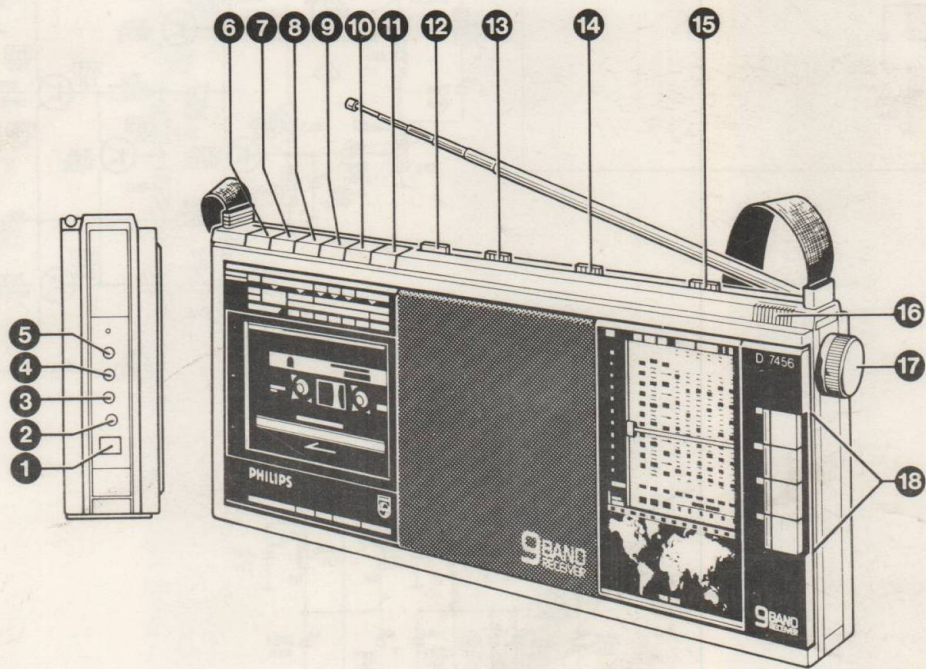


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For repair information of the cassette mechanism see
Service Manual of "Recorders tape deck RT-1 and
RT-38".

Service Manual



"After servicing and before returning set to customer perform a leakage current or resistive measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5 mA".

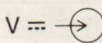


"Pour votre sécurité, ces documents
doivent être utilisés par des spécia-
listes agréés, seuls habilités à réparer
votre appareil en panne".

Subject to modification
4822 725 20068
Printed in The Netherlands

PHILIPS

Connections and controls

1. 

2. 

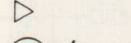
3. 

4. 

5. 

6. 

7. 

8. 

9. 
10. 

11. 

12. RADIO ON/OFF

13. 

14. 

15. SW1-SW2-SW3-SW4-SW5-SW6

16. 

17. 

18.

FM	MW
LW	SW
- BU-1

BU-4

BU-2

BU-3

BU-5

BU-5

SK-D

SK-D

SK-D

SK-D

SK-F

SK-E

3072

3071

SK-D

1017

2121,2122

SK-B

Specifications

- LW : 150-225KHz (2000-1176m)

MW : 520-1605KHz (577-187m)

SW1 : 5.9-6.3MHz (49m)

SW2 : 7.0-7.4MHz (41m)

SW3 : 9.4-9.9MHz (31m)

SW4 : 11.6-12.2MHz (25m)

SW5 : 15.0-15.7MHz (19m)

SW6 : 17.6-18.3MHz (16m)

