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# CARBOY SPRAY WAND

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# Carboy Spray Wand

Story and photos by **Forrest Whitesides**

Probably every homebrewer's least favorite part of the hobby is the sometimes staggering amount of cleaning that is required to produce a sanitary, contaminant-free batch of beer. And one of the most stubborn things to clean can often be that thick, nasty-looking ring of dried kräusen gunk that is almost always present after a healthy fermentation. This is especially true for brewers who use blow-off tubing, as the kräusen travels all the way up the neck of the carboy.

You can soak the carboy overnight in a solution of water and a cleaning agent such as B-Brite and then use a carboy brush to get the stubborn cling-on gunk. Or, you could just use a high-pressure sprayer to blast away the left over kräusen.

There are two basic ways to build this carboy sprayer: either with soft copper tubing or with hard copper pipe. If you intend to use soft copper tubing, you'll need two compression fittings and a few adapters. I chose to use ⅜-inch OD copper tubing (to navigate the narrow neck of a glass carboy) along with ⅜-inch x ½-inch compression coupling (Watts part # A-118), a ⅜-inch x ¼-inch compression coupling (Watts part # A-116), a ¾-inch male hose thread x ½-inch male pipe thread adapter (Watts part # A-663), and a ⅛-inch hose barb x ¼-inch male pipe thread adapter (Watts part # A-85). These fittings work with my usual brewing setup, so feel free to make changes based on your equipment, whether it includes an outside garden hose or an indoor utility sink.

For those of you with PET carboys, or if you happen to have a glass carboy with a wider-than-normal mouth, hard copper pipe is a great alternative to copper tubing. It's less pliable than soft tubing, but far more sturdy over the long haul and there are several available fittings allowing for many different designs to accommodate a wide range of needs.

Going with hard copper pipe also means that you'll need to solder the joints and fittings together, as it is too rigid for regular compression fittings to work properly. If you've never soldered copper pipe before (referred to as "sweating" copper), don't let that stop you from giving this project a try. The process of soldering copper is very simple to learn (but difficult to master, of course), the equipment to do it is inexpensive (less than $20 for the basic gear), and it's a useful general home-improvement skill. Be sure to wear appropriate safety equipment and follow all precautions as directed.

## Parts and Tools

### Soft Copper Option

- 2-foot (or longer) piece of ⅜-inch OD soft copper tubing
- ⅜-inch x ½-inch compression coupling (Watts part # A-118)
- ⅜-inch x ¼-inch compression coupling (Watts part # A-116)
- ¾-inch male hose thread x ½-inch male pipe thread adapter (Watts part # A-663)
- ⅛-inch hose barb x ¼-inch male pipe thread adapter (Watts part # A-85).

### Hard Copper Option

- 2-foot (or longer) piece of ½-inch OD copper pipe
- ¾-inch male garden hose adapter fitting
- 45-degree street elbow
- 90-degree street elbow
- end cap


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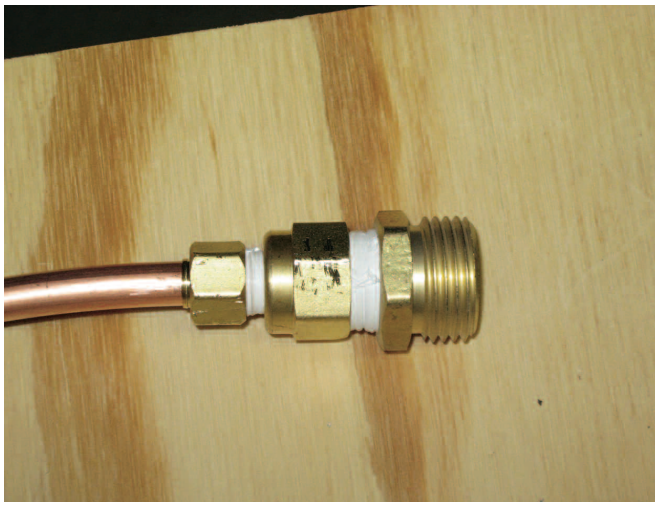
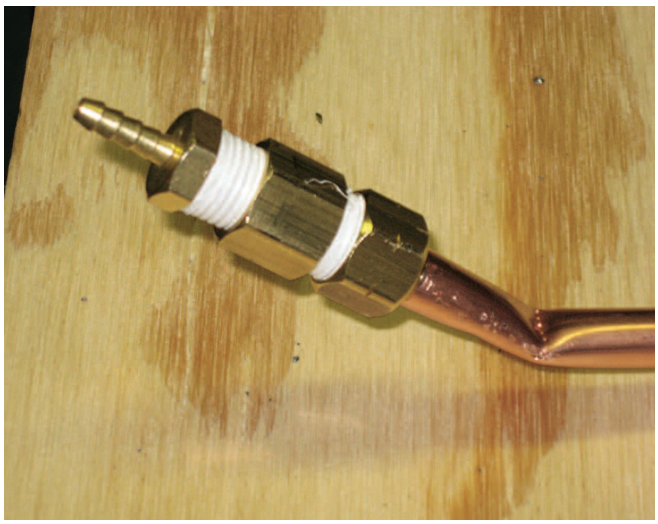
## 1: SOFT TUBING OPTION

