pulse Off
                                            └► Triac
        └► Decaf Main Water

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
                                            └► Pulse On
                                            └► Pulse Off
                                            └► Triac
        └► Main Whipper

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
                                            └► Pulse On
                                            └► Pulse Off
                                            └► Triac
        └► Decaf Whipper

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
                                            └► Pulse On
                                            └► Pulse Off
                                            └► Triac
        └► Whitener

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
                                            └► Pulse On
                                            └► Pulse Off
                                            └► Triac
        └► Extra Whitener

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
        └► Whitener Water

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
                                            └► Pulse On
                                            └► Pulse Off
                                            └► Triac
        └► Whitener Whipper

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
                                            └► Pulse On
                                            └► Pulse Off
                                            └► Triac
        └► Sugar ingredient

                                            └► 7oz
                                            └► 9oz
                                            └► 12oz
                                            └► Delay
```

```
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
                        └► Extra Sugar
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                        └► Sugar Water
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
                        └► Sugar Whipper
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
                        └► Top up Water
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
                        └► Spare Throw
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
└► Instant Cappuccino
              └► Drink Setup
                        └► Regular Setup
                                              └► Active
                                              └► Time free vend
                                              └► Whipped
                        └► Decaf Setup
                                              └► Active
                                              └► Time free vend
                                              └► Whipped
                        └► Extra Time
              └► Drink Throws
                        └► Regular Ingredient
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
                        └► Regular Ingredient Extra
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                        └► Decaf Ingredient
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
                        └► Decaf Ingredient Extra
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                        └► Regular Main Water
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
```

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```
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Decaf Main Water
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Main Whipper
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Decaf Whipper
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Topping
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Topping Water
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Topping  Whipper
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Sugar ingredient
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Extra Sugar
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
        └► Sugar Water
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Sugar Whipper
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
        └► Chocolate
```

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Chocolate Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Chocolate Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Spare Throw

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► **Instant Café Latte**

└► Drink Setup

　　└► Regular Setup

　　　　└► Active
　　　　└► Time free vend
　　　　└► Whipped

　　└► Decaf Setup

　　　　└► Active
　　　　└► Time free vend
　　　　└► Whipped

　　└► Extra Time

└► Drink Throws

　　└► Regular Ingredient

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz
　　　　└► Delay
　　　　└► Pulse On
　　　　└► Pulse Off
　　　　└► Triac

　　└► Regular Ingredient Extra

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz

　　└► Decaf Ingredient

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz
　　　　└► Delay
　　　　└► Pulse On
　　　　└► Pulse Off
　　　　└► Triac

　　└► Decaf Ingredient Extra

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz

　　└► Regular Main Water

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz
　　　　└► Delay

└► Pulse On
└► Pulse Off
└► Triac

└► Decaf Main Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Main Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Decaf Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Topping

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Topping Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Topping Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Extra Sugar

└► 7oz
└► 9oz
└► 12oz

└► Sugar Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

```
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                        └► Spare Throw
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
└► Instant Mocha
                      └► Drink Setup
                                        └► Regular Setup
                                                              └► Active
                                                              └► Time free vend
                                                              └► Whipped
                                        └► Decaf Setup
                                                              └► Active
                                                              └► Time free vend
                                                              └► Whipped
                                        └► Extra Time
                      └► Drink Throws
                                        └► Regular Ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                        └► Regular Ingredient Extra
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                        └► Decaf Ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                        └► Decaf Ingredient Extra
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                        └► Regular Main Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                        └► Decaf Main Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                        └► Main Whipper
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                        └► Decaf Whipper
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
```

```
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                        └► Topping
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                        └► Topping Water
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                        └► Topping Whipper
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                        └► Sugar ingredient
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                        └► Extra Sugar
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                        └► Sugar Water
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                        └► Sugar Whipper
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                        └► Top up Water
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                        └► Spare Throw
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
FG Coffee
    └► FG Espresso
                    └► Drink Setup
                                    └► Regular Setup
                                                      └► Active
                                                      └► Double Active
                                                      └► Time free vend
                                                      └► Whipped
                                                      └► Use Brewer 2
```

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```
                                              └► Decaf Setup
                                                                  └► Active
                                                                  └► Time free vend
                                                                  └► Whipped
                                                                  └► Use Brewer 2
                                              └► Extra Time
         └► Drink Throws
                                              └► Regular Ingredient
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                                                  └► Delay
                                                                  └► Pulse On
                                                                  └► Pulse Off
                                                                  └► Triac
                                              └► Regular Ingredient Extra
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                              └► Decaf Ingredient
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                                                  └► Delay
                                                                  └► Pulse On
                                                                  └► Pulse Off
                                                                  └► Triac
                                              └► Decaf Ingredient Extra
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                              └► Regular Main Water
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                                                  └► Delay
                                                                  └► Pulse On
                                                                  └► Pulse Off
                                                                  └► Triac
                                              └► Decaf Main Water
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                                                  └► Delay
                                                                  └► Pulse On
                                                                  └► Pulse Off
                                                                  └► Triac
                                              └► Main Whipper
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                                                  └► Delay
                                                                  └► Pulse On
                                                                  └► Pulse Off
                                                                  └► Triac
                                              └► Decaf whipper
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                                                  └► Delay
                                                                  └► Pulse On
                                                                  └► Pulse Off
                                                                  └► Triac
                                              └► Whitener
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                                                  └► Delay
                                                                  └► Pulse On
                                                                  └► Pulse Off
                                                                  └► Triac
                                              └► Extra Whitener
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                              └► Whitener Water
                                                                  └► 7oz
                                                                  └► 9oz
                                                                  └► 12oz
                                                                  └► Delay
```

                                        └► Pulse On
                └► Pulse Off
                └► Triac

            └► Whitener Whipper

                └► 7oz
                └► 9oz
                └► 12oz
                └► Delay
                └► Pulse On
                └► Pulse Off
                └► Triac

            └► Sugar ingredient

                └► 7oz
                └► 9oz
                └► 12oz
                └► Delay
                └► Pulse On
                └► Pulse Off
                └► Triac

            └► Extra Sugar

                └► 7oz
                └► 9oz
                └► 12oz

            └► Sugar Water

                └► 7oz
                └► 9oz
                └► 12oz
                └► Delay
                └► Pulse On
                └► Pulse Off
                └► Triac

            └► Sugar Whipper

                └► 7oz
                └► 9oz
                └► 12oz
                └► Delay
                └► Pulse On
                └► Pulse Off
                └► Triac

            └► Top up Water

                └► 7oz
                └► 9oz
                └► 12oz
                └► Delay
                └► Pulse On
                └► Pulse Off
                └► Triac

            └► Brewer Home Delay

                └► 7oz
                └► 9oz
                └► 12oz

            └► Air Pump

                └► 7oz
                └► 9oz
                └► 12oz
                └► Delay
                └► Pulse On
                └► Pulse Off
                └► Triac

            └► Pressure Pincher

                └► 7oz
                └► 9oz
                └► 12oz
                └► Delay
                └► Pulse On
                └► Pulse Off
                └► Triac

            └► Spare Throw

                └► 7oz
                └► 9oz
                └► 12oz
                └► Delay
                └► Pulse On
                └► Pulse Off
                └► Triac

└► **FG Coffee Black**

      └► Drink Setup

            └► Regular Setup

                └► Active
                └► Time free vend

