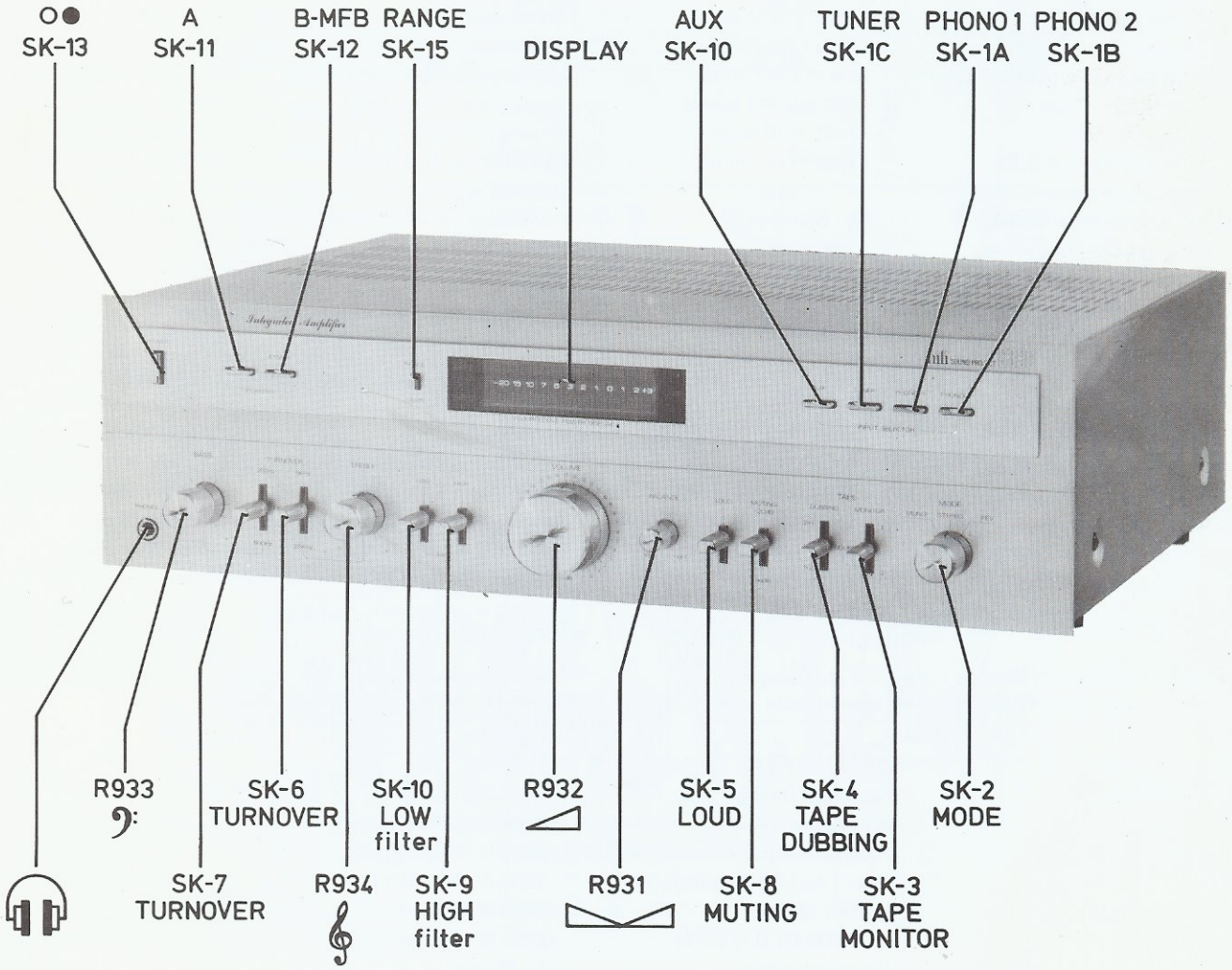
Hi-Fi A 6396

12/13/14/15/24/29/33

Service
Service
Service

Service Manual



19944B12

Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Serviçio

GB NL F

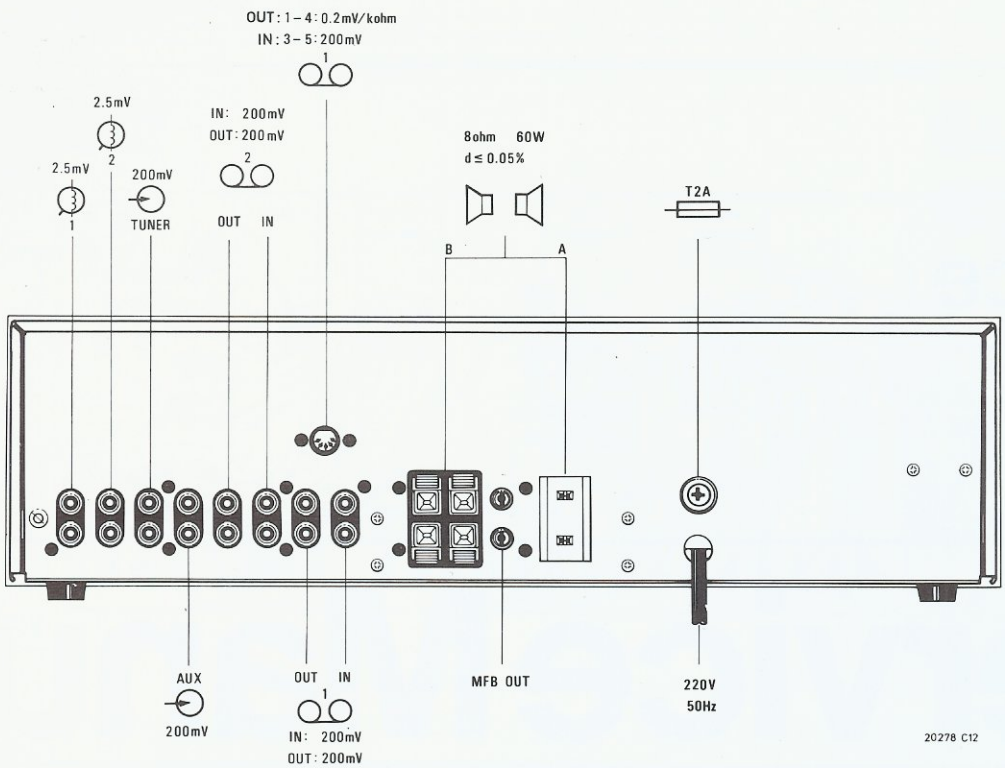
Subject to modification

4822 725 13666

Printed in The Netherlands

D S

CS 70 905



(GB)

Supply voltage	: 110 - 220 V AC
Dimensions	: 450x132x330 mm
Input sensitivity phono 1+2	: 2.5 mV (47 kohm)
Tuner - Aux - Tape 1+2	: 200 mV (50 kohm)
Output IEC 581	: 2x65 W (8 ohm)
63-12.500 Hz D ⩽ 0.7%	: 2x80 W (4 ohm)
Output impedance	: 4 - 16 ohm
Headphone impedance	: 8 - 600 ohm
MFB output	: 1 V

For more detailed technical specifications please consult commercial documentation

(NL)

Voedingsspanning	: 110 - 220 V AC
Afmetingen	: 450x132x330 mm
Ingangsgevoeligheid phono 1+2	: 2.5 mV (47 kohm)
Tuner - Aux - Tape 1+2	: 200 mV (50 kohm)
Uitgang IEC 581	: 2x65 W (8 ohm)
63-12.500 Hz D ⩽ 0.7%	: 2x80 W (4 ohm)
Uitgangs impedantie	: 4 - 16 ohm
Hoofdtelefoon impedantie	: 8 - 600 ohm
MFB uitgang	: 1 V

Voor meer uitgebreide technische specificaties gelieve de commerciële dokumentatie te raadplegen

(F)

Tension d'alimentation	: 110 - 220 V AC
Encombrement	: 450x132x330 mm
Sensibilité d'entrée phono 1+2	: 2.5 mV (47 kohm)
Adaptateur-magnètophone-Aux-1+2	: 200 mV (50 kohm)
Sortie IEC 581	: 2x65 W (8 ohm)
63-12.500 Hz D ⩽ 0.7%	: 2x80 W (4 ohm)
Impedance de sortie	: 4 - 16 ohm
Impedance casque d'encoute	: 8 - 600 ohm
MFB sortie	: 1 V

Pour l'obtention de données techniques plus détaillées veuillez consultez la documentation commerciale

(D)

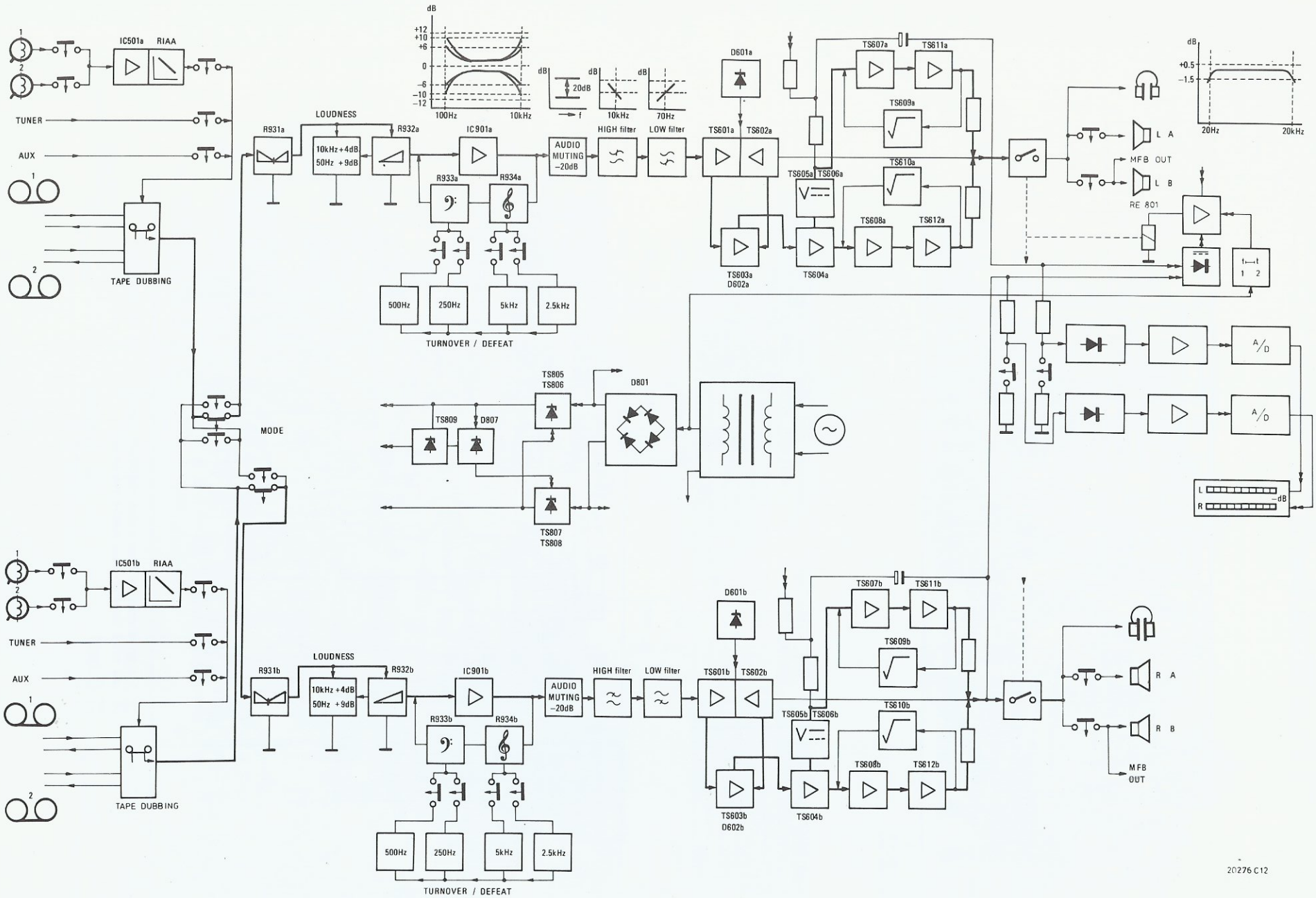
Speisespannung	: 110 - 220 V AC
Abmessungen	: 450x132x330 mm
Eingangsempfindlichkeit Phono 1+2	: 2.5 mV (47 kohm)
Tuner- Aux - Tape 1+2	: 200 mV (50 kohm)
Ausgangsleistung IEC 581	: 2x65 W (8 ohm)
63-12.500 Hz D ⩽ 0.7%	: 2x80 W (4 ohm)
Ausgangsimpedanz	: 4 - 16 ohm
Kopfhörer - Impedanz	: 8 - 600 ohm
MFB Ausgang	: 1 V

