

# Plateway Models

## 1, 2 & 3 Compartment, Open, Covered, Roofed, Protected Coaches, Guards Vans, Luggage / Cycles & Parcel Vans

### Introduction

Thank you for purchasing this kit. It is not a beginners kit but with a little patience it will provide a rewarding model. The model is formed up from multiple layers and parts, some of which are sandwiched, others are small and tricky or the position is not obvious. Preparation is therefore key, practice fitting is recommended! Note that some of the instructions are only relevant to some model versions.

### Preparation Preparation Preparation

The kit provides all the parts needed except glue and finishes. The provided parts have been laser cut, some minor finishing may be required using simple hand tools. Some parts may benefit from having the surface finish (paint, varnish, oil, stain etc.) applied before assembly. Some glues may affect the finished surface (e.g. stain) therefore a trial of glues and finishes is recommended on a hidden surface.

Recommended glues are: PVA and Thick Cyanoacrylate (superglue) but any other suitable glue could be considered. PVA has the benefit of the modeller being able to part imperfect joints, whereas Cyanoacrylate is stronger.

Laserply uses a water based interior glue which cuts down on emissions and over-burn (scorch marks) when cutting. Occasionally, the laserply, a naturally based material may have warped or may warp when a finish is applied (e.g. water based stain). Dampening the piece and allowing it to dry naturally under a weight on a flat surface normally improves it.

### Jigs - Your Reliable Friends

Fitters used to fettle, nuts and bolts used to be bespoke, mechanical contrivances used to be entirely innovative and cutting edge. However, not all were successful, unfortunately engineering is all about consistency, you can build ten or more examples and keep the final perfect one or perhaps you can follow a standardised method that takes the drudge and frustration out of construction.

Therefore the following jigs are included in the kit to aid the modeller:

1. Bottom Structural Assembly Jig for fitting the structural sides to the floor
2. Top Structural Assembly Jig for fitting the carriage ends and ensuring the carriage is square.
3. Gauge setting Jig to help align the chassis rails.
4. Handrail jig (part of the top jig)
5. Roof Jig (not covered versions)

The jigs are made of birch laserply and can be usually disposed of in garden waste where they will eventually compost. They also make good kindling, alternatively you can buy another kit!

### Assembly

Having, read all the instructions, prepared the parts and trial fitted them the kit is finally ready for assembly. The following construction order is recommended:

### First Sub-Assemblies

**Windows:** The windows are sandwiched between the outer layers of the sides when complete and cannot easily be removed, modified or painted once installed. Once the frames are finished (painted, stained, etc.) they can be glued with a tiny amount of Cyanoacrylate at the corners to the supplied clear sheeting. Once dry they can be cut out with a sharp pair of scissors.

**Carriage Ends:** The ends comprise of two layers, a structural inner layer that is also planked as part of the internal finish and an outer framed layer. These two layers should be glued together so that the planking is showing. Note that corridor ends have a window that needs to be included between the two layers.

### Carriage Structure & Jigs

The floor sits inside all four walls, the horizontal lines on the structural inner layer marks the position of the floor. The side walls are flush with the bottom of the floor. The floor planking should face into the vehicle.

Three jigs are provided to assist, in building the model structure, two bottom jigs and a top jig. The jigs are purposefully tight to provide some temporary structural support and ensure the structure is square. Each bottom jig is in two parts and just slots together. The jigs allow for the glueing up of both structural sides to the floor, which sits between the sides, they are the correct height off the surface to allow for the attachment of the structural ends.



The top jig is used when attaching the ends to ensure that sides are the correct distance apart and square. Glue one end at a time moving the jig between the ends. Be careful not to glue the jigs on.

It is Important that the body is square and true otherwise it will not ride well on the track when finished. When dry/set carefully remove the jigs before adding the final outer walls.

#### Tips:

1. It is sometimes better to build the structure before painting or staining the floor or underside, particularly in the longer 3 compartment coaches, as perfectly flat straight floor can banana, if so wet, clamp/weight flat, allow to fully dry and try again.
2. If the body is not square and you have use PVA, it is better to break it apart carefully, with a sharp craft knife and try again, see above.
3. Gluing up the sides and ends, applying light pressure with clamps is ideal

### Inner & Outer Cosmetic Layers

These layers not only make the carriage look good but also add strength to it. The next stage is to add the two outer side layers. These cover both of the ends and should be applied centrally and line up with any openings. Use a window frame for example to check that they are in the correct position.

