Tupolev Tu-22M3 (Backfire-C)

History: In the mid 1950s the Tupolev bureau designed the Tu-22 (Blinder) supersonic bomber that was put into production in 1959. Although 300 were built it's performance and capacity were disappointing so development began on a much more capable supersonic bomber. The initial proposal was for an improved Tu-22 but as development progressed it passed through several stages until a virtually new bomber design emerged. It had in common with the Tu-22 the ability to perform nuclear strike, conventional attack, anti-shipping and reconnaissance missions and a twin-engine layout. The more powerful engines, the variable geometry wing and improved aerodynamics led to a much more capable bomber but, for a reason that is not clear, it retained the Tu-22 designation with only the M added to distinguish between the two bombers. One suggestion is that it came about as a ruse, not unknown in the west, to suggest to the officials that they were not funding a new project. In any case, when western observers first identified it they gave it the reporting name 'Backfire' that clearly distinguished it from the earlier 'Blinder'.

Development of the Backfire began in earnest in 1967 and the prototype made its first flight on 30 August 1969. Only a few were produced before a more advanced version was first flown in July 1971. After four years development the first Backfire-As entered service with Soviet Naval Aviation, but the first major version was the Tu-22M2, Backfire-B. Test flights were commenced in 1973 and they were deployed by air force and naval air force units in 1976. A total of 211 were manufactured between 1973 to 1983. Despite their relative success they suffered from several shortcomings including, range, speed and payload so further development led to the Tu-22M3, Backfire-C. It was modified to include many improvement including a longer nose, revised air intakes, more powerful engines and wings with greater sweep back that all contributed to its greater payload, range and speed. The first Backfire-C flew on 20 June 1977 and they began entering service in 1983

The Backfire was such a powerful bomber that it became a major bargaining chip in arms control negotiations between the USA and USSR in the 1970s. The Soviets agreed to limit the number of Backfires in service to about 500, 300 air force bombers and 200 in naval aviation. Although, as part of those agreements Backfire-Cs are not equipped for air-to-air refuelling, it is highly likely that it can be quickly fitted with aerial refuelling equipment to make it a fully capable intercontinental strategic bomber.

During the 1980s they were used in conventional bombing raids in Afghanistan but by 1991 there were reports that due to shortages of spare parts, some Backfire units were down to 30-40 per cent operational efficiency. By the late 1990s at least 125 were in service with Russia's Long Range Aviation and another 47 were in service in Naval Aviation. Some Backfires are also in service with the Ukraine air force. Backfires are likely to remain in service

for many years to come.

Data: *Engine* two NK-25 turbojet engines of 25.000kg (55,115lb) thrust each. *Wing span* 23.3m (76ft 5in) minimum and 34.28m (112ft 5in) extended. *Length* 42.46mm (139ft 3in). *Maximum take-off weight* 126,400kg (278,661lbs). *Maximum speed* 2300km/h (1429mph). *Range* 7000km (4349miles). *Payload* One to three H-22 missiles, or six to ten H-15 missiles or 24,000kg (52,910lb) of free fall bombs and one double barrelled GSH-23 23mm gun.

The kit: Esci 1:72

Esci seems to have cornered the market in large Tupolev supersonic bombers with kits of the Blinder, Backfire-B and Backfire-C. Who knows how much additional plastic had to be imported into Italy to make them all. Cardboard too. The kit comes in BIG boxes but, unlike some kits out there in the market, the parts don't rattle around in a largely empty box. As you would expect, the parts are well engineered with lightly countersunk lines and everything goes together as though filler had never been invented because it wasn't needed.

Putting this kit together has no difficulties. Even the variable geometry wings fit snugly and move easily. There is enough detail in the cockpit for the size of the windows. Painting is equally easy, requiring only white and light gull grey. These are exactly the same colours the US Navy used for a couple of decades so either the instructions to use light gull grey are simply the closest available colour or Soviet spies were interested in more than you'd expect. So, really there's nothing to report about making this model except that you need a lot of shelf space for it. There is, however, the matter of accuracy.

The more I looked at photos of Backfire-Cs the more I became confused about what the kit presented me with and what a real Backfire looks like. The trouble is that, without good references, it is very difficult to say what might be right and what isn't. The nose, for example, looks a lot sharper in most photos than it is on the kit and overall the completed model looks a lot chunkier than the sleek looking Backfire-C. I didn't note any dates on the moulds but my guess is that this kit, and the Blinder and Backfire-B kits too, were made in the early 1990s when people in the west knew a lot less about Soviet equipment than we do now. Consequently the plans these kits were based on were as detailed and accurate as possible then, but our knowledge is a lot better now. The problem is, where to find more up to date knowledge and how do you apply it. One modeller who reported on the internet on the major surgery he did on a Backfire-C kit used plans he found in a Ukranian modelling magazine published in 1993. He treated it as gospel, declaring many features of the kit are 'completely wrong'. All I can say is that he has much more faith in secondary sources than I do.

However, not having access to those drawings myself I was faced with the prospect of having to rebuild the kit exactly as he had by following his directions and photos. Quite honestly it seemed like a lot of very hard and time consuming work. He insists, for example, that the wings have to be moved back 10mm and went to a lot of trouble to do it. Similarly, he made the fuselage narrower, reworked the intakes, the nose and the tail. All very complex work but I'm not convinced that his Backfire-C model is any more accurate than mine. I'll admit that, from the photos of his Backfire-C model, it looks more like a real Backfire-C than mine. However, my model still looks more like a Backfire-C than a B-58, so I'm content with it.