EINBREW 1V1P

Electric Brewing Controller

For BIAB, 1 & 2 Vessel Systems, Nano and Micro Breweries.

USER INSTRUCTIONS

INTRODUCTION

Congratulations on your investment in an EINBREW 1V1P electric brewing controller. Our precise temperature control, automatic mash steps, Boil Detect and hop insertion alarms means that you can focus on what you really want – making great beer with your home brewery.

There's nothing as satisfying as putting together your own brewery, however dealing with complex electrical and temperature control can be concerning – not only making sure everything works the way you want, but safely too! EINBREW 1V1P takes away those concerns with a flexible, configurable and industrial-grade control system – all expertly engineered into an easy to install package. Just plug in your heater and pump, no electrician or electrical experience needed!

We'll work with your existing heater and pump – no need to purchase additional, expensive equipment. Our control will help you make a great batch of sweet wort every time, and give you the repeatability you want.

Our temperature control will automatically adjust itself to your system's requirements – you don't need to be a chemical engineer to get brewing.

These user instructions will help you get the best out of your EINBREW 1V1P system and allow you to use it safely, and we recommend you read through them fully before installation and starting your brew day!

For further help, search 'EINBREW' or '1V1P' on YouTube.com

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SAFETY INFORMATION

- Please inspect your EINBREW 1V1P system and accessories for damage when you receive it. If there is any damage, please do not use the system and contact your supplier or Support for assistance.
- Do not operate the system if the power leads show any signs of damage or wear.
- If you need to clean the surface of your EINBREW 1V1P system, please ensure that it is fully disconnected from the mains supply beforehand. We recommend removing the plug from the socket to ensure disconnection. Use only a damp cloth and do not allow liquid to come in contact with EINBREW 1V1P, and ensure the vessel is dry before reconnecting the electricity supply.
- **The EINBREW 1V1P MUST be used with a RCD/GFCI/RCBO device. Ensure that you test it prior to every use.**
- Ensure that the supplied power lead is fully unwound during use. If using any extension leads, ensure that they are fully unwound and have a 15A+ current capacity when unwound.
- EINBREW 1V1P is not to be used by children or vulnerable adults, or around pets. Please ensure that the device is only used with adequate supervision to ensure safety.
- EINBREW 1V1P does not contain any internal user serviceable parts, and should not be disassembled or repairs attempted. Please contact your supplier or Support for any assistance required.
- Ensure that EINBREW 1V1P is positioned as far away as possible from liquids and vapours being used in the brewing process or condensate paths that may form – its enclosure is not water-tight.
- You must manually control the Pump during brewing. This is especially important if you are using a RIMS system, as it can be dangerous to operate the heater without the pump and water circulation.
- Do not operate your brewery or EINBREW 1V1P unless you are certain it has been correctly and safely setup. You may need to refer to a qualified/licensed electrician to achieve this.
- **DO NOT USE THIS PRODUCT AS AN ISOLATION DEVICE, TO ISOLATE PUMPS, ELEMENTS OR ANY EQUIPMENT.**

TECHNICAL SPECIFICATIONS

Feature	EINBREW 1V1P
Product Dimensions	215mm x 230mm x 85mm
Power Supply Input	220Vac/230Vac, 50Hz, 20W
Total Current (including element, pumps, controller)	15A (including pump current),
Pump Output	Pumps should be mains powered. DO NOT use switch mode power supplies on pump output!
Control Precision	0.1C (or 0.1F in Fahrenheit mode)
Temperature Measurement Accuracy	0.1C (or 0.1F in Fahrenheit mode)
Heating Element Outputs	1, 15A Maximum, IEC C19 Socket
Pump Outputs	1, 2.5A Maximum, IEC C14 Socket (man & auto control)
Product Weight	2kg
Environmental	IP43, keep dry, splash proof fascia.
Brewing Vessels Supported	1, 2
Temperature Monitoring	YES, 1, PT100 sensor ¼" BSPP
PCB fuses	**2, 3A, 20mm x 5mm (PCB and pumps).**
Power fuses	**2, 15A, 32mm x 6.3mm (All)**
HERMS Support	YES
RIMS Support	YES
Audible Alarms	YES
Visible Alarms	YES
Audible Cooling Alarm	YES
Visible Cooling Alarm	YES
Automatic Timer	YES
Recipe Stored in Memory	YES, one recipe.
Programmable Recipe	YES, 9 programmable mash steps
Automatic Boil Detect	YES
Microprocessor Control	YES
Hop Insertions Alarms	YES, 9 programmable insertion alarms
Ergonomic Design	YES
Limited Lifetime Warranty	YES
Product Compliance & Safety	CE and LVD Compliant
Country of Manufacture	United Kingdom

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COMPONENTS AND ACCESSORIES

Your EINBREW 1V1P system will come shipped with the following components. When you unpack please ensure you check everything is there, and if any parts are missing please contact your supplier or Support immediately.

1) 1 x EINBREW 1V1P Electric Brewery Controller
2) 1 x Power Lead, IEC C20 Socket, 2m lead.
3) 1 x Temperature Sensor, ¼" BSPP thread, with 3m lead.
4) 1 x Heater output plug, C19.
5) 1 x Pump output plug, C13. Do not use switch mode power supplies on this output!
6) 1 x User Instructions (detailed).

BREWING SYSTEM REQUIREMENTS

We aim for EINBREW 1V1P to take care of electrical control for you, leaving you to concentrate on designing and building your brewing system!

Constructing your own Electric Brewery is beyond the scope of these user instructions, and there are a number of great guides out there that'll help you achieve this. There are also a number of performance and safety issues to consider when specifying and putting together your brewery.

However, for EINBREW 1V1P to work effectively, there are some areas to consider.

- Your heating element must be appropriately sized for the amount of wort you're trying to heat/produce, whilst meeting the maximum EINBREW 1V1P power restrictions. If the heating element is too small, it may take a long time to increase the temperature of the wort as you go through the brewing process, especially when boiling. In the worst case, you may be unable to maintain your target temperature at all due to losses. You can also improve system performance by ensuring that you keep a lid on your vessel when brewing, and insulating the vessel. Elements that are too large may result in scorched wort, or considerable temperature overshoot and oscillation during heating.
- EINBREW 1V1P supports one heating element up to ~14A – the element can be directly in the vessel, or you can use an external heating element through which wort is pumped around.
- Your system pump must be sufficiently powerful for the task – importantly, if using RIMS the water flow must be able to remove heat from the in-circuit heating element at a sufficient rate, or you may encounter issues where the water is e.g. boiling at the heater itself and much cooler elsewhere. The pump must also be rated for use at the operating temperature – it is worth noting that many pumps will not operate correctly at 100C (boiling) due to cavitation. You ideally want the temperature throughout the system to be as equal as possible, helping to reduce temperature overshoot and oscillation. In the worst case, you could encounter equipment damage or scorched wort. Similarly, the pump must be powerful enough to continuously recirculate the wort through your mash without sticking, if relevant. The amount of flow required can also vary depending on the type of grain and crush quality used.
- It is important that you do use a pump in your system where feasible, as if the volume of water is not well mixed, the accuracy and quality of the control system will degrade.
- Ensure that your system interconnector pipes are of sufficient diameter to let through enough flow, and is rated for use at the operating temperature. Make sure you test the system with the pumps running and cold water after installation, to ensure there's no leaks – these could be dangerous when working with heated wort!
- Ensure that you have added sufficient filtering to the pump inlet – otherwise, you may encounter clogging or flow restrictions after adding grain due to debris or grain in the fluid path/circuit. The same applies if you intend to e.g. recirculate after hops have been added.

