Guide for Creating an Easily Transportable Single Keg Jockey Box

Kegging your beer is one of the most rewarding decisions in homebrewing. It shaves hours off your brewing process by dramatically streamlining your bottling process and you get the ultimate control for adjusting your carbonation. Plus you get the extra satisfaction of seeing your beer served through a faucet.

However, the convenience of kegging comes at a cost. Apart from the financial investment of the basic kegging equipment, you have the additional cost of needing some sort of device to chill 5 gallons of beer to a serving temperature. This typically means the purchase of a separate refrigerator or freezer along with faucets and shanks. For people who live in an apartment, the luxury of the additional space may not be feasible. Additionally, when going to a party or event, it is either necessary to bottle up some beer (which takes time and doesn't match the carbonation levels that you had in the keg) or transport your keg, CO2 system, and some way to keep the beer cold. For those who have a large multi-tap jockey box, transporting a 48 quart cooler with you for one keg isn't the most fun or efficient approach.

I figured that the concept of a smaller single keg jockey box can actually provide a way around both the large initial investment of a keggerator in money and space but also provide a way to easily transport and serve your beer on the road. While ultimately designed for the road, it would be possible to simply use it at home to serve beer from warm kegs, only needing to add ice prior to serving.

The basic requirements for the "mini-chill" were that it chill a beer down at least 20 F from ambient temperature, be small enough to fit on top of a keg and transportable with a keg, cost less that $50 to assemble, and be "powered" by the contents of a normal refrigerator ice machine. I wanted it to be something that almost anyone could easily assemble with tools from around their house as well as something easy to clean. Finally, my goal was to be able to balance the system to accommodate for the proper carbonization maintaining pressure and serving pressure to include line loss (this is a big variable depending on how you choose to create your system).

With these considerations in mind, I envisioned a small cooler with a chiller coil and a basic in and out hose connection to attach your keg and a basic cobra faucet. You can create this system and only need the following tools:

Screwdriver (flat head)
Drill with 3/8" drill bit
Something solid between 3-4 inches to wrap tubing around
Newspaper - preferably the World and Sports sections
Optional: tube cutter (if you buy more tube than you need)

All you will need to assemble your mini-chill is:

1-2 gallon Rubbermaid cooler: $8-$15
20-60 ft 3"8 OD / 1/4" ID copper tubing: $20-$60
1" ¼" screw-in barb: $1.00
4 hose clamps: $2.00
2-3 ft ¼" ID vinyl hose: $0.50
1 cobra head faucet: $6.00
1 bungee chord: $1.00

Once you have the above equipment, the time to build the mini-chill is less than one hour. First, you find out whether the item you plan to wrap the tubing around fits within your cooler with at least 1 inch to spare around it. This will give you space to wrap the coil around and also allow for water and ice circulation to keep the device chilled. We are going to create a

"double helix" with one tubing helix leading down and one coming back up.

I have found that for a 2-gallon container, a slim 5 lb CO2 canister fits well. Ultimately, whatever you have around will work. Simply place the canister in the cooler and mark off a spot roughly 1 inch below the top of the cooler. For a 1 gallon cooler, you can probably find something else around the house that is about 4" in diameter.

The next thing that you want to consider is line pressure. Ideally, you'd like to have a balanced system so that you could apply an appropriate level of pressure on the keg to maintain carbonation and dispense the beer without foaming. This can be a bit difficult to get to work out, but it is still worth trying. The biggest problem is that when your keg is warm, it requires a much higher level of pressure to maintain the desired carbonation level. This means that a lot of line resistance is needed to get down to serving pressure. The good news is that with more copper tubing, your temperature and pressure drop can be greater. The bad news is that the resistance of metal tubing is a lot lower than plastic tubing. You can find values for line pressure loss at: http://kegman.net/balance.html