

# A Jointer/Planer For the Site

by Clayton DeKorne

If you do any custom finish work, or trimming out in old houses, a jointer/planer can fast become your best friend. Carpenters in the field who don't have access to these shop machines end up paying a mill shop upwards of \$30 an hour to surface hardwood stock or any unusually dimensioned material.

Last year, Hitachi introduced the P 12RA, which combines a 12-inch planer and a 6-inch jointer. Like its big brother, the Hitachi F 1000A jointer/planer, this compact version is a side-by-side machine with one motor driving a separate set of knives for each function. But unlike the 320-pound shop model, the P 12RA weighs only 83 pounds. The jointer bed detaches from the planer to make it easy to transport (otherwise the unit is too unbalanced to carry). While the setup is probably more than you want to load in your truck everyday, it's small enough to bring on site, or include in an off-site shop where space is at a premium. And the little jointer/planer costs about \$850, so depending on how much custom woodwork you do, it might earn it's keep.

I've used the Hitachi planer/jointer for about five months, mostly to dress rough-sawn lumber for interior woodwork. I have been pleasantly

surprised by the cost of rough-sawn hardwoods compared to milled stock. For example, the going price for rough-sawn cherry now is about \$2.50 per board foot. The cost for dressed 1x6 cherry is about \$2.50 per lineal foot. Some of the savings from using the rough stock is lost to waste. And, of course, it takes a lot of work to dress a board. But at least some of the difference in cost can go into your pocket, instead of the supplier's. Additional savings might come from milling small runs that a mill shop would charge a minimum on, or from surfacing odds and ends of scrap that are lying around on the job. Of course, all these arguments are but justification for owning a tool that's fun to use.

### Small Planer

The Hitachi planer compares favorably to other portable planers on the market (see "Toolbox," JLC 8/90). The rubber feed rollers run at a quick 26 feet per minute and the two-blade cutterhead runs at 10,400 rpm. This action produces a smooth cut on pine, poplar, oak, cherry, and mahogany.

The table adjusts up and down for the depth-of-cut, and is built around four steel guide posts. This seems like a more durable design than other portable planers I've

seen that have only two posts. The table is very short, however. If you're working with long stock, you need two people. Hitachi includes a useful feeler gauge on the front of the machine that gives a quick indication of the depth-of-cut, or "take." The gauge along the side that reads the board thickness is also accurate, but is difficult to read at a glance.

The planer has no anti-kickback device. Because it has rubber rollers, this is less of a drawback than it would be for larger machines, which have a segmented steel infeed roller. Nevertheless, kickback is possible, especially at a very light take, and the operator should keep out of a board's likely path.

### Planer Tips

When planing on any machine, keep these points in mind:

- Keep the planer level. The cutter head will rotate more evenly.
- Feed boards into the planer, as shown in Figure 1. If the ends of "feather grain" are visible on the face of the board, keep the ends of the feathers pointed toward you when planing the pith side of the board. Keep the ends pointing away from you when planing the bark side.
- Don't take off more than 3/32 inch per pass. A 1/16-inch setting will give a smoother cut.
- Remove stock from both faces if the board is kiln-dried. If the case hardening is removed from only one side, the board will often warp.
- If you're working with wild grain, the only option you have to stop chatter and tearout on a small planer is to reduce the depth-of-cut. On larger machines, you can reduce the feed rate, as well.

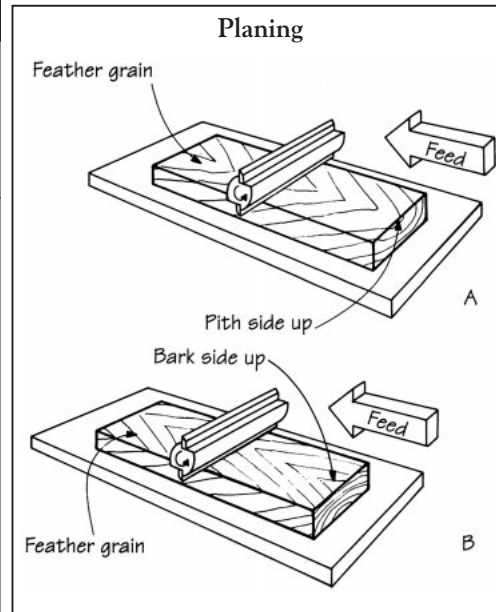


Figure 1. Keep the feather grain pointing toward you when planing the pith side of a board (A), and away from you when planing the bark side (B).

- A planer won't take out a warp or bow in a board. To true a board you have to use the jointer.
- The small Hitachi doesn't have table rollers, so it's important to keep the table clean and waxed.

### Small Jointer

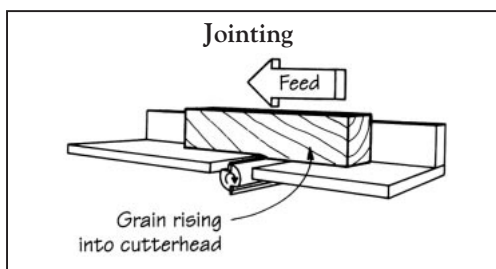
The Hitachi jointer doesn't offer a lot of bells and whistles, but is well-designed in its simplicity. The cutter head is belt driven by a 15-amp motor which provides enough power for the 12-inch planer, so it has plenty of power for the jointer. The fence adjusts easily and tilts to 45° for beveling. A hinged plate covers the knives when the fence is adjusted for narrow stock. The height adjustment for the infeed table is easily reached from the front of the machine, and the gauge actually registers an accurate depth-of-cut. The fence is cast iron and the table is cast aluminum with a steel work surface.

