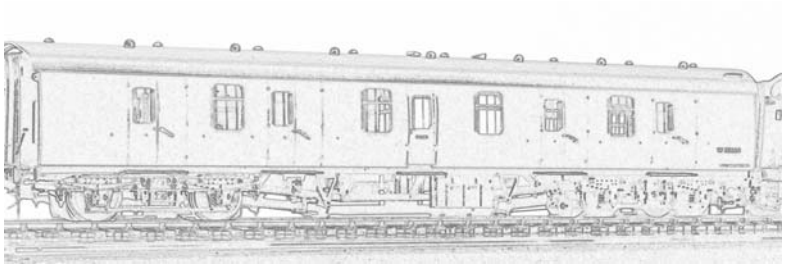
"EASY-BUILD" BR Mk1 SUBURBAN STOCK ASSEMBLY INSTRUCTIONS.



THIS KIT CONTAINS SMALL PARTS THAT MAKE IT UNSUITABLE FOR UN-SUPERVISED CHILDREN. SAFETY FIRST! IN ORDER TO CONSTRUCT THIS MODEL YOU WILL BE USING VOLATILE SOLVENTS, ALWAYS FOLLOW THE MANUFACTURERS INSTRUCTIONS AND ENSURE ADEQUATE VENTILATION. YOU WILL ALSO REQUIRE SHARP TOOLS AND THE EDGES OF THE ETCHED PARTS CAN BE VERY SHARP SO TAKE CARE WHEN HANDLING. WORK STEADILY AND SAFELY AT ALL TIMES. PLEASE READ THESE INSTRUCTIONS FULLY BEFORE PROCEEDING WITH ASSEMBLY AS MORE THAN ONE ORDER OF CONSTRUCTION MAY BE USED.

"EASY-BUILD"

HMMMM - WHAT A DIFFERENCE!

Our guarantee to you is, by purchasing this kit you should be able to build a high quality model from the components supplied. To ensure this, if you damage a component return it to Easy-Build for a free replacement. If you cannot complete the model we can arrange to complete it for you - we want you to have a completed model to enjoy not a box of half completed bits in a cupboard! If you are unsatisfied with this kit, or the service you have received from Easy-Build in any way, please contact us at our Camelford address without hesitation.

KIT PACKING CHECKLIST

1) Floor x1

2) Roof x1

3) Sides x2

4) Bogie kit (inc. wheels & bearings)

5) Window glazing strips

6) Castings And Details Pack

7) Ends Molding x2

8) Underframe Moldings

9) ABS Angle Extrusions

10) 40 thou Micro-Rod (for door stops)

11) Wire (3 sizes)

12) Etched Fret Of Components

13) Resin interior components

INTRODUCTION

The general idea for assembly is to construct a box with a removable roof, which enables interior details to be fitted exactly where they should be relative to window and door openings. In order to get the most from your kit we recommend you read these instructions in full prior to commencing construction making notes as to any assembly options, or changes to the suggested order you think would suit your method of building better. However, we do suggest you adhere to the order of construction as we know it works! We only recommend solvents suitable for ABS plastics such as Carrs Plastic Weld, or EMA Plastic Weld, two-part epoxy resins are suitable for fixing the larger metal parts and superglue for small items (see instructions for suitable alternatives in particular situations).

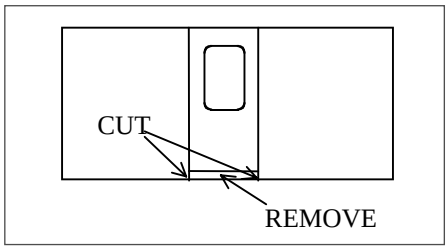
There are many photgraphs on our website and CDROM to assist and clarify where things go should you need help.

LET'S GET STARTED BY WASHING ALL MOULDED PARTS WARM WATER AND WASHING-UP LIQUID TO REMOVE MOULDING AND MACHINING LUBRICANTS.

PREPARING THE SIDES

1) The sides should be sanded all over with abrasive paper (600 grit is ideal) to identify any low spots, continue until the side has a consistent appearance over its entire surface.

2) Check each side moulding against the edge of the end moldings. Trim the inner face of the side molding to allow the ends to fit snugly against the sides (you are removing the top and bottom molded ridges that provide physical locating surfaces for floor and roof).



3) If constructing a brake vehicle, the guard's doors require the bottoms modifying. The doors are depicted by removing the bottom of the door level with the bottom of the lip molded on the inside of the body to the full width of the door opening. Start by cutting (with a fine razor saw) up the door scribe marks, about 1.5mm max., then remove the material between the two cuts (see right).

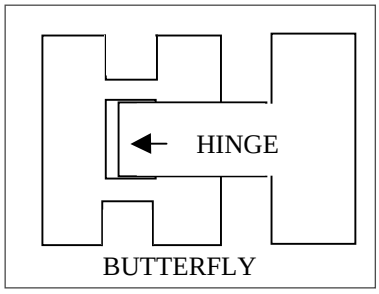
4) With the exception of the guard's compartment, all doors have externally fitted hinges. Having identified guard's compartment doors, where appropriate, drill through all the holes in the sides 0.7mm dia. for door hinges and grab (commode) handles and 1.0mm for bump-stops. The holes for door catch T handles are best left until after painting since they will require opening out anyway, but you can drill them out now if your prefer. Check the supplied T handles in your kit for size as there is some shaft size variation.