FM : 87.5-108MHz
87.35-107.5MHz for -/02
- IF-AM : 468KHz
455KHz for -/01

IF-FM : 10.7MHz

Tape speed : 4.75cm/sec ±2%

Wow and flutter : ≤ 0.35%

Signal to noise ratio : ≥ 45dB

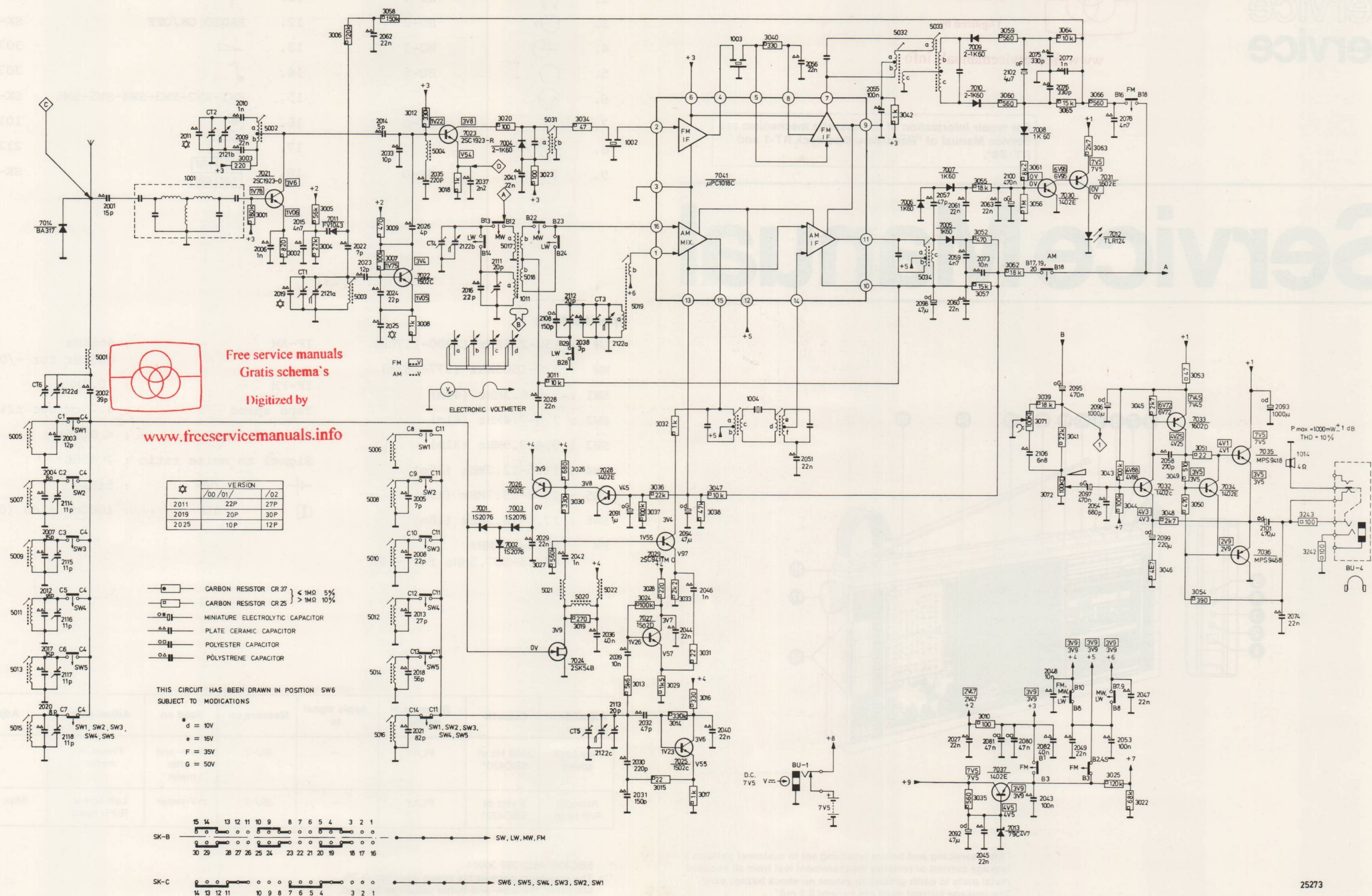
 7V5 : 5xR14

 4Ω : 1000mW ±1dB (d=1%)

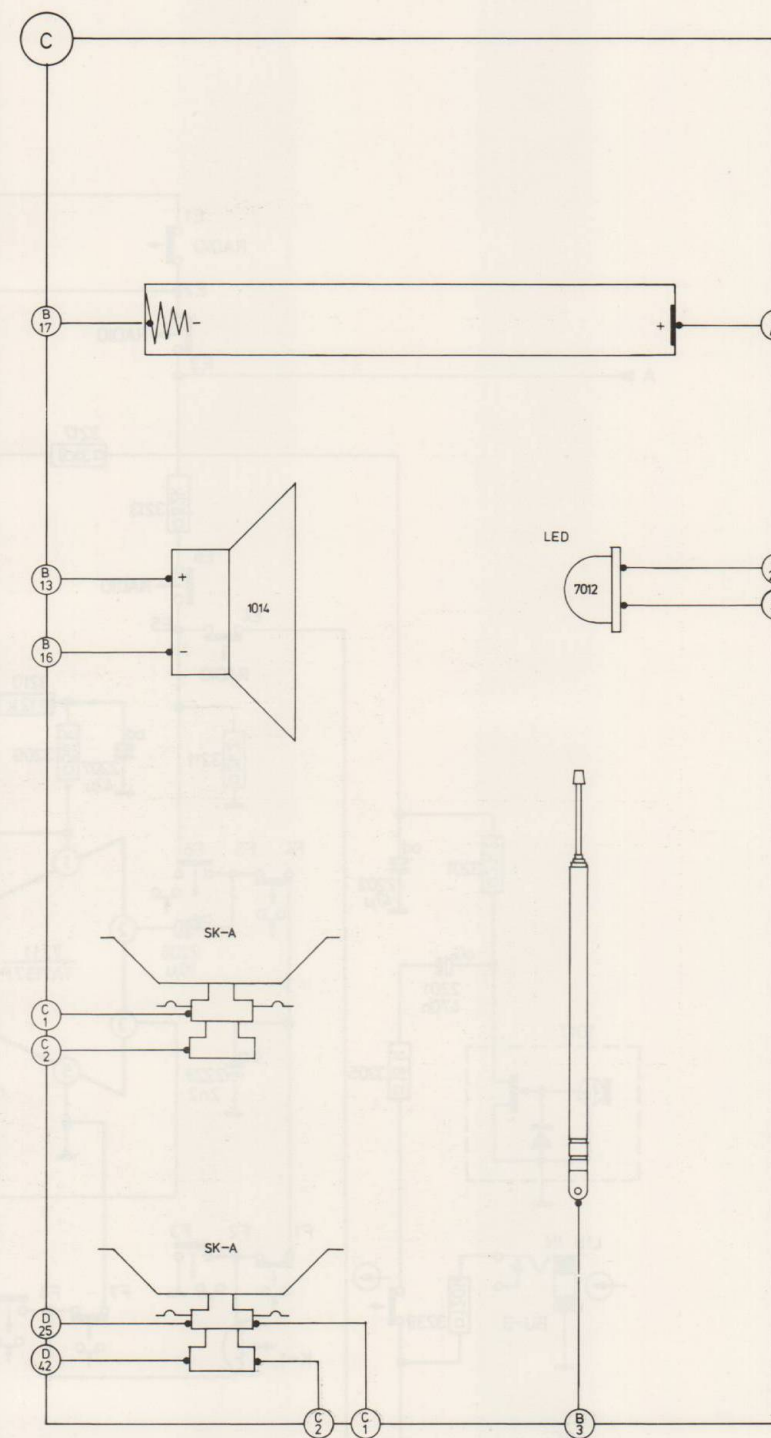
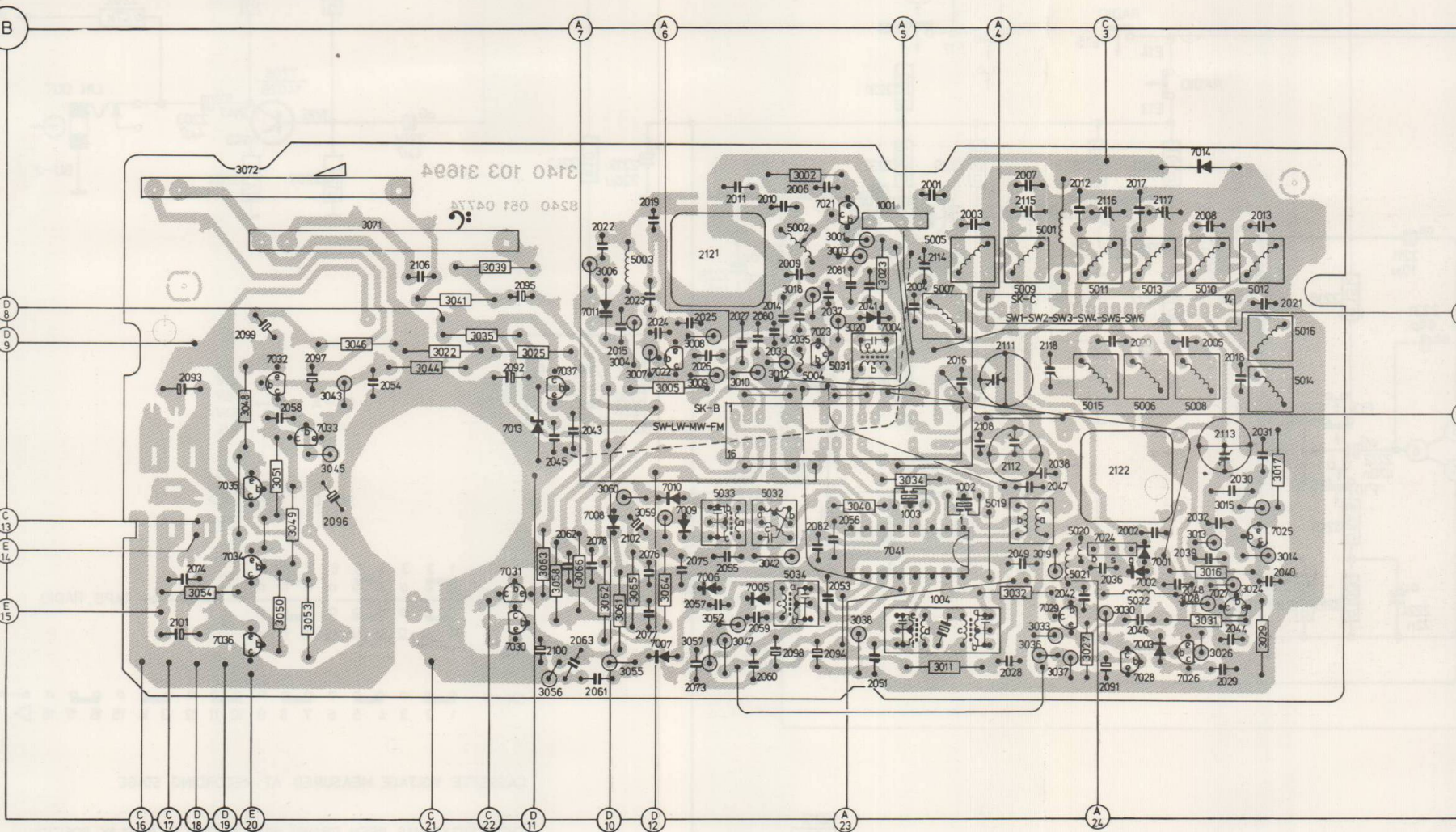
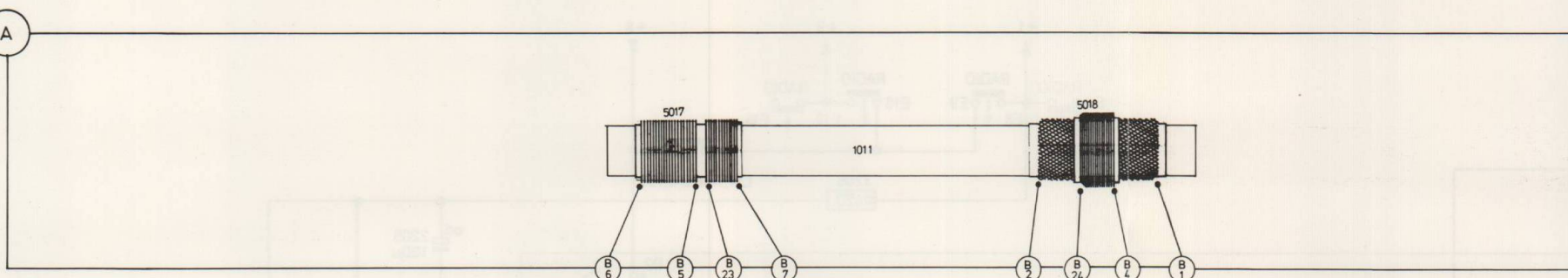
Adjustment	Cassette	Recorder in position	Apply signal to	Measure on	Read on	Adjust with	Adjust to
Play back speed	3150 Hz of SBC420*	PLAY	—	BU-2	Wow- and flutter meter	Preset in motor	**a
Azimuth R/P head	8 kHz of SBC420*	PLAY	—	BU-2	mV-meter	Left screw R/PB head	Max. output

