

PRESIDENT BENJAMIN



MANUEL DE MAINTENANCE.

ALIGNEMENT DU SYNTHETISEUR

CARACTERISTIQUES COMMERCIALES

GENERALES :

Bande de fréquences : 26,965 MHz à 27,405 MHz

Nombre de canaux : 40

Ecart entre canaux : 10 KHz

Classe d'émission : A3E (AM); F3E (FM); J3E (BLI); J3E (BLS)

Tension d'alimentation : Secteur 220 V.

Marge de température : - 10° C à + 55° C

Impédance d'antenne : 50 Ohms

EMETTEUR :

Ecart de fréquence : moins que +/- 800 Hz

Puissance d'émission : 4 W crête (1W en AM - 4W en FM, BLI, BLS)

Impédance du microphone : 500 Ohms

Puissance émise dans le canal adjacent : inférieure à 20 microwatts.

RECEPTEUR :

Première F.I. : 10,695 MHz

Deuxième F.I. : 4 55 KHz

Impédance du haut-parleur incorporé : 8 Ohms

Puissance de sortie B.F. : 2W

Sensibilité : meilleure que 12 dB/microvolt (f, e, m)

ALIGNEMENT DU SYNTHETISEUR

1) Equipement nécessaire

- | | |
|----------------------------------|----------------------------|
| a) Fréquencemètre 200MHz | g) Générateur HF |
| b) Voltmètre continu | h) Voltmètre HF continu |
| c) Distortiomètre | i) Voltmètre HF alternatif |
| d) Wattmètre avec charge fictive | j) Oscilloscope |
| e) Détecteur FM linéaire | k) Charge 8 Ohms |
| f) Générateur Audio-Fréquence | |

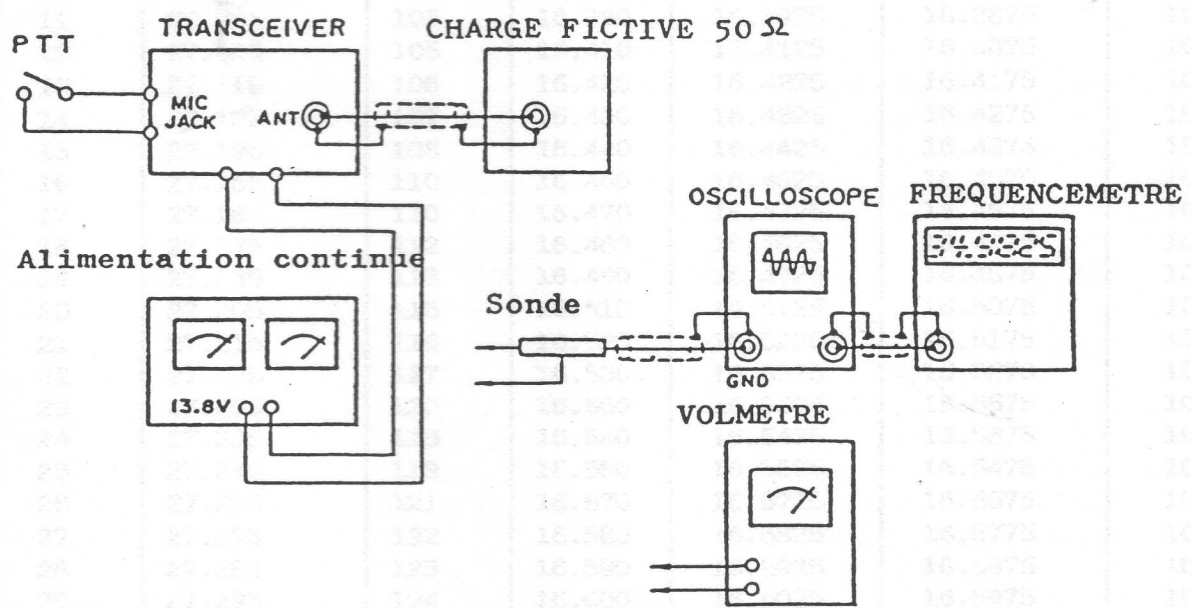
2) Procédure d'alignement

ORDRE	M O D E	REGLAGES	REMARQUES DE REGLAGE
1	RX AM CANAL 40	L 38	Relier l'oscilloscope à TP 4. Ajuster pour obtenir le maximum de signal.
2	I D E M	L 13	Relier le voltmètre à TP 2. Ajuster pour obtenir 4,5volts ± 0,1 v.
3	RX A M CANAL 1		Vérifier 2 volts sur TP 4
4	I D E M	L 14	Relier l'oscilloscope à TP 3. Ajuster pour obtenir le maximum de signal.
5	RX A M CANAL 19	L 15	Relier le fréquencemètre à TP3 Ajuster pour obtenir 16,490MHz ± 20 Hz.
6	RX F M		Vérifier sur TP 3 16,490 MHz ± 40Hz.
7	RX U S B CANAL 19	L 16	Ajuster L16 pour obtenir 16,4925 MHz ± 20Hz.
8	RX L S B Canal 19	L 17	Ajuster L 17 pour obtenir 16,4875 MHz ± 20 Hz.
9	TX L S B	VR 3	I D E M
10	TX A M	L 18	Ajuster pour obtenir 10,695 MHz ± 20 Hz.
11	TX F M		Vérifier 10,695 MHz ± 50 Hz.
12	RX U S B CANAL 19	L 19	Relier le fréquencemètre à T P 5. Ajuster pour obtenir 10,6925 ± 20 Hz.
13	RX L S B CANAL 19	L 20	Ajuster pour obtenir 10,6975 MHz ± 20 Hz.

ALIGNEMENT DU SYNTHETISEUR

CHANNEL NO.	FREQUENCY (MHz)	DIVIDER RATIO (K)	LOCAL FREQ. (MHz)	OSCILLATOR (MHz)	FREQUENCIES (MHz)	10% POINT (MHz)
1	16.270	10	16.270	16.2700	16.2675	16.2725
2	16.275	10	16.275	16.2750	16.2725	16.2775
3	16.280	10	16.280	16.2800	16.2775	16.2825
4	16.285	10	16.285	16.2850	16.2825	16.2875
5	16.290	10	16.290	16.2900	16.2875	16.2925
6	16.295	10	16.295	16.2950	16.2925	16.2975
7	16.300	10	16.300	16.3000	16.2975	16.3025
8	16.305	10	16.305	16.3050	16.3025	16.3075
9	16.310	10	16.310	16.3100	16.3075	16.3125
10	16.315	10	16.315	16.3150	16.3125	16.3175
11	16.320	10	16.320	16.3200	16.3175	16.3225
12	16.325	10	16.325	16.3250	16.3225	16.3275
13	16.330	10	16.330	16.3300	16.3275	16.3325
14	16.335	10	16.335	16.3350	16.3325	16.3375
15	16.340	10	16.340	16.3400	16.3375	16.3425
16	16.345	10	16.345	16.3450	16.3425	16.3475
17	16.350	10	16.350	16.3500	16.3475	16.3525
18	16.355	10	16.355	16.3550	16.3525	16.3575
19	16.360	10	16.360	16.3600	16.3575	16.3625
20	16.365	10	16.365	16.3650	16.3625	16.3675
21	16.370	10	16.370	16.3700	16.3675	16.3725
22	16.375	10	16.375	16.3750	16.3725	16.3775
23	16.380	10	16.380	16.3800	16.3775	16.3825
24	16.385	10	16.385	16.3850	16.3825	16.3875
25	16.390	10	16.390	16.3900	16.3875	16.3925
26	16.395	10	16.395	16.3950	16.3925	16.3975
27	16.400	10	16.400	16.4000	16.3975	16.4025
28	16.405	10	16.405	16.4050	16.4025	16.4075
29	16.410	10	16.410	16.4100	16.4075	16.4125
30	16.415	10	16.415	16.4150	16.4125	16.4175
31	16.420	10	16.420	16.4200	16.4175	16.4225
32	16.425	10	16.425	16.4250	16.4225	16.4275
33	16.430	10	16.430	16.4300	16.4275	16.4325
34	16.435	10	16.435	16.4350	16.4325	16.4375
35	16.440	10	16.440	16.4400	16.4375	16.4425
36	16.445	10	16.445	16.4450	16.4425	16.4475
37	16.450	10	16.450	16.4500	16.4475	16.4525
38	16.455	10	16.455	16.4550	16.4525	16.4575
39	16.460	10	16.460	16.4600	16.4575	16.4625
40	16.465	10	16.465	16.4650	16.4625	16.4675

3) SYNOPTIQUE DU BANC DE MESURE :



FREQUENCES OSCILLATEURS LOCAUX

CHANNEL NO.	RECEPTION FREQUENCIES (MHz)	DIVIDE RATIO (N)	LOCAL FM AM MODE	OSCILLATOR (MHz) USB MODE	FREQUENCIES LSB MODE	I.F. FREQUENCY (MHz)
1	26.965	91	16.270	16.2725	16.2675	10.695
2	26.975	92	16.280	16.2825	16.2775	10.695
3	26.985	93	16.290	16.2925	16.2875	10.695
4	27.005	95	16.310	16.3125	16.3075	10.695
5	27.015	96	16.320	16.3225	16.3175	10.695
6	27.025	97	16.330	16.3325	16.3275	10.695
7	27.035	98	16.340	16.3425	16.3375	10.695
8	27.055	100	16.360	16.3625	16.3575	10.695
9	27.065	101	16.370	16.3725	16.3675	10.695
10	27.075	102	16.380	16.3825	16.3775	10.695
11	27.085	103	16.390	16.3925	16.3875	10.695
12	27.105	105	16.410	16.4125	16.4075	10.695
13	27.115	106	16.420	16.4225	16.4175	10.695
14	27.125	107	16.430	16.4325	16.4275	10.695
15	27.135	108	16.440	16.4425	16.4375	10.695
16	27.155	110	16.460	16.4625	16.4575	10.695
17	27.165	110	16.470	16.4725	16.4675	10.695
18	27.175	112	16.480	16.4825	16.4775	10.695
19	27.185	113	16.490	16.4925	16.4875	10.695
20	27.205	115	16.510	16.5125	16.5075	10.695
21	27.215	116	16.520	16.5225	16.5175	10.695
22	27.225	117	16.530	16.5325	16.5275	10.695
23	27.255	120	16.560	16.5625	16.5575	10.695
24	27.235	118	16.540	16.5425	16.5375	10.695
25	27.245	119	16.550	16.5525	16.5475	10.695
26	27.265	121	16.570	16.5725	16.5675	10.695
27	27.275	122	16.580	16.5825	16.5775	10.695
28	27.285	123	16.590	16.5925	16.5875	10.695
29	27.295	124	16.600	16.6025	16.5975	10.695
30	27.305	125	16.610	16.6125	16.6075	10.695
31	27.315	126	16.620	16.6225	16.6175	10.695
32	27.325	127	16.630	16.6325	16.6275	10.695
33	27.335	128	16.640	16.6425	16.6375	10.695
34	27.345	129	16.650	16.6525	16.6475	10.695
35	27.355	130	16.660	16.6625	16.6575	10.695
36	27.365	131	16.670	16.6725	16.6675	10.695
37	27.375	132	16.680	16.6825	16.6775	10.695
38	27.385	133	16.690	16.6925	16.6875	10.695
39	27.395	134	16.700	16.7025	16.6975	10.695
40	27.405	135	16.710	16.7125	16.7075	10.695

ALIGNEMENT DE L'EMETTEUR

1) Equipement nécessaire

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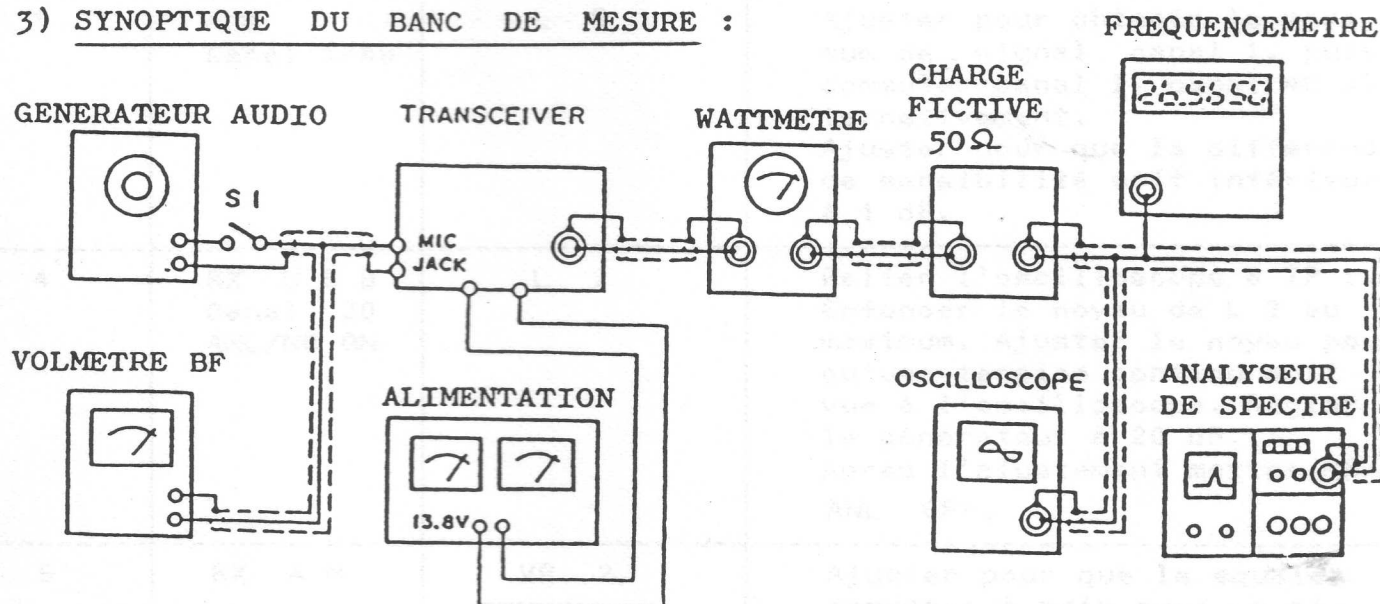
2) Procédure d'alignement

ORDRE	M O D E	REGLAGES	REMARQUES DE REGLAGE
1	U S B CANAL 19	VR - 9	Déconnecter B002 - PB 100 Relier un ampèremètre entre TP 8 (+) et TP 7 (-) Ajuster pour obtenir 65 mA. Si le réglage n'est pas possible mettre VR 9 au maxi.
2	IDEM	VR 8	Relier l'ampèremètre entre TP 8 (+) et TP 6 (-) Ajuster pour obtenir 30 mA.
3	U S B Mod 500Hz et 2,4KHz	L 34 - L 35 L 36 - L 37 et L 14	Remettre B002 - Relier le Wattmètre et l'oscilloscope à J 501 Ajuster pour obtenir le maximum de puissance.
4	U S B	L 36	Commuter alternativement de canal 1 à 40. Ajuster pour obtenir le minimum de différence de puissance entre les deux canaux.
5	A M	L 26	Ajuster le niveau de modulation d'entrée pour que la modulation de sortie soit approximativement de 90%, si le taux de modulation n'est pas suffisant ajuster avec VR 5.
6	U S B 30 mV modul	VR 6	Ajuster pour obtenir 12 W sur le Voltmètre.
7	U S B sans modul	VR 4	Ajuster pour que la porteuse résiduelle soit au minimum.
8	A M	VR 10	Ajuster pour obtenir 4 W sur le Wattmètre.

ALIGNEMENT DE L'EMETTEUR

ORDRE	M O D E	REGLAGES	REMARQUES DE REGLAGE
9	A M sans modul	VR 7	Régler le Vu mètre
10	30 mV modul	VR 5	Ajuster la modulation pour obtenir 90%
11	F M	VR 601	Relier l'excursiomètre FM pour obtenir 2,5 KHz d'excursion

3) SYNOPTIQUE DU BANC DE MESURE :



ALIGNEMENT DU RECEPTEUR

1) Equipement nécessaire

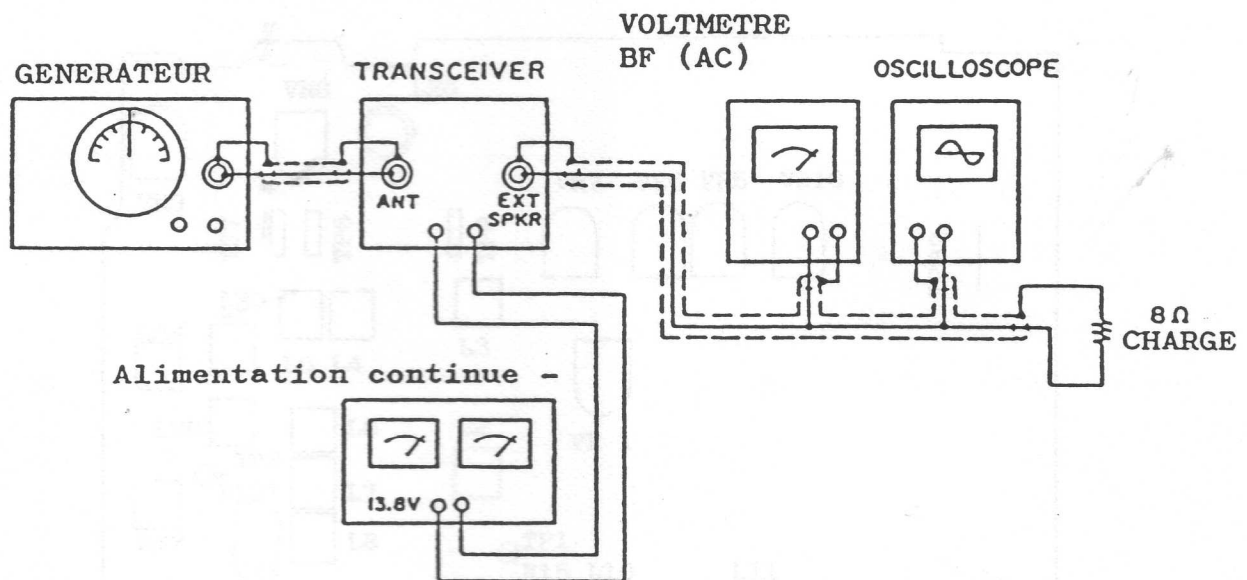
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2) Procédure d'alignement

ORDRE	M O D E	REGLAGES	REMARQUES DE REGLAGE
1	RX AM CANAL 19	L 5	Enfoncer le noyau au maxi.
2	R X	L 3 - 4 - 6 - L 7 - 8 - 10 - L11.	Ajuster chaque bobine pour obtenir le maximum.
3	A M Canal 1/40	L 5	Ajuster pour obtenir le maximum de signal canal 1, puis commuter canal 1, canal 40 alternativement. Ajuster pour que la différence de sensibilité soit inférieure à 1 dB.
4	RX U S B Canal 20 ANL/NB ON	L 2	Relier l'oscilloscope à TP 1. Enfoncer le noyau de L 2 au maximum. Ajuster le noyau pour qu'une tension continu soit vue à l'oscilloscope. Régler le générateur à 20 dB. Après l'ajustement mettre NB/ANL OFF.
5	RX A M	VR 2	Ajuster pour que le squelch commence à agir avec un niveau d'entrée du générateur = 66 dB \pm 2 dB.
6	I D E M	VR 1	Régler le générateur à 46 dB sans modulation. Ajuster le signal pour obtenir S 9.
7	RX F M	L 602	Relier l'oscilloscope à TP 12 Ajuster pour obtenir le maximum de signal.
8	I D E M	L 601	Régler le générateur 1,5 KHz de déviation - 66 dB. Ajuster pour obtenir le maximum de puissance de sortie.