5) Check the depth of score lines at the door positions and deepen if you prefer. Carefully remove raised burr from the door opening score marks with a craft knife, work slowly and re-open score marks as necessary until desired effect has been achieved.

***TIP - Use a gentle scraping action followed by 1200 wet-n-dry (used wet). Alternatively, a small chisel can be used to shave off the burrs. Old flat needle files can be ground into chisels and are ideal for this purpose. Be careful not to dig into the surrounding surface of the sides.*

6) Check the ends of the side moldings for cutting burrs, removing as necessary ensuring the edge remains square and true. Likewise check all the window openings for burrs - gently scrape the

edges as required, i.e. don't be too enthusiastic with the knife! Now thoroughly rub down whole side with fine abrasive paper (1200 grit wet-n-dry) with plenty of water and rinse with clean water.



7) Moving on to the door hinges, count how many are required for the type of coach being constructed. You will need 2 tall and 1 short hinge per door remembering that the short hinge goes in the centre with a large hinge top and bottom. Remove an equal number of 'butterflies' from the etch, 1 for each hinge. The hinge piece is pushed through a butterfly shaped backing piece then glued into the hole in the side trapping the butterfly with the hinge. Remember the guard's doors open inward and so have no visible external hinges.

7.1) Once the superglue has fully hardened file the spike off the hinge making the inside surface of the side flush on the top and centre hinges (at least). This is so that the spike does not interfere with the fitting of the glazing later on.

8) Using the 1mm micro rod 'plug' the holes in the door centres and those to the left (and right for baggage doors) of the doors to represent the door stops. The stops should be trimmed so that they protrude not more than 1mm from the sides. Note: door stops are not fitted to all doors (e.g. guard's doors). You may prefer to leave fitting the door handles and grab irons until after painting, otherwise they too can be fitted now.

***TIP - To ensure all the bump stops are trimmed to the same length: drill a 1mm dia. hole in a piece of 1mm (40 thou) thick scrap styrene (or other sheet material). Place the scrap styrene over the bump stop so that it protrudes through the hole and gently pare back the excess with a sharp knife, followed by a fine file. Remove the styrene and, once all bump stops have been so treated, give them all a gentle rub over with fine abrasive paper to round the edges slightly.*

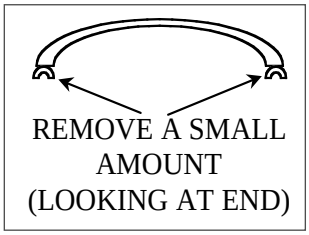
9) If building a brake vehicle, add the handrails to either side of the door to the guard compartment.

That completes the sides for now.

ROOF PREP

You will notice your roof has a curve due to the moulding process this is useful when fitted as it ensures the roof is a tight fit in the centre of your coach.

10) Clean off any burrs of plastic then put a strip of masking tape down the centre of your roof onto which you can mark the positions of roof vents etc. from the tables and sketches provided (see end of instructions).



11) Remove about 7mm of the inside edge of the roof mounting groove at both ends of the roof - this allows the roof to sit more snugly over the end molding. NOTE: **DO NOT** remove any of the (visible) outer edge of the groove as this represents the roof gutter.

12) Drill the marked vent positions approx. 2.0mm dia. to accept the roof vents and a smaller hole (approx. 1.2mm) for water filler castings should they be fitted to the suburban being built then remove tape.

13) Give the whole roof a good rubbing down with fine abrasive paper to smooth out any surface imperfections from the manufacturing process.

14) Cut 2 pieces of the 2mm x 0.5mm styrene micro strip approximately 75mm long and pre-curve them by dragging the strip across an edge, a thumb nail for instance. Attach one strip to each end of the roof following the roof profile and aligning the top face of the strip with the top surface of the roof. Start from the centre and work outwards in turn. Trim back the ends level with the bottom of the gutter as necessary. Once the strip is in position it can be strengthened by adding another strip of micro rod underneath if required.

15) Once the solvent has properly hardened, give the roof another rub over with fine abrasive paper and fill any gaps that may be apparent.

16) Cut the roof vents from the spues leaving no more than a 2mm spigot with which to attach the vent to the roof. Leaving the spigot longer than 2mm may interfere with the roof fixing clamps later.

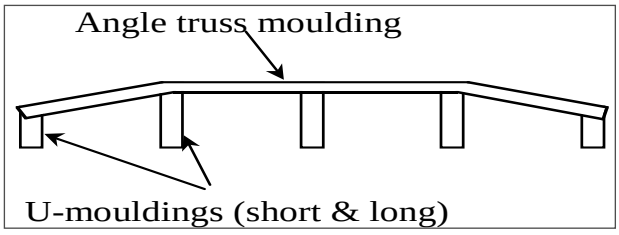
17) Fit the roof details - superglue is ideal for this. Before fitting the water filler castings you might consider leaving them removable, i.e. create the water pipes and simply wedge them into the holes once the roof is in position. This option allows the roof to be removed without the pipes becoming vulnerable as part of a detached roof.

FLOOR PREP

18) Check the floor molding for flatness - if it appears too distorted (some curvature is quite normal) bend it in the reverse direction to correct. Place the floor molding top side down on a flat surface to begin detailing.

