AVD-K600P

SERVICE MANUAL

US Model
Canadian Model

Ver. 1.2 2004.12

AVD-K600P is the amplifier, DVD/VIDEO player and tuner section in HT-V600DP.

DVD	Model Name Using Similar Mechanism	NEW
	Mechanism Type	DP-7C
	Optical Pick-up Name	PVR-502W
VCR	Mechanism Type	D35 (N)

SPECIFICATIONS

General

Power requirements	AC 120V, 60 Hz
Power consumption	74W
Dimensions (approx.)	430 x 97 x 386 mm (17 x 3 7/8 x 15 1/4 inches) (W x H x D)
Mass (approx.)	6.3 kg (13.15 lbs)
Operating temperature	5˚C to 35˚C (41˚F to 95˚F)
Operating humidity	5 % to 90 %
Signal system	NTSC

DVD Section

Laser system	Semiconductor laser, wavelength 650 nm
Frequency response	DVD (PCM 48 kHz): 8 Hz to 22 kHz, CD: 8 Hz to 20 kHz
Signal-to-noise ratio	More than 80 dB (AUDIO OUT jacks)
Harmonic distortion	Less than 0.3%
Dynamic range	More than 85 dB (AUDIO OUT jacks)

Inputs

ANTENNA IN	Antenna or CATV input, 75 ohms
VIDEO IN	1 Vp-p 75 ohms, sync negative, RCA jack x 1
AUDIO IN	-6.0 dBm more than 47 kohms, RCA jack (L, R) x 1
FM ANTENNA IN	FM antenna input, 300 ohms
AM ANTENNA IN	AM antenna input, 300 ohms
OPTICAL IN	Optical connector x 1

Outputs

VIDEO OUT	1 Vp-p 75 ohms, sync negative
S VIDEO OUT	(Y) 1.0 V (p-p), 75 ohms, negative sync, Mini DIN 4-pin x 1 (C) 0.286 V (p-p) 75 ohms
COMPONENT VIDEO OUT	(Y) 1.0 V (p-p), 75 ohms, negative sync, RCA jack x 1 (P_B/C_B)/(P_R/C_R) 0.7 V (p-p), 75 ohms, RCA jack x 2
Audio output (analog audio)	2.0 Vrms (1 KHz, 0 dB), 330 ohms, RCA jack (L, R) x 1
ANTENNA OUT	Channel 3 or 4 (Switchable)

VIDEO Section

Head system	4 heads helical scan azimuth system
Timer	12-hour display type with AM, PM
Tape speed	SP: 33.35 mm/sec, EP: 11.12 mm/sec
Tape width	12.7 mm
Maximum recording time	SP: 2 HOURS (T-120), EP: 6 HOURS (T-120)/8 HOURS (T-160)
Rewind time	About 150 seconds (T-120)
Antenna	75 ohms (VHF/UHF)
Channel coverage	VHF: 2-13, UHF: 14-69, CATV: 1-125 (4A, A-W, W+1 - W+84, A-5 - A-1)
Frequency range	20Hz to 20kHz
Signal-to-noise ratio	More than 43dB
Dynamic range	More than 85 dB (AUDIO OUT jacks)
Channel separation	More than 55 dB (AUDIO OUT jacks)

— Continued on next page —

DVD/VCR RECEIVER HOME THEATER SYSTEM

9-877-542-03
2004L16-1

Sony Corporation
Audio Group
Published by Sony Engineering Corporation

SONY®

FM Tuner

Tuning Range	87.5 - 108.0 MHz
Intermediate Frequency	10.7 MHz

AM Tuner

Tuning Range	530 - 1,720 kHz
Intermediate Frequency	450 kHz

AUDIO POWER SPECIFICATION

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 6 ohm loads, both channels driven, from 120 - 20,000 Hz; rated 70 watts per channel minimum RMS power, with no more than 10 % total harmonic distortion from 250 milli watts to rated output (USA model only).

Amplifier

Stereo mode	70W + 70W (6Ω at 1 kHz, THD 10 %)
Surround mode	Front: 70W/ch (6Ω at 1 kHz, THD 10 %) Center*: 70W (6Ω at 1 kHz, THD 10 %) Surround*: 70W/ch (6Ω at 1 kHz, THD 10 %) Subwoofer*: 100W (4Ω at 30 Hz, THD 10 %) * Depending on the sound mode settings and the source, there may be no sound output.
Inputs	VIDEO 1, VIDEO 2, OPTICAL IN

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth Ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

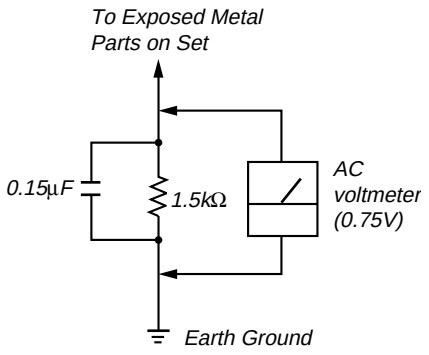


Fig. A. Using an AC voltmeter to check AC leakage.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output several times.

TABLE OF CONTENTS

SECTION 1
GENERAL

This section is extracted from instruction manual.

Front Panel

I / ⏻
Switches the DVD/VCR Receiver ON and OFF.

⏏ VIDEO
Ejects the tape in the VIDEO deck.

VIDEO 2 IN(VIDEO/AUDIO IN (Left/Right))
Connect the audio/video output of an external source (Audio system, TV/ Monitor, another VCR).

VOLUME
Adjusts sound level of speakers.

■ (STOP)
Stops playback or recording.

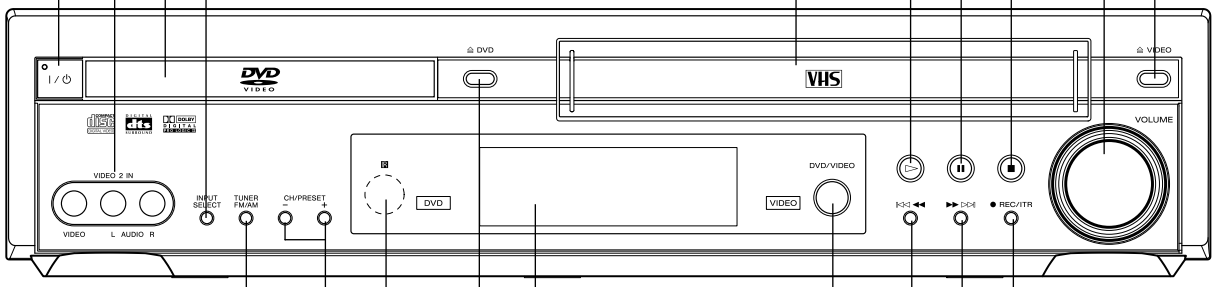
Disc Tray (DVD deck)
Insert a disc here.

❚❚ (PAUSE)
Pause playback or recording temporarily.

INPUT SELECT
Selects the VIDEO deck's source (Tuner, VIDEO 1 or VIDEO 2).

▷ (PLAY)
To play back a disc or a recorded tape.

Video Cassette Compartment (VIDEO deck)
Insert a video cassette here.



TUNER FM/AM
Selects Radio operation mode.

Display window
Shows the current status of the DVD/VCR Receiver.

CH/PRESET (+/–)
Scans up or down through memorized channels or radio frequencies (stations).

⏏ DVD
Opens or closes the disc tray.

DVD/VIDEO
Toggles control between the DVD deck and the VIDEO deck.

Remote Sensor
Point the DVD/VCR Receiver remote control here.

⏮ ◀◀
DVD: Go to beginning of current chapter/track or to previous chapter/track. Press and hold for a fast reverse search.
VIDEO: Rewinds the tape from STOP mode or for fast reverse picture search.

▶▶ ⏭
DVD: Go to NEXT chapter/track. Press and hold for a fast forward search.
VIDEO: Advances the tape from STOP mode or for fast forward picture search.

● REC/ITR
To record normally or to activate Instant Timer Recording.

Remote Control

VIDEO
Select the output source to VIDEO.

DVD
Sets the output source to DVD.

INPUT SELECT
Selects the VIDEO deck's source (L1 OPT, LINE1, LINE2, Tuner).

TUNER FM/AM
Selects the DVD/VCR Receiver's tuner as the listening choice. (FM and AM bands)

0-9 numerical buttons
Selects numbered options in a menu.

TUNING (+/–)
To tune in the desired station.

MEMORY
Memorize a radio station frequency into the tuner.

SHUFFLE
Plays tracks in random order.

PROGRAM
Enters to the program edit mode or exits from that.

● REC/ITR
Records normally or activates Instant Timer Recording.

TV/VIDEO
To view channels selected by the VIDEO tuner or by the TV tuner.

SP/EP
Selects recording speed.

CM SKIP
Fast forwards picture search through 30 seconds of recording.

ANGLE
Selects a DVD camera angle if available.

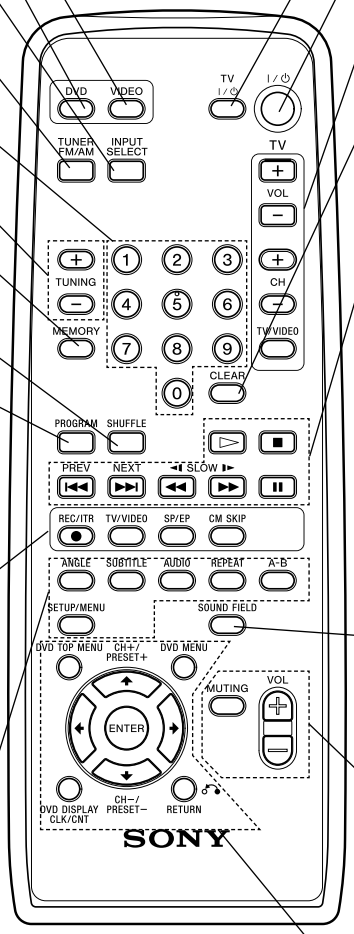
SUBTITLE
Selects a subtitle language.

AUDIO
Selects an audio language (DVD) or an audio channel (CD).

REPEAT
Repeat chapter, track, title, all.

A-B
Repeats sequence.

SETUP/MENU
Accesses or returns DVD setup menu and VIDEO setup menu.



TV I / ⏻
Switches TV ON and OFF.

I / ⏻
Switches DVD/VCR Receiver ON and OFF.

TV Control Buttons (see page 40)
- **VOL +/–:** Adjusts TV's volume.
- **CH +/–:** Selects TV's channel.
- **TV/VIDEO:** Selects the TV's source.

CLEAR
Removes a track number on the program menu. To clear preset stations from the tuner memory.

Playback Control Buttons
- ▷ **(PLAY)**
  Starts playback.
- ■ **(STOP)**
  Stops playback.
- I◀◀ **(PREV) (DVD mode only)**
  Go to beginning of current chapter or track or go to previous chapter or track.
- ▶▶I **(NEXT) (DVD mode only)**
  Go to next chapter or track.
- ◀◀/▶▶ **(SLOW ◀II/II▶)**
  DVD: For picture search or slow playback backward or forward.
  VIDEO: Rewinds or advances the tape in STOP mode or for picture search.
- II **(PAUSE)**
  Pause playback or recording temporarily.

SOUND FIELD
Selects sound mode between BYPASS, PRO LOGIC, PRO LOGIC II (MOVIE, MUSIC, MATRIX) and 3D SURROUND.

VOL (+/-)
Adjusts speaker volume.

MUTING
Momentarily silence the speaker of the DVD/VCR Receiver.

DVD TOP MENU
Displays the disc's Title menu, if available.

DVD MENU
Accesses menu on a DVD disc.

←/→/↑/↓ (left/right/up/down)
Selects an option in the menu.
CH/PRESET(+/–): Selects a program of VIDEO or Tuner. Adjusts manually the tape's picture onscreen.

ENTER
Acknowledges menu selection.

DVD DISPLAY, CLK/CNT
Accesses On-Screen display. Switches among the clock and tape counter.

RETURN
Returns the setup menu.

Note
This remote control uses the same buttons for VIDEO and DVD functions (ex. PLAY).
To use the VIDEO, first press the VIDEO button.
To use the DVD, first press the DVD button.

Rear Panel

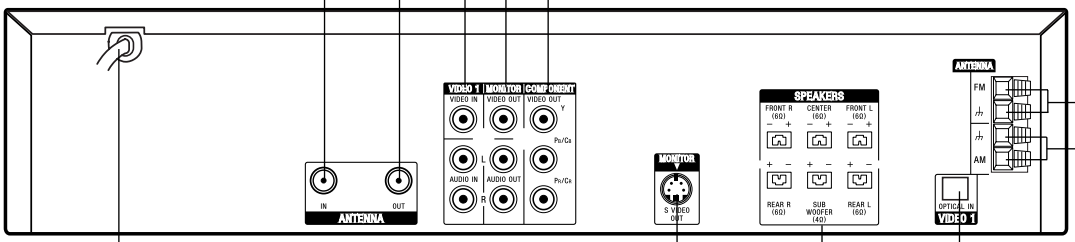
VIDEO 1 (VIDEO/AUDIO IN (Left/Right))
Connect the audio/video output of an external source (Audio system, TV/Monitor, Another VCR).

MONITOR (VIDEO / AUDIO OUT (Left/Right))
Connect to a TV with video and audio inputs.

COMPONENT VIDEO OUT (Y PB/CB PR/CR) (DVD OUT)
Connect to a TV with Y PB/CB PR/CR inputs. FOR DVD VIEWING ONLY.

ANTENNA OUT (DVD/VIDEO OUT)
Connect to a TV with RF coaxial inputs.

ANTENNA IN
Connect the VHF/UHF/CATV antenna to this terminal.



AC Power Cord
Plug into the power source.

MONITOR S VIDEO OUT (DVD OUT)
Connect to a S Video Input on TV. FOR DVD VIEWING ONLY.

SPEAKERS Connectors
Connect the six supplied speakers to these terminals.

OPTICAL IN
Connect to a digital audio output on a digital device.

AM ANTENNA Connectors
Connect the AM antenna to this terminal.

FM ANTENNA Connectors
Connect the FM antenna to this terminal.

Setting the Clock

The DVD/VCR Receiver gives you two ways to set the time and date: the Auto Clock Feature or manually. The Auto Clock feature enables the DVD/VCR Receiver to set up the clock while the DVD/VCR Receiver is turned off.

Things to know before starting

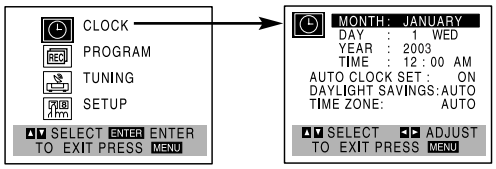
- The clock uses the 12-hour system. (Be sure to set AM and PM correctly.)
- The initial Clock Setting is **JANUARY 1, 2003, 12:00 AM**.

Auto Clock Set

The Auto Clock Set feature is set to ON at the factory. In the ON setting, the DVD/VCR Receiver looks for a channel carrying XDS (Extended Data Services) information. XDS updates the clock using the Coordinated Universal Time.
The Auto Clock feature enables the DVD/VCR Receiver to set up the clock while the DVD/VCR Receiver is turned off.

1 Press SETUP/MENU and the MAIN menu will appear.

2 Use ↑/↓ to select the CLOCK menu.
Press ENTER and the CLOCK menu will appear.



3 Use ↓ to select the AUTO CLOCK SET option.
Use ←/→ to select ON.
The Auto Clock Set feature is set to ON at the factory. In the ON setting, the DVD/VCR Receiver looks for a channel carrying XDS (Extended Data Services) information. XDS updates the clock using the Coordinated Universal Time.

4 Use ↓ to select the DAYLIGHT SAVINGS option.
Use ←/→ to select AUTO, ON, or OFF.
If you select AUTO, the DVD/VCR Receiver sets the clock using the DST information broadcast in the signal (channel). If you select ON, the DVD/VCR Receiver adjusts the clock for Daylight Saving Time automatically.

5 Use ↓ to select the TIME ZONE option.
Use ←/→ to select the correct time zone (AUTO, EASTERN, CENTRAL, MOUNTAIN, PACIFIC, ALASKA or HAWAII).
If "AUTO" is selected as the time zone, the DVD/VCR Receiver sets the clock using the first Coordinated Universal Time information it finds in a broadcast signal.

6 Press SETUP/MENU to return to the TV screen.

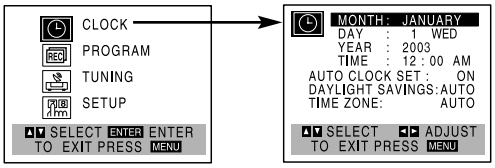
7 Turn off the DVD/VCR Receiver and the auto clock set feature sets the time.

Note
There are cases where the TV station does not send or sends the wrong time. Therefore, the incorrect time will be set. If this happens we recommend that you set the clock manually.

Manual Clock Set

1 Press SETUP/MENU and the MAIN menu will appear.

2 Use ↑/↓ to select the CLOCK menu.
Press ENTER and the CLOCK menu will appear.



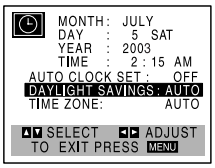
3 Use ←/→ to select the month.

4 Use ↓ to select the DAY option.
Use ←/→ to select the date.
The day of the week will display automatically.

5 Use ↓ to select the YEAR option.
Use ←/→ to select the year.

6 Use ↓ to select the TIME option.
Use ←/→ to select the time.
Press and hold ←/→ to advance clock continuously.

7 Use ↓ to select the DAYLIGHT SAVINGS option.
Use ←/→ to select AUTO, ON, or OFF.
If you select AUTO, the VIDEO sets the clock using the DST information broadcast in the signal (channel).
If you select ON, the VIDEO adjusts the clock for Daylight Saving Time automatically.

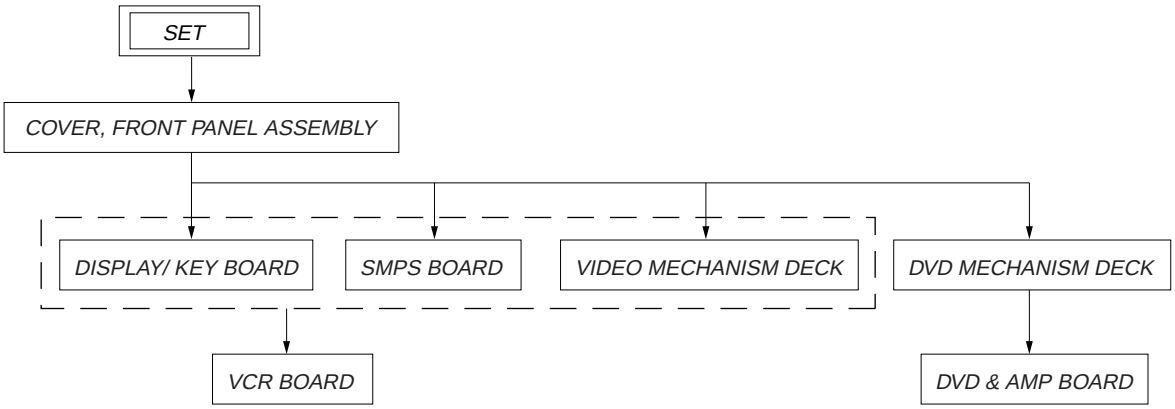


8 Press SETUP/MENU to return to the TV screen.

Notes
- If setting the clock manually, "AUTO CLOCK SET" must set to "OFF". If set to "ON", an incorrect date and/or time will be entered again when the DVD/VCR Receiver is turned off.
- "--:-- --" appears in the display window during clock setting.

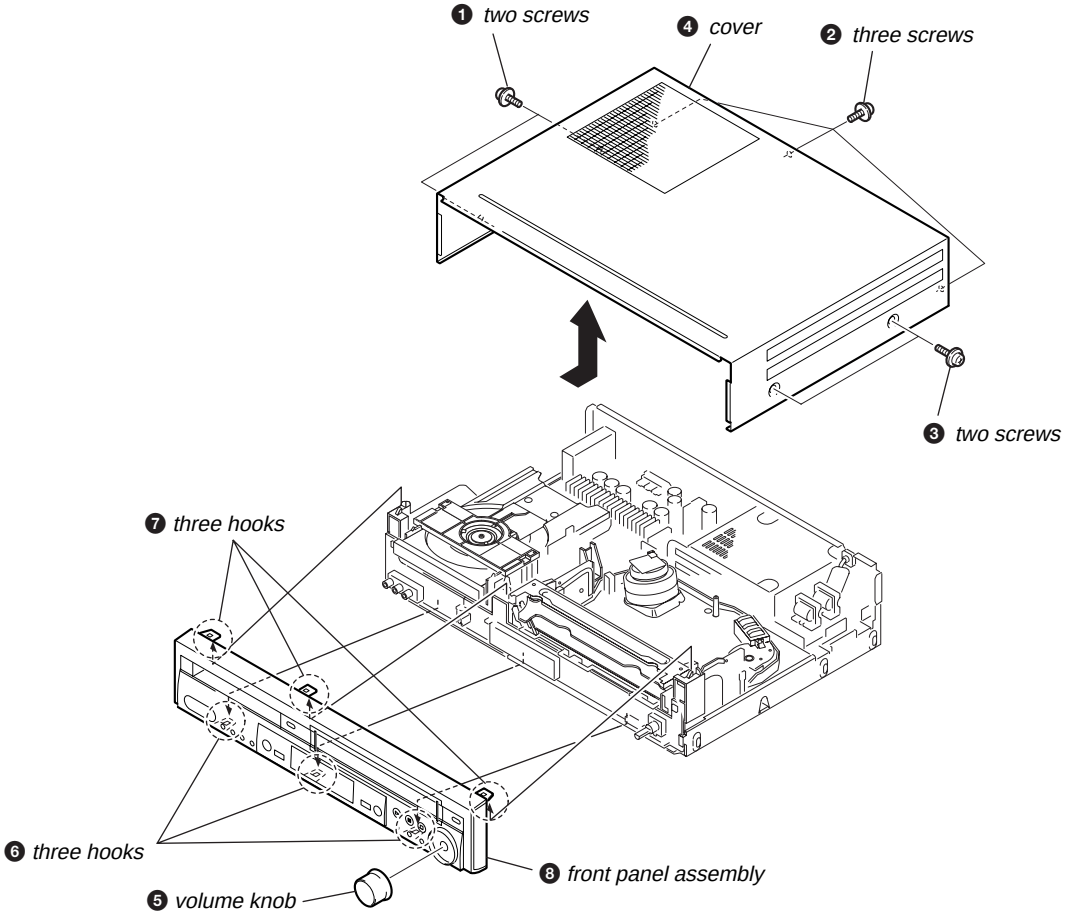
SECTION 2
DISASSEMBLY

• The equipment can be removed using the following procedure.

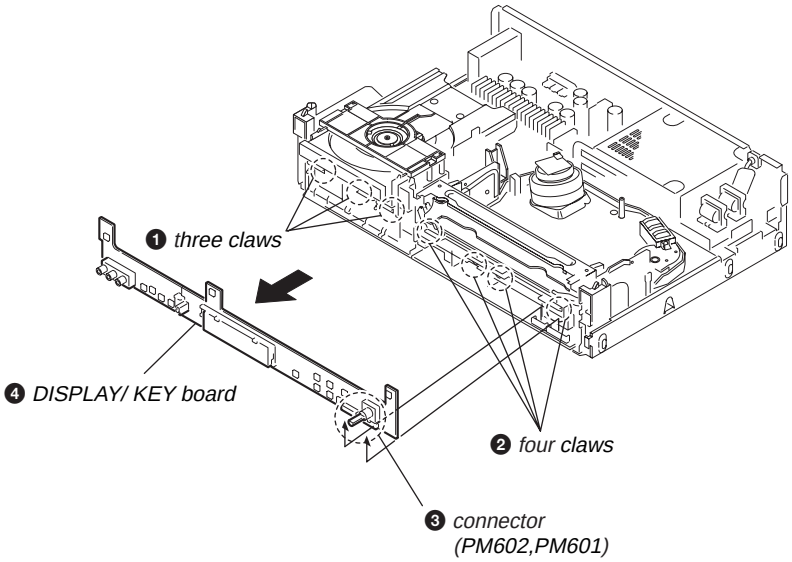


Note: Follow the disassembly procedure in the numerical order given.

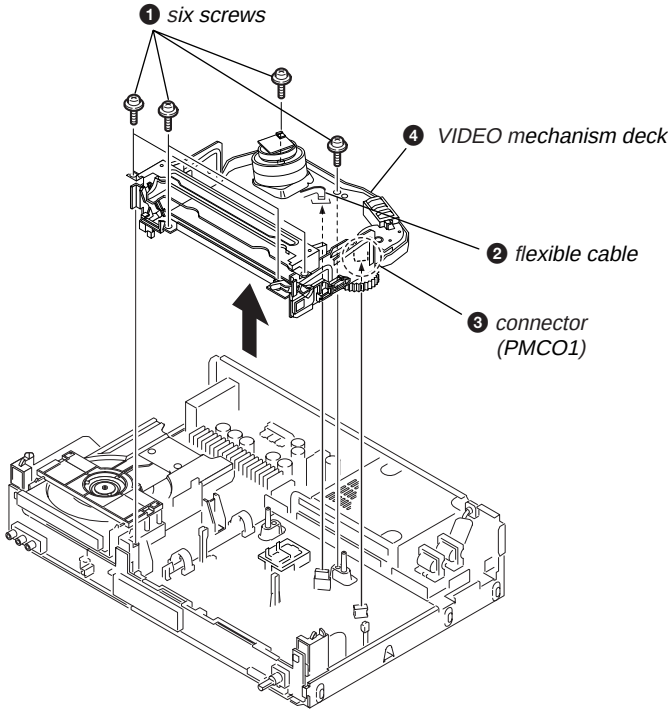
2-1. COVER, FRONT PANEL ASSEMBLY



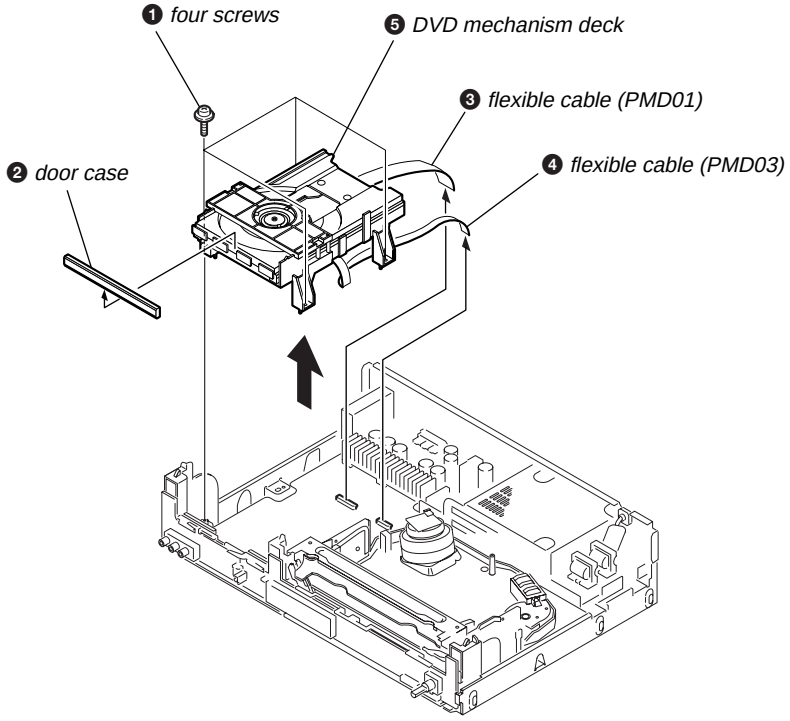
2-2. DISPLAY/KEY BOARD



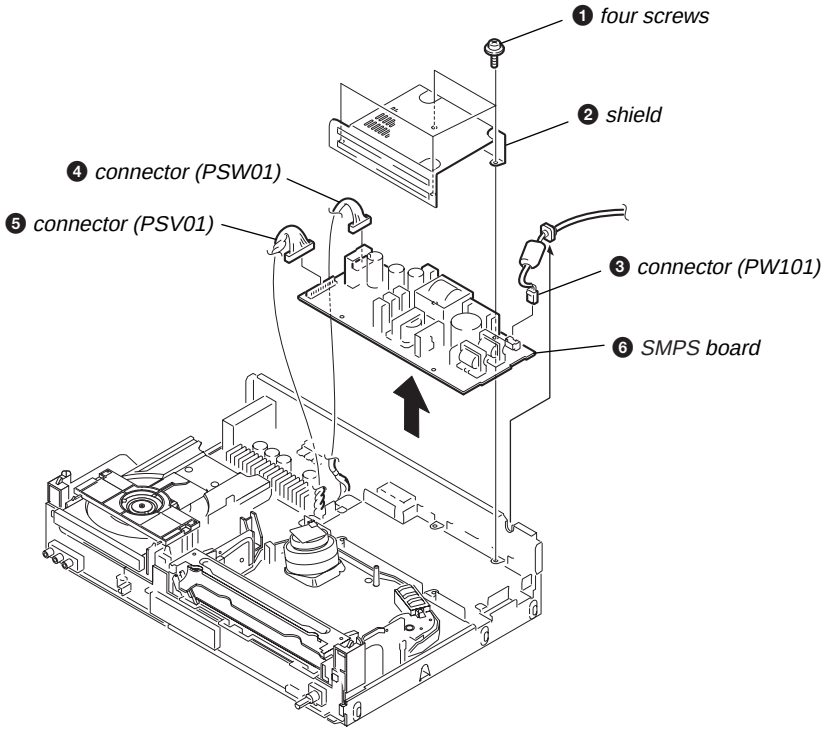
2-3. VIDEO MECHANISM DECK



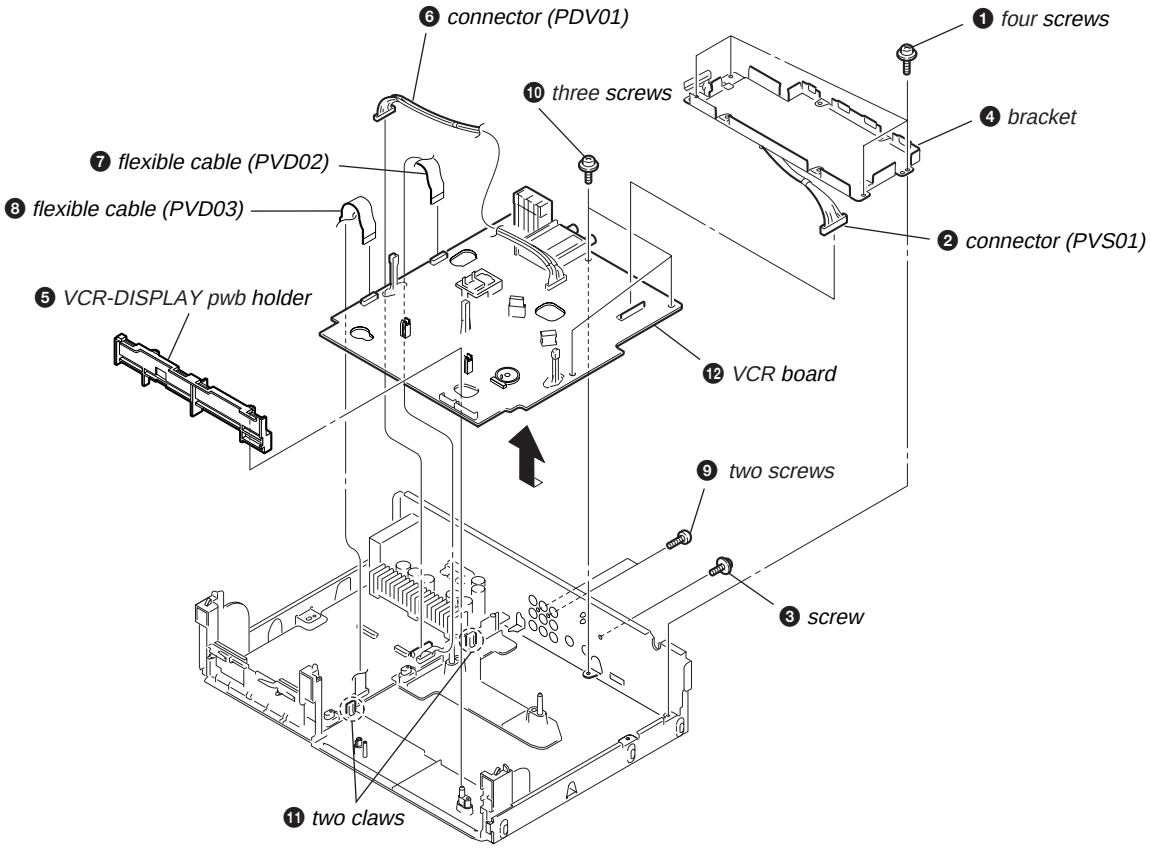
2-4. DVD MECHANISM DECK



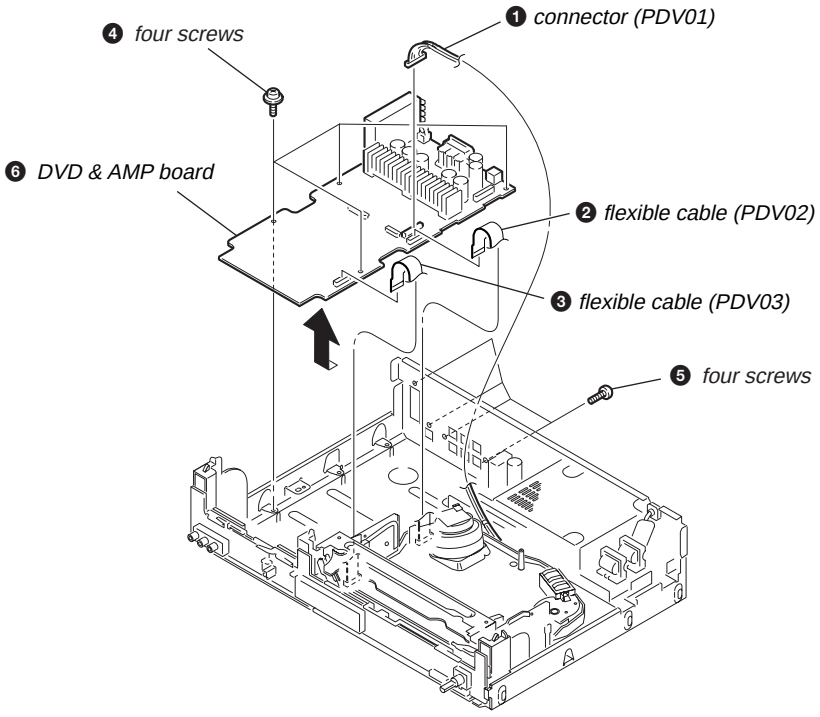
2-5. SMPS BOARD



2-6. VCR BOARD



2-7. DVD & AMP BOARD



SECTION 3
ELECTRICAL ADJUSTMENT

3-1. VCR SECTION ELECTRICAL ADJUSTMENT

1. Servo Adjustment

1) PG Adjustment

• Test Equipment
  a) OSCILLOSCOPE
  b) NTSC MODEL : NTSC SP TEST TAPE

• Adjustment And Specification

MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
PLAY	V.Out H/SW(W373, W374)	R/C TRK JIG KEY	6.5 ± 0.5H

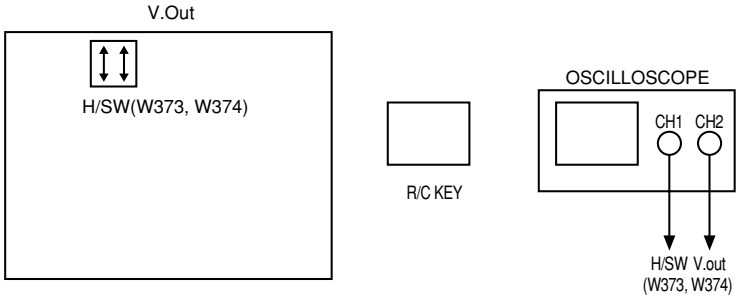
• Adjustment Procedure

a) Insert the SP Test Tape and play.
b) Connect the CH1 of the oscilloscope to the H/SW(W373, W374) and CH2 to the Video Out for the VCR.
c) Trigger the mixed Combo Video Signal of CH2 to the CH1 H/SW(W373, W374), and then check the distance (time difference), which is from the selected A(B) Head point of the H/SW(W373, W374) signal to the starting point of the vertical synchronized signal, to 6.5H ± 0.5H (412μs, 1H=63μs).
  Note - Press FRONT CH UP KEY and FRONT PLAY KEY on Deck playback, and it goes in to ATR PRESET. after the SP Test Tape is inserted.