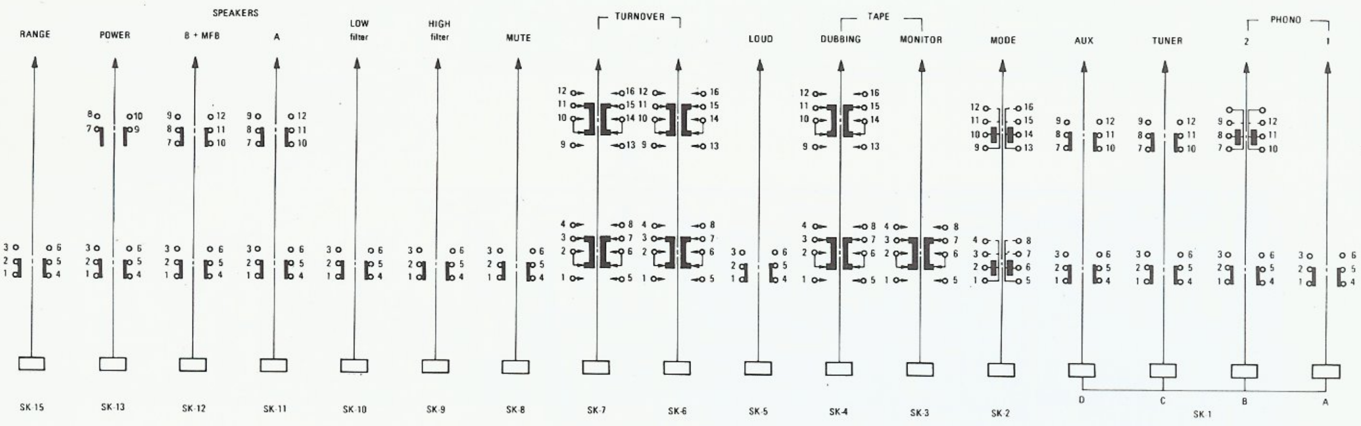
Für eine mehr detaillierte technische Spezifikation verweisen wir auf die kommerziele Dokumentation

(S)

Matningsspänning	: 110 - 220 V AC
Dimensioner	: 450x132x330 mm
Ingångskänslighet Grammofon 1+2	: 2.5 mV (47 kohm)
Tuner - Aux - Bandspelare 1+2	: 200 mV (50 kohm)
Uteffect IEC 581	: 2x65 W (8 ohm)
63-12.500 Hz D ⩽ 0.7%	: 2x80 W (4 ohm)
Utgångsimpedans	: 4 - 16 ohm
Hörtelefonimpedans	: 8 - 600 ohm
MFB Utgång	: 1 V

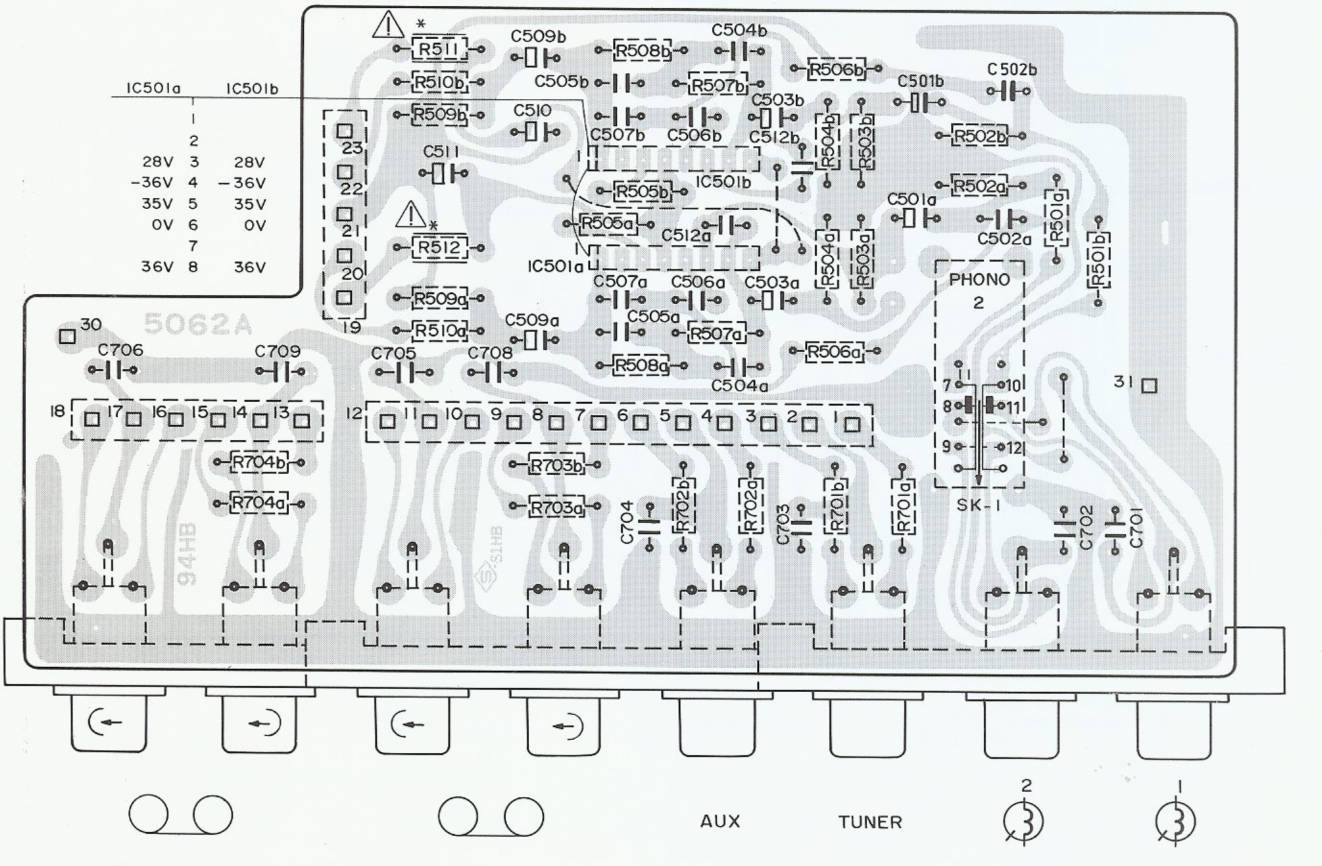
För mera detaljerade tekniska data se kommersiel dokumentation


IC501a
RIAA
TUNER
AUX
TAPE DUBBING
R931a
LOUDNESS
10kHz +4dB
50Hz +9dB
R932a
IC901a
R933a
R934a
500Hz
250Hz
5kHz
2.5kHz
TURNOVER / DEFEAT
AUDIO MUTING −20dB
HIGH filter
LOW filter
TS601a
TS602a
TS603a
D602a
TS604a
D601a
TS605a
TS606a
TS607a
TS611a
TS609a
TS610a
TS608a
TS612a
L A
MFB OUT
L B
RE 801
20Hz
20kHz
A/D
MODE
TS805
TS806
D801
TS809
D807
TS807
TS808
IC501b
TS607b
TS611b
TS609b
R931b
R932b
IC901b
R933b
R934b
TS601b
TS602b
TS603b
D602b
TS604b
D601b
TS605b
TS606b
TS610b
TS608b
TS612b
R A
R B
20276 C12



20279 C12

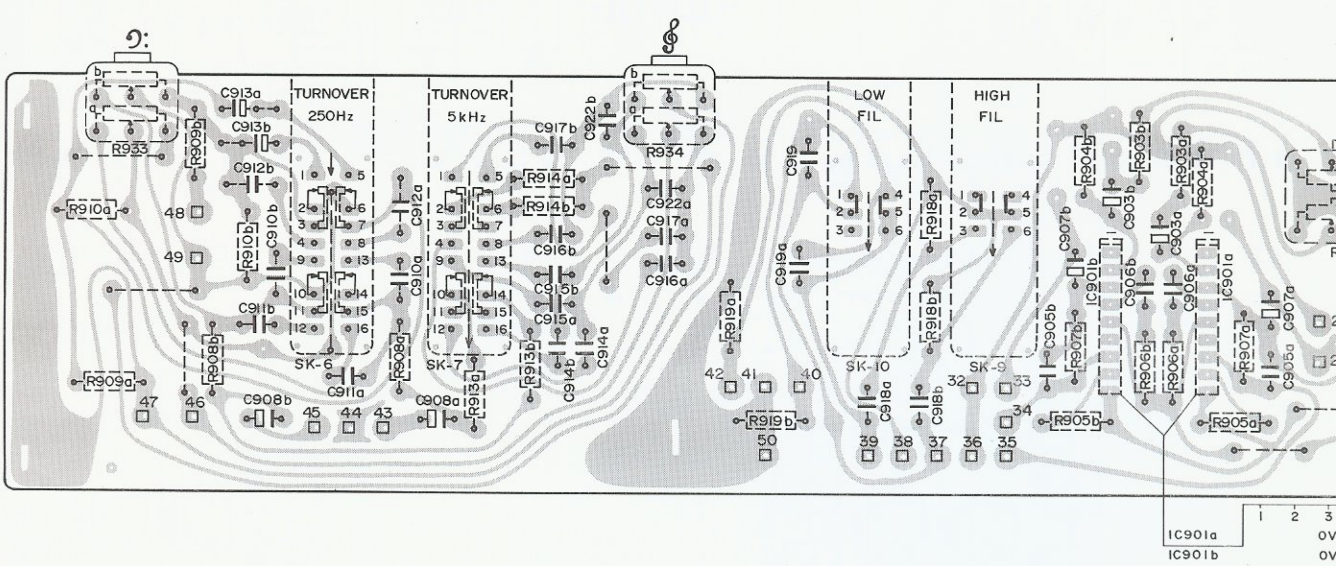
M	IC501a IC501b SK-1	M
C	706 705 511 510 509b 503b - 507b 512b 501b 502b	C
C	709 708 509a 704 503a - 507a 512a 703 501a 502a 702 701	C
R	704b 509b 510b 511 703b 508b 505b 702b 507b 701b 504b 503b 506b 502b 501b	R
R	704a 510a 509a 512 703a 505a 508a 702a 507a 701a 504a 506a 503a 502a 501a	R



