Warning:

Review Entire Manual Before Operating Immersion. Damage and/or bad beer may result otherwise.
Warnings

1. Never operate Immersion without the rod securely installed.
2. Always use Iodine-based sanitizers to clean Immersion's rod.
3. Never block Immersion's heat vents.
4. Always operate in a well-ventilated area. Do not operate in a closed closet (or at least crack the door).
5. Never get Immersion's head unit wet.
6. Keep power supply a safe distance from the fermenter in a well-ventilated area.
7. Never use Immersion without the jacket, it will not cool: imagine trying to cool your fridge with the door open.
8. Read all safety instructions before using Iodine sanitizers (caution, causes burns)
9. Only use check valve for lager primaries and conditioning or ale secondary and conditioning. Do not use check valve for ale primaries, it will clog.
10. For Big Mouth Bubblers, Immersion's rod will contact the glass bottom of your fermenter. Be careful not to press hard.

Section 0: Before you Begin

1. Take a step back from the Immersion.
2. Congratulate yourself on stepping into the future of home brewing.
3. (Optional) Give yourself a pat on the back.
4. Brag to all your friends about how much better your next batch is going to be than anything they have ever made.
5. Take a deep breath.
6. Let's get started.

Section I: Assembly and Installation
Part IA: Fermenter Specific Instructions - Use and Airlocks

- Your airlock assembly includes the following parts:
  - Gasket (attached to the lid or your fermenter)
  - Straight 3/8” connector
  - 90° Elbow 3/8” connector
  - Check valve (one-way valve — for lagers and for conditioning ales)
  - 3' of 3/8” tubing

- The elbow and straight connectors in conjunction with the 3/8” tubing may be used to divert fermenter release away from your Immersion head unit. While sturdy, Immersion’s electronics are not designed to endure yeast goop in the circuitry.
Check Valve: For use with lagers and conditioning ales, not primary fermentation of ales

Blow into your check valve to learn which direction air flows through it

The check valve is a one-way air release valve that opens at 1psi, or roughly the same pressure as a traditional 3-piece water airlock. BrewJacket has chosen check valves for Immersion because they can be orientated horizontally as well as vertically and still function.

Check valves are for air release only. Liquid with a high solid count, such as yeast, WILL clog up the valve. Therefore it is recommended that you use your check valve with lager yeast only. Ale yeast ferment on the top of your fermenter and can rise up to exit through the air release, where lager yeast will stay at the bottom of your fermenter.

If fermenting ale, you can install the check valve after the first few days, when primary fermentation is complete and the risk of yeast exiting through the airlock is diminished.
Blow-off Jar - For use with ales during primary fermentation

We recommend using either the straight or elbow connector attached to the included 3/8" tubing fed into a jar of sanitized solution for the primary fermentation of ales. Active ferments are known to rise up through the air release and having a jar will give you volume to catch the yeast and avoid a mess.

If you have a modified bucket lid

- Attach the tubing (included in your accessory pack) to the black gasket in your lid and attach either the check valve for lagers (included in your accessory pack) or blow-off jar for ales. You can attach the check valve directly to the gasket if you wish.
- We do not recommend using the check valve for ales during primary fermentation as the yeast may rise and clog the valve. We suggest using a blow-off tube submerged in water for ales during primary fermentation.

If you have a PET carboy

Attach the tubing to the black gasket in the PET carboy neck and attach either the included check valve or airlock of your choice to the other end of the tubing. You can attach the check valve directly to the gasket if you wish.

We do not recommend using the check valve for ales during primary fermentation as the yeast may rise and clog the valve. We suggest using a blow-off tube submerged in sanitizer for ales during primary fermentation.

If you have a glass Big Mouth Bubbler

Attach right angle connector to black grommet on lid on tubing to other side of 90° elbow. Attach check valve or your choice of airlock to other side of tubing. Note: there will be exposed rod. Ice should form on exposed portion of rod. This is normal. In very warm environments, ice may not form. If so, see Section III: Troubleshooting.
We do not recommend using the check valve for ales during primary fermentation as the yeast may rise and clog the valve. We suggest using a blow-off tube submerged in water for ales during primary fermentation.

**Part IB: Immersion Head Assembly**

Unscrew the protective plug in rod’s threads. Screw rod to the bottom of main Immersion head until rod won’t turn anymore. Be sure to keep this screw in a safe place as it helpful during cleaning.