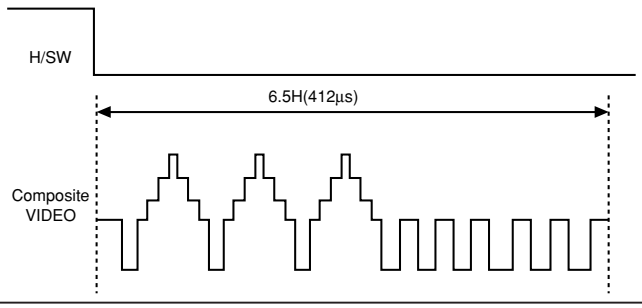
• PG Adjustment Method

a-1) Payback the SP standard tape
b-2) Press the “O” key on the Remote controller and the “PLAY” key on the Front Panel the same time, then it goes in to Tracking initial mode.
c-3) Repeat the above step(No.b-2), then it finishes the PG adjusting automatically.
d-4) Stop the playback, then it goes out to PG adjusting mode after mony the PG data.

• CONNECTION



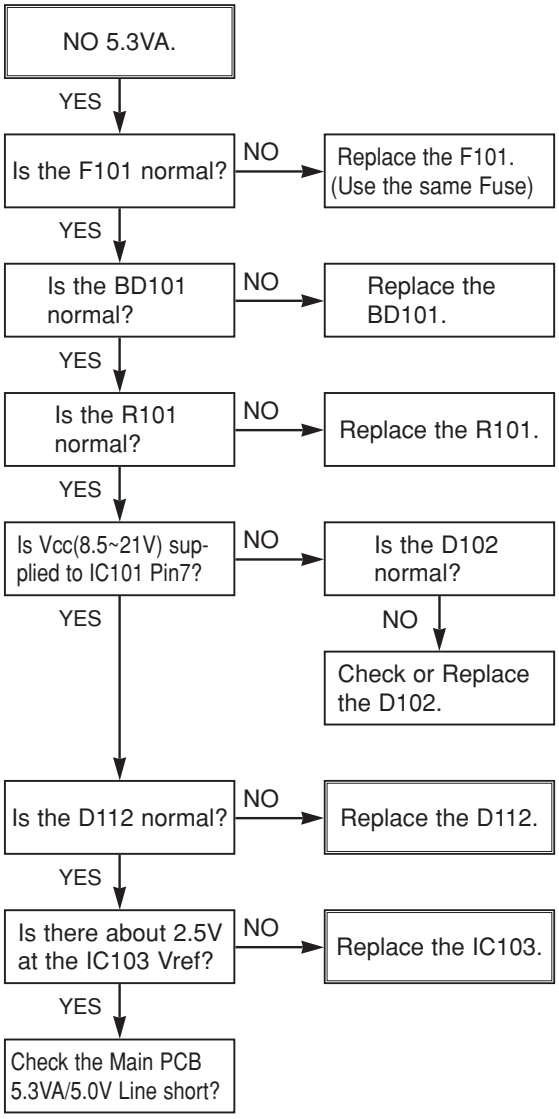
• WAVEFORM



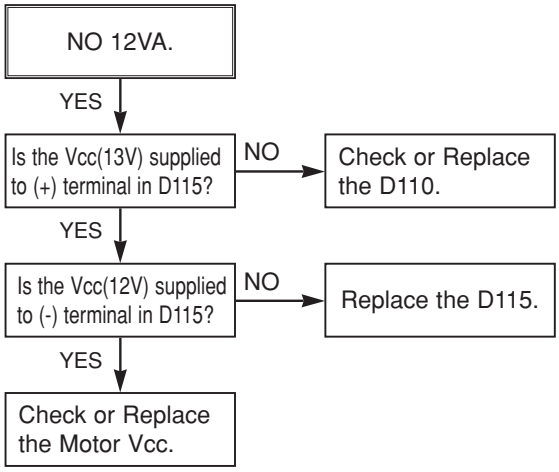
3-2. ELECTRICAL TROUBLESHOOTING GUIDE

1. Power (SMPS) CIRCUIT

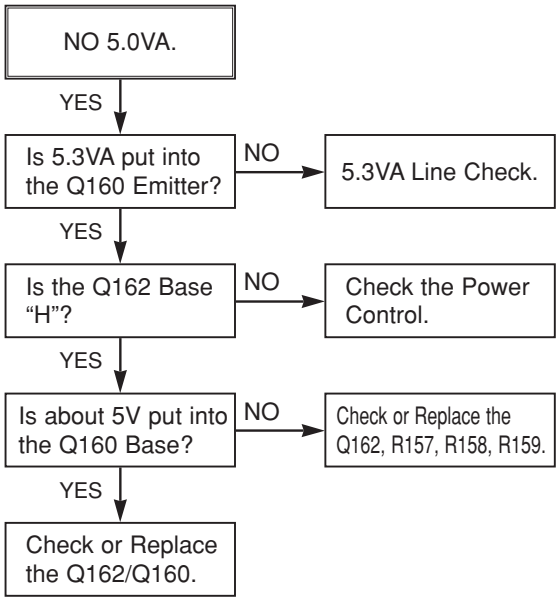
(1) No 5.3VA (SYS/Hi-Fi/TUNER)



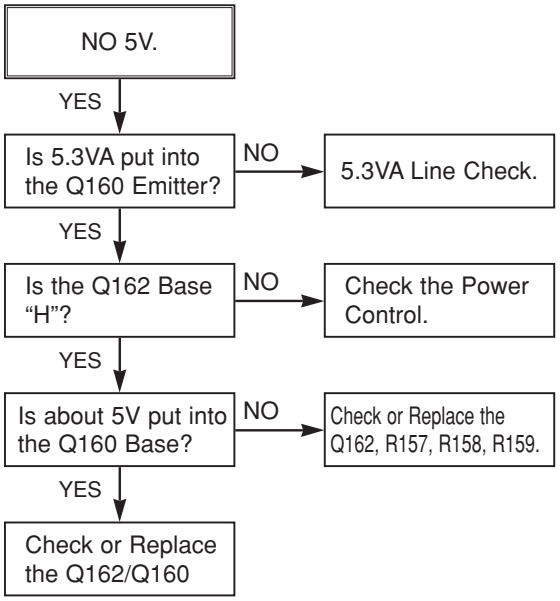
(2) No 12VA (TO CAP, DRUM MOTOR)



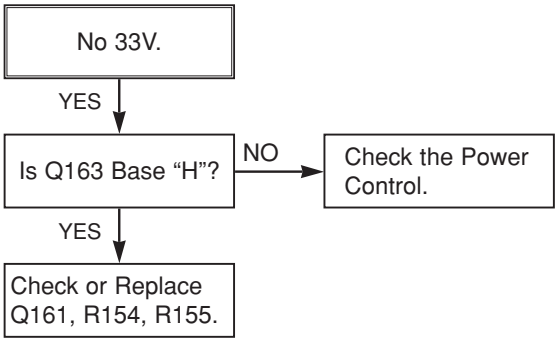
(3) No 5.0V (SYS/Hi-Fi/TUNER)



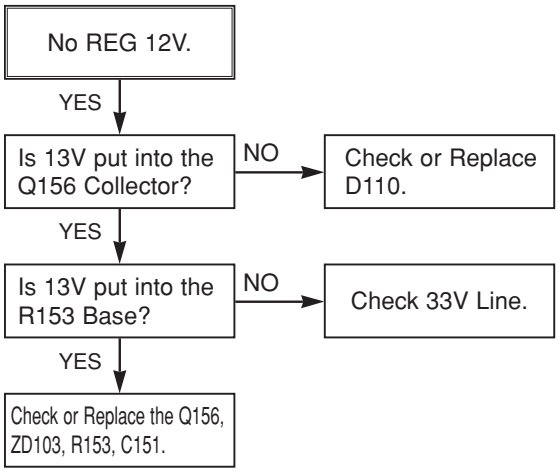
(4) No 5V (TO DVD)



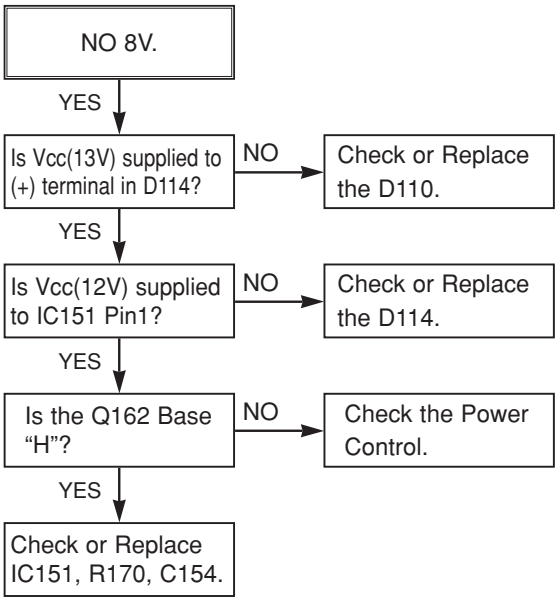
(5) No 33V (TUNER)



(6) No REG 12V

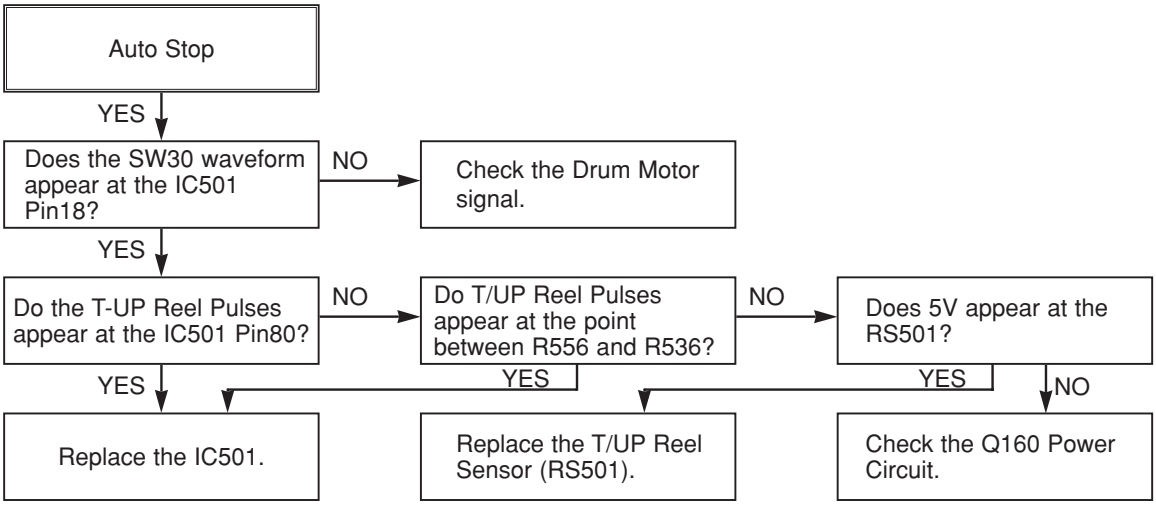


(7) No 8V(TO DVD)

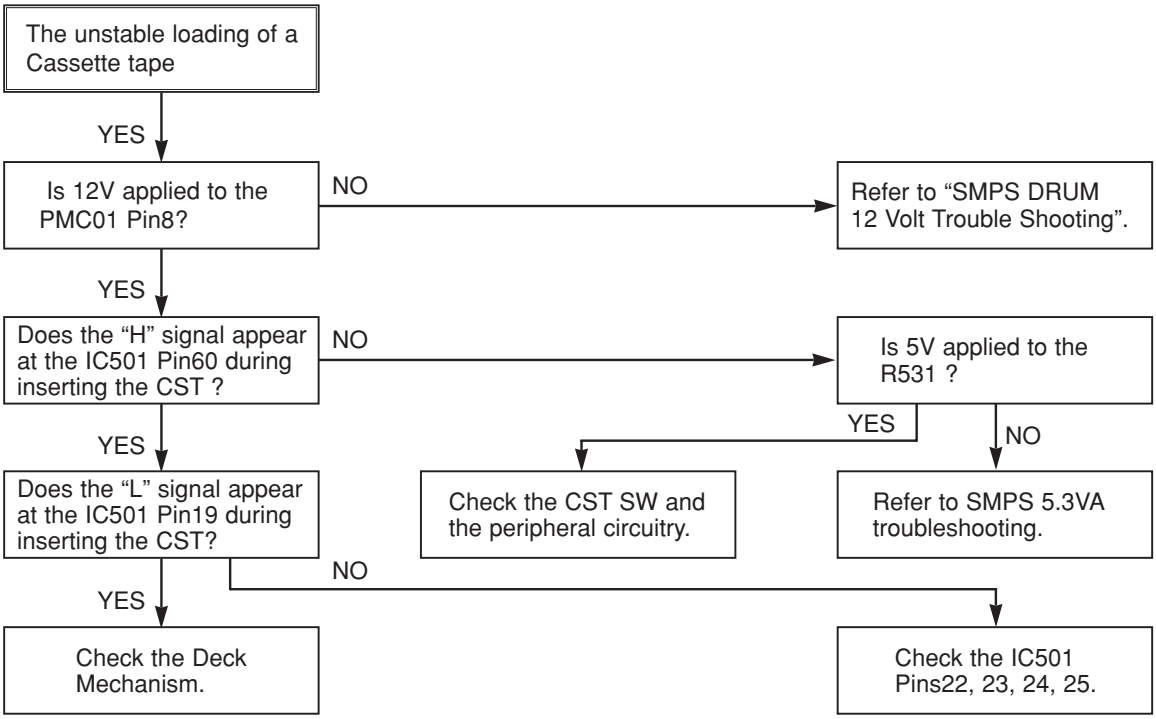


2. SYSTEM/KEY CIRCUIT

(1) AUTO STOP



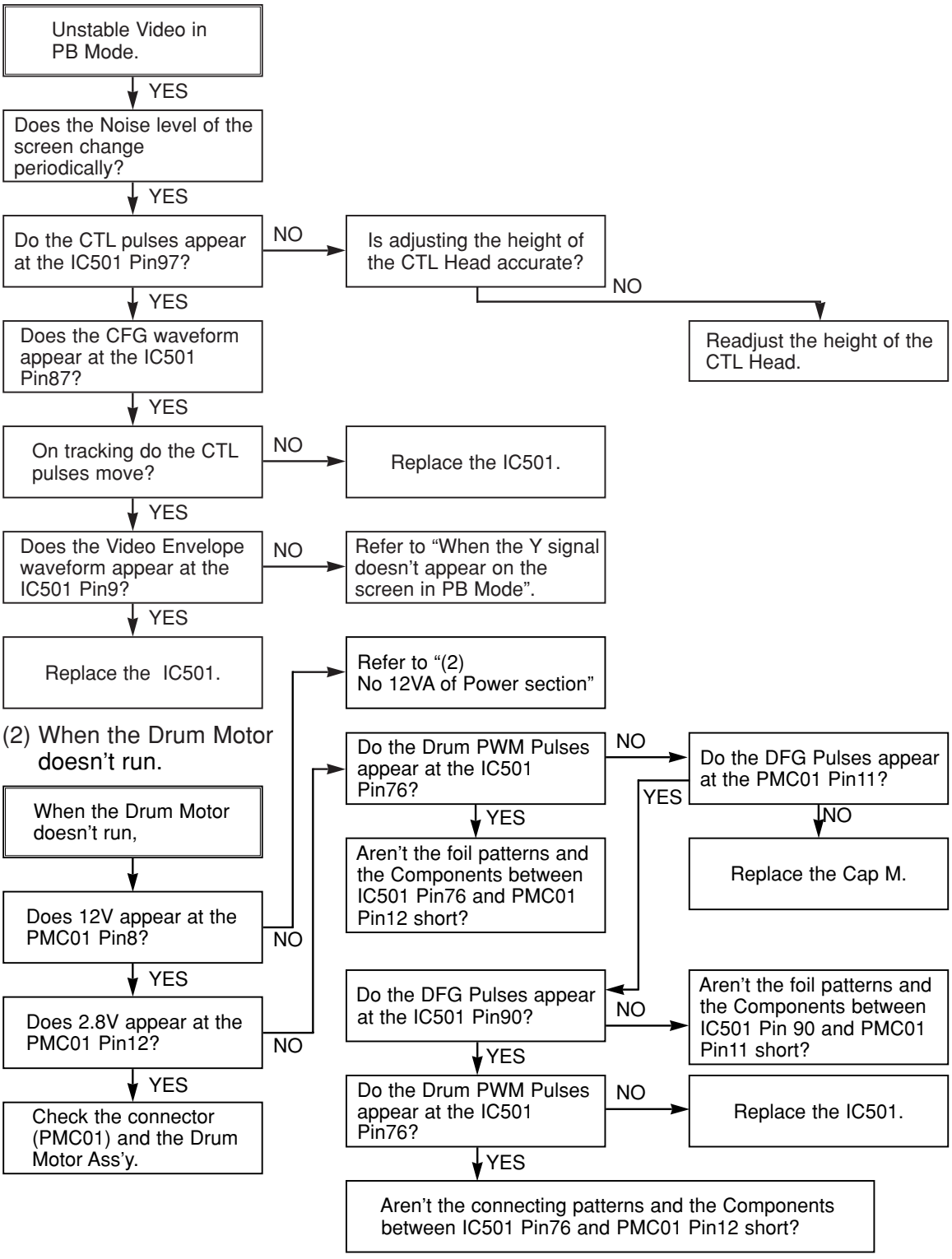
(2) The unstable loading of a Cassette tape



Caution : Auto stop can occur because Grease or Oil is dried up

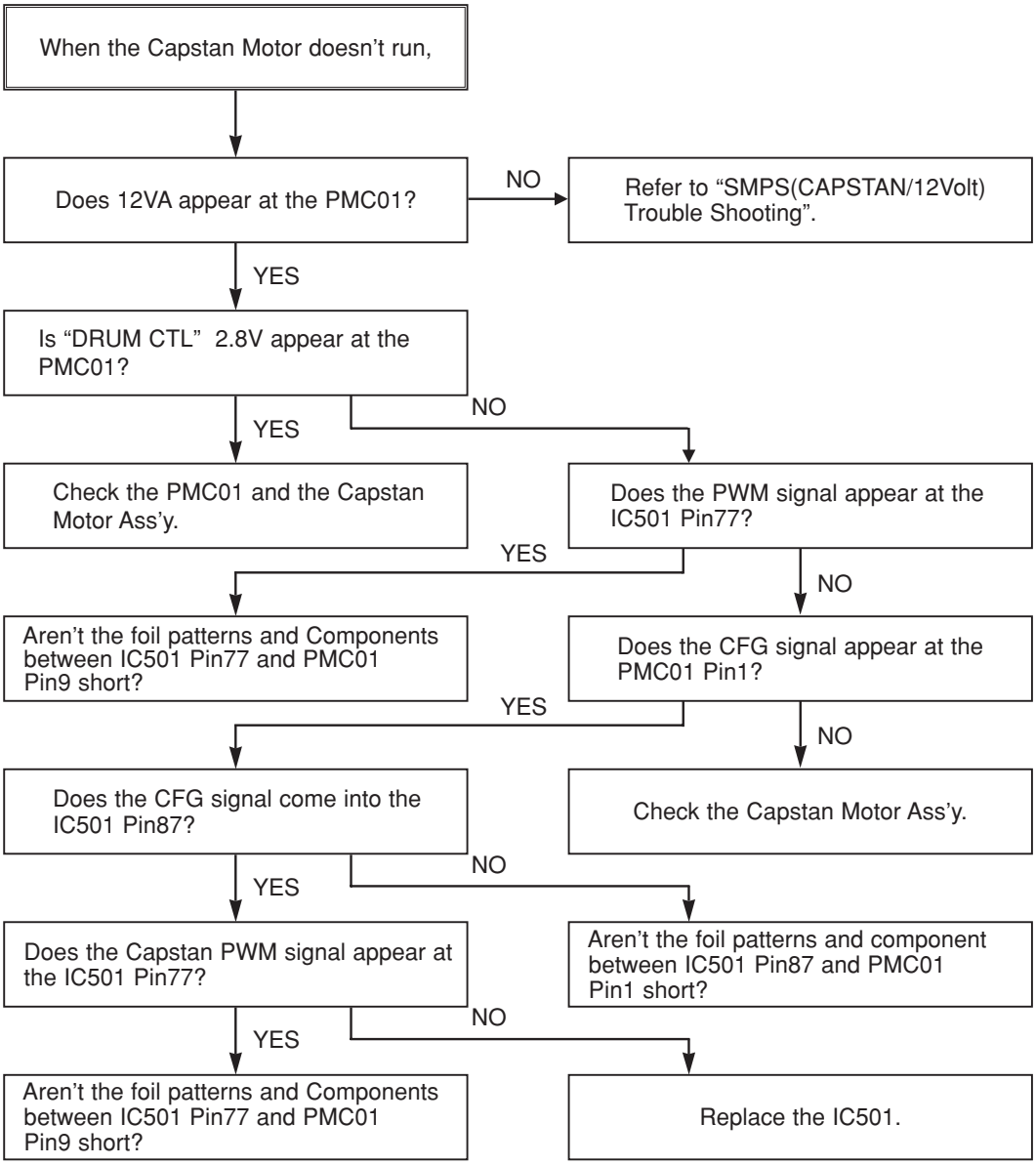
3. SERVO CIRCUIT

(1) Unstable Video in PB MODE

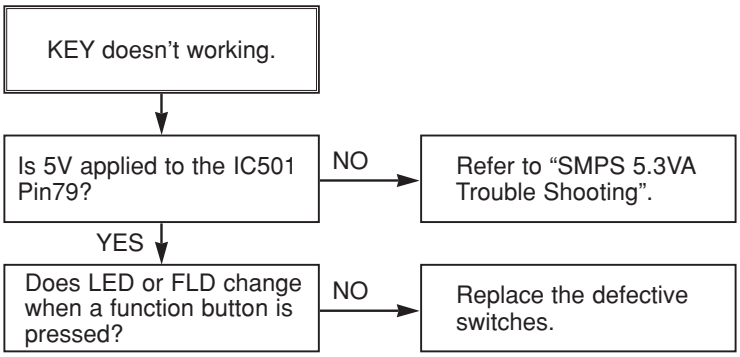


(2) When the Drum Motor doesn't run.

(3) When the Capstan Motor doesn't run,

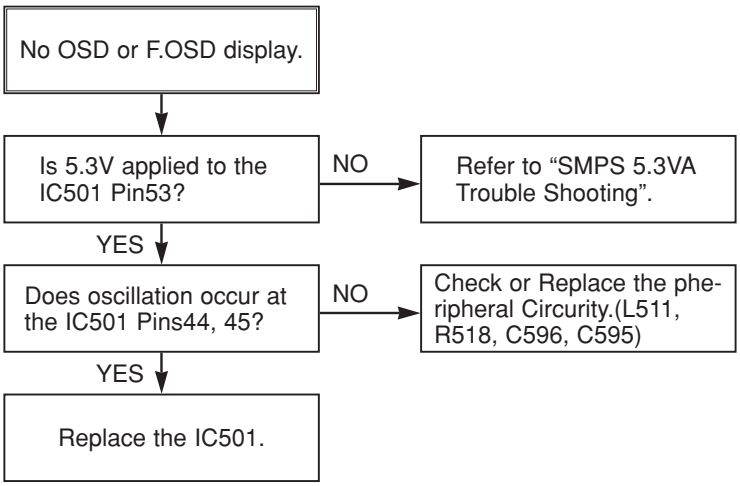


(4) KEY doesn't working

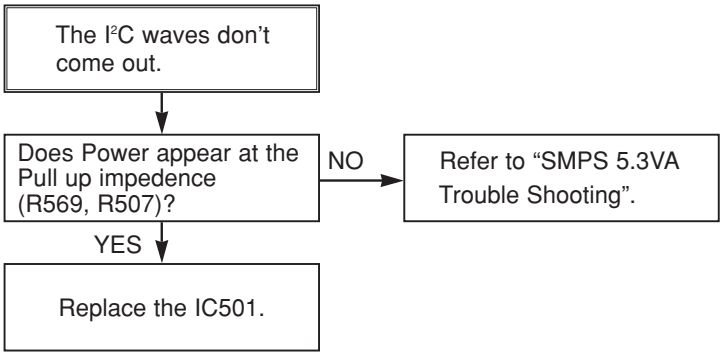


4. OSD CIRCUIT

(1) No OSD display.

