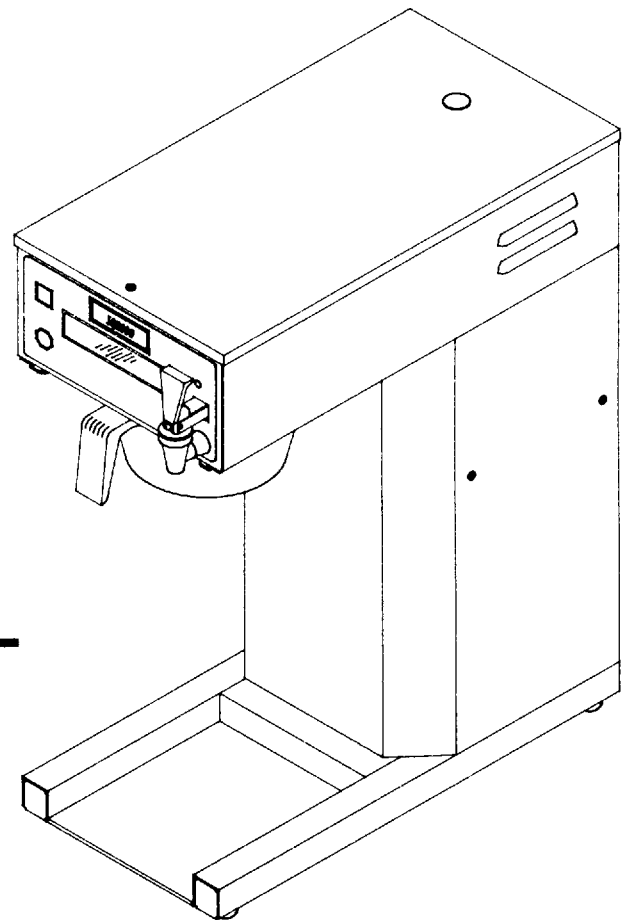
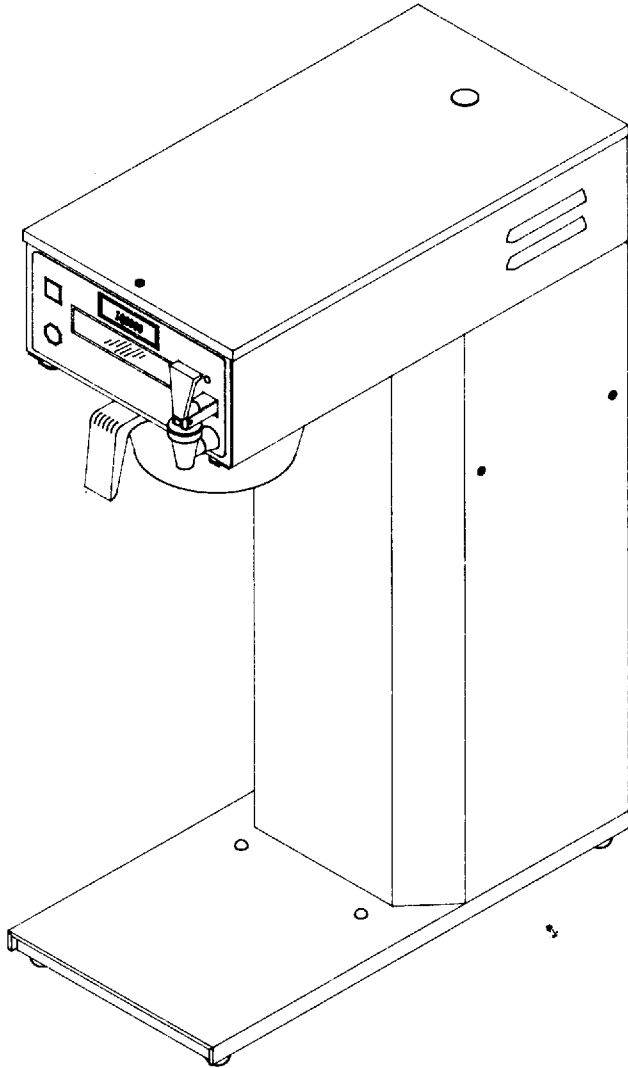


