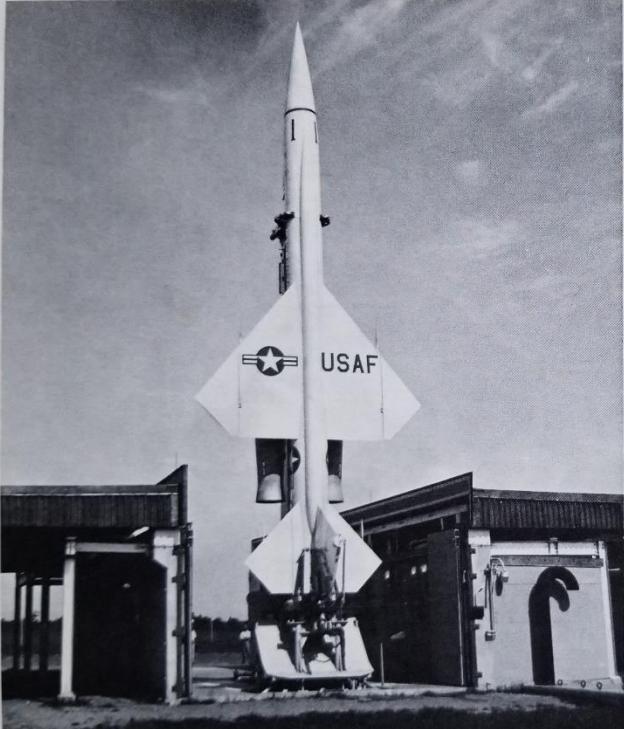


Boeing IM-99 Bomarc in 1/72nd scale

by Frank Ress



IM-99 BOMARC MISSILE

The Boeing IM-99 Bomarc is an Air Force ground-to-air interceptor missile designed to operate against enemy airborne weapons.

Two models were built—the IM-99A and IM-99B. The A model had a range of 200 miles and used a liquid fuel rocket and twin ramjets, slung on struts beneath the slim cylindrical fuselage. The B model is powered by a solid fuel rocket and advanced ramjets. The IM-99Bs can intercept anywhere from sea level to more than 80,000 feet altitude and have a range of more than 400 miles.

Specifications:

WING SPAN	18 feet 2 inches (5.5 m)
LENGTH	45 feet (13.7 m)
SPEED	Mach 2.5
RANGE	400 miles (644 km)
CEILING	More than 70,000 feet (21,336 m)

When I was in grade school, I wrote to the Boeing Corporation. I don't know what I said (or asked for), but I got a really nice picture packet with datasheets for most of the significant Boeing products from the first B&W seaplane through the then-new 747. It included planes, helicopters, hydrofoils, spacecraft, and a number of missiles. One that stuck in my memory over all these years was the IM-99 Bomarc, and I always wanted to build a model of it. I still have that picture packet, though it took some digging to find it again, and the Bomarc sheet is pictured above.

The only styrene kit of the Bomarc that I knew of was the old Revell box-scale kit. When it was re-issued recently, I picked one up with thoughts of using it as a template for a 1/72 scratch build (my preferred scale). Fortunately, I decided to do a web search first, and found that I could get a 1/72 resin kit from Belcher Bits. In fact, I had my choice of the A or B version, and I could even get the launcher assembly. So I ordered the IM-99A and the launcher kit, and when the seller got back from his European vacation, I got my order in the mail.

The Bomarc kit consists of 14 resin parts, an instruction sheet, and a small sheet of decals (my kit had duplicate decal sheets – I'm assuming the extra decals were just my good fortune). The missile

body consists of the body tube, a nose cone, and a nozzle. The wings are a single part each, and there are 3 tail surfaces. The jet pods are 3 parts each – a body with the pylon to attach the pod to the body tube, an inlet nozzle, and a tail cone.

Since this is a resin kit, I expected something more demanding than an injection-molded version, but overall I was pleased with the quality. There are relatively few voids and molding flaws that need correction, and the overall engineering is impressive for something short-run. There are even very finely molded recessed panel lines to provide some surface interest for the finished model.

