ElectricBrewing SUPPLY

Getting Started

Revision 1.2 - 5/2019

GET TO KNOW YOUR PANEL

WHAT YOU NEED TO KNOW:

-- When you first power up the panel, the e-stop may or may not be pressed, this will be indicated at power up by a red led light over stop.
-- When you power up, if elements or pumps are in any form of “on” position, the elements and pumps will appear to not function. This is normal, simply flip all to off position, and resume.
-- Yellow LEDs will indicate which vessel, Boil or HLT, is currently available and live.
-- White LEDs will indicate if an element outlet is in fact on and active
----> If no elements are attached these will glow dim when not on, this is normal
----> You must connect temp probes before the PID will control anything.
-- Blue leds on the pump switches will glow when the pumps are on.

WHAT’S IN THE BOX

Your control panel and power cable.

Keys and hole plugs in a baggie

Your choice of probes with silicon probe cables

Power cable and temp probe cables were tested with your panel, on a GFCI protected circuit prior to ship.

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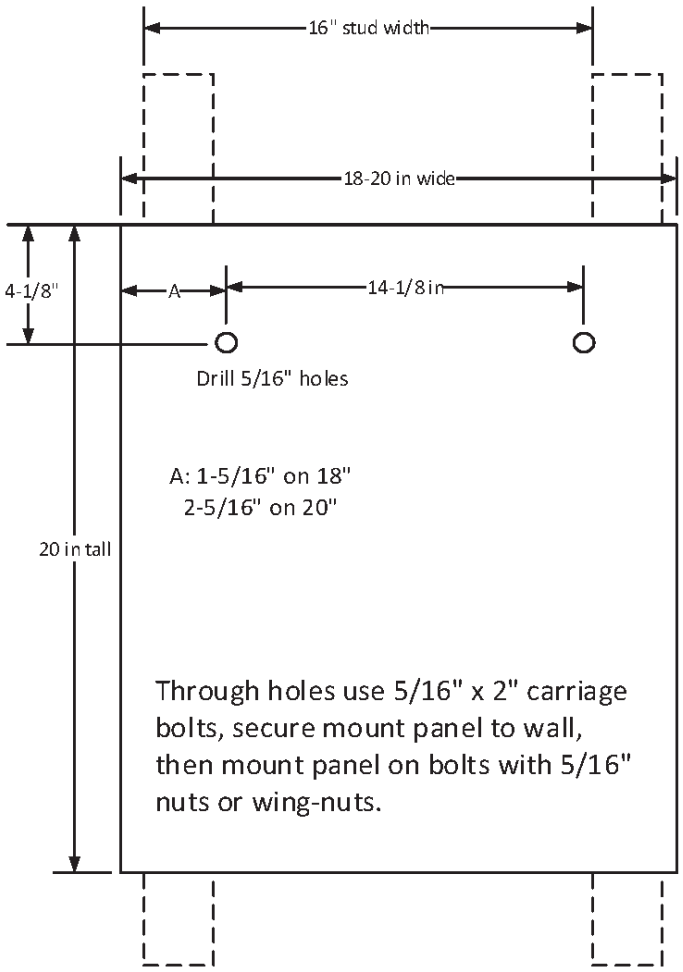
WARNING

Your new control panel features electric controls and powers electric heating elements. It is extremely important that you take appropriate precautions while using this equipment around water as it has the potential to severely injure you. It is highly recommended that as a precaution for your own safety, that you use GFCI protection at your breaker panel or somewhere down the line before the control panel. This protection doesn't replace safe practices but it will provide an additional layer of protection. Additionally, always take care to inspect your controller inside and out prior to use. It is best practice to inspect internals regularly to insure wiring and hardware hasn't loosened due to use and heat as a result of.

INSTALLATION OF STANDARD SIZE PANELS

You will need:

__ - 14-30/14-50 dryer outlet
--- Recommended GFCI Protection in place
__ - A clear area on the wall to mount
__ - Approx. 20"x20"x3/4" pc of lumber
__ - Drill the lumber per the drawing.
__ - 2 pcs 5/16" x 2" Carriage bolts
__ - 6 pcs 5/16" Washers
__ - 2 pcs 5/16" wing-nut or standard nut
__ - 2 or 4 5/16" x 3" lag bolts for secure wall mounting.



Important note:
Panels are fully tested in our shop. While we make every effort minimize or eliminate the chances, it is still possible for items to loosen while in transit via UPS and FedEx. Please inspect the panel prior to powering up to make sure nothing has come loose.

