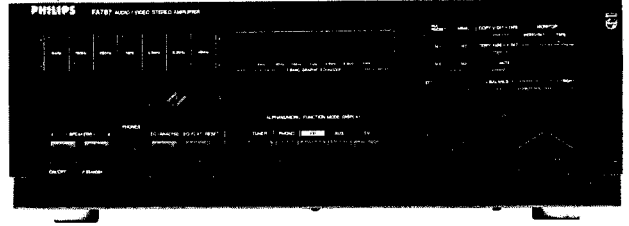


Service  
Service  
Service



# Service Manual

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(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 in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

(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 pezzi di ricambio identici a quelli specificati.

(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.

**SPECIFICATION**

<b>General</b>	<b>Nominal value</b>	<b>Typical value</b>
Mains voltage	: 220V ~ (/00R) : 240V ~ (/05R)	: 220V ~ (/00R) : 240V ~ (/05R)
Mains frequency	: 50 – 60 Hz	: 50 – 60 Hz
Power consumption	: 310W	: 380W max
Dimensions (WxHxD)	: 360 x 120 x 300 mm	: 360 x 120/128 x 300 mm
Weight	: 8.3 kg	: 8.3 kg
 <b>Amplifier</b>		
Output power	: 75W in 8Ω (IEC)	: 75W in 8Ω (IEC)
Distortion		
T.H.D.	: ≤ 0.05% at 1 kHz : ≤ 0.1% at 63 Hz–12.5 kHz } (IEC)	: ≤ 0.015% at 1 kHz : ≤ 0.1% at 65 Hz–12.5 kHz } (IEC)
Intermodulation	: ≤ 0.05% at 60/7000 Hz 4:1	: ≤ 0.02% at 60/7000 Hz 4:1
Frequency characteristic		
Phono input      tone control	: from 20 Hz – 20 kHz ±1.5 dB (IEC)	: from 20 Hz – 20 kHz ±0.5 dB (IEC)
Other inputs     neutral	: from 20 Hz – 20 kHz ±2 dB	: from 10 Hz – 30 kHz ±2 dB
Frequency equalizer control	: at 64 Hz +10 dB to –10 dB ±2 dB : at 150 Hz +10 dB to –10 dB ±2 dB : at 400 Hz +10 dB to –10 dB ±2 dB : at 1 kHz +10 dB to –10 dB ±2 dB : at 2.5 kHz +10 dB to –10 dB ±2 dB : at 6.3 kHz +10 dB to –10 dB ±2 dB : at 15 kHz +10 dB to –10 dB ±2 dB	: at 64 Hz +10 dB to –10 dB : at 150 Hz +10 dB to –10 dB : at 400 Hz +10 dB to –10 dB : at 1 kHz +10 dB to –10 dB : at 2.5 kHz +10 dB to –10 dB : at 6.3 kHz +10 dB to –10 dB : at 15 kHz +10 dB to –10 dB
Signal/noise ratio weighted (A-curve)		
Phono input	: for 75W output ≥ 77 dB (IEC)	: for 75W output ≥ 77 dB (IEC)
Other inputs	: for 75W output ≥ 95 dB (IEC)	: for 75W output ≥ 95 dB (IEC)
Channel separation	: at 1000 Hz ≥ 55 dB : at 250 Hz – 10 kHz ≥ 35 dB	: at 1000 Hz ≥ 65 dB : at 250 Hz – 10 kHz ≥ 45 dB
Input sensitivity/Input impedance		
Audio		
Phono	: 2.8 mV/ 47 kΩ	: 2.5 mV/ 47 kΩ
Tuner/CD/Aux/Tape	: 150 mV/ 25 kΩ	: 150 mV/ 25 kΩ
TV/Video	: 150 mV/ 25 kΩ	: 150 mV/ 25 kΩ
Output level/Output impedance		
Tape (Audio)	: 220 mV/ 3.5 kΩ (Phono 5.0 mV 1 kHz input)	: 220 mV/ 3.5 kΩ (Phono 5.0 mV 1 kHz input)

# Service Information

1988-10-13

70FA787

A88-250

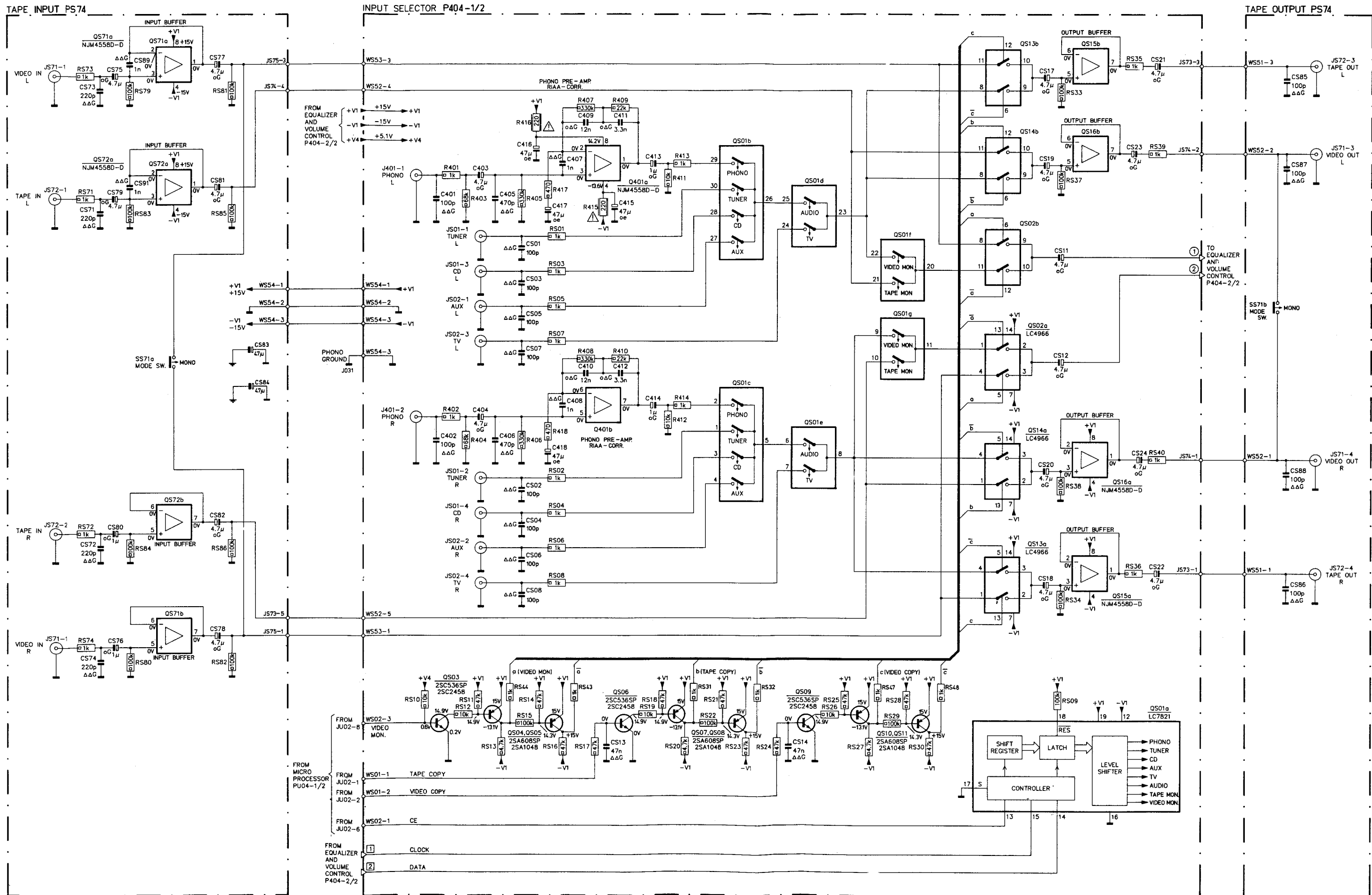
## Product Service Group CE Audio

Previously published A88 – 246

\* In this Service Information you will find the, adapted,  
circuit diagrams for amplifier 70 FA 787.

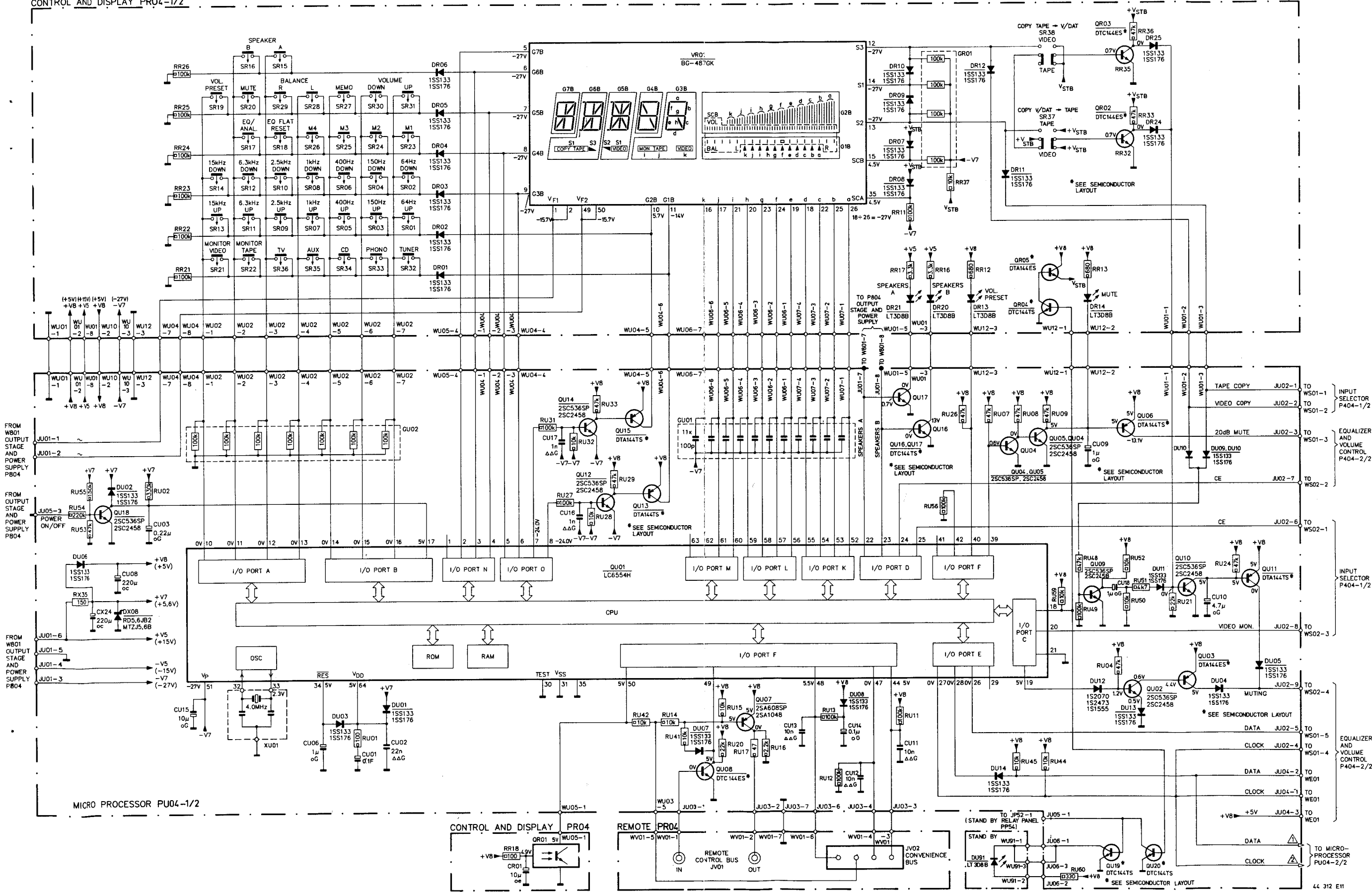
- INPUT SELECTOR **P404 1/2** – TAPE IN/OUT **PS 74**
- EQUALLIZER AND VOLUME CONTROL **P404**
- PRE AMPLIFIER **P704** – OUTPUT STAGE AND  
POWER AMPLIFIER **P804**
- CONTROL AND DISPLAY **PR04 1/2** –  
MICROPROCESSOR **PU04 1/2**
- CONTROL AND DISPLAY ( spectrum analyzer )  
**PR04 2/2** – MICROPROCESSOR **PU04 2/2**.

