

# BREW CENTER, COFFEE BREWING EQUIPMENT

TWIN: BC2, BC302    SINGLE: BC1, BC301, BC120, BC240



BC-2E



BC-1E

BREWERS SHOWN WITH OPTIONAL STAINLESS STEEL FUNNEL

## MANUAL

\* Specifications

\* Installation

\* Start up procedure

\* Operating Instructions

\* Adjustments

\* Care Maintenance

\* Parts Identification

\* Wiring Diagram

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N831A-C 4/3/2002

## **SPECIFICATIONS**

### **ELECTRICAL SPECIFICATIONS**

MODEL NO.	BC1	BC301	BC120	BC240	BC2	BC302
Volts	120/240	120/240	120	240	120/240	120/240
Watts	4100	4100	1800	3120	6200	6280
Amps	18	18	15	13	27	27
Wall Outlet (Receptacle) Power Cord CE202 – 30A <b>optional</b>	6-20R	6-20R	5-15R	6-15R	6-30R	6-30R

All Brew Centers are single phase with 3 wires plus a ground with cord and plug, except Eport 220V, 1 PH, (UROPEAN).

### **MECHANICAL SPECIFICATIONS**

MODEL NO.	BC1	BC301	BC120	BC240	BC2	BC302
Tank Capacity (US gal.)	3.1	3.1	3.1	3.1	6.2	6.2
Cups/Brew Cycle	1 x 36	12/24/36	12/24	12 x 24	2 x 36	(2x)12/24/36
Cups/Hour	240	240	240	200	400	400
Height (includes 4" legs)	31	31	31	31	31	31
Width (+ 2"for ¼"water connection)	9 ¼	9 ¼	9 ¼	9 ¼	18	18
Depth	17 ½	17 ½	17 ½	17 ½	17 ½	17 ½
Ship Weight lbs.	65	65	65	65	105	105

## **FAST START-UP PROCEDURE**

1. Turn on power to the Brewer.  
The Brewer will automatically start filling. After 6 minutes the filling cycle will stop.  
Allow approximately 20 minutes for the brewer to reach full brewing temperature (197'-203').  
When the GREEN READY LIGHT comes **ON** the brewer is ready to brew the next batch of coffee.
2. Turn Warmer Switch to the ON position. The Warmer Switches also double as CYCLE STOP switches.
3. Place coffee in the Funnel. See "COFFEE BREWING INSTRUCTIONS" for the recommended amount.  
Place funnel in the machine.
4. With Funnel and Carrier in place activate GREEN BREW switch.

## **INSTALLATION AND OPERATING INSTRUCTIONS**

Warranty is **void** if the Brewer is connected to any Voltage **other than the Voltage specified on the data label of the Brewer.**

### **UNPACKING AND INSPECTION**

Carefully unpack the Brewer by cutting the straps and lifting the carton off the Brewer.

### **ASSEMBLY AND SET-UP**

The Brewer is shipped complete with:

DESCRIPTION	BC1, 301, 120, 240	BC2, 302
Adjustable legs	4	4
Carriers complete with Faucets and Covers	1	2
Funnels with sample Filter pack	1	2

Remove carriers from Brewer, one has the four (4) legs packed inside. Install legs by tilting Brewer on its back and screwing the legs into the threaded leg supports on bottom.

### **WATER HOOK UP**

The National Sanitation Foundation (NSF) requires the following for NSF approved installation:

1. A quick disconnect water connection or enough extra coiled tubing (at least 2x the depth of the unit) so that the Brewer can be moved for cleaning underneath.
2. An approved flow-back prevention device such as a double check valve to be installed between Brewer and water supply.

### **WATER CONNECTION**

The Brewer comes equipped with a ¼ inch compression water inlet fitting located in the back. Use a ¼ inch copper tubing to connect the Brewer to a cold water supply. Water pressure should be: 20 PSI min. to 90 PSI max. An external shut-off valve and a water filtering system with a charcoal filter are highly recommended.

Turn water supply on and check for leaks at the water inlet connections, tighten compression fitting if necessary.

### **ELECTRICAL CONNECTIONS**

A terminal block inside the base compartment is provided for electrical connections. Opening for field conduit connections are provided in the bottom and the back of the base.

To access the Terminal Block, loosen the 2 screws on the side of the base cover. Disengage base cover from rear panel by lifting base cover up and lifting back towards rear panel.

### **Power Cord CE202 – Optional ?**

### **RECOMMENDED WIRING SIZES**

Model No.	Single (1) Phase
Single: BC1, BC301, BC120, BC240	12 AWG
Twin: BC2, BC302	10 AWG

### **Note:**

1. Neutral (**N**) and Ground Wires to be 14 AWG Minimum.
2. Field wiring must be suitable for 75° C.
3. Use Copper wire only for all power supply connections.

## **INITIAL PRIMING** – Filling of Tank

The BC Brewers are shipped with the Thermostat in the **OFF** position. Do not turn Thermostat to the **ON** position until the Brewer has been fully primed.

a. Turn water supply on and check for leaks at the water inlet connections. Tighten compression fitting if necessary.

b. Turn on power to the Brewer. The Brewer will automatically start filling. After 6 minutes the filling cycle will stop and the thermostat should be turned clockwise to the full **ON** position. Allow approximately 20 minutes for the brewer to reach full brewing temperature (197'-203').

When the GREEN READY LIGHT comes **ON** the brewer is ready to brew the next batch of coffee.

**NOTE:** Before proceeding further, make sure the sample Filter pack has been removed from the funnel.

### **CHECKING BREW CYCLE OUTPUTS.**

The BC-Series brewers are factory preset to deliver the proper amount of brewing water for the 12 cup, 24 cup and 36 cup brew cycles. Nevertheless, it is a good practice to check the output levels prior to brewing the first batch of coffee.

BC1 and BC2: Full 36 cups (3 decanters) per brew cycle with a 20% by-pass.

BC120 and BC240: Selectively 12 cups (1 decanter) or 24 cups (2 decanters) per brew cycle.

No by-Pass.

BC301 and BC302: Selectively 12, 24 and 36 cups per brew cycle with a 20% by-pass for the 36 cup cycle only.

### **TO START A BREW CYCLE:**

Turn Warmer Switch to the ON position. The Warmer Switches also double as CYCLE STOP switches. With Funnel and Carrier in place activate GREEN BREW switch.

On BC120, BC240, BC301 and BC302 brewers first activate brew switches marked 12 cups and then check output. Do the same with the 24 cup brew switch and the 36 cup brew switch for the BC301 and BC302 units.

NOTE: 12 cups equal 1 full decanter.

If necessary adjust the timer(s) to increase or decrease output levels. See Timer adjustments.

## **COFFEE BREWING INSTRUCTIONS**

Place filter paper into brew basket and add finely ground coffee as per chart below:

	MODEL#	CUPS BREWED	RECOMMENDED COFFEE AMOUNT	TOTAL BREW TIME
Single	BC120	12 / 24 Cups	2 oz./ 4 oz.	3.0 / 4.5 Minutes
Single	BC240	12 / 24 Cups	2 oz./ 4 oz.	3.0 / 4.5 Minutes
Single	BC1	36 Cups	6 oz.	6.0 Minutes
Twin	BC2	2 x 36 Cups	2 x 6 oz.	6.0 Minutes
Single	BC301	12 / 24 / 36 Cups	2 oz./ 4 oz./ 6 oz.	3.0 / 4.5 / 6.0 Minutes
Twin	BC302	2 x (12 / 24 / 36 Cups)	2x (2 oz./ 4 oz./ 6 oz.)	2x (3.0 / 4.5 / 6.0 Minutes)

Insert brew funnel back into brewer and position empty carriers under brew funnels. With **Warmer Switches** on (lit), depress **Green Brew Switches**. Total brew time will vary according to cups selected. After funnel stops dripping, remove and empty funnels.

**Warning:** Remove Brew funnel ONLY after it has stopped dripping.

## **ADJUSTMENTS**

### **1. BY-PASS FLOW VALVE ADJUSTMENTS**

Depending on the model number, the BC Brewers have been factory set to brew 12, 24 and/or 36 cups of coffee, with the BY-PASS adjusted for a 20% BY-PASS flow of brewing water for the 36 cup, brew output only. Since water hardness, the brand of coffee, and the length of brew time are important factors in final drink taste, it may be necessary to adjust the percentage of BY-PASS. In general, the more ground coffee used for each brew, the higher the percentage of BY-PASS. Proceed as follows to adjust BY-PASS:

Place empty carrier without cover under brew funnel.

