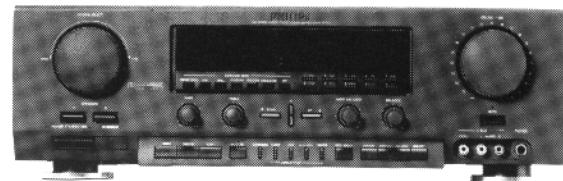
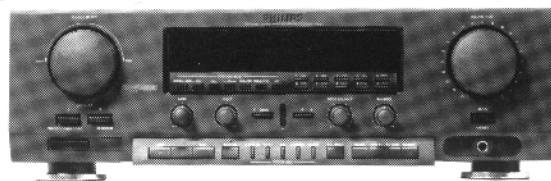


Service Service Service

www.rtvcenter.com
repairtips, servicemanuals
forum, chassispictures...



Service Manual

CONTENTS

Specifications	2, 3
Connections and Controls	4, 5
Service Routine	6-8
Electrical Adjustment	9-12
μ -Processor Data	13
Schematic Diagrams and Parts Location	14-50
Semi-Conductor Layout	41, 42
Electrical Parts List	51-55
Exploded View and Parts List	55-60

PAGE

2, 3
4, 5
6-8
9-12
13
14-50
41, 42
51-55
55-60



(BG)

Service Routine

To enter the service routine, press the POWER switch to ON while press and hold the MUTE and MEMORY switches simultaneously. The display shows characters "SERVICE--" for 2 seconds, then shows "TUNER-OK" or "TUNER-NG" for 2 seconds.

TUNER-OK: The data communication between the PLL IC (Q150) and microprocessor (Q401) is normal.

TUNER-NG: The data communication between the PLL IC (Q150) and microprocessor (Q401) is abnormal. Check the data line between them.

In case of "TUNER-NG", the characters blink at a cycle of 1 Hz. The blinking can be stopped with the FM/AM switch.

Other switches are invalid during blinking.

After the "TUNER-OK" or "TUNER-NG" display, normal operation starts. However, the source indicator on the display keeps on blinking at 1 Hz while the unit in the service routine.

— Tracking point memory mode

When the MUTE and MEMORY switches are pressed simultaneously while the unit is in the service routine, the tracking point frequencies as shown below are written in the memory.

● Tracking point frequencies

Pre Set Nbr.	1-3	4	5	6	7	8	9	10-20	21-30
/00S/01S /13S				603	999	1404		87,5	522
BK01	87,5	90,0	98,0	106,0				87,5	530
	FM (MHz)			AM (kHz)			FM (MHz)	AM (kHz)	

In the service routine, the RAM can be cleared by pressing the POWER switch to OFF while pressing and holding the 0/+ and MEMORY switches simultaneously.

To quit the service routine, press the POWER switch to OFF.

(F)

Routine d'entretien

Pour utiliser la routine d'entretien, appuyer sur la touche POWER tout en appuyant et maintenant la pression simultanément sur les touches MUTE et MEMORY pour mettre l'appareil en service. L'afficheur indique le mot "SERVICE--" pendant 2 secondes puis soit "TUNER-OK", soit "TUNER-NG" pendant 2 secondes.

TUNER-OK: La transmission d'informations entre le CI PLL (Q150) et le microprocesseur (Q401) est normale.

TUNER-NG: La transmission d'informations entre le CI PLL (Q150) et le microprocesseur (Q401) est anormale. Vérifier la ligne de transmission.

Dans le cas de "TUNER-NG", les caractères clignotent à la fréquence de 1 Hz. Il est possible d'arrêter le clignotement au moyen de la touche FM/AM. Les autres touches sont sans effet pendant le clignotement.

Après l'affichage de "TUNER-OK" ou de "TUNER-NG", le fonctionnement normal commence. Toutefois, le témoin de la source, placé sur l'afficheur, continue de clignoter à la fréquence de 1 Hz aussi longtemps que l'appareil est en routine d'entretien.

— Mémoire du point de poursuite

Lorsque l'on appuie simultanément sur les touches MUTE et MEMORY alors que l'appareil est en routine d'entretien, les fréquences du point de poursuite indiquées ci-dessous sont écrites en mémoire.

● Fréquences du point de poursuite

Numéro de présélection	1-3	4	5	6	7	8	9	10-20	21-30
/00S/01S/13S				603	999	1404		87,5	522
BK01	87,5	90,0	98,0	106,0				87,5	530
	FM (MHz)			AM (kHz)			FM (MHz)	AM (kHz)	

Pendant la routine d'entretien, la mémoire vive peut être effacée en appuyant sur la touche POWER pour mettre l'appareil en service tout en appuyant et maintenant la pression simultanément sur les touches 0/+ et MEMORY.

Pour abandonner la routine d'entretien, appuyer sur la touche POWER pour mettre l'appareil hors service.

ADJUSTMENTS

Audio Section

Idling Current

SK... SWITCH			VOLUME	ADJUST		D.C. METER INDICATOR
Power switch OFF (S321: /00S/01S) (S320: /13S, BK01)				R263, R264 Preset in full C.C.W. position		
Power switch ON (S321: /00S/01S) (S320: /13S, BK01)			Min.	Lch R263		Lch TP1 (+), TP3 (-) (Both side of R271) DC 7.2 mV (20 mA)
				Rch R264		Rch TP2 (+), TP4 (-) (Both side of R272) DC 7.2 mV (20 mA)

C.C.W.: Counterclockwise

GB Notes:

- In 5 minutes after the power has been switched ON, adjust to read 7.2 mV DC.
- If the heat-sink temperature is higher than the ambient temperature, switch the power OFF, and leave the unit until the heat-sink temperature falls equal to or below the ambient temperature before proceeding to the idling current adjustment.

F Remarques:

- Dans 5 minutes après la mise en circuit, régler pour lire 7,2 mV CC.
- Si la température de la plaque de refroidissement est supérieure à la température ambiante, couper l'alimentation et laisser l'appareil jusqu'à ce que la température de la plaque de refroidissement soit égale ou inférieure à la température ambiante avant de passer à l'ajustement du courant déwatté.

NL Opmerkingen:

- Stel binnen 5 minuten nadat de spanning is aangeschakeld (ON) op 7,2 mV DC in.
- Als de temperatuur van de warmteput hoger is dan de omringende temperatuur, schakel dan de spanning uit totdat de temperatuur van de warmteput gelijk is aan of lager is dan de omringende temperatuur alvorens over te gaan tot aanpassen op de stationaire stroom.

D Anmerkungen:

- 5 Minuten nach dem Einschalten der Spannungsversorgung die Anzeige auf 7,2 mV Gleichstrom einstellen.
- Wenn die Temperatur des Kühlkörpers höher ist als die Umgebungstemperatur, die Spannungsversorgung ausschalten und warten, bis die Temperatur des Kühlkörpers gleich der oder niedriger als die Umgebungstemperatur wird, bevor die Ruhestrom-Einstellung durchgeführt wird.

I Note:

- Regolare in modo da ottenere 7,2 mV di corrente continua dopo aver atteso 5 minuti dopo l'accensione.
- Se la temperatura degli organi di dispersione del calore è superiore a quella dell'ambiente, spegnete l'unità e lasciatela raffreddare sino a che la sua temperatura non diviene uguale o inferiore a quella ambiente, quindi procedete con la regolazione della corrente a riposo.

Tuner Section

- Inner adjustment of the FM front end pack (A101) of this unit is difficult. (IF, RF, OSC)
- Inductance of the AM OSC coil (L102) is preset. Therefore, please do not turn the core of this coil.
- Refer to "Tracking point memory mode" in the Service Routine.

FM-Distortion

SK... WAVE RANGE SWITCH	SIGNAL	TO	DISPLAY	TUNE IN	DETUNE	ADJUST	OSCILLOSCOPE	INDICATOR
FM (S433)	98 MHz Mod. 1 kHz Δf 40 kHz (/00S/01S) Δf 75 kHz (/13S, BK01) (Mono) Output 500 μ V (65 dBf)	J101				L105		J551 (Tape out) Distortion Min.
	98 MHz Mod. 1 kHz Δf L+R 40 kHz Pilot 6 kHz (/00S/01S) Δf L+R 67.5 kHz Pilot 6.75 kHz (/13S, BK01) Output 500 μ V (65 dBf)					A101-IFT (Front end IFT)		

Stereo Separation

FM (S433)	98 MHz Mod. 1 kHz Δf L+R 40 kHz Pilot 6 kHz (/00S/01S) Δf L+R 67.5 kHz Pilot 6.75 kHz (/13S, BK01) Output 500 μ V (65 dBf)	J101				R119		J551 (Tape out) Separation Max.
--------------	---	------	--	--	--	------	--	--

Muting Level

FM (S433) FM mode switch (S435) (Mono indicator OFF)	98 MHz Mod. 1 kHz Δf 75 kHz Output 6.3 μ V (27.2 dBf)	J101				R114		J551 (Tape out) 1
--	---	------	--	--	--	------	--	-------------------------

AM-IF

AM (S433)	999 kHz (/00S/01S/13S) 1000 kHz (BK01) Mod. 400 Hz 30% Low Output (300 μ V/m)	Loop Ant.				L104		J551 (Tape out) Output Max.
--------------	--	--------------	--	--	--	------	--	--------------------------------------

AM-RF

SK... WAVE RANGE SWITCH	SIGNAL	TO	DISPLAY	TUNE IN	DETUNE	ADJUST	OSCILLOSCOPE	INDICATOR
AM (S433)	1404 kHz (/00S/01S/13S) 1400 kHz (BK01)	Loop Ant.				L101		J551 (Tape out) Output Max. [2]
	603 kHz (/00S/01S/13S) 600 kHz (BK01)					C101		

AM Auto Stop

AM (S433)	999 kHz (/00S/01S/13S) 1000 kHz (BK01) Mod. 400 Hz 30% Output 1000 μ V/m	Loop Ant.			R103			J551 (Tape out) [2]
--------------	---	--------------	--	--	------	--	--	---------------------------

(GB) Notes:

- [1] By turning R114, clear once the output waveform the J551, and then adjust it by turning R114 a little so that the waveform appears again.
- [2] Adjust R103 so that the "TUNED" indicator of the FL display tubes lights up.

(F) Remarques:

- [1] En tournant R114, effacer la forme d'onde de sortie de J551 dans un premier temps, puis ajuster celle-ci en tournant doucement R114 de sorte que la forme d'onde apparaisse à nouveau.
- [2] Ajuster R103 pour que l'indicateur "TUNED" du tube d'affichage fluorescent s'allume.

(NL) Opmerkingen:

- [1] Draai R114 rond om de uitgangsgolfvorm van de J551 eenmaal te doorlopen en stel daarna af door R114 een weinig te draaien zodat de golfvorm weer verschijnt.
- [2] Stel R103 zodanig af dat de "TUNED" indicator van de FL-display oplicht.

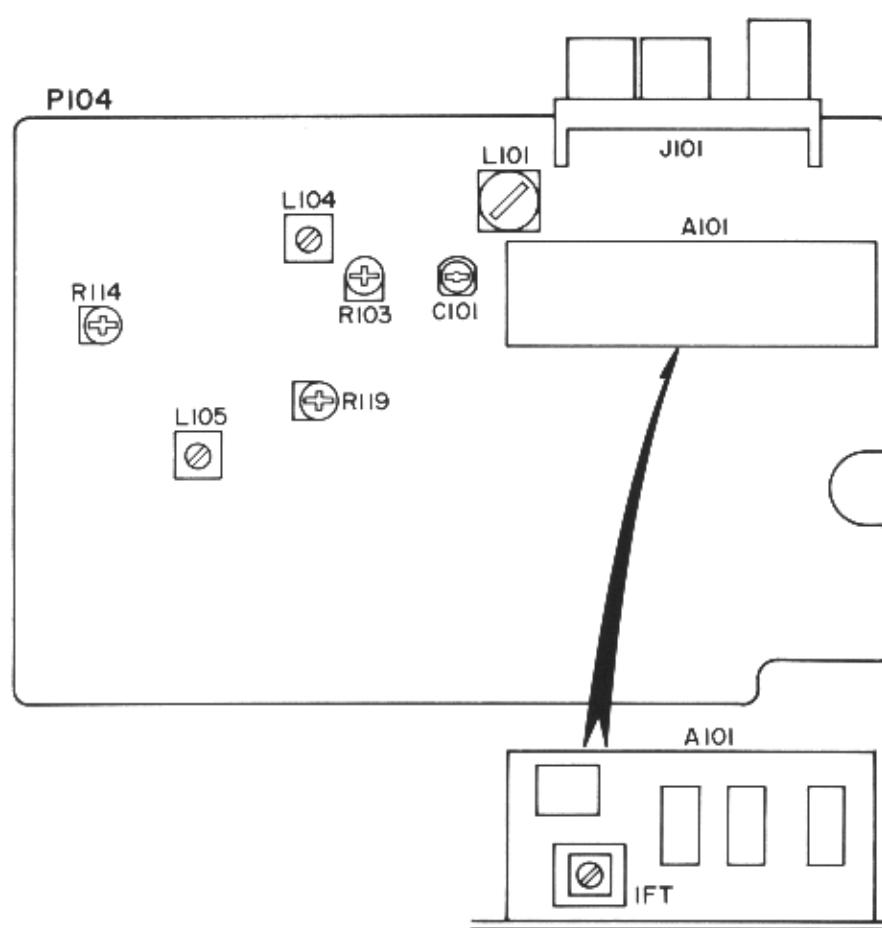
(D) Anmerkungen:

- [1] Die Ausgangswellenform von J551 durch Drehen von R114 löschen und dann durch geringfügiges Drehen von R114 so einstellen, daß die Wellenform wieder erscheint.
- [2] R103 so einstellen, daß die Anzeige "TUNED" auf dem Fluoreszenz-Display leuchtet.

(I) Note:

- [1] Ruotando R114 cancellare la forma d'onda in uscita di J551 e quindi regolarla ruotando leggermente R114 in modo che la forma d'onda ricompaia.
- [2] Regolare R103 in modo che l'indicatore "TUNED" del display FL si illumini.

Tuner Adjustment Positions



Pin Nbr.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

 Carbon film 0.125 W or 0.2 W 70°C 5%	 Ceramic plate Tuning ≤ 120 pF NP.O 2% Others -20/+80%	^a = 2.5 V ^b = 3.15 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%	 Polystyrene film/foil 1%	
 Carbon film 1 W or 1.15 W 70°C 5%	 Tubular ceramic	
 C Chip component		 Miniature single
		 Subminiature tantalum ± 20%

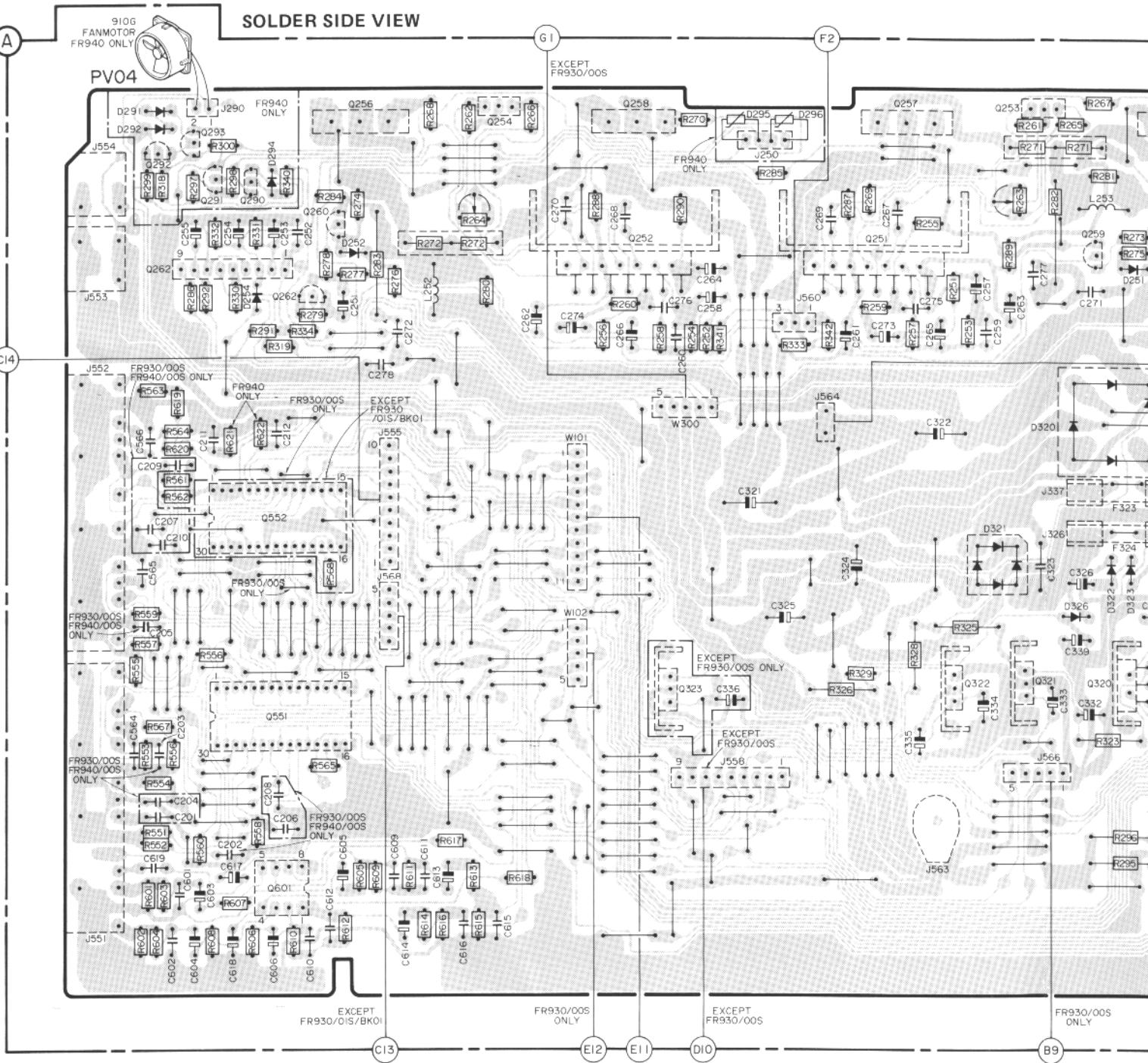
μ -Processor Data

Q401: TMP47C1670AN H054

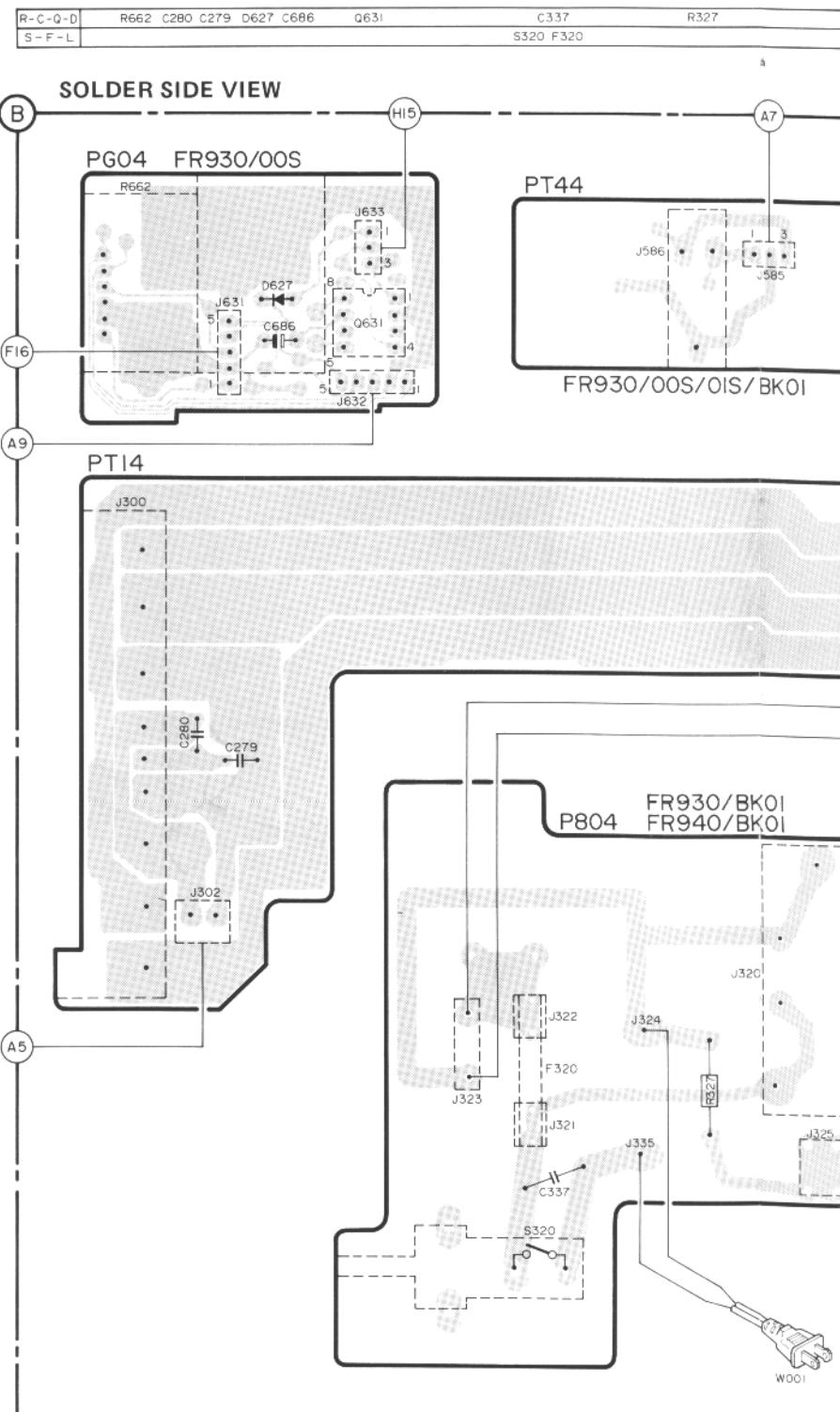
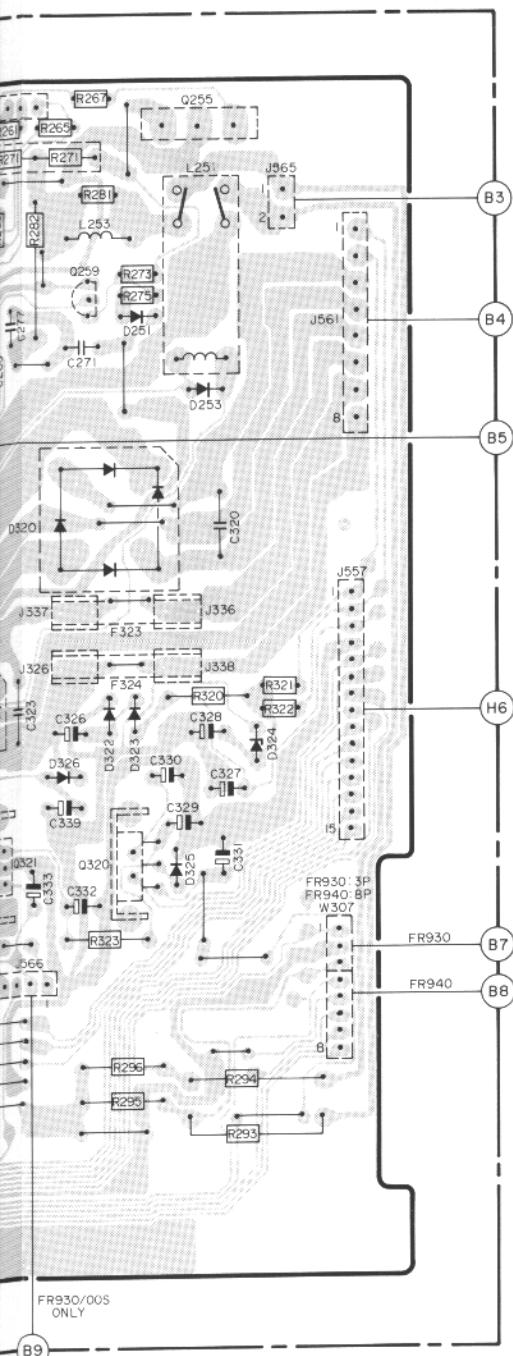
Pin Nbr.	Pin Name	I/O	Act.	Function	Pin Nbr.	Pin Name	I/O	Act.	Function
1	VKK	—	—	-35V	33	N.C.	—	—	Not Used
2	S0	O	H	FTD Segment Drive	34	AUTO SELECT IND	O	L	Auto Select Mode Indicator Out
3	S1	O	H		35	MUTE	O	L	Audio Mute Output
4	S2	O	H		36	STANDBY IND	O	L	Standby Indicator Output
5	S3	O	H		37	DATA IN	I	H	Serial Data Input
6	S4	O	H		38	W.T. OUT	O	L	Watchdog Reset Signal Output
7	S5	O	H		39	DIGITAL IND	I	L	Detecting Digital Signal Out/In
8	S6	O	H		40	3/4 CH	O	H	3CH/4CH Switching Signal Output
9	S7	O	H		41	RC-5 IN	I	L	RC-5 Bus Signal Input
10	S8	O	H		42	SD IN	I	L	Band Detecting Signal Input
11	S9	O	H		43	EASY LINK IN	I	L	Easy Link Bus Signal Input
12	S10	O	H		44	EASY LINK OUT	O	L	Easy Link Bus Signal Output
13	S11	O	H		45	SPK RELAY	O	L	Speaker Relay Control
14	K0	I	H	Key Input	46	MUTE	O	L	Front Channel Mute Signal Out
15	K1	I	H		47	V-AUX	O	L	FTD Segment Drive
16	K2	I	H		48	G11	O	H	FTD Grid Drive
17	K3	I	H		49	G10	O	H	
18	TEST	I	—	GND	50	G9	O	H	
19	OSC	I	—	Clock Input	51	G8	O	H	
20	OSC	O	—	Clock Output	52	G7	O	H	
21	RESET	I	L	Reset	53	G6	O	H	
22	HOLD	I	H	Elect. Failure Sensing Signal Input	54	G5	O	H	
23	CE4	O	H	Strobe Signal Output	55	G4	O	H	
24	PULSE UP	I	L	Function Selector Pulse Input	56	G3	O	H	
25	PULSE DOWN	I	L		57	G2	O	H	
26	CE3	O	H	Latch Signal Output	58	G1	O	H	FTD Segment Drive
27	CE2	O	L	"REQ" Signal Output	59	G0	O	H	
28	CE1	O	H	Chip Enable Signal Output	60	S15	O	H	
29	CLK OUT	O	H	Serial Data Control Clock Output	61	S14	O	H	
30	DATA OUT1	O	H	Data Output	62	S13	O	H	
31	DATA OUT2	O	H	Data Signal Output	63	S12	O	H	FTD Segment Drive
32	VSS	—	—	GND	64	VDD	—	—	+5V

