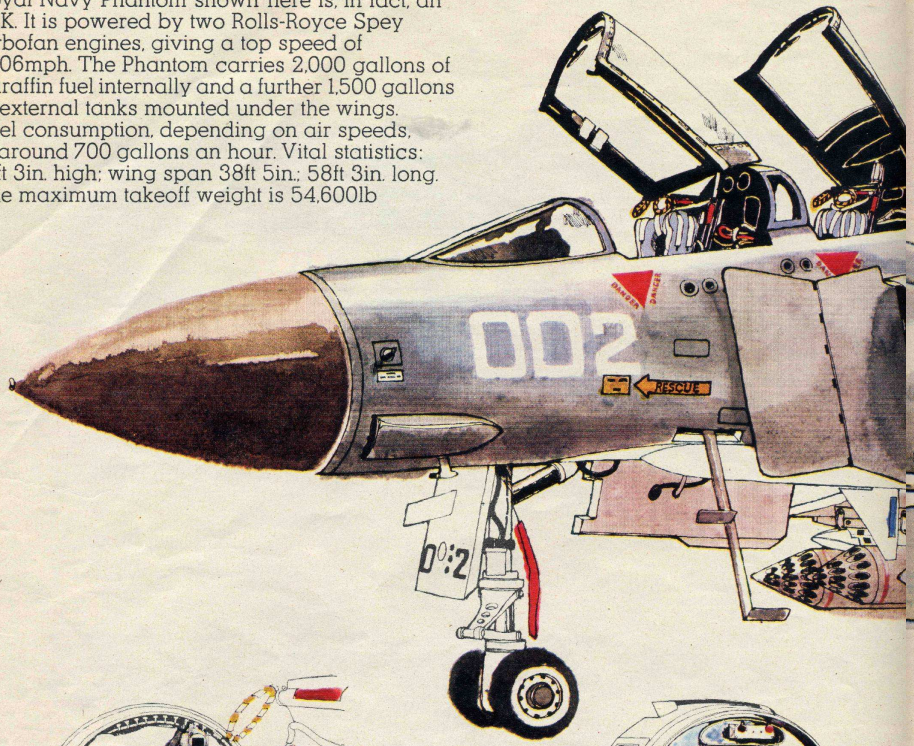
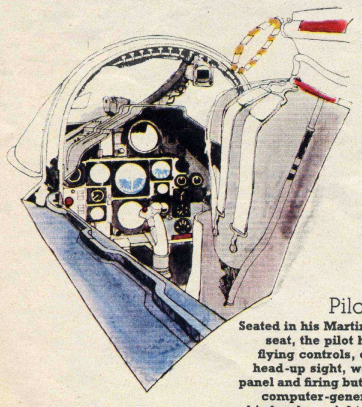
PHANTOM

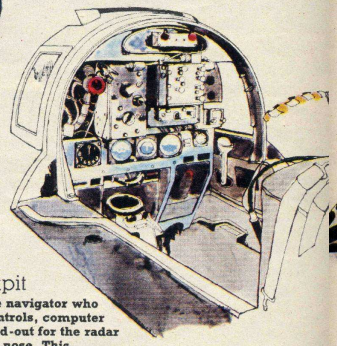
The Phantom F4A first flew on May 27, 1958. The Royal Navy Phantom shown here is, in fact, an F4K. It is powered by two Rolls-Royce Spey turbofan engines, giving a top speed of 1,606mph. The Phantom carries 2,000 gallons of paraffin fuel internally and a further 1,500 gallons in external tanks mounted under the wings. Fuel consumption, depending on air speeds, is around 700 gallons an hour. Vital statistics: 16ft 3in. high; wing span 38ft 5in.; 58ft 3in. long. The maximum takeoff weight is 54,600lb





Pilot's cockpit

Seated in his Martin Baker ejection seat, the pilot has the powered flying controls, engine controls, head-up sight, weapon-selection panel and firing button. He watches computer-generated signals on his head-up sight and at his hand has the weapon selection panel and the firing button. He has a read-out of a radar picture showing dispositions of other aircraft

