

Belcher Bits BL-20: Polaris A-1 /A-2 IRBM 1/72

Background

In 1956, the USN started development of sea-based IRBMs, and within a year, had evolved that requirement to submarine-launched solid fuel ballistic missiles. Development of the submarine and the missile (to be called Polaris) went on concurrently under the highest national priority and by 1960, 14 SSBNs were under construction. The initial Polaris A-1 had a 1200 mile range; the A-2 had a larger first stage and a 1500 mile range. It entered service in 1962. The Polaris A-3 variant (available as Belcher Bits BL-15) carried 3 warheads and had a 2500 mile range.

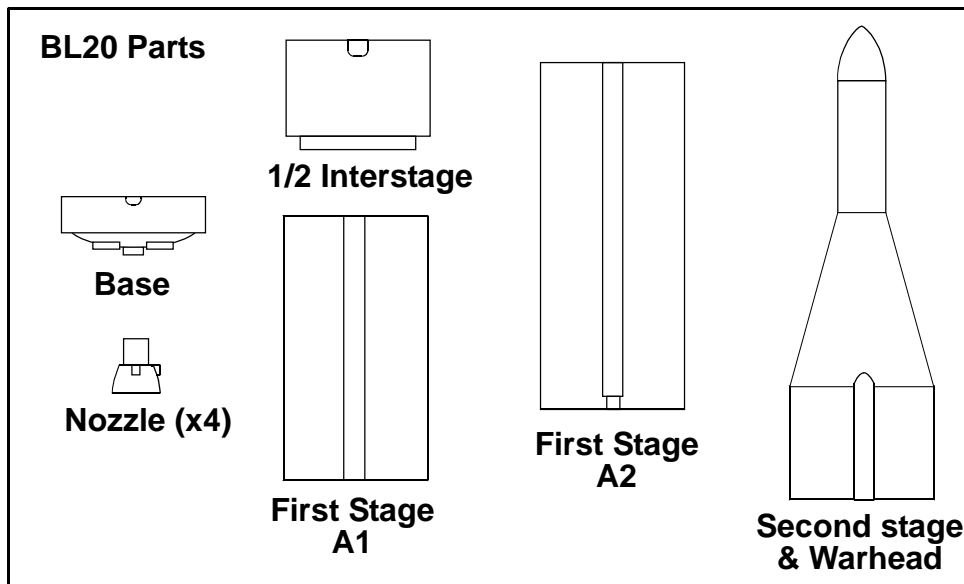
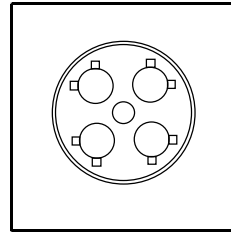
Assembly

Like all resin kits, remove the parts from their bases / sprues and wash thoroughly to remove any release agents. The base and first stage have flat faces, while the rest are raised on cylindrical standoffs which are designed to fit inside the ends of the pieces below, so clean those ends up carefully and test fit everything.

Match up the cable fairing of the first stage with the small semi-circular end on the base and glue together; use a V-block if you have one, or against a straight edge on a flat surface. It is important to get these two parts correctly aligned since there are no positive guides. Line up the cable fairing end on the top of the interstage with the cable fairing on the first stage (yes, there should be a gap) and glue in place. Glue on the second stage / warhead, matching cable fairing. The four nozzles are sanded on their bases, then glued into the holes in the base, orienting each nozzle so the two blocks on the side face outwards as in the sketch right. I believe those blocks are where the steering rams attach to the nozzles but I cannot find any details on their design.

Painting and Decalling

The basic colour is gloss white. Rocket nozzles are painted aluminum. Operational USN missiles seemed to be unmarked, but test missiles were sometimes painted with a black roll markings as shown at right.