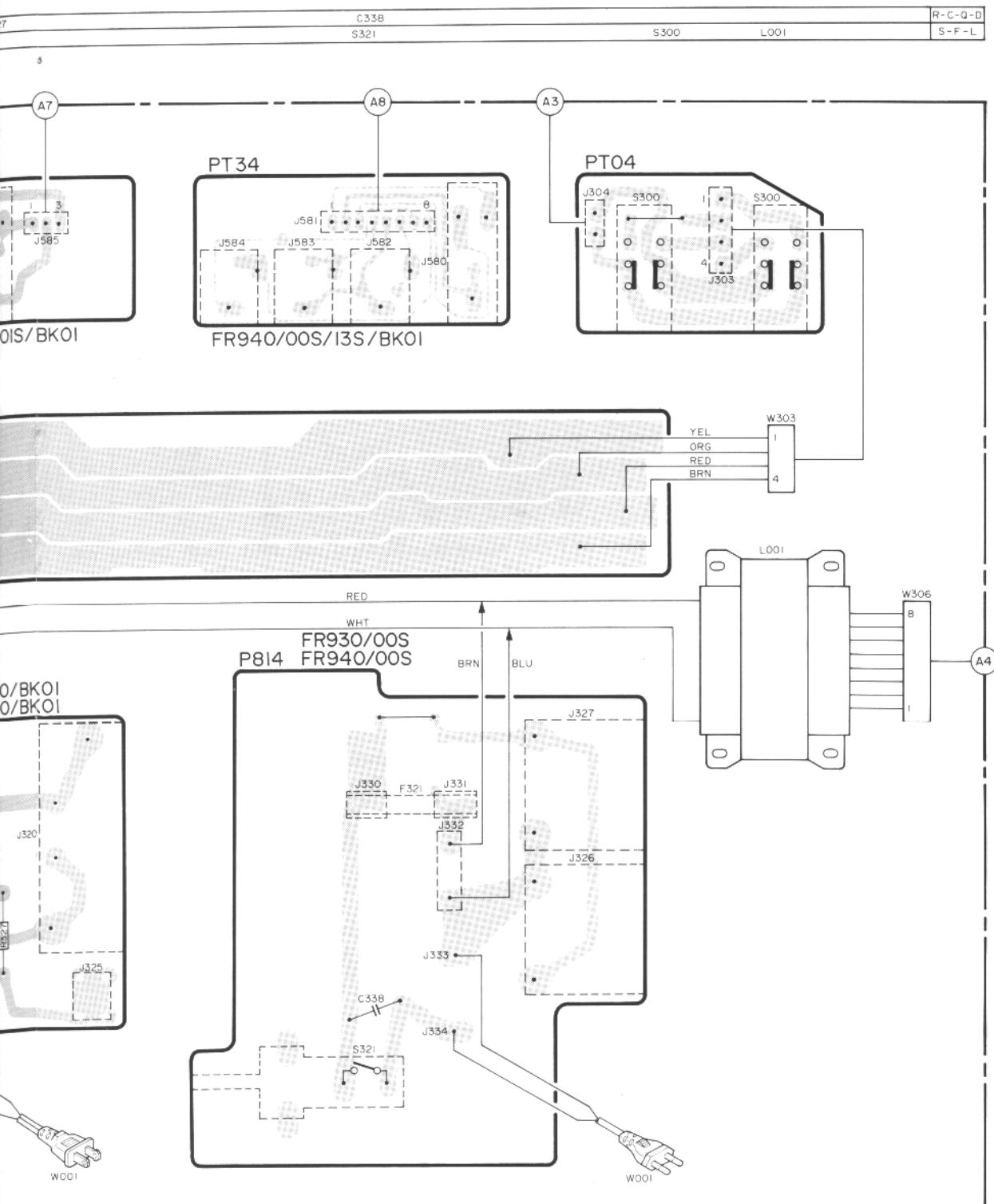
SCHEMATIC DIAGRAMS AND PARTS LOCATION

R	R318 R286 R292 R297~R300 R277~R279 R340 R284 R274 R551~R568 R601~R622 R330~R332 R291 R319 R334 R283 R276 R268 R262 R266 R288 R260 R290 R270 R341 R285 R342 R287 R269 R257 R255 R251 R253 R263 R261 R265 R267 R2
C	C564~C566 C251~C255 C201~C212 C601~C606 C564~C570 C609~C619
O	Q262 Q290~Q293 Q552 Q551 Q601 Q262 Q260 Q256 Q254 Q258 Q252 Q323
D	D291 D292 D254 D294 D252 D295 D296
L	L252 L253

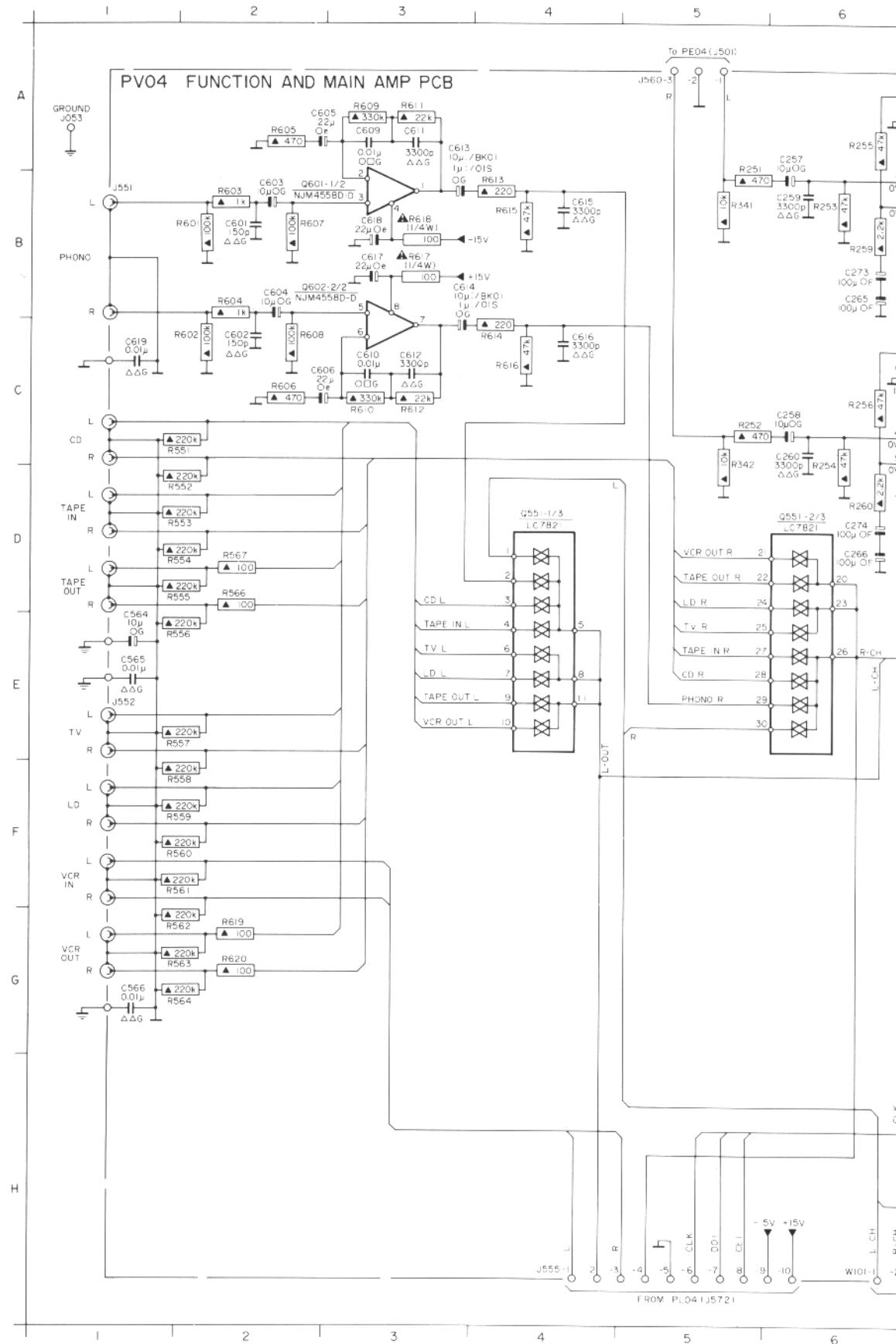


R261 R265 R267 R273	R320~R323	R
271 R282 R281 R275	R293~R296	
C269 C263 C277 C271	C320	C
C335 C332 C326 C339	C327~C331	
Q321 Q259 Q320 Q255		Q
D320 D322~D326 D251	D253	D
L253	L251	L

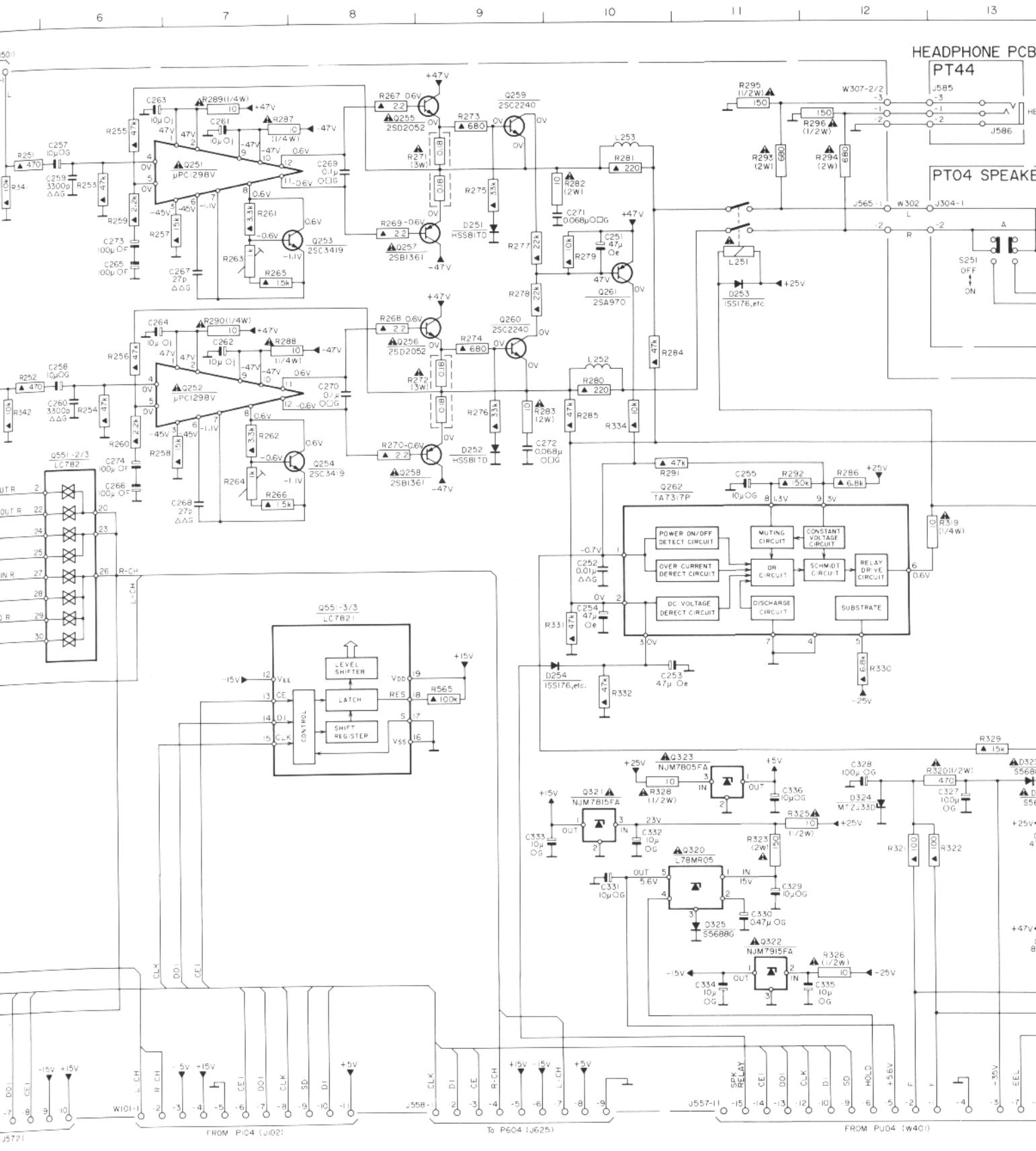




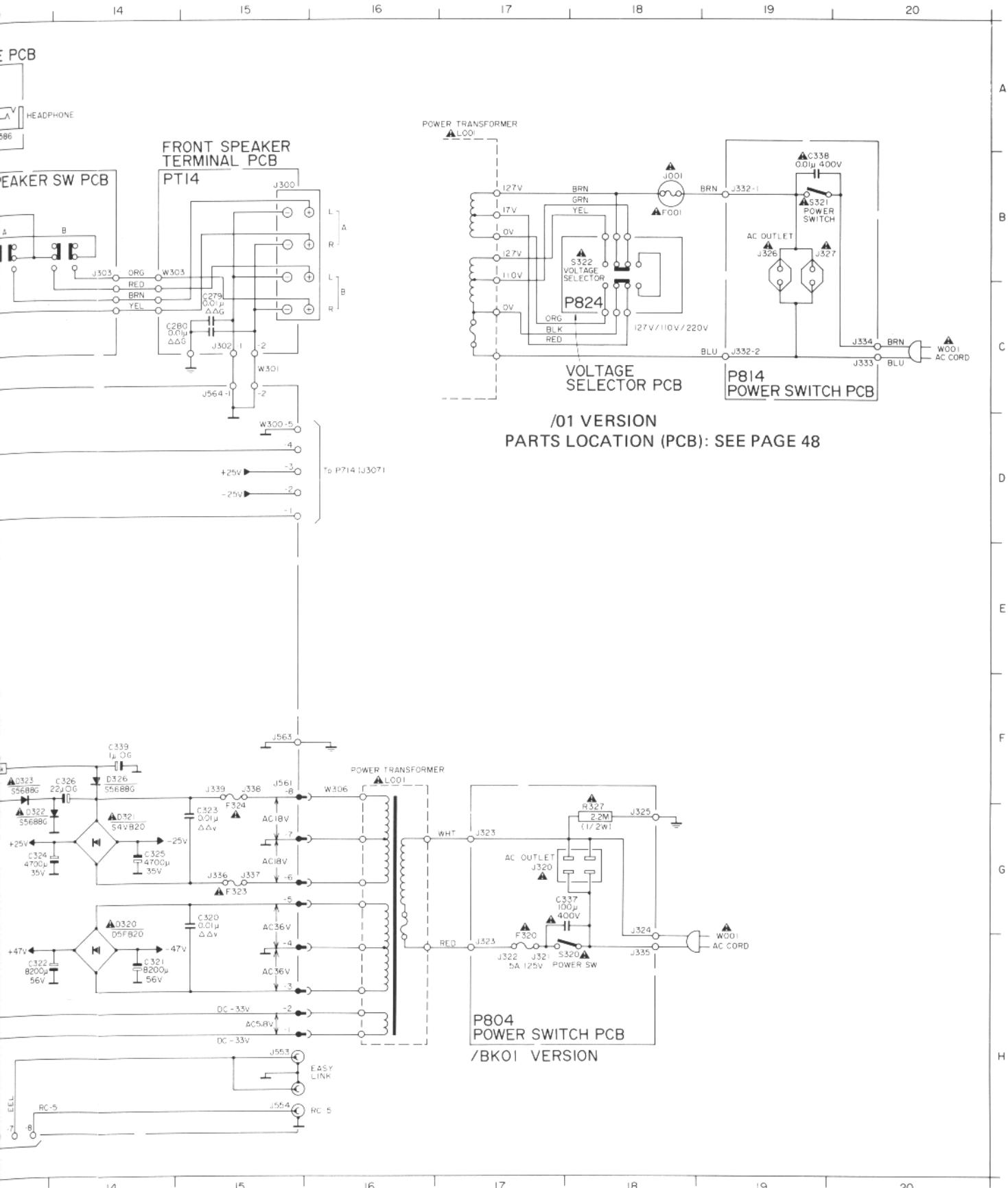
FR930/01S,BK01



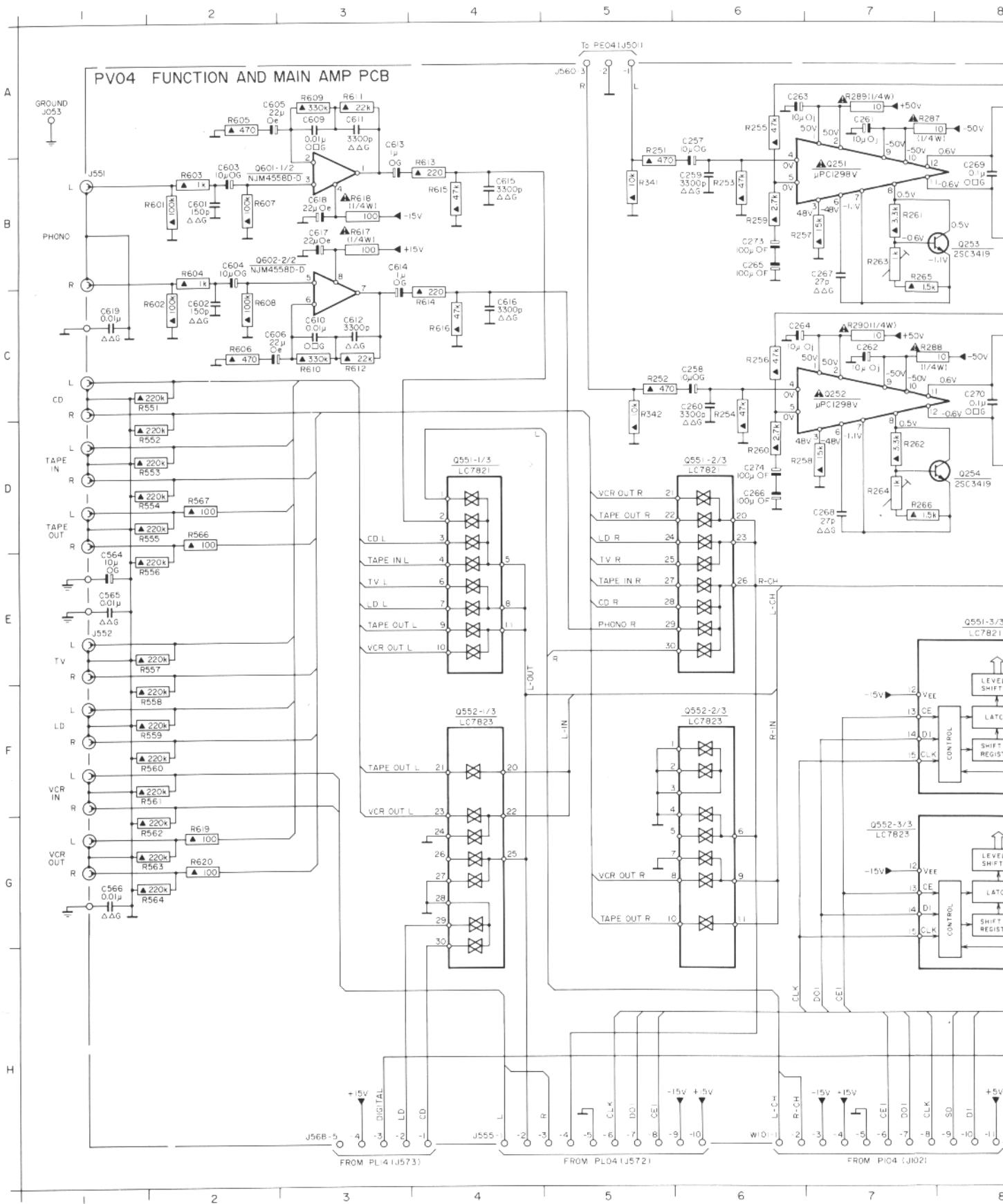
C251 B10	C263 A6	C273 B6	C326 F14	C336 G11	C604 B2	C616 C4	D322 G14	J302 C15	J327 B19	J551 B1
C252 E10	C264 C6	C274 D6	C327 G13	C337 G18	C605 A2	C617 B3	D323 F14	J303 B14	J332 B19	J552 E1
C253 F10	C265 B6	C279 C15	C328 F12	C338 B19	C606 C2	C618 B3	D324 G12	J304 B13	J333 C19	J553 H1
C255 D11	C266 D6	C280 C15	C329 G11	C339 F14	C609 A3	C619 C1	D325 B11	J305 H17	J334 C20	J554 H4
C257 B6	C267 B7	C320 G15	C330 H11	C354 E1	C610 C3	D251 B9	D326 F14	J306 H14	J335 H18	J555 A20
C258 C6	C268 D7	C321 H14	C331 G10	C355 E1	C611 C3	D252 D9	F001 B18	J323 G17	J336 G18	J556 A5
C259 B6	C269 B8	C322 H14	C332 G10	C356 G1	C612 C3	D253 C11	F320 H17	J323 H17	J337 G15	J557 F1
C260 C6	C270 C8	C323 G15	C333 G10	C601 B2	C613 B3	D254 F10	J001 B18	J324 H18	J338 F15	J558 C1
C261 A7	C271 B10	C324 G14	C334 H11	C602 C2	C614 B3	D320 H14	J053 A1	J325 G18	J339 F15	J559 B1
C262 C7	C272 D9	C325 D9	C335 H12	C603 B2	C615 B4	D321 G14	J300 B15	J326 B19	J339 F15	J560 B1



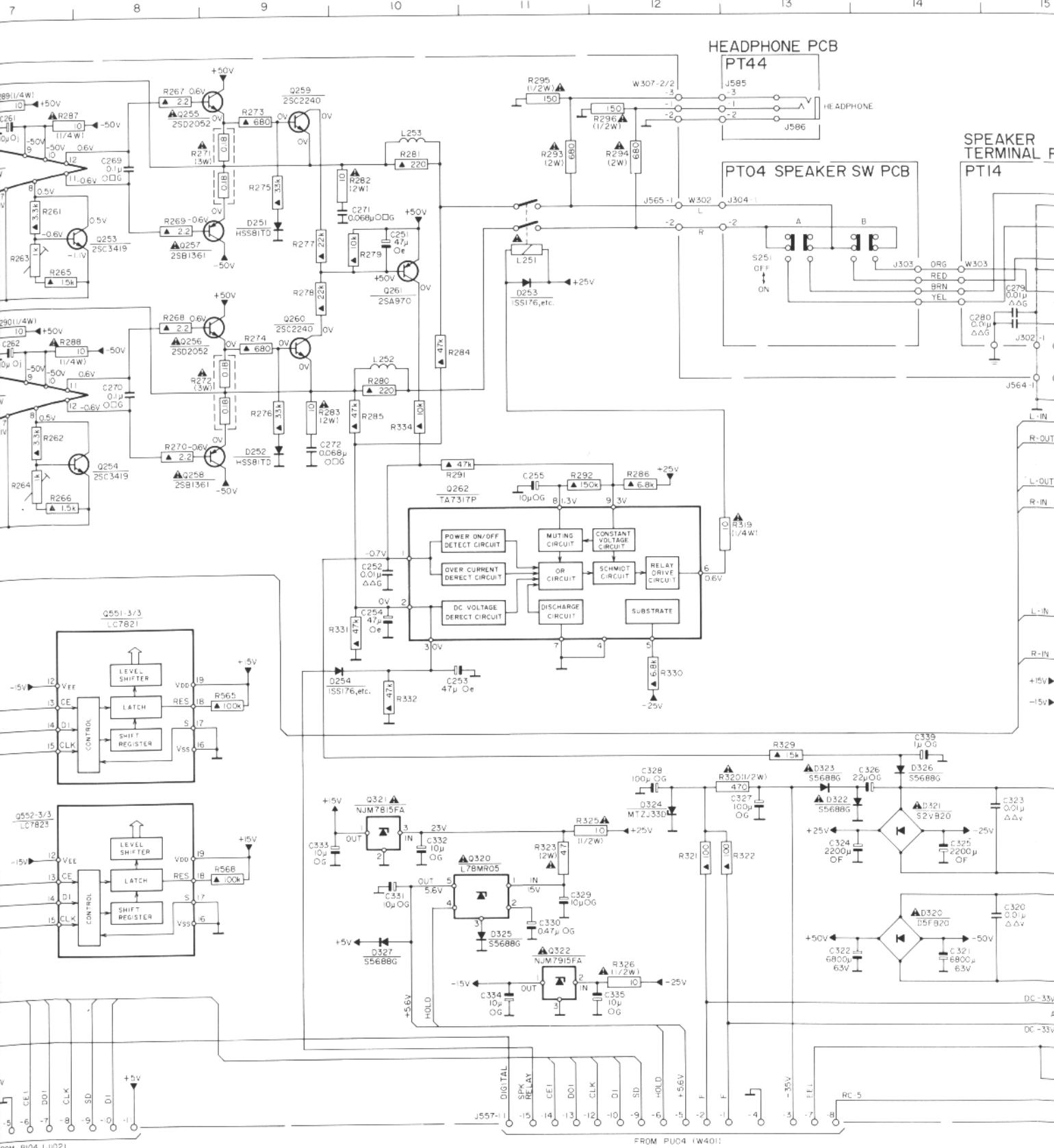
J551 B1	J581 A13	Q253 B8	Q320 G11	R254 C6	R264 D7	R274 C9	R284 C10	R294 B12	R327 G18	R552 D1	R562 G1	R605 A2	R615 B4
J552 E1	J585 A12	Q254 D8	Q321 G10	R255 A6	R265 B7	R275 B9	R285 D19	R295 A11	R328 F10	R553 D1	R563 G1	R606 C2	R616 C4
J553 H15	J586 A13	Q255 A9	Q322 H11	R256 C6	R266 D7	R276 D9	R286 D12	R296 A12	R329 F13	R554 D1	R564 G1	R607 B2	R617 B3
J554 H15	L001 A17	Q256 C9	Q323 F11	R257 B7	R267 A6	R277 B9	R287 A7	R319 D13	R330 F12	R555 D1	R565 F9	R608 C2	R618 B3
J555 H4	L001 F16	Q257 B9	Q551 D4	R258 D7	R268 C6	R278 C9	R288 C7	R320 F13	R331 E10	R556 E1	R566 D2	R609 A3	R619 G2
J561 F15	L251 B11	Q258 E9	Q551 D6	R259 B6	R269 B8	R279 B10	R289 A7	R321 G12	R332 D10	R557 E1	R567 D2	R610 C3	R620 G2
J560 A5	L252 C10	Q259 A9	Q551 E8	R260 D6	R270 C6	R280 C10	R290 C7	R322 G13	R334 D10	R558 F1	R601 B2	R611 A3	S251 B13
J563 F15	L253 A10	Q260 C9	Q251 B5	R261 B5	R271 A7	R281 B10	R291 D10	R323 G11	R341 B5	R559 F1	R602 B2	R612 C3	S250 H18
J564 C15	Q251 B7	Q261 B10	R252 B5	R262 D7	R272 C9	R282 B10	R292 D11	R325 G11	R342 C5	R560 F1	R603 B2	R613 B4	S321 B19
J565 B12	Q252 C7	Q262 D10	R253 B6	R263 B7	R273 A9	R283 D9	R293 B11	R326 H12	R551 C1	R561 F1	R604 B2	R614 C4	S322 B18



