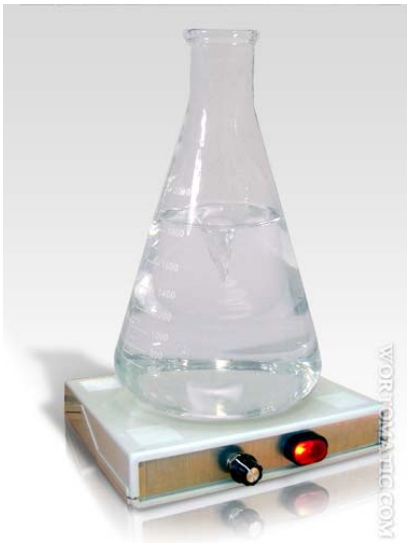
Hank Speaks... So Listen by Hank Bienert

Hot weather has arrived. Even though I live up NORTH, that is a few blocks north of the DHaus which is/should be the true center of every CCH member's universe, Rocky Racoon the Dog/confidant/brewing companion is much slower as he runs to the back fence throwing his 14 lbs at the gate whenever danger threatens. Every Monday and every Thursday AM, a large LOUD stinky truck comes by and stops and there is some commotion and activity with the garbage cans and he growls and barks and they leave so he assumes it must be working. And being hot weather it's time to make lagers. No I didn't say ***drink*** lagers which is too obvious a statement to bother with, but to make them. Ales ferment at mid 60s and lagers mid 40s-50s and which is easier to do in the hot weather? The latter temp range since I have plenty of room in my secondary fridge. One of the keys to having a good ferment in a lager is a big starter which is why over the last few years, I tumbled to the virtues of making a stirplate which is therefore the subject at hand and as always I am recycling - not only materials but articles as I do in the summer.

July - My favorite celebration

Building a Basic Stirplate for Yeast Suspension



Materials

1 box (size nearly unlimited)
1 computer fan 12v
1 dc power supply 6v
1 rare earth magnet
1 rheostat (pot) 25ohm 3watt
1 power toggle switch (optional)

The computer fan spins so fast that you really only need 10-20% of its power. Spinning much faster than that will spin the magnets so fast that excessive turbulence is created inside the flask (suspending the yeast is one thing, making them pull 5 G's is another). The 25ohm pot provides enough resistance to get the fan spinning at its fastest potential, with its minimum speed being just about right for yeast suspension. The combination of 12v fan and 25ohm rheostat seems to be a good one for both 1 liter and 2 liter flasks, though nearly any combination could work with some tweaking. If a 9v or 12v power adapter is used, you can employ a fixed resistor or second rheostat to add resistance and slow the fan down. One of my stirplates uses two pots, one as a master to set the general speed of the fan (this sits entirely on the inside of the box). The second pot is the fine control which is mounted to the box wall with the control knob on the outside. I am not an authority when it comes to electricity. In fact, it took several whiteboard sessions from a buddy to explain this to me. So if my rude descriptions aren't good enough you can do some Googleing for Ohm's Law. This can get a little confusing if you're not already familiar with it, and personally once they started putting letters in math I never did so well. Instead of using two pots there's always the option of using an inline fixed resistor in place of the master pot, but with the variable resistance of a second pot you get a little wiggle room. This wiggle room is particularly helpful if electrical theory is not your strong suit.

Assembly

I don't think I can describe the wiring in way that would be detailed enough to be helpful. So the following is a very general description. Splice your fan's power cable and connect it to the cable of the 6v DC power supply. I soldered my connection and covered with shrink wrap, but wire nuts and/or electrical tape would probably suffice. The toggle switch and pots will also need to connect into the power line (if you use two pots, just put a short jumper cable between the pots for power and ground). Setting all the components in place and making your best guess would work fine. If the system doesn't work, switch something around. If you're handy with an ohmmeter, you can save yourself some time. Or like me, find someone who is skilled in this area and promise them some homebrew if they lend a hand.

Use

I've followed the advice of Jamil Zainasheff from Mr. Malty. Jamil gives an incredibly informed and detailed explanation of yeast, starters, and pitching on his site. I make a batch of wort two days before my brew day. I cover with a hepifilter from MoreBeer, but plain old foil will do. After the wort has cooled, yeast is pitched and aerated (I use an O_2 stone) I put the flask on the stirplate and spin for 48 hours. Generally speaking, a properly prepared starter can increase yeast cell counts from 100 billion to 240 billion in two days

Hank's notes:

1) actual cell counts show a 4-5 fold increase
2) I no longer bother with Mr. Malty since the stir pate will make plenty enough even from 2 yr past "best date" or stored in fridge harvest 3 month old and it helps if you learn and employ during initial loading of the yeast, the 1930s hit, the music goes round and round.. here's a great example from New Orleans boy Louie Prima

http://www.youtube.com/watch?v=j8cQb6R0wdU

-- THNX Hank