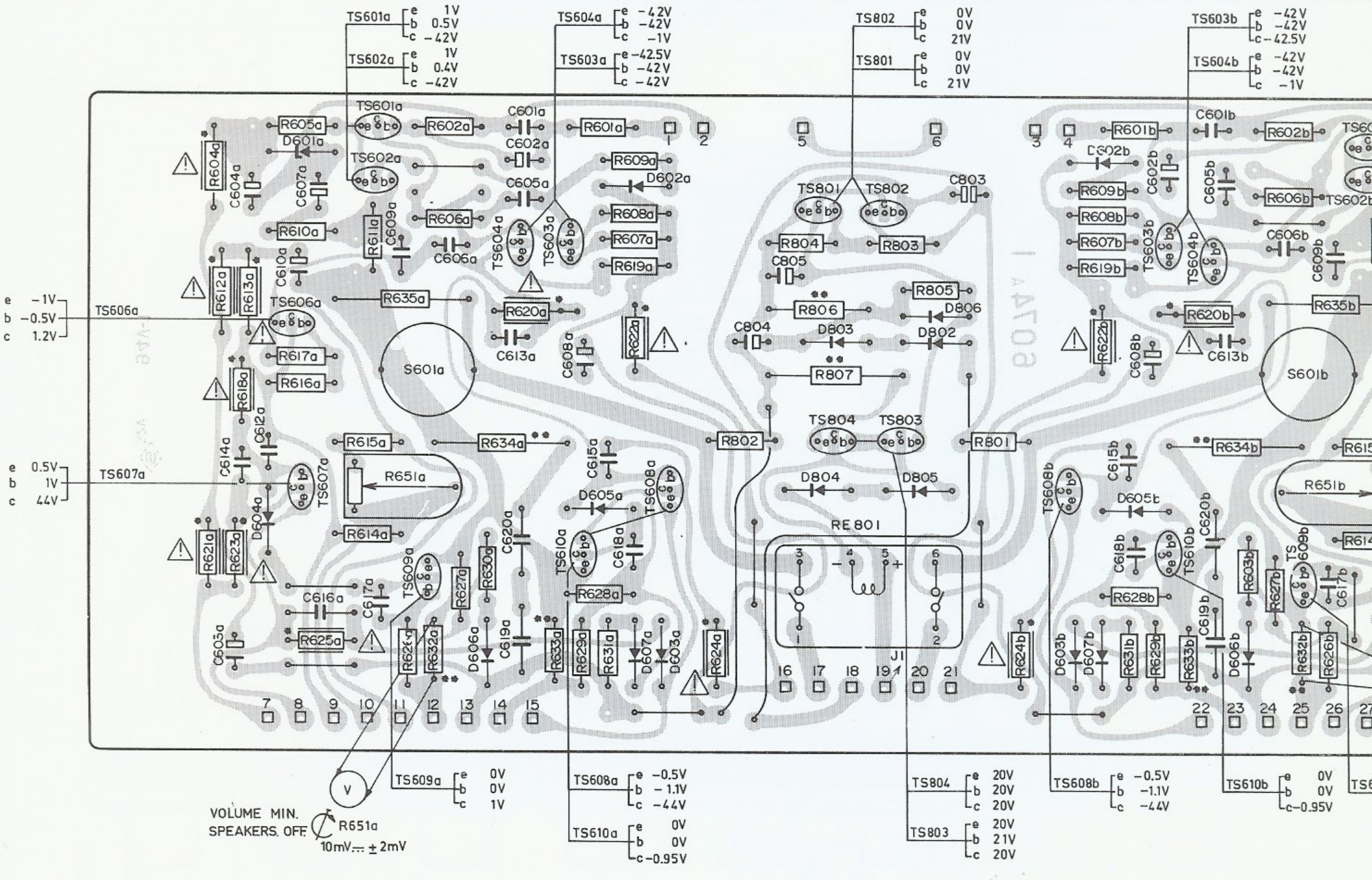
* TO BE MOUNTED 10mm ABOVE THE PRINT

20280 C12

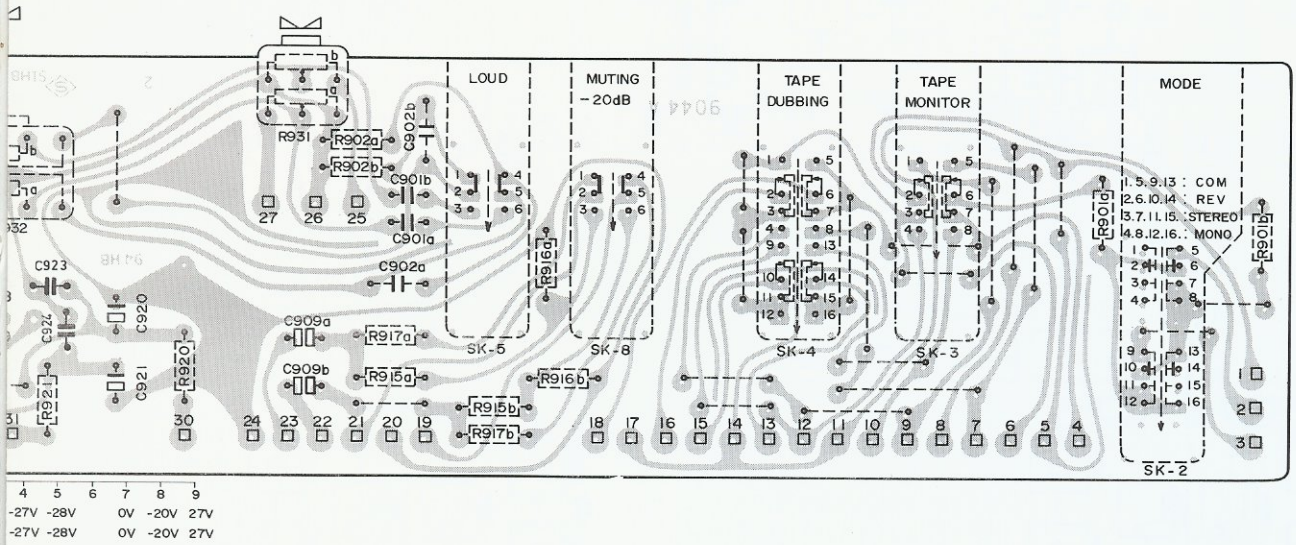
M	SK-6 SK-7 SK-10 SK-9 IC901b IC901a
C	910b-913b 908b 913a 910a-912a 908a 914b-917b 922b 914a-917a 922a 919a 919b 918a 918b 905b 907b903b 906b 903a 906a 905a 907a
R	910a 909a 933 909b 908b 910b 908a 913a 913b 914b 914a 934 919a 919b 918b 918a 903b-907b 903a-907a



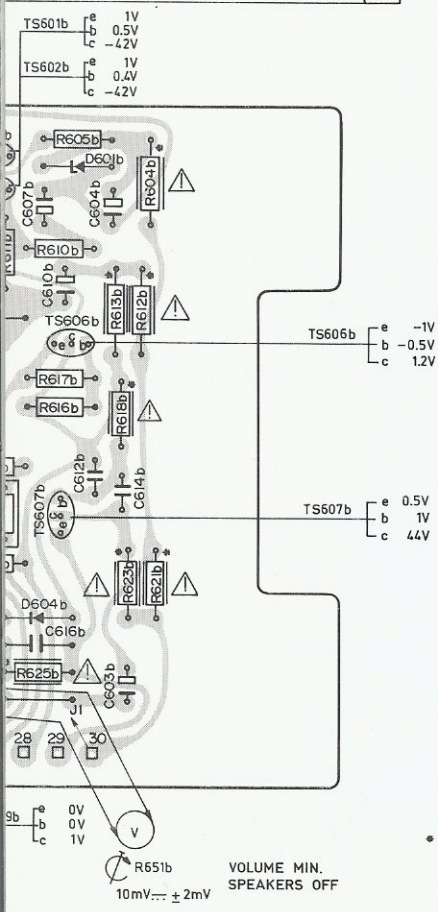
M	D601a TS606a TS601a S601a TS604a TS603a D605a D602a TS608a TS801-TS804 D806 TS608b D602b TS603b TS604b S601b TS6
M	D604a TS607a TS602a TS609a D606a TS610a D607a D603a RE801 D802-D805 D603b D607b D605b TS610b D606b TS609b TS6
C	604a 610a 607a 609a 606a 601a 602a 602b 601b 605b 606b 609b
C	614a 612a 605a 613a 608a 615a 803-805 608b 613b
C	603a 616a 617a 620a 619a 618a 615b 618b 620b 619b 617b
R	604a 605a 610a 611a 602a 606a 620a 601a 607a-609a 607b-609b 601b 620b 602b 606b
R	612a-618a 651a 633a-635a 619a 801-807 619b 633b-635b 651b
R	621a 623a 625a-627a 628a-632a 622a 624a 624b 622b 628b-632b 625b



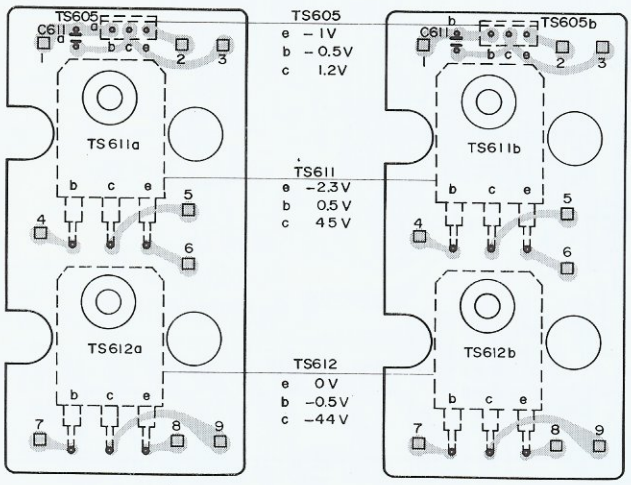
								SK-5		SK-8		SK-4		SK-3		SK-2		M
923 924 921 920				909b 909a 902a 901a 901b 902b														C
932 921			920		931 902b 902a 915a 917a			917b 915b 916a 916b								901a	901b	R



1b	D601b TS606b		M
2b	D604b TS607b		M
	610b 604b		C
	607b 612b 614b		C
	616b 603b		C
11b	610b 605b 604b		R
	612b - 618b		R
627b	623b 621b		R



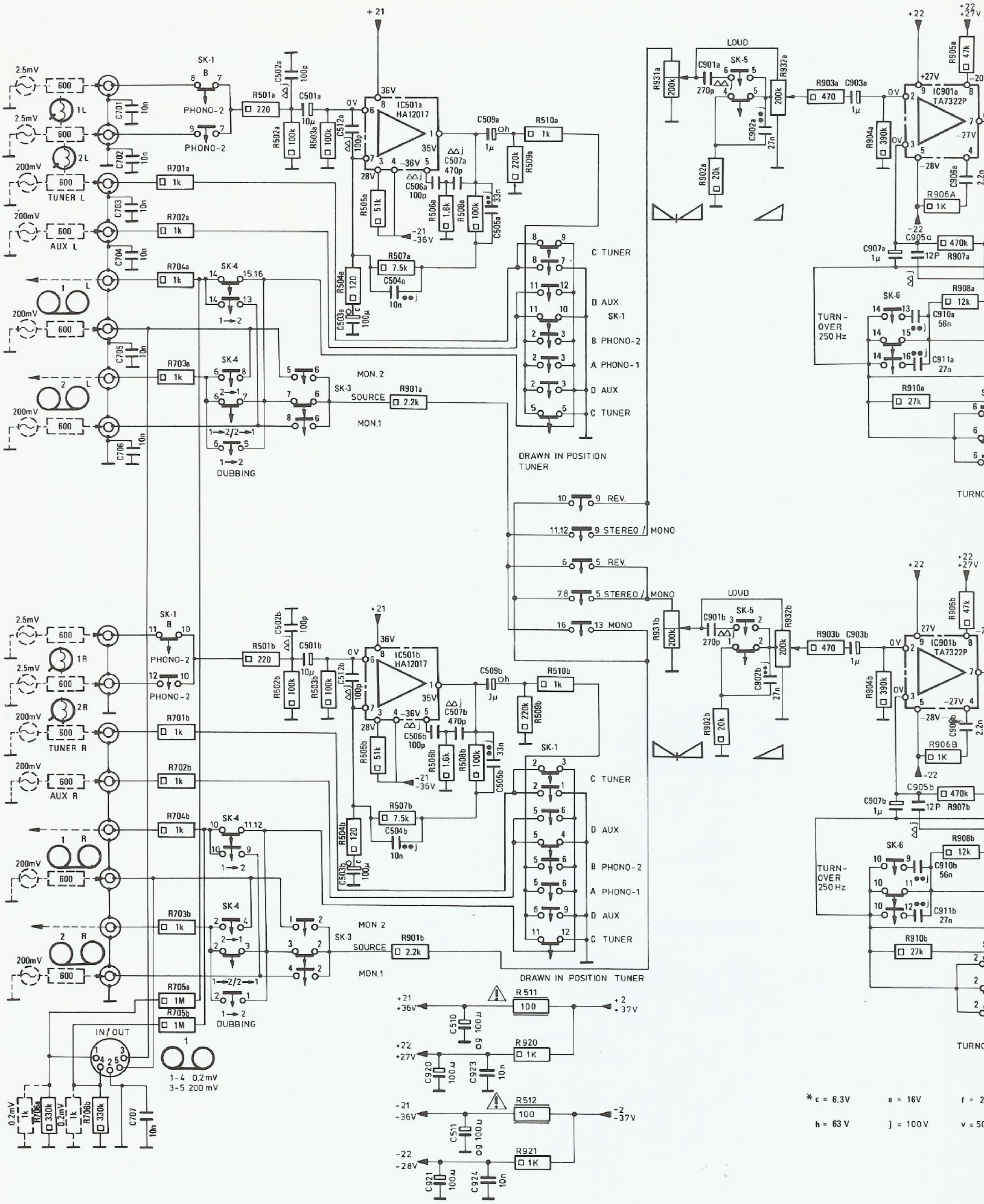
M	TS605a.TS611a.TS612a	TS605b.TS611b.TS612b	M
C	611a	611b	C



* TO BE MOUNTED 10mm A BOVE THE PRINT.
** TO BE MOUNTED 15mm A BOVE THE PRINT.