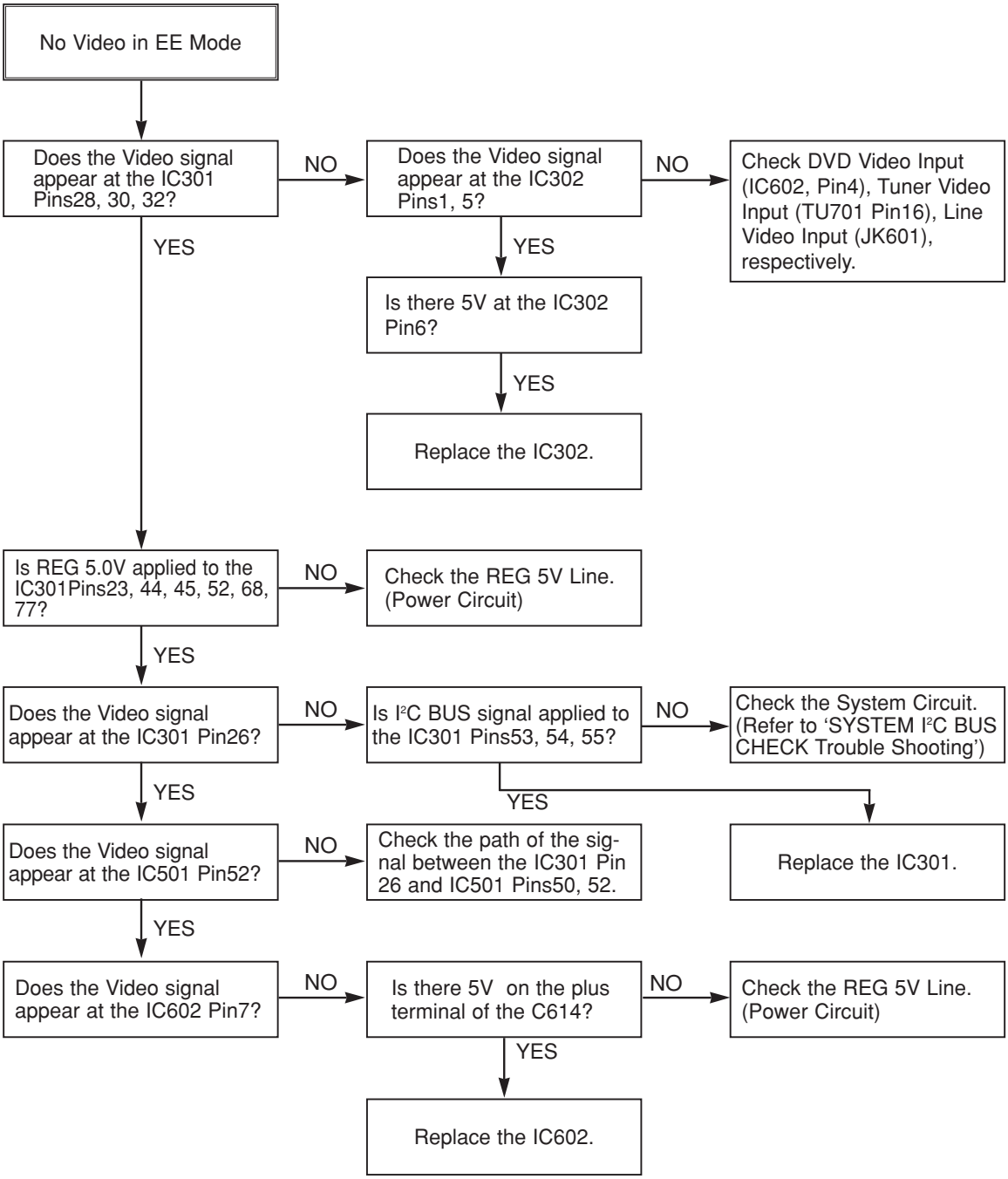


(2) I²C BUS CHECK

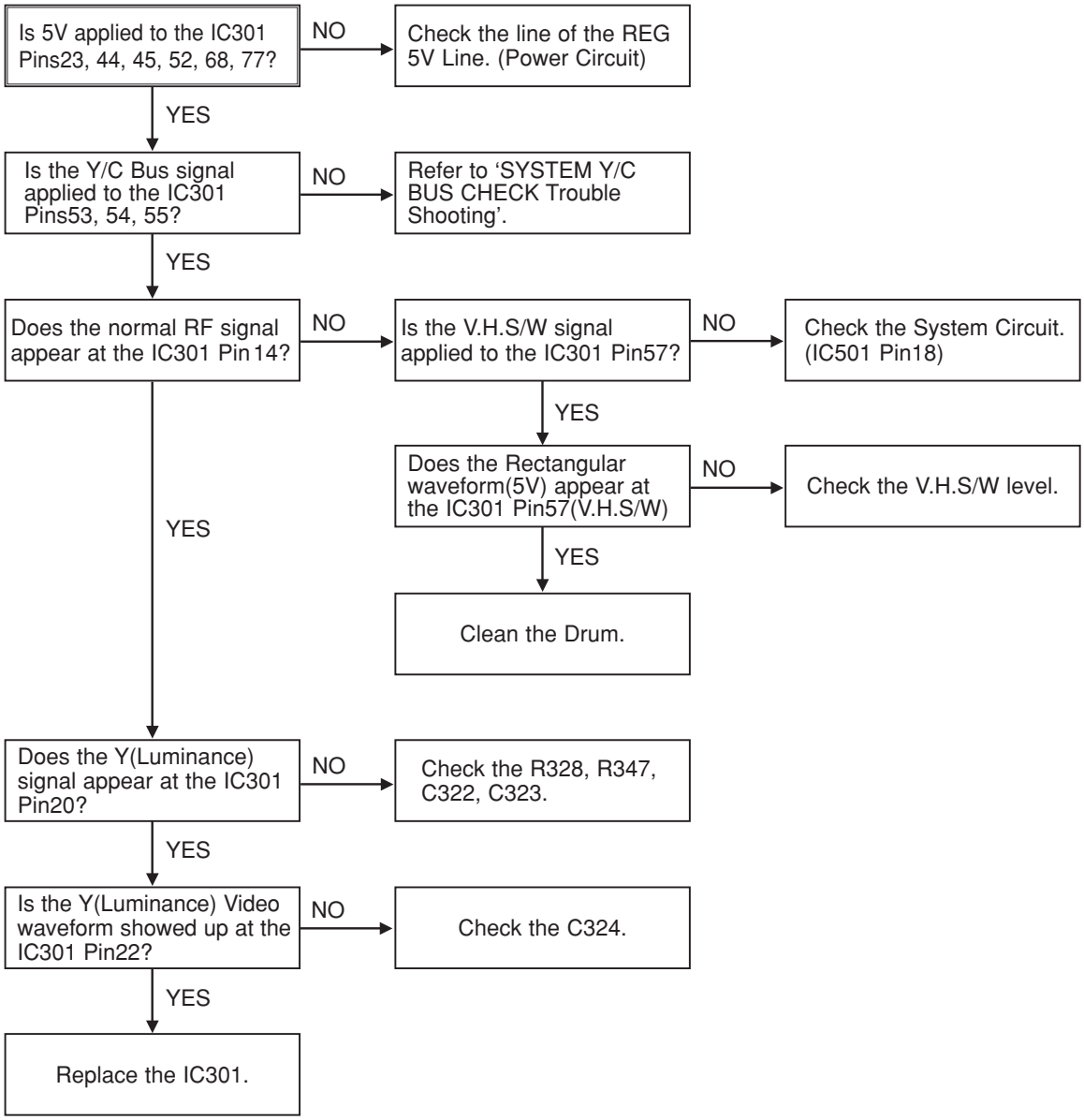


5. Y/C CIRCUIT

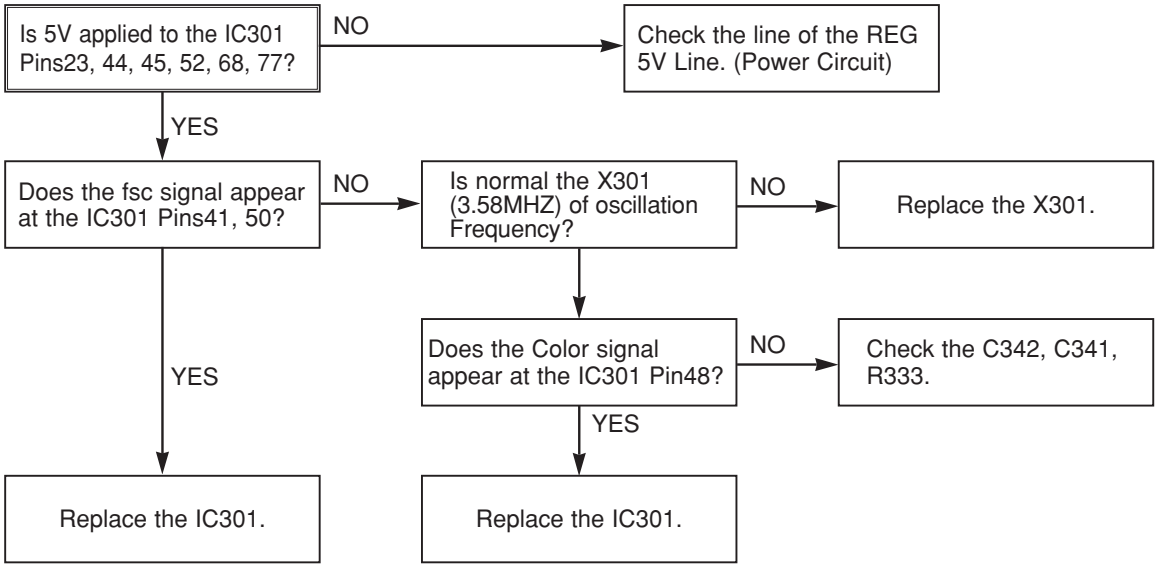
(1) No Video in EE Mode,



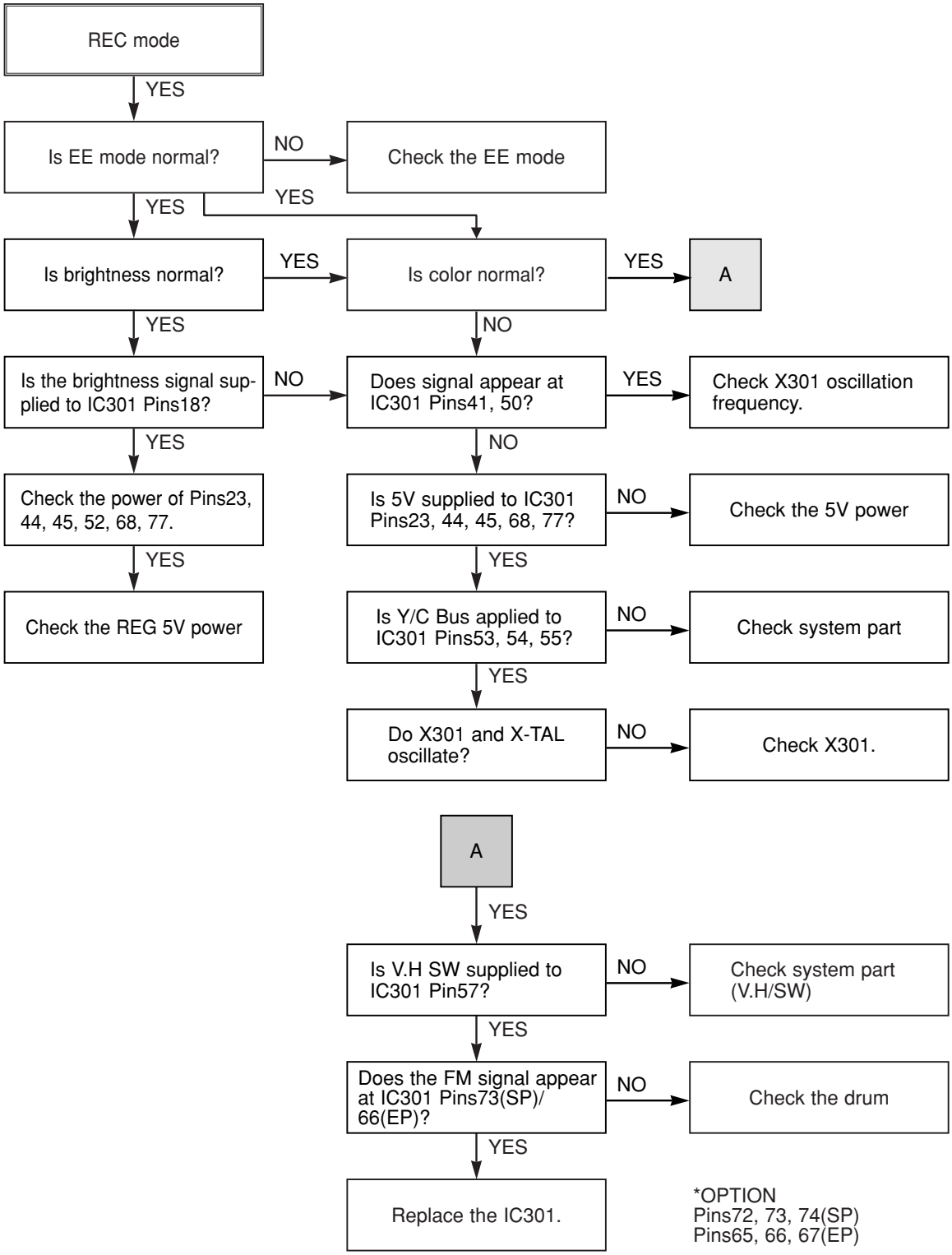
(2) When the Y(Luminance) signal doesn't appear on the screen in PB Mode,



(3) When the C(Color) signal doesn't appear on the screen in PB Mode,

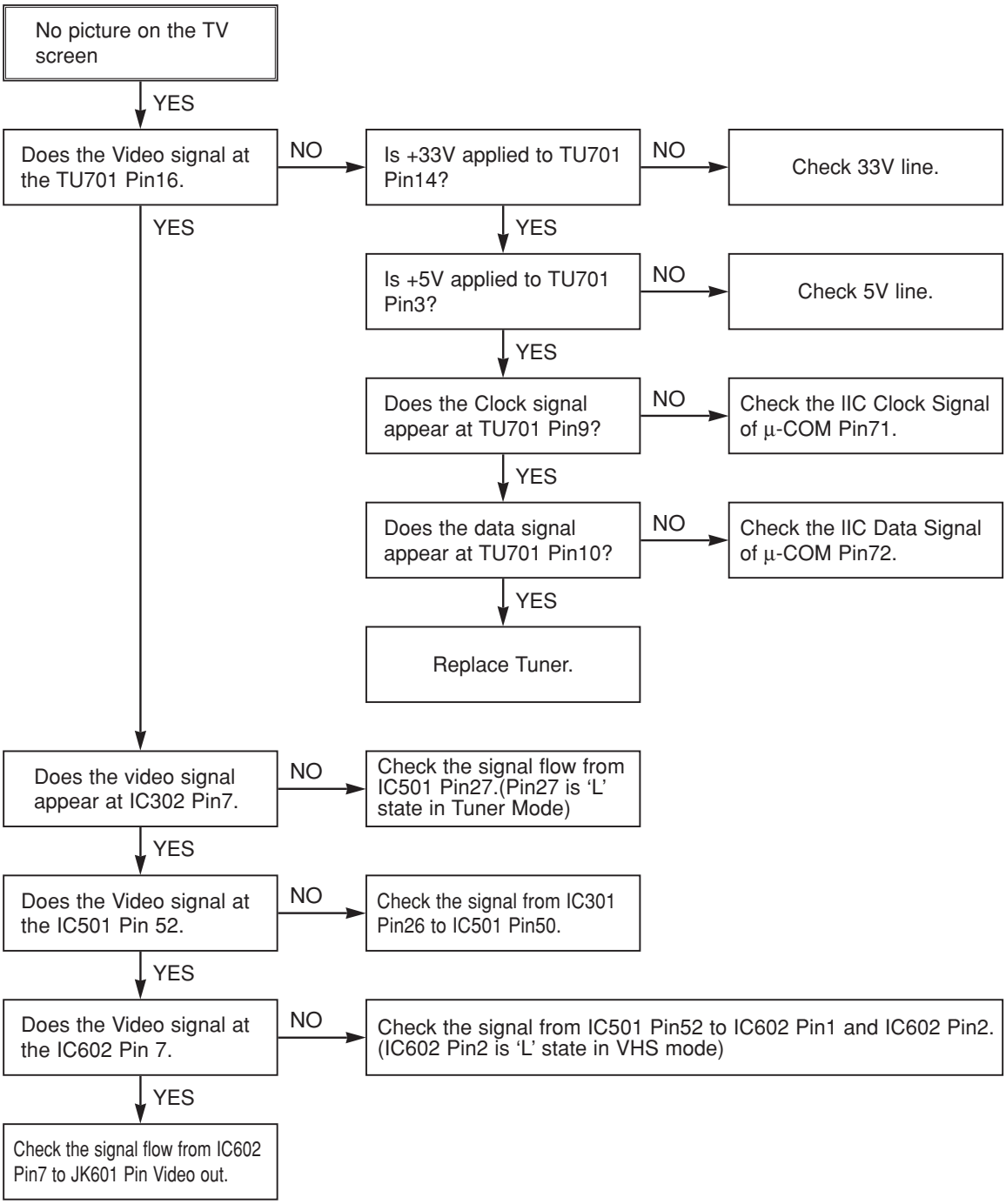


(4) When the Video signal doesn't appear on the screen in REC Mode,

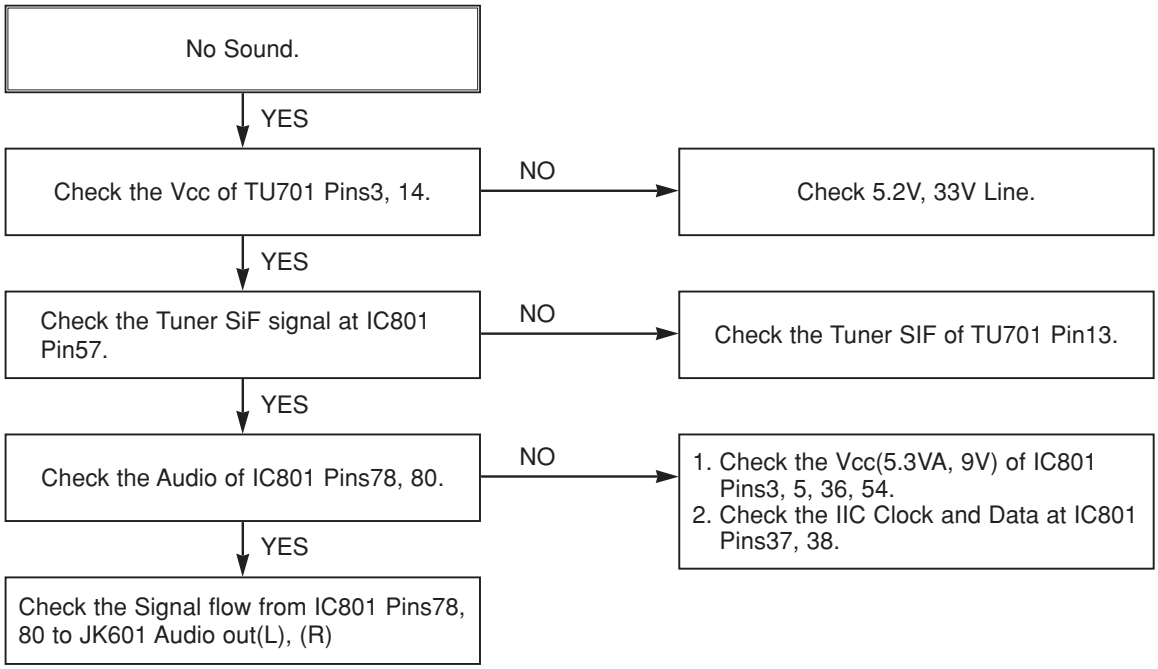


6. Tuner/IF CIRCUIT

(1) No Picture on the TV screen

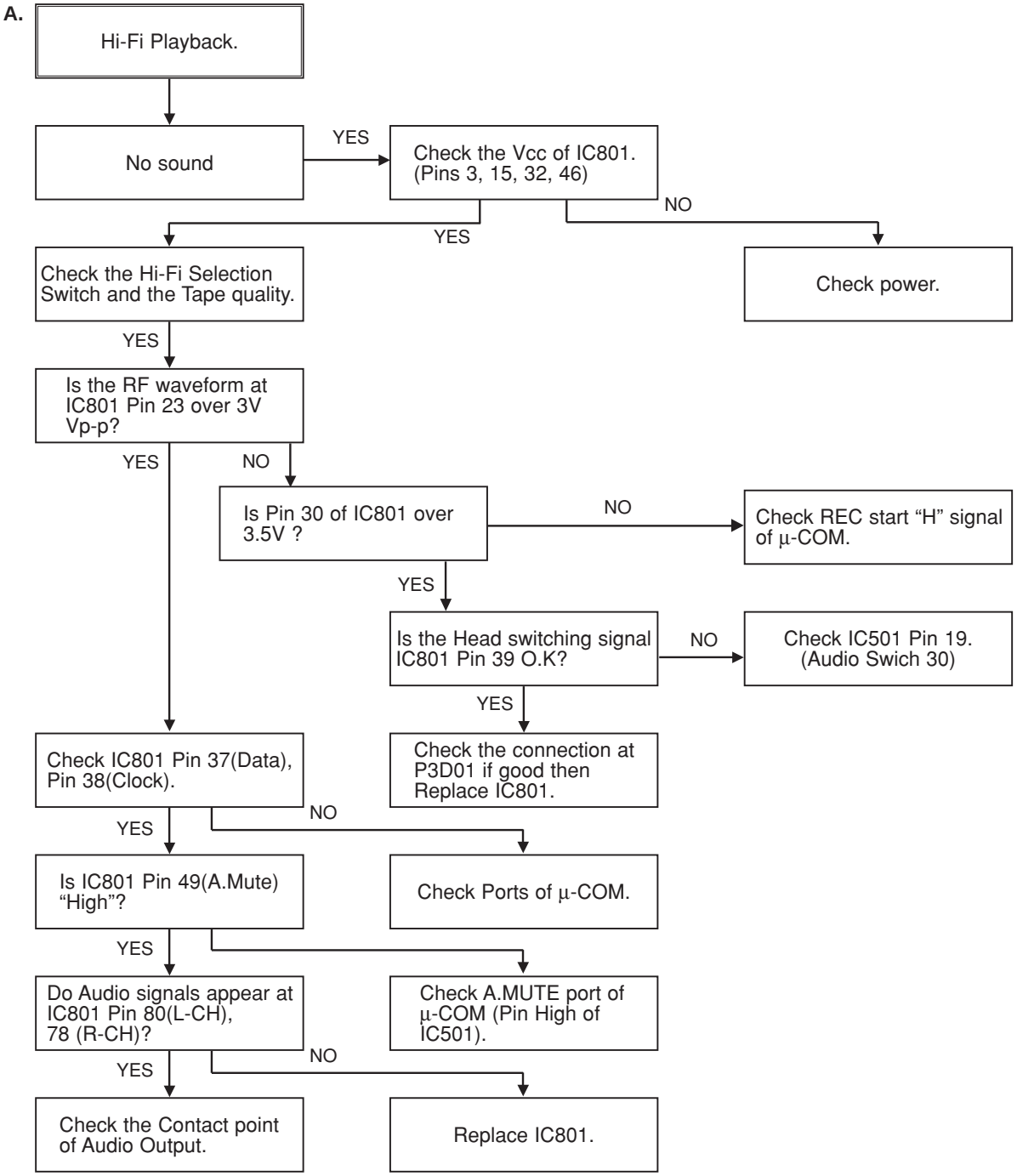


(2) No Sound

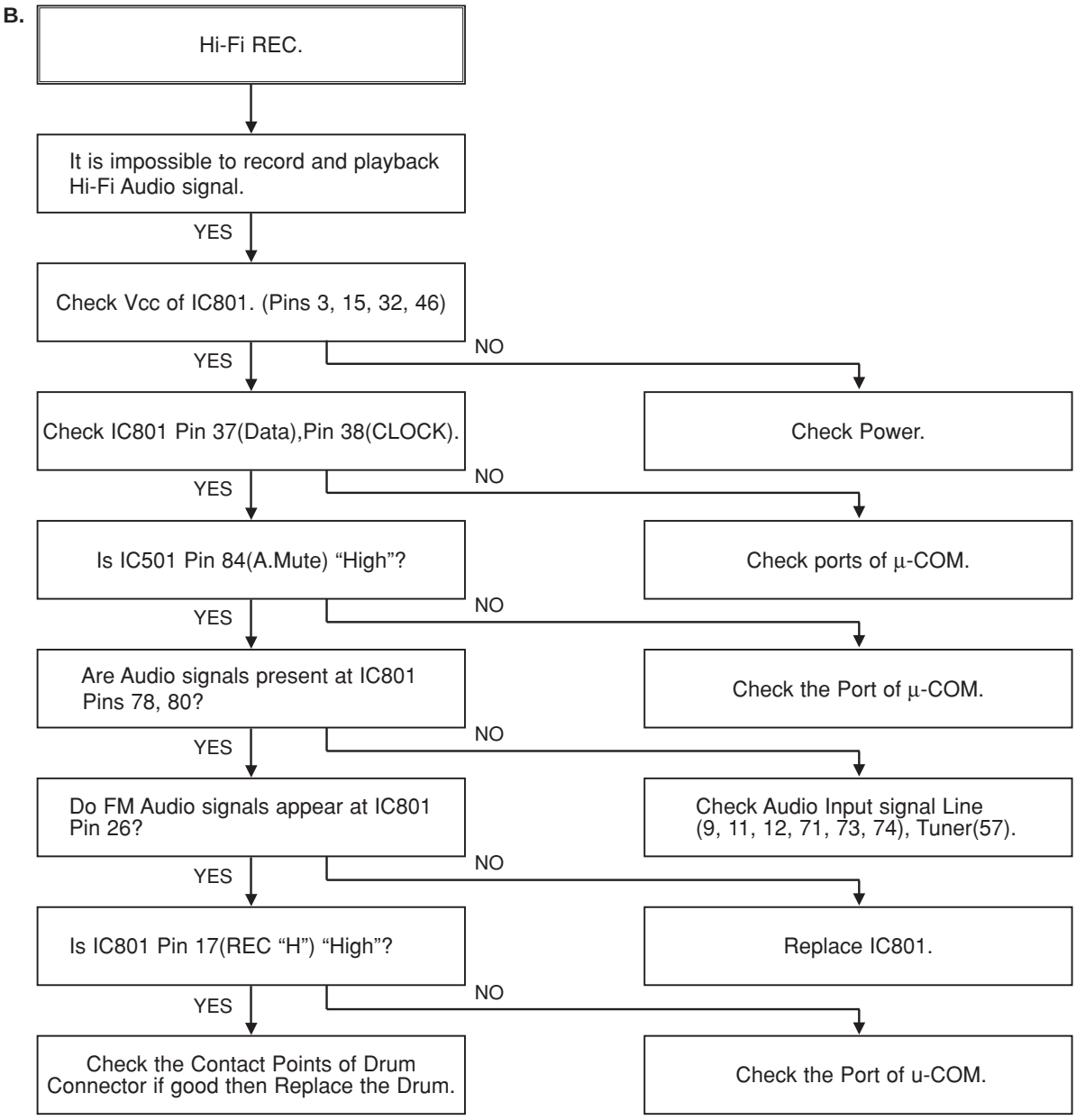

No Sound.
YES
Check the Vcc of TU701 Pins3, 14.
NO
Check 5.2V, 33V Line.
YES
Check the Tuner SiF signal at IC801 Pin57.
NO
Check the Tuner SIF of TU701 Pin13.
YES
Check the Audio of IC801 Pins78, 80.
NO
1. Check the Vcc(5.3VA, 9V) of IC801 Pins3, 5, 36, 54.
2. Check the IIC Clock and Data at IC801 Pins37, 38.
YES
Check the Signal flow from IC801 Pins78, 80 to JK601 Audio out(L), (R)

7. Hi-Fi Circuit

A.

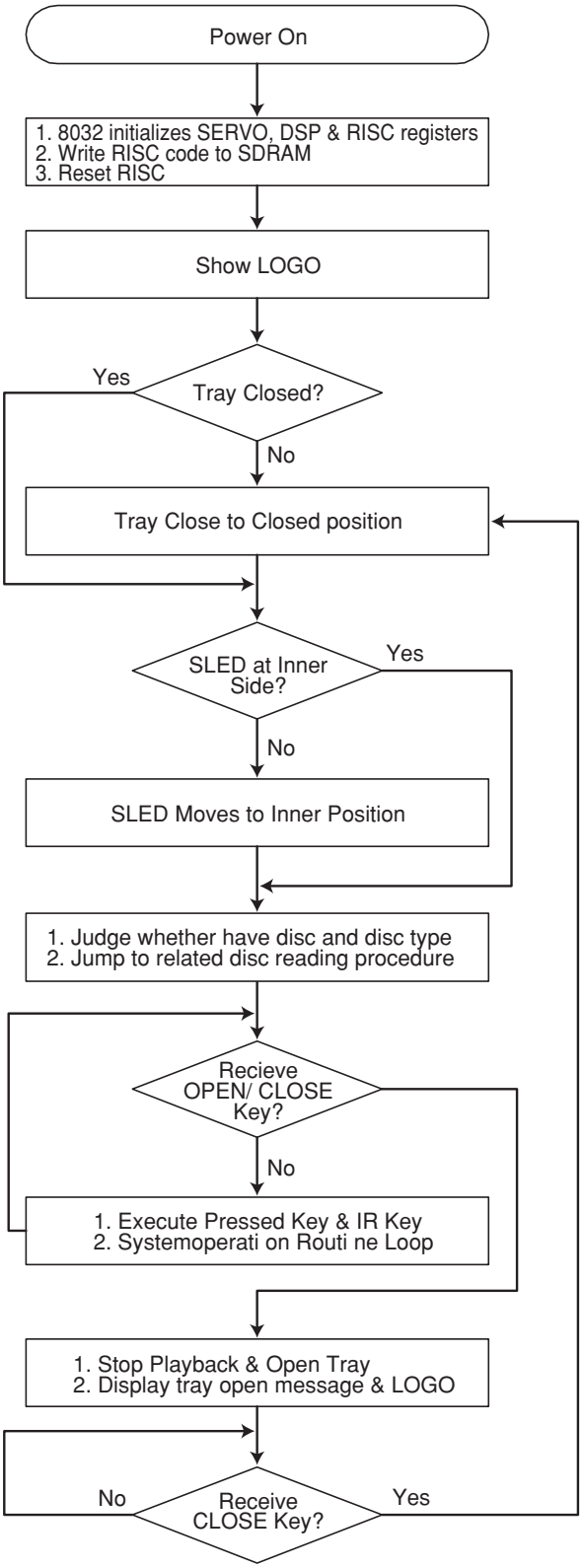


B.

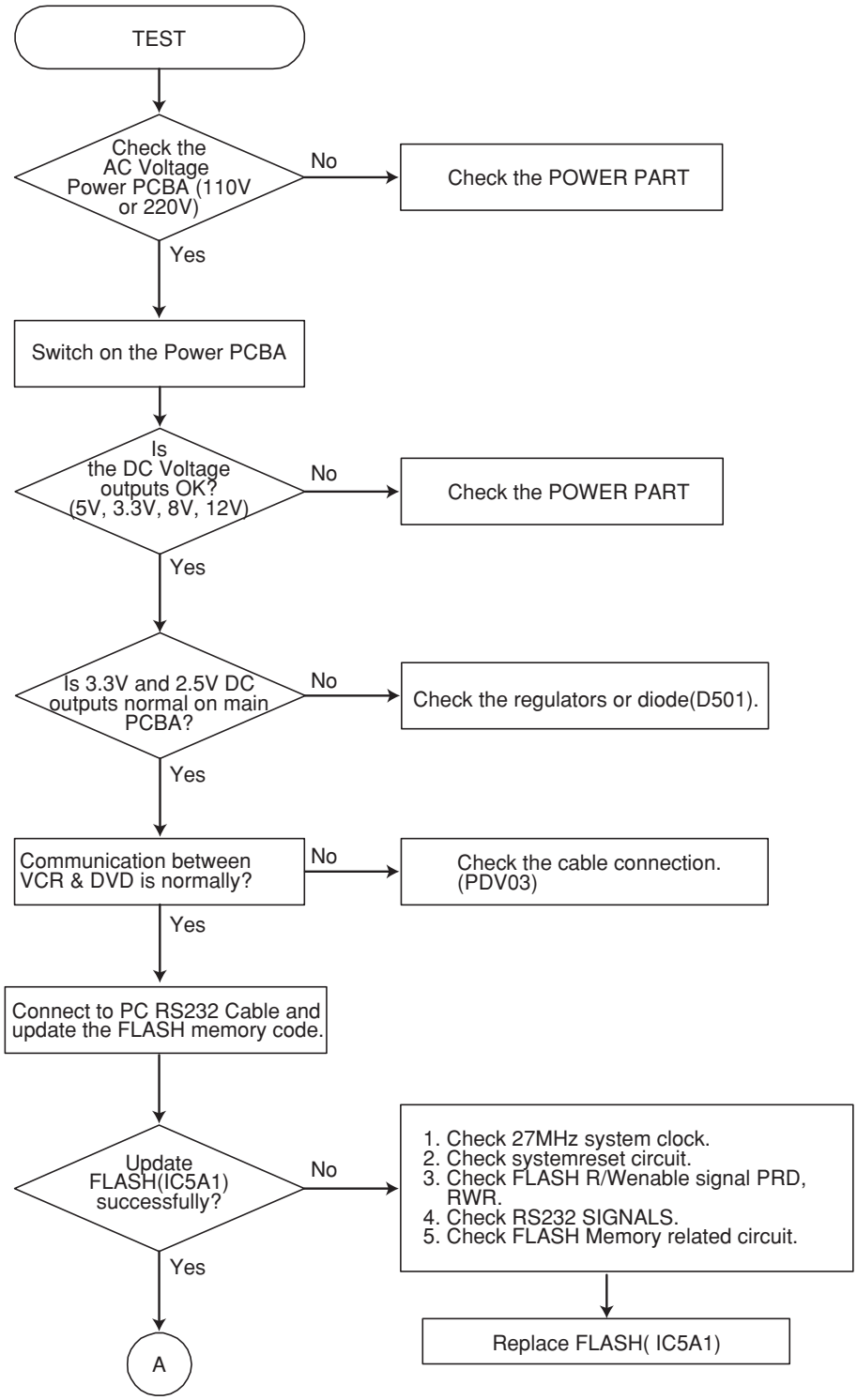

Hi-Fi REC.
It is impossible to record and playback Hi-Fi Audio signal.
YES
Check Vcc of IC801. (Pins 3, 15, 32, 46)
NO
YES
Check Power.
Check IC801 Pin 37(Data),Pin 38(CLOCK).
NO
YES
Check ports of µ-COM.
Is IC501 Pin 84(A.Mute) "High"?
NO
YES
Check the Port of µ-COM.
Are Audio signals present at IC801 Pins 78, 80?
NO
YES
Check Audio Input signal Line (9, 11, 12, 71, 73, 74), Tuner(57).
Do FM Audio signals appear at IC801 Pin 26?
NO
YES
Replace IC801.
Is IC801 Pin 17(REC "H") "High"?
NO
YES
Check the Port of u-COM.
Check the Contact Points of Drum Connector if good then Replace the Drum.

