

Service Manual

DVD MINI SYSTEM

XD-615[R]/616[R]/618[R]

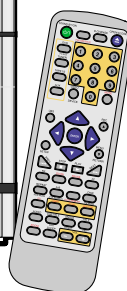
XD-625[R]/626[R]/628[R]



XD-615/616/618[R]



XD-625/626/628[R]



DVD MINI SYSTEM

XD-615[IR]/616[IR]/618[IR]

XD-625[IR]/626[IR]/628[IR]

Table of Contents

SAFETY PRECAUTIONS	1	EXPLODED VIEW AND	
SPECIFICATIONS, ADJUSTMENT	2	MECHANICAL PARTS LIST	10
LOCATION OF USERS CONTROLS	3	• Mechanical Exploded View : XD-615/ 616, XD-625/ 626	
• Front Panel		• Mechanical Parts List : XD-615/ 616, XD-625/ 626	
• Display		WIRING DIAGRAM	11
• Rear Panel		BLOCK DIAGRAM	12
• Remote Controller		SCHEMATIC DIAGRAM	13
CONNECTING TO EQUIPMENT	4	• Front Section : XD-615/ 616/ 625/ 626	
• Connecting to TV		• Function/ Tape Section : XD-615/ 616/ 625/ 626	
• Connecting to Speaker		• Video/ Analogue Section : XD-615/ 616/ 625/ 626	
• Connecting to the Supplied FM/AM(MW) Antennas		• Digital Amp : XD-615/ 616/ 625/ 626	
• Connecting the Microphone for KARAOKE		• Scart Section(Only for EU Version) : XD-615/ 616/ 625/ 626	
FIRMWARE DOWNLOAD METHOD	5	• Mic Section : XD-615/ 616/ 625/ 626	
• Preparing the Firmware Upgrade		• DVD Processor : XD-615/ 616/ 625/ 626	
• Activating the Firmware Upgrade		• Motor/ Pickup Section : XD-615/ 616/ 625/ 626	
• Starting Update		• SMPS Section : XD-615/ 616/ 625/ 626	
• Read the Disc or USB Card, Checksum Check and Update New Firmware.		P.C.B PATTERN LAYOUT	14
• Completed Update.		• MPEG : XD-615/ 616/ 625/ 626	
• Check the Update Version.		• FRONT : XD-615/ 616, XD-625/ 626	
CODE FREE METHOD & EEPROM RESET	6	• SMPS : XD-615/ 616/ 625/ 626	
TROUBLE SHOOTING GUIDE	7	• Amp : XD-615/ 616/ 625/ 626	
WAVEFORM OF MAJOR CHECK METHOD	8	• Main : XD-615/ 616/ 625/ 626	
INTERNAL BLOCK DIAGRAM OF ICs	9	• Mic : XD-615/ 616/ 625/ 626	
		ELECTRICAL PARTS LIST	15
		• Electrical Parts List	
		• Electrical Parts List [Option List]	

Safety Precautions

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

	CAUTION RISK OF ELECTRIC SHOCKS DO NOT OPEN	
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		
	THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.	
	THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.	

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

LASER SAFETY

THIS UNIT EMPLOYS A LASER. ONLY QUALIFIED SERVICE PERSONNEL SHOULD REMOVE THE COVER OR ATTEMPT TO SERVICE THIS DEVICE DUE TO POSSIBLE EYE INJURY.

CAUTION : USE OF ANY CONTROLS, ADJUSTMENTS, OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION : TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION : POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

Important Safety Instructions

- All the safety and operating instructions should be read before the appliance is operated.
 - The safety and operating instructions should be retained for future reference.
 - All warnings on the appliance and in the operating instructions should be adhered to.
 - All operating and use instructions should be followed.
1. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink,

laundry tub, in a wet basement, or near a swimming pool, and the like.

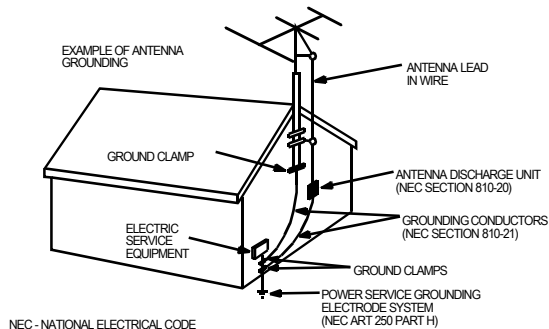
PORTABLE CART



Figure 2

2. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
3. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
4. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
5. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
6. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
7. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
8. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
9. Power - Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
10. Protective Attachment Plug - If the appliance is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.
11. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
12. Power Lines - An outdoor antenna should be located away from power lines.

13. Outdoor Antenna Grounding - If an outside antenna is connected to the receiver be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode. See Figure 1.



14. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

15. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

16. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:

- a) The power-supply cord or the plug has been damaged; or
- b) Objects have fallen, or liquid has been spilled into the appliance; or
- c) The appliance has been exposed to rain; or
- d) The appliance does not appear to operate normally or exhibits a marked change in performance; or
- e) The appliance has been dropped, or the enclosure damaged.

17. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Specifications

General Specifications

Model	XD-615/ 616/ 625/ 626	XD-618/ 628
Operating Voltage	AC 100V ~ 240V (50/ 60Hz)	AC 230V (50Hz)
Power Consumption	Operating 45 Watt	Operating 100 Watt

Model Set	XD-615/ 616/ 625/ 626	XD-618/ 628
	275 x 363.3 x 317.5 / 6.15Kg	275 x 363.3 x 317.5 / 6.2Kg
Speaker	AS-61VDS : 199 x 251 x 327 / 3.6Kg x 2EA AS-61WDS : 199 x 280 x 327 / 4.6Kg x 2 EA	AS-62NYS : 230 x 458 x 390 / 6.1Kg x 2EA

Audio Section

POWER OUTPUT at 10 % THD (RMS)	At 1KHz, 6 ohms	XD-615/625 : 50W / XD-616/626 : 65W
	At 1KHz, 8 ohms	XD-618/628 : 150W
THD (Total Harmonic Distortion)	At 1KHz, 10 W	0.10 %
Input Sen. / Impedance @ 1KHz, 47 K ohms	VIDEO	400 mV $\pm$ 30 mV / 47K
Output Level / Impedance @ 1KHz	Tape Rec	400 mV $\pm$ 30 mV / 2.2K
Frequency Response (Analogue)	at 1W : VIDEO -3 dB	20 Hz ~ 20 KHz
S/N Ratio IHF-A Weighted	VIDEO	60 dB

Video Section

Input Sen./Impedance	Composite Video (Video)	1 Vp-p / 75 ohm	$\pm$ 0.5 dB
Output Level/Impedance	Composite 75 ohm	1 Vp-p / 75 ohm	$\pm$ 0.5 dB
	S-Video (Y/C) 75 ohm (DVD only)	1 Vp-p / 0.286 Vp-p	$\pm$ 0.5 dB
	Component Out(Y/ Cb/ Cr) : Option	1V p-p / 0.7 Vp-p / 0.7 Vp-p	$\pm$ 0.5 dB
Frequency Response	Ref 500 KHz		5 Hz ~ 5.7 MHz
Crosstalk	@1 MHz	45 dB	40 dB
S/N Ratio	DVD	60 dB	

Tuner Section

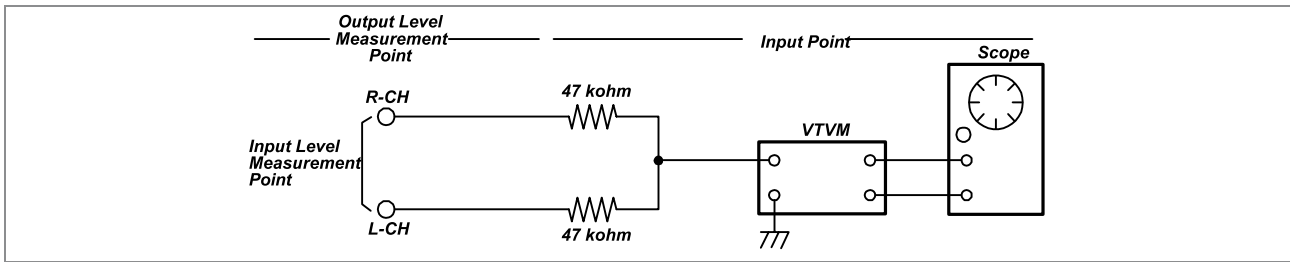
	Item	FM	MW(AM)
Tuning Range	USA Version	87.5 ~ 108.0 MHz	530 ~ 1,710 KHz
	Australia/Europe Version	87.5 ~ 108.0 MHz	522 ~ 1,620 KHz
Scanning Frequency Interval	USA Version	100 KHz	10 KHz
	Australia/Europe Version	50 KHz	9 KHz
Usable Sensitivity, 75 ohms	S/N = FM 30dB/MW 20dB, USA Version	2 uV (17.2dBf)	75 dBuV
	S/N = FM 26dB/MW 20dB, Australia/Europe Version	3 uV (20.8dBf)	75 dBuV
S/N Ratio @1mV IHF-A FILTER	FM Mono USA Version	60 dB	-
	FM Mono Australia/Europe Version	60 dB	-
	USA Version	Stereo 65 dB	45 dB
	Australia / Europe Version	Stereo 63 dB	45 dB

Tape Section

Tape Speed	TCC-112, Normal	3000 $\pm$ 3%
Frequency Response	1KHz = 0dB	150 Hz ~ 8KHz
S/N Ratio (with Filter)	TCC-140 / AUX	Playback 50dB / Recording 45dB
Channel Separation	MTT-141	40dB
THD (Total Harmonic Distortion)	Playback, TCC-142	1.5 %
Wow & Flutter (JIS/WTB)	TCC-112	0.2 $\pm$ 0.35%

Adjustments

● TAPE SECTION



Test Tape be used

Tape	Contents	Use
MTT-111N	3 KHz	Tape Speed Adjustment
MTT-114N	10 KHz	Head Azimuth Adjustment
MTT-5511	Blank	Record Frequency Property

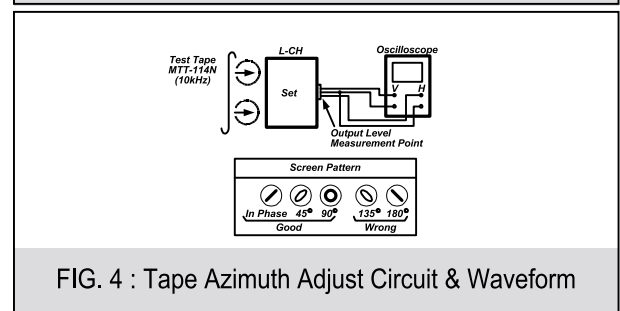
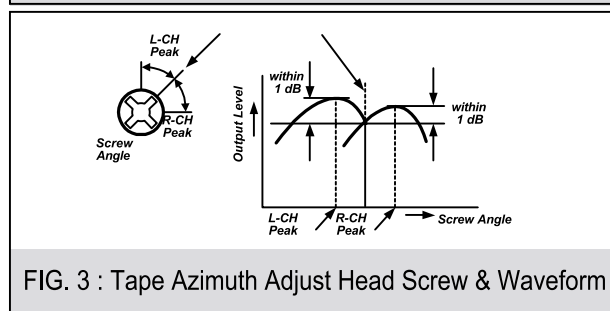
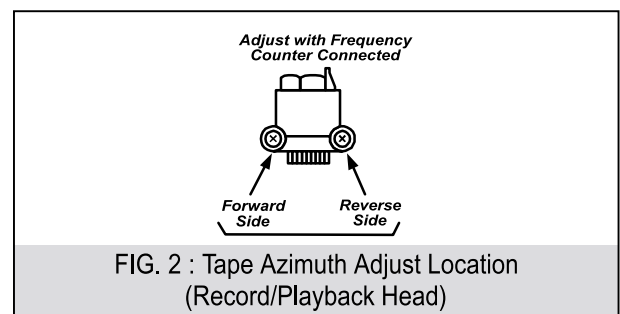
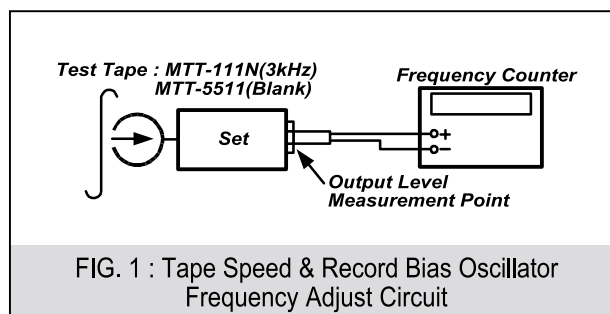
HEAD ADJUSTMENT (AZIMUTH)

- 10KHz test tape(example: MTT-114N) must be used for this adjustment.
- Connect to VTVM or oscilloscope to the headphone jack or speaker terminal.
- Press the play button.
- Adjust the azimuth by using a screw driver to maintain the max. L&R output voltage.
- Adjust tape A(1), tape B(2) respectively, Please secure the azimuth position by using locking paint.

RECORDING BIAS OSCILLATOR FREQUENCY ADJUSTMENT

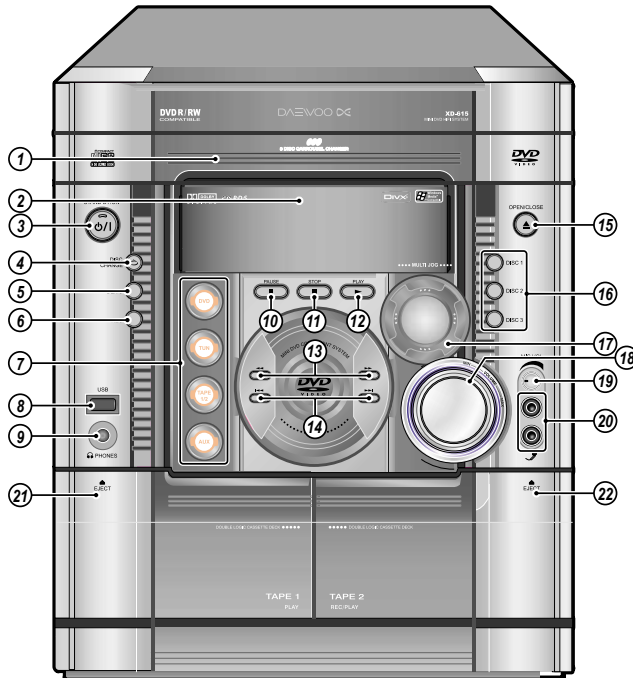
- Connect the frequency counter to TP603, GND.
- Press the REC button.
- Adjust L600 to obtain 80 KHz $\pm$ 5KHz

TAPE ALIGNMENT CHART								
Step	Item		Reference Value	Test Tape	Adjust Point	Test Point	Note	FIG.
1	Tape Speed Adjustment	Normal	3,015~3,025Hz	MTT-111N	RV602	Line Out L/R Channel	Confirm Wow & Flutter is within 0.35%	FIG.1
			3,000~3,010Hz	MTT-111N	RV701	Line Out L/R Channel	Confirm Tape Speed of end position after adjustment at tape start position	FIG.1
2	Azimuth Adjustment		Maximum Level Phase:Within90°	MTT-114N	Head Screw	Line Out L/R Channel		FIG.2,3,4
3	Recording Bias Oscillator Frequency Adjustment		80 KHz±5 KHz	MTT-5511	L641	TP603,GND	Adjust with frequency counter connected.	FIG.1



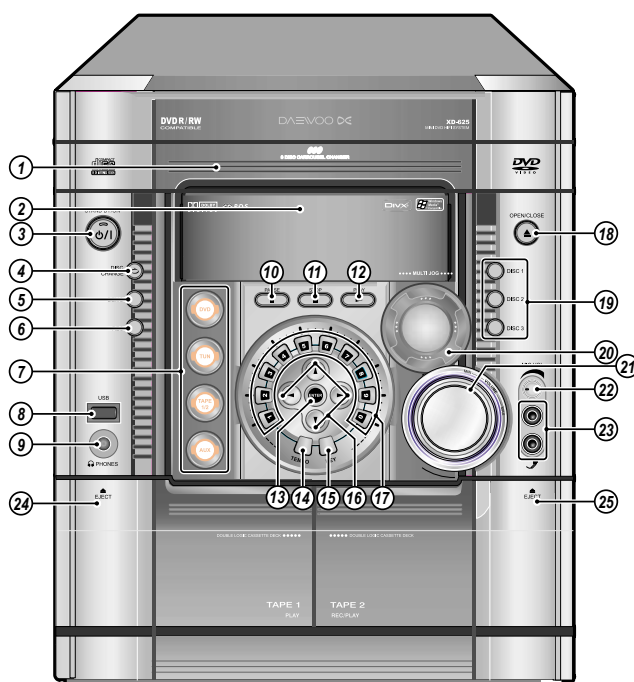
Location of Users Controls

• Front Panel : XD-615/616/618[R]



1. Disc tray
2. Display
3. STANDBY/ON button with lamp
4. DISC CHANGE button
5. DEMO button
6. Tape RECORD button
7. FUNCTION : DVD, TUNER(FM/AM), TAPE1/2 and AUX/DIGITAL button
8. USB jack
9. PHONES jack
10. PAUSE (II) button
11. STOP (■) button
12. PLAY (▶) button
13. FAST REVERSE (◀◀) / FAST FORWARD (▶▶) buttons
14. SKIP PREV (◀◀◀) / SKIP NEXT (▶▶▶) buttons
15. OPEN/CLOSE (▲) buttons
16. DISC 1/2/3 buttons
17. MULTI JOG dial
18. MASTER VOLUME Control
19. Mic. VOLUME Control
20. Microphone 1/2 jacks
21. TAPE 1 EJECT button
22. TAPE 2 EJECT button

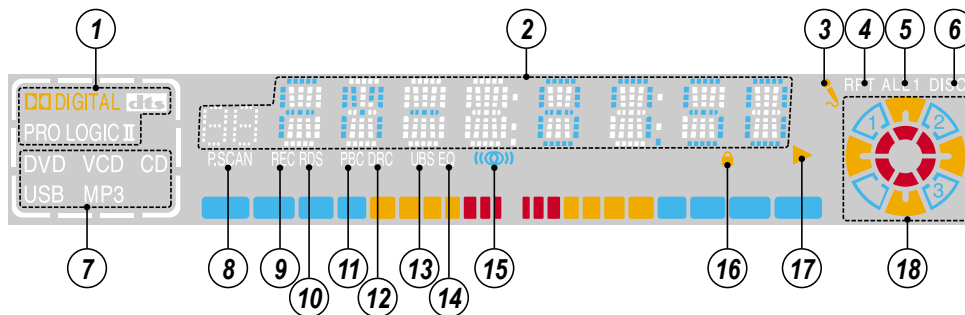
• Front Panel : XD-625/626/628[R]



1. Disc tray
2. Display
3. STANDBY/ON button with lamp
4. DISC CHANGE button
5. DEMO button
6. Tape RECORD button
7. FUNCTION : DVD, TUNER(FM/AM), TAPE1/2 and AUX/DIGITAL button
8. USB jack
9. PHONES jack
10. PAUSE (II) button
11. STOP (■) button
12. PLAY (▶) button
13. ENTER button
14. TEMPO button
15. KEY button
16. Direction(▲/▼/◀/▶) buttons
17. Number(0-9) buttons
18. OPEN/CLOSE (▲) buttons
19. DISC 1/2/3 buttons
20. MULTI JOG dial
21. MASTER VOLUME Control
22. Mic. VOLUME Control
23. Microphone 1/2 jacks
24. TAPE 1 EJECT button
25. TAPE 2 EJECT button

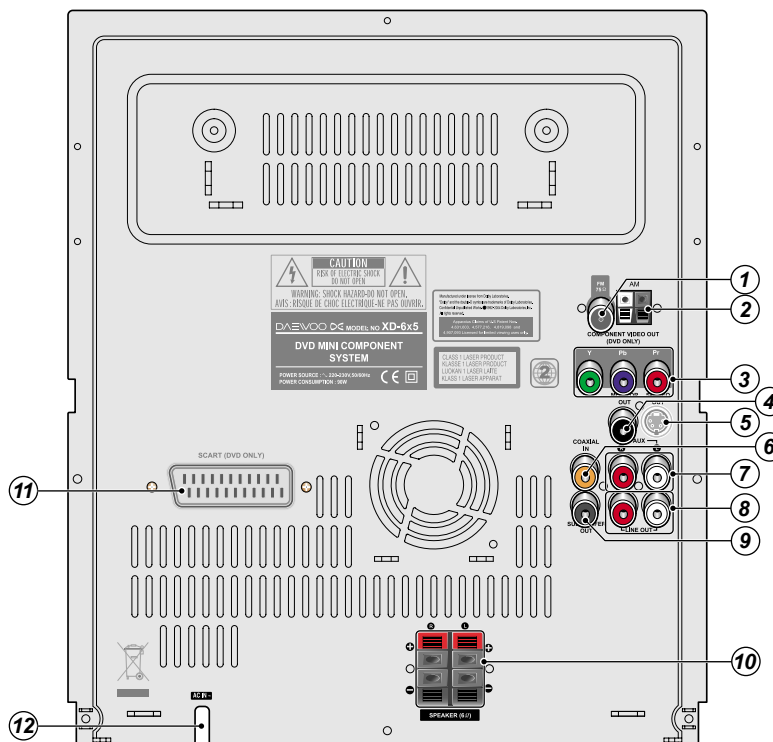
Location of Users Controls

• Display



- | | |
|---|-------------------------------------|
| 1. Sound Mode indicator | 11. PBC(Playback Control) indicator |
| 2. Multi-Function Information Displaying Area | 12. DRC indicator |
| 3. MIC indicator | 13. UBS indicator |
| 4. REPEAT indicator | 14. EQ indicator |
| 5. ALL/1 indicator | 15. FM STEREO indicator |
| 6. DISC indicator | 16. Lock indicator |
| 7. Media indicator | 17. Disc/Tape Play indicator |
| 8. PROGRESSIVE SCAN Mode indicator | 18. Disc Tray indicator |
| 9. Tape RECORD indicator | |
| 10. RDS indicator | |

