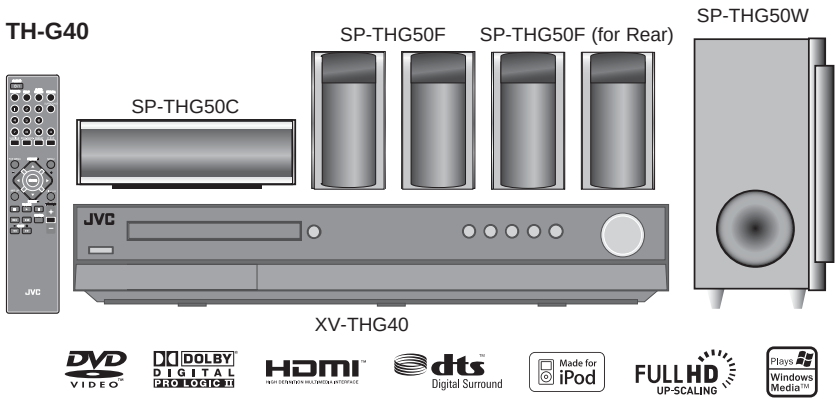
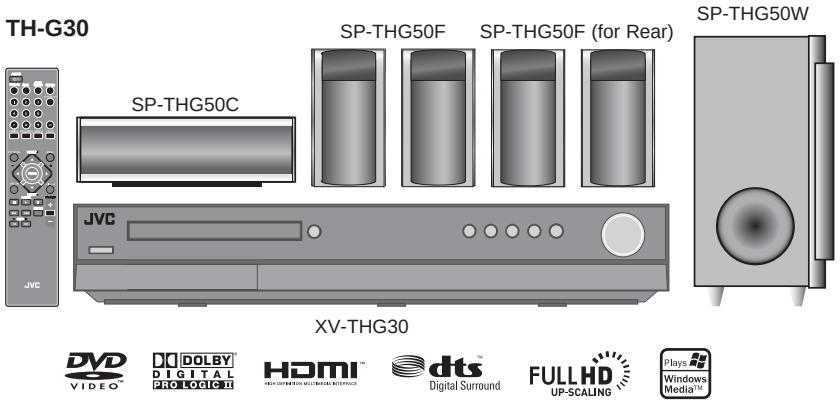
JVC

SERVICE MANUAL

DVD DIGITAL THEATER SYSTEM

TH-G40J, TH-G40C, TH-G40UJ, TH-G30J, TH-G30C





Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

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No.MB672<Rev.002>
2008/9

SPECIFICATION

TH-G40

General		
Power supply		Refer to main label.
Power consumption		Refer to main label.
Net Weight		4 kg
External dimensions (W x H x D)		430 x 72 x 307 mm
Operating conditions		Temperature: 5°C to 35°C Operation status: Horizontal
Operating humidity		5% to 85%
Laser		Semiconductor laser, wavelength 650 nm
CD/DVD		
Video system		NTSC
Frequency response (audio)		140 Hz to 20 kHz *
Signal-to-noise ratio (audio)		More than 75 dB (1 kHz 20 kHz LPF/A-Filter) *
Dynamic range (audio)		More than 75 dB *
Harmonic distortion (audio)		0.5 % (1 kHz at 1W position) (20 kHz LPF) *
Video		
Video output		1.0 V (p-p) 75 Ω negative sync. RCA jack x 1
COMPONENT VIDEO OUT		(Y) 1.0 V (p-p) 75 ohms negative sync RCA jack x 1
		(PB)/(PR) 0.7 V (p-p) 75 ohms RCA jack x 1
HDMI OUT		480p/720p/1080i/1080p
Tuner (FM)		
Tuning Range		87.5 - 108.0 MHz
Intermediate Frequency		10.7 MHz
Signal-to Noise Ratio		60 dB (Mono) *
Frequency Response		140 - 10,000 Hz *
Amplifier		
Stereo mode		155 W + 155 W (4Ω at 1 kHz, THD 10 %)
Surround mode (* Depending on the sound mode settings and the source there may be no sound output.)		Front: 155 W + 155 W (THD 10 %)
		center*: 155 W
		Surround*: 155 W + 155 W (4Ω at 1 kHz THD 10 %)
		Subwoofer*: 225 W (3Ω at 70 Hz THD 10 %)
Inputs		AUDIO IN, OPTICAL IN, AUX IN
Outputs		MONITOR OUT HDMI OUT COMPONENT VIDEO OUT
Speakers		
Front/Rear Speaker	Type	1 Way 1 Speaker
	Impedance	4 Ω
	Frequency Response	120 - 20000 Hz
	Sound Pressure Level	83 dB/W (1m)
	Rated Input Power	155 W
	Max. Input Power	310 W
	Net Dimensions (W x H x D)	117 x 210 x 111 mm
	Net Weight	0.9 kg

center speaker	Type	1 Way 1 Speaker
	Impedance	4 Ω
	Frequency Response	120 -20000 Hz
	Sound Pressure Level	83 dB/W (1m)
	Rated Input Power	155 W
	Max. Input Power	310 W
	Net Dimensions (W x H x D)	300 x 115 x 111 mm
	Net Weight	1.1 kg
Passive Subwoofer	Type	1 Way 1 Speaker
	Impedance	3 Ω
	Frequency Response	40 - 1500 Hz
	Sound Pressure Level	82 dB/W (1m)
	Rated Input Power	225 W
	Max. Input Power	450 W
	Net Dimensions (W x H x D)	236 x 435 x 391 mm
	Net Weight	5.7 kg

Items with * are measured at Front Speaker Terminals in STEREO mode
Designs and specifications are subject to change without notice.

TH-G40UJ

General	
Power supply	110-240 V ~ 50/60 Hz
Power consumption	130 W
Net Weight	4 kg
External dimensions (W x H x D)	430 x 72 x 307 mm
Operating conditions	Temperature: 5°C to 35°C,Operation status: Horizontal
Operating humidity	5% to 85%
Laser	Semiconductor laser,wavelength 650 nm
CD/DVD	
Video system	NTSC
Frequency response (audio)	140 Hz to 20 kHz*
Signal-to-noise ratio (audio)	More than 75 dB (1 kHz,20 kHz LPF/A-Filter)*
Dynamic range (audio)	More than 75 dB*
Harmonic distortion (audio)	0.5 % (1 kHz,at 1W position) (20 kHz LPF)*
Video	
Video output	1.0 V (p-p),75 Ω,negative sync.,RCA jack x 1
COMPONENT VIDEO OUT	(Y) 1.0 V (p-p),75 ohms,negative sync,RCA jack x 1
	(PB)/(PR) 0.7 V (p-p),75 ohms,RCA jack x 1
HDMI OUT	480p/720p/1080i/1080p
Tuner (FM)	
Tuning Range	87.5 - 108.0 MHz
Intermediate Frequency	10.7 MHz
Signal-to Noise Ratio	60 dB (Mono)*
Frequency Response	140 - 10000 Hz*
Amplifier	

Surround mode (* Depending on the sound mode settings and the source there may be no sound output.)	Front: 155 W + 155 W (THD 10 %)	
	center*: 155 W	
	Surround*: 155 W + 155 W (4Ω at 1 kHz,THD 10 %)	
	Subwoofer*: 225 W (3Ω at 70 Hz,THD 10 %)	
Inputs	AUDIO IN,OPTICAL IN,AUX IN	
Outputs	MONITOR OUT,HDMI OUT,COMPONENT VIDEO OUT	
Speakers		
Front/Rear Speaker	Type	1 Way 1 Speaker
	Impedance	4 Ω
	Frequency Response	120 - 20000 Hz
	Sound Pressure Level	83 dB/W (1m)
	Rated Input Power	155 W
	Max. Input Power	310 W
	Net Dimensions (W x H x D)	117 x 210 x 111 mm
	Net Weight	0.9 kg
center speaker	Type	1 Way 1 Speaker
	Impedance	4 Ω
	Frequency Response	120 -20000 Hz
	Sound Pressure Level	83 dB/W (1m)
	Rated Input Power	155 W
	Max. Input Power	310 W
	Net Dimensions (W x H x D)	300 x 115 x 111 mm
	Net Weight	1.1 kg
Passive Subwoofer	Type	1 Way 1 Speaker
	Impedance	3 Ω
	Frequency Response	40 - 1500 Hz
	Sound Pressure Level	82 dB/W (1m)
	Rated Input Power	225 W
	Max. Input Power	450 W
	Net Dimensions (W x H x D)	236 x 435 x 391 mm
	Net Weight	5.7 kg

Items with * are measured at Front Speaker Terminals in STEREO mode
Designs and specifications are subject to change without notice.

TH-G30

General		
Power supply		Refer to main label.
Power consumption		Refer to main label.
Net Weight		4 kg
External dimensions (W x H x D)		430 x 72 x 307 mm
Operating conditions		Temperature: 5°C to 35°C Operation status: Horizontal
Operating humidity		5% to 85%
Laser		Semiconductor laser, wavelength 650 nm
CD/DVD		
Video system		NTSC
Frequency response (audio)		140 Hz to 20 kHz *
Signal-to-noise ratio (audio)		More than 75 dB (1 kHz 20 kHz LPF/A-Filter) *
Dynamic range (audio)		More than 75 dB *
Harmonic distortion (audio)		0.5 % (1 kHz at 1W position) (20 kHz LPF) *
Video		
Video output		1.0 V (p-p) 75 Ω negative sync. RCA jack x 1
COMPONENT VIDEO OUT		(Y) 1.0 V (p-p) 75 ohms negative sync RCA jack x 1
		(PB)/(PR) 0.7 V (p-p) 75 ohms RCA jack x 1
HDMI OUT		480p/720p/1080i/1080p
Tuner (FM)		
Tuning Range		87.5 - 108.0 MHz
Intermediate Frequency		10.7 MHz
Signal-to Noise Ratio		60 dB (Mono) *
Frequency Response		140 - 10,000 Hz *
Amplifier		
Stereo mode		155 W + 155 W (4Ω at 1 kHz, THD 10 %)
Surround mode (* Depending on the sound mode settings and the source there may be no sound output.)		Front: 155 W + 155 W (THD 10 %)
		center*: 155 W
		Surround*: 155 W + 155 W (4Ω at 1 kHz THD 10 %)
		Subwoofer*: 225 W (3Ω at 70 Hz THD 10 %)
Inputs		AUDIO IN, OPTICAL IN, AUX IN
Outputs		MONITOR OUT HDMI OUT COMPONENT VIDEO OUT
Speakers		
Front/Rear Speaker	Type	1 Way 1 Speaker
	Impedance	4 Ω
	Frequency Response	120 - 20000 Hz
	Sound Pressure Level	83 dB/W (1m)
	Rated Input Power	155 W
	Max. Input Power	310 W
	Net Dimensions (W x H x D)	117 x 210 x 111 mm
	Net Weight	0.9 kg

center speaker	Type	1 Way 1 Speaker
	Impedance	4 Ω
	Frequency Response	120 -20000 Hz
	Sound Pressure Level	83 dB/W (1m)
	Rated Input Power	155 W
	Max. Input Power	310 W
	Net Dimensions (W x H x D)	300 x 115 x 111 mm
	Net Weight	1.1 kg
Passive Subwoofer	Type	1 Way 1 Speaker
	Impedance	3 Ω
	Frequency Response	40 - 1500 Hz
	Sound Pressure Level	82 dB/W (1m)
	Rated Input Power	225 W
	Max. Input Power	450 W
	Net Dimensions (W x H x D)	236 x 435 x 391 mm
	Net Weight	5.7 kg

Items with * are measured at Front Speaker Terminals in STEREO mode
Designs and specifications are subject to change without notice.

SECTION 1
PRECAUTION

1.1 Safety Precautions

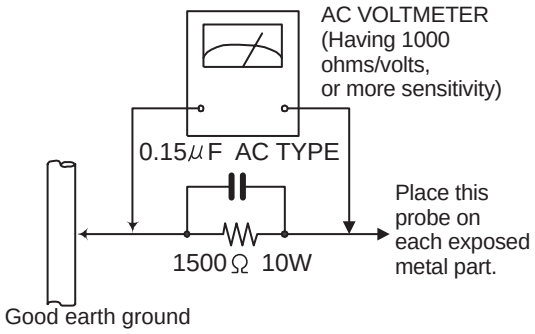
(1) This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.

(2) Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturers warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.

(3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.

(4) The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.

(5) Leakage shock hazard testing
After reassembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.Do not use a line isolation transformer during this check.
- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
- Alternate check method
Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000Ω per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
Measure the AC voltage across the resistor with the AC voltmeter.
Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



1.2 Warning

(1) This equipment has been designed and manufactured to meet international safety standards.
(2) It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
(3) Repairs must be made in accordance with the relevant safety standards.
(4) It is essential that safety critical components are replaced by approved parts.
(5) If mains voltage selector is provided, check setting for local voltage.

1.3 Caution

Burrs formed during molding may be left over on some parts of the chassis.
Therefore, pay attention to such burrs in the case of preforming repair of this system.

1.4 Critical parts for safety

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▮) and ICP (●) or identified by the " ⚠ " mark nearby are critical for safety. When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer.
(This regulation dose not Except the J and C version)

1.5 Preventing static electricity

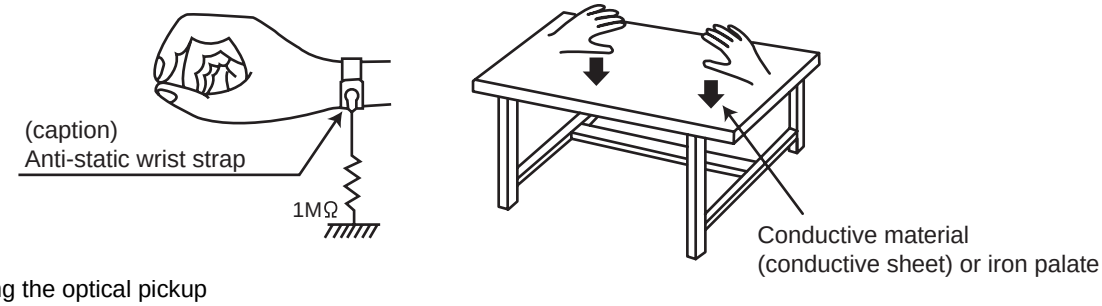
Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

1.5.1 Grounding to prevent damage by static electricity

Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as laser products.
Be careful to use proper grounding in the area where repairs are being performed.

