

What is Good Storage? Version 1.3

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Of course, “good” is subjective. What we might consider good, you might see as terrible. So at the risk of generating heated debate, we have come up with a list of what we think constitutes good, good/bad, and bad storage. Plenty of examples.

Direct Visibility and Random Access

The ability to see and reach all items being stored without disturbing other items.

Bad



When you need one item, having to touch one or more you don't need is annoying. In the worst case, you don't notice the needed item so waste time searching other drawers.

The only saving feature of this kind of storage is that the thing you reached for last time is likely on top so easy to access. But if you routinely need all of them, this gets old quickly.

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OK, mostly bad here. The fundamental problem is that the cabinet is deep. Plastic drawer units have been pushed to the back. The space in front is, at best, wasted. At worst, it becomes a collection point for material waiting to be put away. The compromise was to place boxes in this space.

In order to reach a drawer, boxes have to be moved. The only savings here is that the boxes are relatively large and few.



Dave calls this his layered storage area - 3 layers deep. First is the front of the hinged panels, with nominally "flat" stuff hanging (like ladders). Opening the panels reveals shelves. The shelving units are welded assemblies that are also "hinged" on wheel bearings to allow access to fixed shelves behind. The main reason for this extravagance (other than I thought it was a neat idea) is that the space was

about 40" deep, and I wanted to make the best use of it.

Another suboptimal solution to deep spaces is to use one or more "lazy Susan's". These must be round to permit spinning and typically go into square spaces so there is waste. Furthermore, if anything falls off where it can't be seen, at best it is gone from sight. At worst, it jams up the mechanism and is hard to remove.

The take home message here is that having deep storage areas are not friendly to random access and direct visibility. You might be tempted to use the back of deep areas as "dead" storage. The problem becomes that you forget all about the contents so it really becomes dead. Sure you can keep an inventory, but that has never worked for us.



Those plastic draw units are also a mixed blessing. Great for small items that can fill the space. Bad for large items that keep popping out. Also bad for heavy items that crack the plastic.

If you are shopping for plastic drawer units, try pulling one drawer out. Some designs have a little stop to prevent accidentally pulling out too far. Others have a rounded back/bottom to assist you

in dumping the contents all over the floor.

On the left side of the picture you can see three clear plastic tubs stacked up. This is also a mixed blessing. Good use of space but the needed material is always on the bottom. Move that tub to the top and the needed material will soon be the one on the bottom. That is just the way Murphy works.

Some Good and Some Bad



This storage arrangement is a mixed blessing. You can see about half of its contents and reach maybe a third of it. However, not much wasted space but you may spend time rotating it. Murphy's Law says the bin you need is always on the other side. With some planning, this problem can be minimized. For example, placing wood screws on one side and bolts on the other.

This structure is particularly useful if you have a big shop and the unit is on wheels. A little rotation of the bins is far better than constantly hiking across the room.



This masterful fastener storage unit was designed and built by John Herrmann. He has a large shop so this saves him steps. The fasteners have been organized so there is minimal turning of the unit during a job.



Looking down into this drawer Rick is able to reach for any of the tubs plus see some of their contents.

The down side here is he is almost at capacity. Not much room to add another tub.

Don't confuse this arrangement with stacking boxes.



These stacked boxes are directly visible but hard to randomly access.

Better

A better option is to build close fitting shelves. Then you get both direct visibility and random access.



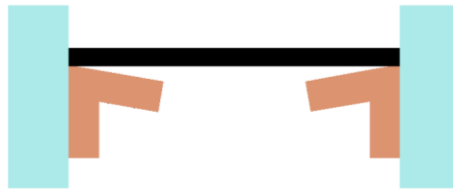
Here is another option from John Herrmann. Those pieces of angle stock are compressed cardboard which are glued and nailed to 1x2s. The angle stock is commonly found as packing on heavy items like washing machines.



Another option that should work is to use cut up lengths of bed rails. Do be careful with this material because sometimes it is mild steel and other times it can strip the teeth off of your hacksaw. It can often be found for very little money at resale shops.



John and I got together and came up with a rack to allow random access for the tubs inside my cabinet and atop my cut offs rack. We used some 3" x 3" cardboard angle stock that John had recently found. Being wider than the usual stock, it did a good job of supporting the narrow bottoms of the tubs, while providing clearance for the wide tops.



On a few tubs the weight was too much for the cardboard. This was solved by laying down a piece of scrap sheet metal. It was as wide as the inside width of the enclosure so the weight of the tub was supported at the bend in the cardboard.



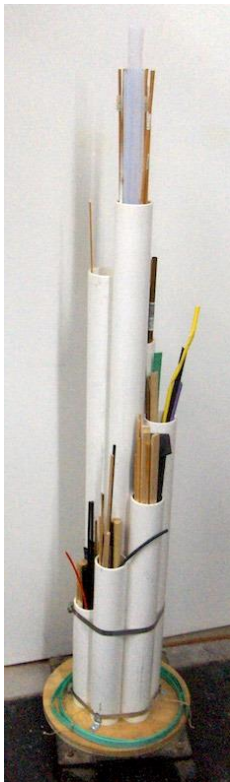
Then John outdid himself and solved the mess on top of my cut offs rack. Thanks John!



This is common metal shelving loaded with various U shaped trays. You get mostly random access and direct visibility as long as it is not overloaded. Those U shaped trays prevent sideways avalanches of metal. These trays are cut up plastic rain gutter.



For longer stock, a series of 6 inch diameter ABS pipes secured side to side works. As you can see, it can also become overloaded.



This is another contribution from John Herrmann. Various lengths of stock are supported by the 7 different lengths of PVC pipe. This is good because he gets direct visibility and random access. The assembly is secured with large hose clamps.

This arrangement can also be a problem because the stock is organized by length and not form. A long and short length of 1/2 inch diameter rod will be in separate pipes, maybe paired with long and short threaded rod. A solution that keeps the same forms together would be nice.



All screwdrivers are visible and easy to access. There is also room for more. This also offers random access and visibility².

² See <http://rick.sparber.org/SDR.pdf> for details.

Readiness For Use

The ability to store and retrieve an item without having to adjust it.

Bad



To keep the C-clamps from falling off the rod, they must first be closed all the way. Yet, to use one, it must be opened. Therefore, this storage method forces us to have all clamps in a non-ready state.

Furthermore, we do not have random access. To reach all but the first clamp requires us to remove some clamps to get to the one we need.

Better



The Vise-Grips can be left in the open position and the C-clamps are held as long as they are partially open³.

Furthermore, all tools are visible and can be randomly accessed.

This arrangement is not perfect. If on a movable platform, the Vise-Grips would likely fall off.

³ See <http://rick.sparber.org/VGAC.pdf> for details.



Here is a multilayer tool storage cabinet from John's shop. The cabinet has several doors with tools hung on each face. A little harder to see and access random tools but extremely good tool density.

Acknowledgements

Thanks to John Herrmann for sharing his Lazy Susan and box holding designs plus pictures along with various clarity improvements. Thanks also for the tub cabinets!

We welcome your comments and questions.

If you wish to be contacted each time I publish an article, email me with just "Article Alias" in the subject line.

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