```
                                                        └► Whipped
                                                        └► Use Brewer 2
                                 └► Decaf Setup
                                                        └► Active
                                                        └► Time free vend
                                                        └► Whipped
                                                        └► Use Brewer 2
                                 └► Extra Time
         └► Drink Throws
                                 └► Regular Ingredient
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                                        └► Delay
                                                        └► Pulse On
                                                        └► Pulse Off
                                                        └► Triac
                                 └► Regular Ingredient Extra
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                 └► Decaf Ingredient
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                                        └► Delay
                                                        └► Pulse On
                                                        └► Pulse Off
                                                        └► Triac
                                 └► Decaf Ingredient Extra
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                 └► Regular Main Water
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                                        └► Delay
                                                        └► Pulse On
                                                        └► Pulse Off
                                                        └► Triac
                                 └► Decaf Main Water
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                                        └► Delay
                                                        └► Pulse On
                                                        └► Pulse Off
                                                        └► Triac
                                 └► Main Whipper
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                                        └► Delay
                                                        └► Pulse On
                                                        └► Pulse Off
                                                        └► Triac
                                 └► Decaf Whipper
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                                        └► Delay
                                                        └► Pulse On
                                                        └► Pulse Off
                                                        └► Triac
                                 └► Sugar ingredient
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                                        └► Delay
                                                        └► Pulse On
                                                        └► Pulse Off
                                                        └► Triac
                                 └► Extra Sugar
                                                        └► 7oz
                                                        └► 9oz
                                                        └► 12oz
                                 └► Sugar Water
                                                        └► 7oz
                                                        └► 9oz
```

└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Sugar Whipper

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Top up Water

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Brewer home Delay

└▶ 7oz
└▶ 9oz
└▶ 12oz

└▶ Air Pump

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Pressure Pincher

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Spare Throw

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ **FG Coffee White**

└▶ Drink Setup

└▶ Regular Setup

└▶ Active
└▶ Time free vend
└▶ Whipped
└▶ Use Brewer 2

└▶ Decaf Setup

└▶ Active
└▶ Time free vend
└▶ Whipped
└▶ Use Brewer 2

└▶ Extra Time

└▶ Drink Throws

└▶ Regular Ingredient

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay
└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Regular Ingredient Extra

└▶ 7oz
└▶ 9oz
└▶ 12oz

└▶ Decaf Ingredient

└▶ 7oz
└▶ 9oz
└▶ 12oz
└▶ Delay

```
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Decaf Ingredient Extra
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                    └► Regular Main Water
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Decaf Main Water
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Main Whipper
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Decaf Whipper
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Whitener
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Extra Whitener
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                    └► Whitener Water
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Whitener Whipper
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Sugar ingredient
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                    └► Extra Sugar
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                    └► Sugar Water
```

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Brewer home Delay

└► 7oz
└► 9oz
└► 12oz

└► Air Pump

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Pressure Pincher

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Spare Throw

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► **FG Cappuccino**

└► Drink Setup

└► Regular Setup

└► Active
└► Time free vend
└► Whipped
└► Use Brewer 2

└► Decaf Setup

└► Active
└► Time free vend
└► Whipped
└► Use Brewer 2

└► Extra Time

└► Regular Ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Drink Throws

└► Regular Ingredient Extra

└► 7oz
└► 9oz
└► 12oz

└► Decaf Ingredient

└► 7oz
└► 9oz

                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Decaf Ingredient Extra
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz

  └► Regular Main Water
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Decaf Main Water
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Main Whipper
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Decaf Whipper
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Sugar ingredient
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Extra Sugar
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz

  └► Sugar Water
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Sugar Whipper
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Topping
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac

  └► Topping Water
                                                                    └► 7oz
                                                                    └► 9oz

```
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                           └► Topping Whipper
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                           └► Chocolate
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                           └► Chocolate Water
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                           └► Chocolate Whipper
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                           └► Top up Water
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                           └► Brewer home Delay
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                           └► Air Pump
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                           └► Pressure Pincher
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                           └► Spare Throw
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
└► FG Café Latte
                 └► Drink Setup
                           └► Regular Setup
                                                    └► Active
                                                    └► Time free vend
                                                    └► Whipped
                                                    └► Use Brewer 2
```

```
                                              └► Decaf Setup
                                                              └► Active
                                                              └► Time free vend
                                                              └► Whipped
                                                              └► Use Brewer 2
                              └► Drink Throws └► Extra Time
                                              └► Regular Ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                              └► Regular Ingredient Extra
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                              └► Decaf Ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                              └► Decaf Ingredient Extra
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                              └► Regular Main Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                              └► Decaf Main Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                              └► Main Whipper
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                              └► Decaf Whipper
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                              └► Sugar ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                              └► Extra Sugar
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                              └► Sugar Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
```

```
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                      └► Sugar Whipper

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                      └► Topping

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                      └► Topping Water

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                      └► Topping Whipper

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                      └► Top up Water

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                      └► Brewer home Delay

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                      └► Air Pump

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                      └► Pressure Pincher

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                      └► Spare Throw

                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
  └► FG Mocha
                          └► Drink Setup
                                      └► Regular Setup
                                                                    └► Active
                                                                    └► Time free vend
                                                                    └► Whipped
                                                                    └► Use Brewer 2
                                      └► Decaf Setup
                                                                    └► Active
```

```
                                                              └► Time free vend
                                                              └► Whipped
                                                              └► Use Brewer 2
                                          └► Extra Time
         └► Drink Throws
                                          └► Regular Ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                          └► Regular Ingredient Extra
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                          └► Decaf Ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                          └► Decaf Ingredient Extra
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                          └► Regular Main Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                          └► Decaf Main Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                          └► Main Whipper
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                          └► Decaf Whipper
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                          └► Sugar ingredient
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
                                                              └► Triac
                                          └► Extra Sugar
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                          └► Sugar Water
                                                              └► 7oz
                                                              └► 9oz
                                                              └► 12oz
                                                              └► Delay
                                                              └► Pulse On
                                                              └► Pulse Off
```

                                                    └► Triac
                              └► Sugar Whipper
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Topping
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Topping Water
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Topping Whipper
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Chocolate
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Chocolate Water
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Chocolate Whipper
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Top up Water
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Brewer home Delay
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                              └► Air Pump
                                                    └► 7oz
                                                    └► 9oz
                                                    └► 12oz
                                                    └► Delay
                                                    └► Pulse On
                                                    └► Pulse Off
                                                    └► Triac
                              └► Pressure Pincher
                                                    └► 7oz
                                                    └► 9oz

