TRANSMITTER-RECEIVER, RADIO, A40

TECHNICAL HANDBOOK - FAULT FINDING AND REPAIR DATA

This Part 2 contains fault finding and repair data in tabular and diagrammatic form. Part 1 and the regulations dealing with unit, field and base repairs describe how various operations are to be carried out.

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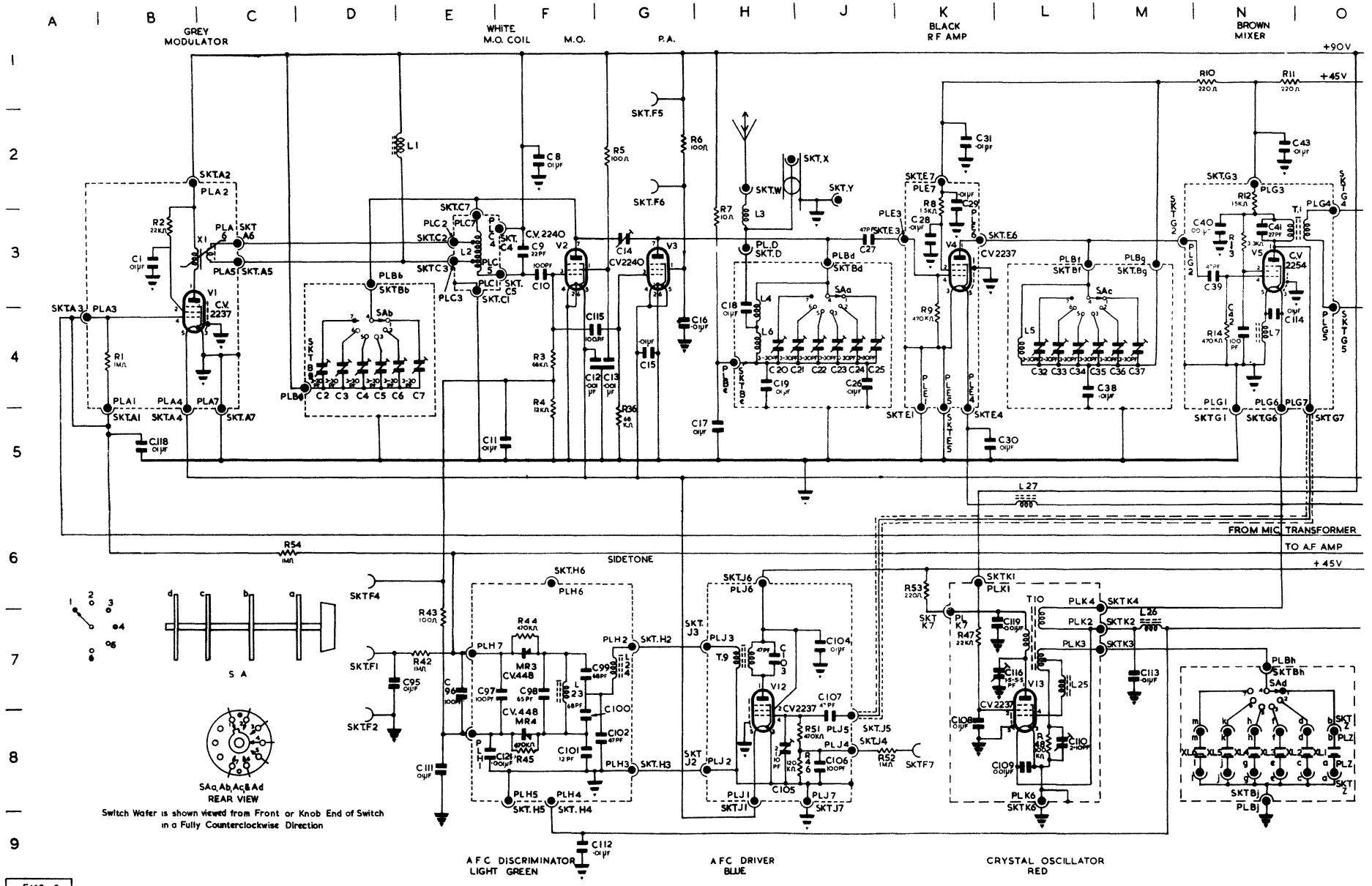


Fig 2001a - Circuit diagram, part 1

Note: These Pages 1003 and 1004, Issue 2, supersede Pages 1003 and 1004 Issue 1, dated 1 May 58. Fig 2001b has been amended.

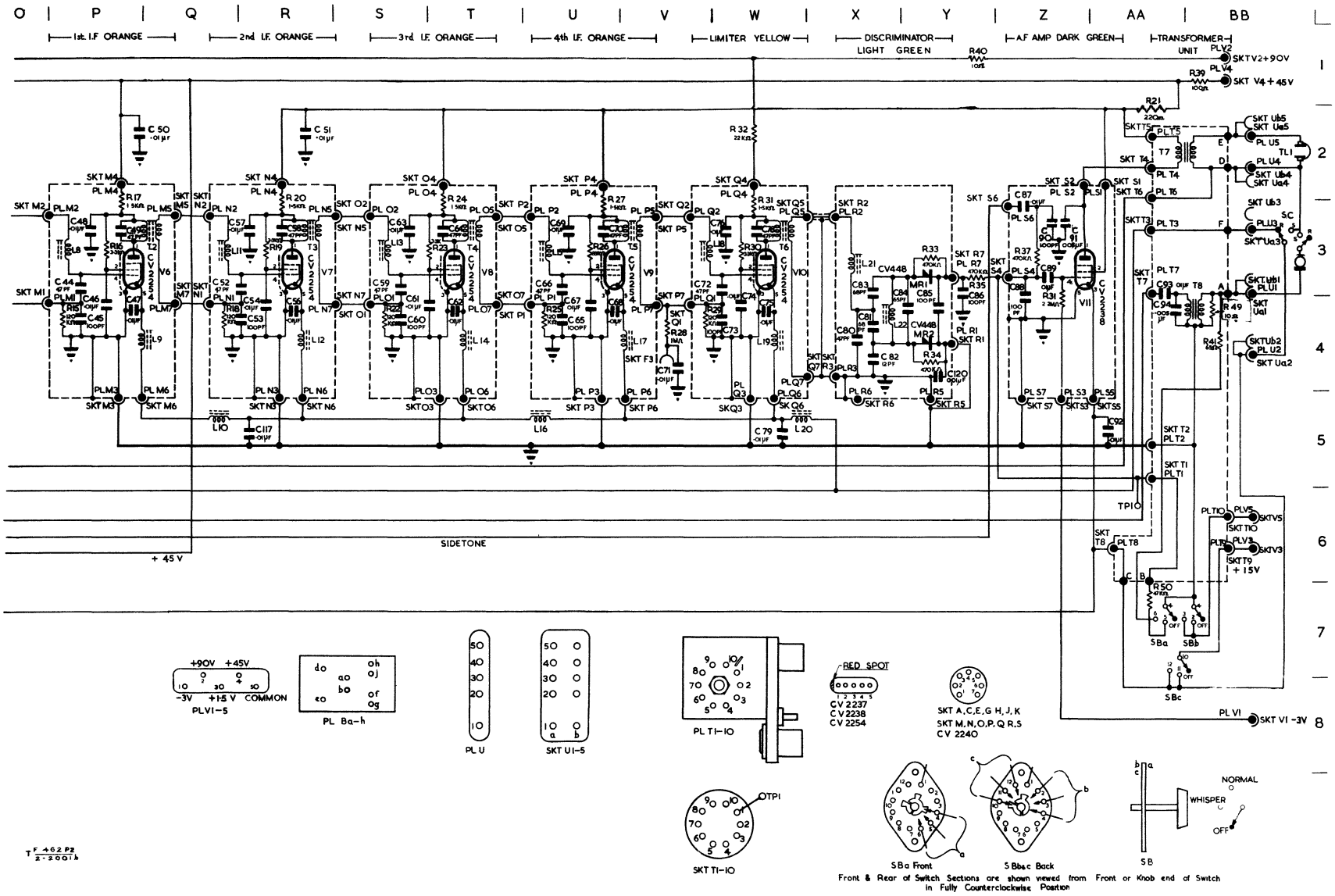


Fig 2001b – Circuit diagram, part 2

Circuit Reference	Location of Components		Value	Rating	Type and Limit
	Circuit diagram	Layout			
	Fig 2001b				
C93	A3	)	0.01μF	150V	Paper Met. Tub. ±20%
C94	A3	)	0.005μF		Paper Met. Tub. ±20%
R41	BB4	) Fig	0.65Ω		Wire wound special
R49	BB4	) 2003	10Ω		Wire wound special
T7	BB2	)			Phone output transformer
T8	BB3	)			Mic. input transformer
PLT		)			10 pin plug
The above items are all moulded in a Marco Resin block. If any item becomes unserviceable the entire block must be replaced.					

