BD8

MANUAL

CAUTION: CLOSE DOOR BEFORE PRESSING GO
ALWAYS STORE JAR ON BLENDER BASE

BRAWN and BRAINS

Blendtec ®

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Section 1: Important Safeguards

READ ALL INSTRUCTIONS CAREFULLY BEFORE USING YOUR BD8

1.1 Safety Certification
Model BD8-502 is certified by ETL to comply with UL/ANSI standard 763-2000, 3rd Edition, November 30, 2000 and to comply with CSA standard C22.2 No. 195-M1987. Model BD8-503 is a 240VAC version that is certified to CE standards.

1.2 Health Certification
All BD8 models are certified by NSF International to comply with Standard 8.

1.3 Precautions:
- Avoid contact with moving parts.
- Keep fingers, hair, hands, and clothing away from all moving parts.
- Keep utensils away from drive socket and blender blades during operation. Metal utensils will damage blades.
- **NEVER** place a jar into the drive socket if the blender motor is operating.
- **DO NOT** rock the blender jar while it is operating. Keep the blender jar straight up until the operation is complete.

These precautions will prevent personal injury and/or damage to the blender dispenser.

1.4 Power Cord Precautions
- **DO NOT** operate with a damaged power cord or outlet.
- If the power cord or outlet is damaged it must be replaced by the manufacturer or its authorized service agent in order to prevent any hazard.
- **DO NOT** let the power cord hang over the edge of the work surface.
- **NEVER** use an extension cord with the unit.
- Unplug the unit when changing location, servicing, or cleaning.

1.5 DO NOT attempt to perform repairs. **NEVER** remove the covers or panels on the unit. The unit does not contain adjustable or customer serviceable parts. The manufacturer or their authorized agent must perform all interior service and adjustments. Removing covers or panels, or attempting to effect repairs, will void the warranty. Please call Blendtec Technical Support at 800 748-5400 ext. 494 or 248 for guidance on warranty and service options.

1.6 Turn the unit off when not in use for a prolonged period of time.

1.7 NEVER operate the unit if it appears to be damaged. If the unit malfunctions, call the manufacturer first. If it is dropped or damaged in any way, call Blendtec Technical Support for service to evaluate the extent of damage and the possibility of either repair or replacement.

1.8 NEVER operate in liquid. **DO NOT** allow the unit to sit in a pool of liquid or

use the unit outdoors where it will be subject to precipitation. This will void the warranty.

1.9 NEVER put items such as metal, rocks, or other hard materials into the blender jar. Metal utensils and other hard objects can damage the blender jar and will void the warranty.
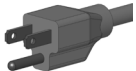
1.10 NEVER operate the unit with attachments not sold or authorized by Blendtec. The use of unauthorized attachments may cause fire, electric shock, unit malfunction, or injury. Damage incurred by the use of such attachments will not be covered by warranty.

1.11 ALWAYS operate the blender with the clear door closed.

1.12 ALWAYS secure the blender jar lid before starting the machine.
Even within the blending chamber it is important to put a lid on the blender jar before initiating a blend cycle.

1.13 The blender jar blades are sharp – handle carefully.

1.14 Power Requirements

Model **BD8-502**	POWER CORD	
120V, 1800W, 15A, 50-60 Hz. It is recommended that a dedicated 20A receptical be used.	NEMA 5-15P	

Model **BD8-503**	POWER CORD
120V, 1800W, 7.5A, 50-60 Hz. It is recommended that a dedicated 10A receptical be used.	Varies by Country

1.15 DO NOT use any other electrical equipment on the same circuit as the unit or you risk overloading the circuit and either burning the fuse or possibly the electronics inside the unit. This will void the warranty. ALWAYS use a surge protector device.

1.16 NEVER use a water jet to clean the unit. Use of a water jet to clean the unit can result in malfunction or damage to the unit. This type of damage/malfunction will not be covered under warranty.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

IMPORTANT
We took care to ensure your machine was clean when it was shipped from the factory, but since we do not have any control over shipping conditions we strongly recommend that you sanitize the machine before you prepare any drinks. (See Section 5.4)

WELCOME TO AN EXCITING NEW WAY OF BLENDING
Blendtec® Blender Dispenser with 8 Pumps!
(BD8)

The (BD8) combines some of the best ideas in blending into one easy-to-operate machine. The result is a machine that provides:

- Fast delivery to large crowds.
- Controlled labor and finished product costs.
- Portability and easy set-up.
- Maximum revenue generated per square foot.
- Multiple drink combinations from one machine.

The BD8 is a microprocessor-controlled machine designed to quickly make precise blended drinks from concentrates or other liquids (including alcohol), ice, and water. It has two main sections, the blend station and the control board section. The following pages will introduce you to the most advanced blending system available today.

2.1 Blend Station:
Contains a powerful blender motor that is controlled by the microprocessor in the control board. You can select the speed and duration of each blend cycle for each drink size.

2.2 Control Board:
Contains the microprocessor that controls all of the functions of the unit. The control board is utilized to make and program drinks.

2.3 Water Input Line:
Allows cold water to be added to drinks to help reconstitute concentrated purees or to help increase volume.