- EINBREW 1V1P supports one pump up to 2.9A, which you manually activate via the Control Panel. Typically, you'd use a pump to recirculate wort from the bottom of the vessel to the top during mashing, and sometimes also used with an external heating element.
- Ensure that the temperature probe provided with EINBREW 1V1P is adequately fitted. For example, with external heating it is important that you install the temperature probe near the point where heated liquid is fed back into the vessel, and not for example after it has circulated through the mash bed or at the pump inlet. Not doing so will result in issues such as temperature overshoot and/or temperature oscillation, in the worst-case equipment damage or scorched wort. If you are using an internal heating element, do not place the temperature probe right beside it.
- EINBREW 1V1P provides precision temperature measurement and control, and should provide excellent temperature control over a wide range of brewery configurations. However, its performance is ultimately down to the equipment you've specified. It is normal that the maintained temperature will fluctuate and you may see slight temperature overshoot or oscillation when brewing. This can be exacerbated by issues such as insufficient pump flow, too large/too small heating element.
- Additional safety equipment such as installing a float switch to prevent your pump running dry and the elements operating without water added can be worthwhile additions.
- Unless you're building an off-the-shelf brewery kit, be prepared to experiment and improve your brewery as you go! It's not unusual for systems to require tweaking after first being assembled.

GETTING STARTED

We know you're eager to get on with making some beer, so the first thing to do is get your EINBREW 1V1P system installed with your brewing setup!

Once you've checked you've got everything, work out where you're going to install your EINBREW 1V1P controller. Everyone's brewery is different; however, you should make sure that it is situated far enough away from your brewing vessels that there won't be any liquid splashed on the controller, or any danger of steam condensing and dripping on the controller for above.

Please also make sure that the inlet power cable for EINBREW 1V1P, the outlet power cables for the heating element and pump, and the temperature sensor cable will reach without being taut or presenting a trip hazard.

EINBREW 1V1P should be connected to an electric outlet suitable for the total electrical load you wish to drive, controller + heaters + pumps. The supply MUST be protected by an **RCD/GFCI/RCBO device**, for your safety – please test the **RCD/GFCI/RCBO device** before use, using the built-in test function.

IF YOU DO NOT UNDERSTAND THE ABOVE STATEMENT, PLEASE CONSULT A LOCAL EXPERT.

Once that's done you're ready to turn on! Move the power switch to the ON position and EINBREW 1V1P will power on, running through a short self-test of the onboard displays, indicators and alarm buzzer before starting. This will only take a few seconds.

When operational, EINBREW 1V1P will display the readings from the temperature sensor on its display and you can begin configuring and testing the system.

BREWING SYSTEM INTEGRATION

We know you're eager to get on with making some beer, so the first thing to do is get your EINBREW 1V1P system installed with your brewing setup!

Installing C20 Plug to Heating Element Lead

The EINBREW 3V2P connects to your heating elements using C19 power sockets. To interface with these, you need to install C20 plugs onto the power leads for each of your heating elements. If you are unsure of any aspects of how to undertake this task, please contact a competent person (e.g. qualified and certified Electrician) for advice and assistance. Miswiring a plug can be fatal. FIRST ENSURE YOUR POWER LEAD IS NOT CONNECTED TO THE POWER SUPPLY.

Remove the screws holding together the C20 plug that has been supplied with your system. Leave these carefully to one side.

Once you've done that, you'll note that there are screw terminals for Live, Neutral and Earth – along with a retaining clamp for the power cable to be inserted, to ensure that it cannot be taken out later. Unscrew the retaining clamp to allow you to feed in the power cable.

Strip back the Live, Neutral and Earth conductors to allow you to fit the exposed conductors into the appropriate screw terminals. You may need to shorten one or more of the conductors for a good fit. For safety, ensure that you only strip enough of the protective sheath to allow insertion of the relevant conductor into each of the screw terminals – no more.

Screw each of the terminals down firmly to ensure that the conductor cannot move and is securely in place, then screw down the retaining clamp for the power cable such that it is also secure.

Finally, reassemble the C20 plug using the screws from earlier, firmly screwing the plug back together.

To test, ensure that EINBREW 3V2P is turned off, then insert the assembled C20 plug with attached power cable into the C19 receptacle. Ensure that the vessel the heating element is fitted to has enough water added to at least cover the element sufficiently. Turn on the EINBREW 3V2P system, and utilise the control system to energise the heating element. You should note that the water will increase in temperature accordingly.

Installing C13 Plug to Pump Lead

The EINBREW 1V1P connects to your pump using a C14 power socket. To interface with it, you need to install a C13 plug onto the power lead for your pump. If you are unsure of any aspects of how to undertake this task, please contact a competent person (e.g. qualified and certified Electrician) for advice and assistance. Miswiring a plug can be fatal. FIRST ENSURE YOUR POWER LEAD IS NOT CONNECTED TO THE POWER SUPPLY.

Remove the screws holding together the spare C13 plug that has been supplied with your system. Leave these carefully to one side.

Once you've done that, you'll note that there are screw terminals for Live, Neutral and Earth – along with a retaining clamp for the power cable to be inserted, to ensure that it cannot be taken out later. Unscrew the retaining clamp to allow you to feed in the power cable.

Strip back the Live, Neutral and Earth conductors to allow you to fit the exposed conductors into the appropriate screw terminals. You may need to shorten one or more of the conductors for a good fit. For safety, ensure that you only strip enough of the protective sheath to allow insertion of the relevant conductor into each of the screw terminals – no more.

Screw each of the terminals down firmly to ensure that the conductor cannot move and is securely in place, then screw down the retaining clamp for the power cable such that it is also secure.

Finally, reassemble the C13 plug using the screws from earlier, firmly screwing the plug back together.

To test, ensure that EINBREW 1V1P is turned off, then insert the assembled C13 plug with attached power cable into the C14 receptacle. Ensure that the system the pump is fitted to has enough water added to operate the pump sufficiently – this is especially important if the pump will be damaged if run dry, and does not have run dry protection. Turn on the EINBREW 1V1P system, and utilise the relevant pump button to activate it. You should observe that the pump will activate.

Installing Temperature Probe to Brewing Vessel

The EINBREW 1V1P comes supplied with a Temperature Probe to allow you to monitor and control your system. This will typically be a PT100 probe depending on the type of system you have purchased; however, installation and operation is identical.

To fit the probe into the vessel, firstly consider where you are going to place it. The ideal placement will vary depending on factors like the type of heating system you have chosen to use, along with other factors. Generally, the temperature probe is positioned near the bottom of a vessel, about 40/45mm from the base and at 90 degrees to the heating element. The sensors are 80mm in length and have a ¼" BSPP thread, which requires a 13/14mm hole in the vessel.

