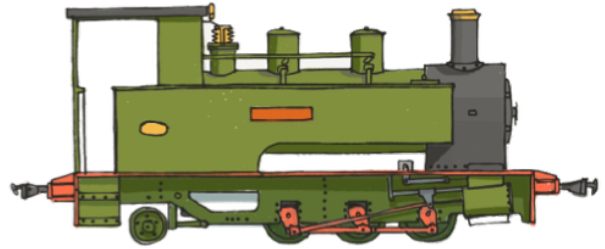


Bowaters

MODELS

specialising in distinctive 16mm models



Bowaters Models – BMF Series Instructions



Requires

- Accucraft Chopper Couplings (Z1 or Z2)
- IP Engineering Large Laser Cut Bogies (Own Choice of Gauge)
- 2-3 A3 pieces of Craft paper
- Glazing Material

Required Tools

- Fine Sandpaper/Emery paper or boards
- Small Files
- PVA Glue
- Super Glue
- Sharp Craft Knife

Prototype Information

During the early 1960s, the Ffestiniog Railway management decided that the current fleet of existing Passenger Stock was inadequate for the constantly growing passenger loads the railway was transporting on a regular basis. To carry these passengers, a new design of coach was drawn up with noticeably more headroom than the existing stock, along with other improvements. The new coaches were built with wooden bodies on steel under frames. The initial set of 6 coaches were built using the profile of the recently rebuilt former L&B Coach No.14 and quickly gained the nickname 'Barns' as a result. Over time, 2 of the first 6 have been scrapped while 4 newer builds have joined the fleet giving a current operational fleet of 8 'Barns'.

Current Operational Fleet:- 100, 102*, 104, 105*, 106*, 107*, 123, 124 (* = Covered by Bowaters Models)

In the early 1990s, as part of the INCA Programme, the FR built a set of 3 similarly designed coaches to boost the operational fleet. All 3 were fitted with push pull equipment and featured aluminium bodies running on steel under frames. These coaches quickly became known as 'Carnforths', after the company that completed the majority of the construction work. All 3 remain in service on the present day Railway.

Current Operational Fleet:- 112*, 113*, 114* (* = Covered by Bowaters Models)

About the Kit

The kit is a wooden kit comprising of a set of laser cut wooden parts. If you have a BMF-001 kit, you will also have a 3D printed section for part of the roof.

Chassis Fitting

This kit is designed for IP Engineering Large Laser Cut Bogies. These are assembled as per the instructions with no modifications required. On the top chassis piece, normally distinguishable by the laser cut detailing on the top surface, flip it over so the detailing is facing down. Then draw a straight line down the centre of the piece lengthways. This is needed so that once the chassis has been assembled, the correct position of the bogies can be achieved. They should normally be added once the chassis has been assembled and should be placed 90mm along the line from each end of the coach. Alternatively, you can attach the bogies closer to the end of the coach to dramatically reduce the minimum radius.

Couplings

This kit is designed to take Accucraft Chopper Couplings (available separately as their part number Z1/Z2). These should be attached into the flat sections below the main coach bodies. These have been positioned so as to be at the correct height for the 16mm Association standard coupling height. We strongly recommend setting the coupling height against your existing motive power fleet.

Instruction notes

With these instructions, there are images which show various stages of the construction of two coach kits. They are of the Prototypes for BMF-001 and BMF-005 which aren't representative of the kit you have brought. They are for reference purposes only.

Painting

Over the time period the coaches we have produced have operated, they carried various paint schemes.

- 1958 to 196? Varnished Wood
- 196? - 198? - All over Maroon (Closest match is Humbrol 20 (Crimson Gloss))
- Push Pull Paint Scheme of Cream and Green (Closest matches are Humbrol 41 (Ivory) and Revell 364 (Leaf Green)) for coaches 117, 121 and 112 to 114
- 199? - Present - Modern FR Coach Paint Scheme of Cream and Maroon (Closest matches are Humbrol 20 (Crimson Gloss) and 41 (Ivory))

Beading Notes

The original kits cover the beading for BMF-001 to BMF-005. The newer generation kits (BMF-006 onwards) feature different styles regarding their beading. The section regarding this is at the back of the main instructions.

Please Turn over

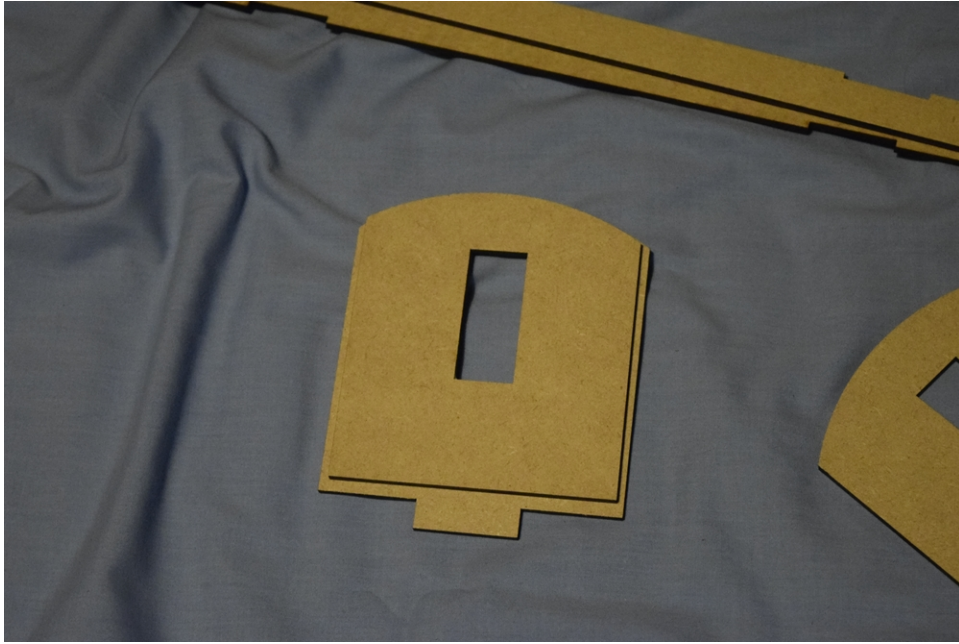
Please read though these instructions before beginning to assemble your
kit