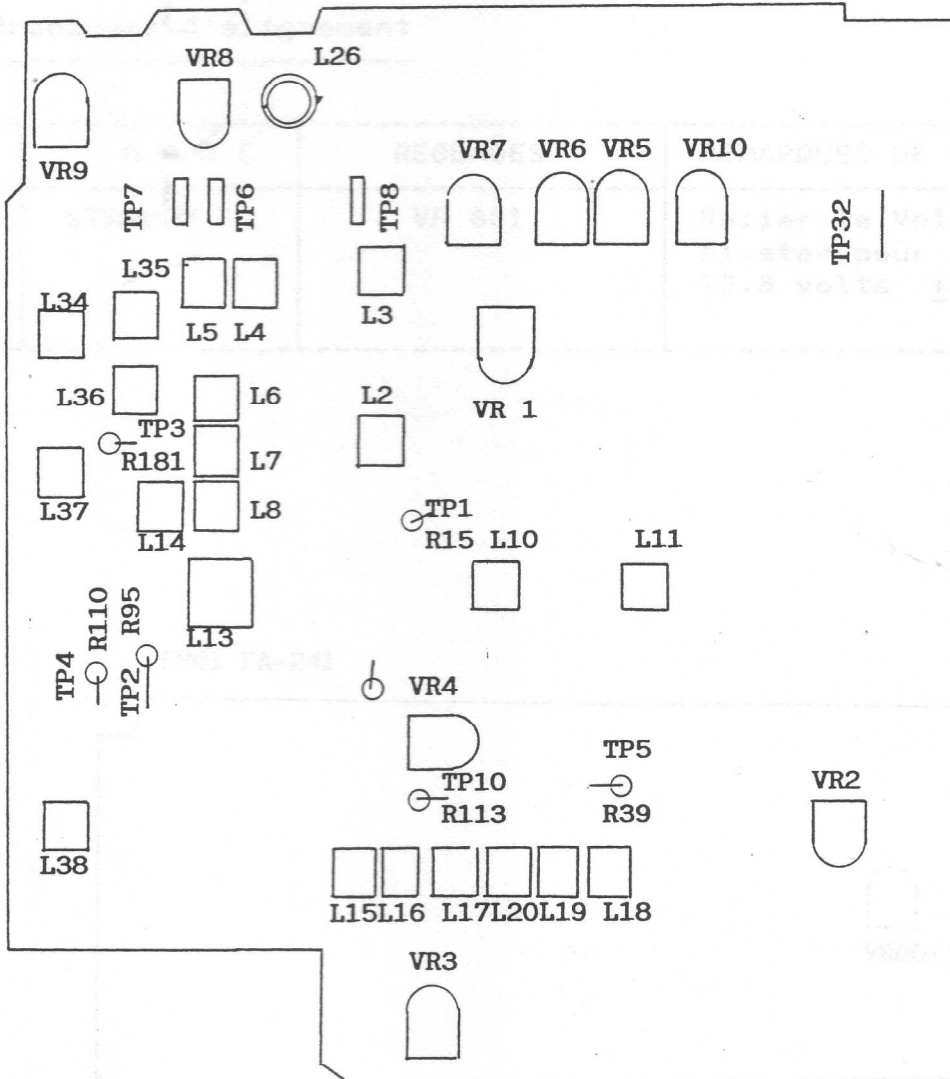
ALIGNEMENT DU RECEPTEUR

3) SYNOPTIQUE DU BANC DE MESURE :

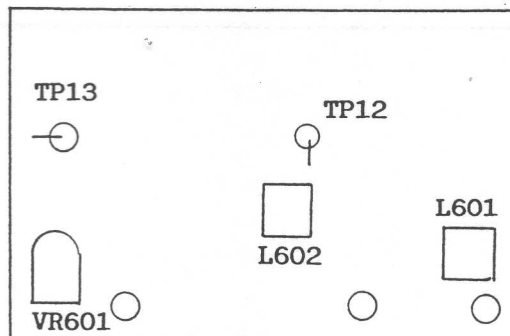


EMPLACEMENT DES POINTS D'ALIGNEMENTS

PB-122 MAIN (TOP VIEW)



PB-189 : FM (TOP VIEW)



ALIGNEMENT PLATINE ALIMENTATION

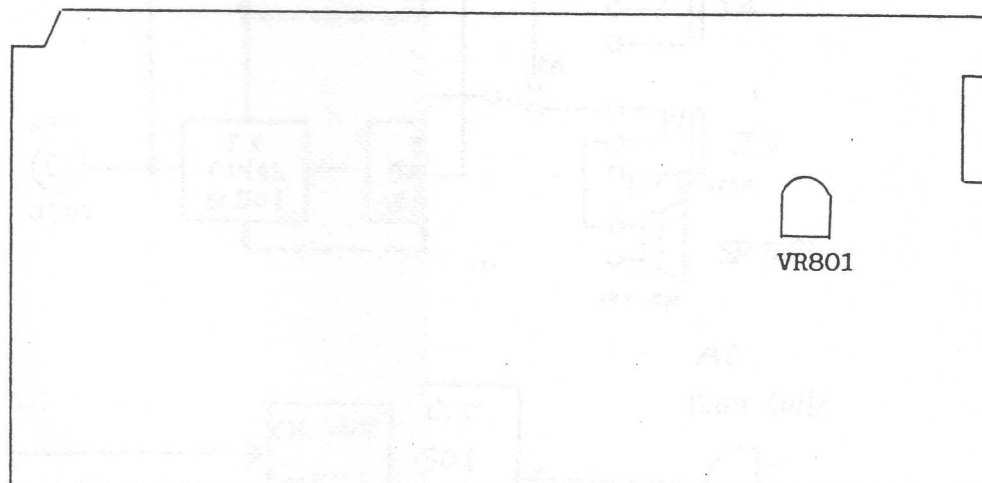
1) Equipement nécessaire

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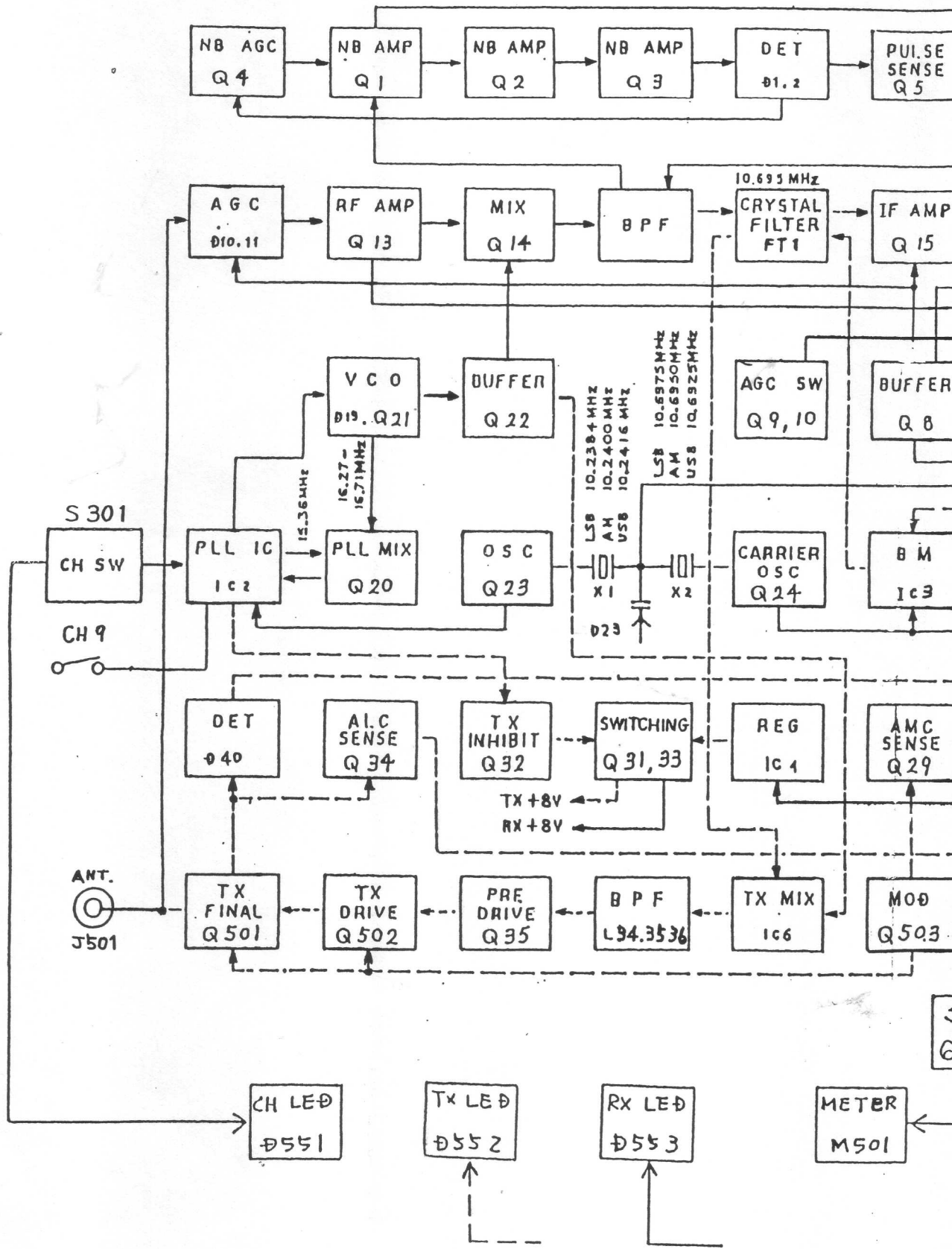
2) Procédure d'alignement

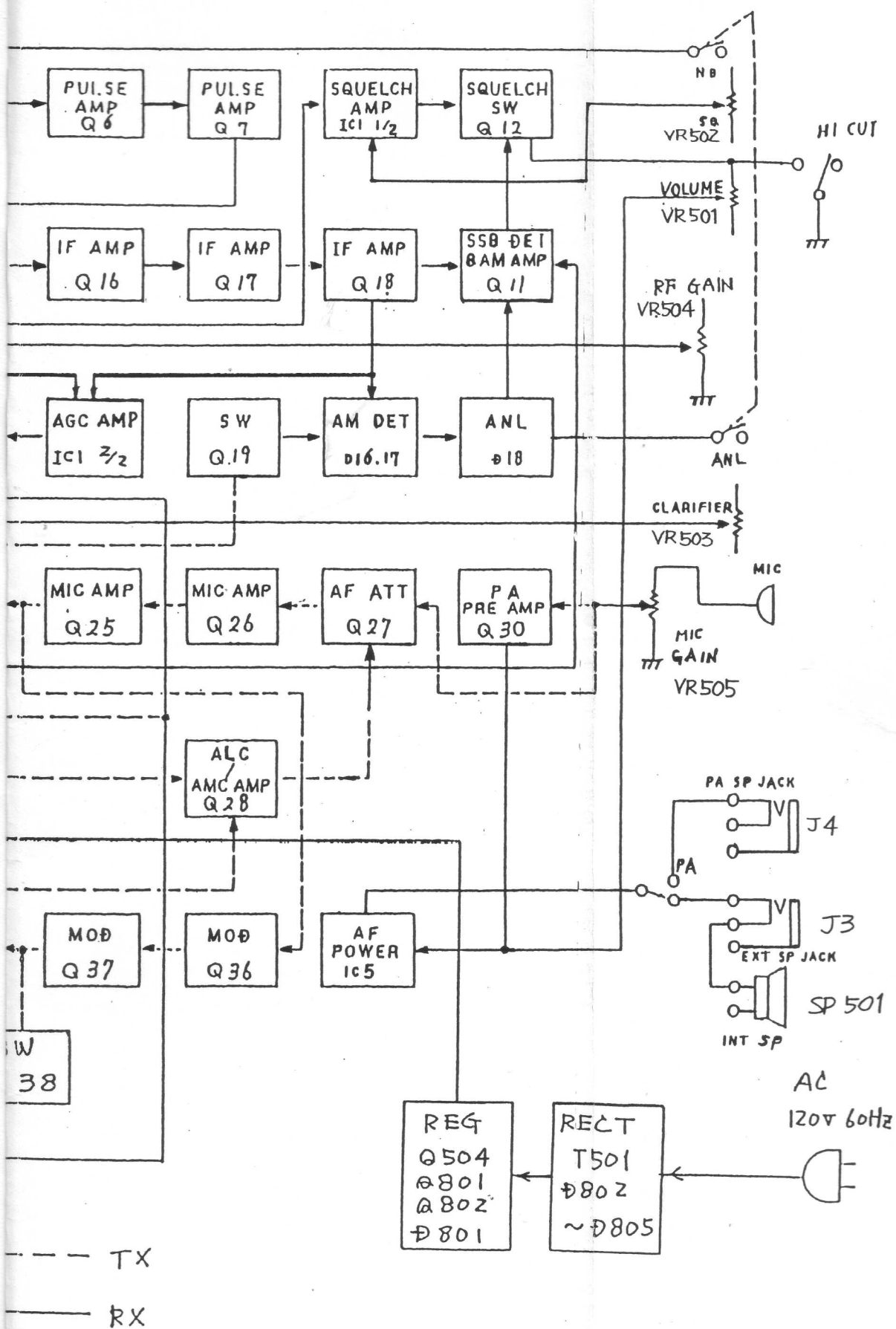
ORDRE	M O D E	REGLAGES	REMARQUES DE REGLAGE
1	STANDBY	VR 801	Relier le Voltmètre à JP 32 Ajuster pour obtenir 13,8 volts \pm 0,1 volt.

B801 PA-241

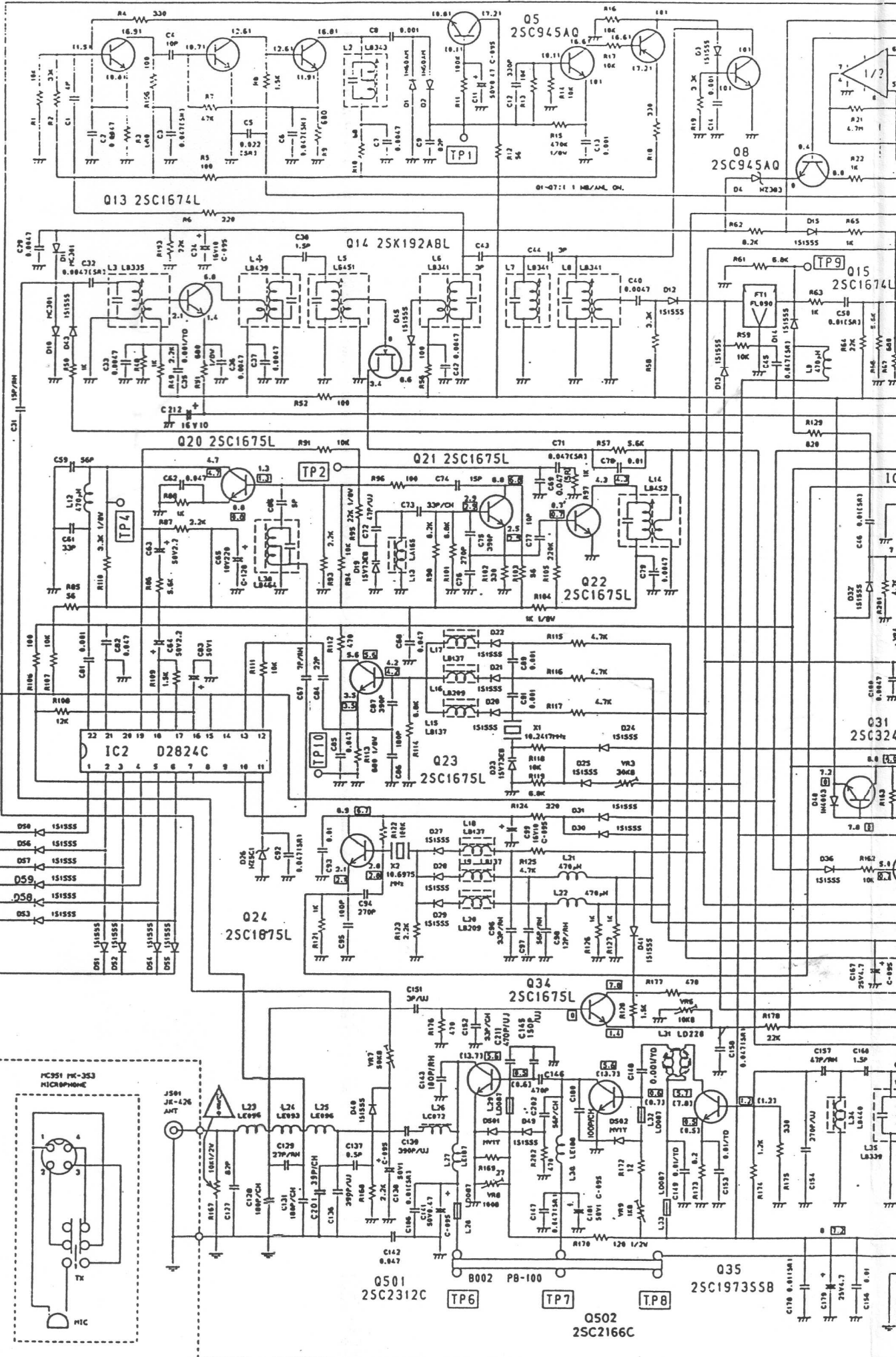


BLOCK DIAGRAM

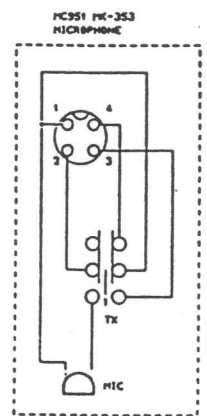




Q1 2SC1675L Q2 2SC1675L Q3 2SC1736L Q4 2SC945A0 Q5 2SC945A0 Q6 2SA733P Q7 2SC945A0



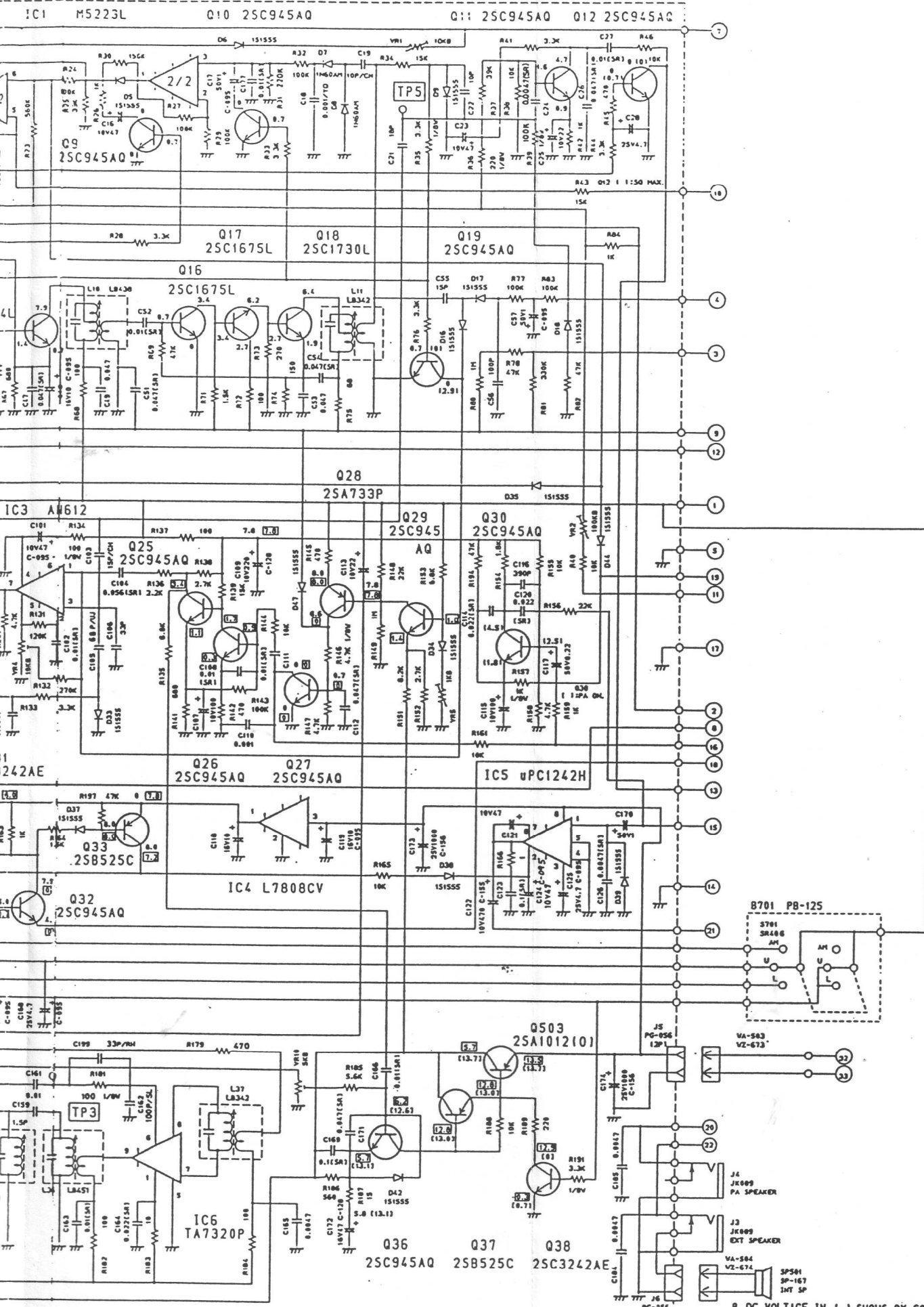
- 24
- 25
- 26
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- 31