If you are using a HERMS system, then the vessel should have a heating element fitted. It is important not to install the temperature sensor too near the heating element, as this can produce readings which are artificially high and prevent the control system from operating correctly. A good place may be close to the pump inlet or outlet, as there will be active circulation around that area. If you are using a RIMS system, the temperature sensor should be placed in the area of the RIMS outlet into the vessel, in order to monitor the output temperature of that system.

Extending EINBREW 1V1P C20 Power Lead

The EINBREW 1V1P comes supplied with a 2m power lead. However, you may find this is insufficient for your purposes. If this is the case, please extend the cable using a suitable extension cord, or purchase a longer power lead.

Please note any replacement/extension must be capable of handling at least 15A of current. If using a wound extension cord, please ensure that it is fully unwound before use to allow it to handle its

maximum rated capacity. Not doing so will reduce the current capacity of the cable and may result in fire or damage to the lead coil.

Replacing user-replaceable fuses

There are two user-replaceable fuse receptacles mounted on the base of the enclosure. If you believe that these fuses have blown, these can be replaced. Please ensure to replace them with an equivalent specification of fuse. **WE RECOMMEND YOU KEEP SPARE 15A (32mm x 6.3mm) & 3A (20mm x 5mm) fuses.**

To replace, first ensure that you have turned off EINBREW 1V1P and disconnected it at the plug. This will ensure the system is isolated. Then use a screwdriver to access the fuse compartments, and replace the blown fuses. You may wish to use a e.g. multimeter to test if the fuse(s) are actually blown or not, as the fault may lie elsewhere.

Insert the new fuse(s) and screw in the fuse compartment again. Then reconnect the system to mains electrical supply, and test the system to ensure that it operates correctly.

Drilling Holes in Stainless Steel Vessels for Heating Elements and/or Temperature Probes

Depending on which vessel you're using in your system, you may already have holes pre-drilled for heating elements and water pump inlet/outlet – this makes things very convenient as you can simply use those for installation, as long as they're in the right place!

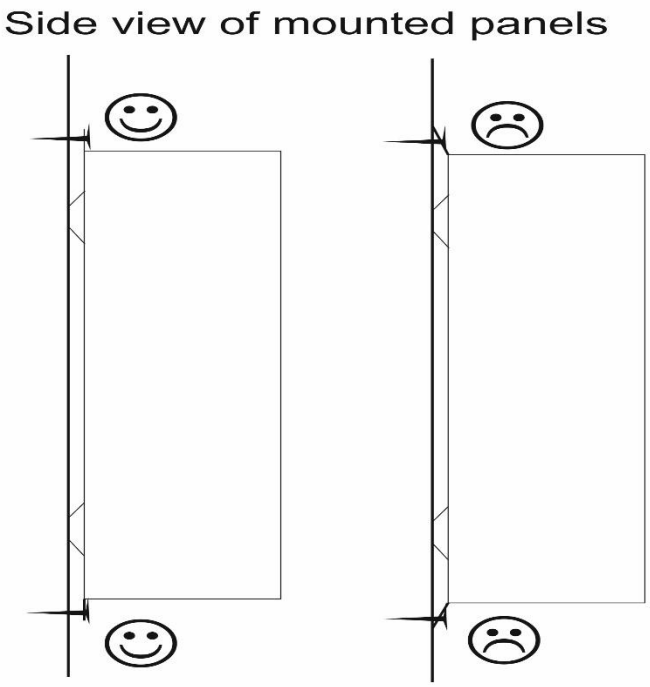
However, if you are building a system without any of this work carried out, you will have to undertake the work yourself.

Firstly, confirm that you have appropriate drill bits (or hole saws, etc) and drill (available speed, etc) for the job of creating these holes. You will require drill bits, and/or a sheet metal hole cutter. If you do not have experience in this work, you would be advised to contract a specialist metal worker to help, as it can be easy to damage or cosmetically mark your vessels.

Next, mark out the holes in the design to ensure that placement of the new equipment is correct. Then create the hole. After the metal has cooled down afterwards, fit the elements and probes as necessary. Ensure that the vessels are well cleaned afterwards to ensure that no metal shavings or dust get into the brewing system during use.

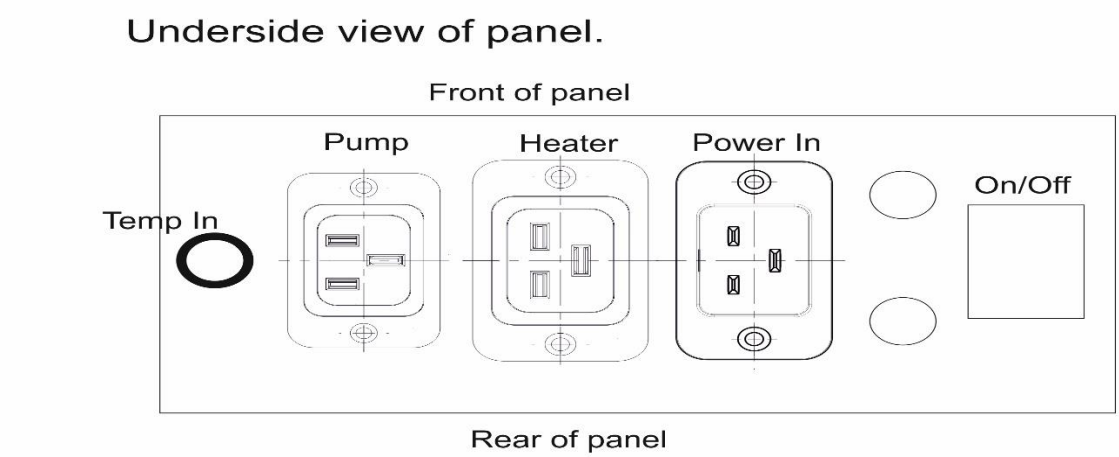
Mounting the Control Panel

The panel must be mounted vertically. There are mounting holes in tabs on the corners of the enclosure, these are used to mount the panel. During use the rear of the panel can get hot, this is normal. It is vital that a gap be left between the rear and the mounting surface, to allow airflow, the outward dimples are to facilitate this. It is also vital that the mounting surface can withstand temperatures of up to 50C. Ensure that you do not over-tighten the 4 mounting screws and bend the tabs, the tabs should remain vertical like the rear of the control panel. Do not mount the panels near or over vessels or indeed near any heat source. Ensure that there is plenty of ventilation around the panels and the air can move around rear (do not set items on top of the panel, which may restrict air flow). Ensure cables and leads are kept cool and dry. Ensure the panel does not become moist. If condensation forms on the panel, you must stop using it immediately, and turn off the power remotely.



Basic System Testing

Once you've installed all your heating element, pump and temperature probe – it's time to test everything out before properly brewing wort!



Connect up everything to EINBREW 1V1P and add some water into the vessel. The water level will need to be sufficient to cover the element and to correctly fill the circulation system.

The first thing to try is to activate the pump. Ensure the correct valves are in the correct orientation open/closed as required. Press and hold the P1 button on the 1V1P to start the pump, if you have enabled Pump Vent, then the pump will pulse on and off several times before remaining on. Confirm that it is operating correctly, and flowing well. Also ensure that there are no leaks coming from any pipework! If there are any leaks that look as if they may contact with electrical connections, disconnect the power to your system immediately.