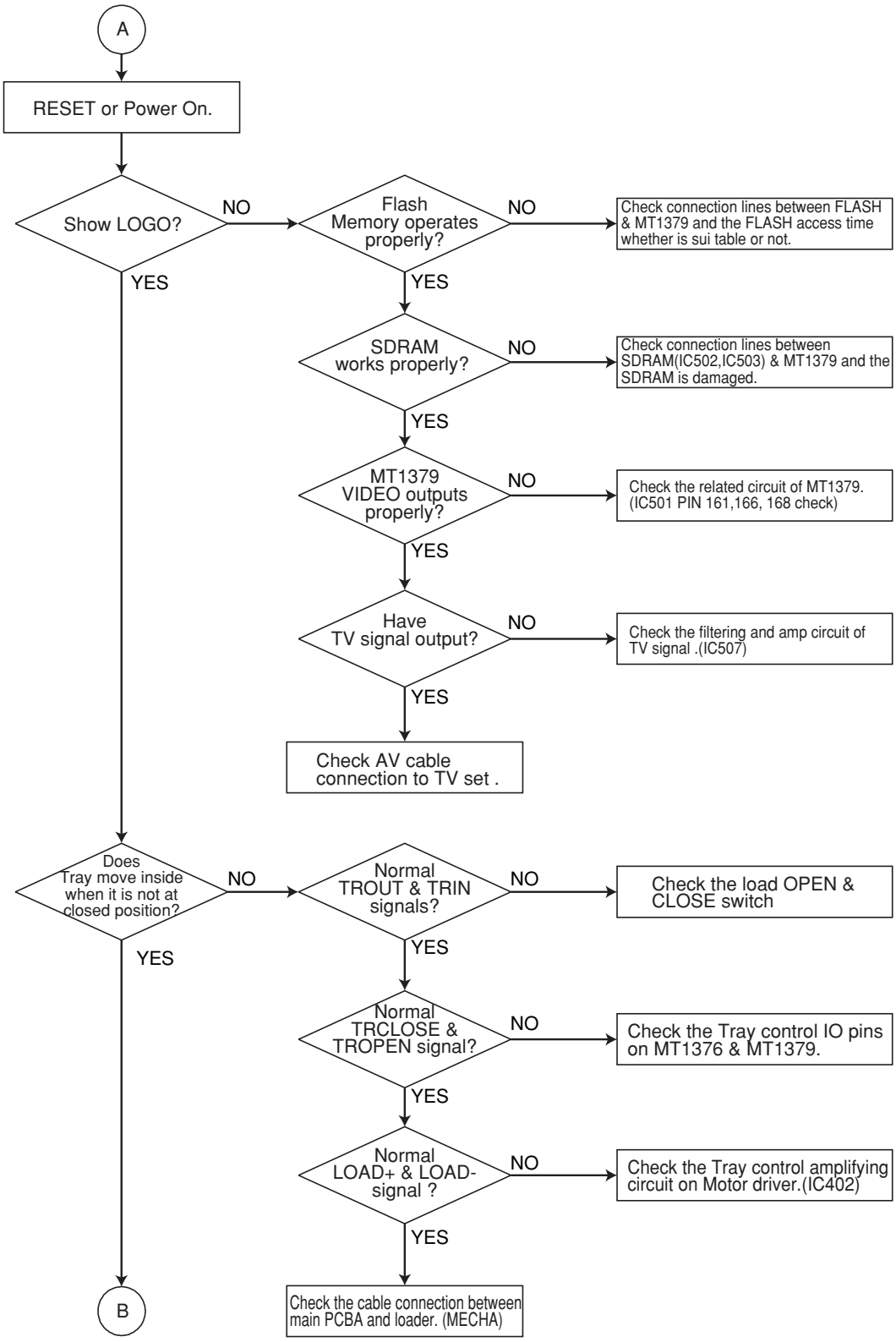
3-3. DVD & AMP SECTION ELECTRICAL TROUBLESHOOTING GUIDE

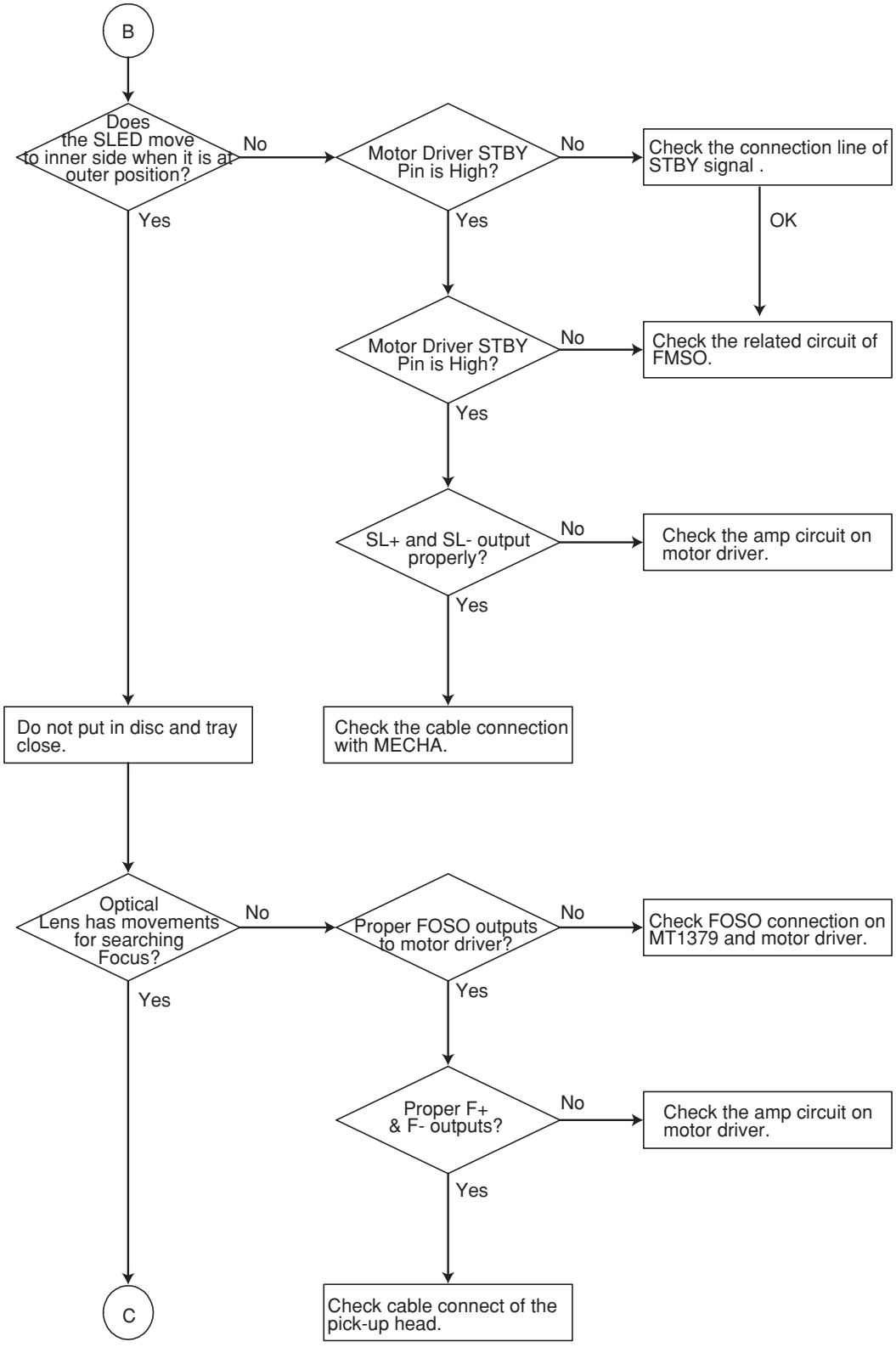
1. System operation flow

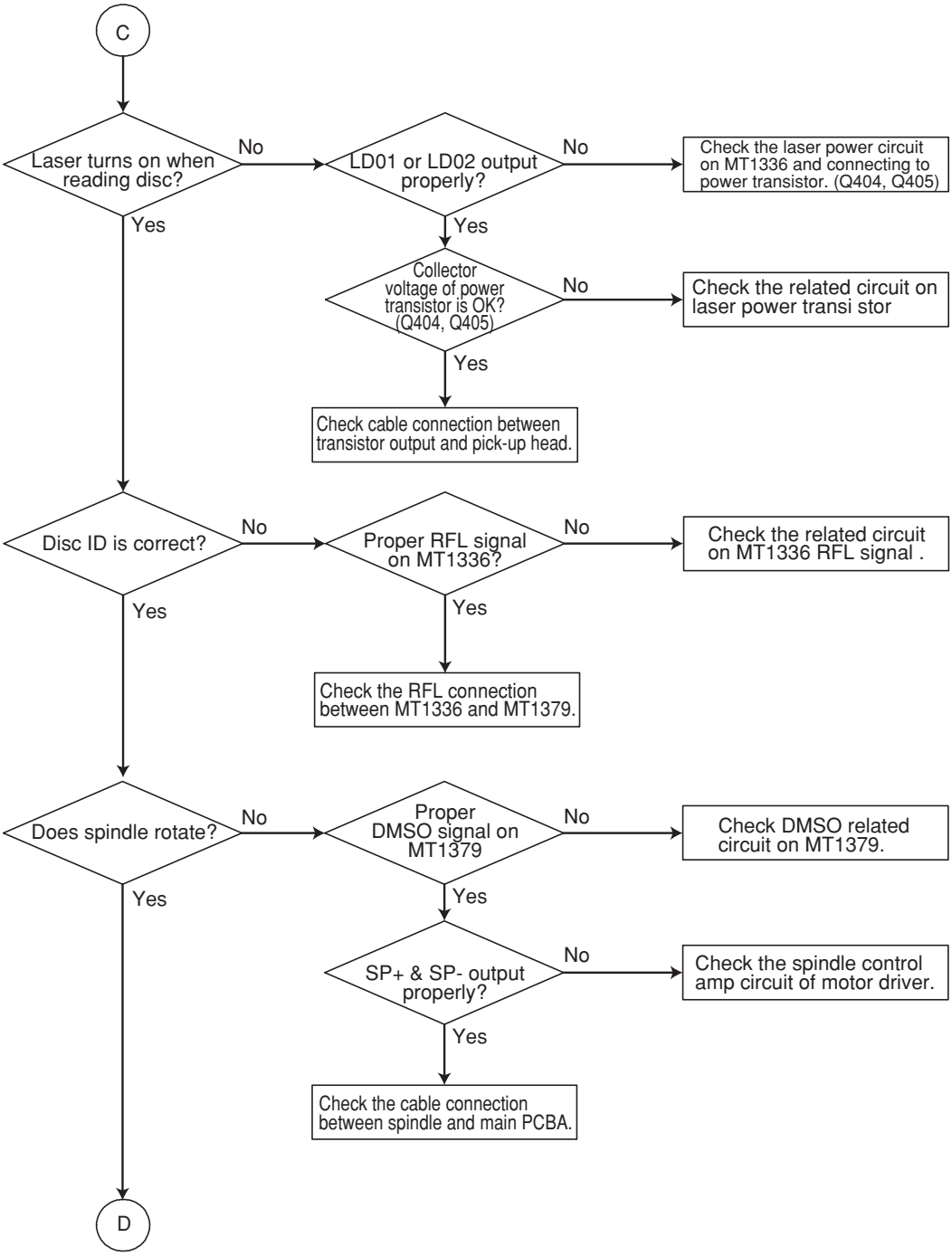


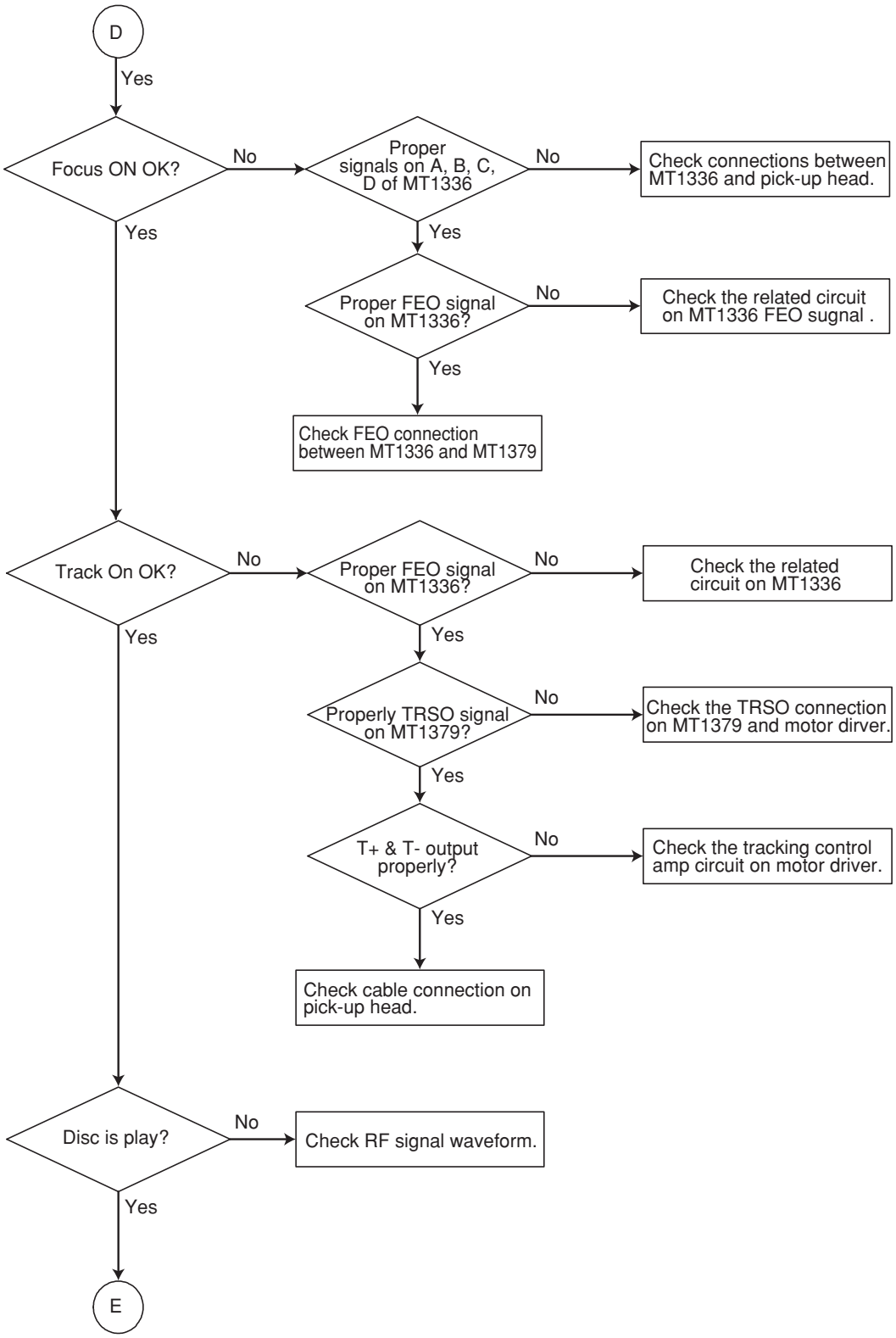
2. Test & debug flow

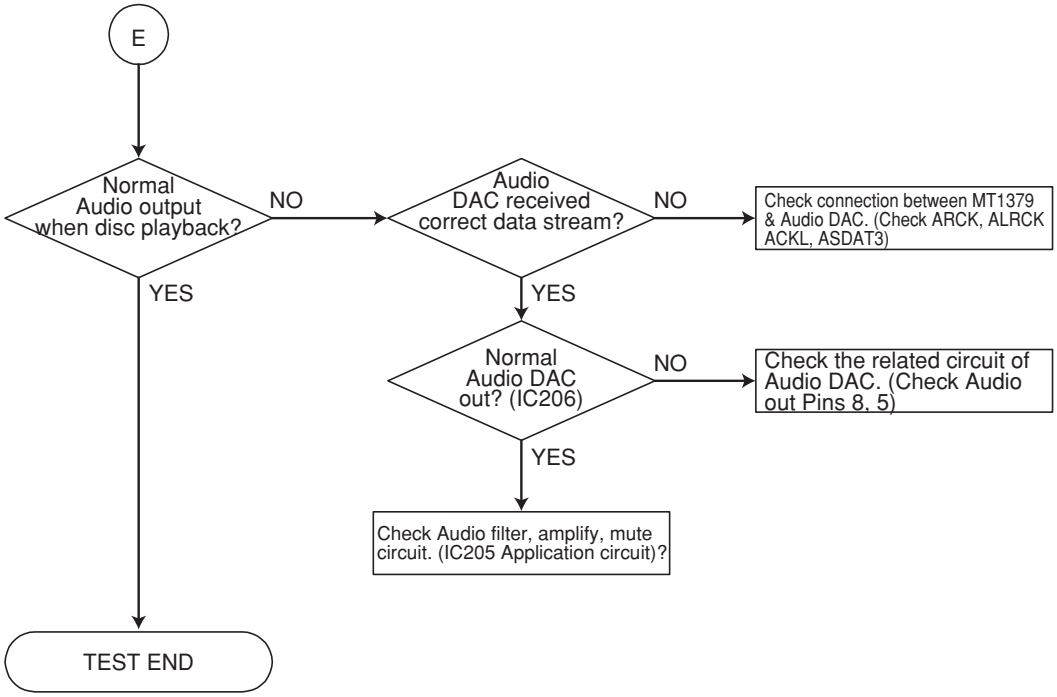



A
RESET or Power On.
Show LOGO?
NO
YES
Flash Memory operates properly?
NO
YES
Check connection lines between FLASH & MT1379 and the FLASH access time whether is sui table or not.
SDRAM works properly?
NO
YES
Check connection lines between SDRAM(IC502,IC503) & MT1379 and the SDRAM is damaged.
MT1379 VIDEO outputs properly?
NO
YES
Check the related circuit of MT1379. (IC501 PIN 161,166, 168 check)
Have TV signal output?
NO
YES
Check the filtering and amp circuit of TV signal .(IC507)
Check AV cable connection to TV set .
Does Tray move inside when it is not at closed position?
NO
YES
Normal TROUT & TRIN signals?
NO
YES
Check the load OPEN & CLOSE switch
Normal TRCLOSE & TROPEN signal?
NO
YES
Check the Tray control IO pins on MT1376 & MT1379.
Normal LOAD+ & LOAD- signal ?
NO
YES
Check the Tray control amplifying circuit on Motor driver.(IC402)
Check the cable connection between main PCBA and loader. (MECHA)
B

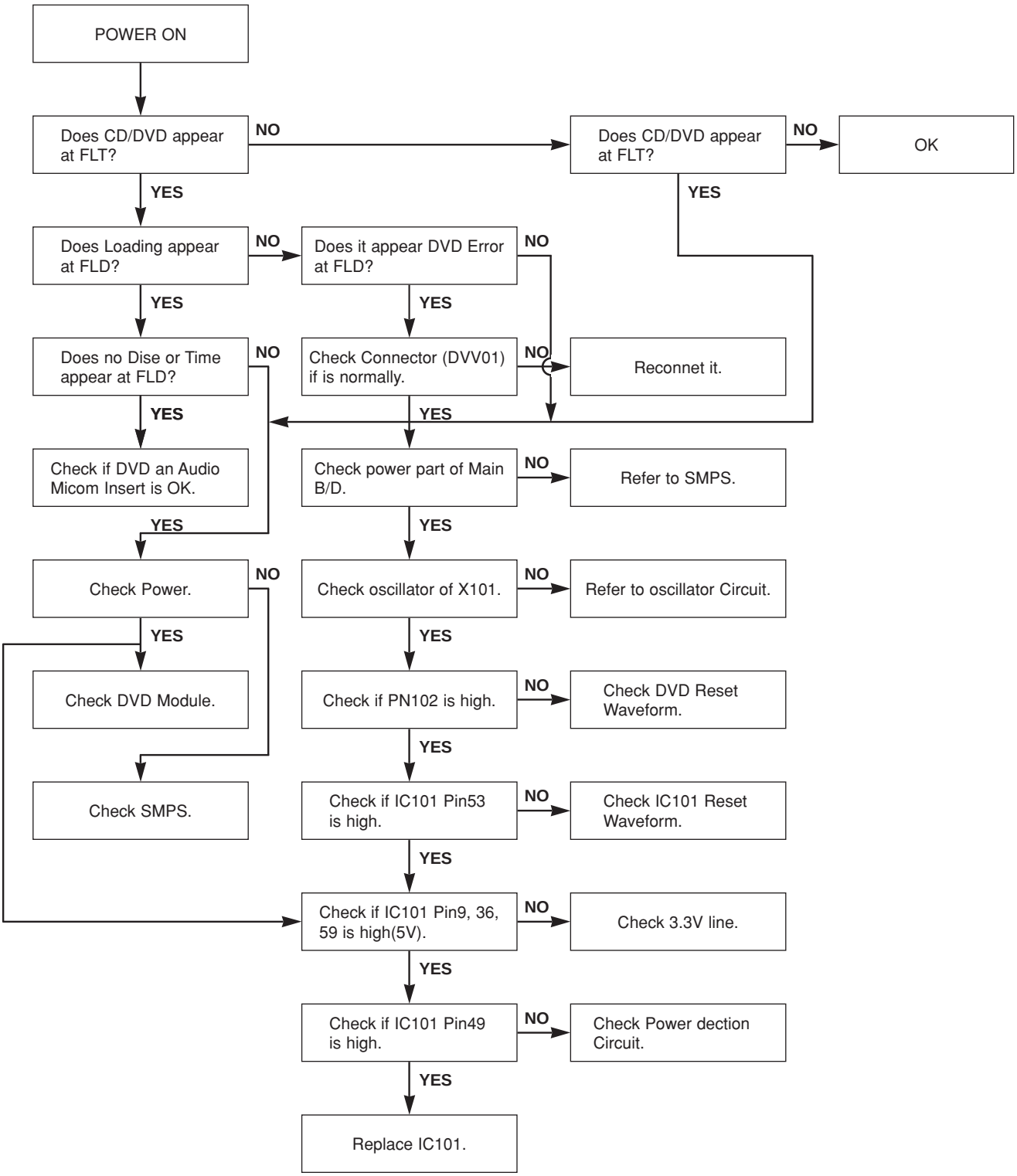

B
Does the SLED move to inner side when it is at outer position?
No
Yes
Motor Driver STBY Pin is High?
No
Yes
Check the connection line of STBY signal .
OK
Motor Driver STBY Pin is High?
No
Yes
Check the related circuit of FMSO.
SL+ and SL- output properly?
No
Yes
Check the amp circuit on motor driver.
Do not put in disc and tray close.
Check the cable connection with MECHA.
Optical Lens has movements for searching Focus?
No
Yes
Proper FOSO outputs to motor driver?
No
Yes
Check FOSO connection on MT1379 and motor driver.
Proper F+ & F- outputs?
No
Yes
Check the amp circuit on motor driver.
C
Check cable connect of the pick-up head.


C
Laser turns on when reading disc?
No
LD01 or LD02 output properly?
No
Check the laser power circuit on MT1336 and connecting to power transistor. (Q404, Q405)
Yes
Yes
Collector voltage of power transistor is OK? (Q404, Q405)
No
Check the related circuit on laser power transi stor
Yes
Check cable connection between transistor output and pick-up head.
Disc ID is correct?
No
Proper RFL signal on MT1336?
No
Check the related circuit on MT1336 RFL signal .
Yes
Yes
Check the RFL connection between MT1336 and MT1379.
Does spindle rotate?
No
Proper DMSO signal on MT1379
No
Check DMSO related circuit on MT1379.
Yes
Yes
SP+ & SP- output properly?
No
Check the spindle control amp circuit of motor driver.
Yes
Check the cable connection between spindle and main PCBA.
D


D
Yes
Focus ON OK?
No
Proper signals on A, B, C, D of MT1336
No
Check connections between MT1336 and pick-up head.
Yes
Yes
Proper FEO signal on MT1336?
No
Check the related circuit on MT1336 FEO sugnal .
Yes
Check FEO connection between MT1336 and MT1379
Track On OK?
No
Proper FEO signal on MT1336?
No
Check the related circuit on MT1336
Yes
Yes
Properly TRSO signal on MT1379?
No
Check the TRSO connection on MT1379 and motor dirver.
Yes
T+ & T- output properly?
No
Check the tracking control amp circuit on motor driver.
Yes
Check cable connection on pick-up head.
Disc is play?
No
Check RF signal waveform.
Yes
E


E
Normal Audio output when disc playback?
NO
Audio DAC received correct data stream?
NO
Check connection between MT1379 & Audio DAC. (Check ARCK, ALRCK ACKL, ASDAT3)
YES
YES
Normal Audio DAC out? (IC206)
NO
Check the related circuit of Audio DAC. (Check Audio out Pins 8, 5)
YES
Check Audio filter, amplify, mute circuit. (IC205 Application circuit)?
TEST END

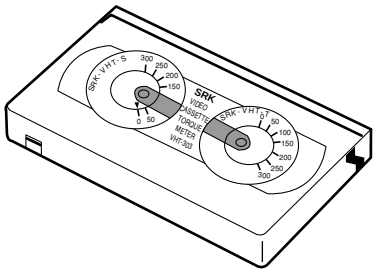
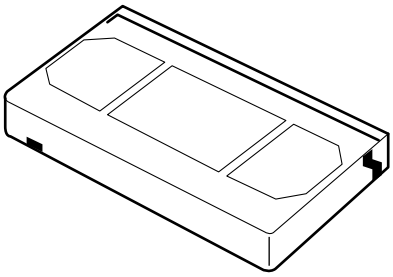
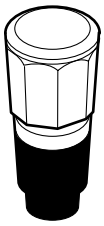
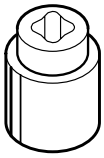
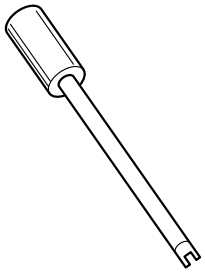
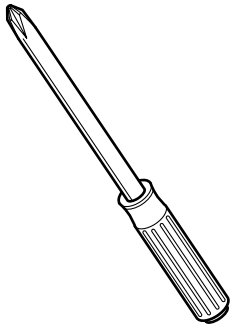
3. AUDIO μ-COM Circuit(DVD & AMP)



SECTION 4
MECHANICAL ADJUSTMENT

4-1. VIDEO MECHANISM DECK SECTION

• Tools and Fixfures for Service

1. Cassette Torque meter SRK-VHT-303(Not SVC part) 	2. Alignment tape (See figure below) 	3. Torque gauge 600g.Cm ATG 
4. Torque gauge adaptor 	5. Post height adjusting driver Parts No. : SV-TGO-030-000(SMALL) : SV-TGO-030-000(LARGE) 	6. + Type driver (ϕ 5) 

• Alignment Tapes for Adjustment

Derivation No.			A	B C	D
Mechanism / Adjustment Items			A	B C	D
		SP/LP 2/4 Head	SP 2 Head	SP/LP/EP 2/4 Head	SP 2 Head
FM Envelope		TTV-P2L	TTV-P2	TTV-N1 (TTV-N12)	TTV-N2
A/C Head	Slantness	A commecially available tape			
	Height	TTV-P1 (TTV-P1L)	TTV-P1	TTV-N1 (TTV-N12) (TTV-N1E)	TTV-N1 (TTV-N12)
	Azimuth	TTV-P1	TTV-P2	TTV-N2	TTV-N2
X-value		TTV-P2 (TTV-P2L)	TTV-P2	TTV-N2 TTV-N2E TTV-N12	TTV-N2
RG Post Inclination		A commecially available tape			
Tape Back Tension		SRK-VHT-303			

The numbers in ( ) parenthesis can be used as the substiture.

1. Mechanism Alignment Position Check

Purpose:To determine if the Mechanism is in the correct position, when a Tape is ejected.

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Check Point
• Blank tape	• Eject Mode (with Cassette ejected)	• Mechanism and Mode Switch Position

1) Turn the Power S/W on and eject the Cassette by pressing the Eject Button.
2) Remove the Top Cover and Plate Assembly Top, visually check if the Gear Cam Hole is aligned with the Chassis Hole as below Fig. C-2.
3) IF not, rotate the Shaft of the Loading Motor to either clockwise or counterclockwise until the alignment is as below Fig. C-2.
4) Remove the Screw which fixes the Deck Mechanism and Main Frame and confirm if the Gear Cam is aligned with the Gear Drive as below Fig. C-1(A).
5) Confirm if the Mode S/W on the Main P.C.Board is aligned as below Fig. C-1(B).
6) Remount the Deck Mechanism on the Main P.C.Board and check each operation.

CHECK DIAGRAM

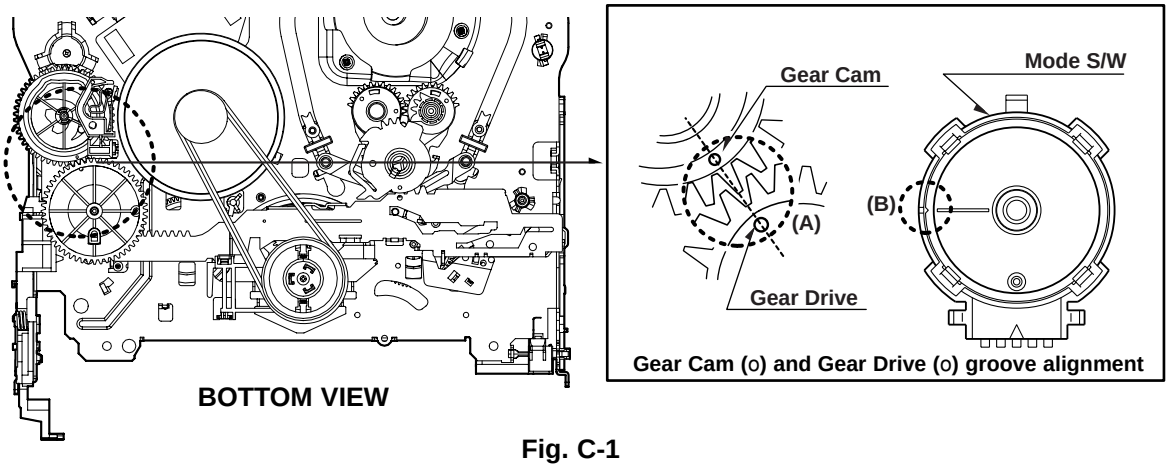


Fig. C-1

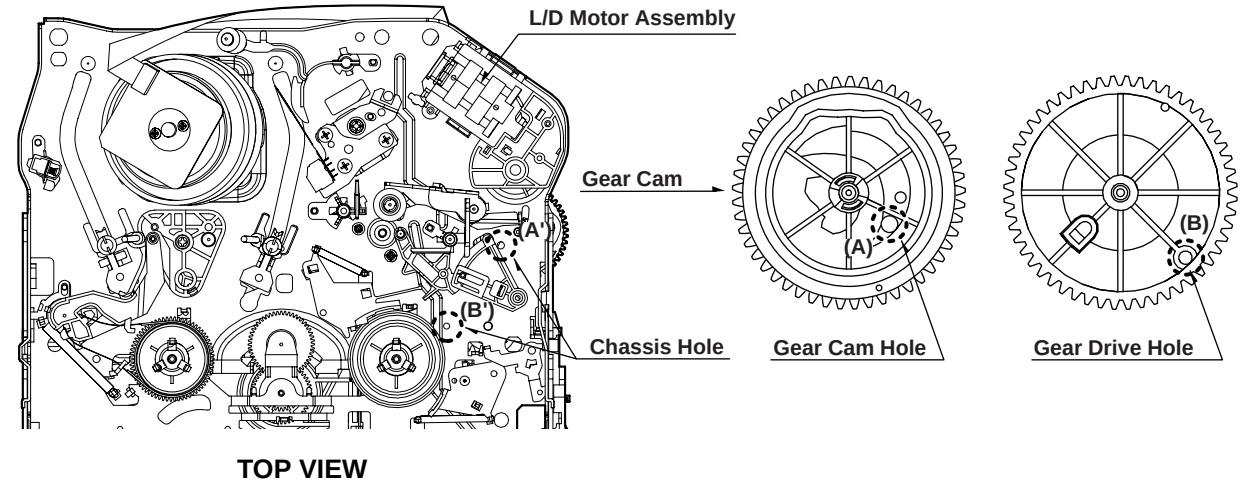


Fig. C-2

2. Preparation for Adjustment (To set the Deck Mechanism of the loading state without inserting a cassette tape).

1) Unplug the power cord from the AC outlet.
2) Disassemble the Top Cover and Plate Assembly Top.
3) Plug the power cord into the AC outlet.
4) Turn the power S/W on and push the Lever Stopper of the Holder Assembly CST to the back for loading the cassette without tape.
Cover the holes of the End Sensors at the both sides of the Chassis to prevent a light leak.
Then the Deck Mechanism drives to the Stop Mode.
In this case, the Deck Mechanism can accept inputs of each mode, however the Rewind and Review operation can not be performed for more than a few seconds because the Take-up Reel Table is in the Stop State and can not be detected the Reel Pulses.

