

# Service Manual

## DVD MINI SYSTEM

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

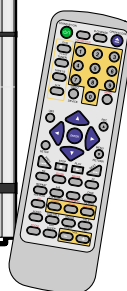
**XD-625[R]/626[R]/628[R]**



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

|                                                                         |   |                                                              |    |
|-------------------------------------------------------------------------|---|--------------------------------------------------------------|----|
| <b>SAFETY PRECAUTIONS</b> .....                                         | 1 | <b>EXPLODED VIEW AND</b>                                     |    |
| <b>SPECIFICATIONS, ADJUSTMENT</b> .....                                 | 2 | <b>MECHANICAL PARTS LIST</b> .....                           | 10 |
| <b>LOCATION OF USERS CONTROLS</b> .....                                 | 3 | • Mechanical Exploded View : XD-615/ 616, XD-625/ 626        |    |
| • Front Panel                                                           |   | • Mechanical Parts List : XD-615/ 616, XD-625/ 626           |    |
| • Display                                                               |   | <b>WIRING DIAGRAM</b> .....                                  | 11 |
| • Rear Panel                                                            |   | <b>BLOCK DIAGRAM</b> .....                                   | 12 |
| • Remote Controller                                                     |   | <b>SCHEMATIC DIAGRAM</b> .....                               | 13 |
| <b>CONNECTING TO EQUIPMENT</b> .....                                    | 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 |    |
| <b>FIRMWARE DOWNLOAD METHOD</b> .....                                   | 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,<br>Checksum Check and Update New Firmware. |   | <b>P.C.B PATTERN LAYOUT</b> .....                            | 14 |
| • Completed Update.                                                     |   | • MPEG : XD-615/ 616/ 625/ 626                               |    |
| • Check the Update Version.                                             |   | • FRONT : XD-615/ 616, XD-625/ 626                           |    |
| <b>CODE FREE METHOD &amp; EEPROM RESET</b> .....                        | 6 | • SMPS : XD-615/ 616/ 625/ 626                               |    |
| <b>TROUBLE SHOOTING GUIDE</b> .....                                     | 7 | • Amp : XD-615/ 616/ 625/ 626                                |    |
| <b>WAVEFORM OF MAJOR CHECK METHOD</b> .....                             | 8 | • Main : XD-615/ 616/ 625/ 626                               |    |
| <b>INTERNAL BLOCK DIAGRAM OF ICs</b> .....                              | 9 | • Mic : XD-615/ 616/ 625/ 626                                |    |
|                                                                         |   | <b>ELECTRICAL PARTS LIST</b> .....                           | 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.

|                                                                                                                                                                         |                                                                                                                                                                                                                 |                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|                                                                                        | <b>CAUTION</b><br><b>RISK OF ELECTRIC SHOCKS</b><br><b>DO NOT OPEN</b>                                                                                                                                          |  |
| <b>CAUTION :</b> 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.

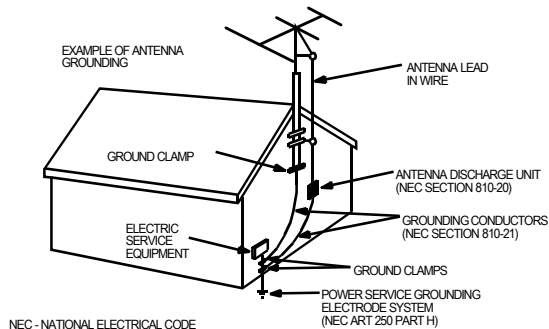
## PORTABLE CART



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<br>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

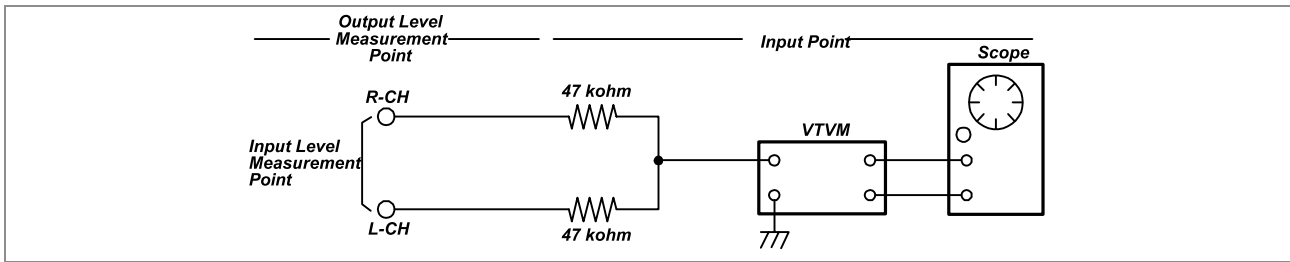
|                             | Item                                            | FM                  | MW(AM)          |
|-----------------------------|-------------------------------------------------|---------------------|-----------------|
| Tuning Range                | USA Version                                     | 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 $\mu$ V (17.2dBf) | 75 dBuV         |
|                             | S/N = FM 26dB/MW 20dB, Australia/Europe Version | 3 $\mu$ V (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 |

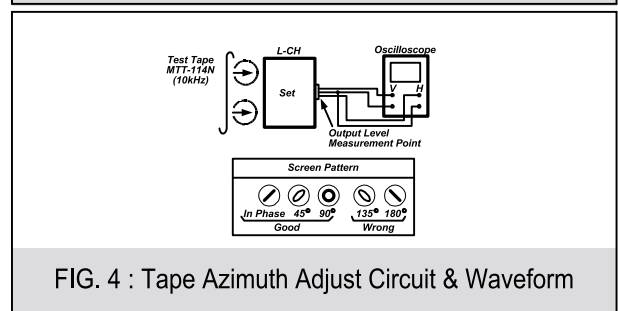
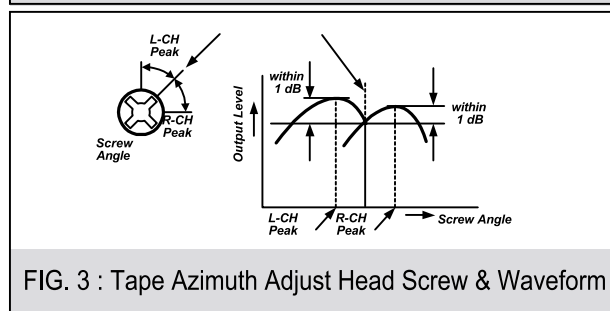
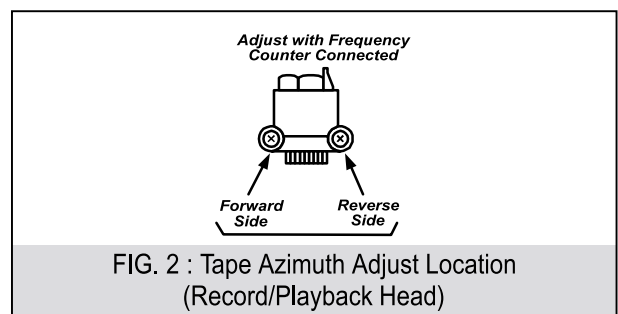
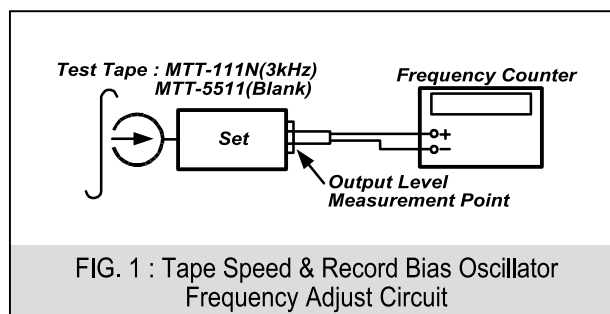
### HEAD ADJUSTMENT (AZIMUTH)

- 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

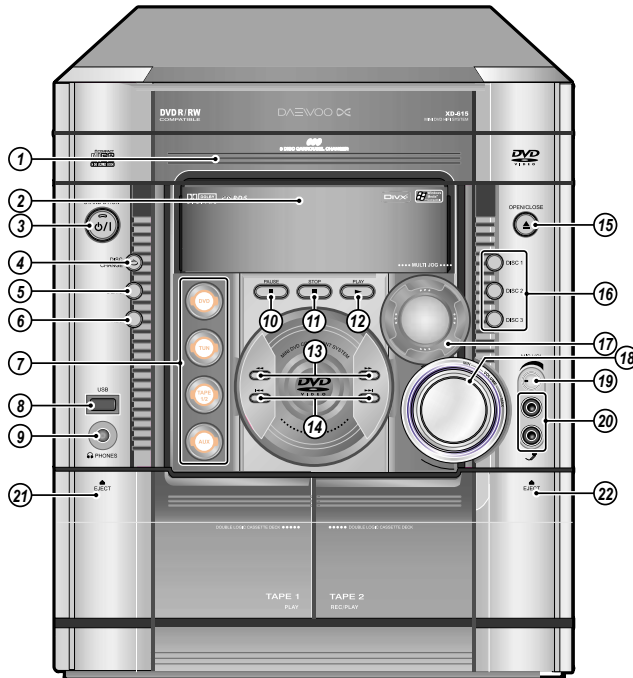
- Connect the frequency counter to TP603, GND.
- Press the REC button.
- Adjust L600 to obtain 80 KHz $\pm$ 5KHz

| 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     |



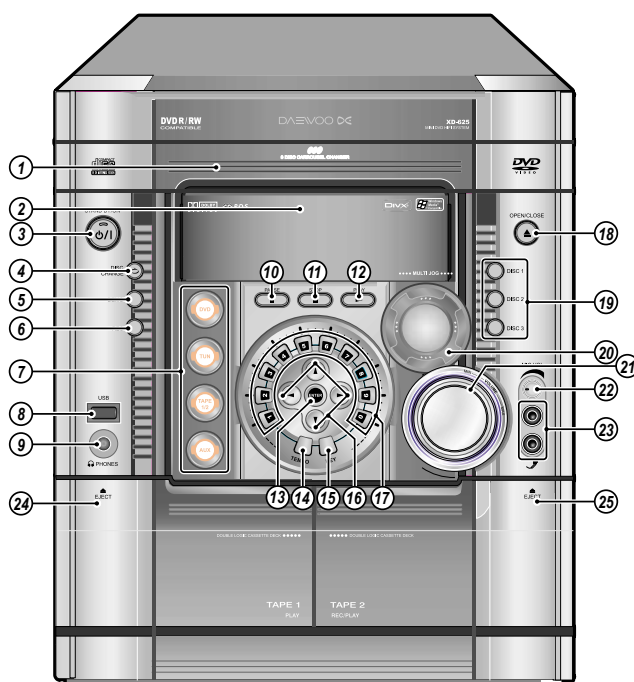
# Location of Users Controls

## • 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

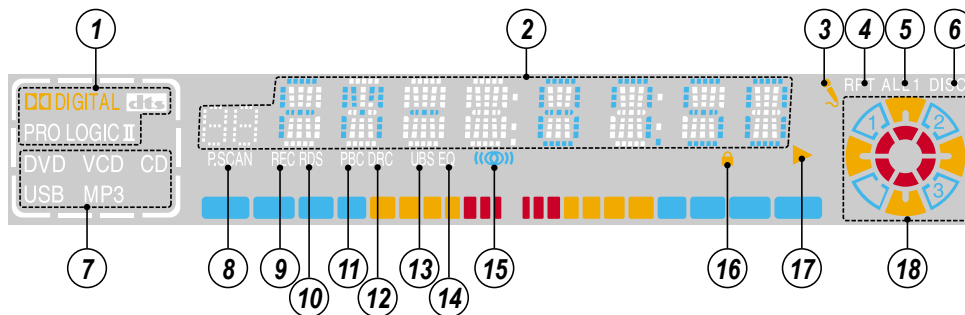
## • Front Panel : XD-625/626/628[R]



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

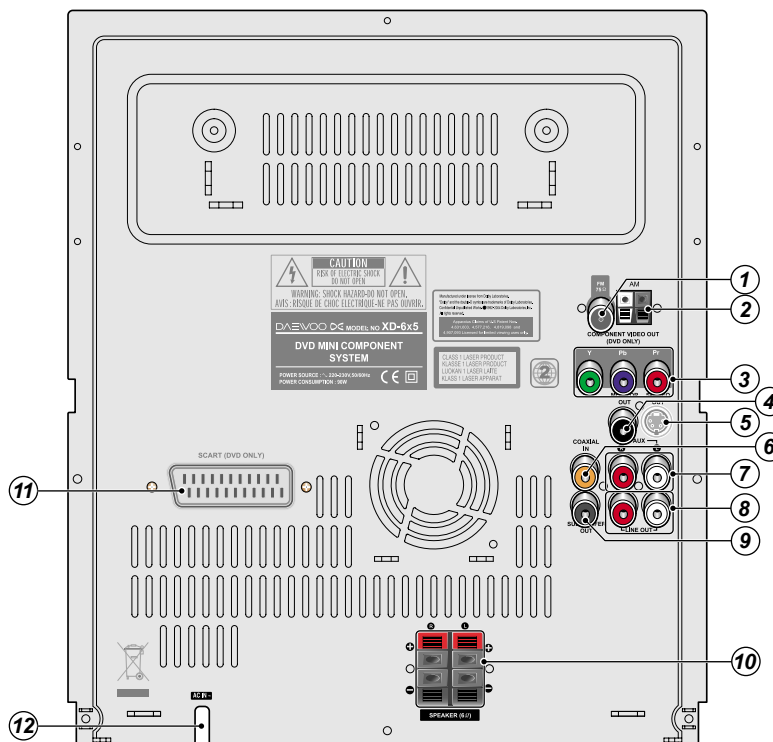
# Location of Users Controls

## • 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                             |                                     |

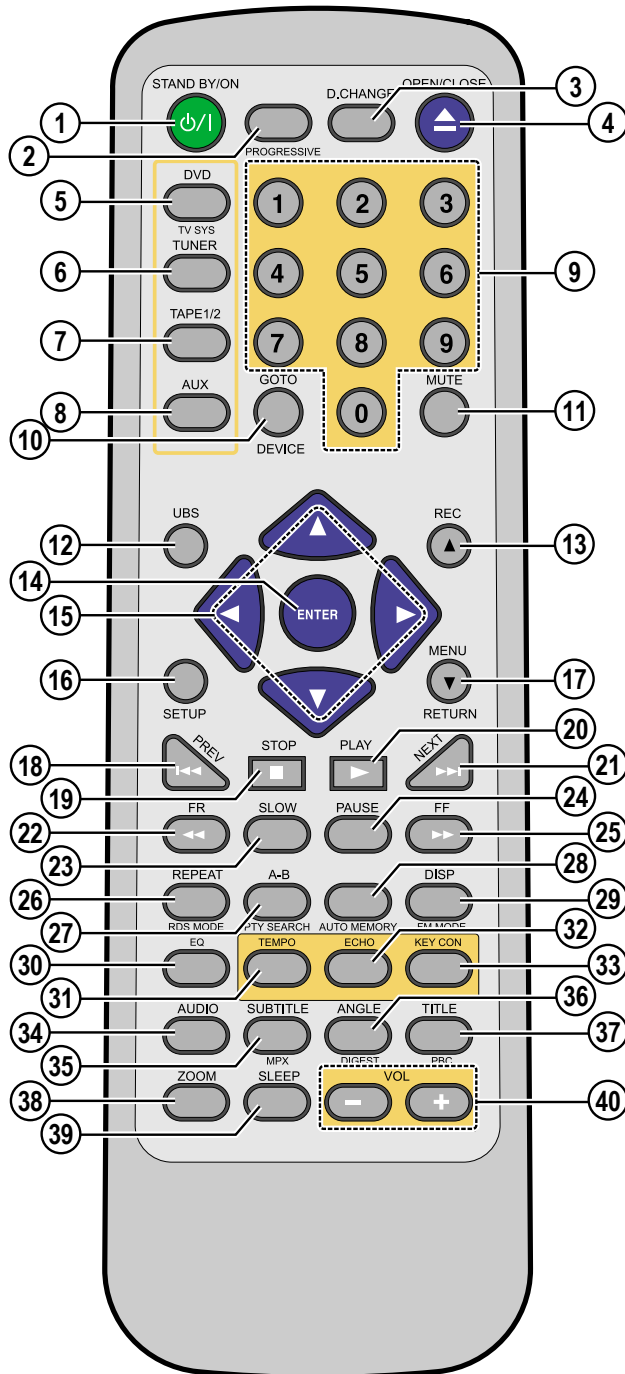
## • Rear Panel



- |                                         |
|-----------------------------------------|
| 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