*Ensure there is no insulation sandwiched between rod and head unit. Insulation can shift slightly and become sandwiched when the rod is tightened down. A clean metal-on-metal connection must be made otherwise no cooling will occur. If you find residue or sandwiched insulation on the contact point or the rod, scrape it off with your fingernail or a plastic utensil. Do not use metal as it can gouge the soft metal contact point.*

1. Clean and sanitize rod, bung (included in your accessory pack), and fermenter according to sanitizing and cleaning instructions in Section III below.
2. Slide bung up rod until bung touches the Immersion head unit.
3. Attach temperature probe to Immersion head unit and insert temperature probe between the jacket and the fermenter, or into a thermowell (not included). Thanks to the jacket’s thick insulation, the temperature between the fermenter and the jacket is approximately equal to the temperature inside the fermenter.

Insert rod through the hole in top of fermenter and ensure a tight seal. (Avoid pressing on buttons or LCD screens.

Note: if you have a Big Mouth Bubbler, the rod will contact the bottom of the fermenter. Do not press. Doing so could damage your fermenter. You may have to lower the bung slightly to achieve a sanitary seal.
Part IC: Jacket Installation

1. Jacket will come compressed in the box. Unfold the jacket and place your arm down the center of the jacket and expand the jacket outwards.
2. Insert your fermenter into the jacket
3. Pull drawstring tight to ensure a well-insulated environment.
   - If you are using a plastic bucket, ensure the jacket is not blocking the exhaust vents
Section II: Using the Immersion

Part IIA: Turning on the Immersion

Insert power plug into main Immersion head. The displays on the device will light up indicating the device has turned on.

Part IIB: Setting the Temperature

1. Press up button to increase the set temperature.
2. Press down button to decrease the set temperature.
Part IIC: Calibrating the Temperature

If your CURR temp is off, you may need to recalibrate. If CURR is reading something very high (in the 90s for fahrenheit models, or in the 30s for centigrade models), do not recalibrate, see troubleshooting in Section IV.

1. Hold UP and DOWN buttons as the same time until the SET temperature display reads 00.
2. Place Immersion temperature probe and a separate thermometer that you trust into a container of liquid.
3. Wait 5 minutes for the temperature of the liquid to be uniformly read by both the Immersion temperature probe and your separate thermometer. Stirring the liquid ensures the temperature is uniform.
4. Using UP and DOWN buttons adjust CURR temperature to match the reading you received from your separate thermometer.
   a. If you do not have a second thermometer, use a container full of ice and add water so the ice is slightly suspended. Stir the thermometer in the ice water bath until CURR no longer changes (approximately 5 minutes).
   b. Adjust CURR to read 32g for F or 0 for C.
5. Hold UP and DOWN buttons at the same time until the SET temperature display no longer reads 00. Verify that your new temperature is recorded. Otherwise repeat the above steps.
Section III: Maintenance, Storage, and Upgrading

Part IIIA: Sanitizing

Note: Only use Iodine-based sanitizers with Immersion (included in you accessory pack), such as lodophor and IO-Star. **Do not use acid based sanitizers such as Star-San.** Immersion’s rod has a hard-anodized surface; therefore very low PH solutions can harm the protective finish.

1. Fill your fermenter to the top with an iodine-based sanitizing solution.
2. Sanitize lid and bung separately.
3. Install sanitized lid onto sanitized fermenter, ensuring the iodine solution is brimming out of your fermenter.

4. With carboy style PET fermenters, we recommend installing the check valve backwards as pictured above to ensure sanitizer does not leave the fermenter. **If you do not block the air release, the top of your rod will not get sanitized and your beer may get infected.**
5. Very slowly insert the Immersion (no bung) through the hole in your lid or fermenter opening.
6. Iodine solution should overflow the fermenter with the insertion of the rod. Ensure you do this slowly to keep sanitizer from entering the head unit.
7. Alternatively if you do not wish risk getting the head unit wet, you can unscrew the rod and install the nylon safety plug and submerge the entire rod without the head unit. Allow rod’s cold contact surface to fully dry before installing.
7. Wait 2 minutes
8. Remove Immersion and allow the rod to air dry
9. Remember to sanitize and reverse the check valve prior to lager fermentation, or remove it for ale fermentation.

Part IIIB Immersion Cleaning

After fermentation is complete and you are waiting to enjoy your perfectly fermented beer, Immersion must be cleaned to remove all residual beer and yeast solids to prevent contamination of future batches.

