

Restricted

101B-603-15  
A.P. 4700C-P.N.

**PILOT'S NOTES**  
**LIGHTNING F. Mk.3**

Restricted

## AMENDMENTS

Amendment Lists will be issued as necessary and should be inserted in the appropriate place in the Notes. New or amended paragraphs will be indicated by triangles thus ◀.....▶ to show the amount of amended text and thus ▶◀ to show where text has been deleted.

The number of the latest Amendment List affecting a page appears at the bottom of the page and any triangles therefore on the page refer to this amendment list. However if a page is issued in a revised form, or consists of completely new text, the triangles do 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 below, and the Amendment List instruction sheet inserted at the end of the book.

Amendment List No.	Date of Incorporation	Signature	Amendment List No.	Date of Incorporation	Signature
1	4/3/66	<i>h. Pany.</i>	7	1-3-70	<i>fw</i>
2	9-6-66	<i>Rwell</i>	8	2-6-71	<i>fw</i>
3	27/10/67	<i>h. Pany.</i>	9	31 Jul 72	<i>fw</i>
4	19-6-68	<i>fw</i>	10	31 Oct 73	<i>fw</i>
5	6-11-68	<i>fw</i>	11	10 May 74	<i>fw</i>
6	10-1-69	<i>fw</i>	12	7 Aug 75	<i>fw</i>

Comments and suggestions regarding Pilot's Notes should be forwarded to the Officer Commanding, Royal Air Force Handling Squadron, Boscombe Down, Wiltshire.

April 1965

AP 101B-1003-15  
(formerly AP 4700C-PN)

**PILOT'S NOTES**

**LIGHTNING F Mk 3**

BY COMMAND OF THE DEFENCE COUNCIL

*Michael Cany*

Prepared by Procurement Executive,  
Ministry of Defence

## NOTES TO USERS

- ◀ 1. These Notes are divided by marker cards as follows:

Preliminaries

PART 1—DESCRIPTION AND MANAGEMENT

PART 2—LIMITATIONS

PART 3—HANDLING

PART 4—EMERGENCIES

PART 5—ILLUSTRATIONS

The Parts are divided into chapters as listed on the marker cards. A Folio Sheet reference number is at the top left corner of each sheet and each Part starts at FS1. All Folio Sheets except the first sheet in each Chapter also have the Part, Chapter and Chapter Title at the top right. ▶

2. The limitations quoted in Part 2 are mandatory and must not be exceeded except in emergency. The contents of other Parts of the book are mainly advisory but instructions containing the word 'must' are also mandatory.

- ◀ 3. Amendment instructions are given inside the front cover. The List of Folio Sheets will be updated at each amendment.

4. The following conventions are used throughout these Notes:

- The actual markings on controls are indicated in the text by capital letters.
- Unless otherwise stated, all speeds, temperatures, altitudes and accelerations quoted are indicated values.
- WARNINGS** are inserted only when the consequences of not following a certain procedure might otherwise be overlooked.
- Information which requires to be emphasised is in either italics or bold print.
- 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. Modification numbers are only referred to in these Notes when it is necessary to differentiate between pre- and post-mod states. For ease of reference a list of modifications mentioned in the text is included after the main contents list, with a cross reference to the position in the text where details of the modifications are given.

- ◀ 6. The Flight Reference Cards (AP 101B-1003-14) and Operating Data Manual for the aircraft are complementary to these Notes but are issued separately. Reference is made to both publications where necessary.

**IMPORTANT**

Comments and suggestions should be forwarded to the Officer Commanding, Royal Air Force Handling Squadron, Boscombe Down, Salisbury, SP4 0JF. ▶

## Amendment Record Card — (continued)

AL No	SIGNATURE	DATE
13	<i>[Signature]</i> MAY 76	1 JUL 76
14	<i>[Signature]</i> JUL 77	29 JUL 77
15	<i>[Signature]</i> DEC 78	19 JAN 79
16	<i>[Signature]</i> Sep 80	16 Oct 80
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36		
37		
38		

