COPPER STILL SET-UP GUIDE:

Thank you for choosing to purchase a genuine North Georgia Copper Still! You will need to do a little prep work to get your beauty set up and ready for action. You will need the following:

- White Vinegar & Salt
- Dish brush OR New toilet brush
- 4-6 ft. 3/8 inch OD or 1/2 inch OD (outside diameter) copper tubing, depends on your tubing size
- Four 3/8 inch OD or 1/2 inch shark bite or threaded compression fittings
- Hacksaw/pipe-cutter/band-saw
- Thermometer, ½ inch NPT threaded back (sold on Amazon) CONCORD 3" Stainless Steel Thermometer 2" stem. Plumbers thread tape. (PTFE)

CLEANING:

Before the first use of your still, we recommend giving the inside a wash. We give the outside a nice polish before shipment, however you'll want to get the inside cleaned up. To accomplish this, we recommend using a salt and vinegar mixture using ½ cup of salt per 1 gallon of vinegar. Heating the vinegar to about 110-115 degrees in the microwave, or on your stove, is going to produce better results. Once you have your mixture, pour it into your equipment. Using a cheap dish brush or new toilet brush, scrub the inside of your pot and cap. After you've scoured the inside of the pot, you will want to pour mixture into your worm and thumper and clean those as well. Once all equipment has been cleaned, rinse everything with fresh water. Repeat as necessary. You may also do a "cleaning run" after your initial wash once your set-up is complete, by distilling the fresh water to help clean the lines. Remember to rinse everything with fresh water when done.

CONNECTING:

Before connecting your still, decide where you want to run it. Place your pot where you want it to sit during a run. (If using a burner place it on the burner.) Next space your thumper a few feet from the pot, and your worm a few feet from your thumper. Your specific area will determine exact spacing. We generally recommend elevating your worm and thumper off the work surface that your pot is on. A couple of cinder blocks works great for this. You will want your worm elevated high enough so you can fit mason jars underneath the output. Your thumper's input** is on the left side when facing it head on (drain port towards you). Now that you have determined the spacing between each piece of equipment, you can begin cutting lengths of 3/8" OD copper tubing to the appropriate lengths to connect each piece. Use your compression fittings to secure the tubing.

**If you aren't using an NGSC thumper, place a few inches of water inside your thumper. You can now determine input/output by blowing into each "ear". The line that bubbles will be your input.

BASICS OF FERMENTATION:

The principals of making beer, wine, or moonshine from scratch are the same. There are only three ingredients: water, sugar, and yeast. Yeast is a microorganism that lives in water and eats sugar. Its byproduct (waste) is carbon dioxide and alcohol.

Water Quality- VERY important. The purity and source of your water will have an effect on your final product. Always be consistent with your source. This will help once you have mastered a recipe, because it will assist in its consistency. Those who have visited Jack Daniels will recall, they have their own natural water source on their property and have been using it and the same yeast culture, since day one. Crown Royal does the same. If you only have access to city water we recommend using a filter, such as Brita, and letting the water sit out overnight to de-chlorinate.

Fermentation Temperatures- should be kept between 70-80 degrees Fahrenheit. Any lower than this will cause slow and incomplete fermentation. Any higher than this will cause yeast to become stressed or die. This results in an inferior wash and will produce a foul taste. For those in a colder climate, use an electric blanket to keep your wash at temperature. For those in a warmer climate, gather a cheap fountain pump, copper tubing (10 feet should do), 5-gallon bucket, and clear aquarium tubing. Coil the copper tubing, using the pump to cycle cool water through your wash. The bucket holds your water, while the clear tubing keeps everything cycling.

Clearing your wash/mash- We recommend this after fermentation has taken place. You want to separate as much of the yeast and particles to the bottom of your ferment tank. In most cases, yeast will give off unwanted flavors when introduced to heat. If carried over into your final product they can be very strong. By day 7-10 of fermentation, assuming optimum temperatures have been adhered to, most of the bubbling should stop. You can use a hose to syphon you wash, make sure you don't disturb the sediment on the bottom of your fermentation container. Or you can strain your wash through strainers, we suggest you strain it until you wash can run through cheese cloth folded over 4 times.

BASICS OF DISTILLATION:

Once you have your wash ready, you need to distill it to separate the alcohol from the water. Distillation accomplishes this by taking advantage of the different boiling points of water (212°F/100°C) and alcohol (173°F/78°C). Because your wash has water in it your thermometer reading will actually be higher. The exact temperature will be dependent on the ratio of alcohol in your mash. Once it begins to boil, you can then capture the alcohol vapor, cool it down, and be left with liquid alcohol.

Foreshots, Heads, Hearts, Tails- Because the various alcohols and chemical compounds in a wash separate at different boiling temperatures, there are several phases of each distillation run: foreshots, heads, hearts, and tails. During the different phases of a run, taste and smell may vary considerably. Generally, only the "heart" portion is kept for drinking. The heads and tails are usually set aside to be distilled again in the future. Of the liquid collected during a run, roughly 30% will be heads, 40% will be hearts, and 30% will be tails.