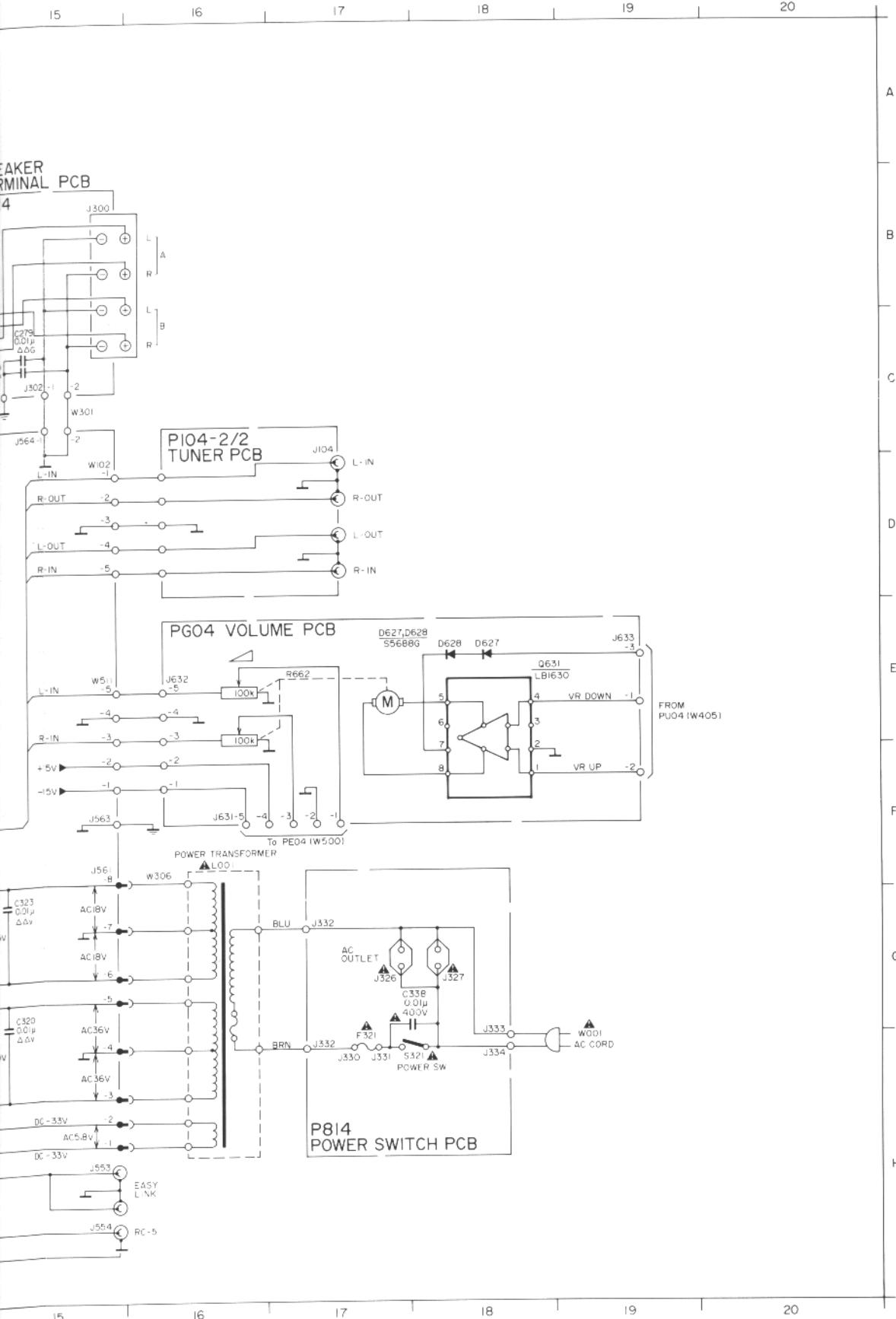
FR930/00S



C251	B10	C262	C7	C272	D9	C325	G14	C339	F14	C609	A3	C619	C1	D326	F14	J304	B13	J552	E1	J568	H3	L253	A10	Q260	C9	Q552		
C252	F10	C263	A6	C273	B6	C326	F14	C564	E1	C610	A3	D251	B9	D327	H10	J326	B19	J553	H15	J581	A13	Q251	B7	Q261	B10	Q552		
C253	F10	C264	C6	C274	D6	C328	F12	C565	E1	C611	A3	D252	D9	D627	E18	J327	B19	J554	H15	J585	A13	Q252	C7	Q262	D10	Q552		
C254	E10	C265	B6	C279	C15	C329	G11	C566	G1	C612	C3	D253	C11	D628	E18	J330	H17	J555	H4	J586	A13	Q253	B8	Q320	G11	R251		
C255	D11	C266	D6	C280	C15	C330	H11	C601	B2	C613	B3	D254	F10	F322	E18	J331	H17	J556	H11	J631	F16	Q254	D8	Q321	H10	R252		
C257	B6	C267	B7	C320	G15	C331	G10	C602	C2	C614	B4	D320	F14	J053	A1	J332	G17	J557	A5	J632	E16	Q255	A9	Q322	H11	R253		
C258	C6	C268	D7	C321	H14	C332	G10	C603	B2	C615	B4	D321	G4	J104	B17	J332	G17	J561	F15	J633	E19	Q256	C9	Q551	D4	R254		
C259	B6	C269	B8	C322	H14	C333	G10	C604	B2	C616	C4	D322	G14	J304	B15	J333	C20	J563	F15	J634	E16	Q257	B8	Q551	D4	R255		
C260	C6	C270	C8	C323	G15	C334	H11	C605	A2	C617	B3	D324	G12	J302	C15	J334	C20	J564	C15	J565	B1	J566	E9	Q258	E8	Q551	E8	R256
C261	A7	C271	B10	C324	G14	C335	H12	C606	C2	C618	B3	D325	H11	J303	B14	J551	B1	J565	B12	L252	C10	Q259	A9	Q552	F4	R257		

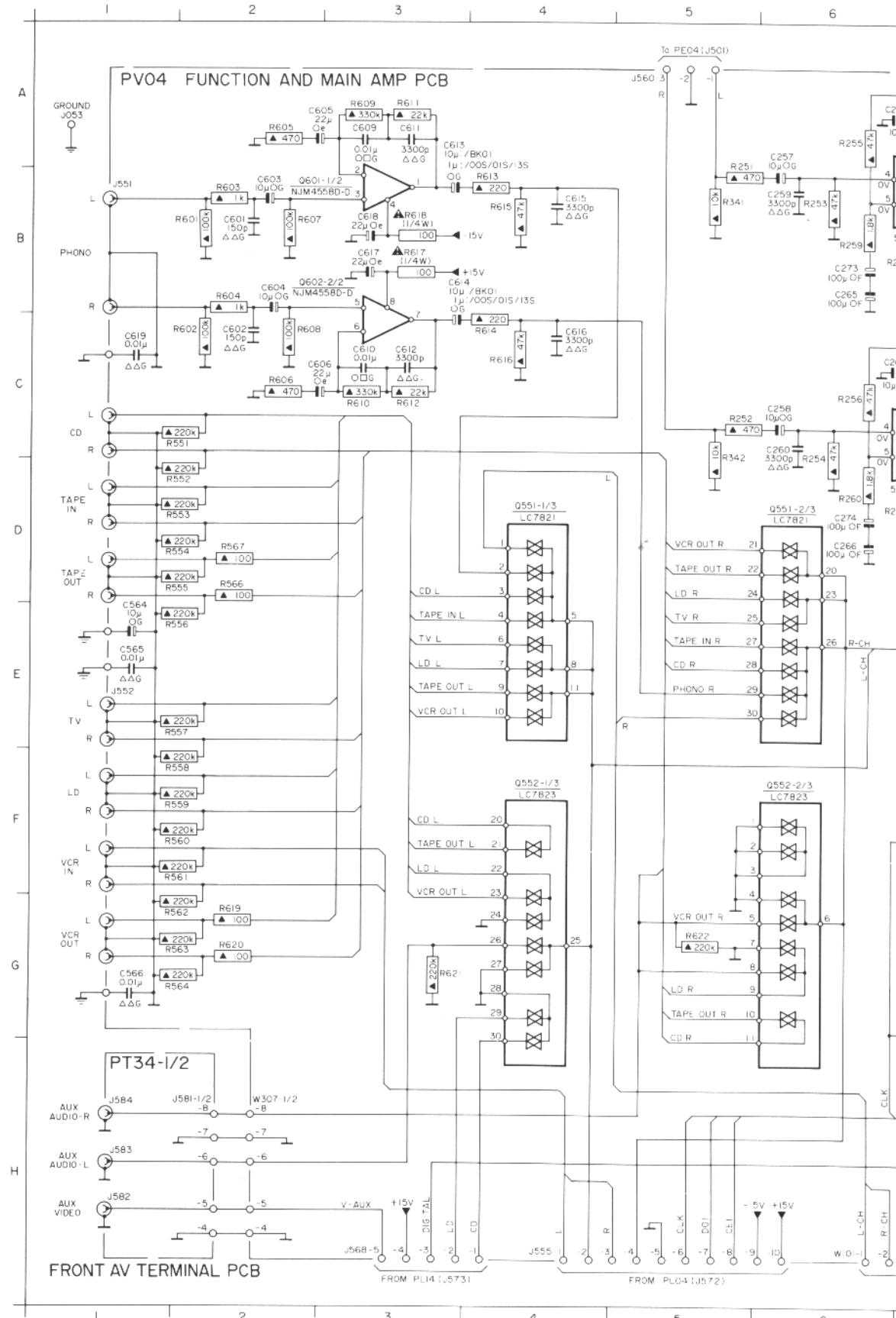


R9	Q552 F6	R258 D7	R268 C8	R278 C9	R288 C7	R320 F13	R334 D10	R558 F1	R568 G9	R610 C3	R620 G2
S10	Q552 G8	R259 B6	R269 BB	R279 B10	R289 A7	R321 G12	R341 B5	R559 F1	R601 B2	R611 A5	R682 E16
R10	Q531 E18	R260 D6	R270 D8	R280 C10	R290 C7	R322 G13	R342 C5	R560 F1	R602 B2	R612 B3	S251 B13
R11	R251 B5	R261 B7	R271 A9	R281 B10	R291 D10	R323 G11	R343 C1	R561 F1	R603 B2	R613 B4	S321 H18
R10	R252 C5	R262 D7	R272 C9	R282 B10	R292 B11	R324 H11	R344 C1	R562 G1	R604 B2	R614 C4	
R11	R253 B5	R263 B7	R273 A9	R283 D9	R293 B11	R326 H12	R345 D1	R563 G1	R605 A2	R615 B4	
R14	R254 C6	R264 D7	R274 C9	R284 D10	R294 B12	R327 F13	R346 D1	R564 G1	R606 C2	R616 C4	
R16	R255 A6	R265 B7	R275 B9	R285 D10	R295 A11	R330 F12	R355 D1	R565 F9	R607 B2	R617 B3	
R14	R256 C6	R266 D7	R276 D9	R286 D12	R296 A12	R331 E10	R356 E1	R566 D2	R608 C2	R618 B3	
R14	R257 B7	R267 A8	R277 B9	R287 A7	R319 D13	R332 F10	R557 E1	R567 D2	R609 A3	R619 G2	

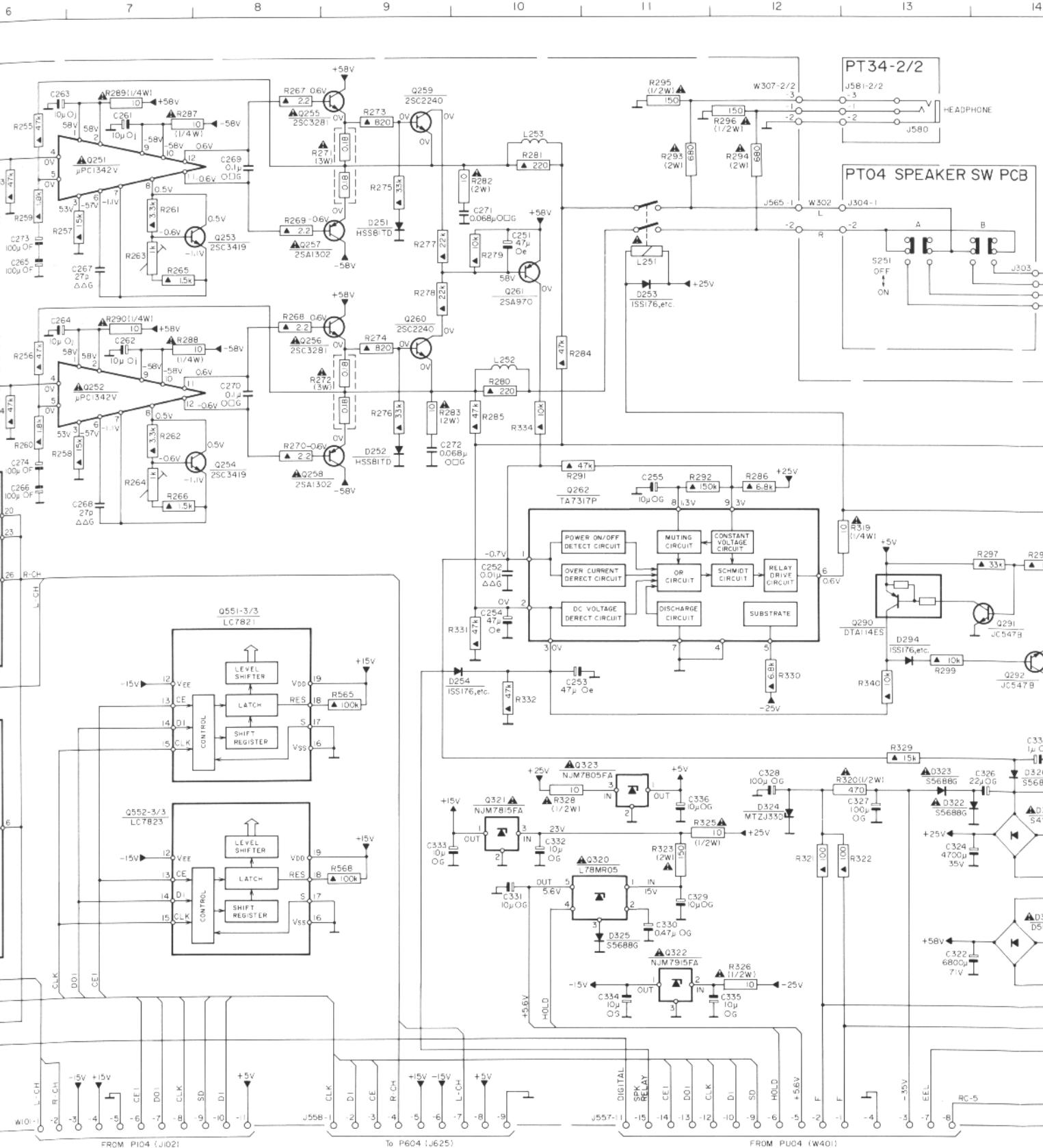


FR940/00S/13S,BK01

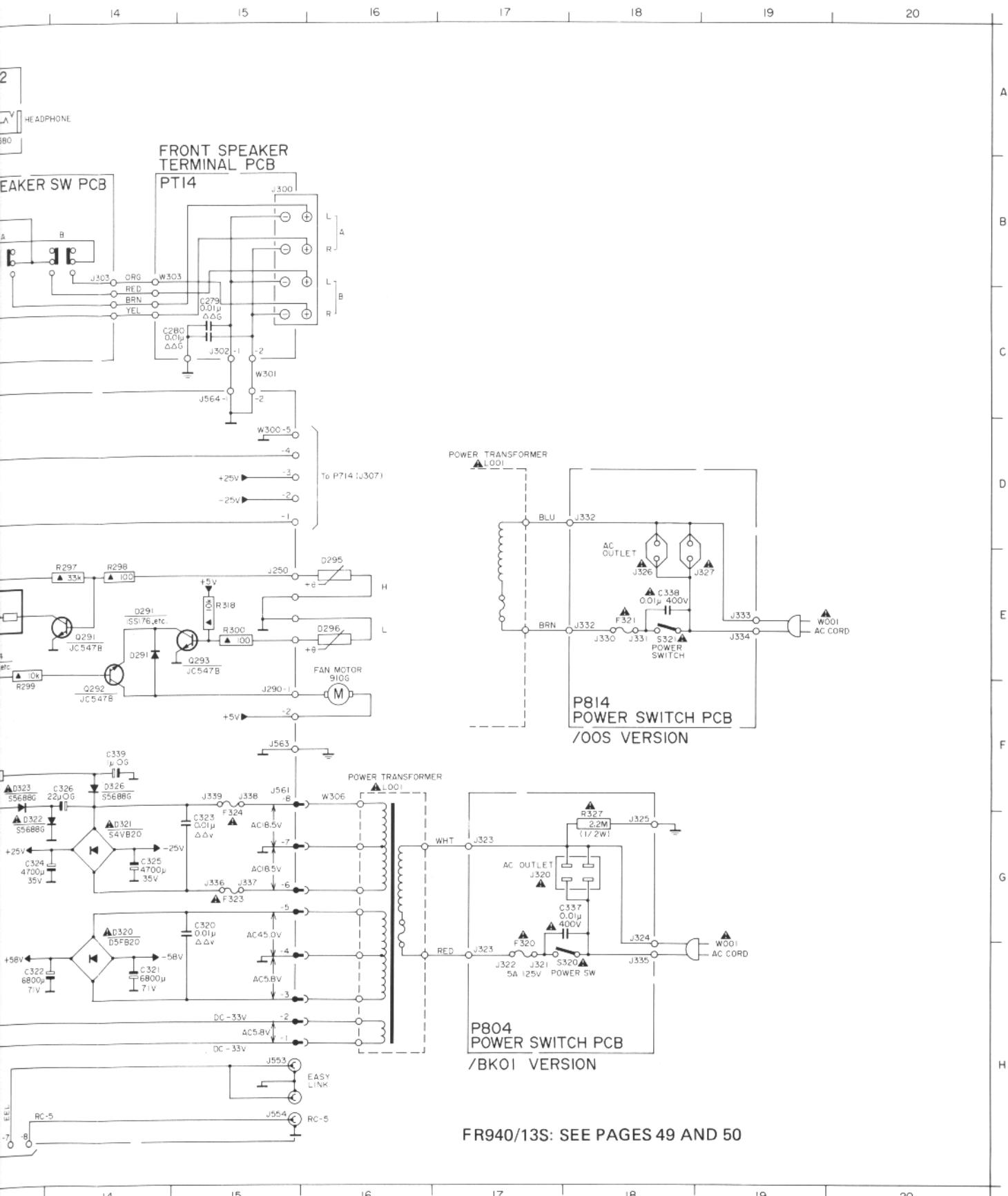
C251	B10	C262	C7	C272	D9
C252	E10	C263	A6	C273	B6
C253	E10	C264	C6	C274	D6
C254	E10	C265	B6	C279	C15
C255	D11	C266	B6	C280	C15
C256	B6	C267	B7	C281	H14
C257	B6	C268	D7	C282	H14
C258	C6	C269	BB	C283	G14
C259	B6	C270	C8	C284	G14
C260	C6	C271	B10	C285	G14
C261	A7				



C272 D9	C325 G14	C335 H12	C601 B2	C613 B3	D254 F10	D325 H11	J290 F15	J324 H18	J332 C19	J339 F15	J563 F15	L001 D17	Q256 C9	Q293 E15
C273 B6	C326 G14	C336 B19	C602 C2	C614 B3	D291 E14	D326 F14	J300 B15	J325 G18	J332 E18	J551 B1	J564 C15	L001 F16	Q257 B9	Q320 G15
C274 D6	C327 G13	C336 G11	C603 B2	C615 B4	D294 E13	F001 B18	J302 C15	J326 B19	J333 C20	J552 E1	J565 B12	L251 B11	Q258 E9	Q321 G10
C275 C15	C328 G12	C337 G18	C604 B2	C616 C4	D295 E16	F320 H17	J303 B14	J326 E18	J333 E19	J553 H15	J566 H3	L252 C10	Q259 A9	Q322 H11
C280 C15	C329 G11	C338 B19	C605 A2	C617 B3	D296 E16	F321 E18	J304 B13	J327 B19	J334 C20	J554 H15	J581 A13	L253 A10	Q260 C9	Q323 F11
C321 H14	C331 G10	C339 F14	C609 A3	C619 C1	D320 H14	F323 G15	J320 G18	J327 E18	J334 E19	J555 H4	J582 H2	L254 B7	Q261 B10	Q551 D4
C322 H14	C332 G10	C564 E1	C610 C3	D251 B9	D322 G14	J001 B18	J322 H17	J330 E18	J335 H18	J556 H1	J582 H1	L255 C7	Q262 D10	Q552 D6
C323 G15	C333 G10	C565 E1	C611 A3	D252 D9	D323 F13	J053 A1	J323 G17	J332 G19	J336 G18	J558 H9	J583 H1	L256 B8	Q263 E13	Q553 E8
C324 G14	C334 H11	C566 G1	C612 C3	D253 C11	D324 G12	J250 E15	J323 H17	J332 D18	J338 F16	J560 A5	J584 H1	L001 A17	Q255 D8	Q552 F4



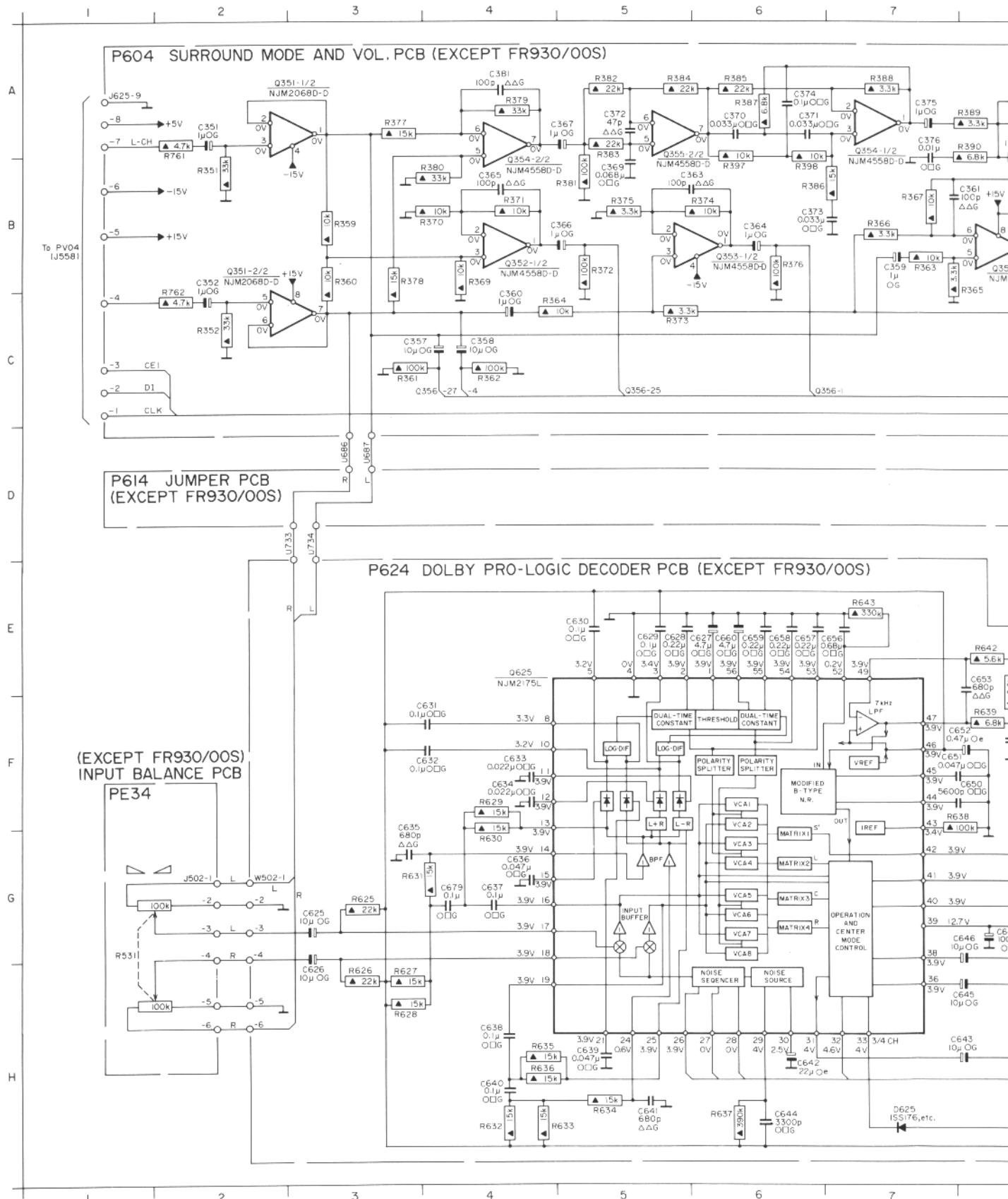
Q256 C9	Q293 E15	Q552 G8	R258 D7	R268 C8	R278 C9	R288 C7	R298 E14	R326 H12	R342 C5	R560 F1	R602 C2	R612 C3	R622 G5
Q257 B9	Q320 G11	Q602 C3	R259 B6	R269 B10	R279 B10	R289 A7	R299 E14	R327 H18	R551 C1	R561 C1	R603 B2	R613 B4	R621 B13
Q258 E9	Q321 G10	Q602 C3	R260 D6	R270 D8	R280 C10	R290 C7	R300 E15	R328 F10	R552 D1	R562 G1	R604 B2	R614 C4	S320 H18
Q259 A9	Q322 H11	R251 B5	R261 B7	R271 A9	R281 B10	R291 D10	R318 E15	R329 F13	R553 D1	R563 G1	R605 A2	R615 B4	S321 B19
Q260 C9	Q323 F11	R252 C5	R262 D7	R272 C9	R282 B10	R292 D11	R319 D13	R330 F12	R554 D1	R564 G1	R606 C2	R616 C4	S321 E18
Q261 B10	Q325 F11	R253 B6	R263 B7	R273 A9	R283 D9	R293 B11	R320 F13	R331 E10	R555 D1	R565 F9	R607 B2	R617 B3	S322 B18
Q262 D10	Q325 F11	R254 C6	R264 D7	R274 C9	R284 C10	R294 B12	R321 G12	R332 F10	R556 E1	R566 D2	R608 C2	R618 B3	
Q263 E13	Q325 F11	R255 A6	R265 B7	R275 B9	R285 D10	R295 A11	R322 G13	R334 D10	R557 E1	R567 D2	R609 A3	R619 G2	
Q264 E14	Q325 F11	R256 C6	R266 D7	R276 D9	R286 D12	R296 A12	R323 G11	R340 F13	R558 F1	R568 G9	R610 C3	R620 G2	
Q265 F6	Q325 F11	R257 B7	R267 A8	R277 B9	R287 A7	R297 E14	R325 G11	R341 B5	R559 F1	R601 B2	R611 A3	R621 G3	



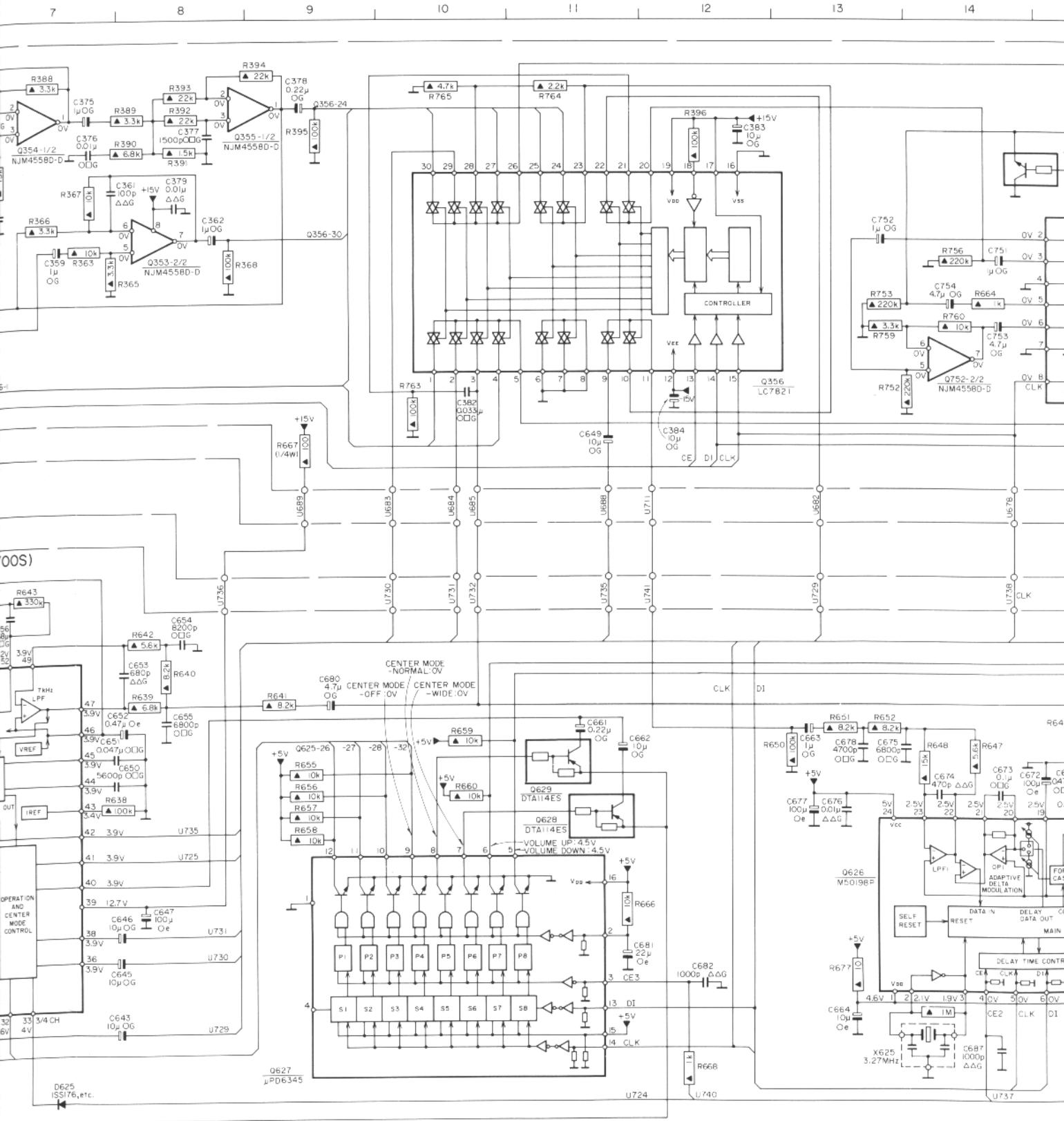
www.rtvcenter.com
repaitips, servicemanuals
forum, chassispictures...

