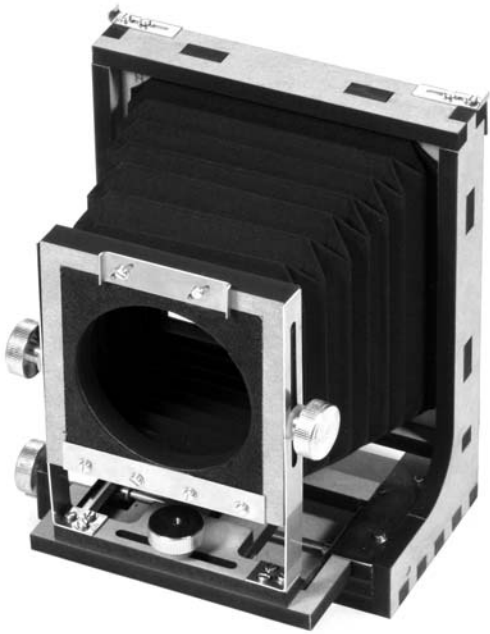


THE BULLDOG

5x4 Self Assembly Camera – Instructions

NOTES

YOU WILL NEED:

PVA Wood Glue • Two Part Epoxy Adhesive • Contact Adhesive
Glass Paper / Abrasive Cloth • 2mm drill • 4mm drill

The finished camera will take a Linhof Technica style lens panel and a suitable lens, any standard 5x4 film holder, and can be finished in any way you wish. The exterior should be sanded with fine emery paper, and can be varnished, painted or covered in cloth or other suitable material. For ease of instruction, the metalwork & foam is shown added during assembly. If you are intending to paint or seal the woodwork after completion, the foam, metalwork and bellows can be fitted after painting. Due to the variations in the manufacturing process, some parts may require sanding or shaping to fit correctly and for the camera mechanism to operate smoothly. You should familiarise yourself with each stage prior to fixing/glueing.

In all cases, leave enough time for any glue to dry before continuing. Any excess glue can be wiped away with a damp cloth before it sets.

If you have any problems with the assembly, please call our helpline on +44 (0) 121 440 1695

Or e-mail help@camerabellows.com

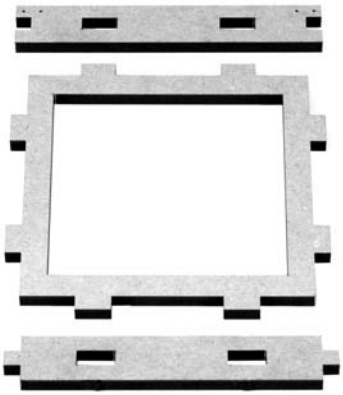
PARTS

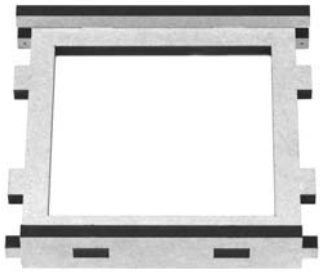
mdf parts	x 19	bellows	x 1
gears	x 2	ground glass	x 1
grub screws	x 2	lens foam	x 1
allen key	x 1	rear foam	x 4
brass racking	x 2	springs	x 2
plastic washers	x 4	bolts	x 2
screw	x 35	lens board support	x 1
steel washers	x 35	lens board clamp	x 1
register strip	x 2	rear supports	x 2
tripod mount	x 1	front standard support	x 2
knob(threaded thro)	x 1	international back clamps	x 2
knob(focussing)	x 1	glass clamps	x 2
knob(with insert)	x 2	studding clamp	x 1
focussing spindle	x 1	running board support	x 2
15mm bar	x 2	top sliding clamp(left)	x 1
30mm studding	x 1	top sliding clamp(right)	x 1

MAIN CAMERA BODY

STAGE 01

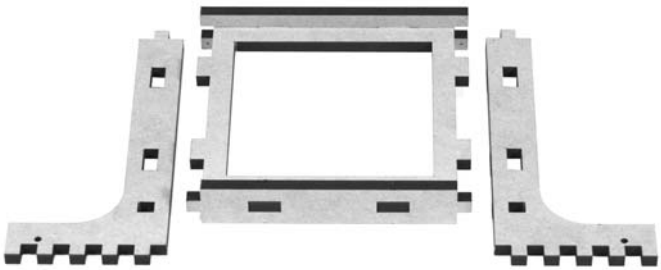
Using PVA wood glue, attach top and bottom cross bars – note that the top crossbar has pilot holes drilled, which will be eventually at the rear of the camera.