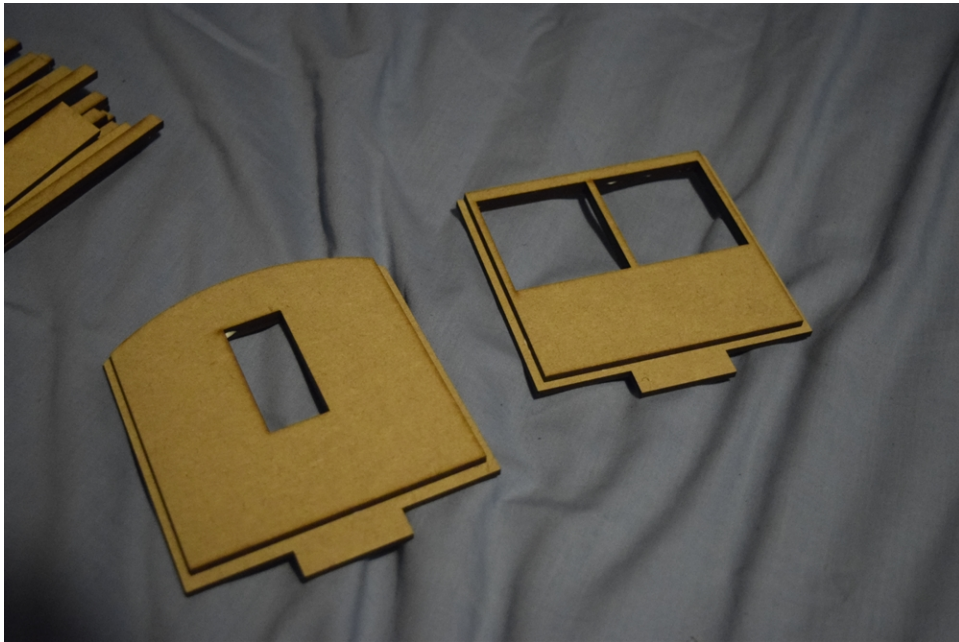
The Kit as you will receive it.



We will start with the sides and ends.



Start by attaching the two layers of the ends together. There are two layers per end piece. The front piece has lots of etched detailing on the front. There should be a 3mm gap along the sides of the piece with the top flush. Some minor filing may be required to get a perfect fit.



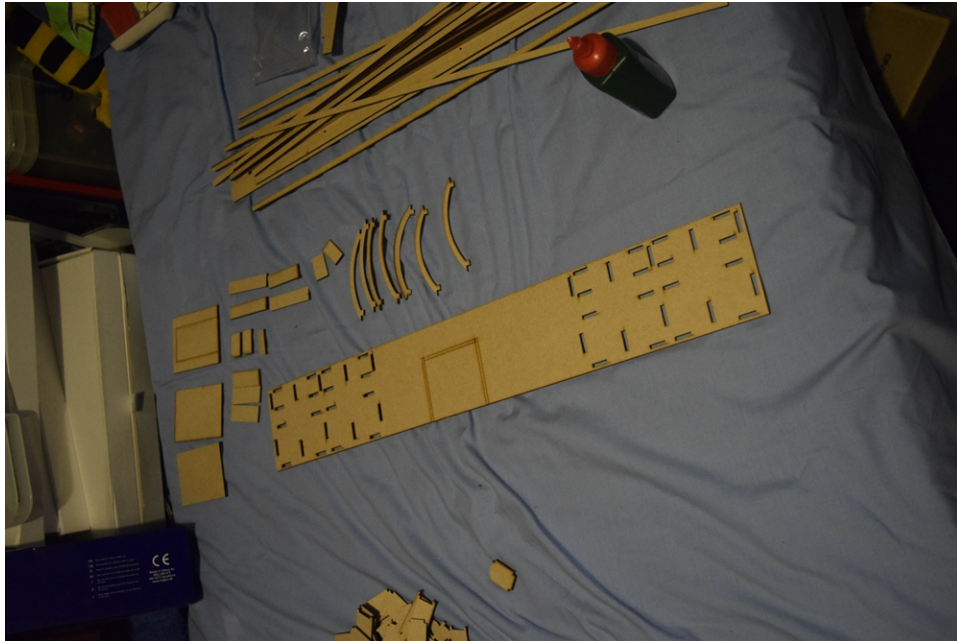
The two end pieces belonging to BMF-001 showing the two distinctive styles.