- a. Pull brew funnel out 3 inches, exposing BY-PASS outlet behind funnel.
- b. Activate warmer/cycle stop switch. Switch will be lit.
- c. Hold measuring cup under BY-PASS outlet and activate Green Brew Switch. After 15 seconds, push warmer/cycle stop switch to stop cycle.
- d. Measure ounces of water in cup and ounces of water in carrier. Divide ounces in cup by total volume dispensed (add ounces in cup and carrier) to get the BY-PASS ratio.
- e. To get more BY-PASS, turn slotted adjustment screw in spray-head adjuster **Counter-ClockWise**. Turning adjuster screw **clockwise** will **decrease** the BY-PASS flow. See figure below.

**NOTE:** The BY-PASS valve is activated only when the **36 cup cycle** is selected. The BC301 and BC302 units do not use the BY-PASS when brewing for 12 and 24 cups. The BC120 and BC240 models only brew for 12 or 24 cups and therefore do not have the BY-PASS.

#### **DUAL BYPASS VALVE**



ADJUSTMENT  
SCREW [2]

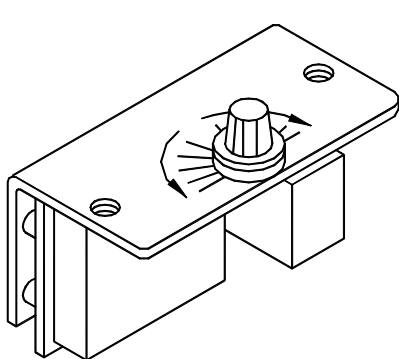
## 2. TIMER ADJUSTMENT PROCEDURE

Remove the top cover to access the brew timer(s).

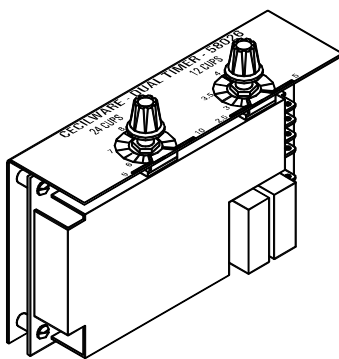
To **INCREASE** output: turn timer knob a small increment **CLOCKWISE**.

To **DECREASE** output: turn timer knob a small increment **COUNTER-CLOCKWISE**.

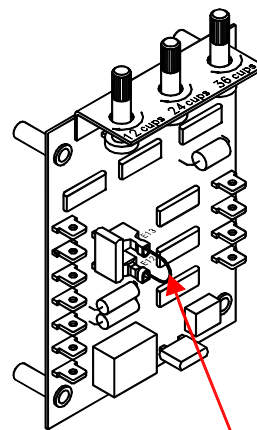
Check output level in carrier.



BC1, BC2  
Single Timer (L264A)



BC120, BC240  
Dual Timer (58026) 120  
Dual Timer (58027) 240



BC301, BC302  
Triple Timer  
(Dual Voltage)(L410C)

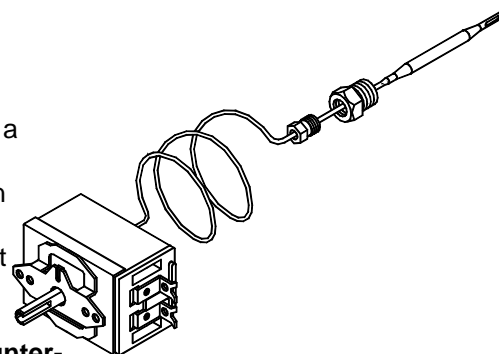
## 3. THERMOSTAT ADJUSTMENT

The BC Brewers are factory set to deliver hot brewing water at 200° F. The water temperature, at the spray head, should be between 195° F-203° F with the thermostat knob at its maximum clockwise position. If adjustment is necessary, proceed as follows:

- To **RAISE** water temperature, turn temperature control knob to its maximum clockwise position. Remove the knob and locate slotted adjustment screw inside hollow thermostat shaft. Using a narrow-bladed screwdriver, engage slotted adjustment screw and turn it 1/4 turn counter-clockwise. The thermostat will cut in and the **Green** ready light will go off. When **Green** ready light comes on after a few minutes, measure temperature and repeat if necessary.

- To **LOWER** water temperature, simply turn knob one notch **counter-clockwise** to next lower number on dial.

**HINT:** To measure water temperature accurately, remove the spray-head for a solid water stream.



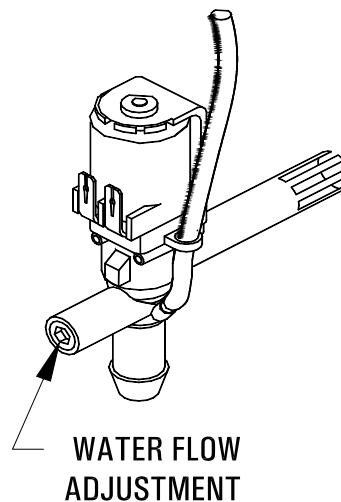
## 4. WATER FLOW RATE ADJUSTMENT

Locate adjustment screw on valve (as show here).

Using an Allen Key or a flat screwdriver, rotate 1/4 turn at a time, Clockwise (CW) to decrease water flow rate or Counter-Clockwise (CCW) to increase water flow rate. Check water flow output after each 1/4 turn.

The **SINGLE DISPENSE VALVE** is factory adjusted to dispense **0.6 oz./sec.** of water during the **brew** cycle (spray duration).

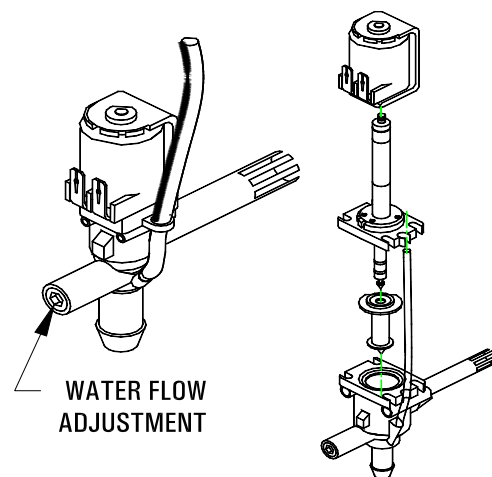
The **DOUBLE/ DILUTION DISPENSE VALVE** is factory adjusted, on **both sides**, to dispense **0.22 oz./sec** of water during **dilution** cycle.



## SPECIAL COMPONENTS TEST

- 1) **CHECK DISPENSE VALVES FOR LIME BUILD-UP** (Located inside top) Drain the water tank to just below the level of the Dispense Valves. Remove the Valves and clean. You can take these valves apart by hand as shown.

Replace the assembly as needed.  
Replace the valve into the tank and refill tank.

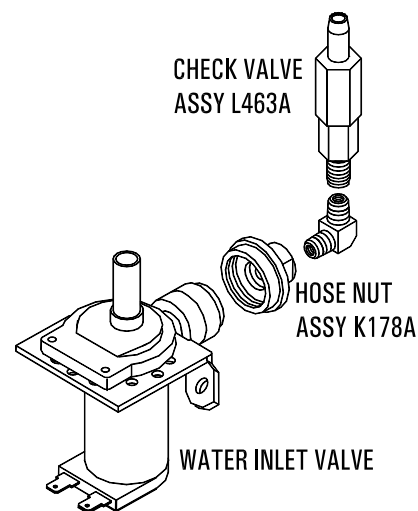


- 2) **WATER INLET VALVE (SOLENOID) TEST** (Located inside bottom cal) Turn power off. If the water level rises inside the tank, and shoots out or the overflow, the Water Inlet Valve is leaking. Disconnect wires from the Water Inlet Valve coil and connect a 2 wire line cord to the terminals. Plug it into a 115V outlet. If water flows in and stops when you pull it out, the Valve is working fine. Repeat this test a few times. The problem may be in the Probe. If the water does not flow in when the cord is plugged into an electrical outlet, the Solenoid coil may be damaged, opened or the valve may have an obstruction preventing the water from flowing in. Clean or replace it.

