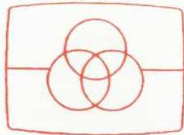


Amplifier 70FA564/00R/05R

Service
Service
Service



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40 065 A

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.

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.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambio identici a quelli sepecificati.

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.



"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

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Consumer Electronics

CS 3 579

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SPECIFICATION	Nominal value
General	
Mains voltage	: 220V ~ (/00R) 240V ~ (/05R)
Mains frequency	: 50–60 Hz
Power consumption	: 170W ± 40W
Dimensions (WxHxD)	: 420 x 90 x 260 mm
Weight	: 6.0 kg
Amplifier	
Output power	: 40W in 8Ω (IEC)
Distortion	
T.H.D.	: ≤ 0.05% at 1 kHz
Intermodulation	: ≤ 0.05% at 60/7000 Hz 4:1 } (IHF)
Frequency characteristic	
Phono input } tone control	: from 20 Hz – 20 kHz ±1.5 dB (IEC)
Other inputs } neutral	: from 20 Hz – 20 kHz ±2 dB
Graphic equalizer control	: at 50 Hz +10 dB to –10 dB ±2 dB : at 200 Hz +10 dB to –10 dB ±2 dB : at 800 Hz +10 dB to –10 dB ±2 dB : at 3.2 kHz +10 dB to –10 dB ±2 dB : at 12.8 kHz +10 dB to –10 dB ±2 dB : at 100 Hz +6 dB ±3 dB } Tap position : at 10 kHz +4 dB ±2 dB }
Loudness	
Signal/noise ratio weighted (A-curve)	
Phono input	: for 40W output ≥ 72 dB (IEC)
Other inputs	: for 40W output ≥ 87 dB (IEC)
– Channel separation	: at 1000 Hz ≥ 45 dB : at 250 Hz–10 kHz ≥ 30 dB
Input sensitivity	
Phono	: 3.0 mV at 47 kΩ
Tuner	: 200 mV at 25 kΩ
Tape	: 200 mV at 25 kΩ
CD/TV	: 200 mV at 25 kΩ
Video	: 200 mV at 25 kΩ
Outputs	
Tape	: 400 mV at 2.0 kΩ (Phono 7.75 mV 1 kHz input)

