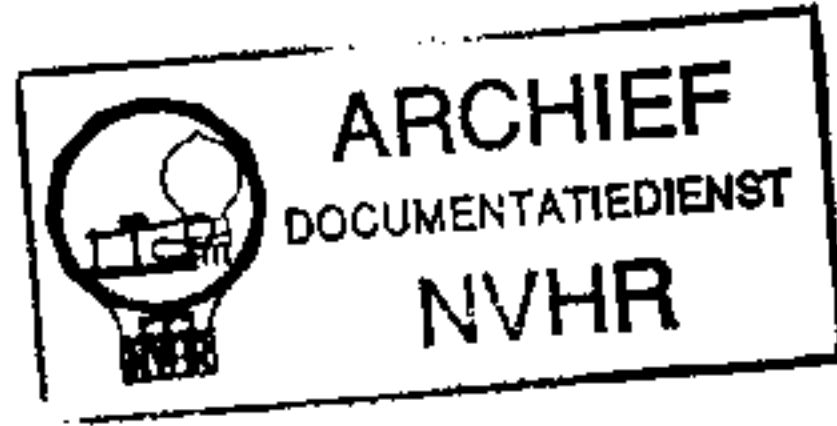
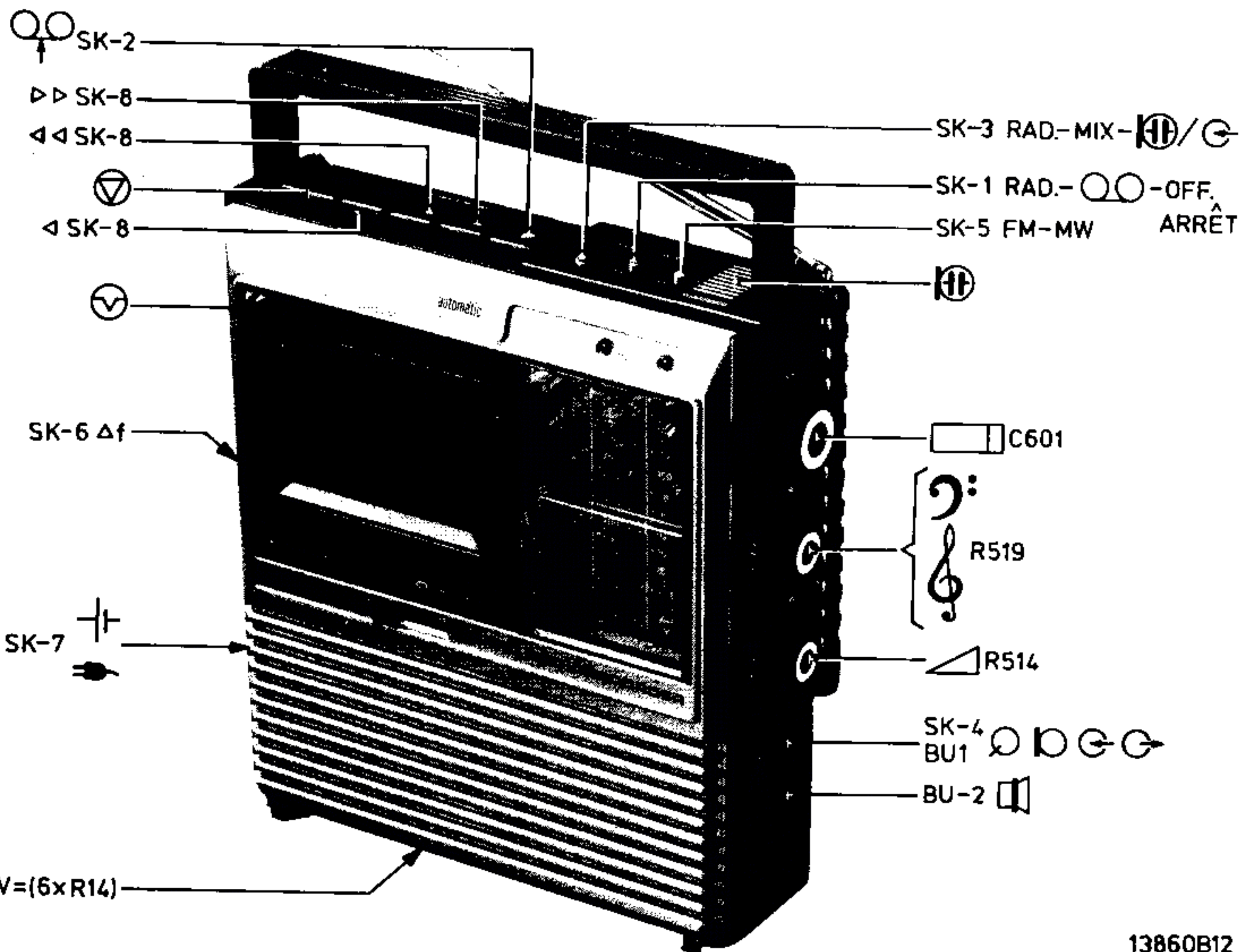


Service
Service
Service

Ned. Ver. v. Historie v/d Radio



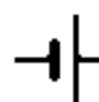




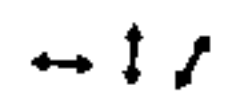
Service Manual

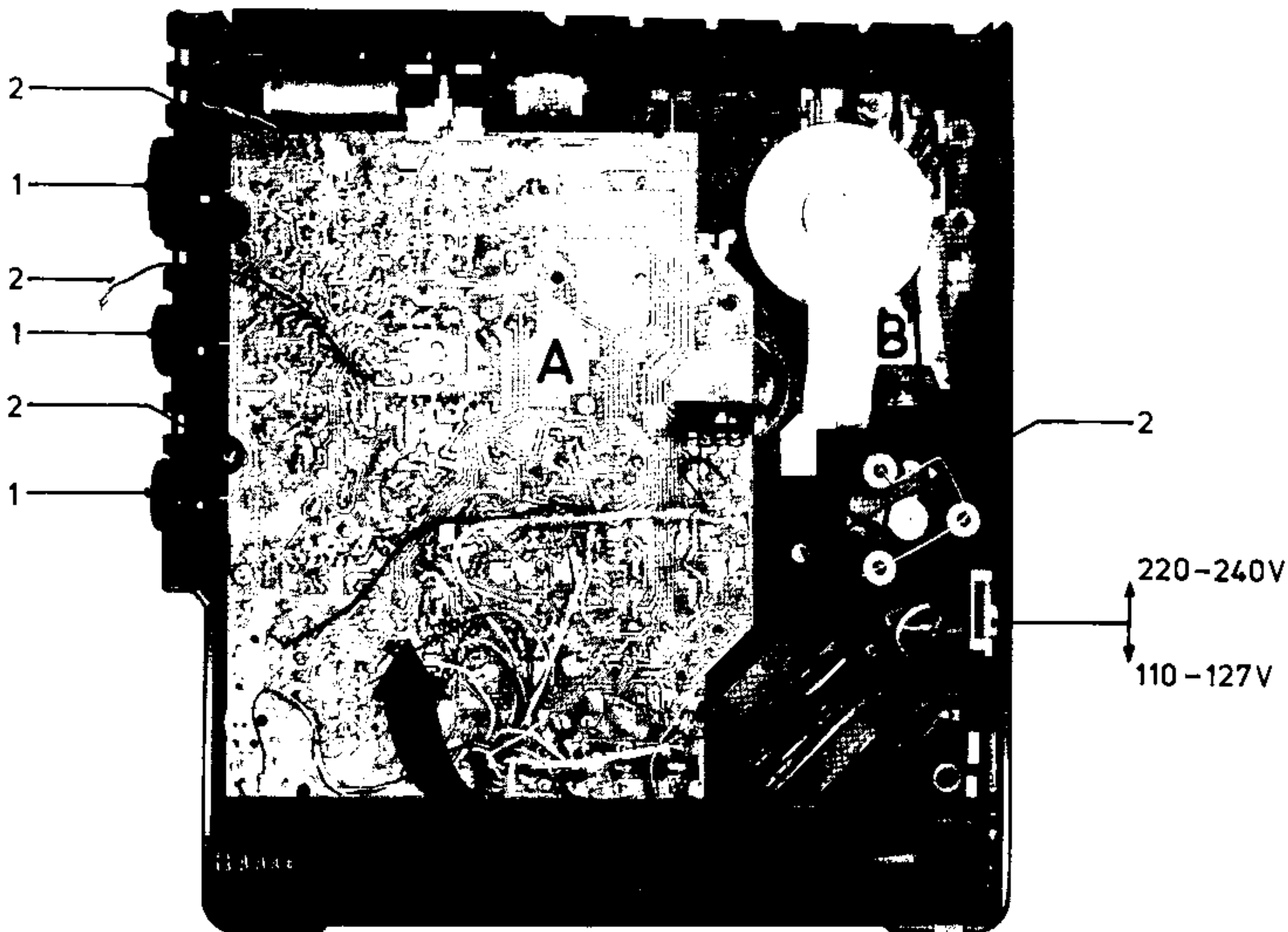


13860B12



SPECIFICATION

	9 V (6xR14)	IF	FM	10.7 MHz
			AM	468 kHz
	110-127/220-240 V 50-60 Hz	FM		87.5-108 MHz
	1100 mW cont.	MW/PO		520-1605 kHz
 4" 4 Ω	 1100 mW cont.			227x247x70