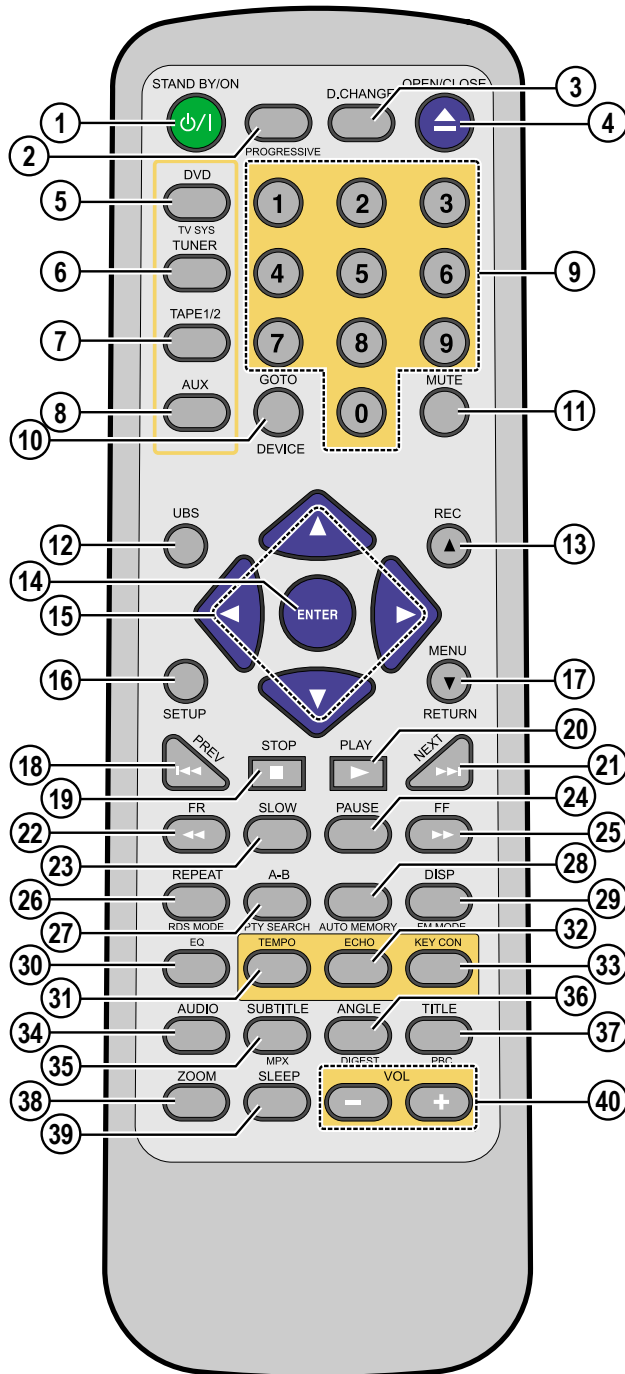
• Rear Panel



- | |
|---|
| 1. FM ANTENNA connector |
| 2. AM(MW) ANTENNA connectors |
| 3. COMPONENT VIDEO OUTPUT Y/Pb/Pr jacks |
| 4. MONITOR OUT jack |
| 5. S-VIDEO OUT jack |
| 6. COAXIAL INPUT jack |
| 7. AUX INPUT jacks |
| 8. LINE OUTPUT jacks |
| 9. SUB WOOFER OUTPUT jacks |
| 10. SPEAKER connectors |
| 11. SCART jack (Optional) |
| 12. Power cord |

Location of Users Controls

• Remote Controller

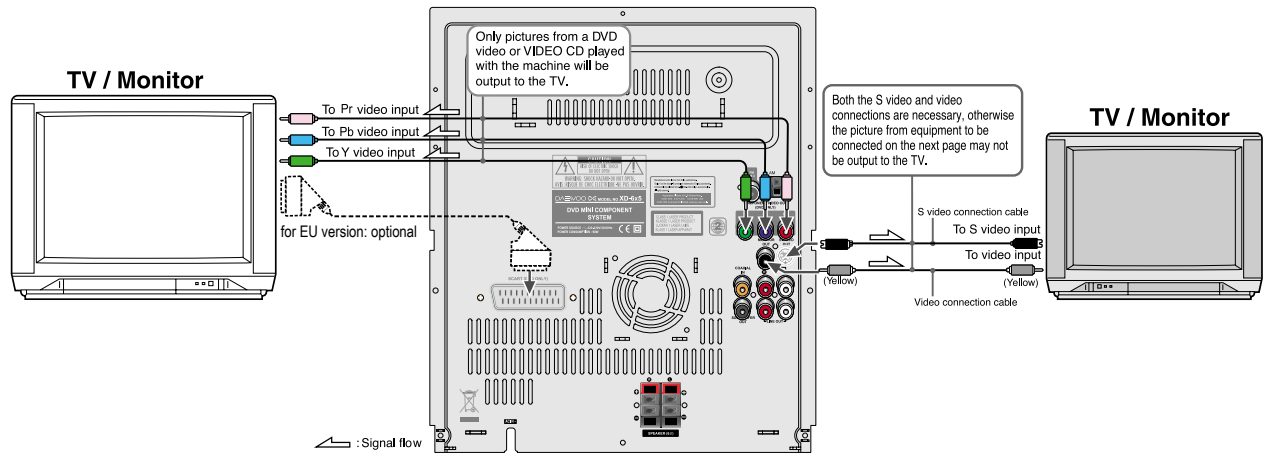


1. STAND BY/ON button
2. PROGRESSIVE button
3. DISC CHANGE button
4. OPEN/CLOSE(▲) button
5. DVD/TV SYS(PAL/NTSC: DVD only) button
6. TUNER button
7. TAPE 1/2 button
8. AUX button
9. Number(0~9) buttons
10. GO TO/DEVICE button
11. MUTE button
12. UBS button
13. RECORD(▲) button
14. ENTER button
15. Direction(▲/▼/◀/▶) button
16. SETUP button
17. MENU/RETURN(▼) button
18. SKIP PREV (◀◀) button
19. STOP (■) button
20. PLAY(▶) button
21. SKIP NEXT (▶▶) button
22. FAST REVERSE (▶▶) button
23. SLOW button
24. PAUSE button
25. FAST FORWARD (◀◀) button
26. REPEAT/RDS MODE button
27. A-B REPEAT/PTY SEARCH button
28. AUTO MEMORY button
29. DISPLAY/FM MODE button
30. EQ button
31. TEMPO button
32. ECHO button
33. KEY CON button
34. AUDIO button
35. SUBTITLE/MPX button
36. ANGLE/DIGEST button
37. TITLE/PBC button
38. ZOOM button
39. SLEEP button
40. VOLUME -/+ buttons

Connecting to Equipment

• Connecting to TV

- 21-Pin SCART Cable(not included) to 21-pin SCART input terminal on TV
- SCART Specification(Europe model only) : Composite and Component Video output(DVD, Video)Audio L/R Output(DVD only)



- If the TV or monitor is equipped with an S video input, make the S video connection in addition to the normal video connection. The S video connection will provide higher quality picture playback.

• Connecting speakers

◆ Before connecting

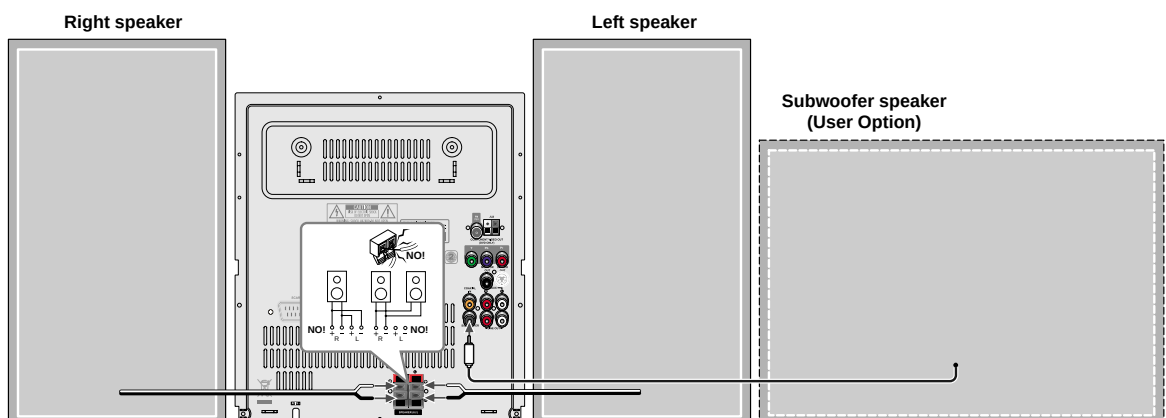
- This machine is designed to reproduce optimum sound quality when speakers with the specified impedance below are connected. Please check the following information and choose speakers with appropriate impedance for the connections.

Front speakers(L/R) :

XD-615/616/625/626[R] : 6 ohms min. per speaker

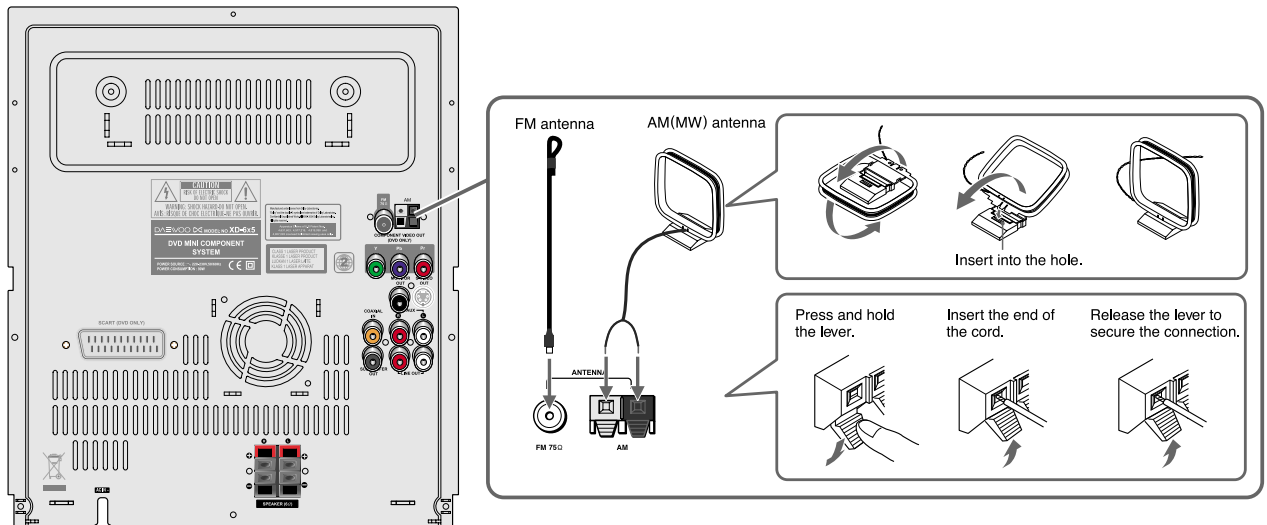
XD-618/628[R] : 8 ohms min. per speaker

- To prevent damage to circuits, never short-circuit the positive (+) and negative (-) speaker wires.
- Do not connect the speaker cable to the L and R connectors at the same time and do not connect more than one speaker to the same speaker connectors.



Connecting to Equipment

• Connecting the supplied FM/MW(AM) antennas



◆ Adjusting the position of the FM antenna

While listening to an FM program, extend the antenna and move it in various directions until the clearest signal is received, then secure the antenna with push pins in the position with the least distortion.

◆ Adjusting the position of the AM(MW) antenna

While listening to a AM(MW) program, set the antenna in the direction and position where you receive the clearest sound.

Put it as far away as possible from the unit, TVs, speakers, cables, and power cords.

• Connecting the microphone for KARAOKE

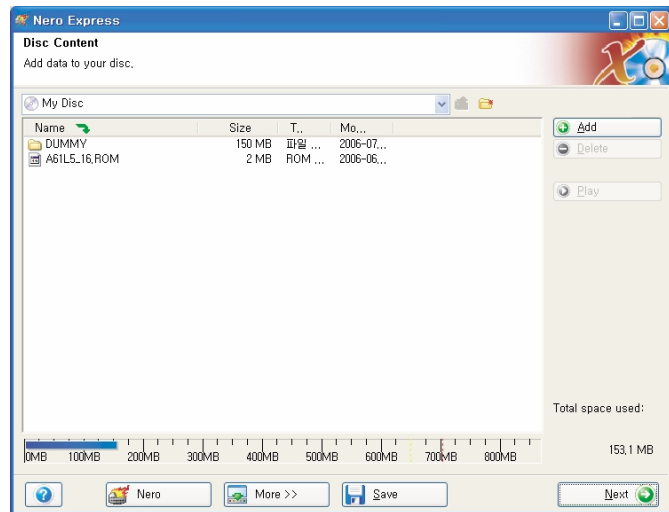
- Plugging a dynamic microphone to sing along with CD, VCD, DVD or AUX(also while recording).
- Connect the plugs securely.



Firmware Download Method

• Preparing the Firmware Upgrade

1. Write a disc to Update file by PC Writing Program.
2. A size of dummy folder is more than 10M bite. (ex : font_dw, attached picture)
3. Put Firmware file in a disc or USB Card.
 - Filename : A61L5_16.ROM

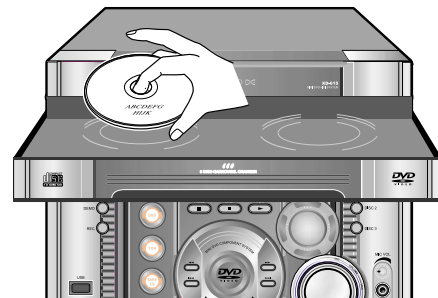


Note : Before using the USB devices, make sure there is no disc on the machine. USB function works only under the condition that the display shows “NO DISC” or “STOP” at DVD function mode.

• Activating the Firmware Upgrade

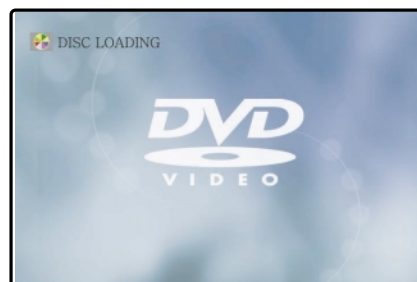
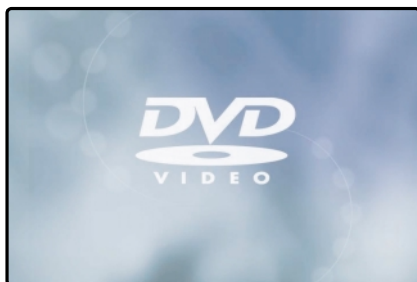
<Update by CD-R>

1. Open the Door of DVD Receiver.
2. Insert the Update Disc into the Disc Tray.
3. Close the Door, then DVD Receiver reads the disc, and Update the Firmware itself.



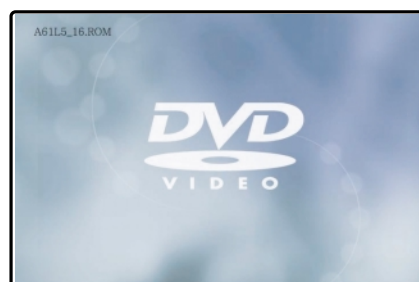
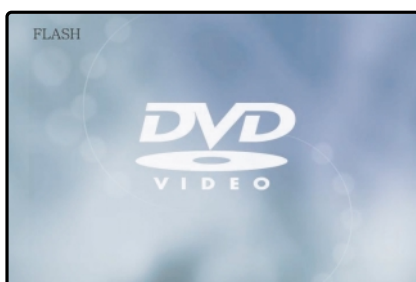
<Update by USB>

1. Insert the USB Card while the disc is stopped, and Update the Firmware itself.



• Starting Update.

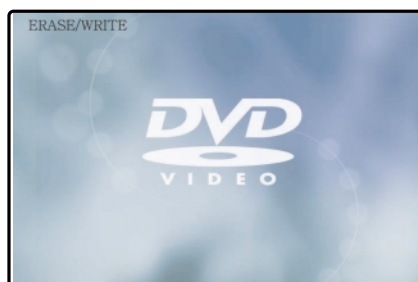
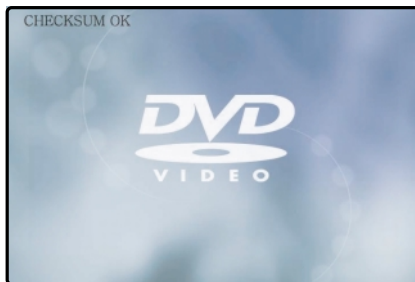
1. Detect the Update Disc.
2. Display for Update Version.
 - Basic Version : XD- 615/ 616/618, XD- 625/ 626/628 (A61L5_ 16. ROM)



Firmware Download Method

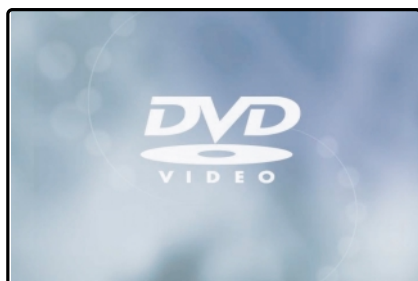
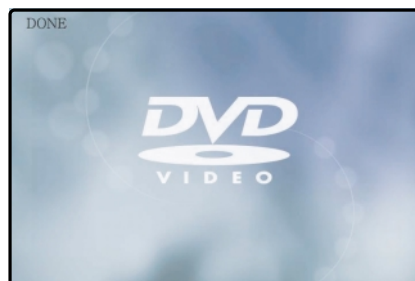
• Read the Disc or USB Card, Checksum Check and Update New Firmware.

1. Automatically open the Door, after Read from Disc. (Disc only)
2. Take a disc out of a Tray. (Disc only)



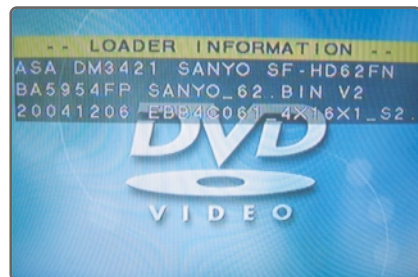
• Completed Update.

1. Automatically Video Output off, after Complete Update.
2. Remove the USB Card.
3. Press Power Button twice(off → on)
4. The system is working.



• Check the Update Version.

1. Open the Door of UNIT.
2. Press Audio Button or Subtitle Button.
 - Audio Button : Check for MPEG Firmware Version.
 - Subtitle Button : Check for Loader Firmware Version.



! Caution

- While updating, if the door opened or closed by touch, or power button is pressed, the Flash Memory will be damaged (Same as USB).
- Must be press "Default" or "Reset" on the Setup Menu, Finished Update New Firmware.

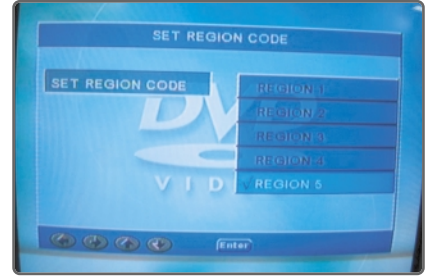
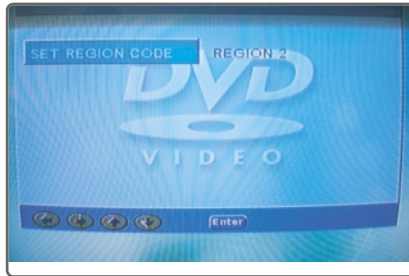
Code Free Method & EEPROM Reset

• Preparing the Code Free Method

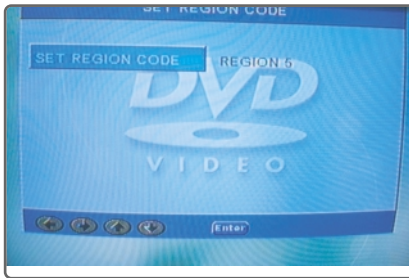
1. Press "Open" button.
2. Press "Setup" button.
3. Press Number button.
(5 → 4 → 2 → 5)



4. You can see window for Code Free.
5. Press "Enter", or "Right Arrow" button.
6. Select Region Number.



7. Press "Left Arrow" button.
8. If you Press "Setup", The Setting of Code Free is finished.



• XD-610/620 Series EEPROM Reset

Use Only this case : change Flash Memory

1. Door Open.
2. Press Setup Key.
3. Press Number Key(2-5-8-0)
4. Display as follows,
 - "EEPROM CLEAR TWICE POWER ON/OFF"
 - Power off → Power on → Power off → Power on.

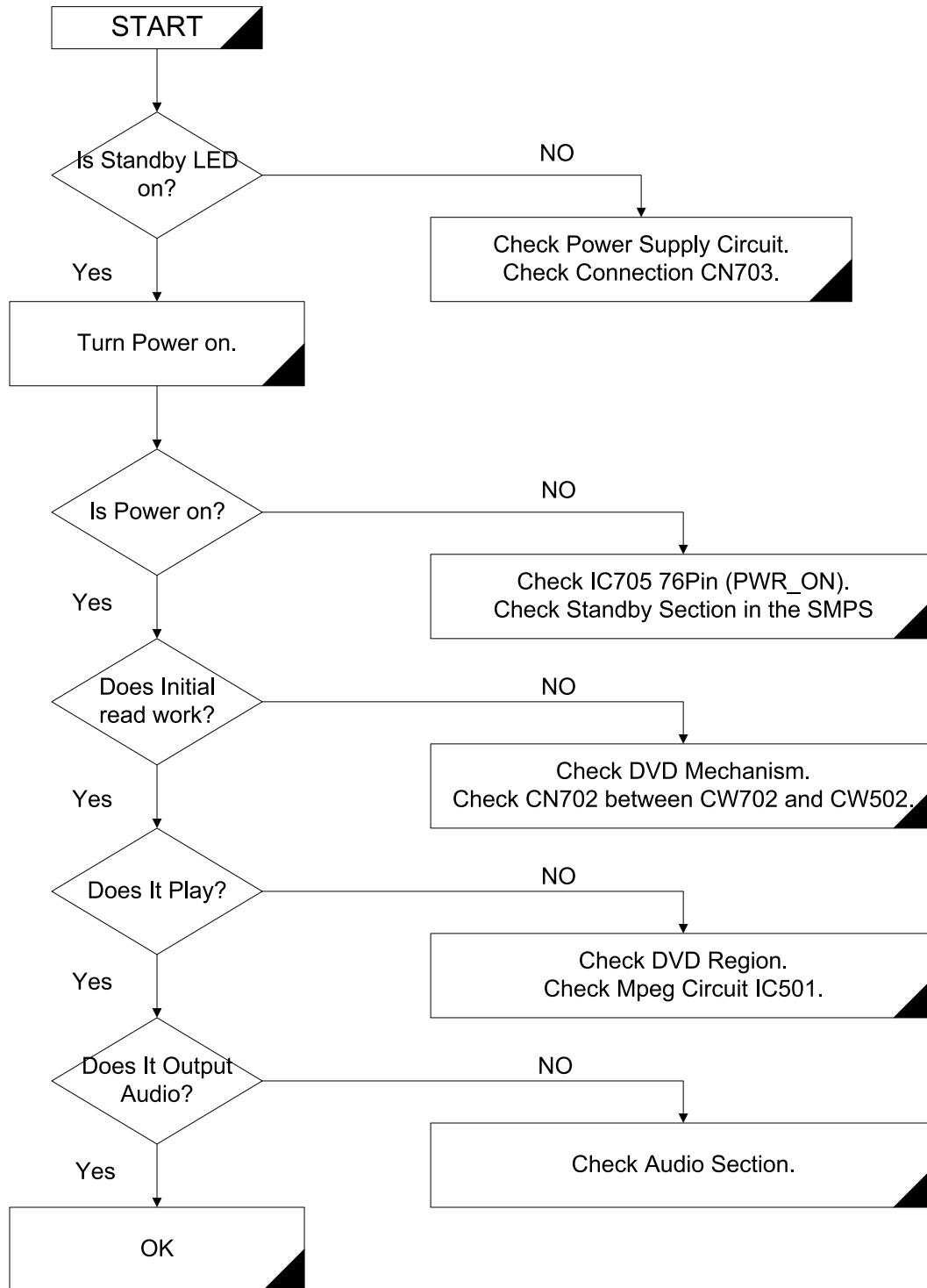


Notice

- Check Region Code.
- Check Video Mode.

