

User Programming

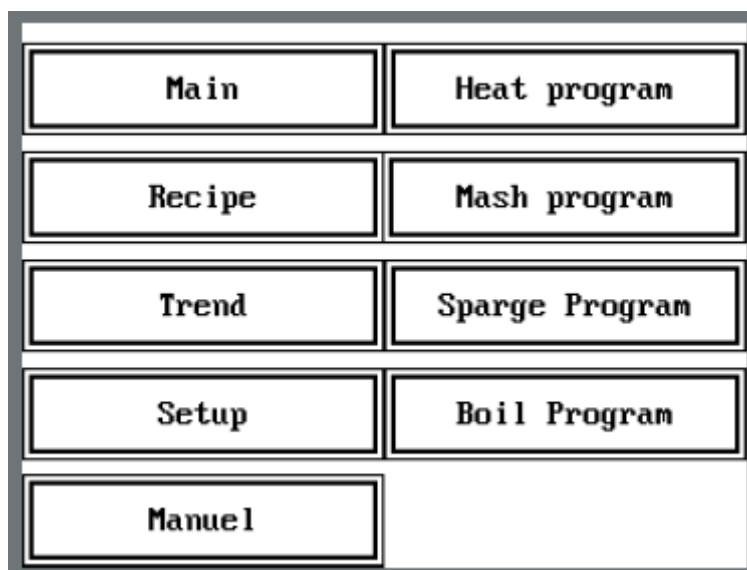
Introduction

The range of Brew4You systems can be programmed in order to assure, that the brewing proces are carried out automatically and strictly according to the parameters set by the Brewmaster. The parameters are divided into System Parameters and specific Brew Parameters for the beer in question.

The Touch Screen Control Panel is activated by pressing a finger on the given area/menu point.



Press <MENU> to get into the the Main Menu.



System Parameters

From the Main Menu, access to the system parameters is given by pressing <Setup>.



In order to allow for changing the parameters, login is needed. Press <Login>, then password (factory setting = 1234). There are 4 system parameters, each of which can be changed by pressing the frame next to the parameter. Enter the new value for the parameter on the keyboard, that will emerge on the screen. The parameters are :

1. **Mashtun Setpoint +/-** : This parameter controls the deviation from the Mashtun Setpoint as defined in the Recipe. Factory settings are + 0.0 degrees C and – 0.3 degrees C. If the setpoint as an example is 68 degrees C, the temperature in the Mashtun will be kept in the range 67.7 degrees C to 68.0 degrees C.
2. **HLT (Hot Liquor Tun) Setpoint +/-** : Same function as above. Factory settings are +/- 0.5 degrees C.
3. **Sparge pump delay** : During sparging, the Level Sensor mounted on the Sparge Ring will assure, that the Grain Bed constantly will be covered by a certain amount of water. When the hot wort, during sparging, is transferred to the Boil Kettle, the level of water in the Mashtun will fall. The Level Sensor then signals the Pump to add more hot water from the HLT. The delay, measured in seconds, will assure, that the Pump is not turned on and off constantly. Factory setting is 3 seconds.
4. **Clock** : Parameter for Date and Time.

Brew Parameters

The Brewing Proces are divided in 4 programs :

1. **Heat Program** : The aim of this program is to raise the temperature of the water in the HLT and the Mashtun to the desired level, before adding Malt and starting Mashing.
2. **Mash Program** : This program is subdivided in up to 5 steps, so that multi rest Mashing can be performed, depending on type of Beer, Recipe and personal preferences. For each step, the desired temperature in the HLT and Mashtun as well as the time for the temperature rest is entered. The system will automatically go through all steps, giving a "beep" when transferring from one step to the next, and an alarm, when the Mash Program is completed.
3. **Sparge Program** : This program controls the temperature of the sparge water added from the HLT during sparging. It also controls the Level Sensor in the Mashtun, assuring a constant level of water over the Grain Bed, when the sweet wort is transferred to the Boil Kettle assuring, that the Grain Bed is not compacted and made impermeable.
4. **Boil Program** : This program keeps track of Boiling Time. Total boiling time is entered. The program is started, when the Hot Break occurs, and it is time for the first hop addition (Bitter Hops).