The windows and glazing should be fitted next (if applicable), glazing inside window frame outside. They are a tight fit so that they cannot move out of alignment. **Tip:** A partially open window can be created by cutting off the bottom of the frame and glazing so that it appears to have been dropped into the door.

See notes on door handles before fitting inner layers! The two inner layers can now be fitted, minor adjustments to the size and open positions can be undertaken by sanding down an edge. Once fitted the inner layer should line up with the windows, hiding the inner side of the frame and cut edge of the glazing.

Vents are supplied to be fitted above the doors, internally and externally, these can be fitted before or after the fixing of the surfaces depending upon the finishes, however if you are going to fit a removable roof then read that bit first.

### Covered / Luggage – Cycles Version

The covered version has open sides instead of windows. Two top rails need to be fitted along the eaves of the coach. The roof arches can then be attached to these. Square uprights are also provided at the between compartments or either side of the door, these fit between the coach sides and the top rails. The Luggage – Cycles version has a door overlay on the outside.

### Guards Compartments

Guards compartments are similar to standard carriage compartments. However one pair of windows is blocked up with panels and the other has duckets installed The doors remains glazed. The interior is fully fitted but does not contain any furniture.

The duckets are made up a number of small pieces and are the same for each side. The ducket frames are made up of two layers, the inner layer has slightly smaller window openings. The outer layer is marked with planks. Once glued

together they can be attached to the side of the carriage, they fit within the window opening. A small shelf / windowsill fits at the bottom of the window opening. It may require a little sanding and can be fitted before or after fitting the outer skins.

A small roof piece fits over the duckets, overhanging all the edges. The skins fit tight under the roof and down the side. The windows can be glazed with a small piece of plastic sheet (supplied) glued to the inside of the duckets. Note before fitting the duckets look at fitting the hand rails (if required) as the space available will be tight.

### **Parcels Version**

Parcel vans are similar to standard carriage compartments but only the central doors have windows the rest are blocked up. The interior is fully fitted but does not contain any furniture.

### **Protected Version**

Protected armoured versions generally follow the open version. However the interior armour plating (rivet detail) should face inwards. The provided rivet strips can be applied on the outward side.

### **Second Sub-Assemblies (if applicable)**

**Partitions:** The partitions are made up of two layers back to back which will require trial fitting between the compartments. If a little tight the edges can be sanded down.

**Seats:** The benches/chairs are best made outside of the carriage. Each bench is made up of three supports (ends and centre) and two bench/back, chairs only have the end supports. The bench/back can be carefully rounded with sandpaper before fitting if required. The bench/chair seat being fitted first with the back sitting on top of it. Finish as required.

### **Interior finishing (if applicable)**

The partitions and seats can now be fitted within the carriage and glued into place.

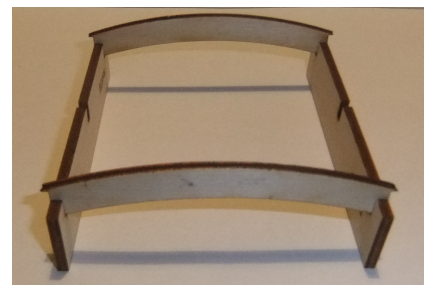
### **Roof**

The roof can now be fitted, permanently glued into place or made removable with a little additional effort (not covered versions). The permanent roof is more robust but makes the interior inaccessible. The roof is marked on the inside with planking.

**For a permanent roof:** Glue the roof supports (thin ones) evenly along the carriage between the windows and doors. Glue the roof down onto the supports, partition, sides and ends making sure that it overhangs evenly. Note fit bogies first.

**Removable roof:** Glue the roof supports (thin ones) evenly along the carriage between the windows and doors. Additional structural roof supports (deep ones) have been provided at the ends and each side of the partitions. Two roof jig rails have been provided to help make the removable roof. The rails are the length of the roof to aid positioning. Mark the centre of two roof supports (45.5 mm), these will line up with the planking on the roof, use these facing out at the ends. Each compartment has space for three supports, strictly only the two outer ones are needed, the central ones do provide an additional bit of stiffness but will the supports will need easing by approximately 1 mm on each side as they interfere with the vents, or they can be left out, or the vents can be left out. Ease and test beforehand as it is easier then when they are part of the roof.