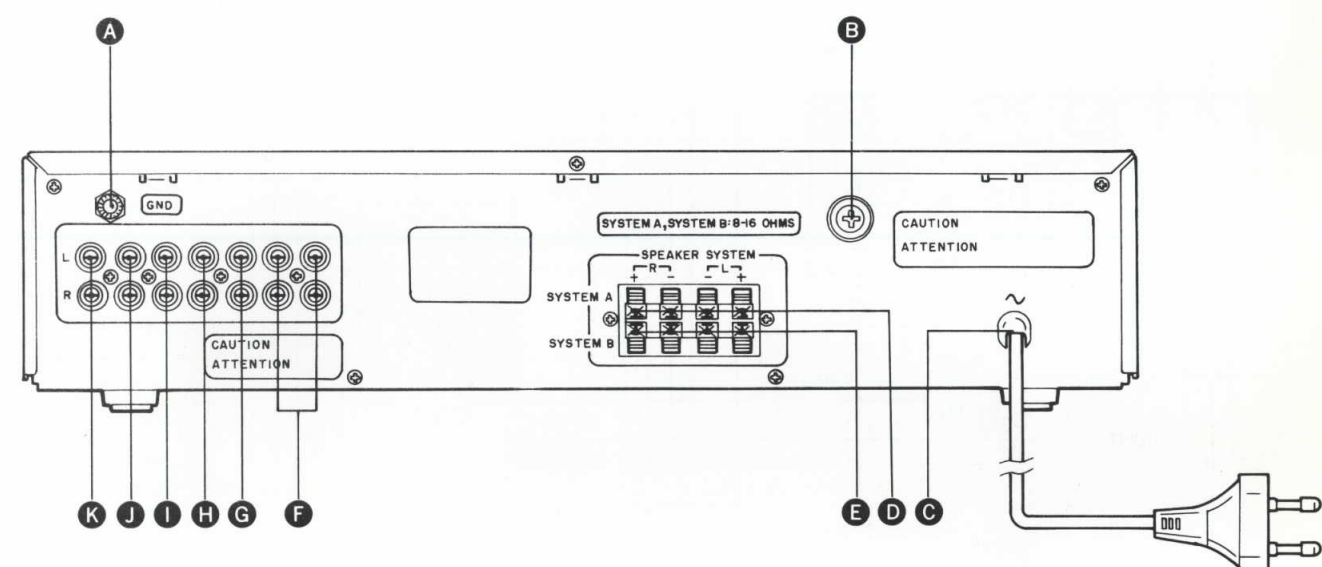
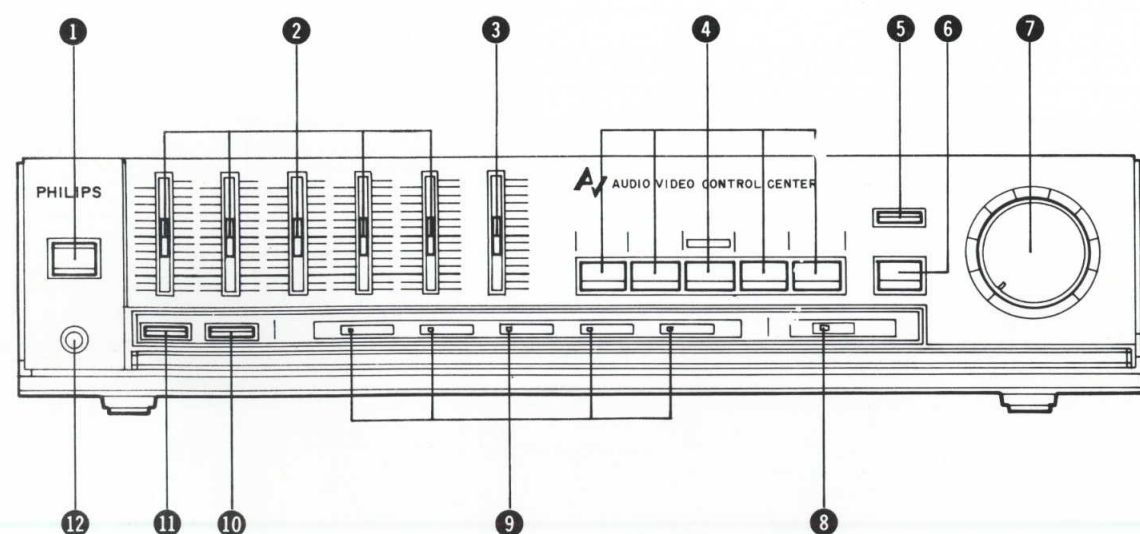
Caution **220V/240V**

Removal of upper cabinet and recordplayer exposes the protruding current-carrying parts of mains switch and mains transformer, therefore extreme care should be taken when the apparatus is connected to the mains.

Uncasing instructions

See for the uncasing instructions exploded view on page 17 and 18.

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CONNECTIONS AND CONTROLS

1	Mains switch	SP01	A	Ground terminal	J031
2	Equalizer control	RF18-RF22	B	Fuse holder	J001
3	Balance control	RE17	C	Mains cord	W001
4	Function switch	SY01-SY05	D	LS output A	J701
5	Loudness switch	SG01	E	LS output B	JS02
6	Tape monitor switch	SY06	F	Tape monitor input/output	JS01
7	Volume control	RG35	G	TV input	JS01
8	Tape monitor indicator	DY06	H	Video input	JS01
9	Function indicator	DY01-DY05	I	CD input	J401
10	LS switch B	SW91	J	Tuner input	J401
11	LS switch A	SW91	K	Phono input	J401
12	Headphone socket	JW91			