Man P/N 105066-796

# ***IQ2000***



## **OPERATION MANUAL**

*Trouble shooting guide,  
installation instructions,  
wiring schematic*

**GREAT CANADIAN SYSTEM INC.**

**1-800-267-3555**

# OPERATING INSTRUCTIONS

## Installation Instructions

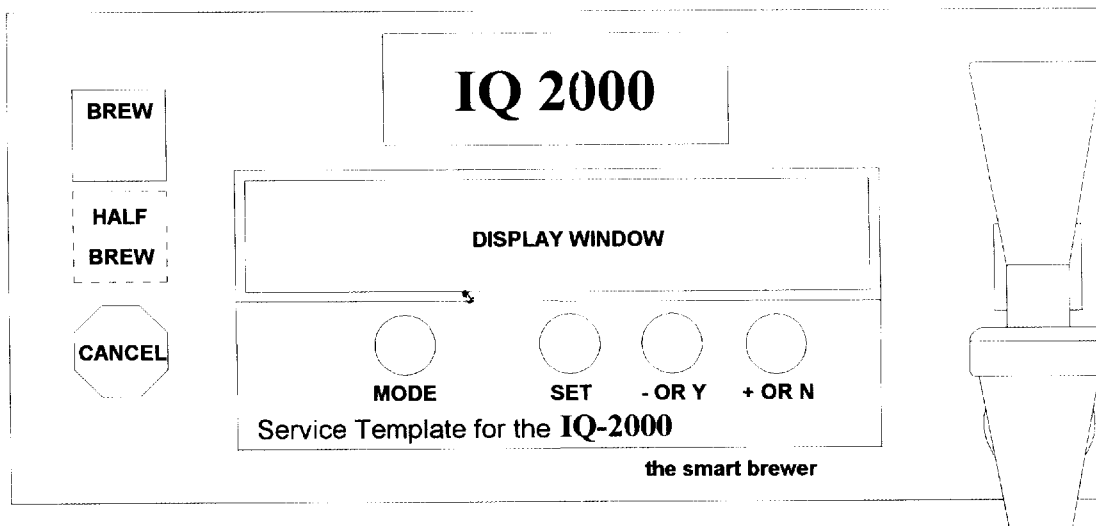
### PLUMBER'S INSTALLATION INSTRUCTIONS

**CAUTION:** Power to brewer must be OFF before proceeding with plumbing installation.

- 1) Plumb brewer in to water supply using 1/4 inch copper or plastic tubing. Flush water line before installing brewer to remove sediment. Brewer should be connected to COLD WATER LINE for best operation.
- 2) Water pressure should be at least 20 lbs. For less than a 25 ft run, use 1/4" tubing and connect to 1/2" or larger water line. The inlet water fitting extending from the solenoid valve on the back of the brewer is a 1/4" compression type fitting.
- 3) Once the brewer is pressurized plug the brewer into a 120 volt power supply.

### Brewer Fill Program

Depress and hold down both the Brew and Cancel Buttons located on the brewer face plate. (See Fig 1 Below). Continue to hold while turning the main ON/OFF switch located on lower left front of column to the ON position. The brewer display will indicate to please wait as it initializes the program /service mode. Continue holding the brew and the cancel button for approximately 10 seconds at which time the brewer will enter the program/service main menu. The display will read "SELECT MODE PGM SRV". Programming is done through the 4 hidden buttons located under the display. Depress the hidden switch located under the SRV symbol which will place the brewer into the "Service Program Mode". To make the buttons easier to locate attach a service template to the faceplate of the unit aligning it with the display window as shown in the figure below.



Depress the "MODE" button. The display will change messages. Continue to depress the MODE button until you reach the "FILL TANK PRESS BRW1" message. Depress the BREW switch and the brewer filling process will begin. Brewer fill process will take between 4 and 5 minutes. The tank heater in the brewer will automatically turn on when the water makes contact with the heater safety probe. This will prevent damage to the tank heater from turning on the element too early. The brewer will continue to fill until the water level in the tank reaches the upper probe. The Tank Fill Program has a maximum run time of 5 minutes which is designed to provide overflow protection. The brewer heating system will take approximately 15 minutes to reach the preset temperature of 205 degrees.

### Brewer Programming & Calibration

During the filling and heating process you may continue to program many of the brewer functions and customized features. Depress the MODE button until the display reads "SELECT MODE PGM SRV". Press PGM or SRV button for desired program. By continuing to depress the MODE button you may cycle through all available options as explained beginning at the top of the next page.