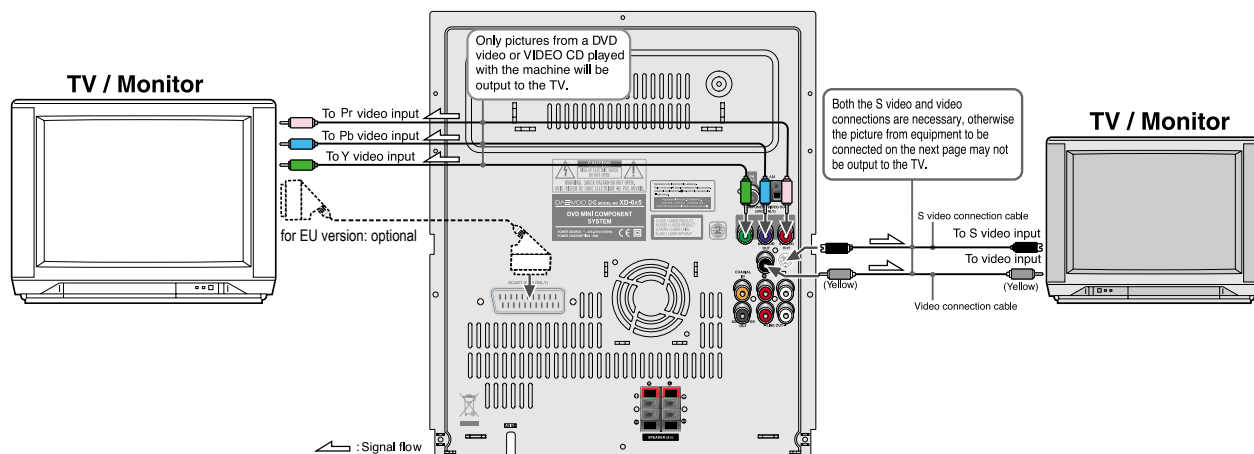


1. STAND BY/ON button
2. PROGRESSIVE button
3. DISC CHANGE button
4. OPEN/CLOSE(▲) button
5. DVD/TV SYS(PAL/NTSC: DVD only) button
6. TUNER button
7. TAPE 1/2 button
8. AUX button
9. Number(0~9) buttons
10. GO TO/DEVICE button
11. MUTE button
12. UBS button
13. RECORD(▲) button
14. ENTER button
15. Direction(▲/▼/◀/▶) 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

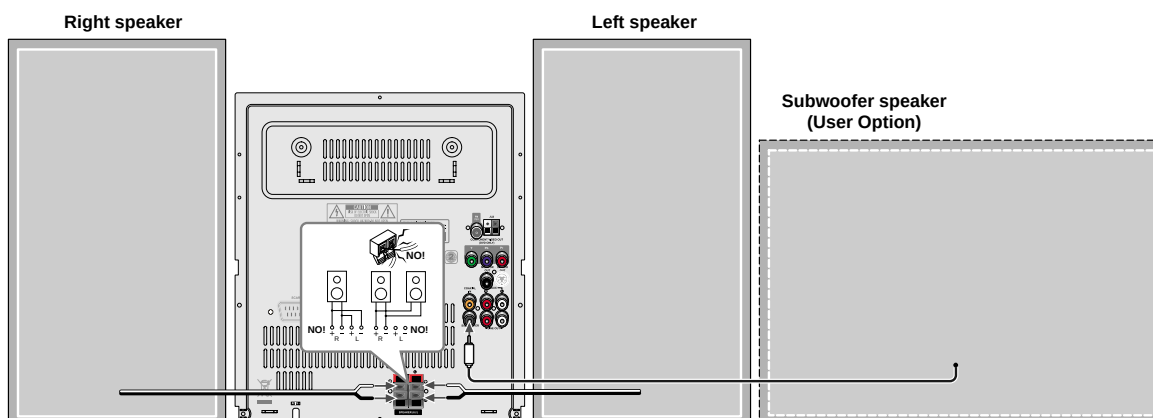
- This machine is designed to reproduce optimum sound quality when speakers with the specified impedance below are connected. Please check the following information and choose speakers with appropriate impedance for the connections.

#### Front speakers(L/R) :

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

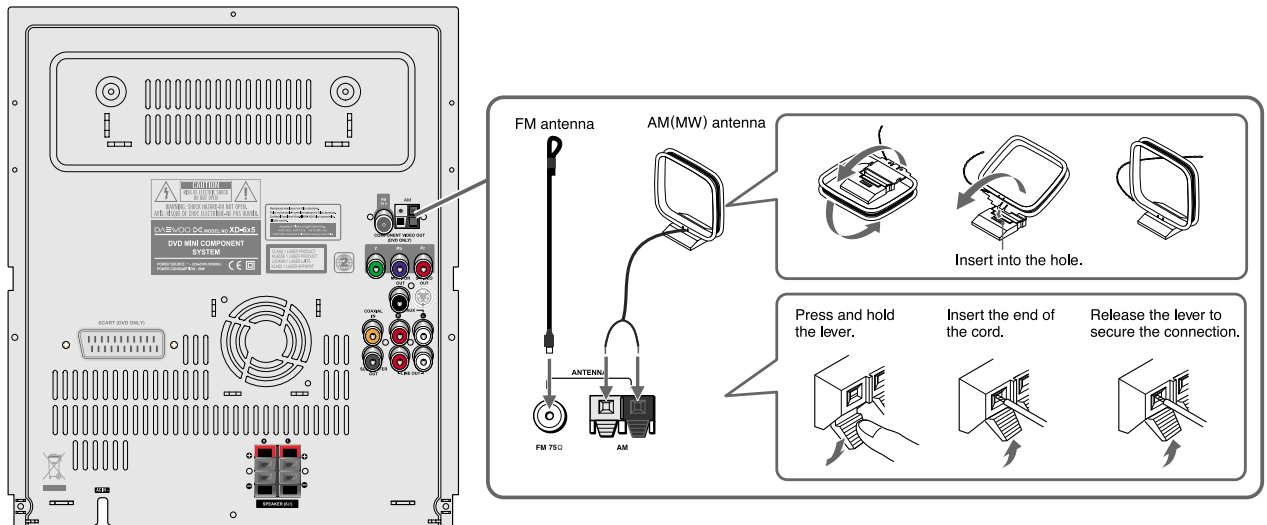
XD-618/628[R] : 8 ohms min. per speaker

- 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

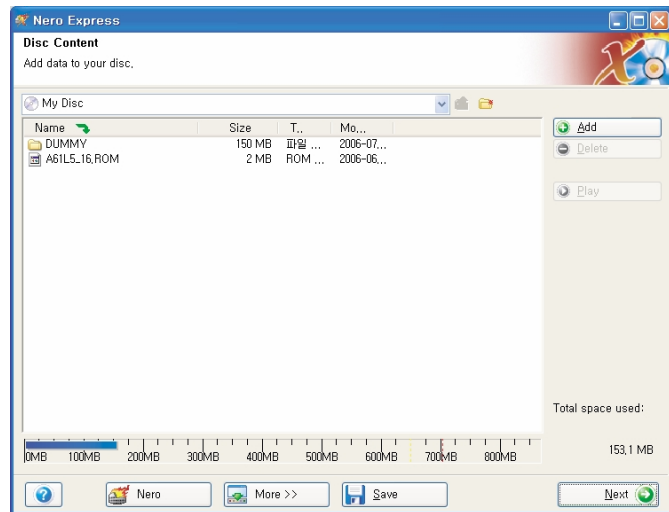
- Plugging a dynamic microphone to sing along with CD, VCD, DVD or AUX(also while recording).
- Connect the plugs securely.



# 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

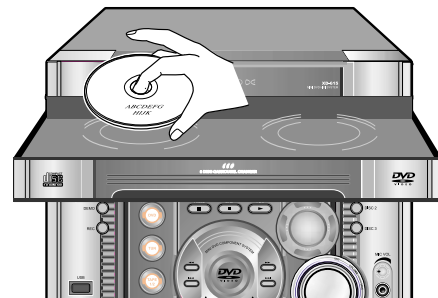


**Note :** Before using the USB devices, make sure there is no disc on the machine. USB function works only under the condition that the display shows “NO DISC” or “STOP” at DVD function mode.

## • Activating the Firmware Upgrade

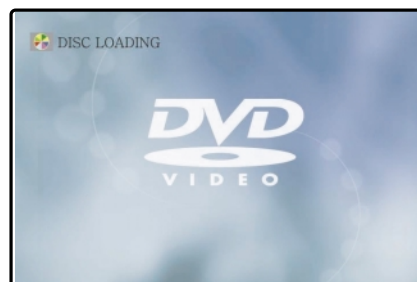
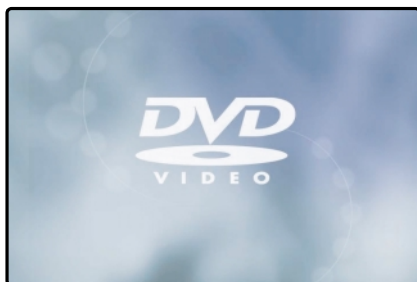
### <Update by CD-R>

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.



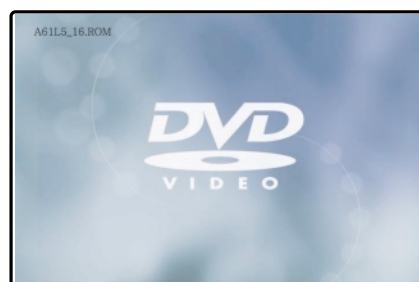
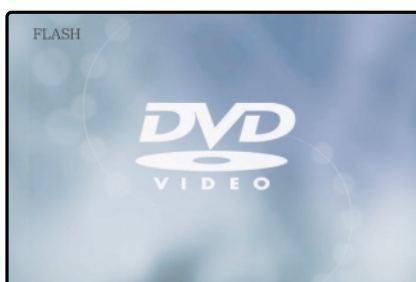
### <Update by USB>

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



## • Starting Update.

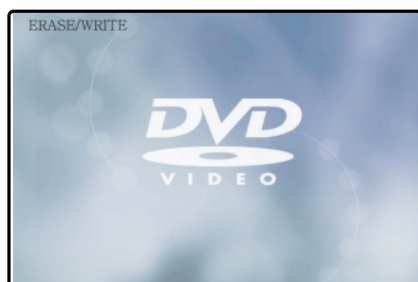
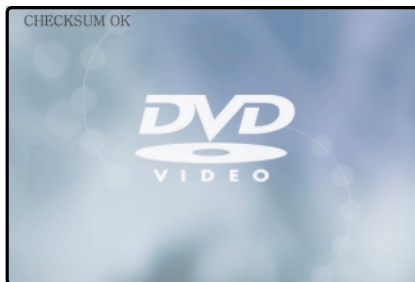
1. Detect the Update Disc.
2. Display for Update Version.
  - Basic Version : XD- 615/ 616/618, XD- 625/ 626/628 ( A61L5\_ 16. ROM )



# Firmware Download Method

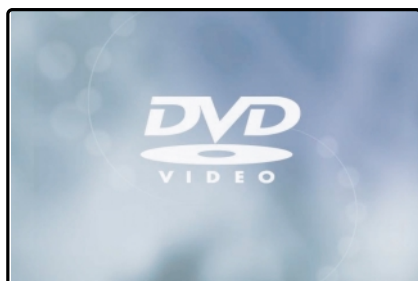
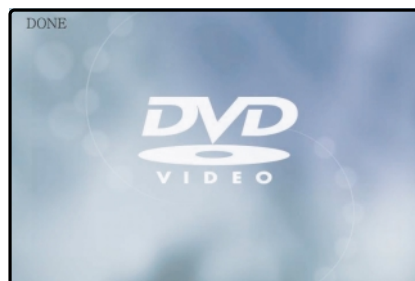
## • Read the Disc or USB Card, Checksum Check and Update New Firmware.

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



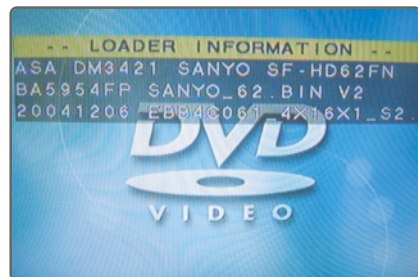
## • Completed Update.

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.

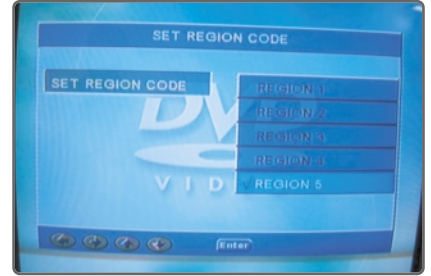
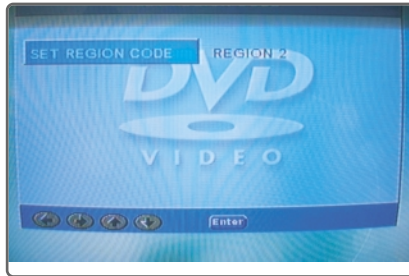
# Code Free Method & EEPROM Reset

## • Preparing the Code Free Method

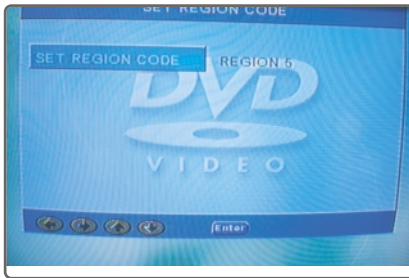
1. Press "Open" button.
2. Press "Setup" button.
3. Press Number button.  
(5 → 4 → 2 → 5)



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.

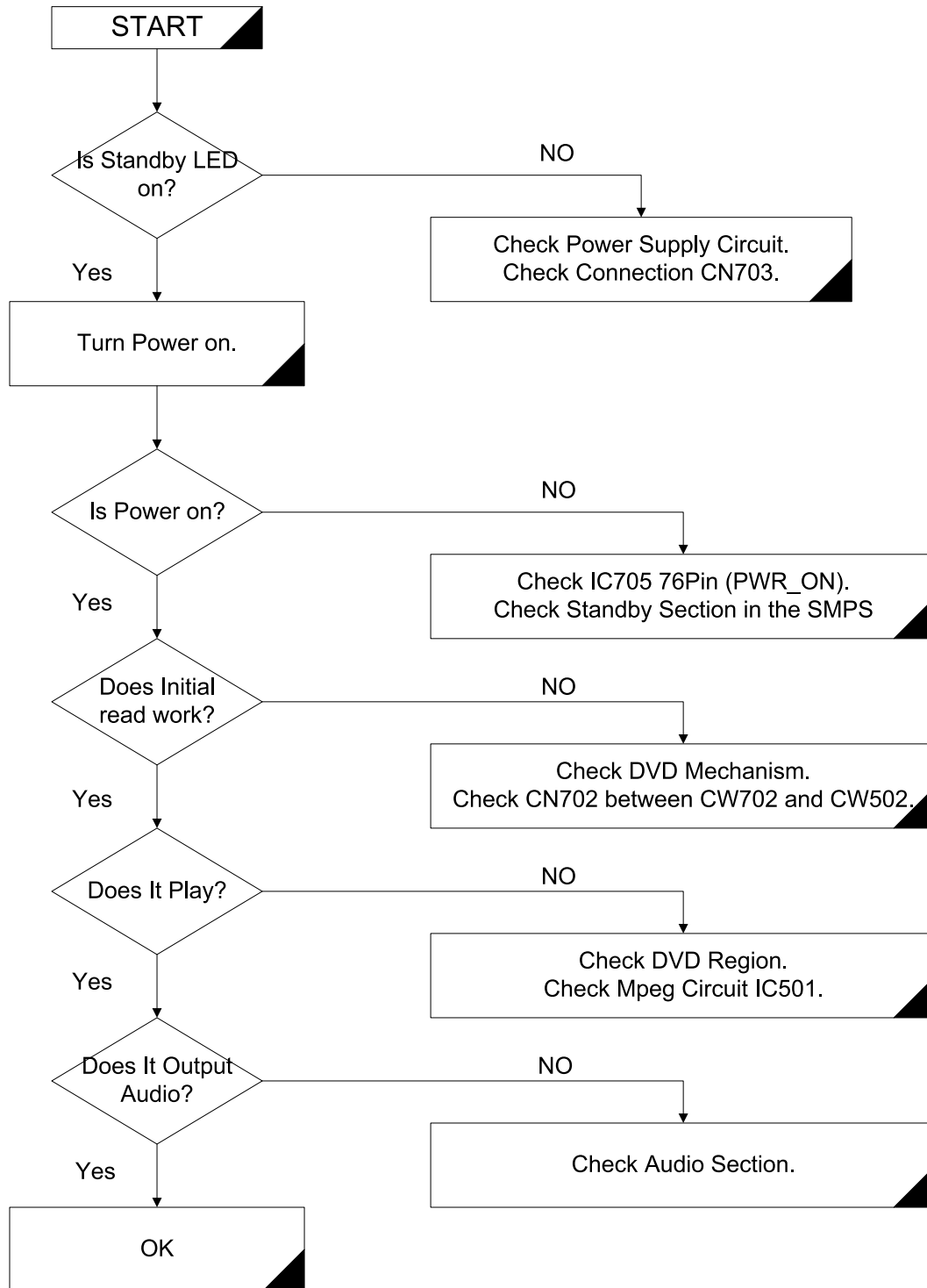


### Notice

- Check Region Code.
- Check Video Mode.