Q501 2SC2312C TP6 TP7 TP8

Q502 2SC2166C

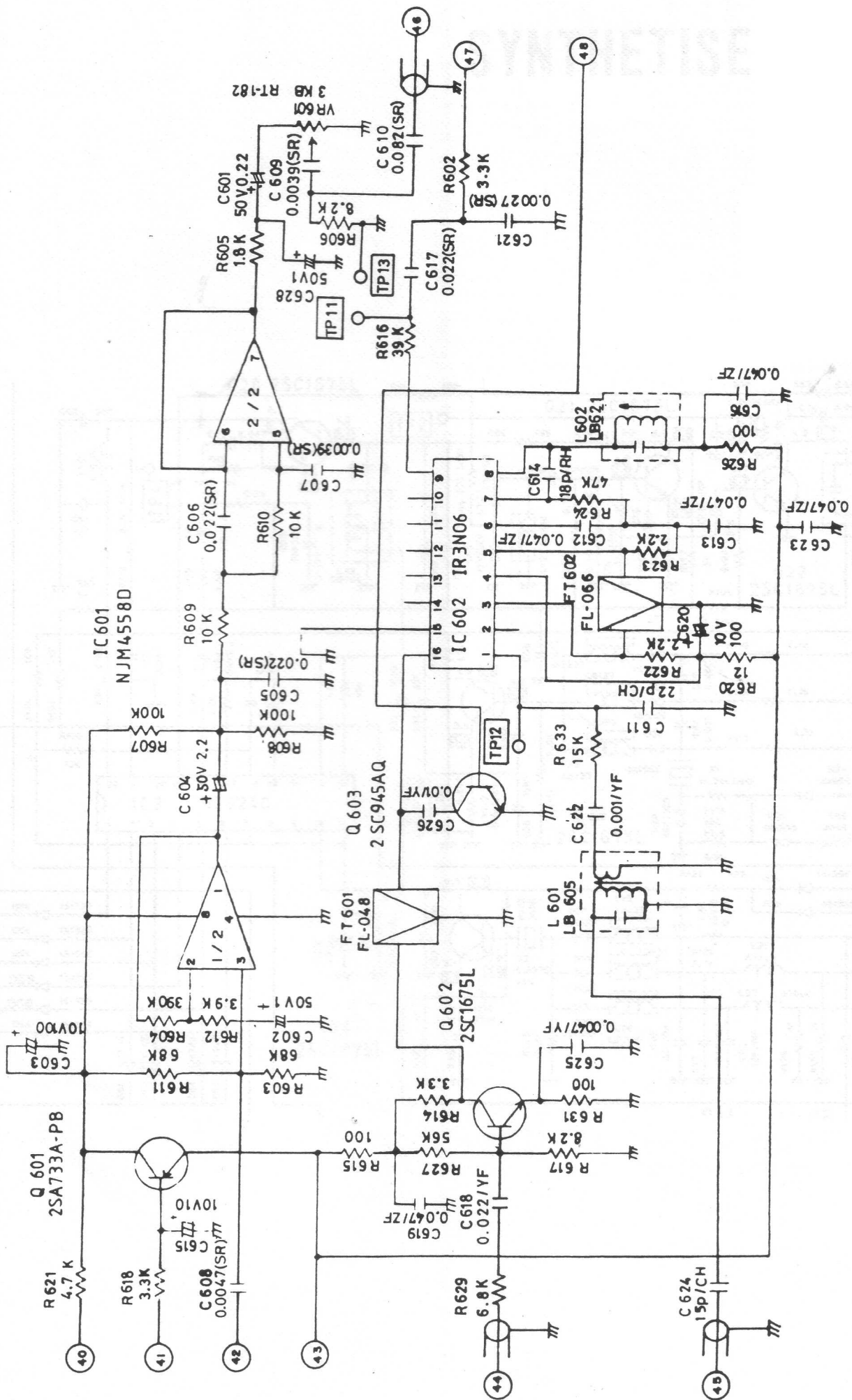
Q35 2SC19735S8



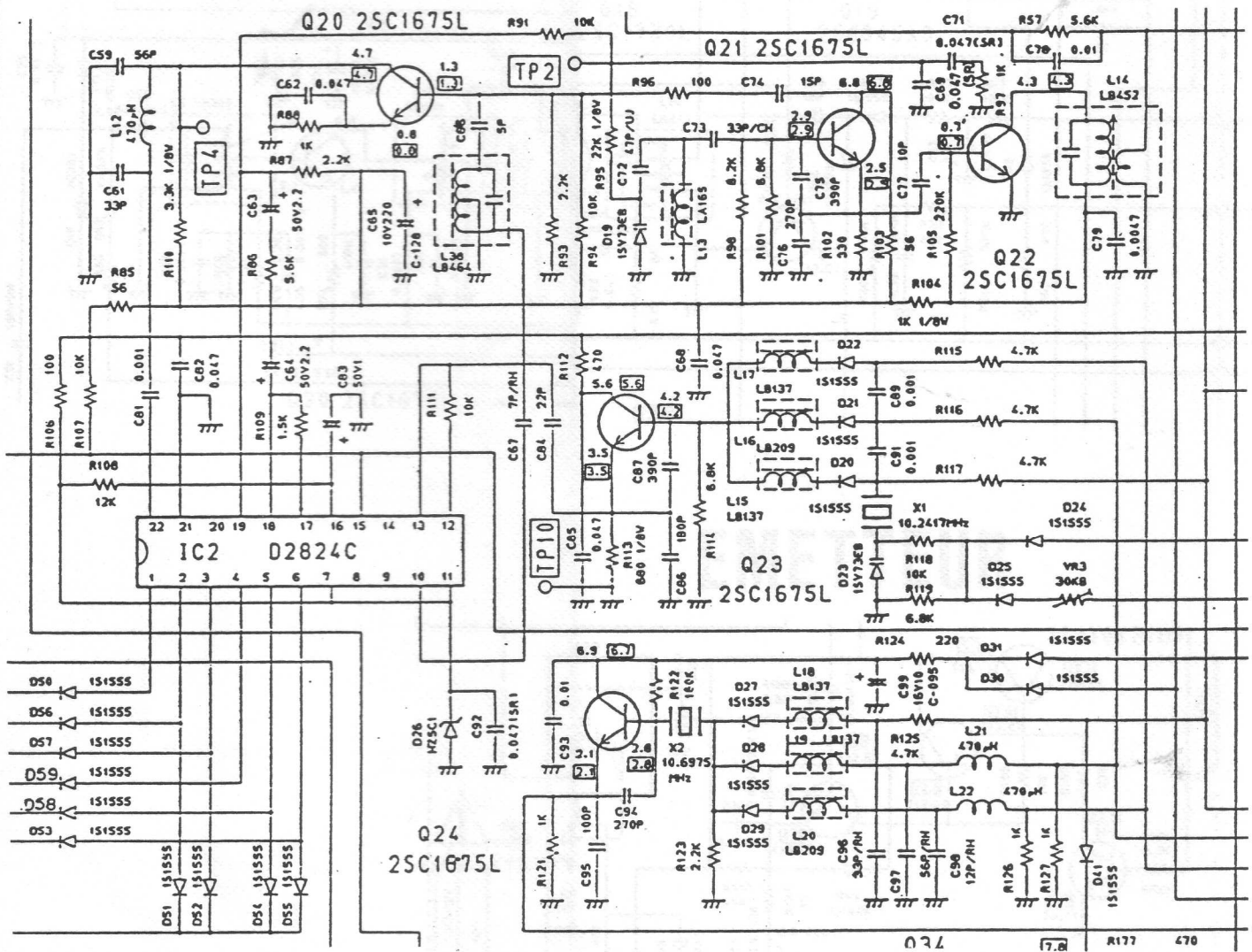
- NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED. 1K-KILO OHM, M-MEG OHM
 2. RESISTOR WATTAGES ARE 1/8W UNLESS OTHERWISE NOTED.
 3. CAPACITANCE VALUES ARE INDICATED IN MICRO FARADS UNLESS OTHERWISE NOTED. 1P-MICRO-MICRO FARAD
 4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE 5L (LESS THAN 1000PF), 2F (0.0047uF) OR YF (0.001uF-0.039uF) UNLESS OTHERWISE NOTED.
 5. DC VOLTAGE IN \square SHOWS TX AM CONDITION.
 6. DC VOLTAGE IN () SHOWS TX SSB CONDITION.
 7. DC VOLTAGE IN NO MARK SHOWS RX CONDITION.

8. DC VOLTAGE IN \square SHOWS RX CONDITION UNDER OPERATION OF EACH FANCTION.

FM SCHEMATIC DIAGRAM (B601 PB-189AA)



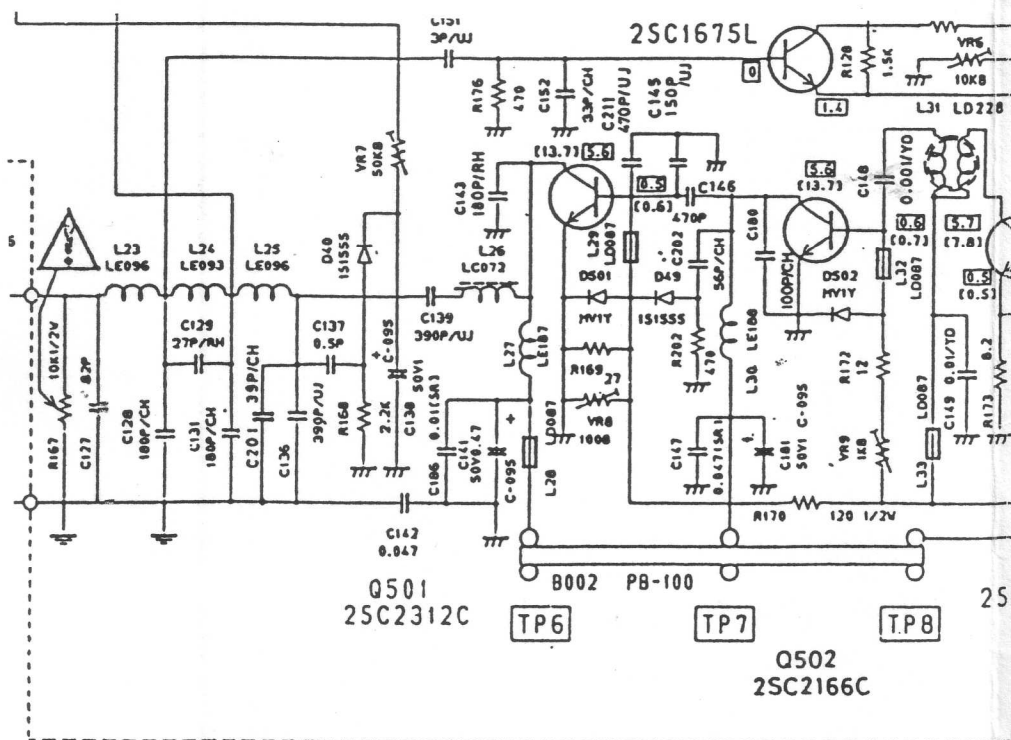
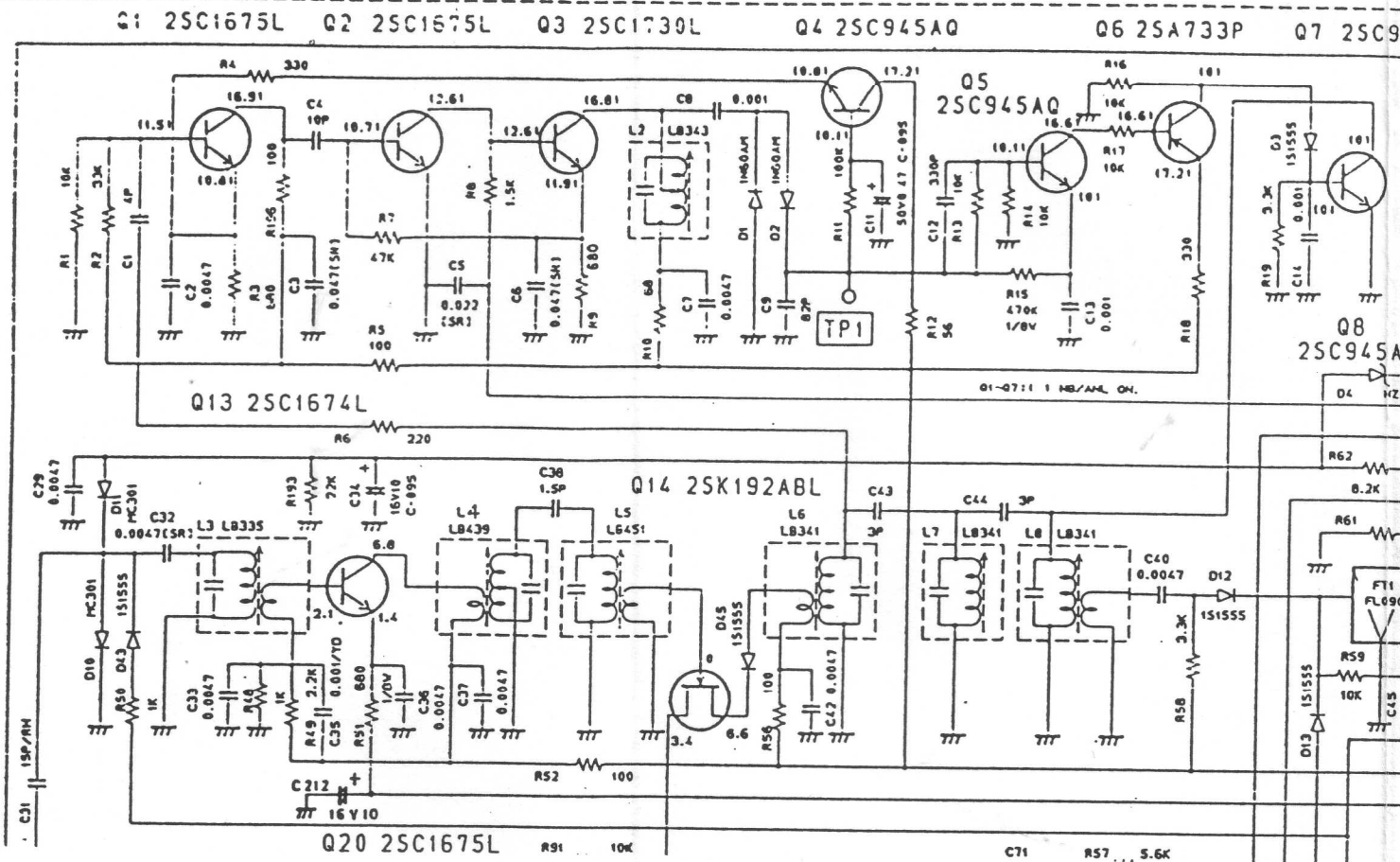
SYNTHETISEUR



