

**6 GREAT ROUTERS**  
For router tables

Better Homes and Gardens®

# WOOD

THE WORLD'S LEADING WOODWORKING MAGAZINE

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## Collector's **COFFEE TABLE**

See page 42



## Projects For Everyone!

- Compost Bin
- Sanding Cabinet
- Turned Desk Clock
- Whale Bank
- Letter Opener
- Scrollsawn Circus

## TOOL BUYERS' UPDATE

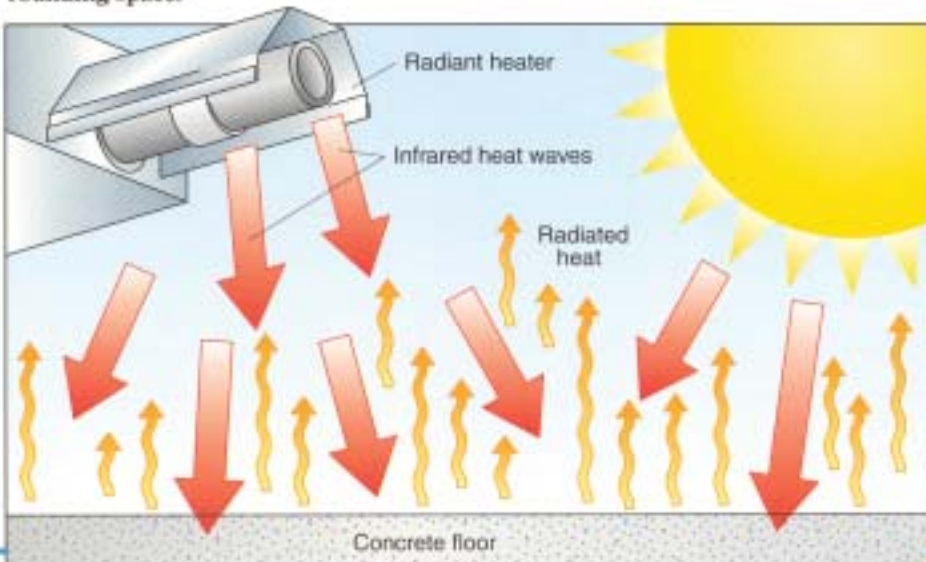
# Safe and efficient RADIANT HEATING

Due to high reader interest in this subject, and our ongoing study of safe ways to warm your workshop, we recently tested an infrared radiant heater made by Detroit Radiant Products Company. Compared to competing shop-heating choices, our ceiling-mounted unit offers several unique advantages that readily offset the somewhat stiff initial investment.

### Infrared radiant heating in a nutshell

Fueled by either natural or propane gas, and powered by a 120-volt electrical outlet, Detroit Radiant's radiant heater consists of a heating unit with an internal fan. Attached to this is a 4"-diameter aluminized steel tube (called a burner tube) that carries the heated products of combustion and vents them outside, and an aluminum reflector hood that helps direct the heat from the tube downward. This infrared heat warms the objects below, much like the sun's infrared rays on an absorbent surface.

Like the sun's rays, an infrared radiant heater's tube and reflector heat the surfaces below. These same surfaces—like a shop floor—warm up and return heat to the surrounding space.



In a shop, this might be the concrete floor or a stationary tool table. These surfaces, in turn, grow warm and radiate heat up and out, improving the temperature in the space as shown *below*.

### What's so hot about radiant heating?

So far, only Detroit Radiant makes radiant heaters approved for residential applications, such as home workshops, garages, and indoor swimming pools. These "Re-Verber-Ray" models are the DBS10-25 (having a 10'-long radiant tube and generating 25,000 Btus), and the DBS20-40 (with a

20'-long tube capable of dishing out 40,000 Btus). While the smaller unit best suits one- and two-car garage shops, Joe Wortman of Detroit Radiant advised that we use the larger unit for our 22x30' garage/workshop. Joe also recommended the L-shaped configuration *above*. This localized the heat over the garage's workshop area.