20274 E12

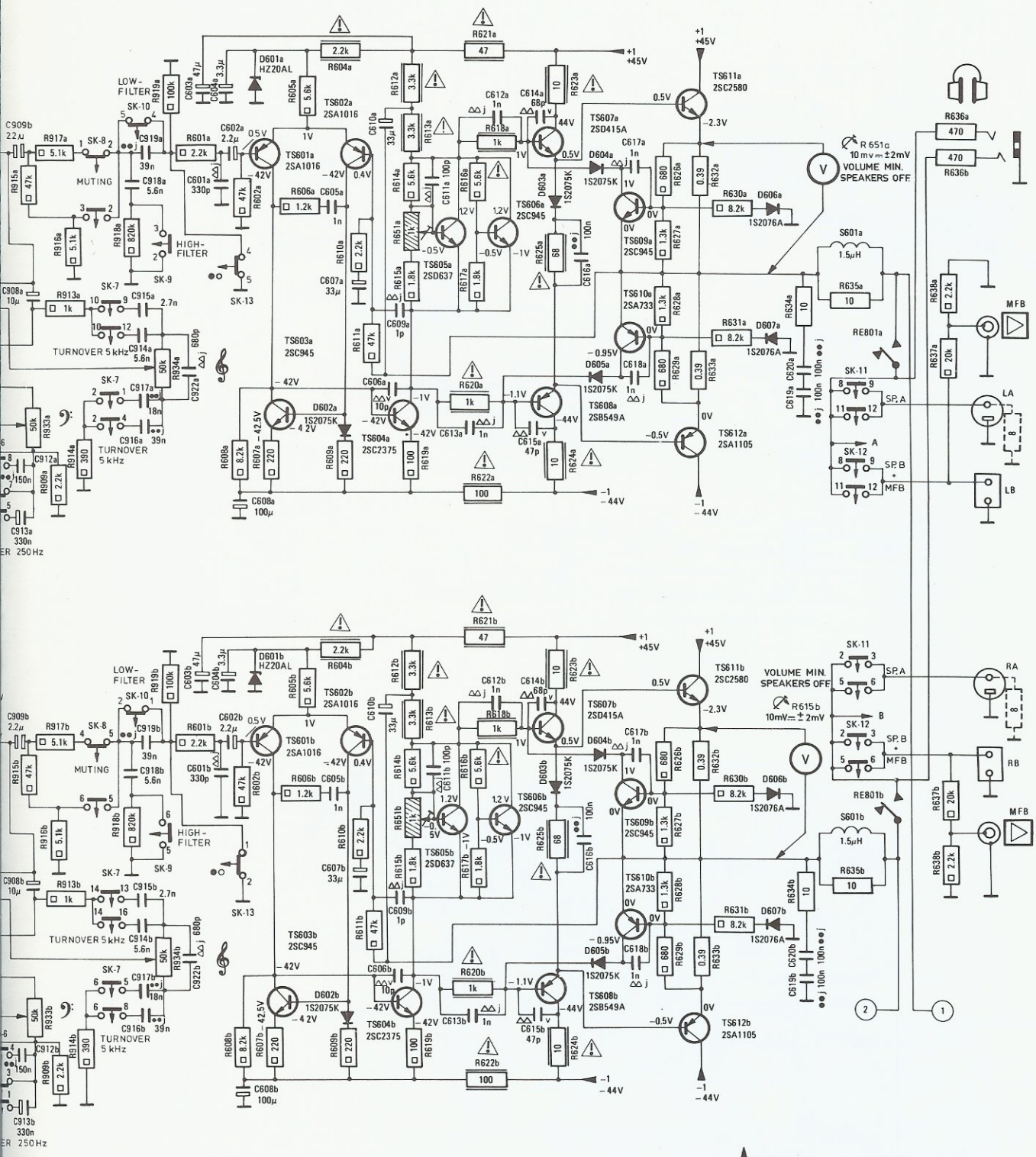
M	IC501a IC901a
M	IC501b IC901b
C	701 – 706 512a 501a – 507a 509a 510 511 901a – 903a 905 a – 9
C	707 512b 501b – 507b 509b 921 923 924 920 901b – 903b 905 b – 9
R	701a – 704a 501a – 508a 901a 509a 510a 511 512 931a 902a 932a 903a – 910a
R	706a 706b 701b – 704b 705a 705b 501b – 508b 901b 509b 510b 921 920 931b 902b 932b 903b – 910b



*c = 6.3V e = 16V f = 2

h = 63 V j = 100V v = 50

						D601a	TS601a – TS806a	D602a					D603a – D605a		TS607a – TS612b		D606a	D607a	S601a	RE801a					M
						D601b	TS601b – TS806b	D602b					D603b – D605b		TS607b – TS612a		D606b	D607b	S601b	RE801b					M
		914a – 919a	922a	608a	601a – 605a	607a	606a			609a – 615a			616a – 618a			619a	620a							C
		914b – 919b	922b	608b	601b – 605b	607b	606b			609b – 615b						619b	620b							C
933a	913a – 919a	934a	601a	602a				651a	604a – 625a					626a – 635a						636b	636a – 638a			R
933b	913b – 919b	934b	601b	602b				651b	604b – 625b					626b – 635b							637b	638b		R



CARBON RESISTOR E24 SERIES 0.125W 5%

PLATE CERAMIC CAPACITOR

MINIATURE ELECTROLYTIC CAPACITOR

FLAT-FOIL POLYESTER CAPACITOR

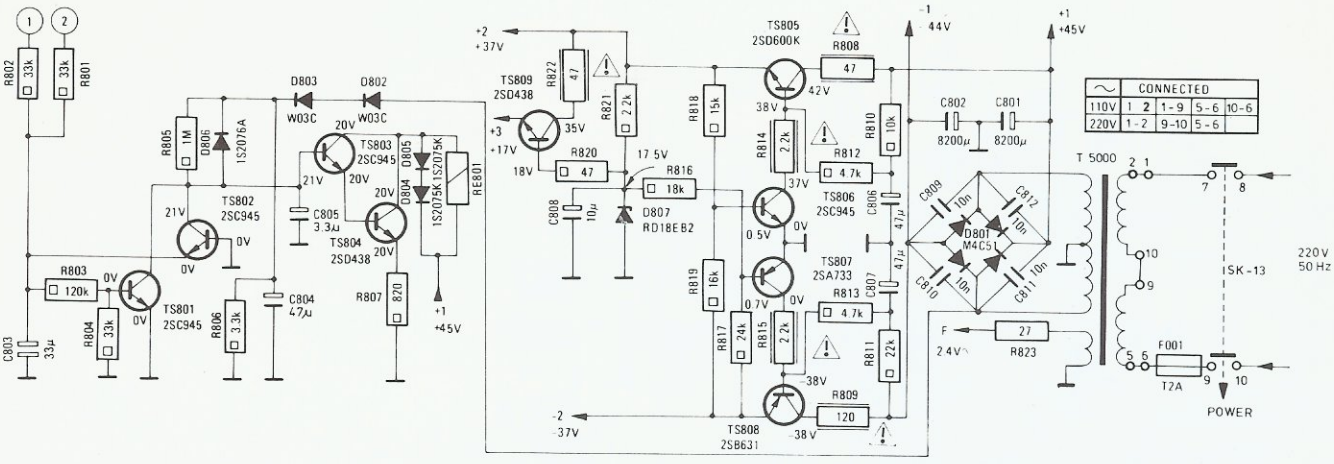
MINIATURE BIPOLAR ELECTROLYTIC CAPACITOR

ELECTRONIC VOLTMETER

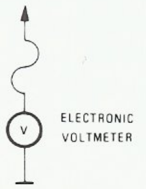
20273 E12

CS 70 909

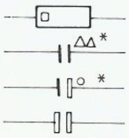
M	D806 TS801 TS804 D802 D804 RE801 TS809 D807 TS805 TS808 D801 T5000 F001	M
C	803 804 805 808 806 807 801 802 809 812	C
R	801 – 807 814 822 808 813 823	R



~	CONNECTED			
110V	1 2	1-9	5-6	10-6
220V	1-2	9-10	5-6	



ELECTRONIC VOLTMETER



* e = 16V
f = 25V
v = 500V

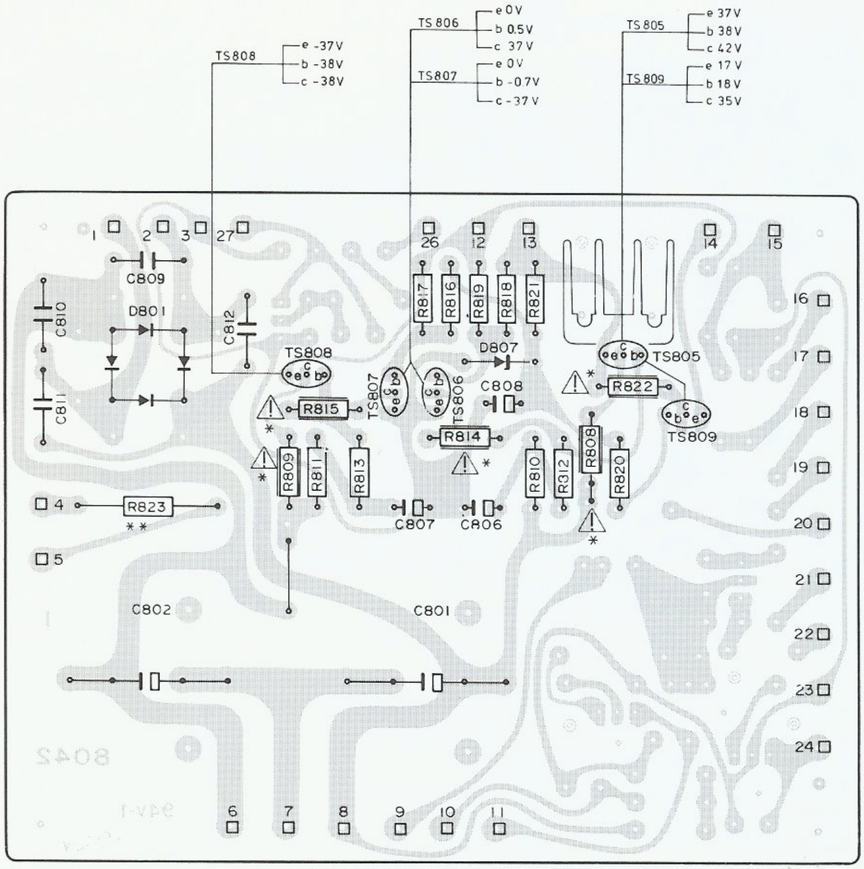
CARBON RESISTOR E24 SERIES 0.125W 5%

PLATE CERAMIC CAPACITOR

MINIATURE ELECTROLYTIC CAPACITOR

MINIATURE BIPOLAR ELECTROLYTIC CAPACITOR

M	D801 TS808 TS807 TS806 D807 TS805 TS809	M
C	**810** 811 809 812 806-808	C
C	802 801	C
R	815 816-819 **821** 822	R
R	823 809 811 813 814 **810** 812 808 820	R

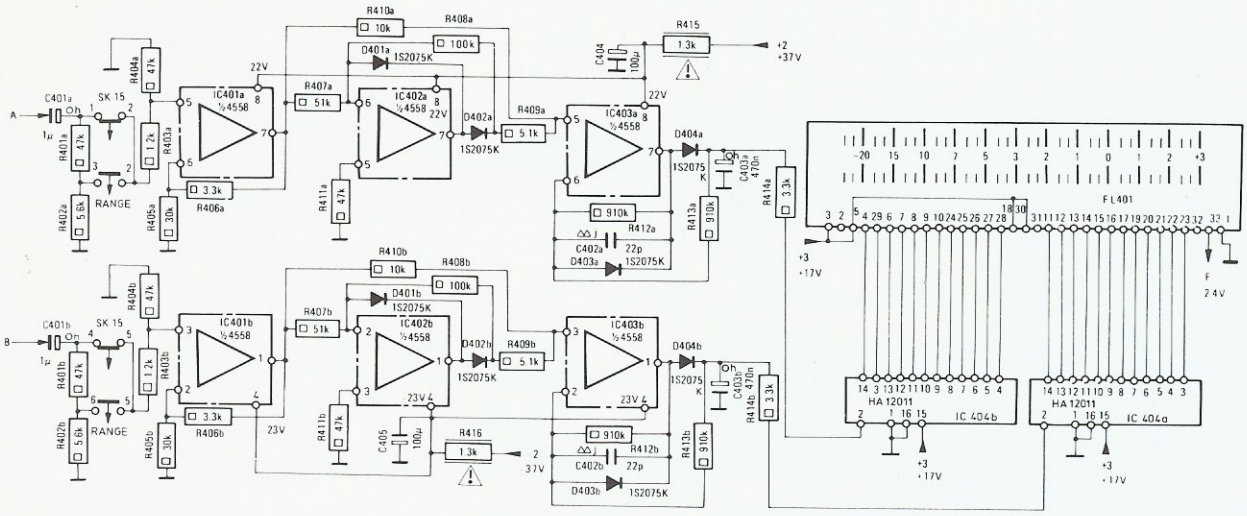


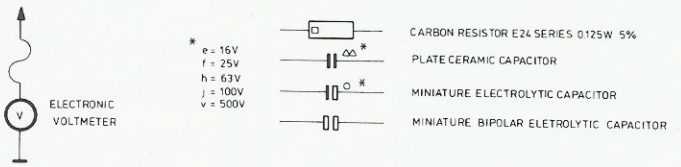
* TO BE MOUNTED 10mm ABOVE THE PRINT

** TO BE MOUNTED 15mm ABOVE THE PRINT

20272 C12

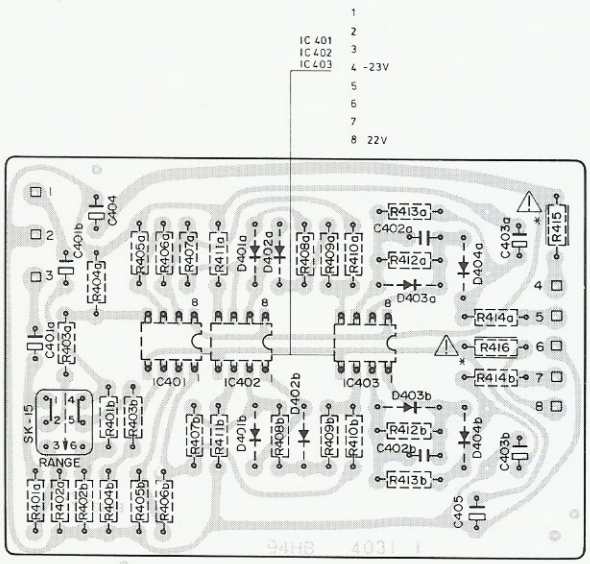
M	IC401a	D401a	IC402a	D402a	IC403a	D403a	D404a	FL401	M
M	IC401b	D401b	IC402b	D402b	IC403b	D403b	D404b	IC 404b	IC 404a	M
C	401a	402a	404	403a	C
C	401b	405	402b	403b	C
R	401a - 406a	407a - 411a	412a	414a	415	R
R	401b - 406b	407b - 411b	416	412b	414b	R

