WHITWORTH, BREECH-LOADING 12-POUNDER

Designed by Sir Joseph Whitworth, the cannon that bore his name became a favored weapon of the Confederacy. Unusual in appearance as well as operation, the Whitworth was a breech-loader that fired an elongated 12-pound iron shell from a finely rifled 1,100 pound barrel. Accurate and easy to maneuver, it had a range of 4.5 miles and made a shrill, whistling noise which could be distinguished from all other cannon of the period. The Whitworth saw action at Gettysburg. Charleston. Vicksburg. Fredericksburg and many other American Civil War battlefields.

- Historically accurate and perfectly scaled
- Cleanly cast Britannia metal components
- Authentically detailed cannon barrel
- One-piece ready to assemble wheels
- Clearly written illustrated instructions
- Easy to build assembly and painting time 5-10 hours



No. MS4001

No. MS4002

PRECISION CAST

METAL PARTS

Entry Level • No. MS4001 Length 10" / Width 4" Height 3-1/4" Weight 1 lb., 4 oz. / Scale 1:16



PRECISION CAST

METAL PARTS

LIMBER FOR WHITWORTH, **AMMUNITION CHEST**

The limber was an indispensable piece of equipment during the American Civil War. It was a simple two-wheeled cart designed to carry an ammunition chest containing gunpowder and shot for the artillery pieces. A team of horses was hitched to the limber and a cannon was hooked on to its rear when the army was on the move.

The ammunition chest lid was large enough to seat up to three men. However, sitting above the gunpowder was dangerous, so after the first few months of the War, only the driver rode on the limber. In times of battle, the limber and horses were left behind the lines of fire.

- Historically accurate and perfectly scaled
- Cleanly cast Britannia metal components
- Authentically detailed ammuntion chest
- One-piece ready to assemble wheels
- Clearly written illustrated instructions
- Easy to build assembly and painting time 5-10 hours
- Entry Level No. MS4002 Length 10" / Width 4" Height 3-1/4" Weight 1 lb. / Scale 1:16

Y MODEL SHIPWAYS

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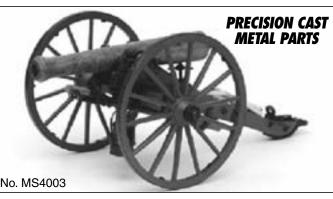
NAPOLEON, MODEL 1857 12-POUNDER

Developed in France for Emperor Napoleon III in the 1850s, the bronze smoothbore 12-pounder became the most popular gun of the American Civil War. The Napoleon was light enough to be easily maneuverable and heavy enough to destroy field fortifications almost a mile away. Firing solid shot, spherical case and canister, it was also extremely versatile. By mid-1863 nearly 40% of all field artillery pieces of each army were Napoleons. The Union had over 1,000 in its arsenal and the Confederacy over 600.

- Historically accurate and perfectly scaled
- Cleanly cast Britannia metal components
- Authentically detailed cannon barrel One-piece ready to assemble wheels
- Clearly written illustrated instructions
- Easy to build assembly and
- painting time 5-10 hours

