

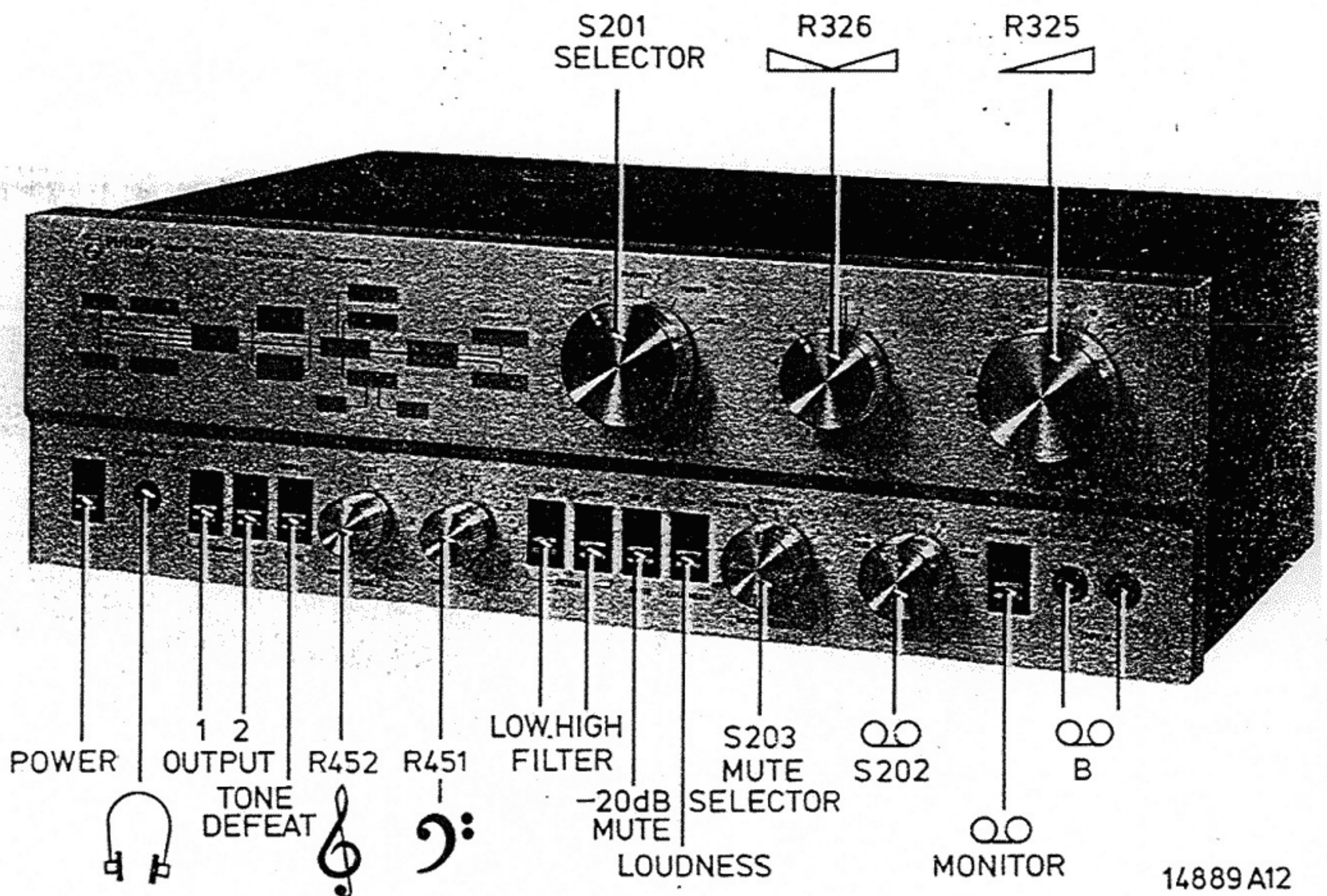


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Service Service Service

PART 2

Service Manual



14889 A12

Fig. 1

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

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



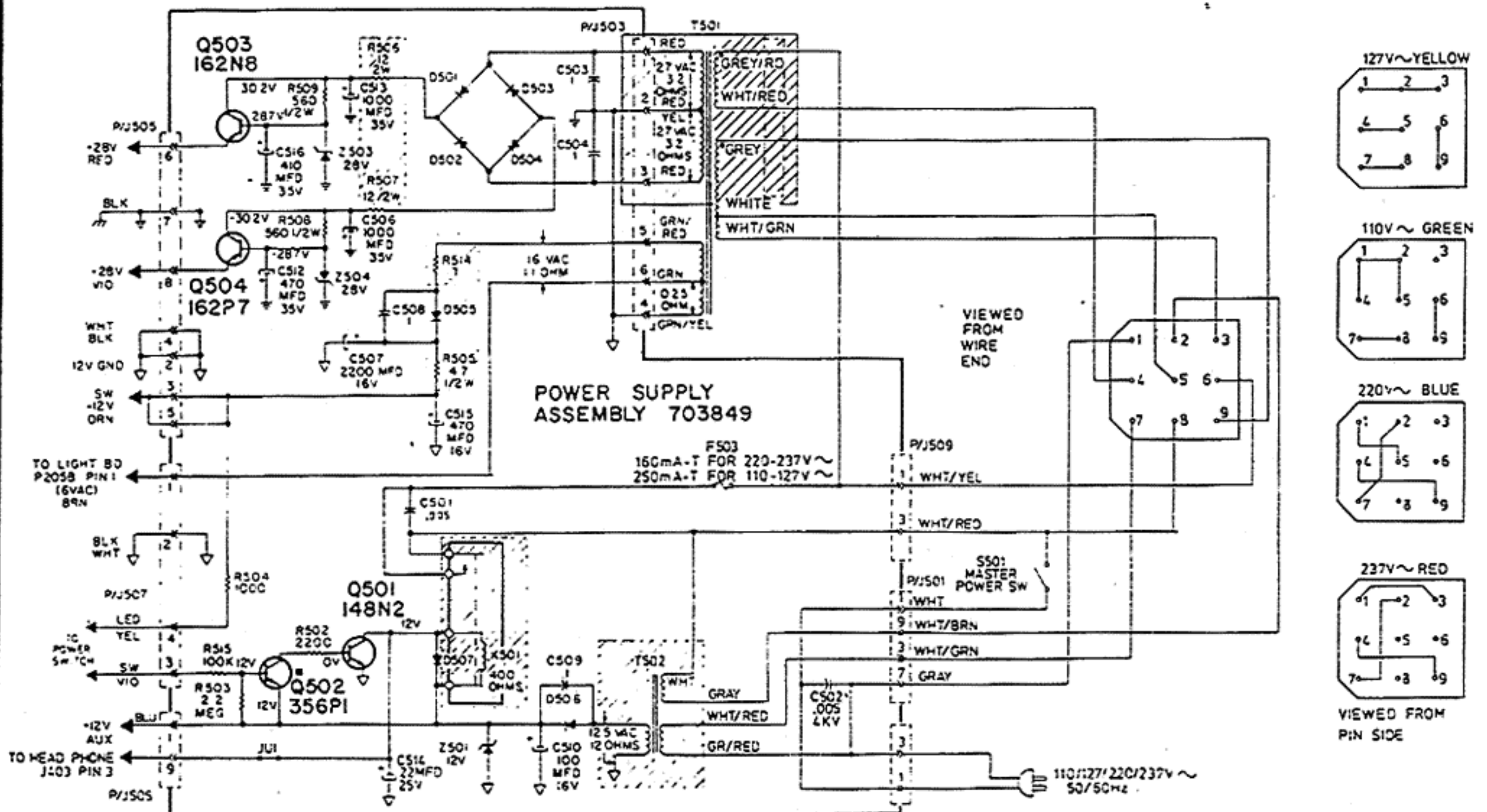
Subject to modification
4822 725 12764
Printed in The Netherlands

PHILIPS

OBJET : MODIFICATIONS DANS L'ALIMENTATION

Au départ de la production, le câblage du primaire du transformateur d'alimentation T501, et le répartiteur de tension ont été modifiés ainsi que les éléments suivants :

- . F 503 passe à 160 mA code 4822 253 30011 pour un secteur de 220 à 237 V
- . F 503 passe à 250 mA code 4822 253 30013 pour un secteur de 110 à 127 V
- . C 501 passe de 10 nF à 5 nF code 5322 122 50001



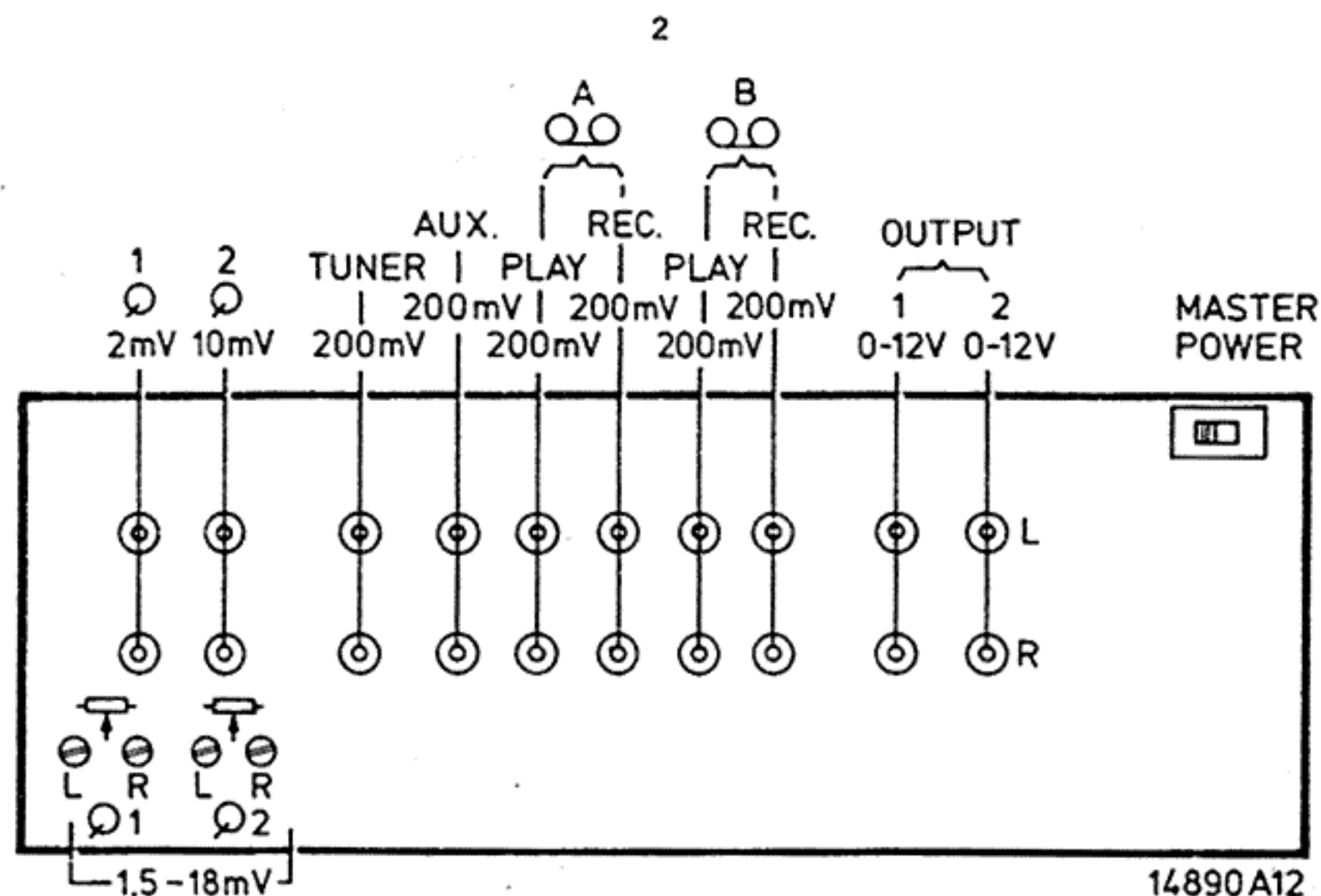


Fig. 2

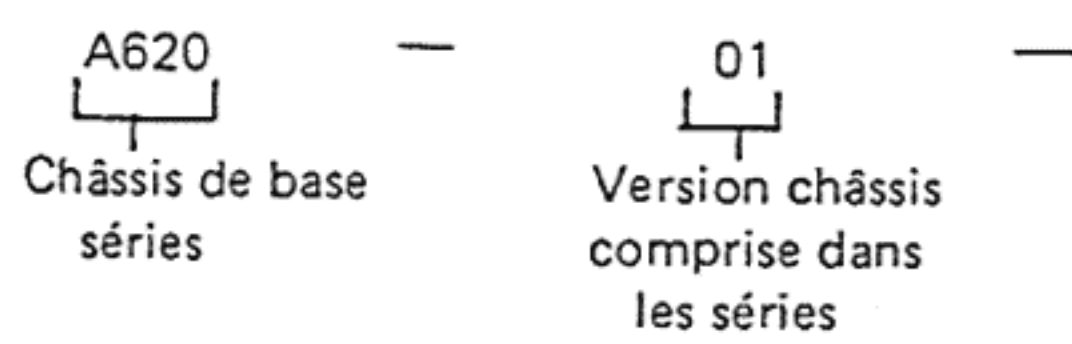
TECHNICAL SPECIFICATIONS

Input Sensitivity		Crosstalk (Minimum)	
Phono 1	2mv (Adj 1.5-18mv)	Between Modes	75dB
Phono 2	10mv (Adj 1.5-18mv)		
Aux. Tuner, Tape Play	200mv		
Impedance		Output Level	
Phono input 1,2	50K Ohms	Output 1,2 Rated	2 Volts
Aux, Tuner, Tape Play	100K Ohms	Maximum	12 Volts
Tape Record Out	1K Ohms	Record Output A,B	200mv
Pre-amp Out	600 Ohms		
Total Harmonic Distortion		Controls	
0.01% (2 V Output)		Bass (50 Hz)	±10dB (2dB detent)
Intermodulation Distortion		Treble (10 kHz)	±10dB (2dB detent)
0.01% (2 V Output)		Loudness Action (-30 dB)	
Signal to Noise Ratio (Minimum)		50 Hz	±10dB
Phono (1.5mv input)	75dB	10 kHz	±4dB
Aux. Tuner, Tape	90dB	Filters	
Phono Overload		High Cut (10 kHz)	-9dB
750mv		Low Cut (50 Hz)	-9dB
Frequency Response		Muting	
Phono 1,2	RIAA +0,-0.5dB	-20dB	
Aux, Tuner, Tape	10-45kHz, -1.0dB		
Separation (Minimum)		Power Supply	
Phono 1,2	55dB	120/240 V 50/60Hz	
Aux, Tuner, Tape	55dB	Power Consumption	
		22 watts	

