



How to...

MAKE A TELESCOPE – PART 2

Images extra

STEP 1



◀ Assemble everything you need for this stage of the project before you begin

Mark up the plywood ▶ boards according to the plans and diagrams on the PDFs. Use a sharp pencil





How to...

MAKE A TELESCOPE – PART 2

STEP 2



Mark the baffles with 12mm square indents for the struts



Cut out the 12mm indents with your junior hacksaw



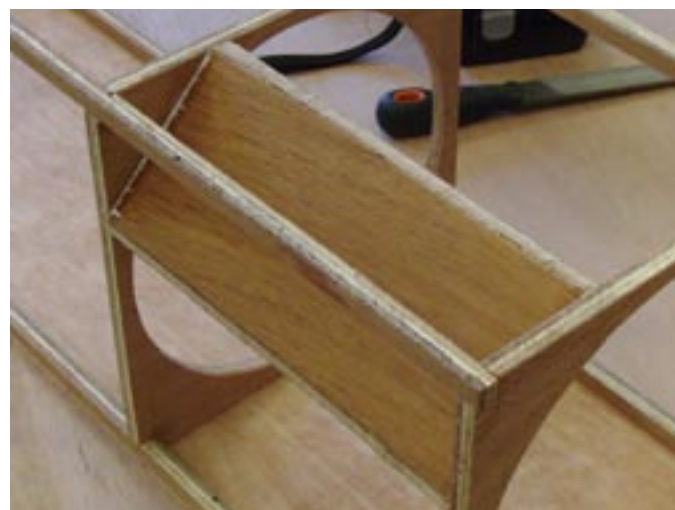
Struts, baffles, mirror cell and rounds from the 12mm ply