A Check Valve is installed to prevent backflow.

To check proper function of Check Valve, disconnect water line from the Check Valve, check for dripping from the disconnected end of the Check Valve. If it leaks, replace it.

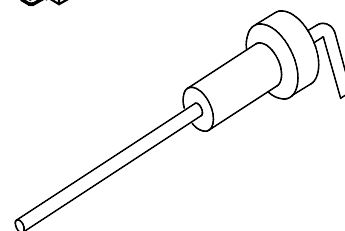
Water inlet Valve max. flow rate is 1.3 gal/min.



- 3) **WATER LEVEL PROBE TEST** (Located on tank top, inside top cabin) If there is a lack of water, you will get an uneven flow.

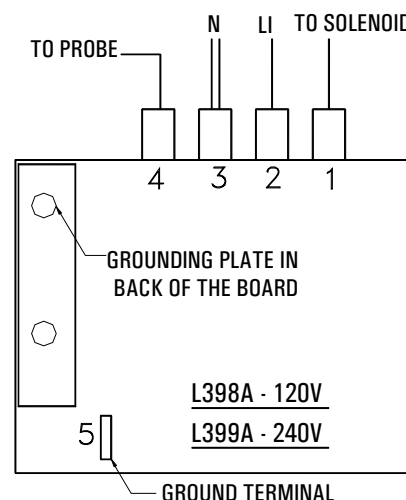
Check the probe as follows:

Turn on the power and water supply. Check inside the tank to make sure the water is not touching the Probe. Pull the wire and terminal out of the Probe rod. If water starts flowing into the tank, the Probe may be grounded, due to excessive liming. Check with Ohm meter. Clean or replace.



### 4) SOLID STATE WATER LEVEL CONTROL BOARD

- a) Make sure there is power input to the board at the terminals 2 & 3. Your voltmeter should read 115 volts. It should read the same at terminals 1 & 3. This is the output power to electrify the coil of the solenoid valve to open it. The lack of voltage at terminals 2 & 4 will indicate that the water level board is not working properly.
- b) Make sure all wire connections to the board are tight.
- c) The grounding plate at the top, in the back of the board, should be securely grounded. The board will not work, or will work erratically, if it is not grounded properly. If after this, the board is still failing to open the water inlet valve, then replace it.



## TROUBLESHOOTING GUIDE

**WARNING:** To reduce the risk of electrical shock unplug the dispenser power cord before repairing or replacing any internal components of the unit.. Before any attempt to replace a component be sure to check all electrical connections for proper contact

PROBLEM	PROBABLE CAUSE	REMEDY
1. No power to the machine.	a) Loose wire connection. b) Blown fuse. c) Tripped Breaker	a) Check wire connections to Power Switch. b) Check fuse. c) Re-set Breaker
2. Machine keeps repeating cycle.	a) Dispense Switch defective.	a) Replace Dispense Switch.
3. Water does not shut off. Water keeps running into funnel.	a) Leaking Water Inlet Valve [Solenoid]. b) Inoperative Switches. c) Clogged Dispense Valve	a) Clean/check fittings of Valve. Replace Valve if needed. See "Water Inlet Valve Test" b) Check Switch connections. Replace it if needed. c) Clean Dispense Valve. Replace Dispense Valve if inoperative.
3. Water will not stop flowing into tank.	a) Water Level Probe malfunction. b) Water Inlet Valve malfunction..	a) Check Probe. Replace if necessary. See "Probe Test" b) Check Solenoid. Replace if necessary. See "Water Inlet Valve Test"
4. Water drips from brew funnel.	a) Leaking Dispense Valve. b) Too much water in tank. c) Spray Head Fitting is clogged. d) Water Valve blocked by scales.	a) Replace Water Dispense Valve. b) Dispense some water from tank. c) Clean Spray Head Fitting. d) Replace or clean Valve Seat.
5. No water is going into tank at all.	a) Water Inlet Valve (Solenoid) malfunction. b) Water Level Probe malfunction.	a) Check Water Inlet Valve. Replace if necessary. See "Water Inlet Valve Test" b) Check Probe. Replace if necessary. See "Probe Test".
6. Water is not heating up in the water tank.	a) Temperature setting is incorrect. b) Loose connection to Heating Element. c) Heater is burned out or defective.	a) Set Temperature at 200°F – See Thermostat Adjustments. b) Make sure all wires are tight. c) Replace the Heater.
7. Cold coffee.	a) Run out of hot water in tank. b) Temperature setting is incorrect. c) Loose electrical connection. d) Bad or burnt out Heating Element.	a) Allow time for water in tank to heat after filling. b) Set temperature at 200°F. (See Thermostat Adjustments) c) Check all electrical connections for contact. d) Replace Heater.
8. Coffee too strong.	a) Water flow too low. b) Too much coffee in the brew funnel.	a) Adjust water flow rate on Dispense Valve. b) Put the proper amount of coffee in funnel. See suggested amount.
9. Coffee too weak.	a) Not enough coffee in the brew funnel. b) Water flow too high.	a) Add coffee. b) Adjust water flow rate on Dispense Valve.



# **CLEANING AND SANITIZING**

## **SANITIZING:**

All food dispensing units should be sanitized periodically. All parts to be sanitized must be cleaned first.

### **To prepare a sanitizing solution:**

ADD 2 TSP. OF LIQUID CLOROX BLEACH (5.25% CONCENTRATION) TO 1 GALLON OF WATER AT ROOM TEMPERATURE (70°- 90°F).

Note: Always start with a unopened bottle of Clorox Bleach since the solution from an opened bottle has a short life span.

- Soak all parts for a minimum of 3 min. in the sanitizing solution.
- Let all sanitized parts drain and dry naturally. DO NOT WIPE THEM DRY.
- Before using the sanitized unit (or parts) with food stuffs, rinse all parts thoroughly with water.

Water pipe connecting and fixtures directly connected to a potable water supply shall be sized, installed, and maintained in accordance with Federal, State, and Local codes (section 7).

## **TO PREVENT CORROSION DAMAGE:**

1. Carrier liners should be cleaned daily.
2. Use only neutral pH cleansers such as dish washing detergents to clean the unit. Do not use cleansers containing alkalies, acids or harsh abrasives.
3. Use mild abrasive nylon or brass brushes for removing coffee deposits. Do not use steel wool, wire brushes or other abrasive tools that will scratch the stainless steel surface.
4. Use recommended sanitizing solutions.
5. Let the unit dry naturally after sanitizing. Do not wipe them. Do not use the unit until completely dry.

## **DRAINING OF WATER TANK:**

Fast draining of tank is possible by Drain Hose which is located behind the front panel and held in place by a clamp to the side wall.

When draining of tank is required, always disconnect power supply and turn thermostat counterclockwise to the OFF position.

## **CLEANING:**

1. Wipe all exterior surfaces of the unit with a soft, damp cloth using warm water and mild detergent.  
WARNING: Before attempting to clean the Warmer Deck, make sure the Warmer switches are "OFF" and the Warmer Deck has cooled down to room temperature.
2. Clean all interior surfaces, in contact with the substance dispensed, thoroughly.  
Caked-on residue may have to be soaked before removal. On metal or glass surfaces, stiff bristle brushes may be used.
3. Rinse the cleaned unit thoroughly with warm water and let dry.
4. Empty contents from brew funnel, wash and let dry (use a mild dishwasher detergent).

## **CARE OF STAINLESS STEEL:**

Stainless steel surfaces that come in contact with food substances must be cleaned every day. Many food products contain acid, alkalies, salt and other substances that corrode the stainless steel. In order to prevent the corrosion of the material, proper cleaning, and sanitizing must be performed.

When cleaning the stainless steel, only neutral pH cleansers are to be used. Highly acidic or alkaline cleansing agents and chlorinating sanitizing solutions cause corrosion.

## **DELIMING OF TANK:**

Minerals in water also cause corrosion if they are allowed to accumulate. Therefore, the interior walls should be cleaned frequently in order to remove mineral deposits and prevent corrosion from occurring.

