

How to Display Your Translite/Backglass

By Mark Bakula

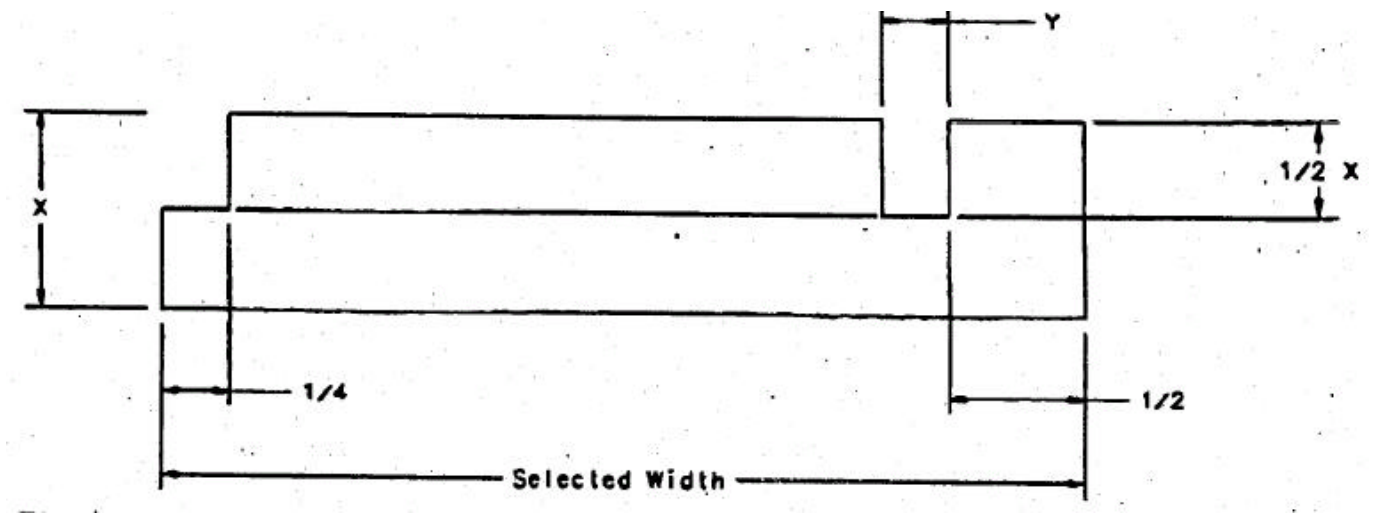
Safety First! Working with power tools requires eye protection, understanding of the tool instructions and a clear head. Safety must be the number one priority at all times during construction.

Equipment: Table saw or radial arm saw / tape measure / carpenter's square / corner clamps / hand saw / hammer / drill and bits / screwdriver. NOTE: A miter box can be used to make the corner cuts, but it cannot make the grooves.

Material: Wood for sides – 8' long, 3 or 4" wide / 1" stock thickness (actually 3/4"). For a clear finish or stain: I use oak, maple or clear stock fir (pine). For a Painted finish: I use fir - clear stock or with knots / Back (light) panel: 1/4" thick plywood or masonite / clear Plexiglass (plastic) to support translite: 1/16" acrylic (Plexiglass) / glue / nails / screws / finishing materials (paint or stain) / aluminum foil / hot glue or staples / one string clear x-mas lights.

Template/Plastic First thing to do in construction is to select the translite/back glass to be backlit. Then measure the item and cut a piece of cardboard for a template or cut the back panel to the exact same size as translite/back glass and use it as the template. Cut two clear Plexiglass (plastic) panels to exact size of the translite. The translite will be sandwiched between the panels. NOTE: You can get away with only one clear Plexiglass (plastic) panel if the translite is very stiff. Backglasses do not require plastic panels.

Saw Grooves Set the saw up to cut 2 grooves into the board. A translite/back glass groove and a back board groove. **Be safe doing this!** See below for sizes of the translite/back glass groove. Single blade (multiple passes) or dado blades can be used.



The width of the translite/Backglass groove ('Y') is calculated by:

$$Y = \text{Backglass thickness} + 1/16''$$

For a translite with 1 piece of clear Plexiglass (plastic):

$$Y = \text{clear Plexiglass (plastic) sheet thickness} + 1/16''$$

For a translite with 2 pieces of clear Plexiglass (plastic):

$$Y = 2 X \text{ plastic sheet thickness} + 1/16''$$

Corners: Now you have to make a decision as to which corner design we will use.

Miter

Advantages:

Looks like a picture frame corner

Disadvantages

Slightly harder to make (due to the 45 degree cuts)

Requires the box to be partially disassembled after finishing for final assembly.

Miter edge may require touch-up

Lap

Advantages

No touch-up required after finishing.

