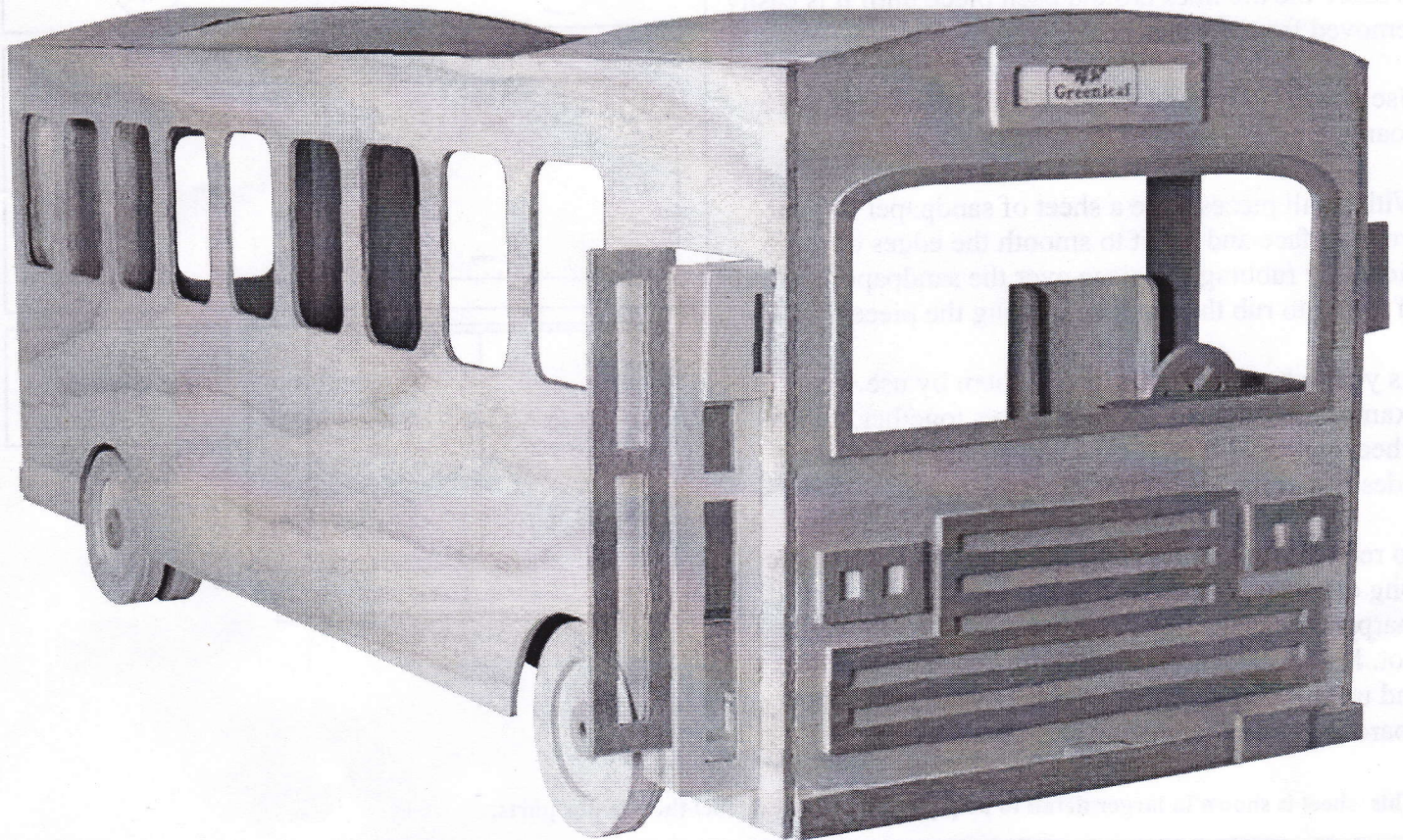


# The Big Bus

**It can be a School Bus, a City Bus, a Rock Band Tour Bus,  
a Hippie Bus or a luxury Motor Home.**

**You decide!**



## Assembly Instructions

**Read through these instructions before assembly and  
understand the basic construction process before you  
begin to punch-out or assemble the kit.**



**Read through these instructions before assembly** and understand the basic construction process before you begin to assemble the kit. Start with identifying the parts by comparing these diagrams to the die-cut sheets.

Label all parts in light pencil before removing from the sheet.

The large parts should come out of their sheets easily. Hold the sheet in both hands and press down with your thumbs along the die lines to gently push the part out.

