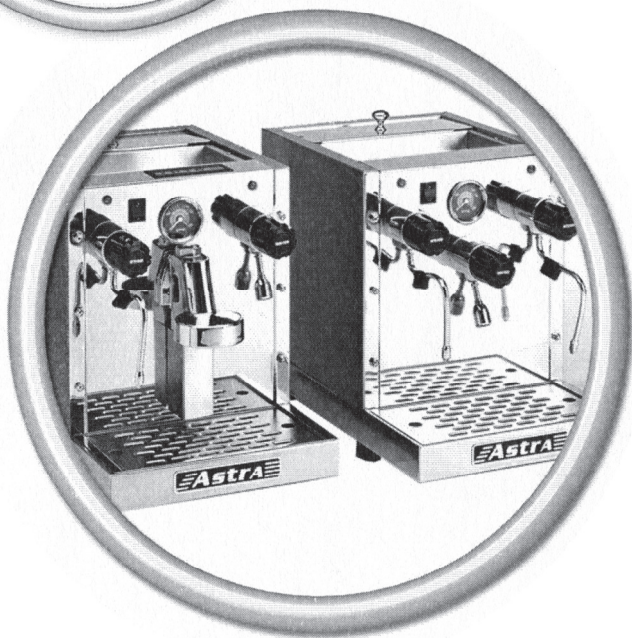
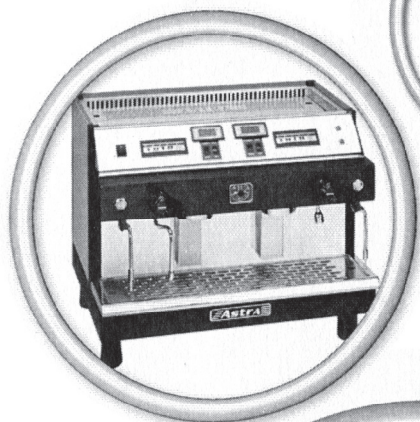


# Operation Manual For Astra Traditional Machines & Steamers



# **Astra®**

U.S.A., CANADA, CENTRAL & SOUTH AMERICA, EUROPE  
INDONESIA, CHINA, JAPAN

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## **A. Introduction to Your ASTRA Espresso Machine**

Congratulations on choosing ASTRA as your espresso machine!

Before we begin making espresso drinks, it is important to first understand what espresso is. Espresso is a process in which you extract the “flavor oils” from dark-roasted Arabic coffee beans. Therefore, espresso is really the extraction process of the flavor oils. That is what you are serving when you make an espresso. When hot water hits the finely-ground, dark-roasted Arabic beans at 135 PSI, the exposed oils will boil and turn to a reddish-gold called “crema”. A properly-made espresso will not taste bitter or burnt, but, instead, will exhibit a strong, sweet taste of coffee that doesn’t attack the tongue. Rather, it has a smoothness that lets you maximize the enjoyment of the blend of the roasted beans you have chosen.

Read the ASTRA manual and follow the instructions closely, and you will be enjoying espresso and cappuccino in minutes.

If you need any help or have any questions, please call your local ASTRA representative.

## B. Required Connections

### 1. Water:

All ASTRA machines (except the Gourmet series and Steamers) are provided with a 1/4" male flare connection in the front, under the drain tray (See Figure 1). The Gourmet series and Steamers are provided with the 1/4" male flare connection underneath the machine towards the right rear (See Figure 2).

A WATER PRESSURE REGULATOR IS SUGGESTED IF THE WATER PRESSURE EXCEEDS 50 PSI.

### 2. Power:

All ASTRA machines must be connected according to the local and national electrical and plumbing codes. For a 110-Volt machine, a separate circuit with ground is required. A 220-Volt machine must be connected to a single phase power (2 hot and ground) and the equipment must be grounded.

### 3. Drain:

All ASTRA machines are provided with a flexible hose (1" outside diameter) which must be connected to the drain basket under the front drain tray (please see Figure 1) and must be sloped properly.

**Please note that all ASTRA equipment must be installed in accordance with all applicable Federal, State and/or local electrical and plumbing codes.**

## C. Water Softener

It is highly recommended that the machine be used in conjunction with a water softener in order to ensure the integrity of your espresso drinks and to prolong the life of the individual components of the machine.

The water softener must be periodically serviced (regenerated or replaced) based on your usage. Please see the drawing (Page 24) at the end of this manual for instructions for regeneration.

## D. Grinders

CAUTION: Never put any fingers or any foreign objects into the grinder without first unplugging it. Never put ground coffee into the grinder, and please use **ONLY** whole beans.

The automatic and semi-automatic grinders are divided into three main parts:

1. Hopper
2. Grinder Assembly
3. Doser (Dispenser)

### 1. Hopper

The hopper fits into the grinder collar and dispenses the beans into the grinder. On the bottom of the hopper, there is a flap that can be pushed closed to prevent beans from spilling out when removing the hopper. Make sure the hopper is in the OPEN position when the grinder is in use. On some grinders, the lid for the hopper has a large safety magnet that extends down into the hopper. These grinders will not work unless the lid is on.

### 2. Setting the Grind (Automatic & Semi-Automatic)

The On/Off switch is located on the lower left side of the grinder. The automatic grinder should be left in the “On” position. It will automatically turn off once there is a sufficient amount ground in the dosing chamber. As you use the dispenser, the grinder will automatically grind more to replace what has been used.

The semi-automatic grinder must be turned on and off *manually* in order to keep ground coffee at the desired level in the dispenser.

Please ensure that you are operating the grinder with whole beans only and that the hopper is in the OPEN position.

On the left side of the grinder collar, there is a spring-loaded, push-lock pin. This locks the setting in place and prevents the grinder from losing that setting. To adjust the grinder, depress the push-lock pin with your finger. To obtain a finer grind, turn the collar clockwise. To set the grinder for the first time, depress the lock-pin and turn the collar clockwise until it stops. (Do NOT force the collar to turn more.)