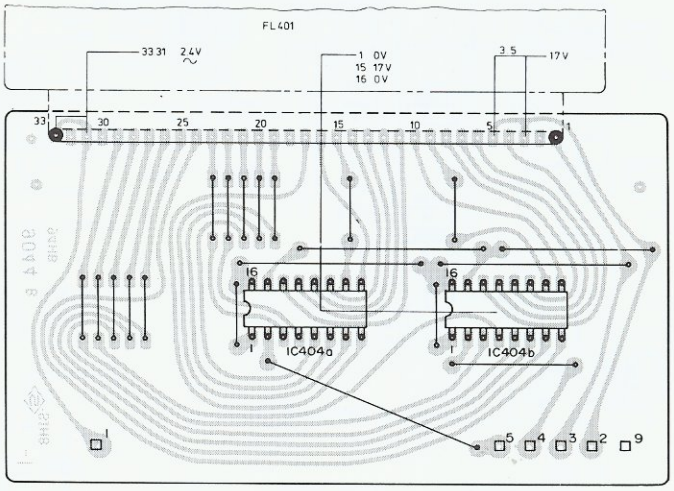




M	IC401	IC402	D401a	D402a	IC403	D403a	D404a	M
M	D401b	D402b	D403b	D404b	M
C	401a	401b	404	402b	402a	405	403a	403b	C
R	401a - 404a	405a - 407a	411a	408a - 410a	412a	413a	414a	415	R
R	401b - 407b	411b	408b - 410b	412b	413b	414b	416	R

M	FL-401	IC404a	IC404b	M

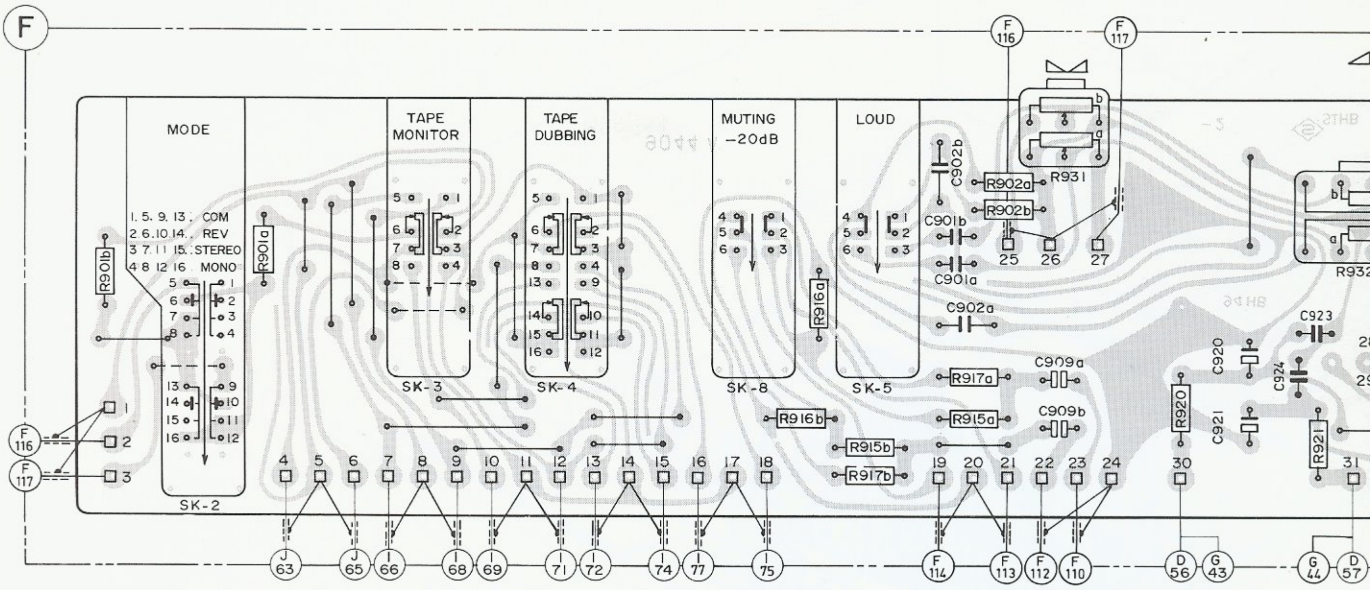




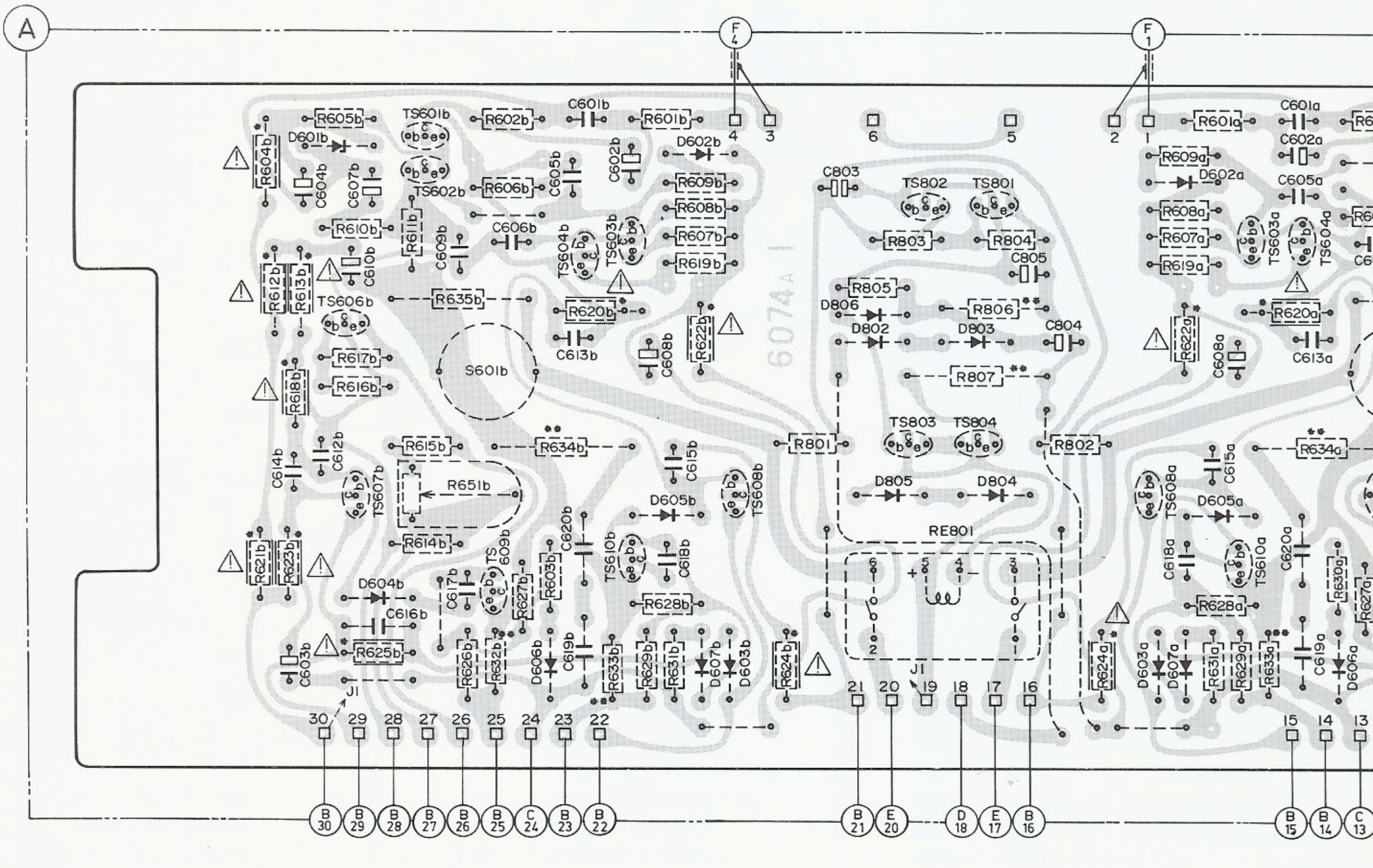
* TO BE MOUNTED 10mm ABOVE THE PRINT

20271 D12

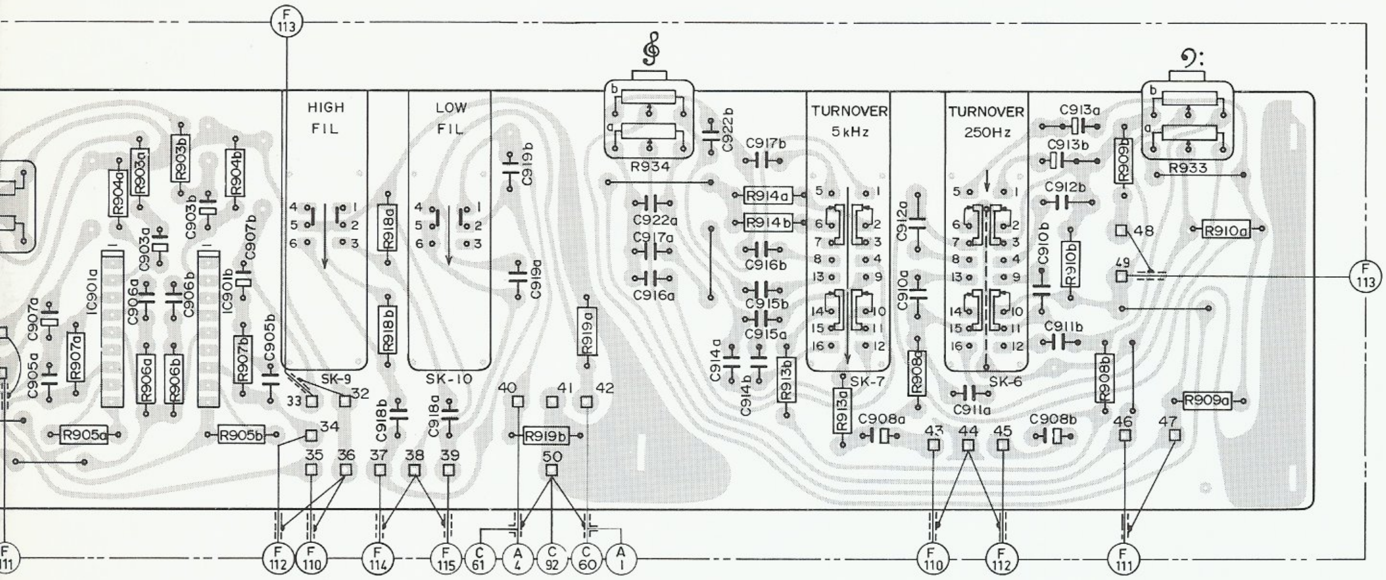
M	SK-2 SK-3 SK-4 SK-8 SK-5
C	902b 901b 901a 902a 909a 909b 920 921 924 923
R	901b 901a 916b 916a 915b 917b 917a 915a 902a 902b 931 920 921 932



M	TS606b D601b TS601b S601b TS604b TS603b D602b TS608b D806 TS801 - TS804 TS608a D602a D605a TS603a TS604a
M	TS607b D604b TS602b TS609b D606b TS610b D605b D607b D603b D802 - D805 RE801 D603a D607a TS610a D606a
C	604b 610b 609b 606b 605b 601b 602b 602a 601a
C	614b 612b 607b 613b 608b 803 - 805 615a 608a 613a 605a
C	603b 616b 617b 619b 620b 618b 615b 618a 619a 620a
R	604b 605b 610b 611b 606b 602b 620b 601b 607b - 609b 607a - 609a 601a 620a
R	618b - 612b 651b 633b - 635b 619b 801 - 807 619a 633a - 635a
R	621b 623b 625b - 627b 628b - 632b 622b 624b 624a 622a 628a - 632a