```
                                                          └► 12oz
                                                          └► Delay
                                                          └► Pulse On
                                                          └► Pulse Off
                                                          └► Triac
                            └► Spare Throw
                                                          └► 7oz
                                                          └► 9oz
                                                          └► 12oz
                                                          └► Delay
                                                          └► Pulse On
                                                          └► Pulse Off
                                                          └► Triac
```

FB Coffee
```
    └► FB Espresso
                    └► Drink Setup
                                    └► Regular Setup
                                                          └► Active
                                                          └► Double Active
                                                          └► Time free vend
                                                          └► Whipped
                                                          └► Use Brewer 2
                                    └► Decaf Setup
                                                          └► Active
                                                          └► Double Active
                                                          └► Time free vend
                                                          └► Whipped
                                                          └► Use Brewer 2
                    └► Drink Throws
                                    └► Extra Time
                                    └► Regular Ingredient
                                                          └► 7oz
                                                          └► 9oz
                                                          └► 12oz
                                                          └► Delay
                                                          └► Pulse On
                                                          └► Pulse Off
                                                          └► Triac
                                    └► Regular Ingredient Extra
                                                          └► 7oz
                                                          └► 9oz
                                                          └► 12oz
                                    └► Decaf Ingredient
                                                          └► 7oz
                                                          └► 9oz
                                                          └► 12oz
                                                          └► Delay
                                                          └► Pulse On
                                                          └► Pulse Off
                                                          └► Triac
                                    └► Decaf Ingredient Extra
                                                          └► 7oz
                                                          └► 9oz
                                                          └► 12oz
                                    └► Regular Main Water
                                                          └► 7oz
                                                          └► 9oz
                                                          └► 12oz
                                                          └► Delay
                                                          └► Pulse On
                                                          └► Pulse Off
                                                          └► Triac
                                    └► Decaf Main Water
                                                          └► 7oz
                                                          └► 9oz
                                                          └► 12oz
                                                          └► Delay
                                                          └► Pulse On
                                                          └► Pulse Off
                                                          └► Triac
                                    └► Main Whipper
                                                          └► 7oz
                                                          └► 9oz
                                                          └► 12oz
                                                          └► Delay
                                                          └► Pulse On
                                                          └► Pulse Off
                                                          └► Triac
                                    └► Decaf whipper
                                                          └► 7oz
```

└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Whitener

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Extra Whitener

└► 7oz
└► 9oz
└► 12oz

└► Whitener Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Whitener Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Extra Sugar

└► 7oz
└► 9oz
└► 12oz

└► Sugar Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Brewer Home Delay

└► 7oz
└► 9oz
└► 12oz

└► Air Pump

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On

```
                                              └► Pulse Off
                                              └► Triac
                         └► Pressure Pincher
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
                         └► Spare Throw
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
```

```
└► FB Coffee Black
                    └► Drink Setup
                                    └► Regular Setup
                                                      └► Active
                                                      └► Time free vend
                                                      └► Whipped
                                                      └► Use Brewer 2
                                    └► Decaf Setup
                                                      └► Active
                                                      └► Time free vend
                                                      └► Whipped
                                                      └► Use Brewer 2
                                    └► Extra Time
                    └► Drink Throws
                                    └► Regular Ingredient
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                                    └► Regular Ingredient Extra
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                    └► Decaf Ingredient
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                                    └► Decaf Ingredient Extra
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                    └► Regular Main Water
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                                    └► Decaf Main Water
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
                                    └► Main Whipper
                                                      └► 7oz
                                                      └► 9oz
                                                      └► 12oz
                                                      └► Delay
                                                      └► Pulse On
                                                      └► Pulse Off
                                                      └► Triac
```

└▶ Decaf Whipper
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz
                                 └▶ Delay
                                 └▶ Pulse On
                                 └▶ Pulse Off
                                 └▶ Triac

└▶ Sugar ingredient
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz
                                 └▶ Delay
                                 └▶ Pulse On
                                 └▶ Pulse Off
                                 └▶ Triac

└▶ Extra Sugar
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz

└▶ Sugar Water
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz
                                 └▶ Delay
                                 └▶ Pulse On
                                 └▶ Pulse Off
                                 └▶ Triac

└▶ Sugar Whipper
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz
                                 └▶ Delay
                                 └▶ Pulse On
                                 └▶ Pulse Off
                                 └▶ Triac

└▶ Top up Water
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz
                                 └▶ Delay
                                 └▶ Pulse On
                                 └▶ Pulse Off
                                 └▶ Triac

└▶ Brewer home Delay
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz

└▶ Air Pump
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz
                                 └▶ Delay
                                 └▶ Pulse On
                                 └▶ Pulse Off
                                 └▶ Triac

└▶ Pressure Pincher
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz
                                 └▶ Delay
                                 └▶ Pulse On
                                 └▶ Pulse Off
                                 └▶ Triac

└▶ Spare Throw
                                 └▶ 7oz
                                 └▶ 9oz
                                 └▶ 12oz
                                 └▶ Delay
                                 └▶ Pulse On
                                 └▶ Pulse Off
                                 └▶ Triac

└▶ FB Coffee White
               └▶ Drink Setup
                                 └▶ Regular Setup
                                                └▶ Active
                                                └▶ Time free vend
                                                └▶ Whipped
                                                └▶ Use Brewer 2
                                 └▶ Decaf Setup

∟► Active
∟► Time free vend
∟► Whipped
∟► Use Brewer 2

∟► Extra Time

∟► Drink Throws

∟► Regular Ingredient

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz
  ∟► Delay
  ∟► Pulse On
  ∟► Pulse Off
  ∟► Triac

∟► Regular Ingredient Extra

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz

∟► Decaf Ingredient

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz
  ∟► Delay
  ∟► Pulse On
  ∟► Pulse Off
  ∟► Triac

∟► Decaf Ingredient Extra

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz

∟► Regular Main Water

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz
  ∟► Delay
  ∟► Pulse On
  ∟► Pulse Off
  ∟► Triac

∟► Decaf Main Water

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz
  ∟► Delay
  ∟► Pulse On
  ∟► Pulse Off
  ∟► Triac

∟► Main Whipper

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz
  ∟► Delay
  ∟► Pulse On
  ∟► Pulse Off
  ∟► Triac

∟► Decaf Whipper

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz
  ∟► Delay
  ∟► Pulse On
  ∟► Pulse Off
  ∟► Triac

∟► Whitener

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz
  ∟► Delay
  ∟► Pulse On
  ∟► Pulse Off
  ∟► Triac

∟► Extra Whitener

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz

∟► Whitener Water

  ∟► 7oz
  ∟► 9oz
  ∟► 12oz
  ∟► Delay
  ∟► Pulse On

└► Pulse Off
└► Triac

└► Whitener Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Extra Sugar

└► 7oz
└► 9oz
└► 12oz

└► Sugar Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Brewer home Delay

└► 7oz
└► 9oz
└► 12oz

└► Air Pump

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Pressure Pincher

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Spare Throw

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► **FB Cappuccino**

└► Drink Setup

└► Regular Setup

└► Active
└► Time free vend
└► Whipped

```
                                              └► Decaf Setup        └► Use Brewer 2