(1) Ground the workbench
Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

(2) Ground yourself
Use an anti-static wrist strap to release any static electricity built up in your body.



(3) Handling the optical pickup
- In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)
- Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

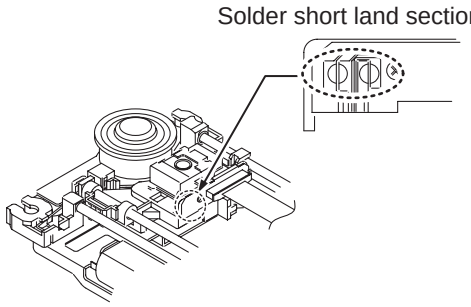
1.6 Handling the traverse unit (optical pickup)

(1) Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.
(2) Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.
(3) Handle the flexible cable carefully as it may break when subjected to strong force.
(4) I t is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it.

1.7 Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for the pickup unit.**

- Apply solder to the short land sections before the card wire is disconnected from the connecto on the servo board. (If the card wire is disconnected without applying solder, the pickup may be destroyed by static electricity.)
- In the assembly, be sure to remove solder from the short land sections after connecting the card wire.



1.8 Important for laser products

1.CLASS 1 LASER PRODUCT

2.CAUTION :
(For U.S.A.) Visible and/or invisible class II laser radiation when open. Do not stare into beam.
(Others) Visible and/or invisible class 1M laser radiation when open. Do not view directly with optical instruments.

3.CAUTION : Visible and/or invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

4.CAUTION : This laser product uses visible and/or invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified here in may result in hazardous radiation exposure.

⚠ ***CAUTION*** **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

(For U.S.A.)
CAUTION : Visible and/or invisible class II laser radiation when open. Do not stare into beam.
(Others)
CAUTION : Visible and/or invisible class 1M laser radiation when open. Do not view directly with optical instruments

ACHTUNG: Sichtbare und/oder unsichtbare Laserstrahlung der Klasse 1M bei offenen Abdeckungen. Nicht direkt mit optischen Instrumenten betrachten.

ATTENTION: Rayonnement laser visible et/ou invisible de classe 1M une fois ouvert. Ne pas regarder directement avec des instruments optiques.

VOORZICHTIG: Zichtbare en/of onzichtbare klasse 1M laserstralen indien geopend. Bekijk niet direct met optische instrumenten.

ATTENZIONE: Radiazione laser in classe 1M visibile e/o invisibile quando aperto. Non osservare direttamente con strumenti ottici.

VARNING: Synlig och/eller osynlig laserstrålning, klass 1M, när denna del är öppnad. Betrakta ej strålen med optiska instrument.

VARO!: Avattaessa olet alttiina nakyvalle ja/tai näkymättömälle luokan 1M lasersateilylle. Älä tarkastele sitä optisen laitteen läpi.

ADVARSEL: Synlig og/eller usynlig klasse 1M-laserstråling ved åbning. Se ikke direkte med optiske instrumenter.

AVISO: Radiación láser de clase 1M visible y/o invisible cuando está abierto. No mirar directamente con instrumental óptico.

PRECAUÇÃO: Radiação laser de classe 1M visível e/ou invisível quando aberto. Não olhe directamente com instrumentos ópticos.

PRECAUÇÃO: Radiação laser de classe 1M visível e/ou invisível quando aberto. Não olhe diretamente com instrumentos óticos.

ПРЕДУПРЕЖДЕНИЕ: В открытом состоянии происходит видимое и/или невидимое излучение лазера класса 1M. Не смотрите непосредственно в оптические инструменты.

UWAGA: Otwarcie spowoduje narażenie na widzialne i/lub niewidzialne promieniowanie lasera klasy 1M. Nie patrzeć bezpośrednio w przyrządy optyczne.

UPOZORNĚNÍ: Při otevření vydává viditelné popř. neviditelné laserové ozáření třídy 1M. Nedívejte se do otvoru přímo s optickými nástroji.

FIGYELMEZTETÉS: Látható és/vagy láthatatlan 1M osztályú sugárzás nyitott állapotban. Ne nézze közvetlenül optikai műszerekkel.

注意：打開蓋板可能會產生可見或不可見的 1M 級鐳射。
不要使用光學儀器直接進行窺視。

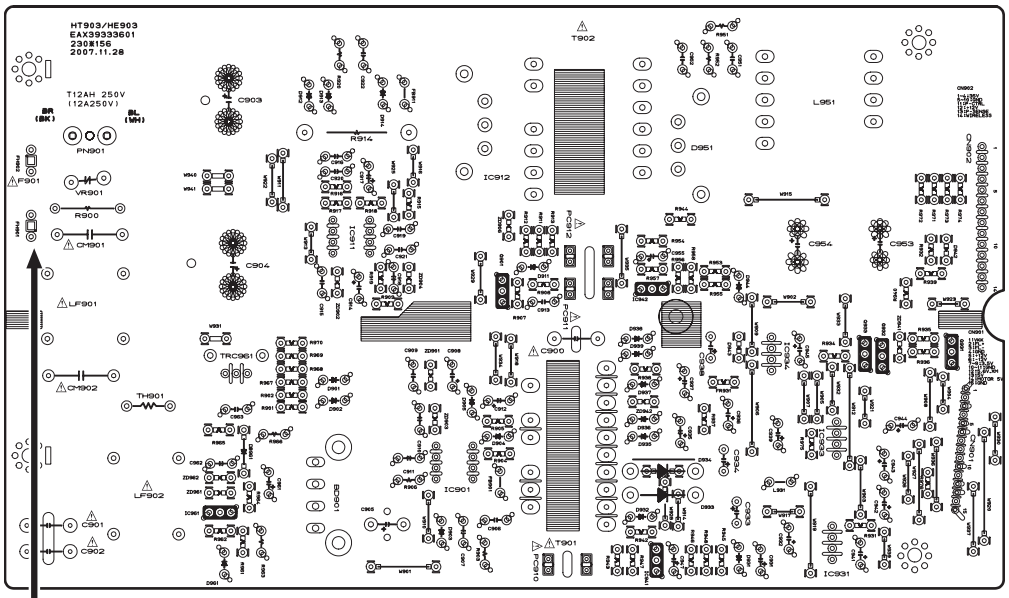
注意：打开盖板可能会产生可见或不可见的 1M 级镭射。
不要使用光学仪器直接进行窥视。

تنبيه: يوجد إشعاع ليزري مرئي و/أو غير مرئي من الفئة 1M عندما يكون الجهاز مفتوحا. تجنب النظر مباشرة داخل الجهاز باستخدام أدوات بصرية.

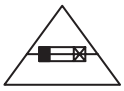
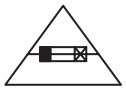
احتياط: هنگامی که باز گردد، تشعشع مرئی و یا نامرئی کلاس 1M لیزر وجود دارد. با لوازم چشمی مستقیماً به آن نگاه نکنید.

주의: 개방하면 가시 및/또는 비가시 클래스 1M 레이저 방사선이 나옵니다. 광학 기구로 직접 들여다보지 마십시오.

1.9 Importance admistering point on the safety



slow blow type / type a fúsion lent

Full Fuse Replacement Marking	**Marquage Pour Le Remplacement Complet De Fusible**
Graphic symbol mark (This symbol means slow blow type fuse.)  should be read as follows ;	Le symbole graphique (Ce symbole signifie fusible de type á fusion lent.)  doit être interprété comme suit ;
FUSE CAUTION	**PRECAUTIONS SUR LES FUSIBLES**
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSES ; F901 : T12AH 250V	**POUR UNE PROTECTION CONTINUE CONTRE DES RISQUES D'INCENDIE, REMPLACER SEULEMENT PAR UN FUSIBLE DU MEME TYPE ;** F901 : T12AH 250V

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

SECTION 3
DISASSEMBLY

3.1 Main body

3.1.1 Removing the Metal cover (See Fig. 1, 2)

(1) Remove the three screws **A** attaching the Metal cover. (See Fig.1)
(2) Remove the four screws **B** attaching the both side of the Metal cover. (See Fig.2)

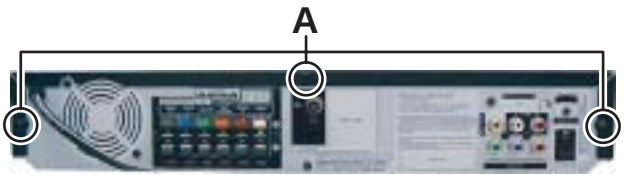


Fig.1

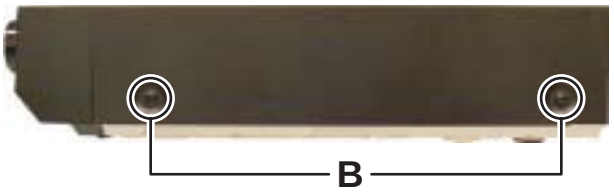


Fig.2

3.1.2 Removing the Front Panel (See Fig. 3 to 6)

(1) Disconnect the card wire from Front panel connected to connector PN103 of the Amp board. (See Fig.3)
(2) From the top side of the Front panel, disengage three hooks **a** engaged Front panel. (See Fig.4)
(3) From the both side of the Front panel, disengage two hooks **b** engaged Front panel. (See Fig.5)
(4) From the bottom side of the Front panel, disengage three hooks **c** engaged Front panel. (See Fig.6)

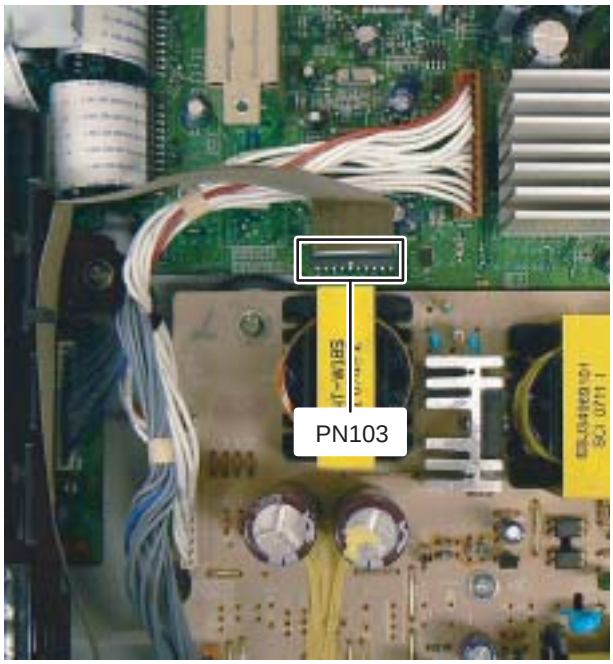


Fig.3

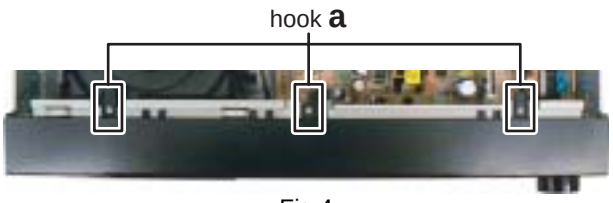


Fig.4

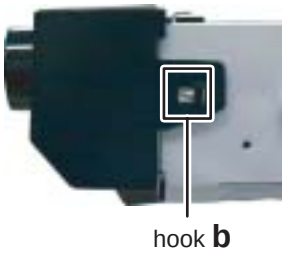


Fig.5

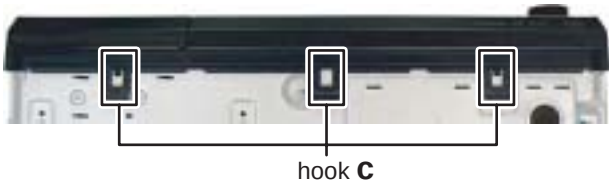


Fig.6

3.1.3 Removing the HDMI board (See Fig. 7, 8)

(1) Remove the one screw **C** attaching the HDMI board. (See Fig.7)
(2) Disconnect the card wire from Main board connected to connector CN810 of the HDMI board. (See Fig.8)
(3) Remove the three screws **D** attaching the HDMI board. (See Fig.8)

Fig.7

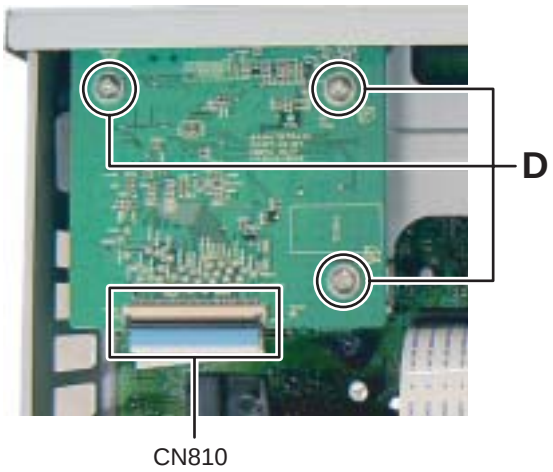


Fig.8

3.1.4 Removing the DVD mechanism (See Fig.9)

(1) Disconnect the card wires from DVD mechanism connected to connector P400 and P401 of the Main board.
(2) Remove the four screws **E** attaching the DVD mechanism.