Q-D	Q571,Q572	Q506	Q503,Q507	Q504	Q505	Q506	Q507	Q501b,Q501c,Q508	Q501d,Q501e,Q509	Q510	Q501f,Q501g,Q511	Q502,Q513,Q514	Q515,Q516	Q501a	Q-D
C	S71+S76,S79,S80,S89+S92	S77,S78,S81,S82,S83,S84	401,402	403+406,S01+S08,416+418	407+412	S13,415	413,414	S14	S17+S20,S11,S12	S21+S24	S85+S88				C
R	S79,S80,S83,S84	S81,S82,S85,S86	401+404,S44	405,406,416+418,S01+S08	407+410,415	411+414			S33,S37,S38,S34	S35,S36,S39,S40				R	
S	SS71a		S10	S12,S11,S43,S13	S15,S14	S16	S17	S19,S18	S20,S31,S22,S21,S32,S23	S24	S26,S25,S47,S27	S29,S28	S30,S48	S09	SS71b



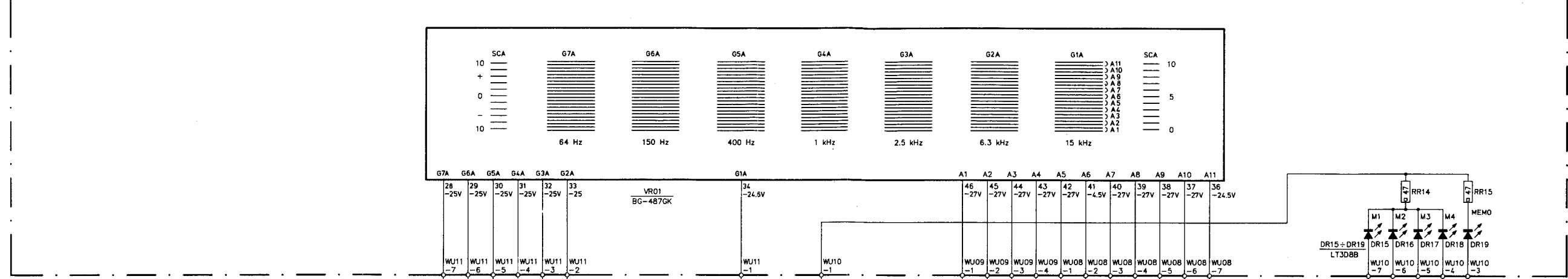
Q-D-V	DU06, QU18, DU02, DX08	U15	U04, U05	DU03, DU01, U02	DR01-DR06	DR01-DR06	DR01-DR06	VR01	DR07, QU08, QU07	U13, U12, U11	DR07-DR10, DR21, DR20	DR13, DR12, DR11	SR38, SR37	DR14	QR03, QR02, DR25, DR24	QU10, QU03, DU04, QU11, DU05	Q-D-V
C	X24, U08, U03	R21-R26	U04, U05	U06, U01, U02	R01	U17, U16	U13, U12, U11	U13, U12, U11	U13, U12, U11	U13, U12, U11	U13, U12, U11	U13, U12, U11	U13, U12, U11	U13, U12, U11	U13, U12, U11	U13, U12, U11	C
R	U53+U55, X35	U02	XU01	SR1+SR36	U01	GU02	R18	U27+U34	U42, U14, U41	U15+U20	U13, U12	U36, U35, U11	U43, U26, U07	U08, U45, U09, U44	U10, U04	U05, U21, U06, U25, U24	R
G-L-S-F-X																	G-L-S-F-X

CONTROL AND DISPLAY PR04-1/2

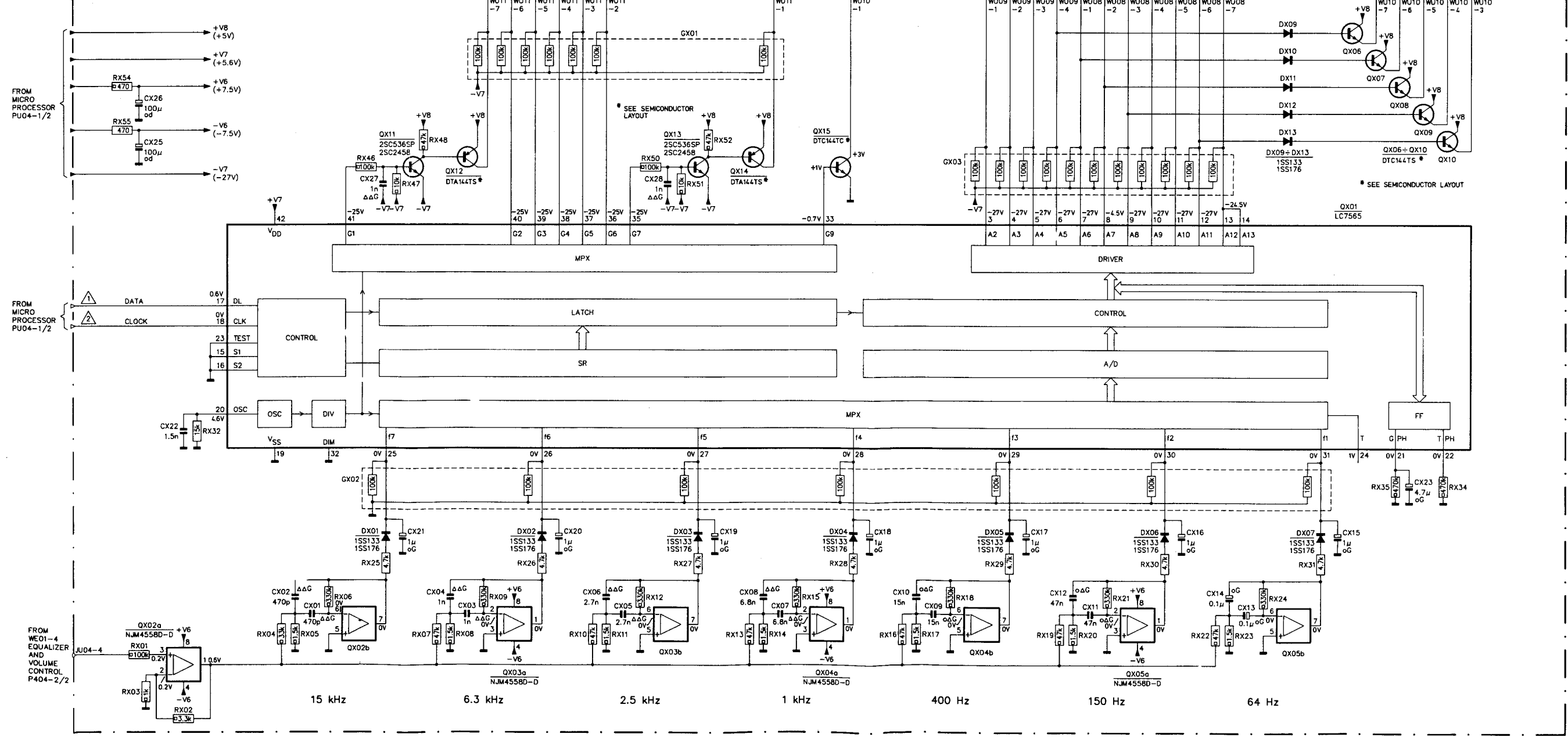


Q-D-V	QX02a	QX02b,DX01	QX11	QX12	QX03a,DX02	QX03b,VR01,QX13,DX03	QX14	QX04a,QX15,DX04	QX04b,DX05	QX06a,DX06	DX09 = DX13,QX05b,DX07,QX01	QX06 + QX10,DR15 + DR19	Q-D-V												
C	X25	X22	X02,X01	X27	X21	X04,X03	X28	X19	X08,X07	X17	X12,X11	X16	X14,X13	X15	X23	C									
R	X54,X55	X01 + X03	X32	X04 + X06	X25,X46 + X49	X07 + X09	X26	X10 + X12	X50 + X53,X27	X13 + X15	X41	X28	X16 + X18	X29	X19 + X21	X30	X16	X22 + X24	X36 + X40	X31	X35,R14	X34	R15	R	
G					GX02				GX01							GX03									G

