

Honest John M-31 Missile



The MGR-1 Honest John rocket was the first nuclear-capable surface-to-surface missile in the United States arsenal. Designated Artillery Rocket XM31, the first such rocket was tested 29 June 1951 and the first production rounds were delivered in January 1953. The designator was changed to M31 in September 1953. The first Army units received their rockets by year's end and Honest John battalions were deployed in Europe in early 1954.

Alternatively, the rocket was designed to be capable of carrying an ordinary high-explosive warhead weighing 680 kilograms (1,500 lb), even though that was not the primary purpose for which it was originally envisioned.

Developed at Redstone Arsenal, Alabama, Honest John was a large but simple fin-stabilized, unguided artillery rocket weighing 2,640 kilograms (5,820 lb) in its initial M-31 nuclear-armed version. Mounted on the back of a truck, HJ was aimed in much the same way as a cannon and then fired up an elevated ramp, igniting four small spin rockets as it cleared the end of the ramp. The M-31 had a range of 24.8 kilometres (15.4 mi) with a 20 kiloton nuclear warhead and was also capable of carrying a 680 kilograms (1,500 lb) conventional warhead. Early tests exhibited more scatter on target than was acceptable when HJ was conventionally armed. Development of an upgraded Honest John, M-50, was undertaken to improve accuracy and extend range.

The size of the fins was greatly reduced to eliminate "weathercocking" (the tendency of crosswinds to turn a rocket to face into the wind). Increased spin was applied to restore the positive stability margin that was lost when fin size was reduced. The improved M-50, with the smaller fins and more "rifling", had a maximum range of 30+ miles with a scatter on target of only 230 metres (250 yd), demonstrating an accuracy approaching that of tube artillery. Honest John was manufactured by the Douglas Airplane Company of Santa Monica, California.

The two basic versions of Honest John were:

MGR-1A (M31) was 8.31 metres (27 ft 3 in) long, had an engine diameter of 58.10 centimetres (22.875 in), a warhead diameter of 76 centimetres (30 in), a span of 260 centimetres (104 in), weighed 2,640 kilograms (5,820 lb) (nuclear), and had a maximum range of 24.8 kilometres (15.4 mi). The Hercules Powder Company X-202 rocket motor was 5.015 metres (197.44 in) long, weighed 1,786 kilograms (3,937 lb), and had 401.79 kN (90,325 lbf) average thrust.

MGR-1B (M50) was 7.5827 metres (24 ft 10.53 in) long, had an engine diameter of 58 centimetres (22.8 in), a warhead diameter of 76 centimetres (30 in), a span of 140 centimetres (56 in), weighed 1,965 kilograms (4,332 lb) (nuclear), and had twice the range of the M31. An improved propellant formulation gave the rocket motor 670 kN (150,000 lbf) thrust.

By the time the last Honest Johns were withdrawn from Europe in 1985, the rocket had served with the military forces of Belgium, Britain, Canada, Denmark (non-nuclear), France, Germany, Greece, Italy, the Netherlands, Norway (non-nuclear), South Korea, Taiwan (non-nuclear), and Turkey.

