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RACAL COMMUNICATION RECEIVER

TYPE RA17 MK2

TECHNICAL HANDBOOK - FAULT FINDING AND REPAIR DATA

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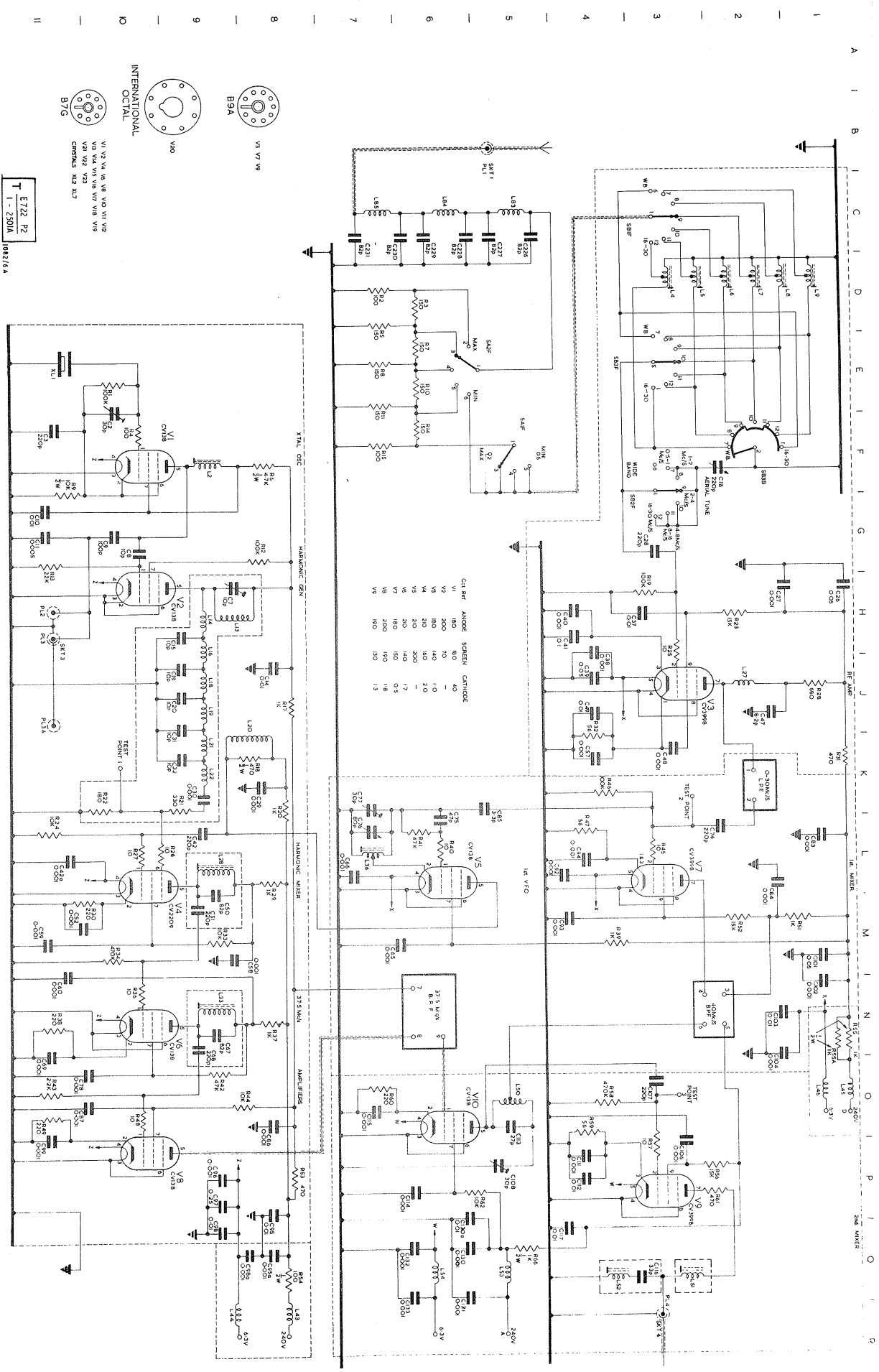


Fig 2501A - H.F. section of receiver

T 722 P2
 T-2501A
 1082/144

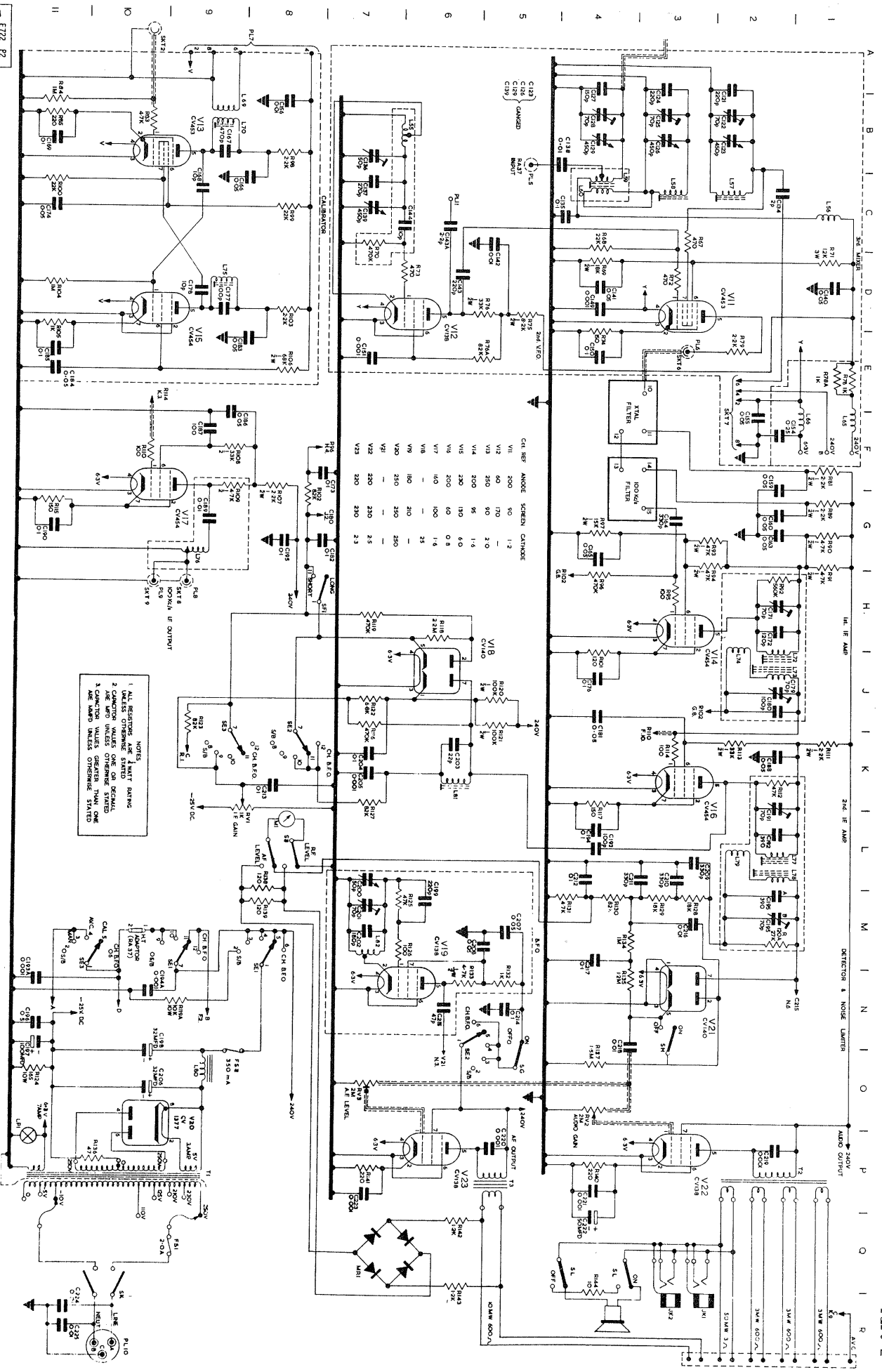
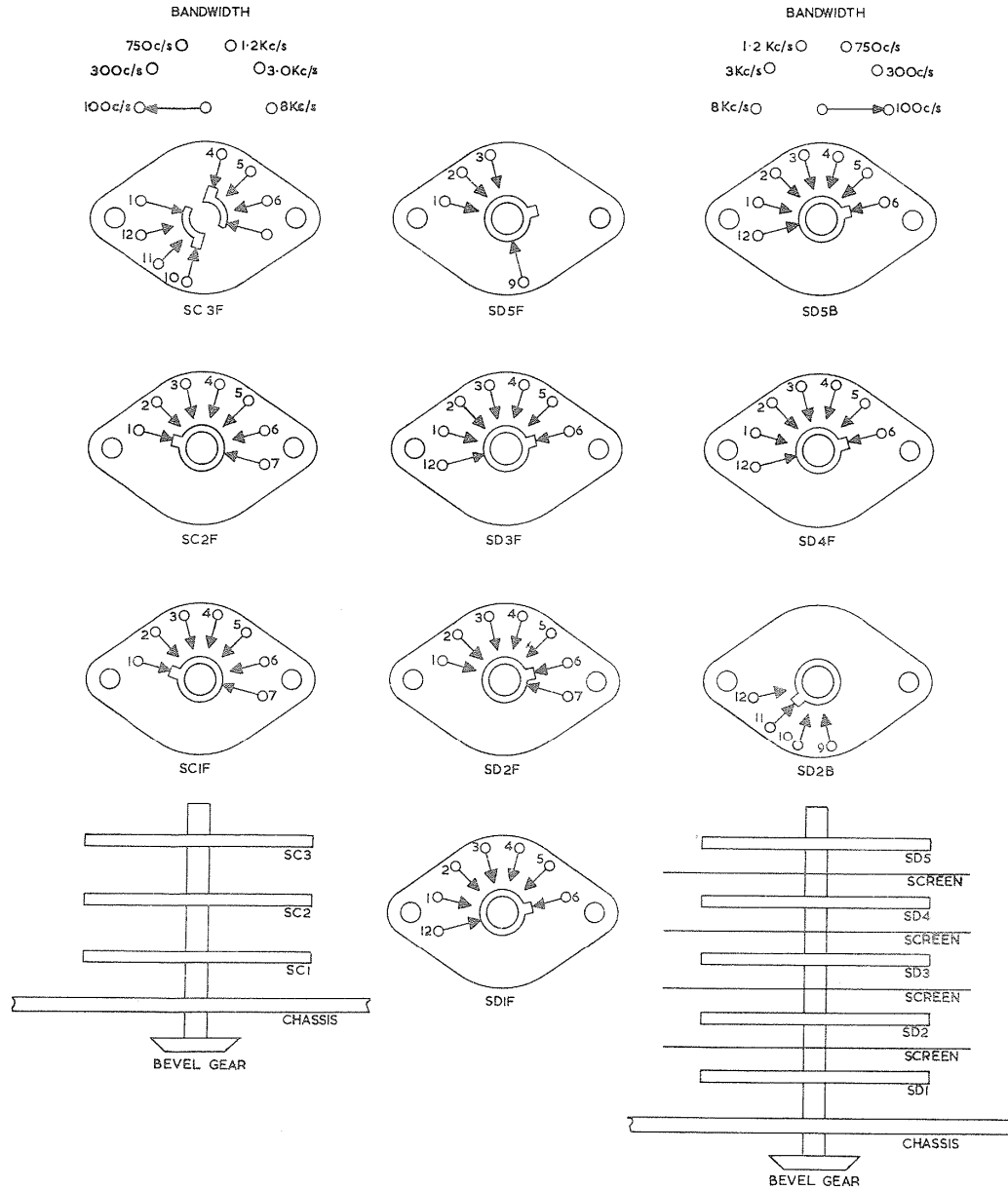
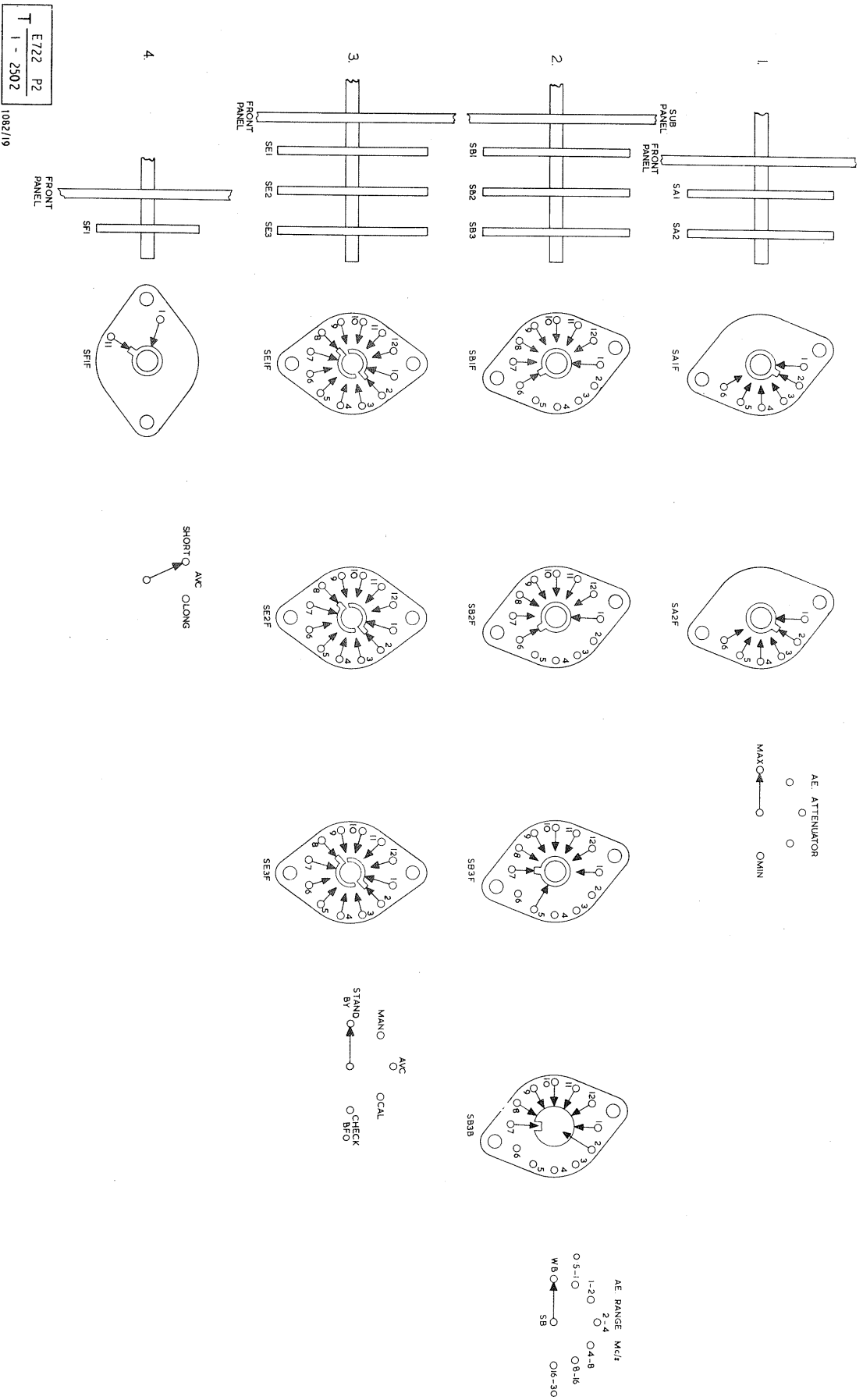