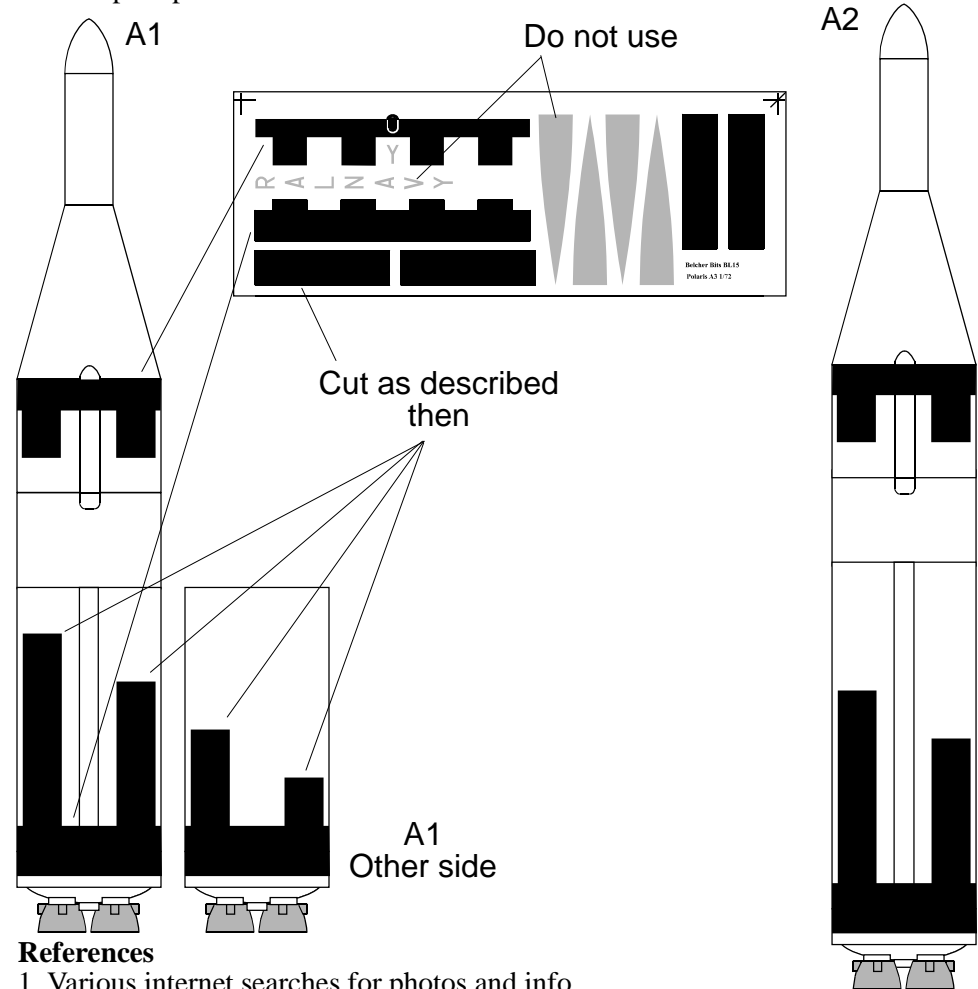
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The Polaris A3 set included a decal sheet and this can be modified so that ALL roll markings can be applied by decal. The sketch below shows where the various decal elements go. Cut the Y and the top of the O out of the circumferential decal strip and put this on first, around the top of the cylindrical section. The bottom circumferential strip goes on next, its base about halfway up the base part and put aside to let the decals fully dry. Cut the rectangular blocks to the following lengths: 0.9", 0.65", 0.4" and 0.15". They can be placed on the bottom strip, starting with the longest and reducing in length as you go around the missile. Patch the O cutout in the top strip.



References

1. Various internet searches for photos and info
2. American Missiles by B. Nicklas, Frontline Books, 2012
3. US Guided Missiles by Bill Yenne, Crecy Publishing, 2012
4. Personal photos from Imperial War Museum and National Museum of Nuclear Science & History