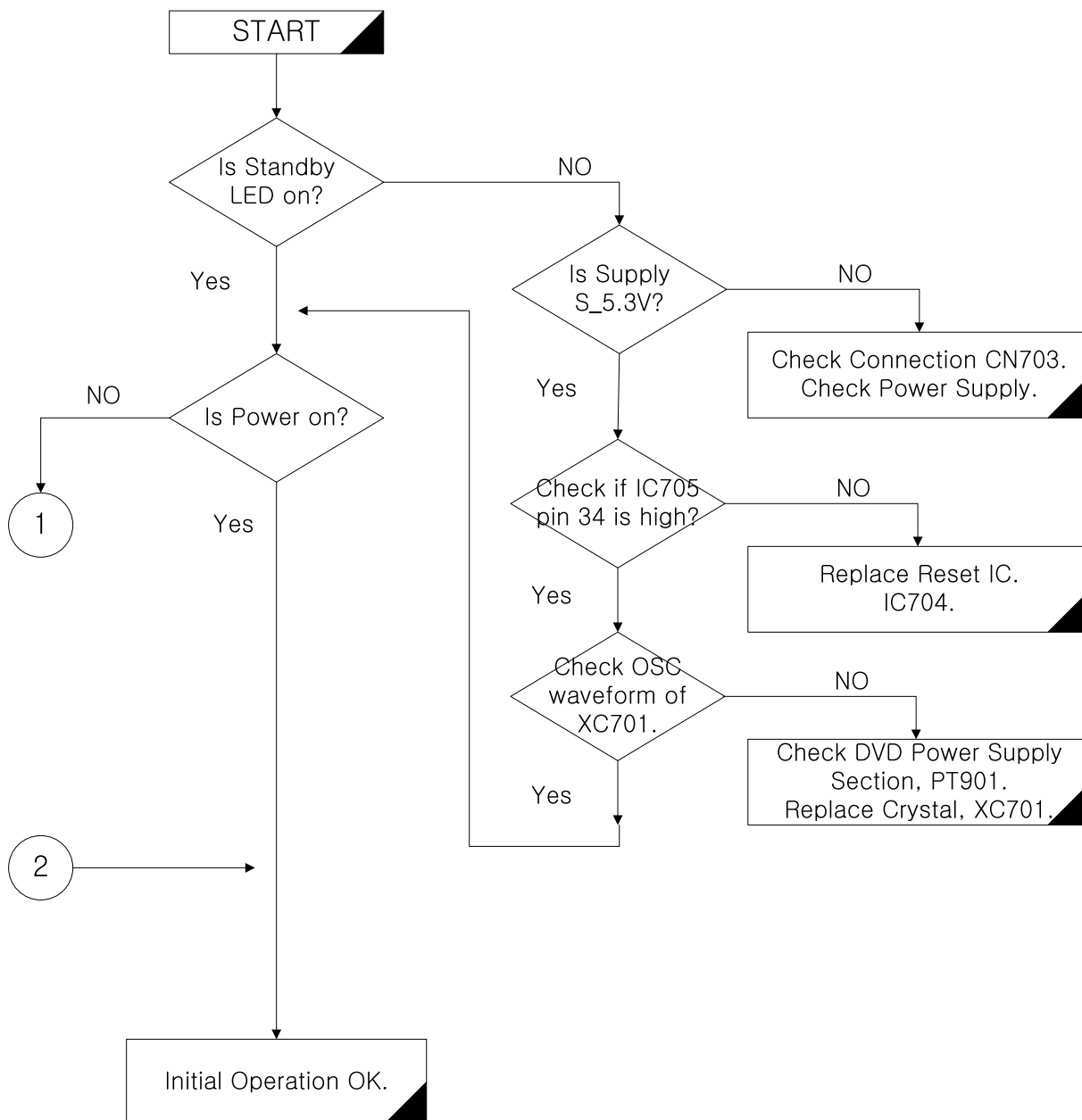
# Trouble Shooting Guide

## • Basic Operating



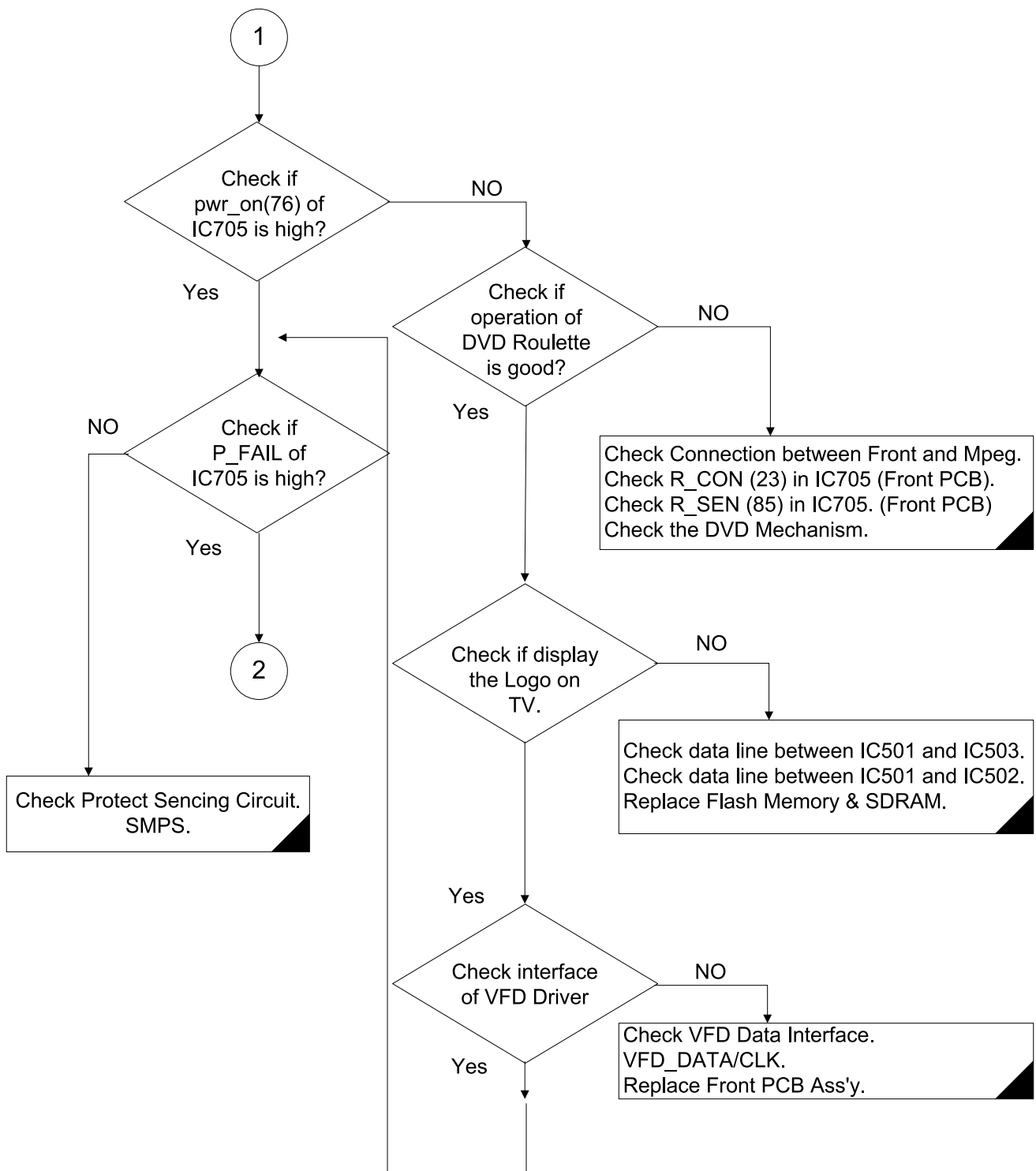
# Trouble Shooting Guide

## • Initial Operating



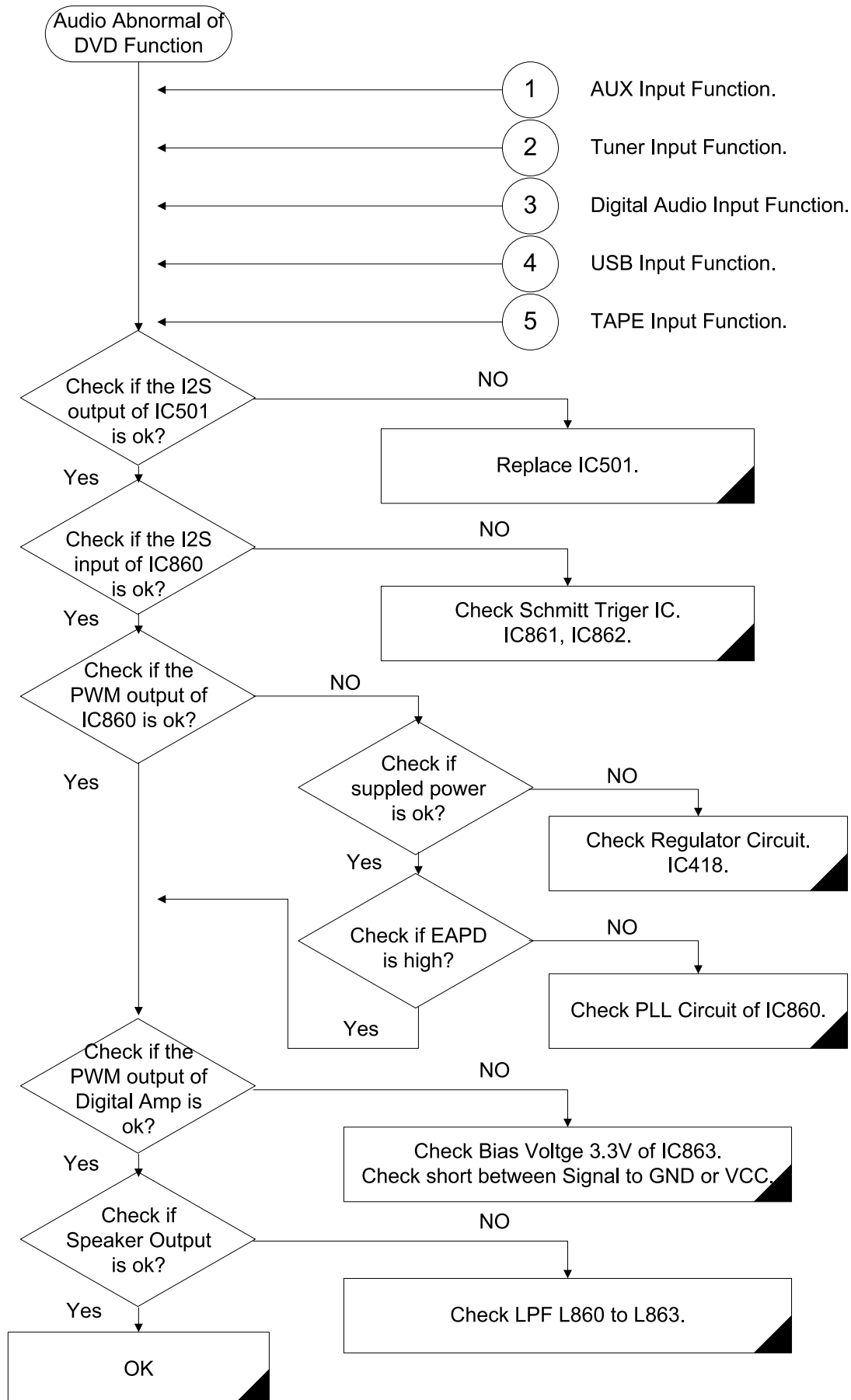
# Trouble Shooting Guide

## • Initial Operating



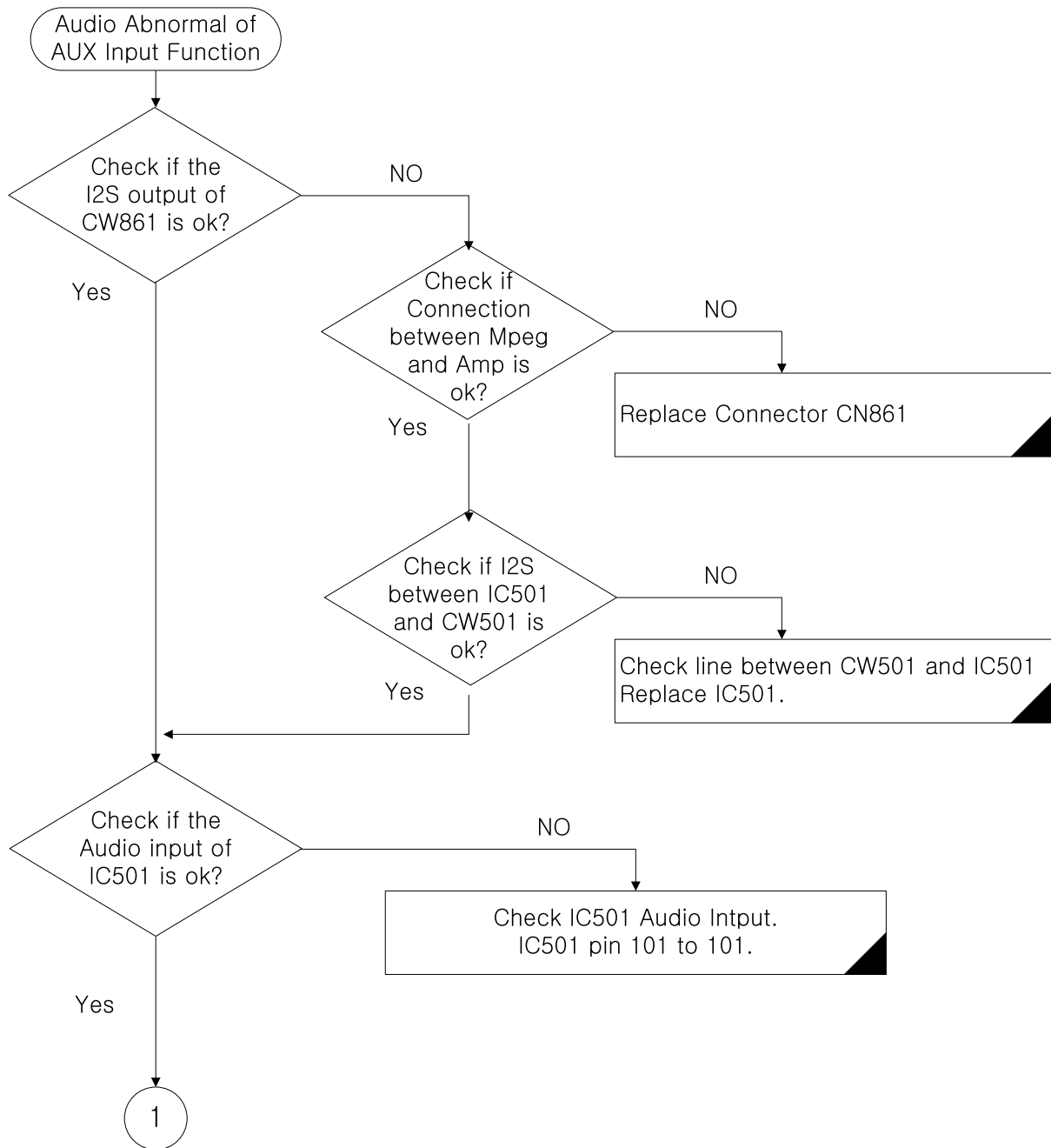
# Trouble Shooting Guide

## • Audio Abnormal



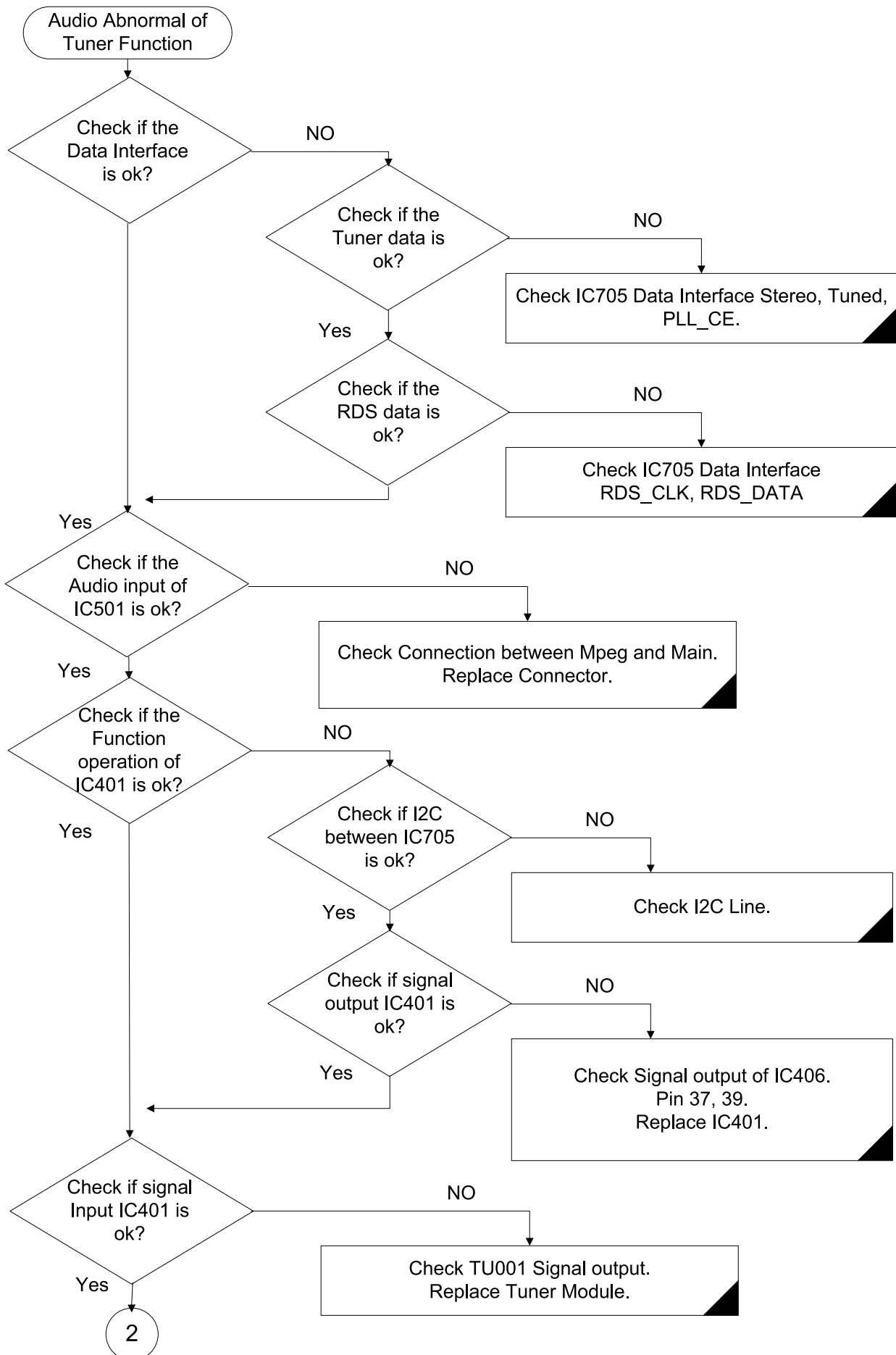
# Trouble Shooting Guide

## • Audio Abnormal



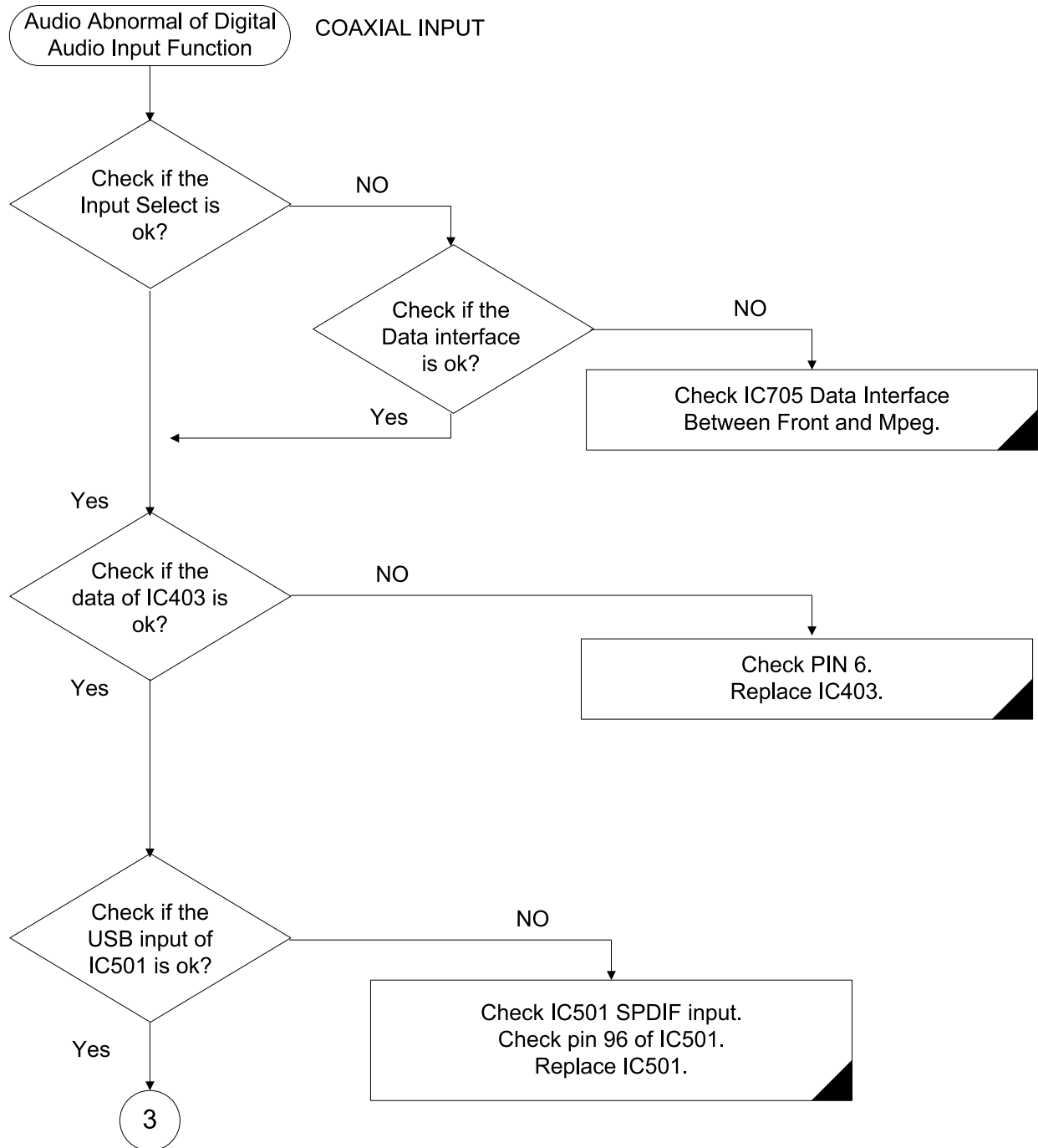
