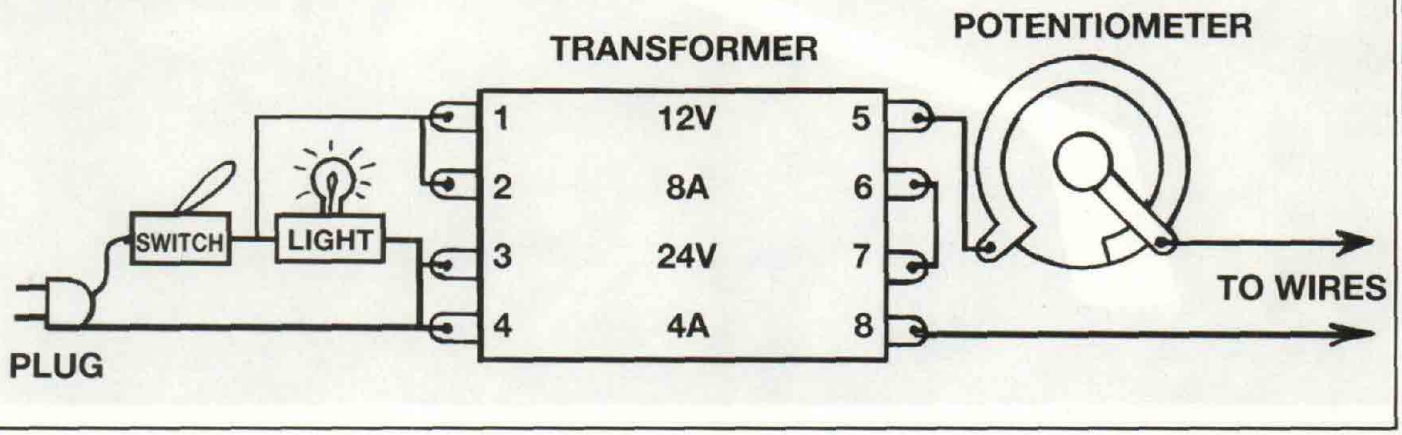
Ben Owen

HOTWIRE TOOL INFORMATION

The function of the hotwire tool is to successfully cut foam cores for various aircraft components. To do this it needs a potentiometer to vary the output of the transformer. In this case, we used a 24 volt transformer - it was found that 12 volts was inadequate to provide the push necessary to heat the wire properly.

The big advantage of this type of device is that the transformer provides isolation between the 110 volt incoming current and the 24 volt current used to heat the wires. This, in fact, eliminates its shock potential, as many other devices do not. The isolation of the 110 volt current from the heating wire near your hands is the big plus in using a transformer.

You can purchase a suitable transformer from either Lafayette Radio Supply or Radio Shack. These items were practically all purchased from Lafayette and the transformer stock number was 6-K-8VBR. This particular one is a 24 volt 4 amp transformer. The potentiometer was of 2.88 amp style and 3 ohms. The Lafayette stock number was 8334. This system is adequate to feed wire 6 to 8 feet long with no real problems. The light is a nice added feature, make sure you get a 110 volt light and a switch as an



