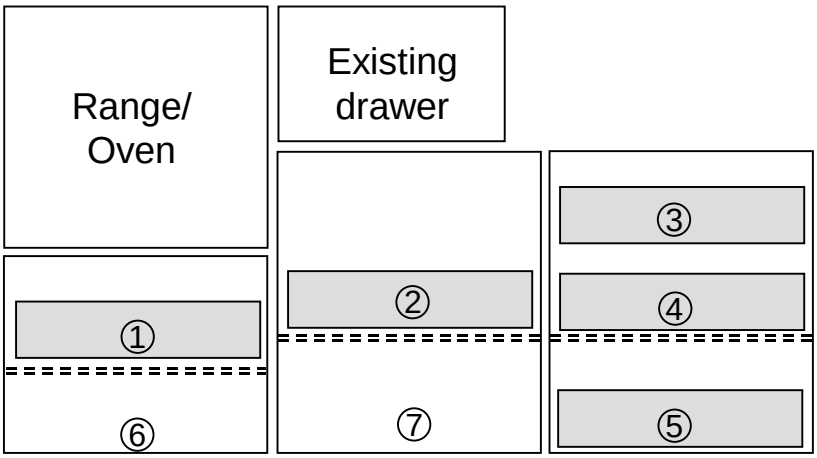
Kitchen drawers for a 2002 Trail Manor 2720SL

We got tired of having to kneel on the floor to see into the kitchen cabinets. My knees won't do what they once would, and besides, it is dark and disorganized under there! So last weekend I decided to make some drawers on nice self-closing roller slides. The picture shows the 5 drawers I installed, still in white primer before their final coat of paint. When closed, the drawers are flush with the cabinet face frames, so the original cabinet doors close over them. They will look better when they are painted, they will help us find things, and best of all, they should eliminate the kneeling.

These drawers were made specifically to fit my 2720SL. If you have a different model or a different year, I urge you to measure everything carefully. The TM kitchen cabinet assembly appears to be the same in various models, but I can't guarantee it. In addition, the various obstructions (wheel well, outside outlet, fire extinguisher) will almost certainly be different. Finally, even if you have my exact TM model, I would urge you to confirm my measurements. Errors may have crept in!

Bill Jeffrey May 2002

Design Notes



Drawer width:

1: 20-1/16”

2: 19”

3: 15-5/8”

4: 15-5/8”

5: 15-5/8”

Note: drawer width is 1” less than the opening width, to provide space for slides.

========== denotes existing shelf (shelves remain in place)

① etc. denotes drawer locations

Locations 6 and 7 do not work in the TM 2720 - they are blocked by the wheel well. Might work in other TM models.

Drawers 3 and 4 are within a single existing shelf opening.

All locations are 18” deep, except location 5 which is 2” shallower due to outdoor electrical outlet box. Make all drawers 17.5” deep overall (except drawer 5).

Fire extinguisher bracket protrudes into opening 1. Screw a 1/2” thick block to the left side of this opening in the face frame to reduce the opening width. Then construct drawer 1 to fit in this modified opening.

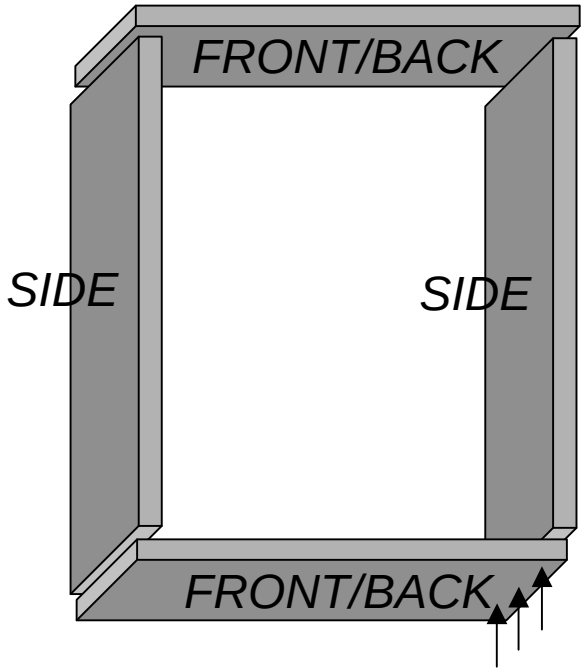
Front of drawer to be flush with (or slightly recessed behind) front of cabinet face frame to permit existing doors to close.

