

1. System consists of the following:

AFL Part Nō.	Description	Qty.	Section
50-030502	VHF DOWNLINK SPLITTER	1	5.1
50-030503	VHF 6CH COMBINER	2	5.2
50-030504	VHF UPLINK SPLITTER	1	5.3
50-030505	VHF DUPLEX CHANNEL MODULE	3	5.4
50-030506	VHF SIMPLEX CHANNEL MODULE	2	5.5
50-030507	UHF DOWNLINK SPLITTER	2	5.6
50-030508	UHF DOWNLINK COMBINER	2	5.7
50-030509	UHF DUPLEXER CBC	2	5.8
50-030510	UHF UPLINK COMBINER	2	5.9
50-030511	UHF UPLINK SPLITTER	2	5.10
50-030512	UHF DUPLEX CHANNEL MODULE	11	5.11
50-030513	PSU SYSTEM	1	5.12

1.1 VHF Downlink Splitter 50-030502 parts list

01-002503	FILTER VHF H/B 6SMAS100W	1
06-000501	4 WAY HYBRID RECEIVER UNIT BNC LEAD	1
12-002201	3 STAGE AMPLIFIER ALARM BOARD	3
12-004901	POWER AMP. VHF 1W 38dB GAIN	3
80-024701	LOAD TERMINATION,0.25W,N-TYPE	1
93-980069	154.010MHz CRYSTAL FILTER	1
93-980070	154.130MHz CRYSTAL FILTER	1
93-980071	154.220MHz CRYSTAL FILTER	1
93-980072	154.295MHz CRYSTAL FILTER	1
93-980073	154.385MHz CRYSTAL FILTER	1
96-110013	T 3.15 A ANTI SURGE FUSE 20mm	1

1.2 VHF 6 Channel Combiner 50-030503 parts list

01-002503	FILTER VHF H/B 6 SMA S 100W	1
05-000103	Tx HYBRID COUPLER 3 PORT NO HEATSINK	1
05-001405	3 CH.WILK.COM.VHF H/B	2

1.3 VHF Uplink Splitter Shelf 50-030504 parts list

AFL Part Nō.	Description	Qty.
01-002503	FILTER VHF H/B 6 SMA S 100W	1
06-000501	4 WAY HYBRID RECEIVER UNIT BNC LEAD	1
12-002201	3 STAGE AMPLIFIER ALARM BOARD	3
12-004901	POWER AMP. VHF 1W 38dB GAIN	3
80-024701	LOAD TERMINATION,0.25W,N-TYPE	1
93-980071	154.220MHz CRYSTAL FILTER	1
93-980073	154.385MHz CRYSTAL FILTER	1
93-980076	153.770MHz CRYSTAL FILTER	1
93-980077	153.950MHz CRYSTAL FILTER	1
93-980078	153.830MHz CRYSTAL FILTER	1
96-110006	T 1.25A A SURGE FUSE 20mm	1

1.4 VHF Duplex Channel Module 50-030505 parts list

08-930002	2 PORT ISOLATOR SMA	1
10-000701	1/4W0-30dB SWITCHED ATTENUATOR	2
11-001202	10/600MHz LNA 24v SMA Alarm	2
12-002201	3 STAGE AMPLIFIER ALARM BOARD	2
12-002801	SINGLE CHANNEL ALARM BOARD	1
12-004901	POWER AMP. VHF 1W 38dB GAIN	1
12-005301	VHF 60dB 10W CLASS AB AMPLIFIER	1
13-001803	DUAL DC/DC CONVTR 24V-12V 1A	1
17-003006	CHAN MOD, 160MHz, 30KHz B/W	2
20-001602	24V RELAY BOARD	1
96-110013	T 3.15 A ANTI SURGE FUSE 20mm	1