The structural roof supports ends can be pushed into the slots (NO GLUE) so that they are flush (except middle, ones which should be set in evenly on both sides), curved face outwards. One jig rail each side to form a ladder structure. The jigs with the structural roof supports form a temporary backbone whilst the glue sets. Make sure that all the structural roof supports are flush and the resulting frame is straight, square and fair.



You will then need two lengths of suitable timber ( $\frac{3}{4}$  inch) to support the edges of the roof along the sides, set them the width of the carriage apart. The roof can then be placed plank side upwards, centrally and the structural roof supports. Before gluing practise positioning the jig assembled jig and supports, some weight will also be required to hold the whole lots in place whilst it dries / sets.

Once happy, glue up, locate in position, weight it down etc. let it dry / set fully, don't be in a rush let it cure. Once dry / set carefully remove the jigs, this is best done by laying the roof on a flat surface and carefully wiggling one jig rail

back and forth evenly until it comes off. Try not to distort the roof during this process. If the odd edge springs off a roof support a dab of glue and some light pressure with a mini clamp or cloths peg will easily fix it.

Once both rails are off some final fettling with some sand paper is probably required to ease the assembly into the carriage. Leave it a little tight so that the roof does not come off in a shunting accident.

### **Door Handles**

The door handles are T-shaped and are made out of split cotter pins and cocktail sticks which are easy to replace if damaged. To make them thread the cocktail stick through the split pins so that they are 6 to 8 mm apart, when happy cut the cocktail stick. Round the cut ends with sandpaper, cut the split pins to length with a sharp pair of side cutters.

The suggested location of each handle is marked on right hand side of each door as a single dot. Door hinges are on the left hand side of the doors. The handle holes are not drilled in case the modeller chooses to use different handles. The required drill size is 1.6 mm for the handles provided. Fix with a little glue.

The same handles can be used for the corridor ends or alternatively if a handle is wanted on both sides then wire can be used instead, bending it around at each side by approximately 4 mm.

### **Hand rails**

The hand rails run up the right hand side of the doors, these are made from the copper wire provided, which needs to be formed into a U shape, 18 mm across. A hand rail jig is provided in the top jig used earlier. A hole can be found 18 mm from one end, thread the wire through the hole and bend over 90 degrees and then over the end a further 90 degrees to form a U shape. Use a pair of pliers to tweak if necessary. Ensure that all the handrails are consistent. Cut the U shape to length.

Two holes now need to be drilled to the right of the door on the door frame using a 1.3 mm drill. The first hole goes in the corner of the window/side frame. Using the hand rail as a template, make the second hole, vertically below and drill. Fit the handrails with a small drop of glue.

### **Wheels & Axle boxes – 4 Wheelers**

The two chassis members can now be fitted to the underside of the carriage. They should be spaced to the required gauge, the wheels are adjustable on the axles. The axle-boxes should be attached to the chassis members using Cyanoacrylate glue or similar for strength. Locations for the axle boxes are marked with rivet detail.

### **Bogies**

Follow the separate bogie construction instructions to construct the bogies. The 2 & 3 compartment carriages need centreline 3mm diameter holes drilled for the bogies in the floor. The 2 & 3 compartment carriage holes are 42 mm and respectively from 57 mm from the ends. 4 compartment carriages have holes pre-drilled. Nyloc nuts, washers and set screws are provided to secure the bogies to the floor.

### **Finishing Touches**

Couplings can now be fitted through the holes in the ends. The running boards can be fitted using the brackets supplied to the underside of the carriage floor.

### **Completion**

Time to oil up the axles (4 wheelers only) and set off on a test run. Enjoy.

### **Recommended Tools List**

- Sharp craft knife and cutting board/mat
- Various grades of sandpaper / emery paper
- Steel rule, square, pencil
- Micro drills
- Clamps, clothes pegs, small weights, etc.
- Long nose pliers / Side cutters
- Tweezers

More resources are available on the [www.platewaymodels.co.uk](http://www.platewaymodels.co.uk) website.