General notes on using this regulation

Component schedules

1. Grid references are given in the form figure-letter-figure. The prefix figure refers to the drawing and the suffix letter and figure denote the actual grid reference on the drawing, eg 4C9 means that a component is located at C9 on Fig 2504.

2. The following abbreviations have been used in the 'Type and limit' column.

P.m.t.	=	Paper, metal, tubular
Mica S	=	Moulded silvered mica
Cer tub	=	Ceramic tubular
Cer disc	=	Ceramic disc
T.C.C.	=	Telegraph Condenser Co Ltd.
H.S.	=	High stability
Var w.w.	=	Variable wire wound
Comp ins	=	Composition insulated
P.T.F.E.	=	Polytetrafluorethylene
N080, P100 etc	=	Temperature compensated capacitors eg N080 means a negative change of capacitance of 80 parts per million per ^{o}C rise in temperature and P100 means a positive change of capacitance of 100 parts per million per ^{o}C rise in temperature

3. The limits shown in the 'Type and limit' column are in percentages except in the case of small capacitors when the actual capacitive tolerance is quoted.

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Fig 2501a - Circuit diagram
(Part 1), No 1 set

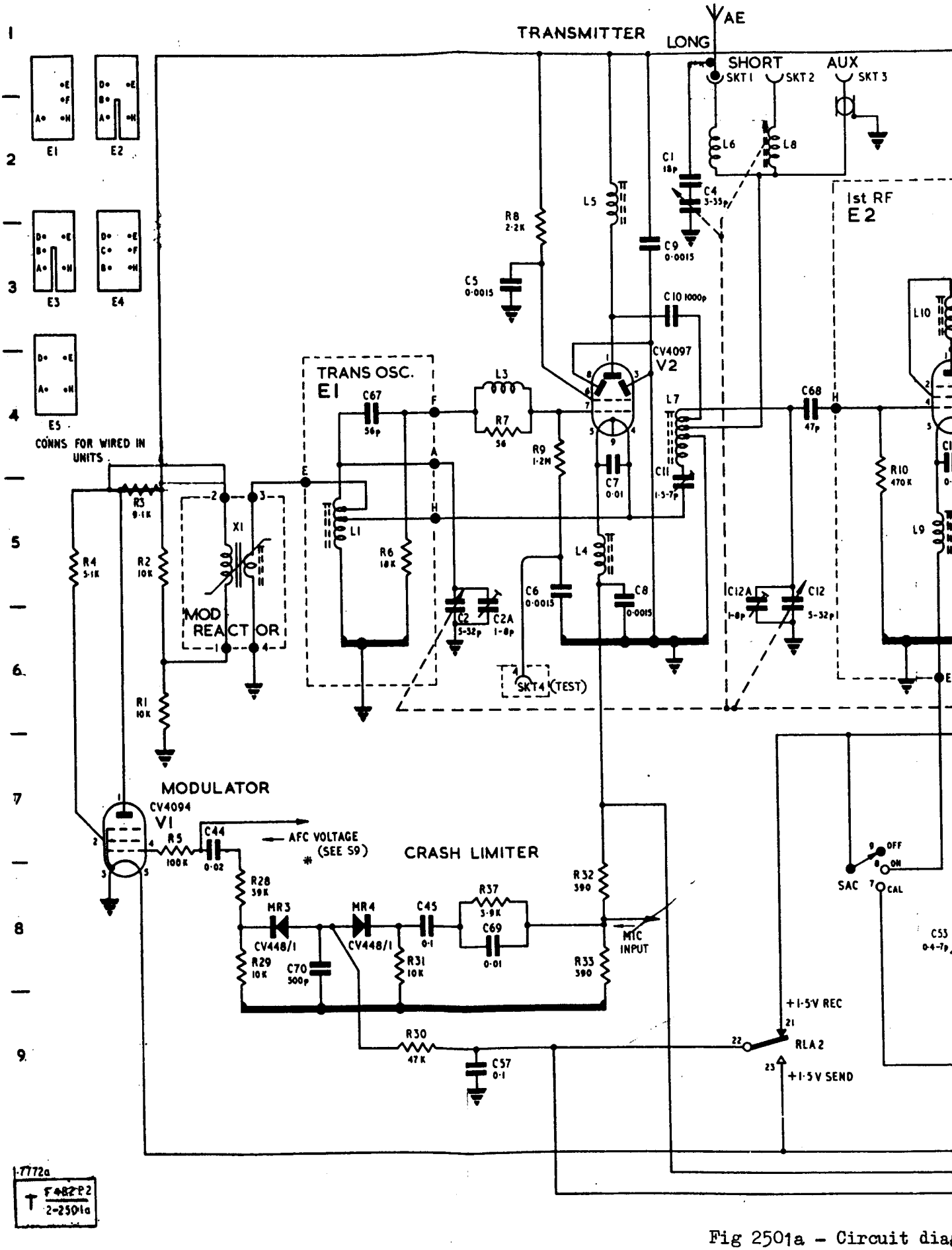

Fig 2501a - Circuit dia

(Note: Additional copies of this figure for use as

H | J | K | L | M | N | O |

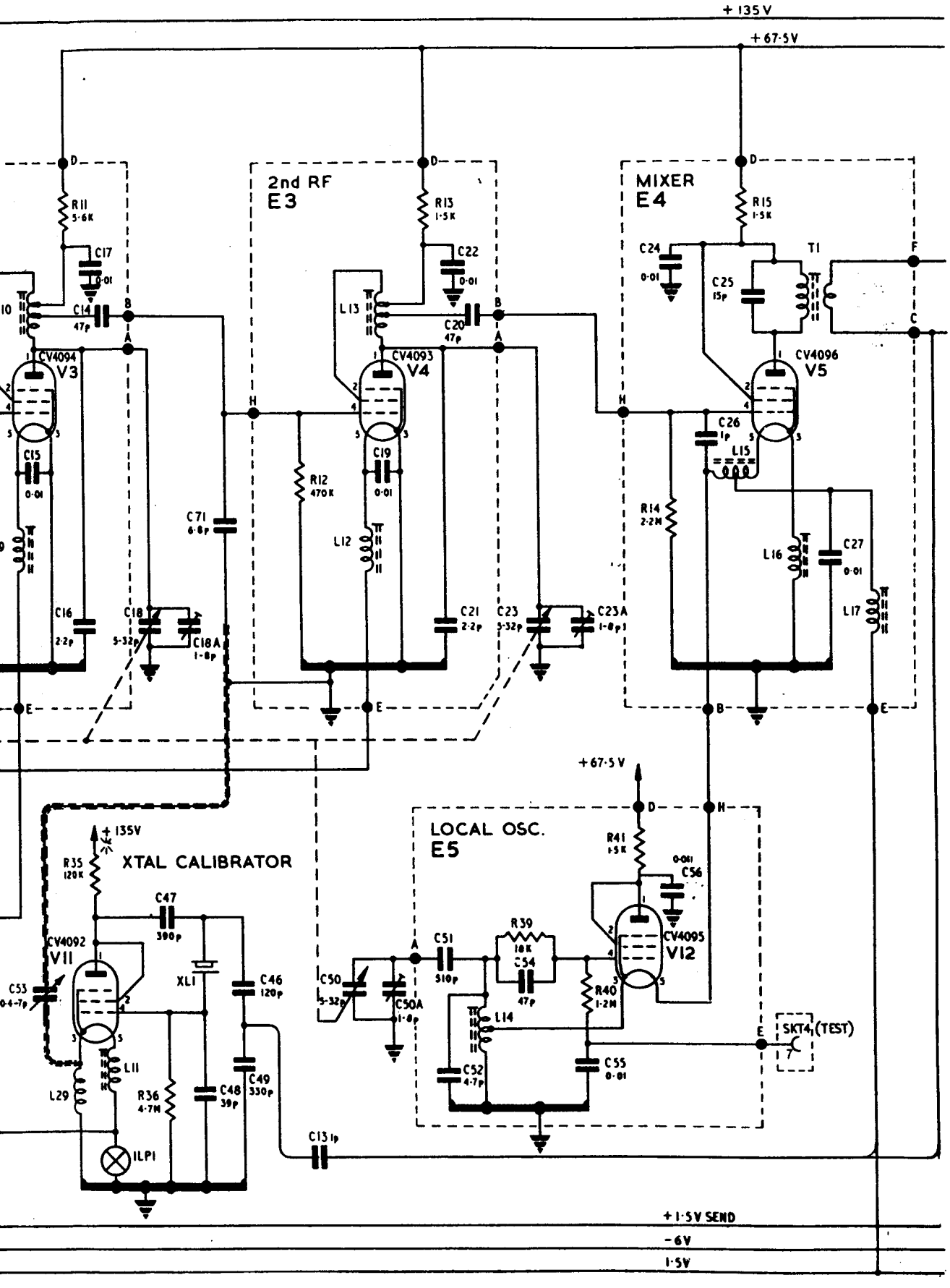

diagram (Part 1), No 1 set

as bench copies may be obtained on supplementary demand)

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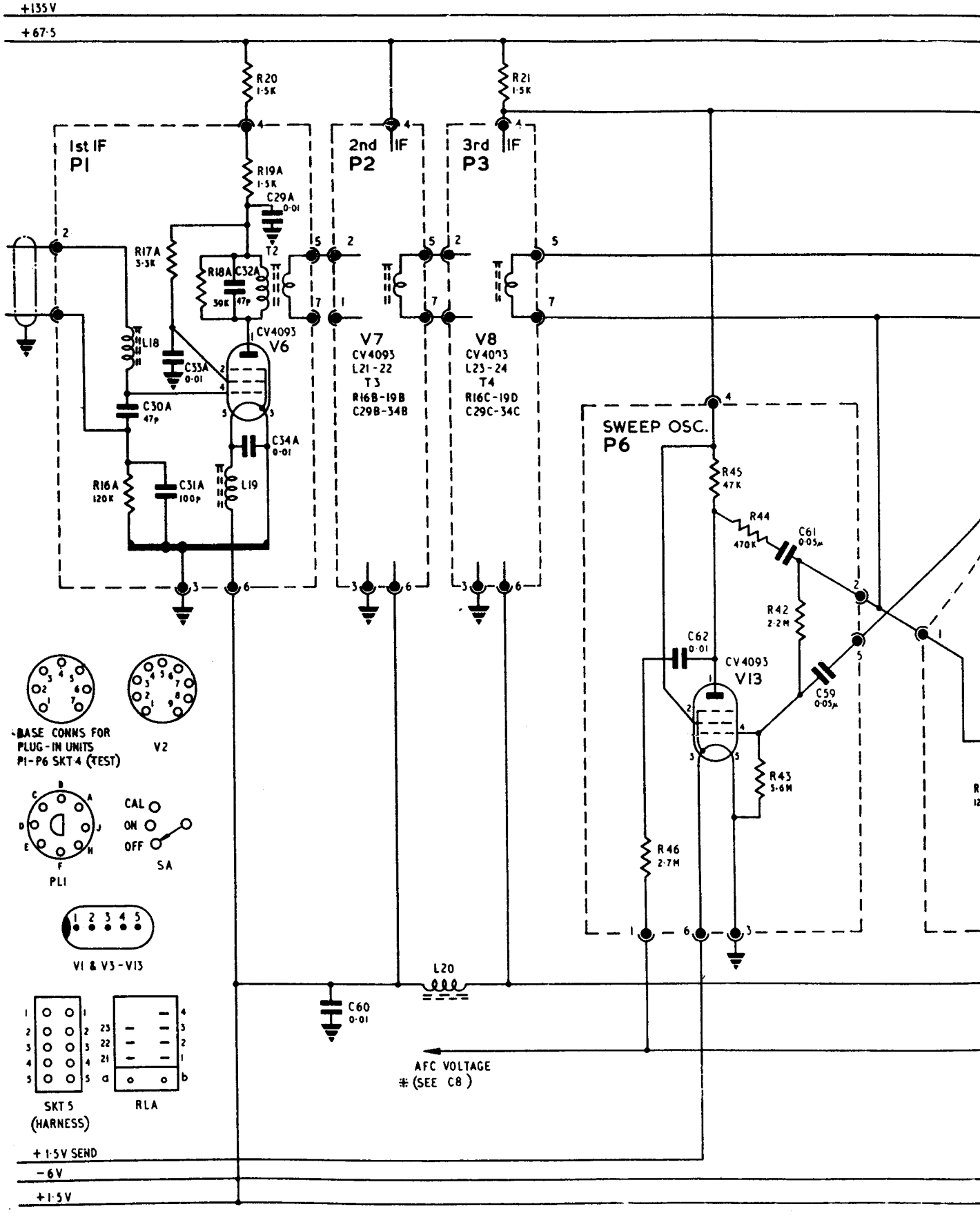
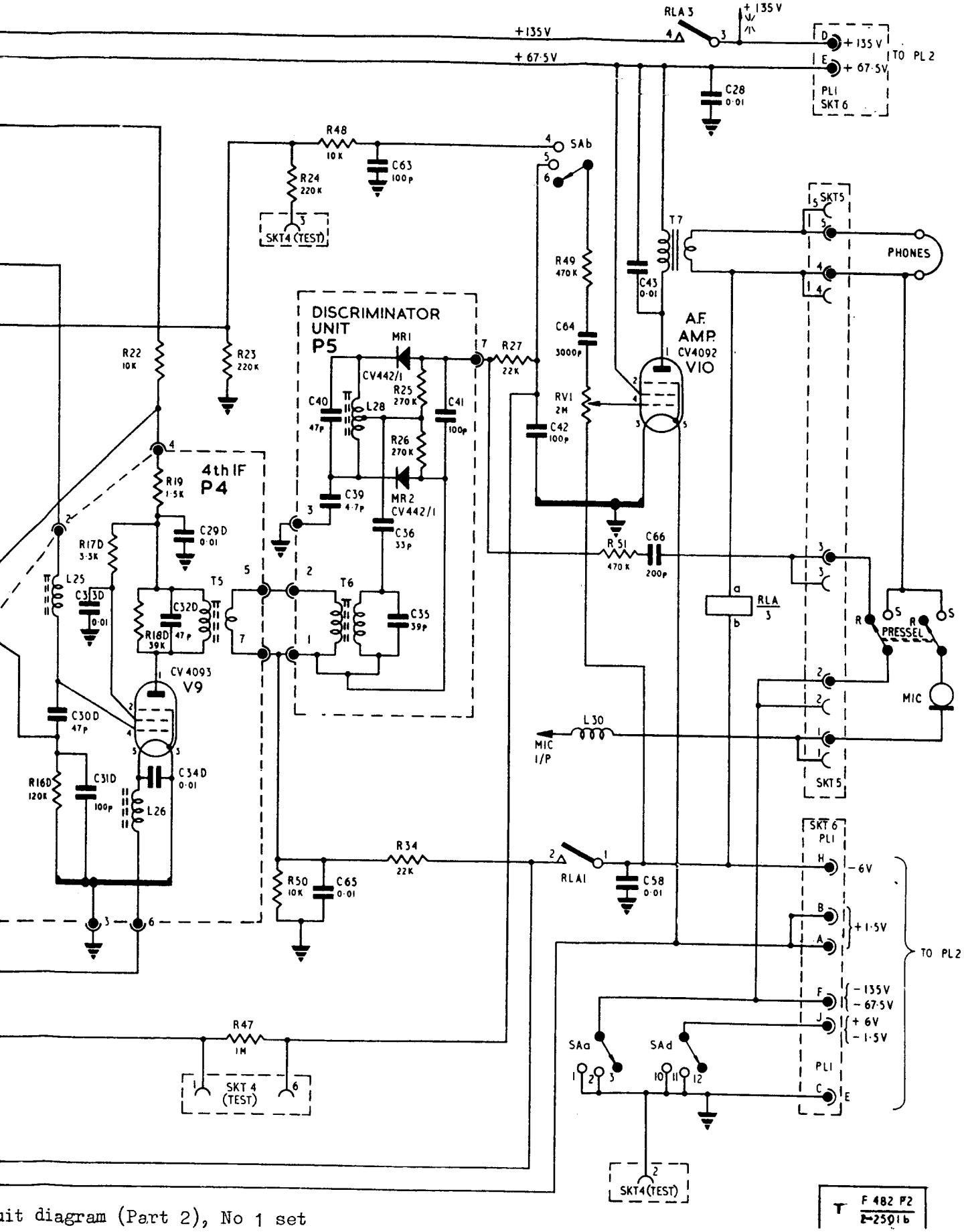


Fig 2501b - Circuit

(Note: Additional copies of this figure for use



uit diagram (Part 2), No 1 set

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Fig 2501b - Circuit diagram
(Part 2), No 1 set

Table 2501 - Chassis, top and underside, No 1 set - component schedule

Cct. ref.	Component location: Main cct.	Component location: Unit layout	Value	Rating	Type and limit		Part No
			RESISTORS				
R1	1B6	2M8	10kΩ	1/4W	Comp	±5	5905-99-021-9185
R2	1B5	2M8	10kΩ	1/4W	Comp	±5	5905-99-021-9185
R3	1B5	2M8	9.1kΩ	1/4W	Comp	±5	5905-99-021-9182
R4	1A5	2L8	5.1kΩ	1/8W	Comp	±5	5905-99-021-9163
R7	1D4	2C4	56Ω	1/4W	Comp	±5	5905-99-022-1029
R8	1E3	2N5	2.2kΩ	1/4W	Comp	±10	5905-99-022-2046
R9	1E4	2B5	1.2MΩ	1/4W	Comp	±10	5905-99-022-3175
R32	1E8	2K8	390Ω	1/4W	Comp	±10	5905-99-022-1184
R33	1E8	2K8	390Ω	1/4W	Comp	±10	5905-99-022-1184
R36	1J9	2E4	4.7MΩ	1/4W	Comp	±10	5905-99-022-3247
R37	1D8	2J8	3.9kΩ	1/4W	Comp	±10	5905-99-022-2079
			CAPACITORS				
C1	1F2	2B6	18pF	750V	Cer tub	±5	5910-99-011-8608
C4	1F2	2C5	3-35pF	500V	Air variable	-0 +20	5910-99-949-0091
C5	1D3	2N5	1500 + 1500pF	500V	T.C.C. 2cth 315/S	+100 -0	5910-99-949-0081
C6	1E5	2N5					
C7	1E4	2N5	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
C8	1E5	2N5	1500 + 1500pF	500V	T.C.C. 2cth 315/S	+100 -0	5910-99-949-0081
C9	1F3	2N5					
C10	1F3	2M5	1000pF	350V	Mica	±10	5910-99-012-4702
C11	1F4	2M5	2-10.5pF	250V	Air variable		5910-99-016-0040
C13	1K9	2E4	1pF	750V	Cer tub N.P.O.	±0.1pF	-
C45	1D8	2K8	0.1μF	150V	P.m.t.	±25	5910-99-011-5560
C46	1J8	2E4	120pF	350V	Mica	±5	-
C47	1J7	2F4	390pF	350V	Sintered	±5	-
C48	1J9	2E4	39pF	750V	Cer tub	±5	5910-99-011-8616
C49	1J9	2E4	330pF	350V	Sintered	±5	-
C57	1D9	2K5	0.1μF	100V	P.m.t.	±25	5910-99-949-0080
C68	1G4	2M4	47pF	350V	Mica S.	±5	5910-99-949-0084
C69	1D8	2J8	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
C71	1J5	2M4	6.8pF	750V	Cer S. P100	±0.25pF	-
			INDUCTORS				
L1	1C5	2N4			For wiring details see Tels F 484		5950-99-101-8575
L3	1D4	2C5					5950-99-949-0113
L4	1E5	2N5					5950-99-949-0146
L5	1E2	2M5					5950-99-949-0116
L6	1F2	2B6					5950-99-949-0132
L7	1F4	2C5					5950-99-949-0871
L8	1G2	2M6					5950-99-949-0269
L10	1H3	2N4					5950-99-949-0158
L13	1K3	2N4					5950-99-949-0158
L14	1L8	2N2					5950-99-949-0169
L30	1AA6	2J6					5950-99-949-0194

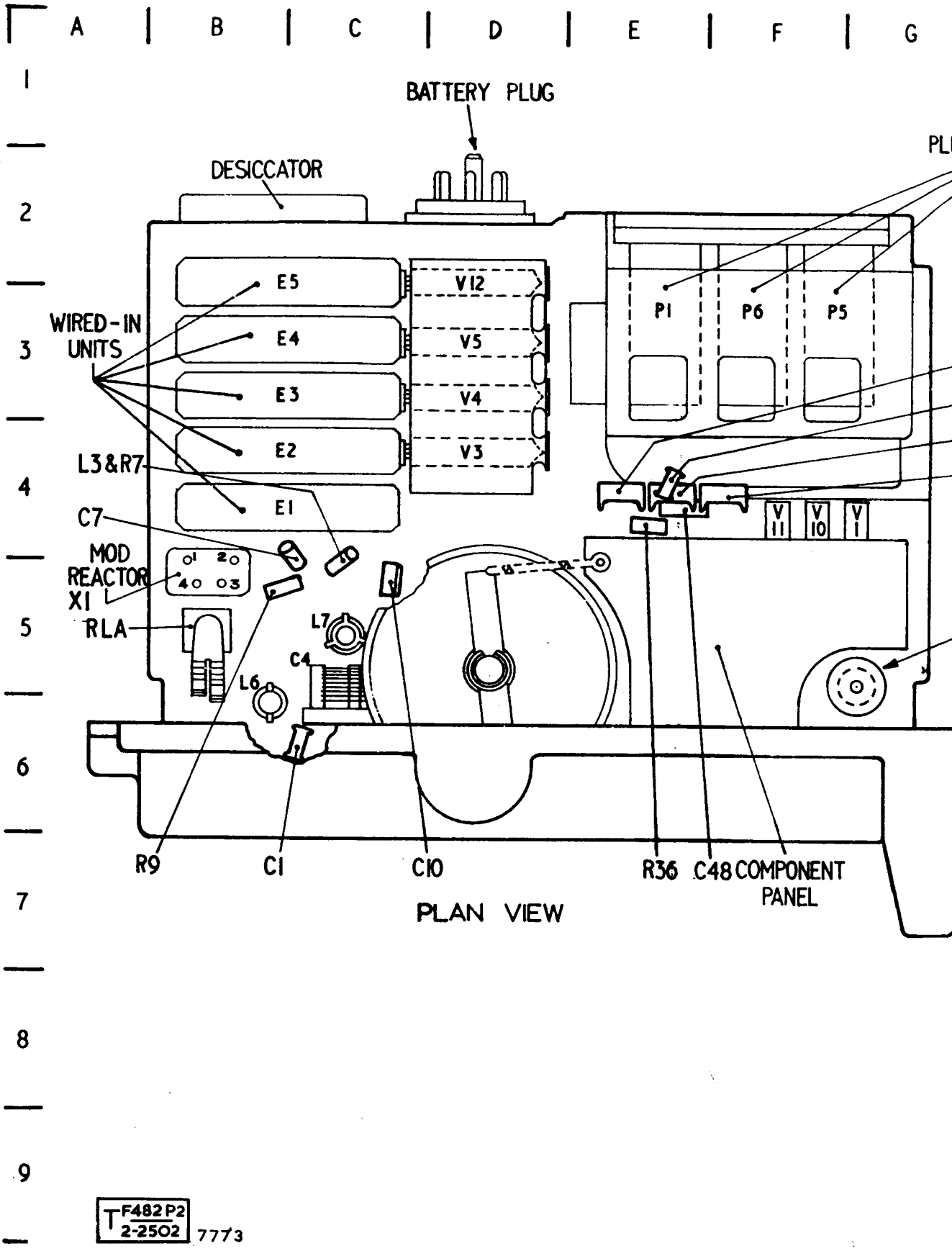
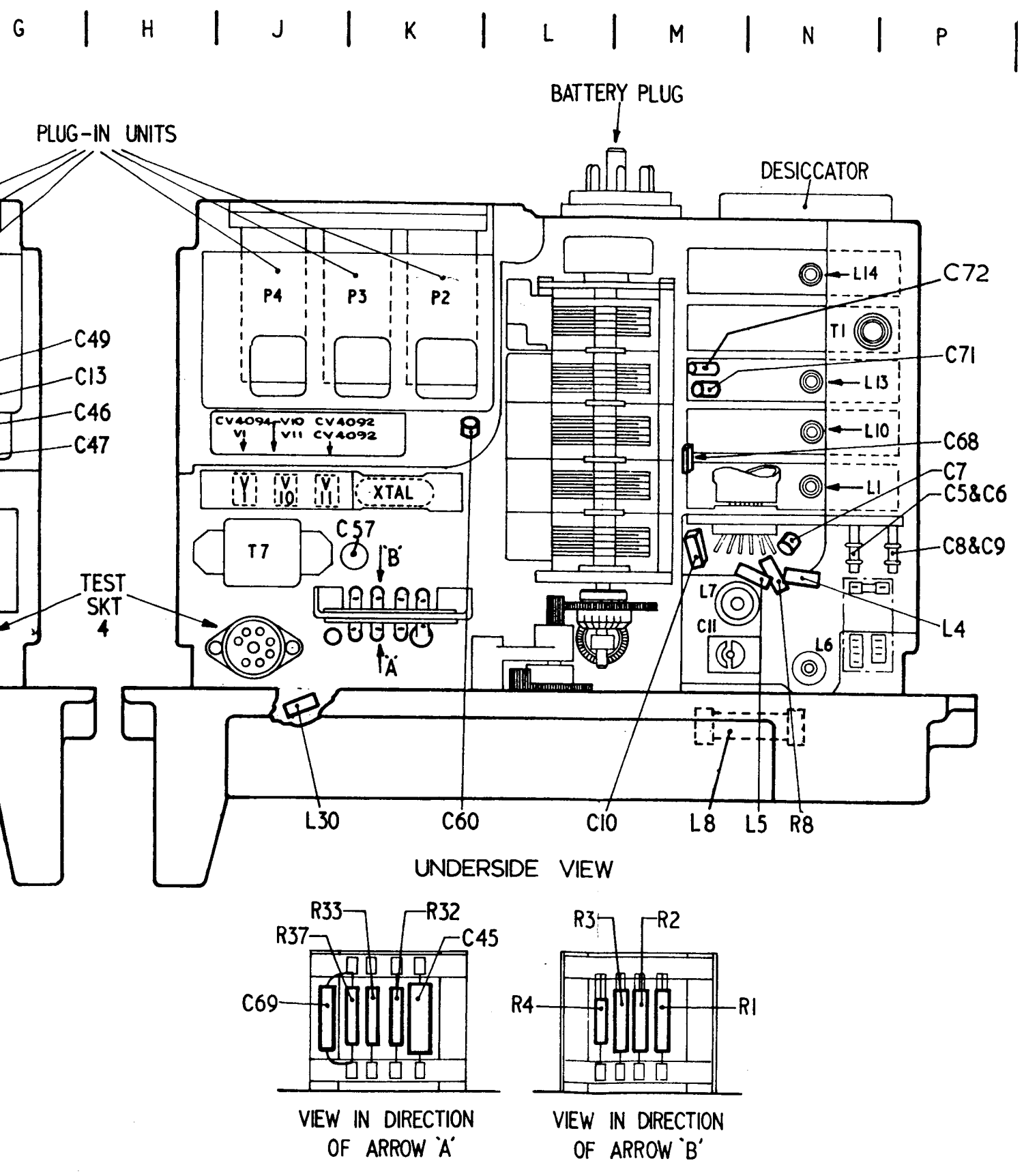