* SBC420: 4822 397 30071.
**a The maximum permissible speed deviation is 3%.
Moreover, the wow-and-flutter value can be read.
This value should not exceed 0.35%.

MISC.	5005 5011	7014 5001		1001	5002 7021	7011 5003	5006 5012 7022 7023	7001 7004 7026 5031 7027	1002 7029 7025	1004	5032	5033 7007 7009	7008 7030 7031 7012	7032 7033 7034 7035	1014
	5007 5013						5008 5014 5004	7002 7003	5021 5020	7028	1003 7041	7037 7005 7010			
	5009 5015						5010 5016	5017 1011 5018	5022 5019			7006 5034 7013			
C	2004 2003 2114 2117 2001		2011	2010	2006 2019	2022 2023 2014 2025 2026 2021 2037	2029 2042 2113 2122a 2030 2094 2040	2051	2055	2081 2080 2043 2060 2073 2102 2075 2077 2078 2099	2101				
	2012 2007 2115 2118 2002		2009	2015	2015	2062 2033 2005 2013 2035 2122b	2116 2041 2028 2112 2038 2091 2031 2044 2046	2056	2092 2045 2057	2061 2082 2063 2100 2076 2047 2096	2058				
	2020 2017 2116 2122d		2121b			2024 2008 2018	2111	2108 2036 2122c 2039 2032	2027	2098 2059 2048 2049 2106 2053 2095 2097 2054	2074				
R			3001 3002 3005 3004	3006	3058 3012 3018	3020 3023 3027 3034 3013 3024 3028 3015 3031 3047	3040	3042 3010	3055 3059 3061 3071 3064 3063 3044	3045 3053 3050	3243				
			3003	3006	3009 3008	3011 3019 3026 3037 3036 3029 3017 3016	3030	3035	3052 3060 3056 3065 3041 3066	3048 3049 3054	3242				
					3007	3032 3014 3033 3038			3057 3062 3025 3039 3022 3072 3043	3046 3051					