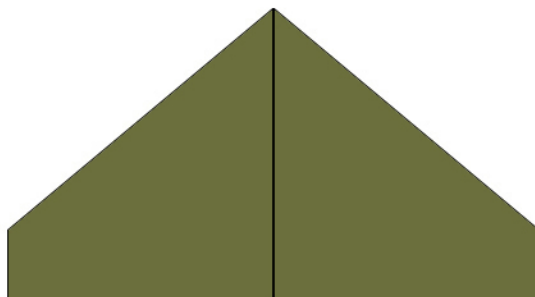
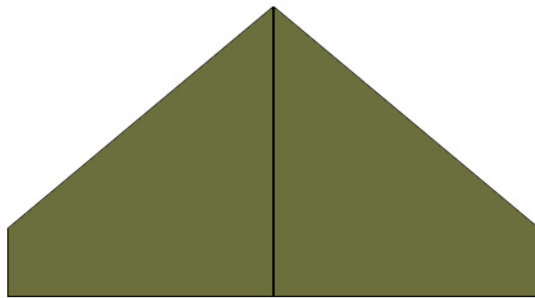
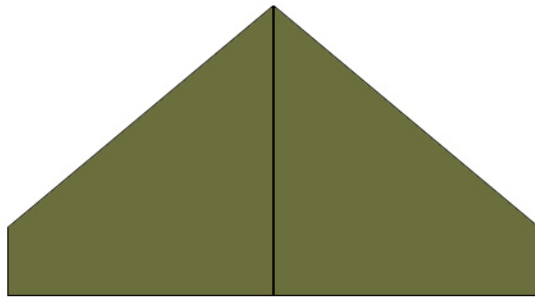
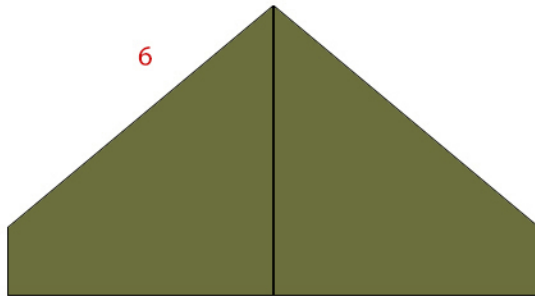
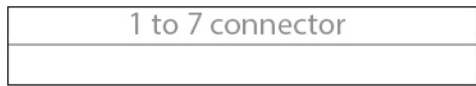
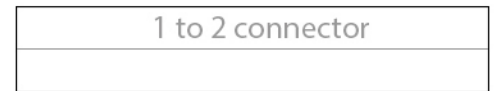
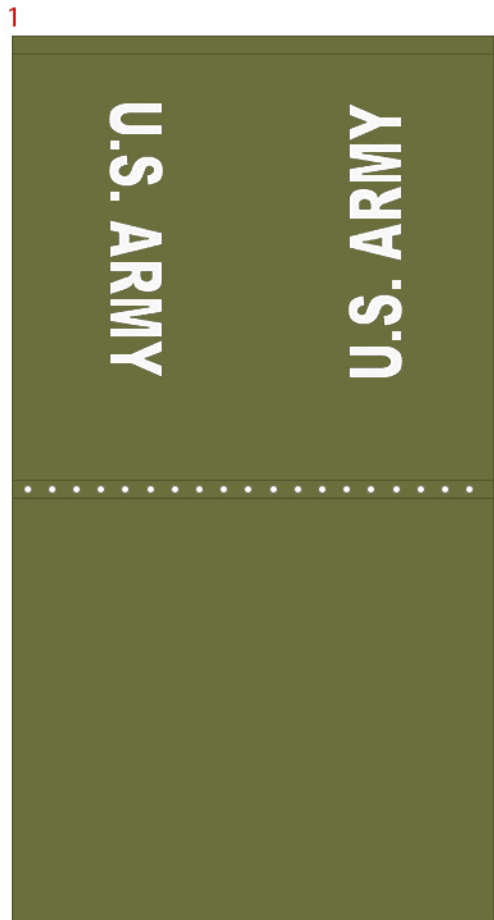
Origin of name

In late 1950, Major General Holger Toftoy was a colonel overseeing the development of the rocket. The project was in danger of cancellation "on the grounds that such a large unguided rocket could not possibly have had the accuracy to justify further funds." On a trip to White Sands Missile Range, Toftoy met a Texan man who was prone to making unbelievable statements. Whenever anyone expressed doubt about the man's claims, he would respond, "Why, around these parts, I'm called 'Honest John!'" Because the project was being questioned, Toftoy felt that the nickname was appropriate for the rocket and suggested the name to his superiors.

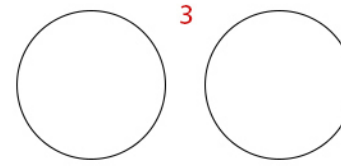


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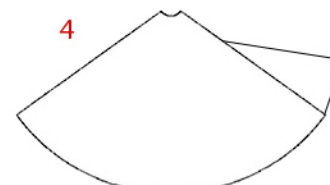
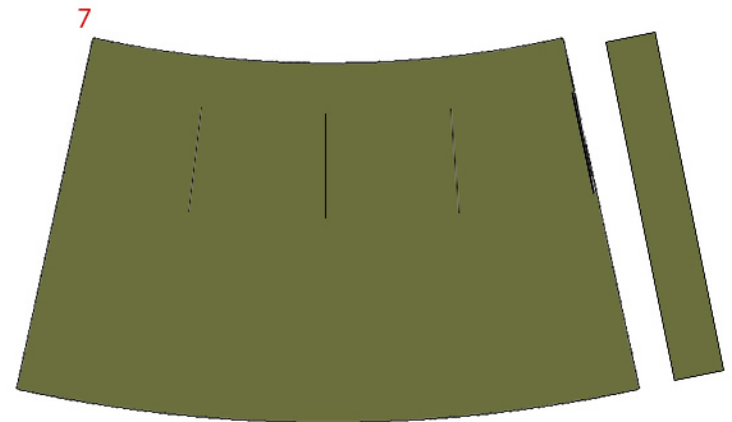
1/30 Scale Paper Model