**BREW TIME #1: 3:15**

This is the length of time which the dump valve will remain open to allow water to flow over the ground coffee. It is the active portion of the brew cycle. The "-" or "+" keys may be used to scroll the time up or down as required. Note that the rate at which the display will change will vary depending on how long the buttons are continuously held down. The display will initially change in increments of one. As the button is held down the rate of change will increase. The brewer incorporates an "Auto Calibrate" mode which is a convenient option for setting the brew time. It works as follows: Place the container to be filled into place below the brew basket (brew basket should be empty). depress the brew button and the brewer will begin to brew while counting up the time. When the decanter is filled to the desired level depress the cancel button followed by the set button and this time will be programmed into the brew time. Maximum programmable time is 5 minutes and 20 seconds.

**BREW #2 EN : Y <N>**

Enable the second brew function. This is the brew cycle which would be initiated by depressing the hidden button labeled in Fig 1 as HALF BREW. If this feature is desired depress the "Y" followed by the SET button.

**BREW TIME #2: 1:38**

If you answered yes to the previous option you will be asked to set the brew time for this function. Follow the steps previously outlined for brew time number one above.

**BUZZER DELAY: 0:20**

This function is to set the delay for the buzzer, indicating that the coffee is finished brewing, from the time which the dump valve shuts off until the coffee finishes dripping from the brew basket. This is the second portion of the brew cycle. Maximum buzzer time and delay is 2 minutes. Once time is determined depress the set button to store it.

**AUTO ARM EN :<Y> N**

Enabling the auto arm function will not allow the brew cycle to start until the water temperature is at the preset temperature level if the brew button is pressed while the tank is heating. The display will however indicate that "BREW CYCLE ACTIVATED" to aid in preventing the decanter from being removed prematurely. Depress the set button to store.

**BRW TIME REM:<Y> N**

Answering yes enables the brew time remaining to be displayed during the brew cycle. The brew time and the buzzer delay are added together for the total brew time. The time remaining and COFFEE BREWING will flash successively on the display. Depress the set button to store.

**TEMP. -++++++|+**

This is the method for controlling the water temperature in the tank. It is similar to the function of a thermostat knob. Use the "-" or "+" keys to move the bar up and down the graph to increase or decrease the tank temperature. The temperature at the low end of the graph is approximately 170 degrees and at the upper end approximately 212 degrees. Depress the set button to store.

**PWR SAVE EN :<Y> N**

When power save is enabled the brewer will allow the tank temperature to drop to the standby temperature of approximately 170 degrees in order to reduce power consumption when the power switch on the column is turned to the OFF position. When this feature is not enabled the tank temperature will be maintained at the brew set point temperature. Depress the set button to store.

**BUZZER TYPE: SPULSE**

There are 4 possible selections for the buzzer indicating the end of a brew cycle. They are SPULSE or single pulse, STEADY for a steady tone, BURST for a series of burst, or DPULSE for a double pulse tone. Use the "-" or "+" keys to make your selection. Depress the set button to store.

**KYPD BEEP EN:<Y> N**

This enables a short audible tone to be sounded whenever a key is depressed to provide audible reassurance that the button was indeed pressed and the function initiated. Select N to disable this function. Depress the set button to store.

**SRVC CYCLES: 400**

This feature allows you to program in the number of brew cycles which you want to run before the brewer automatically displays the call for service message so that routine maintenance may be performed. The brewer will continue to operate even though this message is displayed. Depress the set button to store.

**CUSTOM MSG : 0**

This provides the option for selecting one of 24 company names and phone numbers to scroll across the display. READY TO BREW, the company name, and the phone number will alternate displaying. The company codes are as follows:

00	AMBASSADOR COFFEE	774-1824
01	ARBUCKLE COFFEE	522-9944
02	ARBUCKLE COFFEE	1-800-663-1058
03	ARBUCKLE COFFEE	384-4705
04	COFFEE BREW SERVICE	287-3777
05	EXECUTIVE COFFEE	754-9200
06	EXECUTIVE COFFEE	1-800-900-9229
07	IMPERIAL COFFEE	1-416-638-7404
08	INTERNATIONAL BLENDS	722-8127
09	INTERNATIONAL BLENDS	328-1717
10	INTERNATIONAL BLENDS	342-6598
11	NATIONWIDE GOURMETS	681-4270
12	NATIONWIDE GOURMETS	1-800-404-8855
13	NOVA COFFEE	468-2665
14	NOVA COFFEE	1-800-665-2715
15	SAFARI COFFEE	861-5848
16	ARBUCKLE COFFEE	861-5848
17	TAKE A BREAK COFFEE	226-1414
18	TAKE A BREAK COFFEE	388-1139
19	TAKE A BREAK COFFEE	333-6309
20	ARBUCKLE COFFEE	226-1414
21	UNIQUE COFFEE	888-9880
22	UNIQUE COFFEE	1-800-281-7214
23	WORLD WIDE COFFEES	437-3997

\* Select message by depressing the set button. Note: The custom message and phone number will then be programmed. After selecting the custom display, depressing the MODE button will display a message asking if you wish to exit the program mode, "EXIT PGM MODE<Y> N ". select "Y" or "N" and push set. If no was selected you will be returned to the program/service main menu. The display will read "SELECT MODE PGM SRV". Select "SRV" to enter the service menus.

