

Service
Service
Service



Service Manual

260.000 Color LED	AUTO DJ	DJ CROSSFADER	Dual USB	RIPE PLUS	Bluetooth®	NX BASS
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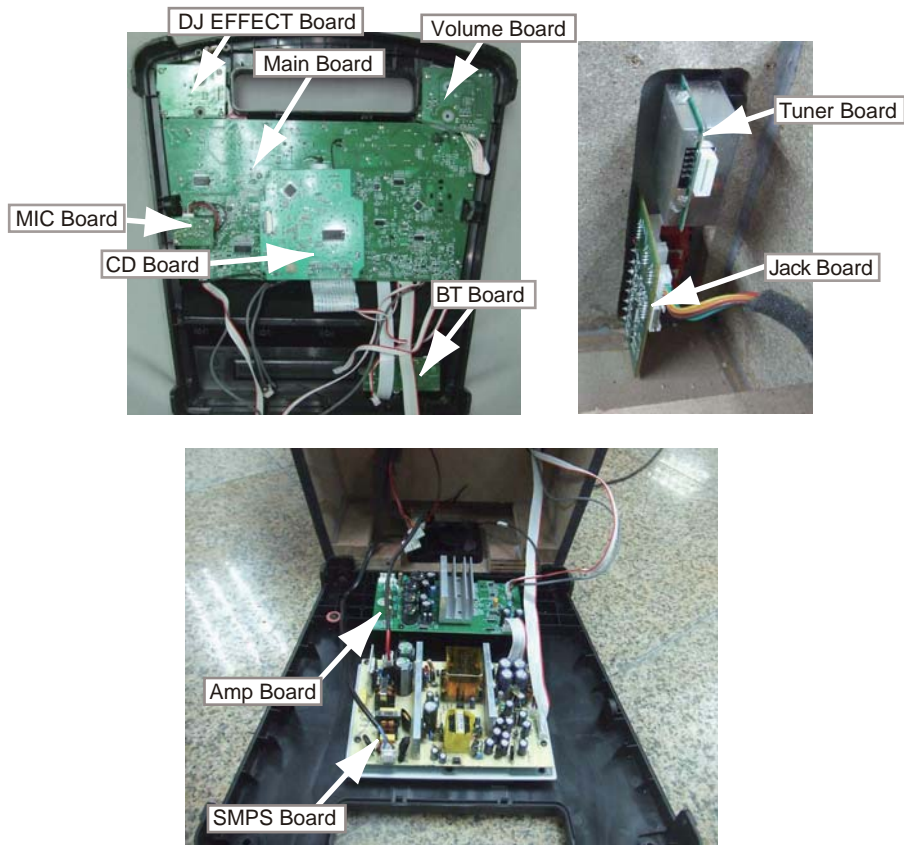
Version 1.0



PHILIPS

Technical Specification and Connection Facilities

Location of PC Boards



VERSION VARIATION

Type /Versions:		NTRX710									
		/55 (LATAM)	/77 (ARGENTINA)	x/78 (BRAZIL)							
Board in used:	Service policy										
	MAIN BOARD	C/M	C/M	C/M							
	VOLUME BOARD	C/M	C/M	C/M							
	AMP BOARD	C/M	C/M	C/M							
	DJ EFFECT BOARD	C/M	C/M	C/M							
	JACK BOARD	C/M	C/M	C/M							
	TUNER BOARD	C/M	C/M	C/M							
	SMPS BOARD	M	M	M							
MCU+CD BOARD	C/M	C/M	C/M								
Type /Versions:		NTRX710									
Features	Feature diffrence	/55	/77	x/78							
	RDS										
	VOLTAGE SELECTOR										
	ECO STANDBY - DARK										
* TIPS : C -- Component Lever Repair. C/M M -- Module Lever Repair C/M √ -- Used											

NX5 NX7 ALL SH190 Contact List		
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GENERAL DESCRIPTION						
MP3-USB Mini Hi FiSystem with Digital Tuner, 1CD/mp3 BT for NX5 NX7 ALL) (125W x 4 FOR NX5; 239W x 4 FOR NX7 ALL Power Amplifier, LCD Display, Aux in , Remote control						
LIFETIME : 7 Years						
Class	Tuner	Supply + Amplifier	USB	Recorder	Clock	CD-mp3
I			X	N/A		
II	X	X			X	X
III						
Page	10	3-7	9		8	11
SAFETY requirements						
Version	Safety			EMC		
/98	EN 60065			CISPR 13		
/55	EN 60065			CISPR 13		
/12	EN 60065			EN 55013 / EN 55020		
/05	EN 60065			EN 55013 / EN 55020		
/79	EN 60065			CISPR 13		
/37	UL 60065			FCC99		
RADIATION / IMMUNITY requirments (EMC) for 12 version only						
CLIMATIC requirements						
ALL climates	: + 5 Degree	till	+ 35 Degree			
MODERATE climates	: + N.A	till	N.A Degree			
PERFORMANCE CLASSES						
POWER SUPPLY						
MAINS (A.C.)	120 Vac (110V-10%, 120V ±10%)	230 Vac ± 10 %	127 / 240 Vac ± 15 %	240 Vac ± 10 %	220 Vac ± 10 %	
Version	/ 37	/ 12 /05	/ 55 /98/96	/ 79	/ 61, /93	
Voltage Selection	No	No	Yes	No	No	
Frequency	60Hz ±5%	50Hz	60/50Hz	50Hz	60Hz, 50Hz	
POWER CONSUMER						
	/12	/ 55/98/96	/79 /61 /93	/ 37		
Stadby :	< 25W	< 25W	<25W	<25W		
(DEMO mode " OFF ") , NOM. A, INPUT						
Maximum :	<110W	<110W	<110W	<110W	<110W	
@ 1/8 Prated , NOM. A, INPUT	<130W	<130W	<130W	<130W	<130W	
ECO Power mode :	<= 1W	no	<= 1W	<= 1W	<= 1W	
Quality	: 0.8 % (Major)	2.0 % (Mirror)				
Reliability	: 3.0 % (C 42)					
Tested according to General Test Instruction refer to PHILIPS standary (UAN -D1591)						
Measured according to PHILIPS standary (UAN - L1059) unless other wise stated						
All not mentioned date, please refer to PHILIPS standary (XUW - 0010 - JUNE 2001)						
DERIVED	REMARKS			APPROBATION		
Remarks						
GENERAL PART 1 - GENERAL SPECIFICATION						
Class No	<u>NX5 NX7 ALL</u>			Ver	Issued Date	
				1	16-4-2013	
				2		
				3		
NAME : MZ.FENG	10	10	SH 190 - 3			A4
KT	CHECK	DATE :				

TECHNIAL DESCRIPTION					
Total power 500W FOR NX5 1000W FOR NX7), FOUR INPUT SOURCE, (Digital Sound Control). IS (Incredible Sound)					
GENERAL PART					
OUTPUT stage Protection		: Yes	Temperature	: Yes.	
LoudSpeaker D.C. Protection		: Yes.	Shorcircuit	: Yes	
INDICATORS					
Standby Mode Indicator		: LCD display Clock active			
ECO Mode Indiicator		: LCD turns off, ECO - Standby LED turn on			
ELECTRICAL DATA					
DSC :	Rock, Pop, Jazz, Optimal	Channel Differencer at -46dB	3	dB	
MAX	YES	Hum (Volume Minimun - 50mW)(A - weighted)	< 200	nW	
IS :	YES	Residual Noise (Volume Minium)(A - weighted)	< 100	nW	
VAC :	N/A	Channel Separation (at 1 kHz)	≥ 45	dB	
WOOX :	N/A	Signal / Noise (weighted)	≥ 60	dB	
Frequency Response (+/- 3dB), reference 1kHz		60Hz - 16kHz			
INTERCONNECTS					
Input Sensitivity(±2 dB)rated ouput power at 1 kHz and 10kHz.		Line Output Voltage (*1)			
Tuner	: FM 67.5KHz,AM 80% Modulation - 3dB	Line Out (Left / Right)	N.A		
CD	: 0 dB track (Audio Disc 1, Trk 35)	Subwoofer Out	N.A		
USB	: 0 dB track	Headphone	N.A		
AUX	: Nor: 600mV Lim: 450mV ~ 550mV for /37	Digital Coaxial Out	N.A		
	: Nor: 2V Lim: 1.5V ~ 2.5V for /55	Booster Out	N.A		
input leven Nor: 1.5mv Lim:0.8-2.5mv					
Microphone	: Rs=600ohm (output=500MW)				
OUTPUT POWER (* 1) At THD = 10% (Measured with 20Hz-20KHz filter), both channels driven (Low channel at 1KHz, High channel at 10k)					
Power output (RMS) FOR NX5 ALL		Low channel	125W per channel (Lim '-1dB) (CD USB AUX)		
		High channel	125W per channel (Lim '-1dB) (CD USB AUX)		
Power output (RMS) FOR NX7 ALL		Low channel	250W per channel (Lim '-1dB) (CD USB AUX)		
		High channel	250W per channel (Lim '-1dB) (CD USB AUX)		
Frequency Response					
LOW Frepuecy	Frequency Response - 60Hz - ref. 1kHz ±3 dB				
HI Frepuecy	Frequency Response -6KHz - ref. 10kHz ±3 dB				
Rated Impedance					
: 3 Ohms					
Remarks					
(*1) Electrical parameters are to be measurement at specker terminals with rated input signal in AUX mode; DSC setting in Jazee mode with DBB OFF IS off and OSM unless specified otherwise One channel signal input (L or R), two channel load (< Low ch. L + High ch. L > or < Low ch. R + High ch. R >) Measurement output power only for AUX model and CD model of used audio analyzer equipment.					
GENERAL PART 1 - TECHNICAL SPECIFICATION					
Class No	<u>NX5 NX7 ALL</u>			Ver	Issued Date
				1	
				2	16-4-2013
				3	
NAME : MZ.FENG	10	10	SH 190 - 4		A4
KT	CHECK	DATE :			

AUDIO SIGNAL PROCESSING

MP3-USB Mini Hi Fi System with Digital Tuner ,Class AB Power Amplifier

1) DSC (Digital Sound Control)

Select AUX as input source with the following set conditions:

Inject sine wave 2V at 1 KHz to L/R channels of AUX-IN socket.

Set DSC to JAZZ(Flat) mode and switch off DBB. Max off

Refence level for DSC's without DBB on=500mW.

Refence level for DSC'S with DBB on=1.7V at the speaker terminal .

Inject sine wave 2V to AUX-IN socket with frequencies indicated in Table 1.

Tabel 1a (Tolerance ± 3dB)

Frequency	DSC Modes with DBB Off				
	JAZZ	POP	ROCK	TECHNO	SAMBA
60 Hz	-1.8 dB	+ 3 dB	+ 6dB	+0.5dB	+0.3dB
1 kHz	0 dB	0.5db	1 dB	0.5dB	0
10 kHz	-1.5 dB	-0.6dB	+1 dB	-0.5 dB	-3

Tabel 1b (Tolerance ± 3dB)

Frequency	DSC Modes with DBB 1 ON				
	JAZZ	POP	ROCK	TECHNO	SAMBA
60 Hz	+3 dB	+8dB	+ 14. 5dB	5.5 dB	+5.5dB
1 kHz	0 dB	+1 dB	1 dB	+1 dB	0
10 kHz	-1.5 dB	+0.6dB	+1dB	-0.5dB	-3

Tabel 1b (Tolerance ± 3dB)

Frequency	DSC Modes with DBB 2 ON				
	JAZZ	POP	ROCK	TECHNO	SAMBA
60 Hz	+8dB	+ 14.0 dB	+ 15.0 dB	+ 11.0 dB	+11dB
1 kHz	+0 dB	+1dB	+1 dB	+1 dB	0
10kHz	-1.5 dB	+ 1dB	+2 dB	- 0.5dB	-0.5

Tabel 1b (Tolerance ± 3dB)

Frequency	DSC Modes with DBB 3 ON				
	JAZZ	POP	ROCK	TECHNO	SAMBA
60 Hz	+14 dB	+ 17.0 dB	+ 20.0 dB	+ 18.0 dB	+18dB
1 kHz	+0dB	+1dB	+1dB	+1 dB	0
10 kHz	-0.5 dB	+ 2dB	+3dB	+ 1dB	1

GENERAL PART 1 - GENERAL SPECIFICATION

Class No	<u>NX5 NX7 ALL</u>			Ver	Issued Date
				1	16-4-2013
				2	
				3	
NAME : MZ.FENG	DATE:25/08/07	10	10	SH 190 - 5	A4
KT	CHECK	DATE :			

AUDIO SIGNAL PROCESSING

MP3 - USB Mini Hi Fi System with Digital Tuner , 1CDCfor NX5 NX7 ALL

3) IS (Incredible Sound)

Select AUX as input source.

Inject sine wave 2V at 1kHz to AUX-IN socket, one channel at a time (input level 500mV for /37,2V for /55).

Set DSC to JAZZ (Flat) mode and switch of DBB, OSM & INCREDIBLE SURROUND.

Adjust volume level to obtain 500mW across 4OHM load at L/R speaker output.