Fig 2502 - Chassis, top and un



and underside, No 1 set - component layout

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Fig 2502 - Chassis, top and underside, No 1 set
- component layout

Table 2501 - (cont)

Cct. ref.	Component location: Main cct.	Component location: Unit layout	Value	Rating	Type and limit	Part No
			PLUG IN UNITS			
P1	1Q3	2E3			1st i.f. stage	5820-99-949-0129
P2	1R3	2K3			2nd i.f. stage	5820-99-949-0129
P3	1S3	2K3			3rd i.f. stage	5820-99-949-0129
P4	1W6	2J3			4th i.f. stage	5820-99-949-0129
P5	-	2F3			Discriminator	5820-99-949-0130
P6	-	2F3			Sweep oscillator	5820-99-949-0131
			WIRED IN UNITS			
E1	-	2B4			Transmitter oscillator	5820-99-949-0123
E2	-	2B4			1st r.f. stage	5820-99-949-0124
E3	-	2B3			2nd r.f. stage	5820-99-949-0125
E4	-	2B3			Mixer	5820-99-949-0126
E5	-	2B2			Local oscillator	5820-99-949-0127
			MISCELLANEOUS			
T1	1N3	2P3			) For winding details	5950-99-949-0165
T7	1BB3	2J5			) see Tels F 484	5950-99-949-0121
SKT4	-	2J5			Test SKT B7G	5935-99-096-0132
RLA	1BB5	2B5	6V		Relay miniature*	
X1	1B5	2B5			Mod reactor*	5950-99-949-0122
XL1	1J8	2K4	2.15Mc/s		ZDJ 2150	
V2					Holder, valve, B9A	5935-99-056-0135
Bty plug					Plug and pin	5935-99-949-0135
					*for wiring details see Tels F 484	
			VALVES			
V1	1A7	2J4			Valve, electronic, CV4094	5960-99-000-4094
V2	1E4	2N4			Valve, electronic, CV4097	5960-99-000-4097
V3	1H4	2D4			Valve, electronic, CV4094	5960-99-000-4094
V4	1K4	2D3			Valve, electronic, CV4093	5960-99-000-4093
V5	1N4	2D3			Valve, electronic, CV4096	5960-99-000-4096
V10	1BB4	2J4			Valve, electronic, CV4092	5960-99-000-4092
V11	1H8	2J4			Valve, electronic, CV4092	5960-99-000-4092
V12	1M7	2D2			Valve, electronic, CV4095	5960-99-000-4095

Table 2502 - Front panel, No 1 set - component schedule

Cct. ref.	Component location: Main Cct.	Component location: Unit layout Rear	Component location: Unit layout Front	Value	Rating	Type and limit	Part No
SKT1						Cap and chain assembly	5920-99-949-0246
SKT1	1F1	3F6	3B2			Long and short antenna	5935-99-949-0214
SKT2	1G1	3F7	3B3			socket, twin assembly	
SKT3	1G1	3E6	3B2			Coaxial socket	5935-99-949-0241
SKT3						Socket cap	5820-99-949-0242
SKT5						Audio socket assembly	9320-99-949-0236

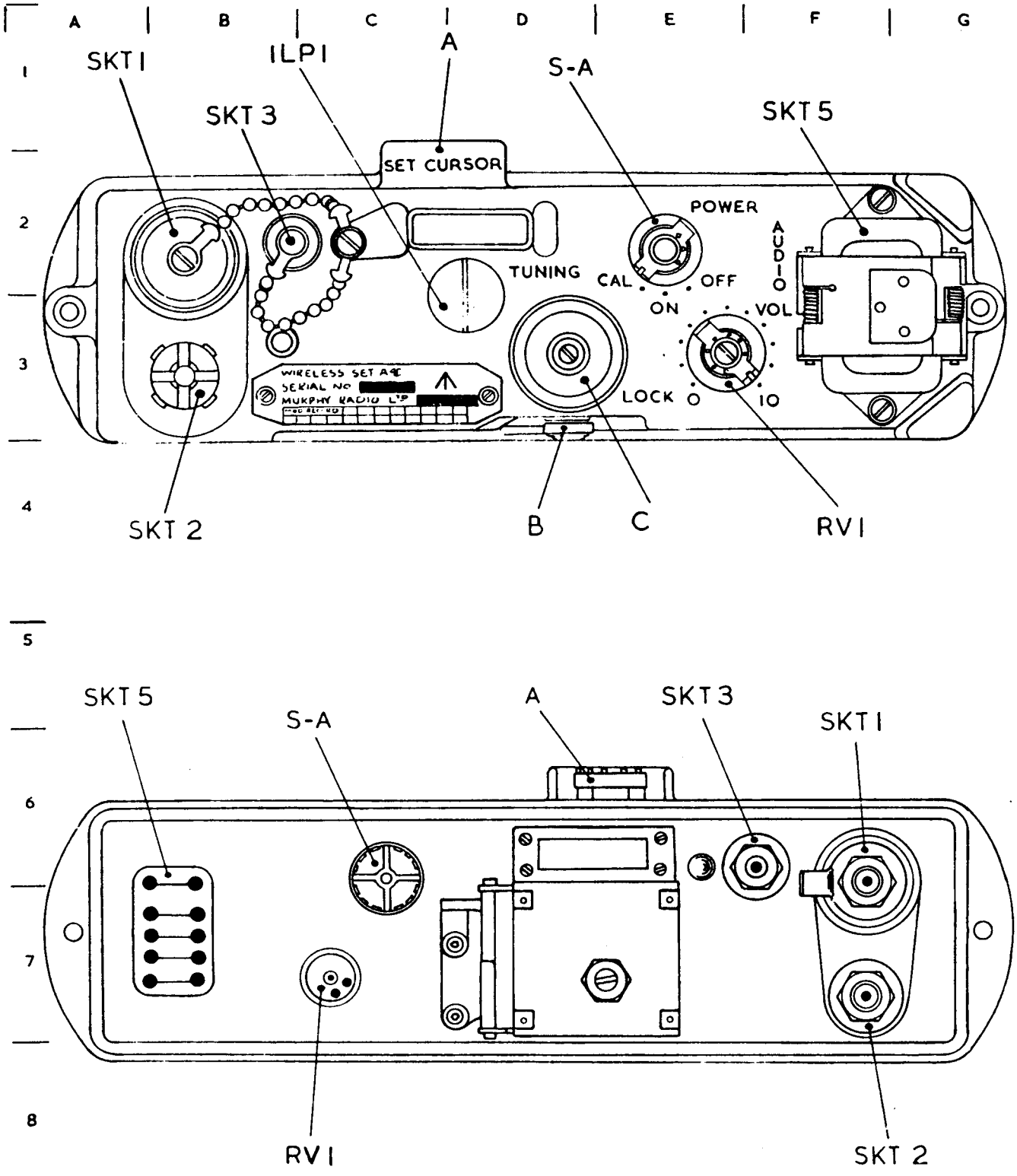

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Fig 2503 - Panel controls, front and rear view, No 1 set - component layout

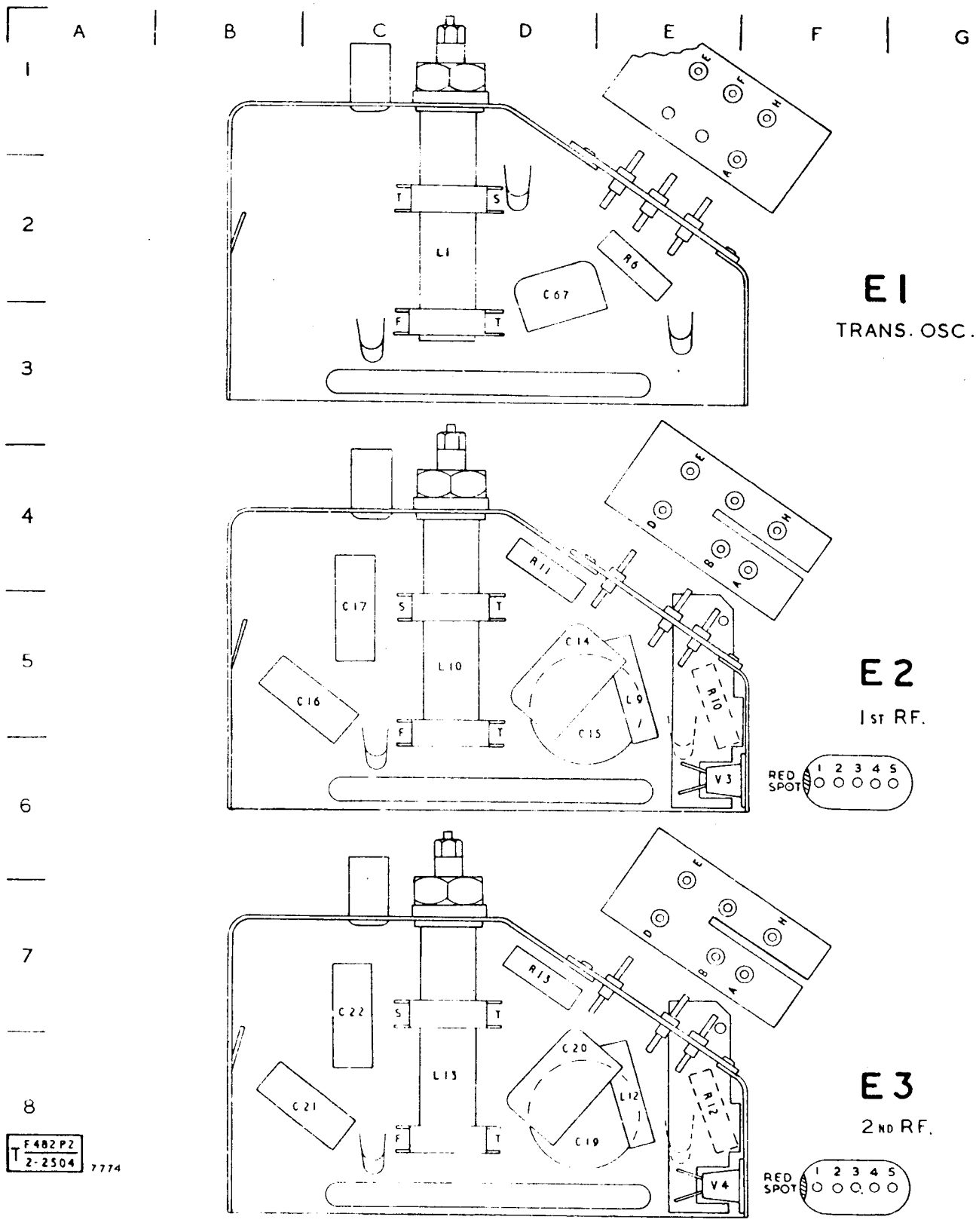

Fig 2504 – Transmitter oscillator and 1st and 2nd r.f. units – component layout

Table 2502 - (cont)

Cct. ref.	Component location: Main cct.	Unit layout: Rear	Unit layout: Front	Value	Rating	Type and limit	Part No
C	-	3D7	3D3			Knob tuning	5980-99-949-0220
ILP	1H9	-	3C2			Lamp cap contact	5820-99-949-0238
ILP1				3V	0.2A	Pilot lamp	6240-99-995-9103
A	-	3D6	3C1			Knob flat - set cursor	5355-99-949-0233
B	-	-	3D3			Lever locking	-
RV1						Knob (volume)	5355-99-949-0243
RV1	1AA4	3C7	3E3	2MΩ	0.25W	Resistor ±20	5905-99-949-0077
S-A	-	-	-			Knob (ON/OFF/CAL)	5355-99-949-0243
S-A	-	3C6	3E2			Switch, rotary, 4-pole 3-way	5930-99-949-0093

Table 2503 - Transmitter oscillator and 1st and 2nd r.f. units

Cct. ref.	Component location: Main unit	Unit layout	Value	Rating	Type and limit	Part No
TRANSMITTER OSCILLATOR						
R6	1D5	4E2	18kΩ	1/4W	Comp ±10	5905-99-022-2163
C67	1C4	4D2	56pF	350V	Mica S ±10	5910-99-949-0083
L1	1C5	4C2			For winding details see Tels F 484	5950-99-101-8575
TP	-	4E2			Terminal post, 4-way	5940-99-949-0155
1ST R.F. AMPLIFIER						
R10	1G4	4E5	470kΩ	0.1W	Comp ±20	5905-99-949-0070
R11	1H2	4D4	5.6kΩ	1/4W	Comp ±10	5905-99-022-2100
C14	1H3	4D5	47pF	350V	Mica S ±5	5910-99-949-0084
C15	1H4	4D5	0.01μF	500V	Cer disc -20 +80	5910-99-949-0085
C16	1H5	4C5	2.2pF	500V	Cer tub ±.5pF	5910-99-011-8270
C17	1H3	4C5	0.01μF	250V	P.m.t. ±20	5910-99-012-0113
L9	1H5	4E5			) For wiring details	5950-99-949-0160
L10	1H3	4D5			) see Tels F 484	5950-99-949-0158
TP	-	4E5			Terminal post, 6-way	5940-99-949-0157
2ND R.F. AMPLIFIER						
R12	1K4	4E8	470kΩ	0.1W	Comp ±20	5905-99-949-0070
R13	1L2	4D7	1.5kΩ	1/4W	Comp ±10	5905-99-022-2025
C19	1K4	4D8	0.01μF	500V	Cer disc -20 +80	5910-99-949-0085
C20	1L3	4D8	47pF	350V	Mica S ±5	5910-99-949-0084
C21	1L5	4B8	2.2pF	500V	Cer tub ±.5pF	5910-99-011-8270
C22	1L3	4C7	0.01μF	250V	P.m.t. ±20	5910-99-012-0113
L12	1K5	4E8			) For wiring details	5950-99-949-0160
L13	1K3	4C8			) see Tels F 484	5950-99-949-0158
TP	-	4E7			Terminal post, 6-way	5940-99-949-0157

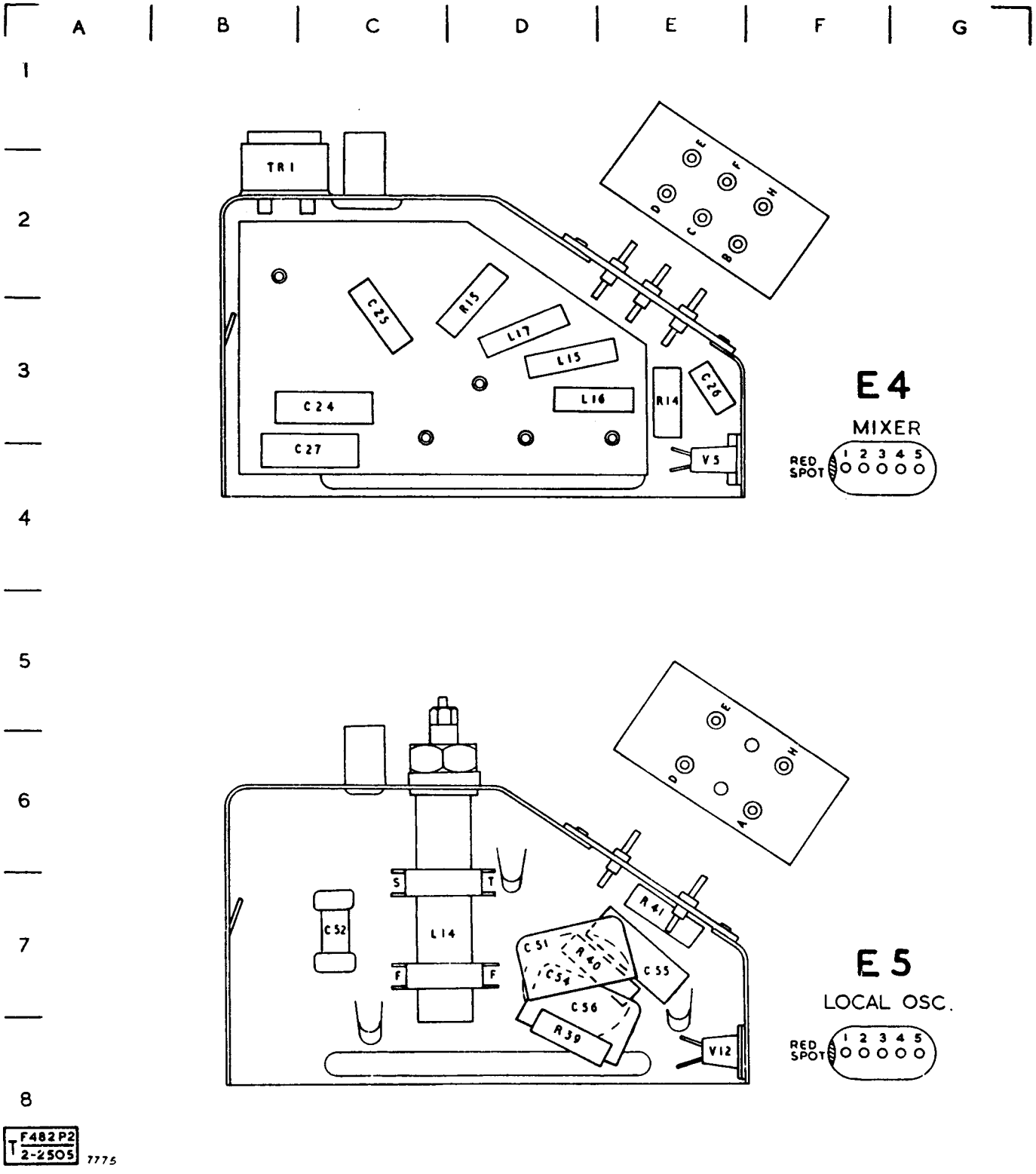

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Fig 2505 - Mixer and local oscillator units - component layout

Table 2504 - Mixer and local oscillator units - component schedule

Cct. ref.	Component location: Main cct.	Component location: Unit layout	Value	Rating	Type and limit		Part No
				MIXER			
R14	1M5	5E3	2.2MΩ	1/10W	Comp	±20	5905-99-949-0071
R15	1N2	5D2	1.5kΩ	1/4W	Comp	±10	5905-99-022-2025
C24	1M3	5C3	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
C25	1N3	5C3	15pF	750V	Cer tub	±2	5910-99-949-0086
C26	1N4	5E3	1pF	750V	Cer tub	±0.25pF	5910-99-949-0087
C27	105	5C4	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
L15	1N4	5D3			)		5950-99-949-0166
L16	1N5	5E3			) For winding details		5950-99-949-0160
L17	105	5D3			) see Tels F 484		5950-99-949-0146
TR1	1N3	5B2			)		5950-99-949-0165
TP		5E2			Terminal post, 6-way		5940-99-949-0164
				LOCAL OSCILLATOR			
R39	1L7	5D8	18kΩ	1/4W	Comp	±10	5905-99-022-2163
R40	1M8	5E7	1.2MΩ	1/4W	Comp	±10	5905-99-022-3175
R41	1M7	5E7	1.5kΩ	1/4W	Comp	±10	5905-99-022-2025
C51	1L8	5D7	510pF	350V	Mica S.	±5	5910-99-949-0088
C52	1L8	5C7	4.7pF	500V	Cer tub	±.5pF	5910-99-011-8598
C54	1L8	5D7	47pF	350V	Mica S.	±5	5910-99-949-0084
C55	1M8	5E7	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
C56	1M7	5D8	0.01μF	500V	Cer	-20 +80	5910-99-949-0085
L14	1L8	5C7			For winding details see Tels F 484		5950-99-949-0169
TP	-	5E7			Terminal post, 4-way		5940-99-949-0168

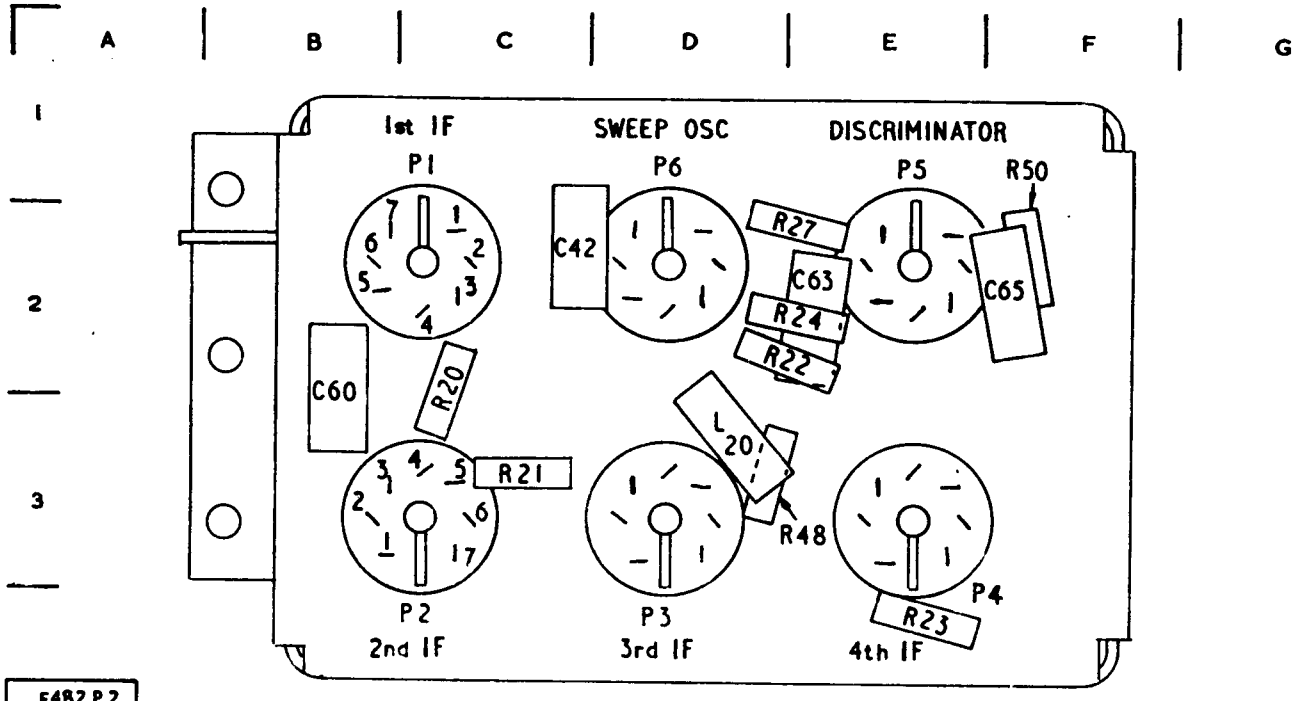


Fig 2506 - Plug-in unit chassis - component layout

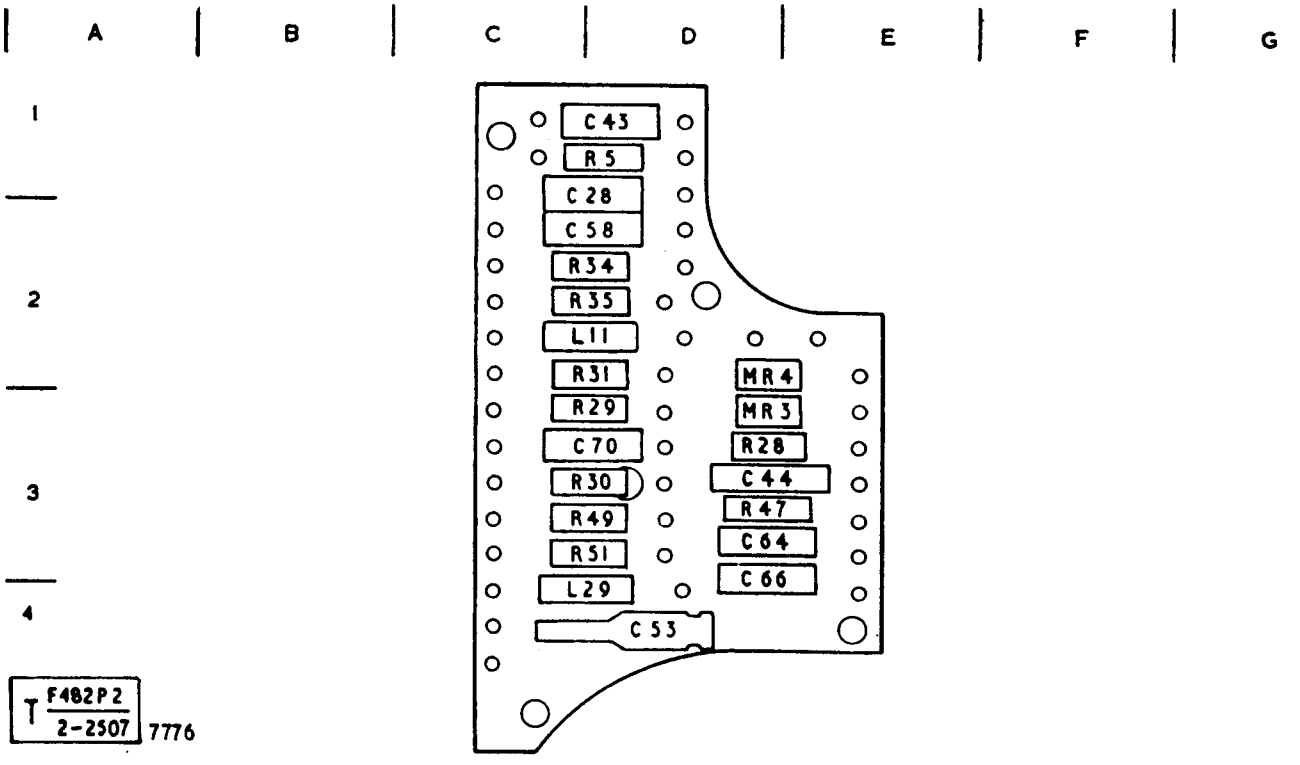


Fig 2507 - Insulated component panel, No 1 set - component layout

Table 2505 - Plug-in unit chassis and insulated component panel - component schedule