Fig 2501B - I.F. and I.F. section of receiver



T E 722 P 2
1 - 2503A 1082/7

Fig 2503A - Bandwidth switch sections



T E722 P2
I - 2502
1082/19

Fig 2502 - Aerial attenuator and functional switch sections

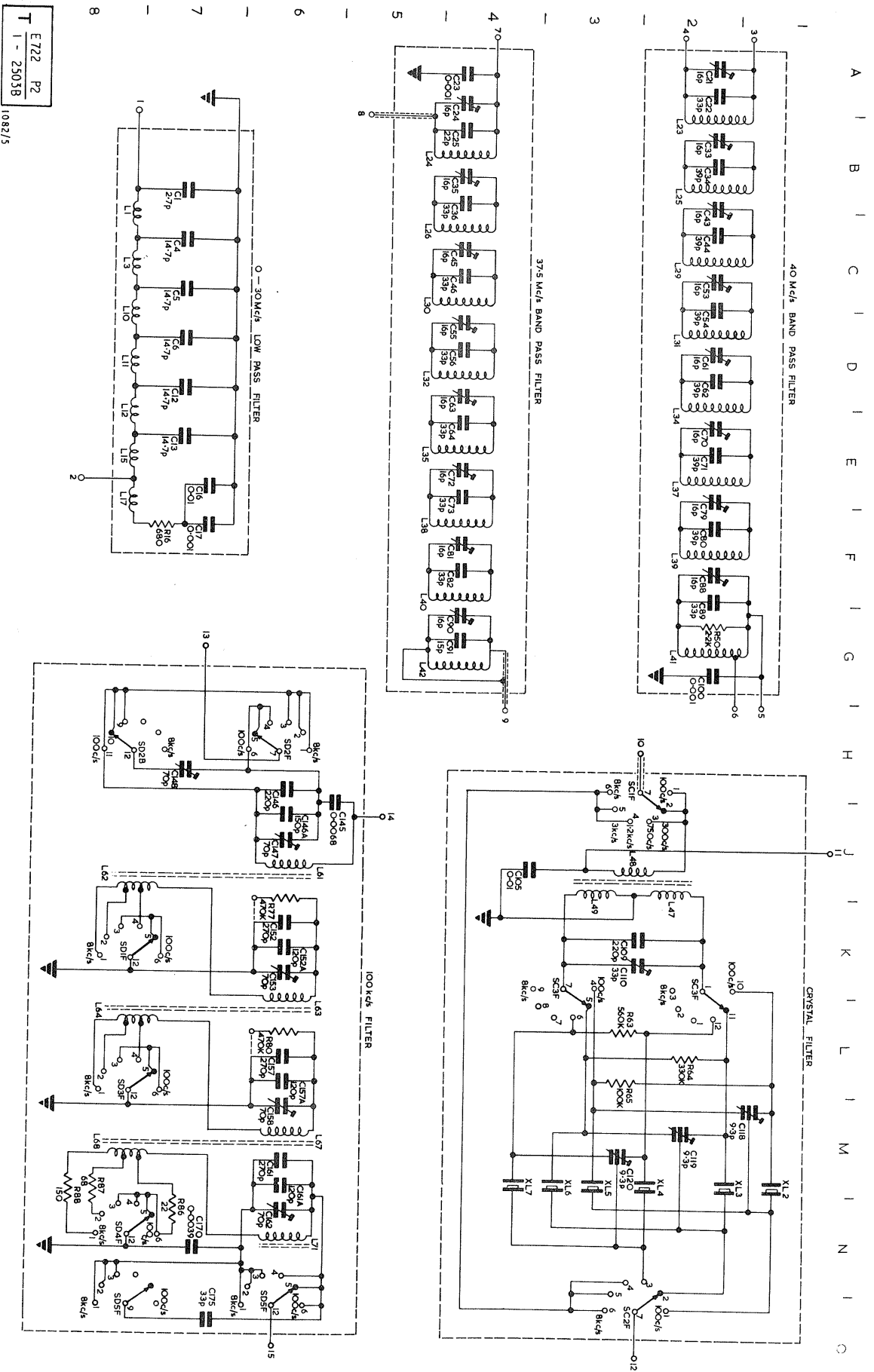


Fig 2503B - R.F. and I.F. filters

E722 P2
1-2503B
1082/5

Table 2501 - Components

Cct Ref	Location		Value Ω	Rating W	Tol %	Type	VAOS No 5905-99
	Circuit Diagram	Layout Diagram					
RESISTORS - FIXED							
R1	1AE10	2506	100k	1/4	10	carbon	-022-3038
R2	1AD7		100	1/4	10	carbon	-022-1110
R3	1AD6		150	1/4	10	carbon	-022-1131
R4	1AF10	2506	100	1/4	10	carbon	-022-1110
R5	1AD7		150	1/4	10	carbon	-022-1131
R6	1AF8	2506	4.7k	1/2	10	carbon	-022-2090
R7	1AE6		150	1/4	10	carbon	-022-1131
R8	1AE7		150	1/4	10	carbon	-022-1131
R9	1AF11	2506	10k	1/2	10	carbon	-022-2132
R10	1AE6		150	1/4	10	carbon	-022-1131
R11	1AE7		150	1/4	10	carbon	-022-1131
R12	1AG8	2506	100k	1/4	10	carbon	-022-3038
R13	1AG11	2506	22k	1/4	10	carbon	-022-2173
R14	1AF6		150	1/4	10	carbon	-022-1131
R15	1AF7		100	1/4	10	carbon	-022-1110
R16	3BF7	2509	680	1/4	10	carbon	-022-1215
R17	1AJ8	2506	1k	1/2	10	carbon	-022-2006
R18	1AK8	2506	470	1/2	10	carbon	-022-1195
R19	1AH3	2508	100k	1/4	10	carbon	-022-3038
R20	1AK8	2506	1k	1/4	10	carbon	-022-2005
R21	1AK9	2506	330	1/4	10	carbon	-022-1173
R22	1AK10	2506	180	1/4	10	carbon	-022-1143
R23	1AH2	2508	15k	1/4	10	carbon	-022-2152
R24	1AL11	2506	10k	1/4	10	carbon	-022-2131
R25	1AJ3	2508	10	1/4	10	carbon	-022-1002
R26	1AL10	2506	10	1/4	10	carbon	-022-1002
R27	1AL10	2506	10	1/4	10	carbon	-022-1002
R28	1AJ1	2508	680	1/4	10	carbon	-022-1215
R29	1AL8	2506	1k	1/4	10	carbon	-022-2005
R30	1AM10	2506	220	1/4	10	carbon	-022-1152
R31	1AK1	2508	470	1/4	10	carbon	-022-1194
R32	1AJ4	2508	56	1/4	10	carbon	-022-1080
R33	1AM9	2506	10k	1/4	10	carbon	-022-2131
R34	1AM10	2506	470k	1/4	10	carbon	-022-3122
R36	1AN10		10	1/4	10	carbon	-022-1002
R37	1AN8	2506	1k	1/4	10	carbon	-022-2005
R38	1AN11	2506	220	1/4	10	carbon	-022-1152
R39	1AM4	2509	1k	1/4	10	carbon	-022-2005
R40	1AL6	2509	10	1/4	10	carbon	-022-1002
R41	1AL6	2509	47k	1/4	10	carbon	-022-2215
R42	1A09	2506	47k	1/4	10	carbon	-022-2215
R43	1A011	2506	2.2k	1/4	10	carbon	-022-2047
R44	1A08	2506	10k	1/4	10	carbon	-022-2131
R45	1AL3	2509	10	1/4	10	carbon	-022-1002
R46	1AK4	2509	100k	1/4	10	carbon	-022-3038

Table 2501 - (cont)

Cct Ref	Location		Value Ω	Rating W	Tol %	Type	VAOS No 5905-99
	Circuit Diagram	Layout Diagram					
R47	1AL4	2509	56	1/4	10	carbon	-022-1080
R48	1A010	2506	10	1/4	10	carbon	-022-1002
R49	1A011	2506	220	1/4	10	carbon	-022-1152
R50	3BG2		2.2k	1/4	10	carbon	-022-2047
R51	1AM1	2509	1k	1/4	10	carbon	-022-2005
R52	1AM2	2509	15k	1/4	10	carbon	-022-2152
R53	1AP8	2506	470	1/4	10	carbon	-022-1194
R54	1AQ8	2504	100	1/2	10	carbon	-022-1111
R55	1AN1	2504	1k	1/2	10	carbon	-022-2006
R55A	1AN1		1k	1/2	10	carbon	-022-2006
R56	1AP2		15k	1/4	10	carbon	-022-2152
R57	1AP3	2504	10	1/4	10	carbon	-022-1002
R58	1A04		470k	1/4	10	carbon	-022-3122
R59	1A04	2504	56	1/4	10	carbon	-022-1080
R60	1A07	2504	220	1/4	10	carbon	-022-1152
R61	1AP3	2504	470	1/4	10	carbon	-022-1194
R62	1AP6		10k	1/4	10	carbon	-022-2131
R63	3BL3	2513	560k	1/4	10	carbon	-022-3134
R64	3BL2	2513	330k	1/4	10	carbon	-022-3101
R65	3BL3	2513	100k	1/4	10	carbon	-022-3038
R66	1AQ5	2504	1k	1/2	10	carbon	-022-2006
R67	1BC3	2510	470	1/4	10	carbon	-022-1194
R68	1BC4	2510	22k	1/4	10	carbon	-022-2173
R69	1BD4	2510	18k	1/2	10	carbon	-022-2165
R70	1BC7		470k	1/4	10	carbon	-022-3122
R71	1BD1	2510	12k	3	5	Wirewound	-011-3346
R72	1BD3	2510	470	1/4	10	carbon	-022-1194
R73	1BD6	2510	470	1/4	10	carbon	-022-1194
R74	1BF4	2510	150	1/4	10	carbon	-022-1131
R75	1BD5	2510	8.2k	1/2	10	carbon	-022-2123
R76	1BD5	2510	33k	1/2	10	carbon	-022-2195
R76A	1BE5		82k	1/4	10	carbon	-022-3029
R77	3BK6	2513	470k	1/4	10	carbon	-022-3122
R78	1BE1	2510	1k	1/2	10	carbon	-022-2006
R78A	1BE1		1k	1/2	10	carbon	-022-2006
R79	1BE2	2510	2.2k	1/4	10	carbon	-022-2047
R80	3BL6	2513	470k	1/4	10	carbon	-022-3122
R81	1BF1	2515	2.2k	1/2	10	carbon	-022-2048
R83	1BE10		4.7k	1/4	10	carbon	-022-2089
R84	1BE11		1M	1/4	10	carbon	-022-3164
R85	1BB11	2515	220	1/4	10	carbon	-022-1152
R86	3BN7	2513	22	1/4	10	carbon	-022-1026
R87	3BN3	2513	68	1/4	10	carbon	-022-1089
R88	3BN3	2513	150	1/4	10	carbon	-022-1131
R89	1BG1	2515	2.2k	1/2	10	carbon	-022-2048
R90	1BG1	2515	4.7k	1/2	10	carbon	-022-2090
R91	1BG1	2515	4.7k	1/2	10	carbon	-022-2090
R92	1BH2		560k	1/4	10	carbon	-022-3134

Table 2501 - (cont)