Table 2002 - Audio transformer unit, component schedule

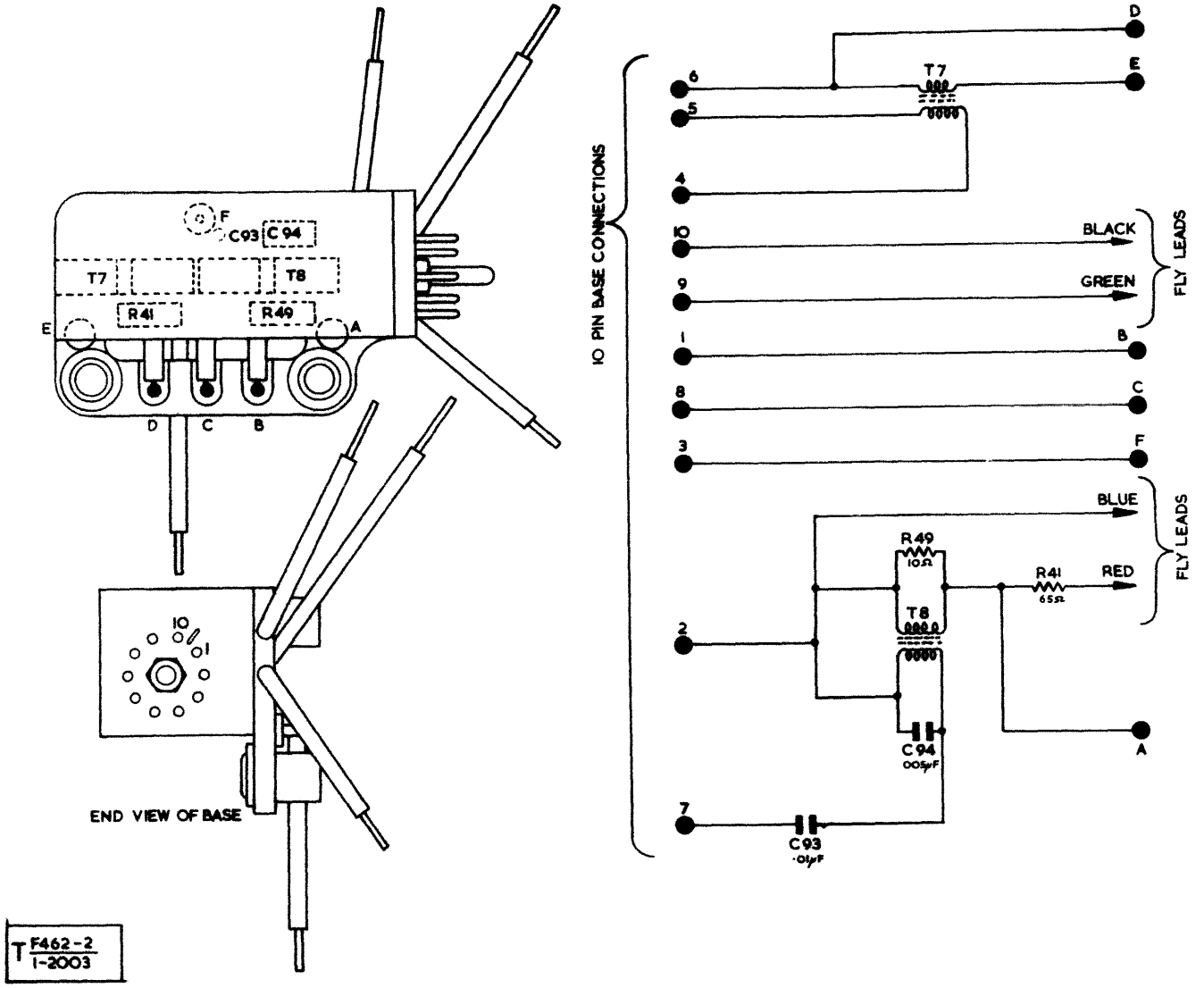
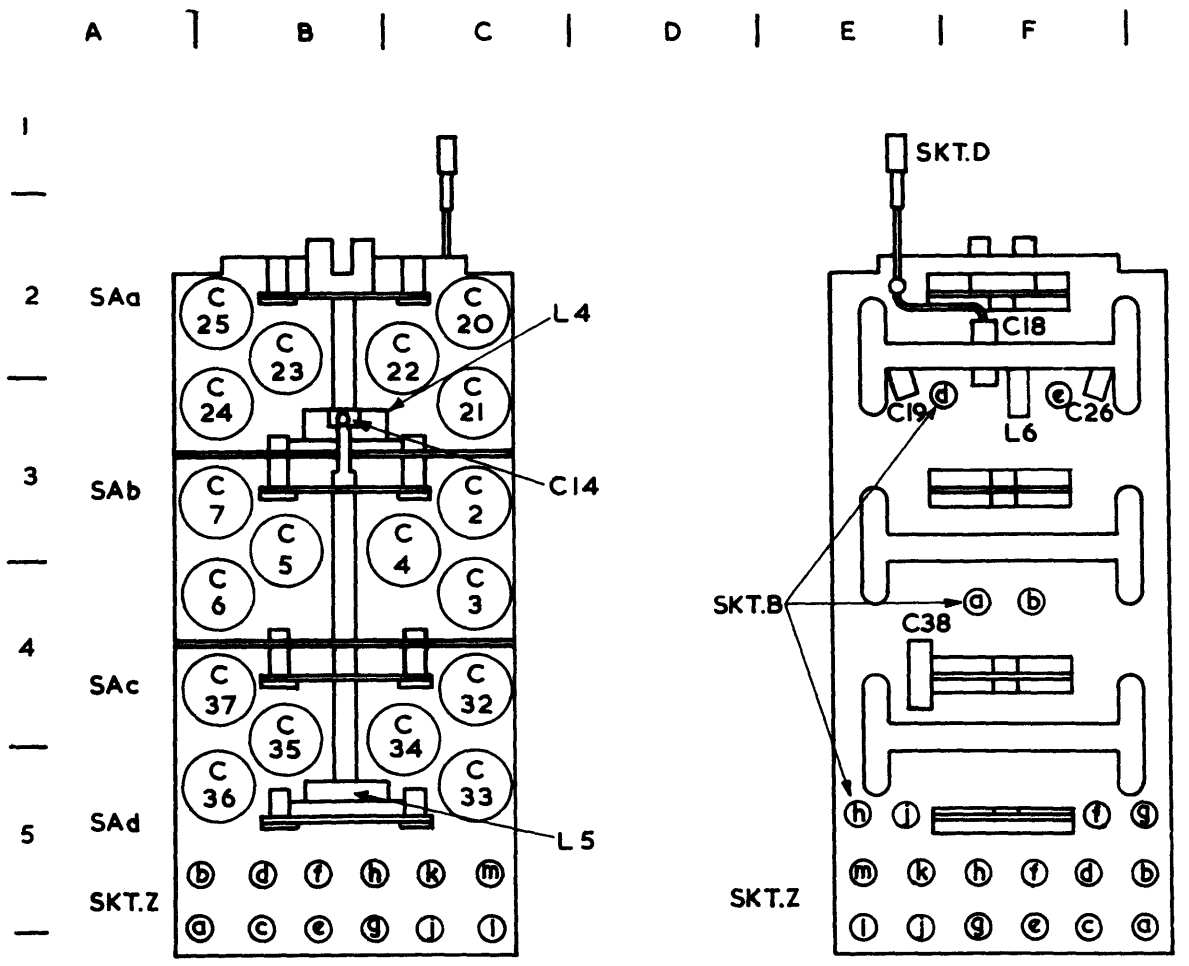


Fig 2003 - Audio transformer unit, component layout and circuit

Circuit Reference	Location of Components: Circuit diagram (Fig 2001)	Location of Components: Component layout (Fig 2004)	Value	Rating	Type and Limit
C2-7	D4	B3-C3			
C20-25	H4	B2-C2	3-30pF		Phillips Concentric Trimmer
C32-37	L4	B4-C4			
C19	H4	E3	0.01µF	150V	Paper Met. Tub. ±20%
C26	J4	F3	0.01µF	150V	Paper Met. Tub. ±20%
C14	F3	B3			Single plate special (neutralising)
C18	H4	F2	0.01µF	150V	Paper Met. Tub. ±20%
C38	L4	E4	0.01µF	150V	Paper Met. Tub. ±20%
L4	H4	B3	RF & PA tuning		For winding details see TELS F 464
L5	L4	B5	PA tuning		
L6	H4	F3	RF & PA coil		
SKTB					8-way sockets moulded in deck
SKTZ		B5 F5			12-way Crystal socket
SKTD		C1 E1			Single socket on flylead

Table 2003 - Trimmer deck, component schedule



NOTE: S.A SHOWN IN POS'N. 4 WITHDRAWAL POSITION

Fig 2004 - Trimmer deck, component layout

Table 2004 - Chassis unit, component schedule

Circuit Reference	Location of Components		Value	Rating	Type and Limit
	Circuit diagram (Fig 2001)	Layout (Fig 2005)			
Resistors					
R3	F4	E3	68kΩ	1/8W	Composition Grade 1 Non Ins. 1%
R4	F4	E3	12kΩ	1/8W	Composition Grade 1 Non Ins. 1%
R5	F2	D4	100Ω	1/4W	Composition Grade 2 Ins. ±20%
R6	G3	D2	100Ω	1/4W	Composition Grade 2 Ins. ±20%
R7	G3	B3	10Ω	1/4W	Composition Grade 2 Ins. ±20%
R10	M1	E2	220Ω	1/4W	Composition Grade 2 Ins. ±20%
R11	N1	E2	220Ω	1/4W	Composition Grade 2 Ins. ±20%
R21	AA2 ~~Q7~~	E2	220Ω	1/4W	Composition Grade 2 Ins. ±20%
R28	V4	B1	1MΩ	1/10W	Composition Grade 2 Non Ins. ±20%
R32	W2	A2	22kΩ	1/4W	Composition Grade 2 Ins. ±20%
R35	Y3	B3	470kΩ	1/4W	Composition Grade 2 Ins. ±20%
R36	F5	C3	68kΩ	1/10W	Composition Grade 2 Ins. ±20%
R39	BB1	F2	100Ω	1/10W	Composition Grade 2 Ins. ±20%
R40	BB2	F3	10Ω	1/10W	Composition Grade 2 Ins. ±20%
R42	G7	E4	1MΩ	1/10W	Composition Grade 2 Non Ins. ±20%
R43	G8	F3	100Ω	1/10W	Composition Grade 2 Ins. ±20%
R52	L8	F4	1MΩ	1/10W	Composition Grade 2 Ins. ±20%
R53	M7	F1	220Ω	1/10W	Composition Grade 2 Ins. ±20%
R54	D6	C4	1MΩ	1/10W	Composition Grade 2 Non Ins. ±20%
Capacitors					
C8	F2	C3	0.01μF	150V	Paper Tub. Met. ±20%
C9	E3	C4	22pF	500V	Silver Ceramic Tub. ±1/2p
C10	F3	D3	100pF	500V	Silver Ceramic Tub. ±20%
C11	E5	E4	0.01μF	150V	Paper Tub. Met. ±20%
C12	F4	D4	0.001μF	500V	Silver Ceramic Tub. (with C13)
C13	F4	D4	0.001μF	500V	Silver Ceramic Tub. (with C12)

Table 2004 - cont.