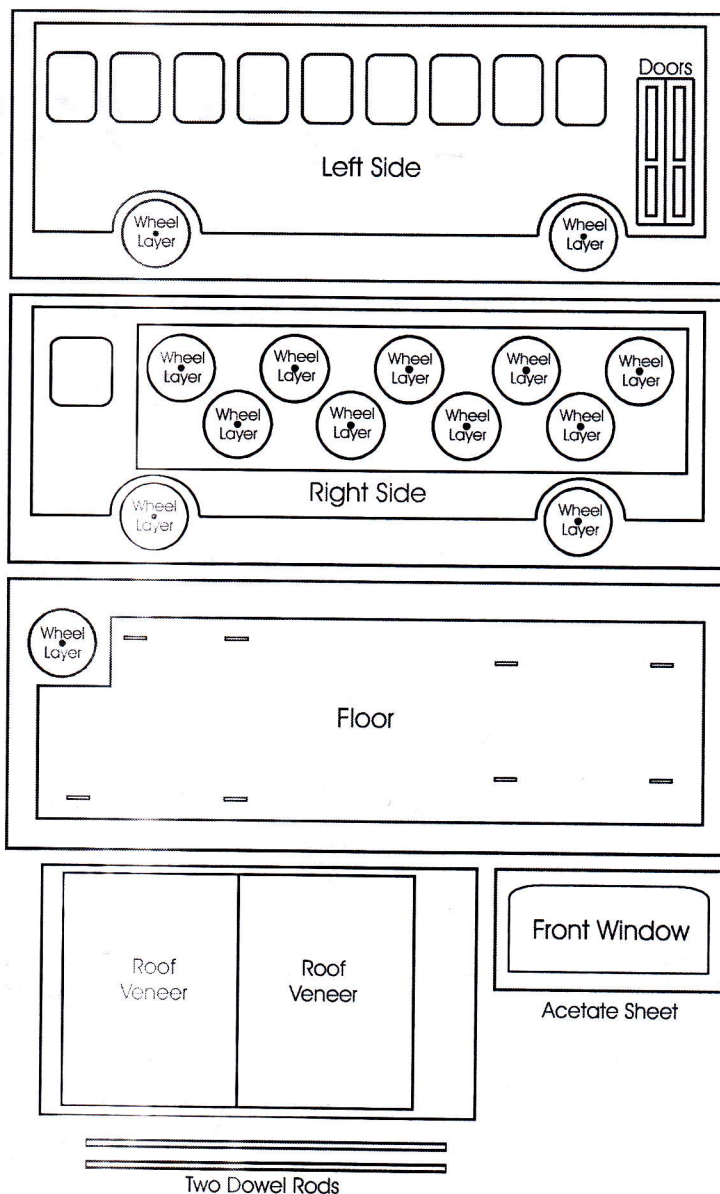
If you meet any resistance, use a heavy duty craft knife to score the die lines around each piece until it is easily removed from the sheet.

Use a sanding sponge to smooth all edges. Use emery boards inside of smaller openings.

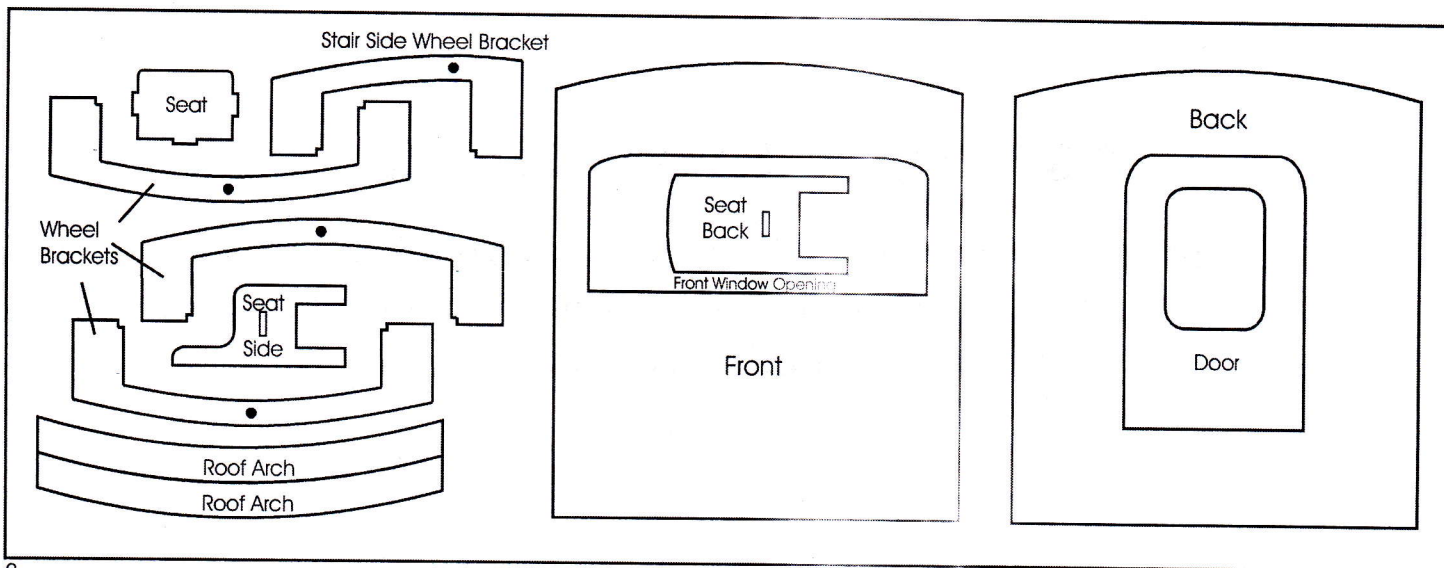
With small pieces, tape a sheet of sandpaper to your work surface and use it to smooth the edges of these pieces by rubbing the piece over the sandpaper instead of trying to rub the sandpaper along the piece.