For me the sign of a well-designed jointer or planer is the ease in changing knives. Like a lot of machines, the knives in the little Hitachi are spring loaded in the cutter head. You should definitely read the instructions before taking out the knives, and pay attention to which way the cutter head turns, but the procedure is relatively simple. Hitachi includes a set of magnetic gauges that attach to the outfeed table and make setting the height of the blades very easy. The same gauges attach to the planer's cutter head to adjust the depth-of-cut on those knives.

The jointer bed is only 28 inches long, which makes it hard to take the warp out of a long board. But with lots of siting along the edges, and careful



The Hitachi P 12RA jointer/planer weighs 83 pounds and has a detachable jointer bed, making it maneuverable enough to bring on site.



**Figure 2.** When jointing the edge of a board, the grain should rise into the cutterhead.

marking, most narrow stock can be trued to straight.

### Jointer Tips

Here are a few tips that hold true for just about any machine.

- For a smooth edge on softwoods, don't remove more than 1/16 inch of stock in a single pass. For hardwoods, limit the cut to 1/32 inch.
- Always feed boards into the jointer against the grain. The grain should rise into the

cutterhead as shown in Figure 2.

- When truing the face of a bowed board, first take down the high spots at both ends on one face, or the crown on the other face. When one face is reasonably straight, take a pass putting pressure on the outfeed table and let the board pass freely over the infeed table. Once one side is true, both faces can be smoothed in the planer.
- Don't joint plywood. The glue will dull the blades instantly. ■

## TOOLBITS

Once again the intrepid editors of JLC braved the 820,000-square-foot National Hardware Show in Chicago. Of the 250,000 products displayed by over 3,000 exhibitors, these gems caught our eye.

**The Ladder-Brace** (Maria Soccorro Industries, 2691 Ravenna Road, Hudson, OH 44236; 800/628-1322) is the simplest light-duty scaffolding system I've seen. It's nothing more than a piece of flat bar stock welded to two 8-inch steel dowels, which fit inside the "O" or "D" rungs of most aluminum ladders. Depending on where you place them, you can use them as stand-offs, roof hooks, or staging. Ladder-Brace has been tested by the Canadian Standards Association to hold 1,000 pounds per pair, and is currently being tested by UL.

**I used to store plumbing tools and spare fittings in an empty drywall bucket.** I wish I'd known about *Bucket Boss* (Portable Products, 58 E. Plato Blvd., St. Paul, MN 55107; 612/221-0308), a nylon tool organizer that fits over and around any standard five-gallon bucket. It has 16 pockets outside and 11 inside to hold tools and supplies of various sizes, leaving the bucket itself free for bulkier items.

**Crowned deck boards and warped plywood can really take the fun out of laying decking.** Instead of bulling and jamming, why not slide decking into place with *The Lumber Jack* (T.C. Manuf., P.O. Box 122, Fredericktown, OH 43019; 800/253-5669)? The steel baseplate rides smoothly on top of a single joist until you lock two spring-action steel wedges into place. A pull on the 40-inch handle delivers a 10:1 mechanical advantage, and will close a gap in deck boards of up to 1/4 inches. I'm anxious to test this one

out on full plywood sheets.

**SmartLevel Series 200 from Wedge Innovations** (2040 Fortune Drive, Suite 102, San Jose, CA 95131; 408/434-7000), is a 24-inch, lower-cost alternative to the company's *Pro* model ("Toolbox," JLC, 1/90). It recalibrates at the touch of a button, displays all angles in degrees (accurate to 0.5° or 0.1° when within 1° of level or plumb), and indicates pitches of 1/8-, 1/4-, and 3/8-inches per foot. The unique "I-box" housing has a v-groove on one edge for use with pipes or columns. Unlike the *Pro* model, the sensing module is not removable.

**The Magna 1 Combination Layout Tool** (Enmark Corp., 626 Armstrong Ave., St. Paul, MN 55102; 800/233-1117) houses several high-strength plastic templates in a 36-inch aluminum sleeve. The template pivots to function as a level, protractor, framing square, and 16- and 24-inch on-center layout tool. Everything folds neatly away for easy storage.

**The Hip Hanger** (New York Tool Mfg. Corp., P.O. Box 1303, Brentwood, NJ 11717; 516/435-3409) is just the thing when you need a hammer loop, but not your whole tool belt. It's a molded ABS plastic ring rivetted to a spring steel clip that slips over the top of your work pants or pocket. A "C" shape is available to hold spray cans, and the company is working on a drill holster.

**Carpenter's elbow is a common affliction among framers.** To the rescue comes *BioCurve* (Barco Industries, Reading, PA 19612-4567; 800/234-8665). According to Barco, the 19-degree bend in the hickory handle reduces muscle tension throughout the wrist and arm. The company puts its handle on 16-, 20-, and 22-ounce claw hammers, as well as ball-peen and 3-pound sledge hammers.

— Sal Alfano