On30 Locomotive Shed

Thank you for purchasing KHM's On30 Locomotive Shed. I hope you will enjoy the build, as well as the completed model.

With a 15" x 10" footprint this is a large structure, however the modular assembly method makes for a straightforward build and produces a highly versatile kit, capable of being used with several layout options to suit many purposes. The internal width is 9" which allows it to be used as a freight car repair shed. This was the original design origin of the kit which is why the "front" is the wall with the sliding doors.
The roof can be built as removable to show off the detailed framing and any additional internal detail the modeller may choose to add. The wall surfaces are detailed with interior viewing in mind so it looks good both inside and out.

Start by checking and identifying the parts in the carriers with the help of the photos and familiarize yourself with the build instructions. The kit is packed in separate subassemblies to make construction easier.

Painting/staining
Parts can be painted or stained while still on the carrier boards, but you will find it easier if you paint the brick walls as complete subassemblies. For the instruction photos I have generally left painting until the end for clarity.

Removing parts from carriers
Use a new blade and take care. While we have part-cut through the retaining tabs, the remaining wood can still be hard. Please don't twist out any of the parts – they will get damaged. Leaving the parts in the carriers until needed will help identification and reduce chance of loosing pieces.

Glue
DO NOT USE WHITE GLUE. Cyno Acrylate (Super glue) and/or contact adhesive is suitable.

Suggested order of construction:-

1. brick walls (front and back)
2. brick pillars
3. assemble front and back brick sections together and paint the brickwork
4. Make up wooden rear walls with individual batten and board on frames, adding window trim.
5. End wall wooden sections with doorways. (batten and board on frame)
6. Assemble windows and fix in place.
7. Make up hinged doors and fix in place on end walls. (or leave final fixing to end)
8. Construct sliding door assemblies and fix to brick walls.
9. Make Skylight assemblies
10. Roof frame sub-assembly.
11. Make up roof panel assembly with shingles.
12. Assemble all walls and roof frame together to form a solid structure.
13. Add internal details to taste.
14. Admire your craftsmanship ☺

This model kit is intended for adults.
NOT A TOY. Contains small parts.

Written instructions to be used with the photos.

1. Brick walls

PHOTO 1A: Parts for the 2 front wall sections. Carefully cut out *from the back* of the sheet to avoid damaging brickwork. Cutting from the front tends to risk removing bricks from the edge. Note there is an outside and inside part of each section. The inside has straight edges nearest the door pillars.

PHOTOS 1B: press the door pillar walling gently into place on the outside wall. One of the neatest features of this kit is that walls interlink at the corners with the correct brick spacing. When happy with the fit, carefully run some superglue down the inside corner, keeping the door pillar wall square. Be sparing wit the glue it will seep into the cracks. (superglue seems to work best on the MDF material used for brickwork)

PHOTO 1C: after a trial fit, glue the inside wall to the back face of the outside wall, ensuring the brick edges are perfectly aligned, so that they will fit correctly to the wall pillars. I use contact adhesive for this, making the join immediately to allow a bit of adjustment before the glue bond is permanent.

PHOTO 1D: glue door pillar end brick strip into place and glue door pillar spacer into postion.

PHOTO 1E: glue door pillar brick return in place.

PHOTO 1F: Repeat with the second front wall section.

PHOTO 1G: parts for 2 rear wall sections. These are the brick foundations for the wooden walls. Each section consists of 2 brickwork walls, and 2 spacers. Cut them out from the back of the carrier carefully.

PHOTO 1H: Glue the spacers together ensuring perfect alignment, then glue the spacers to one of the wall sections. Then glue the remaining brick wall into place, aligning as best you can to the other side.

WATCH OUT! note that the brick courses at the ends must match (get this wrong and you'll be cutting one row of bricks off later!)

PHOTO 1J: *Gently* sanding the tops and bottoms to get a smooth surface will help, but don't overdo it. The MDF material is quite soft so be careful.

PHOTO 1K: repeat with the other rear wall section.

2. Brick Pillars.

PHOTO 2A: front brick pillar parts. Note the outer pillars have brick-sized assembly holes on one side only, the centre pillar has brick holes on both sides. Cut them out carefully from the back of the carrier panel to avoid damge to brickwork.

PHOTO 2B: Each pillar has 2 sides, 2 edges, and 4 spacers. The photo shows one of the outer pillar.

PHOT0 2C: start by press fitting the edges into one side and when happy with the fit, sparingly run some superglue down the inside of the seams. It will seep into the cracks of the corner. Keep the edges square while doing it. (I use a block of wood, but be careful of the glue)

PHOTO 2D: glue the spacers into each end. Align them to the ends of the brickwork.

PHOTO 2E: glue in the remaining side.

PHOTO 2F: when you come to make up the centre pillar, make sure the assembly holes match up – this is to ensure the whole wall lines up. The pillar sides will fit either way round so please be careful. If you do get it wrong I am happy to send you replacement parts, but for your convenience a trial fit is recommended before glueing!

PHOTO 2G: back wall pillar parts. Note the holes are symmetrical. They are made up as the front brick pillars. The only thing to watch out for is that holes on both sides of the centre pillar are at the same end, again trail fitting is advised.

3. Brick wall assembly and painting

PHOTOS 3A: front wall assembly. Trial fit the walls into the pillars. **Note that the longer part of the pillar projects towards the inside, on the same side of the door pillars**. Refer also to the photos of the final assembly! Be very crafeul about this before glueing into place – if you get it wrong, the roof will not fit ☹

PHOTO 3B: rear wall assembly. The rear pillars are symmetrical with the wall sitting centrally. After a trial fit glue into place, ensuring the pillars and walls are level with the pillars upright at right-angles.

BRICK PAINTING

The commonly used method is “paint the brick red oxide and then when thoroughly dry, run a wash of mortar colour over it, and then wipe from brick surface”. However that doesn’t seem to work that well with this MDF laser-cut brickwork.

I use acrylics, and have found *for me* that it’s easiest to apply mortar colour first, using a flow improver (wetting agent) so that the paint goes all the way into the cracks. Then when completely dry I apply the brickwork colour with a dry-brushing technique, picking out some bricks in various shades to bring the wall to life.

I’m no painting expert. There are likely as many ways to do this as you can think of, depending on the “look” you want and the materials you prefer to use. I have included some extra brick wall sections that build into the practice square section above so you can try out what painting method suits you best.

4. Wooden rear wall assemblies.

From here on the methods are like all other laser-cut kits ☺

PHOTO 4A: cutout the rear wall sections. There is less risk of damage if you cutting from the backside

PHOTO 4B: stain the frames (or paint them), as the internal frames don’t see much sunlight /weather they will be quite dark – and dirty being a locomotive shed.

PHOTO 4C: apply the peel and stick (P&S) sheet to the outside of the frame that will hold the boards in place. (I had to add this as a separate sheet so that the scale 6” frame would cut reliabily). I find the best way is to lay the P&S sheet on your workmat, peel away the backing from one corner (it’s tricky –take care!) and then line up the frame onto the P&S sheet. If you try to handle the P&S sheet in mid-air it will want to stick to everything and you’ll end up in a mess. I’ve given you a spare PS sheet just in case.

PHOTOS 4D: prepare the scale 12” wide boards. The board material is obechi which has a fine but useful grain structure. You can use it as it is or add more grain structure with a wire brush, removing the fuzz with transfer or masking tape. The ends may have splits added with a knife. You can stain them while they are still on the panel, but it is better to stain the boards individually. I use a weathering solution of isoprol alcohol mixed with chalks and a bit of acycrlic. The trick is to build up colour slowly. I try to get some variation to make the wall more interesting *Note that the inside of the wall is likely to be darker, and have more original wood colour.*

The battens and window trim can be treated in the same way, but as these are peel and stick it is easiest to stain them while they are still on the panel. (And you don’t risk loosing any). Because the colour of the 1/64 microply is already quite weathered, I left them untreated.

PHOTO 4E: Boards applied to the frames. I apply the boards, then cut out the windows from behind and trim the lengths, rather than trying to board round the window appertures.

PHOTO 4F: removing the peel and stick backing tape, apply window trim around the windows and fit the window ledges. (Windows will be fitted from the rear later). Note the window ledges are at the bottom of the window – the top of the side walls can be identified by the slots in the frame for the roof joist supports. I find that lightly sanding the edges helps to give a better look.

PHOTO 4H: apply peel and stick battens over the gaps between the boards. Unless you have fine fingernails, Removing the backing tape is best done with the point of a craft knife. Note that prototype battens typically stop short of the bottom of a wall to reduce decay. You’ll have to trim the batten lengths – I suggest you fit them first with overhang at the top of the wall, then trim afterwards.

5. End wall assemblies

There are provision for 2 hinged doors and 4 windows. How you arrange them is up to you depending on your usage of the building. As cut from the laser they are set up for a tradional locomotive shed with the tracks running lengthways so the 2 doors are one end and up to 4 windows at the other. Of course there is nothing preventing you from omitting windows and boarding over those holes. I have included enough board and batten to allow for that.

PHOTOS 5A: The parts for the end walls before painting. There is corresponding P&S sheets, again with a spare sheet.

PHOTO 5B: alternative wall ends – for use with running tracks across the width of the shed. (shorter locomotives up to 9", or a freight car repair shed)

PHOTO 5C: The walls are made up in the same way as the rear walls - paint the frames, apply P+S, add boards + battens, add window trim.

