USER ASSEMBLY INSTRUCTIONS · DOC. DS-R37-26-001

RUSSIAN 37 MM HOTCHKISS GUN SET

1/6 scale complete kit — pedestal-mounted naval light gun, precision-cast in high detail resin grey for static display. This manual covers part identification, orientation, surface preparation, the recommended assembly sequence, alignment tolerances and final inspection.

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PRECISION RESIN KITS

SCALE	MATERIAL	SKILL LEVEL	BUILD TIME
1 / 6	High Detail Resin	Intermediate	3 – 5 h



FIG. A — COMPLETED ASSEMBLY, LEFT SIDE



FIG. B — COMPLETED ASSEMBLY, BREECH THREE-QUARTER

Reference views of the finished gun. Use them to confirm barrel elevation, shield position and the rearward reach of the shoulder-rest arm at every stage.

01 — KIT COMPONENTS & SUB-ASSEMBLY BREAKDOWN

Confirm every part below is present before starting. Parts are grouped by sub-assembly; the group letter (A–D) is used throughout the assembly procedure. All parts are precision-cast in High Detail Resin Grey.

REF	PART	QTY	DESCRIPTION
GROUP A — MOUNTING & PIVOT			
A1	**Pedestal Cone & Deck Flange**	1	Tapered pedestal with riveted deck flange, moulded inspection hatch, hinge plate and dog handle. Open socket at the crown accepts the pivot post.
A2	**Pivot Post & Trunnion Yoke**	1	Training post with collar ring, forked trunnion yoke and cast traverse clamp lever. Rotates in the pedestal socket.
A3	**Trunnion Pin**	1	Short stepped pin securing the cradle in the yoke and setting the elevation axis.
GROUP B — ORDNANCE			
B1	**Barrel & Breech Assembly**	1	One-piece tube with hollowed muzzle, reinforce bands, front sight boss, breech housing, firing lever and cross-pin bosses.
B2	**Recoil Sleeve Collar**	1	Twin-banded cylindrical collar fitted beneath the barrel forward of the trunnion.
GROUP C — SHIELD			
C1	**Splinter Shield Plate**	1	Radius-cornered shield with stepped barrel aperture and six moulded rivet bosses marking the bracket pads on the rear face.
GROUP D — LAYER'S CONTROLS			
D1	**Shoulder Rest Arm**	1	Long T-form arm with curved shoulder pad, pierced mounting lug and a dropped, cranked grip rod at the outer end.
D2	**Clamp Handle Pin**	1	Small knurled pin for the elevation clamp boss on the yoke.

Part names above are taken from the printed reference set supplied with this kit. If a casting in your box differs from its description, confirm against Fig. 1 before cutting or bonding.

