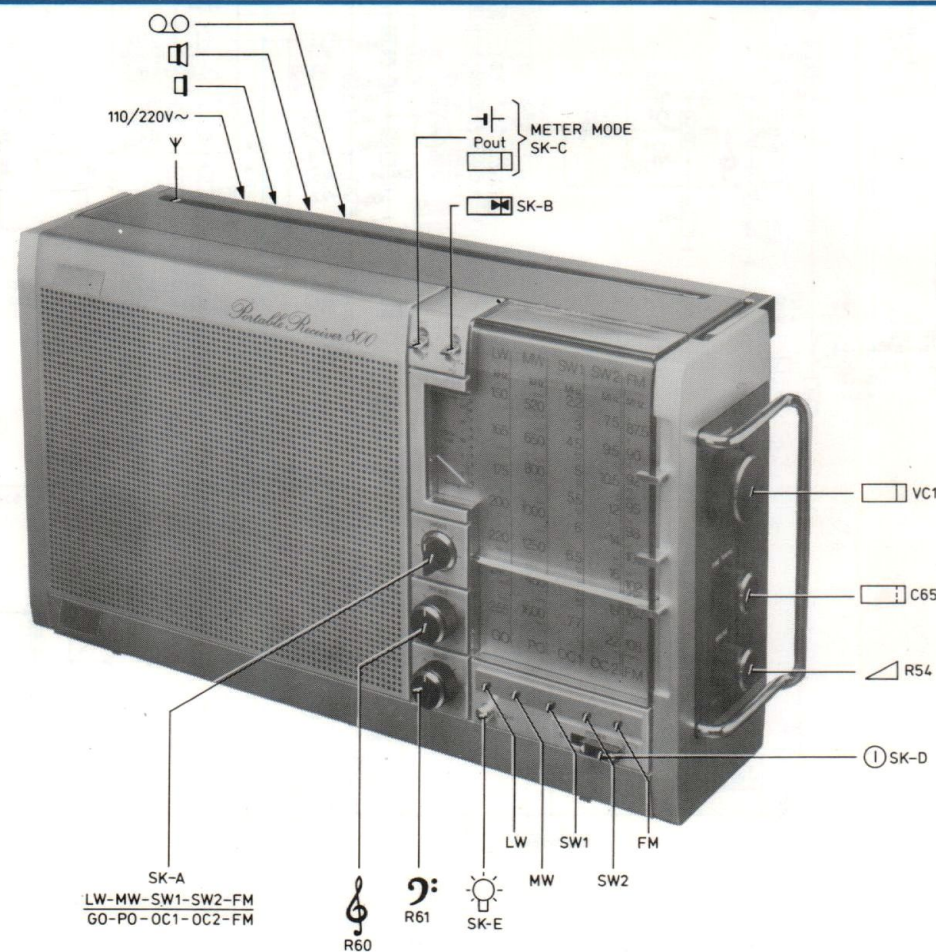


Service
Service
Service

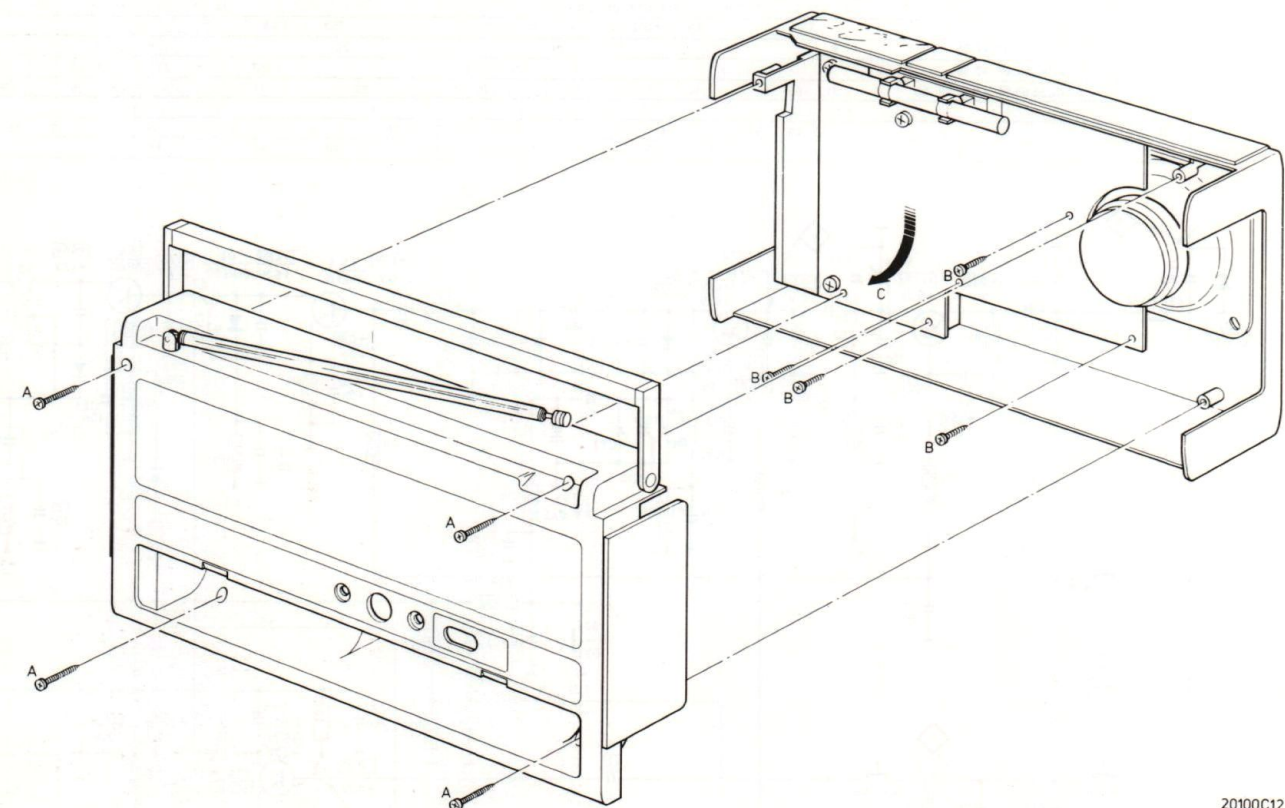
Service Manual



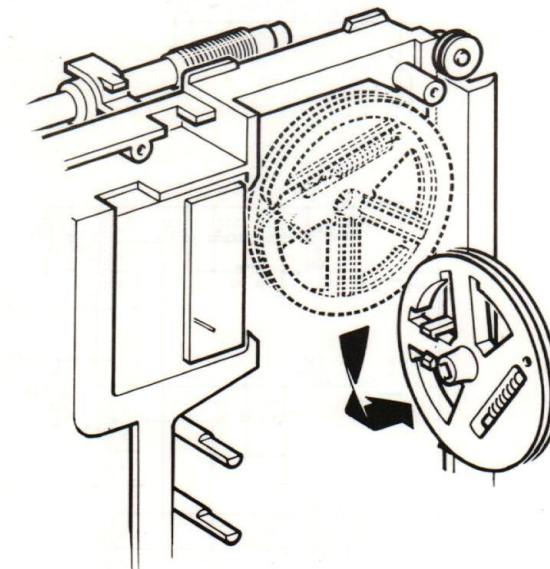
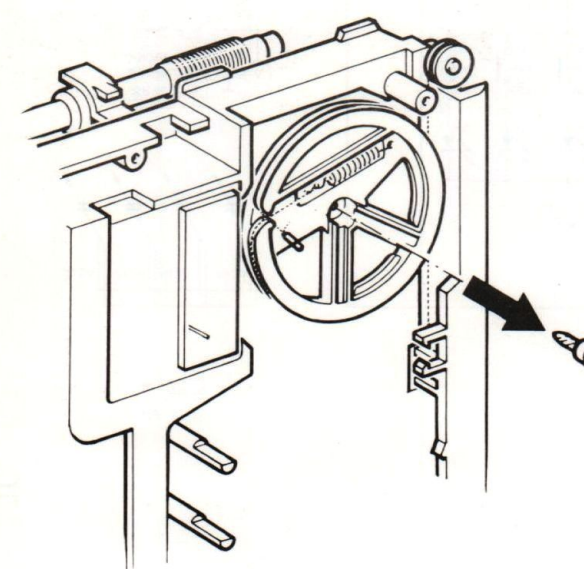
LW/GO: 150 - 255 kHz (2000 - 1177 m)
MW/PO: 520 - 1605 kHz (577 - 187 m)
SW1/OC1: 2.3 - 7.3 MHz (120 - 41 m)
SW2/OC2: 9.5 - 21.8 MHz (31 - 13 m)
FM/00/15/28/40/51: 87.5 - 104 MHz
FM/01: 87.5 - 108 MHz

IF/F1 - AM/00/15/28/40/51: 468 kHz
IF/F1 - AM/01: 455 kHz
IF/F1 - FM: 10.7 MHz
SUPPLY/SECTEUR: 110/220V~60Hz
: 9V (6xR20)
OUTPUT/SORTIE: 2W ± 1dB (d=10%) ~
1.5W ± 1dB (d=10%)

