Northrop YB-49

History: Jack Northrop was a gifted aeronautical engineer with an obsession for producing the most aerodynamically efficient aeroplane possible. He reasoned that he could achieve that goal by taking away from the ideal aeroplane everything that was not necessary for it to fly, and that basically left him with nothing but a wing. In 1929 he produced his first test aeroplane which fitted that theory but still had a tail supported on two slim booms. In 1940 he pushed the idea further with the N-1M which was pure flying wing that allowed him to test the validity of the concept in more detail. From this the Northrop company developed the design for a massive flying wing heavy bomber that was endorsed by the US Air Force and designated the XB-35. The concept was tested with the N-9M which was virtually a flying scale model of the XB-35 that enabled Northrop to test the concept and gave pilots experience in the flying wing.

Two prototypes of the XB-35 were ordered in November 1941 and another 13 were ordered in 1943. The first one made its maiden flight on 25 June 1946 but by then the piston engine powered XB-35 was obsolete and Northrop received approval from the US Air Force to modify two of them to jet power. The redesigned bomber, designated YB-49, was powered by eight jet engines buried in the wing. The first YB-47 flew on 21 October 1947 and received many complementary reports that suggested it would be adopted for use. However, the second prototype crashed in June 1948, possibly as the result of structural failure. The main problem with the YB-49 may have been that it was in competition with the Convair B-36 to become the United States' heavy bomber so there was much propaganda broadcast saying that the YB-49 was not a good bombing platform and that it's bomb bays could not accommodate the large atomic bombs that were entering service at the time. These may or may not have been accurate criticisms but the B-36 was put into large scale production and, in March 1950, the whole Northrop flying wing programmed was cancelled and all the XB-35 and YB-49 airframes were scrapped. On 15 March 1950 the first YB-49 was involved in a taxiing accident and was totally destroyed by fire. It seemed like the end of the flying wing concept.

Data: *Engine* eight Allison J35-A-15 turbojet engines of 1814kg (4000lb) thrust. *Wing*

span 52.43m (172ft). *Length* 16.18m (53ft 1in). *Maximum take-off weight* 90 800kg (88 100lb). *Maximum speed* 837km/h (520mph). *Range* 4506km (2800 miles). *Armament* up to 16 965kg (37 400lb) of bombs. *Crew* 6.

The kit: AMT 1/72

While they were at it AMT made quite a few fairly good very large 1/72 scale aeroplanes that included the XB-70, B-52, C-135, and XB-35 in addition to the YB-49. Sadly they stopped producing this line some time ago but most of their kits are still available, if you can afford them. The only reason I bought this kit was because it was on sale for half price, costing $35 rather than $70. The box is gigantic while the plastic in it is only large, but you could still consider this kit worthwhile if you are seriously keen on big bombers.

This has to be one of the biggest and simplest kits to assemble. AMT tried to make it more difficult by providing a nicely detailed interior that is, of course, almost completely hidden within the huge wing. Apart from the wing that is made up from eight sturdy parts, four fins and some engine exhausts and other bits and pieces there is almost nothing else to this kit. That doesn't mean that there aren't problems. One is that while all the large pieces of plastic go together fairly well there are some gaps and many of the flat surfaces don't quite match up and need a lot of filling and sanding to give a good smooth surface. I used up quite a lot of filler in the process of merging the various wing surfaces, fins and engine exhausts.

The instruction sheet is a bit of a worry and following it can lead to some simple mistakes. For example, the YB-49s were not fitted with armament but the kit supplies gunner seats and periscopes and little holes in the transparencies for the aiming lenses - leave them all out. The instructions suggest that navigation astrodomes should be fitted above and below the wing but the kit supplies only the upper astrodome and that too was not fitted to either YB-49 (I only notices this when it was too late). There are a couple of other little things that might be inaccurate about the kit but I don't have enough evidence to be sure. For example, it appears that the bomber had large leading edge slats in the wing, they are clearly evident in some photos and not others. One of the prototypes might have had pitot tubes on both wing tips, perhaps not.

The most challenging part of this model is really in the finishing. There is only one option, bare aluminium. To begin with, no matter what kind of finish you use, the surface has to be perfect as any kind of silver or metalizer will show up the slightest blemish. After some hesitation I decided to use Metaliser non-buffing aluminium on the model because it can still be buffed a bit and it doesn't tend to come off with every touch. I used up four bottles of the stuff giving the model two coats. Then I rubbed the model over fairly briskly with the remains of an old flannel nighty (one of the advantages of being married) to make the thing look a bit more natural. The kit instructions suggest that the inside of the wheel well should be painted chromate green, which may or may not be correct, so I ignored them. The YB-49s may or may not have had a black anti-dazzle panel around the cockpit, the photos are inconclusive and the instructions said no, so I decided not to bother. The most difficult part of the kit was cutting up lots of tiny little strips of black decal for the walk lines on the upper wing surface. That took ages and a lot of patience but the lines really bring the model to life. It looks *impressive*, that's a good word for it.