

6.3.5 R/T ASSEMBLY (A7) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
	RT-138 ANT CVR PLT	146-0681-001	01	54001	
	RT-138 TRANSISTOR HEAT BAR	146-0682-001	01	54001	
	MOD STATUS TAG	156-0100-000	01	54001	
	SCREW, 2-56 X 3/16 FHP	188-0101-006	18	54001	
	SCREW, 4-40 X 7/16 PHP	188-0200-014	05	54001	
	SCREW, 4-40 X 11/16 PHP	188-0200-022	02	54001	
	SCREW, 4-40 X 5/16 FHP	188-0201-010	02	54001	
	SCREW, 4-40 X 7/16 FHP	188-0201-014	04	54001	
	SCREW, 4-40 X 1/4 SEMS	188-0208-008	08	54001	
	NUT, 8-32 X 11/32	188-2350-000	01	54001	
	WASHER, SPLITLOCK NO.4	188-4200-000	05	54001	
	WASHER, SPLITLOCK NO.8	188-4350-000	01	54001	
	WASHER, COPPER, NO.8	188-4353-000	01	54001	
	M/F HEX SPCR, 0.765L	191-2029-002	03	54001	

CHANGES TO THE STANDARD R/T MODULE (300-2239-000) PARTS LISTING
 FOR THE HIGH SENSITIVITY R/T MODULE (300-2239-001) PARTS LISTING.

DELETE:

J1	JACK, SMB, BULKHD MTG	129-0028-000	01
PS1	RF PWR SPLITTER	118-2009-000	01
	NO.4 GROUND LUG, LONG SHANK	109-0008-000	02

DECREASE QTY:

INSULATOR, XTAL CAN RELAY	111-0026-000	01
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INCREASE QTY:

WASHER, SPLITLOCK NO.4	188-4200-000	02
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6.3.6 GUARD RECEIVER (A8)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
A8	GUARD RCVR REV.D	300-2241-000	01	54001	
C1	CAP, ADJ 10-40PF	201-0003-000	04	52763	10-ST-22 10/40 N75C
C2	CAP, ADJ 10-40PF	201-0003-000	04	52763	10-ST-22 10/40 N75C
C3	CAP, DIP-MICA 56PF	199-5601-013	02	14655	CM04ED560J03
C4	CAP, MONO-CER 470PF X7R	209-2471-112	04	31433	C320C471M2R5CA
C5	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C6	CAP, MONO-CER 220PF COG	209-2221-100	07	31433	C312C221J1G5CA
C7	CAP, DIP-MICA 56PF	199-5601-013	02	14655	CM04ED560J03
C8	CAP, ADJ 10-40PF	201-0003-000	04	52763	10-ST-22 10/40 N75C
C9	CAP, ADJ 10-40PF	201-0003-000	04	52763	10-ST-22 10/40 N75C
C10	CAP, DIP-MICA 30PF	199-3001-013	01	14655	CM04ED300J03
C11	CAP, ADJ 4.5-15PF	201-0013-000	07	74970	274-1015-005
C12	CAP, DIP-MICA 10PF	199-1001-013	04	14655	CM04CD100D03
C13	CAP, DIP-MICA 18PF	199-1801-013	02	14655	CM04CD180J03
C14	CAP, DISC-CER 0.01UF	208-0011-000	07	71590	UK50-103
C15	CAP, ADJ 4.5-15PF	208-0013-000	07	74970	274-1015-005
C16	CAP, DISC-CER 1000PF	208-0007-000	02	91418	JE-.001-10%-Y5E
C17	CAP, MONO-CER 1000PF X7R	209-2102-011	03	31433	C312C102K1R5CA
C18	CAP, DISC-CER 0.01UF	208-0011-000	07	71590	UK50-103
C19	CAP, ADJ 4.5-15PF	201-0013-000	07	74970	274-1015-005
C20	CAP, DIP-MICA 33PF	199-3301-013	01	14655	CM04ED330J03
C21	CAP, ADJ 4.5-15PF	201-0013-000	07	74970	274-1015-005
C22	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C23	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C24	CAP, MONO-CER 0.01UF X7R	209-2103-011	03	31433	C320C103K2R5CA
C25	CAP, MONO-CER 100PF COG	209-2101-100	01	31433	C320C101J2G5CA
C26	CAP, MONO-CER 0.01UF X7R	209-2103-011	03	31433	C320C103K2R5CA

6.3.6 GUARD RECEIVER (A8) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
C27	CAP, MONO-CER 47PF COG	209-2470-100	02	31433	C320C470J2G5CA
C28	CAP, MONO-CER 150PF X7R	209-2151-111	01	31433	C320C151K1G5CA
C29	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C30	CAP, TANT 1.0UF 35V	195-0107-035	03	31433	T110A105M035AS
C31 THROUGH C37					
	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C38	CAP, MONO-CER 470PF X7R	209-2471-112	04	31433	C320C471M2R5CA
C39	CAP, TANT 1.0UF 35V	195-0107-035	03	31433	T110A105M035AS
C40	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C41	CAP, DISC-CER 1000PF	208-0007-000	02	91418	JE-.001-10%-Y5E
C42	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C43	CAP, DIP-MICA 100PF	199-1011-013	01	14655	CM04FD101J03
C44	CAP, DIP-MICA 150PF	199-1512-013	01	14655	CM05FD151J03
C45	CAP, DISC-CER 0.01UF	208-0011-000	07	71590	UK50-103
C46	CAP, DISC-CER 220PF	208-0005-000	02	22701	TYPE S (220PF)
C47	CAP, MONO-CER 220PF COG	209-2221-100	07	31433	C312C221J1G5CA
C48	CAP, DISC-CER 220PF	208-0005-000	02	22701	TYPE S (220PF)
C49	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C50	CAP, MONO-CER 220PF COG	209-2221-100	07	31433	C312C221J1G5CA
C51	CAP, DIP-MICA 10PF	199-1001-013	04	14655	CM04CD100D03
C52	CAP, ADJ 4.5-15PF	201-0013-000	07	74970	274-1015-005
C53	CAP, ADJ 4.5-15PF	201-0013-000	07	74970	274-1015-005
C54	CAP, DIP-MICA 10PF	199-1001-013	04	14655	CM04CD100D03
C55	CAP, MONO-CER 1000PF X7R	209-2102-011	03	31433	C312C102K1R5CA
C56	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C57	CAP, MONO-CER 0.056UF X7R	209-2563-011	16	31433	C320C563K5R5CA
C58 THROUGH C60					
	CAP, MONO-CER 220PF COG	209-2221-100	07	31433	C312C221J1G5CA

