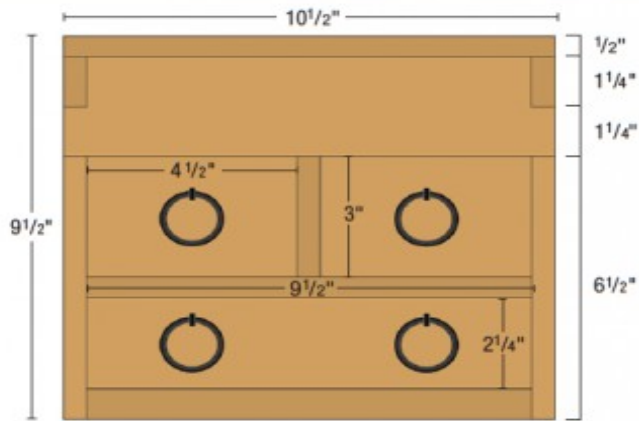


## Traditional Japanese Writer's Box

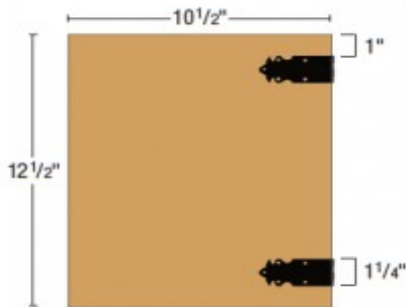
Asked to imagine a *tansu*, or Japanese chest, most people probably would picture a large stepped chest. But those *kaidan dansu* are only one expression of Japanese case design. The category includes chests large and small, mundane and elaborate, ranging from utilitarian boxes to elegant cases built to hold a household's most prized possessions. The *suzuribako*, or writing box, is definitely the former: a compact chest designed to hold the calligrapher's brushes, inks, ink stones and paper. Despite its small size, the *suzuribako* uses much of the joinery as its larger cousins, providing a great introduction to building Japanese cabinetry. The traditional form features a pinned, finger-jointed case with a lidded bin over a bank of drawers. This functional design can be scaled up or down depending on its intended use. I sized the version here to hold a ream of copy paper and stray office supplies, but the *suzuribako* could be easily built to hold craft supplies or jewelry, too.

Historically, *tansu* were built with a variety of domestic Japanese woods, including cedar, elm and paulownia. I followed suit, using a wood common here in the Pacific Northwest, Douglas fir, with stock I salvaged when replacing the subfloor of our Craftsman bungalow. If fir isn't readily available near you, take a note from the original makers and use locally available softwood.

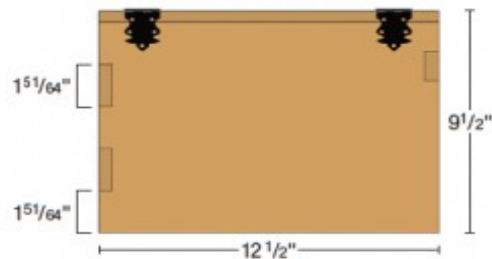
# Japanese Writing Box



FRONT VIEW



TOP VIEW



SIDE VIEW

## Cut List

No.	Item	Dimensions (inches)			Comments
		T	W	L	
1	Back	1/2	9	10 1/2	Finger-jointed to sides
1	Drawer guide	1/2	1 1/2	10 3/4	Tongue on bottom edge to fit divider dado
1	Front apron	1/2	2 1/2	10 1/2	Finger-jointed to sides
1	Lid	1/2	10 1/2	12 1/2	Breadboard ends
1	Lower horiz. divider	1/2	9 7/8	10 1/2	*
1	Lower rail	3/4	1 1/2	10	*
1	Middle horiz. divider	1/2	9 7/8	11 1/2	*Top face dadoed for drawer guide
1	Middle rail	1/2	1 25/64	9 7/8	*Dadoed for vertical divider
2	Narrow drawer back	1/4	2 3/4	4 1/2	Single finger joint at sides
2	Narrow drawer bottoms	1/4	4 1/2	11 3/4	-
4	Narrow drawer sides	1/4	2 3/4	11 3/4	Single finger joint at end
2	Sides	1/2	9	12 1/2	Finger-jointed to back; notched for front stretcher
2	Narrow drawer fronts	1/2	3	4 1/2	Rabbeted for sides and back
1	Upper horiz. divider	1/2	9 7/8	11 1/2	*Bottom face dadoed for vert. drawer divider
1	Vertical drawer divider	1/2	1 1/2	3 3/8	Tongues at both ends for dados in horiz. dividers
1	Wide drawer back	1/4	2	9 1/2	Single finger joint at sides
1	Wide drawer bottom	1/4	9 1/2	11 3/4	-
1	Wide drawer front	1/2	2 1/4	9 1/2	Rabbeted for sides and back
2	Wide drawer sides	1/4	2	11 3/4	Single finger joint at end