1.1 PART IDENTIFICATION PLATE

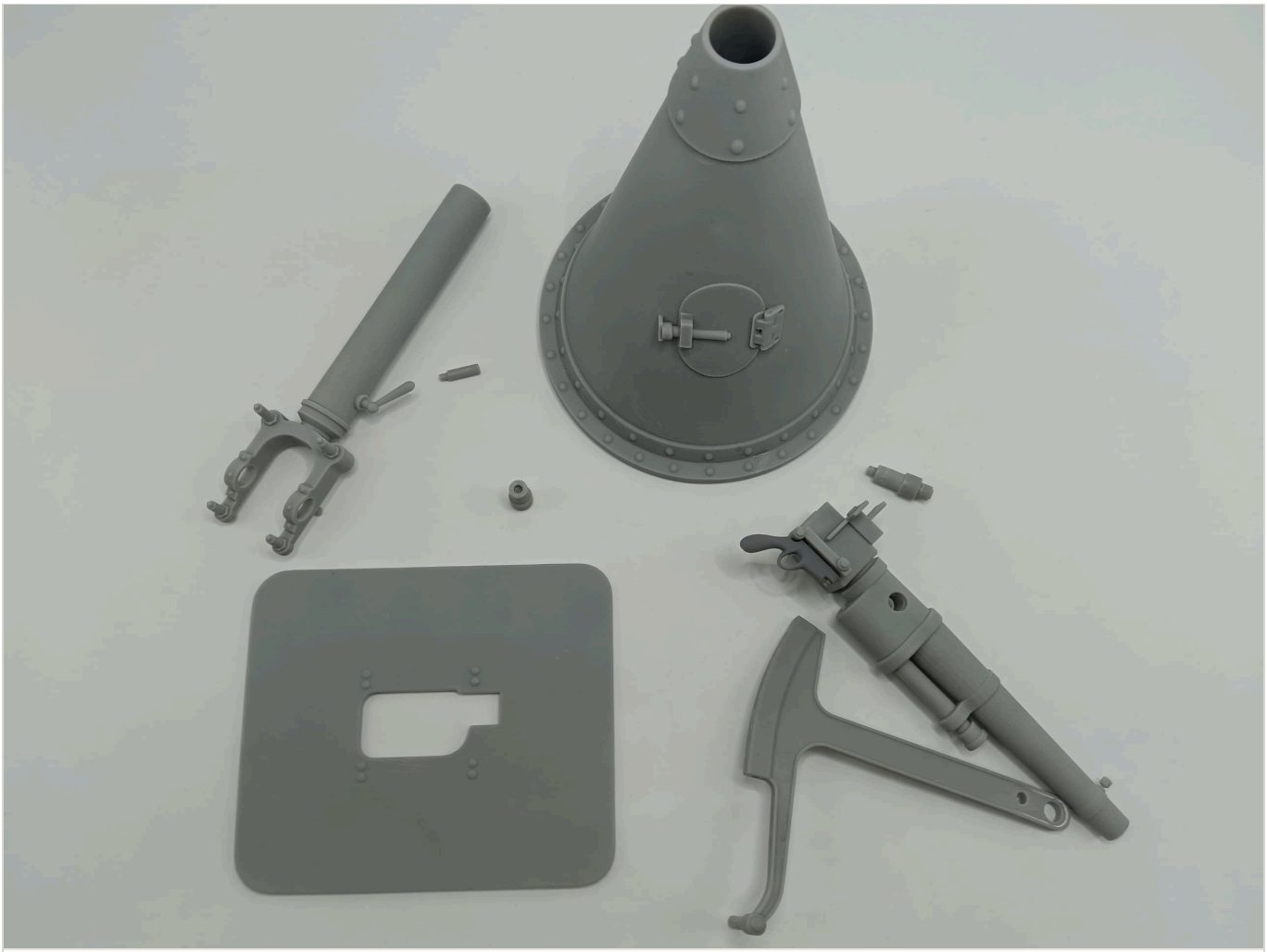

FIG. 1 — COMPLETE PARTS MAP, PRINTED SET

A1 Top centre — pedestal cone, hatch face up.

A2 Upper left — pivot post with forked yoke.

A3 Centre — short stepped trunnion pin.

B1 Right — barrel with breech housing and lever.

B2 Right of centre — twin-banded recoil sleeve.

C1 Lower left — shield plate, rear face up.

D1 Lower right — shoulder rest arm.

D2 Left of centre — small clamp handle pin.

1.2 SUPPLEMENTARY VIEWS



FIG. 2 — MUZZLE SIDE: SHIELD FRONT FACE, HATCH POSITION

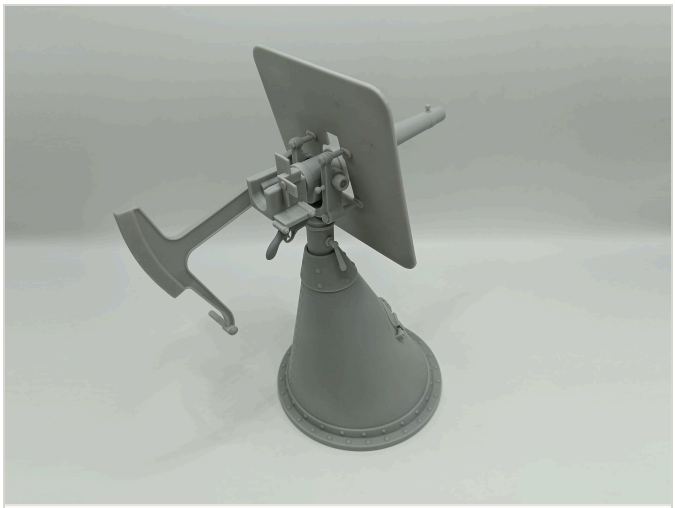

FIG. 3 — LAYER'S SIDE: YOKE, CLAMPS AND SHOULDER ARM

02 — ORIENTATION GUIDE

All directional terms in this manual are given from the layer's position — standing behind the shield, looking out over the barrel. Fix this vocabulary before starting: several joints are only correct in one rotation.

FRONT / MUZZLE
The hollowed open end of the barrel (B1), forward of the shield.

REAR / BREECH
The housing with the firing lever, and the shoulder rest arm (D1) behind it.

SHIELD FACES
Front face is smooth. Rear face carries the six rivet bosses and the aperture step — brackets land on this side.

HATCH BEARING
The pedestal inspection hatch (A1) faces forward, roughly under the muzzle, as in Fig. 2.

TWO AXES
Training = rotation of the post (A2) in the pedestal. Elevation = rotation of the barrel about the trunnion pin (A3).

DATUM FACE
The flat underside of the deck flange (A1) — the reference plane for every levelling and elevation check in this manual.

03 — PREPARATION

Prepare every part before any adhesive is opened. Parts are supplied washed and cured, but support witness marks remain and will hold joints open if left in place.