STAGE 02

Attach side support pieces using wood glue; ensuring pilot holes are towards the rear.

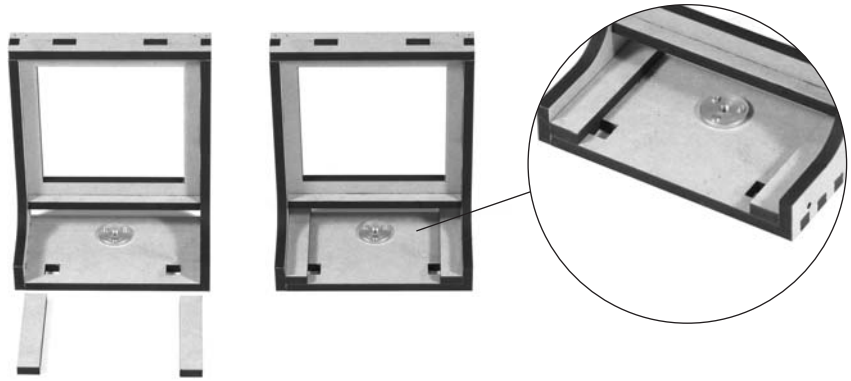


STAGE 03

Screw tripod mount to base plate, and then attach base plate to existing frame using wood glue.

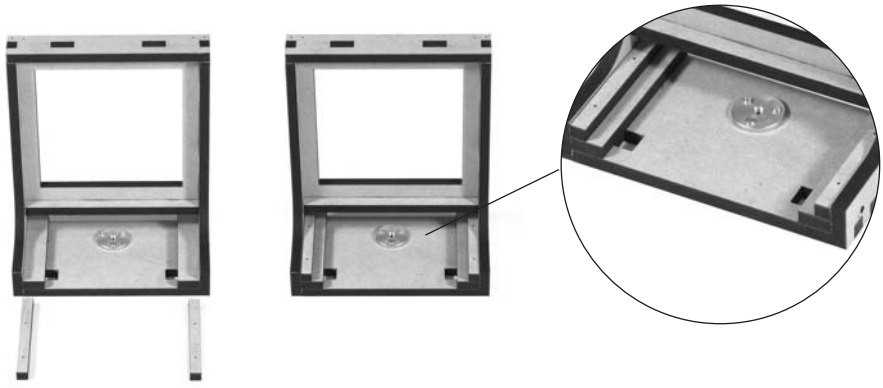
STAGE 04

Glue bottom runners to base plate on both sides.



STAGE 05

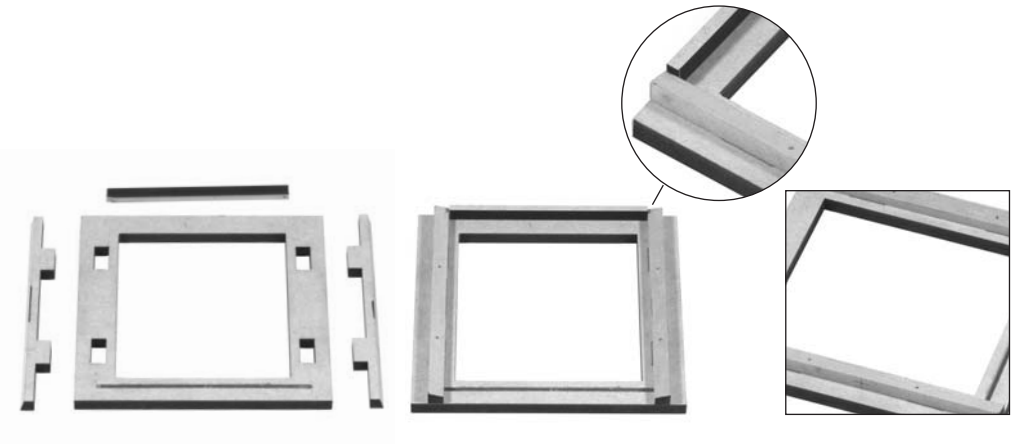
Then attach top runners in the same way – note that the pilot holes on the top runners are offset towards the front of the camera.



