

RESTRICTED

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**PUBLICATION
BAC 55-(SA)-6 Issue 2**

**LIGHTNING T MK 55
Version Aircraft**

PILOTS NOTES

**For use in the
ROYAL SAUDI AIR FORCE**

Prepared by:

BRITISH AIRCRAFT CORPORATION LIMITED

Military Aircraft Division

Warton Aerodrome

Preston PR4 1AX

Lancashire

England

NOTES TO USERS

1. This Manual is complementary to the LIGHTNING T Mk 55 Flight Reference Cards for the Royal Saudi Air Force.
2. The Manual is divided by marker cards (excluding Preliminaries) as follows:

Preliminaries

List of Contents

- Part 1 — Description and Management of Systems
- Part 2 — Limitations
- Part 3 — Handling
- Part 4 — Emergency Procedures
- Part 5 — Controls and Indicators

Each Part is divided into Chapters as listed on its marker card. Each sheet is identified by a **Part**, **Chapter**, **Page** reference at the foot of the page. Thus a page bearing the reference 1-3 Page 7 is Page 7 of Part 1, Chapter 3.

3. The limitations quoted in Part 2 are mandatory. The contents of the remainder of the publication are mainly advisory but instructions containing the word 'must' are also mandatory.

Amendment Lists will be issued as necessary and each amendment list instruction sheet will state the main purpose of the amendment and will include a list of modifications and Special Flying Instructions covered. The List of Pages will also be updated with each amendment. New or amended matter of importance will be indicated by triangles positioned in the text thus: ◀.....▶ to show the extent of amended text and thus: ▶◀ to show where text has been deleted. The number of the amendment list by which a sheet was initially issued or re-issued will appear at the bottom of the odd-numbered pages and any triangles on either page forming a sheet will, therefore, refer to that amendment list. However, when a new chapter is issued with an amendment list, or an existing chapter is completely revised, this fact will be noted within the heading of the chapter and the triangles will not appear.

If a manuscript amendment is called for in an Amendment List the number of the Amendment List should be noted in the margin adjacent to the amended text.

Incorporation of an Amendment List must be certified on the Amendment Record Sheet.

4. The following conventions are observed throughout the Manual:
 - a. The actual markings on controls are indicated in the text by capital letters.
 - b. Unless otherwise stated all speeds, temperatures, altitudes and accelerations quoted are indicated values.
 - c. All references to fluid capacities given in gallons are Imperial gallons.
 - d. **WARNINGS** are inserted only when the serious consequences of not following a certain procedure might otherwise be overlooked.
 - e. Information requiring emphasis is printed in italics.
 - f. Notes are inserted to clarify the reason for a procedure or to give information which, while not essential to the understanding of the subject is useful to the reader.
5. Operating data are contained in the associated Operating Data Manual which should be used in conjunction with these Notes.
- 6.