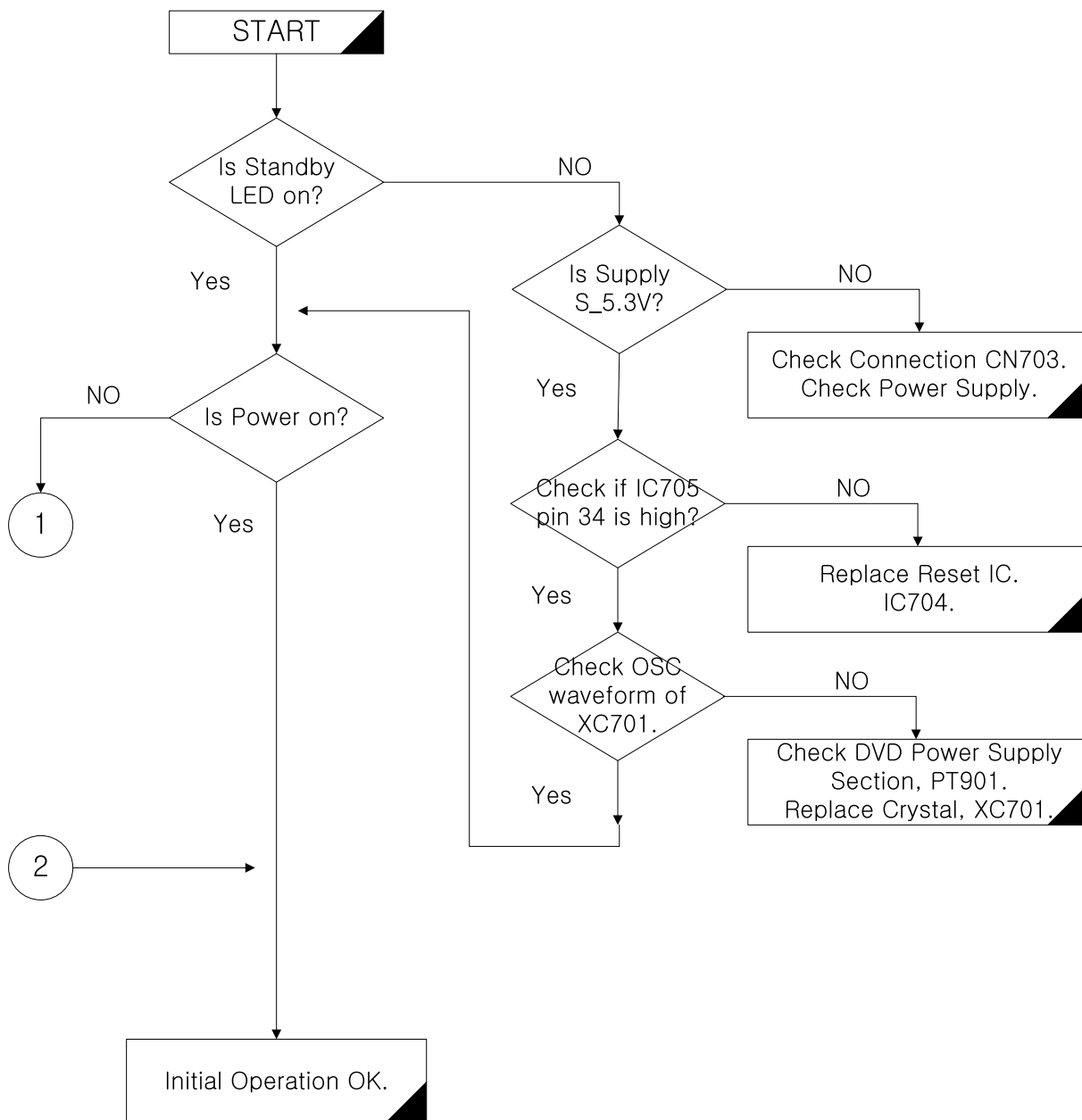
Trouble Shooting Guide

• Basic Operating



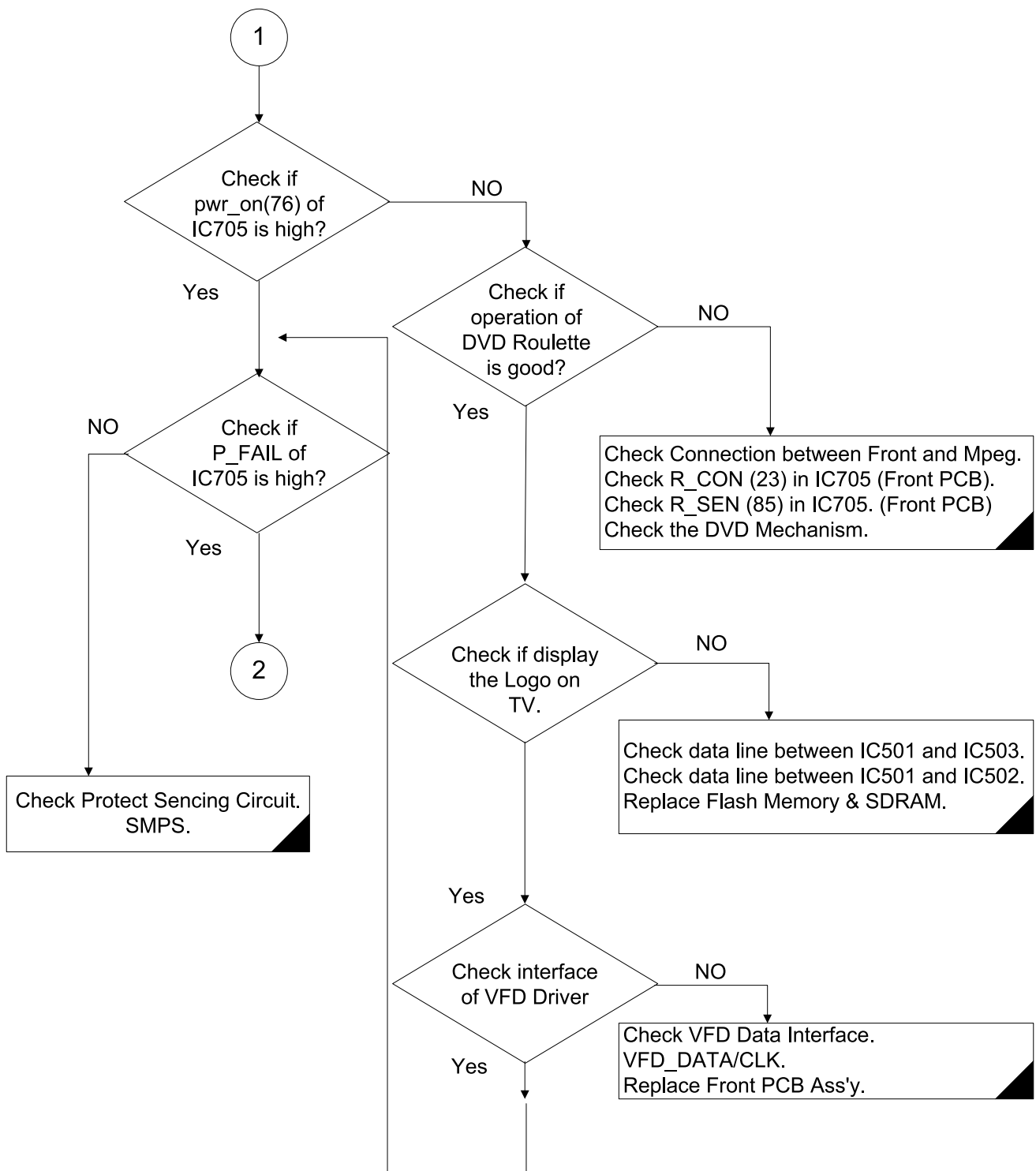
Trouble Shooting Guide

• Initial Operating



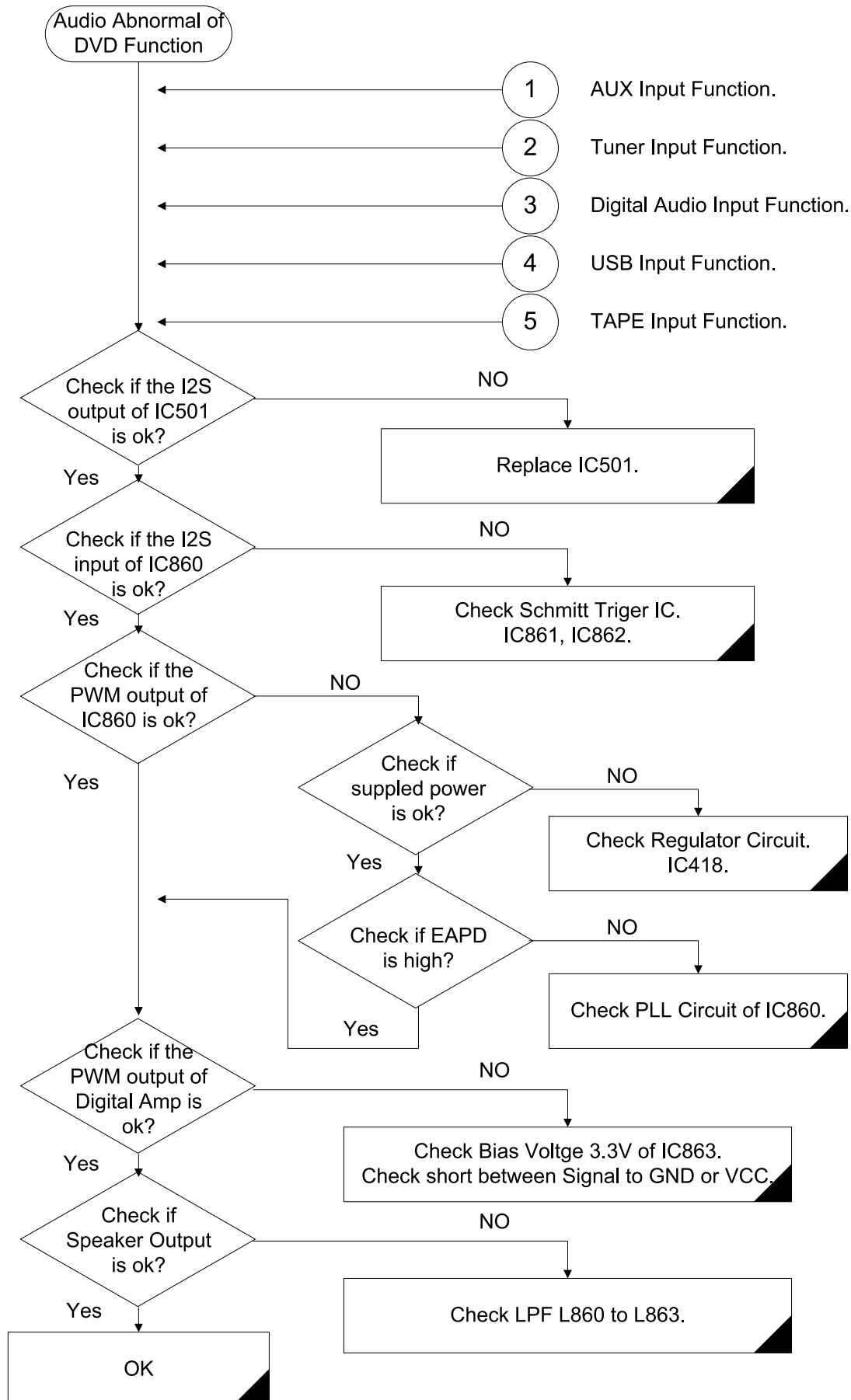
Trouble Shooting Guide

• Initial Operating



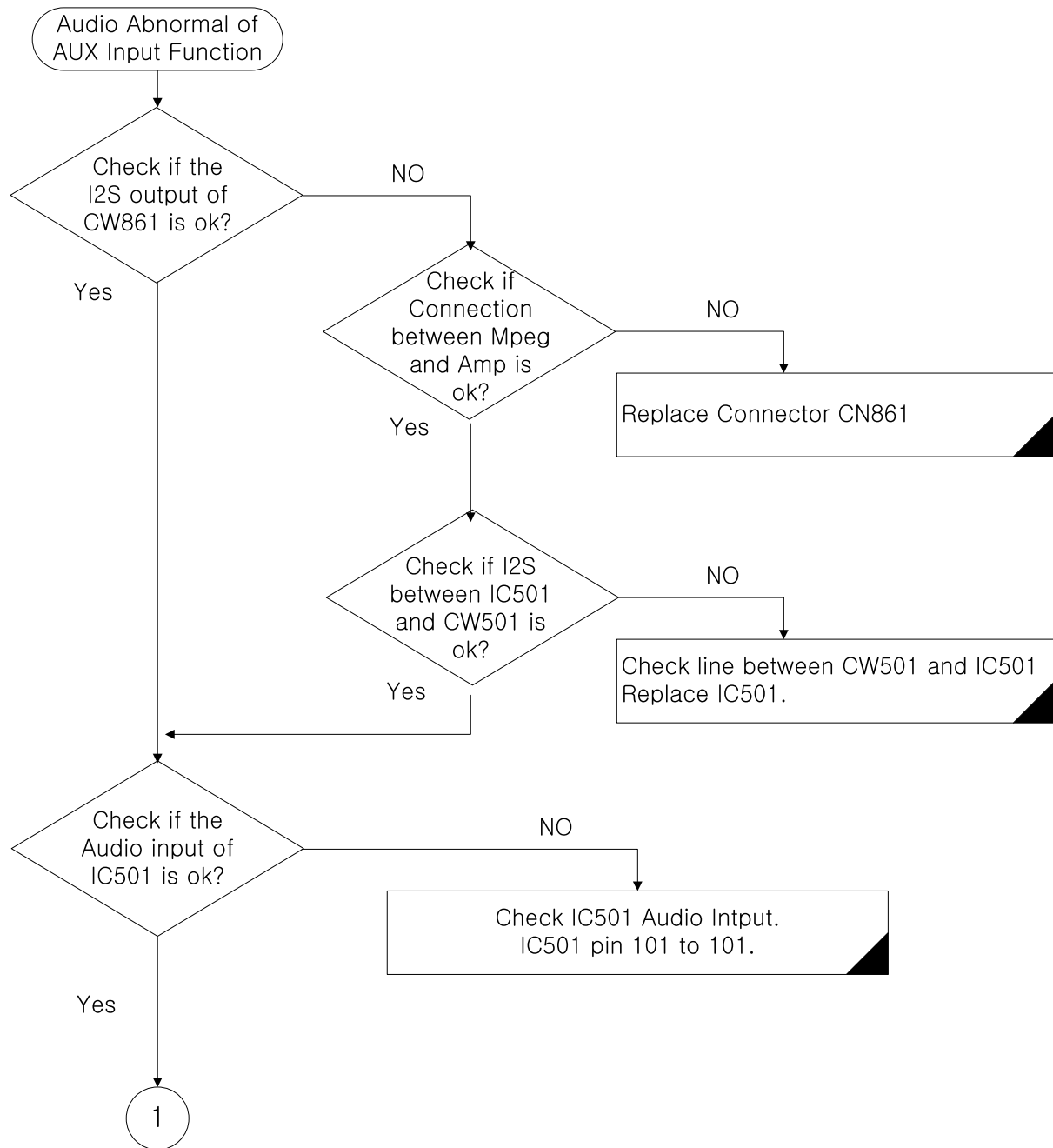
Trouble Shooting Guide

• Audio Abnormal



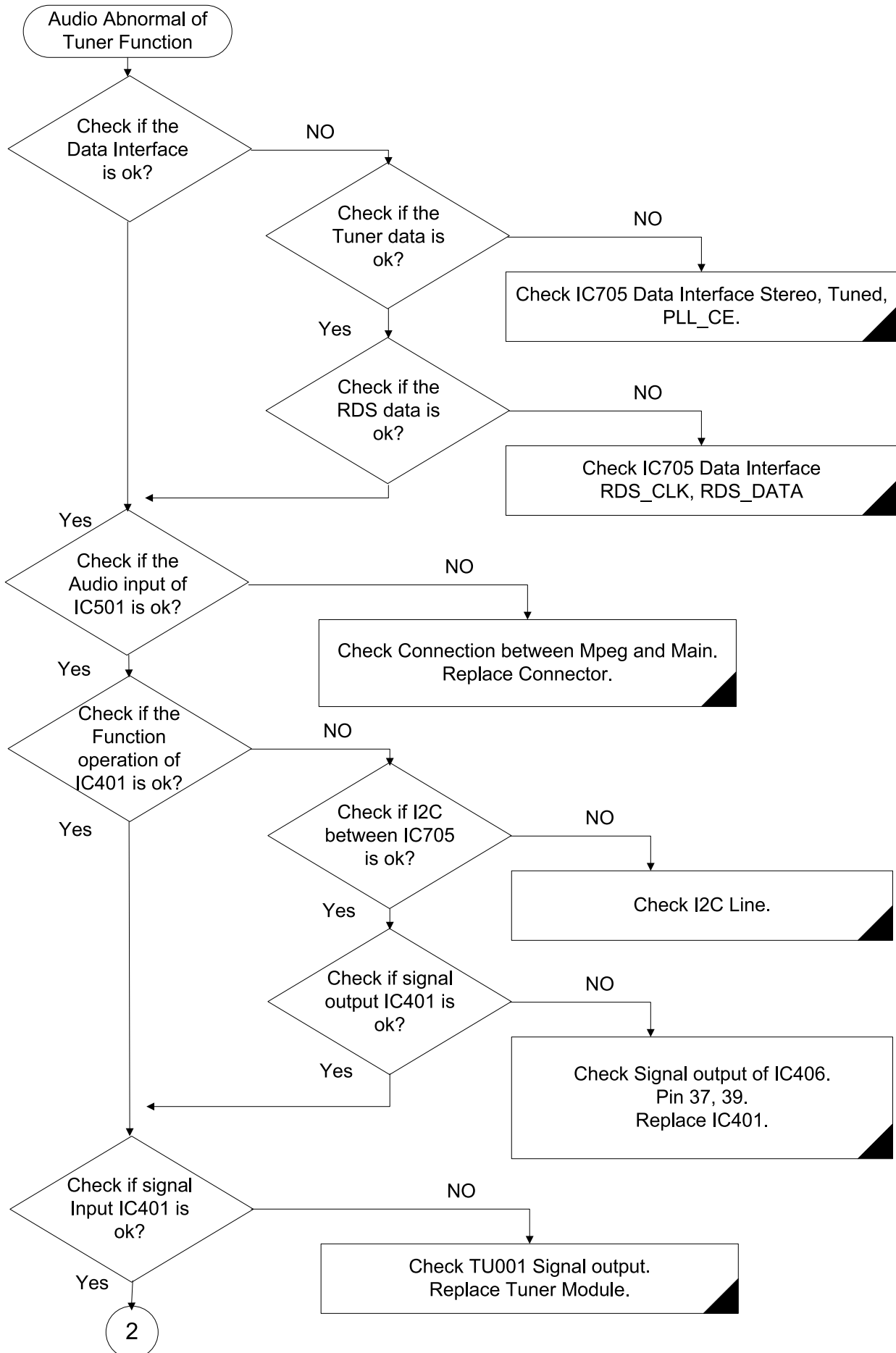
Trouble Shooting Guide

• Audio Abnormal



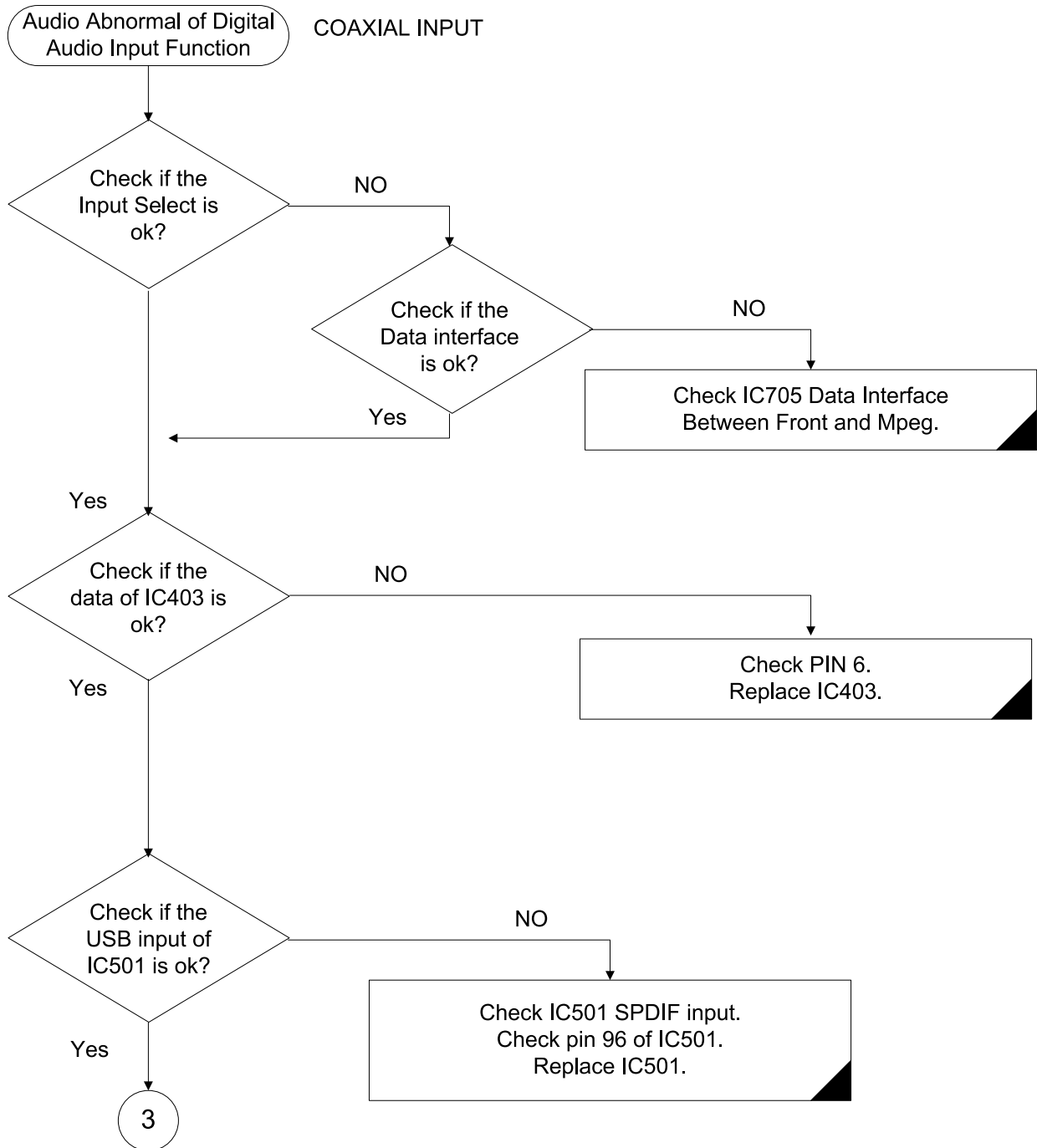
Trouble Shooting Guide

• Audio Abnormal



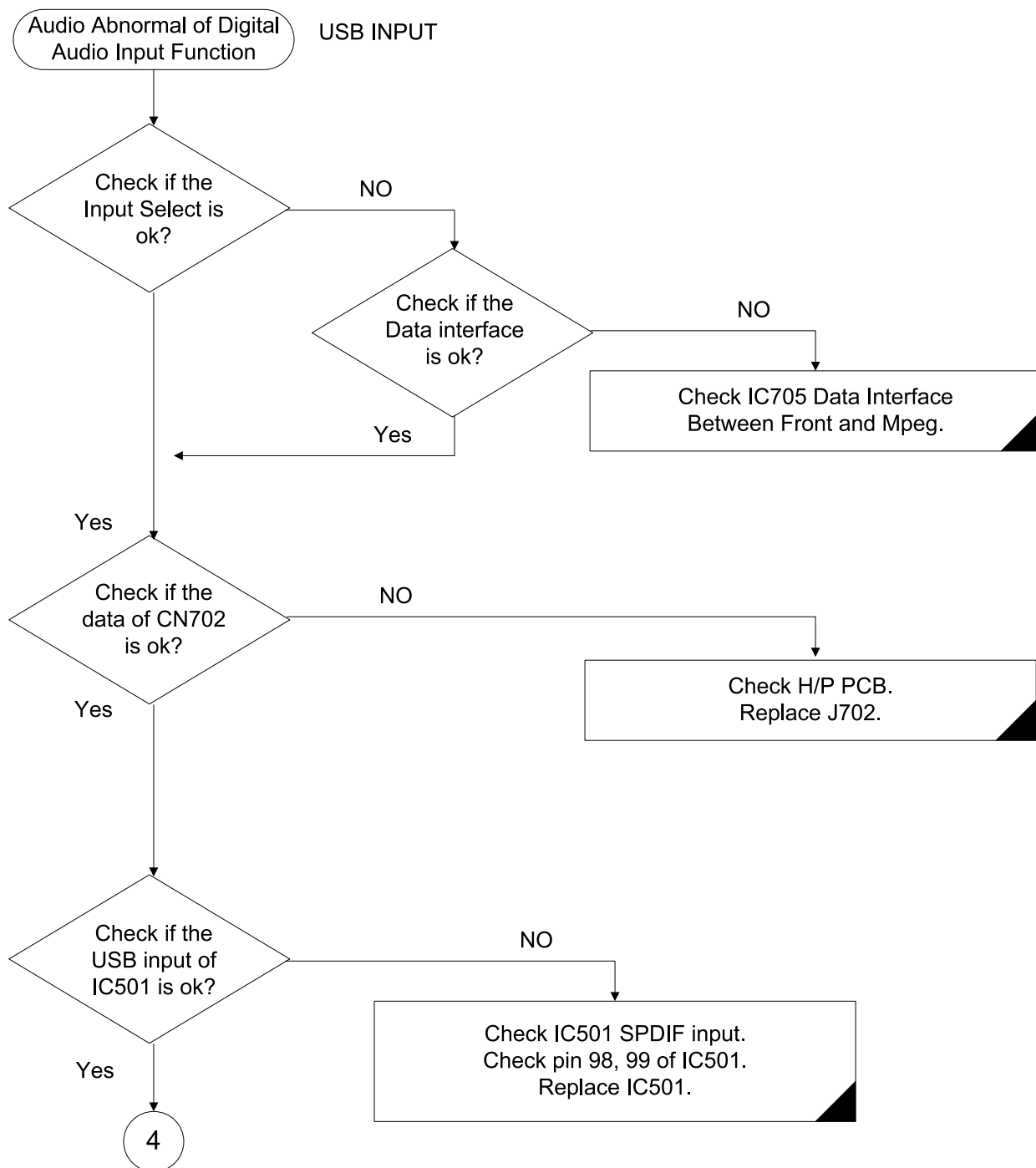
Trouble Shooting Guide