Once the collar is turned all the way down, note the number next to the push-pin. Now depress the lock-pin and turn the collar back (counter-clockwise) two turns, stopping when the same number is next to the push-lock pin. This setting should be close to the proper setting. You may adjust to finer or coarser grinds based on the beans you are using.

### 3. Setting the Dosing (Automatic & Semi-Automatic)

Remove the lid from the doser and look at the bottom. Notice it is divided like a pie where each section is an individual dose of espresso. Also note that part of the pie is covered. The cover can be raised/lowered to increase/decrease the amount of the dose. In the middle of the doser there is an elevated stem which will raise the cover when turned counter-clockwise and lower the cover when turned clockwise.

Before setting the dose, make sure the dispenser is filled one-quarter to one-half full. Put the portafilter in the yoke under the dispenser and pull the lever once or twice until the coffee is dispensed.

Make sure each pull is a full dose and then adjust the amount for each dose. For a single dose, pull once, and for a double dose, pull twice. A double dose should fill the double portafilter to about one-eighth inch from the top and cover the lip in the middle of the portafilter basket.

## E. Automatic Espresso Machine

The following applies to ALL ASTRA Automatic Traditional Espresso Machines Manufactured BEFORE January 1st, 2014 with GOLD color touch pad:

***Open any steam valve and leave it open*** by turning the knob counter-clockwise. Turn the machine on using the On/Off switch on the front panel. All the computer lights will flash and then go off as the machine undergoes a self-diagnostic test. Once the steam begins to disperse from the steam wand, close the valve. When boiler pressure on the gauge is in the green, you are ready to put the machine into program mode. If you are using a two or three-group machine, use the left/first touchpad while following the next step of instructions. Push and hold the Brew/Stop button until all the lights on that touchpad light up. If you have a two or three-group machine, then push the Brew/Stop button for touchpad two and three so all touchpad lights are on. Now the machine is ready to be programmed.

Once you have programmed one pushbutton, the program is automatically applied to ALL pushbuttons on the machine.

Take the single portafilter and put it in the yoke of the grinder. Pull the lever once for a single dose and ensure the coffee is level. It is NOT necessary to tamp the portafilter because ASTRA espresso machines come with self-tamping group heads. To put the portafilter on the group head, hold the handle level at 7 o'clock and lift it up into the group head. Make sure the portafilter wings fit into the slots and turn the handle to the right to create a tight seal.

**CAUTION:** Make sure that both of the portafilter wings are securely aligned and that the portafilter has created a tight seal with the group head gasket. If a tight seal is not created, a potentially dangerous situation exists as hot water under pressure could escape from the group head causing burn injuries. NEVER remove a portafilter from the group head while it is under pressure and brewing. Push the Brew/Stop button to stop brewing or wait until the brew cycle stops.

Place an espresso cup under the portafilter. A single serving of espresso is 1.5 to 2.0 ounces. Extraction time will be between 18 to 22 seconds. Push the first selection on the touchpad and extraction will start. Once you have the right amount of espresso in the cup, push the first selection again to stop the extraction. The light for a single selection (on all touchpads) will start to blink. Once the blinking stops and the light is off, the selection is now programmed in all of the group heads.

Now use the double portafilter and complete the next selection following the same steps. Repeat until all of the selections are programmed. To exit the program mode, push and hold the Brew/Stop button. All of the lights will come on and continue to hold the button until the lights go out. Once the lights are out, your selections are programmed and you have exited the programming mode.

While the machine is extracting espresso, pump pressure gauge will read approximately 135 PSI. On the front panel there are two lights: green and amber. The green light indicates that the machine is on while the amber light indicates when the heating element is operating. The amber light will go on intermittently while the machine is on regardless of whether it is in use or not.



## Brew/Stop Button

The Brew/Stop button is a manual override for all selections. If you should push the wrong selection, press the Brew/Stop button to cancel that selection. If you need to extract an amount not programmed, put the cup under the portafilter and push the Brew/Stop button for extraction to begin. Once the desired level is reached, push the Brew/Stop again to complete the extraction.

The Brew/Stop button can also be programmed as a fifth selection. If you have programmed this button and now wish to return to manual override, you must do the following:

1. Press and release the Brew/Stop button.
2. Quickly press and hold Brew/Stop button until the lights on the keypad are on. (THE TIME DELAY BETWEEN STEPS 1 AND 2 MUST BE EXTREMELY SHORT.)
3. After a 10 second pause, press and hold the Brew/Stop button until the lights on the keypad are off.
4. Now the Brew/Stop button is returned to the factory set manual override.

## F. Automatic Espresso Machine

The following applies to ALL ASTRA Automatic Traditional Espresso Machines Manufactured AFTER January 1st, 2014 with SILVER color touch pad:

***Open any steam valve and leave it open*** by turning the knob counter-clockwise. Turn the machine on using the On/Off switch on the front panel. All the computer lights will flash and then go off as the machine undergoes a self-diagnostic test. Once the steam begins to disperse from the steam wand, close the valve. When broiler pressure on the gauge is in the green, you are ready to put the machine into program mode. Push and hold the Brew/Stop button until all the lights on that touchpad light up. Now the machine is ready to be programmed.

Take the single portafilter and put it in the yoke of the grinder. Pull the lever once for a single dose and ensure the coffee is level. It is NOT necessary to tamp the portafilter because ASTRA espresso machines come with self-tamping group heads. To put the portafilter on the group head, hold the handle level at 7 o'clock and lift it up into the group head. Make sure the portafilter wings fit into the slots and turn the handle to the right to create a tight seal.