PHOTO 5D: Trial fit the 5x2mm stripwood into engine bay door frames (3 pieces/door) Note that the stripwood should be notched to fit neatly around the floor ties. You could cut the floor ties away instead, but it does mean a little more care is needed in handling during the later final assembly stages. Stain or paint the parts and glue into position.

6. Windows.

The kit includes parts for 8 scale 4'x8' fixed pane windows.

PHOTO6A: paint the glazing bars and window frames while still on the carriers. It's easier than painting them after they are assembled to the "glass" ☺. Note that one side is peel and stick.

PHOTO6B: there are 5 window parts for each window. Each window is assembled with glazing bars and framing either side of the glazing sheet to maintain realism when viewed from the inside as well as outside. The cardstock glazing bars are identical, but one frame is from card, and the other is 1/32 microply. That is to give the window some strength, as well as some variation of depth. Be careful when cutting through the tabs - there wasn't space on the carrier to provide spares!

PHOTO6C: A completed window.

PHOTO6D: Glue the windows into the walls with a very sparing amount of glue on the window edge. I find it easiest to fit them from the inside of the walls. Note the thicker 1/32 ply frame is intended to be fitted to the outside; however it will fit either way round.

7. Hinged end doors.

PHOTO 7A: end door parts. Each door has framing inside and out. Remove the peel and stick backing and assemble the frames to either side of the doors. Nows a good time to paint them before adding the hinges.

PHOTO 7B: hinge parts. These are quite fiddly so I have included a few spares. I fit 3 hinges per door.

PHOTO7C: Remove the peel and stick backing and fit 3 hinge bars to each door.

PHOTO 7D – lay the doors in a closed position in the wall –taping them closed will help. Removing the P&S backing, fit the small hinge parts to the door frames, lining up with the door hinge bars on the doors. Note the position of the door. It needs to be set high enough to clear any trackwork. (5.5mm is just enough for Peco On30/O-16.5 trackwork, ME track is lower) If no track clearance is needed then you may wish to add additional boards at the bottom to fill the gap.

I suggest that you glue the doors into place once the structure is completed to avoid damage.

8. Sliding doors.

PHOTO 8A: the sliding door parts: 3 parts for each door parts. Remove P+S backing and fit the cross frames to the doors. Note the inside of the door has engraved planking (to enable it to slide without snagging)

PHOTO 8B: top slide rail, bottom guide rail, and roller parts. There are 2 rollers per door, 8 in all. Note that some parts have peel and stick backing, some do not.

PHOTOS 8C Top slide rail assembly sequence. Refer to the end profile photo – there are 3 widths of strip that make up the top slide rail. Remove the P&S backing from the thinnest piece and press that firmly in place to the widest strip to form an "L"profile.(I find a wallpaper roller a very handy tool for pressing P&S parts together evenly - £2 from DIY store). Next glue the retining strip into place. Super glue is best for this. Your target is for a glue-free groove - refer again to the profile picture. The bottom of the slide rail should be flat so the doors do not snag – some gentle sanding is helpful here. Run the rail along some fine sandpaper. After painting, remove the P&S backing and fit 4 spacers on the back side of the rail. These hold the doors slightly away from the walls. Leave the P&S backing of the spacers in place – these will be removed later to attach the assembly to the wall.

PHOTO 8D: shows assembly sequence of the rollers. Best to glue them together first, then paint them. Superglue is the best adhesive for this job, applied with a coctail stick. There are holes, and in the first prototype I fitted wire to align the parts. However I found that gets in the way of the sliding action and it is just as easy to align the holes by eye. I have added spares of the more fiddly parts. The end result is that each roller assembly should slide in the top sliding rail. Some gentle sanding (or filing) of the rollers can help achieve a nice result.

PHOTO 8E: Bottom guide rail assembly sequence. There are 4 guide rails, each having 4 short strips. 3 strips have P&S backing, the outermost face with the 3 rivet-head cuts doesn't. Make up the guide rails "H" profile as shown.

PHOTO 8F: glue the rollers to the doors in the postion indicated on the frames. Ensure they are level and at the same height.

Remove P+S backing and fit the guide rail to brick wall. Note position of the doors needs to clear any trackwork. The brick courses will help you judge what is needed. (if you have track going through these doors!)

Slide the doors onto the top rail from the ends. They should slide into the groove in the top rail. (Depending on assembly clearances they make just hook over the rail). Then remove the P&S from the top rail spacers, fit the bottom of the doors into the bottom guides and offer up the assembly to the front wall. Ensure the toprail sits centrally between the pillars.

9. Skylight assembly.

PHOTO 9A: paint the parts of the skylight assemblies. So that the vent detail stands out I suggest you don't paint it black, but rather a grimey grey with some lighter weathering/rust along the edges of the fan blades. You won't be able to get at them properly once the fans are installed. The skylight support is on this frame, but is not needed until the roof frame is built. Keep them safe, you'll need them later!

PHOTOS 9B: Fit the P&S vent parts to each end.

PHOTO 9C Paint the window frame and glazing bars, then make up the peel and stick windows. They are applied to the skylight walls with the frames on the outside. (Sorry, that's bit obvious!)

PHOTO 9D: Instead of windows you may prefer to have slatted vents so I have included that option. Each vent assembly is made up from laser cut micro-ply as shown in the photos, and then fitted to the window openings from the inside. The P&S window frame is then used as trim around the edge.

PHOTOS 9E: Strightforward skylight assembly. Glue one end and side to the skylight base, aligning the slot and tabs. Note the holes on the side are where the roof rafters are glued later. Complete the basic structure with the other side and end, and then glue the skylight roof panels into place. The small triangular roof strengthener fits in the centre.

Do not add the peel and stick corner trims yet, but keep them safe. They are on the same card panel as the skylight windows. These are best fitted once the roof has been made up, just before adding the shingles.

10. Roof frame assembly.

This is the where the kit really starts to come together! I strongly recommend a trial assembly of the roof frame so you can fully understand the structure before gluing anything. The roof frame holds the whole structure together.

PHOTO 10A: stain/paint the roof frame parts to taste.

PHOTO 10B: The roof frame is made in 2 halves. Start each half with the 2 joists either side of the skylight. Glue the purlins into place, the centre bars, and the skylight support plate as shown, keeping the structure exactly square. Make both halfs.

PHOTO 10C Check that the skylights fit snugly between the frames, BUT DO NOT GLUE THEM INTO PLACE. A little filling may help to ensure they will be able to be taken on and off. (The roof is held in place by the snug fit of the sklights, but you don't want them too tight). Make both halves as shown.

PHOTO 10D: Join the 2 halves of the roof frames together. Glue the centre roof joist into place on one half, (using short centre bars) and then glue the other half to the centre joist. The purlins will also meet at the centre roof joist and should be glued together. (Tough to word this – follow the pics!). End result is 5 roof joists, in line, all with their apex and base at the same height, sitting squarely on a flat surface. Tip: using a block of wood under all 5 the joists will help keep them at the same level while you assemble.

PHOTO 10E: Using the short centre bars, and the ends of the purlins, glue the 2 end joists into place to complete the roof frame structure. Keep the ridge and edges lined up, and the joists at the same height. (tip: that block of wood is most handy here.)

PHOTO 10F: Prepare the gable ends. These can be further improved by lifting some of the plank edges with a craft knife (take care!) and also punching some nail heads (I use a small nail!) glue the gables onto the end joists, lining up with the apex and joist edges.

Congratulations! Now you have a firm roof substructure upon which to fit the roof panel assembly.

11. Roof panel assembly.

Do you want the roof to be removable? The roof lifts off as a one piece panel, complete with the rafters and skylights, to reveal the roof framework below. Having spent time on that roof frame, and painting the inside of the walls, it would be a shame not to show them off occasionally! Also gives you the option of showing off further detailing of the shed interior later. The roof is made up of 4 panels. It's easiest to make the roof in 2 halves – then join them together in the centre.

PHOTO 11A: glue the rafters to each of 4 roof panels using the location tabs to guide you. The rafters help to keep the large panels rigid and flat. There are 3 short and 4 long rafters per panel. Note that they are not

PHOTO 11B: glue the triangular ridge braces into place to one half, and offer up the skylight into place, fitting the rafter tabs into the holes on the skylight walls (don't glue the skylight just yet). Fit the other half of the roof panel in place, locating the skylight-rafter tabs first then the ridge triangle tabs. Secure the 2 halves with tape across the ridge, check all is square then run superglue along the triangle ridges and along the joints between skylight and roof panels + rafter tabs. You'll need to make both halves of the roof.

PHOTO SEQUENCE 11C:
11C 1. Now its time to join the roof panels together using 8 mico-ply "joiners". Notice the positions for these are engraved into the roof panels.
11C 2. Test fit each roof panel to the roof frame, ensuring correct location of the skylights.
11C 3. At the centre of the roof, the edge of each panel should line up halfway across the centre joist. With both roof panels test fitted to the frame, the panels should butt together at the centre, with the roof edges lined up.
11C 4. Fit 2 roof joiners through the holes of a ridge triangle, and superglue into place using the engraved marks as a guide.
11C 5. Then offer that roof panel back onto the roof frame, followed by the other roof panel. Tape the 2 halfs together while on the roof frame. This ensures they are set together in the right position. With the roof panel still on the frame, run superglue along the 2 joiners.
11C 6. Keeping the tape in place, carefully lift the roof from the roof frame. On the underside fit the remaining 6 joiners between the 2 roof halfs.
11C 7-9. When glue is set, remove the tape. Another trial fit to the roof frame will show that the joiners sit in notches on the roof joists.

