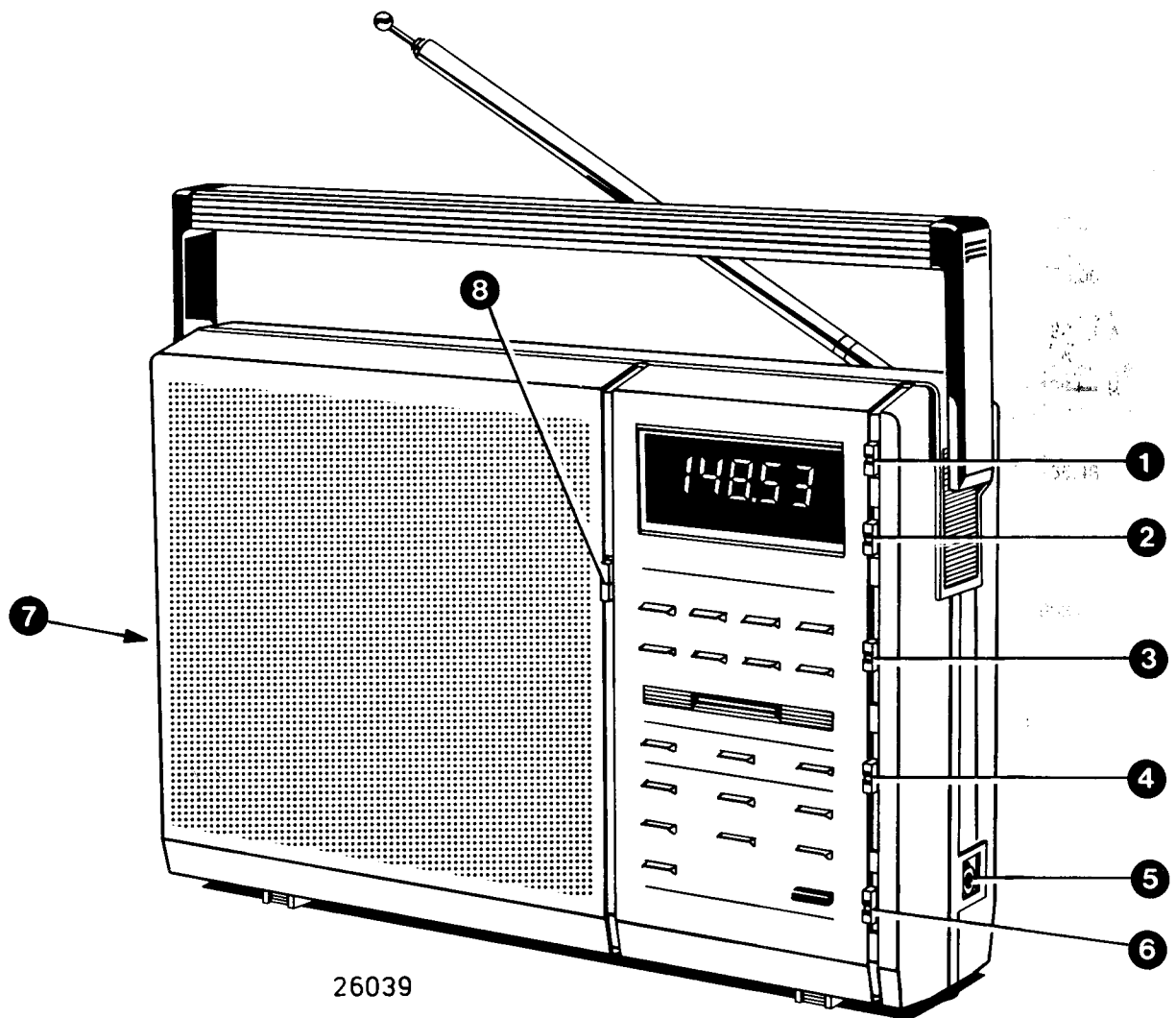


Service
Service
Service

Service Manual



26039

Documentation Technique Service Dokumentation Documentazione di Servizio Huolto-Ohje Manual de Servicio Manual de Serviço



"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 14579

Printed in The Netherlands

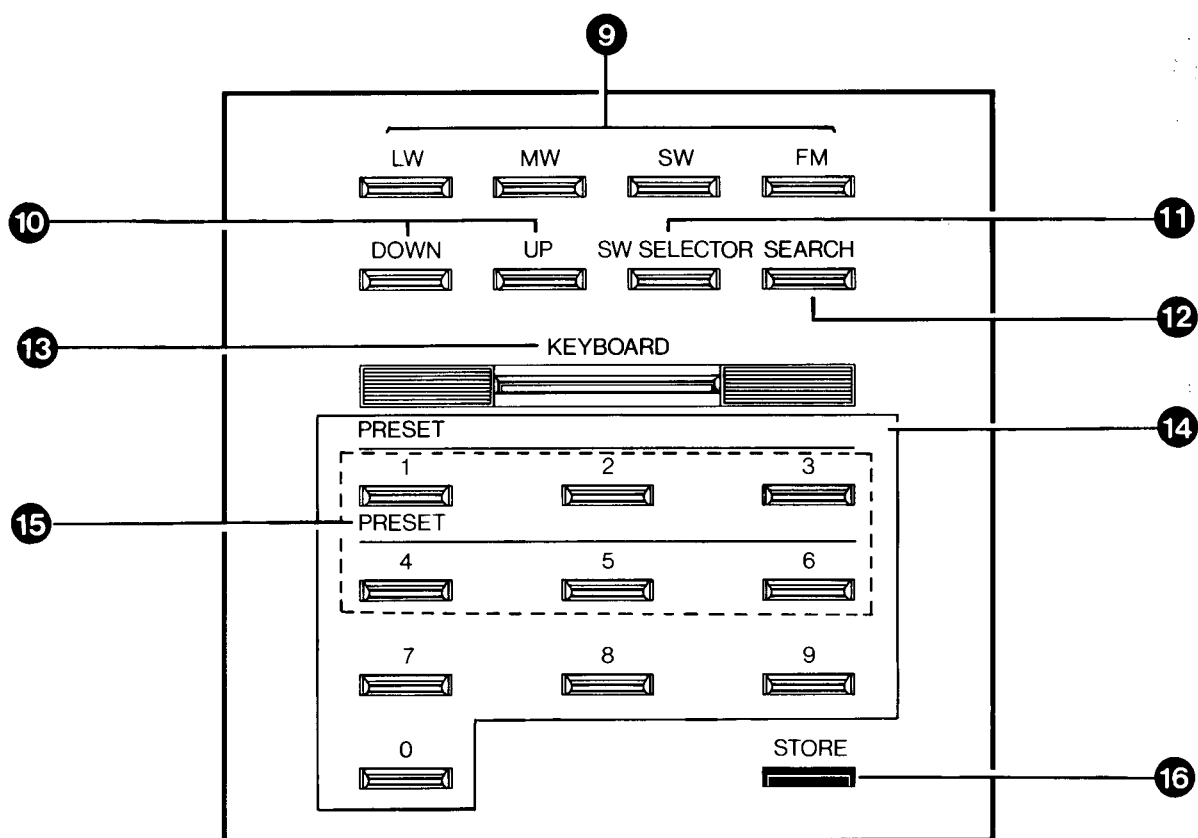
PHILIPS

CONNECTIONS AND CONTROLS

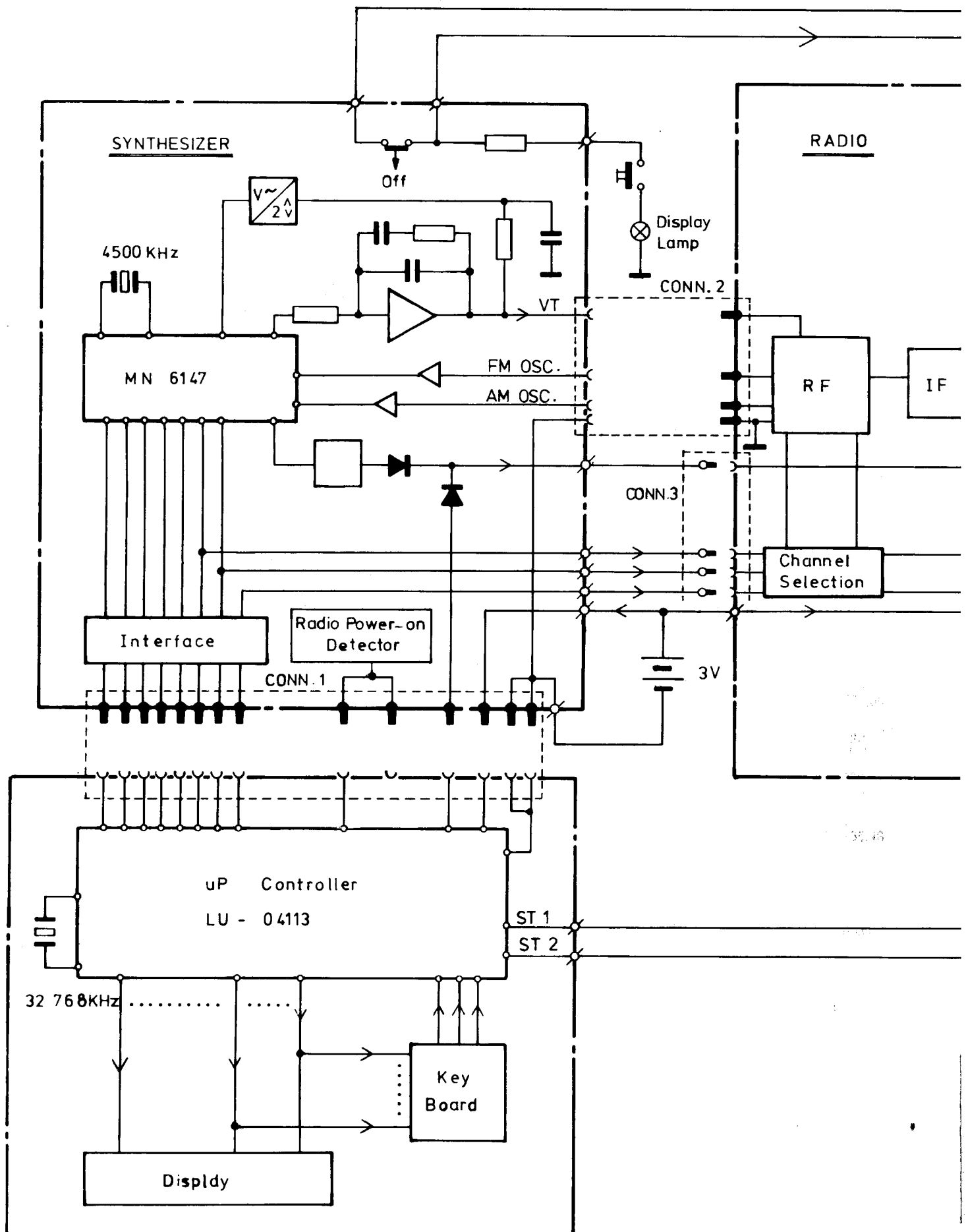
- ① =  SK-E
- ② = Loc/dist. SK-A
- ③ =  3553
- ④ =  3552
- ⑤ = BU-1
- ⑥ = Store Lock SK-C
- ⑦ = 
- ⑧ =  on/off SK-B
- ⑨ = LW-MW-SW-FM
- ⑩ = Up-Down
- ⑪ = SW Selector
- ⑫ = Search
- ⑬ = Keyboard select
- ⑭ = Keyboard buttons
- ⑮ = Preset buttons
- ⑯ = Store