                                                                    └► Active
                                                                    └► Time free vend
                                                                    └► Whipped
                                                                    └► Use Brewer 2
                                              └► Extra Time
          └► Drink Throws                     └► Regular Ingredient
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                              └► Regular Ingredient Extra
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                              └► Decaf Ingredient
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                              └► Decaf Ingredient Extra
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                              └► Regular Main Water
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                              └► Decaf Main Water
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                              └► Main Whipper
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                              └► Decaf Whipper
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                              └► Sugar ingredient
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                                                    └► Delay
                                                                    └► Pulse On
                                                                    └► Pulse Off
                                                                    └► Triac
                                              └► Extra Sugar
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
                                              └► Sugar Water
                                                                    └► 7oz
                                                                    └► 9oz
                                                                    └► 12oz
```

└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Topping

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Topping Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Topping Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Chocolate

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Chocolate Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Chocolate Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Brewer home Delay

└► 7oz
└► 9oz
└► 12oz

└► Air Pump

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Pressure Pincher

　　└► 7oz
　　└► 9oz
　　└► 12oz
　　└► Delay
　　└► Pulse On
　　└► Pulse Off
　　└► Triac

└► Spare Throw

　　└► 7oz
　　└► 9oz
　　└► 12oz
　　└► Delay
　　└► Pulse On
　　└► Pulse Off
　　└► Triac

└► **FB Café Latte**

└► Drink Setup

　　└► Regular Setup

　　　　└► Active
　　　　└► Time free vend
　　　　└► Whipped
　　　　└► Use Brewer 2

　　└► Decaf Setup

　　　　└► Active
　　　　└► Time free vend
　　　　└► Whipped
　　　　└► Use Brewer 2

└► Drink Throws

　　└► Extra Time

　　└► Regular Ingredient

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz
　　　　└► Delay
　　　　└► Pulse On
　　　　└► Pulse Off
　　　　└► Triac

　　└► Regular Ingredient Extra

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz

　　└► Decaf Ingredient

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz
　　　　└► Delay
　　　　└► Pulse On
　　　　└► Pulse Off
　　　　└► Triac

　　└► Decaf Ingredient Extra

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz

　　└► Regular Main Water

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz
　　　　└► Delay
　　　　└► Pulse On
　　　　└► Pulse Off
　　　　└► Triac

　　└► Decaf Main Water

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz
　　　　└► Delay
　　　　└► Pulse On
　　　　└► Pulse Off
　　　　└► Triac

　　└► Main Whipper

　　　　└► 7oz
　　　　└► 9oz
　　　　└► 12oz
　　　　└► Delay
　　　　└► Pulse On
　　　　└► Pulse Off
　　　　└► Triac

　　└► Decaf Whipper

　　　　└► 7oz

└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar ingredient

      └► 7oz
      └► 9oz
      └► 12oz
      └► Delay
      └► Pulse On
      └► Pulse Off
      └► Triac

└► Extra Sugar

      └► 7oz
      └► 9oz
      └► 12oz

└► Sugar Water

      └► 7oz
      └► 9oz
      └► 12oz
      └► Delay
      └► Pulse On
      └► Pulse Off
      └► Triac

└► Sugar Whipper

      └► 7oz
      └► 9oz
      └► 12oz
      └► Delay
      └► Pulse On
      └► Pulse Off
      └► Triac

└► Topping

      └► 7oz
      └► 9oz
      └► 12oz
      └► Delay
      └► Pulse On
      └► Pulse Off
      └► Triac

└► Topping Water

      └► 7oz
      └► 9oz
      └► 12oz
      └► Delay
      └► Pulse On
      └► Pulse Off
      └► Triac

└► Topping Whipper

      └► 7oz
      └► 9oz
      └► 12oz
      └► Delay
      └► Pulse On
      └► Pulse Off
      └► Triac

└► Brewer home Delay

      └► 7oz
      └► 9oz
      └► 12oz

└► Top up Water

      └► 7oz
      └► 9oz
      └► 12oz
      └► Delay
      └► Pulse On
      └► Pulse Off
      └► Triac

└► Air Pump

      └► 7oz
      └► 9oz
      └► 12oz
      └► Delay
      └► Pulse On
      └► Pulse Off
      └► Triac

└► Pressure Pincher

      └► 7oz

└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Spare Throw

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► FB Mocha

└► Drink Setup

└► Regular Setup

└► Active
└► Time free vend
└► Whipped
└► Use Brewer 2

└► Decaf Setup

└► Active
└► Time free vend
└► Whipped
└► Use Brewer 2

└► Extra Time

└► Drink Throws

└► Regular Ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Regular Ingredient Extra

└► 7oz
└► 9oz
└► 12oz

└► Decaf Ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Decaf Ingredient Extra

└► 7oz
└► 9oz
└► 12oz

└► Regular Main Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Decaf Main Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Main Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Decaf Whipper

└► 7oz
└► 9oz
└► 12oz