Circuit Reference	Location of Components		Value	Rating	Type and Limit
	Circuit diagram (Fig 2001)	Layout (Fig 2005)			
C15	G4	C3	0.01µF	150V	Paper Tub. Met. ±20%
C16	G3	C2	0.01µF	150V	Paper Tub. Met. ±20%
C17	G4	B3	0.01µF	150V	Paper Tub. Met. ±20%
C27	J3	C2	47pF	500V	Silver Ceramic Tub. ±20%
C30	K5	D1	0.01µF	150V	Paper Tub. Met. ±20%
C31	A2	D2	0.01µF	150V	Paper Tub. Met. ±20%
C43	N2	E2	0.01µF	150V	Paper Tub. Met. ±20%
C50	P2	E1	0.01µF	150V	Paper Tub. Met. ±20%
C51	R2	D2	0.01µF	150V	Paper Tub. Met. ±20%
C71	V4	B2	0.01µF	150V	Paper Tub. Met. ±20%
C79	W5	A1	0.01µF	150V	Paper Tub. Met. ±20%
C86	Y3	A2	100pF	600V	Paper Tub. Met. ±20%
C92	AA4	B2	0.01µF	150V	Paper Tub. Met. ±20%
C95	F7	E4	0.01µF	150V	Paper Tub. Met. ±20%
C96	G7	G4	100pF	600V	Paper Tub. Met. ±20%
C111	C8	G4	0.01µF	150V	Paper Tub. Met. ±20%
C112	H9	G2	0.01µF	150V	Paper Tub. Met. ±20%
C113	N7	G1	0.01µF	150V	Paper Tub. Met. ±20%
C115	F4	D3	100pF	500V	Silver Ceramic Tub. ±20%
C117	R5	D1	0.01µF	150V	Paper Tub. Met. ±20%
C118	B5	B4	0.01µF	150V	Paper Tub. Met. ±20%
		Inductors			
L1	G2	A1			M.O. h.t. choke
L27	K5	D2			Filament choke
L10	Q4	D1			Filament choke
L16	U5	C1			Filament choke
L20	X4	A2			Filament choke
L26	O7	G2			Filament choke
		Miscellaneous			
PLB					8 way plug
PLV	BB1-8	G1-3			5 way battery connector
SKTA	B2-4	B3			B7G socket (Modulator)
SKTC	E3	C3			B7G socket (M.O. coil)
SKTE	K2-4	D2			B7G Socket (R.F. unit)
SKTF		E3			B7G socket (Test)
SKTG	N2-4	E2			B7G socket (Mixer)
SKTH	N6-8	G3			B7G socket (A.F.C. discriminator)
SKTJ	K6-8	G2			B7G socket (A.F.C. Driver)
SKTK	N6-8	G1			B7G socket (Crystal osc.)
SKTM	P2-4	E1			B7G socket (1st i.f.)
SKTN	R2-4	D1			B7G socket (2nd i.f.)
SKTO	S2-4	C1			B7G socket (3rd i.f.)
SKTP	U2-4	B1			B7G socket (4th i.f.)
SKTQ	W2-4	A1			B7G socket (Limiter)
SKTR	X2-4	A1			B7G socket (A.F. discriminator)
SKTS	Z2-4	B2			B7G socket (A.F. amp)
SKTT	AA2-5	A3			10 pin Transformer Unit socket

