





You don't need a professionally set up workshop, nor do you require the know-how and skills of a carpenter to build the playmobile. A little bit of skill in the use of a drill, jigsaw and, possibly, an orbital sander is all you need to complete the job. For our material, we selected glued laminated boards made of pine such as can be obtained in any DIY market. All parts in the list of materials can easily be cut out of 20-cm wide shelf boards. Otherwise you will need round rods made of ramin and aluminium rods for the axles. First, a tracing is made of the wooden parts on the glued laminated boards (wasting as little material as possible) and then this is cut out with the jigsaw. Detailed assembly instructions with illustrations to a scale of 1 : 1 help you deal with parts with round or curved shapes. Naturally, you can also use a precise table circular saw if you have one at your disposal. But when you have made a few trial cuts with the jigsaw, you will realise that with a good saw blade for an extra-fine cut and even, smooth machine feed, you will achieve extremely exact cutting results. The best method is to trace the contours with a soft pencil so that the dimensions are correct when you have "sawn away" the line. When using a fine-toothed saw blade, the cutting width corresponds exactly to that of a thick pencil line. Use a sandpaper block to smooth the edges with an orbital sander or by hand. Use an extra-thin curved saw blade for all round and curved shapes.



When all parts are cut to size and are ready on your work bench, you can start with the assembly. First, glue the two reinforcements (4) to one another and then stick them underneath the seat board (1). The rear wall (2) is glued flush onto the seat board with 120 mm protrusion and secured with screws. For this purpose, use chipboard screws countersunk 6 mm in a 10-mm bore. Then seal the screw holes with a wooden peg.

If necessary, rework the cut-out parts first with a rasp and then carefully smoothen with the orbital sander.



When screwing the base plate (3) onto the rear wall, the screw heads underneath may remain visible. Where the chipboard screws are inserted near the edge, for example with the axle bearings (6), pilot drilling must be carried to prevent the wood from chipping. To produce the different bores for the steering axle (10) and wheel axles, a drill stand is indispensable. Use only top quality drill bits that guarantee a really clean cut. Here

A clean-cutting Forstner drill bit is used to make the bores for the steering or wheel axles (drill stand).



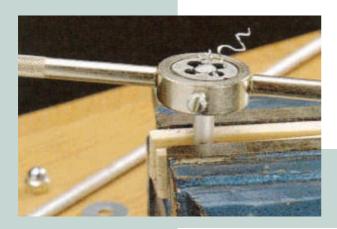
is a tip when gluing the two washers required for each wheel: drill the bores first, then you can simply slide the washers onto one axle and press together firmly with G-clamps without the parts being displaced.

When the steering axle is glued in the bore of the steering bearing (5) (approx. 55 mm deep), slide a U-disc with an inner diameter of 20 mm on top, insert the axle through the seat plate and locate it with minimum clearance by means of the lower thrust bearing (9). Add a little glue when doing this and insert an additional screw through a pre-drilled

Using two nails in a wooden strip, the wheels discs can be traced exactly. Now cut out with the jigsaw. Use curved saw blades.

hole. When the upper thrust bearing, the steering wheel and the rear axle bearing have been secured, the playmobile is almost complete.

A good tip: Twenty-mm round timber often becomes slightly thinner as a result of drying and fits too loosely in a 20-mm hole. In this case, simply place a strip of newspaper in position when gluing. The paper bonds perfectly with the glue and gives you a tight fit.



Now we have to assemble the wheels. We selected aluminium round rods for the axles. On the one hand, this material is sufficiently stable and, on the other hand, can be easily cut to lengths and provided with threads. And this is how it's done: on one side of the axle, cut enough thread to allow a cap nut to be firmly screwed on. Then fit a wheel with U-

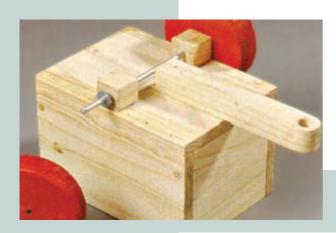
With water-soluble wood stain, the wheels are given a strong red colour; then they are coated with colour less varnish. Always use non-toxic paint and varnish for children's toys.

disc and insert the axle through the axle or steering bearing. Fit U-discs and wheel on the other side as well and make markings for cutting the axle to length. Once the second thread has been cut and the cap nut has been firmly screwed on, there must be sufficient play between the wheels and U-disc.



A small amount of candle wax applied to the aluminium axle guarantees particularly smooth running of the wheels. The trailer is assembled according to the same procedure as the playmobile. Also in this case there are only flush screw connections covered by wooden dowels.

