



## HOW-TO BOOKLET #3114

# UPGRADING KITCHEN CABINETS



### TOOL & MATERIAL CHECKLIST

- Table Saw
- Sandpaper
- Screwdriver
- Screws
- Re-surfacing Material
- Sawhorses
- Hammer
- Nails
- Eye, Ear, Nose, Mouth Protection

*Read This Entire How-To Booklet for Specific Tools and Materials Not Noted in the Basics Listed Above*

The primary reason people upgrade kitchen cabinets rather than replace them is the cost. It is possible to spend \$10,000 - \$20,000 to remodel an average kitchen. Upgrading the old cabinets into a new look might cost as little as \$1,000 - \$2,000 in the same kitchen.

The areas to focus on are:

A) Door and drawer fronts. B) Pulls, hinges and hardware. C) Paints, stains and covers.

Do not worry about the old countertop not matching to the upgrade. Old tops can be removed or covered over with new materials to match the cabinet upgrades. Countertop conversion is not covered in this booklet.

### FLUSH-MOUNT VERSUS SURFACE MOUNT

Flush-mount cabinetry is when the drawer and door fronts fit flush with the face frame. Surface-mount fronts fit over the frames, hiding the openings (Fig. 1).

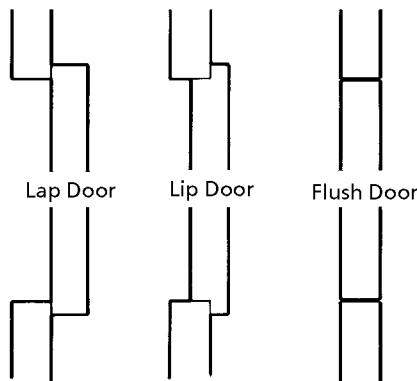
Flush-mount fronts require the use of pulls or specialty catches to allow the fronts to be opened.

Surface-mounts may use pulls or may be opened by simply pulling on the exposed edge.

Surface-mounts are much easier to build and install. If an opening is out of square the surface-mount simply covers it up. The flush-mount, however, may require that the front be cut out of square to match the opening.

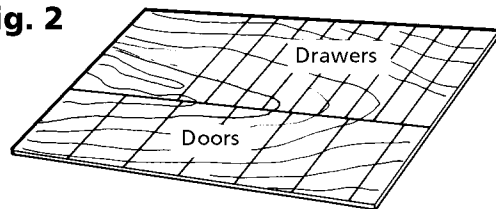
Surface-mounts also hide irregularities in the face frames such as dings, holes or poorly mortised hinges. They can cover most of the face frame and hide the bad spots without removing entire cabinet.

**Fig. 1**

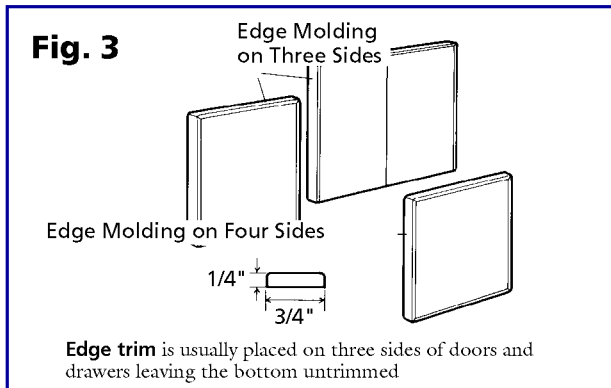


Flush-mount cabinetry drawers and door fronts fit flush with the face frame. Surface-mount fronts fit over the frames.

**Fig. 2**



Door/drawer fronts layout on plywood



This booklet deals primarily with changing flush-mount fronts to surface-mounted fronts. Some sections will show how to install flush-mounted fronts where applicable.

### CHOOSING THE LOOK

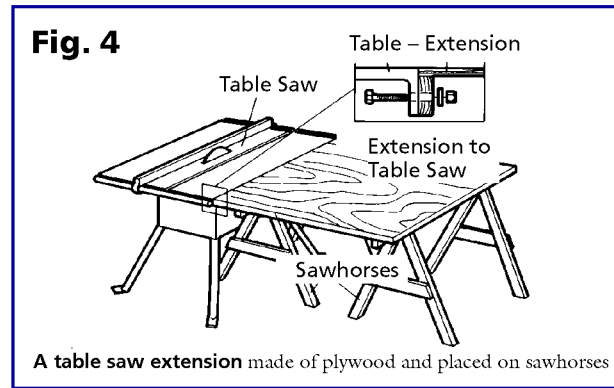
The hardest thing to do is to choose the type of look and feel in your cabinetry.