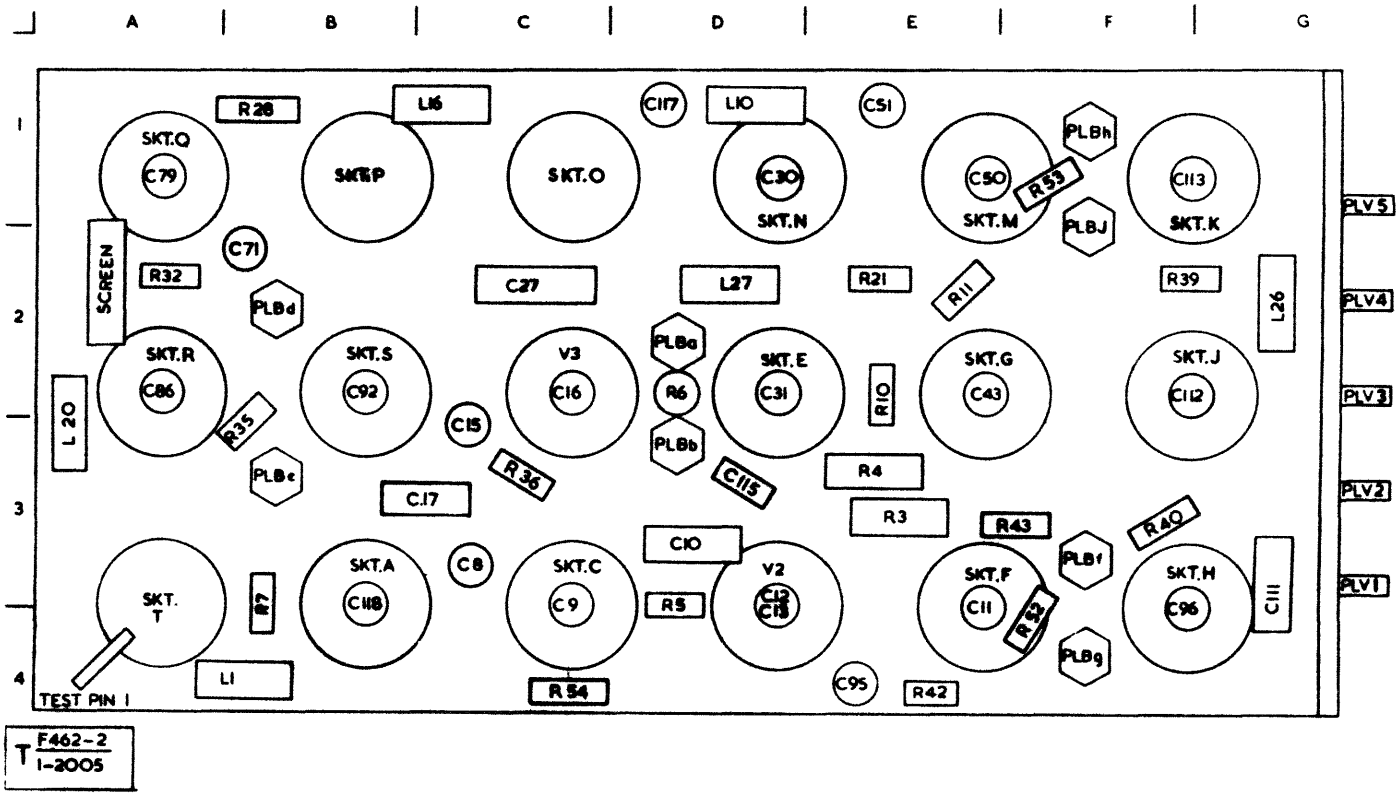


Fig 2005 - Chassis Unit, component layout

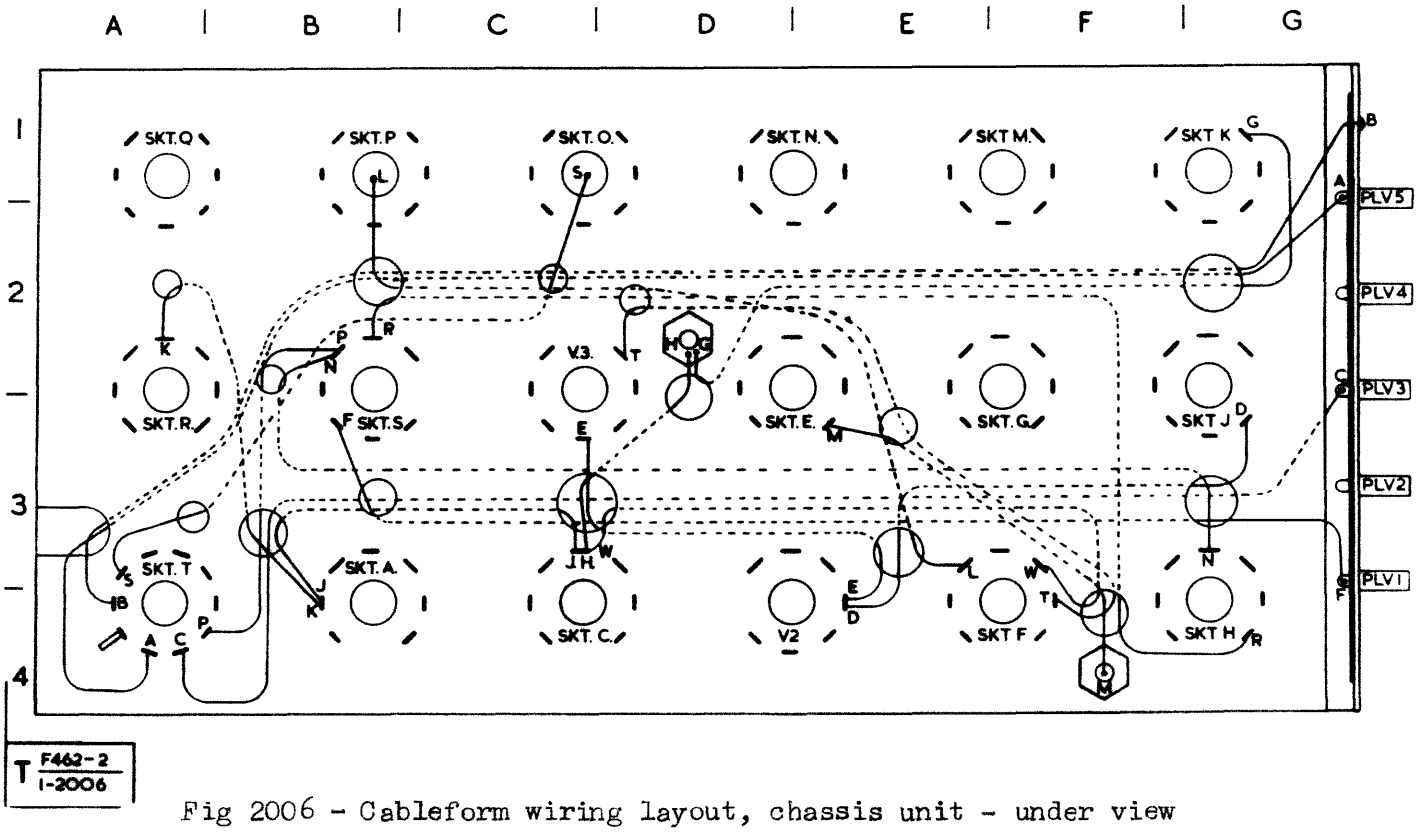


Fig 2006 - Cableform wiring layout, chassis unit - under view

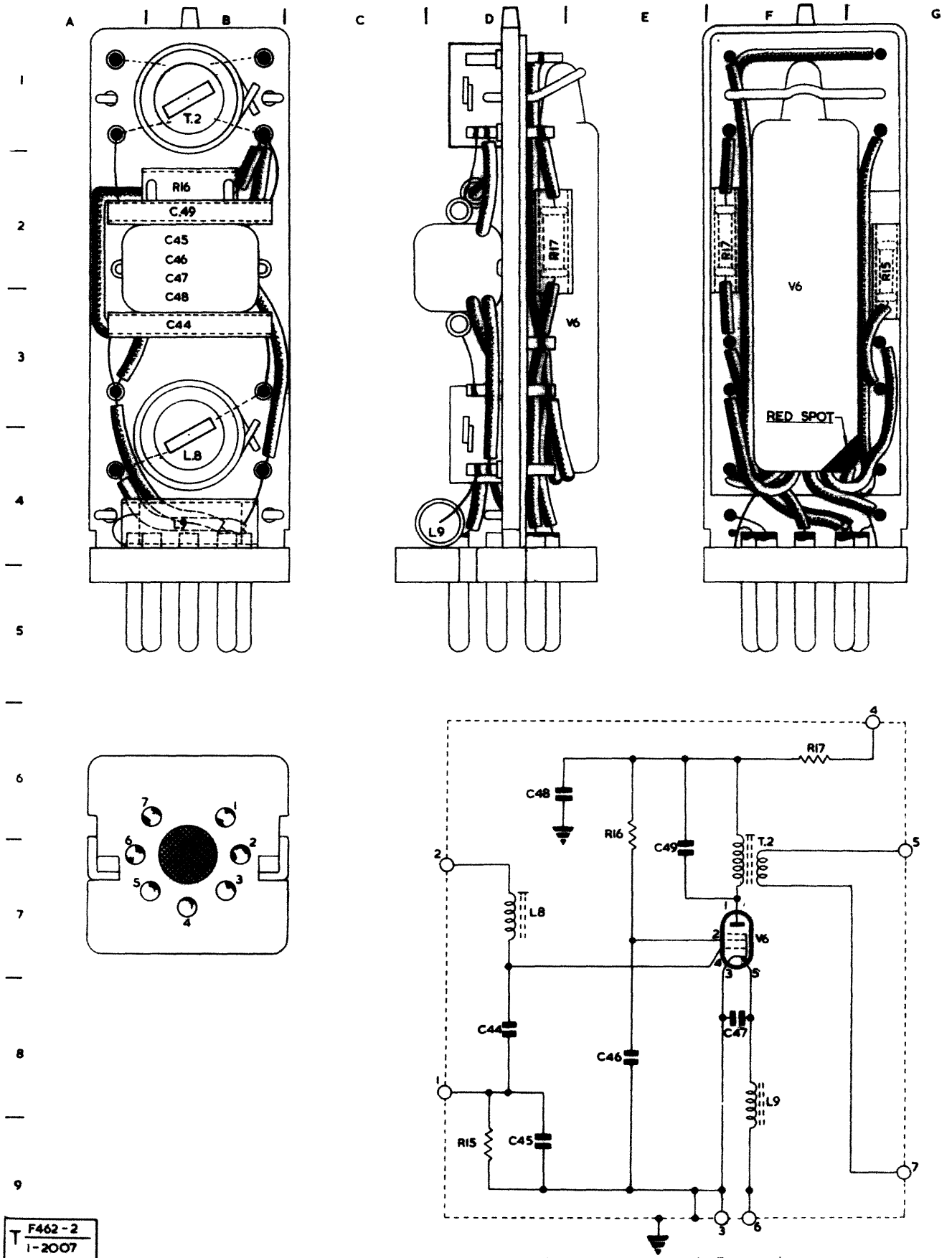
Circuit Reference	Location of Components: Circuit Diagram	Component Layout Fig 2007		Value	Rating	Type and Limit
R15	P4	G2		120kΩ	1/10W	Carbon Grade 2 Non Ins. ±20%
R16	P3	B2		3.3kΩ	1/10W	Composition Grade 2 Non Ins. ±20%
R17	P2	F2	D2	1.5kΩ	1/10W	Composition Grade 2 Non Ins. ±20%
C44	P3	B3		47pF	750V	Sil. Ceramic Tub. N220 ±2%
C45	P4	B2		100pF	) 600V	Paper ±20%
C46	P4	B2		0.01µF	) 4 UNIT	±20%
C47	P4	B2		0.01µF	) ASSEMBLY	±20%
C48	P3	B2		0.01µF	) 150V	Paper (3 off) ±20%
C49	P3	B2		47pF	750V	Sil. Ceramic Tub. N220 ±2%
L8	P3	B4				) For winding
L9	P4	B4	D4			) details see
T2	Q3	B1				) TELS F 464
V6	P3	F2-4				CV2254
PLM						7 Pin plug

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

Circuit Reference 1st IF	2nd IF	3rd IF	4th IF	Limiter
R15	R18	R22	R25	R29
R16	R19	R23	R26	R30
R17	R20	R24	R27	R31
C44	C52	C59	C66	C72
C45	C53	C60	C65	C73
C46	C54	C61	C67	C74
C47	C56	C62	C68	C75
C48	C57	C63	C69	C76
C49	C58	C64	C70	C78
L8	L11	L13	L15	L18
L9	L12	L14	L17	L19
T2	T3	T4	T5	T6*
V6	V7	V8	V9	V10
Can PLM	PLN	PLO	PLP	PLQ
Colour Orange	Orange	Orange	Orange	Yellow

*In limiter unit T6 differs from the corresponding i.f. component. For details see TELS F 464

Table 2005 - I.F. and limiter, component schedule

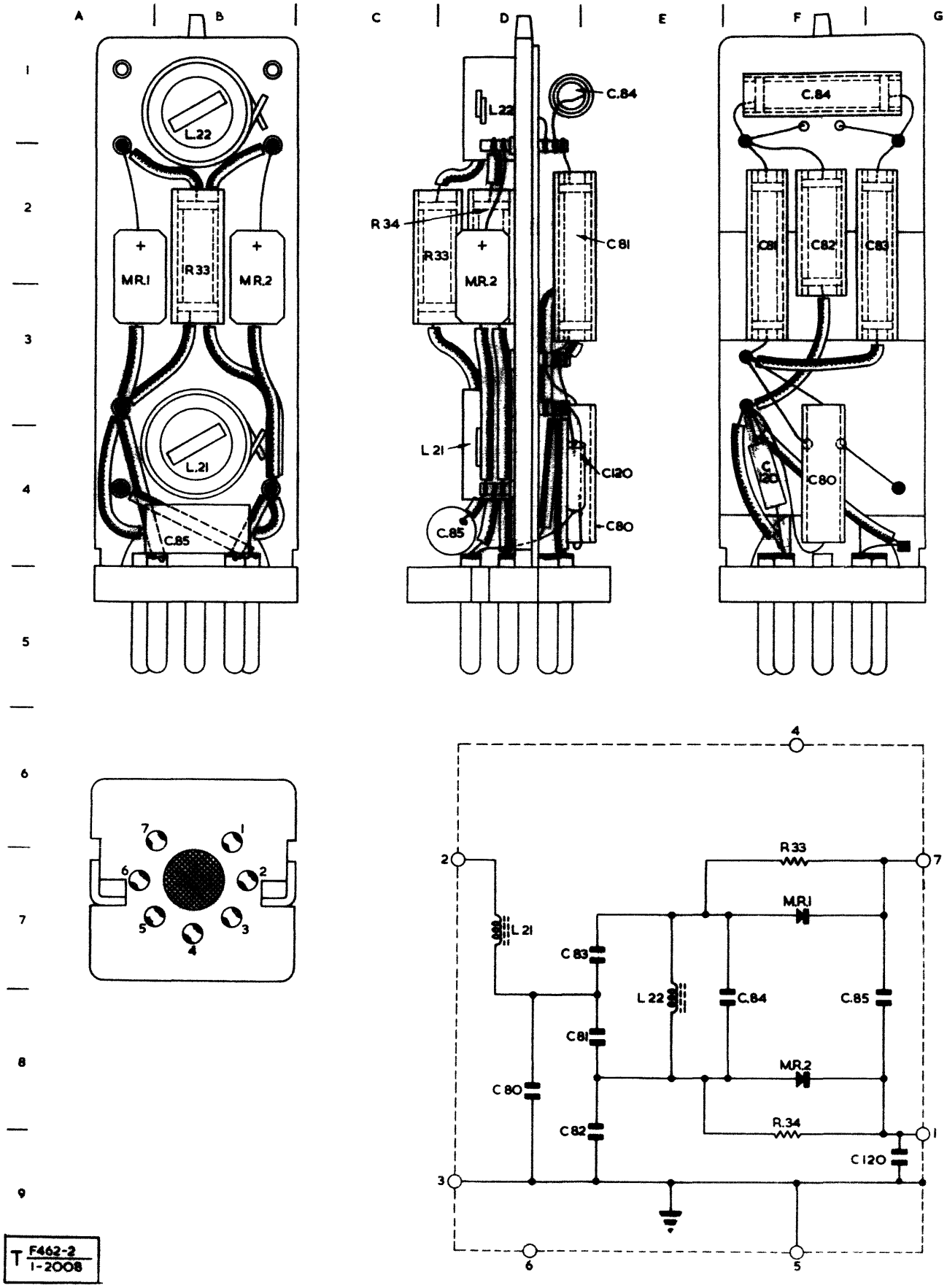


T F462-2 / 1-2007

Fig 2007 - I.F. and limiter units, component layout

Circuit Reference		Location of components		Value	Rating	Type and Limit
		Circuit diagram Fig 2001	Layout Fig 2008			
Can colour - light green						
AF	AFC	AF	AFC			
R33	R44	Y3	H7	C2	470kΩ	1/10W Composition Grade 2 Non-Ins. ±20%
R34	R45	Y4	H8	D2	470kΩ	1/10W Composition Grade 2 Non-Ins. ±20%
C80	C102	X4	H8	D4	47pF	750V Silver Ceramic Tub. N220 ±1%
C81	C100	X4	H7	D2-F2	68pF	750V Silver Ceramic Tub. N030 ±1%
C82	C101	X4	H8	F2	12pF	500V Silver Ceramic Tub. N030 ±1/2pF
C83	C99	X3	H7	G2	68pF	750V Silver Ceramic Tub. N030 ±1%
C84	C98	X3	G7	D1	68pF	750V Silver Ceramic Tub. N080 ±1%
C85	C97	Y3	G7	B4-D4	100pF	600V Paper Tub. Met. ±20%
C120	C121	Y4	G8	D4-F4	0.001μF	
L21	L24	X3	H7	B4-D4		For winding details see TELS F 464
L22	L23	X4	H7	B1-D1		
MR1	MR3	Y3	G7	A2		CV448
MR2	MR4	Y4	G8	B2-D2		CV448
PLR	PLH					7 Pin plug