3. Checking Torque

Purpose: To insure smooth transport of the tape during each mode of operation.
If the tape transport is abnormal, then check the torque as indicated by the chart below.

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Checking Method
• Torque Gauge(600g/cm ATG) • Torque Gauge Adaptor • Cassette Torque Meter SRK-VHT-303	• Play (FF) or Review (REW) Mode	• Perform each Deck Mechanism mode without inserting a cassette tape(Refer to above No.2 Preparation for Adjustment). • Read the measurement of the Take-up or Supply Reels on the Cassette Torque Meter(Fig. C-3-2). • Attach the Torque Gauge Adaptor to the Torque Gauge and then read the value of it(Fig. C-3-1).

Item	Mode	Test Equipment	Measurement Reel	Measurement Values
Fast Forward Torque	Fast Forward	Cassette Torque Gauge	Take-Up Reel	More than 400g/cm
Rewind Torque	Rewind	Cassette Torque Gauge	Supply Reel	More than 400g/cm
Play Take-Up Torque	Play	Cassette Torque Meter	Take-Up Reel	40~100g/cm
Review Torque	Review	Cassette Torque Meter	Supply Reel	120~210g/cm

NOTE:

The values are measured by using a Torque Gauge and Torque Gauge Adaptor with the Torque Gauge affixed.

NOTE:

The torque reading to measure occurs when the tape abruptly changes direction from Fast Forward to Rewind Mode, when quick braking is applied to both Reels.

• Torque Gauge (600g.cm ATG)

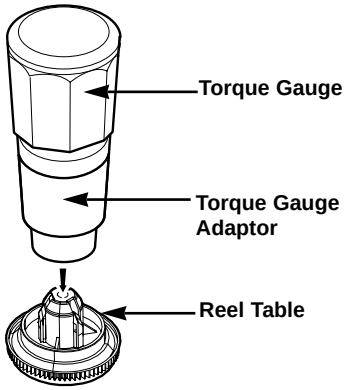


Fig. C-3-1

• Cassette Torque Meter (SRK-VHT-303)

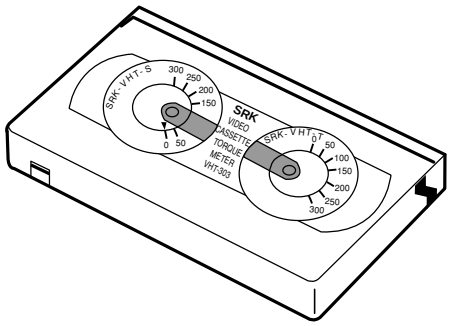


Fig. C-3-2

4.Guide Roller Height Adjustment

Purpose: To regulate the height of the tape so that the bottom of the tape runs along the tape guide line on the Lower Drum.

4-1. Preliminary Adjustment

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Adjustment Point
• Post Height Adjusting Driver	• Play or Review Mode	• Guide Roller Height Adjustment screws on the Supply and Take-Up Guide Rollers.

Adjustment Procedure

1) Confirm if the tape runs along the tape guide line of the Lower Drum.
2) If the tape runs the bottom of the guide line, turn the Guide Roller Height Adjustment Screw to clockwise direction.
3) If it runs the top, turn to counterclockwise direction.
4) Adjust the height of the Guide Roller to be guided to the guide line of the Lower Drum from the starting and ending point of the Drum.

ADJUSTMENT DIAGRAM

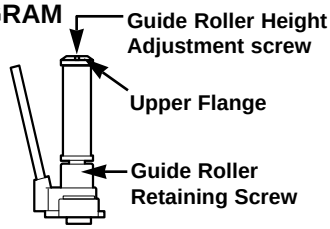


Fig. C-4-1

4-2. Precise Adjustment

Test Equipment/Fixture	Test Equipment Connection Points	Test Conditions VCR(VCP) State	Adjustment Point
• Oscilloscope • Alignment Tape • Post Height Adjusting Driver	• CH-1:PB RF Envelope • CH-2:NTSC: SW 30Hz PAL: SW 25Hz • Head Switching Output Point • RF Envelope Output Point	• Play an Alignment Tape	• Guide Roller Height Adjustment Screws

Adjustment Procedure

1) Play an Alignment Tape after connecting the probe of the Oscilloscope to the RF Envelope Output Test Point and Head Switching Output Test Point.
2) Tracking Control(in PB Mode) : Center Position(When this adjustment is performed after the Drum Assembly has been replaced, set the Tracking Control so that the RF Output is Maximum).
3) Height Adjustment Screw : Flatten the RF waveform. (Fig. C-4-2)
4) Turn(Move) the Tracking Control(in PB Mode) clockwise and counterclockwise.(Fig. C-4-3)
5) Check that any drop of RF Output is uniform at the start and end of the waveform.

NOTE

If the adjustment is excessive or insufficient the tape will jam or fold.

Waveform Diagrams

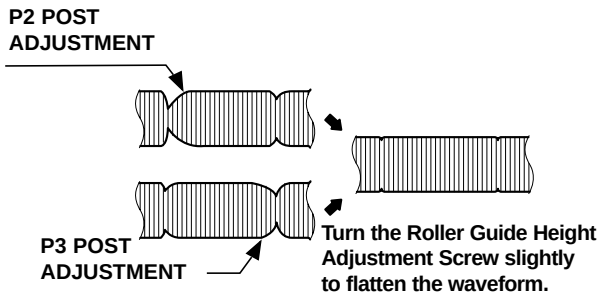


Fig. C-4-2

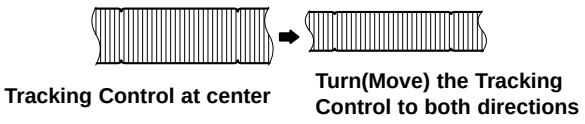
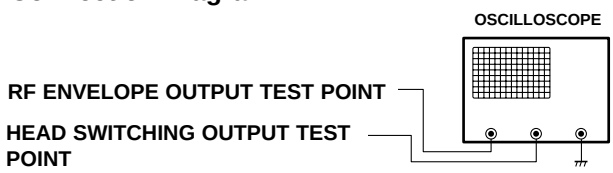


Fig. C-4-3

Connection Diagram



5. Audio/Control (A/C) Head Adjustment

Purpose: To insure that the tape passes accurately over the Audio and Control Tracks in exact alignment of the both Record and Playback Modes.

5-1. Preliminary Adjustment (Height and Tilt Adjustment)
Perform the Preliminary Adjustment, when there is no Audio Output Signal with the Alignment Tape.

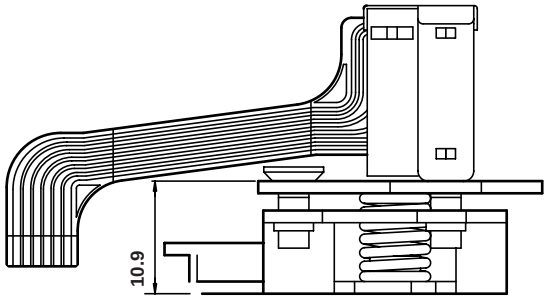
Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Adjustment Point
• Blank Tape • Screw Driver(+) Type 5mm	• Play the blank tape	• Tilt Adjustment Screw(C) • Height Adjustment Screw(B) • Azimuth Adjustment Screw(A)

Adjustment Procedure/Diagrams

1) Initially adjust the Base Assembly A/C Head as shown Fig. C-5-1 by using the Height Adjustment Screw(B).
2) Play a blank tape and observe if the tape passes accurately over the A/C Head without tape curling or folding.
3) If folding or curling is occured then adjust the Tilt Adjustment Screw(C) while the tape is running to resemble Fig. C-5-3.
4) Reconfirm the tape path after Playback about 4~5 seconds.

NOTE

Ideal A/C head height occurs when the tape runs between 0.2~0.25mm above the bottom edge of the A/C Head core.



A/C Head Base

Fig. C-5-1

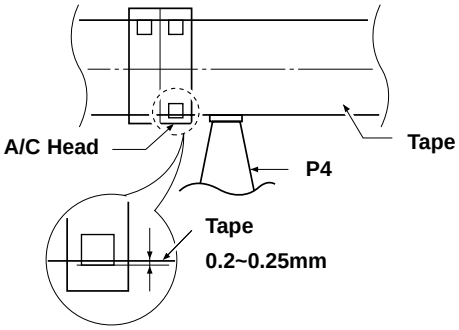
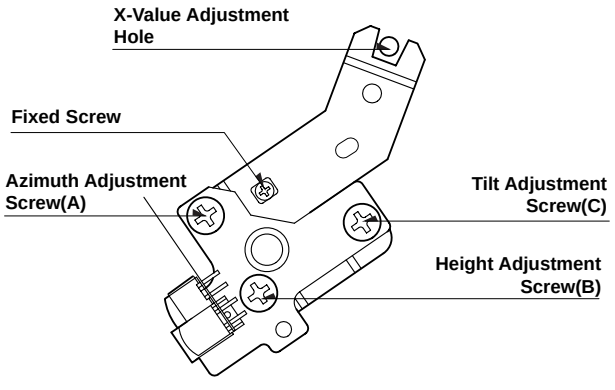


Fig. C-5-3



A/C Head Assembly

Fig. C-5-2

5-2. Confirm that the tape passes smoothly between the Take-up Guide and Pinch Roller(using a mirror or the naked eye).

1) After completing Step 5-1.(Preliminary Adjustment), check that the tape passes around the Take-up Guide and Pinch Roller without folding or curling at the top or bottom.
   (1) If folding or curling is observed at the bottom of the Take-up Guide then slowly turn the Tilt Adjustment Screw(C) in the clockwise direction.
   (2) If folding or curling is observed at the top of it then slowly turn the Tilt Adjustment Screw(C) in the counterclockwise direction.

NOTE:

Check the RF envelope after adjusting the A/C Head, if the RF waveform differs from Fig. C-5-4, performs Precise Adjustment to flat the RF waveform.

5-3. Precise Adjustment (Azimuth adjustment)

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Point
• Oscilloscope • Alignment Tape(SP) • Screw Driver(+) Type 5mm	• Audio output jack	• Play an Alignment Tape 1kHz, 7kHz Sections	• Azimuth Adjustment Screw(A) • Height Adjustment Screw(B)

Adjustment Procedure

1) Connect the probe of the oscilloscope to Audio Output Jack.
2) Alternately adjust the Azimuth Adjustment Screw(A) and the Tilt Adjustment Screw(C) for maximum output of the 1kHz and 7kHz segments, while maintaining the flattest envelope differential between the two frequencies.

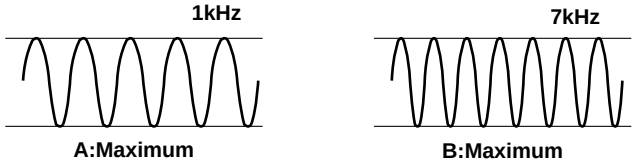
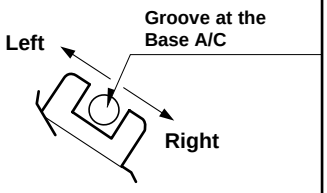


Fig. C-5-4

6. X-Value Adjustment

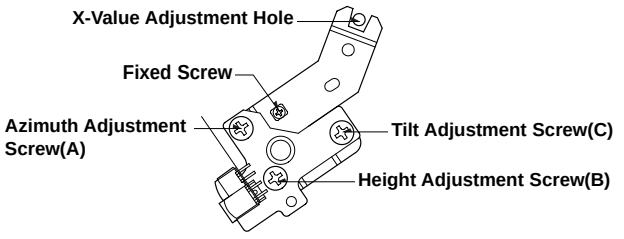
Purpose: To obtain compatibility with the other VCR(VCP) Models.

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Point
• Oscilloscope • Alignment Tape(SP only) • Screw Driver(+) Type 5mm	• CH-1: PB RF Envelope • CH-2: NTSC: SW 30Hz PAL: SW 25Hz • Head Switching Output Test Point • RF Envelope Output Test Point	• Play an Alignment Tape	

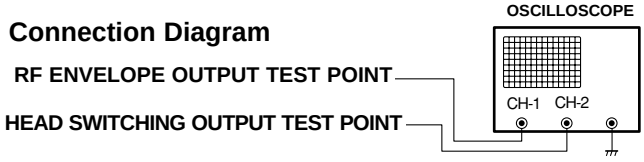
Adjustment Procedure

1) Release the Automatic Tracking to run long enough for tracking to complete it's cycle.
2) Loosen the Fixed Mounting Screw and move the Base Assembly A/C Head in the direction as shown in the diagram to find the center of the peak that allows for the maximum waveform envelope.
   This method should allow the 31μm Head to be centrally located over the 58μm tape track.
3) Tighten the Base Assembly A/C Head mounting Screw.

Adjustment Diagram



Connection Diagram



7. Adjustment after Replacing Drum Assembly (Video Heads)

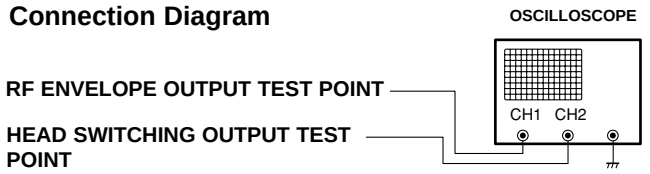
Purpose: To correct for shift in the Roller Guide and X value after replacing the Drum.

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Points
• Oscilloscope • Alignment Tapes • Blank Tape • Post Height Adjusting Driver • Screw Driver(+) Type 5mm	• CH-1: PB RF Envelope • CH-2: NTSC: SW 30Hz PAL: SW 25Hz • Head Switching Output Test Point • RF Envelope Output Test Point	• Play the Blank Tape • Play an Alignment Tape	• Guide Roller Precise Adjustment • Switching Point • Tracking Preset • X-Value

Checking/Adjustment Procedure

Play a blank tape and check for tape curling or creasing around the Roller Guide. If there is a problem then follow the procedure 4. "Guide Roller Height" and 5. "Audio Control(A/C) Head Adjustment".

Connection Diagram



Waveform

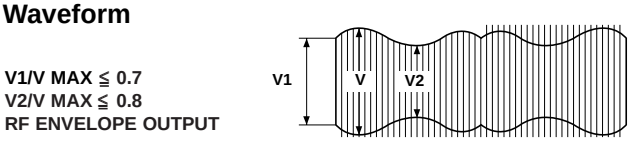


Fig. C-7

8. Check the Tape Travel after Reassembling Deck Assembly.

8-1. Checking Audio and RF Locking Time during playback and after CUE or REV (FF/REW)

Test Equipment/ Fixture	Specification	Connection Points	Test Conditions (Mechanism Condition)
• Oscilloscope • Alignment Tapes(with 6H 3KHz Color Bar Signal) • Stop Watch	• RF Locking Time: Less than 5 sec. • Audio Locking Time:Less than 10sec	• CH-1: PB RF Envelope • CH-2: Audio Output • RF Envelope Output Point • Audio Output Jack	• Play an Alignment Tape (with 6H 3kHz Color Bar Signal)

Checking Procedure

Play an Alignment Tape then change the operating mode to CUE or REV and confirm if the unit meets the above listed specifications.

NOTES:

1) CUE is the forward search mode (FF)
2) REV is the backward search mode (REW)
3) Refer to the Play mede

8-2. Checking for tape curling or jamming

Test Equipment/ Fixture	Specification	Test Conditions (Mechanism Condition)
• T-160 Tape • T-120 Tape	• Be sure there is no tape jamming or curling at the begining, middle or end of the tape.	• Run the CUE, REV, Play mode at the beginning and the end of the tape.

Checking Procedure

1) Confirm that the tape runs smoothly around the roller guides, Drum and A/C Head Assemblies while abruptly changing operating modes from Play to CUE or REV. This is to be checked at the begining, middle and end sections of the tape.
2) Confirm that the tape passes over the A/C Head Assembly as indicated by proper audio reproduction and proper tape counter performance.

4-2. MAINTENANCE/INSPECTION PROCEDURE

1. Check before starting repairs

The following faults can be remedied by cleaning and oiling. Check the needed lubrication and the conditions of cleanliness in the unit.
Check with the customer to find out how often the unit is used, and then determine that the unit is ready for inspection and maintenance. Check the following parts.

Phenomenon	Inspection	Replacement
Color beats	Dirt on Full-Erase Head	○
Poor S/N, no color	Dirt on Video Head	○
Vertical or Horizontal jitter	Dirt on Video Head Dirt on tape transport system	○
Low volume, Sound distorted	Dirt on Audio/Control Head	○
Tape does not run. Tape is slack	Dirt on Pinch Roller	○
In Review and Unloading (off mode), the tape is rolled up loosely.	Clutch Assembly D35 torque reduced	○
	Cleaning Drum and transport system	Fig. C-9-3

NOTE

If locations marked with ○ do not operate normally after cleaning, check for wear and replace.
See the EXPLODED VIEWS at the end of this manual as well as the above illustrations and see the Greasing (Page 45, 46) for the sections to be lubricated and greased.

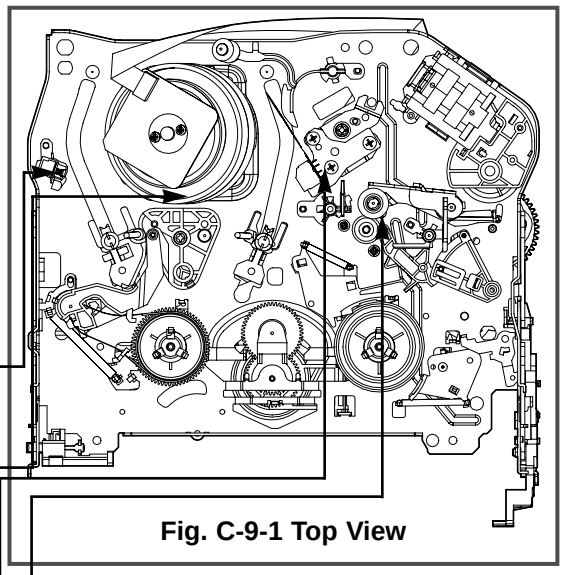


Fig. C-9-1 Top View

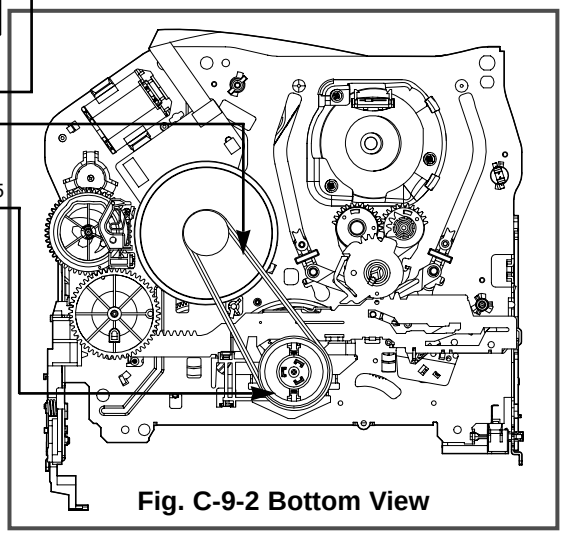


Fig. C-9-2 Bottom View

*** No. (1)~(12) Indicates the Tape Path to be traveled from Supply Reel to Take-up Reel.**

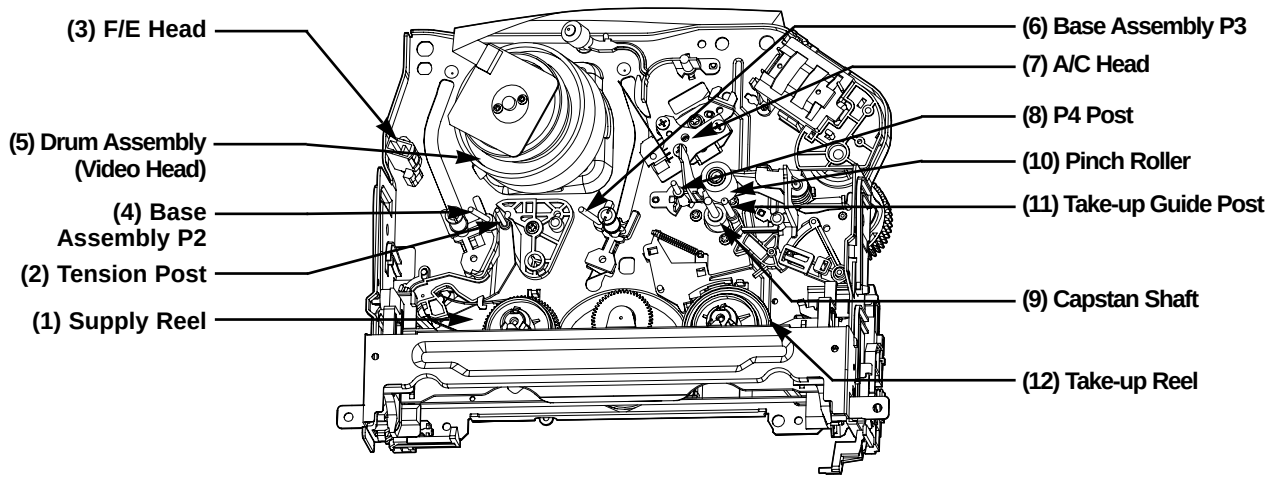


Fig. C-9-3 Tape Transport System

2. Required Maintenance

The recording density of a VCR(VCP) is much higher than that of an audio tape recorder. VCR(VCP) components must be very precise, at tolerances of 1/1000mm, to ensure compatibility with the other VCRs. If any of these components are worn or dirty, the symptoms will be the same as if the part is defective. To ensure a good picture, periodic inspection and maintenance, including replacement of worn out parts and lubrication, is necessary.

3. Scheduled Maintenance

Schedules for maintenance and inspection are not fixed because they vary greatly according to the way in which the customer uses the VCR(VCP), and the environment in which the VCR(VCP) is used.
But, in general home use, a good picture will be maintained if inspection and maintenance is made every 1,000 hours. The table below shows the relation between time used and inspection period.

Table 1

When inspection is necessary / Average hours used per day	About 1 year	About 18 months	About 3 years
One hour	▼	▼	▼
Two hours			
Three hours			

4. Supplies Required for Inspection and Maintence

(1) Grease : Kanto G-311G (Blue) or equivalent
(2) Isopropyl Alcohol or equivalent
(3) Cleaning Patches
(4) Grease : Kanto G-381(Yellow)

5. Maintenance Procedure

5-1) Cleaning

(1) Cleaning video head
First use a cleaning tape. If the dirt on the head is too stubborn to remove by tape, use the cleaning patch. Coat the cleaning patch with Isopropyl Alcohol. Touch the cleaning patch to the head tip and gently turn the head(rotating cylinder) right and left.
(Do not move the cleaning patch vertically. Make sure that only the buckskin on the cleaning patch comes into contact with the head. Otherwise, the head may be damaged.)
Thoroughly dry the head. Then run the test tape. If Isopropyl Alcohol remains on the video head, the tape may be damaged when it comes into contact with the head surface.
(2) Clean the tape transport system and drive system, etc, by wiping with a cleaning patch wetted with Isopropyl Alcohol.

NOTES:

① It is the tape transport system which comes into contact with the running tape. The drive system consists of those parts which moves the tape.
② Make sure that during cleaning you do not touch the tape transport system with excessive force that would cause deformation or damage to the system.

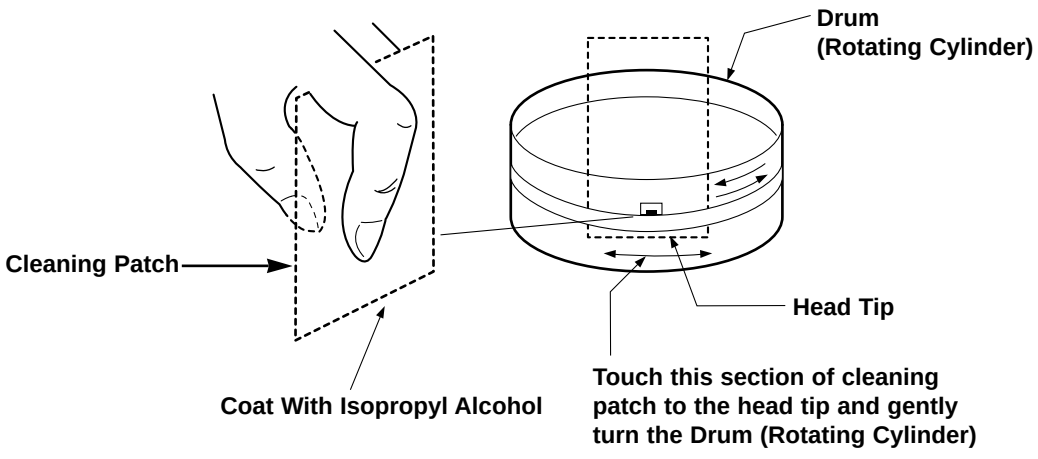


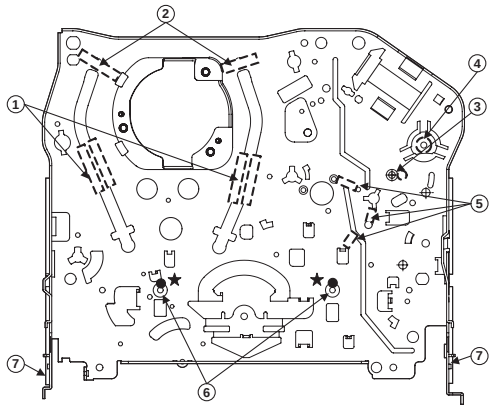
Fig. C-9-4

5-2) Greasing

(1) Greasing guidelines
Apply grease, with a cleaning patch. Do not use excessive grease. It may come into contact with the tape transport or drive system. Wipe excessive grease and clean with cleaning patch wetted in Isopropyl Alcohol.

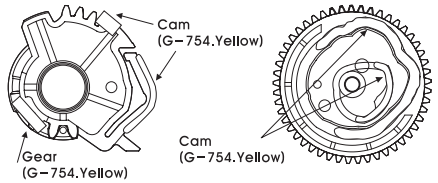
NOTE:Greasing Points

1) Loading Path Inside & Top side
2) Base Assembly P2, P3 stopper
3) Shaft
4) L/D Motor Gear Wheel Part
5) Arm Take-up Rubbing Sections
6)Reel S,T shaft(G381:Yellow)
7) Arm Assembly F/L Rotating Sections

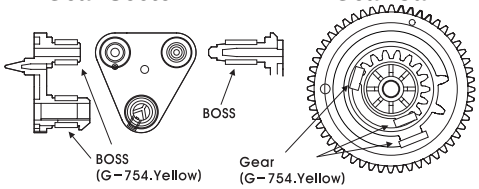


Chassis (Top)

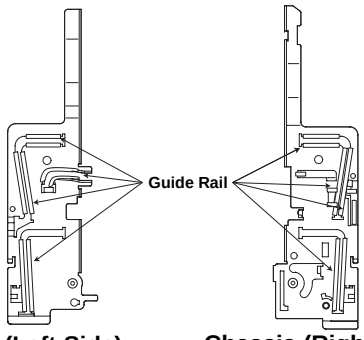
Gear Part



Gear Sector **Gear Cam**



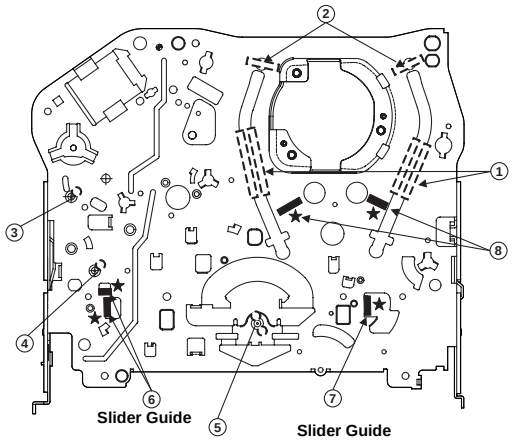
Base Loading **Gear Drive**



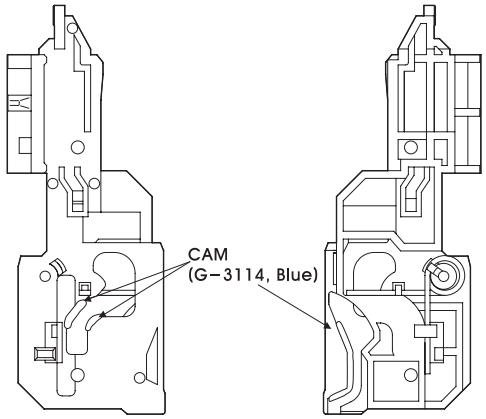
Chassis (Left Side) **Chassis (Right Side)**

(2) Periodic greasing
Grease specified locations every 5,000 hours.

1) Loading Path Inside & Top side
2) Base Assembly P2,P3 stopper
3) Shaft
4) Shaft
5) Clutch Assembly D35 Shaft
6) Plate Slider Guide Sections
7) Plate Slider Guide Sections
8) Gear Assembly P2, P2 Rubbing Sections



Chassis (Bottom)



Gear Rack F/L

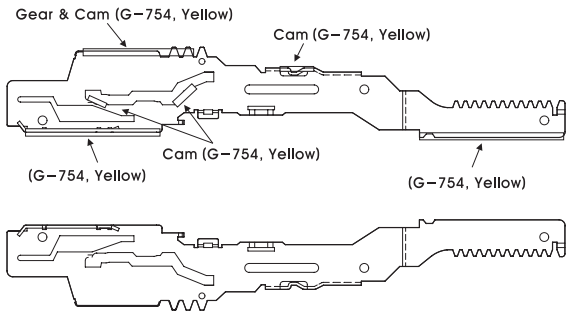
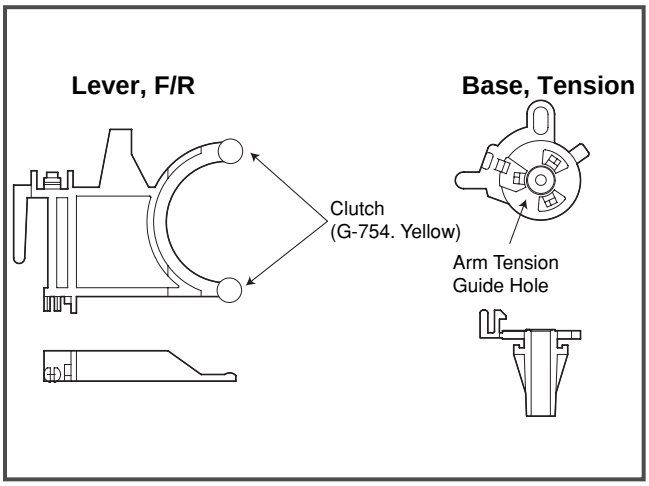
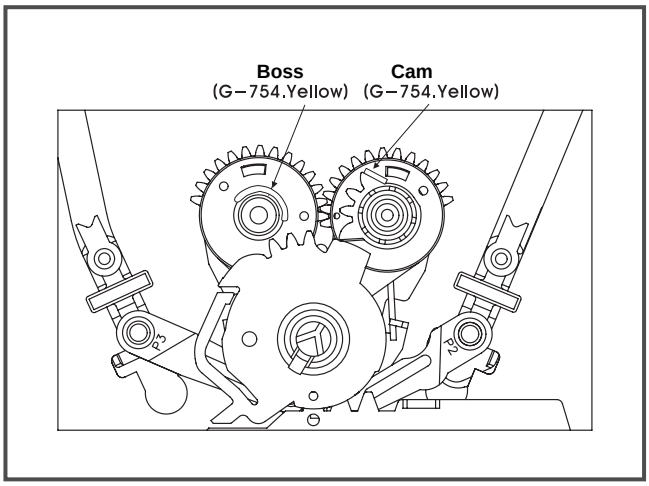


Plate Slider

Lever, F/R, Base, Tension

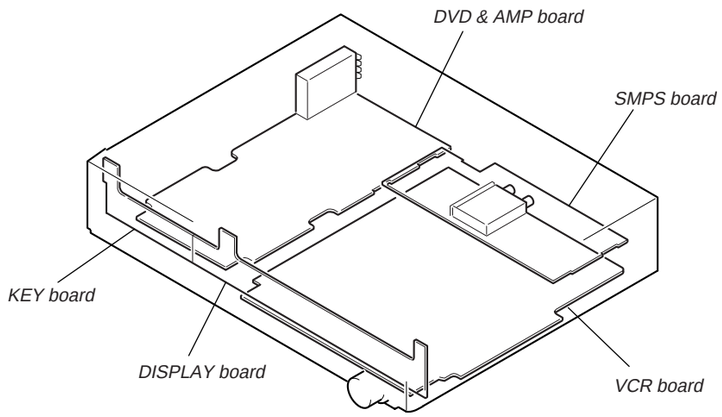


GEAR AY, P2 & P3



SECTION 5
DIAGRAMS

CIRCUIT BOARD LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages and waveforms are dc with respect to ground in service mode.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
  no mark : STOP
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : AUDIO
  - ⇨ : CD
  - ⇨ : DVD
  - ⇨ : TUNER
  - ⇨ : VIDEO
  - ⇨ : Y
  - ⇨ : CHROMA
  - ⇨ : R, G, B

For printed wiring boards.

