

CHAP	2	AIR COMMS	SERVICING PROCEDURES	AP101B-1000-5A3F				
GP NO	107	Contd	LIGHTNING	Section 2				
SHEET	2	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2933B				
				(1)	(2)	(3)	(4)	(5)
AIR COMMS								
1. <u>Preparation</u> (Contd)								
1.11 TS15077 (Contd)								
(b) Supply switch. Set to 'ON' and allow a 30 second warm up period.								
1.12 Cockpit dimmer control. Operate and ensure CU CU1607/4 panel lights function correctly.								
1.13 CU C1607/4.								
(a) Chan switch. Set to 'M'.								
(b) Manual selector. (i) Set to 243.1. (ii) Set to 243.0 and simultaneously start stop-watch. Check mechanical drive ceases within 6 seconds.								
1.14 I/C facility. Ensure available between Pilot's and TS headsets.								
1.15 CU C1607/4 Volume control. Set fully clockwise.								
1.16 Aerial change-over switch. Set to 'LOWER'.								
2. <u>UHF Main Receiver, Audio Output Auxiliary Output and Mute Checks</u>								
2.1 TS 15077.								
(a) Co-axial link. Connect between TS Rx and Sig Gen sockets.								
(b) Sig Gen Freq switch. Set to 'X' and ensure tone is heard in TS headset.								
(c) Meter switch. Set to '3' and check meter indication exceeds 'B', and ensure tone is heard in Pilot's headset. Note: If meter indication is low, momentarily disconnect Pilot's headset.								
2.2 TS Meter switch. Set to '10' and check meter indication is between '25' and '55'.								
SMS/79/				Continued				

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CHAP	2	AIR COMMS	SERVICING PROCEDURES		AP101B-1000-5A3F				
SP NO	107	(Contd)	LIGHTNING		Section 2				
SHEET	3	AL13			AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.					SERV RECORD - F. 2983B				
					(1)	(2)	(3)	(4)	(5)
<u>AIR COMMS</u>									
3. <u>Main Receiver Crystal Check</u>									
3.1 TS 15077 Meter Set to '5'. switch.									
3.2 TS Sig Gen Set to 'Z'. Freq s/w.									
3.3 CU C1607/4 main Set to 226.0 316.40 and selectors. 327.70 in turn and ensure tone is audible.									
3.4 TS Sig Gen Freq. Set to 'Y'.									
3.5 CU C1607/4 Set to 249.55, 271.25, manual 282.10, 292.96, 336.35, selector. 347.20, 358.05, 368.90 and 390.60 in turn and ensure tone is audible.									
3.6 TS Sig Gen Set to 'X'. Freq switch.									
3.7 CU C1607/4 Set to 230.85, 243.00, manual 255.15, 267.30, 279.45, selectors. 303.75, 364.50, 376.65 and 388.80 in turn and ensure tone is audible.									
4. <u>Main Receiver Sensitivity</u>									
4.1 CU C1607/4 Set to 225.0. manual selectors.									
4.2 TS 15077.									
(a) Co-axial Connect between Rx and link. Noise Gen sockets.									
(b) Meter Set to '4'. switch.									
(c) Noise Gen Set to 'MOD ON'. switch.									
(d) DC Cal. Adjust for meter controls. indication of 'C'.									
(e) Noise Gen Set to 'MOD OFF' and switch. check meter indication decreases to less than 'A'.									
SMS/79/21/51					Continued				