• Audio Abnormal



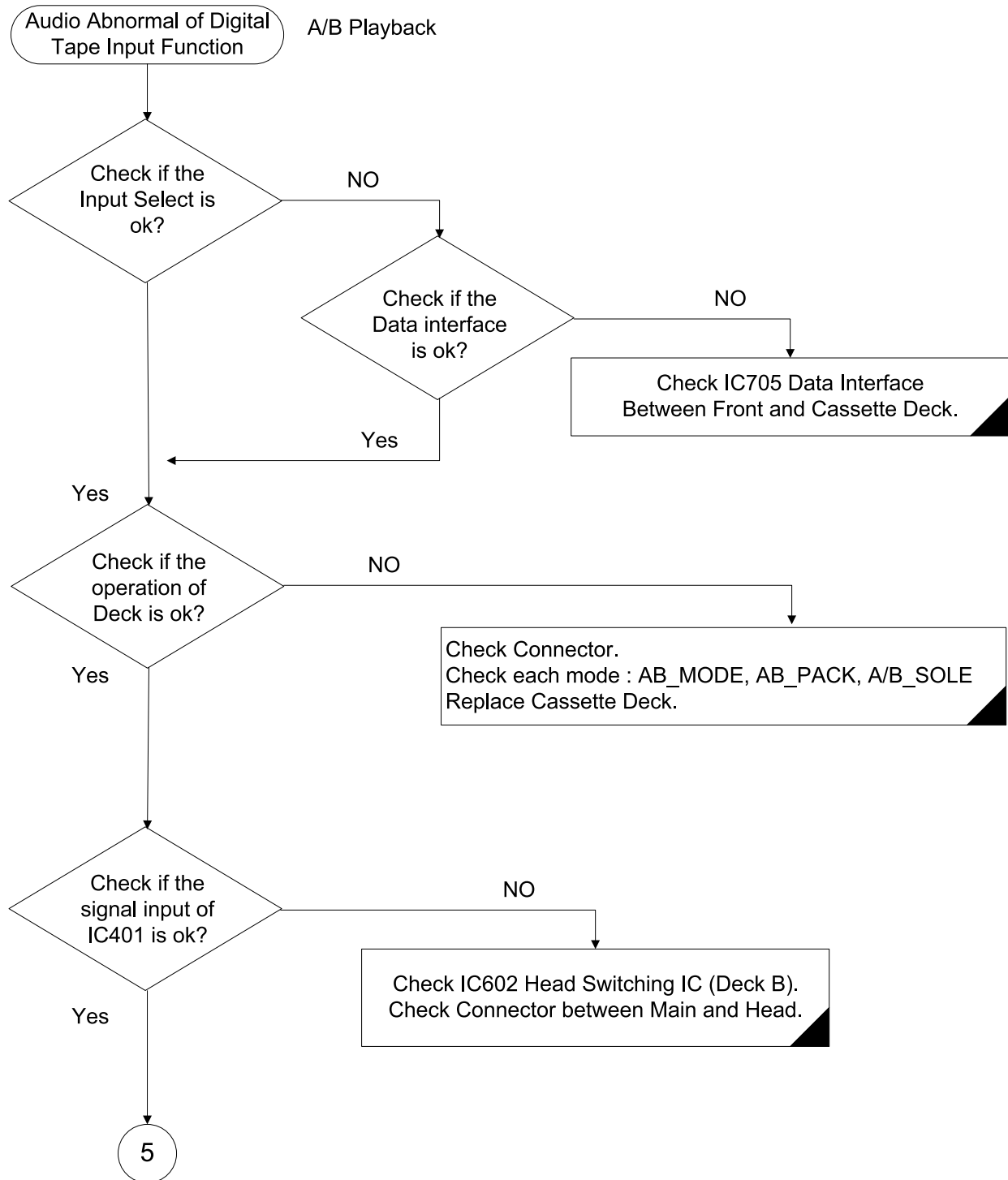
Trouble Shooting Guide

• Audio Abnormal



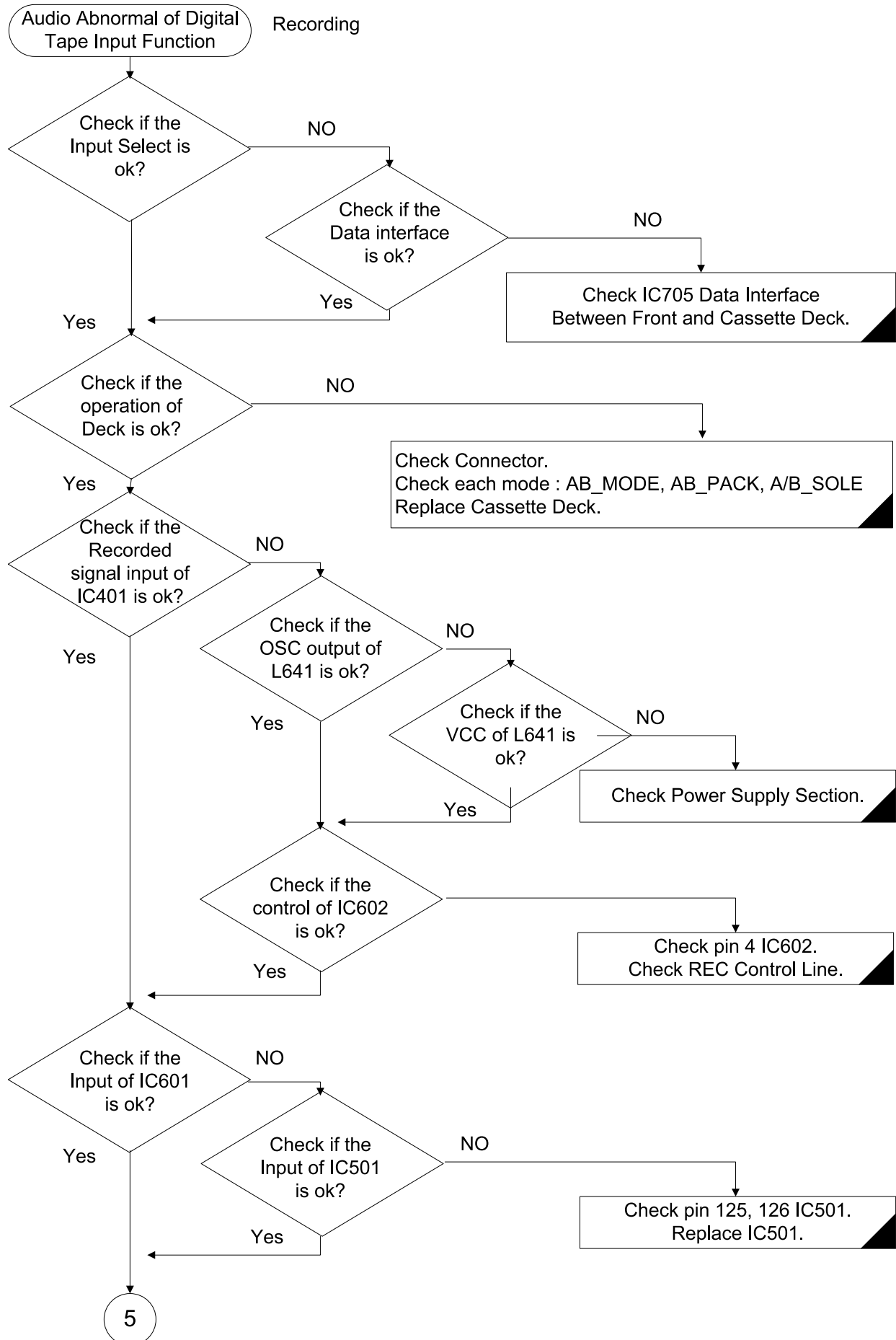
Trouble Shooting Guide

• Audio Abnormal



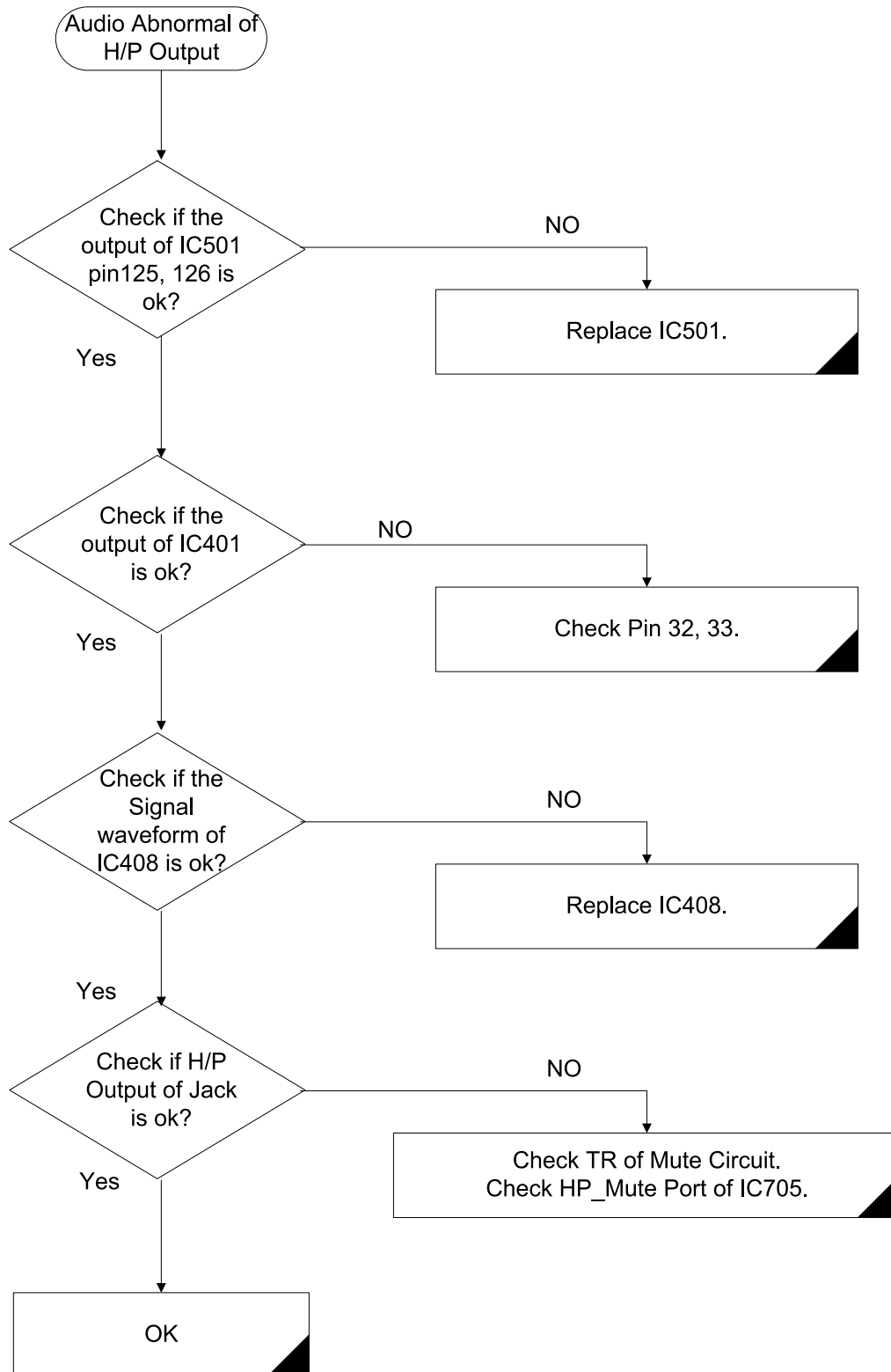
Trouble Shooting Guide

• Audio Abnormal



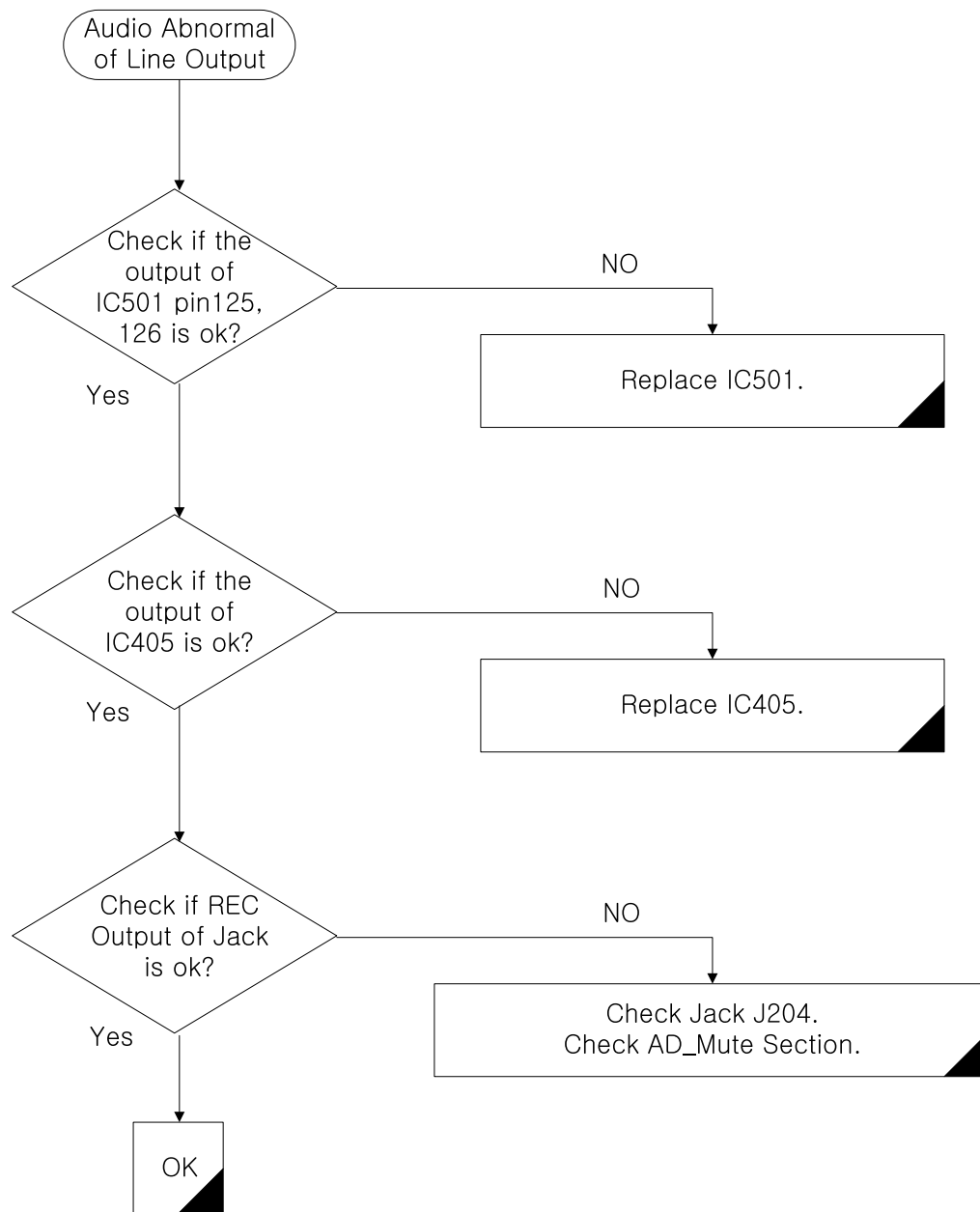
Trouble Shooting Guide

• Audio Line Out Abnormal



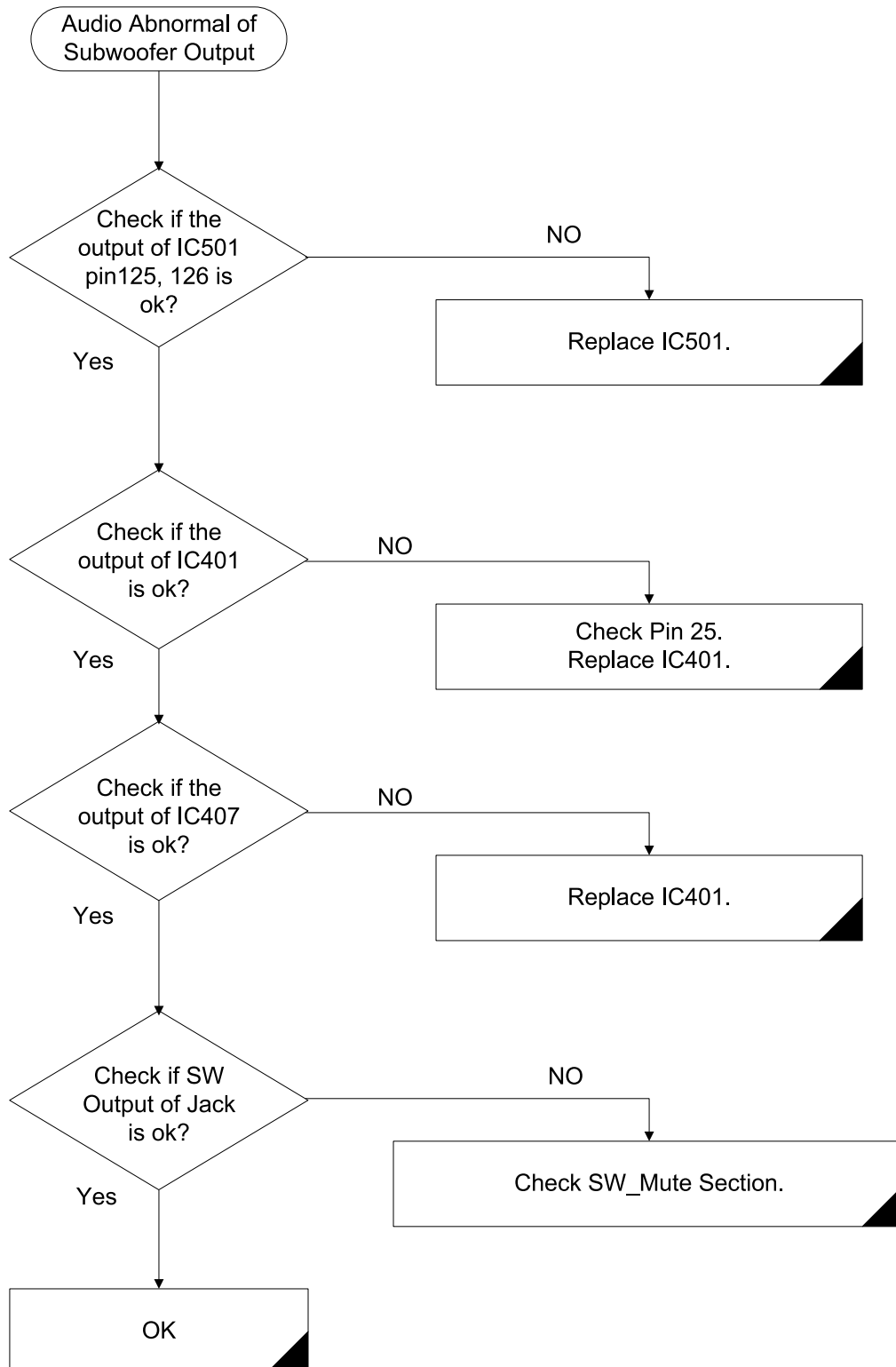
Trouble Shooting Guide

• Audio Line Out Abnormal



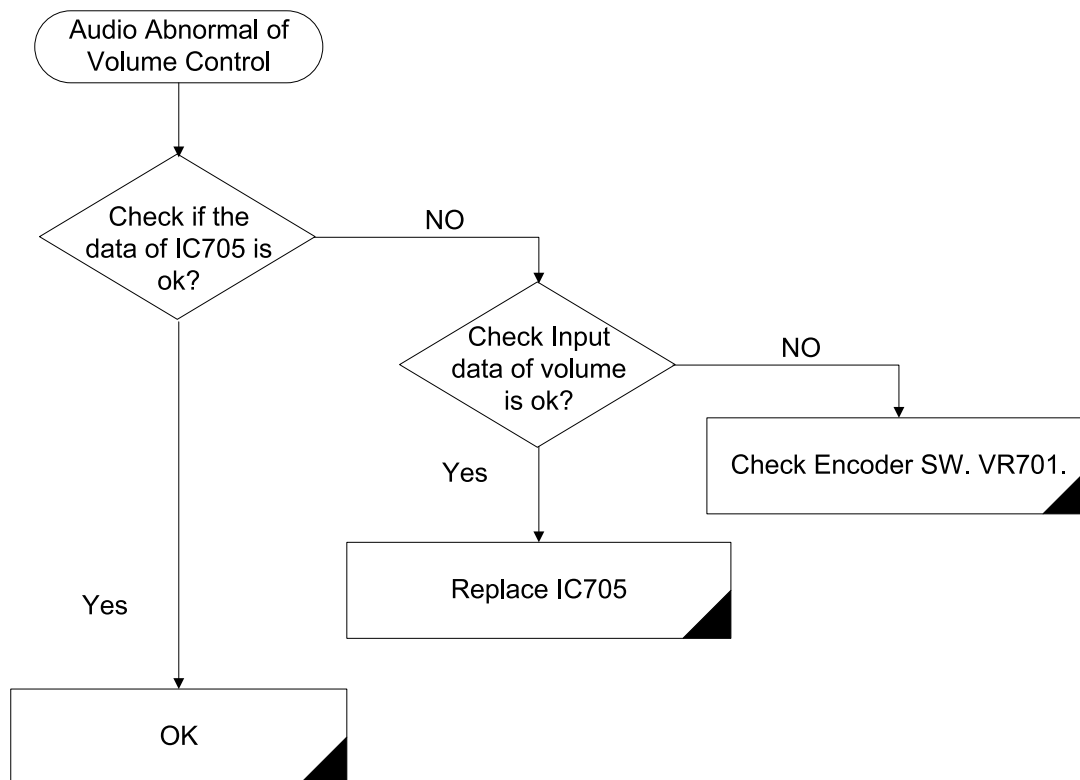
Trouble Shooting Guide

• Audio Line Out Abnormal

