

|  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
|--|---|--------|----------------------|---|----|---|------------------|---|----------------------------|--------------------------------|-----------------|----------------------------|-----|
| CHAP   | 2   | SP 106 | SERVICING PROCEDURES |   |    |   |                  |   | AP.101B-1000-5A3 F         |                                |                 | TIME                       | ACT |
| TRADE  | AIR RADAR                                 |        | LIGHTNING            |   |    |   |                  |   | Section 1<br>(1st Edition) |                                |                 |                            |     |
| SHEET  | 1   | OF 7   | SHEET/S              | 1 | 1A | 2   | 2A               | 3   | 4                          | 5                              | 6               |                            |     |
| TITLE  | IFF/SSR Installation (Using Test Set CRM) |        |                      |   |    |   | SERVICING RECORD |   |                            | AC NO . . . . . DATE . . . . . |                 |                            | EST |
| Safety and Servicing Notes are to be complied with throughout the work detailed on this Card.                    |   |        |                      |   |    | (1)   | (2)              | (3)   | (4)                        | (5)                            |                 |                            |     |
| <u>Special Tools and Equipment</u>   |   |        |                      |   |    | MAN HOURS   | TRADESMAN INIT   | BRIEF DETAILS OF DEFECT OR SUSPECTED DEFECT |                            | F. 720B NO                     | N.C.O. INITIALS | ASSOCIATED PROCEDURE CARDS |     |
| Test Kit Radar, 105/1050/59<br>Test Set CRM544<br>Co-axial Adapter BNC 50 ohm female-to-female, 5935-99-999-T889 |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| AIR RADAR  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| 1. <u>Preparation</u>  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| 1.1 TR. Pressurize to 4 lbf/in2.   |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| 1.2 Test set. CRM544.  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
|  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
|  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| 1.3 RF cover Type 4345.  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
|  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
|  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
|  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
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|  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| 1.4 Aircraft.  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| (a) Upper and lower aeriels.   |   |        |                      |   |    | Ensure correctly connected to aerial switch unit Type 16941 Set to 'UPPER'. |                  |   |                            |                                |                 |                            |     |
| (b) Aerial test  |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| (c) External Power switch  |   |        |                      |   |    | (i) Set to 'ON'<br>(ii) Check failure warning lamp is lit.                  |                  |   |                            |                                |                 |                            |     |
| 1.5 Control transponder set 16929.   |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| (a) Mode 1 switch.   |   |        |                      |   |    | Set to 'ON'.  |                  |   |                            |                                |                 |                            |     |
| (b) Mode 2, C and D switches.  |   |        |                      |   |    | Set to 'OFF',   |                  |   |                            |                                |                 |                            |     |
| (c) Mode 3 A B switch.   |   |        |                      |   |    |   |                  |   |                            |                                |                 |                            |     |
| RM 52011/78  |   |        |                      |   |    | Continued   |                  |   |                            |                                |                 |                            |     |
|  |   |        |                      |   |    | ASSOCIATED TRADES   |                  |   |                            |                                |                 |                            |     |
|  |   |        |                      |   |    | SP NO   |                  |   |                            |                                |                 |                            |     |
|  |   |        |                      |   |    | 106   |                  |   |                            |                                |                 |                            |     |