**CAUTION:** Make sure that both of the portafilter wings are securely aligned and that the portafilter has created a tight seal with the group head gasket. If a tight seal is not created, a potentially dangerous situation exists as hot water under pressure could escape from the group head causing burn injuries. NEVER remove a portafilter from the group head while it is under pressure and brewing. Push the Brew/Stop button to stop brewing or wait until the brew cycle stops.

1. Press and hold the Start/Stop button for 5 seconds. All the lights start flashing indicating that you are in the program mode.
2. Load the Portafilter with coffee and lock it to the machine. Press any key that you like to program. The machine starts to dispense. Once you have enough extraction press, “Start/Stop” button. The machine will stop and the specific button now has been programmed.
3. Repeat step 2 for all other buttons that you wish to program.
4. Press “Start/Stop” button to Exit the program Mode.
5. If you wish to copy the stored program from one touchpad to the other Touchpad.
  - A. Press and hold the “Brew/Stop” button on the touchpad you like to program for 10 seconds. All the lights will start to finish.
  - B. Remove your hand and press the button “Brew/Stop” again momentarily. All the lights go out and the program is copied.

While the machine is extracting espresso, pump pressure gauge will read approximately 135 PSI. On the front panel there are two lights: green and amber. The green light indicates that the machine is on while the amber light indicates when the heating element is operating. The amber light will go on intermittently while the machine is on regardless of whether it is in use or not.

# G. Steam Wand

## Programming the Automatic Steam Option

This procedure is used to program the desired temperature for optional automatic steam wands on espresso machines.

Ensure that the machine is ON and the LED displays the current temperature. Each steam wand can be programmed and operated INDEPENDENTLY as follows:

### 1. Setting the Desired Steam Temperature

- Press the “Set” button on the display
- Display will read “Set”
- Press “Set” button again
- Display will read “150”
- If you would like to change this pre-set temperature, press the up arrow to raise the temperature. Press the down arrow to lower the temperature.
- Once you have selected the desired temperature, press the “Set” button
- The display will show the sensor’s current temperature.

### 2. Setting the Accuracy Parameters

- Press and hold the “Set” button
- Display will read “Cor”
- Press “Set” button again
- Adjust the temperature between 0-20 degrees Fahrenheit using the up or down arrows (default is set for 0 degrees Fahrenheit)
- Once you have selected the desired temperature, press the “Set” button

### 3. Setting the Differential Temperature

- Press and hold the “Set” button
- Display will read “Dif”
- Press “Set” again

- Adjust the temperature between 2-40 degrees Fahrenheit using the up or down arrows
- Once you have selected the desired temperature, press the “Set” button
- The display will read “St.2”
- Press “Set” button again
- Display will show the selected temperature from step 1
- Press “Set” button to record the change

#### 4. Setting the Upper Limit Parameters

- Press and hold the “Set” button
- Display will read “St.H” (setting the highest temperature)
- Press “Set” button again
- Adjust the temperature between 0-950 degrees Fahrenheit using the up or down arrows (suggested temp. 250 degrees Fahrenheit)
- Once you have selected the desired temperature, press the “Set” button to record the change.

#### 5. Setting the Lower Limit Parameters

- Press and hold the “Set” button
- Display will read “St.L” (setting the lowest temperature)
- Press “Set”
- Adjust the temperature between 0-150 degrees Fahrenheit using the up or down arrows (suggested temp. is 100 degrees Fahrenheit).
- Once you have selected the desired temperature, press the “Set” button.
- The display will show the room temperature and programming is finished.

## **Operating the Automated Steam Wand**

### **1. Using the Automatic Steaming Option**

- Move the switch located underneath the display to the “manual” position
- Let the steam blow out for a few seconds
- Move the switch to the “automatic” position, this will turn the steam wand off.
- Insert the steam wand into the desired amount of milk.
- Press “Start”
- Once the milk has reached the proper temperature, the steam wand will automatically stop
- To stop the automatic steaming manually, press the “Stop” Button
- Remove the steam wand from the milk.
- Press the “manual” button for a few seconds. This will clear the steam wand. Move the switch to the “automatic” position to turn the steam wand off.

### **2. Using the Manual Steaming Option**

- Move the switch located underneath the display to the “manual” position.
- Let the steam blow out for a few seconds
- Move the switch to the “automatic” position; this will turn the steam wand off.
- Place a desired amount of milk under the steam wand.
- Move the switch to the “manual” position.
- Once the milk has reached the proper temperature, move the switch to the “automatic” position.
- Remove the steam wand from the milk.
- Press the “manual” button for a few seconds, this will clear the steam wand. Move the switch to the “automatic” position to turn the steam wand off.

## H. Semi-Automatic Espresso Machine

The following applies to ALL ASTRA Semi-Automatic machines and steamers:

***Open any steam valve and leave it open*** by turning the knob counter-clockwise. Turn the machine on using the On/Off switch on the front panel. The green and amber lights will come on. Once the steam begins to disperse from the steam wand, close the valve. When the arrow on the right side of the gauge is in the green, the machine is ready to be used.

Take the single portafilter and put it in the yoke of the grinder. Pull the lever once for a single dose and ensure the coffee is level. It is NOT necessary to tamp the portafilter because ASTRA espresso machines come with *self-tamping* group heads. To put the portafilter on the group head, hold the handle level at 7 o'clock and lift it up into the group head. Make sure the portafilter wings fit into the slots and turn the handle to the right to create a tight seal.

**CAUTION:** Make sure that both of the portafilter wings are securely aligned and that the portafilter has created a tight seal with the group head gasket. If a tight seal is not created, a potentially dangerous situation exists as hot water under high pressure could escape from the group head causing burn injuries. NEVER remove a portafilter from the group head while it is under pressure and brewing. Push the Brew/Stop button to stop brewing or wait until the brew cycle stops.

Place an espresso cup under the portafilter. Push the right On/Off switch to the "On" position. Espresso will begin to be extracted and once the cup is filled to the desired level, press the same switch to the "Off" position. Single doses extract between 1.5 to 2.0 ounces.