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20100C12

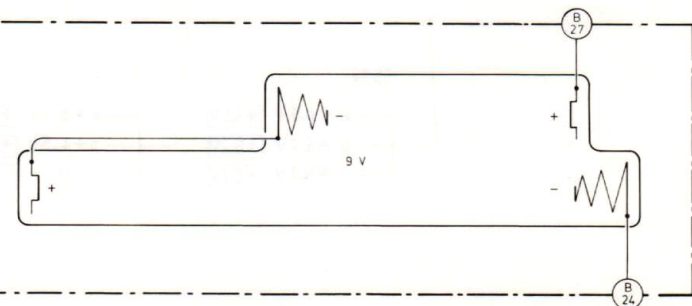
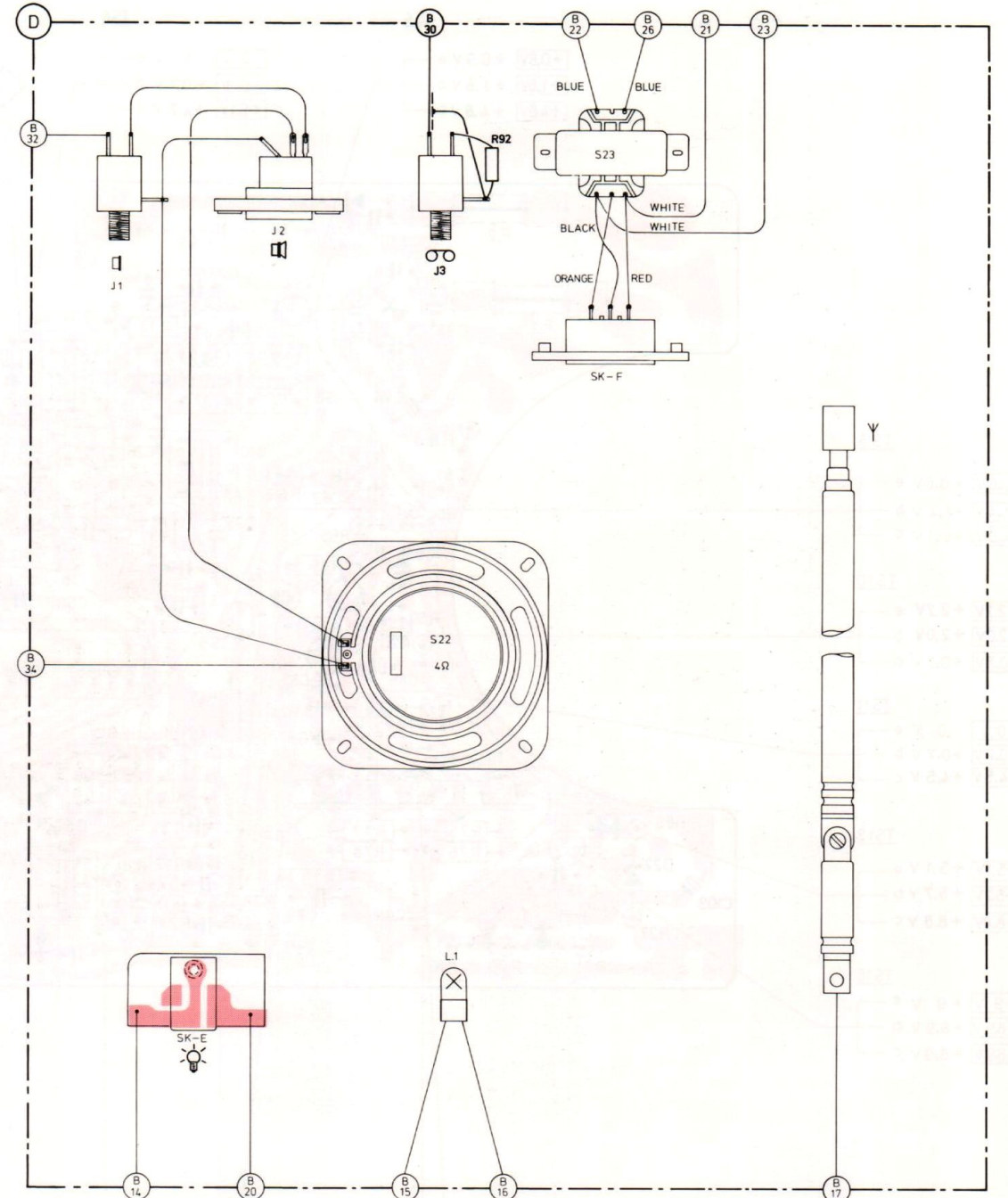