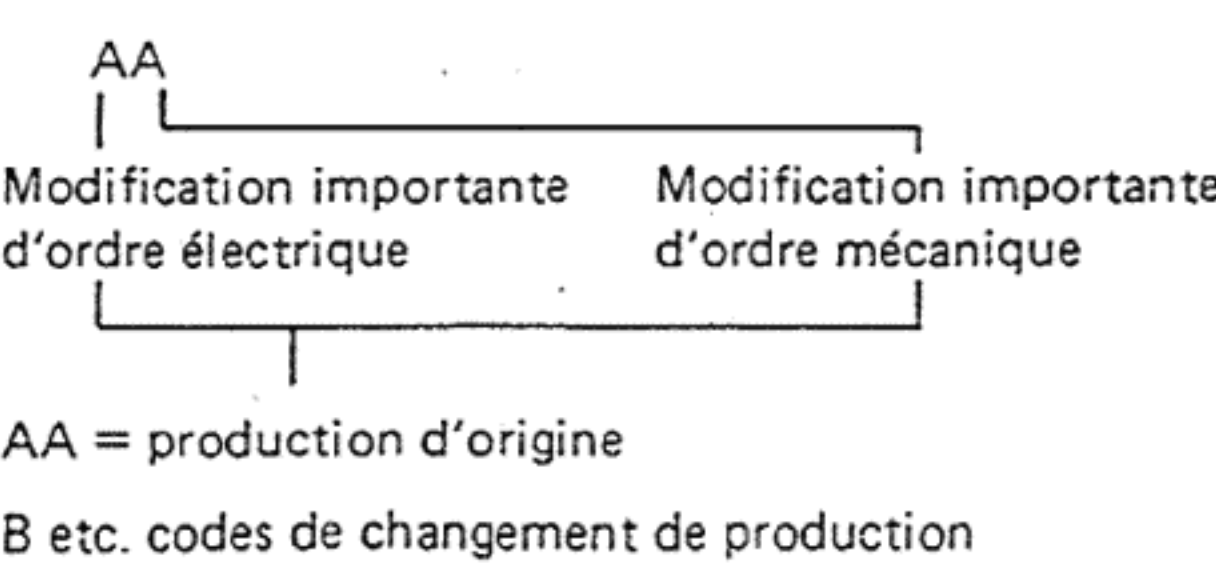
CARACTERISTIQUES TECHNIQUES

Sensibilité d'entrée	
Phono 1	: 2 mV (Adj. 1,5-18 mV)
Phono 2	: 10 mV (Adj. 1,5-18 mV)
Aux. tuner (adaptateur), tape play (marche magnéto).	: 200 mV
Impédance	
Entrée phono 1,2	: 50 kΩ
Aux,tuner, tape play	: 100 kΩ
Sortie enregistrement	: 1 kΩ
Sortie préampli	: 600 Ω
Distorsion harmonique totale	: 0,01 %(sortie 2 V)
Distorsion d'intermodulation	: 0,01 % (sortie 2 V)
Rapport signal/bruit (min.)	
Phono (entrée 1,5 mV)	: 75 dB
Aux, tuner, tape	: 90 dB
Diaphonie phono	: 750 mV
Courbe de fréquence	
Phono 1,2	: RIAA +0, -0,5 dB
Aux tuner, tape	: 10-45 kHz. -1,0 dB
Séparation des canaux (min.)	
Phono 1,2	: 55 dB
Aux., tuner, tape	: 55 dB
Diaphonie (min.)	
Entre les fonctions	: 75 dB
Niveau de sortie	
Sortie 1,2 graduée	: 2 V
Sortie 1,2 maximum	: 12 V
Sortie enregistrement A,B	: 200 mV
Commandes	
Graves 50 Hz	: ± 10 dB (2 dB graduée)
Aigus 10 kHz	: ± 10 dB (2 dB graduée)
Correction physiologique -30 dB	
50 Hz	: ± 10 dB
10 kHz	: ± 4 dB
Filtres	
Haut 10 kHz	: -9 dB
Bas 50 Hz	: -9 dB
Silence	: -20 dB
Alimentation	: 120/240 V 50/60 Hz
Consommation	: 22 W

IDENTIFICATION DU CHASSIS



- Aux — Auxiliaire
- Balance — Réglage d'équilibrage
- Bass action — Fonctionnement des graves
- Chassis ground — Masse du châssis
- Darlington transistor — Transistor Darlington
- Deviation — Déviation
- Distorsion — Distorsion
- Frequency responce — Courbe de fréquence
- Function selector module — Module de sélection de fonction
- Ground power supply - Masse de l'alimentation
- Headphone/pre-amp module — Ecouteur/module préampli
- Headphone/output amplifier module — Casque d'écoute/module de sortie amplificateur
- Hi-cut — Filtre haut
- Input connector module — Module connecteur d'entrée
- Jack — Prise
- Left channel — Canal gauche
- Light display module — Module d'affichage lumineux
- Lo-cut — Filtre bas
- Loudness — Puissance
- Low-high filter — Filtre bas-haut
- Master power switch — Commutateur principal de puissance
- Mode switch — Commutateur de mode
- Monitor switch — Commutateur moniteur
- Mute -20 dB — Commutateur de silence -20 dB
- Mute selector — Sélecteur de silence
- Noise component — Composante bruit
- Output — Sortie
- Output relay — Relais de sortie
- Phono — Tourne-disque
- Phono pre-amp module — Module prèampli tourne-disque
- Power supply — Alimentation
- Reverse stereo — Stéréophonie inversée
- Right channel — Canal de droite
- Selector switch — Commutateur sélecteur
- Signal ground — Masse du signal
- Source — Source
- Tape monitor switch — Commutateur moniteur de bande
- Tape play — Reproduction
- Tape rec — Enregistrement
- Tape monitor and mode module — Moniteur bande et module demode
- Tone controle module — Module de commande de tonalité
- Tone defeat — Aplanissement tonalité
- Treble action — Fonctionnement des aigus
- Tuner — Adaptateur
- Viewed from pin side — Vue côté broches
- Volume and filter module — Module volume et filtre



CHASSIS IDENTIFICATION

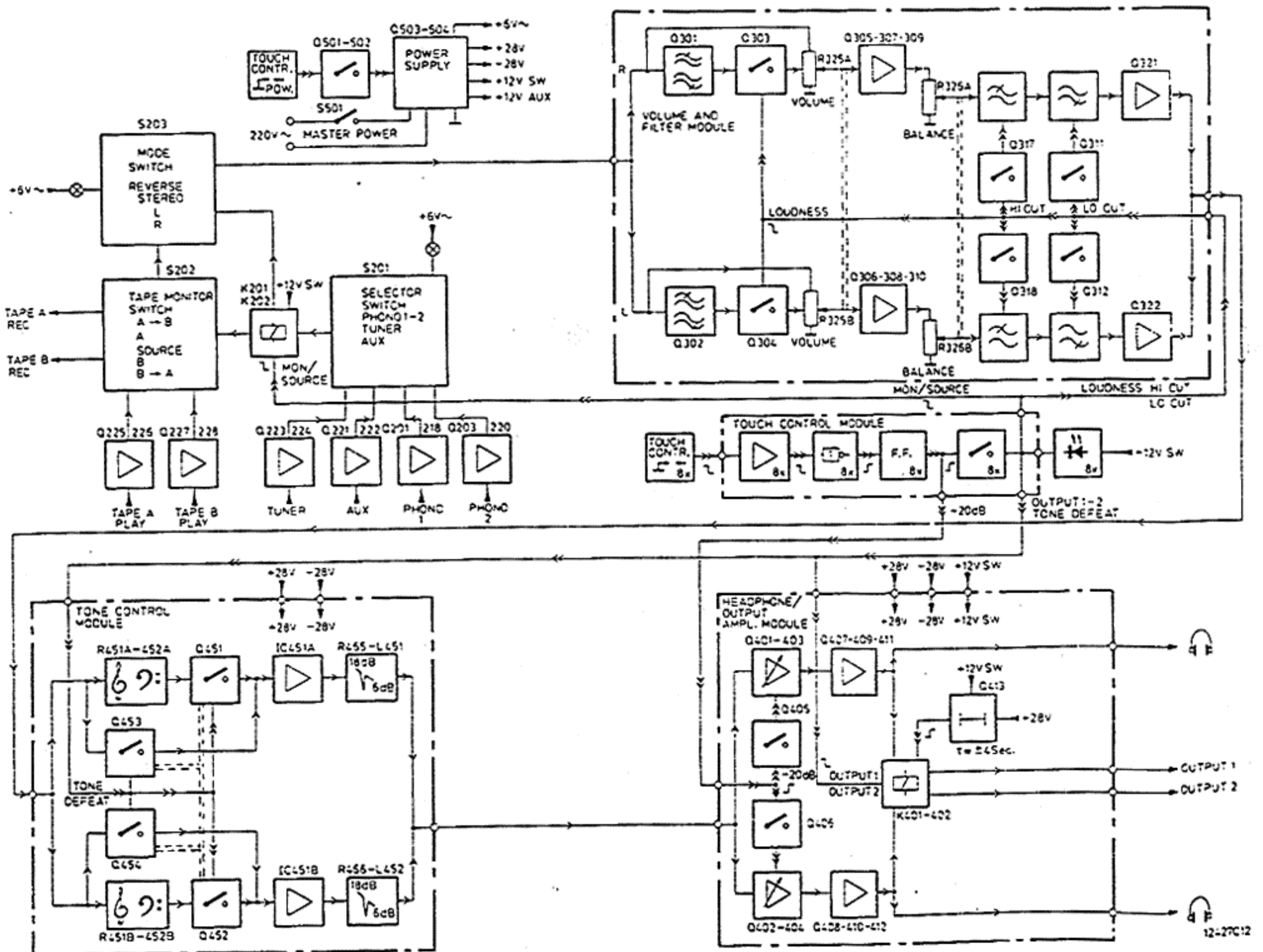
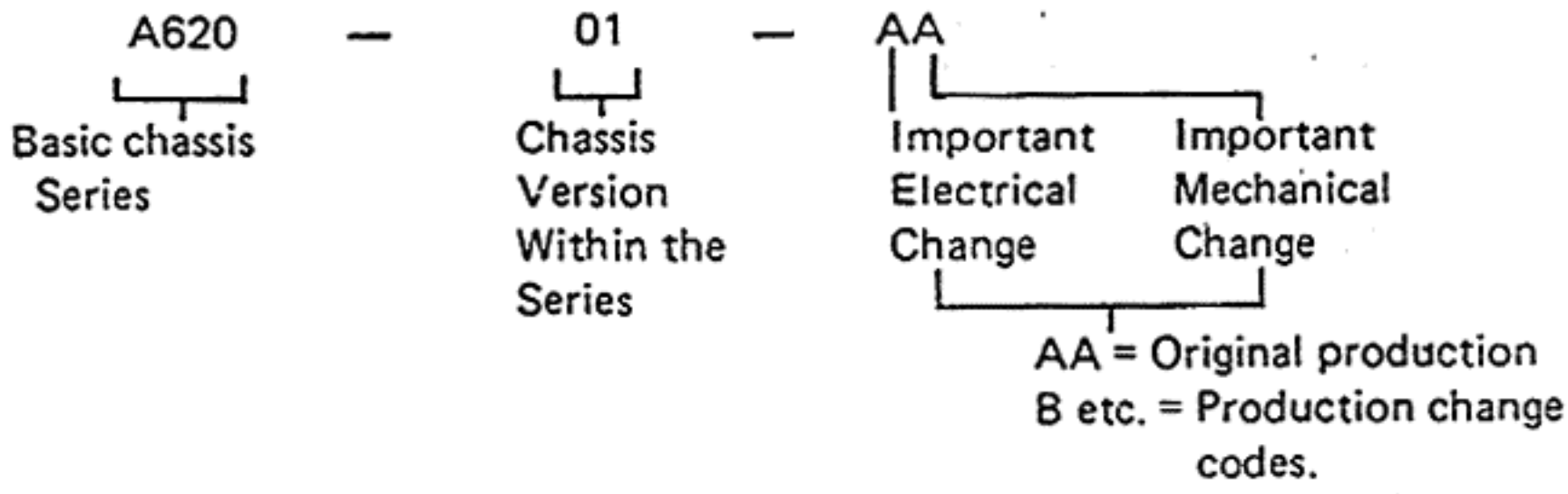