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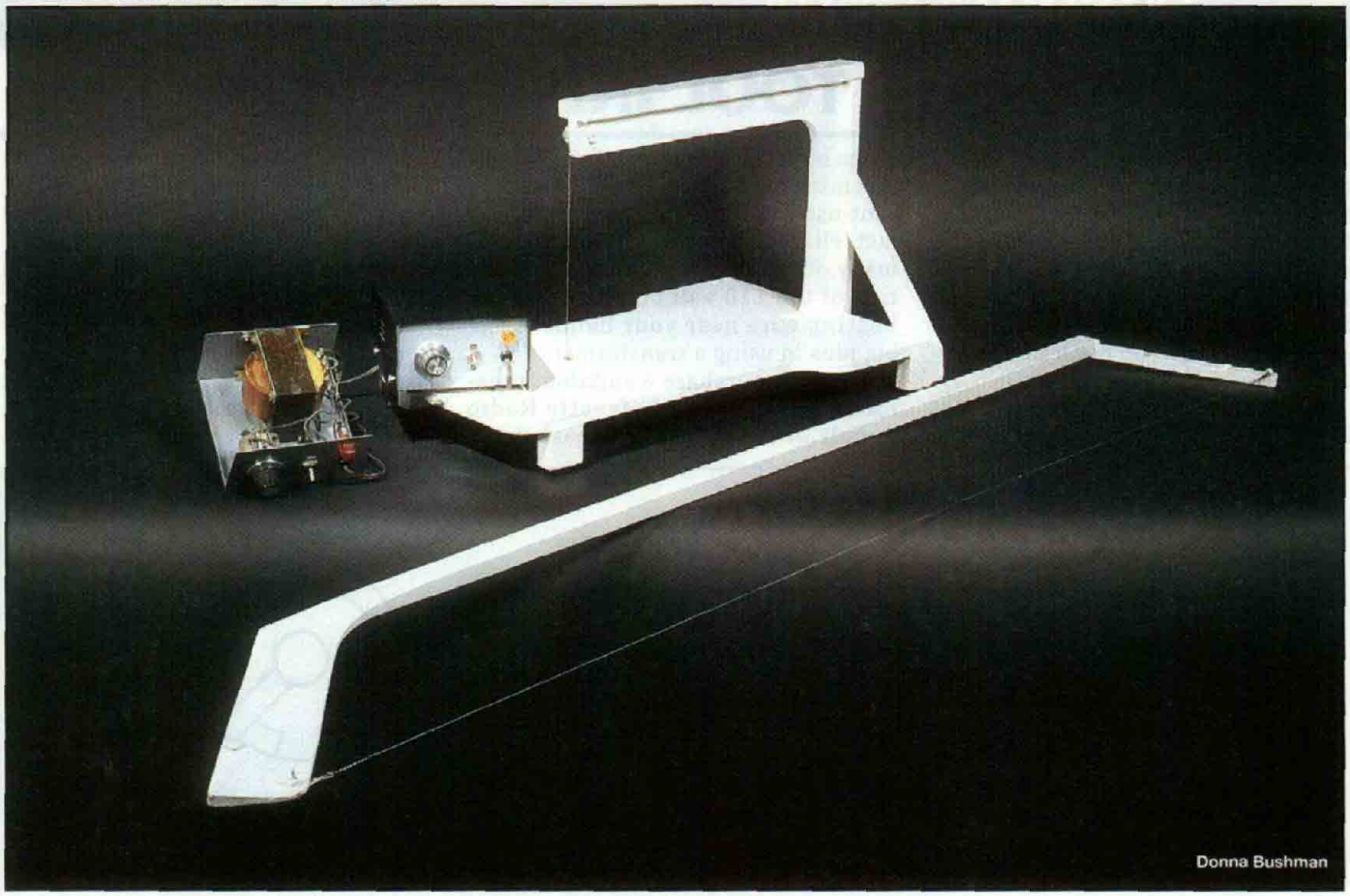

on/off measure. The light is also an excellent safety feature. You won't usually leave the transformer on if you see the light burning.

Some of the other supply items would include nichrome wire. Round nichrome wire is available from several of the aviation suppliers and also from some businesses that specialize in repair to electronic appliances. Aircraft safety wire will also work satisfactorily. The bow can be fabricated from scrap lumber, or as we did, from an old hockey stick plus some type of device for tensioning. The wire tension should be released when it is not in use.

I also prepared a small "jigsaw" style of hotwire, and the transformer that drives this particular one. The web material is obviously cut from the flat base of this device and is essential to keep the arm properly tensioned. The box that drives this unit uses a slightly smaller transformer with 1 amp capacity. The Lafayette stock number is 273-1544. It drives through a potentiometer of 2 amp capacity.

These hotwire tools were designed and built by Seth Owen.