6.3.6 GUARD RECEIVER (A8) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
C61	CAP, DIP-MICA 10PF	199-1001-013	04	14655	CM04CD100D03
C62	CAP, ADJ 4.5-15PF	201-0013-000	07	74970	274-1015-005
C63	CAP, MONO-CER 220PF COG	209-2222-004	01	31433	C320C222G1G5CA
C64	CAP, MONO-CER 0.01UF X7R	209-6104-011	02	31433	C330C104K1R5CA
C65	CAP, TANT 3.3UF 15V	195-0337-023	02	31433	T110A335K015AS
C66	CAP, MONO-CER 330PF COG	209-2331-100	01	31433	C320C331J2G5CA
C67	CAP, POLYCARB 0.01UF	205-0001-000	01	14752	650B1C103J
C68	CAP, MONO-CER 1000PF X7R	209-2102-011	03	31433	C312C102K1R5CA
C69 THROUGH C71					
	CAP, DIP-MICA 510PF	199-5112-013	03	14655	CD15FD511J03
C72	CAP, DISC-CER 0.01UF	208-0011-000	07	71590	UK50-103
C73	CAP, TANT 3.3UF 15V	195-0337-023	02	31433	T110A335K015AS
C74	CAP, MONO-CER 0.01UF X7R	209-2103-011	03	31433	C320C103K2R5CA
C75	CAP, DISC-CER 0.01UF	208-0011-000	07	71590	UK50-103
C76	CAP, MONO-CER 0.22UF X7R	209-6224-011	01	31433	C330C224K5R5CA
C77	CAP, TANT 1.0UF 35V	195-0107-035	03	31433	T110A105M035AS
C78	CAP, MONO-CER 0.1UF X7R	209-6104-011	02	31433	C330C104K1R5CA
C79	CAP, MONO-CER 470PF X7R	209-2471-112	04	31433	C320C471M2R5CA
C80	CAP, TANT 15UF 20V 10%	195-0156-034	01	31433	T110B156M020AS
C81	CAP, MONO-CER 470PF X7R	209-2471-112	04	31433	C320C471M2R5CA
C82	CAP, TANT 4.7UF 50V	195-0477-026	01	31433	T110B475K050AS
C83	CAP, DISC-CER 470PF	208-0006-000	01	71590	CE-471
C84	CAP, TANT 4.7UF 10V	195-0477-032	01	31433	T110A475M010AS
C85	CAP, MONO-CER 220PF COG	209-2221-100	07	31433	C312C221J1G5CA
C86	CAP, DISC-CER 0.01UF	208-0011-000	07	71590	UK50-103
C87	CAP, DIP-MICA 18PF	199-1801-013	02	14655	CM04CD180J03
C88	NOT USED				
C89	CAP, DIP-MICA 5PF	199-0501-013	01	14655	CM04CD050D03

6.3.6 GUARD RECEIVER (A8) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
C90	CAP, DISC-CER 0.01UF	208-0011-000	07	71590	UK50-103
C91	CAP, MONO-CER 12PF COG	209-2120-100	01	31433	C320C120J2G5CA
C92	CAP, MONO-CER 47PF COG	209-2470-100	02	31433	C320C470J2G5CA
C93	CAP, MONO-CER 10PF COG	208-0037-000	01	31433	C312C100J2G5CA
CR1	HOT CARRIER DIODE	106-5002-000	04	50434	HP5082-2800
CR2	HOT CARRIER DIODE	106-5002-000	04	50434	HP5082-2800
CR3	NOT USED				
CR4 THROUGH CR6					
	1N914	106-5007-000	05	07263	1N914
CR7	HOT CARRIER DIODE	106-5002-000	04	50434	HP5082-2800
CR8	HOT CARRIER DIODE	106-5002-000	04	50434	HP5082-2800
CR9	1N914	106-5007-000	05	07263	1N914
CR10	1N914	106-5007-000	05	07263	1N914
FL1	FILTER, 16.9 MHz, 4-POLE	139-2025-000	02	56187	03940-001
FL2	FILTER, 16.9 MHz, 4-POLE	139-2025-000	02	56187	03940-001
FL3	FILTER, 455 kHz	139-2007-000	01	51406	CFM-455C
FL4	455 kHz CER DISCRIMINATOR	139-2023-000	01	51406	SFD-455S
HR1	CRYSTAL OVEN, TO-5, 15/28V	189-0058-000	01	12020	T05P-24-80
J11	JACK, SMB, BULKHD MTG	129-0028-000	01	16733	700 163
L1	2T AIR COIL, CW	118-1080-000	04	54001	
L2	1.2UH CHOKE	118-1041-000	02	24226	10/121
L3	2T AIR COIL, CW	118-1080-000	04	54001	
L4	0.33UH CHOKE	118-1048-000	01	24226	10/330
L5	2T AIR COIL, CW	118-1080-000	04	54001	
L6	1.2UH CHOKE	118-1041-000	02	24226	10/121
L7	2T AIR COIL, CW	118-1080-000	04	54001	
L8	2.2UH SHIELDED CHOKE	118-1105-000	01	99800	0925-222
L9	3.3UH SHIELDED CHOKE	118-1102-000	02	99800	0925-332
L10	3.3UH SHIELDED CHOKE	118-1102-000	02	99800	0925-332