Fig. 3

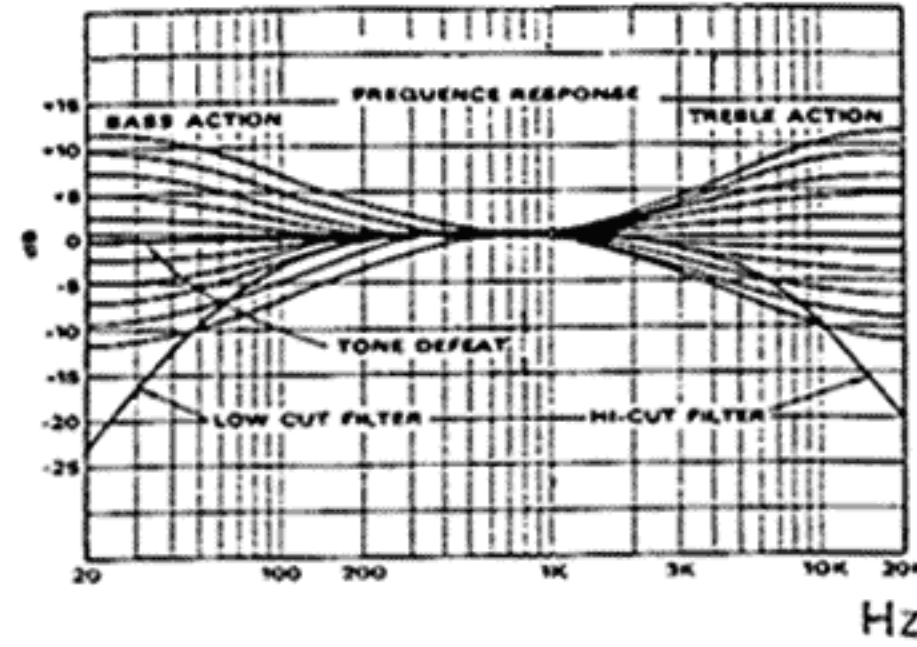
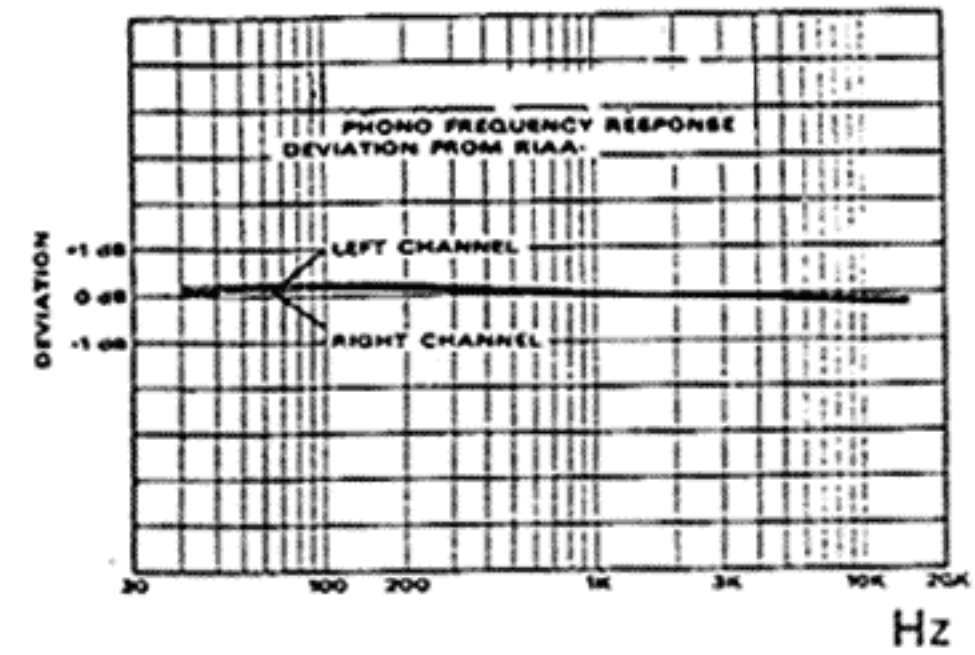
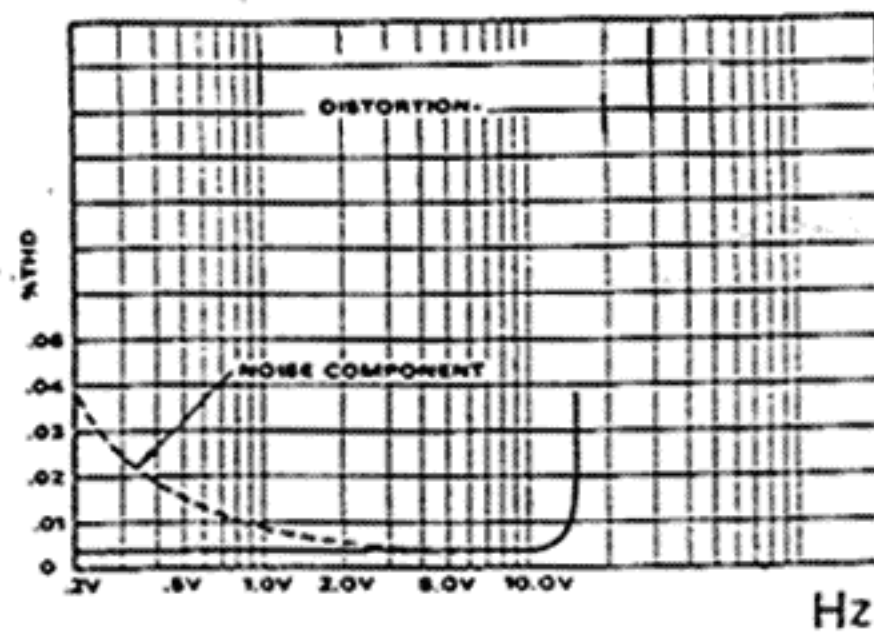
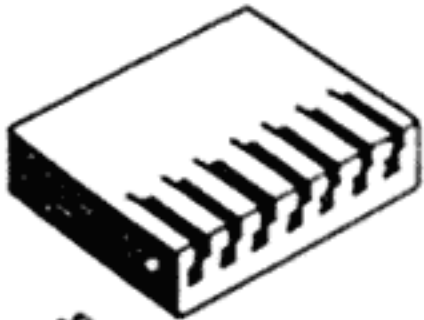
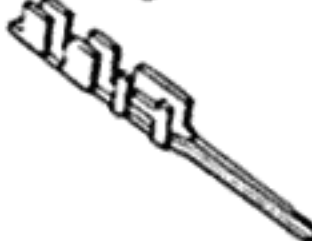
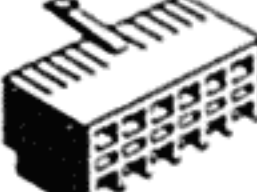
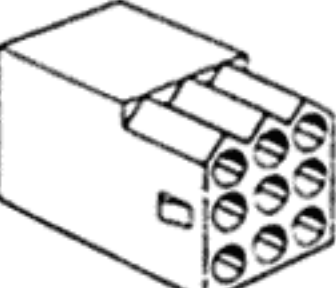
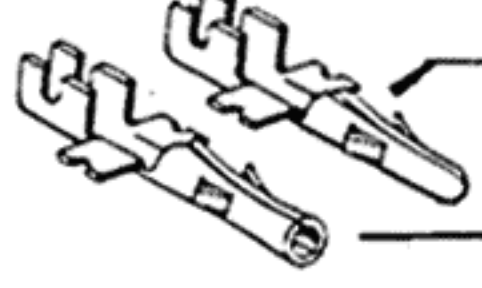
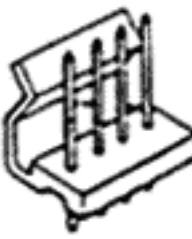




Fig. 4

	3 Pin 4822 267 40294 4 Pin 4822 267 40295 5 Pin 4822 267 40296
	4822 268 10118
	3 Pin 4822 267 40317 4 Pin 4822 267 40297 5 Pin 4822 267 40298 6 Pin 4822 267 50248 9 Pin 4822 267 50249 10 Pin 4822 267 50264
	4822 267 50243
	2.2 mm 4822 268 10114 3 mm 4822 268 10121 2.2 mm 4822 268 20071 3 mm 4822 268 20073
	2 Pin 4822 265 30152 4 Pin 4822 265 30136 9 Pin 4822 265 30153
	4822 268 10115
	8 Pin 4822 265 30155




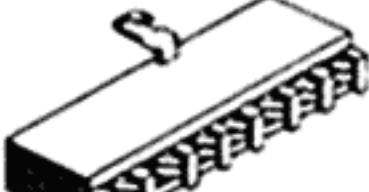
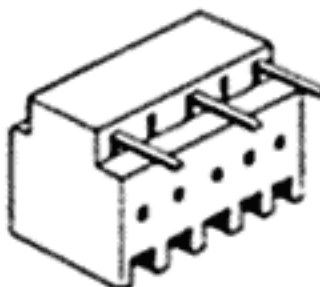
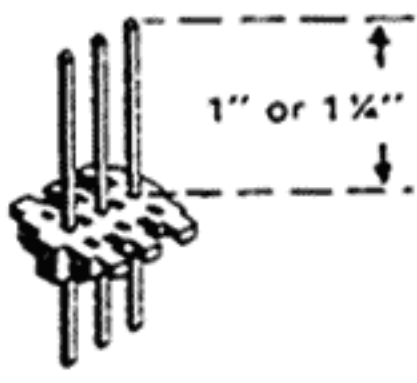


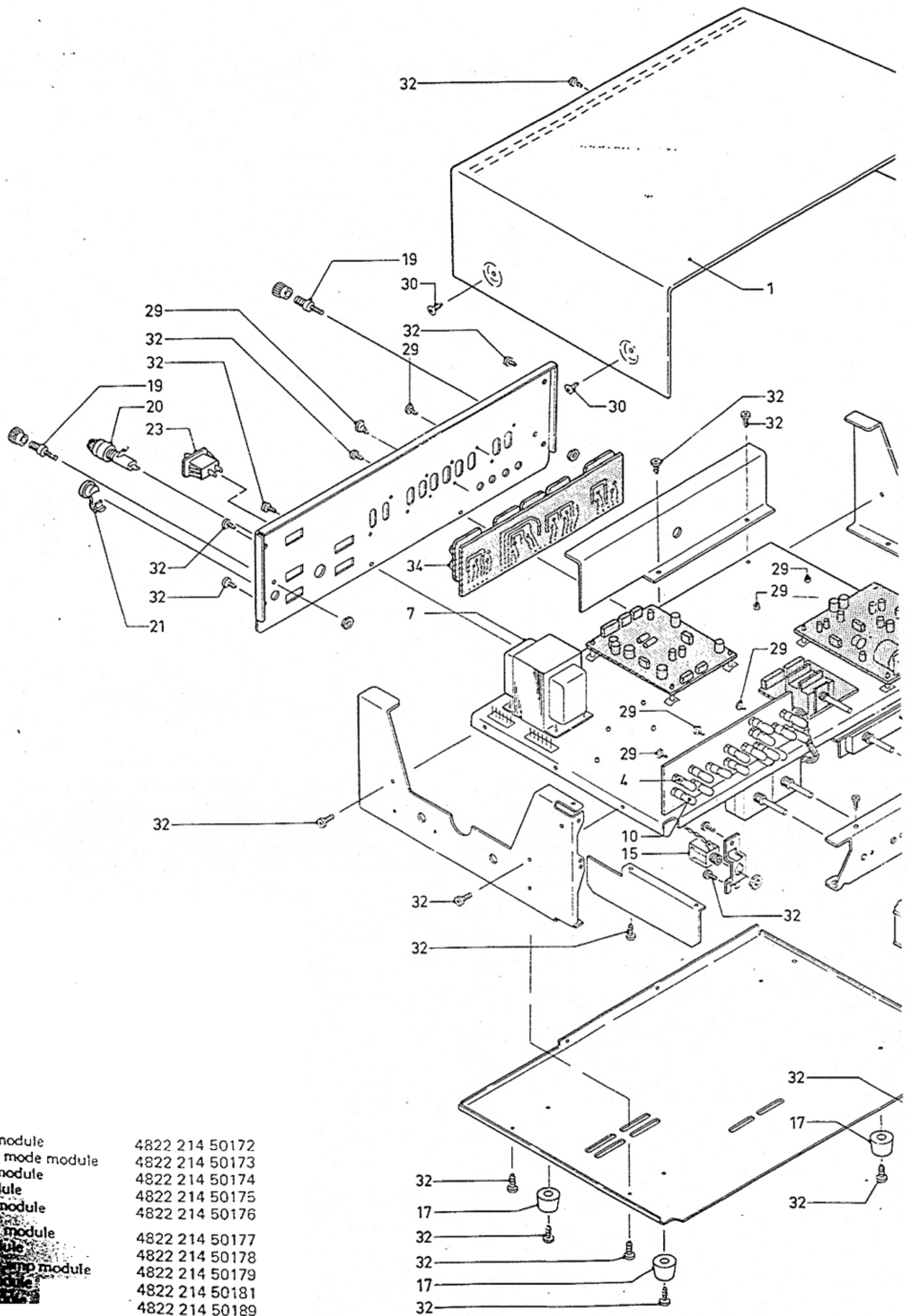
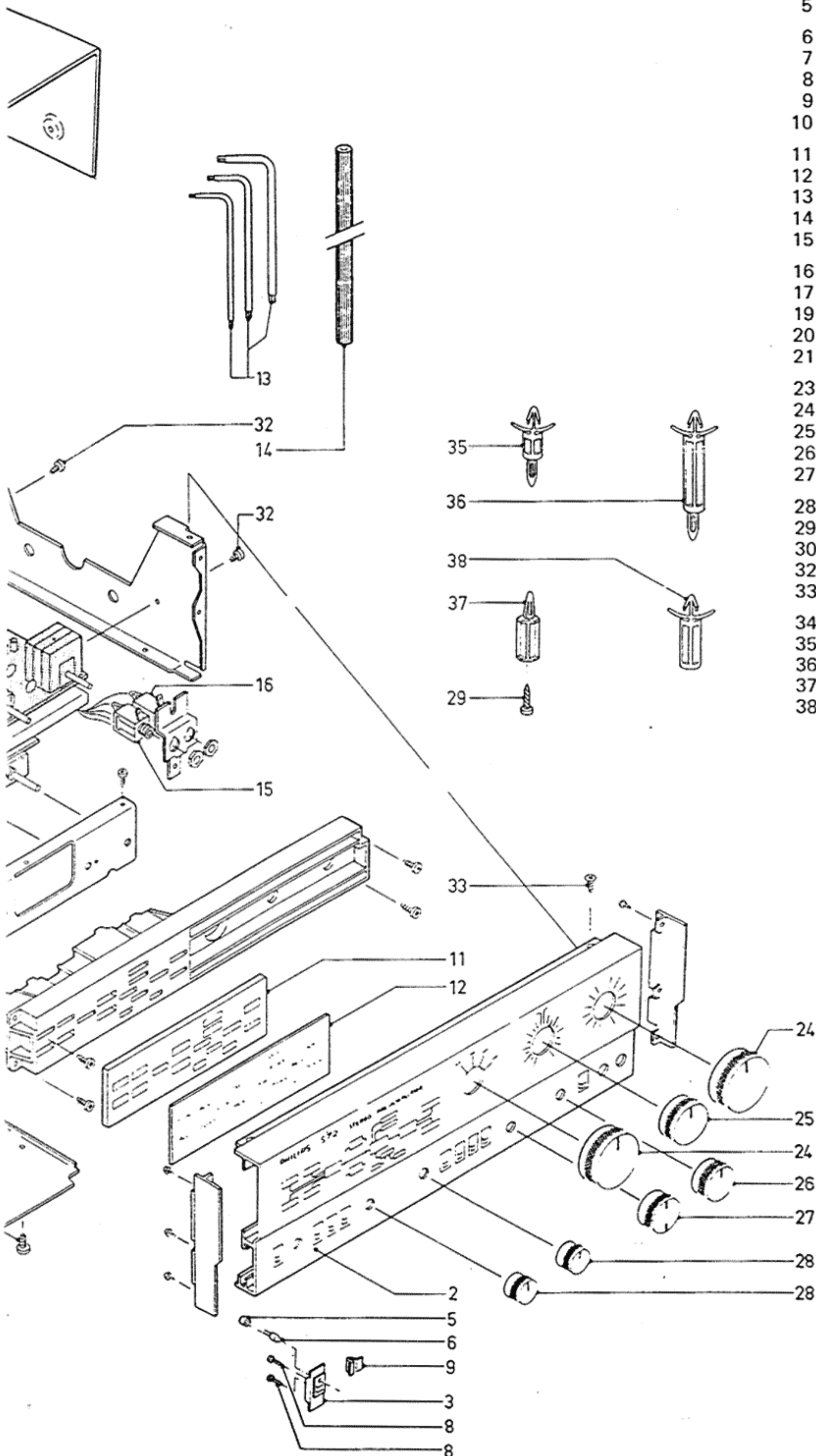
	2 Pin 4822 267 50269 4 Pin 4822 167 40271
	3 Pin 4822 267 40272 4 Pin 4822 267 40273 5 Pin 4822 267 40274 6 Pin 4822 267 50244 7 Pin 4822 267 50245 9 Pin 4822 267 50246
	4822 268 10113
	3 Pin 4822 267 40291 4 Pin 4822 267 40292 5 Pin 4822 267 40293 6 Pin 4822 267 50247 7 Pin 4822 265 30154 8 Pin 4822 267 50263
	3 Pin 4822 267 40275 4 Pin 4822 267 40276 5 Pin 4822 267 40289
	3 Pin, 1" 4822 265 40137 3 Pin, 1 1/4" 4822 265 30141 4 Pin, 1" 4822 265 30138 5 Pin, 1" 4822 265 30139 5 Pin, 1 1/4" 4822 265 30142 6 Pin, 1" 4822 265 40128 6 Pin, 1 1/4" 4822 265 40136 7 Pin, 1" 4822 265 30156 8 Pin, 1/2" 4822 265 30151 8 Pin, 1" 4822 265 40135
	3/4" 4822 268 10116
	5/8" 4822 268 10117