Cct Ref	Location		Value Ω	Rating W	Tol %	Type	VAOS No 5905-99
	Circuit Diagram	Layout Diagram					
R93	1BG2	2515	47k	1/2	10	carbon	-022-2216
R94	1BG2	2515	47k	1/2	10	carbon	-022-2216
R95	1BH3	2514	100	1/4	10	carbon	-022-1110
R96	1BH4		470k	1/4	10	carbon	-022-3122
R97	1BG4	2515	15k	1/2	10	carbon	-022-2153
R98	1BB8		2.2k	1/4	10	carbon	-022-2047
R99	1BC8		22k	1/4	10	carbon	-022-2173
R100	1BG11		22k	1/4	10	carbon	-022-2173
R101	1BJ4	2515	120	1/4	10	carbon	-022-1122
R102	1BF8	2515	82k	1/4	10	carbon	-022-3029
R103	1BD8		2.2k	1/4	10	carbon	-022-2047
R104	1BD11		1M	1/4	10	carbon	-022-3164
R105	1BD11		1k	1/4	10	carbon	-022-2005
R106	1BE8		68k	1/2	10	carbon	-022-3018
R107	1BG9	2515	2.2k	1/2	10	carbon	-022-2048
R108	1BF9	2515	33k	1/2	10	carbon	-022-2195
R109	1BF9		4.7k	1/2	10	carbon	-022-2090
R110	1BF10	2514	100	1/4	10	carbon	-022-1110
R111	1BK1	2515	2.2k	1/2	10	carbon	-022-2048
R112	1BK2		47k	1/4	10	carbon	-022-2215
R113	1BK2	2515	33k	1/2	10	carbon	-022-2195
R114	1BK3	2514	100	1/4	10	carbon	-022-1110
R115	1BG11		150	1/4	10	carbon	-022-1131
R116	1BJ7		470k	1/4	10	carbon	-022-3122
R117	1BK4	2515	150	1/4	10	carbon	-022-1131
R118	1BN6	2514	2.2k	1/4	10	carbon	-022-3206
R119	1BH7	2515	470k	1/4	10	carbon	-022-3122
R119A	1BN9	2504	10k	10	5	wirewound	-011-3088
R120	1BJ5	2515	100k	1/2	10	carbon	-022-3039
R120A	1BM2		27k	1/4	10	carbon	-022-2185
R121	1BJ5	2515	100k	1/2	10	carbon	-022-3039
R122	1BJ7	2515	6.8k	1/4	10	carbon	-022-2110
R123	1BK9	2515	82k	1/2	10	carbon	-022-3030
R124	1B011	2504	165	10	5	wirewound	-972-8311
R125	1BM7		47k	1/4	10	carbon	-022-2215
R126	1BM7		100	1/4	10	carbon	-022-1110
R127	1BK7	2515	82k	1/4	10	carbon	-022-3029
R128	1BM3	2515	18k	1/4	10	carbon	-022-2164
R129	1BM3	2515	18k	1/4	10	carbon	-022-2164
R130	1BM4	2515	82k	1/4	10	carbon	-022-3029
R131	1BM4	2515	4.7k	1/4	10	carbon	-022-2089
R132	1BN5		1k	1/4	10	carbon	-022-2005
R133	1BN6		4.7k	1/2	10	carbon	-022-2090
R134	1BN4	2515	1M	1/4	10	carbon	-022-3164
R135	1BN3	2515	1.2M	1/4	10	carbon	-022-3176
R136	1BP10	2504	47	3	5	wirewound	-011-3288
R137	1B04	2515	1.5M	1/4	10	carbon	-022-3185

Table 2501 - (cont)

Cct Ref	Location		Value Ω	Rating W	Tol %	Type	VAOS No
	Circuit Diagram	Layout Diagram					
R138	1BM8	2504	120	1/4	10	carbon	5905-99-022-1122
R139	1BM8	2504	120	1/4	10	carbon	5905-99-022-1122
R140	1BP4	2504	220	1/4	10	carbon	5905-99-022-1152
R141	1BP7	2504	220	1/4	10	carbon	5905-99-022-1152
R142	1BQ6	2504	1.2k	1/4	10	carbon	5905-99-022-2017
R143	1BQ6	2504	1.2k	1/4	10	carbon	5905-99-022-2017
R144	1BR4	-	10	1/4	10	carbon	5905-99-022-1002
RESISTORS - VARIABLE							
RV1	1BL8	2514	1k	2	10	wirewound	5905-99-972-8314
RV2	1B04	2504	2M	1/4	20	composition, log-law, 1 in. spindle.	5905-99-940-9134
RV3	1B07	2504	2M	1/4	20	composition, log-law, 5/8 in. spindle slotted	5905-99-940-9135
Cct Ref	Location		Value	Rating V	Tol %	Type	VAOS No
	Circuit Diagram	Layout Diagram					
CAPACITORS							
C1	3BB7	2509	2.7p	750	±0.5p	ceramic trimmer	011-8271
C2	1AE10	2506	33p				016-0047
C3	1AF11	2506	220p	350	10	silver mica	940-9085
C4	3BC7	2509	14.7p	750	10	ceramic	011-8301
C5	3BC7	2509	14.7p	750	10	ceramic	011-8301
C6	3BD7	2509	14.7p	750	10	ceramic	011-8301
C7	1AH9	2506	10p			trimmer	016-0040
C8	1AG10	2506	10p	750	±0.5p	ceramic	011-8278
C9	1AG10	2506	100p	350	10	silver mica	911-6929
C10	1AG11	2506	0.01	400	20	paper	011-5827
C11	1AG11	2506	0.005	400	20	paper	011-5824
C12	3BD7	2509	14.7p	750	10	ceramic	011-8301
C13	3BE7	2509	14.7p	750	10	ceramic	011-8301
C14	1AJ8	2506	0.01	400	20	paper	011-5827
C15	1AH9	2506	10p	750	±0.5p	ceramic	011-8278
C16	3BE7	2509	0.01	400	20	paper	013-5827
C17	3BF7	2509	0.001	500	20	ceramic	911-4892
C18	1AF2	2505	220p			variable	972-8330
C19	1AJ9	2506	10p	750	±0.5p	ceramic	011-8278
C20	1AJ20	2506	10p	750	±0.5p	ceramic	011-8278
C21	3BA2	2504	13.2p	1000		trimmer	972-8322
C22	3BA2	2504	33p	350	5	silver mica	911-4291

Table 2501 - (cont)

Cct Ref	Location		Value	Rating V	Tol %	Type	VAOS No 5910-99
	Circuit Diagram	Layout Diagram					
C23	3BA4		0.001	500	20	ceramic	-911-4892
C24	3BA4	2504	13.2p	1000		trimmer	-972-8322
C25	3BB4	2504	22p	350	5	silver mica	-911-4294
C26	1AH1	2508	0.05	350	20	paper	-011-5559
C27	1AH2	2508	0.001	500	20	ceramic	-911-4892
C28	1AG3	2508	220p	350	10	silver mica	-940-9085
C29	1AK8	2506	0.001	500	20	ceramic	-911-4892
C30	1AK9	2506	0.001	500	20	ceramic	-911-4892
C31	1AJ9	2506	10p	750	±0.5p	ceramic	-011-8278
C32	1AK9	2506	10p	750	±0.5p	ceramic	-011-8278
C33	3BB2	2504	13.2p	1000		trimmer	-972-8322
C34	3BB2		39p	350	5	silver mica	-911-6837
C35	3BB4	2504	13.2p	1000		trimmer	-972-8322
C36	3BB4	2504	33p	350	5	silver mica	-911-4291
C37	1AH3	2508	0.01	400	20	paper	-011-5827
C38	1AJ4	2508	0.001	500	20	ceramic	-911-4892
C39	1AJ4	2508	0.05	350	20	paper	-011-5559
C40	1AH4	2508	0.001	500	20	ceramic	-911-4892
C41	1AH4		0.1	150	20	paper	-011-5560
C42	1AL9	2506	220p	350	10	silver mica	-940-9085
C42A	1AL11	2506	0.001	500	20	ceramic	-911-4892
C43	3BB2	2504	13.2p	1000		trimmer	-972-8322
C44	3BC2	2504	39p	350	5	silver mica	-911-6837
C45	3BC4	2504	13.2p	1000		trimmer	-972-8322
C46	3BC4	2504	33p	350	5	silver mica	-911-4291
C47	1AJ2		8.2p	750	±0.5p	ceramic	-011-8277
C48	1AK3	2508	0.001	500	20	ceramic	-911-4892
C49	1AJ3	2508	0.01	400	20	paper	-011-5827
C50	1AL9		82p	350	±1p	silver mica	-911-6952
C51	1AM9		220p	350	2	silver mica	-911-6839
C52	1AM11	2506	0.001	500	20	ceramic	-911-4892
C53	3BC2	2504	13.2p	1000		trimmer	-972-8322
C54	3BD2	2504	39p	350	2	silver mica	-911-6837
C55	3BD4	2504	13.2p	1000		trimmer	-972-8322
C56	3BD4	2504	33p	350	5	silver mica	-911-4291
C57	1AK4	2508	0.001	500	20	ceramic	-911-4892
C58	1AM9		0.001	500	20	ceramic	-911-4892
C59	1AM11	2506	0.001	500	20	ceramic	-911-4892
C60	1AM11	2506	0.001	500	20	ceramic	-911-4892
C61	3BD2	2504	13.2p	1000		trimmer	-972-8322
C62	3BD2	2504	39p	350	5	silver mica	-911-6837
C63	3BO4	2504	13.2p	1000		trimmer	-972-8322
C64	3BE4	2504	33p	350	5	silver mica	-911-4291
C65	1AM6	2509	0.001	500	20	ceramic	-911-4892
C66	1AL7	2509	0.001	500	20	ceramic	-911-4892
C67	1AN9		82p	350	±1p	silver mica	-911-6952
C68	1AN9		220p	350	2	silver mica	-911-6839
C69	1AN11	2506	0.001	500	20	ceramic	-911-4892

Table 2501 - (cont)

Cct Ref	Location		Value	Rating V	Tol %	Type	VAOS No 5910-99
	Circuit Diagram	Layout Diagram					
C70	3BE2	2504	13.2p	1000		trimmer	-972-8322
C71	3BE2	2504	39p	350	5	silver mica	-911-6837
C72	3BE4	2504	13.2p	1000		trimmer	-972-8322
C73	3BE4		33p	350	5	silver mica	-911-4291
C74	1AL2	2509	220p	350	10	silver mica	-940-9085
C75	1AL6	2509	47p	750	2	ceramic	-011-8313
C76	1AL7	2509	100p			variable	-972-8324
C77	1BD9	2509	33p			trimmer	-016-0047
C78	1A011	2506	0.001	500	20	ceramic	-911-4892
C79	3BE2	2504	13.2p	1000		trimmer	-972-8322
C80	3BF2	2504	39p	350	5	silver mica	-911-6837
C81	3BF4	2504	13.2p	1000		trimmer	-972-8322
C82	3BF4	2504	33p	350	5	silver mica	-911-4291
C83	1AL1	2509	0.001	500	20	ceramic	-911-4892
C84	1AL2	2509	0.001	500	20	ceramic	-911-4892
C85	1AK3	2509	3.3p	750	±0.5p	ceramic	-011-8272
C86	1A08	2506	0.001	500	20	ceramic	-911-4892
C87	1A010	2506	0.001	500	20	ceramic	-911-4892
C88	3BF2	2504	13.2p	1000		trimmer	-972-8322
C89	3BG2	2504	33p	350	5	silver mica	-911-4291
C90	3BG4	2504	13.2p	1000		trimmer	-972-3322
C91	3BG4	2504	15p	350	±1p	silver mica	-911-6850
C92	1AL4	2509	0.001	500	20	ceramic	-911-4892
C93	1AM4	2509	0.001	500	20	ceramic	-911-4892
C94	1AL4	2509	0.001	500	20	ceramic	-911-4892
C95	1AP8	2506	0.01	400	20	paper	-011-5827
C95A	1AQ8		0.001	500	20	ceramic	-911-4892
C96	1AP9	2506	0.001	500	20	ceramic	-911-4892
C97	1AP9	2506	0.25	150	20	paper	-011-5563
C98	1AQ9	2506	0.01	400	20	paper	-011-5827
C98A	1AQ8		0.001	500	20	ceramic	-911-4892
C99	1AQ11	2506	0.001	500	20	ceramic	-911-4892
C100	3BG2	2504	0.001	500	20	ceramic	-911-4892
C101	1AM1	2509	0.05	350	20	paper	-011-5559
C102	1AN1		0.001	500	20	ceramic	-911-4892
C103	1AN2	2509	0.1	150	20	paper	-011-5560
C104	1AN2		0.001	500	20	ceramic	-911-4892
C105	3BJ3		0.01	400	20	paper	-011-5827
C106	1AP3	2504	0.001	500	20	ceramic	-911-4892
C107	1A03	2504	220p	350	10	silver mica	-940-9085
C108	1AP5	2504	33p			trimmer	-016-0047
C109	3BK2	2514	220p	350	2	silver mica	-911-6839
C110	3BK2	2514	33p			trimmer	-016-0047
C111	1AP4	2504	0.001	500	20	ceramic	-911-4892
C112	1AP4	2504	0.01	400	20	paper	-011-5827
C113	1A05		27p	750	5	ceramic	-011-8307
C114	1AP6	2504	0.001	500	20	ceramic	-911-4892
C115	1A07	2504	0.001	500	20	ceramic	-911-4892

Table 2501 - (cont)

Cct. Ref	Location		Value	Rating V	Tol %	Type	VAOS No 5910-99
	Circuit Diagram	Layout Diagram					
C116	1A03		33p	350	5	silver mica	-911-4291
C117	1A04	2504	0.01	400	20	paper	-011-5327
C118	3BM1	2513	9.3p			diff trimmer	-972-3321
C119	3BM2	2513	9.3p			diff trimmer	-972-3321
C120	3BN3	2513	9.3p			diff trimmer	-972-3321
C121	1BB2	2512	220p	350	2	silver mica	-911-6339
C122	1BB2	2505	70p			trimmer	-972-3320
C123	1BB2	2512	See C139				
C124	1BB3	2512	220p	350	2	silver mica	-911-6339
C125	1BB3	2505	70p			trimmer	-972-3320
C126	1BB3	2512	See C139				
C127	1BB4	2512	150p	750	20	silver mica	-972-9056
C128	1BB4	2505	70p			trimmer	-972-3320
C129	1BB4	2512	See C139				
C130	1A06		0.001	500	20	ceramic	-911-4392
C130A	1A06	2504	0.01	400	20	paper	-011-5327
C131	1A06	2504	0.001	500	20	ceramic	-911-4392
C132	1A06	2504	0.001	500	20	ceramic	-911-4392
C133	1A06	2504	0.001	500	20	ceramic	-911-4392
C134	1BC2	2511	2.2p	750	±0.25p	ceramic	-972-3959
C135	1BC4	2512	0.1	350	20	paper	-011-5562
C136	1BB7	2510	50p			trimmer	-016-0004
C137	1BC7		270p	350	5	silver mica	-972-9629
C138	1BB4		0.01	400	20	paper	-011-5327
C139	1BC7	2512	443p			variable air (4 gang)	-940-9081
C140	1BD1	2510	0.05	350	20	paper	-011-5559
C141	1BD4	2510	0.05	350	20	paper	-011-5559
C142	1BC5	2510	0.01	400	20	paper	-011-5327
C143	1BD6	2510	220p	350	5	silver mica	-911-6954
C143A	1BC6		2.2p	750	±0.25p	ceramic	-972-3959
C144	1BC6		10p	350	±1p	silver mica	
C145	3BJ5	2513	6800p	350	5	silver mica	-972-3310
C146	3BH6	2513	220p	350	5	silver mica	-911-6954
C146A	3BJ6		150p	750	2	ceramic	-011-3325
C147	3BJ6	2513	70p			trimmer	-972-3320
C148	3BH7	2513	70p			trimmer	-972-3320
C149	1BD4	2510	0.001	500	20	ceramic	-911-4392
C150	1BE4	2510	0.1	150	20	paper	-011-5560
C151	1BE7	2510	0.001	500	20	ceramic	-911-4392
C152	3BK6	2513	270p	350	5	silver mica	-972-9629
C152A	3BK6		120p	750	2	ceramic	-011-3323
C153	3BK6	2513	70p			trimmer	-972-3320
C154	1BF2	2510	0.25	150	20	paper	-011-5563
C155	1BF2	2510	0.05	350	20	paper	-011-5559
C156	1BB8		0.01	400	20	paper	-011-5327
C157	3BL6	2513	270p	350	5	silver mica	-972-9629
C157A	3BL6		120p	750	5	ceramic	-011-3323