The sides simply attach onto each other. The same gaps are on the sides (3mm each side) with the top being a flush fit. The interior pieces also double up at the mounting points for Window Glazing.



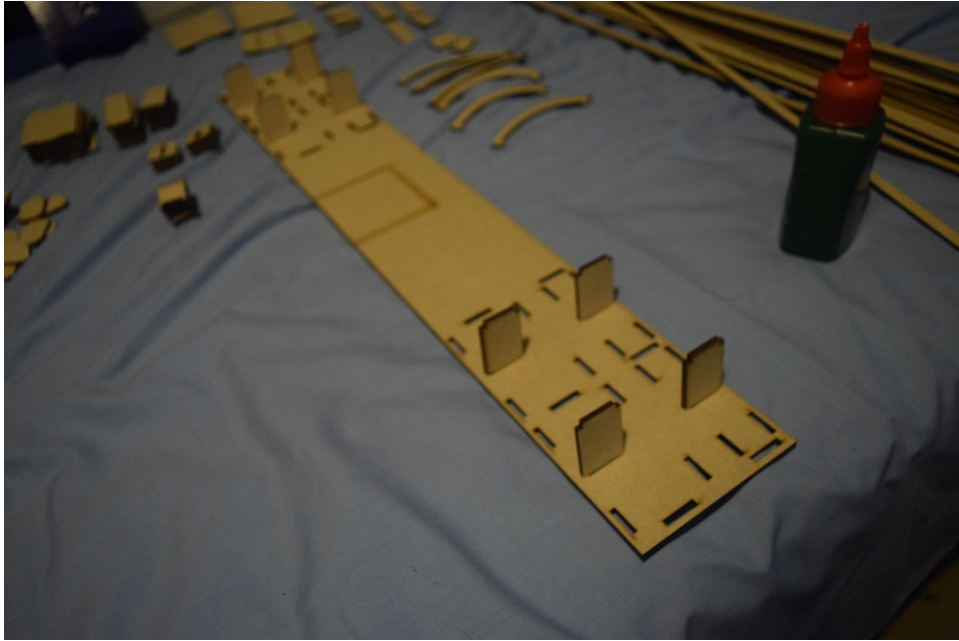
The completed sides and ends belonging to BMF-001.



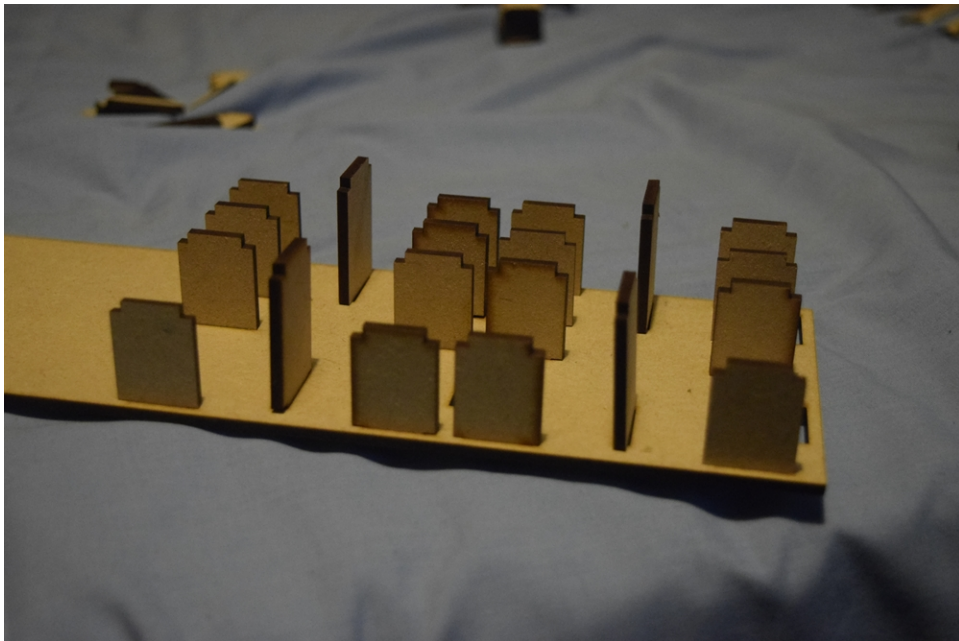
Time to start assembly of the interior. Although the kits are designed to slot together, we strongly recommend gluing the interior together.