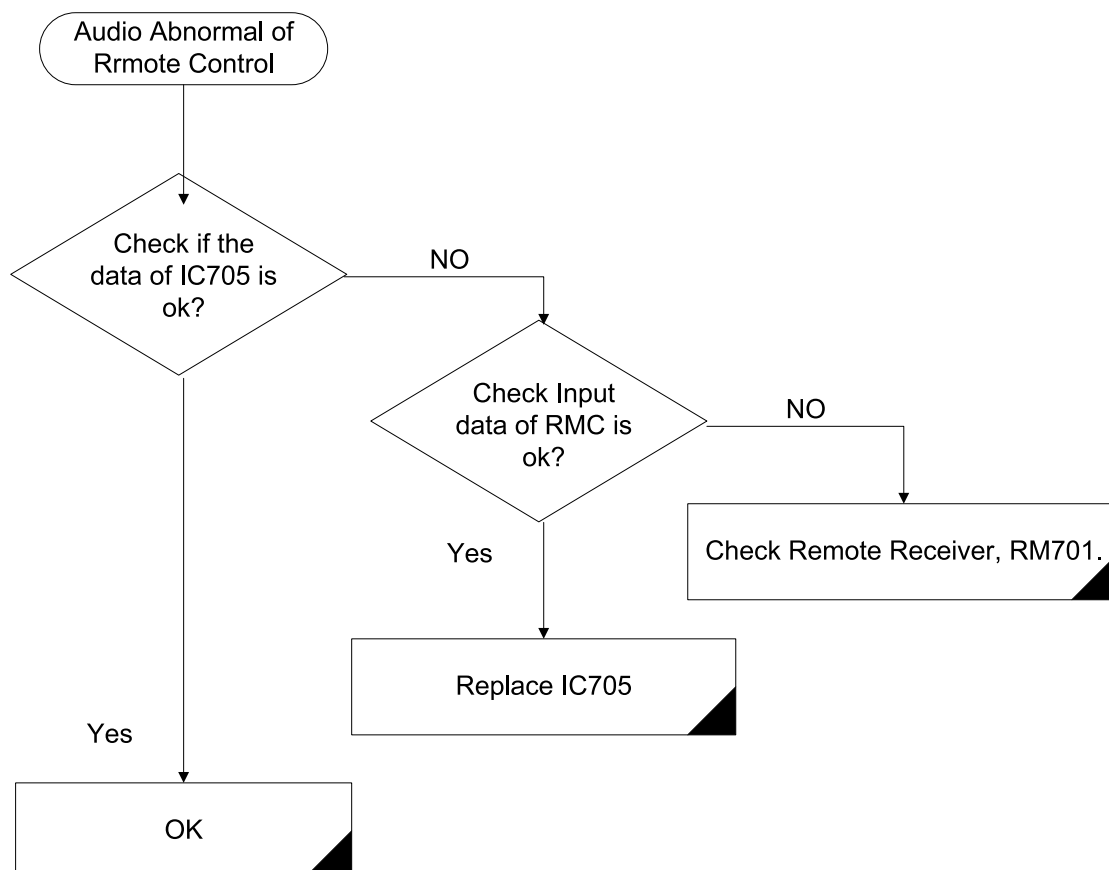


Trouble Shooting Guide

• Audio Control Abnormal

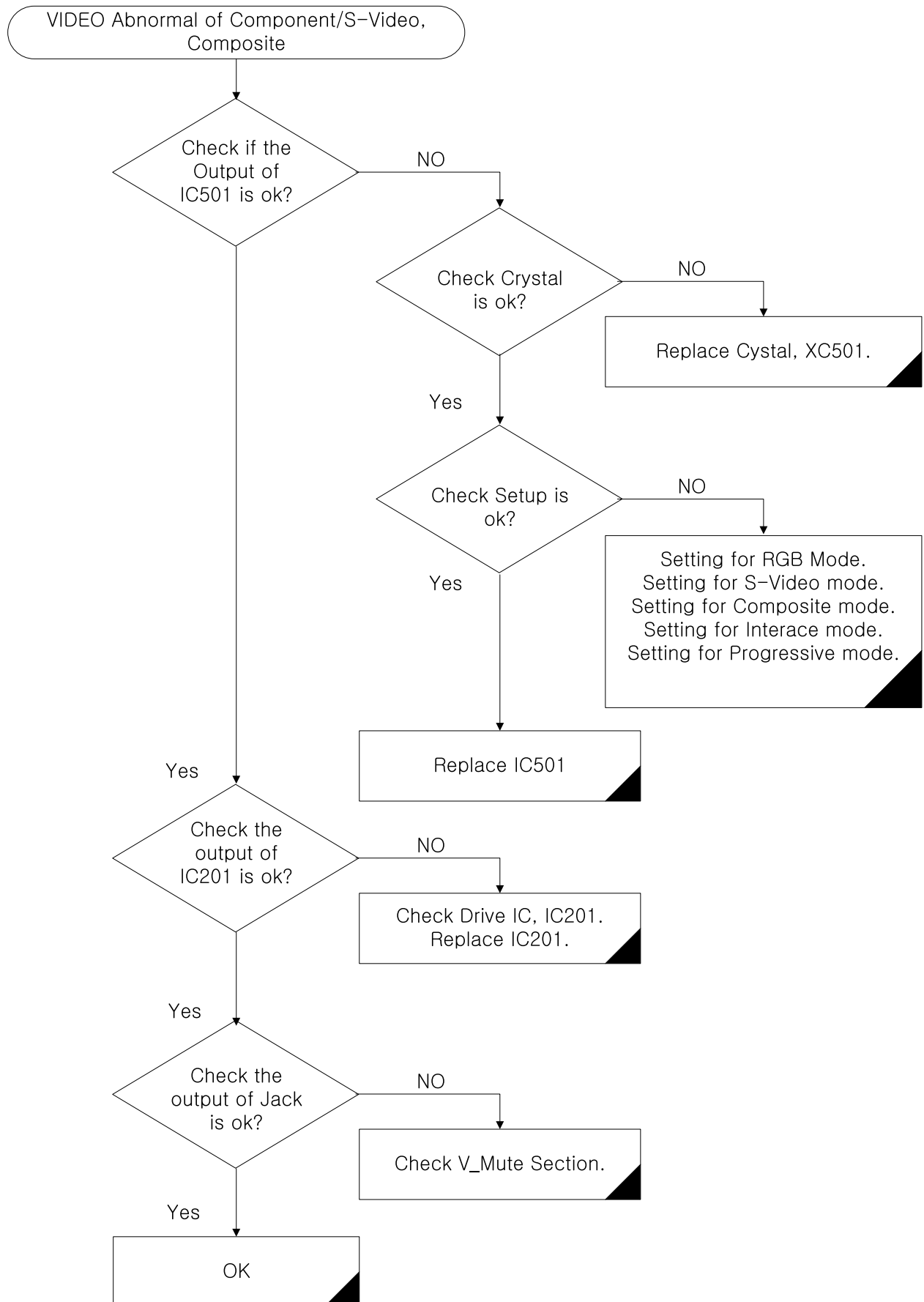


• Audio Control Abnormal



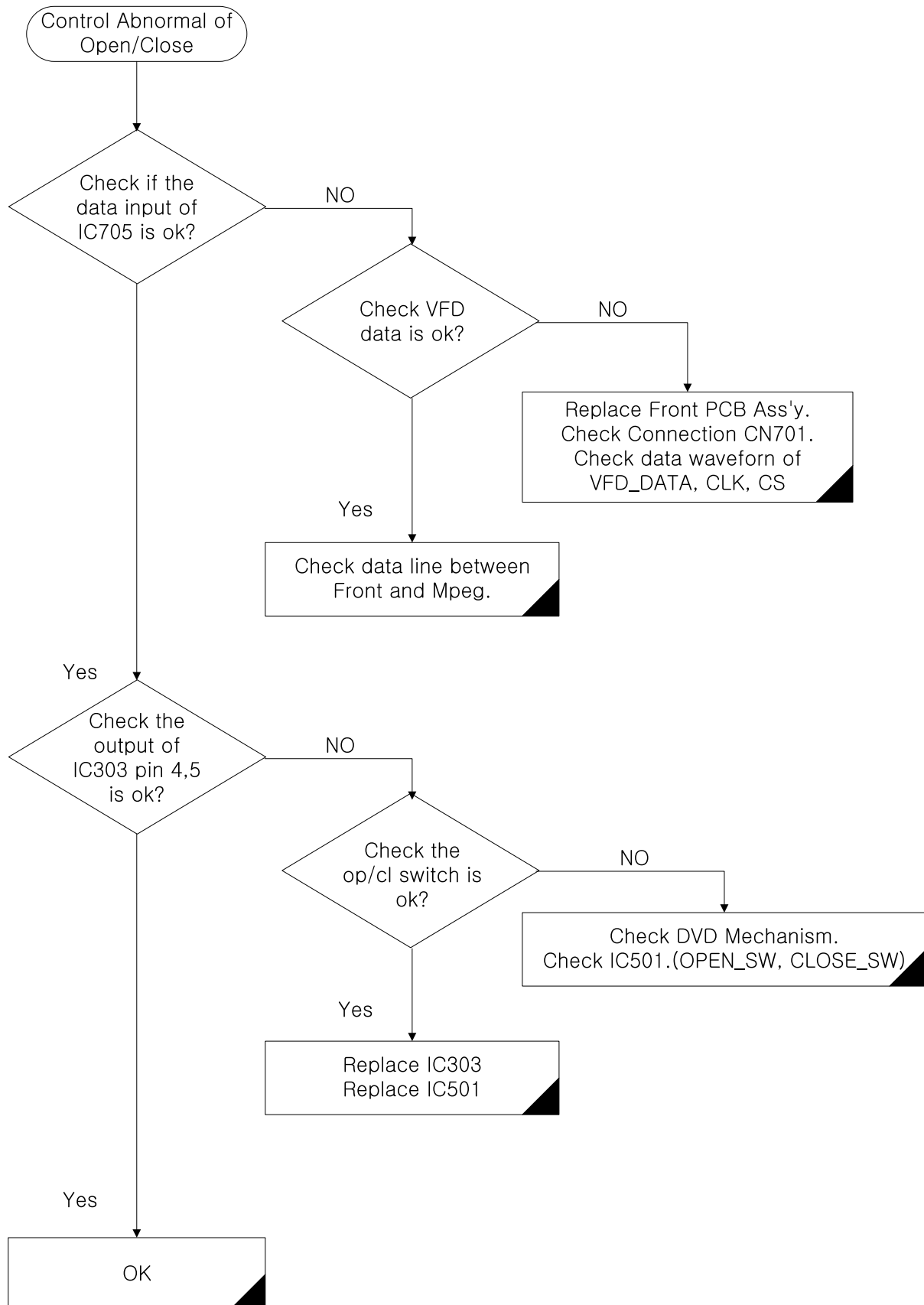
Trouble Shooting Guide

• Video Output Abnormal



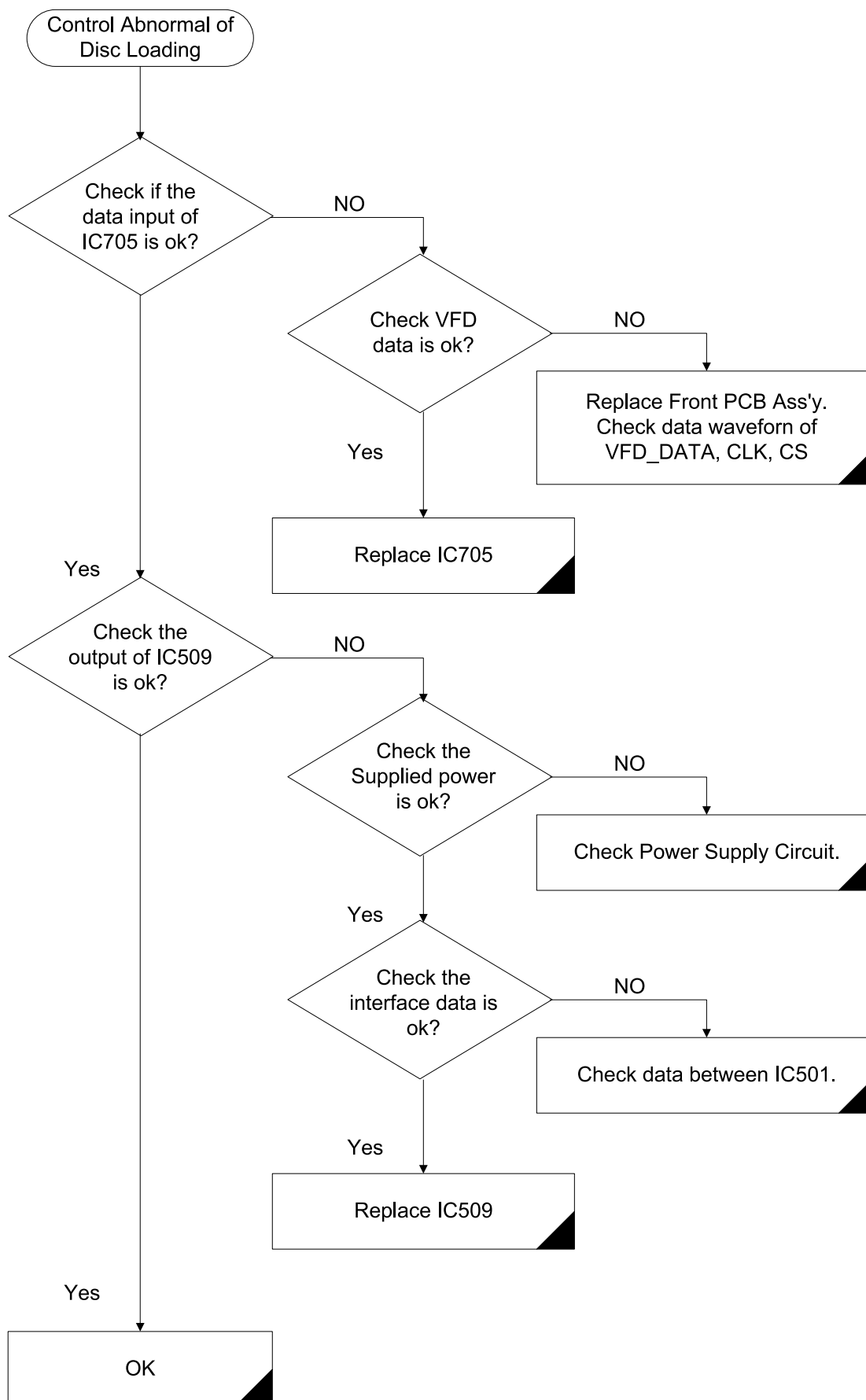
Trouble Shooting Guide

• Mechanical Control Abnormal



Trouble Shooting Guide

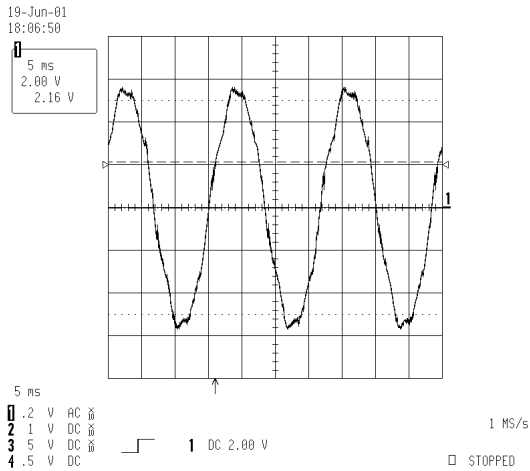
• Mechanical Control Abnormal



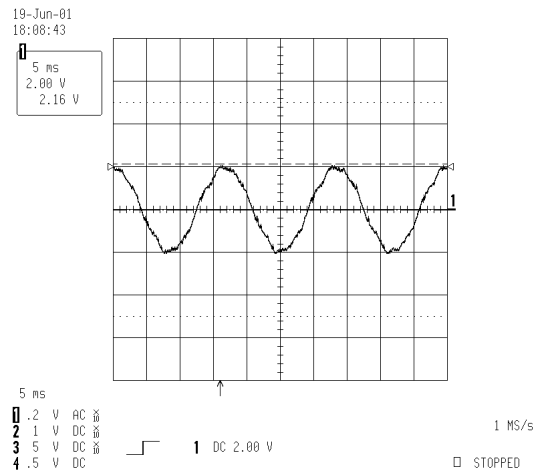
Waveforms of Major Check Method

※ Test Point : DVD Test Disc “MDVD-W111 TRACK2 Color Bar”