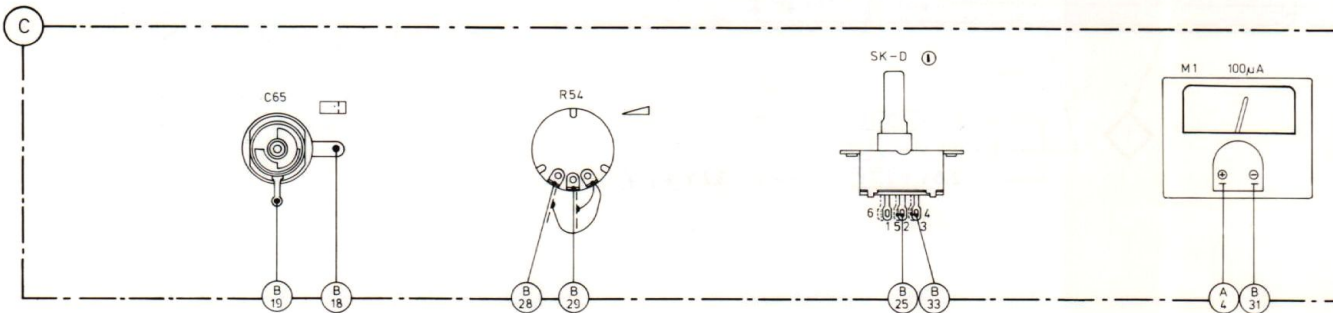
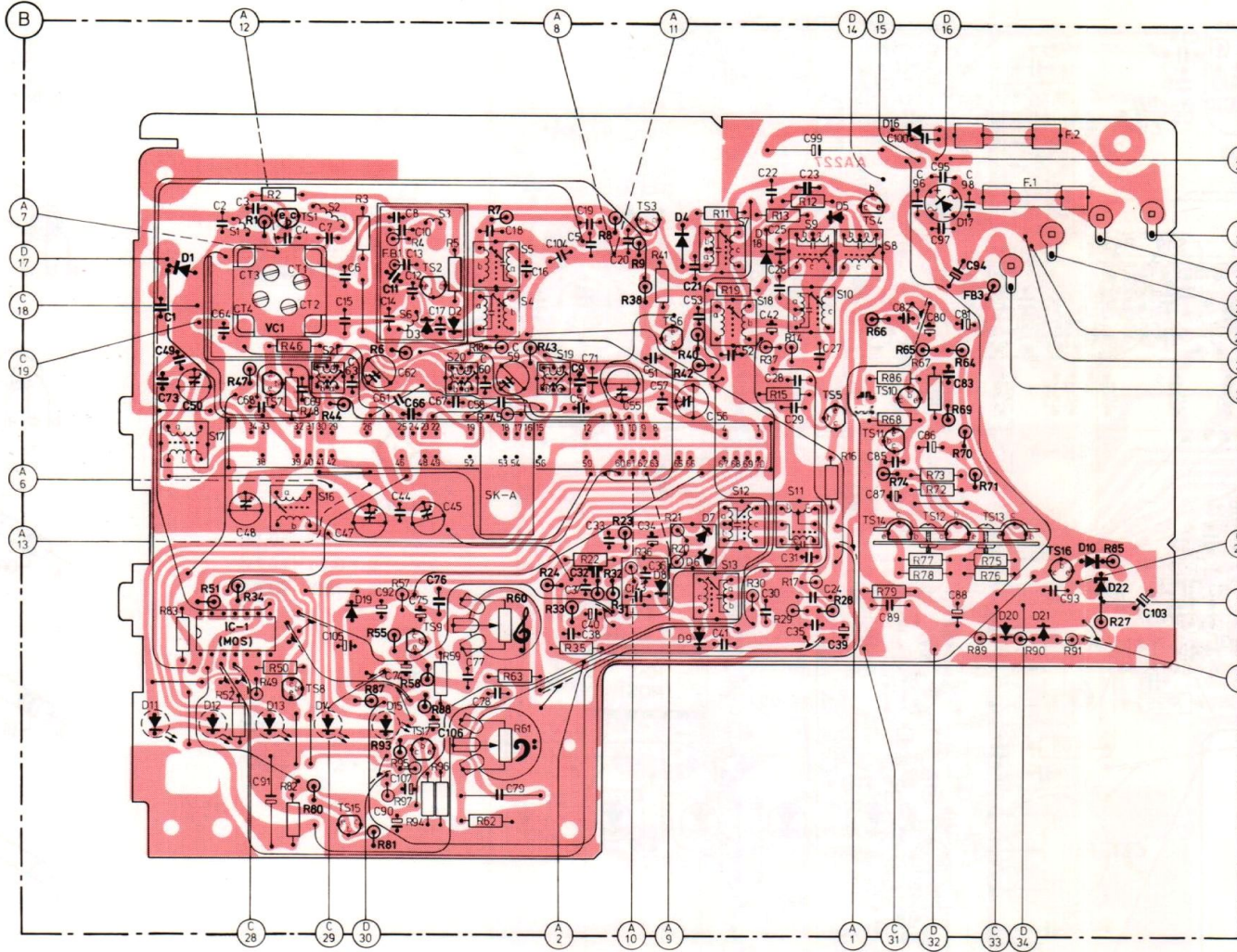
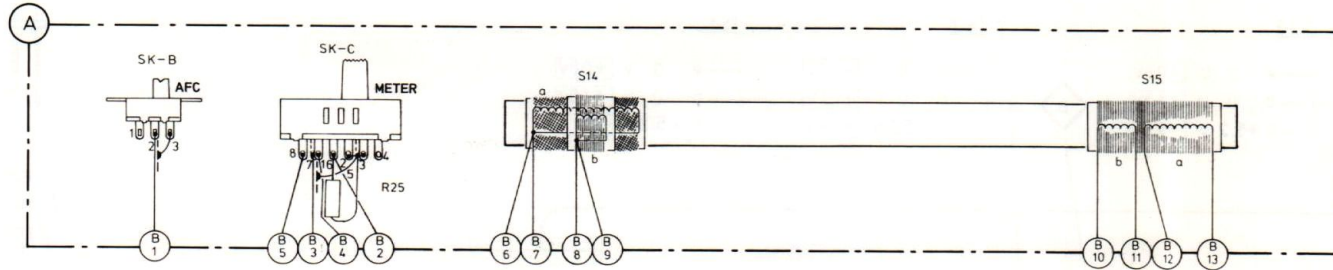