Foreshots are the very first vapors to boil off during a distillation run. These are toxic and should be disposed. You will want to abandon the first 2 ounces for every 5 gallons of mash. The heads usually smell bad, taste worse, and are known to give a massive hangover. You can however store the heads for future runs. The hearts contain ethanol. This is the drinkin' stuff! This should taste smooth and smell good. As you notice the rich flavor begin to fade, you can be certain you have reached the tails. This will be bitter, and the smell may again begin to turn. You will want to set this aside with the heads.

As you gain more experience, you will learn to "read" your run. Most will run their still until the alcohol has been reduced to 15-20 proof. Anything beyond this is not worth the effort. It can be beneficial to use a hydrometer and parrot while using your equipment. Using smaller mason jars can also help you sort through the various phases of a run.

RUNNING:

Before a run, fill your thumper with a couple pints of liquor/tails, water, or mash. Just enough to completely cover the input, which extends all the way to the bottom of your thumper. Most people save a little liquor from previous runs (heads/tails) to use in their thumpers. Your thumper acts as a second distillation center and will help you net a higher proof.

The most effective way to cool your worm coil is to use the small tubes in the side of the can. One at the top and one near the bottom. Using your clear tubing, connect your inlet to the garden hose then to the bottom tube, and run your outlet (top tube) to your desired location. You will want to throttle the flow on your hose to get the perfect cycle of cool water. Start slow and work your way up. When you are finished with your distillation run disconnect the compression fitting between the still cap and thumper immediately to allow for proper cool down. This will prevent the possibility of your still collapsing in on itself if it cools down too quickly.

There are two methods to sealing your cap. First is the traditional paste method. You will mix flour and water to make a dough paste. With your cap installed, lift it off the neck/collar about an inch. Spread a healthy layer of paste around the entire circumference of the neck/collar. Slide your cap back down over the paste. Take more paste and spread it around the bottom of the cap where the neck/collar and cap meet. Your goal is to make an air tight seal. The paste will bake as your still heats up. Many prefer this method. First, it's old-school. Second, it provides a back-up safety measure. If for some reason your still is induced with a blockage, usually caused by running too fast and too hot, the seal around your neck will break, and pressure will be relieved.

The second, more modern technique for sealing your cap, is electrical tape or F4 Type II MIL- SPEC Silicone Tape. With this method, lift your cap only slightly. About an inch. Wrap the tape, starting at the base of the neck/collar, working your way a few inches up the cap, then back down. Repeat this process a couple times, until you have a tight seal.

** Our caps are custom fitted to each still and are tapered to aid in the sealing process. Do not use excess force to slide the cap on. This will make it harder to remove. It can also be beneficial to line up the seams of the cap and collar during installation.

****If using a propane burner/direct flame, we recommend using a piece of tin or thin sheet metal between the flame and your pot. This barrier will protect against scorching your still bottom & possibly damaging the solder seams on the bottom.**

"All of us at North Georgia Still Company are extremely pleased to have you as a customer! We believe in employing the best American Craftsman, to bring you the best American made product.
Please remember to contact us if you have any issues with your equipment. Our goal is to have raving fans, and we will do everything in our power to take the best care of you.

STARTER RECIPE:

Ingredients for Corn Moonshine

- 5 lbs. cracked corn
- 7 lbs. sugar
- 5 Gallons Water
- 2 dry yeast packets (4 ½ teaspoons)

Directions:

1. Put all your water in a large pot or several pots and bring to 180 degrees.
2. Put the cracked corn and sugar in a large enough container that will also contain all the water.
3. Pour the 5 gallons of 180 degree water into the container that has the cracked corn and sugar, stir until all the sugar has dissolved.
4. Allow mash to cool down to 75-80 degrees, (we let ours sit at room temperature overnight)
5. Create a simple yeast starter for 5 gallons of mash
6. Add 1/2 cup of 110-115 degree water to a sanitized jar.
7. Add 2 teaspoons of sugar to the water and mix thoroughly.
8. Add 2 packets of yeast (4 ½ teaspoon if you are using bulk yeast).
9. Swirl the glass to mix in the yeast with the sugar water.
10. Let the glass sit for 10-15 minutes and it will double in size.
11. Once your starter has doubled in size add it to your mash and aerate. (transfer it back and forth in 5-gallon buckets to mix and aerate well, it should look foamy.)
12. Empty the mash into large containers that can seal, and place a release valve at the top to allow gases to escape as the yeast does its job
13. Allow to sit in a dark area, 75-80 degrees is the optimal temperature for this.
14. Wait 7-14 days for the fermentation process, rule of thumb is when the bubbles are all gone it is finished.
15. Strain mash mixture until you can run it through cheese cloth folded over 4 times.

Cheers!