

# BUNN® COMBO®

Combination Grinder & Brewer

## INSTALLATION & OPERATING INSTRUCTIONS

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### INTRODUCTION

This equipment will grind a preselected amount of whole bean coffee into the brew funnel and automatically brew a half-gallon batch of coffee into an awaiting decanter. All functions of the grinder and brewer are independently adjustable. It includes a hot water faucet for allied beverage use. It is only for indoor use on a sturdy, level counter or shelf.

The grind is preset at the factory to **drip** specifications as set forth by the United States Department of Commerce and adopted by the Coffee Brewing Center of the Pan American Coffee Bureau. Adjustments may be made to alter both the amount and grind from the factory setting.

### WARRANTY

Bunn-O-Matic Corp. ("Bunn") warrants the equipment manufactured by it to be commercially free from defects in material and workmanship existing at the time of manufacture and appearing within one year from the date of installation. In addition:

- 1.) Bunn warrants electronic circuit and/or control boards to be commercially free from defects in material and workmanship for two years from the date of installation.
- 2.) Bunn warrants the compressor on refrigeration equipment to be commercially free from defects in material and

## DISCONTINUED VERSION

**The information in this manual  
is no longer current.**

**ITY OR FITNESS FOR A PARTICULAR PURPOSE.** The agents, dealers or employees of Bunn are not authorized to make modifications to this warranty or to make additional warranties that are binding on Bunn. Accordingly, statements by such individuals, whether oral or written, do not constitute warranties and should not be relied upon.

The Buyer shall give Bunn prompt notice of any claim to be made under this warranty by telephone at (217) 529-6601 or by writing to Post Office Box 3227, Springfield, Illinois, 62708-3227. If requested by Bunn, the Buyer shall ship the defective equipment prepaid to an authorized Bunn service location. If Bunn determines, in its sole discretion, that the equipment does not conform to the warranty, Bunn shall repair the equipment with no charge for parts during the warranty period and no charge for labor by a Bunn Authorized Service Representative during the warranty period. If Bunn determines that repair is not feasible, Bunn shall, at its sole option, replace the equipment or refund the purchase price for the equipment.

**THE BUYER'S REMEDY AGAINST BUNN FOR THE BREACH OF ANY OBLIGATION ARISING OUT OF THE SALE OF THIS EQUIPMENT, WHETHER DERIVED FROM WARRANTY OR OTHERWISE, SHALL BE LIMITED, AS SPECIFIED HEREIN, TO REPAIR OR, AT BUNN'S SOLE OPTION, REPLACEMENT OR REFUND.**

In no event shall Bunn be liable for any other damage or loss, including, but not limited to, lost profits, lost sales, loss of use of equipment, claims of Buyer's customers, cost of capital, cost of down time, cost of substitute equipment, facilities or services, or any other special, incidental or consequential damages.

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**BUNN-O-MATIC CORPORATION**

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## USER NOTICES

The notices on this brewer should be kept in good condition. Replace unreadable or damaged labels.

▲WARNING
◆ Fill water tank before turning -on thermostat or connecting appliance to power source. ◆ Use only on a properly protected circuit capable of the rated load. ◆ Electrically ground the chassis. ◆ Follow national/local electrical codes. ◆ Do not use near combustibles.
FAILURE TO COMPLY RISKS EQUIPMENT DAMAGE, FIRE, OR SHOCK HAZARD
READ THE ENTIRE OPERATING MANUAL BEFORE BUYING OR USING THIS PRODUCT
THIS APPLIANCE IS HEATED WHENEVER CONNECTED TO A POWER SOURCE
<small>00831.0000F 3/88 © 1988 BUNN-B-MATIC CORPORATION</small>

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## ELECTRICAL REQUIREMENTS

**CAUTION** - Do not connect to the power source until specified in Initial Set-Up.

This equipment requires either 2-wire, grounded service rated 120 volts ac or 3-wire, grounded service rated 120/208 or 120/240 volts ac, 20 amp, single phase, 60 Hz. Refer to the product data plates on the brewer and grinder for actual voltage of your particular model.