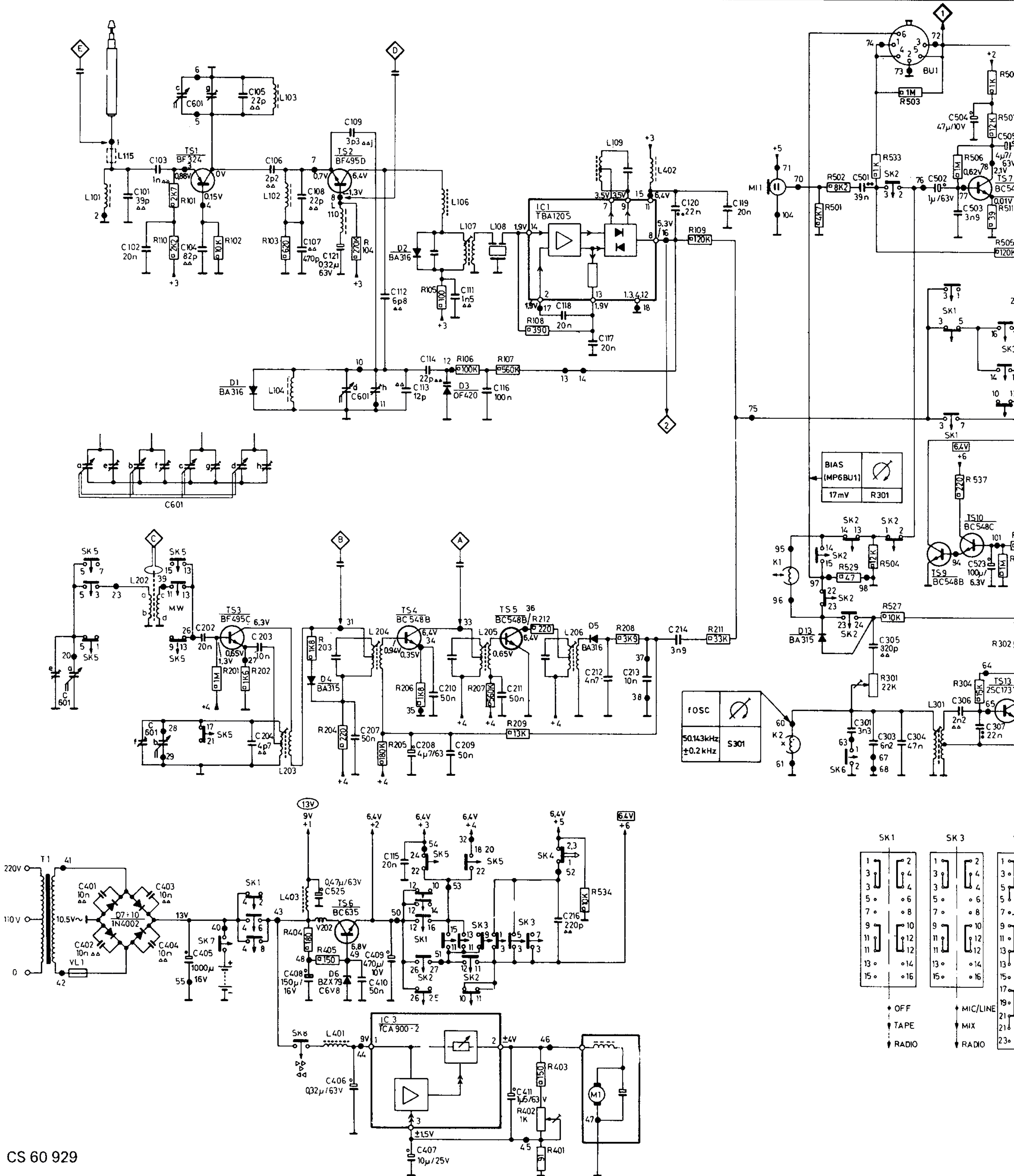


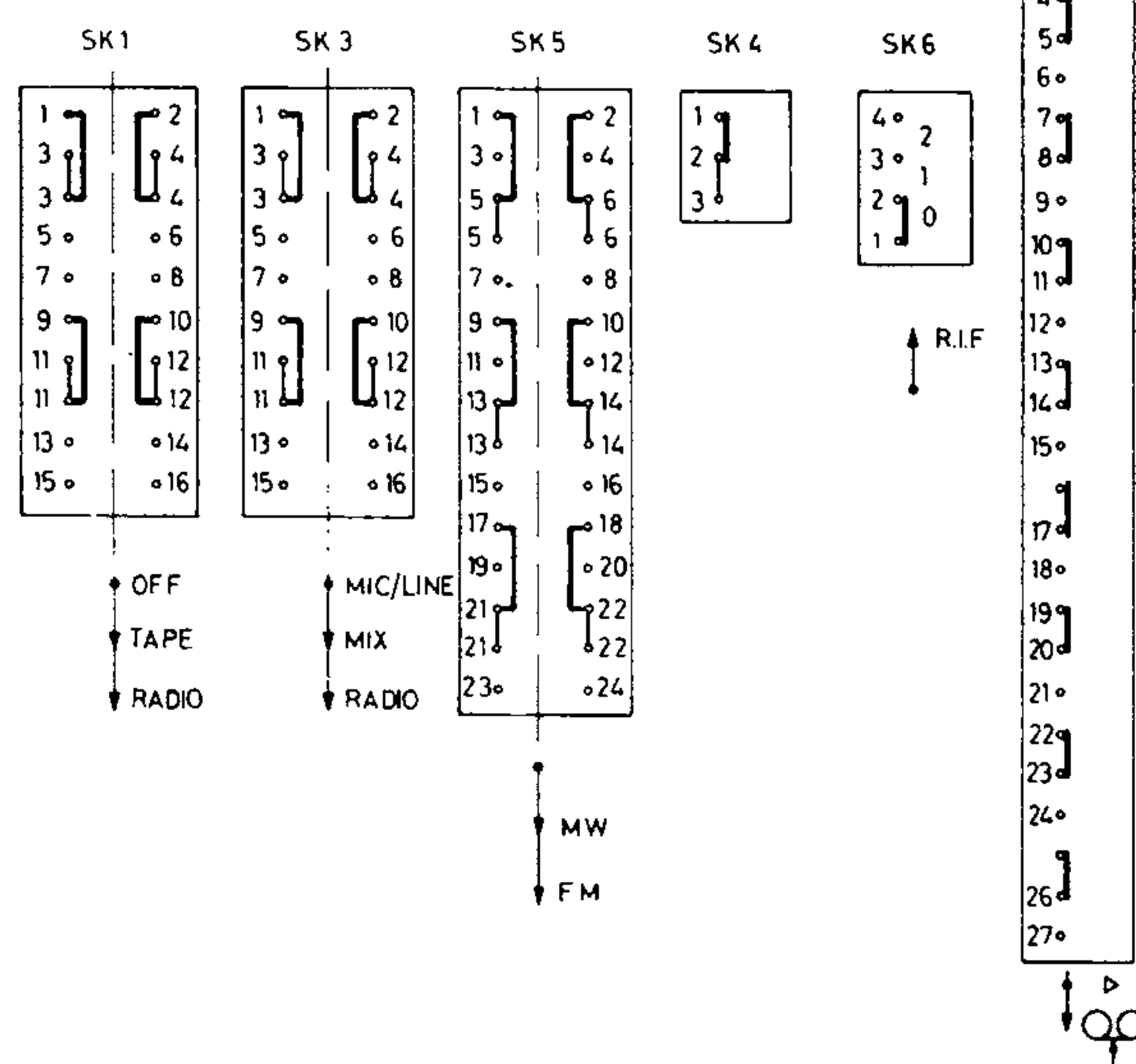
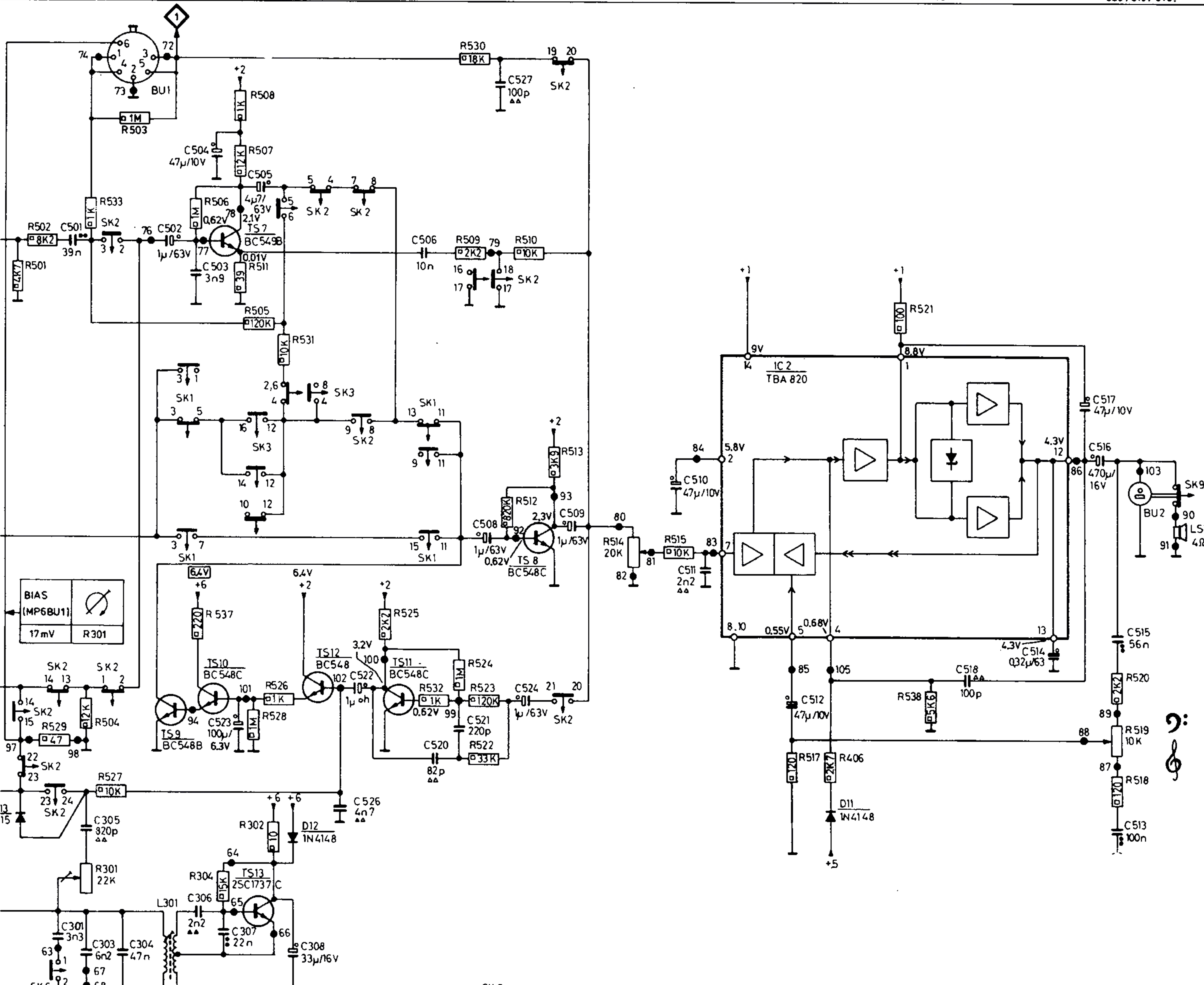
A+B → 1-2