1.5 VHF Simplex Channel Module 50-030506 parts list

08-930002	2 PORT ISOLATOR SMA	1
10-000701	1/4W0-30dB SWITCHED ATTENUATOR	2
11-001202	10/600MHz LNA 24v SMA	2
12-002201	3 STAGE AMPLIFIER ALARM BOARD	2
12-002801	SINGLE CHANNEL ALARM BOARD	1
12-004901	POWER AMP. VHF 1W 38dB GAIN	1
12-005301	VHF 60dB 10W CLASS AB AMPLIFIER	1
13-001803	DUAL DC/DC CONVTR 24V-12V 1A	1
13-002811	SIMPLEX CONTROLLER PCB ASSEMBLY	1
17-001201	C/E AGC UNIT ATTENUATOR ASSEMBLY	1
17-002802	SIMPLEX C.E Rx/SQUELCH & AF (SMD)	2
17-003006	CHAN MOD, 160MHz, 30kHz B/W	2
20-001602	24V RELAY BOARD	1
96-110013	T 3.15 A ANTI SURGE FUSE 20mm	1

1.6 UHF Downlink Splitter 50-030507 parts list

AFL Part Nõ.	Description	Qty.
02-010201	6P C/L SDF 400MHz SMA	1
06-000601	8 WAY HYBRID RECEIVER UNIT	1
11-001202	10/600MHz LNA 24v SMA	1
12-002801	SINGLE CHANNEL ALARM BOARD	1
80-024701	LOAD TERMINATION,0.25W,N-TYPE	3
96-110006	T 1.25A A.SURGE FUSE 20mm	1

1.7 UHF Downlink Combiner 50-030508 parts list

05-000103	TX HYBRID COUPLER 3 PORT NO HEATSINK	1
05-001406	3 CH. WILK. COMBINER LOW PWR UHF	2
09-001201	5W HEATSINK DUMMY LOAD ASSEMBLY	1

1.8 UHF Duplexer Cross-Band Coupler 50-030509 parts list

02-010201	6P C/L SDF 400MHz SMA	2
07-005705	CROSSBAND CPLR XC 250/380 SMA	1

1.9 UHF Uplink Combiner 50-030510 parts list

02-010201	6P C/L SDF 400MHz SMA	1
05-000103	TX HYBRID COUPLER 3 PORT NO HEATSINK	1
05-001406	3 CH.WILK.COMBINER LOW PWR. UHF	2
09-001201	5W HEATSINK DUMMY LOAD ASSEMBLY	1

1.10 UHF Uplink Splitter 50-030511 parts list

AFL Part Nō.	Description	Qty
06-000601	8 WAY HYBRID RECEIVER UNIT BNC LEAD	1
12-002201	3 STAGE AMPLIFIER ALARM BOARD	1
12-002408	450MHz 0.5W 34dB LPA, 24V	1
80-024701	LOAD TERMINATION,0.25W,N-TYPE	3
96-110006	T 1.25A A.SURGE FUSE 20mm	1

1.11 UHF Duplex Channel Module 50-030512 parts list

08-930003	2 PORT ISOLATOR SMA	1
10-000701	1/4W 0-30dB SWITCHED ATTENUATOR	2
11-001202	10/600MHz LNA 24v SMA	4
11-003905	TETRA LNA 30dB GAIN	1
12-001806	400MHz 10W CLASS AB POWER AMPLIFIER	1
12-002201	3 STAGE AMPLIFIER ALARM BOARD	2
12-002401	450MHz 1w LPA 24v	1
12-002801	SINGLE CHANNEL ALARM BOARD	4
12-004901	POWER AMP. VHF 1W 38dB GAIN	1
13-001803	DUAL DC/DC CONVTR 24V-12V 1A	1
17-003007	CHAN MOD 450MHz, 30kHz B/W	2
20-001601	12V RELAY BOARD	1
20-001602	24V RELAY BOARD	1
96-110013	T 3.15 A ANTI SURGE FUSE 20mm	1

