



No-Hassle Panel Handling

Moving and storing sheet goods doesn't have to be backbreaking labor

by Skip Lauderbaugh

When you need big, flat panels that are stable, smooth and ready to be cut, you just can't beat sheet goods. But moving plywood, melamine or medium-density fiberboard (MDF) is a backbreaker. A single 4x8 sheet of $\frac{3}{4}$ -in. MDF weighs almost 90 lbs., and it's terribly awkward to maneuver, especially by yourself.

I used to think that schlepping panels by hand was a necessary evil in my cabinet-making business. Like many small-shop owners, I didn't have the space or the budget for material-handling equipment like a forklift. I stored panels near my saw in a stack. But it seemed whichever panel I wanted was always buried at the bottom of the pile. The day I needed a panel that was under 30 sheets of melamine, I just knew there had to be a better way.

It was time to stand back and analyze



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my entire panel-handling process—from unloading the truck to pushing panels through the saw. My goal was to devise a way for one person to unload, store, sort and move panels to the saw, using the least possible effort. So I came up with a storage system built around a low platform.

Panel-storage system saves labor, space and time

When I began studying how I had been moving sheet goods, I realized how inefficient I'd been. So I designed a panel-storage system to achieve five basic objectives:

- provide easy access to panels
- minimize lifting of entire sheets
- work at safe, comfortable positions
- organize panel cutoffs
- make the most of my floor space

At the heart of the panel-handling system is a 4-ft. by 10-ft. platform. The top of the



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1. Platform is at a comfortable height for unloading. The author slides plywood from his truck to the platform and tilts the panels up to the stack. He doesn't have to lift the full sheet.

2. Bolsters let you leaf through sheet goods. When sorting through panels, two bolsters act like buttresses to support sheets at the front of the stack. The bolsters adjust by sliding and locking in tracks in the top of the platform (below). An overhead rack holds small cutoffs.



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3. The right space between sheets and the saw—After the author selects a panel, he pulls it end first from the stack. The platform is 6 ft. from his saw so that both ends of the sheet can be supported.



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4. Panel supported at start of cut—The placement of the platform allows easy access to the saw and enables one person to move and cut panels. Leaving the front edge on the saw, the author feeds a panel into the blade by holding the unsupported back corner.



Stored sheets are easier to lift—When the author has to carry a full sheet (top), he lifts it upright to keep his back straight. A cutout gives his hand clearance to grab the sheet's lower edge.

Drawers make use of floor space—A two-part assembly table rolls under the platform when not in use. Aligned by biscuits and clamped together, the table has slide-out bins in back (bottom).



platform is 24 in. above the floor, which is easy on the back for those rare times that I have to lift an entire sheet. The top is also at the right height for sliding sheets directly off the tailgate of my truck. And by standing on the platform, I can lean through panels or reach up to my overhead cutoff rack. Connected to the top are two panel supports (I call them bolsters) that slide in tracks. The bolsters can be removed for loading panels or adjusted to fit the stack of sheets as it grows or shrinks.

I store panels with the long edges on the platform and the faces leaning against the wall. To sort through the stack, I lean unwanted panels against the bolsters and lean through the rest like pages in a book. The end of the platform is 6 ft. from the front of my saw, providing plenty of cutting room. But I can still rest an end of a sheet either on the saw table or on the platform. To maximize floor space, I built two low assembly tables that roll under the platform.

The no-sweat panel shuffle

The beauty of the panel-handling system is that I almost never have to lift a full sheet. I either slide the panel or lift only one end. Photos 1 to 4 on pp. 82-83 show my typical panel-moving sequence. If I do have to lift a sheet off the platform, a cutout makes it easy (see the top photos).

There are only four elements in my panel-storage system: the platform, the bolsters, the cutoff racks and the assembly tables. I'll briefly explain how I built the platform, but I'll leave the specific measurements and details up to you. If you don't have headroom for overhead racks, for example, you can mount them somewhere else.

The platform—The platform must be sturdy and big enough to hold 4x8 sheets. I designed the framework so I'd get the most storage area from the dead space underneath. I used 4x4s and 2x4s for the frame and secured it to a 10-ft.-long ledger I bolted to the wall. I anchored each leg of the platform to the floor.

The top of the platform has a pair of grooves running across the width, which serve as tracks for the adjustable bolsters. I bored 7/8-in.-dia. holes in the grooves every 6 in. to register the bolsters (the bolsters have alignment pins on the bottom) at various preset positions. And I sleeved the holes with short pieces of Schedule 40 PVC pipe to keep the holes from wearing and to keep the pins clean.

I let in and epoxied 1/8-in.-thick steel bars along both edges of the grooves to create lips to secure the bolsters (see the far right

photo on p. 83). The bars protrude 3/8 in. into the groove, leaving a 5/8-in. gap between the bars. The top of the platform—3/4-in. plywood covered by 1/4-in. tempered hardboard—is screwed to the frame. On the wall behind the platform, I attached a 1/2-in. sheet of particleboard, so the panels have a flat surface to lean against.

The adjustable bolsters—The bolsters measure 32 in. tall and are 9 in. wide at the bottom, tapering to 2 in. at the top. The cores are made of solid wood with 3/4-in. plywood gussets glued and screwed to the sides. At the bottom of each bolster are two pins. One pin is a 1/2-in. carriage bolt that fits into the track holes to align the bolster; the other pin, also a 1/2-in. carriage bolt, is inverted and has a 1-in. flat washer under the head. This pin prevents uplift on the toe of the bolster as sheets are loaded against it. The pins are height adjustable, so they engage both the holes and the lips of the track. Adjust the pins so they fit snugly in the tracks. Then carefully lean sheets against the bolsters to make sure they'll hold. You don't want a stack of sheets to crash against your legs later.

The cutoff racks—Because I have a nice high ceiling, I made a rack above the platform for various sized cutoffs. The overhead rack is divided into three sections. The left section holds 12-in.-wide pieces, the center 18-in.-wide pieces and the right 24-in.-wide cutoffs. I located the bottom edge of the rack 62 in. above the platform to allow for 5-ft.-wide sheets and metric-sized plywood on the platform. The rack is attached to a ledger bolted to the wall. To the right of my platform is a storage rack that I use for wide cutoffs and long rip-pings. I can also use this area to store full panels vertically.

The roll-out assembly tables—The space underneath the platform was the perfect place for storage-drawer units that also serve as cabinet-assembly tables. The two units are on wheels. They can be joined together to make one large surface, and when both tables are rolled under the platform, four drawers face out (see the bottom photos at left). I keep fasteners and hardware in these. When I pull the tables out, there are plastic crates in the back where I store power tools. The crates slide out on pull-out shelves. □

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