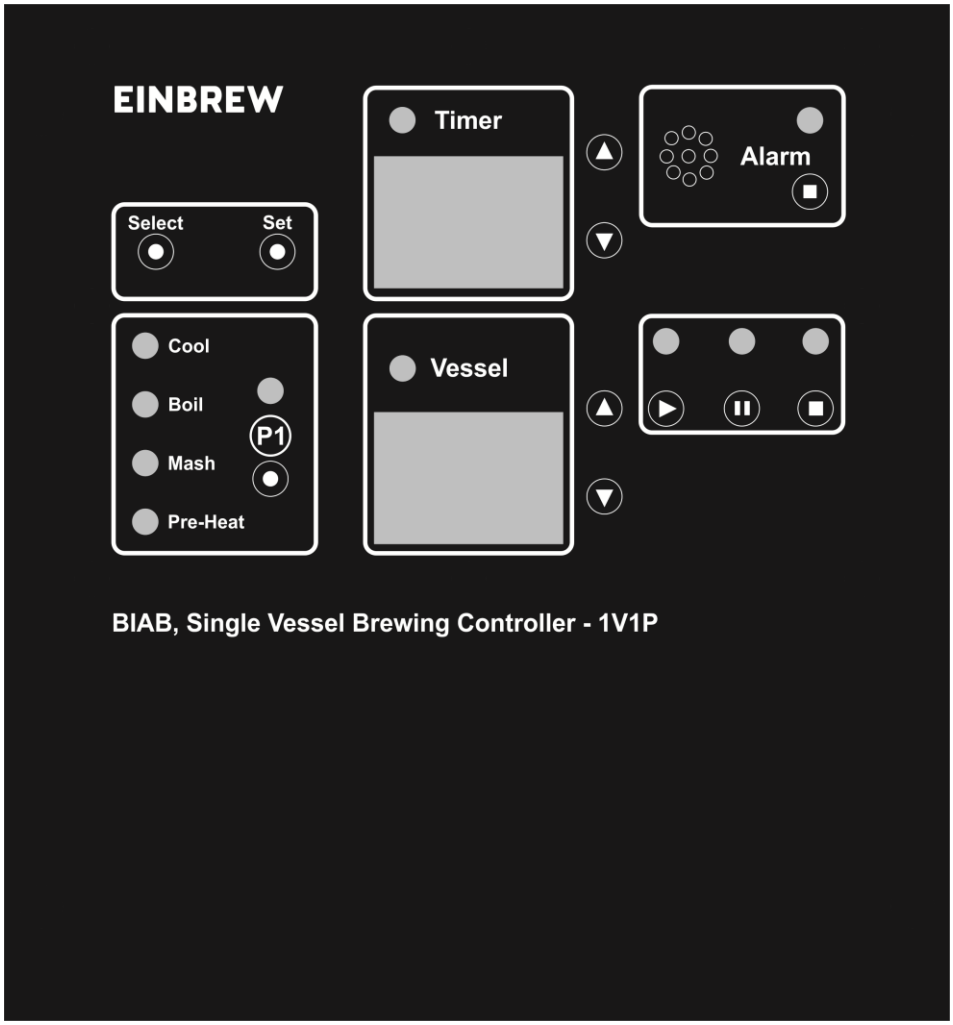
Once the circulation system seems to be working OK, activate the Pre-Heat/Mash In stage and confirm that the heating system/heat exchanger is warming the vessel as expected. It will take time for the temperature to increase, so do not expect an instant ramp to your set temperature. Take care to look for any leaks as time goes on. You may find that you need to tighten connectors, add washers, etc. before everything is completely watertight.

After you've carried out the basic tests, dispose of all the water from the system in case there is any loose debris or other material present. Then you're ready to brew for real!

CONTROL PANEL

Before beginning to make your brew, let's go through the main control panel. EINBREW 1V1P is designed to be similar to a traditional brewery control system.

Diagram of the front panel below illustrates some of the options available.



Control Section	Explanation
Timer	Allows you to set the time for up to 9 (nine) Mash Steps and the Boil duration, along with 9 Hop Insertion times and alarms. The Up/Down buttons will allow you to increase/decrease the presently displayed time. You can also press and hold the buttons to go to the highest/lowest value (or OFF if available). The Time displayed will depend on the particular Stage you're in. The red indicator for this section will be lit when the Timer is active. Any changes made will be automatically stored in the 1V1P memory.

Vessel	Displays the Measured Temperature on the top half, and the Set Temperature on the bottom half of the display. The Up/Down buttons will allow you to increment and decrement the presently displayed set temperature. The temperature displayed will depend on the active Stage/Step. The Green indicator will be lit when the system is running and the heater has been turned on. When the system is pre-heating in any Stage, the Pre-Heat indicator will be lit as well as the current stage. Any changes made will be automatically remembered when you start the brewing process. Here you can set the Pre-Heat, Mash, Boil and Cooling temperatures. Switch between these with the **Select** button. When the Pre-Heat stage is active, you can set the Pre-Heat/Mash In temperature. When the Mash Stage is **active**, the display shows the Measured Temperature on the bottom half, and the Set Temperature for the presently selected Mash Step on the top half of the display. The present Mash Step time will be displayed on the bottom half of the **Timer** display (St 1 to St 9) and can be adjusted there. The Up/Down buttons will allow you to increment and decrement the presently displayed set temperature. You can also press and hold the buttons to go to the highest/lowest value, or OFF if available. To switch between the different Mash Step timings, press the **Set** button. The display will go through Mash Step 1 to Mash Step 9, and back to Mash Step 1 each time **Set** is pressed. If you don't want to use a particular Mash Step, set the time for the Step to be OFF (go to 0 minutes, then press Down again so the display changes to OFF). Please note that Mash Steps set to 0 minutes will change the set temperature for the brew accordingly when they're triggered, but will not run for any time when the set temperature is met. When the Boil Stage is **active**, the display shows the Measured Temperature on the top half and the Boil Power Percentage on the bottom half of the display (e.g. "P50" = 50% Power). This determines how much power is put into the system after boil has been detected, and allows you to control how vigorous the boil will be. To switch between the different Hop Insertion timings, when the Boil Stage is active, press the **Set** button. The display will go through Hop Insertion 1 to Hop Insertion 9 on the bottom half of the timer display above (HOP1 to HOP9), and go back around to Boil set temperature, each time **Set** is pressed. If you don't want to trigger a particular hop insertion, set the time to be OFF (go to 0 minutes, then press Down again so the