A support helps you glue the skeleton together square

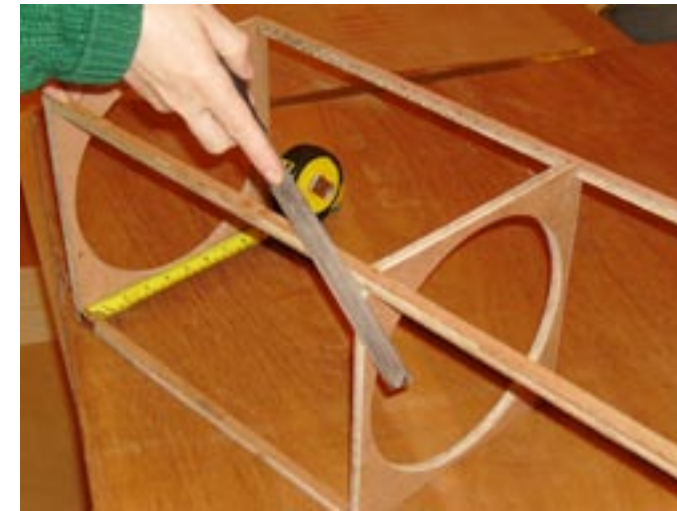


Tape the joints up to make sure the glue bonds well



Glue the eyepiece fillet in place at the top of the tube

STEP 3



When the glue has dried, file off any rough edges



Now cut out the skin from the 9mm plywood sheet



The incorrect way of lining the skin up with the baffle



The skin should be flush with the top and bottom baffle



Use a plane to make sure all surfaces are flush



Paint the inside of the tube matt black, plus side four



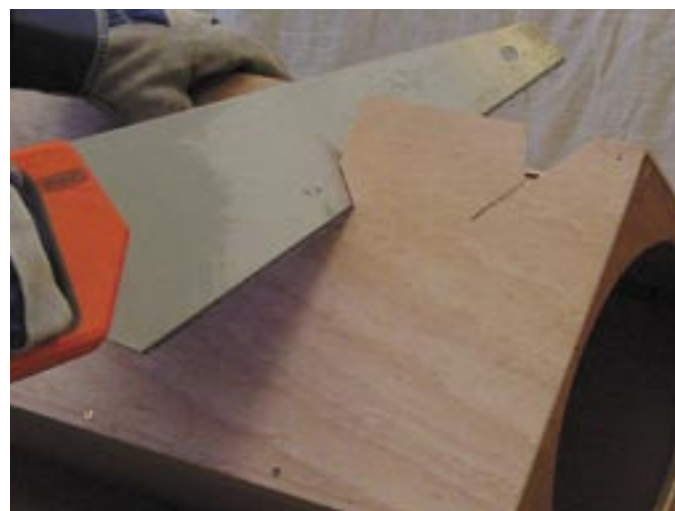
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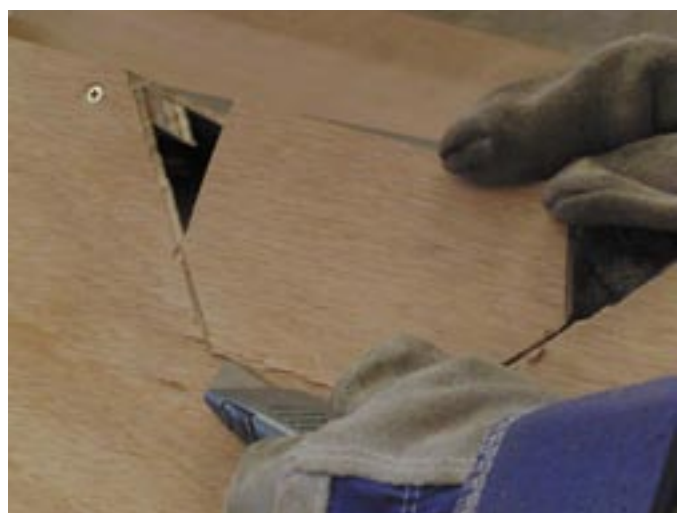
STEP 4



Attach the 9mm plywood, overhanging the base by 60mm



Saw out the focuser rebate with two 45° cuts



Finish cutting out the rebate using a Stanley knife



Mark up two 3mm triangles for the sides of the rebate



Once marked, cut them to size using your junior hacksaw



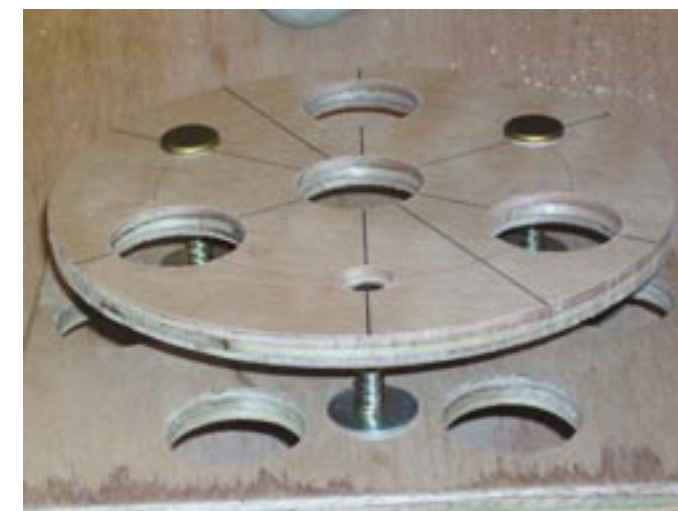
**REMEMBER
SAFETY
FIRST**

**Wear your
gloves at all
times when
sawing or
drilling wood**

STEP 5



Divide the mirror cell, a round from a baffle, into thirds



Holes in the mirror cell and backplate for ventilation



Between the cell and backplate are three sprung bolts



These can be tightened or loosened with butterfly nuts



Spider arms are measured between diagonal struts



Cut the aluminium to length and then cut it in half ►



How to...

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STEP 5 – CONTINUED



◀ Cut the groove for the spider arms. It should be 15mm deep and a tight fit for the aluminium strip



The spider hub, with its ▲ aluminium arms is fixed to the secondary mirror holder with a 6mm x 65mm cup square bolt



▼ Cut a 45° face on the secondary mirror holder, made from four glued-together offcuts from the holes in the mirror cell



The finished secondary ► mirror holder can be adjusted with three 3mm x 50mm slotted pan head screws

STEP 6



The focuser's outer skin is made from a postal tube



Cut a 10mm strip off the tube to use as a stopring



The 1.25-inch drawtube is glued and held firm with bands



The 1.25- to 2-inch adaptor is a loo roll inner and cardboard



Use the cardboard to make the tubes a tight push fit



The assembly can be painted up for a great finish