Table 2501 - (cont)

Cct Ref	Location		Value	Rating V	Tol %	Type	VAOS No 5910-99-
	Circuit Diagram	Layout Diagram					
C158	3BM6	2513	70p			trimmer	-972-3320
C159	1BG2	2515	0.05	350	20	paper	-011-5559
C160	1BG2	2515	0.05	350	20	paper	-011-5559
C161	3BM6	2514	270p	350	5	silver mica	-972-9629
C162A	3BN6		120p	750	2		-011-8323
C162	3BN6	2513	70p			trimmer	-972-3320
C163	1BG2	2515	0.05	350	20	paper	-011-5559
C164	1BG3	2515	330p	350	10	silver mica	-911-6930
C165	1BG4	2514	0.05	350	20	paper	-011-5559
C166	1BG3		0.05	350	20	paper	-011-5559
C167	1BB9		470p	350	5	silver mica	-972-3962
C168	1BC9		10p	750	5	ceramic	-013-2425
C169	1BB11		0.1	150	20	paper	-011-5560
C170	3BN7	2513	3900p	350	5	silver mica	-972-3309
C171	1BH2	2505	70p			trimmer	-972-3320
C172	1BH2		120p	350	5	silver mica	-972-3960
C173	1BF7	2515	0.1	150	20	paper	-011-5560
C174	1BC11		0.05	350	20	paper	-011-5559
C175	3B07	2513	33p	750	5	ceramic	-011-8309
C176	1BJ4	2515	0.1	150	20	paper	-011-5560
C177	1BD4		100p	350	10	silver mica	-911-6929
C178	1BD9		10p	750	5	ceramic	-013-2425
C179	1BJ2	2505	70p			trimmer	-972-3320
C180	1BJ2		100p	350	5	silver mica	-911-6953
C181	1BJ4	2514	0.05	350	20	paper	-011-5559
C182	1BG7	2515	0.1	150	20	paper	-011-5560
C183	1BE8		0.05	350	20	paper	-011-5559
C184	1BE11		0.05	350	20	paper	-011-5559
C185	1BE11		0.1	150	20	paper	-011-5560
C186	1BF9	2515	0.05	350	20	paper	-011-5559
C187	1BF9	2515	0.05	350	20	paper	-011-5559
C188	1BK2	2514	0.05	350	20	paper	-011-5559
C189	1BG9		0.01	400	20	paper	-011-5327
C190	1BG11		0.1	150	20	paper	-011-5560
C191	1BL2	2505	70p			trimmer	-972-3320
C192	1BL2		390p	350	5	silver mica	-911-6943
C193	1BL4	2514	100p	750	2	ceramic	-011-8321
C193A	1BN11		0.001	500	20	ceramic	-911-4392
C194	1BL4	2515	0.1	150	20	paper	-011-5560
C194A	1BN10		0.001	500	20	ceramic	-911-4392
C195	1BG3	2515	0.1	350	20	paper	-011-5562
C195A	1BM2		390p	350	5	silver mica	-911-6943
C195B	1BM2		70p			trimmer	-972-3320
C196	1BN11	2504	0.5	150	20	paper	-011-5566
C197	1BN11	2504	100	50	+100 -20	electrolytic	-014-5515
C198	1B010	2504	32	350	+50 -20	electrolytic	-972-3303
C199	1BM6		220p	350	5	silver mica	-911-6954

Table 2501 - (cont)

Cct Ref	Location		Value	Rating V	Tol %	Type	VAOS No 5910-99-
	Circuit Diagram	Layout Diagram					
C200	1BL7		50p			variable	-972-8957
C201	1BM7		70p			trimmer	-972-8320
C202	1BM7	2514	130p	350	10	silver mica	-972-8961
C203	1BK6		22p	750	5	ceramic	-011-8305
C204	1BK7	2515	0.1	150	20	paper	-011-5560
C205	1BK7		0.001	500	20	ceramic	-911-4892
C206	1B010	2504	32	350	+50 -20	electrolytic combined with C198	
C207	1BM5		0.05	350	20	paper	-011-5559
C208	1BM5		0.05	350	20	paper	-011-5559
C209	1BL3	2515	330p	350	10	silver mica	-911-6930
C210	1BL3	2515	330p	350	10	silver mica	-911-6930
C211	1BL3	2515	330p	350	10	silver mica	-911-6930
C212	1BL4	2515	0.1	150	20	paper	-011-5560
C213	1BK8	2515	0.1	150	20	paper	-011-5560
C214	1BN5		0.1	350	20	paper	-011-5562
C215	1BN6		47p	750	2	ceramic	-011-8313
C216	1BM3	2515	0.01	400	20	paper	-011-5827
C217	1BM4	2515	0.1	150	20	paper	-011-5560
C218	1BN4		0.01	400	20	paper	-011-5827
C219	1BP2	2504	0.001	500	20	ceramic	-911-4892
C220	1BP5		0.001	500	20	ceramic	-911-4892
C221	1BP4		0.001	500	20	ceramic	-911-4892
C222	1BQ4	2504	50	12	+100 -20	electrolytic	-014-5200
C223	1BP7	2504	0.001	500	20	ceramic	-911-4892
C224	1BR11		0.01	750	20	silver ceramic	-972-8307
C225	1BR11		0.01	750	20	silver ceramic	-972-8307
C226	1AC5		82p	750	2	silver ceramic	-011-3319
C227	1AC5		82p	750	2	silver ceramic	-011-3319
C228	1AC6		82p	750	2	silver ceramic	-011-3319
C229	1AC6		82p	750	2	silver ceramic	-011-3319
C230	1AC6		82p	750	2	silver ceramic	-011-3319
C231	1AC7		82p	750	2	silver ceramic	-011-3319
VALVES							
Cct Ref	Location		Description	Type	VAOS No Z/5960-99		
	Circuit Diagram	Layout Diagram 2505 &					
V1	1AF9	2506	H.F. pentode	CV138 (CV4014)	-000-0138 -000-4014		
V2	1AH9	2506	H.F. pentode	CV138 (CV4014)	-000-0138 -000-4014		
V3	1AJ2	2503	Wideband amplifier pentode	CV3993	-000-3998		

Note: Valve numbers shown in brackets are the new preferred valves.

Table 2501 - (cont)

Cct Ref	Location		Description	Type	VAOS No Z/5960-99-
	Circuit Diagram	Layout Diagram 2505 &			
V4	1AM9	2506	H.F. pentode	CV2209 (CV329)	000-2209 000-0329
V5	1AL6	2509	H.F. pentode	CV133 (CV4014)	000-0138 000-4014
V6	1AN9	2506	H.F. pentode	CV133 (CV4014)	000-0138 000-4014
V7	1AL3	2509	Wideband amplifier pentode	CV3993	000-3998
V8	1AP9	2506	H.F. pentode	CV133 (CV4014)	000-0138 000-4014
V9	1AP3	2504	Wideband amplifier pentode	CV3993	000-3998
V10	1A06	2504	H.F. pentode	CV133 (CV4014)	000-0138 000-4014
V11	1BD3	2511	Heptode	CV453 (CV4012)	000-0453 000-4012
V12	1BD6	2511	H.F. pentode	CV133 (CV4014)	000-0138 000-4014
V13	1BB9	2504	Heptode	CV453 (CV4012)	000-0453 000-4012
V14	1BH3	2514	Variable μ h.f. pentode	CV454 (CV4009)	000-0454 000-4009
V15	1BD9		Variable μ h.f. pentode	CV454 (CV4009)	000-0454 000-4009
V16	1BK3	2514	Variable μ h.f. pentode	CV454 (CV4009)	000-0454 000-4009
V17	1BG9	2513	Variable μ h.f. pentode	CV454 (CV4009)	000-0454 000-4009
V18	1BJ6	2514	Double diode	CV140 (CV4025)	000-0140 000-4025
V19	1BN6	2514	H.F. pentode	CV133 (CV4014)	000-0138 000-4014
V20	1BP9	2504	Rectifier	CV1377	000-1377
V21	1BN3	2514	Double diode	CV140 (CV4025)	000-0140 000-4025
V22	1BP3		H.F. pentode	CV133 (CV4014)	000-0138 000-4014
V23	1BP6		H.F. pentode	CV133 (CV4014)	000-0138 000-4014

Note: Valve numbers shown in brackets are the new preferred valves.

Table 2501 - (cont)

Cct Ref	Location		Description	Tol %	VAOS No
	Circuit Diagram	Layout Diagram			
CRYSTALS					
XL1	1AE11	2504	1Mc/s	0.005	ZDK 1000kc/s
XL2	3BM1	2513	100,036c/s	0.005	5955-99-972-9799
XL3	3BM2	2513	100,110c/s	0.005	5955-99-972-9801
XL4	3BM2	2513	100,270c/s	0.005	5955-99-972-9803
XL5	3BM3	2514	99,964c/s	0.005	5955-99-972-9800
XL6	3BM3	2514	99,890c/s	0.005	5955-99-972-9802
XL7	3BM4	2514	99,730c/s	0.005	5955-99-972-9804
Cct Ref	Location		Function	VAOS No	
	Circuit Diagram	Layout Diagram			
INDUCTORS					
L1	3DC8	2509	0-30Mc/s filter	5950-99-972-9552	
L2	1AF9	2506	Crystal anode coil	5950-99-972-9565	
L3	3DC8	2509	0-30Mc/s filter	Combined with L1	
L4	1AD3	2505	Aerial tuning	5950-99-972-9567	
L5	1AD3	2505	Aerial tuning	5950-99-972-9575	
L6	1AD2	2505	Aerial tuning	5950-99-972-9571	
L7	1AD2	2505	Aerial tuning	5950-99-972-9572	
L8	1AD2	2505	Aerial tuning	5950-99-972-9573	
L9	1AD1	2505	Aerial tuning	5950-99-972-9570	
L10	3BD8	2509	0-30Mc/s filter	Combined with L1	
L11	3BD8	2509	0-30Mc/s filter	Combined with L1	
L12	3BE8	2509	0-30Mc/s filter	Combined with L1	
L13	1AH9	2506	Harmonic filter	5950-99-972-9553	
L14	1AH9	2506	Harmonic filter	Combined with L13	
L15	3BE8	2509	0-30Mc/s filter	Combined with L1	
L16	1AJ9	2506	Harmonic filter	Combined with L13	
L17	3BF8	2509	0-30Mc/s filter	Combined with L1	
L18	1AJ9	2506	Harmonic filter	Combined with L13	
L19	1AJ9	2506	Harmonic filter	Combined with L13	
L20	1AK8	2506	First v.f.o. anode coil	5950-99-972-9577	
L21	1AK9	2506	Harmonic filter	Combined with L13	
L22	1AK9	2506	Harmonic filter	Combined with L13	
L23	3BB1		40Mc/s filter	5950-99-972-9560	
L24	3BB4		37.5Mc/s filter	5950-99-972-9554	
L25	3BB1		40Mc/s filter	5950-99-972-9560	
L26	3BC4		37.5Mc/s filter	5950-99-972-9554	
L27	1AJ2	2508	R.F. amplifier anode coil	5950-99-972-9558	
L28	1AL9	2505	37.5Mc/s mixer anode coil	5950-99-972-9562	
L29	3BC1		40Mc/s filter	5950-99-972-9560	
L30	3BC4		37.5Mc/s filter	5950-99-972-9554	
L31	3BC1		40Mc/s filter	5950-99-972-9560	
L32	3BD4		37.5Mc/s filter	5950-99-972-9554	

Table 2501 - (cont)