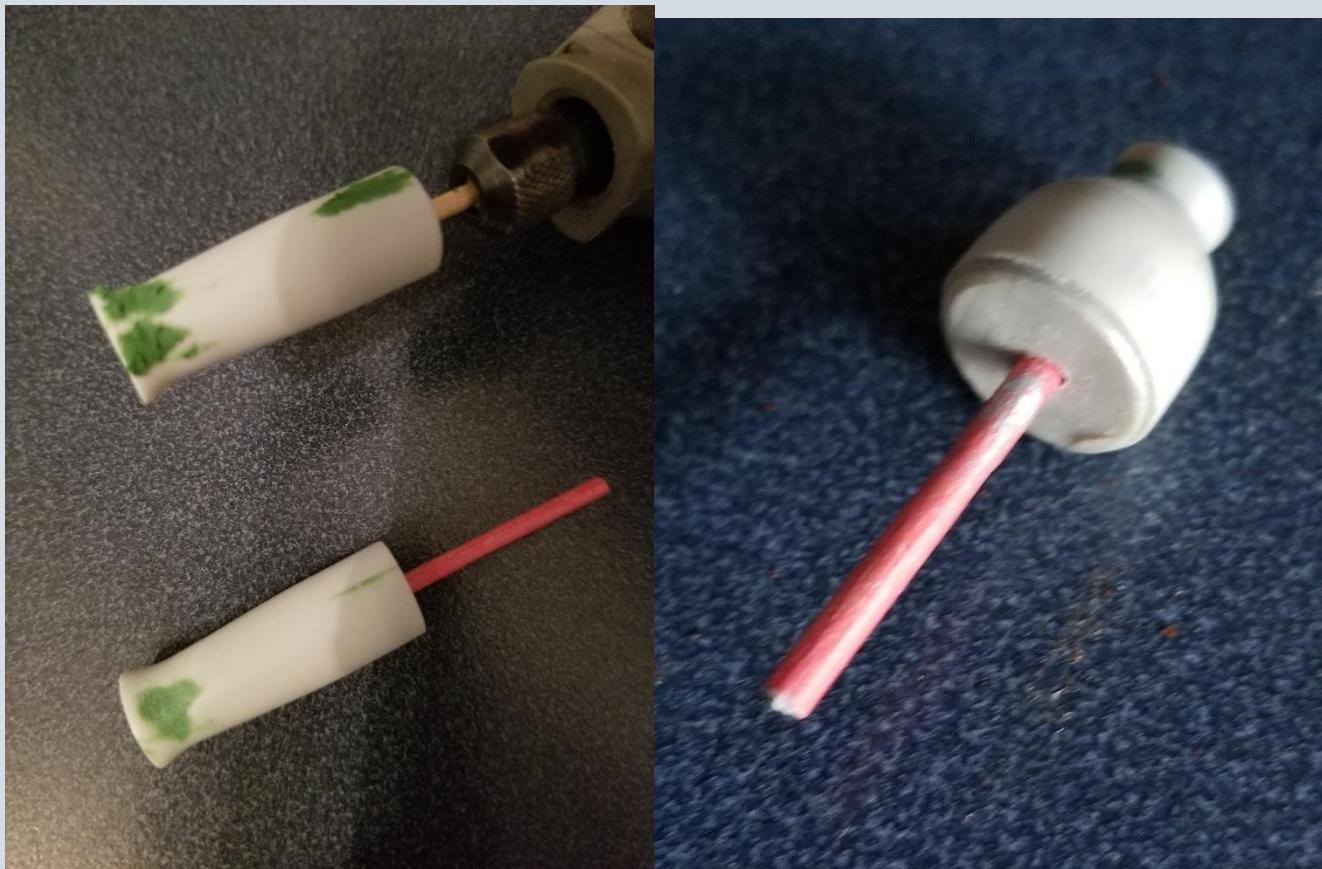
There was some warping in the vertical stabilizer, which I easily corrected by submerging the warped section in hot water and gently straightening the part with my fingers until it cooled in the proper shape.

Where cylindrical parts join (tail cone and nosecone to body and tail cones to ramjets), rather than simple butt joints, there are well-fitting lap joints (see picture). I had to clean up the inside corners of one or two of the sockets for a good fit, but once that's done the parts mate snugly.



The nose cone required little work to fill or shape. In fact, once attached to the body tube, it was only necessary to sand it lightly to smooth the joint between the parts.

The tail cones, on the other hand, required a little more work. All had areas that needed some filling and sanding to achieve an even shape, and to thin out the trailing edges of the nozzles. I decided to center drill each of these and insert the end of a toothpick to make a shaft, then chuck the shaft in my Dremel to spin, shape, and sand each part. I used a combination of hand-held shaping bits, sanding sticks, and sandpaper while spinning the part at a relatively low speed setting on the Dremel.



Unlike the cylindrical parts with their more complicated mating surfaces that insured proper alignment, the wings and control surfaces lacked much guidance for placement on the missile body. There's a small dimple on either side of the spine to guide the placement of the wing. There was a corresponding dimple on each wing, and the instructions suggested drilling each part to allow placement of a short length of rod to aid in wing attachment. The instructions also note that the dimples on the body are 5mm too far forward, which is something of an advantage, since their value as a point of reference won't be disturbed when drilling through the body to insert the rod.

Since the wings and horizontal tail surfaces are mounted in line with one another, the wing mounting mark should be used to guide placement of the horizontal stabilizers, too. I chose to locate and drill to insert similar rods for attachment of all tail control surfaces, as well. See pictures below that display the attachment of these parts.

(End of review, part 1)