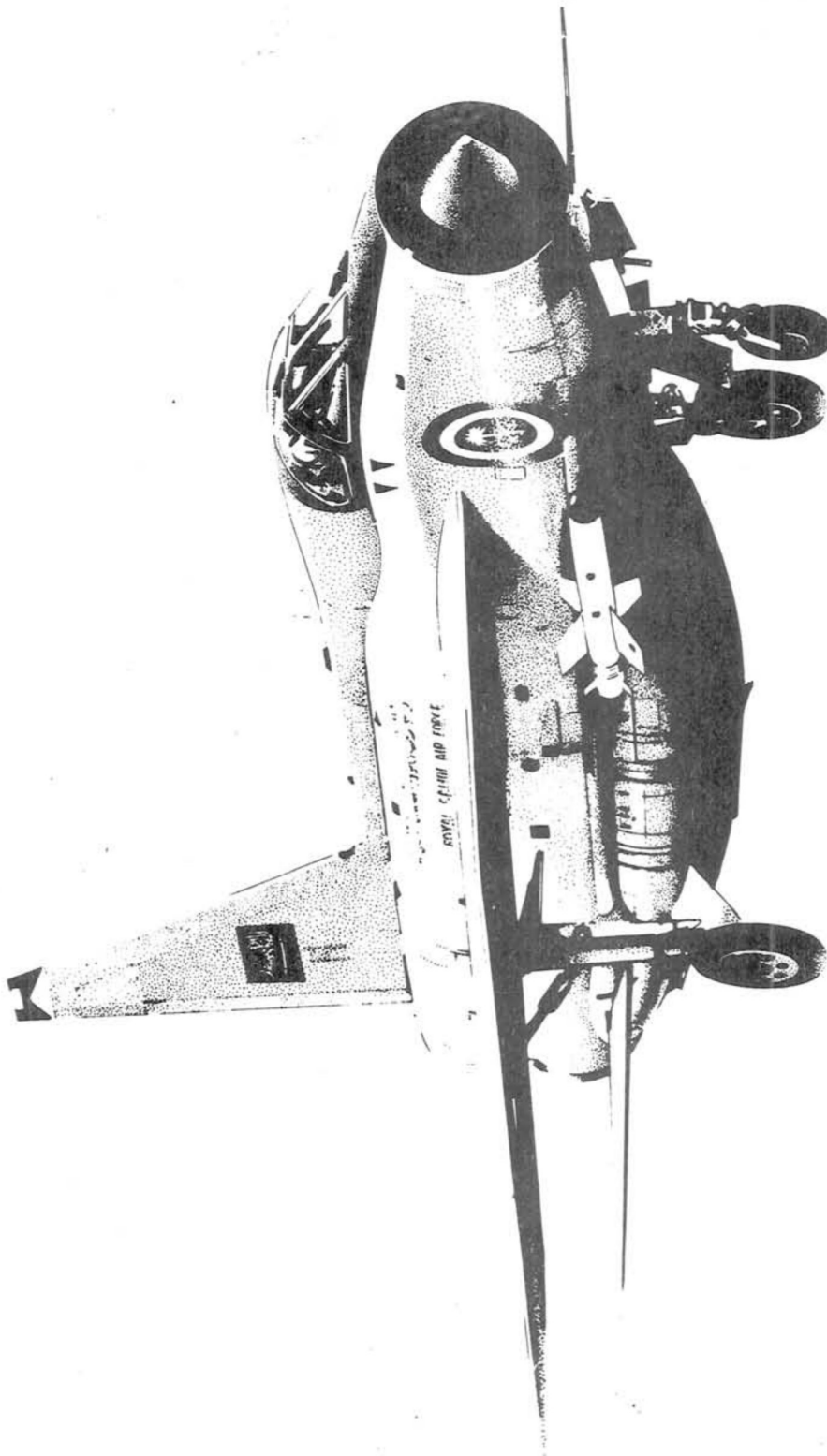
Proposed amendments or corrections to this Pilots' Notes Manual must be submitted to the Senior Flight Simulation Instructor, Tabuk, for consultation with OC2 Squadron.
Form Maint. O1 is to be used in accordance with Maintenance Support Plan TMO1-3-6 leaflet 1 to enable subsequent UFIP action.

AMENDMENT RECORD SHEET

To record the incorporation of an Amendment List in this publication, sign against the appropriate AL No and insert the date of incorporation.

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LIGHTNING T MK.55

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ANA are to be incorporated in manuscript and the ANA serial number is to be recorded above.

LIST OF PAGES

This List shows all the pages which should be present in this Manual. The List will be re-issued with each Amendment List.