**CAUTION** – Improper electrical installation will damage electronic components.

1. An electrician must provide electrical service as specified.
2. Remove the brewer top lid held in place with one screw. Lift the front of the lid slightly and push it back.
3. Remove the restraining device from the swing-away coffee chute. It will swing to a vertical position when freed.
4. (1-hopper grinder) Remove the screw below the grinder's front decal. Tilt the grinder back on the top lid and set the screw aside for later installation.  
(2-hopper grinder) Remove the front inspection panel on the grinder. Set it aside for later installation.
5. Set the grinder on top of the brewer sliding it to interconnect the tab with its mating slot.
6. Plug the grinder's polarized six-pin electrical connector into its mate at the top of the brewer.
7. Install the screw to secure the front of the grinder to the brewer.
8. (1-hopper grinder) Tilt the grinder forward over the hood front.

**NOTE** – The swing away coffee chute mechanism must not get jammed. It must be in front of the movable sprayhead mechanism. Move the sprayhead mechanism out of the way if necessary by pushing the threaded rod to either side of the hood and then pushing the bracket until it is as far back as possible.

8. Place the switch on the rear of brewer in the “OFF” (lower) position.
9. Remove the front panel of the brewer. Set it aside for later installation.
10. Place the heater switch at the bottom of the Digital Brewer Control (DBC) , the box on the top of the component mounting bracket, in the “OFF” (left) position.
11. Feed the cord through the strain relief at the rear of the brewer and connect it to the terminal block.
12. Using a voltmeter, check the voltage and color coding of each conductor at the power source.
13. Connect the brewer to the power source, verify the voltage at the terminal block and reinstall the brewer front panel.

**WARNING** – The brewer must be electrically grounded using the green screw near the terminal block. Do not assume a plumbing line will provide an adequate ground.

14. If plumbing is to be hooked-up later be sure the brewer is disconnected from the power source. If plumbing has been hooked-up, the brewer is ready for Initial Set-Up.

## PLUMBING REQUIREMENTS

This brewer must be connected to a cold water system with operating pressure between 30 and 90 psi from a ½" or larger supply line. A shut-off valve should be installed in the line before the brewer. Install a regulator in the line when pressure is greater than 90 psi to reduce it to 50 psi. The water inlet fitting is ¼" flare.

**NOTE** - Bunn-O-Matic recommends ¼" copper tubing for installations of less than 25 feet and ⅜" for more than 25 feet from the ½" water supply line. A tight coil of copper tubing in the water line will facilitate moving the brewer to clean the countertop. Bunn-O-Matic does not recommend the use of a saddle valve to install the brewer. The size and shape of the hole made in the supply line by this type of device may restrict water flow.

This equipment must be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

### Plumbing Hook-Up

1. Attach the female fitting from the short piece of tubing on the strainer assembly (supplied) to the water inlet fitting on the rear of the brewer as indicated on the illustration adjacent to the water inlet fittings.
2. Flush the water line and securely attach it to the inlet flare fitting on the strainer assembly.
3. Turn on the water supply.

### INITIAL SET-UP

**CAUTION** - The Combo® must be disconnected from the power source throughout the initial set-up, except when specified in the instructions.

### Brewer

1. Place the switch at rear of the Combo® in the "ON" (upper) position
2. Insert an empty funnel into the funnel rails.
3. Hold an empty decanter beneath the hot water faucet on the front of the Combo®. Hold the faucet open until a steady stream of water flows from it.
4. Empty the decanter and place it on the warmer.
5. Place the Selector switch (center) in the lower "BREW ONLY" position.
6. Connect the Combo® to the power source. Place the On/Off switch in the lighted "ON" position and momentarily press the start switch. Water will flow into the tank.
7. When the flow of water into the tank cannot be heard, remove and reinsert the empty brew funnel. Press the start switch again to initiate a second cycle.
8. When the flow of water into the tank cannot be heard, remove and reinsert the empty brew funnel. Press the start switch again to initiate a third cycle. During this cycle, the tank will fill to its capacity and the excess will flow from the funnel into the decanter. Place the On/Off switch in the "OFF" position and empty the decanter when the flow of water from the funnel stops.
9. Disconnect the Combo® from the power source, remove the brewer front panel, and place the heater switch on the Digital Brewer Control (DBC), the box on the top of the component mounting bracket, in the "ON" position.
10. Connect the Combo® to the power source and wait for the ready light to glow indicating the water in the tank has heated to brewing temperature (approximately 20 minutes). Some water will drip from the funnel during this time; this is due to expansion and should not occur thereafter.
11. Place the On/Off switch in the lighted "ON" position, remove and reinsert the empty brew funnel, and momentarily press the start switch. Place the On/Off switch in the "OFF" position and empty the decanter when the flow of water from the funnel stops.
12. Allow the water in the tank to heat to the proper temperature.