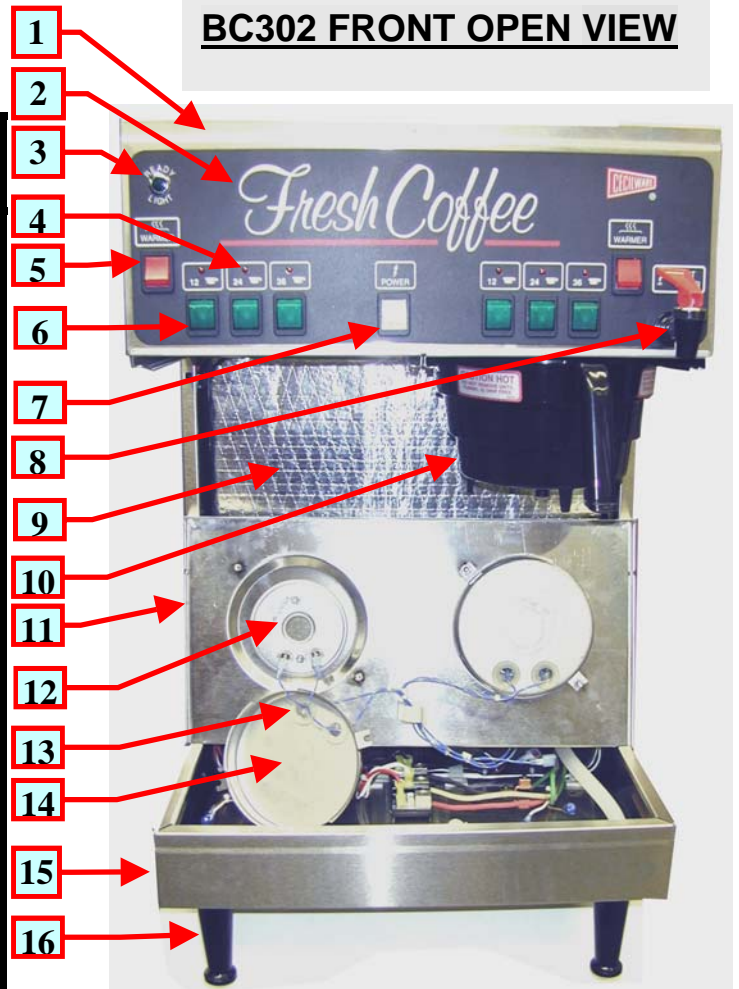
**WARNING: Do not immerse Carrier into water or use in dishwasher.**

## PARTS IDENTIFICATION

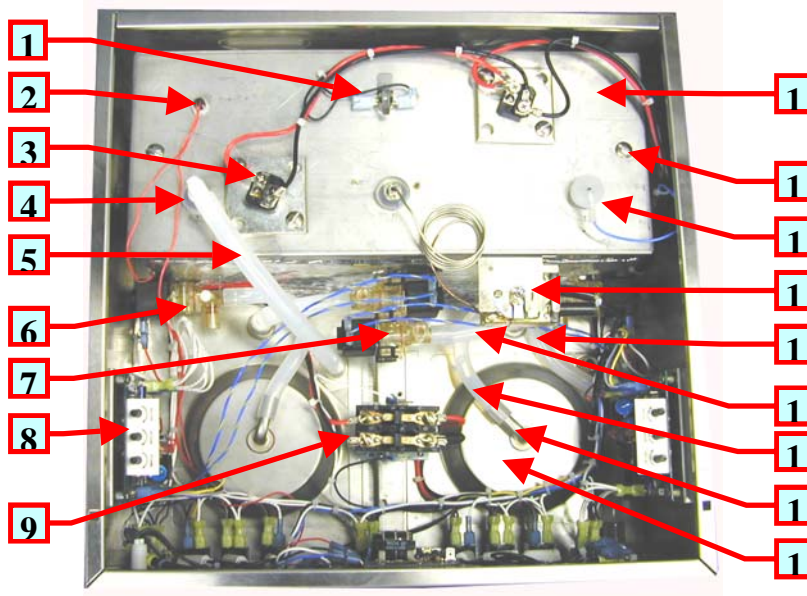
[\* RECOMMENDED SPARE PARTS]

	SINGLE UNITS BC1, BC301, BC120, BC240		TWIN UNITS BC2, BC302		
TEM	P/N	QTY	P/N	QTY	DESCRIPTION
1	SF26A	1	SB49A	1	CABINET TOP COVER
2	---	--	---	--	SWITCH PANEL LABELS:
	N829A	1	---	--	BC120 & BC240
	N892A	1	N815A	1	BC1 / BC2
	N822A	1	N823A	1	BC301 / BC302
5*	L155A	2	L155A	2	BC2 ON-OFF SWITCH
	L155A	1	L155A	1	BC120 ON-OFF SWITCH
	L155A	1	L155A	1	BC240 ON-OFF SWITCH
	L155A	1	L155A	1	BC1 ON-OFF SWITCH
6*	L383A	2	L383A		BC120 BREW SWITCHES
	L383A	1	....		BC1 BREW SWITCHES
	L383A	2	....		BC240 BREW SWITCHES
	L383A	3	....		BC301 BREW SWITCHES
	L383A		L383A	2	BC2 BREW SWITCES
	L383A		L383A	6	BC302 BREW SWITCHES
7*	L389A	1	L389A	1	POWER SWITCH
8*	D067A	1	D067A	2	FAUCET, HOT WATER -plastic
9	SF74Q	1	SC81Q	1	TANK WELDMENT ASS'Y
10*	V210Q	1	V210Q	2	FUNNEL ASS'Y, BLACK
11*	R615A	1	SC86A	1	BASE WARMER COVER
12*	G108A	1	G108A	2	WARMER ELEMENT
13*	M090A	2	M090A	4	GROMMET F/HEAT SHIELD
14	U485A	1	U485A	2	HEAT SHIELD
15	SF27A	1	SB65Q	1	CABINET FRAME ASS'Y
16	M172S	1	M172S	1	LEGS [SET OF 4]
17*	L069A	1	L069A	1	POWER SWITCH - MAIN
18	K331A	1	K331A	1	ELBOW FITTING, IN. VALVE
19	C396A	1	C396A	1	FUSE HOLDER
*	C395A	1	C395A		FUSE
20*	CE202	1	CE202	1	POWER CORD 30A-OPTIONAL
	SF28A	1	SB66A	1	FRONT COVER-NOT SHOWN

## BC302 FRONT OPEN VIEW



## TOP CABIN OPEN VIEW

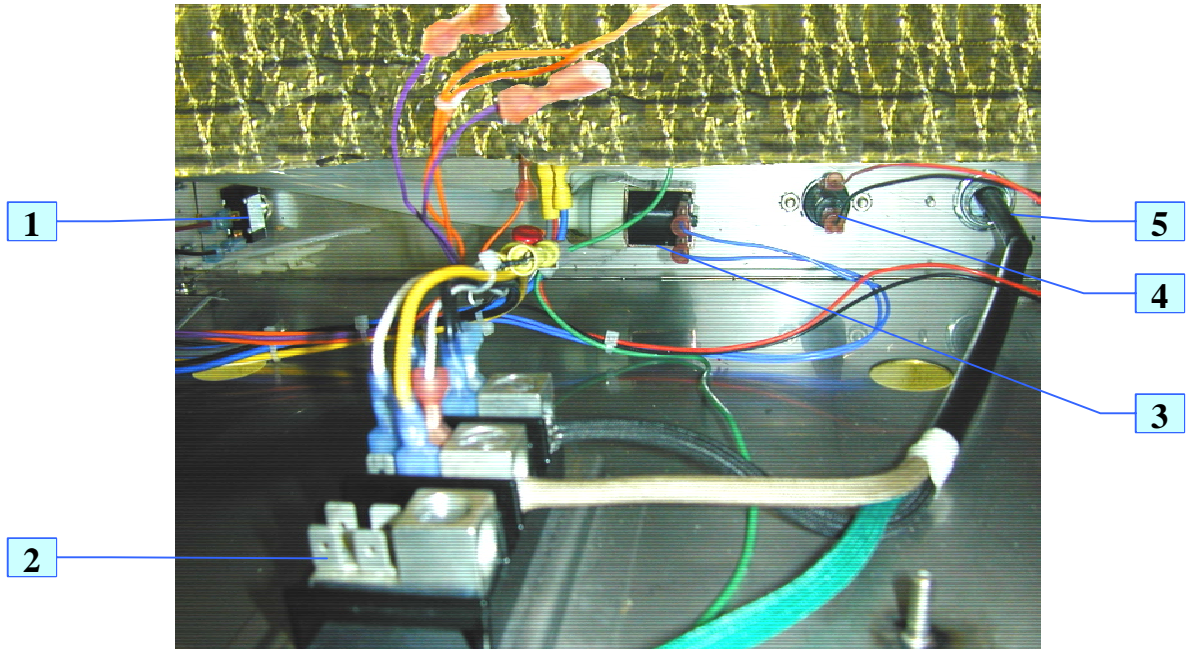


### TOP CABIN - PARTS IDENTIFICATION

[\* RECOMMENDED SPARE PARTS]