FR930/FR940

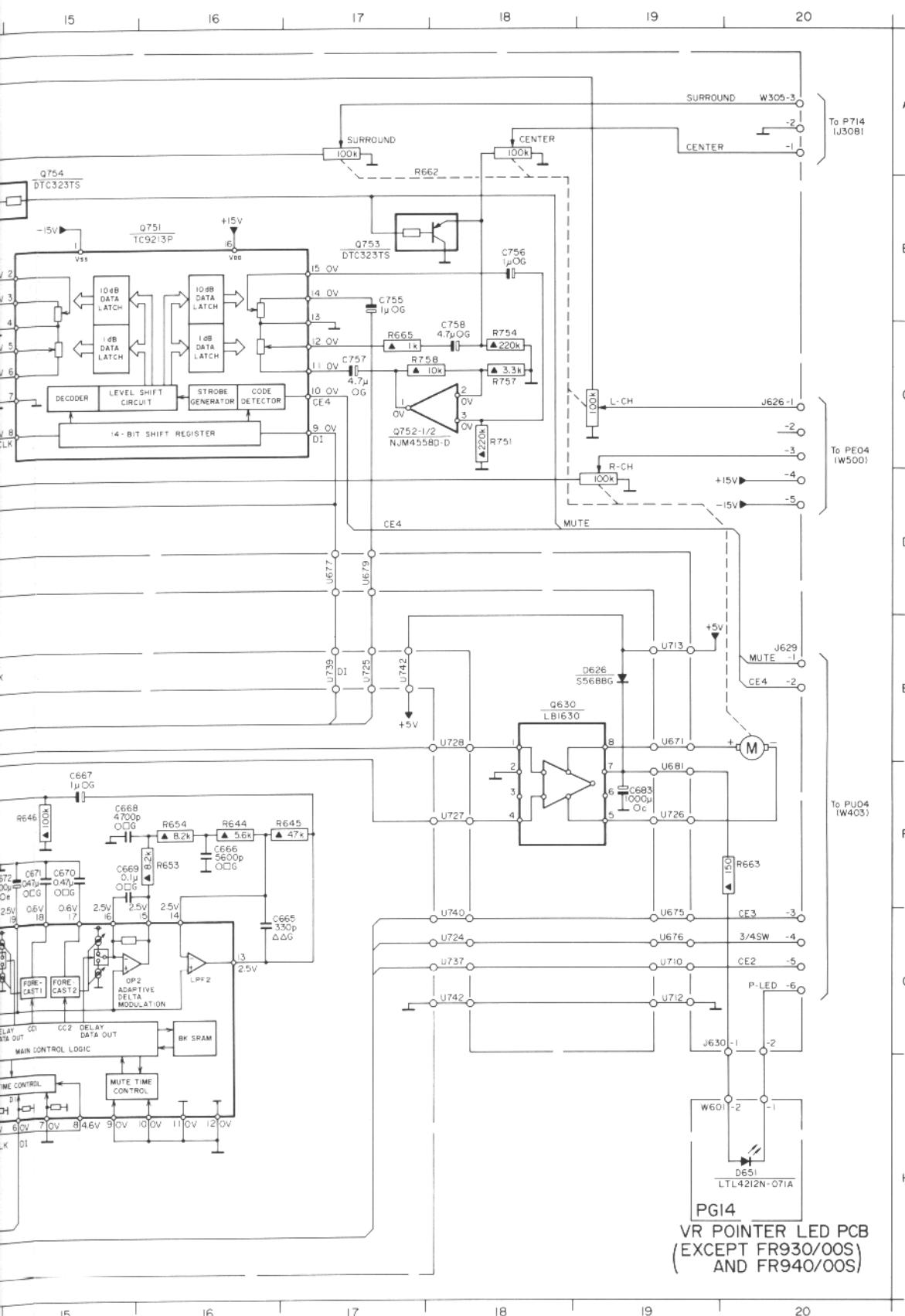
C351 A2	C365 B4	C377 AB	C628 E5	C638
C352 C2	C366 B5	C378 A9	C629 E5	C639
C357 C4	C367 A5	C379 B8	C630 E5	C640
C358 C4	C368 B5	C381 A4	C631 F4	C641
C359 B7	C370 A6	C382 C10	C632 F4	C642
C360 C4	C371 G6	C383 A12	C633 F4	C643
C361 B7	C373 B6	C384 C12	C634 F4	C644
C362 B7	C374 A6	C385 G2	C635 G3	C645
C363 B6	C375 A7	C386 G3	C636 G4	C646
C364 B6	C376 A7	C387 E6	C637 G4	C647



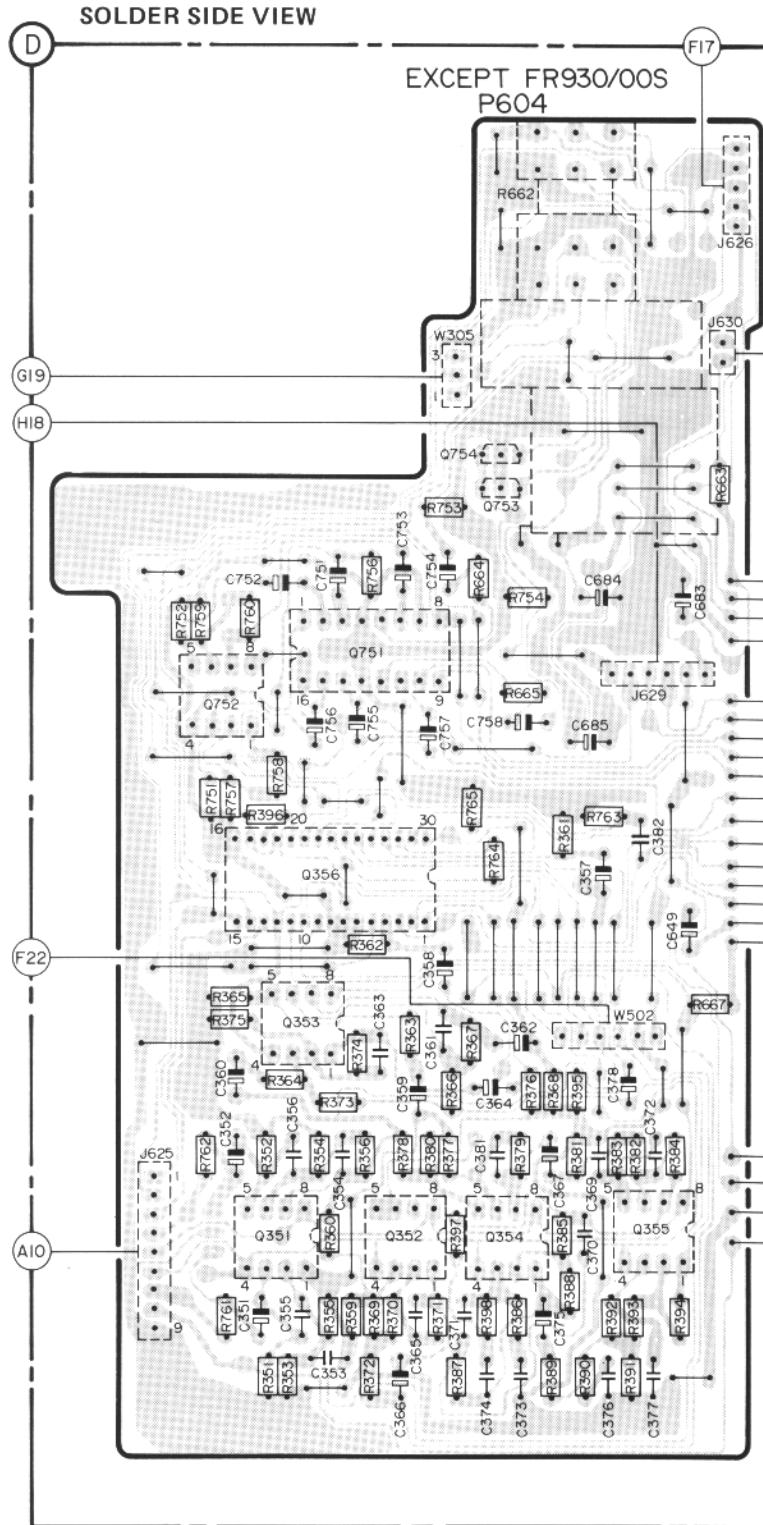
C377 AB	C628 E5	C638 H4	C649 D11	C659 E6	C669 F15	C680 F9	C757 C17	J629 E20	Q355 A9	Q627 H9	R352 C2	R368 B8	R378 B3	R388 A7	R	
C378 A9	C629 E5	C639 H5	C650 FB	C660 E6	C670 F15	C681 H11	C758 C18	J630 G19	Q356 A9	Q628 C11	R359 B3	R369 B4	R379 A4	R389 A8	R	
C379 B8	C630 E5	C640 H4	C651 F7	C661 F11	C673 F14	C683 F12	D628 E19	Q351 B2	Q356 B4	Q630 E18	R360 B3	R370 B4	R380 B4	R390 A8	R	
C381 A4	C631 F4	C641 H5	C652 FB	C662 F13	C673 F14	C683 F16	D626 E19	Q352 B2	Q356 B4	Q631 C3	R371 B4	R379 B5	R381 A8	R391 A8	R	
C382 C10	C632 F4	C642 H6	C653 EB	C663 F13	C674 F14	C684 EB	D651 H20	Q352 B4	Q356 C5	Q631 C4	R371 B5	R382 A5	R392 A8	R393 A8	R	
C383 A12	C633 F4	C643 H8	C654 EB	C664 F14	C675 F13	C685 G16	C751 B14	J308 A20	Q353 B6	Q356 C6	Q752 C14	R372 B5	R383 A5	R393 A8	R394 A9	R
C384 C12	C634 F4	C643 H8	C655 FB	C665 F15	C676 G13	C677 G13	C753 B17	J502 G2	Q353 B8	Q356 C13	Q752 C17	R364 C4	R373 C5	R384 A5	R394 A9	R
C625 G3	C635 G3	C644 H6	C656 FB	C666 F15	C677 G13	C754 C14	J558 B1	Q354 A4	Q625 E4	Q753 B17	R365 BB	R374 B6	R385 A6	R395 A9	R	
C626 G3	C636 G4	C646 H8	C657 EB	C667 F15	C678 F13	C755 B17	J625 A1	Q354 A7	Q625 F9	Q754 B15	R366 B7	R376 B6	R386 B6	R396 A12	R	
C627 E6	C637 G4	C647 H8	C658 EB	C668 F15	C679 G4	C756 B18	J626 C20	Q355 A5	Q626 G13	R351 B2	R367 B7	R377 A3	R387 A6	R397 A6	R	



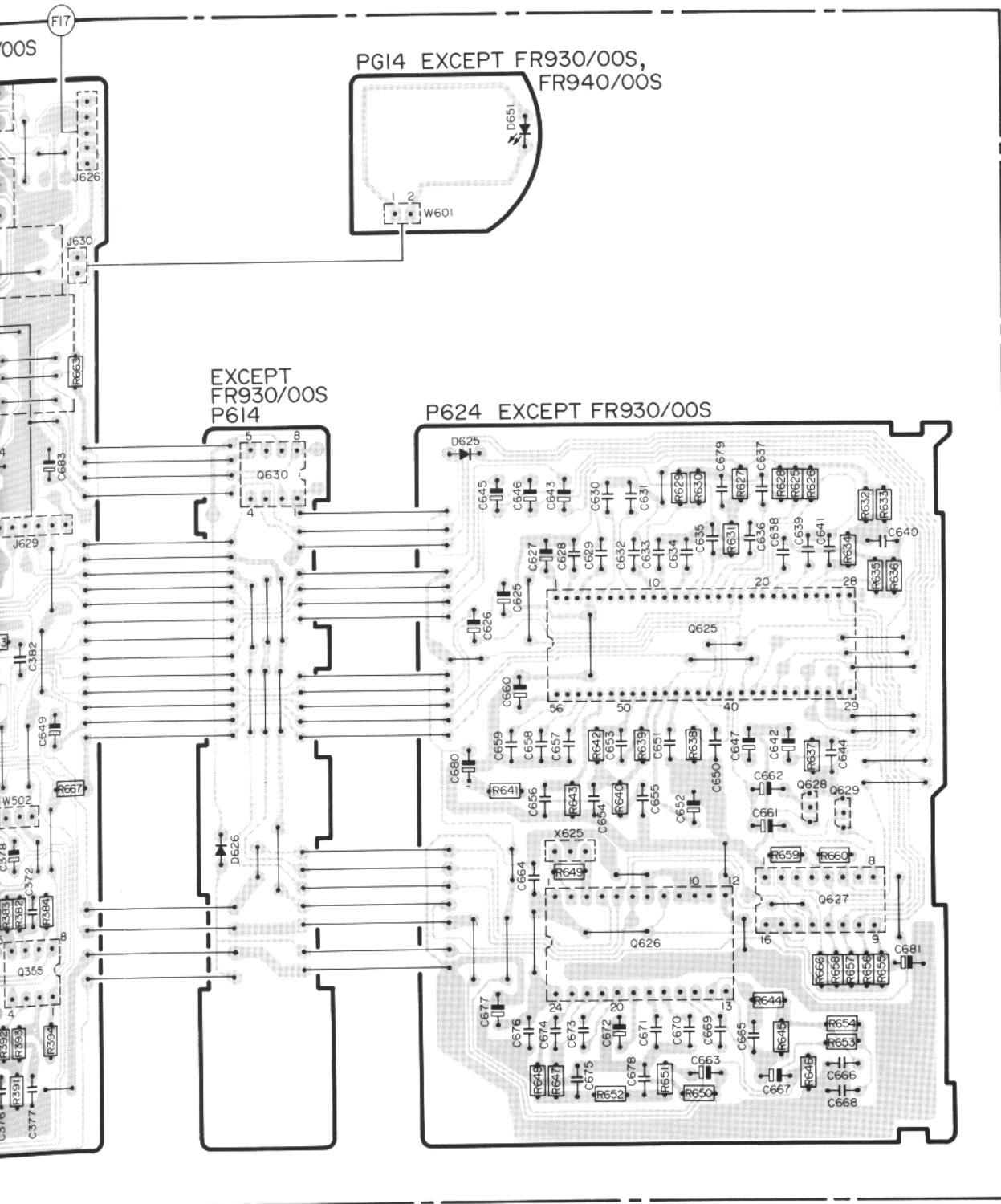
R398 A6	R633 H4	R643 E7	R654 F16	R665 C7	R757 C18	U675 G19	U686 D3	U725 E17	U732 E10	U740 G18
R531 G1	R634 H5	R644 F16	R655 F9	R666 G11	R758 C7	U676 G19	U687 D3	U726 E15	U733 E10	U740 H120
R625 G3	R635 H4	R645 F16	R656 F9	R667 D1	R759 C13	U677 D7	U688 D11	U727 F19	U734 D3	U741 E12
R626 H3	R636 H4	R646 F15	R657 G9	R668 H12	R760 C14	U678 D14	U689 D9	U728 F18	U735 G8	U742 E17
R627 H3	R637 H6	R647 F14	R658 G9	R669 C15	R761 A2	U679 D17	U711 G19	U729 E13	U736 E11	X625 H13
R628 H3	R638 F8	R648 F14	R659 G10	R751 C14	R762 A2	U681 F19	U711 D12	U729 E13	U736 E18	
R629 F4	R639 F9	R650 F13	R660 F10	R752 C14	R763 C10	U682 D13	U712 G19	U729 HB	U737 G18	
R630 F4	R640 E8	R651 F13	R662 A17	R753 C13	R764 A11	U683 D10	U713 E19	U730 E10	U737 H14	
R631 G4	R641 F9	R652 F13	R663 F20	R754 C18	R765 A10	U684 D10	U724 G18	U731 E10	U738 E14	
R632 H4	R642 E8	R653 F16	R664 C14	R756 B14	U671 E19	U685 D10	U724 H11	U731 G8	U739 E17	



R	R752 R751 R396 R756~R762 R753 R662 R664 R665 R754 R763~R765 R667 R663 R351~R356 R359~R365 R369~R380 R366~R368 R397 R398 R381~R395
C	C751~C758 C358 C359 C361~C367 C357 C382 C649
Q - D	Q752 Q351 Q353 Q356 Q751 Q352 Q754 Q753 Q354 Q355
X	

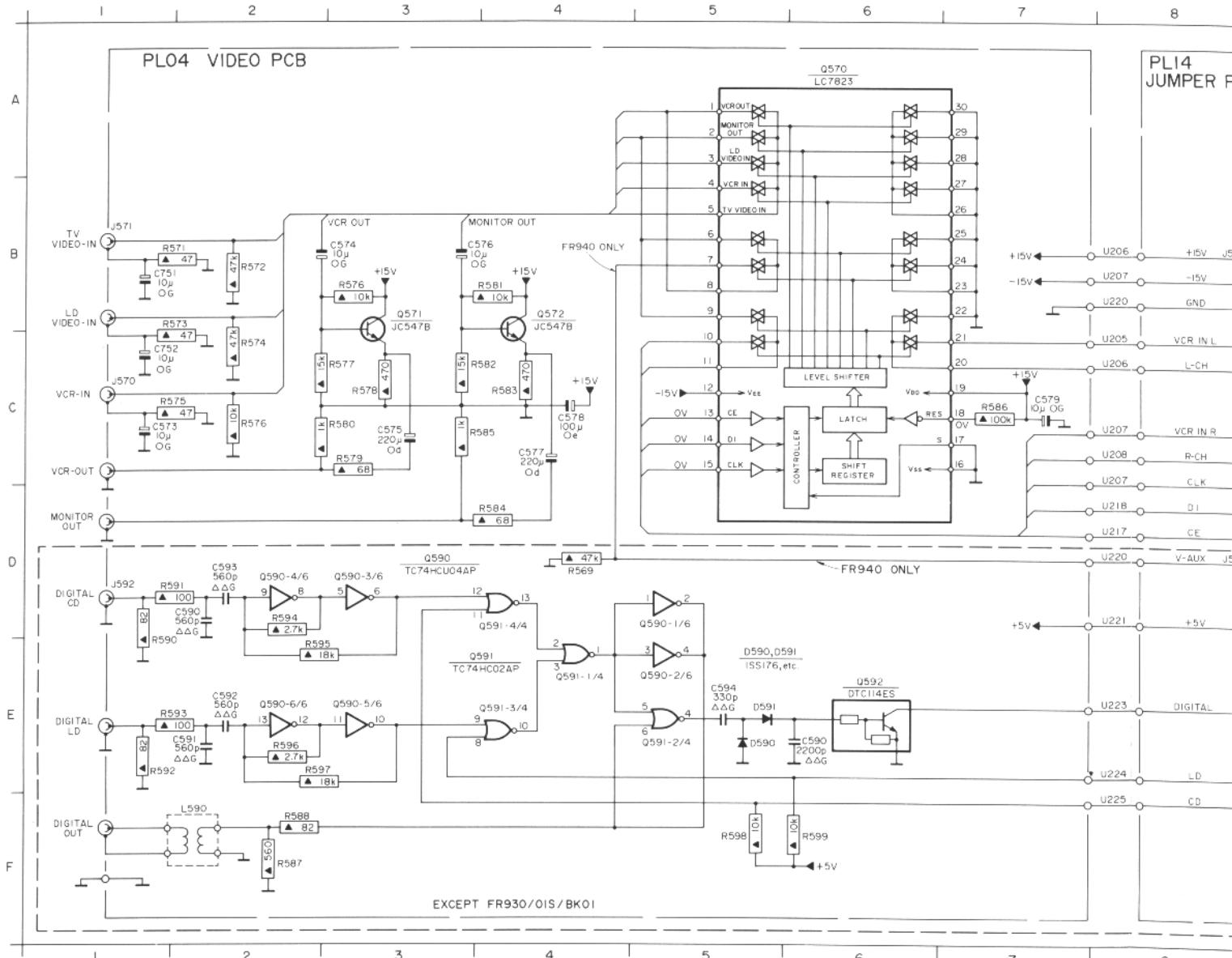


R		
R638~R643	R625~R637	R653~R660
R647~R649	R650~R652	R644~R646 R666
C645 C646 C643 C625~C635	C679 C636~C642 C644	
C680 C664 C650~C660 C670~C678	C647 C661~C663 C665~C669 C681	
D626 Q630	D625 D651	Q626 Q625 Q627~Q629
X625		



FR930/FR940

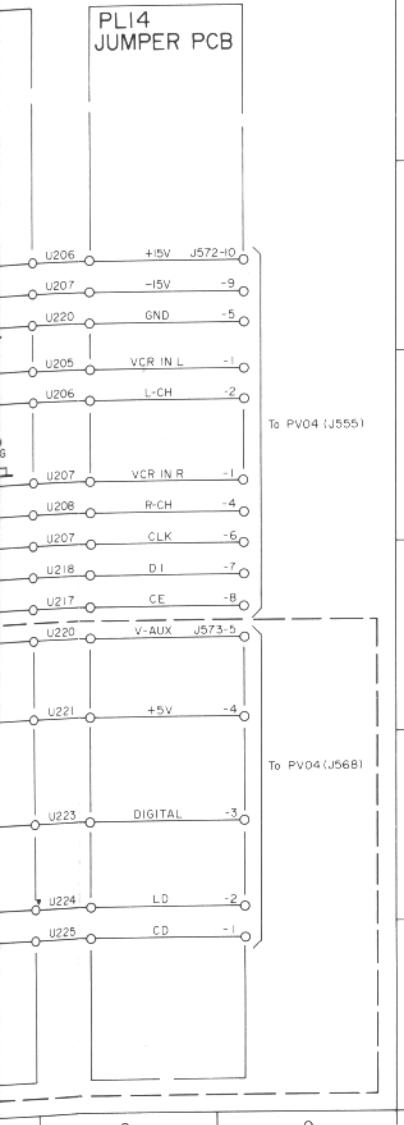
C573 C1	C591 E2	J592 D1	Q590 E5	R575 C1
C574 B3	C592 E2	L590 F2	Q591 D4	R576 B3
C575 C3	C593 D2	Q591 E4	Q591 E4	R576 C2
C576 B3	C594 E5	Q571 B3	Q591 E5	R577 C2
C577 C4	C751 B1	Q572 B4	Q592 E6	R578 C3
C578 C4	C752 C1	Q590 D2	R569 D4	R579 C3
C579 C7	J571 C1	Q590 D3	R571 B1	R580 C2
C590 E2	J571 B1	Q590 D5	R571 B2	R582 C3
C590 E5	J572 B9	Q590 E2	R573 B1	R583 C4
C590 E6	J573 D9	Q590 E3	R574 C2	R584 D4



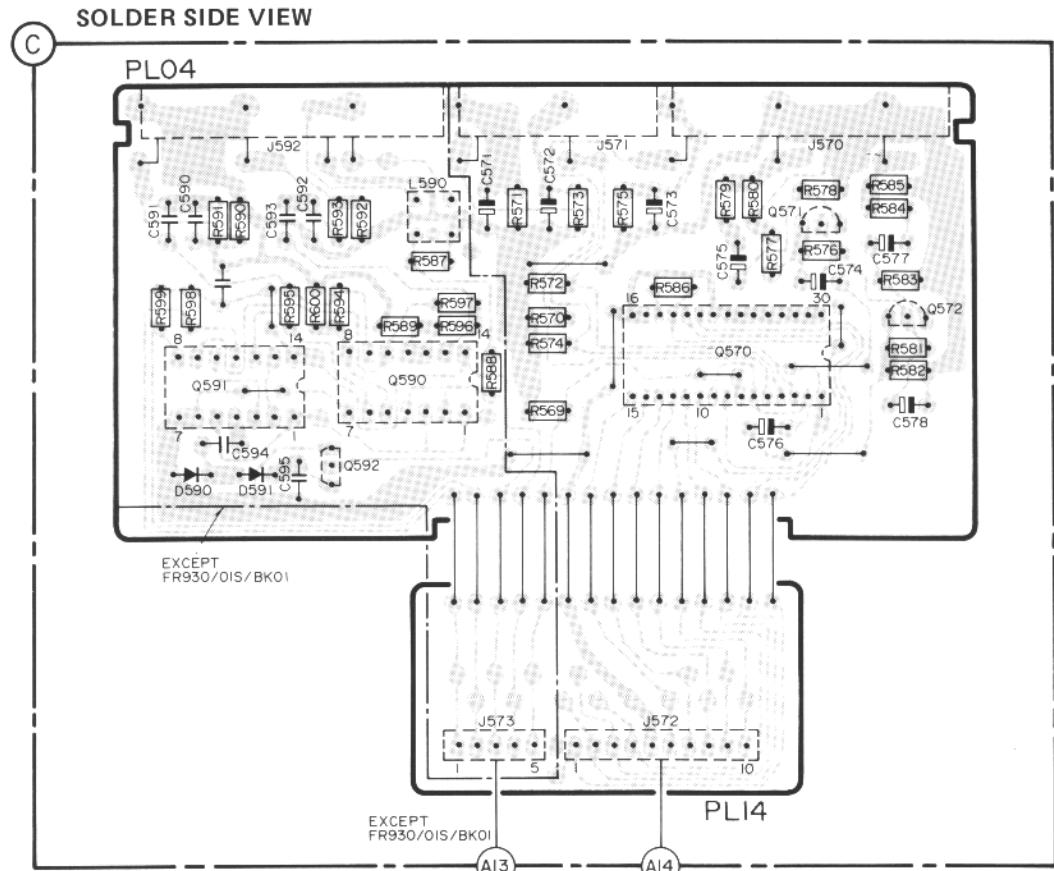
Q590	E5	R575	C1	R585	C3	R596	E2
Q591	D4	R576	B3	R586	C7	R597	E2
		R576	C2	R587	F2	R598	F5
Q591	E4	R577	C2	R588	F2	R599	F6
Q592	E6	R578	C3	R590	D1		
R569	D4	R579	C3	R591	D1		
R571	B1	R580	C2	R592	E1		
R571	B2	R582	C3	R593	E1		
R573	B1	R583	C4	R594	D2		
R573	C2	R584	D4	R595	D2		

8

9

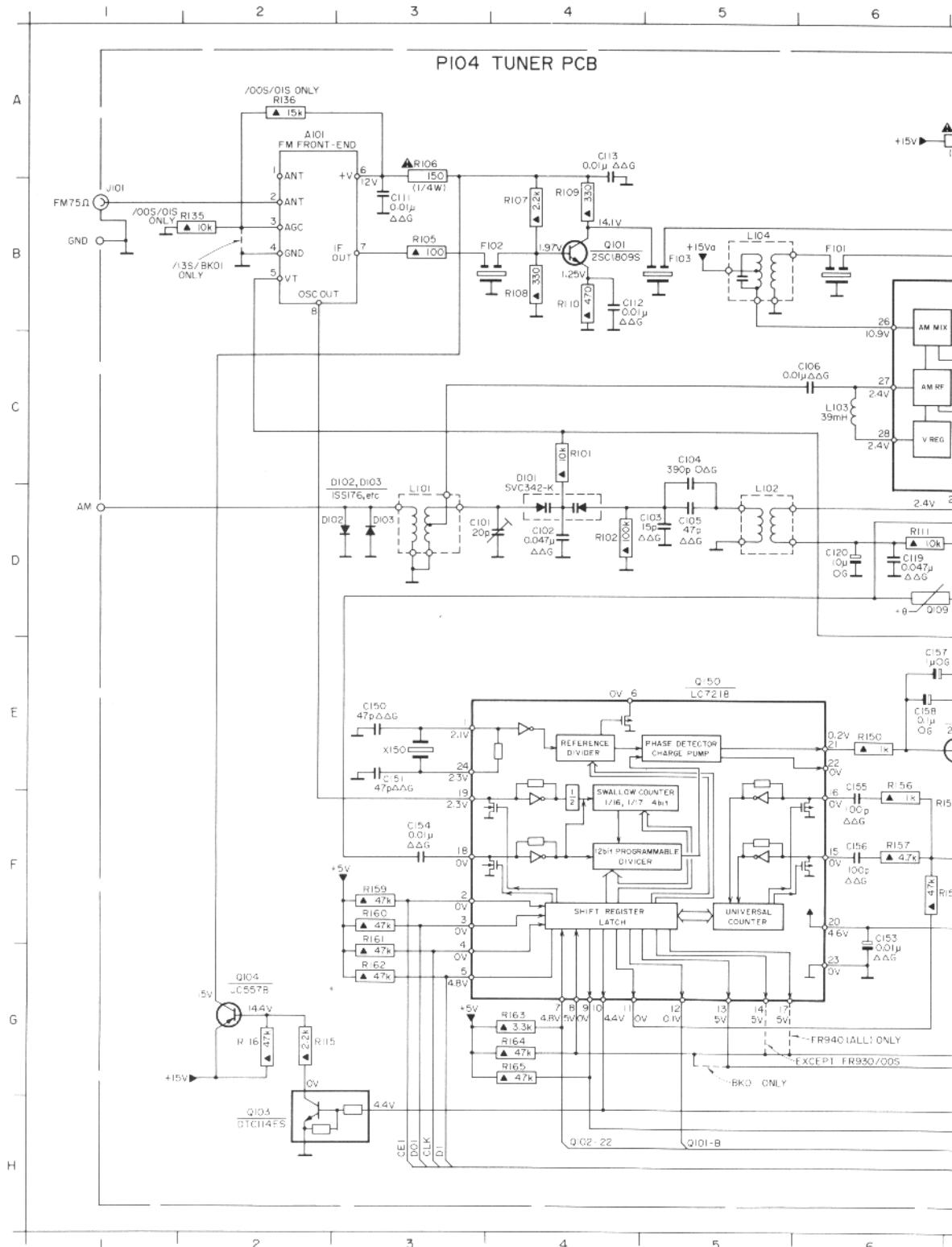


R	R599	R598	R600	R590~R595	R587~R589	R597	R596	R569~R575	R586	R580	R576~R580	R581~R585	R
C	C591	C590		C592~C595		C571	C572		C573	C575	C576	C574	C
Q-D-L	D590	Q591	D591		Q592	Q590	L590		Q570	Q571		Q572	Q-D-L