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|  |     |           |                                   |  |     |     |     |  |
|--|-----|-----------|-----------------------------------|--|-----|-----|-----|--|
| CHAP   | 2   | AIR RADAR | SERVICING PROCEDURES<br>LIGHTNING | AP101B-1000-5A3 <sup>F</sup><br>Section 1<br>(1st Edition) |     |     |     |  |
| SP NO  | 106 | CONTINUED |                                   | AC NO . . . . . DATE . . . . .                             |     |     |     |  |
| SHEET  | 2   |           |                                   | SERVICING RECORD   |     |     |     |  |
| Safety and Servicing Notes are to be complied with throughout the work detailed on this card.                        |     |           | (1)                               | (2)  | (3) | (4) | (5) |  |
| AIR RADAR  |     |           |                                   |  |     |     |     |  |
| 1. <u>Preparation</u> (Contd)  |     |           |                                   |  |     |     |     |  |
| 1.5 Control transponder set 16929.   |     |           |                                   |  |     |     |     |  |
| (d) Mode 1 and 3 code switches. Set to '0000'.   |     |           |                                   |  |     |     |     |  |
| (e) Civil/Mil switch. Set to 'MIL'.  |     |           |                                   |  |     |     |     |  |
| (f) Function switch.   |     |           |                                   |  |     |     |     |  |
| (i) Set to 'S/BY'.   |     |           |                                   |  |     |     |     |  |
| (ii) Check failure warning lamp extinguishes.  |     |           |                                   |  |     |     |     |  |
| (iii) Set to 'NORM'.   |     |           |                                   |  |     |     |     |  |
| (i) Depress.   |     |           |                                   |  |     |     |     |  |
| (ii) Check failure warning lamp flashes.   |     |           |                                   |  |     |     |     |  |
| (iii) Release.   |     |           |                                   |  |     |     |     |  |
| (iv) After one minute warm up depress. and check Green confidence lamp lights and failure warning lamp extinguishes. |     |           |                                   |  |     |     |     |  |
| (v) Release.   |     |           |                                   |  |     |     |     |  |
| 2. <u>Test Set CRM544</u>  |     |           |                                   |  |     |     |     |  |
| 2.1 Power switch. Set to 'ON' and check power indicator lamp lights.   |     |           |                                   |  |     |     |     |  |
| 2.2 Function switch. Set to 'SELF TEST' and check meter indicates at nominal setting on dB scale.                    |     |           |                                   |  |     |     |     |  |
| 3. <u>TR Serviceability Tests</u>  |     |           |                                   |  |     |     |     |  |
| 3.1 Control transponder set 16929 and CRM 544. Carry out system check in accordance with the following Table 1.      |     |           |                                   |  |     |     |     |  |
| RM 52011/78A   |     |           | Continued                         |  |     |     |     |  |

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|-------|-----|-----------|-----------------------------------|---|--|--|
| CHAP  | 2   | AIR RADAR | SERVICING PROCEDURES<br>LIGHTNING | AP101B-1000-5A3 F<br>Section 1<br>(1st Edition) |  |  |
| SP NO | 106 | CONTINUED |                                   | AC NO . . . . . DATE . . . . .                  |  |  |
| SHEET | 3   |           |                                   | SERVICING RECORD                                |  |  |

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.

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| (1) | (2) | (3) | (4) | (5) |
|-----|-----|-----|-----|-----|

AIR RADAR

TABLE 1

| Test | CU 16929 Switch Positions   | CRM544 Switch Positions   | Meter Indication |
|------|---|---|------------------|
| 1.   | Mode 1,2,C and D switches to 'ON'<br><br>Mode 3A/B switch to 3A<br>Mode 1, 2 and 3 code switches to 7777,<br>Civl/Mil switch to 'MIL'.<br>Function switch to 'NORM'.  | Mode switch to Mode 1.<br>Function switch to 'FREQ/PWR'   | Green            |
| 2.   | As for Test 1.  | Mode switch to Mode 2   | Green            |
| 3.   | As for Test 1.  | Mode switch to Mode 3A  | Green            |
| 4.   | As for Test 1.  | Mode switch to Mode C   | Green            |
| 5.   | As for Test 1.  | Mode switch to Mode D   | Green            |
| 6.   | Function switch to 'LOW SENS'.  | Mode switch to Mode 1   | Red              |
| 7.   | Mode 1 Code switches to 0000. Function switch to 'NORM'.  | Code switches to 0000<br>Function switch to 'REPLY'.  | Green            |
| 8.   | Operate Mode 1 code switches in sequence as below:-<br><br>1000,2000,3000,4000<br>5000,6000,7000,0100,<br>0200,0300,0400,0500,<br>0600,0700,0010,0020,<br>0030,0040,0050,0060,<br>0070,0001,0002,0003,<br>0004,0005,0006,0007,<br>0000. | Operate Code switches in sequence as below.<br>Check meter indicates Green at each coincident setting.<br><br>1000,2000,3000,4000,<br>5000,6000,7000,0100,<br>0200,0300,0400,0500,<br>0600,0700,0010,0020,<br>0030,0040,0050,0060,<br>0070,0001,0002,0003,<br>0004,0005,0006,0007,<br>0000. | Green            |

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|---|-----|-----------|-----------------------------------|---|-----|-----|-----|--|
| CHAP  | 2   | AIR RADAR | SERVICING PROCEDURES<br>LIGHTNING | AP101B-1000-5A3 F<br>Section 1<br>(1st Edition) |     |     |     |  |
| SP NO   | 106 | CONTINUED |                                   | AC NO . . . . . DATE . . . . .                  |     |     |     |  |
| SHEET   | 4   | AL 9      |                                   | SERVICING RECORD                                |     |     |     |  |
| Safety and Servicing Notes are to be complied with throughout the work detailed on this card. |     |           | (1)                               | (2)   | (3) | (4) | (5) |  |

