DVD Receiver

MX2600/55

Service
Service
Service

Service Manual

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CLASS 1
LASER PRODUCT

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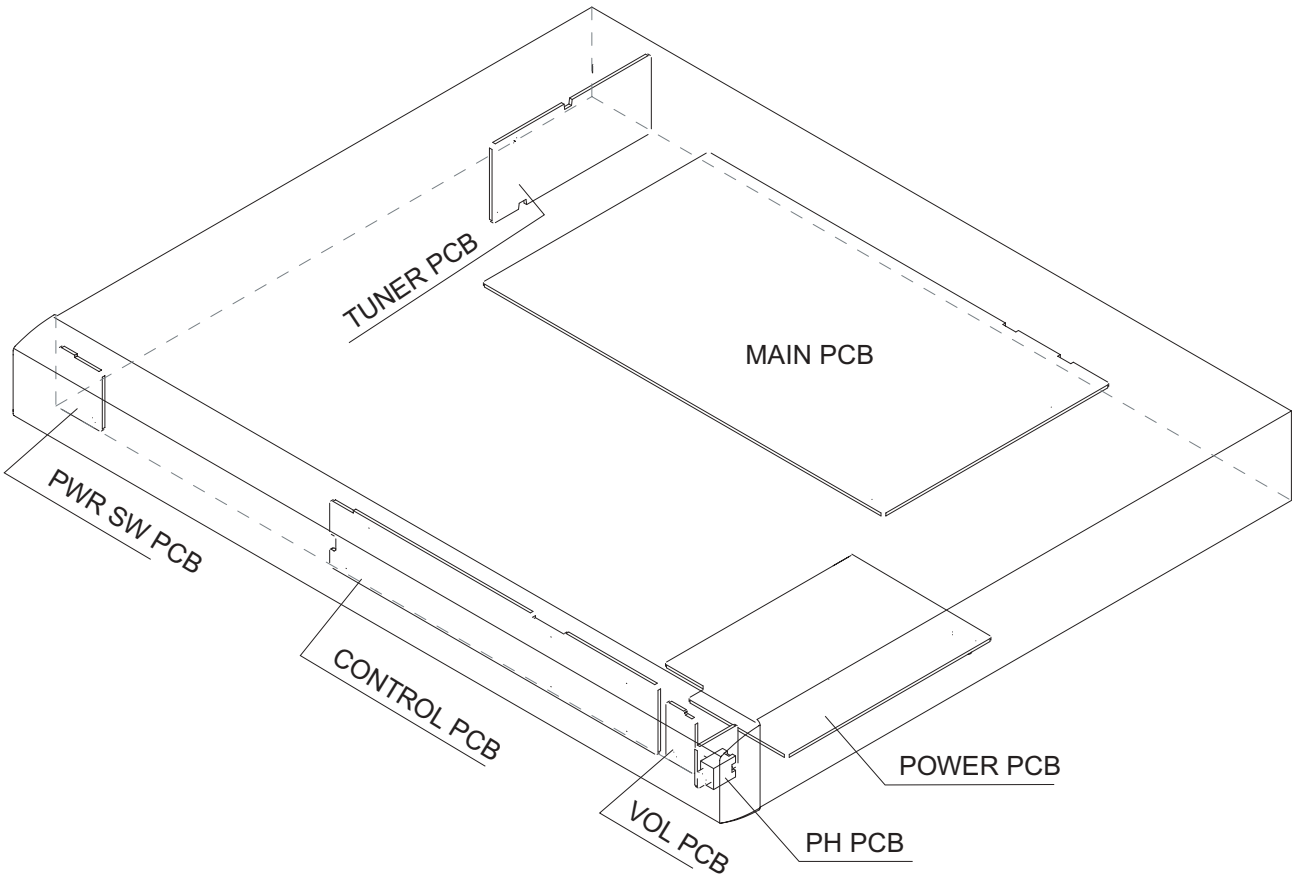
Version 1.0

PHILIPS

LOCATION OF PC BOARDS



VERSION VARIATION:

Type /Versions Features & Board in used:	MX2600 /55
RDS	
Rotary Encoder (volume control)	x
Aux Input	x
Digital Output	x
Line Output	x
Progressive scan	x
Power supply (110 / 220 V~)	x

SPECIFICATIONS

AMPLIFIER SECTION

PMPO Power 2400W
Output power(Home Theater Mode) 200W
..... 120W 1% THD
- Front ..... 20 W ①x 2
- Rear ..... 20 W ①x 2
- Centre ..... 20 W ①
- Subwoofer ..... 20W ②
Frequency Response ..... 180 Hz – 14 kHz / ±3 dB
Signal-to-Noise Ratio ..... > 60 dB (A-weighted)
Input Sensitivity
- AUX In ..... 450 mV
- TV In ..... 450 mV

① 4 ohm, 160 Hz - 20 kHz, 1%THD
② 4 ohm, 40 Hz - 160 Hz, 1%THD

TUNER SECTION

Tuning Range ..... FM 87.5 – 108 MHz
..... AM 530 – 1710 kHz
..... AM 531 - 1602 kHz
26 dB Quieting Sensitivity ..... FM 22 dBf
26 dB Quieting Sensitivity ..... AM 5000 μV/m
IF Rejection Ratio ..... FM 60 dB
..... AM 24 dB
Signal-to-Noise Ratio ..... FM 50 dB
..... AM 30 dB
AM Suppression Ratio ..... AM 30 dB
Harmonic Distortion ..... FM Mono 3%
..... FM Stereo 3%
..... AM 5%
Frequency Response ..... FM 180 Hz – 10 kHz
Stereo Separation ..... FM 26 dB (1 kHz)
Stereo Threshold ..... FM 23.5 dB

DISC SECTION

Laser Type ..... Semiconductor
Disc Diametre ..... 12cm / 8cm
Video Decoding ..... MPEG-2 / MPEG-1
Video DAC ..... 10 Bits
Signal System ..... PAL / NTSC
Video Format ..... 4:3 / 16:9
Video S/N ..... 56 dB (minimum)
Composite Video Output ..... 1.0 Vp-p, 75 Ω
S-Video Output ..... Y - 1.0 Vp-p, 75 Ω
..... C - 0.286 Vp-p, 75 Ω
Audio DAC ..... 24 Bits / 96 kHz
Frequency Response ..... 4 Hz – 20 kHz (44.1 kHz)
..... 4 Hz – 22 kHz (48 kHz)
Digital Output ..... SPDIF (Sony Philips
..... digital interface) Coaxial
- Dolby Digital ..... IEC 60958, IEC 61937

MAIN UNIT

Power Supply Rating ..... 110 / 220 V; 50 - 60Hz
Power Consumption ..... 110 W
Dimensions (w x h x d) ..... 435 x 53 x 359 (mm)
Weight ..... 5.59 kg

FRONT SPEAKERS

Front/Rear speakers
System ..... 2 ways
Impedance ..... 4 Ω
Speaker drivers ..... 3” full range with piezo
Frequency response ..... 160 Hz – 20 kHz
Dimensions (w x h x d) ..... 95 x 150 x 90 (mm)
Weight ..... 0.54 kg (Front speaker)
..... 0.64 kg (Rear speaker)
(Front speakers are magnetically shielded)

SPEAKERS

System ..... 2 way
Impedance ..... 4 Ω
Speaker drivers ..... 3” full range woofer with piezo
Frequency response ..... 160 Hz – 20 kHz
Dimensions (w x h x d) ..... 250 x 94 x 84 (mm)
Weight ..... 1.05 kg

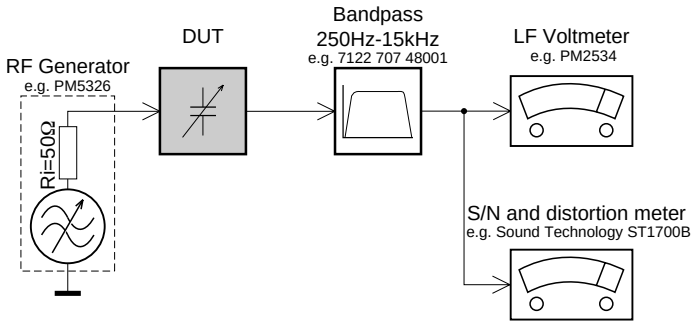
PASSIVE SUBWOOFER

Impedance ..... 4 Ω
Speaker drivers ..... 6.5” woofer
Frequency response ..... 40 Hz – 160 Hz
Dimensions (w x h x d) ..... 230 x 222 x 360 (mm)
Weight ..... 3.68 kg

Specifications subject to change without prior notice

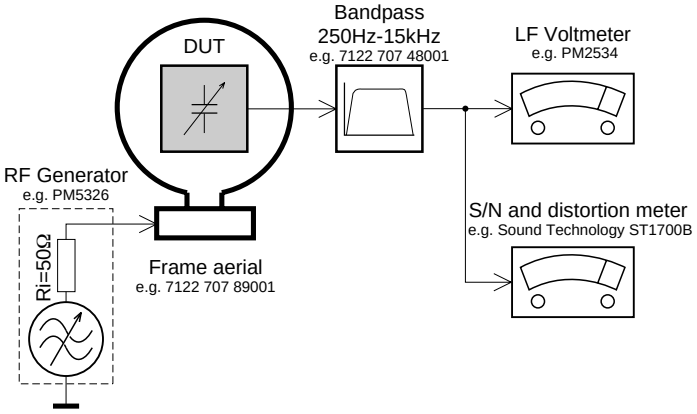
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilottone (19kHz, 38kHz).

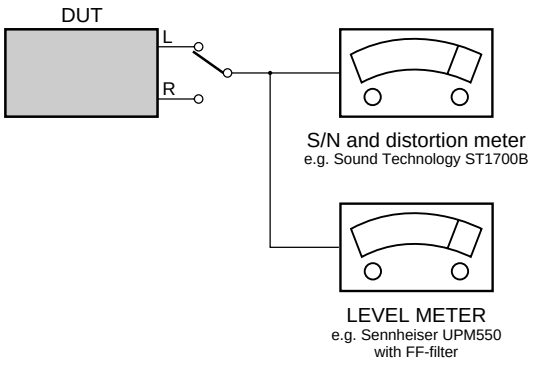
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday´s cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

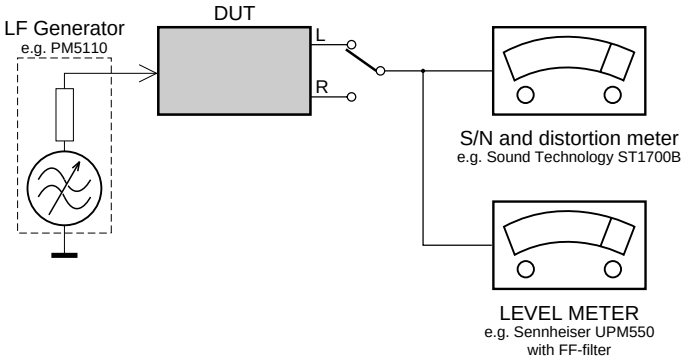
CD

Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)



Recorder

Use Universal Test Cassette **CrO2** SBC419 4822 397 30069
or Universal Test Cassette **Fe** SBC420 4822 397 30071



SERVICE AIDS

Service Tools:

Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6-T20 .....4822 395 50145
Torx driver T10 extended 4822 395 50423

Compact Disc:

SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

ESD

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kan die Lebensdauer drastisch reduzieren.
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB) ESD PROTECTION EQUIPMENT

Complete Kit ESD3 (small tablemat, wristband, connection box, estention cable and earth cable 4822 310 10671
Wristband tester 4822 344 13999

(GB)

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

Safety components are marked by the symbol ⚠ .

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

De Veiligheidsonderdelen zijn aangeduid met het symbol ⚠ .

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utiliséés les piéces de rechange identiques à celles spécifiées.

Less composants de sécurité sont marqués ⚠ .

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Original zustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

(I)

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

Componenty di sicurezza sono marcati con ⚠ .

(GB)

After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist, The leakage current must not exceed 0.5mA.

(GB) Warning !

Invisible laser radiation when open.
Avoid direct exposure to beam.

(S) Varning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

(SF) Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

(DK) Advarse !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

(F)

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

Pb(Lead) Free Solder

When soldering , be sure to use the pb free solder.

INDENTIFICATION:
Regardless of special logo (not always indicated) 

one must treat all sets from **1 Jan 2005** onwards, according next rules:

Important note: In fact also products of year 2004 must be treated in this way as long as you avoid mixing solder-alloys (leaded/ lead-free). So best to always use SAC305 and the higher temperatures belong to this.

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-paste is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
  - To reach at least a solder-temperature of 400°C,
  - To stabilize the adjusted temperature at the solder-tip
  - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature around 360°C – 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (leaded and lead-free).
  If one cannot avoid or does not know whether product is lead-free, clean carefully the solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).
- Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.
- Special information for BGA-ICs:

– Always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use the lead-free temperature profile, in case of doubt)

– Lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. (MSL=Moisture Sensitivity Level). This will be communicated via AYS-website.
  Do not re-use BGAs at all.

- For sets produced before 1.1.2005 (except products of 2004), containing leaded solder-alloy and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
- On our website **www.atyourservice.ce.Philips.com** you find more information to:

  - BGA-de-/soldering (+ baking instructions)
  - Heating-profiles of BGAs and other ICs used in Philips-sets

  You will find this and more technical information within the "magazine", chapter "workshop news".

  For additional questions please contact your local repair-helpdesk.

System, Region code, Tuner, etc. setting procedure

1) System Reset

a) Press "SYSTEM" button on R/C. TV show "SETUP"
b) Select the menu using the "▼" and "►" button on R/C
c) Go feature setup page to do system reset

2) Region Code Change

After replacement / repair of the MPEG board, the customer setting and the region code may lost. Changing the Region code will put the player back in the state which it has left the factory.

Region Code

1	USA
2	EU
3	AP
4	Australia, NZ, Latam
5	RUSSIA, INDIA
6	CHINA

TV System

1	NTSC
2	PAL
3	AUTO

AFS

001	LX3000D/HTS3400/MRD130/ MX2600
002	MX3600D/MX3800
003	LX3700D/LX3750W
005	MRD210
006	MX3660D
008	FW-D550/FWD570
010	MRD120/MX6050

oem derivative

08

- region code = 1 digit
- tv system = 1 digit
- "as/menu lang" = 1 digit
- "AFS" = "architechture Feature Set" = 3 digits

This field is used to define the architecture / features sets for each product.

- "oem derivative" = 2 digit

This field is use to define the OEM set. This will affect the background display.

Hence in total, reprograming will be done by way of the remote control. It should run as below :-

a) Put the player in No disc loaded.
b) Press the following key on remote control:

For MX2600/55 (LATAM) :
<PLAY> <159> <411> <001> <08> <PLAY>

✱ After the Region Code is changed it is necessary to reset the system so that the new Region Code will be fully effective. All customer setting will be lost.

✱ On top of the maximum number of times allowed for changing the region code is changed to 25.

✱ When the counter reach 25, you will not be able to further change the code until you reset the timer by the Region Code timer reset procedure

CAUTION !

This information is confidencial and may not be distributed. Only a qualified service person should reprogram the Region Code.

2-1

3) Region code change timer reset

Press below key to reset the timer :
a) In no disc mode.
b) Press R/C "Play -159-PLAY" to reset timer to 25

4) Tuner area change

a) Press the "OPEN/CLOSE" button to open the set's door
b) Press "1" "5" "9" button by using R/C.
c) TV Show "TUNER AREA"
d) Select the tuner area you want by using the "▼ " and "►" button on R/C, then press "OK" to confirm, TV show "TUNER AREA CHANGED"
If you didn't press it in five seconds, the system will remain original status.

AREA	BAND	FREQUENCY (Hz)		STEP(Hz)
LATAM(55)	FM	87.5M	108 M	50 K
	AM	531K	1602 K	9 K
		530K	1710 K	10 K

Note:-

Please refer to the above different tuner area.

5) Video Out Change

a) Press "SYSTEM" on R/C button
b) Select the menu using the "▼" and "►" button on R/C
c) Go picture setup page select Video out item.

6) Password Change

a) Press "SYSTEM" on R/C button
b) Select the menu using the "▼" and "►" button on R/C
c) Go feature setup page select "PASSWORD". TV show "ENTER CODE".Press 4 times of "STOP" button on R/C.
d) Select "PARENTAL" "8 ADULT" on TV.
e) Enter PASSWORD to "1234".
✱ "1234" is a default password supplied.

7) Checking on the Software version

a) Open the CD door.
b) Press "123" and "OK" on the remote control.
c) TV will show the version on screen.

8) Upgrading new software

a) Open the door, then insert the CD-R program disc.
b) Close the door.
c) TV will show:-
- "disc loading"
- "bank30.rom"
- "writing" about 6 seconds.
- "Done"

✱ The latest upgraded is in version VER050131_20.

2-2

REPAIR INSTRUCTIONS (1 of 2)

MAIN UNIT REPAIR CHART

- A — All Function No Working
- B — Power Supply No Working
- C — All Function No Sound
- D — Earphone No Sound
- E — Audio Line No Output
- G — DVD Audio No Sound
- H — Aux/TV in No Sound
- I — Tuner No Sound

A — All Function No Working

- Check All System All cable is loose or bad INT — Yes → RE−insert and fix the cable
- No → Panel stand LED show Working or Not — Not → Check Back power PCB F904 Bad Cause Damage — Bad → Change F904
  - Ok → Check RB904 Pin1 +5V affirm Correct — No → Repair Between T901 Circuit
    - Yes → Check Repair Control PCB IC201,IC202 and Their conjoint part
  - Work → Check CN901 Pin2=(8V) affirm Correct — No → Check Repair Switch Power Supply Circuit (See B)
    - Correct → Check SERVO PCB Check IC208 Pin3=3.3V Check IC209 Pin3=2.3V — Yes → Check Repair IC201,IC203,IC205,IC204, IC206,IC207,IC208,IC209, IC210, Circuit

B — Power Supply No Working

- All Voltage No Output — No → +/−17 V Voltage No Output → Check F901 F902,and its conjoint part
  - No → +8V Voltage No Output → Check F903 and its conjoint part
  - No → +5 V Voltage No Output → Check T901 and its conjoint part
- Yes → Check F904 Bad Cause Damage — Yes → Repair The Parts
  - No → Check RL901 Working or Not — No → Check RL901 and its conn circuti — No → Check Repair Q902 and its conn circuti
    - Yes → Check POWER TRANSFORMER Working or Not — Yes → Repair The Parts

C — All Function No Sound

- affirm Earphone Sound output OK or NO — No → (See Contents D)
  - Ok → Check CN901 Pin6 Voltage=+17V Pin4 Voltage=−17V — No → (See Contents B)
    - Yes → Check IC501,IC502,IC503 Voltage Correct is OK — No → Check Repair CN901 and its conjoint part
      - Yes → Check IC501,IC502,IC503 PIN5 Voltage Is 0V — No → Check Repair Q507,Q508, and its conjoint part

D — Earphone No Sound

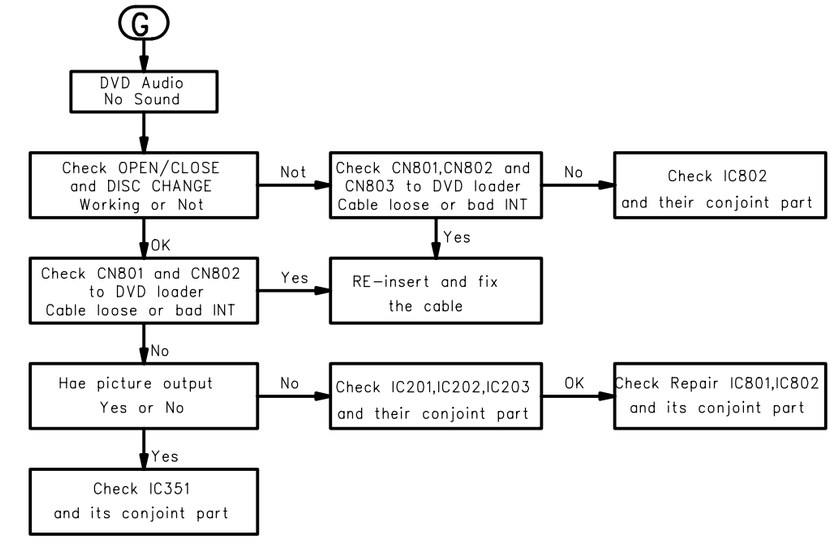
- Check Audio Line output Ok or No — No → (See Contents E)
  - Ok → Check Between RB5001 to CN5001 Cable loose or INT — Yes → RE−insert and fix the cable
    - No → Check IC5001 Pin8 Voltage Correct is 6.3v — No → Check Repair Q5002 and its conjoint part
      - Yes → Check IC5001, IC404 and its conjoint part — OK → Check IC405 and its conjoint part