While the machine is extracting espresso, the arrow on the left side of the gauge will read approximately 135 PSI. On the front panel there are two lights: green and amber. The green light indicates that the machine is “On” while the amber light indicates when the heating element is operating. The amber light will go “On” while the machine is “On” regardless of whether it is in use or not.

## I. Pourover Espresso Machine and Steamers

All ASTRA machines are available in a pourover model. The water reservoir cover is located on top of the machines. Lift the cover and fill with water. Check the water container periodically to make sure there is plenty of water and ensure that the suction tube inside the reservoir is ALWAYS below the water level. (An empty water container can cause component damage inside the machine and the machine will fail to operate.)

Do **NOT** use distilled water and do **NOT** overfill the water container.

Water can be added at any time during operation and it is NOT necessary to turn the machine off. The operation of these machines are identical to the respective Automatic and Semi-Automatic ASTRA machines.



# **J. Steamers**

## **Standard Steamer**

Prior to operation, ensure that the boiler pressure has reached the green area on the gauge (Boiler pressure).

The manual steam valves have a factory set safety mechanism that prohibits accidental release of steam. This feature provides a greater level of control to the operator.

## **Automatic Steamer**

### Programming the Automatic Steam Wand

This procedure is used to program the desired temperature for optional automatic steam wands.

Ensure that the machine is ON and LED displays the current temperature. Each steam wand can be programmed and operated INDEPENDENTLY as follows:

#### 1. Setting the Desired Steam Temperature

- Press the “Set” button on the display
- Display will read “Set”
- Press “Set” button again
- Display will read “150”
- If you would like to change this pre-set temperature, press the up arrow to raise the temperature. Press the down arrow to lower the temperature.
- Once you have selected the desired temperature, press the “Set” button.
- The display will show the sensor’s current temperature.

## 2. Setting the Accuracy Parameters

- Press and hold the “Set” button
- Display will read “Cor”
- Press “Set” button again
- Adjust the temperature between 0-20 degrees Fahrenheit using the up or down arrows (default is set for 0 degrees Fahrenheit)
- Once you have selected the desired temperature, press the “Set” button.

## 3. Setting the Differential Temperature

- Press and hold the “Set” button
- Display will read “Dif”
- Press “Set” again
- Adjust the temperature between 2-40 degrees Fahrenheit using the up or down arrows
- Once you have selected the desired temperature, press the “Set” button.
- The display will read “St.2”
- Press “Set” button again
- Display will show the selected temperature from step 1
- Press “Set” button to record the change

## 4. Setting the Upper Limit Parameters

- Press and hold the “Set” button
- Display will read “St.H” (setting the highest temperature)
- Press “Set” button again
- Adjust the temperature between 0-950 degrees Fahrenheit using the up or down arrows (suggested temp. is 250 degrees Fahrenheit)
- Once you have selected the desired temperature, press the “Set” button to record the change.

## 5. Setting the Lower Limit Parameters

- Press and hold the “Set” button
- Display will read “St.L” (setting the lowest temperature)
- Press “Set”

- Adjust the temperature between 0-150 degrees Fahrenheit using the up or down arrows (suggested temp. 100 degrees Fahrenheit).
- Once you have selected the desired temperature, press the “Set” button.
- The display will show the room temperature and programming is finished.

## **Operating the Steam Wand (Automatic & Manual)**

### 1. Using the Automatic Steaming Option

- Move the switch located underneath the display to the “manual” position.
- Let the steam blow out for a few seconds.
- Move the switch to the “automatic” position, this will turn the steam wand off.
- Insert the steam wand into the desired amount of milk.
- Press “Start”
- Once the milk has reached the proper temperature, the steam wand will automatically stop
- To stop the automatic steaming manually, press the “Stop” Button
- Remove the steam wand from the milk.
- Press the “manual” button for a few seconds. This will clear the steam wand. Move the switch to the “automatic” position to turn the steam wand off.

### 2. Using the Manual Steaming Option

- Move the switch located underneath the display to the “manual” position.
- Let the steam blow out for a few seconds
- Move the switch to the “automatic” position; this will turn the steam wand off.
- Place a desired amount of milk under the steam wand.
- Move the switch to the “manual” position.
- Once the milk has reached the proper temperature, move the switch to the “automatic” position.

- Remove the steam wand from the milk.
- Press the “manual” button for a few seconds, this will clear the steam wand. Move the switch to the “automatic” position to turn the steam wand off.

## **K. Foaming or Frothing Milk**

Foaming milk can be divided into three basic steps:

1. Fill a 32 oz. steaming pitcher 1/3 full with cold milk. Place the tip of the steam wand 1/2” below the surface of the milk.
2. Open the steam valve completely in order to create enough turbulence to produce foam.
3. As foam begins to rise, lower the pitcher so that the tip of the wand is always about 1/2” below the surface of the milk. As foam nears the top, turn off the steam.

\*Milk foams better when cold. After making drinks, it is important to return the unused milk to the refrigerator right away.

## **L. Cup Rack**

The top of the ASTRA espresso machine has a cup rack for keeping espresso cups warm. If your ASTRA machine has a dome on top, it is recommended that you warm the espresso cups prior to use.

CAUTION: Do NOT store anything on top of the machine that can spill or be affected by heat. Spilling may cause component failure in the machine.

## M. Knockout Box

The knockout box (wall or counter-top model) has a padded bar that lays across the opening of the box. By knocking the portafilter against the padded bar, it knocks out the grounds and prevents the edge of the portafilter from becoming damaged. Nicks and cuts on the portafilter can damage the rubber gasket on the group head that seals the portafilter basket.

## N. Drain Tray

To remove the tray, lift the back of the tray first and then the front. The tray should be emptied and cleaned daily (See Figure 1).

