

Service
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Service Manual



12 V

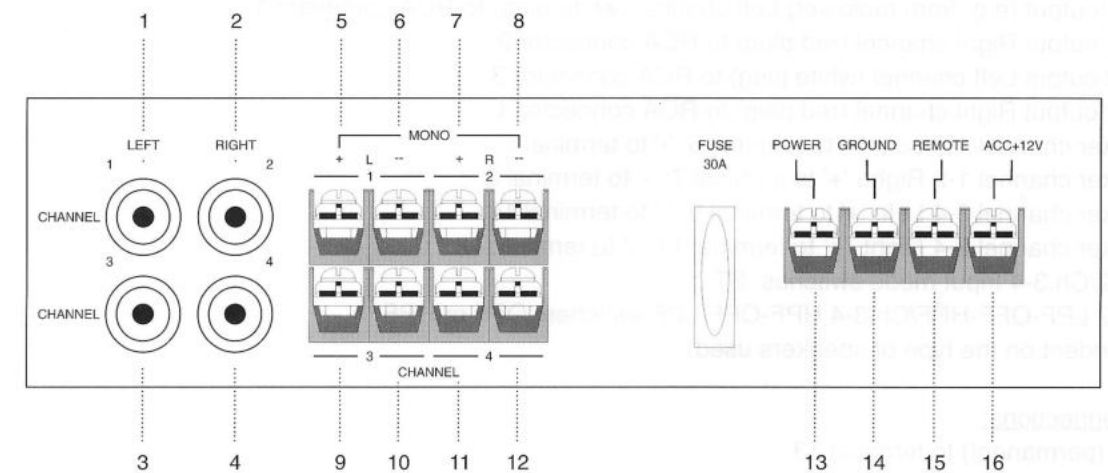
Technical specifications

Power output	4 x 40 Watt (THD=0.08%) (in bridge mode 2 x 80 W)	Channel separation	> 70 dB
Maximum power	4 x 60 Watt (THD=10%) (in bridge mode 2 x 150 W)	Signal-to-noise ratio	> 100 dB (A-weighted)
Input sensitivity	0.3 - 2.0 V	Low-pass filter	$f_o = 80\text{Hz}$, switchable
Input impedance	33 k Ω	High-pass filter	$f_o = 80\text{Hz}$, switchable
Frequency response	5 Hz - 100 kHz (-3 dB)	Fuse size	30 A
CMR	> 40 dB	Weight	3.0 kg
		Size LxWxH	250 x 267 x 56 (mm) 9.84 x 10.51 x 2.2 (inch)

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(GB) 4822 725 25464

Connections/adjustments DAP4040



- 1 - 4: Input RCA connectors (White=Left, Red=Right)
 5 - 12: Speaker terminals
 13 - 16: Power supply terminals

Note: the INPUT MODE switches, FILTER MODE switches and GAIN CONTROLS are at the opposite side of the cabinet.

2-channel system connection/configuration (two 'bridged' channels):

- Line output (e.g. from radio set) 1 Left channel (white plug) to RCA connector 1
- Line output 1 Right channel (red plug) to RCA connector 4
- Line 2 outputs not connected
- Speaker channel 1-2 Left: '+' to terminal 5; '-' to terminal 8
- Speaker channel 3-4 Right: '+' to terminal 9; '-' to terminal 12
- Ch.1-2 Input mode switch: MONO L; Ch.3-4 Input mode switch: MONO R
- Ch.1-2 LPF-OFF-HPF/Ch.3-4 HPF-OFF-LPF switches: OFF (for use with normal speakers)
- Ch.1-2 LPF-OFF-HPF/Ch.3-4 HPF-OFF-LPF switches: LPF (for use with subwoofers)
- Ch.1-2 LPF-OFF-HPF/Ch.3-4 HPF-OFF-LPF switches: HPF (for use with mid/hi-range speakers)

3-channel system connection/configuration (two 'single' channels and one 'bridged' channel -e.g. for two separate mid/hi-range speakers and one common subwoofer):

- Line 1 output (e.g. from radio set) Left channel (white plug) to RCA connector 1
- Line 1 output Right channel (red plug) to RCA connector 2
- Line 2 output Left channel (white plug) to RCA connector 3
- Line 2 output Right channel (red plug) to RCA connector 4
- Speaker channel 1-2 Left: '+' to terminal 5; '-' to terminal 6
- Speaker channel 1-2 Right: '+' to terminal 7; '-' to terminal 8
- Speaker channel 3-4 Left+Right (MONO): '+' to terminal 9; '-' to terminal 12
- Ch.1-2 Input mode switch: ST; Ch.3-4 Input mode switch: MONO L+R
- Ch.1-2 LPF-OFF-HPF switch: HPF
- Ch.3-4 HPF-OFF-LPF switch: LPF