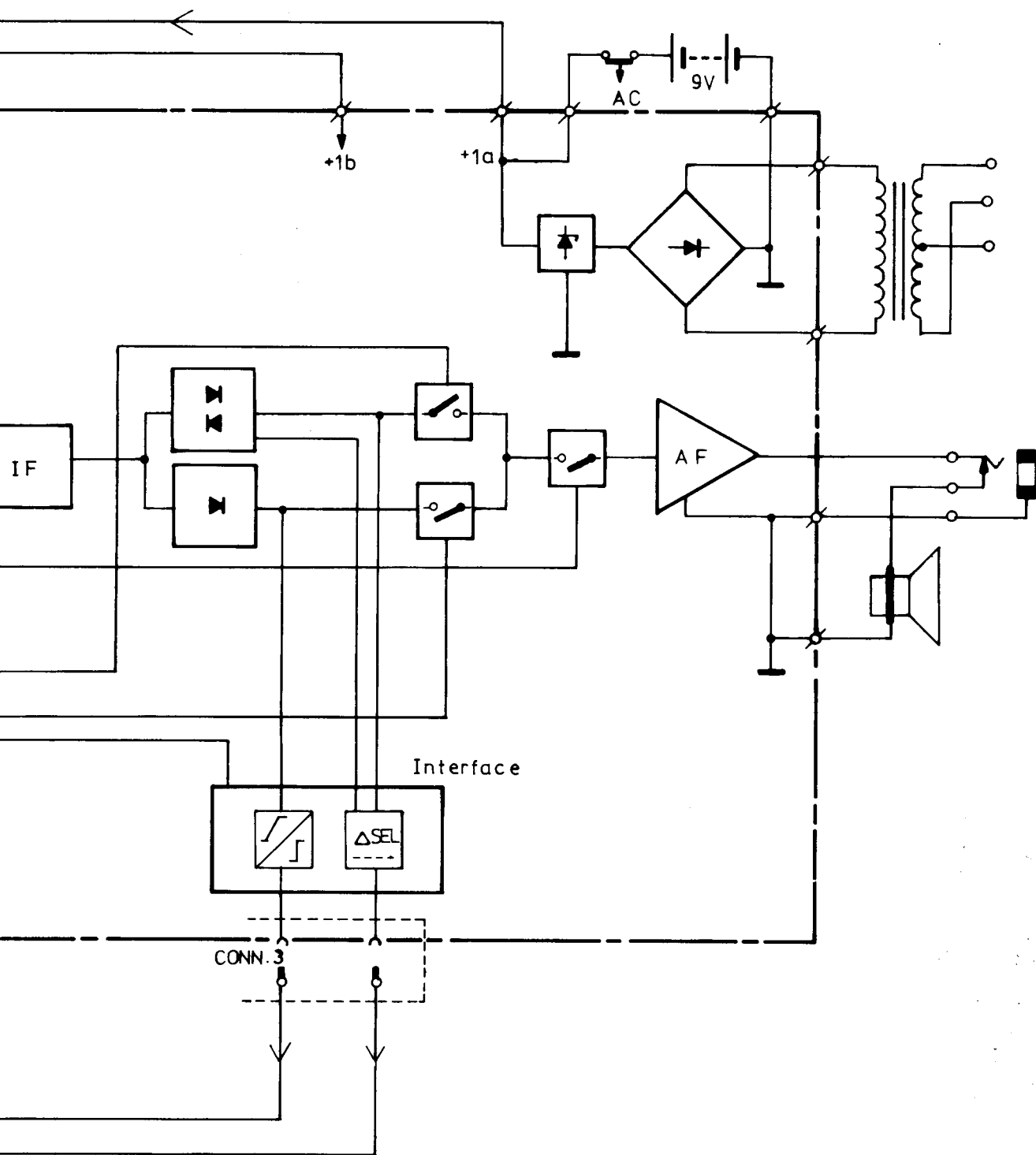
SPECIFICATIONS

IF-AM	468 kHz
IF-FM	10.7 MHz
LW	150-255 kHz
MW	520-1605 kHz
SW	5.95-15.45 MHz
FM	87.5-108 MHz
 {	3 V (2xR6) μ P/Display
	9 V (6xR6)
	110-127/220-240 V 50 Hz
 {	 500 mW $\pm$ 1 dB
	 400 mW $\pm$ 1 dB
	16 Ω (d $\leq$ 10 %)



26038





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.

S

Säkerhetsbestämmelserna kräver att varje reparation skall utföras korrekt med hänsyn till ursprunglig placering av komponenter, ledningar etc. och med användning av föreskrivna reservdelar.

DK

Myndighedernes sikkerheds- og radiostøjbestemmelser kræver, at enhver reparation skal udføres korrekt m.h.t. overholdelse af originalplacering og montering af komponenter, ledningsbundter, etc. og ved anvendelse af de foreskrevne reservedele.

N

Sikkerhetsbestemmelser kreves at apparatet blir gjenopprettet til original utførelse og at deler som er identiske med de som er spesifisert, blir benyttet.

SF

Korjattessa laitetta on turvallisuussyistä ehdottomasti eneteltävä oikein ja käytettävä tehtaan määrittämiä alkuperäisvaraosia.

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.

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.

I

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

N

Forði, generelt, MOS-IC'er er meget følsomme for overbelastning og for høje spændinger, må målinger udføres med størst mulig forsigtighed. For videre forholdsregler, se anvisningene vedlagt i IC-pakningene.

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.

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 beigelegten Zettel in der Verpackung der IC's.

S

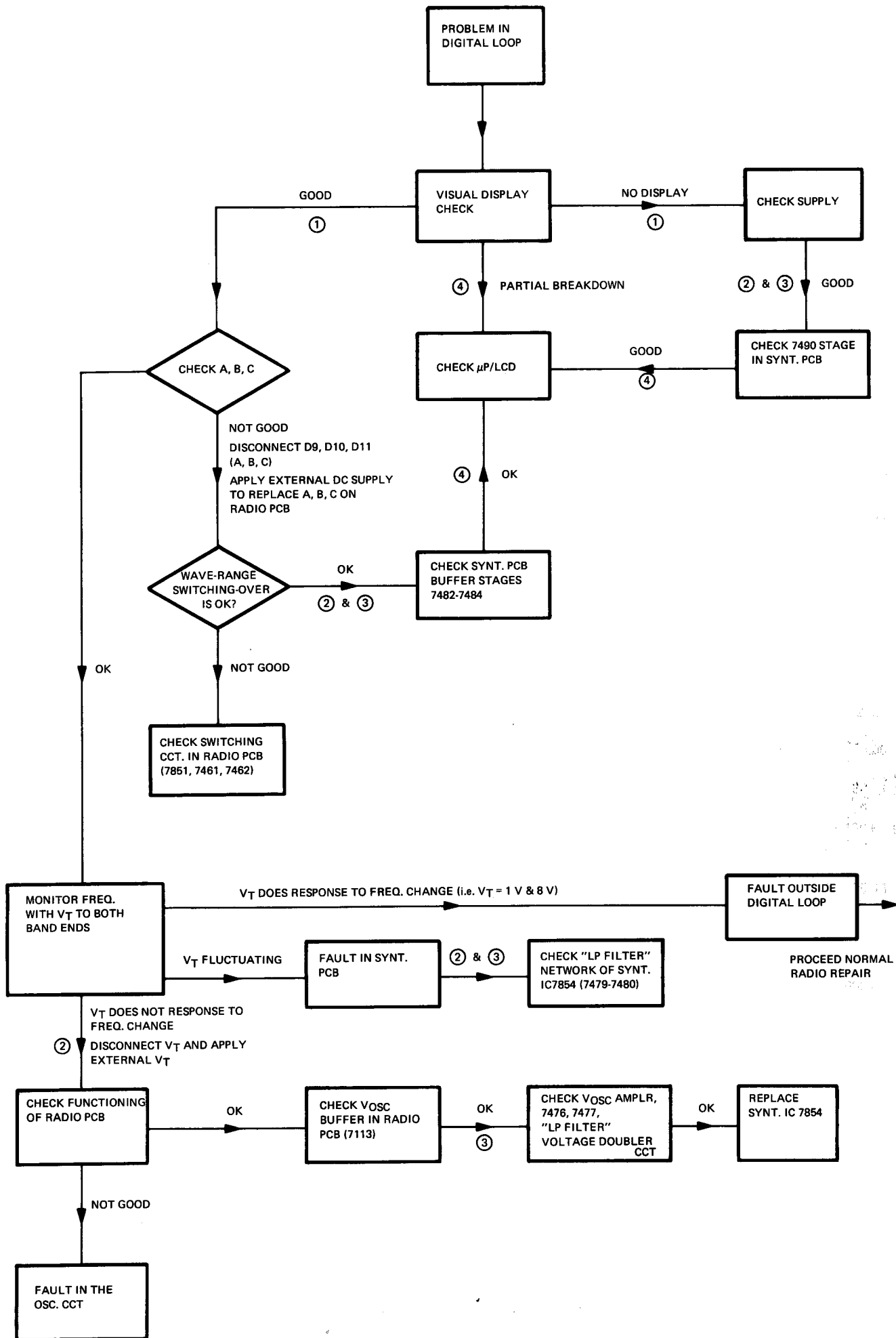
I allmänhet är IC-kretsar AV MOS-typ mycket känsliga för höga spänningar och för överbelastning. Iakttag därför största möjliga försiktighet vid mätningar på dessa kretsar. Se även de anvisningar som bipackas IC-kretsarna.