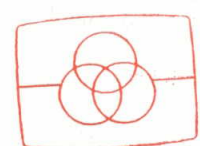
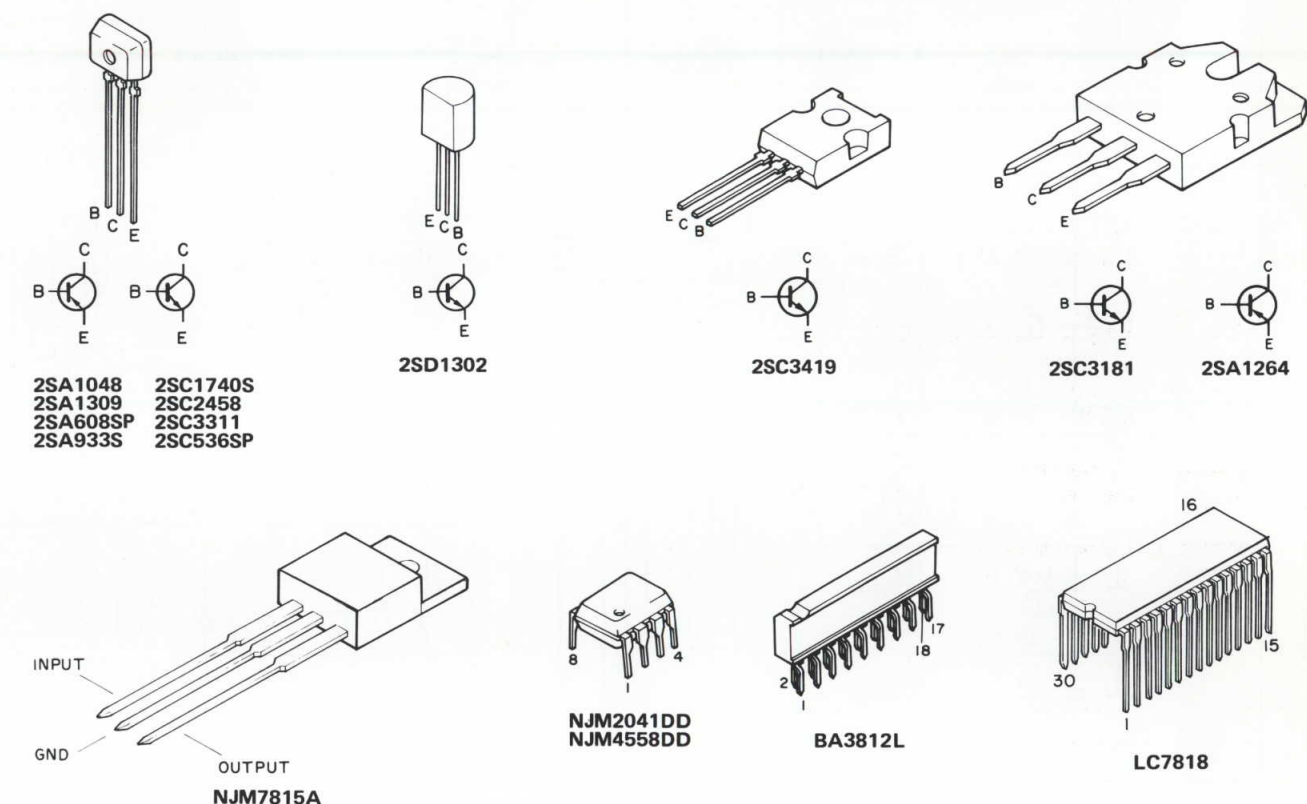
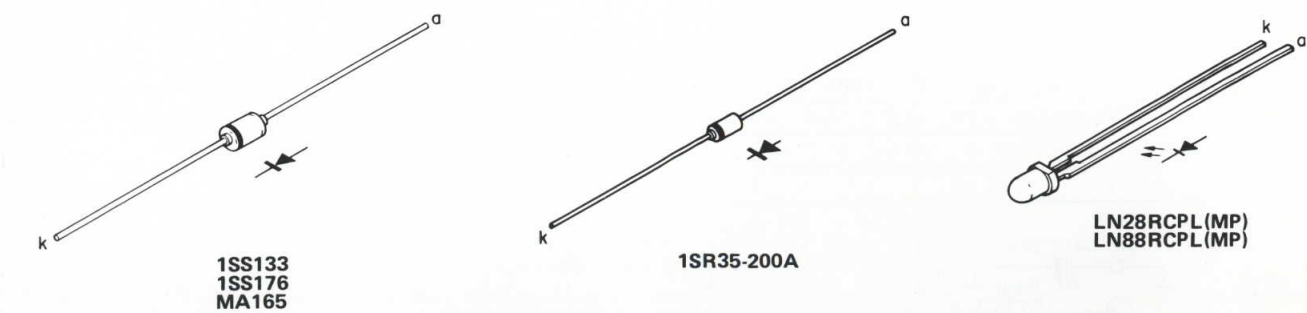
Idling Current