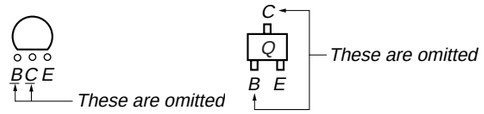
Note:

- ○——○ : parts extracted from the component side.
- ○ : Through hole.
- ▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

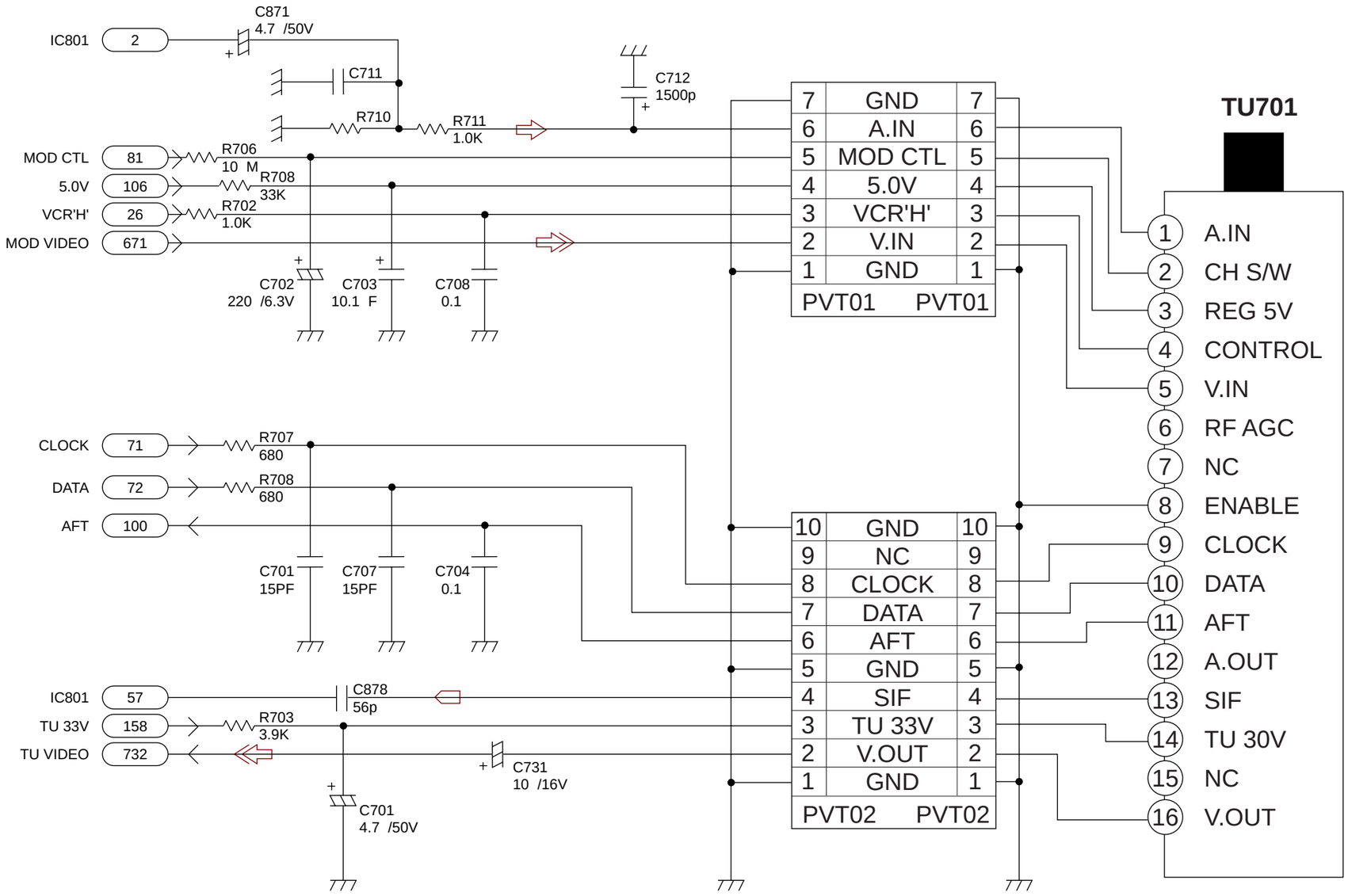
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- **Indication of transistor**



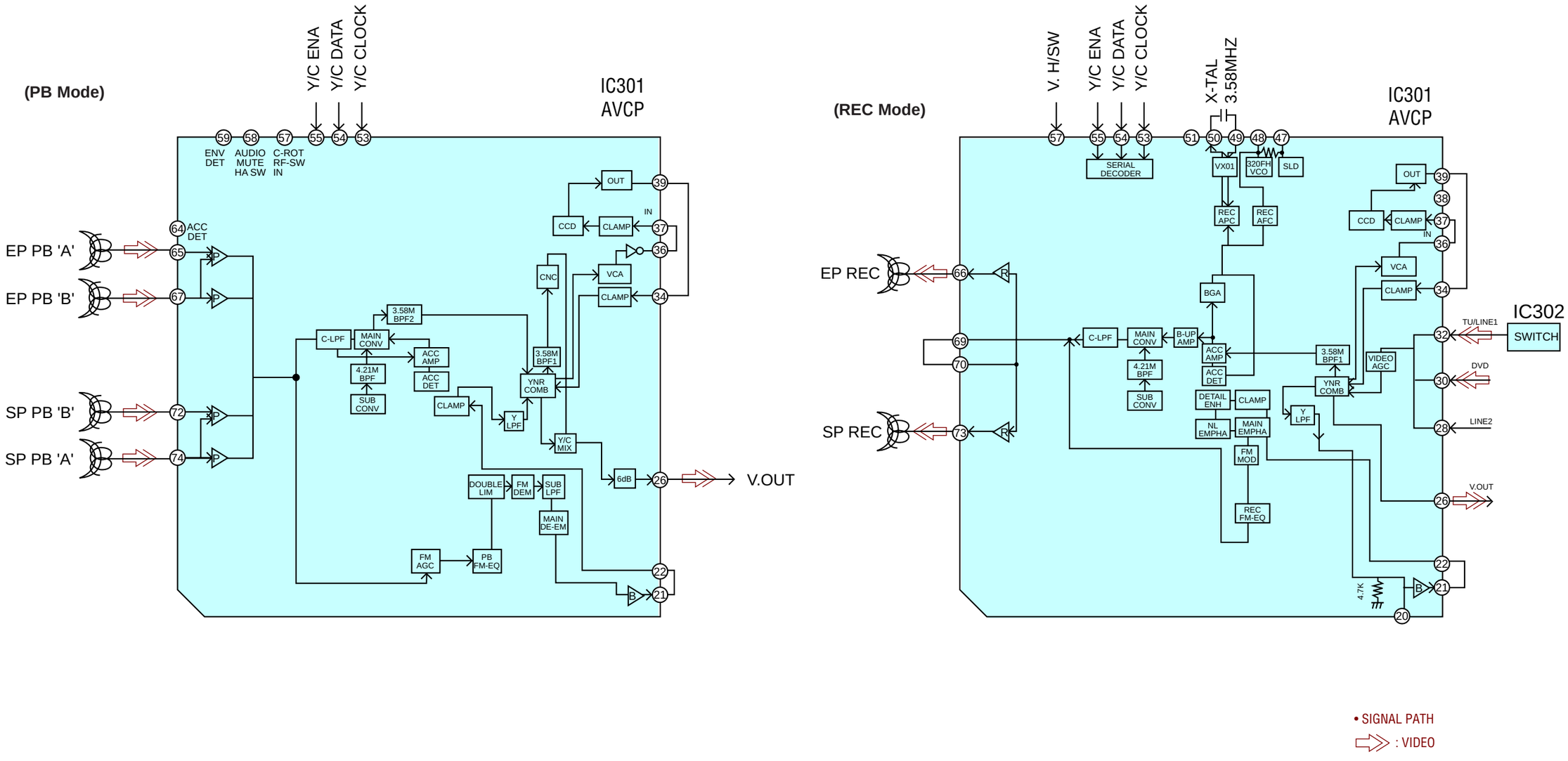
- Abbreviation
  CND : Canadian model

5-1. BLOCK DIAGRAM – JACK & TUNER SECTION –



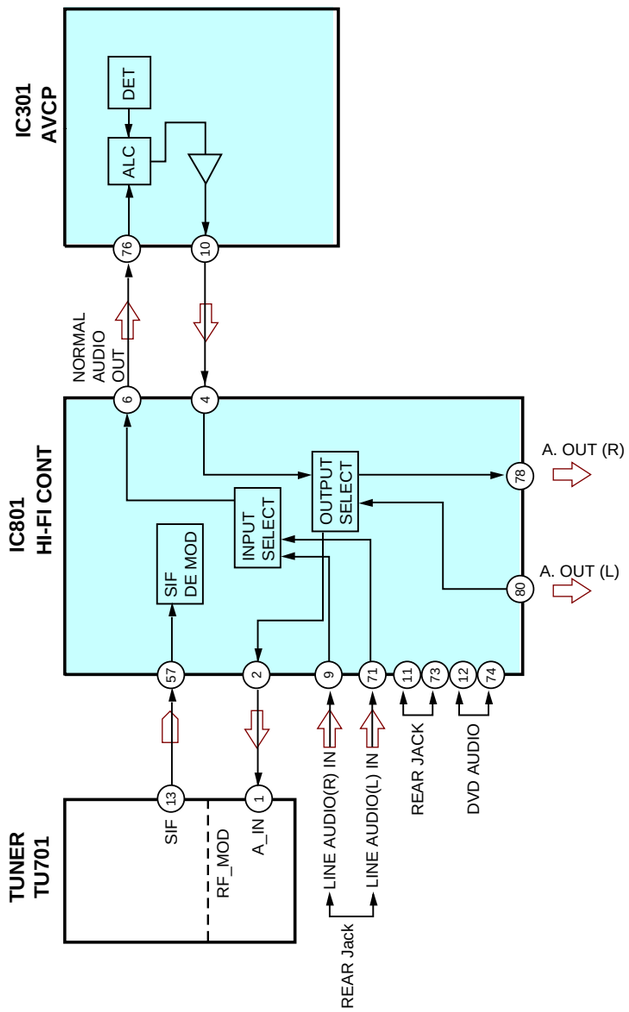
• SIGNAL PATH
: AUDIO
: VIDEO
: TUNER

5-2. BLOCK DIAGRAM – Y/C BLOCK SECTION –

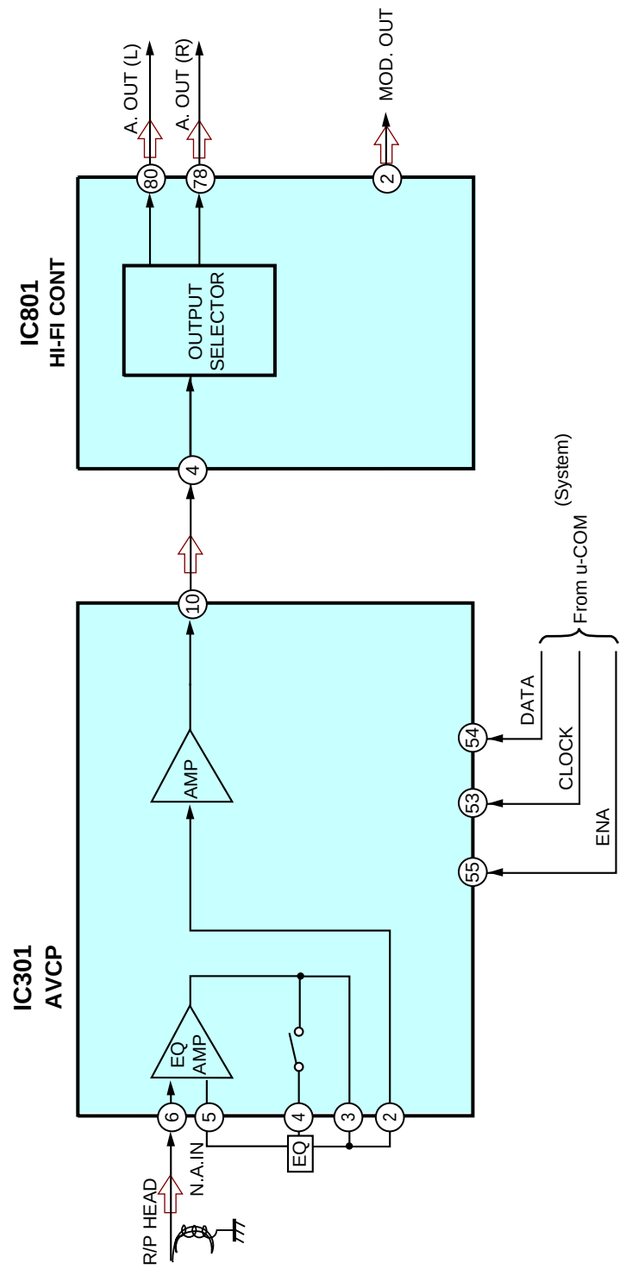


5-3. BLOCK DIAGRAM – NORMAL AUDIO SECTION –

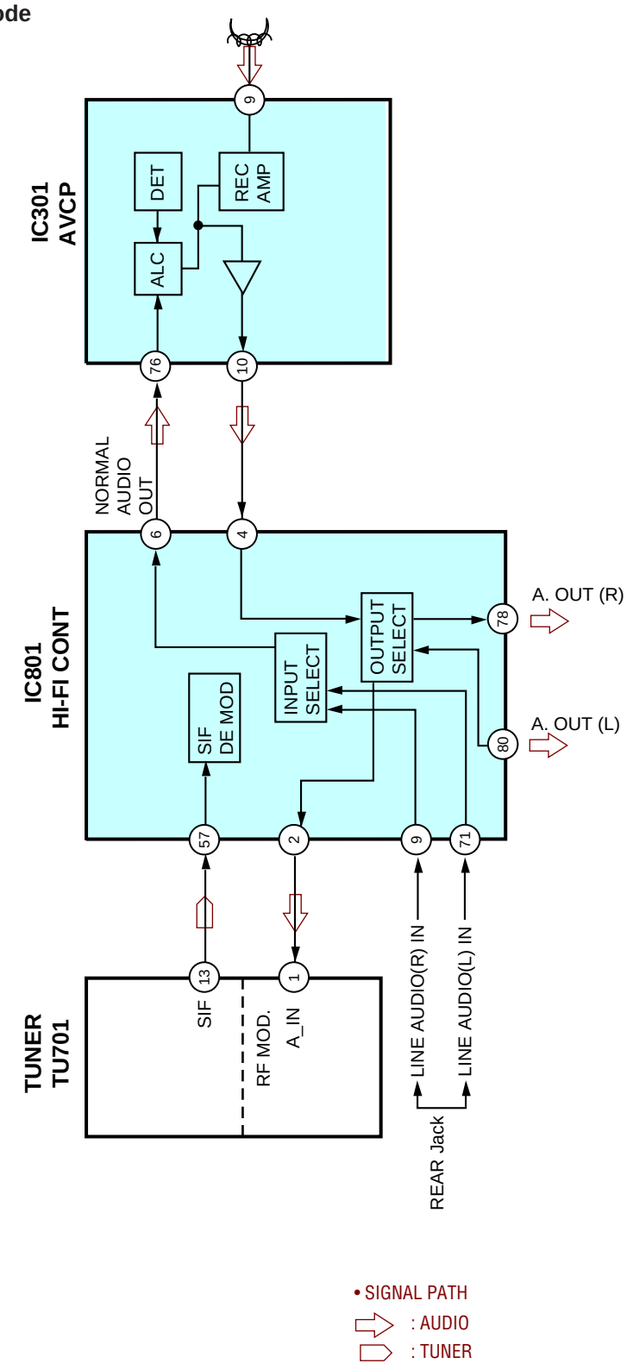
1) EE Mode



2) PB Mode

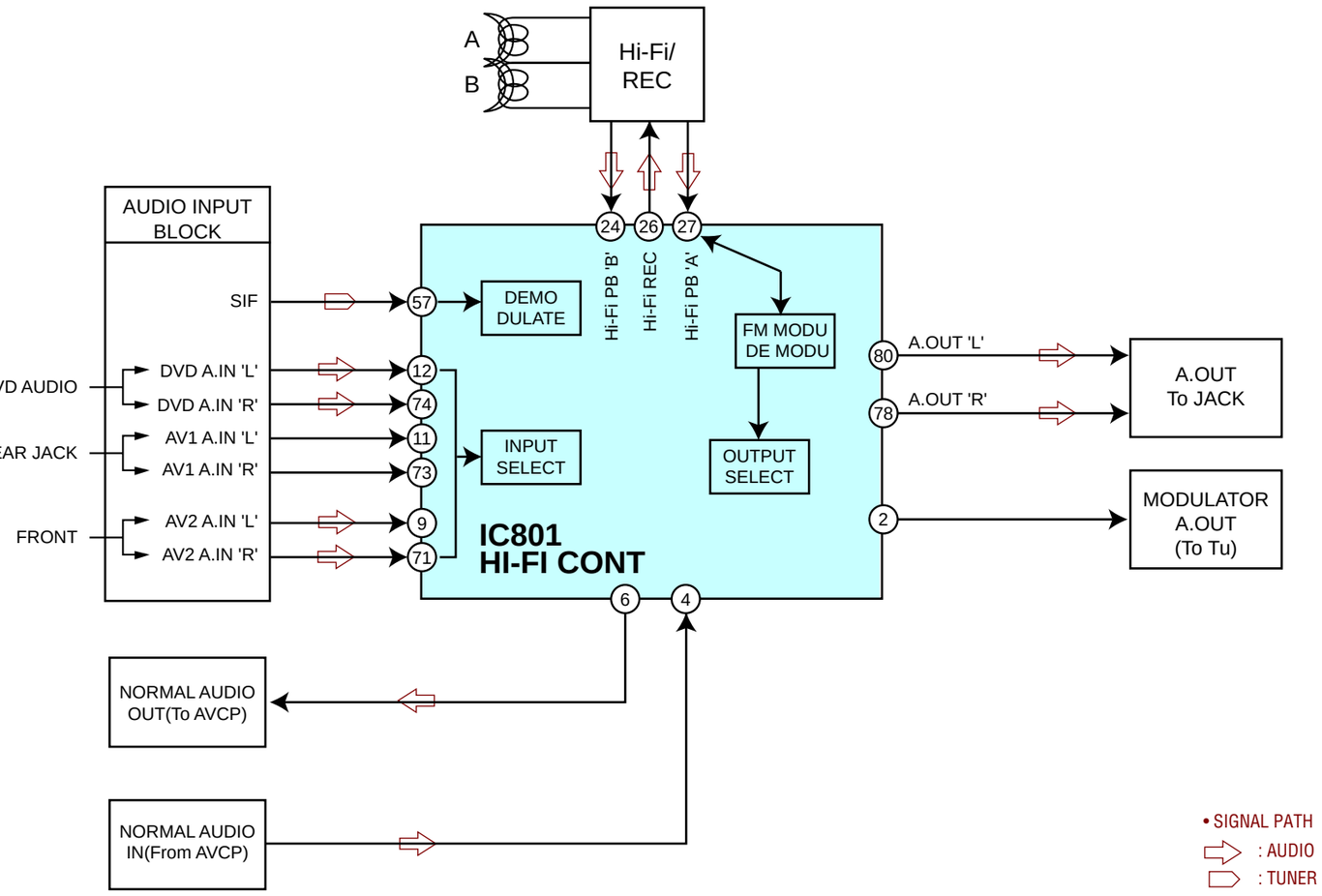


3) REC Mode

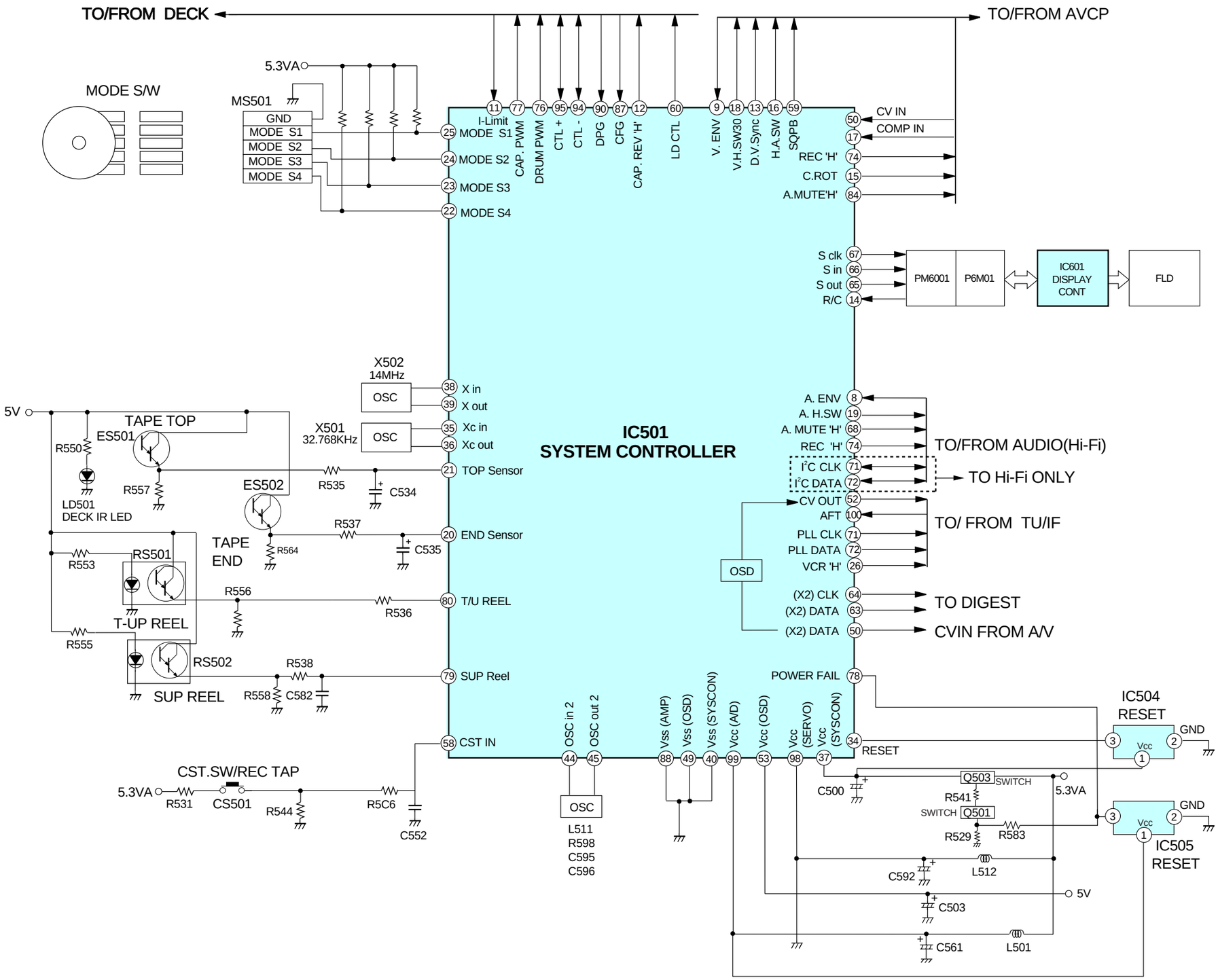


• SIGNAL PATH
: AUDIO
: TUNER

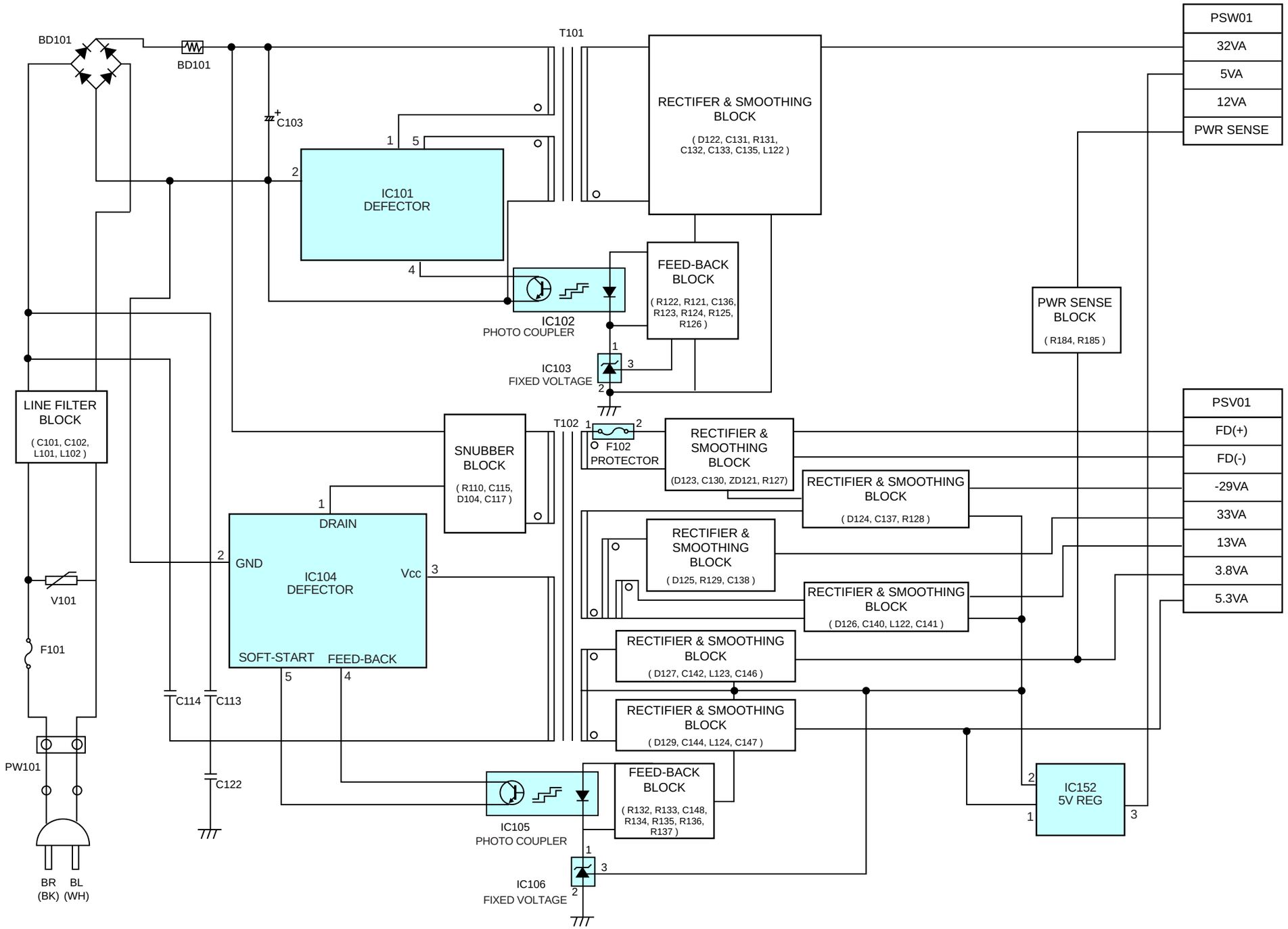
5-4. BLOCK DIAGRAM – HI-FI SECTION –



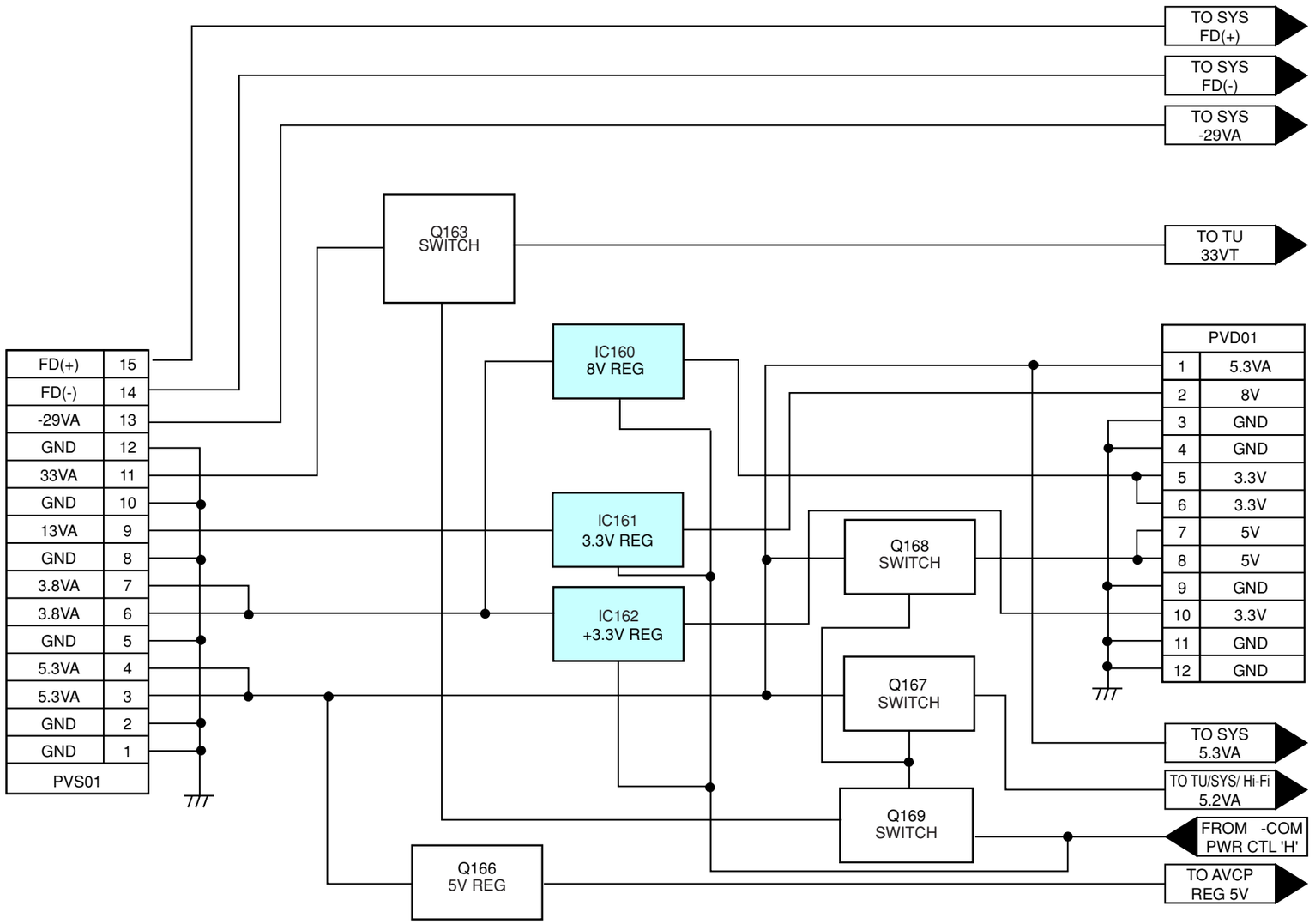
5-5. BLOCK DIAGRAM – SYSTEM SECTION –



5-6. BLOCK DIAGRAM – POWER (SMPS) SECTION 1 –



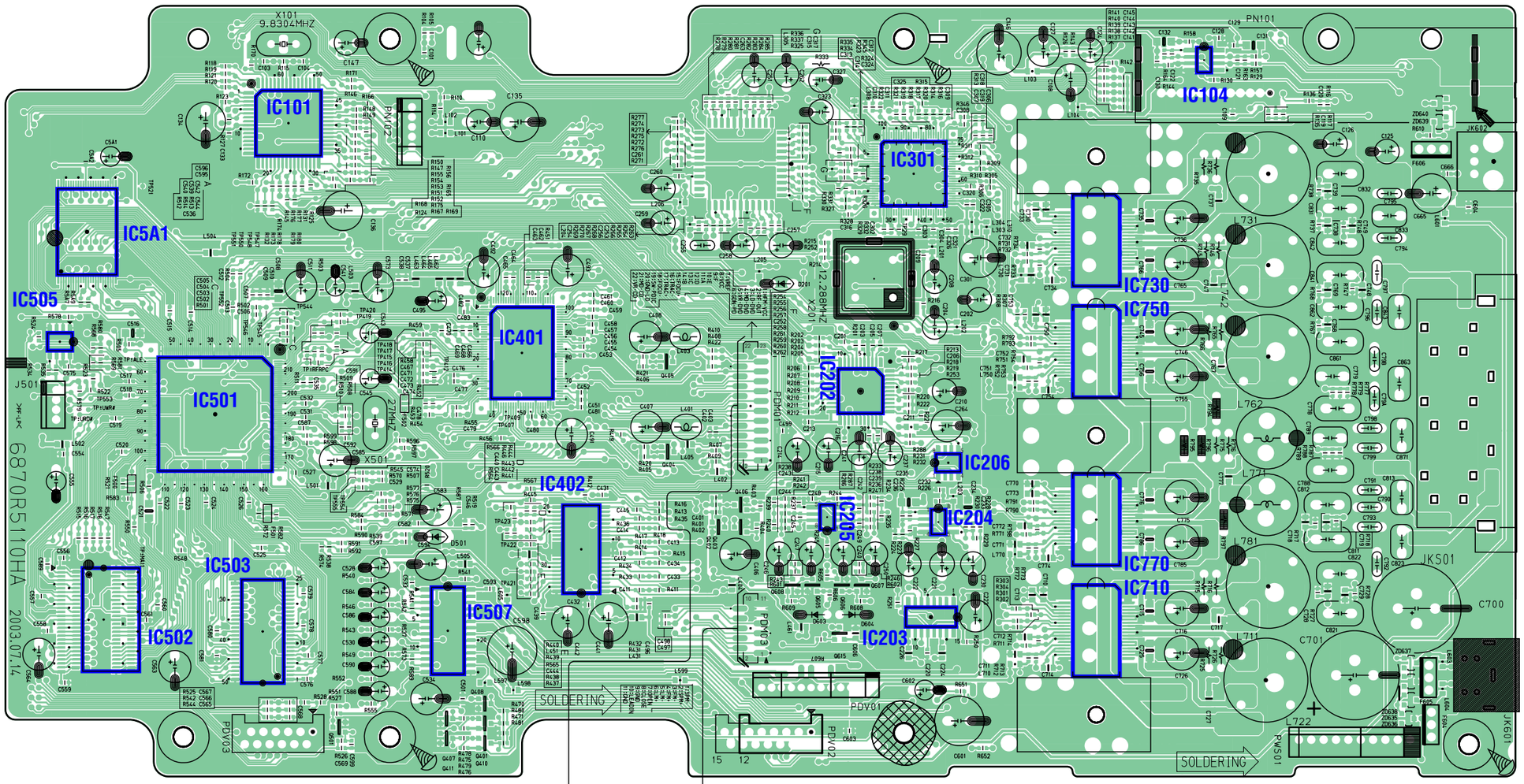
5-7. BLOCK DIAGRAM – POWER (SMPS) SECTION 2 –



5-8. PRINTED WIRING BOARD – DVD & AMP SECTION (COMPONENT SIDE) – • See page 47 for Circuit Board Location.

