

The 1/2 inch Scale Thornhill

Dollhouse Shell Kit
#H9001

A component pack #H9002 has been produced for this house by Houseworks Ltd. containing preassembled interior and exterior doors, windows, stairways, shingles, doorknobs, and dentil trim as shown in the photo.

#H9001 1/2" THORNHILL SHELL PARTS LIST:

- | | |
|---|--|
| 1 (1) Top Floor: 13 1/4" x 22 5/8", with stair hole | 31 (1) Divider: 5" x 7 1/2", with door hole |
| 2 (1) Middle Floor: 11 1/2" x 20 7/8", with stair hole | 32 (1) Divider: 5" x 8 5/8" |
| 3 (1) Base Floor: 11 1/2" x 20 7/8" | 33 (1) Divider: 5" x 5 3/4", with door hole |
| 4 (2) Foundation: 21 1/4" x 7/8" | 34 (1) Divider: 5" x 5 3/4", with door hole |
| 5 (6) Foundation: 11 1/4" x 7/8" | 35 (1) Divider: 5" x 5 1/8", with door hole |
| 6 (1) Foundation: 5 1/2" x 7/8" | 36 (1) Divider: 5" x 5 1/8", with door hole |
| 7 (1) Foundation: 4 3/4" x 7/8" | 37 (1) Divider: 5" x 3 1/2", with door hole |
| 8 (2) Foundation: 1 1/8" x 7/8" | 38 (1) Divider: 5" x 3 3/8" |
| 9 (2) Back Wall: 10 3/4" x 7 7/8" | 39 (1) Divider: 5" x 3", with door hole |
| 10 (2) Front Wall: 10 3/4" x 7 7/8", with window holes | 40 (1) Stair Blind: 3 1/16" base x 4 3/8" tall, triangle |
| 11 (2) Gable Side Wall: 10 3/4" x 1 1/2" | 42 (1) Step: 7/16" pine, 4" x 1 5/16" |
| 12 (1) Center Back Wall: 10 5/8" x 5 1/16" | 43 (1) Step: 7/16" pine, 3 1/8" x 7/8" |
| 13 (1) Center Front Wall: 10 5/8" x 5 7/8", with window and door | 44 (1) Threshold: 2 1/4" x 7/16" |
| 14 (2) Side Wall: 10 5/8" x 11 7/8", with window holes | 45 (2) Chimney Blocks: 1" x 1 13/16", angled |
| 15 (2) Side Roof: 13 3/4" base x 9 3/4" tall, beveled | 46 (2) Middle Caps (3/8"): 2 1/16" x 1 1/4" |
| 16 (2) (Left & Right) Back Roof: 7 5/16" base x 9 3/4" tall, beveled | 47 (2) Top Caps (1/4"): 1 13/16" x 1" |
| 17 (2) (Left & Right) Corner Roof: 2 5/8" base x 3 5/8" tall, beveled | |
| 18 (1) Center Front Roof: 17 7/8" x 9 3/4", inlet for gable, bevel | |
| 19 (2) Attic Partitions: 12 1/32" base x 6 5/16" tall, door | |
| 20 (1) Dormer Roof: 8 1/2" x 7 7/8", beveled | |
| 21 (1) Dormer Back: 2 5/8" x 8 1/2", beveled | |
| 22 (2) Gable Floors: 1 1/2" x 5 1/8" | |
| 23 (1) Top Gable Floor: 5/8" x 5 7/8" | |
| 24 (1) Gable Triangle: 3 5/16" tall x 5 7/8" base | |
| 25 (2) (Left & Right) Gable Roof: 4 5/8" x 5", beveled | |
| 26 (1) Center Back Roof: 8 1/2" x 1 1/8", beveled | |
| 27 (2) Attic Kneewall: 2" x 12 7/16", beveled | |
| 28 (1) Divider: 5" x 11 1/2", with door holes | |
| 29 (1) Divider: 5" x 11 1/2", with door holes | |
| 30 (1) Divider: 5" x 7 1/2", with door hole | |