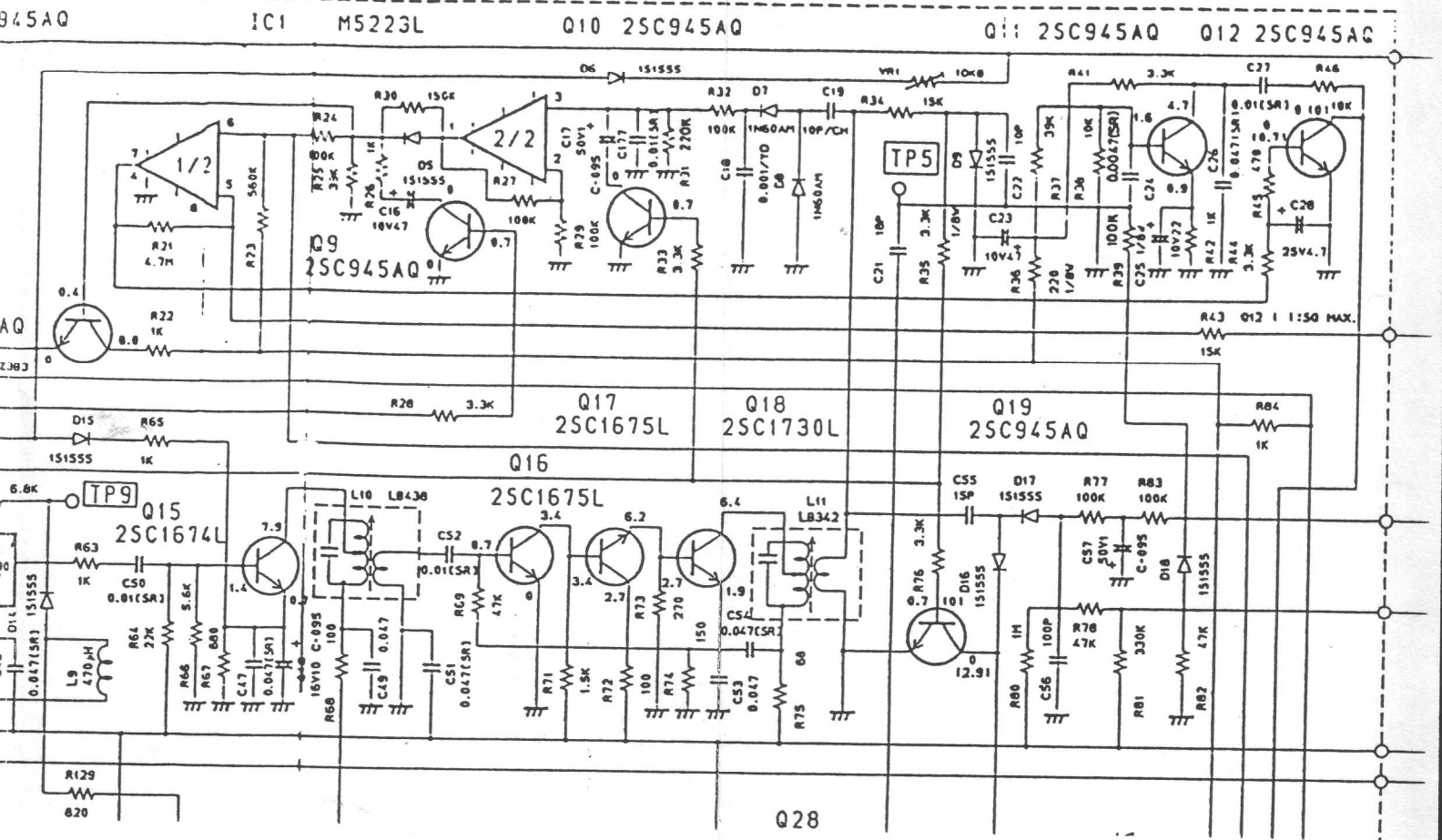
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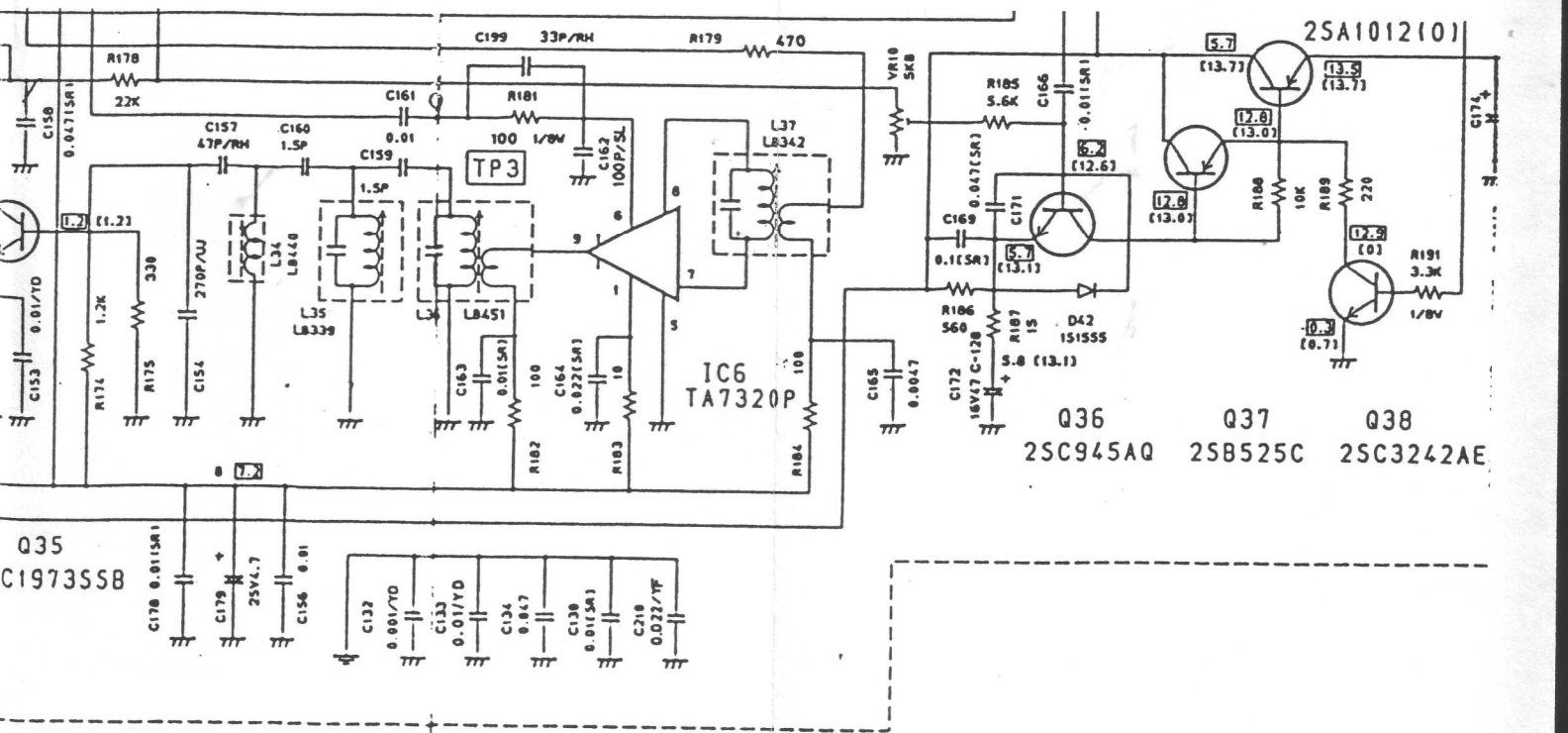
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RECEPTEUR

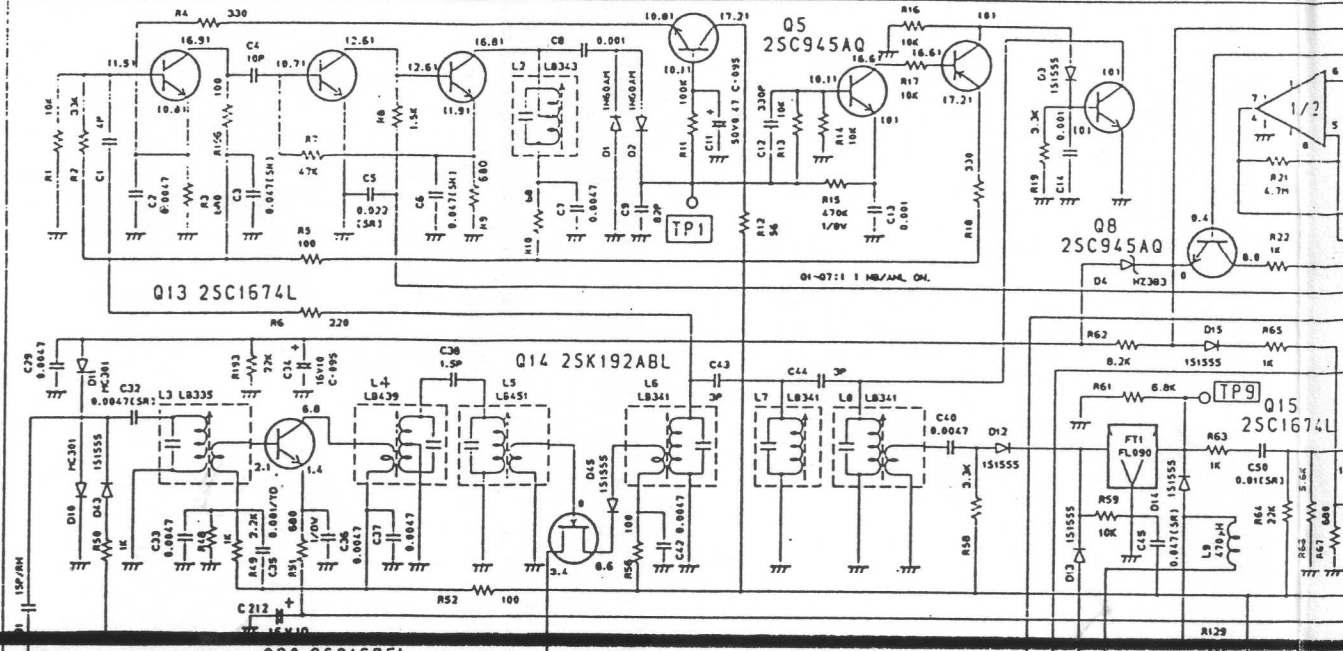


EMETTEUR

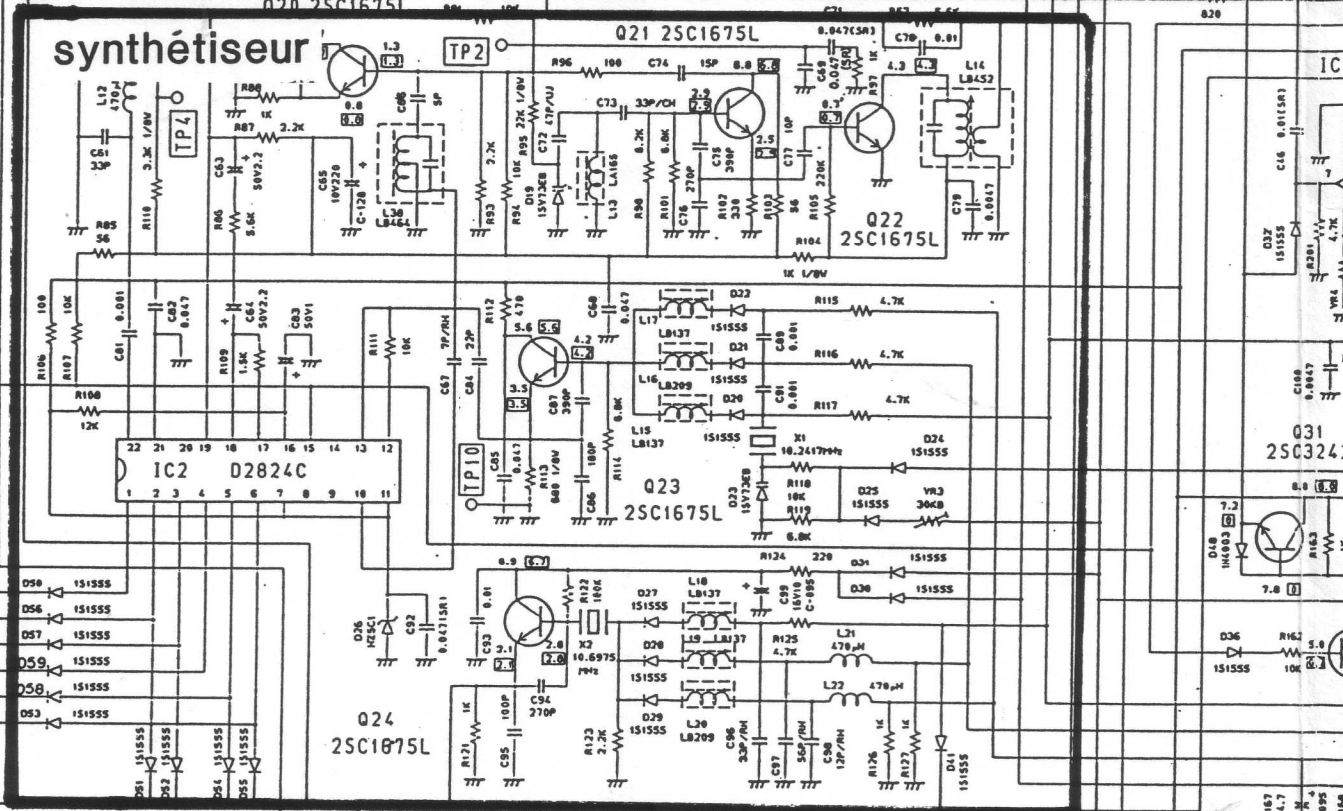


récepteur

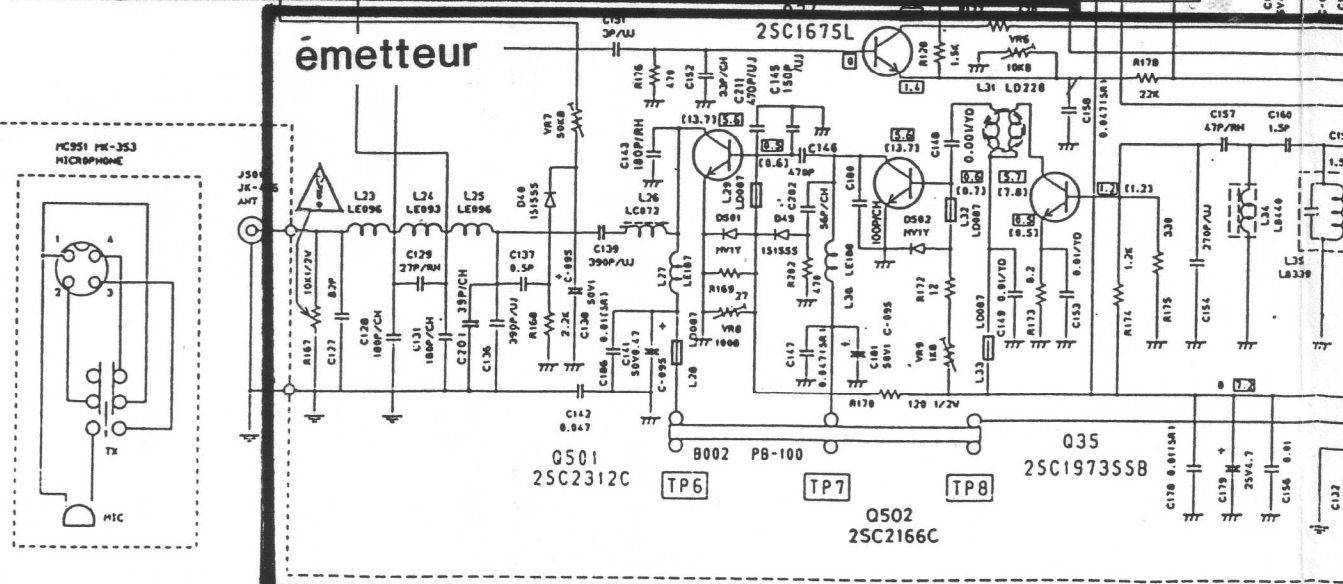
1675L Q2 25C1675L Q3 25C1730L Q4 25C945A0 Q6 25A733P Q7 25C945A0