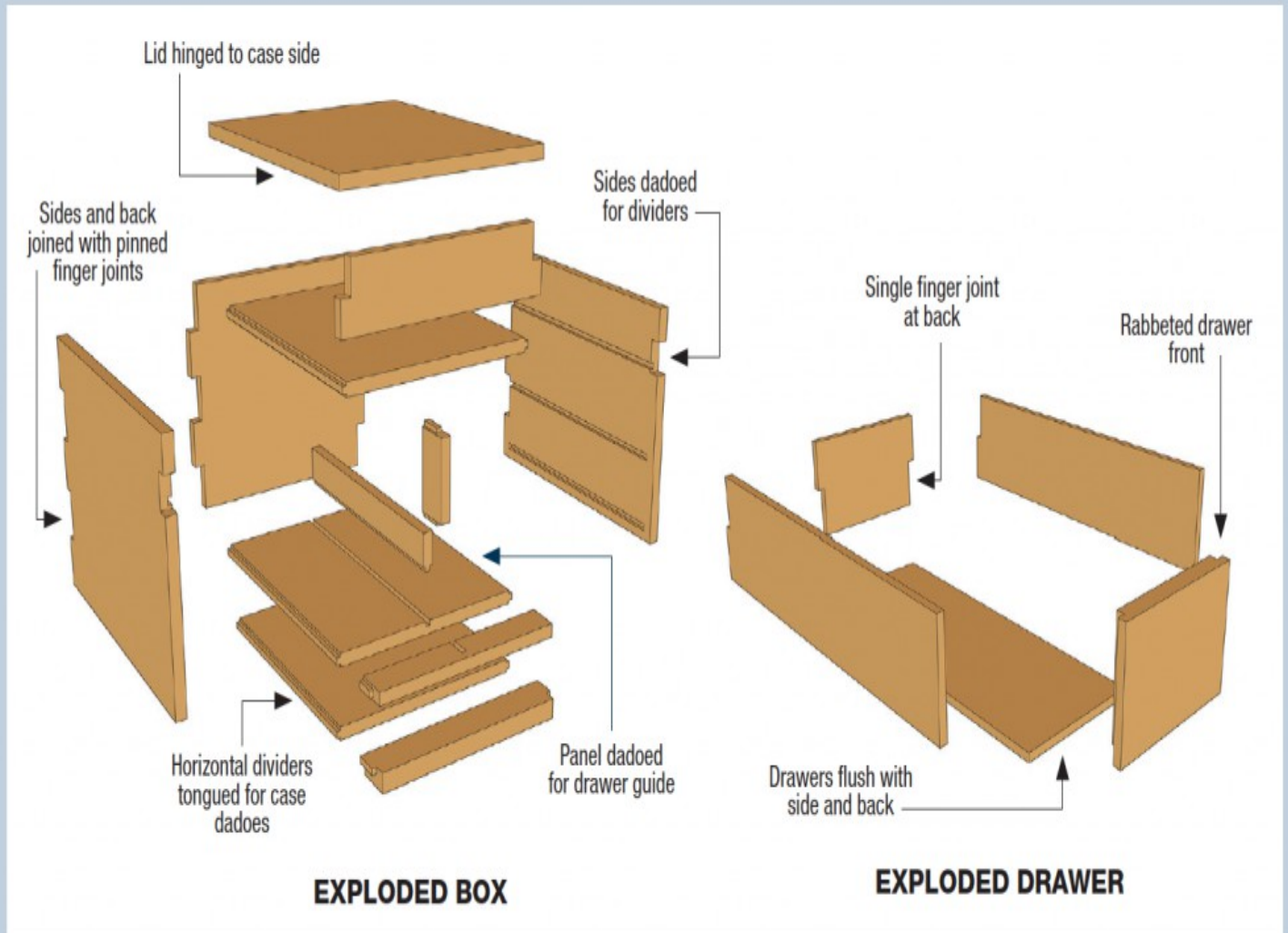
\*Tongue milled on sides to fit case grooves

