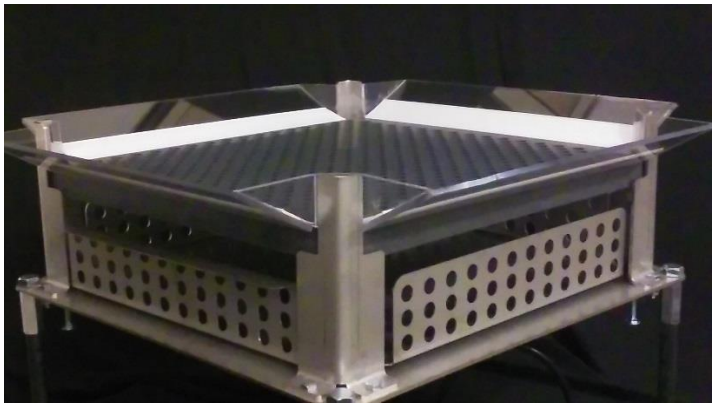
User's Manual

ALWAYS ALWAYS ALWAYS USE PAPERS DIRECT FROM THE MANUFACTURER OR THE MANUFACTURER'S AUTHORIZED DISTRIBUTOR. BOOTLEGGED PAPERS MAY OR MAY NOT BE OF THE SAME QUALITY OR STANDARDS AS ORIGINAL MANUFACTURER. TPH PLATES ARE CUT BASED OFF OF ORIGINAL EQUIPMENT MANUFACTURE AND BOOTLEGGED PAPERS MAY OR MAY NOT FIT. USE BOOTLEGGED PAPERS AT YOUR OWN RISK

Your Thousand per Hour™ machine and system is pretty much ready to roll out of the box. You will need to make some minor adjustments to tailor your machine to your installation, but other than that, it is plug and play.

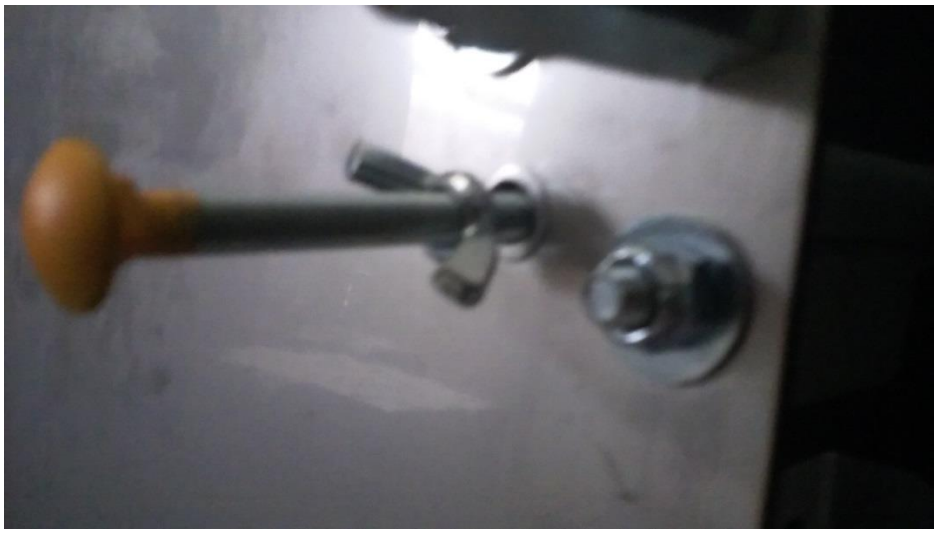


Identifying Parts

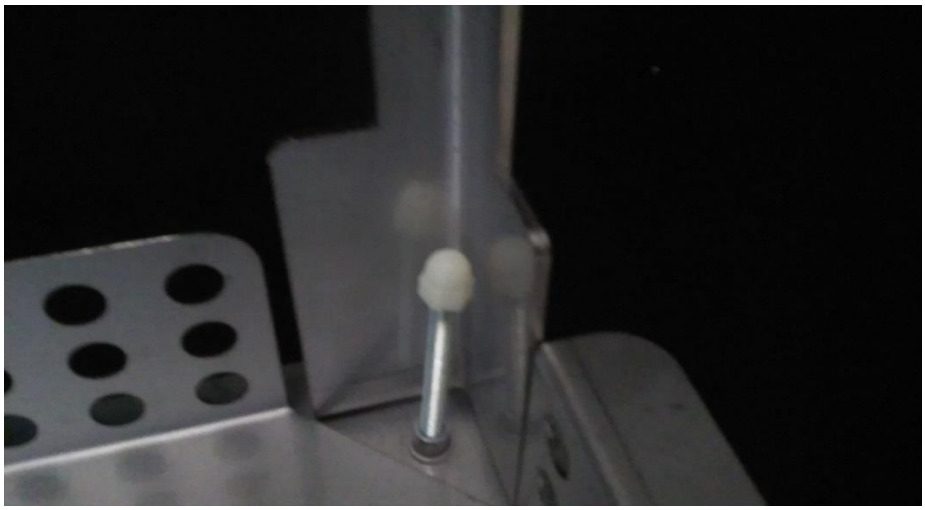
There are five basic parts to your Thousand per Hour™ system. They are:

- The Shake Cradle – That which holds all the above together
- The Basket – Piece w/ Stainless Steel holes used to lift the blunt tray and keep papers (full & empty) secure
- The Blunt Plate – Holes custom cut to the paper(s) you work with
- The Funnel – The clear plastic which secures the feedstock on the blunt plate

The cradle has four height adjustment screws, one in each corner.

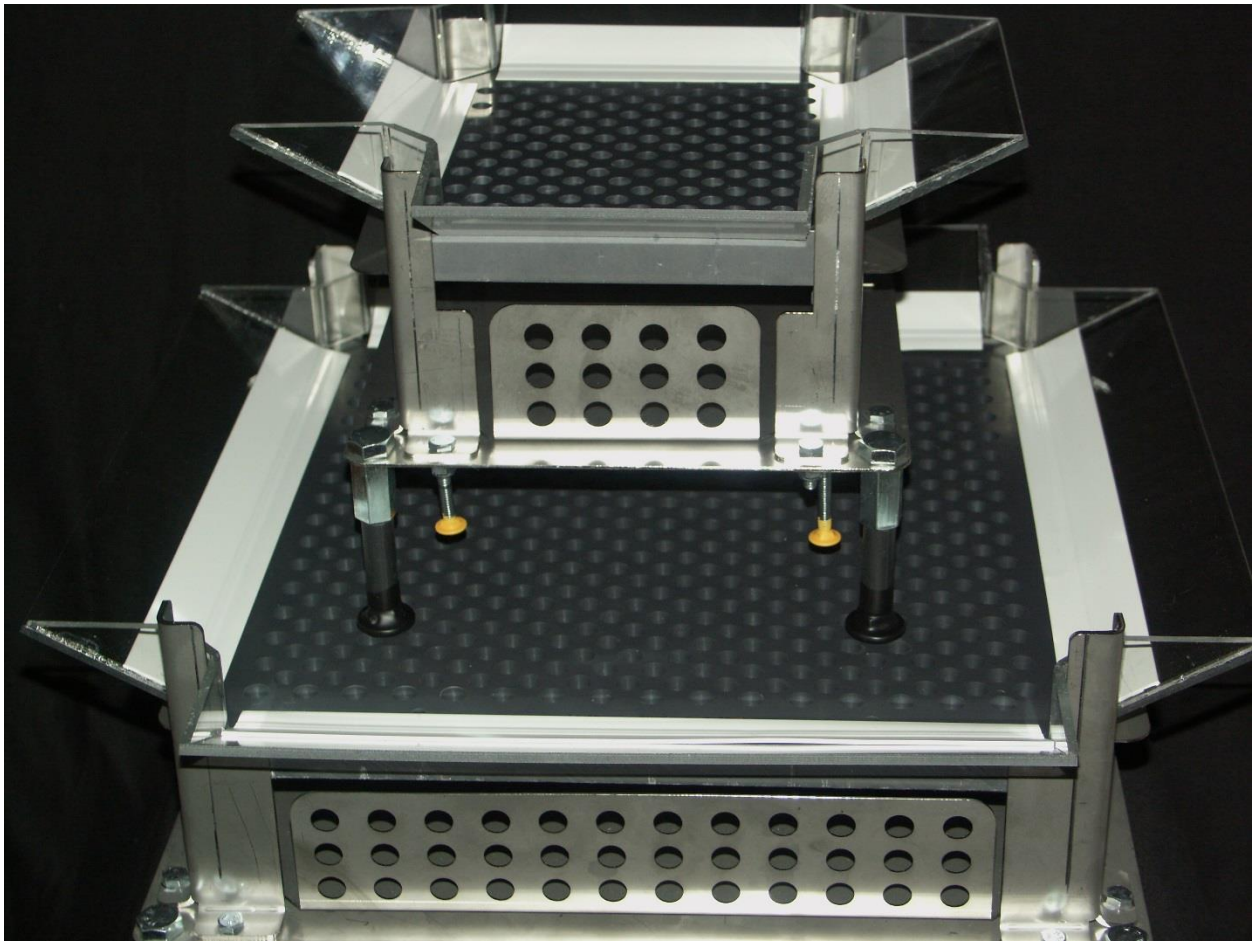


Viewed from the bottom – you do not need to turn the cradle upside down to make adjustments



