TU-95MS BEAR

During the Cold War the Bear became part of folklore (right); a pair of Tornados provide an escort for a Tu-95 Bear (middle); the cockpit is surprisingly cramped (bottom)

F or years during the Cold War, the

only sight that Western air forces
had of their potential Communist enemy was the long-range prob-
ing flights of the Soviet Union's Dal'nyaya Aviatsiya — the DA long-range aviation force — usually in the shape of the mighty Tupolev Tu-95 Bear.
The Bear assumed a folklore of its own within the Western fighter community, tasked with intercepting, identifying and escorting out of area the "unknown" radar returns, code named Zombies. Most Zom-bie flights were intercepted by the air forces of the UK and Norway in the West and by Japan in the East, but the wide-ranging Bears were also picked up off Alaska, Cuba and even off Cape Town. The Tu-95 was first flown in 1954 and has been built in numerous versions. The original Bear fuselage was from the Tu-85, a development of the Tu-4 Bull (a Boeing B-29 Superfortress copy). The Tu-85, the Russian answer to the US Consolidated B-36, never went into production, as the Russians decided to proceed to turbojet and turboprop swept-wing designs. This decision culminated in the four-jet Myasischev Mya-4 Bison and the turbo-prop-powered Tu-95 Bear.
Most Bear variants retained the two pressurised forward and aft crew compart-ments, linked by an airlock tunnel which ran over the free-fall weapons bay.
The Tu-95MS Bear H, which joined the International Air Tattoo at Fairford, UK, on 21 July, does not have this feature. The crew compartment extends aft to a point level with the wing leading edge, followed by an avionics bay, after which is the weapons bay for six cruise missiles on a rotary launcher. The total weapons fit for the Tu-95MS, which went into production in 1984, is 16 AS-15A/B Kent cruise missiles, six in the weapons bay and five each on a pair of multiple-ejector under-wing pylons. Aft of the weapons bay is a second avionics bay, which doubles as a

The first Westerner to fly with the
Russian air force's long-range aviation
force, Mike Gaines describes the

famous Tupolev Tu-95 Bear. BEAR

Flight engineer Weapons
Pilot / Escape/entry hatch

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Commander Radio I Weapons/tactical
operator I navigation
Chemical toilet

Tupolev Tu-95MS crew layout

crew baggage compartment.
The rear gunner enters his tail turret by a ventral hatch and, except for intercom, is isolated from the rest of the crew.

TOADSTOOL NAVIGATION

Entry to the cockpit/crew Qabin is by ladder to a ventral hatch in .„th'e.;

nose-

wheel bay. Despite the Bear's missive size overall, the cabin is surprisingly'veramped, but anyone familiar with the Avro Shack-leton would feel instantly at home. Between the two pilots' seats is a hatch below the fire/feather-control panel. This is used to give access to -the navigator's position in the glazed nose of earlier Bears, but the 95MS has a large ground-mapping/weapons-aiming radar in the nose. A curtain now covers access to some of the radar's line-replaceable units. Each pilot has four throttles mounted outboard and, in between, is a centrally pivoted autopilot control box, mounted on a swinging arm and passed to which-ever pilot is in control during the cruise. Behind the aircraft commander (left seat) and facing astern (as do all other crewmen) is the radio operator, who has a keyboard on which
to compile enci-
phered messages for
burst transmission,
but who also has a
conventional Morse-
code key for HF
communications.

Opposite the radio
operator sits the
flight engineer, fac-
ing a panel of engine
and systems instru-
ments. The engineer
also has a set of

Navigation plotter

throttles and is responsible for engine handling on take-off and landing.
In the cruise, the engineer ensures that the four Kuznetsov NK-12 engines and their massive sets of contra-rotating pro-pellers are synchronised.
Aft of the radioman (portside) sits the navigator, responsible for weapons aiming and who also handles the defensive elec-tronic-countermeasures suite and operates the rear-facing and gun-directing Box Tail radar. The defensive suite has two missile-approach warners, semi-balls mounted above and below the fuselage with a 360° field of regard. This navigator is also responsible for monitoring the Toad Stool terrain-following radar, mounted just below the flight-refuelling probe. The Bear H also has a ventrally aft-mounted terrain-bounce jammer, which emits a flood of radar signals to bounce off the ground to create general noise and clutter on the radars of attacking aircraft.
Seated centrally at the rear on a raised seat is another navigator, who has a plotting table surmounted by a scope for the Clam Pipe ground-mapping/target-acquisition radar in the "platypus-beak" radome. The 300mm Clam Pipe screen is topped by a first-generation inertial navi-gation system, which looks like a 1950s-vintage jukebox
The Clam Pipe gives a clear picture of ground features, and shipping is easily discernible, with very little sea clutter (the water was calm, however). If a target is selected, its range and bearing is displayed on screen in numbers about 30mm high.
A sector scan of about 35° takes about 6s
to traverse.

Behind the engineer's position is a small
galley, with a water heater and provisions
storage space and, behind that, a spare

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