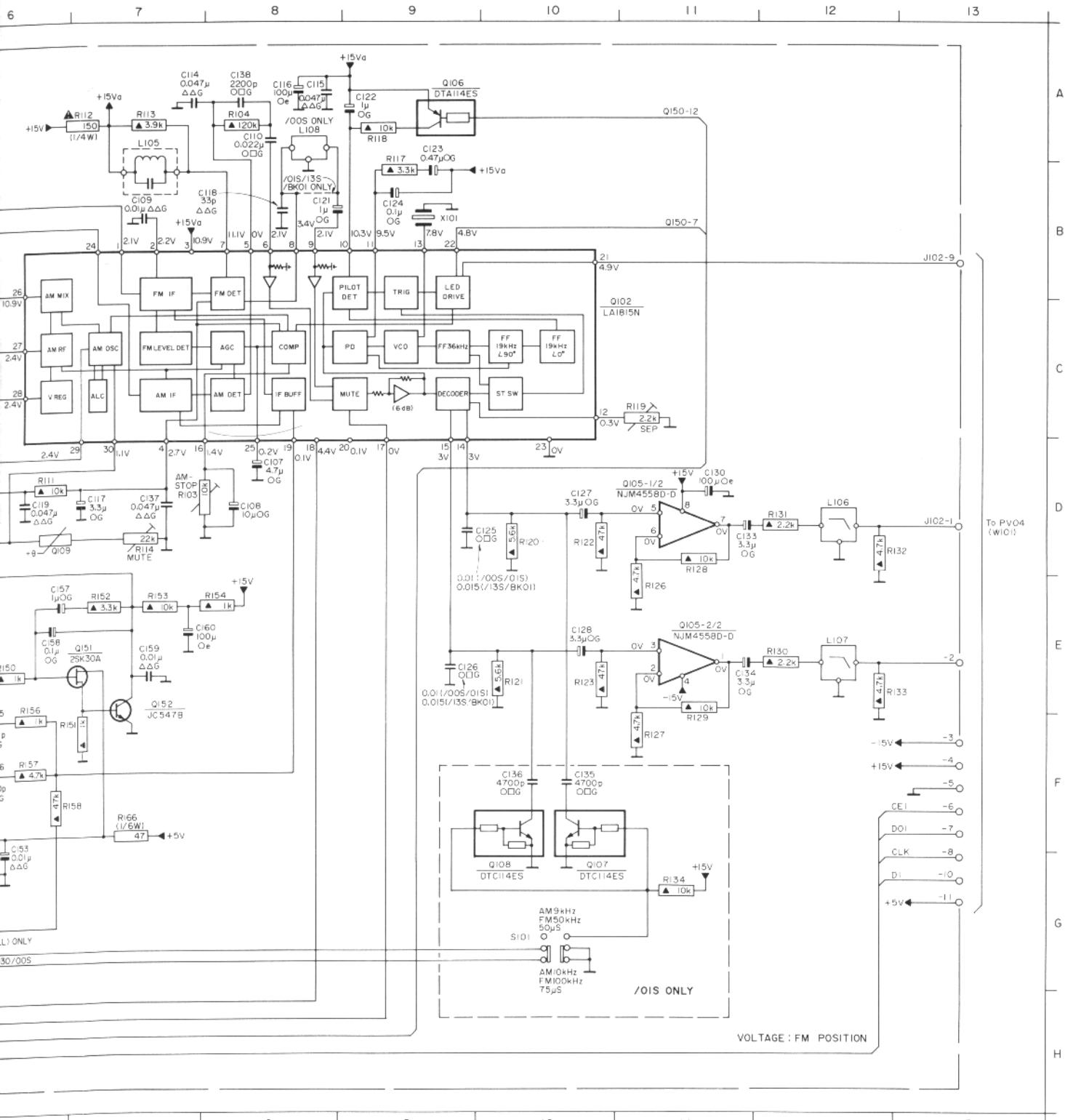


FR930/FR940

A101 A2
C101 D4
C102 D4
C103 D5
C104 C5
C105 D5
C106 C6
C107 D8
C108 D8
C109 B7

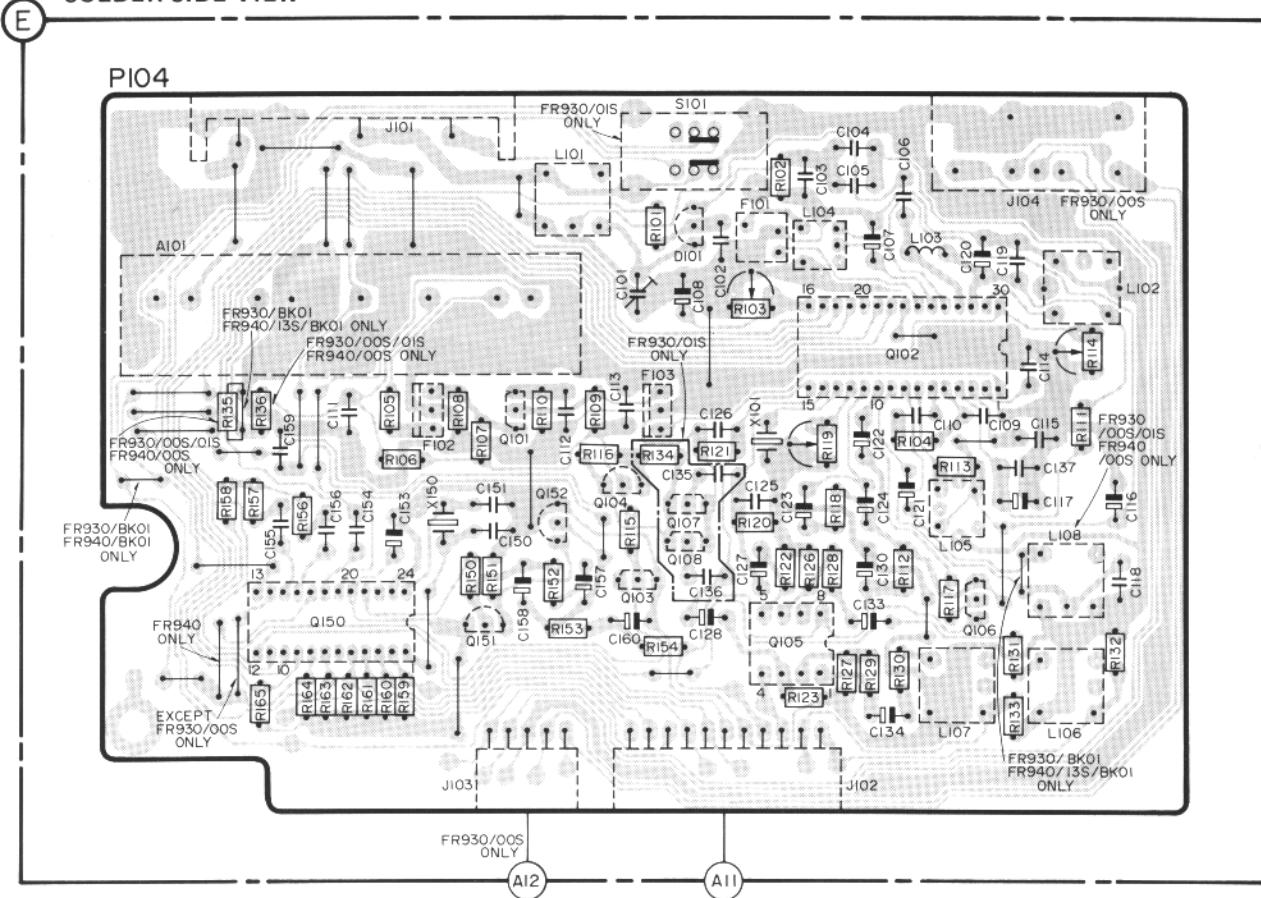


A101 A2	C110 A8	C120 D6	C133 D11	C154 F3	F101 B6	L105 B7	Q105 E11	R101 C4	R111 D6	R121 E10	R133 E12	R157 F6	X101 B9
C101 D4	C111 B3	C121 B8	C134 E11	C155 F6	F102 B3	L106 B9	Q106 A9	R102 D4	R112 A7	R122 D10	R134 G11	R158 F6	X150 E3
C102 D4	C112 B4	C122 A9	C135 F10	C156 F6	F103 B5	L107 B12	Q107 A12	R103 D7	R113 A7	R123 E10	R135 B2	R159 F3	
C103 D5	C113 A4	C123 B9	C136 F10	C157 F6	F104 B6	J101 C12	Q108 F10	R104 A8	R114 A7	R124 E11	R136 A2	R160 E6	
C104 C5	C114 T	C124 B9	C137 D7	C158 F6	J102 B13	Q101 H5	Q109 D6	R105 B3	R115 G2	R125 E11	R137 E6	R161 G3	
C105 C6	C115 A8	C125 B9	C138 A8	C159 F6	J102 B13	Q102 C11	Q150 A11	R106 A3	R116 G2	R126 D11	R138 E11	R162 G3	
C106 C6	C116 A8	C126 E9	C150 E3	C160 E7	L101 D3	Q102 H4	Q150 B11	R107 B4	R117 B9	R129 E11	R152 E7	R163 G4	
C107 D8	C117 D7	C127 D10	C151 E3	D101 D4	L102 D5	Q103 H2	Q150 E5	R108 B4	R118 A9	R130 E12	R153 E7	R164 G4	
C108 D8	C118 B8	C128 E10	C153 F6	D102 D3	L103 C6	Q104 G2	Q151 E7	R109 B4	R119 C11	R131 D12	R154 E8	R165 G4	
C109 B7	C119 D6	C130 D11	C153 G6	D103 D3	L104 B5	Q105 D11	Q152 E7	R110 B4	R120 D10	R132 D12	R156 F6	R166 F7	



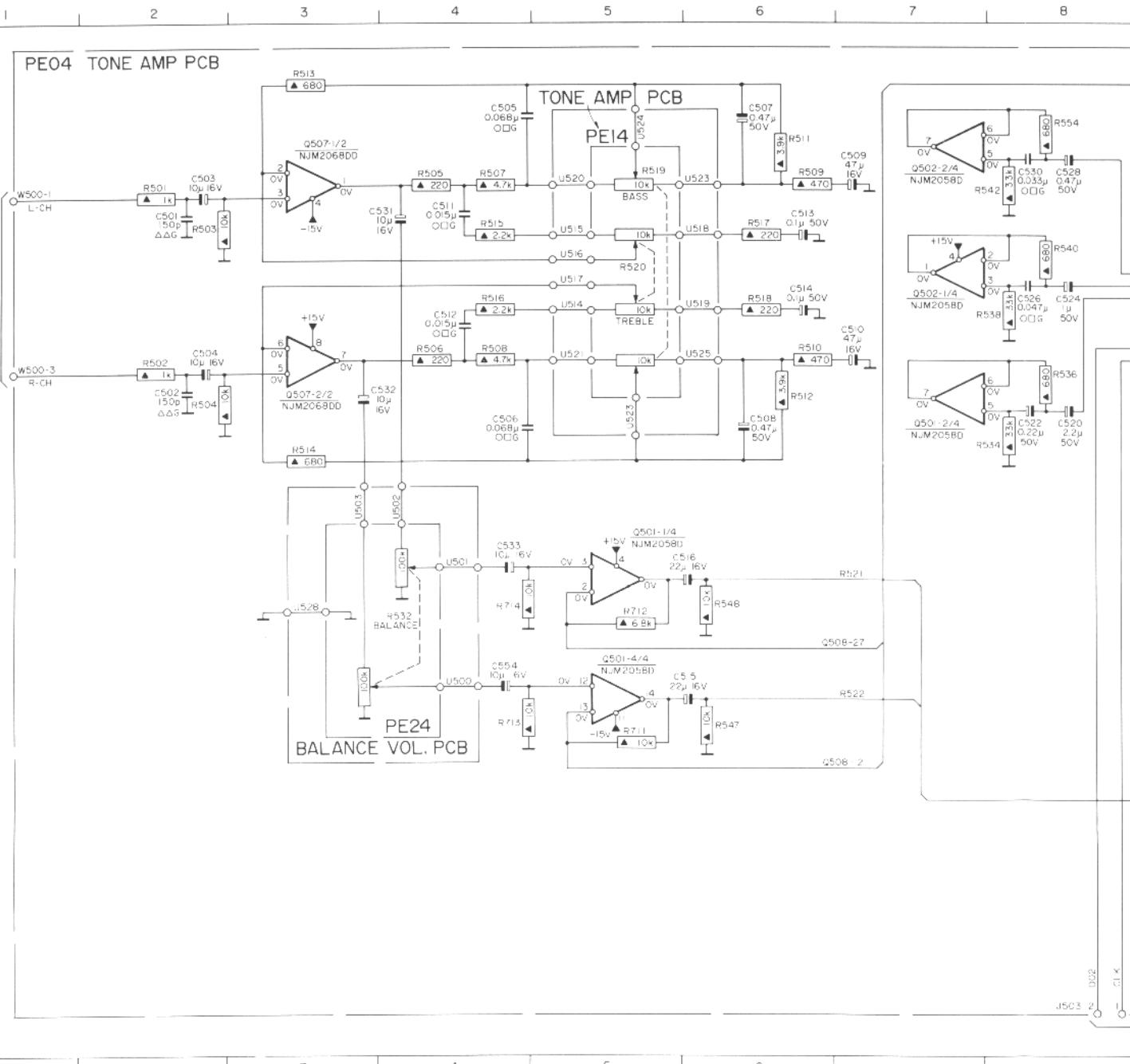
R	R135 R136 R156~R158 R159~R165	R105~R108 R150~R153 R116 R115 R154	R110 R109 R101 R134 R120~R122 R126~R130 R112 R117 R131 R133	R103 R102 R119 R118 R112 R117 R131 R133	R104 R113 R112 R117 R131 R133	R111 R114 R132	R
C	C159 C111	C151	C112 C113 C101 C108 C102	C103~C107 C130 C120 C119 C137			C
Q	R153~C156	C150 C158 C157 C160 C135 C136 C125~C128 C121~C124 C133 C134 C110 C109 C114~C118	Q150 Q101 Q152 Q104 Q103 Q107 Q108	Q105	Q102	Q106	Q
D - S			S101 D101				D - S
F - L - X		F102 X150	L101 F103	F101 X101 L104	L103 L105 L107	L108 L106 L102	F - L - X

SOLDER SIDE VIEW

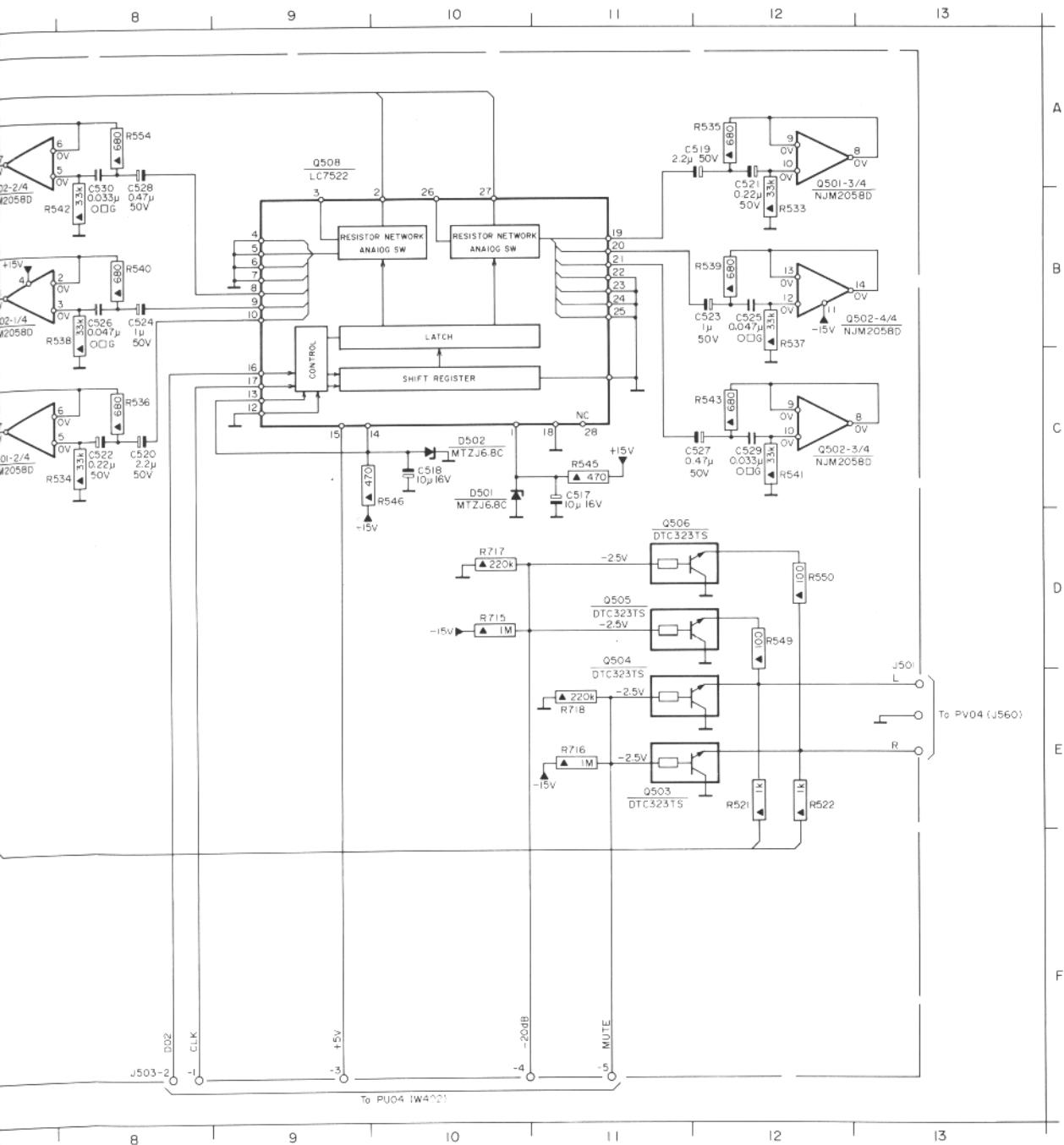


FR930/01S,BK01
FR940/00S/13S,BK01

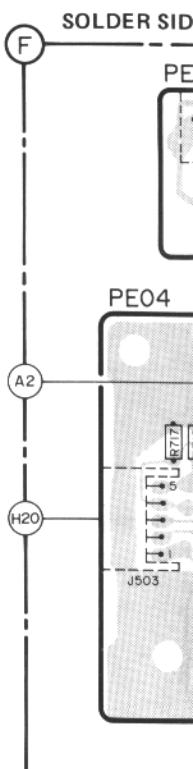
C501	B2
C502	C2
C503	B2
C504	C2
C505	A4
C506	C4
C507	A6
C508	C6
C509	A7
C510	C7
C511	C5
C512	C5
C513	C5
C514	C5
C515	C5
C516	C5
C517	C5
C518	C5
C519	C5
C520	C5
C521	C5
C522	C5
C523	C5
C524	C5
C525	C5
C526	C5
C527	C5
C528	C5
C529	C5
C530	C5
C531	C5
C532	C5
C533	C5
C534	C5
C535	C5
C536	C5
C537	C5
C538	C5
C539	C5
C540	C5
C541	C5
C542	C5
C543	C5
C544	C5
C545	C5
C546	C5
C547	C5
C548	C5
C549	C5
C550	C5
C551	C5
C552	C5
C553	C5
C554	C5



C501 B2	C511 B4	C521 A12	C531 B4	Q501 D5	Q507 A3	R509 A6	R519 B5	R538 B8	R549 D12	R718 E11
C502 C2	C512 B4	C522 C8	C532 C3	Q501 E5	Q507 C3	R510 C6	R520 B2	R539 B12	R550 D12	
C503 B2	C513 B6	C523 B12	C533 D4	Q502 A7	Q507 B2	R511 A6	R521 F12	R540 C12	R554 A8	
C504 C2	C514 B6	C524 B8	C534 E4	Q502 B7	Q502 C2	R512 C6	R522 E2	R541 C12	R712 E5	
C505 A4	C515 E6	C525 B12	D501 C10	Q502 B12	R513 A3	R513 D4	R542 C4	R712 D5		
C506 C4	C516 D6	C526 B8	D502 C10	Q502 C12	R504 D2	R514 D3	R533 A12	R543 C12	R713 D4	
C507 A6	C517 C11	C527 C12	J501 E3	Q504 E11	R505 B4	R515 B4	R534 C6	R545 C11	R714 D4	
C508 C6	C518 C10	C528 A8	J503 G8	Q504 E11	R506 D11	R507 B4	R516 B4	R535 A12	R546 C9	R715 D10
C509 A7	C519 A12	C529 C12	Q501 A12	Q505 D11	R508 C4	R517 B6	R536 C8	R547 E6	R716 E11	
C510 C7	C520 C8	C530 A8	Q501 C7	Q506 D11	R508 C4	R518 B6	R537 B12	R548 D6	R717 D10	

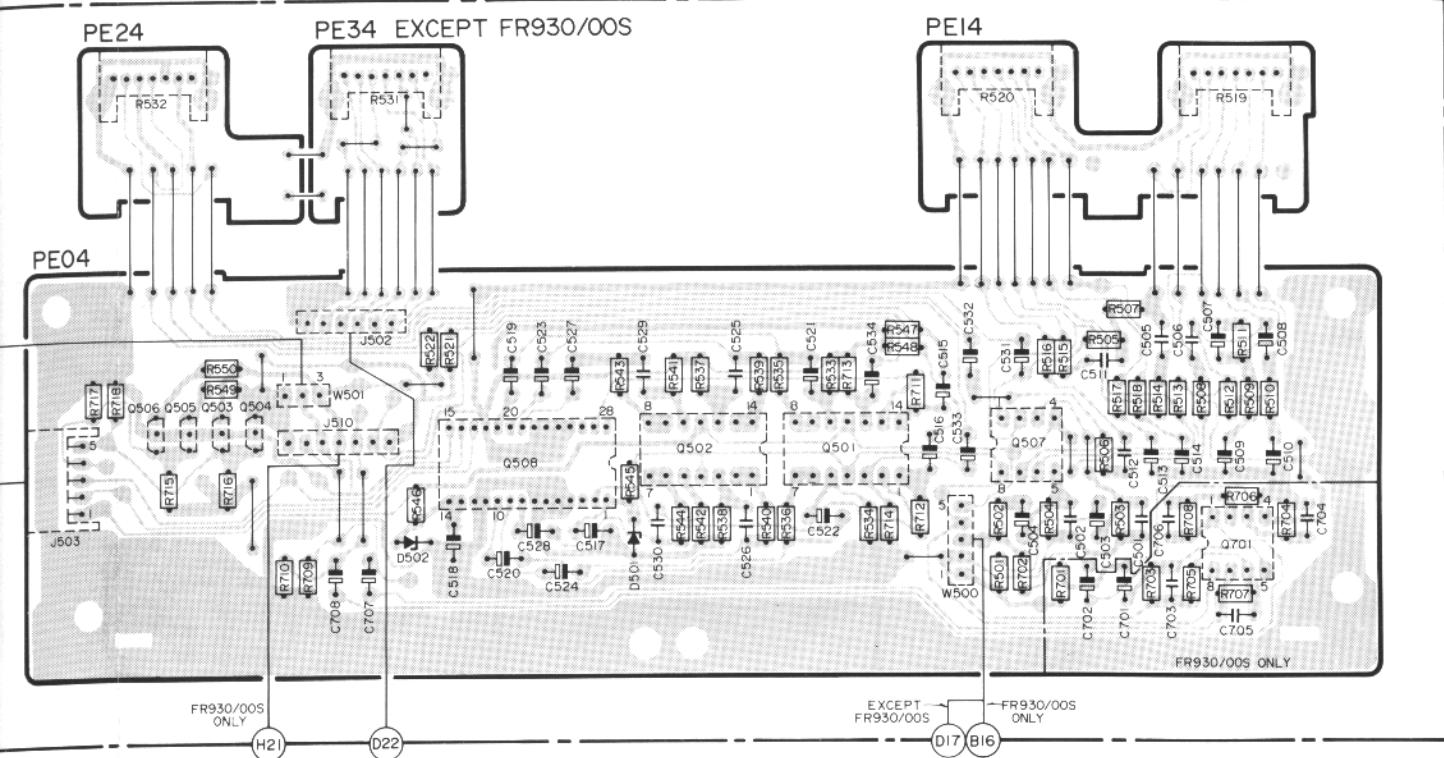


R	R717 R
C	
D - Q	

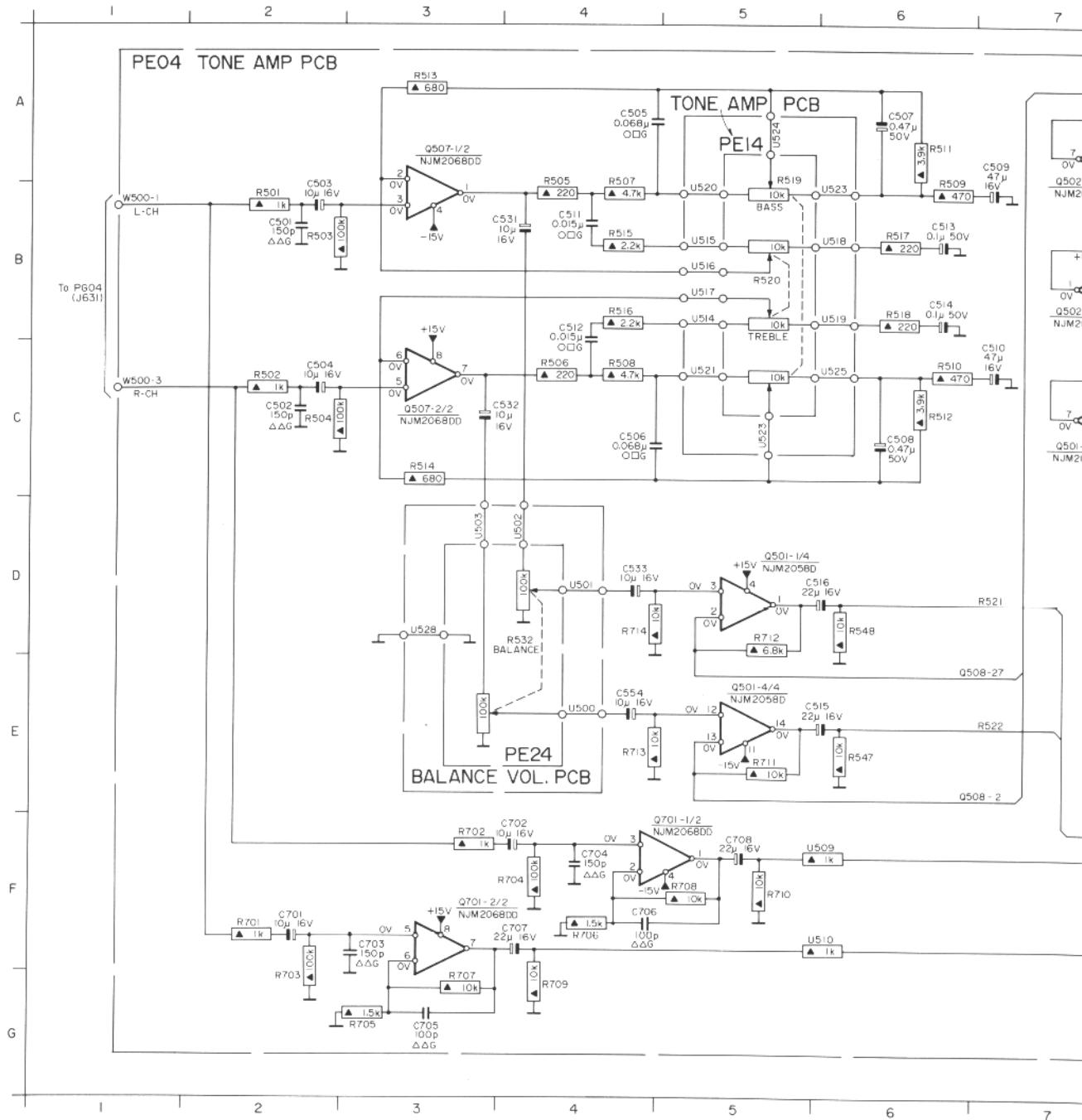


R717 R718 R532	R550	R531	R522 R521	R543	R541 R537 R539 R535 R533 R713 R547 R711	R520 R516 R515	R517~R519 R505~R514		R
R715	R716	R710 R709	R546	R545 R544 R542 R538 R540 R536 R534 R714 R548 R712	R501~R504 R701~R703	R704~R708			C
Q	Q506 Q505 Q503 Q504			C517~C520 C523 C524 C527~C530 C525 C526 C521 C522 C534 C516 C515 C531 C531~C533 C501~C514	C501~C514	C701~C706			
		D502	Q508	D501 Q502	Q501	Q507	Q701		D - Q