This photo shows what one end of your copper tubing should look like once you've attached the nut and flare fitting. To start, measure off a comfortable length of tubing and make your cut. A Dremel or other rotary tool with a cutoff wheel is an excellent way to cut the tubing. A coping or hack saw will also work, but take care not to apply too much pressure as the tubing is very easily deformed, and this can make it difficult or impossible to get a good seal with the compression fittings.



## 2: STEP TWO

Soft copper tubing is very pliable and can be bent and twisted to suit many cleaning applications. Try several different angles of bend to make sure you'll be able to fit the completed sprayer into your carboy. The next step is to wrap the threads of the two fittings with Teflon tape. Unscrew the nut from the ⅜-inch x ½-inch compression coupling and slide it approximately half an inch over one end of the tubing and then do the same with the flare fitting (which looks like a small brass ring). Now screw the rest of the compression coupling into the nut until hand tight.



## 3: STEP THREE

To tighten fully and insure a good seal, hold the main part of the coupling stationary while turning the nut with either pliers or a wrench. A vise is handy to hold the coupling steady, but it can also be done with a crescent wrench. Repeat the same procedure on the other end of the tubing with the smaller compression coupling. All that remains to be done is to wrap the threads of the two fittings with Teflon tape and screw them in to the compression fittings. Hook up your new sprayer to a garden hose or sink to test the integrity of the compression fittings. Tighten and readjust as needed. Once the fittings are wrapped, screw them into the compression fittings to look like they do in the photo.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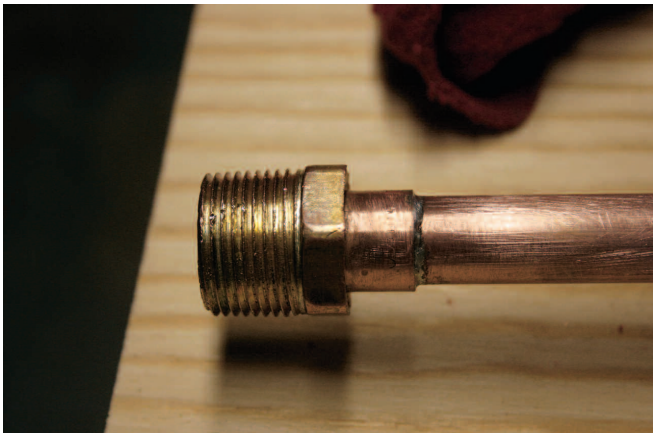
## 4: HARD TUBING OPTION

For my hard copper sprayer, I chose a 2-foot section of ½-inch OD copper pipe, which is commonly available at hardware stores in short, pre-cut lengths that are perfect for this type of project. Fittings for this project include a ¾-inch male garden hose adapter, a 45-degree street elbow, a 90-degree street elbow, and an end cap. These are just suggestions, so feel free to shop around for different options to suit your needs. I highly recommend that you test fit the elbows before soldering to make sure the configuration will fit through the neck of your carboy. For example, I found that attaching the 45-degree elbow and then the 90-degree elbow - but not the other way around - fit fine into my carboy. To create a nozzle for your sprayer, cut a slit or drill a hole (or several small holes) in the end cap fitting (as pictured). I prefer the slit, as it creates a wide, high-powered fan of water, but your mileage may vary.

## 5: STEP TWO

Next, the ¾-inch male garden hose adapter to one end of the copper pipe, (as pictured) and solder the elbows together on the other end of the pipe followed by the end cap. By using "street" elbows instead of the regular variety, the elbows can be fit together directly. My local hardware store did not have 90-degree street elbows in stock, so I had to cut a short piece of pipe to use as a coupling between a normal 90-degree elbow and the end cap.



## 6: STEP THREE

Finally, solder the elbows together on the other end of the pipe followed by the end cap. Attach the sprayer to your garden hose and turn on the water to make sure your solder joints are fully seated and sealed. And now it's time for a homebrew! BYO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