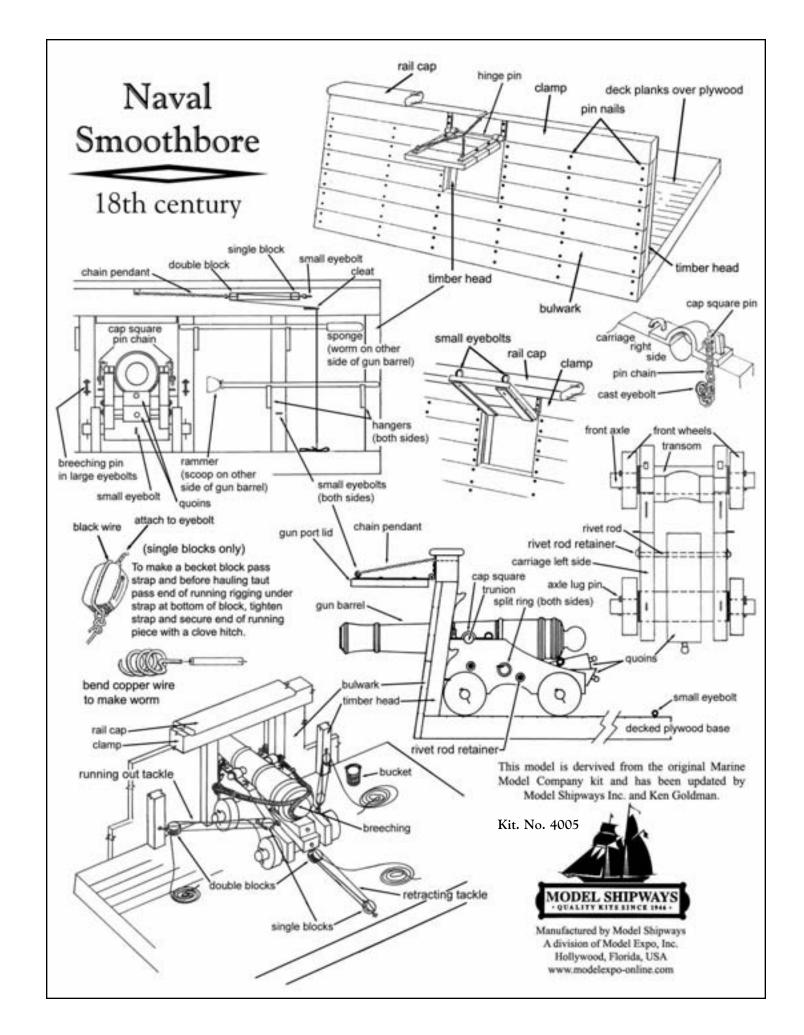


Entry Level • No. MS4003 Length 8-1/4" / Width 4" / Height 3-1/2" Weight 1 lb. / Scale 1:16



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INSTRUCTIONS FOR 1:24 SCALE NAVAL SMOOTHBORE

GENERAL PREPARATION & PAINTING

Lightly sand wood parts to remove any raised grain fibers. Cast metal parts should be thoroughly washed to remove molding agents. Scrape off mold seams and then polish the parts with steel wool or a soft brass brush. NOTE: the inscribed seam on the wheels belongs there to indicate they were laminated wheels. Fill any pits. Primer painting the cast parts is recommended. Pin nails and eyebolts should be cut as necessary so they do not penetrate clear through the wood parts. Refer to the drawings for proper placement of parts.

Paint all metal parts black. The bulwark and gun port lid are gloss black on both sides, the clamp and rail cap should be stained and finished a dark oak. The deck can simply be varnished or given a very light gray wash to simulate years of holy stoning. The Gun carriage sides, axle casings, transom and quoins can be painted a red or a maple tan (refer to box art).

GUN AND CARRIAGE

Drill out the lug pin holes in the axles and the cap square pin holes (see drawing). Glue the transom to the front axle so it slopes to the rear with its leading edge flush with the axle housing. On a flat surface, dry fit the carriage sides to both axles and adjust as needed to ensure everything is square. Insert the trunion through the cap squares to make sure it will be level. Remove the trunion and glue the carriage sides and axles together. Insert the rivet rod through the holes in the carriage sides. It should be flush or slightly recessed. Glue in a rivet rod retainer on each end.

Drill a #68 hole, centered on the rear face of the rear axle, and glue in a large eyebolt. Cut two 3/4" lengths of chain for the pin chains, slightly enlarge the end links and, per the drawing, attach them to the cap square pins and carriage sides using tiny split rings fashioned by cutting the tails off four small eyebolts. Attach a large split ring (breeching ring) to each side of the carriage.

Attach the gun by sliding the trunion through the cap squares and the barrel itself. Slide the larger quoin atop the rear axle and rivet rod, then the smaller one onto the larger to adjust the gun elevation as desired, but make sure the barrel will clear the gun port. Glue the quoins and barrel in place. Slip the wheels onto the axles and finish off by inserting four lug pins made by cutting four large eyebolts.

BULWARK AND DECK

Bevel back one long side ten degrees on the provided 8 1/4" x 5 1/4" x 3/16" plywood. This later will create the bulwark tumblehome. Using wood glue, plank the deck starting with two uninterrupted strips of 1/4" x 1/32" lumber at the

- 1 3/4" from edge				
3 5/16" from edge	—; :		*	
simulate	pegs with brown per			
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beveled edge. Continue planking to the opposite edge as indicated in the drawing.laser etched side of the bulwark and gun port lid face outboard.

Scribe the blank sides to match the etched sides. Hold the bulwark against the beveled deck edge and draw a light line the length of the bulwark to indicate the bottom placement of the timber heads, cut from 1/4" square stock 2 3/8" long. The outside timbers heads are attached flush with the bulwark ends. The remaining two pair should be centered 1 3/4" and 3 5/16" from the outer edges of the bulwark. The innermost timber heads should protrude about 1/16" into the gun port to create a lip against which the lid rests. Bevel the ends of the timber heads to the same ten degrees as the deck plywood, making sure the ends are parallel. All timber heads should be sanded flush with the bulwark top.

Insert pairs of pin nails through the bulwark planks into each timber head, leaving the bottom plank until after the bulwark is glued to the deck piece. Score the backside of the gun port lid, as you did with the bulwark. Cut the two backing strips, $1 \frac{1}{8} \times \frac{3}{32} \times \frac{1}{4}$ and glue these to the back of the lid, in $\frac{1}{8}$ from the outside edges. Determine the top by lining up the lid planks with those on the bulwark, then position the long hinge straps on the outside of the lid, centered over the backing strips, with the eye centered on the top edge. Affix these with pin nails in the top and center holes and small eyebolts in the bottom holes. Let the eyebolt ends protrude about $\frac{1}{16}$ and clench over. Paint the bulwark and gun port lid assemblies.