Fig. 5



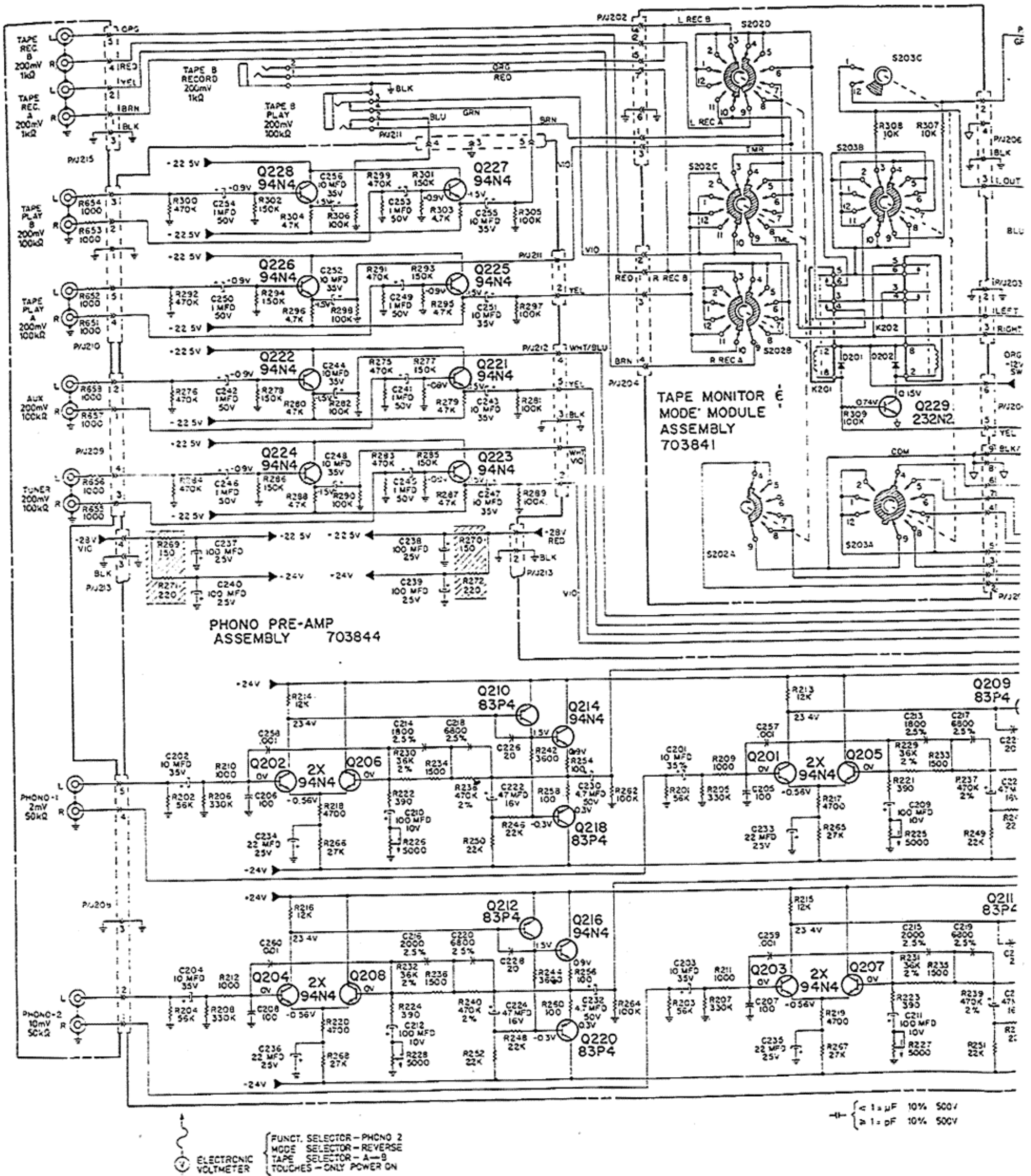
tion selector module
 be monitor and mode module
 ut connector module
 Hz display module
 no pre-amp module
 ame and filter module
 e control module
 amp module
 module

4822 214 50172
 4822 214 50173
 4822 214 50174
 4822 214 50175
 4822 214 50176
 4822 214 50177
 4822 214 50178
 4822 214 50179
 4822 214 50181
 4822 214 50189



1	4822 426 90051
2	4822 459 50236
3	4822 276 10676
4	4822 255 20084
5	4822 256 90231
6	4822 130 30999
7	4822 146 40241
8	4822 502 11053
9	4822 404 20249
10	4822 134 40354
11	4822 459 50235
12	4822 454 10574
13	4822 395 50132
14	4822 395 90098
15	4822 267 30294
16	4822 267 30293
17	4822 462 71098
19	4822 267 30295
20	4822 256 40051
21	4822 325 50117
23	4822 277 10426
24	4822 413 50947
25	4822 413 50948
26	4822 413 40762
27	4822 413 50949
28	4822 413 30724
29	4822 502 30145
30	4822 500 10191
32	4822 502 30144
33	4822 502 30102
34	4822 268 20072
35	4822 535 91089
36	4822 535 91091
37	4822 535 91092
38	4822 535 91093

Fig. 6



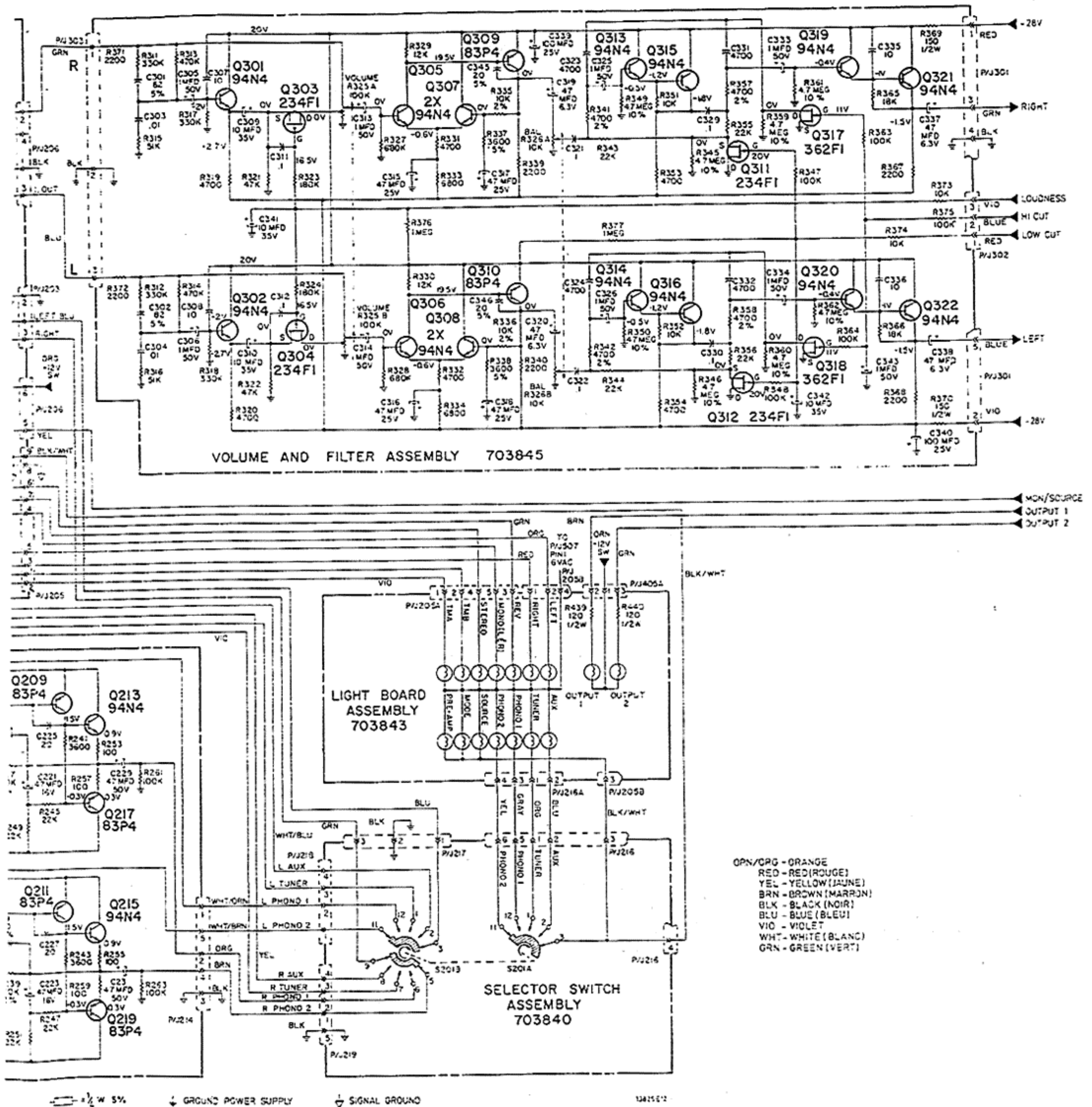
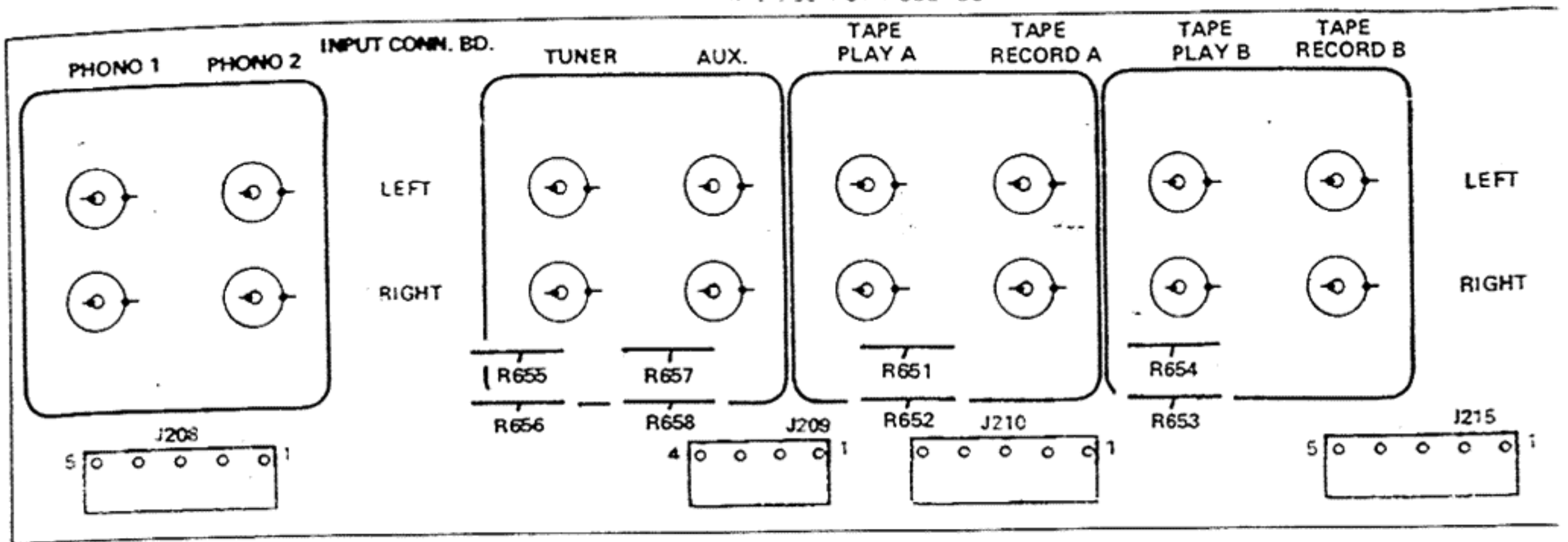