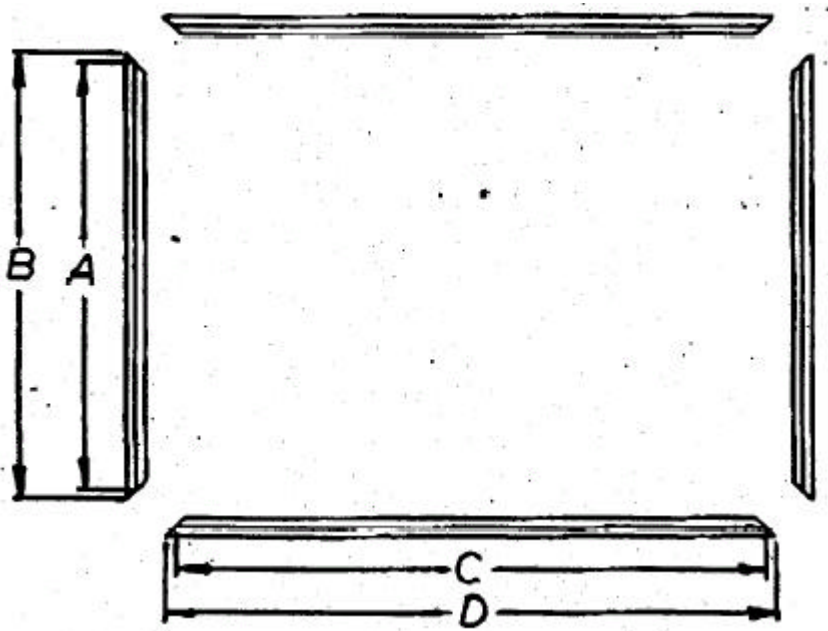
Individual cuts are easy – straight cuts

Disadvantages

View from the top or bottoms reveals glass and back panel grooves

MITER

Cut the 4 frame boards (45 degree angles) per dimensions below.



$$A = \text{length of the side of the translite/Backglass} + 1/16''$$

$$B = \text{length of the side frame rail} = A + \text{thickness of the board}$$

$$C = \text{length of the top or bottom of the translite/Backglass} + 1/16''$$

$$D = \text{length of the top or bottom frame rail} = C + \text{thickness of the board}$$

Sand all 4 sides to the desired texture.

Temporarily assemble all 4 sides with the template to ensure proper fit. If fit is not correct make adjustments and trim to fit or recut.

Disassemble and remove template. Select the 2 joints sides to be glued. Glue the **two** corners, drill and nail in fixture.

Temporarily drill and nail the non-glue side while in fixture.

Finish the frame w/stain/paint etc.

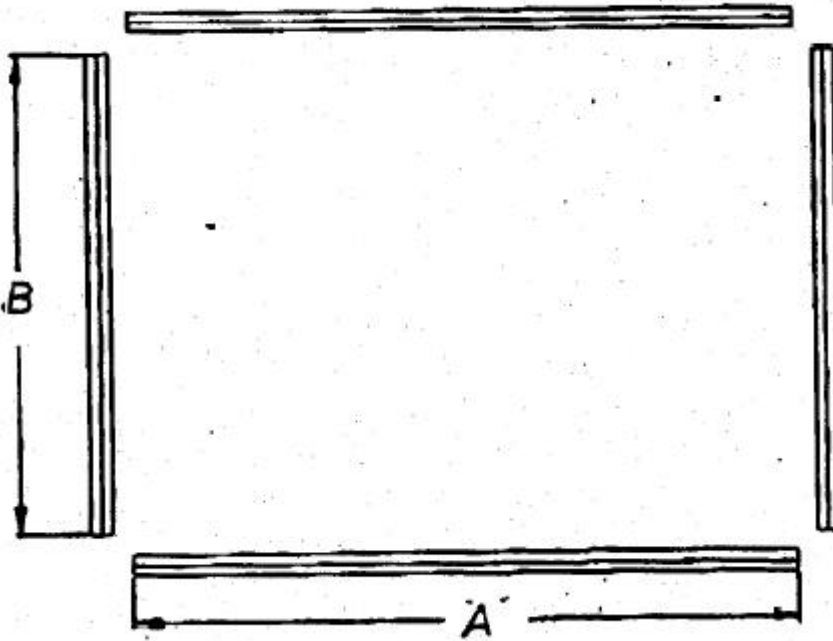
Disassemble non glued side.

Install backglass or translite with clear plastic panels in fixture.

Glue and nail 4th side in fixture.

LAP

Cut all 4 sides frame boards per dimensions below (straight cuts here).



$A =$ the length of the top or bottom of the translite/Backglass + $1/16''$ – (less) the thickness of one board

$B =$ the length of the sides of the translite/Backglass + $1/16''$ + the thickness of one of the board

Sand all 4 sides to desired texture.

Temporarily assemble all 4 sides with the template to ensure proper fit. If fit is not correct make adjustments to trim to fit or recut.

Disassemble/remove template.

Finish the frame w/stain/paint etc.

Assemble in fixture with back glass or translite and clear Plexiglass (plastic) panels.

Drill for screws at each corner (2 screws per corner) and install screws (I use brass screws with dress washers).

Construction of back panel (light panel) I have used 2 different methods. First, cut a small groove in one edge of the panel for cord to exit.

A) Cut 4 slots for heat removal.

If wanted, paint the light side of the back panel with white paint.

Use large clear X-mass tree (C-7) bulbs – string of 25.

I tack them into the ¼” plywood (tacks or staples being ¼” long). DO NOT STAPLE THROUGH THE WIRES. (You could also use hot glue)

B) Use a string of 100 mini X-mass tree bulbs.

If wanted, paint the light side of the back panel with white paint.

Layout and hot glue to masonite.

Do not use foil.

Put light panel on and attach with screws.

Install hanging hardware:

If large bulbs are used install standoffs at back bottom corners to keep the back of the frame from touching the wall for better heat removal .