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TAP CLEANING SYSTEM



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TAP CLEANING SYSTEM

Clean multiple beer lines in a fraction of the time

For those who keg their beer, a necessary evil is cleaning your beverage lines routinely. On the homebrew level, the general rule of thumb I've followed is cleaning every 6-weeks or at the very least, in-between each keg that will be on tap. Leaving the lines and faucets dirty can result in off-flavors as well as increase foaming, making dispensing more difficult. Why destroy all the hard work put into the beer you are dispensing?

The cleaning process involves running some kind of caustic cleaning solution such as Beer Line Cleaner (BLC), Straight A, PBW, or Clear Tap, through the lines and faucets to remove deposits, bacteria, and even mold, to guarantee the best quality beer. The most prevalent technique among homebrewers utilizes a spare keg with your cleaning solution of choice inside of it, putting CO₂ pressure into the keg and connecting each beverage line to the liquid-out post to clean lines one at a time. This not only wastes CO₂, but is not the best method to clean beer lines which benefit from continuous flow for a duration of time, typically 15 minutes.

Another method used is to

disassemble the faucet and connect a hand pump to the faucet shank, and soak all the pieces in the cleaning solution. As you can expect this can be quite the task to perform often on a multiple tap dispensing system. While a complete disassemble, deep clean and soak is recommended every so often, for routine beer line cleaning it does not have to be so thorough.

The best technique for cleaning beer lines utilizes a pump to push the cleaning fluid through your taps and beer lines. However, if you have multiple tap lines like most of us do, you may find yourself having to do one at a time which can also be time consuming. For folks with multiple taps, a properly setup manifold allows you to connect each of your tap lines to a pump, reducing the time it takes to perform this routine maintenance.

There are many ways to skin this cat depending on your kegerator's connection types, what hardware you can source, and how much you are willing to spend. In my case, I use Bev Seal Ultra® beer lines with John Guest push disconnects in my 4-tap keezer. I was cleaning my lines via the push CO₂ method. I eventually decided to pick up a submersible pump that allowed me to pump clean the lines. While this eliminated my CO₂ waste, I started with cleaning one line at a time. Next I picked up three barbed "T" pipe fittings so I can split one flow off the pump to four. Voila! Now I was able to clean all four at once but because this design used pipe clamps to ensure no leaking (which was tricky at times), and I wanted something easier, that led to my current design with a manifold. For around \$50, I have a system now that allows me to clean up to 6-tap lines at once with a setup that takes just minutes to connect all the plumbing.

The best technique for cleaning beer lines utilizes a submersible pump to push the cleaning fluid through your taps and beer lines.

MATERIALS

EcoPlus 290 GPM submersible pump
 SMC KM12-09-36-6 PBT Push-To-Connect Tubing Manifold with (2) 3/8" NPT female threaded inlets
 (2) 3/8" NPT male to 1/2" Barbed Hose/Tubing Connector
 3/8" NPT male end cap
 1/2" I.D. tubing, length as required
 (2) 5-gallon (19-L) buckets
 Beer Line Cleaner (BLC) or caustic cleaner of preference.
 Plumber's thread seal tape



Photos by Steven Franczek

STEP BY STEP

I. BUILD YOUR MANIFOLD

First you must decide on a manifold design, which needs to configure to fit your system. The manifold I purchased works well with my Bev Seal Ultra® beverage lines and simply required two fittings. The pump and manifold I purchased both had $\frac{3}{8}$ " NPT female threaded fittings, so I picked up (2) $\frac{3}{8}$ " NPT male to $\frac{1}{2}$ " barb hose connector to secure this connection between pump and manifold and a $\frac{3}{8}$ " male end cap for the other end of the manifold. Depending on your pump outlet and manifold, this may require the purchase of a connector that is different than the parts listed. So make sure to pick up the connections that are right to connect your pump's outlet to the manifold's inlet.