To cut the threads, secure the aluminium rods with hardwood shims in the vice.



Only use non-toxic paints and varnishes for surface treatment! We have pickled the wheels red and then varnished them; otherwise, only the pine wood has been rubbed with beeswax balsam. For those who need a playmobile designed for more robust use in the yard or on the patio, steel axles can be used and suitable plastic wheels instead of the wooden ones.

And now the wheel assembly: U-discs between wheel, chassis and cap nut guarantee the required clearance and ease of movement.

MATERIAL LIST PLAYMOBILE

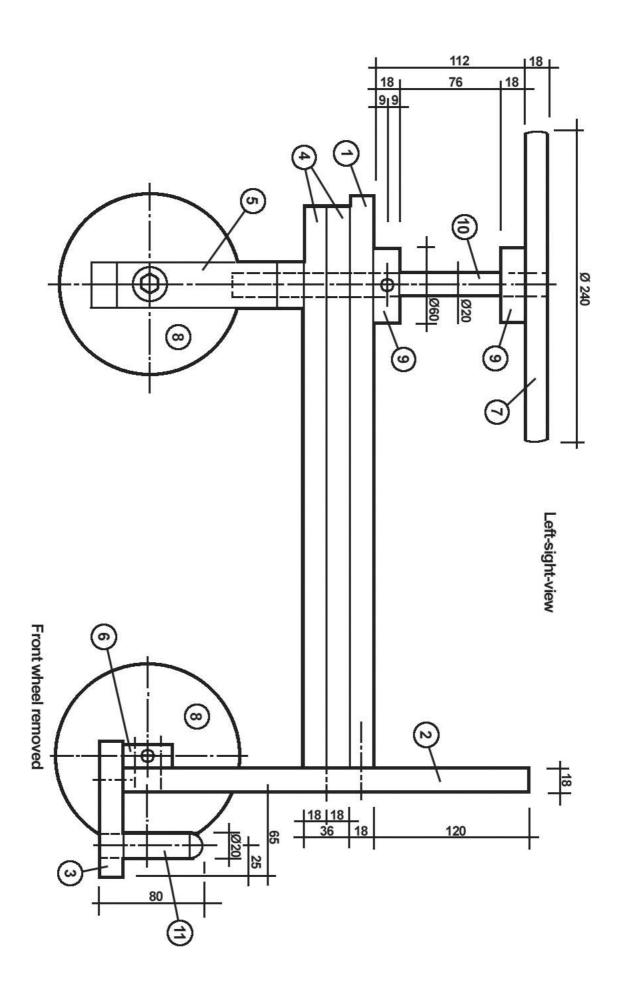
Motor car						
Item	Qty.	Designation	Dimensions in mm	Material		
1	1	Seat board	440 x 200	Pine 18 mm thick		
2	1	Rear wall	310 x 200			
3	1	Base plate	200 x 105			
4	2	Reinforcements	430 x 60			
5	2	Steering bearings	160 x 80			
6	2	Axle bearings	60 x 38			
7	1	Steering wheel	dia. 240			
8	8	Wheel discs	dia. 140			
9	2	Thrust bearings	dia. 20			
			dia. 20			
10	1	Steering axle	240 long	Ramin, dia. 20 mm		
11	1	Coupling mandrel	80 long			

for each aluminium rod, dia. 8 mm, 181 mm and 305 mm long; 4 Cap nuts M8, low profile, DIN 917; 10 U-discs for M8; 1 U-disc, inner dia. approx. 20 mm; Chipboard screws; 5 Wooden plugs; Nails; Wood glue.

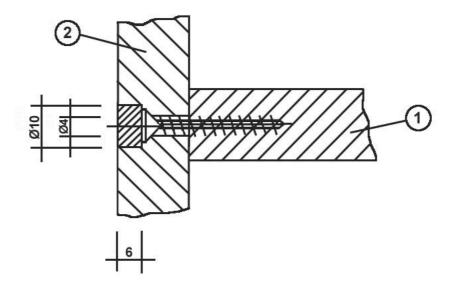
Trailer				
1	1	Base plate	280 x 200	Pine wood 18 mm thick
2	2	Side walls	280 x 160	
3	2	Front walls	164 x 160	
4	2	Drawbar parts	260 x 40	
5	4	Axle bearings	40 x 40	
6	4	Wheel discs	dia. 140	

¹ Aluminium rod dia. 8 x 301 mm; 2 Cap nuts M8, low profile, DIN 917;

⁴ U-discs for M8; Chipboard screws; 8 Wooden plugs; Nails; Wood glue.



Partial section A - A



Trailer