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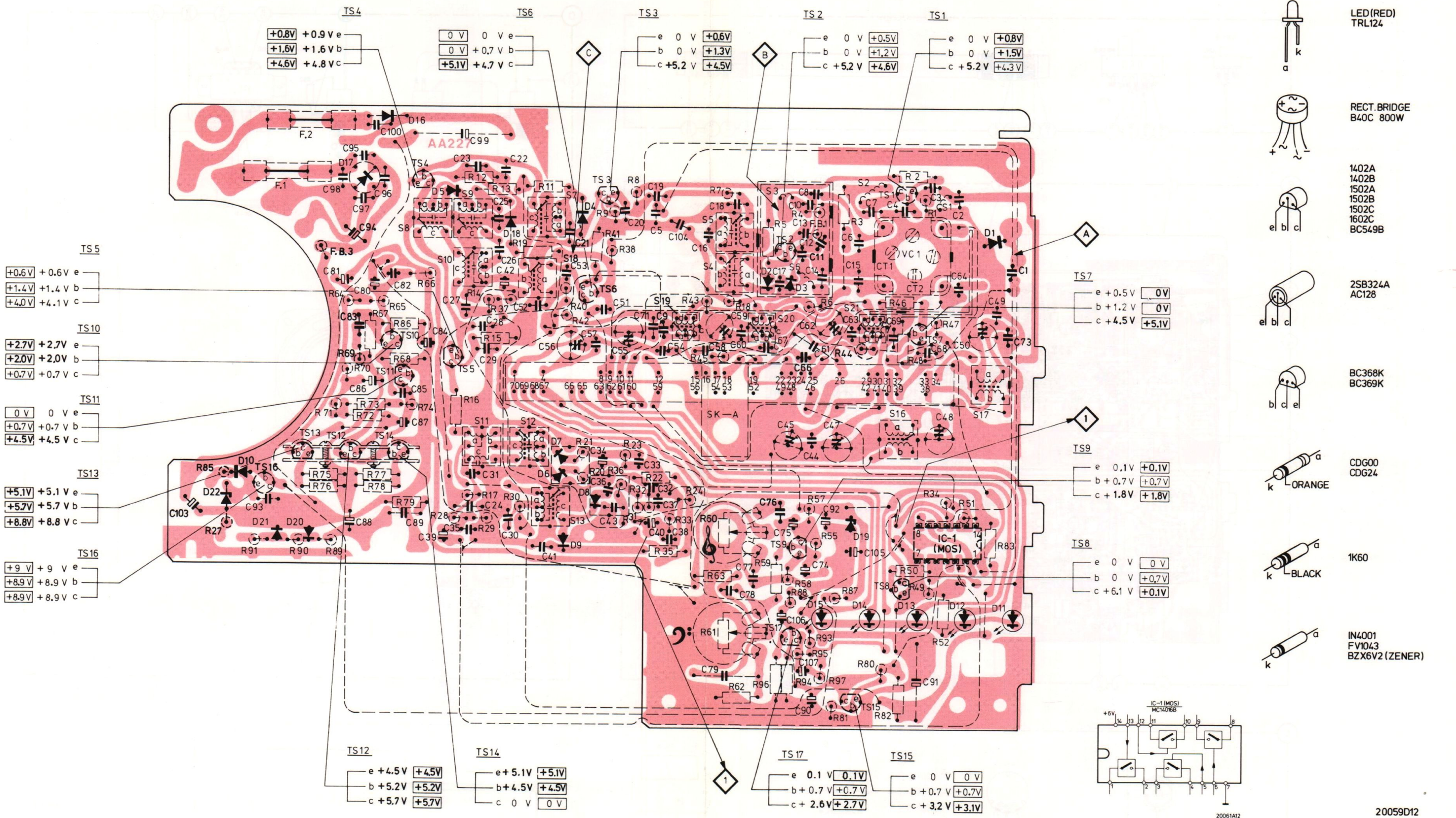