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INSTALLATION OF 1BBL SYSTEM SIZE PANELS

You will need:

__ - 14-50 dryer outlet

--- Recommended GFCI Protection in place

__ - A clear area on the wall to mount

Our latest generation 1bbl enclosures are manufactured by Rittal to strict Nema 4x rules. This means the box is sealed on the back side. To that end, our current mounting recommendation is to drill holes to your desired mount and attach to the board, similar to smaller panels.

For example:

Here is an example from a customer who used a standard 19" Comms network rack to mount his.

Other mounting solutions include VESA TV/monitor mounts.

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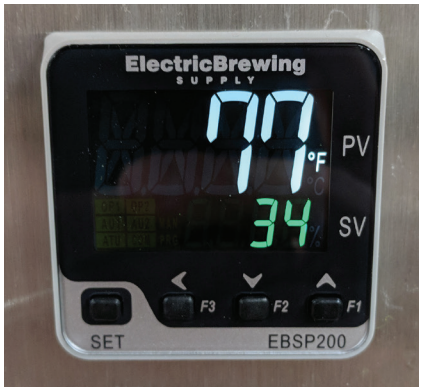
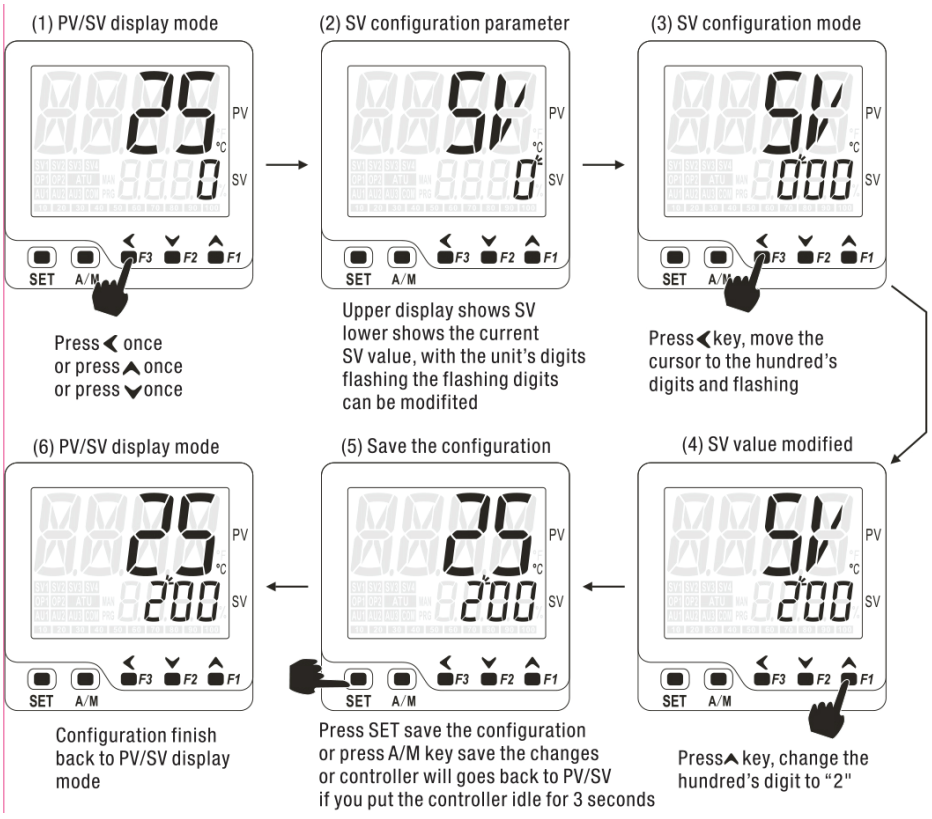
MEET YOUR PID

PV - Present value
=== This is what the temp probe is sensing.

SV - Set Value
=== This is the temp you want to achieve





Set a temperature
To adjust the tempurature in SV use the Up, Down, or Left arrow keys to move the cursor.
Once you have your desired temperature entered. Wait a moment and the temp will lock in.