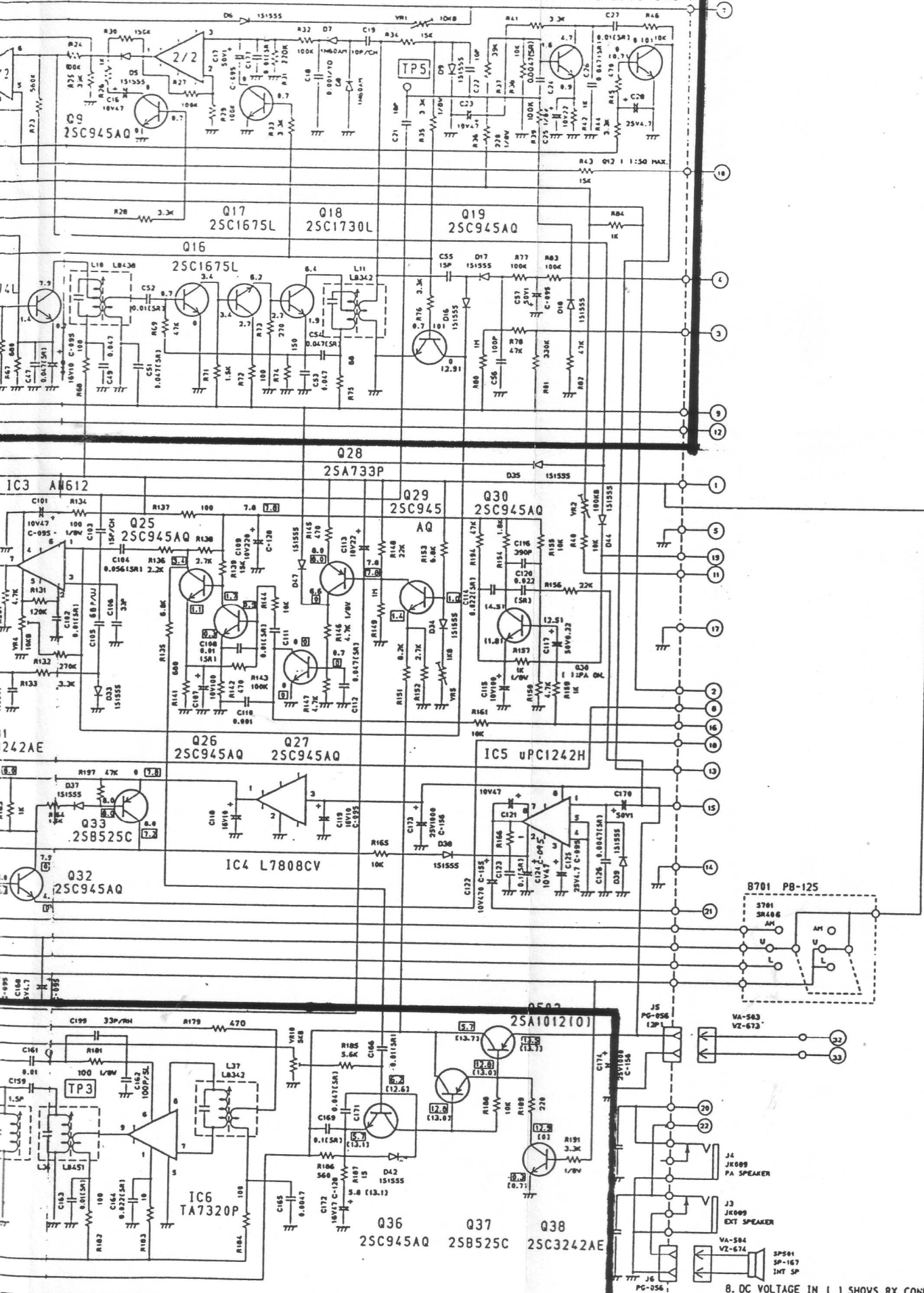


synthétiseur



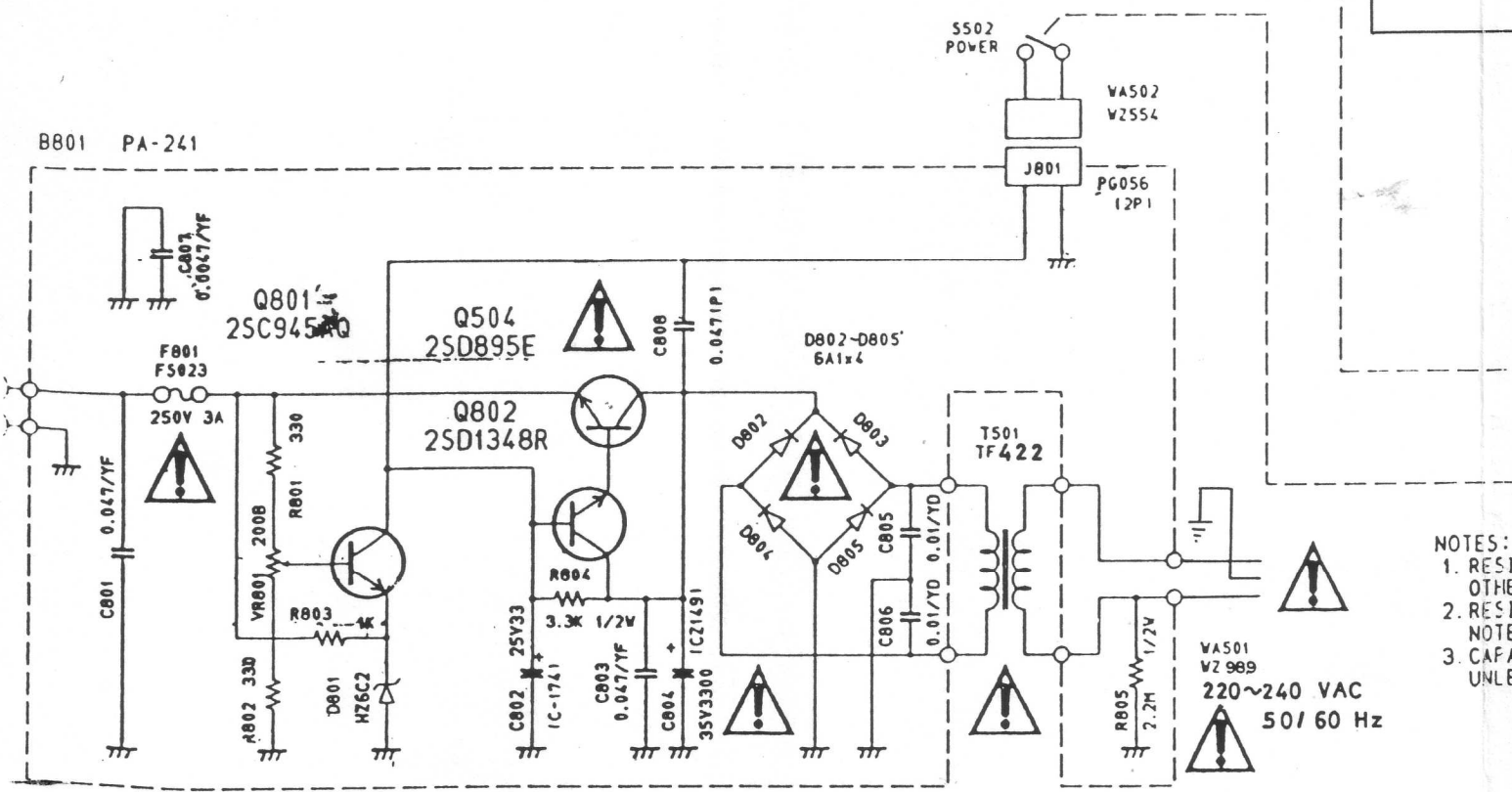
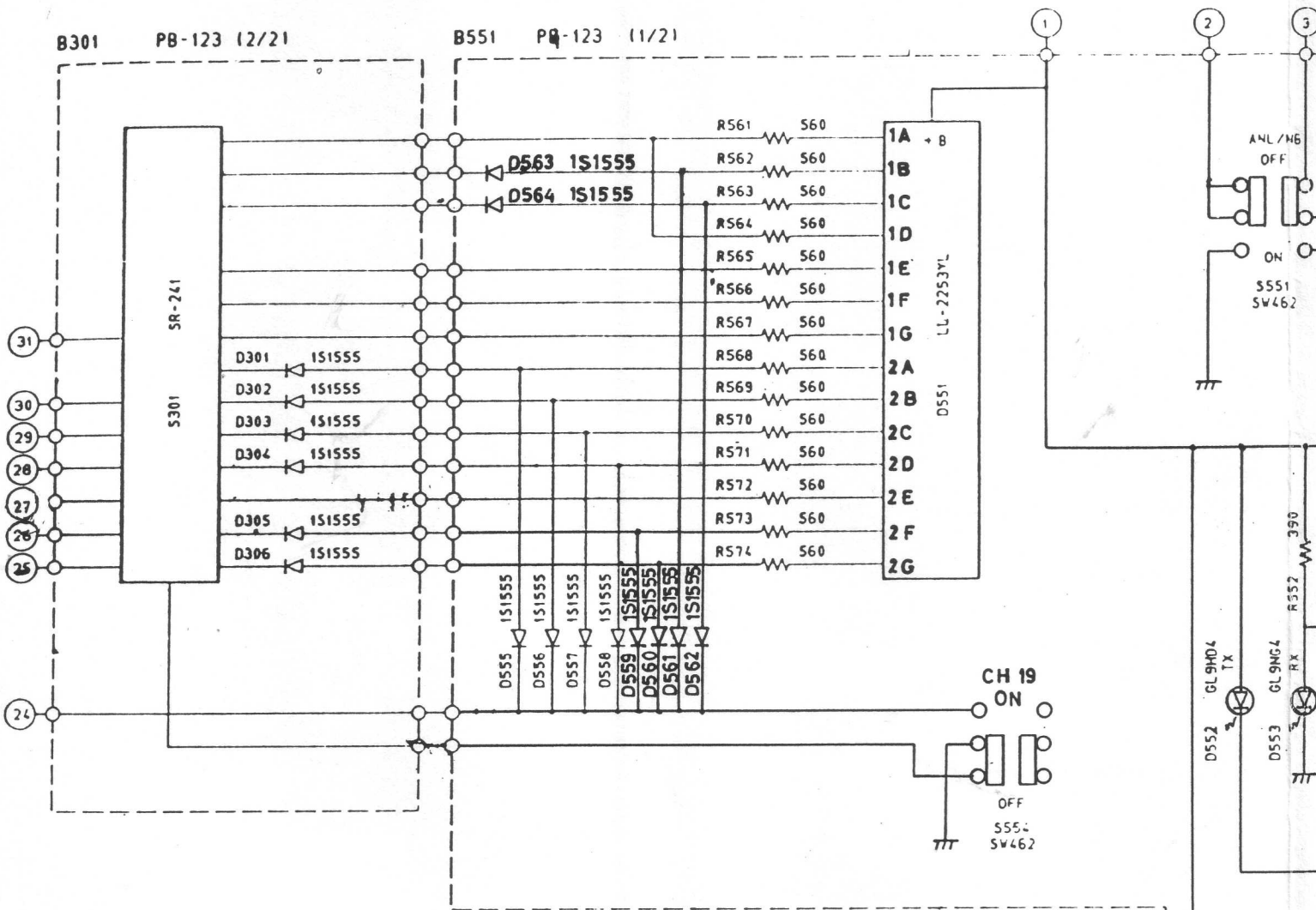
émetteur





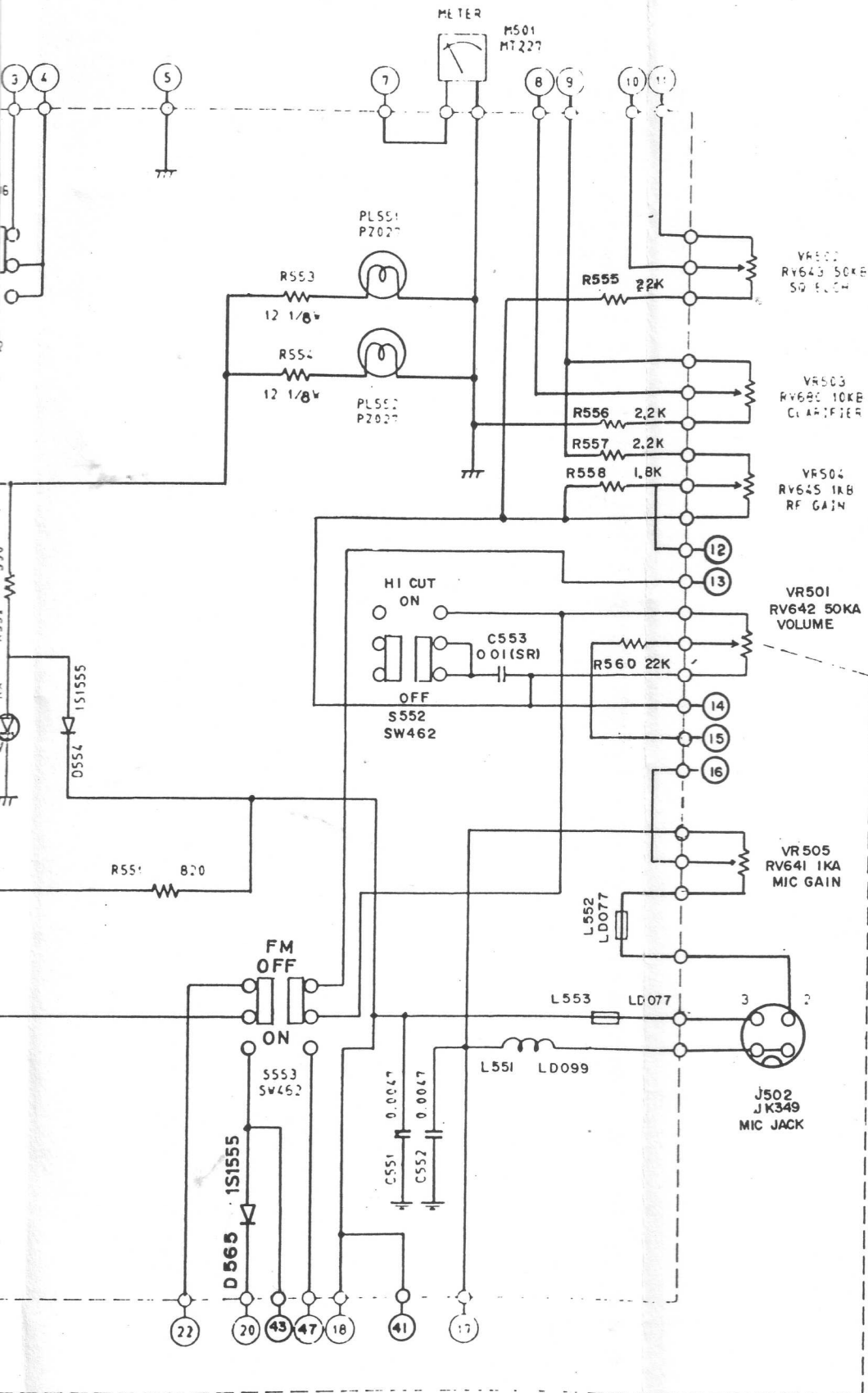
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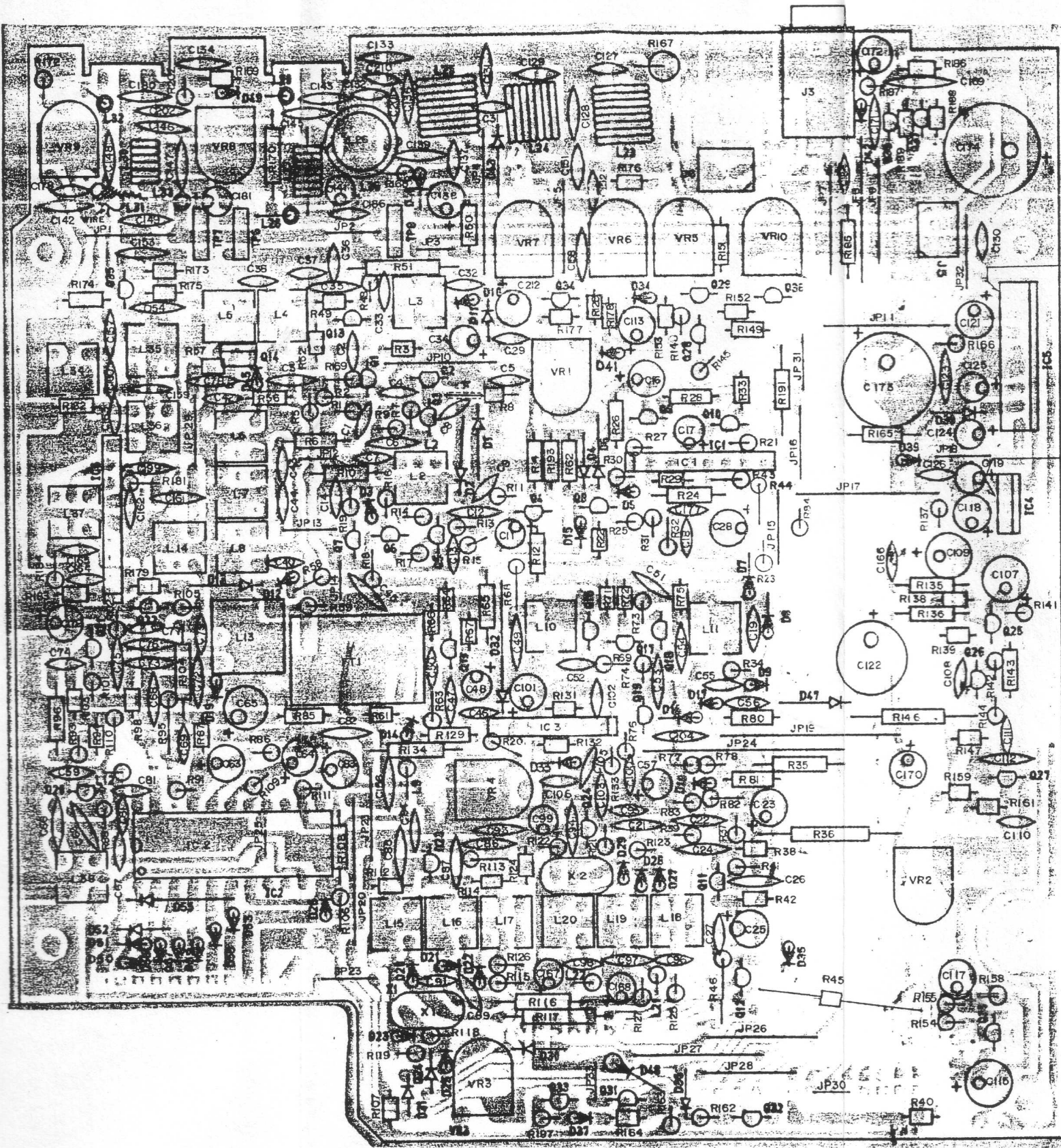


- NOTES:
1. RESI OTH
 2. RESI NOTE
 3. CAFA UNLE

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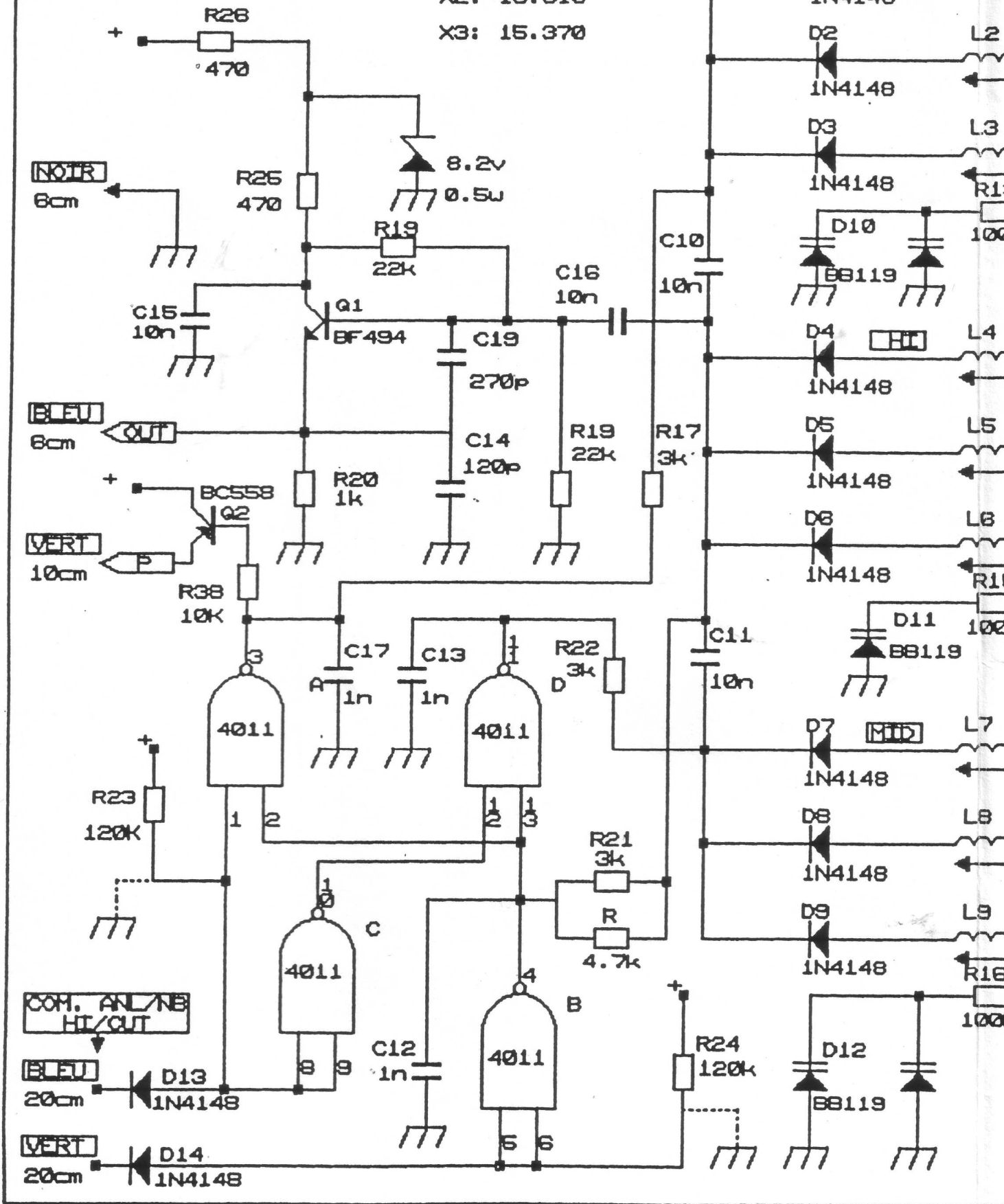