AIR RADAR  
TABLE 1 (Contd)

| Test | CU 16929 Switch Positions                  | CRM544 Switch Positions  | Meter Indication             |
|------|--|--|------------------------------|
| 9.   | Operate Mode 2 code switches as in Test 8  | Mode switch to Mode 2<br>Operate Code switches as in Test 8.                     | Green                        |
| 10.  | Operate Mode 3 code switches as in Test 8. | Mode switch to Mode 3A<br>Operate Code switches as in Test 8.                    |                              |
| 11.  | Mode 1 code switches to 7777               | Code switches to 7777<br>Mode switch to Mode 1<br>Function switch to 'NO REPLY'. | Red                          |
| 12.  | As for Test 11.                            | Function switch to 'REPLY RATE'.   | Approx 40 per cent delection |
| 13.  | As for Test 11.                            | Function switch to 'IDENT'.  | Red                          |
| 14.  | Press and release IP switch.               | As for Test 13.  | Green for approx 20 secs.    |
| 15.  | Mode 2 code switches to 7777.              | Mode switch to Mode 2  | Red                          |
| 16.  | Press and release IP switch.               | As for Test 15.  | Green for approx 20 secs.    |
| 17.  | Mode 3 code switches to 7777.              | Mode switch to Mode 3A   | Red                          |
| 18.  | Press and release IP switch.               | As for Test 17.  | Green for approx 20 secs.    |
| 19.  | Mode 3A/B switch to 'B'.                   | Mode switch to Mode B  | Red                          |
| 20.  | Press and release IP switch.               | As for Test 19.  | Green for approx 20 secs.    |

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|---|--|-----------|---|--|--|-----|
| CHAP  | 2  | AIR RADAR | SERVICING PROCEDURES  |  | AP101B-1000-5A3F                       |     |
| SP NO   | 106  | CONTINUED | LIGHTNING   |  | Section 1<br>(1st Edition)             |     |
| SHEET   | 5  |           |   |  | AC NO . . . . . DATE . . . . .         |     |
| Safety and Servicing Notes are to be complied with throughout the work detailed on this card. |  |           |   |  | SERVICING RECORD                       |     |
|   |  |           |   |  | (1)                                    | (2) |
|   |  |           |   |  | (3)                                    | (4) |
|   |  |           |   |  | (5)                                    |     |
| AIR RADAR   |  |           |   |  |  |     |
| TABLE 1 (Contd)   |  |           |   |  |  |     |
| Test  | CU 16929 Switch Positions  |           | CRM544 Switch Positions   |  | Meter Indication                       |     |
| 21.   | Mode 2, C and D switches to 'OFF'<br>Mode 3A/B switch to 'OFF'.<br>Mode 1 Code switches to 0077.<br>Mode 2 code switches to 0055.<br>Mode 3 code switches to 0066. |           | Code switches to 0077<br>Mode switch to Mode 1<br>Function switch to 'EMERG'.         |  | Red                                    |     |
| 22.   | Function switch to 'EMGY'.   |           | As for Test 21.   |  | Green                                  |     |
| 23.   | Mode 1 switch to 'OFF'.  |           | As for Test 21.   |  | Green                                  |     |
| 24.   | As for Test 23.  |           | Code switches to 0055<br>Mode switch to Mode 2  |  | Green                                  |     |
| 25.   | As for Test 23.  |           | Code switches to 0066<br>Mode switch to 3A.   |  | Green                                  |     |
| 26.   | As for Test 23.  |           | Mode switch to B  |  | Green                                  |     |
| 27.   | Civil/Mil switch to 'CIVIL'.   |           | Code switches to 7700   |  | Green                                  |     |
| 28.   | As for Test 27.  |           | Mode switch to 3A   |  | Green                                  |     |
| NB  | Transfer RF cover Type 4345 to lower aerial and set aircraft aerial test switch to 'LOWER'.  |           |   |  |  |     |
| 29.   | Mode 1 switch to 'ON'.<br>Function switch to 'NORM'.   |           | Code switches to 7777<br>Mode switches to Mode 1.<br>Function switch to 'FREQ/POWER'. |  | Green                                  |     |
| 30.   | As for Test 29.  |           | Function switch to 'REPLY'.   |  | Green                                  |     |
| 31.   | Set Aerial Test switch to 'FLIGHT'<br>As for Test 29.  |           | As for Test 30.   |  | Approx<br>50 per<br>cent<br>deflection |     |
| RM 52011/80   |  |           | Continued   |  |  |     |