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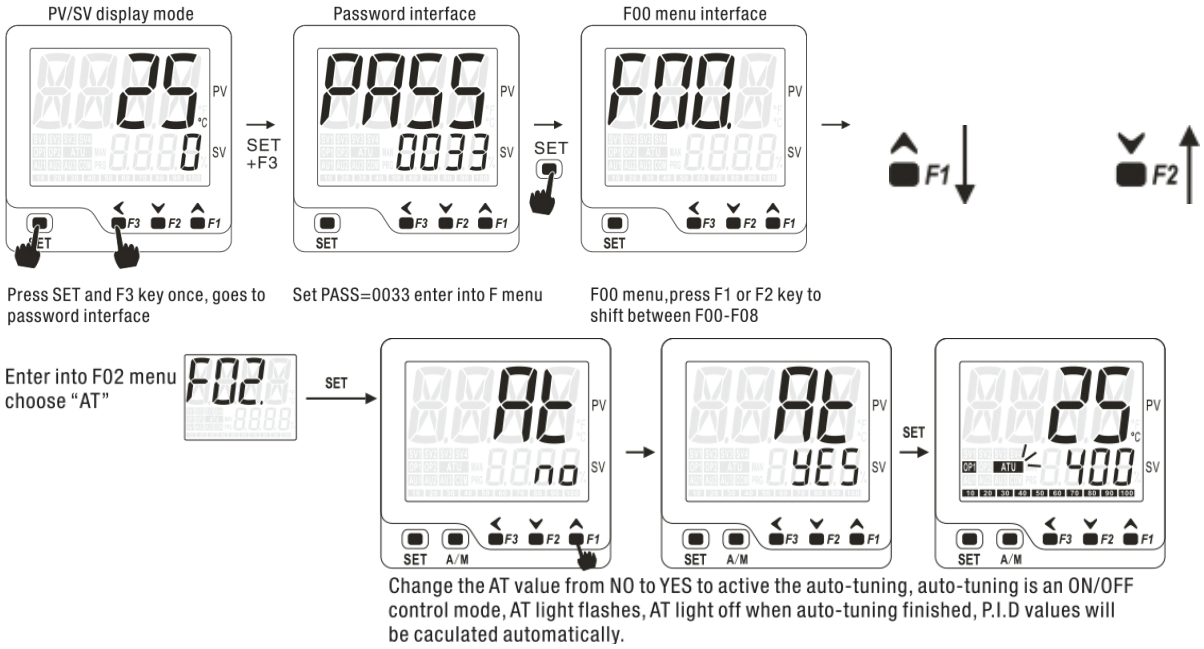
AUTO-TUNING YOUR PID

Once your kettles and panel are setup, for an effective use of your panel, you need to auto-tune your HLT PID controller. This insures proper calcs resulting in efficient use of the heating element(s). You only need to do this for your HLT PID.

To start the auto tune process, bring your kettle to approximately 150 degrees, once close, press the **SET and <** buttons until you see **PASS**. Enter code **0033** and press **set**. Select **F02** and press **Set.** Set **At** to ***YES*** and press the set button again until you se your **PV** again. You'll see ATU blink in the bottom right while it auto tunes. The auto tune process isn't a precise period, but it typically will run about 30 to 60 minutes.



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Getting Started

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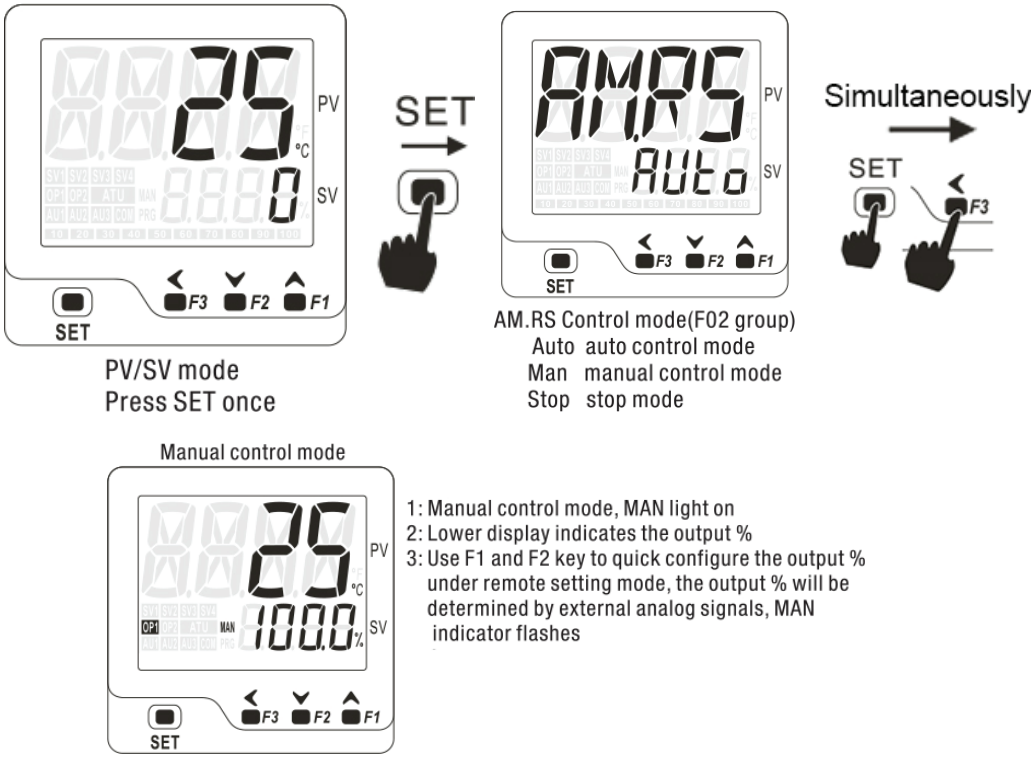
CONTROLLING YOUR BOIL