1. Unscrew the rod from the head unit.
2. Replace the nylon screw cap that came with your rod to prevent debris entering the screw cavity on the rod.
3. Wash the rod in your sink with warm soapy water and a mild abrasive sponge. Do not use metal abrasives such as steel wool.
4. If either visible residue or a beer smell persists on the rod, soak the rod in a weak solution of Powdered Brewery Wash (PBW): 1/2oz PBW per gallon of hot water.
5. After soaking in PBW, rinse well with hot water. Sometimes a soak in hot water will be required if any white PBW residue persists after rinsing.
Part IIIC: Immersion Storage

1. Unplug power plug and temperature probe from main Immersion head.
2. Unscrew rod from main Immersion head and replace nylon screw cap in rod's threads.
3. Store the rod in a safe place where no other objects will contact it. Ensure the top shiny surface is well protected. If this surface is damaged, heat transfer will be diminished.
Part HID: Immersion Upgrading

The Immersion is designed to be upgradable as we develop controllers with additional functionality. This allows you to experience the newest features of the Immersion without having to buy an entirely new device. Be sure to read through all of the upgrading instructions before upgrading to prevent damage from occurring to the immersion.

1. Make sure the Immersion device is not powered on and is unplugged.
2. Unscrew the four screws that hold the faceplate to the Immersion main unit.
3. Carefully and slowly lift the faceplate off of the Immersion main unit until you can see the white plug on the bottom of the faceplate.
4. Carefully unplug the Immersion main unit from the faceplate.

5. Store the faceplate somewhere safe in case you want to use the functionality from that controller.
6. Plug Immersion main unit into the new faceplate.
7. Place the new faceplate into the Immersion main unit.
8. Using the four faceplate screws, screw the new faceplate into the Immersion main unit.

**Section IV: Troubleshooting**

support@brewjacket.com

If you are having problems with your Immersion, email us at support@brewjacket.com. We will do our best to answer any problems you may have within 48 hours.

**CURR temperature jumps up and down periodically**

- The temperature probe connection is loose or your temperature probe is faulty.
- Unplug probe and plug back in. If that does not work, contact support@brewjacket.com for help.
CURR temperature does not react to probe

- Unplug probe and plug back in, or unplug the power and plug back in.
- If those do not work, contact support@brewjacket.com for help.

Immersion is slow to power on

- Ensure the power plug is firmly inserted in your Immersion. Also ensure the temperature probe is fully inserted.
- Immersion utilizes a delay in temperature readings to ensure the cooling engine does not continually power on and off if the temperature readings are volatile.
- If it takes Immersion longer than 5 minutes to turn on, contact support@brewjacket.com.

Immersion head unit gets hot but no fan turns on

- Unplug Immersion immediately and contact support@brewjacket.com

Immersion is not cooling

If the SET temperature is less than CURR, Immersion should take approximately 2 minutes to power on the fans and cooling engine, and another 10 minutes to get very cold.

1. If above happens but Immersion is not cold, check the following:
   a. Ensure the contact point between the rod and the Immersion head unit is clean and free of scratches. See Part IB to verify you do not have debris on your contact point.
   b. Tighten the rod until you cannot turn it anymore. You should hear/feel metal on metal contact. If you do not, you have debris or insulation in the way and cooling cannot occur. Clean your contact points.

2. If rod still does not get cold, remove the rod and power on Immersion. Ensure SET is less than CURR so Immersion begins to cool. Wait 15 minutes. Frost should form on the cold contact point and the metal should be very cold. Do not touch the metal; it can freeze your skin. Turn Immersion off, wait for the ice to defrost and for metal plate to dry completely, screw the rod back in tightly and repeat step 1.

3. If the cold contact point is not cold and frost is absent, contact support@brewjacket.com.

Power supply is noisy

- The fan of the power supply can age and become noisy over time. This is normal. The power supply is capable of safely providing enough power to Immersion without fan support, as the power supply is spec’d for a very high load. If the fan becomes too noisy, contact support@brewjacket.com.

Immersion does not power on
• Ensure the power plug is firmly inserted into Immersion and that the LED power indicator light on the power supply is on. If that fails, contact support@brewjacket.com.

I think my check valve or blow-off is clogged, will my fermenter explode, or will Immersion turn into a projectile weapon?

• No. If your check valve is clogged, pressure can build up inside the fermenter, but Immersion has enough weight to remain in place. You may notice a "pffft" sound as co2 forces Immersion up just enough for the gas to escape. If you notice this happening, remove your check valve or blow-off line and clean it.

How to unclog a check valve

• To unclog your check valve, soak it in a normal concentration of PBW for 30 minutes. Rinse thoroughly. Test the check valve by blowing into it each direction. If air can only travel one way, the clog is removed. If not, repeat the PBW soak.