ITEM	SPARE PARTS	SINGLE UNITS P/N QTY	TWIN UNITS P/N QTY	DESCRIPTION
1	*	L656A 1	L656A 1	HI-LIMIT
2	*	L499A 1 M532A 1	L499A 1 M523A 1	FLOAT SENSOR WITH RUBBER GASKET
3	*	G367A 1 G369A G286A	G367A 2 G369A G286A	HEATER (1.7 KW 120V) OR HEATER (3.0 KW 230V) OR HEATER (4.0 KW 230V)
4		K683A 1	K683A 1	OVERFLOW FITTING FTB
5	*	M483A 1	M483A 2	SILICONE HOSE- OVERFLOW ( .312"ID x 7"L)
6	*	L688A 1	L688A 2	DINSPENSE VALVE, SINGLE 120V 60HZ
7	*	L689A 1	L689A 1	DINSPENSE VALVE, DUAL, BYPASS 120V 60HZ
8*	*	L264A 1	L264A 2	SINGLE TIMER - 120V
	*	58026 1	.... 1	DUAL TIMER - 120V [ or 58027 - 220V ]
	*	L410A 1	L410A 2	TRIPLE TIMER - 120V
9	*	B177A 1	B177A 1	CONTACTOR - 2 POLE, 30/40 Amp, 120V [B178A FOR 208/240V]
10		SD06Q 1	SD06Q 2	SPRAY HEAD BASE ASS'Y
11	*	K671Q 1 M197A 1 E107A 1 K668A 1	K671Q 2 M197A 2 E107A 2 K668A 2	SPRAY HEAD FITTING ASS'Y WITH RUBER WASHER SPRAY HEAD NUT
12	*	M483A 1	M483A 2	SILICONE HOSE - SPRAY HEAD ( .312"ID x 11"L)
13	*	M483A 1	M483A 2	SILICONE HOSE- BYPASS ( .312"ID x 6"L)
14	*	M483A 1	M483A 1	SILICONE HOSE - HOT WATER FAUCET (.312"ID x 10.5"L)
15	*	L681A 1	L681A 1	THERMOSTAT
16	*	K402Q 1	K402Q 1	HI-LEVEL CONTROL SENSOR
17		P465A 1	P465A 1	SCREW, ¼-20 x 5/8
18		RK70A 1	SC82A 1	TANK TOP

## BOTTOM CABIN OPEN VIEW



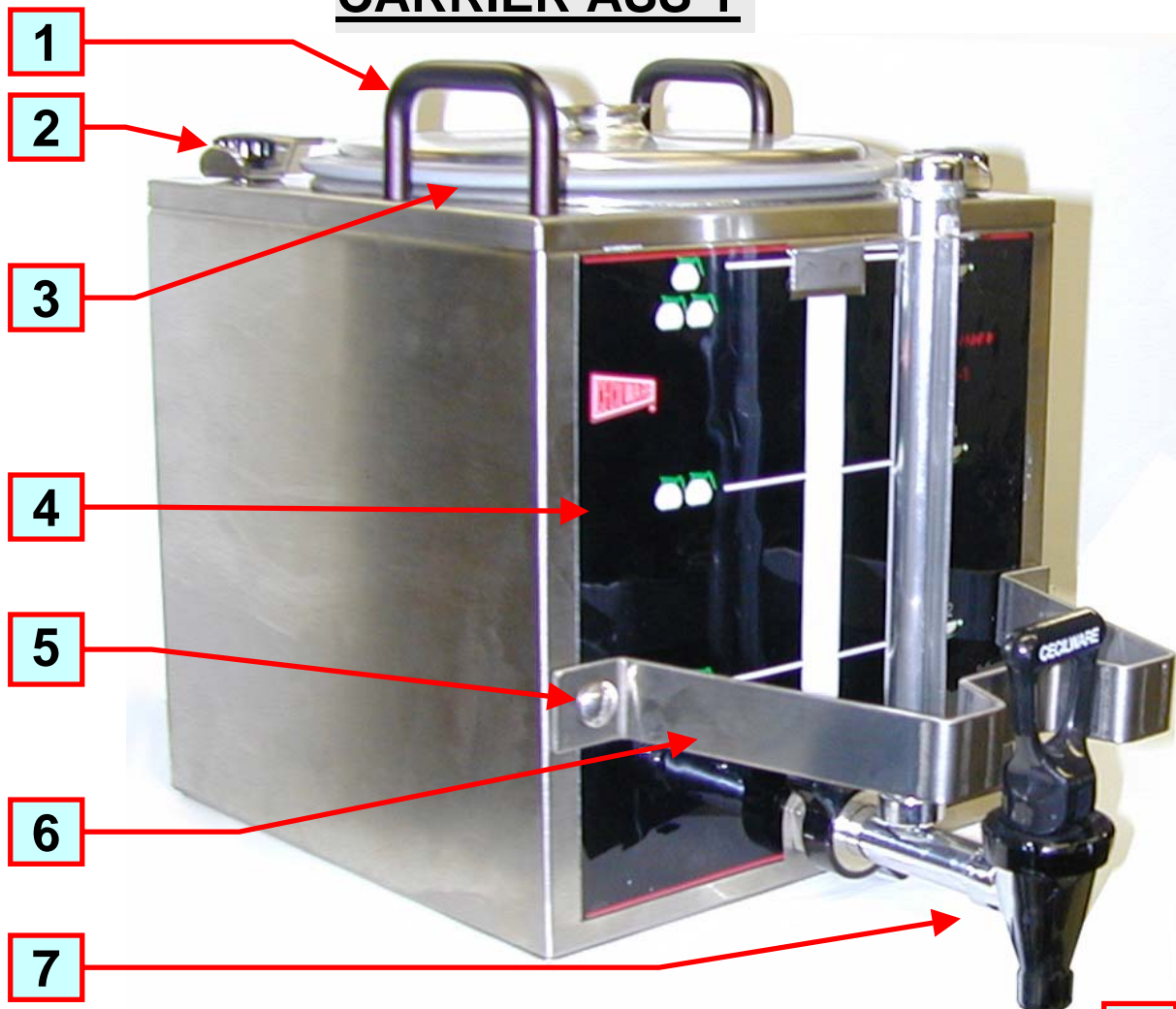
### BOTTOM CABIN - PARTS IDENTIFICATION

[\* RECOMMENDED SPARE PARTS]

	SPARE PARTS	BC301-IT		BC2-IT BC302-IT		
ITEM		P/N	QTY	P/N	QTY	DESCRIPTION
1	*	L069A	1	L069A	1	POWER SWITCH
2		B083A	1	B083A	1	TERMINAL BLOCK
3	*	CD257	1	CD257	1	WATER INLET VALVE
4		C396A	1	C396A	1	FUSE HOLDER
	*	C395A	1	C395A	1	FUSE
5	*	CE202 CG99A	1	CE202 CG99A	1	POWER CORD 120/240V or POWER CORD 240V