PHOTO 11D. After staining/painting with a dark colour, glue the soffits in place on the end of the rafters. These will fill the gap between the top of the walls and the underside of the roof panel.

PHOTO 11E. The finished roof should sit squarely on the roof frame joists. Add the skylight corner trim (remove P&S backing) then follow instructions in the shingle pack to add the shingles.

12. Structure assembly

All the subassemblies are now complete to allow the construction of the complete structure.

The roof frame assembly is used to check square-ness to ensure everything is in the correct position.

PHOTO 12A: Glue the end walls to the roof frame using contact adhesive. Note the frames are level with the joists on the inside of the structure. Make sure the walls they are upright. Using tape helps keep them in position.

PHOTO 12B Trial fit the front wall. Note the roof frame entre joist centrally on the centre pillar, and the "skylight roof joists" are centred on the door pillars. Now remove, and apply glue to the end walls and roof joists that make contact with the front wall, then refit the front wall into its correct position.

PHOTO 12C: after painting, glue the 8 joist plates into place on the roof joist above the door pillars

PHOTO 12D After trail fitting, glue the rear brick wall section into place.

PHOTO 12E glue the 4 joist brackets into the wooden back wall panels, then glue the panels to the rear brick walls and roof joists, ensure the roof brackets line up. (or glue the walls in first, then turn over to fit the brackets)

PHOTO 12F Glue the hinged doors on.

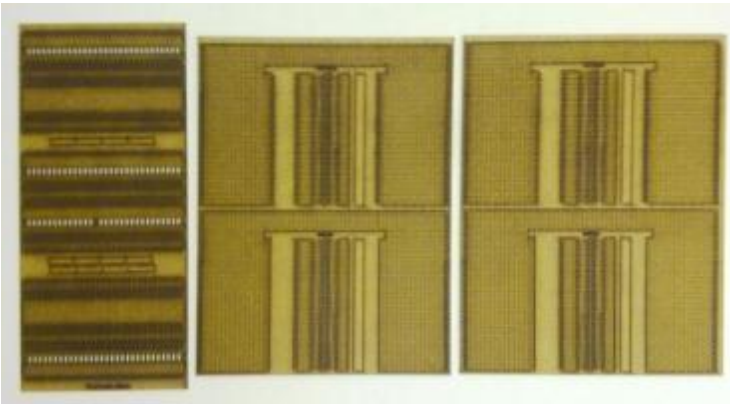
13. You're done!

Thank you for purchasing the kit. If you have any trouble during the build, or constructive feedback, please contact me at sales@kitwoodhillmodels.com

Please do email me your pics of the completed model (or kit bashes from it) to sales@kitwoodhillmodels.com. I would love to see photos of your build and share them on the website with due recognition to the modeller.

Happy modelling! Simon Cox

PHOTOS 1A parts for front walls (2 walls with door pillars + 3 wall pillars)



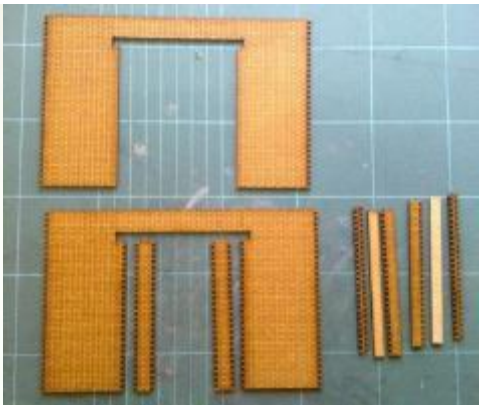
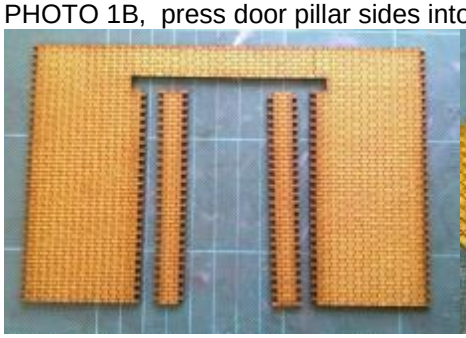


PHOTO 1B, press door pillar sides into place and glue.



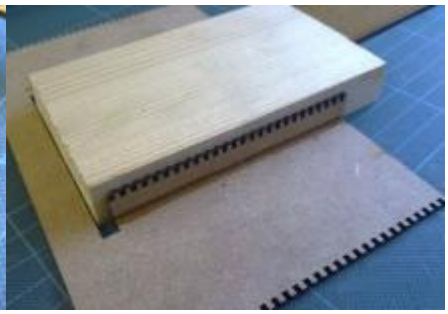


PHOTO 1C Glue inside wall to back face. Ensure perfect fit at edges.

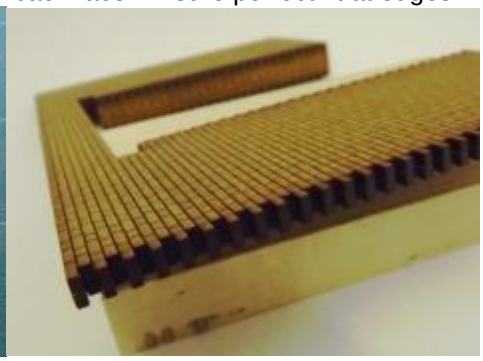


PHOTO 1D glue door pillar end strip and spacer into place.

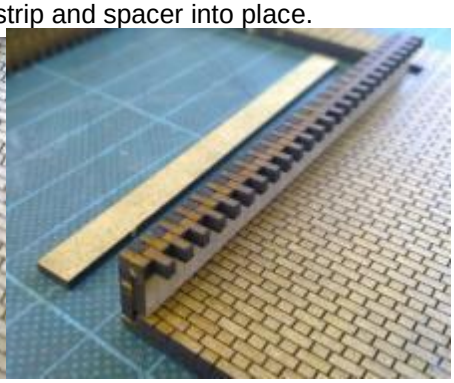


PHOTO 1E. Glue door pillar returns into place. PHOTO 1F Repeat with second front wall section.

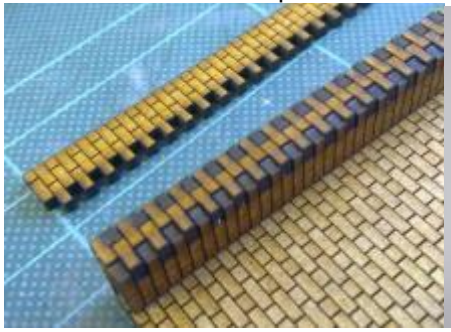


PHOTO 1G parts for rear wall (2 walls, 2 spacers per wall section + 3 pillars)

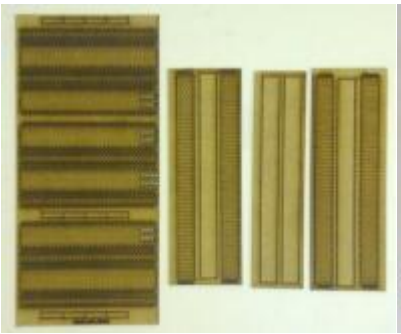
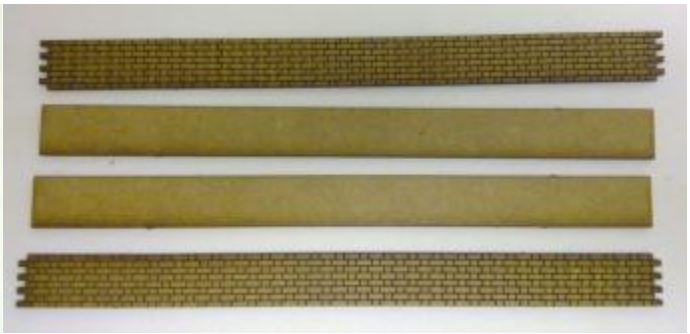



PHOTO 1H Glue spacers together, then to one wall. Glue remaining wall. WATCH ALIGNMENT

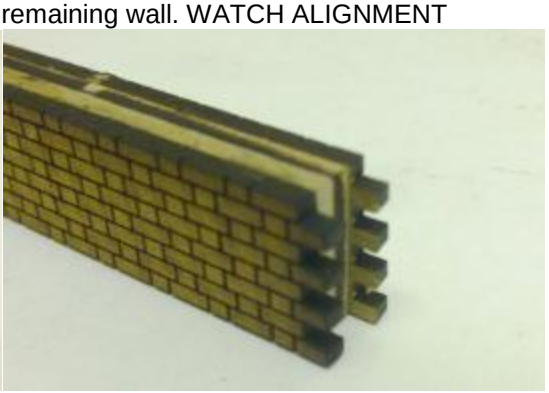



PHOTO 1J: sand very gently to make level (if needed). PHOTO 1K: make other rear wall.

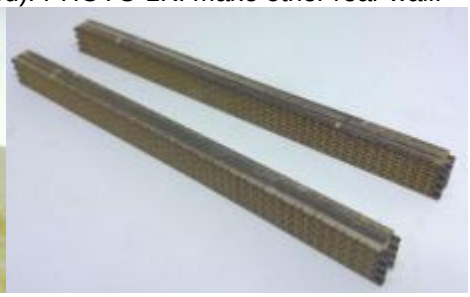
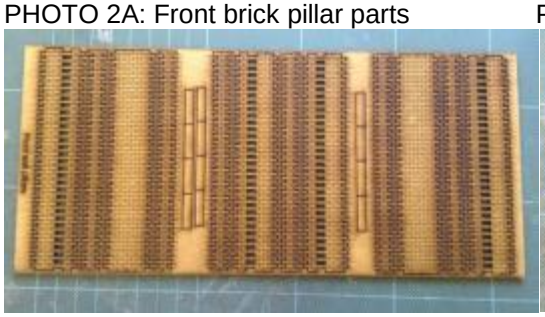



PHOTO 2A: Front brick pillar parts PHOTO 2B PHOTO 2C: glue pillar sides.