As you remove the parts, group them by use. For example, arrange all wheel brackets together, all the wheel layers with their caps and all the seat backs, sides and seats.

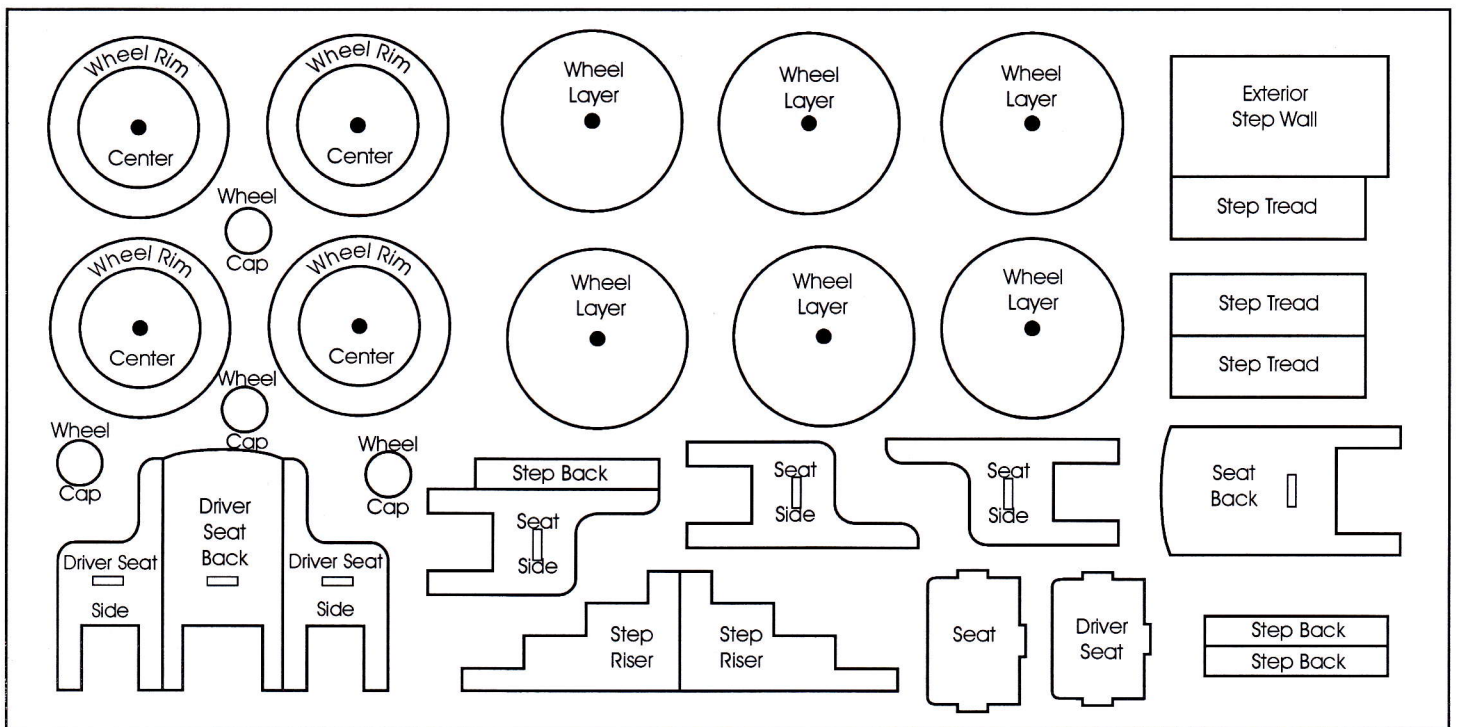
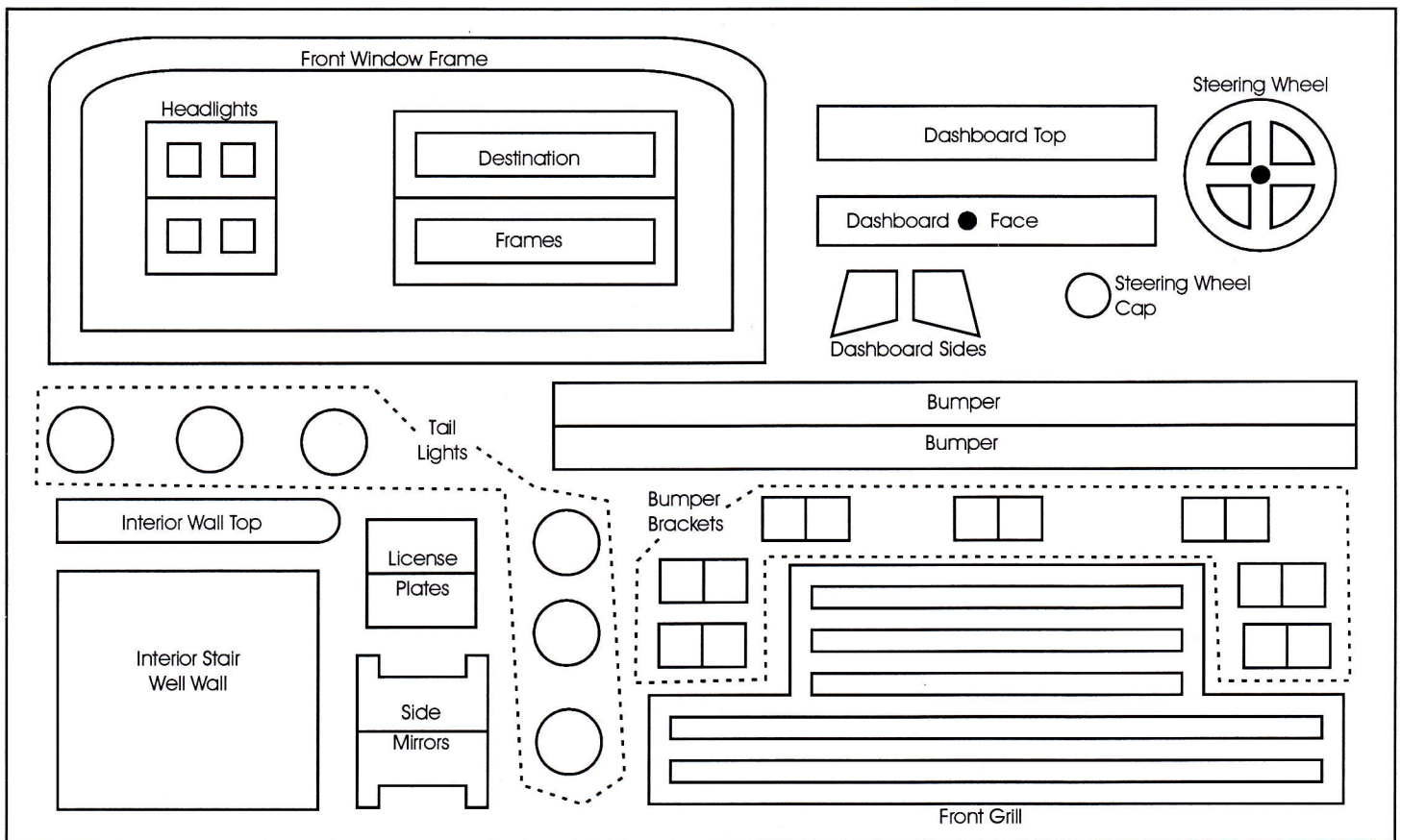
To remove a slot, press a heavy craft knife along the long die-lines. Then, use a small flat screwdriver, sharpened, and hammer it into the short ends of the slot. If the slot center doesn't pop out, then lift the part and use the screwdriver to press it out. Use an emery board to sand a slot opening smooth.