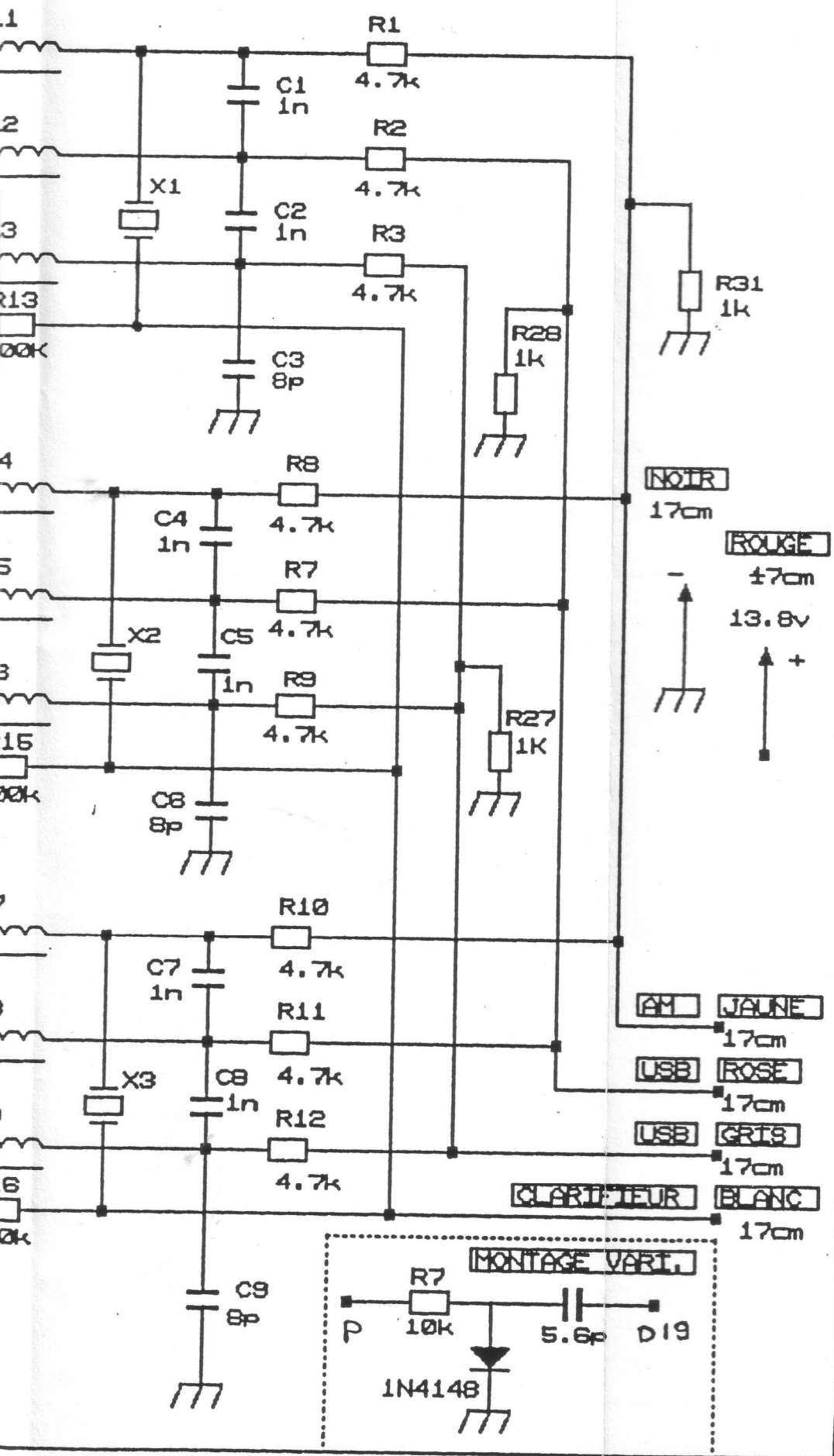
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**MODULE BENJAMIN 120
VERSION EXPORT**

X1: 14.818
X2: 15.816
X3: 15.370





MESURES

SYMB NO.	PIN NO.	RX/TX	VOLTAGE
IC 1	1	RX	0.2
	2		0.1
	3		0.1
	4		0
	5		1.2
	6		1.5
	7		0
	8		8.0
IC 2	1	RX TX	5.1
	2		0
	3		0
	4		5.1
	5		5.1
	6		0
	7		5.1
	8		-
	9		-
	10		2.0
	11		5.1
	12		2.5
	13		2.5
	14		-
15		5.2	
16		5.1	
17		1.6	
18		1.6	
19		3.9	
20		-	
21		0	
22		2.4	
IC 3	1	RX TX	0
	2		3.3
	3		3.2
	4		0
	5		5.8
	6		7.3
	7		6.6
IC 4	1	RX TX	8.0
	2		0

SYMB NO.	PIN NO.	RX/TX	VOLTAGE	
IC 5	3		13.7	
	1	RX	0.1	
	2		1.9	
	3		1.3	
	4		0	
	5		0	
	6		7.0	
	7		12.7	
IC 6	8		13.7	
	1	TX	7.6	
	2		-	
	3		-	
	4		-	
	5		0	
	6		2.6	
	7		4.2	
	8		4.2	
	9		7.4	
	IC601	1	TX	4
		2		3.9
		3		3.9
		4		0
		5		3.9
		6		3.9
7			3.9	
8			7.8	
IC602		1	RX	7.7
		2		7.1
	3		7.4	
	4		7.7	
	5		1	
	6		1	
	7		1	
	8		7.8	
	9		3.3	
	10		0	
	11		7.2	
	12		0	
	13		7.1	
	14		0	
	15		0	
	16		0	

MESURES

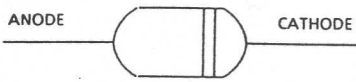
SYMBOL NO.	*	RX TX	BASE GATE	COLLECTION DRAIN	EMITTER SOURCE
Q1		RX NB ON	1.5	6.9	0.8
Q2		↓	0.7	2.6	0
Q3			2.6	6.8	1.9
Q4			0.1	7.2	0.8
Q5			0.1	6.6	0
Q6			6.6	0	7.2
Q7		↓	0	0	0
Q8		RX	0.4	8.0	0
Q9		RX	0.7	0	0
Q10		SSB RX	0.7	0	0
Q11		↓	1.6	4.7	0.9
Q12	FM	RX	0	3.6	0
		TX	0.7	0	0
Q13		RX	2.1	6.8	1.4
Q14		↓	0	6.6	3.4
Q15			1.4	7.9	0.7
Q16			0.7	3.4	0
Q17			3.4	6.2	2.7
Q18		↓	2.7	6.4	1.9
Q19		RX AM	0.7	0	0
		SSB	0	2.9	0
Q20		RX	1.3	4.7	0.8
		TX	1.3	4.7	0.8
Q21		↓	2.9	6.8	2.5
Q22			0.7	4.3	0
			4.2	5.6	3.5
Q23		↓	4.2	5.6	3.5
Q24		RX SSB	2.8	6.9	2.1
		TX	2.8	6.7	2.1
Q25		TX	1.7	3.4	1.1
Q26		↓	0.9	1.7	0.3
Q27		RX	0.7	0	0
		TX	0	0	0
Q28		RX	7.8	6.6	8.0
		TX	7.8	0	8.0
Q29		TX	1.0	7.8	1.4
Q30		↓	2.5	4.5	1.5
Q31		RX	7.8	8.0	7.2
		TX	0	8.0	0
Q34		TX	0	7.8	1.4
		SSB	0		
Q35		TX AM	1.2	5.7	0.5
		SSB	1.2	7.8	0.5
Q36		↓	6.2	12.2	5.7
			12.6	13.2	13.1
Q37			12.8	5.7	12.3
			13	13.7	13.2

MESURES

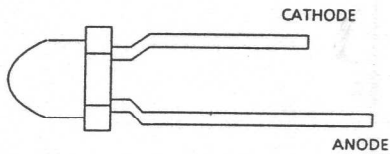
IDENTIFICATION DES SEMI-CONDUCTEURS

SYMBOL NO.	*	RX TX	BASE GATE	COLLECTION DRAIN	EMITTER SOURCE
Q38			0.3 0.7	12.9 0	0 0
Q501			0.5 0.6	5.6 13.7	0 0
Q502			0.6 0.7	5.5 13.7	0 0
Q503			12.8 13.0	5.7 13.7	13.5 13.7
Q504		RX TX	14.4 14.4	21.4 21.4	13.8 13.8
Q601	FM	RX TX	7.2 7.0	0 7.7	7.8 7.7
Q602	FM	RX TX	0.9 0.9	3.6 3.6	0.1 0.1
Q603		RX NB ON	0 0	0 0	0 0
Q801		RX TX	6.8 6.8	6.2 6.2	15 15
Q802		RX TX	15.0 15.0	21.4 21.4	14.4 14.4

IDENTIFICATION DES SEMI-CONDUCTEURS



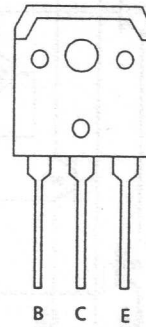
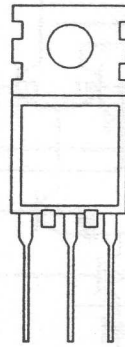
1N60 AM
1N4003
HZ3B3
HZ6C2
HZ5C-1
1S1555
MC-301
1SV73-EB



GL-9HD4

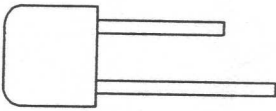
2SC2166-C

2SD895-E



B C E

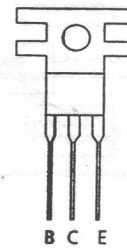
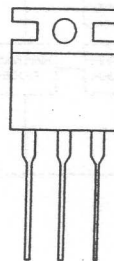
B C E



GL-9NG4

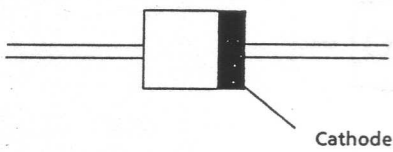
2SA1012-O

2SC2312-C

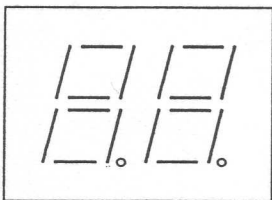


B C E

B C E



6A1



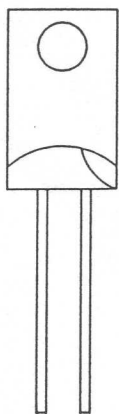
2SD1348-R

2SC1973-SSB

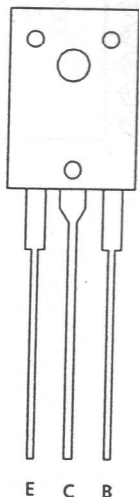
2SK192A-BL

2SC3242A-E

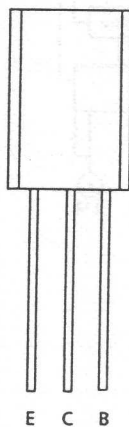
LL-2253YL



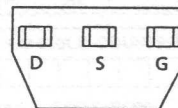
MV-1Y



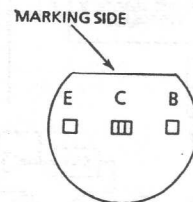
E C B



E C B



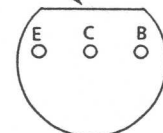
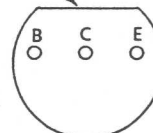
2SB525-C



2SC1675-L
2SC1730-L
2SC945A-Q
2SC1674-L
2SA733A-PB

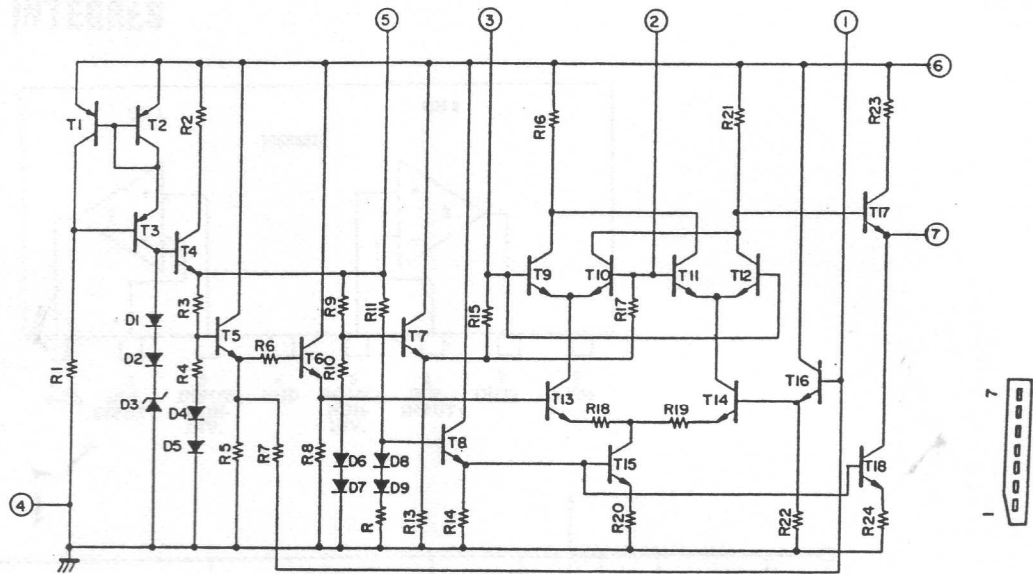
MARKING SIDE

MARKING SIDE

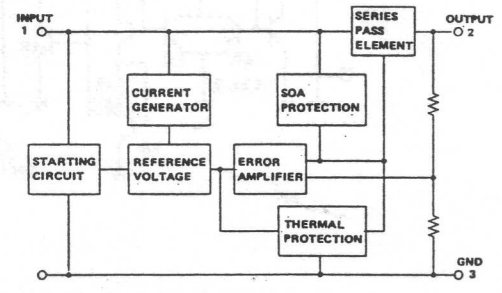
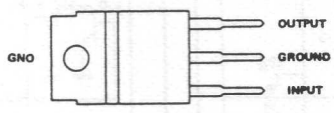


CIRCUITS INTEGRES

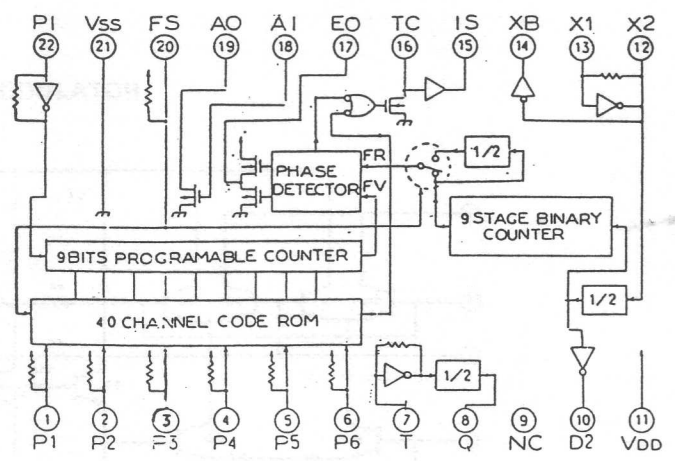
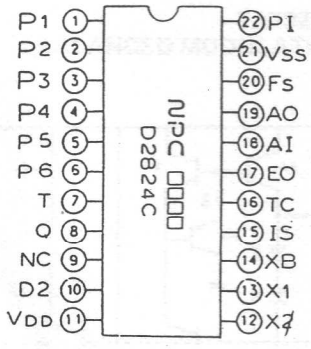
AN612



L7808CV

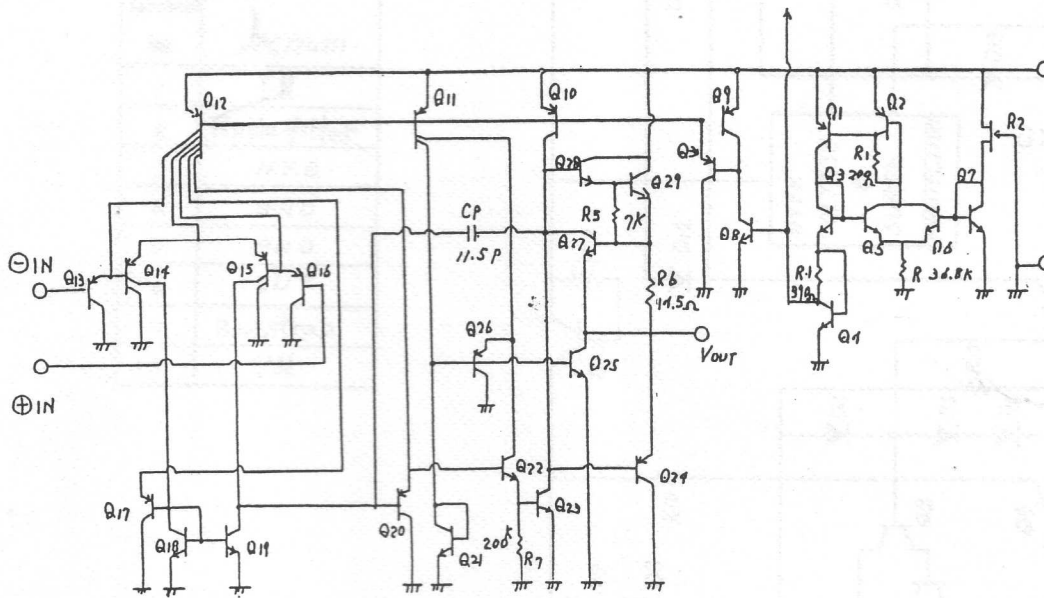
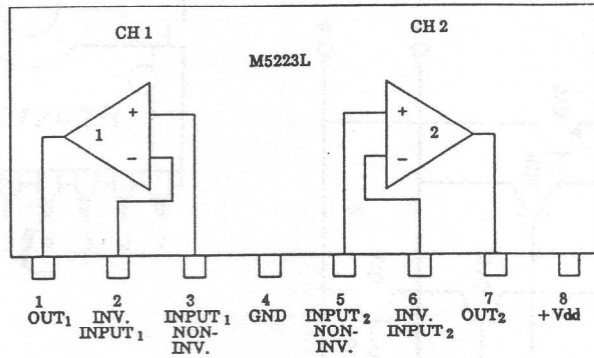


D2824C

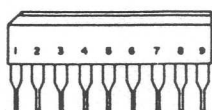
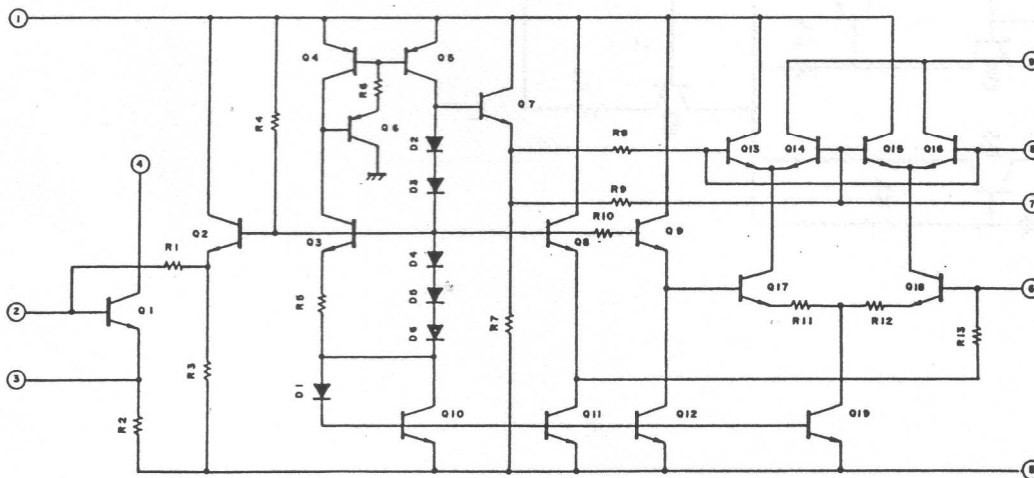