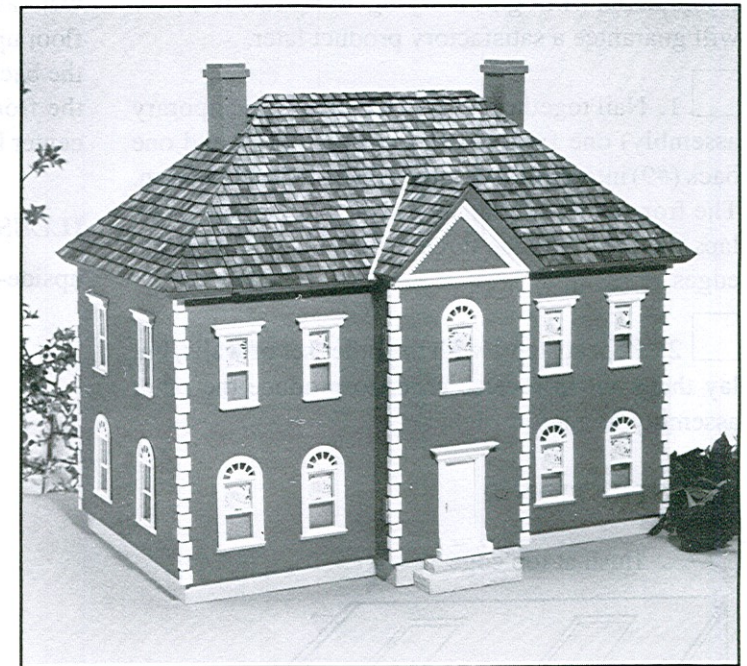
QUOIN PREPACK:

(120) wraparound quoins 7/16": 5/16" x 15/32"

HARDWARE PREPACK:

- (8) Hinges #1276
- (32) Screws 3/8" #2
- (3) Hinges #1279
- (12) Screws 3/8" #5
- (1) Flat Hook
- (2) Roundhead Screws 1/2" #6

Sanding Pad



Locate and identify all the parts using the parts list and diagrams. Parts are identified by number in the instructions. Any discussion with Real Good Toys about this kit (assembly help or parts replacement orders) must include exact names from the parts list. Read these instructions all the way through as well as the "Tips" before beginning assembly.

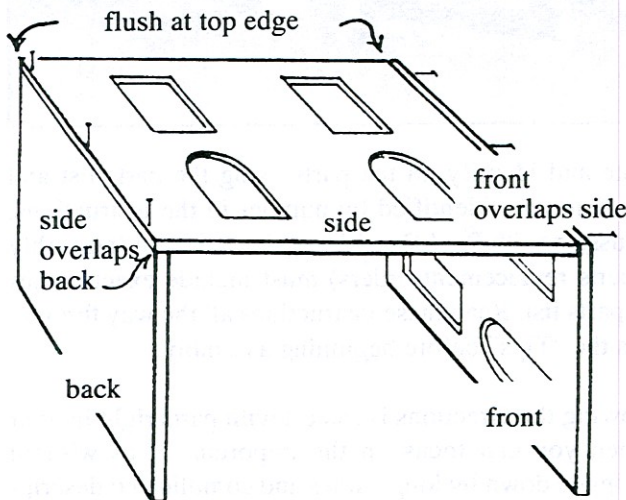
Following the directions is easiest with parts right in your hands; then you can focus on the important areas without getting bogged down by long names and complicated descriptions.

☛ In this section, you will assemble the house body (walls, floors, foundation). The upside-down technique gives perfect floor spacing for the interior dividers. Take extra care to not glue the walls that will eventually be hinged. Take care also to make the floors sit flat while glue is drying. Extra attention now will guarantee a satisfactory product later.

☐ 1. Nail together (don't glue, this is a temporary assembly) one front (#10), one side (#14), and one back (#9) into a freestanding "U" shaped wall section. The front panel overlaps the side, and the side overlaps the back. Set the three panels flush at their top edges.

☐ 2. Repeat step 1 with the other set of walls, but lay them out in reverse order to produce the other assembly of a left & right set.

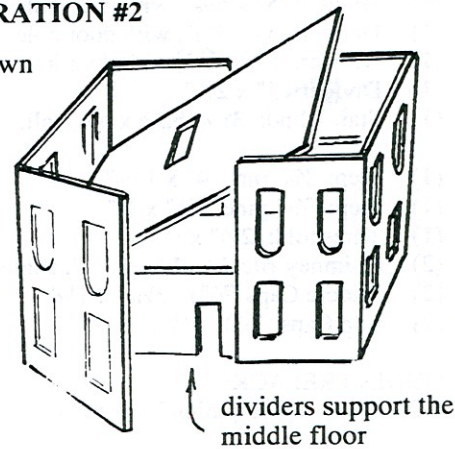
ILLUSTRATION #1



☐ 3. Stand the wall assemblies on their top edges, upside-down, on a large, flat surface. Tape dividers around the inside perimeter, forming a support platform to hold the middle floor (#2) in position for glue/nailing. Without glue, put the middle floor into the wall assemblies (ILLUSTRATION #2). With the floor upside-down, the stair hole should be closest to the back panels, offset to the left when viewed from the front. Mark the position of the center front and center back panels on the edge of the floor panel.