13211A10

Fig. 1

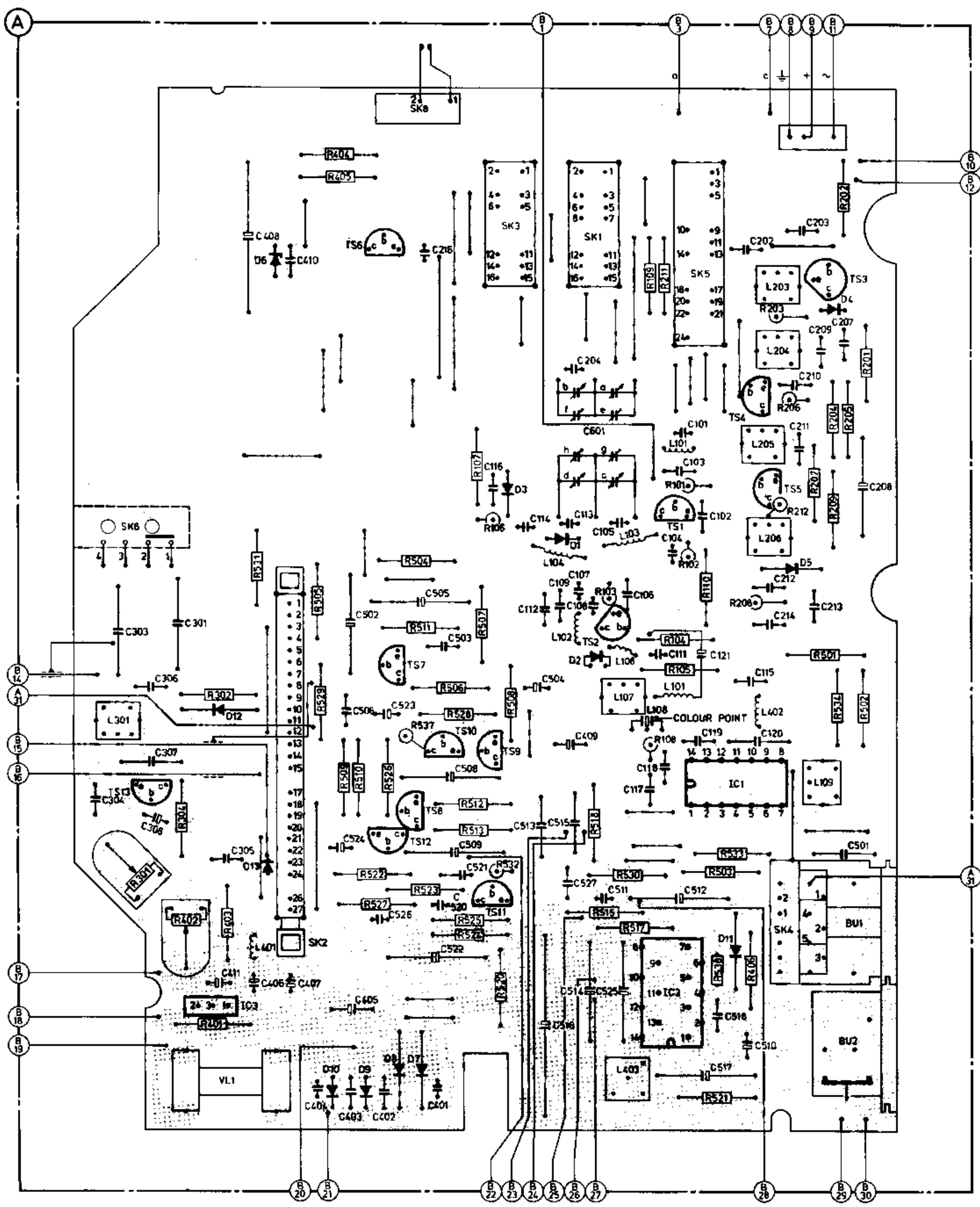
TS/D	D7...10.	TS1.	D1. TS3.	D6. D4. TS2. TS6. IC3. D2. TS4.	D3. TS5. IC1.	D5.	D13.	TS7.
L	101. 115. 202.		403. 402...105. 203.110. 401.	204.	106.107. 205.108.	206.	109. 402.	301.
C101...308	101...106. 202.203.204		121.	107...109.111. 115 207...211.	116.	216. 212. 213. 117...120. 214.	301.303...305	306. 307.
C401...601	601a,e. 401...405.601b,c,f,g.		601d,h. 525.406...410.		411.		501...505. 523.	506. 507.
R101...304	110. 101.	102.	103. 201...205.	104. 206.	207. 105...108. 209. 212.	208.	109.211.	301. 304. 302
R401...538		404. 405.				401.402.403.534.	529.501...504.533.527.	537.505...508.511

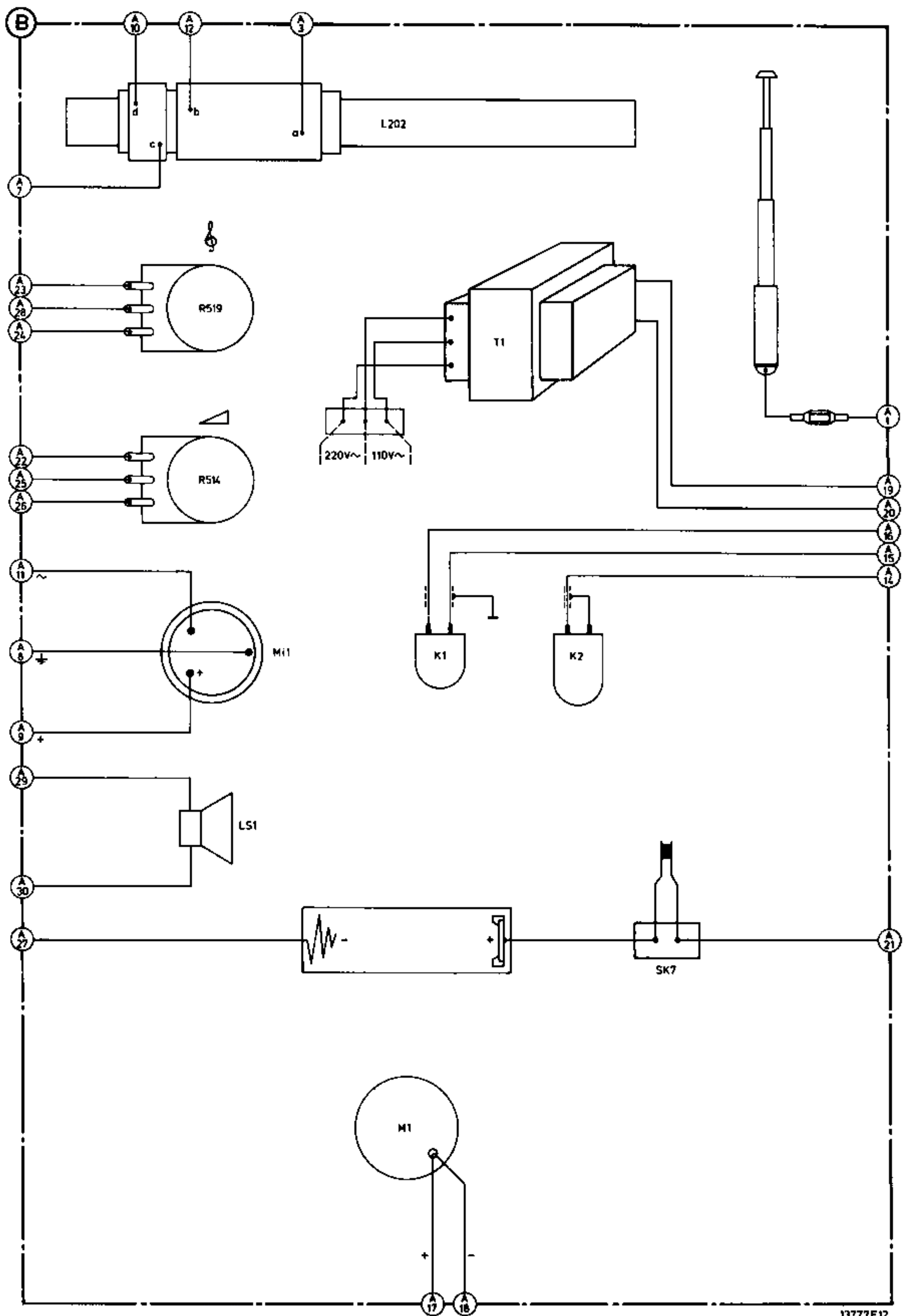
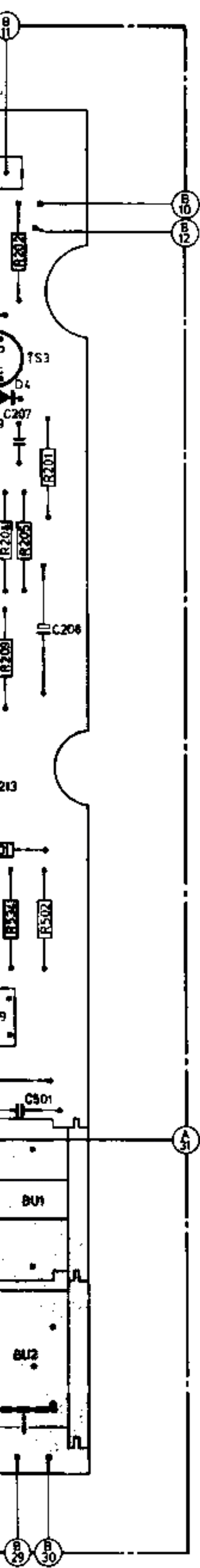


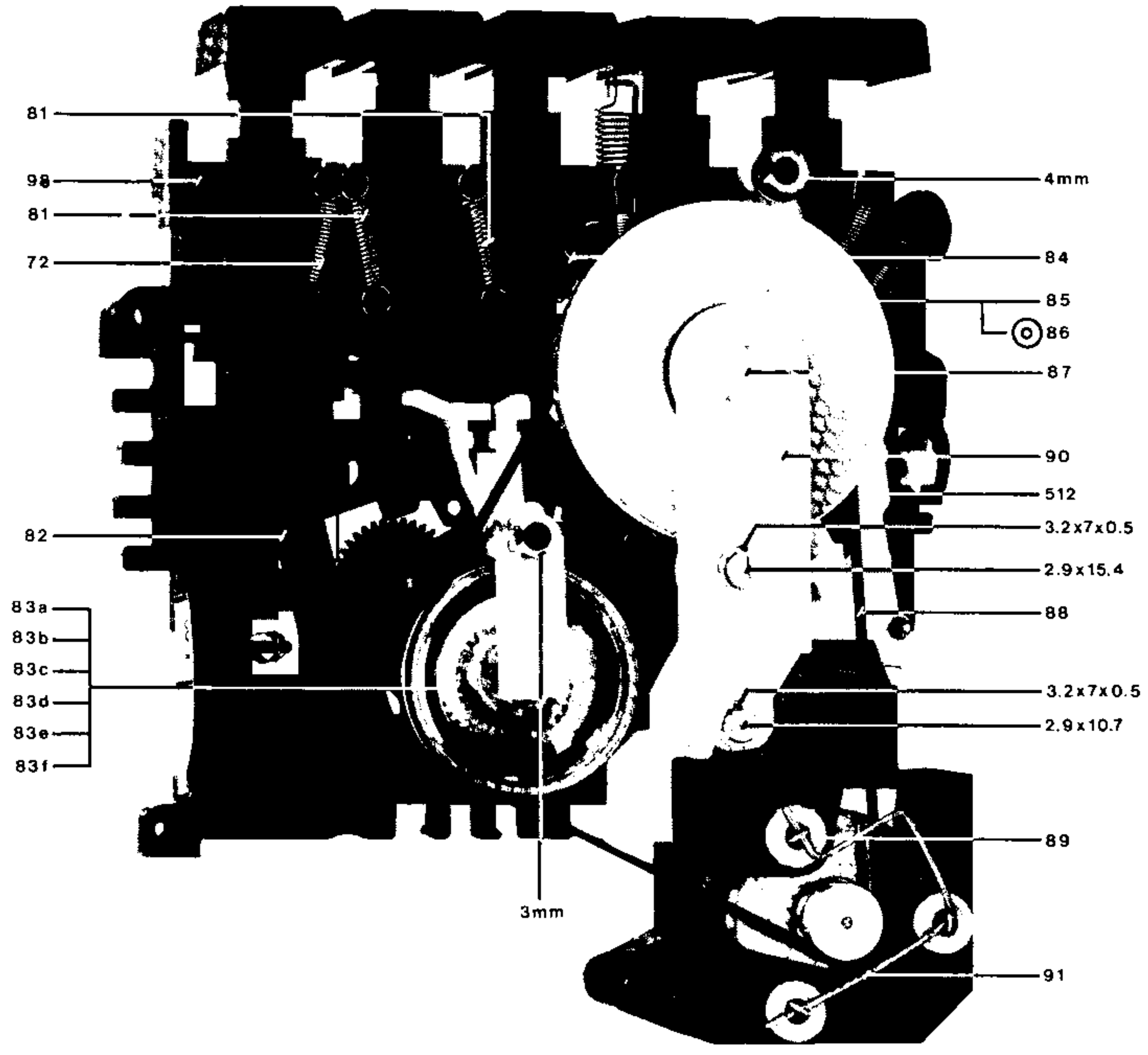


- CARBON RESISTOR E24 SERIES 0.125W 5%
- PLATE CERAMIC CAP
- FLAT FOIL POLYESTER CAP.
- MINIATURE ELECTROLYTIC CAP
- MEASURING POINT

