






















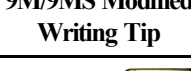

 1 - Large Skew	For burning larger feathers (life sized geese or eagle feathers). Very limited turning radius.	 10S Micro Skew	An even smaller version of the #10 pen tip. Song bird carvers use for fine features.
 2 - Small Round	Good for concave areas such as under necks. Good for not leaving a depression from the point.	 11 Medium Skew	Smaller than the Large Skew, has many of the same uses. Medium to Long lines, limited turning radius.
 2B - Shader	The "2B" version is not sharpened, and is bent at a 45 degree angle for shading	 12 - Small Rounded Skew	Like the small skew, but can turn a corner real easily. This is the most popular pen that we sell. Used for fur & small feathers.
 3 - Large Round	Same as small round, just a bit larger diameter.	 12S - Micro Rounded Skew	An even smaller version of the ever popular #12 pen tip. Song bird carvers really like this pen, as do tagua nut pyrographers.
 3B - Shader	The 3B version is not sharpened, and is bent at a 45 degree angle for shading.	 13 - Spade Shader/ Scaler	Used on flatwork for buildings, carvers use it for fishscales & bumping feathers. (S=3/32", M=1/8", L=1/4")
 4 - Flat Skew	Same as a Medium sized Skew knife, but at a lesser angle. Good for lefties'.	 14 - Guge RHV Feather Edger	Used on bird carvings for "bumping" large primary feathers. Right handed version.
 5 - Spear Point	Good for getting into tight places like under wings. Can also be used to make a fuzzy raised hair on flat work or mammal carvings.	 15 - Guge LHV Feather Edger	Same as #14, but is the Left handed version.
 6 - Chisel Point	Some carvers prefer this for running quill lines.	 16 - Small Chisel	Basically looks like a small 1/8" chisel tip. Can be used for purposes other than calligraphy. Available in 1/16" version.
 7 - Round Point Skew	A variation of the Medium Skew, tip is rounded at both the point and heel. Turns easy if you lift the heel.	 17 - Course Hair	Used to make course hair on your caricature or mammal carvings (up to 1mm wide).
 8 - Burnisher	Works great for doing 1/2" to 1" high calligraphy lettering.	 18 Spear Shader	Flatwork shader used for animals, people, landscapes. Available in Large (<i>Shown</i>), Medium, & Small.
 9 - Writing Tip	Used for writing your name on your carvings.	 19 - Ball tip (S, M, L, & XL)	Draw lines, writing, shading, pointillism, and much more. Available in four sizes: S=1/16", M=5/64", L=1/10", XL=1/8" (S <i>shown</i>).
 9M/9MS Modified Writing Tip	Similar to the #9, but has the end of the tip ground symmetrically, and the end is perfectly round. 9M= 0.04", 9MS=0.03". Pointillism, writing, etc...	 20 & 20L Gourd Sawing tip	Make straight line cuts into gourds with a sawing motion. The #20 can do gourds up to 1/4" thick, the 20L (<i>Shown</i>) can do up to a little over 3/8" thick gourds. VERY sharp, be careful!
 9PP - Pin Point Tip	This version of the #9 has been ground so that it comes to a sharp pin point.		
 10 - Small Skew	Great for the miniature carver or anyone that needs to do small fine detailed work.		

The Optima 1 Pyrographic System

By P.J.L Enterprises



INSTRUCTIONS FOR USE:
(For Optima 1 Single or Dual burners)

READ ALL OF THESE INSTRUCTIONS CAREFULLY BEFORE OPERATING YOUR OPTIMA 1 BURNER.

KEEP THESE INSTRUCTIONS FOR FUTURE CONSULTATION.

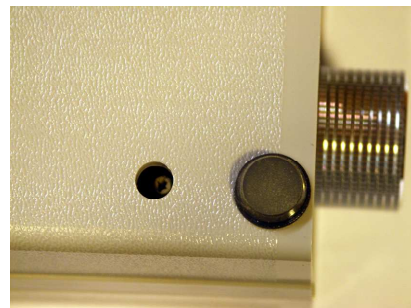
1. **Do not** use excessive pressure on the Ultra Fine pen tips. The Optima 1 Ultra fine tips are made for fine, professional type texturing, and the finer tips will bend or break if too much pressure is used. The HD tips can stand a bit more heat and pressure, but tip lifetime is still dependent upon what type of usage they are exposed to.