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4-channel system connection/configuration:

(four 'single' channels)

- Line 1 output (e.g. from radio set) Left channel (white plug) to RCA connector 1
- Line 1 output Right channel (red plug) to RCA connector 2
- Line 2 output Left channel (white plug) to RCA connector 3
- Line 2 output Right channel (red plug) to RCA connector 4
- Speaker channel 1-2 Left: '+' to terminal 5; '-' to terminal 6
- Speaker channel 1-2 Right: '+' to terminal 7; '-' to terminal 8
- Speaker channel 3-4 Left: '+' to terminal 9; '-' to terminal 10
- Speaker channel 3-4 Right: '+' to terminal 11; '-' to terminal 12
- Ch.1-2/Ch.3-4 Input mode switches: ST
- Ch.1-2 LPF-OFF-HPF/Ch.3-4 HPF-OFF-LPF switches: OFF or HPF (dependent on the type of speakers used)

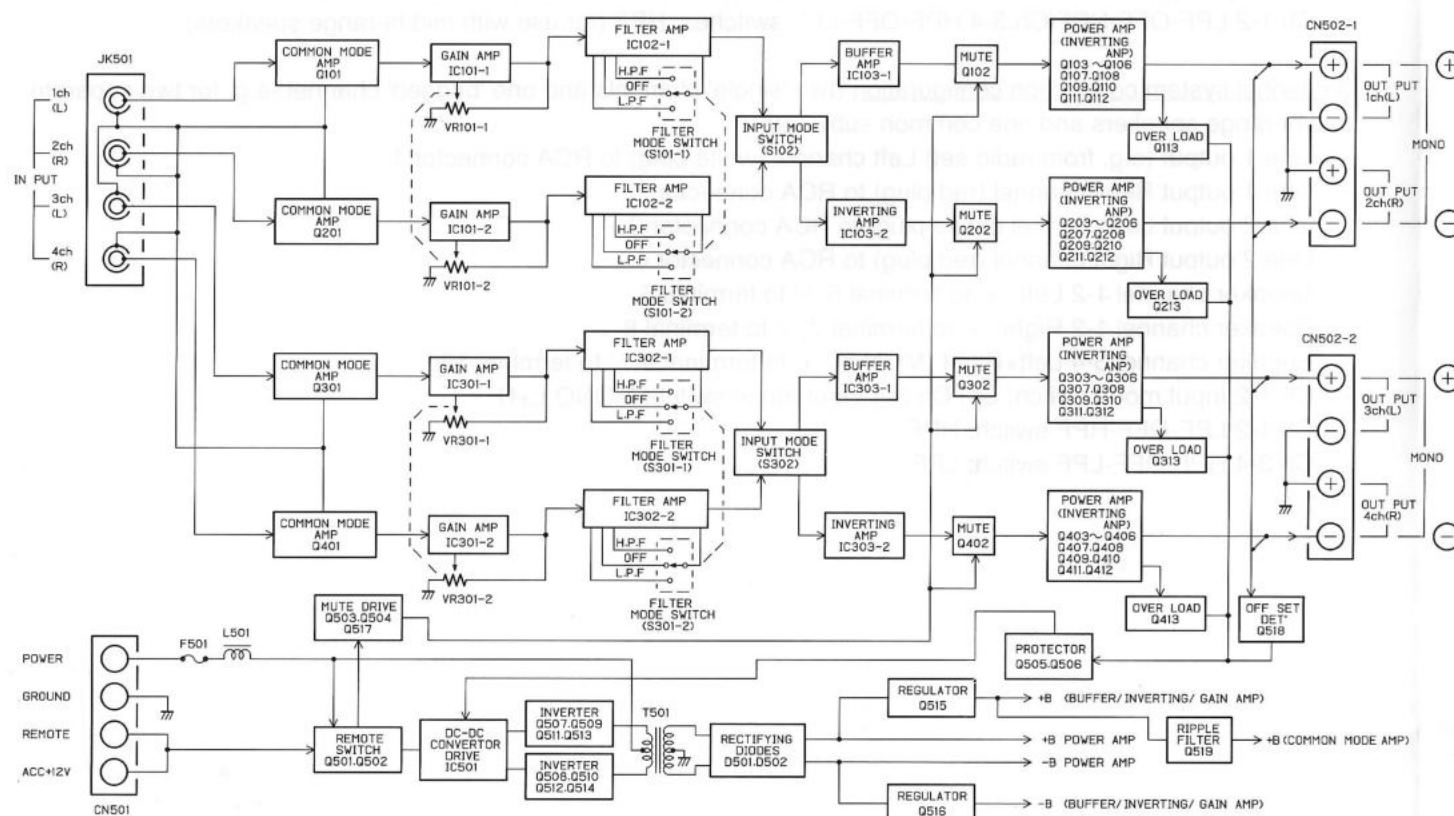
Power connections:

- +12V (permanent) to terminal 13
- Car ground to terminal 14
- 'Automatic aerial' or 'remote' output (e.g. from radio set) to terminal 15
- Terminal 16 (ACC+12V) is only used to control switch on/off other equipment (e.g. other amplifiers and/or equalizer)

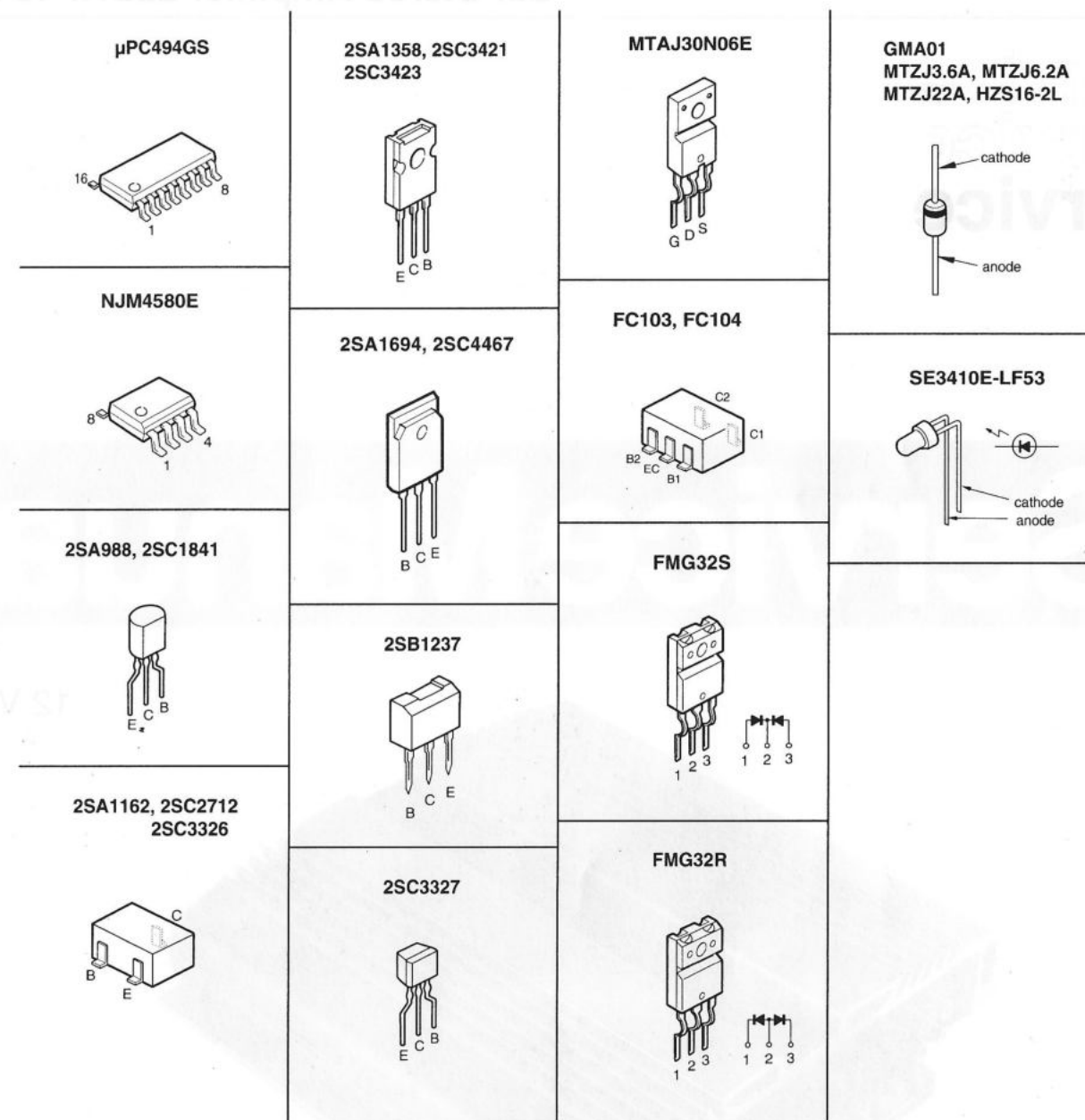
Input sensitivity:

- Adjust the 'Gain Control' levels equal to the normal AF level of the connected set; refer to the technical specifications of the set if necessary
- For all recent radio sets the 'Gain Controls' have to be set to the '1V' position

BLOCK DIAGRAM DAP4040

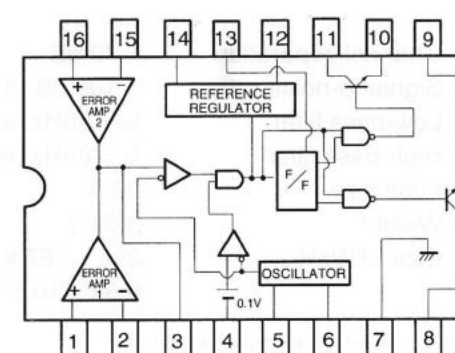


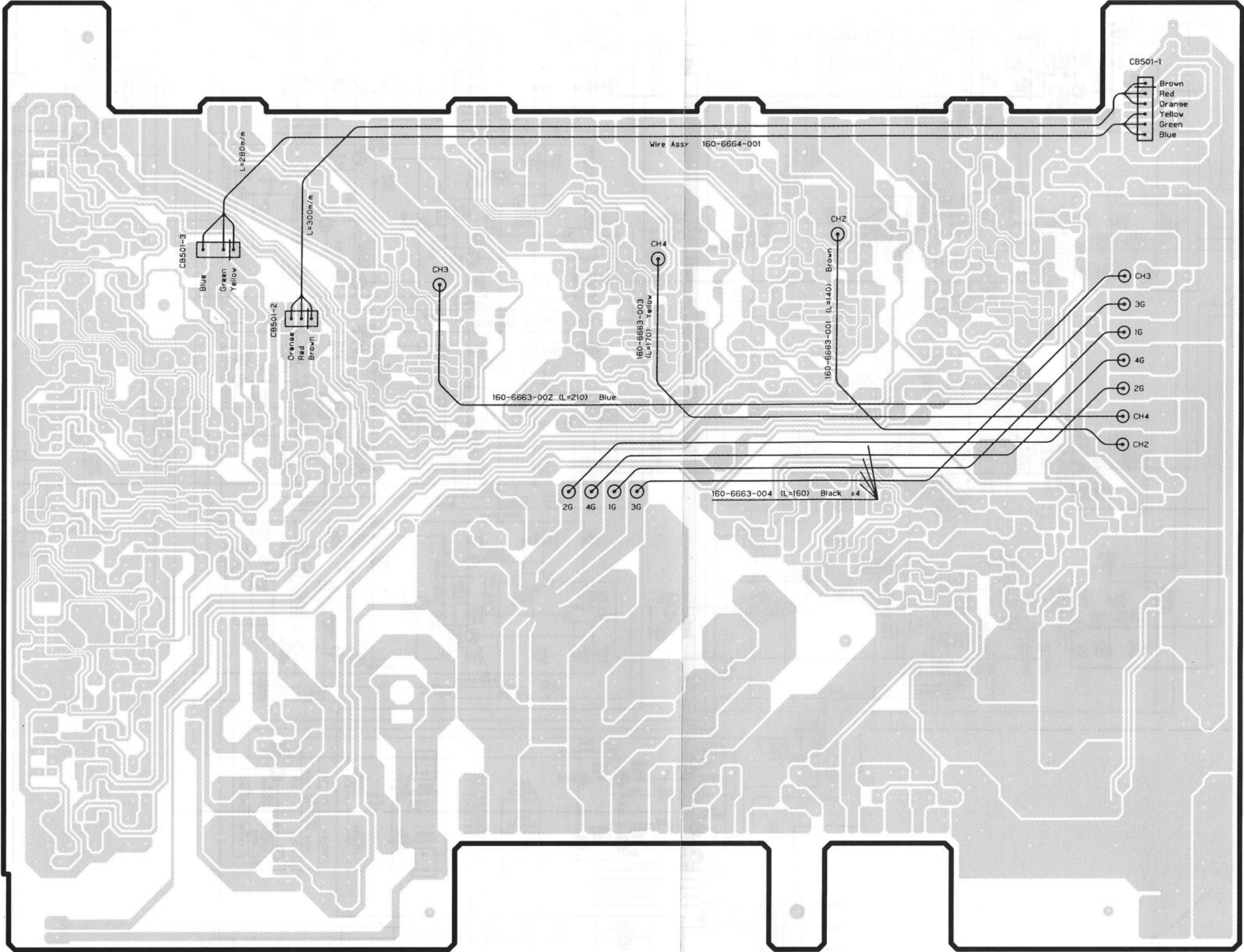
DAP4040 SEMICONDUCTORS LEAD LAYOUT

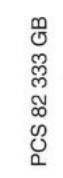


IC BLOCK DIAGRAM

IC501 μPC494GS







Q101-Q201-Q301-Q401

B: 5.4V
C: 11.0V
E: 4.7V

Q102-Q202-Q302-Q402

B: 0.6V / -14.3V (MUTE)
C: 0V
E: 0V

Q103-Q203-Q303-Q403

B1,2: 0V
C1,2: -24.2V
E: 0.6V