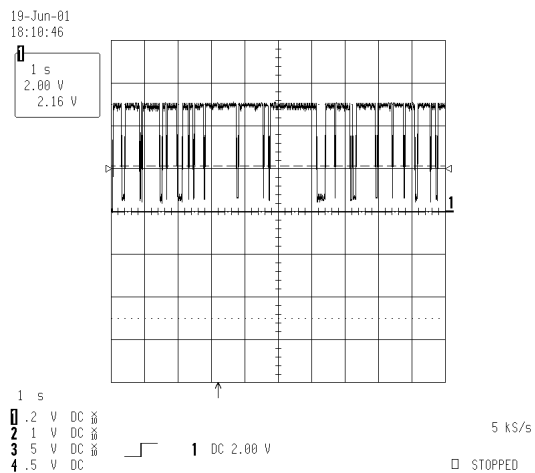
● Audio Out Signal Waveform



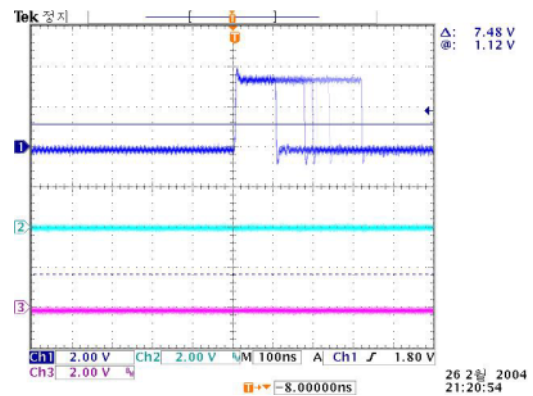
● DAC Output Signal Waveform



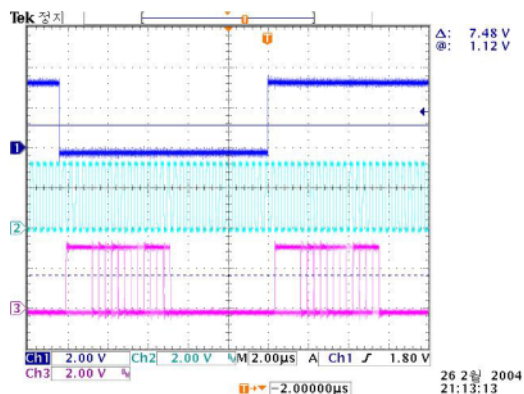
● Optical Output Audio Data Signal waveform



● PWM Output Waveform During Normal Play



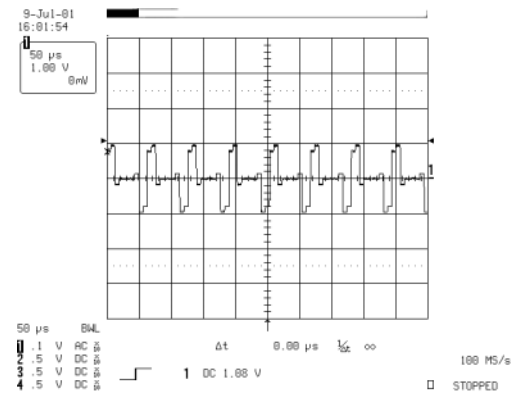
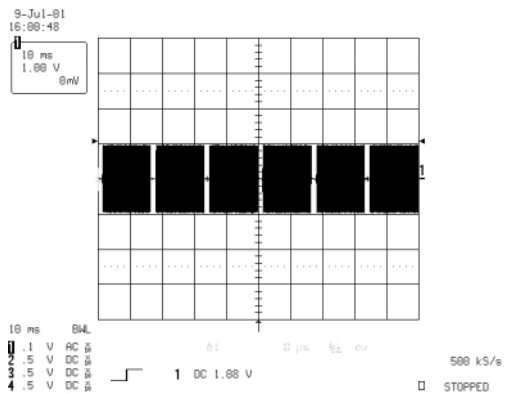
● Serial Data Output Waveform During Normal Play



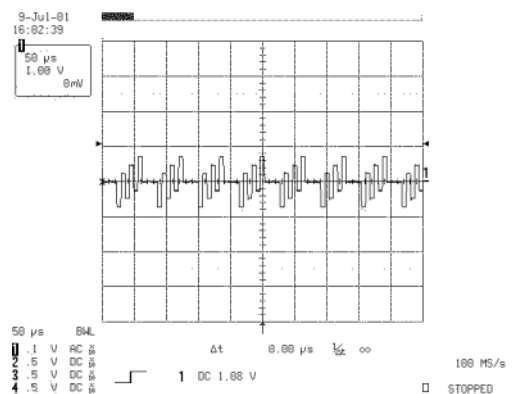
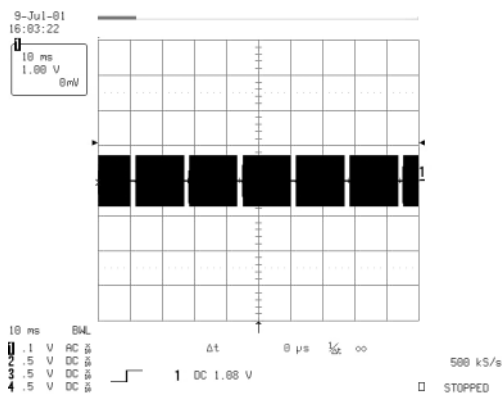
Waveforms of Major Check Method

※ Test Point : DVD Test Disc “MDVD-W111 TRACK2 Color Bar”

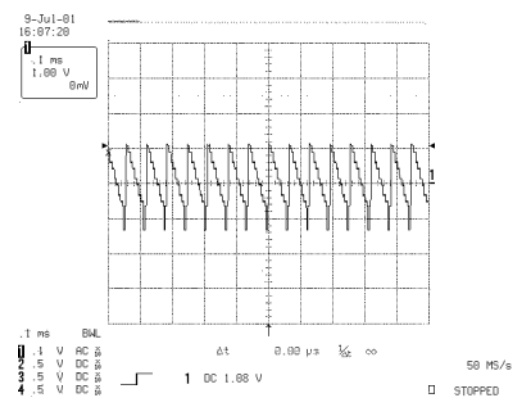
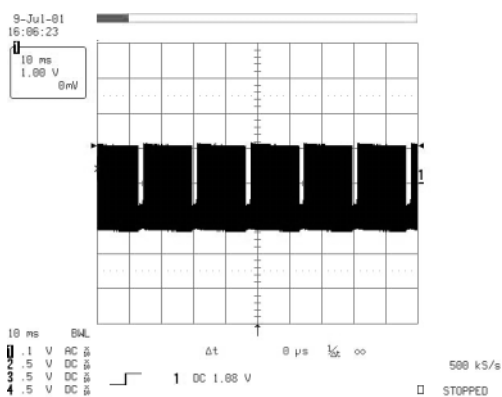
● Pr Output Data Waveform in Component Output



● Pb Output Data Waveform in Component Output



● Y Output Data Waveform in Component Output

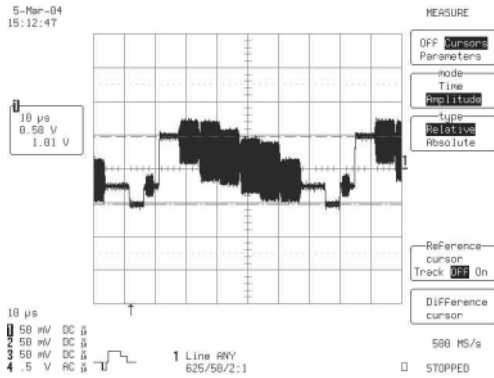


Waveforms of Major Check Method

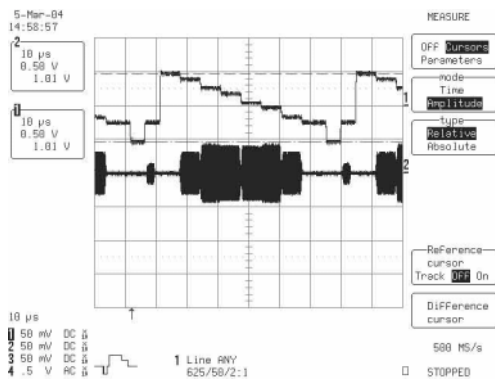
- MPEG

※ Test Point : DVD Test Disc “MDVD-W111 TRACK2 Color Bar”

- Composite Output Data Waveform in Monitor Output

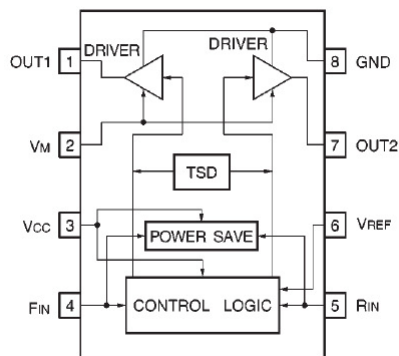


- S-Video Output Data Waveform

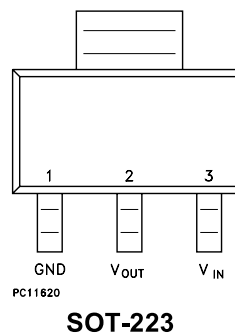


Internal Block Diagram of ICs

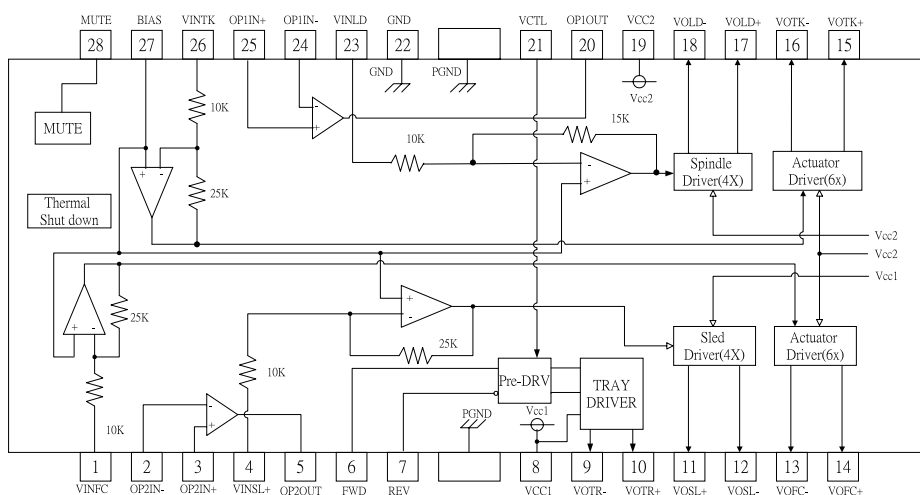
• BA6287F



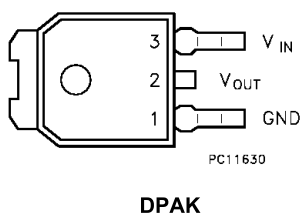
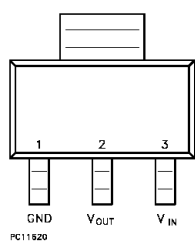
• LD1117DT



• AM5888



• LD1117A

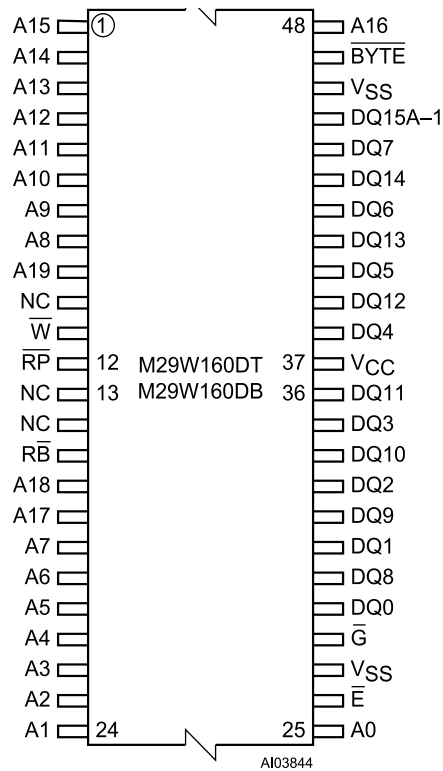
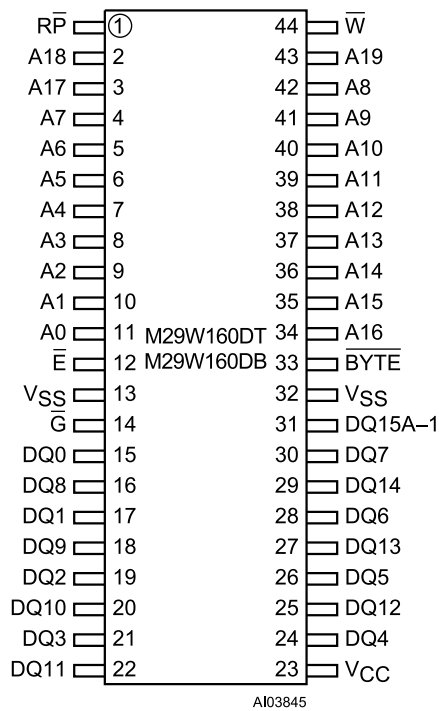


SOT-223

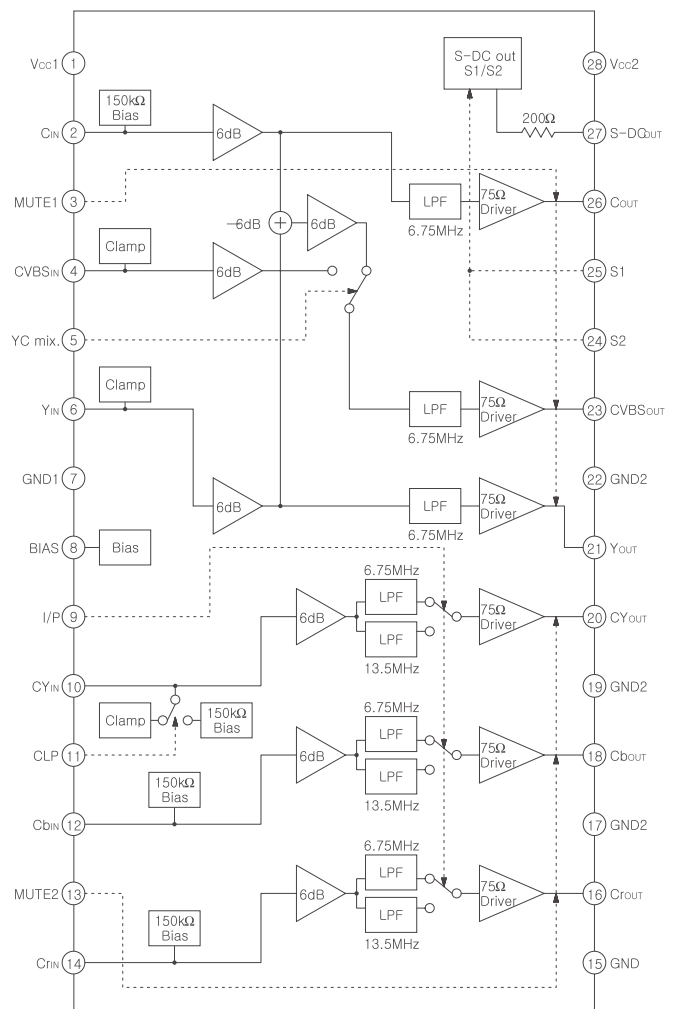
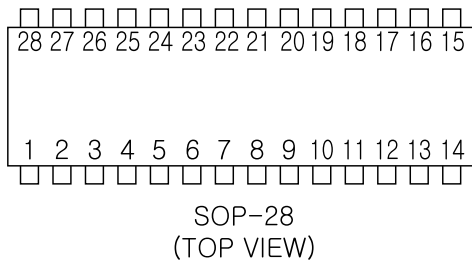
DPAK

Internal Block Diagram of ICs

• M29W160DB



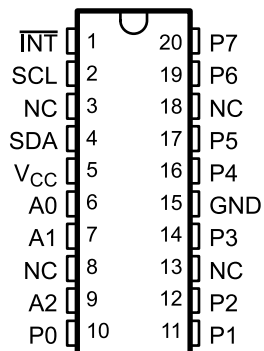
• MM1623



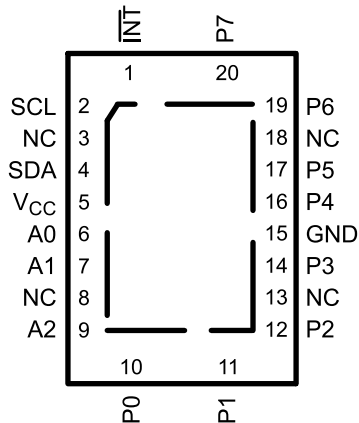
Internal Block Diagram of ICs

• PCF8574

DGV OR PW PACKAGE
(TOP VIEW)