If the kitchen layout is "all wrong" then it might be prudent to consider a complete replacement. On the other hand, if the layout is ok but the look is not, it may be quite possible to get "the look" without "the cost".

- 1 Study others' cabinetry, look in books and magazines and record what you like and do not like.
- 2 Focus on changing the colors, feel and overall look of the cabinets and not the way they are constructed or the layout.
- 3 Price the materials needed for the changes, such as comparing the cost of replacement to an upgrade.
- 4 Choose the upgrade style based upon price, difficulty, time allowances and final use.

### ESTIMATING MATERIALS

The easiest way to upgrade cabinets is to change cabinet door/drawer fronts. The kind of materials

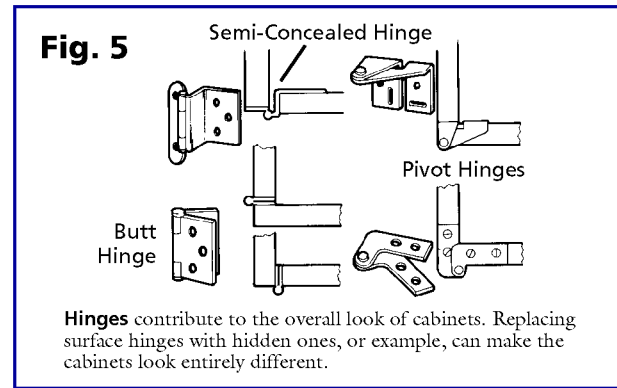


are varied. This section describes the steps to estimate typical materials.

- 1 Measure all openings for height, width and thickness in inches. Be sure to add 1/4" or more in all directions for surface-mounted fronts and round to whole inches.
- 2 Draw a plan showing how the existing cabinets look from the front and side. Mark the measurements taken on each of the fronts. Also place measurements on side of plan.
- 3 Determine if the new fronts will fit exactly like the old ones (flush versus surface-mounted).

**NOTE:** Cabinet frames that are out of square are best replaced with surface-mounted fronts.

- 4 Calculate the surface areas in inches, (length x width), for each front and add the totals.
- 5 Convert the "total square inches needed" into square feet by dividing the total by 144 (the number of square inches in one square foot).
- 6 Divide the "square feet of material needed" by the number 32, which is the number of square feet in a standard 4' x 8' sheet of particleboard.



**NOTE:** If using plywood, lay out doors/drawers on a standard 4x8 sheet of plywood with the fronts "across the grain," and count the number of sheets needed.

The reason is that plywood has a tendency to warp more easily in the "long" direction. Doors, especially need to be cut from the "narrow" direction to prevent warping in a high moisture environment (**Fig 2**).

- 7 Add 15% to the totals for waste and mistakes and round up to the nearest whole 4x8 sheet.
- 8 Order two hinges and one pull per front, if pulls are to be used.
- 9 If trimming the outside of the cut edges with wood trim, perform the following calculation:
  - A) for each door/drawer  
2 X (length + width),
  - B) add all totals and divide by 12 inches,
  - C) order trim material in lineal feet.

**NOTE:** Edge trim is usually placed on 3 sides of doors and drawers, leaving the bottom untrimmed. The exception is on the bottom drawer where 4 sides are trimmed and on double doors where only two sides are trimmed (**Fig. 3**).

## CUTTING NEW FRONTS

You will need a table saw with a sharp blade to cut cabinet door/drawer fronts from particleboard or plywood. In fact you need several sharp blades with particleboard cutting since it dulls blades faster than plywood.

Rent a table saw with at least a 24" table surface or larger, if you do not intend to purchase one. If you have a smaller table saw make an extension out of 5/8" CCX plywood, smooth side up, as follows:

- 1) Cut out the opening for the table saw leaving at least 2' on one side and 4' on the other (for a 2' x 2' table).
- 2) Set plywood on sawhorses and secure/clamp the extension to the saw and sawhorses for safety and security (**Fig. 4**).