My chosen slides require 1” clearance above the drawer for tip-up drawer removal.

Drawer slides are mounted in the bottom of the opening except for drawer 3. In this case, the slides are positioned approximately midway up the opening, in a position that provides proper clearance above drawers 3 and 4.

Door latch on the door over drawers 3,4,5 must be repositioned to a location just below the shelf.

Construction Notes



Each drawer is a four-sided box. Material is 1x6 boards cut to length. Each drawer bottom is a rectangle of 1/4" plywood, screwed to the underside of the box with 1" drywall screws. All screwholes are pre-drilled and countersunk.

Corner assy, typical
Assemble each corner with three 1-5/8" drywall screws. Screwholes pre-drilled and countersunk.

To <u>estimate</u> the total amount of stock needed for the sides and front/backs

Sides:
10 @ 16" = 160"
Front/backs:
2 @ 20-9/16" = 41" (approx)
2 @ 19" = 38"
6 @ 15-5/8" = 94" (approx)
Total length = 333" = 28 feet (approx).
Buy four 8' lengths of stock = 32 feet.

<u>Width of the stock</u>:
Nominal 1 x 6 stock will work well for all drawers except drawer 1. This opening is only 5-3/8" high, so the drawer must be no more than 4-3/8" high. The stock for this drawer must be ripped to 4-1/8" width.

Materials Summary

Think about drawer slides:

Several types are available. Avoid center-mounted slides - they are not strong, and often they don't slide easily. Instead, use good-quality self-closing roller slides.

Choose slides in which the drawer half has an L-shaped cross section. The base of the L wraps around and under the drawer, providing support for the drawer bottom. This provides strength, and eliminates the need to dado a slot into the drawer sides to hold the bottom.

My chosen slides are K&V model 1805.

Drawer bottoms

1 @ 16 x 20-1/2"
1 @ 16 x 19"
3 @ 16 x 15-1/2"

Material required: One 48" x 48" handi-panel of 1/4" birch plywood

Wood summary:

Four 8' lengths of good quality 1x6 board
One 4' x4' handi-panel of 1/4" birch plywood

Other materials needed:

5 sets of 17.7" (450 mm) drawer slides
5 pairs of rear slide supports
Sheet metal screws to attach supports to wall
(Self-drilling screws are easier to insert.)
Drywall screws (1-5/8") for corners - 1 lb
Drywall screws (1") to attach bottoms - 1 lb

All material is available at Home Depot and Lowe's.
Total cost is less than $100

Post-construction notes and lessons learned

1. As you cut the pieces for the drawers, it is very important that all cuts are square! If a front or back is off-square, then the assembled drawer will not be square. If the drawer is not square, it will not fit well into the opening, and will not present a flush front. I made the cuts using a hand-held 7-1/4" circular saw and a homemade jig, but this was time-consuming and didn't work particularly well. A bench saw or radial-arm saw would have made it a lot easier.

2. The cabinet assembly in the trailer is pre-made by a cabinet factory. Trail Manor simply sets the assembly in place, and screws some built-in locator blocks to the walls and floor. The cabinet assembly itself is well made, meaning that the walls are square, the shelves are level, and so forth. However, the assembly has no back, so the walls can wiggle a bit until the blocks are screwed down. Unfortunately, Trail Manor's installation leaves a lot to be desired. The locating blocks are screwed to the wall and floor in pretty haphazard fashion. In mine, the walls did not extend straight back from the face, but were canted substantially to the left or right. The result was that the slide rails of my new drawers (which have to extend straight back from the face) couldn't be mounted until I had actually unscrewed the cabinet blocking and pushed the walls into place. This is not a serious problem, but it was unexpected, and that is a tight place in which to work.

3. I painted my drawers. They would have looked a lot better if I had simply stained them to match the rest of the cabinets, and poly'ed them.

4. Choose a wood that is nice-looking and light weight. I chose Douglas fir, but it turned out to be pretty heavy. Clear spruce, pine, or redwood would probably have been a better choice. If the chosen wood holds screws in the end-grain, so much the better. If not, a metal L-bracket to brace each corner is probably in order. These brackets are not attractive, but by mounting the front ones inside the drawer, and the back ones outside the drawer, they are pretty well hidden.