

# Mobile Bases

For shops large or small, mobility offers convenience, as long as the base is stable and rolls smoothly

BY CLIFF COLLEY

Most woodworkers I know have small shops where space is at a premium. I'm at the other extreme. I teach woodworking in a huge space; nearly 6,000 sq. ft. Two of our four bandsaws spend a significant amount of time on mobile bases, rolling from one end of the shop to the other. Whether to resaw a fresh load of lumber close to the storage stack or to turn the feed path of a long board away from other machines and students, without these bases, our productivity would be hampered severely.

Whether their shops are small or large, woodworkers face space issues sooner or later. Mobile bases offer the convenience of being able to relocate machinery easily, allowing woodworkers to use shop space more efficiently.

I tested seven mobile machine bases to move a couple of bandsaws around the shop. I chose five universal bases—Delta 50-345, General 50-025, HTC 2000, Jet HMB-UMB, and Shop Fox D2057—and two dedicated bases—Delta 50-274 and HTC HRBS-14. All range in price from about \$50 to \$100. I think the



## Dedicated vs. universal bases: Which is right for you?

The foremost requirements for a mobile base are that it be strong and stable. It must not buckle under the weight of a machine, and it must not wobble while the machine is in use. It is an added benefit if it transports a machine with ease and if its handles and foot levers are easy to see and to use.

### DEDICATED BASES

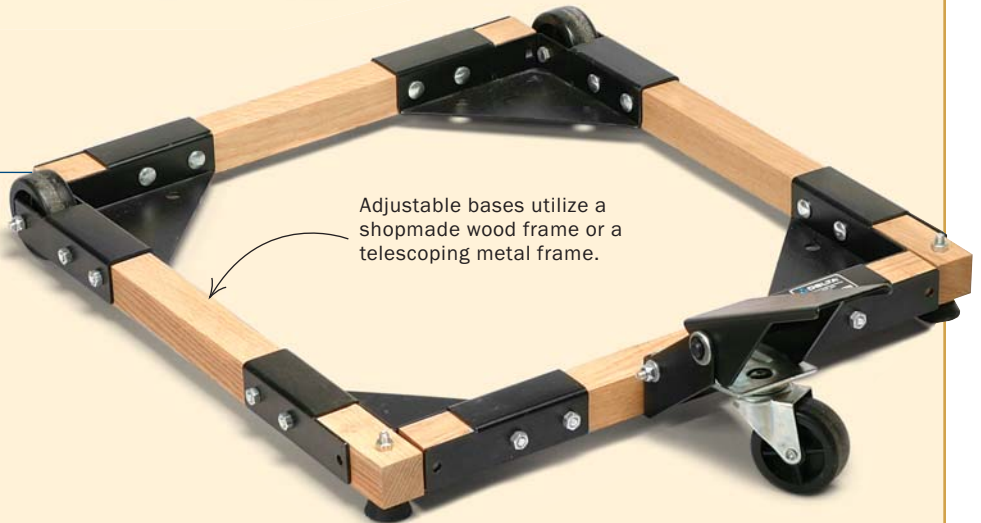
Dedicated bases are engineered to the weight and dimensions of a specific machine. However, most dedicated bases fit more than one machine. The HTC HRBS-14 (right), for example, fits a variety of 14-in. bandsaws. Often, more than one machine from a company will fit within the footprint of its dedicated base. Such is the case with the Delta 50-274 (see p. 86), which is made to fit six Delta machines.



Dedicated bases feature rigid frame construction but may not come in the size you need.

### UNIVERSAL BASES

Universal bases can fit almost any machine as long as the footprint fits within the base's adjustment range. A base that's too big usually is fairly easy to retrofit by adding a plywood bottom, cutting the base's rails shorter, and/or by drilling out extra bolt catch holes in the base's runners.



Adjustable bases utilize a shopmade wood frame or a telescoping metal frame.

models offer a good cross section of what is available today.

### Not all bases are easily assembled

The construction requirements for each brand varied a lot—from arriving almost ready-made out of the box to assembly that seemed almost as complicated as that of a pocket watch.

On first inspection, I thought the Jet universal base was well engineered. Each side has one solid rail made from flat bar stock with a single set of holes for the bolt catches. The parts snapped together in about three minutes. Assembly was nearly as easy with the Delta 50-274 and the HTC HRBS-14 dedicated bases.

The universal Delta 50-345 comes as a set of parts and metal corner assemblies. It re-

quires the user to fit it out with wood rails; the manufacturer recommends using hardwood, such as oak or maple. I made mine out of red oak. Assembly of the Delta 50-345 was more labor-intensive than any of the other bases, but the end result was a perfect fit to the footprint of my machine.