SK...	SIGNAL	TO	VOLUME	ADJUST	OSCILLOSCOPE	D.C. METER INDICATOR
			Min.	Lch R735		Lch TP1(+), TP3(-) DC4mV (20mA)
				Rch R736		Rch TP2(+), TP4(-) DC4mV (20mA)

	Carbon film 0.125 W or 0.2 W	70°C	5%
	Carbon film 0.25 W or 0.33 W	70°C	5%
	Metal film 0.25 W or 0.33 W	70°C	5%
	Carbon film 0.5 W	70°C	5%
	Carbon film 0.67 W	70°C	5%
	Carbon film 1 W or 1.15 W	70°C	5%
	Ceramic plate Tuning ≤ 120 pF NP.0		2% Others -20/+80%
	Polyester flat foil		10%
	Metalized polyester flat film		10%
	Polyester flat foil small size (Mylar)		10%
	Polysterene film/foil		1%
	Tubular ceramic		
	Miniature single		
	Subminiature tantalum		± 20%
	Chip component		

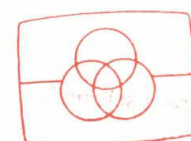
*a = 2.5 V
b = 3.15 V
or 4 V
c = 6.3 V
d = 10 V
e = 16 V
f = 25 V
g = 40 V
h = 63 V
j = 100 V
l = 125 V
m = 150 V
n = 160 V
p = 200 V
q = 250 V
r = 250 V
s = 300 V
t = 350 V
u = 400 V
v = 500 V
w = 630 V
x = 1000 V
A = 1.6 V
B = 6 V
C = 12 V
D = 15 V
E = 20 V
F = 35 V
G = 50 V
H = 75 V
I = 80 V

Semiconductor Layout



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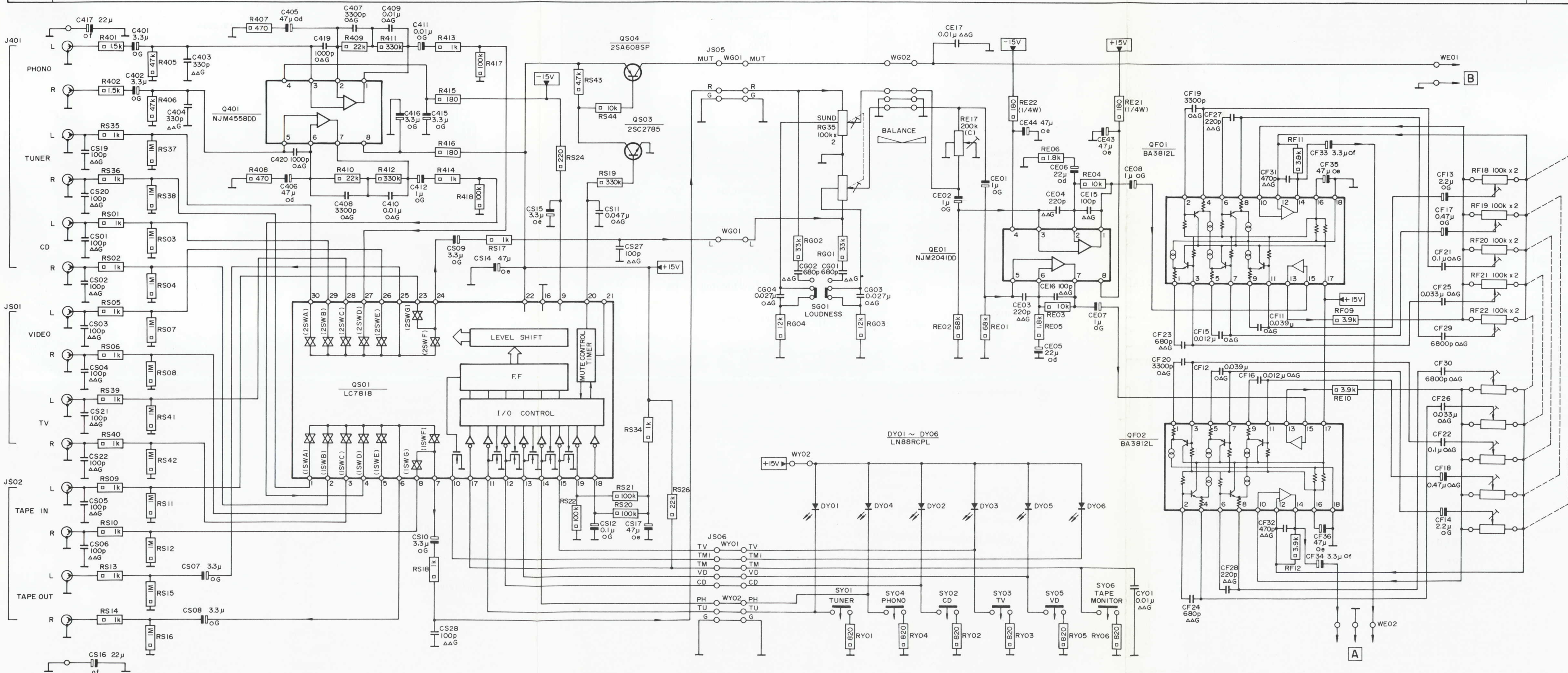
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SCHEMATIC DIAGRAM