Q104-Q204-Q304-Q404

B1,2: 0V
C1,2: 24.2V
E: -0.6V

Q105-Q205-Q305-Q405

B: 24.2V
C: 1.0V
E: 24.8V

Q106-Q206-Q306-Q406

B: -24.2V
C: -1.0V
E: -24.8V

Q107-Q207-Q307-Q407

B: 1.0V
C: 25.6V
E: 0.6V

Q108-Q208-Q308-Q408

B: -1.0V
C: -25.6V
E: -0.6V

Q109-Q209-Q309-Q409

B: 0.6V
C: 25.6V
E: 3mV

Q110-Q210-Q310-Q410

B: -0.6V
C: -25.6V
E: -3mV

Q111-Q211-Q311-Q411

B: -0.4V
C: 1.0V
E: -1.0V

Q112-Q212-Q312-Q412

B: 0.2V
C: -1.0V
E: 0V

Q113-Q213-Q313-Q413

B: 3mV
C: 14.2V
E: -3mV

Q501

B: 13.6V
C: 14.3V
E: 14.4V

Q502

B: 0.7V
C: 0.05V
E: 0V

Q503

B: 0.8V / 0V (MUTE)
C: 1.3V / 25.2V (MUTE)
E: 0.05V

Q504

B: 0.05V
C: 3.8V
E: 0V

Q505

B: 14.2V / 13.6V (PROT.)
C: 0V / 14.2V (PROT.)
E: 14.3V

Q506

B: 0V / 0.6V (PROT.)
C: 14.2V / 0V (PROT.)
E: 0V

Q507-Q508

B: 5.5V
C: 14.3V
E: 5.2V

Q509-Q510

B: 5.5V
C: 0V
E: 5.2V

Q511-Q512-Q513-Q514

G: 4.2V
D: 14.4V
S: 0V

Q515

B: 16.2V
C: 25.6V
E: 15.6V

Q516

B: -16.2V
C: -25.6V
E: -15.6V

Q517

B: 24.8V / 25.6V (MUTE)
C: 25.5V / -14.3V (MUTE)
E: 25.6V

Q518

B: 0V / 0.6V (PROT.)
C: 14.0V / 0V (PROT.)
E: 0V

Q519

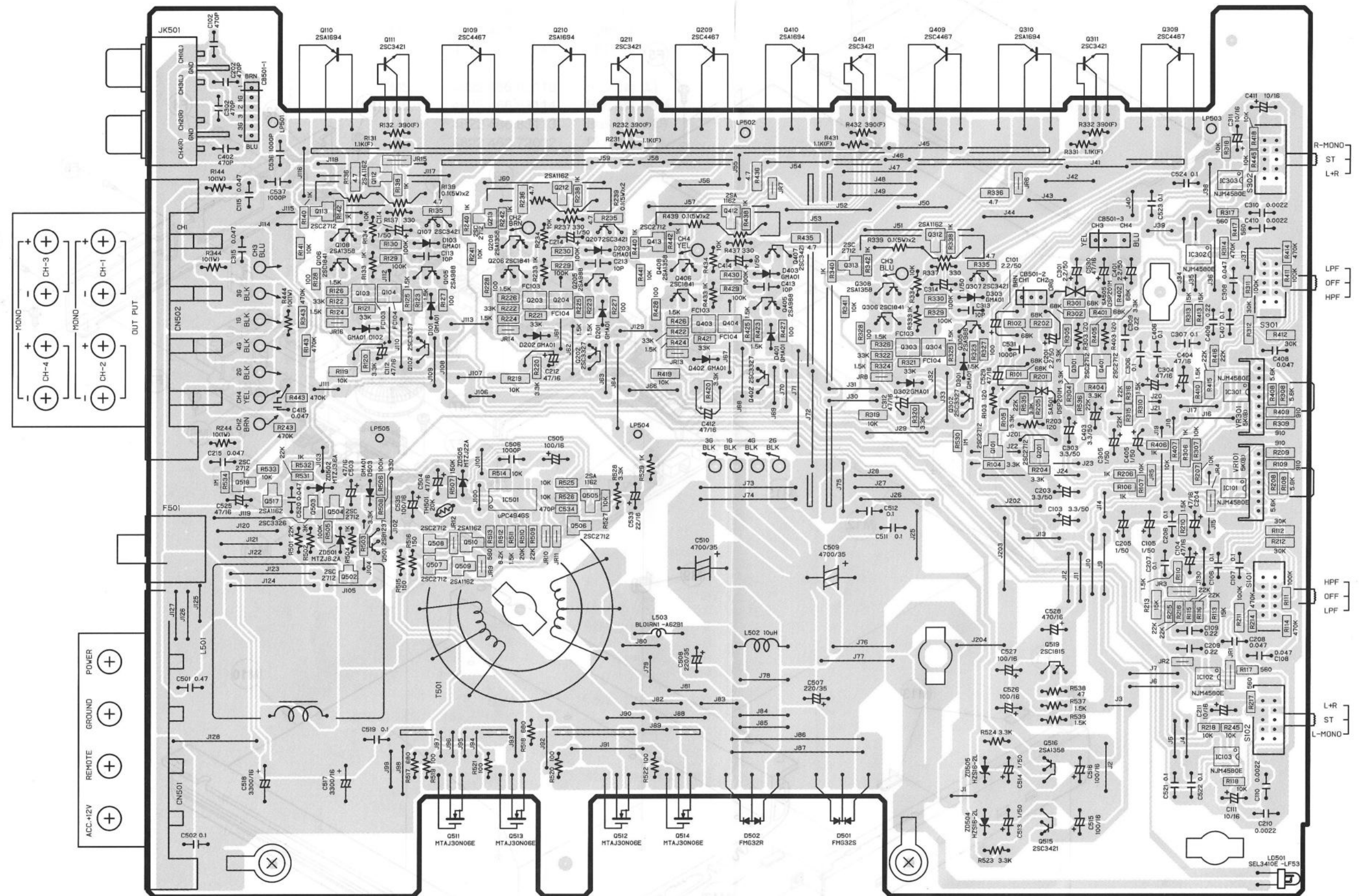
B: 15.3V
C: 15.4V
E: 14.7V

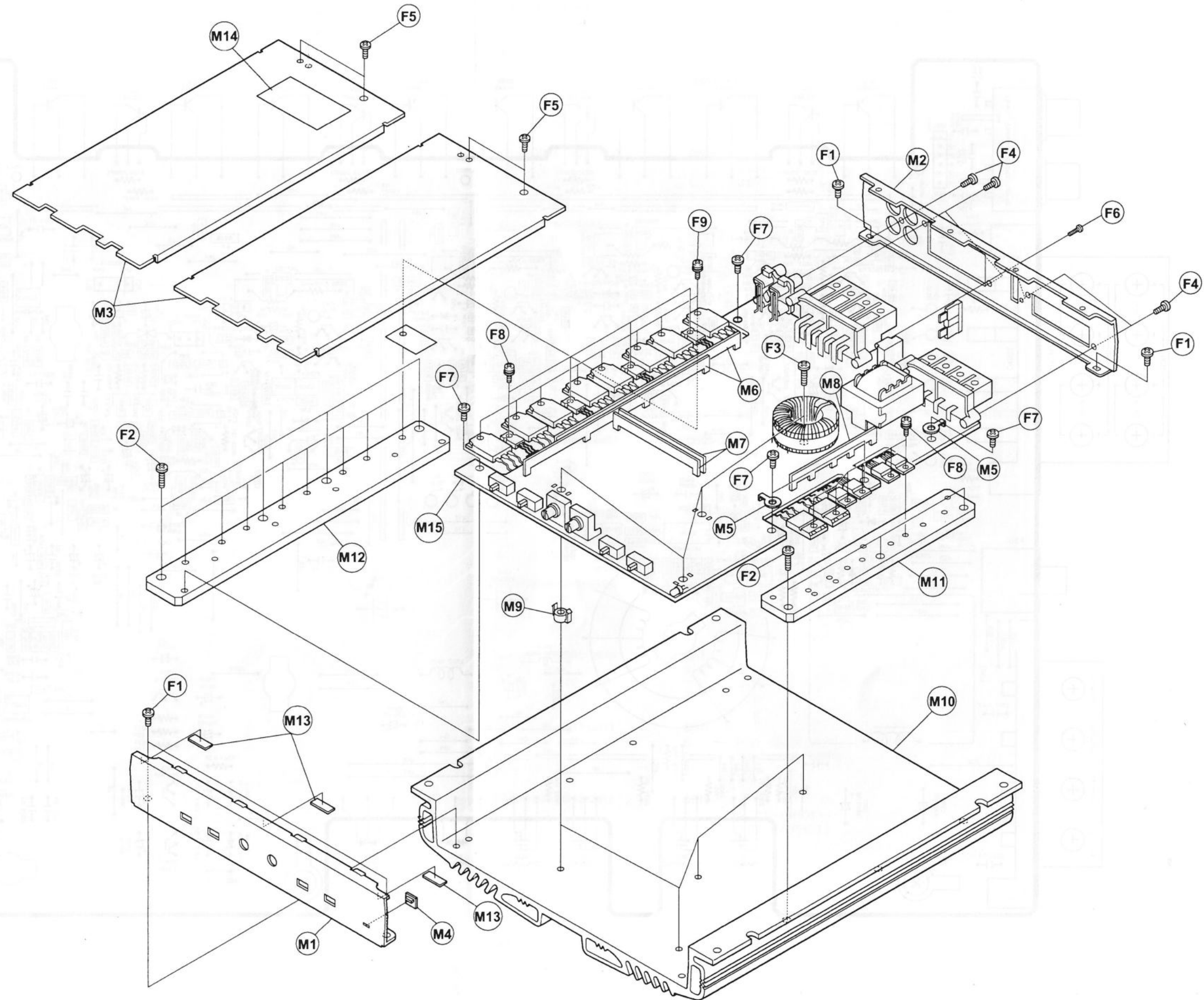
IC101-IC102-IC103**and****IC301-IC302-IC303**