Fig. 7

INPUT/OUTPUT ASSEMBLY



LIGHT BOARD ASSEMBLY

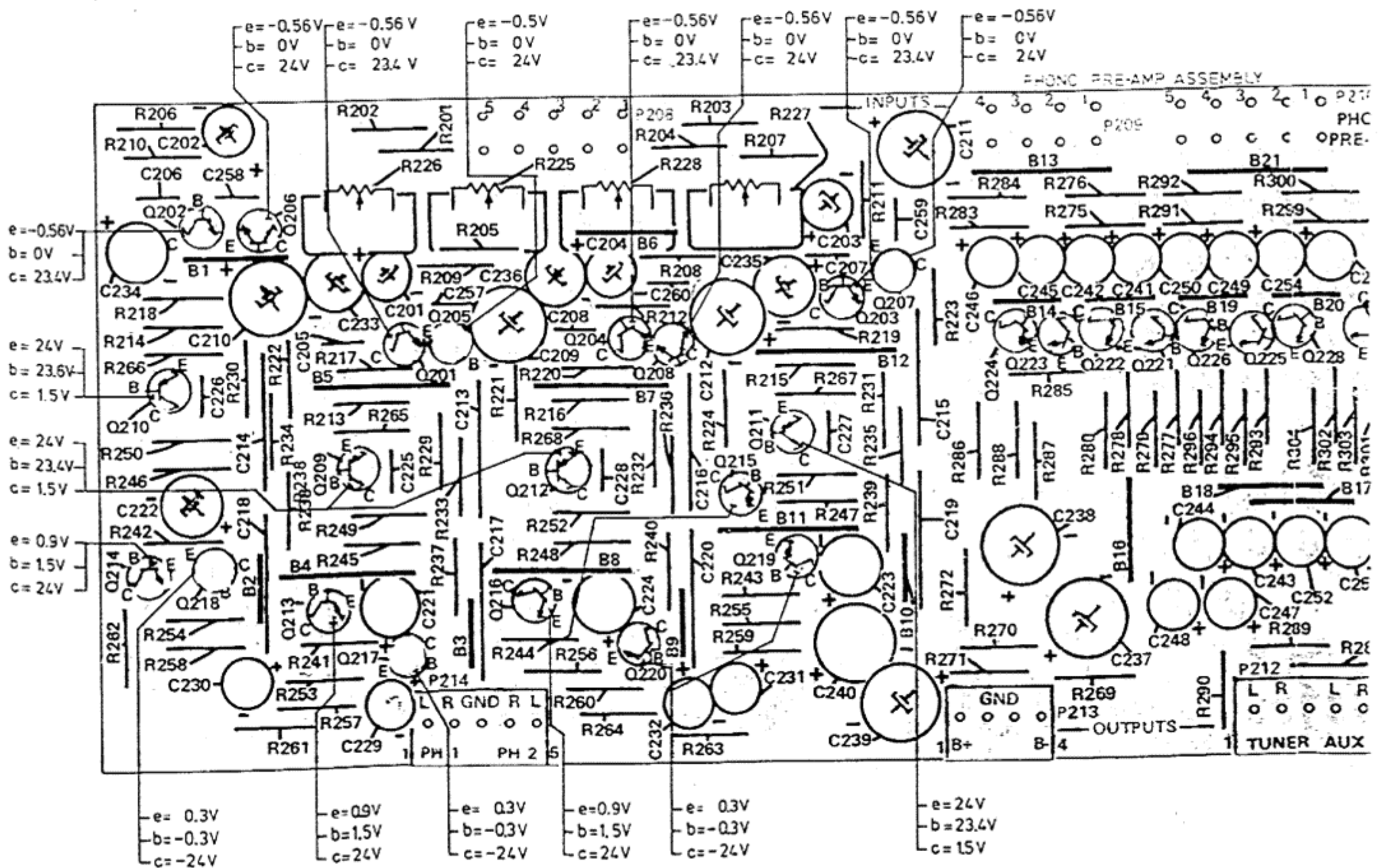
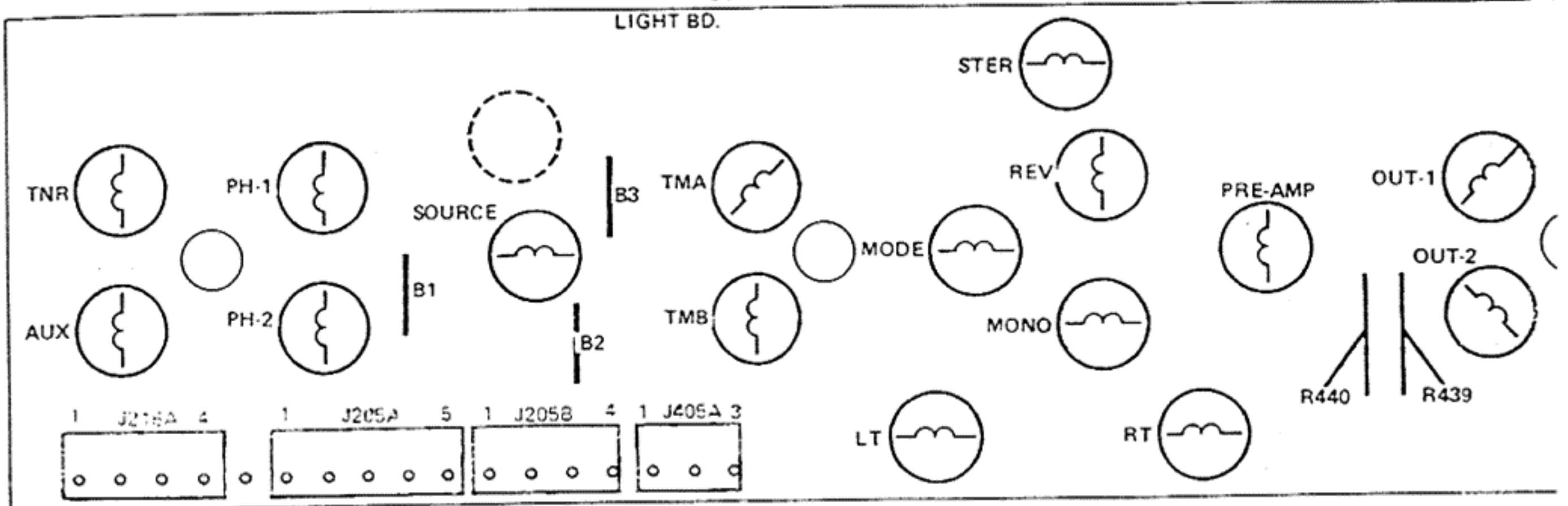
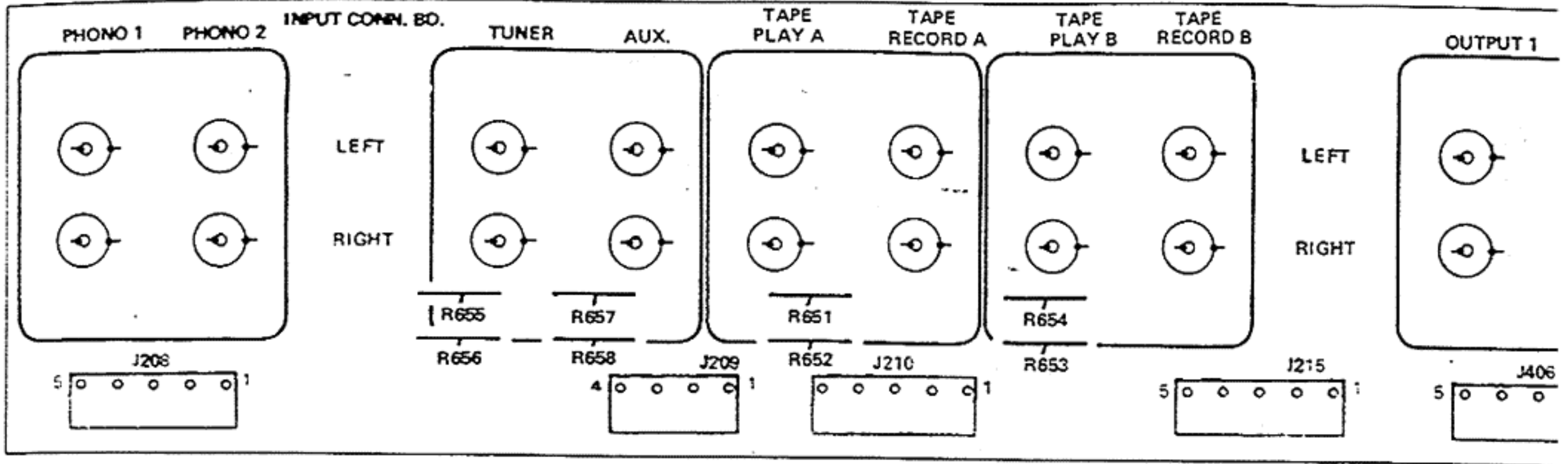


Fig.