Cct Ref	Location		Function	VAOS No
	Circuit Diagram	Layout Diagram		
L33	3AN9	2505	37.5Mc/s amplifier anode coil	5950-99-972-9562
L34	3BE1		40Mc/s filter	5950-99-972-9560
L35	3BE4		37.5Mc/s filter	5950-99-972-9554
L36	1AL7	2509	First v.f.o.	5950-99-972-9556
L37	3BE1		40Mc/s filter	5950-99-972-9560
L38	3BF4		37.5Mc/s filter	5950-99-972-9554
L39	3BF1		40Mc/s filter	5950-99-972-9560
L40	3BF4		37.5Mc/s filter	5950-99-972-9554
L41	3BG1		40Mc/s filter	5950-99-972-9560
L42	3BG4		37.5Mc/s filter	5950-99-972-9554
L43	1AR3	2504	Choke	5950-99-972-3034
L44	1AR9	2504	Filter coil	5950-99-972-9555
L45	1A01	2504	Choke	5950-99-972-3034
L46	1A01	2504	Filter coil	5950-99-972-9555
L47	3BJ2	2514	Crystal input transformer	5950-99-972-9563
L48	3BJ2	2514	Crystal input transformer	5950-99-972-9563
L49	3BJ3	2514	Crystal input transformer	5950-99-972-9563
L50	1A05	2504	37.5Mc/s tapped anode coil	5950-99-972-9569
L51	1AQ3	2505	Second mixer anode choke 10Mc/s	5950-99-972-9550
L52	1AQ4	2505	Second mixer trap 37.5Mc/s	5950-99-972-9549
L53	1AQ5	2504	Filter	5950-99-972-9559
L54	1AQ6	2504	Filter	5950-99-972-9559
L55	1BB6	2510	Second v.f.o. coil	5950-99-972-9551
L56	1BC1	2511	Choke	5950-99-972-3034
L57	1BC2	2505	2-3Mc/s band pass filter	5950-99-972-9563
L58	1BC3	2505	2-3Mc/s band pass filter	5950-99-972-9563
L59	1BC4	2505	2-3Mc/s b.p. filter transformer	5950-99-972-9564
L60	1BC4	2505	2-3Mc/s b.p. filter transformer	Combined with L59
L61	3BJ6	2514	First 100kc/s filter stage	5950-99-972-9557
L62	3BJ7	2514	First 100kc/s filter stage	Combined with L61
L63	3BL6	2514	Second 100kc/s filter stage	5950-99-972-9573
L64	3BL7	2514	Second 100kc/s filter stage	Combined with L63
L65	1BF1	2510	Choke	5950-99-972-3034
L66	1BF1	2510	Filter coil	5950-99-972-9555
L67	3BM6	2514	Third 100kc/s filter stage	5950-99-972-9573
L68	3BM7	2514	Third 100kc/s filter stage	Combined with L67
L69	1BN9	2505	0.1Mc/s coupling coil	5950-99-972-9574
L70	1BB9	2505	0.1Mc/s coupling coil	Combined with L69
L71	3BN6	2514	Final 100kc/s filter stage	5950-99-972-9573
L72	1BJ2	2514	100kc/s i.f. first stage	5950-99-940-3481
L73	1BJ2	2514	100kc/s i.f. first stage	5950-99-940-3481
L74	1BJ2	2514	100kc/s i.f. first stage	5950-99-940-3481
L75	1BD9	2505	0.9Mc/s anode coil	5950-99-972-9576
L76	1BG9		I.F. output	5950-99-940-3482
L77	1BL2	2514	100kc/s i.f. final stage	5950-99-940-3480
L78	1BL2	2514	100kc/s i.f. final stage	5950-99-940-3480
L79	1BL2	2514	100kc/s i.f. final stage	5950-99-940-3480
L80	1BO9	2505	Smoothing choke	5950-99-972-3943
L81	1DK6	2514	150mH choke	5950-99-972-9561

Table 2501 - (cont)

Cct Ref	Location		Function	VAOS No
	Circuit Diagram	Layout Diagram		
L32	1BM7		B.F.O. coil	5950-99-972-9566
L33	1AC5		Aerial filter coil	5950-99-911-0554
L34	1AC6		Aerial filter coil	5950-99-911-0554
L35	1AC7		Aerial filter coil	5950-99-911-0554
TRANSFORMERS				
T1	1BP10	2505	Mains transformer	5950-99-911-6456
T2	1BP1	2504	Audio output transformer	5950-99-911-6455
T3	1BP5	2505	A.F. line output transformer	5950-99-911-6454
SWITCHES				
SA1F	1AF5	2504	Aerial attenuator	5930-99-920-6716
SA2F	1AE5	2504	Aerial attenuator	Combined with SA1F
SB1F	1AC3	2503	Frequency selection	5930-99-972-3849
SB2F	1AG3	2503	Frequency selection	Combined with SB1F
SB3F	1AE3	2503	Frequency selection	Combined with SB1F
SB3B	1AF2	2503	Frequency selection	Combined with SB1F
SC1F	3BJ2	2514	Crystal filter	5930-99-972-3852
SC2F	3B02	2514	Crystal filter	Combined with SC1F
SC3F	3BL2	2514	Crystal filter	Combined with SC1F
SD1F	3BK7	2514	100kc/s filter	5930-99-972-3853
SD2F	3BH6	2514	100kc/s filter	Combined with SD1F
SD2B	3BH7	2514	100kc/s filter	Combined with SD1F
SD3F	3BL7	2514	100kc/s filter	Combined with SD1F
SD4F	3BN7	2514	100kc/s filter	Combined with SD1F
SD5F	3D06	2514	100kc/s filter	Combined with SD1F
SE1	1DM3	2504	System switch	5930-99-972-3851
SE2	1D05	2504	System switch	Combined with SE1
SE3	1DM11	2504	System switch	Combined with SE1
SF1	1BH7	2504	A.V.C.	5930-99-972-3848
SG	1BN5	2504	B.F.O.	5930-99-051-0554
SH	1BN5	2504	Noise limiter	5930-99-051-0554
SJ	1BL3	-	Meter	5930-99-051-0554
SK	1BE10	2504	Mains	5930-99-051-0554
SL	1BQ4	-	Speaker	5930-99-051-0554
PLUGS AND SOCKETS				
PL1	1AB5	2506	Aerial input	5935-99-054-0101
SKT1	1AB5		Aerial input	5935-99-054-9023
PL2	1AH11	2506	1Mc/s output	5935-99-054-0151
SKT2	1BA10	2505	1Mc/s crystal calibrator	5935-99-054-0155
PL3	1AH11	2505	1Mc/s output	5935-99-054-1051
PL3A	1AJ11		1Mc/s output	5935-99-054-0152
SKT3	1AH11		RA37 output	5935-99-054-0155
PL4	1AR3		2-3Mc/s b.p. filter input	5935-99-054-0151
SKT4	1AR3	2505	2-3Mc/s b.p. filter input	5935-99-054-0155

Table 2501 - (cont)

Cct Ref	Location		Function	VAOS No	
	Circuit Diagram	Layout Diagram			
PL5	1B35	2505	RA37 input	5935-99-054-0152	
PL6	1BE3	2511	Crystal filter input	5935-99-054-0151	
SKT6	1BE3		Crystal filter input	5935-99-054-0155	
PL7	1BA3		Crystal calibrator input	5935-99-940-3342	
SKT7	1BF2	2511	Crystal calibrator input	5935-99-056-0149	
PL3	1BH9	2505	100kc/s i.f. output	5935-99-054-0101	
SKT3	1BH9		100kc/s i.f. output	5935-99-054-9023	
PL9	1BH10	2505	100kc/s i.f. output	5935-99-054-0101	
SKT9	1BH10		100kc/s i.f. output	5935-99-054-9023	
PL10	1BR10	2504	Mains input	5935-99-056-0060	
SKT10	1BR10		Mains input	5935-99-056-0100	
PL11	1BC6		Second v.f.o. output	5935-99-056-0151	
JK1	1BR3	2504	Headphone jack	5935-99-940-9312	
JK2	1BR3	2504	Headphone jack	5935-99-940-9312	
Cct Ref	Location		Value	Function	VAOS No
	Circuit Diagram	Layout Diagram			
MISCELLANEOUS					
MR1	1BQ7	2504	200µA	Meter rectifier	6130-99-943-6133
M1	1BL3		200µA	Meter	6625-99-943-6523
	1BR4		2.1/2"	Loudspeaker	5965-99-972-9307
FS1	1BQ9	2504	3Ω		
			2A	Mains fuse	5920-99-059-0110
FS2	1BN9		350mA	H.T. fuse	5920-99-972-7902
ILP1	1BP11		3V, 1.6W	Mains indicator	6240-99-995-1201

Table 2502 - Typical valve electrode potentials

Cct Ref	Anode V	Screen V	Cathode V	Notes
V1	180	180	40	All voltages measured using a multi-range meter with a resistance of 20,000Ω per volt
V2	200	70	-	
V3	180	140	1.0	
V4	210	160	2.0	
V5	210	200	-	
V6	210	140	1.7	
V7	180	150	0.5	
V8	200	190	1.3	
V9	190	130	1.3	
V10	210	210	2.0	
V11	210	90	1.2	
V12	60	170	-	
V13	250	90	2.0	
V14	200	95	1.6	
V15	230	130	6.0	
V16	200	60	0.3	
V17	160	100	1.6	
V18	-	-	25	
V19	180	210	-	
V20	250	250	250	
V21	-	-	-	
V22	220	230	2.5	
V23	220	230	2.3	