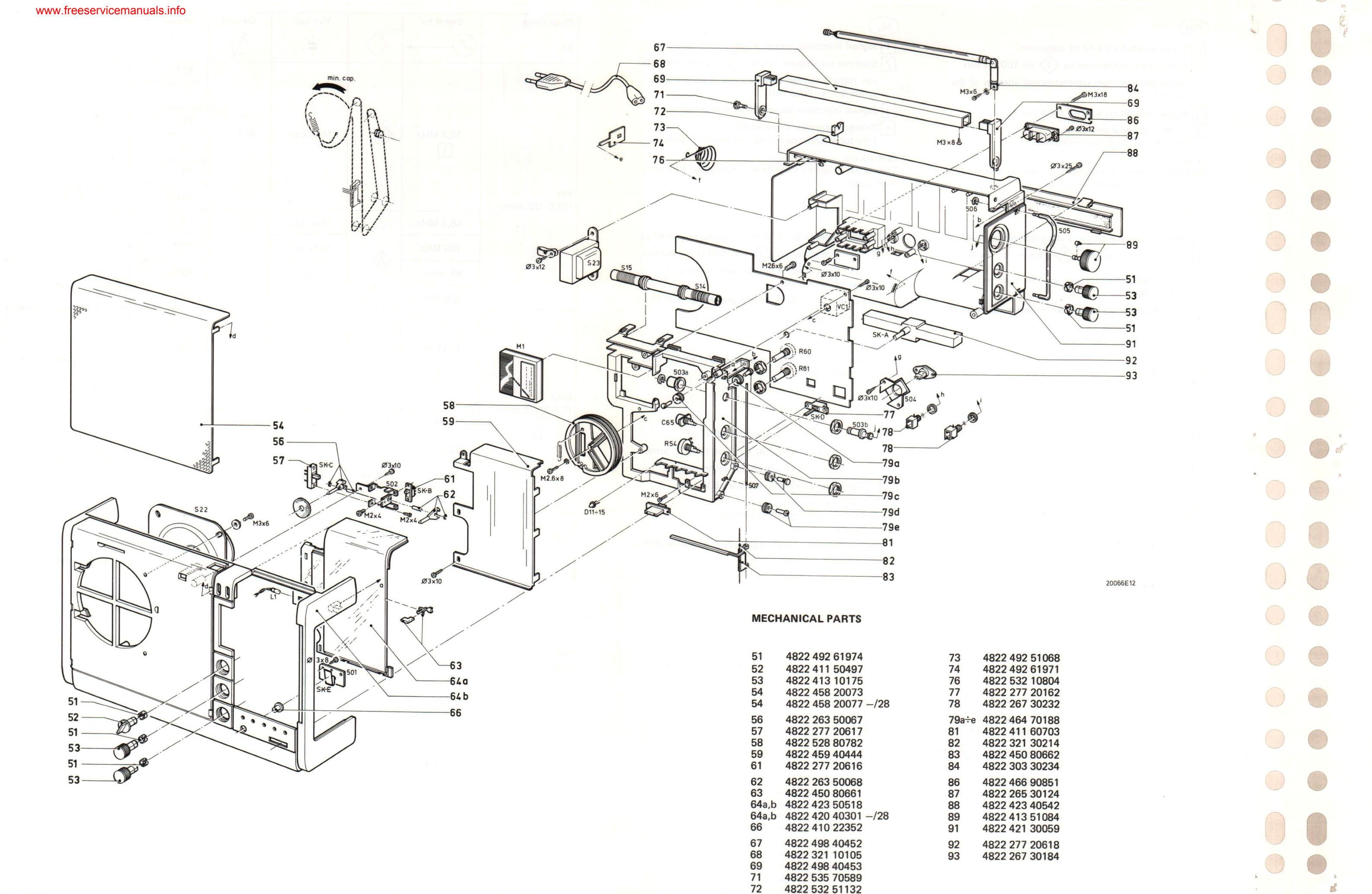
MISC	SK-B																SK-C																SK-D																SK-E																SK-F																																															
	D1 S17 S1 TS1 S16 S21 D19				TS9 TS2 D2 S4 S19				D8 D4 D7 S13 S12 S10 TS5 TS11 TS10 TS12				F.1 TS13 TS16				J1				J2				J3				S23																																																																																			
	D11 C1 D12 TS7 D13 TS8 D14				TS15 D15 TS17 D3 S20 SK-A				TS6 D9 D6				S11 SK-D TS14				D10 D20 D21 D22 M1				SK-E				S22				SK-F																																																																																			
C	49																1 2 3																7 6 14 62 8 10 45 17 18 59 16 54 19 71 55 51 21 52 22 25 99 23 27 85 100																95 83 98																SK-E																L1																															
	50																64 48 68 4																66 15 47 61 11 13 12 75 76 67 60 58 104 38 37 32 36 34 53																42 26 28 31 24 84 87 96 80 97 88 94																																																															
	73																65 91																69 105 63 92 44 90 74 107 106 77 78 79 20 5 40 33 43 57 56 41 30 29 35 39 89 82 86 81																93																103																																															
R	83 34 47 2 45																6 4 44 7 58 59 5 60 18 43 24 22 8 23 9 41																11 13 12																66 65 67																75																																															
	51 52 49 1 48																3 97 55 57 88 96																61 45 63 33 32 31 38 21 40 19 37 14 17 16																74 86 77 73 64 70 76																27 85																92																															
	50 82 80																87 81																93 95 94 62 54 35																36 39 20 42 30 15 29 28																79 68 78 72 69 71 89 90 91																																															