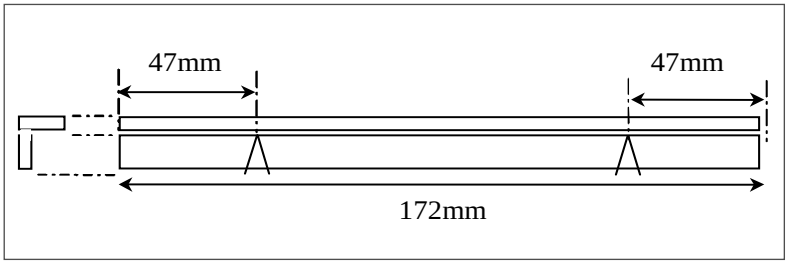
***TIP - Fixing the floor down on to a piece of melamine, or glass with double-sided tape works very well.*

19) Remove the U-shaped and 'T' section molding from the sprue, cleaning off any flash as necessary. The 'U' shaped moulding are in fact slightly too tall and should be shortened by approx. 2.5mm at this stage.



20) Using the locating 'dots' on the floor surface, affix 5 of the 'U' molding to the floor between the raised centre beams in the order of 1 short, 3 tall, 1 short. Allow joints to fully harden before continuing.

21) Cut 2 lengths of angle truss moulding 172mm and make a notch in one side of the angle 47mm from each end (see right) - a simple cut with a junior hacksaw will create a sufficiently wide notch for our needs. **Check all measurements against your underframe before cutting.**

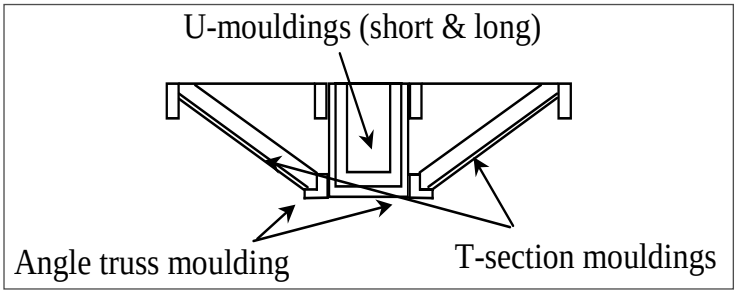


22) Gently bend the ends of the trusses (closing the notches) to pre-form to shape. Attach the formed trusses to the outside edges of the centre 'U' shaped molding with the notches aligned with the centres of the outer tall 'U' molding and the ends aligned with the edges of the shorts 'U' molding. Allow the solvent to harden on the centre 'U' molding before attaching the ends to the short 'U' molding as these may need bending a little more to achieve good alignment of the parts. The top of the angle should be level with the tops of the 'U' shaped molding.

***TIP - Roughening the surface of the ABS angle prior to applying solvent significantly*

improves the solvent's ability to form a strong joint.

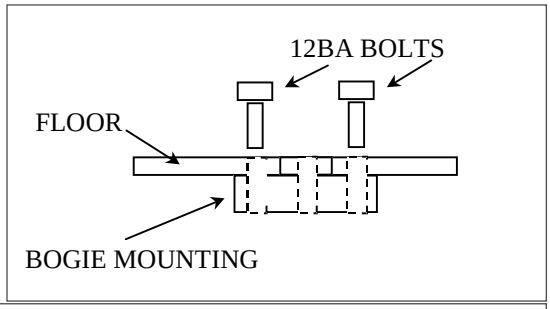
23) With the angle trussing firmly in place affix the T-section molding as shown in the diagram (see right) between the truss angle and inner face of the solebar. There are long and short T-section molding supplied, the short ones are fitted against the short U-shaped molding (closest to the bogies), the longer ones being fitted to the centre U-shaped molding.



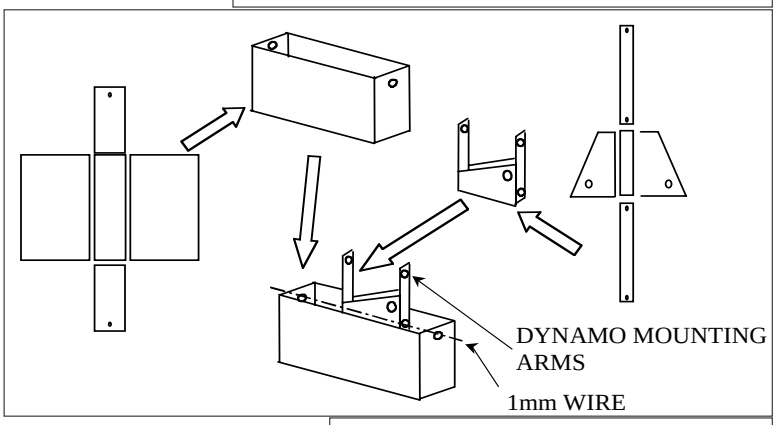
24) Locate the two aluminium bogie mounting turnings and prepare them by scoring their upper surface (the upper surface has a spigot that locates in the hole in the floor). Treat the mounting areas likewise. Using a strong adhesive affix the two bogie mountings in their respective holes.

***TIP - Bogies present quite a load to their mountings mainly due to the ease by which they get knocked and twisted when the model is off the tracks, it is therefore necessary to select an adhesive capable of withstanding such shocks. Two part epoxy resins are more suitable than superglues.*

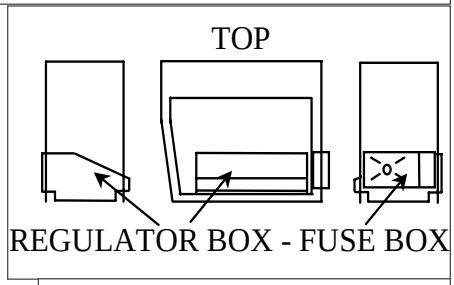
25) To make a much stronger job of fixing the bogie pivots in place, you might consider a 'belt and braces' approach by adding a mechanical fixing to the mounting. Good results have been achieved by drilling two 1mm holes through the bogie mountings and floor (once the mounting has been fixed in place) either side of the bogie pivot bolt, tap 12BA. Now secure the bogie pivot in place by bolting down through the coach floor with short 12 BA bolts.