R	R401 R402 RS35 ~ RS38 R405 R406 R407 R409 R411 R413 R415 R417 RS24 RS43 RS44 RS19 RG02 RG35 RG01 RE02 RE17 RE01 RE22 RE06 RE04 RE21 RF11 RF09 RE10 RF18 ~ RF22	R
	RS01 ~ RS16 RS39 ~ RS42 R408 R410 R412 RS18 R416 R414 R418 RS17 RS22 RS21 RS20 RS34 RS26 RG04 RG03 RY01 ~ RY06 RE05 RE03	
C	C417 C421 C422 C401 C402 C403 C404 C405 C419 C407 C409 C411 CS28 CS15 CS12 CS11 CS17 CG04 CG02 CG01 CG03 CE17 CE02 CE01 CE44 CE04 CE06 CE43 CE15 CE08 CF23 CF19 CF27 CF15 CF31 CF11 CF33 CF35 CF13 CF17 CF21 CF25 CF29	C
	CS01 ~ CS06 CS16 CS19 ~ CS22 CS07 CS08 C420 C406 C408 C410 C416 C412 C415 CS10 CS09 CS14 CS27 CE03 CE05 CE16 CE07 CY01 CF20 CF24 CF12 CF28 CF16 CF32 CF36 CF34 CF30 CF26 CF22 CF18 CF14	
Q - D	Q401 QS01 QS03 QS02 DY01 ~ DY06 QE01 QF02 QF01	Q - D
L - S - T	SG01 SY01 SY04 SY02 SY03 SY05 SY06	L - S - T