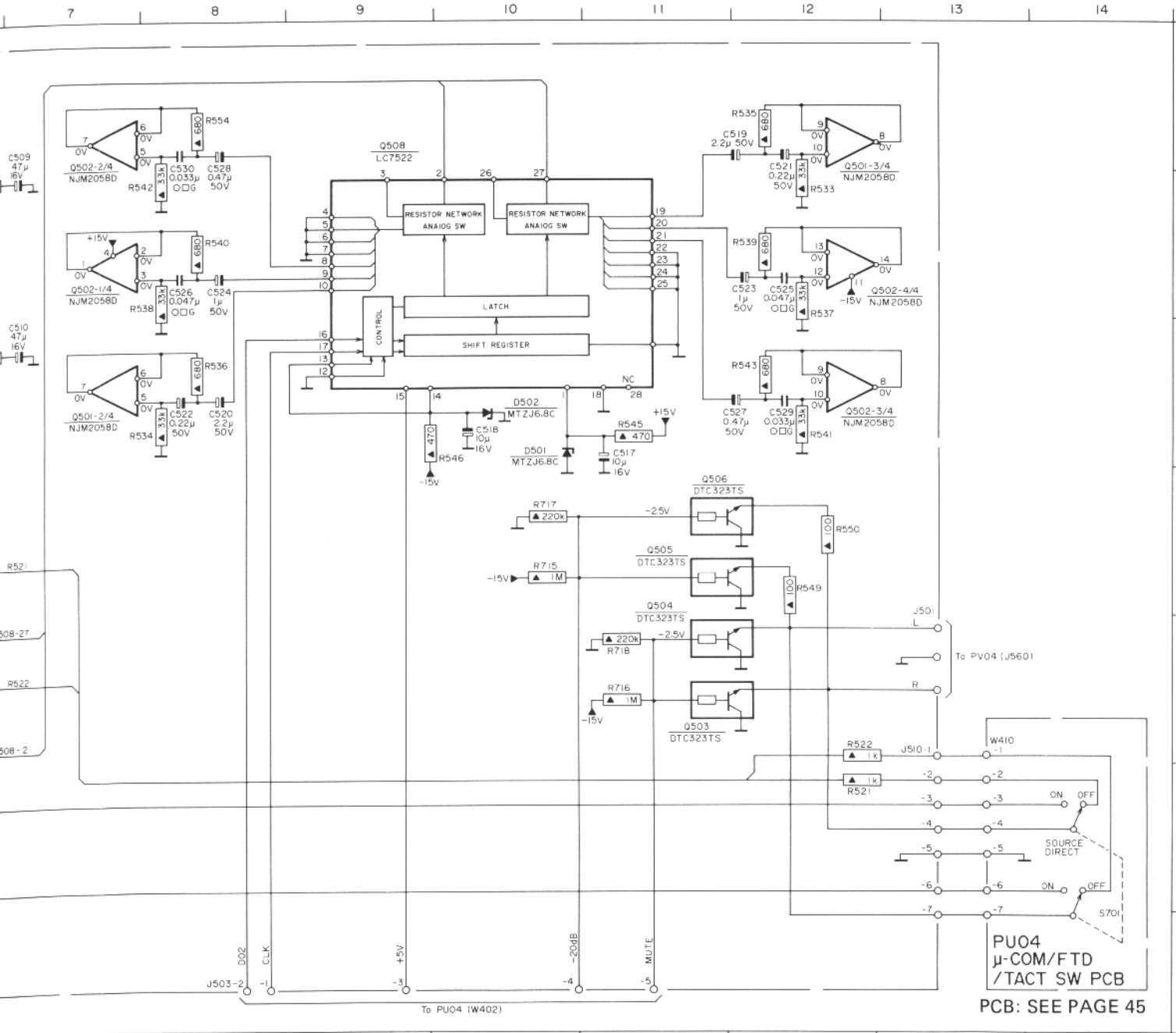
SOLDER SIDE VIEW



FR930/00S

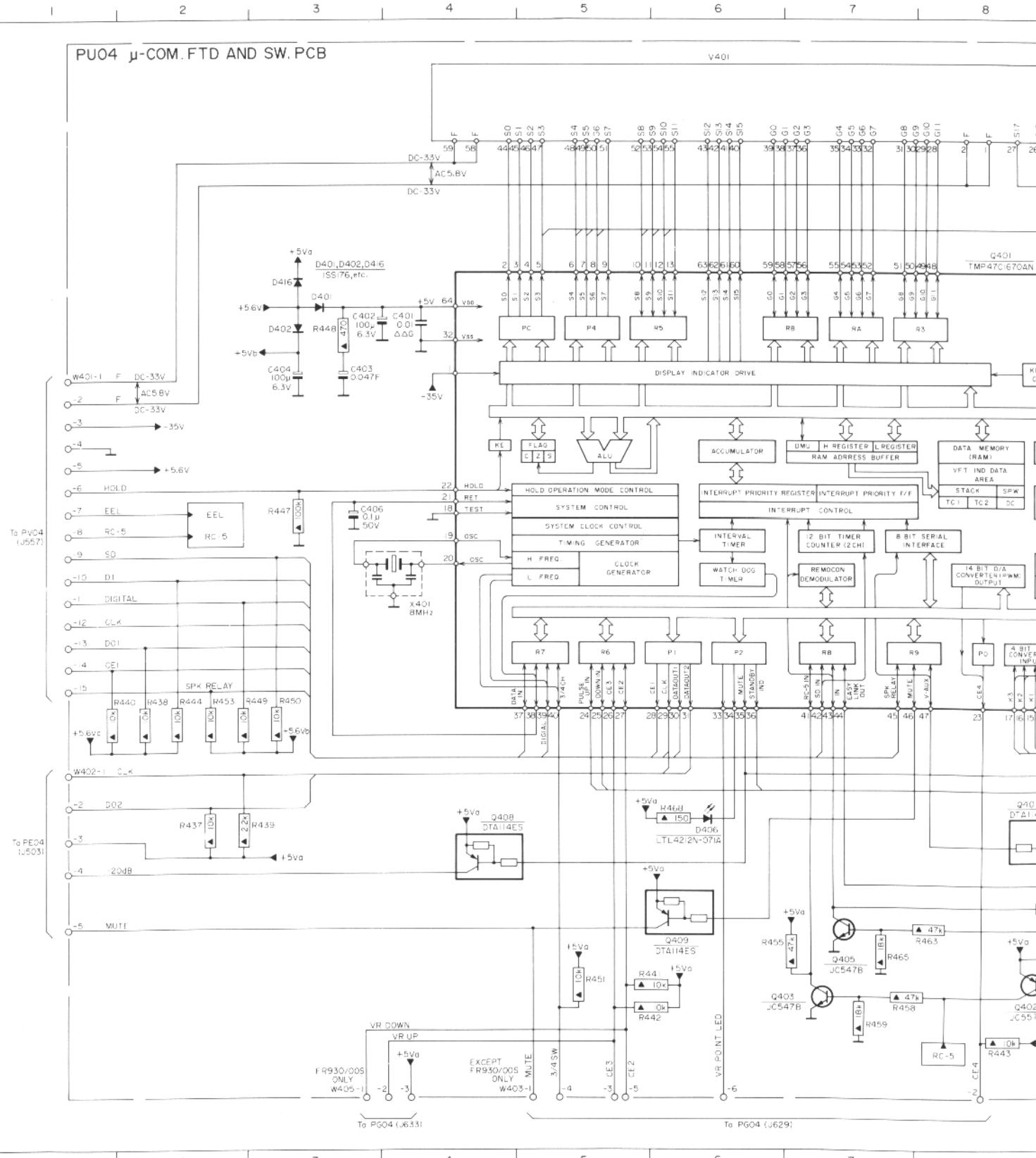


C501	B2	C511	B4	C521	A12	C531	B4	C707	F4	Q501	E5	Q507	C3	R507	B4	R517	B6	R536	C8	R547	E6	R706	F4	R716	E11
C502	C2	C512	B4	C522	C8	C532	C3	C708	F5	Q502	A7	Q508	C4	R508	B6	R518	B6	R537	B12	R548	D6	R707	G3	R717	D10
C503	B2	C513	B6	C523	B12	C533	D4	D501	C10	Q502	B7	Q502	B12	R509	B6	R519	B5	R538	B5	R549	D6	R708	F5	R718	E11
C504	C2	C514	B6	C524	B8	C554	E6	D502	E10	Q502	B12	Q501	G8	R510	B6	R520	B6	R539	B12	R550	D12	R709	F4	S701	E14
C505	A4	C515	E6	C525	B12	C526	B6	C701	F2	J501	E13	Q503	E12	R501	B2	R511	A6	R521	F12	R540	B8	R710	F5	U509	F5
C506	C4	C516	C6	C526	B6	C702	F4	J503	G8	Q503	E11	R502	C2	R512	C6	R522	E12	R541	C12	R701	F2	R711	E5	U510	F5
C507	A6	C517	C11	C527	C12	C703	F3	J510	E13	Q504	E11	R503	B2	R513	A3	R532	D4	R542	B8	R702	F3	R712	D5		
C508	E6	C518	C10	C528	A8	C704	F4	Q501	A12	Q505	D11	R504	C2	R514	C3	R533	A12	R543	C12	R703	G2	R713	E4		
C509	A7	C519	A12	C529	C12	C705	G3	Q501	C7	Q506	D11	R505	B4	R515	B4	R534	C8	R545	C11	R704	F4	R714	D4		
C510	C7	C520	A8	C530	A8	C706	F4	Q501	D5	Q507	A3	R506	C4	R516	B4	R535	A12	R546	C9	R705	G3	R715	D10		

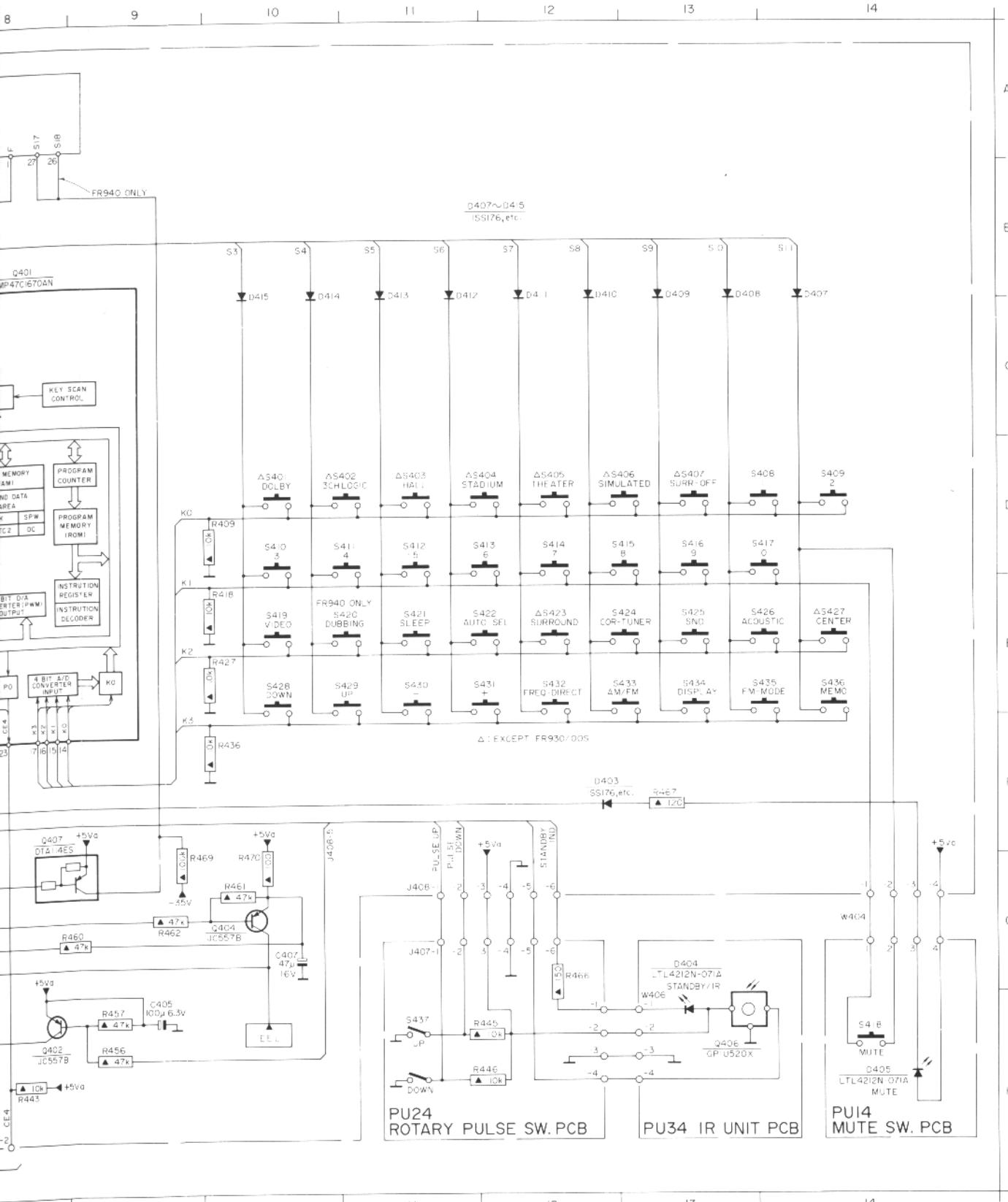


PCB: SEE PAGE 45

FR930/FR940

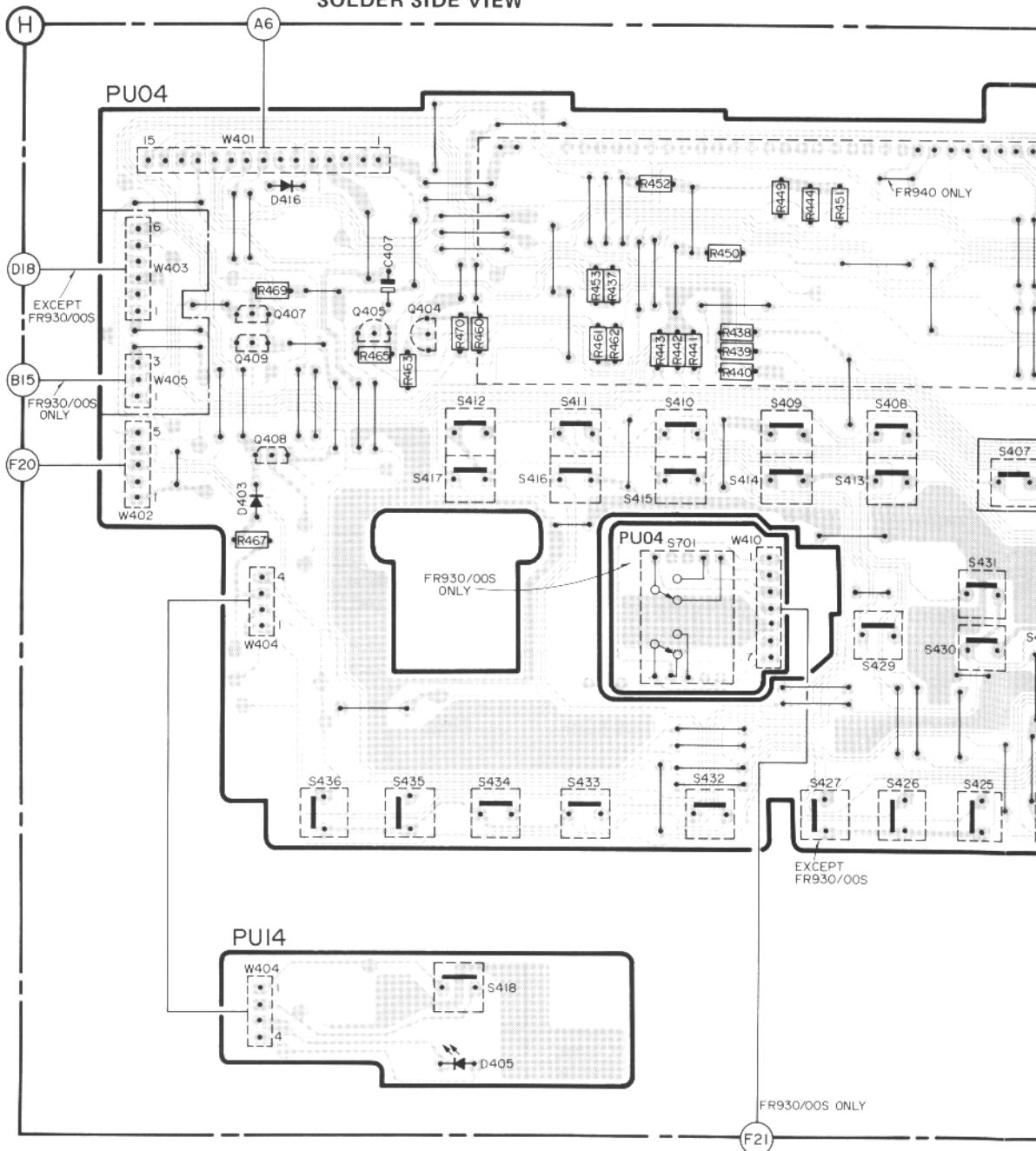


C401 C4	D404 G13	D414 B10	Q401 BB	R418 E10	R444 F2	R456 H9	R467 F13	S407 D13	S417 D14	S427 E14	S437 H11
C402 C3	D405 H14	D415 B10	Q403 H7	R427 E10	R445 H12	R457 H9	R468 F6	S408 D14	S418 D14	S428 E10	V401 A6
C403 C3	D406 G6	D416 B3	Q404 G10	R436 F10	R446 H12	R458 H7	R469 G9	S409 D14	S419 E10	S429 E11	X401 E4
C404 C3	D407 B14	J407 G11	Q405 H7	R437 G2	R447 D3	R459 H7	R470 G10	S410 D10	S420 E11	S430 E11	
C405 H9	D408 B13	J408 F10	Q406 H13	R438 F2	R448 C3	R460 G9	S401 D10	S411 D11	S421 E11	S431 E12	
C406 D3	D409 B13	J408 G11	Q407 GB	R439 G2	R449 F2	R461 G10	S402 D11	S412 D11	S422 E12	S432 E12	
C407 G10	D410 B12	J503 G1	Q408 G4	R440 F1	R450 F3	R462 G9	S403 D11	S413 D12	S423 E13	S433 E13	
C401 C3	D411 B12	J557 D1	Q408 HB	R441 H5	R451 H5	R463 G8	S404 D12	S414 D12	S424 E13	S434 E13	
C402 C3	D412 B11	J629 H6	Q409 G6	R442 H5	R453 F2	R465 H7	S405 D12	S415 D13	S425 E13	S435 E14	
C403 F12	D413 B11	J633 H4	R409 D10	R443 H8	R455 H7	R466 G12	S406 D13	S416 D13	S426 E14	S436 E14	

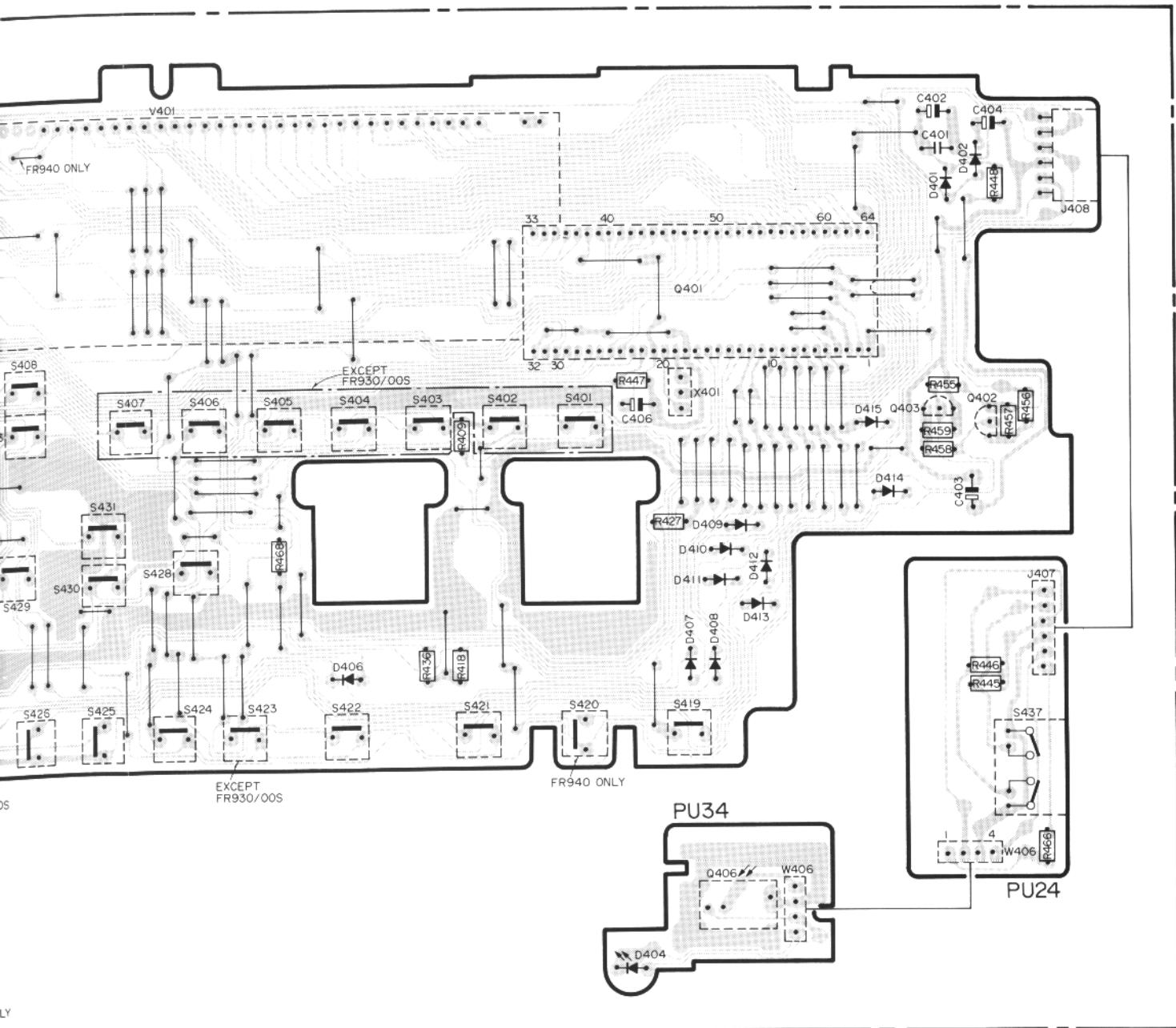


R	R467 R469	R465 R463 R470 R460	R453 R437 R461 R462 R452 R438~R444 R449~R451
C		C407	
Q - D	D403 Q407~Q409	D416 Q405 Q404	D405
S - X	S432~S436	S413~S417	S408~S412
			S423~S431

SOLDER SIDE VIEW

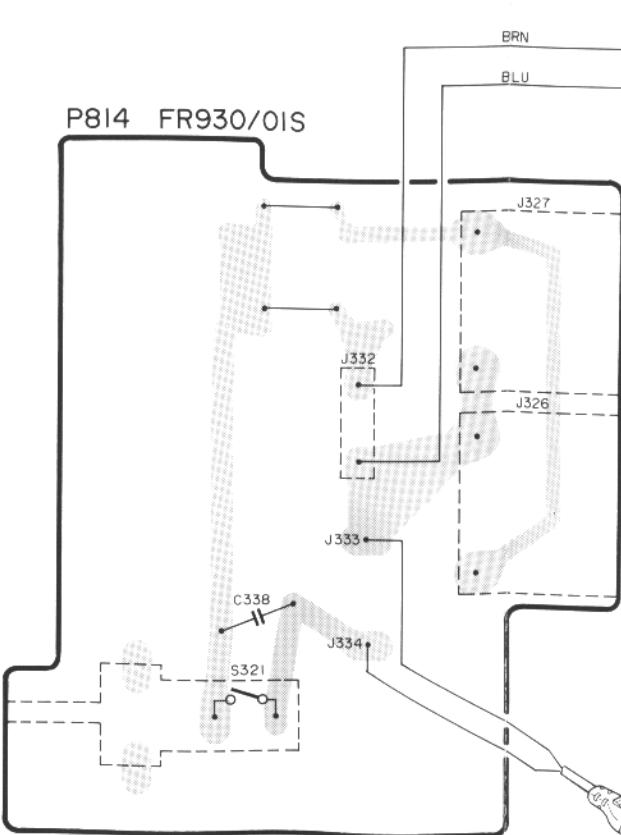
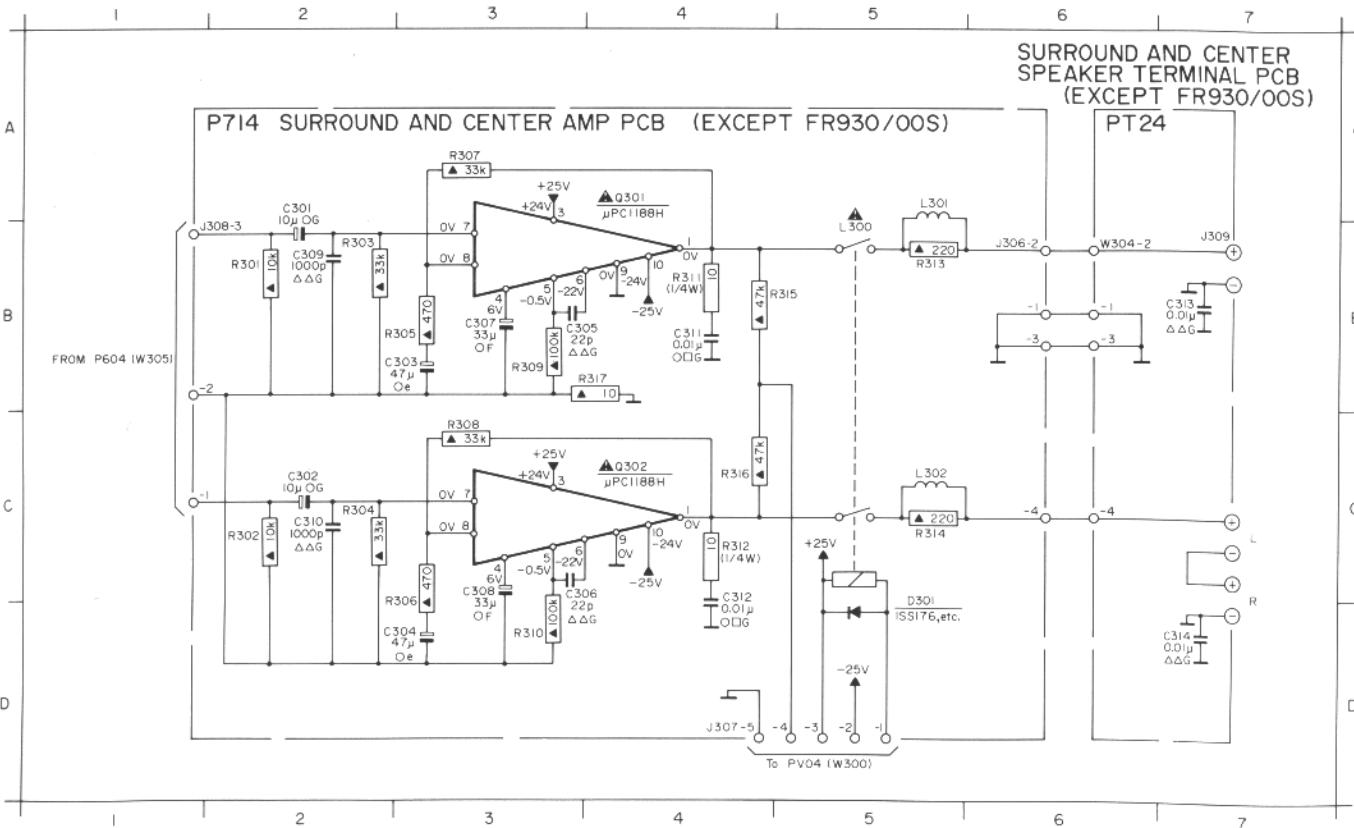


