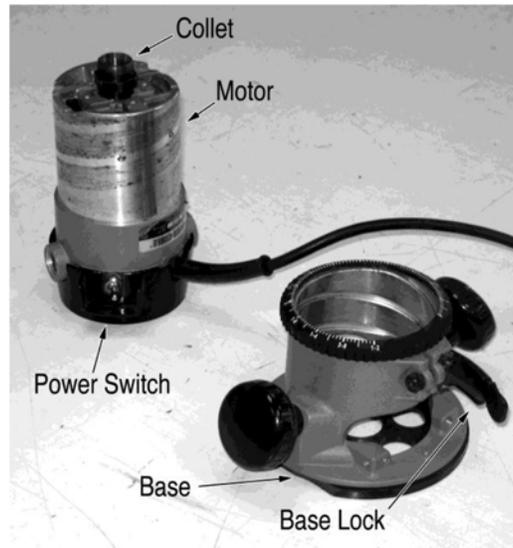


## HAND-HELD ROUTER



The router is a simple, relatively safe, portable electric tool. It is extremely versatile; its use is limited only by the imagination of the operator. The router consists mainly of two parts; a motor with a collet mounted on one end of the motor shaft and a base which holds the motor. A bit or cutter is mounted in the collet and protrudes below the surface of the base to do the cutting. The depth of the cut can be adjusted by moving the motor up or down inside the base and locking it at the desired depth setting. Routers run at speeds up to about 22,000 rpm.

There are two basic types of routers, fixed-base and plunge. With a fixed base router, the motor is adjusted in the base for a given depth of cut and locked in place. With a plunge router, the motor can be slid up and down within the base while the motor is running.

1. Use only bits that are specially designed for operation in high speed routers.
2. Always unplug the router before changing bits or making adjustments other than the depth of cut.
3. Do not bottom out the shank of the router bit in the collet. When possible, insert the bit to its maximum depth, and then withdraw it about 1/8" before tightening the collet.
4. Make sure the bit is firmly secured in the collet before starting work. A loose bit will work its way out of the collet, damaging your work and/or injuring you.
5. Make sure the router motor is tight in the router base before power is turned on.
6. When starting the router, make sure the bit is not in contact with anything.
7. Hold the router firmly when turning on the power to withstand the starting torque of the router motor.
8. Keep hands and loose clothing away from revolving bits and cutters.
9. Operate the router in the proper direction. If only one side of the bit is being used, move the work against cutter rotation. If the bit is cutting on both sides, feed the work so that the bit pushes the work towards the fence (when applicable).
10. Use slower speeds for larger bits.
11. Do not overload or bog down the speed of the motor.
12. Make several light cuts where large amounts of material are to be removed.

13. Always make sure the bit is sharp; if unsure, check with the instructor.
14. Always secure or clamp the work so that it cannot move during routing.
15. When using multi-piece router bits, ensure all nuts and bearings are tightened properly.
16. Large panel-cutting bits should not be used in a hand-held router. Due to the physics of routing, dados and rabbets in solid wood are best achieved using a table saw. Dados and rabbets in manufactured material

## **HAND-HELD ROUTER TEST**

True or False:

1. \_\_\_\_\_ The router should be unplugged when installing or changing bits.
2. \_\_\_\_\_ The bit should be bottomed out in the collet.
3. \_\_\_\_\_ The router should be moved in a direction such that the cut is made against the cutter rotation.
4. \_\_\_\_\_ It is a good idea to make several light cuts rather than one heavy cut.
5. \_\_\_\_\_ When using a hand-held router, the workpiece should be clamped or otherwise held in place.