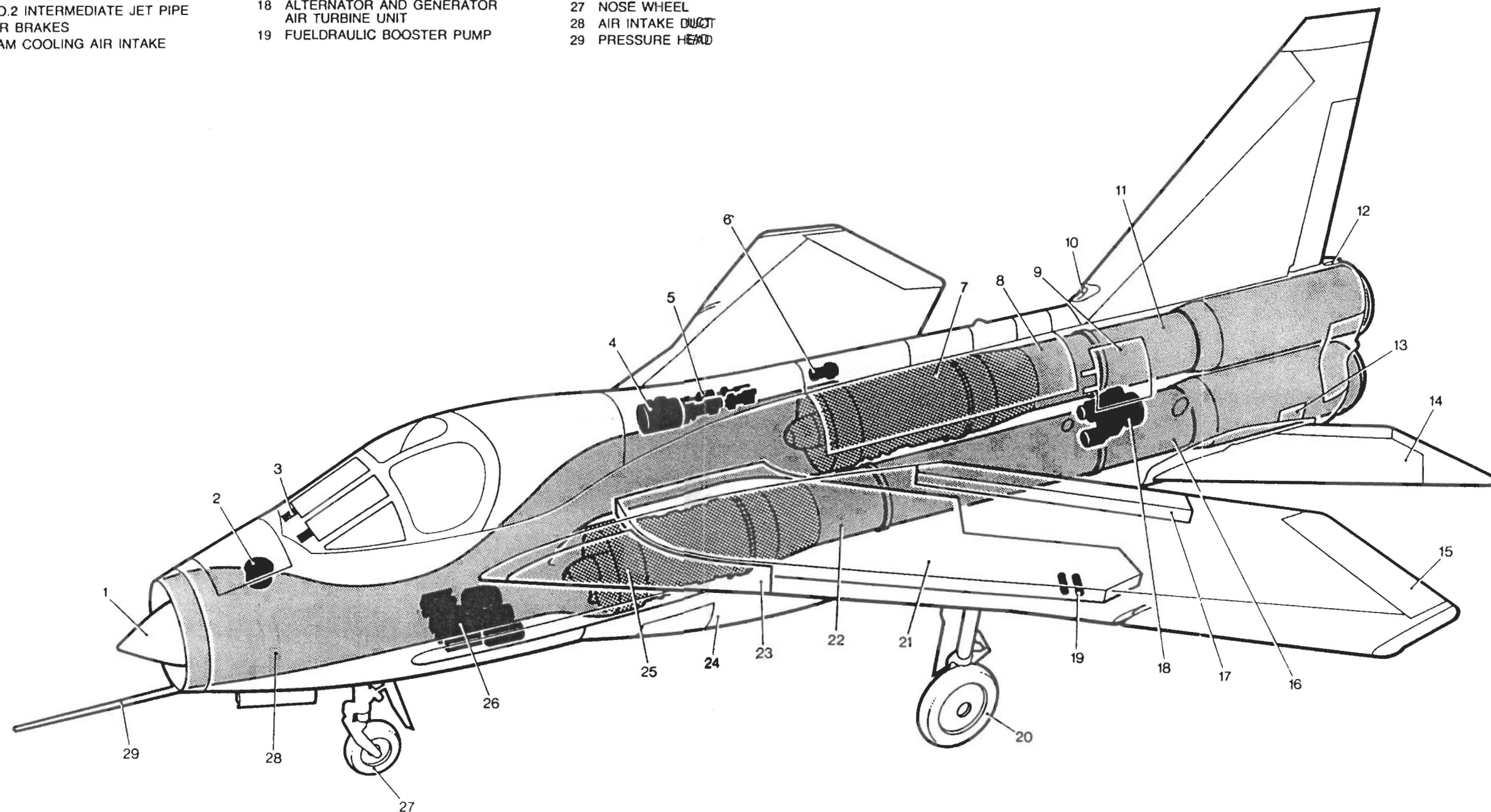
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- 1 RADAR BULLET
- 2 LOX CONVERTER
- 3 RAIN DISPERSAL NOZZLE
- 4 AVP IN FUEL TANK
- 5 ENGINE STARTING EQUIPMENT
- 6 STANDBY DC GENERATOR
- 7 NO.2 ENGINE
- 8 NO.2 INTERMEDIATE JET PIPE
- 9 AIR BRAKES
- 10 RAM COOLING AIR INTAKE

- 11 NO.2 REHEAT JET PIPE
- 12 BRAKE CHUTE JETTISON RELEASE
- 13 BRAKE PARACHUTE COMPARTMENT
- 14 ALL-MOVING TAILPLANE
- 15 AILERON
- 16 NO.1 REHEAT JET PIPE
- 17 FLAP FUEL TANK
- 18 ALTERNATOR AND GENERATOR
- 19 FUELDRY AIC BOOSTER PUMP

- 20 MAIN UNDERCARRIAGE
- 21 MAIN FUEL TANK
- 22 NO.1 INTERMEDIATE JET PIPE
- 23 LEADING EDGE FUEL TANK
- 24 VENTRAL FUEL GUN PACK
- 25 NO.1 ENGINE
- 26 ARMAMENT PACK
- 27 NOSE WHEEL
- 28 AIR INTAKE DUCT
- 29 PRESSURE HEAD

DIMENSIONS:
 LENGTH (INCLUDING PITOT) 55 FT. 3 IN.
 HEIGHT (TO TOP OF FIN) 19 FT. 7 IN.
 WINGSPAN 34 FT. 10 IN.
 TRACK 12 FT. 10 IN.
 CANOPY HEIGHT 11 FT. 6 IN.