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|   |     |           |                                   |  |  |     |     |     |     |
|---|-----|-----------|-----------------------------------|--|--|-----|-----|-----|-----|
| CHAP  | 2   | AIR RADAR | SERVICING PROCEDURES<br>LIGHTNING |  | AP101B-1000-5A3F<br>Section 1<br>(1st Edition) |     |     |     |     |
| SP NO   | 106 | CONTINUED |                                   |  | AC NO . . . . . DATE . . . . .                 |     |     |     |     |
| SHEET   | 7   |           |                                   |  | SERVICING RECORD                               |     |     |     |     |
| Safety and Servicing Notes are to be complied with throughout the work detailed on this card. |     |           |                                   |  | (1)  | (2) | (3) | (4) | (5) |

AIR RADAR

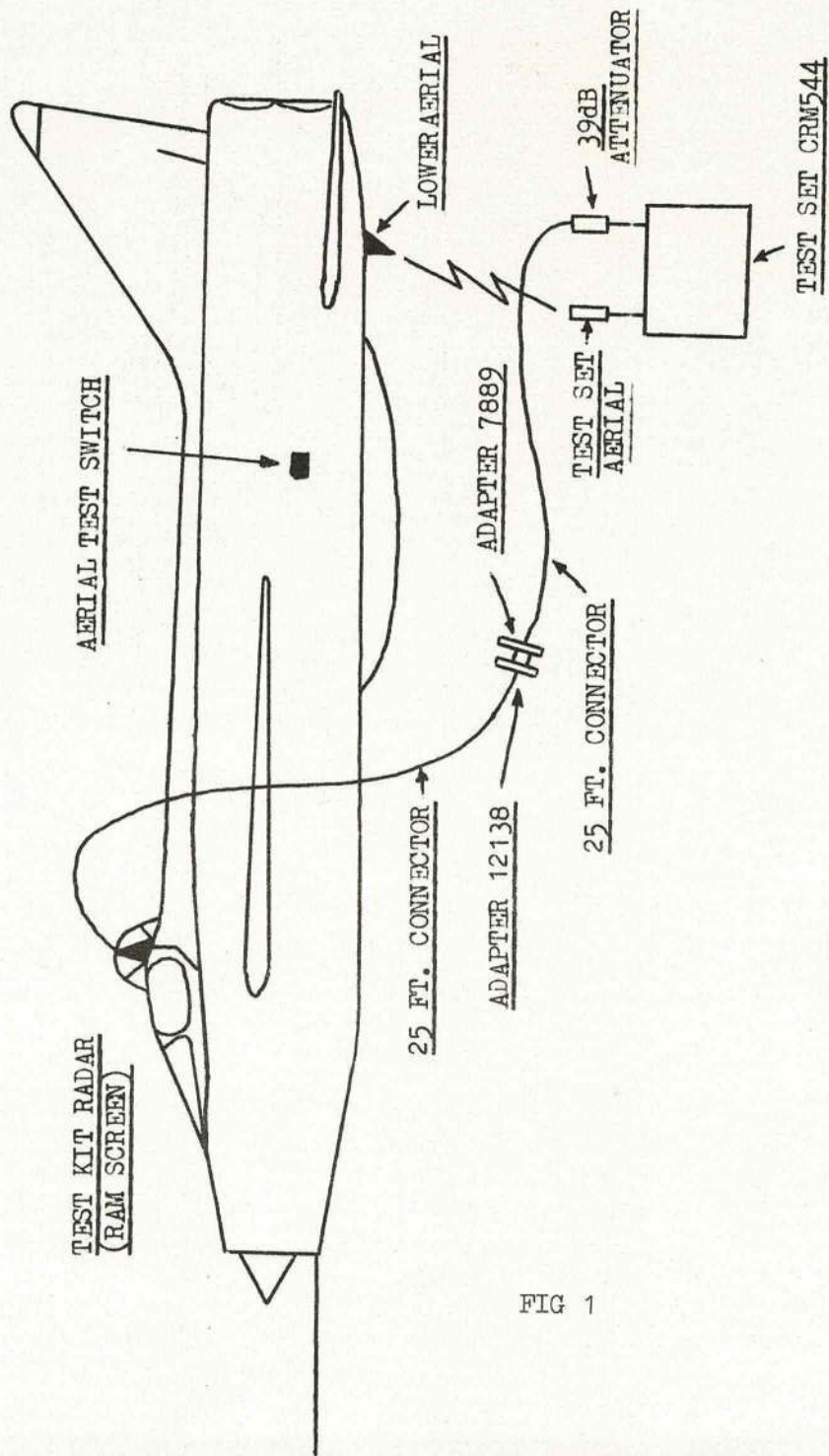


FIG 1

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