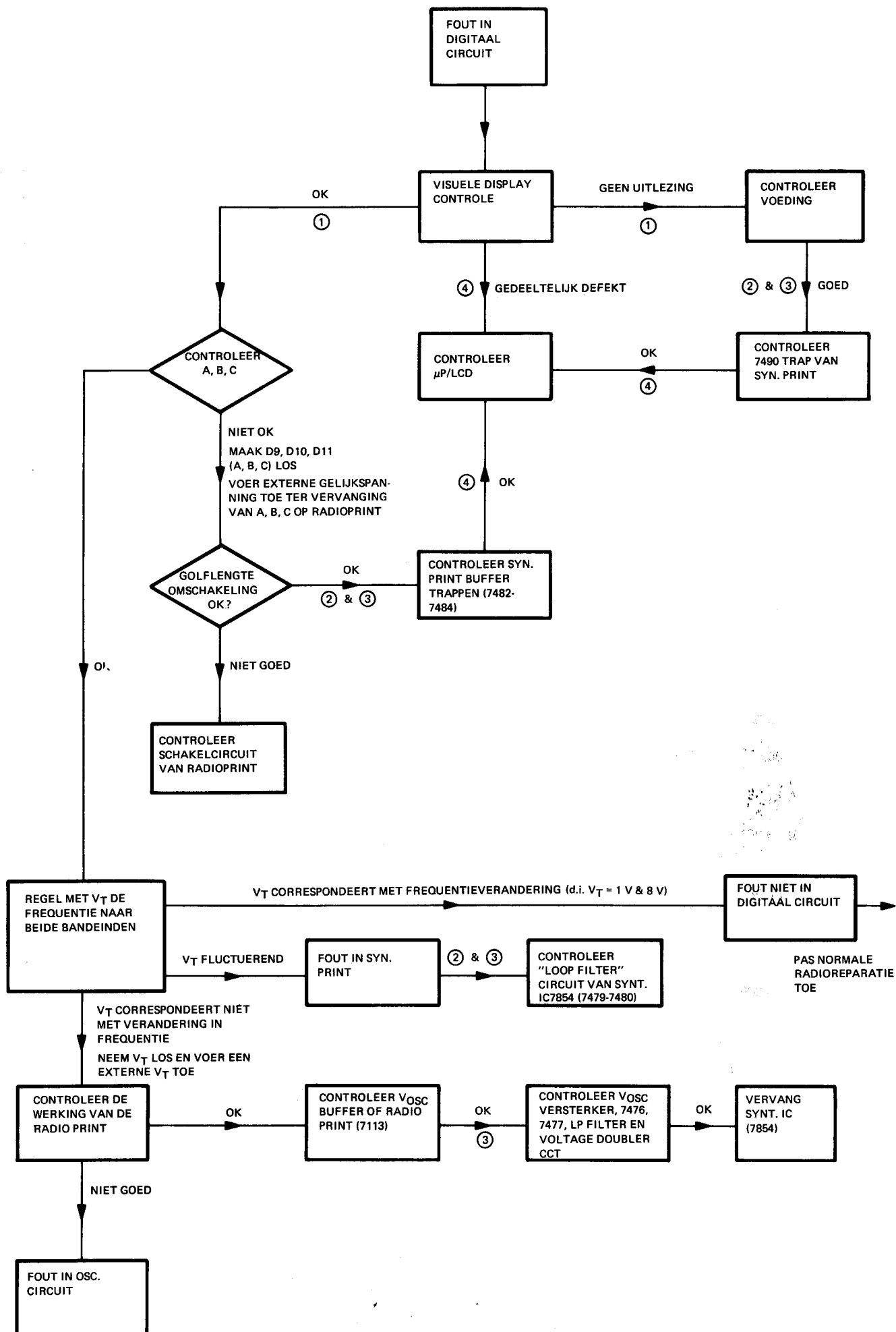
DK

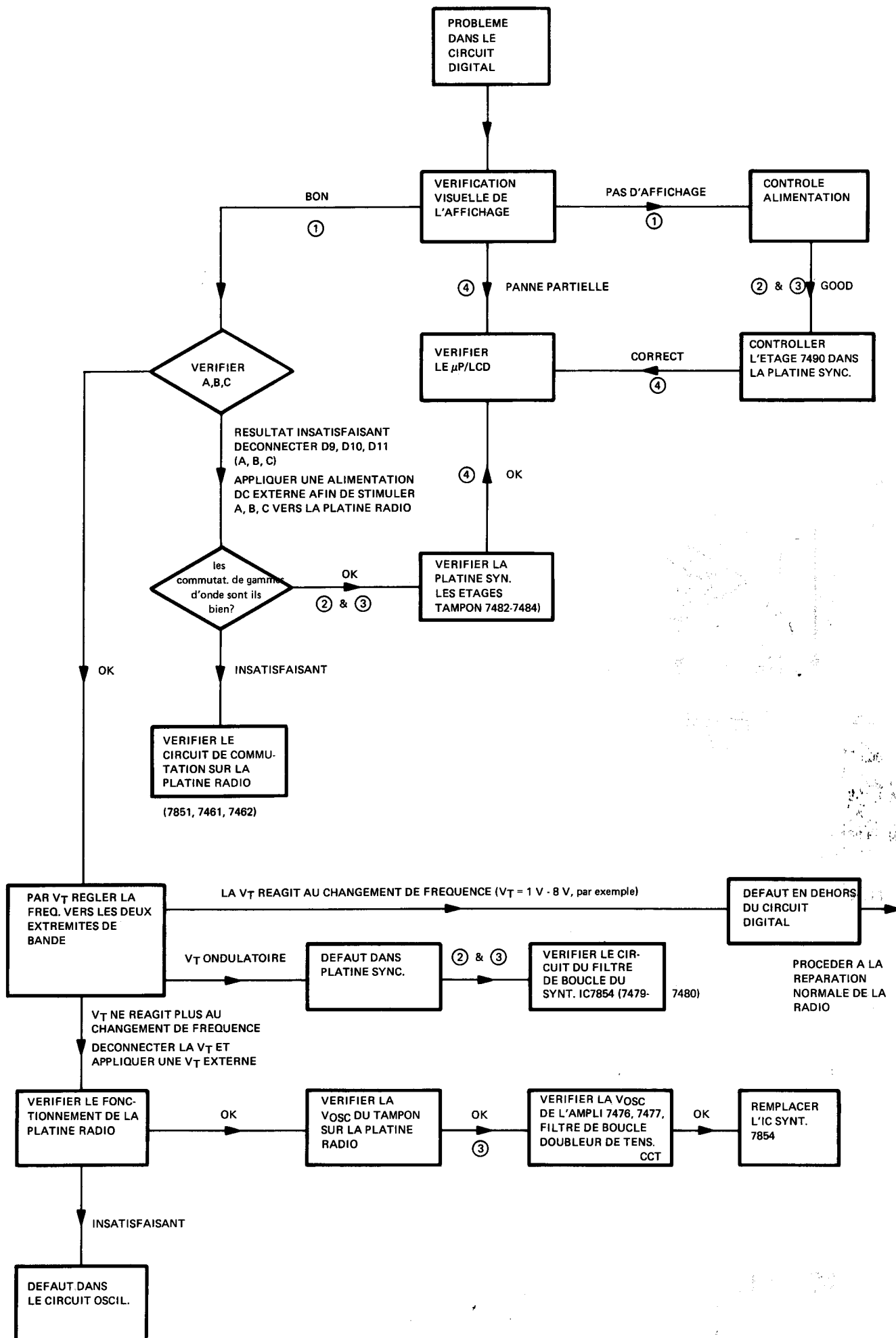
Da MOS-IC'er er meget følsomme overfor høje spændinger og andre former for overbelastning, skal håndteringen af disse ske med størst mulig forsigtighed. Se instruktionen som er ilagt IC-embalagen.