## O. Cleaning and Maintenance

### 1. Backflushing

Remove the filter basket from the portafilter. Replace with a blank filter (also referred to as a blind filter). Make sure the blank filter is pressed all the way into the portafilter. Put about a **TIP** of a teaspoon of Puly Caff detergent into the portafilter. Insert the portafilter in the group head. With the blank filter, nothing will dispense from the portafilter and the cleaning solution will escape at the relief valve under the group head thereby cleaning the brewing mechanism.

After the portafilter is placed on the machine, press the Brew/Stop button again. Repeat this process 4 more times. Do **NOT** add cleaning solutions each time, just repeat pushing the Brew/Stop button for a **FEW** seconds duration each time. After the fifth time, remove the portafilter and rinse it out to make sure there is no remaining cleaning solution.

Place the portafilter back on the machine and repeat the process **WITHOUT** any cleaning solution. When the backflush water becomes clear, remove the blank filter and replace it with a regular filter. If you have a two or three-group machine, repeat this process with each group. Backflushing is an important maintenance step and must be done a minimum of 3 times a week and even daily with high volume machines.

## 2. Portafilter

The portafilter should be kept on the group head at all times to keep it hot. After knocking grounds into the knockout box, there will be some grounds left in the filter. Before inserting the portafilter back into the group, push the Brew/Stop button to dispense hot water from the group.

**BE CAREFUL NOT TO PLACE YOUR HANDS OR FINGERS UNDER THE GROUP HEAD.** The hot water will rinse off any remaining grounds. Push the Brew/Stop button to stop.

On a weekly basis, fill the sink with hot water, add cleaning solution, and mix thoroughly. Remove the basket(s) from the portafilter(s). Place both parts into water and let the part(s) sit overnight if possible. Next morning, using the cleaning brush, scrub and rinse the filter and replace back into the the portafilter. Ensure that when you replace the baskets, the single filter basket is inserted into the single portafilter, and the larger double filter basket is inserted into the double portafilter.

## **P. Basic Espresso Drinks**

### Espresso

Fill the smaller filter with a dose of freshly-ground coffee or the large filter with two doses. Place the portafilter into the group head and press either the 1 or 2-cup button as appropriate.

### Basic Cappuccino

Froth the milk while making the basic espresso recipe. While dispensing espresso into the cup, fill with equal amounts of froth and hot milk. Sprinkle with powdered cocoa or cinnamon.

### Basic Latte

Froth the milk while making the basic espresso recipe. Pour espresso into a cup and fill with hot milk. Top off the cup with a layer of milkfoam.

### Cafe Mocha

Prepare espresso in a 5-ounce pitcher. Prepare chocolate milk as above. Pour espresso from the mini-pitcher into the mug and top with whipped cream.

### Cafe Au Lait

1/2 cup freshly-brewed coffee with 1/2 cup hot (*not frothed*) milk.

### Espresso Romano

Espresso with a twist of lemon peel.

### Iced Cappuccino

Pour chilled espresso pre-sweetened with sugar over a chilled mug filled 2/3rds with ice. Fill to the top with cold milk. Top with whipped cream and frothed milk. For mocha, add chocolate and mix, then top off with whipped cream or frothed milk.

## **Q. Warranty Conditions**

ASTRA warrants to ASTRA's Customer for a period of 2 years Limited Warranty on parts and one year labor through the Distributor/Dealer from the date of shipment of the Product by ASTRA that the Product will perform the functions described in the operating instructions provided by ASTRA when used as intended in accordance with ASTRA's operating instructions.

ASTRA will replace or repair all major components of the Product if they are defective from the factory. Normal wear-and-tear parts are not covered, including, but not limited to: gaskets, O-rings, plastic knobs, handles, filters, electrovalves, and pumps. Grinders will be guaranteed for a period of thirty (30) days from delivery.

The Customer and any user shall be solely responsible for the selection, installation, use, efficiency, and suitability of the Product and ASTRA shall have no liability therefore.

If the Product is damaged by faulty electrical connection, or damaged by dirty water/scale build-up, or if the Product is used differently from its intended use, then this warranty is void. If the equipment does not have a serial number or is in possession of companies or persons other than the original registrant, then the warranty is void.