Inject sine wave 2V to AUX-IN socket with frequency indicated in Table 3 (input level 500mV for /37,2V for /55).

Right channel reference to left channel.

Table 3 (Tolerance ± 3 dB)

FREQ	INPUT LEVEL		OUTPUT LEVEL			
			IS OFF		IS ON	
	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
60 Hz	2V	-	- 1.0 dB	-	+2.0 dB	-17.0 dB
1 kHz	2V	-	0	-	+ 3.5 dB	-0 dB
10 kHz	2V	-	- 0.5 dB	-	+ 3.0 dB	-7.0 dB

Note : The above specs also apply to right channel.

4) DSC Mode (Jazz , Rock, Techno and Optimal)

The VEC modes are software controlled by switching the combination between DBB and DSC modes as show in Table 4.

DSC MODE	DBB Level preset
Jazz	DBB OFF
POP	DBB 2
Techno	DBB 3
Optimal	DBB 1

Note : When these modes are activ DBB and DSC will not be displayed

5) MAX (Maximum Sound)

Select AUX as input source.

Inject sine wave 2V at 1kHz to AUX-IN socket, one channel at a time (input level 600mV for /37,2V for /55).

Set DSC to JAZZ (Flat) mode and switch of DBB, OSM & INCREDIBLE SURROUND.

Adjust volume level to obtain 500mW load at L/R speaker output.

The 500mW level will be used as 0 dB reference

Inject sine wave 2V to AUX-IN socket with frequency indicated in Table 5 (input level 600mV for /37,2V for /55).

FREQ	Max OFF	Max ON
60 Hz	00 dB	+ 19 .0 dB
1 kHz	0	+ 7.0 dB
10 kHz	- 0.5 dB	+ 10.0 dB

GENERAL PART 1 - AUDIO SIGNAL SPECIFICATION (2)

Class No		NX5 NX7 ALL	Ver	Issued Date		
			1			
			2	16-4-2013		
			3			
NAME : MZ.FENG		10	10	SH 190 - 6		A4
KT		CHECK	DATE :			

TECHNIAL DESCRIPTION

AUX modle

GENERAL PART

Description	Specification
Output power = , 1 KHz)	125W± 1 Db(NX5) 250W± 1 Db(NX7)
Channel Unbalance	<= +/- 3 dB
THD + Noise (0dB, 1Khz)	<=2%
Channel Crosstalk ((0dB, 1 KHz)	>= 40dB
(0 dB, 10 KHz)	>= 40dB
Signal to Noise Ratio (0dB,1kHz) (A - weighted)	>= 60dB(A - weighted)
Frequency Response (+/- 3dB), reference 1kHz	60Hz - 16kHz
Microphone	
Description	Specification
Output power = , 1 KHz 2mV input)	1W± 1 dB
THD + Noise (0dB, 1Khz)	<=5%
Signal to Noise Ratio (0dB,1kHz) (A - weighted)	>= 45dB(A - weighted)
Frequency Response (+/- 3dB), reference 1kHz	100Hz - 16kHz

Remarks :

USB SPECIFICATION					
Class No				Ver	Issued Date
	NX5 NX7 ALL			1	16-4-2013
				2	
				3	
NAME : MZ.FENG		10	10	SH 190 -9	A4
	CHECK	DATE :			

TECHNIAL DESCRIPTION										
SOFTWARE IMPLEMENTED CLOCK / TIMER FUNCTION WITHOUT 32.768KHZ QUARTZ OSCILLATOR.										
GENERAL PART										
Timer Setting		:	Clock and Timer							
Timer Wakeup Mode		:	CD USB or Tuner							
Remarks Time Setting		:	12hr for /37 version, 24hrs for other version.							
Volume at Wakeup		:	Last Setting							
No of Timer Settings		:	1							
Clock Accuracy		:	Nom : 1 sec/day			Limit : 2 sec/day				
INDICATORS										
Display Type		:	LCD							
Remark										
CLOCK / TIMMER SPECIFICATION										
Class No		NX5 NX7 ALL					Ver	Issued Date		
							1	16-4-2013		
							2			
							3			
NAME : MZ.FENG		10		10		SH 190 - 7		A4		
KT		CHECK	DATE :							

TECHNIAL DESCRIPTION

USB

See also SH 190 USB Audio Module (300605)

Measurement are directly done at the coonector on the board

GENERAL PART

Measurement are directly done at the connector on CDC board

Description	Specification
Output Resistance	< = 1.5 kOhm
Output Voltage RL = 33 k ohm dB, 1 KHz	NC
Channel Unbalance	< = +/- 1 dB
THD + Noise (0dB, 1Khz)	<=1.5%
Channel Crosstalk (1k)	>= 40dB
(0 dB, 10 KHz)	>= 40dB
Signal to Noise Ratio (0dB,1kHz) (A - weighted)	>= 60dB(A - weighted)
Frequency Response (+/- 3dB), reference 1kHz	60Hz - 16kHz

USB Measurement at Set Level

Electrical Parameters are to be measured at speaker teminals across 6 ohm load with 500mW output and DSC setting in Jazz Mode

Description	Specification
Channel Crosstalk (0 dB, 1 KHz)	>= 40dB (with 1 KHz filter)
Signal to Noise Ratio (0 dB, 1 KHz)	>= 60dBA (A - weighted)
Channel Unbalance (0 dB, 1 KHz)	< +/- 1.5dB
Frequency Response (+/- 3dB), reference 1kHz	60Hz - 5.8kHz
Frequency Response (+/- 4dB), reference 10kHz	6KHz - 16kHz

Remarks :

USB SPECIFICATION

Class No					Ver	Issued Date
	NX5 NX7 ALL				1	16-4-2013
					2	
					3	
NAME : MZ.FENG		10	10	SH 190 -8		A4
	CHECK	DATE :				

TECHNICAL DESCRIPTION									
GENERAL PART									
WAVE RANGE			TOLERANCE			TUNING GRID			
FM(55/37) 87.5 - 108.00 MHz			QUARTZ PRECISION			100 kHz			
FM(12) 87.5 - 108.00 MHz						50KHZ			
AM (55/37) 530 - 1700 kHz			QUARTZ PRECISION			10 kHz			
AM (12) 531 - 1602 kHz			QUARTZ PRECISION			9 kHz			
AERIAL									
FM : PIGTAIL ANT WIRE 300 Ohm(for/37) 75ohm for 55/12									
AM : FRAME ANT. 18.1 uH									
INDICATORS									
LCD									
ELECTRICAL DATA									
A.M		Nom	Limit	Unit	F.M.		Nom	Limit	Unit
					- 3 dB Limiting Point		: 17	23.5	dBf
Amplification Reverse		: - 2	-4	dB	Amplification Reverse		: 0	-4	dB
AGC Figure of Merit		: 30	25	dB	Distortion (RF 1mV, Frq Dev.75 kHz)		: 2	5	%
Distortion (RF 50mV, M 80%)		: 3	5	%	Stereo - 46 dB Quieting		: 38	43	dBf
IF		: 450	± 3	kHz	Crosstalk (RF1mV, Freq Dev.40kHz)		: 25	18	dB
Modulation Hum.		35	30	dB	Modulation Hum.		45	40	dB
Wave Range		Noise Limited Sensitivity 26 dB		Image Rejection	IF Rejection	Large Signal	Selectivity S3 / S9 / 300kHz		
MW 610 kHz		Nom.	3500	uV/m	32 db	28db	1000mv/m	22	db
		Lim.	4000	uV/m	28db	24db	500mv/m	18	db
MW 1400 kHz		Nom.	1500	uV/m	32db	28db	1000mv/m	22	db
		Lim.	4000	uV/m	28db	24db	500mv/m	18	db
FM 98 MHz		Nom.	18	dBf	40db	65db	116 dBu	45	db
		Lim.	22	dBf	30db	60db	108 dBu	25	db
		Auto Search sensitivity							
MW 610 kHz		Nom.	58	db/m					
		Lim.	± 10	db/m					
MW 1400 kHz		Nom.	58	db/m					
		Lim.	± 10	db/m					
FM 98 MHz		Nom.	26	dBuV					
		Lim.	± 10	dBuV					
Remarks									
TUNER SPECIFICATION									
Class No		NX5 NX7 ALL						Ver	Issued Date
								1	16-4-2013
								2	
								3	
NAME : MZ.FENG			10	10	SH 190 - 9				A4
KT		CHECK	DATE :						

TECHNIAL DESCRIPTION			
Bluetooth Function			
GENERAL PART			
Bluetooth Version :		Ver2.1 + EDR	
Receive A2DP:		N/A	
Transmit A2DP:		N/A	
Receive HSP		N/A	
		Remote Controlled : YES	
		Noise Reduction System : No	
INDICATORS			
Bluetooth Flashing :		Yes	
Display :		Yes	
ELECTRICAL DATA			
Bluetooth at Module level:			
Frequency Response		Mobile Phone	lim
		125-16khz	± 7
S/N (Unweighted)		≥55	50
S/N (A-weighted)		≥60	55
Level Diff		\	± 3
Channel Separation		≥35	30
Distortion		<1	%
Bluetooth at Set Level		Mobile Phone	
10%THD OUTPUT POWER(EQ:FLAT)		\	250± 3dB
Connected distance		8-10	meter
REMARKS			
Bluetooth SPECIFICATION			
Class No	NX5 NX7 ALL All Version	Ver	Issued Date
		1	16-4-2013
		2	
		3	
NAME : TAN	DATE :	SH 190 - 9	
CHECK:	DATE :		

TECHNIAL DESCRIPTION

CD + MP3 - Part Specifications (CD MECHAISM DA11VF OF SANYO) 1DISC for NX5 NX7 ALL

	Input	Output	Motor	Logic control
Active components	BU9543	BU9543	SA5888	BU9543
	Signal processing	D/A converter	HF-preamplifier	Servo processor
Active components	BU9543	BU9543	NA	DA23SR

AUDIO part: Measurement with Audio Signals Disc TCD-781 on speakers or Headphone socket with nom.load

Description	Extern	Nom	Lim	Unit
De-emphasis	15us / 50us Switchable via Subcode information			
Frequency accuracy		N/A	± 0.5	%
Channel Unbalance		0.5	1.5	dB
Frequency Response (60Hz - 16 kHz)		0	± 3	dB
Signal to Noise Ration (Unweighted)		60	55	dBA
Signal to Noise Ration (A - weighted)		65	60	dBA
Crosstalk (1kHz) (A - weighted)		55	40	dB
Crosstalk (10kHz) (A - weighted)		50	40	dB
Hum & Noise (*1)		1	2	Mv
THD (1KHz -6dB)		0.2	<1.5	%
THD (10KHz -20dB)		<1	<1.5	%

REMARKS:

1. Amplification reserve for CD = +2dB (±2dB),Ref.Level for CD is a 0dB track instead of a -.6dB track.

Playability :(acc.To AR 30-05-239)

	Limit	Typical	Test disc
Wedge	600um	900um	TNO 7, 9 of SBC 444A(7104 099 24990)
Eccentric	150um	200um	TNO 1, 24 of 200um disc (7104 099 24960)
Fingerprint	No audible defect		TNO 11 of Sub chassis 8A
Black dot	500um	800um	TNO 13 of SBC 444A (7104 099 24990)
Skew 0.6mm	No audible defect		TNO 1,6 of 0.6mm skew (7104 099 28260)
Bad HF track	No audible defect		TNO 8 of Sub chassis 8A
Playback position	Solid, Normal position (Set is located on a flat surface, floor)		

1. Playback of above mentioned tracks possible without track loss or audible defects.
2. Double black dot, max. diameter, thin/disk is according to PQR or AR 30-05-239
3. This unit can playback (only) CD-R or CD-RW discs. For performance specification, Please refer to module. specification of CD99 (3103 308 52190)

CD / MP3 SPECIFICATION

Class No	NX5 NX7 ALL	Ver	Issued Date	
		1	16-4-2013	
		2		
		3		
NAME : MZ.FENG	10	10	SH 190 -10	A4
KT	CHECK	DATE :		

2.0 SAFETY INSTRUCTIONS

(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.

ESD**(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 enfilez 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 kann 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 ridotta 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)

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

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

(NL)

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

**(F)**

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

(GB) Warning !

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

(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.

(S) Varning !

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

(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.

(SF) Varoitus !

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

"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."

DK Advarsel !

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

Caution: These servicing instructions are for use by qualified service personnel only.

To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

2.1 ESD PROTECTION

- レンズには絶対に触れないでください。
- DO NOT TOUCH THE LENS.
- LINSE NICHT BRÜHREN.
- NE PAS TOUCHER LA LENTILLE.