Cct. ref.	Component location: Main unit	Component location: Unit layout	Value	Rating	Type and limit		Part No
PLUG IN UNIT CHASSIS (FIG 2506)							
R20	1Q2	6C2	1.5kΩ	1/4W	Comp	±10	5905-99-022-2025
R21	1S2	6C3	1.5kΩ	1/4W	Comp	±10	5905-99-022-2025
R22	1X3	6D2	10kΩ	1/4W	Comp	±10	5905-99-022-2130
R23	1X3	6E3	220kΩ	1/4W	Comp	±10	5905-99-022-3079
R24	1Y2	6D2	220kΩ	1/4W	Comp	±10	5905-99-022-3079
R27	1Z3	6D2	22kΩ	1/4W	Comp	±10	5905-99-022-2172
R48	1Y2	6D3	10kΩ	1/4W	Comp	±10	5905-99-022-2130
R50	1Y7	6F2	10kΩ	1/4W	Comp	±10	5905-99-022-2130
C42	1AA4	6C2	100pF	750V	P.m.t.	±20	5910-99-012-0126
C60	1R8	6B2	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
C63	1Y2	6E2	100pF	750V	P.m.t.	±20	5910-99-012-0126
C65	1Y7	6F2	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
L20	1S8	6D3			For wiring details see Tels F 484		5950-99-949-0146
SKTP1	-	6C2			B7G socket 1st i.f.		5935-99-056-0132
SKTP2	-	6C3			B7G socket 2nd i.f.		
SKTP3	-	6D3			B7G socket 3rd i.f.		
SKTP4	-	6E3			B7G socket 4th i.f.		
SKTP5	-	6E2			B7G socket discriminator		
SKTP6	-	6D2			B7G socket sweep oscillator		
INSULATED COMPONENT PANEL (FIG 2507)							
R5	1B7	7D1	100kΩ	1/4W	Comp	±10	5905-99-022-3037
R28	1B8	7D3	39kΩ	1/4W	Comp	±10	5905-99-022-2205
R29	1B8	7C3	10kΩ	1/4W	Comp	±10	5905-99-022-2130
R30	1D9	7C3	47kΩ	1/4W	Comp	±10	5905-99-022-2214
R31	1C8	7C2	10kΩ	1/4W	Comp	±10	5905-99-022-2130
R34	1Z7	7C2	22kΩ	1/4W	Comp	±10	5905-99-022-2172
R35	1H7	7C2	120kΩ	1/4W	Comp	±10	5905-99-022-3049
R47	1X8	7D3	1MΩ	1/4W	Comp	±10	5905-99-022-3163
R49	1AA3	7C3	470kΩ	1/4W	Comp	±10	5905-99-022-3121
R51	1AA5	7C3	470kΩ	1/4W	Comp	±10	5905-99-022-3121
C28	1BB2	7C2	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
C43	1AA3	7D1	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
C44	1B7	7D3	0.02μF	250V	P.m.t.	±20	5910-99-012-0114
C53	1H7	7D4	0.7pF-4pF	750V	Tub variable		5910-99-940-9517
C58	1AA7	7C2	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
C64	1AA3	7D3	3000pF	500V	P.m.t.	±20	5910-99-012-0121
C66	1BB5	7D3	200pF	750V	P.m.t.	±20	5910-99-012-0128
C70	1C8	7C3	500pF	500V	P.m.t.	±20	5910-99-012-0118
L11	1H8	7C2			For wiring details see Tels F 484		5950-99-949-0116
L29	1H9	7C4					
MR3	1C8	7D2			CV448		5960-99-000-0448
MR4	1C8	7D3			CV448		5960-99-000-0448

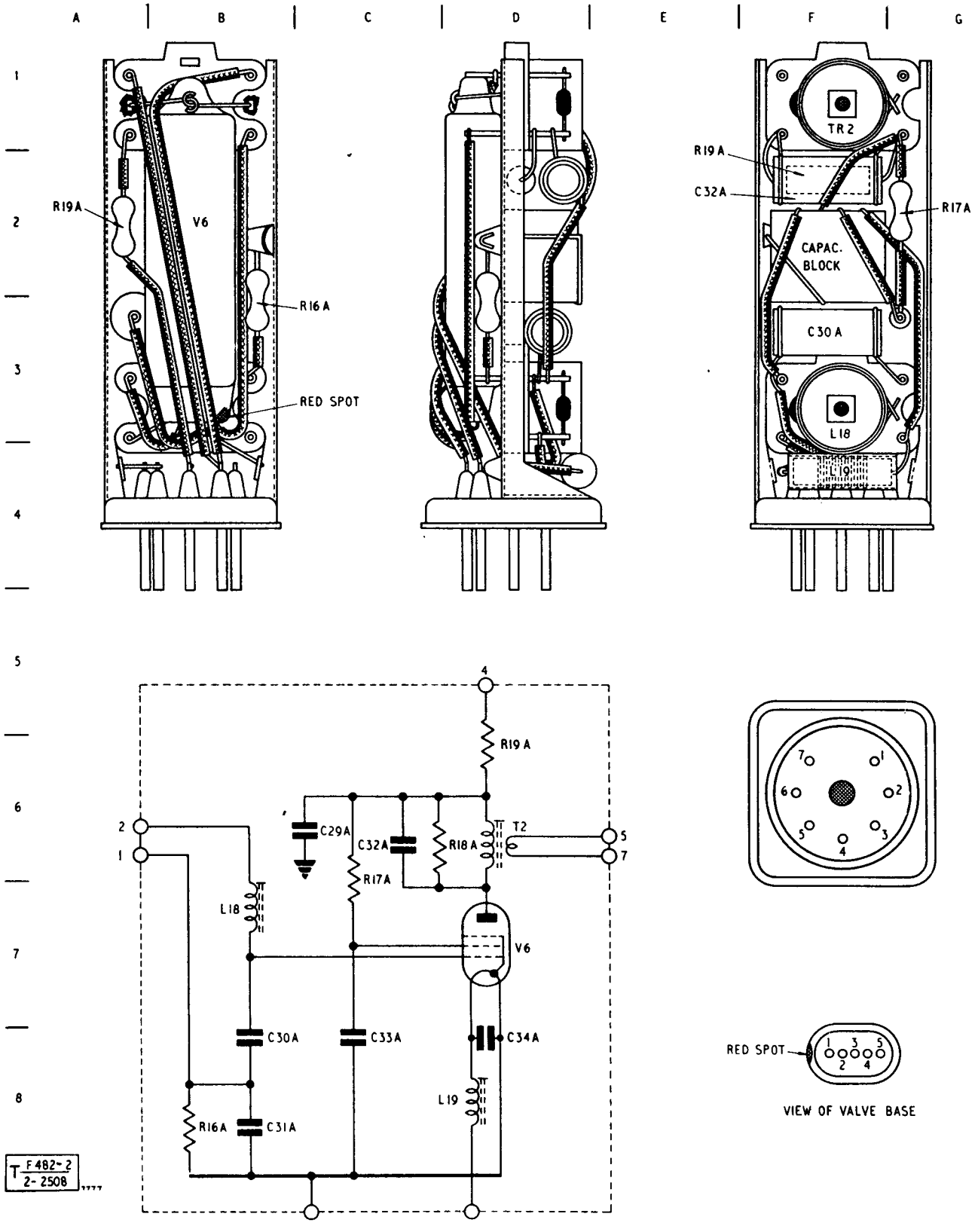


Fig 2508 - I.F. plug-in units - component layout and circuit

Table 2506 - I.F. plug-in units - component schedule

Cct. ref	Component location			Value	Rating	Type and limit		Part No
	Main cct.	Unit cct.	Unit layout					
R16A	1P5	8B8	8B3	120kΩ	1/10W	Comp	±20	5905-99-949-0072
R17A	1Q3	8C7	8G2	3.3kΩ	1/10W	Comp	±20	5905-99-949-0073
R18A	1Q3	8D6	8F2	39kΩ	1/4W	Comp	±10	5905-99-022-2205
R19A	1Q2	8D6	8A2	1.5kΩ	1/10W	Comp	±20	5905-99-949-0094
C29A	1Q2	8C6	-	0.01μF	200V	Paper met*	±20	
C30A	1P4	8B8	8F3	47pF	750V	Cer tub	±2	-
C31A	1Q4	8B8	-	100pF	200V	Paper met*	±20	
C32A	1Q3	8C6	8F2	47pF	750V	Cer tub	±2	-
C33A	1Q4	8C8	-	0.01μF	200V	Paper met*	±20	
C34A	1Q4	8D8	-	0.01μF	200V	Paper met*	±20	
L18	1P4	8B7	8F3			)For wiring		5950-99-949-0193
L19	1Q5	8D8	8F4			)details see		5950-99-949-0194
T2	1R3	8D6	-			)Tels F 484		5950-99-949-0192
V6	1Q4	8D7	8B2			Valve, electronic, CV4093		5960-99-000-4093
PL	-	-	-			Plug, 7 pin		

*C29A, 31A, 33A and 34A are enclosed together in a resin block Part No 5910-99-949-0089

The circuit references quoted are for the 1st i.f. stage. For the other stages see below.

1st i.f.	2nd i.f.	3rd i.f.	4th i.f.
R16A	R16B	R16C	R16D
R17A	R17B	R17C	R17D
R18A	R18B	R18C	R18D
R19A	R19B	R19C	R19D
C29A	C29B	C29C	C29D
C30A	C30B	C30C	C30D
C31A	C31B	C31C	C31D
C32A	C32B	C32C	C32D
C33A	C33B	C33C	C33D
C34A	C34B	C34C	C34D
L18	L21	L23	L25
L19	L22	L24	L26
T2	T3	T4	T5
V6	V7	V8	V9

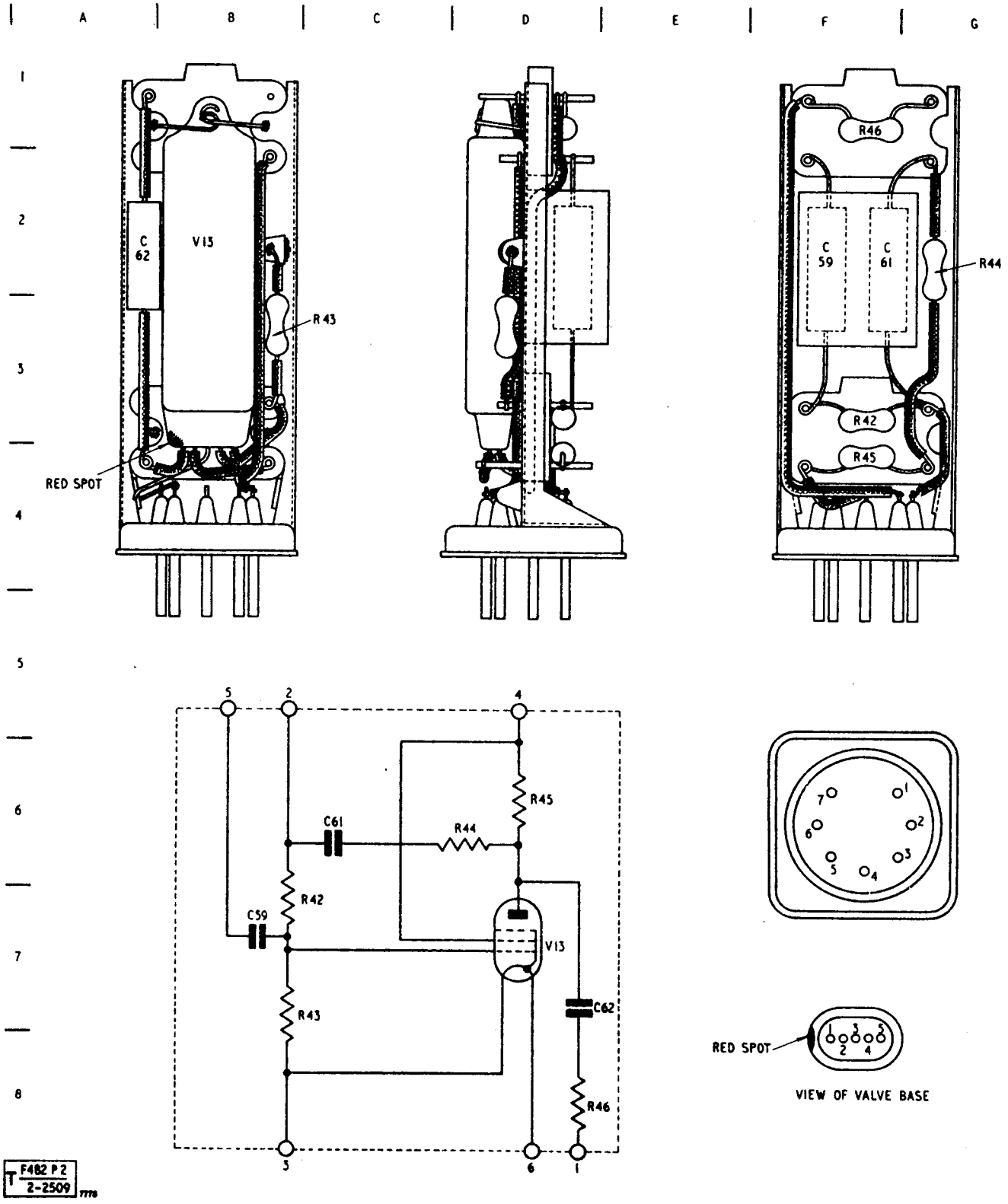


Fig 2509 - Sweep oscillator plug-in unit - component layout and circuit

Table 2507 - Sweep oscillator plug-in unit - component schedule

Cct. ref.	Component location			Value	Rating	Type and limit		Part No
	Main cct.	Unit cct.	Unit layout					
R42	1U5	9B7	9F3	2.2MΩ	1/10W	Comp	±20	5905-99-949-0071
R43	1U6	9B7	9B3	5.6MΩ	1/10W	Comp	±20	5905-99-949-0074
R44	1U4	9D6	9G2	470kΩ	1/10W	Comp	±20	5905-99-949-0070
R45	1U4	9D6	9F4	47kΩ	1/10W	Comp	±20	5905-99-949-0075
R46	1T7	9D8	9F2	2.7MΩ	1/10W	Comp	±20	5905-99-949-0076
C59	1V6	9B7	9F2	0.05μF	200V	P.m.t.*	±25	5910-99-012-0600
C61	1V4	9C6	9F2	0.05μF	200V	P.m.t.*	±25	5910-99-012-0600
C62	1T6	9D7	9A2	0.01μF	250V	P.m.t.	±20	5910-99-012-0113
	*C59, C61 are enclosed together in a resin block							
V13	1U6	9D7	9B2			Valve, electronic, CV4093		5960-99-000-4093
PL	-	-	-			Plug, 7 pin		

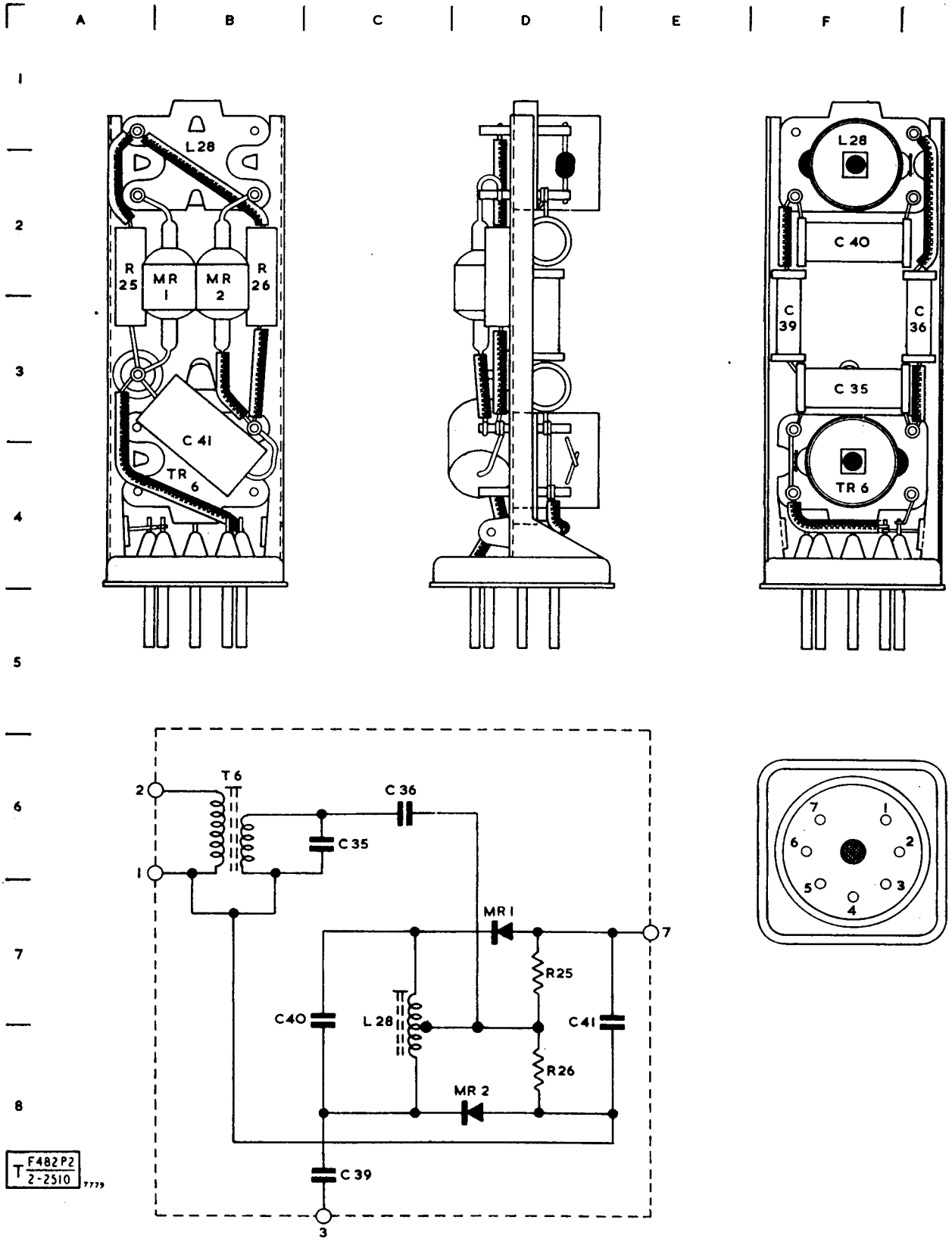


Fig 2510 - Discriminator plug-in unit - component layout and circuit

Table 2508 - Discriminator plug-in unit - component schedule

Cct. ref.	Component location			Value	Rating	Type and limit		Part No
	Main cct.	Unit cct.	Unit layout					
R25	1Z4	10D7	10A2	270kΩ	1/4W	Comp	±10	5905-99-022-3091
R26	1Z4	10D8	10B2	270kΩ	1/4W	Comp	±10	
C35	1Z5	10C6	10F3	39pF	750V	Cer N030	±2	5910-99-940-9512
C36	1Z5	10C6	10G3	33pF	750V	Cer N030	±2	5910-99-940-9514
C39	1Y4	10C8	10F3	4.7pF	750V	Cer N030	±.5pF	5910-99-940-9516
C40	1Y4	10C7	10F2	47pF	750V	Cer N030	±2	5910-99-940-9515
C41	1Z4	10E7	10B3	100pF	750V	P.m.t.	±20	5910-99-012-0126
L28	1Y4	10C7	10F2			For wiring details see Tels F 484		5950-99-949-0195
T6	1Y5	10B6	10F4			For wiring details see Tels F 484		5950-99-949-0196
MR1	1Z4	10D7	10B2			Valve, electronic, CV448		5960-99-000-0448
MR2	1Z4	10D8	10B2			Valve, electronic, CV448		
PL	-	-	-			Plug, 7 pin		

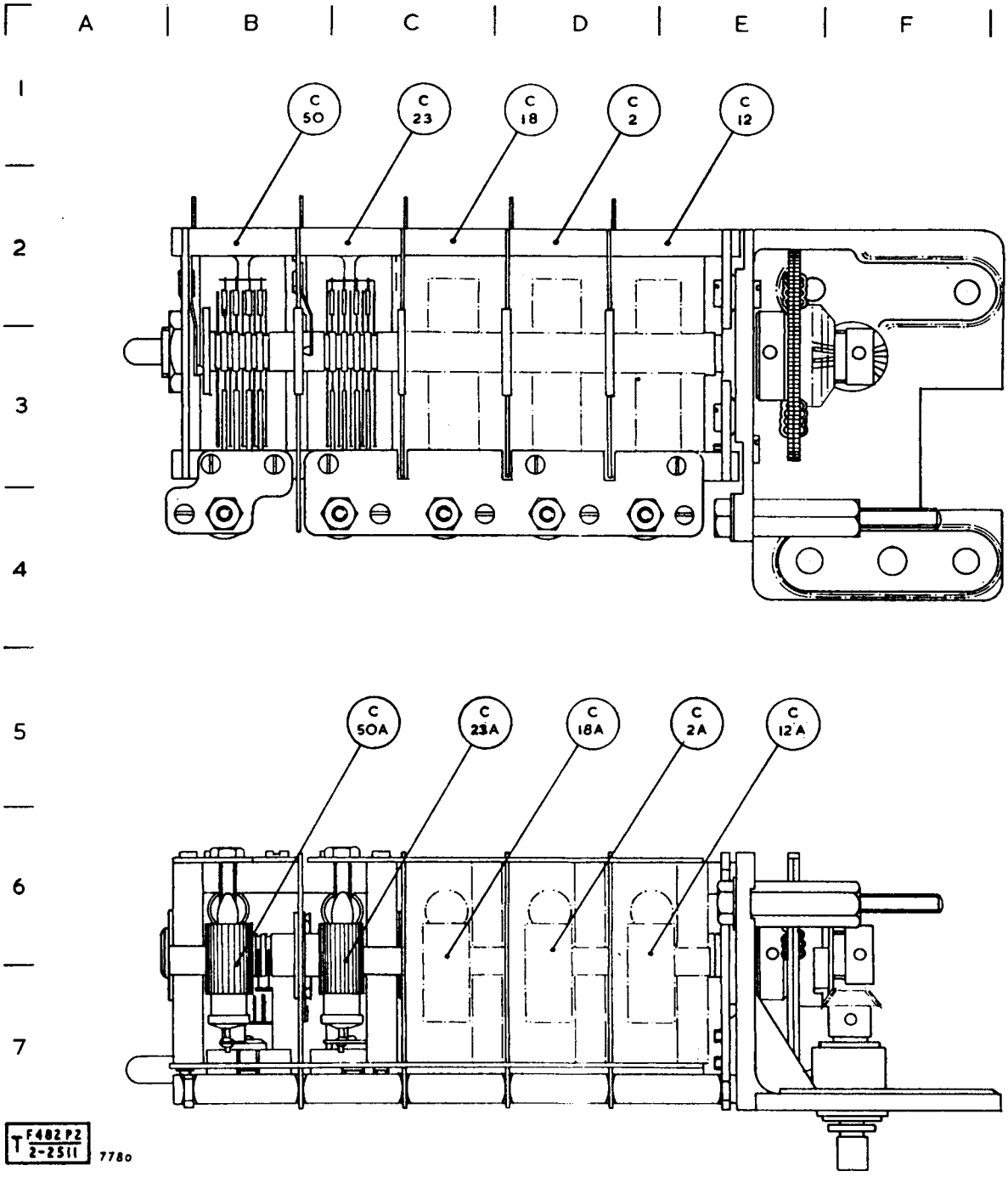
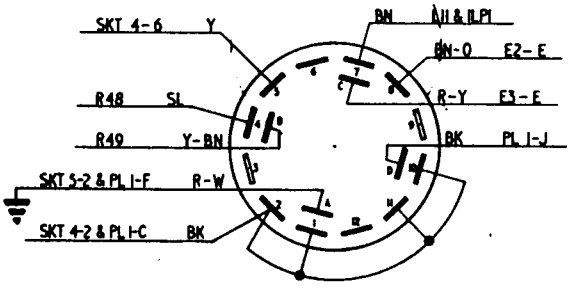


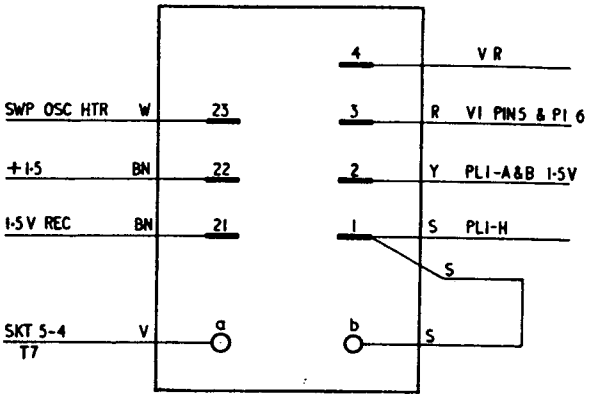
Fig 2511 - Main tuning gang capacitor - component layout

Table 2509 - Main tuning gang capacitor - component schedule

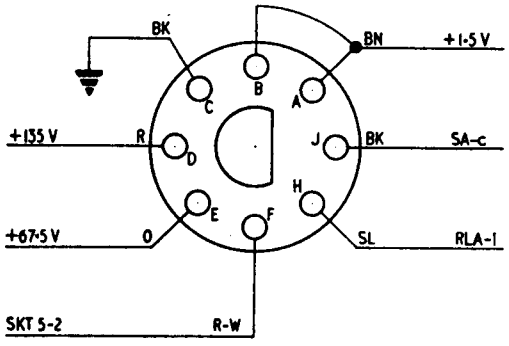
Cct. ref.	Component location		Value	Rating	Type and limit	Part No
	Unit cct.	Unit layout				
C2	1D5	11D2				
C2A	1D5	11D6	0.7pF to 6pF	750V a.c. 50c/s r.m.s.	P.T.F.E.	
C12	1G5	11E2				
C12A	1F5	11E6	0.7pF to 6pF	750V a.c. 50c/s r.m.s.	P.T.F.E.	
C18	1J5	11C2				
C18A	1J5	11C6	0.7pF to 6pF	750V a.c. 50c/s r.m.s.	P.T.F.E.	5910-99-911-0575
C23	1L5	11C2				
C23A	1L5	11C6	0.7pF to 6pF	750V a.c. 50c/s r.m.s.	P.T.F.E.	
C50	1K8	11B2				
C50A	1K8	11B6	0.7pF to 6pF	750V a.c. 50c/s r.m.s.	P.T.F.E.	