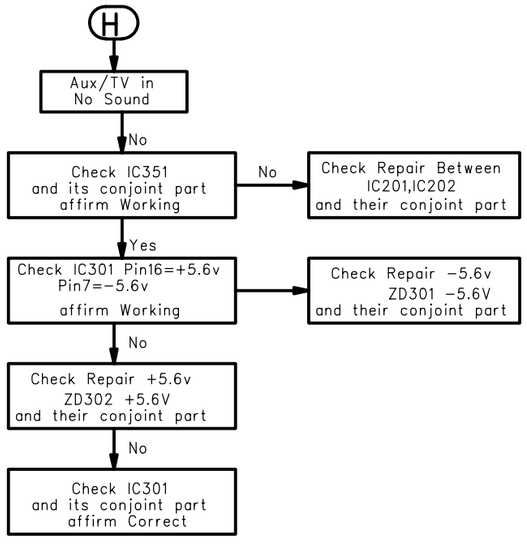
E — Audio Line No Output

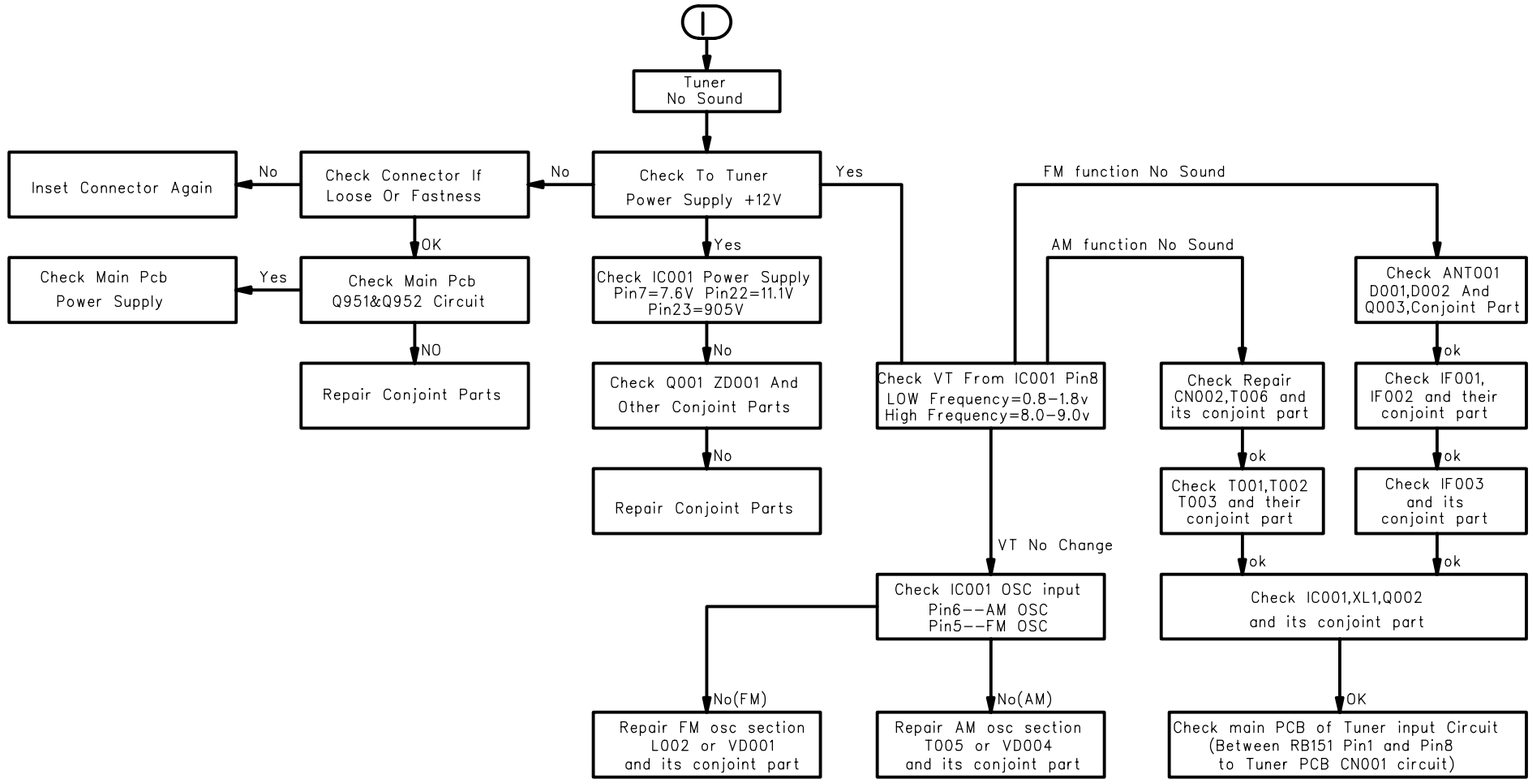
- DVD and Tuner Function Audio Line No oUTPUT — No → Tuner Function Audio Line No oUTPUT (See Contents I)
- DVD and Tuner Function Audio Line No oUTPUT — NO → DVD Function Audio Line No oUTPUT (See Contents G)
  - Yes → Check IC405 Pin4 +5V Check IC405 Pin30 −5V — No → Check Repair ZD401 +5.6V and its conjoint part
  - Check IC405 Pin4 +5V Check IC405 Pin30 −5V — NO → Check Repair ZD402 −5.6V and its conjoint part
    - Yes → Check IC351 and its conjoint part

2-3

REPAIR INSTRUCTIONS (2 of 2)







DISASSEMBLY INSTRUCTIONS

Dismantling of the Front Panel Assembly

1) Open the DVD Tray by using the Open/Close Button while the Set is ON and disconnect the mains supply after removing the Tray Cover.

   Note: If this is not possible, the DVD Tray has to be open manually.

   Take a mini screw driver about 2mm diameter and make a marking 24mm from the tip as shown in figure 2. place the set on its side, insert the mini screw driver till the marking and slide it towards the right as shown in figure 1 until the Tray moves out of the Front Panel.

2) Return the set to its upright position and remove the Tray Cover as shown in Figure 3 and close the tray manually by pushing it back in.

3) Loosen 9 screws and remove the Top Cover by lifting the rear portion upwards before sliding it out towards the rear.
   - 5 screws on the back
   - 2 screws each on the left & right side

4) Loosen 7 screws & lift up the top edge of Front Panel assembly to free some catches before sliding it out towards the front.
   - 4 screws on the bottom
   - 1 screw on the inside.
   - 1 screw each on the left & right side

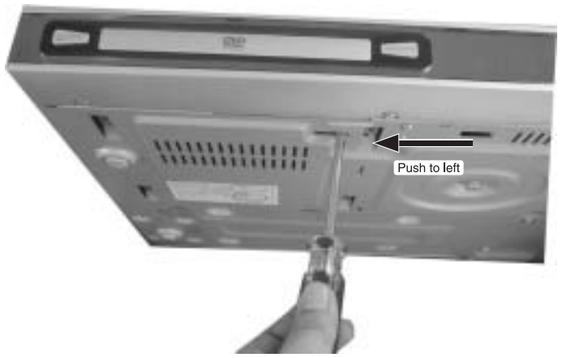


Figure 1

Figure 2

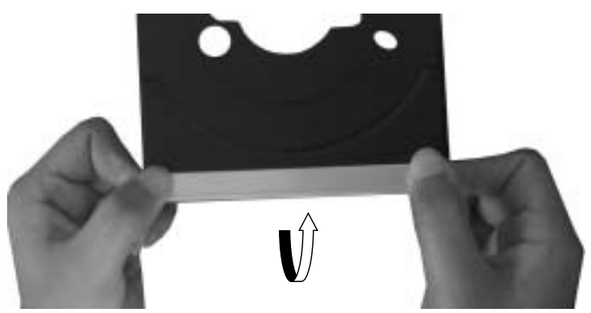


Figure 3

3-1

Dismantling of the DVD Module

1) Loosen 4 screws "A" to remove the DVD Module as shown in figure 4.

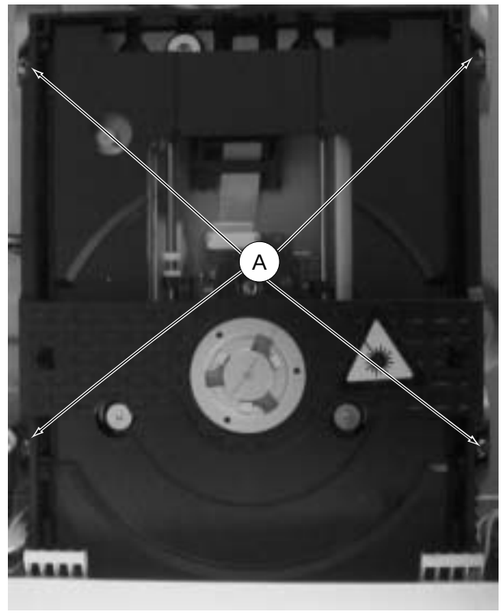


Figure 4

Dismantling of the Power Board

1) Loosen 2 screws "C" at the top of the Power Board as shown in figure 5
2) Release 2 catches "B" at the top of the Power Board as shown in figure 5

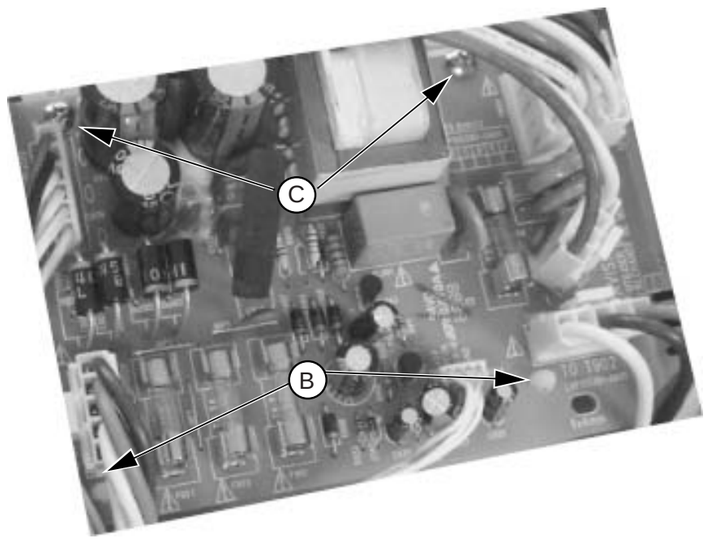


Figure 5

Dismantling of the Main & Tuner PCB

1) Loosen 10 screw " D " at the back panel as shown in figure 6.

2) Loosen 4 screw " E " on the top of main board and loosen 2 screw on the bottom panel as shown in figure 7

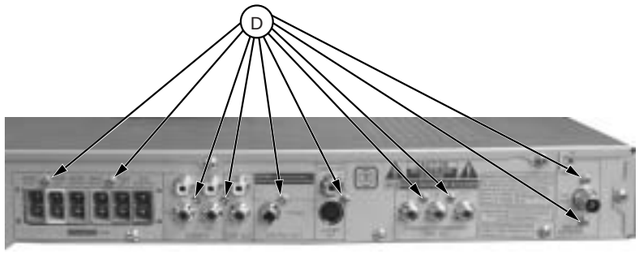
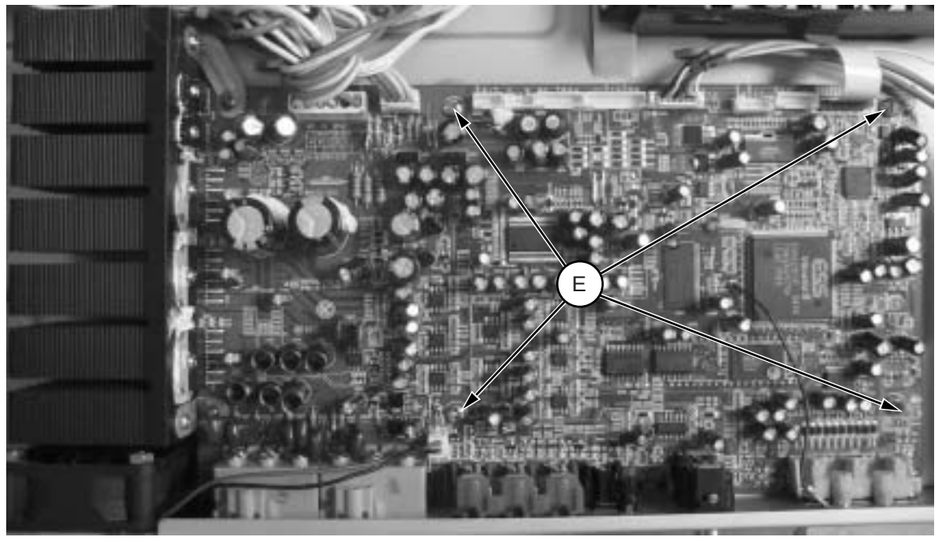


Figure 6



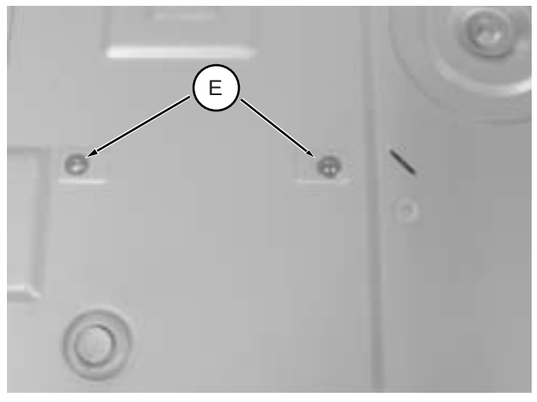
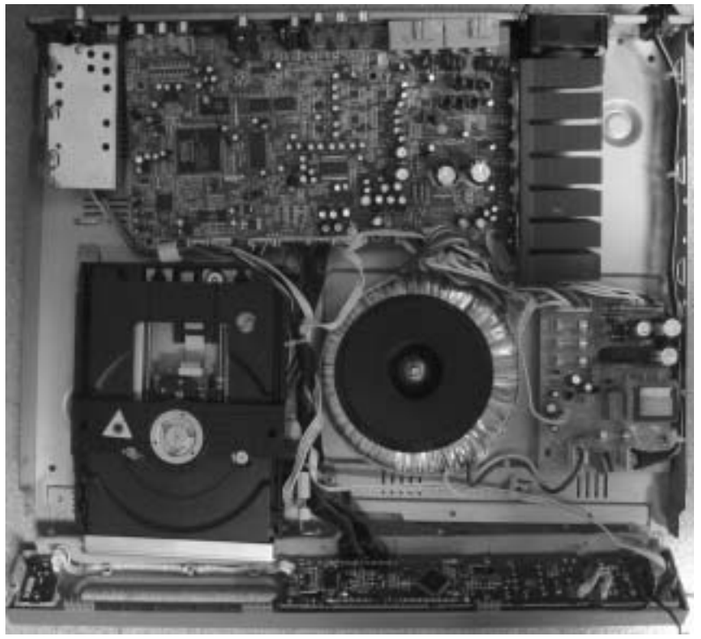


Figure 7

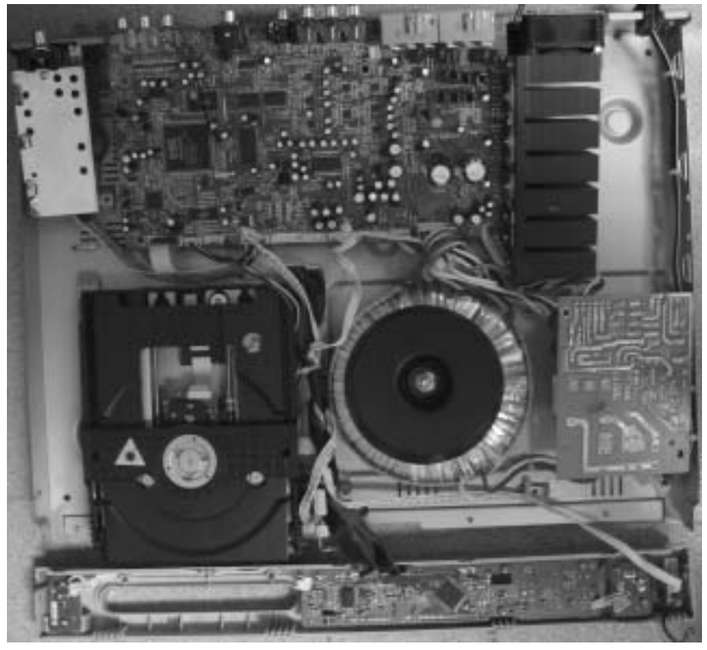
SERVICE POSITIONS

Service position A



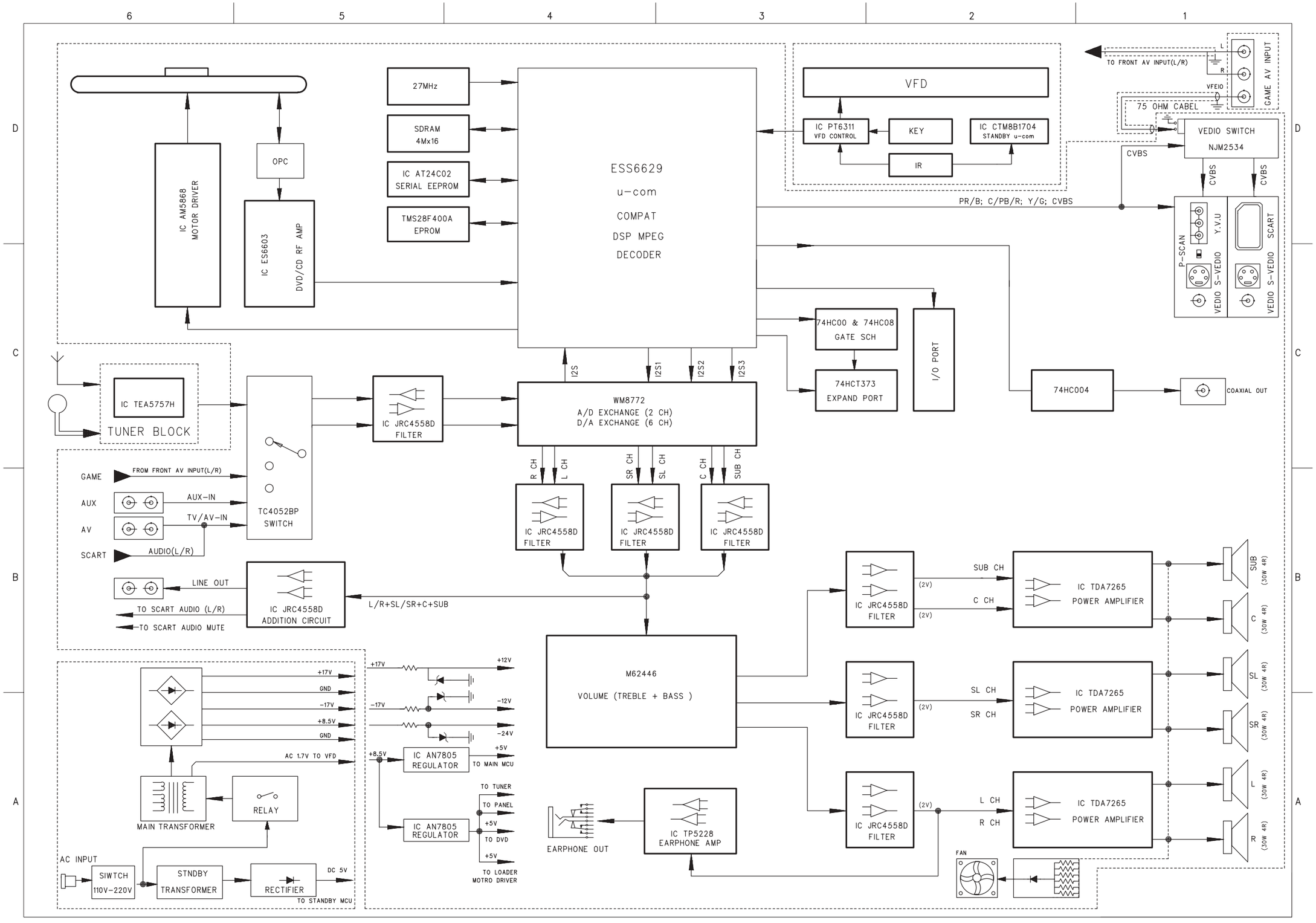
Note: In some service positions the components or copper patterns of one board may risk touching its neighbouring pc boards or metallic parts. To prevent such short-circuit use a piece of hard paper or other insulating material between them.