1.12 Power Supply System 50-030513 parts list

13-002104	PSU ALARM BOARD (3 INPUT 24V)	1
20-001602	24V RELAY BOARD	2
94-100004	STPS12045TV 60A DUAL DIODE	2
96-300013	24 V 600 W FLATPACK PWR SUPPLY	3
96-900024	70A SPNO 12V DC RELAY (Omron G8JE)	1

USED ON		CIRC. REF.	AFL STOCK REF.		DESCRIPTION							
		C1	93-100049		10nF 100V CERAMIC CAP							
		C2	93-140001		1uF 35V TANTALUM CAP							
		C3	93-200010		10pF CERAMIC CAP 10%							
		C4	93-200007		100pF CERAMIC CAP 10%							
		C5	93-140003		3.3uF 35V TANTALUM CAP							
		C6	93-200007		100pF CERAMIC CAP 10%							
		C7	93-200007		100pF CERAMIC CAP 10%							
		C8	93-100049		10nF 100V CERAMIC CAP							
		C9	93-100049		10nF 100V CERAMIC CAP							
		C10	93-200016		1nF CERAMIC CAP 10%							
		C11	93-200016		1nF CERAMIC CAP 10%							
		C12	93-200016		1nF CERAMIC CAP 10%							
		C13	93-100049		10nF 100V CERAMIC CAP							
		L1	93-910001		FX4008 MULLARD FERRITE CORE + 3 TURNS 90-500011 (See 11-001202)							
		L2	93-910001		FX4008 MULLARD FERRITE CORE + 3 TURNS 90-500011 (See 11-001202)							
		L3	93-910001		FX4008 MULLARD FERRITE CORE + 3 TURNS 90-500011 (See 11-001202)							
		L4	90-500007		20 SWG TINNED COPPER WIRE 1/2 TURN (See 11-001202)							
		L5	90-500007		20 SWG TINNED COPPER WIRE 3 1/2 TURNS (See 11-001202)							
		L6	90-500007		20 SWG TINNED COPPER WIRE 3 1/2 TURNS (See 11-001202)							
		L7	93-910001		FX4008 MULLARD FERRITE CORE + 3 TURNS 90-500011 (See 11-001202)							
		R1	93-540017		68R 0.25W 1% RES MRS							
		R2	93-540008		15R 0.25W 1% RES MRS							
		R3	93-540014		47R 0.25W 1% RES MRS							
		R4	93-630035		820R 0.125W 2% RESISTOR							
		R5	93-540025		270R 0.25W 1% RESIS							
		R6	93-630029		270R 0.125W 2% RESIS							
3	21/1/93	CR0411	6A	14/4/00	CR1679							
2	5/4/91	CR0268	5	23/5/94	CR0521							
1	28/9/90	Prod. Iss.	4	16/8/93	CR0502							
ISSUE	DATE	CHANGE No	ISSUE	DATE	CHANGE No	ISSUE	DATE	CHANGE No	ISSUE	DATE	CHANGE No	
 Aerial Facilities Limited					TITLE							
					VHF/UHF LOW NOISE AMPLIFIER (12V VERSION)							
					CIRCUIT DIAGRAM							
DRAWN	DATE	CHKD	APPD	CUSTOMER				COMPONENT LIST FOR			ISS	
MRB	28/09/90							11-001270C1			6A	

USED ON		CIRC. REF.	AFL STOCK REF.		DESCRIPTION							
11-1202		R7	93-630037		1KR 0.125W 2% RESISTOR							
		R8	93-630012		18R 0.125W 2% RESISTOR							
		R9	93-630012		18R 0.125W 2% RESISTOR							
		R10	93-630012		18R 0.125W 2% RESISTOR							
		R11	93-630012		18R 0.125W 2% RESISTOR							
		R12	93-630037		1KR 0.125W 2% RESISTOR							
		R13	93-630007		6.8R 0.125W 5% RESISTOR							
		R14	93-630042		2.2KR 0.125W 2% RESISTOR							