CONTROL AND DISPLAY (SPECTRUM ANALYZER) PR04-2/2

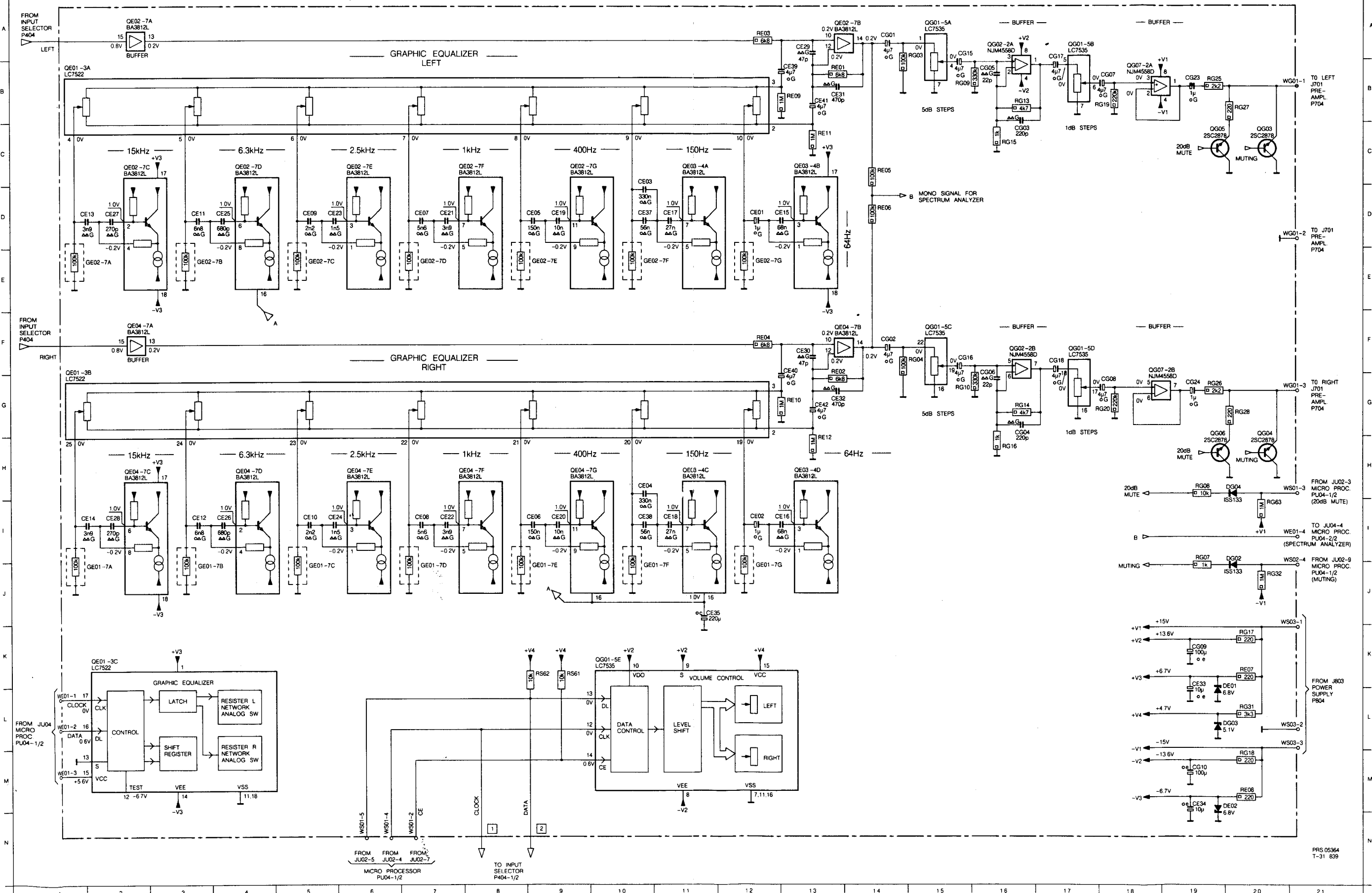


MICROPROCESSOR (SPECTRUM ANALYZER) PU04-2/2

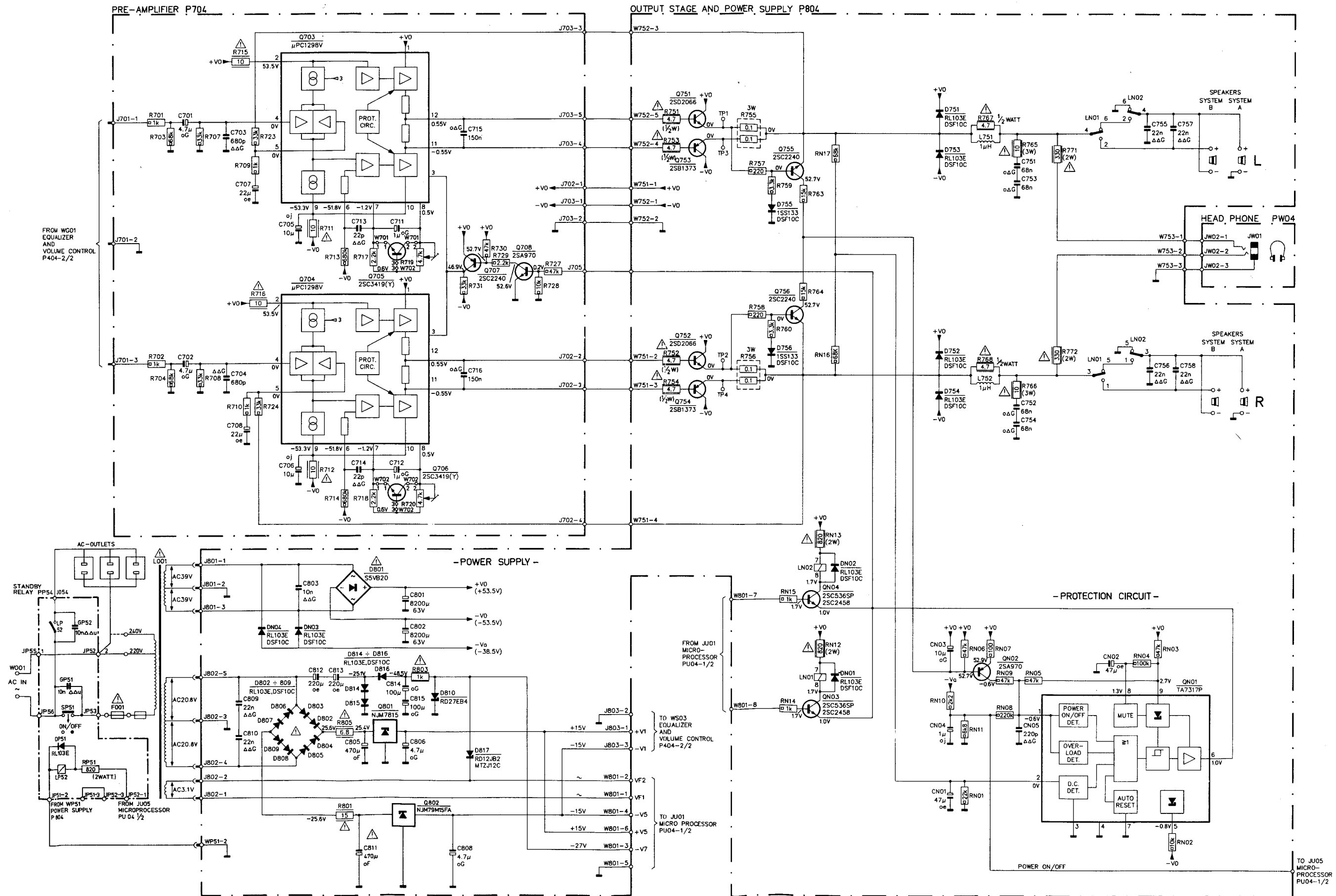


CE01 D12	CE06 I 9	CE11 D 3	CE16 I 13	CE21 D 7	CE26 I 4	CE31 B13	CE37 D10	CE42 G13	CG05 B16	CG10 M19	CG23 B19	DG03 L20	GE01 J 7	GE02 E 3	GE02 E12	OE02 C 8	OE03 H11	OE04 H 8	OG01 F15	OG03 C20	OG07 F18	RE05 C14	RE10 G13	RG07 I19	RG14 G18	RG19 B18	RG28 G20	RS62 K 9
CE02 I12	CE07 D 7	CE12 I 3	CE17 D11	CE22 I 7	CE27 D 2	CE32 G13	CE38 I10	CG01 A14	CG06 F16	CG15 A15	CG24 G19	DG04 H20	GE01 J 9	GE02 E 5	GE01 K 2	OE02 A13	OE04 H 2	OE04 F13	OG01 K10	OG05 C19	RE01 B13	RE06 D14	RE11 C13	RG08 H19	RG15 C16	RG20 G18	RG31 L20	
CE03 C10	CE08 I 7	CE13 D 2	CE18 I11	CE23 D 5	CE28 I 2	CE33 K19	CE39 B13	CG02 F14	CG07 B18	CG16 F15	DE01 K20	GE01 J 2	GE01 J10	GE02 E 7	OE02 C 2	OE03 C11	OE04 H 4	OG01 A15	OG02 A16	OG06 G19	RE02 F13	RE07 K20	RE12 H13	RG09 B15	RG16 H16	RG25 B19	RG32 J20	
CE04 H10	CE09 D 5	CE14 I 2	CE19 D 9	CE24 I 5	CE29 A13	CE34 M19	CE40 F13	CG03 C16	CG08 G18	CG17 A17	DE02 M20	GE01 J 3	GE01 J12	GE02 E 9	OE02 C 4	OE03 C13	OE04 H 6	OG01 A17	OG02 F16	OG07 B18	RE03 A12	RE08 M20	RG03 H15	RG10 G15	RG17 K20	RG26 G19	RG63 I20	
CE05 D 9	CE10 I 5	CE15 D13	CE20 I 9	CE25 D 4	CE30 F13	CE35 J11	CE41 B13	CG04 G16	CG09 K19	CG18 F17	DG02 I20	GE01 J 5	GE02 E 2	GE02 E10	OE02 C 6	OE03 C13	OE04 H 6	OG01 A17	OG02 F16	OG07 B18	RE04 F12	RE09 B13	RG04 F15	RG13 B16	RG18 M20	RG27 B20	RS61 K 9	

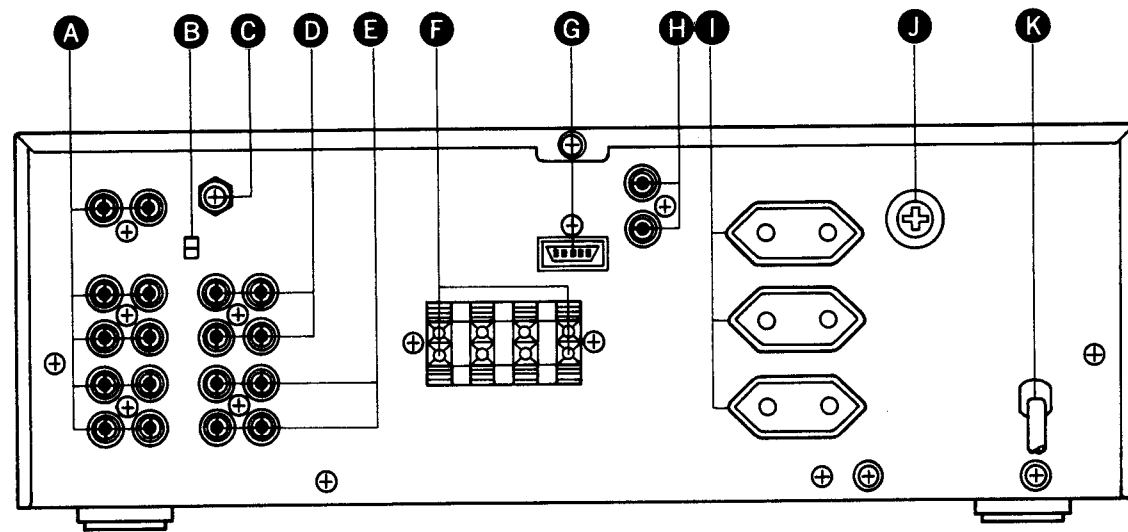
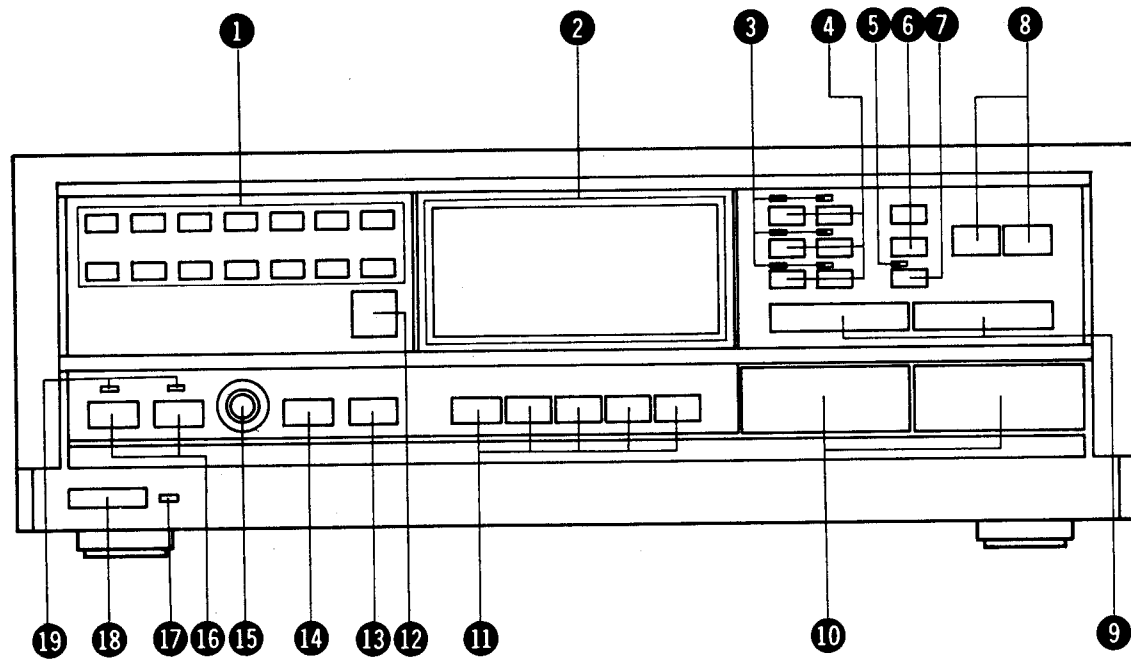
EQUALIZER AND VOLUME CONTROL P404 - 2/2



Q - D	Q703, Q704		Q705, Q706		Q707	Q708	Q751 + Q754		D755, 756, Q755, Q756		D751 + D754		Q - D
C	DN03, DN04		DB02 + DB09		DB01, DB01, DB12 + DB16, DB02, DB10		DB17	QN04, QN03, DN02, DN01		QN02		QN01	C
R	701 + 704	707, 708	705, 706	711 + 714	809, 810		803	812, 813, 805, 811	804, 801, 802, 814, 815, 806, 808		711 + 720	727 + 731	R
G-L-S-F	GP01, SP01	F001	L001	805, 801		802	803	N12 + N15		N16, N17		N112 + N15	G-L-S-F
									LN02, LN01	N03, N04, N01	N05	N02	
										767, 768	765, 766	771, 772	
										N10, N11, N01	N05 + N09		
										L751, L752		LN01	LN02
												N04, N03	N02







**CONNECTIONS AND CONTROLS**

1	Graphic equalizer switch	SR01~SR14	16	LS A/B switch	SR15, SR16
2	Display	VR01	17	P. standby indicator	DU91
3	Volume preset, memory indicator	DR13, DR15~DR19	18	Mains switch	SP51
4	Volume preset, memory switch	SR19, SR23~SR27	19	LS A/B indicator	DR20, DR21
5	Muting indicator	DR14			
6	Copy switch	SR37, SR38	A	Input	J401, JS01, JS02
7	Muting switch	SR20	B	Mode switch	SS71
8	Video/tape monitor switch	SR21, SR22	C	Ground terminal	J031
9	Balance left/right switch	SR28, SR29	D	Video input/output	JS71
10	Volume up/down switch	SR30, SR31	E	Tape input/output	JS72
11	Function switch	SR32~SR36	F	LS output A/B	J751
12	Remote control sensor	QR01	G	Convenient bus	JV02
13	EQ flat/reset switch	SR18	H	Remote control bus	JV01
14	EQ/analyse switch	SR17	I	AC outlet	J021~J023
15	Headphone socket	JW01	J	Fuse holder	J001
			K	Mains cord	W001

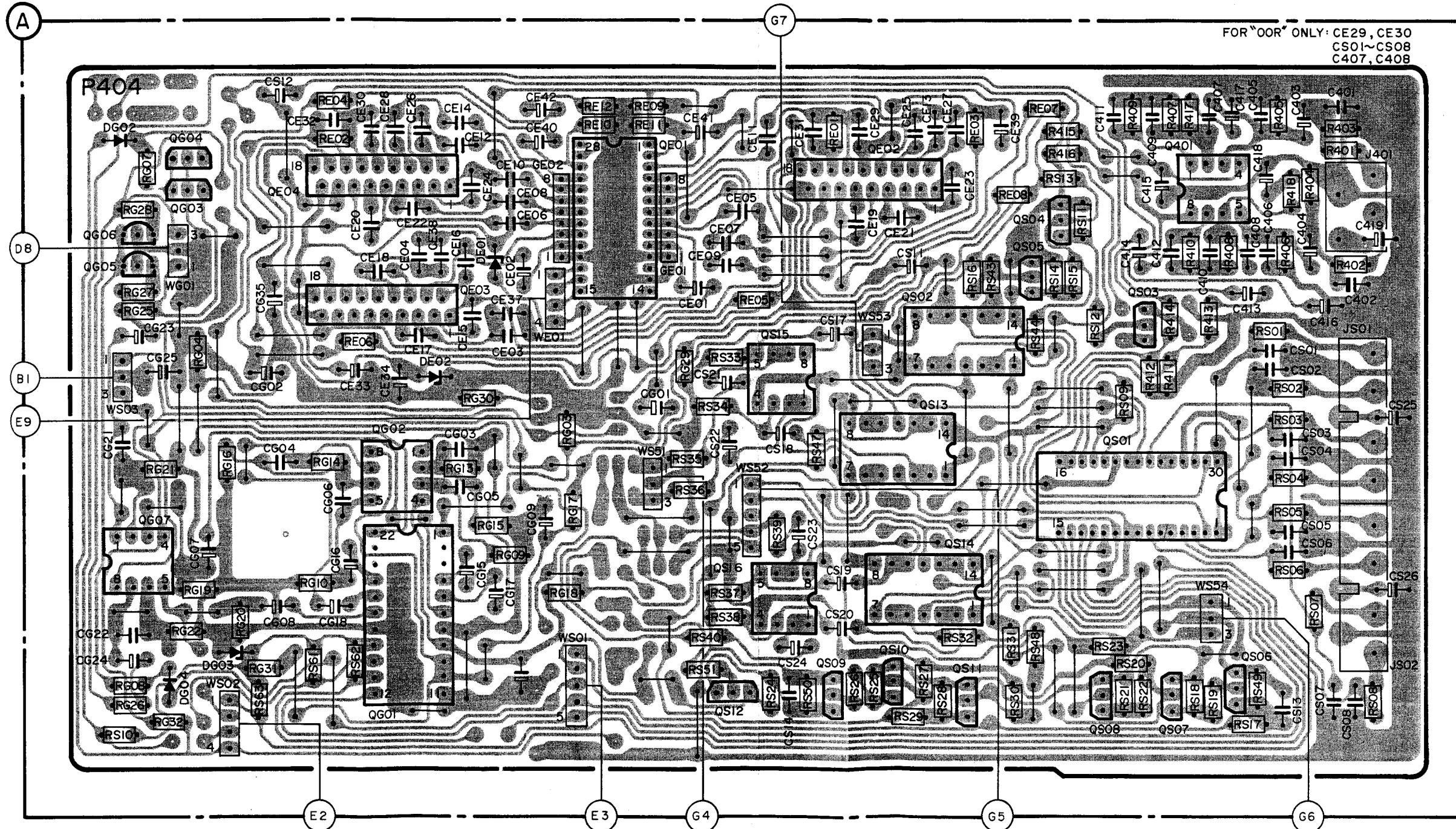
**Idling Current**

SK... SWITCH	SIGNAL	TO	VOLUME	ADJUST	OSCILLOSCOPE	D.C. METER INDICATOR
			Min.	Lch R719		Lch TP1(+), TP3(-) (Both ends of R755) DC3mV (15mA)
				Rch R720		Rch TP2(+), TP4(-) (Both ends of R756) DC3mV (15mA)