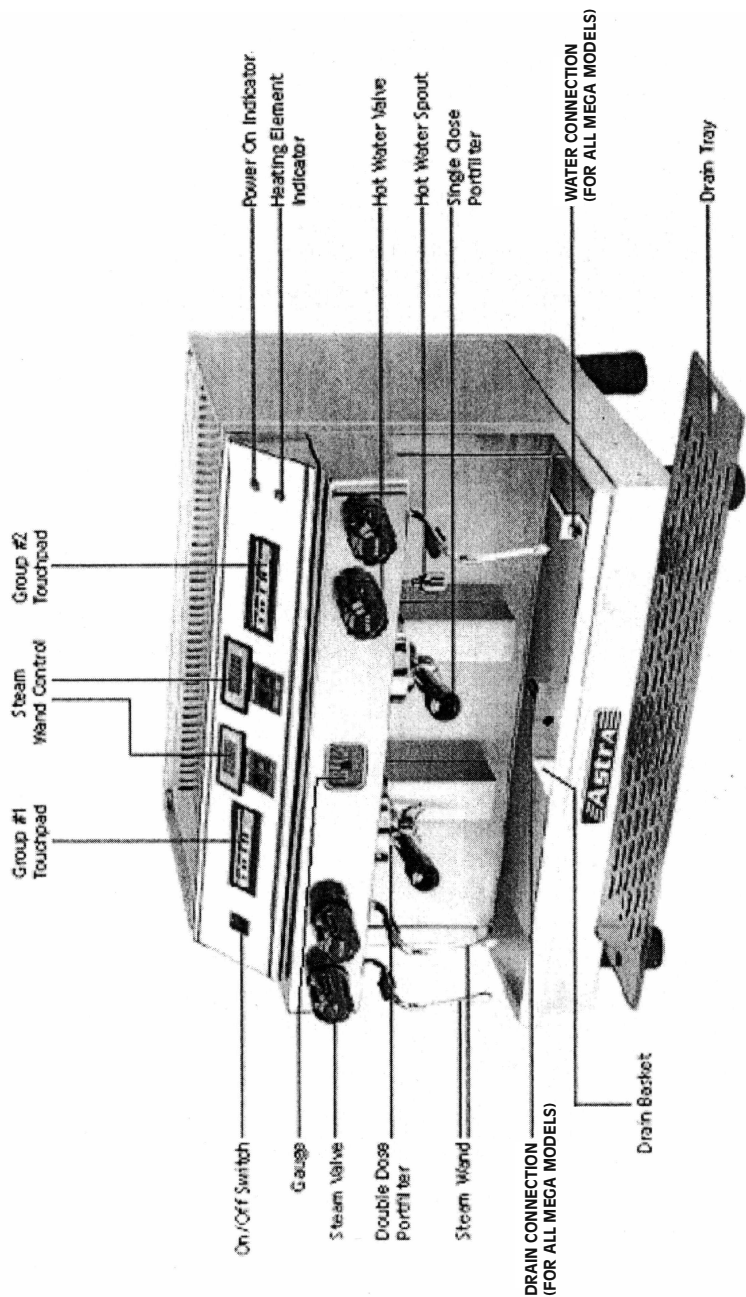
The warranty card must be received within (10) days of the installation date to be effective. ASTRA must be contacted prior to returning any warranty-covered parts for ASTRA's warranty authorization. All parts shall be sent to ASTRA by prepaid shipping, and warranty replacement parts will be sent with collect shipping.

In no event shall ASTRA be liable to ASTRA's Customer or any user for any damages resulting from or relating to any failure of the Product.

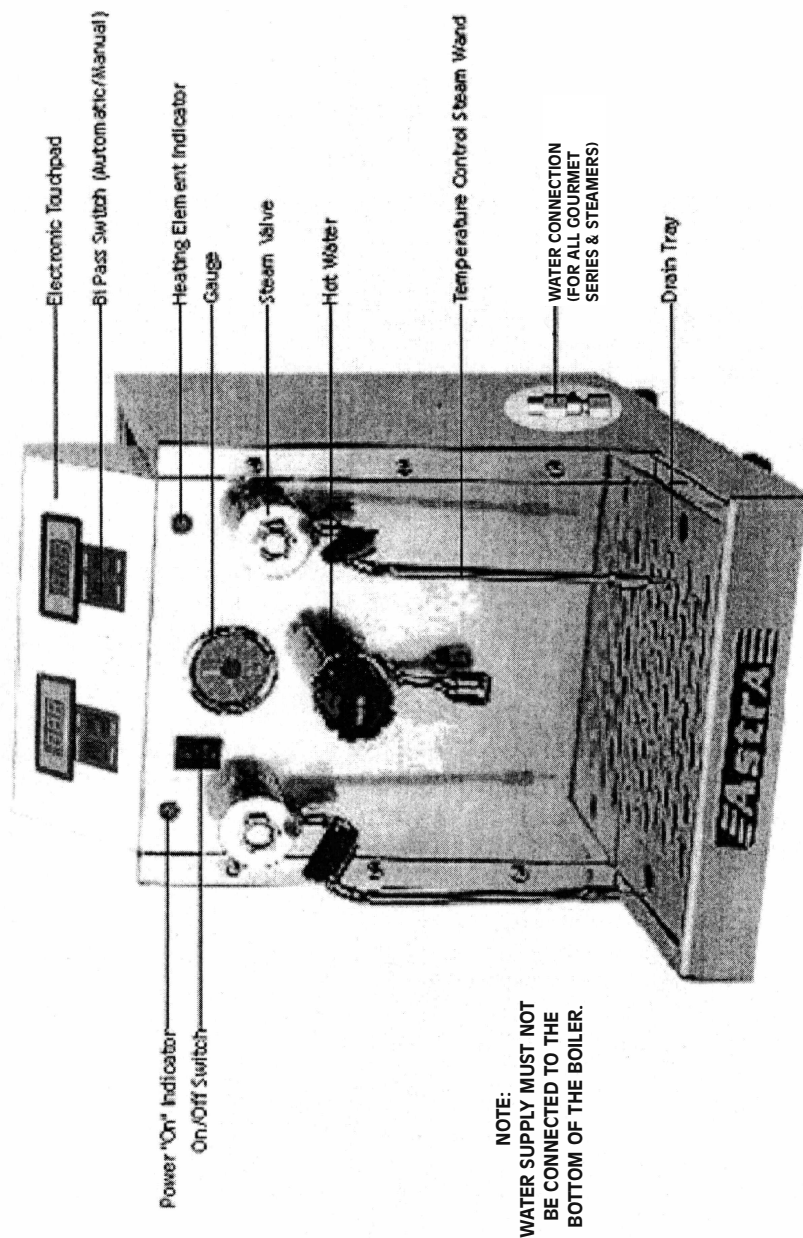
In no event shall ASTRA be liable to ASTRA's Customer or any third party for any indirect, special, or consequential damages or loss of profits arising out of or related to the performance of the Product. ASTRA's liability to ASTRA's Customer and any other user hereunder, if any, shall in no event exceed the total amount paid to ASTRA by the Customer for this Product.