MISC	D10		TS16	TS13 F.B.3		TS12 D17	TS10	TS11 S8	TS5 S9		S12 S7				S13 D6	TS6		SK-A		S4	D2	TS2	TS9 S6	D15	TS15 S2	D14	TS1 D13	S1 D12	D1	D11	MISC
	D22	F.1	F.2	D21	D20	D16 TS14		TS4	D5	S10 S11	D18	S18	D9	D7	D4	D8	TS3	S19	S5	S20	S3	D3	TS17 F.B.1	D19 S21	S16	TS8	TS7	IC-1	S17		
C	103	93			98 94 97 83 86 96 87 89				84	27 24 23 29 26 42				41	53	34	43 55 33 54 0 37 104		58 79 59 18 77 76 45 74 12 13 44 10 78 14 47 63 6 66		69 3		48	64	49	73	C				
					81 88 95 80				100	82 85	39	35 99 31 28 25 22 30		52	56	21	57 51 36 20 32 19 71 54 38		9	16	78	60	67 106 17 75 90 101 119 2 61 62 103 5 7		4	91		68	2	50	1
R	27		90		75 71 70 73 77 65 68 79				66	28	12 14 37		19	42	21	38 9 23 8 32 35		24	63 60 18 62		5 96 94 58 95 65 55 7 81 87 44		46	48 1 49		52	34	51	R		
	85		91		76 89 64 69 72 67 78				86	74	16 17 29 15 13 30		11	40	20	41	36 31 22 33		43 45 7 61		59 88		4	93	3	97	80 82 2 50 47 54			83	