INPUT/OUTPUT ASSEMBLY



LIGHT BOARD ASSEMBLY

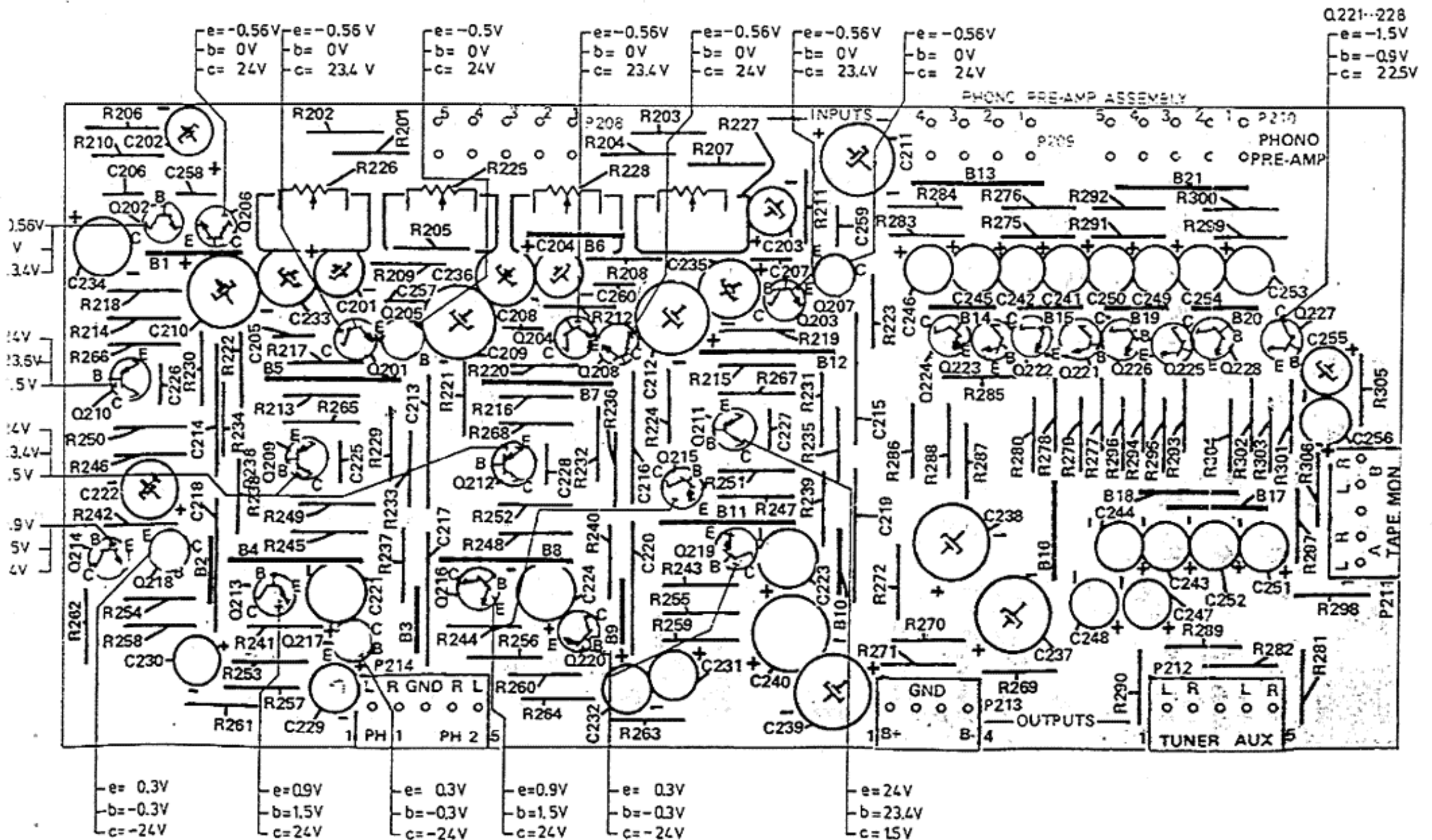
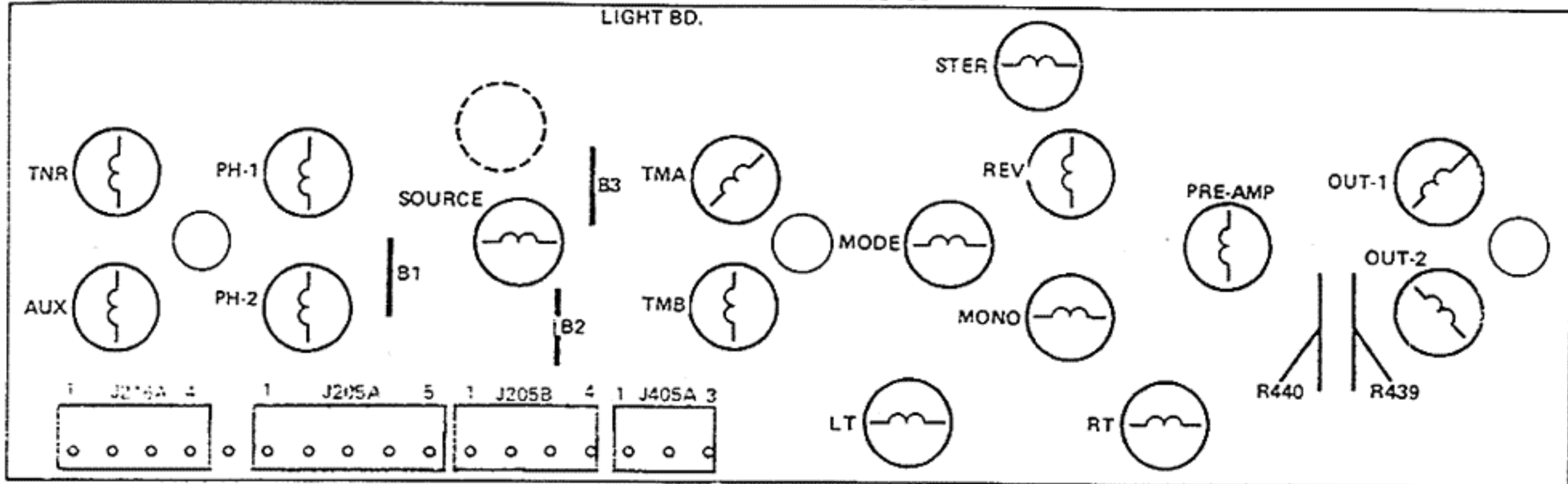
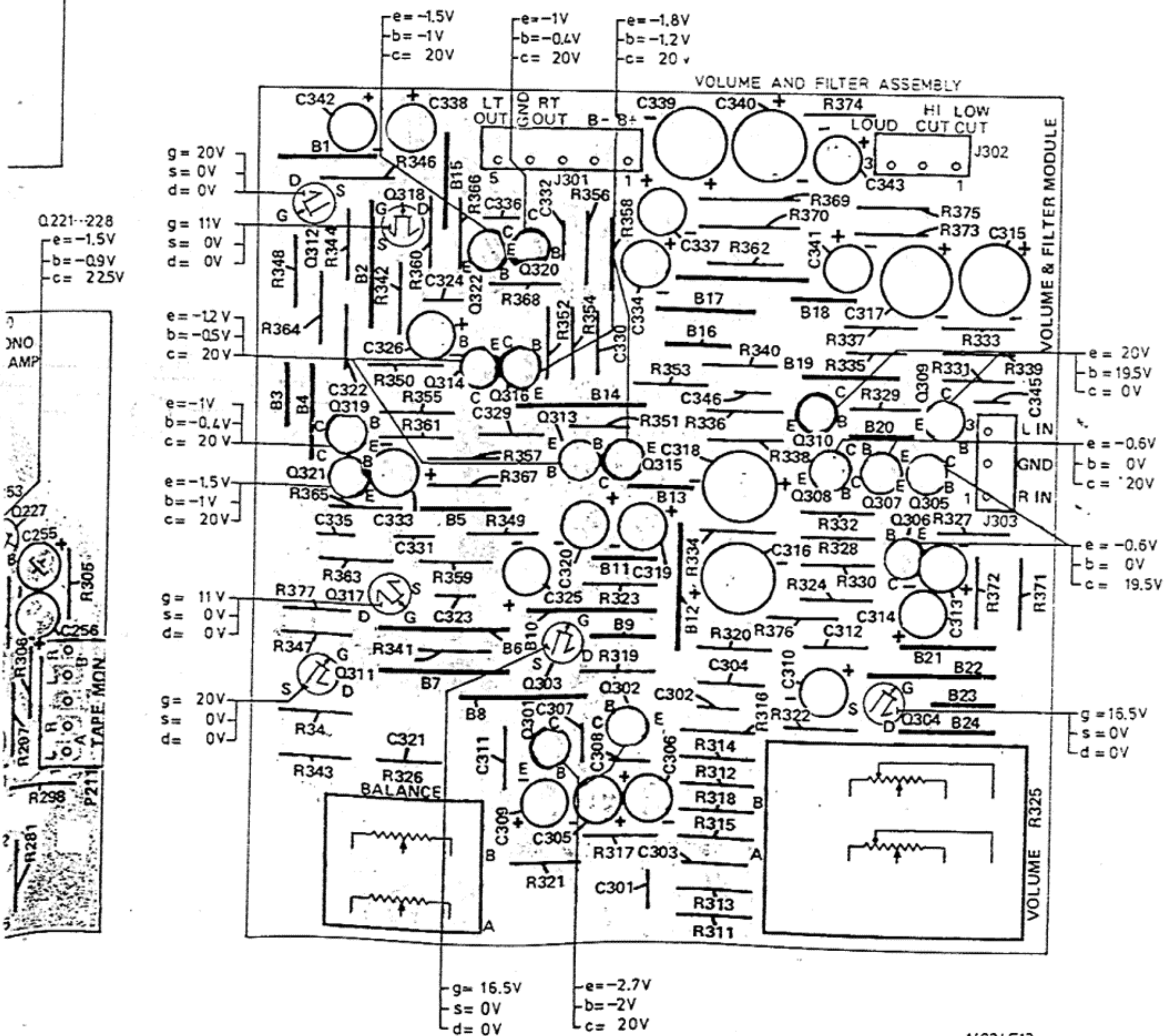
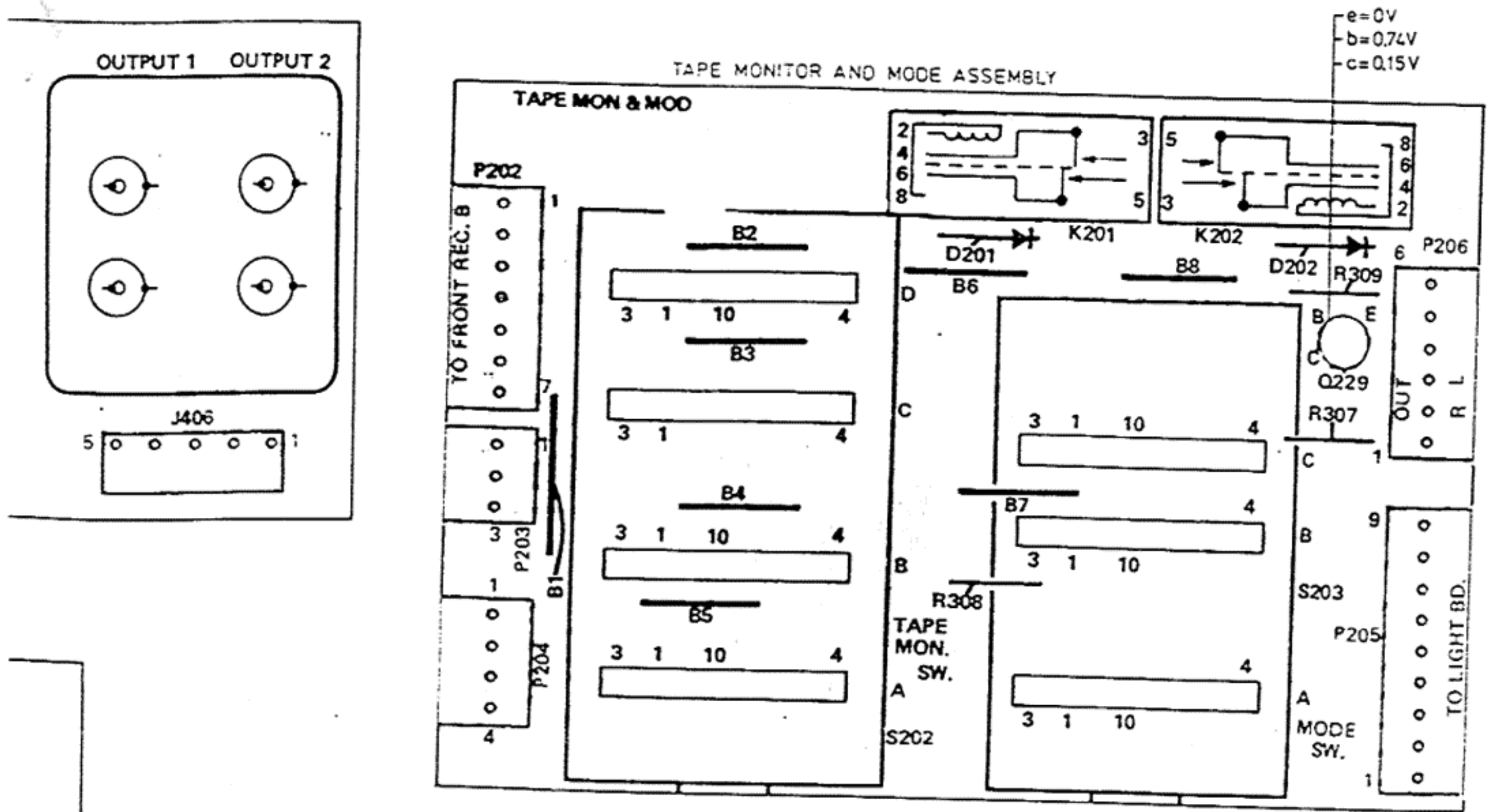
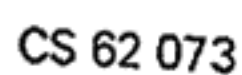
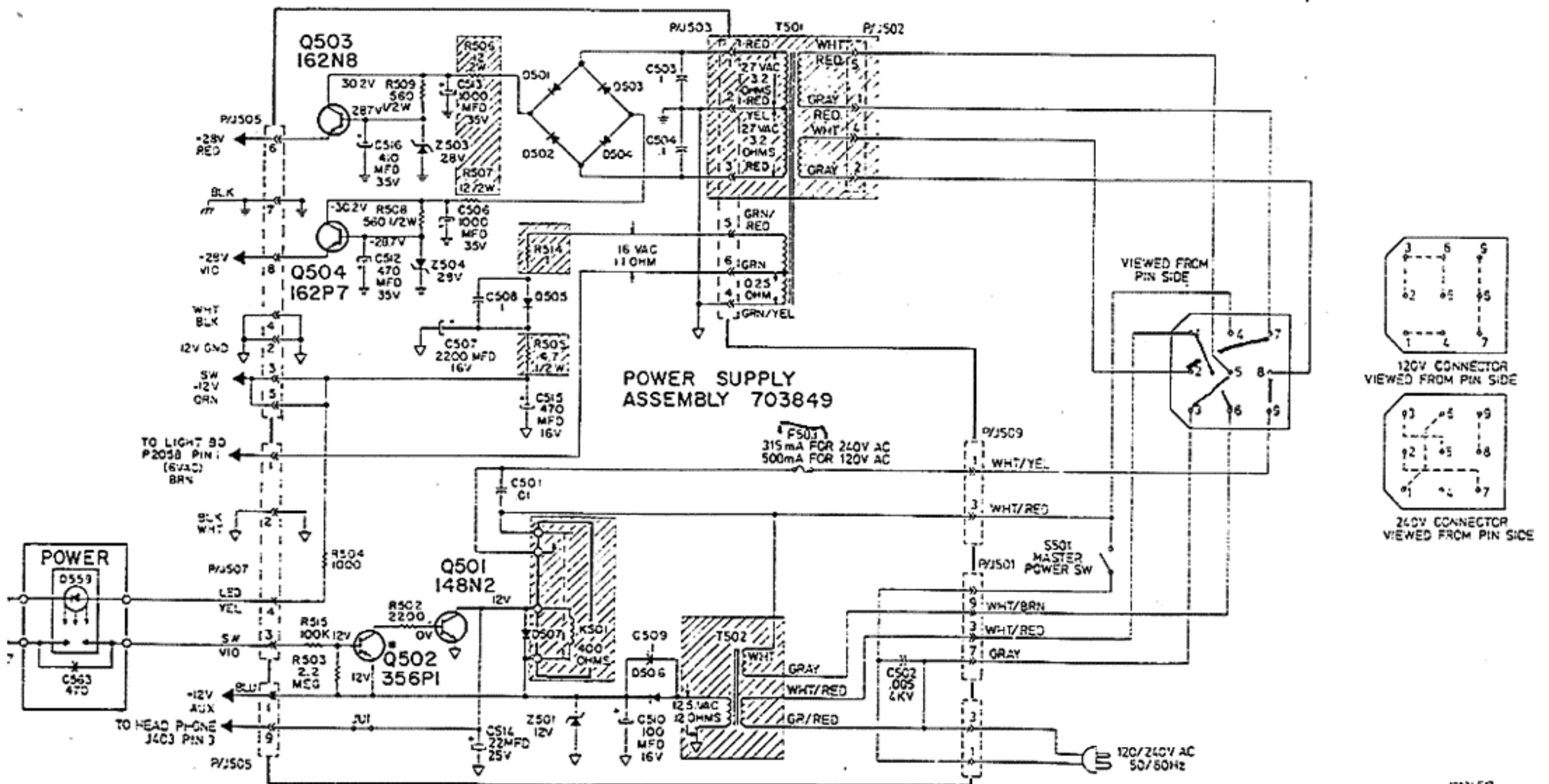
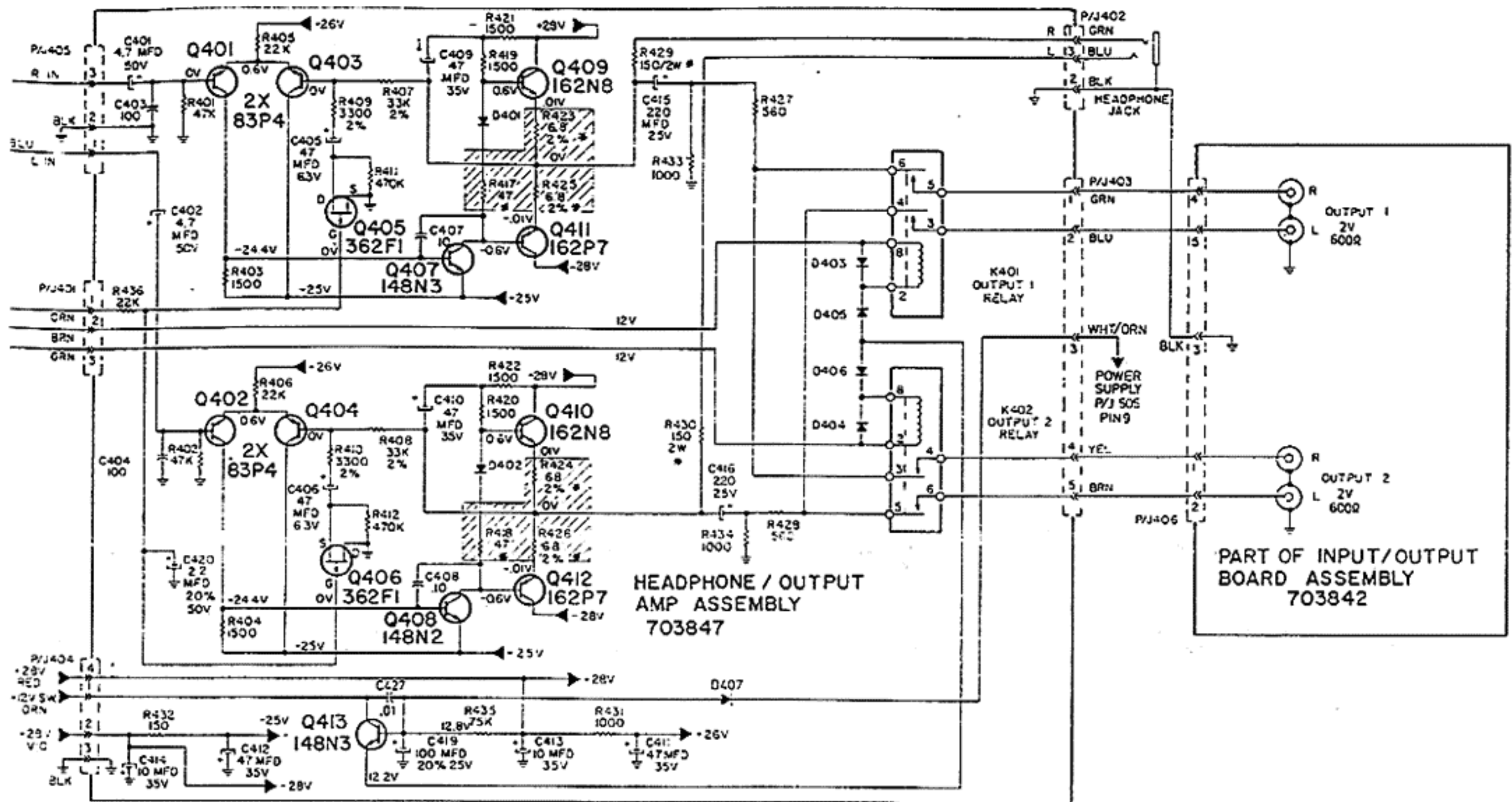