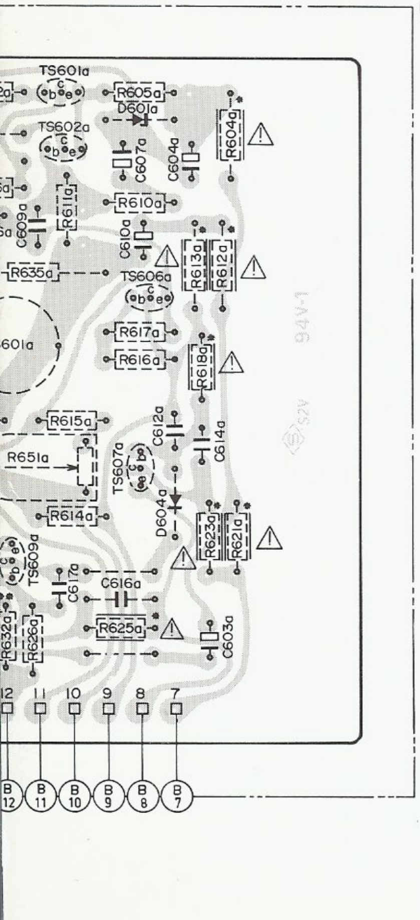


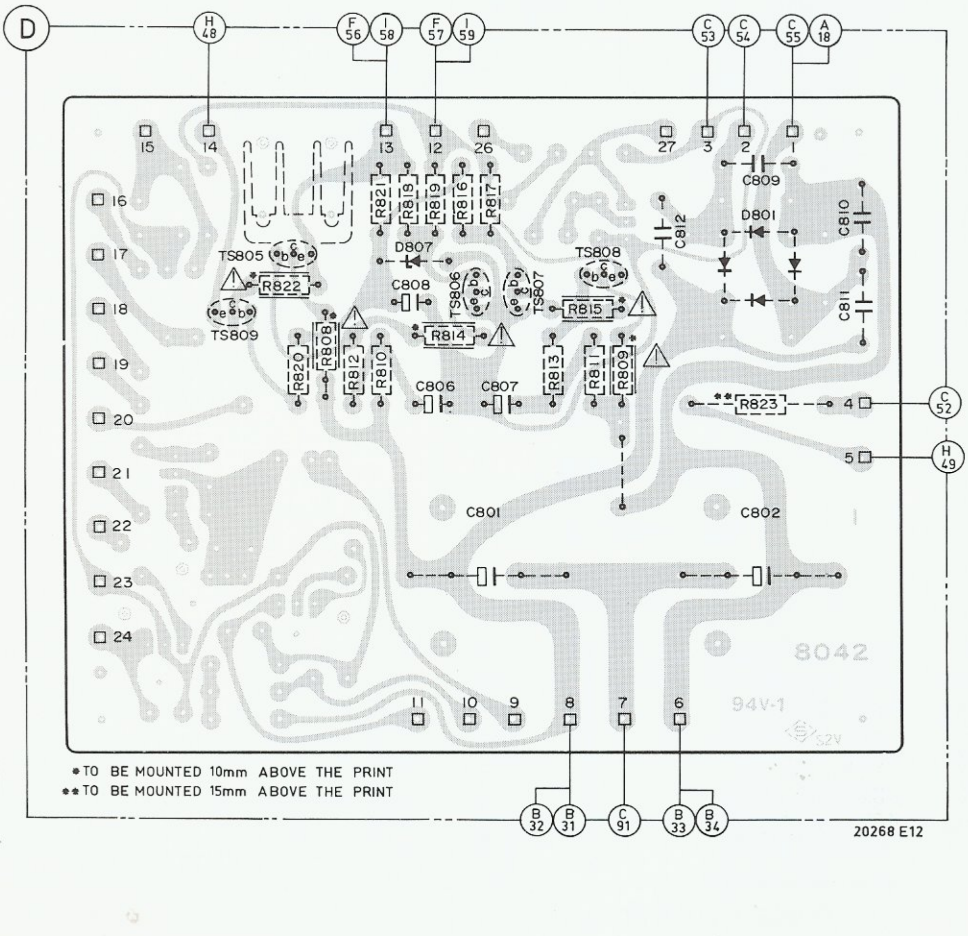
IC901a IC901b SK-9 SK-10 SK-7 SK-6	M
907a 905a 906a 903a 906b 903b 907b 905b 918b 918a 919b 919a 922a 914a-917a 922b 914b-917b 908a 910a-912a 913a 908b 910b -913b	C
903a -907a 903b-907b 918a 918b 919b 919a 934 914a 914b 913b 913a 908a 910b 908b 909b 933 909a 910a	R



01a TS601a TS606a D601a	M
09a TS602a TS607a D604a	M
609a 607a 610a 604a	C
612a 614a	C
617a 616a 603a	C
02a 611a 610a 605a 604a	R
651a 612a -618a	R
625a -627a 623a 621a	R

M	TS809 TS805 D807 TS806 TS807 TS808 D801	M
C	806-808 812 809 811 810	C
C	801 802	C
R	822 821 816-819 815	R
R	820 808 812 810 814 813 811 809 823	R

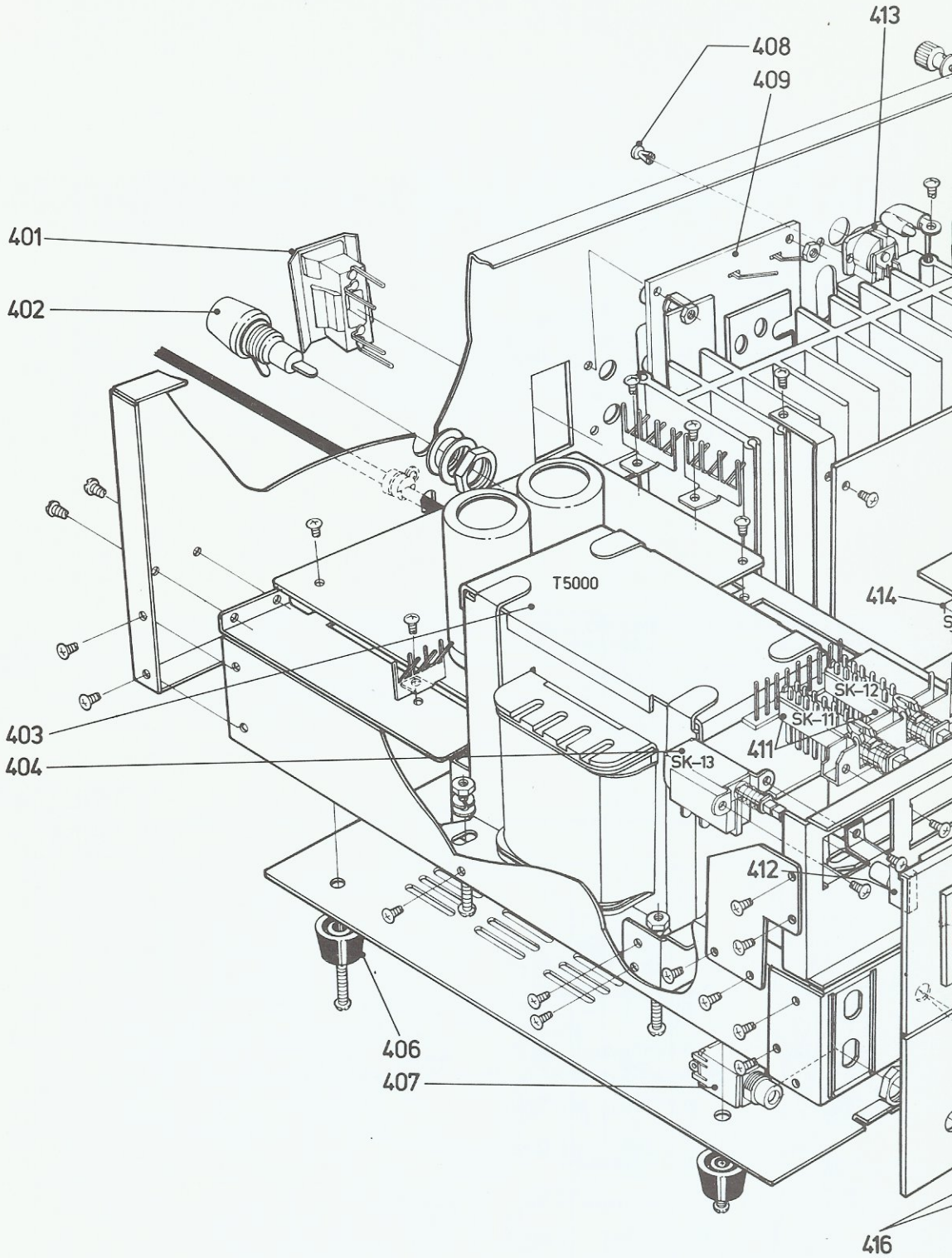




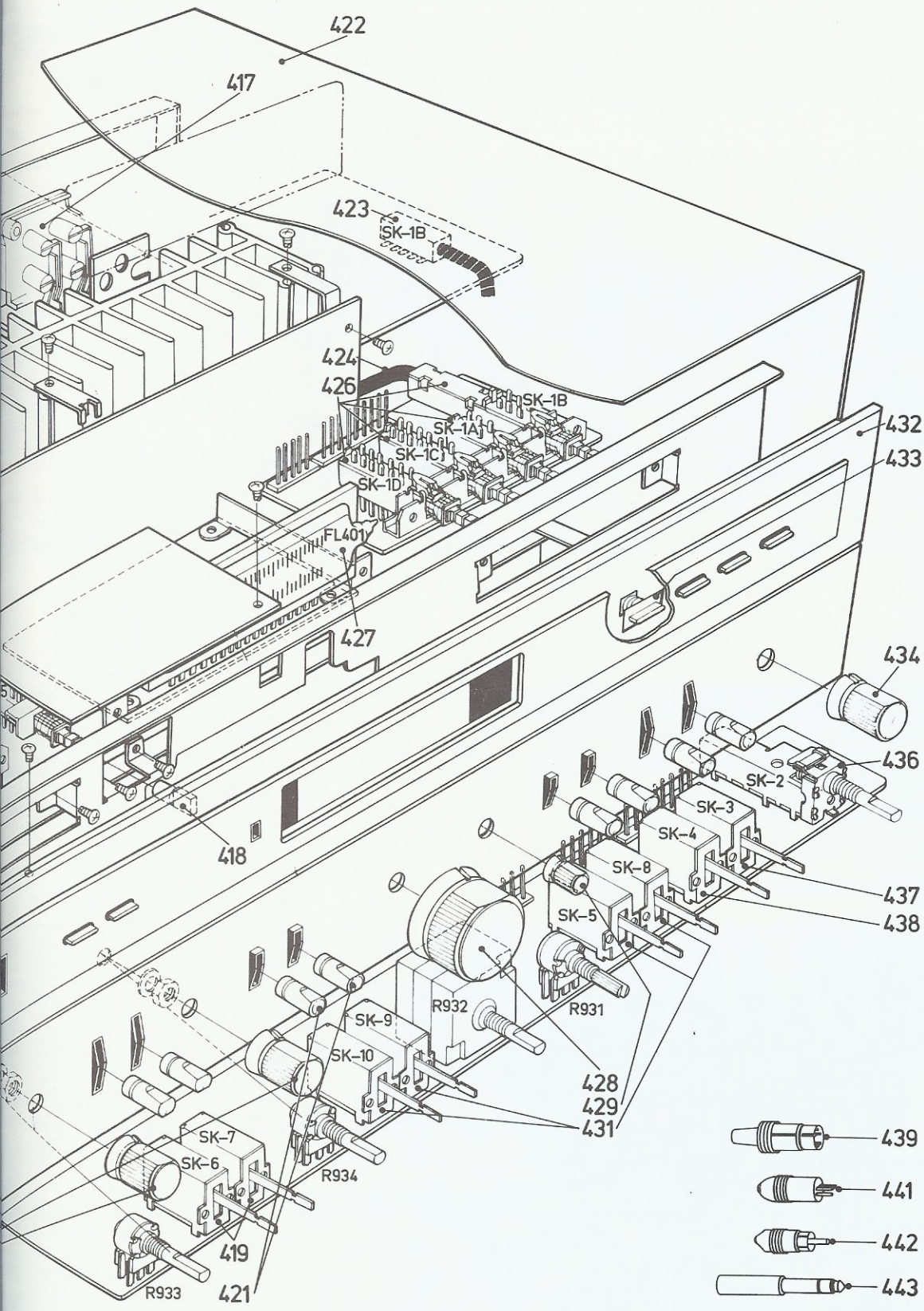
* TO BE MOUNTED 10mm ABOVE THE PRINT

** TO BE MOUNTED 15mm ABOVE THE PRINT

20268 E12



401	4822 267 30331	412	4822 410 40165	423	4822 277 30641	4	
402	4822 256 30162	413	4822 267 20179	424	4822 267 30347	4	
403	4822 146 20593	414	4822 276 10784	426	4822 276 40254	4	
	4822 146 20603—/15	416	4822 413 30876	427	4822 130 90036	4	
404	4822 277 10507	417	4822 267 40358 4p	428	4822 413 51071	4	
406	4822 462 71166	417	4822 267 40357 6p	429	4822 413 30875	4	
407	4822 267 30329	418	4822 413 30877	431	4822 277 10519	4	
408	4822 532 60719	419	4822 277 10523	432	4822 454 10732		
409	4822 290 40155	421	4822 410 40166	433	4822 413 30886		
411	4822 276 20264	422	4822 466 30091	434	4822 413 30876		



20275 E12

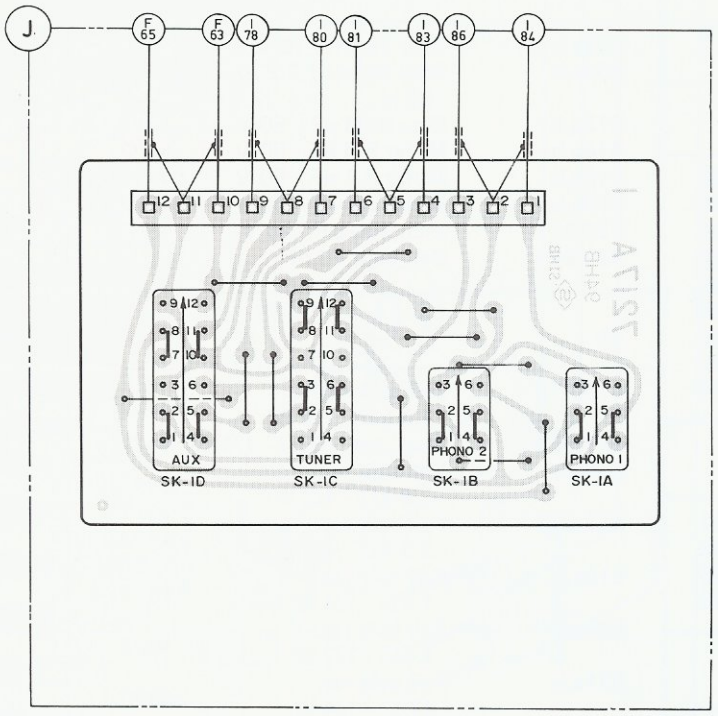
4822 273 30252
4822 277 10521
4822 277 10522
4822 264 40023
4822 264 30041