Carbon film 0.125 W or 0.2 W	70°C	5%	Ceramic plate Tuning ≤ 120 pF NP.0	2%	*a = 2.5 V b = 3.15 V or 4 V c = 6.3 V d = 10 V e = 16 V f = 25 V g = 40 V h = 63 V j = 100 V l = 125 V m = 150 V n = 160 V q = 200 V r = 250 V s = 300 V t = 350 V u = 400 V v = 500 V w = 630 V x = 1000 V A = 1.6 V B = 6 V C = 12 V D = 15 V E = 20 V F = 35 V G = 50 V H = 75 V I = 80 V
Carbon film 0.25 W or 0.33 W	70°C	5%	Polyester flat foil	10%	
Metal film 0.25 W or 0.33 W	70°C	5%	Metalized polyester flat film	10%	
Carbon film 0.5 W	70°C	5%	Polyester flat foil small size (Mylar)	10%	
Carbon film 0.67 W	70°C	5%	Polysterene film/foil	1%	
Carbon film 1 W or 1.15 W	70°C	5%	Tubular ceramic		
Chip component			Miniature single		
			Subminiature tantalum	± 20%	

### WIRING DIAGRAM

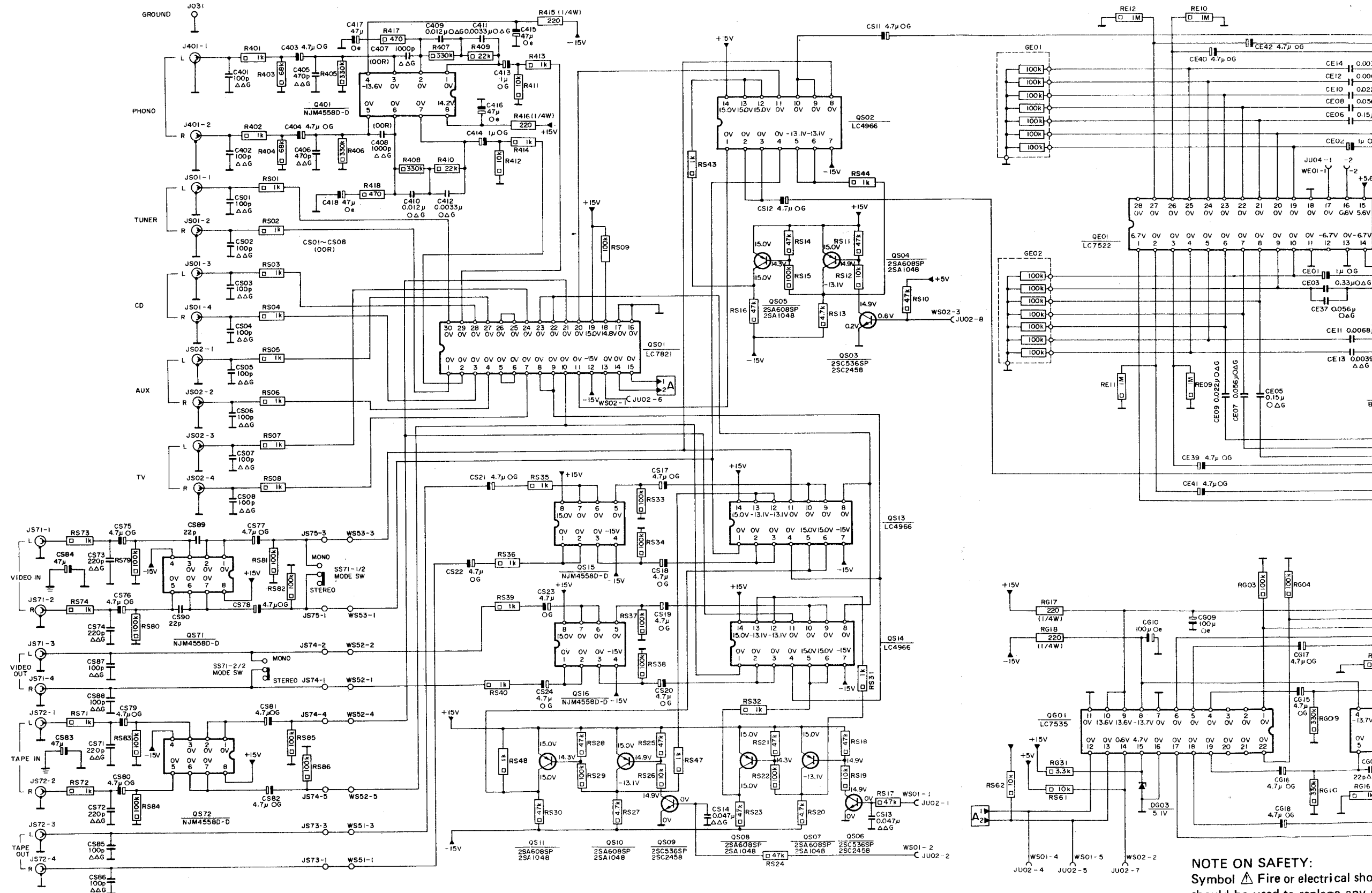
	RG19~RG22 RG16	RE04 RE06	RG15	RE09~RE12	RS33~RS40	RE01	RE03 RE08	RE07	R407~R414 R417	R401~R406
R	RG08 RG07 RG04	RG32 RG31 RE02	RG30	RG09 RG03	RG29	RE05 RS24 RS50	RS48 RS16 RS43 R415 R416 RS09			R418 RS01~RS08
	RG25~RG28	RS10 RG10 RG14	RS61 RS62	RG13	RG17 RG18	RS51	RS47	RS25~RS32	RS44 RS11~RS15	RS17~RS23 RS49
C		CS12 CE32~CE34 CE30 CE28 CE22 CE14~CE18 CE37	CG15 CG17	CE01 CE09 CE07 CE05 CE11	CS17~CS20	CS11 CE23 CE39			C409~C415 C417 C401~C408	C416 CS25
		CG07	CG04 CG06	CG18 CE20	CE26 CE38 CE12 CE10 CE03 CG03 CG10 CG01	CS21~CS24	CE25 CE13 CE27		C418	C419 C426
	CG21~CG25	CG02 CG08 CG16 CG35	CE04 CE24 CE08 CE06	CE02 CG05	CE40~CE42	CE31 CE29 CE19 CE21			CS13 CS01~CS08	
Q	QG03~QG07	QE04	QG02 QG01	QE03	QE01	QS12 QS16 QS15	QS09~QS11 QE02 QS13 QS14		QS01~QS05	Q401 QS06~QS08
D - G	DG02 DG04	DG03	DE02	GE02	GE01					




COPPER TRACK SIDE VIEW

### SCHEMATIC DIAGRAM

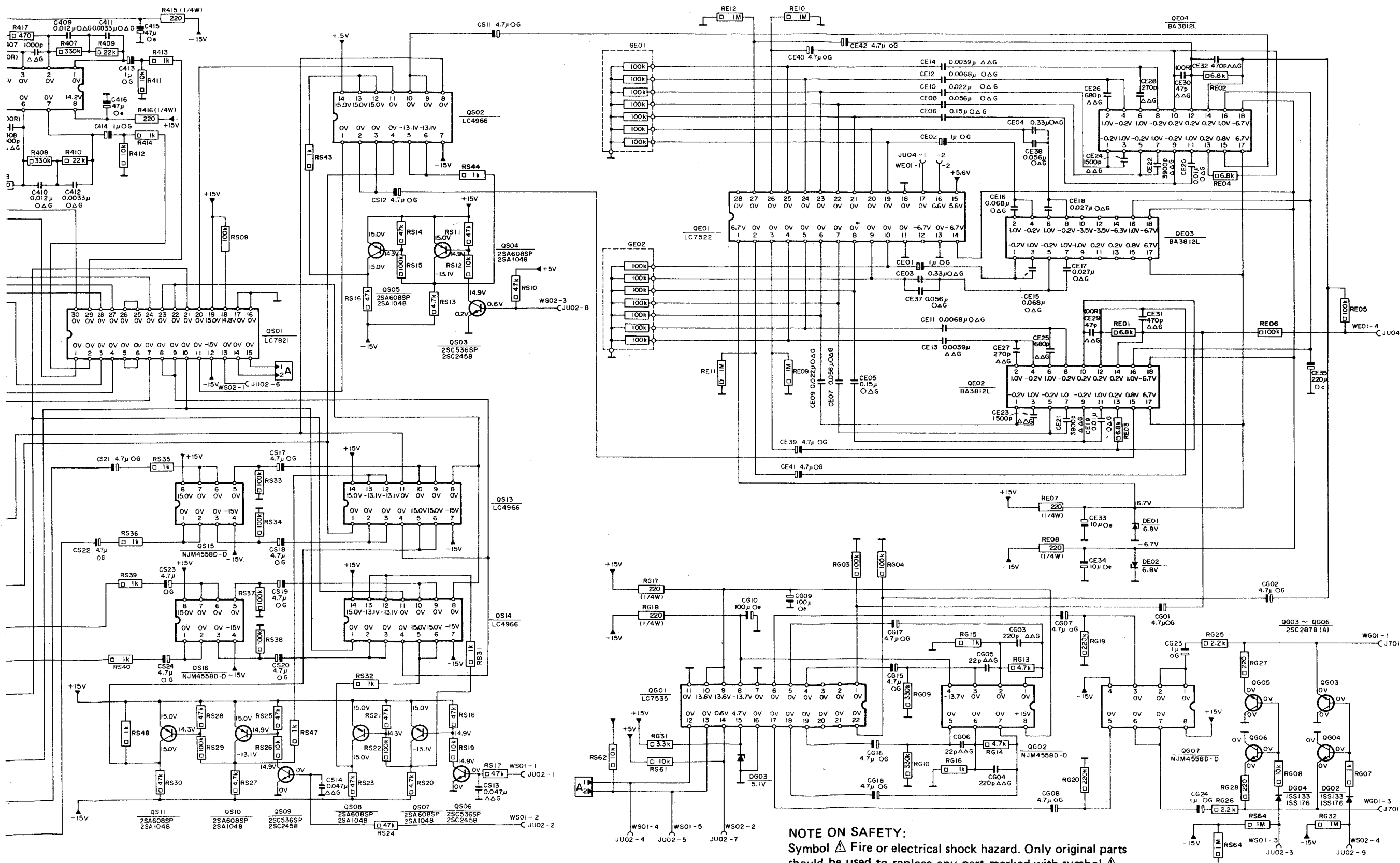
R	RS71~RS74	RS79~RS86	RS51~RS54	R418 R417	R407~R410	R411~R416	RS09	RS43	RS10~RS16 RS44	RG17 RG18	RE09~RE12	RG03 RG04	RG09 RG10 RG13~RG16	
C	CS01~CS08	C401~C406	C418 C417	C407~C410	C411~C416	CS21~CS24	CS17~CS20	CS14	CS12	CS13	CS11	CE39~CE42	CE37	CE01~CE14
Q - D	QS71 QS72	CS51~CS54	Q401	QS01 QS15 QS16	QS06~QS11	QS02 QS13 QS14	QS03~QS05	QS03				DG03	Q601	Q601
S - G		SS71	SS51									GE01 GE02		



**NOTE ON SAFETY:**  
 Symbol  Fire or electrical shock should be used to replace any component. Any other component substitution (type), may increase risk of fire.