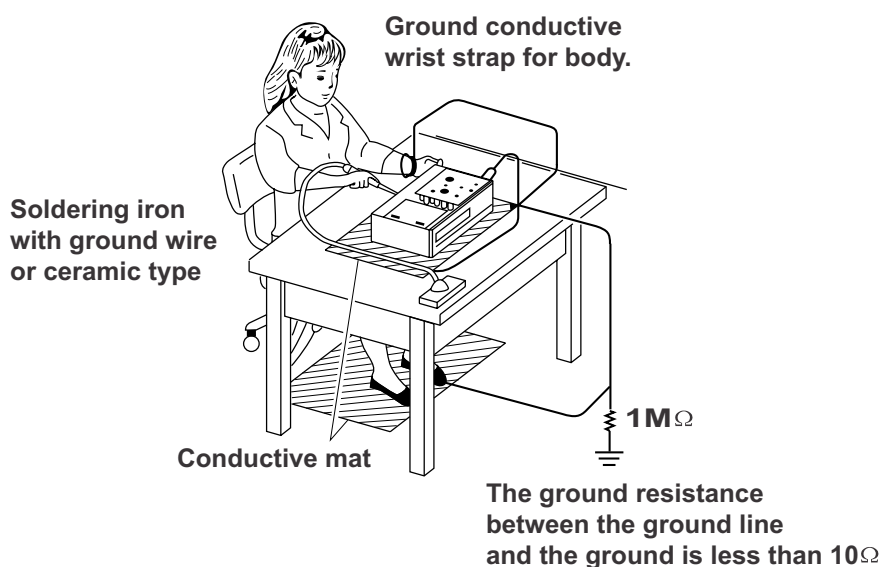
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electrocity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode form damage by static electricity.

And also, the LSI and IC are same as above.



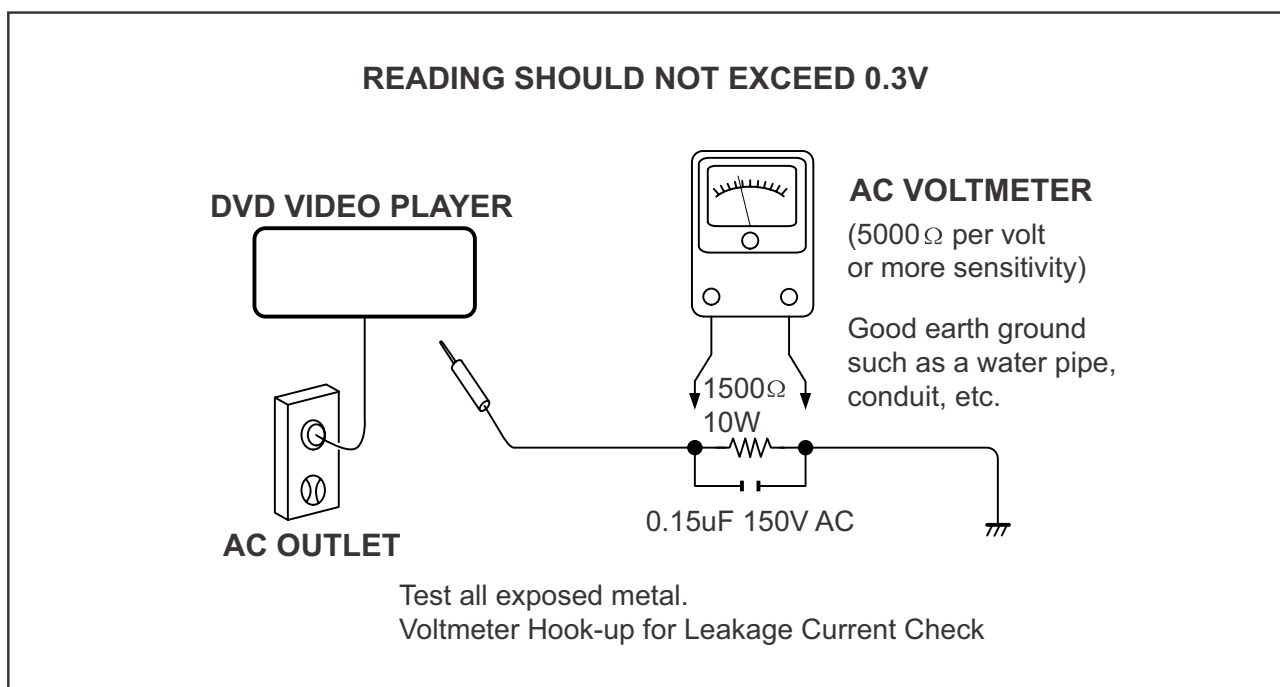
SAFTY NOTICE

SAFTY PRECAUTIONS

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having 5000Ω per volt or more sensitivity. Connect a 1500Ω 10W resistor, paralleled by a $0.15\mu\text{F}$ 150V AC capacitor between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

Measure the AC voltage across the 1500Ω resistor. The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3V. A reading exceeding 0.3V indicates that a dangerous potential exists, the fault must be located and corrected. Repeat the above test with the DVD VIDEO PLAYER power plug reversed. NEVER RETURN A DVD VIDEO PLAYER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

2.2 SAFETY INSTRUCTIONS

Battery Handling Guideline

Since the battery is packed in soft package, to ensure its good performance, it's very important to carefully handle the battery

2.2.1 Soft Aluminium foil

The soft aluminum packing foil is very easily damaged by sharp edge parts such as Ni-tabs, pins and needles.

- Don't strike battery with any sharp edge parts
- Trim your nail or wear glove before taking battery
- Clean worktable to make sure no any sharp particle



2.2.2 Sealed edge

Sealing edge is very flimsy

- Don't bend or fold sealing edge



2.2.3 Folding edge

The folding edge is formed in battery process and has passed all hermetic tests.

- Don't open or deform folding edge



2.2.4 Tabs

The battery tabs are not so rigid especially for aluminum tab.

- Don't bend tab



2.2.5 Mechanical shock

- Don't fall, hit, bend battery body



2.2.6 Short

Short terminals of battery is strictly prohibited, it may damage battery.

Caution: Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type.

The battery shall not be exposed to such as sunshine, fire or similar overheated environment.

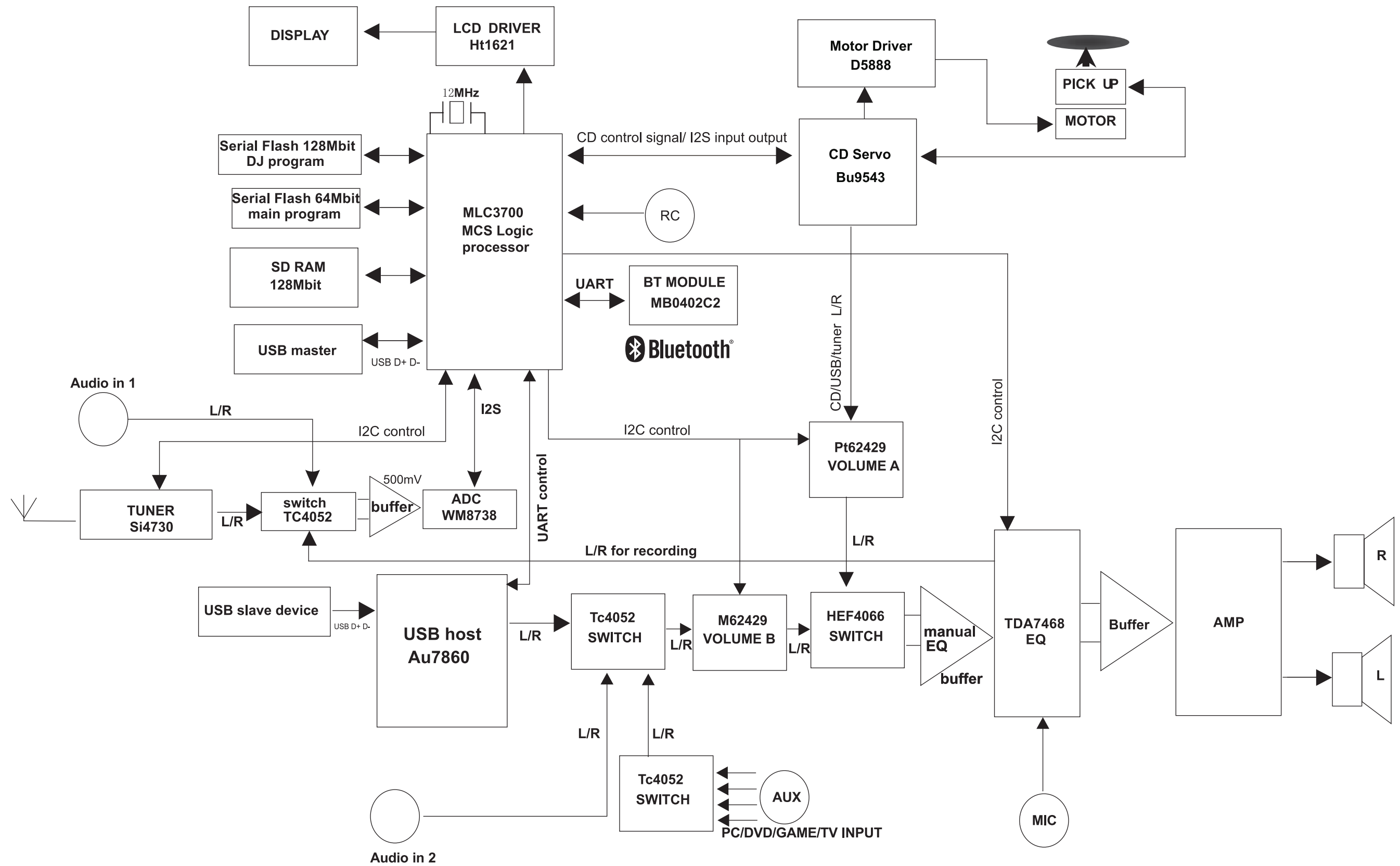
如果电池更换不当会有爆炸危险,只能用同样类型或等效类型的电池来更换.

电池不得暴露在诸如日照、火烤或类似过热环境

BLOCK DIAGRAM

3-1

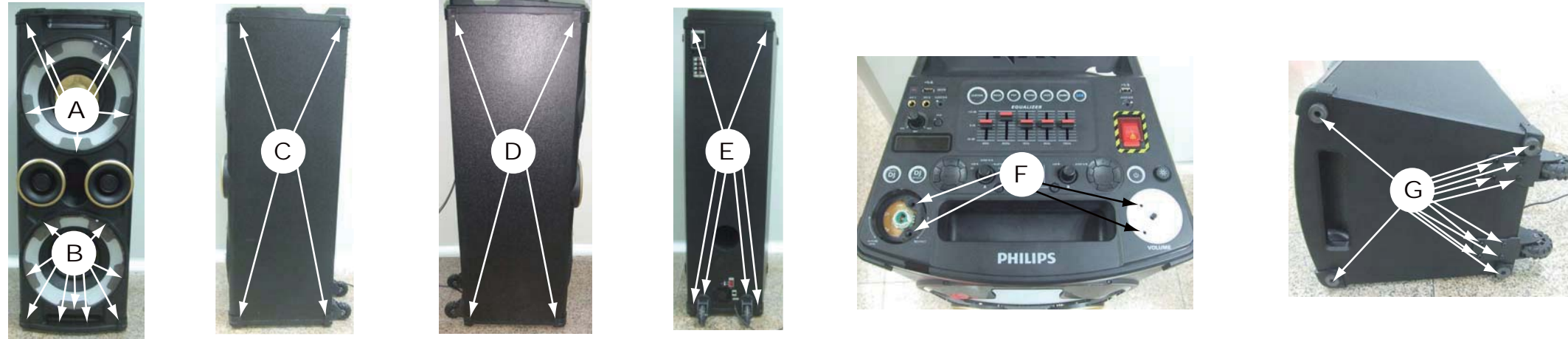
3-1



DISASSEMBLY INSTRUCTIONS

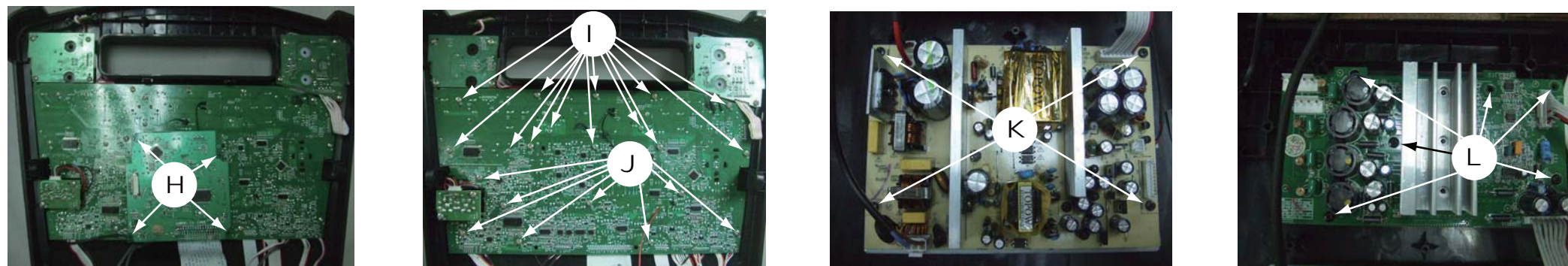
Dismantling of OUTER Portion

1) Remove 46 screws A/B/C/D/E/F/G as indicated to loosen the top/front/bottom plate.