Fig. 8

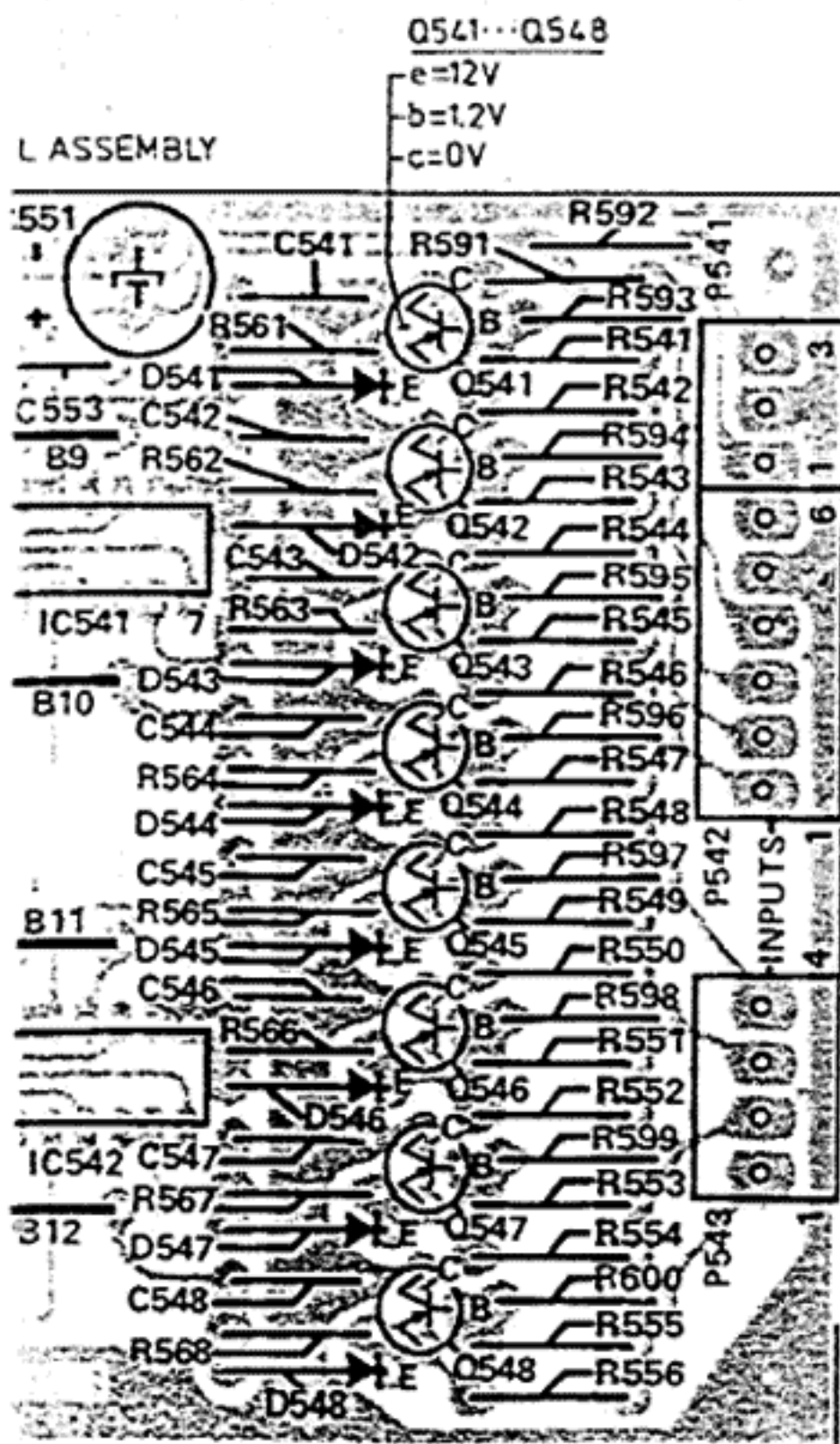
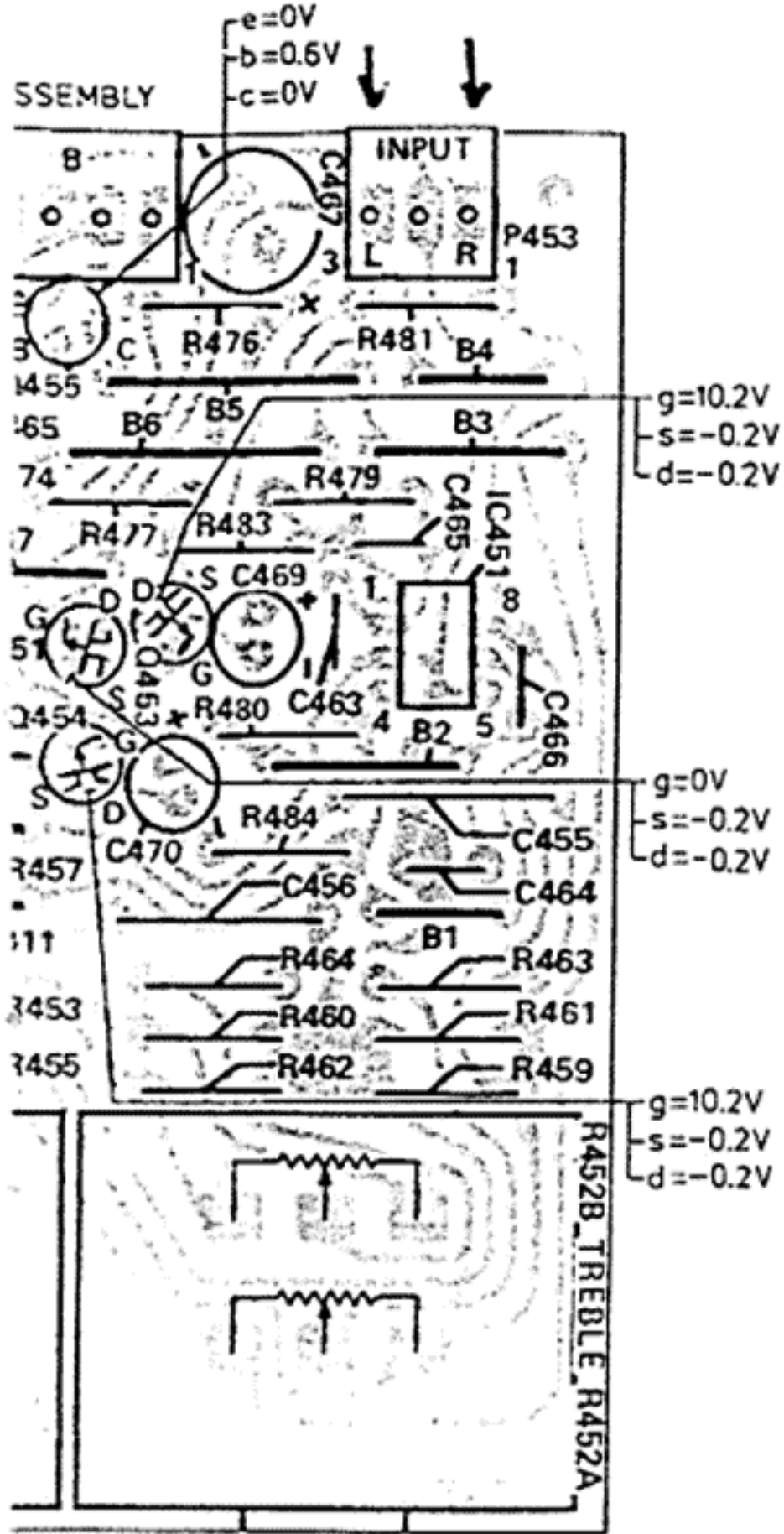
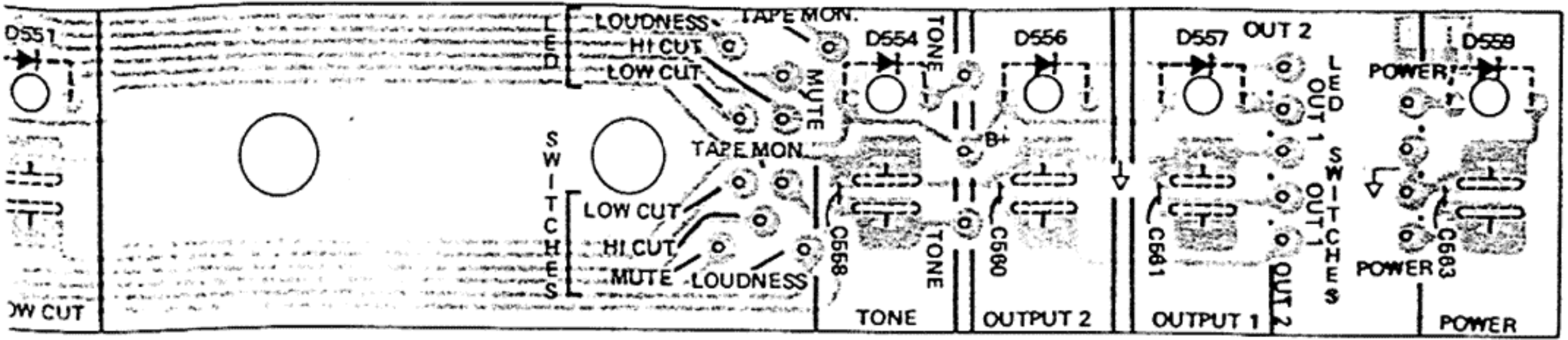