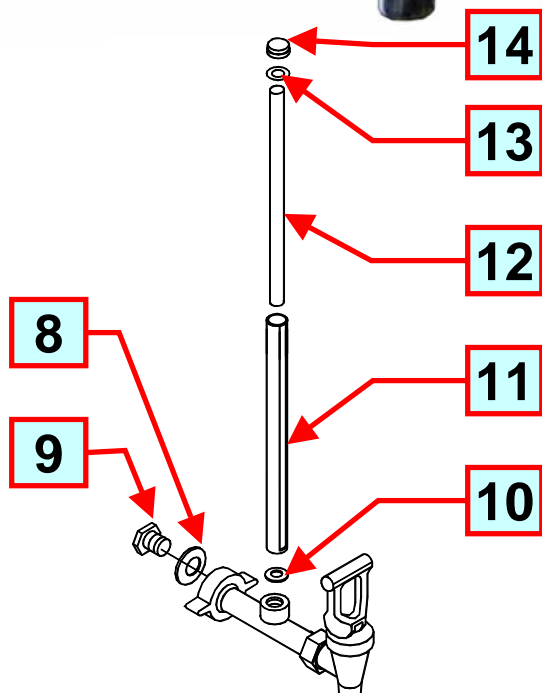
## CARRIER ASS'Y



### **CARRIER ASS'Y 97208**

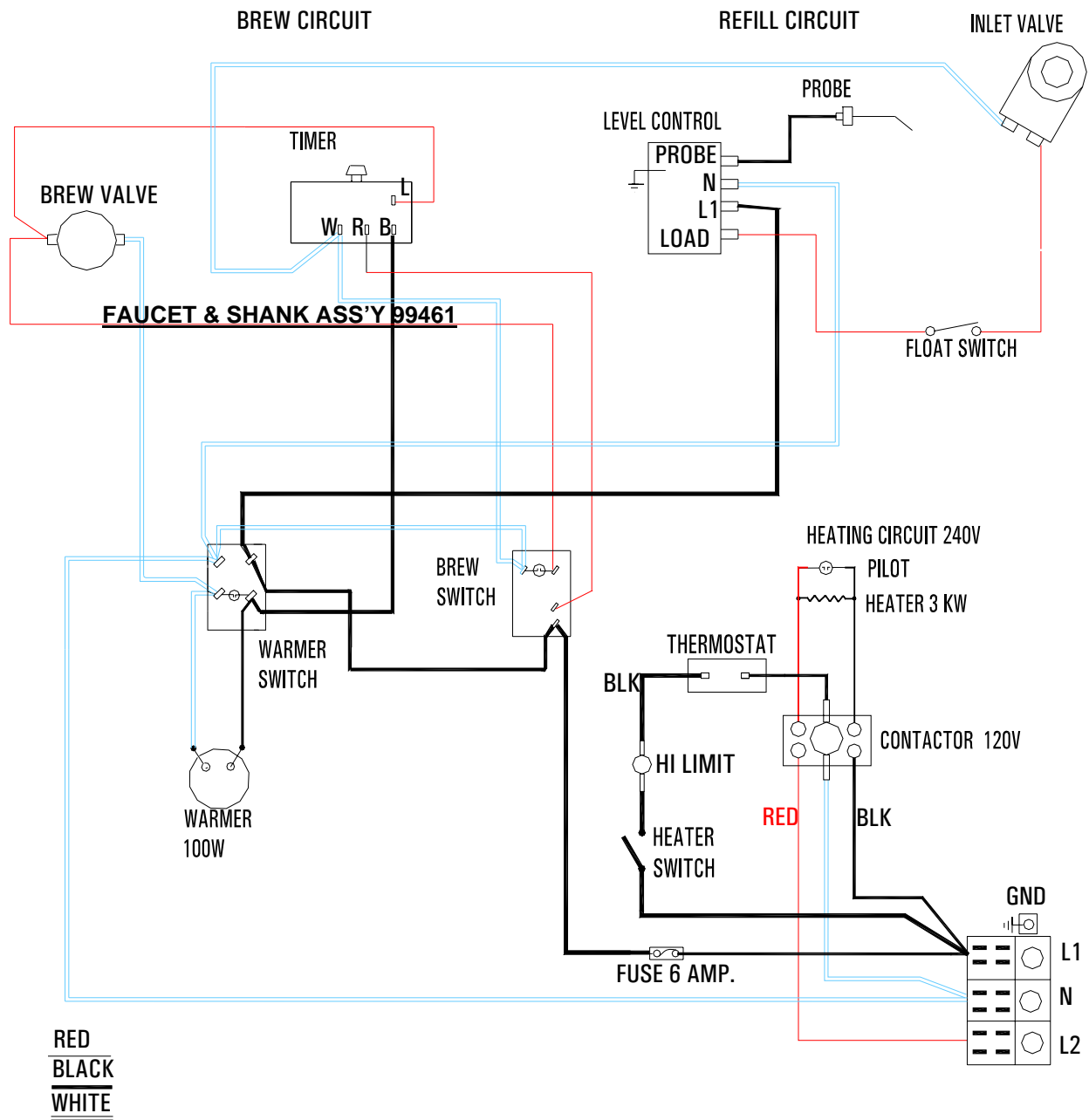
[\* RECOMMENDED SPARE PARTS]

Item		Description	Part #
1	*	Handle, black 3"	02015
2	*	Hold Down Bracket	U833A
2	*	Thumb Screw	M299A
3	*	Carrier Cover S.S.	U811A
	*	Gasket, Cover Carrier	M294A
4		Label	NG47A
5		Screw	P808A
6	*	Faucet Guard	U812A
7	*	Faucet & Shank Ass'y 8"	99461
8	*	Faucet Washer	7227
9	*	Faucet Hex Nut	03067
10	*	Washer, Base	38318
11	*	Sight Gauge Shield	38316
12	*	Sight Gauge Glass	38315
13	*	Washer, End Cap	38317
14	*	End Cap	38314