## INITIAL SET-UP (cont)

### Brewer (cont.)

13. Place an empty decanter on the warmer, place the On/Off switch in the lighted “ON” position, remove and reinsert the empty brew funnel, and momentarily press the start switch. At the completion of this cycle, place the On/Off switch in the “OFF” position, and carefully measure the total water in the decanter. It should be 64 ounces.
14. If not, disconnect the Combo® from the power source, and adjust the desired brew volume. (Refer to the adjustment section.)
15. Repeat steps 12 - 14 until the proper total water volume is achieved. Then proceed to the grinder section, below.

### Grinder

1. Place some whole bean coffee in each of the two hoppers.
2. Place the Hopper Select switch on the grinder in the “RIGHT” position.
3. Place the Selector switch (center) in the upper “GRIND/BREW” position.
4. Place a BUNN® paper filter in an empty brew funnel.
5. Place the On/Off switch in the lighted “ON” position, insert the brew funnel, and momentarily press the start switch. Immediately after the grinder motor stops, remove the brew funnel and carefully weigh the filter and ground coffee.
6. If the weight of the coffee is satisfactory, proceed to step # 9 below.
7. If not, disconnect the Combo® from the power source, and adjust the desired grind volume. (Refer to the adjustment section.)
8. Repeat steps 4 - 7 until the desired grind volume is achieved from this hopper.
9. Place the Hopper Select switch on the grinder in the “LEFT” position.
10. Place a BUNN® paper filter in an empty brew funnel.
11. Place the On/Off switch in the lighted “ON” position, insert the brew funnel, and momentarily press the start switch. Immediately after the grinder motor stops, remove the brew funnel and carefully weigh the filter and ground coffee.
12. If the weight of the coffee is satisfactory, proceed to step # 15 below.
13. If not, disconnect the Combo® from the power source, and adjust the desired grind volume. (Refer to the adjustment section.)
14. Repeat steps 10 - 13 until the desired grind volume is achieved from this hopper.
15. The Combo® is now ready to grind and brew a batch of fresh coffee.

## OPERATING CONTROLS

### A. Lighted On/Off Warmer Switch (Left Switch above the brew funnel)

**ON** - Placing the switch in the lighted upper position allows the start switch to activate a grind & brew or brew cycle. This position also energizes the brew station warmer.

**OFF** - Placing the switch in the lower position stops the cycle and shuts-off power to the brew station warmer. Stopping a brew cycle after it has been started will not stop the flow of water into the funnel until the tank syphons down to its proper level.

**NOTE** - The switch should always be placed in the “OFF” position after a cycle and whenever the Combo® is unattended.

### B. Grind/Brew & Brew Only Selector Switch (Center Switch above the brew funnel)

**Grind/Brew** - Placing the switch in the upper position instructs the Combo® to grind a preselected amount of coffee into the brew funnel and immediately brew into the funnel when a cycle is properly initiated.

**Brew Only**- Placing the switch in the lower position instructs the Combo® to skip the grind cycle and immediately brew a batch of coffee when a cycle is properly initiated.

### C. Start Switch

Starts the selected type of brew cycle when the lighted On/Off Warmer switch is in the “ON” position.

## **OPERATING CONTROLS (cont.)**

### **D. Check Funnel Indicator**

Glows when any of a number of conditions occur that may result in a spoiled brew cycle. Remove the funnel and check its contents before reinserting it to initiate the next cycle. Whenever the brew funnel is checked and reinserted, empty the decanter on the brew station warmer.

### **E. Funnel Out Indicator**

Glows whenever a brew funnel is not properly in place above the brew station warmer.

**NOTE** – The Combo® is equipped with a funnel sensor to enable grinding and or brewing only when a funnel is in place above the brew station warmer.

### **F. Grind Selector Switch (2-Hopper Grinder)**

Instructs the Combo® to grind the next properly initiated grind/brew cycle from either the left or right bean storage hopper.

## **COFFEE GRINDING & BREWING**

1. Insert a BUNN® filter into the brew funnel.
2. Visually inspect the hopper for an adequate supply of whole bean coffee.
3. Slide the funnel into the funnel rails.
4. Place an empty decanter on the brew station warmer.
5. Place the On/Off Warmer switch in the lighted upper position.
6. Place the Selector switch (center) in the upper “GRIND/BREW” position.
7. Momentarily press and release the start switch.
8. When brewing is completed, simply discard the grounds and filter.