MISC.	SK6 TS13 IC3 VL1 D6	D7, D10	SK8	D3, SK3, L104, L107, L108, SK1, L403, L110	IC2	SK5, IC1, TS4, TS5, L203	L204, TS3, D4
C	L301	D12 L401, D13, SK2	TS6, TS8, TS12	TS9, TS11	D11, L102, D2, TS2, L103, TS1	L101	D11, L402, L205, L206, D5, SK4, L109
R	301, 303, 308	411 404, 408, 410	506, 502, 523, 216, 522, 505, 503, 509, 116, 114, 504, 113	204, 527, 511, 103, 105, 101	115 202	203	213
			524 526 401, 403, 520, 508, 521	601, 513, 516, 409, 106, 109, 525, 117, 119, 512, 102, 517	516, 510, 120, 212, 214, 207, 211, 501		
	301 304 401, 403, 302, 531	405, 404	527, 537, 504, 511, 513, 506, 107, 106	111, 112, 121, 518, 108, 110, 211	533, 503	201, 209, 212	
			505, 529, 509, 510, 522, 526, 523, 525, 528, 507, 520, 532, 508	515, 517, 530, 101, 105	521, 538	406	501, 534, 502

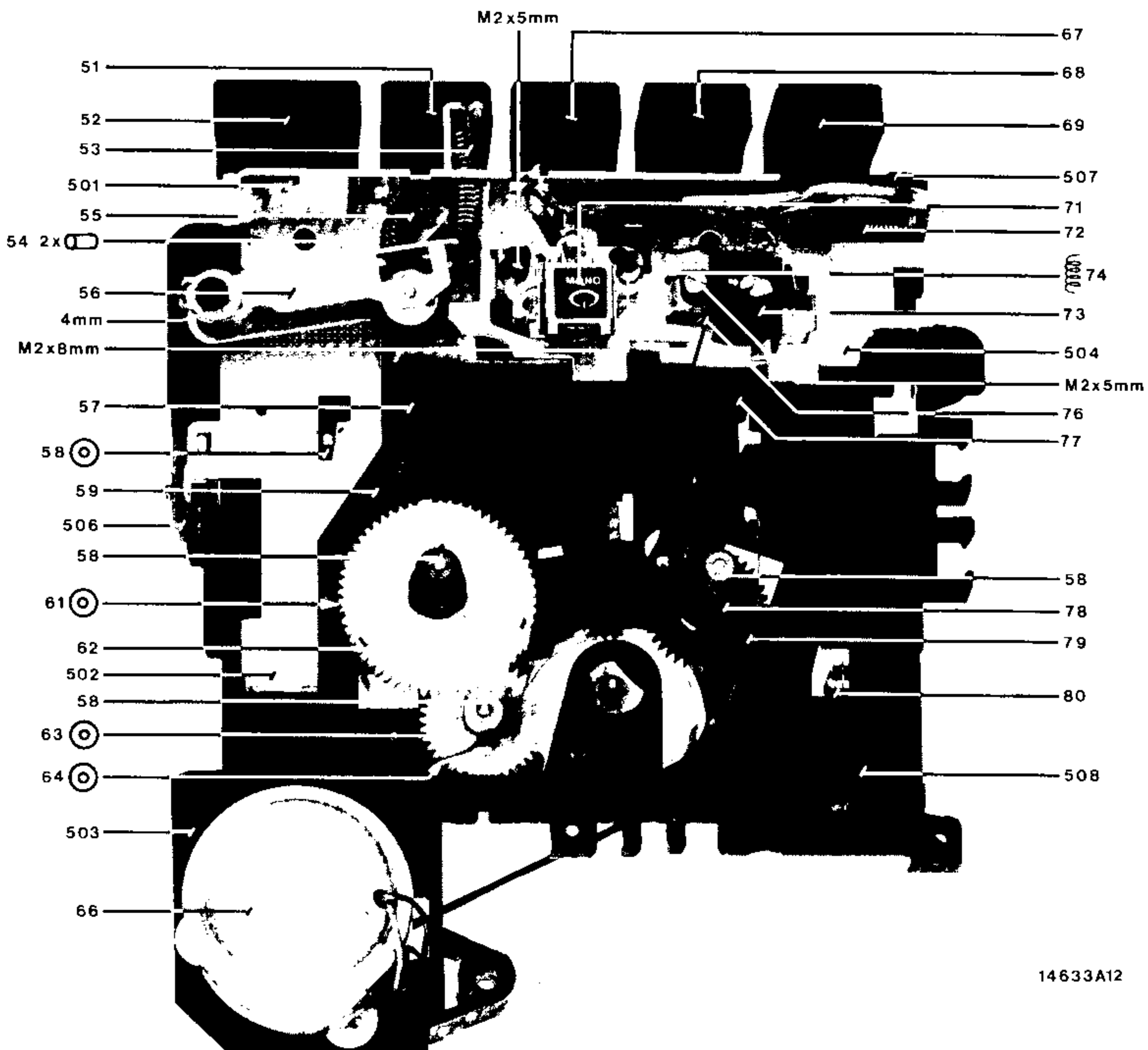






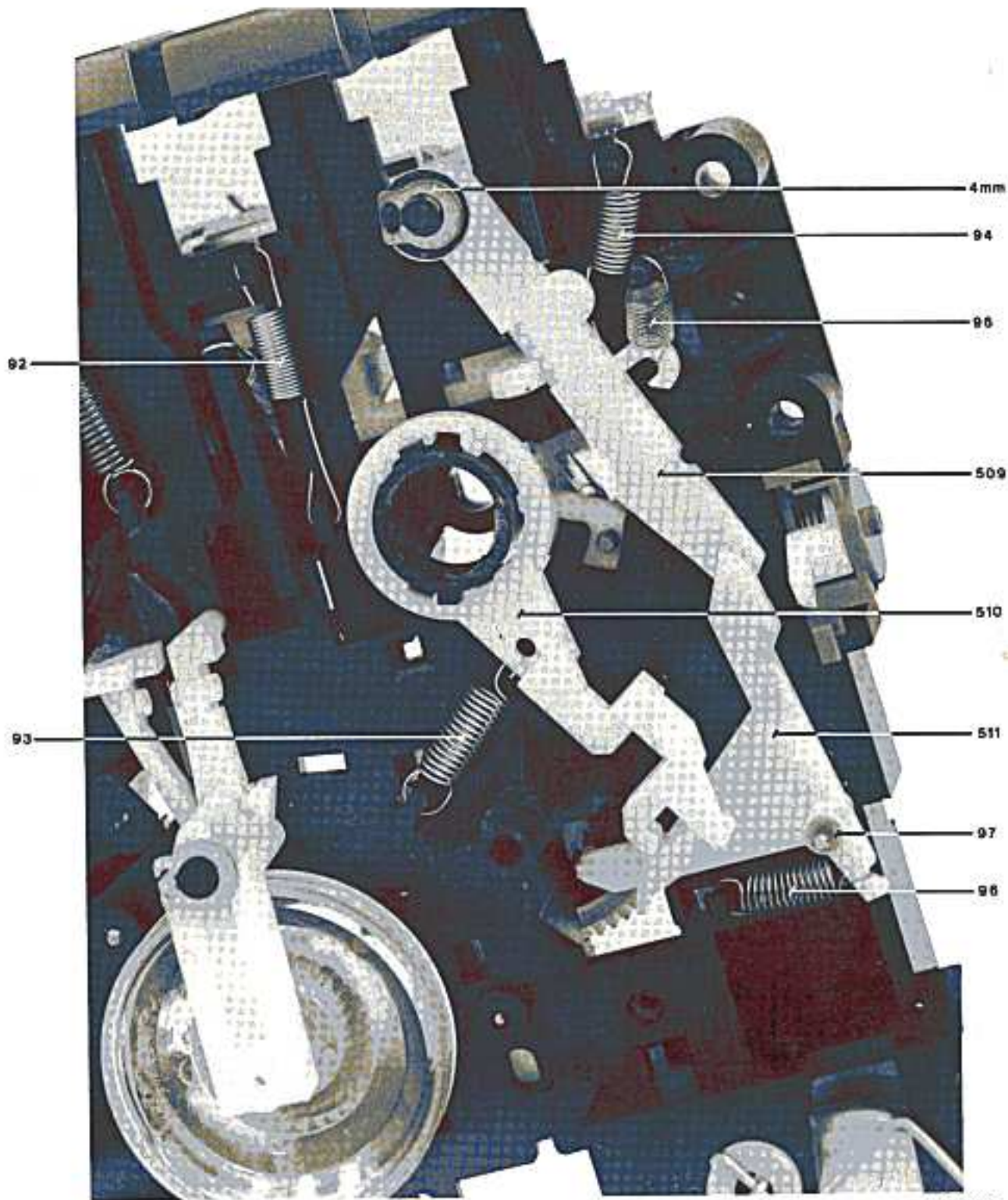
14631A12

51	4822 410 21885	56	4822 403 40069	62	4822 528 10322	68	4822 410 21883
52	4822 410 21886	57	4822 520 30296	63	4822 522 10137	69	4822 410 21882
53	4822 492 31294	58	4822 532 50268	64	4822 532 50692	71	4822 249 10032
54	4822 528 80617	59	4822 522 10138	66	4822 361 20145	72	4822 492 31268
55	4822 492 40587	61	4822 532 50692	67	4822 410 21884	73	4822 249 40076



14633A12

74	4822 492 40588	80	4822 492 31264	85	4822 520 10383	90	4822 403 51046
76	4822 492 51137	81	4822 492 31267	86	4822 532 50993	91	4822 492 61989
77	4822 403 50883	82	4822 404 10367	87	4822 522 31212	92	4822 492 31265
78	4822 520 10375	83	4822 520 10371	88	4822 358 30194	93	4822 492 31374
79	4822 492 62035	84	4822 492 31262	89	4822 325 60038	94	4822 492 31375
						96	4822 492 31264
						97	4822 532 50262



- a. Togliere il rullo preminastro 56 togliendo l'anello di chiusura.
Osservazione:
Fare attenzione alla molla di pressione 55 che determina la forza del rullo preminastro (400-460 gr).
- b. Sostituzione della guida delle testine 502
Dopo aver tolto il rullo preminastro, pressione 55 e 84 e la staffa d'avvolgimento, la guida delle testine è spostata rispetto alla posizione di partenza e deve essere ricorretta.
Osservazione:
Fare attenzione ai cuscinetti 54 a sfera che sono liberi dopo aver tolto la guida delle testine 502.
- c. Sostituzione dei tasti di comando
Prima togliere il rullo pressione 56, la staffa d'avvolgimento 504 la guida delle testine 502 ed infine la molla di trazione del tasto di cui si tratta.
I tasti possono essere separati dai loro supporti premendoli maggiormente.

REGOLAZIONE E CONTROLLO

Regolazione del volano 85

Regolare il volano ad un gioco assiale minimo per mezzo della vite di regolazione 87.

Controllo della frizione d'avvolgimento

La forza della frizione è misurata per mezzo di una cassetta campione (numero di codice: 4822 395 30054).

La cassetta deve indicare i seguenti numeri:

- 30-60 grcm sul lato avvolgimento
 - 3-8 grcm sul lato riavvolgimento
 - Wow e Flutter può essere misurato con l'apposito strumento, max. 3,5°/100.
- La forza di frizione è regolabile spostando la molla alla cama voluta.