This extension allows you to safely cut a full 4' x 8' sheet without it falling off the table after a cut. It helps to rub paraffin wax on the plywood extension surface to allow the sheet to slide easily.

**NOTE: Cutting on a small surface can cause blades to pinch, break, or tip over the saw causing great damage and personal harm!**

This section deals with cutting overlaid particleboard, probably the hardest to work with. This material looks like a plastic laminated material for the "European style". The difference is that it is not as strong as laminate and can chip easier with dull blades.

Overlaid materials are also less expensive and lighter than laminated particleboard. The names vary for different overlays (commonly referred to as "HDO" for high density overlay). Contact your retailer for more information.

- 1 Layout the first cabinet door/drawer front on a 4x8 sheet of HDO.

**NOTE:** Try to make two edges on the factory edge of the sheet. This makes the first cut easier since you only need to make one long cut across

the width of the sheet. The second cut is made handling a smaller section making the sequence easier and safer. Also use factory edges whenever two doors swing closed together.

- 2 WITH THE SAW OFF, position the sheet onto the table saw. Check the blade for 90° or vertical position.
- 3 Set the saw depth to clear the finished surface by about 1/2" or so that teeth and half of the groove between each saw tooth is exposed.
- 4 Clear the area from any debris, cords or other items that can be tripped on while "running" the sheet through the saw.
- 5 Provide adequate ventilation to the area and close off living spaces to the fine dust that particleboard makes when cut.
- 6 Put on eye, ear, nose and mouth dust protection and make sure personal safety is first and foremost!
- 7 Start the saw with the sheet and any other material or objects AWAY FROM THE BLADE. Allow the blade to reach full RPM before "running" the workpiece through.
- 8 Find someone to help "run" the 4x8 sheet gently and evenly through the blade.

**NOTE: Prevent binding the blade at all costs! The saw blade does the work and the workpiece should never be forced against the blade!**

- 9 After the first piece is cut off from the sheet and is clear from the blade, turn the saw off.

**NOTE: NEVER let the blade come to a stop while still cutting. This dulls the blade quickly and is extremely dangerous, causing kickbacks!**

- 10 Position the cut piece for the second cut. Be sure to remove the larger sheet, debris and obstacles away from the work area as before.
- 11 Using the same precautions as earlier noted, start the saw and make the second cut to obtain the first door/drawer front.

- 12 Lightly sand the edges of HDO with fine sandpaper to prevent the edges from snagging and chipping.

- 13 Take the first front to the old opening and test the fit. Adjust the layout or patterns if the overhang is not enough. This first cut is a test that may be discarded if the fit is poor.

**NOTE:** It is faster to cut all fronts in one step and to install them later. It is also easier to make mistakes that way for a novice. It is slower yet safer to cut and install one front at a time while learning, to minimize mistakes. Later, with experience, make cuts and installations in batches to save time.

## INSTALLING DOOR FRONTS

Old door fronts must first be removed. If re-using the hinge-hardware and replacing the door exactly as the original, remove the door from the hardware leaving the hinge attached to the face frame (**Fig. 5**).

If using new hardware and covering the face frame with a surface-mounted door, remove the door and hinge from the face frame. Patch the face frame, if needed, before installing a new door.

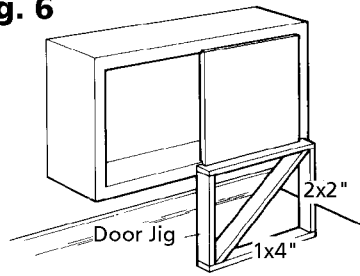
Pre-stain the edge trim before applying to HDO fronts. Let the stain dry and keep thinner handy for cleaning up smudges.

This action assumes that a new surface-mount door is to be installed. The text in parentheses is for a flush-mount door re-using old hinge-hardware.

- 1 Add edge trim to door and attach 2 new hinges on the hinge side of the door. Space the top and bottom hinge equally from each end of the door 2-5" from the ends depending upon door size (flush-mount doors skip this step).

**NOTE:** Use the screws that come with the hinges and make sure that they do not penetrate through the front door surface.

Fig. 6



A jig is needed to hold the door front a set height off the countertop.