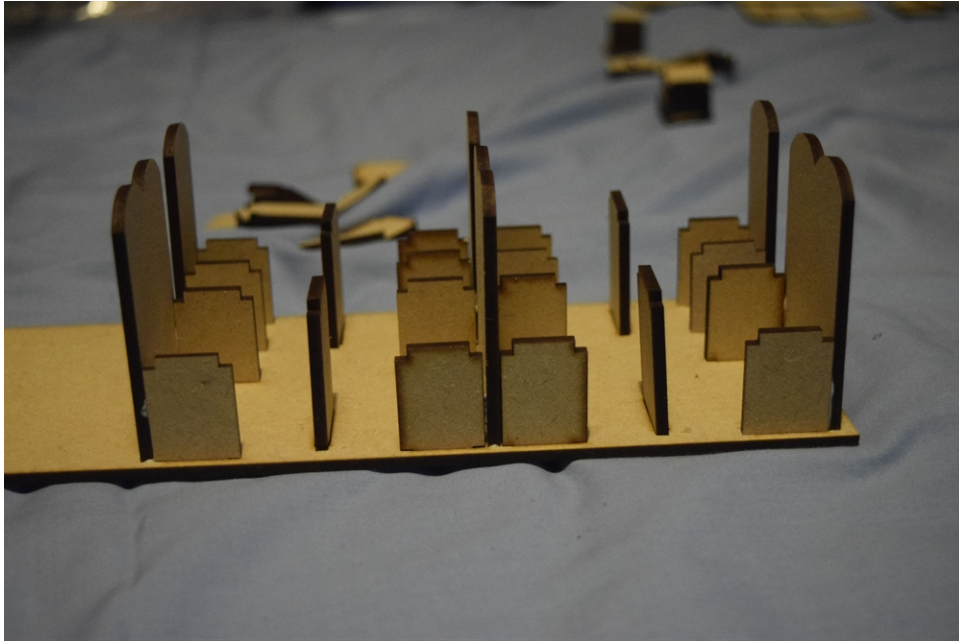
Start by splitting the parts into separate piles for each specific type.



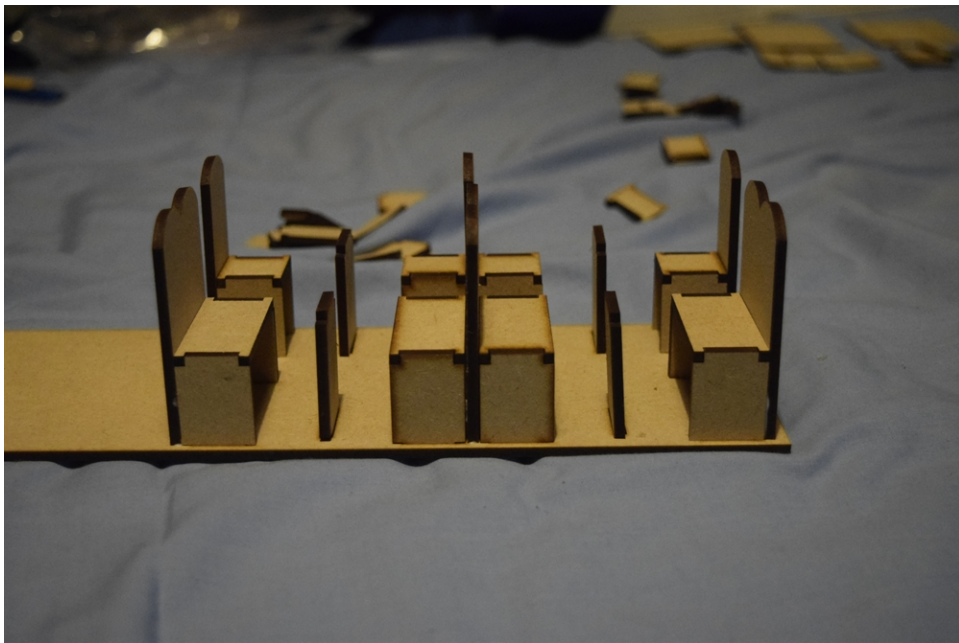
Start with the table uprights. These are the bigger pieces (there are two sizes of the same shape) and slot into the floor.



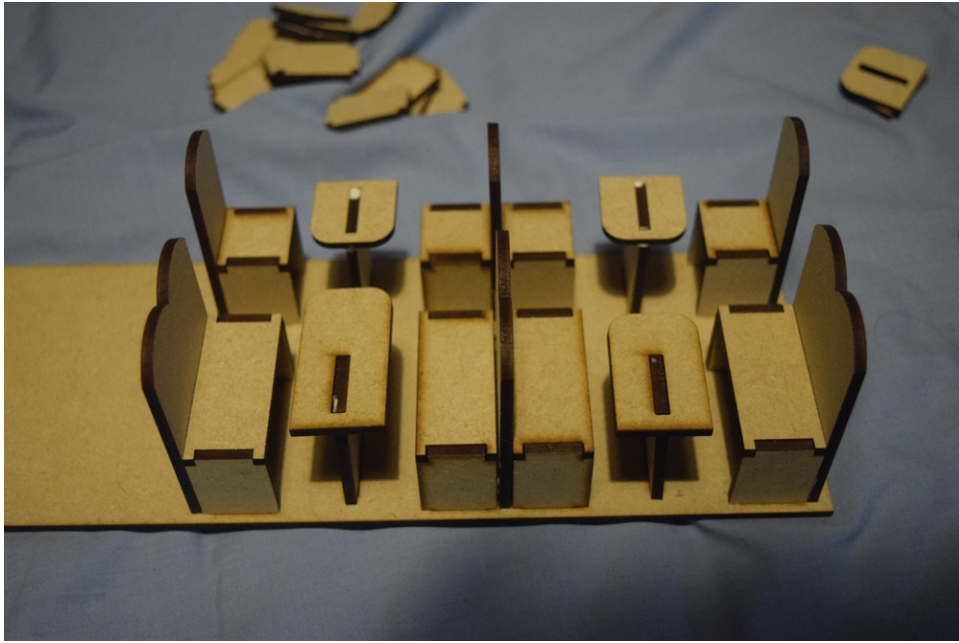
Then slot in the smaller pieces. These will form the supports for the seats within the coach.