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CHAP	2	AIR COMMS	SERVICING PROCEDURES	AP101B-1000-5A F				
SP NO	107	Contd	LIGHTNING	Section 2				
SHEET	4	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2988B				
				(1)	(2)	(3)	(4)	(5)
AIR COMMS								
4. <u>Main Receiver Sensitivity (Contd)</u>								
4.3	CU C1607/4 manual selectors.	Set to 300.0 repeating Sub-item 4.2(c) to 4.2(e) inclusive.						
5. <u>Guard Receiver Audio Output and Crystal Checks</u>								
5.1	CU C1607/4 manual selectors.	Set to '300'.						
5.2	CU Function switch.	Set to 'TR/G'.						
5.3	TS 15077.							
	(a) Coax link.	Remove.						
	(b) Attenuator link.	Connect between TS. Rx and Sig gen sockets.						
	(c) Sig Gen freq switch.	Set to 'X' and ensure a tone is present in head set with meter switch to '2'.						
	(d) Meter switch.	Set to '3' and check meter indication exceeds 'A' and tone is heard in pilots headset.						
		NOTE: If meter indicates low, momentarily disconnect pilots headset.						
6. <u>Transmitter Power Output and Tone Checks</u>								
6.1	CU C1607/4 function switch.	Set to 'TR'.						
6.2	TS 15077.							
	(a) Attenuator link.	Remove.						
	(b) Coax-link.	Connect between TS TX and load sockets.						
	(c) Meter switch.	Set to '5'.						
SMS/79/ 51A				Continued				

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CHAP	2	AIR COMMS	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	107	Contd	LIGHTNING	Section 2				
SHEET	5	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR COMMS								
6. <u>Transmitter Power Output and Tone Checks (Contd)</u>								
6.3 CU 1607/4 Set to each pre set UHF channel switch. channel in turn.								
6.4 Pilots' Press-to-transmit switch. (i) Depress, and check meter indication exceeds 'B' for each pre-set channel. (ii) Release.								
6.5 Tone On/Off switch. (i) Set to 'ON' and ensure 1KHz note is heard. (ii) Set to off.								
7. <u>Modulation and Quality</u>								
7.1 Pilot's microphone. Switch off.								
7.2 CU C1607/4 manual selector. Set to 315.5 MHz								
NB. Items 7.3(a) and 7.8 are applicable only if TS 15077 is Pos Mod A3327.								
7.3 TS 15077.								
(a) Signal Gen/ Mic Sim output switch. Set to 5mV 300 ohms.								
(b) Meter switch. Set to '6'.								
(c) Talk switch. Depress to 'ON'.								
(d) DC Cal controls. Adjust for TS meter indication of 'D'.								
(e) Meter switch. Set to '7' and check meter indication exceeds 'B'.								
(f) Talk switch. Release.								
SMS/79/...				Continued				

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CHAP	2	AIR COMMS	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	107	Contd	LIGHTNING	Section 2				
SHEET	6	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			SERV RECORD - F. 2983B					
			(1)	(2)	(3)	(4)	(5)	
AIR COMMS								
7.	<u>Modulation and Quality (Contd)</u>							
7.3	TS 15077 (Contd)							
	(g)	Tone Mod switch.	Repeat Sub-items 7.3(a) to (e) inclusive reading Tone Mod switch for Talk switch throughout.					
	(h)	Meter switch.	Set to '9'.					
	(l)	DC Cal controls.	Set fully clockwise.					
7.4	Pilot's microphone.		Switch on.					
7.5	Pilot's Press-to- Transmit switch.		(i) Depress, speak into microphone and ensure sidetone in headset is clear.					
			(ii) Release.					
7.6	Pilot's microphone.		Switch off.					
7.7	CU C1607/4							
	(a)	Chan switch.	Set to 'M'.					
	(b)	Manual selectors.	Set to 235.0 and 395.0 in turn and repeat Sub-items 7.3(a) to (e) inclusive.					
7.8	TS 15077 Mic GEN/MIC SIM output switch.		Set to 'X'.					
8.	<u>Transmit Override Facility</u>							
8.1	CU C1607/4 Function switch.		Set to 'ADF'.					
8.2	TS Meter switch.		Set to '5'.					
8.3	Pilot's Press-to- Transmit switch.		(i) Depress and check TS meter indication exceeds 'B'.					
			(ii) Release.					
SMS/79/ 52A			Continued					