**This sheet is shown in larger detail to help you identify and label the various parts.**



These sheets are shown in larger detail to help you identify and label the various parts.





After opening the slots in the Floor, lay it smooth surface down. Gather the Wheel Brackets and trial fit them into the slots. The half-bracket goes behind the stairwell opening.

**Always trial fit tabs into slots before gluing.** The slots may need to be enlarged or the tabs may need to be sanded down. In either case, you want a smooth, tight fit. To be sure the Wheel Bracket tabs are correctly fitted into the Floor Slots, turn the Floor over and see if the tab edges are flush with the floor. The parts should fit so tightly that they don't fall out — even without glue. If the tabs are recessed in the slots, then you will need to sand the "leg" of the Bracket so that the tab will insert deeper. See illustration at right.



### Gluing Tip:

Use an old cup and line the bottom with a folded, damp paper towel. Turn your white glue container, tip side down, and stand it inside the cup.

This way your glue is always ready to squeeze.

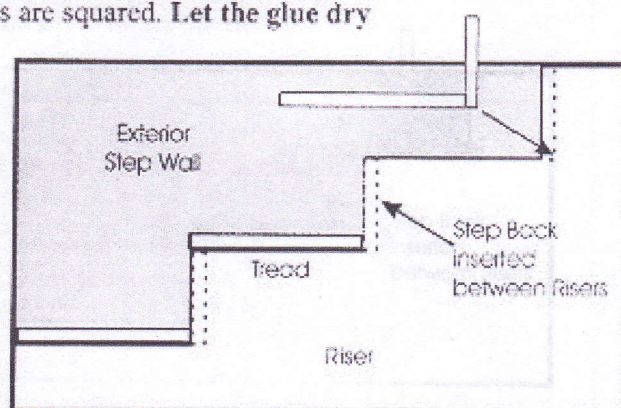
When the Bracket slots are tightly fitted into the Floor and the tab edges are flush with the smooth side, lay the floor smooth side down on a sheet of wax paper. You may remove the Brackets, brush a fine layer of glue around the tabs and re-insert them. Or, for more durability, leave the Brackets in place and run a bead of glue around the base of each "leg". Use a small triangle to be sure each Bracket is squarely upright and **let the glue dry completely.**

## Staircase Assembly

While the glue on the Undercarriage is drying, proceed to assemble the Staircase which will be mounted on the Undercarriage. Gather all the parts and sand their edges smooth. Use the sanding sheet you taped down to smooth the long sides and ends of the Step Treads, Step Backs and the long sides of the Risers. Use emery boards to sand the step edges on the Risers.

Start by measuring the thickness of another piece from the end of each Step Tread and mark with pencil on the smooth face. Lay a bead of glue along the back edge of one of the Step Treads. Put it down on a sheet of wax paper and hold it in place with one hand while picking up one of the Step Backs and pressing it, upright, against the back of the Tread. Align it using the pencil marks so that it is centered. Use a Small Triangle to be sure the two pieces are squared. **Let the glue dry completely.**

Lay the Exterior Step Wall, smooth side down, on a sheet of wax paper. Apply an even film of glue to the rough side of the left side Riser and press it against the Exterior Step Wall so the edges at the bottom and sides are aligned. Cover with a sheet of wax paper and place a weight, like a book, on top until the glue has dried.

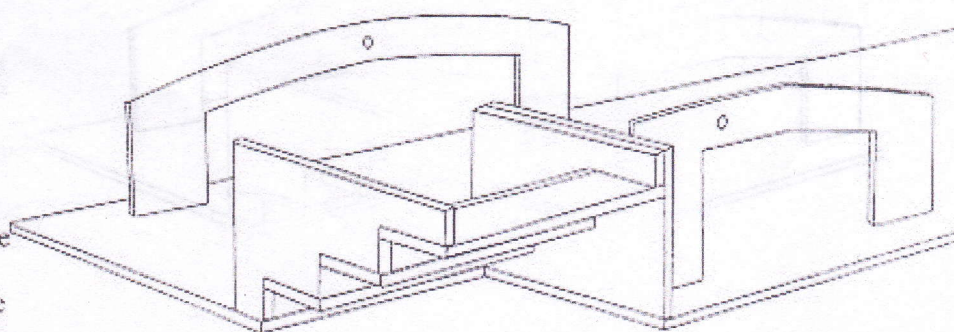


After the glue has dried, lay the Wall with Riser on a sheet of wax paper. Take one of the Tread & Back combinations and apply glue along the left side edges. Turn it upright and fit it against the wall and on the Riser. The Step Back fits on the inside of the Riser and the Tread fits flush to the wall. Let the glue set before proceeding.

On the edge of the stair assembly, apply glue on the ends of the Step Backs. On the right side Riser, apply glue on the Tread Edges. Fit the right side Riser onto the existing assembly, remembering that the Step Backs go inside and the Treads are flush with the outside of the Riser. **Let the glue dry completely.**

## Mounting the Stairs to the Undercarriage

Turn the Stair Assembly upside down and position it on top of the Floor so that the Exterior Stair Wall is aligned with the back of the stair opening and the top is aligned with the side of the opening. Use the illustration below to see what the correct positioning will look like. Once you understand how the parts fit together, apply glue along (what currently is) the bottom edges of the Stair Assembly. Use masking tape to hold in place and turn over the entire assembly. Place a weight, like a book, over the stairwell to make certain of complete contact between the surfaces. **Let the glue dry completely.**





**Note:** Once the Undercarriage and Stairwell Assembly is completed, you may want to fill and sand the slot holes in the Floor and then prime and paint it. If you intend to cover the floor, you should prime it and then install the flooring. It will be easier to do it at this point because you can turn the Floor upside down, press it on the glued back of the flooring and trim around it.

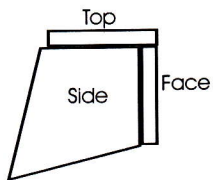
## Assembling the Front & Back

Set the Floor and Undercarriage upright. Apply glue over the front side of the Stairwell and along the front edge of the Floor. Stand up the Front, smooth side out, and press it against the glue. Make sure that it is evenly aligned with the outside edges of the Floor and the Stairwell. Use masking tape to hold it upright and tight against the front.

Apply glue along the back edge of the Floor. Stand up the Back, smooth side out, and press it against the glue. Make sure that it is evenly aligned with the outside edges of the Floor. Use a triangle to be sure that it is squarely upright and hold it in place while using masking tape to secure the Back to the Floor. You may want to use tape at the bottom of the Back to attach it to your work surface.