**Service Messages**

To display the service messages turn the main ON/OFF located on lower left front of column to the OFF position. Depress and hold down both the Brew and Cancel Buttons located on the brewer face plate. Continue to hold while turning the ON/OFF switch to the ON position. The brewer display will indicate to please wait as it initializes the program /service mode. Continue holding the brew and the cancel button for approximately 10 seconds at which time the brewer will enter the program/service main menu. The display will read "SELECT MODE PGM SRV". Depress the hidden switch located under the SRV symbol which will place the brewer into the "Service Program Mode". Depress the "MODE" button to cycle through the messages.

**TOTAL CYCLES**      Factory fixed. This number is the cumulative brewer cycles and can not be altered.

**ACCOUNT CYCLES**      To reset, hold down the set button for 3 seconds. The count will be reset to 0.

**SERVICE CYCLES**      To reset, hold down the set button for 3 seconds. The count will be reset to 0.

**FILL TANK PRESS BRW1**      This function is for the initial tank fill cycle as explained in the Brewer Fill Program section on page 1.

## Error Messages

Error messages are reached under the service mode which is accessed as described above. When asked to "DISPLAY ERROR" choose Y and depress the set button. The error will be displayed.

**CALL FOR SERVICE** ; Only displays when an error occurs. Scrolls the phone number.

**ERR ; FILL PROBE** The fill solenoid, in a normal brew, has run longer than 60 seconds with out the water level in the tank making contact with the water level probe. check the water supply or solenoid valve. Note: The maximum run time on the tank fill program has been extended to 5 minutes. To clear the error depress the set button. A fill error will disable brewer from brewing. If a brew cycle is initiated the message "BREW CYCLE ABORTED" will be displayed followed by "CALL FOR SERVICE" message and the phone number.

**ERR ; SAFETY PROBE** The heater element is disabled. Check the water level in the tank. The brew cycle will function but the tank heater will be disabled. To clear the error depress the set button.

**ERR ; OPEN TMP SENSOR** The heater element is disabled. Check the thermistor in the tank. The brew cycle will function but the tank heater will be disabled. To clear the error depress the set button.

**ERR ; SHORTED TEMP SENSOR** Same as open temp sensor. To clear the error depress the set button.

## Other Brewer Message's

"READY TO BREW" - This message will be displayed while the brewer is not in use.

"BREW CYCLE ACTIVATED" When a brew cycle is initiated , whether the brewer is up to temperature or not, this message will appear and continue to flash until the brew cycle has started.

"COFFEE BREWING" Once the brew cycle starts this message will continue to flash throughout the brew cycle

"BREW TIME REMAINING" Y N This optional feature will randomly display the time remaining before the brew cycle is completed .

"COFFEE READY" this message will flash for one minute after the completion of a brew cycle.