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CHAP	2	AIR COMMS	SERVICING PROCEDURES	AP101B-1000-5A3F				
OP NO	107	Contd	LIGHTNING	Section 2				
SHEET	7	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			SERV RECORD - F. 2933B					
			(1)	(2)	(3)	(4)	(5)	
AIR COMMS								
9. <u>UHF Aerial Reflection Coefficient</u>								
9.1 Connector Type 5995-99-9434145. Disconnect from TS Radio and RF unit Comms socket.								
9.2 Comms aerial connector. Connect to RF unit Comms Ae socket.								
9.3 T/R In connector. Disconnect from RF unit T/R In socket.								
9.4 Connector Type 5995-99-943-4145. Connect between TS Aerial and RF unit T/R In sockets using appropriate adaptor Type N/C.								
9.5 Connector Type 5995-99-0434144. Using appropriate adaptor Type N/C, connect between TS Radio socket and TR In connector.								
9.6 CU C1607/4 (a)Function switch. Set to 'T/R'. (b)Chan switch. Set to any little used channel.								
9.7 TS 15077. (a)Co-axial link. Connect between TS Tx socket and Aerial socket (small). (b)Meter switch. (i) Set to '2' and ensure channel is not in use. (ii) Set to '6'. (c)Talk switch. Depress to 'ON'. (d)DC Cal controls. Adjust for TS meter indication of 'D'. (e)Meter switch. Set to '8' and check meter indication is less than 'B'.								
SMS/79/219/53			Continued					

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CHAP	2	AIR COMMS	SERVICING PROCEDURES		AP101B-1000-5A3F				
OP NO	107	CONTINUED	LIGHTNING		Section 2				
SHEET	8	AL 13			(1st Edition)				
					AC NO DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.					SERVICING RECORD - RAF F. 2988B				
					(1)	(2)	(3)	(4)	(5)
AIR COMMS									
9.	<u>UHF Aerial Reflection Coefficient</u> (Contd)								
9.8	Lower aerial.		Screen momentarily and ensure TS meter indication fluctuates.						
9.9	TS Talk switch.		Release.						
9.10	Aerial change-over switch.		Set to 'UPPER' and repeat Sub-items 9.7 (b) to (e) inclusive and Sub-item 9.9.						
9.11	Comms aerial connector.		Disconnect from RF unit Comms Ae socket.						
9.12	Port aerial connector.	(i)	Disconnect from RF unit Port Ae socket.						
		(ii)	Connect to RF unit Comms Ae socket and repeat Sub-items 9.7 (b) to (e) inclusive and Sub-item 9.9.						
		(iii)	Disconnect from Comms Ae socket and reconnect to Port Ae socket.						
9.13	Starboard aerial connector.	(i)	Disconnect from RF unit Starboard Ae socket and connect to Comms Ae socket.						
		(ii)	Repeat Sub-items 9.7 (b) to (e) inclusive and Sub-item 9.9.						
		(iii)	Disconnect from Comms Ae socket and reconnect to Starboard Ae socket.						
9.14	Comms aerial connector.		Reconnect to Comms Ae socket.						
10.	<u>General</u>								
10.1	CU C1607/4 Function switch.		Set to 'OFF'.						
10.2	TS 15077.	(a)	Supply switch. Set to 'OFF'.						
		(b)	Headset. Disconnect.						
		(c)	TS. Disconnect from installation.						
10.3	T/R In connector.		Reconnect to T/R In socket.						
SMS/79/ 53A					Continued				