The HTC 2000 has 108 pieces to assemble. That's a lot, but this unit proved to be worth the extra effort, as the fit was solid. The rails also allow a variety of size options.

The General 50-025 required a lot of assembly. This base arrived with 114 parts. However, assembly was straightforward once I studied the instructions and parts list provided.

The Shop Fox had the most parts—128, to be exact. Compared with other units reviewed here, parts for this base were diffi-

cult to fit, so assembly was frustrating and labor-intensive.

### Bases should not wobble under load

The usefulness of a mobile base depends greatly on its weight-bearing capacity. I used two bandsaws to conduct this test. Each one weighs less than 250 lb. I did not include a tensile-strength trial because all of the bases are rated to bear much more weight than I intended to place on them. Still, one base did have difficulty holding firmly under the weight.

Both of the HTCs, the General, and the Shop Fox bases proved to be solid. The two Deltas, though lighter, were substantial enough to carry their loads faithfully.

I was disappointed in the performance of the Jet HMB-UMB. It is rated to hold





**Nearly ready to roll.** While most universal bases required extensive assembly, the Jet HMB-UMB arrived nearly ready-made. Snap catches (inset) make adjustments easy. Simplicity, however, comes at a price—the unit flexed under load.



**Some assembly required.** The Delta 50-345 requires milling four hardwood frame members, drilling holes, and assembling nuts and bolts. Once complete, it provides a stiff platform.

600 lb., yet the brackets that support the wheels flexed when I placed a 230-lb. bandsaw on it, and the whole unit wobbled while cutting, making it disconcerting to use.

## Foot-operated locks are easy to use

The wheel-locking system may be a deciding factor in choosing a mobile base. Wheel types and axle configurations vary, and each company has a unique take on locking systems. Some bases employ hand-operated systems, while others use foot-operated systems.

Even though I don't like the inconvenience of bending down to set a brake, I did like the hand-operated system on the HTC HRBS-14, which required minimal hand pressure to work.

The Shop Fox D2057, which also employs a hand-operated locking system, was one of the most solid, unwavering bases I tested, once it was locked down. However, locking the machine on its leveler pads felt awkward and seemed to take a long time. I called the company and discovered that I was over-tightening the knob. I was assured that it takes only one-half turn to get the leveler pads to engage and secure the machine to the floor. I tried it again, and it worked.

The foot-operated locking system on the General worked well. The two easy-to-find foot levers made locking and unlocking the wheels a breeze.

The HTC 2000 has foot-operated locking levers on both sides of the unit to accommodate its two front caster wheels. The locks easily engaged to secure the machine on two leveler pads and two fixed wheels.

The Jet has a foot-operated lock on both fixed back wheels and a wing-nut type of friction lock on the side of its two front caster wheels. The locks on the fixed wheels were simple and straightforward. The side friction locks, however, were difficult to use.

The locking systems on both Delta bases also worked well. With one step, the units can be locked. And with a flick of the toe, the bases are ready to roll.

## Most bases rolled smoothly

Up to this point, I had conducted my tests on a level, clean floor. I decided to add realism to the mix. Taking turns with each base, I rolled the bandsaws through light sawdust and over a low-nap shop carpet.

The HTC 2000, with the narrowest and



## PARKING THE BASE LOCK THE WHEELS...



**Shorter foot levers can work well.** In spite of its smaller size, a well-engineered foot lock, like this lever on the Jet HMB-UMB, proved more than adequate to hold a machine in place. It also was easy to kick up and release for moving.



**Easy-to-operate hand lock.** The HTC hand-locking mechanism engages a small leaf spring that secures the wheel with little effort.

## ...OR LIFT THE WHEELS OFF THE FLOOR

softest wheels of the group, moved like a sports car compared with the rest of the bases. The narrow wheels worked like skinny tires in snow, cutting easily through the sawdust and over the carpet. However, the soft wheels on the HTC 2000 were susceptible to getting screws and other debris embedded in them.

The General 50-025, both Jet units, both Delta units, and the HTC HRBS-14 all cut the mustard where mobility is concerned. Even when the threaded locking feet were up off the floor, the Shop Fox still didn't roll as easily as the rest of the bases I tested.

### Considerations for uneven floors

Another issue to consider when deciding on a mobile base is the type and condition of your shop floor. Is the floor fairly level, or is it uneven? Do you keep it reasonably clean? Any mobile base can be stalled by even a small scrap of wood on the floor.