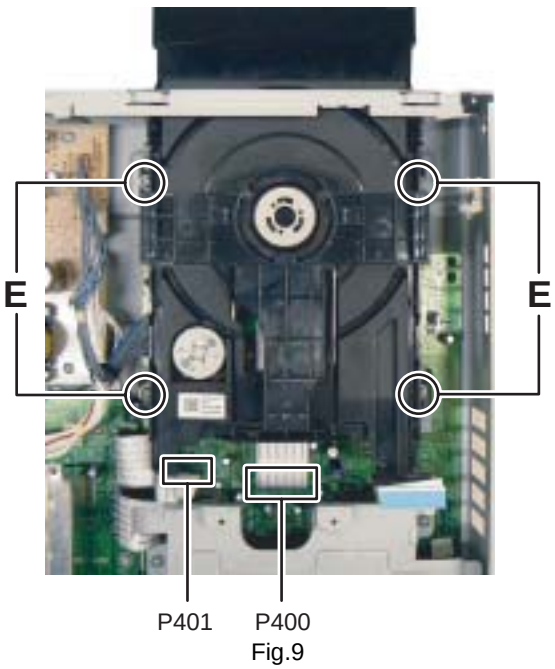


Fig.9

3.1.5 Removing the Rear panel (See Fig.10, 11)

(1) Disconnect the Power cord from connector PN901 of the SMPS board. (See Fig.10)
(2) Disconnect the connector wire from FAN connected to connector PN603 of the Amp board. (See Fig.10)
(3) Remove the one screw **F** and seven screws **G** attaching the Rear panel. (See Fig.11)

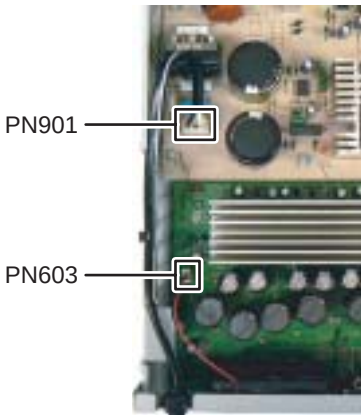


Fig.10

Fig.11

3.1.6 Removing the Front jack board (See Fig.12)

(1) Disconnect the card wire from Front jack board connected to connector PN204 of the Main board.
(2) Remove the two screws **H** attaching the Front jack board.

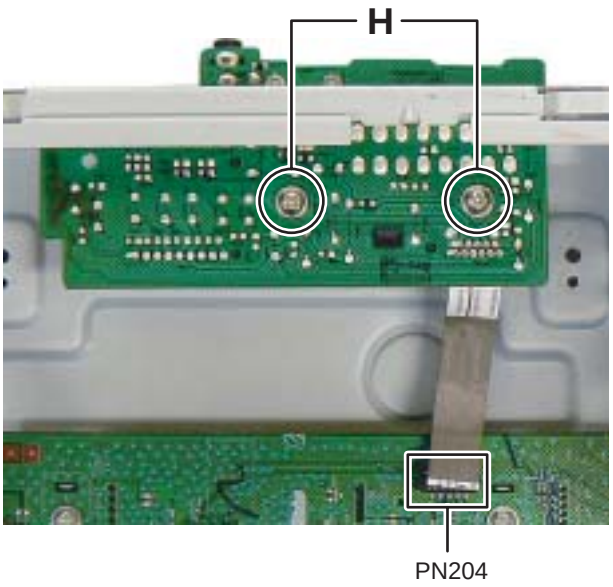


Fig.12

3.1.7 Removing the Main board (See Fig.13, 14)

(1) Remove the two screws **J** attaching the bracket. (See Fig.13)
(2) Disconnect the connector wire from Main board connected to connector CN901 of the SMPS board. (See Fig.14)
(3) Disconnect the card wires from Amp board connected to connector PN202 and PN203 of the Main board. (See Fig.14)
(4) Remove the two screws **K** attaching the Main board. (See Fig.14)

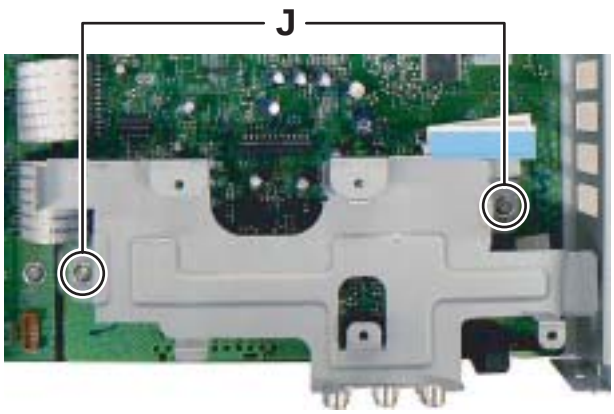


Fig.13

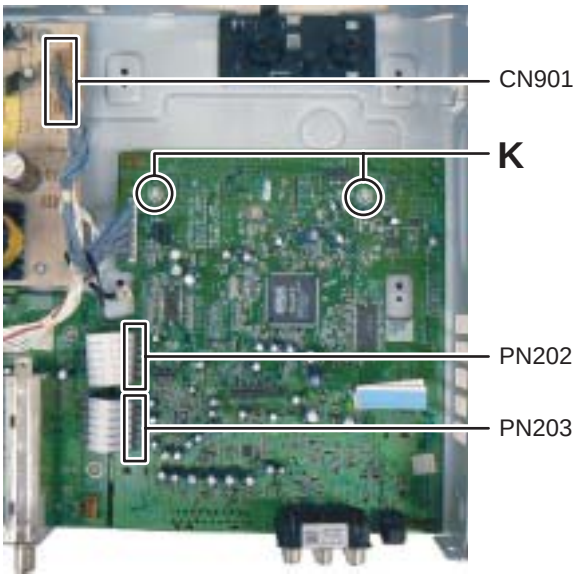


Fig.14

3.1.8 Removing the SMPS board (See Fig.15)

(1) Disconnect the connector wire from Amp board connected to connector CN602 of the SMPS board.
(2) Remove the five screws **L** attaching the SMPS board.

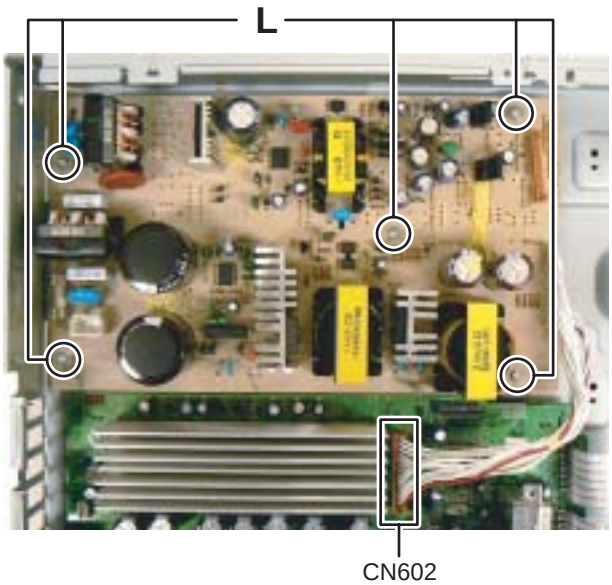


Fig.15

3.1.9 Removing the Amp board (See Fig.16)

(1) Remove the four screws **M** attaching the Amp board.

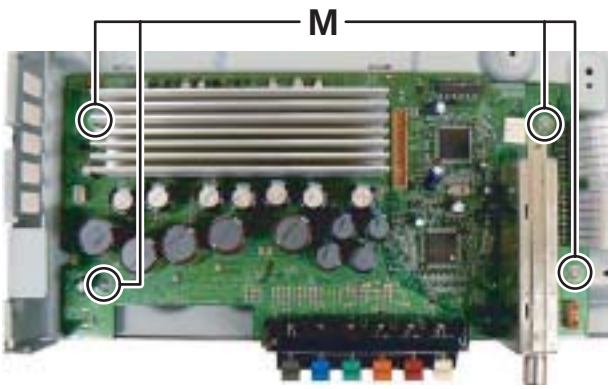


Fig.16

3.1.10 Removing the Front key board (See Fig.17)

(1) Remove the one screw **N** attaching the Front key board.

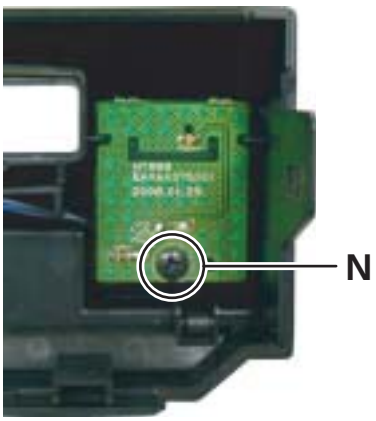


Fig.17

3.1.11 Removing the FL board (See Fig.18)

(1) Remove the five screws **P** attaching the FL board.

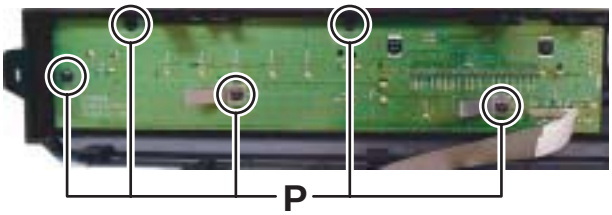


Fig.18

3.2 DVD mechanism

3.2.1 Main base (See Fig.1)

(1) Place the disc clamp assembly as Fig.1.
(2) Lift up the disc clamp assembly in direction of the arrow (A).
(3) Separate the disc clamp assembly from the Clamp holder.
(4) Turn the Clamper plate to counterclockwise direction and then lift up the clamper plate.

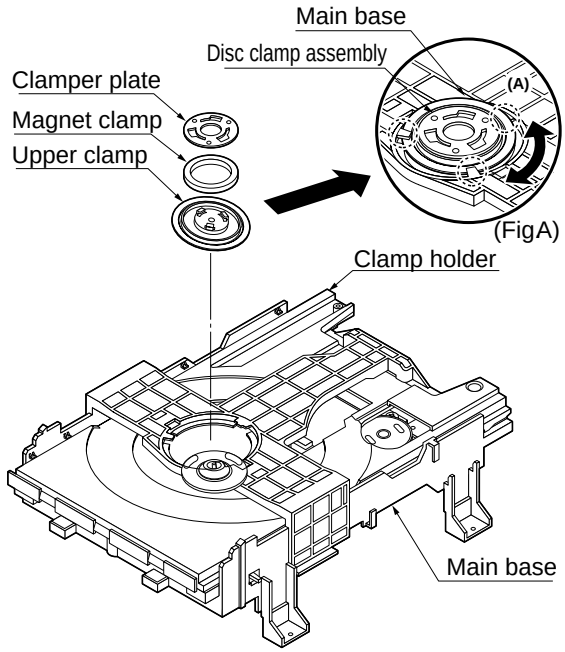


Fig.1

3.2.2 Disc tray (See Fig.2)

(1) Insert and push a screwdriver in the emergency eject hole (A) at the right side, or put the screwdriver on the lever (B) of the emergency gear and pull the lever (B) in direction of arrow so that the Disc tray is ejected about 15 ~ 20 mm.
(2) Pull the Disc tray until it is separated from the Main base completely.

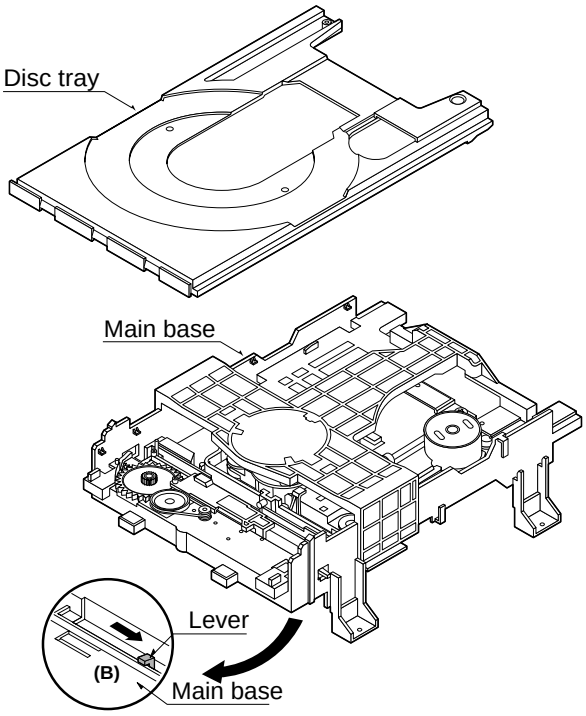


Fig.2

3.2.3 Slide base assembly (See Fig.3)

(1) Release the four screws (S2).
(2) Disconnect the FFC connector (C1).
(3) Release the screw (S3).

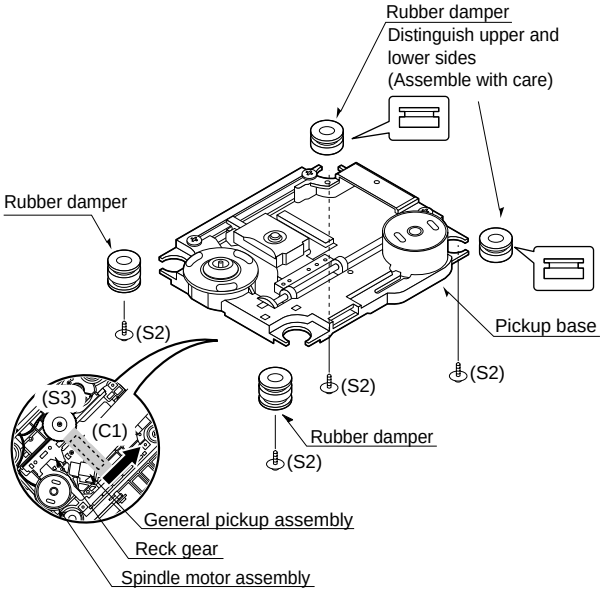


Fig.3

3.2.4 Up/Down frame assembly (See Fig.4)

NOTE:

Put the Main base face down (Bottom side)

(1) Release the screw (S4).