Viewed from the top

Each blunt plate is custom cut for the papers you use. Every manufacturer has subtle differences in their tapers and crutch styles. There is no “standard”. The tapers are machined in the plate with six decimal place accuracy so they exactly fit the taper of the paper. We taper the holes in the plate to help minimize spillage & eliminate blow by. There are 512 holes in the large machine, 128 in the small machine.

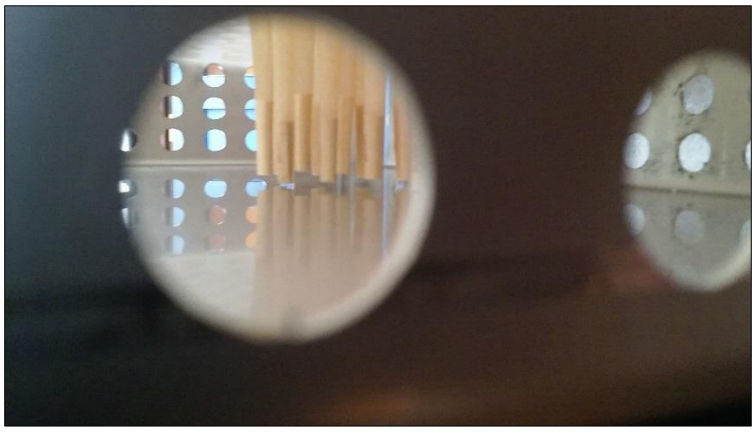


The plastic funnel provides a backstop so you can be a little more assertive when working your feedstock towards the edges and corners. The seal helps keep spillage to a minimum.

Set the Plate Height of the Shake Cradle

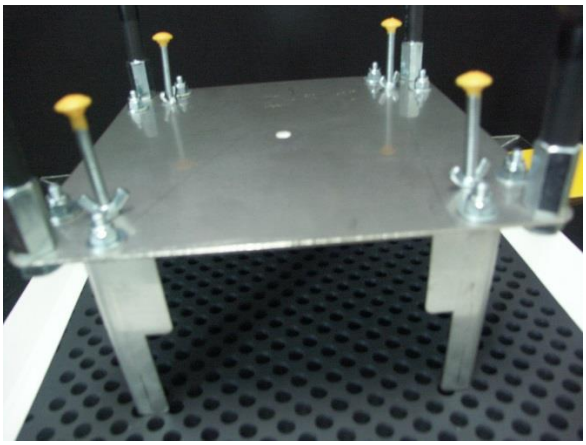
The blunt plate is tapered to provide a sliding stop for your pre-roll papers. The basket is the hard stop. The goal of this adjustment is to have the hard stop of the underlying steel engage

the paper just before the sliding stop of the blunt plate does. The correct setting is so the basket bottom is in contact with the crutch of the pre-roll and all tops of the papers are just barely below the top surface of the plate. All crutch tips should rest on the surface of the underlying pop up plate.



You need to lower the plate until they touch.