CIRCUITS INTEGRÉS

M5223L

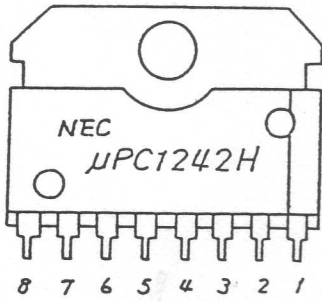


TA7320P BALANCED MODULATOR-DEMODULATOR

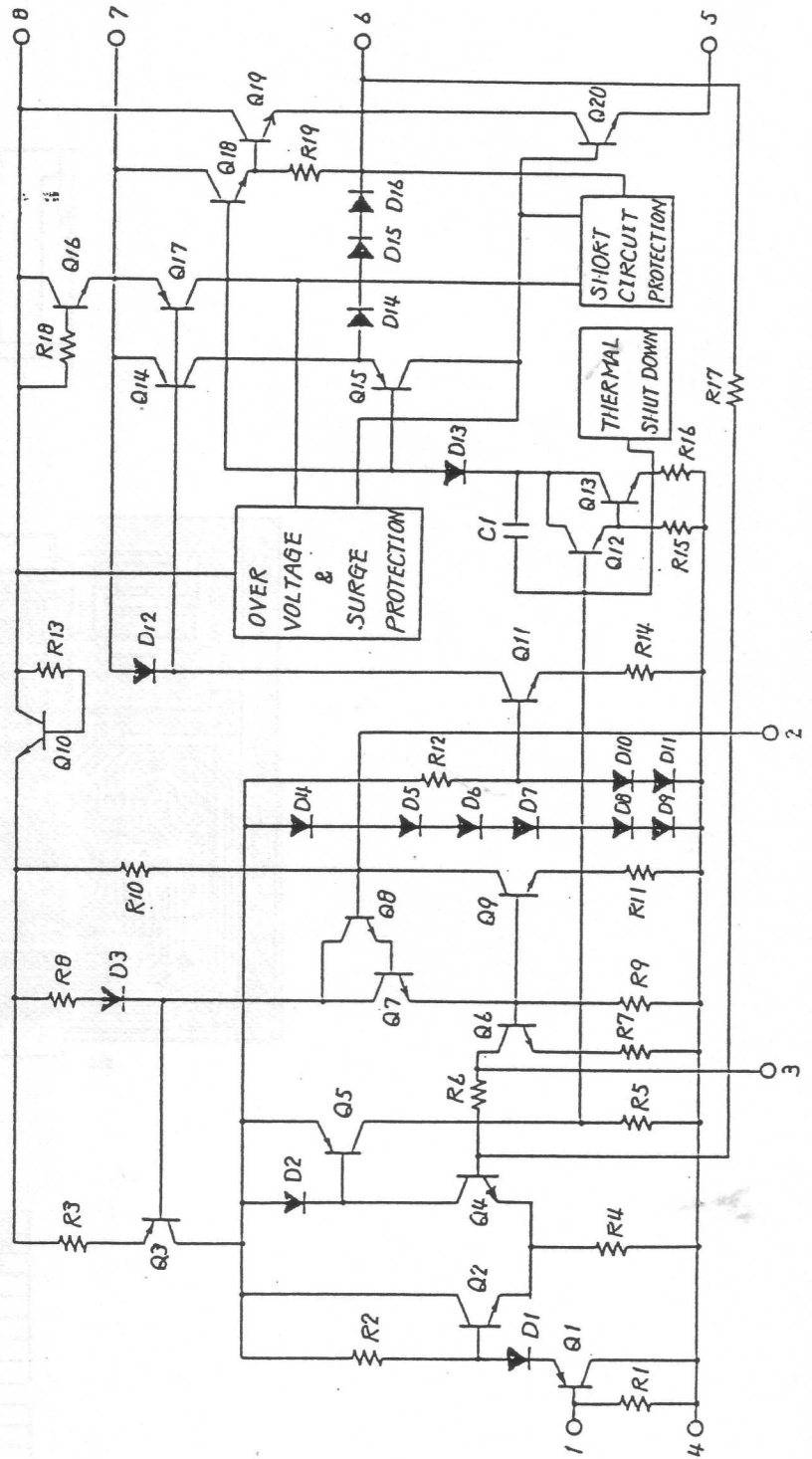


CIRCUITS INTEGRES

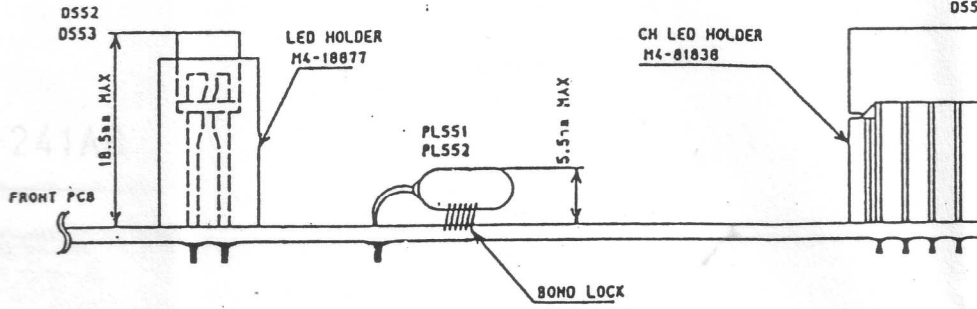
μPC1242H



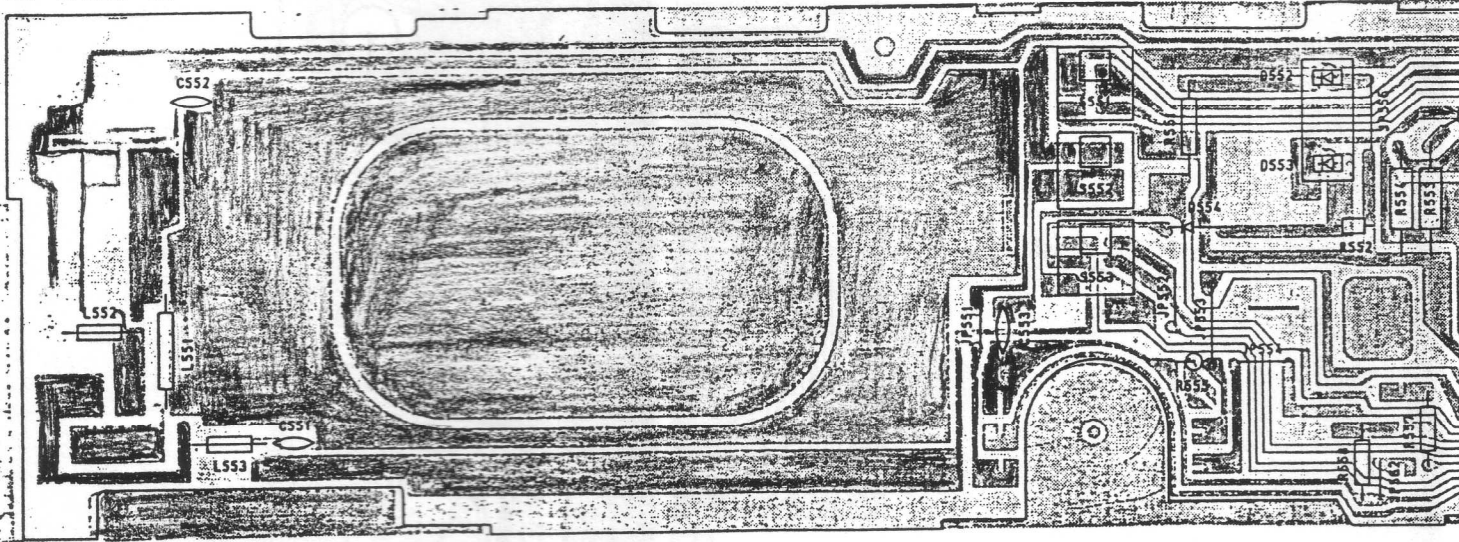
Terminal No.	μPC1242H
1	IN
2	Ripple filter
3	N.F.B.
4	GND
5	GND
6	OUT
7	Bootstrap
8	V _{dd}



D601 PA-241



B551 PB-123AA 1/2



C551	0.0047/YF
C552	0.0047/YF
C553	0.01(SR)

S551	SV462
S552	SV462
S553	SV462
S554	SV462

D551	LL-2253YL
D552	GL9H04
D553	GL9H04
D554	IS1555
D555	IS1555
D556	IS1555
D557	IS1555
D558	IS1555
D559	IS1555
D560	IS1555

JP551	5
JP552	7.5
JP553	10
JP554	7.5
JP555	10
JP556	15
JP557	5
JP558	5
JP559	7.5
JP560	5
JP561	17.5
JP562	5

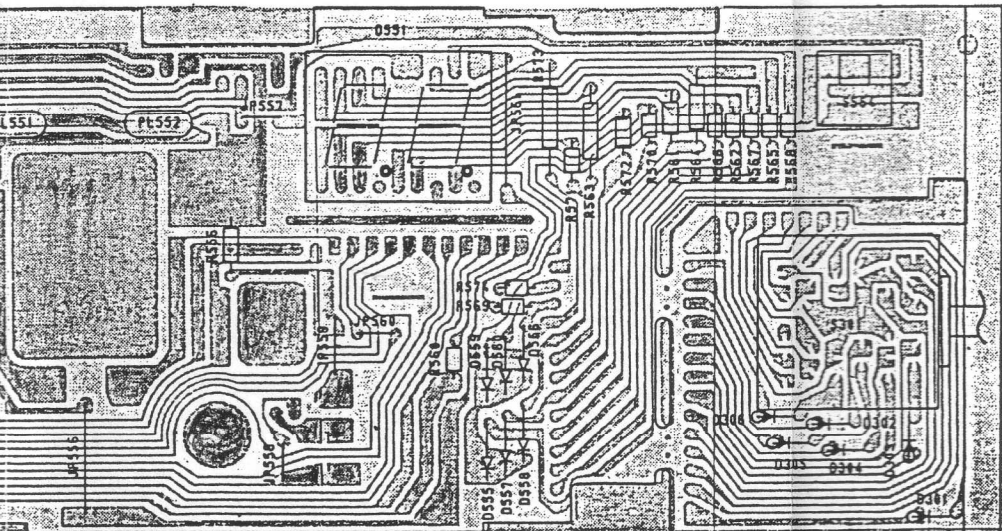
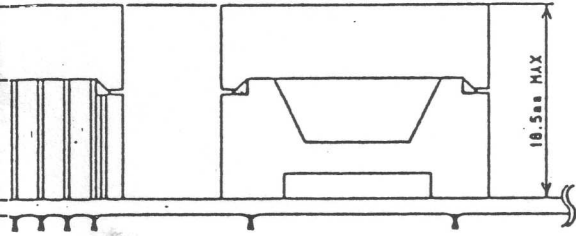
L551	L0099
L552	L0077
L553	L0077
PL551	PZ027
PL552	PZ027

R551	
R552	
R553	
R554	
R555	
R556	
R557	
R558	
R560	
R561	
R562	
R563	
R564	
R565	
R566	

PLATINE COMMUTATEUR DE CANAUX

UT552/PB123AA::52:1

(SIDE VIEW)



B301 PB-123AA 2/2

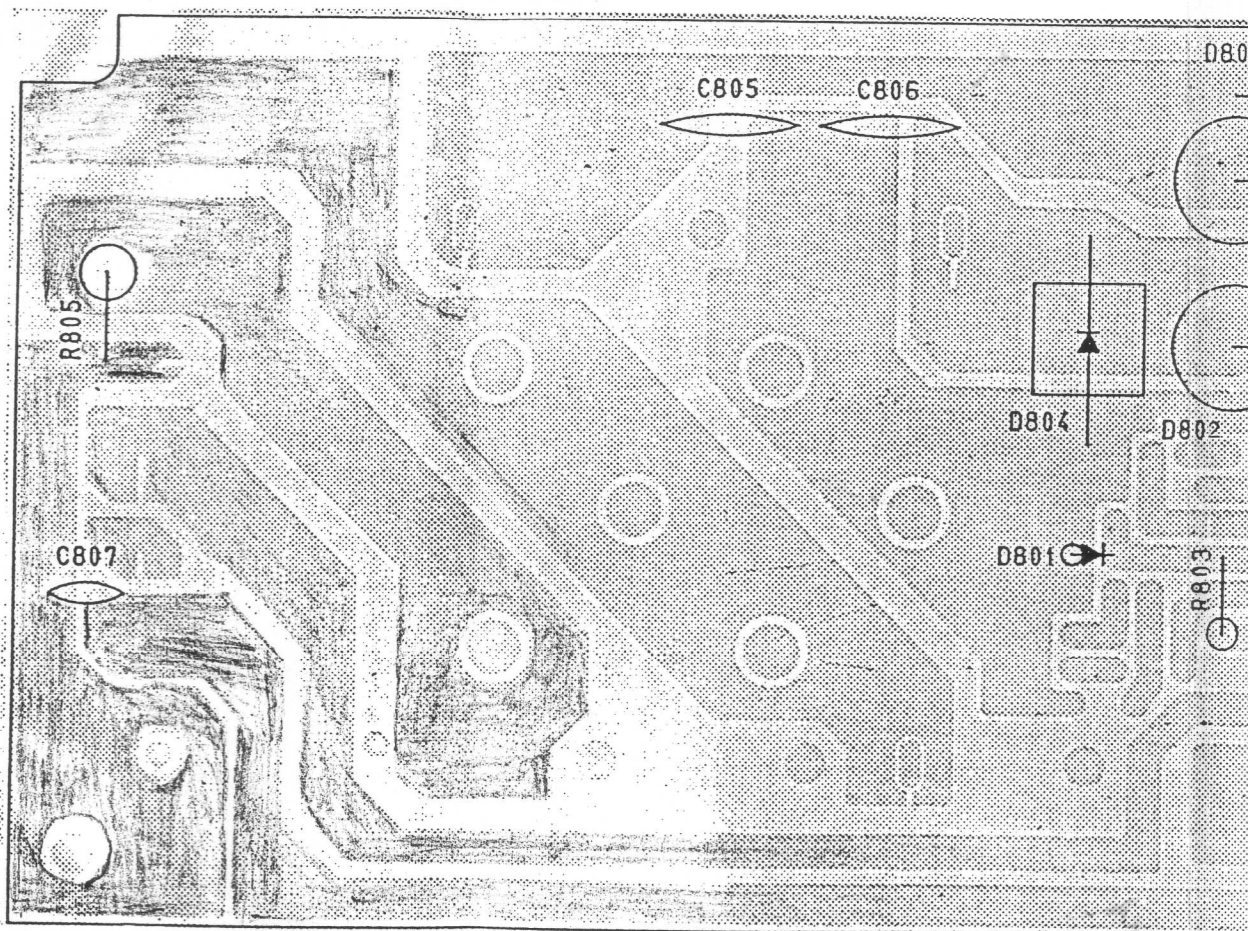
820
390
12 1/2W
12 1/2W
22K
2.2K
2.2K
1.8K
22K
560
560
560
560
560
560

R567	560
R568	560
R569	560
R570	560
R571	560
R572	560
R573	560
R574	560

0301	1S1555
0302	1S1555
0303	1S1555
0304	1S1555
0305	1S1555
0306	1S1555
S301	5R241

NOTES:
 1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED. 1K=KILO OHM, M=MEG OHM
 2. RESISTOR VOLTAGES ARE 1/8W UNLESS OTHERWISE NOTED.
 3. CAPACITANCE VALUES ARE INDICATED IN MICRO FARADS UNLESS OTHERWISE NOTED. 1P=MICRO-MICRO FARAD

B801 PA-241AB



PLATINE ALIMENTATION

C801	0.047/YF
C802	25V 33 C-174
C803	0.047/YF
C804	35V 3300 CZ149
C805	0.01/YD
C806	0.01/YD
C807	0.0047/YF
C808	0.047/IP1

R801	330
R802	330
R803	1K
R804	3.3K 1/2W
R805	2.2M 1/2W

VR801	200 B RT-182

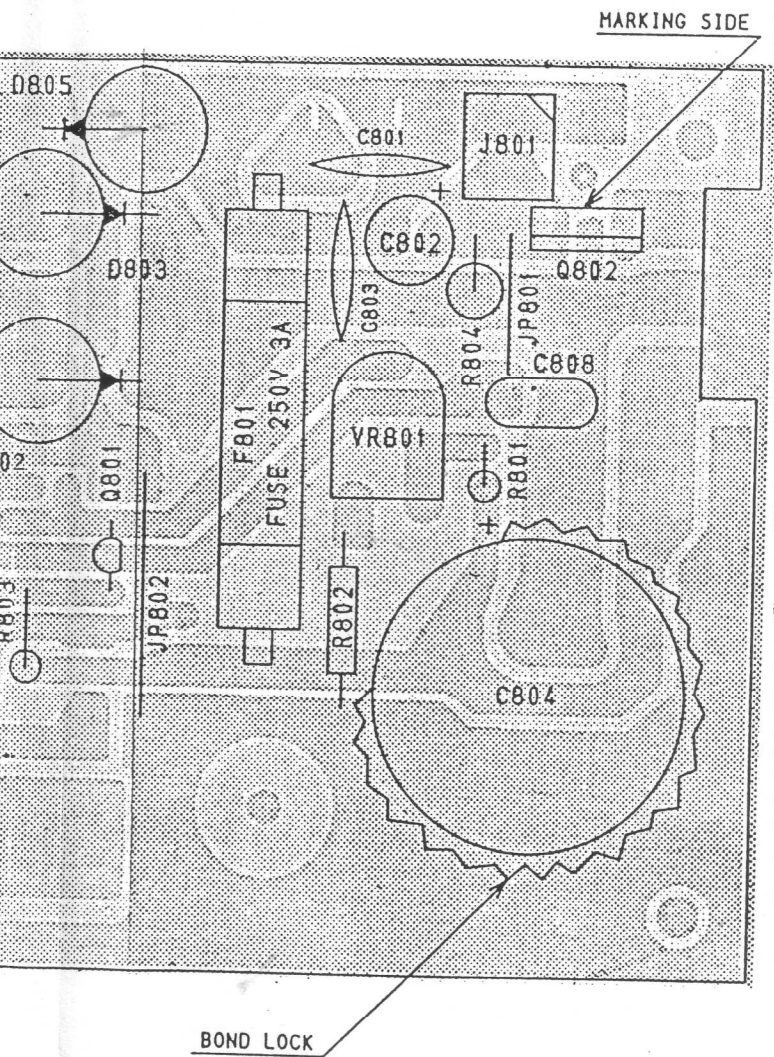
D801	HZ6C2
D802	6A1
D803	6A1
D804	6A1
D805	6A1