You should let the glue on the Front and Back completely dry before removing the masking tape and proceeding to add the Right Side. Or, if you have someone to help, they could hold the Front and Back in place, while you add the Right Side and hold all three sides upright by taping the corners. You could add the Left Side but, I suggest that it is easier to wait until after the Dashboard & Steering Wheel are installed.

## Assembling and Installing the Dashboard & Steering Wheel



Assemble the Dashboard on its sides as illustrated at left. The Top overlaps the Face on the right angle point of the Side piece. This appears to leave a gap at the back of the top but when the Dashboard is glued on the Front inside wall it will be tilted and the gap will almost disappear. Paint and/or decorate the Dashboard before proceeding.

Carefully remove the pie-shaped pieces in the Steering Wheel and sand all edges smooth. Paint the Steering Wheel, front and back, and the Steering Wheel Cap separately before assembling. Clear out the hole in the Steering Wheel with the tip of a craft knife if it becomes clogged with dried paint.

Cut a piece of dowel 1" long, paint it and let dry. Insert one end into the hole in the Steering Wheel. If you have any difficulty, sand around the end of the dowel until it slides into the hole easily but not too loosely. Pull the dowel out, apply a thin film of glue around the end and re-insert into the Steering Wheel until it is flush with the front. Apply a dab of glue over the end of the dowel in the middle of the Steering Wheel and press the Cap into place. Let the glue dry.

When installing the Steering Wheel into the Dashboard Face, you will need to force the dowel into the hole. If you sand the end of the dowel too much, the Steering Wheel will slide into the Dashboard Face. You want the Wheel to stick out about  $\frac{3}{4}$ ". Do not use glue so that you can turn the Wheel.

**Note:** You should paint the Front and Right inside walls before installing the Dashboard & Steering Wheel.

Apply glue along the wall edges of the assembly and position it flush against the Right interior wall and  $\frac{1}{4}$ " below the window opening on the Front interior wall. Hold in place with tape until the glue dries.

## Assembling the Right & Left Sides

After you have removed the tape from the Front and Back walls, lay the assembly on its Left side to add the Right Side wall. Apply glue to the Front and Back wall edges and across the Floor edge. The Sides overlap the Front and Back edges. Tape the corners securely and tape along the Floor edge so that it is even with the bottom edge of the opening in that wall.

Apply glue to the top edge of the Interior Stairwell Wall and position the Interior Wall Top centered on the top edge and flush with the left side edge. Hold with tape and let the glue dry completely. Apply glue along the bottom edge and position with the flush side facing the left Floor edge and flush with the wall of the Stairwell. Hold in place with tape.

After painting the Front and Right interior walls and installing the Dashboard and Interior Stairwell Wall, turn the assembly on its Right side. Apply glue along the Front and Back wall edges, across the Floor edge, the edge of the Interior Stairwell Wall and across the edge of the bottom step in the Stairwell. Tape the corners securely and tape the bottom step even with the door opening. Stand the assembly upright and use a small bubble level on the Floor to be sure that it is joined to the Left Side wall properly. If necessary, tape the wall to the Floor. Let the glue dry completely.



## Adding the Roof Arches

Carefully remove one of the Roof Veneer pieces from its sheet. Gently, lay it over the edge of the Front and press down to the end away from the wall. Mark in pencil the exact outside edge of the Veneer. Repeat this process on the Back end. Apply glue to the ends of one of the Roof Arches and position it between the Right and Left interior walls, lined up against your pencil mark toward the end of the bus. The walls should be tight enough to hold the Roof Arch in place but, you may need to use tape until the glue dries.

**Place the Roof Veneer aside until you have finished all interior painting.**

## Adding the Roof Veneers

Apply a thin film of glue along the top edges of the Front, the front Roof Arch and the walls between. Let the glue set and become tacky. Then carefully lay the Veneer, starting at one corner and gently pressing until it is evenly laid on all four edges. If the glue is not tacky enough, the Veneer will start to pop up and you will need to press it down again.

**If you must use tape, do so with an old paste-up artist trick:** Take a small strip of tape and stick it on your neck! Your neck has natural oils that will soften the tackiness of the tape. It doesn't hurt to peel it off and it will hold the Veneer in place without the risk of splintering the Veneer when you remove the tape.

**After applying the Roof Veneers, you may paint the exterior of the bus.**

## Making the Wheels

The two Front Wheels are stacked out of four Wheel Layers and one Wheel Rim. The four Back Wheels are stacked like this: One Wheel Rim, three Wheel Layers, two Wheel Rim centers, and three Wheel Layers.

Before assembling, test each Wheel Layer by passing a Dowel thru it. The holes should not be loose but, if there is an obstruction, use a sharp craft knife and twist the tip around inside the hole to open it. Start by applying glue to the rough side of one layer, lay it down and put another layer on top. Use the Dowel to be sure the holes are aligned. Add layers as needed and let the last one have the smooth side facing out.