# Trouble Shooting Guide

## • Audio Abnormal



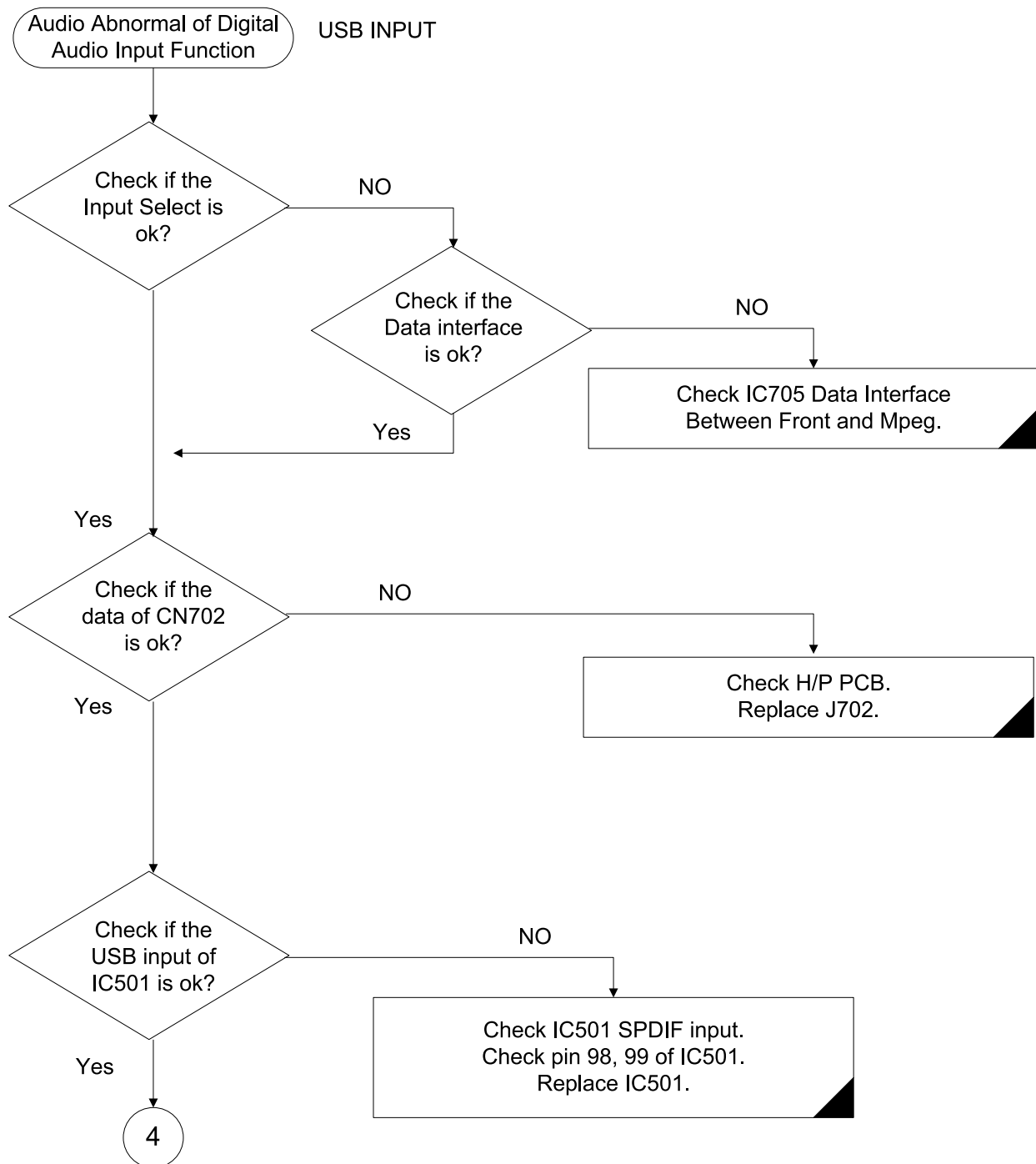
# Trouble Shooting Guide

## • Audio Abnormal



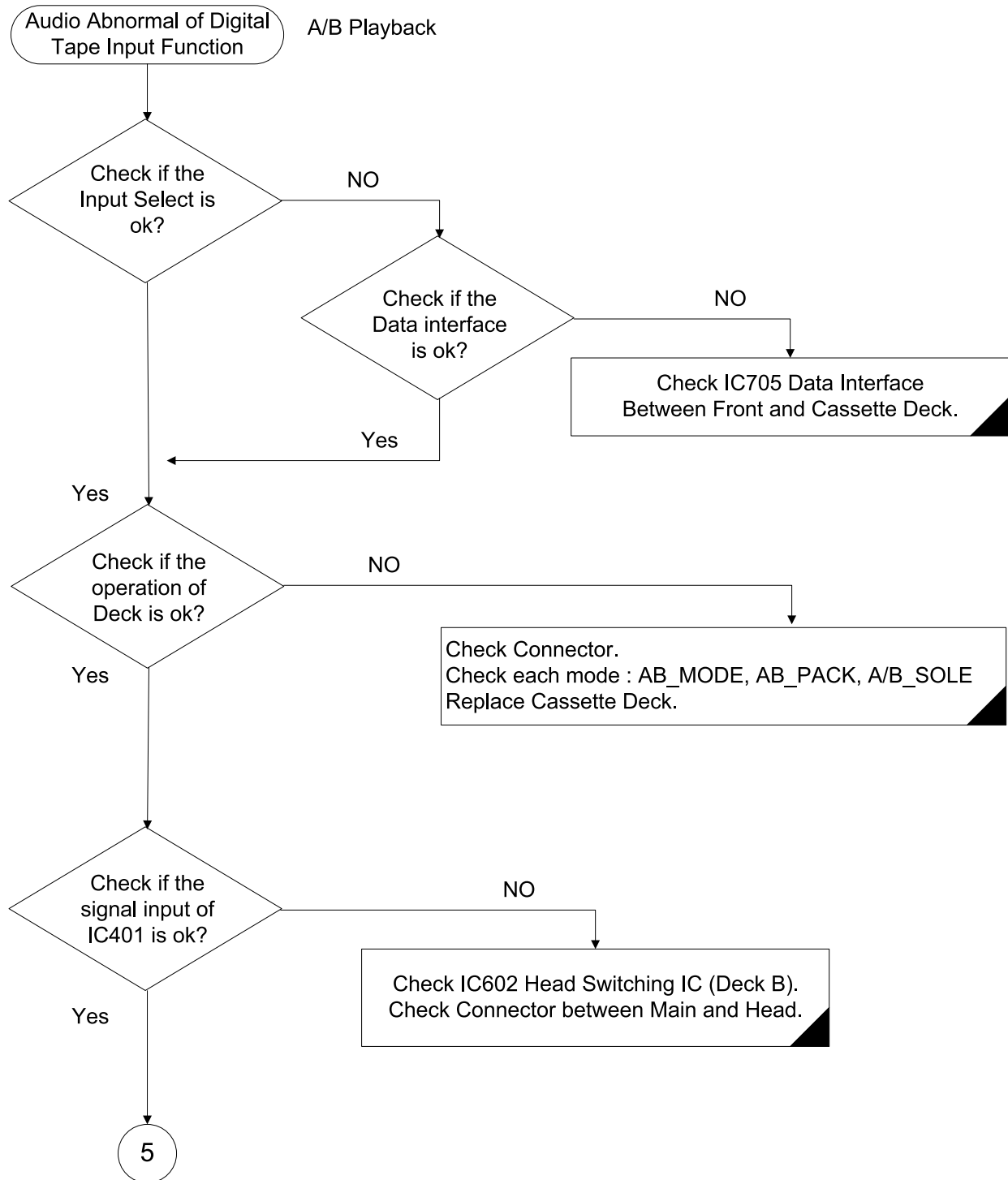
# Trouble Shooting Guide

## • Audio Abnormal



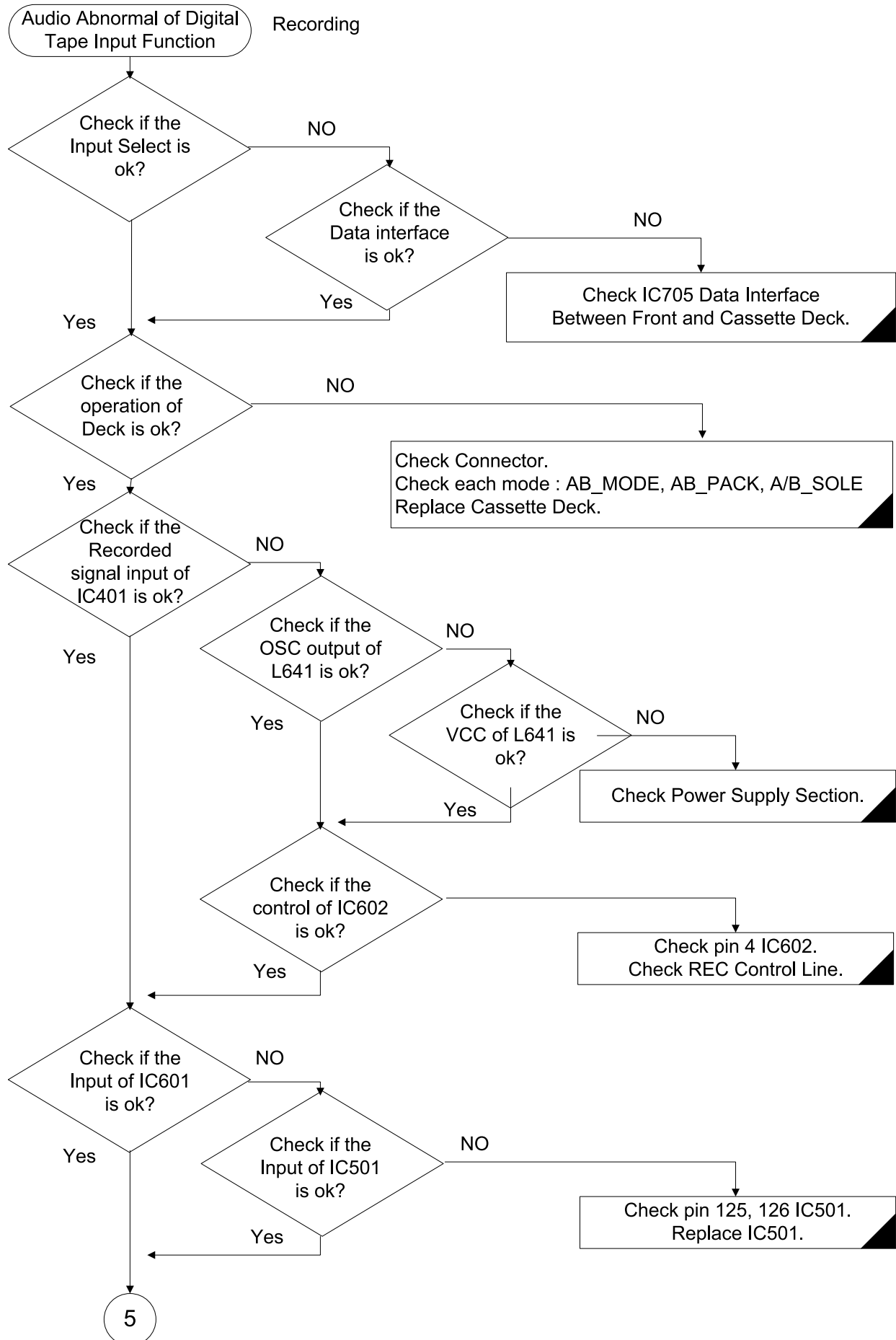
# Trouble Shooting Guide

## • Audio Abnormal



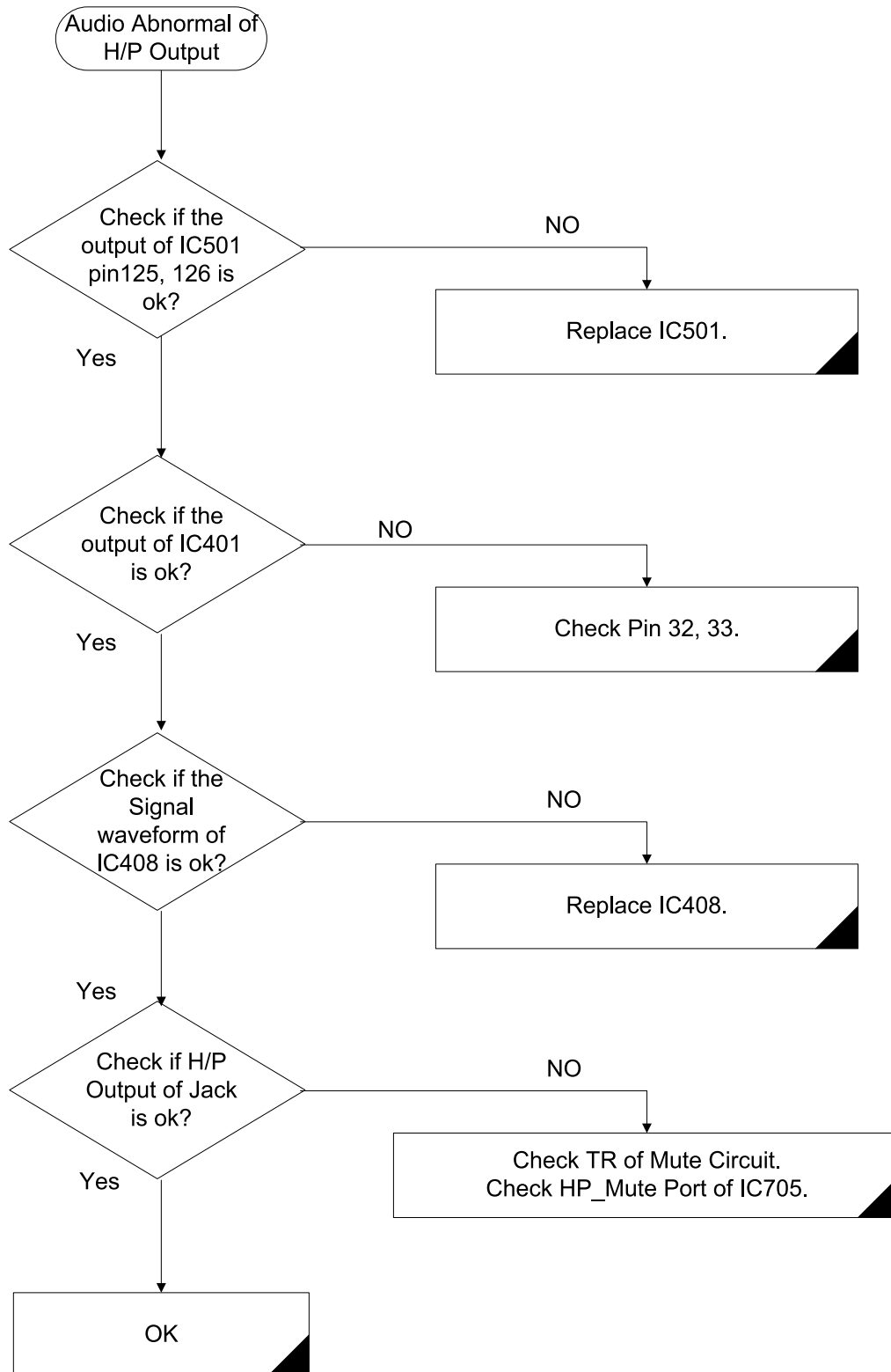
# Trouble Shooting Guide

## • Audio Abnormal



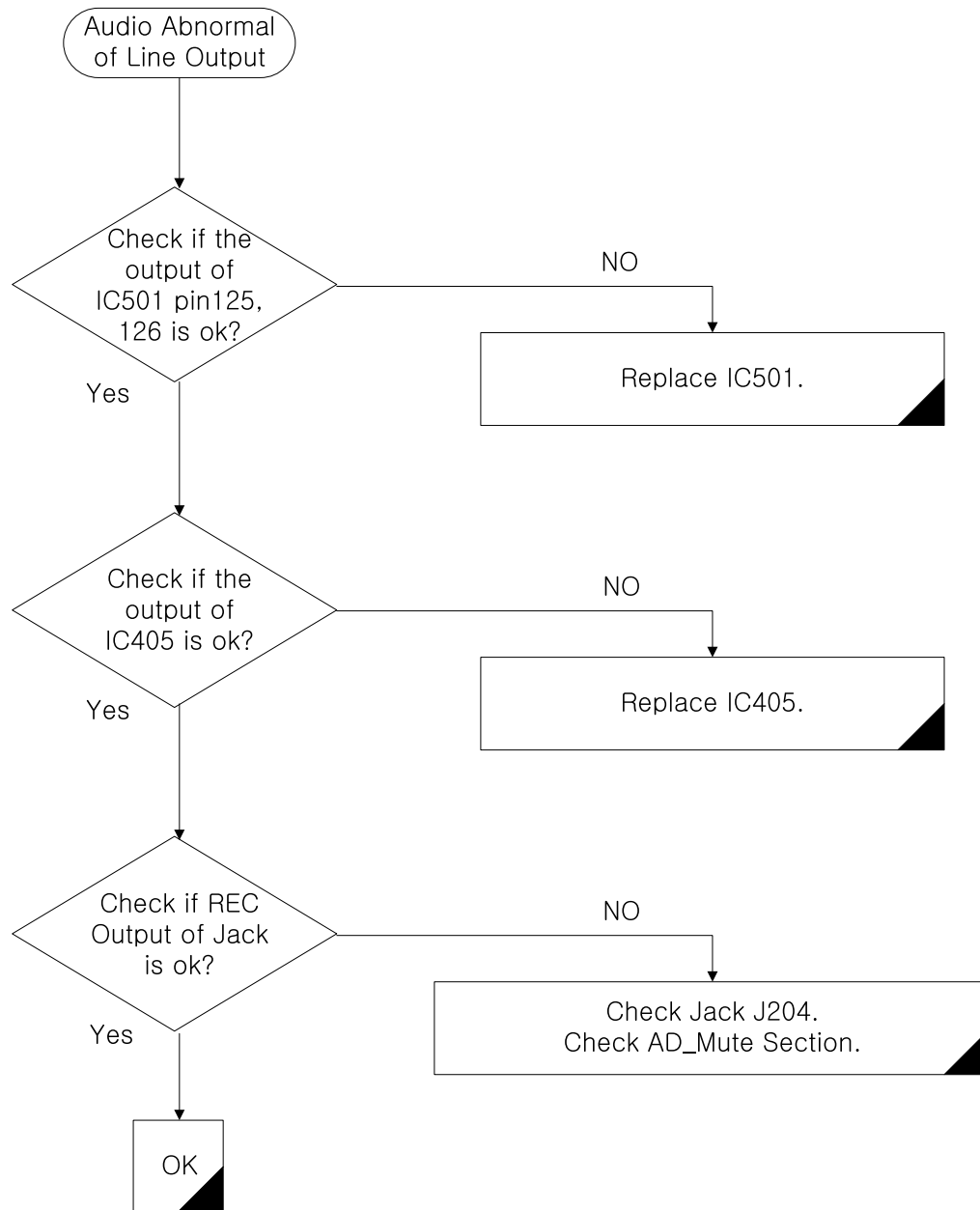
# Trouble Shooting Guide

## • Audio Line Out Abnormal



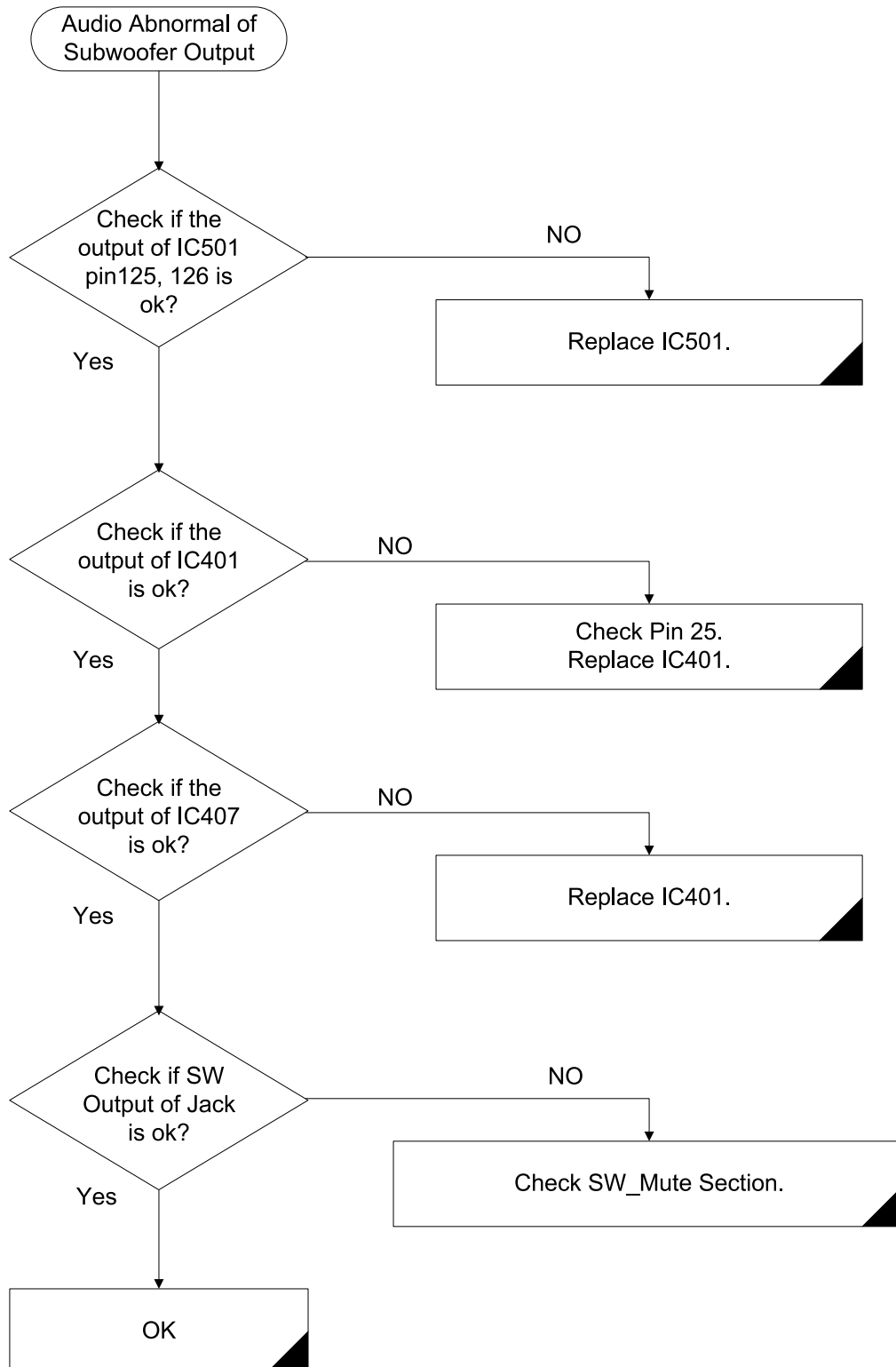