2.4 BD8 models
Voltage:

Model **BD8-502**
120 VAC

Model **BD8-503**
240 VAC

Size:

Models **BD8-502, BD8-503**		
Height: 21"	Width: 18.5"	Length (depth): 14.5"

Limitations:

Volume Limited - Models **BD8-502, BD8-503**

Products other than those dispensed by the unit (ice cream, yogurt, etc.) can be added to the blending jar before dispensing. This limits the finished drink size to 32 ounces.

Section 3: Installation

Read all instructions, cautions, notes, and warnings before attempting to operate this machine. Warranties may be voided if this machine is improperly installed.

3.1 Counter Placement:
Ensure there are at least 4 inches of space on each side and at least 6 inches in back (room for plumbing). Counter location should be near water, ice, and storage area for product bags.

3.2 Electrical Connections:
See power requirements in section **1.14.**

3.3 Water Connection:
A 3/8" compression fitting is located behind the (optional) vanity panel in the upper right-hand corner (from the rear of the machine). You must use a reinforced water line with this unit. Incoming water must have a pressure rating of at least 30 PSI (207 KPA) and no greater than 120 PSI (827 KPA) to operate correctly. You must add a water filter with a flow rate of at least 1 gallon per minute (3.78 Liters per minute). Unit must be installed with adequate back-flow protection to comply with Federal, state, or local codes having jurisdiction.

3.4 Product Lines and Connections:
The inlets for the product lines are located on the back of the unit. There are labels next to each inlet with numbers that correspond to the pump numbers in programming. These fittings are ⅜" outer diameter and are barbed to help retain the hose. Use a hose clamp to retain the hose on the inlet fitting.

Section 4: Basic Operations

4.1 Making Drinks:
Place a blender jar containing sufficient ice in the blend station with the blender lid in place. After programming drinks into the microprocessor (see Section 6), you simply press the drink number (1-64) of the drink, select the size (S, M, or L), and then press GO. The unit will automatically dispense liquids and

water, and then blend. All parameters for drink production can be manipulated to suit your needs (see Section 6).

4.2 Dispense Product Only:
You can dispense product only by pressing the number of the pump (1-8) and then pressing and holding the JUICE button. The unit will dispense the product selected until you release the JUICE button. The maximum time that the JUICE button will dispense is 25 seconds. This feature allows you to prime your product lines easily with little waste.

4.3 Dispense Water Only:
By pressing and holding the WATER button you can dispense cold water as desired. The maximum amount of time the feature will run is 25 seconds.

4.5 Run Blender Motor Only:
This feature can be used in two ways: as a ramp pulse (gradually increasing speed) or to run at a constant speed. To use as a ramp pulse, press and hold the BLEND button until the drink is completed. The motor will stop when the BLEND button is released. To run at a constant speed, select the speed (1-9) and then press and hold the BLEND button. The unit will run until the BLEND button is released or for 25 seconds.

Section 5: Cleaning and Sanitizing

5.1 After Each Use:
After every use of the unit, the operator should ensure that the blender jar has been rinsed, the blend station has been wiped out if there is spillage, and that the blender door is wiped down if there is spillage. <u>ALWAYS keep an empty jar on the blender motor base when the unit is not in use.</u> This helps catch any potential drips and keeps liquid from leaking into the blender motor.

5.2 Jar Care:
SHORT TERM – as needed, wash the jars with a mild detergent solution. Do not immerse the jars for longer than necessary in any type of liquid. Wash quickly with a smooth cloth or sponge, rinse, and sanitize with appropriate solution. (Some sanitizer manufacturers require their sanitizer to remain in contact with the sanitized object for a specific amount of time before rinsing or removing. Refer to your manufacturer's instructions before rinsing.) Hold the jar by the handle and give three or more sharp downward shakes to remove any water from around the shaft area. Then place the jar upside down on a rack to dry.
LONG TERM – As needed, fill the jar with hot sanitizer solution. Stir and let set for 5 minutes. Empty and rinse with clear hot water. Hold the jar by the handle and give three or more sharp downward shakes to remove any water from around the shaft area. Then place the jar upside down on a rack to dry.

5.3 Short Term (Unit):
As time permits (daily or weekly), wipe down the exterior of the unit and the interior of the blend station with a damp rag. Carefully tilt the machine either backward or forward (two person operation) and wipe underneath the unit with a damp rag.

5.4 Long Term (Unit):

As time permits (monthly), sanitize the blend station utilizing the steps below. The best time to perform this cleaning is either before or after work hours when you have plenty of time. Mix up 2-5 gallons of sanitizer solution per the manufacturer's directions.

BLEND STATION:

- Remove the blender jar from the blender station (empty if needed).
- Using a mild soapy solution, wipe down all surfaces of the blend station.
- Use a damp cloth to remove the soap from the surfaces of the blend station. Avoid getting excess water on the motor.
- To sanitize the surfaces of the blend station either spray or wipe the surfaces of the blend station with the sanitizing solution.
- Remove the blend station door by opening the door and gently lifting it off the hinges (do not lose the small plastic washers). Wash the door in the sink and allow to air dry.
- Dry any water off the blender motor area and replace the blender door. Avoid getting liquids directly on the motor (the area where the jar shaft connects to the motor).

PRODUCT TUBES:

There are two options to sanitize product lines. The first is to use the sanitizing cycle built into the machine; the second is a simpler method using the JUICE button. You may use either one depending on preference; the beginning steps are the same.