6.3.6 GUARD RECEIVER (A8) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
L11	3.9UH SHIELDED CHOKE	118-1114-000	01	99800	0925-392
L12	0.15UH CHOKE	118-1031-000	02	24226	10/150
L13	10UH SHIELDED CHOKE	118-1068-000	01	99800	0925-103
L14	0.22UH CHOKE	118-1007-000	02	24226	15/220
L15	1.0UH CHOKE	118-1003-000	01	24226	10/101
L16	RED MOLDED VAR COIL	118-7003-001	02	54001	
L17	0.15UH CHOKE	118-1031-000	02	24226	10/150
L18	RED MOLDED VAR COIL	118-7003-001	02	54001	
L19	NOT USED				
L20	0.22UH CHOKE	118-1007-000	02	24226	15/220
L21	4.7UH CHOKE	118-1061-000	01	24226	10/471
MX1	BALANCED MIXER	118-2001-000	01	15542	SRA-1
Q1	BFR-91 LOW NOISE, RF AMP	106-0053-000	01	04713	BFR-91
Q2	3N203 RF MOSFET	106-0027-000	01	01295	3N203
Q3	2N5245 FET	106-0004-000	01	01295	2N5245
Q4	2N3904 NPN	106-0041-000	01	04713	2N3904
Q5 THROUGH Q7					
	2N5179 NPN RF	106-0005-000	03	04713	2N5179
R1	RESISTOR, 4.7K OHM 1/4W	230-0474-022	03	01121	RCR07G472KS
R2	RESISTOR, 560 OHM 1/4W	230-0563-022	02	01121	RCR07G561KS
R3	RESISTOR, 56 OHM 1/4W	230-0562-022	03	01121	RCR07G560KS
R4	RESISTOR, 680 OHM 1/4W	230-0683-022	02	01121	RCR07G681KS
R5	NOT USED				
R6	RESISTOR, 100K OHM 1/4W	230-0106-022	01	01121	RCR07G104KS
R7	RESISTOR, 47K OHM 1/4W	230-0475-022	03	01121	RCR07G473KS
R8	RESISTOR, 22K OHM 1/4W	230-0225-022	02	01121	RCR07G223KS
R9	RESISTOR, 100 OHM 1/4W	230-0103-022	05	01121	RCR07G101KS
R10	RESISTOR, 390 OHM 1/4W	230-0393-022	02	01121	RCR07G391KS

6.3.6 GUARD RECEIVER (A8) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
R11	RESISTOR, 4.7K OHM 1/4W	230-0474-022	03	01121	RCR07G472KS
R12	RESISTOR, 220 OHM 1/4W	230-0223-022	03	01121	RCR07G221KS
R13	RESISTOR, 100 OHM 1/4W	230-0103-022	05	01121	RCR07G101KS
R14	RESISTOR, 1.5K OHM 1/4W	230-0154-022	01	01121	RCR07G152KS
R15	RESISTOR, 390 OHM 1/4W	230-0393-022	02	01121	RCR07G391KS
R16	RESISTOR, 10K OHM 1/4W	230-0105-022	04	01121	RCR07G103KS
R17	RESISTOR, 27 OHM 1/4W	230-0272-022	02	01121	RCR07G270KS
R18	RESISTOR, 47 OHM 1/4W	230-0472-022	02	01121	RCR07G470KS
R19	RESISTOR, 820 OHM 1/4W	230-0823-022	05	01121	RCR07G821KS
R20	RESISTOR, 820 OHM 1/4W	230-0823-022	05	01121	RCR07G821KS
R21	RESISTOR, 18K OHM 1/4W	230-0185-022	02	01121	RCR07G183KS
R22	RESISTOR, 1.8K OHM 1/4W	230-0184-022	01	01121	RCR07G182KS
R23	RESISTOR, 470 OHM 1/4W	230-0473-022	04	01121	RCR07G471KS
R24	RESISTOR, 100 OHM 1/4W	230-0103-022	05	01121	RCR07G101KS
R25	RESISTOR, 220 OHM 1/4W	230-0223-022	03	01121	RCR07G221KS
R26	RESISTOR, 47 OHM 1/4W	230-0472-022	02	01121	RCR07G470KS
R27	RESISTOR, 820 OHM 1/4W	230-0823-022	05	01121	RCR07G821KS
R28	RESISTOR, 5.6K OHM 1/4W	230-0564-022	04	01121	RCR07G562KS
R29	RESISTOR, 5.6K OHM 1/4W	230-0564-022	04	01121	RCR07G562KS
R30	RESISTOR, 6.8K OHM 1/4W	230-0684-022	02	01121	RCR07G682KS
R31	RESISTOR, 10K OHM 1/4W	230-0105-022	04	01121	RCR07G103KS
R32	RESISTOR, 470 OHM 1/4W	230-0473-022	04	01121	RCR07G471KS
R33	RESISTOR, 560 OHM 1/4W	230-0563-022	03	01121	RCR07G561KS
R34	RESISTOR, 220 OHM 1/4W	230-0223-022	03	01121	RCR07G221KS
R35	RESISTOR, 18K OHM 1/4W	230-0185-022	02	01121	RCR07G183KS
R36	RESISTOR, 470 OHM 1/4W	230-0473-022	04	01121	RCR07G471KS
R37	RESISTOR, 150 OHM 1/4W	230-0153-022	02	01121	RCR07G151KS
R38	RESISTOR, 100 OHM 1/4W	230-0103-022	05	01121	RCR07G101KS