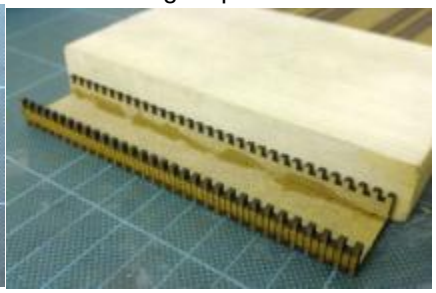


PHOTO 2D: glue spacers. PHOTO 2E: Glue other side. PHOTO 2F: take care aligning centre pillar holes

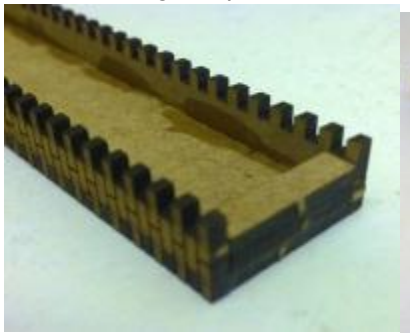
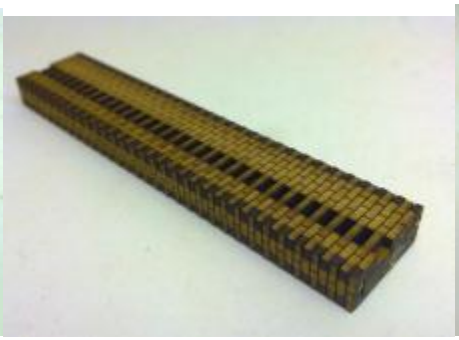
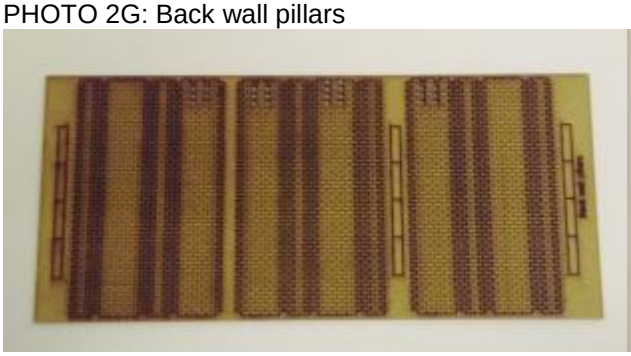




PHOTO 2G: Back wall pillars



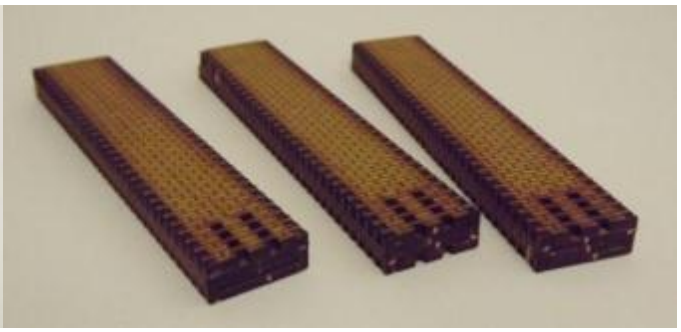
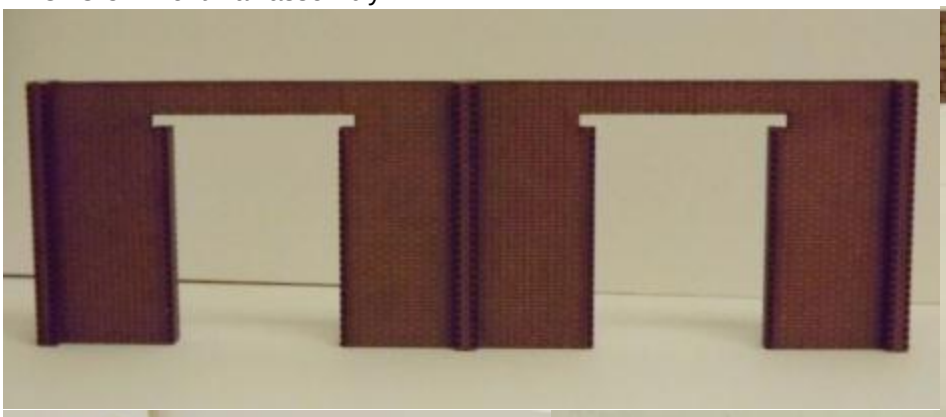
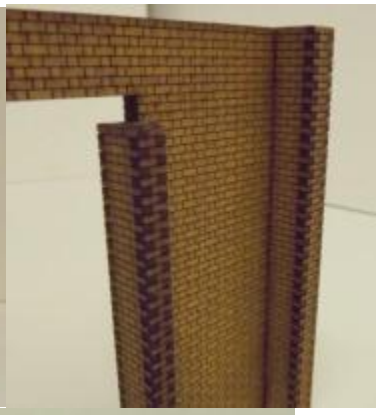
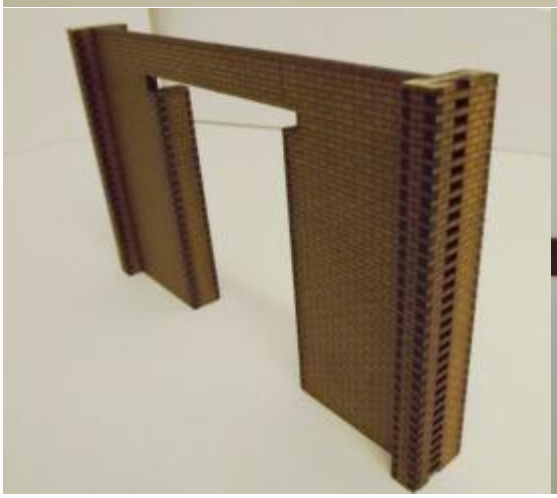