ILLUSTRATION #2

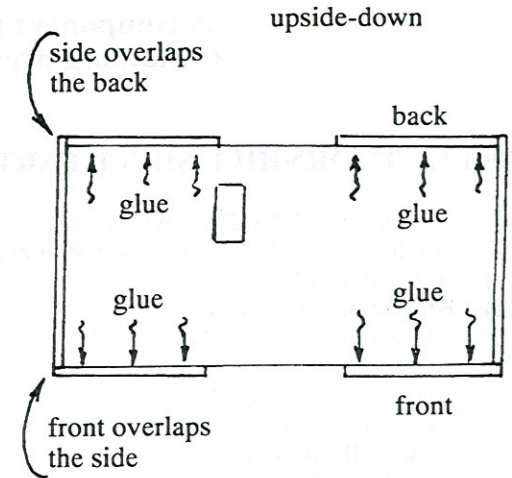
upside-down



Remove the mid-floor and do NOT put glue on the edge of the areas which line up with the side walls and the center front and back. These panels will be hinged and will swing open. Apply glue to the other edges. (ILLUSTRATION #3)

Set the floor panel back in place, oriented properly. Use another person to help avoid messy glue smear.

ILLUSTRATION #3



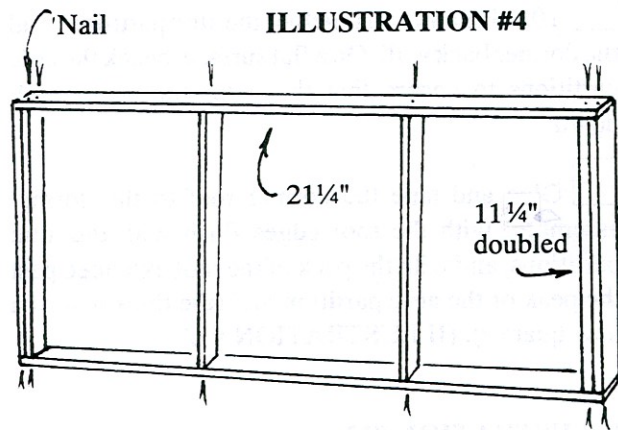
Put several thicknesses of tape around the edges of the center back panel (#12). This tape will space the rest of the walls such that the center back panel can swing when it is hinged.

Add the center front (#13) and center back (#12) panels to the wall perimeter, and tape all the way around – don't be stingy!

Nail the front left & right walls and the back left & right walls to the mid-floor panel. Be sure the floor is held down tight to the divider perimeter. Nails will be 5 3/16" from the work surface. (Always check for "splitout" before the last smack of the hammer so the nail can be extracted if necessary.)

☐ 4. Tape in place another divider perimeter, spacing from the middle floor. Position, mark, and remove the base floor (#3). Once again, glue and nail only the left & right front and back panels. Keep the floor tight to the dividers when nailing.

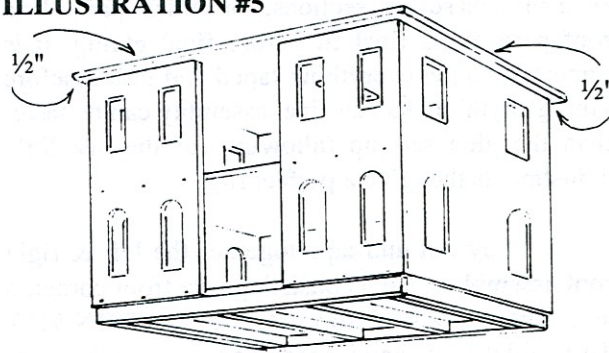
5. Pre-assemble the foundation as shown (ILLUSTRATION #4). One nail into each cross piece is sufficient.



6. Lay the foundation on your flat worksurface. Put glue on all the top edges. Keep glue away from the side, center front, and center back panels. Set the house body right-side-up on the foundation, spaced evenly all around. Tape and nail... make sure the base floor is very flat as the glue dries. Once the glue dries, the shape of the floor becomes permanent!

7. Lay out and mark a 1/2" border all the way around the top floor, on its underside. Use this marked border to line up the top floor on top of the wall assembly (ILLUSTRATION #5). Glue/nail the top floor (#1) in place to the top edges of the left & right front and back walls. (Again, do not glue the opening panels in place!)

