Figure 1: Exploded view of the monorail camera (simplified)

1 Optical bench
2 Monorail
3 Tripod block
4 Sliders (front and rear)
5 Front standard
6 Rear standard
7 Front frame
8 Rear frame
9 Lensboard
10 Springback
11 Bellows
12 Lens
13 Ground glass frame
4. Slider
5. Front standard
7. Front frame
9. Lensboard
18. Control knob
20. Bolt and wing nut
21. Frame connector
22. Lensboard lock (upper)
23. Lensboard lock (lower)
Figure 3: End view

4 Slider
6 Rear standard
13 Ground glass frame
14 Ground glass
15 Film holder seat
16 Leaf springs
17 Springback lock
18 Control knob
19 Wing nut
20 Bolt and wing nut
21 Frame connector
Figure 4: Front frame
Figure 5: Front frame (hardwood strips with rabbet)
Figure 6: Front frame - plywood square
Figure 8: Front frame with frame connector.
Figure 10: Rear frame - plywood square
Figure 11: Rear frame (with plywood square)
Figure 13: Lensboard

Frame and light trap

4 mm birch plywood

140

072

4
Figure 14: Spring back (sketch)

- Springback panel
- Ground glass frame
- Ground glass
- Leaf spring
- Cutout for film holder
- Film holder seat
- Ground glass lock
Figure 15: Spring back (end view and side view)
Figure 17: Film holder seat on spring back panel
(end view, side view, top view)

Film holder seat
Spring back panel
Spring back panel
Film holder seat
Rabbet for leaf spring in film holder seat
Spring back panel
Cutout 100 x 120 mm in spring back panel
Figure 18: Ground glass frame (sketch)
Figure 19: Ground glass frame

4 mm plywood
Brass 0.8 mm
Ground glass

Critical measurement: Focusing plane of ground glass should be 4.8 mm from bottom of ground glass frame

Stud for leaf spring
Cut out corners in ground glass
Ground glass

Screw for ground glass lock
10 x 24 mm hardwood

Ground glass lock
Screw for ground glass lock
Figure 20: Brass fittings

A = Spring back lock (bottom)
B = Spring back lock (top)
C = Spring back lock (top, cover plate)
D = Bellows lock
E = Lensboard lock (upper)
F = Lensboard lock (upper, cover plate)
G = Lensboard lock (lower)

Measurements depend on design.
Figure 21: Spring back lock
Figure 22: Front standard

2-3 mm brass

Angle irons, screws to be tapped with acorn nuts.

"Beam" or...
Figure 23: Rear standard

- Hole for control screw
- Slot for control screw
- Cut out for tilt movement
Figure 24: Frame connectors

- Front standard
- Front frame
- Frame connector
- Threaded insert
- Knurled screw
- Washers
- Screw
- Front
- Back

- Rear frame
- Screw
- Frame connector
- Threaded insert
- Knurled screw
- Hole for threaded insert
- Rear standard
- Screw
- Front
- Back
Figure 25. Sliders
Figure 26. Tripod block
Figure 27: Bellows Lock
Figure 28: Bag bellows (sketch)

Measurements in centimeters

Folded and glued bag bellows

Bellows panel
Figure 29: Lens case (sketch)
Figure 32: Standard 4 x 5 in. film holder (scale 1 : 1)