```
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Sugar ingredient
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Extra Sugar
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
        └► Sugar Water
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Sugar Whipper
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Topping
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Topping Water
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Topping Whipper
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Chocolate
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Chocolate Water
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
        └► Chocolate Whipper
                                              └► 7oz
                                              └► 9oz
                                              └► 12oz
                                              └► Delay
                                              └► Pulse On
                                              └► Pulse Off
                                              └► Triac
```

ꞁ▶ Top up Water

        ꞁ▶ 7oz
        ꞁ▶ 9oz
        ꞁ▶ 12oz
        ꞁ▶ Delay
        ꞁ▶ Pulse On
        ꞁ▶ Pulse Off
        ꞁ▶ Triac

ꞁ▶ Brewer home Delay

        ꞁ▶ 7oz
        ꞁ▶ 9oz
        ꞁ▶ 12oz

ꞁ▶ Air Pump

        ꞁ▶ 7oz
        ꞁ▶ 9oz
        ꞁ▶ 12oz
        ꞁ▶ Delay
        ꞁ▶ Pulse On
        ꞁ▶ Pulse Off
        ꞁ▶ Triac

ꞁ▶ Pressure Pincher

        ꞁ▶ 7oz
        ꞁ▶ 9oz
        ꞁ▶ 12oz
        ꞁ▶ Delay
        ꞁ▶ Pulse On
        ꞁ▶ Pulse Off
        ꞁ▶ Triac

ꞁ▶ Spare Throw

        ꞁ▶ 7oz
        ꞁ▶ 9oz
        ꞁ▶ 12oz
        ꞁ▶ Delay
        ꞁ▶ Pulse On
        ꞁ▶ Pulse Off
        ꞁ▶ Triac

Instant Tea Black
    ꞁ▶ Drink Setup

        ꞁ▶ Active
        ꞁ▶ Time free vend
        ꞁ▶ Extra Time

    ꞁ▶ Drink Throws

        ꞁ▶ Main Ingredient

            ꞁ▶ 7oz
            ꞁ▶ 9oz
            ꞁ▶ 12oz
            ꞁ▶ Delay
            ꞁ▶ Pulse On
            ꞁ▶ Pulse Off
            ꞁ▶ Triac

        ꞁ▶ Main ingredient Extra

            ꞁ▶ 7oz
            ꞁ▶ 9oz
            ꞁ▶ 12oz

        ꞁ▶ Main Water

            ꞁ▶ 7oz
            ꞁ▶ 9oz
            ꞁ▶ 12oz
            ꞁ▶ Delay
            ꞁ▶ Pulse On
            ꞁ▶ Pulse Off
            ꞁ▶ Triac

        ꞁ▶ Main Whipper

            ꞁ▶ 7oz
            ꞁ▶ 9oz
            ꞁ▶ 12oz
            ꞁ▶ Delay
            ꞁ▶ Pulse On
            ꞁ▶ Pulse Off
            ꞁ▶ Triac

        ꞁ▶ Sugar ingredient

            ꞁ▶ 7oz
            ꞁ▶ 9oz
            ꞁ▶ 12oz
            ꞁ▶ Delay
            ꞁ▶ Pulse On
            ꞁ▶ Pulse Off
            ꞁ▶ Triac

        ꞁ▶ Extra Sugar

            ꞁ▶ 7oz

└► 9oz
└► 12oz

└► Sugar Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Spare Throw

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

Instant Tea White
└► Drink Setup

└► Active
└► Time free vend
└► Extra Time

└► Drink Throws

└► Main Ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Main Ingredient Extra

└► 7oz
└► 9oz
└► 12oz

└► Main Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Main Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Whitener

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Extra Whitener

└► 7oz
└► 9oz
└► 12oz

└► Whitener Water
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz
　　　　　　　└► Delay
　　　　　　　└► Pulse On
　　　　　　　└► Pulse Off
　　　　　　　└► Triac

└► Whitener Whipper
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz
　　　　　　　└► Delay
　　　　　　　└► Pulse On
　　　　　　　└► Pulse Off
　　　　　　　└► Triac

└► Sugar ingredient
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz
　　　　　　　└► Delay
　　　　　　　└► Pulse On
　　　　　　　└► Pulse Off
　　　　　　　└► Triac

└► Extra Sugar
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz

└► Sugar Water
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz
　　　　　　　└► Delay
　　　　　　　└► Pulse On
　　　　　　　└► Pulse Off
　　　　　　　└► Triac

└► Sugar Whipper
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz
　　　　　　　└► Delay
　　　　　　　└► Pulse On
　　　　　　　└► Pulse Off
　　　　　　　└► Triac

└► Top up Water
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz
　　　　　　　└► Delay
　　　　　　　└► Pulse On
　　　　　　　└► Pulse Off
　　　　　　　└► Triac

└► Spare Throw
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz
　　　　　　　└► Delay
　　　　　　　└► Pulse On
　　　　　　　└► Pulse Off
　　　　　　　└► Triac

FB Tea Black
└► Drink Setup
　　　　└► Active
　　　　└► Time free vend
　　　　└► Use Brewer 2
　　　　└► Extra Time

└► Drink Throws
　　　　└► Main Ingredient
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz
　　　　　　　└► Delay
　　　　　　　└► Pulse On
　　　　　　　└► Pulse Off
　　　　　　　└► Triac

　　　　└► Main ingredient Extra
　　　　　　　└► 7oz
　　　　　　　└► 9oz
　　　　　　　└► 12oz

　　　　└► Main Water

                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
                                          └► Delay
                                          └► Pulse On
                                          └► Pulse Off
                                          └► Triac
            └► Main Whipper
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
                                          └► Delay
                                          └► Pulse On
                                          └► Pulse Off
                                          └► Triac
            └► Sugar ingredient
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
                                          └► Delay
                                          └► Pulse On
                                          └► Pulse Off
                                          └► Triac
            └► Extra Sugar
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
            └► Sugar Water
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
                                          └► Delay
                                          └► Pulse On
                                          └► Pulse Off
                                          └► Triac
            └► Sugar Whipper
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
                                          └► Delay
                                          └► Pulse On
                                          └► Pulse Off
                                          └► Triac
            └► Top up Water
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
                                          └► Delay
                                          └► Pulse On
                                          └► Pulse Off
                                          └► Triac
            └► Drain Delay
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
                                          └► Delay
                                          └► Pulse On
                                          └► Pulse Off
                                          └► Triac
            └► Brewer home Delay
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
            └► Spare Throw
                                          └► 7oz
                                          └► 9oz
                                          └► 12oz
                                          └► Delay
                                          └► Pulse On
                                          └► Pulse Off
                                          └► Triac

FB Tea White
    └► Drink Setup
                          └► Active
                          └► Time free vend
                          └► Use Brewer 2
                          └► Extra Time
        └► Drink Throws
                          └► Main Ingredient
                                          └► 7oz

        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On
        └► Pulse Off
        └► Triac

└► Main Ingredient Extra
        └► 7oz
        └► 9oz
        └► 12oz

└► Main Water
        └► 7oz
        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On
        └► Pulse Off
        └► Triac

└► Main Whipper
        └► 7oz
        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On
        └► Pulse Off
        └► Triac

└► Whitener
        └► 7oz
        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On
        └► Pulse Off
        └► Triac

└► Extra Whitener
        └► 7oz
        └► 9oz
        └► 12oz

└► Whitener Water
        └► 7oz
        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On
        └► Pulse Off
        └► Triac

└► Whitener Whipper
        └► 7oz
        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On
        └► Pulse Off
        └► Triac

└► Sugar ingredient
        └► 7oz
        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On
        └► Pulse Off
        └► Triac

└► Extra Sugar
        └► 7oz
        └► 9oz
        └► 12oz

└► Sugar Water
        └► 7oz
        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On
        └► Pulse Off
        └► Triac

└► Sugar Whipper
        └► 7oz
        └► 9oz
        └► 12oz
        └► Delay
        └► Pulse On

└► Pulse Off
└► Triac

  └► Drain Delay

    └► 7oz
    └► 9oz
    └► 12oz
    └► Delay
    └► Pulse On
    └► Pulse Off
    └► Triac

  └► Brewer home Delay

    └► 7oz
    └► 9oz
    └► 12oz

  └► Top up Water

    └► 7oz
    └► 9oz
    └► 12oz
    └► Delay
    └► Pulse On
    └► Pulse Off
    └► Triac

  └► Spare Throw

    └► 7oz
    └► 9oz
    └► 12oz
    └► Delay
    └► Pulse On
    └► Pulse Off
    └► Triac

Chocolate
 └► Drink Setup

   └► Active
   └► Time free vend
   └► Whipped
   └► Extra Time

 └► Drink Throws

   └► Chocolate

     └► 7oz
     └► 9oz
     └► 12oz
     └► Delay
     └► Pulse On
     └► Pulse Off
     └► Triac

   └► Main Water

     └► 7oz
     └► 9oz
     └► 12oz
     └► Delay
     └► Pulse On
     └► Pulse Off
     └► Triac

   └► Main Whipper

     └► 7oz
     └► 9oz
     └► 12oz
     └► Delay
     └► Pulse On
     └► Pulse Off
     └► Triac

   └► Topping

     └► 7oz
     └► 9oz
     └► 12oz
     └► Delay
     └► Pulse On
     └► Pulse Off
     └► Triac

   └► Topping Water

     └► 7oz
     └► 9oz
     └► 12oz
     └► Delay
     └► Pulse On
     └► Pulse Off
     └► Triac

   └► Topping Whipper

     └► 7oz
     └► 9oz

└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar ingredient

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Sugar Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Top up Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Spare Throw

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

Cremi Choc
  └► Drink Setup

└► Active
└► Time free vend
└► Whipped
└► Extra Time

  └► Drink Throws

└► Chocolate

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Main Water

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Main Whipper

└► 7oz
└► 9oz
└► 12oz
└► Delay
└► Pulse On
└► Pulse Off
└► Triac

└► Topping

└► 7oz
└► 9oz
└► 12oz