Control Section	Explanation
	display changes to OFF). Please note that Hop Insertions set to 0 minutes will be triggered immediately as the Boil stage starts.
P1 Pump 1	Press the P1 button to turn Pump 1 on and off. The Pump will automatically go through a Pump Ventilation cycle each time it is turned on – you can set this in the **Configuration Menu**. The button must be held down for approximately a second before it will activate. The red indicator will show if the pump is presently turned on or off. Please note that the pump is manually controlled using this button – it will not generally be switched on or off automatically. The exceptions are if you press and hold the **Stop** button or reach the end of the Cooling phase, all pumps will be turned off. Additionally, it will be temporarily turned off during Grain Rest intervals.
Select Brewing Stage Button	This button will cycle through the available brewing stages – Pre-Heat/Mash In, Mashing, Boiling and Cooling. The relevant indicator will light as you cycle through the stages.
Set Brewing Set Button	This button has different functions depending on the presently selected Brewing Stage. When a Brewing Stage hasn't been started, it'll allow you to configure your EINBREW 1V1P system as follows: 1) In Preheat/Mash In Stage, pressing Set will bring up the **Configuration Menu**. Please see this section for more information. 2) In Mash Stage, pressing Set will cycle between the different Mash Steps, allowing you to set the time and temperature for each. 3) In Boiling Stage, pressing Set will cycle between the Boil Time and Temperature, and Hop Insertion 1 to 9 Time. 4) In Cooling Stage (BK section) the Set button has no usage. When you're operating the Boil stage, after boil has been detected the present Boil Control percentage can be saved by pressing and holding the Set button. The system will beep twice when it has been saved.
Alarm	The Alarm light and sounder will be triggered when an alarm condition is met. Typically, this will light and sound at the end of each of the Stages (Preheat/Mash In, Mashing, Boiling, Cooling). It may also sound in other scenarios, for example just before the boil, or if an error has occurred with the Temperature probe. To acknowledge the Alarm and turn it off, just press the Alarm button.

Control Section	Explanation
Start	Pressing **Start** will begin the presently selected Brewing Stage. The button must be held down for approximately a second before it will activate. **Preheat/Mash In** – preheat to the selected temperature and end the stage. **Mashing Stage** – run through the Mash Steps in sequence, heating to the preset temperature then running for the set time. Please note that the system will start with the **presently selected Mash Step**, so make sure you're on Step 1 if you want to run through Step 1-9! **Boiling Stage** – automatically preheat to the Boil temperature and run for the set time. **Cooling Stage** – alarm once the wort is cooled to the selected temperature. Relies on manual cooling system. When the system is operational, the green indicator above the Start button will be lit. The Heater will be controlled automatically to achieve and maintain the set temperatures. As each stage is running, you can also dynamically change the present set temperature/power and timer by pressing the Up/Down buttons. Any changes made will be remembered. The stage will automatically end once the preset parameters have been run through. At the end of each stage, you manually move to the next by pressing the **Select** button and pressing **Start** again. NOTE the controller will maintain the mash-in and mash-out temperatures for a period of 10 minutes after the stage end, after this 10 minute period the heater control will be turned off. If you wish to re-establish the set temperature, please use the select and set buttons to scroll round to the start of the relevant stage and press start.
Pause	You may **Pause** a Stage when it's running. This will stop any timers that are running, as well as stopping the heaters. The Orange indicator will be flashing when the stage is paused. The button must be held down for approximately a second before it will activate. This would most commonly be used if there's a temporary issue with your brewing system that you need to address before progressing forward. To restart the Stage, either press **Pause** again or press **Start**. The Stage will pick up where it left off.
Stop	If you encounter a problem with your brewing system (or you decide that you wish to end the present stage prematurely), you can press and hold **Stop** to completely stop and cancel the present Brewing Stage. The button must be held down for approximately half a second before it will stop, to prevent accidental activation. This will reset the stage timers and progress, stop the pump, and stop the heater. When you have stopped, you can go ahead and reconfigure the brewing recipe, or go and select and start a Brewing Stage again.

CONFIGURATION MENU

EINBREW 1V1P has a number of configuration options you can use to customise your system. These settings are not normally changed beyond the initial configuration of EINBREW 1V1P.

To enter the Configuration Menu, ensure that EINBREW 1V1P is stopped, then ensure that the Preheat Stage is selected. Then press the **Set** button once. A configuration menu will appear in the bottom half of the Timer section – use the Up/Down buttons on the Timer to navigate between the menu options, and press the **Set** button again to select.

When you select an option, you will be presented with a value – press the Up/Down buttons on the timer to change it, and press the **Set** button again to save it. If you do nothing, the menu will automatically time out and EINBREW 1V1P will return to normal operation.

Additional configuration options are also available in the **Maintenance Menu** section. This provides access to settings that do not normally need to be changed.

Menu Option	Default	Min	Max	Explanation
P01 unit Temperature Units	Celsius	N/A	N/A	Toggle the Temperature Units between Celsius and Fahrenheit. All displayed values and settings will be converted accordingly after switching.
P02 Pt Maximum Pump Temp.	95° (C)	0° (C)	105° (C)	Set the Maximum Pump Temperature. Pump will turn off above this setting. Disabled by default; can be enabled in **Maintenance Menu**.
P03 Er Enable Grain Rests	Yes	N/A	N/A	Enable the Grain Rests during Mashing (pump is automatically turned off to let the wort run through the grain and prevent grain compaction)
P04 rL Grain Rest Length	20s	10s	120s	Define the length of the Grain Rests that are carried out during Mashing, to allow wort to circulate down through the grain. During this rest, pump and heating will be automatically turned off.
P05 rP Grain Rest Period	600s	300s	1800s	Define how often a Grain Rest is triggered, e.g. 600s = 10 minutes = a Grain Rest every 10 minutes during Mashing Stage.
P06 BAL Boil Alarm Level	95° (C)	80° (C)	105° (C)	Set the Temperature Level that the system will alarm on the way to the Boiling Point. This allows you to prepare any necessary Hops for insertion, or observe the wort as it comes to the boil to ensure that it isn't too vigorous.
P07 tPo Probe Offset	0.0° (C)	-2.0° (C)	2.0° (C)	If you would like to alter the temperature reading to match another probe you are using for reference, you can utilise the Temperature Probe Offset setting to do so. This should not normally be required.
rST Reset	N/A	N/A	N/A	Select YES to reset all parameters to their factory default values.
End Exit Menu	N/A	N/A	N/A	Exit the Menu.

PREPARING FOR BREWING

EINBREW 1V1P lets you focus on what you do best – brewing beer! It'll take care of the temperature control and timing on your bespoke system, along with all the electrical control. All you have to do is enter your recipe!

Before brewing, please ensure that you've sterilised/sanitised all your equipment – this will help prevent infection.

This is also a good point to ensure that you've connected everything you need to EINBREW 1V1P, and that all electrical connectors are firmly seated. Ensure that the Temperature Probe is connected and that its reading appears to be correct.

Entering your Recipe

The last step before you start brewing is to enter your Recipe into EINBREW 1V1P! We'll take an example recipe below with timings and temperature for each stage, and show you how to enter it.

Stage	Temperature	Time
Preheat/Mash In Stage	39°C	N/A
Mashing Steps		
Mash Step 1	52°C	5 minutes
Mash Step 2	62°C	30 minutes
Mash Step 3	72°C	20 minutes
Mash Step 4	78°C	15 minutes
Boiling Stage	99°C	70 minutes
Hop Insertion 1	-	0 minutes
Hop Insertion 2	-	30 minutes
Hop Insertion 3	-	70 minutes
Cooling Stage	21°C	N/A

As we can see, this recipe has 4 mash steps and 3 hop insertions. Up to 9 mashing steps and 9 hop insertions are supported, although of course you can always manually control the system to do additional steps if needed.