6.3.6 GUARD RECEIVER (A8) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
R39	RESISTOR, 1K OHM 1/4W	230-0104-022	03	01121	RCR07G102KS
R40	RESISTOR, 10K OHM 1/4W	230-0105-022	04	01121	RCR07G103KS
R41	RESISTOR, 2.2K OHM 1/4W	230-0224-022	04	01121	RCR07G222KS
R42	RESISTOR, 150 OHM 1/4W	230-0153-022	02	01121	RCR07G151KS
R43	RESISTOR, 100 OHM 1/4W	230-0103-022	05	01121	RCR07G101KS
R44	RESISTOR, 1K OHM 1/4W	230-0104-022	03	01121	RCR07G102KS
R45	RESISTOR, 5.6K OHM 1/4W	230-0564-022	04	01121	RCR07G562KS
R46	RESISTOR, 47K OHM 1/4W	230-0475-022	03	01121	RCR07G473KS
R47	RESISTOR, 1.30K OHM 1%	231-1304-021	01	91637	RN55D1301F
R48	RESISTOR, 22.1K OHM 1%	231-2215-021	03	91637	RN55D2212F
R49	RESISTOR, 2.2K OHM 1/4W	230-0224-022	04	01121	RCR07G222KS
R50	RESISTOR, 2.7K OHM 1/4W	230-0274-022	01	01121	RCR07G272KS
R51	RESISTOR, 2.55K OHM 1%	231-2554-021	01	91637	RN55D2551F
R52	RESISTOR, 4.99K OHM 1%	231-4994-021	01	91637	RN55D4991F
R53	RESISTOR, 3.32K OHM 1%	231-3324-021	01	91637	RN55D3321F
R54	RESISTOR, 8.2K OHM 1/4W	230-0824-022	01	01121	RCR07G822KS
R55	RESISTOR, 23.2K OHM 1%	231-2325-021	01	91637	RN55D2322F
R56	RESISTOR, 73.2K OHM 1%	231-7325-021	01	91637	RN55D7322F
R57	RESISTOR, 47.8K OHM 1%	231-4785-021	01	91637	RN55D4782F
R58	RESISTOR, 147K OHM 1%	231-1476-021	02	91637	RN55D1473F
R59	RESISTOR, 147K OHM 1%	231-1476-021	02	91637	RN55D1473F
R60	RESISTOR, 4.75K OHM 1%	231-4754-021	02	91637	RN55D4751F
R61	RESISTOR, ADJ 50K OHM	233-0010-000	01	32997	3006P-1-503
R62	RESISTOR, 4.75K OHM 1%	231-4754-021	02	32997	RN55D4751F
R63	RESISTOR, 22K OHM 1/4W	230-0225-022	02	01121	RCR07G223KS
R64	RESISTOR, 22.1K OHM 1%	231-2215-021	03	91637	RN55D2212F
R65	RESISTOR, 4.7K OHM 1/4W	230-0474-022	03	01121	RCR07G472KS

6.3.6 GUARD RECEIVER (A8) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
R66	RESISTOR, 6.8K OHM 1/4W	230-0684-022	02	01121	RCR07G682KS
R67	RESISTOR, 56.2K OHM 1%	231-5625-021	01	91637	RN55D5622F
R68	RESISTOR, 33.2K OHM 1%	231-3325-021	01	91637	RN55D3322F
R69	RESISTOR, 150K OHM 1%	231-1506-021	02	91637	RN55D1503F
R70	RESISTOR, 330K OHM 1/4W	230-0336-022	01	01121	RCR07G334KS
R71	RESISTOR, 499K OHM 1%	231-4996-021	01	91637	RN55D4993F
R72	RESISTOR, 470 OHM 1/4W	230-0473-022	04	01121	RCR07G471KS
R73	RESISTOR, 5.90K OHM 1%	231-5904-021	01	91637	RN55D5901F
R74	RESISTOR, 3.92K OHM 1%	231-3924-021	01	91637	RN55D3921F
R75	RESISTOR, 22.1K OHM 1%	231-2215-021	03	91637	RN55D2212F
R76	RESISTOR, 150K OHM 1%	231-1506-021	02	91637	RN55D1503F
R77	RESISTOR, 47K OHM 1/4W	230-0475-022	03	01121	RCR07G473KS
R78	RESISTOR, 10K OHM 1/4W	230-0105-022	04	01121	RCR07G103KS
R79	RESISTOR, 5.6K OHM 1/4W	230-0564-022	04	01121	RCR07G562KS
R80	RESISTOR, 1.50K OHM 1%	231-1504-021	01	91637	RN55D1501F
R81	RESISTOR, 226 OHM 1%	231-2263-021	01	91637	RN55D2260F
R82	RESISTOR, ADJ 2K OHM	233-0015-008	01	32997	3329H-1-202
R83	RESISTOR, 820 OHM 1/4W	230-0823-022	05	01121	RCR07G821KS
R84	RESISTOR, 56 OHM 1/4W	230-0562-022	03	01121	RCR07G560KS
R85	RESISTOR, 1K OHM 1/4W	230-0104-022	03	01121	RCR07G102KS
R86	RESISTOR, 2.2K OHM 1/4W	230-0224-022	04	01121	RCR07G222KS
R87	RESISTOR, 680 OHM 1/4W	230-0683-022	02	01121	RCR07G681KS
R88	RESISTOR, 820 OHM 1/4W	230-0823-022	05	01121	RCR07G821KS
R89	RESISTOR, 56 OHM 1/4W	230-0562-022	03	01121	RCR07G560KS
R90	RESISTOR, 27 OHM 1/4W	230-0272-022	02	01121	RCR07G270KS
R91	RESISTOR, 2.2K OHM 1/4W	230-0224-022	04	01121	RCR07G222KS
T1	5T RF BALUN, T-30-12	118-2012-000	01	54001	
TP1 THROUGH TP4	JACK, 2-PIN, PC MTG	129-2059-002	04	54001	