PIN 1: 0V
PIN 2: 0V
PIN 3: 0V
PIN 4: -15.6V
PIN 5: 0V
PIN 6: 0V
PIN 7: 0V
PIN 8: 15.6V

IC501

PIN 1: 0.2V / 2.4V (PROT.)
PIN 2: 2.3V
PIN 3: 0.2V / 2.4V (PROT.)
PIN 4: 0.5V
PIN 5: 1.7V
PIN 6: 3.8V
PIN 7: 0V
PIN 8: 14.3V
PIN 9: 5.5V
PIN10: 5.5V
PIN11: 14.3V
PIN12: 14.3V
PIN13: 5.0V
PIN14: 5.0V
PIN15: 2.3V
PIN16: 0V / 14.2V (PROT.)







Mechanical parts DAP4040

M1	4822 459 04187	Front chassis
M2	4822 426 10196	Rear chassis
M3	4822 442 00399	Bottom cover
M4	4822 381 11742	LED lens
M5	4822 466 83118	Bus bar (L)
M6	4822 466 83114	Bus bar (PA)
M7	4822 466 83113	Bus bar (JD)
M9	4822 462 72032	Pcb support

Electrical parts DAP4040

For all resistors/capacitors/coils not mentioned here, refer to a 'Standard Component' catalogue.