REVERSING BACK

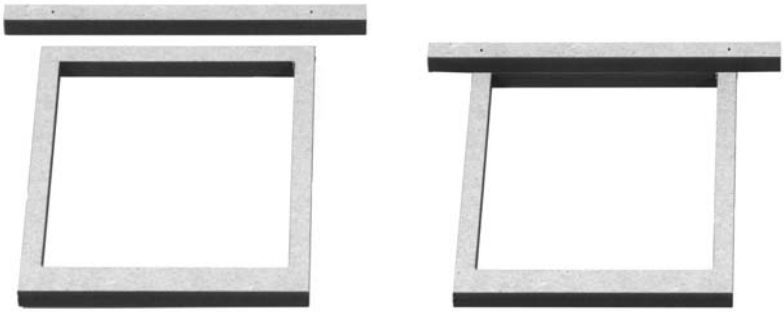
STAGE 06

Glue parts as per diagram, noting that the sides are L/R handed. The bevel should be towards the central aperture and the edges flush.



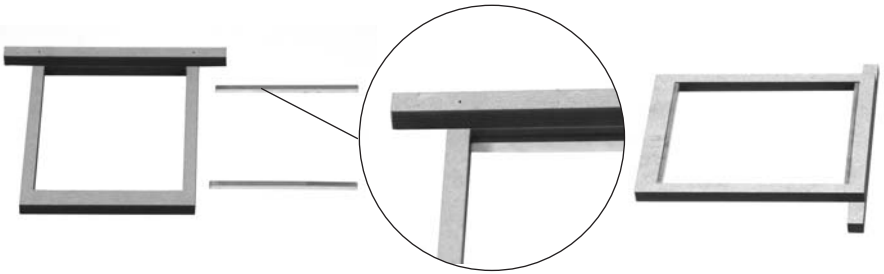
STAGE 07

Glue crossbar to frame, ensuring it is square and central



STAGE 08

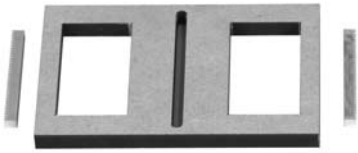
When crossbar is dry, place on a flat surface, and glue metal bars in place at top and bottom using epoxy. These bars should be flush with the back of the frame as per diagram. These bars are rectangular in cross section – the longer edge glues to the frame, the narrower edge faces up.



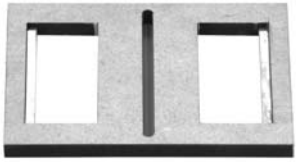
FOCUSING RAILS

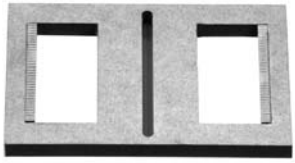
STAGE 09

Fix the serrated focusing rails to the focusing board.



On a flat service, epoxy the rails in place so that the teeth are flush with the bottom surface of the board. Butt up to one end to ensure smooth transit - allow drying for the recommended time. Once dry flip over so that the teeth face upwards.

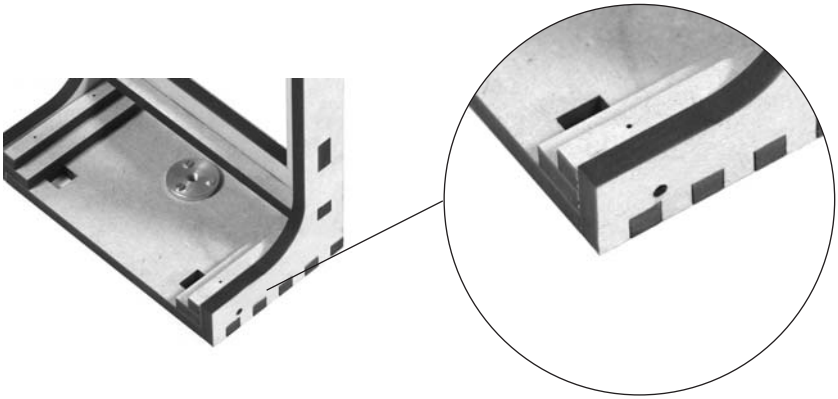




CAMERA BODY

STAGE 10

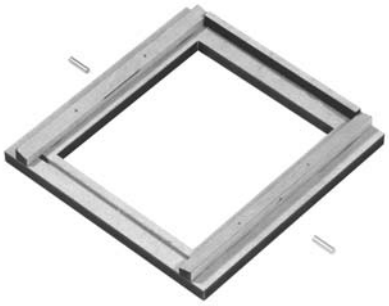
On the main camera body, drill the front pilot holes on both sides with a 4mm drill bit. These holes take the main focusing spindle so please ensure they are kept straight and level.