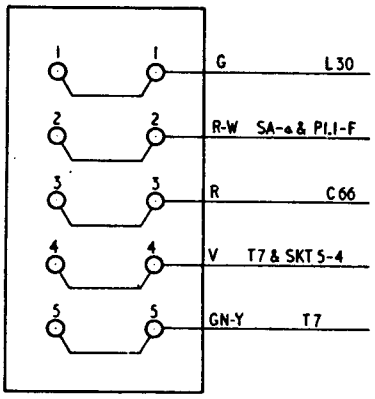
SA
(OFF-ON-CAL SW)



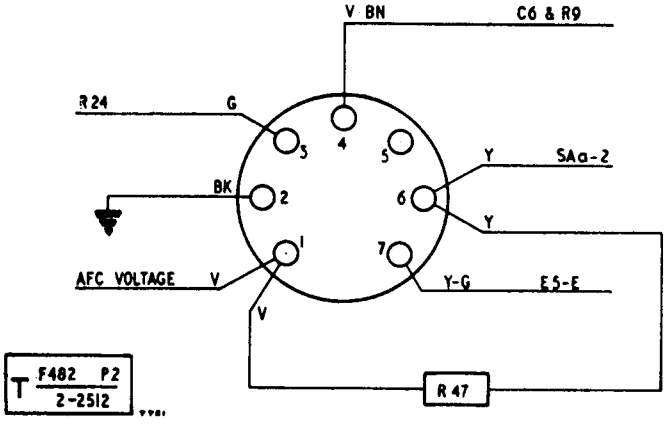
RLA
(S/R RELAY)



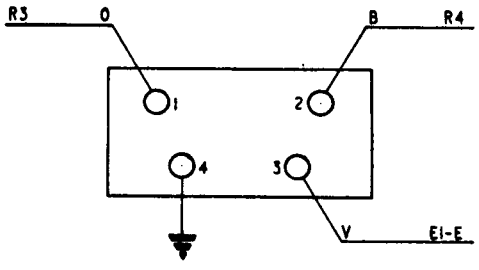
PL I
(BATTERY PL)



SKT 5
(HARNESS SKT)



SKT 4
(TEST SOCKET)



XI
(MOD. REACTOR)

Fig 2512 - Wiring details of plugs, sockets, relay and reactor, No 1 set

Table 2510 - Test equipment schedule - field and base repairs

Preferred instrument		Suitable alternative	
Part No	Designation	Part No	Designation
ZD 02674	Signal generator No 12 CT320	ZD C0391	Signal generator No 1, Mk 3
ZD 04302	Signal generator No 18 CT402	WD 3941	Signal generator No 13
Z4/6625-99-949-1999	Multimeter, Avo, model 9SX	Z4/6625-99-943-1524	Multimeter, Avo, model 8S
Z4/6625-99-913-8618	Oscilloscope, set CT436	Z4/10S/831	Oscilloscope, type 13A
Z4/6625-99-949-0510	Wattmeter, absorption, a.f., No 1, CT44	ZD C0663	Meter, output, power, No 3, Mk 2
Z4/6625-99-949-0593	Calibrator, crystal, set CT507	WY 0241	Wavemeter, standard, No 2
			*Test set, type AM 193
			*Test set, type AM 330
ZD 00747	Wattmeter, absorption, h.f., No 2, CT211	-	-
Z4/6625-99-949-0470	Voltmeter, valve, No 3, CT208	ZD 00617	Instrument, testing, electronic, multi-range, No 1
ZD 00198	Oscillator, b.f., No 8		
Z4/6625-99-949-0515	Test set, deviation, f.m., No 2, CT45	-	-
Z4/6625-99-933-1822	Counter, electronic, frequency	ZC 1411 Z4/ZD 00118	Frequency meter SCR 211 Wavemeter No 4 Mk 2
Z4/6625-99-933-1923	Counter, electronic, frequency range extender	-	-
Z4/6625-99-933-1884	Converter, frequency, electronic	-	-
Z4/6625-99-942-4825	Ovens, drying, Tels, 240V a.c.	-	-
Z4/6625-99-943-2419	Test set, electronic, valve, CT160	ZD 00286 ZD C0019	Tester, valve, Avo, No 3 or No 1, Mk 2
W3/WC 53340	Apparatus, seal testing	-	-
Z4/6625-99-943-1523	Multimeter, Avo, model 7	ZD 00207	Instrument, testing, Avometer universal, 50-range, No 2
Z4/6625-99-949-5448	Power supply set for bench testing manpack radio sets	-	-
ZD 03985	Kits, testing, vehicle and manpack radio sets (see Tels M 152)	-	-

*Used with Wavemeter, standard, No 2 in base workshops for crystal testing

Table 2511 - Specification tests

Notes

1. The conditions of test are as specified in Tels F 484.

2. The tests quoted are those considered necessary to check the serviceability of a set. They do not include those tests in the original specification which are purely of design interest.

3. The figures quoted are those in the original design specification. During production these figures are sometimes modified. Any such changes will be included in the Inspection Standard Tels F 488.

4. Voltages between the battery plug (PL1) pins should be as follows:-

Test between battery plug (PL1) pins	Voltage		
	Nominal	Normal (on load)	Low
A) B) (+ve) and J	1.5	1.4	1.1
C and earth	0	0	0
D (+ve) and F	135	130	100
E (+ve) and F	67.5	65	50
H (-ve) and J	6	5.6	4.5

Test	Limits	Remarks
Receive		
1. Battery consumption	Voltage: 1.4V, 65V; Current drain: 0.47A, 22mA	
2. Selectivity	65 - 85kc/s at 6dB 300kc/s max at 60dB Mean of 6dB points ±5kc/s of 4.3Mc/s	Referred to 1.25µV input signal measured at 54Mc/s. Signal generator impedance of 50Ω and connected to the auxiliary antenna socket (SKT3) (Standard r.f. input)
3. Sensitivity	Normal volts - at least 20dB low volts - at least 15dB Signal + Noise / Noise	Input 1.25µV. Standard modulation 15kc/s at 1000c/s. Check over the frequency range
4. Limiting	Not greater than 2.5dB change in a.f. output for standard r.f. input from 3µV - 1mV	Check throughout the frequency range. (Standard modulation)

Table 2511 - (cont)

Test	Limits	Remarks
5. Resetting accuracy	±10kc/s of original tuning point	Check by detuning and retuning five times in each direction
6. A.F. power output	Normal voltage - not less than 5mW Low voltage - not less than 1.5mW	10μV r.f. input, standard modulation. 5μV r.f. input, standard modulation.
7. Frequency	Normal voltage - drift of local oscillator not to exceed 9kc/s. Low voltage - as above - drift not to exceed 6kc/s	Measured at 2 and 30 minutes after switching on
8. Muting (No 2 set)	Reduction in noise at least 20dB	Standard modulation S101 to MUTE
9. Calibration (No 2 set)	Calibration signal at 38Mc/s and 1Mc/s steps throughout band	S101 to CURSOR Volume control at maximum
	Calibration signals at 50kc/s intervals	S101 to CHAN.
10. Seal test	Initial pressure 10 lb/sq.in. After 14 hours: 9 lb/sq.in.	Time constant - 150 hours (see Tels M 631)
Send		
11. Battery consumption	Voltage / Current drain 1.4V / 0.47A 65V / 19mA 130V / 55mA -5.6V bias / 0.38A	
12. R.F. power output	Normal volts - not less than 0.75W Low volts - not less than 0.25W	Through frequency range. R.F. output meter of 40-50Ω input connected to auxiliary antenna socket (SKT3)
13. A.F.C. operation	Normal volts - the a.f.c. shall restore to a corrected value whose total spread in +ve and -ve detuning shall not exceed 10kc/s. Low volts - as above but spread shall not exceed 15kc/s	Detuned ±500kc/s. Through frequency range. Detuned ±400kc/s. Through frequency range.
14. Output frequency	Normal volts - output frequency within 4kc/s of receive frequency Low volts - output frequency within 8kc/s of receive frequency	With standard input conditions for receiver With standard input conditions for receiver
15. Neutralisation	0.2V difference between antenna loaded and unloaded	A.F.C. voltage measured between a.f.c. bias test point and earth
16. Modulation	With audio input of 250mV at 1000c/s deviation will be between 5-10kc/s	With audio input of 500mV at 1000c/s, max deviation not to exceed 15kc/s

RESTRICTED

Fig 2513a - Circuit diagram
(Part 1), No 2 set

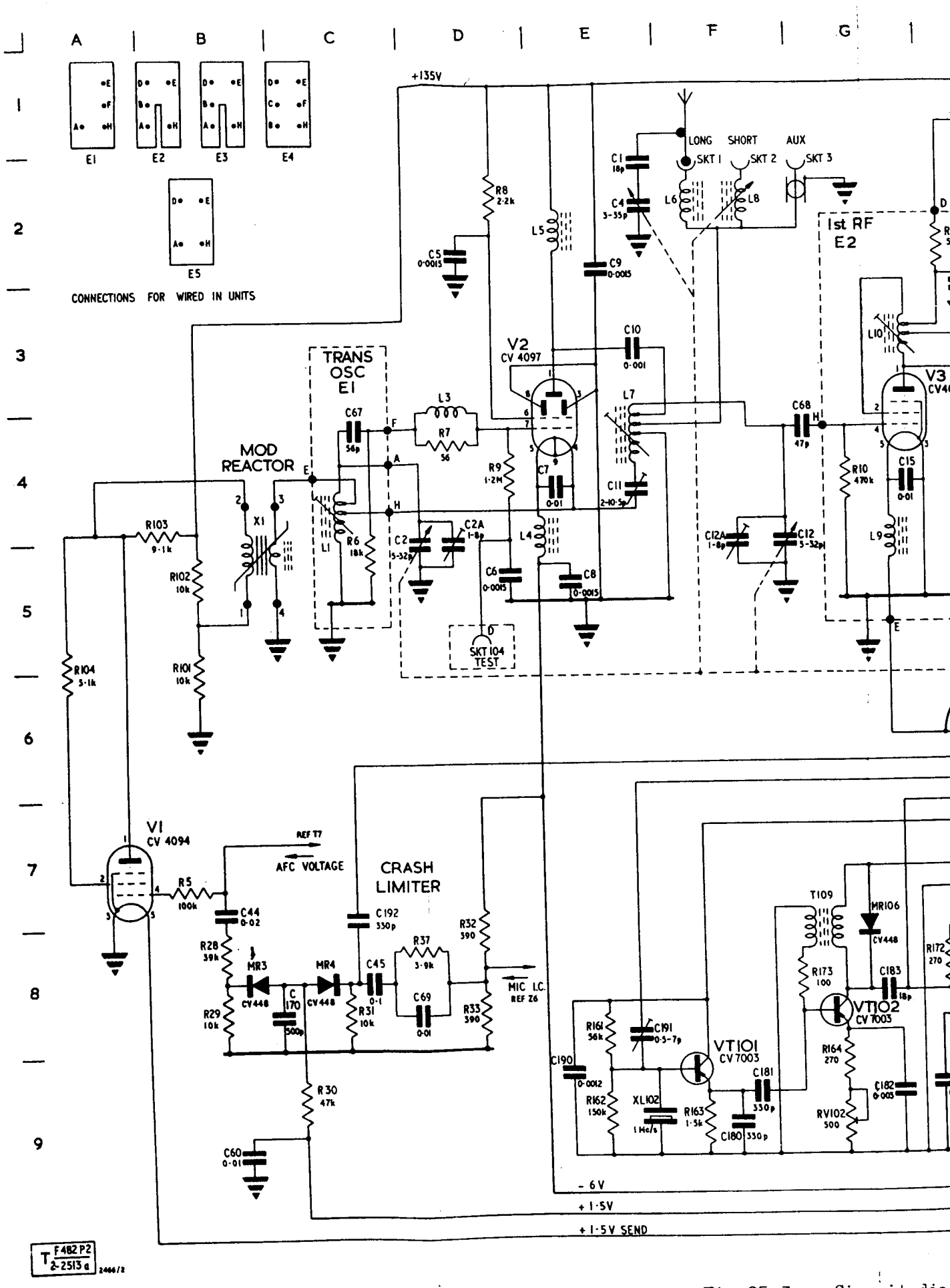
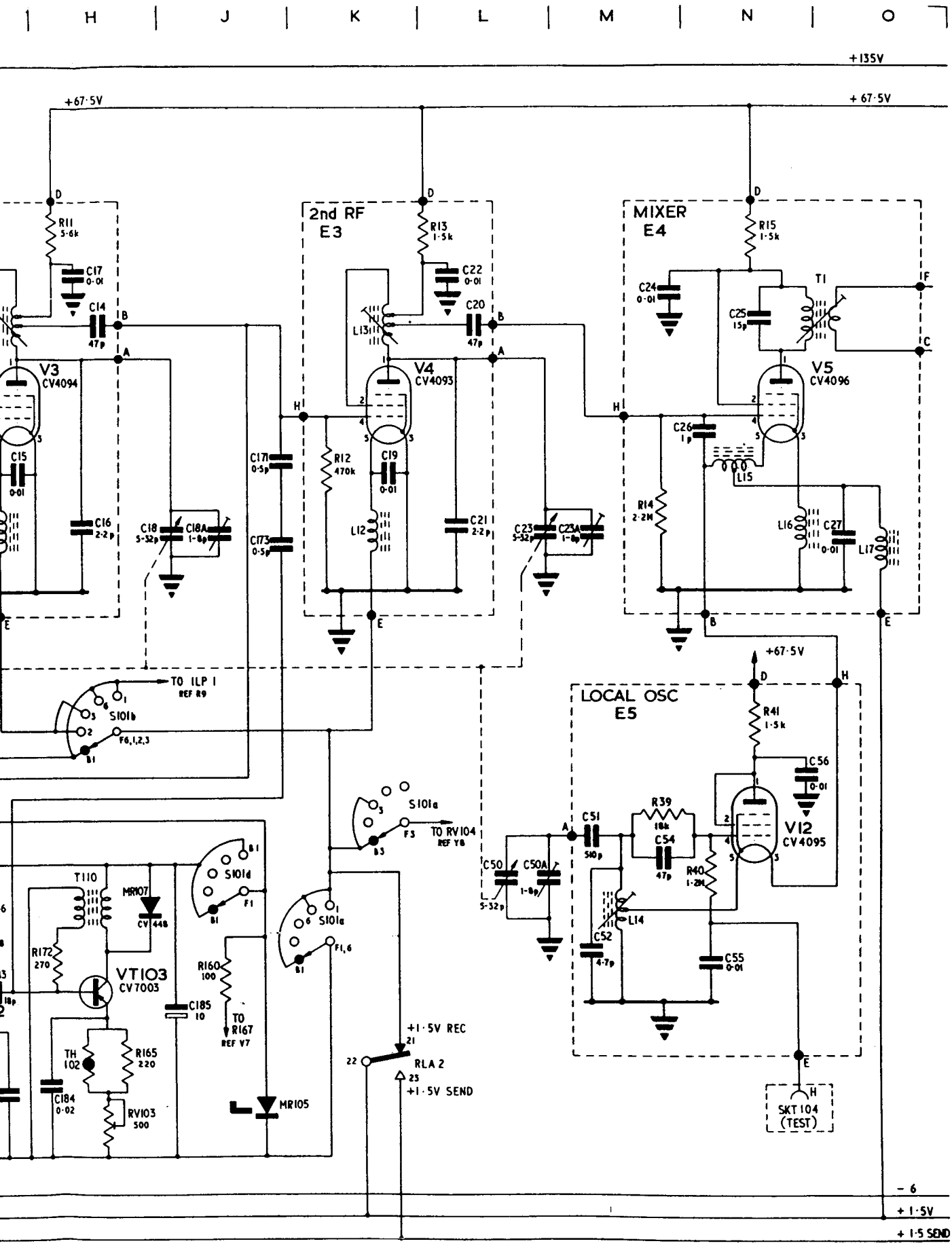


Fig 2513a - Circuit dia

(Note: Additional copies of this figure for use as



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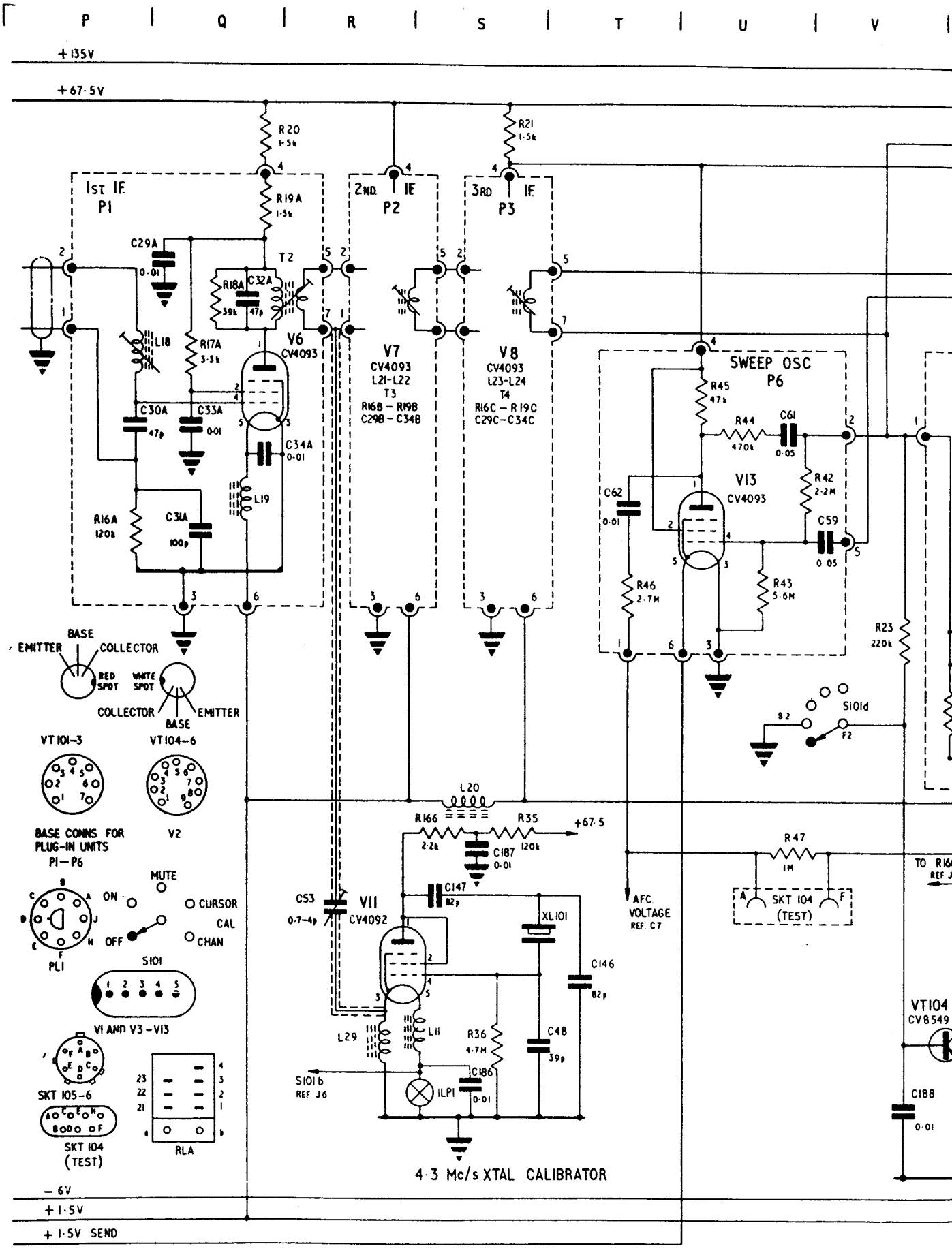
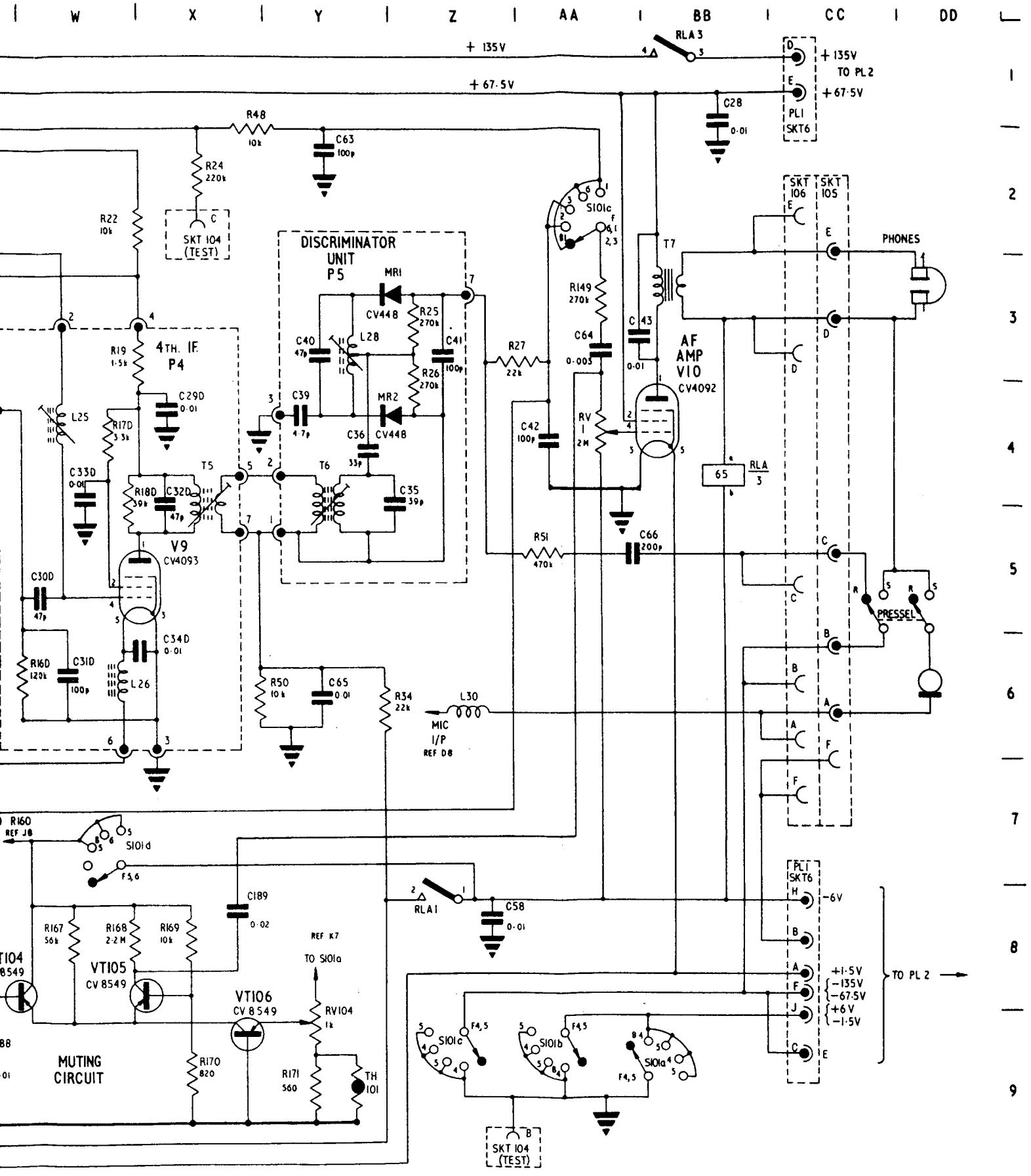


Fig 2513b - Circuit

(Note: Additional copies of this figure for use



uit diagram (Part 2), No 2 set

use as bench copies may be obtained on supplementary demand)

T F482 P2 2-2513b

Table 2512 - No 2 set - component schedule

Cct. ref.	Component location		Value Ω	Rating	Type and limit	Part No
	Main cct. Fig 2513	Unit layout				
			RESISTORS			
R5	B7	16B3	100k	1/4W	Comp ins ±10	5905-99-022-3037
R6	C5	4E2	18k	1/4W	Comp ins ±10	5905-99-022-2163
R7	D4	14C4	56	1/4W	Comp ins ±10	5905-99-022-1079
R8	D2	14N5	2.2k	1/4W	Comp ins ±10	5905-99-022-2046
R9	D4	14B5	1.2M	1/4W	Comp ins ±10	5905-99-022-3175
R10	G4	4E5	470k	1/10W	Comp ins ±20	5905-99-949-0070
R11	H2	4D4	5.6k	1/4W	Comp ins ±10	5905-99-022-2100
R12	K4	4E8	470k	1/10W	Comp ins ±20	5905-99-949-0070
R13	L2	4D7	1.5k	1/4W	Comp ins ±10	5905-99-022-2025
R14	M4	5E3	2.2M	1/4W	Comp ins ±20	5905-99-949-0071
R15	N2	5D3	1.5k	1/4W	Comp ins ±10	5905-99-022-2025
R16	P4 W6	8B3	120k	1/10W	Comp ins ±20	5905-99-949-0072
R17	Q3 W4	8G2	3.3k	1/10W	Comp ins ±20	5905-99-949-0073
R18	Q3 W4	8F2	39k	1/4W	Comp ins ±10	5905-99-022-2205
R19	Q2 W3	8A2	1.5k	1/10W	Comp ins ±20	5905-99-949-0094
R20	Q1	6C2	1.5k	1/4W	Comp ins ±10	5905-99-022-2025
R21	S1	6C3	1.5k	1/4W	Comp ins ±10	5905-99-022-2025
R22	W2	6D2	10k	1/4W	Comp ins ±10	5905-99-022-2130
R23	V5	6E3	220k	1/4W	Comp ins ±10	5905-99-022-3079
R24	X2	6D2	220k	1/4W	Comp ins ±10	5905-99-022-3079
R25	Z3	10A2	270k	1/4W	Comp ins ±10	5905-99-022-3091
R26	Z3	10B2	270k	1/4W	Comp ins ±10	5905-99-022-3091
R27	AA3	6D2	22k	1/4W	Comp ins ±10	5905-99-022-2172
R28	B8	16D2	39k	1/4W	Comp ins ±10	5905-99-022-2205
R29	B8	16D3	10k	1/4W	Comp ins ±10	5905-99-022-2130
R30	C9	16D3	47k	1/4W	Comp ins ±10	5905-99-022-2214
R31	C8	16C3	10k	1/4W	Comp ins ±10	5905-99-022-2130
R32	D7	20B3 14K8	390	1/4W	Comp ins ±10	5905-99-022-1184
R33	D8	20C3 14K8	390	1/4W	Comp ins ±10	5905-99-022-1184
R34	Y6	16E3	22k	1/4W	Comp ins ±10	5905-99-022-2172
R35	S7	16C2	120k	1/4W	Comp ins ±10	5905-99-022-3049
R36	S8	14E4	4.7M	1/4W	Comp ins ±10	5905-99-022-3247
R37	D8	20C3 14J8	3.9k	1/4W	Comp ins ±10	5905-99-022-2079
R39	M7	5D8	18k	1/4W	Comp ins ±10	5905-99-022-2163
R40	N7	5D7	1.2M	1/4W	Comp ins ±10	5905-99-022-3175

R E S T R I C T E D

Fig 2513b - Circuit diagram
(Part 2), No 2 set

Table 2512 - (cont)

Cct. ref.	Component location: Main cct. Fig 2513	Component location: Unit layout	Value Ω	Rating	Type and limit	Part No
		RESISTORS - (cont)				
R41	N6	5E7	1.5k	1/4W	Comp ins ±10	5905-99-022-2025
R42	U4	9F3	2.2M	1/4W	Comp ins ±20	5905-99-949-0071
R43	U5	9B3	5.6M	1/4W	Comp ins ±20	5905-99-949-0074
R44	U4	9G2	470k	1/4W	Comp ins ±20	5905-99-949-0070
R45	U3	9F4	47k	1/10W	Comp ins ±20	5905-99-949-0075
R46	T5	9F2	2.7M	1/4W	Comp ins ±20	5905-99-949-0076
R47	U7	16D2	1M	1/4W	Comp ins ±10	5905-99-022-3163
R48	X1	6D3	10k	1/4W	Comp ins ±10	5905-99-022-2130
R50	Y6	6F2	10k	1/4W	Comp ins ±10	5905-99-022-2130
R51	AA5	16E3	470k	1/4W	Comp ins ±10	5905-99-022-3121
R101	B5	20B4 14K8	10k	1/4W	H.S. carbon ±5	5905-99-021-6001
R102	B5	20B4 14K8	10k	1/4W	H.S. carbon ±5	5905-99-021-6001
R103	B4	20B3 14K8	9.1k	1/4W	H.S. carbon ±5	5905-99-021-5356
R104	A5	20B3 14K8	5.1k	1/4W	H.S. carbon ±5	5905-99-021-5326
R149	AA3	16E3	270k	1/4W	Comp ins ±10	5905-99-022-3091
R160	J8	20E3 14N8	100	1/10W	Comp ins ±10	5905-99-946-4450
R161	E8	20C7	56k	1/10W	Comp ins ±10	5905-99-946-4548
R162	E9	20C7	150k	1/10W	Comp ins ±10	5905-99-946-4462
R163	F9	20C7	1.5k	1/10W	Comp ins ±10	5905-99-946-4478
R164	G9	20E5	270	1/10W	Comp ins ±10	5905-99-946-4452
R165	H8	20E7	220	1/10W	Comp ins ±10	
R166	S7	16C3	2.2k	1/4W	Comp ins ±10	5905-99-022-2046
R167	W8	20E3 14N8	56k	1/10W	Comp ins ±10	5905-99-946-4548
R168	W8	20E3 14N8	2.2M	1/10W	Comp ins ±10	5905-99-949-7653
R169	X8	20E3 14N8	10k	1/10W	Comp ins ±10	5905-99-946-4481
R170	X9	20E3 14M8	820	1/10W	Comp ins ±10	5905-99-946-4459
R171	Y9	20E2 14M9	560	1/10W	Comp ins ±10	5905-99-946-4553
R172	H8	20D6	270	1/10W	Comp ins ±10	5905-99-946-4452
R173	G8	20C6	100	1/10W	Comp ins ±10	5905-99-946-4450
RV1	AA4	15F2	2M	1/4W	Var comp linear ±20	5905-99-949-0077
RV102	G9	20E5	500	1W	Var w.w. ±5	5905-99-103-7823
RV103	H9	20E5	500	1W	Var w.w. ±5	5905-99-103-7823
RV104	Y9	15E2	1k	1/2W	Var comp linear ±20	5905-99-949-7652