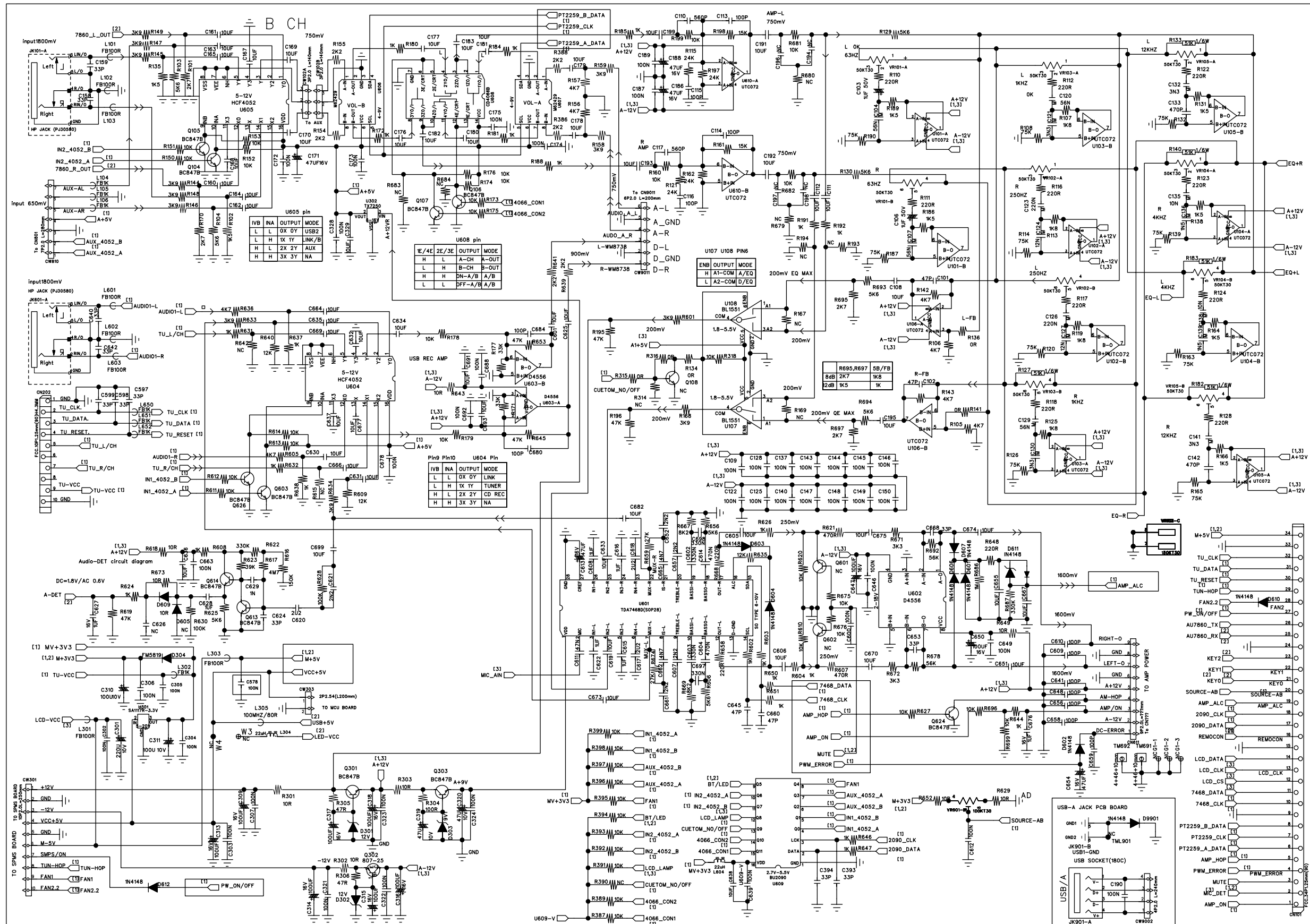


Dismantling of the PCB Board

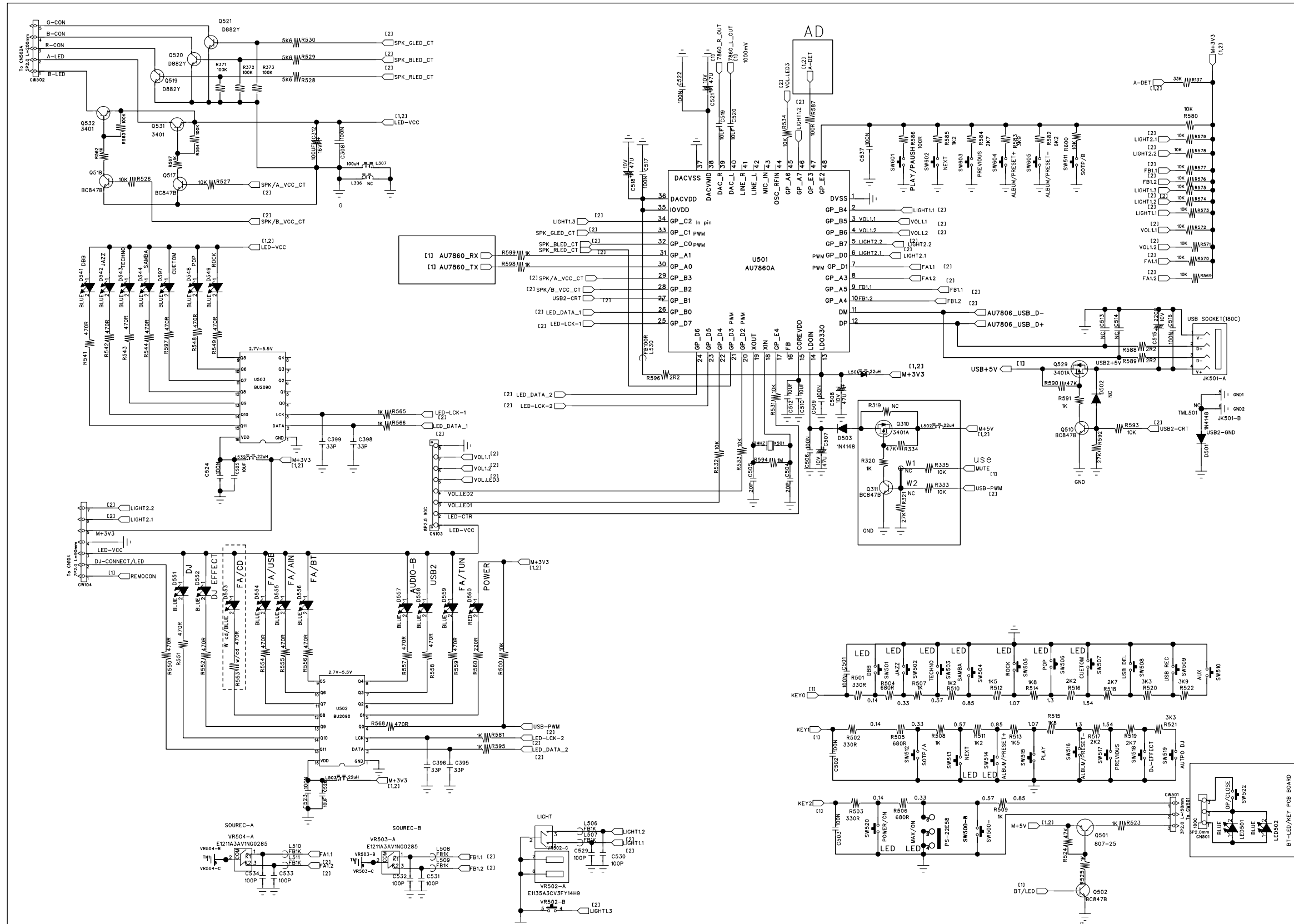
- 1) Remove 4 spacer supports H as indicated to loosen the CD Board.
- 2) Remove 13 screws I and 8 screws J as indicated to loosen the Main Board.
- 3) Remove 4 screws K as indicated to loosen the Smps power Board.
- 4) Remove 6 screws L as indicated to loosen the Amp Board.



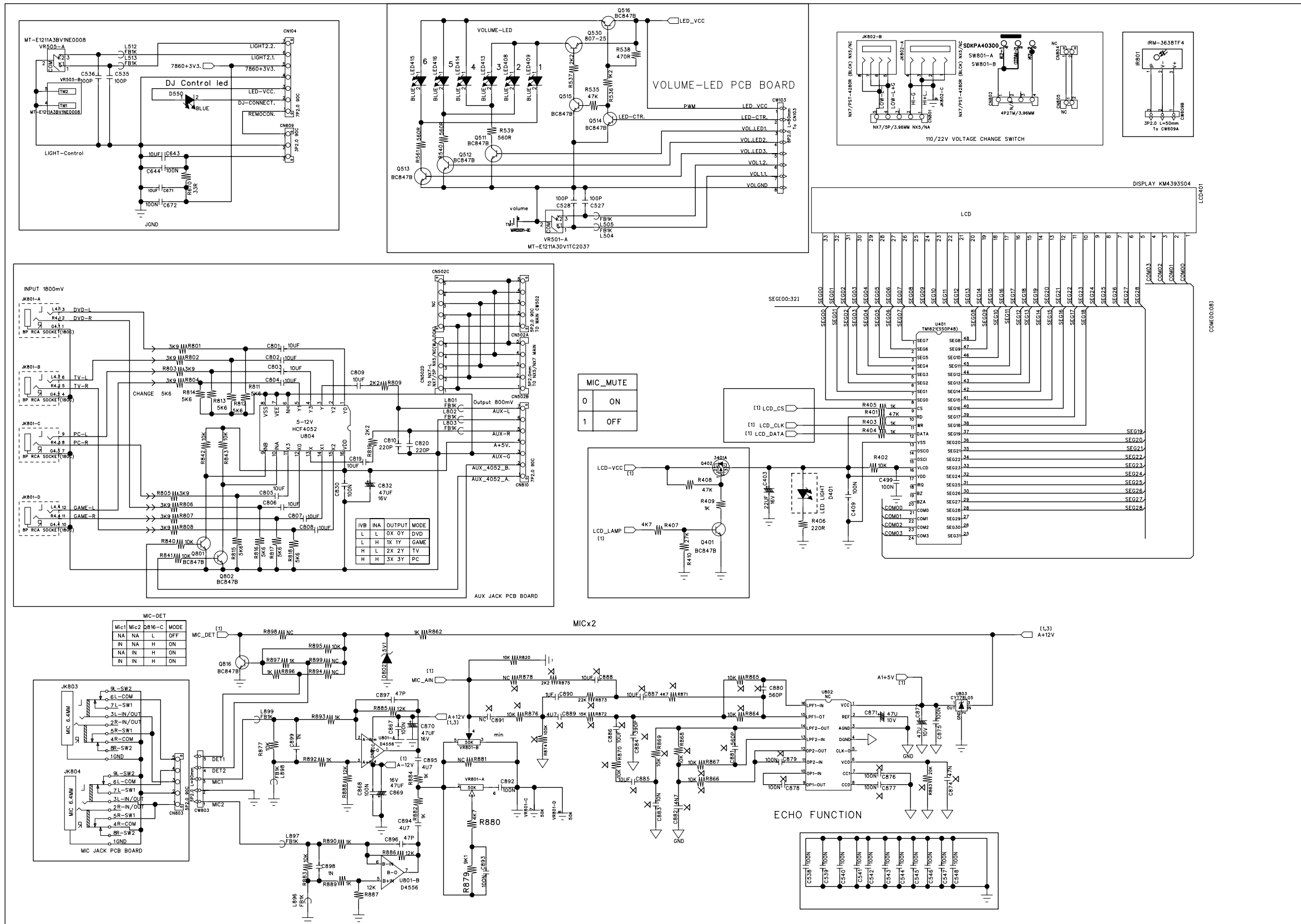
CIRCUIT DIAGRAM - MAIN BOARD AND JACK BOARD