Service position B



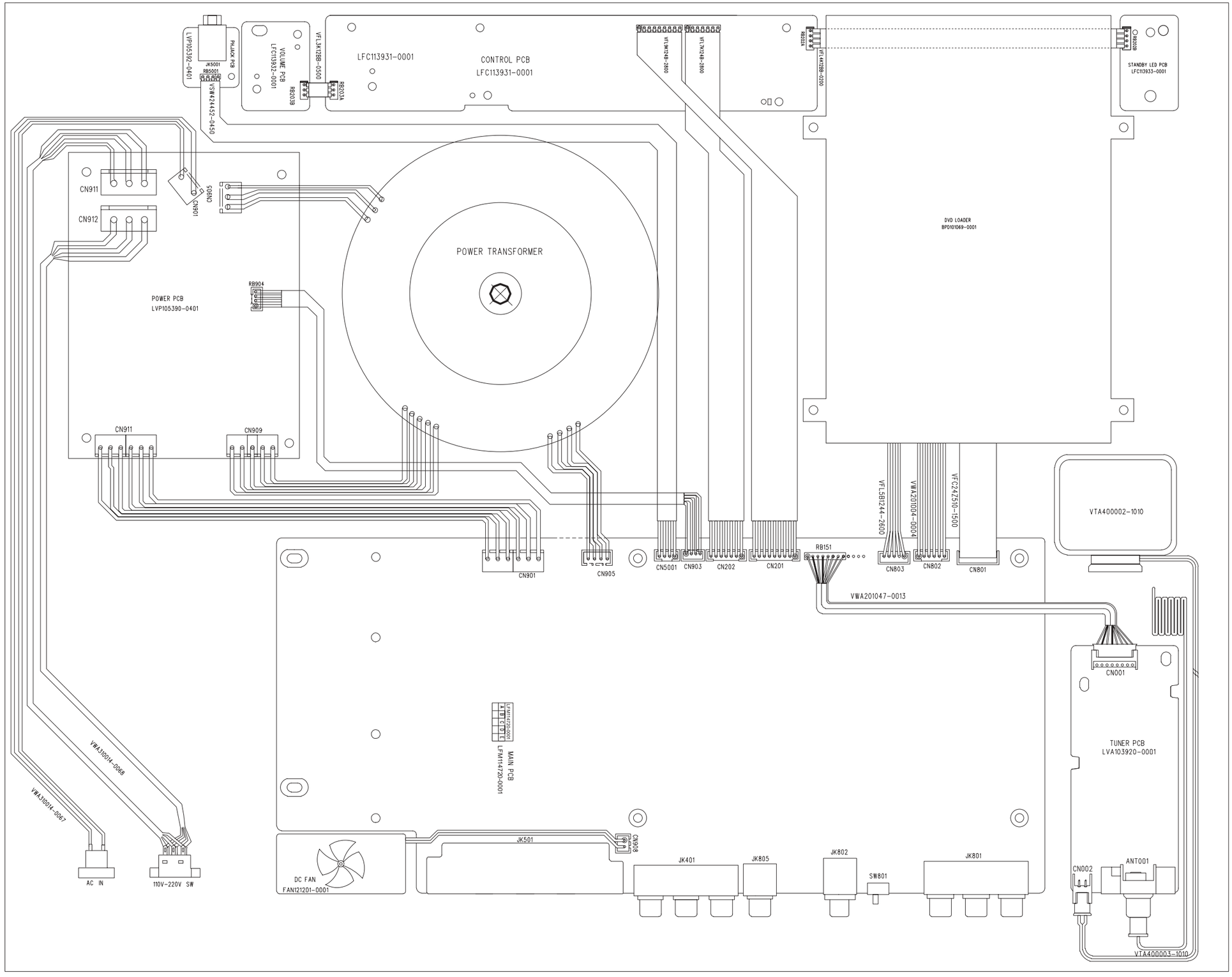
4-1

BLOCK DIAGRAM



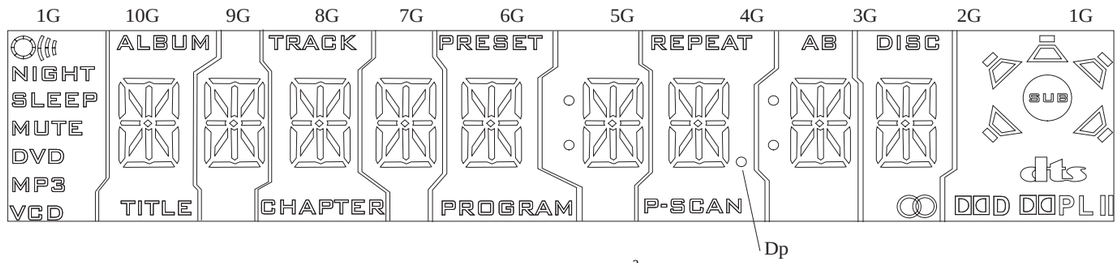
4-2

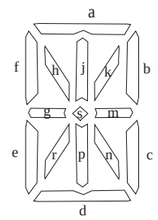
WIRING DIAGRAM



KEY (CONTROL / STANDBY / VOL) BOARD

FTD DISPLAY PIN ASSIGNMENT





(2G - 10G)

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	a	a	
P2	b	b	b	b	b	b	b	b	b	
P3	f	f	f	f	f	f	f	f	f	
P4	h	h	h	h	h	h	h	h	h	SUB
P5	j	j	j	j	j	j	j	j	j	
P6	k	k	k	k	k	k	k	k	k	
P7	m	m	m	m	m	m	m	m	m	dts
P8	s	s	s	s	s	s	s	s	s	DOLBY DIGITAL
P9	g	g	g	g	g	g	g	g	g	DOLBY PL
P10	c	c	c	c	c	c	c	c	c	II
P11	e	e	e	e	e	e	e	e	e	
P12	r	r	r	r	r	r	r	r	r	NIGHT
P13	p	p	p	p	p	p	p	p	p	SLEEP
P14	n	n	n	n	n	n	n	n	n	MUTE
P15	d	d	d	d	d	d	d	d	d	DVD
P16						Col	Dp	Col		MP3
P17	ALBUM		TRACK		PRESET		REPEAT	A	DISC	V
P18	TITLE		CHAPTER		PROGRAM		P-SCAN	B		CD

PIN CONNECTION

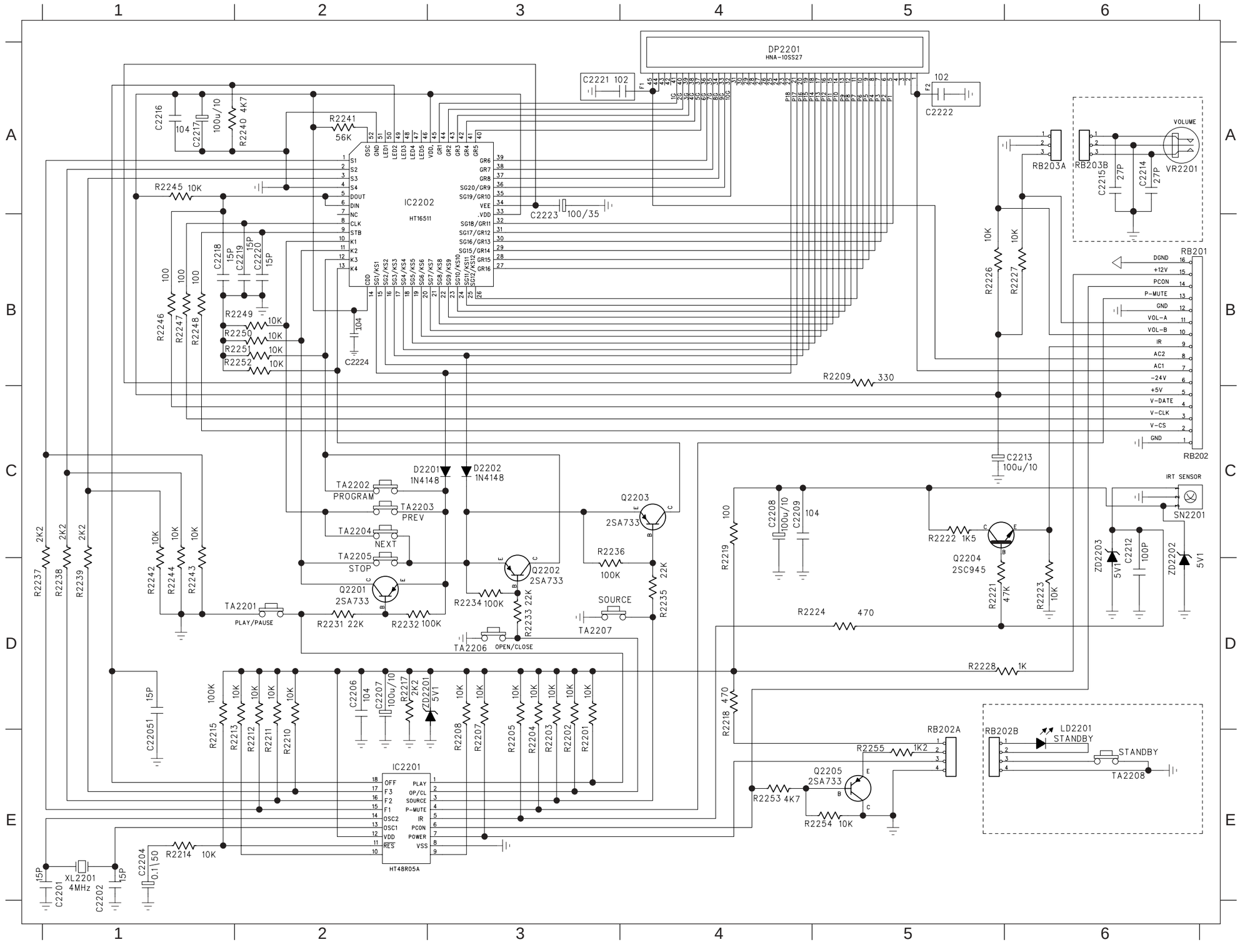
PIN NO.	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	F2	F2	NP	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	NX	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	NP	F1	F1								

Note

1. Fn: Filament pin
2. NP : No Pin
3. NX : No Extended Pin
4. nG : Grid Pin
5. PN : Anode Pin

5-2

CIRCUIT DIAGRAM - KEY BOARD

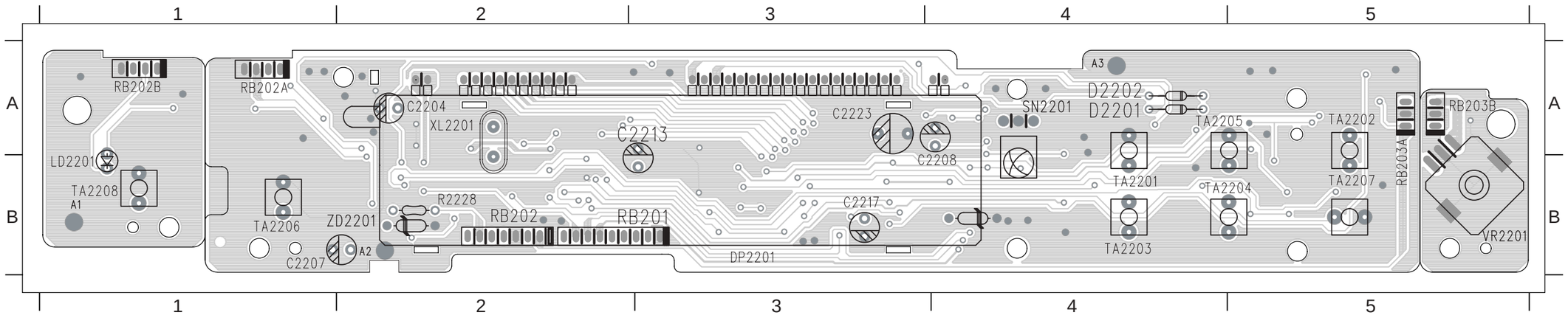


C2201	E1	R2251	B2
C2202	E1	R2252	B2
C2204	E1	R2253	E4
C2206	D2	R2254	E5
C2207	D2	R2255	E5
C2208	C4	RB201	B6
C2209	C4	RB202	C6
C2212	D6	RB202A	E5
C2213	C5	RB202B	E5
C2214	A6	RB203A	A6
C2215	A6	RB203B	A6
C2216	A1	SN2201	C6
C2217	A1	TA2201	D2
C2218	B1	TA2202	C2
C2219	B2	TA2203	C2
C2220	B2	TA2204	C2
C2221	A4	TA2205	C2
C2222	A5	TA2206	D3
C2223	A3	TA2207	D3
C2224	B2	TA2208	E6
C22051	D1	VR2201	A6
D2201	C2	XL2201	E1
D2202	C3	ZD2201	D3
DP2201	A4	ZD2202	D6
IC2201	E2	ZD2203	D6
IC2202	A2		
LD2201	E6		
Q2201	D2		
Q2202	D3		
Q2203	C4		
Q2204	D5		
Q2205	E5		
R2201	D3		
R2202	D3		
R2203	D3		
R2204	D3		
R2205	D3		
R2207	D3		
R2208	D3		
R2209	B5		
R2210	D2		
R2211	D2		
R2212	D2		
R2213	D2		
R2214	E1		
R2215	D1		
R2217	D2		
R2218	D4		
R2219	C4		
R2221	D5		
R2222	C5		
R2223	D6		
R2224	D5		
R2226	B5		
R2227	B6		
R2228	D5		
R2231	D2		
R2232	D2		
R2233	D3		
R2234	D3		
R2235	D4		
R2236	D3		
R2237	D1		
R2238	D1		
R2239	D1		
R2240	A2		
R2241	A2		
R2242	D1		
R2243	D1		
R2244	D1		
R2245	A1		
R2246	B1		
R2247	B1		
R2248	B1		
R2249	B2		
R2250	B2		

5-3

PCB LAYOUT - KEY BOARD (TOP)

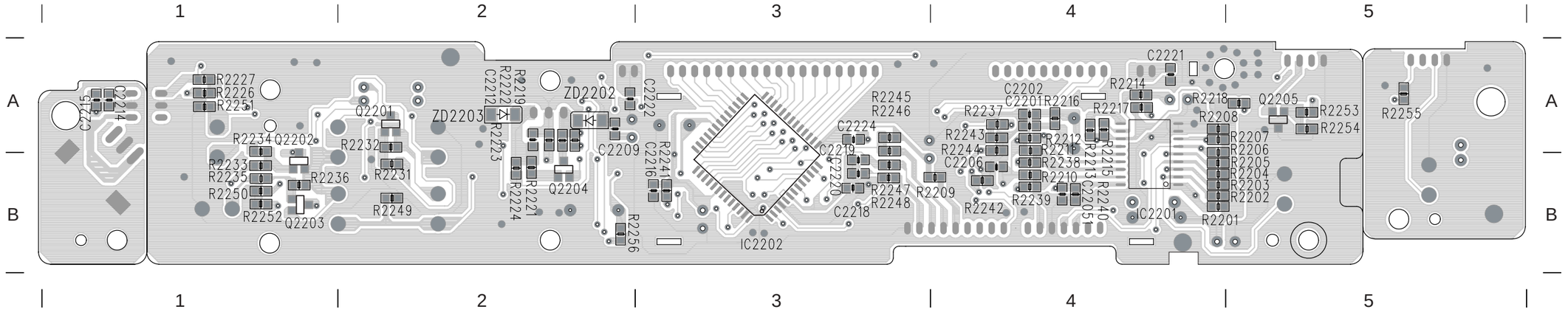
C2204	A2	D2201	A4	RB202	B2	TA2201	B4	TA2207	B5	A2	B2
C2207	B1	D2202	A4	RB202A	A1	TA2202	A5	TA2208	B1	A3	A4
C2208	B4	DP2201	B3	RB202B	A1	TA2203	B4	VR2201	B5		
C2213	A3	LD2201	B1	RB203A	A5	TA2204	B4	XL2201	A2		
C2217	B3	R2228	B2	RB203B	A5	TA2205	A4	ZD2201	B2		
C2223	A3	RB201	B2	SN2201	A4	TA2206	B1	A1	B1		



PCB LAYOUT - KEY BOARD (BOTTOM)

C2201	A4	C2219	B3	Q2202	B1	R2207	A5	R2216	A4	R2227	A1	R2239	B4
C2202	A4	C2220	B3	Q2203	B1	R2208	A4	R2217	A4	R2231	B2	R2240	B4
C2206	B4	C2221	A4	Q2204	B2	R2209	B4	R2218	A4	R2232	A2	R2241	B3
C2209	A2	C2222	A3	Q2205	A5	R2210	B4	R2219	A2	R2233	B1	R2242	B4
C2212	A2	C2224	A3	R2201	B4	R2211	A4	R2221	B2	R2234	A1	R2243	A4
C2214	A1	C22051	B4	R2202	B5	R2212	A4	R2222	A2	R2235	B1	R2244	A4
C2215	A1	IC2201	B4	R2203	B5	R2213	A4	R2223	A2	R2236	B1	R2245	A3
C2216	B3	IC2202	B3	R2204	B5	R2214	A4	R2224	B2	R2237	A4	R2246	A3
C2218	B3	Q2201	A2	R2205	B5	SR2215	A4	R2226	A1	R2238	B4	R2247	B3

R2248	B3	ZD2202	A2
R2249	B2	ZD2203	A2
R2250	B1		
R2251	A1		
R2252	B1		
R2253	A5		
R2254	A5		
R2255	A5		
R2256	B2		



IC2201 (HT480051)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
VOLTAGE	5.1	5.1	5.1	0	5.1	0	5.1	0	0	4.9	4.9	5.2	0	0	0	0	0	0		

IC2202 (TP6311)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOLTAGE	0	0	0	0	3.8	3.8	0	3.8	3.7	0	0	0	0		19.7	-22.2	-22	-11.2	-19.9	-17.8
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
VOLTAGE	-21	-15.6	-13.4	-20	-13.4	-20	-22.4	-18	-20.3	-13.6	-15.8	-11.4	-4.6	-22.6	-20.4	-20.4	-20.4	-20.4	-20.4	-20.4
PIN	41	42	43	44	45	46	47	48	49	50	51	52								
VOLTAGE	-20.4	-20.4	-20.5	-20.4	4.6	4.6	4.6	4.6	0	4.6	0	4.6								

Q2201 (2SA733)

PIN	1	2	3
VOLTAGE	5	0	5

Q2202 (2SA733)

PIN	1	2	3
VOLTAGE	5	0	5

Q2203 (2SA733)

PIN	1	2	3
VOLTAGE	5	0	5

Q2204 (2SC1623)

PIN	1	2	3
VOLTAGE	4.6	4.2	4.2

Q2205 (2SA733)

PIN	1	2	3
VOLTAGE	5	0	5

TUNER BOARD

TUNER ADJUSTMENT TABLE

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (50kHz grid)			108MHz	check		6.5V ±0.2V
			87.5MHz	check		1.0V ±0.5V
AM 530-1710kHz (10kHz grid) (21L / 21L / 37S)			1602KHz	check		7.8V ±0.2V
			531KHz	T005		1.1V ±0.5V
			1700KHz	check		8.0V ±0.1HV
			530KHz	T005		1.1V ±0.2V
FM - IF						
FM	10.7MHz, 50mV continuous wave		IC001 23 short circuit to block AFC 200P	No need to adjust		fo Max Symmetric
FM - RF						
FM	108MHz	mod=1kHz Δf=±22.5kHz	106MHz	VC001	MAX	MAX
	87.5MHz		90.1MHz	L001		
AM IF						
AM	450kHz Connect pin 29 of IC001 (AM Osc.) with short wire to ground (pin 6)	Δf = ±15kHz V_{RF} = 3mV	IC001 24 100nF R220	T001 T002	MAX	max. f_o symmetric
AM AFC **MW**		ΔV=mV		T003		
AM RF 3)						
MW	1404kHz	Δf = ±30kHz V_{RF} as low as possible	1404kHz	VC001	MAX	max. f_o symmetric
	576kHz		612kHz	T006		
	1400kHz		1400kHz	VC002		
	610kHz		610kHz	T006		

Use Service Testprogram. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

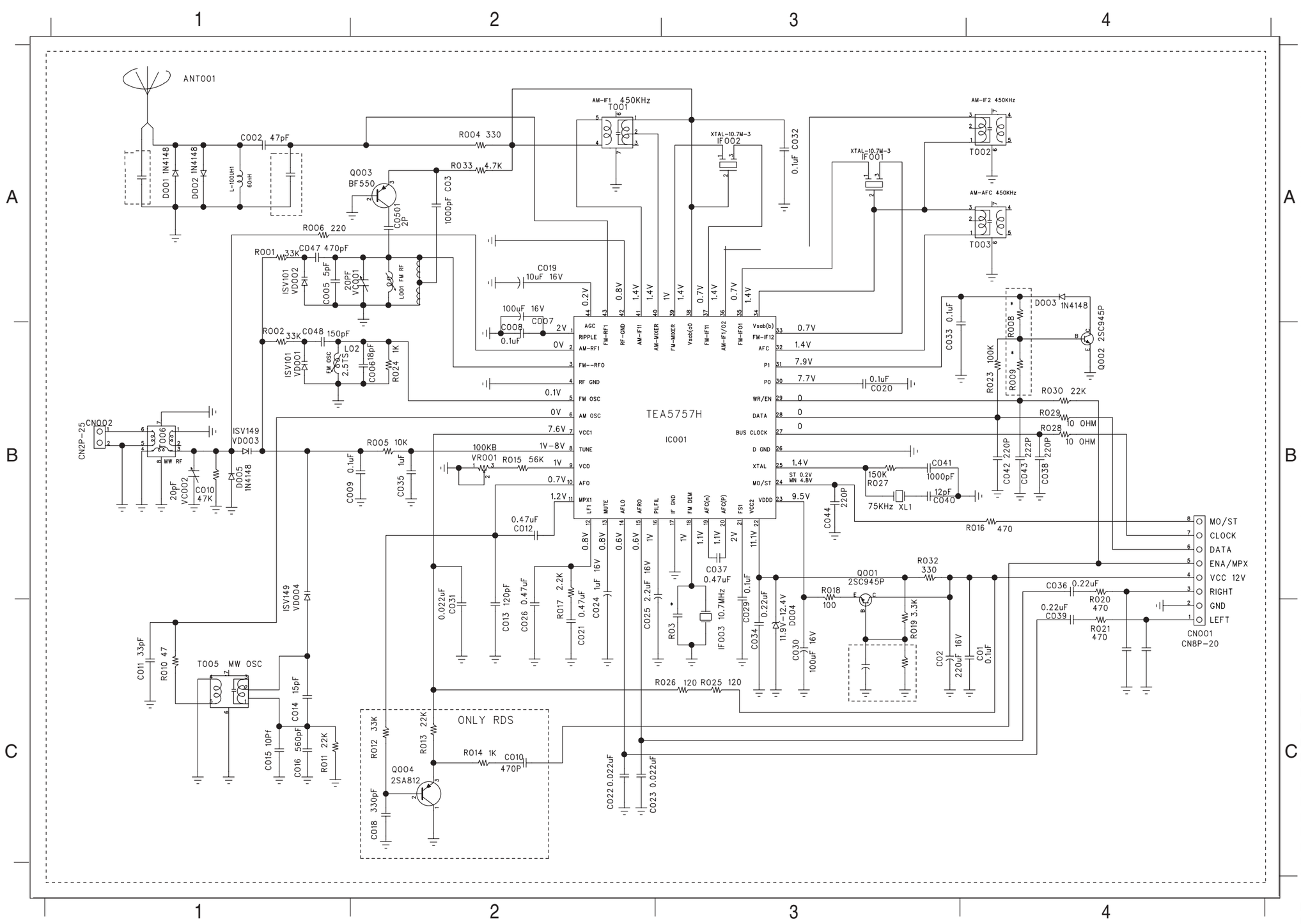
1) If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)

2) RC network serves for damping the IF-filter while adjusting the other one.