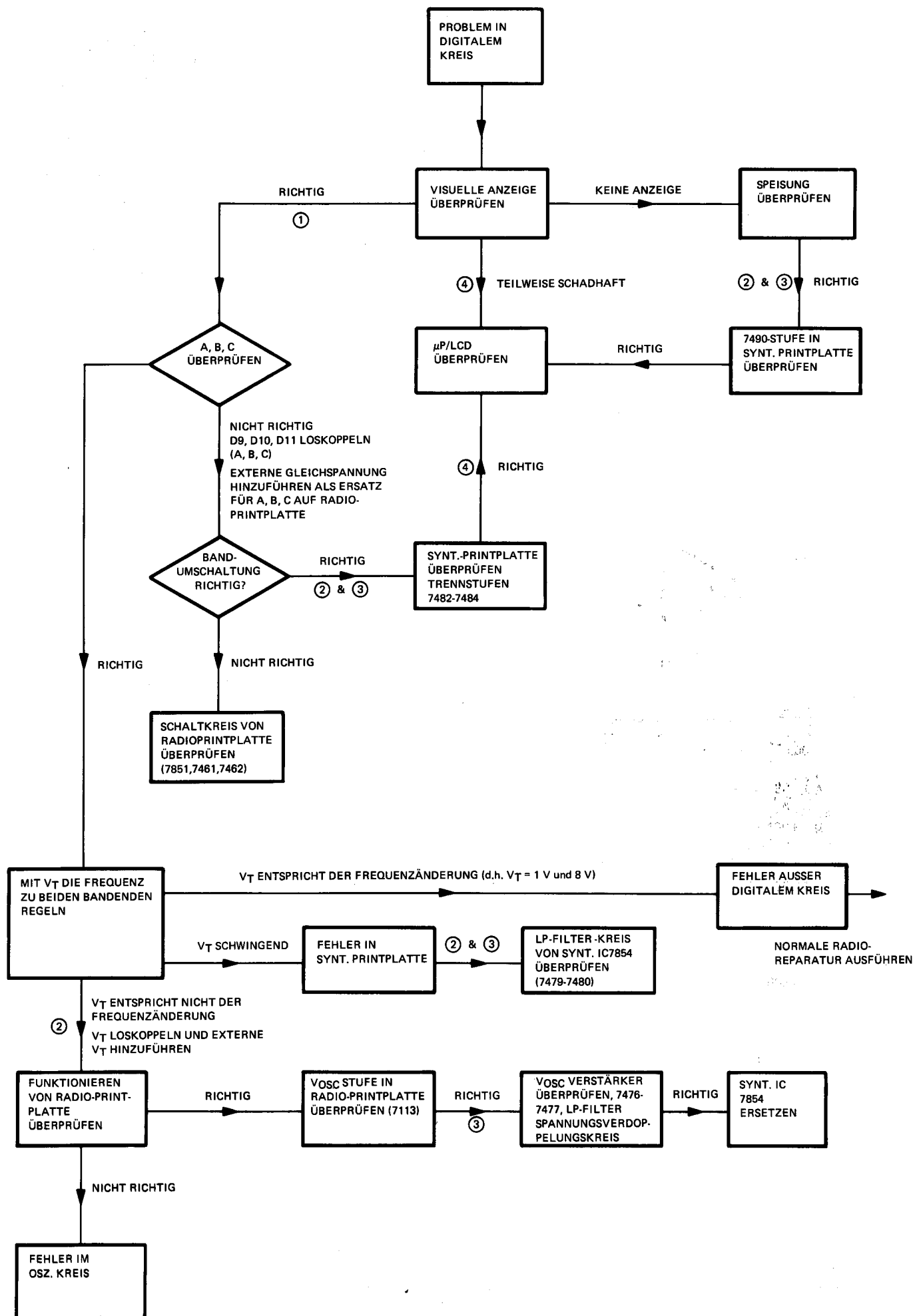
SF

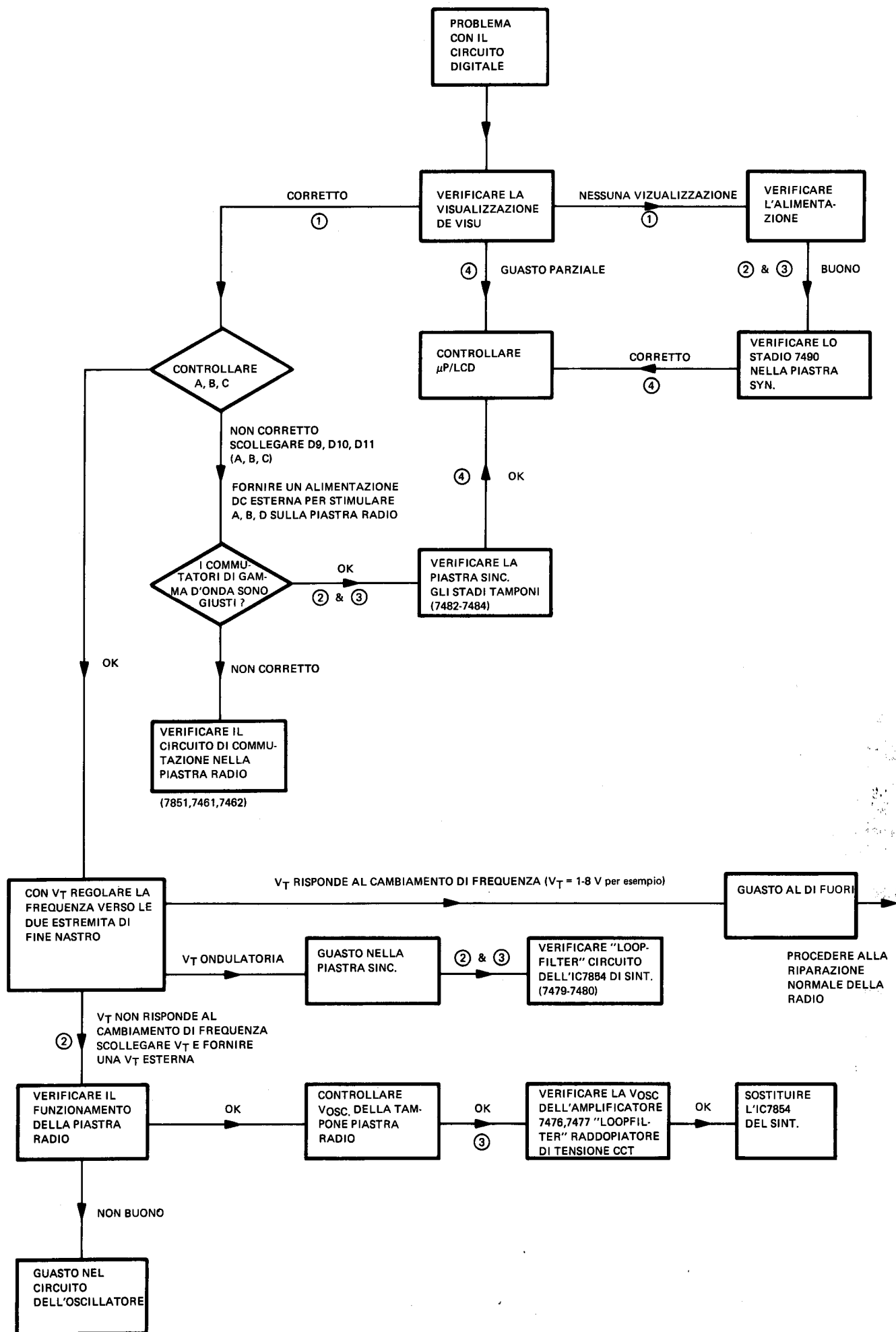
Koska yleisesti ottaen MOS-mikropiirit ovat arkoja ylikuormituksen ja liian suurien jännitteiden suhteen, on mittaukset suoritettava suurella varovaisuudella. Lisäohjeet ovat kyseisen integroidun piirin pakkauksessa.











(GB)

Note:

V_T = Varicap voltage

- ① Open back cabinet.
- ② Remove radio pcb from front cabinet and reconnect pcb with cable to Synt. pcb
(male plug 4822 267 40423,
female plug 4822 267 40424)
- ③ Open μP shield case.
- ④ Disconnect μP pcb from Synt. pcb and perform μP test as according to test-table.

(NL)

Note:

V_T = Varicap voltage

- ① Verwijder achterwand.
- ② Verwijder radioprint uit kast en verbind deze met de Synt. print via doorverbindingkabel.
(male plug 4822 267 40423,
female plug 4822 267 40424)
- ③ Verwijder metalen afscherming van digitaalgedeelte.
- ④ Neem μP print los van Synt. print en voer de μP test uit volgens test tabel.

(F)

Note:

V_T = Tension Varicap

- ① Ouvrir l'arrière du boîtier.
- ② Enlever la platine de la radio de l'avant du boîtier et relier la platine avec câble à la platine du synt. (4822 267 40423 et 4822 267 40424)
- ③ Ouvrir la plaque d'isolation du μP et relier le câble.
- ④ Détacher la platine du μP de la platine du synt. et procéder au test du μP comme indiqué au tableau d'essai.

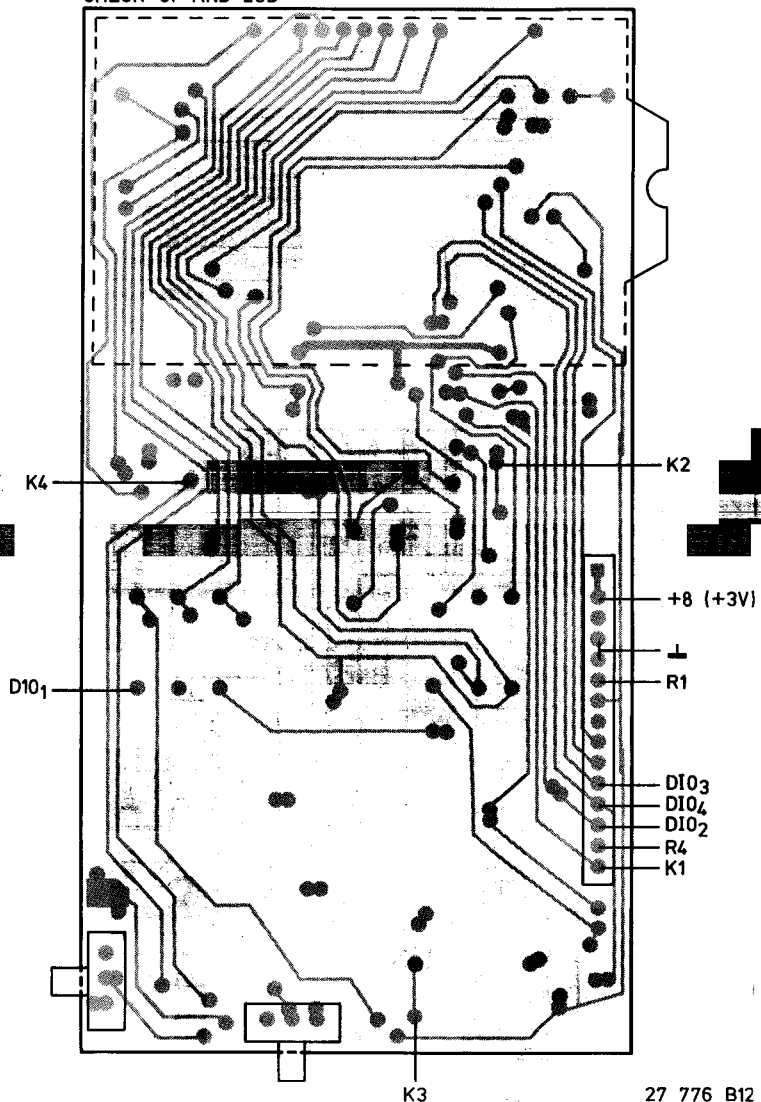
(D)

Bemerkung:

V_T = Varicap-Spannung

- ① Rückseite entfernen.
- ② Radio-Printplatte aus dem Gehäuse entfernen und diese durch Verbindungskabel (Stecker 4822 267 40423 und Steckerbuchse 4822 267 40424) mit der Synt. Printplatte verbinden.
- ③ Metallabschirmung vom digitalen Teil entfernen.
- ④ μP -Printplatte von Synt. Printplatte losmachen und die μP -Überprüfung ausführen, wie gegeben in der Prüfungs-Tabelle.

CHECK UP AND LCD



27 776 B12

(I)

Note:

V_T = Tensione varicap

- ① Aprire il mobile.
- ② Togliere la piastra dalla parte frontale del mobile e ricollegare la piastra col cavo alla piastra di sint. (4822 267 40423 e 4822 267 40424)
- ③ Togliere la piastra d'isolamento del μP e ricollegare il cavo.
- ④ Staccare la piastra del μP dalla piastra di sint. e procedere al controllo del μP come alla tabella di prova.