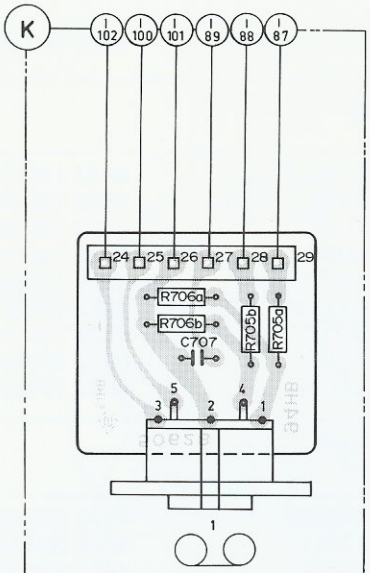
4822 264 30039
4822 264 30011

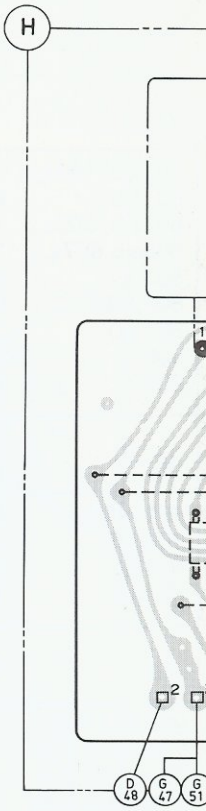
M	SK-1D	SK-1C	SK-1B	SK-1A	M

C	707	C
R	706a.706b 705b 705a	R

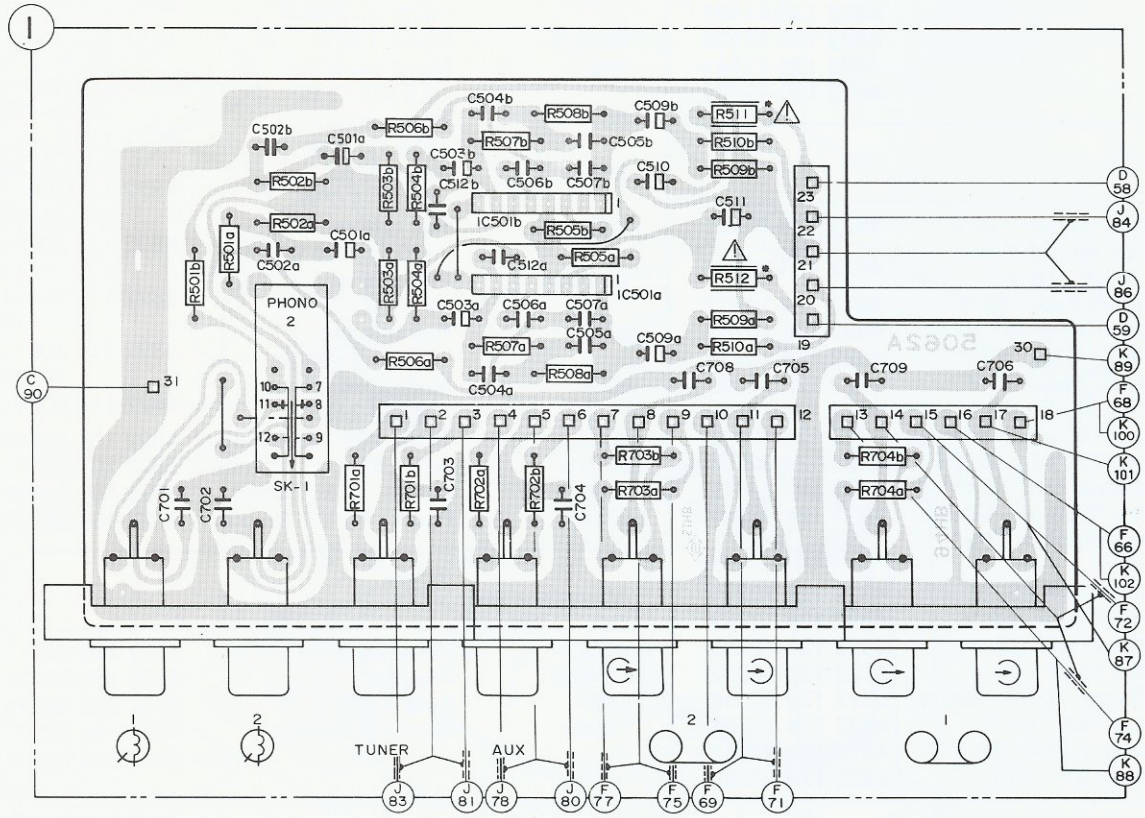
M	



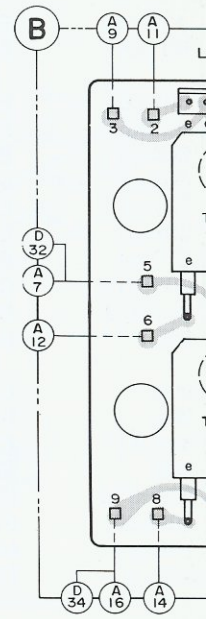




M	SK-1	IC501b IC501a	M
C	502b 501b 512b 503b-507b 509b 510 511 705 706		C
C	701 702 502a 501a 703 512a 503a-507a 704 509a 708 709		C
R	501b 502b 506b 503b 504b 701b 507b 702b 505b 508b 703b 511 510b 509b 704b		R
R	501a 502a 503a 506a 504a 701a 507a 702a 508a 505a 703a 512 509a 510a 704a		R