	R468	R436 R418 R409	R447 R427	R455~R459 R445 R446 R448 R466	R
		C406		C401 ~ C404	C
	D406	D404 Q401 Q406 D407~D413	D415 D414 Q403 D401 D402 Q402		Q - D
S423~S431	S401~S407	S419~S422	X401	S437	S - X

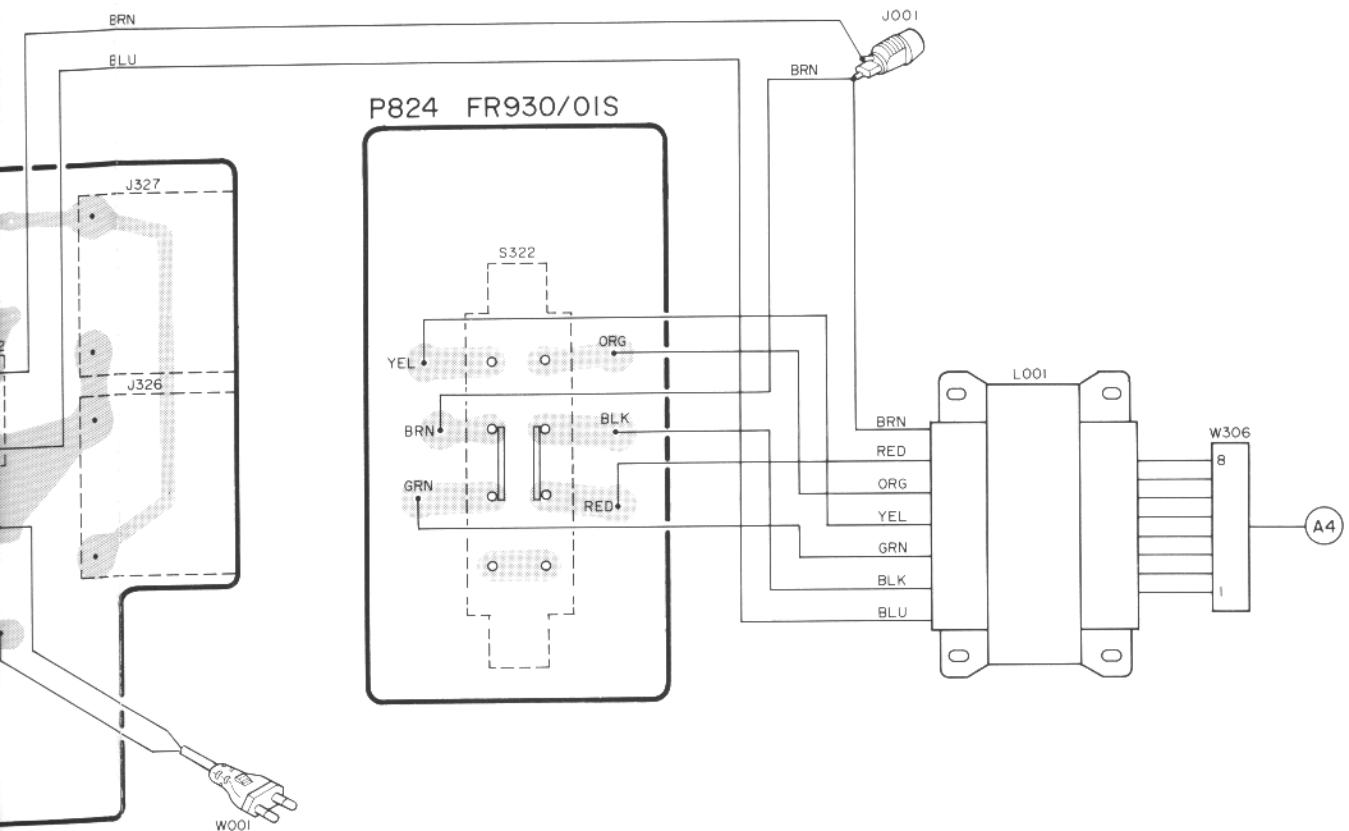
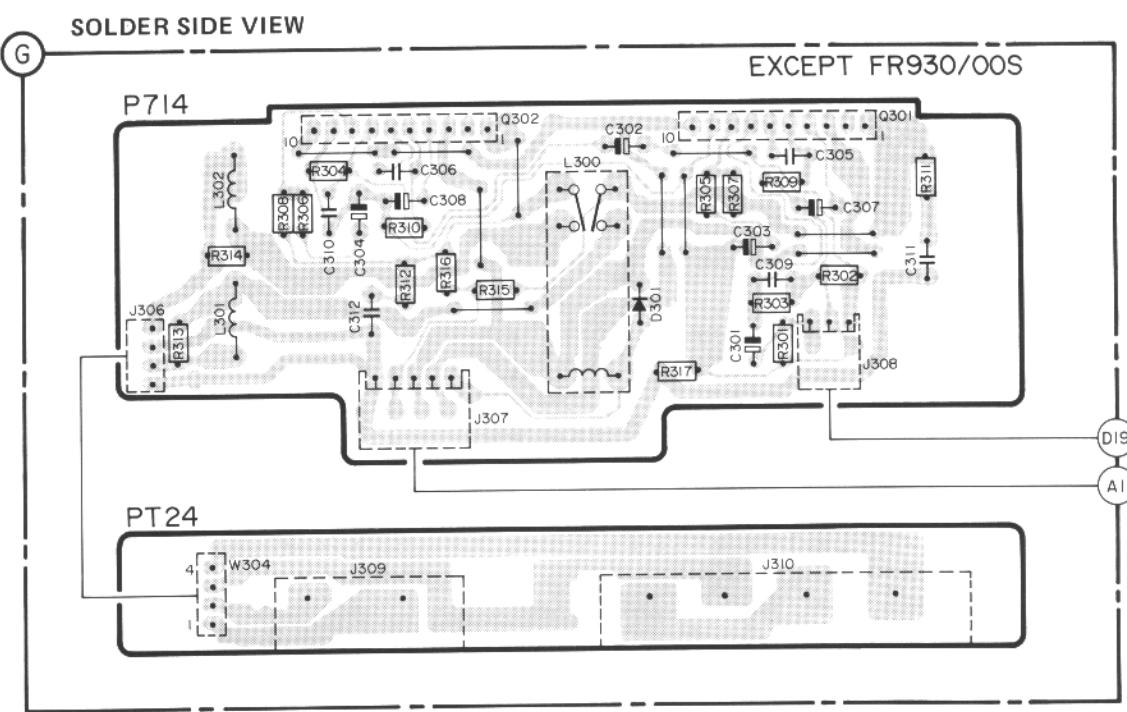


FR930/01S,BK01
FR940/00S/13S,BK01

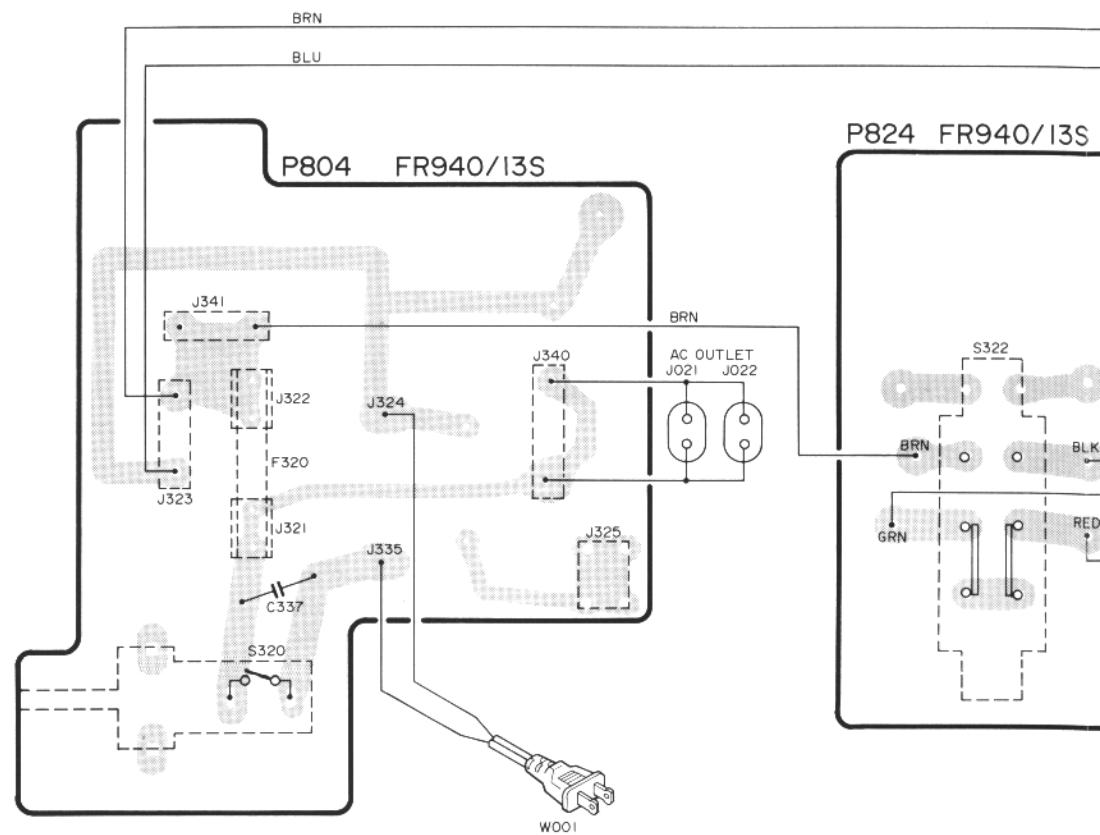
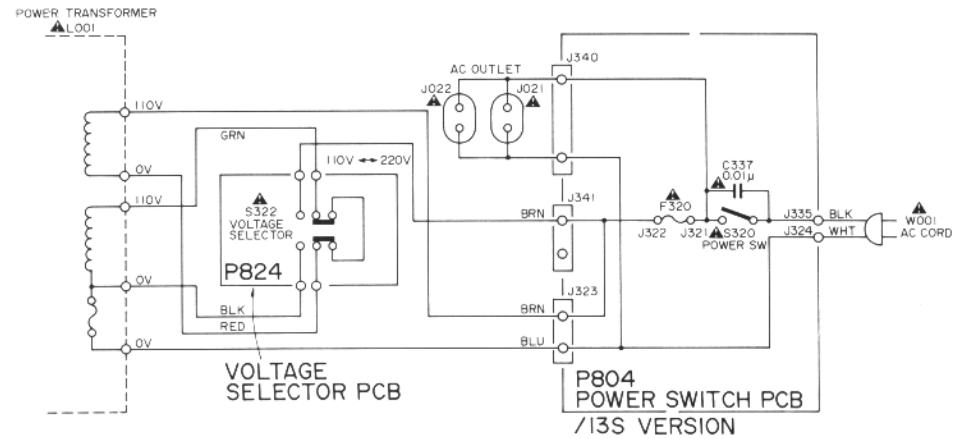
C301 B2	C311 B4	L301 A5	R307 A3	R317 B4
C302 B3	C312 D4	L302 C5	R308 C3	
C303 B3	C313 B7	Q301 A4	R309 B3	
C304 D3	C314 D7	Q302 C4	R310 D3	
C305 D3	D301 D5	R301 B2	R311 B4	
C306 C3	J306 B6	R302 B2	R312 C4	
C307 B3	J307 A4	R303 B2	R313 B5	
C308 C3	J308 B1	R304 B2	R314 C5	
C309 B2	J309 B7	R305 B3	R315 B4	
C310 C2	L300 B5	R306 C3	R316 C4	



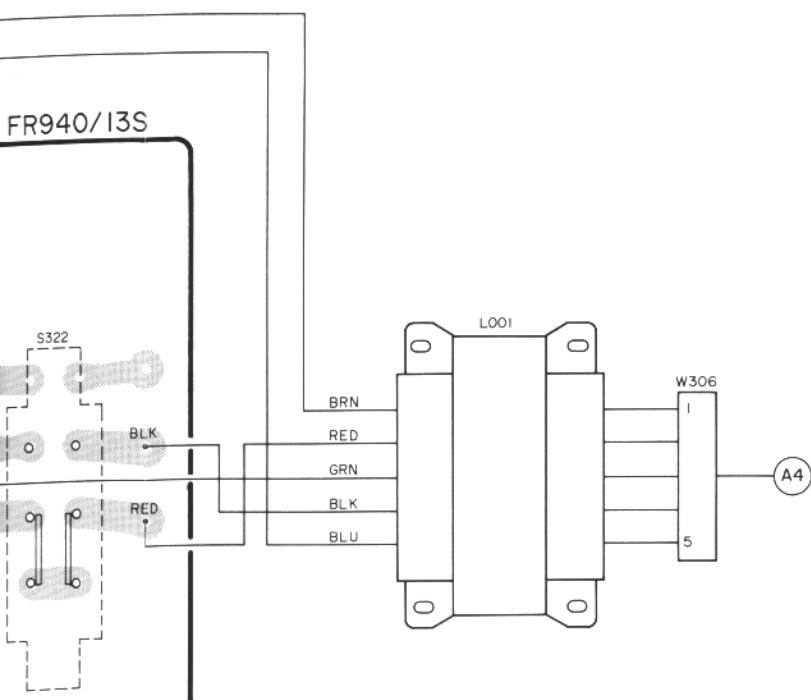
R	R313 R314 R308 R306 R304 R310 R312 R316 R315	R317 R305 R307 R309 R301~R303 R311	R
C	C310 C312 C304 C306 C308	C302 C301 C303 C309 C305 C307 C311	C
Q - D	Q302	D301	Q - D
L	L302 L301	L300	L



FR940/13S



L
001
CORD



ELECTRICAL PARTS LIST (FR930)

(FR930)

Q101 Q103 Q104 Q106 Q107, Q108	4822 130 62294 4822 130 60588 4822 130 62386 4822 130 61227 4822 130 60588	2SC1809S (P) DTC114ES JC557B DTA114ES DTC114ES [/01S]	Q102 Q105 Q150 ▲ Q251, Q252 Q262	4822 209 31001 4822 209 83631 4822 209 73435 4822 209 70382 4822 209 83312	LA1851N NJM4558DD LC7218 μPC1298V TA7317P
Q151 Q152 Q253, Q254 ▲ Q255, Q256 ▲ Q257, Q258	4822 130 42121 4822 130 62295 4822 130 60117 4822 130 63096 4822 130 63095	2SK30A (Y) JC547B 2SC3419 (Y) 2SD2052 (S) 2SB1361 (S)	▲ Q301, Q302 ▲ Q320 ▲ Q321 ▲ Q322 ▲ Q323	4822 209 73727 4822 209 70385 4822 209 61848 4822 209 83828 4822 209 31631	μPC1188H [/01S, BK01] L78MR05 NJM7815FA NJM7915FA NJM7805FA [/01S, BK01]
Q259, Q260 Q261 Q402, Q404 Q403, Q405 Q407-Q409	4822 130 43233 4822 130 42951 4822 130 62386 4822 130 62295 4822 130 61227	2SC2240 (GR, BL) 2SA970 (GR, BL) JC557B JC547B DTA114ES	Q351 Q352-Q355 Q356 Q401 Q501, Q502	4822 209 73064 4822 209 83631 4822 209 72748 4822 209 31556 4822 209 70044	NJM2068DD [/01S, BK01] NJM4558DD [/01S, BK01] LC7821 [/01S, BK01] TMP47C1670AN H054 NJM2058D
Q503-Q506 Q571, Q572 Q592 Q628, Q629 Q753, Q754	4822 130 61723 4822 130 62295 4822 130 60588 4822 130 61227 4822 130 61723	DTC323TS JC547B DTC114ES [/00S] DTA114ES [/01S, BK01] DTC323TS [/01S, BK01]	Q507 Q508 Q551 Q552 Q570	4822 209 73064 4822 209 71783 4822 209 72748 4822 209 73731 4822 209 73731	NJM2068DD LC7522 LC7821 LC7823 [/00S] LC7823
			Q590 Q591 Q601 Q625 Q626	4822 209 72323 4822 209 61688 4822 209 83631 4822 209 31572 4822 209 31573	TC74HCU04AP [/00S] TC74HC02AP [/00S] NJM4558DD NJM2175L [/01S, BK01] M50198P [/01S, BK01]
D101 D102, D103 D251, D252 D253, D254 D301	4822 125 50416 4822 130 33305 4822 130 80837 4822 130 33305 4822 130 33305	SVC342K 1SS176 (MA165, 1SS254) HSS81TD 1SS176 (MA165, 1SS254) 1SS176 (MA165, 1SS254) [/01S, BK01]	Q627 Q630 Q631 Q701 Q751	4822 209 31574 4822 209 73287 4822 209 73287 4822 209 73064 4822 209 31575	μPD6345C [/01S, BK01] LB1630 [/01S, BK01] LB1630 [/00S] NJM2068DD [/00S] TC9213P [/01S, BK01]
▲ D320 ▲ D321 ▲ D321 ▲ D322, D323 D324	4822 130 30984 4822 130 31007 4822 130 80907 4822 130 80839 4822 130 81729	S5VB20 S4VB20 [/01S, BK01] S2VB20 [/00S] S5688G MTZJ33D	Q752	4822 209 83631	NJM4558DD [/01S, BK01]
D325, D326 D327 D401-D403 D404-D406 D407-D416	4822 130 80839 4822 130 80839 4822 130 33305 4822 130 82978 4822 130 33305	S5688G S5688G [/00S] 1SS176 (MA165, 1SS254) LTL4212N-071A 1SS176 (MA165, 1SS254)	L101 L102 L103 L104 L105	4822 157 63084 4822 157 52716 4822 157 53589 4822 148 81095 4822 148 81269	Ant coil AM OSC coil AM Choke coil 39mH I.F.T. coil AM I.F.T. coil FM
D501, D502 D590, D591 D625	4822 130 80318 4822 130 33305 4822 130 33305	RD6.8JB2, MTZJ6.8C 1SS176 (MA165, 1SS254) [/00S] 1SS176 (MA165, 1SS254) [/01S, BK01]	L106, L107 L108 ▲ L251 L252, L253 ▲ L300	4822 157 70021 4822 156 10794 4822 280 70354 4822 157 70022 4822 280 70354	MPX coil FM MPX coil [/00S, /01S] Relay, speaker Air coil, speaker Relay, speaker [/01S, BK01]
D626 D627 D651	4822 130 80839 4822 130 80839 4822 130 82978	S5688G S5688G [/00S] LTL4212N-071A [/01S, BK01]	L301, L302 L590	4822 157 70022 4822 148 81268	Air coil speaker [/01S, BK01] Pulse transformer [/00S]
Q109	4822 126 90002	Posistor ZPA21BB251B1UA			



R103
▲ R106,
R114
R119
R263,

▲ R271,
R280,
▲ R282,
▲ R287,
▲ R293,

▲ R295,
R311,
R313,
▲ R319

▲ R320
▲ R323
▲ R323
▲ R323

▲ R325,
▲ R327
▲ R328

R519
R520
R531
R532
▲ R617,

R662
R667

(FR930)

 				 			
R103 ▲ R106, R112	4822 100 11351 4822 050 21501	Potm. trimmer Res.	10K 150E 1/4W	C101 C320, C323 C321, C322 C321, C322	4822 125 60185 4822 122 30043 4822 124 23346 4822 124 80369	Cap. trimming Cap. ceramic Cap. elect Cap. elect	20pF 0.01μF 500V 8200μF 56V [01S, BK01] 6800μF 63V [00S]
R114 R119 R263, R264	4822 100 11352 4822 100 20681 4822 100 11386	Potm. trimmer Potm. trimmer Potm. trimmer	22K 2.2K 1K	C324, C325 ▲ C337 ▲ C338 C402 C403 C404, C405	4822 124 80244 4822 122 33276 4822 122 33276 4822 124 21737 4822 124 23128 4822 124 21737	Cap. elect Cap. ceramic Cap. ceramic Cap. elect Cap. big elect Cap. elect	4700μF 35V 0.01μF 400V 0.01μF 400V 100μF 6.3V 0.047F 5.5V 100μF 6.3V
▲ R271, R272 R280, R281 ▲ R282, R283 ▲ R287=R290 ▲ R293, R294	4822 116 82049 4822 050 22201 4822 053 11109 4822 115 90166 4822 053 11681	Res. Res. Res. Res. fusible Res.	0.18Ex2 3W 220E 1/4W 10E 2W 10E 1/4W 680E 2W	C406 C407 C503, C504 C507, C508 C509, C510	4822 124 41604 4822 124 41246 4822 124 21894 4822 124 21898 4822 124 41246	Cap. elect Cap. elect Cap. elect Cap. elect Cap. elect	0.1μF 50V 47μF 16V 10μF 16V 0.47μF 50V 47μF 16V
▲ R295, R296 R311, R312 R313, R314	4822 050 21501 4822 052 10109 4822 050 22201	Res. Res. Res.	150E 1/2W 10E 1/4W 220E 1/4W	C513, C514 C515, C516 C517, C518 C519, C520 C521, C522	4822 124 41604 4822 124 21739 4822 124 21894 4822 124 41243 4822 124 21895	Cap. elect Cap. elect Cap. elect Cap. elect Cap. elect	0.1μF 50V 22μF 16V 10μF 16V 2.2μF 50V 0.22μF 50V
▲ R319 ▲ R320 ▲ R323	4822 115 90166 4822 050 24701 4822 053 11151	Res. fusible Res.	10E 1/4W 470E 1/2W 150E 2W	C523, C524 C527, C528 C531+C534 C701, C702 C707, C708	4822 124 21736 4822 124 21898 4822 124 21894 4822 124 21894 4822 124 21739	Cap. elect Cap. elect Cap. elect Cap. elect Cap. elect	1μF 50V 0.47μF 50V 10μF 16V 10μF 16V 22μF 16V
▲ R323	4822 053 11479	Res.	47E 2W	S101 S300 ▲ S320 ▲ S321 ▲ S322	4822 277 20968 4822 276 13289 4822 276 13285 4822 276 13285 4822 272 10322	Sean/ De-emphasis Speaker Power Power Voltage selector	[01S] [BK01] [00S, 01S] [01S]
R519 R520 R531	4822 101 30797 4822 101 30797 4822 101 30798	Potm. bass Potm. treble Potm. input bal.	10K (C) 10K (C) 100K (W)	S401-S417 S408-S417 S418, S419 S421, S422	4822 276 13288 4822 276 13288 4822 276 13213 4822 276 13213	Functions Functions Functions Functions	[01S, BK01] [00S] [00S] [00S]
R532 ▲ R617, R618	4822 101 30798 4822 050 21021	Potm. balance Res.	100K (W) 100E 1/4W	S423-S431 S424-S426 S428-S431 S432-S436 S437	4822 276 13288 4822 276 13288 4822 276 13288 4822 276 13213 4822 273 10249	Functions Functions Functions Functions Pulse switch	[01S, BK01] [00S] [00S] [00S] [00S]
R662	4822 101 30799	Potm. master vol	100K	S701	4822 273 10251	Source direct	[00S]
R662	4822 101 30801	Potm. master vol	100K				
R667	4822 050 21021	Res.	100E 1/4W				

(FR930)

ELECTRICAL PARTS LIST (FR940)

MISCELLANEOUS							
A101	4822 210 10397	V.H.F. tuner	[BK01]	Q101	4822 130 62294	2SC1809S (P)	
A101	4822 210 10372	V.H.F. tuner	[/00S, /01S]	Q103	4822 130 60588	DTC114ES	
F101	4822 242 81262	Ceramic filter	SFP450F	Q104	4822 130 62386	JC557B	
F102	4822 242 70911	Ceramic filter	10.7MHz [BK01]	Q106	4822 130 61227	DTA114ES	
F102	4822 242 71135	Ceramic filter	10.7MHz [/00S, /01S]	Q151	4822 130 42121	2SK30A (Y)	
F103	4822 242 71135	Ceramic filter	10.7MHz	Q152	4822 130 62295	JC547B	
▲ F320	4822 253 30224	Fuse	4.0A 125V [BK01]	Q253, Q254	4822 130 60117	2SC3419 (Y)	
▲ F321	4822 253 30416	Fuse	T2.5A 250V [/00S]	▲ Q255, Q256	4822 130 63121	2SC3281 (O)	
▲ F322	4822 253 30416	Fuse	T2.5A 250V [/00S]	▲ Q257, Q258	4822 130 63119	2SA1302 (O)	
▲ F323	4822 253 30409	Fuse	T4.0A 250V [/01S]	Q259, Q260	4822 130 43233	2SC2240 (GR, BL)	
▲ F323	4822 253 30224	Fuse	4.0A 125V [BK01]	Q261	4822 130 42951	2SA970 (GR, BL)	
▲ F324	4822 253 30409	Fuse	T4.0A 250V [/01S]	Q290	4822 130 61227	DTA114ES	
▲ F324	4822 253 30224	Fuse	4.0A 125V [BK01]	Q291-Q293	4822 130 62295	JC547B	
J101	4822 264 30255	Terminal, antenna	[/00S]	Q402, Q404	4822 130 62386	JC557B	
J101	4822 290 81537	Terminal, antenna	[/01S, BK01]	Q403, Q405	4822 130 62295	JC547B	
J104	4822 157 63605	Terminal, processor	IN/OUT [/00S]	Q407-Q409	4822 130 61227	DTA114ES	
J105	4822 264 10111	Short plug	[/00S]	Q503-Q506	4822 130 61723	DTC323TS	
J300	4822 266 30323	Terminal, speaker		Q571, Q572	4822 130 62295	JC547B	
J309	4822 290 81525	Terminal, speaker 2P	[/01S, BK01]	Q592	4822 130 60588	DTC114ES	
J310	4822 290 81526	Terminal, speaker 4P	[/01S, BK01]	Q628, Q629	4822 130 61227	DTA114ES	
▲ J320	4822 267 31286	Jack, AC outlet	[BK01]	Q753, Q754	4822 130 61723	DTC323TS	
▲ J326, J327	4822 267 31194	Jack, AC outlet	[/00S, /01S]				
J551, J552	4822 290 81524	Terminal, RCA pin 8P					
J553	4822 265 20542	Terminal, RCA pin 2P		D101	4822 125 50416	SVC342K	
J554	4822 290 81519	Terminal, RCA pin 1P		D102, D103	4822 130 33305	1SS176 (MA165, 1SS254)	
J570	4822 265 41264	Terminal, RCA pin 3P		D251, D252	4822 130 80837	HSS81TD	
J571	4822 265 41263	Terminal, RCA pin 2P		D253, D254	4822 130 33305	1SS176 (MA165, 1SS254)	
J585	4822 265 20555	Jack, headphone		D291	4822 130 33305	1SS176 (MA165, 1SS254)	
J592	4822 265 41265	Terminal, RCA pin 3P	[/00S]	D294, D301	4822 130 33305	1SS176 (MA165, 1SS254)	
				D295	4822 130 42848	PTH9MO4BB222TS2F333	
Q406	4822 130 83197	IR receiver	GP1U58XP	D296	4822 130 43564	Posistor	
V401	4822 130 91145	Display unit		▲ D320	4822 130 33132	PTH9MO4BE222TS2F333	
X101	4822 242 81248	Ceramic resonator		▲ D321	4822 130 31007	Posistor	
X150	4822 242 72333	Crystal	7.2MHz	▲ D322, D323	4822 130 80839	D5FBO2L20	
X401	4822 242 73696	Ceramic resonator	8.00MHz	D324	4822 130 81729	S4VB-20	
X625	4822 242 81271	Ceramic resonator	3.27MHz [/01S, BK01]	D325, D326	4822 130 80839	MTZJ33D	
				D401-D403	4822 130 33305	S5688G	
				D404-D406	4822 130 82978	1SS176 (MA165, 1SS254)	
				D407-D416	4822 130 33305	LTL4212N-71A	
				D501, D502	4822 130 80318	RD6.8JB2, MTZJ6.8C	
				D590, D591	4822 130 33305	1SS176 (MA165, 1SS254)	
				D625	4822 130 33305	1SS176 (MA165, 1SS254)	
				D626	4822 130 80839	S5688G	
				D651	4822 130 82978	LTL4212N-071A	
				Q109	4822 126 90002	[/13S, BK01]	
						Posistor	
						ZPA21BB251B1UA	