AMPLIFIER PCB					
					
D101	4822 130 33993	GMA01	Q203	4822 130 63581	FC103
D102	4822 130 33993	GMA01	Q204	4822 130 63582	FC104
D103	4822 130 33993	GMA01	Q205	4822 130 42386	2SA988
D201	4822 130 33993	GMA01	Q206	4822 130 63583	2SC1841FA
D202	4822 130 33993	GMA01	Q207	4822 130 60354	2SC3421Y
D203	4822 130 33993	GMA01	Q208	4822 130 60353	2SC1358Y
D301	4822 130 33993	GMA01	Q209	4822 130 63433	2SC4467
D302	4822 130 33993	GMA01	Q210	4822 130 63307	2SA1694 P
D303	4822 130 33993	GMA01	Q211	4822 130 60354	2SC3421Y
D401	4822 130 33993	GMA01	Q212	4822 130 61311	2SA1162Y
D402	4822 130 33993	GMA01	Q213	4822 130 61355	2SC2712Y
D403	4822 130 33993	GMA01	Q301	4822 130 61355	2SC2712Y
D501	4822 130 83687	FMG32S	Q302	4822 130 63284	2SC3327A
D502	4822 130 83688	FMG32R	Q303	4822 130 63581	FC103
D503	4822 130 33993	GMA01	Q304	4822 130 63582	FC104
LD501	4822 130 83691	LED 3410E-LF53	Q305	4822 130 42386	2SA988
ZD501	4822 130 83251	Zener 6.2V	Q306	4822 130 63583	2SC1841FA
ZD502	4822 130 80316	Zener 3.6V	Q307	4822 130 60354	2SC3421Y
ZD503	4822 130 83685	Zener 22V	Q308	4822 130 60353	2SC1358Y
ZD504	4822 130 83686	Zener HZS16-2L	Q309	4822 130 63433	2SC4467
ZD505	4822 130 83686	Zener HZS16-2L	Q310	4822 130 63307	2SA1694 P
			Q311	4822 130 60354	2SC3421Y
Q101	4822 130 61355	2SC2712Y	Q312	4822 130 61311	2SA1162Y
Q102	4822 130 63284	2SC3327A	Q313	4822 130 61355	2SC2712Y
Q103	4822 130 63581	FC103	Q401	4822 130 61355	2SC2712Y
Q104	4822 130 63582	FC104	Q402	4822 130 63284	2SC3327A
Q105	4822 130 42386	2SA988	Q403	4822 130 63581	FC103
Q106	4822 130 63583	2SC1841FA	Q404	4822 130 63582	FC104
Q107	4822 130 60354	2SC3421Y	Q405	4822 130 42386	2SA988
Q108	4822 130 60353	2SC1358Y	Q406	4822 130 63583	2SC1841FA
Q109	4822 130 63433	2SC4467	Q407	4822 130 60354	2SC3421Y
Q110	4822 130 63307	2SA1694 P	Q408	4822 130 60353	2SC1358Y
Q111	4822 130 60354	2SC3421Y	Q409	4822 130 63433	2SC4467
Q112	4822 130 61311	2SA1162Y	Q410	4822 130 63307	2SA1694 P
Q113	4822 130 61355	2SC2712Y	Q411	4822 130 60354	2SC3421Y
Q201	4822 130 61355	2SC2712Y	Q412	4822 130 61311	2SA1162Y
Q202	4822 130 63284	2SC3327A	Q413	4822 130 61355	2SC2712Y
			Q501	4822 130 63584	2SB1237Q
			Q502	4822 130 61355	2SC2712Y
			Q503	5322 130 63229	2SC3326A
			Q504	4822 130 61355	2SC2712Y
			Q505	4822 130 61311	2SA1162Y

Q506	4822 130 61355	2SC2712Y	SA502	4822 130 10646	Surge protector
Q507	4822 130 61355	2SC2712Y	TH501	4822 111 92181	Thermistor
Q508	4822 130 61355	2SC2712Y	VR101	4822 100 30192	Potmeter 5K*2 log
Q509	4822 130 61311	2SA1162Y	VR301	4822 100 30192	Potmeter 5K*2 log
Q510	4822 130 61311	2SA1162Y	Accessories		
Q511	4822 130 10419	FET MTAJ30N06E	4822 320 11474	Power wire	
Q512	4822 130 10419	FET MTAJ30N06E	4822 320 11475	Ground wire	
Q513	4822 130 10419	FET MTAJ30N06E	4822 320 11472	Remote wire	
Q514	4822 130 10419	FET MTAJ30N06E	4822 736 14431	Instructions f. use	
Q515	4822 130 60354	2SC3421Y	4822 321 62456	Ad. cable EA6197	
Q516	4822 130 60353	2SC1358Y			
Q517	4822 130 61311	2SA1162Y			
Q518	4822 130 61355	2SC2712Y			
Q519	4822 130 41947	2SC1815Y			
					
IC101	4822 209 33467	NJM4580E			
IC102	4822 209 33467	NJM4580E			
IC103	4822 209 33467	NJM4580E			
IC301	4822 209 33467	NJM4580E			
IC302	4822 209 33467	NJM4580E			
IC303	4822 209 33467	NJM4580E			
IC501	4822 209 33466	UPC494GS			
					
L501	4822 157 10608	Choke			
L502	4822 157 10609	Coil 10µH			
L503	4822 157 53447	Coil BL01RN1			
T501	4822 146 10503	DC/DC transformer			
Miscellaneous					
CB501	4822 320 11473	Wire assy 6-p			
CN501	4822 265 10615	Terminal 4-p			
CN502	4822 265 10617	Terminal 8-p			
	4822 256 30515	Fuse holder			
F501	4822 071 23003	Fuse 30A			
JK501	4822 265 10618	RCA jack 4-p			
R139	4822 117 11192	Metal plate 0.1E*2			
R239	4822 117 11192	Metal plate 0.1E*2			
R339	4822 117 11192	Metal plate 0.1E*2			
R439	4822 117 11192	Metal plate 0.1E*2			
S101	4822 277 21738	Slide switch			
S102	4822 277 21738	Slide switch			
S301	4822 277 21738	Slide switch			
S302	4822 277 21738	Slide switch			
SA501	4822 130 10646	Surge protector			