# Trouble Shooting Guide

## • Audio Line Out Abnormal



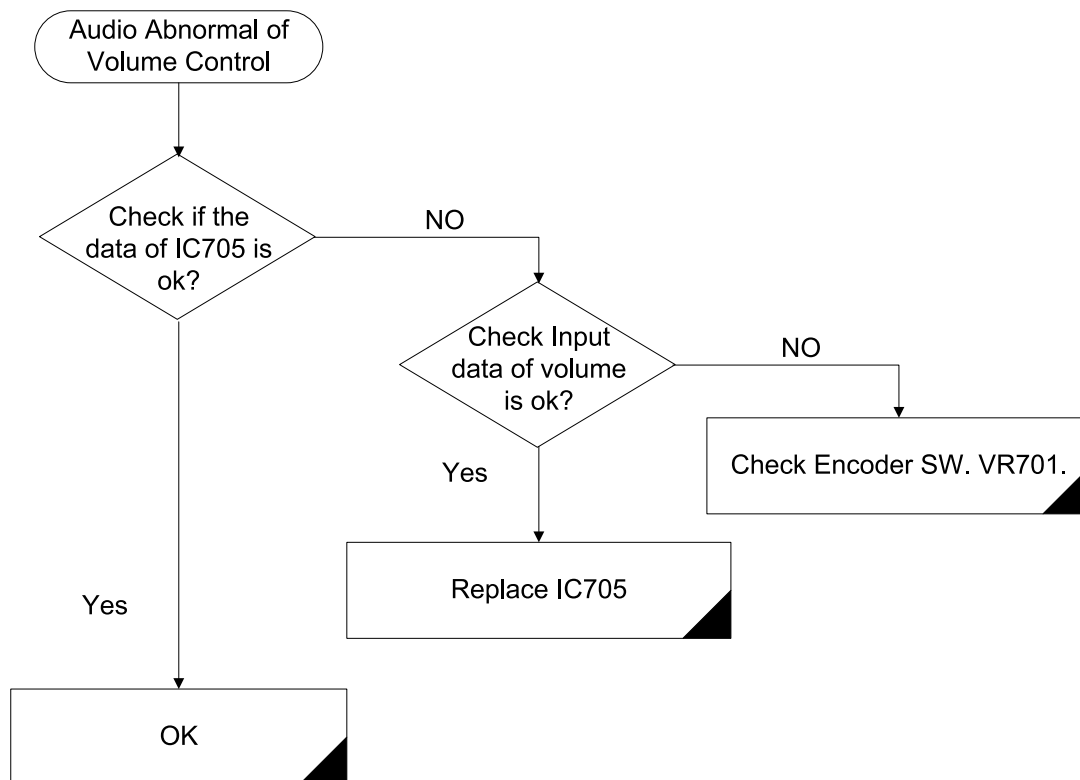
# Trouble Shooting Guide

## • Audio Line Out Abnormal

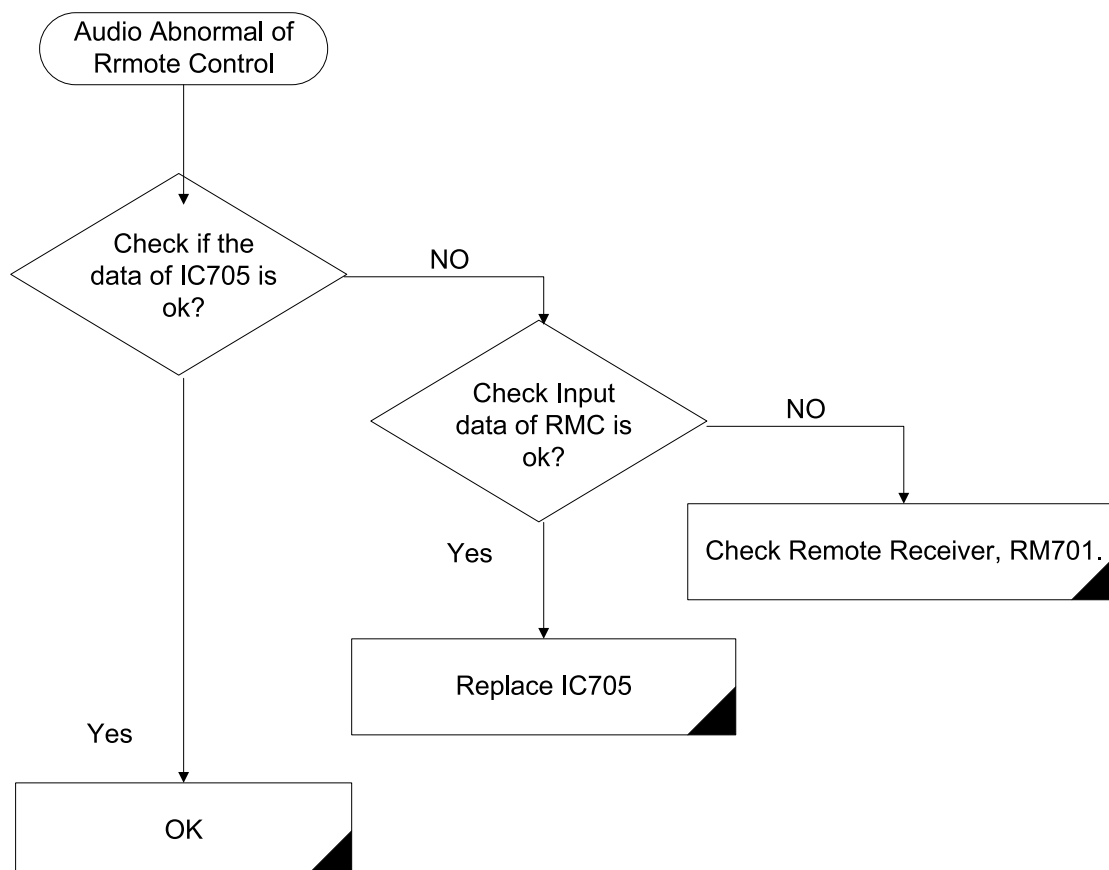


# Trouble Shooting Guide

## • Audio Control Abnormal

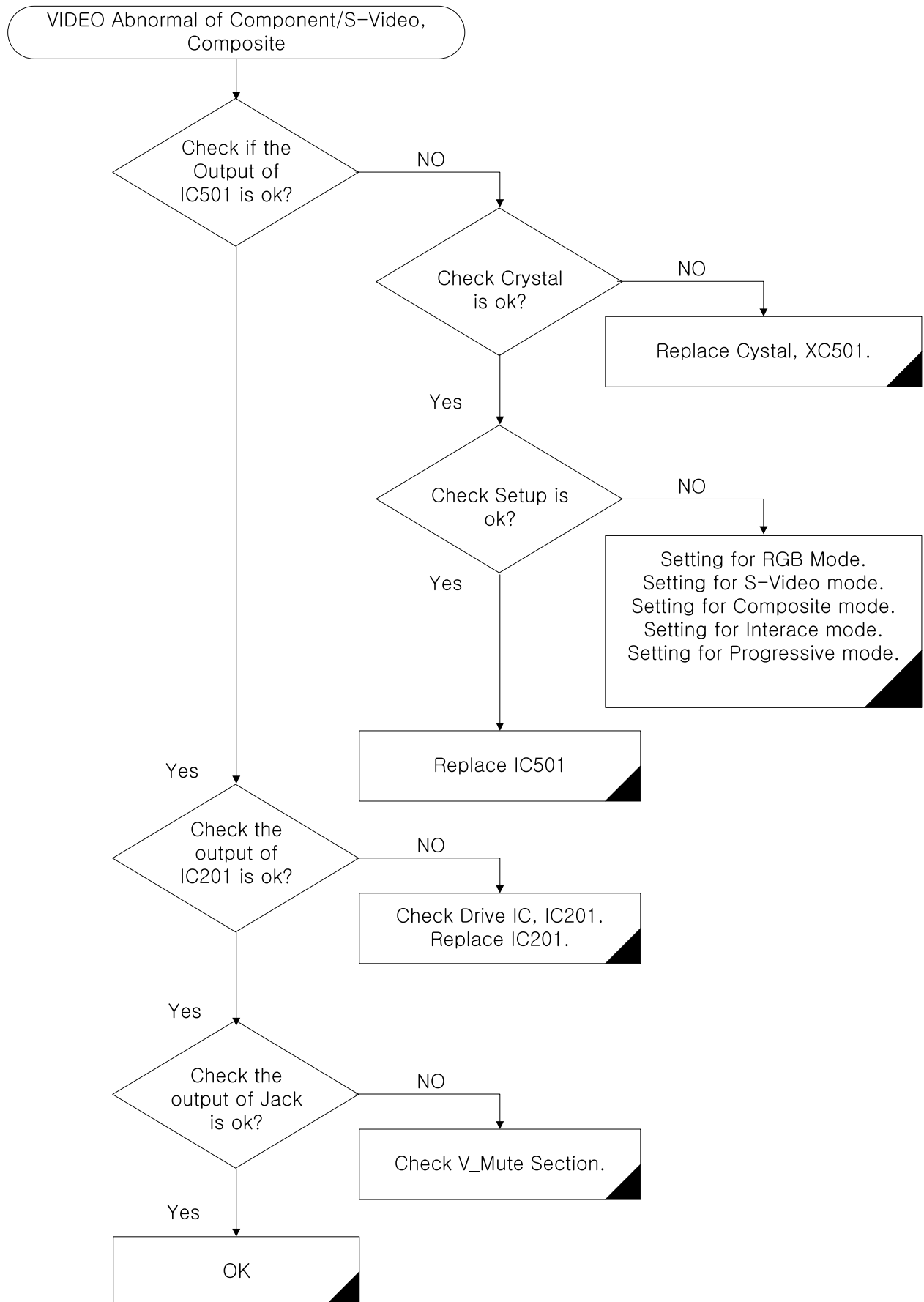


## • Audio Control Abnormal



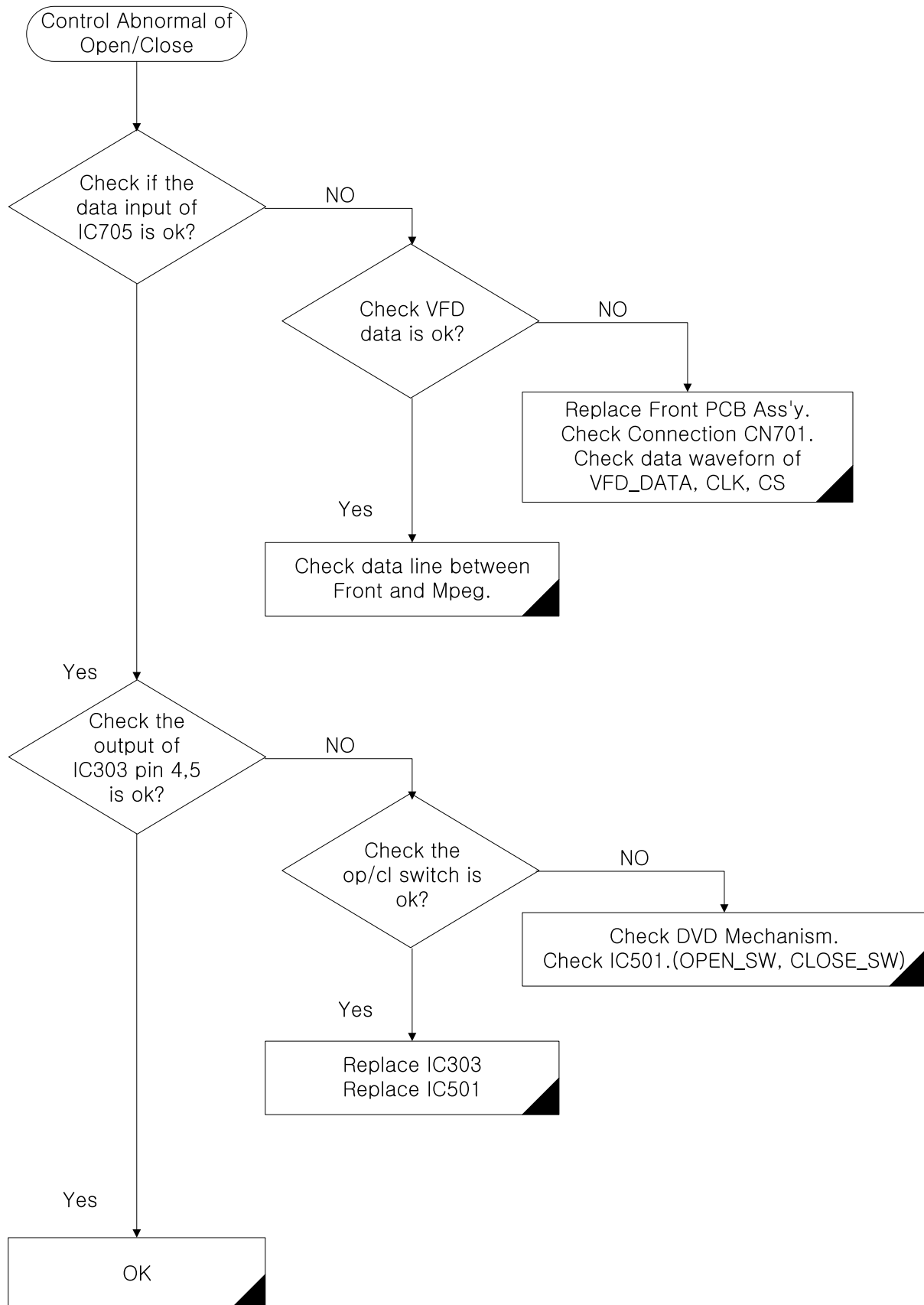
# Trouble Shooting Guide

## • Video Output Abnormal



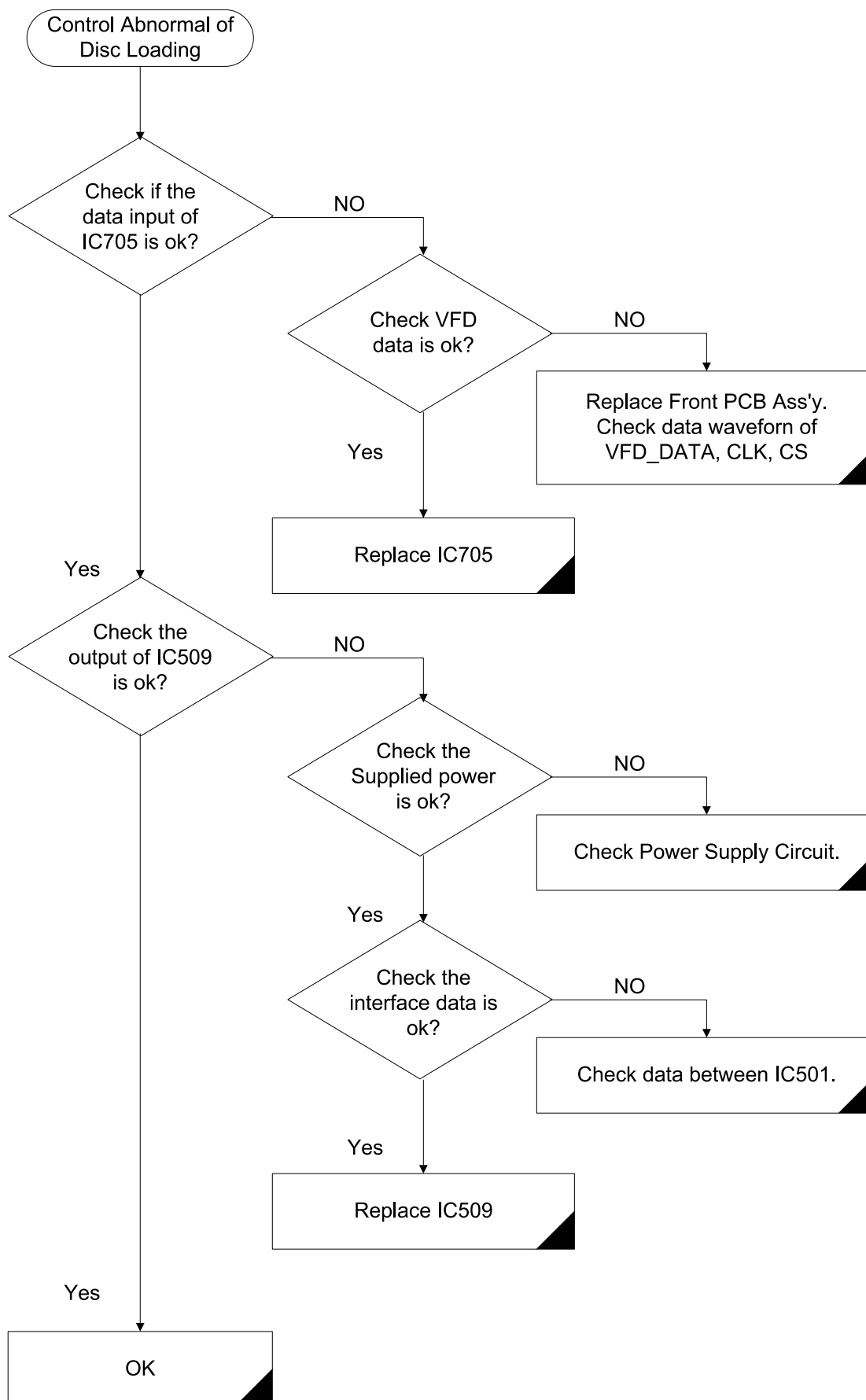