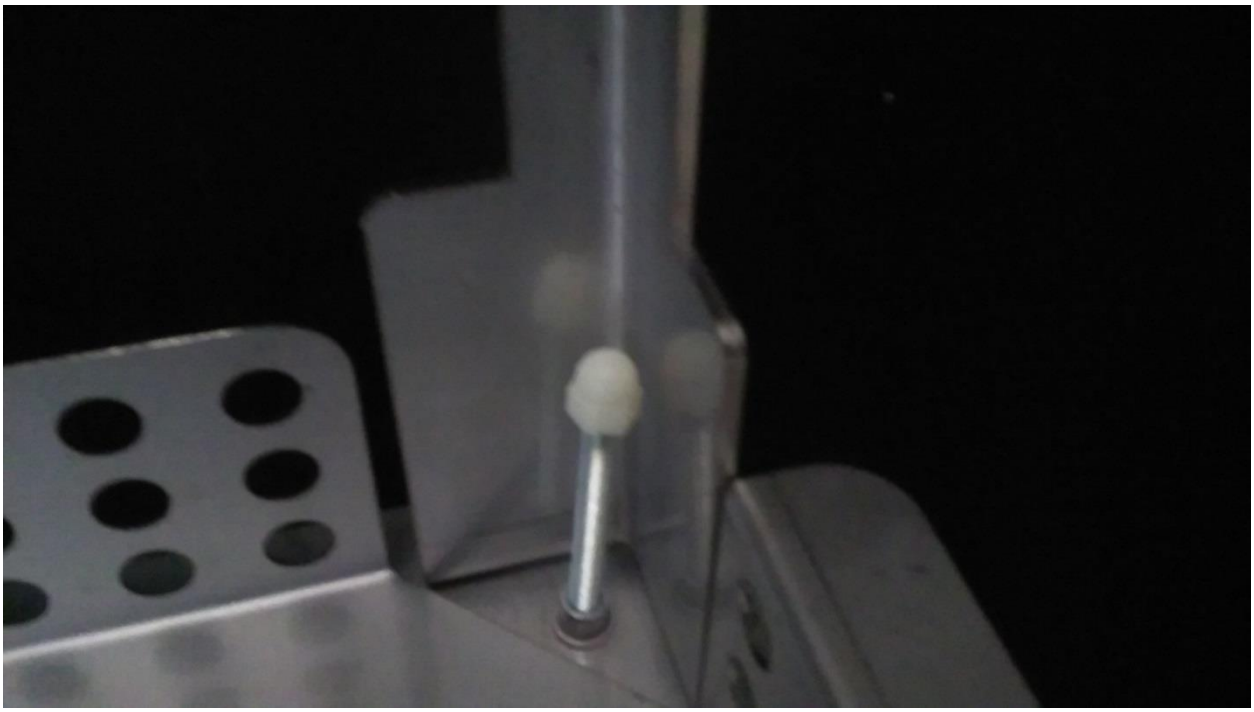
There are four independently operated height adjustment screws. These screws are located just inside the towers of the cradle and the adjustment mechanism is accessed from the bottom.



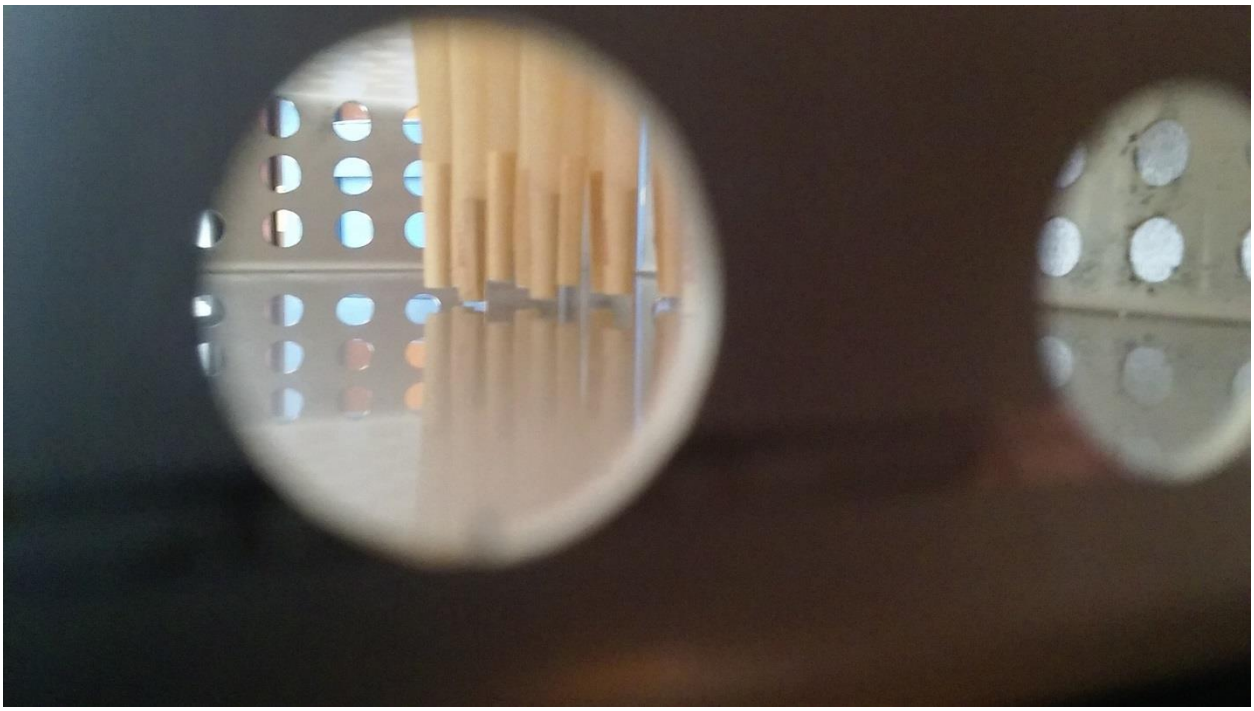
There is a wing nut underneath acting as a lock. The head of the screw is the adjustment mechanism. No tools are necessary, you do not need to turn the cradle upside down. Once you loosen the wing nut, the height adjustment screw spins freely and easily.