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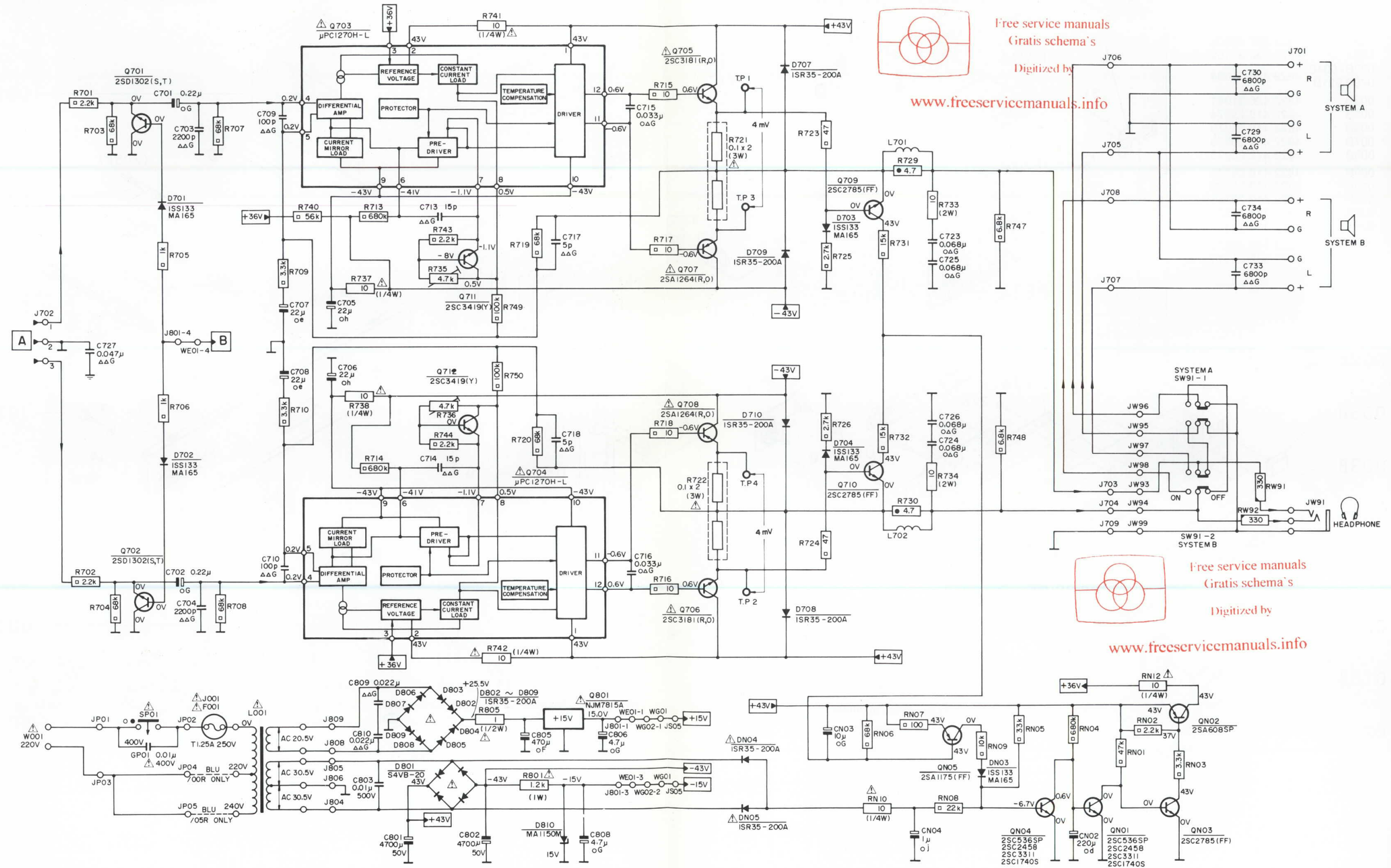


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SCHEMATIC DIAGRAM

R	R701	R703	R705	R707	R709	R740	R737	R713	R735	R743	R741	R749	R719	R715	R717	R721	R723	R725	R731	R729	R733	R747	R748	R														
	R702	R704	R706	R708	R710		R738	R714	R801~R803	R805	R744	R736	R742	R750	R720	R718	R716	R722	R726	R724	RN11	R732	R730		R734	RN06	RN09	RN01~RN05	RN12	RS51	RS52							
C	C727		C701	C703	C709	C707	C705	C713			C717			C715		C723			C725					C729	C730	C												
	GPO1		C702	C704	C710	C708	C706	C809			C810	C803	C714	C801	C802	C805	C718	C806	C808	C716	CN03			CN04	C726		C724	CN02	C733	C734								
Q - D	Q701	Q702	D701	D702				D802 ~ D809			Q703	Q704	D801	Q711	Q712	D810	Q801	Q705			Q707	Q708	DN04	DN05	Q706	D707 ~ D710		D703	D704	Q709	Q710	QN05	DN03	QN04	QN01	QN02	QN03	Q - D
L - S - T	SP01			L001																		L701			L702	SS51										L - S - T		