Table 2512 - (cont)

Cct. ref.	Component location		Value F	Rating	Type and limit	Part No
	Main cct. Fig 2513	Unit layout				
			CAPACITORS			
C1	E2	14C6	18p	750V	Cer tub ±5	5910-99-011-8608
C2	D4	11D2	5-32p			*
C4	E2	14C5	3-35p		Var air dielectric -0 +20	5910-99-911-0949
C5	D2	14N5	+0.0015µ	500V	Cer +100 -0	5910-99-949-0081
C6	D5	14N5	0.0015µ			
C7	E4	14C4 14N4	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C8	E5	14P5	+0.0015µ	500V	Cer +100 -0	5910-99-949-0081
C9	E2	14P5	0.0015µ			
C10	E3	14C5	0.001µ	350V	Mica ±10	5910-99-012-4702
C11	E4	14M5	2-10.5p		Air var	5910-99-016-0040
C12	G4	11E2	5-32p			*
C14	H2	4D5	47p	350V	Mica S ±5	5910-99-940-8701
C15	G4	4D5	0.01µ	500V	Cer disc +80 -20	5910-99-940-9270
C16	H4	4C5	2.2p	500V	Cer tub ±0.5p	5910-99-011-8270
C17	H2	4C5	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C18	J4	11C2	5-32p			*
C19	K4	4E8	0.01µ	500V	Cer disc +80 -20	5910-99-940-9270
C20	L3	4D8	47p	350V	Mica S ±5	5910-99-940-8701
C21	L4	4B8	2.2p	500V	Cer tub ±0.5p	5910-99-011-8270
C22	L2	4C7	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C23	L4	11C2	5-32p			*
C24	M3	5C3	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C25	N3	5C3	15p	750V	Cer tub ±2	5910-99-949-0086
C26	N4	5E3	1p	750V	Cer tub ±0.25p	5910-99-949-0087
C27	Q4	5C4	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C28	BB1	16B3	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C29	Q2,X4	8F2	0.01µ	200V	Paper met ±20	†
C30	P4,W5	8F3	47p	750V	Cer tub ±2.5	5910-99-900-4877
C31	Q4,W6	8F2	100p	200V	Paper met ±20	†
C32	Q3,X4	8F2	47p	750V	Cer tub ±2.5	5910-99-900-4877

*Part of 5 gang variable tuning capacitor 5910-99-911-0575. Each section has a 0.7 to 6pF trimmer

†C29+C31+C33+C34 are enclosed in a resin block 5910-99-949-0089

Table 2512 - (cont)

Cct. ref.	Component location: Main cct. Fig 2513	Component location: Unit layout	Value F	Rating	Type and limit		Part No
			CAPACITORS - (cont)				
C33	Q4,W4	8F2	0.01µ	200V	Paper met	±20	†/
C34	Q4,X6	8F2	0.01µ	200V	Paper met	±20	†/
C35	Z4	10F3	39p	750V	Cer NO30	±2.5	5910-99-900-4879
C36	Y4	10G3	33p	750V	Cer NO30	±2.5	5910-99-900-4878
C39	Y4	10F3	4.7p	750V	Cer NO30	±0.5p	5910-99-940-9516
C40	Y3	10F2	47p	750V	Cer NO30	±2.5	5910-99-900-4880
C41	Z3	10B3	100p	750V	P.m.t.	±20	5910-99-012-0126
C42	AA4	6C2	100p	750V	P.m.t.	±20	5910-99-012-0126
C43	AA3	16B3	0.01µ	250V	P.m.t.	±20	5910-99-012-0113
C44	B7	16D2	0.02µ	250V	P.m.t.	±20	5910-99-012-0114
C45	C8	20B2 14J8	0.1µ	200V	P.m.t.	±25	5910-99-011-9827
C48	S8	14E4	39p	750V	Cer tub	±5	5910-99-011-8616
C50	L7	11B2	5-32p				*
C51	M7	5D7	510p	350V	Mica S	±5	5910-99-949-0088
C52	M8	5C7	4.7p	750V	Cer tub	±0.5p	5910-99-011-8598
C53	R7	16E2	0.7-4p		Concentric trimmer		5910-99-999-0771
C54	M7	5D7	47p	350V	Mica S	±5	5910-99-940-8701
C55	N8	5E7	0.01µ	250V	P.m.t.	±20	5910-99-012-0113
C56	O6	5D7	0.01µ	500V	Cer disc +80	-20	5910-99-940-9270
C58	Z8	16B2	0.01µ	250V	P.m.t.	±20	5910-99-012-0113
C59	V4	9F2	0.05µ	250V	P.m.t.	±20	*†
C60	B9	6B2 14K4	0.01µ	250V	P.m.t.	±20	5910-99-012-0113
C61	U4	9F2	0.05µ	250V	P.m.t.	±20	*†
C62	T4	9A2	0.01µ	250V	P.m.t.	±20	5910-99-012-0113
C63	Y2	6E2	100p	750V	P.m.t.	±20	5910-99-012-0126
C64	AA3	16E2	0.003µ	500V	P.m.t.	±20	5910-99-012-0121
C65	Y6	6F2	0.01µ	250V	P.m.t.	±20	5910-99-012-0113
C66	AA5	16E2	200p	750V	P.m.t.	±20	5910-99-012-0128
C67	C4	4D3	56p	350V	Mica S	±10	5910-99-949-0083
C68	G4	14M4	47p	350V	Mica S	±5	5910-99-940-8701
C69	D8	20C2 14J8	0.01µ	250V	P.m.t.	±20	5910-99-012-0113
C146	T8	14E4	82p	350V	Mica	±5	5910-99-110-2373
C147	S7	14F4	82p	350V	Mica	±5	5910-99-110-2373
C170	C8	16D3	500p	750V	P.m.t.	±20	5910-99-012-0132
C171	J4	14M4	0.5p	750V	Cer tub	±0.1p	5910-99-949-6509

*Part of 5 gang variable tuning capacitor 5910-99-911-0575. Each section has a 0.7 to 6pF trimmer

†/C29+C31+C33+C34 are enclosed in a resin block 5910-99-949-0089

*†/C59+C61 are enclosed in a resin block 5910-99-012-0600

Table 2512 - (cont)

Cct. ref.	Component location: Main cct. Fig 2513	Component location: Unit layout	Value F	Rating	Type and limit	Part No
			CAPACITORS - (cont)			
C173	J5	14N4	0.5p	750V	Cer tub ±0.1p	5910-99-949-6509
C180	F9	20C7	330p	350V	Mica ±5p	5910-99-900-4585
C181	F9	20C6	330p	350V	Mica ±5p	5910-99-900-4585
C182	G9	20E6	0.003µ	500V	P.m.t. ±20	5910-99-012-0121
C183	G8	20D6	18p	350V	Mica ±5	5910-99-110-2733
C184	H9	20D7	0.02µ	250V	P.m.t. ±20	5910-99-012-0114
C185	J8	20D6	10µ	6V	Elec tantalum sintered ±20	5910-99-949-6459
C186	S9	16C2	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C187	S7	16D3	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C188	V9	20F2 14M8	0.01µ	250V	P.m.t. ±20	5910-99-012-0113
C189	X8	20F4 14N8	0.02µ	250V	P.m.t. ±20	5910-99-012-0114
C190	E9	20C7	0.0012µ	100V	Cer tub +100 -0	5910-99-103-2158
C191	E8	14C2	0.5-7p		Concentric trimmer	5910-99-102-2018
C192	C9	16C1	330p	350V	Mica ±5p	5910-99-900-4582

Cct. ref.	Component location: Main cct. Fig 2513	Component location: Unit layout	Description	Part No
			INDUCTORS (for winding details see Tels F 484)	
L1	C4	4C2 14N4	Transformer, r.f., 9.1/2 turns	5950-99-101-8575
L3	D3	14C4	Inductor, r.f., 5 turns wound on R7	5950-99-949-0113
L4	E4	14N5	Inductor, r.f., 30 turns	5950-99-949-0146
L5	E2	14N5	Inductor, r.f., 100 turns	5950-99-901-7905
L6	F2	14B5	Inductor, r.f., 12.1/2 turns	5950-99-949-0132
L7	E3	14C5	Transformer, r.f.	5950-99-911-0871
L8	F2	14M6	Inductor, r.f., 5.1/2 turns	5950-99-949-0269
L9	G4	4E5	Inductor, r.f., 32 turns	5950-99-949-0160
L10	G3	4C5 14N4	Transformer, r.f.	5950-99-949-0158
L11	S8	16C3	Inductor, r.f., 56 turns	5950-99-949-0116
L12	K4	4E8	Inductor, r.f., 32 turns	5950-99-949-0160
L13	K3	14N3	Transformer, r.f.	5950-99-949-0158
L14	M7	5C7 14N2	Transformer, r.f.	5950-99-949-0169
L15	N4	5D3	Transformer, r.f.	5950-99-949-0166
L16	N4	5D3	Inductor, r.f., 32 turns	5950-99-949-0160

Table 2512 - (cont)

Cct. ref.	Component location: Main cct. Fig 2513	Component location: Unit layout	Description	Part No
			INDUCTORS - (cont)	
L17	O5	5D3	Inductor, r.f., 30 turns	5950-99-949-0146
L18	P3	8F3	Inductor, r.f., 42.1/2 turns	5950-99-949-0193
L19	Q4	8F4	Inductor, r.f., 38 turns	5950-99-949-0194
L20	S7	6D3	Inductor, r.f., 30 turns	5950-99-949-0146
L21	R3	8F3	Inductor, r.f., 42.1/2 turns	5950-99-949-0193
L22	R3	8F4	Inductor, r.f., 38 turns	5950-99-949-0194
L23	S3	8F3	Inductor, r.f., 42.1/2 turns	5950-99-949-0193
L24	S3	8F4	Inductor, r.f., 38 turns	5950-99-949-0194
L25	W4	8F3	Inductor, r.f., 42.1/2 turns	5950-99-949-0193
L26	W6	8F4	Inductor, r.f., 38 turns	5950-99-949-0194
L28	Y3	10F2	Inductor, r.f.,	5950-99-949-0195
L29	R8	16E2	Inductor, r.f., 56 turns	5950-99-949-0116
L30	Z6	20B3 14J8	Inductor, r.f., 38 turns	5950-99-949-0194
			TRANSFORMERS	
T1	O3	5B2 14N3	Transformer, r.f.	5950-99-949-0165
T2	R3	8F1	Transformer, r.f.	5950-99-949-0192
T3	R3	8F1	Transformer, r.f.	5950-99-949-0192
T4	S3	8F1	Transformer, r.f.	5950-99-949-0192
T5	X4	8F1	Transformer, r.f.	5950-99-949-0192
T6	Y4	10F4	Transformer, r.f.	5950-99-949-0196
T7	BB3	14J5	Transformer, a.f.	5950-99-949-0121
T109	G7	20C6	Transformer, r.f.	5950-99-105-2404
T110	H7	20D6	Transformer, r.f.	5950-99-105-2404
Cct. ref.	Component location: Main cct. Fig 2513	Component location: Unit layout	Description	Part No
			MISCELLANEOUS	
V1	A7	14G1	Valve, electronic, CV4094	5960-99-000-4094
V2	E3	14M4	Valve, electronic, CV4097	5960-99-000-4097
V3	G3	4E6 14D4	Valve, electronic, CV4094	5960-99-000-4094
V4	K3	4E8 14D3	Valve, electronic, CV4093	5960-99-000-4093
V5	N3	14D3	Valve, electronic, CV4096	5960-99-000-4096
V6	Q3	8B2	Valve, electronic, CV4093	5960-99-000-4093
V7	R3	8B2	Valve, electronic, CV4093	5960-99-000-4093
V8	S3	8B2	Valve, electronic, CV4093	5960-99-000-4093
V9	X5	8B2	Valve, electronic, CV4093	5960-99-000-4093
V10	BB4	14F4	Valve, electronic, CV4092	5960-99-000-4092

Table 2512 - (cont)

Cct. ref.	Component location: Main cct. Fig 2513	Component location: Unit layout	Description	Part No
			MISCELLANEOUS - (cont)	
V11	R8	14F4	Valve, electronic, CV4092	5960-99-000-4092
V12	N7	14D2	Valve, electronic, CV4095	5960-99-000-4095
V13	U4	9B2	Valve, electronic, CV4093	5960-99-000-4093
VT101	F9	20C6	Transistor, CV7003	5960-99-037-2003
VT102	G8	20C5	Transistor, CV7003	5960-99-037-2003
VT103	H8	20E7 16C3	Transistor, CV7003	5960-99-037-2003
VT104	V8	20F2 14N8	Transistor, CV8549	5960-99-037-3778
VT105	W8	20F3 14N8	Transistor, CV8549	5960-99-037-3778
VT106	X9	20F2 14M8	Transistor, CV8549	5960-99-037-3778
MR1	Z3	10B2	Semi-conductor device diode, CV448	5960-99-000-0448
MR2	Z4	10B2	Semi-conductor device diode, CV448	5960-99-000-0448
MR3	B8	16C2	Semi-conductor device diode, CV448	5960-99-000-0448
MR4	C8	16C2	Semi-conductor device diode, CV448	5960-99-000-0448
MR105	J9	20F3 14N8	Semi-conductor device, Zener diode, CV5815	5960-99-037-2898
MR106	G7	20C5	Semi-conductor device diode, CV448	5960-99-000-0448
MR107	H7	20D5	Semi-conductor device diode, CV448	5960-99-000-0448
XL101	T7	14K4	Crystal unit quartz, 4.3Mc/s	Z17/ 5955-99-102-0019
XL102	E9	14B2	Crystal unit quartz, 1Mc/s	Z17/ 5955-99-102-0310
TH101	Y9	20E2 14M9	Thermal resistor	5905-99-949-7692
TH102	H9	20E7	Thermal resistor	5905-99-949-7692
SKT1	F2	15B2	Socket assembly, antenna	5935-99-901-7423
SKT2	F2	15B3	Socket assembly, antenna	5935-99-901-7423
SKT3	G2	15B2	Socket, coaxial	5935-99-949-0241
SKT104	U7,Z9,X2 D5,N9	14J5	Socket, electrical 7-pole	5935-99-901-7888
SKT105	CC2-7	15F2	Socket, electrical, fixed, female shell, 6-pole	5935-99-901-7425
SKT106	CC2-7	15F3	Socket, electrical, fixed, female shell, 6-pole	5935-99-901-7425
S101	H6,J7,K7, AA9,AA2, V6,W7,Z9, BB9	14K6 15E3	Switch, rotary wafer, 8-pole, 5 pos.	5930-99-949-8923
RLA	BB4,K9,Z8 BB1	14B5	Relay armature, 65Ω	5945-99-901-0387
X1	B4	14B5	Saturable reactor	5950-99-949-0122
ILP1	S9	15D2	Lamp filament, 3V, 0.6A	6240-99-995-9103

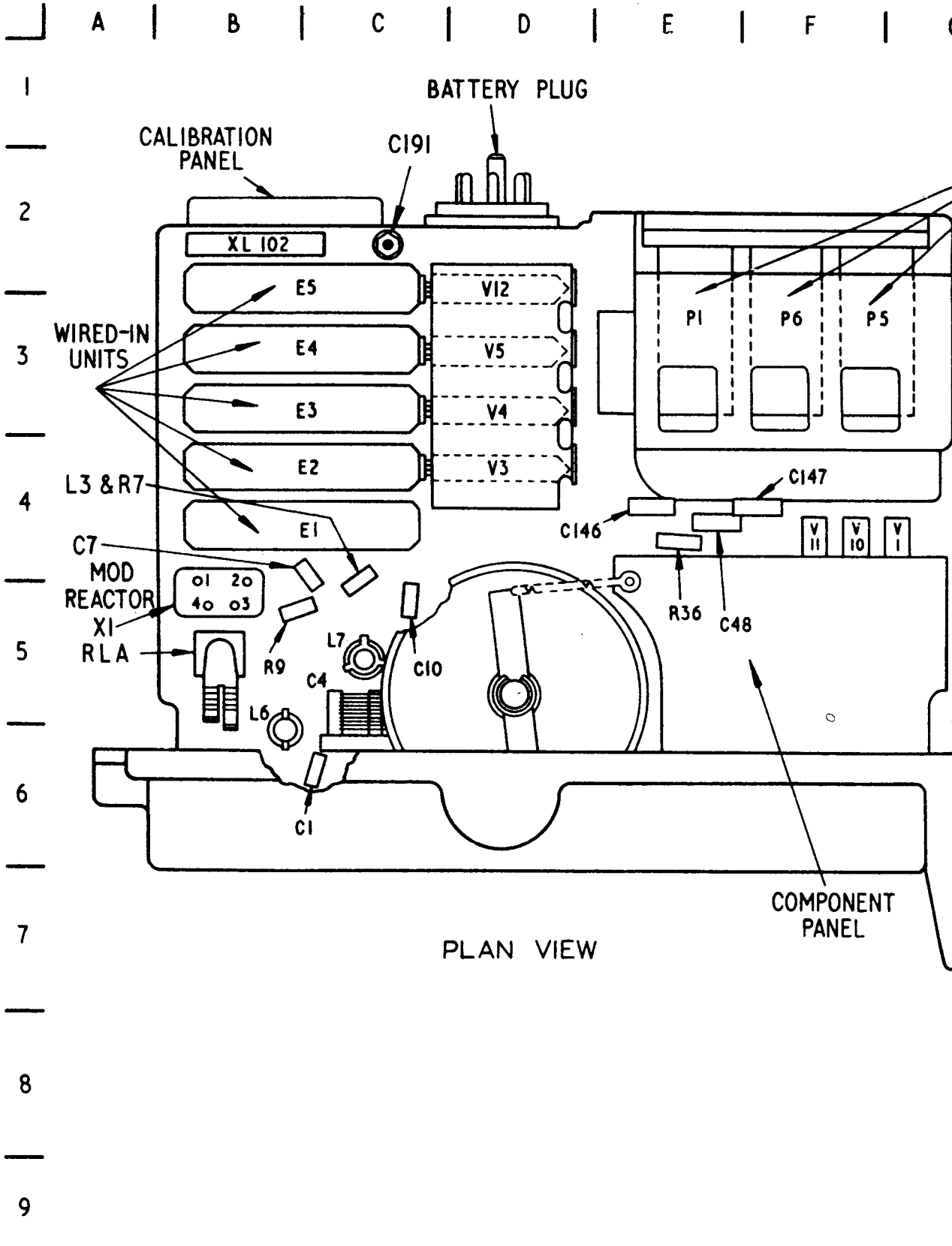


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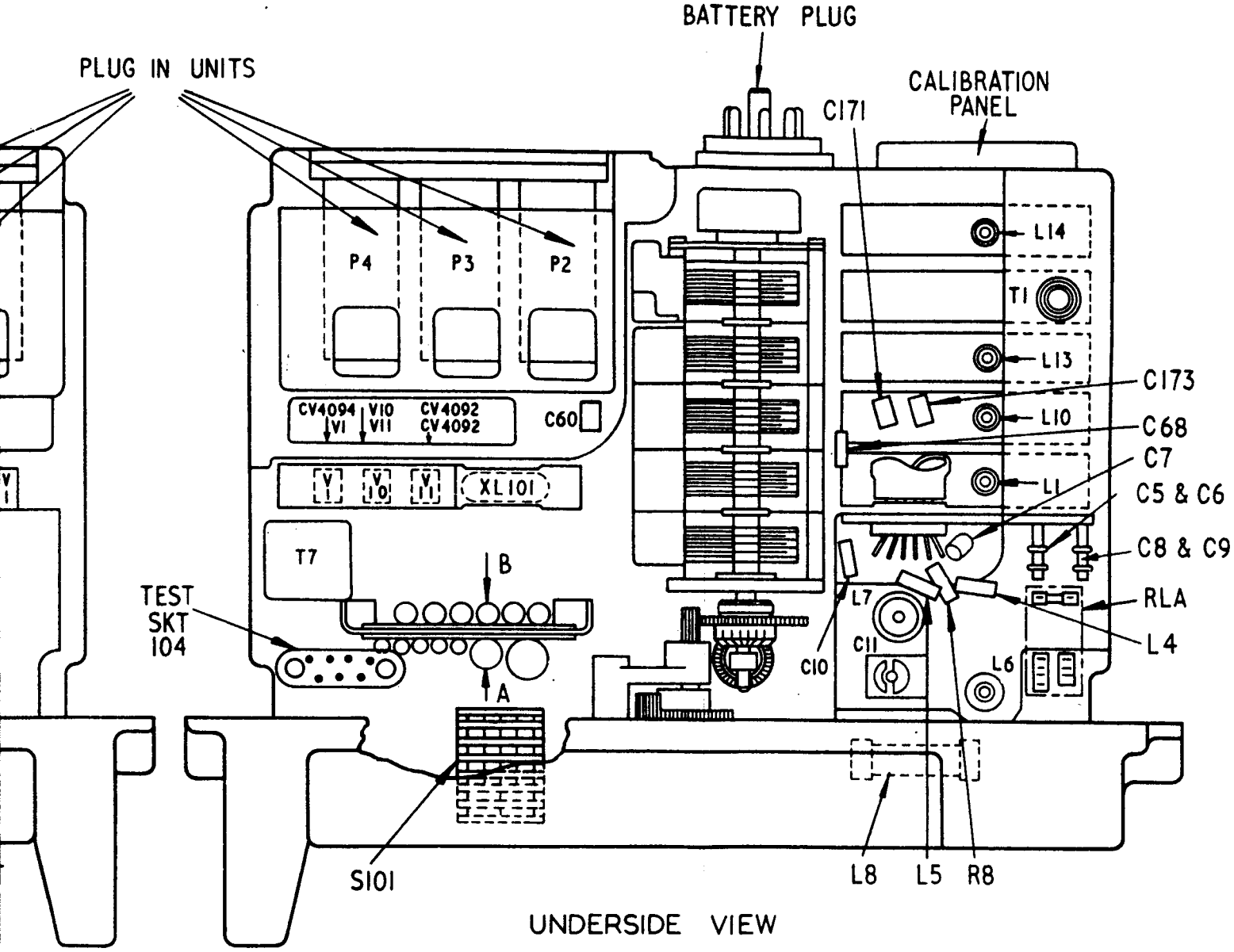
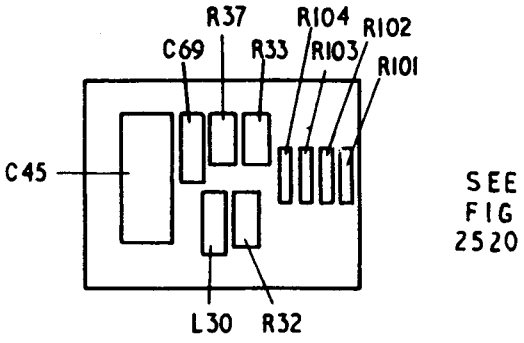
Fig 2514 - Chassis, top an