Table 2006 - Discriminator units, component schedule

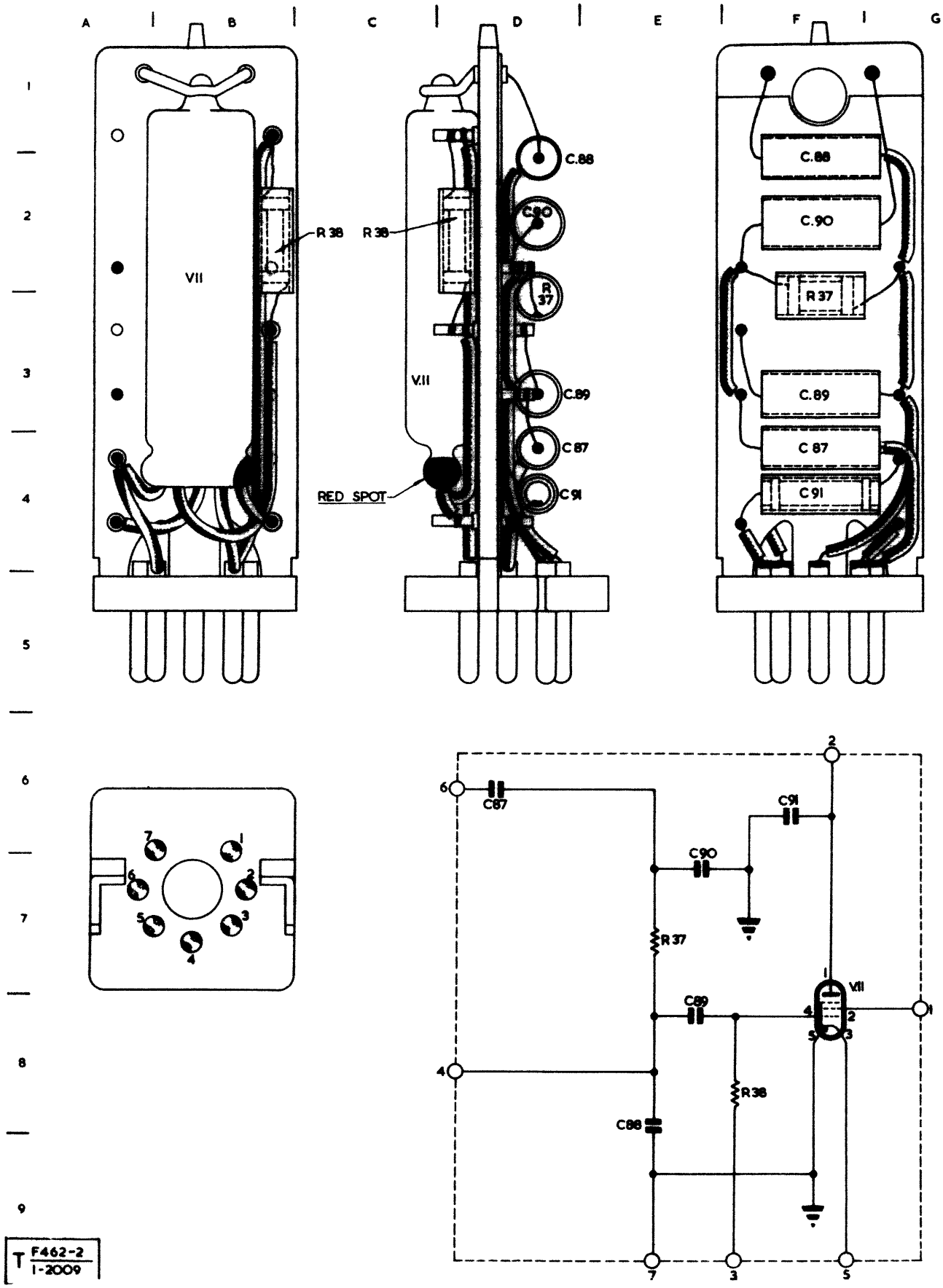


T F462-2 1-2008

Fig 2008 - Discriminator units, component layout

Circuit Reference	Location of components			Value	Rating	Type and Limit
	Circuit Diagram Fig 2001	Component Layout Fig 2009				
Can colour - green						
R37	Z3	D3	F3	470kΩ	1/10W	Composition Grade 2 Non-Ins. ±20%
R38	Z3	B2	D2	2.2MΩ	1/10W	Composition Grade 2 Non-Ins. ±20%
C87	Z2	D4	F4	0.01μF	150V	Paper Tub. Met. ±20%
C88	Z3	D1	F1	100pF	600V	Paper Tub. Met. ±20%
C89	Z3	D3	F3	0.01μF	150V	Paper Tub. Met. ±20%
C90	Z2	D2	F2	100pF	600V	Paper Tub. Met. ±20%
C91	Z2	D4	F4	0.005μF	150V	Paper Tub. Met. ±20%
V11						CV2238
PLS						7 Pin

Table 2007 - A.F. unit, component schedule



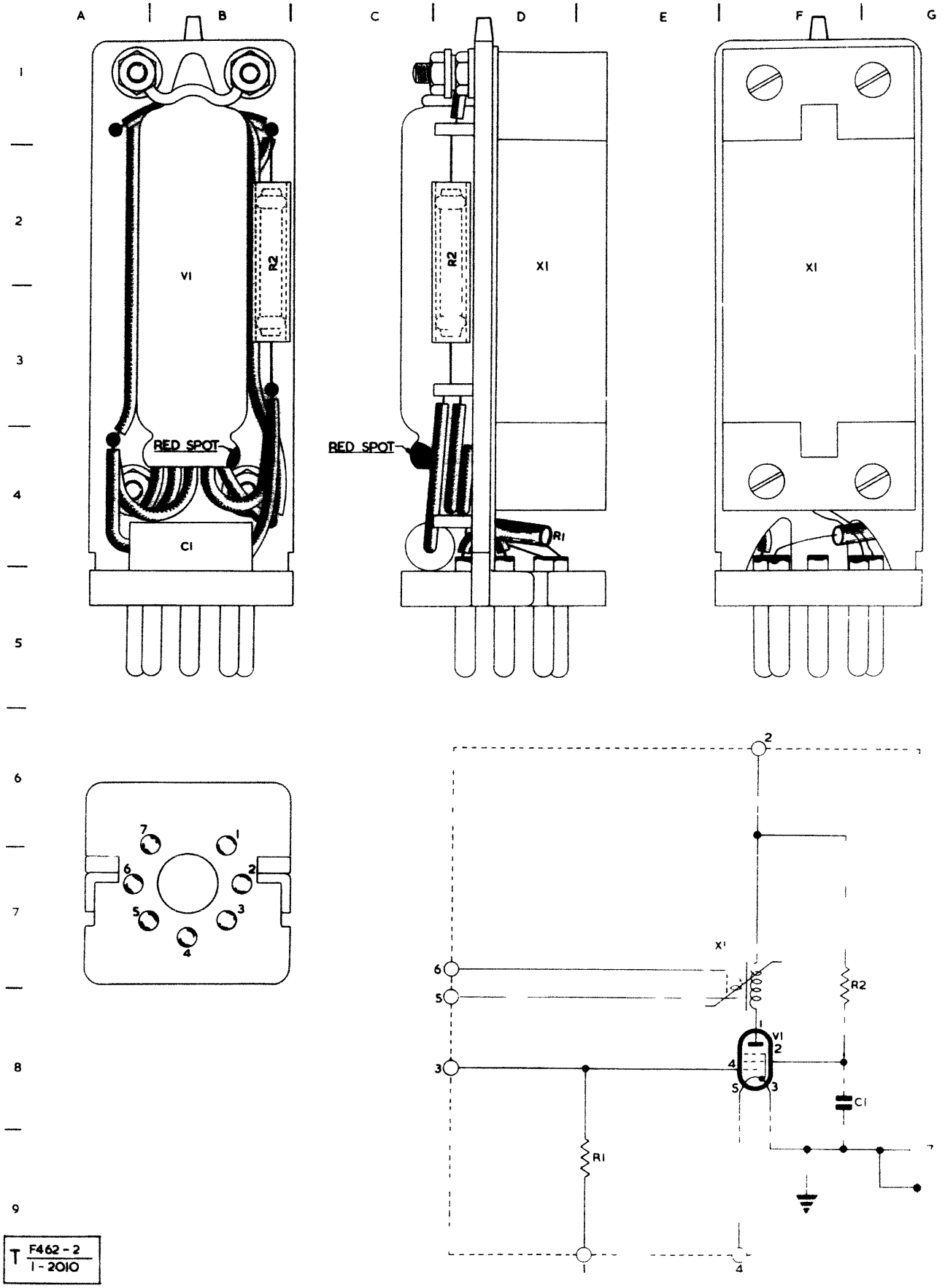
T F462-2 1-2009

Fig 2009 - A.F. unit, component layout

Circuit Reference	Location of components			Value	Rating	Type and Limit
	Circuit Diagram Fig 2001	Component Layout Fig 2010				
Can colour - grey						
R1	A4	D4		1MΩ	1/10W	Composition Grade 2 Ins. ±20%
R2	B3	B2	D2	22kΩ	1/8W	Composition Grade 1 Non-Ins. ±5%
C1	B3	B4		0.01μF	150V	Paper Met. Tub. ±20%
V1	B3	B2-3				CV2237
X1	B3	D2-3	F2-3			Ferrite reactor
PLA						7 pin plug

Note: The Ferrite reactor is enclosed in a Marco Resin block, if any winding becomes unserviceable the entire reactor must be replaced.