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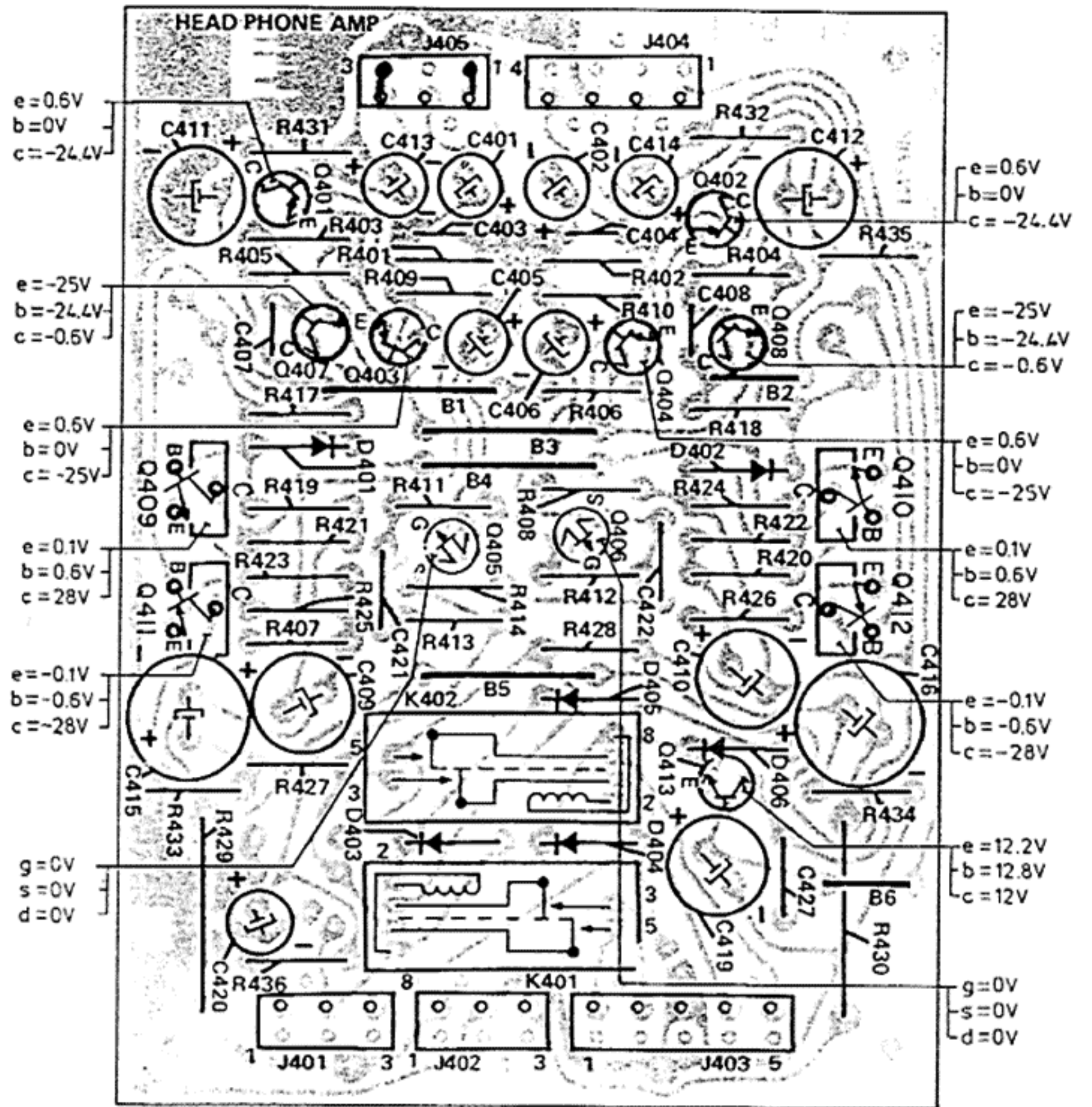




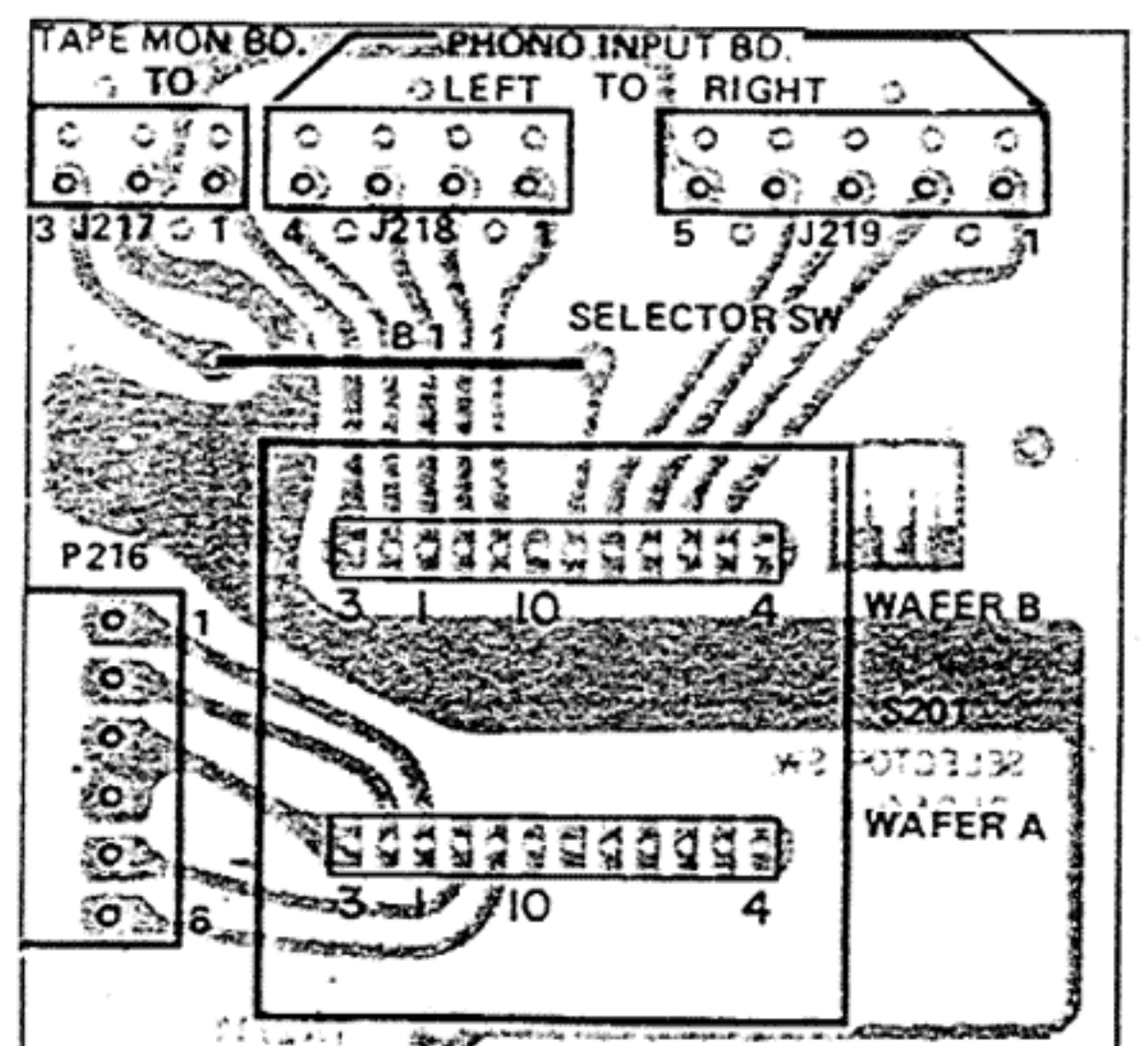
1 ASSEMBLY



HEADPHONE AMP ASSEMBLY

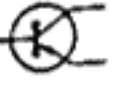

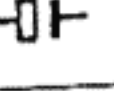
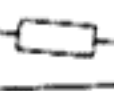
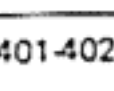


SELECTOR SWITCH ASSEMBLY


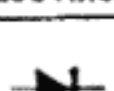
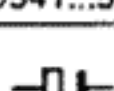
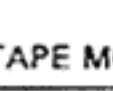


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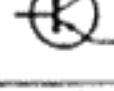
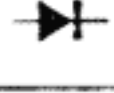
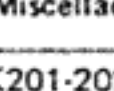
HEADPHONE/PRE AMP

		
Q401...404	83P4	4822 130 41183
Q405-406	FET 362F1	4822 130 41192
Q407-408	148N3	4822 130 41186
Q409-410	162N8	4822 130 41188
Q411-412	162P7	4822 130 41187
Q413	148N2	4822 130 41185
		
D401...407		4822 130 30998
		
C401-402	4.7 μ F - 50 V	4822 134 20494
C405-406	47 μ F - 6.3 V	4822 124 20461
C409...412	47 μ F - 35 V	4822 124 20487
C413-414	10 μ F - 35 V	5322 124 24094
C415-416	220 μ F - 25 V	4822 124 20526
C419	100 μ F - 25 V	4822 124 20587
C420	2.2 μ F - 50 V	4822 124 20584
		
R409-419	3.3K-2% -1/4 W	5322 116 54005
R417-418	47 Ω -5% -1/4 W	4822 110 53072
R423...426	6.8 Ω -2% -1/4 W	4822 116 51172
R429-430	150 Ω -10% - 2 W	5322 116 54393
		
-Miscellaneous-		
K401-402		4822 280 20068

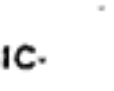

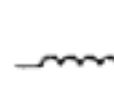
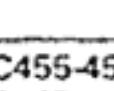
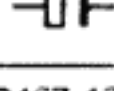
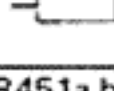

TOUCH CONTROL

		
IC541-542	RCA652	4822 209 80399
IC544...547	CD40138CN	4822 209 10002
		
Q541...548	356P1	4822 130 41191
Q551...558	232N2	4822 130 41101
		
D541...548		4822 130 30998
		
C551-552	100 μ F - 25 V	4822 124 20587

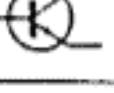
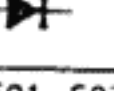
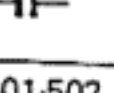
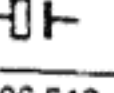
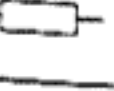
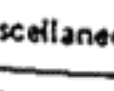
TAPE MONITOR AND MODE

		
Q229	232N2	4822 130 41101
		
D201-202		4822 130 30998
		
-Miscellaneous-		
K201-202		4822 280 20068
S202		4822 273 80176
S203		4822 273 80177

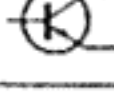
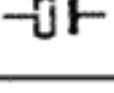
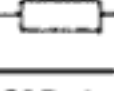
TONE CONTROL

		
IC451	RC4558P	4822 209 80401
		
Q451...454	FET 234F1	4822 130 41189
Q455	232N2	4822 130 41101
		
D451		4822 130 30995
		
L451-452	10 mH	4822 156 10439
		
C455-456	510 pF-2.5%-60 V	4822 121 50056
C457...460	1600 pF-2.5%-60 V	4822 121 50554
C465-466	4.7 pF-10%-500 V	4822 122 31189
		
C467-468	100 μ F - 25 V	4822 124 20587
C469...471	1 μ F - 50 V	4822 124 20583
C472	2.2 μ F - 50 V	4822 124 20584
		
R451a,b	100K	4822 102 90014
R452a,b		
R481...484	10K-2% -1/4 W	5322 116 54619

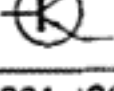
POWER SUPPLY

		
Q501	148N2	4822 130 41185
Q502	356P1	4822 130 41191
Q503	162N8	4822 130 41188
Q504	162P7	4822 130 41187
		
D501...507		4822 130 30997
Z501	Zener 12 V-1/2 W	5322 130 34197
Z503-504	Zener 28 V-1/2 W	4822 130 30996
		
C501-502	5 nF+80%-20%	5322 122 50001
C503-504	4KV	
C508-509	100 nF 20 %-200 V	4822 121 41161
		
C506-513	1000 μ F - 35 V	5322 124 24067
C507	2200 μ F - 16 V	5322 124 24084
C510	100 μ F - 16 V	4822 124 20488
C512-515-516	470 μ F - 35 V	4822 124 20533
C514	22 μ F - 25 V	4822 124 20476
		
R505	4.7 Ω -5% -1/2 W	4822 110 43045
R506-507	12 Ω -5% -2 W	4822 112 41056
R514	1 Ω -5% -1/4 W	4822 110 53027
		
-Miscellaneous-		
T502		4822 145 30205
K501		4822 280 60398

VOLUME AND FILTER

		
Q301-302		
305...308		
313...316	94N4	4822 130 41184
319...322		
Q303-304	FET 234F1	4822 130 41189
311-312		
Q309-310	83P4	4822 130 41183
Q317-318	FET 362F1	4822 130 41192
		
C305-306		
313-314		
325...334-343	1 μ F - 50 V	4822 124 20583
C309-310		
341-342	10 μ F - 35 V	5322 124 24094
C315...320	47 μ F - 25 V	4822 124 20477
C337-338	47 μ F - 6.3 V	4822 124 20461
C339-340	100 μ F - 25 V	4822 124 20587
		
R325a,b	100K	4822 102 90014
R326a,b	10K 20% -1/8 W	4822 102 30263
R335-336	10K 2% -1/4 W	5322 116 54619
R341-342		
357-358	4.7K 2% -1/4 W	5322 116 54008
R369-370	150 Ω 5% -1/2 W	4822 110 43085

PHONO PRE-AMP

		
Q201...208		
213...216	94N4	4822 130 41184
221...228		
Q209...212	83P4	4822 130 41183
217...220		

BASIC CHASSIS

T501		4822 146 40241
S501		4822 277 10426
D551...559	LED	4822 130 30999

FUNCTION SELECTOR

S201		4822 273 80175
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