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Missile
AP 101B
1003, 5, 6-15B

LIGHTNING
3, 5 & 6

AIRCREW
MANUAL-
WEAPON
SYSTEM

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AP 101B-1003, 5 & 6-15B

LIGHTNING F3, T5, F6

AIRCREW MANUAL - WEAPON SYSTEM

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St. Jones
AP 101B-1003, 5 & 6-15B
FL MOORE

LIGHTNING

F3, T5, F6

AIRCREW MANUAL WEAPON SYSTEM

BY COMMAND OF THE DEFENCE COUNCIL



Prepared by Procurement Executive,
Ministry of Defence

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AL3

NOTES TO USERS

1. This Manual is complementary to the Lightning F3 Pilot's Notes (AP 101B-1003-15), the Lightning T5 Pilot's Notes (AP 101B-1005-15) and the Lightning F6 Pilot's Notes (AP 101B-1006-15).

2. The Manual is divided by marker cards as follows:

Preliminaries

Part 1 — Description of Systems and Equipment

Part 2 — Handling Procedures

Each Part is divided into Sections and Chapters as listed on its marker card. Each page is identified by a Part, Section, Chapter and Page reference at the foot of the page. Thus, a page bearing the reference: 1-2-4 Page 5 is page 5 of Part 1, Section 2, Chapter 4.

3. A Supplement to this Manual is issued, containing text which is of a security classification higher than 'Restricted'. The Supplement, issued separately, is subject to a separate amendment procedure but is an integral part of this Manual.

4. Amendment Lists will be issued as necessary. ►◄ New or amended matter of importance will be indicated by triangles 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 on each page.

5. The following conventions are observed throughout this Manual:

- ◄ a. The actual markings on controls are indicated in the text by capital letters. ►
- b. WARNINGS are inserted only where the serious consequences of not following a certain procedure might otherwise be overlooked.
- c. Information which requires to be emphasised is printed in italics.
- d. 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.

6. Modification numbers are referred to in the text only when it is necessary to differentiate between pre- and post-mod states. For ease of reference, a list of the modifications mentioned in the text is included in the preliminary pages, with a cross reference to the location in the text of the modification details.

IMPORTANT

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

AMENDMENT RECORD SHEET

AP.101B-1003, 5 & 6-15B

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

A.L. No.	AMENDED BY	DATE
1	<i>W. Knight</i>	22/6/77
2	<i>W. Knight</i>	10/5/78
3	<i>W. Knight</i>	21/5/77
4	<i>S. Gunne</i>	13 JAN 79
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ANA are to be incorporated in manuscript and the ANA serial number is to be recorded above.

This list shows all pages which should be present in this Manual at AL5. Pages which should have manuscript amendments are marked with an asterisk.

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LIST OF ASSOCIATED AIR PUBLICATIONS

<i>AP Number</i>	<i>Title</i>
101B — 1003/6 series	Lightning F Mk 3 and F Mk 6
101B — 1005 series	Lightning T Mk 5
114C — 0200 series	AI Mk 23D
1641S series	Aden 30 mm Gun
4742 series	Firestreak Weapon System
112E-0309-1	Light Fighter Sight General and Technical Information
1355D	Photographic Equipment — Cine and Recording Cameras
4865 series	Red Top Weapon System
112P-0402-1	Pilot's Display Recorder (Telford)

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LIST OF MODIFICATION NUMBERS MENTIONED IN THE TEXT

<i>Mod No</i>	<i>Brief Description</i>	<i>Location in Text of Mod Details</i>			
		<i>Part</i>	<i>Sect</i>	<i>Chap</i>	<i>Para</i>



STI/Red Top/53	Painting of 'ready use' missiles	1	7	2	1
SEM/07/STC	Introduction of Luneberg Lens	Preliminaries, Page 5, para 6			

INTRODUCTION

1. The specification for the Lightning F3, T5 and F6 requires the aircraft to be capable of interception against high altitude supersonic targets. To meet the specification, the aircraft is equipped with a sophisticated radar and fire control system and armed with the Red Top all-round, collision-course missile. The Firestreak missile, capable of pursuit attacks only, may be carried in place of Red Top.
2. Reappraisal of the specification led to the deletion of the requirement for a 44 tube 2" rocket battery and the introduction, on F6 aircraft, of 2 x 30 mm Aden guns as secondary armament.
3. The aircraft, radar and missiles form an integrated weapon system. The interactions between these components are complex and the purpose of this book is to provide an understanding of these interactions and so make possible the best use of the system.
4. The book is divided into two parts. Part 1 deals with the requirements of the Lightning weapon system, the construction and operation of the components, and the sequence of operation and capability of the system. Part 2 covers the use and handling of the system.
5. Part 1 describes the system when it is being used in the manner for which it was designed. There are many conditions which arise when tactical considerations make essential some deviation from the design mode and these are covered in Part 2.
- ◀ 6. The introduction of SEM/07/STC enables Lightning F3, T5 and F6 aircraft to be flown as supersonic targets by replacing the radar assembly with a Luneberg Lens and ballast weight assembly. ▶

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