PV/SV mode
Press SET once

AM.RS Control mode(F02 group)
Auto auto control mode
Man manual control mode
Stop stop mode

1: Manual control mode, MAN light on
2: Lower display indicates the output %
3: Use F1 and F2 key to quick configure the output % under remote setting mode, the output % will be determined by external analog signals, MAN indicator flashes

Ready to boil?

The PID has 2 options, ***Auto*** and ***Man***. Auto allows you to set the temperature, however once you are at boil, you will need to switch to ***Man*** in order to dial in your boil. To set to man and back, press **SET** so you see **AM.RS**, and change accordingly. Press set until you see your temp in **PV** again. Typically once you are at boil, you'll dial manual precentage back to around 70-80%.

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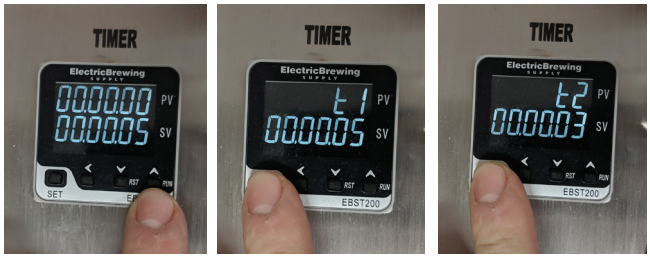
TIMER CONTROL

Don't forget your timer

The timer is configured in countdown mode. This means the lower value (SV) will be what the counter will start at.

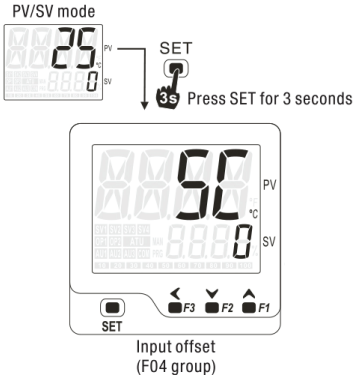


When you press **SET**:
T1 = Countdown time you want to wait
T2 = How long you want the buzzer to sound

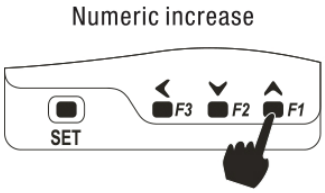
Set a tme

To adjust the time in SV press SET and use the Up, Down, or Left arrow keys to move the cursor. Once you have your desired time, press set until you return to the original display.
To start the countdown, press the **START** button.

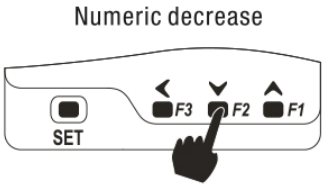
ADJUSTING FOR TEMP ERROR



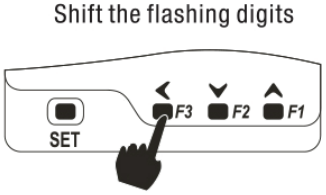
SC Input Offset is available for adjusting for error in your temperature readings. This likely will never exceed a few degrees if any.
Once adjusted, tap both Set and < together to return to the PV/SV screen.



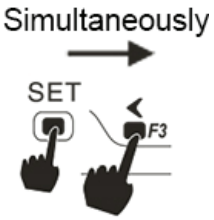
Press ^ key to increase the numeric of a parameter, press ^ and hold can fast increase the value



Press v key to decrease the numeric of a parameter, press v and hold can fast increase the value



Press < key to shift the flashing digit



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Trouble Shooting

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HAVING TROUBLES WITH YOUR CONTROL PANEL

As you setup your panel, we highly recommend a thorough once through with a flat head screw driver, tightening all the screws on contactors and other wire points. The reason for this is because during transit, we have experienced hardware and wire coming loose. The tighter we secure, doesn't insure a tight delivery.
Once tightening is completed, you should be set to go.

