Martin-Baker

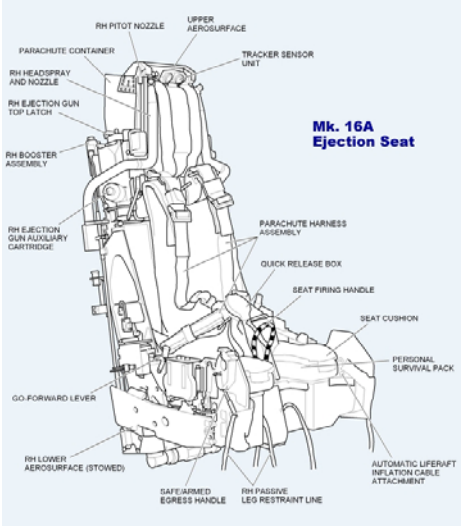
Mk.16A Seat - Eurofighter

The Mk16A grew out of the early work undertaken by Martin-Baker on the Eurofighter Demonstrator in 1984. This aircraft used to be fitted with the Mk10LX seat, and through various iterations, the Mk.16A was developed between 1990-95 culminating in the delivery of seven seats for the Development Aircraft (DA) programme.

The development of the Mk16A ejection seat was carried out at Martin-Baker's facilities at Denham, Chalgrove and Langford Lodge - in Northern Ireland. Because of the capabilities and wide operating envelope of the aircraft, Martin-Baker was presented with a series of challenges which have been resolved during the development of the seat - such as the accommodation of a wider range of pilot models covering height, weight and sex requirements, as well as achieving compatibility with equipment such as the Head Mounted Display (HMD), Chemical and Biological protection units (CB) and general aircrew equipment.

Furthermore, the Mk16A seat utilises a second generation digital seat sequencer which incorporates a strategy of continuous sensing of external environmental parameters. Under certain speed and altitude conditions the recovery timings at which the parachute is deployed are varied in order to optimise the terrain clearance.

SPECIFICATIONS



INSTALLATIONS

Operating ceiling	55 310 ft (16 768 m)
Minimum height/speed	Zero/zero in near level attitude
Crew boarding mass range	61.0 - 133.5 kg
Crew size range	Eurofighter specific crew size range
Maximum speed for ejection	600 KIAS
Parachute type	GQ Type 5000
Parachute deployment	Cartridge initiated
Drogue parachute	Yes
Drogue deployment	Cartridge initiated, electronic sequencer controlled
Aerosurface deployment system	Yes, upper and lower. Lower is gas operated
Harness type	Combined
Ejection seat operation type	Twin ejection guns and underseat rocket motor
Ejection initiation	Handle on seat pan initiates gas operated seat firing system
Automatic back-up unit	Yes, barostat controlled
Electronic sequencer	Yes, powered by thermal batteries
Timers	Time delay for canopy jettison
Seat adjustment	Up/down actuator operated 28 Vdc
Arm restraints	Yes
Leg restraints	Passive leg restraint system
Oxygen supply	Bottled emergency oxygen
Personal survival pack	Yes + automatic deployment and liferaft inflation
Aircrew services	Aircrew services package, interface for: -Breathing gas -NBC ventilation supply -Mic/tel -Anti-g trousers Head equipment assembly services module Liquid suit connector assembly Auxiliary oxygen bottle
Canopy jettison	Yes, through canopy back-up
Miniature detonating cord	No
Interseat sequencing system	Yes, via mode selector