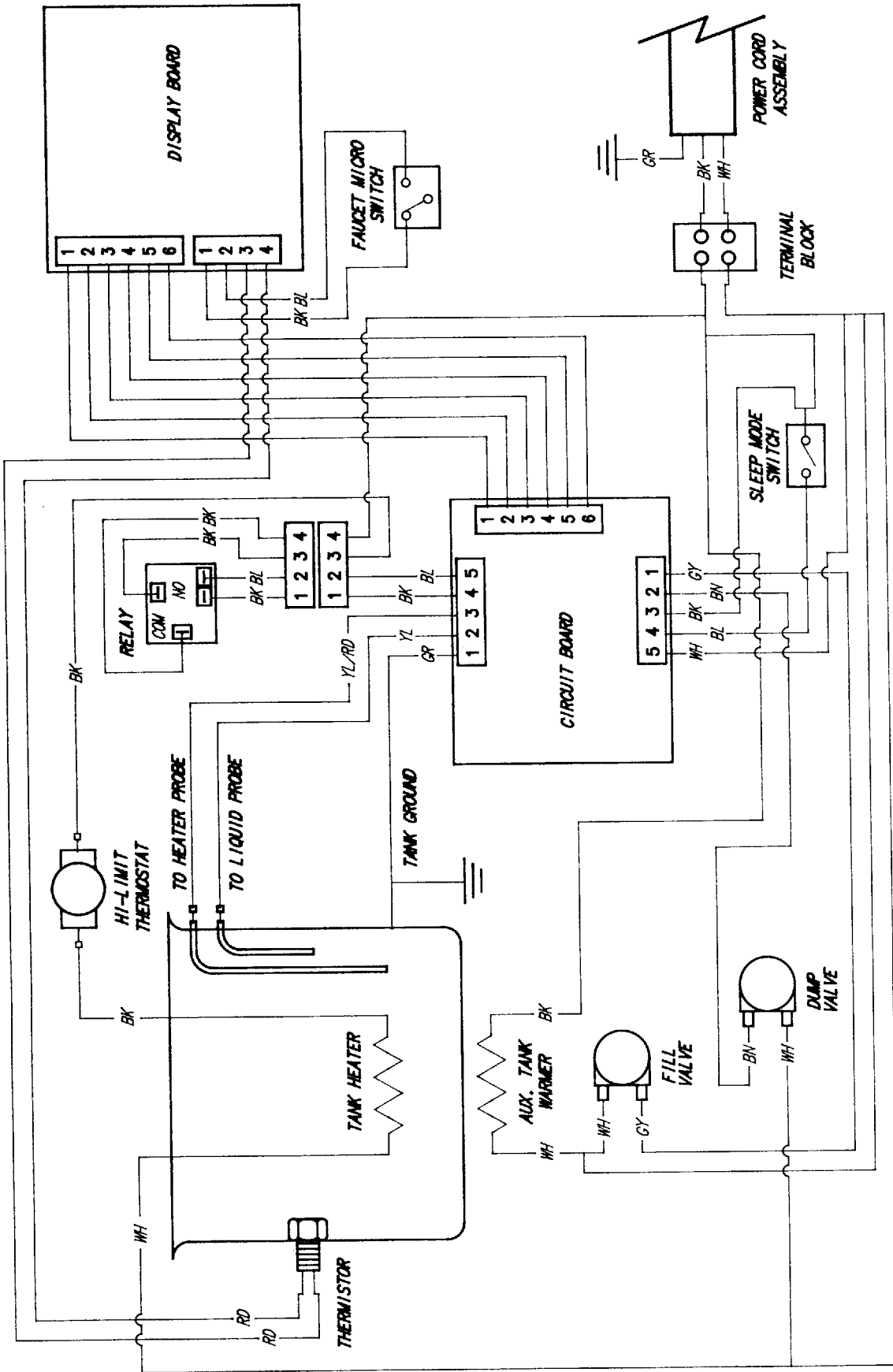
'BREW CYCLE ABORTED' this message will flash for 5 seconds and an audible signal will sound to alert the user that the brew cycle has been terminated prematurely.

## Program Mode Messages

### **Brewer Messages**

All programming and calibrations are done through the front plate switches and the display . To help you with understanding how the brewer operates , we will start with the messages that you and your customer will see during the normal operation of the brewer .You have several options which allow you to custom tailor the brewer operating features to your customers desires.

The messages that will be displayed when the brewer is not in use will be " READY TO BREW " which will scroll on the screen and stop for 5 seconds, and then your custom messages, " YOUR COMPANY NAME " and "YOUR PHONE NUMBER" will scroll and stop for 5 seconds. If a brew cycle is initiated , the display will flash the " COFFEE BREWING " message for 5 seconds and then display "TIME REMAINING" for 3 seconds and continue to repeat these messages until the brew cycle is completed . At the end of the cycle a "COFFEE READY " message will flash for 1 minutes



IQ SCHEMATIC

## **IQ 2000 TROUBLE SHOOTING GUIDE**

### **SYMPTOM : BREWER DISPLAY WILL NOT LIGHT UP**

The brewer may not be receiving power , check to make sure that you have the correct voltage at the receptacle for the brewer , check the serial tag for the correct voltage for the brewer . If voltage is present there are 3 areas which should be checked in the following sequence.

Unplug brewer and remove top cover as well as the rear back panel.

1. Check the fuse located on the lower board located on the left side of the brewer , if fuse is blown replace .

2. Check the ON/Off power switch for continuity which is located at the front of the brewer. Access to the switch is through the rear back panel. If the switch does not make & break contact , replace switch.