# Trouble Shooting Guide

## • Mechanical Control Abnormal



# Trouble Shooting Guide

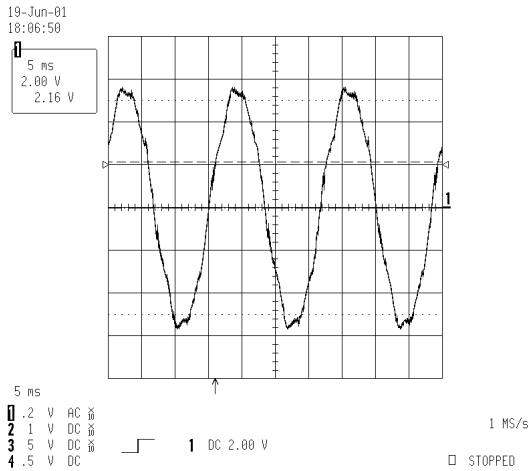
## • Mechanical Control Abnormal



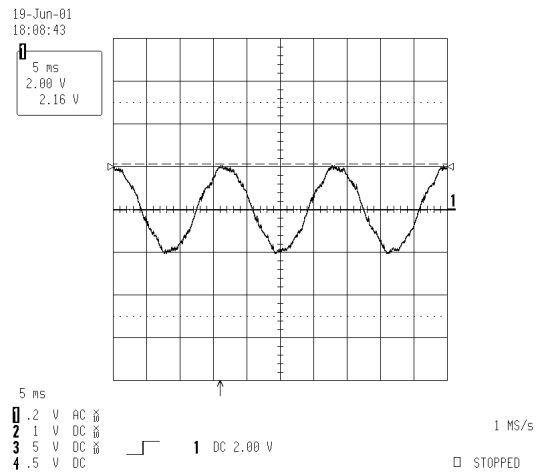
# Waveforms of Major Check Method

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

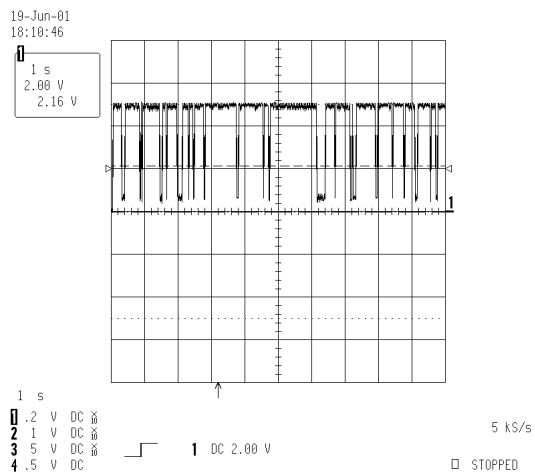
### ● Audio Out Signal Waveform



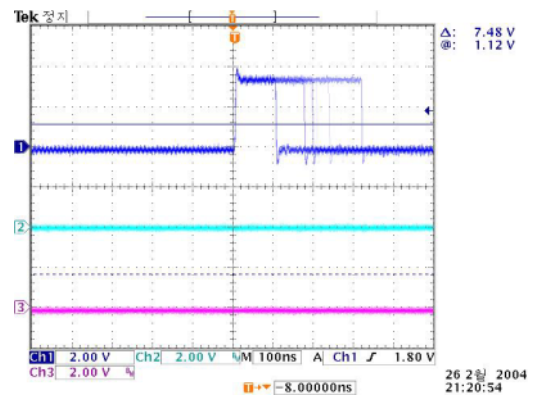
### ● DAC Output Signal Waveform



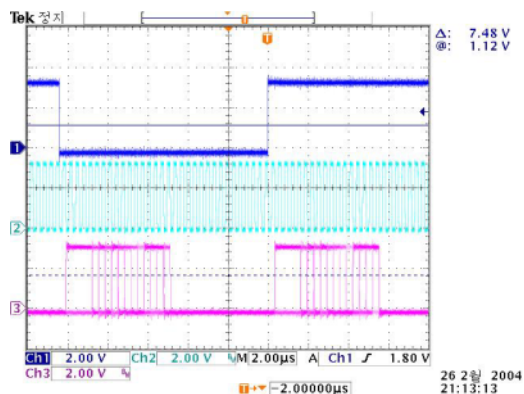
### ● Optical Output Audio Data Signal waveform