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CHAP	2	AIR COMMS	SERVICING PROCEDURES		AP101B-1000-5A3 F				
SP NO	107	CONTINUED	LIGHTNING		Section 2 (1st Edition)				
SHEET	9	AL 13			AC NO DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.					SERVICING RECORD - RAF F. 2988B				
					(1)	(2)	(3)	(4)	(5)
AIR COMMS									
11.	<u>Azimuth Checks</u>								
11.1	CU 1607/4.								
	(a) Function switch. Set to 'ADF'.								
	(b) Channel switch. Set to 'M'.								
	(c) Manual selector. Set to '344.0'.								
11.2	Inst master switch. Set to 'ON'.								
11.3	Test oscillator Type 9784.								
	(a) Selector switch. Set to 344 MHz.								
	(b) Test oscillator Position approx 10 yards to port bow of aircraft.								
	(c) Aerial. Extend.								
	(d) Button. Depress.								
11.4	Nav display unit.		Ensure azimuth lines are deflected to port and note is heard in headset.						
11.5	Test oscillator.		(i) Release button.						
			(ii) Position oscillator approx 10 yards to Starboard of aircraft bow.						
			(iii) Depress button.						
11.6	Nav display unit.		Ensure azimuth lines are deflected to starboard and note is heard in headset.						
11.7	Pilot's Press-to-Talk switch.		(i) Depress and check azimuth needle zero's and flag re-appears.						
			(ii) Release switch.						
11.8	Pilot's Press-to-Mute switch.		Depress and check azimuth lines zero.						
11.9	Meter sensitivity switch.		(i) Set to 'MIN'.						
			(ii) Ensure angle of indicator azimuth line deflection decrease.						
			(iii) Set to 'MAX'						
11.10	Nav display indicator.		Set to 'COMP'.						
11.11	Inst master switch.		Set to 'OFF'.						
12.	<u>VHF Facility</u>								
12.1	TR VHF aerial connector.		Disconnect from TR VHF aerial socket P1403.						
12.2	Connector Type 5995-99-9434142.		Connect between TR Test socket and Test socket on AF unit.						
SMS/79/2.2/54					Continued				

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CHAP	2	AIR COMMS	SERVICING PROCEDURES		AP101B-1000-5A3F				
SP NO	107	CONTINUED	LIGHTNING		Section 2 (1st Edition)				
SHEET	10	AL 13			AC NO DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.					SERVICING RECORD - RAF F. 2988B				
					(1)	(2)	(3)	(4)	(5)
AIR COMMS									
12.	<u>VHF Facility (Contd)</u>								
12.3	Connector Type 5995-99-9434144.		Connect between TS aerial socket and TR VHF aerial connector using adapter.						
12.4	Connector Type 5995-99-9434145		Connect between TS Radio socket and TR VHF socket using adapter.						
12.5	TR aerial connector.		Refit to TR UHF aerial socket.						
12.6	TS 15077.								
	(a) Supply switch.		Set to 'ON'.						
	(b) Co-axial link.		Connect between TS Rx and Sig Gen sockets.						
	(c) Sig Gen Freq switch.		Set to 'Y'.						
12.7	CU Manual selectors.		Set to 119.35 and ensure tone is heard in headset.						
12.8	TS Sig Gen Freq switch.		Set to 'Z'.						
12.9	CU C1607/4 Manual selectors.		Set to 124.3 and ensure tone is heard in headset.						
13.	<u>VHF Receiver Sensitivity and Squelch</u>								
13.1	TS 15077.								
	(a) Co-axial link.		Connect between TS Rx and Noise Gen sockets.						
	(b) Meter switch.		Set to '4'.						
13.2	CU Chan switch.		Set to each VHF pre-set channel in turn.						
13.3	TS 15077.								
	(a) Noise Gen switch		Hold to 'MOD ON' for each pre-set channel.						
	(b) DC Cal controls.		Adjust for meter indication of 'C'.						
	(c) Noise Gen switch.		Release and check meter indication is less than 'A'						
14.	<u>VHF Transmitter Power Output</u>								
14.1	TS 15077.								
	(a) Co-axial link.		Connect between TS Tx and Load sockets.						
	(b) Meter switch.		Set to '5'.						
14.2	CU Chan switch.		Set to each VHF pre-set channel in turn.						
14.3	TS High/Low switch.		Depress to 'LOW'.						