6.3.6 GUARD RECEIVER (A8) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
U1	2111 LIN FM-IF AMP	106-7007-000	02	27014	LM2111N
U2	2111 LIN FM-FM AMP	106-7007-000	02	27014	LM2111N
U3	1458 LIN DUAL OPAMP	106-7006-000	02	04713	MC1458CPI
U4	1458 LIN DUAL OPAMP	106-7006-000	02	04713	MC1458CPI
U5	358 LIN DUAL OPAMP	106-7044-000	01	27014	LM358N
U6	78L08 LIN 8V REG	106-7043-000	01	27014	LM78L08ACZ
VR1	1N758A 10V ZENER	106-4002-000	01	04713	1N758A
Y1	XTAL, RT-9600, 17.355 MHz	139-0014-000	01	54001	
Y2	XTAL, RT-138 GD CHNL	139-1013-000	01	54001	
	RT-138 GD-RCVR PC BD	108-6140-000	01	54001	
	EYELET, 0.048 X 0.095	109-0024-000	09	98291	229-3036-59
	TRANSISTOR INSULATOR	111-0023-000	02	13103	7717-15N
	TRANSISTOR INSULATOR	111-0024-000	04	13103	43-18-1
	RT-30 GD MODULE CHASSIS	146-0511-002	01	54001	
	RT-138 GD RCVR FENCE	146-0639-002	01	54001	
	RT-138 GD MODULE COVER	146-0640-001	01	54001	
	RT-138 L.O. FENCE	146-0676-002	01	54001	
	RT-138 L.O. BOTTOM COVER	146-0677-001	01	54001	
	SCREW, 2-56 X 3/16 FHP	188-0101-006	12	54001	
	SCREW, 4-40 X 1/4 SEMS	188-0208-008	04	54001	
	SPACER, M/F 3/16 X 0.765	191-2029-002	04	54001	



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6.3.7 SYNTHESIZER ASSEMBLY (A9)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
A9	SYNTH ASSY REV.A	300-2242-000	01	54001	
	INSULATOR, ADHESIVE BACK	111-0022-000	01	54001	
	VCO/MODULATOR COVER	146-0519-001	01	54001	
	SYNTH LOGIC COVER	146-0520-001	01	54001	
	SYNTH MODULE COVER	146-0521-003	01	54001	
	RT-138 SYNTH ASSY DECAL	156-0261-000	01	54001	
	SCREW, 2-56 X 1/4 PHP	188-0100-008	05	54001	
	SCREW, 2-56 X 3/16 FHP	188-0101-006	14	54001	
	WASHER, SPLITLOCK NO.2	188-4100-000	05	54001	
	SPACER, M/F 3/16 X 0.281	191-2029-000	05	54001	
	SPACER, M/F 3/16 X 0.343	191-2029-001	05	54001	
A10	SYNTH LOGIC BOARD	300-2243-000	01	54001	
A11	SYNTH MODULATOR BOARD	300-2244-000	01	54001	
A12	SYNTH VCO BOARD	300-2245-000	01	54001	



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6.3.8 SYNTHESIZER LOGIC BOARD (A10)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
A10	LOGIC BD REV.D	300-2243-000	01	54001	
C1	CAP, MONO-CER 330PF COG	209-2331-100	03	31433	C320C331J2G5CA
C2	CAP, MONO-CER 1000PF X7R	209-2102-011	02	31433	C312C102K1R5CA
C3	CAP, MONO-CER 0.01UF X7R	198-0008-000	03	31433	C315C103K5R5CA
C4	CAP, MONO-CER 330PF COG	209-2331-100	03	31433	C320C331J2G5CA
C5	NOT USED				
C6	CAP, MONO-CER 330PF COG	209-2331-100	03	31433	C320C331J2G5CA
C7	CAP, TANT 15UF 20V	195-0156-034	04	31433	T110B156M020AS
C8	CAP, MONO-CER 1000PF COG	209-2331-100	03	31433	C312C102K1R5CA
C9	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C10	CAP, MONO-CER 220PF COG	209-2221-100	01	31433	C312C221J1G5CA
C11	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C12	CAP, MONO-CER 0.1UF X7R	209-6104-011	01	31433	C330C104K1R5CA
C13	CAP, MONO-CER 0.01UF X7R	198-0008-000	03	31433	C315C103K5R5CA
C14	CAP, ADJ 1.2-10PF	201-0001-000	01	52763	R-T-122-09MD 1.2/10
C15	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C16	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C17	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C18	CAP, TANT 15UF 20V	195-0156-034	04	31433	T110B156M020AS
C19	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C20	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C21	CAP, TANT 15UF 20V	195-0156-034	04	31433	T110B156M020AS
C22	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C23	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C24	CAP, TANT 15UF 20V	195-0156-034	04	31433	T110B156M020AS
C25	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C26	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA

6.3.8 SYNTHESIZER LOGIC BOARD (A10) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
C27	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C28	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C29	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C30	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C31	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C32	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C33	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C34	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C35	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C36	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C37	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C38	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C39	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C40	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C41	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C42	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C43	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C44	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C45	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C46	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C47	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C48	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C49	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C50	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C51	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C52	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C53	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA

6.3.8 SYNTHESIZER LOGIC BOARD (A10) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
C54	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C55	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C56	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C57	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C58	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C59	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C60	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C61	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C62	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C63	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C64	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C65	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C66	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C67	CAP, MONO-CER 100PF COG	209-2101-100	24	31433	C320C101J2G5CA
C68	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C69	CAP, MONO-CER 470PF X7R	209-2471-112	30	31433	C320C471M2R5CA
C70	CAP, MONO-CER 0.01UF X7R	198-0008-000	03	31433	C315C103K5R5CA
CR1	NOT USED				
CR2	MV2110 VARACTOR	106-5017-000	01	04713	MV2110
CR3 THROUGH CR24					
	1N914	106-5007-000	22	07263	1N914
HR1	XTAL OVEN, T0-5, 15/28V	189-0058-000	01	12020	T05P-24-80
L1	NOT USED				
L2	8.2UH CHOKE	118-1005-000	01	24226	10/821
L3	0.22UH CHOKE	118-1007-000	02	24226	15/220
L4	4.7UH CHOKE	118-1061-000	03	24226	10/471
L5	0.22UH CHOKE	118-1007-000	02	24226	15/220
L6	4.7UH CHOKE	118-1061-000	03	24226	10/471