PHOTO 3A Front wall assembly







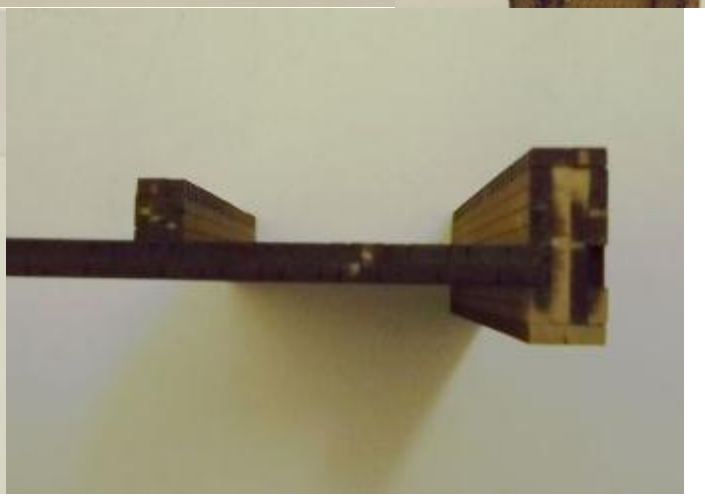


PHOTO 3B Back wall assembly

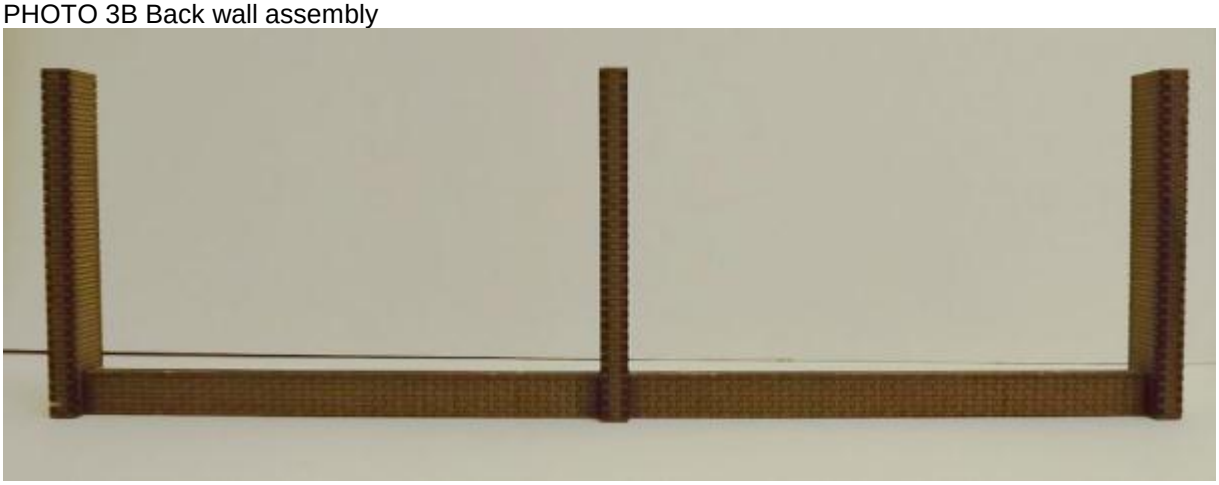


PHOTO 4A: wooden back wall

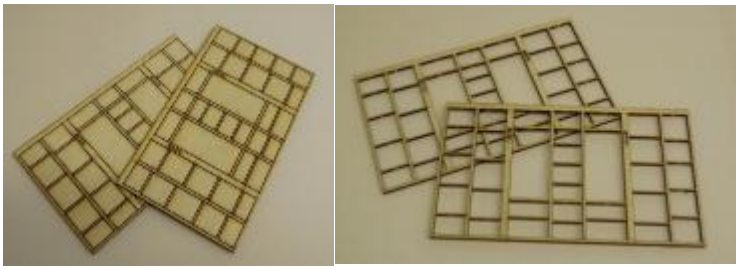


PHOTO 4B: stain wooden back walls. PHOTO 4C: apply peel and stick

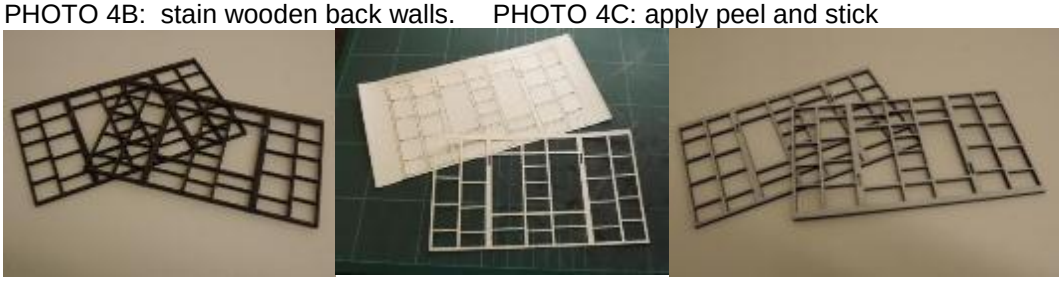
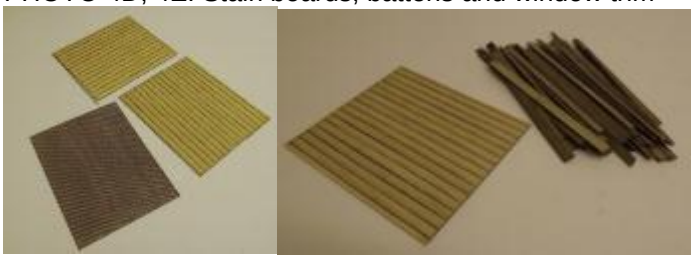


PHOTO 4D, 4E. Stain boards, battens and window trim



PHOTOS 4F: Boards fitted to frames, then window openings cut out

PHOTOS 4G, 4H window trim and battens added

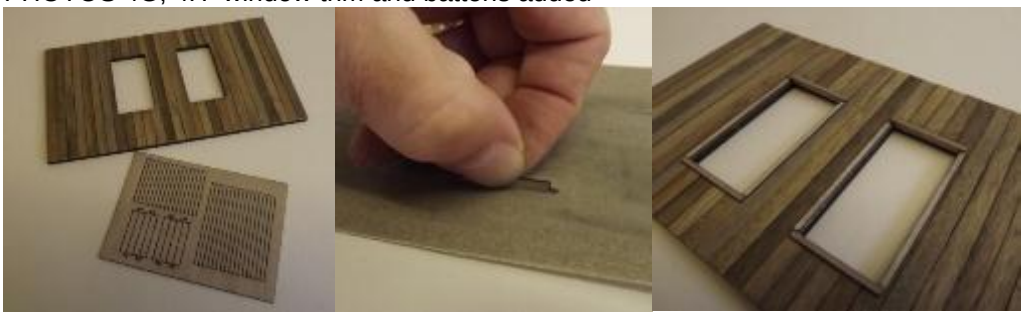


PHOTO 4J add battens. Note battens are cut short at the bottom of the wall

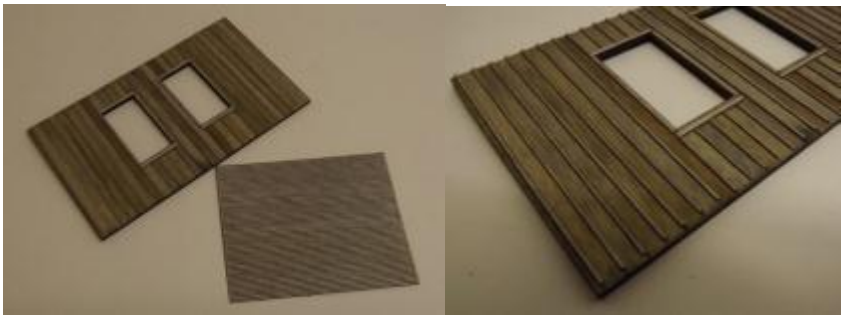


PHOTO 5A End wall frames + PHOTO 5B Alternative end wall frames

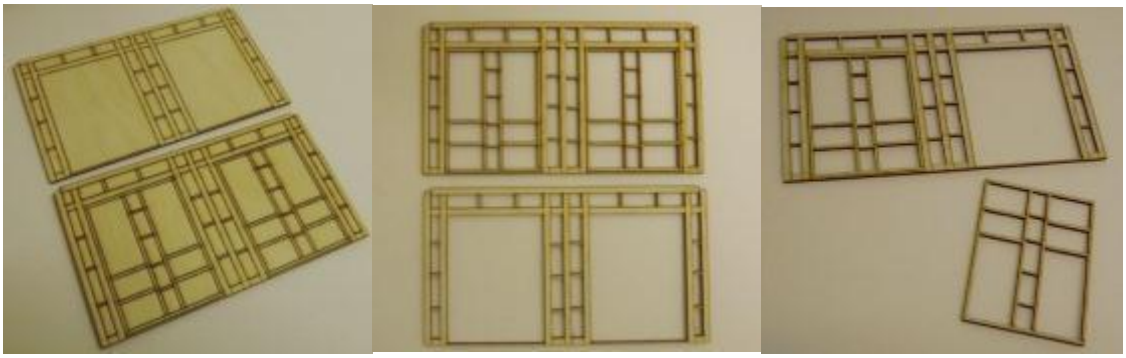
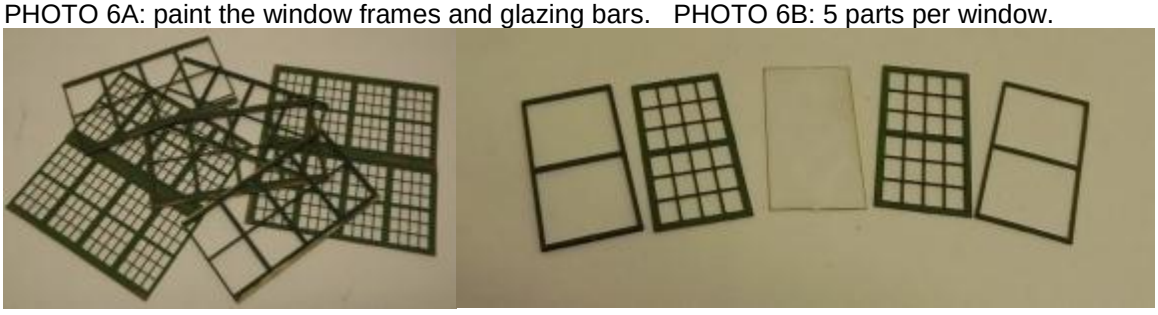


PHOTO 5C: End walls made up in same way as the side walls, with boards, battens and window trim.

PHOTOS 5D: Trial fit the door frame strips, trim as needed. Stain and fit doorframes

PHOTO 6A: paint the window frames and glazing bars. PHOTO 6B: 5 parts per window.



PHOTOS 6C: Window assembly. Glazing bars either side of “glass”, frames either side (one card, one microply)

