

Wood burning, Variables, Tests and Final Issues

This is the last of the three-part series on wood burning. In last month's edition we covered the use of the burners and some techniques of using a burner. In this final part we will discuss some of the variables of burners and some of the testing conducted by the author. This article is not intended to endorse any product or company. It is reprinted with the permission of and thanks to Steve Colaguori and the Colwood company <http://www.woodburning.com/>

Variables:

One major difference that can be found from one woodburner to the next is the method of connection between components – the control unit, the cord, and the pen. Connections can make a great difference to the efficiency and effectiveness of a woodburning pen. The two most common connections are both audio plug and jacks. They are the standard headphone plug and jack, or the phone (RCA type) socket and jack. Of the two, I prefer the RCA connector over the large headphone jack because the RCA connector has more actual surface contact for size than does the headphone connector. Some manufacturers permanently affix (by mechanical or soldered connection) the cord to the power unit and connect the other end to the pen by means of an RCA/phone connector.

Whether texturing, clarifying details in hair, fur, feathers, fish scales, or just highlighting carving cuts, find a woodburning tool that feels comfortable and operates in a manner that produces the exact and/or desired result that you want. Explain your requirements to woodcarving suppliers, salesmen, or vendors and ask for assistance to achieve what you desire as a result of your type and style of carving(s).

Talk with people who use woodburning tools to a greater extent than just casual or sporadic use – to include pyrographers (people who create decorative pictures and design with woodburning pens) as well as woodcarvers. Wherever possible, try a burning tip or pen before purchase – what may come highly recommended by one may not be comfortable in grip or function for another.

Tests:

Each of the units featured was connected to a digitized wattmeter to ascertain the amount of power the machine would generate with a burning tip turned to full power. The wattmeter drew a constant 121 volts on the same circuit, so every unit was given exactly the same input.

I was not completely convinced that the manufacturer who claimed their unit produced more than 130 watts was entirely accurate when the machine seemed to function no better and no hotter than other machines I detailed or textured with. I hate to go out on a limb, but I think wattage rating is nonsense! All the units featured were within 3 watts from highest to lowest. I would rather be told about features and function than be misled about power. I don't care what the rating, as long as the unit performs to the standard that my style of carving and texturing demand of it. As a user/consumer, I am not concerned with claims of high power when I find that the measurement came from within the circuit, across components, or across the transformer leads. As a user, I am interested in the capability of the unit to deliver to the tip of the burning pen the power necessary to accomplish what I am doing or want to do. Unless the industry agrees to a standardized method of measuring all units – such as a wattmeter measurement using a standardized pen/tip, what good are comparative ratings?

Yes, if the same company manufactures several models, I would like to know the duty rating assigned to each by that company. Such terminology as heavy duty, medium duty, or light duty would satisfy me completely, and I'm willing to bet it would satisfy the majority of woodcarvers and pyrographers as well.

For the most part, (as can be seen by each of the wattmeter readings for those units tested) the units tested produced readings within one or two watts of each other. So how does one select the best unit? Consider the following when selecting a woodburning unit: Response of heat to the tip – the unit should bring the tip quickly to the level of heat that you desire.

Continuity of heat to the tip – every time you stroke with the pen, heat is drawn from its tip to the surface of the carving. The unit you choose should produce a consistent and continual source of heat without high and low prolonged peaks of indiscriminate power which make the texturing process uneven and untidy. Units like this make it virtually impossible to regulate and/or produce the detail in the extreme that today's carvings demand.

Recovery of heat to the tip – should be as instantaneous as possible. It makes texture burning a chore when the user must either continually pause or re-stroke because the unit doesn't recover quickly enough to facilitate his stroke cadence. (In fairness to any of today's woodburners, the unit can usually be fitted to your stroke cadence by adjusting the heat setting – or as a last resort, you can adjust your cadence with faster or slower stroke movements.)

Power – sufficient to accomplish the extremes of

cutting, detailing, or texturing that the user's style of carving and burning dictates.

Comfort – with prolonged use, the burning pen should remain cool in the grip area, and afford comfort with respect to holding ability and size to the hand of the user.

Features – the three features that any unit must have are: a separate ON/OFF power switch, a well defined and divided temperature adjustment knob, and just as important, an indicator light that tells me if the unit is on or off. If and when the telephone, grandchildren, visitors, or my dog interrupts me, I want to see at a glance that the unit is OFF. The last thing I do after I have turned off the lights in the studio at the end of the day is to scan the work surfaces for a red or green pilot light that will tell me I have left a unit on. All other features (depending on the manufacturer) are appreciated, and in most cases, gladly received conveniences.

Links to woodburning websites

<http://www.woodburning.com/>

<http://www.razertip.com/>

<http://www.nibsburner.com/>

<http://www.woodburner.com/viewtopic.php?forum=5&topic=2381&start=0>

<http://www.woodcarvers.com/PRODUCTS.htm>

<http://www.woodburnedart.com/oproducts.html>

Odds and Ends

The CAW Board is in the early stages of updating our web site. There are several changes anticipated, though nothing has been solidified. What we do know at this time is that in order to insure we can accomplish all that we are aiming for, everyone must have current information in the membership database, which will not be available to the public. However, **please contact Phil Mannino to provide current contact information.** Phil is the only person who can take the information and complete the update. Phil can be contacted at: phileman@cox.net.

The Board is considering the giving of a **\$500 education grant**, probably one this year, to someone interested in applying. Applicants will need to justify the use of the grant and be willing to share their experiences with the Club. **Application deadline is April 30th.** You can contact a Board member for the form and additional information.

If you need to replace your buffing wheels from your **Beall buffing system** or other similar type buffing systems, you may wish to check out Caswell Plating at <http://caswellplating.com/buffs/index.html> or call them at 315-946-1213. Their prices seem quite reasonable and the service on the one order that was placed with them was good.