Word of note: Homebrewers who have typical vinyl beverage lines do have the ability to attach the liquid disconnects right to a manifold. A select few homebrew shops sell $\frac{19}{32}$ " ball-lock or pin-lock to $\frac{1}{4}$ " NPT male connector that could attach the disconnects direct to a manifold that has $\frac{1}{4}$ " NPT female ports. If you take this route, be sure that the manifold you purchase can handle the highly caustic and acidic environment that it may encounter during the cleaning process such as stainless steel or polypropylene. Aluminum manifolds that are common for gas distribution, would not be advised.

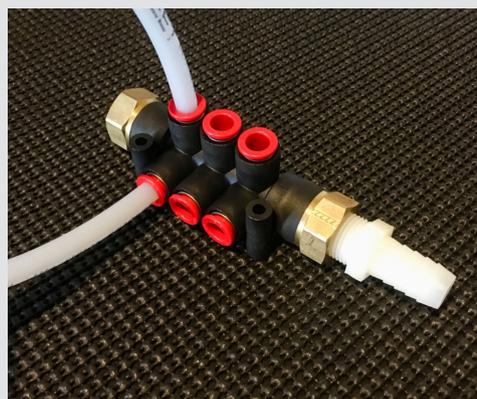
2. PLACE THE MANIFOLD INLINE

Remove the liquid disconnects from the beer lines. Set these liquid disconnects aside. With the John Guest push disconnects, this is an extremely easy task. There will be a little leaking of the beer that is inside of the beer lines, so have a towel nearby. Connect the beer lines to the manifold one by one. I recommend that you loosen the tops of the liquid disconnects and soak those in the cleaning solution – see step 3.

My manifold has six outlets, but my kegerator has only 4 taps. You can see in the picture to the left that I utilized a closed loop to seal off these two outlets I don't use. Plugs can also be purchased to close off individual outlets as well.

3. PREP FOR CLEANING

First, prepare a half bucket, ~2.5 gal. (10 L) of warm rinse water and another bucket with 2.5 gal. (10 L) of BLC solution. Submerge those liquid disconnects that were placed aside into the bucket now with the BLC solution to allow those to be cleaned as well. The warm water rinse will clear out any residual beer from your lines before the actual cleaning takes place. Submerge the pump inside of rinse water with $\frac{1}{2}$ " tubing connected to the fluid-out post of the pump.



4. FLUSH THE SYSTEM

Connect your ½" I.D. silicon tubing from the ends of your faucets into your bucket. At this time, your system is now closed. Open your faucets, then turn on your pump, allowing the warm water to flush the system. This only needs to run for a minute or so, but eliminates any dilution of your cleaning solution with leftover beer sitting in your lines. Now, close your faucets and dump your bucket of water.

Word of note: Beer line cleaners are highly caustic solutions and can cause bodily harm if the user is not careful. A proper inspection during the flush cycle is very important to your safety. Before you begin running the cleaner, be sure to double check that all connections are tight, use chemical-resistant gloves, and most importantly, we highly recommend users wear safety glasses for eye protection.



5. CLEAN AND RINSE

Place submersible pump in the cleaning solution, open tap faucets, turn the pump back on and allow it to run for 15 minutes minimum, or as directed by manufacturer's instructions. I will usually allow it to run while I do other things around the house, so don't worry if it's going for 30 minutes or more. Once time is up, turn off the pump and close the faucets.

Beer line cleaners typically require a rinse water or occasionally an acid-sanitizer rinse after use, so once cleaning is complete prepare a fresh bucket of clean water or acid sanitizer and run a rinse cycle. Allow it to run for a minute to rinse the lines of any residual cleaner. With the rinse complete, the lines are now clean and ready for reassembly.



6. REASSEMBLE

Remove the beer line disconnects from the cleaning solution with a brewing spoon or other utensil as you won't want the solution on your skin. Rinse with water or acid sanitizer and re-tighten disconnects tops. Remove beer lines from the manifold and place disconnects back onto the beer line. Reinstall the disconnect back onto the liquid-out post of your kegs (this is a good time to make sure your faucets are all in the off-position, first) and the cleaning is complete. Allow your lines and faucets to drop in temperature following the cleaning, as they are elevated in temperature and will cause foaming. After about a half hour, you will be ready to dispense. 