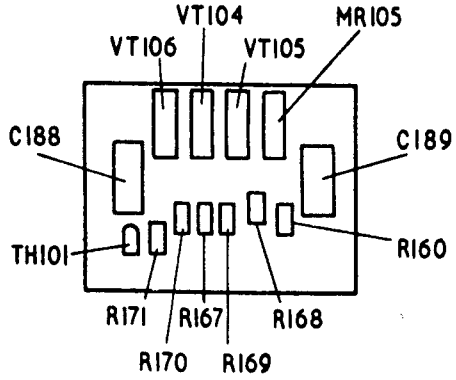


UNDERSIDE VIEW



SEE FIG 2520

VIEW ON ARROW A



VIEW ON ARROW B

op and underside, No 2 set - component layout

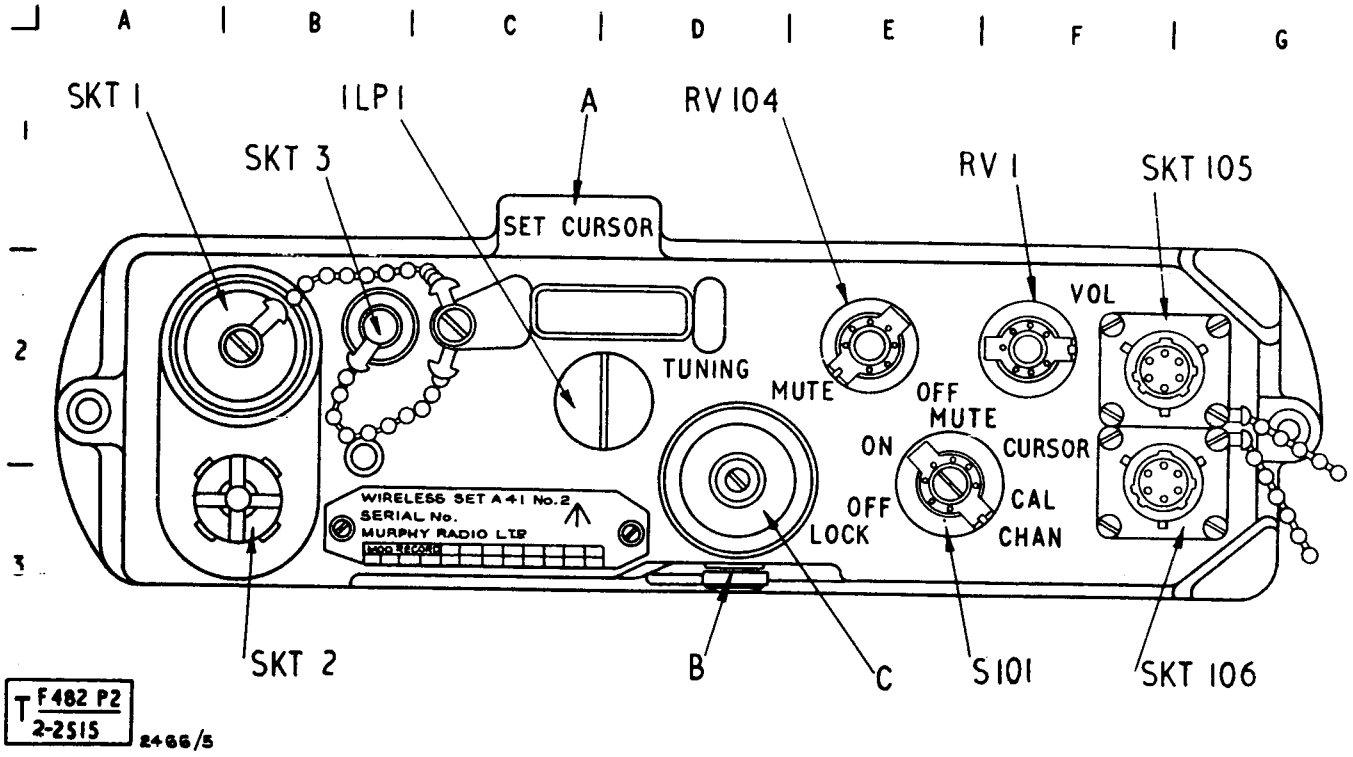


Fig 2515 - Front panel controls, No 2 set

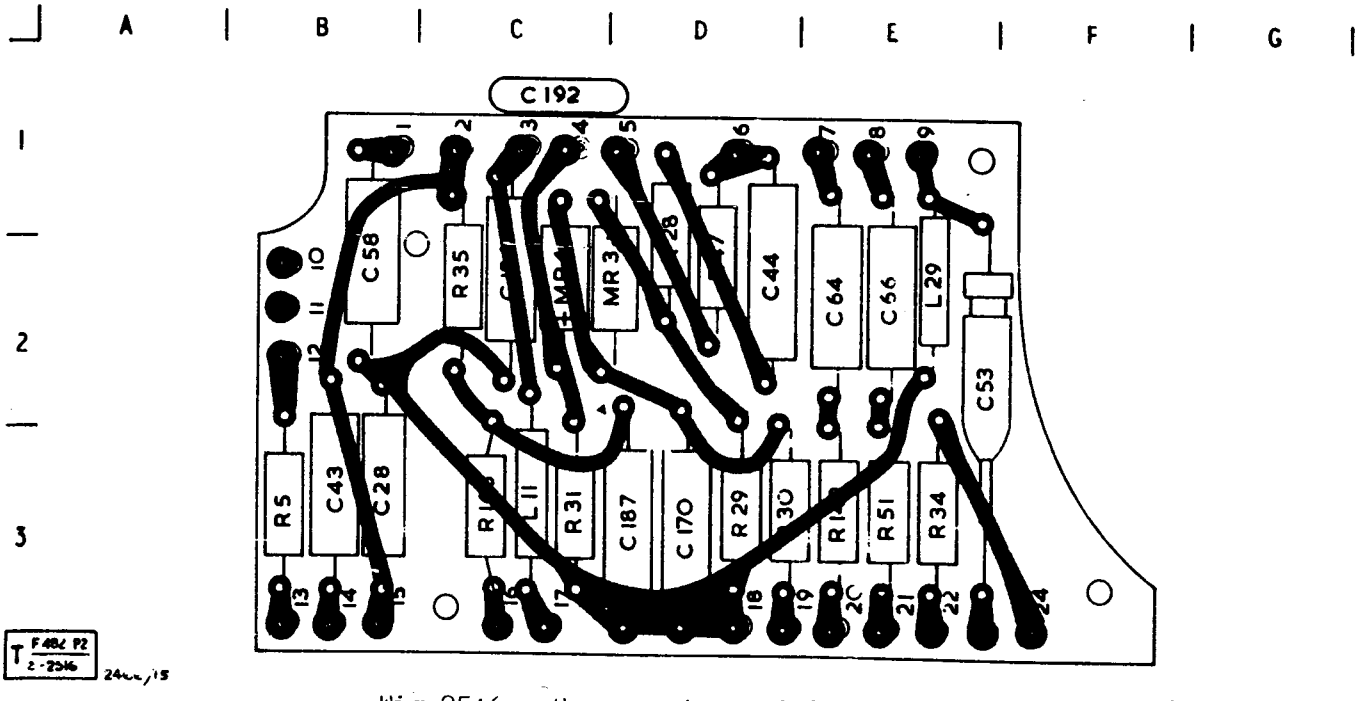
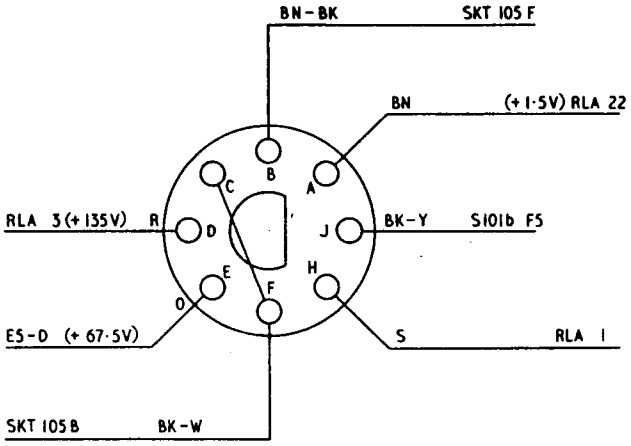


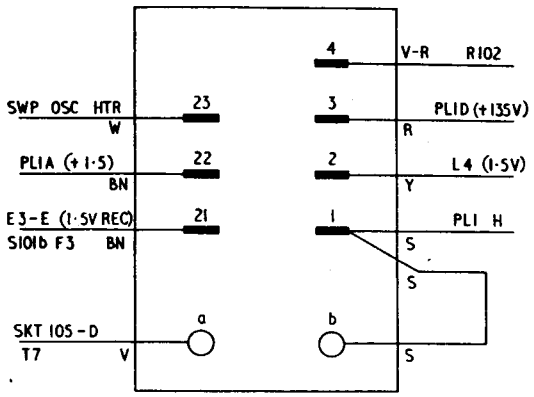
Fig 2516 - Component panel layout, No 2 set

RESTRICTED

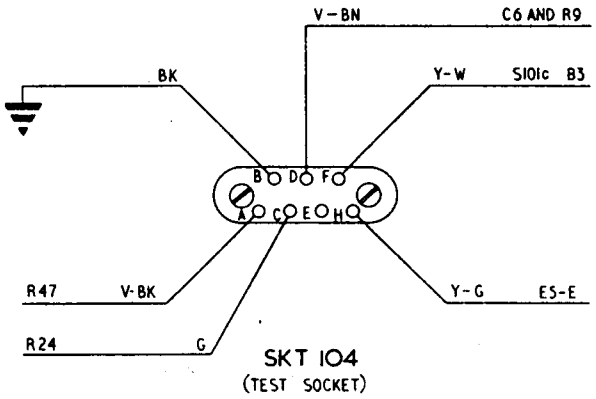
Fig 2514 - Chassis, top and underside, No 2 set - component layout



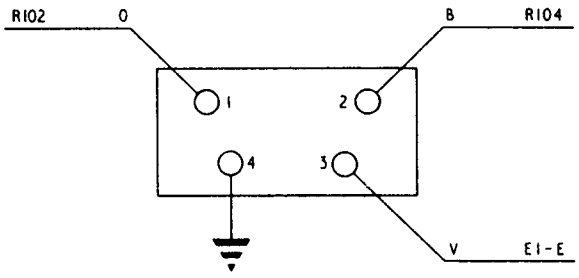
PLI
(BATTERY PLUG)



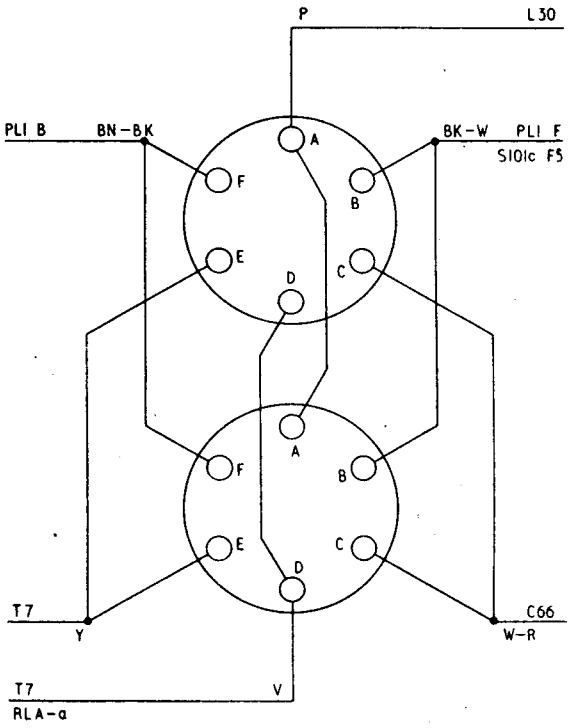
RLA
(S-R RELAY)



SKT 104
(TEST SOCKET)



X1
(MODULATOR REACTOR)



SKT 105 AND 106
(HEADSET SOCKETS)

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Fig 2517 - Wiring of plugs and sockets, No 2 set

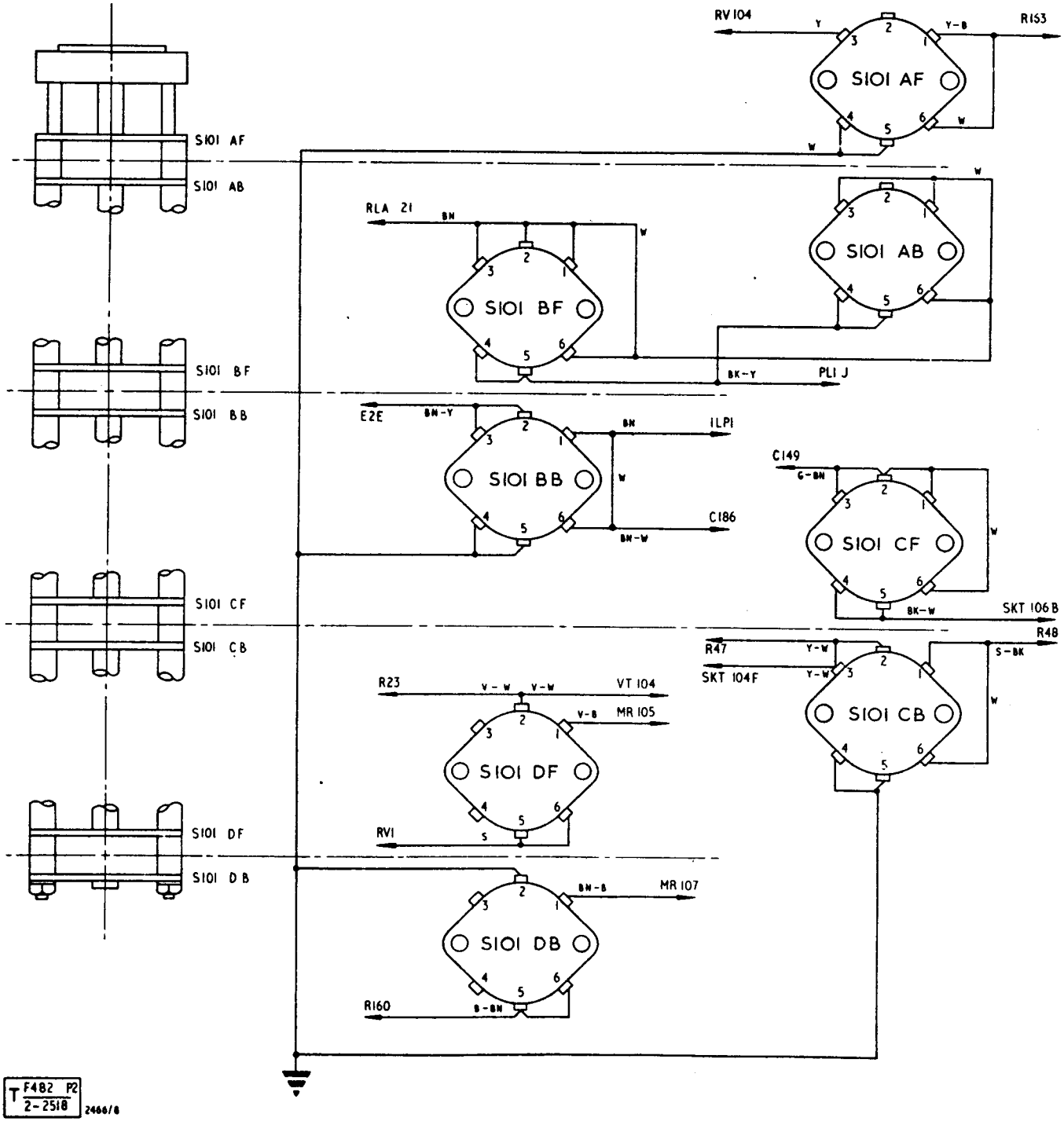


Fig 2518 - Wiring of switch S101

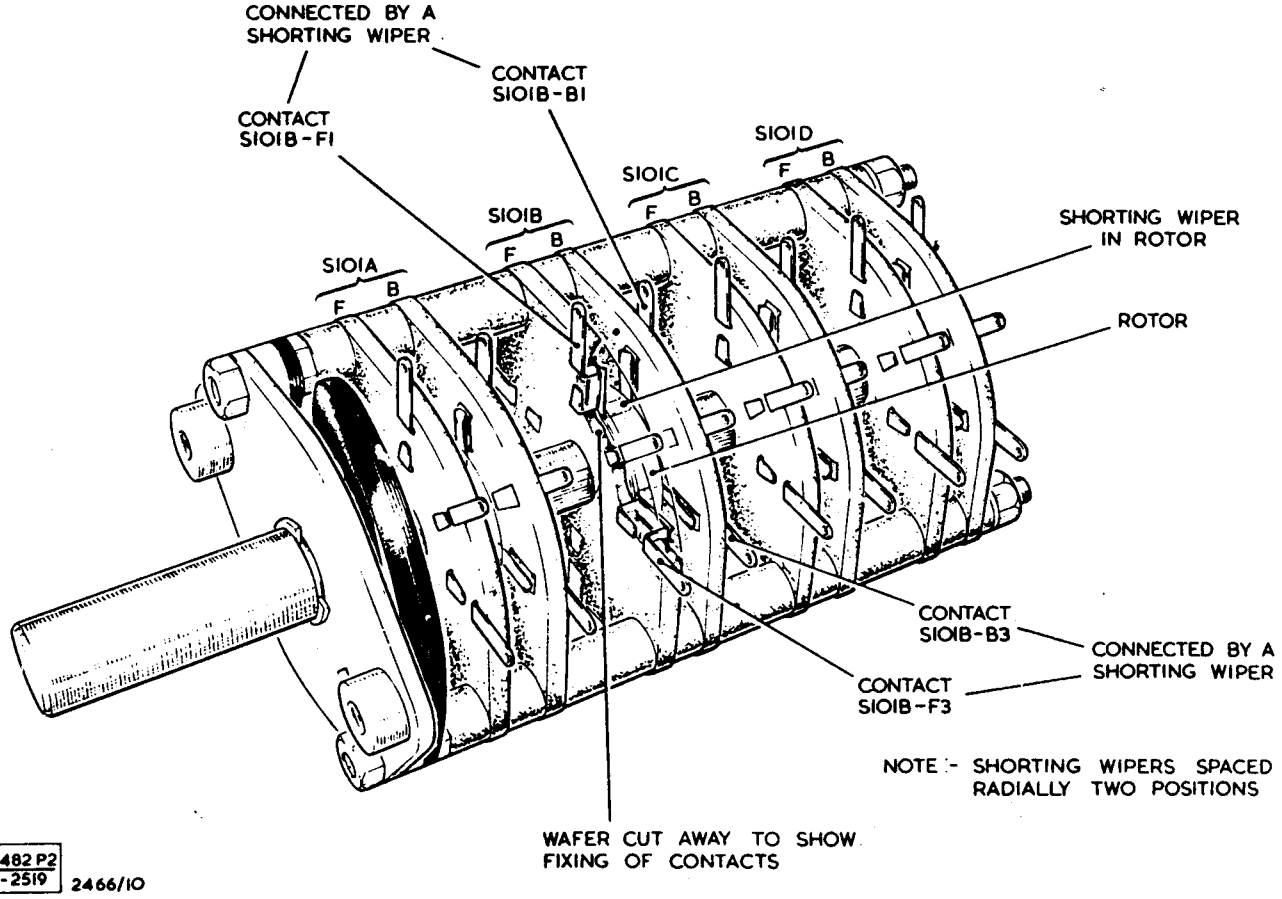
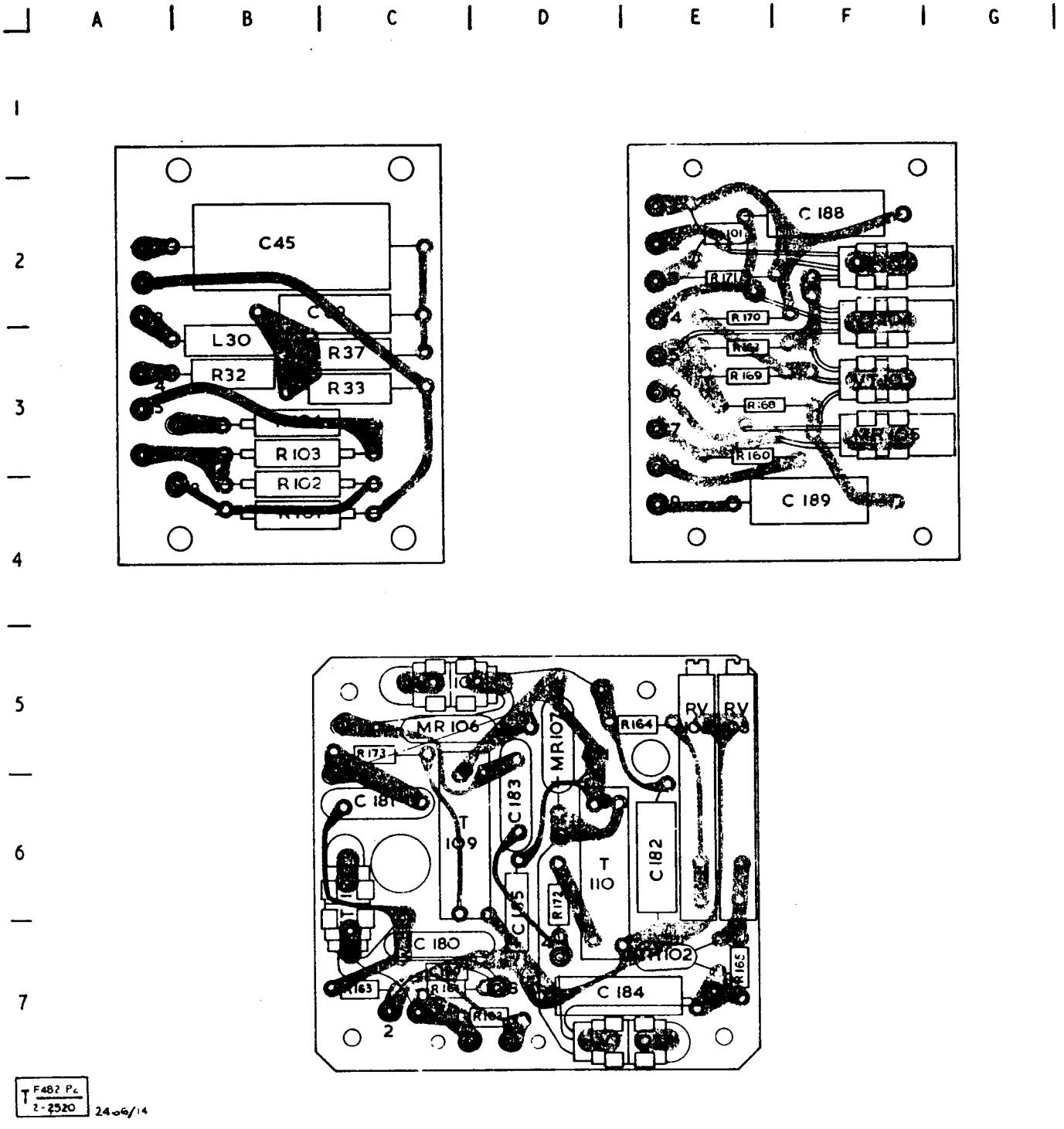


Fig 2519 - Exploded view of switch S101



T F482 Pt 2-2520 2406/14

Fig 2520 - Component panels, layout, No 2 set

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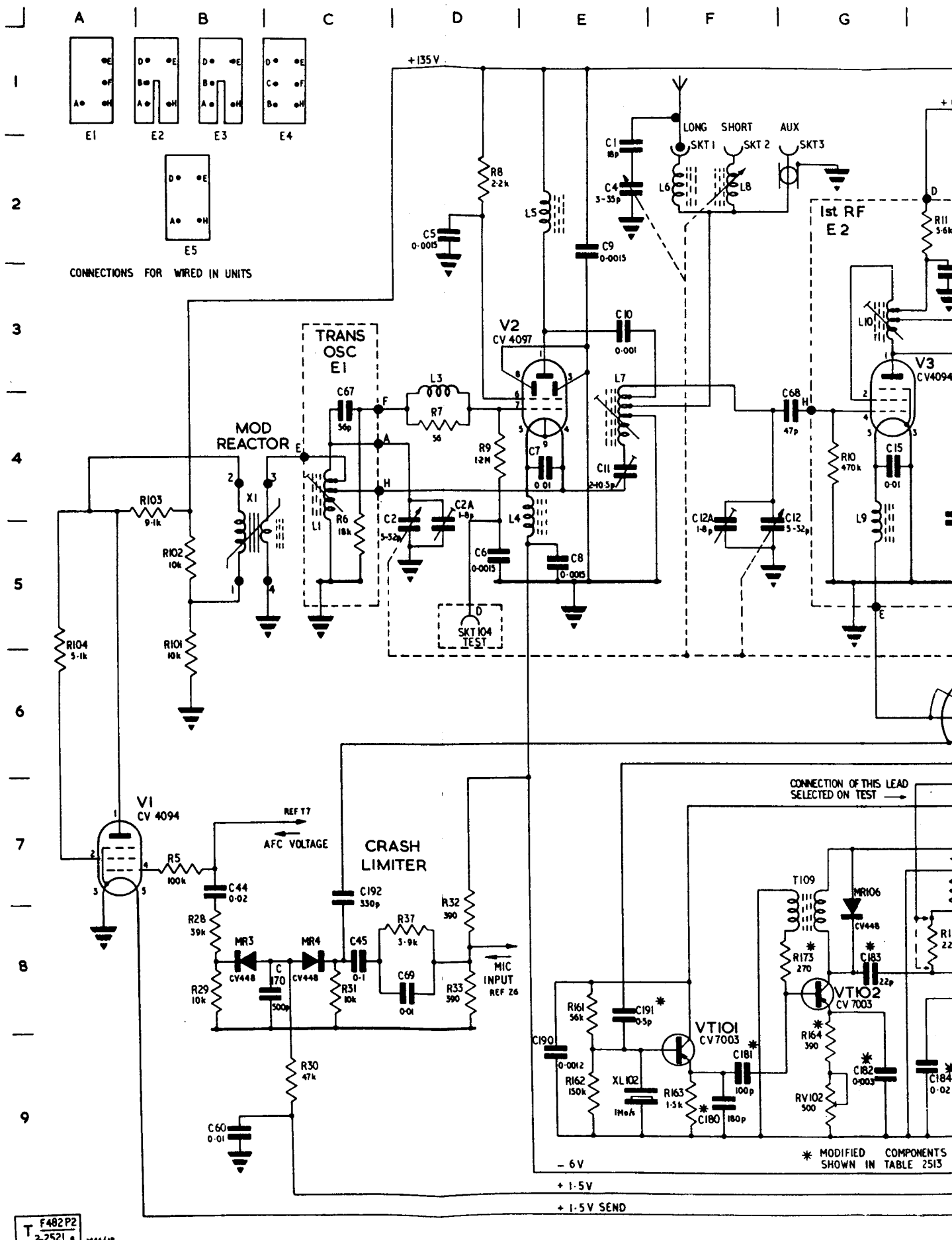

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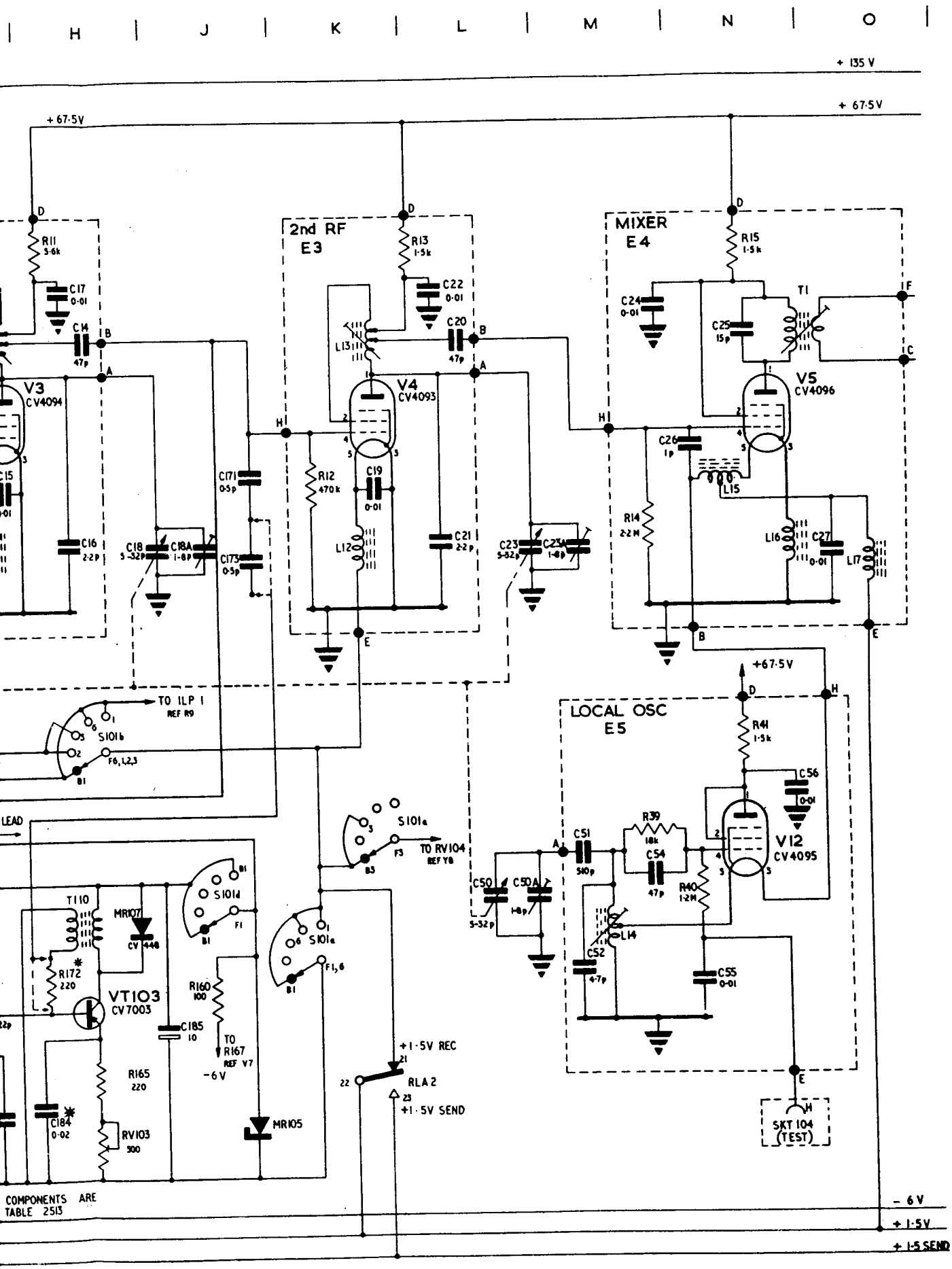
Fig 2521a - Circuit diagram (Part 1),