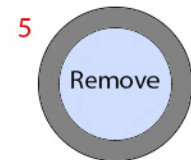
Fins, score the middle and fold in half



Formers, glue to cardstock



Color back Black



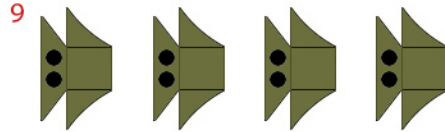
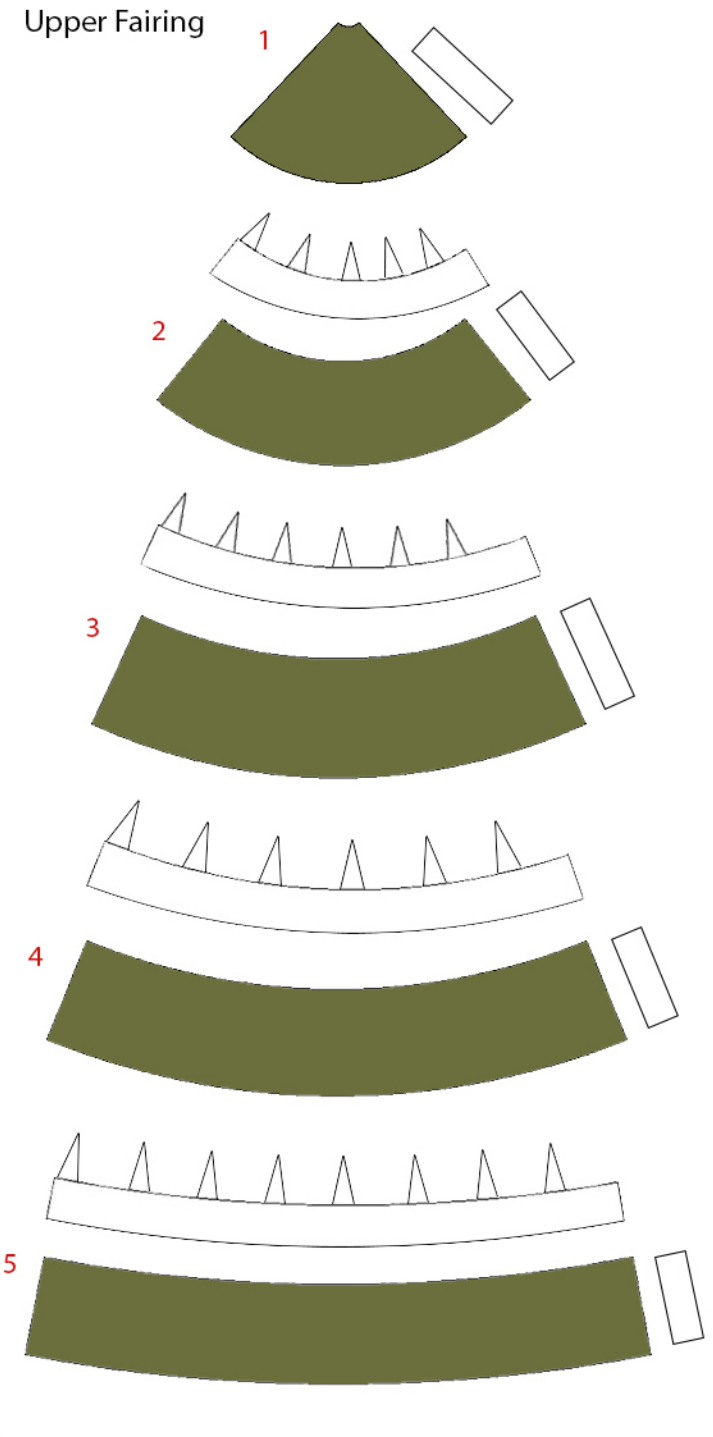
Remove the light blue circle from 5. Color backside of 4 black and roll it to a cone. Glue 4 to backside of 5 for an embedded nozzle. Glue this up into the bottom of the rocket.