**Before adding the Wheel Rim, you may want to paint it, the Wheel Caps and the face of the top Wheel Layer in different colors. When all of the stacks are assembled, the outside edges may need to be sanded smoother before painting the sides tire tread black.**

Cut two Dowel rods with a fine-toothed saw exactly 9 ¼" long. Lay a Front Wheel face down and push the Dowel through until it is flush with the outside Wheel Layer, not with the Wheel Rim. Apply glue to the back of a Wheel Cap and press it into the center of the Wheel. **Let the glue dry completely** while you do the same procedure for a Back Wheel.

When the glue on the Front Wheel and Dowel is dried, lay the Bus on one side and push the Dowel through the holes in the Wheel Brackets until it pushes against your work surface. You should hold each Bracket as the Dowel is threaded through it so that it isn't bent or broken by the pressure. The Dowel needs to be forced through the holes so that it is held tight.

When the Dowel is in position, turn the Bus onto its other side. Push on the opposite Wheel onto the Dowel as you did on the other side. Apply glue to the back of a Wheel Cap and press it into the center of the Wheel. Repeat for Front and Back Wheels. **Let the glue dry completely.** When you stand the Bus upright, you may need to push a Wheel on one side or the other to adjust the Dowels. The Wheel should be positioned just inside the wheel openings in the Sides.

## Adding the Bumpers

For each Bumper, glue together two stacks of two Bumper Brackets and one stack of three. **Let the glue dry completely.** Turn a Bumper face side down and glue a 2-stack Bracket ½" from each end. Glue a 3-stack in the middle. Repeat for the other Bumper. Because of the different heights of the stacks, the Bumper will curve back slightly. When the glue has dried, paint the Bumper and its Brackets, leaving the back face of the Brackets clear. Using an enamel Silver or Pewter paint is suggested. Or you may chose Gloss Black.

Measure ⅛" above the bottom edge of the Front and Back and make a horizontal pencil mark in the middle and at each end. This is where the bottom edge of the Bumper will align. Measure across the width and mark the center of the Front And Back with a vertical pencil mark. This mark will help you center the Bumper.

Turn the Bus with its Face or Back directly facing you. Apply glue to the backs of the Bracket Stacks. Position the Bumper, which will be even with the outside edges of the Bus, by pressing the center and taping that in position. Push the ends back one at a time. Wrap tape horizontally over the end of the Bumper and pull it back toward a Side Wall until the Brackets are pressed down then, stick the tape to the Wall. **Let the glue dry completely.**



## The Driver's Seat & Benches

Gather and compare all of the Seat parts, the Backs, Sides and Seats. All the Backs and Sides are the same height but the width of the Backs and Seats are slightly different. You will find that one of them is  $\frac{1}{8}$ " narrower than the others; that's the Driver's Seat and the others can be used as Benches or incidental chairs in a motor home. All of the Seats are put together in the same way. First test tabs in slots to see if any adjustments are required.

Apply glue to the tab in the back of a Seat and fit it into the slot in a Seat Back. Apply glue to the side tabs of the Seat and run a bead of glue down the outside edge of the Seat Back. Fit the Seat tab into the Side slot and tape the corner of the Side and Back together. After the glue has dried, fill the slots and sand smooth. Paint or stain the Seat, as desired.

You may make cushions for the Seats easily. Cut small scraps of Foamcore to fit in the seat and upright against the back. Cover them with appropriately scaled fabric that can be glued on or taped on the back sides. Foamcore can be pressed and shaped to curve on its edges and even pressed in the middle to look cushiony.

## Trims & Details

### The Front Window

Paint the smooth side and edges of the Front Window Frame and also paint the inside rough side the same color as the interior Front Wall. Despite positioning the Frame correctly over the Window Opening, small edges will show from the inside.

You may add the punch-out on the Acetate Sheet to put "glass" in the Front window. Use a sharp craft knife and slice the bits that hold it in place on the sheet. Trying to pull the window punch-out from the sheet may result in tearing.

Lay the finished Front Window Frame on top of the Front Window Acetate to see if the acetate needs to be trimmed to fit just inside the outside edge of the Frame. After trimming the Acetate, lay it on a paper towel and carefully wipe away any dust that may be clinging to it.

When ready, cover the back of the Frame in a thin film of glue and lay it face down. Hold the acetate curved back from the Frame, align it with one corner and side, then press down, slowly easing it down across the Frame, gently pressing as you go. **Let the glue dry completely.**

The point is to avoid getting any glue on the part of the acetate that will show within the Frame. If this does occur, quickly wipe it off with a damp paper towel and then dry the area with another paper towel. This may still leave a slight residue so it is better to avoid smears if possible.

After the glue between the Frame and the Acetate has dried, carefully apply glue around the outer edges of the Frame, position it over the Front Window Opening and tape in place until the glue is dry.