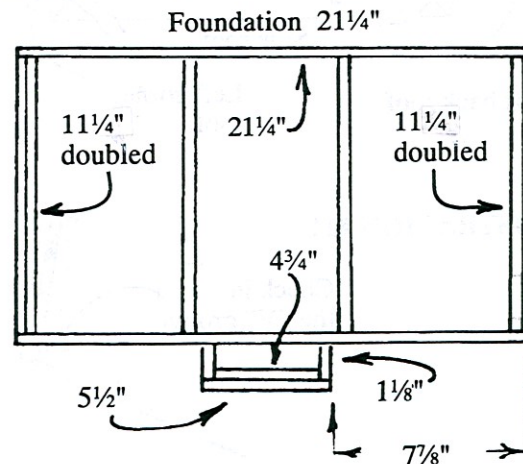
ILLUSTRATION #5



8. Remove the center front panel. To encourage the base to remain flat as the glue dries, place the 11 1/2" dividers across the base floor, thus supporting the base across the opening.

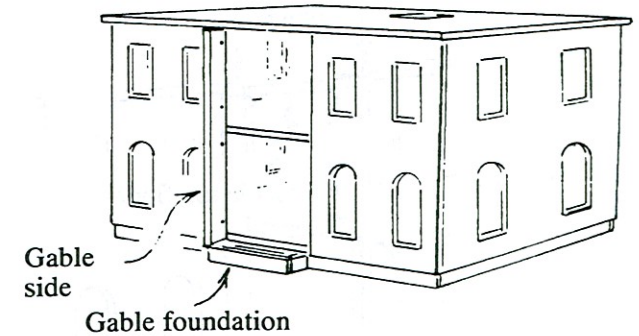
Glue and nail together the gable foundation and glue to the house foundation in the space left by the center front. (ILLUSTRATION #6)

ILLUSTRATION #6



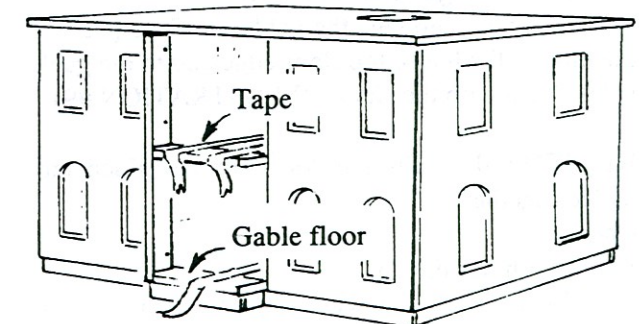
Glue and nail one gable side (#11) to the edge of the front panel. (ILLUSTRATION #7)

ILLUSTRATION #7



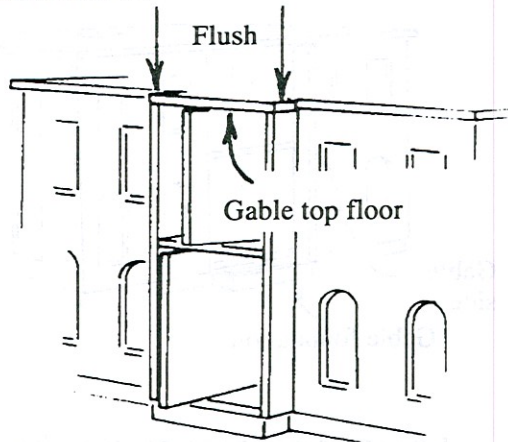
Glue and tape (lots of tape, stretch it as you rub it down) the lower two gable floors (#22) to the house floors and gable side. (ILLUSTRATION #8)

ILLUSTRATION #8



Check the flatness from the gable floor to the house floors by sliding in dividers. (ILLUSTRATION #9)

ILLUSTRATION #9



Dividers help keep the floors straight

Without letting the glue set on the floors, glue and nail the second gable side in place.

Glue, nail, and tape the gable top floor (#23) in position to the house top floor edge and to the gable sides, flush with the sides. (ILLUSTRATION #9)

REVIEW: the walls and floors are now glued and nailed together.

Check:

- the stair holes line up.
- no glue is on the side walls, the center front or the center back walls.
- the top floor overhangs the walls 1/2" all the way around.
- the floors are straight and flat.

In the next several sections, you will prepare all the roof parts for a final fit before final gluing. It is important to get everything taped and tested before gluing anything, so that final assembly can be faster than the glue sets up (allowing for the last little adjustments that give a perfect fit).