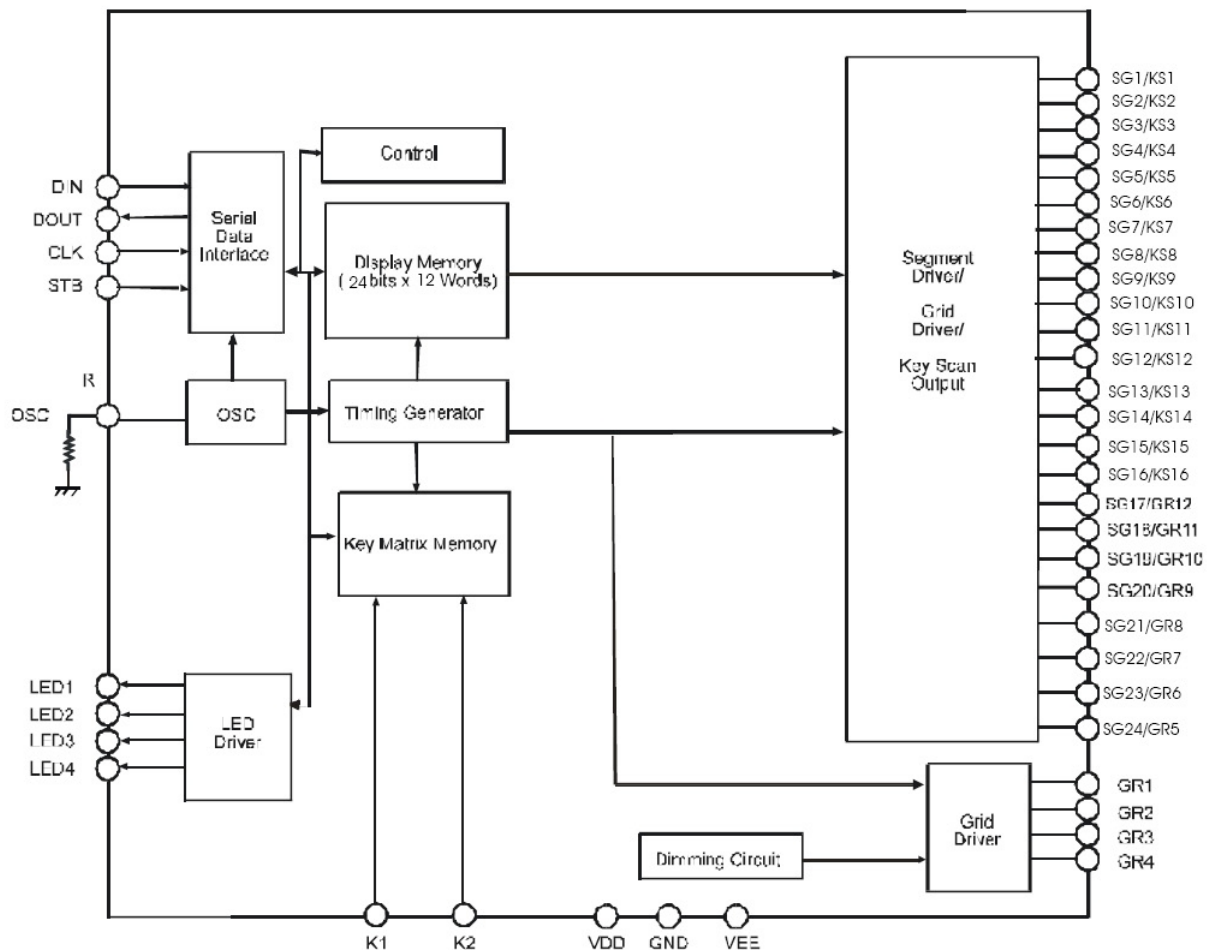


NC – No internal connection



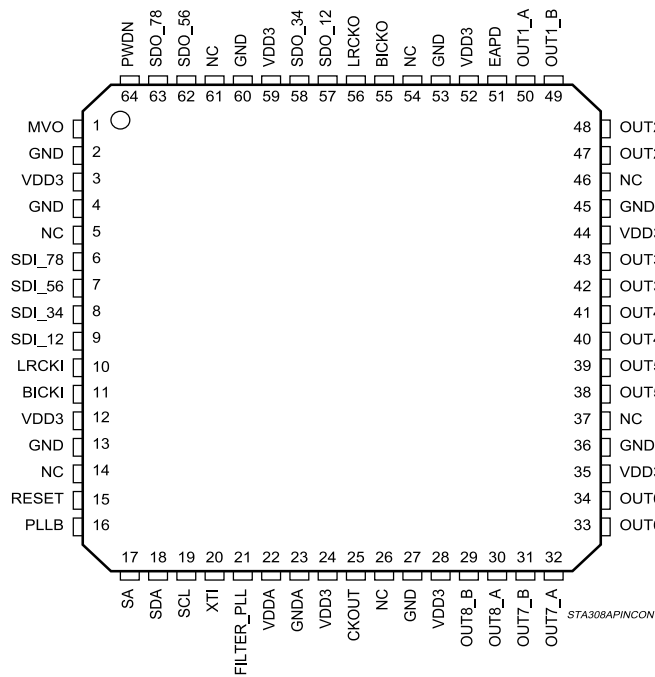
NC – No internal connection

• PT6315

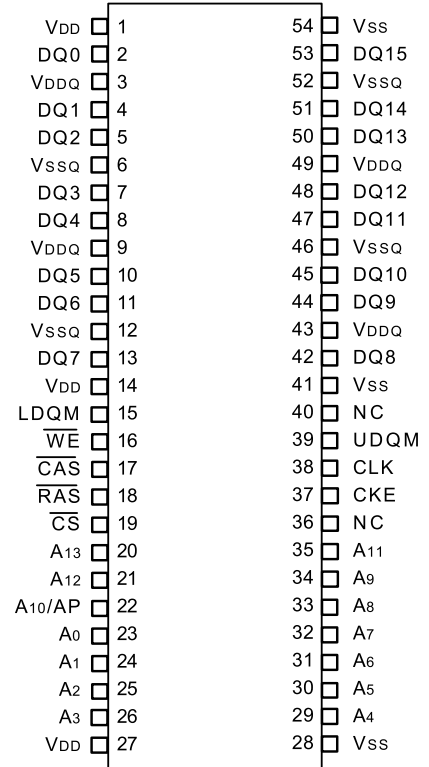


Internal Block Diagram of ICs

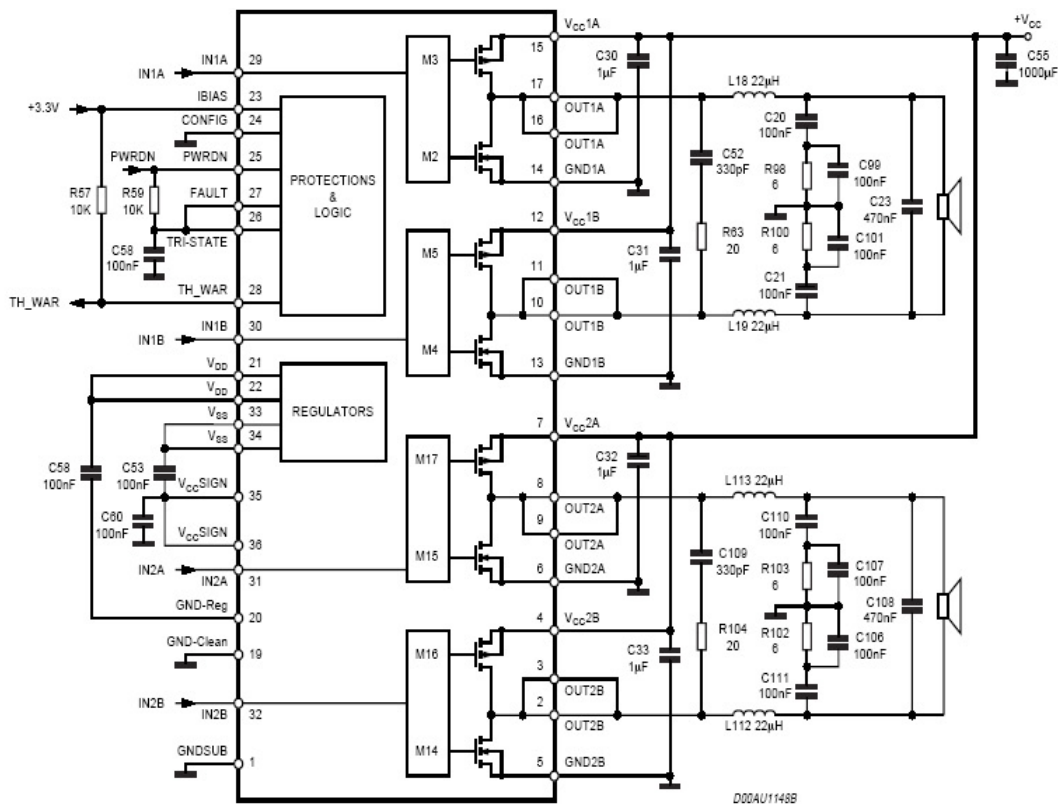
• STA308A



• M12L64164A



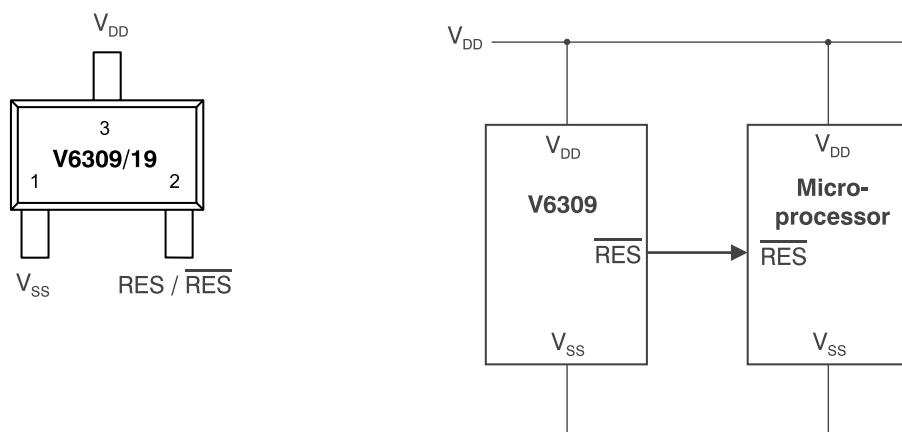
• STA505



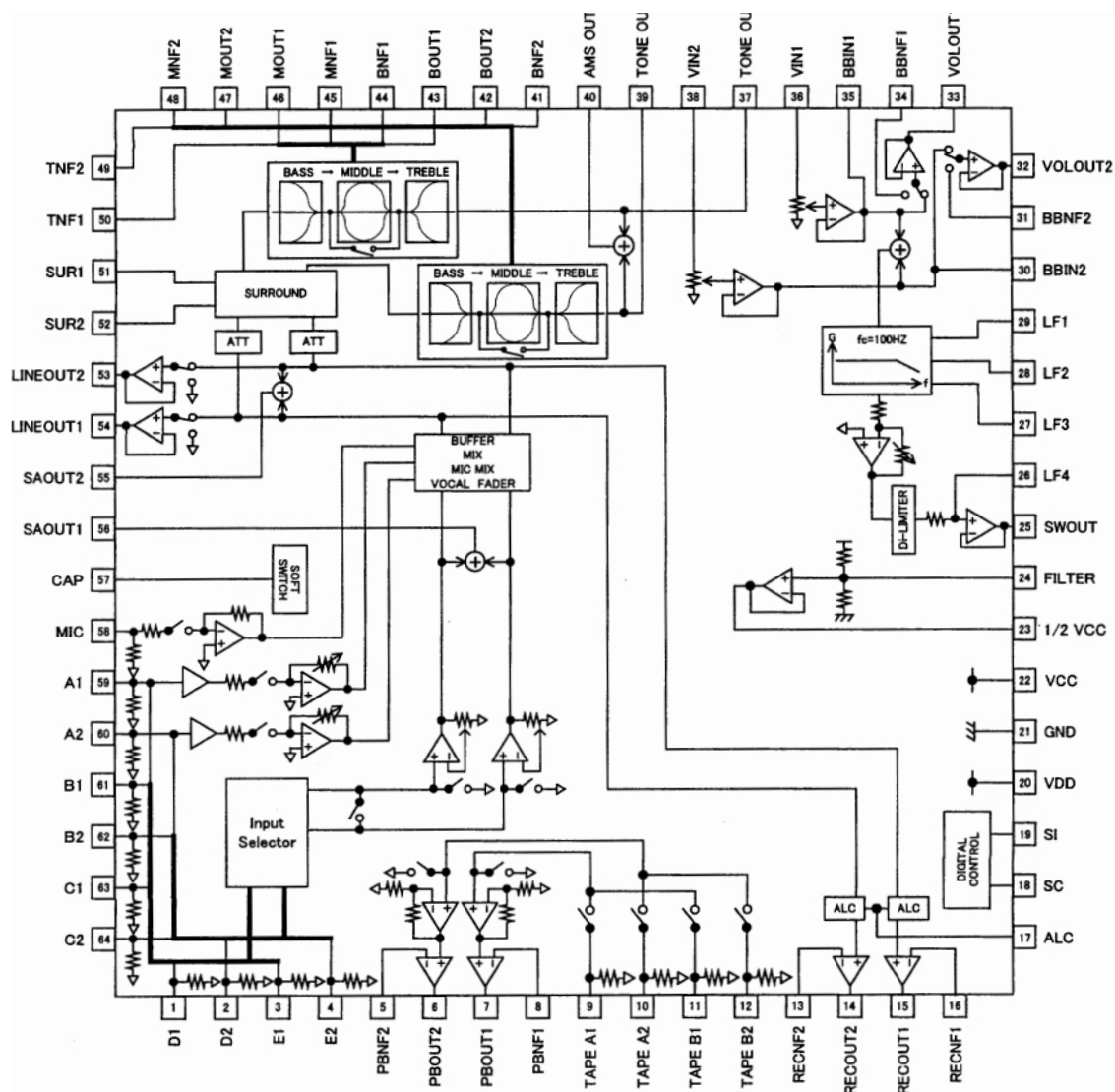
D00AU11468

Internal Block Diagram of ICs

• V6309



• BD3401KS2(Bi)





APPENDIX - ELECTRICAL PART LIST

● XD-615/ 616/618/ 625/ 626/628

ASS'Y	LOC	PART-CODE	PART-NAME	PART-DESC	Q'TY
MAIN	10000	9CDC080100	PCB MAIN ASS'Y	XD-610 MAIN ASS'Y	
MAIN	B400	9CD6502500	PCB MAIN	231.5X194X1.6T	1
MAIN	CF251 CF252 CF253 CF254 CF255 CF256 CF265 CF266 CF267 CF268 CF269 CF270	5P1H101MF-	LC FILTER	CFI 06B 1H 101MF	1
MAIN	CN403	9728837000	CONN AS	UL1007 #24 4P P2.0 250MM Board-in	1
MAIN	CN406	9728837100	CONN AS	UL1007 #26 8P P2.0 250MM Board-in	1
MAIN	CN601	9738835000	CONN AS	UL 2851 #28X2C0 3P 260MM	1
MAIN	CN602	9728838700	CONN AS	UL2851,1533 #28X4C0 6P+7P 270MM	1
MAIN	CN902	9728836700	CONN AS	UL1007 #24 8P P2.0 150MM Board-in	1
MAIN	CW402	9CD6268700	WAFER	52806-2210	1
MAIN	CW404	9CD6268500	WAFER	52806-2010	1
MAIN	CW405	9728836900	CONN AS	UL1007 #26 7P P2.0 270MM Shield	1
MAIN	CW601	2503-WS-03	WAFER	3P 2.5MM	1
MAIN	CW602	2503-WS-07	WAFER	7P 2.5MM	1
MAIN	HD401 HD402 HD603 HD604	DZDS160---	DIODE SW CHIP	KDS160 (KDS511)	1
MAIN	HD403	D1SR156---	DIODE RECTIFIER	1SR156-400 TE25	1
MAIN	HQ251 HQ254	TZRA102S--	TR CHIP	KRA102S	1
MAIN	HQ252 HQ253 HQ255	TZRC107S--	TR CHIP	KRC107S	1
MAIN	HQ404 HQ407	TZRA107S--	TR CHIP	KRA107S	1
MAIN	HQ405 HQ406 HQ409 HQ605 HQ644	TZRC231S--	TR CHIP	KRC231S	1
MAIN	HQ408	TZTD1304--	TR CHIP	KTD1304	1
MAIN	HQ601 HQ602 HQ647 HQ648 HQ649 HQ650	TZTC3875S-	TR CHIP	KTC3875Y	1
MAIN	HQ604 HQ606	TZTD1304--	TR CHIP	KTD1304	1
MAIN	HQ645	T2SA2071--	TR CHIP	2SA2071	1
MAIN	HQ646	T2SC5824--	TR CHIP	2SC5824	1
MAIN	IC251	1MM1623---	IC	MM1623	1
MAIN	IC401	1BD3401KS2	IC	BD3401KS2	1
MAIN	IC402	1PCF8574AP	IC	PCF8574APWR	1
MAIN	IC403	174HCU04PW	IC	SN74HCU04PWR TSSOP	1
MAIN	IC405 IC406 IC407 IC409 IC601	1NJM4558M-	IC	NJM4558M	1
MAIN	IC408	1BA4560F--	IC	BA4560F	1
MAIN	IC410	1LD1117S33	IC	LD1117AS33TR SOT-223	1
MAIN	IC602	1BA3126N--	IC	BA3126N	1
MAIN	J251	9736329600	JACK	JACK_RGB_RCA305	1
MAIN	J252	9736328100	JACK S-VIDEO	R102-D04KA-07	1
MAIN	J254	9736329500	JACK	JACK_RCA-619A-01-01	1
MAIN	L601 L602 L631 L632	5LC333K804	COIL CHOKE	33MH K	1
MAIN	L641	5L0503K643	COIL BIAS OSC	SM-10F 5.04MH	1
MAIN	TU001	9737653301	TUNER MODULE	KST-ML000MV0-J69L(USA)	1
MIC	11000	9CDC079800	PCB MIC ASS'Y	XD-610 MIC ASS'Y	
MIC	B200	9CD6501800	PCB MIC	139X247X1.6T(2'3)	1
MIC	CW405	2001-WS-07	WAFER	7P 2.0MM	1
MIC	HD201	DZDS160---	DIODE SW CHIP	KDS160 (KDS511)	1
MIC	HQ201 HQ202	TZTC3875S-	TR CHIP	KTC3875Y	1
MIC	IC201 IC203	1NJM4558M-	IC	NJM4558M	1
MIC	J201 J202	9736329400	JACK MIC	PJ-603A	1
MIC	VR201	5V1503728B	VR ROTARY	RK09K1110AV8	1
MPEG	12000	9CDC080000	PCB MPEG ASS'Y	XD-610 MPEG ASS'Y	
MPEG	B500	9CD6502100	PCB MPEG	160X130X1.6T	1
MPEG	CN301	9728838000	CONN FFC	FFC P=0.5X24PX195MM D	1
MPEG	CW301	9CD6273600	WAFER	JSYO.5S-5S-24PWB	1
MPEG	CW302	2001-WS-12	WAFER	12P 2.0MM	1
MPEG	CW303	2001-WS-06	WAFER	6P 2.0MM	1
MPEG	CW403	2001-WS-04	WAFER	4P 2.0MM	1
MPEG	CW406	2001-WS-08	WAFER	8P 2.0MM	1
MPEG	CW501	9CD6268700	WAFER	52806-2210	1
MPEG	CW502	9CD6267800	WAFER	52806-1310	1
MPEG	HA501 HA510	HRTT8330J	R ARRAY CHIP	1/16 33X4 OHM 1608	1
MPEG	HA502 HA503 HA504 HA505 HA506 HA507 HA508 HA509	HRTT8100J	R ARRAY CHIP	1/16 10X4 OHM 1608	1
MPEG	HD302 HD303 HD304 HD305 HD503	DZDS160---	DIODE SW CHIP	KDS160 (KDS511)	1
MPEG	HD501 HD502	D1SR156---	DIODE RECTIFIER	1SR156-400 TE25	1
MPEG	HL304 HL305	5LF100K859	CHIP COIL	10UH 2012	1
MPEG	HL501 HL502 HL503 HL504 HL505 HL509 HL510 HL511 HL512 HL513 HL515 HL516 HL517 HL518 HL519	5LX600K841	CHIP BEAD	FB 60 OHM 100MHZ 2012	1
MPEG	HQ301 HQ302	T2SB1132T1	TR CHIP	2SB1132	1
MPEG	HQ303	TZTC3875S-	TR CHIP	KTC3875Y	1
MPEG	HQ304 HQ305	T2SK3018--	FET CHIP	2SK3018	1
MPEG	HQ306	TZRC111S--	TR CHIP	KRC111S	1
MPEG	IC303	1BA6287F--	IC	BA6287F DRIVER	1
MPEG	IC501	1ES8380FCA	IC	ES8380 MPEG DECODER	1
MPEG	IC502	1L128168AE	IC	M12L128168A SDRM(128M) (ESMT)	1
MPEG	IC503	1M29W160EB	IC	M29W160DB FLASH(16M)	1
MPEG	IC504	1M24C04MN-	IC	M24C04MN SOP	1
MPEG	IC505	1LD1117A33	IC	LD1117ADT33 DPAK	1
MPEG	IC506	1LD1117A-R	IC	LD1117ADT-R DPAK	1
MPEG	IC508	1V6309MSP3	IC	RESET IC, V6309 MSP3B	1
MPEG	IC509	1AM5888S--	IC	AM5888S Motor Driver	1
MPEG	XC501	5XJ27M000E	X-TAL	27MHZ HC-49/US (RADIAL/SMD)	1

APPENDIX - ELECTRICAL PART LIST

ASS'Y	LOC	PART-CODE	PART-NAME	PART-DESC	Q'TY
FRONT	13000	9CDC080500	PCB FRONT ASS'Y	XD-620 FRONT ASS'Y	
FRONT	B700	9CD6505600	PCB FRONT	247X163X1.6T	1
FRONT	CN702	9728837600	CONN FFC	FFC P=1.0X13PX240MM C	1
FRONT	CN703	9728837400	CONN FFC	FFC P=1.0X20PX220MM R	1
FRONT	CN704	9728837700	CONN FFC	FFC P=1.25X16PX120MM D	1
FRONT	CN903	9728836600	CONN AS	UL1007 #26 11P P2.0 300MM Board-in	1
FRONT	CW702	9CD6267800	WAFER	52806-1310	1
FRONT	CW703	9CD6268500	WAFER	52806-2010	1
FRONT	CW704	9CD6261600	WAFER	52492-1620	1
FRONT	FD701	D25-1121FN	VFD	VFD25-1121FN	1
FRONT	HD702 HD703 HD704 HD705	DZDS160---	DIODE SW CHIP	KDS160 (KDS511)	1
FRONT	HD706	D1SR156---	DIODE RECTIFIER	1SR156-400 TE25	1
FRONT	HQ701 HQ703	TZTD1304--	TR CHIP	KTD1304	1
FRONT	HQ702	TZRA111S--	TR CHIP	KRA111S	1
FRONT	HQ704	TZRA107S--	TR CHIP	KRA107S	1
FRONT	HQ705 HQ706 HQ707	T2SA2071--	TR CHIP	2SA2071	1
FRONT	HQ708 HQ709 HQ710	TZRC107S--	TR CHIP	KRC107S	1
FRONT	IC701	1PT6315---	IC	PT6315	1
FRONT	IC702	1M24C04MN-	IC	M24C04MN S0P	1
FRONT	IC703	1HK381B-DW	IC	HK381BT-DW	1
FRONT	IC704	1V6309MSP3	IC	RESET IC, V6309 MSP3B	1
FRONT	IC705	13776XD610	IC	M37762 BASIC Version	1
FRONT	IC706	174HC244PW	IC	SN74HC244PW	1
FRONT	LD701	DMT463SRTT	LED	MT-463SRT/W60/TR1	1
FRONT	LD702 LD703 LD704 LD705	DMT-463UBD	LED	MT-463UBD/W60	1
FRONT	RV701	RV1417222-	R SEMI FIXED	1/10 2.2K OHM B V6EK-PV1S	1
FRONT	VR701 VR702	5SH1224375	SW ENCODER	RE0123PVB25FINB 1-2-24 PCE	1
FRONT	XC701	5XJ16R000C	X-TAL	JWT-16.000-US	1
FRONT	10	9CD4210000	CUSHION VFD	EVA T4.5	2

H/P		9CDC080600	PCB HP ASS'Y	XD-620 HP ASS'Y	
H/P	B701	9CD6501701	PCB H/P	FR-1, HP XD-620	0
H/P	CF701 CF702	5P1H101MF-	LC FILTER	CFI 06B 1H 101MF	1
H/P	CN701	9728837200	CONN AS	UL1007 #26 8P P2.0 70MM Board-in	1
H/P	HL701	5LX600K841	CHIP BEAD	FB 60 OHM 100MHZ 2012	1
H/P	J701	9736325300	JACK H/P	HTJ-035-18A (H/P)	1
H/P	J702	9736329300	JACK USB	USAF-046N-WP-01	1

SMPS		9CDC080200	PCB SMPS ASS'Y	XD-610 SMPS ASS'Y	
SMPS	B900	9CD6502200	PCB SMPS	139X197X1.6T	1
SMPS	AC901	9736915700	CORD AC	KE-112 H03VVH2-F 5A 250V 2.18M	1
SMPS	CC901 CC911	CCXB3A102K	C CERA	1KV B 1000PF K (FORMING)	1
SMPS	CC902 CC903 CC906 CC908 CC909 CC910 CC912 CC914 CC916	CCFF1H104Z	C CERA	HIKF 50V 0.1MF Z (FORMING)	1
SMPS	CC904	CCXB3A103K	C CERA	1KV B 0.01MF K (FORMING)	1
SMPS	CC905	CL1GB1102K	C CERA (Y-CAP)	250V 102PF Y-1	1
SMPS	CC907 CC913 CC915	CCXB3A471K	C CERA	1KV B 470PF K (FORMING)	1
SMPS	CC917 CC918	CL1GB1101K	C CERA (Y-CAP)	250V 100PF Y-1	1
SMPS	CC919	CL1GB1102K	C CERA (Y-CAP)	250V 102PF Y-1	1
SMPS	CE904	CEXN4D331P	C ELECTRO	400V 300UF LHS	1
SMPS	CE906 CE907	CEXD1H331B	C ELECTRO	50V RL(LK) 330MF (10X20)	1
SMPS	CM901	CMXK2J333J	C MYLAR	MC 630V 0.033MF J	1
SMPS	CW901	2001-WS-06	WAFER	6P 2.0MM	1
SMPS	CW902	2001-WS-08	WAFER	8P 2.0MM	1
SMPS	CW903	2001-WS-11	WAFER	11P 2.0MM	1
SMPS	CW981	9CD6290900	WAFER	3.96 2P VH-02A(White)	1
SMPS	CX901	CL1BB3334K	C CERA (X-CAP)	275V 334(X-CAP) 436D	1
SMPS	D901 D902 D906 D907 D909 D910 D912 D913 D920 D925 D940	DHER108G--	DIODE(UFR)	HER108G(UF4007)	1
SMPS	D903	DSR106----	DIODE(Schottky)	SR106	1
SMPS	D904	DTS10P06G	DIODE(Bridge)	TS10P06G	1
SMPS	D908	DMBR20150C	DIODE(Schottky)	MBR20150CT	1
SMPS	D914 D915 D916 D917 D918	DSR310----	DIODE(Schottky)	SR310	1
SMPS	D923	DSR106----	DIODE(Schottky)	SR106	1
SMPS	D926	DSR310----	DIODE(Schottky)	SR310	1
SMPS	DZ905	DP6KE200A-	DIODE(TVS)	P6KE200A	1
SMPS	DZ911	DZTZ18B---	DIODE ZENER	MTZ-18B 52MM TAPPING	1
SMPS	DZ912	DZTZ4R7B--	DIODE ZENER	MTZ-4.7B 52MM TAPPING	1
SMPS	DZ924	DZTZ4R3B--	DIODE ZENER	MTZ-4.3B 52MM TAPPING	1
SMPS	F901	5FFPS5022S	FUSE MINIATURE	250V 5.0A TL	1
SMPS	IC901	1LNK353P--	IC(Switching)	LNK353P	1
SMPS	IC902 IC905	1TL431A---	IC(Shunt Regulator)	TL431	1
SMPS	IC903	1TOP245Y--	IC(Switching)	TOP-245Y	1
SMPS	IC904	1TOP248Y--	IC(Switching)	TOP-248Y	1
SMPS	IC907 IC908 IC909 IC910	1ET1103---	IC(Photocoupler)	ET1103	1
SMPS	L901 L908 L909 L910	5LC220K864	COIL CHOKE	22uH(1A)	1
SMPS	L905	5LF203N865	COIL LINE FILTER	KS-2930A1 LINE FILTER	1
SMPS	L906 L907	5LC339N863	COIL CHOKE	3.3uH(5A)	1
SMPS	PT901	5TMW015972	TRANS POWER	EE1614 H	1
SMPS	PT902	5TMW034971	TRANS POWER	EE2834V_12P	1
SMPS	PT903	5TMW028970	TRANS POWER	EE2828	1
SMPS	Q901	TZTC3198Y-	TR	KTC3198Y (2SC5343) AUTO	1
SMPS	R901	RS01Y104J-	R METAL OXIDE FILM	1W 100K OHM J	1