- Disconnect all product bags from the product lines.
- Place an empty blender jar in the blend station.
- Empty each product line by pressing the number of the pump (1-8) and then holding the juice button down. This will remove the bulk of the remaining product from the machine. Be sure that the blender jar does not overflow.
- Disconnect all product bag connectors from the product lines. You will want to have a bucket or empty blender jar to capture any product that leaks back out of the tubes.
- Place the product bag connectors in the sink to soak in a sanitizing solution.
- Mix up a solution of hot soapy water.
- Place the ends of the product tubes into the soapy solution.

Method 1 Sanitizing Cycle:

- To clean the tubes, run the soapy solution by pressing 9-8-0-GO. This cycle will clean two product tubes at a time. The beginning screen will read "CLEAN 1 2 READY". Press GO to activate the cycle. Pumps 1 and 2 will run approximately 12 seconds, each dispensing the soapy water into the empty blender jar. Ensure that the jar does not overfill!
- Once the wash cycle is done, the screen will read "CLEAN 3 4 READY". Make sure the blender jar is empty and press GO. Pumps 3 and 4 will run. Repeat for all 8 product tubes.
- Retrieve a container (bucket) of clear rinse water.
- Place all eight ends of the product tubes into the bucket of water.
- To run the cycle to rinse, press 9-8-0-GO. This cycle will rinse two product

tubes at a time. The beginning screen will read "CLEAN 1 2 READY". Press GO to activate the cycle. Pumps 1 and 2 will run approximately 12 seconds, each dispensing the rinse water into the empty blender jar. Ensure that the jar does not overfill!

- Once the rinse cycle is done, the screen will read "CLEAN 3 4 READY". Make sure the blender jar is empty and press GO. Pumps 3 and 4 will run.
- Repeat to rinse the remaining product tubes.
- Mix up a solution of sanitizer per manufacturer's instructions.
- Place all eight tubes, with connectors attached, into the sanitizer solution.
- To run the sanitizing cycle – press 9-8-0-GO. This cycle will sanitize two product tubes at a time. The beginning screen will read "CLEAN 1 2 READY". Press GO to activate the cycle. Pumps 1 and 2 will run approximately 12 seconds, each dispensing the sanitizer into the empty blender jar. Ensure that the jar does not overfill!
- Once the sanitizing cycle is done, the screen will read "CLEAN 3 4 READY". Make sure the blender jar is empty and press GO. Pumps 3 and 4 will run.
- Repeat to sanitize the remaining lines.
- Remove the hose and connectors from the container of sanitizer.
- Run each pump individually to clear the remaining sanitizing solution from the product tubes.
- Reconnect the product tubes to the product bags, prime each line.

Method 2 Sanitizing Cycle:

- Using the JUICE button, follow the steps above EXCEPT do not use 9-8-0-GO; instead, press the button of the product pump (1-8) and then press and hold the JUICE button.
- Once the product has stopped dispensing from the unit, release the JUICE button.
- Repeat for all eight pumps.
- Follow the instructions for wash, rinse, and sanitize above.
- Regardless of the method used, refill the product lines by pressing the pump number (1-8) and the JUICE button until the product dispenses, then release the JUICE button.

Section 6: Blending 101 & Basic Programming

Blending 101: Making the ideal smoothie with the BD8 is just a matter of simple physics. The input variables include the temperature and thickness of the ingredients, the output variable is the desired texture achieved at 29 degrees Fahrenheit. A smoothie much warmer than this (above 32 degrees) will be runny, a smoothie much colder (below 25 degrees) will cavitate (develop an air pocket around the blade) and not blend. So let's make a perfect smoothie, simply.

1. Determine the concentration ratio of your flavor ingredients to ice and water. In other words, what's your ideal recipe? What does your product supplier recommend will be the proper amount of juice concentrate or puree, and how much will be ice and water for a given drink size? For example, in a 12 ounce drink, some recipes call for 5, others 4, 3, or even just 2 ounces of flavored product. These concentration values would be 1.4, 2, 3, and 5 to 1, respectively, where the 1 is the product, and the 5, 3, 2 and 1.4 values represent the relative amounts of ice/water needed to make the desired 12 ounce drink. So if the recipe called for 2 ounces of product, you need to put in 10 ounces of ice/water (5 to 1 ratio). If the recipe called for 3 ounces of product, you would need to put in 9 ounces of ice/water (3 to 1 ratio) to make a 12 ounce drink.

2. Determine the water to ice ratio necessary to bring the final drink to 29 degrees Fahrenheit. If I had a 3 to 1 flavor concentrate, then I will need to put in 9 ounces of some combination of ice and water into my 12 ounce drink. If I put in all ice I run the risk of freezing the drink and failing to blend (aka cavitation). If I put in all water, I am guaranteed to lose a customer. So the ice/water ratio is like a teeter-totter. I have to put in 9 ounces total; the only question is how much of this will be ice, and how much will be water? It is recommended that you begin with approximately a 4 to 1 ratio of ice to water to start with. In the present case, try 7 ounces of ice to 2 ounces of water. If the drink is a little too runny, go to 8 ounces ice and 1 ounce water. If it is initially too thick, go to 6 ounces ice and 3 ounces water. You get the idea. The two values have to add up to 9 ounces, so adjust according to preference. And with the BD8, you do not need to experiment with only whole numbers of ounces as the computer allows dispensing in tenths of seconds!