9. Lay out and tape together the left & right roof assemblies, each consisting of a front corner, a side roof, and a back roof (ILLUSTRATION #10). Test-fold the sets and inspect the line up of the roofs in the "V" groove (on the underside in illus. #10) at the corners; adjust if necessary. (ILLUSTRATION #11)

ILLUSTRATION #10

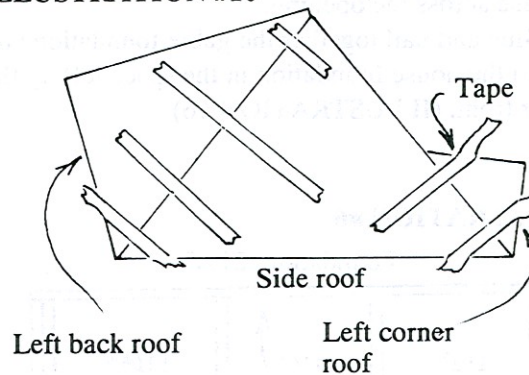
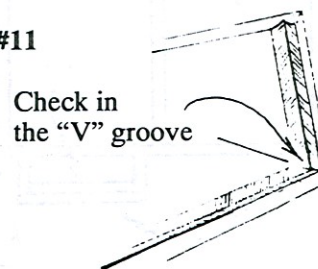


ILLUSTRATION #11

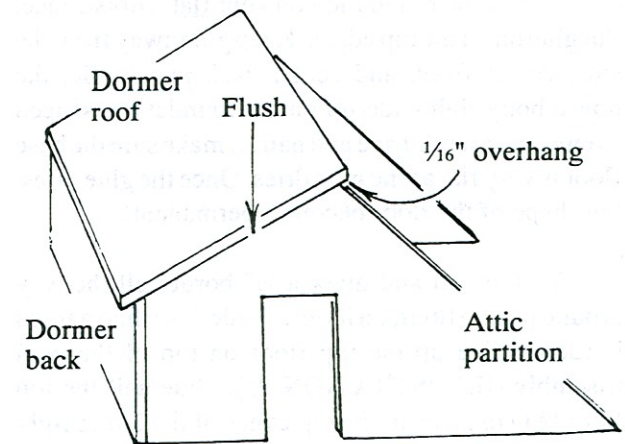


Stick several thicknesses of tape to the left & right edges of the front roof for swing clearance from the front corner roofs.

10. Glue and nail together the attic partitions and the dormer back wall. On a flat surface, check the attic partitions to ensure that they are straight up-and-down.

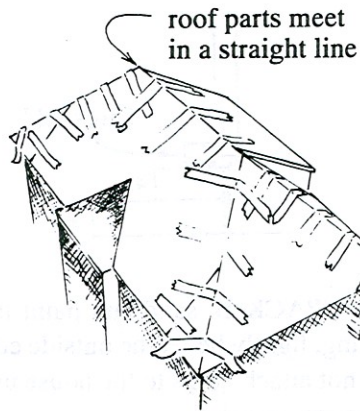
Glue and tape the dormer roof to the dormer assembly, with the roof edges flush with the attic partitions, and with the peak of the roof extended past the peak of the attic partition 1/16" (the thickness of a new quarter). (ILLUSTRATION #12)

ILLUSTRATION #12



11. Without glue, set up the entire roof system taping all the parts together. The roof parts fit onto the outer edge of the third floor, and come to a straight line at the peak (ILLUSTRATION #13). Keep the left & right roof sets taped together, but remove them from the test setup.

ILLUSTRATION #13



Spread glue in the joints between the rear roof/side roof/front corner pieces only . . . do not glue the dormer or front roof contact points!

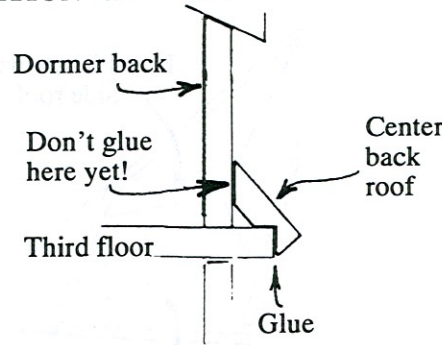
Spread glue in the "V" groove (contact with the third floor). Return the left & right roof sets to the test assembly, once again making sure that the dormer and front roof will not be glued in this step.

Make sure the fit around the third floor is good, that the roof peak is straight, and that all joints are tight as the glue dries.

Glue and tape the center back roof to the third floor and to the left & right back roofs. (ILLUSTRATION #14)

Tape some more . . . then let the glue dry. When all the glue is dry, remove the center front roof.

ILLUSTRATION #14



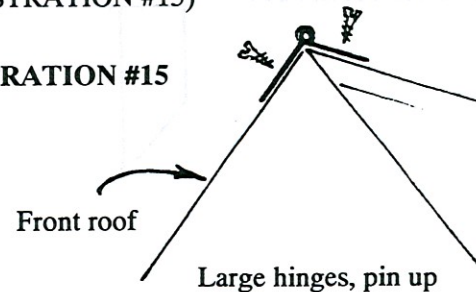
12. Mark the dormer where it touches the left, right, and center back roofs.