CIRCUIT DIAGRAM - MAIN BOARD

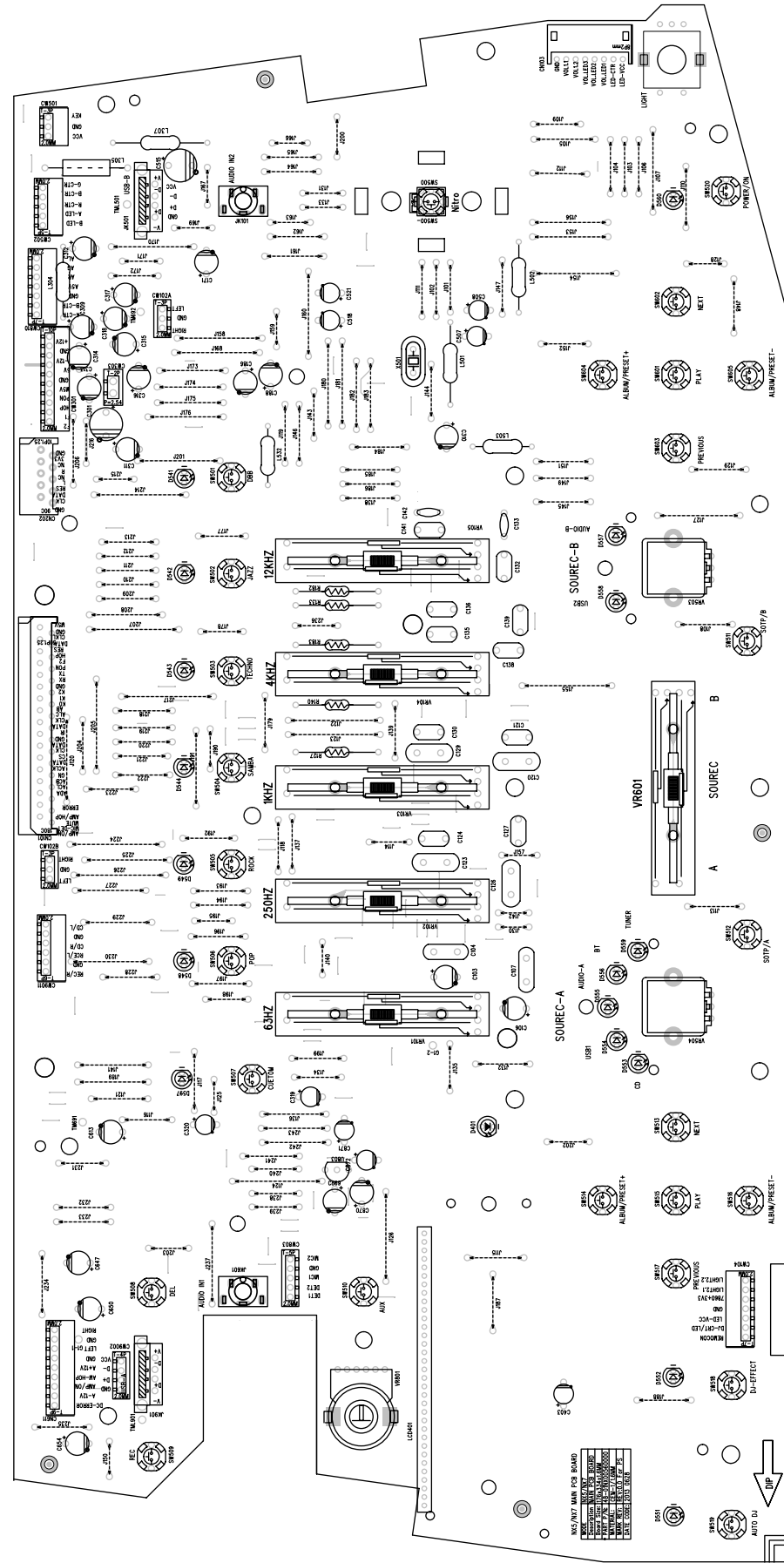


CIRCUIT DIAGRAM - MAIN BOARD

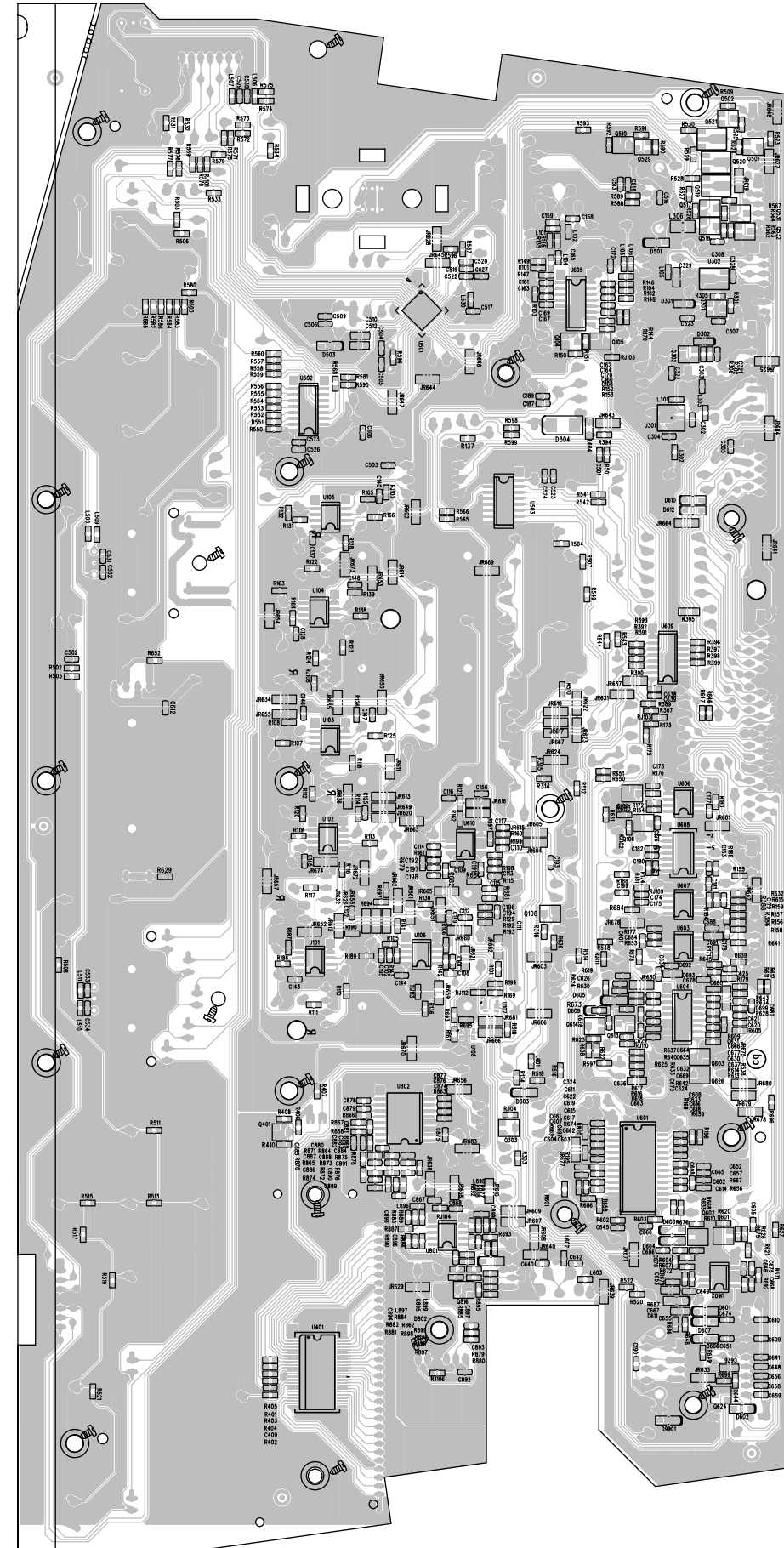


PCB LAYOUT - MAIN BOARD

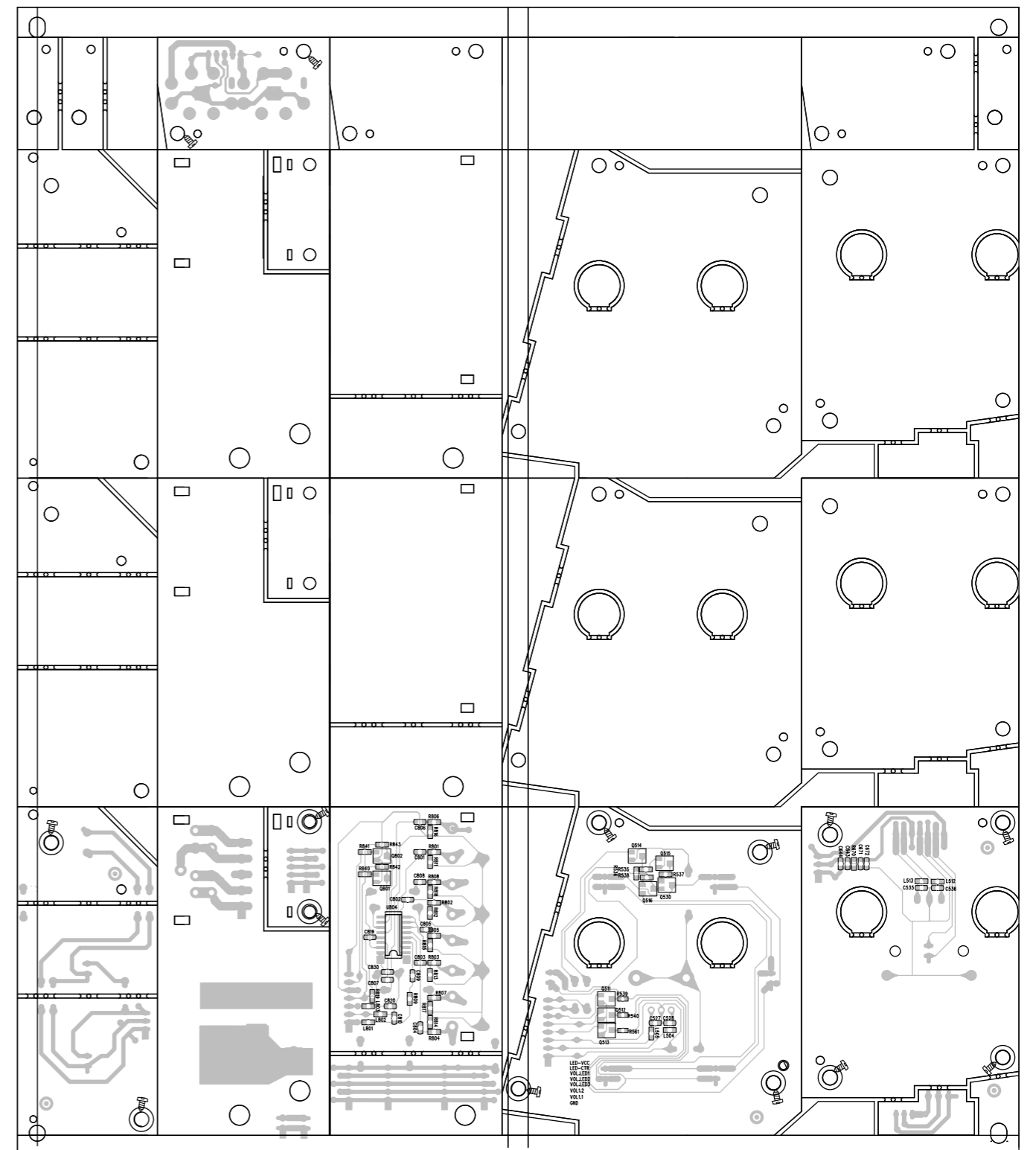
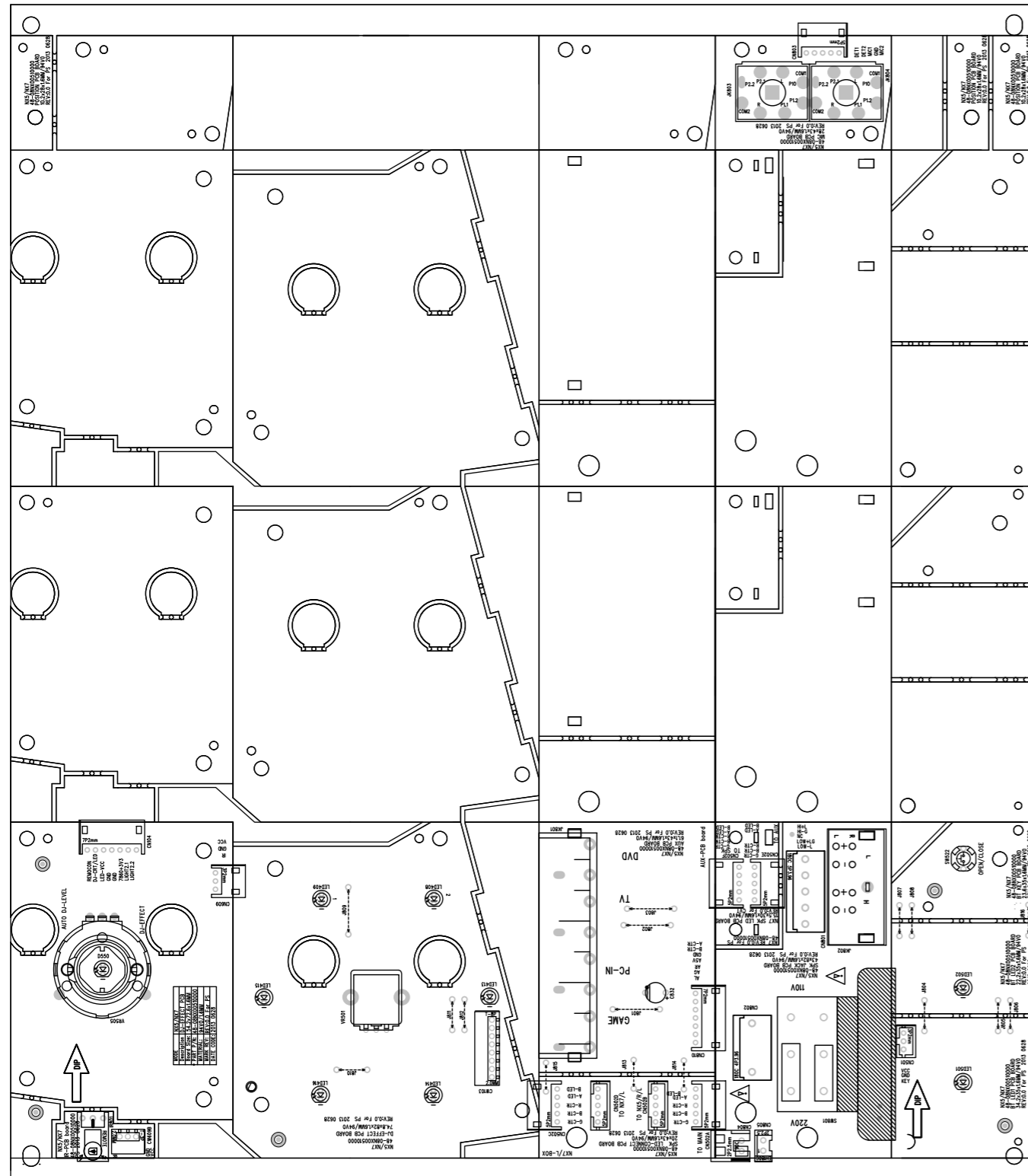
6-4