Controlli della testina di canallazione 73

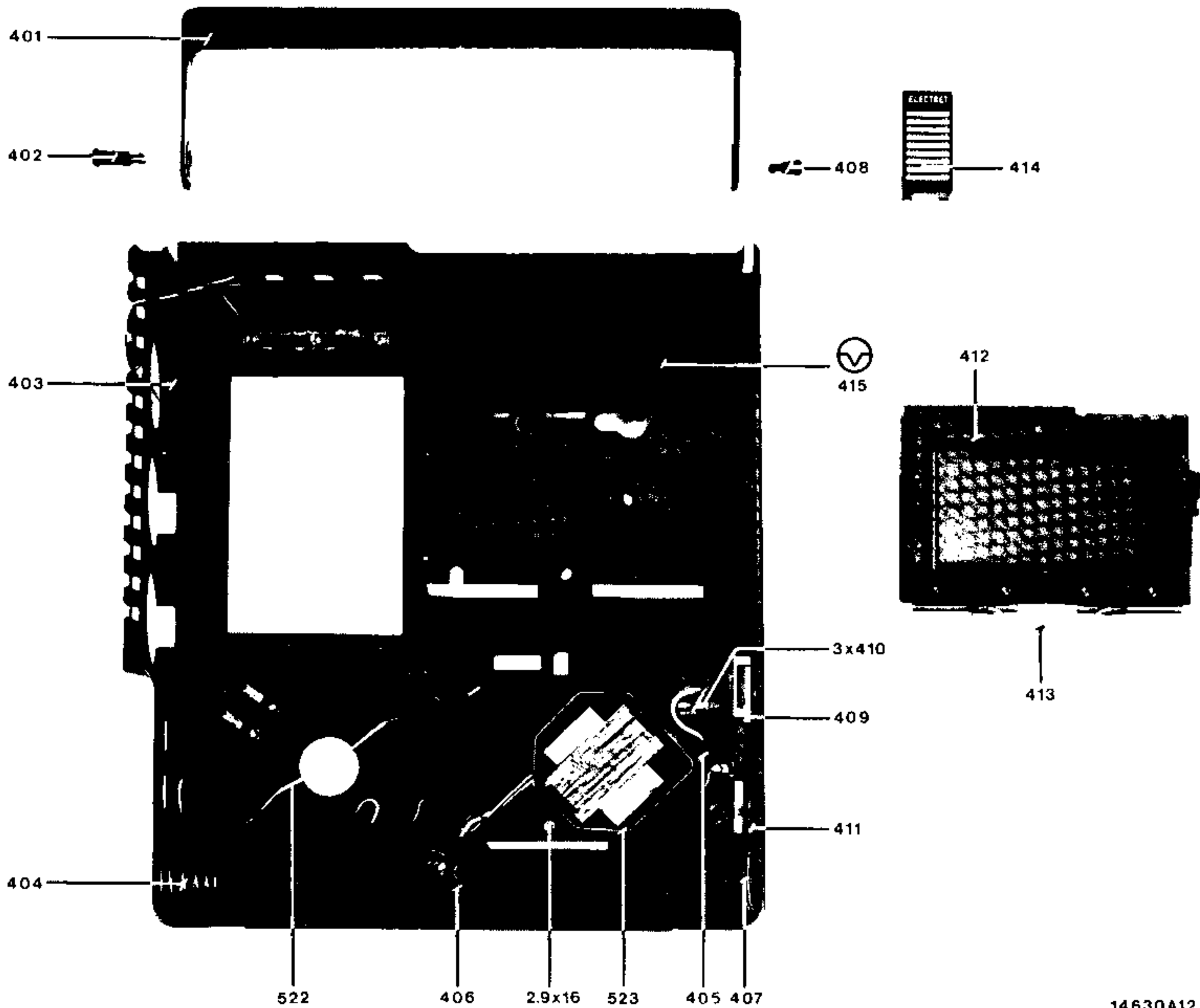
Dopo sostituzione della testina procedere ai controlli seguenti:

- a. Tassa della cancellazione
Alla rete o con nuove batterie, il nastro al cromo dovrebbe essere totalmente cancellato.
- b. Interferenza del segnale AM
Se non fosse possibile sopprimere ogni flauto con l'intervento del commutatore R.I.F., la frequenza dell'oscillatore di cancellazione dovrà essere controllata.
- c. Dopo la sostituzione della testina di cancellazione occorrerà verificare il corrente di premagnetizzazione della registrazione/lettura (17 mV - R529).

Regolazione dell'azimuth

L'azimuth della testina di registrazione/riproduzione 71 è regolato da una vite M2x8.

Per questa regolazione utilizzare la cassetta 812/MCT. Per regolare l'azimuth applicare un segnale di 8 kHz. Regolare la testina di registrazione/riproduzione per la massima tensione d'uscita misurata sui punti 6 di BU1.



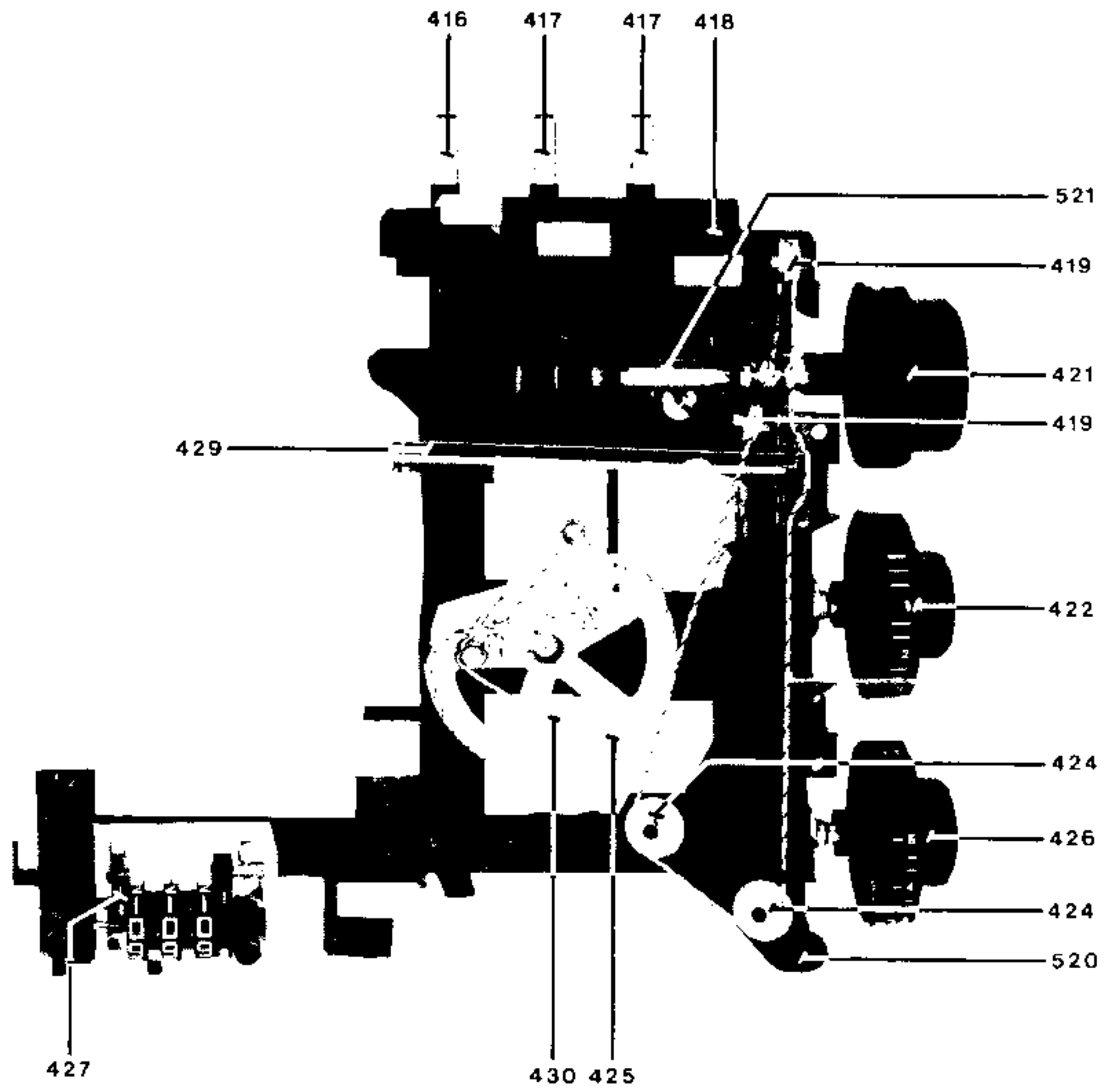
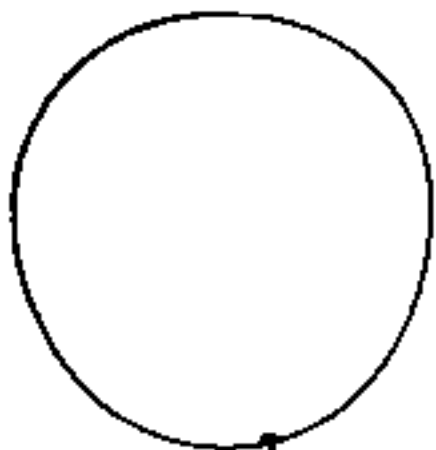
14630A12

401	4822 498 40403	420	4822 358 30148
402	4822 535 91082	421	4822 413 50933
403	4822 423 50325	422	4822 413 50931
403/58	4822 423 50326	424	4822 528 80686
404	4822 492 51198	425	4822 528 80687
405	4822 404 10364	426	4822 413 50932
406	4822 290 80228	427	4822 349 50091
407	4822 290 80282	429	4822 450 80559
408	4822 535 91083	430	4822 492 40713
409	4822 454 10557	431	4822 333 20037
410	4822 268 10119	432	4822 423 40471
411	4822 466 90857	433	4822 423 40472
412	4822 443 60578	434	4822 303 30168
413	4822 492 40586	Mains cord	4822 321 10105
414	4822 423 40474	Cordon secteur	
415	4822 410 22014		
416	4822 404 10366		
417	4822 404 10365		
418	4822 423 40473		
419	4822 528 80666		