Inspect the attic partitions for straightness where they touch the third floor. You may need a spreader stick or temporary nail-blocks to hold the attic partitions straight while you glue them in place. Take whatever steps are necessary before gluing begins.

Remove the dormer from the roof setup. Spread glue on the dormer parts at all the contact points with the third floor and the back roofs. Replace the dormer; make sure the attic partitions are straight and all the joints are tight. Replace the front roof too while the glue dries.

13. Using the #1279 (larger size) hinges from the hardware pack, mount the front roof. (ILLUSTRATION #15)

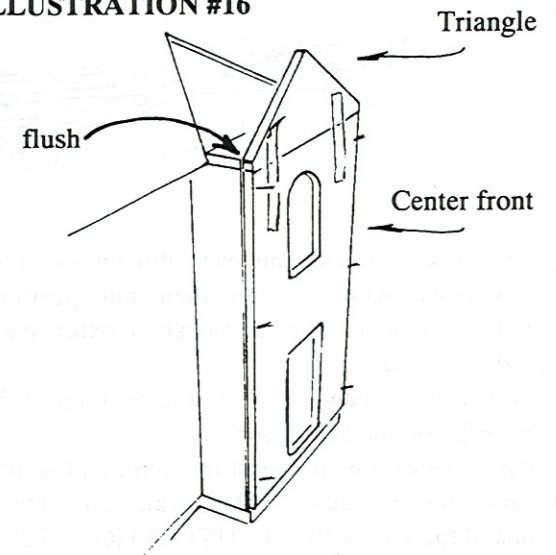
ILLUSTRATION #15



14. If you are planning to shingle the house, this is the easiest time to draw the shingling lines. The 5/8" tall shingles provided in the Houseworks Component Set would use lines at 1/8", 1 5/8", 2 1/8", 2 5/8", 3 1/8", etc. If you intend to fit Houseworks Dentil trim (component set), make a tracing of the gable triangle now. You will fold this tracing to use as a template for mitering the dentil trim.

15. Tape together the center front (#13) and triangle (#24). Do NOT use glue. Temporarily attach this unit in place on the house body using lots of tape or nails. Line up the shoulders on the triangle with the corners of the gable top floor (this will leave a space of about 1/8" at the bottom edge of the front panel). (ILLUSTRATION #16)

ILLUSTRATION #16



Tape together the gable roofs (#25) at the peak.
Dry fit this unit on the house and mark its location on the house front roof.

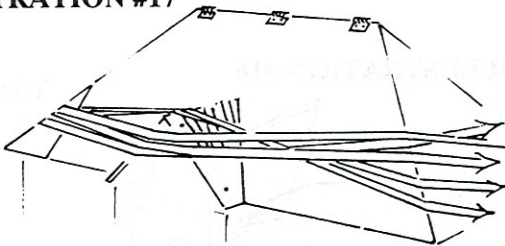
Mark the position of the gable triangle on the bottom surface of the gable roofs. Prepunch holes 3/16" to the inside of this line, 1" from the peak and bottom edges of each roof.

Glue together the gable roof set and glue this unit to the gable triangle and to the house front roof. Nail through the prepunched holes into the triangle and use lots of tape to hold the gable roofs to the front roof (ILLUSTRATION #17). Let dry.

Remove the center back, sides, and center front wall panels.

ILLUSTRATION #17

Lots of tape!



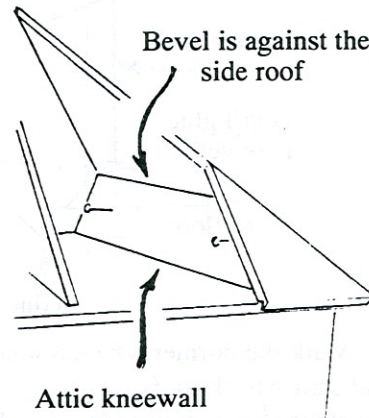
16. Drive two nails into each attic kneewall for handles to use while coaxing them into position. Later, they can be removed and a dab of texture paint will hide the hole.

Test fit the kneewalls. Mark the position of the bottom edge on the attic floor.

Put a line of glue just past the mark on the attic floor and a line of glue on the kneewall beveled face.

Install the kneewall. (ILLUSTRATION #18)

ILLUSTRATION #18



ASSEMBLERS NOTE: One of the kneewalls in the test house required considerable straightening. We used nails up through prepunched holes in the third floor, and a divider wedged against the attic partition to hold the kneewall flat while the glue dried.