3) For AM RF adjustments the original frame antenna has to be used!

6-2

CIRCUIT DIAGRAM - TUNER BOARD

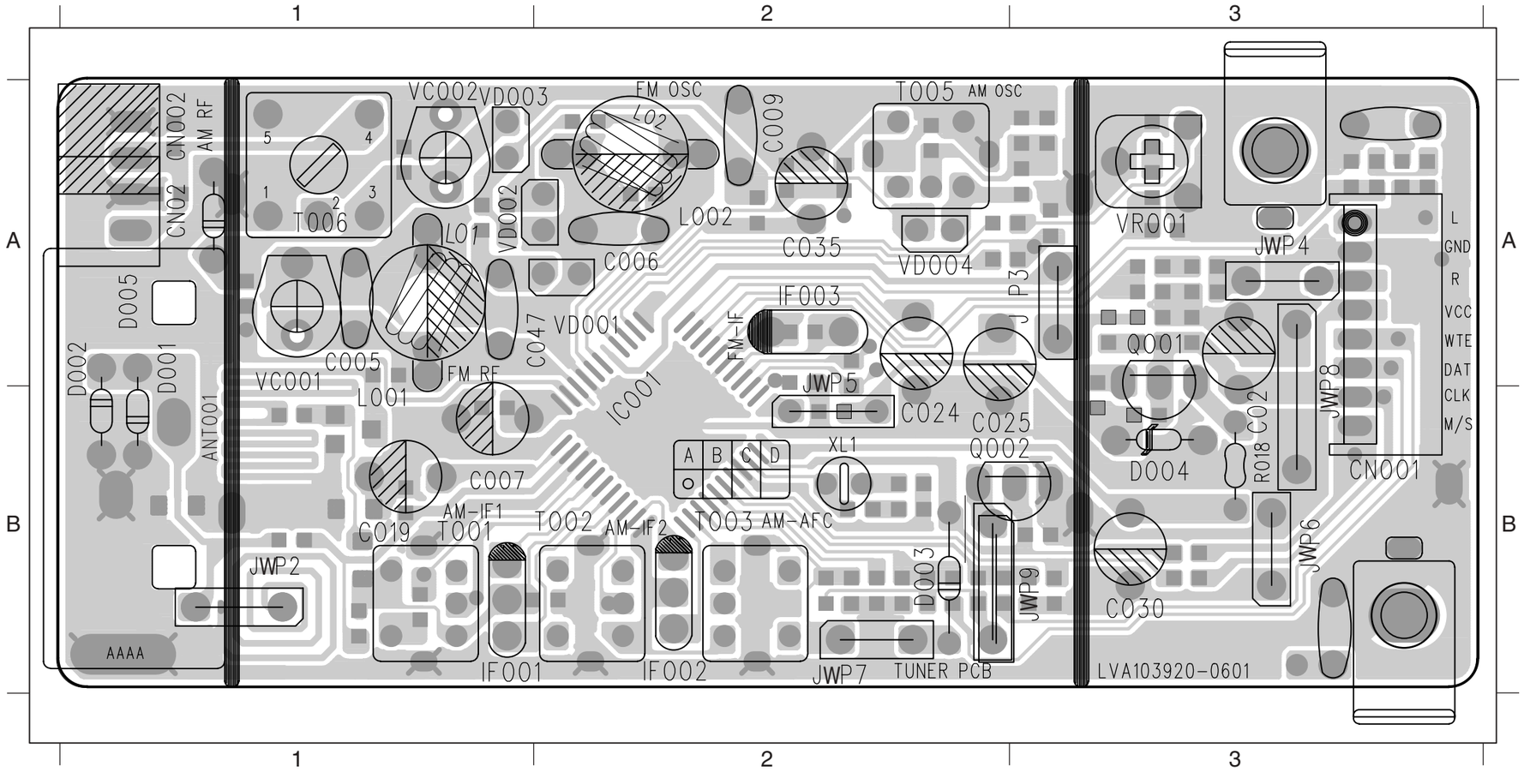


ANT001	A1	R004	A2
C002	A1	R005	B2
C005	A1	R006	A1
C007	A2	R010	C1
C006	B2	R011	C1
C008	B2	R015	B2
C009	B2	R016	B4
C01	C4	R017	C2
C02	C3	R018	B3
C03	A2	R019	C3
C010	B1	R020	B4
C011	C1	R021	C4
C012	B2	R023	B4
C013	C2	R024	B2
C014	C1	R025	C3
C015	C1	R026	C3
C016	C1	R027	B3
C019	A2	R028	B4
C020	B3	R029	B4
C021	C2	R030	B4
C022	C2	R032	B3
C023	C2	R033	A2
C024	C2	T001	A2
C025	C2	T002	A4
C026	C2	T003	A4
C029	C3	T005	C1
C030	C3	T006	B1
C031	C2	VC001	A2
C032	A3	VC002	B1
C033	B3	VD001	B1
C034	C3	VD002	A1
C035	B2	VD003	B1
C036	B4	VD004	C1
C037	B3	VR001	B2
C038	B4	XL1	B3
C039	C4		
C040	B3		
C041	B3		
C042	B4		
C043	B4		
C044	B3		
C047	A1		
C048	B1		
C0501	A2		
CN001	C4		
CN002	B1		
D001	A1		
D002	A1		
D003	A4		
D004	C3		
D005	B1		
IC001	B3		
IF001	A3		
IF002	A3		
IF003	C3		
L02	B1		
L001	A2		
Q001	B3		
Q002	B4		
Q003	A2		
R001	A1		
R002	B1		

6-3

PCB LAYOUT - TUNER BOARD (TOP)

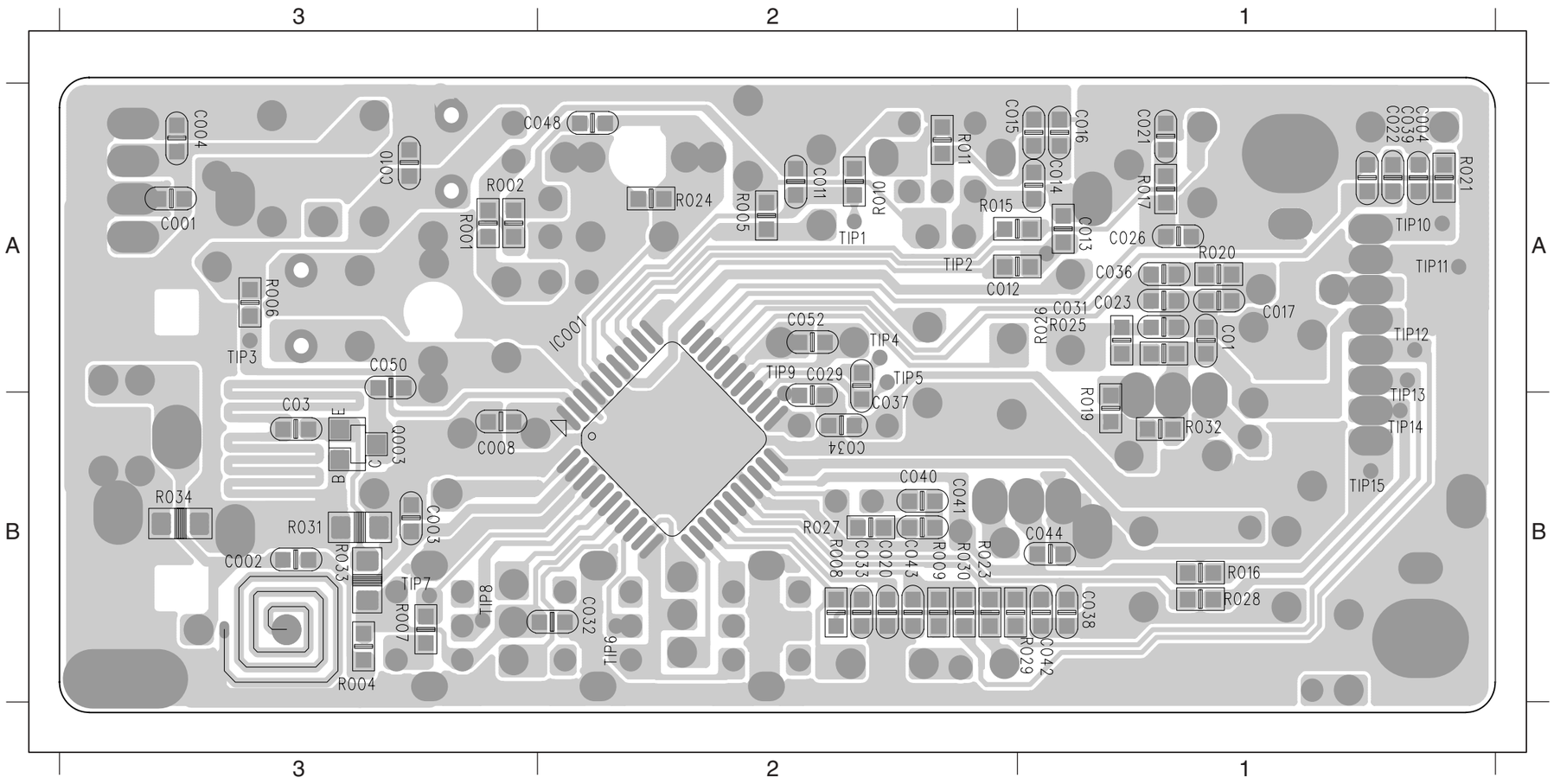
ANT001	B1	C025	B2	D002	A1	IF003	A2	JWP8	A3	T001	B1	VD001	A2
C005	A1	C030	B3	D003	B2	JWP2	B1	JWP9	B3	T002	B2	VD002	A1
C006	A2	C035	A2	D004	B3	JWP3	A3	L02	A2	T003	B2	VD003	A1
C007	B1	C047	A1	D005	A1	JWP4	A3	L001	B1	T005	A2	VD004	A2
C009	A2	CN001	B3	IC001	B2	JWP5	B2	Q001	A3	T006	A1	VR001	A3
C019	B1	CN002	A1	IF001	B1	JWP6	B3	Q002	B2	VC001	A1	XL1	B2
C024	B2	D001	A1	IF002	B2	JWP7	B2	R018	B3	VC002	A1		



6-4

PCB LAYOUT - TUNER BOARD (BOTTOM)

C01	A3	C013	A3	C023	A3	C037	A2	C048	A2	R005	A2	R019	B3	R028	B3
C03	B3	C014	A3	C026	A3	C038	B3	C050	A3	R006	A3	R020	A3	R029	B3
C001	A3	C015	A2	C029	A2	C039	A3	C052	A2	R007	B3	R021	A3	R030	B2
C002	B3	C016	A3	C031	A3	C040	B2	IC001	A2	R010	A2	R023	B2	R031	B3
C008	B3	C020	B2	C032	A2	C041	B2	Q003	B3	R011	A2	R024	A2	R032	B3
C010	A3	C021	A3	C033	B2	C042	B3	R001	A3	R015	A2	R025	A3	R033	B3
C011	A2	C022	A3	C034	B2	C043	B2	R002	A3	R016	B3	R026	A3	R034	B3
C012	A2	C023	A3	C036	A3	C044	B3	R004	B3	R017	A3	R027	B2		



VOLTAGES

IC001 (TEA5757H)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOLTAGE(FM)	2.1	0.01	0.01	0.01	0.01	0.01	7.21	4.49	1	0.7	1.24	0.83	0.77	0.63	0.64	1.01	0.01	0	1.15	1.15
VOLTAGE(AM)	2.1	0.01	0.01	0.01	0.01	0.01	7.45	1.12	1.36	0.58	1.24	0.18	0.77	0.63	0.64	1.01	0.01	0	1.15	1.15
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
VOLTAGE(FM)	1.94	10.9	9.13	1.26	1.92	0.01	0.19	0.52	0.2	0.01	0.01	1.43	0.75	1.43	0.7	1.43	0.62	1.35	1.02	1.34
VOLTAGE(AM)	1.94	10.9	9.13	1.2	1.88	0.01	0.19	0.52	0.2	0.01	0.01	1.43	1.44	1.47	1.42	1.47	1.32	1.35	1.41	1.37
PIN	41	42	43	44																
VOLTAGE(FM)	1.35	0.01	0.75	0.15																
VOLTAGE(AM)	1.35	0.01	0.75	0.43																

Q003 (BF550)

PIN	1	2	3
VOLTAGE(FM)	0.01	0.66	0.01
VOLTAGE(AM)	0.01	0.66	0.01

Q001 (2SC945)

PIN	1	2	3
VOLTAGE(FM)	0.07	-0.03	1.3
VOLTAGE(AM)	0.08	0.01	1.24

Q002 (2SC945)

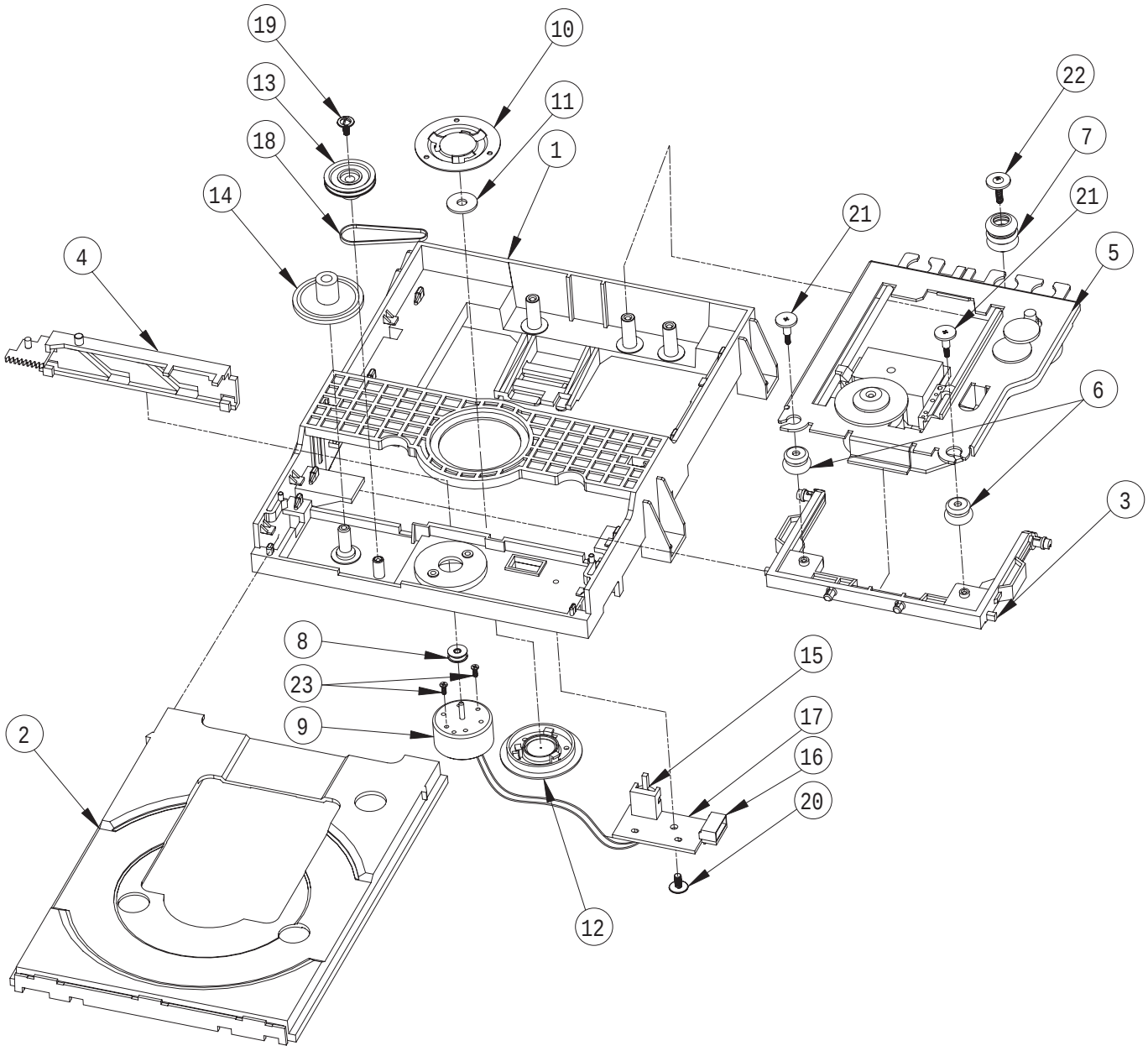
PIN	1	2	3
VOLTAGE(FM)	10.12	11.8	10.77
VOLTAGE(AM)	10.17	11.81	10.82

DVD LOADER

It is not recommended for component repair on this Module but to replace the maj or assembly when it becomes defective. Therefore limited service parts list are published in this chapter.