- LED (RED) TRL124
- RECT. BRIDGE B40C 800W
- 1402A 1402B 1502A 1502B 1502C 1602C BC549B
- 2SB324A AC128
- BC368K BC369K
- CDG00 CDG24 ORANGE
- 1K60 BLACK
- IN4001 FV1043 BZX6V2 (ZENER)



MECHANICAL PARTS

51	4822 492 61974	73	4822 492 51068
52	4822 411 50497	74	4822 492 61971
53	4822 413 10175	76	4822 532 10804
54	4822 458 20073	77	4822 277 20162
54	4822 458 20077 -/28	78	4822 267 30232
56	4822 263 50067	79a-e	4822 464 70188
57	4822 277 20617	81	4822 411 60703
58	4822 528 80782	82	4822 321 30214
59	4822 459 40444	83	4822 450 80662
61	4822 277 20616	84	4822 303 30234
62	4822 263 50068	86	4822 466 90851
63	4822 450 80661	87	4822 265 30124
64a,b	4822 423 50518	88	4822 423 40542
64a,b	4822 420 40301 -/28	89	4822 413 51084
66	4822 410 22352	91	4822 421 30059
67	4822 498 40452	92	4822 277 20618
68	4822 321 10105	93	4822 267 30184
69	4822 498 40453		
71	4822 535 70589		
72	4822 532 51132		

ELECTRICAL PARTS

-TS-			-C-		
1	1502A	4822 130 40947	1	Cer. cap. 35 pF ± 5 %	4822 122 31286
2,4,5,7	1502C	4822 130 44195	2,11,49	Cer. cap. 40 pF ± 5 %	4822 122 31288
3,6	1502B	4822 130 40947	8, 12	Cer. cap. 3 pF ± ¼ pF	4822 122 31223
8,11,12,15	1402B	4822 130 40948	17	Temp. cap. 6 pF ± ¼ pF	4822 122 31224
9	BC549B	4822 130 40936	18,22,28	Cer. cap. 200 pF ±20%	4822 121 50532
10	1602C	4822 130 44196	24,89	Cer. cap. 100 nF ±20%	4822 122 30108
13,14	BC368K/BC369K (pair)	4822 130 41079	45, 47,56	Trimmer 20 pF	4822 125 50045
16	2SB324 (AC128)	5322 130 40095	48,50,55,59	Trimmer 5 pF	4822 125 50077
17	1402C	4822 130 40937	60	Temp.cap. 10 pF ±5%	4822 122 31054
			62	Trimmer 10 pF	4822 125 50062
			64	Cer.cap. 4 pF ± ¼ pF	4822 122 31043
			65	Fine-tuner	4822 125 20235
			VC-1	Varco 335 pFx2/ 20 pFx2	4822 125 50109
-D-			-R-		
1,2,4,5,8	CDG00 (BA216)	4822 130 30702	54	Volume potm. 100 kA	4822 101 20467
3	FV1043	4822 130 30845	60,61	Tone control potm. 100 kA	4822 101 30387
6,7,9,18,20	1 K 60 p (2-AA119)	4822 130 30312			
11÷15	LED TLR124 (Red)	4822 130 31162			
16	IN4001 (BY188B)	4822 130 30829			
17	B40C800W (Rect. bridge)	4822 130 50321			
19	BZXC6V2	4822 130 34167			
21	CDG24 (BA216)	4822 130 30702			
-IC-			-Miscellaneous-		
IC1	MC14016B (Mas)	5322 209 14119	M1	Meter 100 µA 1K2	4822 346 10086
			L1	Dial lamp 6 V 80 mA	4822 134 40412
			F1	Fuse 500 mA slow	4822 253 30017
			F2	Fuse 100 mA slow	4822 253 30006
				Ferrite-bar 10x140mm	4822 526 10122
-S-					
4,5	FM 1st. IF coil	4822 153 50197			
7,8	FM 3rd. IF coil	4822 153 50198			
9,10	AM 2nd. IF coil	4822 156 40672			
11	FM ratio det. (prim.)	4822 153 10237			
12	FM ratio det. (sec.)	4822 156 30442			
13	AM det. coil	4822 153 10232			
14	LW ant. coil	4822 158 10487			
15	MW ant. coil	4822 158 10486			
16	SW1 - RF coil	4822 156 30515			
17	SW2 - RF coil	4822 157 50951			
18	AM 1st. IF coil	4822 156 40615			
19	MW/LW osc. coil	4822 156 30726			
20	SW1 osc. coil	4822 157 51107			
21	SW2 osc. coil	4822 157 51108			
22	Speaker 4 Ω - 2 W	4822 240 30113			
23	Mains transformer	4822 145 30218			

(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.

GB

- 1 Signal injected via a 47 pF capacitor.
- 2 Connect an oscilloscope to ① via 100 kΩ and adjust for maximum symmetry and linearity of the S-curve.
- 3 Signal injected via a 10 nF capacitor.
- 4 Telescopic aerial pushed in.
Fine-tuner C65 at centre position.

Note:

During the alignment procedure, the volume-control R54 should be set in position minimum.