REVERSING BACK

STAGE 11

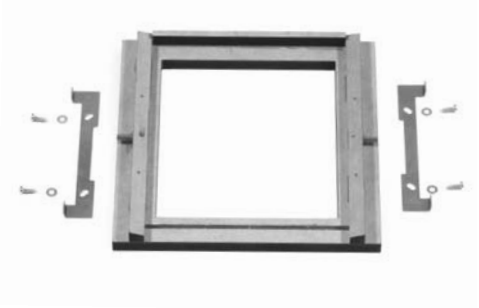
On the reversing back, drill the central pilot holes with a 4mm drill. Do not drill right through as these holes take the pieces of 4mm metal rod. Glue the rod in place with epoxy as per diagram, again ensuring the rods sit straight and level. Allow to dry fully before stage 12



REVERSING BACK

STAGE 12

Drill pilot holes on bevel to 2mm, as per diagram, these holes are to take screws so do not need to be right through, but do need to be on the same angle as the bevel. Screw international back slides into place as per diagram. Tighten screws enough to allow the metalwork to move when needed.



GROUND GLASS HOLDER

STAGE 13a

Attach spring clips to ground glass holder. Pass bolt through pre-drilled hole and secure clip with nut as per diagram.

GROUND GLASS HOLDER

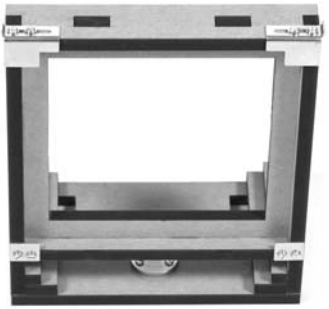
STAGE 13b

The ground glass holder can now be finished off. The glass is held in place using the metalwork as per diagram. Pre drill the screw holes as before with 2mm bit, and attach a small piece of foam to the L shaped bracket to ensure the ground glass fits snugly (frosted side down) against the metal runners. Manually bend the other spring if necessary if the glass fits loosely.

CAMERA BODY

STAGE 14

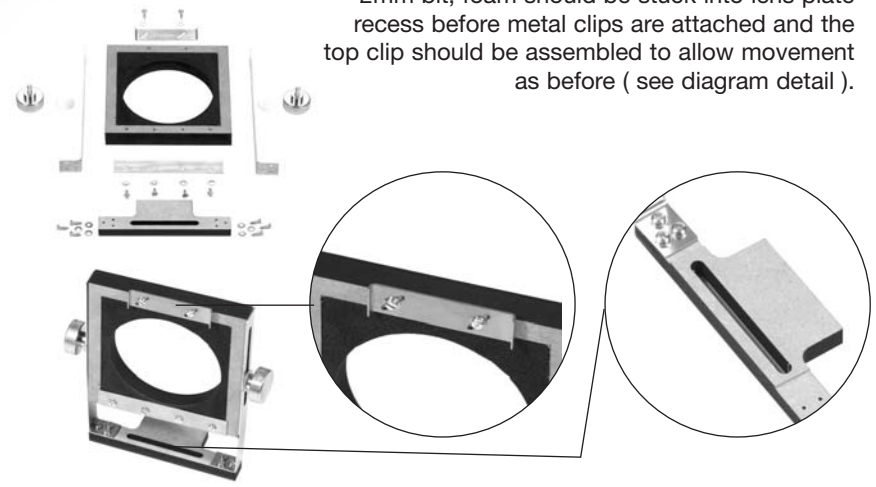
Attach metal work to rear of main camera body as per diagram, pre drill holes with 2mm bit as before and allow upper metal clips to move when needed.