TABLE OF CONTENTS

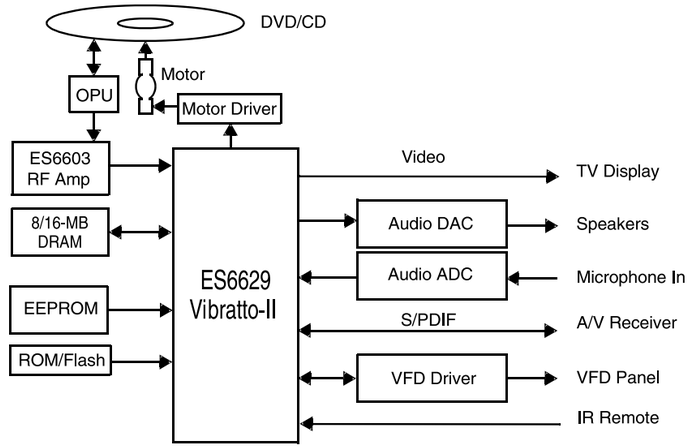
Explorer view



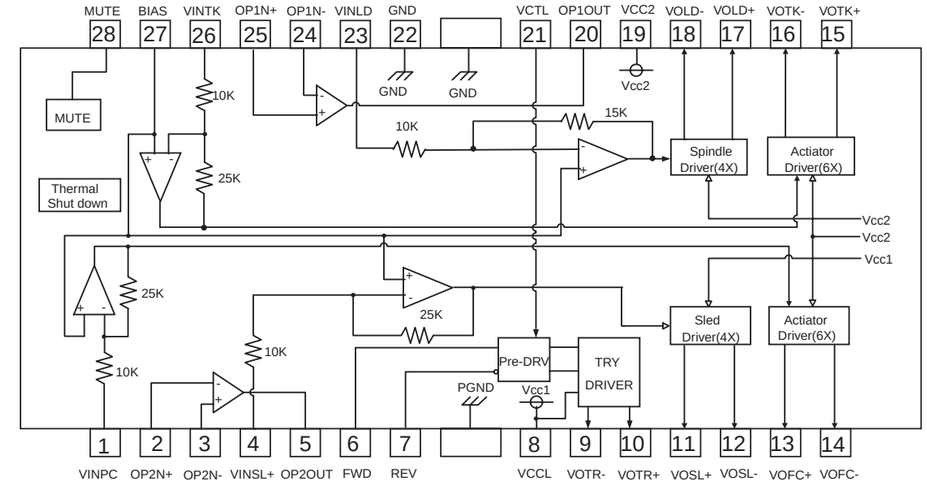
MAIN BOARD

8-1

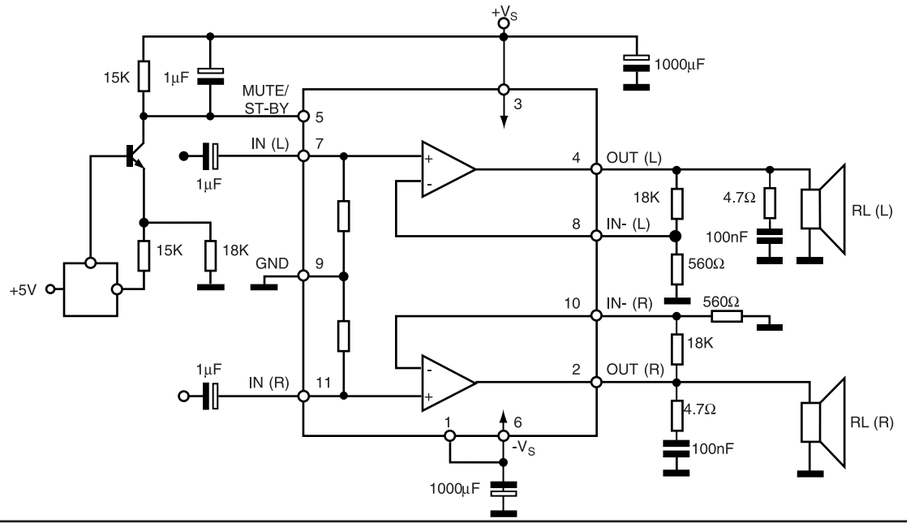
ES6628F INTERNAL IC DIAGRAM



AM5868S INTERNAL IC DIAGRAM



TDA7265 INTERNAL IC DIAGRAM



8-2

VOLTAGES

IC201 (ES6629)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	3.3	1.77	1.77	1.77	3.3	3.3	3.3	1.5	0	3.3	1.4	1.5	1.5	1.5	1	0	0	0	3.3	0.1
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	3.3	2.8	3.1	3	0.2	0	2	0.2	3.3	3	1.3	1.3	1.4	0	3.3	1.4	1.3	1.3	1.2	1.3
PIN NO	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Voltage	1.4	1.4	0	3.3	1.5	1.1	1.2	1.2	1.2	1.3	1.6	0	3.3	0.1	3.3	0	0	0	0	0
PIN NO	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Voltage	0	3.3	1.3	1.6	2.6	1.8	1.2	2.5	0.7	0	2	2	1.1	1.7	2	2.6	2	0	3.3	2
PIN NO	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Voltage	2	2	3.3	3.3	3.3	0	2	0	3.3	0	0.7	0.9	1.7	1.4	0	3.3	1.7	1.8	1.6	1
PIN NO	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Voltage	1.2	1.6	1.6	3.3	0	1.3	2.1	1.3	3.3	0.6	3.3	0	1	0.8	0.7	1.6	1	0	0	0
PIN NO	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
Voltage	0	1.5	1.6	1.6	1.2	3.3	0	3.3	3	3.6	3.6	3.6	0.2	3.3	3.3	3.3	0	2	1.3	0
PIN NO	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
Voltage	2	1.6	0	1.6	1.5	0	3.3	2.1	0.9	1.5	1.3	3.3	1.5	1.5	1.5	1.5	0	0	1.5	1.5
PIN NO	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
Voltage	1.5	3.3	0.6	2.19	1.5	1.5	0	1.5	3	3.3	2.1	1.5	1.7	1.5	1.6	1.7	2.5	2.5	0	2.4
PIN NO	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
Voltage	3.3	0	3.3	3.3	3.3	0	0	2.4	0	2.4	0	0.7	3.3	3.3	3.3	0	0	2.1	5	5
PIN NO	201	202	203	204	205	206	207	208												
Voltage	-0.4	-0.4	-0.4	4	4	3.3	3.1	0												

IC202 (M29LV)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	1.2	1.7	2.6	2	1.2	2.5	0.7	0	0	0	3.2	0	0	1.3	0	0	2.1	2.5	1.7
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	2	1.9	2.1	2.1	2.1	0	0	0	1.8	1.2	1.9	1.7	1.2	1.3	1.2	3.3	1.5	1.2	2	1.2
PIN NO	41	42	43	44	45	46	47	48												
Voltage	1.7	1.2	1.5	2	0	0	0	0												

IC203 (EDS6416AHTA)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	3.3	1.3	3.3	1.2	1.4	0	1.4	1.3	3.3	1.1	1.1	0	1.4	3.3	0.1	3	3.1	3	2.8	0.2
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	0.2	0.1	0	0	0.5	1.5	3.3	0	1.4	1.5	1.5	1.5	1	0	0.1	1.6	3.3	1.6	0.1	0
PIN NO	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
Voltage	0	1.2	3.3	1.2	1.2	0	1.1	1.1	3.3	1.4	1.5	0	1.4	0						

IC204 (ASM809)

PIN NO	1	2	3
Voltage	0	0	0

IC205 (M24C02)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	0	4.93	0	4.82	4.82

IC206 (74F374D)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	3.8	1.2	1.7	3.8	4.3	1.4	0.8	0.1	0	5	4	0.1	1.5	4	0	1.9	1.2	3.5	3.3
PIN NO	21	22																		
Voltage	4.5	0																		

IC207 (74F374D)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	3.8	1.2	1.7	3.8	4.3	1.4	0.8	0.1	0	5	4	0.1	1.5	4	0	1.9	1.2	3.5	3.3
PIN NO	21	22																		
Voltage	4.5	0																		

IC208 (B1117N)

PIN NO	1	2	3
Voltage	4.88	0	3.34

IC209 (B1117N)

PIN NO	1	2	3
Voltage	3.3	2.2	1.0

IC210 (B1117N)

PIN NO	1	2	3
Voltage	5	3.3	0

IC301 (CD4052BM)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	0	0	0	0	0	0	5.6	0	3.8	3.8	0	0.1	0	0	0	5.8

IC351 (WM8772)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	1.7	1.7	3.3	0	0	0	0	0	0	0	0	0	5	5	0	5	5	0	0
PIN NO	21	22	23	24	25	26	27	28												
Voltage	0	0	0	0	0	0	0	5												

IC401 (RC4558)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

IC402 (RC4558)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

IC403 (RC4558)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

IC404 (RC4558)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

IC405 (M62446FP)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	0	0	0	5.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	4.5	0	0	0	0	0	0	0	0	-6	0	0	0	0	0	0	0	0	0.1	0.1
PIN NO	41	42																		
Voltage	4.6	4.9																		

IC406 (RC4558)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

IC407 (RC4558)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

IC408 (RC4558)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

IC409 (RC4558)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

IC501 (E-TDA7265)

PIN NO	1	2	3	4	5	6	7	8	9	10	11
Voltage	-21	-0.08	20.6	0	0	-21	0	0	0	0	0

IC502 (E-TDA7265)

PIN NO	1	2	3	4	5	6	7	8	9	10	11
Voltage	20.7	0	20.5	0	0	-20.8	0	0	0	0	0

IC503 (E-TDA7265)

PIN NO	1	2	3	4	5	6	7	8	9	10	11
Voltage	-20.8	0	20.7	0	0	-20.8	0	0	0	0	0

IC5001 (APA3541)

PIN NO	1	2	3	4	5	6	7	8
Voltage	2.15	0.01	2.15	0	2.15	2.17	2.17	5.1

IC801 (ES6603)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	3.5	3.5	2.6	2.6	2.6	2.6	3.8	3.8	2.7	2.6	2.7	2.7	2.6	2.6	2.7	2.7	2.6	2.6	5.1	2.6
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	3.9	5.1	0.2	0.2	0	3.3	0	2.6	0	0	0	1.5	2.4	0	3.9	1.6	3.3	2	1.5	1.6
PIN NO	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Voltage	1.6	2	4.2	4.2	3.3	3.3	2.7	0	1.5	0	0	2.5	2.5	3.5	3.5	2.5	2.4	5.1	4.3	4.3
PIN NO	61	62	63	64																
Voltage	3.2	3.1	0.8	3																

IC802 (AM5868)

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	1.52	2.21	1.1	1.55	0.16	0.01	0.02	0.01	0.01	0	2.35	2.45	2.55	2.14	2.39	2.37	2.34	1.41	4.9	0.01
PIN NO	21	22	23	24	25	26	27	28												
Voltage	4.89	0	1.89	0.87	0.96	1.54	1.55	2.4												

IC3201 (RC4558D)

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-13.3	0	0	0	13

IC4201 (RC4558D)

PIN NO	1	2	3	4	5	6	7	8
Voltage	-0.34	0	0	-13.4	0.07	0.07	0.07	13.1

IC902 (BA50BC0T)

Pin No.	1	2	3
Voltage	8.6	0	5.1

IC903 (BA50BC0T)

Pin No.	1	2	3
Voltage	8.6	0	3

Q401 (KTC3875)

Pin No.	1	2	3
Voltage	0	-0.2	0.1

Q403 (2SA812)

Pin No.	1	2	3
Voltage	0.1	-0.2	0

Q503 (2SC1623)

Pin No.	1	2	3
Voltage	0	0	0

Q507 (2SC1623)

Pin No.	1	2	3
Voltage	0	20	0

Q5001 (2SC1623)

Pin No.	1	2	3
Voltage	0.7	0	0

Q801 (2SK3018)

Pin No.	1	2	3
Voltage	0.03	0.17	0

Q803 (2SC2812)

Pin No.	1	2	3
Voltage	0.56	0.03	0

Q805 (2SB1132RT)

Pin No.	1	2	3
Voltage	4.8	0.03	0

Q811 (2SA812)

Pin No.	1	2	3
Voltage	0.1	0	0.8

Q902 (2SB772)

Pin No.	1	2	3
Voltage	0.8	0	0.2

Q904 (2SB772)

Pin No.	1	2	3
Voltage	-13.4	-18.1	-14

Q952 (2SC1623)

Pin No.	1	2	3
Voltage	0	0.1	0.7

Q955 (2SC1623)

Pin No.	1	2	3
Voltage	7.1	12.2	7.8

Q301 (2SC1623)

Pin No.	1	2	3
Voltage	0.8	0	0

Q402 (KTC3875)

Pin No.	1	2	3
Voltage	0	0	-0.2

Q502 (2SC1623)

Pin No.	1	2	3
Voltage	0	0	0

Q506 (2SA812)

Pin No.	1	2	3
Voltage	14.8	0	13.2

Q508 (2SA812)

Pin No.	1	2	3
Voltage	20	0.1	20

Q5003 (2SC1623)

Pin No.	1	2	3
Voltage	0	2	0

Q802 (2SK3018)

Pin No.	1	2	3
Voltage	4.23	0	0

Q804 (2SC2812)

Pin No.	1	2	3
Voltage	0.07	4.23	0

Q806 (2SB1132RT)

Pin No.	1	2	3
Voltage	4.8	0.03	4.83

Q901 (2SD882P)

Pin No.	1	2	3
Voltage	5.5	15.8	6.2

Q903 (2SD882P)

Pin No.	1	2	3
Voltage	13.9	17.2	13.3

Q951 (2SA952)

Pin No.	1	2	3
Voltage	13.2	13.1	12.4

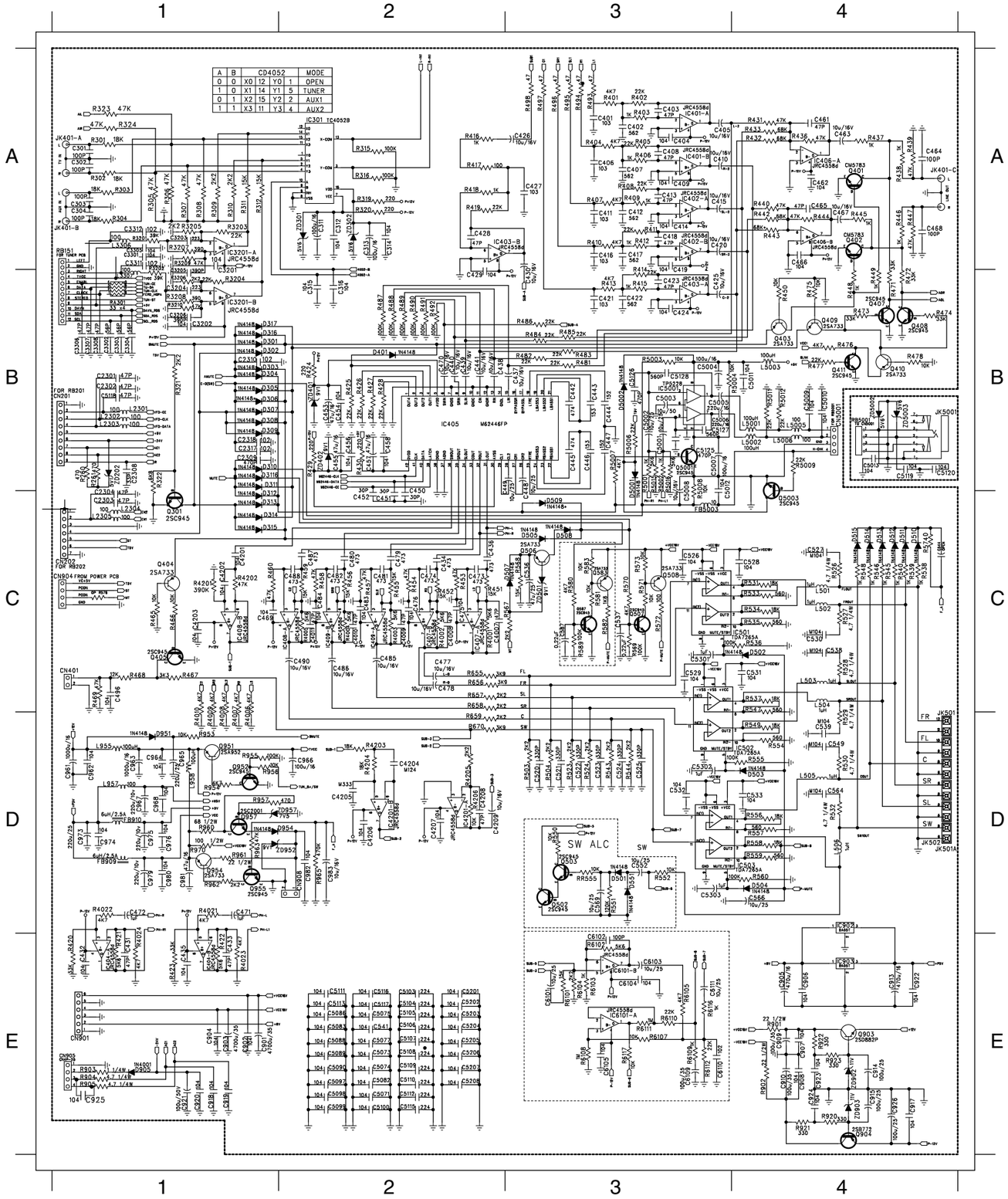
Q954 (2SA733Q)

Pin No.	1	2	3
Voltage	14.7	11.2	15.2

Q957 (2SC2001L)

Pin No.	1	2	3
Voltage	9.8	11	7.59

CIRCUIT DIAGRAM (1)- MAIN BOARD



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C301A1 C302A1 C303A1 C304A1 C311A2 C312A2 C313A2 C314A2 C315B2 C316B2 C401A3 C402A3 C403A3 C404A3 C405A3 C406A3 C407A3 C408A3 C409A3 C410A3 C411A3 C412A3 C413A3 C414A3 C415A3 C416A3 C417A3 C418A3 C419A3 C420A3 C421B3 C422B3 C423B3 C424B3 C425B3 C426A3 C427A3 C428A2 C429B2 C430B3 C431E1 C432E1 C433E1 C434C2 C435E1 C436C2 C437B3 C438B2 C439B2 C440B2 C441B2 C442B3 C443B3 C444B3 C445B3 C446B3 C447B3 C448B3 C449B2 C449B3 C453B2 C454B2 C455B2 C456B2 C457B2 C458B2 C461A4 C462A4 C463A4 C464A4 C465A4 C466A4 C467A4 C468A4 C469C1 C470B2 C471D1 C472D1 C473C2 C474C2 C475C2 C476C2 C477C2 C478C2 C479C2 C480C2 C481C2 C482C2

C483C2 C484C2 C485C2 C486C2 C487C2 C488C2 C490C2 C520D3 C521D3 C522D3 C523D3 C524D3 C525D3 C526C3 C527C4 C528C4 C529C3 C530C4 C531C4 C532D3 C533D4 C536C3 C537C3 C538C4 C539D4 C541E2 C549D4 C552D3 C564D4 C566D4 C569D3 C901E1 C902E1 C903E1 C904E1 C905E4 C906E4 C907E4 C908E4 C909E4 C910E4 C913E4 C914E4 C915E4 C917E4 C918E1 C919E1 C920E1 C921E1 C922E4 C923E4 C924E4 C925E1 C926E4 C961D1 C962D1 C963D1 C964D1 C965D1 C966D2 C967D1 C968D1 C973D1 C974D1 C975D1 C976D1 C979D1 C980D1 C981D1 C982D2 C983D2 C2301B1 C2302B1 C2303A1 C2303B1 C2303C1 C2304B1 C2304C1 C2305A1 C2305B1 C2306B1 C3301A1 C3302B1 C3303B1 C3304B1 C3305A1

C3306B1 C3307B1 C3308B1 C4007C2 C4008C2 C4009C2 C4010C2 C4011C2 C4201C1 C4202C1 C4203C1 C4204D2 C4205D2 C4206D2 C4207D2 C4208D2 C4209D2 C5001B3 C5002B3 C5003B3 C5004B3 C5005B3 C5006B3 C5007B3 C5008B3 C5009B4 C5010B4 C5011B4 C5012B3 C5071E2 C5073E2 C5074E2 C5075E2 C5077E2 C5082E2 C5083E2 C5086E2 C5088E2 C5089E2 C5097E2 C5098E2 C5099E2 C5103E2 C5104E2 C5105E2 C5106E2 C5107E2 C5108E2 C5109E2 C5110E2 C5112E2 C5115E2 C5116E2 C5117E2 C5118B1 C5201E2 C5202E2 C5203E2 C5204E2 C5205E2 C5206E2 C5207E2 C5208E2 C5301C3 C5302D3 C5303D3 CN201B1 CN202C1 CN5001B4 CN901E1 CN904C1 CN905E1 CN908D2 D301B1 D302B1 D303B1 D304B1 D305B1 D306B1 D307B1 D308B1 D309B1 D310B1 D312C1 D313C1 D314C1 D315C1 D316B1

D401B2 D501D3 D502C4 D503D4 D504D4 D505C3 D507C3 D508C3 D510C4 D511C4 D512C4 D513C4 D514C4 D515C4 D551D3 D905E1 D951D1 D954D2 D5001B3 D5002B3 FB5003C3 FB909D1 FB910D1 IC301A2 IC3201-AA1 IC3201-BB1 IC401-AA3 IC401-BA3 IC402-AA3 IC402-BA3 IC403-AB3 IC403-BA2 IC404-AE1 IC404-BE1 IC405B2 IC406-AA4 IC406-BA4 IC407-AC2 IC407-BC2 IC408-AC2 IC408-BC1 IC409-AC2 IC409-BC2 IC4201-AD2 IC4201-BD2 IC5001B3 IC501C4 IC502D4 IC503D4 IC902D4 IC903E4 JK401-AA1 JK401-BA1 JK401-CA4 JK501D4 JK501AD4 JK502D4 L501C4 L502C4 L503C4 L504C4 L505D4 L506D4 L955D1 L957D1 L2301B1 L2302B1 L2303B1 L2304C1 L2305C1 L3306A1 L3307B1 L5001B4 L5002B4 L5003B4 L5005B4 L5006B4 Q301C1 Q401A4 Q402A4 Q403B4 Q502D3 Q503D3 Q506C3 Q507C3 Q508C3 Q903E4 Q904E4

Q951D1 Q952D1 Q954D1 Q955D1 Q957D1 Q5001B3 Q5003C4 R260B1 R261B1 R301A1 R302A1 R303A1 R304A1 R305A1 R306A1 R307A1 R308A1 R309A1 R310A1 R311A1 R312A1 R315A2 R316A2 R319A2 R320A2 R321B1 R322B1 R323A1 R324A1 R401A3 R402A3 R403A3 R404A3 R405A3 R406A3 R407A3 R408A3 R409A3 R410A3 R411A3 R412A3 R413B3 R414A3 R415B3 R416A2 R417A2 R418A2 R419A2 R420E1 R421E1 R422E1 R423E1 R424B2 R425B2 R426B2 R427B2 R428B2 R429B2 R430B2 R431A4 R432A4 R433A4 R436A4 R437A4 R438A4 R439A4 R440A4 R442A4 R443A4 R444A4 R445A4 R446A4 R447A4 R448B4 R449B4 R450B4 R451C2 R452C2 R453C2 R454C2 R455C2 R456C2 R457C2 R458C2 R459C2 R460C1 R481B3 R482B3