**SCHEMATIC DIAGRAM**

R417	R407 ~ R410	R411 ~ R416	RS09	RS43	RS10 ~ RS16 RS44	RG17 RG18	RE09 ~ RE12	RE03 RE01	RE02 RE04	RE06 RS64	RE05	R	
C417	C407 ~ C410	C411 ~ C416	RS25 ~ RS30 RS47	RS32	RS31 RS17 ~ RS24	RS62 RS61 RG31	RG03 RG04	RG09 RG10 RG13 ~ RG16	RG07 ~ RE12 RG19 RG20 RG26 RG25	RG27 RG28	RG08 RG32 RG07	C	
Q401	CS21 ~ CS24	CS17 ~ CS20	CS14	CS12	CS13	CG10 CG09	CG15 ~ CG18	CG03 ~ CG08	CE33 CE34	CG23 CG24	CG01 CG02	CE35	Q - D
31	QS01	QS15 QS16	QS06 ~ QS11	QS02 QS13 QS14	QS03 ~ QS05	QS03	DG03 QG01	QE01	QG02	QE02 QE03	DE01 DE02	QE04 QG03 ~ QG07	S - G



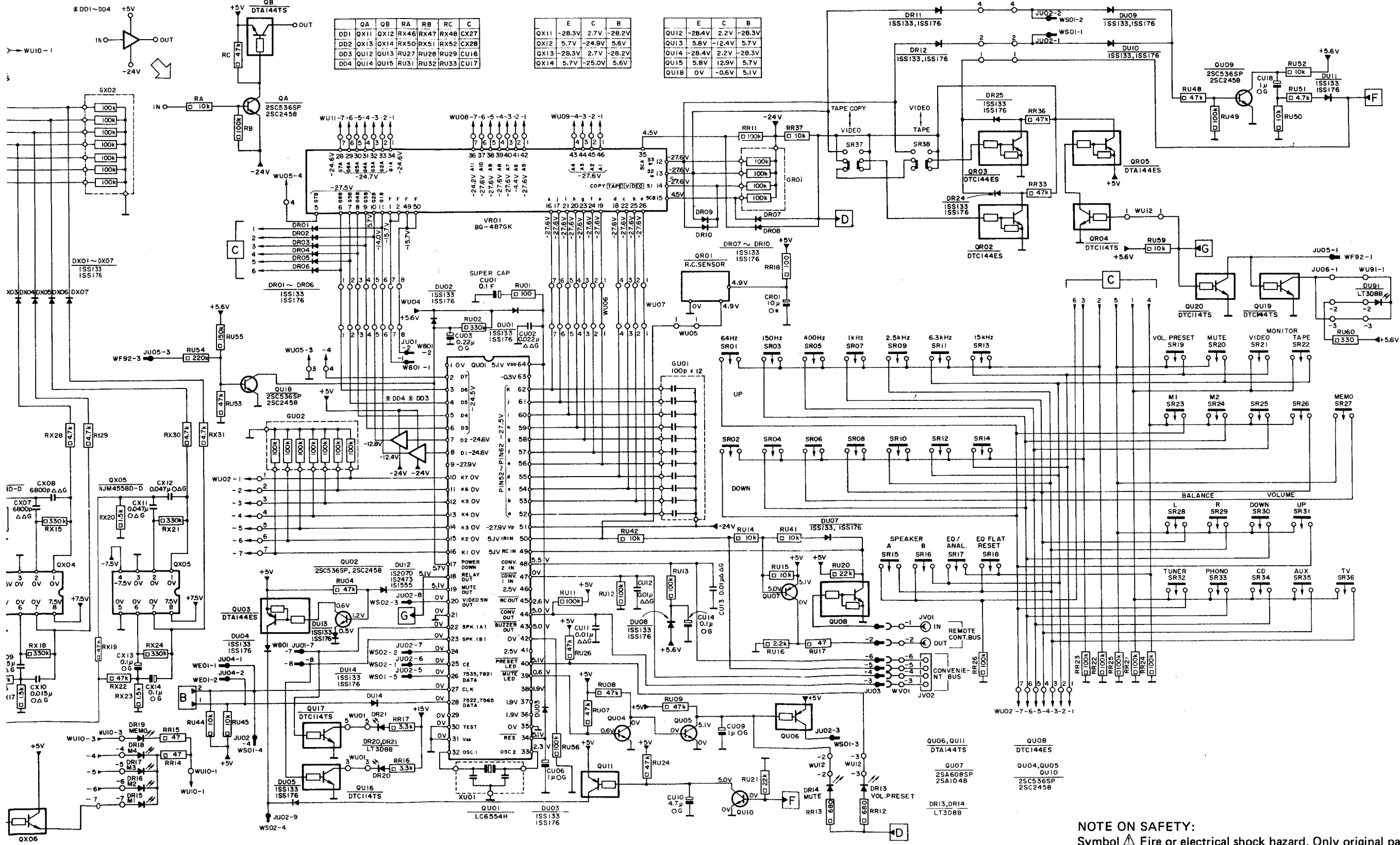
**NOTE ON SAFETY:**  
 Symbol  $\triangle$  Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol  $\triangle$ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.





# SCHEMATIC DIAGRAM

RX28 ~ RX31	RR18 RU53~RU55	RU02	RU01	RR11 RR37	RR18	RR36 RR33	RU48 RU49	RR12 ~ RR17	RU50~RU52	R																										
RX19 ~ RX24	RR14 RR15 RU44 RU45	RU04	RR16 RR17	RU56 RU42	RU24	RU26 RU07~RU09	RU41 RU11~RU17	RR12 RR13	RU20 RU21	RR26	RR21 ~ RR25	RU59	RU60	R																						
CX11 ~ CX14	CR01	CU03	CU01	CU02	CU06	CU11	CU12	CU10	CU14	CU09	CU13	CU18	C																							
DX07 QX04	DR15 ~ DR19	QX05	QUI8 DU04 DU05	QU03 QU02	DR01 ~ DR06	QU17	QU16	DD4	DD3	DU02	QU01	DU01	VRO1	DU03	QU11	QU10	QRO1	QU04~QU08	DU08	DR07 ~ DR10	DU07	DR13 ~ DR14	DR11	DR12	DR24	DR25	QR02 ~ QR05	DU09	DU10	QU19	QU20	QU09	DR13~DR21	DU11	DU91	Q ~ D ~ V
GX02	GU02	DU12	DU14	DR21	DR22	XU01	GU01	GR01	SR37	SR38	SR01 ~ SR18	SR19 ~ SR36	S ~ X ~ G																							



QA	QB	RA	RB	RC	C
DD1	QX11	QX12	RX46	RX47	RX48
DD2	QX13	QX14	RX50	RX51	RX52
DD3	QU12	QU13	RU27	RU28	RU29
DD4	QU14	QU15	RU31	RU32	RU33
					CU17

E	C	B	
QX11	-28.3V	2.7V	-28.2V
QX12	5.7V	-24.9V	5.6V
QX13	-28.3V	2.7V	-28.2V
QX14	5.7V	-25.0V	5.6V

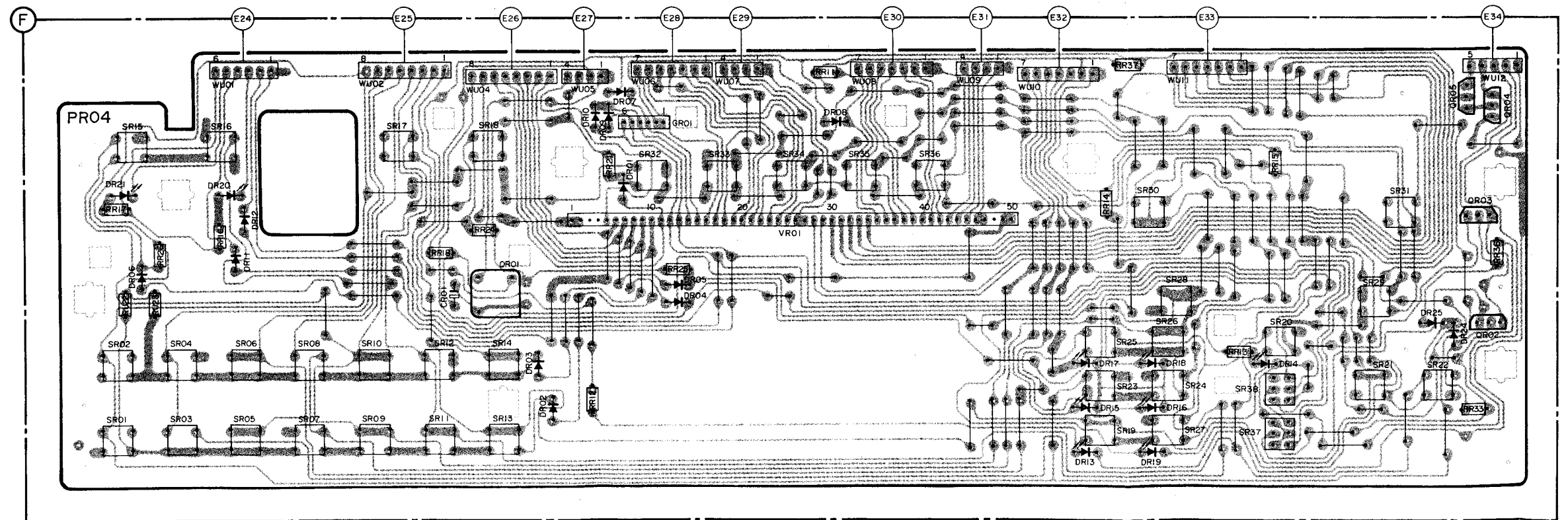
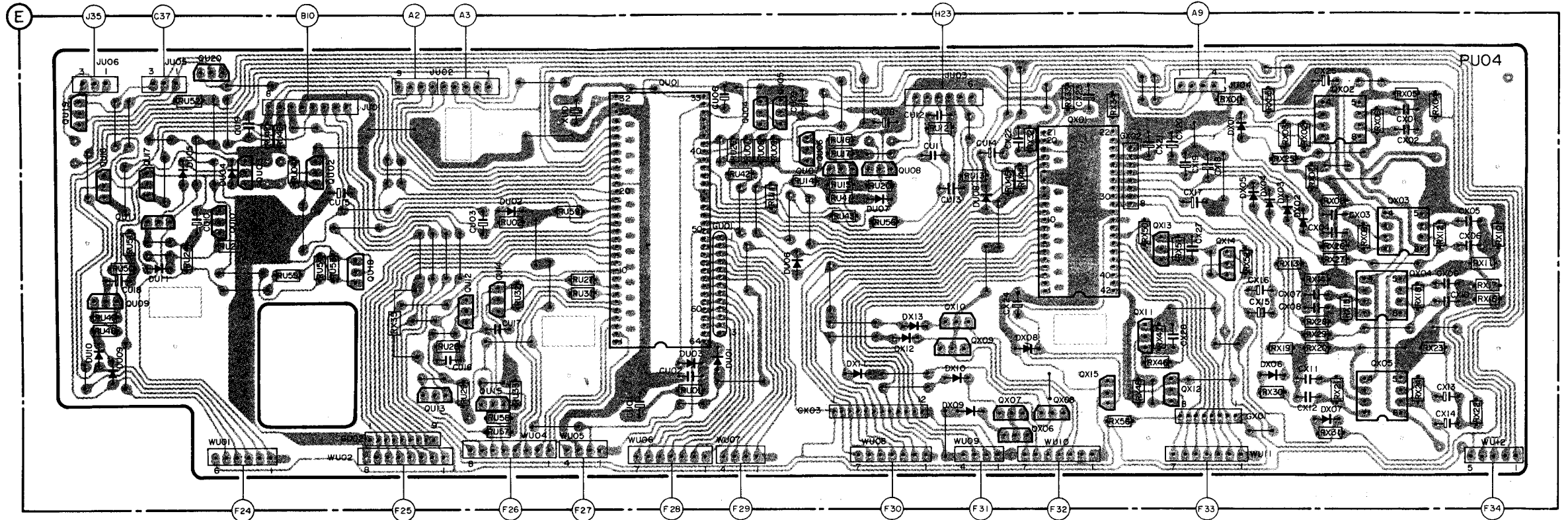
  

E	C	B	
QU12	-28.4V	2.2V	-28.3V
QU13	5.8V	-24.4V	5.7V
QU14	-28.4V	2.2V	-28.3V
QU15	5.8V	12.9V	5.7V
QU18	0V	-0.6V	5.1V

**NOTE ON SAFETY:**  
 Symbol  $\Delta$  Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol  $\Delta$ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