Set the blunt plate into the cradle. Drop papers into the corners and another four or so in the middle. Reaching underneath, raise or lower the plate so that all the test papers are resting

upon the basket base while at the same time, below the plate surface by 1-2 mm. Make sure all adjustments are even and the plate doesn't rock or totter back and forth. Once you have established the correct level of the plate, spin the wing nuts back until tight locking the height adjustment screw into place. Do not over torque. The wing nuts are nylon and you can strip them out. At the same time, if the wing nuts are under-torqued, they will spin loose when you engage the shaker motor.



The basket is the one with holes. The cradle itself is lower. Be sure to use the basket, not the cradle as your measuring spot.



Not quite. In this picture, the sliding stop engaged before the hard stop of the basket. You need to lower the blunt plate a wee bit more so the tips of the crutch rest gently on the surface of the basket.

The blunt plate should rest solidly in the cradle. There should be no wobble or tipping.

How to Operate the System

1. **PREPARE YOUR FEEDSTOCK.** Feedstock preparation is the most important part of this operation**. If your feedstock is not adequately prepared you WILL NOT be pleased with the results.**

   Some considerations for proper preparation are:

   - Proper curing (</= 10% Moisture Content) - Material that is too moist tends to be quite sticky and is more likely to clump. Clumping material will not go down the hole and if it does, it tends to clog just above the crutch making for tedious final QC. According to the manufacturer, the #55 Boota should keep your feedstock in the 10-12% moisture content range.
   - Proper screening - Material should be screened to a maximum of 1/8" minus screen. Keep leaf veins and stem pieces to an absolute minimum. Leaf veins and

stem pieces will clog the blunt leaving gaps in the fill making for a tedious final QC. These little pieces can also puncture the side of the pre-roll spoiling the final product.

- We have seen a lot of success with the Neo-Farms Shredder/Screener. When using this shredder/screener, don't over whip. You are looking to cream this feedstock. That which isn't screened can be set aside for blasting.

2. Place the blunt plate into the cradle. It is designed to fit snugly but still lift cleanly and easily out of the cradle.
3. Load the empty blunts into the plate. A light tap on the head should set all heads below the plate surface.

4. SPECIAL NOTE: THE HOLES WERE CUT TO MANUFACTURER OEM STANDARDS. ALWAYS USE ORIGINAL EQUIPMENT MANUFACTURER (OEM) PAPERS AND AVOID BOOTLEGGED. BOOTLEGGED PAPERS MAY OR MAY NOT HAVE THE SAME TAPER STANDARDS AS THE OEM. YOUR EYE MAY NOT SEE IT, BUT SIX DECIMAL PLACES ACCURACY FINDS IT QUICKLY. THE GOOD NEWS IS, YOU ARE ONY OUT ~$80. WE STRONGLY SUGGEST YOU ALWAYS BUY YOUR PRE-ROLL CONES DIRECTLY FROM EITHER THE OEM OR ONE OF THEIR AUTHORIZED DISTRIBUTORS. WE CANNOT AND WILL NOT BE RESPONSIBLE FOR DEVIATIONS FROM OEM STANDARDS BY BOOTLEGGED PAPERS.
5. Place the plastic funnel on top of the cradled load plate.

6. Measure out your feed stock. We would recommend bump the charge by about 10%. This will help assure a greater number of the final product fall within weight specifications and tolerances.

Measuring the feedstock in advance helps assure an even distribution of material in the cones and a higher probability of accurate weights during final QC.