R483B3 R484B3 R485B3 R486B3 R487B2 R488B2 R489B2 R490B2 R491B2 R492B2 R493A3 R494A3 R495A3 R496A3 R497A3 R498A3 R503D3 R504D3 R523D3 R524D3 R526C4 R527C4 R528C4 R529D4 R530D4 R531C4 R532D4 R533C4 R534C4 R535C4 R536C4 R537C4 R538C4 R539C4 R540C4 R543D3 R544D3 R545C4 R546C4 R547C4 R548C4 R549D4 R550D3 R551D3 R554D4 R555D4 R556D4 R557D4 R558D4 R559D4 R560D4 R567C3 R568C3 R569C3 R570C3 R571C3 R572C3 R573C3 R574C4 R655C2 R656C2 R657C2 R658C2 R659D2 R670D2 R901E4 R902E4 R903E1 R904E1 R905E1 R920E4 R921E4 R922E4 R923E4 R953D1 R954D1 R955D1 R956D1 R957D1 R960D1 R961D1 R962D1 R963D1 R965D2 R970D1 R3201A1 R3202A1 R3203A1

R3204B1 R3205A1 R3206B1 R3207A1 R3208B1 R3209A1 R3210B1 R4001C2 R4002C2 R4003C2 R4004C2 R4005C2 R4006D1 R4007D1 R4008D1 R4009D1 R4010D1 R4021D1 R4022D1 R4023E1 R4024E1 R4201C1 R4202C1 R4203D2 R4204D2 R4205D2 R4206D2 R5001B3 R5002B3 R5003B3 R5004B4 R5006B3 R5007B3 R5008B3 R5009B4 R5011B4 R5012B4 R5015B3 R5016B3 RA301B1 RB151A1 ZD202B1 ZD301A2 ZD302A2 ZD401B2 ZD402B2 ZD501C3 ZD902E4 ZD903E4 ZD952D2 ZD957D2

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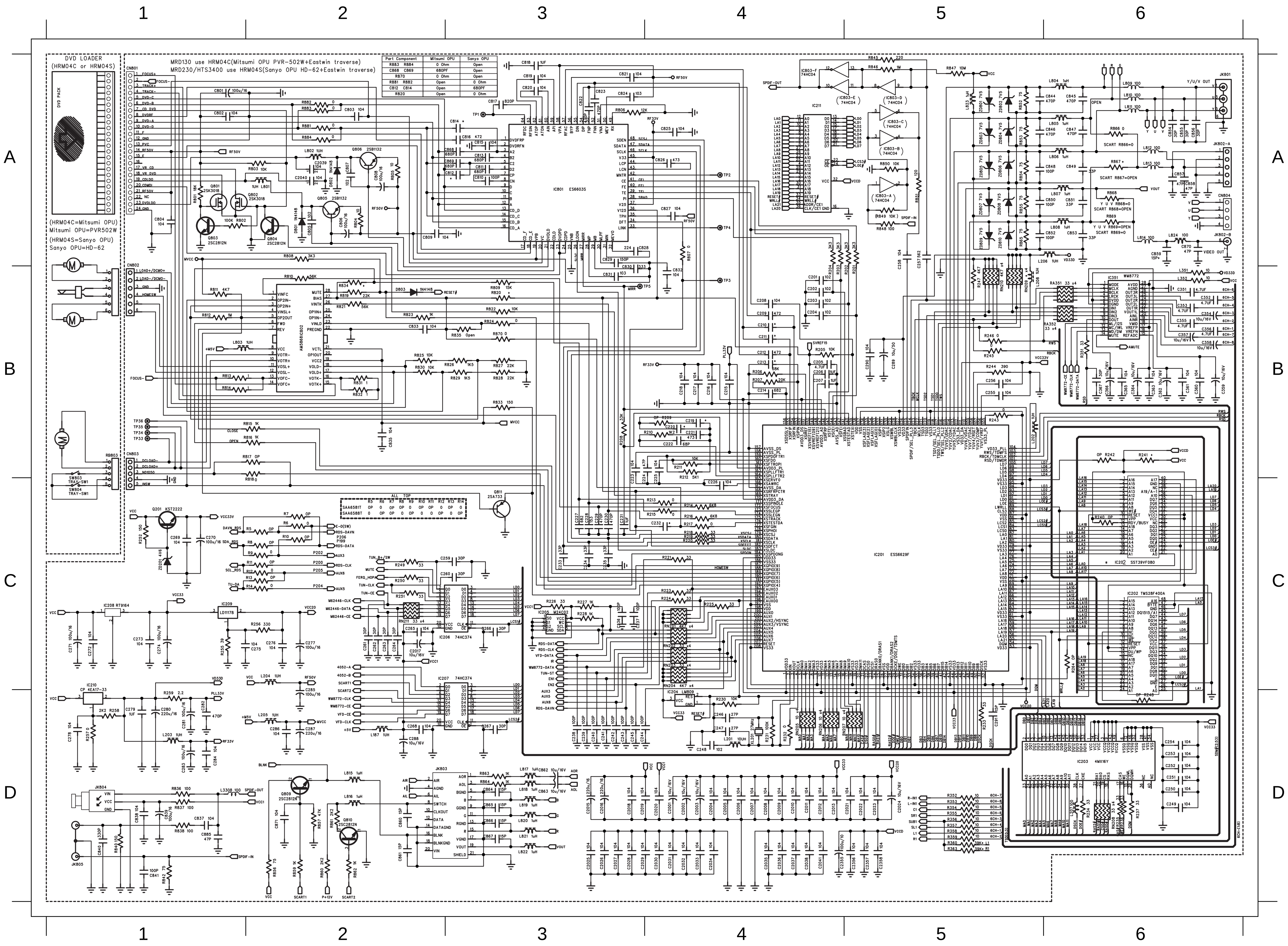
CIRCUIT DIAGRAM (2)- MAIN BOARD



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C202	B4	C355	B6	C2027	D3	R210	B4	R854	A5
C203	B4	C356	B6	C2028	D3	R211	B4	R855	A5
C204	B4	C357	B6	C2029	D3	R212	B4	R865	A5
C205	B4	C358	B6	C2030	D4	R213	C4	R866	A6
C206	B4	C359	B6	C2031	D4	R214	C4	R868	A6
C207	B4	C360	B6	C2032	D4	R215	C4	R881	A2
C208	B4	C361	B6	C2033	D4	R216	C4	R882	A2
C209	B4	C362	B6	C2034	D4	R217	C4	RA351	B6
C212	B4	C363	B6	C2035	D4	R218	C4	RA352	B6
C214	B4	C364	B6	C2038	D4	R219	C4	RN201	C4
C215	B4	C365	B6	C2039	A2	R220	C4	RN202	C4
C216	B4	C366	B6	C2040	A2	R221	C4	RN203	C4
C217	B4	C367	B6	C2041	D4	R223	C4	RN204	C4
C218	B4	C801	A1	C2355	D4	R224	C4	RN205	D4
C221	B4	C802	A1	C2356	D5	R225	C4	RN206	D4
C222	B4	C803	A2	C2357	D5	R226	C3	RN207	D5
C223	C3	C804	A1	C2358	D5	R227	C3	RN208	D6
C224	C3	C805	A2	CN801	A1	R228	C3	RN210	B5
C225	C4	C806	A2	CN802	A1	R230	D4	RN211	C2
C226	C4	C807	A2	CN803	B1	R231	D4	XL201	D4
C227	C3	C808	A2	D801	A2	R232	D4	ZD801	A5
C228	C3	C809	A2	D802	A2	R233	D5	ZD802	A5
C229	C3	C810	A3	D803	B2	R234	D6	ZD803	A5
C230	C3	C811	A3	IC201	C5	R235	D6	ZD804	A5
C231	C3	C813	A3	IC202	C6	R236	D6	ZD805	A5
C233	C3	C815	A3	IC203	D6	R237	D6	ZD806	A5
C234	C3	C816	A3	IC204	D4	R242	B6	ZD807	A5
C235	C3	C817	A3	IC205	C3	R243	B5	ZD808	A5
C236	C3	C818	A3	IC206	C2	R244	B5	ZD809	A5
C237	C3	C819	A3	IC207	C2	R245	B5	ZD810	A5
C238	D3	C820	A3	IC208	C1	R246	B5		
C239	D3	C821	A3	IC209	C1	R247	B5		
C240	D3	C822	A3	IC210	C1	R249	C2		
C241	D3	C823	A3	IC351	B6	R250	C2		
C242	D3	C824	A3	IC801	A3	R251	C2		
C243	D3	C825	A4	IC802	B2	R255	C1		
C244	D3	C826	A4	JK801	A6	R256	C2		
C245	D3	C827	A4	JK802-A	A6	R257	D1		
C246	D4	C828	A3	JK802-B	A6	R258	D1		
C247	D4	C829	A3	JK805	D1	R259	D1		
C248	D4	C830	B3	L187	D2	R351	B6		
C249	D6	C831	B3	L201	D4	R352	D5		
C250	D6	C832	B4	L202	B5	R353	D5		
C251	D6	C833	B2	L203	D1	R354	D5		
C252	D6	C835	B2	L204	C2	R355	D5		
C253	D6	C837	D1	L205	D2	R356	D5		
C254	D6	C840	D1	L206	A5	R357	D5		
C255	B5	C841	D1	L207	D6	R358	D5		
C256	B5	C844	A6	L208	B5	R359	D5		
C257	A5	C846	A6	L351	B6	R801	A1		
C258	A5	C848	A6	L352	B6	R802	A1		
C259	C2	C849	A6	L801	A2	R803	A2		
C260	C2	C850	A6	L802	A2	R804	A2		
C261	C2	C851	A6	L803	B1	R805	A2		
C262	C2	C852	A6	L804	A6	R806	A3		
C263	C2	C853	A6	L805	A6	R807	A4		
C264	C2	C854	A6	L806	A6	R809	B3		
C265	C2	C855	A6	L807	A6	R810	B2		
C266	C3	C856	A6	L808	A6	R811	B1		
C267	D3	C857	A6	L809	A6	R812	B1		
C268	D2	C858	A6	L810	A6	R813	B1		
C269	C1	C870	A6	L811	A6	R814	B1		
C270	C1	C885	D1	L812	A6	R815	B2		
C271	C1	C2001	D4	L813	A6	R816	B2		
C272	C1	C2002	D4	L814	A6	R818	C2		
C273	C1	C2003	D4	L823	A5	R819	B2		
C274	C1	C2004	D4	L824	A6	R821	B2		
C275	C2	C2005	D4	L3308	D1	R822	B3		
C276	C2	C2006	D4	Q801	A1	R823	B2		
C277	C2	C2007	D4	Q802	A2	R824	B3		
C278	D1	C2008	D4	Q803	A1	R825	B2		
C279	D1	C2009	D4	Q804	A2	R826	B3		
C280	D1	C2010	D4	Q805	A2	R827	B3		
C281	D1	C2011	D4	Q806	A2	R828	B3		
C282	D1	C2012	D4	Q811	C3	R829	B3		
C283	D1	C2013	D4	R6	C2	R830	B2		
C284	D1	C2015	D3	R9	C2	R831	B2		
C285	D2	C2016	D3	R12	C2	R832	B2		
C286	D2	C2017	C2	R14	C2	R833	B3		
C287	D2	C2018	D3	R201	B5	R834	B2		
C288	D2	C2019	D3	R202	B5	R838	D1		
C289	B5	C2020	D4	R203	B4	R840	D1		
C290	B5	C2021	D5	R204	B4	R845	A5		
C351	B6	C2022	D5	R205	B4	R848	A5		
C352	B6	C2023	D5	R206	B4	R850	A5		
C353	B6	C2025	D3	R207	B4	R852	A5		

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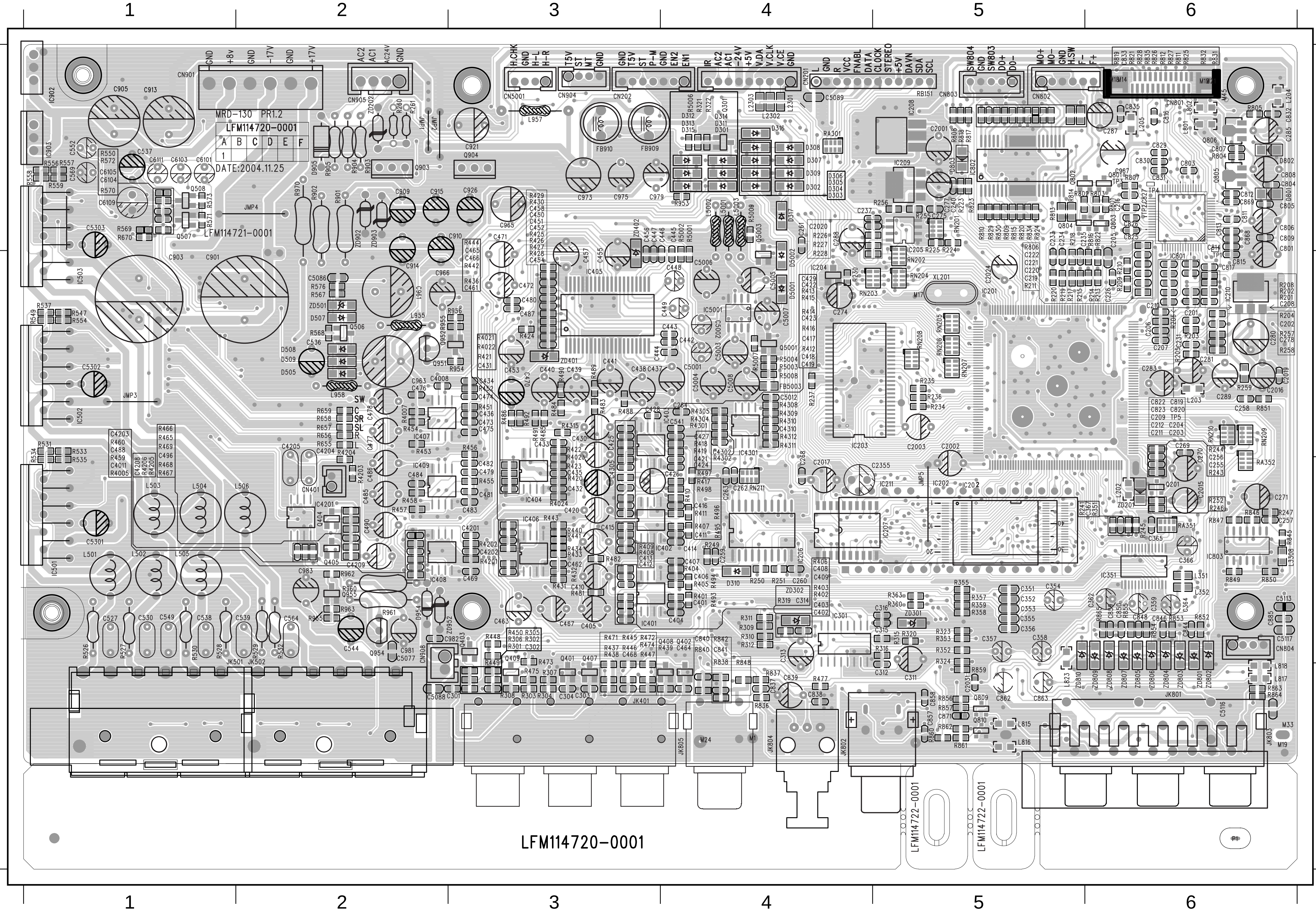
PCB LAYOUT - MAIN BOARD (TOP)

C201	B6	C235	A5	C274	B4	C313	C4	C367	C6	C417	B4	C434	B3
C202	B6	C237	A4	C275	A5	C314	C4	C401	C4	C418	B4	C435	C3
C203	B6	C240	A5	C277	A5	C315	C5	C402	C4	C419	B4	C436	B3
C204	B6	C255	C6	C278	B6	C316	C5	C403	C4	C420	C3	C437	B3
C205	A6	C256	C6	C280	B6	C351	C5	C404	C4	C421	C4	C438	B3
C206	B6	C257	C6	C281	B6	C352	C5	C405	C3	C422	B4	C439	B3
C207	B6	C258	B6	C283	B6	C353	C5	C406	C4	C423	B4	C440	B3
C208	B6	C259	C4	C285	A6	C354	C5	C407	C4	C424	C4	C441	B3
C209	B6	C260	C4	C287	A6	C355	C5	C408	C4	C425	B3	C442	B4
C212	B6	C261	A4	C288	A4	C356	C5	C409	C4	C426	C4	C443	B4
C216	A6	C262	C4	C289	B6	C357	C5	C410	C3	C427	B4	C444	B3
C221	B5	C263	C4	C301	D3	C358	C5	C411	C4	C428	B3	C445	A4
C222	B5	C264	B4	C302	C3	C359	C6	C412	C3	C429	B4	C446	A4
C226	B6	C268	C4	C303	D3	C362	C6	C413	C3	C430	B3	C447	A3
C231	B6	C269	B6	C304	D3	C364	C6	C414	C4	C431	B3	C448	B4
C233	A5	C270	B6	C311	D5	C365	C6	C415	C3	C432	C3	C449	B4
C234	A5	C271	C6	C312	D5	C366	C6	C416	C4	C433	B3	C453	B3

C454	B3	C473	B3	C527	C1	C808	A6	C832	A6	C905	A1	C982	C3
C455	B3	C474	B3	C530	C1	C809	A6	C833	A6	C909	A2	C983	C2
C456	A3	C475	B3	C536	B2	C811	A6	C835	A6	C910	A3	C2001	A5
C457	B3	C476	B2	C537	A1	C813	A6	C837	D4	C913	A1	C2002	B5
C458	A3	C477	B2	C538	C1	C815	B6	C840	C4	C914	B2	C2003	B5
C461	B3	C478	B2	C539	C2	C816	A6	C841	C4	C915	A2	C2015	B6
C462	C3	C479	C3	C541	B4	C817	B6	C844	C6	C921	A3	C2016	B6
C463	C3	C480	B3	C549	C1	C819	B6	C846	C6	C926	A3	C2017	C4
C464	C4	C481	C3	C552	A1	C820	B6	C848	C6	C961	B2	C2019	B6
C465	B3	C482	C3	C564	C2	C822	B6	C850	C6	C963	B2	C2020	A4
C466	B3	C483	C3	C569	A1	C823	B6	C857	D5	C965	A3	C2024	B5
C467	C3	C484	C2	C801	A6	C825	A6	C858	D5	C966	B2	C2031	D5
C468	C3	C485	C2	C803	A6	C826	A6	C868	A6	C967	A6	C2355	C5
C469	C3	C486	C2	C804	A6	C827	A6	C869	A6	C973	A3	C4008	B2
C470	B3	C487	B3	C805	A6	C829	A6	C885	C6	C975	A3	C4011	C1
C471	A3	C488	B1	C806	A6	C830	A6	C901	B1	C979	A3	C4201	C3
C472	B3	C490	C2	C807	A6	C831	A6	C903	B1	C981	C2	C4202	C3

C4203	B1	C5089	A4	D301	A4	D508	B2	IC207	C5	IC503	B1	JMP5	C5
C4204	B2	C5113	C6	D302	A4	D801	A6	IC208	A5	IC801	B6	L202	C6
C4205	B2	C5116	D6	D303	A4	D802	A6	IC209	A5	IC802	A5	L203	B6
C4208	C1	C5117	C6	D304	A4	D803	A5	IC210	B6	IC902	A1	L204	A6
C4209	C2	C5301	C1	D305	A4	D905	A2	IC301	C4	IC903	A1	L205	A6
C5001	B4	C5302	B1	D306	A4	D954	C2	IC351	C6	IC4201	C2	L351	C6
C5002	B4	C5303	A1	D307	A4	D5001	B4	IC401	C3	IC5001	B4	L352	C6
C5003	B4	CN201	A4	D308	A4	D5002	B4	IC402	C4	JK401	D3	L501	C1
C5004	B4	CN202	A3	D309	A4	FB909	A3	IC403	B4	JK501	C1	L502	C1
C5005	B4	CN801	A6	D310	C4	FB910	A3	IC404	C3	JK502	C2	L503	C1
C5006	B4	CN802	A5	D312	A4	FB5003	B4	IC405	B3	JK801	D6	L504	C1
C5007	B4	CN803	A5	D313	A4	IC201	B5	IC406	C3	JK802	D4	L505	C1
C5008	B4	CN901	A1	D314	A4	IC202	C5	IC407	B2	JK805	D4	L506	C2
C5012	B4	CN904	A3	D315	A4	IC203	B4	IC408	C2	JMP1	A2	L801	A6
C5077	C2	CN905	A2	D316	A4	IC204	B4	IC409	C2	JMP2	A2	L802	A6
C5086	B2	CN908	C2	D505	B2	IC205	A5	IC501	C1	JMP3	B1	L823	D5
C5088	D2	CN5001	A3	D507	B2	IC206	C4	IC502	B1	JMP4	A2	L955	B2



