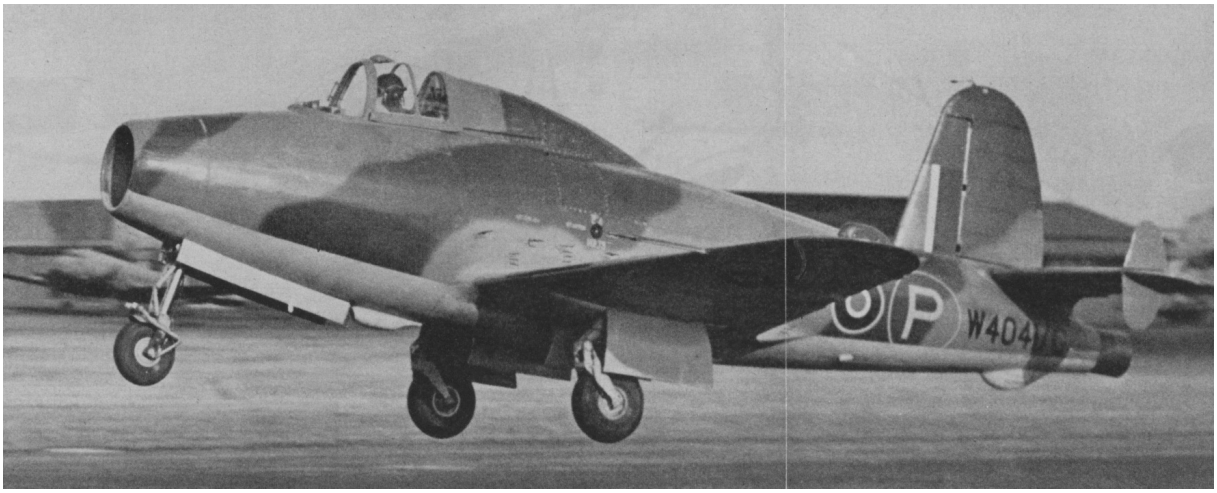
Gloster E.28/39

History: Frank Whittle began developing the idea of the jet engine in 1928 and patented his first gas turbine design in 1930. Nobody, however, was very interested and he couldn't get any financial support to develop his ideas until 1936 when two former RAF officers gave him financial backing and Power Jets Limited was established. (As an aside, a couple of years back, when I was doing the research for a history of electricity generation I talked to an engineer who had gone to Britain in the 1930s to get experience in building generators. He recalled that Frank Whittle was working away on his strange little engine off on the side of the factory he worked in but nobody understood what he was doing.) Whittle's first gas turbine ran in the steam turbine factory in Rugby on 12 April 1937 but the Royal Air Force only began to fund development in July 1939. In Germany official support was just as slight but Ernest Heinkel had funded jet engine development privately and the world's first jet powered aeroplane, the Heinkel He176 was almost ready to fly.



As the official development of a British jet engine went ahead Gloster Aircraft was given the job of constructing the test-bed aeroplane for the engine and started work early in 1940. Because of bombing raids construction was moved to an auto repair garage and completed in April 1941. Taxiing trails with the first jet engine began on 7 April 1941 and the first flight was made on 15 May 1941 at Cranwell where there was one of the few hard surface runways in England long enough for the low powered aeroplane.

The Gloster E.28/39 was designed as a test-bed, it had some potential to be developed into a combat aeroplane but the Gloster Meteor was developed instead. A second E.28/39 with a more powerful engine started flying in early 1943 but crashed in July that year. The first aeroplane continued flying until 1945, making several hundred flights in all and an important contribution to the early development of jet powered aviation. In April 1946 the aeroplane was presented to the Science Museum in Kensington and you can still see it there today.

Data: *Engine* Whittle W.1, W.1A and W.2/500 gas turbine engines, the latter of 1760 lbs thrust. *Wing span* 8.84m (29ft). *Length* 7.72m (25ft 3¾in). *Maximum take-off weight* 1 700kg (3 748lb). *Maximum level speed* 750km/h (466mph).

The kit: HIGH PLANES 1/72

I'm a fan of High Planes kits. It's not that they are terribly easy to put together but because they are very good for limited-run kits and they make kits of aeroplanes I want to add to my collection. And, despite the usual difficulties in putting this kind of kit together, the end result looks as good as any kit from a major manufacturer when its completed because of the

effort High Planes put into their kits. I'm not keen on the racing aeroplanes that they do but I have a few of their other kits in my collection, all are made because I like what they do. The only kit that I'm missing is their Jindivik, as soon as I see one it will be added as well.

More years ago than I care to remember Frog produced a kit of the E.28/39 which looked quite respectable until you happened to compare it to decent plans. The wings are about 1/72 scale but the fuselage is a larger scale, resulting in a very plump looking aeroplane. Recently the Frog kit has been re-released by Eastern Express or one of the other Eastern European companies but I couldn't recommend it. I started making one but then bought the High Planes kit and comparing the half made Frog kit to the High Planes kit just makes you realise how *wrong* the Frog kit is.

The High Planes kit is basic but good, by my standards anyhow. There is no cockpit detail to speak of and the undercarriage openings are basic. The nose undercarriage is white metal and very nicely cast but it is necessary because you need to put a lot of weight in the nose to stop the completed model from being a tail sitter. I put in as much as I could manage and the model can't quite decide whether or not it is a tail sitter so I wish I'd managed to put in another faction of a gram. Everything is very nicely moulded with fine surface detail and panel engraving. I hunted around for information about what should go in the cockpit of the aeroplane but found nothing more definite that a couple of photos of a constructed 1/48 kit. I solved the problem in my usual fashion by painting everything black so you can't see what is missing. Getting the nose right is also a bit dodgey, the kit comes with an intake divider which needs quite a lot of fiddling around and nipping and tucking to fit nicely into the nose, it was perhaps the most difficult part of the whole construction process. When all the parts are assembled there are a few places that will need a fair amount of filler and sanding to make the kit come up nicely. A pin for the pitot tube on the port wing completed the whole thing. It was a bit painstaking to get to this stage but worthile.

Modelmasters make a very nice 'trainer yellow' for the underside of this aeroplane and the upper side is standard green and dark earth. The kit's decal sheet is good and settled down nicely, then a coat of matt varnish completed the whole thing. I guess this kit isn't for the beginner but with a little bit of patience and care it builds up into a lovely little replica of what must be one of the most significant aeroplanes in history.