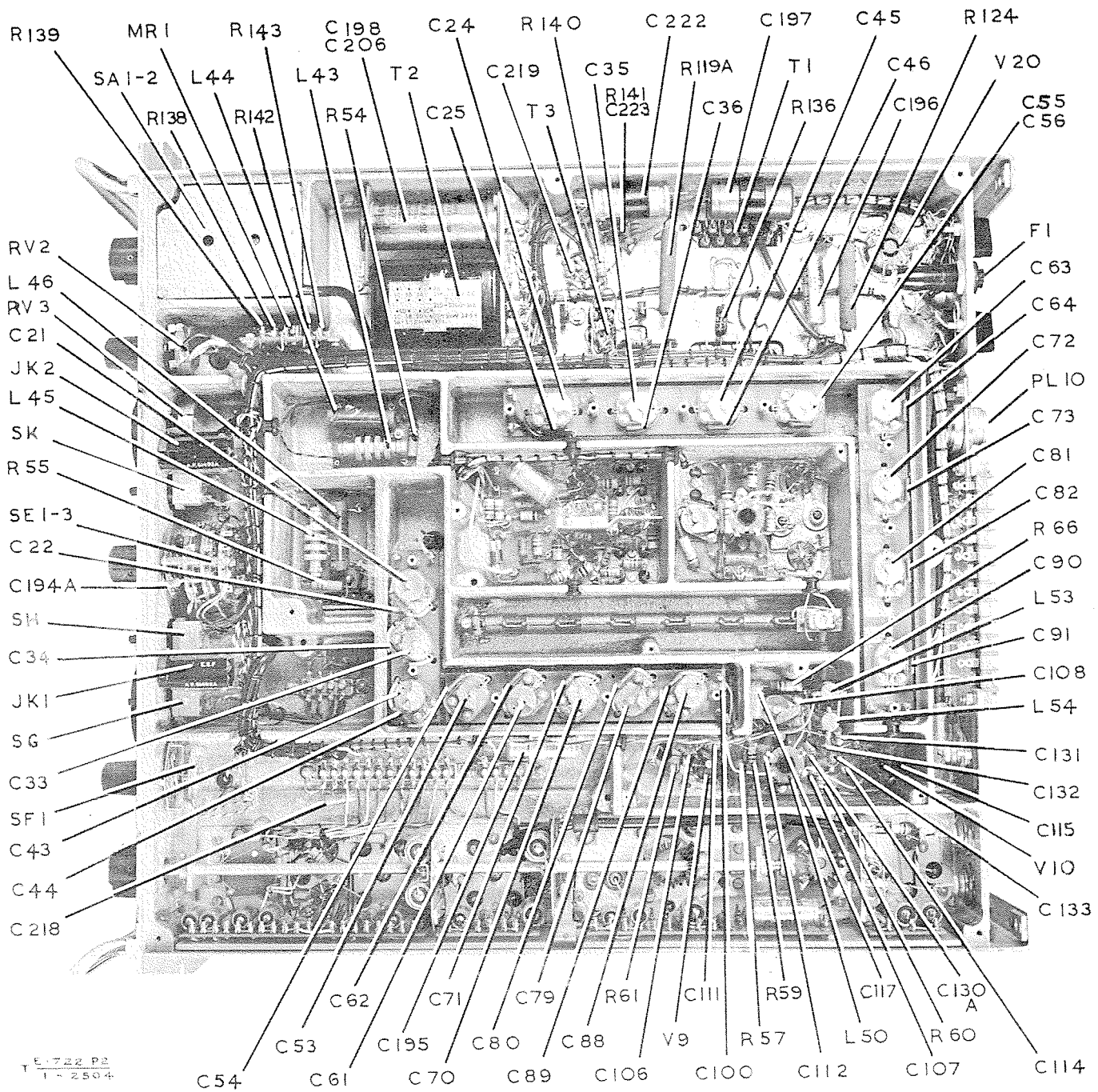
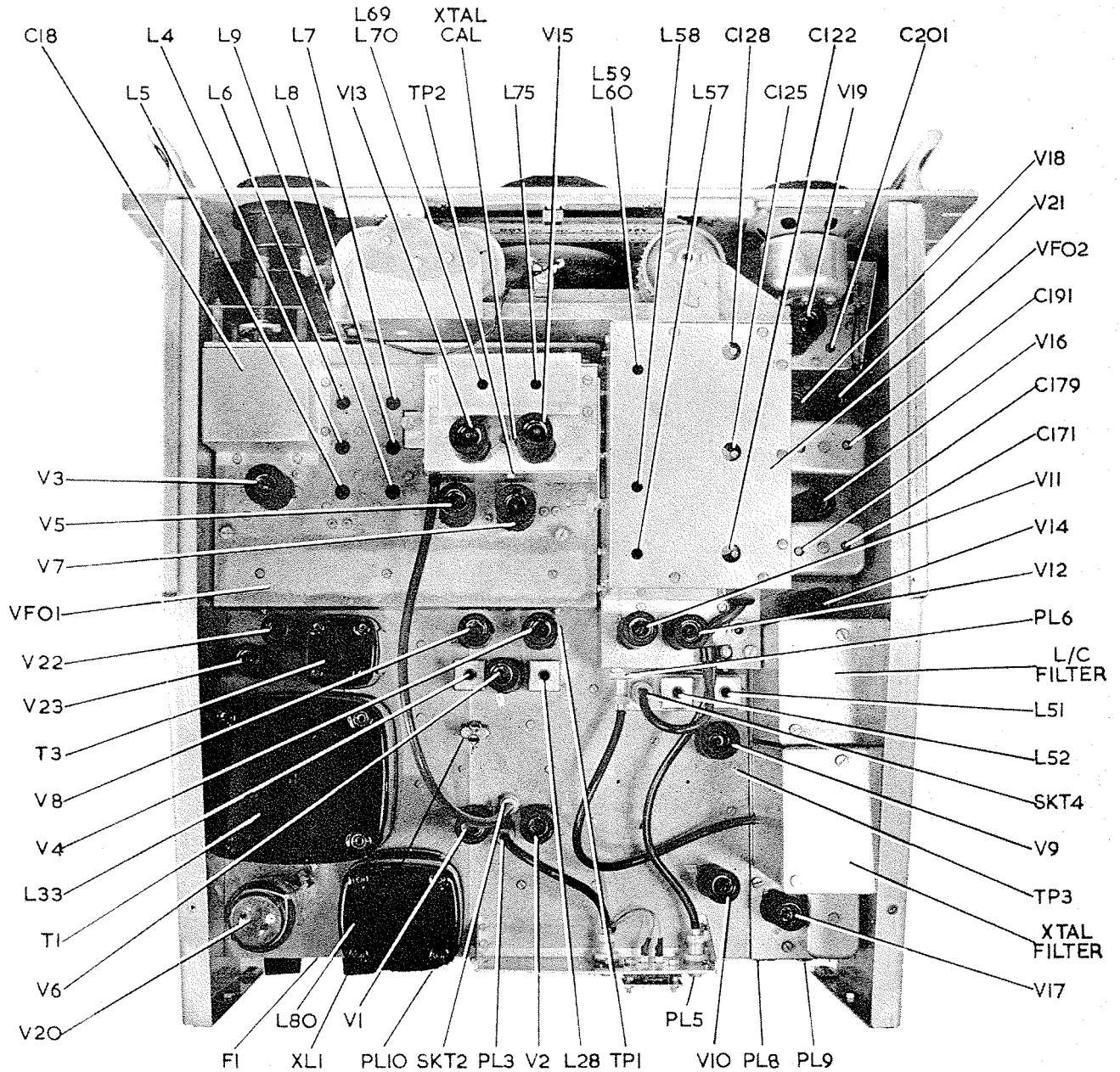
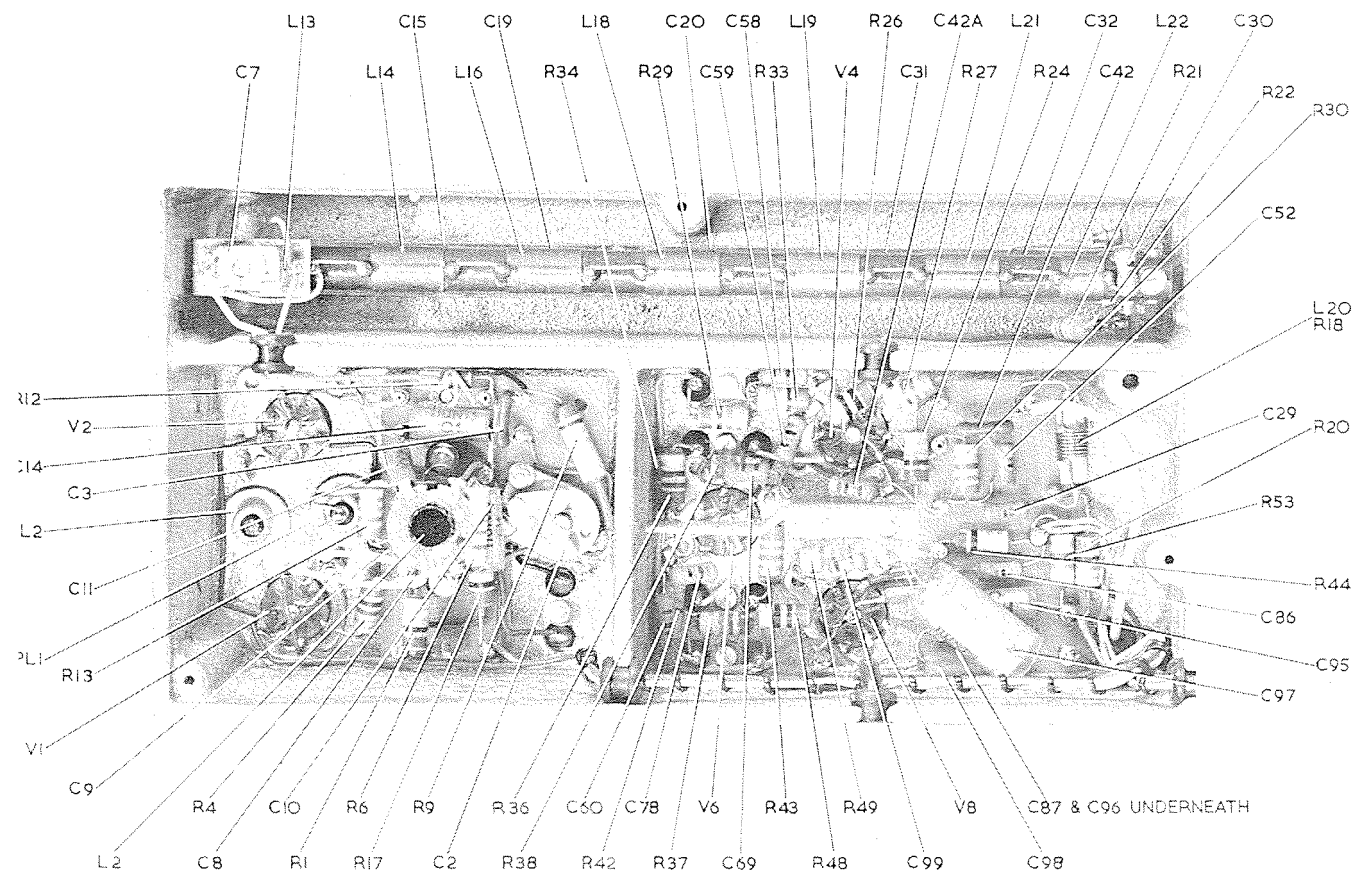


Fig 2504 - Under chassis view



T. E722 P12
1-2505

Fig 2505 - Chassis assembly top



T E722 Pt 2
 1-2506

Fig 2506 - Crystal oscillator and harmonic filter system (underside)

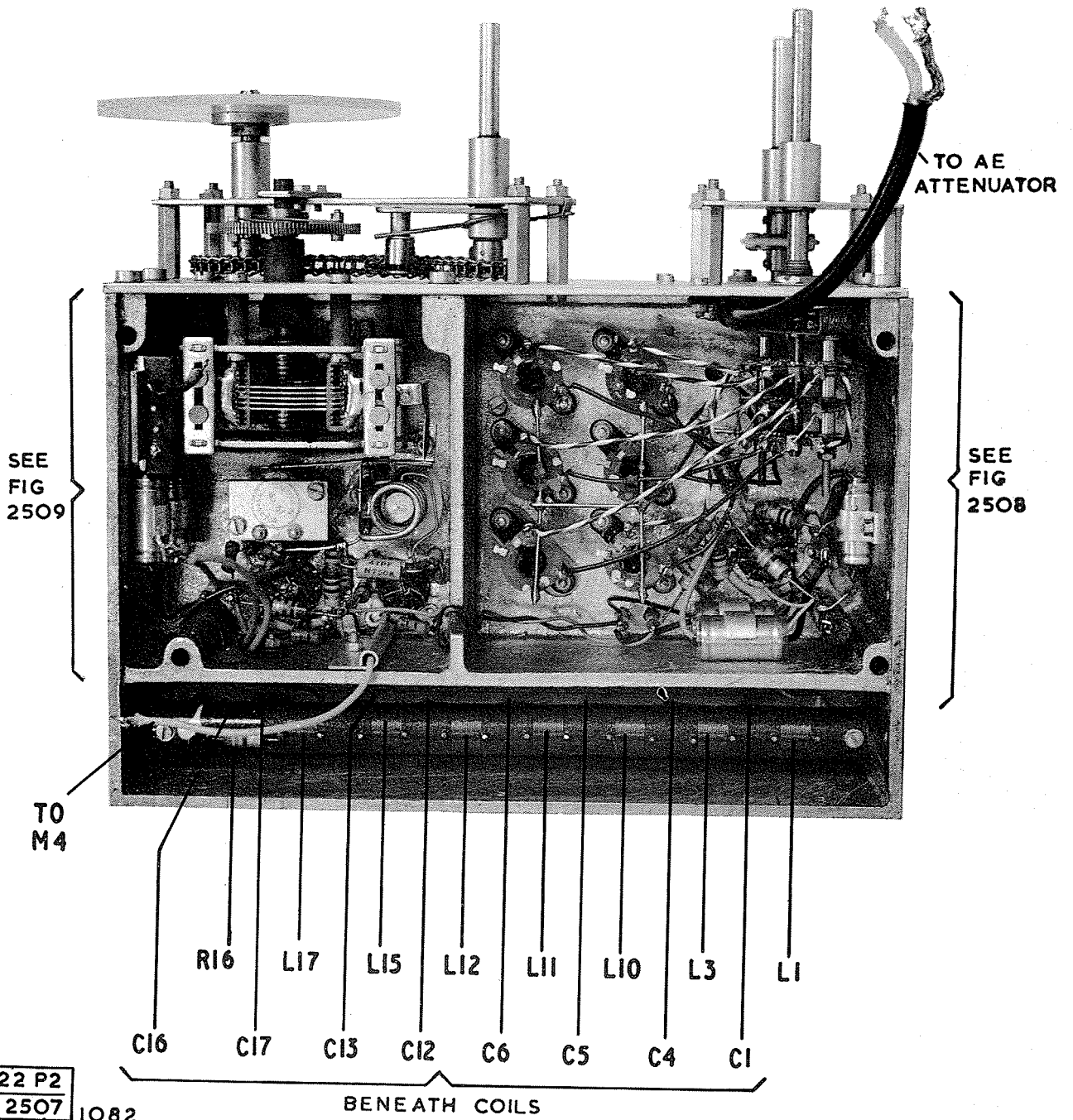
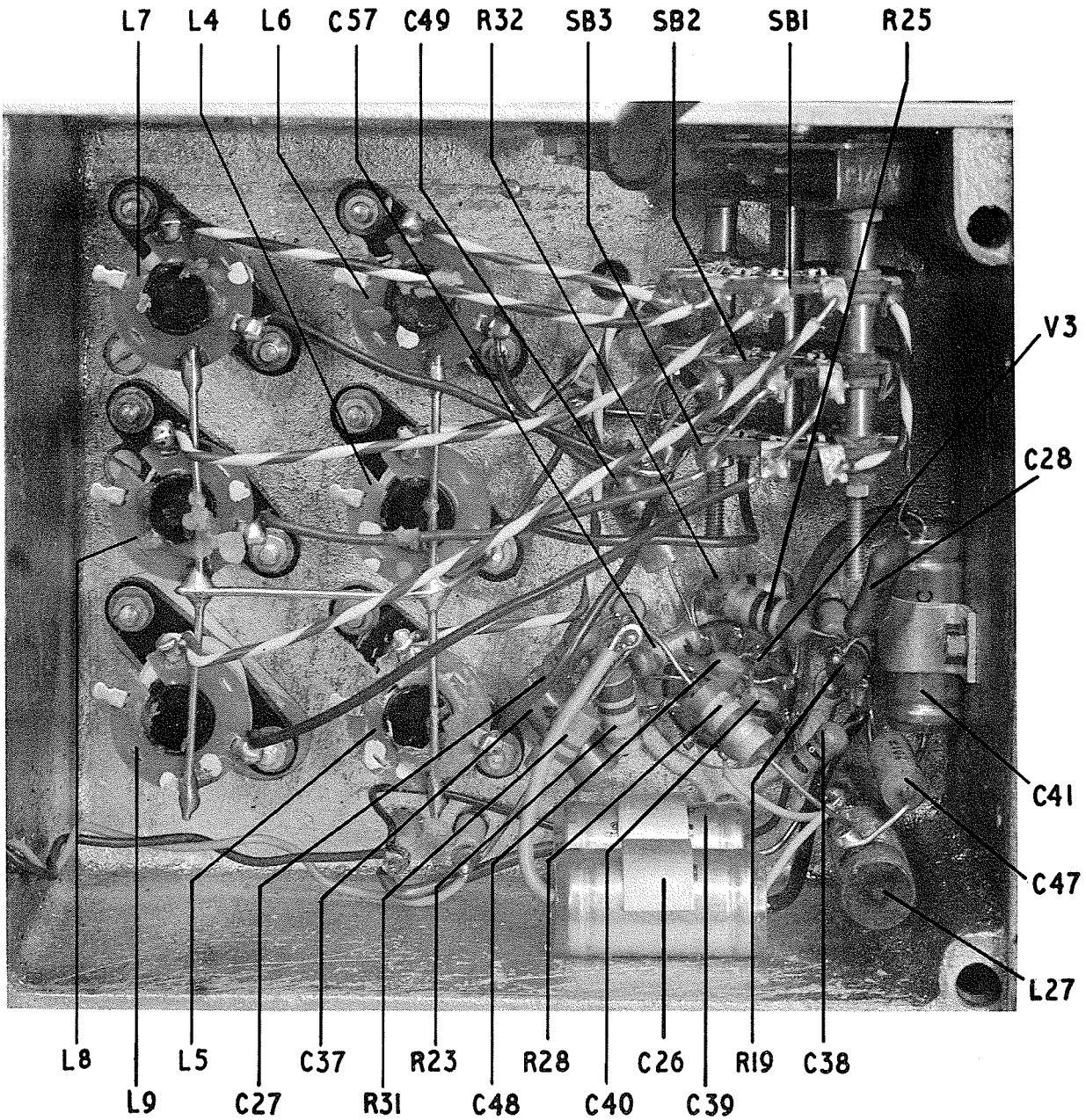
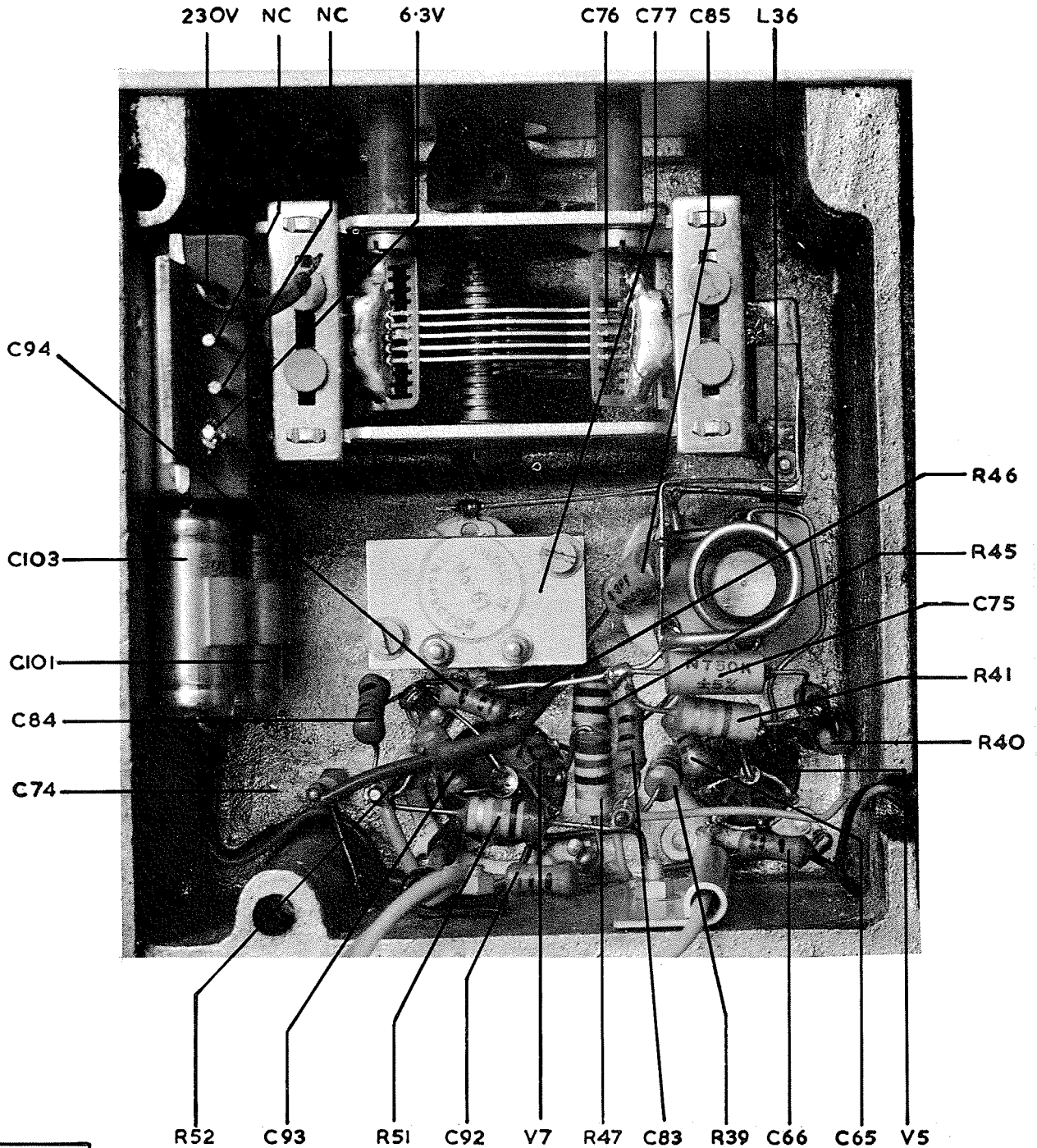