F801	FS023 250V 3A

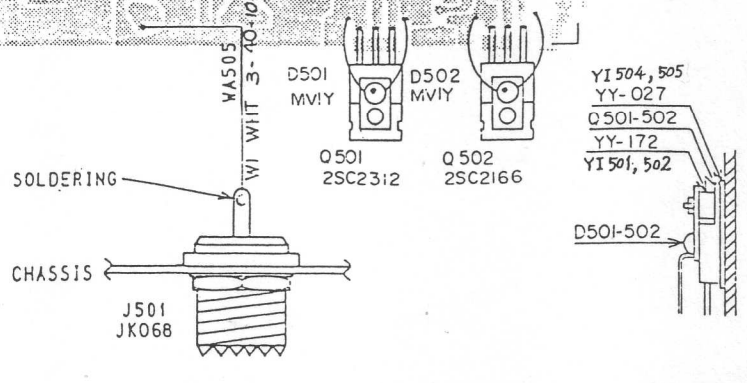
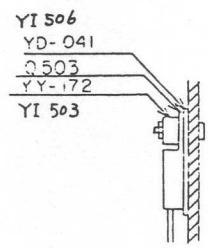
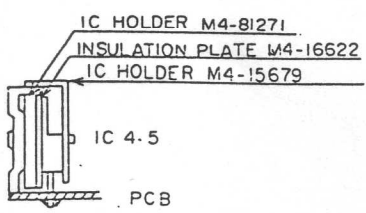
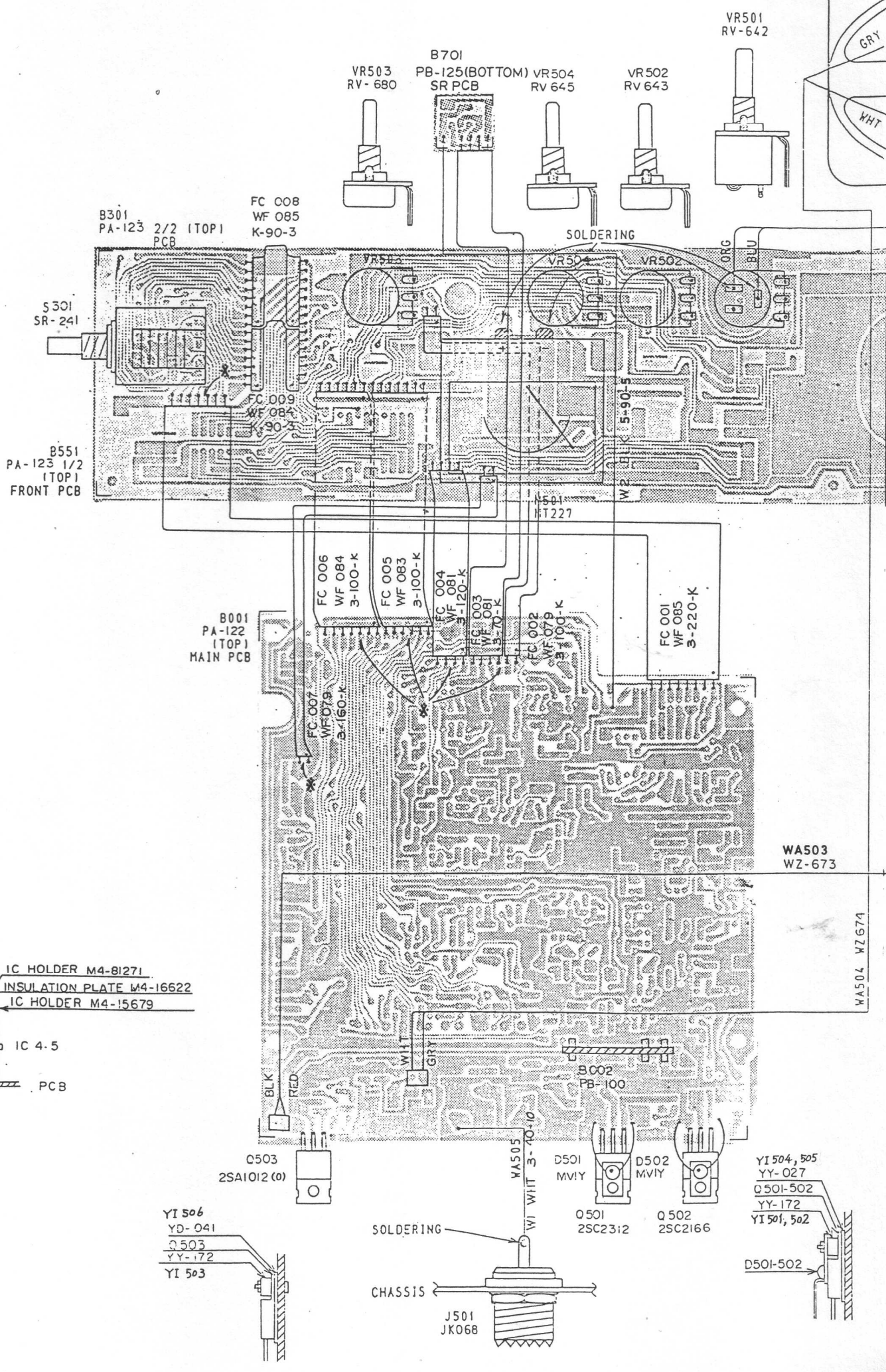
J801	PG056(2P)

JP801	1101
JP802	117.51

Q801	25C945AQ
Q802	25D1348-R



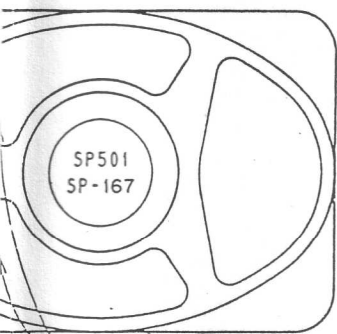
- NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED. (K-KILO OHM, M-MEG OHM)
 2. RESISTOR WATTAGES ARE 1/8W UNLESS OTHERWISE NOTED.
 3. CAPACITANCE VALUES ARE INDICATED IN MICRO FARADS UNLESS OTHERWISE NOTED. (P-MICRO-MICRO FARAD)



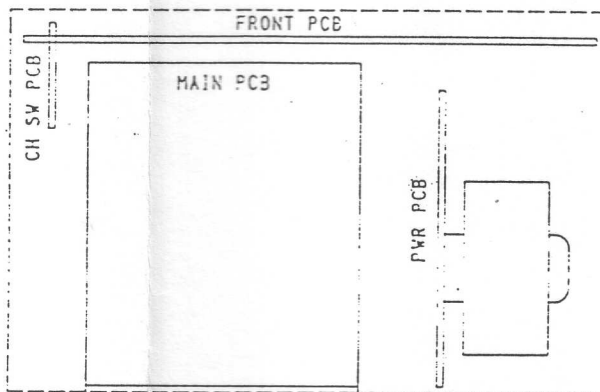
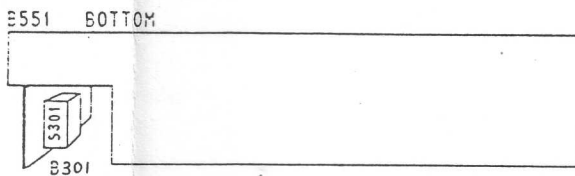
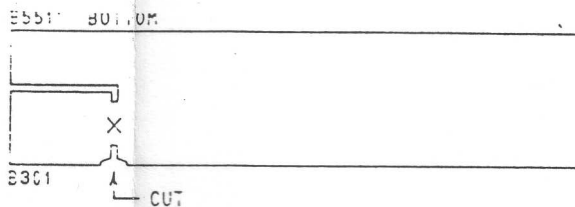
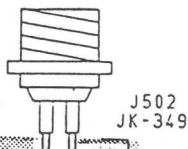
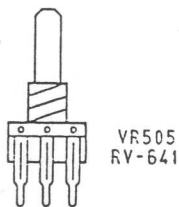
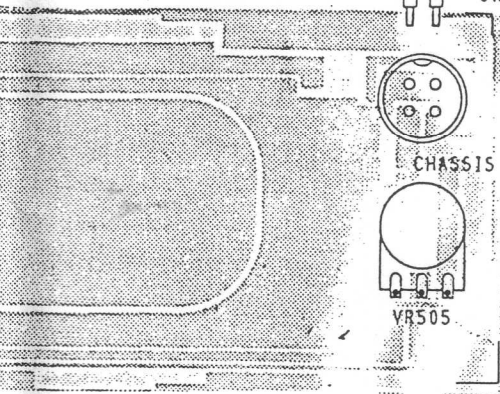
WA504 WZ674

WA503 WZ-673

SCHEMA DE CABLAGE

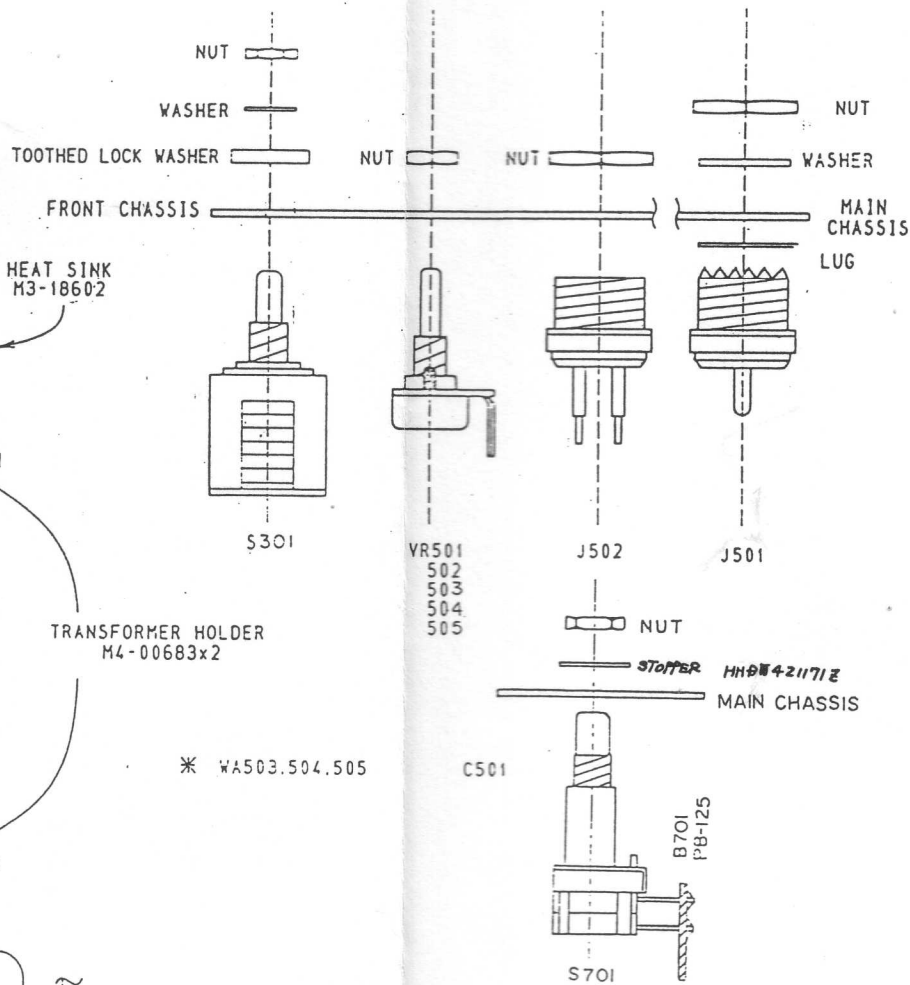
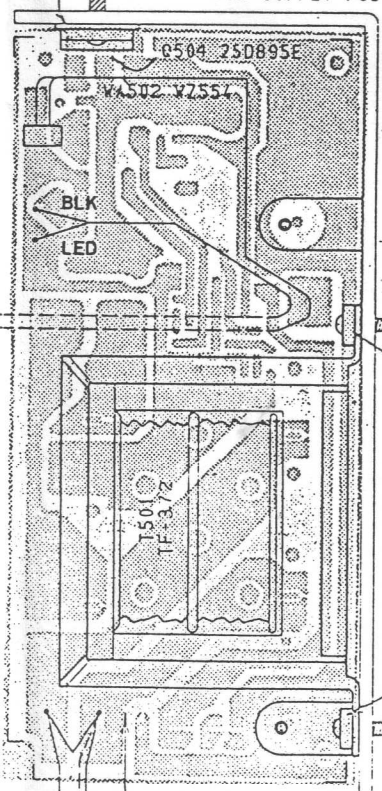


SOLDERING

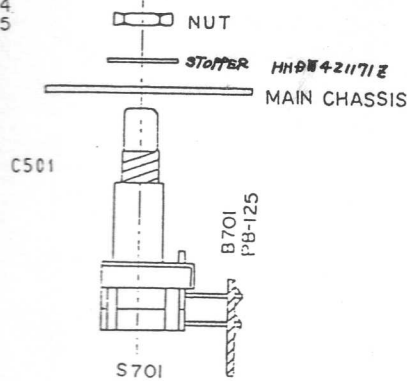


INSULATION SHIEET
Y1502 YD060

B801
PA-241 (TOP)
PWR SUPPLY PCB



* WA503.504.505



WHT LIN
CHASSIS

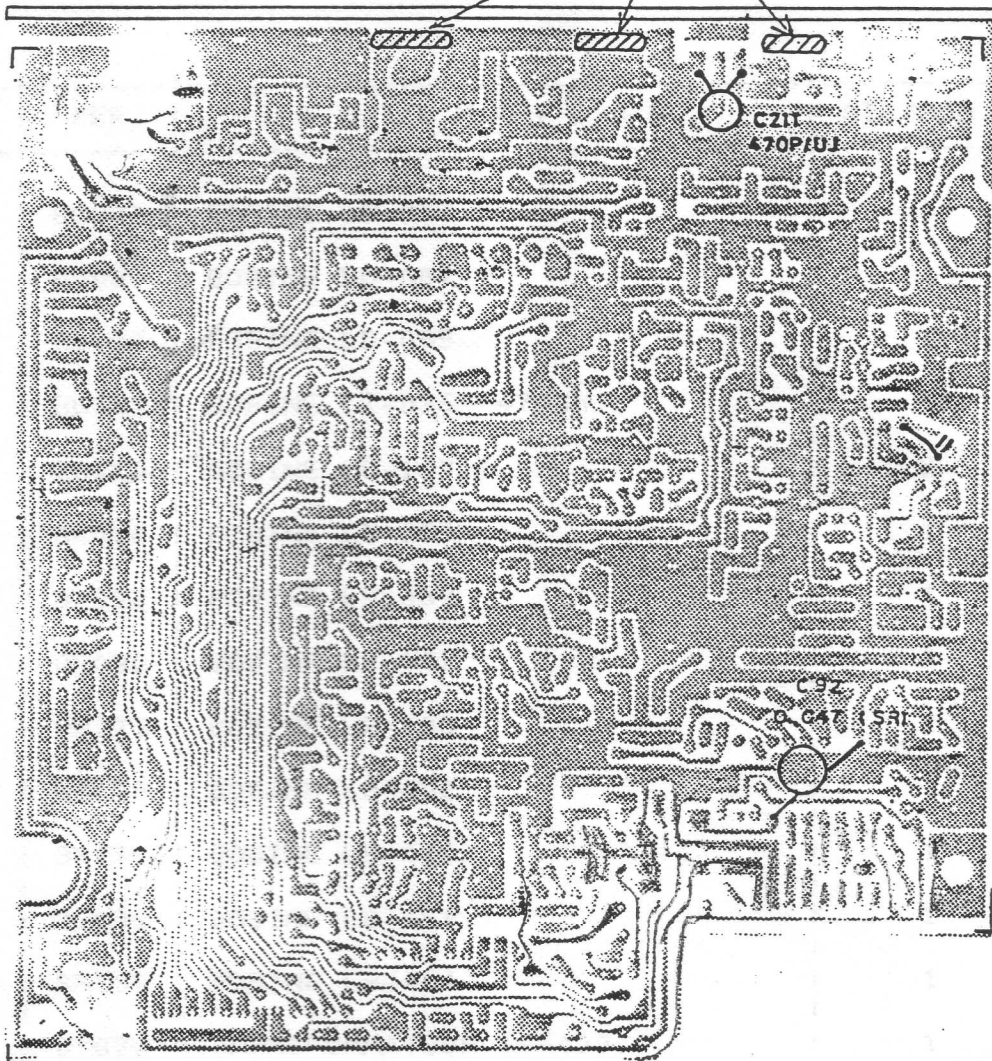
STRAIN RELIEF
HW-4W-2

WA501
WZ494

PLATINE PRINCIPALE

SOLDERING

BC01 PB-122 (BOTTOM VIEW)



LISTE PIECES DETACHEES BENJAMIN

1

	REF.	DESIGNATION	QTE/MOD.
	BC002	BOBINE LD-077	2
	BC003	BOBINE LD-087	4
	BC037	BOBINE LD-099	1
	BC167	BOBINE LZ-035 470UH	4
*	BR015	BOBINE LB-137	2
*	BR016	BOBINE LB-209	2
	BR027	BOBINE LB-339	1
*	BR030	BOBINE LB-342	2
	BR177	BOBINE LB-438	1
	BR178	BOBINE LB-452	1
	BR179	BOBINE LB-440	1
	BR180	BOBINE LB-451	2
	BR181	BOBINE LB-464	1
	BT022	TRANSFORMATEUR TF-422	1
*	DC009	DIODE MV-1Y	2
	DC022	DIODE 1S V73-EB/1S 2688 EA	1
	HP023	HAUT-PARLEUR SP-167	1
	I0008	CIRCUIT INTEGRE L 7808	1
**	IP018	CIRCUIT INTEGRE UPC 1242 H	1
**	IR000	CIRCUIT INTEGRE M 5223L	1
*	IR001	CIRCUIT INTEGRE AN 612	1
**	IR007	CIRCUIT INTEGRE TA 7320-P	1
	IS032	CIRCUIT INTEGRE D 2824C	1
*	JX001	JACK JK-089 HP EXTERNE	1
	OA022	AFFICHEUR LL-2253 BENJAMIN	1
*	PQ024	QUARTZ 10.6975 UND	1

LISTE PIECES DETACHEES BENJAMIN

2

REF.	DESIGNATION	QTE/MOD.
PQ048	QUARTZ 10.2417	1
QX195	FACE AVANT	1
QX196	PLAQUE COMMANDE BENJAMIN	1
QX197	BOUTON POUSSOIR NOIR	4
QX198	BOUTON ROND CANAUX NOIR	1
QX199	BOUTON ROND NOIR	5
QX200	BOUTON ROND M.GAIN NOIR	1
QX201	PLAQUE AFFICHEUR BENJAMIN	1
RV089	POTENTIOMETRE.RV-642 VOL/M/A	1
RV090	POTENTIOMETRE.RV-643 SQUELCH	1
RV091	POTENTIOMETRE.RV-680 10KB/CLAR	1
RV092	POTENTIOMETRE.RV-645 1KB/M.GAI	1
RV093	POTENTIOMETRE.RV-641 1KA/RF.G	1
SS034	COMMUTATEUR SR-241/CANAUX	1
* SX026	COMMUTATEUR SW-462/CONTACT 2 P	4
SX075	COMMUTATEUR SR-406/MODE 3P	1
* TB003	TRANSISTOR 2SA 1012	1
* TH001	TRANSISTOR 2SC 2166	1
*** TH002	TRANSISTOR 2SC 2312	1
TX001	TRANSISTOR 2SA 733	2
TX002	TRANSISTOR 2SC 945	16
TX003	TRANSISTOR 2SC 1674	2
TX004	TRANSISTOR 2SC 1675	2
* TX005	TRANSISTOR 2SC 1730	2
* TX007	TRANSISTOR 2SC 1973-SSB	1
TX117	TRANSISTOR 2SC 3242	2

PIECES DETACHEES SPECIFIQUES A CHAQUE APPAREIL

LISTE PIECES DETACHEES BENJAMIN		P.L.L. boucle à verrouil- lage de phase	3	B.F. Basses Fréquences
REF.	DESIGNATION			
TX309	TRANSISTOR 2SB 1035			2
TX310	TRANSISTOR 2SD 895			1
TX311	TRANSISTOR 2SD 1348			1
VM015	VU-METRE MT-227			1

CONTACTER WOFFEL S.A.V. pour nos Conditions, Disponibilités et Tarifs.

* Ces appareils utilisent soit les anciens modèles en U.F. - UPC 1182