```
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
                    └► Topping Water
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
                    └► Topping Whipper
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
                    └► Sugar ingredient
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
                    └► Sugar Water
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
                    └► Sugar Whipper
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
                    └► Top up Water
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
                    └► Spare Throw
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
Soup
        └► Drink Setup
                    └► Active
                    └► Time free vend
                    └► Whipped
                    └► Extra Time
        └► Drink Throws
                    └► Soup
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
                                        └► Pulse On
                                        └► Pulse Off
                                        └► Triac
                    └► Main Water
                                        └► 7oz
                                        └► 9oz
                                        └► 12oz
                                        └► Delay
```

└▶ Pulse On
└▶ Pulse Off
└▶ Triac

└▶ Main Whipper

      └▶ 7oz
      └▶ 9oz
      └▶ 12oz
      └▶ Delay
      └▶ Pulse On
      └▶ Pulse Off
      └▶ Triac

└▶ Top up Water

      └▶ 7oz
      └▶ 9oz
      └▶ 12oz
      └▶ Delay
      └▶ Pulse On
      └▶ Pulse Off
      └▶ Triac

└▶ Spare Throw

      └▶ 7oz
      └▶ 9oz
      └▶ 12oz
      └▶ Delay
      └▶ Pulse On
      └▶ Pulse Off
      └▶ Triac

Waters

└▶ Hot Water

    └▶ Drink Setup

      └▶ Active
      └▶ Time free vend
      └▶ Extra Time

    └▶ Drink Throws

      └▶ Main Water

          └▶ 7oz
          └▶ 9oz
          └▶ 12oz
          └▶ Delay
          └▶ Pulse On
          └▶ Pulse Off
          └▶ Triac

      └▶ Spare Throw

          └▶ 7oz
          └▶ 9oz
          └▶ 12oz
          └▶ Delay
          └▶ Pulse On
          └▶ Pulse Off
          └▶ Triac

└▶ Cold water

    └▶ Drink Setup

      └▶ Active
      └▶ Time free vend
      └▶ Extra Time

    └▶ Drink Throws

      └▶ Main water

          └▶ 7oz
          └▶ 9oz
          └▶ 12oz
          └▶ Delay
          └▶ Pulse On
          └▶ Pulse Off
          └▶ Triac

Flush Machine

21. Troubleshooting

Please note that the below suggested actions to take are first-line fault finding indications/possible causes only and are not intended as being the sole possible reasons for the particular error reports.

Error code 9	9

Fault Description – Keyboard Fault or Button stuck
Actions to Take:
Disconnect external keypad and power up the machine, if fault disappears then check the key pad/loom, replace keypad.
Check the touch panel for items stuck to the front face.
Clean the touch panel to ensure that there is no residue on the panel.
If fault persists then replace the Processor board.

Error code 11	11

Fault Description - Peeler Motor not homed Cups sold out or switch damaged
Actions to Take:
Check Peeler Motor Home position Switch/operation
Ensure there are cups present within the motorised cup unit.
Ensure the cup-sensing switch in the cup unit works correctly.

Error code 12	12

Fault Description - Waste Bucket full
Actions to Take:
Empty and replace the waste bucket.
Ensure the waste pressure switch is correctly operating and not damaged in any way.

Ensure the switch connections are fitted correctly

Error code 13	13

Fault Description – Boiler full probe has not detected water within programmed time-out.
Actions to Take:
Ensure water is turned on at the mains.
Ensure the level probe connections are fitted correctly
Ensure the timeout settings are set correctly in the boiler menu
Check continuity between pins on control board & crimp within plug H

Error code 14	14

Fault Description – Triac/circuit failure
Actions to Take:
Check the fault log for the circuit / component at fault.
Locate the circuit and check applicable fuse.
Check all crimps and connectors
Check the option is enabled / disabled in the menus.
Check / replace the motor / valve / component.
Replace the control board.

Error code 15	15

Fault Description – Waste bucket full
Actions to Take:
Empty the waste bin.
Reset the waste bin counter in door open mode.

Error code 16	16

Fault Description – Cup Jam
Actions to Take:
The cup sensor has not detected a cup placement for a least x5 vend requests
Ensure there is no fault with the cup unit and that cups are peeling correctly.
Ensure the cup sensor is working and set correctly for the type of cups being dispensed.
Confirm the cup placement time programmed and ensure the cups are peeled and can be placed in the cups station within this time period.

Error code 17	17

Fault Description – Triac on control board has gone open circuit
Actions to Take:
Ensure connections on the control board are correctly connected
Check the fault log for a fault prior to this error, which may have caused the fault.
Return board for fault diagnostic

Error code 19	19

Fault Description – keyboard Fault :
One or more buttons are in the Normally closed position during power up.
Actions to Take:
Disconnect external keypad and power up the machine, if fault disappears then check the key pad/loom, replace keypad if required.

If fault persists then replace the Processor board.

Error code 20	20