L957	A3	R315	C5	R494	C4	R956	B3
L2301	A4	R316	C5	R495	C4	R960	C2
L2302	A4	R319	C4	R496	C4	R961	C2
L2303	A4	R320	C5	R497	C4	R963	C2
L3308	C6	R321	A4	R498	C4	R965	C2
L5001	A4	R322	A4	R526	C1	R970	A2
L5002	A4	R323	C5	R527	C1	R4005	C1
L5003	A4	R324	C5	R528	C1	R4007	B2
Q201	C6	R351	C6	R529	C2	R4021	B3
Q301	A4	R352	C5	R530	C1	R4022	B3
Q401	C3	R353	C5	R531	B1	R4023	B3
Q402	C4	R355	C5	R532	C2	R4024	C3
Q403	C3	R357	C5	R533	B1	R4201	C3
Q506	B2	R358	C5	R534	B1	R4202	C3
Q507	A1	R359	C5	R535	C1	R4203	C2
Q508	A1	R401	C4	R537	B1	R4204	B2
Q801	A6	R402	C4	R547	B1	R4205	C1
Q802	A5	R403	C4	R549	B1	R4206	C1
Q803	A6	R404	C4	R550	A1	R5001	A4
Q804	A5	R405	C4	R554	B1	R5002	A4
Q805	A6	R406	C4	R556	A1	R5003	B4
Q806	A6	R407	C4	R557	A1	R5004	B4
Q903	A2	R408	C3	R558	A1	R5006	A4
Q904	A3	R409	C3	R559	A1	R5007	B4
Q951	B2	R410	C4	R567	B2	R5008	B4
Q952	B2	R411	C4	R568	B2	R5009	A4
Q954	C2	R412	B4	R569	A1	RA301	A4
Q955	C2	R413	B4	R570	A1	RA351	C6
Q5001	B4	R414	B4	R571	A1	RA352	C6
Q5003	A4	R415	B4	R572	A1	RB151	A5
R201	B6	R416	B4	R573	A1	RN201	A5
R202	B6	R417	C4	R655	B2	RN202	B5
R203	B6	R418	B4	R656	B2	RN203	B4
R204	B6	R419	B4	R657	B2	RN204	B5
R205	B6	R420	C3	R658	B2	RN205	B5
R206	B6	R421	B3	R659	B2	RN206	B5
R208	B6	R422	B3	R670	A1	RN207	B5
R210	B6	R423	C3	R801	A6	RN208	B5
R211	B5	R424	B3	R802	A5	RN210	B6
R213	B6	R425	A3	R803	A6	RN211	C4
R214	B6	R426	A3	R804	A6	XL201	B5
R215	B5	R427	A3	R805	A6	ZD202	A2
R217	B5	R428	B3	R806	A5	ZD301	C5
R218	A5	R429	A3	R807	A6	ZD302	C4
R219	B5	R430	A3	R809	A5	ZD401	B3
R220	B5	R431	C3	R810	A5	ZD402	A3
R223	A5	R432	C3	R811	A6	ZD501	B2
R224	A5	R433	C3	R812	A6	ZD801	D6
R225	A5	R436	B3	R813	A5	ZD802	D6
R226	A4	R437	C3	R814	A5	ZD803	D6
R227	A4	R438	C3	R815	A5	ZD804	D6
R228	B4	R439	C4	R816	A6	ZD805	D6
R230	B4	R440	C3	R818	A5	ZD806	D6
R234	B5	R442	B3	R819	A6	ZD807	D6
R235	B5	R443	C3	R821	A6	ZD808	D6
R236	B5	R444	A3	R822	A6	ZD809	D6
R237	B4	R445	C3	R823	A5	ZD810	D5
R243	C6	R446	C3	R824	A5	ZD902	A2
R244	B6	R447	C3	R825	A6	ZD903	A2
R245	C6	R448	C3	R826	A6	ZD952	C3
R246	C6	R449	C3	R827	A6		
R247	C6	R450	C3	R828	A6		
R249	C4	R451	B3	R829	A5		
R250	C4	R452	B3	R830	A5		
R251	C4	R453	B2	R831	A6		
R255	A5	R454	B2	R832	A6		
R256	A5	R455	C3	R838	C4		
R257	B6	R456	B3	R840	C4		
R258	B6	R457	C2	R845	C6		
R259	B6	R458	C2	R848	C4		
R260	A2	R459	B1	R850	C6		
R261	A2	R460	B1	R852	C6		
R301	C3	R481	C3	R853	C6		
R302	C3	R482	C3	R854	C6		
R303	D3	R483	B3	R855	C6		
R304	D3	R484	B3	R865	C6		
R305	C3	R485	B3	R901	A2		
R306	C3	R486	B3	R902	A2		
R307	D3	R488	B3	R903	A2		
R308	D3	R489	B3	R904	A2		
R309	C4	R490	B3	R905	A2		
R310	C4	R491	B3	R953	A4		
R311	C4	R492	B3	R954	B3		
R312	C4	R493	C4	R955	B2		

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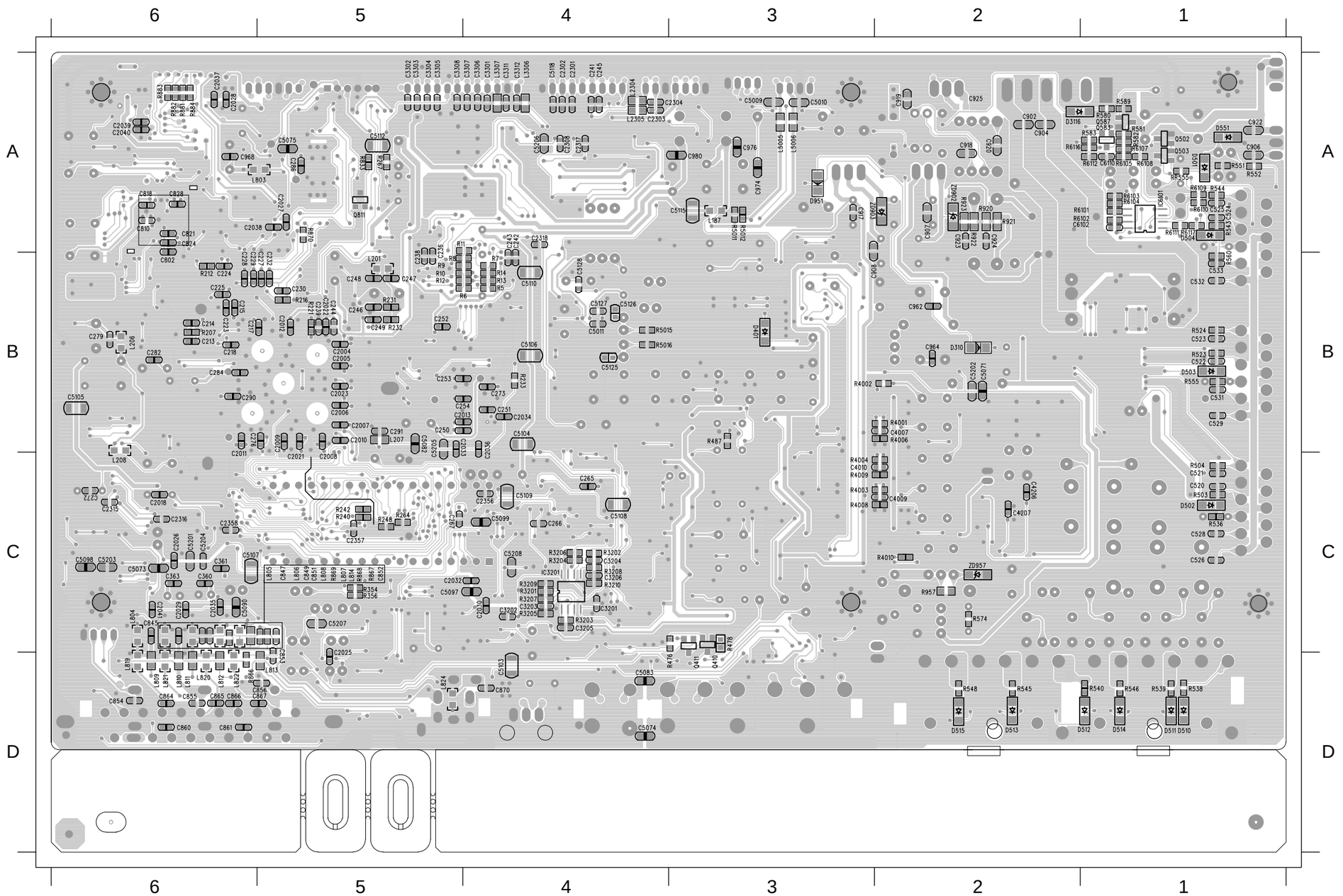
PCB LAYOUT - MAIN BOARD (BOTTOM)

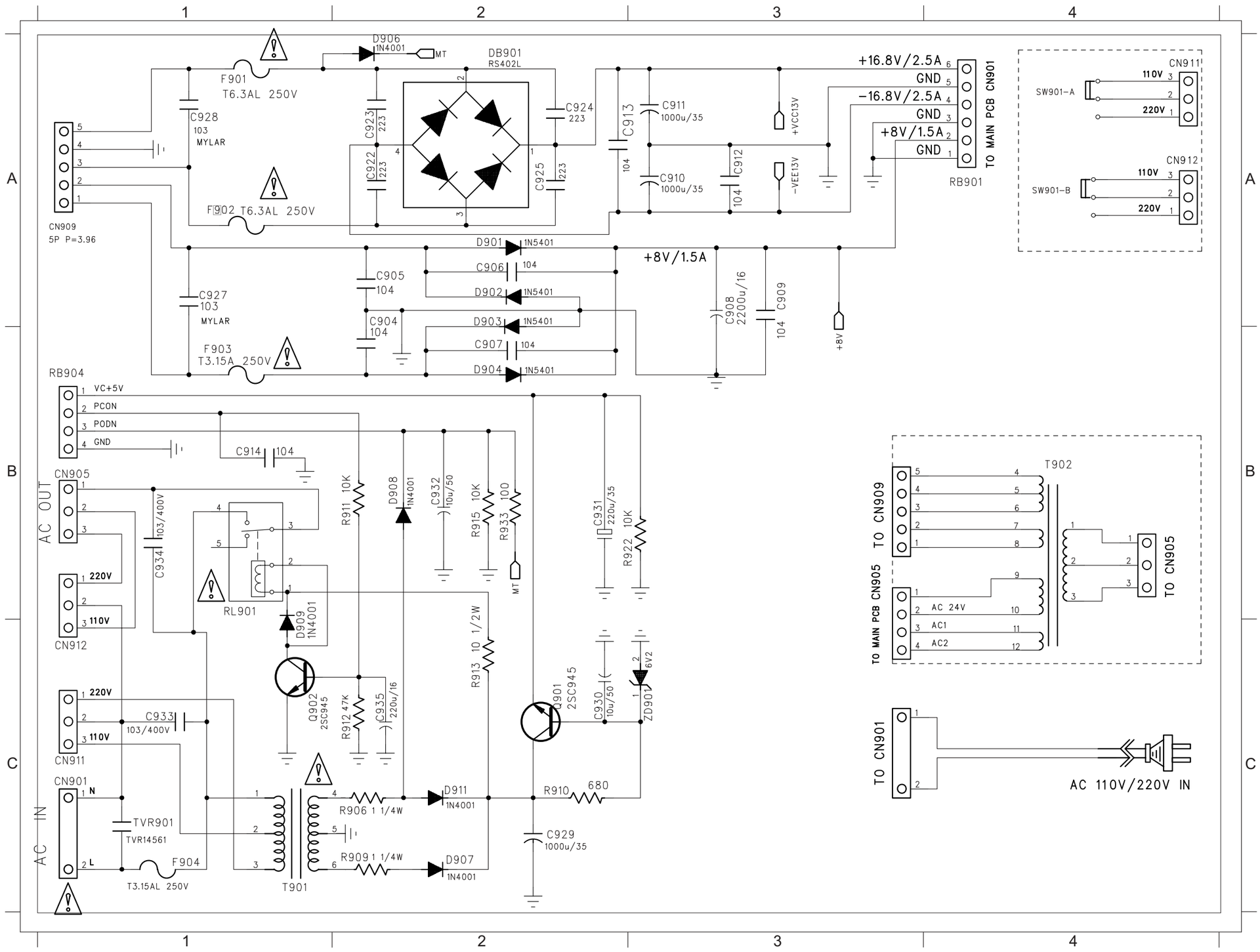
C214	B6	C244	B5	C279	B6	C531	B1	C902	A2	C976	A3	C2026	C6	C2308	A4	C3308	A5	C5099	C4	C5206	A4	IC3201	C4	L814	C5	R216	B5	R543	A1	R922	A2	R4006	B2
C215	B6	C245	A4	C282	B6	C532	B1	C904	A2	C980	A3	C2027	A5	C2356	C4	C4007	B2	C5103	D4	C5207	C5	L187	A3	L824	D5	R221	B5	R544	A1	R923	A2	R4008	C3
C217	B6	C246	B5	C284	B6	C533	B1	C906	A1	C2004	B5	C2028	A6	C2357	C5	C4009	C2	C5104	B4	C5208	C4	L201	B5	L2304	A4	R231	B5	R545	D2	R957	C2	R4009	C3
C218	B6	C247	B5	C286	A5	C802	B6	C907	A2	C2005	B5	C2029	C6	C2358	C6	C4010	C3	C5105	B6	D310	B2	L206	B6	L2305	A4	R232	B5	R546	D1	R3201	C4	R4010	C2
C223	B6	C248	B5	C290	B6	C810	A6	C908	B3	C2006	B5	C2030	C4	C3201	C4	C4206	C2	C5106	B4	D401	B3	L207	B5	L3306	A4	R233	B4	R548	D2	R3202	C4	R5011	A3
C224	B6	C249	B5	C360	C6	C818	A6	C917	A3	C2007	B5	C2032	C5	C3202	C4	C4207	C2	C5107	C6	D501	A1	L208	C6	L3307	A4	R242	C5	R551	A1	R3203	C4	R5012	A3
C225	B6	C250	B5	C363	C6	C821	A6	C918	A2	C2008	C5	C2033	B5	C3203	C4	C5009	A3	C5108	C4	D502	C1	L803	A5	L5005	A3	R354	C5	R555	B1	R3204	C4	R5015	B4
C227	B5	C251	B4	C361	C6	C824	A6	C919	A2	C2009	B5	C2034	B4	C3204	C4	C5010	A3	C5109	C4	D503	B1	L804	C6	L5006	A3	R356	C5	R560	B1	R3205	C4	R5016	B4
C228	B6	C252	B5	C520	C1	C828	A6	C920	A2	C2010	B5	C2035	C6	C3205	C4	C5011	B4	C5110	B4	D504	A1	L805	C5	Q502	A1	R487	B3	R574	C2	R3206	C4	ZD902	A2
C229	B6	C253	B5	C521	C1	C849	C5	C922	A1	C2011	C6	C2038	A6	C3206	C4	C5071	B2	C5112	A5	D510	D1	L806	C5	Q503	A1	R503	C1	R833	A5	R3207	C4	ZD903	A3
C230	B5	C254	B5	C522	B1	C851	C5	C923	A2	C2012	B5	C2039	A6	C3301	A4	C5073	C6	C5115	A3	D511	D1	L807	C5	Q811	A5	R504	C1	R866	D6	R3208	C4	ZD957	C2
C236	B5	C265	C4	C523	B1	C852	C5	C924	A2	C2013	B5	C2040	A6	C3302	A5	C5074	D4	C5118	A4	D512	D1	L808	C5	R6	B5	R523	B1	R868	C5	R3209	C4		
C238	B5	C266	C4	C524	A1	C853	D5	C925	A2	C2018	C6	C2041	C6	C3303	A5	C5075	A5	C5201	C6	D513	D2	L809	D6	R9	B5	R524	B1	R870	A5	R3210	C4		
C239	B5	C267	C5	C525	A1	C854	D6	C962	B2	C2021	C5	C2301	A4	C3304	A5	C5082	B5	C5202	B2	D514	D1	L810	D6	R12	B5	R536	C1	R881	A6	R4001	B2		
C241	A4	C272	C6	C526	C1	C855	D6	C964	B2	C2022	B5	C2302	A4	C3305	A5	C5083	D4	C5203	C6	D515	D2	L811	D6	R14	B4	R538	D1	R882	A6	R4002	B3		
C242	A4	C273	B4	C528	C1	C856	D5	C968	A6	C2023	B5	C2303	A4	C3306	A4	C5097	C5	C5204	C6	D551	A1	L812	D6	R207	B6	R539	D1	R920	A2	R4003	C3		
C243	A4	C276	B6	C529	B1	C870	D4	C974	A3	C2025	D5	C2304	A3	C3307	A4	C5098	C6	C5205	B5	D951	A3	L813	D5	R212	B6	R540	D1	R921	A2	R4004	C3		



POWER+PH1+PH2 BOARD

9-2

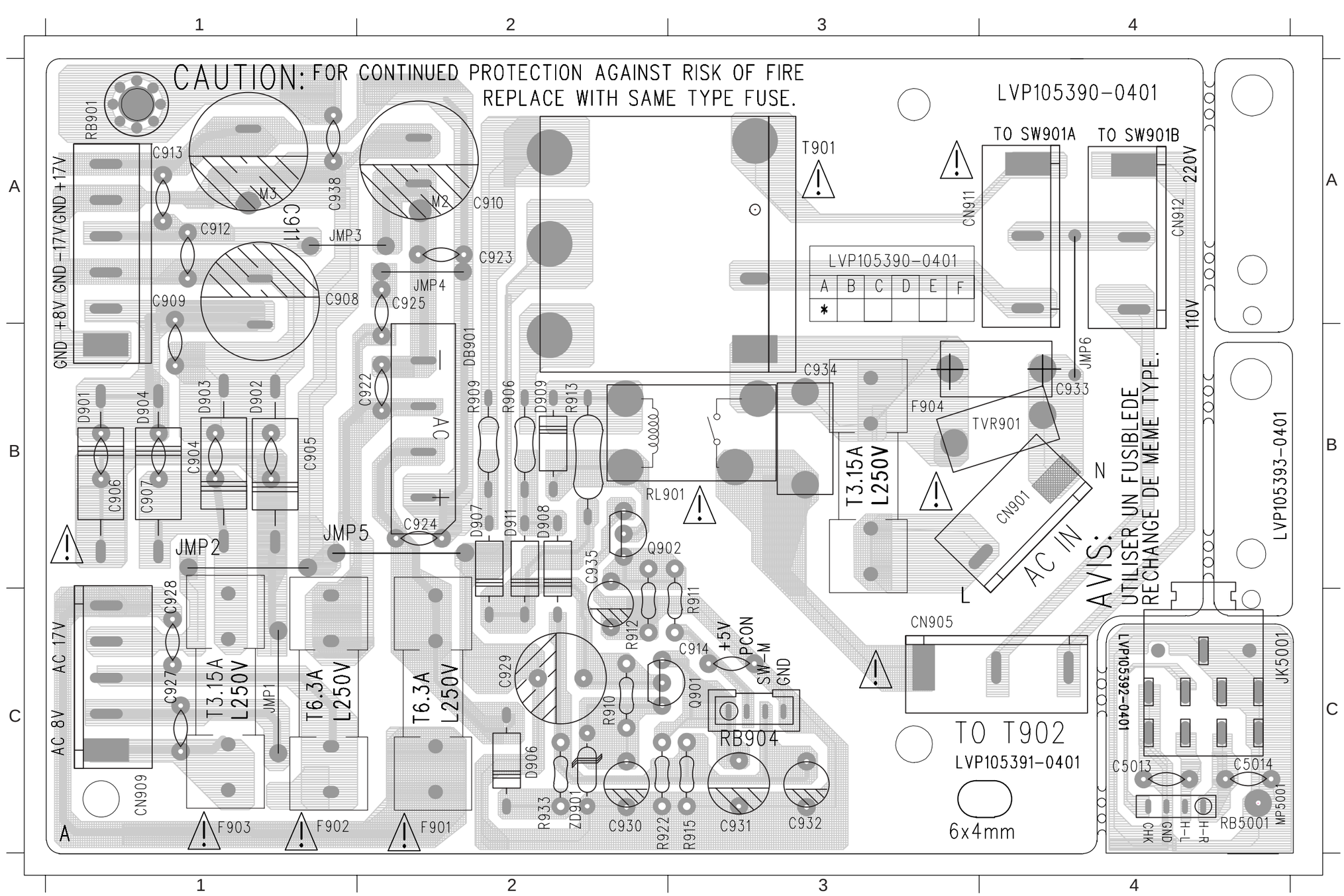
CIRCUIT DIAGRAM - POWER BOARD



C904	B2
C905	A2
C906	A2
C908	A3
C909	A3
C910	A3
C911	A3
C912	A3
C913	A2
C914	B1
C922	A2
C923	A2
C924	A2
C925	A2
C927	A1
C928	A1
C929	C2
C930	C2
C931	B2
C932	B2
C933	C1
C934	B1
C935	C2
CN901	C1
CN901	C3
CN905	B1
CN905	B3
CN905	B4
CN909	A1
CN909	B3
CN911	C1
CN911	A4
CN912	C1
CN912	A4
D901	A2
D902	A2
D903	B2
D904	B2
D906	A2
D907	C2
D907	B2
D908	B2
D909	C1
D911	C2
DB901	A2
F901	A1
F902	A1
F903	B1
F904	C1
Q901	C2
Q902	C1
R906	C2
R909	C2
R910	C2
R911	B2
R912	C2
R913	C2
R915	B2
R922	B3
R933	B2
RB901	A4
RB904	B1
RL901	B1
T901	C1
T902	B4
TVR901	C1
ZD901	C3