**FAUCET & SHANK ASS'Y 99461**

BC-1 120/240 3 WIRES + GROUND 3100 WATTS 14A 1 PH 60Hz **N848A**

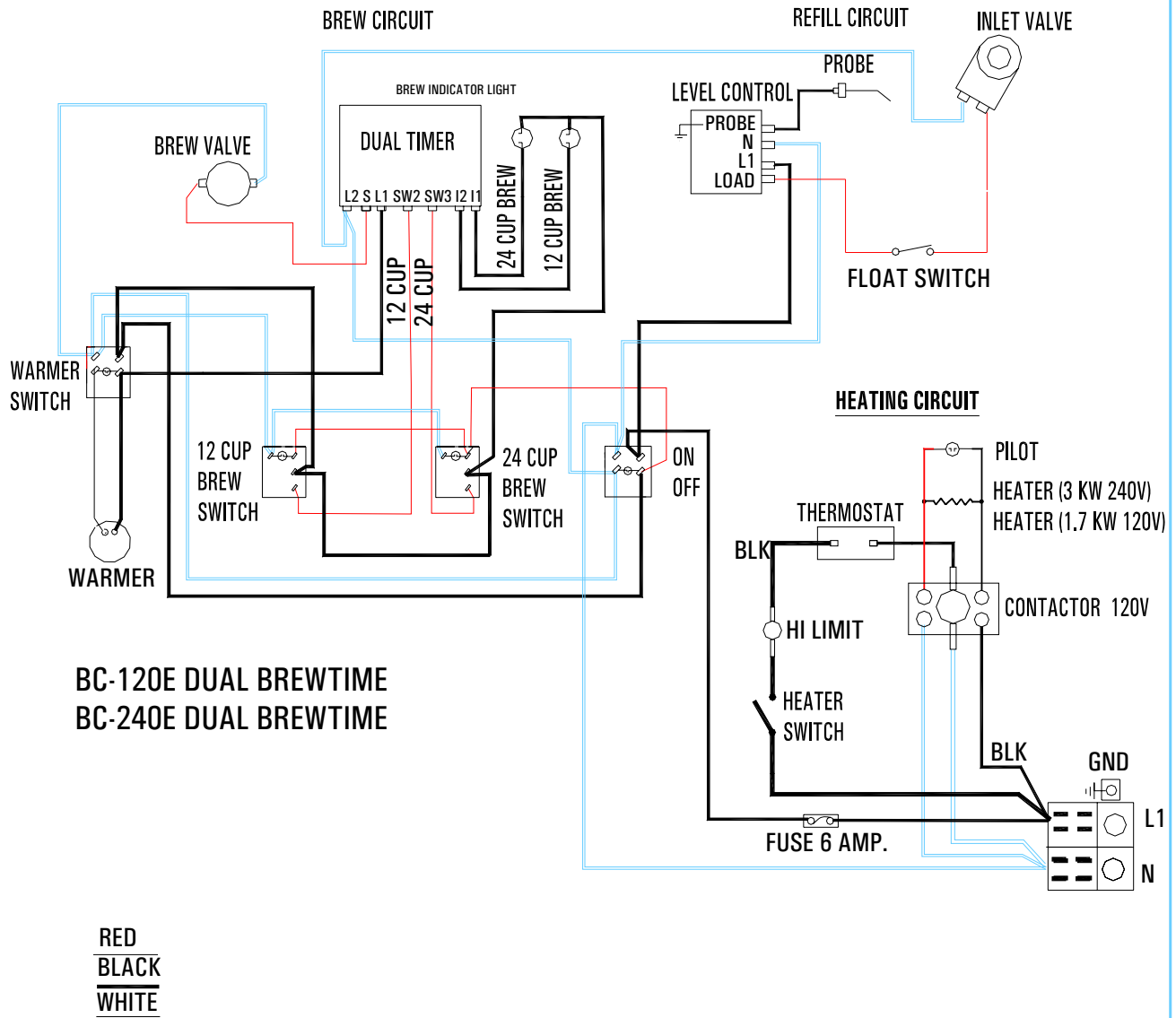


D	C.G.	8/14/2001	REVISED THE HEATING CIRCUIT- CONTACTOR, HI-LIMIT, THERMOSTAT	APP'D BY	DATE	PART NO	N848A
REV	BY	DATE	DESCRIPTION	DRAWN BY	C.G.	DATE	8/13/2001
CECILWARE CORPORATION				43-05 20 AVE. L.I.C. NY 11105			
TITLE: ELECTRICAL DIAGRAM, BC-1E, 120/240, 3 WIRES + GROUND, 3100 WATTS, 14A, 1 PH, 60Hz							REV. D

**N848A**

BC120E 2 WIRES+GRD 1800W 15A 1PH  
BC240E 2 WIRES+GRD 3120W 13A 1PH

**N849A**

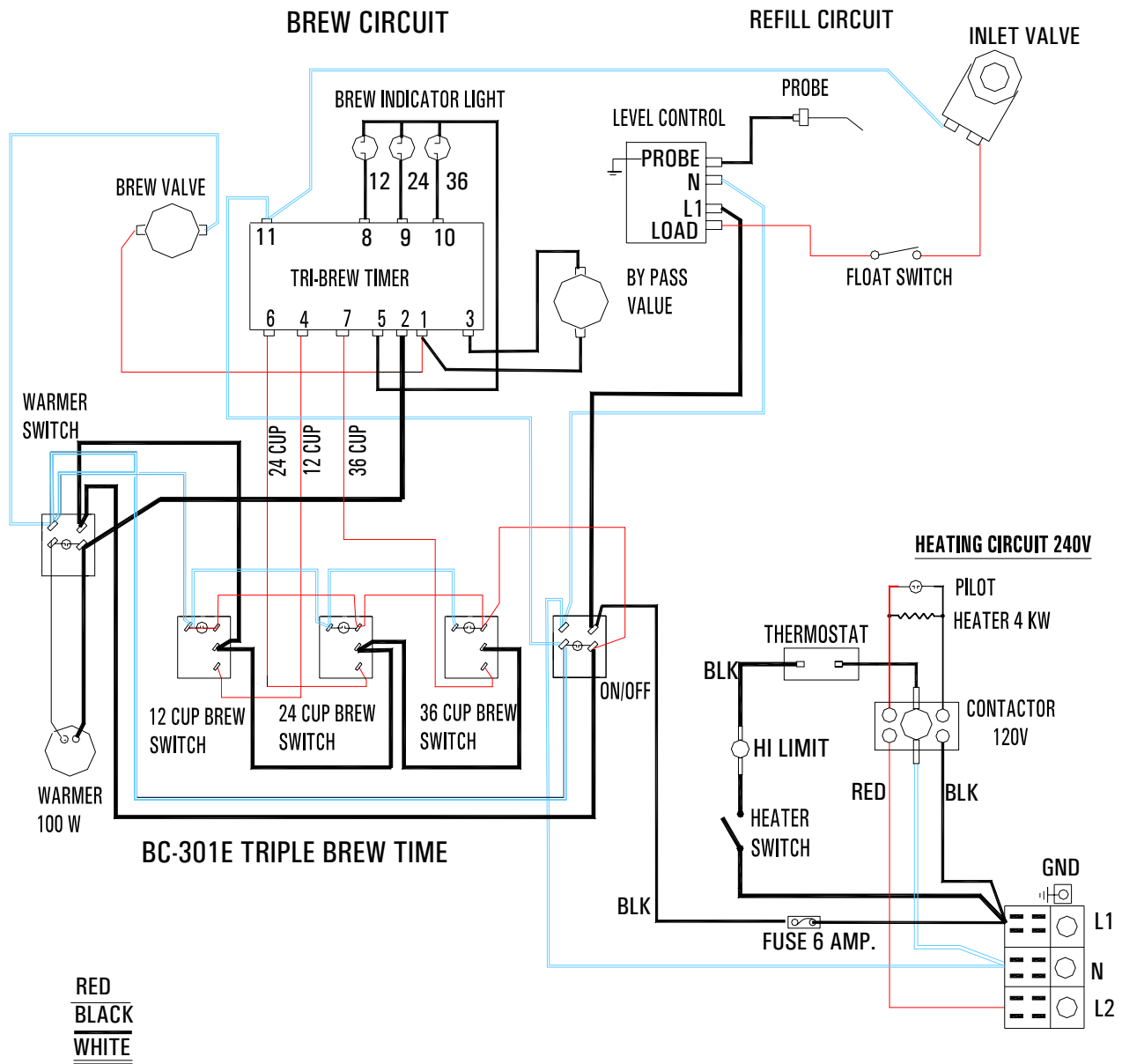


A	C.G.	8/14/2001	REVISED THE HEATING CIRCUIT- CONTACTOR, HI-LIMIT, THERMOSTAT	APP'D BY	DATE	PART NO	N849A
REV	BY	DATE	DESCRIPTION	DRAWN BY	C.G.	DATE	8/13/2001
CECILWARE CORPORATION				43-05 20 AVE. L.I.C. NY 11105			
TITLE: ELECTRICAL DIAGRAM, BC120E, 120V, 2 WIRE+GRD, 1800W, 15A, 1PH, 60HZ / BC240E, 240V, 2 WIRE + GRD, 3120W, 13A, 1 PH, 60 HZ							REV. A