6.3.8 SYNTHESIZER LOGIC BOARD (A10) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
L7	4.7UH CHOKE	118-1061-000	03	24226	10/471
Q1	2N5179 NPN RF	106-0005-000	02	04713	2N5179
Q2	2N5910 PNP	106-0029-000	02	07263	2N5910PN
Q3	2N5910 PNP	106-0029-000	02	07263	2N5910PN
Q4	2N3646 NPN	106-0028-000	01	07263	2N3646
Q5	2N5179 NPN RF	106-0005-000	02	04713	2N5179
R1	RESISTOR, 27 OHM 1/4W	230-0272-022	01	01121	RCR07G270KS
R2	RESISTOR, 39 OHM 1/4W	230-0392-022	01	01121	RCR07G390KS
R3	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R4	RESISTOR, 2.2K OHM 1/4W	230-0224-022	04	01121	RCR07G222KS
R5	RESISTOR, 220 OHM 1/4W	230-0223-022	03	01121	RCR07G221KS
R6	RESISTOR, 100 OHM 1/4W	230-0103-022	04	01121	RCR07G101KS
R7	RESISTOR, 470 OHM 1/4W	230-0473-022	03	01121	RCR07G471KS
R8	RESISTOR, 68 OHM 1/4W	230-0682-022	01	01121	RCR07G680KS
R9	RESISTOR, 220 OHM 1/4W	230-0223-022	03	01121	RCR07G221KS
R10	RESISTOR, 100 OHM 1/4W	230-0103-022	04	01121	RCR07G101KS
R11	RESISTOR, 680 OHM 1/4W	230-0683-022	04	01121	RCR07G681KS
R12	RESISTOR, 150 OHM 1/4W	230-0153-022	02	01121	RCR07G151KS
R13	RESISTOR, 100 OHM 1/4W	230-0103-022	04	01121	RCR07G101KS
R14	RESISTOR, 680 OHM 1/4W	230-0683-022	04	01121	RCR07G681KS
R15	RESISTOR, 150 OHM 1/4W	230-0153-022	02	01121	RCR07G151KS
R16	RESISTOR, 680 OHM 1/4W	230-0683-022	04	01121	RCR07G681KS
R17	RESISTOR, 220 OHM 1/4W	230-0223-022	03	01121	RCR07G221KS
R18	RESISTOR, 680 OHM 1/4W	230-0683-022	04	01121	RCR07G681KS
R19	RESISTOR, 1K OHM 1/4W	230-0104-022	02	01121	RCR07G102KS
R20	RESISTOR, 1K OHM 1/4W	230-0104-022	02	01121	RCR07G102KS
R21	RESISTOR, 470 OHM 1/4W	230-0473-022	03	01121	RCR07G471KS

6.3.8 SYNTHESIZER LOGIC BOARD (A10) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
R22 THROUGH R24					
	RESISTOR, 2.2K OHM 1/4W	230-0224-022	04	01121	RCR07G222KS
R25	RESISTOR, 1.00K OHM 1%	231-1004-021	01	91637	RN55D1001F
R26	RESISTOR, ADJ 500 OHM	233-0015-006	01	32997	3329H-1-501
R27	RESISTOR, 33K OHM 1/4W	230-0335-022	01	01121	RCR07G333KS
R28	RESISTOR, 750 OHM 1%	231-7503-021	01	91637	RN55D7500F
R29	RESISTOR, ADJ 5K OHM	233-0015-009	01	32997	3329H-1-502
R30	RESISTOR, 100 OHM 1/4W	230-0103-022	04	01121	RCR07G101KS
R31	RESISTOR, 3.32K OHM 1%	231-3324-021	01	91637	RN55D3321F
R32	RESISTOR, 6.81K OHM 1%	231-6814-021	01	91637	RN55D6811F
R33	RESISTOR, 14.3K OHM 1%	231-1435-021	01	91637	RN55D1432F
R34	RESISTOR PACK, 10K 8-PIN	234-0001-000	03	91637	MSP08A01-103G
R35	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R36	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R37	RESISTOR PACK, 10K, 8-PIN	234-0001-000	03	91637	MSP08A01-103G
R38	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R39	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R40	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R41	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R42	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R43	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R44	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R45	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R46	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R47	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R48	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R49	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R50	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS

6.3.8 SYNTHESIZER LOGIC BOARD (A10) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
R51	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R52	RESISTOR PACK, 10K, 8-PIN	234-0001-000	03	91637	MSP08A01-103G
R53	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R54	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R55	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R56	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R57	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R58	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R59	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R60	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R61	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R62	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R63	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R64	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R65	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R66	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R67	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R68	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R69	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R70	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R71	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R72	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R73	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R74	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R75	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R76	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R77	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS

6.3.8 SYNTHESIZER LOGIC BOARD (A10) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
R78	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R79	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R80	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R81	RESISTOR, 6.8K OHM 1/4W	230-0684-022	22	01121	RCR07G682KS
R82	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R83	RESISTOR, 10K OHM 1/4W	230-0105-022	26	01121	RCR07G103KS
R84	RESISTOR, 470 OHM 1/4W	230-0473-022	03	01121	RCR07G471KS
T1	5T RF BALUN, T-30-12	118-2012-000	01	54001	
U1	74LS74 TTL DUAL D FLFP	106-7026-000	02	01295	SN74LS74N
U2	74LS192 TTL DECADE CTR	106-7032-000	07	07263	74LS192PC
U3	74LS00 TTL QUAD NAND	106-7040-000	01	01295	SN74LS00N
U4 THROUGH U8					
	74LS192 TTL DECADE CTR	106-7032-000	07	07263	74LS192PC
U9	ECL 10/11 PRESCALER	106-7072-000	01	07263	95H90DC
U10	7402 TTL QUAD NOR	106-7012-000	01	01295	SN7402N
U11	4049 CMOS HEX INV	106-7047-000	04	04713	MC14049UBCP
U12	4049 CMOS HEX INV	106-7047-000	04	04713	MC14049UBCP
U13	74LS74 DUAL D FLFP	106-7026-000	02	01295	SN74LS74N
U14	4049 CMOS HEX INV	106-7047-000	04	04713	MC14049UBCP
U15	82S100 FPLA, RT-138 PRGM	106-7100-001	01	54001	
U16	4049 CMOS HEX INV	106-7047-000	04	04713	MC14049UBCP
U17	7406 TTL HEX INV	106-7039-000	01	01295	SN7406N
U18	74LS192 TTL DECADE CTR	106-7032-000	07	07263	74LS192PC
U19	74LS393 DUAL 4-BIT BIN CTR	106-7083-000	01	01295	SN74LS393N
VR1	1N4740A 10V ZENER	106-4006-000	01	04713	1N4740A
Y1	XTAL, 12.8 MHz, TO-5	139-1016-000	01	54001	
	XTAL OVEN PC BOARD	108-6100-000	01	54001	
	RT-138 LOGIC PC BOARD	108-6141-000	01	54001	
	TRANSISTOR MTG PAD	111-0023-000	02	13103	7717-15N
	TRANSISTOR INSULATOR	111-0024-000	02	13103	43-18-1