(2) Unlock the Locking tab (L3) in direction of arrow and then lift up the Up/down frame assembly to separate it from the Main base.

NOTE:

When reassembling move the Up/Down guide in direction of arrow (C) until it is positioned as Fig (C).

When reassembling insert (A) position of the Up/down frame assembly in the (B) position of the Up/down frame assembly as Fig (B).

3.2.5 Pulley gear (See Fig.4)

(1) Unlock the locking tab (L4) in direction of arrow (B) and then separate the pulley gear from the main base.

3.2.6 Up/down guide (See Fig.4)

(1) Move the Up/down guide in direction of arrow (A) as Fig (A).

(2) Push the locking tab (L5) down and then lift up the Up/down guide to separate it from the main base.

NOTE:

When reassembling place the Up/down guide as Fig (C) and move it direction arrow (B) until it is locked by the locking tab (L5). And confirm the Up/down guide as Fig (A).

3.2.7 Loading board assembly (See Fig.4)

(1) Release one screw (S5).

(2) Unlock the loading motor (C2) from the hook (H1) on the main base.

(3) Unlock two locking tabs (L6) and separate the loading board assembly from the main base.

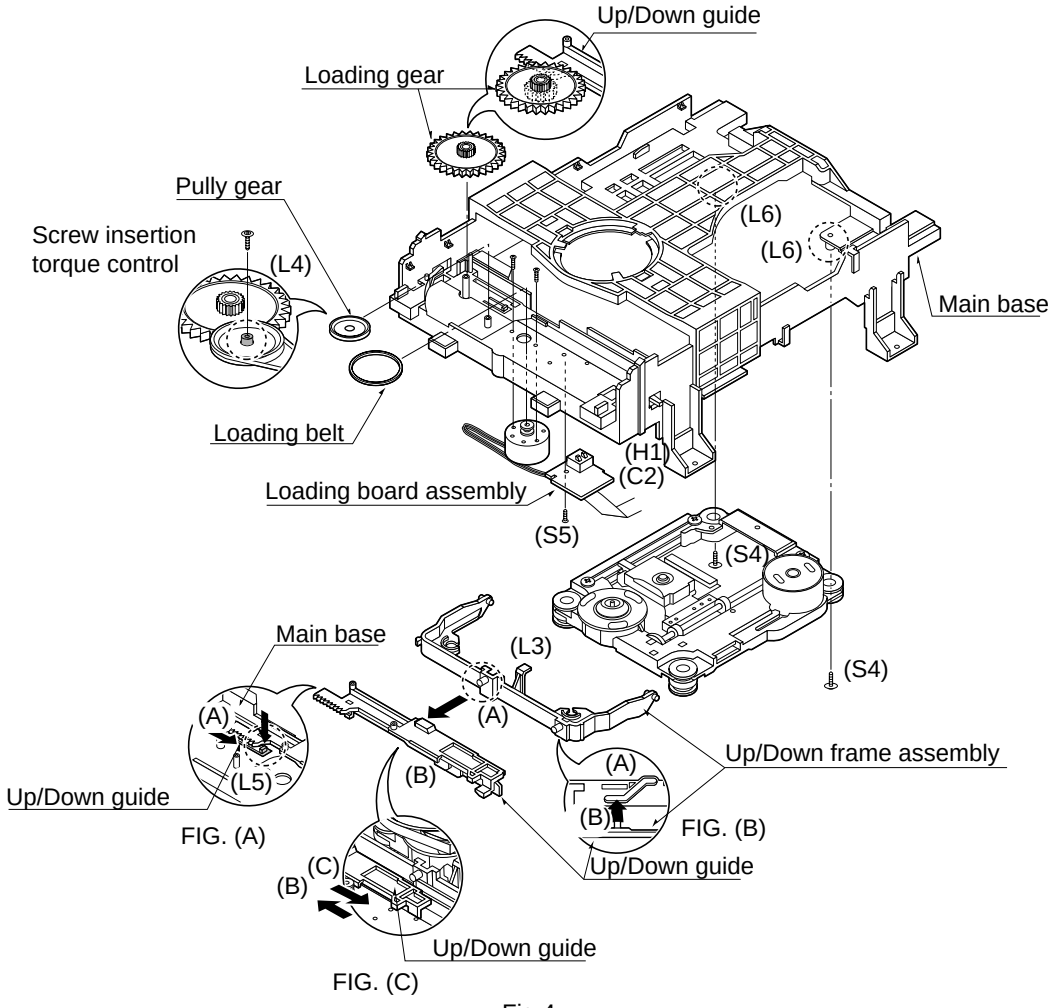


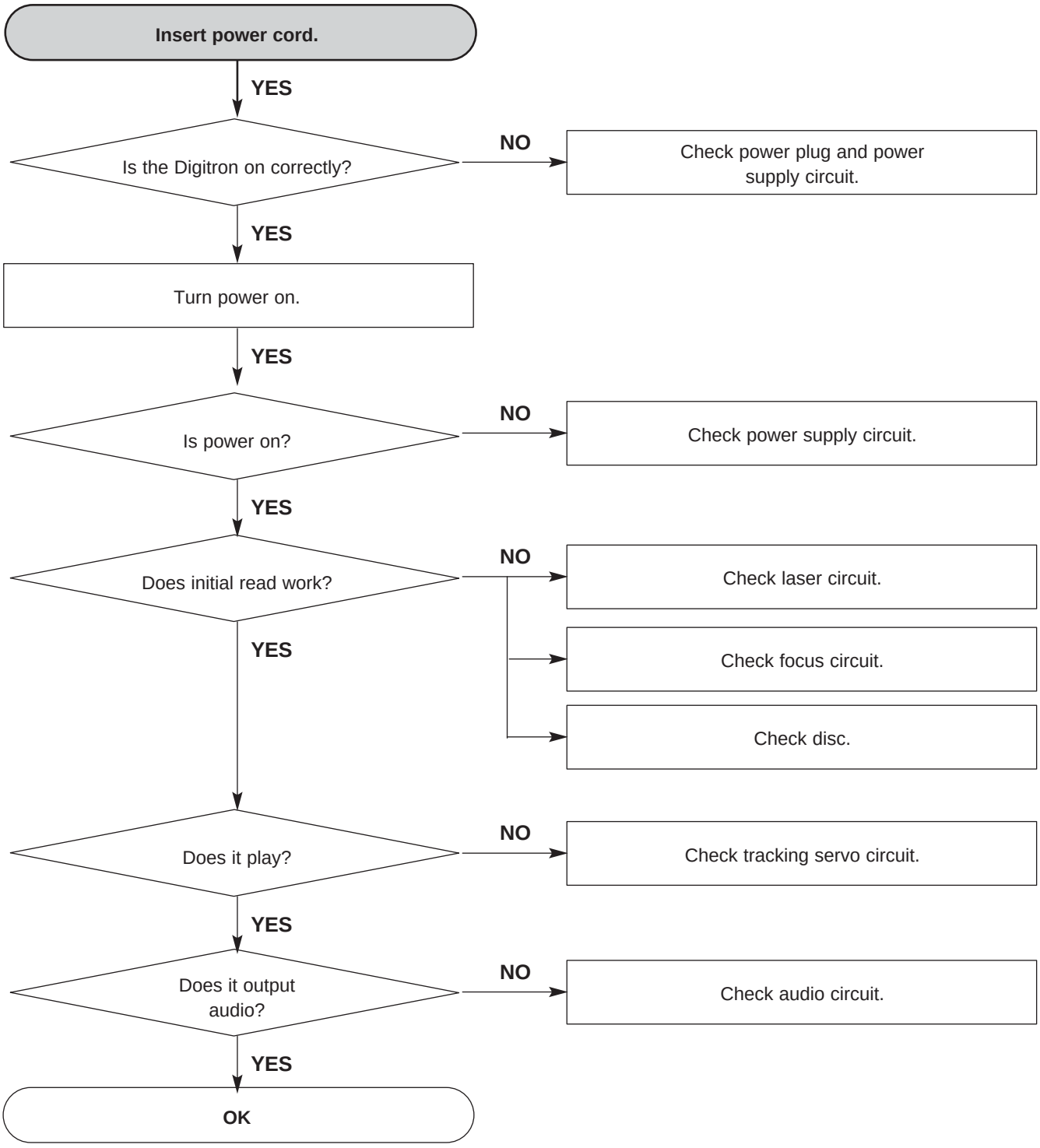
Fig.4

SECTION 4
ADJUSTMENT

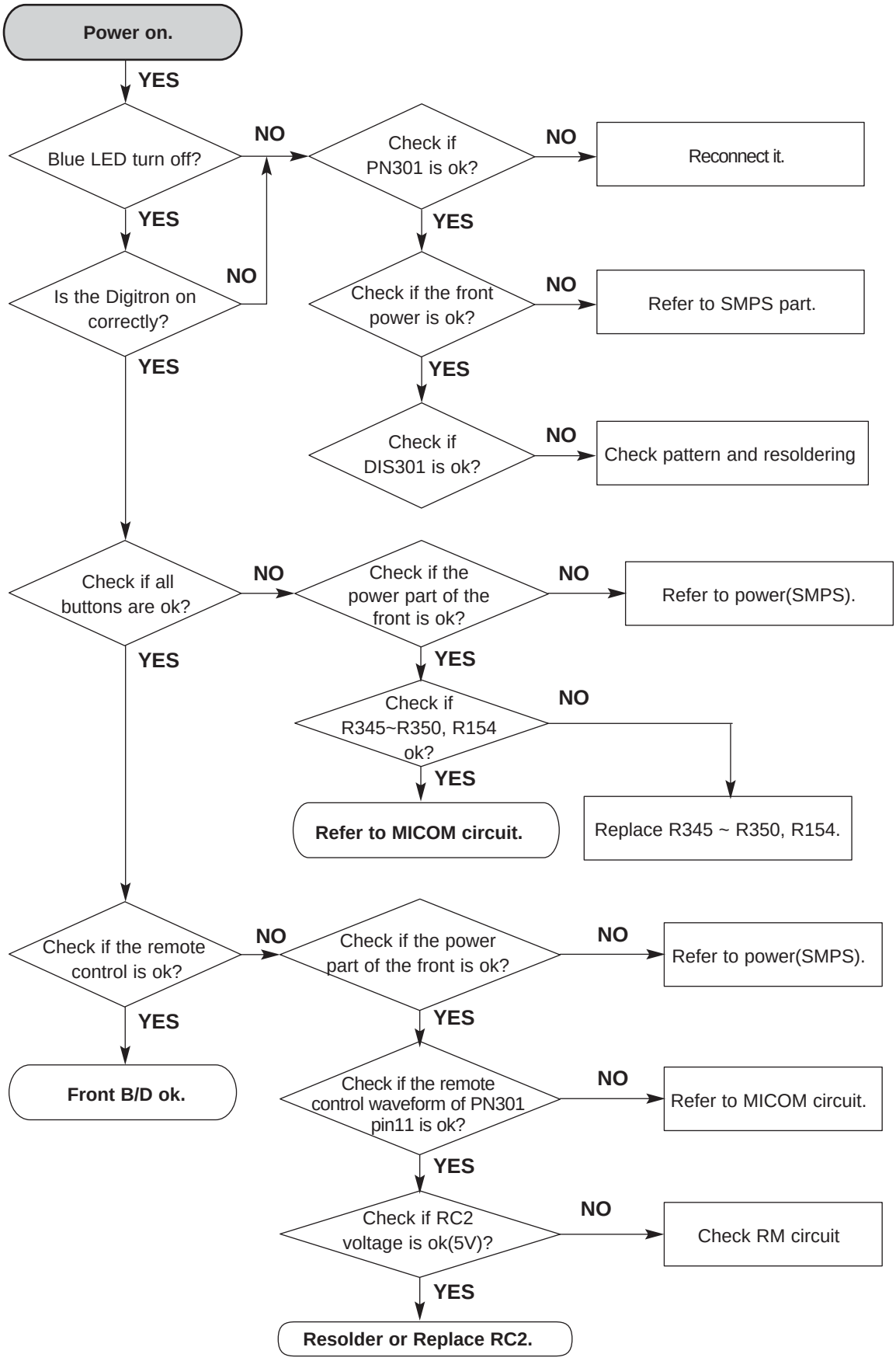
This service manual does not describe ADJUSTMENT.