## LIST OF ASSOCIATED AIR PUBLICATIONS

	<i>AP</i>
◀ Aircrew Manual—Weapon System ...	101B-1003, 5&6-15B ▶
Avon Mk. 30100 Series ECU and associated jet pipes ... ..	4477A
Cameras and accessories, air ... ..	1355C
Combustion starters for aero engines—Plessey	1181B
Ejection seats and escape equipment ...	4288 series
Electrical manual ... ..	4343 series
Fire prevention and fire extinguishing equip- ment in aircraft ... ..	957C
Hydraulics and undercarriage equipment— British Messier ... ..	1803T
Hydraulic and undercarriage equipment— miscellaneous ... ..	1803P
Hydraulic equipment—Dowty ... ..	1803D
Hydraulic equipment—Dunlop ... ..	1803S
Hydraulic equipment—Integral ... ..	1803J
IFF Mk. 10 (airborne) ARI 5848 ... ..	2887N
ILS airborne equipment (ARI 18011) ... ..	2534E
Instrument manual ... ..	1275 series
Integrated flight instrument and control systems ... ..	4685 series
Power flying control units—Hobson ...	4604G
Pressurising and air-conditioning equipment	4340
Pneumatic equipment—Hymatic ... ..	4303C
Rotol accessory gearbox and drives ... ..	2240A
Telebriefing (ARI 18012 and FRGI 18013) ...	2876G
Tacan (ARI 18107) ... ..	2534N
UHF multi-channel T/R (ARI 18124/1 and 2)	2531J
UHF homing installations (ARI 18120) ...	2531L
UHF Standby, T/R (ARI 23057) ... ..	2531N
UHF Data Link (Airborne) equipment ...	CD4773BA

RESTRICTED

## ANA INCORPORATED

ANA No							
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ANA are to be incorporated in manuscript and the ANA serial number is to be recorded above

## LIST OF FOLIO SHEETS

This list shows all the Folio Sheets which should be present in these Pilot's Notes at AL16. Sheets which should have manuscript amendments are marked with an asterisk.

<i>Folio Sheet</i>	<i>Issued by</i>	<i>Folio Sheet</i>	<i>Issued by</i>
<b>Preliminaries</b>		<b>Part 1 Chapter 4</b>	
Title Page	AL12	FS20	AL13
Amendment		FS21	Initial issue
Record Sheet	AL12	<b>Part 1 Chapter 5</b>	
FS1	AL7	FS22	Initial issue
FS1A	AL16	FS23	AL11
FS2	AL12	FS24	AL3
FS3	AL14	<b>Part 1 Chapter 6</b>	
FS4	AL12	FS25	AL3
FS5	Initial issue	FS26	Initial issue
<b>Part 1</b>		FS27*	Initial issue
Marker card	AL12	FS28	AL10
<b>Part 1 Chapter 1</b>		FS28A	AL10
FS1*	AL9	<b>Part 1 Chapter 7</b>	
FS2*	AL7	FS29*	AL10
FS3	Initial issue	FS30	AL13
FS4	AL12	<b>Part 1 Chapter 8</b>	
FS5	AL12	FS31	AL11
FS6	AL9	FS32	AL12
FS7	AL13	FS33	AL13
FS7A	AL13	FS34	AL14
<b>Part 1 Chapter 2</b>		<b>Part 1 Chapter 9</b>	
FS8	AL5	FS35	AL5
FS9	AL2	FS36	AL8
FS10	AL14	FS37	AL10
FS11	AL11	<b>Part 1 Chapter 10</b>	
FS12	AL11	FS38	AL2
FS13	AL11	FS39	AL7
FS13A	AL14	FS39A	AL7
<b>Part 1 Chapter 3</b>		<b>Part 1 Chapter 11</b>	
FS14	AL12	FS40	AL10
FS15	AL12		
FS16	AL12		
FS17	AL14		
FS18	AL12		
FS19	AL13		
FS19A	AL12		