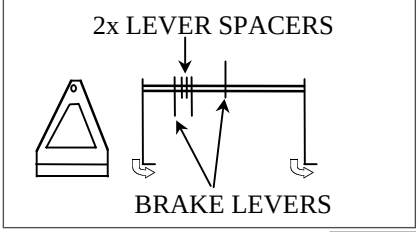
26) Clean up all the metal under-floor castings as required. Fold up and assemble the etched brass dynamo mounting brackets and attach dynamo casting. Drill the dynamo mounting lugs 0.7mm and hang the dynamo on the etched mounting arms with brass rod.



27) Remove the Regulator Carrier Frame from the etch and fold along the half etches to form a U-shaped bracket. Fold in the fuse box mounting plate (away from half etch) and mount the cast metal regulator box and fuse box as shown right (see photos on our CD).



28) Remove the brake V hangers from the etch and bend the bottom edge along the half etched line to form a right angle. Check the etched holes in the brake levers for size and open out accordingly. Check and adjust the central holes in the brake pull-rod adjusters also to 1mm dia. - do this before removing the parts from the etch as they're much



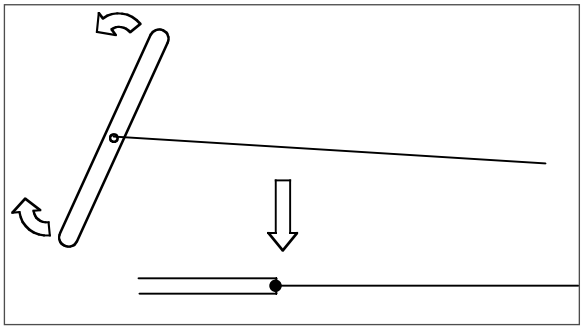
easier to handle.

29) Drill a 1mm dia. hole in the centre of the brake cylinders and glue in a short piece of brass rod (about 20mm protruding out of the cylinder is sufficient). To ensure the brake cylinder sits level once in position file back the mounting lug on one side only - the central ribs of the floor are taller than the outer (solebar) ribs. Check against the floor until the cylinder will sit squarely. Fit the brake cylinders in place using the underfloor diagram as a plan.

***TIP - Two part epoxy resins are more suitable than superglues since they are less brittle. Good results have been obtained using impact adhesives such as Evostick (the new Evostick Serious Glue has recently been recommended although we have not tried it ourselves). Whatever type of adhesive you choose remember to roughen-up the surfaces first to improve adhesive grip.*

30) Thread the levers and spacers as required onto the brake lever bar (1.6mm rod) as shown right. No measurement is given here for the length of the pivot bar as it's better to simply measure the distance directly on your model (see photos on our CD).

31) Attach two brake levers (one either side) to the brake cylinder pull-rod and the third lever stands vertical on the centerline of the floor. To this central brake lever attach the pull-rod with adjuster that would actually pull the bogie brake gear (see illustration below). The pull-rod length should be trimmed to length just forward of the inner axle of the adjacent bogie.



32) Fit the remaining castings in place according the underfloor plan. The brake DA valves mount on the sloping parts of the truss bars. Afix the brass mounting onto the rear of the casting and then onto the truss bars. The etched mounting is angled to ensure the DA valve is vertical once fitted. Position the valves about 10mm from the brake pivot bar (towards the end of the floor). If required, a short length of soft copper wire can be fixed to the top of the valve and into the bottom face of the brake cylinders (see photos on our CD).

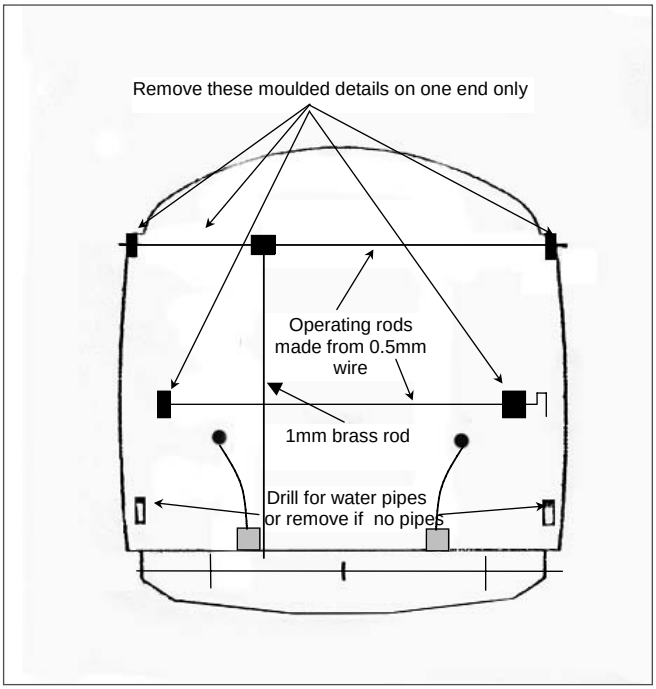
ENDS PREP

33) You will notice that both ends are the same, so you will first need to make an 'A' and a 'B' end. Do this by removing the emergency brake details from one end and the molded switch details in the mid-part of the other end. So, one end will have the emergency brake details and the other the switch details. Unless the coach being built has a toilet, remove the water pipe retaining brackets from both ends. For a coach with a toilet leave the water pipe retaining brackets on the end with the emergency brake details. Paring off the thickest parts first followed by gentle filing and sanding smooth.