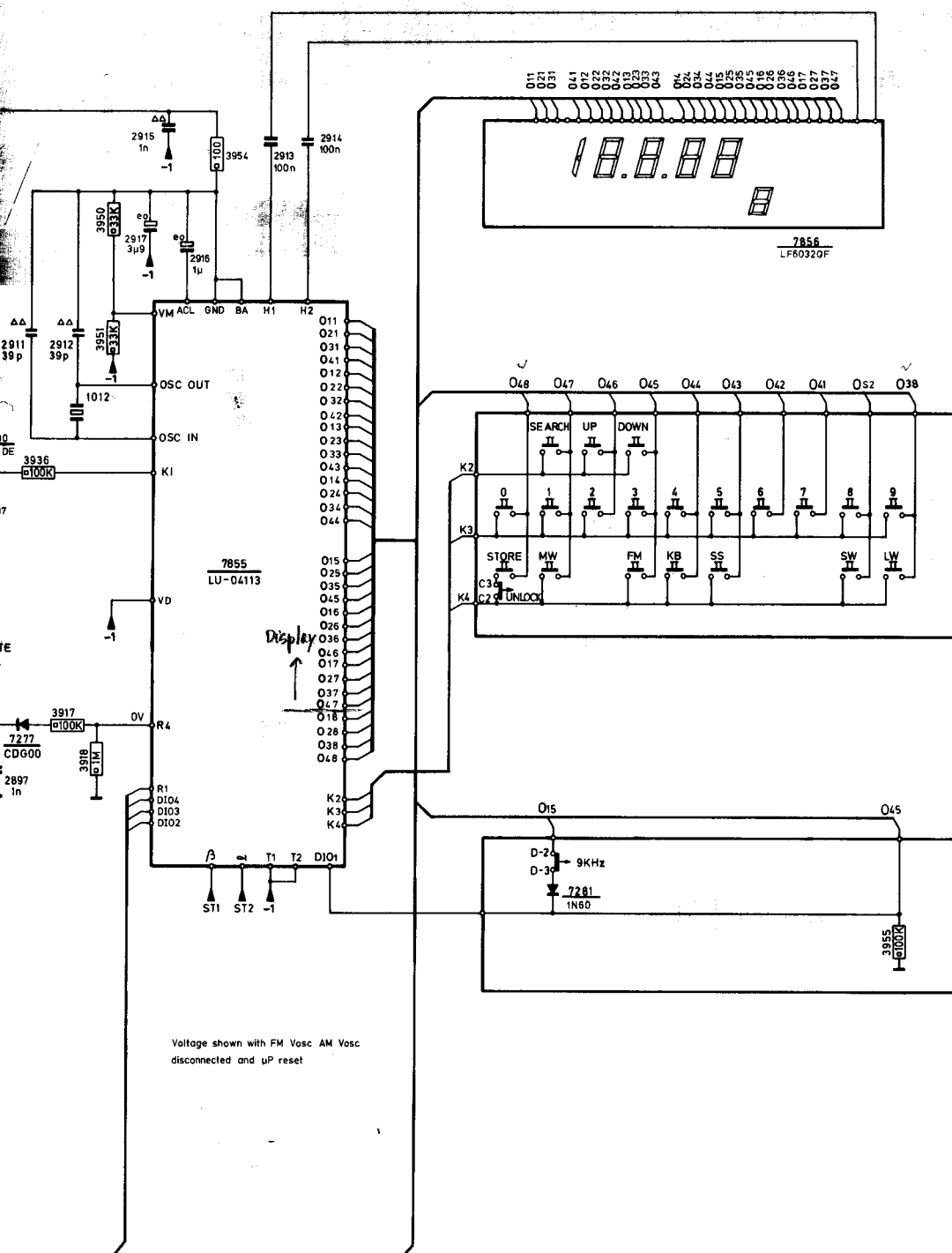
TEST TABLE

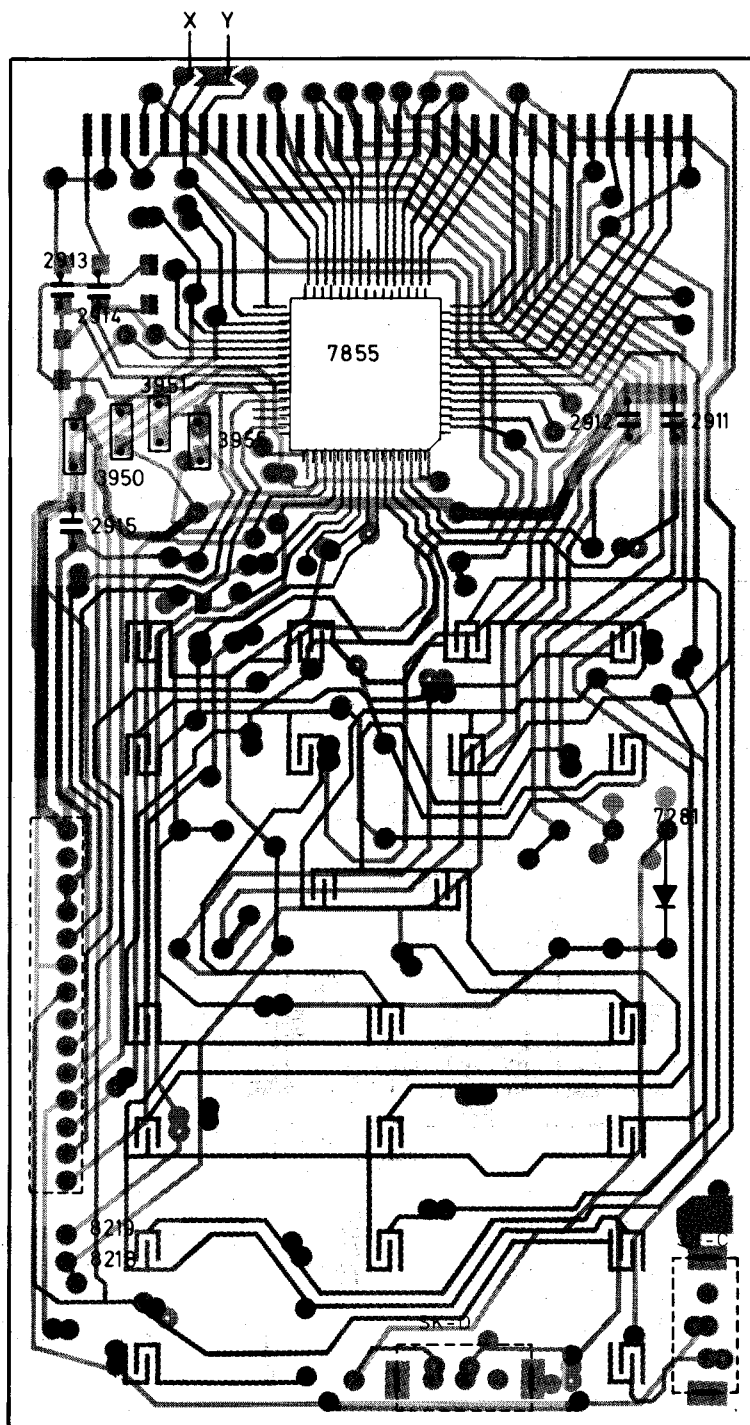
K1	K2	K3	K4	R1	R2	R3	R4	DIO1	DIO2	DIO3	DIO4	LCD PATTERN	
1	1	1	1	1	1	1	1	1	1	1	1	MW	kHz
				START POSITION								PRESET	
0	0	0	0	0	0	0	0	0	0	0	0	LW	10.0.0.0 MHz
												FM	0
												49M 41M 31M 25M 19M	
1	0	0	0	1	0	0	0	1	0	0	0	MW	1.1.1.1 kHz
												41M 31M	PRESET 1
0	1	0	0	0	1	0	0	0	1	0	0	SW	12222 MHz
												FM	STORE 2
												49M 31M 25M	
1	1	0	0	1	1	0	0	1	1	0	0	MW	13333 kHz
												SW	MHz
												FM	STORE 3
												41M 31M 25M	PRESET 3
0	0	1	0	0	0	1	0	0	0	1	0	LW	14444 MHz
												SW	STORE 4
												41M 31M 19M	
1	0	1	0	0	1	0	1	0	1	0	1	LW	15555 kHz
												MW	MHz
												SW	STORE 5
												FM	PRESET 5
												41M 25M 19M	
0	1	1	0	0	1	1	0	0	1	1	0	LW	16666 MHz
												SW	STORE 6
												FM	
												49M 41M 25M 19M	
1	1	1	0	1	1	1	0	1	1	1	0	LW	17777 kHz
												MW	
												FM	PRESET 7
												41M 31M 25M 19M	
0	0	0	1	0	0	0	1	0	0	0	1	LW	18888 MHz
												SW	STORE 8
												FM	
												49M 41M 31M 25M 19M	
1	0	0	1	1	0	0	1	1	0	0	1	LW	19999 kHz
												MW	
												SW	STORE 9
												FM	PRESET 9
												41M 31M 25M 19M	
0	1	0	1	0	1	0	1	0	1	0	1	BLANK	
1	1	0	1	1	1	0	1	1	1	0	1		
0	0	1	1	0	0	1	1	0	0	1	1		
1	0	1	1	1	0	1	1	1	0	1	1		
0	1	1	1	0	1	1	1	0	1	1	1		

27 777 C12

- To start: ① Power off
 ② All K-inputs to +8
 ③ Power on

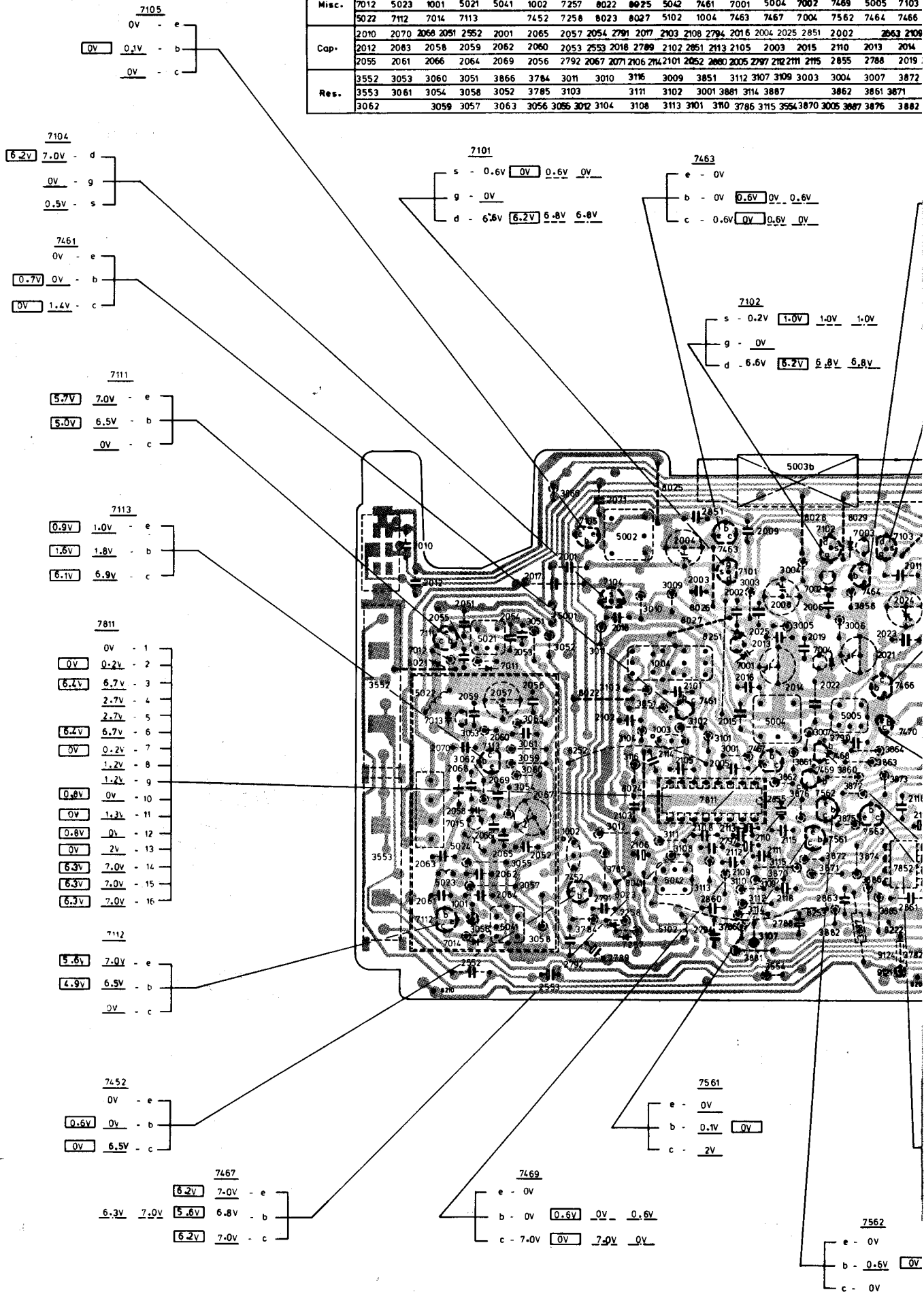
7277	1012	7855	7281	7856
2911	2912	2917	2916	
3936	3917	3950	3954	3955
3951				
3918				

