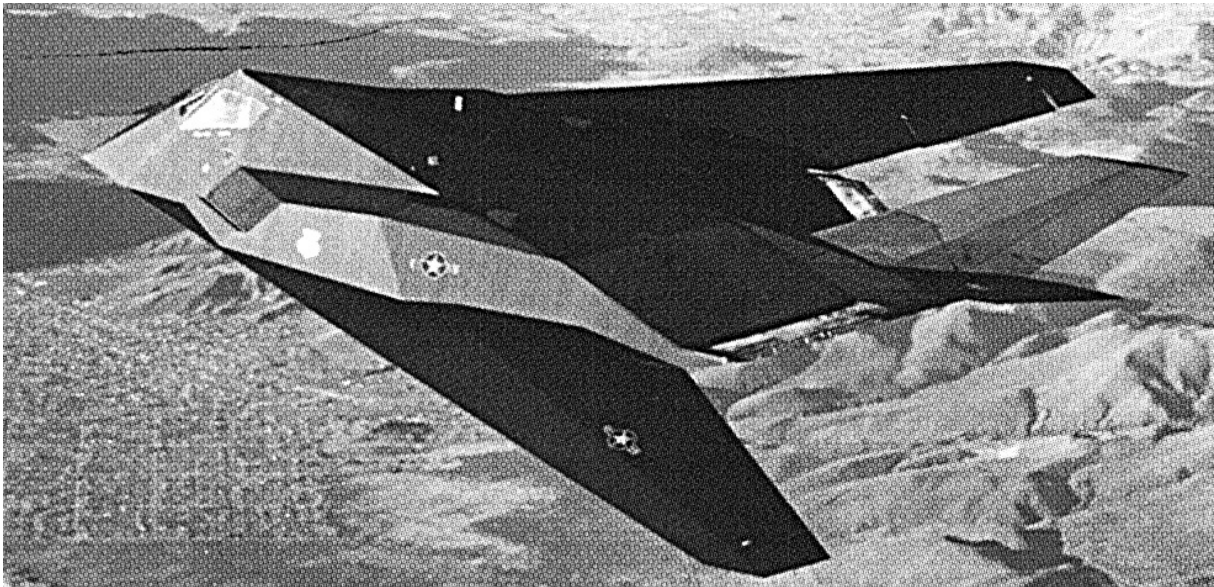


Lockheed F-117A

History: Following the invention of radar just before the beginning of World War II it became increasingly difficult for warplanes to reach their targets unannounced. By the end of the war radar was an important weapon in defence against air attacks and thereafter radar, in league with air defence weaponry, made defence against air attacks more efficient. By the end of the 1950s the ease with which radar could pick up attacking aeroplanes led to several countermeasures including flying as low as possible to avoid radar detection but, as radar became more versatile, the problem of making aeroplanes invisible to radar became even more difficult. As a result companies such as Lockheed began examining ways of making it harder for radar to detect aeroplanes and its series of A-12/SR-71/YF-12 high speed aircraft included some aspects of low radar observability.

During 1975 Lockheed began developing a technique known as ‘faceting’ in which the conventional curved surfaces of aeroplanes was replaced by a series of flat planes because radar signals are easily picked up from curved surfaces but flat surfaces reflect radar signals away from the detector. This concept, an aeroplane made out of a series of flat plates, resulted in almost unflyable aeroplanes but modern avionics made it possible for such aeroplanes to fly safely. In addition the use of radar absorbing material to coat an aeroplane helps reduce radar returns much more. In 1977 Lockheed received a contract for two demonstration models of this new technology, sixty per cent scale flyable test that went under the name of *Have Blue*. They were quickly built, using many components from existing aeroplanes such as the main undercarriage taken from A-10s. They were finished in November 1977 and began flying early in 1978, but both had been lost in flying accidents by 1979.



Despite these losses the United States continued with the concept and ordered a larger and heavier version, the F-117A, into production in November 1978. The first one was flown on 18 June 1981 and four Full Scale Development aircraft were in the air by early 1982 while the first full production model flew on 20 April 1982. A total of only 64 F-117A were constructed between 1981 and 1990, five for testing and fifty-nine for operational use. Only one unit, initially the 4450th Tactical Group that was later renamed the 37th Tactical Fighter Wing, operated the F-117A, beginning with attacks on Panama on 19 December 1989. A little later the

F-117As were involved in the first war against Iraq, specialising in high precision attacks on valuable targets in Baghdad and flying 1271 sorties during Operation Desert Storm but suffering no losses or battle damage. Since then they have been used in several other war zones, more recently in the War against Terror including attacks on Afghanistan in Iraq. They represent to the world the high sophistication of the United States military/industrial complex.

Data: single seat attack fighter. *Engines* two General Electric F404-GE-F102 turbofan engines of 48.04kN (10 800 lb st). *Wing span* 13.2m (43ft 4in). *Length* 20.08m (65ft 11in). *Maximum take-off weight* 23814kg (52 500lb). *Maximum speed* 1040km/h (646mph). *Range* 682km (535miles). *Armament* up to 2268kg (5000lbs) of bombs. *Flight crew* 1.

The kit: Academy Minicraft 1:72

Talk about *ugly!* In comparison this aeroplane makes those famous ‘ugly’ French aeroplanes of the interwar period look like aerodynamic perfection in flight. Still, ugly or not, the F-117A is a significant aeroplane for many reasons so I was bound to make it sooner or later. This is one of those kits I picked up at a swap-meet for a fairly minimal price and really, it isn’t worth too much either. The shape of the aeroplane means that it really has two parts, the upper fuselage and wings and the lower fuselage and wings with a few other bits and pieces tossed in. The decal sheet is also minimal, not surprising, and offers a couple of options but since the major difference is in the ‘nose art’ but that is carried on the weapons bay doors and can only be seen when they are open. So there is hardly anything of note about the kit except that it’s size is a mreinder that this is not a small aeroplane.

I was not thrilled with some of the features of the kit. One is that the cockpit canopy that is tinted (well, so is the canopy of the real thing, but not half so noticeably), Another is that the real



things has special avionics pods hidden behind wire mesh but the kit provides transparencies of the same tinted plastic - not terribly realistic looking. Even less endearing is the flat blank plates where the air intakes are. In the real thing the air intakes are also protected by thin mesh that stops the radar signals getting in, but while the kit gives a vague impression of the mesh it is that weak that it disappears under a couple of coats of paint so you can’t help but wonder where the air gets in. Then there are terrible flaps and ailerons that barely fit at all. Everything else is reasonable, you can make it with the bomb bay open to display the nose art, but I didn’t bother.

The kit goes together fairly easily, the only real problem is the four little sensor probes on the leading edge of the wings that had to come off so the wing leading edges could be made straight. The replacements were made from stretched sprue which is not entirely accurate, but that is hardly noticeable in this scale. Painting is extremely simple, a couple of coats of gloss black paint for the decals to settle easily onto and then a couple of coats Testors Dullcote to flatten the finish. The undercarriage is all white and then all the final little bits and pieces had to go on. There were several problems like the droopy starboard wing as a result of the moulding and the big gaps between the wings and ailerons/flaps, but nothing really serious. This is not one of the best models I’ve made but still it looks as ugly and black as buggery and that is the main features the kit had to capture.