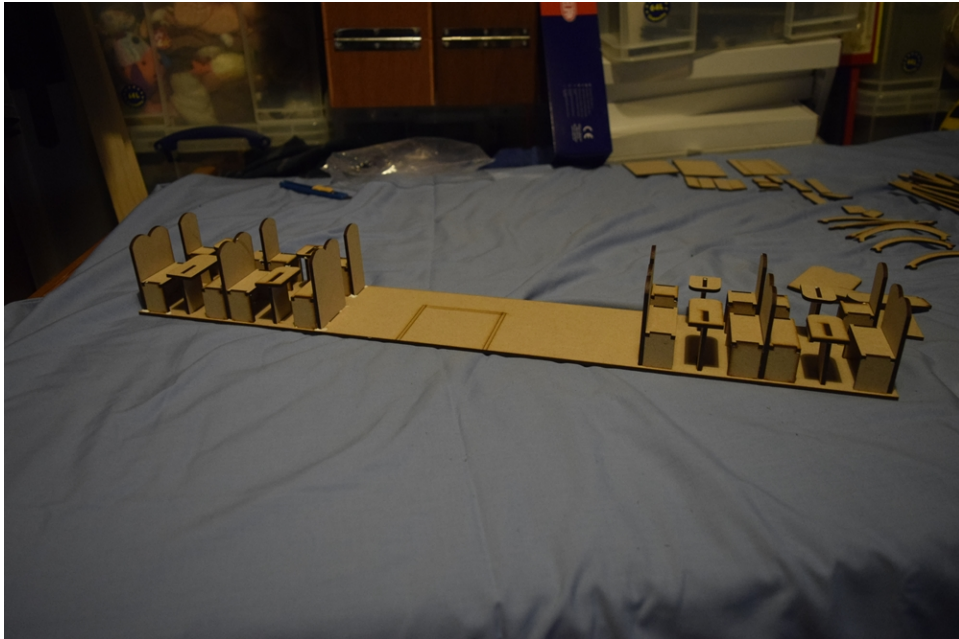
Then add the headrests/backs of the seats.



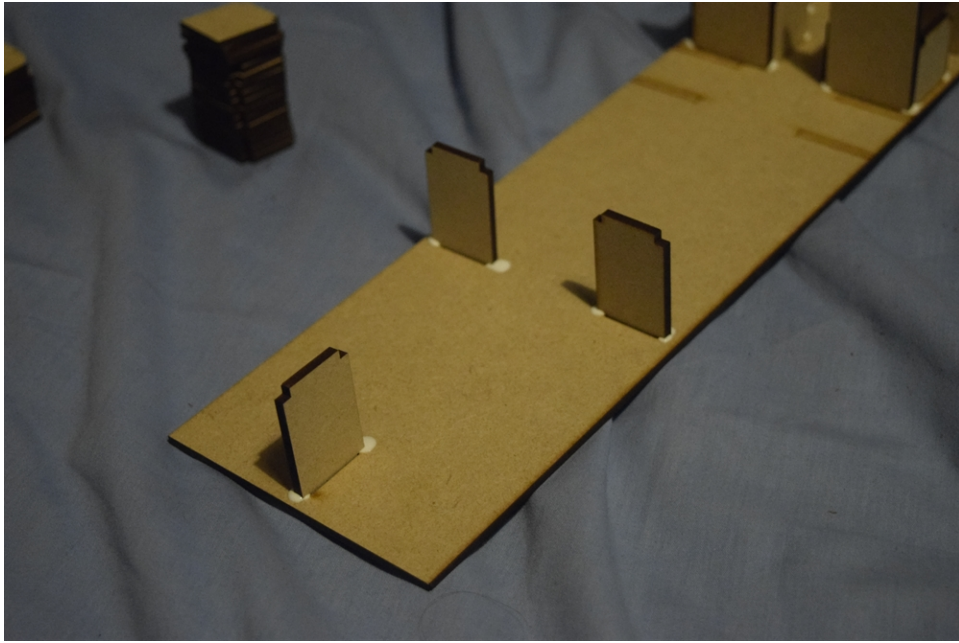
Once the backs have been inserted, glue in the seat tops between the two uprights.



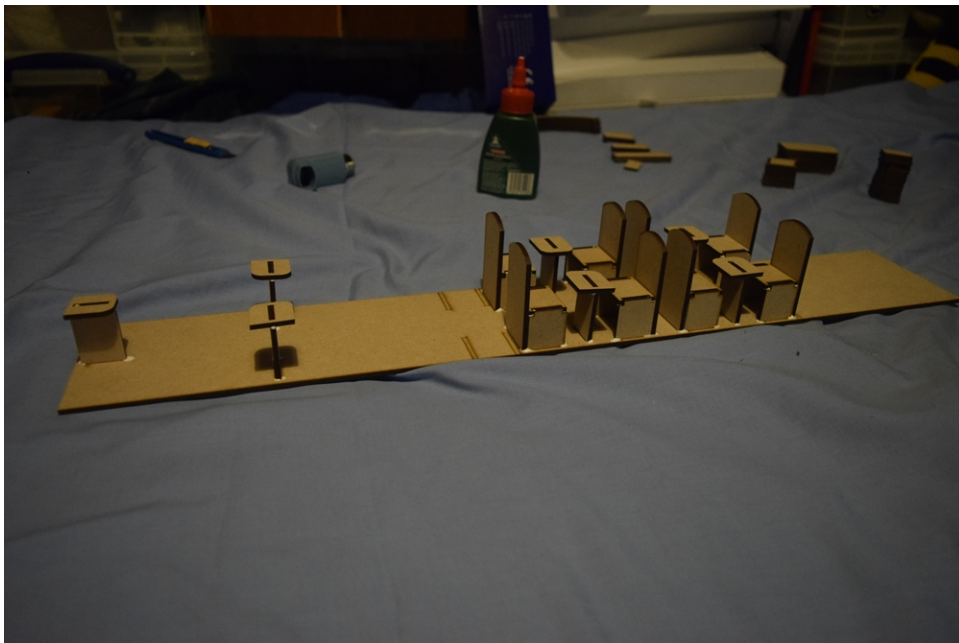
Finally, glue the table tops into place. There are two sizes, one for each side.