LACM 55 PREL 1-1 (S)

Prelim. Fig. 1 Main Features

INTRODUCTION

1. The Lightning T Mk. 55 is a two-seat supersonic trainer intended for pilot conversion and weapon training but designed to be used as an operational interceptor if required. Seating is side-by-side with the instructor's position on the right. Each of the occupants are provided with ejection seats containing escape and survival equipment.
2. The power units are two Rolls-Royce Avon Mk. 302C, axial-flow gas turbines mounted in the fuselage with No. 2 to the rear of and above No. 1. Engine thrust can be increased by reheat which is fully variable between minimum and maximum. Each engine develops approximately 12,580 lb static thrust at sea level and 16,300 lb with maximum reheat.
3. Fuel is carried in integral wing tanks and in the flaps, and in a non-jettisonable ventral tank. Provision is made for flight refuelling.
4. Electrical power comes from a generator and an alternator, both driven by an air turbine powered by air tapped from the engine compressors. A standby generator is fitted for emergency use. Normal and emergency batteries are provided.
5. The flying controls (ailerons, rudder, and all-moving tailplane) are fully power-operated and have artificial feel. Hydraulic supplies to these controls are duplicated. Two-position flaps and two-position air brakes are electrically controlled and hydraulically operated. A braking parachute is housed in a compartment on the underside of the fuselage.
6. An integrated flight instrument and control system supplies normal flight information and provides autostabilization, programmed climb, attitude hold, height and heading locks and ILS coupled approaches through an autopilot/flight director.
7. A search and interception radar and fire control system provides for automatic attacks with two Firestreak or Red Top guided missiles or forty-four 2-inch unguided rockets, carried on interchangeable packs in the forward fuselage.

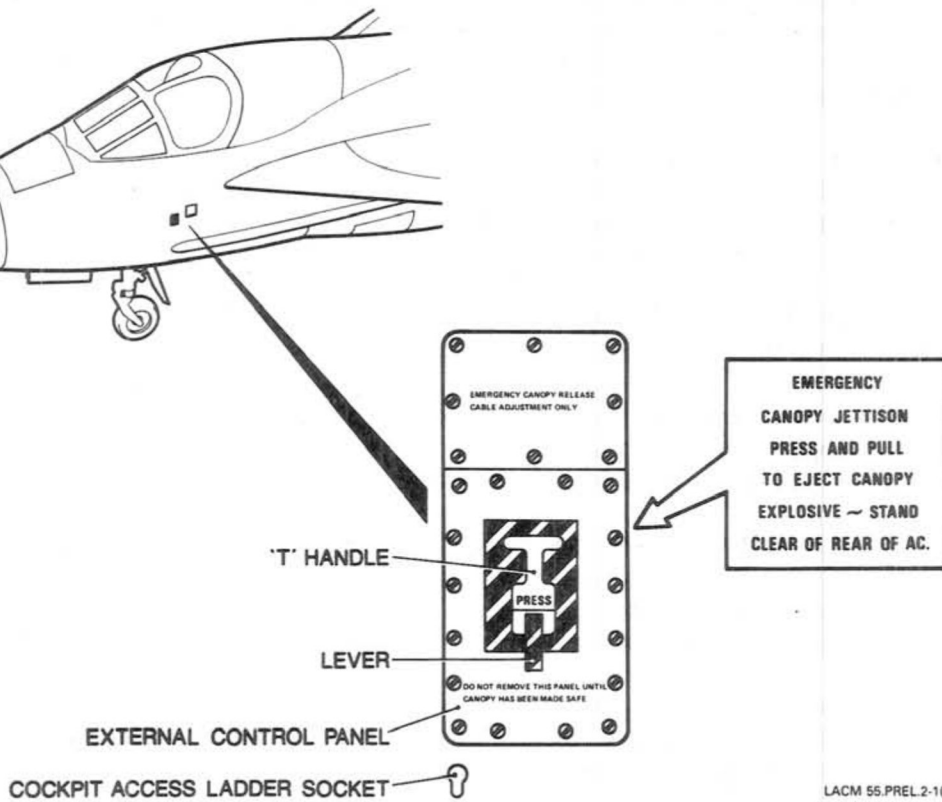
COCKPIT AND CANOPY

WARNING . . .