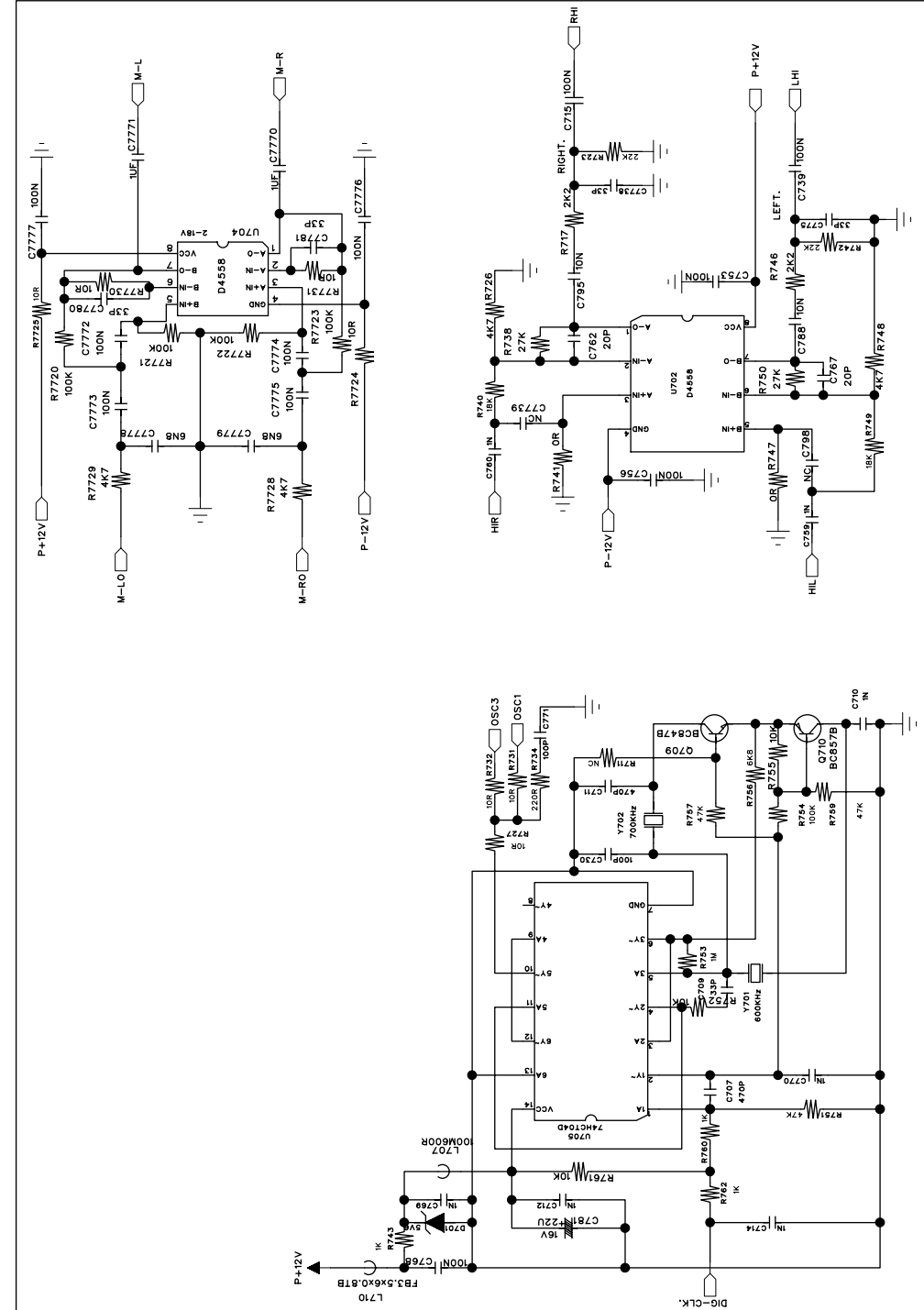
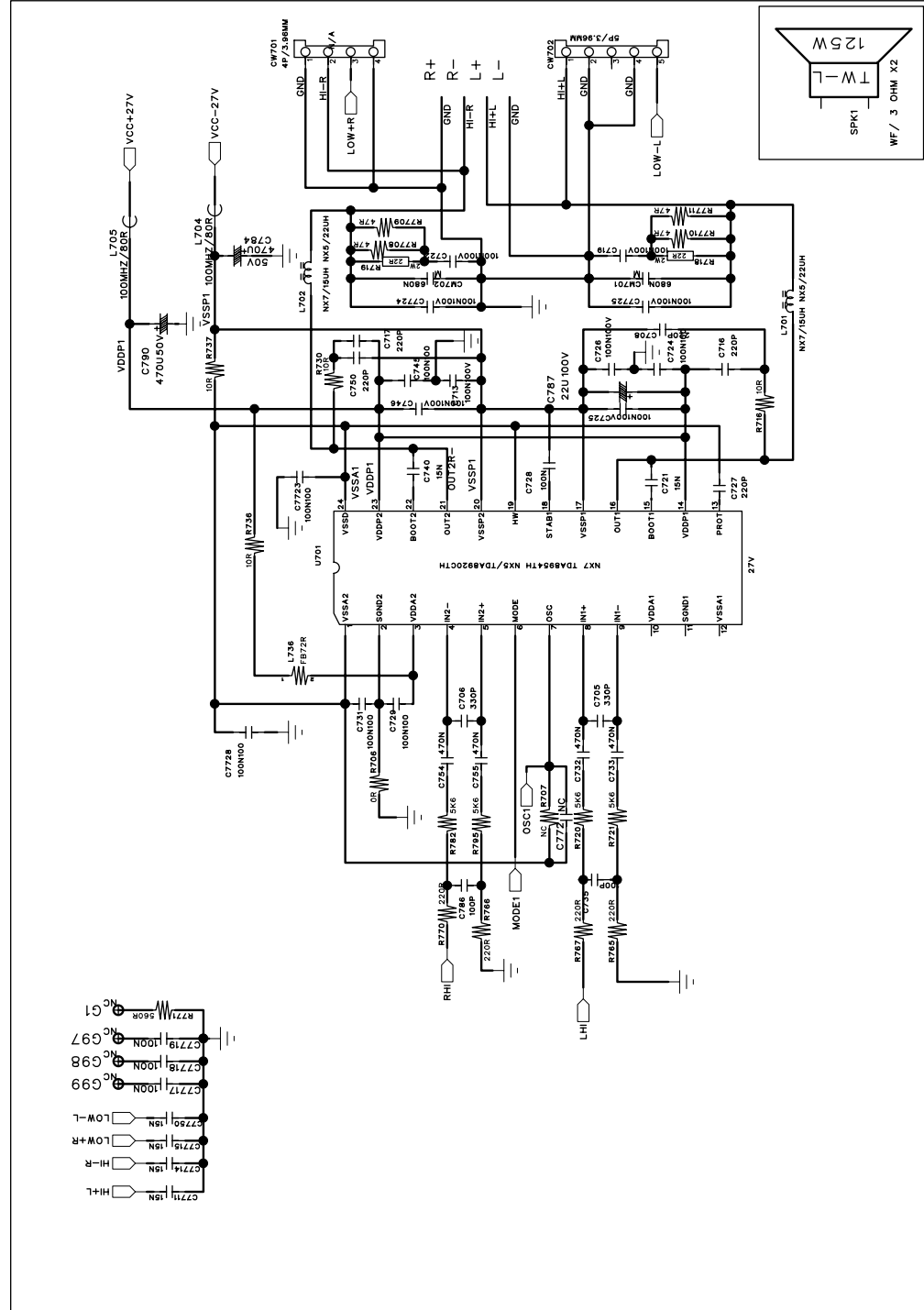
6-4