9-3

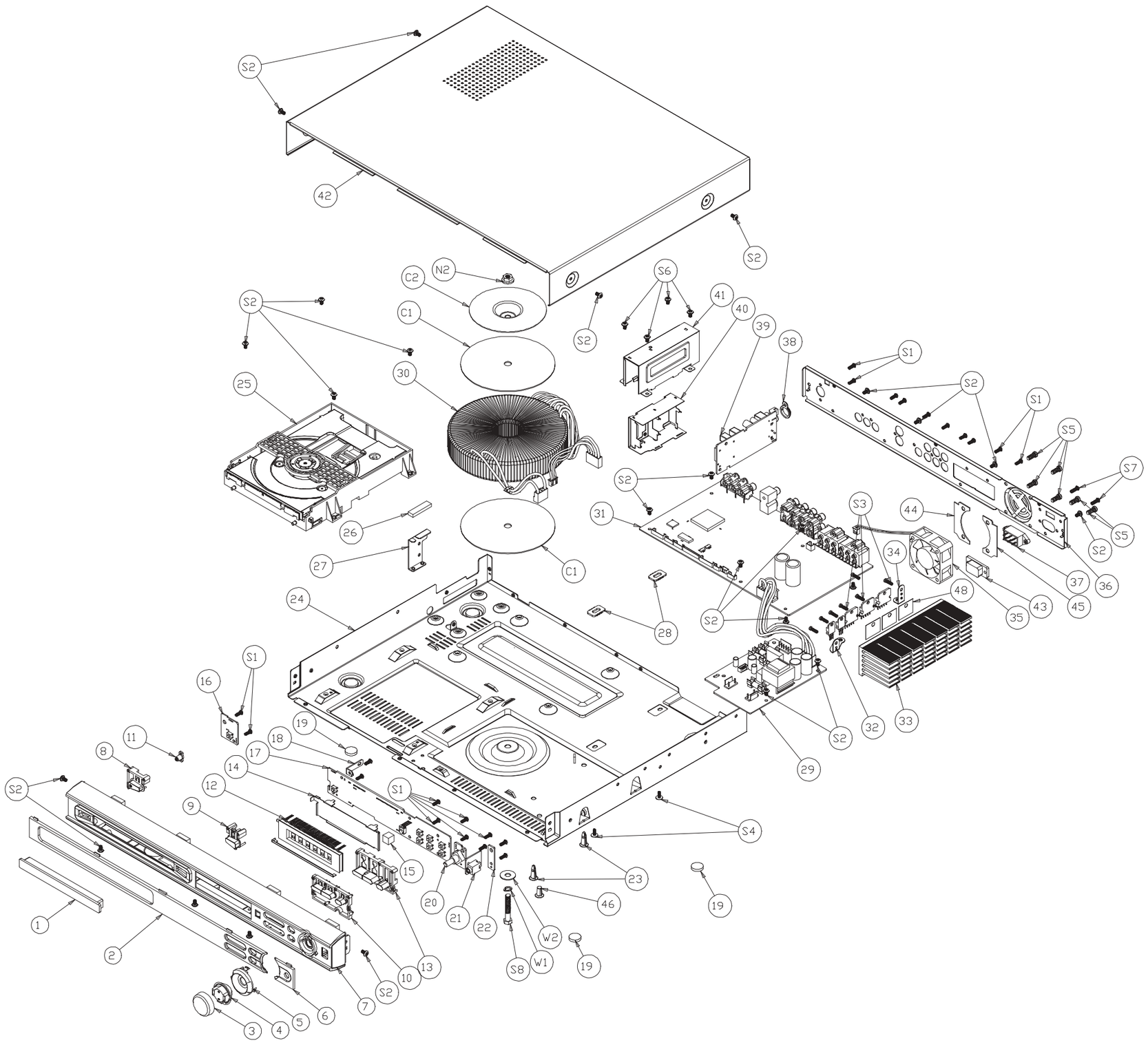
PCB LAYOUT - POWER BOARD



C5013	C4
C5014	C4
C904	B1
C905	B1
C906	B1
C907	B1
C908	A1
C909	A1
C910	A2
C911	A1
C912	A1
C913	A1
C914	C3
C922	B2
C923	A2
C924	B2
C925	A2
C927	C1
C928	C1
C929	C2
C930	C2
C931	C3
C932	C3
C933	B4
C934	B3
C935	B2
C938	A1
CN901	B4
CN905	C3
CN909	C1
CN911	A4
CN912	A4
D901	B1
D902	B1
D903	B1
D904	B1
D906	C2
D907	B2
D908	B2
D909	B2
D911	B2
DB901	B2
F901	C2
F902	C1
F903	C1
F904	B3
JK5001	C4
JMP1	C1
JMP2	B1
JMP3	A1
JMP4	A2
JMP5	B1
JMP6	B4
MP5001	C4
Q901	C3
Q902	B2
R906	B2
R909	B2
R910	C2
R911	C3
R912	C2
R913	B2
R915	C3
R922	C2
R933	C2
RB5001	C4
RB901	A1
RB904	C3
RL901	B2
T901	A3
TVR901	B4
ZD901	C2

10-1

MECHANICAL EXPLODED VIEW



MECHANICAL & ACCESSORIES PART LIST

MISCELLANEOUS

9965 000 32737	DVD LOADER ME M04S-1
9965 000 32738	MAIN WASHER PCB ASS'Y
9965 000 32739	CONTROL VOLUME PWR SW PCBA
9965 000 32740	POWER PHONE1 PHONE2 PCBA
9965 000 28733	RADIO PCBA
9965 000 32741	SATELLITE PACKED 4 OHM 30WX5 FRO
9965 000 32742	SUBWOOFER PACKED 4 OHM 30W
9965 000 26968	DC FAN 12V 0.09A SPEED: 4000RPM
9965 000 32743	PWR TRANS AC 120V/230V 60HZ/50HZ
9965 000 32744	FFC WIRE 24PIN L=150MM UL20798
9965 000 19380	FFC WIRE 24P 150MM
9965 000 32745	FRONT PANEL HIPS 94HB
9965 000 23575	FM ANTENNA HOLDER
9965 000 23639	VOLUME KNOB ABS
9965 000 32746	POWER BUTTON
9965 000 32747	FUNCTION BUTTON 1
9965 000 32748	OPEN/CLOSE BUTTON
9965 000 32749	FUN BUTTON 2 ABS
9965 000 27152	VOLUMR LENS PMMA LF
9965 000 27153	DISPLAY LENS PMMA L389.1XW28.7
9965 000 23650	POWER LED LENS PMMA
9965 000 23641	VOLUME RING ABS
9965 000 32750	VOLUME DOCKING ABS
9965 000 23571	FOOT RUBBER DIA14XT3MM WHITE
9965 000 32751	AC PLUG CONVERSION PLUG
9965 000 25158	CONVERSION PLUG SAA TO 2 FLAT PI
9965 000 20577	RCA CABLE 1500MM OD2.6MM BLK
9965 000 23889	RCA CABLE 1500MM BLK
9965 000 26916	REMOTE CONTROL

SPEAKER ASSY CS-MX2600

MISCELLANOUS

9965 000 32758	SPEAKER BOX- M-L
9965 000 32759	SPEAKER BOX- M-R
9965 000 32760	SPEAKER BOX- S-L
9965 000 32761	SPEAKER BOX-S-R
9965 000 28778	CABLE ASS'Y L5.2M-WHITE
9965 000 28784	CABLE ASS'Y L5.2M-RED
9965 000 28786	CABLE ASS'Y L15.2M-BLUE
9965 000 28787	CABLE ASS'Y L15.2M-GRAY
9965 000 32763	RUBBER FOOT -12LX4.8WX1.5T
9965 000 32762	SPEAKER BOX CENTER
9965 000 20245	KEYHOLE BRACKET/SCREW PACKAGE
9965 000 28785	CABLE ASS'Y L5.2M-GREEN

SUBWOOFER ASSY SW-MX2600

MISCELLANOUS

9965 000 21087	RUBBER FOOT ADHESIVE
9965 000 32757	CABLE ASS'Y - PURPLE SMK

Note: Only the parts mentioned in this list are normal service spare parts.

ELECTRICAL PARTS LIST-MAIN WASHER PCB ASS'Y

MISCELLANEOUS

JK401	9965 000 24074	RCA JACK 6P WHTX3/REDX3 AXIAL
JK501	9965 000 27077	SPK JACK 6P RD-WT-GN
JK502	9965 000 27078	SPK JACK 6P GY-BU-PURPLE
JK801	9965 000 23598	RCA JACK 3P RED/BLU/GRN AXIAL
JK802	9965 000 25153	RCA+DIN JK 1RCA+4P DIN YEL W/GND
JK805	9940 000 01576	RCA JACK 1P BLACK
L957	9965 000 26943	BEAD FERIT DIA3.5X6MM
C4204	9965 000 23930	COND MYLAR 0.12 UF 100V 5%
C4205	9965 000 23931	COND MYLAR 0.033 UF 100V 5%
C527	9965 000 27127	COND MYLAR 0.1 UF 100V 5%
C530	9965 000 27127	COND MYLAR 0.1 UF 100V 5%
C538	9965 000 27127	COND MYLAR 0.1 UF 100V 5%
C539	9965 000 27127	COND MYLAR 0.1 UF 100V 5%
C549	9965 000 27127	COND MYLAR 0.1 UF 100V 5%
C564	9965 000 27127	COND MYLAR 0.1 UF 100V 5%

RESISTORS

R903	9965 000 27085	FUSEABLE RES 1? 1/4W 5%
R904	9965 000 28738	FUSEABLE RES 4.7 1/4W 0.05 LF H
R905	9965 000 28738	FUSEABLE RES 4.7 1/4W 0.05 LF H
RA301	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RA351	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RA352	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RN201	9965 000 23613	CHIP ARRAY 4X4.7KOHM 1/16W 5%
RN202	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RN203	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RN204	9965 000 23613	CHIP ARRAY 4X4.7KOHM 1/16W 5%
RN205	9965 000 23614	CHIP ARRAY 10 OHMX4 1/16 W 5%
RN206	9965 000 23614	CHIP ARRAY 10 OHMX4 1/16 W 5%
RN207	9965 000 23614	CHIP ARRAY 10 OHMX4 1/16 W 5%
RN208	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RN210	9965 000 23613	CHIP ARRAY 4X4.7KOHM 1/16W 5%
RN211	9940 000 00865	RES ARRAY 4X33R 1/10W 5%

DIODES

D301	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D302	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D303	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D304	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D305	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D306	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D307	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D308	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D309	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D310	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D312	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D313	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D314	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D315	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D316	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D401	4822 130 83338	LL4148
D5001	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D5002	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D501	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D502	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D503	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D504	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D507	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D508	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D510	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D511	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D512	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D513	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D514	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D515	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D551	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D801	4822 130 83338	LL4148
D802	4822 130 83338	LL4148
D803	4822 130 83338	LL4148
D905	4822 130 31438	1N4001G
D951	9965 000 19409	DIODE CHIP BAV16W/IN4148W
ZD202	9965 000 26942	DIODE ZENR 5.0-5.2V 0.5W
ZD301	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W (E2) S
ZD302	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W (E2) S

ZD401	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W (E2) S
ZD402	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W (E2) S
ZD501	9965 000 27086	CHIP ZENER 9.1V 5% 0.5W (F4) S
ZD801	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD802	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD803	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD804	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD805	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD806	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD807	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD808	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD809	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD810	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S
ZD902	9965 000 28740	CHIP ZENER 13V 0.05 0.5W (H3)
ZD903	9965 000 28740	CHIP ZENER 13V 0.05 0.5W (H3)
ZD952	9965 000 28741	DIODE ZENR 9.1-9.5V 0.5W PB<1000
ZD957	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W (F1) S

TRANSISTORS & INTREGATED CIRCUITS

Q301	9940 000 00915	XISTR NPN 2SC1623
Q401	9965 000 13683	CHIP TRANSISTOR KTC3875Y-RTK
Q402	9965 000 13683	CHIP TRANSISTOR KTC3875Y-RTK
Q403	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q5001	9940 000 00915	XISTR NPN 2SC1623
Q5003	9940 000 00915	XISTR NPN 2SC1623
Q502	9940 000 00915	XISTR NPN 2SC1623
Q503	9940 000 00915	XISTR NPN 2SC1623
Q506	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q507	9940 000 00915	XISTR NPN 2SC1623
Q508	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q801	3141 018 51690	TRA SM 2SK3018
Q802	3141 018 51690	TRA SM 2SK3018
Q803	9965 000 26928	XISTR NPN 2SC2812N 2204 SANYO PB
Q804	9965 000 26928	XISTR NPN 2SC2812N 2204 SANYO PB
Q805	9965 000 26927	XISTR PNP 2SB1132RT100 ROHM HFE:
Q806	9965 000 26927	XISTR PNP 2SB1132RT100 ROHM HFE:
Q811	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q903	9965 000 28742	XISTR NPN 2SD882P PB<1000PPM
Q904	9965 000 26946	XISTR PNP 2SB772P/Q NEC PB<1000
Q951	9965 000 26939	XISTR PNP 2SA952 NEC PB<1000PPM
Q952	9940 000 00915	XISTR NPN 2SC1623
Q954	9965 000 28743	XISTR PNP 2SA733Q,P NEC
Q955	9940 000 00915	XISTR NPN 2SC1623
Q957	4822 130 41651	2SC2001L
IC201	9965 000 27088	IC208P ES6629FDF PQFP ESS W/DT
IC202	9965 000 26936	IC 48 PIN MX26LV800BTC
IC202	9965 000 26937	IC 48 PIN M29LV1600T70 TSOP MOBI
IC203	9965 000 32752	IC 54P HY57V641620ETP-7
IC203	9965 000 26918	IC 54 PIN SD41620HGT-6 TSOP MOBI
IC203	9965 000 26920	IC 54 PIN EDS6416AHTA-6B-E TSOP
IC204	9940 000 00834	IC 3PIN LM809
IC205	9965 000 23616	8PIN M24C02-MN6T ST SD8 150MIL
IC206	9940 000 00835	IC 20PIN 74F374D
IC207	9940 000 00835	IC 20PIN 74F374D
IC208	9965 000 26932	IC 3 PIN RT9164-33PLR
IC209	9965 000 27090	IC 3 PIN AP1117E18LA 1.8V SOT2
IC210	9965 000 27091	IC 3PIN AP1117E33LA SOT223 3.
IC301	9965 000 23619	IC 16 PIN CD4052BM SOIC TI
IC3201	9965 000 15886	IC RC4558D
IC351	9965 000 26924	IC 28 PIN WM8772SEDS TSOP WOLFSO
IC401	9965 000 15886	IC RC4558D
IC402	9965 000 15886	IC RC4558D
IC403	9965 000 15886	IC RC4558D
IC404	9965 000 15886	IC RC4558D
IC405	9965 000 26921	IC 42 PIN M62446AFP MITSUBISHI
IC406	9965 000 15886	IC RC4558D
IC407	9965 000 15886	IC RC4558D
IC408	9965 000 15886	IC RC4558D
IC409	9965 000 15886	IC RC4558D
IC4201	9965 000 15886	IC RC4558D
IC5001	9965 000 26923	IC 8 PIN APA3541-TRL SOP-8 HEADP
IC501	9965 000 15892	IC TDA7265 SGS
IC502	9965 000 15892	IC TDA7265 SGS
IC503	9965 000 15892	IC TDA7265 SGS
IC801	9940 000 00853	IC 64PIN ES6603S
IC802	9965 000 23620	IC 28 PIN AM5868S HSOP AMTEK
IC902	9965 000 26945	IC 3PIN BA50BC0T TO220FP ROHM PB
IC903	9965 000 26945	IC 3PIN BA50BC0T TO220FP ROHM PB

ELECTRICAL PARTS LIST-CONTROL VOLUME PWR SW PCBA

MISCELLANEOUS

SN2201	9965 000 26956	IRT RECEIVER IRM-2638F4 PB<1000
TA2201	9965 000 26950	AI TACT SW SKHVBE3520 ALPS PB<10
TA2202	9965 000 26950	AI TACT SW SKHVBE3520 ALPS PB<10
TA2203	9965 000 26950	AI TACT SW SKHVBE3520 ALPS PB<10
TA2204	9965 000 26950	AI TACT SW SKHVBE3520 ALPS PB<10
TA2205	9965 000 26950	AI TACT SW SKHVBE3520 ALPS PB<10
TA2206	9965 000 26950	AI TACT SW SKHVBE3520 ALPS PB<10
TA2207	9965 000 26950	AI TACT SW SKHVBE3520 ALPS PB<10
TA2208	9965 000 26952	TACT SW H5.0MM 2PIN 160GF 20MA 1
VR2201	9965 000 29233	ENCODER L20 A=12 WITHOUT CC
XL2201	9965 000 23590	CRYSTAL 4MHZ HC-49US +/-15PPM

DIODES

D2201	9965 000 26949	DIODE SW 1N4148 PB<1000PPM
D2202	9965 000 26949	DIODE SW 1N4148 PB<1000PPM
ZD2201	9965 000 26942	DIODE ZENR 5.0-5.2V 0.5W
ZD2202	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W (E2) S
ZD2203	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W (E2) S

TRANSISTORS & INTREGATED CIRCUITS

Q2201	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q2202	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q2203	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q2204	9940 000 00915	XISTR NPN 2SC1623
Q2205	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
IC2201	9965 000 23592	IC 18PIN HT48R05A-1 SOP HOLTEK
IC2202	9940 000 01564	IC 52P PT6311
IC2202	9940 000 00907	IC 52 PIN TP6311QH

ELECTRICAL PARTS LIST-POWER PHONE1 PHONE2 PCBA

RL901	9965 000 16331	RELAY GJ-SH-112DM
T901	9965 000 32753	TRANS EI-28 115V/230V 60HZ/50HZ
TVR901	9965 000 32754	THERMIST 50A 561V D13.5XT4.9MM
C927	9965 000 32755	COND MYLAR 0.01 UF 100V 5%
C928	9965 000 32755	COND MYLAR 0.01 UF 100V 5%
C933	9965 000 15941	COND SAFTY 0.01UF 250V 20%
C934	9965 000 15941	COND SAFTY 0.01UF 250V 20%
R906	9965 000 27085	FUSEABLE RES 1? 1/4W 5%
R909	9965 000 27085	FUSEABLE RES 1? 1/4W 5%
D901	9965 000 32756	DIODE 1N5401 AI 3A 70 VRMS
D902	9965 000 32756	DIODE 1N5401 AI 3A 70 VRMS
D903	9965 000 32756	DIODE 1N5401 AI 3A 70 VRMS
D904	9965 000 32756	DIODE 1N5401 AI 3A 70 VRMS
D906	4822 130 31438	1N4001G
D907	4822 130 31438	1N4001G
D908	4822 130 31438	1N4001G
D909	4822 130 31438	1N4001G
D911	4822 130 31438	1N4001G
ZD901	9965 000 26941	DIODE ZENR 6.0-6.3V 0.5W PB<1000
Q901	4822 130 41198	2SC945P
Q902	4822 130 41198	2SC945P

ELECTRICAL PARTS LIST-RADIO PCBA

MISCELLANEOUS

CN002	9965 000 25150	CONNECTOR S2B-XH-A 2 PIN
IF001	9965 000 24093	CERFILTER 3P 10.7MHZ LT10.7MA5
IF002	9965 000 24670	CER FILTER 10.7 MHZ
VC001	9965 000 24676	CONDTRIM 3-10PF NP0 PB<1000PPM
VC002	9965 000 24676	CONDTRIM 3-10PF NP0 PB<1000PPM
VR001	9965 000 27005	CNTL TRIMR 30K OHM P=5X5MM
XL1	9965 000 23588	CRYSTAL 75KHZ +/-15 PPMCOLUMN

DIODES

D001	9965 000 26949	DIODE SW 1N4148 PB<1000PPM
D002	9965 000 26949	DIODE SW 1N4148 PB<1000PPM
D003	9965 000 26949	DIODE SW 1N4148 PB<1000PPM
D004	9965 000 26940	DIODE ZENR 11.9-12.4V 0.5W
D005	9965 000 26949	DIODE SW 1N4148 PB<1000PPM
VD001	9965 000 27006	DIODE TUNG FM TOSHIBA 1SV101
VD002	9965 000 27006	DIODE TUNG FM TOSHIBA 1SV101
VD003	9965 000 26965	DIODE TUNG AM TOSHIBA 1SV149B
VD004	9965 000 26965	DIODE TUNG AM TOSHIBA 1SV149B

TRANSISTORS & INTREGATED CIRCUITS

Q001	4822 130 41198	2SC945P
Q002	4822 130 41198	2SC945P
Q003	9965 000 27004	XISTR PNP BF550 SOT23 PHILIPS
Q003	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
IC001	9965 000 27003	IC 44 PIN TEA5757H QFP44 PHILIPS

Note: Only the parts mentioned in this list are normal service spare parts.