APPENDIX - ELECTRICAL PART LIST

● XD-615/ 616/ 625/ 626

ASS'Y	LOC	PART-CODE	PART-NAME	PART-DESC	Q'TY
SMPS	R906	RN-AZ1122F	R METAL FILM	1/6 11.2K OHM F(1%)	1
SMPS	R907	RN-AZ1002F	R METAL FILM	1/6 10K OHM F(1%)	1
SMPS	R912	RS02Y104J-	R METAL OXIDE FILM	2W 100K OHM J	1
SMPS	R913	RS02Y104J-	R METAL OXIDE FILM	2W 100K OHM J	1
SMPS	R914	RD01Y470J-	R CARBON FILM	1W 47 OHM J	1
SMPS	R921	RS01Y101J-	R METAL OXIDE FILM	1W 100 OHM J	1
SMPS	R923	RS01Y103J-	R METAL OXIDE FILM	1W 10K OHM J	1
SMPS	R930	RS02Y563J-	R METAL OXIDE FILM	2W 56K OHM J	1
SMPS	R931	RS01Y470J-	R METAL OXIDE FILM	1W 47 OHM J	1
SMPS	R937	RN-AZ1122F	R METAL FILM	1/6 11.2K OHM F(1%)	1
SMPS	R938	RN-AZ1002F	R METAL FILM	1/6 10K OHM F(1%)	1
SMPS	R946	RD-2Y471J-	R CARBON FILM	1/2 470 OHM J	1
SMPS	R948	RD-2Y561J-	R CARBON FILM	1/2 560 OHM J	1
SMPS	R957	RD-2Y561J-	R CARBON FILM	1/2 560 OHM J	1
SMPS	TH901	DNTC-3D15F	THERMISTOR	NTC-3D15F	1
SMPS	VA901	D1NR10D471	VARISTOR	1NR10D471	1
SMPS	10	9CD0915600	PLATE IC		1
SMPS	20	9CD4411200	HEAT SINK S1	AL-EXT	1
SMPS	30	9CD4411400	HEAT SINK S3	AL-EXT	1

● XD-618/ 628

ASS'Y	LOCATION	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
		PCDC085600		PCB SMPS ASSY		
SMPS	B900	9CD6507800	PCB	CEM-1 1.6T	1	
SMPS	D901	DTS10P06G-	DIODE(Bridge)	TS10P06G	1	
SMPS	D902	D1N4007---	DIODE	1N4007	1	
SMPS	D904 D905	D1N4937---	DIODE	1N4937	2	
SMPS	D906 D919	D1N4148---	DIODE	1N4148	2	
SMPS	D907	DUF5408---	DIODE	UF5408 R-FORMING 5mm	1	
SMPS	D909 D915 D916 D917	DUF4007---	DIODE	UF4007	4	
SMPS	D914	DUF5404---	DIODE	UF5404	1	
SMPS	D911	DSR5A0---	DIODE	SR5A0	1	
SMPS	D912	DSR106---	DIODE	SR106 R-FORMING 5mm	1	
SMPS	D913	DSR504---	DIODE	SR504 R-FORMING 5mm	1	
SMPS	D918	DHERF1605G	DIODE	HERF1605G	1	
SMPS	DZ903	DP6KE200A-	DIODE(TVS)	P6KE200A	1	
SMPS	DZ901	D1N4745A--	DIODE(Zener)	1N4745A(1W/16V)	1	
SMPS	DZ905	D1N5235B--	DIODE(Zener)	1N5235B(0.5W/6.8V)	1	
SMPS	DZ906	D1N5231B--	DIODE(Zener)	1N5231B(0.5W/5.1V)	1	
SMPS	DZ907	D1N5246B--	DIODE(Zener)	1N5246B(0.5W/16V)	1	
SMPS	IC903	1FSCQ1565R	IC	FSCQ1565RT-YDTU	1	
SMPS	IC902	1TNY280PN-	IC	TNY280PN	1	
SMPS	IC904 IC905 IC906	1ET1103---	IC(Photocoupler)	ET1103	3	
SMPS	IC908 IC911	1TL431A---	IC(Shunt Regulator)	TL431	2	
SMPS	IC909	1KIA278R12	IC	KIA278R12PI	1	
SMPS	IC910	1KIA7912AP	IC	KIA7912PI	1	
SMPS	Q901	T2N5551---	TR	2N5551	1	
SMPS	Q903	TKTN2222A-	TR	KTN2222A	1	
SMPS	Q904	TKTD1691--	TR	KTD1691-Y	1	
SMPS	Q905	TKTC3205--	TR	KTC3205-Y	1	
SMPS	Q902	TP45N03LTG	FET	P45N03LTG	1	
SMPS	PT902	5TMW040977	P/T	DAT-4042T2 (AMP)	1	
SMPS	PT901	5TMW028976	P/T	DAT-2828T1 (MAIN)	1	
SMPS	L901 L902	5LF203N865	COIL LINE FILTER	KS-2930A1 LINE FILTER	2	
SMPS	L904 L905	5LC459K872	COIL CHOKE	SPC555, 4.5uH/6A	2	
SMPS	L906	5LC180K873	COIL CHOKE	SPC510, 18uH/10A	1	
SMPS	L903	5LX100J001	COIL BEAD	3.6PI X 6MM 100 OHM,100MHz	1	
SMPS	TH901	DNTC10D15F	THERMISTOR	10D-15	1	
SMPS	VA901	D1NR10D471	VARISTOR	1NR10D471	1	
SMPS	F901	5FFPS5022S	FUSE	250V/5A TL	1	
SMPS	CX901 CX902	CL1BB3224K	C CERA (X-CAP)	275V/224(X-CAP)	2	
SMPS	CC901 CC902	CL1GB1471K	C CERA (Y-CAP)	250V/471	2	
SMPS	CC910 CC911	CL1GB1102K	C CERA	250V/102	2	
SMPS	CC904 CC907 CC909	CCXB3A102K	C CERA	102/1KV	3	
SMPS	CC905 CC908	CCFF1H104Z	C CERA	104/50V	2	
SMPS	CM903 CM906	CMXK2J472K	C MYLAR	630V/472K	2	
SMPS	CM904	CMXM1H272J	C MYLAR	272	1	
SMPS	CM905	CMXM1H473J	C MYLAR	473	1	
SMPS	CM907	CMXM1H104J	C MYLAR	104	1	
SMPS	JW908 JW909 JW910 JW911 JW912 JW913 JW914 JW916 R931	W581GY6095	JUMPER	AWG22 1/0.65 SN 6.0 AUTO	9	

APPENDIX - ELECTRICAL PART LIST

ASS'Y	LOCATION	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
SMPS	CM907	CMXM1H104J	C MYLAR	104	1	
SMPS	JW908 JW909 JW910 JW911 JW912 JW913 JW914 JW916 R931	W581GY6095	JUMPER	AWG22 1/0.65 SN 6.0 AUTO	9	
SMPS	JW904 JW905	W581GY1005	JUMPER	AWG22 1/0.65 SN 10 AUTO	2	
SMPS	JW906 JW907 JW915 JW917 JW918 JW919 JW920 JW921 JW922	W581GY12J5	JUMPER	AWG22 1/0.65 SN 12.5 AUTO	9	
SMPS	JW901	W581GY1505	JUMPER	AWG22 1/0.65 SN 17.5 AUTO	1	
SMPS	CW981	9CD6290900	CONNECTOR	3.96 2P VH-02A(White)	1	
SMPS	CW901	2001-WS-06	CONNECTOR	6PIN 2MM	1	
SMPS	CW902	2001-WS-08	CONNECTOR	8PIN 2MM	1	
SMPS	CW903	2001-WS-11	CONNECTOR	11PIN 2MM	1	
SMPS	CE902 CE903	CEXN2E681P	C ELECTRO	250V/680uF	2	
SMPS	CE909 CE911	CEXF1A471V	C ELECTRO	10V/470uF	2	
SMPS	CE912 CE913	CEXF1A681V	C ELECTRO	10V/680uF	2	
SMPS	CE914	CEXF1A222V	C ELECTRO	10V/2200uF	1	
SMPS	CE904 CE905	CEXF1E220V	C ELECTRO	25V/22uF	2	
SMPS	CE915 CE916	CEXF1E221V	C ELECTRO	25V/220uF	2	
SMPS	CE922	CEXF1H109V	C ELECTRO	50V/1uF	1	
SMPS	CE910	CEXF1H229V	C ELECTRO	50V/2.2uF	1	
SMPS	CE908	CEXF1H100V	C ELECTRO	50V/10uF	1	
SMPS	CE917 CE918 CE919 CE920	CEXF1H470V	C ELECTRO	50V/47uF	4	
SMPS	CE921 CE923	CEXF1J222C	C ELECTRO	63V/2200uF(18*35) 105℃	2	
SMPS	R917	RD-AZ271J-	R CARBON FILM	1/6W270J	1	
SMPS	R918 R923 R930	RD-AZ102J-	R CARBON FILM	1/6W1KJ	3	
SMPS	R922 R924 R925 R928 R934 R939	RD-AZ472J-	R CARBON FILM	1/6W4.7KJ	6	
SMPS	R926	RD-AZ822J-	R CARBON FILM	1/6W8.2KJ	1	
SMPS	R927	RD-AZ473J-	R CARBON FILM	1/6W47KJ	1	
SMPS	R933 R935	RD-AZ100J-	R CARBON FILM	1/6W10J	2	
SMPS	R937 R938	RD-AZ182J-	R CARBON FILM	1/6W1.8KJ	2	
SMPS	R945	RD-AZ153J-	R CARBON FILM	1/6W15KJ	1	
SMPS	R902 R903	RD-4Z154J-	R CARBON FILM	1/4W150KJ	2	
SMPS	R905	RD-4Z680J-	R CARBON FILM	1/4W68J	1	
SMPS	R906	RD-4Z152J-	R CARBON FILM	1/4W1.5KJ	1	
SMPS	R907	RD-4Z331J-	R CARBON FILM	1/4W330J	1	
SMPS	R909	RD-4Z202J-	R CARBON FILM	1/4W2KJ	1	
SMPS	R911	RD-4Z335J-	R CARBON FILM	1/4W3.3MJ	1	
SMPS	R913	RD-4Z101J-	R CARBON FILM	1/4W100J	1	
SMPS	R910	RS01Y101J-	R M-OXIDE FILM	1W100KJ	1	
SMPS	R908	RS02Y152J-	R M-OXIDE FILM	2W1.5KJ	1	
SMPS	R904	RS02Y473J-	R M-OXIDE FILM	2W47KJ	1	
SMPS	R936 R944	RS03Y302J-	R M-OXIDE FILM	3W3KJ	2	
SMPS	R919	RN-AZ8200F	R-METAL FILM	1/6W820F	1	
SMPS	R942 R943	RN-AZ1001F	R-METAL FILM	1/6W1KF	2	
SMPS	R920 R921	RN-AZ3001F	R-METAL FILM	1/6W3KF	2	
SMPS	R941	RN-AZ3301F	R-METAL FILM	1/6W3.3KF	1	
SMPS	R940	RN-AZ3602F	R-METAL FILM	1/6W36KF	1	
SMPS		9736915700	CORD AC	KE-112 H03VVH2-F 5A 250V 2.18M	1	
SMPS		9CD0915600	PLATE IC	(空白)	1	
SMPS		9CD4413300	HEAT SINK IC	AL-EXT	2	
SMPS		9CD4413400	HEAT SINK IC	AL-EXT	1	

APPENDIX - ELECTRICAL PART LIST

● XD-615/ 616/ 625/ 626

AMP		9CDC080100	PCB AMP ASS'Y	XD-610 MAIN ASS'Y	
AMP	B800	9CD6502400	PCB AMP	220X115X1.6T(1*2)	1
AMP	CM860 CM861	CMXK1J684J	C MYLAR	MC 63V 0.68MF J	1
AMP	CN861	9728837900	CONN FFC	FFC P=1.0X22PX330MM D	1
AMP	CN802	9728837800	CONN FFC	FFC P=1.0X22PX140MM C	1
AMP	CN901	9728836800	CONN AS	UL1007 #24 6P P2.0 200MM	1
AMP	CW861 CW862	9CD6268700	WAFER	52806-2210	1
AMP	HL860 HL861	5LX601K843	CHIP BEAD	FB 600 OHM 100MHZ 2012	1
AMP	IC860	1STA308A--	IC	STA308A DDX	1
AMP	IC861 IC862	174HC14PWR	IC	SN74HC14PWR TSSOP	1
AMP	IC863	1STA505---	IC	STA505 PWM AMP	1
AMP	J801	9736329700	JACK SPEAKER	JACK_SPK_PTB-408S	1
AMP	L860 L861L862 L863	5LC220K866	COIL LPF	22UH LPF Digital Amp PI 13mm	1
AMP	10	9CD4410800	HEAT SINK AMP	AL-EXT	1

REMOCON 12000		REMOCON AS	AM-67D	
REMOCON	10	9CDM064300	REMOCON	AM-67D 1

● XD-618/ 628

ASS'Y	LOC	PART-CODE	PART-NAME	PART-DESC	Q'TY	REMARK
		PCDC085700	PCB AMP ASSY			
AMP	CE860	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11)	1	
AMP	CE861	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11)	1	
AMP	CE862	CEXF1V102V	C ELECTRO	63V RSS 1000MF (13X25)	1	
AMP	CM860 CM861	CMXK1J105J	C MYLAR	MC 63V 1uF J	2	
AMP	CN861	9728837900	CONN FFC	FFC P=1.0X22PX330MM D	1	
AMP	CN802	9728837800	CONN FFC	FFC P=1.0X22PX140MM C	1	
AMP	CN901	9728836800	CONN AS	UL1007 #24 6P P2.0 200MM	1	
AMP	CW861 CW862	9CD6268700	WAFER	52806-2210	2	
AMP	HC855 HC856 HC857 HC858	HCBK682KBA	C CHIP CERA	50V X7R 6800PF K 1608	4	
AMP	HC862	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	1	
AMP	HC864	HCQK221JBA	C CHIP CERA	50V CH 220PF J 1608	1	
AMP	HC865	HCBK122KBA	C CHIP CERA	50V X7R 1200PF K 1608	1	
AMP	HC860 HC861 HC863 HC866 HC867 HC868 HC869 HC870 HC871 HC872	HCFK104MBA	C CHIP CERA	50V Y5V 0.1MF M 1608	15	
AMP	HC873 HC874 HC877 HC878 HC880	HCFK104MBA	C CHIP CERA	50V Y5V 0.1MF M 1608		
AMP	HC875 HC876 HC801 HC802 HC803 HC804 HC879	HCFK104MBA	C CHIP CERA	100V Y5V 0.1MF M 3216	7	
AMP	HC887 HC888	HCFK105MCA	C CHIP CERA	100V Y5V 1MF M 3220	2	
AMP	HC891 HC892	HCQK331JBA	C CHIP CERA	100V CH 330PF J 3126	2	
AMP	HC859 HC893 HC894 HC895 HC896 HC897 HC898 HC899	HCFK104MCA	C CHIP CERA	50V Y5V 0.1MF M 2012	8	
AMP	HL860 HL861	5LX601K843	CHIP BEAD	FB 600 OHM 100MHZ 2012	2	
AMP	HR860 HR866	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	2	
AMP	HR861 HR870 HR871	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	3	
AMP	HR862 HR863 HR885 HR886 HR887	HRFT000-BA	R CHIP	1/10 0 OHM J 1608	5	
AMP	HR864 HR865	HRFT682JBA	R CHIP	1/10 6.8K OHM J 1608	2	
AMP	HR867	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	1	
AMP	HR868	HRFT471JBA	R CHIP	1/10 470 OHM J 1608	1	
AMP	HR873 HR874	HRF4220JEA	R CHIP	1/4 22 OHM J 3216	2	
AMP	HR877 HR878 HR879 HR880	HRF4569JEA	R CHIP	1/4W 5.6 OHM J 3216	4	
AMP	IC860	1STA308A--	IC	STA308A DDX	1	
AMP	IC861 IC862	174HC14PWR	IC	SN74HC14PWR TSSOP	2	
AMP	IC863	1STA517B--	IC	STA517B PWM AMP	1	
AMP	J801	9736329700	JACK SPEAKER	JACK_SPK_PTB-408S	1	
AMP	L860 L861 L862 L863	5LC220K876	COIL LPF	22UH LPF Digital Amp PI 15mm	4	
AMP	B800	9CD6502700	PCB AMP	220X115X1.6T(1*2)	1	
AMP		9CD4410900	HEAT SINK AMP	AL-EXT	1	

● XD-618/ 628 Fan Option List

	NAME	Loc	Q'ty	S/N	DESCRIPTION	Remark
MAIN	CONN WAFER	CW201	1	2503-WS-02	2P 2.5MM	
MAIN	C Electro	CE285	1	CEXF1E221V	25V 220uF	
MAIN	CHIP RES	HR283	1	HRF8100JCA	1/8 10 OHM J 2012	
MAIN	TR	HQ256	1	TZRC231S--	KRC231S	
MAIN	TR	HQ257	1	TZRA107S--	KRA107S	
FAN	DC Fan		1	9738101700	SP602512M-03(DC12V, 0.11A)	Use in RH-435

APPENDIX - ELECTRICAL PART LIST

APPENDIX - ELECTRICAL PART LIST/OPTION LISTS

1. SCART JACK OPTION LIST.

2006-08-26

NO	NAME	LOC	Q'TY	S/N	DESCRIPTION	W/O Scart	With Scart	REMARK
1	FFC Wafer	CN201	1	9CD6264700	52045-1645	X	O	
2	PCB ASS'Y		1	9CDC080300	XD-610 SCART ASS'Y	X	O	

2. TUNER MODULE OPTION LIST.

NO	NAME	LOC	Q'TY	S/N	DESCRIPTION	REMARK
1	TUNER MODULE	TU001	1	9737653301	KST-ML000MV0-J69L(USA)	
2	TUNER MODULE	TU001	1	9737653401	KST-ML104MV1-J69L(Europe)	
3	TUNER MODULE	TU001	1	9737653501	KST-ML006MV1-J69L(JAPAN)	
4	ANT LOOP		1	9736807100	S0160BL-25	Shield Type
5	ANT FM		1	9736806000-1	1.2M PIG TAIL BLK	

3. TUNER BAND OPTION LIST.

	America 1/12hz	America 2/24hr (AM input gain +0dB)	CIS /24hr / RDS	Eur 2Band / 24hr	Japan / 12hr	Asia 1/12hr
FM(Mhz)/Step	FM87.5-108/100	FM87.5-108/100	FM L:65-74/10	FM87.5-108/50	FM76-108/1000	FM87.5-108/100
FM(Mhz)/Step			FM H:87.5-108/50			
MW(khz)/Step	AM520-1710/10	AM520-1710/10	AM522-1620/9	MW522-1620/9	AM522-1620/9	AM522-1620/9
HR762	Jump	330	680	1.2K	1.8K	2.7K

	Asia 2/24hr	CIS / 24hr	Latin Am/12hr	Eur Rds 2B/24hr	Semp / 24hr (AM input gain +3.5dB)
FM(Mhz)/Step	FM87.5-108/100	FM L:65-74/10	FM87.5-108/100	FM87.5-108/50	FM87.5-108/100
FM(Mhz)/Step		FM H:87.5-108/50			
MW(khz)/Step	AM522-1620/9	AM522-1620/9	AM520-1620/10	MW522-1620/9	MW520-1710/10
HR762	3.9K	6.8K	10K	22K	47K

4. SMPS Option list

NO	NAME	LOC	Q'TY	S/N	DESCRIPTION	XD-615/625	XD-616/626	REMARK
1	DIODE(Zener)	DZ911	1	DZTZ18B---	UZ18BSB	O	X	
2	DIODE(Zener)	DZ911	1	DZTZ22B---	UZ22BSB	X	O	

5. AMP Option list

NO	NAME	LOC	Q'TY	S/N	DESCRIPTION	XD-615/625	XD-616/626	REMARK
1	IC	IC863	1	1STA505----	STA505	O	X	
2	IC	IC863	1	1STA506----	STA506	X	O	

6. XD-62X RDS Option list

NO	NAME	LOC	Q'TY	S/N	DESCRIPTION	RDS	NO RDS	REMARK
1	R CHIP	HR008/009	2	HRFT101JBA	1/10 100 OHM J 1608	O	X	MAIN PCB
2	C CHIP CERA	HC004/005	2	HCQK101JBA	50V CH 100PF J 1608	O	X	MAIN PCB
3	WIRE JUMPER	JW704	1	W581GY7595	AWG22 1/0.65 SN 7.5 AUTO	O	X	FRONT PCB

7. XD-61X RDS Option list

NO	NAME	LOC	Q'TY	S/N	DESCRIPTION	RDS	NO RDS	REMARK
1	R CHIP	HR008/009	2	HRFT101JBA	1/10 100 OHM J 1608	O	X	MAIN PCB
2	C CHIP CERA	HC004/005	2	HCQK101JBA	50V CH 100PF J 1608	O	X	MAIN PCB
3	WIRE JUMPER	JW714	1	W581GY7595	AWG22 1/0.65 SN 7.5 AUTO	O	X	FRONT PCB
4	WIRE JUMPER	JW745	1	W581GY1005	AWG22 1/0.65 SN 10 AUTO	O	X	FRONT PCB
5	WIRE JUMPER	JW748	1	W581GY12J5	AWG22 1/0.65 SN 12.5 AUTO	O	X	FRONT PCB

8. AC CORD Option list

NO	NAME	LOC	Q'TY	S/N	DESCRIPTION	BUYER
1	AC CORD	-----	1	9736913700	KE-21,H03VVH2-F 1900MM WITH STOPPER	EUROPE
2	AC CORD	-----	1	9736913800	KE-01PA@NISPT-2 18AWG 10A	AMERICA
3	AC CORD	-----	1	9736913900		ENGLAND
4	AC CORD	-----	1	9736914000		AUSTRALLIA
5	AC CORD	-----	1	9736914100		ARGENTINA
6	AC CORD	-----	1	9736914200		BRAZIL
7	AC CORD	-----	1	9736915700	KE-112 H03VVH2-F 5A 250V 2.18M	SRI LANKA

9. OTHER Option list

NO	NAME	LOC	Q'TY	S/N	DESCRIPTION	XD-61X	XD-62X	REMARK
1	CONN FFC	CN703	1	9728837500	P=1.0X20PX250MM	O	X	
2	CONN FFC	CN703	1	9728837400	P=1.0X20PX220MM	X	O	