	1	2	3	4	5	6	7
A							
B							
C							
D							

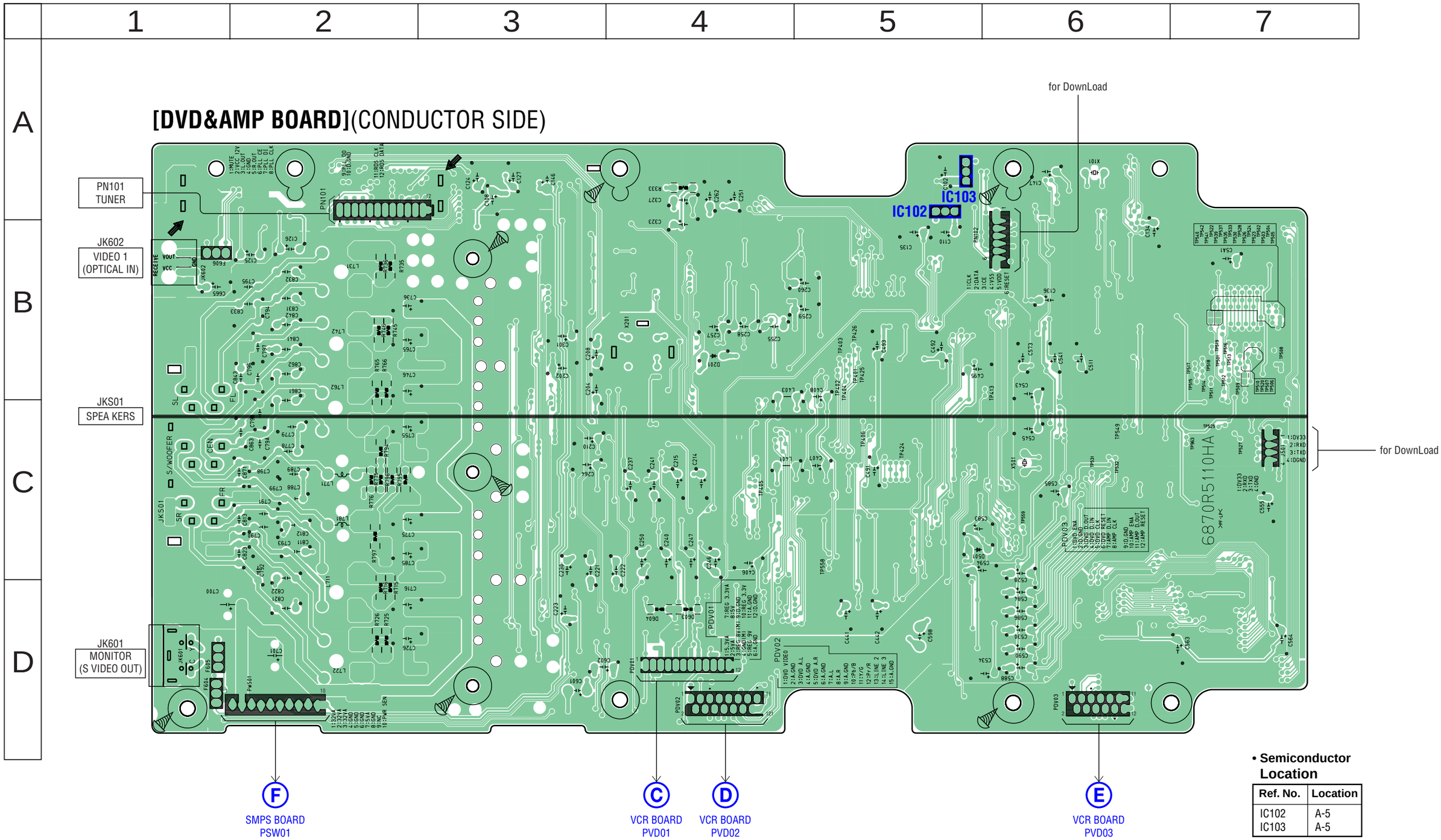
[DVD&AMP BOARD](COMPONENT SIDE)



• **Semiconductor Location**

Ref. No.	Location
D501	C-3
D603	C-4
D604	C-4
IC101	A-2
IC104	A-6
IC202	C-4
IC203	D-4
IC204	C-5
IC205	C-4
IC206	C-5
IC301	B-4
IC401	B-3
IC402	C-3
IC501	C-2
IC502	C-1
IC503	C-2
IC505	B-1
IC507	C-3
IC5A1	B-1
IC710	C-5
IC730	B-5
IC750	B-5
IC770	C-5
Q401	D-3
Q402	C-4
Q403	C-4
Q404	C-3
Q405	C-3
Q406	C-4
Q407	D-2
Q408	D-3
Q410	D-3
Q411	D-2
Q501	D-2
Q605	C-4
Q606	C-4
Q607	C-4
Q608	C-4
Q615	D-4

5-9. PRINTED WIRING BOARD – DVD & AMP SECTION (CONDUCTOR SIDE) – • See page 47 for Circuit Board Location.



• **Semiconductor Location**

Ref. No.	Location
IC102	A-5
IC103	A-5

5-10. SCHEMATIC DIAGRAM – MPEG SECTION –

【DVD & AMP BOARD 】(1/6)

IC501
MT1379DEC
IC501
MPEG & VIDEO

IC503
SD RAM
SDRAM (16M)
IC503
HY57V16160DTC-7

IC502
SD RAM
IC502
HY57V16160DTC-7

IC507
BUFFER
IC507
MM1623XFBE

IC5A1
SD RAM
IC5A1
DTS60910M DVD

IC505
DAC
IC505
S524A440X21

SWITCH
Q501
KTC3875S

DOWN LOAD
J501
for
Down Load

INTERFACE
SECTION

⑥ DVD&AMP BOARD (6/6)

④ DVD&AMP BOARD (2/6)

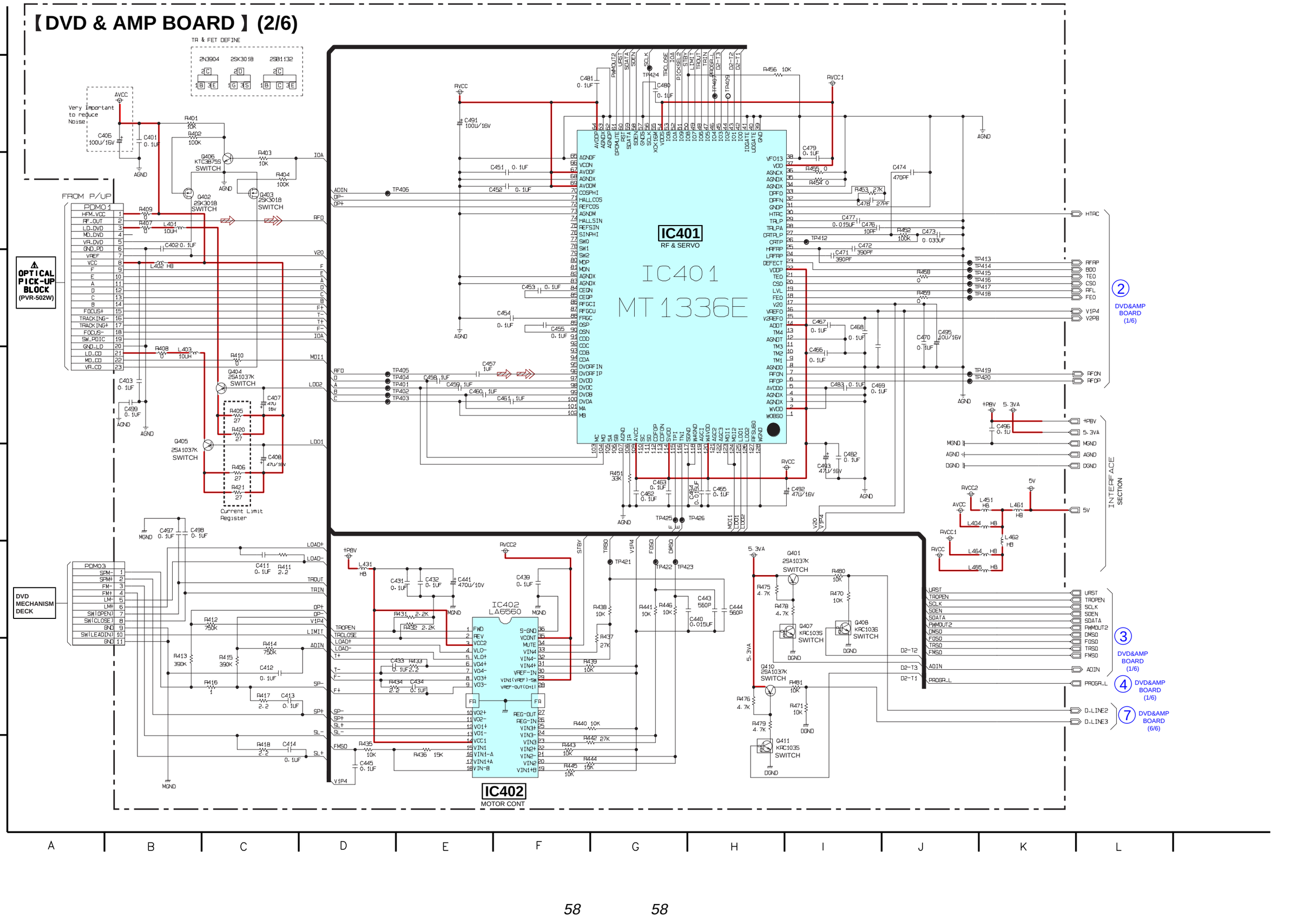
⑤ DVD&AMP BOARD (6/6)

① DVD&AMP BOARD (5/6)

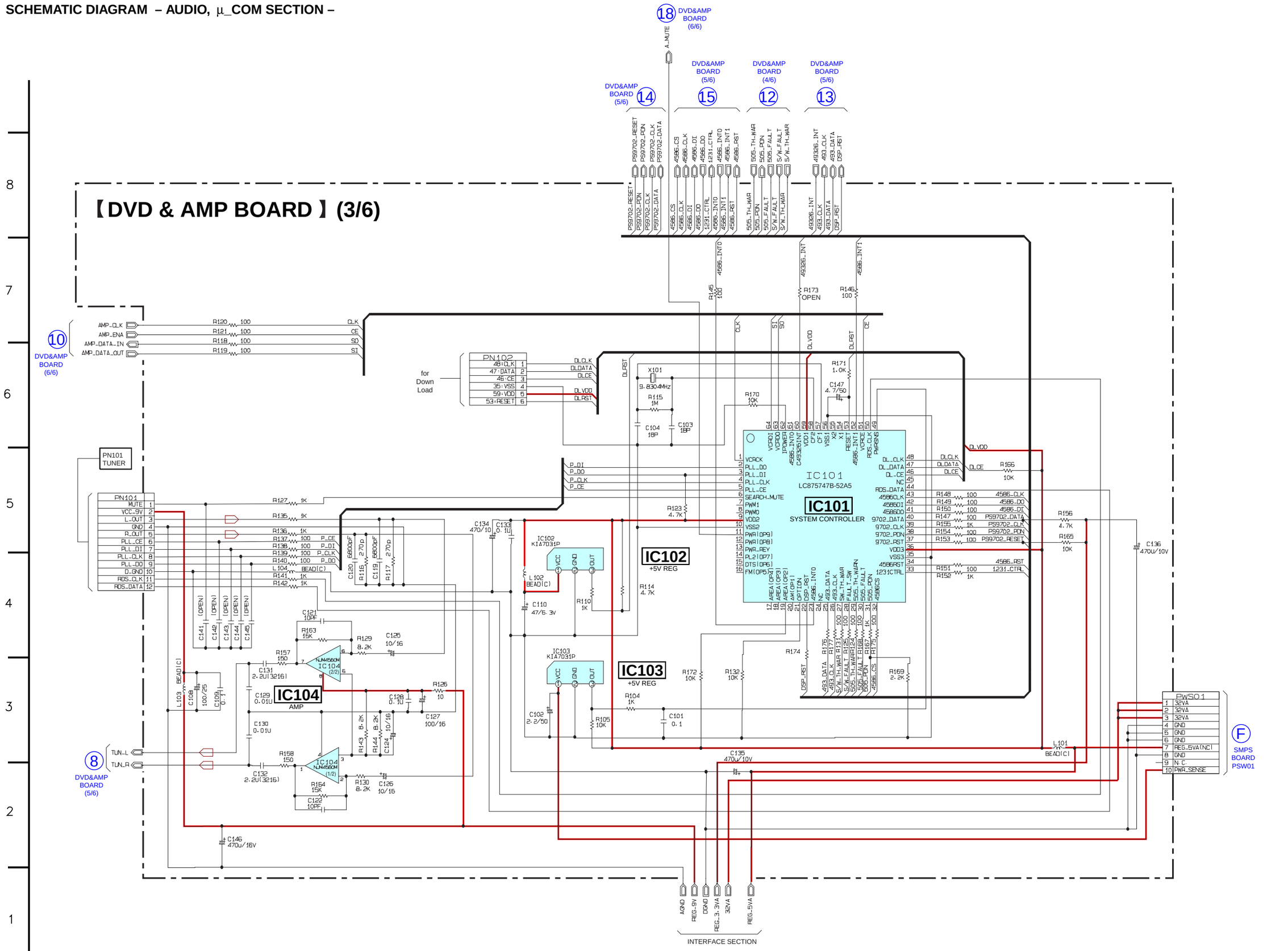
② DVD&AMP BOARD (2/6)

③ DVD&AMP BOARD (2/6)

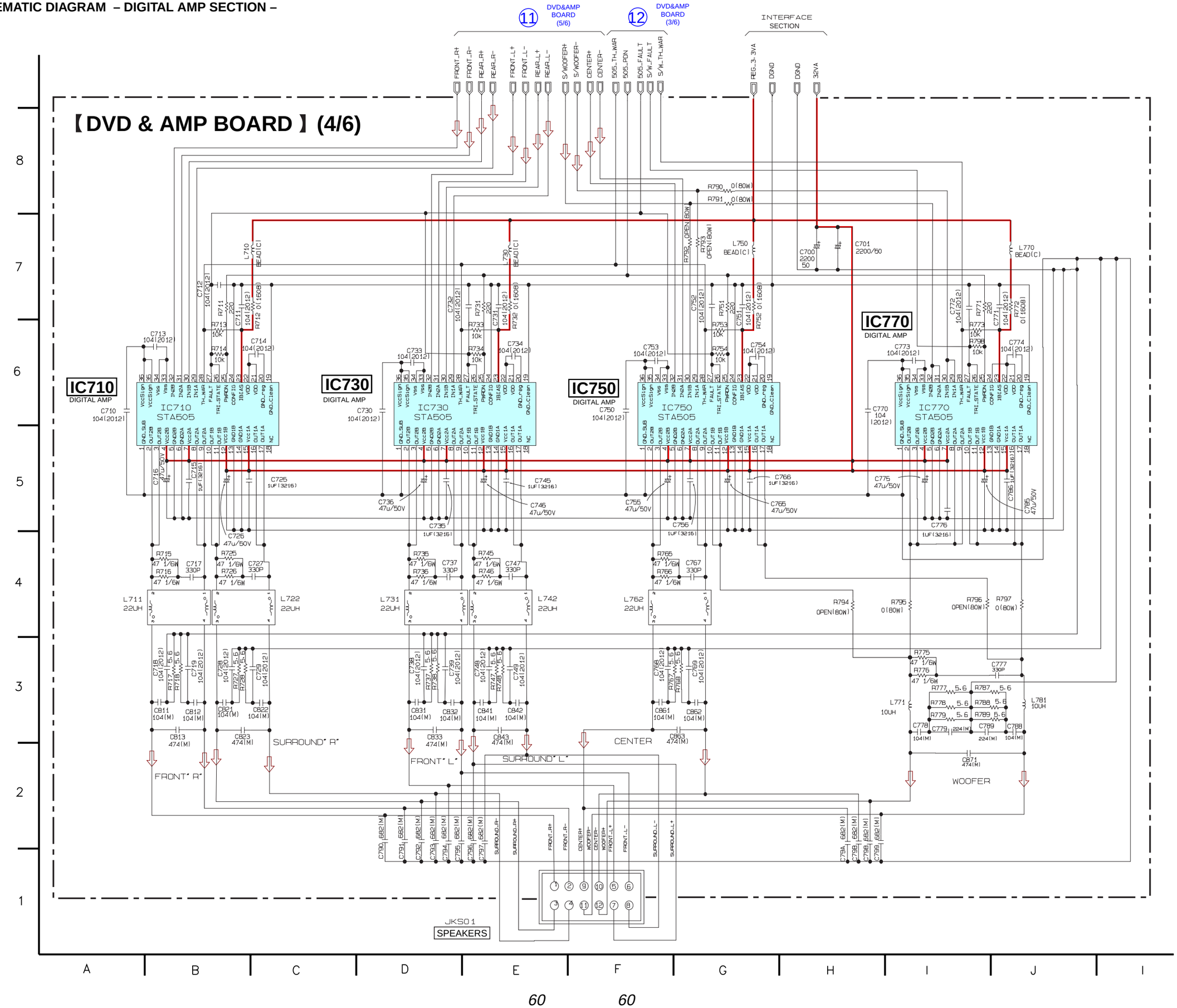
5-11. SCHEMATIC DIAGRAM – RF & SERVO SECTION –



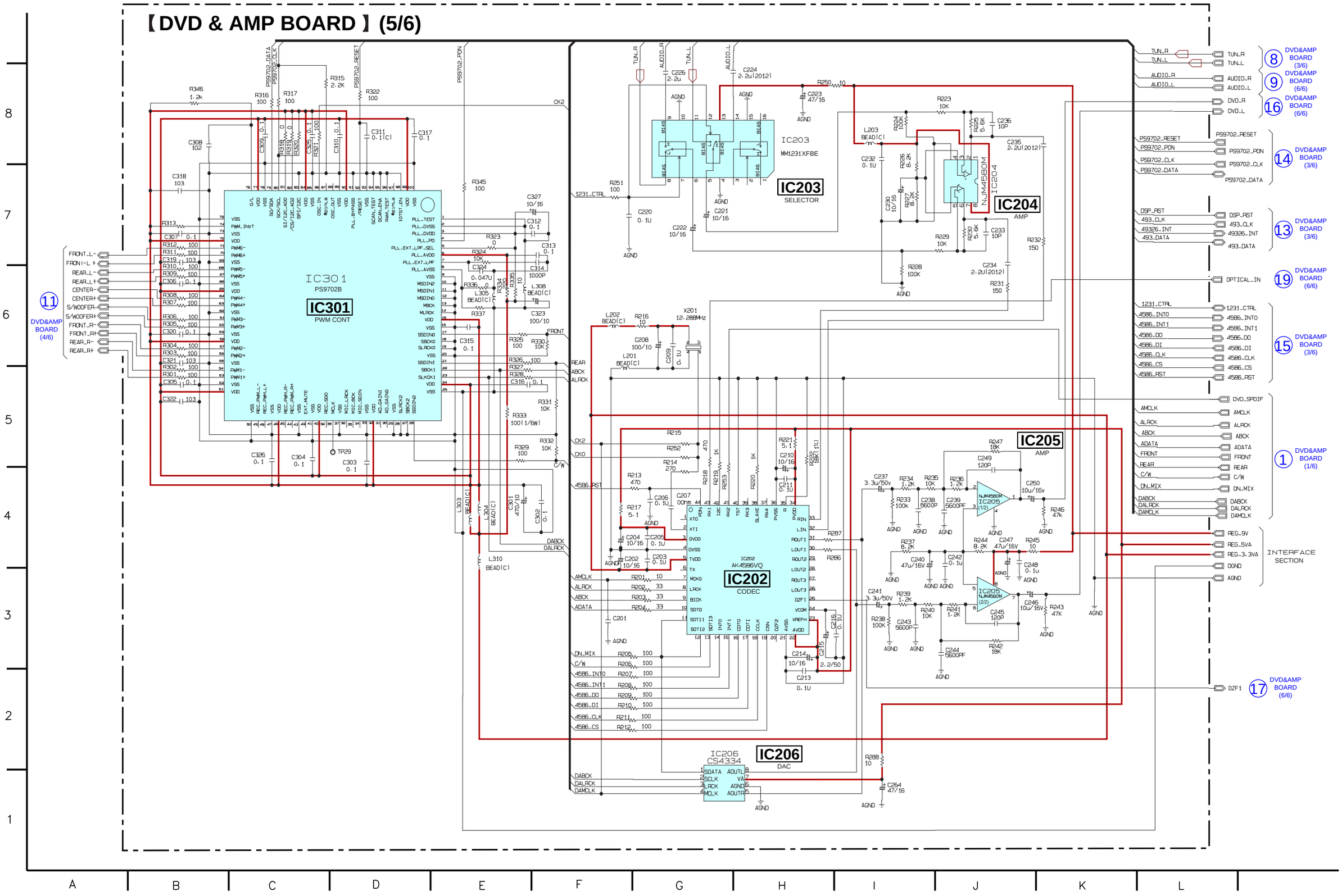
5-12. SCHEMATIC DIAGRAM – AUDIO, μ_COM SECTION –



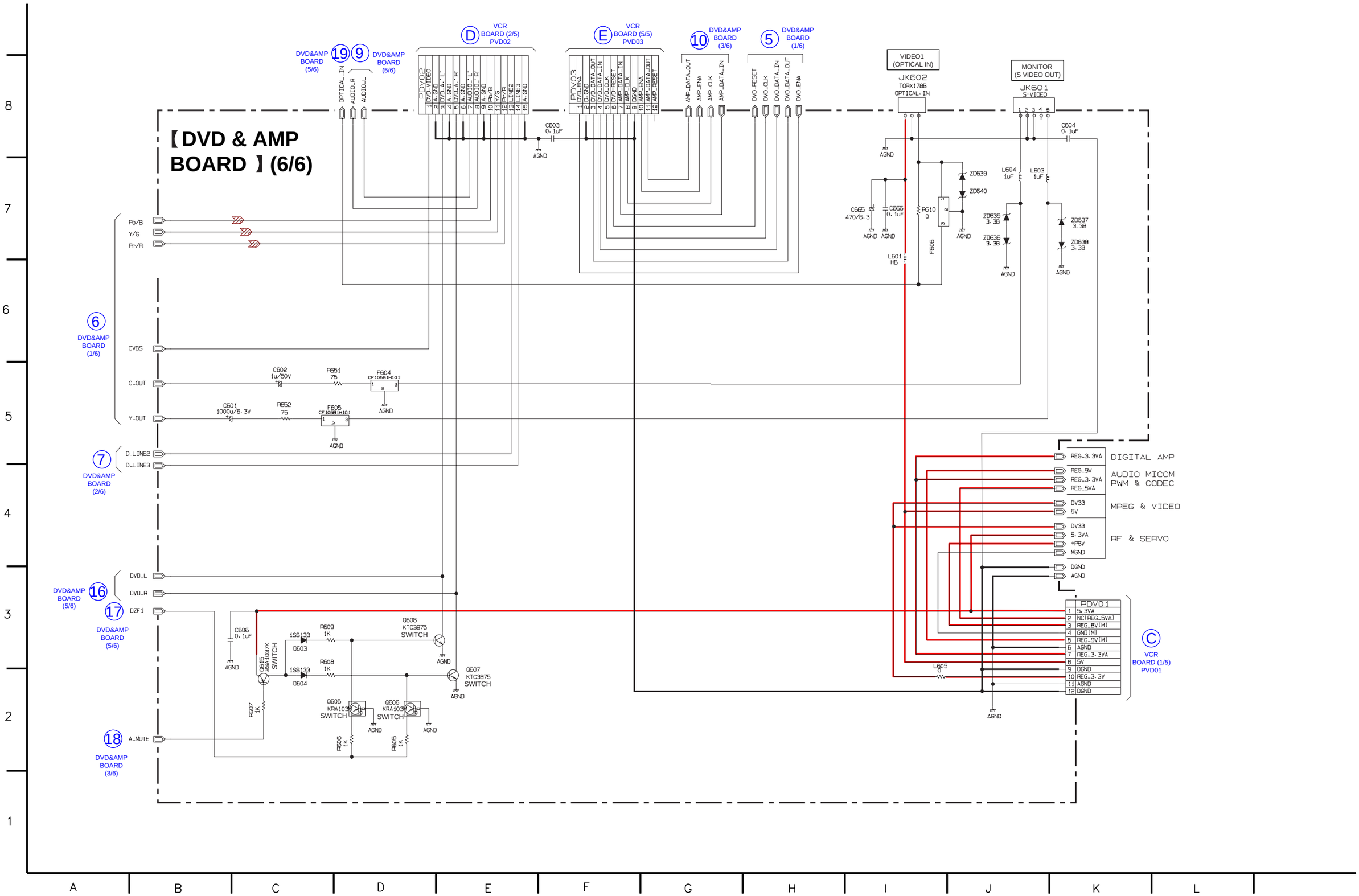
5-13. SCHEMATIC DIAGRAM – DIGITAL AMP SECTION –



5-14. SCHEMATIC DIAGRAM – PWM & CODEIC SECTION –



5-15. SCHEMATIC DIAGRAM – INTERFACE SECTION –



• VOLTAGE CHART (DVD & AMP BOARD) -1/2

MODE / PIN NO.	STOP	PLAY
IC101		
1	5.23	5.22
2	0	0
3	1.75	1.99
4	0	0
5	4.91	4.91
6	NC	NC
7	0.54	1.88
8	0.54	1.88
9	4.91	4.91
10	0	0
11	4.77	4.77
12	0.12	0.12
13	4.72	4.72
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	3.24	3.22
23	0.91	0.91
24	1.65	1.65
25	0	0
26	0	0
27	1.99	1.93
28	3.12	3.12
29	3.26	3.25
30	3.12	3.12
31	4.65	4.65
32	NC	NC
33	NC	NC
34	NC	NC
35	0	0
36	4.91	4.91
37	3.25	3.24
38	4.91	4.91
39	0	0
40	3.22	3.2
41	NC	NC
42	NC	NC
43	NC	NC
44	NC	NC
45	NC	NC
46	4.91	4.9
47	2.08	2.03
48	2.07	2.07
49	4.91	4.9
50	NC	NC
51	5.09	5.08
52	0	0
53	4.91	4.91
54	2.16	2.1

MODE / PIN NO.	STOP	PLAY
55	2.04	1.96
56	0	0
57	2.36	2.36
58	2.42	2.42
59	4.9	4.91
60	2.4	2.4
61	1.8	1.9
62	4.9	4.9
63	0	0
64	5.23	5.22
IC102		
1	4.93	4.93
2	0	0
3	4.93	4.93
IC103		
1	3.72	3.71
2	0	0
3	4.93	4.93
IC104		
1	6.04	6.04
2	6.04	6.04
3	6.04	6.04
4	0	0
5	6.04	6.04
6	6.04	6.04
7	6.04	6.04
8	12.09	12.08
IC202(AK4586)		
1	2.41	2.39
2	2.04	2.07
3	4.85	4.84
4	0	0.01
5	3.28	3.28
6	4.85	0.01
7	1.18	1.15
8	1.65	1.65
9	1.63	1.62
10	1.3	1.25
11	0	1.63
12	0	1.63
13	0	0.58
14	0	0.03
15	0	0.03
16	0.45	0.2
17	0	0.01
18	0	0.02
19	4.93	4.92
20	0	0.02
21	0	0.01
22	4.94	4.93
23	4.93	4.93
24	2.46	2.46
25	0	0.02
26	2.47	2.47
27	2.47	2.47

MODE / PIN NO.	STOP	PLAY
28	2.47	2.47
29	2.47	2.47
30	2.47	2.47
31	2.47	2.47
32	2.47	2.46
33	2.47	2.46
34	4.93	4.92
35	1.2	1.2
36	0	0.01
37	2.44	2.45
38	0	0.01
39	2.44	2.45
40	0	0.02
41	2.44	2.45
42	0	0.01
43	4.24	4.23
44	4.93	4.93
IC301		
1	0	0
2	0	0
3	3.21	3.18
4	4.91	4.91
5	3.21	3.18
6	2.95	2.92
7	1.72	1.7
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	3.21	3.18
16	0	0
17	0	0.9
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	1.59	1.6
24	1.63	1.62
25	3.22	3.18
26	0	0
27	0	0
28	0	0
29	0	0
30	NC	NC
31	NC	NC
32	3.21	3.18
33	0	0
34	NC	NC
35	NC	NC
36	NC	NC
37	0	0