Whether a mobile base is on the move or in its locked position, it is good to be aware of the number of points of contact it has with the floor. If your floor is flat and level, a unit with four wheels will work well. But if you plan to use the base on an uneven floor, a three-wheeled base may be the better choice. Basic laws of physics tell us that three contact points give better



**Foot-operated levers prevent unnecessary bending.** Both Delta models tested (50-345 shown left) have a foot-operated locking mechanism that is prominent and easy to operate.



**Footwork shouldn't be fancy.** Foot levers should be easy to locate and to use without looking. The HTC 2000 (above) and the Delta (left) have foot levers that are large and easy to operate.

stability on an uneven floor than four points do. The unique design of the HTC HRBS-14 places the third wheel away from the main footprint of the base on a cone-style extension assembly, which counterbalances the upper body weight of the bandsaw. The design offered great stability, whether moving or parked.

The only other three-wheeled units in this test are the Delta models 50-274 and 50-345. Each Delta base uses two leveler pads to catch it when the locking wheel is disengaged. The 50-274 is engineered the same way. But the 50-345 was somewhat tippy in motion. When using this universal base with the bandsaw—a machine that tends to be top heavy—the unit tipped in an abrupt turn while I was moving it across the floor of the shop. This gave me a start, until the leveler pads touched down to keep the machine from toppling. With a little forethought, I was able to avoid this problem from then on.

### Picking the best performers

As the old adage says, “You get what you pay for.” Yet, when it comes to choosing a mobile machine base, you can get extra value for your money if you have a clear understanding of your needs.

If you’re not interested in spending a lot of time putting together the complex gadgetry that some of these bases require, a dedicated base, such as the HTC HRBS-14 or the Delta 50-274, might be your answer.

In a hard-use setting, you can’t beat either of the HTC units. The HTC HRBS-14 dedicated base is engineered to a very high standard. The same holds true for the HTC 2000 universal base. Some of HTC’s mobile bases tend to be expensive, but HTC does offer a 30-day trial and a lifetime guarantee on all parts. To me, product integrity does not get any better than that. If you insist on the best and don’t mind paying for it, HTC has a base waiting for you. (The company also builds custom mobile bases.) Another superstar is the General. It’s massive, holds a machine firmly in place, rolls easily, locks decisively, comes with clear directions for assembly, and is a great value. □

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## MOBILE-BASE SPECIFICATIONS

MODEL	STREET PRICE	EASE OF ASSEMBLY/ NUMBER OF PARTS	WEIGHT RATING
<b>DELTA 50-274</b> 800-223-7278 www.deltamachinery.com	\$100	Easy/ four parts	300 lb.
<b>DELTA 50-345</b>	\$65	Difficult/ 66 parts	300 lb. (using hardwood)
<b>GENERAL 50-025</b> 514-326-1161 www.general.ca	\$49	Difficult/ 114 parts	500 lb.
<b>HTC 2000</b> 800-624-2027	\$59	Very difficult/ 108 parts	400 lb.
<b>HTC HRBS-14</b>	\$99	Average/ 25 parts	475 lb.
<b>JET HMB-UMB</b> 800-274-6848 www.wmhtoolgroup.com	\$69	Easy/ eight parts	600 lb.
<b>SHOP FOX D2057</b> 800-225-1153 www.woodcraft.com	\$66	Most difficult/ 128 parts	700 lb.

**DELTA**  
MODEL 50-274



**DELTA**  
MODEL 50-345



**GENERAL**  
MODEL 50-025





DEDICATED OR UNIVERSAL	NUMBER OF WHEELS	LOCKING MECHANISM	MOBILITY	STABILITY	COMMENTS
Dedicated	Three	Single foot-operated lever and leveler pad	Very good	Good	Strong for its size; stable, in spite of caster wheel tilting machine in rolling mode
Universal	Three	Single foot-operated lever and leveler pad	Good	Good	Arrives in kit form; can be made to suit machine footprint; stable when parked; tippy while moving
Universal	Four	Two foot-operated levers and leveler pads	Very good	Very good	Probably the best mobile base in its price range
Universal	Four	Two foot-operated levers and leveler pads	Excellent	Very good	One of the top performers; HTC offers 30-day trial and lifetime guarantee on all parts
Dedicated	Three	One foot-operated lever and two hand-screw locks	Excellent	Excellent	Three-wheel “nose-cone” design aids in stability; a top performer, even on an uneven floor
Universal	Four	Two foot-operated levers and two friction locks	Average	Poor	Flexed under load; did not provide a solid platform for the bandsaw; suitable only for the lightest of shop machines
Universal	Four	Two hand-screw locks that adjust leveler pads independently	Average	Very good	Not intuitive to lock and unlock; a stout unit that provided a stable platform for a machine in the locked position