SECTION 5
TROUBLESHOOTING

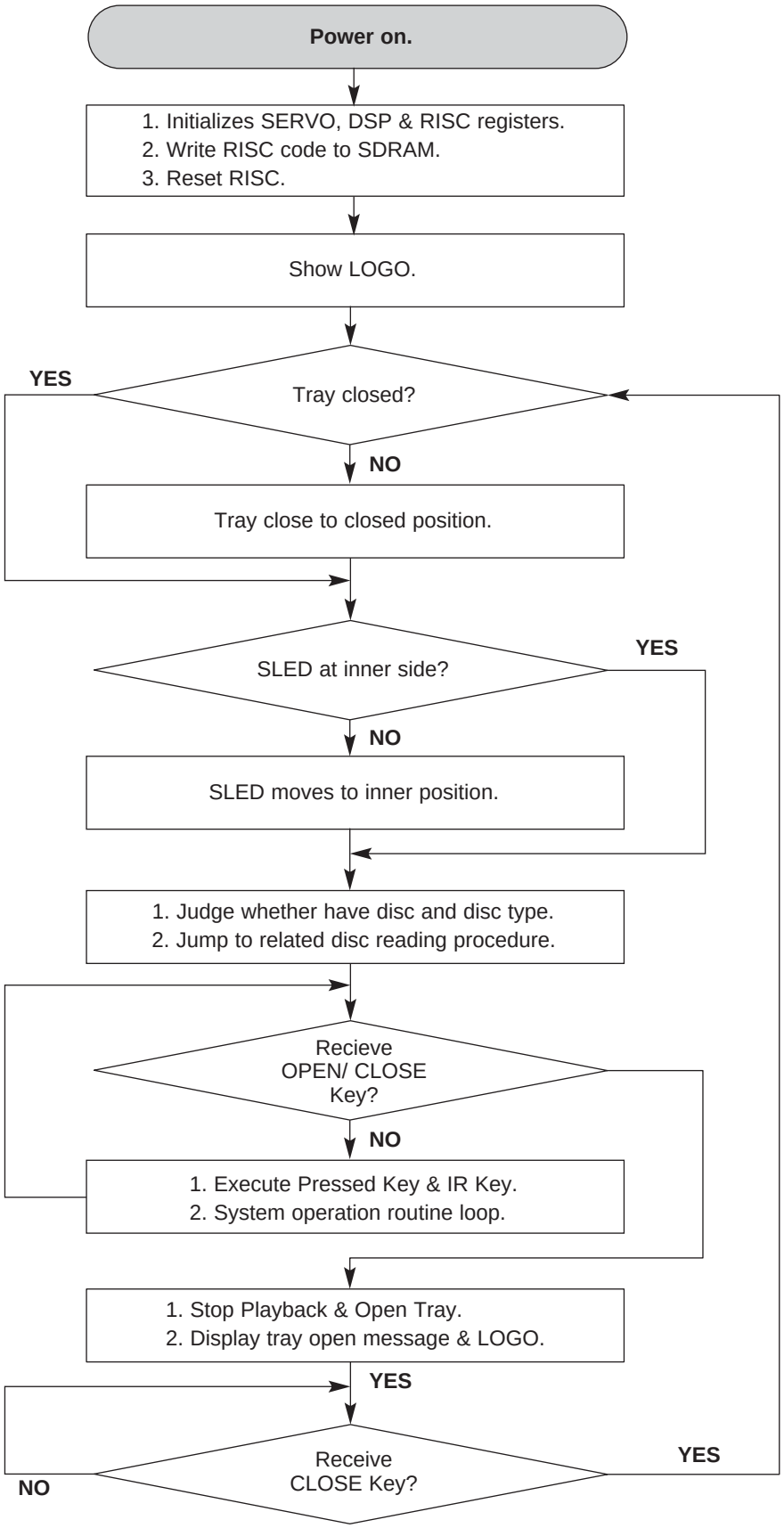
5.1 Power Supply Circuit



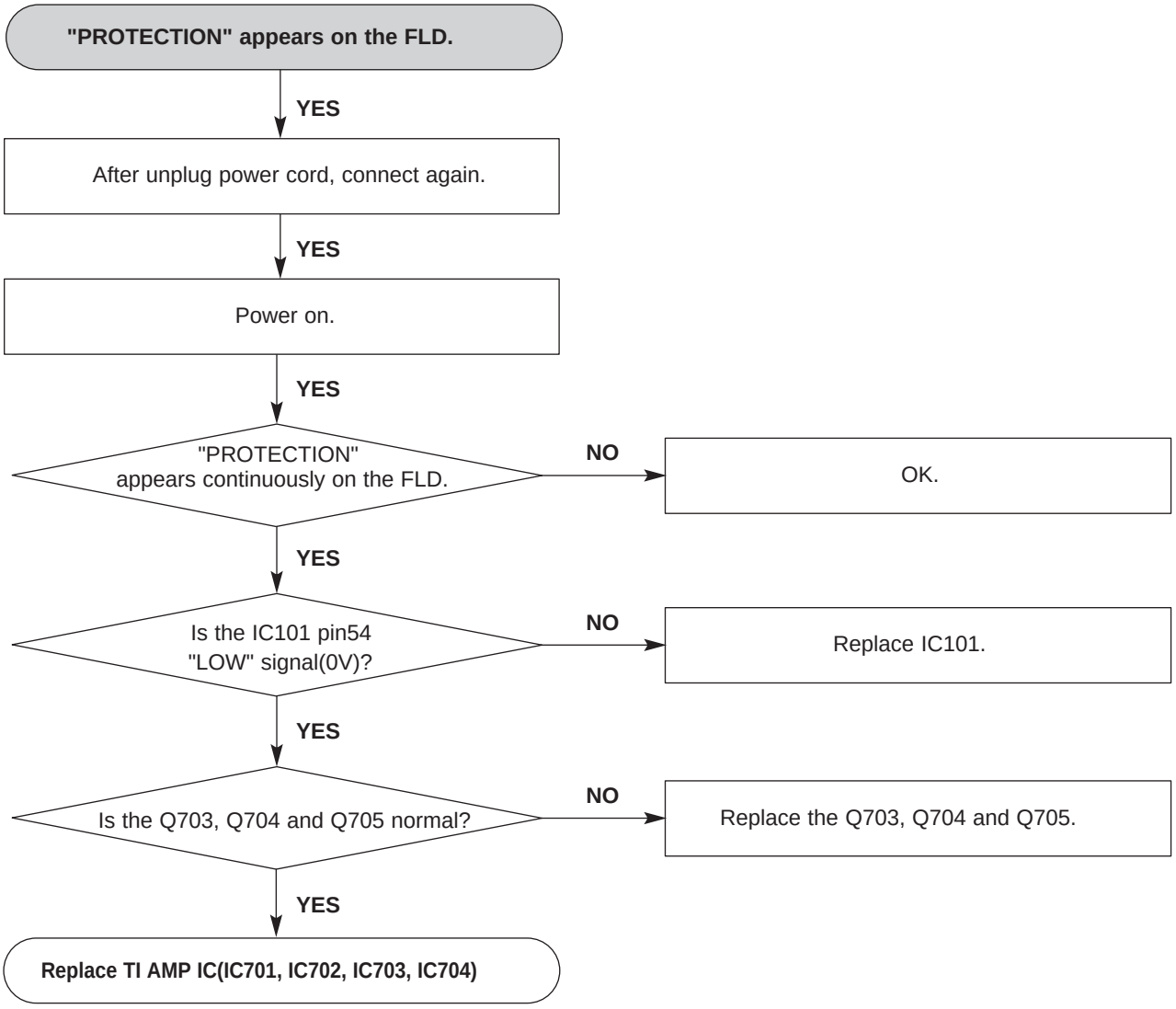
5.2 Front circuit



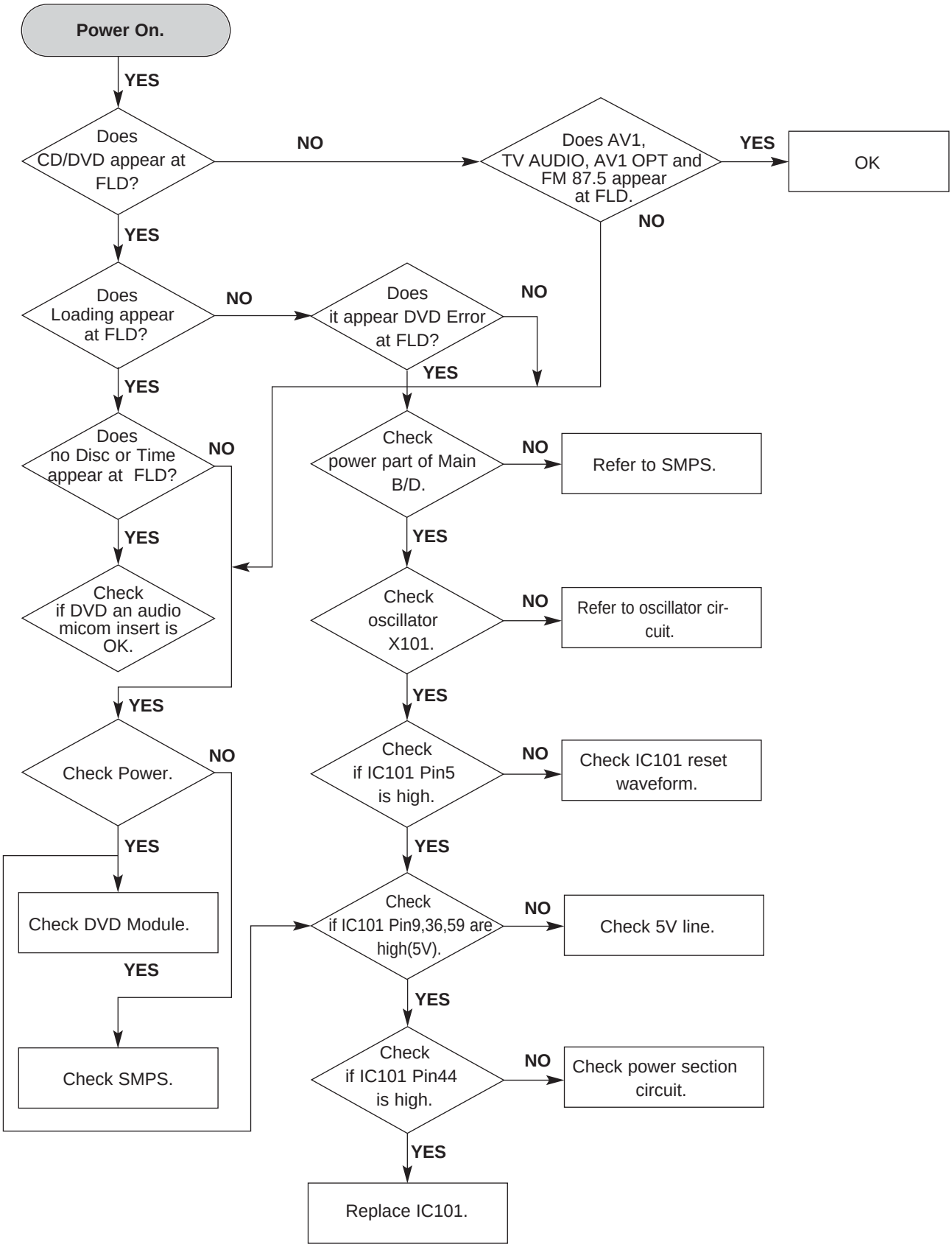
5.3 System operation flow



5.4 AMP Protection



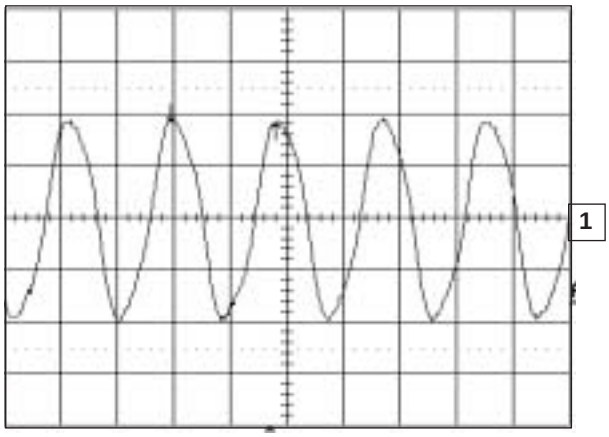
5.5 AUDIO Micom Circuit (DVD & AMP)

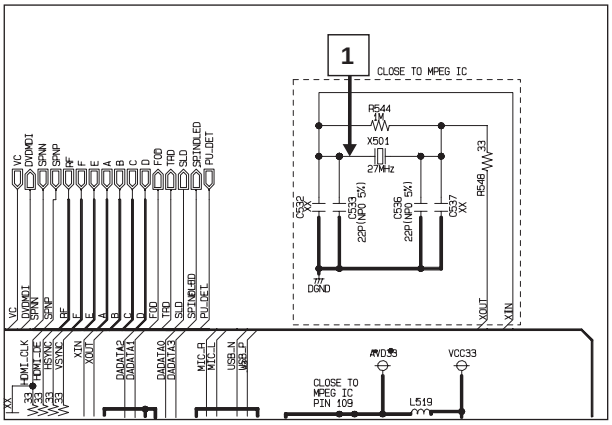


5.6 DETAILS AND WAVEFORMS ON SYSTEM TEST AND DEBUGGING

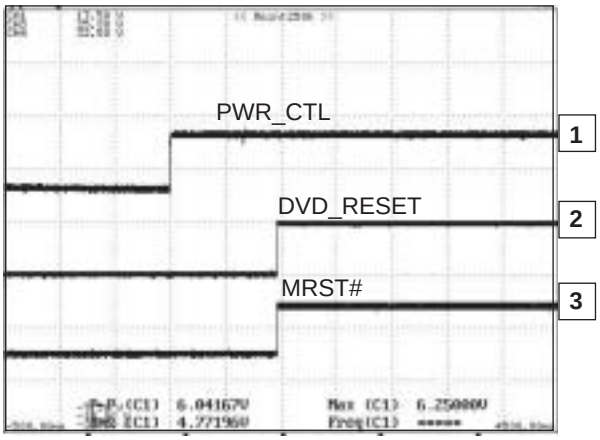
5.6.1 SYSTEM 27MHz CLOCK,RESET,FLASH R/W SIGNAL

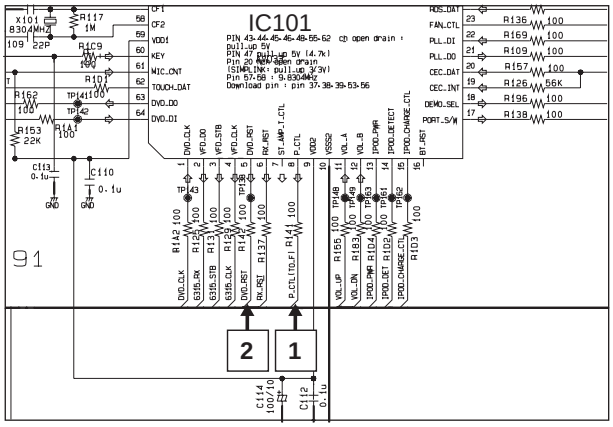
1) ES8391 main clock is at 27MHz(X501)

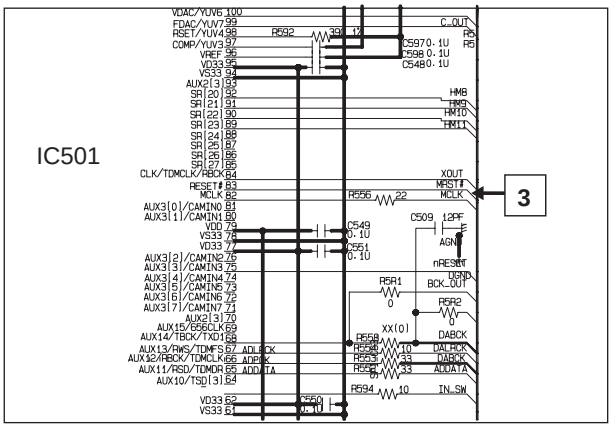




2) ES8391 reset is high active.