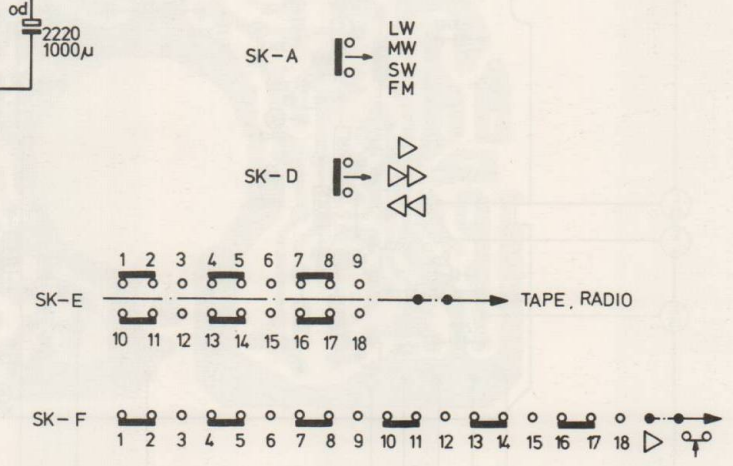
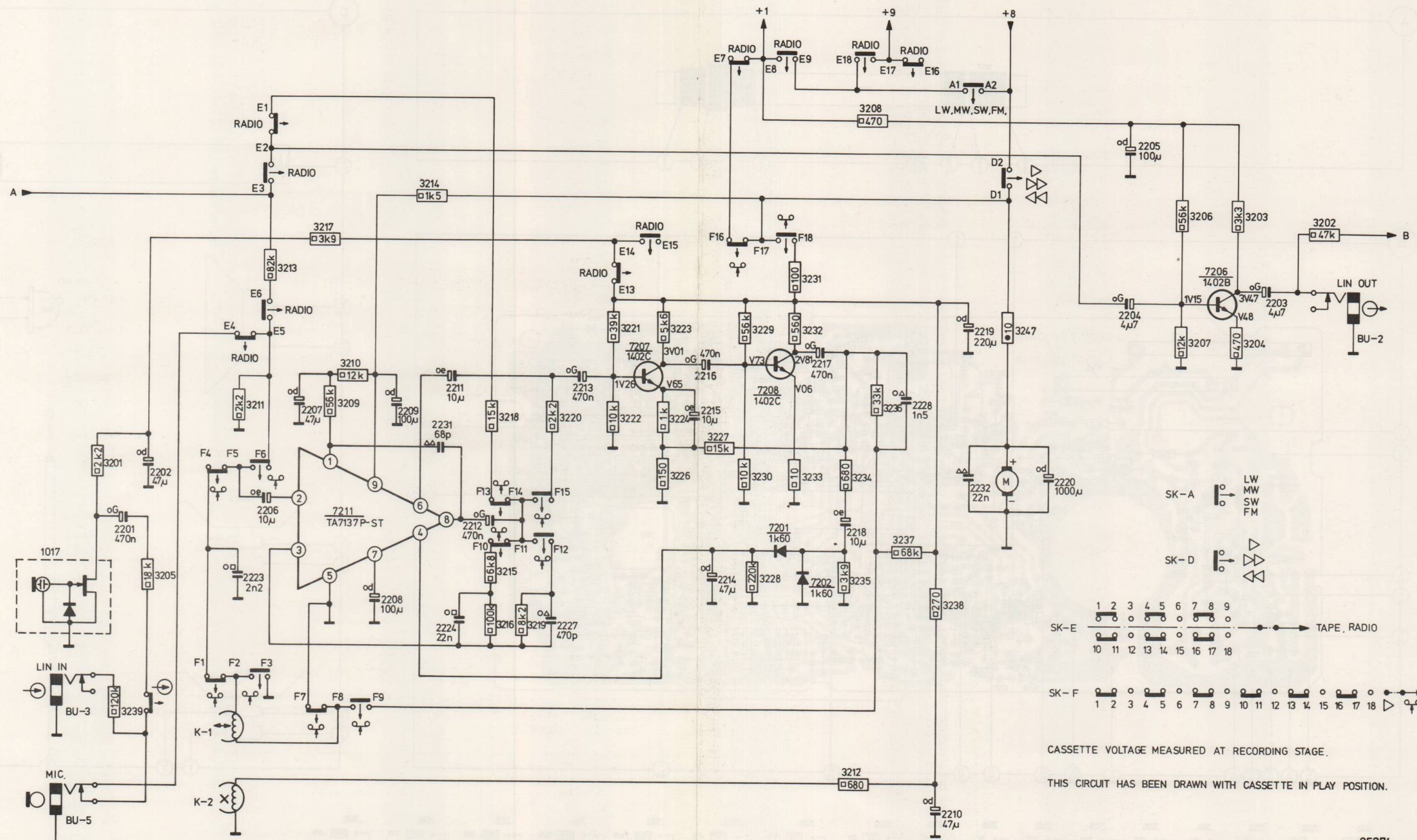


MISC.	7035 7032 7033 7031 7037 7011 5003 7009 7006 5033 7005 5034 7023 7021 5031 1001 5007 5005 7029 5020 5011 5022 5013 7026 5010 7014 5012 5016																												1014	7012							
	7034 7030 7013 7008 7007 7022 SK-B 5004 5002 7004 1003 1002 5018 5009 5021 5015 7002 5006 5008 7027 7025 5014																												SK-A								
	7036 5017 7010 5032 1011 7041 1004 SK-C 5019 5001 7024 7028 7001 7003																																				
C	2101	2093	2058	2097	2096	2054	2106	2063	2100	2062	2015	2102	2024	2075	2057	2027	2033	2098	2009	2082	2081	2053	2051	2114	2108	2111	2049	2007	2118	2012	2046	2117	2005	2113	2018	2013	2031
	2074	2099							2092	2045	2078	2061	2077	2019	2026	2055	2011	2060	2035	2094	2037	2056		2004	2001	2003	2047	2115	2042	2020	2116	2002	2048	2032	2030	2021	2040
										2095	2043	2022	2076	2023	2025	2073	2121	2080	2014	2059	2010	2006	2041		2016	2112	2028	2038	2091	2122	2036	2017	2039	2008	2044		
R	3054	3048	3050	3045	3043	3072	3071	3063	3041	3039	3058	3006	3064	3007	3009	3057	3047	3042	3018	3020	3040	3023	3034	3011	3032	3033	3027	3030	3016	3015	3014	3017					
			3051	3053		3046		3056	3022	3035	3025	3062	3055	3065	3060	3008	3052	3010	3012			3002	3003	3038			3019	3037		3028	3013	3029					
			3049					3044				3066	3004	3061	3059	3005						3001			3036				3026	3024	3031						