WHENEVER THE AIRCRAFT IS ON THE GROUND, THE EJECTION SEATS AND CANOPY MUST BE LEFT 'SAFE FOR PARKING'; ie. SAFETY PINS MUST BE FITTED TO THE EJECTION SEATS FACE-SCREEN FIRING HANDLES, THE SEAT PAN FIRING HANDLES, THE GUILLOTINE SEARS AND THE CANOPY JETTISON SEAR.

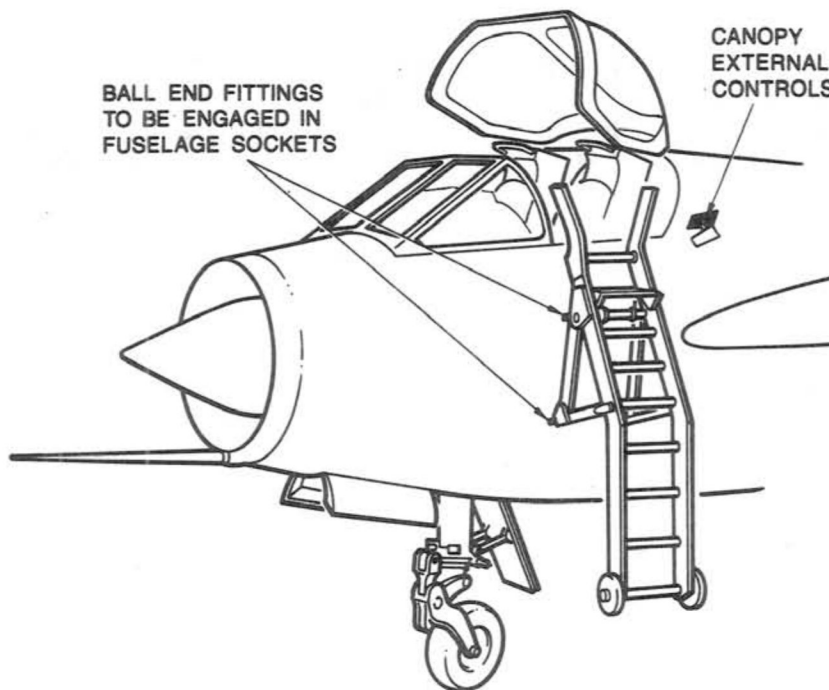
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8. The pressurised cockpit is sealed by a power-operated clam-shell type canopy which is jettisoned automatically on ejection, but which can also be jettisoned by internal or external controls.



Prelim. Fig. 2 External Canopy Jettison Control

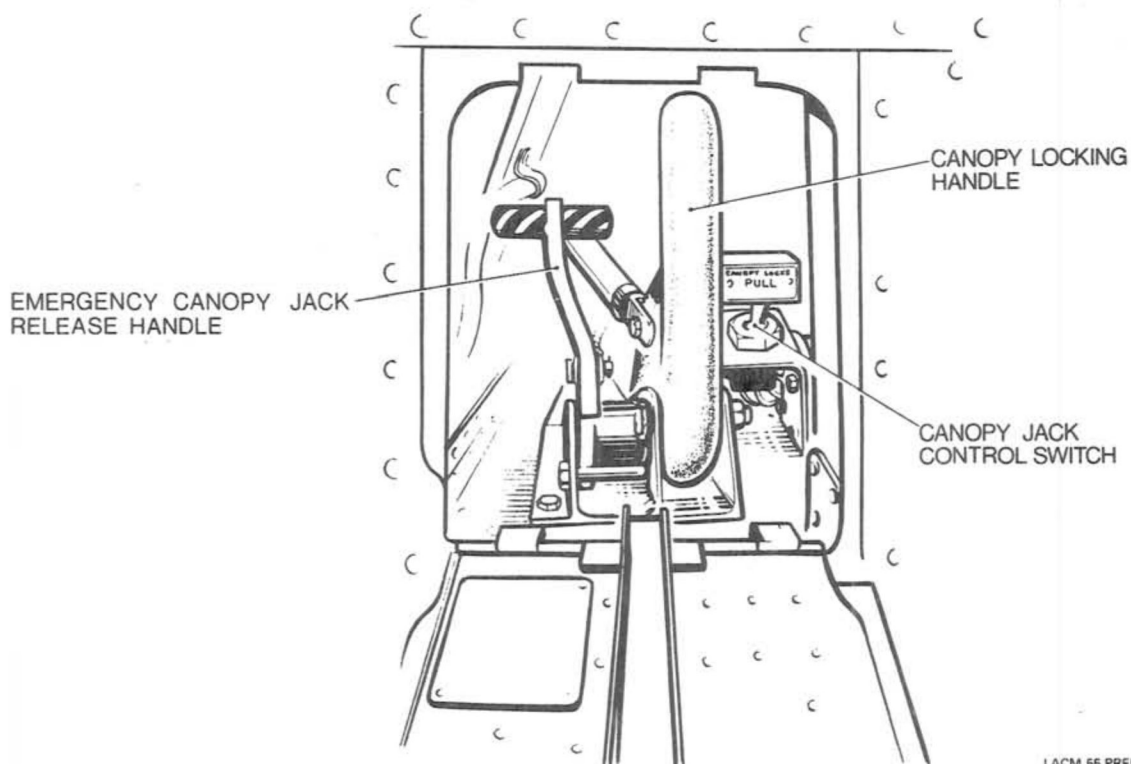
9. Access to the cockpit is gained from either side of the aircraft by access ladders which are part of the ground equipment.