3. Determine the desired texture of the finished drink. The same ingredients (syrup, water, and ice) can be blended slowly to achieve a nice, crunchy Italian ice, while a more aggressive blend will turn them into a velvet smooth granita. It's your choice.

4. Now for a little fine print. First, different ingredients have inherent thickness differences within and between flavors. For instance, think of the difference in thickness there is between strawberry juice, strawberry syrup, and a strawberry puree with lots of pulp and seeds. The first two will be on the thinner side, the puree on the thicker side. Now play the same game with fruits having more fiber such as pineapple or mango. You can see that different types of products (juice, syrup, puree) and different flavors (e.g., apple, mango) have different levels of thickness and fiber. The thicker the ingredients, the tougher the blend. Second, be aware of the brix factor. Sweeter liquids have higher dissolved sugar ratios (solids in water). A 100 gram liquid with a brix level of 10 degrees has 10 grams of sugar combined with 90 grams of water. A 100 gram liquid with a brix level of 25 degrees has 25 grams of sugar combined with 75 grams of water. The higher the solids to water ratio, the more difficult to blend. Third, what is the temperature of your ingredients, all of them? The warmer the flavor product, water, or ice, the thinner the result-

ing drink. Conversely, the colder the ingredients, any of them, the thicker the drink. Fourth, what is an alternative spelling for alcohol? Antifreeze. If you are adding alcohol to a drink, its effect on drink consistency is greater than water, so plan accordingly. In terms of the ice/water in #2 above, more ice is needed relative to the amount of alcohol added to maintain the same consistency between virgin (non-alcoholic) and alcoholic beverages. Finally, all ice values above are in ounces by **weight**. If you do not have a scale and are instead measuring ice by volume, the melt ratio of ice to water is 2 to 1. That is, two cups of ice by **volume** melt to one cup of water by weight and 16 ounces of ice by volume melt to 8 ounces of water by weight. If your drink calls for 10 ounces of ice by weight, be sure that you are putting 20 ounces of ice by volume into your blending jar!

The rest of this section will help you with the basics of programming and allows for the programming of drinks to your requirements. This feature will give you the opportunity to view, and if necessary, change your data set parameters (see **Figure 1** for the data set sequence).
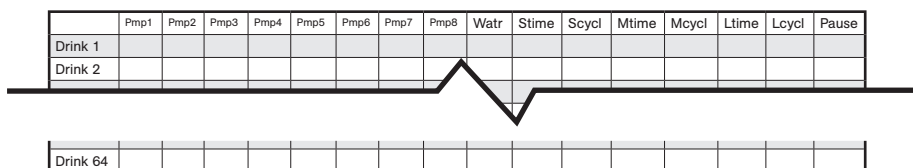
	Pmp1	Pmp2	Pmp3	Pmp4	Pmp5	Pmp6	Pmp7	Pmp8	Watr	Stime	Scycl	Mtime	Mcycl	Ltime	Lcycl	Pause
Drink 1																
Drink 2																
Drink 64																

Figure 1

6.1 Program Mode:
This is the mode that you will utilize to change settings for pumps, water, blend cycles, blend times, and pause. To enter the mode press 7-8-9-GO in sequence. The display will change from "Enter Drink #" to "Drink 1 Pmp 1 00".
- Navigating in the program is done with the S, M, L and GO buttons on the control panel.
- The S and M buttons move you up and down in drinks: 1-64 on M and 64-1 on S.
- The L and GO button will move you up and down in the data sets; GO moves forward (pump 1-8) and L moves backward (pump 8-1).
- You must enter the programming mode before any changes can be made.
- To exit the programming mode at any time, press the STOP button twice.
- It is possible to access a specific drink number in the Drink Settings Menu (7-8-9-GO) by pressing a 1, then the drink number (1 to 64), and then GO.

6.2 Adjusting Product:
- Product values can be added, removed, or adjusted as you see fit; however, when you find a drink setting that works for you it is recommended that you do not change it unless absolutely necessary.
- To adjust product settings, scroll to the drink number (S or M buttons) you wish to change.
- Now use the GO button to move to the pump number that needs to be changed.

- Pump values are recorded in tenths of a second. In other words, 22 on the display represents 2.2 seconds of dispense time.
- The dispense rate will vary slightly depending on the type of product you are using. A 4 to 1 concentrate will be thicker and will therefore need more time to dispense than a 2 to 1 concentrate. (See Section 7.1 for calibration help.)
- Enter the value you want by pressing the correct numbers on the control panel and then the GO button.
- The value will store and then move on to the next pump or data set.
- To zero out a value, scroll to the appropriate pump, enter 0 on the keypad and press GO.

6.3 Adjusting Water:
- Scroll to the Water data set by pressing either the L or GO buttons.
- Water is also entered in tenths of a second. Water dispense rate should not vary unless your water pressure coming into the unit is less than 30psi.
- Enter the value required by pressing the numbers on the control pad and then pressing the GO button.
- To zero out the water value, enter 0 on the keypad and press GO.