The majority of your interior is now complete. Your kit will come with some internal walls. DO NOT glue them into place yet. Only do this once you have assembled the body together.



If you have a BMF-001 kit, one end of the coach is different. Start by gluing the 3 table uprights into place.



Then attach the table tops. This completes the major section of the interior.



As per the prototype, there are a number of moveable seats for this end of the coach. They are left separate so the purchaser can place them where he/she wants. They assemble like the other chairs however they have no tabs on the bottom to slot into the floor.



You should now have all the major bits for assembly. Before we do, lets move onto the coach beading.



To demonstrate the beading, we will use Coach 106 as our demonstration model. All 5 kits follow the same procedure for assembling the beading. Start by splitting up the beading parts into piles based on size.



Once the parts are split, start by laying the pieces on top of the coach side to make sure you have everything you need. Each kit is supplied with suitable spares where deemed necessary. If you have any issues, let us know.



Start gluing the beading on starting with the uprights and door details.



Next, attach the longer sections onto the coach sides.



Finally, attach the smaller sections onto the small areas. Note, these parts vary in size slightly depending on their intended location. We strongly recommend trialling and fitting these parts before gluing to avoid any gaps on the beading.



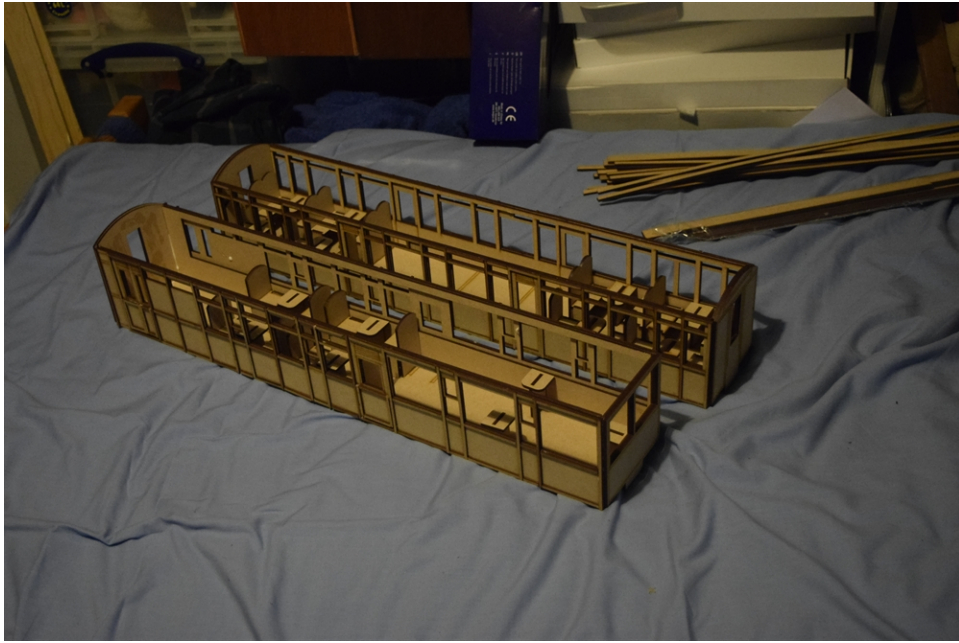
And just like that, your coach sides are now complete ready for assembly.



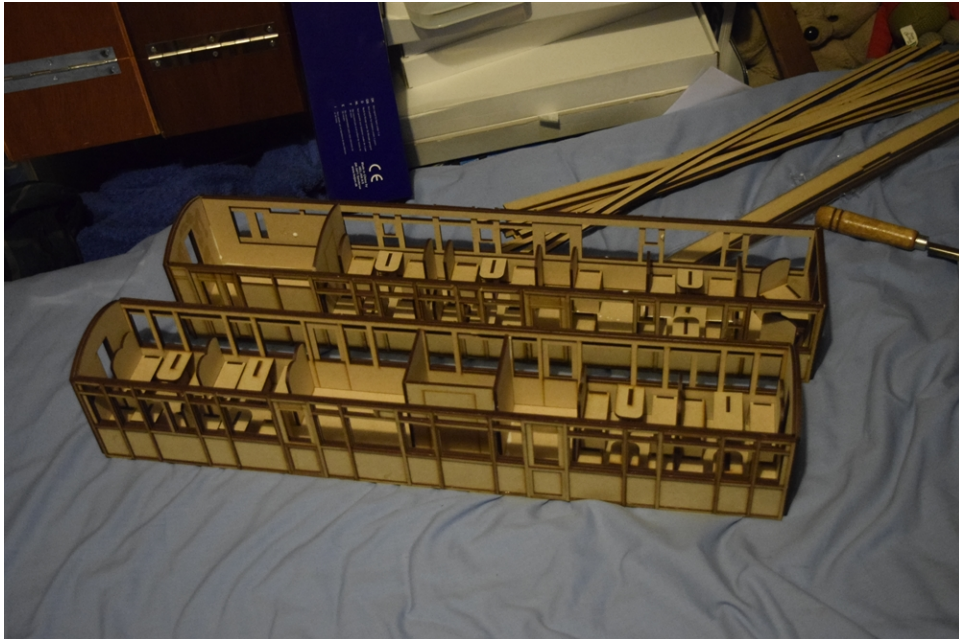
To start assembling the main body, glue one side and one end onto the floor making sure the parts sit on the lip within each part. Once the glue has started to dry, attach the other side/end and make sure the coach is kept flat.