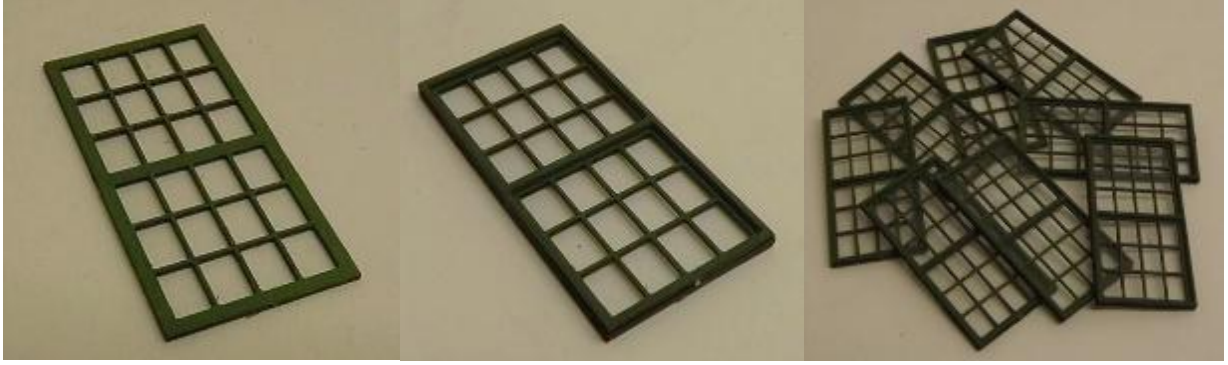


PHOTO 6D: Glue the windows in place

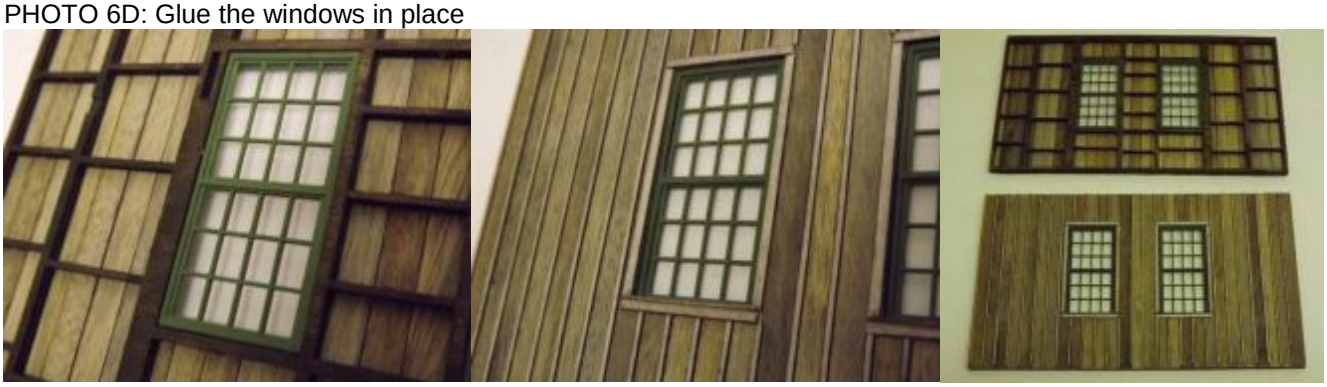


PHOTO 7A: Hinged door parts PHOTO 7B: assembled and painted doors with painted hinges.

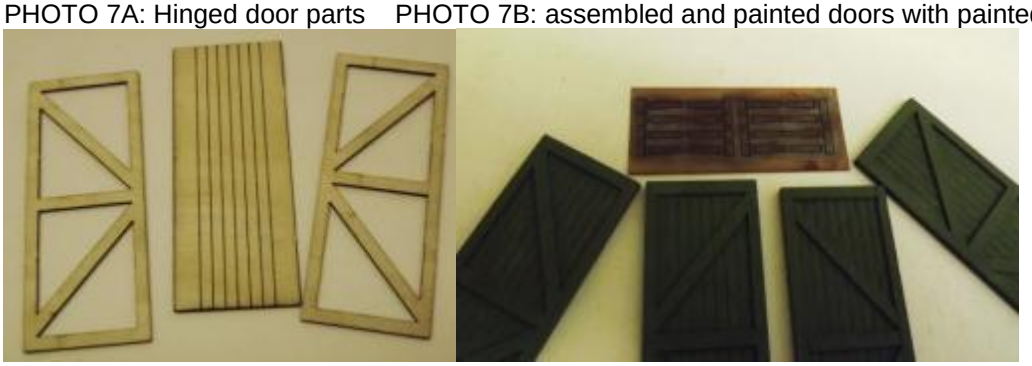
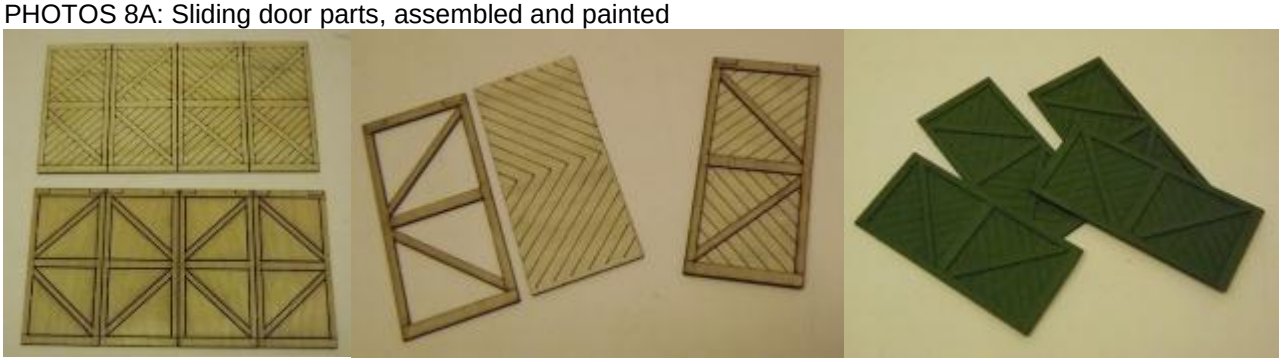


PHOTO 7C: Hinge bar fitted to door. PHOTOS 7D: postioning door hinge brackets - leave height for track!

PHOTOS 8A: Sliding door parts, assembled and painted



PHOTOS 8B: i)Parts for top slide rail, ii)bottom guide rail, and iii) roller

PHOTOS 8C: Top slide rails assembly

PHOTOS 8D: Roller assembly

PHOTOS 8E. Bottom guide rail assembly – 4 simple steps.

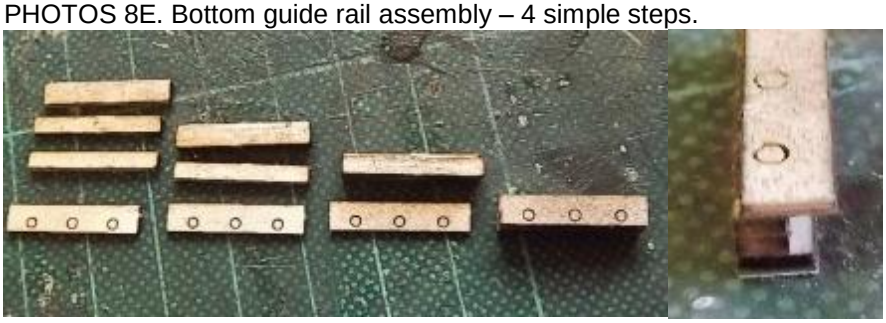


PHOTO 8F: Fit sliding doors to wall

How much gap for track?
Assuming the track is not set into the "ground", if you are using ME track or (or handlaid code 75 on 1/6" thick ties) then a spacing of one course of bricks should be OK.
For Peco On30 / O-16.5 code 100 track you'll need 2 courses.
Fit the lower guide rails first.

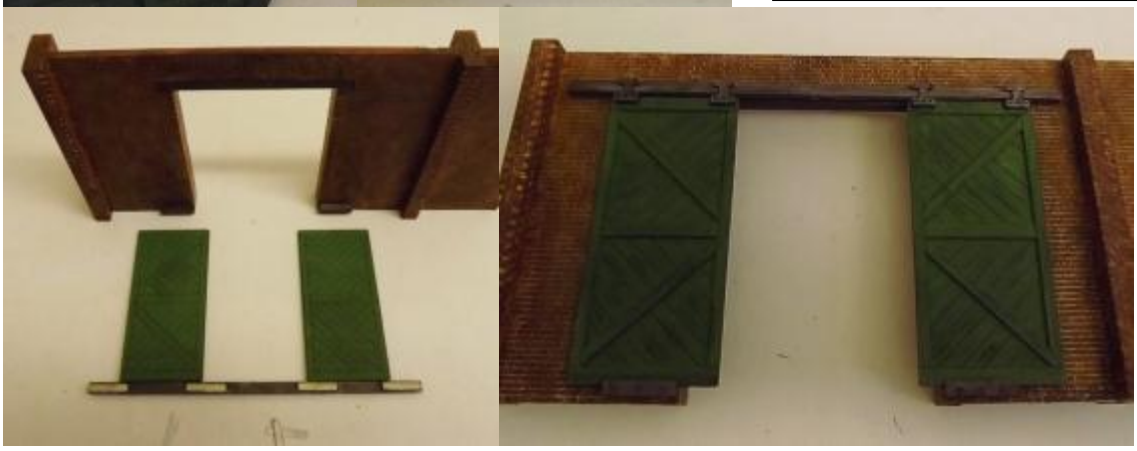


PHOTO 9A Paint Skylight parts. Separate skylight supports and keep safe.

PHOTO 9B: Fit vents to each end.

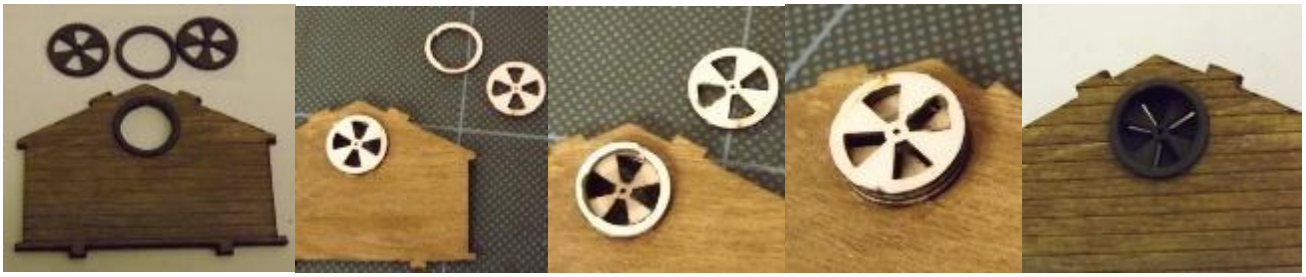


PHOTO 9C: fit windows to Skylight sides.

PHOTO 9D: Alternative to windows: slatted vents.

PHOTO 9E: Skylight assembly

PHOTO 10A: Roof frame and roof rafter parts – there are a lot of them! Note the different lengths of centre bars.