Entering parameters, and using the Heat Program :

From Main Menu, press <Heat program>.

The screenshot shows a terminal-style interface for the 'Heat Program menu'. It features four rows of input fields for temperature and time, and a status indicator. At the bottom, there are four buttons: MENU, SETUP, START, and STOP RESET.

Heat Program menu			
Mashtun C. --0.0	<input type="text" value="--0.0"/>		
HLT C. --0.0	<input type="text" value="--0.0"/>		
Time total	<input type="text" value="--0:00"/>		
Status:	<input type="text" value="BUSY"/>		
<input type="button" value="MENU"/>	<input type="button" value="SETUP"/>	<input type="button" value="START"/>	<input type="button" value="STOP
RESET"/>

The program is started by pressing <Start>. The program can be temporarily stopped by pressing <Stop Reset> and restarted by pressing >Start>.

Reset the program by pressing and holding down <Stop Reset> for 3 seconds.

The top of the display shows the Set-Points for the Mashtun and the HLT, and (in frames) the actual temperature in the 2 kettles.

The Timer keeps track of elapsed time since the program was started.

Status shows <Busy>, if program is running, <Pause>, if program is temporarily stopped, and <Ready>, if program is ready to start.

By pressing <Menu>, the user is back in the Main Menu.

To enter parameters in the Heat program, press <Setup>.



By pressing separately on the 2 frames, a keyboard emerges, and the desired temperature can be entered. When both parameters are entered, press <Back> (and possibly <Menu> to get back to the main Menu).

Entering parameters, and using the Mash Program :

From Main Menu, press <Mash Program>

The screenshot shows the 'Mash Program menu' with the following fields and buttons:

- Mashtun c. --0.0 [--0.0]
- HLT c. --0.0 [--0.0]
- Mash **0** Time [--0:00]
- Time total [--0:00]
- Status: [BUSY]
- Buttons: MENU, SETUP, START, STOP RESET

Start and Stop as in Heat program. Set-Points and actual temperatures in the 2 kettles also as in Heat program, noting, that these will of course change as a function of the current Mash Step (1-5).

Mash Time shows the remaining time for the given Mash Step. Time Total shows total elapsed time from start of Mash program, including the transit time when moving from one temperature rest to the next.

To enter parameters in the Mash program, press <Setup>

The screenshot shows the 'Mash Program setup' screen with the following layout:

	Mashtun	HLT	Time
Mash 1:	[--0.0]	[--0.0]	[--0]
Mash 2:	[--0.0]	[--0.0]	[--0]
Mash 3:	[--0.0]	[--0.0]	[--0]
Mash 4:	[--0.0]	[--0.0]	[--0]
Mash 5:	[--0.0]	[--0.0]	[--0]

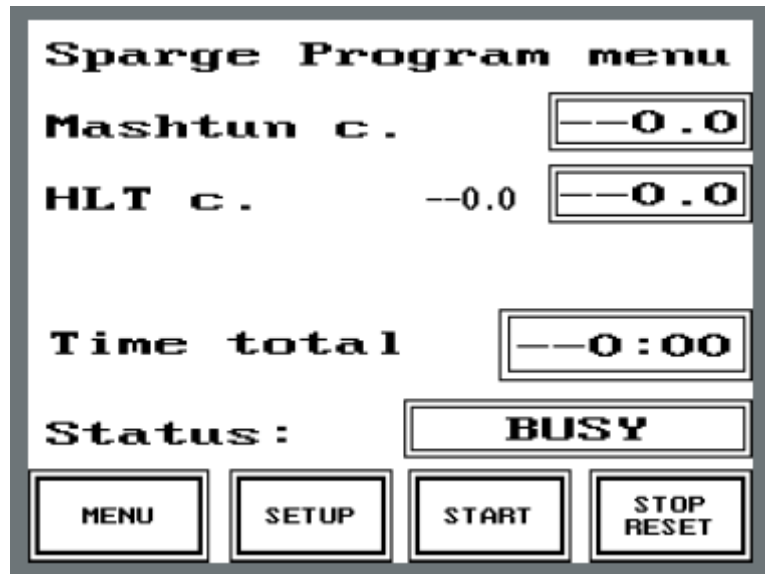
[BACK]