F

- 1 Injecter un signal à travers un condensateur de 47 pF.
- 2 Relier un oscilloscope à ① à travers une résistance de 100 kΩ.
Ajuster la courbe en S pour un maximum symétrie et linéarité.
- 3 Injecter un signal à travers un condensateur de 10 nF.
- 4 Enfoncer l'antenne télescopique et positionner le régleur fin C65 au centre.

Nota:

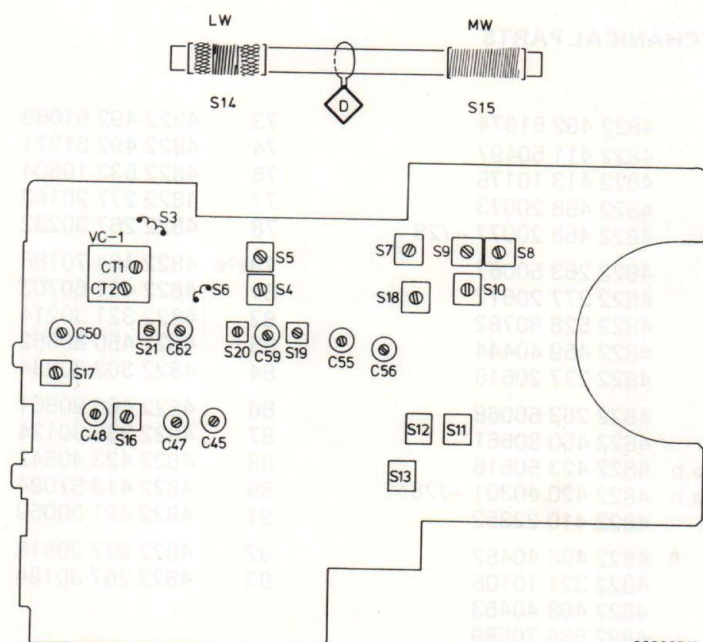
Pendant la procédure d'alignement, régler la commande de volume R54 au minimum.

I

- 1 Iniettore un segnale attraverso un condensatore di 47 pF.
- 2 Collegare un oscilloscopio su di ① attraverso 100 kΩ e regolare la curva ad "S" per simmetria e linearità massima.
- 3 Iniettore un segnale attraverso un condensatore di 10 nF.
- 4 Springere l'antenna telescopica.
Regolare il controllo fine C65 in posizione media.

Nota:

Durante la procedura di allineamento il comando di volume R54 essere deve al minimo.



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NL

- 1 Signaal injecteren via een 47 pF condensator.
- 2 Sluit een oscillograaf aan op ① via een weerstand van 100 kΩ en regel de S-kromme af op maximale symmetrie en lineariteit.
- 3 Signaal injecteren via een 10 nF condensator.
- 4 Teleskoopantenne ingeschoven.
Fine-tuner C65 moet in de middenstand staan.

Opmerking:

Tijdens het afregelen moet de volumeregelaar R54 minimaal staan.

D

- 1 Signal injizieren durch einen Kondensator von 47 pF.
- 2 Ein Oszillographen an ① via 100 kΩ anschliessen und die S-kurve auf maximale Symmetrie und Linearität abgleichen.
- 3 Signal injizieren durch einen Kondensator von 10 nF.
- 4 Die Teleskopantenne einschieben und den Feinabstimmregler C65 in Mittelstellung setzen.

Anmerkung:

Beim Abgleichen muss der Lautstärkeregler R54 in dem Minimumstand stehen.

S

- 1 Tillför signal via en kondensator på 47 pF.
- 2 Anslutt ett oscilloskop till ① via 100 kΩ, justera S-kurvan till max. linearitet och symmetri.
- 3 Tillför signal via en kondensator på 10 nF.
- 4 Skjut in teleskopantennen.
Ställ fininställningen C65 i mittläge.

Märk:

Under inställningsprocessen skall volymkontrollen R54 stå i läge minimum.

Wave range	Signal to		Var. cap.	Detune	Adjust	Indication
SK ...						
FM (87,5-108 MHz)	10.7 MHz ①	B	Max. cap.	S12	S11	① sym.
					S8	
					S7	
					S5	
					S4	
	86,5 MHz 109 MHz 88 MHz 106 MHz	A	via 15 Ω	Tune-in	S12	① ②
					S6	① max.
					CT2	
					S2	
					CT1	
SW2 (9.5-21.75 MHz)	468 kHz ③	C	Max. cap.		S18	① max. + sym.
					S13	
					S10	
					S9	
SW1 (2.3-7.3 MHz)	9.3 MHz 22.2 MHz 10 MHz 21 MHz	A	via 10 pF	Tune-in	S21	① max.
					C62	
					S17	
					C50	
MW (520-1605 kHz)	2.25 MHz 7.45 MHz 2.5 MHz 7.2 MHz	A	via 10 pF	Tune-in	S20	① max.
					C59	
					S16	
					C48	
LW (150-255 kHz)	512 kHz 1635 kHz 550 kHz 1500 kHz	D	Tune-in		S19	① max.
					C55	
					S15	
					C47	
	147 kHz 255 kHz		Tune-in		C56	① max.
					S14	
					C45	

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