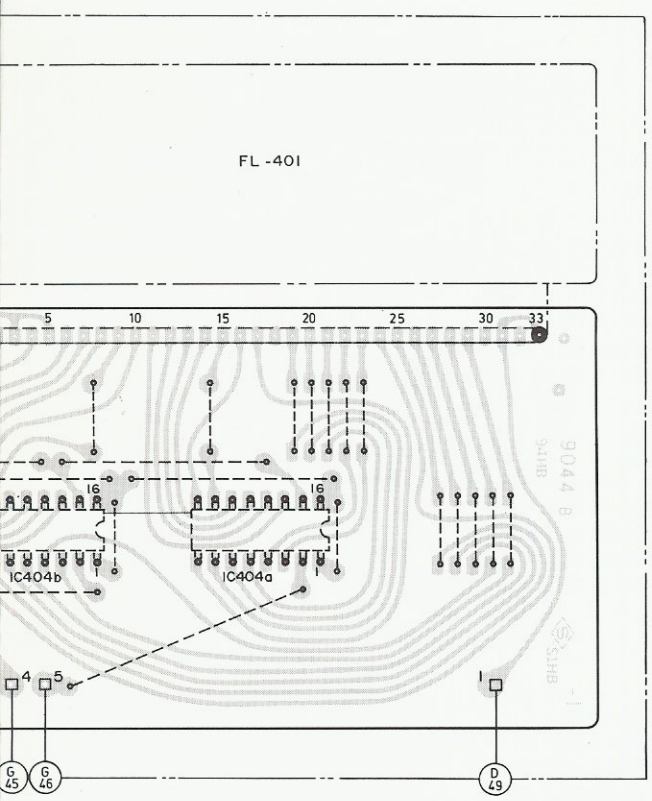


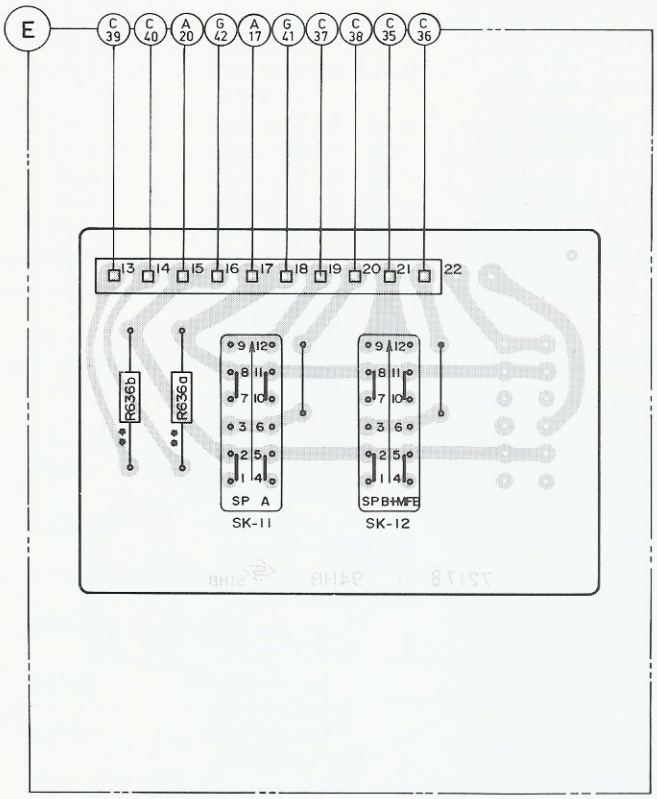
M	TS612a TS6
C	



IC404b	IC404a FL-401		M

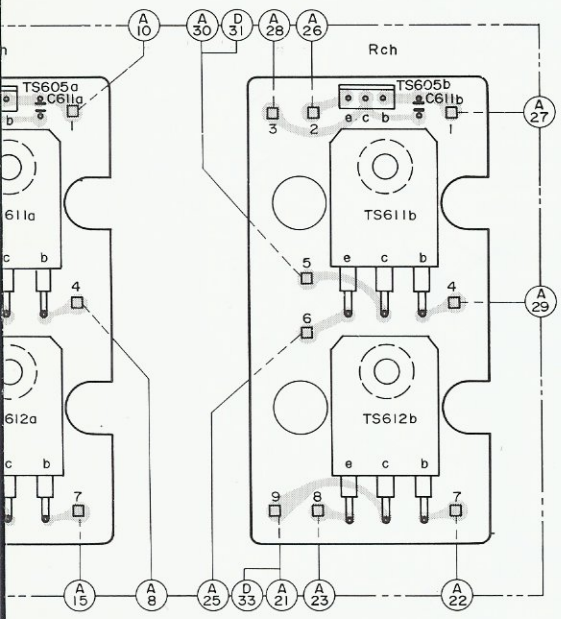
M	SK-11	SK-12	M
R	636b 636a		R

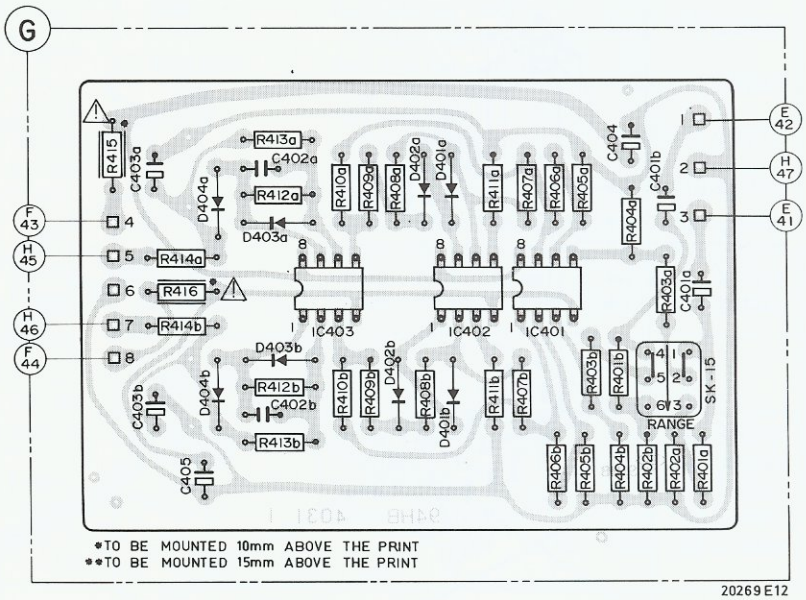


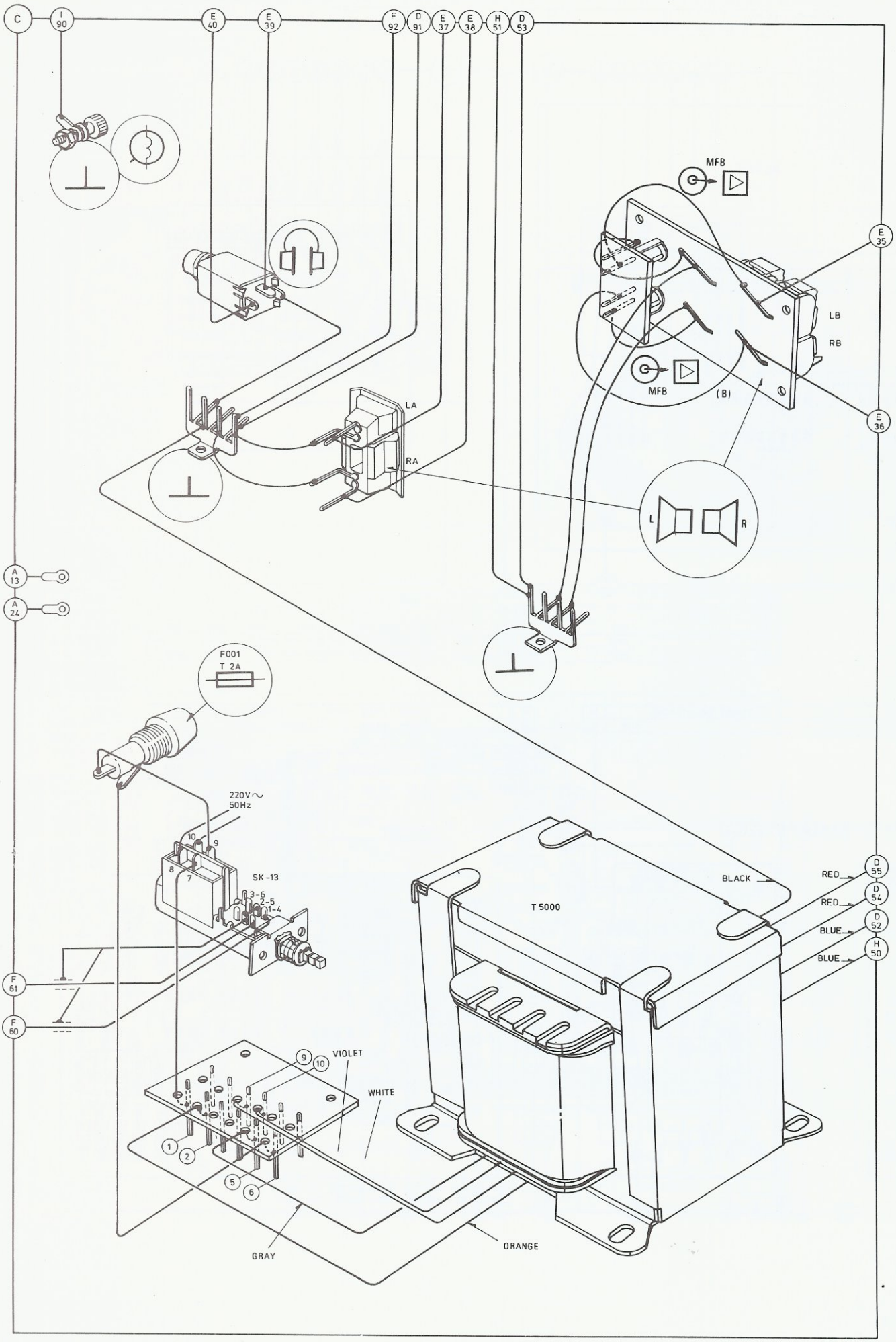


la TS605a	TS612b TS611b TS605b		M
611a		611b	C

M	D404a	D403a	IC403	D402a	D401a	IC402	IC401	SK-15	M
M	D404b	D403b	D402b	D401b	M
C	403b 403a	405	402a 402b	404	401b	401a	C
R	415	414a	413a	412a	408a-410a	411a	405a-407a	401a-404a	R
R	416	414b	413b	412b	408b-410b	411b	401b-407b	R







20270 D12

CS 70 914

-S-		
601a,b	Choke coil 1.5 μH	4822 157 90052

-D-		
401a,b÷404a,b	1S2075K	4822 130 31026
601a,b	HZ20AL	4822 130 31285
602a,b÷605a,b	1S2075K	4822 130 31026
606a,b,607a,b	1S2076A	5322 130 34792
801	M4C-51-13	4822 130 50325
802,803	W03B,C	4822 130 31004
804,805	1S2075K	4822 130 31026
806	1S2076A	5322 130 34792
807	RD18EB2	4822 130 31024

-IC-		
401÷403	NJM4558D	4822 209 80401
404a,b	HA12011	4822 209 80669
501a,b	HA12017	4822 209 80695
901a,b	TA7322P	4822 209 80648

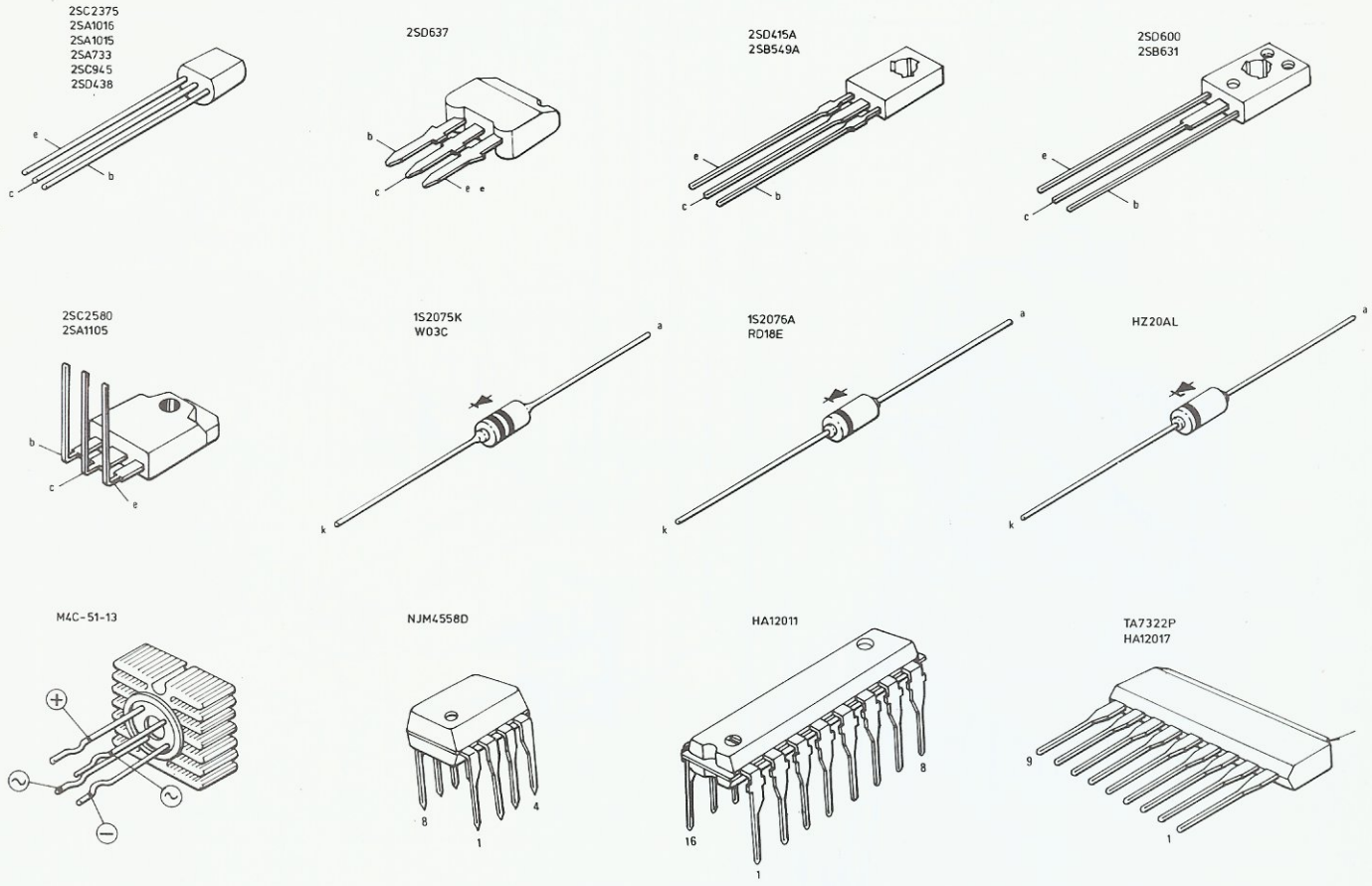
-TS-		
2SA733 P,Q		4822 130 44256
2SA1016 F,G		4822 130 41488
2SA1105 O,Y		4822 130 41489
2SB549A R,Q		4822 130 41491
2SB631K		4822 130 41136
2SC945 L-P		4822 130 41198
2SC2375 E,F		4822 130 41492
2SC2580 O,Y		4822 130 41493
2SD415A		4822 130 41494
2SD438 E,F		4822 130 41139
2SD600K		4822 130 41141
2SD637		4822 130 41323

-C-		
404-405	Elco 100 μF - 16 V	4822 124 10231
501a,b	Elco Lo-leak - 10 μF - 16 V	4822 124 20964
602a,b	Elco 2.2 μF - 50 V	4822 124 10237
603a,b	Elco 47 μF - 63 V	4822 124 10243
604a,b	Elco 3.3 μF - 50 V	4822 124 10239
605a,b	Mylar 1 nF - 50 V	4822 122 31269
607a,b	Elco 33 μF - 6.3 V	4822 124 10196
608a,b	Elco 100 μF - 63 V	4822 124 10242
610a,b	Elco 330 μF - 35 V	4822 124 10234
701÷707	Ceramic cap. 10 nF	5322 122 34072
801,802	Elco 8200 μF - 56V	4822 124 40282
803	Elco Bipolair 33 μF 16 V	4822 124 20649
804	Elco 47 μF - 50 V	4822 124 10241
805	Elco 3.3 μF - 50 V	4822 124 10239
806,807	Elco 47 μF - 35 V	4822 124 10235
808	Elco 10 μF - 25 V	4822 124 10232
809÷812	Cer.cap. 10 nF - 500 V	5322 122 50046
903a,b	Elco 1 μF - 50 V	4822 124 10236
906a,b	Mylar 2.2 nF - 50 V	4822 121 41247
907a,b	Elco 1 μF - 50 V	4822 124 10236

-C-		
908a,b	Elco 10 μF - 16 V	5322 124 14066
909a,b	Elco Bipolair 2.2 μF - 25 V	4822 124 20657
913a,b	Elco 0.33 μF - 50 V	4822 124 10238
914a,b	Mylar 5.6 nF - 50 V	4822 121 41186
915a,b	Mylar 2.7 nF - 50 V	4822 121 41184
918a,b	Mylar 5.6 nF - 50 V	4822 121 41186
920,921	Elco 100 μF - 25 V	4822 124 10233
923,924	Cer. cap. 10 nF	5322 122 34072

-R-		
415,416	Fail safe res. 1.3 kΩ - 1/4 W	4822 111 30611
511,512	Fuse. res. 100Ω - 1/4 W	4822 115 90141
604a,b	Fail safe res. 2.2 kΩ - 1/2 W	4822 111 30607
612,613	Fail safe res. 3.3 kΩ - 1/2 W	4822 111 30598
618a,b	Fail safe res. 1 kΩ - 1/4 W	4822 111 30602
620a,b	Fail safe res. 1 kΩ - 1/2 W	4822 111 30606
621a,b	Fail safe res. 47 Ω - 1/4 W	4822 111 30612
622a,b	Fail safe res. 100 Ω - 1/4 W	4822 111 50412
623a,b-624a,b	Fuse res. 10 Ω - 1/4 W	4822 115 90134
625a,b	Fail safe res. 68 Ω - 1/4 W	4822 111 30613
632a,b-633a,b	Cement res. 0.39Ω - 5W	4822 113 80248
634a,b-635a,b	Metal res. 10Ω - 2 W	5322 116 54348
636a,b	Metaloxide res. 470 Ω - 2 W	4822 116 60068
651a,b	Potm. 1 kΩ	4822 100 10292
806	Metal oxide res. 3.3 kΩ - 1 W	4822 116 60059
807	Metal oxide res. 820 Ω - 2 W	4822 116 60069
808	Fail safe res. 47 Ω - 1/2 W	4822 111 30608
809	Fail safe res. 120 Ω - 1/4 W	4822 111 30609
814,815	Fail safe res. 2.2 kΩ - 1/4 W	4822 111 30594
822	Fail safe res. 47 Ω - 1/4 W	4822 111 30612
823	Metal oxide res. 27 Ω - 2 W	4822 116 60092
931a,b	Potm. 200 kΩ (balance)	4822 101 20569
932a,b	Potm. 200 kΩ (volume)	4822 101 20571
933a,b	Potm. 50 kΩ (bass)	4822 101 20568
934a,b	Potm. 50 kΩ (treble)	4822 101 20567

-Miscellaneous-		
RE801	Relay 24 V	4822 280 50017
FL401	Display	4822 130 90036
F001	Fuse T 2A	4822 253 30025
T5000	Mains transformer	4822 146 20593
		/15– 4822 146 20603



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

SF

Korjatessa laitetta on turvallisuussyistä ehdottomasti eneteltävä oikein ja käytettävä tehtaan määräämiä alkuperäisvaraosia.