Table 2008 - Modulator unit, component schedule

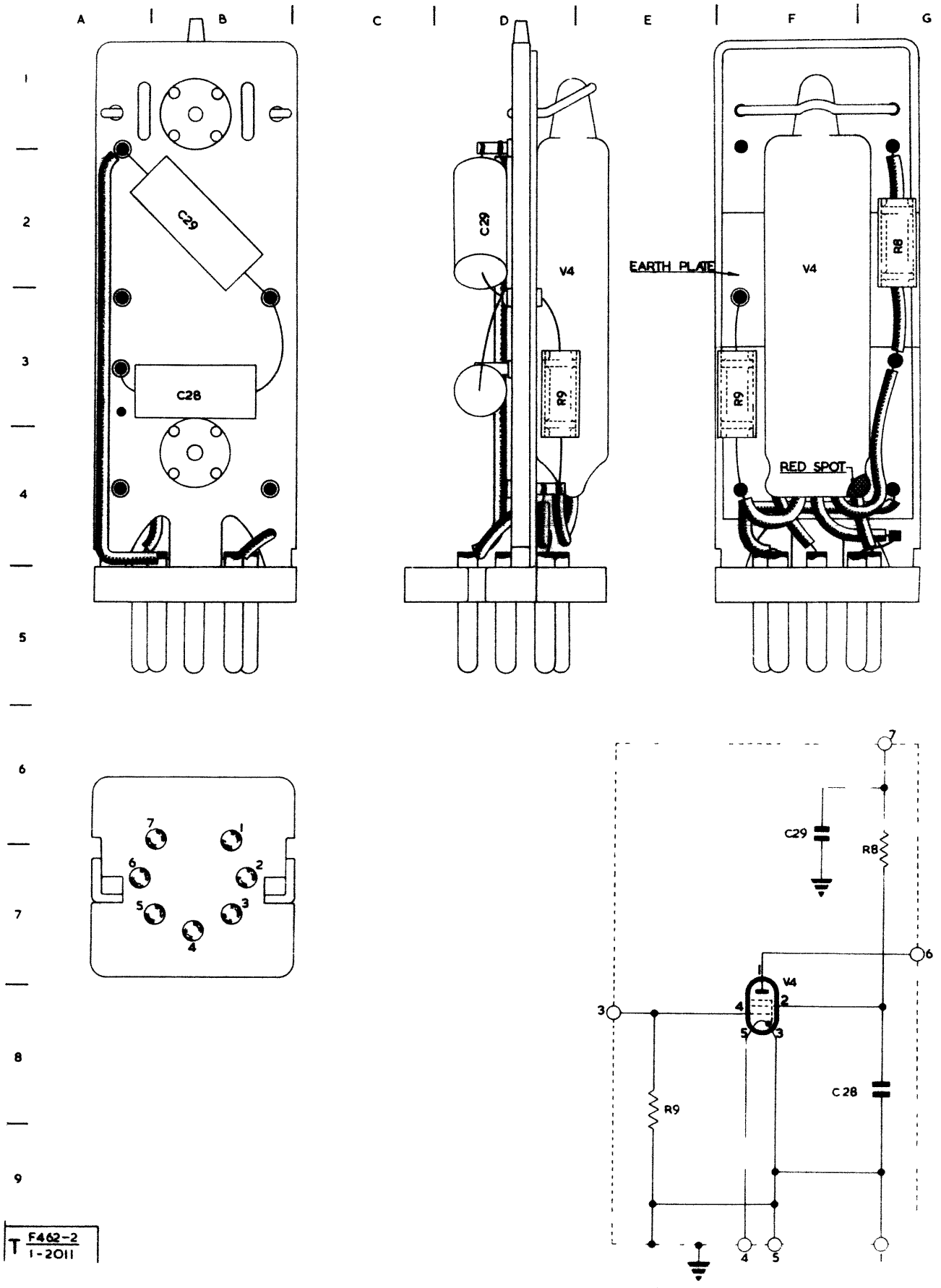


T F462-2 / 1-2010

Fig 2010 - Modulator unit, component layout

Circuit Reference	Location of components			Value	Rating	Type and Limit
	Circuit diagram Fig 2001	Component Layout Fig 2011				
Can colour - black						
R8	K3	G2		1.5kΩ	1/10W	Composition Grade 2 Non-Ins. ±20%
R9	K4	D3	F3	470kΩ	1/10W	Composition Grade 2 Non-Ins. ±20%
C28	K3	B3		0.01μF	150V	Paper Tub. Met. ±20%
C29	K3	B2	D2	0.01μF	150V	Paper Tub. Met. ±20%
V4						CV2237
PLE						7 pin plug

Table 2009 - R.F. unit, component schedule



T F462-2 1-2011

Fig 2011 - R.F. unit, component layout

Circuit Reference	Location of components: Circuit diagram Fig 2001	Location of components: Component layout Fig 2012		Value	Rating	Type and limit
Can colour - brown						
R12	N3	G2		1.5kΩ	1/10W	Composition Grade 2 Non-Ins ±20%
R13	N3	A3		3.3kΩ	1/10W	Composition Grade 2 Non-Ins ±20%
R14	N4	D3	F3	470kΩ	1/10W	Composition Grade 2 Non-Ins ±20%
C39	N3	B4	D4	47pF	500V	Sil. Ceramic Tub. N750 ±20%
C40	N3	B3		0.001μF	150V	Sil. Ceramic Tub. (with C42) ±20%
C41	N3	B2		27pF	750V	Sil. Ceramic Tub. N330 ±2%
C42	N4	B3		0.001μF	150V	Sil. Ceramic Tub. (with C40) ±20%
C114	N4	B4		0.01μF	150V	Paper Met. Tub. ±20%
L7	N4	B3	D3			) Coupling choke) For winding details) see TELS F 464
T1	N3	B1	D1			) Anode inductor
PLG						7 pin
V5	N3					CV2254

Table 2010 - Mixer unit, component schedule

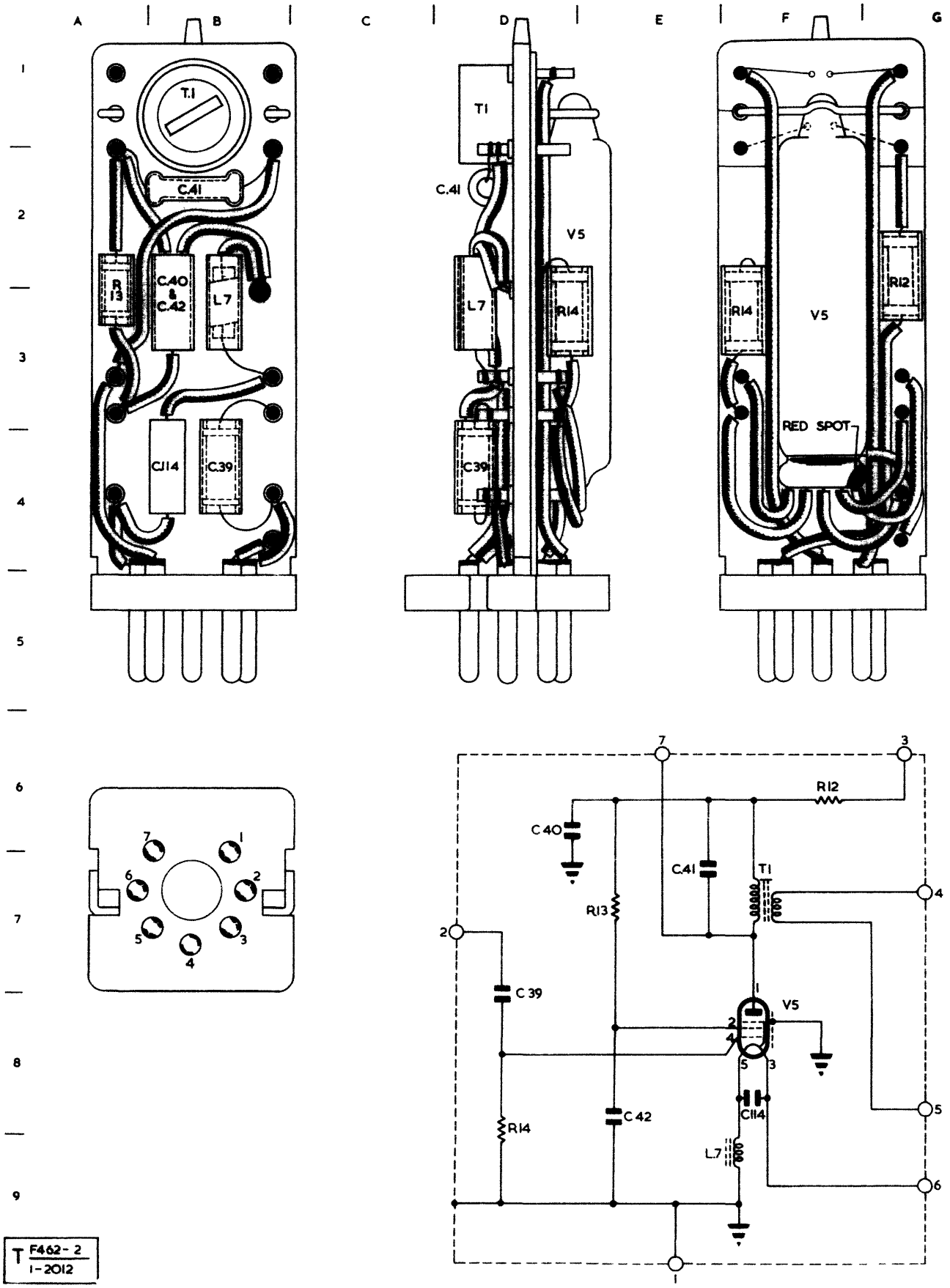
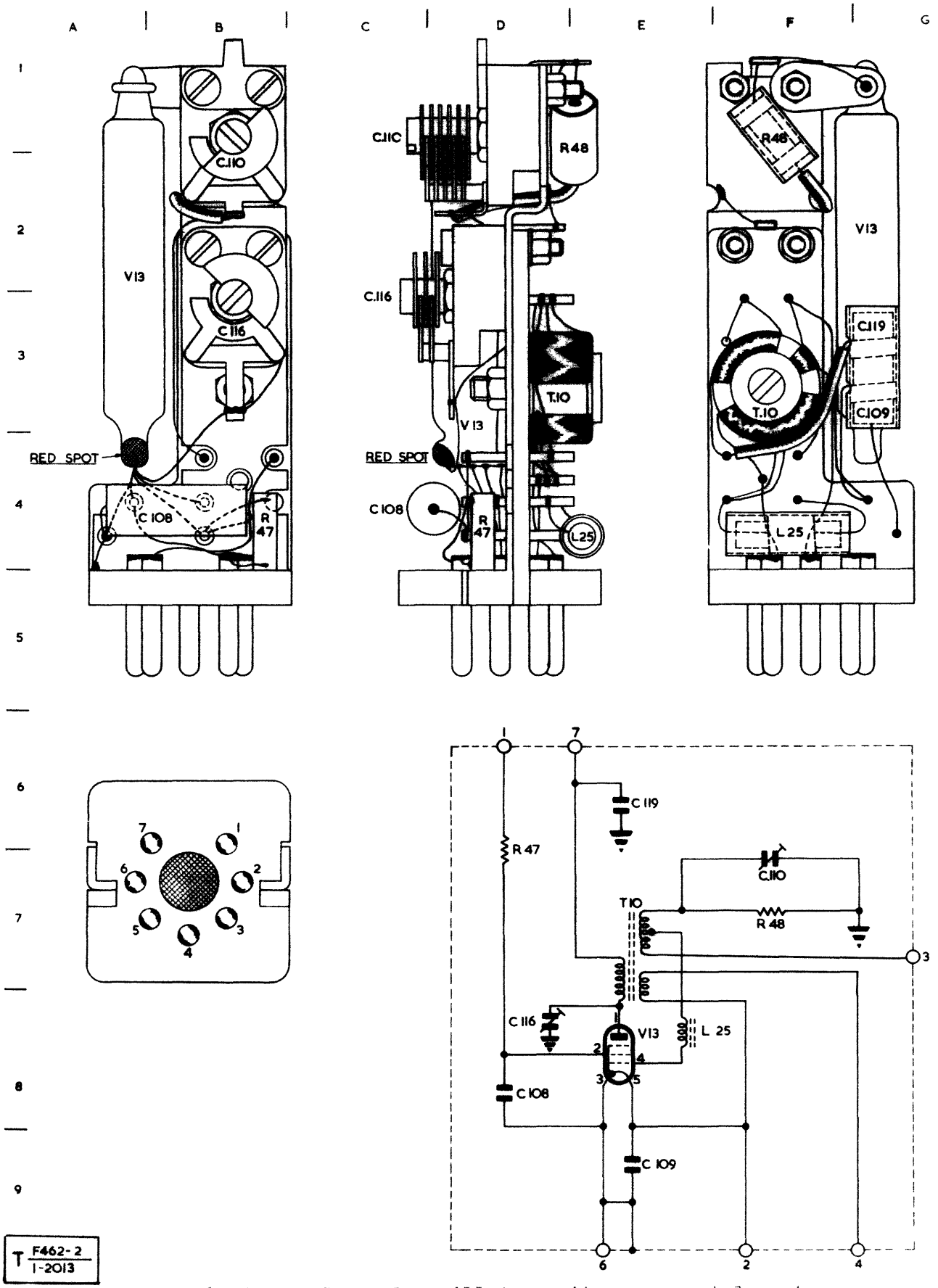