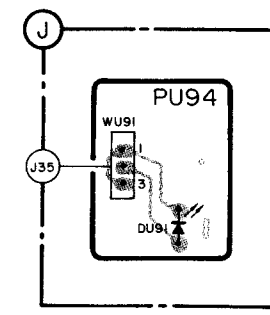
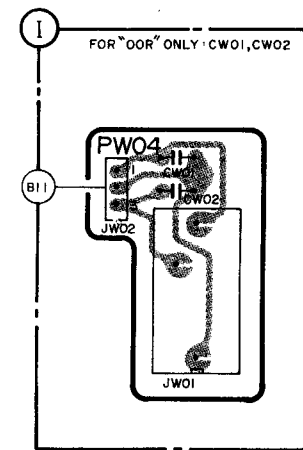
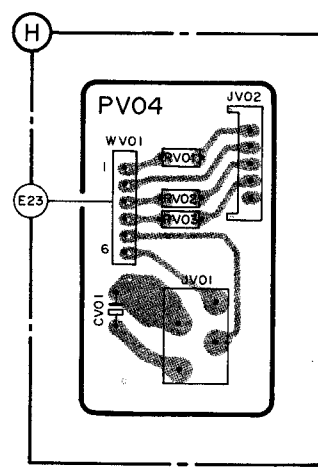
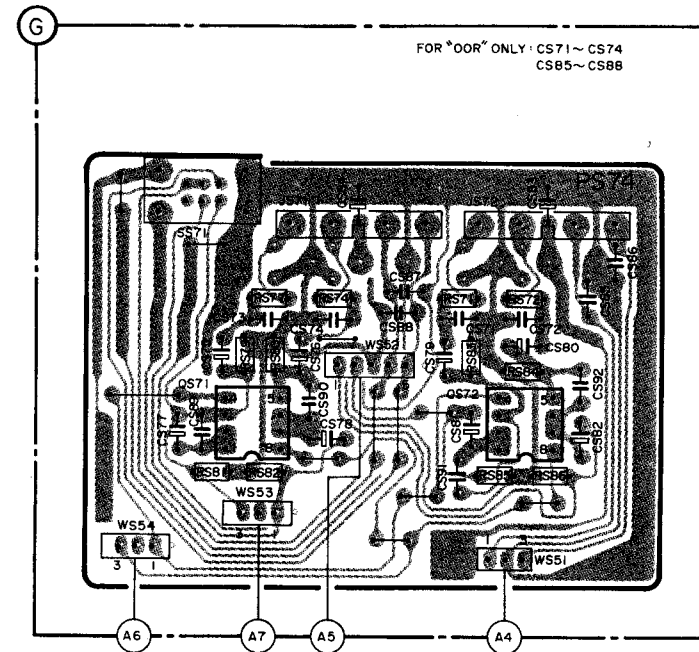
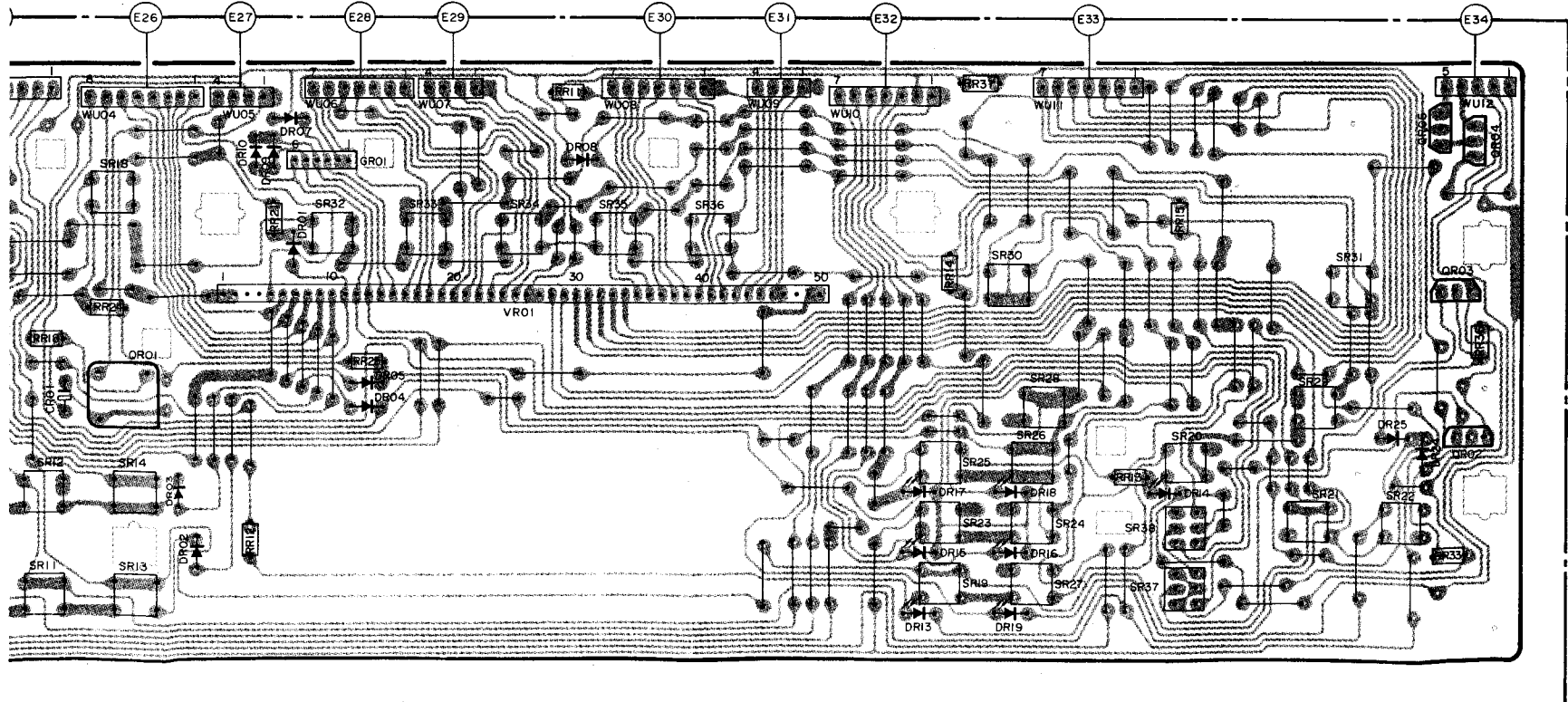
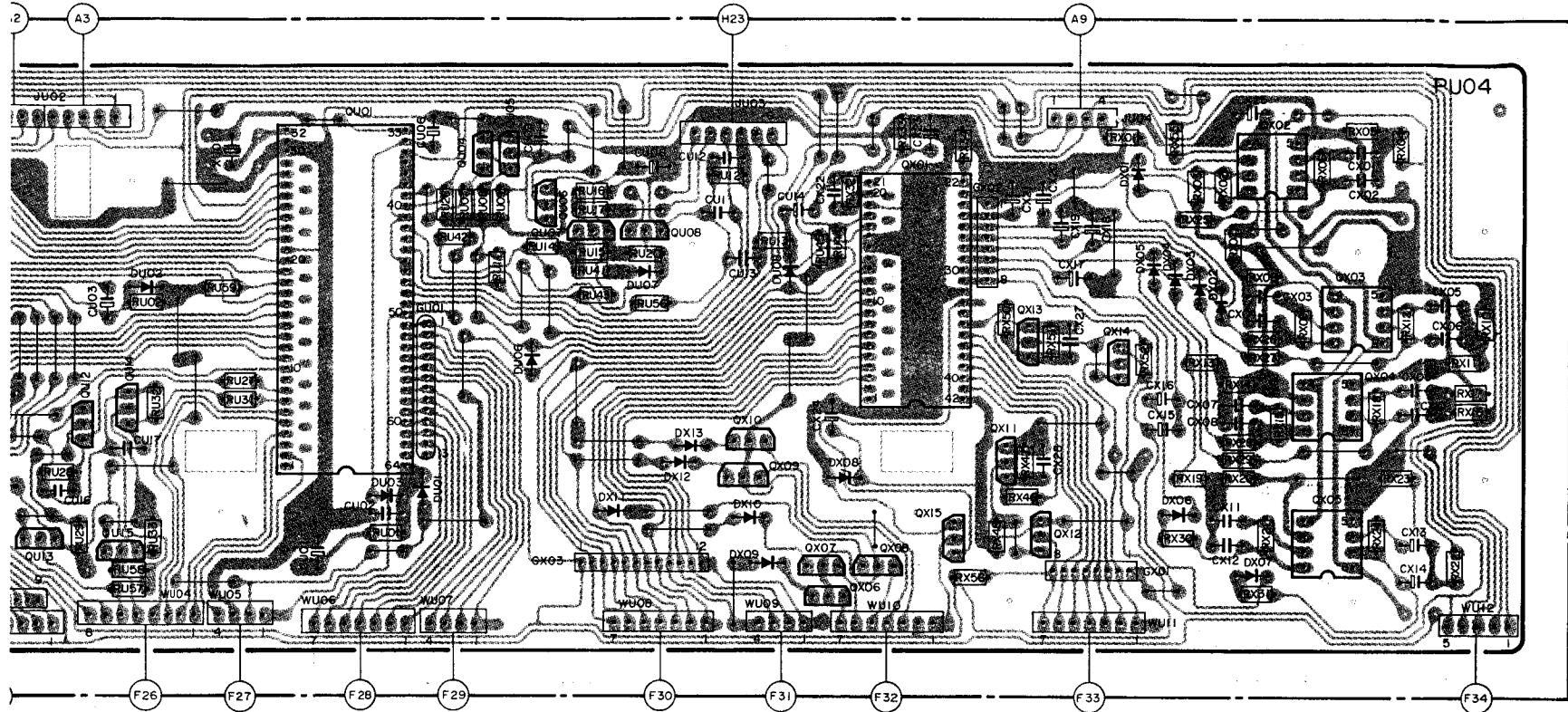
WIRING DIAGRAM

R	RU48~RU52	RU24		RU21	RU47	RU46		RX35	RU28~RU30	RU32~RU34	RU27		RU01	RU26	RU07~RU09	RU15~RU17	RU20	RU12	RU13	RU45	RU44		RX46~RX53	RX01~RX03	RX25~RX31	RX04~RX06	RX10~RX12	
C																												
D-S-X	DU09~DU11	DR21	DR06	DU05	DU04	DR20	DR11	DR12	SR01~SR18																			
G-Q-V	QU19	QU16	QU09	QU17	QU11	QU20	QU10	QU03	QU02	GUC2	QU18	QU12~QU15	QR01															



WIRING DIAGRAM

RX35	RU28~RU30	RU32~RU34	RU27	RU01	RU26	RU07~RU09	RU15~RU17	RU20	RU12	RU13	RU45	RU44	RX46~RX53	RX01~RX03	RX25~RX31	RX04~RX06	RX10~RX12	RS79~RS82	RS71	RS72								
RU58	RU57	RU02	RU59	RU31	RU42	RU14	RU11	RU41	RU43	RX32	RX33	RX34	RX41	RX55	RX13	RX14	RX07~RX09	RR33	RR36	RX16~RX18	RS77	RS74	RS83~RS86					
RR18	RR24	RR12	RR21	RR25	RR11	RU56	RR14	RX56	RR37	RR13	RR15	RX19~RX21	RX15	RX54	RX22~RX24	RV01~RV03	CS73~CS78	CS90	CS84	CS87	CS88	CS71	CS72	CS92	CS85	CS86		
CU16	CU03	CU17	CU04	CU05	CU01	CU02	CU06	CU09	CU08	CU11~CU14	CX22~CX24	CX17~CX21	CX16	CX15	CX11	CX12	CX26	CX05	CX06	CV01	CS89	CS74	CS79	CS91	CS80~CS83	CW01	CW02	
CR01	DU02	XU01	DR03	DR02	DR10	DR09	DR01	DU03	DU01	DR05	DR04	DU06	DR08	SR32~SR36	DU07	DX09~DX13	DU08	DX08	DR13~DR19	SR19~SR31	DX01~DX07	SR38	SR37	DR25	DR24	SS71	DU91	
QUI2~QUI5	QR01	GR01	QU01	GU01	VR01	QU04~QU08	GX03	QX06~QX10	QX01	QX15	GX02	QX11~QX14	GX01	QX02~QX05	QR02~QR05	QS71	QS72											