Note how the ends/sides fit together from this top down view.



Once attached, leave to dry.



Next, install the internal side walls mentioned earlier. These vary from kit to kit so check the floor etching to be sure.



Next, glue on the roof supports. On the Non Observation coaches, these need to be spread along the length of the coach. On the observation coach, these need to be spread along the length of the roof planks finishing 80mm from the windowed end of the coach.



Next step, attach the roof planks to the roof supports. See overleaf for the recommended gluing location. We recommend covering the roofs with craft paper to give the effect of canvas.



Recommended location of the glue for attaching the roof. Please note the roof on BMF-001 does not go the whole length of the coach. The 3D print within your kit is attached on the end of the coach to give the coach's distinctive outline. Once the roof is fully dried, layer pieces of craft paper over the roof. This when painted gives a effect of a canvas roof the prototypes carry in service. Alternatively, you can use masking tape or Tissue paper.



Time to do some quick work on the underside. Glue the two long planks with notches in them on to the underside of the coach right against the edges of the side with the notches facing outwards (On BMF-003 and BMF-004, these are glued in the areas behind the doors).



Next, glue on the footsteps onto each coach. There are 3 or 4 per coach.



Once everything else has dried, now is a good time to attach the bogies. Our image shows the two recommended positions (Smaller Radius above and Prototypical below)



The final two steps are to attach the couplings of your choice along with the corridor connections to the ends of the coach.

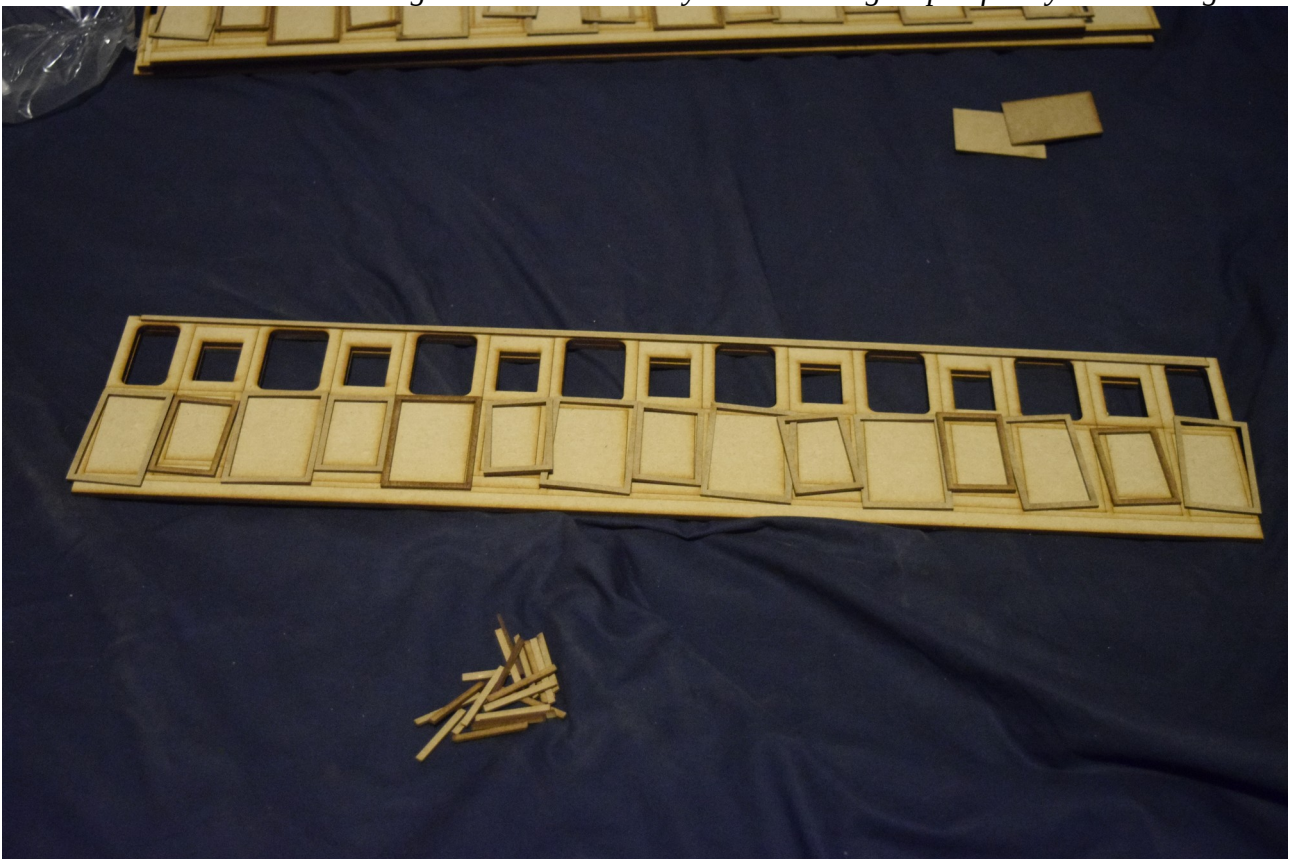


The completed coach.