Press the frame on the parameter in question, a keyboard emerges, and the parameter can be entered. If not all Mash Steps are needed, enter <0> in Time for these steps.

Press <Back> (and possibly <Menu> to get back to the Main Menu)

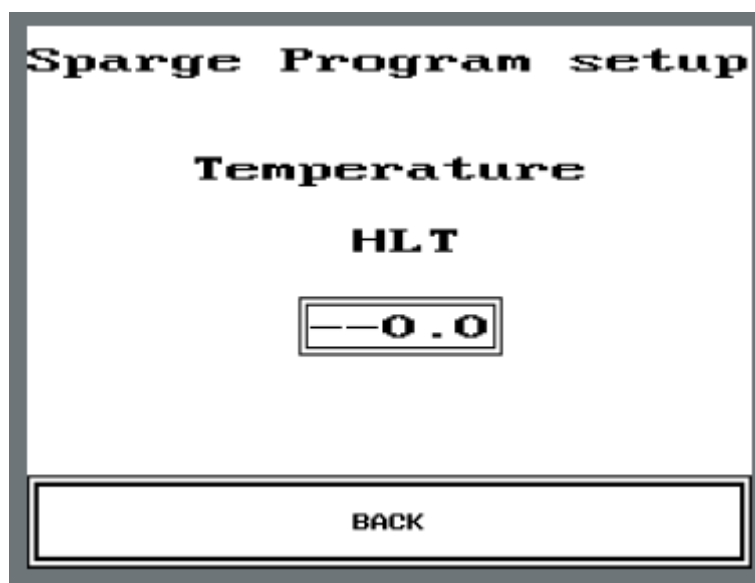
Entering parameters, and using the Sparge Program :

From Main Menu, press <Sparge program>.



On the screen, the Set-Point for the HLT temperature is shown, and in frames, the actual temperature in the 2 kettles.

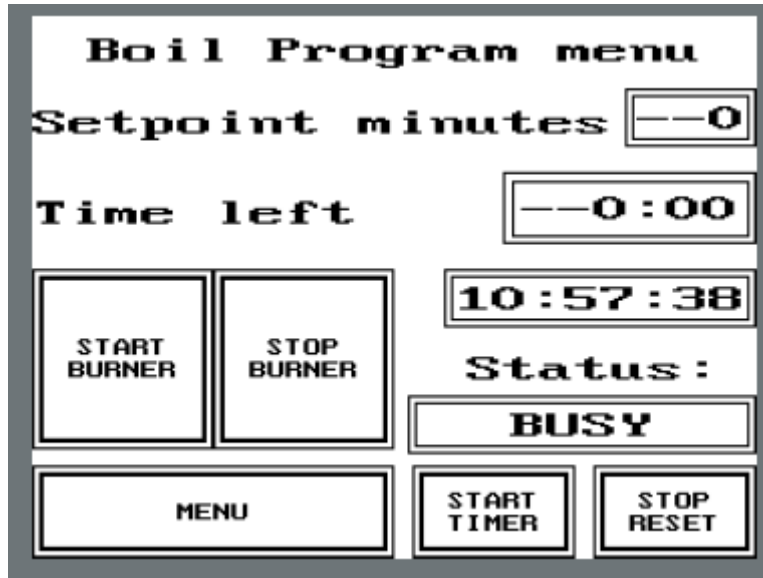
To enter parameters in the Sparge Program, press <Setup>



The desired temperature is entered. Then press <Back> (and possibly <Menu> to get back to the Main Menu).