## **COFFEE BREWING ONLY**

1. Insert a BUNN® filter into the brew funnel.
2. Pour the fresh coffee into the filter and level the bed of grounds by gently shaking.
3. Slide the funnel into the funnel rails.
4. Place an empty decanter on the brew station warmer.
5. Place the On/Off Warmer switch in the lighted upper position.
6. Place the Selector switch (center) in the lower “BREW ONLY” position.
7. Momentarily press and release the start switch.
8. When brewing is completed, simply discard the grounds and filter.

## **CLEANING**

1. The use of a damp cloth rinsed in any mild, non-abrasive, liquid detergent is recommended for cleaning all surfaces on Bunn-O-Matic equipment.
2. Check and clean the sprayhead. The sprayhead holes must always remain open.

**NOTE** – In hard water areas, this may need to be done daily. It will help prevent liming problems in the brewer and takes less than a minute.

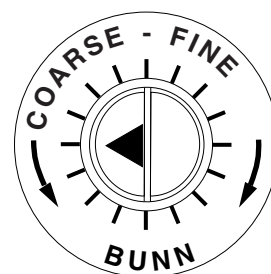
## 1-HOPPER GRINDER ADJUSTMENTS

The basket behind the grinder must be set aside during these steps. Remove the screw beneath the front decal on the grinder to tilt the grinder assembly back. Remove the right side panel of the brewer hood. The controller display unit's coil cord should be routed through this opening in the side and then plugged-into the small telephone-type connector at the right of the hood inside this area.

### A. Coffee Grind Setting

The grind can be set from very fine to very coarse. The following procedures should be used to make adjustments. A change in the burr adjustment will also change the amount dispensed. Any adjustment of the burrs should be followed by an adjustment of the timer. (A twelve-inch flat blade screwdriver is required to adjust the grind.)

1. Empty all beans from the hopper. It may be necessary to remove the hopper guard on top of the grinder motor to better empty the hopper.
2. Press the "FUNC" button on the controller display to scroll thru the display unit's functions stopping at 27.
3. Place a paper filter in the brew funnel and properly install the funnel.
4. Press the "ON" button on the controller display. This turns-on the grind motor. When all of the coffee in the grind chamber is dispensed, press the "OFF" button on the controller display.
5. Carefully tip the grinder assembly back.
6. Press the "ON" button on the controller display and using a long screwdriver through the dispense chute, slowly turn the adjusting screw in a clockwise direction until a metallic whine is heard due to the rubbing of the grinding burrs.
7. Move the chute aside and make a mark with a pen on the decal to note the position of the arrow on the grind adjustment screw.
8. The following settings approximately correspond to the CBC recognized grinds. All are referenced from the arrow position noted in #7.



**FINE GRIND:** Rotate the adjusting screw 5 hash marks in a counterclockwise direction.

**DRIP GRIND:** Rotate the adjusting screw 6 hash marks in a counterclockwise direction.

**REGULAR (COARSE) GRIND:** Rotate the adjusting screw 8 hash marks in a counterclockwise direction.

9. Reinstall the hopper guard and refill the hopper when completed.

### B. Ground Coffee Volume

1. Press the "FUNC" button to scroll thru the display unit's functions, stopping at 5.
2. Adjust the setting up or down by pressing the "+" or "-" buttons as required to increase or decrease the amount of ground coffee dispensed into the awaiting funnel with filter before each brew batch from the hopper.
3. Press and hold the "FUNC" button until the display is blank and then release.
4. Verify the setting by weighing a few samples.
5. Place the Selector switch in the upper "GRIND/BREW" position.
6. Place a BUNN® paper filter in an empty brew funnel.
7. Place the On/Off switch in the lighted "ON" position, insert the brew funnel, and momentarily press the start switch. Immediately after the grinder motor stops, remove the brew funnel and carefully weigh the filter and ground coffee.
8. If the weight of the coffee is not satisfactory, readjust the grind volume as instructed in steps 1-3, above and weigh a few more samples.