Prelim. Fig. 3 Access to Cockpit

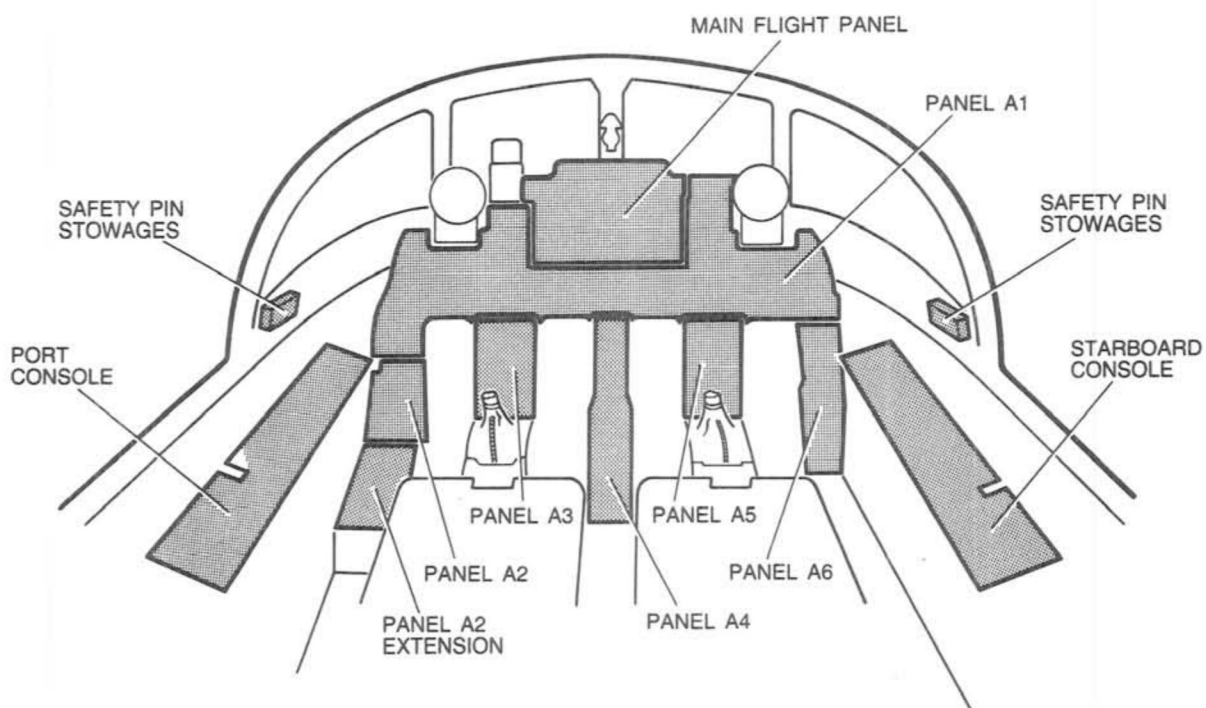
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10. The canopy is opened from the outside by means of a handle and switch located behind a panel on the port side of the fuselage spine.



Prelim. Fig. 4 External Canopy Controls

11. The various panels on which the pilot's instruments, indicators and controls are located are referred to throughout the Notes as shown.



Prelim. Fig. 5 Cockpit Panels