34) Now drill through the outer 'ears' of the emergency brake equipment (0.5mm dia.) and also the molded valve housing horizontally. Next drill two 1mm dia. holes - one in the bottom of the aforementioned valve housing and a second in the bufferbeam immediately below the body ledge and vertically central to the molded valve housing. Likewise, drill holes for the wires for the electrical connectors in both the round connectors and the molded plugs (see pix SB16.jpg). If the coach has a toilet drill through the pipe retainers (0.7mm dia).

35) Drill horizontally through the molded switch details (0.5mm dia.) in the other end and also holes for the electrical connector cables as in the first end.

36) Insert wire into the various holes previously drilled to represent emergency brake linkage (0.5mm dia.) and vac pipe (1mm dia vertical from valve housing), the etched switch rod. For the end cables soft copper wire (5amp fuse wire) is ideal to depict this detail and add the End Cable Electrical Plugs etching having first folded it in half which will produce a slot for the wire to fit inside. (see photos on our CD).



37) Moving to the bufferbeam fit the end step to the left of the left hand buffer detail and fit the buffer heads into the stocks. If required other details such as vac. pipes (not supplied) and lamp irons can be fitted before the ends are fitted to the floor. Add the Bufferbeam Coupling Reinforcing Plates to the coupling opening and open the slot to acommondate the coupling hook (laminated from two etched parts)

Before fitting the ends to the floor moulding check your chosen prototype to determine which end to fit the emergency brake equipment. One would assume it should be fitted at the same end of each coach, but that appears not to be the case. When checking photographs the brake equipment details can be found both adjacent to, or at the opposite end to the dynamo on the same type of vehicle (?). If in doubt, put the dynamo and emergency brake details at opposite ends, which was probably the intended arrangement.

38) With the ends fully prepared they can now be fitted to the floor moulding. Give the inside face of the bufferbeam a quick rub over with a file and present it to the end of the floor moulding. Looking at the (soon to be) inside of the end moulding you will notice a step at the top of the bufferbeam - this is aligned with the top of the floor moulding. Hold the end in place and apply solvent to the joint - be patient the end will have a tendency to simply fall off initially. Once the end has been 'weakly' held in place by the solvent, check the end is stood vertically (from every direction) and is located centrally over the end of the floor. So, Check: 1) the inner 'step' is level with the top of the floor; 2) the end doesn't lean in to, or out of the coach interior; 3) the end is centrally located on the end; 4) the end is stood vertical when viewed end on. That all sounds very complicated, but in fact is quite easy to achieve with a little patience. If the end becomes too stuck to adjust simply apply more solvent to soften the joint. Set the floor aside now for the end joints to fully harden.

***TIP - Once you are satisfied with the positioning of the ends, it is a good idea to reinforce the underside of the floor/end joint using 1mm (40thou) styrene micro-rod.*

39) Now is a good time to fit the steps to the solebars. Suburban stock differs from mainline stock in that they are fitted with long foot board along the length of the solebars. However, there are variations in the length of the foot board depending on the type of carriage.

DIa. 311 (Composite), 326 (Second), 328 (Open Second), 371 (Brake): Full length foot board

Dia. 313 (Composite Lavatory): short foot board to length of first class doors. Short foot board

under corridor doors of second class and single long footboard to length of second class compartments non-corridor side. No foot board under toilet compartment either side.

Dia. 330 (Open Second Lavatory): Long foot board both sides to length of compartments. No foot board under toilet compartment.

For those diagrams that do not have full length foot board, temporarily fit a side in place and mark the positions/end points of the various foot board. The foot board themselves are lengths of 5mm wide strips of styrene and should be attached to the side of the solebars level with the lower edge using solvent. Once in position they can be reinforced with the short brass mounting brackets steps as required.

BUILDING THE BOGIES

40) Remove the bogie frame stretcher plate from the sprue and clean up the edges and square off as necessary.

41) Using a pin, add a tiny drop of oil, NOT WD 40, into each bearing. Push brass bearings into axle holes making sure they are an easy sliding fit, if necessary clean hole with a 2.5mm drill. Do not fix in position as adjustment is made later.

42) Place two axles in the bearings of one side frame and ensuring correct orientation of bogie frame stretcher plate i.e. reinforcing cross members down, assemble the side frame to the frame stretcher.

43) Once the first frame is reasonably firm assemble second side frame onto frame stretcher in the same manner. When the side frames are secure enough to hold themselves in place, make certain all is square and in line, minor adjustments can still be made at this stage by applying more solvent to soften the joints and adjusting as required. Note: wheels should be a loose fit in the bearings at this stage. Leave the bogie to set for at least 1 hour, 2 is better.

44) With the joints set hard we can now set the axle bearings:

44.1) Centralise the wheelset and insert a thin piece of card between each wheel and the side frame to prevent lateral movement.

***TIP: Do not over-pack the wheelsets as this might cause the sides to spring when you remove the card later resulting in stiff wheel movement.*

44.2) Push in the bearings from the outside until the bearings connect with the axle ends.

44.3) When satisfied that the bearings are (just) against the pinpoint ends fill the bearing hole with the 2.5mm sprue supplied, or micro rod (not supplied) and fix with liquid solvent from the outside and leave to harden.