PHOTO 10B: start assembly with frames around each skylight. Ensure everything is square!

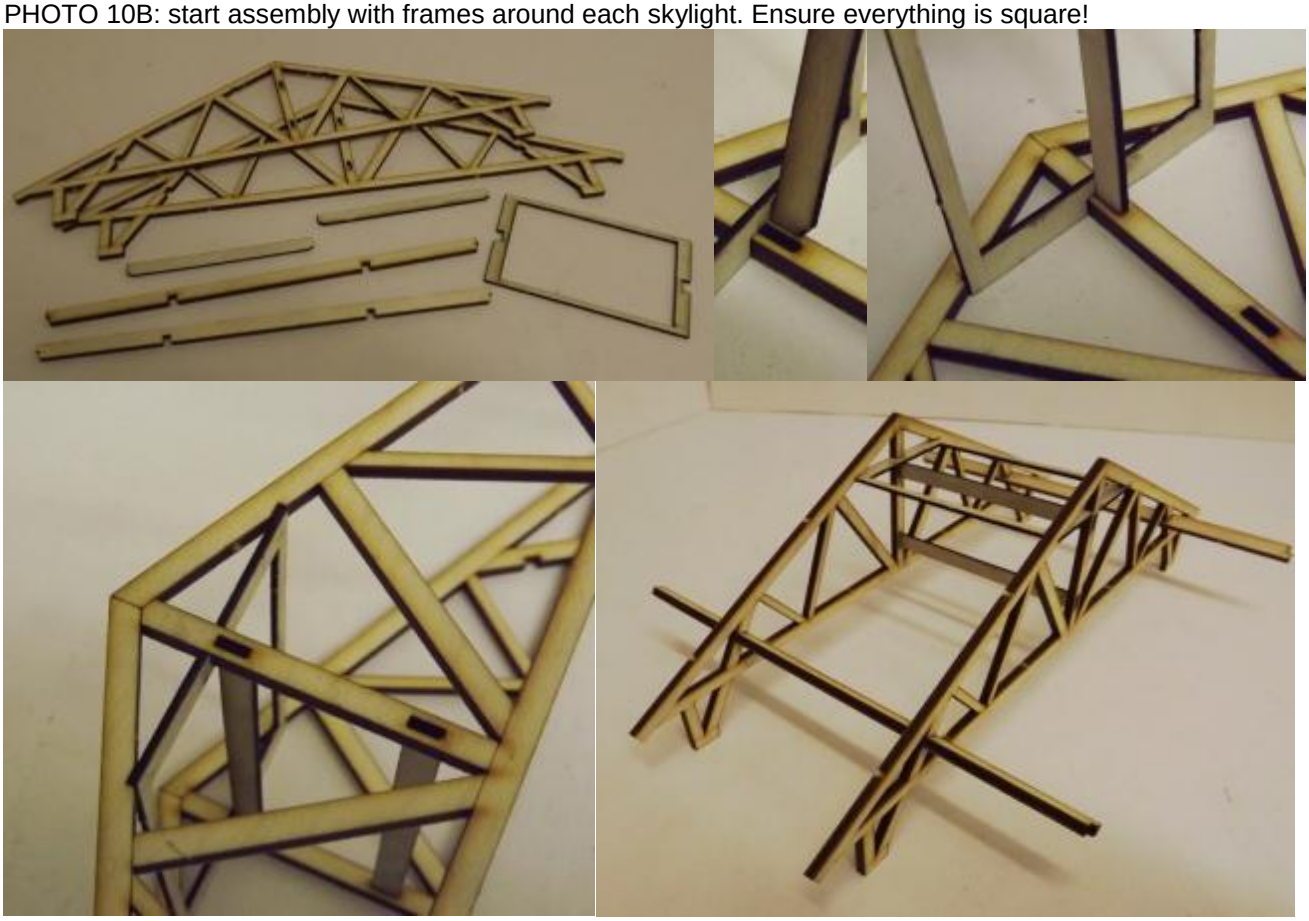


PHOTO 10C: Skylight should be a snug fit on its support, but easy to remove on and off. May need a bit of filing. Make both halves.

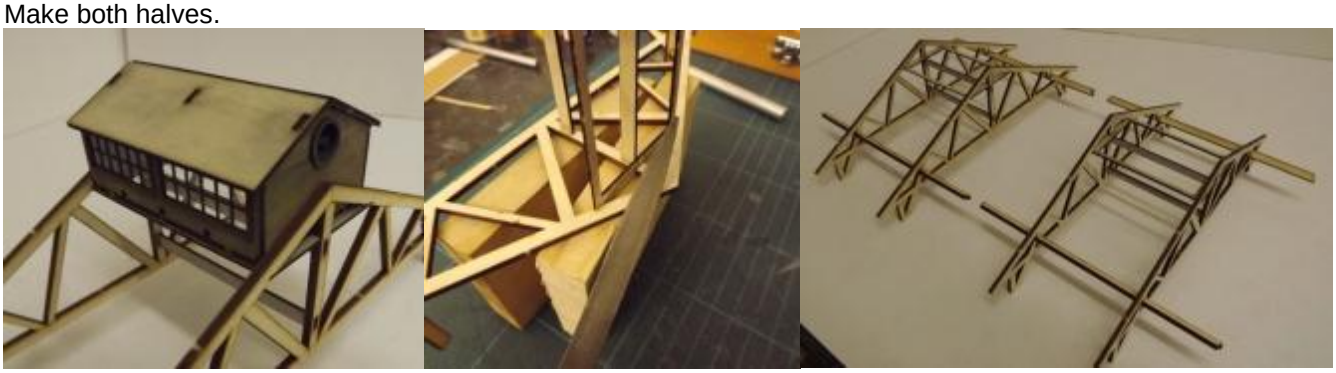


PHOTO 10D: join both halves of the roof frame together with centre A frame.
Keep everything straight, square and level

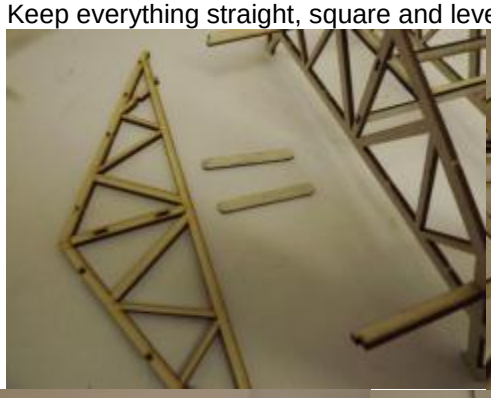
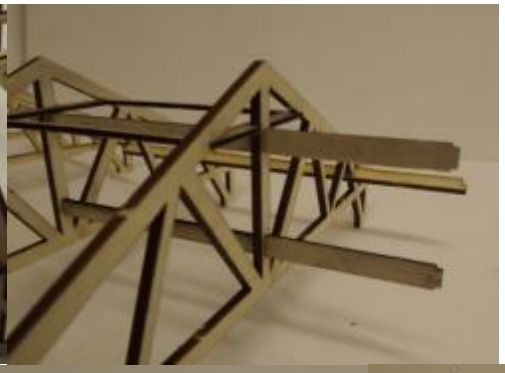
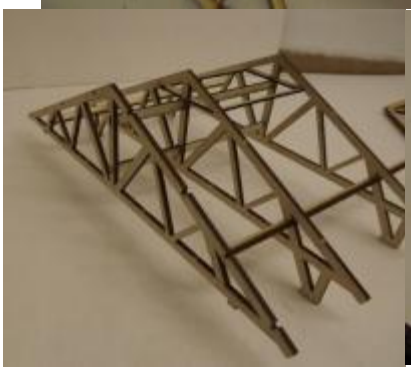




PHOTO 10E: using the remaining short centre bars, fit the end A frames to complete the frame structure.

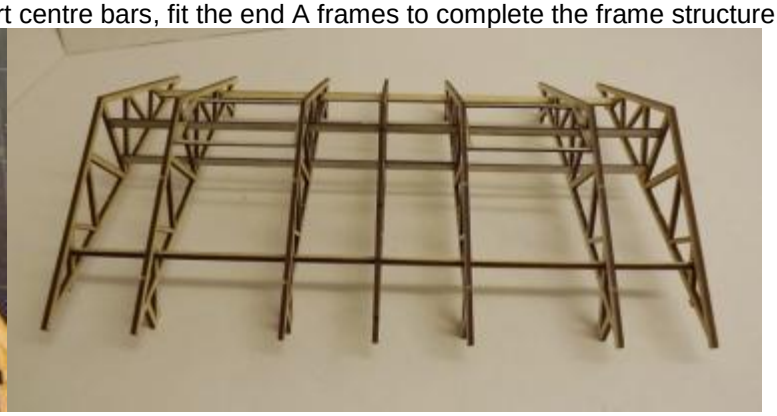



PHOTO 10F: Stain or paint the gable ends and glue to the frames.



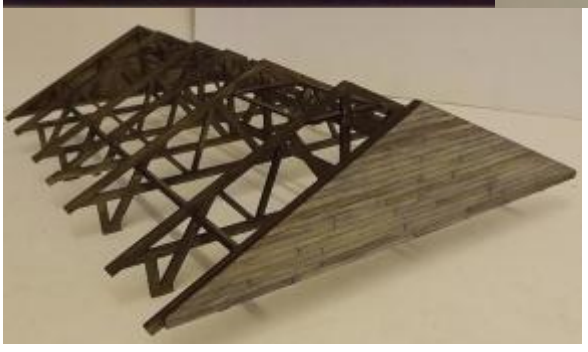


PHOTO 11A: Roof panel.