7. Once the feedstock is dumped on the plate, plug in the motor and work the feedstock over the entire face of the load plate while allowing the vibration motor to continue at a low speed. Properly prepared feed stock will quickly drop into the holes and fill the blunts. When you get to the edges and the corners of the plate, use the funnel as a backstop to help you work the material.
8. Once you have worked the feed stock into the holes, stop the vibration motor. Excessive shaking really doesn't really do anything.
9. Remove the basket with filled pre-rolls from the cradle and place upon a flat surface. All pre-rolls will set up straight awaiting final QC.
10. Final QC. Tap each pre-roll on a flat surface to set the crutch, weigh and close off.

You're done. It's that simple.

Notes, Observations and Ideas from the Field

We worked pretty hard to make this simple. Our ultimate customer (the retail buyer) thinks it's like a fast food burger but the reality is there are an awful lot of variables to making this particular Big Mac. It ain't as easy as it looks.

You guys out in the field are the ones who designed this system. We built it based upon the things you told us you wanted. And you guys out in the field are the ones who taught us how it should be used. With that said, here are some things you guys taught us about how to roll the perfect pre-roll which isn't covered in the operator's manual.

1) **Preparing Your Feedstock is Critical** - If there is one thing which was hammered into our heads more than anything else, this has to be it. Advanced preparation of your feedstock is critical to the smooth operation of this system. All sticks, stems and leaf veins should be screened out. If they are not cleaned out, you run the risk of clogging blunts so they do not fill completely or correctly. These little stems can also can poke holes through the sides of the papers which pretty much ruins the joint. The need for this meticulous preparation is magnified by the fact you are rolling so many at the same time. There are many ways to prepare feedstock and everyone does it differently. Ninja or other food processing shredders are inadequate to the task. They do NOT provide a uniform shredding which is so critical to this process and can easily pulverize your feedstock to a powder your end user can suck through the crutch.
2) **Every Strain Is Different** – No surprise here. Different strains shred down to different consistencies and weight by volume. We recommend you weigh out your feedstock in advance, bag it, and cool it to 37-42 degrees F. When you bag it, you will want to use a 55% invierment to keep your moisture content in the 8-10% range. Weights are weights and you can manipulate volume by working the material over the face of the plate while filling.
3) **Different Strains fill the Cones to Different Levels –** Because of the differing densities of different strains the actual volume in the cone comes to different levels during filling. Some will drop in leaving 1/4 " or so of excess paper which can be easily folded down. Others fill it to the brim and a light tap on the crutch will drop it in. An experienced operator comes to recognize this and adjusts themselves accordingly.
4) **Kief and Other Fine Material Will Clog the Crutch** – If you find you have denser feedstock or more fines in your feedstock than you might ordinarily want, a clogged crutch can be the end result. One way you can compensate for that is to sprinkle in a little bit of feedstock into each joint before you do the full on dump of material onto your

blunt plate. This will put a few millimeters barrier of less fine material which will act as a catch for the finer material as it is drawn through the joint while smoking.

5) **I have seen people use empty coffee cups** to set the crutch on several pre-rolls at one time. Fill the cup with pre-rolls w/ crutch side down and bounce the whole shebang on a hard surface. This tends to set the crutch on all of them after just a couple of taps.
6) **Infused Joints –** Infused joints seem to work quite well with this machine. I had one of my farmers share this technique w/ me and have heard good reports from the field. Freeze your feedstock and distillate in pre-measured, separate containers. As close to zero F as possible is the desired temperature and if you can go sub-zero, all the better. Once all feedstocks have stabilized as close to zero F as possible, (at least 24 hours), remove the distillate and break it up w/ a hammer into as small a chip as you can. Wrap it back up and replace it into the freezer. Allow temperatures to stabilize. Once stabilized, break out both feedstock and distillate and combine into a single bag which you can securely close. Toss this bag as if you were tossing a salad. As the temperature comes towards ambient, the distillate will start to thaw and flow. The tossing motion does a pretty decent job of evenly infusing the feedstock. Once thoroughly tossed, replace the infused feedstock back into the sub-zero freezer and let the temperature stabilize. Once stabilized, prepare the blunt plate w/ a charge of papers and dump the feedstock upon it. Personal experience and all reports from the field indicates the feedstock crumbles beautifully and drops right down the hole. Final QC processes still apply.
7) **Found one we haven't covered**? Write us and let us know. You have our full and undivided attention.