44.4) When set, remove spacing card and trim any excess rod flush with axle box face and fit the axlebox covers in place. Make sure the axlebox covers are fitted centrally and squarely over the axle.

45) Remove the bogie pivot mounting from the casting sprue and remove any flash. Test the bogie pivot bolt is an easy sliding fit in the mounting hole. If tight, open the slightly with a 3.5mm drill (No. 24) to ensure a smooth swivel movement.

46) Drop the bogie pivot mounting into its locating holes in the top of the bogie stretcher plate and using only sufficient glue to attach the plates, fit keeper plates over pivot spindles. Ensure pivot remains free to move until the liquid solvent has evaporated.

***TIP: Some people prefer to use a larger piece of sheet styrene (not supplied) rather than the moulded keeper plates supplied.*

47) If desired, fit the brake shoes on the inside of the sideframe. They should be positioned just off the wheels with the circle detail on the shoe just visible below the bottom of the side frame. Mounting pairs of brake shoes on short lengths of wire makes the fitting much easier, use superglue to affix the wire to the underside of the bogie frame.

48) The suburban stock is supplied with basic interior details. Depending on vehicle type some will require nothing more than painting and fitting in place (although some minor adjustments may be required to clear bogie mountings, etc.). On the types with corridors a corridor side will need to be added to side of the molded seating. On all types remember to keep the body fixing screw holes clear! See diagrams at the end of these instructions for basic layouts.

If you have followed us so far you will now have a detailed roof, carriage sides, the floor with ends attached and completed bogies. At this point it is recommended that you paint the various parts. Proceed by first giving everything a good wash with water containing a mild detergent and allow to dry thoroughly. If you are having difficulty in this area please contact us for advice. Remember also to paint the inside of the carriage sides and roof to brighten the interior once assembled**,** however do not paint below the moulded side ridge and scrape excess paint from the end faces of the sides as solvent will be applied here during final assembly.

BODY ASSEMBLY CONTINUED…

OK, you should now have to hand the finished carriage sides, floor, roof and bogies - let's build the body. But first a word of caution: **REMEMBER YOU ARE HANDLING FINISHED COMPONENTS. KEEP SHARP OBJECTS WELL AWAY FROM THE WORK AREA WHEN THEY ARE NOT ACTUALLY BEING USED.**

49) First of all check that you have the floor and sides correctly aligned - this is most easily done by aligning the door footboards on the solebars with the doors they serve, or the dynamo and emergency brake details. Gently roughen the upper surface to the edges of the floor where the side molding will sit.

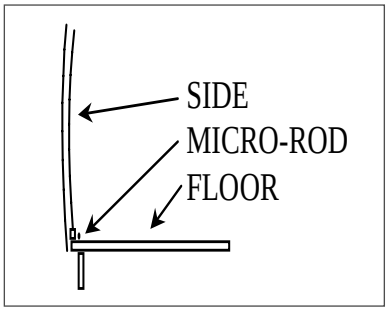
***TIP- Ensure you remove traces of paint from the surfaces to be fixed together as the paint will seriously affect the solvent's ability to create a secure joint.*

50) Working with the side furthest away from you, i.e. you are looking from the inside of the coach, place the side onto the floor and against the edge of the ends. Apply solvent along the side/floor joint progressively along the length of the whole side. Work steadily and hold the parts together until the bond is sufficiently strong to hold the parts in place. The ends can present a bit of a challenge because the side is butted against the outer edge of the end, which of course is painted too. You may wish to use superglue to attach to the ends to the sides.

***TIP- Be generous with the solvent along the floor/side joint, less so at this stage at the ends as solvent here can seep more easily onto the painted exterior surfaces.*

51) We strongly recommend reinforcing all major construction joints and this includes the side/floor joint and the side/end joints. One of the most effective (and, as it happens, tidy) methods of reinforcing these joints is to use 0.75mm (30thou) micro-rod as a fillet between the two components. Once

you are satisfied with the general fit of the sides take a length of micro-rod and place against the side/floor joint in the centre of the coach. Now use copious amounts of solvent to fix the micro-rod in place - pressing it firmly into the joint and working outward from the centre. A similar method can be used at the side/end joint, but with less solvent used here. Once the joints have been made bolt the roof in position and allow to fully harden under compression, however do not overdo the tightness as this can force the sides out of position - just enough to keep it all together.



52) Cut the glazing to length as required for your particular carriage and secure into the machined glazing recess - we recommend Canopy (RC Modellers glue, for instance) glue for this.

53) insert the interior details into the body, securing as necessary.

54) Before going any further with the main assembly, fit the grab handles, door T-handles and guard and baggage handles. You may need to drill through the window glazing in order to fit these details. Being able to offer some support to the inside of the ‘glass’ greatly helps in keeping in place.

55) Fit the two alloy roof retaining 'nuts' in the roof channel and slide to a position directly above that of the 4mm hole in the floor at each end. You may prefer to give the ‘nut’ a few strokes with a flat file to make sliding it into the slot easier, however don’t make it too sloppy as it can then become very difficult to locate it with the bolt.

56) Position the roof in place and secure with the long bolts provided. You may find the sides have bowed inward since you assembled them. If this is the case work initially with one side and locate the top of the side into the groove in the underside of the roof. Once one side is in place gentle pushing and squeezing will be sufficient to encourage the other side into place. Don’t apply too much tension with the fixing bolts until the sides are located into the roof grooves as this can impede fitting.