## Supplies List

No.	Item Description
2	Tansu Strap Hinges 30mm x 110mm (70mm) Item #00D5522
1	7.5mm #1 Round Head Screws (25ct) Item #00D5582
4	32mm Traditional Ring Pull Item #01A6132

\*Items purchased from Lee Valley

## Fitting the Pieces Together



### Case

Construction begins with the case. Using the cut list as a reference, lay out your parts on

your material. For best effect, plan your cuts so that grain wraps around the case. Beginning at the end of a board, mark a length for the first side, then the front (which will be ripped to produce the face frame and drawer fronts), second side and back, leaving a little margin at the ends of each piece for final trimming. Once the sides are cut to final length, it's on to the finger joints.

Tansu cases usually go together with three or five fingers per joint. If you've cut dovetails by hand, these wide finger joints will seem familiar— I tend to think of them as 90° pins and tails. I begin by marking finger joints on the sides. Each side has three fingers joining it to the back, and a single notch at the front to capture the front apron. Instead of trying to calculate the width of the fingers, I laid a ruler across the board so that its length from one edge of the board to the other was divisible by 5 and marked each interval, then transferred these marks to the end of the board. The result is evenly spaced fingers without measuring. A cutting gauge made quick work of marking the shoulder line at the end of the board, and after marking the waste, I was ready to cut my finger joints.

I cut these joints at the band saw, first making a series of cuts to define the fingers, then cutting out the waste. Where the waste lies at the edge of the board, it's simple to cut straight down. For interior notches, you can cut in at an angle from both sides of the notch until most of the waste is removed and clean up the joint with a chisel. Once the finger joints on the sides are cut, I use them to mark the complementary fingers on the back and cut the joints. In a similar fashion, cut the joinery on the front apron first and use it as a reference when marking the notches at the front of each side piece. Some historical versions of the writing box feature feet formed by making a trapezoidal cut in the base of the sides. If you choose to recreate this detail, remember to make the cut shallow enough so that the lower divider is not exposed.

The interior is joined with 1/4" x 1/4" dados and grooves. I make these cuts with a 1/4" spiral upcut bit in a trim router. With a quick jig, two rails join two fences and are spaced to capture the base of the router. To use the jig, align the cut in the fence with the layout lines on the piece and clamp in place. Guided by the parallel fences, the router plows a perfect dado.

While I debated whether to use solid wood or plywood for the upper and lower dividers, I built a web frame for the middle divider, joining the parts with loose tenons. The next time I build a similar piece, I'll build the middle divider the same way I built the upper and lower dividers: a piece of plywood glued to a strip of solid wood edging. Cut the plywood and edging slightly oversized, and glue them together. After the glue has cured, trim the divider to final size and rabbet the top and bottom faces with a 1/4" rabbeting bit set to a 1/8" cut to form a 1/4" x 1/4" tongue on each side of the horizontal dividers. Notch these tongues at the front of each divider to accommodate the stopped dados. A short stopped dado cut in the bottom of the upper divider houses the vertical divider while a longer dado cut in the middle divider houses both the vertical divider and drawer guide. Once the ends of the vertical divider are tenoned (use the rabbeting bit here, too), the case is ready for assembly.

Three grooves in each side capture the dividers.

Assemble the case in stages, first joining the sides to the dividers. Next, glue on the back and front apron.

After dry-fitting the case to make sure everything fits, I assemble the case in stages, checking the case for square at each stage. I begin by gluing the drawer guide in place and then joining the vertical divider to the upper and middle horizontal dividers before gluing the horizontal dividers to the sides. To finish the assembly, I glue on the back and front

apron, brushing glue along the sides of each finger joint. After assembly, the finger joints are pinned to reinforce them. With modern glues this step may not be necessary, but the pins are ornamental as well as functional. Instead of looking for narrow dowel stock for my pins, I looked to my local takeout—round chopsticks are an ideal size for pinning the 1/2"-thick case pieces. Trim the chopsticks into 1 1/4" lengths and drill an inch-deep pilot hole through the center of each finger with a bit slightly narrower than the chopsticks. Apply a small amount of glue to the end of the pin and tap it home. Clean up the glue before it has a chance to harden and then trim the pins flush with the face of the case.