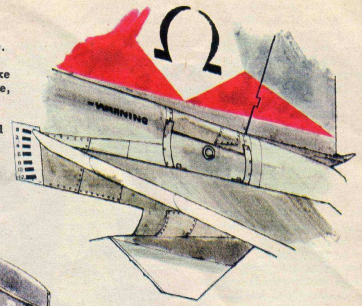


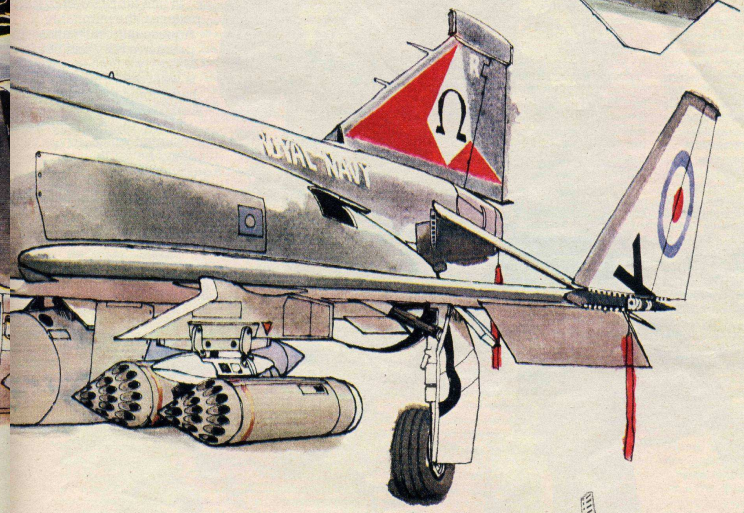
Rear cockpit

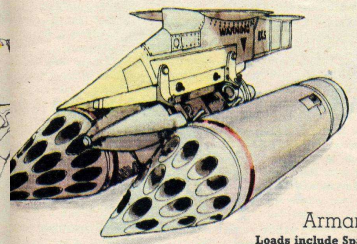
This houses the navigator who also has the controls, computer system and read-out for the radar mounted in the nose. This equipment is primarily used to prepare, launch and guide Sparrow and Sidewinder air-to-air missiles. The navigator has a variety of other devices at his disposal, including a Doppler navigation system

Tailplane

A distinctive feature of the Phantom is the tailplane which has 23 degrees of anhedral (i.e. slope downwards to the tips). When the pilot pushes forwards or backwards on the stick, to make the plane's nose either drop or rise, the whole tailplane moves – unlike older planes, where the tailplane was fixed and only the elevators on it moved

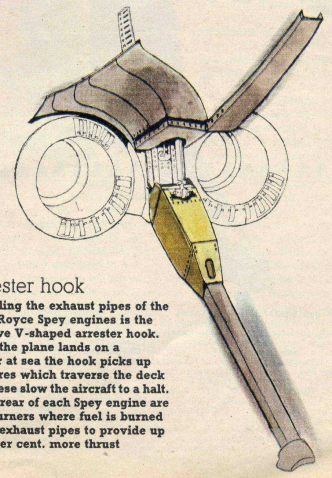






Armaments

Loads include Sparrow or Sidewinder air-to-air missiles, bombs and MATRA pods fitted with rocket projectiles. Napalm bombs and tactical nuclear bombs can also be carried, while a further alternative under-fuselage load consists of a multi-barrel Gatling gun. This illustration is of MATRA rocket pods; main view also shows a Sparrow missile



Arrester hook

Straddling the exhaust pipes of the Rolls-Royce Spey engines is the massive V-shaped arrester hook. When the plane lands on a carrier at sea the hook picks up the wires which traverse the deck and these slow the aircraft to a halt. At the rear of each Spey engine are afterburners where fuel is burned in the exhaust pipes to provide up to 70 per cent. more thrust

Illustrations by Tony Simmonds