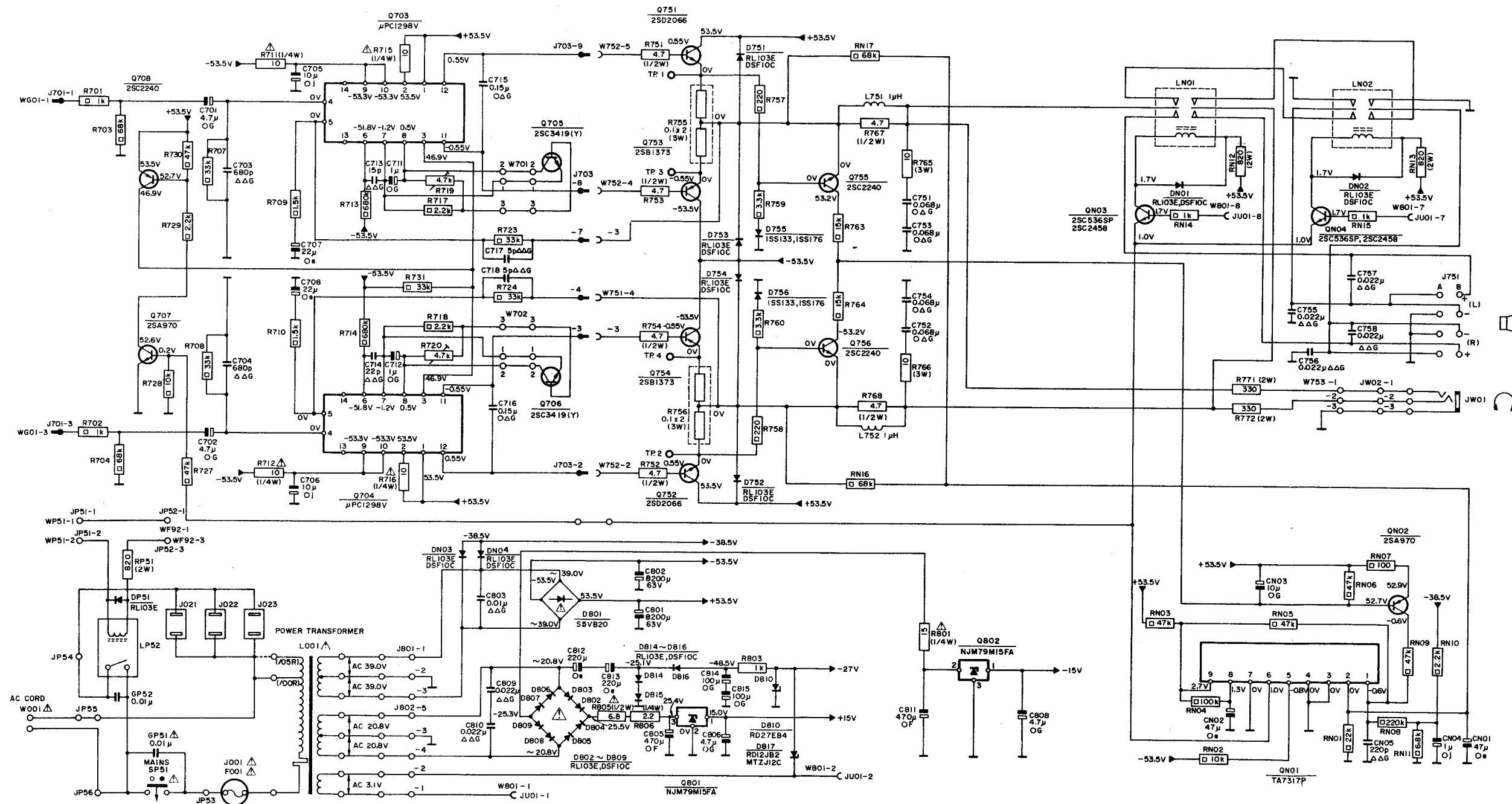


COPPER TRACK SIDE VIEW

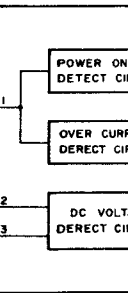


### SCHEMATIC DIAGRAM

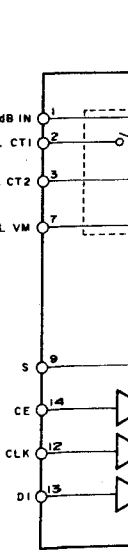
R	R701 ~ R704	R728 ~ R730 R727 R707 R708 R709 ~ R712	R713 ~ R720 R731	R723 R724	R751 ~ R754 R755 R756 R757 ~ R760	RN17 RN16 R765 ~ R768	RN13 RN12	RN14 RN12 R771 R772	RN15 RN13	R		
C	RP51	C701 ~ C704	C705 ~ C710	C711 ~ C714	C715 ~ C718	C751 ~ C754	CN03 CN04 CN02	CN05 CN04 CN01	C755 ~ C758	C		
Q - D	DP51	Q708 Q707	Q703 Q704 Q705 Q706 DN04 DN03	D802 ~ D809 D801	DB14 ~ DB16 Q751 ~ Q754 Q801	D751 ~ D756 D810 Q755 Q756	DB17	Q802	QN03 DN01	QN01 QN04 DN02	QN02	Q - D
G - L - S - F	LP52 GP52	GP51 SP51	F001	L001	L751 L752	LNO1	LNO1	LNO2	LNO2	G - L - S - F		



TA7317P



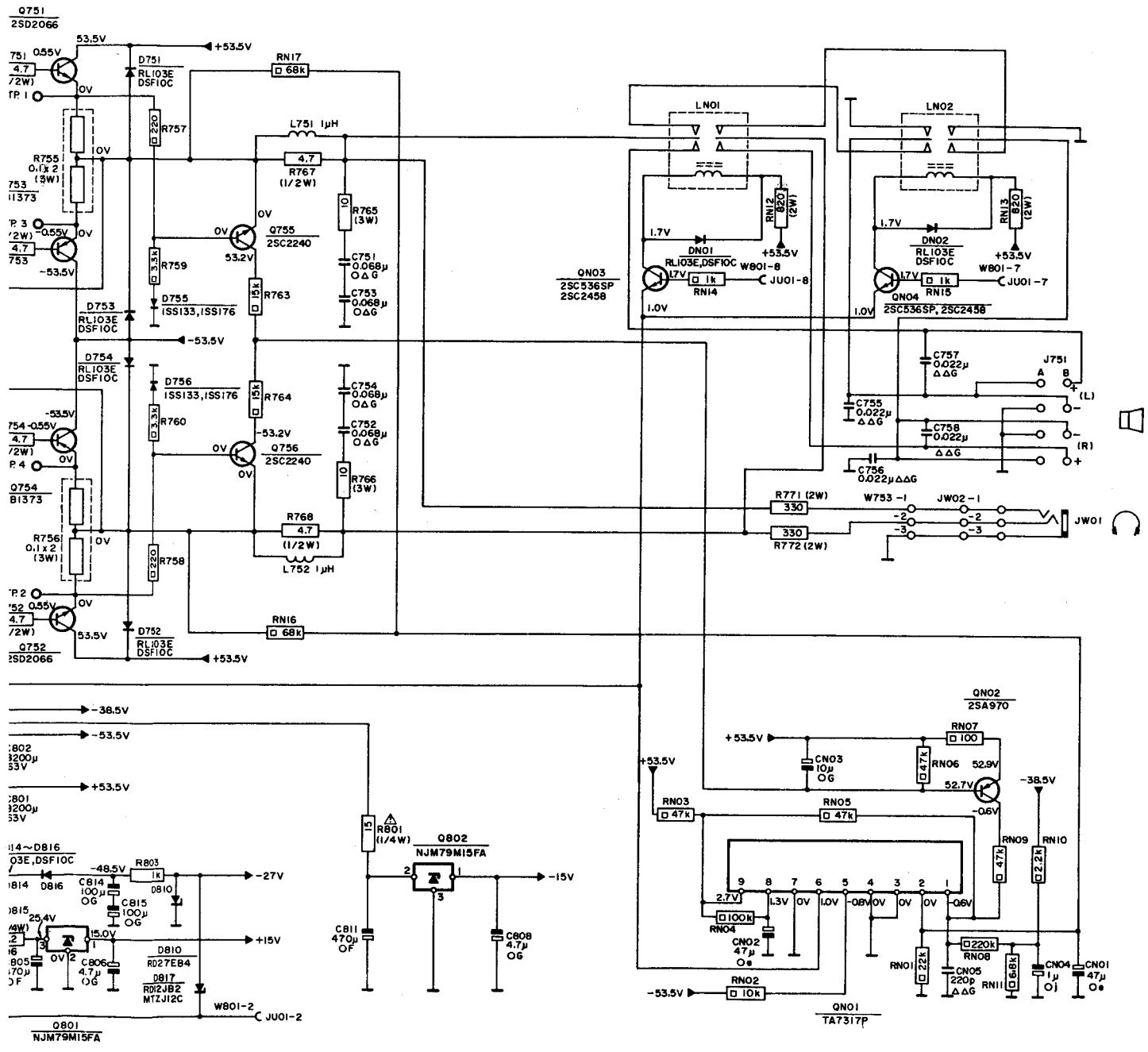
LC7535



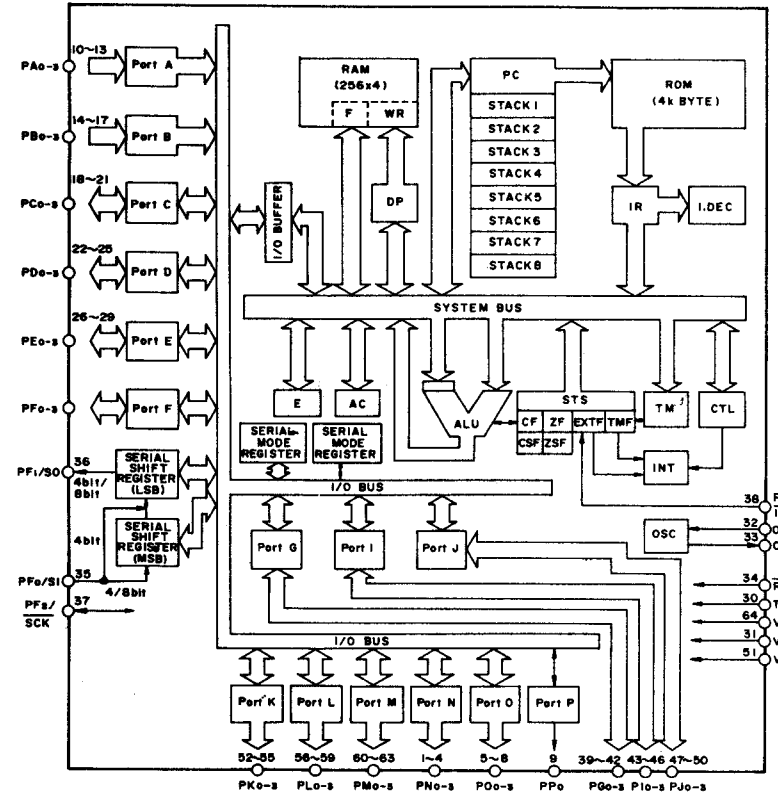
**NOTE ON SAFETY:**  
 Symbol  $\Delta$  Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol  $\Delta$ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

SCHEMATIC DIAGRAM

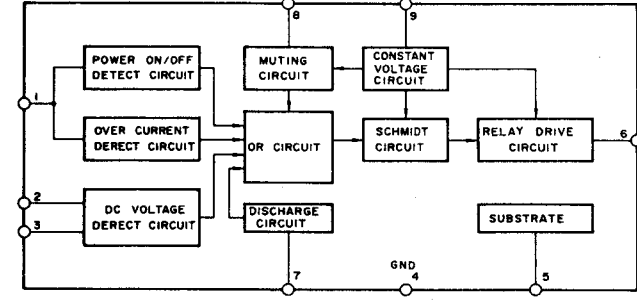
751 ~ R754 R755 R756 R757 ~ R760	RN17 RN16 R765 ~ R768	RN13 RN12	RN14 RN12 R771 R772	RN15 RN13	R
R803	R801	C751 ~ C754	RN03 RN04 RN02 RN05	RN06 RN01 RN07 RN08 ~ RN11	
C801 C805 C814 C815 C806	C811	C808	CN02 CN03	CN05 CN04 CN01	C
~ D816 Q751 ~ Q754 Q801 D751 ~ D756 D810 Q755 Q756 D817	Q802	QN03 DNO1	QN01 QN04 DNO2	QN02	Q - D
L751 L752	LNO1	LNO2			G - L - S - F