After a month's trial during January of this year, when outside temperatures dipped to a chilly 5 degrees below zero, many of radiant heating's advantages became obvious. First, equipped with an electric ignition device, the heater kicked in with a quick turn of the thermostat. In less than five minutes, infrared heat penetrated the icy air below the tubing, making it comfortable to work there.

Second, though a fan inside the heating unit moves heated combustion products through the tube, a radiant heater does not *blow* wood dust around like heaters that rely on blowers for heat distribution. That makes for cleaner shop air.

A third advantage is that the igniter and gas burner are sealed within the heating unit and isolated from the room atmosphere. Outside air feeds the flame, reducing the potential for explosion by volatile vapors or dust.

*Continued on page 26*



Jim Harrold, managing editor of *WOOD* magazine, enjoys a cold January day woodworking in his garage shop. An overhead radiant heater spreads warmth throughout the space.

# TOOL BUYERS' UPDATE

Continued from page 24

Finally, a radiant heater, according to Detroit Radiant, proves to be significantly less expensive to operate from a fuel-savings standpoint than blower-type heaters. That's by 30 percent on average.

## A little chilly news

Is there a downside of radiant heaters? We found a few negatives, but they're easy ones to live with. To avoid dinging the overhead reflector or tube, care must be taken when handling sheet goods or long boards beneath the heating system. In fact, Detroit Radiant recommends having a ceiling height of 8' or higher for this and fire safety reasons.

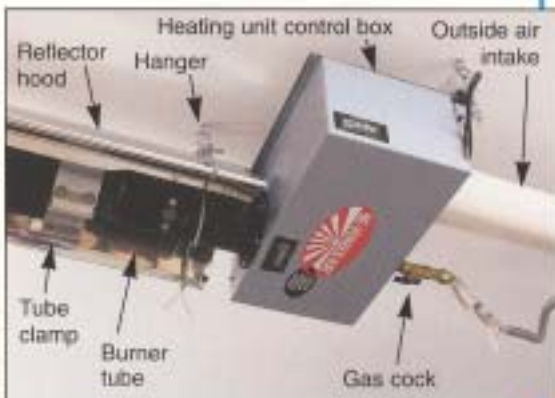
Clearance to combustibles must be watched with a radiant heater. Standard installation clearances are established for each model in the manual, but you must also take care where you place cans of finishes, wood, and other flammables when working in the shop. Parking a vehicle too close to an operating radiant heater could also be a problem, resulting in a damaged paint finish.

Finally, to prevent dust from collecting on the hoodlike reflectors and creating a fire hazard, you need only vacuum the surfaces of the unit occasionally, or blow it off with an air-compressor hose.

## The price of staying warm

Our installation required extensive gas line work. That, coupled with our contractor's inexperience with Detroit Radiant's products, and the fact that hanging the unit amounts to a two-person job, resulted in a \$1,100 installation cost. Add to this the \$1,080 list price of the DBS20-40, which included the 90° elbow and thermostat, and you have a sizable initial investment. But, ways exist to trim this cost considerably.

Most home woodworkers may need the smaller unit, which lists for \$940. And, according to Joe,



The metal-enclosed heating unit uses outside air for combustion, separating the flame from the shop environment.

"Contractors familiar with Detroit Radiant's heaters, and who buy in quantity, often drop the unit price by several hundred dollars." By doing the lion's share of the installation, including the gas-line work and running wiring, you can easily bring the total cost down to well under \$1,000. But, Joe cautions, "all connections must be within code and checked by local heating and electrical inspectors."

In the end, it comes down to how much woodworking you do, or would like to do, during winter, and how much you value having a warm, comfortable shop. Our experience tells us that whether you wish to heat a one-car garage, or a 40x50' production shop, you won't go wrong installing an efficient, effective, overhead radiant heater. In the long haul, you'll be dollars ahead.

**Note:** For more on shop heating, see the "Hot Choices in Heaters" article in the September 1994 issue of *WOOD*® magazine. ♣

## PRODUCT SCORECARD

### Detroit Radiant Heater

Performance	★ ★ ★ ★ ★
Value	★ ★ ★ ☆ ☆

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