Entering parameters, and using the Boil Program :

From Main menu, press <Boil Program>



Next to Setpoint Minutes, total boiling time can be entered. To get the wort boiling, the Burner can be started manually by pressing <Start Burner>. When the wort is boiling, and the bitter hops are added, start the program by pressing <Start Timer>. Clock will then count down to zero, automatically stop the Burner, and sound an alarm to signal, that the program is completed.

Press <Menu> to get back to the Main Menu.

Recipe

From Main Menu, press <Recipe>

Recipe menu				
	Mashtun	HLT	Time	
Heat:	--0.0	--0.0		LOAD
Mash 1:	--0.0	--0.0	--0	
Mash 2:	--0.0	--0.0	--0	SAVE
Mash 3:	--0.0	--0.0	--0	
Mash 4:	--0.0	--0.0	--0	DELETE
Mash 5:	--0.0	--0.0	--0	
Sparge:		--0.0		BACK
Boil:			--0	

In this Menu, the Recipe, that have just been created, can be seen all together. It can be saved by pressing <Save>, and then, via the keyboard, the name. The Recipe can be loaded again by pressing <Load>, then selecting the Recipe from the list. Finally, Recipes can be deleted permanently, by loading, followed by pressing <Delete>.

This Menu can be used as a means to enter the entire Recipe, and as such, is a short cut compared to the previous sections. Parameters are entered from top down (remember <0> in Time for Mash Steps not used)

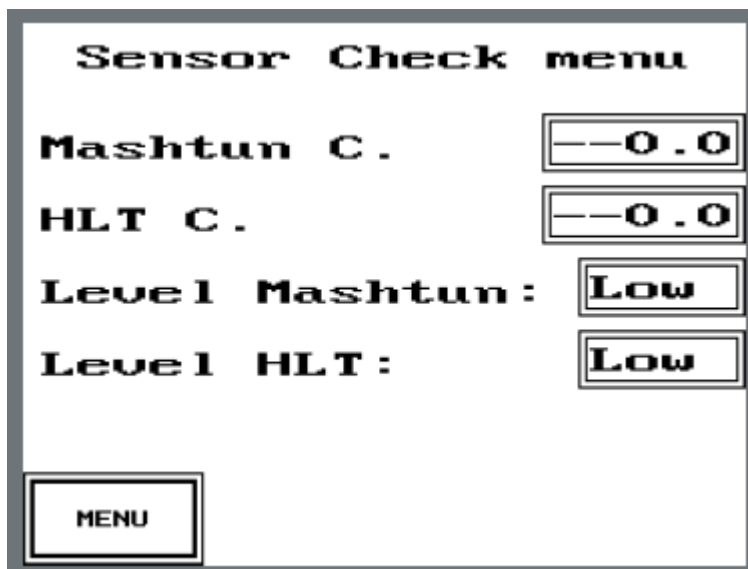
Manuel

Manuel menu	
Pump	Burner
START	START
STOP	STOP
Status:	BUSY
MENU	Sensor Check

It is possible to run manually. From Main Menu, press <Manuel>.

In this Menu, the Burner and the Pump can be started manually. This opportunity is well suited for cleaning processes, preparation before brewing etc. Also, it is used to start the Pump, when the wort, after boiling, is transferred to the Fermenter via the Counterpressure Chiller

The System Sensors can be checked by pressing <Sensor Check>.



The display shows actual temperatures for Mashtun and HLT as well as status for the level indicators (Low = open, High = Closed).

Trend

From Main Menu, press <Trend>

The display shows graphically, how the temperature in the Mashtun and HLT varies over time during the Mash Program.