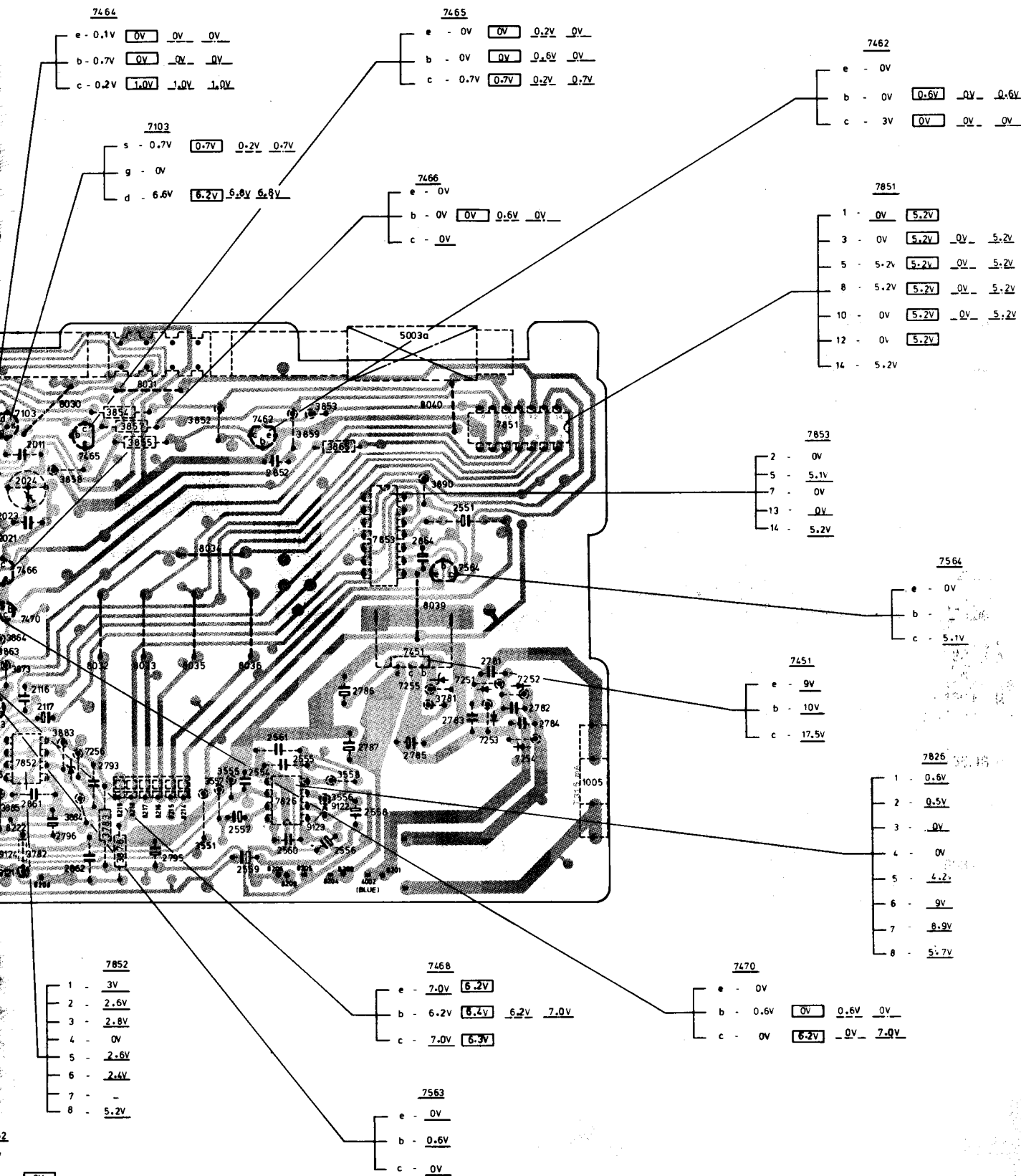




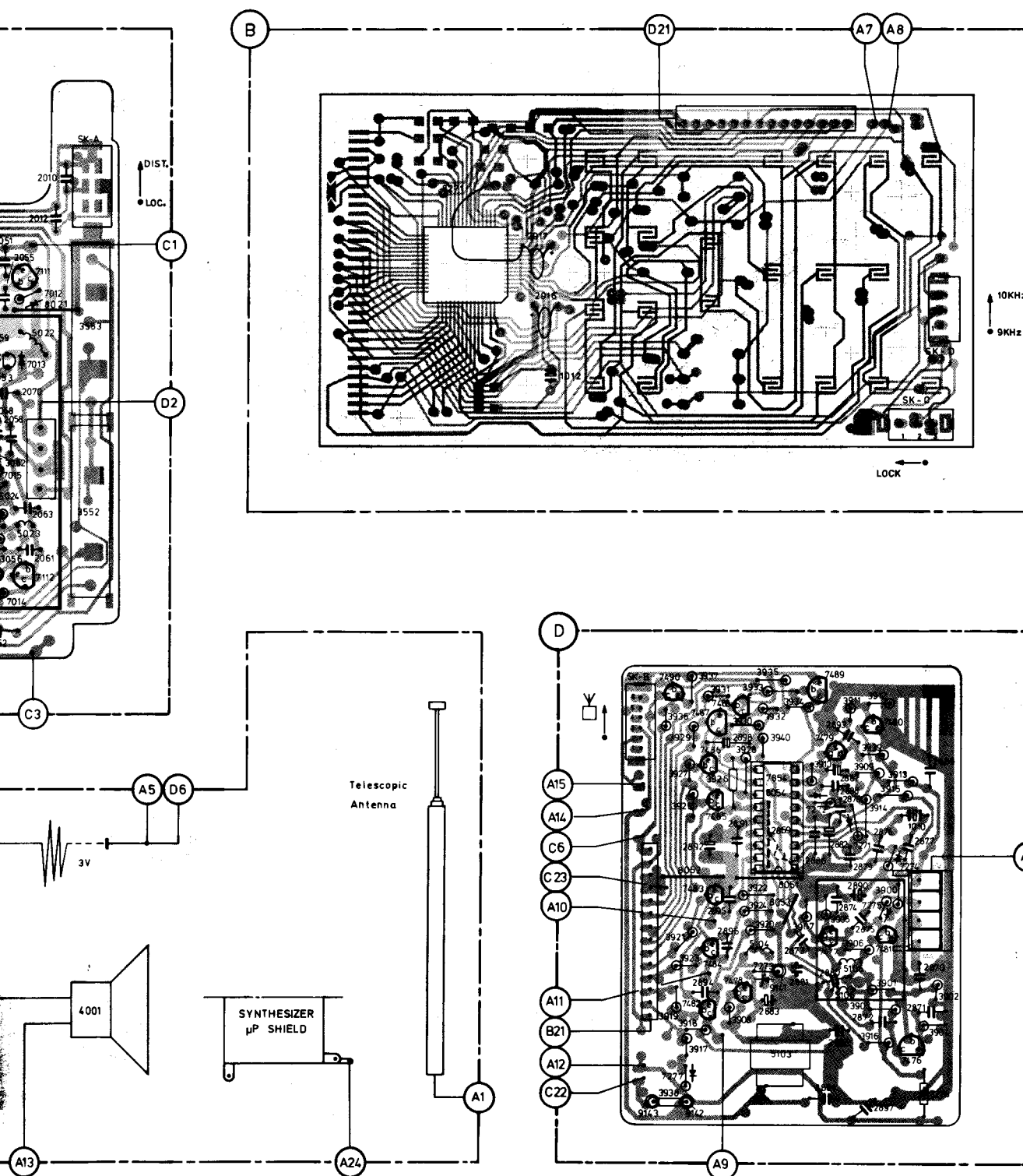
Misc		Cap		Res	
7489	7490			3935	3937
7488				3933	3931
7487				3912	3911
7480		2893	2913	3934	3932
7479		2898	2914	3930	3940
7486				3929	3936
		2889		3939	3928
8204	7855			3909	3910
7854	8054	2888	2887	3925	3927
7272	8205	2878	2911	3913	3951
			2912	3915	3954
7485	1010			3955	
				3914	3925
8301		2869		3950	
		2876	2891		
7271		2892			
			2915		
8051	8052	2877	2882		
7274		2879	2886		
7483	8053	2890	2874	3900	3922
7275		2875	2895	3924	3905
8216				3907	3920
5104		2896		3906	3921
7481	7477	2873		3923	
5106	7273	2870			
7484	8215	2880	2881	3901	3919
9141	7281	2894			
5105				3902	
7482	7478	2871	2883	3903	3908
		2872		3904	3918
		2885		3916	3917
8217					
7476	5103				
8214					
7277	8213				
7276		2884			
9142	9143	2897		3938	
8218	8219				
SK-C	SK-D				