Ensure that the **Stop** indicator is lit before entering the recipe settings – if you've just turned on the system you'll not have to worry about doing anything.

Setting Preheat/Mash In Stage

Ensure that the green indicator beside the **Pre-Heat** section is lit, signifying that we're setting up the Preheat/Mash In Stage. The **Timer** section will also display 'PrEH'. Then use the Up/Down buttons to adjust the temperature to 39°C. At the end of preheat stage the controller has a 10 minute keep warm function, where it will control the heating element to keep the liquid at the set temperature

for a period of 10 minutes – IT IS IMPORTANT to ensure that the element is covered and if you are running any pumps for heat exchange, these pumps MUST be kept running!

Setting Mashing Stage

Then press the **Select** button to move to the **Mash** section. The bottom half of the **Timer** section should be displaying 'St 1' to indicate Mash Step 1 – if it does not, press the **Set** button until the display cycles around to 'St 1'. Use the Up/Down arrows to set 52°C, and use the Up/Down arrows in the **Timer** section to set 5 minutes. Then press the **Set** button again to move to Mash Step 2 – the bottom half of the **Timer** section will display 'St 2'. Set the temperature and time again for Mash Step 2, and repeat for Mash Step 3 and Mash Step 4.

When you move to Mash Step 5, since we aren't actually utilising this Step, we'll do something slightly different. Use the Down arrow in the **Timer** section to reduce the time to 0 minutes, then press the Down arrow again so that the display shows 'OFF' where it previously indicated the time. This signifies that Mash Step 5 will not be used. Do the same for Mash Step 6-9 also.

You can use as many or as few Mash Steps as you like up to the limit of 9 – just set them to OFF to disable them, or set a time of 0 minutes or greater to enable. It's important to note that the system will start off with whichever Step you have currently selected – so make sure you have Mash Step 1 selected before pressing **Start** if you're running all the Mashing Steps! At the end of mashing the controller has a 10 minute keep warm function, where it will control the heating element to keep the mash at the final mash step temperature for a period of 10 minutes – IT IS IMPORTANT to ensure that the element is covered and if you are running any pumps for heat exchange, these pumps MUST also be kept running!

Setting Boiling Stage/Automatic Boil Detect

Press the **Select** button again to move to the **Boil** section, for setting up the Boiling Stage. The green indicator for this section should be lit, and the lower half of the timer display should show 'BOIL'. If it doesn't, press the **Set** button to cycle through the Hop Inserts until this is displayed.

Use the Up/Down arrows in the **Timer** section to set the Boil Time to 70 minutes, and use the Up/Down arrows in the **Vessel** section to set the Boil Control Power. You might want to experiment with which Control Power setting gives you the most appropriate boil level – you can change it on the fly later on, but we default to 30% to start with to reduce the risk of the wort boiling or frothing over. The best setting to use will depend on your system and heating method, and how vigorous a simmer/boil you want. When you're running the Boil Stage, use the Up/Down arrows to control the power on the fly when you've reached boiling point (or increase the heating further if you're not quite getting there!), and press and hold the **Set** button until you hear a beep to save it to memory.

The 1V1P uses a unique Boil Detection feature to determine when the wort has reached its boiling point, so you don't need to set a boil temperature! It'll work it out for you. It'll also alarm at the Boil Alarm Level you've configured (95°C by default) to give you a chance to prepare your hops and monitor the start of the boil.

If you do have an issue with the boil not being detected – or detected too late for your requirements – you can bypass Boil Detection. If you have firmware v3.0.0 or later, you can bypass by pressing and holding the **Set** button – if you have an earlier version, please press and hold the **Vessel Temperature Up** button instead. This will instruct the system to automatically go into Boil mode and let you control the Boil Control Power directly.

Setting Hop Insertions

After setting up the Boiling Stage, we can setup the Hop Insertions. Press the **Set** button and the lower-half of the Timer display will change to 'HOP1'. We can then use the Up/Down arrows on the Timer section to set the time at which the Hop Insertion should occur.

If you set 0 minutes, the Hop Insertion will activate as soon as the wort reaches the boiling temperature you've set. As with the Mash Steps, if you press the Down arrow again when on 0 minutes you can set the Hop Insertion to OFF.

In this case we want to set Hop Insertion 1 to 0 minutes so that it activates immediately, then press the **Set** button again to move to HOP2 – set this to 30 minutes. Repeat this again to set HOP3 to 70 minutes, then cycle through the rest of the Hop Insertions and set them to OFF since we're not using them.

Setting Cooling Stage

Ensure that the blue indicator beside the **Cool** section is lit, signifying that you're setting up the Cooling Stage. The **Timer** section will also display 'COOL'. Then use the Up/Down buttons to adjust the temperature to 21°C. You will need a cooler or heat exchanger in the main pump circuit for cooling to work. When you enter the cooling stage, turn on the cooler or start the coolant flow and the system will automatically keep the pump running until the required temperature is reached, at which point the pump will turn off and the system will alarm to notify you.

BREWING WORT

Pre-Heat/Mashing In Stage

Now that you've entered your recipe, you're ready to start! Add your water to the vessel as necessary, and press the **Select** button until the **Pre-Heat** section is selected. Confirm that the temperature displayed is correct, and press the **Start** button to begin!

The heater will automatically operate until the temperature matches the one you've set. If you need to, you can use the Up/Down buttons in the temperature section to change the set temperature dynamically.

IMPORTANT: You must manually start the Pump during brewing. This is especially important if you are using a RIMS system, as it can be dangerous to operate the heater without the pump and water circulation.

Once the temperature has been reached, the bottom half of the timer display will indicate 'END', and the alarm will sound. Press the **Alarm** button to silence the alarm.

You can now add your grain to the vessel.

Mashing Stage

Press the **Select** button until the **Mash** section is selected, then press the Start button. EINBREW 1V1P will automatically run through the Mashing Steps that you've setup previously. You'll see that the indicator will heat through each temperature step, and once that's reached the timer will start counting down.

The **Timer** section will show you the remaining time in the top half, and alternate between showing you the Mash Step (St 1 to St 9) and the total time you've set for the Step in the bottom half. If you need to, you can use the Up/Down buttons in the **Timer** and **Temperature** section to change the set time and temperature dynamically.

Once all the steps that you've setup have been completed, the bottom half of the timer display will indicate 'END' and the alarm will sound. Press the **Alarm** button to silence the alarm.

The grain can now be removed from the vessel.

Boiling Stage / Automatic Boil Detect

Press the **Select** button until the **Boil** section is selected, then press the Start button. EINBREW 1V1P will automatically start heating the wort to the boiling point and 'Auto' will be displayed in the Temperature area; and then once boil has been reached the timer will appear and start counting down.

Our unique Boil Detect feature will automatically work out when the boil has been reached by examining the temperature profile of the wort, and sound an alarm to let you know. It'll also alarm

at the Boil Alarm Level you've configured (95°C by default) to give you a chance to prepare your hops and monitor the start of the boil.

If you do have an issue with the boil not being detected – or detected too late for your requirements – you can bypass Boil Detection. If you have firmware v3.0.0 or later, you can bypass by pressing and holding the **Set** button – if you have an earlier version, please press and hold the **Vessel Temperature Up** button instead. This will instruct the system to automatically go into Boil mode and let you control the Boil Control Power directly.