**Proceed to back cover for water temperature & volume adjustments.**



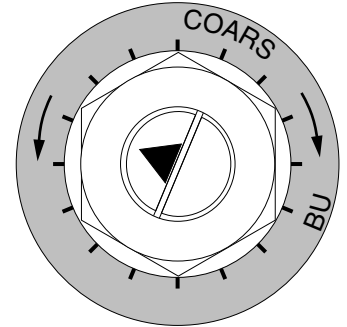
## 2-HOPPER GRINDER ADJUSTMENTS

All of the following adjustments require removal of the front inspection panel on the grinder. The controller display unit must be plugged-into the small telephone-type connector at the right of the grind motor inside this area.

### A. Coffee Grind Setting

The grind can be set from very fine to very coarse. The following procedures should be used to make adjustments. A change in the burr adjustment will also change the amount dispensed. Any adjustment of the burrs should be followed by an adjustment of the timer. It will not be necessary to empty the hoppers when using these steps.

1. Loosen the burr adjustment screw from its locked position.
2. Hand loosen the adjustment locking nut around the screw approximately one turn.
3. Press the "FUNC" button to scroll thru the display unit's functions stopping at 27.
4. Press the "ON" button. This turns-on the grind motor.
5. Slowly turn the adjusting screw in a clockwise direction until a metallic whine is heard due to the rubbing of the grinding burrs.
6. Press the "OFF" button.
7. Press and hold the "FUNC" button until the display is blank and then release.
8. Make a mark with a pen on the decal to note the position of the arrow on the grind adjustment screw.
9. The following settings approximately correspond to the CBC recognized grinds. All are referenced from the arrow position noted in step 8, above.



**FINE GRIND:** Rotate the adjusting screw 7 hash marks in a counterclockwise direction.

**DRIP GRIND:** Rotate the adjusting screw 8 hash marks in a counterclockwise direction.

**REGULAR (COARSE) GRIND:** Rotate the adjusting screw 12 hash marks in a counterclockwise direction.

10. Hold the adjusting screw in its set position with a screwdriver while tightening the lock nut to a snug position by hand. Slightly loosen the adjusting screw and retighten it to its prior position. The lock nut should now be tight against the burr housing front cover.

### B. Ground Coffee Volume

1. Press the "FUNC" button to scroll thru the display unit's functions, stopping at 5 for the left hopper or 6 for the right hopper.
2. Adjust the settings up or down by pressing the "+" or "-" buttons as required to increase or decrease the amount of ground coffee dispensed into the awaiting funnel with filter before each brew batch from the hoppers.
3. Press and hold the "FUNC" button until the display is blank and then release.
4. Verify the setting by weighing a few samples from each hopper.
5. Place the Hopper Select switch on the grinder in the appropriate "RIGHT" or "LEFT" position.
6. Place the Selector switch in the upper "GRIND/BREW" position.
7. Place a BUNN® paper filter in an empty brew funnel.
8. Place the On/Off switch in the lighted "ON" position, insert the brew funnel, and momentarily press the start switch. Immediately after the grinder motor stops, remove the brew funnel and carefully weigh the filter and ground coffee.
9. If the weight of the coffee is not satisfactory, readjust the grind volume as instructed in steps 1-3, above and weigh a few more samples.
10. Repeat this procedure for the other hopper if it's volume needs correction.

**Proceed to back cover for water temperature & volume adjustments.**

# ADJUSTMENTS (cont.)

## C. Brew Water Temperature

The brew water temperature is factory set at 200°F. This should only be changed in high altitude areas that may experience boiling at or near this temperature.

1. Press the "FUNC" button to scroll thru the display unit's functions, stopping at 2 .
2. Adjust the settings up or down by pressing the "+ or -" buttons as required to increase or decrease the brew water temperature. (The display shows the thermostat setting in degrees F, not the actual temperature of the water.)
3. Press and hold the "FUNC" button until the display is blank and then release.

## C. Brew Water Volume

NOTE – Keep in mind that the volume of brewed coffee in the decanter will not equal the amount of water dispensed over the grounds. The grounds will absorb some of this water. Measure the water volume of a "BREW ONLY" batch to accurately adjust the volume.

1. Press the "FUNC" button to scroll thru the display unit's functions, stopping at 3. (2-hopper grinders stop at 3 for brew cycles with beans from the right hopper or 4 for brew cycles with beans from the left hopper.)
2. Adjust the settings up or down by pressing the "+ or -" buttons as required to increase or decrease the time the brew water is dispensed over the grounds. (2 seconds is approximately equal to 1 ounce.)
3. Press and hold the "FUNC" button until the display is blank and then release.

**COMBINATION GRINDER & BREWER  
SCHEMATIC WIRING DIAGRAM**