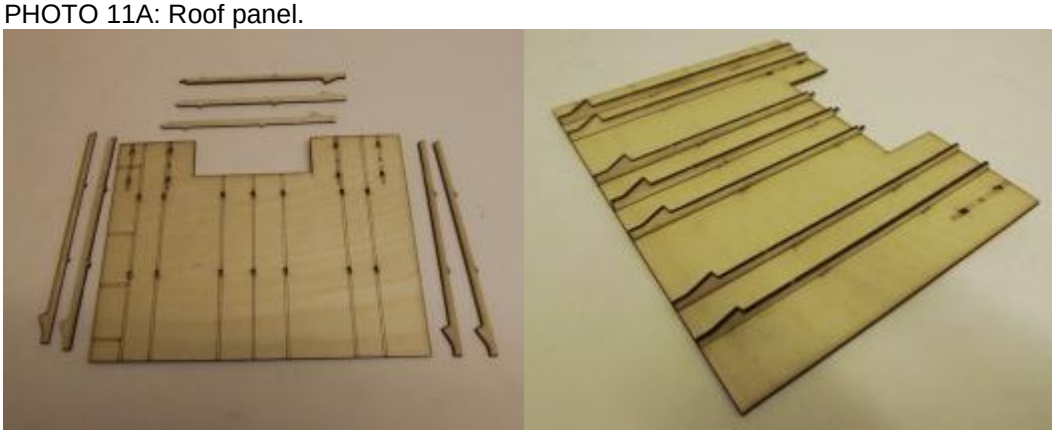


PHOTO 11B: Roof assembly of one half.

PHOTO 11C test fit to frame – do not glue the roof panels to the roof frame if you want a removable roof! Join the roof panels together.

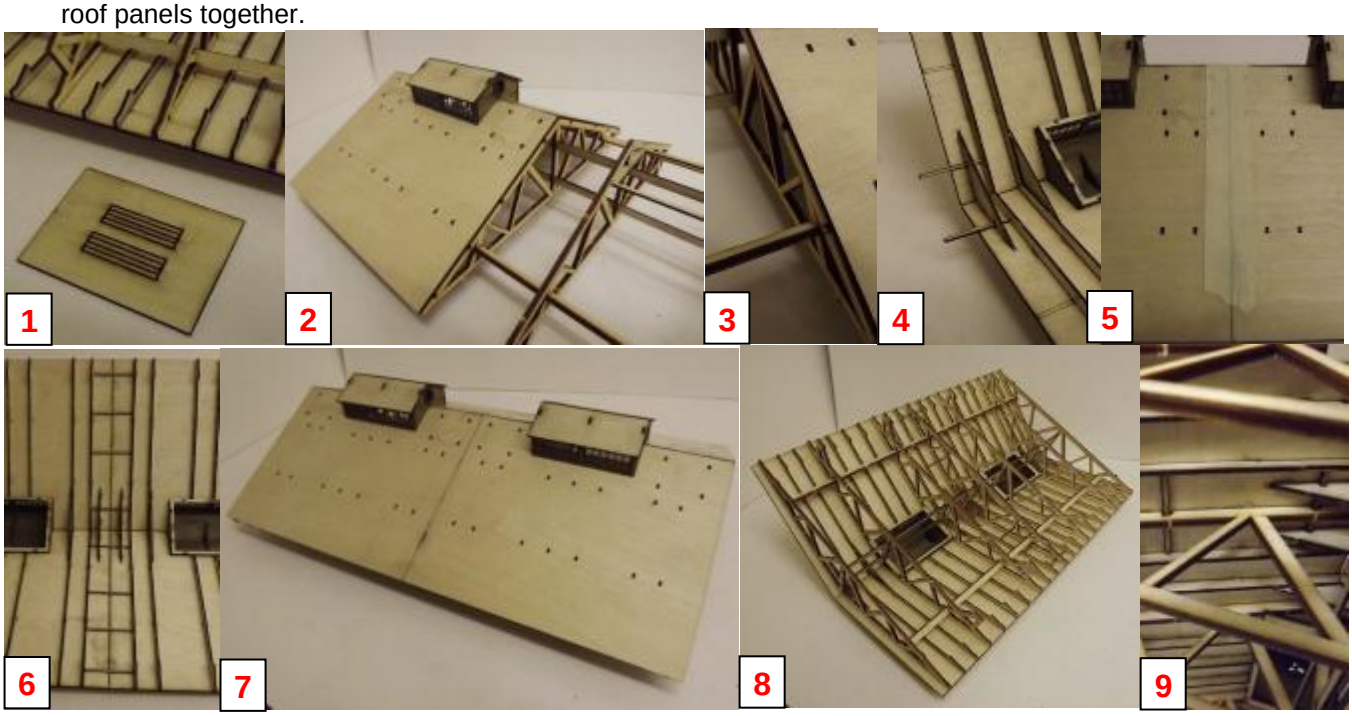
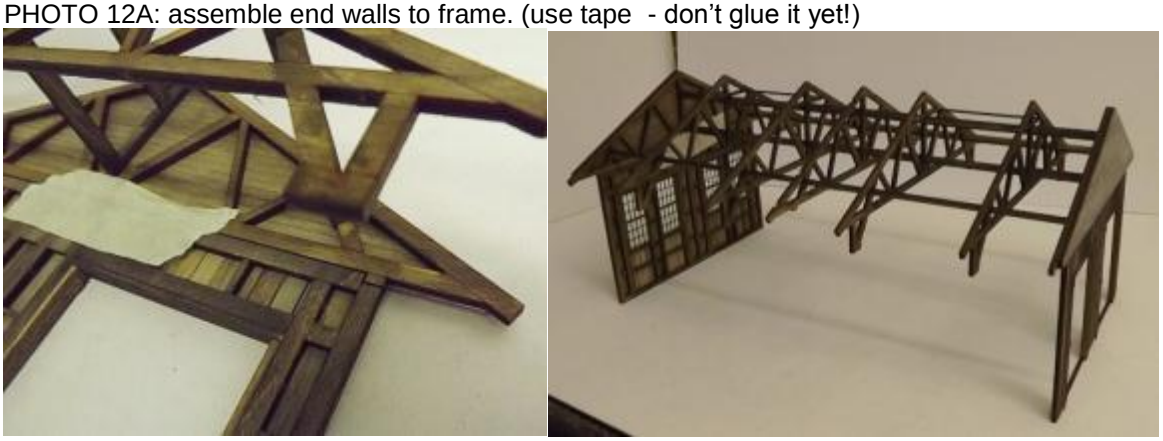


PHOTO 11D: Glue soffit boards in place.

PHOTO 12A: assemble end walls to frame. (use tape - don't glue it yet!)



PHOTOS 12B – fit "front" sliding door brick wall. Roof frame rests centrally on centre pillar and door pillars.

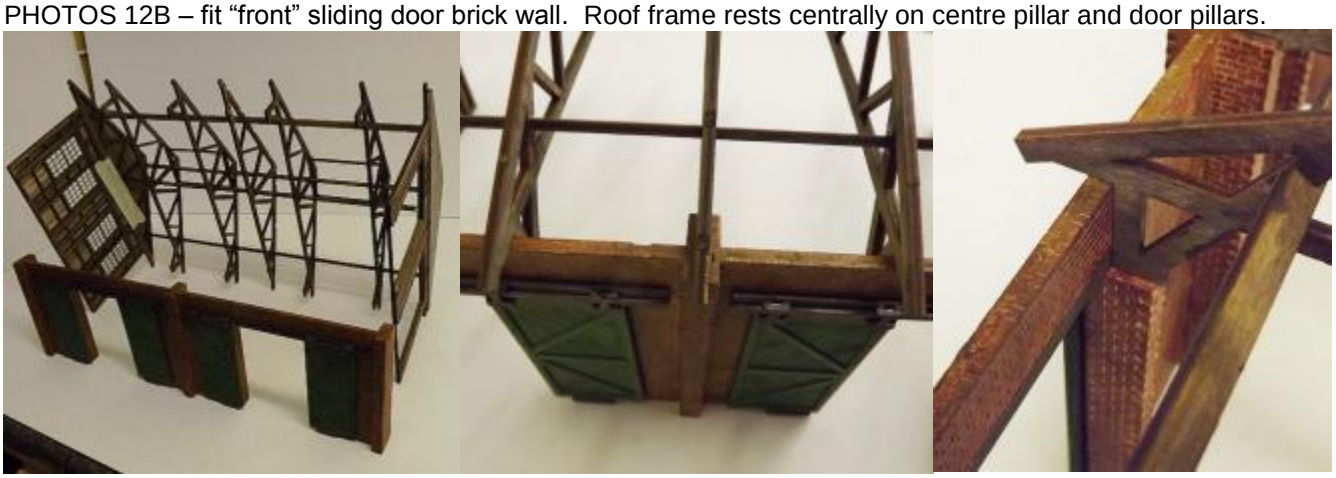


PHOTO 12C: glue roof frame joist plates into place on the roof frame above the door pillars. (8 square pieces)

PHOTO 12D: glue back wall to end walls. Centre pillar aligns to central A frame of roof.

PHOTO 12E: glue roof frame joist brackets into place on back wooden panels and glue the panels to the brick walls.

PHOTO 12F glue the hinged doors on.

PHOTO 11E Fit skylight corner trim before shingles

The completed model