

# Berlingo Camping Car Bed Base Construction Notes

## Materials

3 sheets of exterior grade plywood, 1220 x 607 x 9 mm (4 'x 2'), make sure it is flat, two can be used as they are, one will need to be cut.

There are 2 pieces of ply that are 228 x 190 x 9 mm (9" x 7.5") used for legs by the wheel arches, I used offcuts.

The legs require one piece of 47 x 47 mm softwood, try and get a straight bit with no shakes.

The frame requires a bundle of 19 x 32 mm softwood, this is also used for battens to stiffen the ply.

The legs and frame are fixed together with M6 galvanized coach bolts. I mainly used 75mm but 64mm would have been better. Use galvanized washers under the nuts.

The ply is held down to the frame with 25mm no. 8 galvanized screws, I recommend putting cup washers under the screws.

## Method

My woodworking skills are basic so I measured twice and cut once using a vice to hold the wood and a small square to keep the saw true.

I drilled the holes in the legs with a pillar drill to get the holes running true, you can drill the batten using the hole in the leg as a guide with the frame clamped together.

Start the frame with the two legs at the back 228mm high (9") and a crossbar 1206mm wide (47.5").

The two legs at the front are cut 368mm high (14.5") and joined with another crossbar 1206mm wide (47.5").

The two side bars of the frame are cut longer than needed and bolted to the back frame.

The work then takes place in the vehicle.

The frame with the back and front legs are then fiddled with until the legs land on the right bits of floor, holding things together with clamps. When things are in the correct place the side bars can be bolted to the front legs after drilling through the holes already drilled in the legs.

When the four corner legs are joined the back sheet of ply can be used to hold the frame square.

The other legs and crossbars are fitted working from the rear of the vehicle, fixing the ply with a few screws.

The gap between the front and back ply sheets is 243mm (9.5"). This affects how far the seats can be slid and reclined.

You will end up with the front and rear tables joined by the side bars. Now put in screws about every 150mm (6" ish) with cup washers to fix the ply, don't drive them in.

When they are all in, take them out, put glue on the frame and screw it all back down.

If things creak and bend when you kneel on them, cut extra battens, glue and screw.

Now cut a piece of ply to fit the the gap between the front and rear table, I used a circular saw run against a batten clamped on the sheet of ply. This gives a nice square, straight edge.

The bridging piece will need battens screwed and glued to stiffen it. Blocks need to be made and fixed to provide support in the middle. You can see these in the pictures.

The remaining bit of ply is used for the bed extension, It will need stiffening along the front with a batten and some legs made. I used 25mm aluminium TV mast with walking stick rubber end bits. Hardwood blocks were drilled to hold them. I used wood toggles to clamp the extension when in use, bolts and wing nuts would do the same job but tend to get lost.

The little extension that protrudes towards the offside passenger door was made with an offcut of ply, it is to prevent the dog falling off the edge of the bed, you may not need it.

When all the ply sheets and battens have been fixed the front and back parts of the platform can be separated (saw carefully). The aluminium joining strips are then fitted, this is easier done outside the car. After the strips are fitted the protruding side bars can be shortened, the bridging piece is supported by these.

The edges of the plywood and the frame need to be sanded and then apply several coats of varnish. We used water based, quick drying varnish for interior use and it has been OK.

Let it dry really hard, a couple of days perhaps, then fit it all back in the car.

Load up the gear and off you go.

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