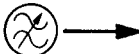
	8021	8210	8252	8024	8041	8026	8251	8253	8028	8029	9121	822
Misc.	7111	7013	5024	7015	7011	5001	7105	7104	5002	1003	7811	7101
	7012	5023	1001	5021	5041	1002	7257	8022	8025	5042	7461	7001
	5022	7112	7014	7113		7452	7258	8023	8027	5102	1004	7463
Cap.	2010	2070	2068	2051	2552	2001	2085	2057	2054	2791	2017	2103
	2012	2083	2058	2059	2082	2060	2053	2553	2018	2789	2102	2851
	2055	2061	2066	2064	2069	2056	2792	2067	2071	2106	2142	2101
Res.	3552	3053	3060	3051	3866	3784	3011	3010	3116	3009	3851	3112
	3553	3061	3054	3058	3052	3785	3103		3111	3102	3001	3881
	3062		3059	3057	3063	3056	3055	3012	3104	3108	3113	3101
												3110
												3786
												3115
												3554
												3870
												3005
												3887
												3876
												3882





024	5023	7111	7012	8271	1012	SK-B 7490 7482-7488 7273 7854 5103 7489 5106 7480 7276 SK-C
001	7015	5022	8021	SK-A		9143 7277 7478 8054 8053 7272 7271 7274 7476 SK-D
	7014	7013	7112	4001		9142 8052 9141 5104 8051 7479 7477 5105 7275 7481 1010
051	2070	2010			2916 2917	2892 2883 2885 2888 2882 2876 2889 2877
068	2055	2012				2896 2895 2887 2884 2893 2872 2870 2871
058	2552	2063				2894 2873 2869 2878 2885 2875 2897
059	2061					2898 2891 2881 2880 2874 2879 2890
053	3553					3936 3927 3931 3908 3933 3935 3905 3911 3912 3904 3902
062	3552					3919 3917 3918 3926 3920 3932 3907 3906 3916 3901 3903
096						3923 3927 3929 3922 3940 3910 3914 3939 3913
						3938 3921 3925 3928 3924 3930 3934 3909 3900 3915



*								
MW/PO (520-1605KHz)	468KHz	 via 39nF	8V		1004		max.	symm.
	512KHz		1V		5005		max.	
	1635KHz		8V		2021			
	600KHz				5003a			
	1400KHz				2008			
LW/GO (150-255KHz)	147KHz		1V		2024		max.	
	200KHz				5003b			
SW/OC (5.95-15.45MHz)	5.75MHz	 via 9pF	1V		5004		max.	
	15.95MHz		8V		2014			
	6.5MHz				5002			
	14.5MHz				2004			
FM (87.5-108MHz)	10.7MHz	 via 20nF	8V	5042	5041		max.	
					5042		 max.lin. + symm.	
	86.5MHz	 via 10nF +15 ohm	1V		5024		max.	
	109MHz		8V		5022			
					2067			
					2057			

↑ Repeat - Herhalen - Répéter - Wiederholen - Repetere - Ricominciare - Gentage - Gjentagelse - Toista

(GB)

1. Disconnect μP /synt. unit from radio p.c.b.
2. Connect to ground via 10 k Ω .
3. DC voltage 1-8 Volts (± 0.1 V) applied to
4. Band switching voltages as given in table.

(NL)

1. μP /synt. unit losnemen van radioprint.
2. verbinden met massa via 10 k Ω .
3. V... 1-8 V ($\pm 0,1$ V) toevoeren aan
4. Golfengte omschakelspanningen als in tabel.

(F)

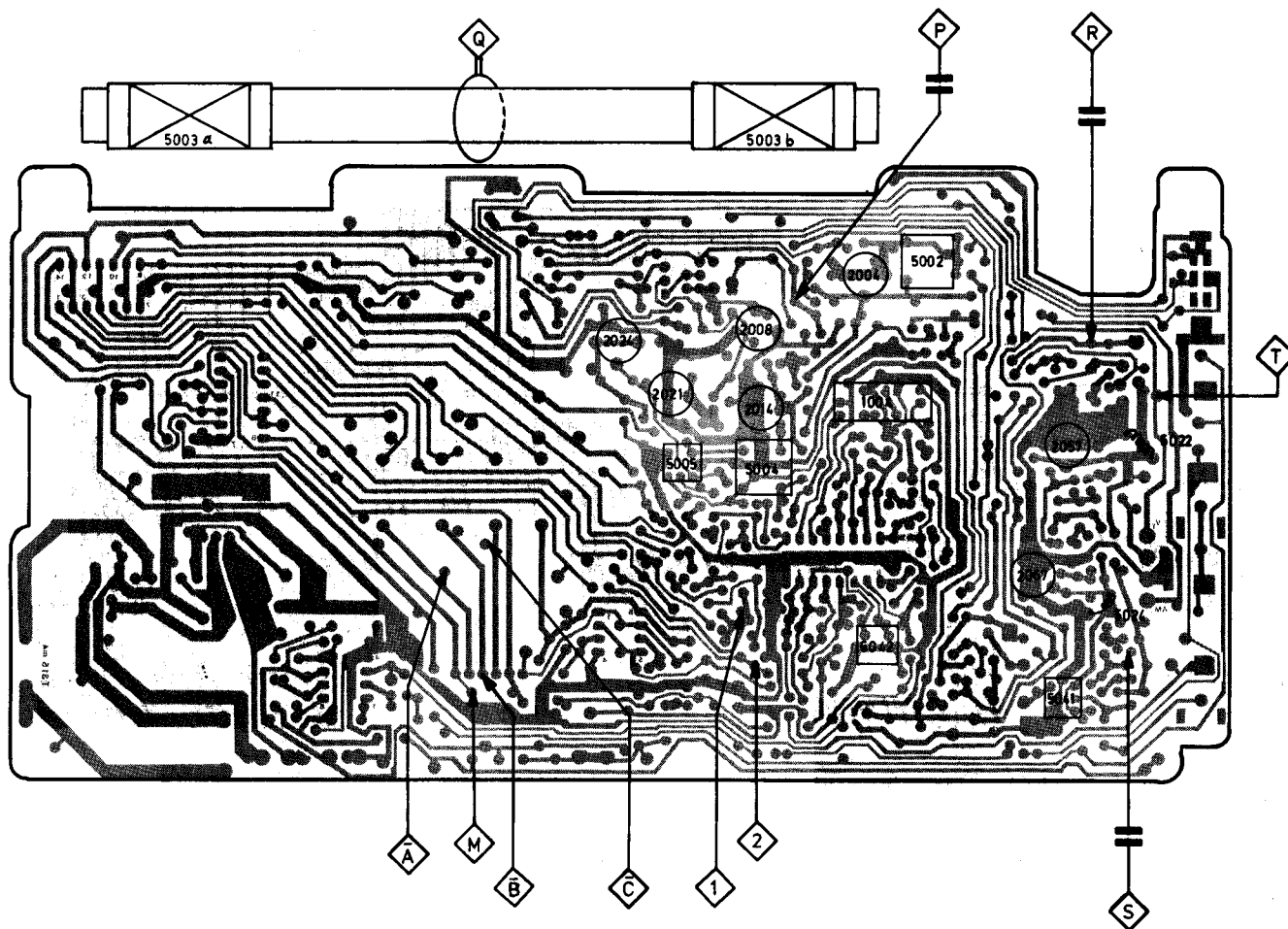
1. Détacher l'unité μP /synt. de la platine radio.
2. Relier à la masse à travers 10 k Ω .
3. Appliquer sur 1-8 V... ($\pm 0,1$ V).
4. Régler les tensions de commutation comme indiqué au tableau.

(D)

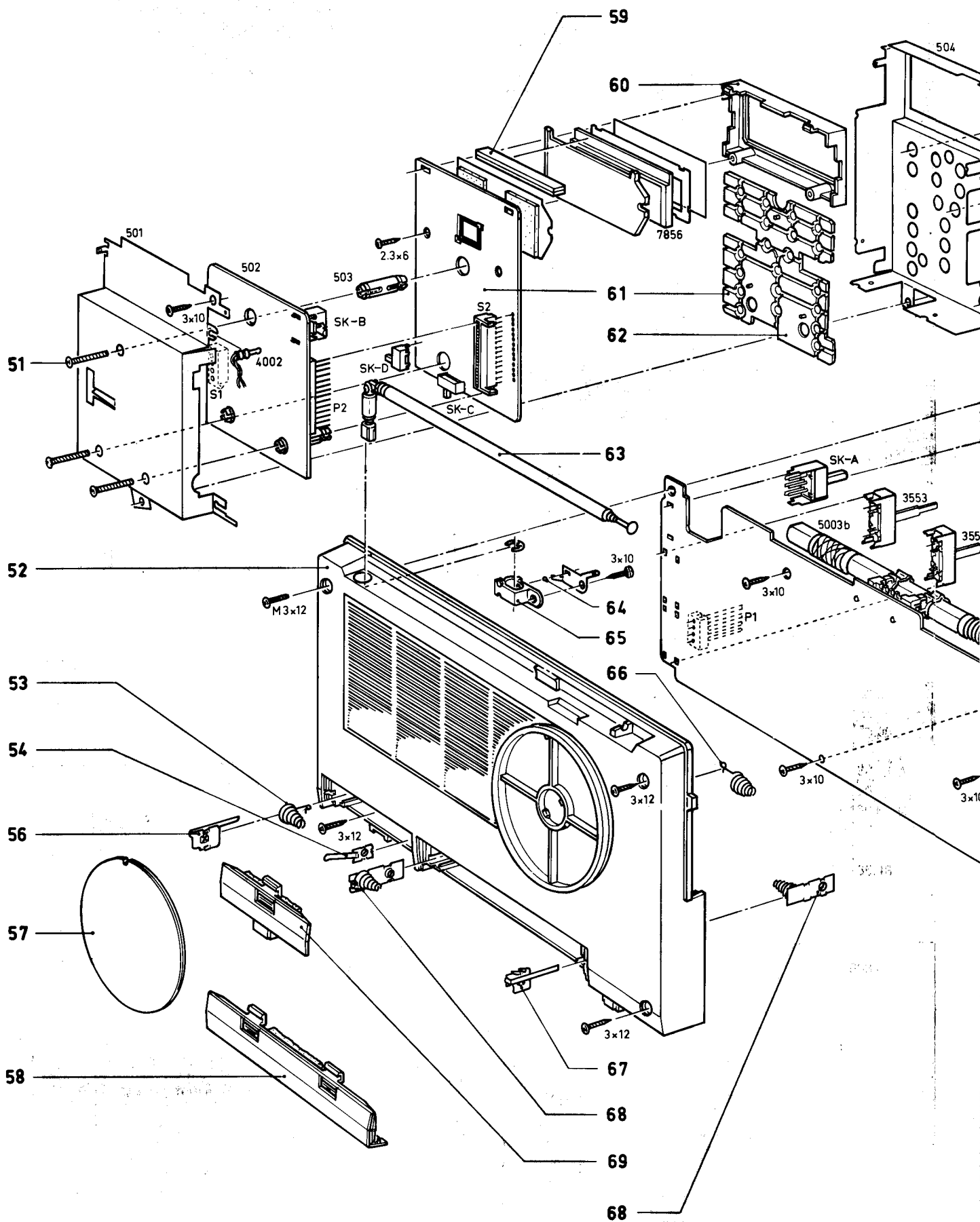
1. μP /synt. Einheit von Radio-Printplatte losmachen.
2. durch 10 k Ω an Masse anschliessen.
3. Gleichspannung 1-8 V ($\pm 0,1$ V) zuführen an
4. Bandschaltspannungen wie erwähnt in der Tabelle.