(Note: Additional copies of this figure for use as bench



art 1), No 2 set after Serial No 3296

as bench copies may be obtained on supplementary demand)

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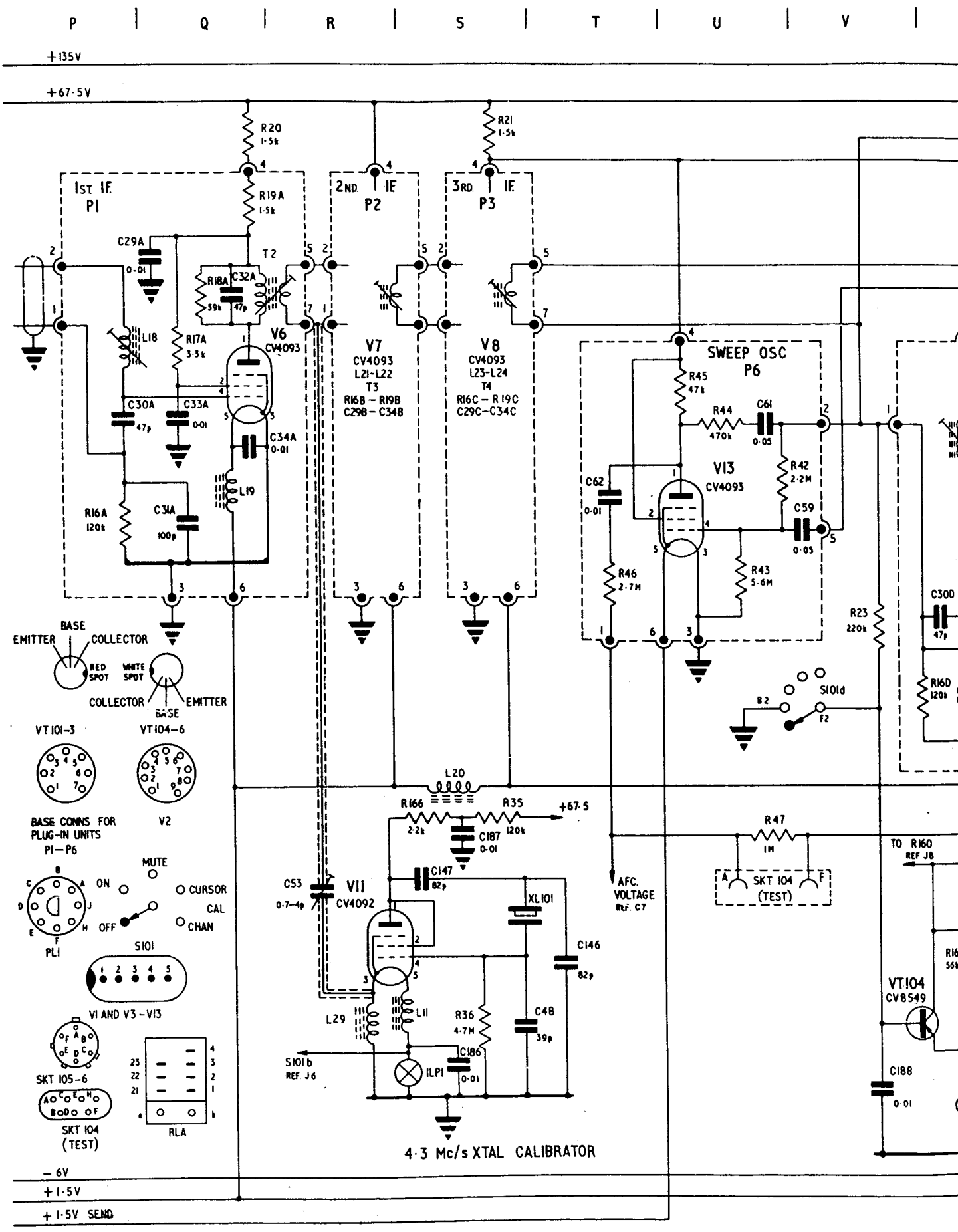
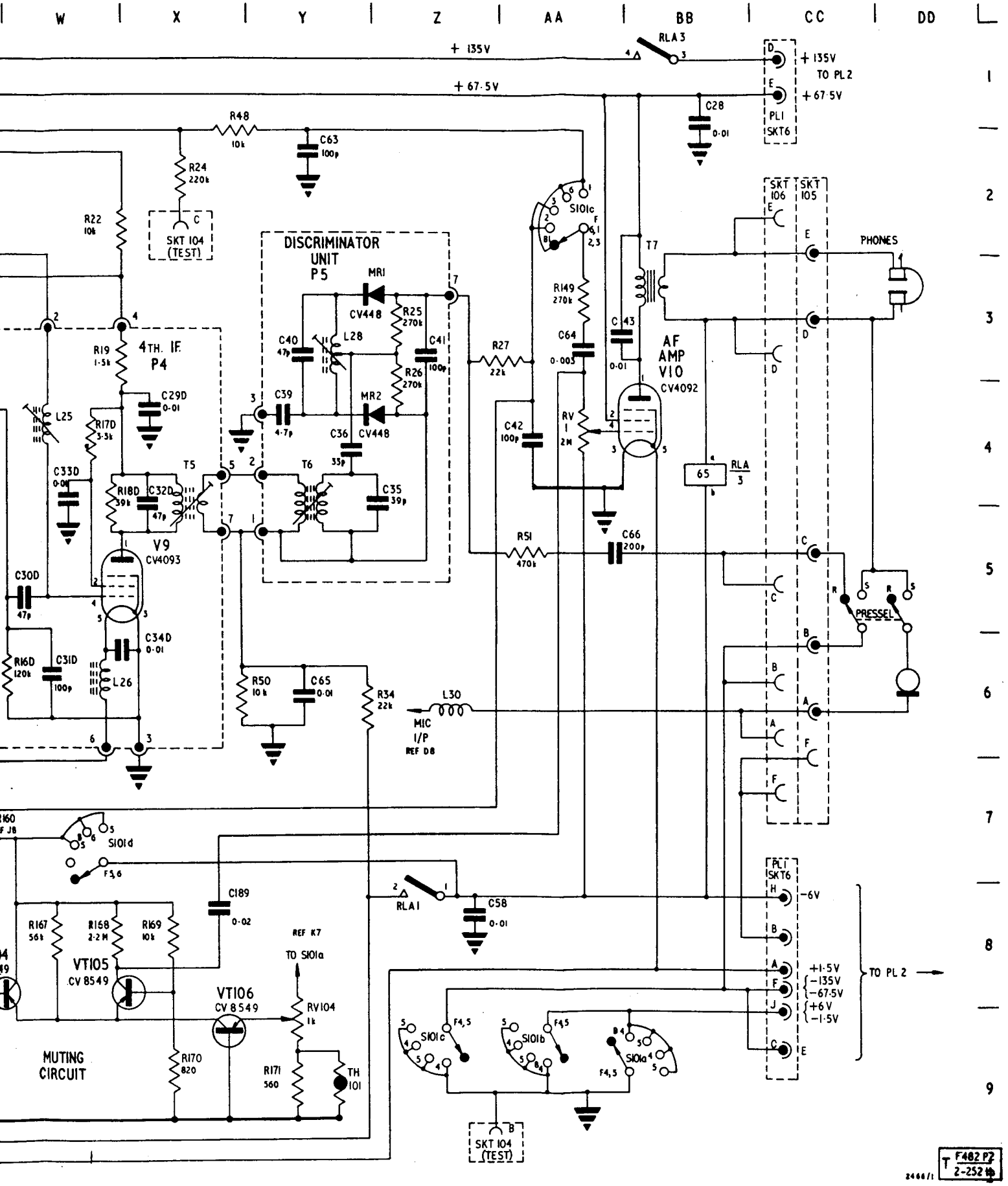


Fig 2521b - Circuit diagram (Pa

(Note: Additional copies of this figure for use



(Part 2), No 2 set after Serial No 3296

use as bench copies may be obtained on supplementary demand)

RESTRICTED

Fig 2521b - Circuit diagram (Part 2),
No 2 set after serial No 3296

Table 2513 - No 2 set after serial No 3296 - component changes

Cct. ref.	Component location		Value	Rating	Type and limit		Part No
	Main cct.	Unit layout					
RESISTORS							
R164	21G9	20E5	390Ω	1/16W	Comp ins	±10%	5905-99-012-8036
R172	21H8	20D6	220Ω	1/16W	Comp ins	±10%	5905-99-012-8027
R173	21F8	20C6	270Ω	1/16W	Comp ins	±10%	5905-99-012-8030
CAPACITORS							
C180	21F9	20C7	180pF	350V	Silvered mica	±5%	5910-99-914-7968
C181	21F9	20C6	100pF	350V	Silvered mica	±5%	5910-99-911-6953
C182	21G9	20E6	0.003μF	500V	p.m.t.	±10%	5910-99-104-7424
C183	21G8	20D6	22pF	350V	Silvered mica	±5%	5910-99-999-1673
C184	21H9	20D7	0.02μF	250V	p.m.t.	±10%	5910-99-948-5694
C191	21E8		0.5pF	500V	cer disc	±0.1p	
	Note: Thyristor TH102 has been removed from these sets						

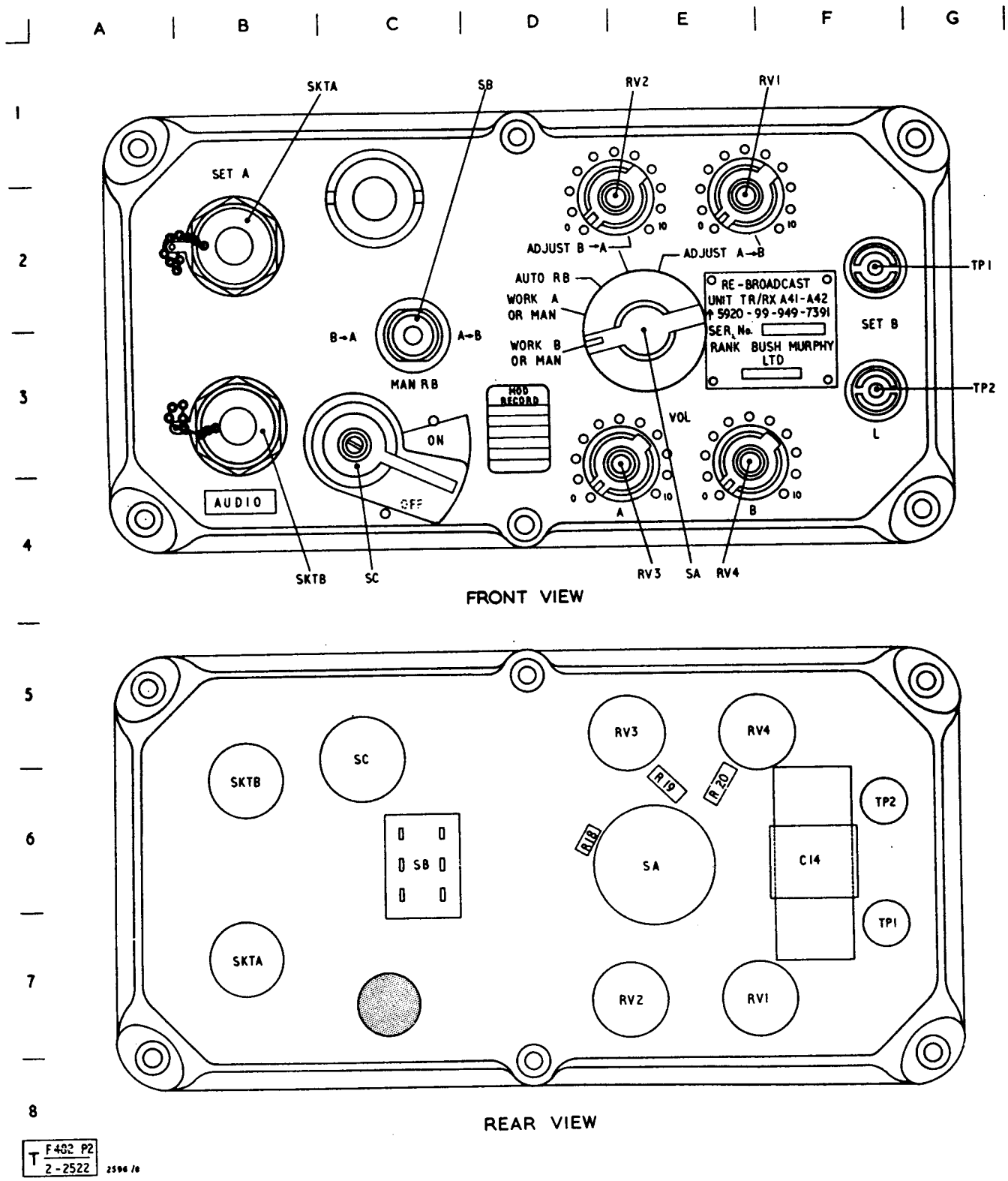


Fig 2522 - Rebroadcast unit - front panel layout

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Fig 2523 - Rebroadcast unit - circuit diagram

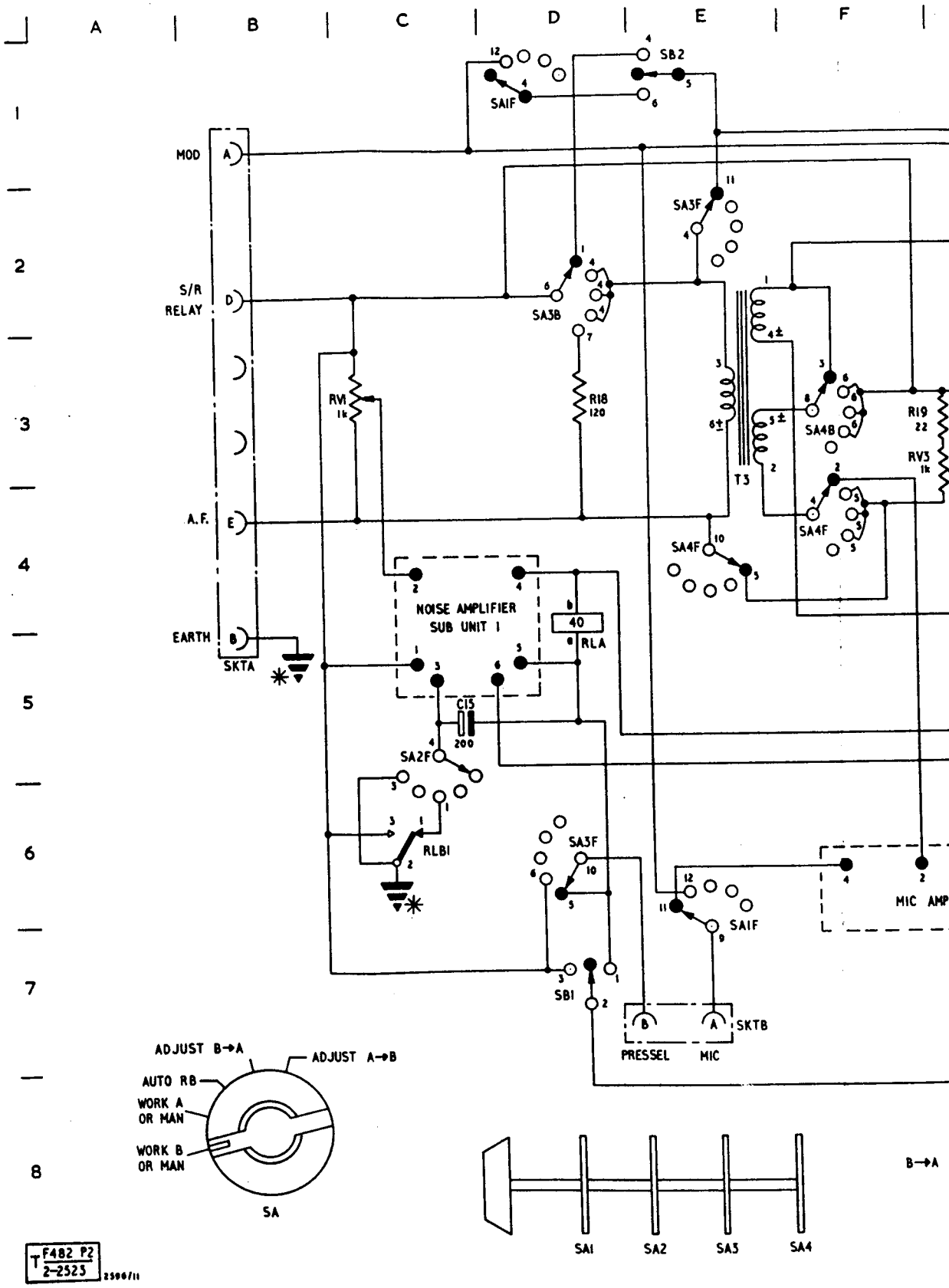
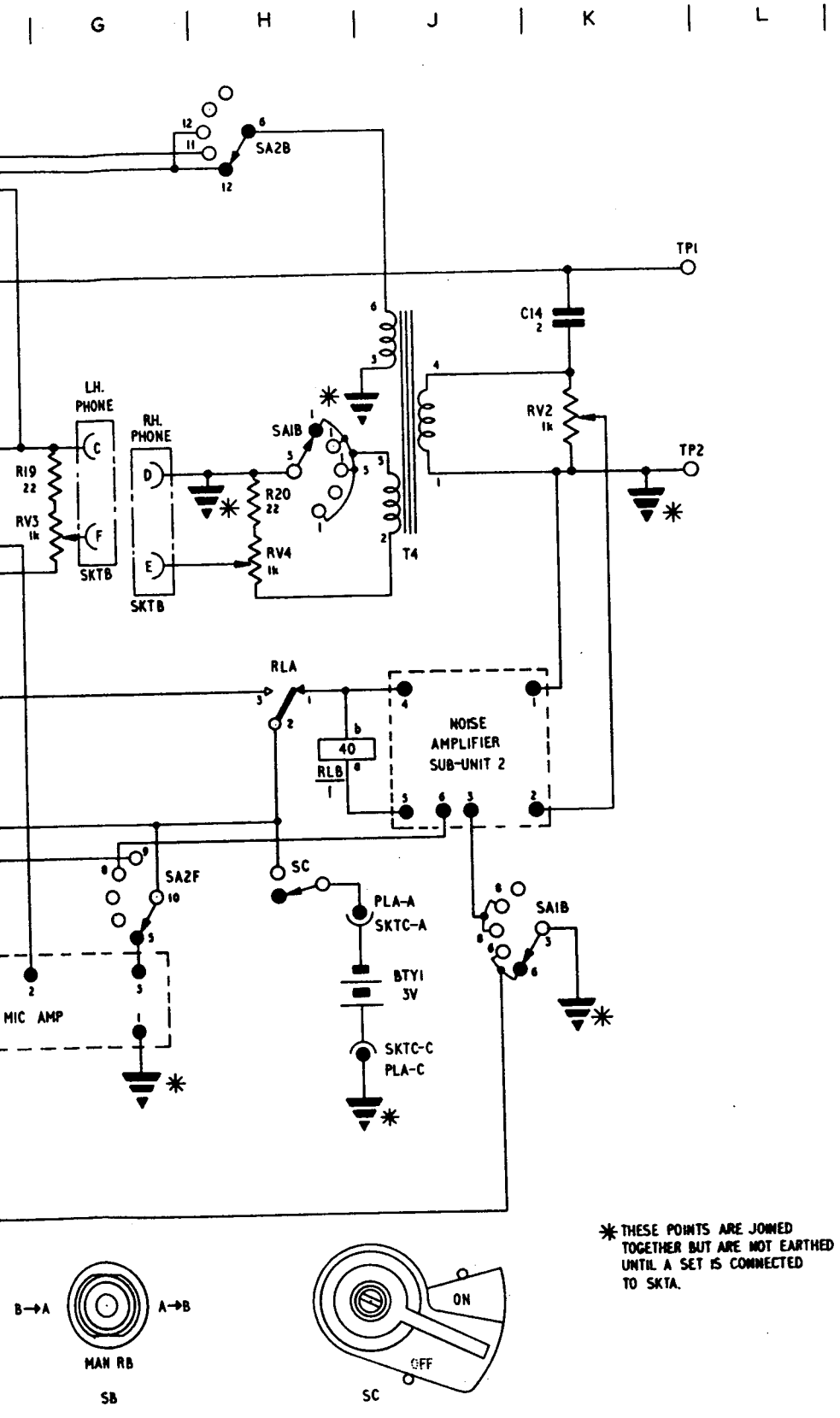


Fig 2523 - Rebroadcast unit



unit - circuit diagram

Table 2514 - Rebroadcast unit - component schedule

Cct. ref.	Component location: Main cct.	Component location: Unit layout	Value (Ω)	Rating (W)	Type and limit (±%)		Part No
			RESISTORS				5905-99-
R1	25C3	26C3	2.7k	1/4	comp ins	10	022-2058
R2	25C1	26B2	12k	1/4	comp ins	10	022-2142
R3	25C3	26C2	1k	1/4	comp ins	10	022-2004
R5	25C1	26B2	1.8k	1/4	comp ins	10	022-2037
R6	25C1	26C2	390 or 330	1/4	comp ins	10	022-1172
R7	25D3	26D2	2.2k	1/4	comp ins	10	022-2046
R8	25D1	26C2	8.2k	1/4	comp ins	10	022-2121
R9	25E3	26D2	180	1/4	comp ins	10	022-1142
R10	25E3	26D2	220	1/4	comp ins	10	022-1151
R11	25E1	26E2	1.2k	1/4	comp ins	10	022-2016
R12	25F1	26E4	2.7k	1/4	comp ins	10	022-2058
R13	25C5	24B7	330	1/4	comp ins	10	022-1172
R14	25D6	24D7	390	1/4	comp ins	10	022-1184
R15	25D5	24C7	1.2k	1/4	comp ins	10	022-2016
R16	25E6	24E7	47	1/4	comp ins	10	022-1067
R18	23D3	22D6	120	1/4	comp ins	10	022-1121
R19	23G3	22E6	22	1/4	comp ins	10	022-1025
R20	23H3	22E6	22	1/4	comp ins	10	022-1025
RV1	23C3	22F7	1k	1/4	comp ins	10	900-3432
RV2	23K3	22E7	1k	1/4	comp ins	10	900-3432
RV3	23G3	22F5	1k	1/4	comp ins	10	900-3432
RV4	23H3	22E5	1k	1/4	comp ins	10	900-3432
			CAPACITORS				
			(μF)	(V)			5910-99-
C1	25A2	26C3	0.1	200	p.m.t.	25	011-9827
C2	25A2	26C3	0.05	250	p.m.t.	25	011-9825
C3	25A2	26D3	0.004	250	p.m.t.	20	012-0110
C4	25B3	26D2	0.02	250	p.m.t.	20	012-0114
C5	25B3	26D3	0.005	250	p.m.t.	20	012-0112
C6	25B2	26C3	0.01	250	p.m.t.	20	012-0113
C7	25C3	26C3	1.5	25	tantalum foil	20	014-5285
C8	25D2	26C1	0.1	200	p.m.t.	25	011-9827
C9	25D3	26E2	1.5	25	tantalum foil	20	014-5285
C10	25F2	26E3	0.5	200	p.m.t.	25	011-9833
C11	25F2	26E3	0.04	250	p.m.t.	20	012-0116
C13	25D5	24C6	2	200	p.m.t.	25	011-9839
C14	23K2	22F6	2	200	p.m.t.	25	011-9839
C15	23C5	24E1	200	6	tantalum foil	20	014-5271

Table 2514 - (cont)

Component location				
Cct. ref.	Main cct.	Unit layout	Description	Part No
			MISCELLANEOUS	
L1	25B3	26D2	Inductor, a.f.	5950-99-949-2956
T1	25A3	26D3	Transformer, a.f.	5950-99-949-2955
T2	25E1	26D1	Transformer, a.f.	5950-99-949-2957
T3	23E3	24C3	Transformer, a.f.	5950-99-949-2961
T4	23J3	24C3	Transformer, a.f.	5950-99-949-2962
SA	23D1	22E6 24E3	Selector switch, rotary, 13 pole, 5 pos	5930-99-900-3598
SB	23E1 23D7	22C6	Manual RB switch, 2 pole, 3 pos	5930-99-051-0581
SC	23H6	22C5	ON/OFF switch, 2 pole, 2 pos	5930-99-900-3599
SKTA	23B5	22B7	Socket, electrical, fixed female shell, 6 pole	5935-99-949-3145
SKTB	23G3 23E7	22B6	Socket, electrical, fixed female shell, 6 pole	5935-99-949-3145
SKTC	23H6		Socket, fixed, 8 pole	5935-99-949-0202
PLA	23H6	24B3	Plug, fixed, 8 pole	5935-99-949-0135
RLA	23D5	24B2	Relay, sealed, 40Ω	5945-99-011-4686
RLB	23H5	24B2	Relay, sealed, 40Ω	5945-99-011-4686
MR1	25F2	26E2	Semi-conductor device, diode, CV7049	5960-99-037-2080
MR2	25G1	26E3	Semi-conductor device, diode, CV7049	5960-99-037-2080
VT1	25C2	26C2	Transistor, CV5712	5960-99-037-2545
VT2	25D2	26D2	Transistor, CV5439	5960-99-037-2436
VT3	25G2	26E2	Transistor, CV5713	5960-99-037-2546
VT4	25D5	24E7	Transistor, CV5713	5960-99-037-2546

Table 2515 - Relay unit - component schedule

Component location				
Cct. ref.	Main cct.	Unit layout	Description	Part No
C1	29C1	29F5	Capacitor, p.m.t., 2μF ±25%, 200V	5910-99-011-9839
T1	29D2	29F5	Transformer, a.f.	5950-99-949-2990
SKTA	29F2	29E5	Socket, electrical, fixed female shell, 6 pole	5935-99-949-3145
RLA	29C2	29G5	Relay, sealed, 40Ω	5945-99-011-4686