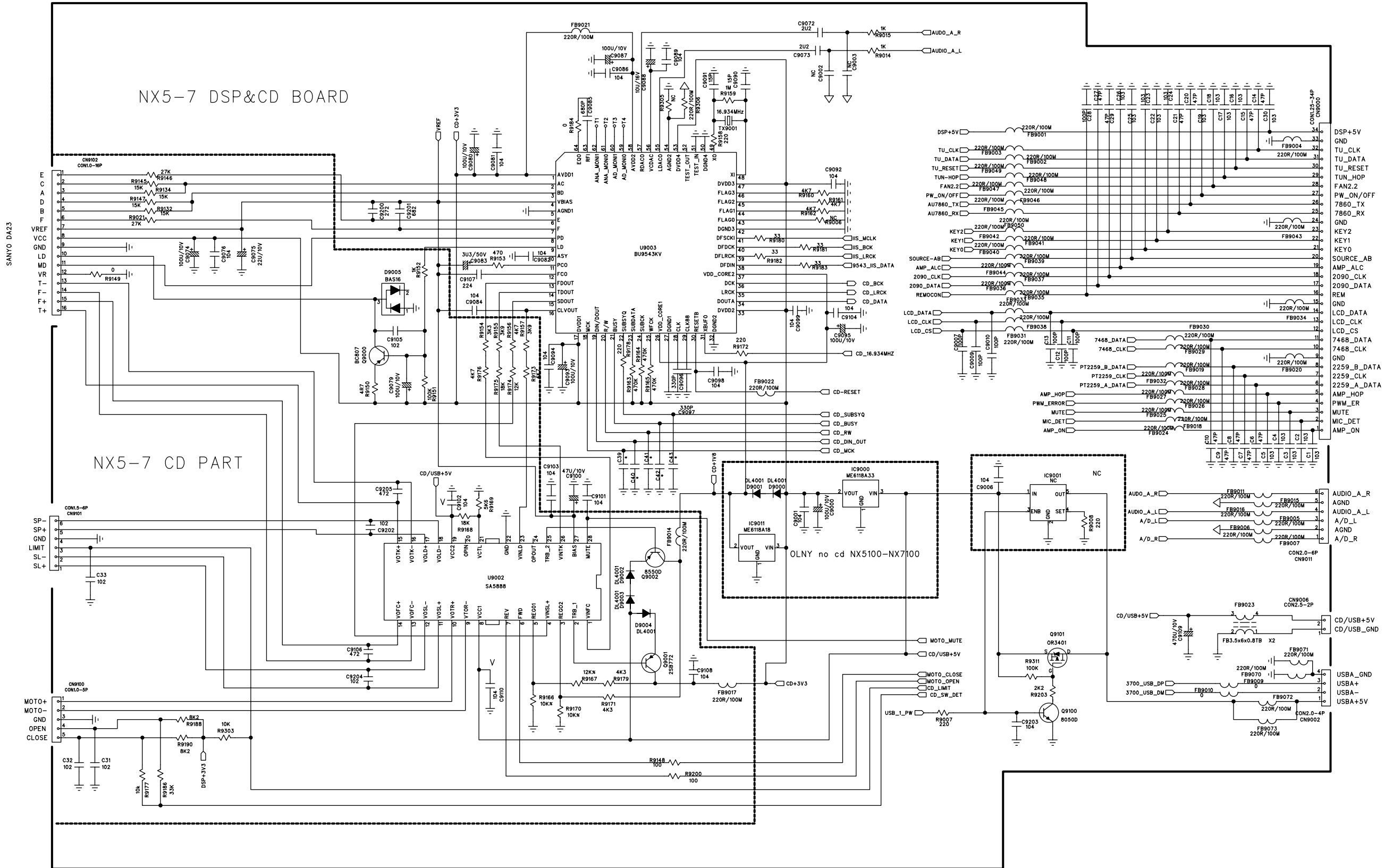
PCB LAYOUT - JACK BOARD



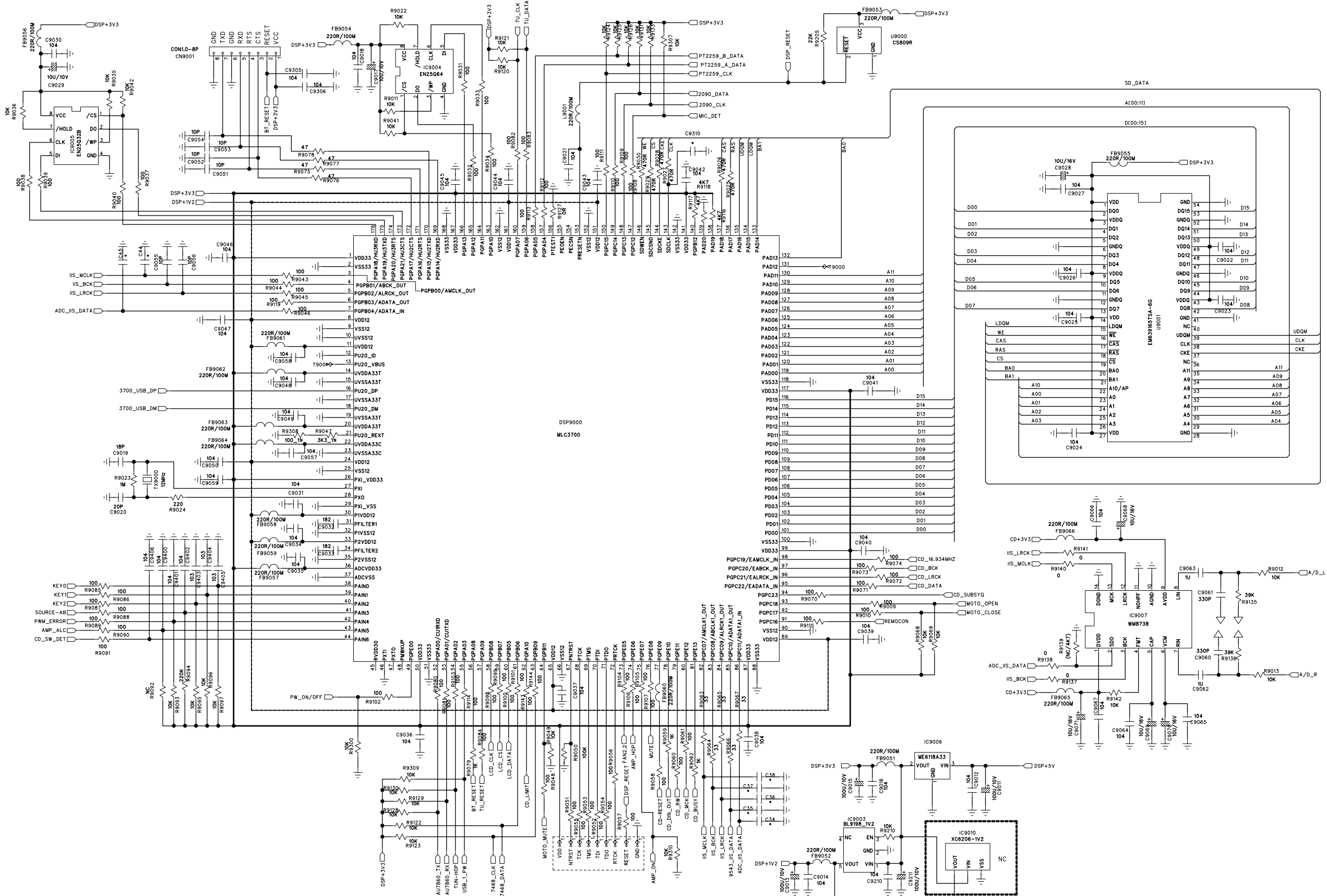
CIRCUIT DIAGRAM - AMP BOARD



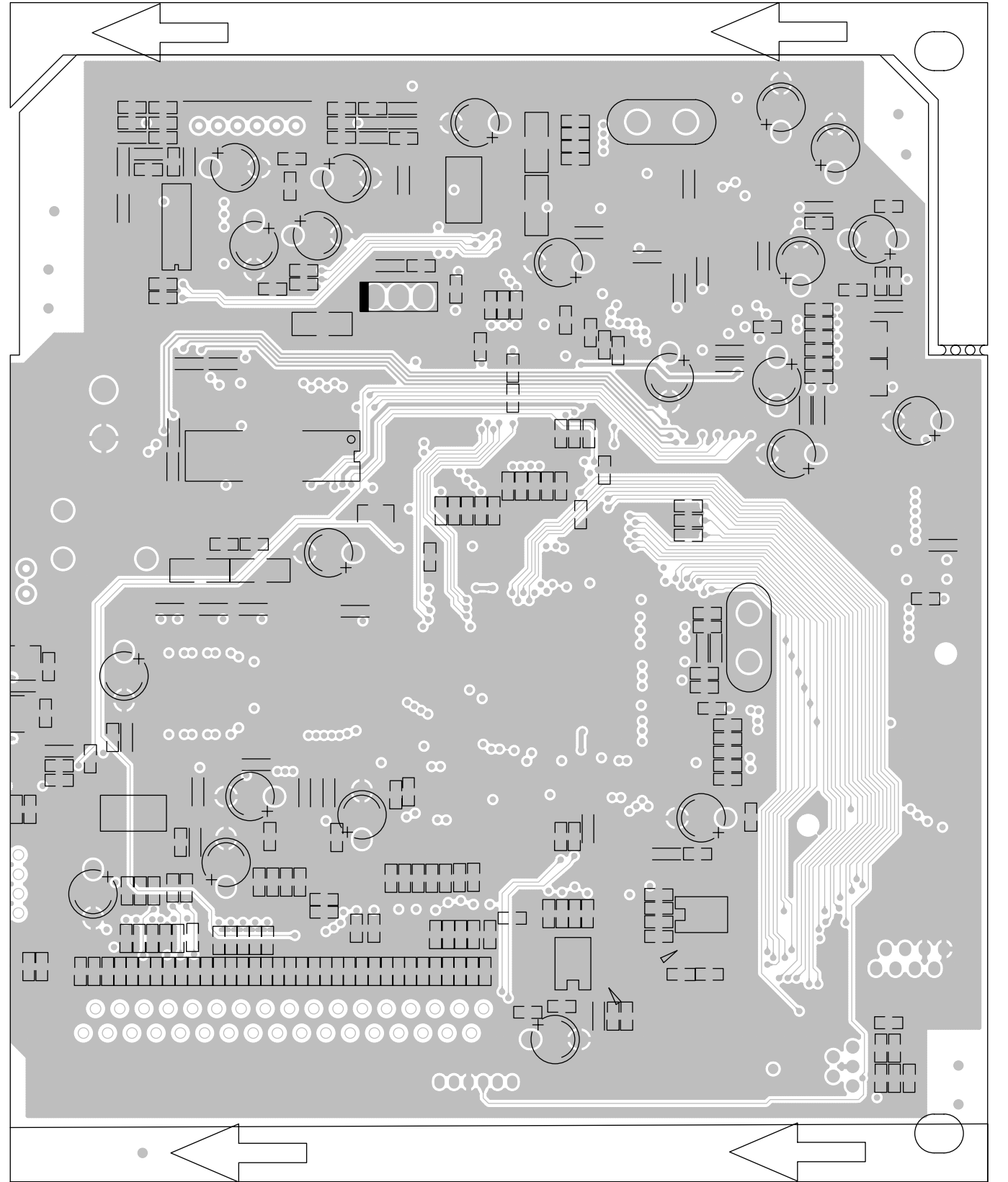
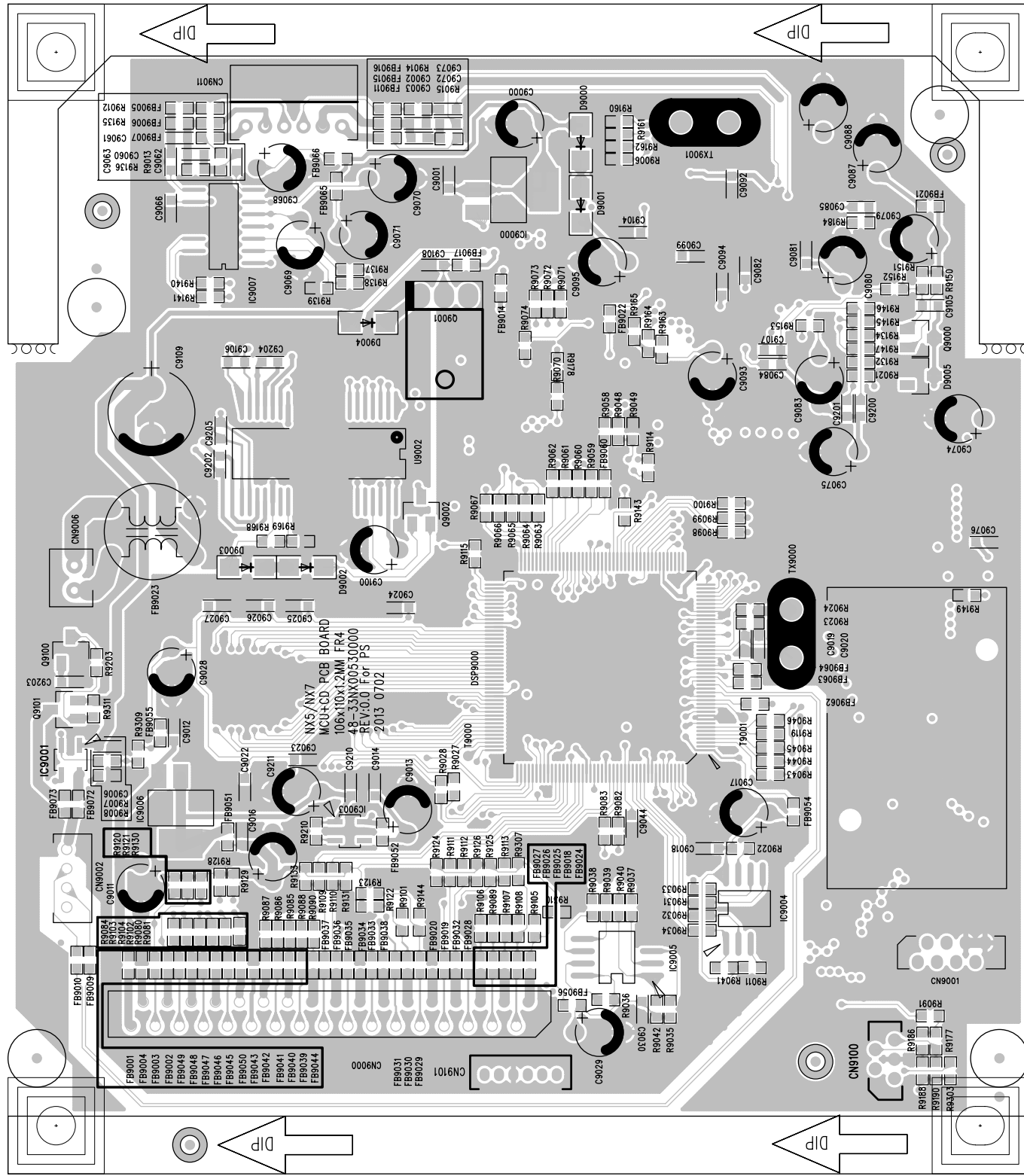
CIRCUIT DIAGRAM - MCU BOARD AND CD BOARD