6.4 Adjusting Blend Times:
- Scroll to the first Blend Time data set (Small) by pressing either the L or GO buttons.
- Blend times are in whole seconds. 21 in the blend cycle set represents 21 seconds of blend time. The blender motor will run for the programmed time and then stop.
- The blender motor will run in the pattern as described by the Cycle in the next data set.
- To zero out the blend time value, enter 0 on the keypad and press GO.
- To move to the next blend time for Medium or Large press the GO button to reach them (cycle settings are between each).

6.5 Adjusting Blend Cycles:
- Scroll to the first Blend Cycle data set (Small) by pressing either the L or GO buttons.
- There are 6 pre-programmed cycles already stored in the unit. **See Figure 2**
- Select the cycle you want by pressing the appropriate number (1-6) and press GO.

	SpeedA	TimeA	SpeedB	TimeB	SpeedC	TimeC	SpeedD	TimeD	SpeedE	TimeE	SpeedF	TimeF	SpeedG	TimeG	SpeedH	TimeH
Cycle 1	5	15														
Cycle 2	6	15														
Cycle 3	7	15														
Cycle 4	3	1	4	1	1	2	3	1	4	2	5	2	6	2	7	3
Cycle 5	3	1	5	1	1	2	3	2	5	2	3	3	6	6	8	6
Cycle 6	3	2	1	3	3	3	5	3	6	4	7	15	8	6		

Figure 2 Standard Blend Cycle Profiles

- Regardless of the time listed above (Figure 2), the blender motor will run for the amount of time that you have programmed into the Cycle Time data set. If greater than the default time, the cycle will start over at the beginning of its programmed time. In other words, looking at Cycle 5 above, you can see that it is set for a total time of 24 seconds. If your cycle time is greater than

24 seconds, the cycle will start over at the lower speed and repeat until the time is up.
- You must have a cycle programmed into the data set even if you have no cycle time.
- Press the GO button to move to the Mcycl and Lcycl data sets and change or set as needed.

6.6 Adjusting Pause:
- Scroll to the Pause data set (Small) by pressing either the L or GO buttons.
- Pause is the amount of time the blender motor will wait until it begins to blend.
- The use of Pause is to allow your ingredients to dispense into the blender jar before the motor starts.
- Pause is again, in whole seconds. Enter the value with the number keys on the control panel and press GO.

6.7 Changing the Drink Size Ratio:
- You can set the drink sizes for the S, M, and L buttons on the keypad.
- To access the menu, press 7-8-8-GO on the control pad (from the Enter Drink # screen).
- The display will now read "Size Small XX". Enter the size, in ounces, of the small drink you want to make and press GO.
- The data set will automatically move to the Size Medium data set; enter the ounces size of your medium drink and press GO.
- The data set will automatically move to the Size Large data set; enter the ounces size of your large drink and press GO.
- It is not necessary to have all three sizes, but you must have a "small" drink. The "small" drink size correlates directly with the data set programmed into the 7-8-9-GO menu. This is very important! If you set your 7-8-9-GO menu and water values to make a 12 ounce drink and your small size to 14, you will only make 12 ounce drinks and the M and L drinks will not turn out correctly. The microprocessor uses the small drink size and the settings in the 7-8-9-GO menu to automatically generate your M and L drinks. Ensure that the size of drink and the programmed data sets match directly.
- Press the STOP button twice to exit the drink size menu.

Section 7: Advanced Programming

This section is intended for the owner/manager of the location who will take the time to fully understand the system and the information contained herein. Greater detail is spent on controls and reports the unit can supply. All functions are accessed by pressing 7-8-9-GO on the control panel unless otherwise noted.

7.1 Calibration:

There are two ways to optimize the drinks made in the BD8. You can use the trial and error method, which involves making small changes to a drink and testing each change as you go until you get it the way you want it. Or, you can calibrate the BD8 and make drinks according to a formula. Because fittings, tubing, temperature, and product can all cause the pumps to dispense at different rates, each drink you wish to make from a formula will require a calibrated pump. This section will tell you how to isolate and calibrate each dispensing function.

- 7.1.1 Press 7-8-9-GO to access the program mode. (If you have not read Sections 6, do so now.)
- 7.1.2 Press 0 then GO. This will zero out the pump run time for Pmp 1 in Drink 1. The display will now read "Drink 1 Pmp 0."
- 7.1.3 Press 0 and GO until all eight pumps are at 0. Continue to zero out water and the blend times (you cannot zero out the cycles).
- 7.1.4 Select the concentration ratio for the product you use in pump port 1 from Figure 3 below. The pumps deliver about 1 oz. per second. Divide your recipe's product amount (the ounces required for a small drink) by 1.0 to get the suggested pump time. For example, if you use 2 to 1 product, divide 4 oz. by 1.0 oz per second 4/1 = 4.0 seconds. With the display showing "Drink 1 Pmp 1 0" enter the suggested run time, remembering that what you enter is in tenths of a second. In this example enter "40" to get 4.0 seconds, then press GO.