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6.3.9 SYNTHESIZER MODULATOR BOARD (A11)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
A11	MODULATOR BD REV.B	300-2244-000	01	54001	
C1 THROUGH C3					
	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C4	CAP, TANT 2.2UF 20V	195-0227-024	01	31433	T110A225K020AS
C5 THROUGH C7					
	CAP, MONO-CER 0.1UF X7R	209-6104-011	05	31433	C330C104K1R5CA
C8	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C9	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C10	NOT USED				
C11	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C12	CAP, GLASS 0.033UF X7R	198-0025-000	01	71590	C41C333KNP
C13	CAP, GLASS 0.0082UF X7R	198-0024-000	01	71590	C41C822KNP
C14	CAP, TANT 1.0UF 35V	195-0107-035	01	31433	T110A105M035AS
C15	CAP, TANT 4.7UF 10V	195-0477-032	01	31433	T110A475M010AS
C16	CAP, MONO-GLASS 0.022UF	198-0007-000	02	71590	C41C223KNP
C17	CAP, MONO-GLASS 0.1UF	198-0006-000	02	71590	C41C104KNP
C18	CAP, MONO-GLASS 0.022UF	198-0007-000	02	71590	C41C223KNP
C19	CAP, MONO-GLASS 0.1UF	198-0006-000	02	71590	C41C104KNP
C20	CAP, MONO-CER 0.1UF X7R	209-6104-011	05	31433	C330C104K1R5CA
C21	CAP, MONO-CER 0.1UF X7R	209-6104-011	05	31433	C330C104K1R5CA
C22 THROUGH C29					
	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C30	CAP, TANT 15UF 20V	195-0156-034	01	31433	T110B156M020AS
C31 THROUGH C33					
	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C34	NOT USED				
C35	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C36	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C37	CAP, MONO-CER 0.01UF X7R	209-2103-011	03	31433	C320C103K2R5CA

6.3.9 SYNTHESIZER MODULATOR BOARD (A11) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
C38	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C39	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C40	NOT USED				
C41	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C42	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C43	CAP, MONO-CER 0.01UF X7R	209-2103-011	03	31433	C320C103K2R5CA
C44	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C45	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C46	NOT USED				
C47	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C48	CAP, DISC-CER 470PF	208-0006-000	27	71590	CE-471
C49	CAP, MONO-CER 0.01UF X7R	209-2103-011	03	31433	C320C103K2R5CA
CR1 THROUGH CR4					
	1N914	106-5007-000	04	07263	1N914
L1	4.7UH CHOKE	118-1061-000	08	24226	10/471
L2	0.22UH CHOKE	118-1007-000	01	24226	15/220
L3 THROUGH L7					
	4.7UH CHOKE	118-1061-000	08	24226	10/471
L8	NOT USED				
L9	4.7UH CHOKE	118-1061-000	08	24226	10/471
L10	NOT USED				
L11	4.7UH CHOKE	118-1061-000	08	24226	10/471
P15	CONN HOUSING 1 X 14S	129-2117-014	01	00779	87334-5
Q1	MPS-3702 PNP	106-0057-000	01	04713	MPS-3702-18
Q2	2N3904 NPN	106-0041-000	01	04713	2N3904
Q3 THROUGH Q5					
	BFR-91 LOW NOISE RF AMP	106-0053-000	03	04713	BFR-91
R1	RESISTOR, ADJ 5K OHM	233-0011-000	01	32997	3006P-1-502