2. **Do not** turn the power supply up into the “red-hot” range to “condition” tips, or to “burn off” carbon deposits, as some other brands may recommend. For most burning, you should not have to turn the control past “6” on the dial. However, if you intend carve deeply into material at low heat, you may want to anneal the tip first, by turning the control dial to high until you can not see anymore temperature change; and then slowly turn it all the way down within a 30 second time period.

3. **Do not** clean the pen tips with a stone, coarse sandpaper (< 1500 grit), or any other harsh abrasive, as this will wear out the tip prematurely. Use a leather or fabric strop, or a felt buffing wheel, with a bit of metal polishing compound on it to clean off carbon deposits and keep the tip polished. Aluminum oxide polishing compound on a strop works very well (“paper white” in color). If you are using a fine sandpaper (=> 1500 grit), you only need to move the side of the tip 1/16”, just enough to pop off the carbon. Tips will turn blackish in color upon moderate usage. This is not necessarily carbon, but Chromium Oxide. Do not remove this protective layer (hence, no sandpaper), as it keeps the tip from oxidizing further, and it tends to keep carbon from sticking to the tips. Pen tip is clean when it reflects light (carbon won’t polish).

4. Send the pen into PJJ Enterprises for tip replacement when necessary. The fee is \$7.00 plus \$1.60 shipping via US first class mail (in the US, up to 3 pens). Send \$2.00 for shipping for 4 to 6 pens.

5. The Optima 1 has an adjustment to allow you to set the low end of the temperature range to wherever you prefer. Insert a small flat screwdriver into the trim adjust slot, located in the small hole on the bottom of the unit. Turn it counterclockwise all the way. Turn the main adjustment to low also. Turn the unit on, and then plug a pen into the cord (be “aware” of where that potentially hot pen tip is during this procedure). Turn the adjustment clockwise very slowly while listening very closely to the unit. When you hear a



slight buzzing sound coming from the unit, your at the best setting possible. You don’t necessarily need to do this adjustment, do it **ONLY** if your low end is too hot, or the tip has no heat at the lowest setting (i.e.: it turns on at 2 or 3 settings).

6. **Turn off** the Optima 1 while not in use to prolong tip life, and to avoid fire hazard.

7. **KEEP THIS AND ALL DANGEROUS TOOLS OUT OF THE REACH OF CHILDREN. TIPS ARE SHARP AND VERY HOT, AND WILL BURN SKIN MUCH EASIER THAN WOOD!**

8. Use Optima brand pen cords only. Use of any “homemade” cords, another brand, or adapter jack/cord combinations may result in damage to the power supply if it shorts out, and will void any warranty coverage. Do not attempt to repair cords yourself, or have someone else do it. Send them in, or call, so that we may honor our warranty, and replace it for you.

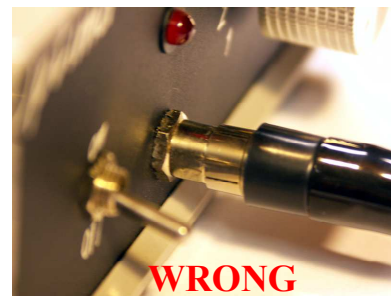
9. The Optima 1 comes with 1 or 2 plastic pen holder clips. Place your pen into it by rotating the foam grip part of the pen into the open side of the pen clip (rotate clockwise when the open side of the pen clip is facing to the right). Do the reverse to extract pens. Keep and store pens in their original pen tubes when not in use.

10. Be sure to insert the cord plugs, on each end, **fully** into the power supply and pen jacks. If your cord plugs get excessively warm near one or both of the cord jacks, this could be the reason (loose jacks). You should only have about a 1/32” to 1/16” gap between the outer edge of the male jack and where the female jack gets larger, or turns into a hex head. When detaching the pen cord(s) from the pens or power supply, be sure **NOT** to pull on the pen cord (grasp the cord cap only). When attaching or detaching the cord from the unit or pens, only rotate jacks “clockwise” to keep from unscrewing either the cord jack or chassis mount unit jacks. If either cord jack still gets excessively hot, stop using that cord immediately, and contact PJJ Enterprises for diagnosis and repair assistance.

WRONG



CORRECT



WRONG



CORRECT

WARRANTY INFORMATION:

The Optima 1 control unit, cord, and handpiece carry a limited lifetime warranty against “manufacturing defects”. Pen “tips” are not under warranty since their use, or abuse, is beyond our control. However, an obvious factory defect will be replaced for free.

Warranty Contact Information

PJJ Enterprises

P.O. Box 273 (US Mail Only) or 720 N. Perry Ave. (UPS or FedEx)

Browerville, MN 56438

Phone: 320-594-2811

Website: www.carvertools.com