### ● PWM Output Waveform During Normal Play



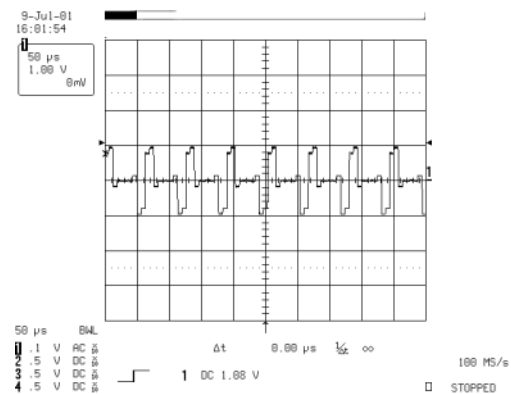
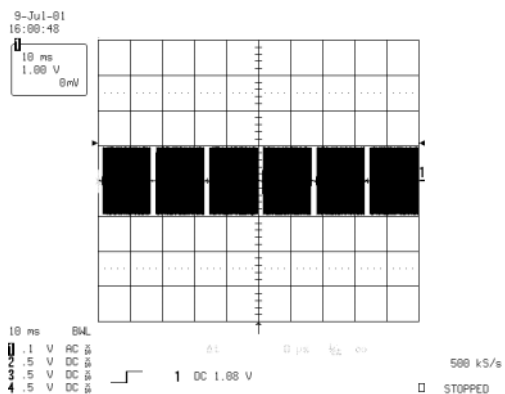
### ● Serial Data Output Waveform During Normal Play



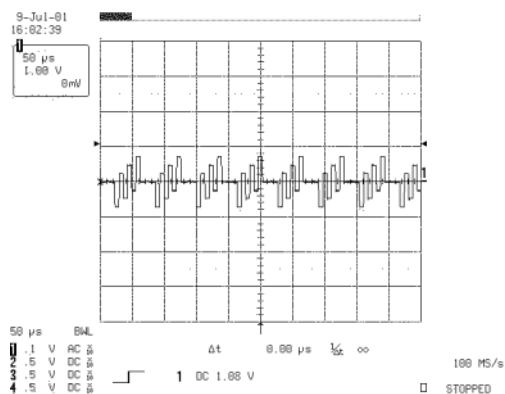
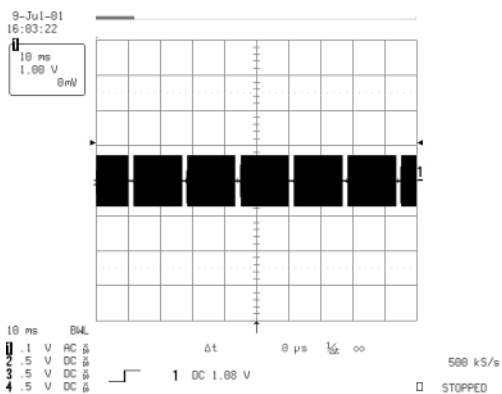
# Waveforms of Major Check Method

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

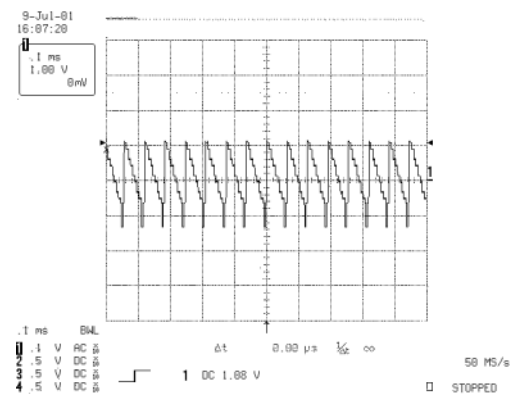
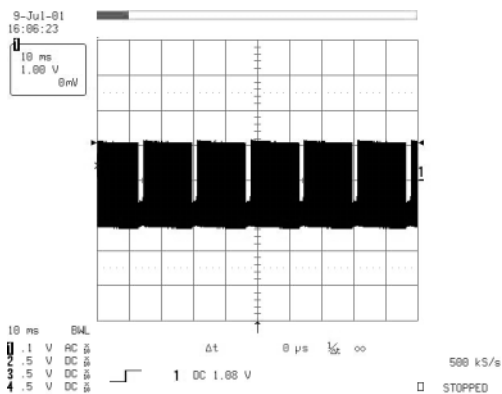
### ● Pr Output Data Waveform in Component Output



### ● Pb Output Data Waveform in Component Output



### ● Y Output Data Waveform in Component Output

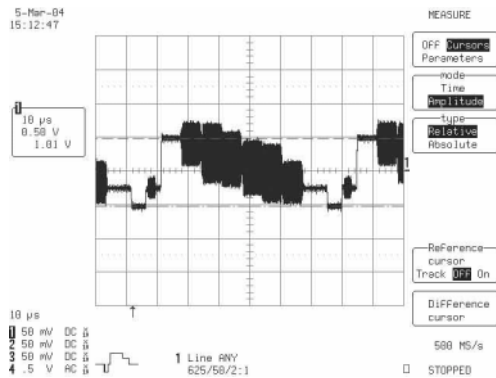


# Waveforms of Major Check Method

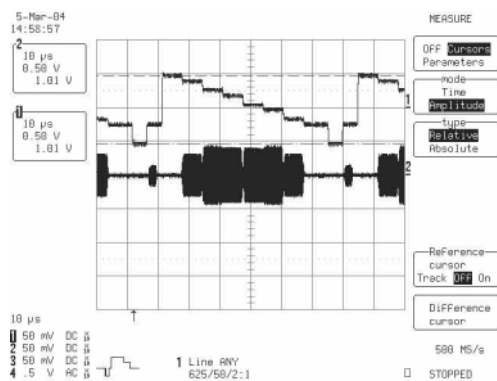
- MPEG

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

- Composite Output Data Waveform in Monitor Output



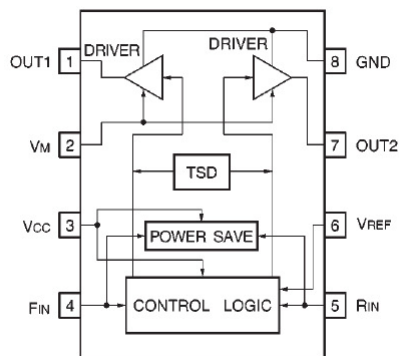
- S-Video Output Data Waveform



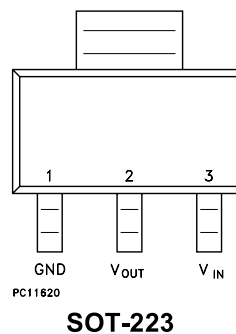


# Internal Block Diagram of ICs

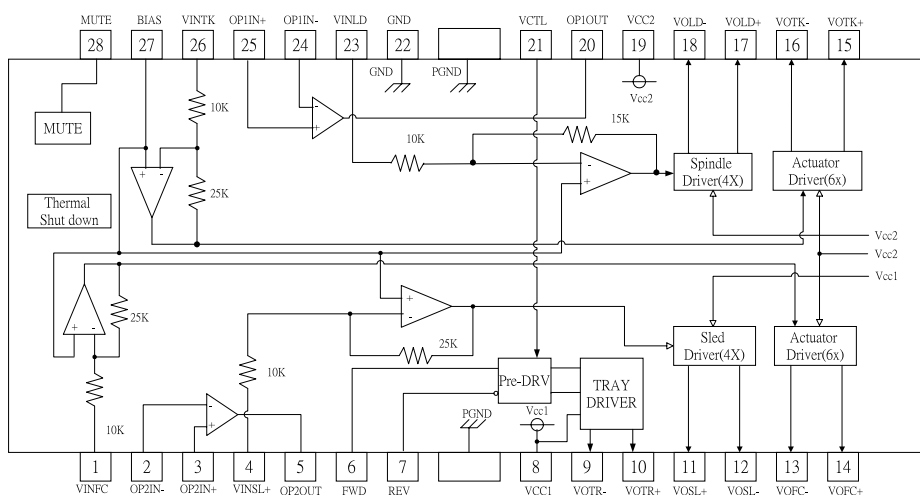
## • BA6287F



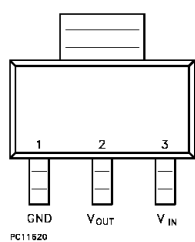
## • LD1117DT



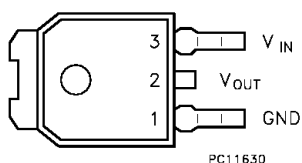
## • AM5888



## • LD1117A



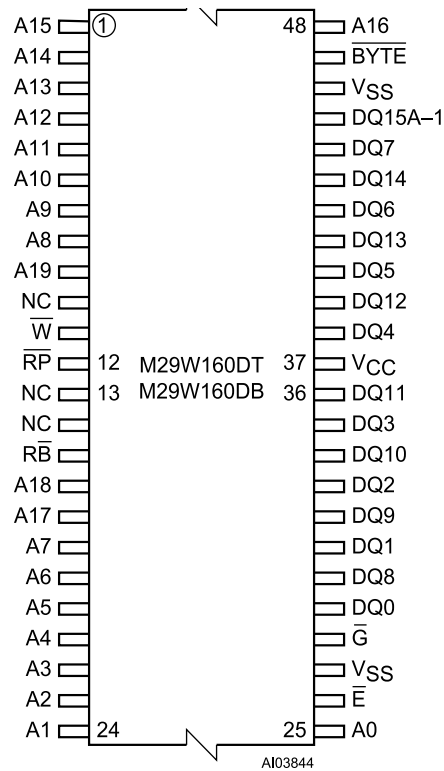
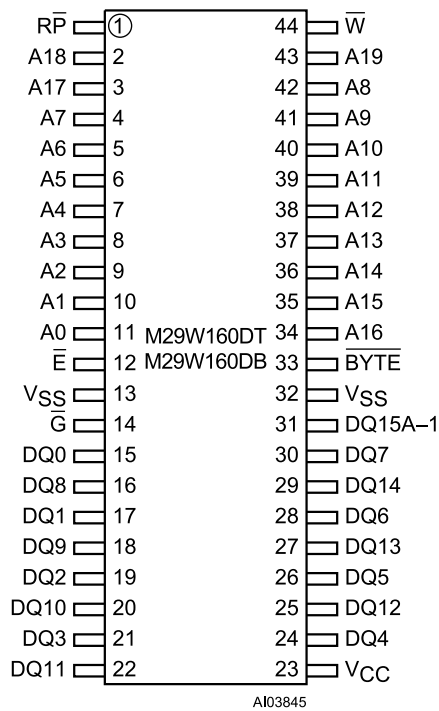
SOT-223



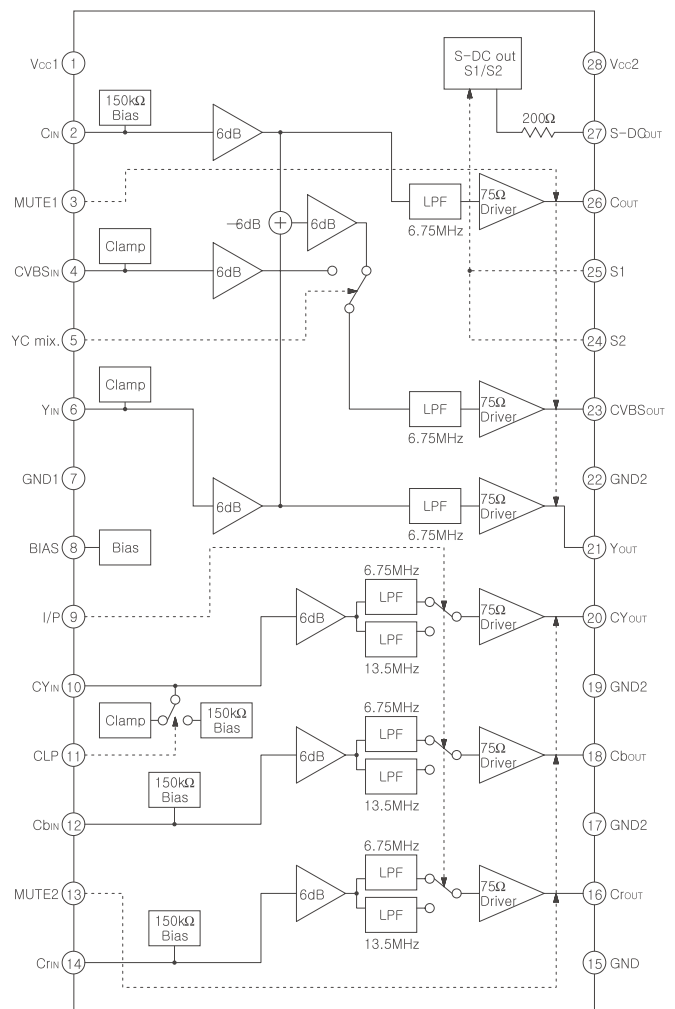
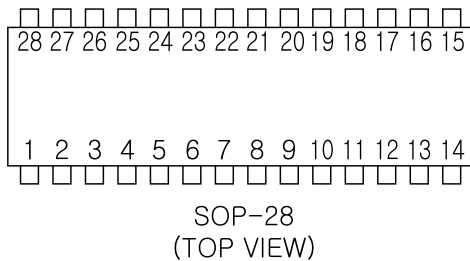
DPAK

# Internal Block Diagram of ICs

## • M29W160DB



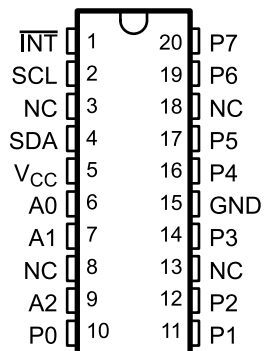
## • MM1623



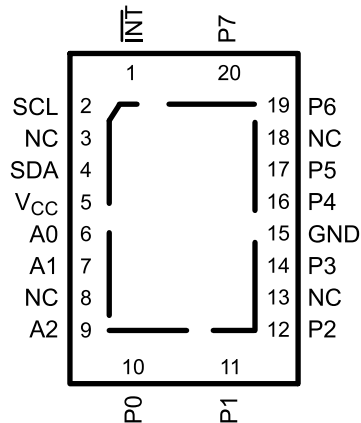
# Internal Block Diagram of ICs

## • PCF8574

DGV OR PW PACKAGE  
(TOP VIEW)