Suggested Drink Formulae – Figure 3			
Concentration Ratio	Small 12 oz. Drink	Medium 18 oz. Drink[1]	Large 24 oz. Drink[2]
1.4 to 1	Pmp 5 oz. Water 0 oz. Ice* 14 oz.	Pmp 7.5 oz. Water 0 oz. Ice* 21 oz.	Pmp 10 oz. Water 0 oz. Ice* 28 oz.
2 to 1	Pmp 4 oz. Water 2 oz. Ice* 12 oz.	Pmp 6 oz. Water 3 oz. Ice* 18 oz.	Pmp 8 oz. Water 4 oz. Ice* 24 oz.
3 to 1	Pmp 3 oz. Water 3 oz. Ice* 12 oz.	Pmp 4.5 oz. Water 4.5 oz. Ice* 18 oz.	Pmp 6 oz. Water 6 oz. Ice* 24 oz.
4 to 1	Pmp 2 oz. Water 4 oz. Ice* 12 oz.	Pmp 3 oz. Water 6 oz. Ice* 18 oz.	Pmp 4 oz. Water 8 oz. Ice* 24 oz.

* For Figure 3, ice is measured by volume. Divide in half if by weight.
- **1)** The product coming from the pump/port and the water for these drinks are automatically proportioned to 1.5 times the "S" drinks unless the proportions have been changed as in Section 6.7.
- **2)** The product coming from the pump/port and the water for these drinks are automatically proportioned to 2 times the "S" drinks unless the proportions have been changed as in Section 6.7.

- 7.1.5 Place a jar in the blend station, press STOP twice to exit the program mode, then press S to select a small drink. Press1 to activate Drink (pump) 1 then press GO.
- 7.1.6 When the pump has stopped delivering product to the blender jar, you may measure the product and get an actual dispense rate of the product from pump number 1. For example, if the volume of product in the jar is 4.4 ounces, 4.4 oz. / 4 seconds = 1.1 oz per second. Calculate the actual pump time by dividing the required ounces by the actual pump rate. For example 4.0/1.1 = 3.6 seconds. Record this number, it will be entered later. Re-enter the programming mode (7-8-9-GO) and zero out Drink 1 Pmp 1.
- 7.1.7 Repeat Steps 7.1.1 to 7.1.6 for each pump port. You may use a different concentration ratio in each pump and your formula may call for different quantities of product than the suggested formula. Keep a record of the measured pump flow rates in the chart below or one similar.

Pump Number	Flow Rate
Pump Port 1 Flavor	oz /sec
Pump Port 2 Flavor	oz/sec
Pump Port 3 Flavor	oz/sec
Pump Port 4 Flavor	oz/sec
Pump Port 5 Flavor	oz/sec
Pump Port 6 Flavor	oz/sec
Pump Port 7 Flavor	oz/sec
Pump Port 8 Flavor	oz/sec

7.2 Water Flow Rate:
- Calibrate water flow rate in much the same way as you calibrated the pumps.
- Press the GO or L pad until the display reads: "Drink 1 Watr 0".
- Press 5-0-GO and then STOP twice.
- Press S-1-GO.
- Measure the water in the jar and divide by 5 to get the water flow rate. For example, with 2.5 oz. of water in the jar, 2.5/5 = 0.5 oz per second. Record this number. Because the water comes from the same valve for all drinks, the water flow rate will be the same for every drink.

7.3 Small Drink Default:
- Use this feature to select the mode for the default drink size. There are three options. The first is for the SMALL to be the default drink size (this means that SMALL will be automatically selected after a drink has been made). The second is that the drink size will remain the same after a drink has been made. The third option is that no drink size will be selected after a drink is made. This requires that the user select a drink size each time a drink is made.
- To make a selection for the mode of operation press 3-5-6-GO.
- The screen will show one of the 3 following options: "Revert To Small", "Re-

vert To Same", and "Revert To None".

· Press the S or M button to scroll through the three options.
· Once you have the option you want selected press STOP. The setting you have selected will be stored.

7.4 Restore Defaults:
· There are three types of restore defaults: Drink Settings, Blend Cycles, and Misc. Settings. These three will revert key settings back to the factory default. If you do not have a profile that is installed at the factory then the default settings will revert to "0".
· **Restore Drink Settings:** This feature will restore the Drink Settings to their factory defaults. Press 4-4-4-GO and the screen reads "Reset Drinks?".
· Press GO again to confirm that the drink settings should be reset to the defaults. The screen will say "Storing Drinks" and a count will show the progress.
· **Restore Blend Cycles:** This feature will restore the Blend Cycles to their factory defaults. Press 4-4-5-GO and the screen reads "Reset Cycles?". Press GO again to confirm that the Blend Cycles should be reset to the defaults. The screen will say "Storing Cycles" and a count will show the progress.
· **Restore Misc Settings:** This feature will restore various settings to their factory defaults. Press 4-4-6-GO and the screen reads "Reset Settings?". Press GO again to confirm that the settings should be reset to the defaults. The settings that will be reset to factory defaults are: Clutch Heater will revert to off, Size Default will revert to Small, Drink Size options will revert to 12oz, 18oz, and 24oz, the Pump Cube Sensor reverts to off, and the Sanitize Lockout reverts to off.