7021	7022	7023	7024	7025	7026	7027	7028	7029	7030	7031	7032	7033	7034	7035	7036	7037
e 1V06	e 1V05	e 1V54	s 0V	e V55	e 3V9	e V57	e 0V	e V97	e 0V 0V	e 7V5 7V5	e 4V3 4V3	e 7V45 7V45	e 2V9 2V9	e 3V5 3V5	e 3V5 3V5	e 3V9 3V9
b 1V78	b 1V75	b 1V22	g 0V	b 1V23	b 3V8	b 1V26	b V45	b 1V55	b 0V 0V	b 6V95 6V95	b 4V88 4V88	b 6V72 6V72	b 3V5 3V5	b 4V1 4V1	b 2V9 2V9	b 4V5 4V5
c 3V6	c 3V3	c 3V8	d 3V9	c 3V6	c 0V	c 3V7	c 3V			0V 0V	c 6V72 6V72	c 4V25 4V25	c 4V1 4V1	c 7V5 7V5	c 0V 0V	c 7V5 7V5

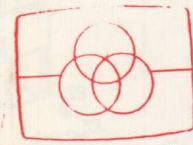
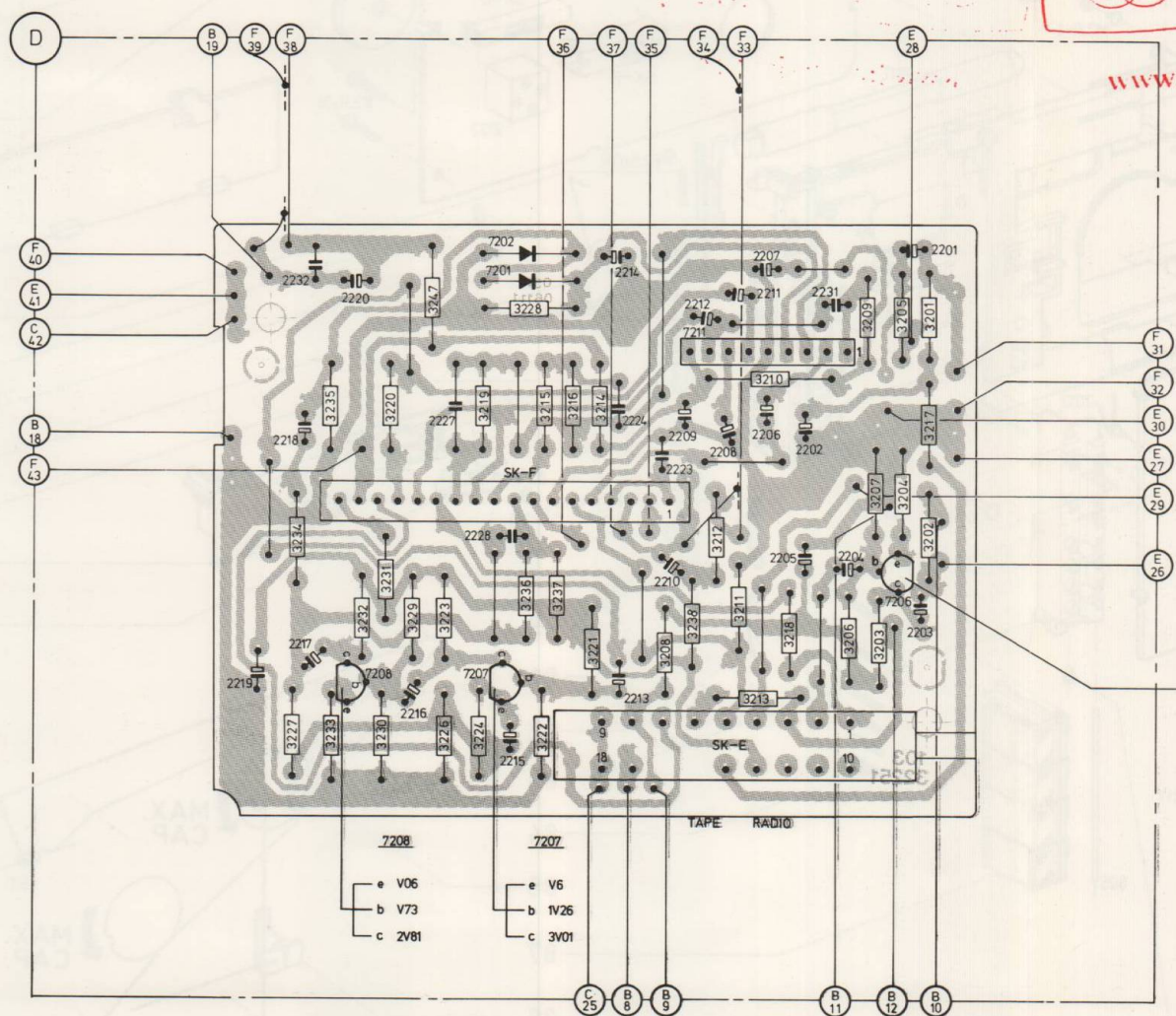
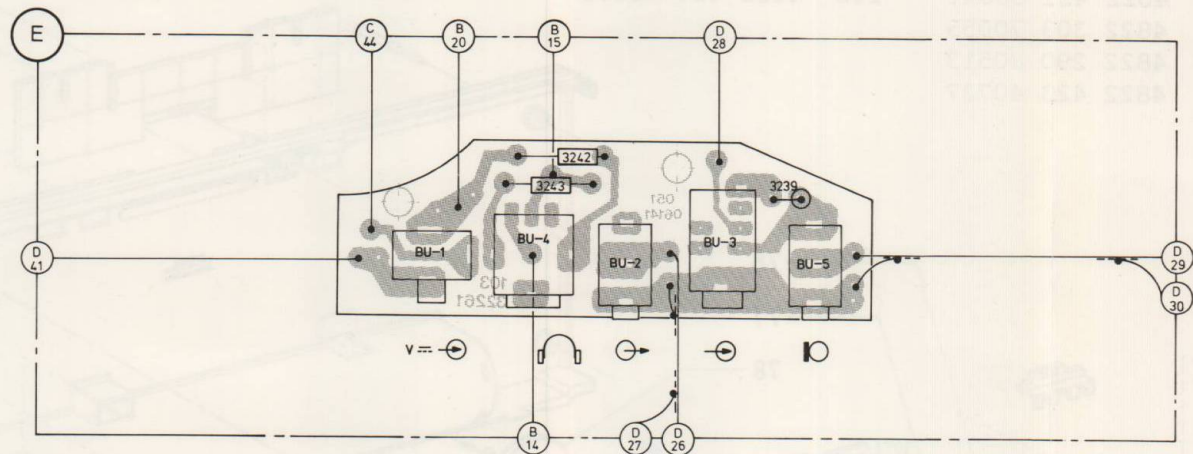
MISC.	K-1										7211					7207					7208					7202					7206													
	K-2																																											
C.	2201		2202		2223		2206		2207		2208		2224		2211		2227		2213		2215		2214		2217		2218		2228		2219		2220		2205		2203							
											2209		2231		2212						2216						2210		2232				2204											
R.	3201		3211		3213		3217				3214		3218		3220				3221		3223		3229		3230		3231		3208		3236		3235		3237		3247		3206		3203		3202	
	3205		3239				3209		3210				3216		3215		3219				3222		3224		3226		3228		3227		3232		3233		3234		3212		3238		3207		3204	



CASSETTE VOLTAGE MEASURED AT RECORDING STAGE.