1. **Inventory.** Lay all parts out against the table in Section 01 and against Fig. 1. Report any missing or damaged casting before starting.

2. **Wash.** Rinse in warm water with a drop of mild detergent and a soft brush; dry fully. Residual release agent stops both adhesive and primer bonding.
3. **Support removal.** Trim remaining nubs with a fresh sharp blade, cutting away from yourself. Expect witness marks inside the pedestal socket and on the underside of the deck flange — both are mating faces and must come back flat.
4. **Sanding.** Dress seams and contact faces at 600–1000 grit, wet. Keep abrasives off the rivet rows on the flange, the hatch hinge and dog handle (A1), the breech lever (B1) and the shoulder pad face (D1).
5. **Bore and muzzle.** Clear the muzzle opening with a rolled strip of fine paper. Do not drill deeper than the moulded bore.
6. **Dry-fit.** Assemble A1–A2–B1 without adhesive first. Open a tight socket with a round file or pin vise; never force a post home.
7. **Prime.** Thin coat of resin-compatible primer on all surfaces to be painted. Paint the pedestal interior edge and hatch detail before the post is fitted — access closes at Step 02.

RECOMMENDED TOOLS & CONSUMABLES

Sharp hobby knife & spare blades	Flush-cut nippers	Needle files, 600–1000 grit paper
Pin vise, 0.5–1.5 mm bits	Medium CA gel + accelerator	5-minute two-part epoxy (structural)
Tweezers, small clamps, masking tape	Flat glass or steel setting plate	Small engineer’s square
Nitrile gloves, dust mask, eye protection	Resin-compatible primer	Debonder for CA

04 — ASSEMBLY PROCEDURE

Work in order. Each step lists the parts used, the adhesive and the check to pass before continuing. Let the stated cure time elapse before a joint carries load.

01 PEDESTAL LEVELLING — PART A1

Set the pedestal (A1) datum face down on a flat glass or steel plate. The whole rivet ring must contact the plate. If the flange rocks, warm it in 50 °C water, press flat and let it cool under a weight — do not sand the rivet row away to chase a high spot.

Check the crown socket for support debris and dry-fit the pivot post (A2) now: it should drop in under its own weight and stand upright without persuasion.

CHECK Flange in full contact with the plate, no rock. Post enters the socket freely and stands within ±1° of vertical.

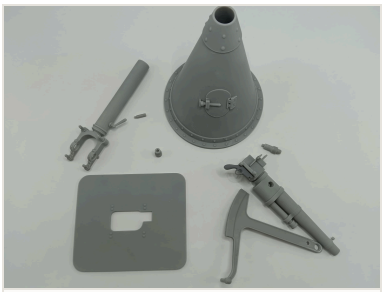

FIG. 4 — A1, HATCH FACE AND RIVET RING

02 PIVOT POST & YOKE INSTALLATION

PARTS A2 → A1

Decide the training angle first — once bonded, the gun no longer traverses. Fig. A shows the barrel roughly square to the hatch; any angle is valid, but set it deliberately.

Bond the post (A2) into the crown socket with two-part epoxy: this joint carries the whole upper assembly and CA alone will fail under it. Seat the collar ring hard down onto the crown, hold the post vertical against a small square, and check it in two directions 90° apart while the epoxy goes off.

CHECK Collar seated with no gap at the crown; post vertical within ±1° on both axes; yoke fork opening square to the intended barrel line. Cure 30 min before Step 03.



FIG. 5 — A2 SEATED, COLLAR HARD DOWN

03 RECOIL SLEEVE TO BARREL

PARTS B2 → B1

Fit the recoil sleeve collar (B2) to its moulded pad on the underside of the barrel (B1), forward of the trunnion bosses, its bands running parallel with the barrel axis. Bond with a small amount of CA gel applied to the pad only.

CHECK Sleeve parallel to the barrel axis within ±1° and centred on the pad within ±0.3 mm; no adhesive on the barrel flanks.



FIG. 6 — B2 UNDER THE BARREL, BANDS PARALLEL

04 BARREL INTO YOKE — ELEVATION SET

PARTS B1, A3, A2

Lay the barrel (B1) into the yoke fork, breech to the rear, and pass the trunnion pin (A3) through the yoke and the barrel bosses. Dry-fit and set the elevation you want: Fig. A shows a slight positive angle, barrel level to a few degrees up.

Measure the elevation against the datum face, not by eye against the shield. When satisfied, wick a small amount of CA into the pin ends only — keep adhesive out of the fork faces so the barrel can still be nudged for a few seconds.

CHECK Barrel centred in the fork with equal side clearance within ±0.2 mm; elevation held to ±1° of intent; no roll — the breech lever stands upright as in Fig. B.