Fault Description – Water Fail safe :
Water inlet failsafe is caused by the operation of the Water inlet valves outside of a vend cycle or the result of a water leak within the machine.
Actions to Take:
Check the machine for internal water leak
Fault code will be rectified by interrupting power.

Error code 21	21

Fault Description – Leak Detected / Boiler / Valve leak detection
Actions to Take:
Check the boiler for leaks
Check / Replace boiler valves for leaks
Check / Replace the main water inlet valves.
Check the Leak detect value in software is correct.
Check boiler for scale. De-scale if necessary

Error code 23	23

Fault Description – Blown Fuse Detected.
Actions to Take:
Check / replace Fuse 1 (1.2A) and/or Fuse 2 (6.3A) on processor board.

Error code 30	30

Fault Description –Dispense Arm Jam timeout activated
Actions to Take:
The Dispense arm has not moved or activated the switch within the time set (5 seconds),
Check the condition of the switches and the dispense arm motor.
Replace if necessary.

Error code 40	40

Fault Description – Internal Timer / If the number of software timers exceeds 64
Actions to Take:
Check fault log and report error to Westomatic vending services. No other action is required.
Cycle power to restart machine.

Error code 50	50

Fault Description – Brewer 1 Fault
Actions to Take:
Brewer 1 has failed to reach Home position.
Check the brewer for jammed parts.
Check fuse for the brewer and replace if necessary

Error code 52	52

Fault Description – Brewer 2 Fault
Actions to Take:

Brewer 2 has failed to reach Home position.
Check the brewer for jammed parts.
Check fuse for the brewer and replace if necessary

Error code 57	57

Fault Description – Boiler Overflow
Actions to Take:
Ensure machine is level
Ensure probes are connected and fitted to the boiler lid.
Ensure the boiler lid is fitted to the boiler and all gaskets are in place
Descale boiler if required.

Error code 58	58

Fault Description – Boiler Under temperature
Actions to Take:
Check Over-temperature trip device.
Ensure the connectors are fitted correctly.
Check / replace the boiler fuse.
Check/replace Heater Element.

Error code 59	59

Fault Description – Temperature Thermistor open circuit
Actions to Take:
Ensure the probe connectors are fitted correctly.
Ensure the probe is connected to the control board.
Replace boiler probes

Error code 81	81

Fault Description – MDB Change-giver or USD fault
Actions to Take:
Ensure the Coin Mech is connected to the MDB loom on the VMC
Ensure the MDB fuse on the main control board has not blown
Disconnect any hosted machines and retest.
Replace the change giver unit.

21.1. Error Code 14 Triac Circuit Fault Number

Circuit number	Function	Connector
1	Master water inlet	P10
2	Hot water inlet	P9
3	Cold water inlet	P8
4	Brewer 1 Air Pincher	P7
5	Brewer 2 Air Pincher	P6
6	Water Station 1	P5
7	Water Station 2	P4
8	Water Station 3	P3
9	Water Station 4	P2
10	Water Station 5	P1
11	Water Station 6	O12
12	Spare	O11
13	Ingredient motor 1/BTC Grinder Motor	O10
14	Ingredient motor 2	O9
15	Ingredient motor 3	O8
16	Ingredient motor 4	O7
17	Ingredient motor 5	O6
18	Ingredient motor 6	O5
19	Brewer 1 / Whipper 1 (Left side)	O4
20	Whipper 2	O3
21	Whipper 3	O2
22	Whipper 4	O1
23	Whipper 5	N10
24	Brewer 2 / Whipper 6 (Right side)	N9
25	Fresh Milk pump	N8
26	Cup Peeler motor	N7
27	Cup transfer motor	N6
28	Spare	N5
29	Station / Bay 2 Pinch solenoid	N4
30	Station / Bay 1 Pinch solenoid	N3
31	Brewer 1 Air Pump	N2
32	Brewer 2 Air Pump	N1

22. Parts Ordering Process

- Extensive parts holding means that Westomatic are able to offer a next day despatch service to anywhere in the UK mainland with orders received before 3:30pm.

- When placing a parts order, please ensure:

  - You telephone: +44 (0) 1626 323100, selecting menu 2.
  - You have the part number of the required item available.
  - You know your company order number.

- When ordering a part via Fax:

  - Fax: +44 (0) 1626 332727.
  - Clearly state the part number of the required item.
  - Clearly state your company order number.

- Important Information
  - When placing an order for a warranty fridge unit or processor board, please contact your Technical Partner for an authorisation code.
  - When obtaining an authorisation code for a warranty fridge or processor board, please state the item serial number, machine serial number and the nature of the fault.

23. Recommended Spares Parts List

Part Number	Description	Part Number	Description
	Control/Operation System Components		**Ingredient, Dispense & Extraction Systems**
198242	Prelude Processor Board	115104	Motor Extractor Fan
190008	LCD Display Blue	161440	Ingredient Motor (90rpm)
199099	Foot adjustable	161441	Ingredient Motor (130rpm) / FB
113170	Flush button	160124	Motor and mounting plate
188157	Door catch	160084	One piece Mixing Bowls
198005	Prelude Menu Pin black x 1	160083	Impellor
198240	USB Interface Board PCB	160085	Steam Hood grey
246372	USB A Cable assembly	198226	Dispense Spouts
198241	Prelude Button Board Assembly with LCD display		
111201	13A Mains lead		
	Water and Heating System Components		**Miscellaneous**
154261	24Vdc Water Inlet Valve	912248	Hygiene Kit
119090	Boiler Temperature probe set		
201516	Prelude boiler lid (with element)		
198252	Boiler Housing		
198243	Boiler interface board		
119080	Prelude cup sensor		
117312	24v 8mm cup detect RED Led		
116075	Valve 8mm Low Scale Body Muller 24vdc x1		
147123	Valve Membrane Seal – Muller 8mm x1		
01Z190006	Boiler Probe gasket		
198357	Boiler lid gasket		