THIS CIRCUIT HAS BEEN DRAWN WITH CASSETTE IN PLAY POSITION.

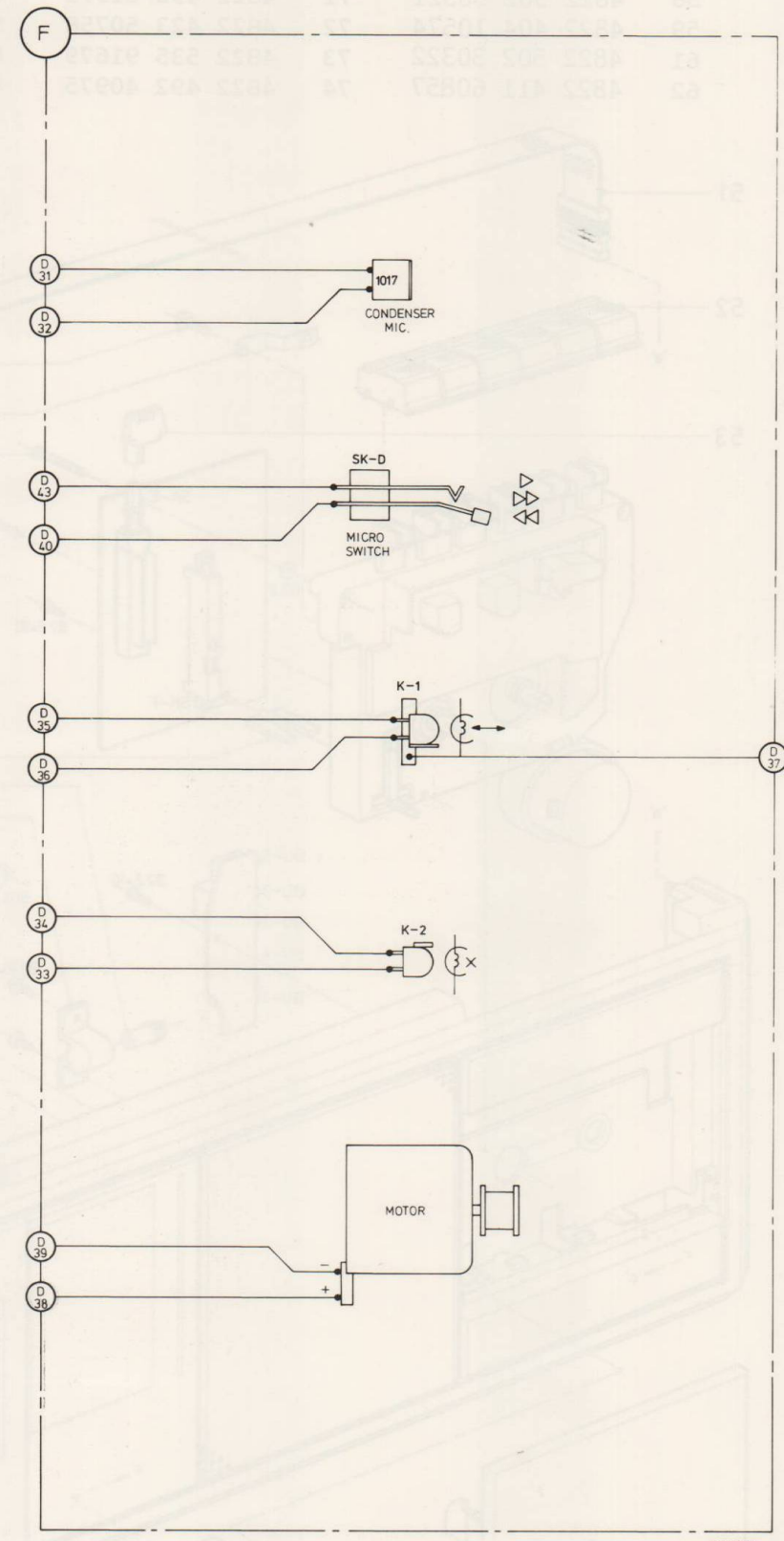
MISC.	7208		7207	BU-1		7202	BU-4	BU-2	BU-3	7211	BU-5	7206										1017	SK-D
						7201	SK-F	SK-E														K-1 K-2	
C.	2219	2232	2220	2227	2215	2213		2214	2209	2212	2207	2231	2205	2204	2201								
	2217	2218	2216	2228		2224 2210 2223 2208 2211 2206 2202										2203							
R.	3234	3232	3231	3247	3236	3237	3219	3242	3215	3216	3214	3212	3239	3211	3209	3205	3201	3217					
	3227	3233	3230	3226	3235	3220	3229	3223	3221	3228	3224	3243	3222	3208	3238	3210	3207	3204	3213	3218	3202	3206	3203