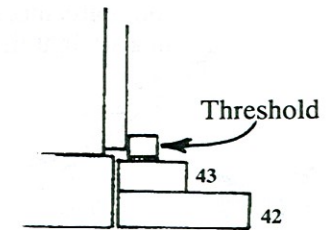
17. CHIMNEYS: let the glue set for a few minutes between each step. Perform each step twice to yield two chimneys. Start with the large cap, then glue on the small cap, centered, and then the chimney block, centered. (ILLUSTRATION #19)

ILLUSTRATION #19



18. Steps: glue step #43 to step #42, centered end-to-end, and flush at the back edge. The threshold (#44) will be glued to the center front panel at the door bottom after all finishing is complete. (ILLUSTRATION #20)

ILLUSTRATION #20



19. PREPACK B: sand and paint the quoins. While sanding, lightly bevel the outside edges of the quoins. Do not attach quoins to the house until stucco and painting are complete.

20. Prior to painting the four hinged wall panels, completely seal the wood inside, outside and all exposed edges. Use shellac which brushes on easily and helps keep moisture from warping the panels.

STUCCO: read this section and EXPERIMENT with your own variations in technique to achieve the finish you like best.

We have written this section for texture paint, but stucco additive or sand paint also works well.

You may wish to have your paint dealer tint Texture Paint to match the house body color. This will help hide scratches when the house is in use. You will need about two cups of Texture Paint for the walls. Save out a little untinted for the quoins.

Apply a medium coating of tinted Texture Paint to the walls of the house. Use short strokes in random directions to create an irregular textured pattern which is the beginning of the stucco finish.

Before the paint begins to dry, go back and "slap" the paint with the flat of the brush, raising tiny peaks. (Thick wet paint gives big peaks and dry thin paint gives little peaks.) Do only one panel at a time. Do all the walls, foundation and roof edge.

Texture Paint can also be used as a wood filler and a pre-sanding coat on the panel edges, assembled chimneys, and assembled front steps. Lightly sand all walls and edges prior to painting.

ASSEMBLERS NOTE: Moisture from the Texture Paint will invade the wall panels causing them to swell unequally. After a few days, the moisture WILL equalize and the contortions will subside.

After the panels are hinged, any other twist can be solved by careful placement of cabinet door magnets if necessary (available at building supply stores).

21. **PAINT:** we recommend a premium semi-gloss latex enamel. The colors used on the color photo are Benjamin Moore's Aqua-glo Hamilton Blue with Silvertone foundation and white trim.

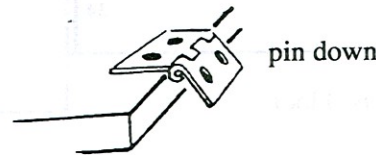
Mask edges where colors change by painting to a putty knife wiped clean each time it's moved, or by defining the edge with tape. Pull off the tape while the paint is wet.

While one coat is often sufficient on the house body, at least two or three coats of white are desirable on the windows, door, dentil trim, eaves and quoins.

BEWARE! Paint in working window tracks may freeze them forever.

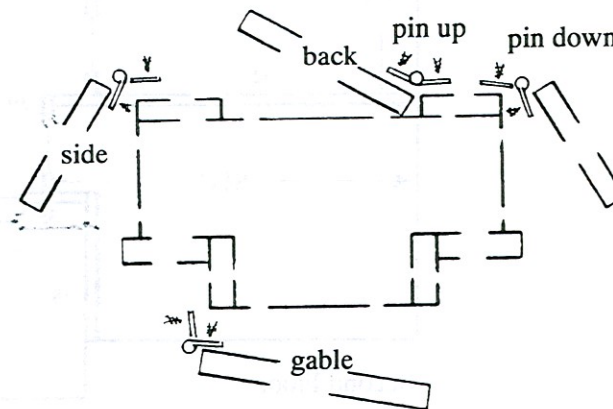
22. **HINGE:** determine which edge of the center front and side panels gets hinged (make a mark to remind yourself—it's easy to do it backwards). Lay the panels face down and mark 1" from both the top and the bottom of each panel along the hinging edge. Place hinges pin down to the center edge of each mark, and screw them in place (we like to mark the hinge holes and punch a starter hole with vice grip pliers and a brad). (ILLUSTRATION #21)

ILLUSTRATION #21



For the center back panel, position hinges as per the other panels, but attach them pin up to the outside face of the back. (ILLUSTRATION #22)

ILLUSTRATION #22



Place the panels in position on the house, elevated to the top of the opening, and mark, prepunch, and screw hinges to the gable side or the back panel.