114153	Boiler over temperature cut-out switch		
135531	Dispense nozzle head		
100046003	7.8mm ID silicone pipe		
01Z460001	Water inlet hose		
100046002	6mm ID silicone pipe		
	Brewer Unit Components		
196952	Brewer pot		
160076	Brewer Cylinder O'Ring 60x2		
198521	Pressurised Brewer pot		
198522	Flexi mixing bowl		
115120	Motor Brewer Assembly		
198423	Filter band		
201526	Multi-brewer drive assembly		
201527	Multi-brewer platform assembly		
115116	Coffee Grinder		
294042	Whole Bean Canister		
294043	FB Canister		
196878	Air Pump		
154280	Air Pump regulator		
154273	Pinch solenoid		
146171	Inline air pipe connector		
201650	Puck breaker arm		
198440	Waste Bucket		
	Cup Dispense System		
175145	Cup unit 24V dc – 73mm		
160089	Cup Turret 270mm		
198088	Cup catcher – 73mm		
198425	Cup unit retaining spring plunger		
175151	Cup unit 24V dc – 70mm		
198441	Cup catcher – 70mm		

Westomatic
The ultimate coffee house experience

24. Wiring Diagram

For electrical schematics & associated information please refer to the *'Prelude Parts & Electrical Schematics Manual'* (Part no. 350098). *Online Schematics are located at the back of this manual.*

25. Parts Listing & Machine Exploded Views

For parts listings & machine explode views information please refer to the *'Prelude Parts & Electrical Schematics Manual'* (Part no. 350098).

Westomatic
The ultimate coffee house experience

Machinery (Safety) Regulations 1992
(EC Machinery Directive 89/392/EEC) as amended...

EC Declaration of Conformity

This is to certify that the:
Prelude Vending Machine

Comprising the following models.

Prelude All Instant
Prelude Bean to Cup / Instant
Prelude Fresh Brew / Instant
Prelude Bean to Cup / Fresh Brew
Prelude Fresh Brew / Fresh Brew
Prelude fitted with the Base Cabinet Chiller accessory.

Manufactured by:
Westomatic Vending Services Ltd , Shaldon Road , Newton Abbot , Devon , TQ12 4TZ
Tel.01626 323100 - Fax 01626 332828

Conforms to the protection requirements of council Low Voltage Directive 73/23/EEC as amended 93/68/EEC relating to Electromagnetic Compatibility , by application of:

EMC Test Standards:
EN 55014-1:2000 + A1:2001 + A2:2002 :
Conducted emissions (0.15MHz-30MHz)
Discontinuous conducted emissions Disturbance Power (30MHz-300MHz)
EN 55014-2:1997 + A1:2001 (Category II)
ESD,EFT/Bursts , Surges ,Conducted immunity (0.15MHz-230MHz) ,Dips and interruptions
EN 61000-3-2:2000
Mains harmonics
EN 61000-3-3:1995 + A1:2001
Voltage fluctuations

EMF Test Standards:
EN 50366:2003
Electromagnetic fields.

Electrical Safety Test Standards:
EN 60335-1:2002 + A1:2004 + A11:2004 + A12:2006
Household and similar electrical appliances - Safety - Part 1 - General requirements
EN 60335-2-75:2004 + A1:2005
Household and similar electrical appliances - Safety - Part 2-75 -Particular requirements for commercial dispensing appliances and vending machines

Supplementary Information   :

[A]   :   Included mains filtering.
[B]   :   Product to be installed in accordance with manufactured instructions.
[C]   :   Class of protection against electrical shock. : Class I

I the undersigned, hereby declare that the equipment specified above conforms to the above Directive and Standards.
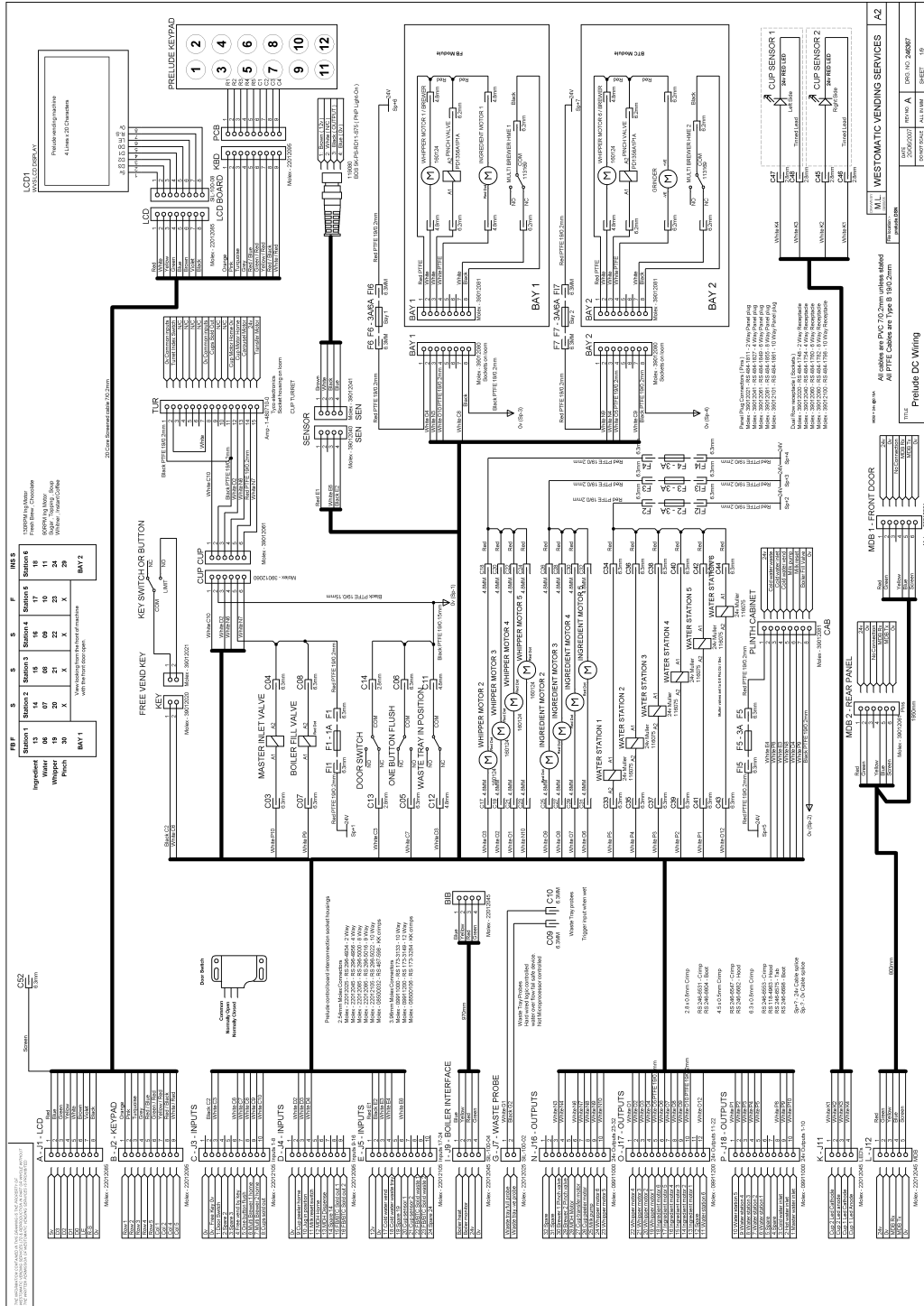
For and on behalf of Westomatic Vending Services, February 2008

Richard Brinsley

Notes:

Westomatic
VENDING SERVICES LIMITED

1.　　AC Wiring

2.   Wiring Diagram

2.   DC Wiring

3. Processor Board Information

PRELUDE
CONNECTOR INFORMATION

Pin No:	Function:	Wire ID
1 -	0v	C1
2 -	0v	C2
3 -	Door Switch	C3
4 -	Spare	C4
5 -	Spare	C5
6 -	Free vend by key	C6
7 -	One Button Flush	C7
8 -	Brewer 1 Home	C8
9 -	Brewer 2 Home	C9
10 -	Cup Sold Out	C10

Pin No:	Function:	Wire ID
1 -	0v	D1
2 -	Cup Peeler Home	D2
3 -	Drip Tray/ Jug Loc	D3
4 -	Milk Reset	D4
5 -	Spare	D5
6 -	Spare	D6
7 -	Spare	D7
8 -	Spare	D8
9 -	Spare	D9

Pin No:	Function:	Wire ID
1 -	12v	E1
2 -	0v	E2
3 -	Cold Water Vend	E3
4 -	Cold Water Waste	E4
5 -	Spare	E5
6 -	Cup Sensor 1	E6
7 -	Cup Sensor 2	E7
8 -	Spare	E8
9 -	Spare	E9
10 -	Spare	E10

Pin No:	Function:
1 -	0v
2 -	Can Lo
3 -	Can Hi
4 -	12v

Pin No:	Function:	Wire ID
1 -	Waste Tray	G1
2 -	0v	G2

Pin No:	Function:	Wire Colour
1 -	0v	Red
2 -	Short Probe	Brown
3 -	Long Probe	Yellow
4 -	Boiler Full	Orange
5 -	Temp Sensor	Blue
6 -	Temp Sensor	Blue

Pin No:	Function:	Wire Colour
1 -	Boiler Heat	Blue
2 -	Boiler Monitor	Yellow
3 -	24v	Red
4 -	0v	Green

Pin No:	Function:	Wire ID
1 -	LED 2 Cathode	K1
2 -	LED 2 Anode	K2
3 -	LED 1 Cathode	K3
4 -	LED 1 Anode	K4

Pin No:	Function:	Wire Colour
1 -	24v	Red
2 -	0v	Green
3 -	MDB Rx	Yellow
4 -	MDB Tx	Blue
5 -	0v	Screen

x4 line LCD

Keypad (12buttons)

USB Interface

WESTOMATIC PRELUDE PROCESSOR

Analogue I / O

Validator

0v Input

OUTPUTS 1 - 32

Pin No:	Function:	Wire ID
1 -	Water station 5	P1
2 -	Water station 4	P2
3 -	Water station 3	P3
4 -	Water station 2	P4
5 -	Water station 1	P5
6 -	Output 5	P6
7 -	Output 4	P7
8 -	Cold water inlet	P8
9 -	Hot water inlet	P9
10 -	Master water inlet	P10

Pin No:	Function:	Wire ID
1 -	Whipper Motor 4	O1
2 -	Whipper Motor 3	O2
3 -	Whipper Motor 2	O3
4 -	Whipper Motor 1	O4
5 -	Ing Motor 6	O5
6 -	Ing Motor 5	O6
7 -	Ing Motor 4	O7
8 -	Ing Motor 3	O8
9 -	Ing Motor 2	O9
10 -	Ing Motor 1	O10
11 -	Output 12	O11
12 -	Water station 6	O12

Pin No:	Function:	Wire ID
1 -	Output 32	N1
2 -	Output 31	N2
3 -	Brewer 1 Pinch	N3
4 -	Brewer 2 Pinch	N4
5 -	Output 28	N5
6 -	Cup transfer Motor	N6
7 -	Cup Peeler motor	N7
8 -	Milk Pump	N8
9 -	Whipper motor 6	N9
10 -	Whipper motor 5	N10