7.5 Locking the Machine:
· This feature allows the manager/owner to lock the machine out of use by other employees without the use of a code. The manager/owner can decide and change the lockout code at will.
· **Change or set machine lockout code:** Enter 7-7-8-GO on the keypad. The screen will then read "Enter Code:". Enter the current code (the factory default is 0) and press GO. The screen now reads "New Code:". Enter new code (up to four digits) and press GO. The screen then reads "Re-Enter:" Re-enter the desired code and press GO.
· **Lock Machine:** To lock the machine press 7-7-7-GO. This will disable all functions. The screen will say "Enter Code:". The machine will not work until the correct security code is entered and the GO button is pressed.
· Write your code down and hide it in case you forget. If you do forget your code and cannot find where you have it written down call Blendtec Technical Support for assistance at 800 748-5400, ext. 494 or 248.
· **Alcohol Pumps:** If your machine was set up to include alcohol pumps you can lock them specifically. This feature allows pumps 6, 7, and 8 to be locked so that product cannot be dispensed by using the JUICE button. The factory default is such that Pump 6, 7, and 8 are all unlocked. You can also change the code that locks/unlocks the pumps.
· They can be locked or unlocked individually by entering 3-5-3-GO on the

keypad.

- Enter the Alcohol Pump lockout code; the factory default is 0, and press GO. The screen will read "Pump 6 Unlocked" or "Pump 6 Locked". It can then be changed to the other by either pressing the S or the M, then press GO.
- The screen will now read "Pump 7 Unlocked" or "Pump 7 Locked". Make a selection by using the S or M button and then press GO again to make a selection.
- The screen will now read "Pump 8 Unlocked" or "Pump 8 Locked". Make a selection by using the S or M button and then press GO again to make a selection.
- Once the pumps have been configured, the menu can be exited by pressing the STOP button.
- To change the alcohol pump lockout code enter 3-5-2-GO on the keypad.
- The screen will then read "Enter Acode:". Enter the current code (the factory default is 0) and press GO.
- The screen now reads "New Acode:". Enter new code (up to four digits) and press GO.
- The screen then reads "Re-Enter:". Re-enter the desired code and press GO.
- Press the STOP button twice to exit the menu.

7.6 Drink Counts:

- The following options allow the user to maintain counts of the individual drinks made by day and total for lifespan.
- **Total Machine Count:** To access the machine count, press 8-0-0-GO. The machine count will be displayed. (If the number of cycles has exceeded 65,535 cycles then there will be a multiplying counter that is displayed also. The multiplying counter will increment each time the machine count reaches 65,535 and resets to 0.) To exit the machine count screen press STOP twice. This count cannot be reset.
- **Individual Drink Counts:** Each time a Drink Cycle is run a respective count will be incremented. This count can be viewed by pressing 8-0-1-GO. The screen will read "Drink # 1   ____". Use the M button to increment the Drink number and use the S button to decrement the Drink number. Using the 8-0-3-GO feature can clear these counts.
- **Total Drink Count:** A total of all of the individual drinks can be viewed by pressing 8-0-2-GO. This total count is reset to zero when the 8-0-3-GO feature is executed.
- **Clear Drink Count:** By pressing 8-0-3-GO, all of the individual drink counts are cleared as well as the Total Drink Count. After pressing 8-0-3-GO, the screen reads "Clear Counts?" Press GO to confirm that the Counts should be cleared.

7.7 Advanced Blend Cycle Control

This feature allows the user to customize up to 6 blend cycles.

- Press 7-9-0-GO to access the Blend Cycle Menu.
- The first thing that appears on the screen is "Cycle 1 Speed A: 0".
- From this point use the S, M, L, and Go buttons to navigate to any of the parameters in the Blend Cycle. S will decrement the Blend Cycle number,

M will increment the Blend Cycle number, L will advance through the speed/time parameters in the reverse direction, and Go will advance through the speed/time parameters in the forward direction.

· Enter the speed for Speed A. (Speeds start at 1 and continue through 9 with 9 being the most aggressive.) Press GO to store the value.
· The data set will change to Time A. Enter the time in whole seconds that you want the blender to run the speed and press GO.
· Repeat the steps to input the blend speeds and times for each sub speed and time (A through H) to create a cycle to set up to your own parameters. All six of the cycles can be manipulated.
· Note – you can reduce the amount of noise coming from the blender motor by keeping the blender speed under 7.
· Press STOP twice to exit the menu.

Section 8: Troubleshooting

We hope you will never have to use this section but if you do, please don't take offense at some of the simplistic answers. We have had most of these problems occur during our development and with other customers.

8.1 Machine won't run. Check the power cord to be sure it is plugged into a functioning, properly grounded electrical circuit. Check that the switch on the back of the machine is turned on. Check in the rear of the machine to see if the circuit breaker button has tripped (little white button). If it has, press the breaker button back in to reset it (the BD8 uses a 13 Amp circuit breaker).

8.2 Blender Stopped Working: If the unit does not blend, check in the rear of the machine to see if the circuit breaker button has tripped. If it has, press the breaker button back in to reset it (the BD8 uses a 13 Amp circuit breaker).

8.3 Drinks too runny. You may need to add more ice, and less water to the drink. See Section 6 to reprogram your ingredients if necessary.