Once Boil has been detected you can use the Temperature Up/Down arrows to change the Boil Control Power dynamically – you'll need to experiment to see what's best for your system, depending on how strong a boil you want, from vigorous to gentle simmer! We default to 30% to start with to reduce the risk of the wort boiling or frothing over, and you can modify that in 10% steps. When you've reached a level you're happy with, you can press and hold the **Set** button for it to be saved as the new default power.

If you've selected to have Hop Insertions as per our example, then when they're triggered the Timer display will show the hops to insert – e.g. HOP1 will be shown right at the start. When this is displayed, the Alarm will also sound. Press the **Alarm** button once to acknowledge that you've inserted the hops, and the display will return to normal.

If you've configured multiple hops to be inserted at the same time, or if you missed an earlier alarm and more have triggered, you'll need to press the button once to acknowledge each insertion in turn.

Once the boil timer has completed, the bottom half of the timer display will indicate 'END' and the alarm will sound. Press the **Alarm** button to silence the alarm. The heater will be automatically turned off.

Cooling Stage

Press the **Select** button until the **Cool** section is selected, then press the Start button. EINBREW 1V1P will monitor until the temperature you've setup previously has been reached, whilst you engage your active cooling system. When the desired temperature is met, and alarm will sound, the Pump will turn off if it's running, and you can shut down your cooling system and transfer the wort to a fermenter.

Brew Complete!

You've now finished your first batch of wort with EINBREW 1V1P! You can now switch it off, or if you have e.g. a controlled pump setup to help pump out to fermenters, manually use that to help you finish it off.

Cleaning

One last thing to take care of - cleaning! It's important to clean immediately after brewing, as leaving it as-is will encourage growth of mould and other unpleasant effects. Whilst EINBREW 1V1P

doesn’t have any built-in cleaning functions, you can use the pump control and the heating control to help you clean up – for example, you could move to the Boil Stage and heat a smaller amount of water to sterilise with.

TROUBLESHOOTING

- Controller is beeping
    - It is alarming because a control stage has ended in the process (e.g. Pre-Heat/Mash In, Mashing, Boiling, Cooling) and human intervention is required to proceed. Alternatively, this may be informational, e.g. reaching the preset Boil Alarm Level, or a Fault may have occurred. Press the Alarm button to cancel the alarm.
- Turning the Control Panel On/Off
    - Use the dedicated on/off switch to turn the Control Panel On/Off.
- Control Panel does not turn on
    - Please ensure that the power inlet cable is inserted securely, and the supplying power socket is turned on.
    - If using an **RCD/GFCI/RCBO device** as recommended, please ensure that it is activated and not in TEST mode. It will not provide power in this state.
    - Please check that the fuses (accessible via the external fuse holders) have not blown. Ensure that the system is disconnected from mains electricity whilst removing or replacing the fuses.
- Brew taking a long time to reach Set Temperatures
    - It can be normal for it to take a reasonable length of time to preheat to temperatures. How long will depend on your system – how much water, and how powerful the heating elements are – it can be typical to find an increase in temperature of 1°C every 1 minute. This will differ depending on the ambient temperature, and if you have the lid on the vessels being heated placed on or off. We generally recommend you minimise removing/replacing the lid to keep the temperature stable during your brew. Also, the higher the temperature, the more heat losses will occur – it will be slower to transition from 90°C to 100°C, than 20°C to 30°C. Adding insulation to the vessels may help, or adding a more powerful heating element.
    - When cooling, for example using cold water, the temperature drop will typically be very quick at the start and become progressively slower as your wort temperature nears the temperature of your cooling medium. This means that it may take a long time to achieve your required cooling temperature – or if it's set too low and your cooling medium is too hot, you may never reach it. If cooling has ceased before your set point, you may need to e.g. use ice baths or similar methods to cool further, or consider an active cooling system such as a glycol chiller.
- The Brew Temperature changes a lot when trying to maintain temperature
    - It is normal that there will be some variation in temperature. Typically, you will see a small overshoot when trying to obtain a particular set temperature, and may see some oscillations below and/or above the set temperature when controlling. This is to be expected, and totally normal. How much this occurs is entirely down to your system,

and will depend on things like volume of water, element size, and vessel insulation – and also the set temperature, as you will have bigger ambient losses at higher temperatures.

- If you are seeing larger swings than you would like, there are some things you can do to improve system stability.
  - Ensure that you keep the lid on at all times. Continually removing and replacing the lid will cause fluctuations in temperature.
  - Add insulation to the vessel. This will help to remove ambient losses and make things more stable.
  - Ensure that you are using a pump with good flow to ensure that the water is well-mixed. This will help the control system do its job.
  - Consider if where you have positioned the temperature probe is appropriate – for example, if it is very near the heating element, it will read an artificially high temperature when the heater is running.
  - As Grain Rests turn off the pump, there will be temperature fluctuations whilst the pump is off, and immediately after turning it back on, as the system temperature equalises again.

- Error Indicators
  - If you see an unusual temperature reading, this may be due to an incorrectly placed, incorrectly connected or damaged temperature probe.
  - If the Measured Temperature display is showing 'ERR', this means there is a problem with the temperature probe. Please ensure that it is connected correctly. It may also provide an error code – e.g. 'Err1'. Please communicate this to Support if you cannot resolve yourself. If a momentary error occurs but it recovers, this may only be displayed briefly.
  - If a persistent Temperature Probe error occurs whilst a Stage is actively being controlled, the system will automatically go into Pause mode to prevent overheating. The timer display will indicate 'FT' along with error codes rather than 'PAUS' on the bottom half to indicate this. 'Err' with a fault number may also be displayed on the temperature probe reading. Until this error is resolved, you will be unable to unpause the control process for safety reasons.
  - If the fault does not go away on its own, try resetting the power on the system to see if that clears it.
  - Please note any information and communicate it to Support if necessary. For example, did it occur at the same time as the Pump or Heater was activated, or any other potentially relevant data.
- Pump does not operate
  - This may be due to the pump inlet getting clogged by debris. Please check that the filter for the inlet is not covered and remove any debris.