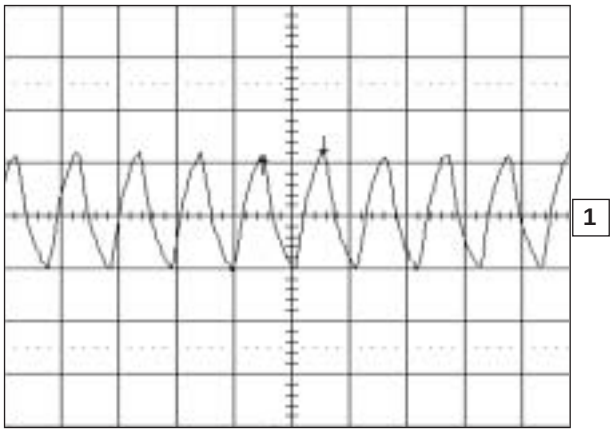


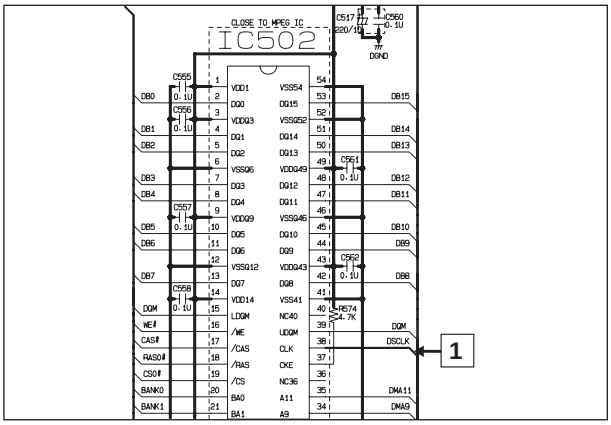


5.6.2 SDRAM CLOCK

1) ES8391 main clock is at 27MHz(X501)

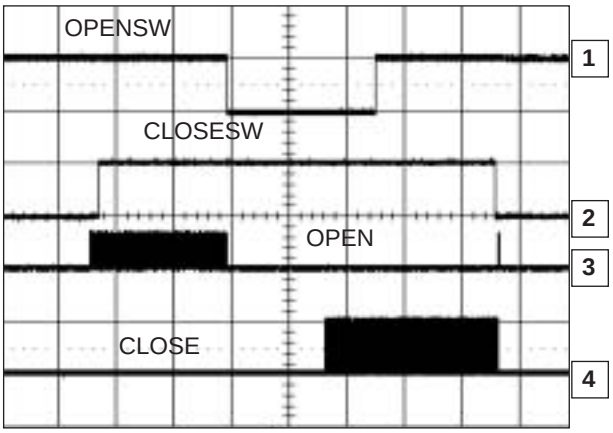
DCLK = 93MHz, Vp-p=2.2, Vmax=2.7V



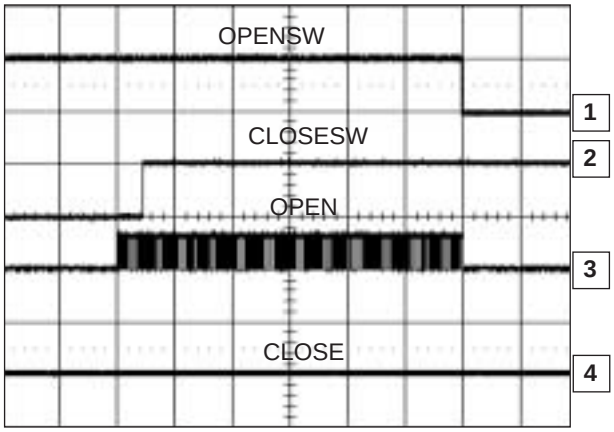


5.6.3 TRAY OPEN/CLOSE SIGNAL

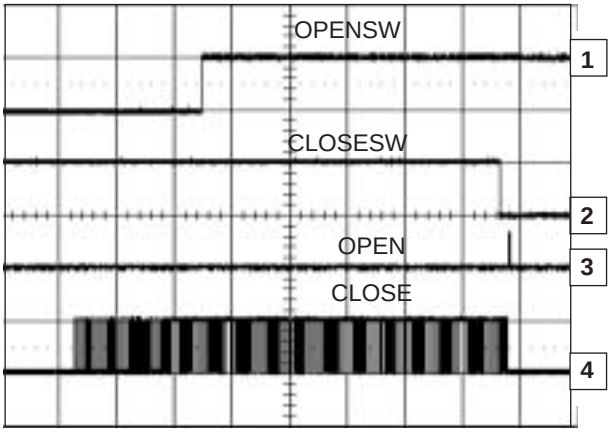
1) Tray open/close waveform

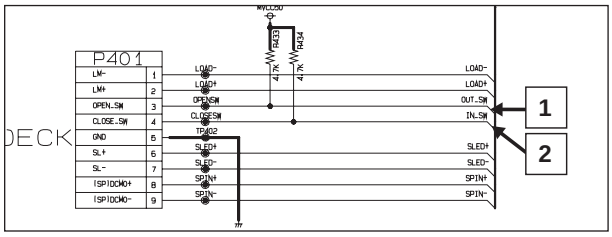


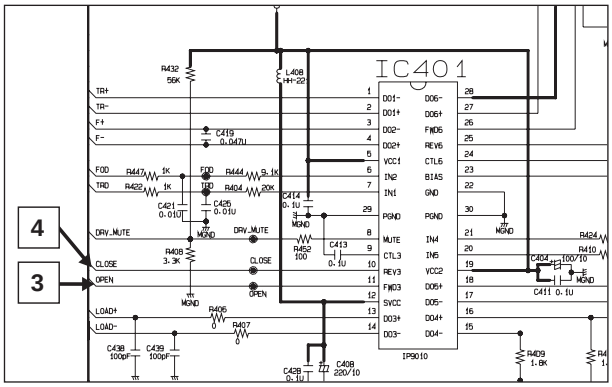
2) Tray close waveform



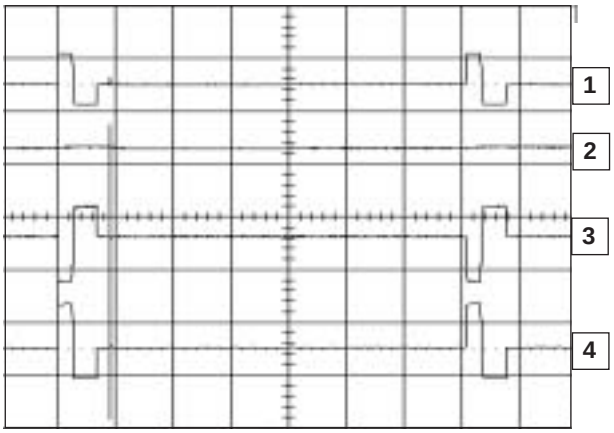
3) Tray open waveform

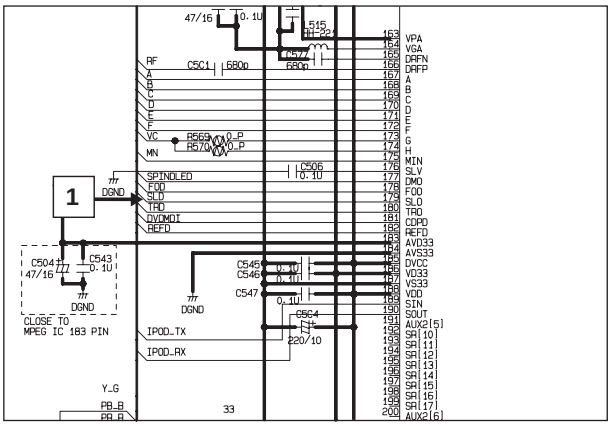


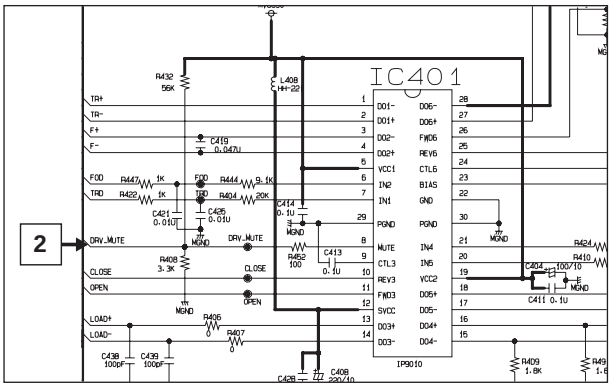


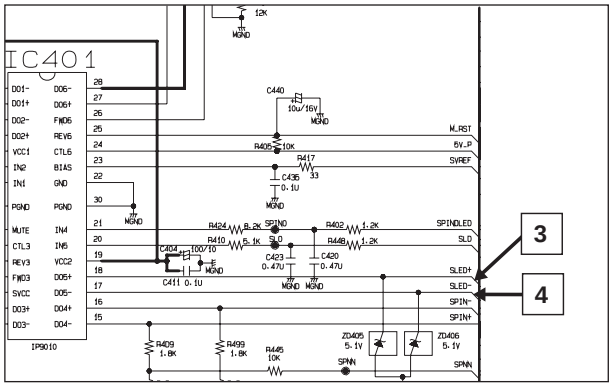


5.6.4 SLED CONTROL RELATED SIGNAL (NO DISC CONDITION)

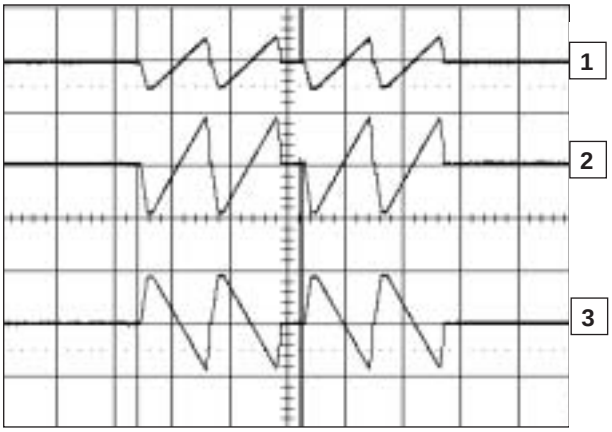


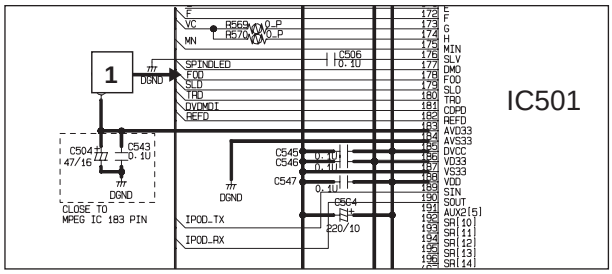


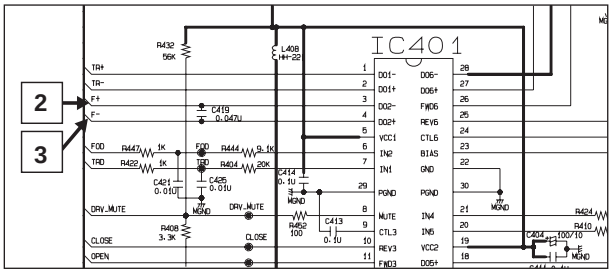




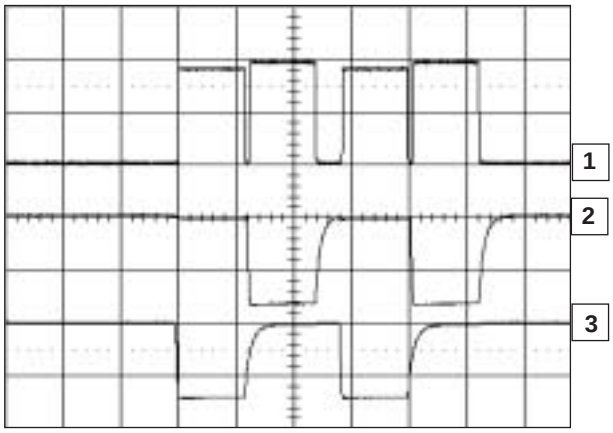
5.6.5 LENS CONTROL RELATED SIGNAL(NO DISC CONDITION)