Fig 2507 - V.F.0-1 chassis (underside)



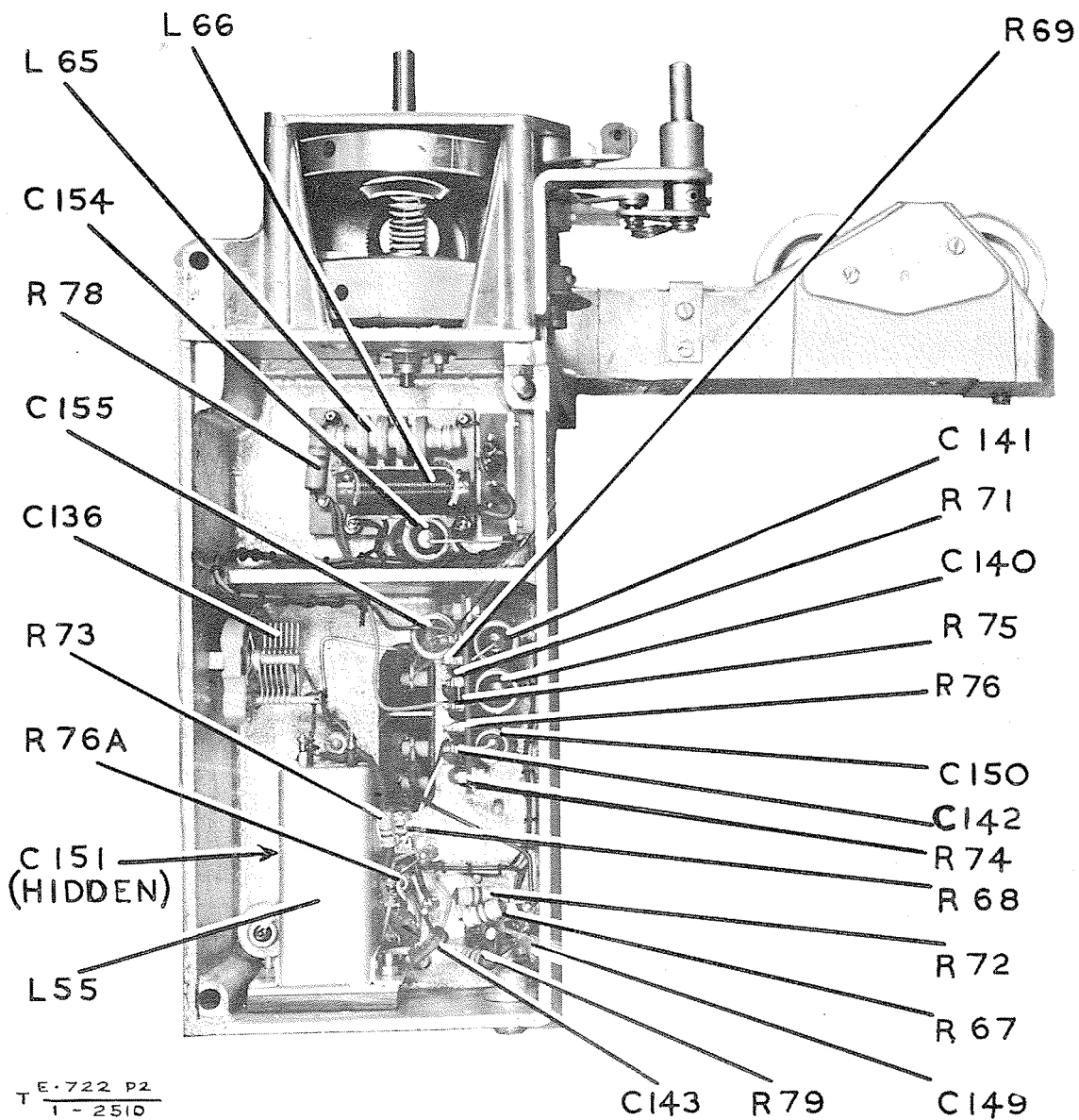
T E722 P2
1-2508 1082

Fig 2508 - Section of v.f.o.-1 chassis



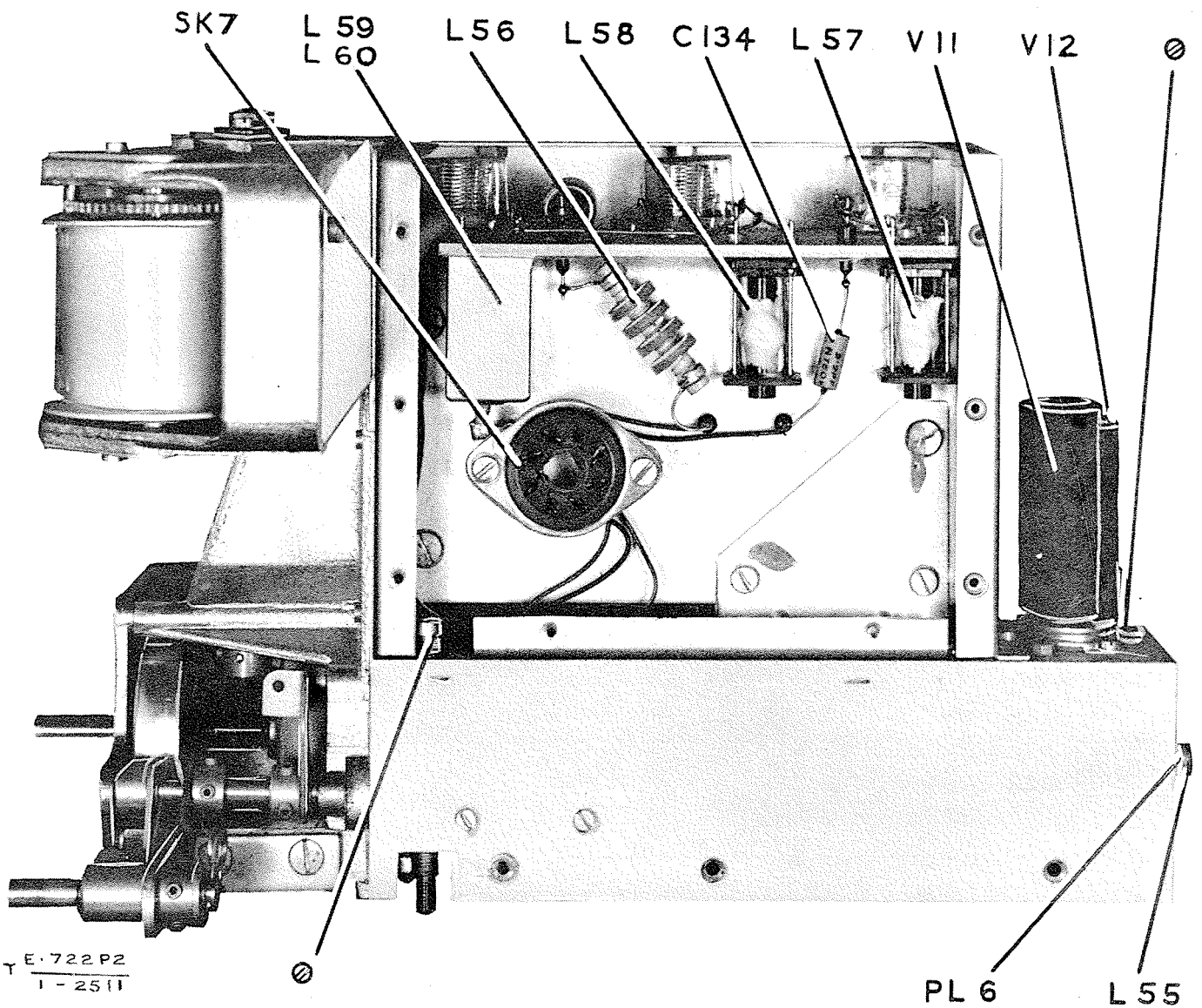
T E722 P2
I-2509 1082

Fig 2509 - Section of v.f.o-1 chassis



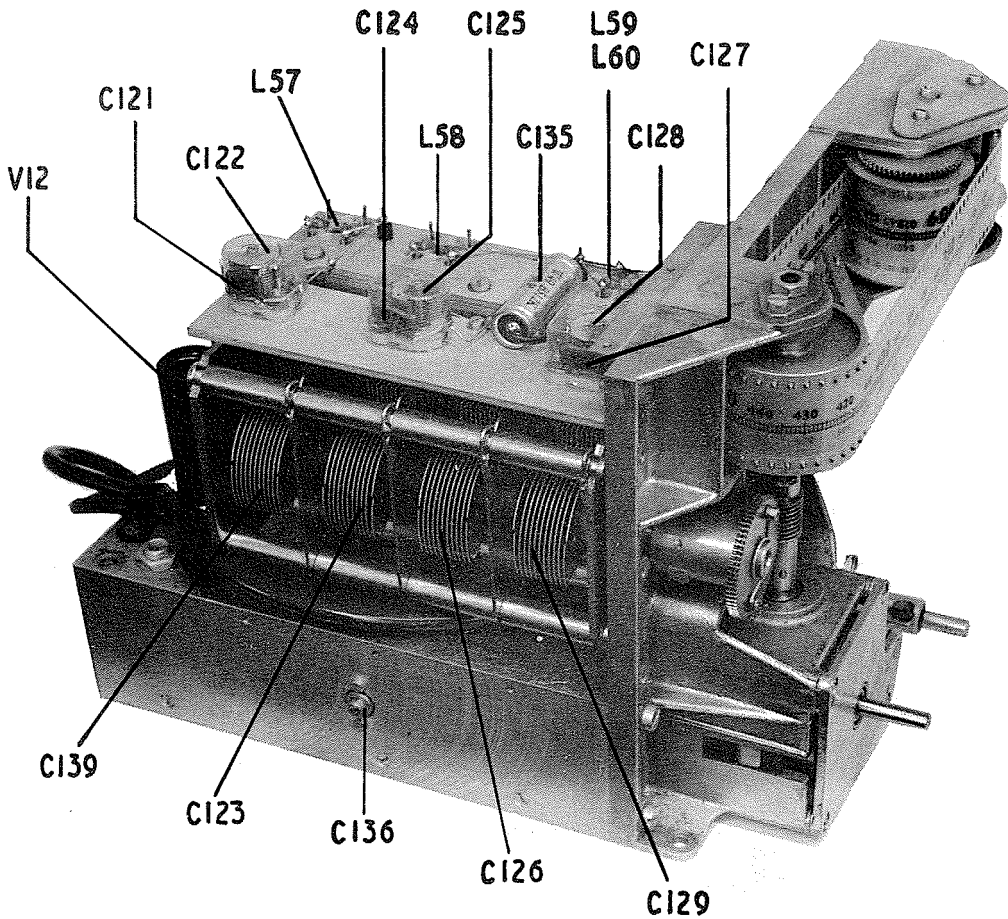
T E-722 P2
1-2510

Fig 2510 - V.F.O.-2 chassis (underside)