57) With the roof in position fit (or form and fit if not already made) the water filler pipes to the ends of the coach. With care a small hole can be drilled into the roof water filler casting and the wires soldered, or glued inside. See roof diagram for pipe run.

58) Turn the carriage over and fit the couplings, by pushing the main coupling hook through the bufferbeam and secure in place with the spring and split-pin. Remember you’re working upside down so the hook faces down - yes we’ve all put them in the right way up when the coach isn’t!

59) Fit the bogies in place with the short bolts provided. Adding a smear of glue on the thread of the bolt prior to fitting will be sufficient to prevent the bolt from unscrewing during use - don’t apply too much or you may not be able to get the bogies off again - not good!

We hope you have enjoyed building this kit and welcome your comments. These revised instructions have been compiled as the result of listening to our customers experiences. We have attempted to address, or clarify areas of weakness in our suggested procedures and improve the strength and durability of the overall construction methods. We are indebted to everyone who has shared their experiences with us in an effort to improve the experience of building “Easy-Build“ products for others - Thank you.

SHAWN KAY SEPTEMBER 2012

CONTACT INFORMATION

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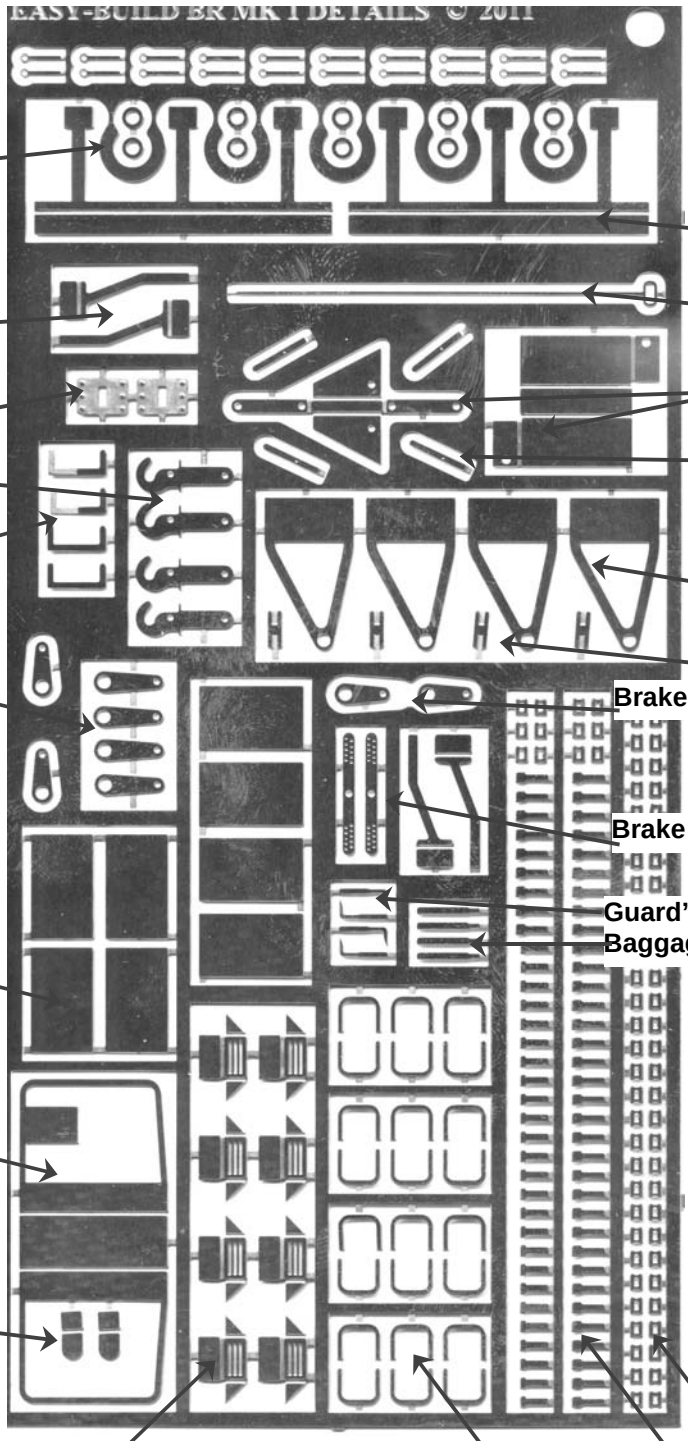
DRAWINGS, ETC.

POLY-PACK CONTENTS - AS PACKED

Door Handles		
Bogie Mountings x2 Roof Fixing Captive Nuts x2		Roof Fixing Bolts (Long Allen Bolts) x2
Roof Tank Fillers x2	Bogie Fixing Bolts (M4) x2	Couling Hook Springs x2
Regulator Box	Generator	Regulator side box
Roof Vents x20	Fuse Box (Small)	Brake Valves x2
Battery Boxes x2	Buffer Heads x4	Brake Cylinders x2

ETCHED DETAILS SHEET



Roof /End Pipes Mounting Eyes

Brake Cylinder Lever Spacers

Bufferbeam Steps

Bufferbeam Coupling Reinforcing Plates

Coupling Hooks

Corridor Connection Lamp Irons

Brake Cylinder Levers

Door Step Reinforcing

Regulator Box Mounting

DA Valve Mounting

End Steps

Door Grab Handles

Door Hinges And 'Butterflies'

Under Body Steps - BGs Etc.