## RESTRICTED

<i>Folio Sheet</i>	<i>Issued by</i>	<i>Folio Sheet</i>	<i>Issued by</i>
<b>Part 1 Chapter 12</b>		<b>Part 3 Chapter 1</b>	
FS41	AL14	FS1	AL14
FS42	AL9	FS2	AL14
FS43	AL9	FS2A*	AL12
FS44	AL12	<b>Part 3 Chapter 2</b>	
FS45	AL11	FS3	AL14
FS45A	AL11	FS4	AL14
FS46	AL11	FS5	AL14
FS47	AL14	FS5A	AL8
FS48	AL15	FS6	AL8
<b>Part 1 Chapter 13</b>		FS7	AL8
FS49	AL9	FS8	AL13
FS50*	AL3	FS9	AL13
FS51	AL13	FS9A	AL13
<b>Part 1 Chapter 14</b>		FS10	AL8
FS52	AL9	FS11*	AL7
FS53	AL9	FS12	AL8
FS54*	AL9	<b>Part 3 Chapter 3</b>	
FS55	AL9	FS13*	AL8
FS56	AL9	FS14	AL13
FS57	AL9	FS15	AL7
FS58	AL9	FS16	AL3
FS59	AL9	FS17	AL12
FS59A	AL9	<b>Part 3 Chapter 4</b>	
<b>Part 1 Chapter 15</b>		FS18	AL14
FS60	AL14	FS19	AL13
FS61*	AL12	<b>Part 4</b>	
FS62	AL14	Marker card	AL12
FS63	AL14	<b>Part 4 Chapter 1</b>	
<b>Part 2</b>		FS1	AL15
Marker card	AL12	FS2	AL15
<b>Part 2 Chapter 1</b>		<b>Part 4 Chapter 2</b>	
FS1	AL16	FS3*	AL12
FS2	AL16	FS4	AL12
FS3	AL16	FS5	AL13
FS4	AL16	<b>Part 5</b>	
FS5	AL16	Marker card	AL12
FS6	AL16	<b>Part 5 Chapter 1</b>	
<b>Part 2 Chapter 2</b>		FS1	AL12
FS7	AL14	FS2*	Initial issue
<b>Part 3</b>		FS3*	Initial issue
Marker card	AL12	FS4*	Initial issue
		FS5*	Initial issue

RESTRICTED

## LIST OF CONTENTS

### Preliminaries

### PART 1 — DESCRIPTION AND MANAGEMENT OF SYSTEMS

	Chap
Electrical System ... ..	1
Fuel System ... ..	2
Engine Controls and Indicators ... ..	3
Engine Fire Protection System ... ..	4
Hydraulic System ... ..	5
Power Flying Controls and Trimmers ... ..	6
Other Aircraft Controls ... ..	7
Flight Instruments ... ..	8
General Equipment and Controls ... ..	9
Pressurisation and Air Conditioning ... ..	10
Windscreen Demisting and Rain Dispersal ... ..	11
Aircrew Equipment Assembly and Associated Systems ... ..	12
Warning Systems ... ..	13
Flight Control System ... ..	14
Radio and Radar ... ..	15

### PART 2 — LIMITATIONS

Airframe Limitations ... ..	1
Engine Limitations ... ..	2

### PART 3 — HANDLING

Starting, Taxying and Take-off ... ..	1
Handling in Flight ... ..	2
Circuit and Landing Procedures ... ..	3
Single-engine Flying and Relighting ... ..	4

### PART 4 — EMERGENCIES

◀ Emergency Index ... ..	1
Emergency Procedures ... ..	2 ▶

### PART 5 — ILLUSTRATIONS

◀ Cockpit Illustrations ... ..	1 ▶
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**MODIFICATION NUMBERS MENTIONED  
IN THE TEXT**

<i>Mod No</i>	<i>Effect of Modification</i>	<i>Location in Text of Mod Details Pt Ch Para</i>
July 81 FE → 2383 ✓	Improved float control valves ...	1, 2, 6 ✓
2459 ✓	Deletes recuperators ...	1, 2, 7 ✓
FE No month → 2477 ✓	Introduces improved shuttle valves ...	1, 2, 12 ×
FE → 2511 ✓	Introduces Triple-FD fire detection system ...	1, 4, 3 ✓
10/5 → 4150 ✓	Introduces ram air temperature gauge ...	1, 8, 9 ✓
FE → 4193 ✓	Introduces captions on amber 'day' windows of AWP ...	1, 13, 2 ✓
FE → 4556 ✓	Obviates possibility of an auto-pilot 'no-mode' selection ...	1, 14, 3 ✓
FE → 4635 ✓	Introduces Monte Carlo stop watch ...	1, 8, 10 ✓
S Fig 210/5 FE → 4664/ ✓	Repositions accelerometer and	1, 8, 9 ✓
FE → 4808 ✓	RAT gauge ...	1, 8, 9 ✓
FE → 4749 ✓	Introduces modified hydraulic reservoirs ...	1, 5, 3 ✓
FE → 4763 ✓	Introduces Mk 17F oxygen regulator ...	1, 12, 11 ✓
FE → 4795 ✓	Mute switch on AWP ...	1, 13, 2 ✓
0227/ STC ✓	Extra accelerometer fitted for aerobic displays ...	1, 8, 9 ✓
FE → FC089 ✓	Locking switches for fuel cocks	1, 2, 10 ✓
Avon 3707 ✓	Modified engine seals ...	2, 2, 3 ✓