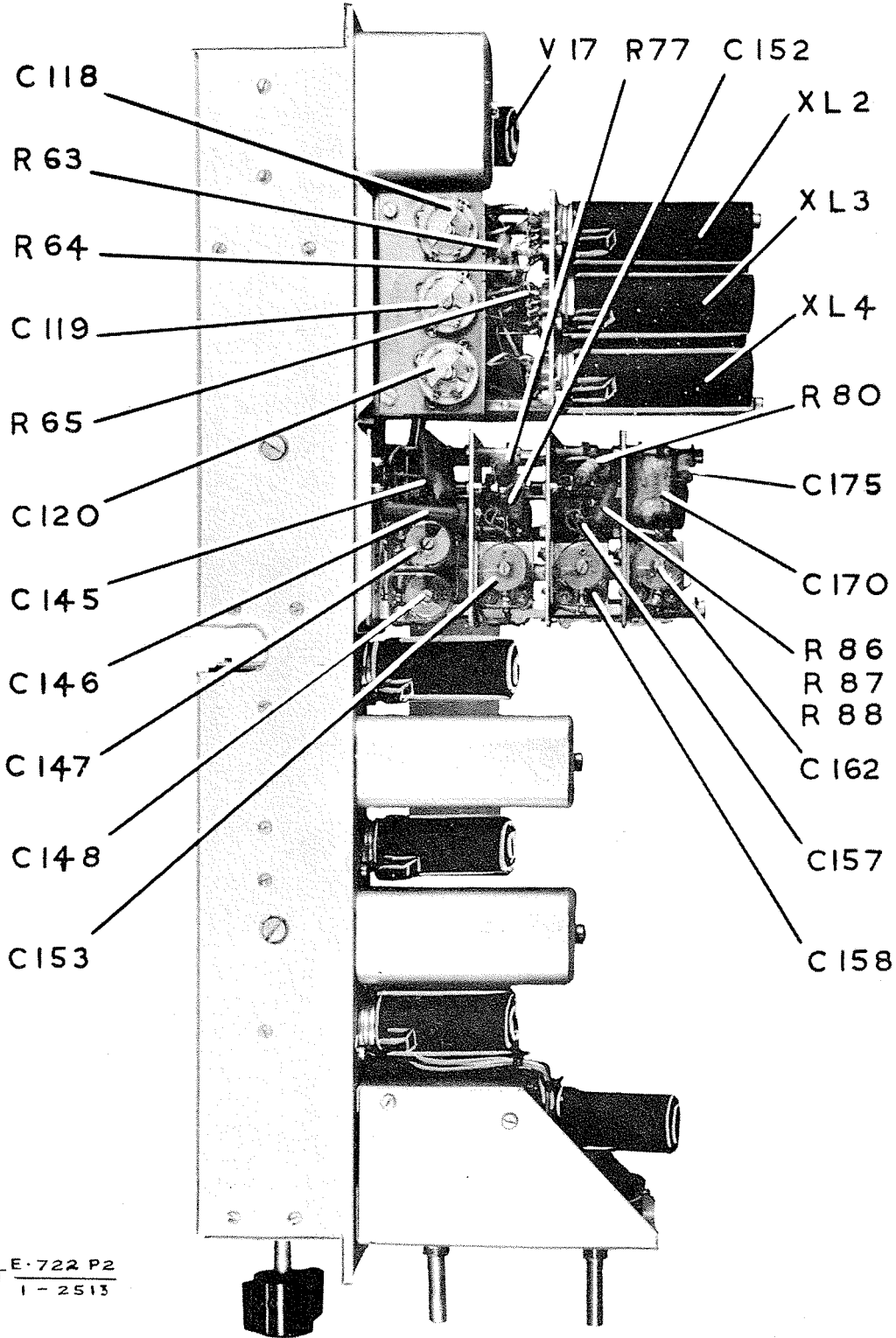
T E. 722 P2
1 - 2511

Fig 2511 - V.F.O.-2 chassis (r.h. side)



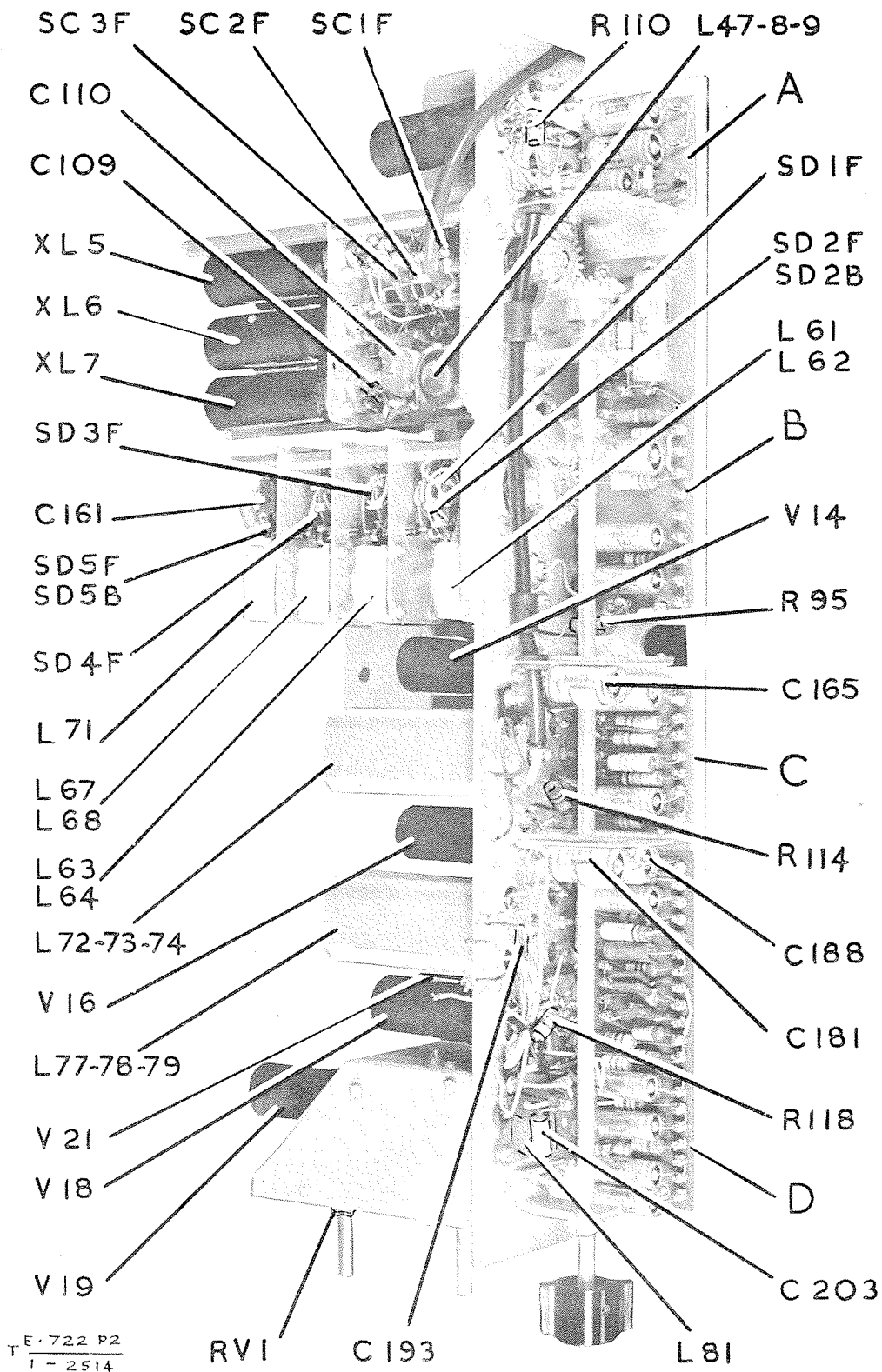
T E722 P2
1-2512 1082

Fig 2512 - V.F.0-2 chassis (l.h. side)



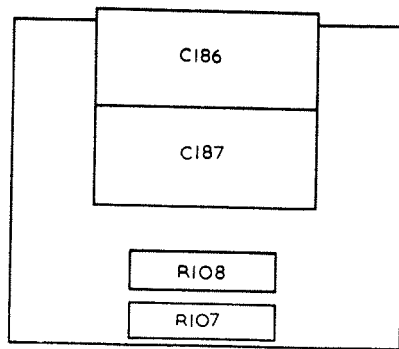
T E-722 P2
1-2513

Fig 2513 - 100kc/s i.f. strip (l.h. side)

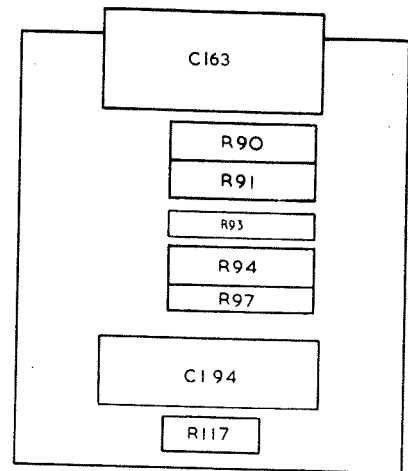


T E 722 P2
I - 2514

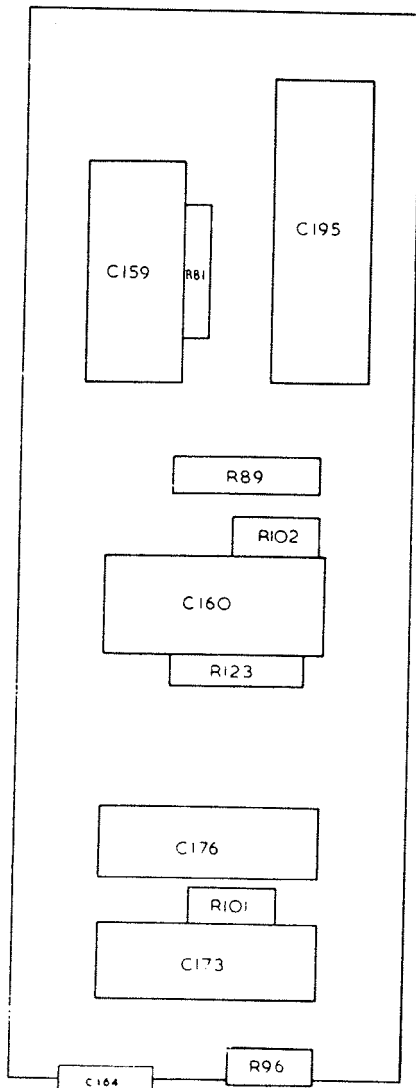
Fig 2514 - 100kc/s i.f. strip (r.h. side)



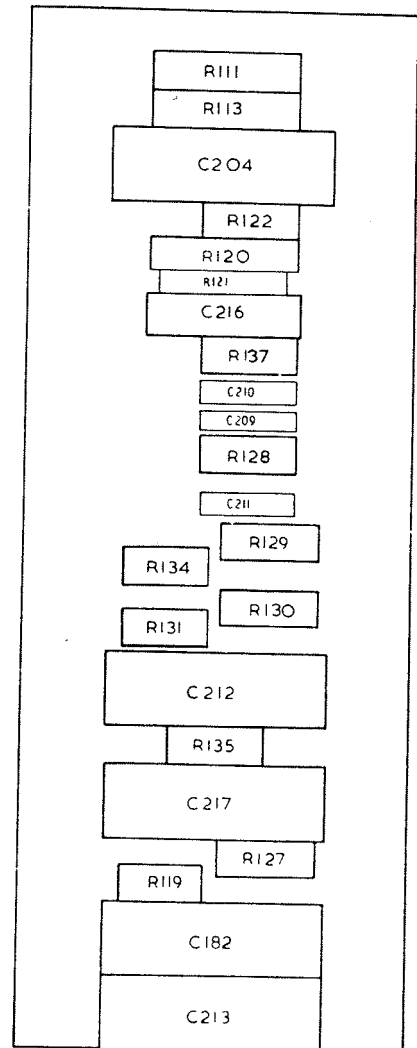
A



C



B



D

T E 722 P2
1-2515 1082/51

57/Maint/7678 Fig 2515 - Component tag panels 100kc/s i.f. strip
Issue 1, 28 Feb 62

R E S T R I C T E D

ELECTRICAL AND MECHANICAL
ENGINEERING REGULATIONS
(By Command of the Defence Council)

TELECOMMUNICATIONS
E 722
Part 2

RECEIVER, RADIO, RACAL, TYPE RA17

FORWARD CODING

Note: The following list of Assembly Codes must be used in conjunction with EMER Mgmt J 021 Part 4

Assembly Code	Designation
0001	Cabinet, receiver, radio
0010	Front panel assembly
0020	Main chassis
0030	First variable frequency oscillator
0040	Second variable frequency oscillator
0050	100kc/s i.f. strip
0060	Beat frequency oscillator
0070	Calibrator unit
0080	Adaptors:-
0081	L.F. adaptor, type RA37
0082	S.S.B. adaptor, type RA121
0083	Panoramic adaptor, type RA66
0084	Frequency shift terminals, type FSW1
0085	Regenerative repeater, type TRRIA
0086	Cathode ray monitor unit, type CRMI
0090	Cable loom
0100	Loudspeaker, p.m.
9999	Miscellaneous

EME/8c/1082/TELS

END

Issue 1, 1 Feb 67

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