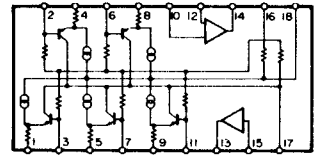
LC6554H



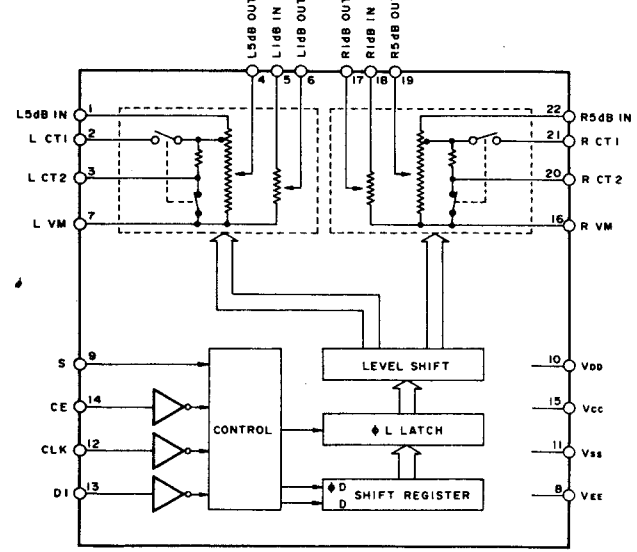
TA7317P



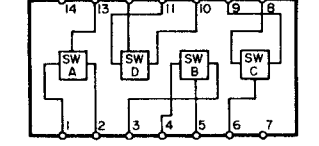
BA3812L



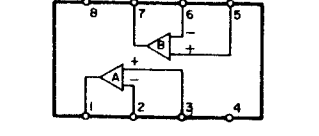
LC7535



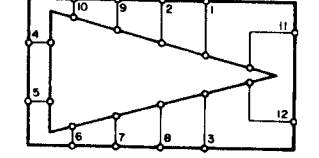
LC4966



NJM4558D-D



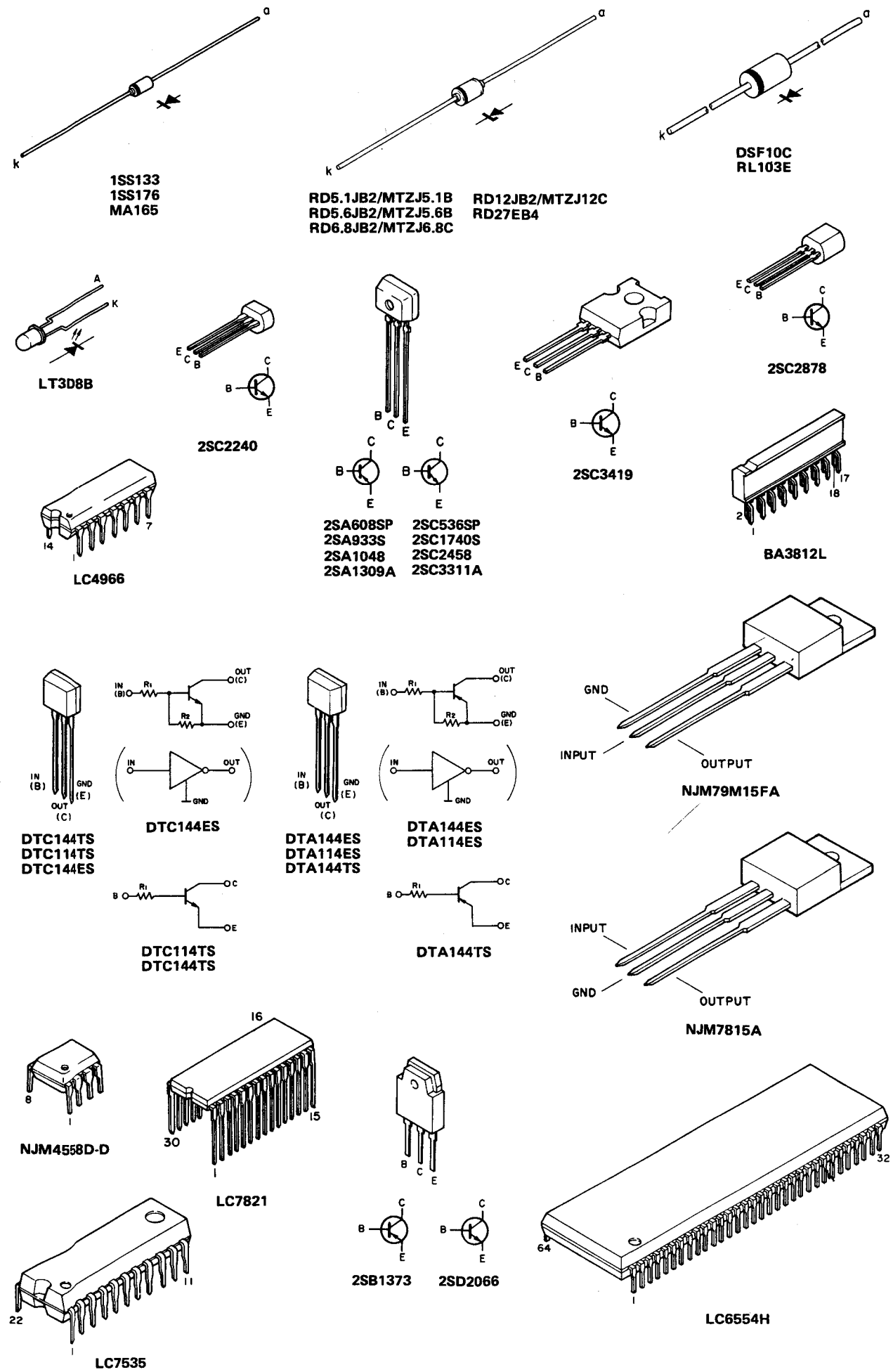
μPC1298V



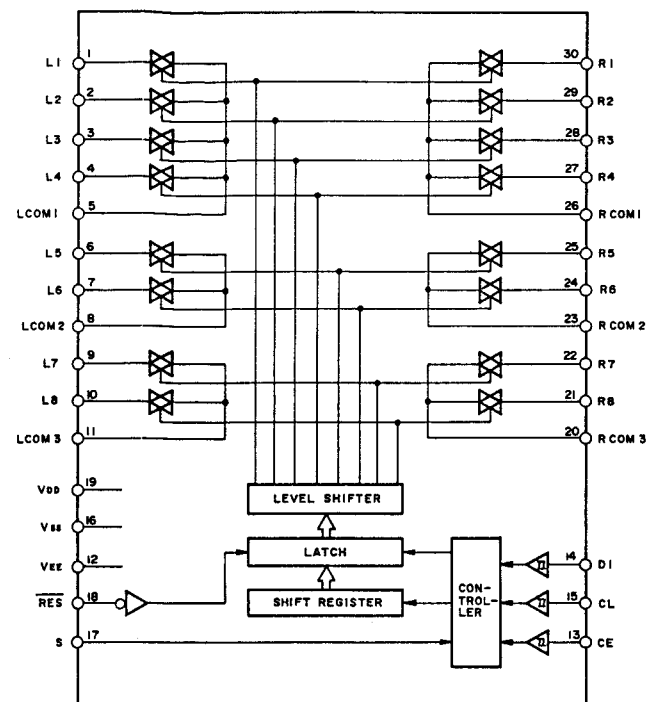
**NOTE ON SAFETY:**  
 Symbol  $\Delta$  Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol  $\Delta$ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.



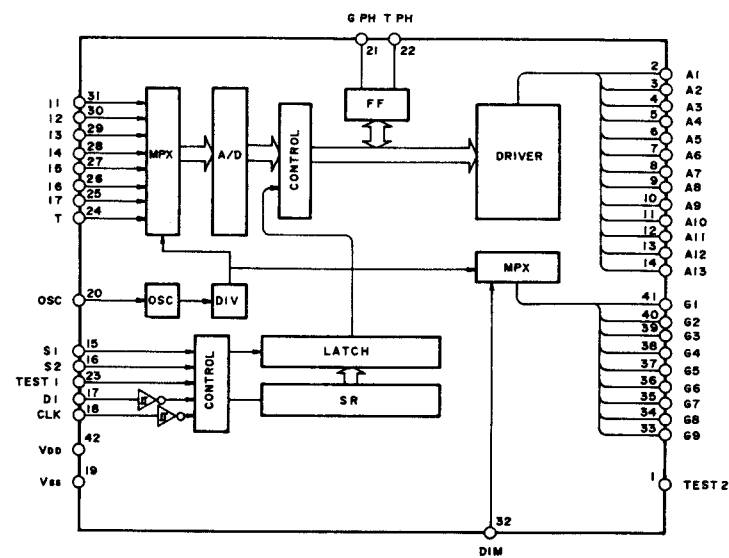
Semiconductor Layout



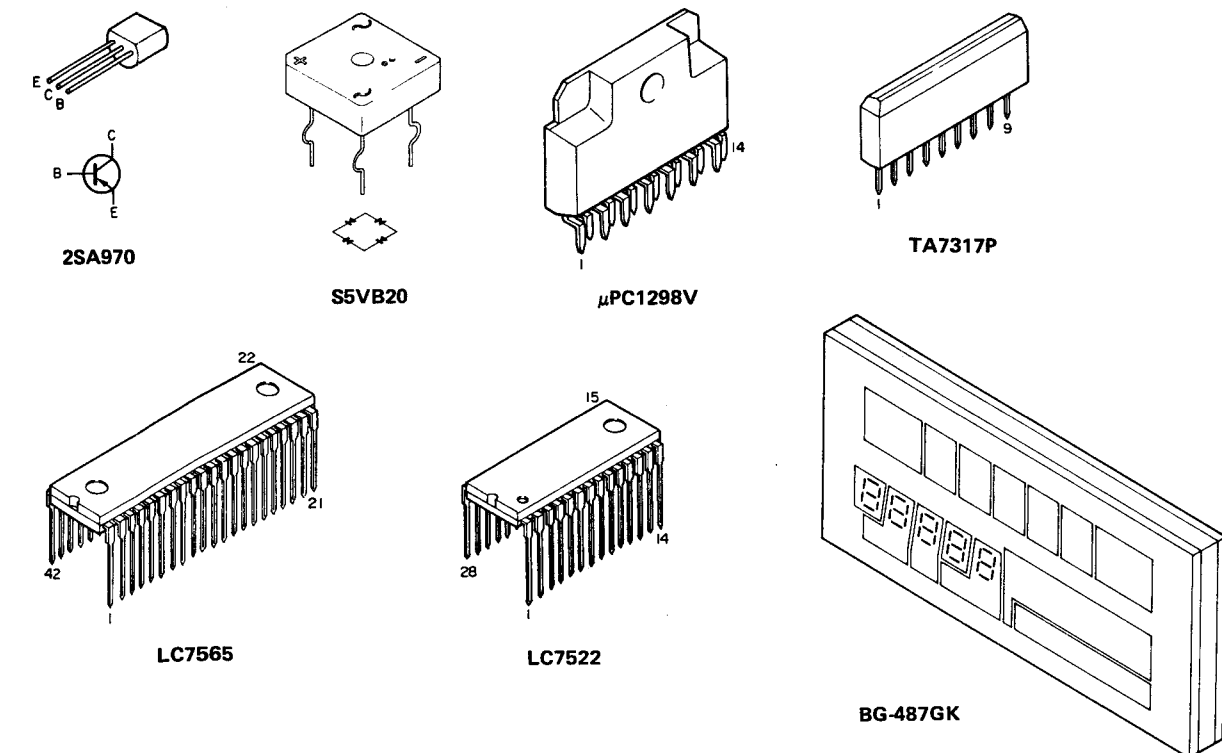
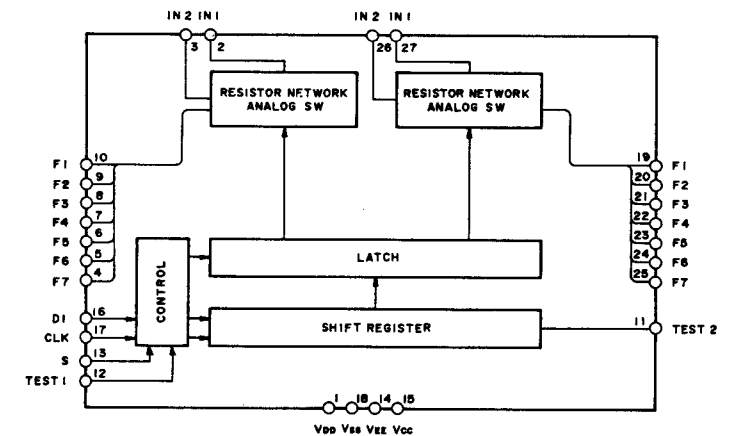
LC7821



LC7565








LC7522





LIST OF ELECTRICAL PARTS

							
CU01	Super cap 0.1 F 5.5 V		4822 124 41592	BA3812L			4822 209 83338
CU14	Cap. elect. 0.1 µF 50 V		4822 124 41604	LC4966			4822 209 83804
GP51,GP52	Cap. cer. 0.01 µF 400 V		4822 122 33276	LC6554H-3761			4822 209 73289
GU01	Cap. comp. 100 pF (5x)		4822 121 51191	LC7522			4822 209 71783
C717,C718	Cap. cer. 5pF 50 V		4822 122 31447	LC7535VR			4822 209 71784
C801,C802	Electr. cap. 8200 µF 63 V		4822 124 41296	LC7565FL			4822 209 71782
				LC7821			4822 209 72357
GU02				NJM4558D			4822 209 80401
GE01,GE02	Res. comp. 100k (7x)		4822 111 91398	NJM4558D-D			4822 209 83631
GX01,GX02				NJM7815			4822 209 83317
GR01	Res. comp. 100k (4x)		4822 111 91399	NJM79M15FA			4822 209 83828
GX03	Res. comp. 100k (11x)		4822 116 90313	TA7317P			4822 209 83312
RE07,RE08	Res. safety 220 Ω 1/4 W		4822 116 52849	UPC-1298V			4822 209 70382
RG17,RG18							
RN12,RN13	Res. safety 820Ω 2 W		4822 116 60272	LT3D8B red			4822 130 80326
RP51					RD5.1JB2,MTZJ5.1B		
RX35	Res. safety 150 Ω 1 W		4822 116 60337	RD5.6JB2,MTZJ5.6B			4822 130 33948
R415,R416	Res. safety 220 Ω 1/4 W		4822 116 52849	RD6.8JB2,MTZJ6.8B			4822 130 80318
R711,R712	Res. fuse 10 Ω 1/4 W		4822 115 90166	RD12JB2,MTZJ12C			4822 130 80091
R715,R716						RD27EB4	
R719,R720	Potm 4.7 k		4822 100 11373	RL103E,DSF10C			4822 130 32508
R751,R752	Res. safety 4.7Ω 1/2 W		4822 116 52858	S5VB20			4822 130 30984
R753,R754						1SS133,1SS176	
R755,R756	Res. comp. 0.1 Ω (23x)		4822 111 91402	<b>-Miscellaneous-</b>			
R765,R766	Res. safety 10 Ω 3 W		4822 116 60326	F001	Fuse 2A 250 V		4822 253 30025
R767,R768	Res. safety 4.7 Ω 2 W		4822 116 52858	JS01,JS02	} Jack 4p.		4822 265 30397
R771,R772	Res. safety 330 Ω 2 W		4822 116 60262	JS71,JS72			
R801	Res. fuse 15 Ω 1/4 W		4822 116 60417	JV01	Jack 2p		4822 266 30274
R802	Res. safety 1.5 k 1/2 W		4822 111 50479	JV02	Jack 5p		4822 267 40768
R803	Res. safety 1k 2 W		4822 116 60332	JW01	Headphone jack		4822 267 30596
R805	Res. fuse 6.8 Ω 1/2 W		4822 111 20384	J001	Fuse holder		4822 256 30233
R806	Res. safety 2.2 Ω 1/4 W		4822 116 52348	J021,			
				J022, /00R	AC outlet		4822 267 30597
DTA114ES			4822 130 61227	J023			
DTA144ES			4822 130 42682	J021			
DTA144TS			4822 130 61187	J022, /05R	AC outlet		4822 265 30606
DTC114TS			4822 130 61189	J023			
DTC144ES			4822 130 42594	J031	Ground terminal		4822 290 40297
DTC144TS			4822 130 61188	J401	Socket 2p		4822 267 30741
2SA608SP, 2SA1048	}		4822 130 42715	J751	Speaker terminal		4822 290 60686
2SA1309,A					LN01,LN02	Relay DC 24V	
2SA970			4822 130 42951	LP52	Relay 250 V AC		4822 280 20222
2SA970 (GR)			4822 130 42949	L001	Mains transformer		4822 146 30653
2SB1373 (Q-P)			4822 130 60928	L751,L752	Choke coil 1 µH		4822 157 51739
2SC536SP,2SC2458	}		4822 130 42298	QR01	IR sensor for RC5		4822 130 10009
2SC3311,C					SP51	Push switch	
2SC2240 GR			4822 130 43231	SR01+SR36	Push switch		4822 276 11559
2SC2240			4822 130 43233	SR37,SR38	Push switch		4822 276 12336
2SC2878 A			4822 130 43818	SS71	Switch slide (stereo)		4822 277 21176
2SC3419Y			4822 130 60117	VR01	Display BG-487GK		4822 130 90494
2SD2066 (Q.P)			4822 130 60929	XU01	Cer. filter 4 MHz		4822 242 72223