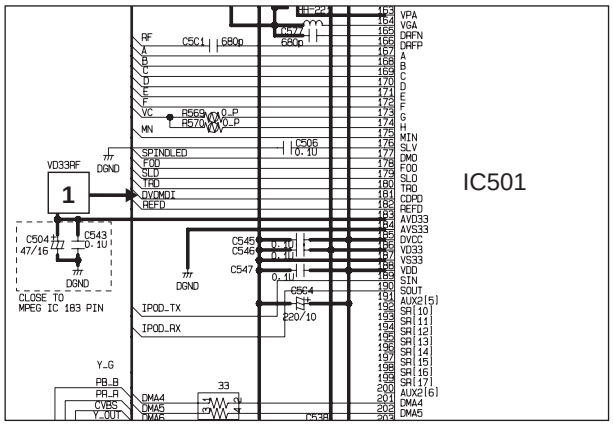


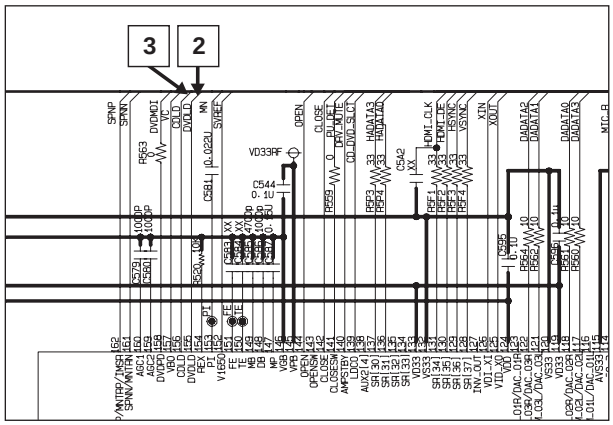




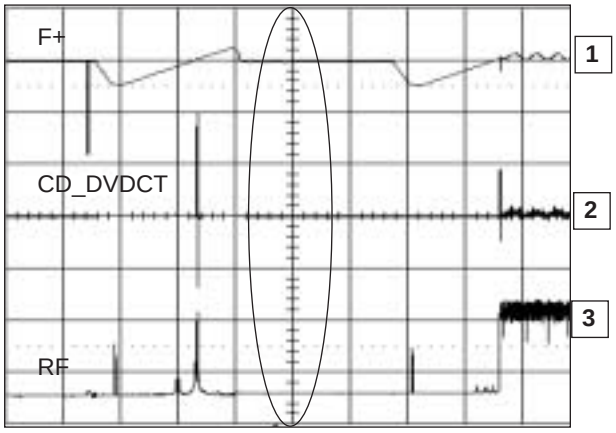
5.6.6 LASER POWER CONTROL RELATED SIGNAL(NO DISC CONDITION)



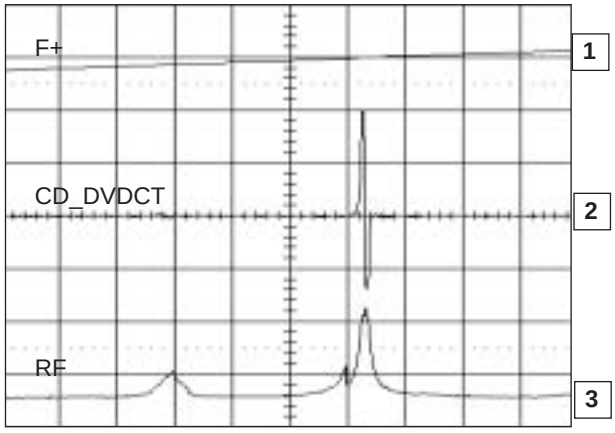




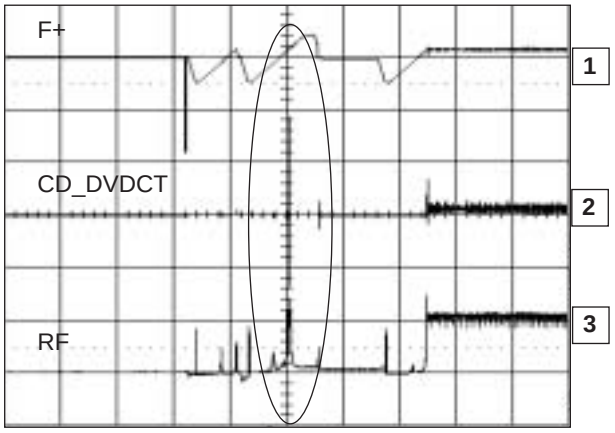
5.6.7 DISC TYPE JUDGEMENT WAVEFORMS



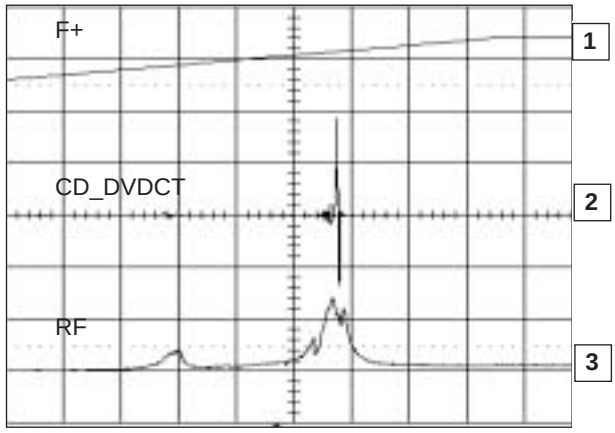
(DVD)



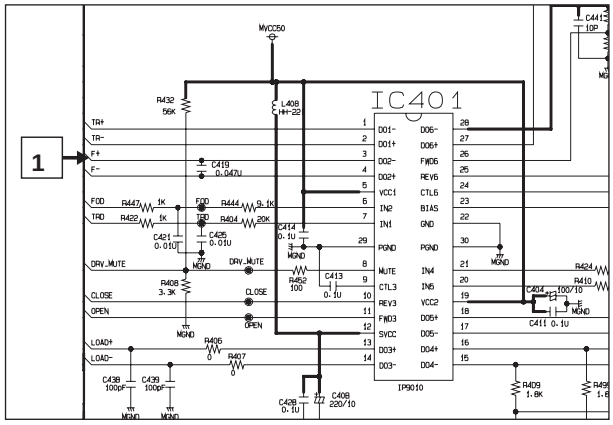
(DVD)

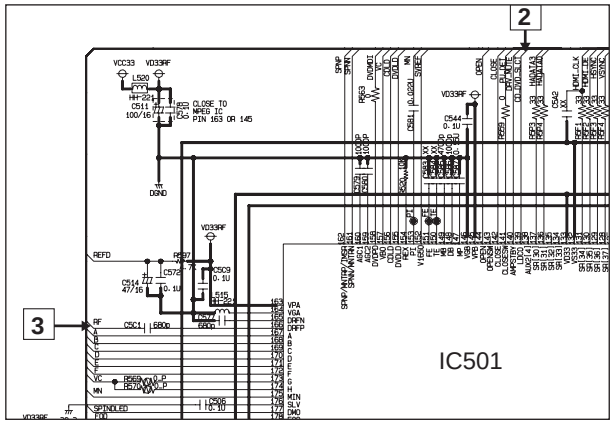


(CD)

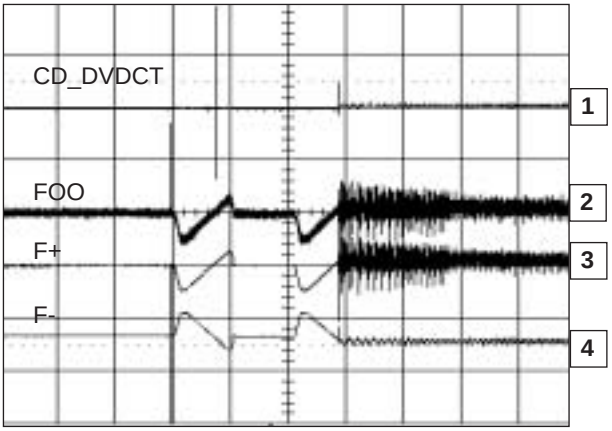


(CD)

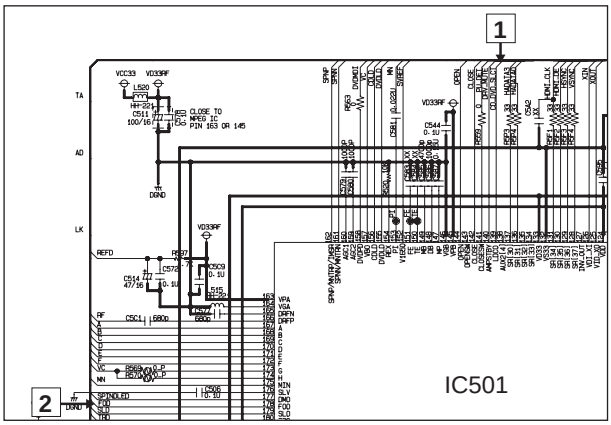


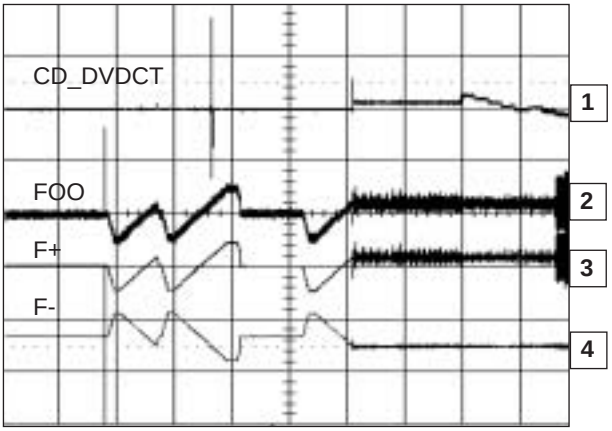


5.6.8 FOCUS ON WAVEFORMS

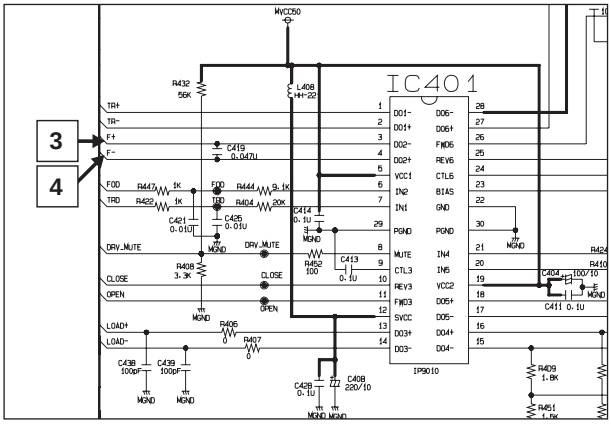


(DVD)

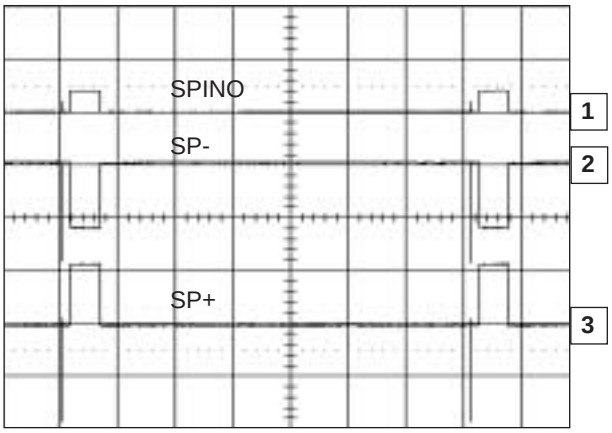


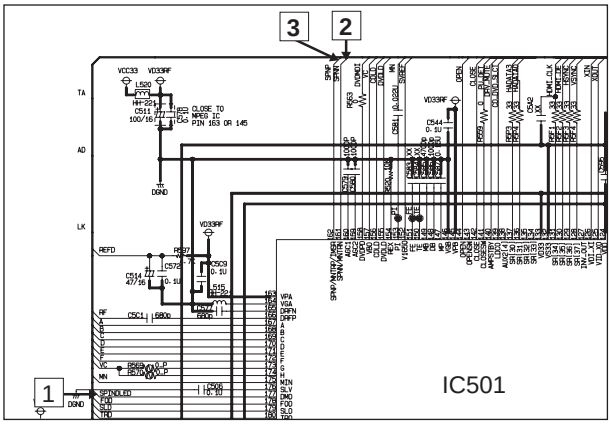


(DVD)