CHAP	2	AIR COMMS	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	107	Contd	LIGHTNING	Section 2				
SHEET	11	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2035B				
				(1)	(2)	(3)	(4)	(5)
AIR COMMS								
14. <u>VHF Transmitter Power Output (Contd)</u>								
14.4	Pilot's press-to-Transmit switch.	(i)	Depress and check meter indication exceeds '40' for each pre-set channel.					
		(ii)	Release.					
14.5	TS High/Low switch.		Release.					
15. <u>VHF Modulation Depth and Quality</u>								
15.1	Pilot's microphone.		Switch off.					
NB: Item 15.2a and 15.7 are applicable only if TS 15077 is Post Mod A3327.								
15.2	TS 15077.							
	(a) Sig Gen/ Mic Sim output switch.		Set to 5mV 300 ohms					
	(b) Meter switch.		Set to '6'.					
	(c) Talk switch.		Depress to 'ON' and adjust DC Cal controls for meter indication 'B'.					
	(d) Meter switch.		Set to '7' and check meter indication exceeds '25'.					
	(e) Tone Mod.		Repeat Sub-item 15.2(a) to (c) inclusive using tone mod switch instead of Talk switch.					
	(f) Meter switch.		Set to '9'.					
	(g) DC Cal controls.		Set fully clockwise.					
15.3	Pilot's microphone.		Switch on.					
15.4	Pilot's Press-to-Transmit switch.		Depress, speak into microphone and ensure sidetone in TS headset is clear.					
SMS/79/210/55				Continued				

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CHAP	2	AIR COMMS	SERVICING PROCEDURES	AP101B-1000-5A3F				
CP NO	107	Contd	LIGHTNING	Section 2 (1st Edition)				
SHEET	12	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2933B				
				(1)	(2)	(3)	(4)	(5)
<u>AIR COMMS</u>								
15.	<u>VHF Modulation Depth and Quality (Contd)</u>							
15.5	Pilot's microphone.	Switch off.						
15.6	CU C1607/4 (a) Chan switch. (b) Manual selectors.	Set to 'M'. Set to 118.95 and 135.95 in turn and repeat Sub-items 15.2(a) to (c) inclusive.						
15.7	TS 15077. Sig Gen/Mic output switch.	Set to 'Z'.						
16.	<u>U/VHF Aerial Reflection Coefficient</u>							
16.1	CU Chan switch.	Set to any little used channel.						
16.2	Aerial Change-over switch.	Set to 'UPPER'.						
16.3	TS 15077. (a) Co-axial link. (b) Meter switch. (c) Talk switch. (d) Meter switch.	Connect between TS Tx socket and Aerial socket (small). (i) Set to '2' and ensure channel is not in use. (ii) Set to '6'. Depress to 'ON' and adjust DC Cal controls for meter indication of 'B'. Set to '8' and check meter indication is less than '12'.						
17.	<u>General</u>							
17.1	TS Supply switch.	} Set to 'OFF'.						
17.2	CU Function switch.							
17.3	TS 15077.	Disconnect from installation.						
17.4	TR Aerial connector.	Reconnect to TR VHF Aerial socket.						
SMS/79 SSA				Continued				

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CHAP	2	AIR COMMS	SERVICING PROCEDURES		AP101B-1000-5A3F				
CHAP NO	107	Contd	LIGHTNING		Section 2 (1st Edition)				
SHEET	13	AL 13			AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.					SERV RECORD - F. 2983B				
					(1)	(2)	(3)	(4)	(5)
AIR COMMS									
17. <u>General</u> (Contd)									
17.5 Headsets. Disconnect.									
17.6 Aerial change- Set to 'LOWER'. over switch.									
17.7 External d.c. Switch off and supply. disconnect.									
SMS/79/56 STC									

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