R. Figure 1 - Mega II Automatic Machine



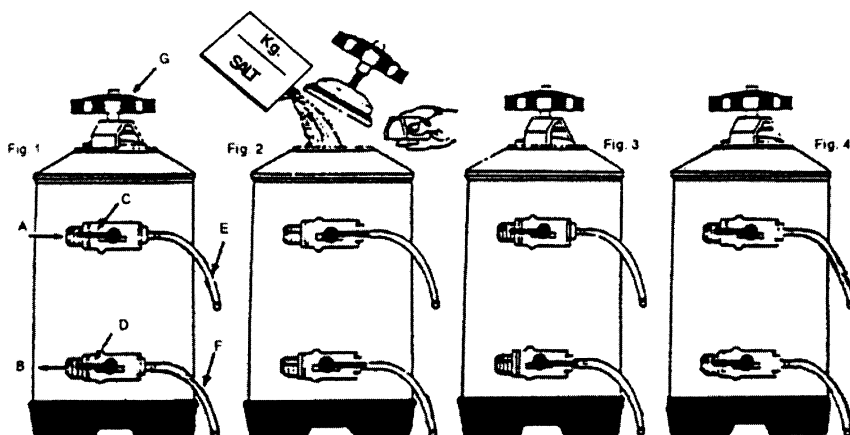
## S. Figure 2 - Automatic Steamer



## T. Figure 3 - Water Softener Regeneration

Your water softener needs to be recharged periodically based on your volume in order to prevent calcium/mineral build-up inside of your machine. (30 - 50 days) Please follow the diagram for instructions.

**\*TURN OFF ESPRESSO MACHINE BEFORE YOU START BELOW PROCESS!**



Put vinyl tubes (E) and (F) in a bucket or a drain

- (A) Incoming Valve
- (B) Outgoing Valve
- (C) Valve Handle
- (D) Valve Handle
- (E) Pressure Relief Tube
- (F) Discharge

Turn valves to the right relieving pressure in the container. Remove cap and pour two lbs. of rock salt in container. Replace container.

Turn valve (A) to the left. Salt will dissolve and discharge out tube (F).

In 45 minutes, TASTE water for saltiness. WHEN WATER NO LONGER TASTES SALTY TURN VALVE (B) TO THE LEFT.

Recharge is complete.

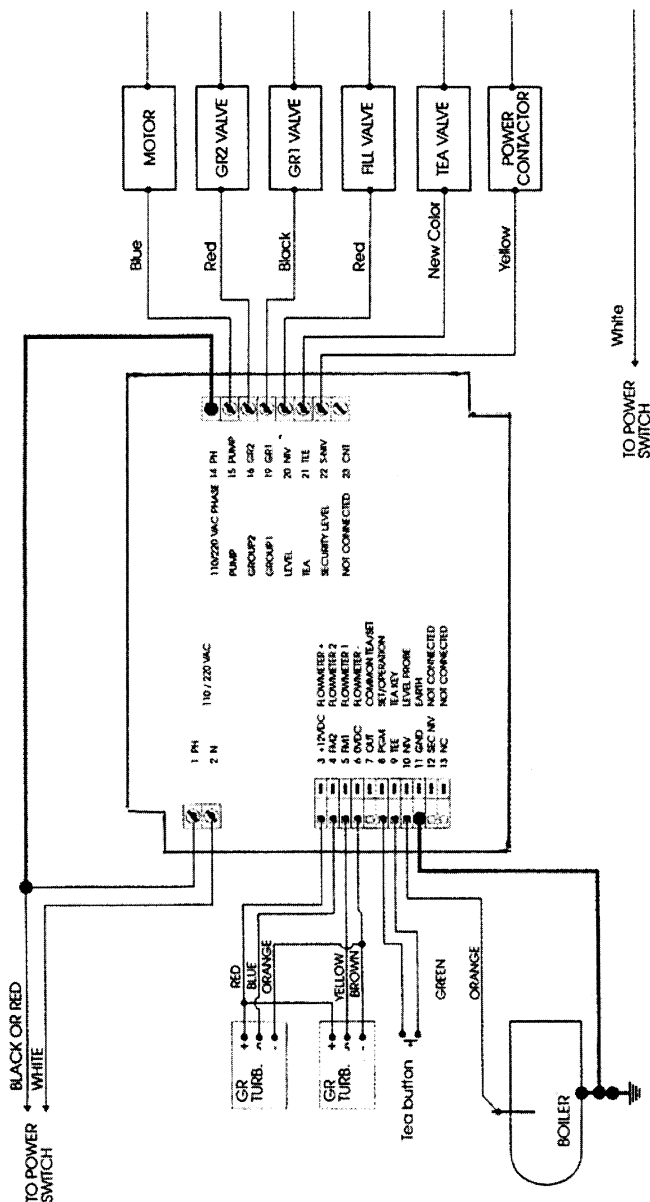
**PLEASE FOLLOW THESE SIMPLE STEPS TO ASSURE YOUR CUSTOMER A QUALITY CUP OF ESPRESSO AND PREVENT UNNECESSARY REPAIRS ON YOUR EQUIPMENT.**

# U. Figure 4A - Automatic Espresso Machine Wiring Diagram

Manufactured BEFORE January 1st, 2014  
with GOLD color touch pad.