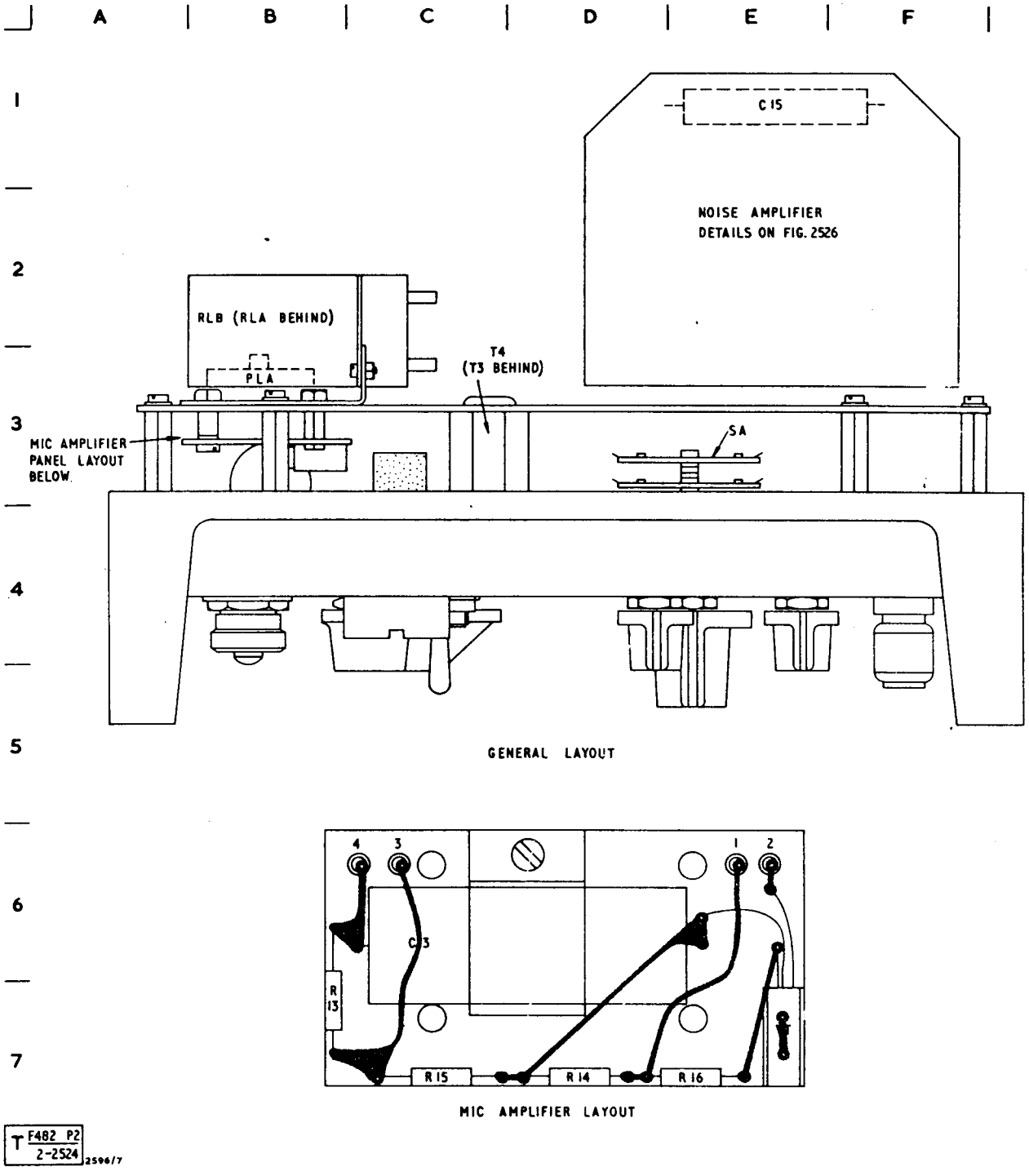


Fig 2524 - Rebroadcast unit - component layout

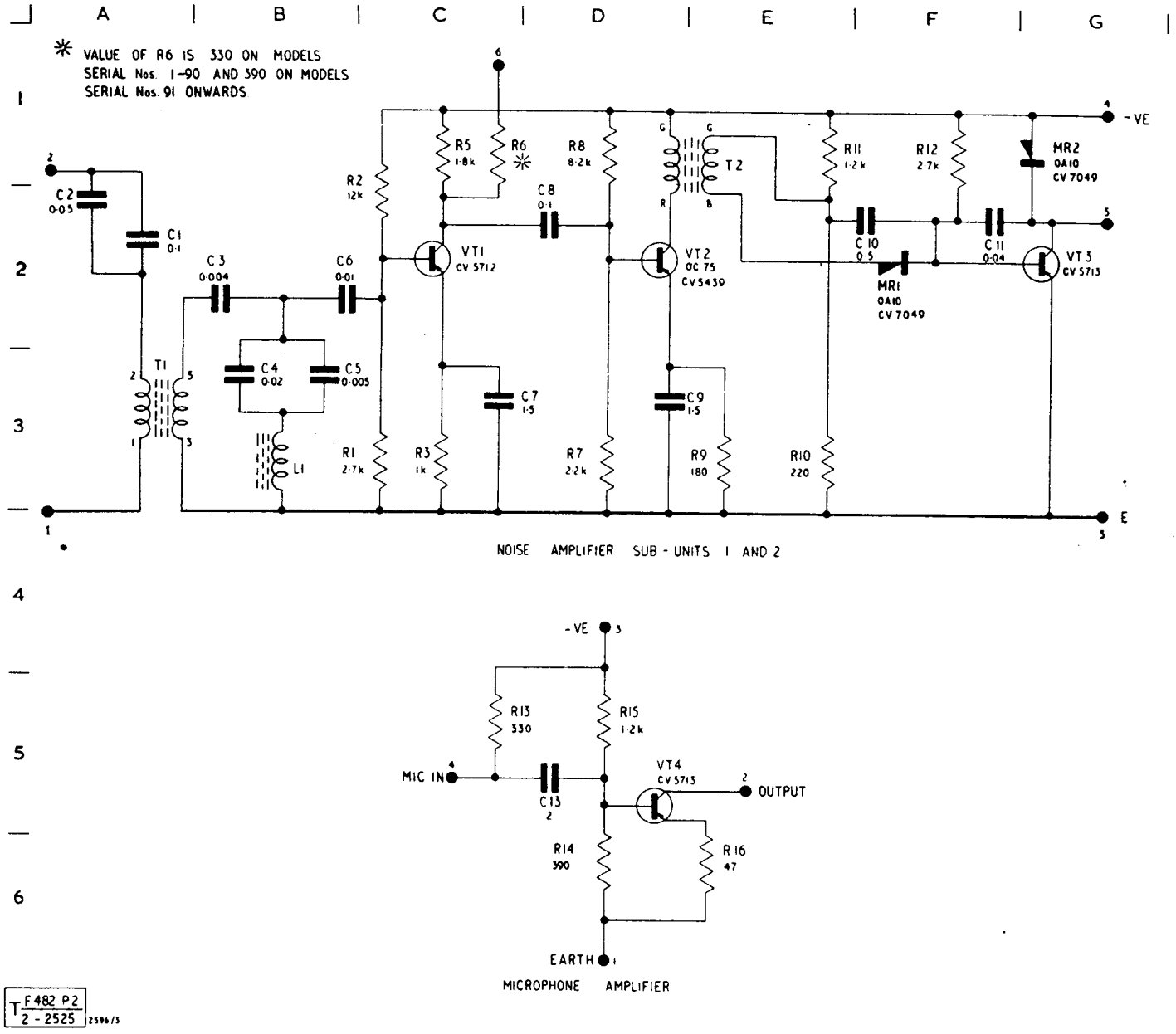


Fig 2525 - Rebroadcast unit - noise and microphone amplifier circuits

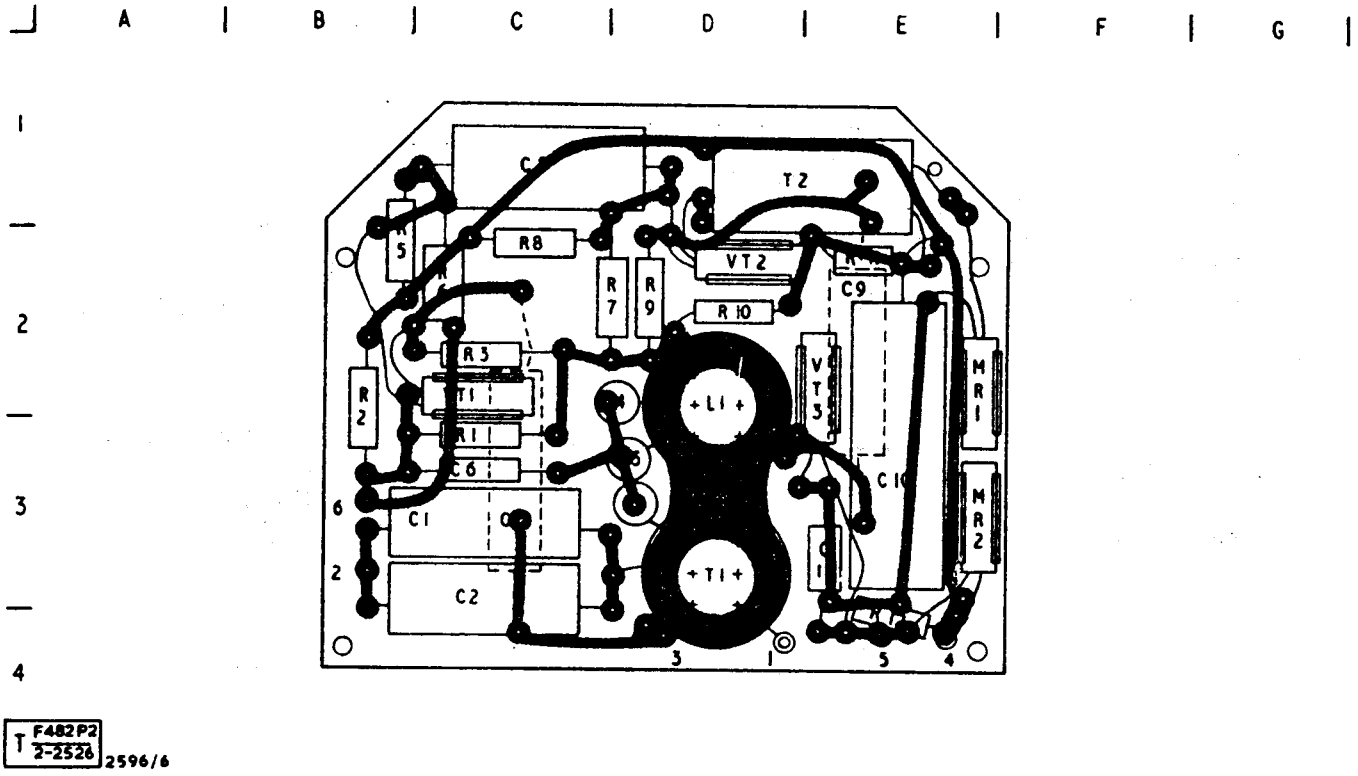


Fig 2526 - Rebroadcast unit - noise amplifier sub unit layout

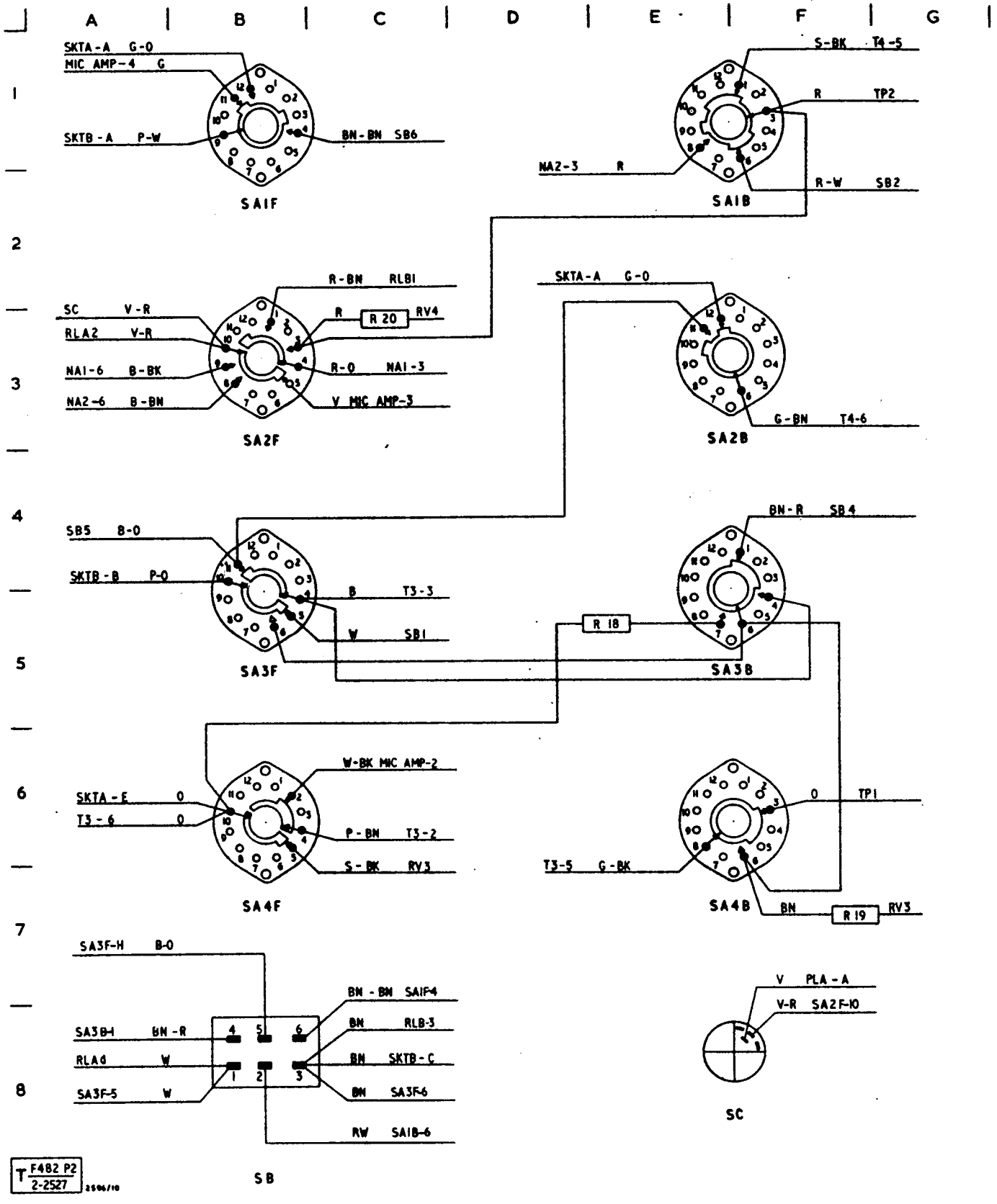


Fig 2527 - Rebroadcast unit - switch wiring

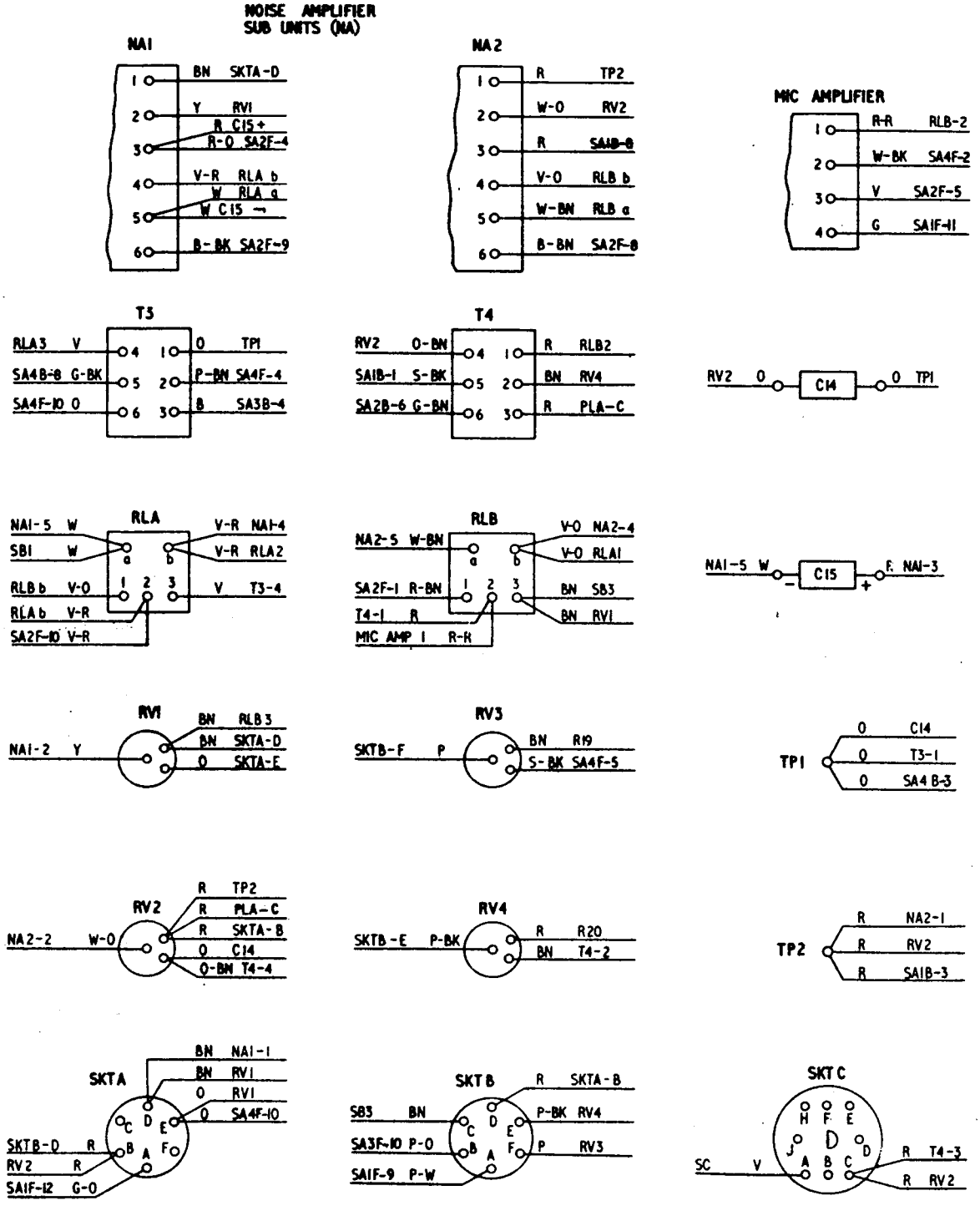


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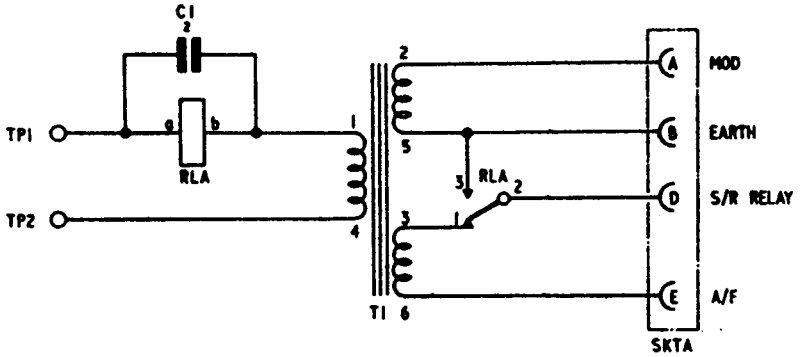
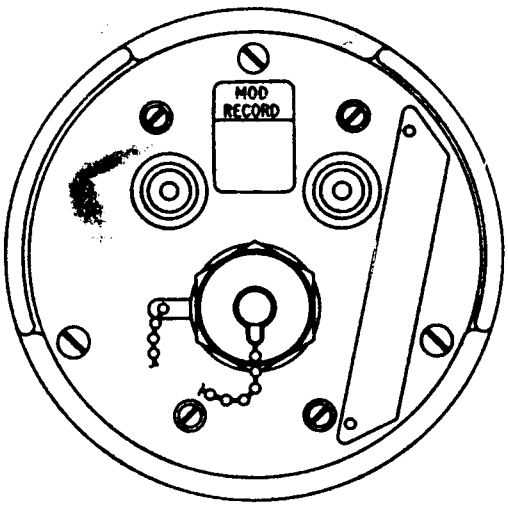
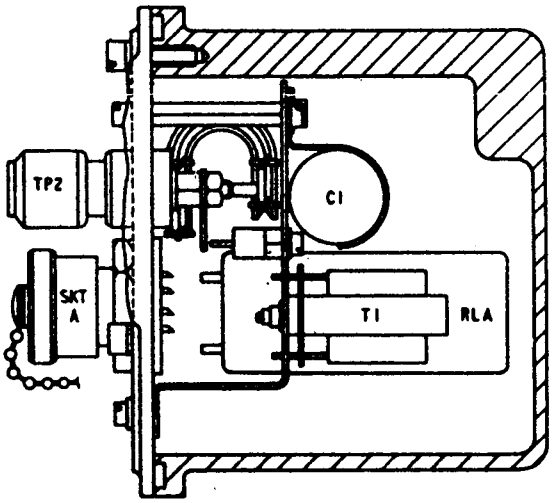
Fig 2528 - Rebroadcast unit - component wiring



CIRCUIT OF RELAY UNIT



FRONT PANEL



COMPONENT LAYOUT

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Fig 2529 - Relay unit - circuit and layout

Table 2516 - Rebroadcast unit - test equipment schedule

Preferred instrument		Suitable alternative	
Part No	Designation	Part No	Designation
Z4/ZD 04247	Signal generator, video frequency, No 1, CT416, equipment No 2	Z4/ZD 00198	Oscillator, b.f. No 8
Z4/6625-99-103-3116	Voltmeter, electronic, TF2600	Z4/6625-99-972-7776	Voltmeter, electronic, TF899A
Z4/6625-99-949-1999	Multimeter, set, Avo, type 9SX, panclimatic (CT498)	Z4/6625-99-943-1523	Multimeter, Avo, model 7
Z4/6625-99-942-4825	Oven, drying, Tels, 240V a.c.	-	-
Z4/6625-99-200-2271	Leak locator, CT509	-	-
	Resistors 180Ω ±5%, 1/4W (Qty 2) 150Ω ±5%, 1/4W (Qty 2)	-	-

Table 2517 - Rebroadcast unit - specification tests

Notes

1. Notes 1-3 Table 2511 apply to this equipment
2. Voltage to be 2.8V ±0.15V

Test	Limits	Remarks
Switching performance		
Automatic		
1. Set B send-receive switching		Set to Relay unit (or continuity meter to B and D of Relay unit socket). AF source (150Ω) to D & E of SKTA on Rebro unit. Adjust controls clockwise. Headset to AUDIO socket. Switch Rebroadcast unit to ON.
(a) Zero A.F. input SA to ADJUST A - B ADJUST B - A AUTO RB WORK A WORK B	Set sends (meter S/C) receives (meter O/C) sends receives receives	
(b) 8kc/s input SA to AUTO	(i) Set receives (meter o/c) with input less than 4.5mV.	

Table 2517 - (cont)

Test	Limits	Remarks
	(ii) Set sends (S/C) with input reduced by less than 4dB	
4kc/s input SA to AUTO	Set receives (O/C) with input more than 35dB above (b) (i)	
8kc/s input SA to ADJUST A - B	Set receives (O/C) with input 12 ±3dB greater than (b) (i)	
2. Set A send-receive switching		Set to SET A socket on Rebroadcast unit (or continuity meter to B and D of socket)
(a) Zero A.F. input SA to ADJUST A - B ADJUST B - A AUTO RB WORK A WORK B	Set receives (O/C) sends (S/C) sends receives receives	A.F. source to D and E of relay unit socket, 180Ω resistor between A and B of relay unit socket Switch Rebroadcast unit to ON
(b) 8kc/s input SA to AUTO	(i) As 1(b)(i) (ii) Set sends (S/C) with input reduced by less than 2dB.	
4kc/s input SA to AUTO	Set receives (O/C) with input more than 35dB above 2(b)(i)	
8kc/s input SA to ADJUST B - A	Set receives (O/C) with input 12 ±3dB greater than 2(b)(i)	
Manual		
1. Set B send-receive switching		
(a) SA to WORK A SB to central A - B B - A	meter O/C S/C O/C	Headset in AUDIO socket Continuity meter to B and D of relay unit socket Switch Rebroadcast unit to ON.
(b) Repeat with SA to WORK B		
(c) SA to WORK A operate pressel	O/C	
(d) SA to WORK B operate pressel	S/C	

Table 2517 - (cont)

Test	Limits	Remarks
2. Set A send-receive switching (a) SA to WORK A SB to central A - B B - A	meter O/C O/C S/C	Headset in AUDIO socket Continuity meter to B and D of SET A socket
(b) Repeat with SA to WORK B		
(c) SA to WORK A operate pressel	S/C	
(d) SA to WORK B operate pressel	O/C	

A.F. performance	Minimum readings			Set up as Automatic 1(a) but omit headset Connect 150Ω resistors between C & F and between D & E of AUDIO socket (SKT B) Measure A.F. power out across 150Ω loads and between A and B of Relay Unit socket with V.V. X = noise out from set - level unspecified
	SKT B		Relay unit	
1. A - B direction (a) A.F. at 1kc/s 1.75V r.m.s. SA to SB	C and F mV	D and E mV	A and B mV	
AUTO RB Central	275	215	150	
WORK A Central	475	X	X	
WORK A A - B	275	215	150	
WORK B Central	530	X	X	
WORK B A - B	385	175	150	
(b) SA to AUTO RB, SB central (i) VOL.A anti-clockwise	26-32dB			Reduction in power in load (i) across C and F
(ii) VOL.B anti-clockwise	26-32dB			(ii) across D and E

2. B - A direction A.F. at 1kc/s 1.75V r.m.s.	Minimum readings			Set up as above but measure A.F. power out across 150Ω loads and between A and B of rebroadcast unit socket with V.V. VOL.A and VOL.B clockwise. X = noise out from set - level unspecified Y = 1kc/s out from sidetone - level unspecified
	SKT B		Set A Skt	
SA to SB	C and F mV	D and E mV	A and B mV	
AUTO RB central	Y	275	150	
WORK A central	X	275	0	
WORK A B - A	Y	275	150	
WORK B central	X	275	150	
WORK B B - A	Y	275	150	

Table 2517 - (cont)

Test	Limits			Remarks
3. Local operation	Minimum Readings			A.F. source (100Ω) to A and D of AUDIO socket (SKT B) 150Ω resistor between D and E (SKT B) 180Ω resistors between A and B of SET A socket and between A and B of Relay unit socket
	SET A SKT	SKT B	Relay Unit	
	A and B mV	D and E mV	A and B mV	
SA to WORK A	130	0	0	
SA to WORK B*	-	195	170	*With B and D of SKT B joined
SA to WORK B*/	5-10mA			/A.F. source removed and replaced by Avo meter
Sealing test	Initial pressure 10 lb/ sq. in. After 3.1/2 hours 9 lb/ sq. in.			Time constant 138 hours

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END