23. **QUOINS:** quoins are laid out without glue to achieve exact spacing, 20 to a corner, then one by one glued in place. To do this, you must set the house in turn on its back and sides. Have pillows ready to protect the stucco and shingles.

With the house on its back, lay out all the quoins. Use a craft knife or X-acto saw to trim them where they line up with a hinge. Make sure a long quoin face is at the front or back (short face is on the side) for the bottom-most quoin on each corner. Adjust the spacing, then glue them down.

24. OPTIONS

A wide variety of materials and accessories is available to help you achieve your dream house.

The following is a partial list of accessories available through your dealer from Real Good Toys.

- #1125 Shingle dye
- #SC Copper flashing
- #T-10 Turntable
- #H9002 Houseworks Component Set

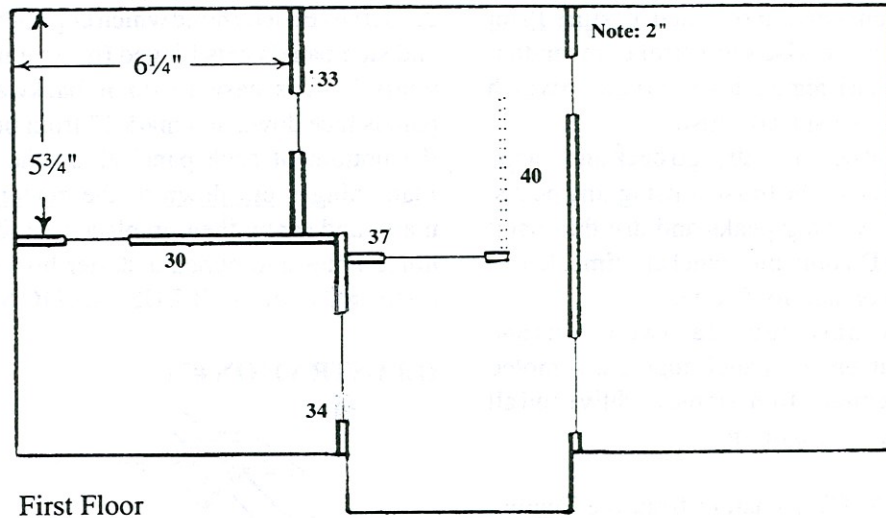
25. INTERIOR FINISHING

Our pro finishes the interior of a few houses each year. Here's the order that he follows for tackling interior finishing . . .

- Electrical wiring (he only uses **tape** style)
- Score and stain floors
- Wallpaper (use "Yes" brand paste)
- Dividers (see illus. #23)
- Carpeting
- Stairs
- Molding and trim

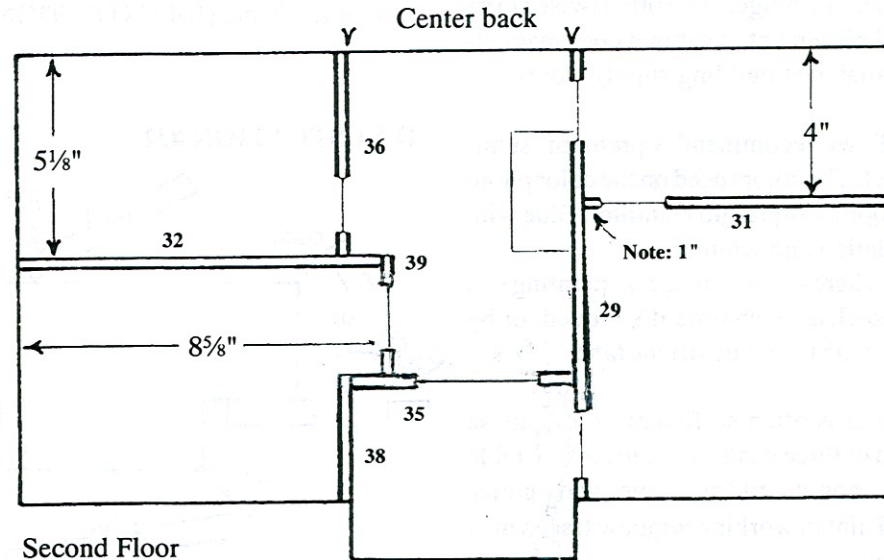
26. Install interior dividers (as per floor plan) in the following order: #28/29, #31/36, #30/32, #34/35, #42/43 (ILLUSTRATION #23). Install #40, then #37 after installing stairs from the Houseworks Component Set. You may wish to delay installation of the dividers until finishing the interior.

**The dollhouse shell kit
part of your project
is done.
Enjoy the rest!**



First Floor

ILLUSTRATION #23



Second Floor