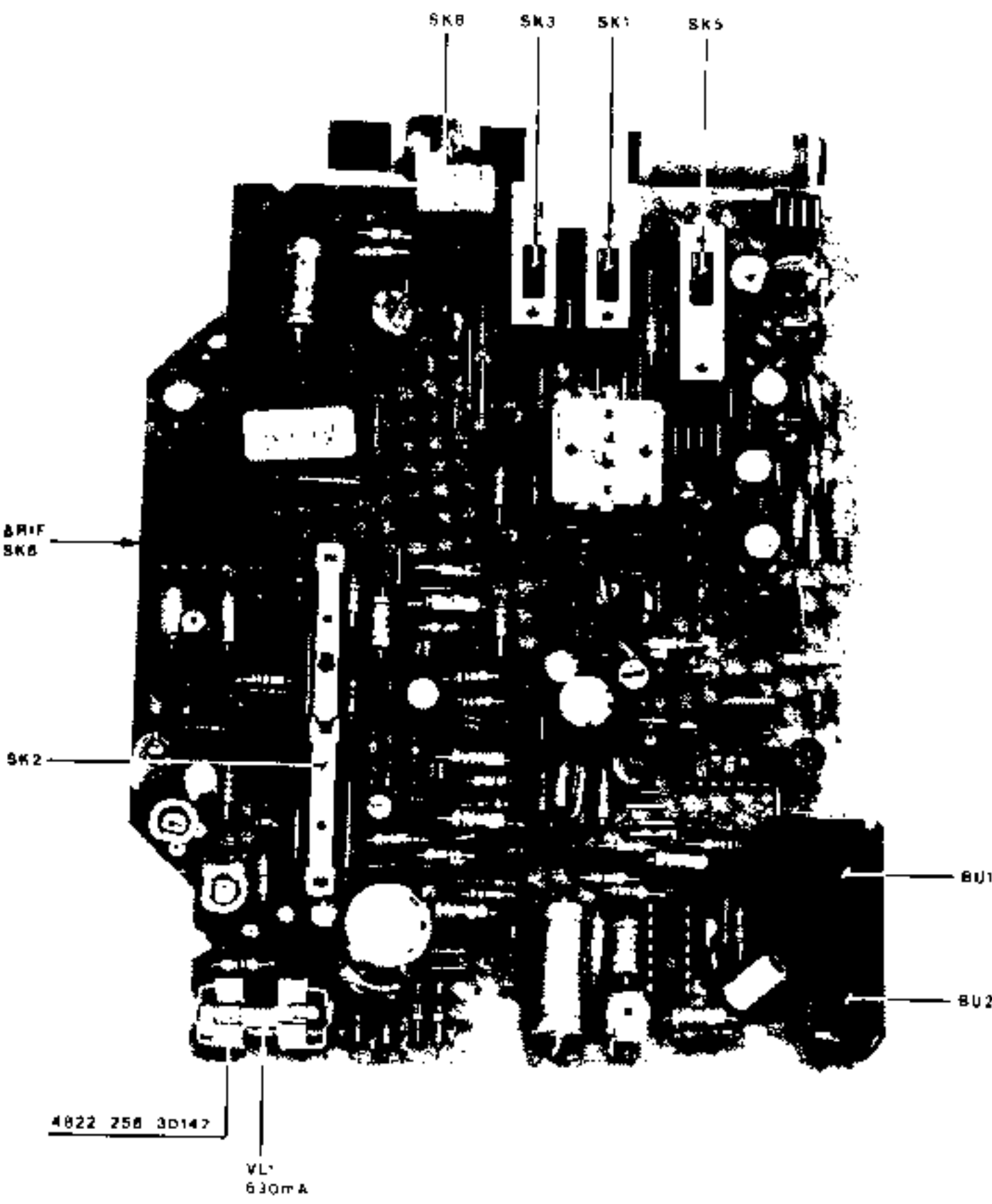
431

MW	m	MHz	chan	FM
190	104	-	67	56
220	102	-	50	
250	100	-	48	
300	98	-	40	
350	96	-	39	
400	94	-	28	
450	92	-	20	
500	90	-	10	
550		-	6	
575	875	-	2	

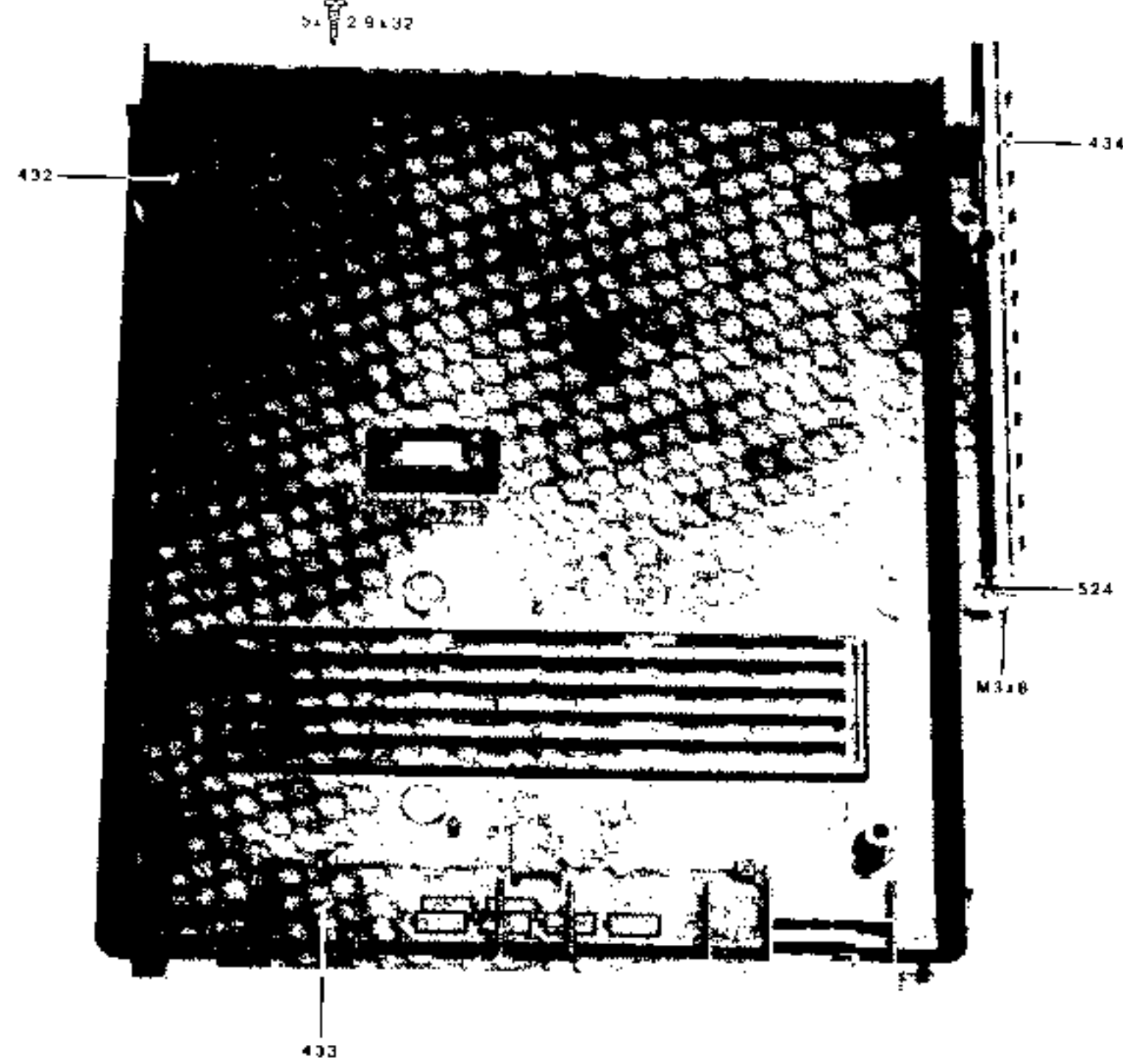
PO FM



14634A12

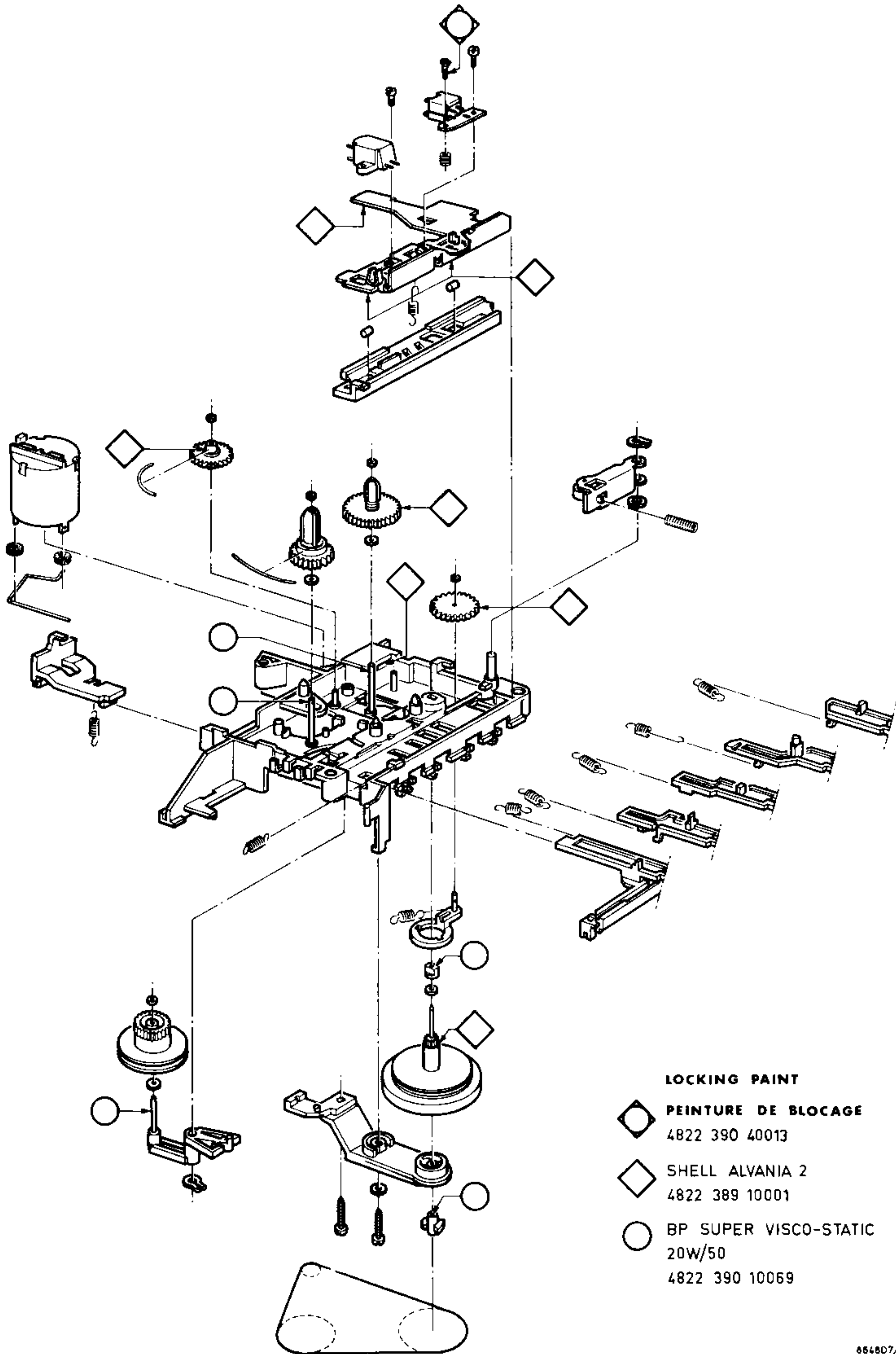


14628A12









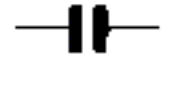
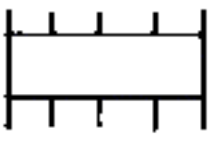
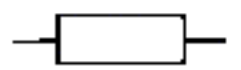
14632A12

LUBRICATION
LUBRIFICATION



LOCKING PAINT

- 
PEINTURE DE BLOCAGE
 4822 390 40013
- 
SHELL ALVANIA 2
 4822 389 10001
- 
BP SUPER VISCO-STATIC
 20W/50
 4822 390 10069