Fig 2012 - Mixer unit, component layout

Circuit Reference	Location of components: Circuit Diagram Fig 2001	Location of components: Component Layout Fig 2013		Value	Rating	Type and limit
Can colour - red						
R47	M7	B4	D4	22kΩ	1/10W	Composition Grade 2 Ins. ±20%
R48	N8	E1	F1	100kΩ	1/10W	Composition Grade 2 Ins. ±20%
C109	M8	G3		0.001μF	500V	Silver Ceramic Tub. with C119 ±20%
C108	M8	B4	C4	.01μF	150V	Paper Met. Tub. ±20%
C110	N8	B2	D2	2-10pF		Pre set variable
C115	M7	B3	C3	1.5-5.5pF		Pre set variable
C119	M7	G3		0.001μF	500V	Silver Ceramic Tub. with C109 ±20%
V13	N8	A2	G2			CV2237
L25	N7	E4	F4	Choke		See TELS F 464 for winding details
T10	N7	D3	F3	Oscillator Coil		See TELS F 464 for winding details
PLK						7 pin

Table 2011 - Crystal oscillator unit, component schedule



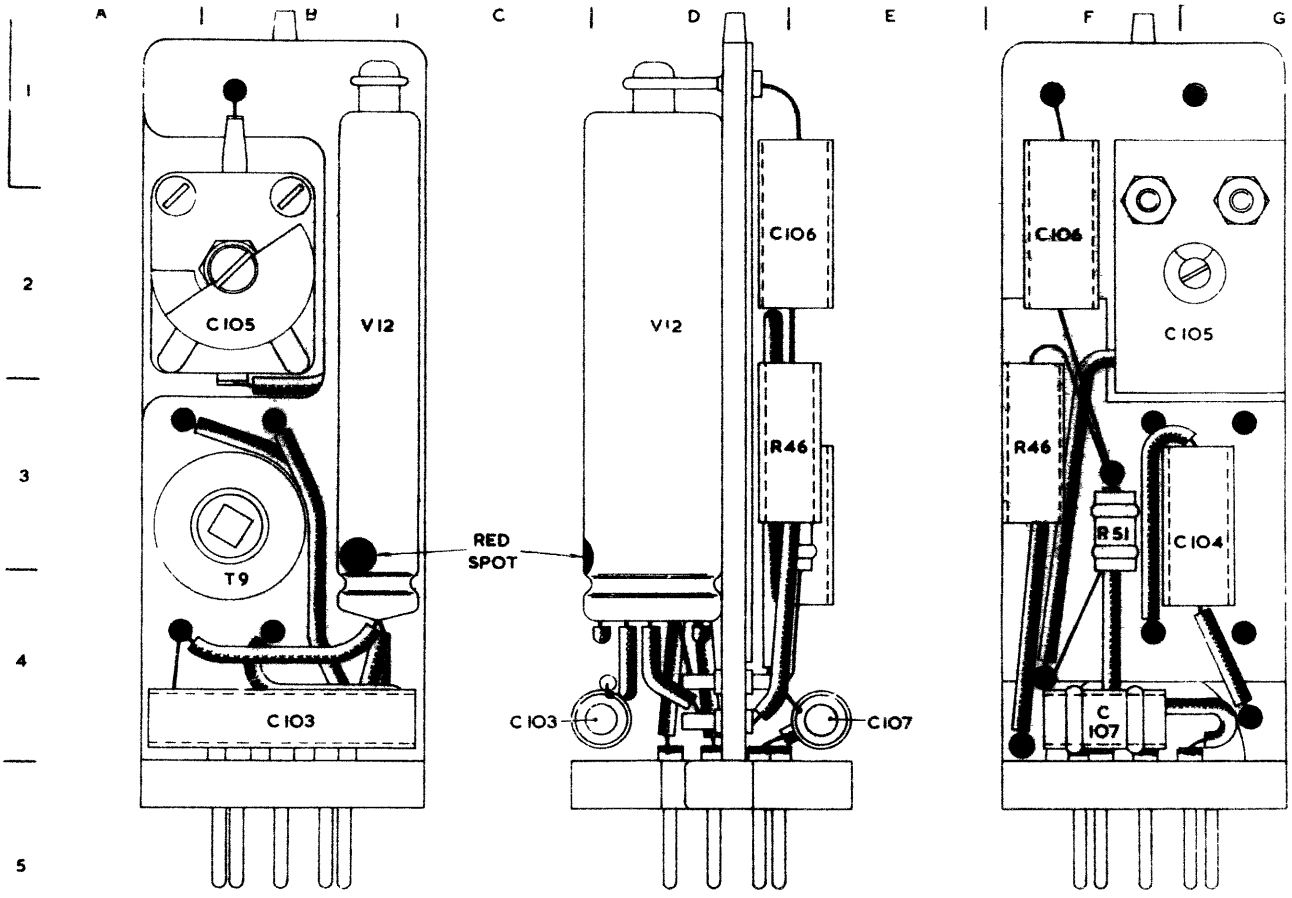
T F462-2 / 1-2013

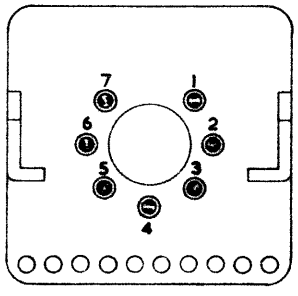
Fig 2013 - Crystal oscillator unit, component layout

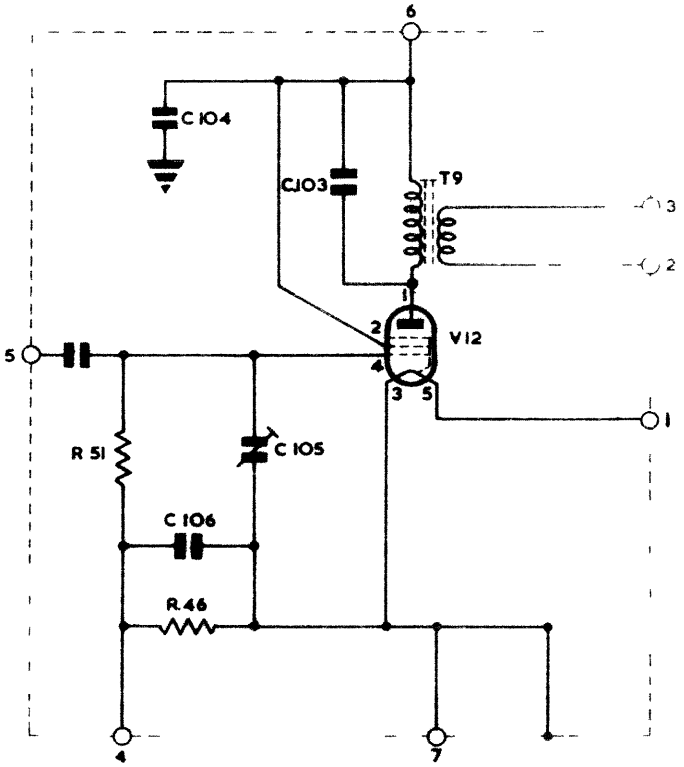
Circuit Reference	Location of components			Value	Rating	Type and limit
	Circuit Diagram Fig 2001	Component Layout Fig 2014				
Can colour - light blue						
R51	K8	D3	F3	470kΩ	1/10W	Composition Grade 2 Ins. ±20%
R46	K8	D3	F3	120kΩ	1/10W	Carbon Grade 2 Non Ins. ±10%
C103	K7	G3		47pF	750V	Silver Ceramic Tub. N220 ±2%
C104	K7	B4	D4	0.01μF	150V	Paper Tub. Met. ±20%
C105	K8	B2	F2	1-10pF		Pre-set variable
C106	K8	D2	F2	100pF	600V	Paper Tub. Met. ±20%
C107	L7	B3		47pF	500V	Silver Ceramic Tub. N750 ±10%
T9	B3	B3				For winding details see TELS F 464
V12	K7					CV2237
PLJ						7 pin plug

Table 2012 - A.F.C. driver unit, component schedule

Note: These Pages 1025 and 1026, Issue 2, supersede Pages 1025 and 1026, Issue 1 dated 1 May 58. Fig 2 has been amended.