6.3.9 SYNTHESIZER MODULATOR BOARD (A11) (cont.)

CKT SYMBOL	DESCRIPTION	WULFSBERG PART NUMBER	ASSY QTY	VENDOR CODE	VENDOR PART NUMBER
R2	RESISTOR, 820 OHM 1/4W	230-0823-022	01	01121	RCR07G821KS
R3	RESISTOR, 4.75K OHM 1%	231-4754-021	02	91637	RN55D4751F
R4	RESISTOR, 4.75K OHM 1%	231-4754-021	02	91637	RN55D4751F
R5	RESISTOR, 10K OHM 1/4W	230-0105-022	11	01121	RCR07G103KS
R6	RESISTOR, 10K OHM 1/4W	230-0105-022	11	01121	RCR07G103KS
R7	RESISTOR, 4.7K OHM 1/4W	230-0474-022	02	01121	RCR07G472KS
R8	RESISTOR, 4.7K OHM 1/4W	230-0474-022	02	01121	RCR07G472KS
R9	RESISTOR, 750 OHM 1%	231-7503-021	01	91637	RN55D7500F
R10	RESISTOR, 332 OHM 1%	231-3323-021	01	91637	RN55D3320F
R11	RESISTOR, 5.23 OHM 1%	231-5234-021	02	91637	RN55D5231F
R12	RESISTOR, 5.23 OHM 1%	231-5234-021	02	91637	RN55D4231F
R13	RESISTOR, 3.3K OHM 1/4W	230-0334-022	01	01121	RCR07G332KS
R14	RESISTOR, 16.2K OHM 1%	231-1625-021	01	91637	RN55D1622F
R15	RESISTOR, 26.7K OHM 1%	231-2675-021	01	91637	RN55D2672F
R16	RESISTOR, 59.0K OHM 1%	231-5905-021	01	91637	RN55D5902F
R17	RESISTOR, 2.55K OHM 1%	231-2554-021	02	91637	RN55D2551F
R18	RESISTOR, 10.2K OHM 1%	231-1025-021	02	91637	RN55D1022F
R19	RESISTOR, 2.55K OHM 1%	231-2554-021	02	91637	RN55D2551F
R20	RESISTOR, 10.2K OHM 1%	231-1025-021	02	91637	RN55D1022F
R21	RESISTOR, 10K OHM 1/4W	230-0105-022	11	01121	RCR07G103KS
R22	RESISTOR, 10K OHM 1/4W	230-0105-022	11	01121	RCR07G103KS
R23	RESISTOR, 150K OHM 1/4W	230-0156-022	01	01121	RCR07G153KS
R24	RESISTOR, 10K OHM 1/4W	230-0105-022	11	01121	RCR07G103KS
R25	RESISTOR, 15K OHM 1/4W	230-0155-022	01	01121	RCR07G153KS
R26 THROUGH R30					
	RESISTOR, 10K OHM 1/4W	230-0105-022	11	01121	RCR07G103KS
R31	RESISTOR, 5.6K OHM 1/4W	230-0564-022	01	01121	RCR07G562KS
R32	RESISTOR, 10K OHM 1/4W	230-0105-022	11	01121	RCR07G103KS

6.3.9 SYNTHESIZER MODULATOR BOARD (A11) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
R33	RESISTOR, 180 OHM 1/4W	230-0183-022	01	01121	RCR07G181KS
R34	RESISTOR, 100 OHM 1/4W	230-0103-022	02	01121	RCR07G101KS
R35	RESISTOR, 100 OHM 1/4W	230-0103-022	02	01121	RCR07G101KS
R36	RESISTOR, 6.8K OHM 1/4W	230-0684-022	03	01121	RCR07G682KS
R37	RESISTOR, 2.2K OHM 1/4W	230-0224-022	03	01121	RCR07G222KS
R38	RESISTOR, 470 OHM 1/4W	230-0473-022	03	01121	RCR07G471KS
R39	RESISTOR, 150 OHM 1/4W	230-0153-022	03	01121	RCR07G151KS
R40	RESISTOR, 1K OHM 1/4W	230-0104-022	01	01121	RCR07G102KS
R41	RESISTOR, 56 OHM 1/4W	230-0562-022	01	01121	RCR07G560KS
R42	RESISTOR, 6.8K OHM 1/4W	230-0684-022	03	01121	RCR07G682KS
R43	RESISTOR, 2.2K OHM 1/4W	230-0224-022	03	01121	RCR07G222KS
R44	RESISTOR, 470 OHM 1/4W	230-0473-022	03	01121	RCR07G471KS
R45	RESISTOR, 150 OHM 1/4W	230-0153-022	03	01121	RCR07G151KS
R46	RESISTOR, 27 OHM 1/4W	230-0272-022	02	01121	RCR07G270KS
R47	RESISTOR, 27 OHM 1/4W	230-0272-022	02	01121	RCR07G270KS
R48	RESISTOR, 6.8K OHM 1/4W	230-0684-022	03	01121	RCR07G682KS
R49	RESISTOR, 2.2K OHM 1/4W	230-0224-022	03	01121	RCR07G222KS
R50	RESISTOR, 470 OHM 1/4W	230-0473-022	03	01121	RCR07G471KS
R51	RESISTOR, 150 OHM 1/4W	230-0153-022	03	01121	RCR07G151KS
T1 THROUGH T3					
	5T RF BALUN, T-30-12	118-2012-000	03	54001	
U1	11C44 TTL PHASE DET	106-7034-000	01	07263	11C44DC
U2	4066 CMOS QUAD SW	106-7019-000	01	02735	CD4066BE
U3	358 LIN DUAL OPAMP	106-7044-000	01	27014	LM358N
U4	78MG LIN ADJ VOLT REG	106-7048-000	02	07263	μ A78MG1C
U5	78MG LIN ADJ VOLT REG	106-7048-000	02	07263	μ A78MG1C
U6	1458 LIN DUAL OP AMP	106-7006-000	01	04713	MC1458CP1



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6.3.9 SYNTHESIZER MODULATOR BOARD (A11) (cont.)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
	RT-138 MODULATOR PC BD	108-6142-000	01	54001	
	SOLID COAX, 50 OHM, 2-1/2 IN	123-0001-000	01	82413	AE50085
	RT-30 BUFFER FENCE	146-0525-003	01	54001	
	RT-30 VCO BUFFER COVER	146-0526-001	01	54001	
	SCREW, 2-56 X 3/16 FHP	188-0101-006	02	54001	
	SCREW, 4-40 X 5/16 PHP	188-0200-010	02	54001	
	NUT, 4-40 X 1/4 KEP	188-2202-000	02	54001	



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6.3.10 VCO ASSEMBLY (A15)

<u>CKT SYMBOL</u>	<u>DESCRIPTION</u>	<u>WULFSBERG PART NUMBER</u>	<u>ASSY QTY</u>	<u>VENDOR CODE</u>	<u>VENDOR PART NUMBER</u>
A12	VCO ASSY REV.B	300-2245-000	01	54001	

THE VCO IS AN ENCAPSULATED ASSEMBLY AND, WITH THE EXCEPTION OF THE FOLLOWING TWO REPLACEABLE COMPONENTS, IS CONSIDERED A "BLACK BOX".

J15	JACK, 14 POSITION	129-2122-014	01	54001	
R26	RESISTOR, 15.0K OHM 1%	231-1505-021	01	91637	RN55D1502F