3. Check the temperature sensor located at the rear of the tank using a continuity meter. Loosen the wire nuts one at a time and check to see if there is continuity between the wire lead and the tanks. If there is continuity replace the temperature sensor .

### **SYMPTOM : BREW START IRREGULARITIES**

If the brewer either operates without depressing the brew switch or will abort the brew cycle when the brew switch is depressed , there may be a switch which is stuck closed on the upper board.

To check , Refer to Pg 1 under the instructions for the Brewer Fill Program , Place a Service Template under the display window and following the steps to place brewer in the program mode, Select Program and scroll down to Key Pad Beep , if not in the yes mode select yes and depress the mode switch .

Then depress each area on the face plate where a switch is located , as you depress you should hear a beep. If a beep does not occur you may need to adjust the nuts holding the board to the face of the brewer.

Unplug the brewer and remove the top cover , using a small nut driver slowly loosen the nut located closest to the switch not operating , you should be able to feel a click or snap , this will indicate the switch is released. If this fails to correct the problem then the board would need to be replaced.

### **SYMPTOM : ERROR MESSAGES**

If a CALL FOR SERVICE shows up on the display , refer to Pg 3 for instruction and procedures to access the error. The following is a list of ERROR'S .

1. Fill Probe :Refer to Pg 4 for the description and the reason the ERROR has come up. The problem usually is the result of poor water supply . Check your water supply up to the brewer to see that you are receiving adequate flow . If yes loosen the brass cap on the inlet of the water solenoid and check to see if there is debris blocking the opening. If the water flow and valve appear to be normal it may be necessary to change the flow washer located internally in the solenoid . In some instance because of Low Water Pressure we recommend increasing the size of the flow washer to .75 or 1 gallon per minute to increase the flow rate to the brewer . If the hot water faucet is being used heavily you may need to restrict the flow rate out of the faucet.

2. CALL FOR SERVICE : Brewer operates normally and you are receiving the CALL FOR SERVICE , you need to reset the SERVICE CYCLE number. Refer to Pg.3

for a description and instruction for resetting. ( **SAMPLE SYMPTOM: NO HOT WATER / CONTINUOUS BOILING** )

3. Safety Probe: Refer to Pg 4 for the description and the reason the ERROR has come up. The problem usually is the result of lime insulating the metal surface of the probe. Clean and replace. ( **SAMPLE SYMPTON: NO HOT WATER / CONTINUOUS BOILING** )

4. Open Temp Sensor : Refer to Pg4 for description . Unplug the brewer from power , to check the thermistor or temperature sensor you will need to remove the top cover and rear panel of the brewer , loosen the wing nut and use a continuity tester to check for a continuity between the 2 wire leads . If there is no continuity or there is continuity between one of the wires and the tank the sensor needs to be replaced. ( **SAMPLE SYMPTON: NO HOT WATER / CONTINUOUS BOILING** )

After you have reset the error, and the brewer continues not to heat , there are 3 areas which should be checked. Unplug the brewer and remove the top cover and rear panel. With a continuity meter check to see if the tank element and the safety thermostat have continuity. Some of the original models used a manual reset safety thermostat, check to make sure the red button is pushed in. If both of components check out OK , then you will need to replace the relay located in the rear of the brewer mounted on the brewer base.

If the brewer continuously heats and is not able to be adjusted by the temperature controls , the relay will also need to be replaced. The relay is a wear part which is operating approximately 45,000 times a year. To replace , disconnect the wires and loosen the screws holding the relay to the brewer base.

### **SYMPTOM : SOLENOID NOISE**

The noise level of the solenoid valve opening and closing during a brew cycle can be annoying. This usually is the result of high water pressure or running the brewer off of a hot water supply. The common solutions are either incorporating a pressure regulator or a water arresstor in the incoming water line before the brewer . We have recently introduce a new adjustable flow valve called the PDS valve. These devices will reduce the noise level .

### **SYMPTOM : WATER KEEPS RUNNING / DRIPPING**

If water drips or continuously flows from the brew basket the outlet dump valve may need to be replaced due to Liming . The valve can be dissemble and cleaned and a replacement repair kit is available. If the brewer is overflowing internally , this can be checked by unplugging the brewer and removing the top cover to gain access to the tank. Remove the tank lid and check to see if the water level in the tank is above the overflow tube. This would indicate that the valve is leaking and would need to be replaced.