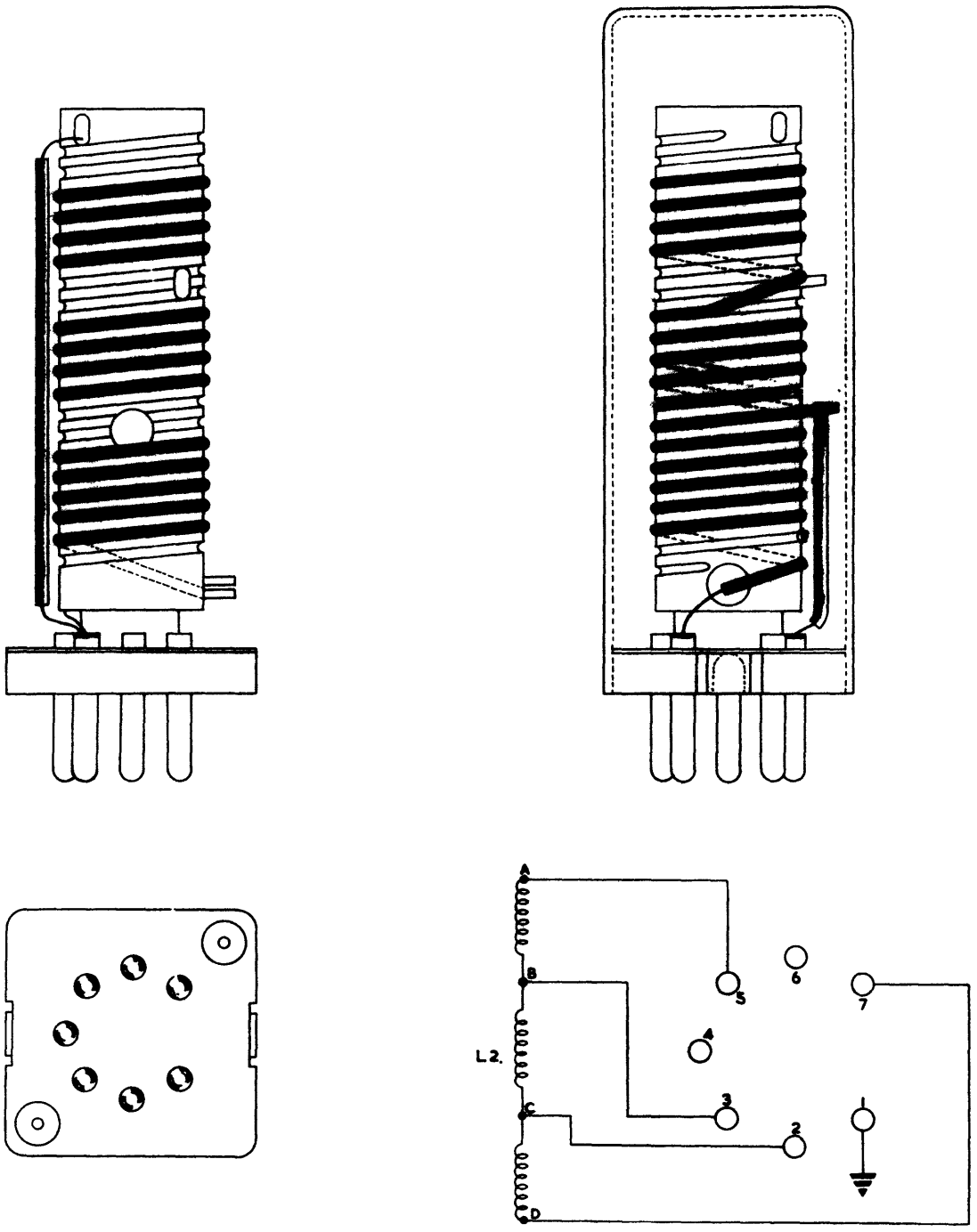






F 462-2
2-2014

Fig 2014 - A.F.C. driver unit, component layout



T F462-2 / 1-2015

Fig 2015 - M.O. coil unit, wiring layout

Note: **These pages 1027 and 1028, Issue 2 supersede pages 1027 and 1028, Issue 1, dated 1 May 58. Table 2014 has been revised.**

SKT F Pin Number	Output	Approximate reading	
1	A.F.C. discriminator output	14-0-14V measured to pin 4 detuning m.o. on send.	
2	Chassis		
3	Limiter grid current	r.f. input	
		No input	0.3-0.6V
		2μV	1-2V
		20μV	7-9V
		1mV	10-12V
4	Modulator bias (m.o. grid current)	1.6 - 2.6V on Send	
5	90V h.t. voltage	90V	
6	P.A. screen voltage	90V	
7	A.F.C. driver grid current	0.4 - 0.7V on send	

Note: The readings quoted above were taken using a Valve Voltmeter No. 3. They are included as a guide and should not be confused with specification figures given in Table 2016.

Table 2013 - Test socket outputs (SKT F)

Channel	R.F. frequency	
	Type A	Type B
1	47.0Mc/s	47.0Mc/s
2	47.4Mc/s	47.4Mc/s
3	47.6Mc/s	47.6Mc/s
4	47.2Mc/s	47.8Mc/s
5	48.8Mc/s	52.6Mc/s
6	54.2Mc/s	54.4Mc/s

Notes:
1. Models will be identified by a disc bearing the type letter on the front panel and part numbers are 'A' - ZA 53443 and 'B' - ZA 53445.
2. Crystals are engraved with their nominal frequency. This will always be 4.3Mc/s below the channel frequency.

Table 2014 - Channel frequencies

Preferred instrument	Suitable alternative
Signal generator No 18	Signal generator No 13 OR No 15
Signal generator No 12	Signal generator No 1, Mk 3
Voltmeter, valve, No 3	Instrument, testing, electronic, multi-range, No 1
Wattmeter, absorption, A.F., No 1	Meter, output power, No 3, Mk 1
Wattmeter, absorption, H.F., No 2	
Test set, deviation, F.M., No 2	Test set, deviation, F.M., No 1A
Audio oscillator (to be developed)	Oscillator, B.F., No 8
Frequency meter, r.f., portable, No 1 (to be developed)	Frequency meter S.C.R. 211
Multirange test meter (1,000Ω per volt)	Instrument, testing, Avometer, universal, 50-range
Multirange test meter (20,000Ω per volt)	Instrument, testing, Avometer, Model 8S 28-range
Power pack, wireless, manpack (to be developed)	Power pack for W.S.31 (modified) See TELS F 364
Ancillary test kit, vehicle and manpack. See TELS M 152	
Apparatus, seal testing	
Ovens, drying, telecommunications, equipment	

Table 2015 - Test equipment schedule, field and base repairs

Notes:

1. The tests quoted are those considered necessary to ensure serviceability of the set. They do not include those in the original specification of purely design significance.
2. The methods of carrying out tests are as specified in Tels F 464.
3. Any change in specification limits during production will be included in the Inspection Schedule F 468.
4. Voltages at battery plug pins for tests should be as fhllows:

	Normal volts	Low volts
PLV3	+1.25V	+1.05V
PLV4	+45V	+34V
PLV2	+90V	+68V
PLV1	-2.5V	-2.5V

Test	Limits	Remarks
Transmitter	Voltage / Max. current drain	
1. Battery consumption	1.25V 975mA 45V 10mA 90V 37mA	With switch in place of microphone and pressel.
2. R.F. power output	Normal volts: Not less than 275mW	All channels. At remote aerial SKTX.
	Low volts: Not less than 100mW	Channel 1 and 6 - at remote aerial SKTX
	Normal volts: Not less than 3V across dummy load.	At rod aerial SKTW on Channel 1. Dummy load 18pF in series with 50Ω.
3. A.F.C. operation	Channel shift - ±250kc/s I.F. shift - ±7kc/s.	All channels.
4. Neutralising	Freq ency shift not greater than 40kc/s.	All channels. Dummy aerial as in 2 short circuited.
5. Modulation sensitivity.	NORMAL 250mV to give ±5 to ±11kc/s deviation WHISPER 25mV to give ±5 to ±11kc/s deviation	Any one channel 1kc/s modulation frequency from 100Ω source impedance.
6. Sidetone	Not less than 1mW.	With inputs as for 5.
7. Modulation frequency characteristic	Deviation in 5 above to be given by any frequency from 400-3,000c/s with input 150-350mV.	Any one channel.
8. Frequency error	±9kc/s of nominal channel frequency.	All channels.

Table 2016 - Specification tests

Table 2016 - contd.

Test	Limits	Remarks
Receiver	Voltage Max. current drain	
9. Battery consumption.	1.25V 600mA 45V 15.5mA 90V 3.5mA	
10. Selectivity	65-85kc/s at 6dB Not greater than 250kc/s at 60dB Mean of 6dB points ±5kc/s of 4.3Mc/s	Referred to 2μV r.f. input signal. Check on highest frequency channel.
11. Frequency error	±7kc/s of nominal channel frequency.	At normal and low volts.
12. Sensitivity	Normal volts at least 20dB $\frac{S+N}{N}$	Input 2μV r.f. 15kc/s deviation. All channels.
	Low volts at least 20dB $\frac{S+N}{N}$	Input 4μV r.f. 15kc/s deviation. Any one channel.
13. Limiting	Not greater than 3dB change in output for inputs from 5μV to 1mV.	Any one channel.
14. A.F. power output	NORMAL: Not less than 3mW WHISPER: 15dB ±3dB of NORMAL	Any one channel 1mV r.f. input
15. Seal test	Initial pressure: 10lb/sq in. After 15 hours: 6.3lb/sq in. Leakage rate: 20c.c./hr. Time constant: 35 hours.	

END

STATION, RADIO, A40

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	Transmitter-receiver, radio, A40
0002	Set case
0003	Battery box
0004	Antenna
0005	Chassis unit
0006	Front panel
0007	Modulator
0008	Master oscillator coil
0009	R.F. amplifier
0010	Mixer unit
0011	A.F.C. discriminator
0012	A.F.C. driver
0013	Crystal oscillator
0014	I.F. plug-in units
0015	Limiter
0016	A.F. discriminator
0017	A.F. amplifier
0018	Audio transformer
0019	Trimmer deck
0020	Cableform
0021	Telephone, hand, SI
0022	Microphone and receiver headgear assembly
0023	Harness

EME/8/650/Tels

END