ASSEMBLE CAMERA FRONT

STAGE 15

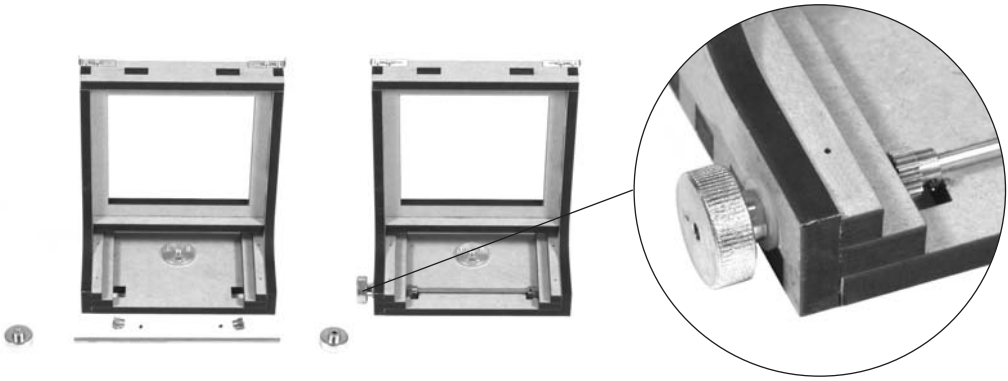
Assemble Camera front as per diagrams. Holes should be pre-drilled with 2mm bit, foam should be stuck into lens plate recess before metal clips are attached and the top clip should be assembled to allow movement as before (see diagram detail).



CAMERA BODY

STAGE 16

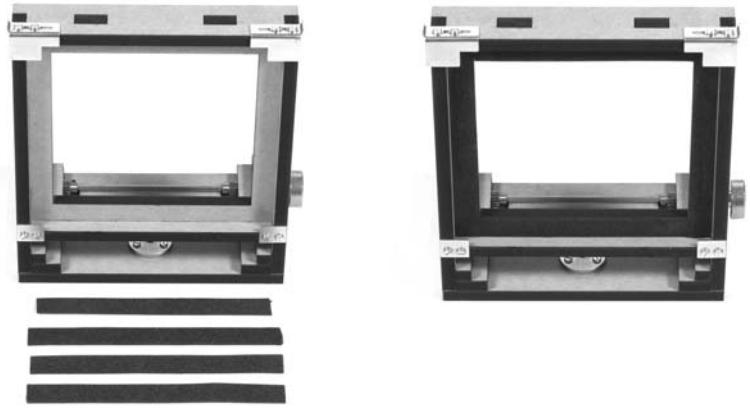
Attach focusing spindle as per diagram. The spindle should be threaded through the camera body and then through the cogs as you go (if the spindle is too tight, rub with Glass Paper/Abrasive Cloth to allow easy insertion). Tighten the grub screws to ensure the cogs are close to the bottom runners as per the diagram detail and leave enough spindle to glue the main focusing knob to the outside.



REVERSING BACK

STAGE 17

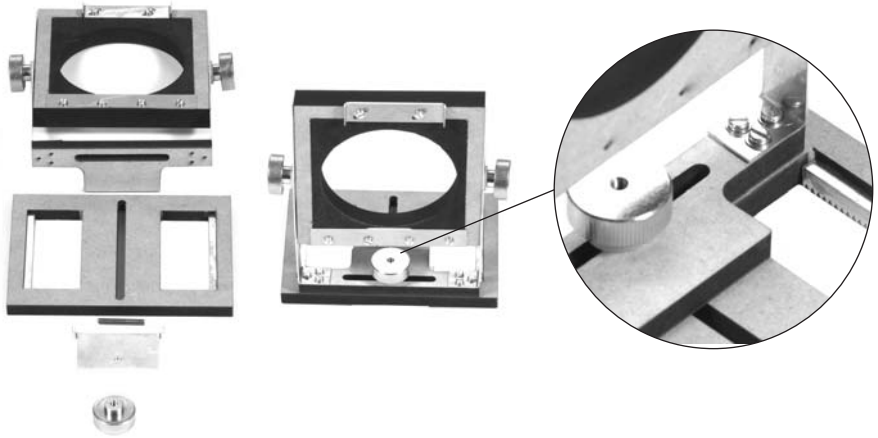
Cut foam to size and stick into the recess at the rear of the camera body, this will act as a light trap, and allow a snug fit for the reversing back.