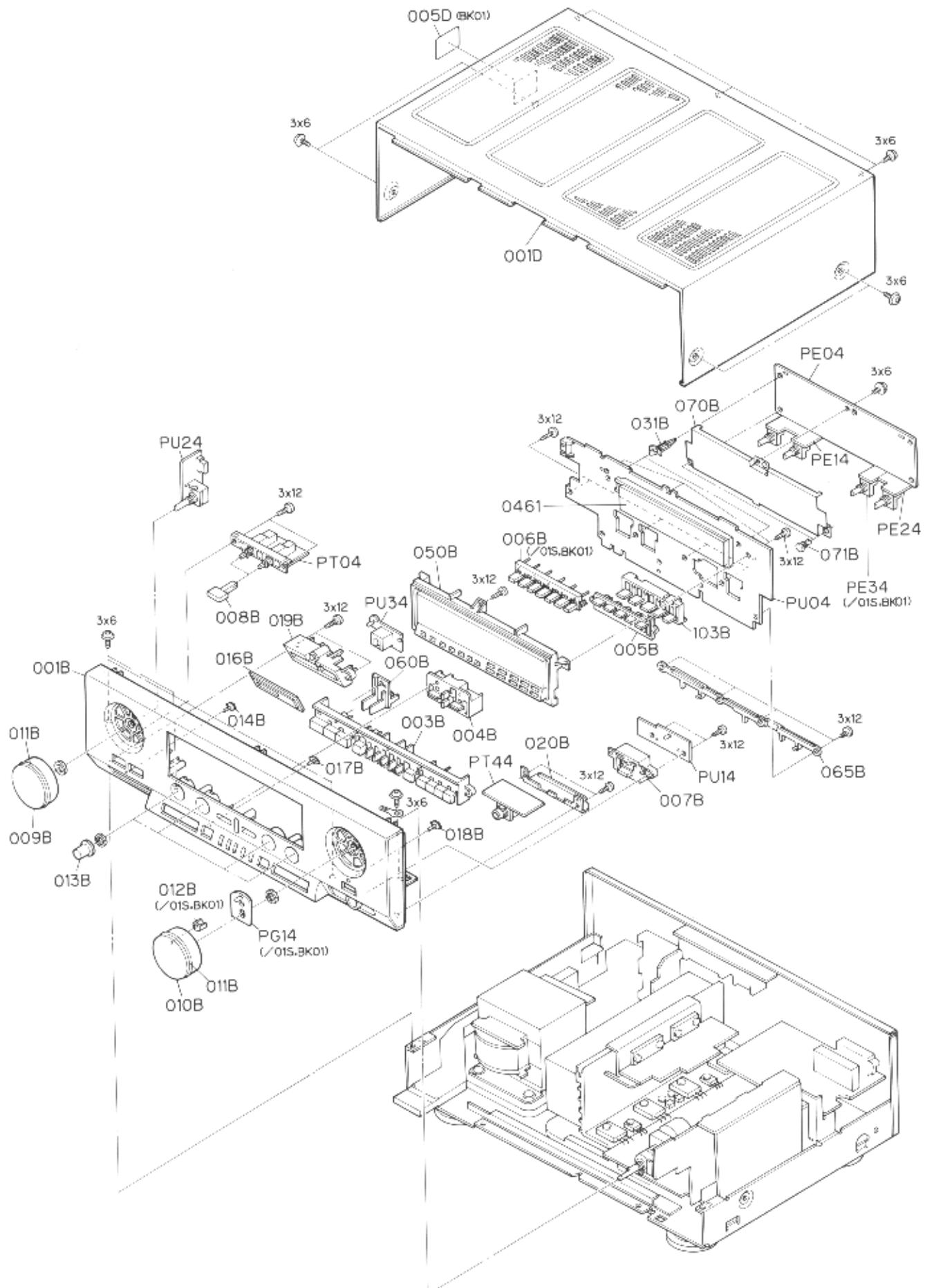
(FR940)

Q102	4822 209 31001	LA1851N	R103	4822 100 11351
Q105	4822 209 83631	NJM4558DD	▲ R106, R112	4822 050 21501
Q150	4822 209 73435	LC7218	R114	4822 100 11352
▲ Q251, Q252	4822 209 31613	μPC1342V	R119	4822 100 20681
Q262	4822 209 83312	TA7317P	R263, R264	4822 100 11386
▲ Q301, Q302	4822 209 73727	μPC1188H	▲ R271, R272	4822 116 82049
▲ Q320	4822 209 70385	L78MR05	R280, R281	4822 050 22201
▲ Q321	4822 209 61848	NJM7815FA	▲ R282, R283	4822 053 11109
▲ Q322	4822 209 83828	NJM7915FA	▲ R287-R290	4822 115 90166
▲ Q323	4822 209 31631	NJM7805FA	▲ R293, R294	4822 053 11681
Q351	4822 209 73064	NJM2068DD	▲ R295, R296	4822 050 21501
Q352-Q355	4822 209 83631	NJM4558DD	R311, R312	4822 052 10109
Q356	4822 209 72748	LC7821	R313, R314	4822 050 22201
Q401	4822 209 31556	TMP47C1670AN H054	▲ R319	4822 115 90166
Q501, Q502	4822 209 70044	NJM2058D	▲ R320	4822 050 24701
Q507	4822 209 73064	NJM2068DD	▲ R323	4822 053 11151
Q508	4822 209 71783	LC7522	▲ R325, R326	4822 116 60313
Q551	4822 209 72748	LC7821	▲ R327	4822 113 80322
Q552, Q570	4822 209 73731	LC7823	▲ R328	4822 116 60313
Q590	4822 209 72323	TC74HCU04AP	R519	4822 101 30797
Q591	4822 209 61688	TC74HC02AP	R520	4822 101 30797
Q601	4822 209 83631	NJM4558DD	R531	4822 101 30798
Q625	4822 209 31572	NJM2175L	R532	4822 101 30798
Q626	4822 209 31573	M50198P	▲ R617, R618	4822 050 21021
Q627	4822 209 31574	μPD6345C	R662	4822 101 30799
Q630	4822 209 73287	LB1630	R667	4822 050 21021
Q751	4822 209 31575	TC9213P		Res. 100E 1/4W
Q752	4822 209 83631	NJM4558DD		
— II — II —				
C101	4822 125 60185	Cap. trimming 20pF	L101	4822 157 63084
C320, C323	4822 122 30043	Cap. ceramic 0.01μF 500V	L102	4822 157 52716
C321, C322	4822 124 80254	Cap. elect 6800μF 71V	L103	4822 157 53589
C324, C325	4822 124 80244	Cap. elect 4700μF 35V	L104	4822 148 81095
▲ C337	4822 122 33276	Cap. ceramic 0.01μF 400V [13S, BK01]	L105	4822 148 81269
▲ C338	4822 122 33276	Cap. ceramic 0.01μF 400V [00S]	L106, L107	4822 157 70021
C402	4822 124 21737	Cap. elect 100μF 6.3V	L108	4822 156 10794
C403	4822 124 23128	Cap. big elect 0.047F 5.5V	▲ L251	4822 280 70354
C404, C405	4822 124 21737	Cap. elect 100μF 6.3V	L252, L253	4822 157 70022
C406	4822 124 41604	Cap. elect 0.1μF 50V	▲ L300	4822 280 70354
C407	4822 124 41246	Cap. elect 47μF 16V	L301, L302	4822 157 70022
C503, C504	4822 124 21894	Cap. elect 10μF 16V	L590	4822 148 81268
C507, C508	4822 124 21898	Cap. elect 0.47μF 50V		
C509, C510	4822 124 41246	Cap. elect 47μF 16V		
C513, C514	4822 124 41604	Cap. elect 0.1μF 50V		
C515, C516	4822 124 21739	Cap. elect 22μF 16V	S300	4822 276 13289
C517, C518	4822 124 21894	Cap. elect 10μF 16V	▲ S320	4822 276 13285
C519, C520	4822 124 41243	Cap. elect 2.2μF 50V	▲ S321	4822 276 13285
C521, C522	4822 124 21895	Cap. elect 0.22μF 50V	▲ S322	4822 272 10325
C523, C524	4822 124 21736	Cap. elect 1μF 50V	S401-S417	4822 276 13288
C527, C528	4822 124 21898	Cap. elect 0.47μF 50V	S418-S422	4822 276 13213
			S423-S431	4822 276 13288
			S432-S436	4822 276 13213
				Functions
				Functions
				Functions

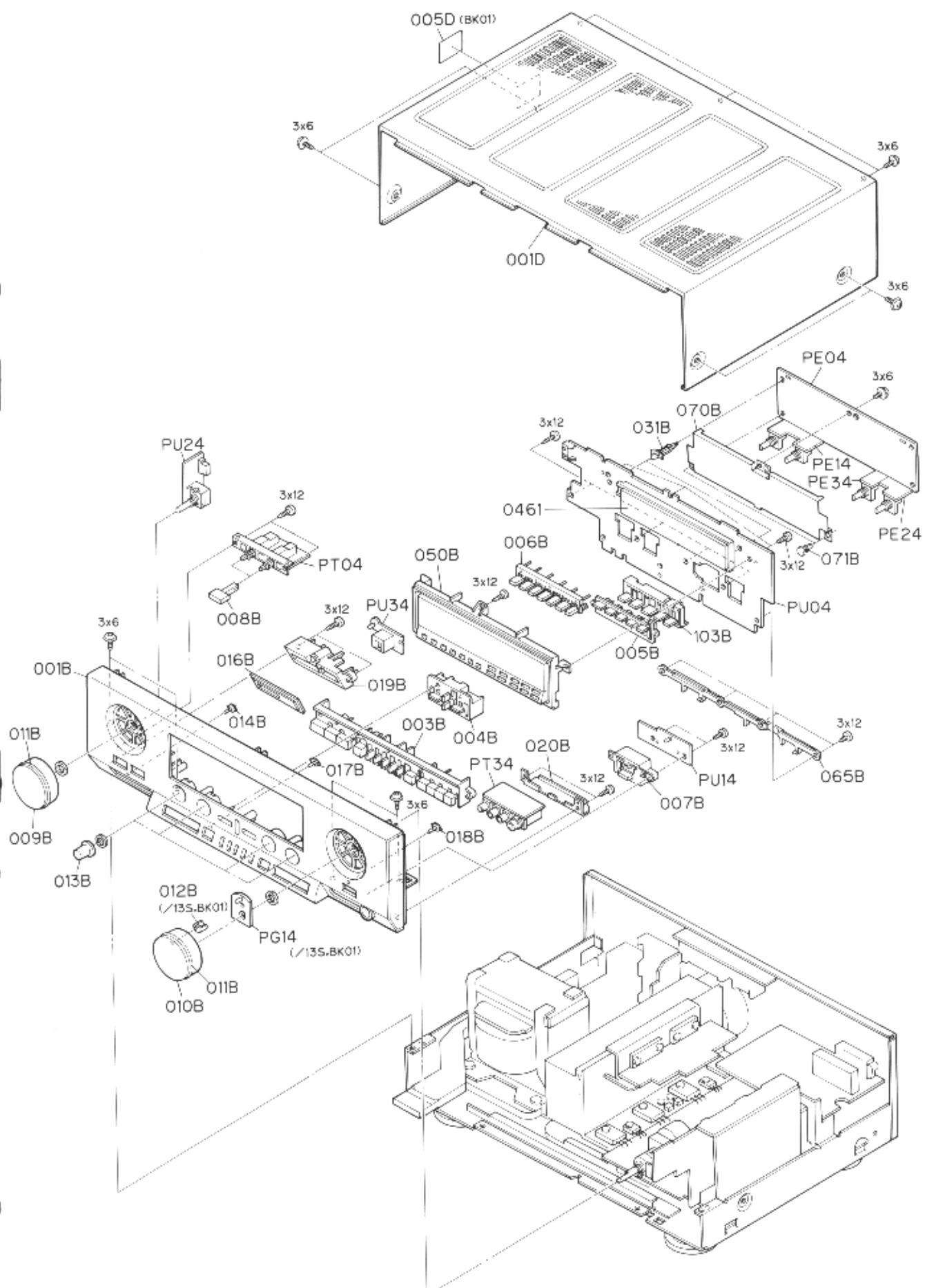
MISCELLANEOUS		
A101	4822 210 10372	V.H.F. tuner [/00S]
A101	4822 210 10397	V.H.F. tuner [/13S, BK01]
F101	4822 242 81262	Ceramic filter SFP450F
F102	4822 242 71135	Ceramic filter 10.7MHz [/00S]
F102	4822 242 70911	Ceramic filter 10.7MHz [/13S, BK01]
F103	4822 242 71135	Ceramic filter 10.7MHz
F320	4822 253 30411	Fuse 5.0A 125V [BK01]
F320	4822 253 30397	Fuse T5.0A 250V [/13S]
F321	4822 253 30416	Fuse T2.5A 250V [/00S]
F322	4822 253 30416	Fuse T2.5A 250V [/00S]
F323	4822 253 30409	Fuse T4.0A 250V [/00S, /13S]
F323	4822 253 30224	Fuse 4.0A 125V [BK01]
F324	4822 253 30409	Fuse T4.0A 250V [/00S, /13S]
F324	4822 253 30224	Fuse 4.0A 125V [BK01]
J101	4822 264 30255	Terminal, antenna [/00S]
J101	4822 290 81537	Terminal, antenna [/13S, BK01]
J300	4822 266 30323	Terminal, speaker 8P
J309	4822 290 81525	Terminal, speaker 2P
J310	4822 290 81526	Terminal, speaker 4P
J320	4822 267 31286	Jack, AC outlet [BK01]
J326, J327	4822 267 31194	Jack, AC outlet [/00S]
J551, J552	4822 290 81524	Terminal, RCA pin 8P
J553	4822 265 20542	Terminal, RCA pin 2P
J554	4822 290 81519	Terminal, RCA pin 1P
J570	4822 265 41264	Terminal, RCA pin 3P
J571	4822 265 41263	Terminal, RCA pin 2P
J580	4822 265 20555	Jack, headphone
J582	4822 290 81521	Terminal, RCA pin 1P
J583	4822 290 81522	Terminal, RCA pin 1P
J584	4822 290 81523	Terminal, RCA pin 1P
J592	4822 265 41265	Terminal, RCA pin 3P
Q406	4822 130 83197	IR receiver GP1U58XP
V401	4822 130 91145	Display unit
X101	4822 242 81248	Ceramic resonator CSB456F15
X150	4822 242 72333	Crystal 7.2MHz
X401	4822 242 73696	Ceramic resonator 8.00MHz
X625	4822 242 81271	Ceramic resonator 3.27MHz

001B	4822 426 51565	Front panel [/01S, BK01]
	4822 426 51566	Front panel [/00S]
003B	4822 410 62061	Button, nose [/01S, BK01]
	4822 410 62067	Button, nose [/00S]
004B	4822 410 62062	Button, cursor
005B	4822 410 62063	Button, 10key upper
006B	4822 410 62064	Button, surround [/01S, BK01]
007B	4822 410 62065	Button, muting
008B	4822 410 62066	Button, speaker
009B	4822 413 31708	Knob, selector [/01S, BK01]
	4822 413 41727	Knob, selector [/00S]
010B	4822 413 41733	Knob, volume [/01S, BK01]
	4822 413 41732	Knob, volume [/00S]
011B	4822 532 21449	Rubber ring
012B	4822 381 11349	Lens, pointer [/01S, BK01]
013B	4822 413 41704	Knob, tone/ balance
014B	4822 381 11311	Lens, standby
015B	4822 462 71808	Cap, power knob
016B	4822 381 11347	Lens, IR sensor
017B	4822 381 11311	Lens, auto selector
018B	4822 381 11311	Lens, muting
050B	4822 454 12845	Escutcheon assembly, window [/01S, BK01]
	4822 454 12879	Escutcheon assembly, window [/00S]
103B	4822 410 62069	Button, 10key lower
004G	4822 462 41887	Buffer, leg
005G	4822 462 41888	Leg
022G	4822 404 21245	Link, power
912G	4822 532 60948	Bushing, AC cord
0461	4822 256 91966	Holder, FTD
▲ F001	4822 253 30408	Fuse T2.0A 250V [/01S]
▲ J001	4822 256 30233	Fuse holder [/01S]
J053	4822 290 40297	Terminal, GND
▲ L001	4822 146 21683	Power transformer [/00S]
	4822 146 21696	Power transformer [/01S]
	4822 146 21682	Power transformer [BK01]
Accessories		
001T	4822 736 21472	User manual [/01S]
	4822 736 21471	User manual [BK01]
	4822 736 21474	User manual [/00S]
Z001	4822 218 10468	Remote control unit, RC6640 [/00S]
	4822 218 10469	Remote control unit, RC6640 [/01S, BK01]
Z003	4822 157 70019	AM loop antenna
Z005	4822 303 50055	FM ext. antenna [/00S]
	4822 303 30314	FM ext. antenna [/01S, BK01]
Z006	4822 264 30265	Ant. adaptor [/01S, BK01]
Z007	4822 253 30409	Fuse, 4A 250V [/01S]

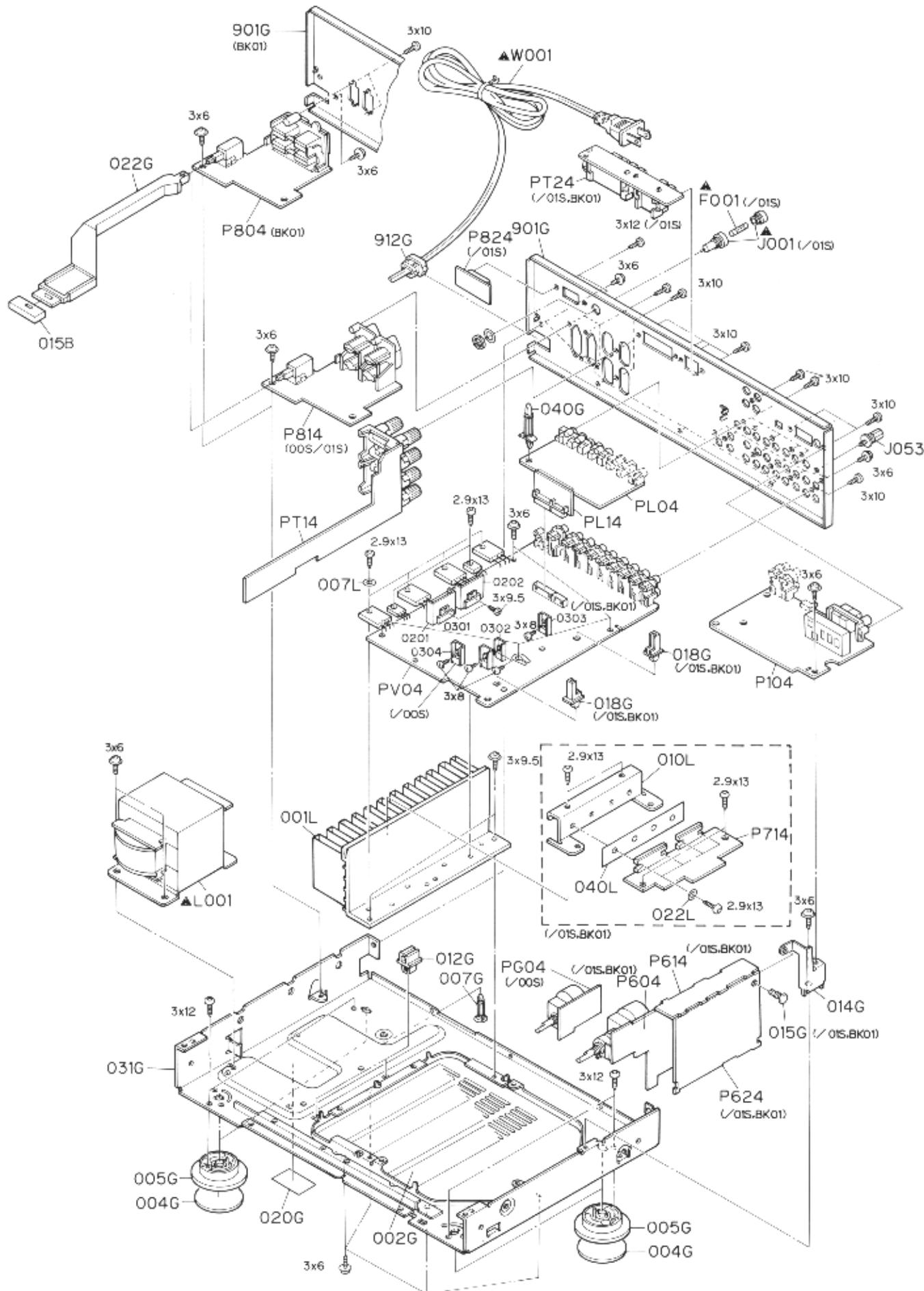
(FR930)



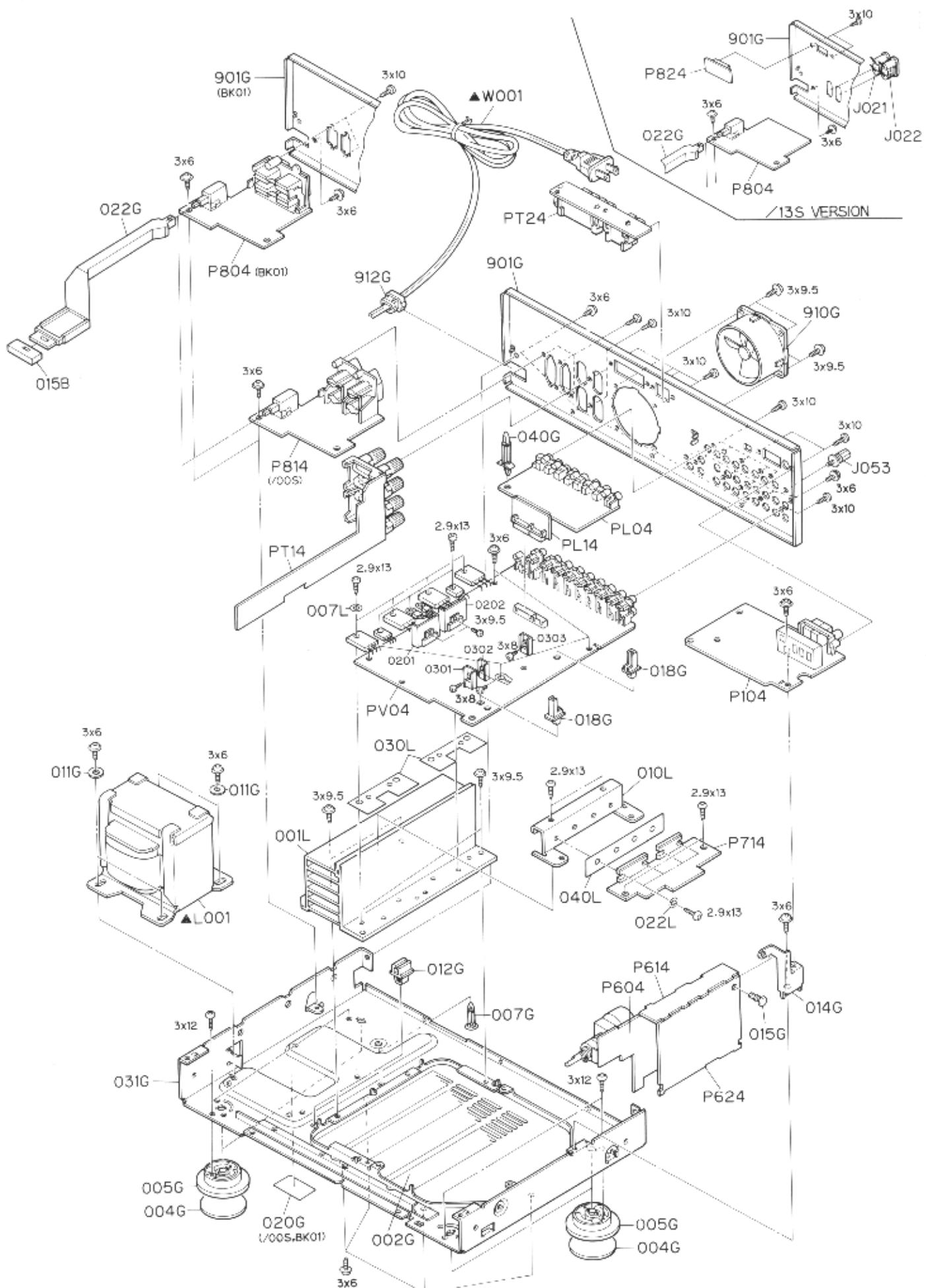
EXPLODED VIEW AND PARTS LIST (FR940)



(FR930)



(FE940)



(FR940)

001B	4822 426 51564 4822 426 51599	Front panel [/00S, BK01] Front panel [/13S]
003B	4822 410 62061	Button, nose
004B	4822 410 62068	Button, cursor
005B	4822 410 62063	Button, 10key upper
006B	4822 410 62064	Button, surround mode
007B	4822 410 62065	Button, muting
008B	4822 410 62066	Button, speaker
009B	4822 413 41727 4822 413 31708	Knob, selector [/00S] Knob, selector [/13S, BK01]
010B	4822 413 41732 4822 413 41733	Knob, volume [/00S] Knob, volume [/13S, BK01]
011B	4822 532 21449	Rubber, ring
012B	4822 381 11349	Lens, pointer [/13S, BK01]
013B	4822 413 41704	Knob, tone/balance
014B	4822 381 11311	Lens, standby
015B	4822 462 71808	Cap, power knob
016B	4822 381 11347	Lens, IR sensor
017B	4822 381 11311	Lens, auto selector
018B	4822 381 11311	Lens, muting
050B	4822 454 12845 4822 454 12877	Escutcheon assembly, window [/00S, BK01] Escutcheon assembly, window [/13S]
103B	4822 410 62069	Button, 10key lower
004G	4822 462 41887	Buffer, leg
005G	4822 462 41888	Leg
022G	4822 404 21245	Link, power switch
910G	4822 361 10653	Fan
912G	4822 532 60948	Bushing, AC cord
0461	4822 256 91966	Holder, FTD
▲ J021	4822 267 31573	AC outlet [/13S]
▲ J022	4822 267 31573	AC outlet [/13S]
J053	4822 290 40297	Terminal, GND
▲ L001	4822 146 21687 4822 146 21695 4822 146 21685	Power transformer [/00S] Power transformer [/13S] Power transformer [BK01]
		Accessories
001T	4822 736 21473 4822 736 21577 4822 736 21477	User manual [/00S] User manual [/13S] User manual [BK01]
Z001	4822 218 10469 4822 218 10487	Remote control unit, RC6624 [/00S, BK01] Remote control unit, RC6624 [/13S]
Z003	4822 157 70019	AM loop antenna
Z005	4822 303 50055 4822 303 30314	FM ext. antenna [/00S] FM ext. antenna [/13S, BK01]
Z006	4822 264 30265	Ant. adaptor [/13S, BK01]