- 2 Build a jig to hold the door front a set height off the countertop. Most upper cabinets are set between 10-20" off the countertop depending upon the user's height and any code requirements. (Flush-mount needs a support to hold it off the countertop when swung open and not yet secured to hinges.) (Fig. 6).
- 3 Set the door in jig and in position on the face frame. Make a light pencil mark on the frame for the top of the hinge or the door itself. (Flush-mount doors are set inside frame and checked for fit. The door may need to be re-cut to fit.)
- 4 If it fits, slide the jig outward so that the door is at least half-open. Swing the hinges from the door to the face frame. Drill a pilot hole and install one screw in the adjustment hole per top and bottom hinge. (Flush-mount doors have hinges already on face frame. Carefully swing door open and mark location of hinge plate and attach to door as above.)

**NOTE:** Adjustment holes in hinges are elongated to allow for minor adjustments.

- 5 Close the door and test for fit. A surface mount door will hide any imperfections in the face frame opening. The major test for fit is that it looks even and meets a companion

door evenly. (Flush-mount doors may need to be cut at irregular angles to fit. There should be a 1/8" reveal around all edges to allow for easy swing.)

- 6 Double doors should have an even reveal between the meeting edges, about 1/8" (same for flush-mounts).

**NOTE:** There is no trim on the meeting edges which are bevelled slightly. Plane the edges to get the right fit.

- 7 Base cabinet doors are the same but use floor jigs instead (same for flush-mount).

### INSTALLING DRAWER FRONTS

Surface mount drawer fronts over flush-mounted fronts are the easiest to build. Do not remove the old drawer fronts, simply install the new fronts over the old.

Flush mount drawers are tougher. Since the drawer is largely held together by the front it may be required to rebuild the entire drawer from scratch.

Using a door skin or laminate may solve this problem and allow you to keep the old fronts.

This section deals with surface-mount drawers being installed over existing flush-mounts.

- 1 Cut drawer fronts to cover existing flush-mount fronts and add edge trim, if any, to *all 4 sides of the bottom drawer only*.
- 2 Plane or adjust old drawers so that they glide easily and remove pulls, catches and other obstructions.
- 3 With old drawers in place, set the bottom surface-mount front over the old front. Draw light pencil marks on the face frame to align the new front to the bottom and sides of the frame.
- 4 Open the drawer slightly, holding the new front on the old. Align the new front with the marks on the face frame and make pencil marks on the back of the new frame.

- 5 Remove the old drawer and set it face down on the back of the new front. Align the old front with the pencil lines and screw the old front to the back of the new front (Fig. 7).

**NOTE:** DO NOT drill through the face of a new drawer front. Drill half-way through the old and new and attach. Also, make sure that the fronts are attached away from the pull locations. Four 1-1/4" self-tapping drywall screws with a #2 phillips head per front, with an old 3/4" and new 3/4" front for example, is sufficient.

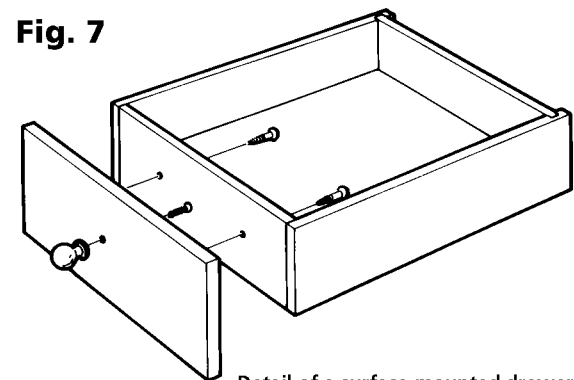
- 6 Repeat the steps for the second drawer front *except do not add trim to all 4 sides*. The next front will use the trim on the top of the first (bottom) front to maintain an even reveal.

**NOTE:** Doubling the trim creates a visual imbalance. Each edge should have a single trim look.

- 7 Continue each row of drawer fronts working from the bottom to the top. Make sure there is sufficient space between doors and drawers for fingers if pulls are not used.

The fronts are installed and the cabinets look like they are brand new. Adding colors to the surrounding area will heighten your "NEW" kitchen.

Fig. 7



Detail of a surface-mounted drawer to an existing flush-mount drawer front.