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## INTRODUCTION

1. The Lightning F Mk 3 is a single-seat, twin-engined, supersonic interceptor fighter, having highly swept, mid-mounted main planes and a slab tailplane. The ailerons, rudder and tailplane are fully power operated, and incorporate artificial feel for each control; hydraulic supplies to these controls are duplicated. Hydraulically operated airbrakes and trailing edge flaps are fitted. A braking parachute is housed in a compartment on the underside of the fuselage.
2. The power units are Avon Mk 302 axial-flow gas turbine engines. The Avon Mk 302 develops approximately 12,600 lb static thrust at sea level (16,300 lb approx. with maximum reheat). The engines are mounted in the fuselage, No 2 to the rear of and above No 1.
3. Internal fuel is carried in integral wing tanks and in the flaps. Additional fuel may be carried in a jettisonable ventral tank. Provision is made for air-to-air refuelling.
4. Electrical power is derived from a generator and an alternator, both driven by an air turbine unit powered by air tapped from the engine compressors. A standby generator is fitted for emergency use and service and emergency batteries are provided.
5. The weapon system of the aircraft comprises a radar and fire control system, a Light Fighter Sight and Red Top or Firestreak air-to-air homing missiles. Cameras and AI recorders are also fitted. Full details of the weapon system are given in AP 101B-1003, 5 & 6-15B.
6. An integrated flight instrument (IFIS) and control system supplies speed, height, attitude and direction information to the flight instruments and provides auto-stabilisation, programmed climb, attitude hold, height and heading locks and ILS coupling.
7. The pressurised cockpit is equipped with an ejection seat. The clamshell canopy is hydraulically operated and electrically controlled and can be jettisoned by a canopy jettisoning handle or, on ejection, by either of the ejection

seat firing handles. An external canopy jettison handle is provided.

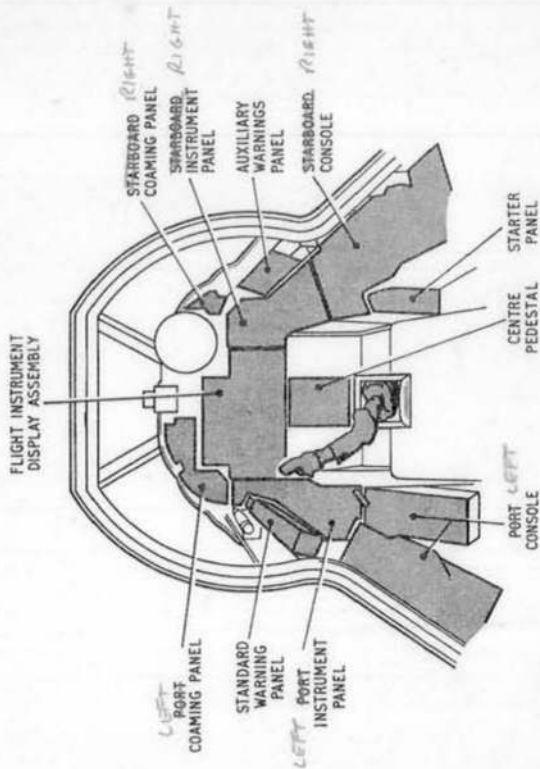
8. Entry to the cockpit is gained from the left side of the aircraft by an access ladder which is part of the ground equipment. The canopy is opened from the outside by means of a handle and switch located behind a panel on the left side of the fuselage spine.

9. All emergency warning lights are grouped on a standard warning panel (SWP) and on an auxiliary warning panel (AWP) on the left and right sides of the cockpit respectively.

10. The various panels on which the pilot controls and indicators are located are referred to in the Notes as shown on the diagram opposite.

11. The principal dimensions of the aircraft are:

Length overall	...	...	...	55 feet 3 inches
Height overall	...	...	...	19 feet 7 inches
Wing span	...	...	...	34 feet 10 inches
Tailplane span	...	...	...	14 feet 6 inches
Canopy height	...	...	...	11 feet 6 inches



**COCKPIT LAYOUT**



THIRTY TWO

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