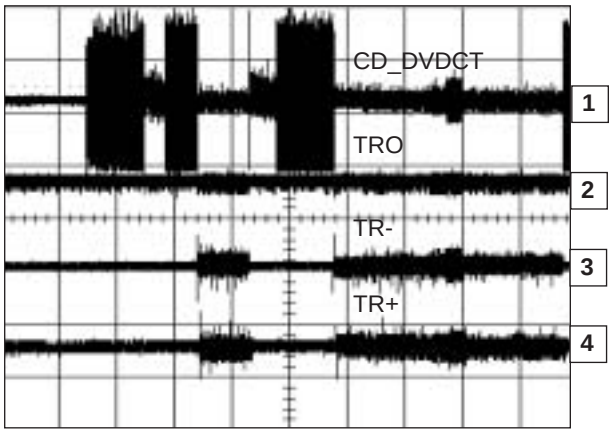


5.6.9 SPINDLE CONTROL WAVEFORMS (NO DISC CONDITION)

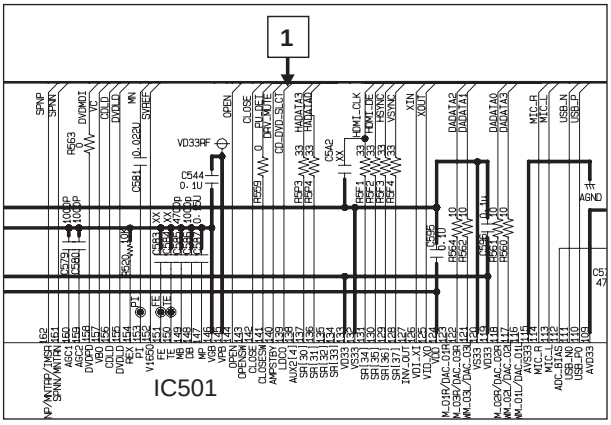


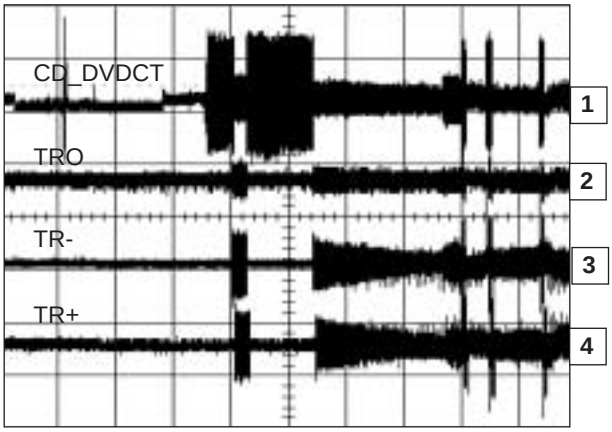


5.6.10 TRACKING CONTROL RELATED SIGNAL(System checking)

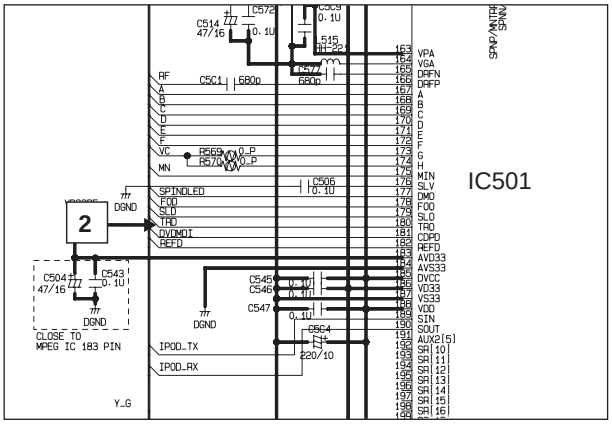


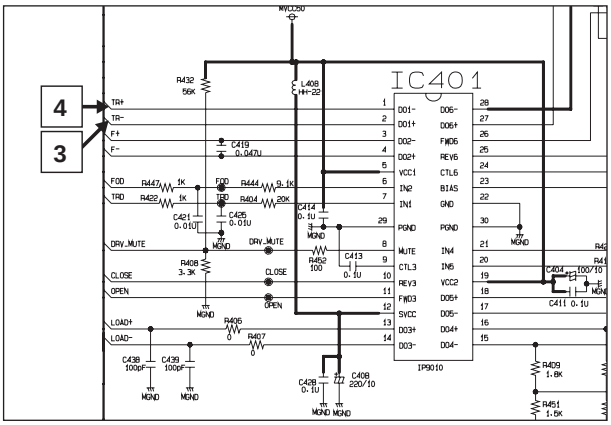
(DVD)





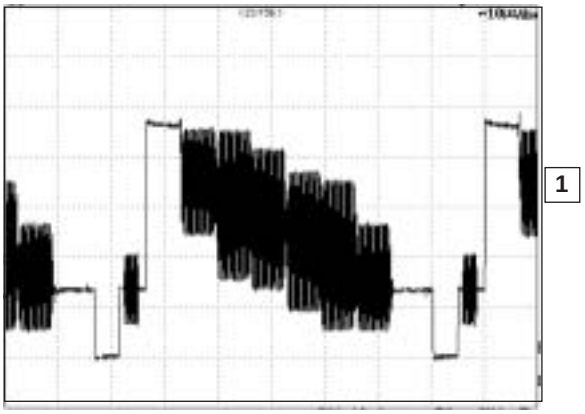
(CD)

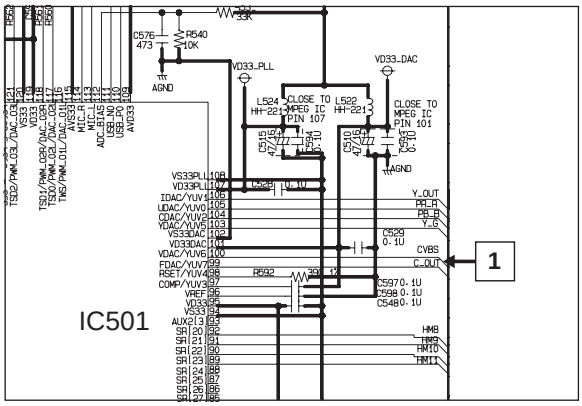




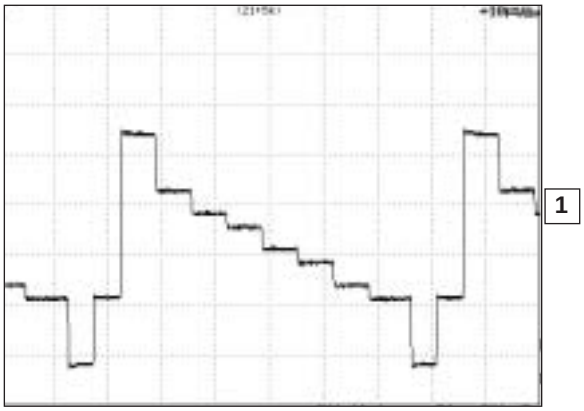
5.6.11 ES8391 VIDEO OUTPUT WAVEFORMS

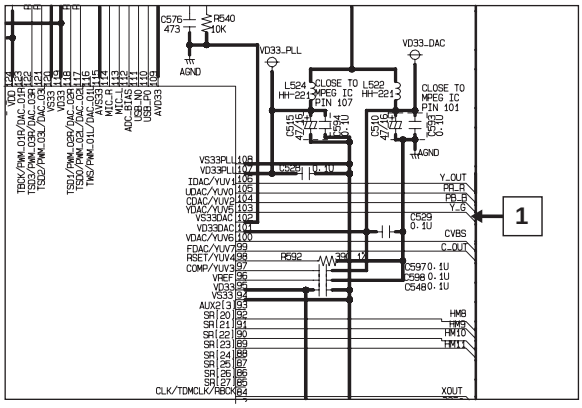
1) Full colorbar signal(COMPOSIT)





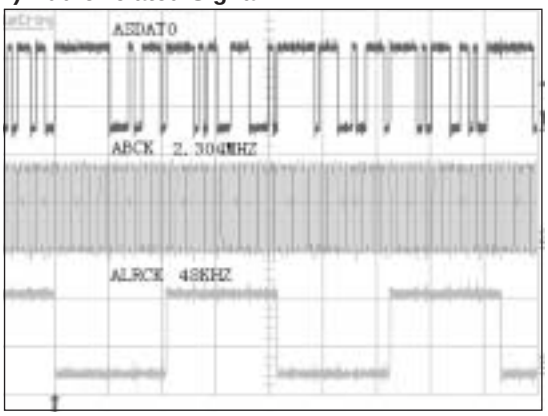
2) Y

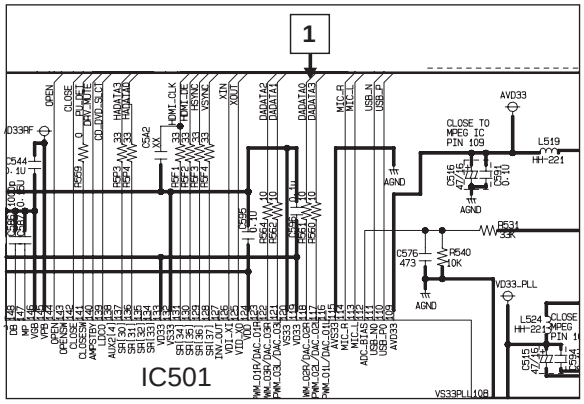


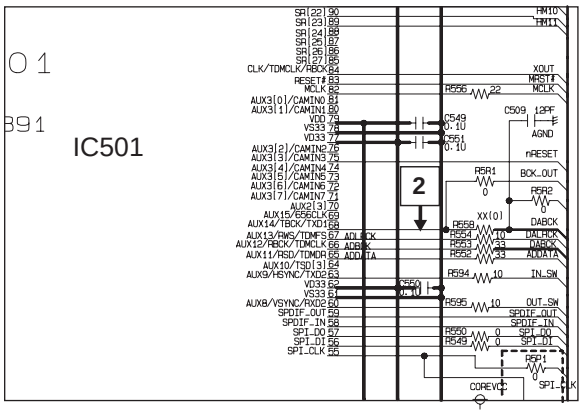


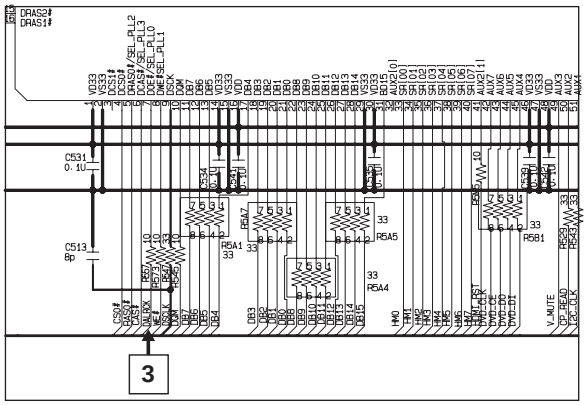
5.6.12 AUDIO OUTPUT FROM PWM IC

1) Audio related Signal



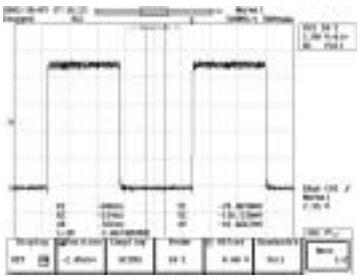






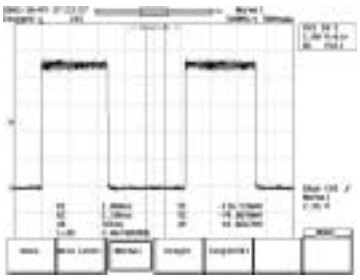
5.6.13 DVD & AMP WAVEFORMS

1)



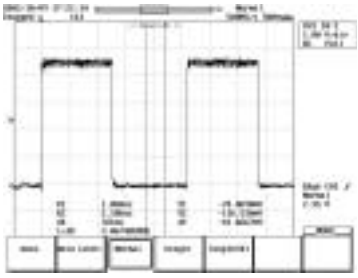
FL+ : TP611 -> R705
FL- : TP612 -> R710

2)



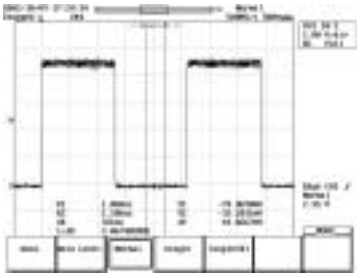
FR+ : TP609 -> R718
FR- : TP610 -> R722

3)



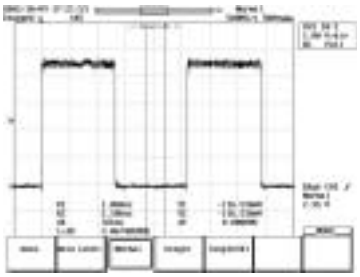
RL+ : TP603 -> R775
RL- : TP604 -> R780

4)



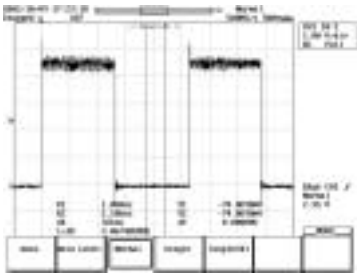
RR+ : TP601 -> R788
RR- : TP602 -> R792

5)

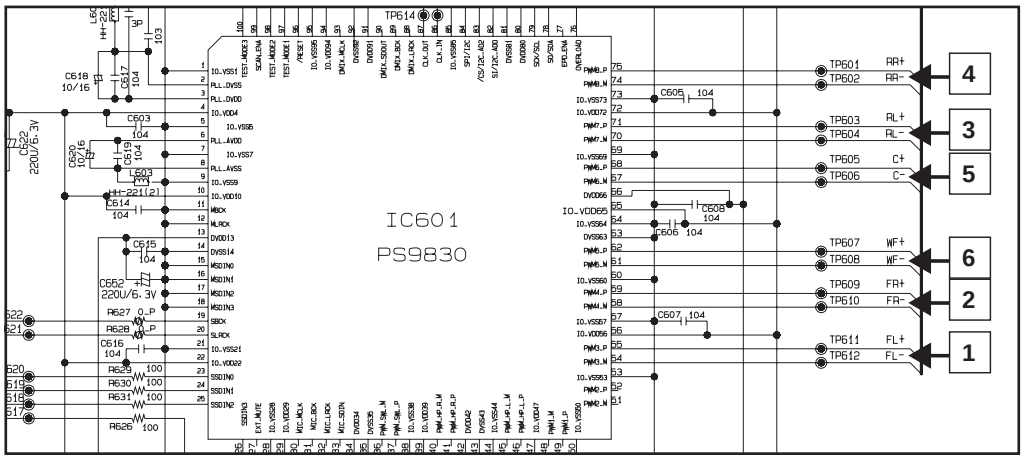


C+ : TP605 -> R731
C- : TP606 -> R736

6)



W+ : TP607 -> R767
W- : TP608 -> R762



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(No.MB672<Rev.002>)

Printed in Japan
VPT