Turn over for notes regarding BMF-006 to BMF-009



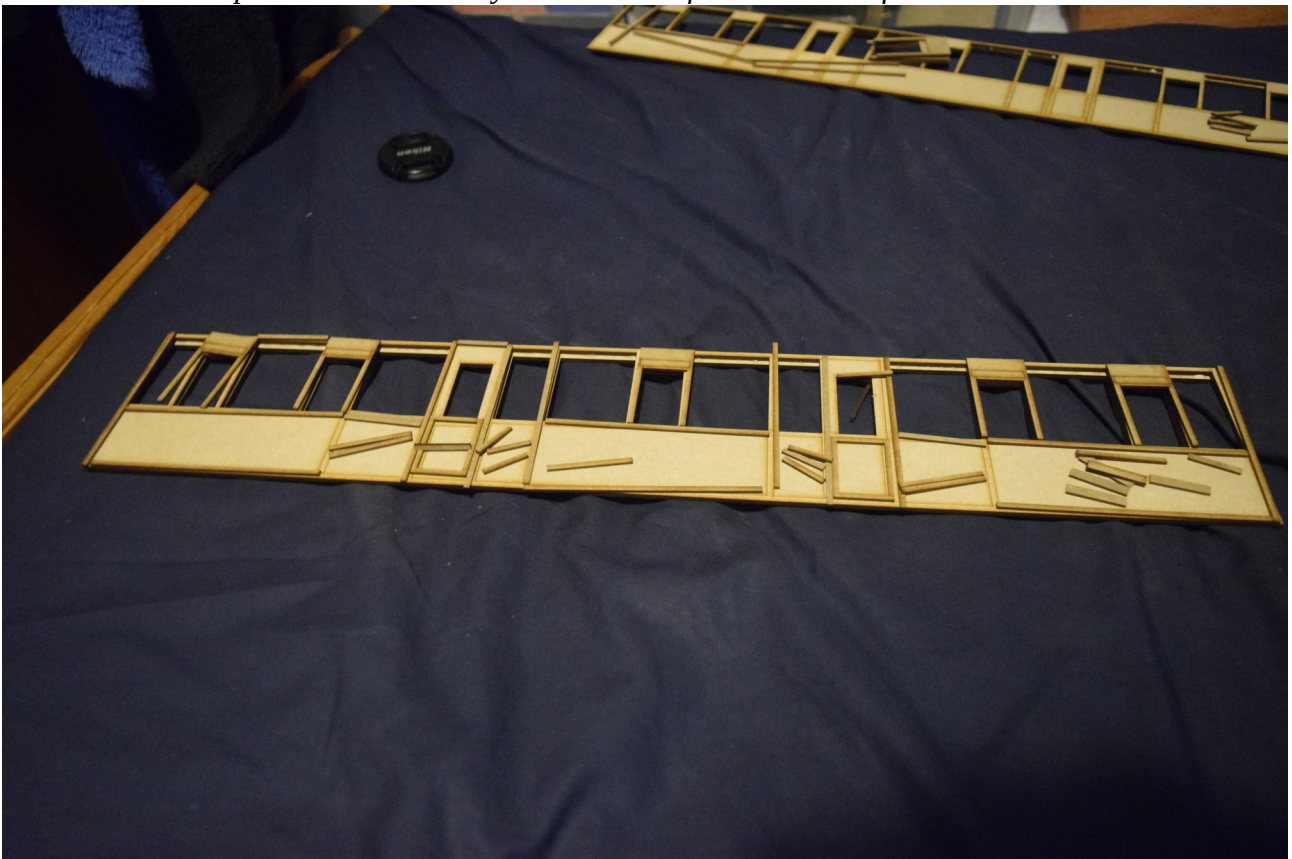
BMF-006 to BMF-009 bring new construction styles to the range. Specifically the beading.



We start with BMF-006. Start by placing the square parts onto the model. There are 3 different sizes which cover the entire model. Remember there are laser etched guides on the side of the model.



Next, glue on the top strip (the long thin one) plus the small strips on the bottom of the model. This completes the sides and you can now refer to the rest of the instructions.



Using BMF-007 as a example, start by laying everything out on the sides of the coaches.



First start with the big squares on the sides along with the N shapes that sit over the windows.



Then start to glue on the bigger horizontal parts. Its better to get these in place first before continuing with the smaller pieces.



Now glue on the vertical parts including the smaller ones. You might need to cut some parts down to size however suitable spares are included with your kit to allow for this.



The final sections are the smaller horizontal parts along with the window toplights. This completes the sides for those format kits.



We hope you enjoy your Bowaters Models kit! If you have any questions, don't hesitate to contact us on info@bowatersmodels.co.uk

We thank you for your custom.