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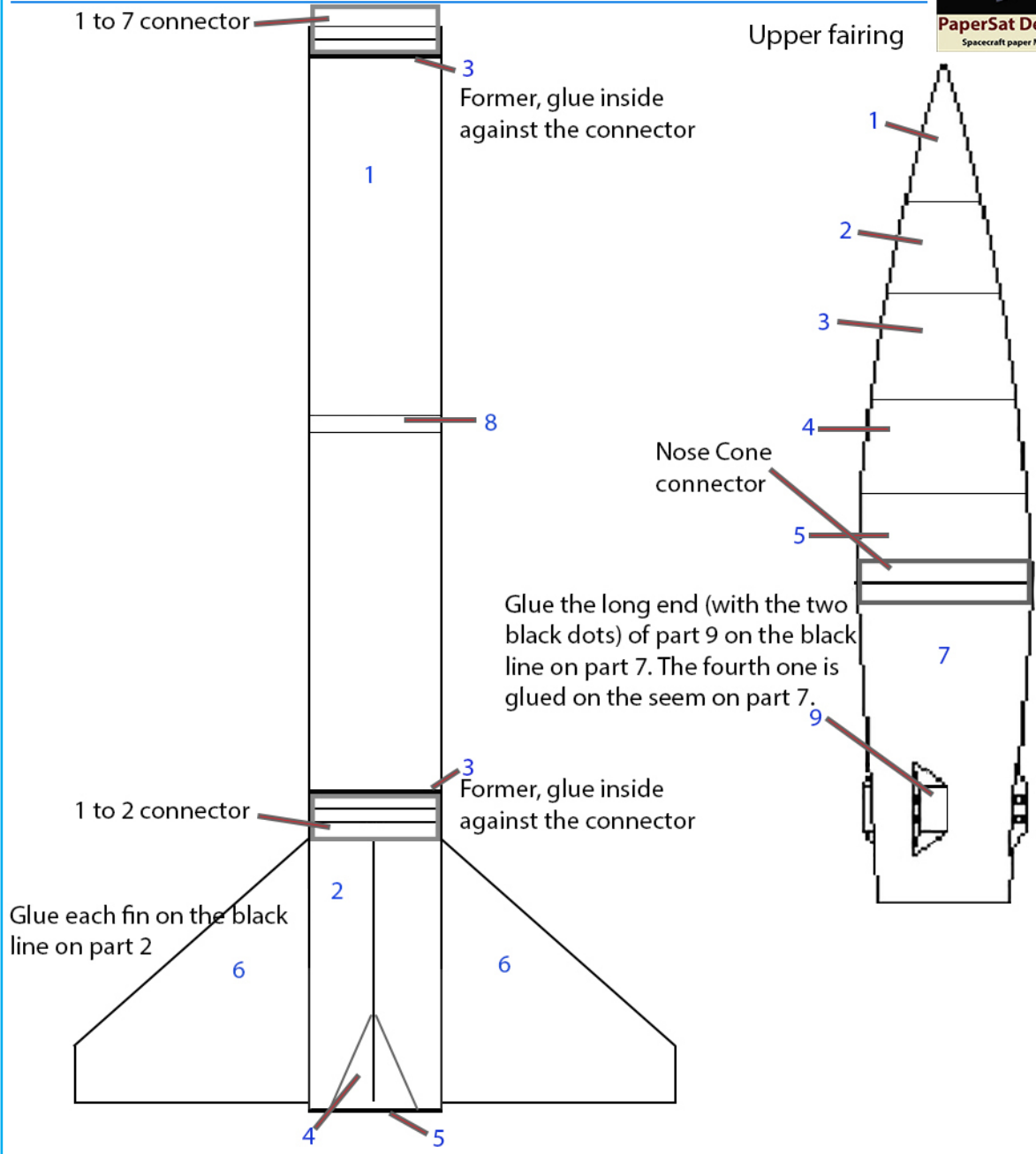
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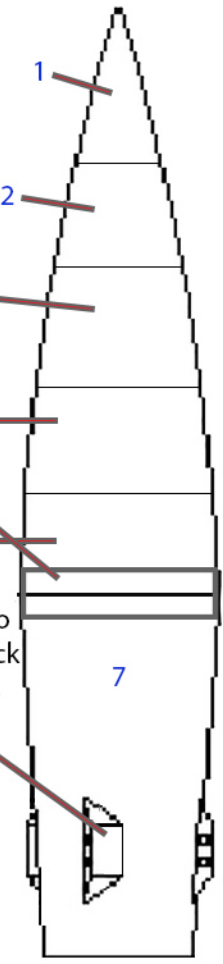
Upper Fairing



When complete, glue the upper fairing on the body using the 1 to 7 connector while aligning the seems on both halves.



Upper fairing



Glue each fin on the black line on part 2