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List of electrical parts

CE01	Elect. cap.	1 μ F	50 V	4822 124 21736
CE02	Elect. cap.	1 μ F	50 V	4822 124 21736
CE05	Elect. cap.	22 μ F	10 V	4822 124 21738
CE06	Elect. cap.	22 μ F	10 V	4822 124 21738
CE07	Elect. cap.	1 μ F	50 V	4822 124 21736
CE08	Elect. cap.	1 μ F	50 V	4822 124 21736
CE43	Elect. cap.	47 μ F	16 V	4822 124 41246
CE44	Elect. cap.	47 μ F	16 V	4822 124 41246
CF13	Elect. cap.	2.2 μ F	50 V	4822 124 41243
CF14	Elect. cap.	2.2 μ F	50 V	4822 124 41243
CF17	Elect. cap.	0.47 μ F	50 V	4822 124 21898
CF18	Elect. cap.	0.47 μ F	50 V	4822 124 21898
CF33	Elect. cap.	3.3 μ F	25 V	4822 124 21741
CF34	Elect. cap.	3.3 μ F	25 V	4822 124 21741
CF35	Elect. cap.	47 μ F	16 V	4822 124 41246
CF36	Elect. cap.	47 μ F	16 V	4822 124 41246
CS12	Elect. cap.	0.1 μ F	50 V	4822 124 21596
CS16	Elect. cap.	22 μ F	6.3 V	4822 122 32678
C417	Elect. cap.	22 μ F	6.3 V	4822 122 32678
C717	Cer. cap.	5 pF	50 V	4822 122 31447
C718	Cer. cap.	5 pF	50 V	4822 122 31447
C801	Elect. cap.	4700 μ F	50 V	4822 124 21977
C802	Elect. cap.	4700 μ F	50 V	4822 124 21977
C803	Cer. cap.	0.01 μ F	500 V	4822 122 30043
GP01	Cer. cap.	0.01 μ F	400 V	4822 122 40305

RE17	Var. res.	bal. 200k	4822 105 10624
RF18	Var. res.	EQ 100k	4822 105 10839
RF19	Var. res.	EQ 100k	4822 105 10839
RF20	Var. res.	EQ 100k	4822 105 10839
RF21	Var. res.	EQ 100k	4822 105 10839
RF22	Var. res.	EQ 100k	4822 105 10839
RG35	Var. res.	vol. 100k	4822 100 20525
RN11	Fuse res.	10E ¼ W	4822 116 60314
RN12	Fuse res.	10E ¼ W	4822 116 60314
R721	Res. compo	0.1E 3 W	4822 111 90966
R722	Res. compo	0.1E 3 W	4822 111 90966
R733	Safety res.	10E 2 W	4822 111 90726
R734	Safety res.	10E 2 W	4822 111 90726
R735	Trimm. res.	4.7k	4822 100 20524
R736	Trimm. res.	4.7k	4822 100 20524
R737	Fuse res.	10E ¼ W	4822 116 60314
R738	Fuse res.	10E ¼ W	4822 116 60314
R741	Fuse res.	10E ¼ W	4822 116 60314
R742	Fuse res.	10E ¼ W	4822 116 60314
R805	Fuse res.	1E ½ W	4822 116 60306

2SC3419Y	4822 130 60117
2SC536SP	4822 130 42483
2SA1175(FF)	4822 130 60131
2SA1264 R or O	4822 130 43018
2SA608SP	4822 130 60165
2SC2785(FF)	4822 130 42122
2SC3181 R or O	4822 130 43305
2SD1302 S.T.	4822 130 42125

BA3812L	4822 209 83338
LC7818	4822 209 83315
NJM2041DD	4822 209 81565
NJM4558DD	4822 209 83631
NJM7815A	4822 209 83317
UPC-1270H	4822 209 82496

S4VB-20	4822 130 31007
1SR35-200A	4822 130 32816
1SS133	4822 130 33305
LN88RCPL.MP	4822 130 33761
MA1150M	4822 130 32654

L701	Coil 1 μ H	4822 157 51739
L702	Coil 1 μ H	4822 157 51739

Miscellaneous

JS01	Terminal	4822 265 30397
JS02	Terminal	4822 265 30397
JW91	Headphone jack	4822 267 30596
SG01	Spec switch	4822 276 11892
SP01	Power switch	4822 276 11891
SW91	SPK switch	4822 276 11894
SY01	Switch tuner	4822 276 11559
SY02	Switch CD	4822 276 11559
SY03	Switch TV	4822 276 11559
SY04	Switch phono	4822 276 11559
SY05	Switch VD	4822 276 11559
SY06	Switch tape monitor	4822 276 11559
F001	Fuse T 1.25 A	4822 253 30022
J001	Fuse holder	4822 256 30233
J031	Terminal ground	4822 267 40505
J701	Terminal speaker	4822 267 50424
L001	Transformer	4822 146 21152

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