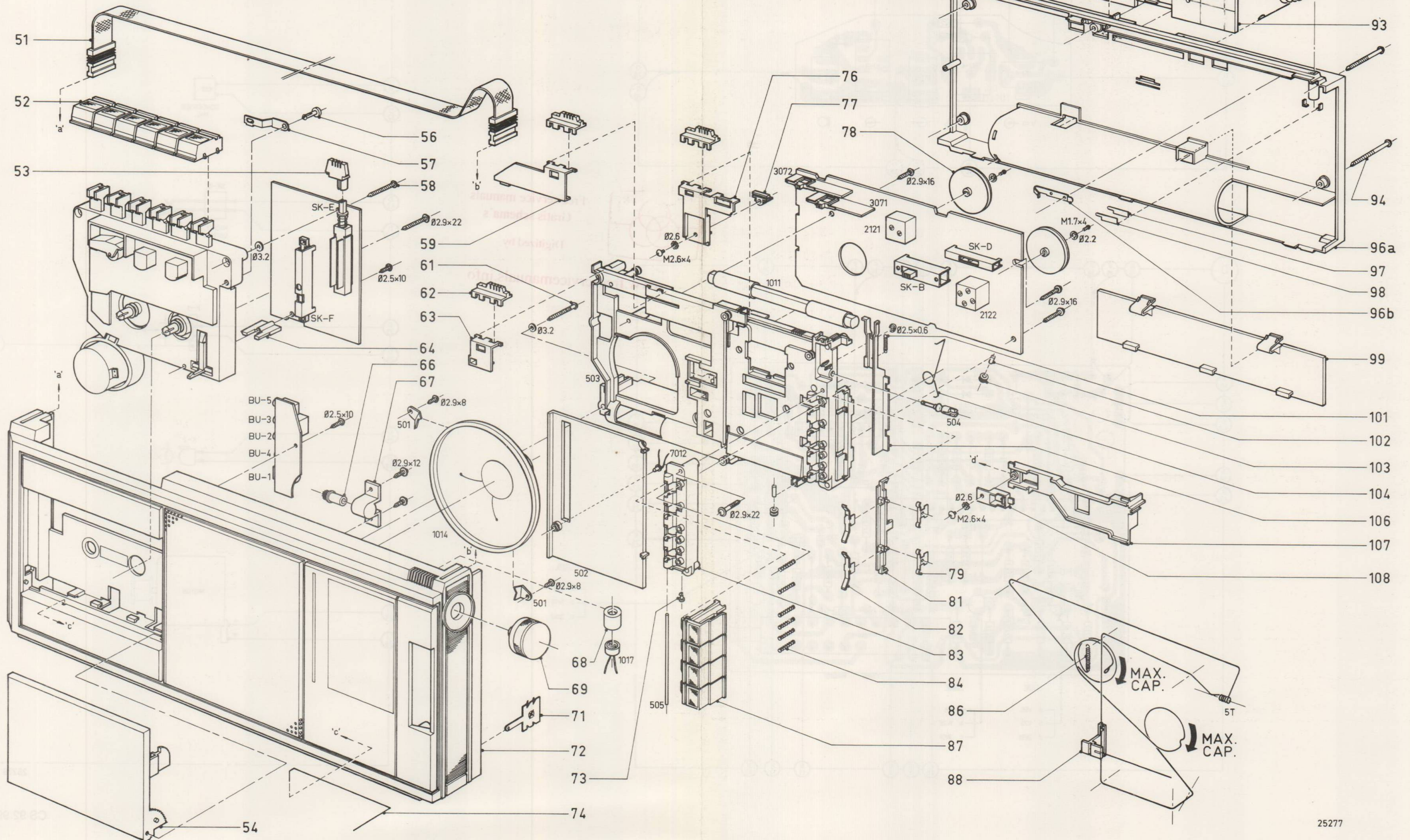
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7206
e V48
b 1V15
c 3V47



57	4822	492	62979	69	4822	413	41212	82	4822	290	80511	94	4822	502	30323	107	4822	404	10575
58	4822	502	30321	71	4822	492	61971	83	4822	404	10625	96	4822	421	50041	108	4822	454	11056
59	4822	404	10574	72	4822	423	50758	84	4822	492	40998	97	4822	303	70055				
61	4822	502	30322	73	4822	535	91679	86	4822	492	31153	98	4822	290	80513				
62	4822	411	60857	74	4822	492	40975	87	4822	410	23347	99	4822	423	40737				



SK-A										
AM-IF										
MW	≈468 KHz ⁺	 via 10nF	min		1004				max	
					5034					
AM-RF										
SW1 5,9-6,3 MHz	5,85 MHz*	 via 7pF	max		5006				max	
	6,35 MHz*		min		2113					
								5005		
								CT6		
SW2 7,0-7,4 MHz	6,95 MHz*	 via 7pF	max		5008				max	
	7,45 MHz*		min							
								5007		
								2114		
SW3 9,4-9,9 MHz	9,35 MHz*	 via 7pF	max		5010				max	
	9,95 MHz*		min							
								5009		
								2115		
SW4 11,6-12,2 MHz	11,55 MHz*	 via 7pF	max		5012				max	
	12,25 MHz*		min							
								5011		
								2116		
SW5 15,0-15,7 MHz	14,95 MHz*	 via 7pF	max		5014				max	
	15,75 MHz*		min							
								5013		
								2117		
SW6 17,6-18,3 MHz	17,55 MHz*	 via 7pF	max		5016				max	
	18,35 MHz*		min							
								5015		
								2118		
MW 520-1605 KHz	512 KHz*	 via 7pF	max		5019				max	
	1635 KHz*		min		CT3					
								5017		
								CT4		
LW 150-225 KHz	147 KHz*	 via 7pF	max		2112				max	
	265 KHz*		min							
								5018		
								2111		