# Astra

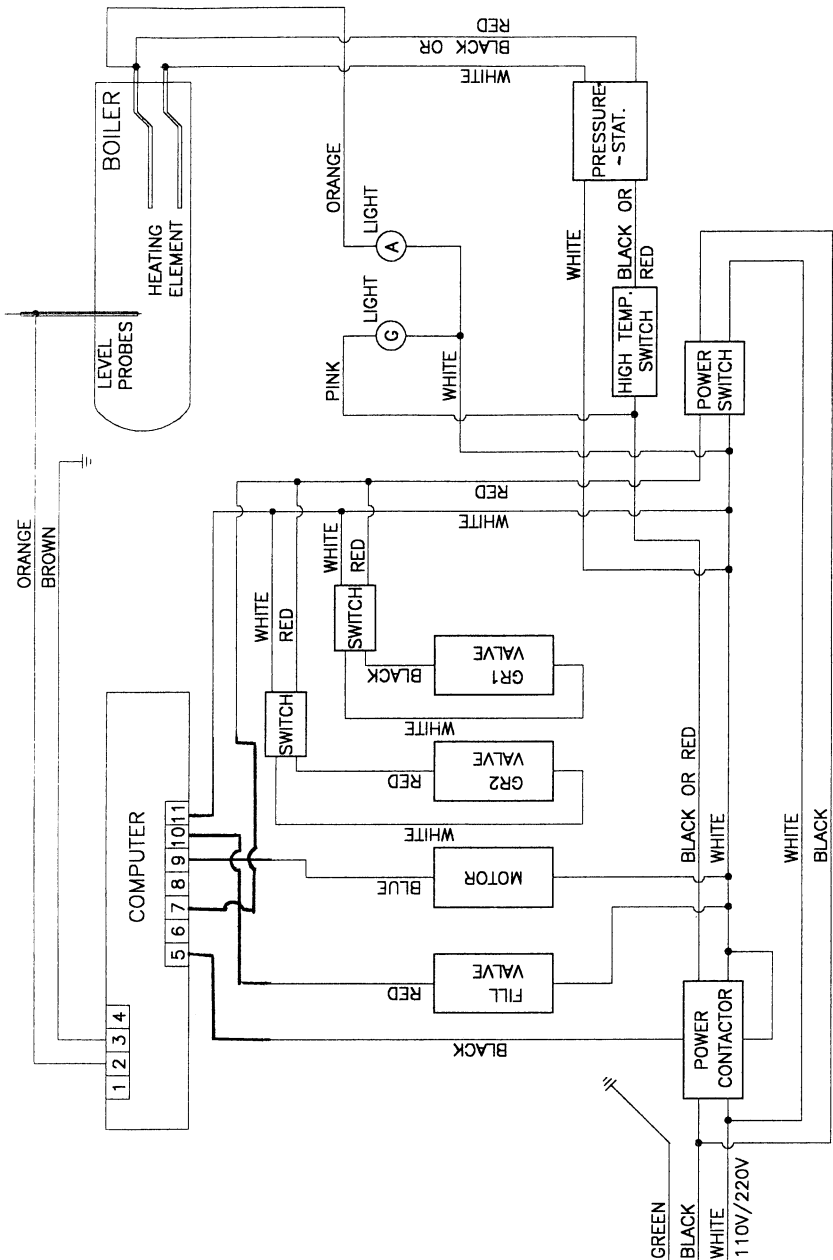
Manufacturers of Espresso/Cappuccino Machines



Manufactured AFTER January 1st, 2014  
with SILVER color touch pad.



W. Figure 5 - Semi-Automatic Espresso Machines & ALL Steamers Wiring Diagram



WIRING DIAGRAM FOR SEMI-AUTOMATIC MACHINE & STEAMER

## **X. Checklist For Yearly Maintenance On All Traditional Machines and Steamers (WHERE APPLICABLE)**

1. Make sure that the water softener has been regenerated on a regular basis. The factory recommends recharging the softener every 45–60 days.  
If you are busy recharge it every 30 days.
2. Replace the parts that experience the most wear and tear, including
  - a) Group Gasket (A10040 - #8)
  - b) Infusion Spray/Orifice (A10020)
  - c) Group Mesh Filter (A10021)
  - d) Shower Screen (A10060)
  - e) Group Electro-valve (A10110 - 110v or A10111 - 220v)
3. Check the Pressure-stat:
  - a) Open the steam wand and at the same time look at the amber light and the gauge
  - b) The amber light must be lit when the pressure drops to 12 - 13 PSI.
  - c) If it does not the pressure-stat must be replaced (A10170)
4. Check the espresso extraction and make sure that the computer is programmed properly (automatic machines only)
5. Check to ensure that the machine is properly supplying water to the boiler.
6. Make sure that the vacuum valve on top of the boiler is not stuck in the up position. If it is, it must be replaced.
7. Check the pump for proper pressure. It must produce 130-135 PSI during the extraction process.
8. Turn the machine OFF, UNPLUG the machine and make sure that ALL of the electrical connections are tight and secure and that there are no signs of damage to the electrical connections or plugs.

**Y. Figure 6**

**Specifications**

<b>Model Description</b>	<b>Production Capability (Cups/Hr)</b>	<b>Boilers (Liters)</b>	<b>Power (Volts) (Amps)</b>	<b>Heating Element (Watts)</b>	<b>Net Weight (Pounds)</b>	<b>Gross Weight (Pounds)</b>	<b>Height (Inches)</b>	<b>Depth (Inches)</b>	<b>Width (Inches)</b>
<b>Mega I</b> Automatic/Semi-Automatic	240	7	110-220 20-15	2000	115	130	20	19.5	19.25
<b>Mega II</b> Automatic/Semi-Automatic	480	12.5	220V 30	4500	150	175	20	19.5	27.25
<b>Mega III</b> Automatic/Semi-Automatic	720	18	220V 30	5500	185	205	20	19.5	35.5
<b>Mega II Compact</b> Automatic/Semi-Automatic	360	7	110-220 20-15	2000	125	138	20	19.5	19.25
<b>G.A. / G.S.</b> Automatic/Semi-Automatic	180	4.2	110-220 20-15	2000/2700	95	110	17	20	13
<b>G.A.P. / G.S.P.</b> Automatic/Semi-Automatic	180	4.2	110V 20	2000	95	105	17	20	13
<b>ASTRA STEAMER</b>	---	4.2	110/220 20	2000/2400	80	85	17	20	13
		7	220 30	4800	100	105	20.50		
<b>ASTRA PRO</b>	120	2-6	110	1300	40	48	15	18	11
<b>ASTRA PRO STEAMER</b>	---	2-6	110	1300	30	38	15	18	11







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