**N849A**

BC-301E 120/240 3 WIRES+GND 4140W 18A 1PH 60HZ

N850A



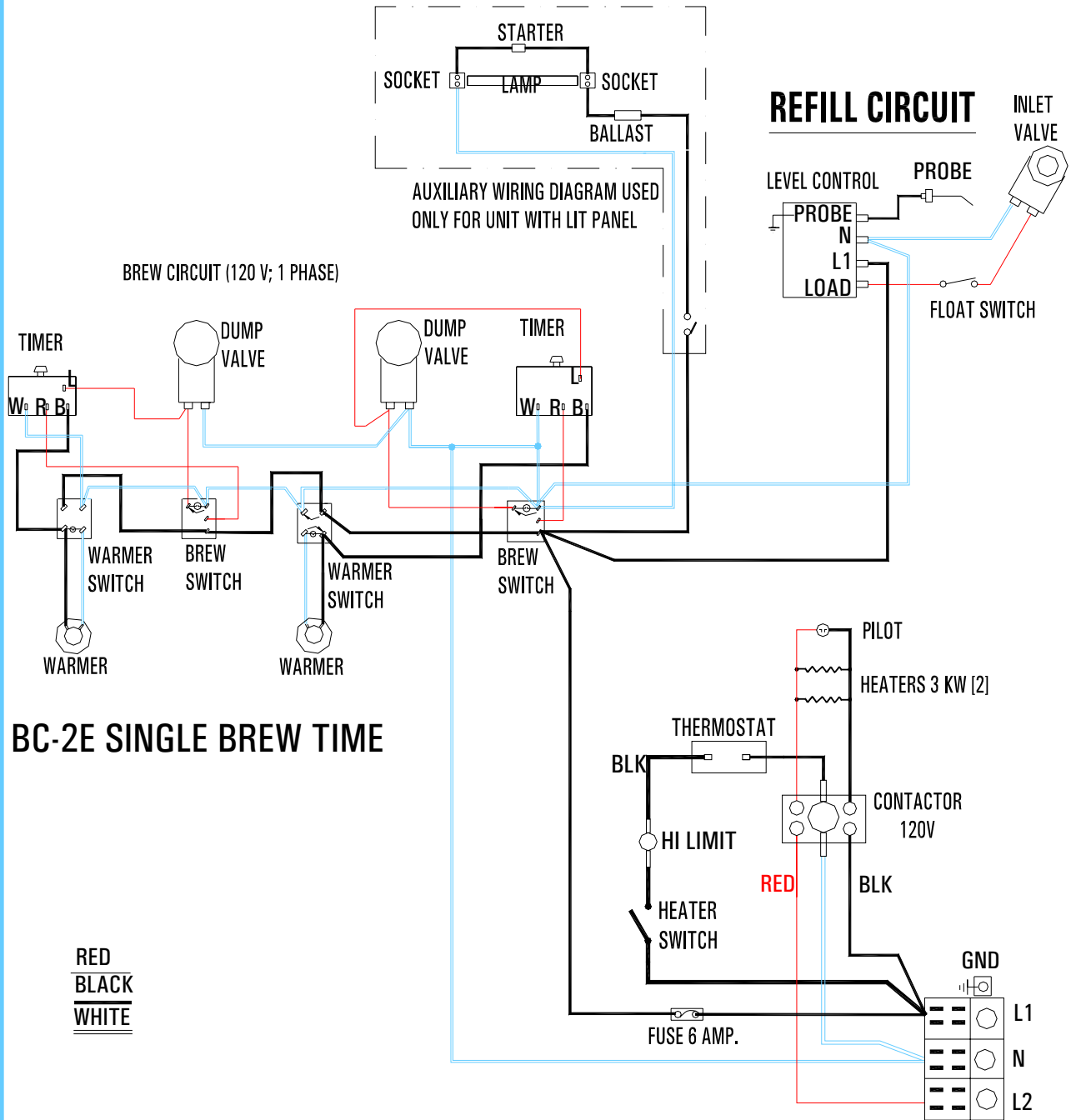
C	C.G.	8/14/2001	REVISED THE HEATING CIRCUIT- CONTACTOR, HI-LIMIT, THERMOSTAT	APP'D BY	DATE	PART NO	N850A
REV	BY	DATE	DESCRIPTION	DRAWN BY	C.G.	DATE	8/13/2001
CECILWARE CORPORATION				43-05 20 AVE. L.I.C. NY 11105			
TITLE: ELECTRICAL DIAGRAM, BC-301E 120/240 3 WIRES+GND 4140W 18A 1PH 60HZ							REV. C

N850A



BC-2E 120/240 3 WIRE+GRD 6230W 26A 1PH 60HZ

N851A

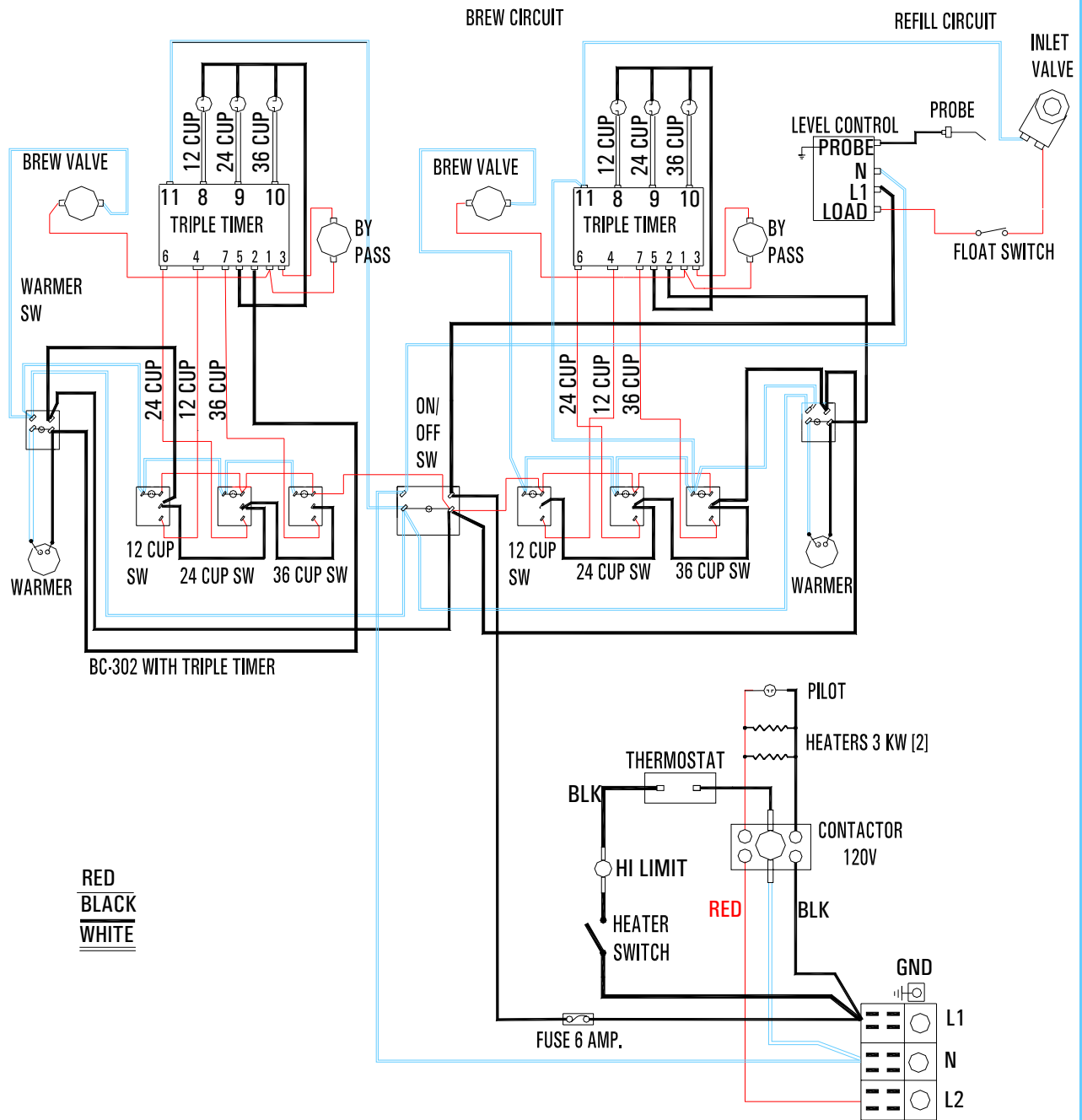


C	C.G.	8/14/2001	REVISED THE HEATING CIRCUIT- CONTACTOR, HI-LIMIT, THERMOSTAT	APP'D BY	DATE	PART NO	N851A
REV	BY	DATE	DESCRIPTION	DRAWN BY	C.G.	DATE	8/13/2001
CECILWARE CORPORATION				43-05 20 AVE. L.I.C. NY 11105			
TITLE: ELECTRICAL DIAGRAM, BC-2E 120/240 3 WIRE+GRD 6230W 26A 1PH 60HZ				REV. C			

N851A

BC-302 6.28KW AT 120/240 50/60HZ, 1PHASE 3WIRES+GND

**N852A**



REV. B < 10. 14. 92 >

D	C.G.	8/14/2001	REVISED THE HEATING CIRCUIT- CONTACTOR, HI-LIMIT, THERMOSTAT	APP'D BY	DATE	PART NO	N852A
REV	BY	DATE	DESCRIPTION	DRAWN BY	C.G.	DATE	SCALE
						8/13/2001	-

**CECILWARE CORPORATION** 43-05 20 AVE. L.I.C. NY 11105

TITLE: ELECTRICAL DIAGRAM, BC-302 6.28KW AT 120/240 50/60HZ, 1PHASE 3WIRES+GND REV. D

**N852A**