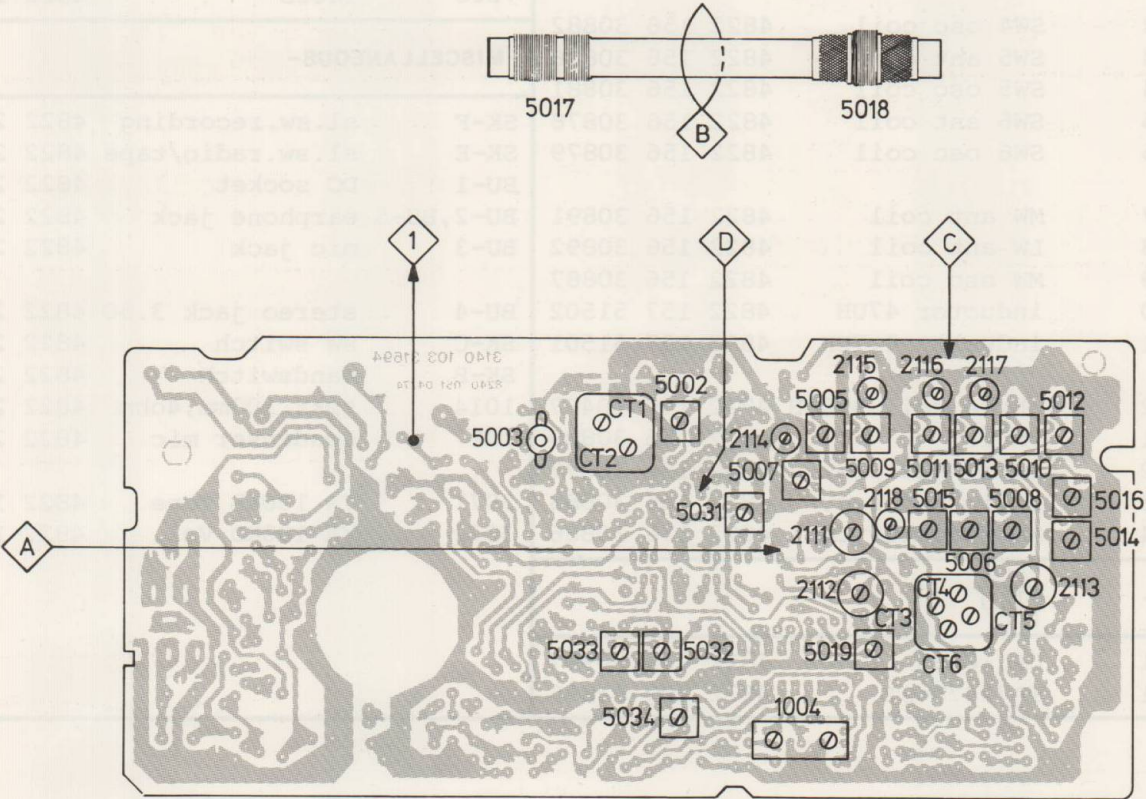
Repeat

+ for -/01 IF=455 KHz
* mod:1 KHz 30%

SK-A									
FM-IF									
FM	≈10,7 MHz f=300 KHz (50 Hz)	 via 10nF	min	5033	5031				max
					5032				
					5033			symmetrical 	
FM-RF									
FM 87,5-108 MHz ⁺⁺ AFC OFF	86,5 MHz**		max		5003				max
	109 MHz**		min		CT1				
	88 MHz**				5002				
	106 MHz**				CT2				

Repeat

++ for -/02 87.35-107.5 MHz
** mod:1 KHz f=22.5 KHz



-C- 				-D- 			
2121	polyvaricon	4822 125 20261		7001-7003	1S2076	5322 130 34655	
2122	polyvaricon	4822 125 40028		7004,7009	}2-1K60	4822 130 31232	
2111-2113	trimmer 20pF	4822 125 50045		7010			
2114-2118	trimmer 11pF	4822 125 50198		7005-7008	}1K60	4822 130 31232	
2019	N220 20pF±5%	4822 122 40158		7201,7202			
2030	N470 220pF±10%	4822 122 31965		7011	FV1043	4822 130 31907	
2031	N750 150pF±10%	4822 122 31767		7012	TLR124	4822 130 31274	
2038	N750 3±0.25pF	4822 122 31223		7013	BZX79C4V7	4822 130 34174	
				7014	BA317	4822 130 30847	
-L- 				-TS- 			
1001	band pass filter	4822 153 10367		7021	2SC1923-0	4822 130 41389	
1002,1003	SFE10.7MA-5	4822 242 70249		7022,7025	1502C	4822 130 44195	
1004	CFT-468B	4822 242 70748		7023	2SC1923-R	4822 130 41735	
1004 -/01	CFTS-455A-1	4822 242 70702		7024	2SK54B	4822 130 41907	
1011	ferrite bar	4822 526 10122		7026,7031	1602E	4822 130 41457	
5001	inductor 2,2UH	4822 157 51499		7027	1502D	4822 130 44195	
5002	RF coil L-1S6D	4822 156 30871		7028,7030	}1402E	4822 130 44196	
5003	FM osc coil	4822 157 51497		7034,7037			
5004	inductor 1UH	4822 157 51498		7029	2SC941TM-0	4822 130 41559	
5005	SW1 ant coil	4822 156 30872		7032,7207	}1402C	4822 130 40937	
5006	SW1 osc coil	4822 156 30885		7208			
5007	SW2 ant coil	4822 156 30873		7033	1602D	4822 130 41434	
5008	SW2 osc coil	4822 156 30884		7035	MPS9418AS	5322 130 44647	
5009	SW3 ant coil	4822 156 30874		7036	MPS9468AS	5322 130 44647	
5010	SW3 osc coil	4822 156 30883		7206	1402B	4822 130 40948	
5011	SW4 ant coil	4822 156 30875					
5012	SW4 osc coil	4822 156 30882					
5013	SW5 ant coil	4822 156 30876					
5014	SW5 osc coil	4822 156 30881					
5015	SW6 ant coil	4822 156 30878					
5016	SW6 osc coil	4822 156 30879					
5017	MW ant coil	4822 156 30891					
5018	LW ant coil	4822 156 30892					
5019	MW osc coil	4822 156 30887					
5020	inductor 47UH	4822 157 51502					
5021	inductor 4,7UH	4822 157 51501					
5022	choke coil 390UH	4822 158 10467					
5031	FM IFT	4822 156 30889					
5032	ratio det.pri.	4822 156 30877					
5033	ratio det.sec.	4822 156 30888					
5034	AM detector coil	4822 156 30886					
-IC- 				-MISCELLANEOUS-			
7041	UPC1018C	4822 209 80967		SK-F	sl.sw.recording	4822 277 30692	
7211	TA7137P-ST	4822 209 81896		SK-E	sl.sw.radio/tape	4822 277 20902	
				BU-1	DC socket	4822 267 30446	
				BU-2,BU-5	earphone jack	4822 267 30332	
				BU-3	mic jack	4822 266 20102	
				BU-4	stereo jack 3.50	4822 267 40455	
				SK-C	SW switch	4822 277 20884	
				SK-B	bandswitch	4822 276 40302	
				1014	spkr.100mm,4ohm	4822 240 30249	
				1017	condenser mic	4822 242 30105	
				3071	VR 100KB Tone	4822 105 10474	
				3072	VR 100KD Vol.	4822 105 10475	

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

NL

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

GB

Because, generally speaking, MOS IC's are very sensitive to overload and too high voltages, measurements should be carried out with greatest possible care. For further instructions, see the directions enclosed in the separate IC-packages.

NL

Omdat MOS IC's in het algemeen zeer gevoelig zijn voor overbelasting en te hoge spanning dient bij het meten de grootst mogelijke zorgvuldigheid in acht genomen te worden. Zie voor verdere instructies de bijsluiters in de verpakking van de IC's.

F

Parce qu'en général, les IC MOS sont très sensibles à la surcharge et à des tensions trop élevées, il faudra procéder aux mesures avec le plus grand soin. Pour plus de détails, voir les instructions accompagnant l'emballage des IC.

D

Da MOS IC's im allgemeinen sehr empfindlich gegen Überbelastung und zu hohe Spannung sind, muss man beim Messen äusserst vorsichtig vorgehen. Für weitere Weisungen siehe den beigefügten Zettel in der Verpackung der IC's.

I

Dato che gli IC MOS sono molto sensibili alla sovraccarica e alle tensioni troppo alte, occorrerà procedere alle misure con particolare cautela. Per altre particolari riferirsi alla istruzioni comprese nell'imballaggio di ogni IC.