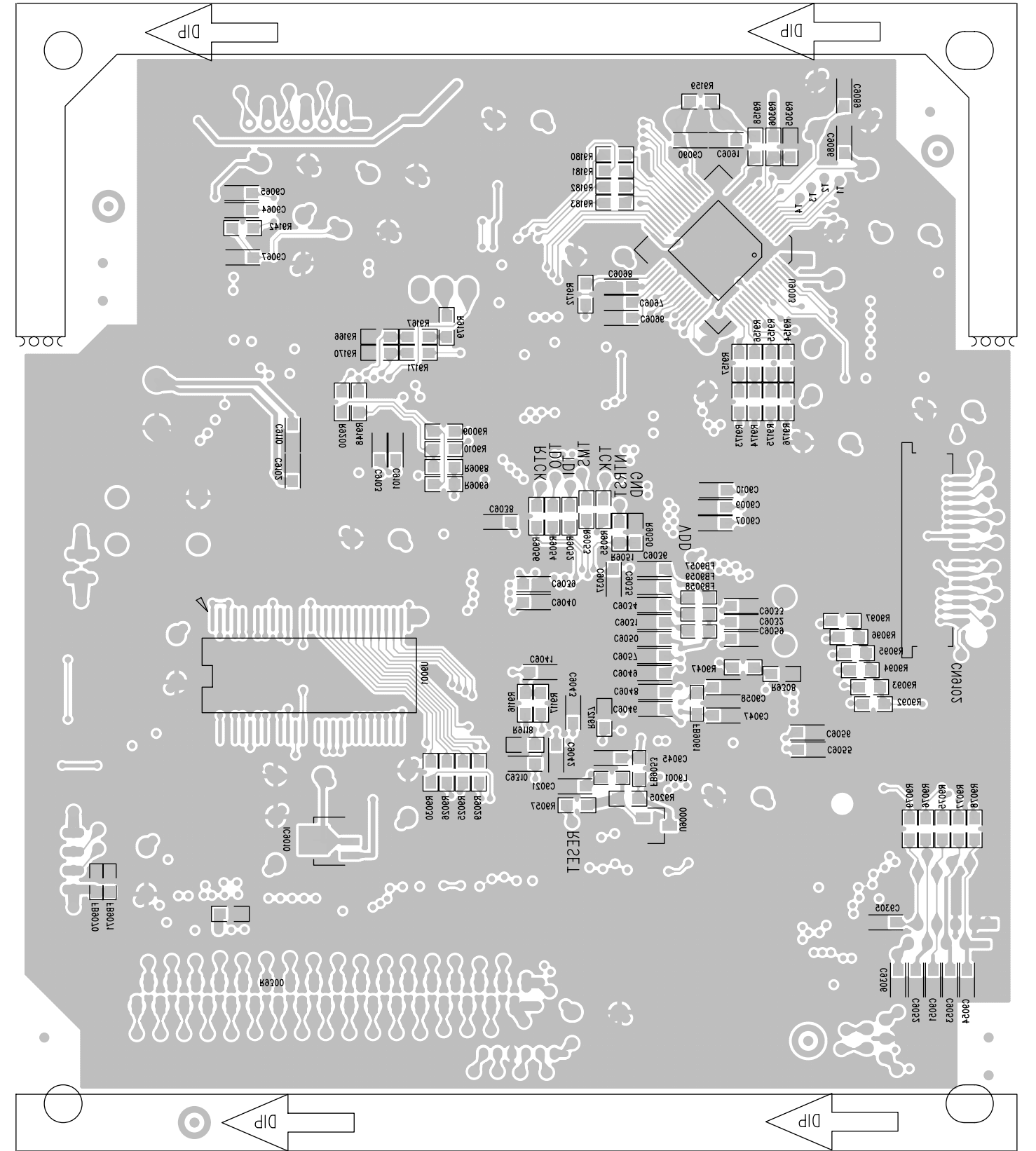
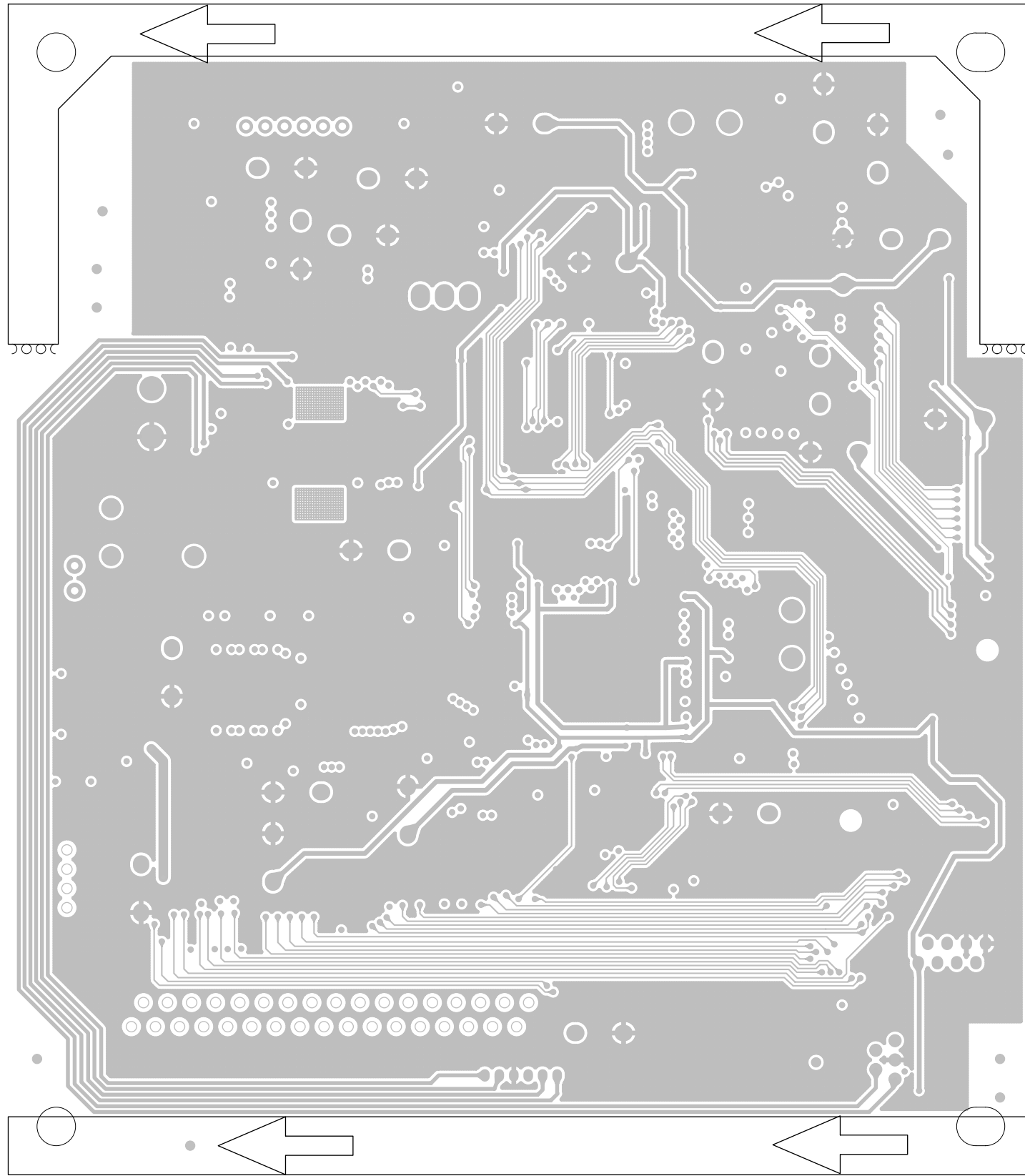
CIRCUIT DIAGRAM - MCU BOARD AND CD BOARD



PCB LAYOUT - MCU + CD BOARD



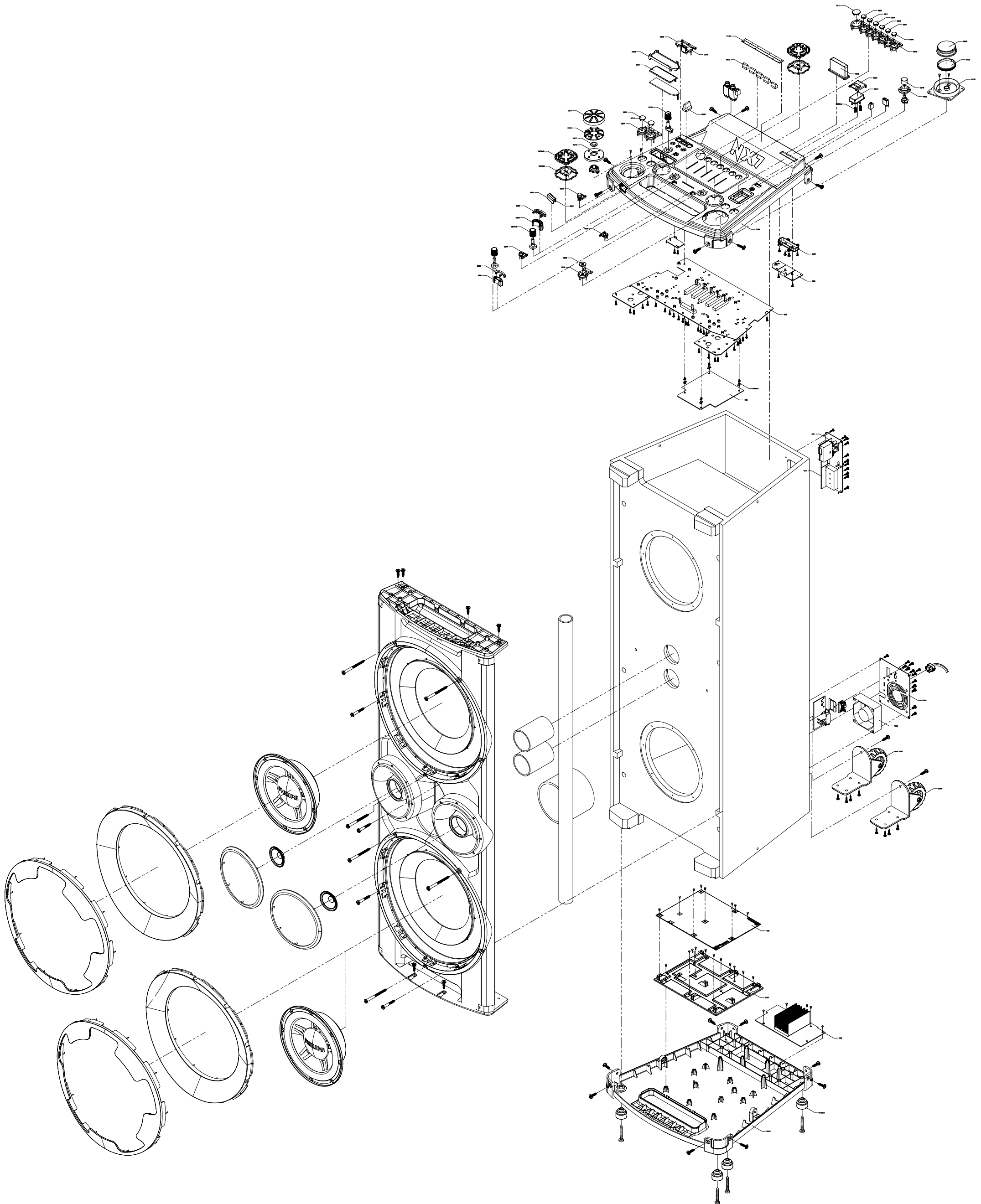
PCB LAYOUT - MCU + CD BOARD



EXPLODED VIEW

9-1

9-1



MECHANICAL PARTS LIST

ITEM	PART NO	DESCRIPTION	ITEM	PART NO	DESCRIPTION
001	05-F60000200010	PCBA-TUNER	0205	56-54NX00500001	DELETE BUTTON
002	05-NX0070100000	PCBA-MAIN	0215	56-54NX00500002	LIGHT KONB
003	05-NX0070700000	PCBA-AMP	0216	56-54NX00500003	NITRO BUTTON
004	05-NX0070800000	PCBA-SOCKET+JACK	0217	56-54NX00500004	DJ KONB
IR801	17-05SR53100000	OPTIC SENSOR	0220	56-54NX00500006	LEFT STOP BUTTON
005	05-NX0072300000	SMPS POWE600B-98	0239	56-54NX00500010	RING BUTTON
006	05-NX0073300000	PCBA-MCU+CD	0225	56-54NX00500007	VOL KONB
0190	56-68MM29900000	WASHER	0240	56-54NX00500011	PLAY BUTTON
0200	56-07F660000002	PCB SPACER	0244	56-54NX00500012	RIGHT STOP BUTTON
0199	56-02NX00700000	TOP CABINET	0237	56-54NX00500008	SOURCE SELECT KNOB
0242	56-03NX00500000	BOTTOM CABINET	0229	56-57NX00500000	LEFT LED LIGHTGUIDE
0218	56-07NX00500000	DJ KNOB BKT	0238	56-54NX00500009	MIC VOL KONB
0221	56-07NX00500001	LEFT LED BKT	0230	56-57NX00500001	RIGHT LED LIGHTGUIDE
0222	56-07NX00500002	LIGHT KONB BKT	0231	56-57NX00500002	DJ KONB LENS
0224	56-07NX00500003	RIGHT LED BKT	0232	56-57NX00500003	BT LIGHTGUIDE
0227	56-07NX00500004	BT LIGHTGUIDE BKT	0233	56-57NX00500004	VOL KONB LIGHTGUIDE
0228	56-07NX00500005	LCD BKT	0234	56-57NX00500005	DJ BUTTON
0202	56-22NX00500000	SMALL BUTTON COVER	0235	56-57NX00500006	POWER BUTTON
0203	56-22NX00500001	BIG BUTTON COVER	0236	56-57NX00500007	DBB BUTTON
0206	56-22NX00500002	DBB BUTTON COVER	0241	56-57NX00500008	IR LENS
0207	56-22NX00500003	SAMBA BUTTON COVER	0246	56-76NX00500000	LEFT PANZER WHEEL ASSY
0208	56-22NX00500004	PARTY BUTTON COVER	0247	56-76NX00500001	RIGHT PANZER WHEEL ASSY
0209	56-22NX00500005	CLUB BUTTON COVER	0102	57-08DM23000020	PETP PLATE
0210	56-22NX00500006	ROCK BUTTON COVER	0101	57-47NX00500000	DISPLAY LENS
0211	56-22NX00500007	POP BUTTON COVER	0103	58-26NX00500000	VOL KONB RUBBER
0212	56-22NX00500008	CUSTOM BUTTON COVER	0104	58-26NX00500001	DJ KONB RUBBER
0213	56-22NX00500009	DJ EFFECT BUTTON COVER	0105	58-26NX00500002	RUBBER FOOT
0214	56-22NX00500010	DJ AUTO BUTTON COVER	FAN2	58-44NX00500000	DC FAN
0223	56-22NX00500011	POWER BUTTON COVER	0107	61-11NX00700000	SMPS METAL BKT
0226	56-22NX00500012	NITRO BUTTON COVER	0104	61-33NX00700000	FAN METAL PLATE
0204	56-54NX00500000	AUX BUTTON	0248	61-94NX00500000	BUTTON SPRING