Suburban Lamp Switch Lever

Dynamo Mountings

Suburban Lamp Irons

Brake V Hangers

End Cable Electrical Plugs

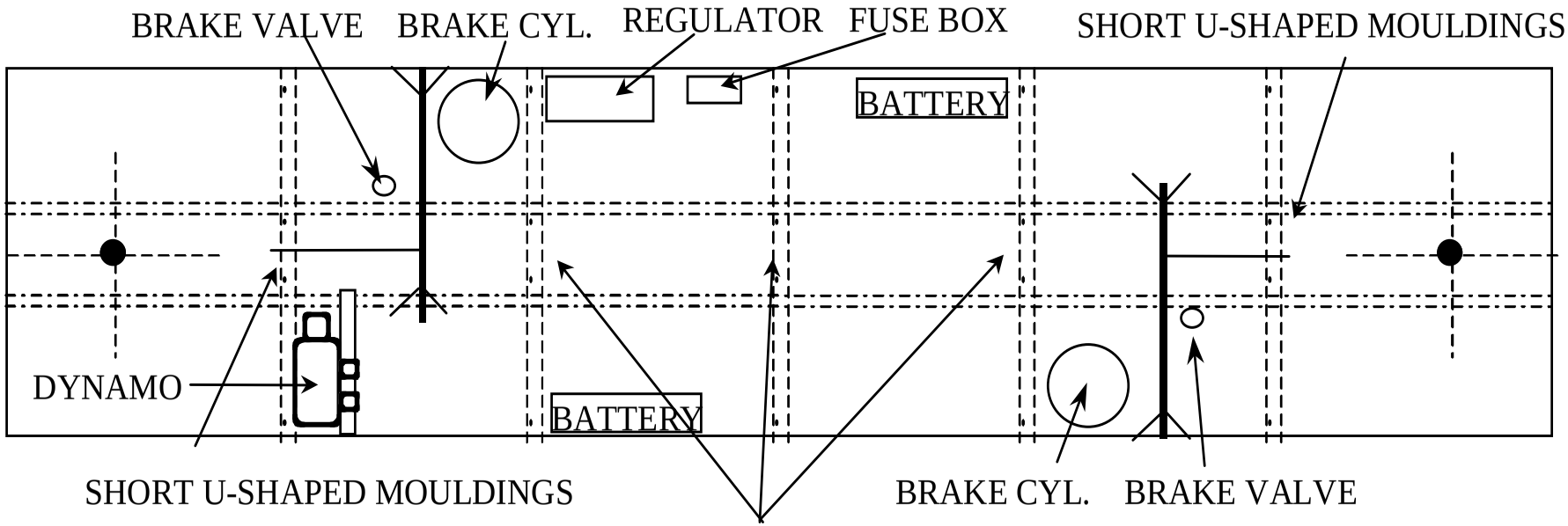
Brake pullrod lever

Brake Pullrod adjuster

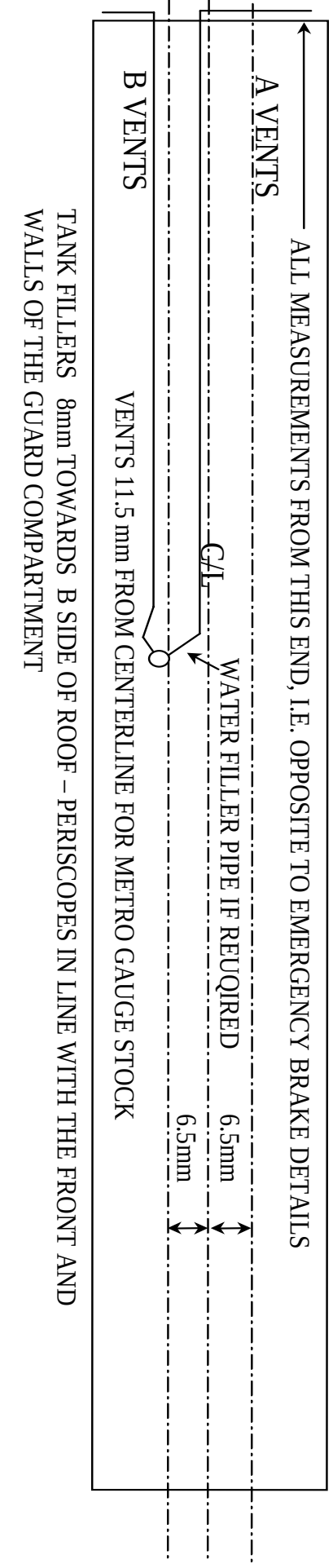
Guard's Door handles

Baggage Door Handles

ARRANGEMENT OF COACH UNDERFRAME COMPONENTS
(NOT TO SCALE)



ROOF VENT MEASUREMENTS - BRAKES (in mm)



DIA 330 SO LAV			DIA 313 COMP LAV		
A	B	W / F	A	B	W / F
32	16	185	40	5	163
68	50		58	58	
120	103		110	94	
156	191		146	146	
208	227		216	180	
244	279		251	232	
296	314		303	286	
331	367		339	339	
384			391	355	

DIA 311 COMP			DIA 326/328 S		
A	B		A	B	
40	5		32	16	
75	59		68	50	
111	94		120	103	
163	146		156	138	
216	182		208	191	
251	235		244	227	
304	288		296	279	
340	323		331	314	
395	358		384	367	

DIA 371 BS					
A	B	PERIS.	A	B	
39	7	258			
57	39	300			
150	90				
159	142				
209	175				
243	227				
294	260				
328	309				
377	344				