If you experience troubles, please run down this list before contacting us:

When you plug the panel in, and power up, the GFCI immediately trips.	Confirm your GFCI is wired correctly. All panels are tested on a GFCI circuit before shipping. Sadly, more often than not, we have found the GFCI miss wired.
When the panel is powered up the Green LED lights, but nothing else will light when switches are flipped.	Check the breaker(s) inside the panel, these need to be in the up position.
When testing the panel prior to attaching the elements, the white LEDs on the elements glow dim.	This is normal and okay. The white the LEDs are sensitive to the trickle current that the Solid State Relays (SSR) give off. Once the elements are attached, the white LED will go dim.
Once the elements are attached, when the element is supposedly switched on, the white LED does not light up.	Does your panel have Float switches? If so, these must be attached; if not installed, we typically include 2 jumpers that can be connected to the panel instead.
	If the floats are not the cause, the second point to check is the breaker inside the panel.
Boil element doesn't work, but works when attached to HLT.	Check the breaker inside the control panel. Also check for loose connections inside as wire will loosen during transit.
Temperature of PID reads OVR	Check your probe cable, insure it's secure. It may be necessary to contact EBS for a replacement.

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Warranty and Maintenance

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Troubleshoot (con't)

Pump switch isn't turning on the pump. LED remains off as well.	Confirm the ice cube relay in the top right, inside corner of the panel is secure in it's space. With elements and pumps off, the red led should glow on. Press the red reset button if not. If this doesn't work, contact us.
Element switch isn't powering the contactor. No thumping sound, therefore no element function.	
The temp probe seems off. Do these need calibrating?	The temp probes shouldn't need calibration. It is possible to put an adjustment in via the PID settings. Refer to the PID manual for how. http://ebsp200.ebrew.supply
Element remains on even after the PID stops calling for heat. Only able to cut off when switching off the switch.	The solid state relay (black "puck" on the heat sink on the top of the enclosure) may have failed. Standard failure is in a closed (on) circuit. Contact us if still within your warranty.

Recommended Maintenance

It is always recommended that you do regular maintenance on your system. For the infrequent brewer it should be a simple open and scan to make sure nothing is out of place or showing burns.

For heavy use it is highly recommended you inspect the interior regularly. With heavy use the heat from the electric current will wear down the hardware. Specifically monitor your twist lock outlets. By nature of how the connection works, the more frequent the plug is used, the more movement, over time arcing can occur inside which can result in melting of wire and/or the outlet. For heavy users, monitoring of this is mandatory, it is also recommended you keep spare parts on hand. The best connection is a hard wire connection, however in brewing, convenience for cleaning is necessary. Contact us for more recommendations for heavy use.

Failure to monitor the performance will result in the cancellation of your warranty.

IMPORTANT:

Commercial use isn't warranted but we do support use. This means we will help you through the troubles, if it proves to be a part or workmanship defect we will replace, but wear and tear damage will not be covered.

ElectricBrewing SUPPLY

Specifications

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CONTROL PANEL SPECIFICATIONS

30a Specifications

- 16” wide x 18” tall x 8.5” deep enclosure
- Approximately 38 lbs
- Stainless Steel enclosure
- Supplied with 6’ ft power cable with L14-30 connector for panel side and Nema 14-30p wall side
- Recommend minimum 30a GFCI breaker
- Requires Ground and Neutral

FLA: 25.8 amps @ 240v
Max Output: 1x 5500w @ 240v
2x 1.4a Chugger Pumps
Power: 240/208v, 1ph 60 hz
Nema 14-30 wall outlet required

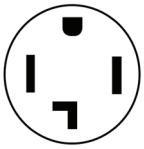
50a Specifications

10-30 gallon version (2 element)
- 16” wide x 18” tall x 8.5” deep enclosure
- Approximately 38 lbs

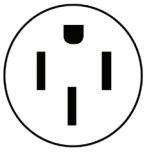
50 gallon version (4 element)
- 16” wide x 18” tall x 8.5” deep enclosure
- Approximately 60 lbs

Both versions
- Stainless Steel enclosure
- Supplied with 6’ ft power cable with CS66364C connector for panel side and Nema 14-50p wall side
- Recommended 60a GFCI breaker
- Requires Ground and Neutral

FLA: 48.6 amps @ 240v
Max Output: 2x 5500w @ 240v
2x 1.4a Chugger Pumps
Power: 240/208v, 1ph 60 hz
Nema 14-50 wall outlet required



NEMA 14-30



NEMA 14-50