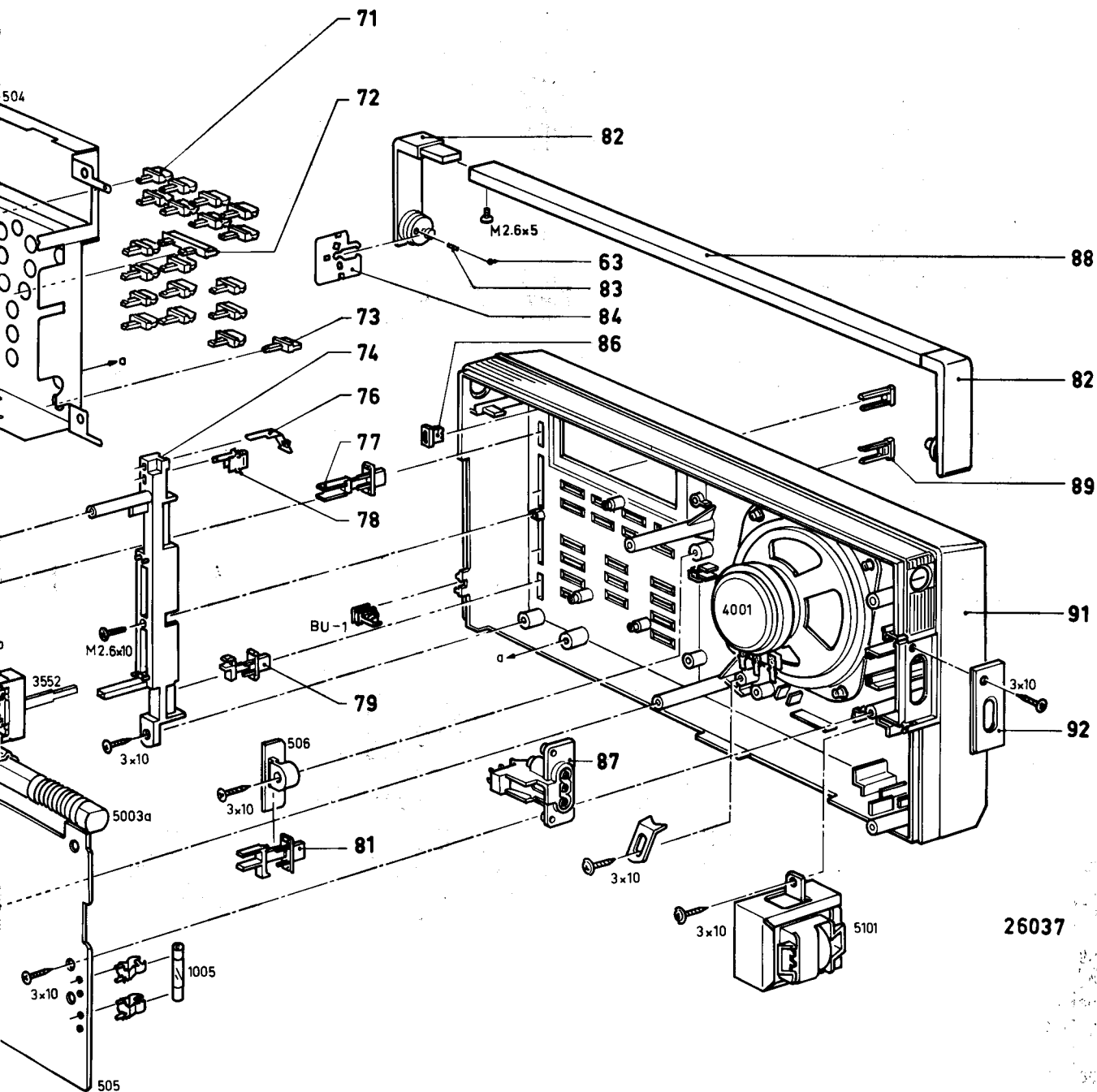
(I)

1. Staccare l'unità del μP /synt. dalla piastra.
2. Collegare a massa tramite una resistenza di 10 k Ω .
3. Applicare su di 1-8 V... ($\pm 0,1$ V).
4. Regolare le tensioni di commutazione come indicato alla tabella.



	$\bar{A}$	$\bar{B}$	$\bar{C}$	
LW/GO	0	0	0	± 0.1 volts
MW/PO	0	0	5	
SW/OC	0	5	5	
FM	5	5	5	





51	4822 502 11001	73	4822 410 22627
52	4822 423 40602	74	4822 404 10556
53	4822 492 62251	76	4822 492 62456
54	4822 290 80383	77	4822 410 22624
56	4822 290 80412	78	4822 290 80413
57	4822 460 10511	79	4822 273 80245
58	4822 423 40601	81	4822 410 22625
59	4822 267 40427	82	4822 498 50131
60	4822 466 70448	83	4822 492 51413
61	4822 214 50274	84	4822 290 80438
62	4822 290 80414	86	4822 410 22626
63	4822 303 30259	87	4822 267 40349
64	4822 520 20317	88	4822 498 40479
65	4822 403 51581	89	4822 413 31009
66	4822 492 51412	91	4822 423 50618
67	4822 290 80411	92	4822 290 80415
68	4822 290 80416		
69	4822 423 40599		
71	4822 410 22629		
72	4822 410 22628		

					
7811	TA7614AP-Y	4822 209 81005	7101,7103	2SK195E	4822 130 41717
7826	TBA820MS	4822 209 80708	7102	2SK195H	4822 130 41679
7851	MC14069BCP	4822 209 10033	7105,7461	} BC548C	4822 130 44196
7852	LM2903N	4822 209 81004	7466,7561		
7853	MC14016B	5322 209 14119	7111	BF324	4822 130 41448
7854	MN6147	4822 209 10189	7112	BF451	4822 130 41365
Miscellaneous			7113	ST1502D	4822 130 41359
			7451	MJE9400	4822 130 41018
7856	LCD display	4822 130 90086	Various	BC548B	4822 130 40927
	LF-6012 QF		7467,7468	BC558A	4822 130 40962
3552	μ P p.c.b. assy	4822 214 50274	7476,7477	ST 1502C	4822 130 41461
3553	Tone control	4822 105 10449	7478	BC338	4822 130 44121
4002	Volume control	4822 105 10445			
1001	Lamp 8 V 50 mA	4822 134 40474	2001	Cer. cap. 40 pF 5 %	4822 122 40176
1001	Ferrite ring	4822 526 10011	2002,2113	} Cer. cap. 100 nF 20 %	4822 122 31635
1002,1003	Cer. filter 10.7 MHz	4822 242 70418	2789,2884		
1004	Cer. filter 468 kHz	4822 242 70306	2004,2008	} Trimmer 20 pF	4822 125 50045
1005	Fuse 315 mA	4822 253 30014	2021,2057,		
1010	Crystal 4.5 MHz	4822 242 70417	2067	} Cer. cap. 130 pF 5 %	4822 122 31634
1012	Crystal 32.768 MHz	4822 242 70416	2011		
SK-A	Local/distance	4822 277 20245	2013,2053	Cer. cap. 20 pF 5 %	4822 122 31226
SK-B	On/off	4822 277 20725	2015	Cer. cap. 5.6 pF 1 %	4822 121 50543
SK-C	Store/Lock	4822 277 20724	2016	Cer. cap. 30 pF 5 %	4822 122 40099
SK-D	9/10 kHz	4822 277 20724	2022	Coil cap. 470 pF 1 %	5322 121 54078
BU-1	Earphone socket	4822 267 30252	2023	Foil cap. 390 pF 1 %	5322 121 54128
P1	Connector (male)	4822 267 40423	2024	Trimmer 40 pF	4822 125 50092
P2	Connector (male)	4822 267 40425	2058	Cer. cap. 3.9 pF $\pm$ 1/4 pF	4822 122 31043
S1	Connector (female)	4822 267 40424	2068	Cer. cap. 3 pF $\pm$ 1/4 pF	4822 122 31223
S2	Connector (female)	4822 267 40426	2552	Foil cap. 47 nF 10 %	4822 121 40239
			2555,2561,	} Cer. cap. 100 nF 20 %	4822 122 30108
4001	Loudspeaker 16 Ω	4822 240 30206	2793,2861,		
5001,5023,	Ferrite ind. 0.7 μ H	4822 157 50791	2863	} Electr. cap. 330 μ F	4822 124 40374
5105			2789		
5002	SW-ANT coil	4822 156 40671	2797,2917	Tant. cap. 3.9 μ F	4822 124 10305
5003	MW/LW ANT. coil	4822 158 60473	2885	Tant. cap. 470 μ F	4822 124 40323
5004	SW/OSC coil		2887,2916	Tant. cap. 1 μ F	4822 124 10306
5005	AM-OSC coil	4822 157 51325	2893	Cer. cap. 47 nF 20 %	4822 122 40114
5041	IF-FM (orange)	4822 156 30694			
5042	IF-FM (blue)	4822 156 30695			
5101	Mains transformer	4822 145 30252			
5102	Bias filter coil 33 mH	4822 156 90031			
5103	Coil assy 27 mH	4822 157 51327			
5104	Ferrite ind. 560 μ H	4822 157 51326			
5106	Coil 0.22 μ H $\pm$ 20 %	4822 158 10471			
					
7001	BB212	4822 130 31129			
7002/7003	SVC321SP-C3/D3	4822 130 31542			
7004					
7011,7012,	} BA216	4822 130 30702			
7014,7257,					
7258,7274,					
7275,7276,					
7277					
7251-7252	1N4001	4822 130 30829			
7255	BZX79-B10	4822 130 34297			
7256	BZX79-B5V1	4822 130 34233			
7271,7272	2-AA119	4822 130 30312			
7273	BZX79-B5V6	4822 130 34173			
7281	1N60	4822 130 31012			