



# ProVap 110

## Instruction Guide

This sublimator (a more accurate term than vaporizer, but we'll use the term vaporizer as most know it by this name) is strictly for use in a grounded 110 volt (3 prong) socket.

### Operation:

This vaporizer is most easily used from the back of the hive, where a small ( $\frac{1}{4}$ " ) hole is drilled in the back center of the  $\frac{3}{4}$ " rim of the bottom board that supports the bottom brood box. This hole is needed to accommodate the vaporizer stem. You want the vapors to rise up through the frames throughout the hive. Using a hole in the back of the hive and at this place (we believe) is easiest as it eliminates the nuisance of flying bees. The friction between the stem and drilled hole also holds the vaporizer in place during vaporization, which allows you time to prepare the next dose. The bees will readily propolize this small hole. Should you wish to close the hole after vaporizing, a plastic golf tee works great and is easily removed for next time. **Make sure the hole is not clogged prior to inserting the stem!**

You can use the ProVap in the front entrances as well if you wish. Rather than closing the entrance with rags or whatever you choose and inserting the vaporizer in an open area, simply take a paint stick, cut it to the desired length and drill a  $\frac{1}{4}$ " hole in the center of the paint stick. Slide the stick over the stem and you have an effective vapor block. With a number of these pre-drilled sticks, you can easily "march right down the line" vaporizing.

Connect the vaporizer to your 110 volt power source. It will take approximately 2 minutes to reach operating temperature. The red sequence readout will display 230 when ready. In the white Teflon lids (recess side up) place the appropriate amount of OA. Do NOT pack the OA in the lid; rather place it loosely. Since one gram is almost a  $\frac{1}{4}$  teaspoon, we'll use teaspoon as our measuring tool as it is the common term. Use  $\frac{1}{4}$  teaspoon per brood chamber no matter the size be it mediums or deeps, eight or ten frame. Use a  $\frac{1}{2}$  of a quarter teaspoon on a nuc. On a two brood chamber hive; you would use  $\frac{1}{2}$  a teaspoon. Invert the vaporizer. Invert the ProVap and push it on the white Teflon lid containing the OA (be careful the vaporizer bowl is very HOT!)

I like to place the cap (recess side up) on the corner of the hive I'm about to vaporize and with the ProVap inverted, "push or tap down" the inverter onto cap. Make sure the cap rim is pushed up against the outside rim of the bowl. Place the still inverted vaporizer stem (with lid attached) into the drilled hole then turn the vaporizer right side up and tap the lid. The acid will fall into the bowl and start to vaporize.

This will cause the temperature to drop to approximately 210-215 then very quickly start to rise. When it again reaches to about 220-225, it is finished vaporizing and you can move on to the next hive. This will take approximately 20 seconds! You need to seal any openings during and 10 minutes after vaporization. It is not unusual to see the temperature rise above 230 to 260 during treatments. This is normal and well within tolerances.

The temperature is preset for 230 C. This is the correct setting for the bowl of this vaporizer. Do not attempt to change it.

### **Safety!**

You must use a respirator that is rated for organic acids! Make sure you buy one with replaceable filters. You are going to work in a heavy OA environment. The 3M full face model 6800 with #60923 filters is a good choice. Heavy, heat resistant gauntlet gloves are a must as well.

**Do NOT drill a hole in your brood chamber to vaporize! You'll most likely shoot the OA directly into a sidebar causing back pressure on the vaporizer which could cause the lid to pop off and spew OA from the heating chamber! Do NOT point the stem of the vaporizer against a solid object, this also could cause the lid to pop off and spew OA from the heating chamber. Make sure the stem is always clear and pointing to an open area.**

### **Details:**

The vaporizer is a 110-volt electrical appliance, 250 watts, 2.2 amps.

### **Maintenance:**

After you have completed your treatments, you must clean the bowl with warm water. Make sure that water flows out through the stem. You can do this while the vaporizer is still warm (not hot) from usage. This is to prevent build up in the bowl and stem of OA that may block the stem. Make sure also you clean the cups of any residual OA. You may wish to carry a 6" or so length of solid copper wire in case the stem gets blocked during usage.

### **Additional Parts:**

Should you wish to purchase additional Teflon caps or other parts for the ProVap 110, they are readily available at OxaVap.com

**OxaVap.com - where the only good mite is a vaporized one!**