Unlike some other small Japanese chests, *suzuribako* omit an upper bank of drawers in favor of an open bin topped with a hinged lid. Lid construction varies, from a simple slab to breadboard ends or the more elaborate mitered breadboard end. I opted for simple breadboard ends attached with loose tenons. To allow for expansion of the top, I cut the outer mortises wide and glued only the center tenon. Alternatively, you could mill a tongue and groove to join the breadboard to lid body, gluing only the center of the joint to allow for movement.

The same rabbet setup used for rabbeting the dividers can be used to mill the tongue, while a slot cutter or mortising bit can be used to groove the breadboard ends, as could the table saw in a couple of passes.

Assemble the case in stages, first joining the sides to the dividers. Next, glue on the back and front apron.

Section chopsticks to produce the pins.

Using a bit just smaller than the diameter of your pins, drill pilot holes centered on each finger.

## **Drawers**

The drawer construction may seem almost rudimentary, but it's easy to assemble and robust when complete. Drawer fronts are rabbeted to receive the sides, while the sides and back are butt-joined or joined with a single finger. Drawer bottoms are cut flush with the sides and back and partially flush with the front.

Begin drawer construction by ripping and crosscutting the fronts to size, then cut out the sides and backs. Use a rabbeting bit to cut a 1/4" x 3/8" rabbet on the sides and bottom of the drawer fronts' rear side. Then, notch both the sides and back to form finger joints. A band saw will make quick work of these finger joints, but it's a low-risk place to practice your handsaw skills. The drawer fronts' rabbeted end grain is less than optimal for gluing, so I start these joints by brushing a thin layer of glue on the end grain and letting it sit for a minute, allowing the end grain to absorb the glue. I then apply another layer of glue to the rabbets and finger joints at the drawer back and clamp the drawer frame together, taking care to ensure the drawer is square.

Drawer bottoms can be cut from 1/4" plywood after the drawer boxes come out of their clamps—the bottoms are glued to the drawers. On drawers these size, glue should be sufficient to keep the drawers together. If you do want to reinforce the joints, they can be pinned like the case. Substitute a bamboo skewer for the chopsticks when pinning the thinner drawer stock.

Rebate rabbet the ends of the drawer front to receive the sides.

## Finishing Touches

Traditionally, two techniques are used to finish tansu: dry finish or lacquer finish. For a dry finish, chalk or clay is first rubbed into the wood and then burnished with a reed whisk. A similar effect can be achieved using a polissoir with or without wax. Lacquer is derived from the sap of the Japanese sumac (*Toxicodendron vernicifluum*) and either left untinted to enhance the grain of the wood or tinted to produce an opaque covering. To approximate the former effect on this build, I used blonde shellac.

After sanding the finished piece from #80 grit to #220 grit, I wiped on several coats of shellac. Once the finish cured, I wet sanded using #400 grit paper lubricated with mineral spirits. As with most of my projects, I topped things off with a couple coats of paste wax.

With my finish work complete, I was ready to install hardware. Many tansu feature elaborate hardware. *Funa tansu* (ship chests), for example, were practically ironclad strong boxes. Their elaborate metalwork demonstrated the owner's wealth while the chest protected the contents. *Suzuribako* feature more modest hardware including hinges, a latch, handle and reinforcing plates at corner and joints. Because I don't plan on carrying my box around much, I omitted the handle, latch and reinforcing plates, installing only hinges and drawer pulls.

Clamp the hinge at the bend line and use a piece of wood to distribute pressure as you bend the leaf.

Lid attachment requires a hinge with a 90° bend in one of the hinge leaves. Unable to source such a hinge, I modified a flat hinge, marking a point 1/2" up from the knuckle before chucking it in my metal vise between cauls and then bending the leaf using a piece of wood as a brake to ensure a smooth bend. Once the hinges were screwed in place, I mounted the simple ring pulls by drilling a pilot hole and tapping the shaft of the pull home, then bending the prongs back against the drawer front.

The pulls are located so that they're centered on the horizontal axis of the narrow upper drawers, and the lower pulls align with the upper. For both lower and upper drawers, the pull is positioned so that the ring (not the shaft) is centered on the drawer fronts. Depending on your intended use, you may want to align the drawers. Adhesive-backed cork liner is a functional and flexible choice, but for a little more pop, consider washi or fabric. The splash of color is a pleasant surprise any time you open the chest, something you'll likely be doing often since this is designed for functional use.