8.4 Drinks too thick or cavitation in blender:
Ensure that product bags are not empty; the water supply is on and unblocked; the water and product amounts are programmed correctly. See Section 6 above to reprogram your ingredients. Cavitation is caused when the liquid and ice mixture in the blender jar is too thick and an air pocket (or bubble) is created around the spinning blender blade. This leaves your drink stuck to the sides of the jar and full of large ice particles. Be sure to put in enough products to produce a good flavor then adjust the water to ice ratio until the blender does not cavitate when you make the drink. If your drink is too watery, you can add more ice or less water until you get a drink that will form a smooth peak when you pour it into a cup.

8.5 Little or no flavor in drinks: Ensure that product bags are not empty. Check that the product hoses are not kinked. Check that the pump time is not

zero (0) in the program. Call us if the pumps do not turn.

8.6 Too much flavor in drinks: Check the programming to see if more than one pump turns at a time or if a pump turns that was not requested. Call Blendtec Technical Support.

8.7 Ice chunks in drinks: Check the blend time in the program for the drink with the chunks. Watch for cavitation; you may need to reprogram quantities. Make sure the blender aggressiveness is on the cycle you want, and the pause is not too long.

8.8 Water Won't Dispense: Check that the water is on and that there are no kinks in the hose to the machine. Call Blendtec Technical Support.

8.9 Product bag is leaking: Replace the bag. Call your product distributor.

Section 9: Warranty Information including Service

Blendtec warrants the BD8 against manufacturers defects for 1 year, parts and labor. The jars, including all moving parts, are covered against leaking or break-age for 1 year. The BD8 housing, pumps, and controller are warranted for one year. Should you experience any difficulty in using your BD8, please proceed as follows:

9.1 For Warranty Service: Call Blendtec Technical Support at 1-800-748-5400, ext. 494 or 248. We will discuss the problem with you and decide on the best way to fix it. We may send a service technician to your facility and ship parts for the repair or we may ship a replacement machine to you.

9.2 Blender Jars: If you experience trouble with your jars, call Blendtec Cus-tomer Service and we can walk you through some simple troubleshooting over the phone. If necessary, we will ship you replacement jars at no charge.

9.3 For Non-Warranty Service: Call Blendtec Technical Support at 800 748-5400, ext. 494 or 248. We will discuss the problem with you and decide on the best way to fix it. We may send a service technician and parts to your facility or ship a replacement machine to your facility. You will be billed for the cost of repair and any shipment. All costs related to parts and replacement will be discussed before hand. Service cost will vary with provider.

Section 10: Blank Drink Template

	Pmp 1	Pmp 2	Pmp 3	Pmp 4	Pmp 5	Pmp 6	Pmp 7	Pmp 8	Watr	Stime	Scycl	Mtime	Mcycl	Ltime	Lcycl	Pause
Drink 1																
Drink 2																
Drink 3																
Drink 4																
Drink 5																
Drink 6																
Drink 7																
Drink 8																
Drink 9																
Drink 10																
Drink 11																
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Drink 24																
Drink 25																

Section 11: BD8 Pre-Installation Checklist

Store Number and Location:

Completed By :   Date :

CHECK LIST		COMMENTS
1 ☐	Do you know exactly where the unit is going to be installed? The unit is designed to be placed on top of a counter. Counter location should be near water and ice. See section 2.4 for equipment dimensions The closer to the product bags the better. Product lines that run more than 10' (3 meters) are not recommended.	
2 ☐	Counter placement: Ensure there are at least 4 inches of space on each side and at least 6 inches in back (room for product installation).	
3 ☐	Is the unit being installed in close proximity to a sink? (Needed for water connections.)	
4 ☐	Are you connecting water to the unit? (If yes, go to number 5. If no, skip to number 6 and put N/A in the comments.)	
5	**Have the following requirements been met for water connection to the unit:**	
☐	1) Water source needs to set up per local code, and terminated at the unit with a flexible reinforced water line. (Water line needs to be at least ½" diameter and terminate at the unit with a 3/8" female compression connector.)	
☐	2) Water pressure needs to be at least 30psi and no more than 120psi.	
☐	3) Adequate backflow prevention installed to comply with local plumbing codes (requires a licensed plumber).	
☐	4) Shut-off valve installed between the water supply and the unit.	

	☐	5) You must use an in-line water filter with at least a one GPM rating. ****Recommend putting a "T" in the ½" waterline, with a ball valve and a ¾" BIB hose connector. Then use a flexible water line with ¾" BIB hose connecter on one end and a 3/8" compression end on the other.	
6		Have the following requirements been met for providing power to the unit:	
	☐	1) Power Requirements have been met (section **1.14**).	
	☐	2) Do not use any other electrical equipment on the same circuit or you risk overloading the circuit and either burning the fuse or possibly the electronics inside the unit.	
	☐	3) You must use a surge suppressor or a GFI protected outlet. ****Receptacle needs to be within 4 feet of the unit	
7	☐	Ice machine needs to be installed and operational.	

I have personally verified that the items on this checklist are completed and the space is ready for installation of Blendtec dispensing equipment. I understand that if the prep work identified on this installation checklist is not complete, my store may be liable for a portion or all of the cost of any service call where a technician is not able to do the install due to incomplete prep work.

Signature:_____ Date:_____

NOTE: If this Blendtec dispensing equipment is not installed in accordance with the pre-installation checklist, we cannot guarantee the proper operation of the equipment and your warranty will be void.

⊙ Blendtec®