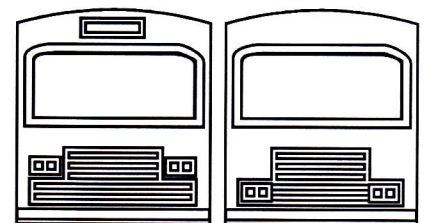
You may use the additional Acetate to fill other windows in the Bus.

### The Front Grill, Headlights, Destination Frames,

These Trims may be painted with enamel Silver paint to simulate chrome. Paint each piece before gluing in position on the Bus.

The Front Grill is centered above the Bumper on the Front. Apply a thin film of glue to the back, press it into position and hold with tape until the glue dries.

Fill in behind the openings in the Headlights by gluing on white shiny paper or posterboard on the back. You may position the Headlights in, at least, two of the ways shown at right.



The Destination Frames, if used, should be backed like the Headlights with destination information or a statement like, "MY BUS," printed or written on paper. You may even use scraps of Acetate between the paper and the Frame to seal and protect it. You may position the Destination Frames, centered at top, on the Front and Back of the Bus. Or you may position them on the sides slightly below the driver's window on the Right Side and below the first passenger window on the Right Side.

### Side Mirrors, Tail Lights & License Plates

You may use enamel Silver paint around the rims of the Tail Lights, License Plates, Side Mirrors and on the "legs" and "mirror" sides of the Side Mirrors. The other side of the Side Mirrors should be painted to match your theme. The surfaces of the Tail Lights could be painted white, yellow and/or red depending on the type of Bus you're making. You can dab over the colors with clear glue, which will spread and settle into a smooth shiny surface. All these pieces can be positioned as shown in the photographs included with the instructions. Or you may position the Tail Lights lower than shown depending, again, on the type of Bus you're making.

Print or photocopy a reduced-size License and glue it on the front of the License Plates. The plates may be centered, if you prefer.



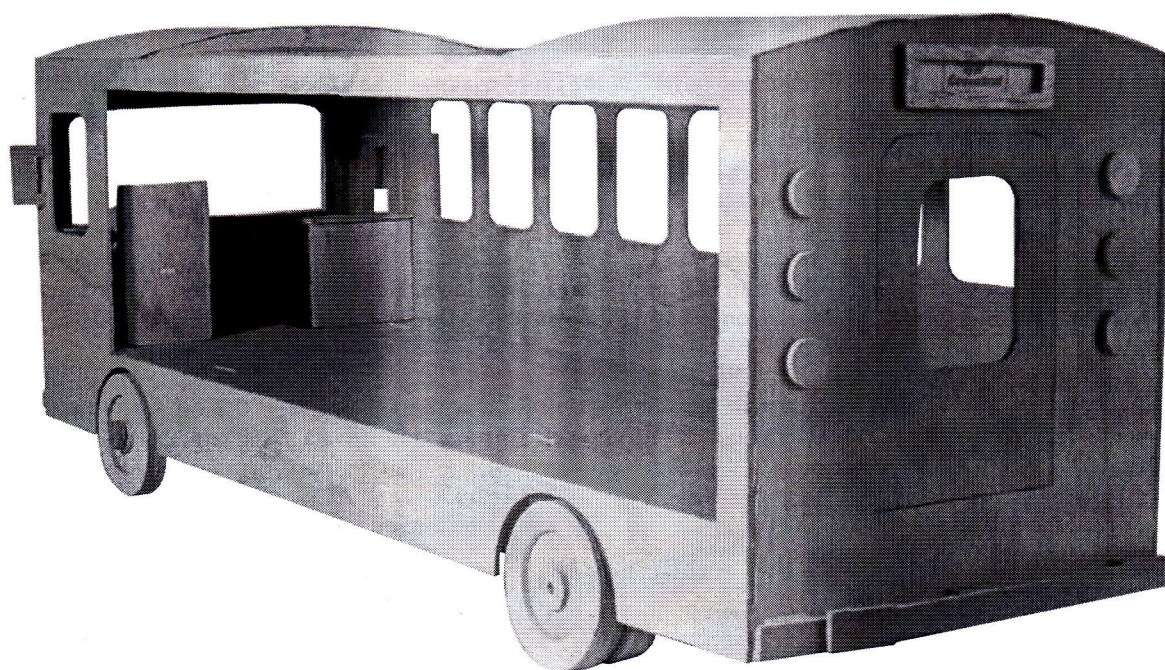
Materials & Tools Required (In Order of Use)

Sharp Pencil  
Heavy Craft Knife  
Sanding Sponge  
Sheet of Fine  
Sandpaper  
Masking Tape  
Emery Boards  
Small Flathead

Screwdriver  
Wax Paper  
12" Ruler  
White Glue  
Small Triangle  
Sharp-tipped Craft  
Knife  
Fine-Toothed Saw

Paint & Brushes

Optional:  
Foamcore Scraps  
Fabric Scraps



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