ATTACH CAMERA FRONT TO FOCUSING BOARD

STAGE 18

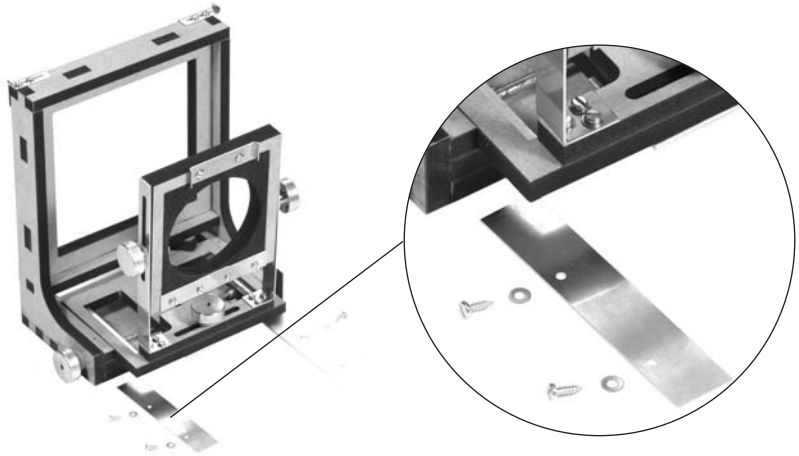
Ensure focusing board is in a “teeth down” orientation and attach the camera front using metal clip and large metal knob as per diagram.



CAMERA BODY

STAGE 19

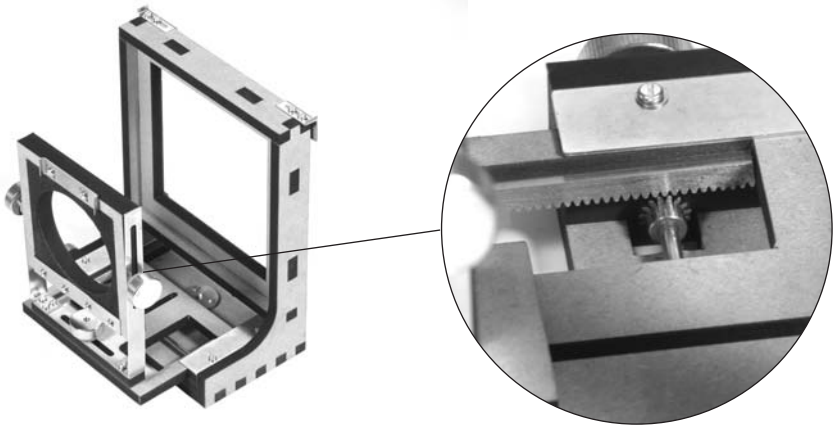
Offer camera front, and focusing board up to camera body. Ensure cogs engage with focus board and that the focus spindle will function correctly.



ASSEMBLE CAMERA

STAGE 20

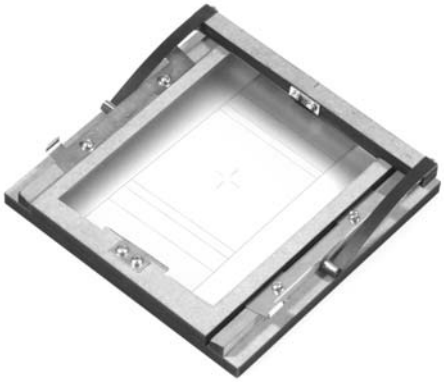
Screw metal plates into pilot holes to complete assembly of the main camera body. The focus board should now move back and forth smoothly when the focus knob is turned.



ASSEMBLE FOCUSING SCREEN / FILM HOLDER

STAGE 21

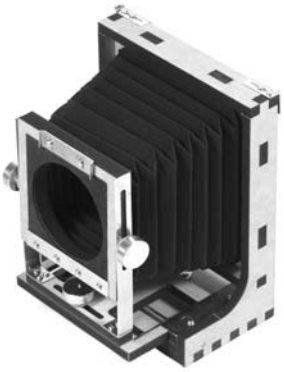
Fit the ground glass holder to the reversing back by tucking the spring clips under the metal rods. The glass holder should sit snugly back into place as per the diagram.



ATTACH BELLOWS

STAGE 22

Using contact adhesive, attach bellows. You should attach the wider end to the camera first, and then by reaching in through the rear of the camera, the front part can be stuck and smoothed into place. Ensure there are no light leaks.



FINAL ASSEMBLY

STAGE 23

Finally the focusing screen assembly can be attached to the camera, using the moveable metal clips to clamp it into place. If you find the focusing screen is a tight fit, sand down its edges to ensure the correct fit. The camera assembly is now complete.

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