-TS- 			-L- 		
TS1	BF324	5322 130 44396	L107		4822 153 50205
TS2,3	BF495D	4822 130 40949	L108		4822 242 70249
	BF495C				
TS4,5,9	BC548B	4822 130 40937	L109		4822 156 40654
TS6	BC337/25	4822 130 40981	L203		4822 156 30509
TS7	BC549B		L204,205		4822 153 10292
TS8,9,10,11	BC548C	4822 130 44196	L206		4822 153 10293
TS12	BC548	4822 130 40938	L301		4822 156 30551
TS13	BC548C	5322 130 44196	LS1		4822 240 40083
			TR1		4822 145 30182
			L202		4822 158 10414
-D- 			-C- 		
D1,2,5	BA316	4822 130 30302	C601	Var.cap.	4822 125 40023
D3	OF420	4822 130 30945	C102,114,	Cer.cap. 20 nF, 25 V	5322 122 34016
D4	BA315	4822 130 30843	115,117,		
D6	BZX79/C6V8	5322 130 30768	118,202		
D7,8,9,10	1N4002	5322 130 30684	C116	Cer.cap. 100 nF, 25 V	5322 122 34052
D11,12	1N4148	5322 130 30621	C203,213	Cer.cap. 10 nF, 25 V	4822 121 50582
			C207,209,	Cer.cap. 50 nF, 25 V	4822 122 40114
			209,210		
			C120,307	Pol.cap. 22 nF, 250 V	4822 121 40407
			C301	PS cap. 3N3, 63 V	4822 121 50389
			C303	PS cap. 6N2, 63 V	5322 121 54153
			C304	PS cap. 47 nF, 63 V	5322 121 54108
			C501	Pol.cap. 39 nF	4822 121 40413
			C504,510,	El.cap. 47 μF, 10 V	5322 124 24082
			512,517		
-IC- 			-R- 		
IC1	TBA120S	5322 209 84511	R514	20 kΩ, var.	4822 101 30335
IC2	TBA820	4822 209 80348	R519	10 kΩ, var.	4822 101 80038
IC3	TCA900-2	4822 209 80306	R301	22 kΩ, adj.	4822 100 10051
			R402	1 kΩ, adj.	5322 101 14151
-DIV.-					
Micro		4822 242 10022			
SK1		4822 277 20231			
SK2		4822 277 30607			
SK3		4822 277 20231			
SK5		4822 277 20262			
SK6		4822 277 20263			
SK8		4822 277 20197			
Aerial holder		4822 256 90202			
Support d'antenne					
Fuse holder		4822 256 30142			
Support de fusible					
BU1		4822 267 50231			
BU2		4822 267 40257			

(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)

Die Sicherheitsvorschriften erfordern, dass das Gerät sich nach der Reparatur in seinem originalen Zustand befindet und dass die benutzten Einzelteile den aufgeführten Teilen identisch sind.

(SF)

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

(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 af 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.

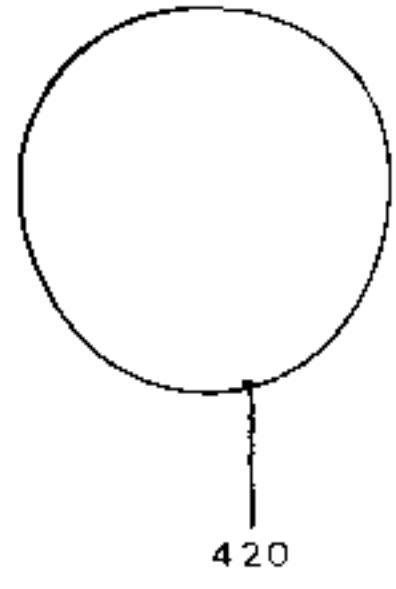
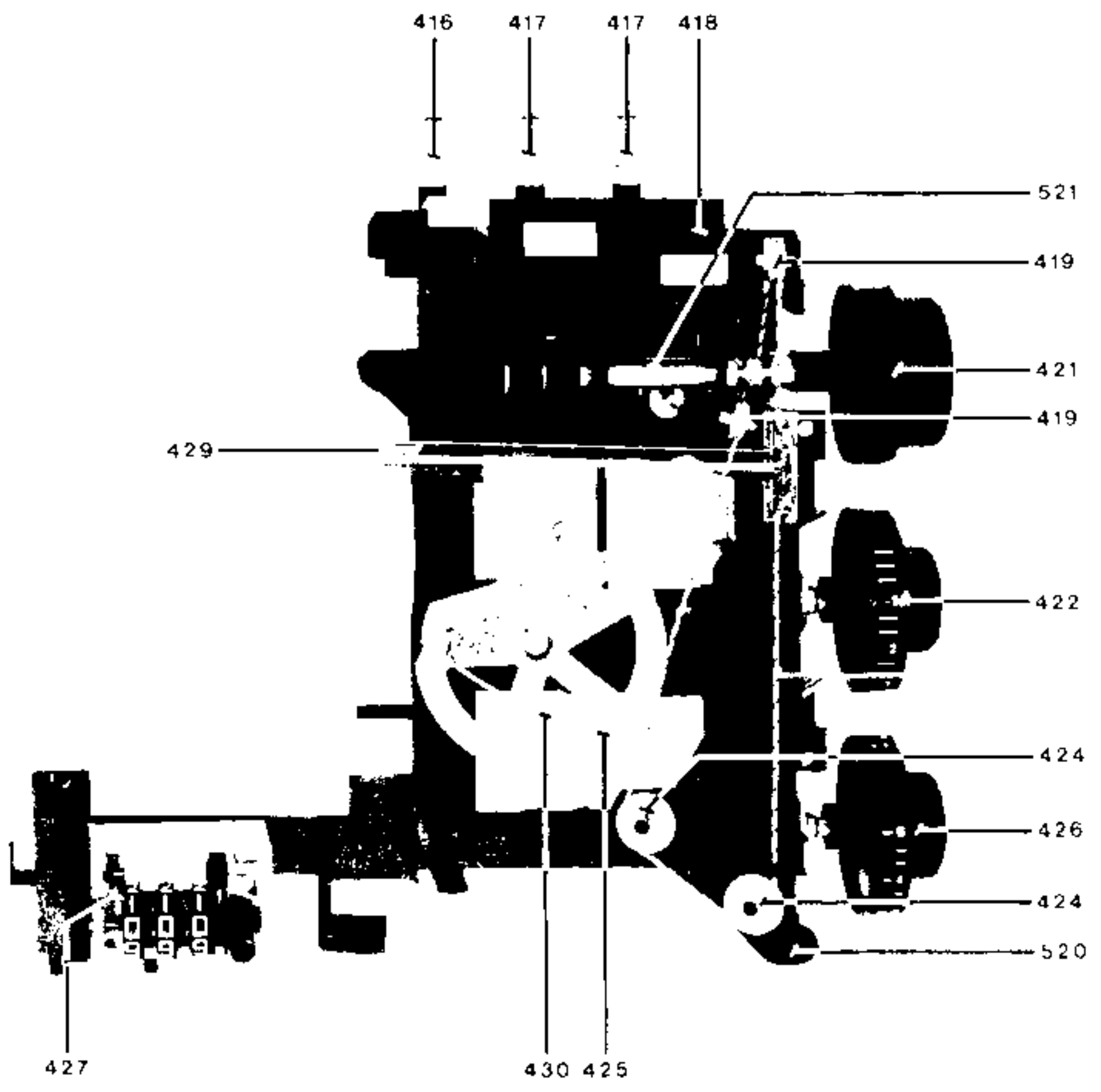
(N)

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

431

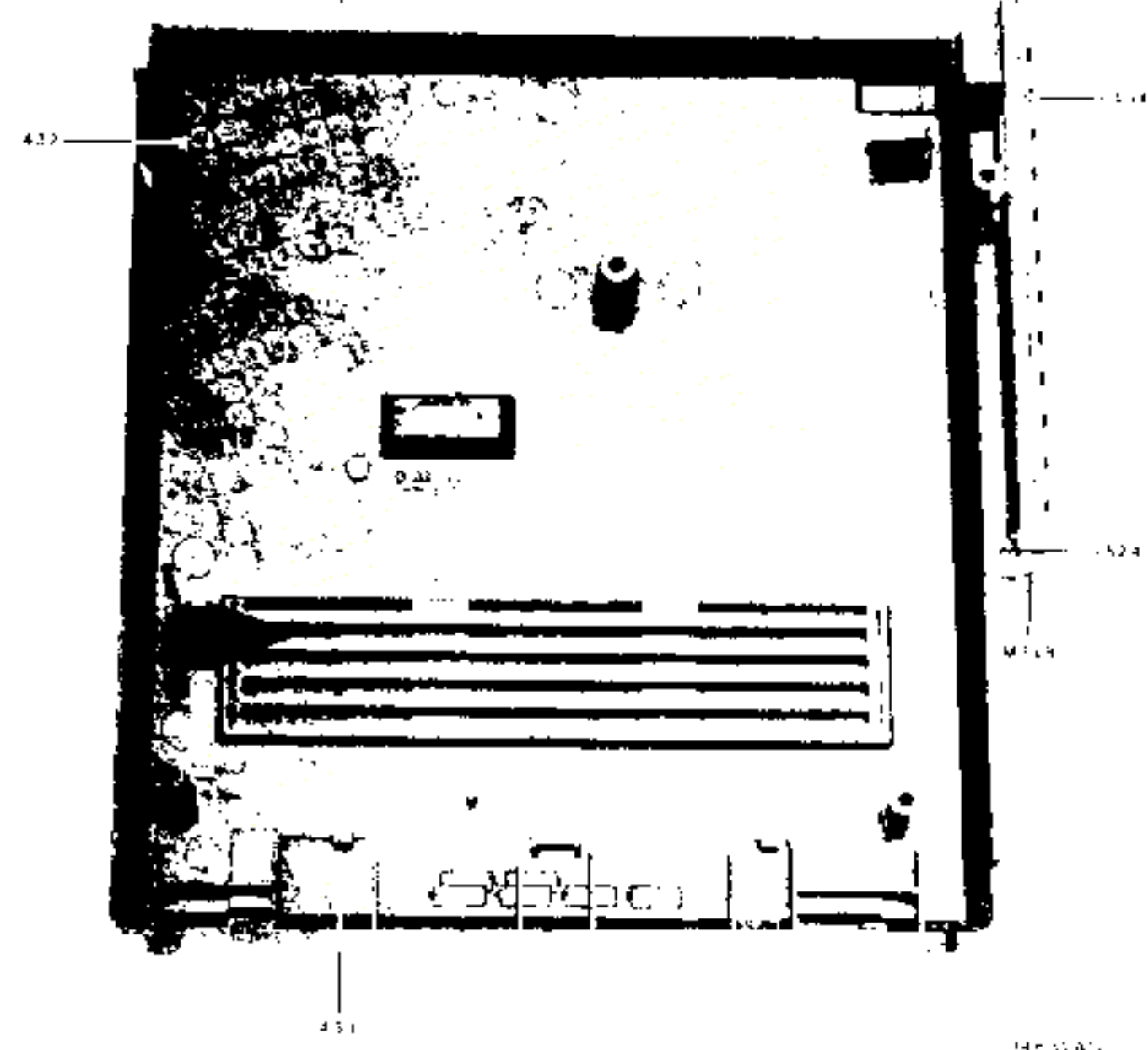
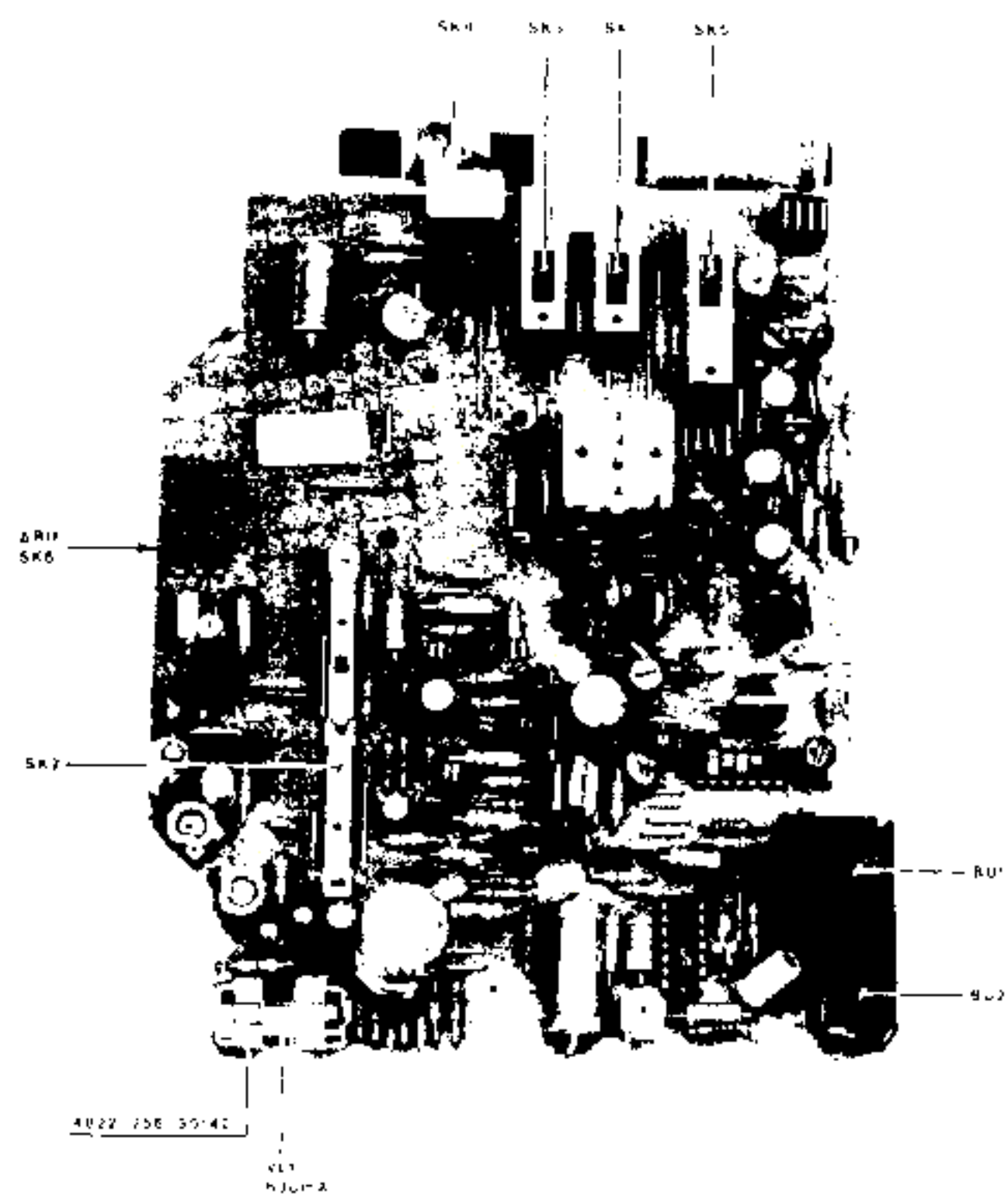
	MW	FM	
	m	kHz	chan
tr. stad	190	104	57
veltem			58
lat	220	102	59
tilk			60
Fulun	250	100	48
strabo			49
paris			50
livers	300	98	51
brusse			52
paris	350	96	53
nirvaga			54
nirvaga	400	94	55
rennes			56
nirvaga	450	92	57
brusse			58
sundsva	500	90	59
heisinki	550	88	60
borge	575	87.5	61