FIG. 7 — A3 THROUGH YOKE AND BARREL BOSSES

05 SPLINTER SHIELD MOUNTING

PART C1

Paint the shield fully before it is fitted; once it is on, the brackets behind it are hard to reach. Pass the barrel through the aperture from the rear, rivet-boss face towards the breech, and rest the shield on the yoke bracket pads.

Set the plate so the aperture step clears the barrel evenly all round and the top edge runs level. Tack with two small CA points at the pads, verify, then reinforce each pad with a fillet of CA gel from behind. If the aperture binds on the barrel, relieve the aperture — never the barrel.

CHECK Top edge level within ±1°; aperture clearance even within ±0.3 mm; plate square to the barrel axis; no adhesive visible on the front face.



FIG. 8 — C1 FITTED, BARREL CENTRED IN APERTURE

06 SHOULDER REST ARM

PART D1

Offer the arm (D1) up to the breech housing with its pierced lug over the mounting boss, shoulder pad outboard and the cranked grip rod hanging down, as in Fig. A. The arm is the longest unsupported part on the model — hold it near the lug, not at the pad.

CHECK Arm in line with the barrel axis viewed from above, within ±1°; pad clear of the shield through the intended elevation; grip rod vertical. Cure fully before the model is handled by the base.



FIG. 9 — D1, PAD OUTBOARD, GRIP ROD DOWN

07 CLAMP HANDLE & FINAL FITTINGS

PART D2

Fit the clamp handle pin (D2) into the elevation clamp boss on the yoke, knurled head outboard. Apply adhesive with a pin point — a brush carries far too much at this size.

Finish by touching in the hatch hinge and dog handle on the pedestal and by checking the muzzle opening is still clear of paint and dust. Leave the model undisturbed for a full cure before display.

CHECK Handle seated square in its boss; muzzle bore open and clean; no loose small part remaining from Section 01.



FIG. 10 — D2 AT THE CLAMP BOSS, HEAD OUTBOARD

05 — HANDLING CAUTIONS

BRITTLE MATERIAL

TOP-HEAVY ASSEMBLY

Cured resin snaps rather than flexes. Lift the finished gun by the pedestal only — never by the barrel, the shield edge or the shoulder rest arm.

The mass sits high on a narrow pedestal. Bond the model to a display base, or store it lying on foam, to stop it toppling onto the barrel.

DUST & VENTILATION

Sand wet where possible and wear a mask. Resin dust should not be inhaled. Work in a ventilated area and clean surfaces afterwards.

ADHESIVES

CA bonds skin instantly — wear nitrile gloves and keep debonder to hand. Use epoxy, not CA, at the post-to-pedestal joint.

HEAT & UV

Do not display in direct sunlight or above 40 °C. Prolonged UV yellows and embrittles resin; heat lets the barrel and arm sag.

NOT A TOY

Static display model for ages 14 and over. Contains small and sharp-edged parts; keep away from children and pets.

06 — ALIGNMENT CHECKS

Perform each check at the stage indicated, while the joint can still be corrected. Tolerances are given for 1/6 scale and are judged against the datum face on a flat plate unless noted otherwise.

STEP	CHECK	TOLERANCE
01	Deck flange flat on plate, no rock	Full ring contact
02	Pivot post vertical, checked on two axes	±1°
02	Collar ring seated on the pedestal crown	No visible gap
03	Recoil sleeve centred and parallel on its pad	±0.3 mm / ±1°
04	Barrel centred in the yoke fork, equal side clearance	±0.2 mm
04	Elevation held as set; no barrel roll	±1°
05	Shield top edge level, plate square to barrel axis	±1°
05	Aperture clearance even around the barrel	±0.3 mm
06	Shoulder arm in line with the barrel axis from above	±1°
07	Clamp handle square in its boss, head outboard	Seated, no lean

07 — FINAL INSPECTION CHECKLIST

Complete after full cure, before display or packing. Tick each line; correct any failure before moving on.

- ☐ All parts from Section 01 accounted for and installed; no leftover casting unexplained.

- [ ] Model stands on the deck flange without rock on a flat surface.
- [ ] Pivot post vertical; upper assembly does not lean when viewed from the front or side.
- [ ] Barrel elevation as intended; barrel not rolled — breech lever upright.
- [ ] Shield level and square, barrel centred in the aperture, front face unmarked.
- [ ] Shoulder rest arm aligned with the barrel; grip rod vertical; joint firm under light pressure.
- [ ] Muzzle bore open and clean; no paint bridging the opening.
- [ ] Rivet rows, hatch hinge and dog handle crisp and free of filler or sanding damage.
- [ ] No adhesive residue, fingerprints, seam lines or dust on visible surfaces.
- [ ] Paint and finish coats fully cured; no tacky areas at contact points.
- [ ] Finished model compared against reference views Fig. A and Fig. B; stance, shield position and arm reach match.

INSPECTED BY _____ DATE _____ KIT SERIAL _____