    - As the Pump is manually operated, please ensure that you have turned it on – the relevant Pump indicator light will be lit when it is active. It will also automatically go through a Pump Ventilation sequence when first turned on, which is normal.
- Power Failure during Brewing Process
    - If a power failure occurs, please switch off EINBREW 1V1P at the plug.
    - Once power has been restored, turn on EINBREW 1V1P again. Depending on the duration of the outage, you may be able to pick off close to where you left off.
    - Move to the relevant Brewing Stage and confirm that the time/temperatures are correct. Depending on when the power cut occurred, you may need select the appropriate Mashing Step to start with, to get to where you were again quickly. You should also reduce the time for that stage to reflect the time remaining at that temperature level. Once you're ready, press the **Start** button to commence.
    - If the outage has been for a substantial period of time, you may need to adjust your recipe accordingly to compensate, or unfortunately dispose of the batch of wort.
- Boil Temperature is detected early by Boil Detect
    - Please ensure that you don't do anything to cause a temperature disturbance coming up to the boil, e.g. lift the lid when you're close to the boiling point – this can potentially cause a false positive detection due to the temperature profile change.
    - Increase the Boil Control Power to 100% and manually increase the temperature to obtain the boil, then manually throttle back the power once it has been achieved to modify the boil as required.
    - If the problem persists, please note any information and communicate it to Support if necessary.
- System continually resets itself
    - Ensure that the power lead is firmly plugged in. Consider replacing the main power lead with an alternative, to ensure that it is not faulty.
    - If you are having regular power fluctuations at your premises, this may be causing resets due to low supply voltage. Please contact your electricity company to report the fault.
    - Check to see if the reset occurs at particular times, e.g. when you are turning the Pump on/off, or the heater on/off, or something else.
    - If the problem persists, please note any information and communicate it to Support if necessary.
- I've changed a menu parameter and the system isn't working as well as it did anymore!
    - You may have inadvertently made a change that has caused something to go wrong. To correct this, you can go into the **Configuration Menu** and select the Reset (rST) option. Select it, then press **Timer Up/Down** to show and then select Yes. All options (including recipe settings) will be reset to factory defaults.
    - You can also reset your parameters and recipe settings by holding down **Pause** and **Stop** when powering up the system – you will hear 2 short beeps to acknowledge the reset, then the rest of the start up sequence will continue as normal.

MAINTENANCE MENU

The Maintenance Menu allows you to change a number of options that do not normally require adjustment, and are available for testing purposes only. Adjusting these options is at your own risk, and we generally only advise adjusting them on the advice of Support.

For these options to be displayed, power down your EINBREW 1V1P system. Press and hold the **Select** and **Set** buttons, then power up the system again. You will hear 3 short beeps almost immediately, signifying success; the normal power-up sequence with a long beep will then continue. You can release the two buttons as soon as you hear the 3 short beeps.

The additional options are available in the Configuration Menu as usual, appended to the end of the existing parameters. To enter the Configuration Menu, ensure that EINBREW 1V1P is stopped, then ensure that the Preheat Stage is selected. Then press the **Set** button once. A configuration menu will appear in the bottom half of the Timer section – use the Up/Down buttons on the Timer to navigate between the menu options, and press the **Set** button again to select.

When you select an option, you will be presented with a value – press the Up/Down buttons on the timer to change it, and press the **Set** button again to save it. If you do nothing, the menu will automatically time out and EINBREW 1V1P will return to normal operation.

Menu Option	Default	Min	Max	Explanation
P08 db Temperature Dead Band	0.0° (C)	0.0° (C)	2.0° (C)	This defines the dead band applied to the Set Temperature. This is the amount of variation allowed in the Measured Temperature from the Set Temperature, before heating is applied to correct any deviations.
P09 EP Enable Pump Ventilation	Yes	N/A	N/A	Enable the system to automatically turn the Pump on and off in bursts when first activated, in order to vent any air from the Pump.
P10 PON Pump Ventilation On Time	5s	1s	10s	Set the length of the Pump Ventilation On Cycle in seconds.
P11 POFF Pump Ventilation Off Time	2s	1s	10s	Set the length of the Pump Ventilation Off Cycle in seconds.
P12 PCYC Pump Ventilation Cycles	3x	1x	5x	Set the number of Pump Ventilation Cycles that are carried out when the Pump is activated, to prevent trapped air.
P13 EPt Enable Maximum Pump Temp.	Yes	N/A	N/A	Enable the system to automatically turn off the pump once the measured temperature exceeds the set value. This is typically used to prevent pumping when boiling, or because your pump has a set temperature limit (e.g. 60°, 85°, or 95° to prevent cavitation during boil).

Menu Option	Default	Min	Max	Explanation
P14 ErI Enable Grain Rest Inhibition	Yes	N/A	N/A	**NOT RECOMMENDED TO MODIFY** Enable Grain Rest Inhibition when approaching the Set Point in Mashing Stage. This ensures that a Grain Rest will not occur when approaching the Set Point, ensuring greater control accuracy.
P15 BLBS Boil Level Buffer Size	10x	4x	30x	**NOT RECOMMENDED TO MODIFY** The gap between samples carried out for Boil Detection.
P16 BLSP Boil Level Sample Period	4x	1x	30x	**NOT RECOMMENDED TO MODIFY** The number of samples carried out for Boil Detection.
P17 bdt Boil Detection Threshold	97° (C)	80° (C)	105° (C)	**NOT RECOMMENDED TO MODIFY** Automatic Boil Detection will commence when the temperature measured in the Boil Kettle meets or exceeds this value during the Boil Stage.
P18 bdtL Boil Detection Tolerance	0.0	0.0	0.5	**NOT RECOMMENDED TO MODIFY** Increases the allowable tolerance for triggering the boiling point detection. Increasing this value may help if your system is unable to detect boil when it occurs, although too high a value will lead to false positive detections.
P19 PSAd Voltage Phase Sync Delay	0 (s)	0 (s)	9 (s)	**NOT RECOMMENDED TO MODIFY** **Available in Firmware v3.0.0 or later** Enables Voltage Phase Sync when changing Pump State. This helps improve relay lifetime and system stability with noisy pumps.
P20 EPS Enable Voltage Phase Sync	Yes	N/A	N/A	**NOT RECOMMENDED TO MODIFY** **Available in Firmware v3.0.0 or later** Enables Voltage Phase Sync when changing Pump State. This helps improve relay lifetime and system stability with noisy pumps.

Should you wish to use your own PT100 sensors, we can supply you with plugs to solder the probe leads to.

WARRANTY

All EINBREW 1V1P products carry a 1 year back to base warranty covering manufacturing defects and component failures. The product has no user-serviceable parts except where otherwise stated, and must never be opened or disassembled, and as such should only be repaired by skilled and authorised personnel. Failure to comply could result in unsafe operation and should not be attempted under any circumstances. Contact below for a list of approved service agents. Note: Any unauthorised repair or adjustment will automatically render the warranty invalid.

The only user serviceable parts are the externally mounted electrical fuses. These can be replaced as needed. Please ensure that the system is completely disconnected from the electrical supply before attempting to remove or replace these fuses.

MAINTENANCE

Prior to each use of the unit, check the casing for signs of damage or misuse. Check the leads for signs of damage, ensure the outer insulation is not broken. If the unit is damaged it must NOT be used and should be returned to the supplier. The unit must not be used for any purpose than for that recommended by the manufacturer. The unit must not be submerged or exposed to liquid.

RETURNING EINBREW 1V1P FOR REPAIR

If returning a product to the manufacturer for repair, it should be sent freight pre-paid to the appropriate address. A copy of the Invoice and of the packing note should be sent simultaneously by airmail to expedite clearance through Customs, if relevant. A repair estimate showing freight return and other charges will be submitted to the sender, if required and applicable, before work on the device commences.

Manufacturer Address for Repair and Spare Parts:

EINBREW
BT37 0AW - United Kingdom

Or an approved repair company.

WEEE REGULATIONS

For EU customers EINBREW 1V1P offer a product take-back service. For customers within the European Union (only) and products manufactured or sold by us; when those products reach the end of their life, simply send them back to us at your expense, we will dispose of them according to the relevant legislation. WEEE Registration Number WEE/DD2117VU.