PO FM







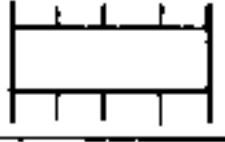
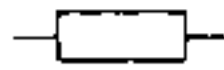
14634A12

14630A12



14676017

14676017

-TS-				-L-			
TS1	BF324	5322 130 44396		L107		4822 153 50205	
TS2,3	BF495D BF495C	4822 130 40949		L108		4822 242 70249	
TS4,5,9	BC548B	4822 130 40937		L109		4822 156 40654	
TS6	BC337/25	4822 130 40981		L203		4822 156 30509	
TS7	BC549B			L204,205		4822 153 10292	
TS8,9,10,11	BC548C	4822 130 44196		L206		4822 153 10293	
TS12	BC548	4822 130 40938		L301		4822 156 30551	
TS13	BC548C	5322 130 44196		LS1		4822 240 40083	
				TR1		4822 145 30182	
				L202		4822 158 10414	
-D-				-C-			
D1,2,5	BA316	4822 130 30302		C601	Var.cap.	4822 125 40023	
D3	OF420	4822 130 30945		C102,114, 115,117, 118,202	Cer.cap. 20 nF, 25 V	5322 122 34016	
D4	BA315	4822 130 30843		C116	Cer.cap. 100 nF, 25 V	5322 122 34052	
D6	BZX79/C6V8	5322 130 30768		C203,213	Cer.cap. 10 nF, 25 V	4822 121 50582	
D7,8,9,10	1N4002	5322 130 30684		C207,209, 209,210	Cer.cap. 50 nF, 25 V	4822 122 40114	
D11,12	1N4148	5322 130 30621		C120,307	Pol.cap. 22 nF, 250 V	4822 121 40407	
				C301	PS cap. 3N3, 63 V	4822 121 50389	
-IC-				C303	PS cap. 6N2, 63 V	5322 121 54153	
IC1	TBA120S	5322 209 84511		C304	PS cap. 47 nF, 63 V	5322 121 54108	
IC2	TBA820	4822 209 80348		C501	Pol.cap. 39 nF	4822 121 40413	
IC3	TCA900-2	4822 209 80306		C504,510, 512,517	El.cap. 47 μF, 10 V	5322 124 24082	
-DIV.-				-R-			
Micro		4822 242 10022		R514	20 kΩ, var.	4822 101 30335	
SK1		4822 277 20231		R519	10 kΩ, var.	4822 101 80038	
SK2		4822 277 30607		R301	22 kΩ, adj.	4822 100 10051	
SK3		4822 277 20231		R402	1 kΩ, adj.	5322 101 14151	
SK5		4822 277 20262					
SK6		4822 277 20263					
SK8		4822 277 20197					
Aerial holder		4822 256 90202					
Support d'antenne							
Fuse holder		4822 256 30142					
Support de fusible							
BU1		4822 267 50231					
BU2		4822 267 40257					

(GB)

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(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 af 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 gjenoppsett til original utførelse og at deler som er identiske med de som er spesifisert, blir benyttet.

Service mededeling

PHILIPS NEDERLAND B.V. - EINDHOVEN
TECHNISCHE SERVICE

Ref. 136 PH

Type 22 AR 070

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RADIORECORDER

Vanaf stempeling WTO3 906 is, om wow flutter te voorkomen, een diode D 15 (1N4002) toegevoegd aan het circuit voor de motorregeling (IC TCA900). Geadviseerd wordt dit in bovengenoemd apparaat toe te passen indien wow en flutter optreedt. Het is dan niet noodzakelijk de motor te vervangen. Voor eventuele wijziging wordt naar onderstaande figuur verwezen.

Opmerking:

Om kortsluiting te voorkomen dient men de diode te isoleren.

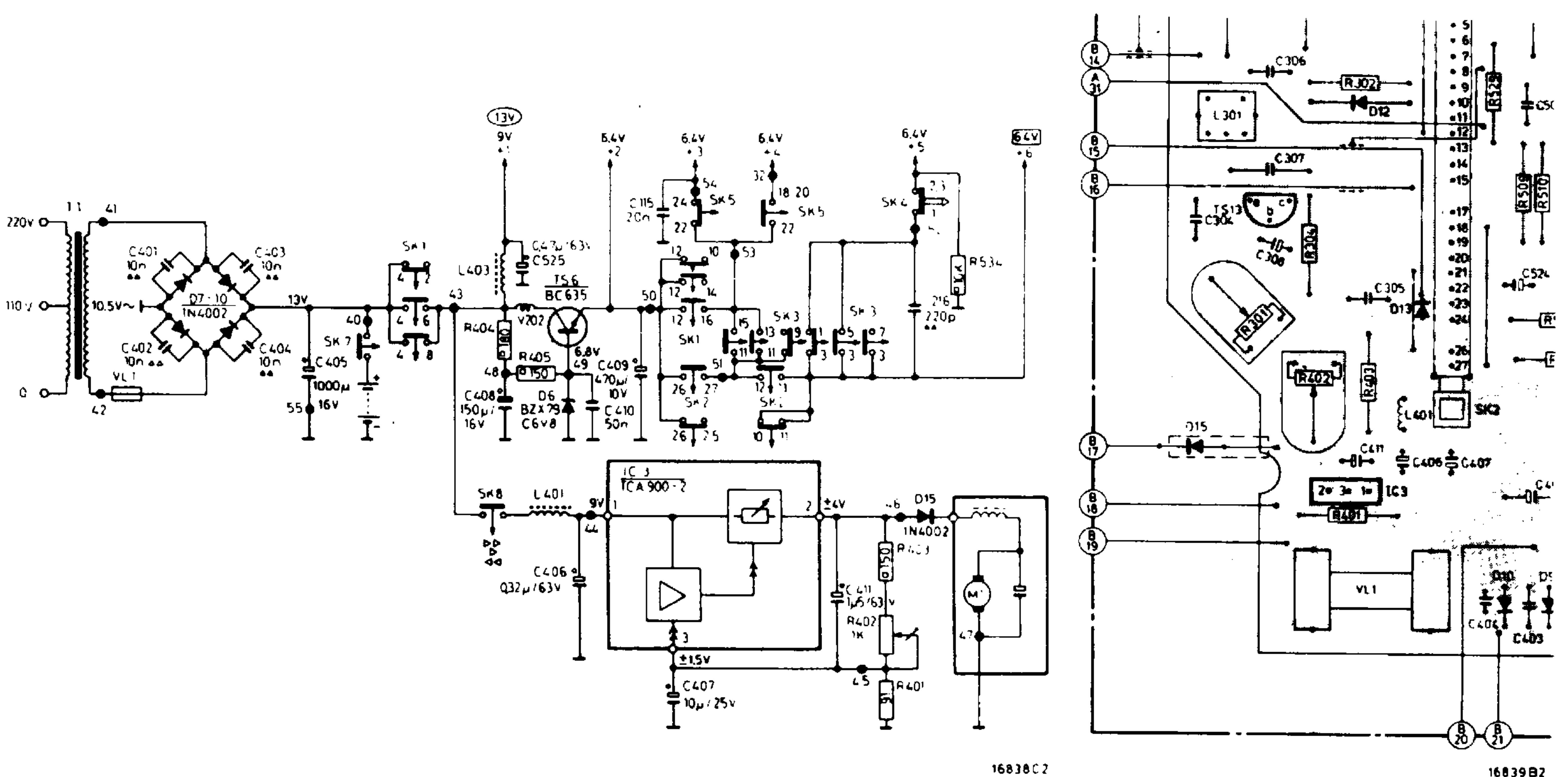


Fig. 1