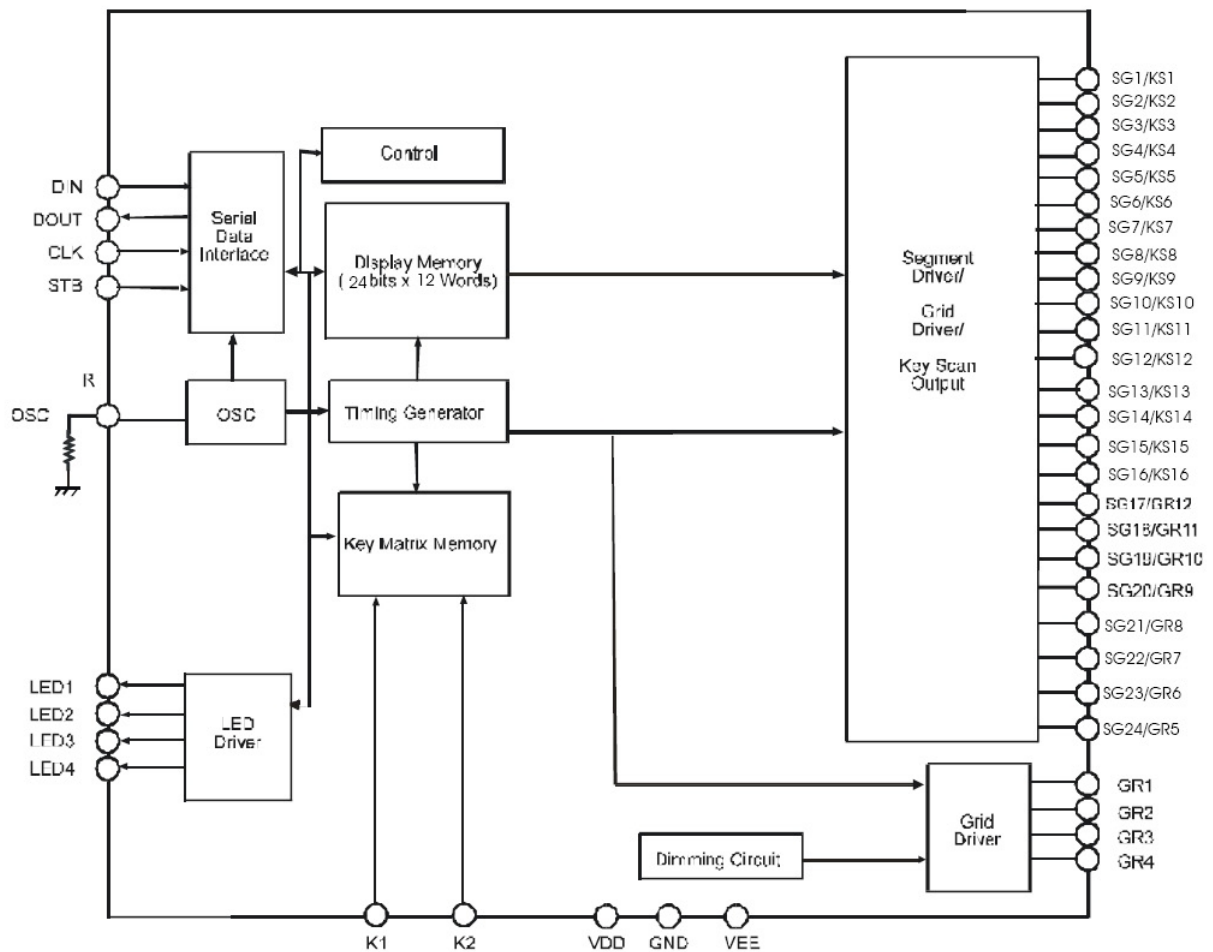


NC – No internal connection



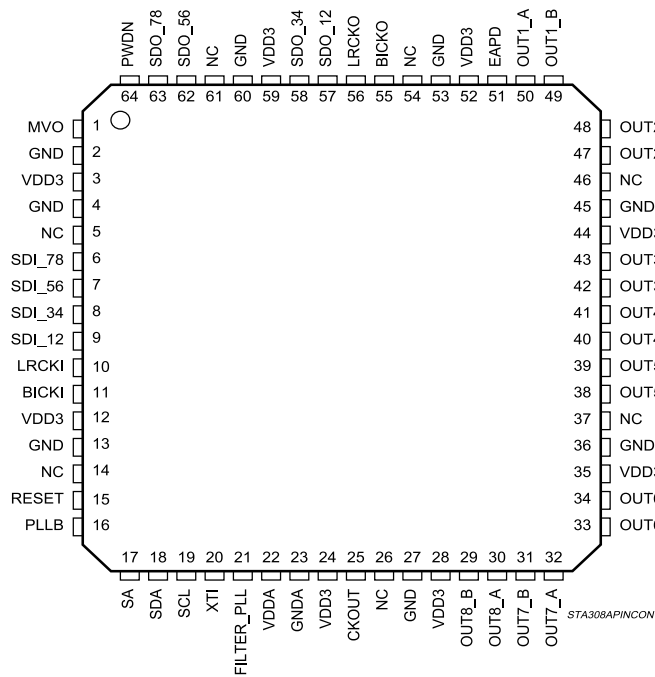
NC – No internal connection

## • PT6315

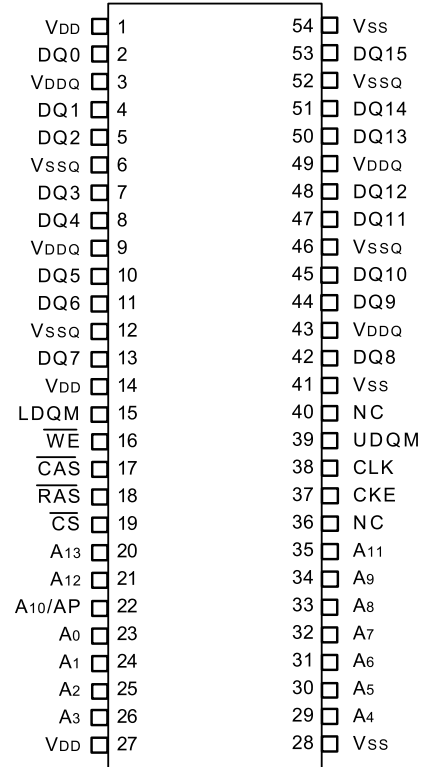


# Internal Block Diagram of ICs

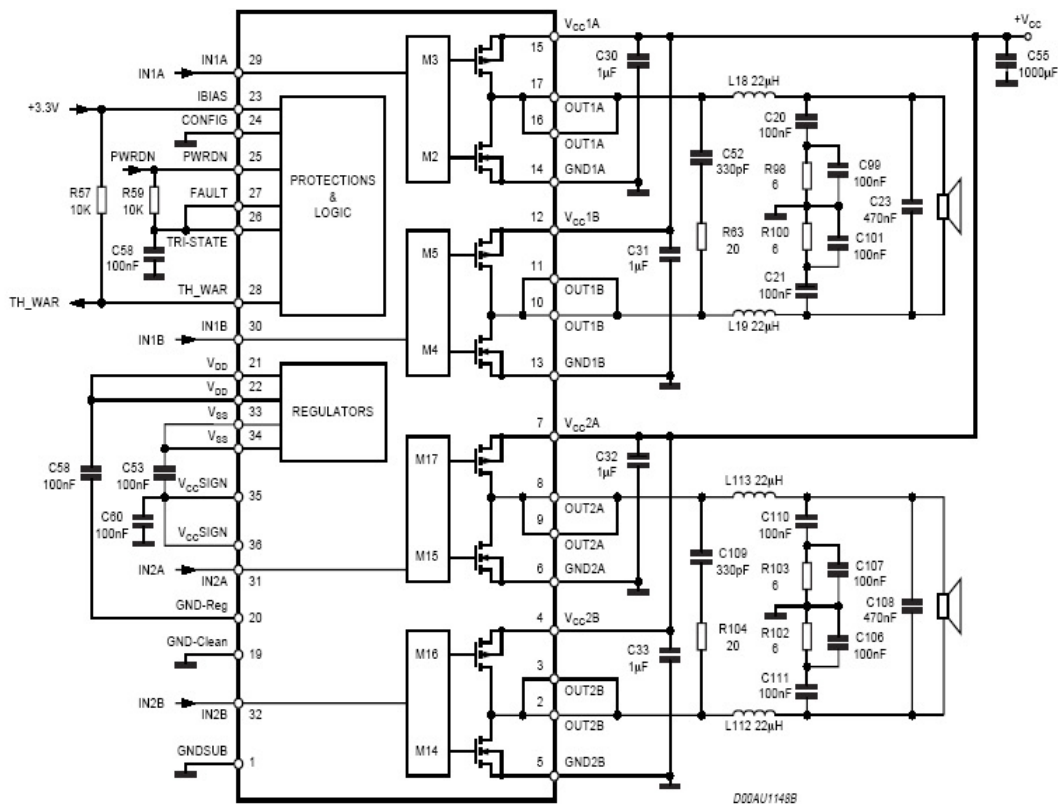
## • STA308A



## • M12L64164A



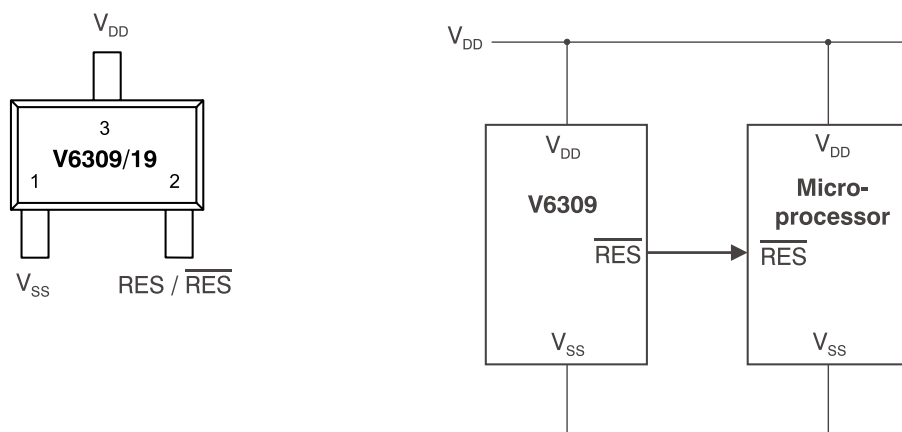
## • STA505



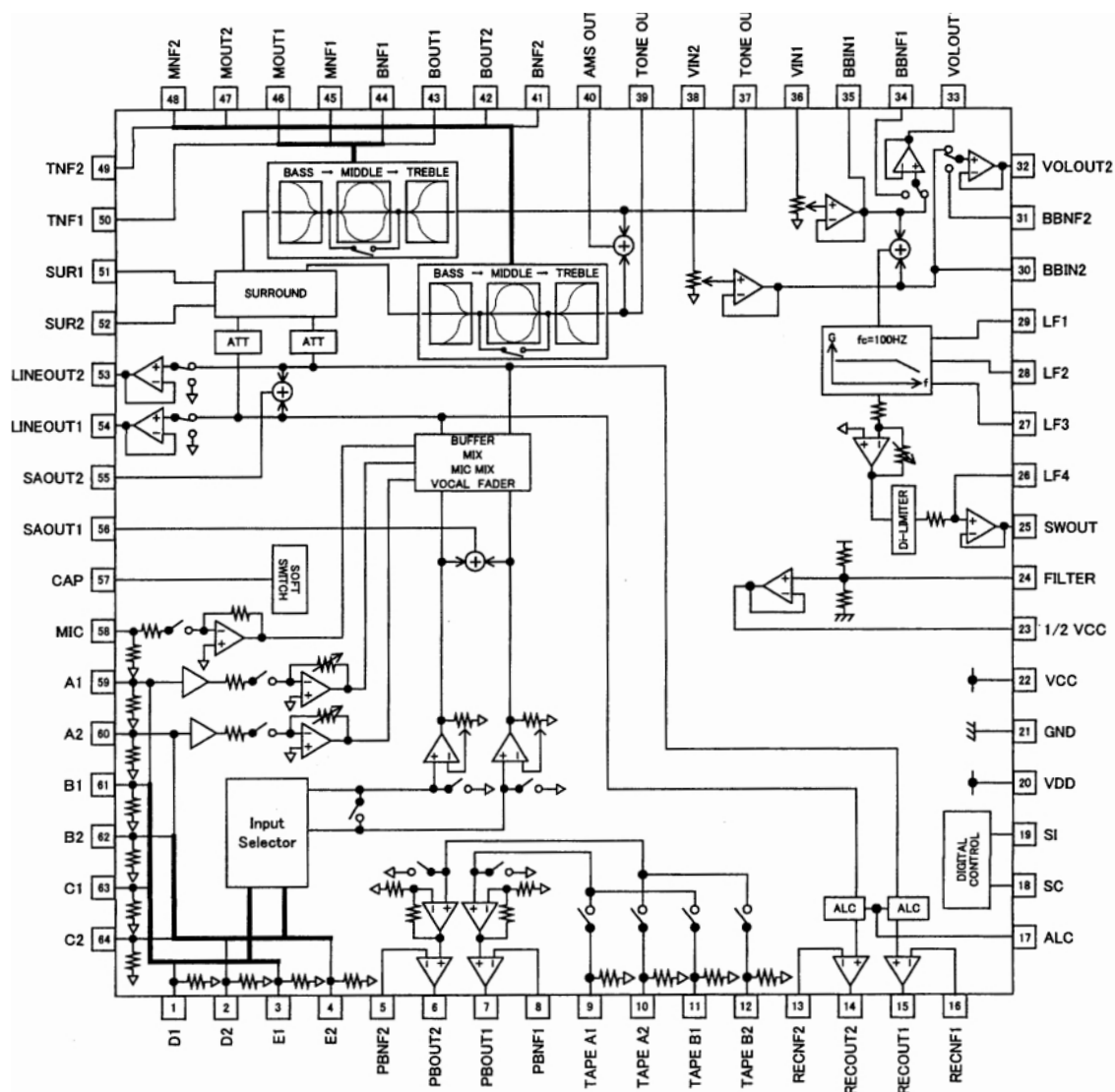
D00AU11468

# Internal Block Diagram of ICs

## • V6309

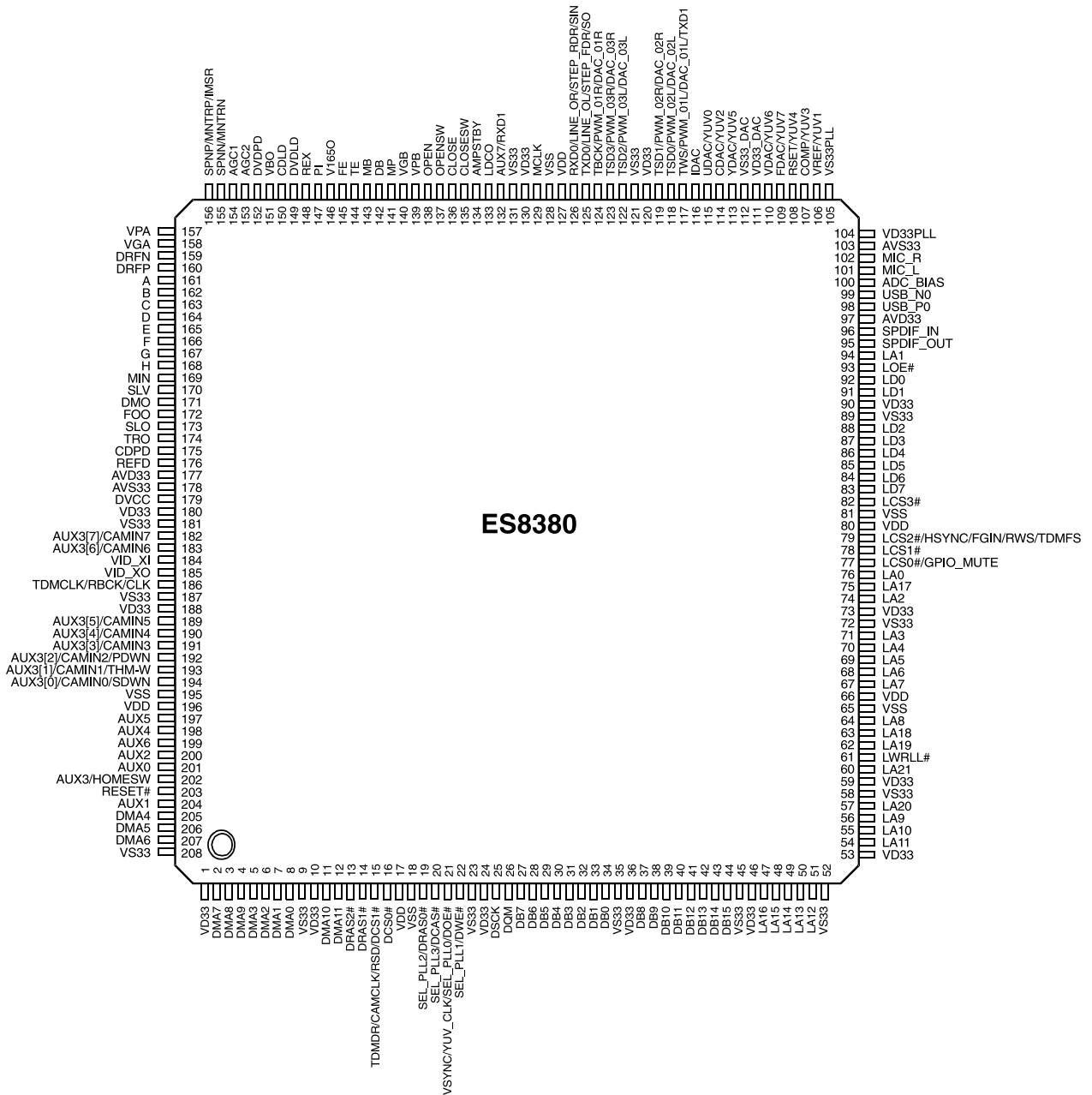


## • BD3401KS2(Bi)

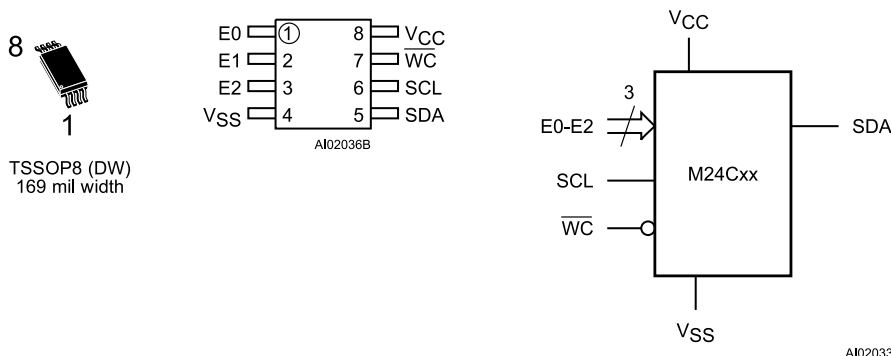


# Internal Block Diagram of ICs

## • ES8380FCA



## • M24C04



# 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<br>(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<br>(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      |        |