MODE / PIN NO.	STOP	PLAY
38	1.6	1.59
39	NC	NC
40	3.21	3.18
41	0	0
42	NC	NC
43	0	0
44	NC	NC
45	NC	NC
46	3.21	3.18
47	0	0
48	NC	NC
49	NC	NC
50	0	0
51	3.21	318
52	0	0
53	1.59	1.58
54	1.59	1.58
55	0	0
56	1.59	1.58
57	1.59	1.58
58	3.21	3.18
59	0	0
60	1.59	1.58
61	1.59	1.58
62	0	0
63	1.59	1.58
64	1.59	1.59
65	3.21	3.18
66	0	0
67	1.59	1.58
68	1.59	1.58
69	0	0
70	1.59	1.58
71	1.59	1.58
72	3.21	3.18
73	0	0
74	0	0
75	0	0
76	3.1	3.09
77	3.21	3.18
78	0	0
79	3.22	3.2
80	0	0
81	3.21	3.18
82	3.21	3.18
83	0	0
84	3.21	3.18
85	0	0
86	1.67	1.67
87	NC	NC
88	NC	NC
89	0	0
90	3.21	3.18
91	0	0
92	3.25	3.24

MODE / PIN NO.	STOP	PLAY
93	0	0
94	0	0
95	0	0
96	0	0
97	NC	NC
98	0	0
99	3.21	3.18
100	0	0
IC401(MT1336E)		
1	1.03	2.99
2	5.11	5.08
3	0	0
4	0	0
5	5.11	5.07
6	0	1.95
7	0	0
8	0	0
9	5.11	0
10	5.11	5.08
11	5.11	5.08
12	0	0
13	5.11	0
14	5.11	5.08
15	2.84	2.81
16	1.45	1.43
17	2.08	2.07
18	1.37	1.42
19	0.69	2.3
20	2.4	0
21	2.35	0
22	5.11	5.08
23	0	0
24	2.59	3.2
25	0.19	1.88
26	1.58	0
27	2.56	3.13
28	2	2.01
29	2	2.06
30	2.96	1.52
31	0	0
32	0.06	2.07
33	0.07	2.07
34	0	0
35	0	0
36	0	0
37	5.13	0
38	0	0
39	0	0
40	0	0
41	0	0
42	5.12	5.09
43	5.12	5.09
44	5.12	5.09
45	5.12	5.09
46	5.12	5.09

MODE / PIN NO.	STOP	PLAY
47	0	0
48	5.12	5.09
49	5.12	0
50	5.08	5.06
51	5.09	5.07
52	5.1	0
53	0	0
54	5.13	0
56	1.61	0
57	0	0
58	0	0
59	0	0
60	0	0
61	3.28	0
62	0	0
63	0	0
64	0	0
65	0	0
66	0.026	0
67	5.12	5.08
68	0	0
69	5.12	0
70	3.21	2.03
71	3.46	2.2
72	2.81	0
73	0	0
74	0.21	0.09
75	0.22	0
76	0	0.1
77	0.21	0.09
78	0.23	0.09
79	0.21	0.08
80	0.23	0.08
81	0.22	0
82	0	0
83	0	0
84	0.07	0
85	0.07	2.27
86	1.97	0
87	1.96	1.9
88	1.54	1.71
89	0.19	2.22
90	0.21	0
91	0.22	0.06
92	0.22	0
93	0.23	0.06
94	0.23	0.06
95	2.28	0
96	2.28	2.25
97	2.27	1.23
98	2.27	2.23
99	2.27	2.23
100	2.16	2.23
101	2.08	2.17
102	2.07	2.17

MODE / PIN NO.	STOP	PLAY
103	2.07	2.18
104	2.08	0
105	0.13	0.15
106	0.14	0.16
107	0	0
108	1.28	1.28
109	5.18	5.05
110	0.14	0.16
111	0.15	0.15
112	0.13	0.16
113	0.14	0.15
114	5.1	5.05
115	2.07	2.06
116	2.06	2.09
117	0	0
118	0	0
119	0	0
120	5.1	5.05
121	0.13	0.15
122	0.14	0.15
123	0	0.18
124	0	0.18
125	5.08	5.03
126	5.08	3.16
127	0.06	2.08
128	0	0
IC402 (LA6560)		
1	0	0
2	0	0
3	8.04	8.01
4	0.12	0.06
5	0	0.06
6	3.64	3.69
7	3.62	3.61
8	3.64	3.53
9	3.6	3.76
10	3.62	2.43
11	3.63	4.85
12	3.62	3.72
13	3.64	3.57
14	8.04	8.01
15	1.45	1.48
16	0.27	1.39
17	0.29	1.32
18	1.45	1.43
19	1.45	1.43
20	1.45	0.82
21	1.45	1.43
22	1.45	1.43
23	1.47	1.37
24	1.45	1.43
25	1.45	1.43
26	0.95	0.9
27	0	0
28	1.45	1.43

MODE / PIN NO.	STOP	PLAY
29	5.15	5.11
30	1.45	1.43
31	1.45	1.43
32	1.45	1.43
33	1.46	1.45
34	5.08	5.06
35	5.15	5.11
36	0	0
IC501(MT1379)		
1	1.22	1.22
2	0	0
3	0.96	0.9
4	2	2.06
5	0	1.51
6	1.48	1.47
7	0	1.56
8	3.2	1.52
9	0.12	0.06
10	0.12	0.06
11	3.25	3.25
12	1.41	1.49
13	1.41	1.41
14	0	0
15	1.42	1.42
16	3.3	0
17	2.53	2.53
18	1.42	2.27
19	1.42	1.39
20	0	0
21	2.61	2.58
22	0.75	1.46
23	2.83	1
24	1.9	0.89
25	1.72	0.39
26	0.68	0.31
27	2.84	3.16
28	0	0
29	2.85	0.66
30	1.83	0.49
31	0.91	1.39
32	1.43	1.2
33	1.51	1.57
34	1.51	1.43
35	3.3	3.29
36	0.81	1.26
37	1.45	1.02
38	1.82	1.6
39	1.2	1.5
40	2	2.06
41	2.17	1.95
42	2.53	2.52
43	1.96	1.9
44	1.79	1.9
45	0.8	1.72
46	0.8	1.96

MODE / PIN NO.	STOP	PLAY
47	0.8	1.84
48	3.3	2.63
49	0	0.13
50	0	0.07
51	0	0
52	0	0
53	0	0
54	0	0
55	3.25	3.27
56	1.2	1.18
57	0	0
58	3.29	3.29
59	0	0
60	0	0
61	2.59	2.57
62	2.58	2.58
63	0	0
64	2.59	2.56
65	3.29	3.29
66	3.3	3.29
67	3.29	3.29
68	2.57	2.56
69	5.19	5.18
70	2.59	2.57
71	0.12	0.08
72	2.53	2.52
73	2.59	2.57
74	3.29	3.29
75	2.61	2.61
76	3.27	3.24
77	0	0
78	0.94	1.04
79	0.78	1.06
80	0.89	1.15
81	0.99	1.34
82	2.52	2.52
83	3.09	1.33
84	0.37	1.16
85	3.08	1.1
86	3.07	1.08
87	0.59	1.04
88	1.57	2.53
89	3.2	3.13
90	2.77	2.53
91	0.22	1.68
92	0	0
93	3.32	1
94	0.16	1.58
95	3.31	1.62
96	3.3	1.08
97	3.3	3.29
98	3.32	1.62
99	0.16	1.09
100	3.32	1.27
101	3.3	1.32

MODE / PIN NO.	STOP	PLAY
102	0	0
103	1.56	1.55
104	0.94	1.25
105	0.41	0
106	0.05	0.06
107	0	0.06
108	3.27	3.26
109	0	0
110	0.19	1.74
111	3.3	3.29
112	0.18	1.62
113	2.98	2.38
114	3.02	1.48
115	0	0
116	2.86	3.01
117	2.86	2.54
118	0	0
119	0	2.5
120	2.55	2.51
121	3.03	1.4
122	3.03	1.4
123	0.22	1.39
124	0.22	0.34
125	0	0
126	3.31	0.98
127	0.26	1.64
128	3.31	1.53
129	3.3	1.15
130	3.3	3.29
131	3.31	1.49
132	0.16	0.89
133	3.3	0
134	3.3	1.07
135	0	0
136	2.86	2.53
137	2.86	2.53
138	0.07	0.86
139	0.09	0.99
140	0.07	2.51
141	0.07	0.94
142	0.09	1.13
143	0.07	1.19
144	0.09	1.07
145	0.09	0
146	0	1.51
147	0.09	1.25
148	0.07	1.64
149	0.06	0
150	0	1.65
151	0.07	3.29
152	0	1.6
153	0	1.64
154	0	1.44
155	0	0
156	0	0

• VOLTAGE CHART (DVD & AMP BOARD) -2/2

MODE / PIN NO.	STOP	PLAY
157	0	1.63
158	0	3.29
159	0	3.27
160	0	1.27
161	0	1.27
162	0	2.35
163	0	0
164	0	0.73
165	0	3.27
166	0	0.5
167	0	0
168	0	0.53
169	0	3.27
170	0	0.59
171	0	0
172	3.01	0.72
173	0	0.72
174	0	0
175	0	2.73
176	0	3.13
177	0	3.13
178	0	3.25
179	0	0
180	0	0
181	2.04	2.64
182	0	2.52
183	0	0
184	0	0.09
185	0	3.26
186	_	_
187	0	0.08
188	0	0
189	0	0
190	0	0
191	0.23	0
192	0	3.29
193	0	0
194	0	0
195	0	0
196	0	0
197	0	1.63
198	0	0
199	0	0
200	0	2.15
201	0	1.44
202	0	1.44
203	0	1.43
204	0	1.43
205	0	1.42
206	0	2.1
207	0	2.07
208	0	1.41
209	0	1.52
210	0	1.43
211	0	2.81

MODE / PIN NO.	STOP	PLAY
212	0	3.28
213	0	0.12
214	0	0.12
215	1.02	1.43
216	0	1.43
IC502(SDRAM)		
1	3.27	3.28
2	1.18	1.26
3	1.1	1.52
4	0	0
5	0.66	1.07
6	0.85	1.12
7	3.27	3.28
8	0.51	0.97
9	3.06	0
10	0	0
11	0.06	0.98
12	3.18	0.87
13	3.27	3.28
14	2.94	2.56
15	0.47	0.42
16	2.93	3.01
17	3.21	3.22
18	2.87	2.95
19	0.15	1.32
20	0	0.05
21	3.09	1.32
22	3.09	1.32
23	3.09	1.32
24	3.09	1.33
25	3.27	3.29
26	0	0
27	0.15	1.36
28	1.84	2.36
29	1	2.32
30	0.54	1.75
31	0.06	0.06
32	0.05	0.06
33	0	0
34	0.73	1.26
35	1.48	1.55
36	2.91	2.53
37	0.07	0
38	3.27	3.28
39	1.06	1.05
40	0.47	0.98
41	0	0
42	0	0.6
43	1.12	1.24
44	3.27	3.28
45	1.21	0.99
46	1.31	1.34
47	0	0
48	1.43	1.44
49	0.88	1.01

MODE / PIN NO.	STOP	PLAY
50	0	0
IC505(EEPROM)		
1	0	0
2	0	0
3	0	0
4	0	0
5	3.28	3.29
6	3.28	3.29
7	0	0
8	3.28	3.29
IC507(MM1623)		
1	5.09	5.08
2	2.43	2.42
3	5.09	5.08
4	1.45	0
5	0	0
6	1.45	1.69
7	0	0
8	2.47	2.46
9	0	0
10	1.14	1.76
11	0	0
12	2.42	2.42
13	5.09	5.08
14	2.43	2.42
15	0	0
16	2.49	2.47
17	0	0
18	2.48	2.47
19	0	0
20	1.18	2.3
21	1.76	2.17
22	0	0
23	1.76	2.24
24	0	0
25	0	0
26	0	0
27	0.06	0.05
28	5.09	0
IC5A1(FLASH)		
1	0.08	0.16
2	1.82	0.45
3	2.84	0
4	2.83	3.12
5	0.69	0.26
6	1.72	0.25
7	1.92	0.9
8	1.7	1.45
9	0	0
10	0	0
11	3.27	3.29
12	3.56	3.55
13	3.29	3.29
14	0	0
15	0.23	0.06

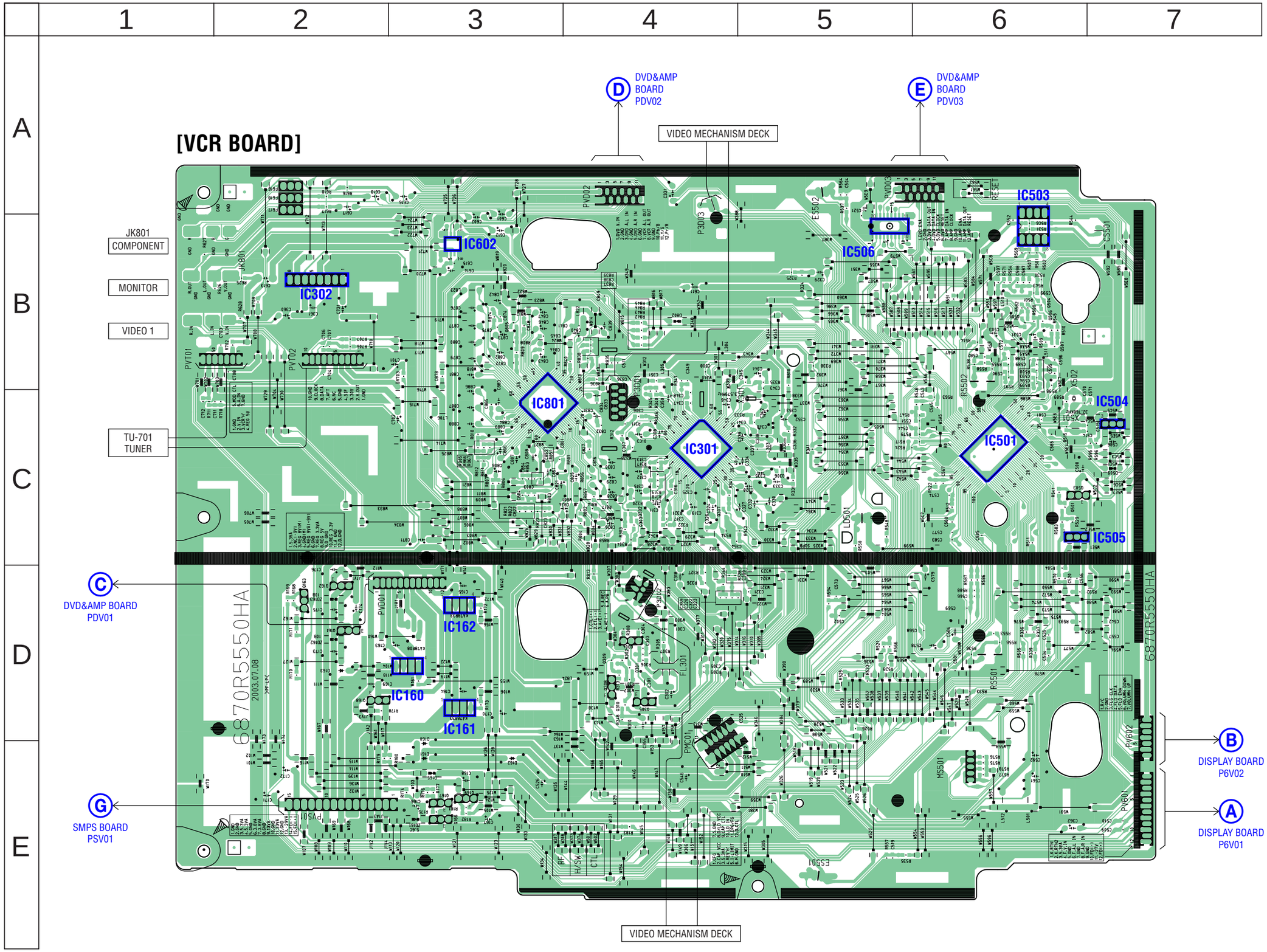
MODE / PIN NO.	STOP	PLAY
16	0	0
17	0	0
18	0	0.87
19	1.98	2.64
20	2.28	2.18
21	2.13	1.96
22	1.67	2.01
23	1.99	1.72
24	1.93	2.19
25	2.05	1.94
26	0	0
27	0	0
28	0	0
29	1.49	2.03
30	0.16	1.07
31	1.96	1.25
32	0.16	1.1
33	0.99	2.2
34	1.17	1.07
35	0.79	1.82
36	0.15	1.07
37	3.29	3.3
38	1.93	3.09
39	0.16	1.07
40	1.5	2.2
41	0.16	1.07
42	1.21	2.64
43	0.16	1.08
44	1.64	1.48
45	2.05	2.06
46	0	0
47	0	0
48	0.07	0.13
IC710		
1	0	0
2	15.6	15.6
3	15.6	15.6
4	3.59	31.58
5	0	0
6	0	0
7	31.59	31.58
8	15.62	15.62
9	15.62	15.62
10	15.61	15.61
11	15.61	15.61
12	31.59	31.59
13	0	0
14	0	0
15	31.59	31.59
16	15.61	15.61
17	15.61	15.61
18	NC	NC
19	0	0
20	0.03	0.03
21	5.06	5.06
22	5.06	5.06
23	3.24	3.23
24	0	0
25	3.15	3.15
26	3.15	3.15
27	3.15	3.15
28	3.24	3.23
29	1.58	1.57
30	1.58	1.57
31	1.58	1.57
32	1.58	1.57
33	26.3	26.3
34	26.3	26.3
35	31.58	31.57
36	31.58	31.57

MODE / PIN NO.	STOP	PLAY
22	5.02	5.02
23	3.25	3.24
24	0	0
25	3.15	3.15
26	3.15	3.15
27	3.15	3.15
28	3.24	3.23
29	1.58	1.57
30	1.58	1.57
31	1.58	1.57
32	1.58	1.57
33	26.32	26.31
34	26.32	26.31
35	31.58	31.57
36	31.58	31.57
IC730		
1	0	0
2	15.6	15.6
3	15.6	15.6
4	31.59	31.58
5	0	0
6	0	0
7	31.59	31.58
8	15.62	15.62
9	15.62	15.62
10	15.61	15.61
11	15.61	15.61
12	31.59	31.59
13	0	0
14	0	0
15	31.59	31.59
16	15.61	15.61
17	15.61	15.61
18	NC	NC
19	0	0
20	0.02	0.02
21	5.02	5.02
22	5.02	5.02
23	3.24	3.23
24	0	0
25	3.15	3.15
26	3.15	3.15
27	3.15	3.15
28	3.24	3.23
29	1.58	1.57
30	1.58	1.57
31	1.58	1.57
32	1.58	1.57
33	26.3	26.3
34	26.3	26.3
35	31.58	31.57
36	31.58	31.57
IC750		
1	0	0
2	15.6	15.6

MODE / PIN NO.	STOP	PLAY
3	15.6	15.6
4	31.59	31.58
5	0	0
6	0	0
7	31.59	31.58
8	15.62	15.62
9	15.62	15.62
10	15.61	15.61
11	15.61	15.61
12	31.59	31.59
13	0	0
14	0	0
15	31.59	31.59
16	15.61	15.61
17	15.61	15.61
18	NC	NC
19	0	0
20	0.03	0.03
21	5.06	5.06
22	5.06	5.06
23	3.24	3.23
24	0	0
25	3.15	3.15
26	3.15	3.15
27	3.15	3.15
28	3.24	3.23
29	1.58	1.57
30	1.58	1.57
31	1.58	1.57
32	1.58	1.57
33	26.3	26.3
34	26.3	26.3
35	31.58	31.57
36	31.58	31.57

SECTION	NO	STOP			PLAY		
		B	E	C	B	E	C
DVD&AMP	Q401	5.2	5.19	0	5.2	5.19	0
	Q402	0	0	0	0	0	0.22
	Q403	5.08	0	0	4.93	0	0
	Q404	5.01	5.08	0	4.96	5.02	0
	Q405	5.01	5.08	0.44	3.32	4.01	1.9
	Q407	0	0	5.2	0	0	0
	Q408	2.85	0	0	2.83	0	0
	Q410	5.2	5.2	0	0	5.2	0
	Q411	0	0	5.2	0	0	5.19

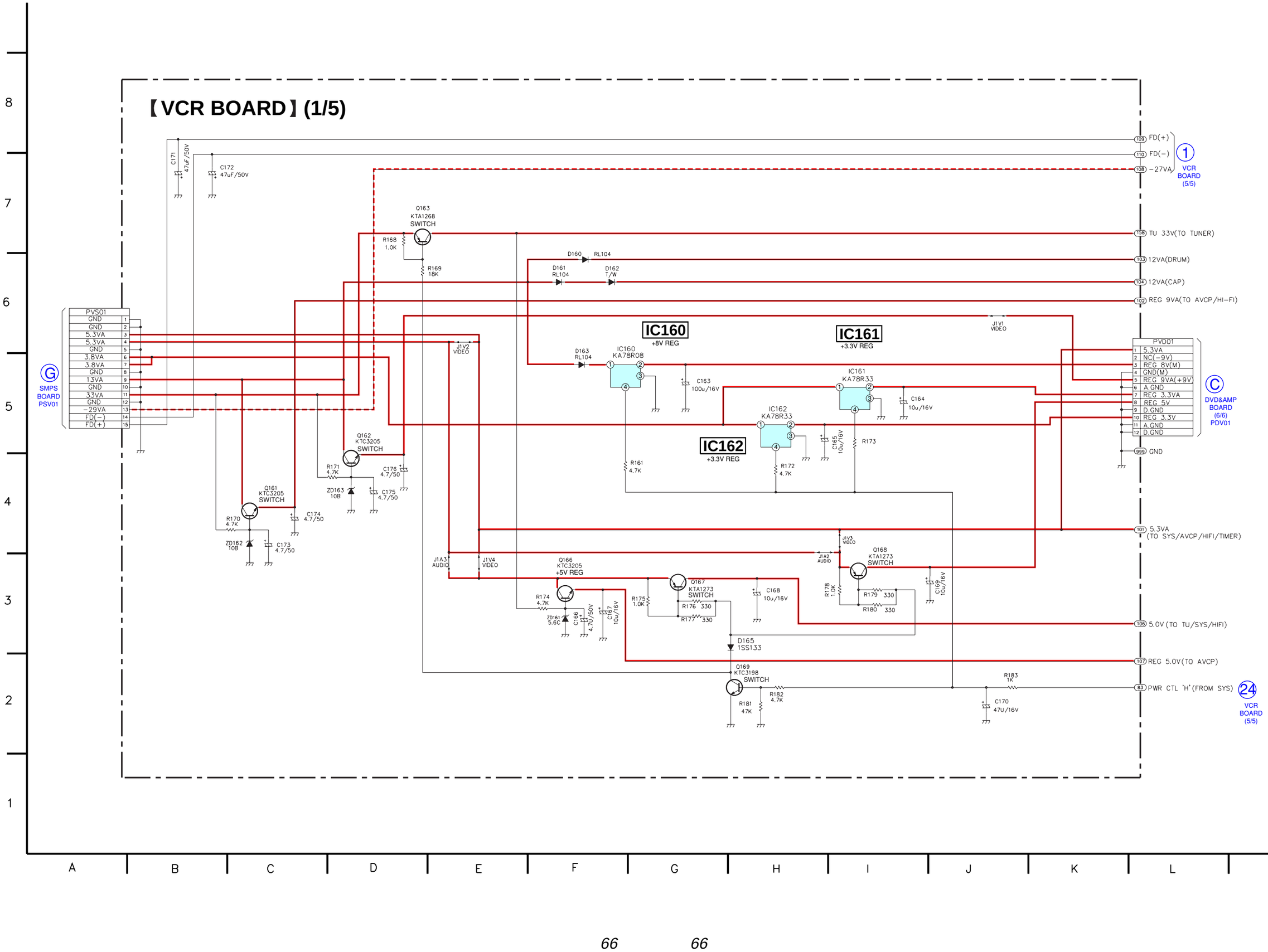
5-16. PRINTED WIRING BOARD – VCR SECTION – • See page 47 for Circuit Board Location.



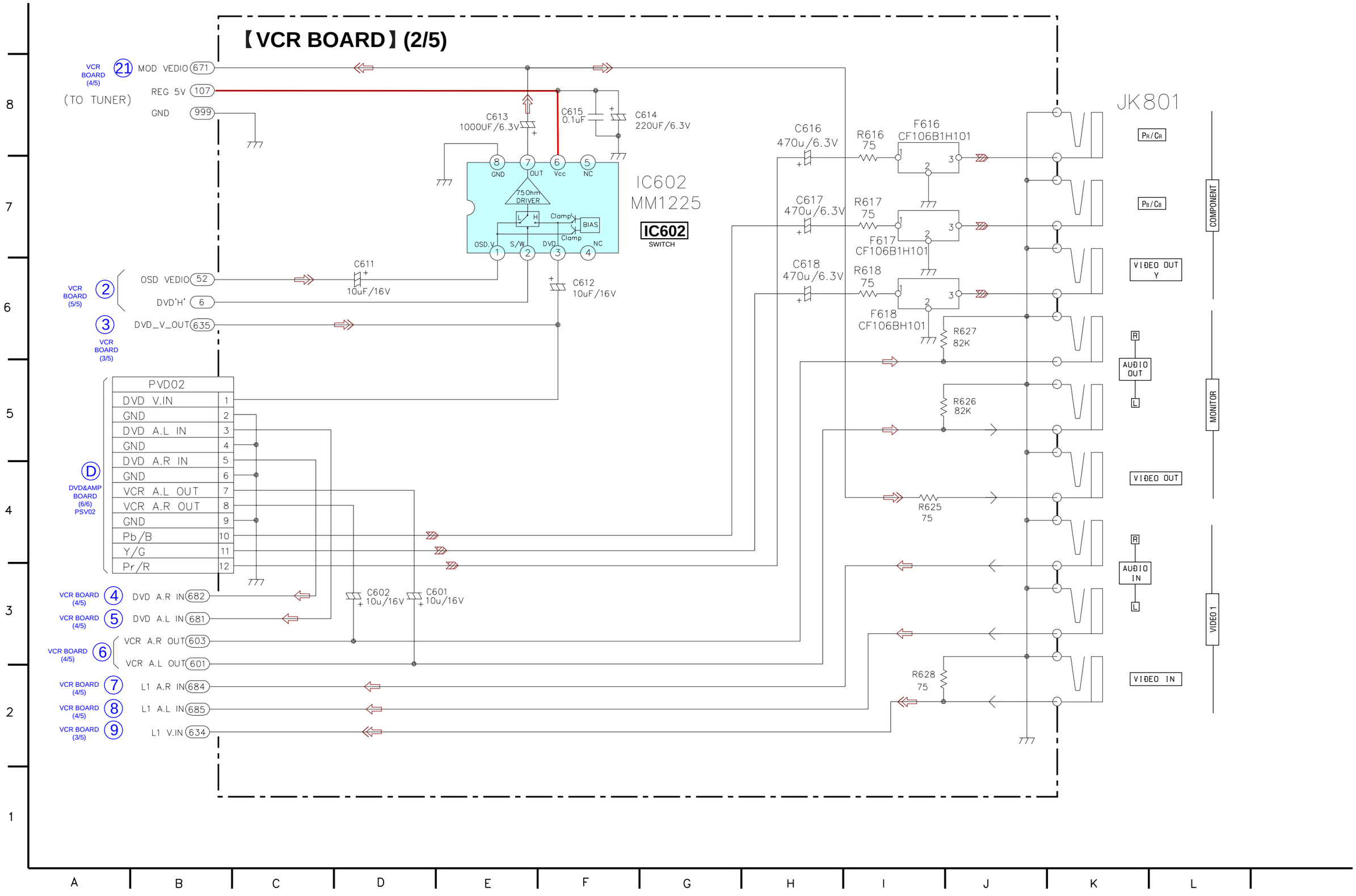
• **Semiconductor Location**

Ref. No.	Location
D161	E-3
D163	D-2
D165	E-3
D509	C-7
D802	B-4
IC160	D-2
IC161	D-3
IC162	D-3
IC301	C-4
IC302	B-2
IC501	C-6
IC503	B-6
IC504	C-7
IC505	C-7
IC506	B-5
IC602	B-3
IC801	C-3
Q161	D-2
Q162	D-2
Q163	D-2
Q166	E-3
Q167	E-3
Q167	E-3
Q168	D-2
Q169	E-3
Q301	D-4
Q302	C-4
Q303	C-4
Q304	D-4
Q305	D-4
Q306	C-5
Q307	C-4
Q308	D-4
Q309	D-4
Q310	D-4
Q501	C-6
Q503	C-6
Q504	B-6
Q505	B-6
Q506	B-6
Q507	B-6
Q805	B-3
ZD161	E-3
ZD162	D-2
ZD163	D-2

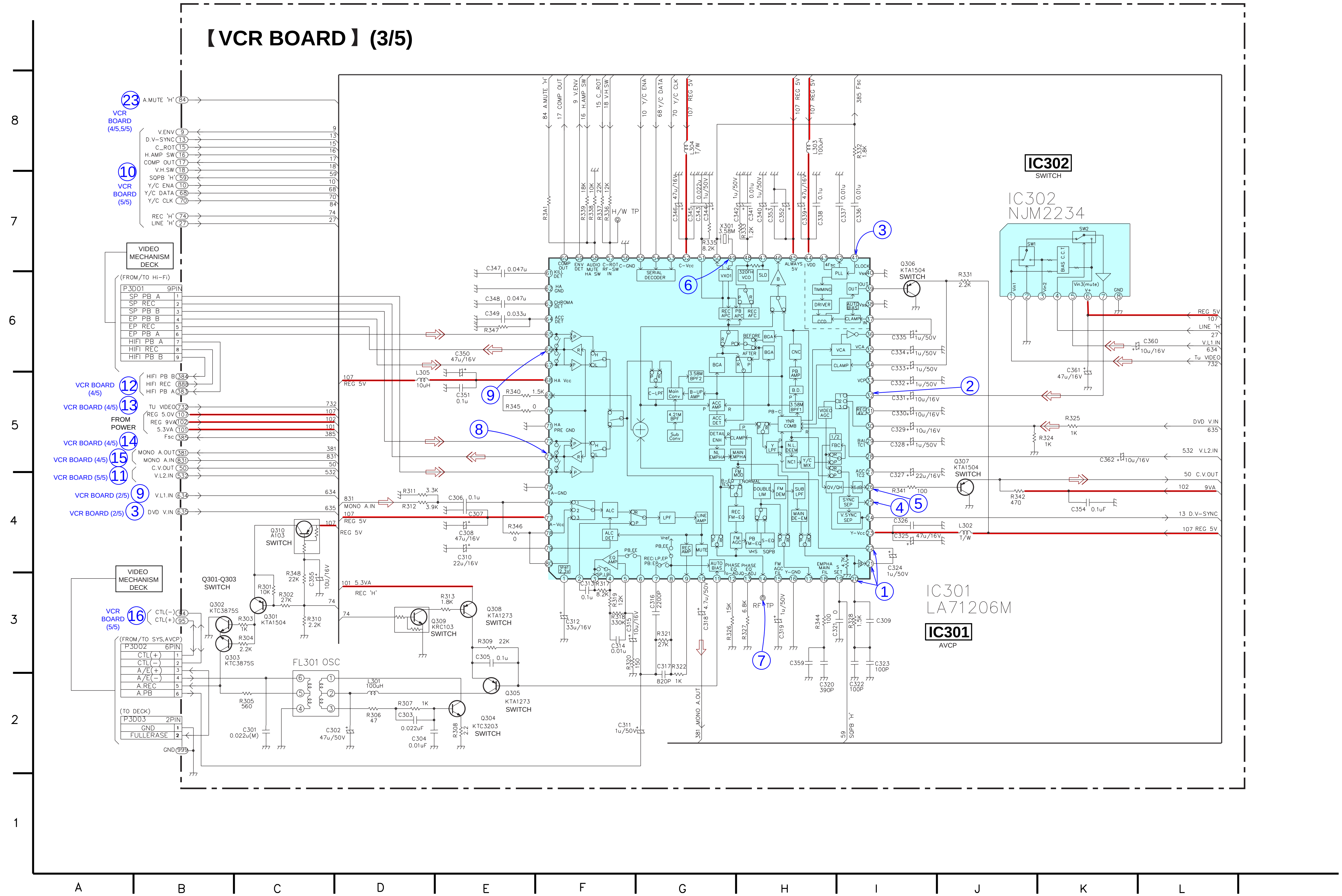
5-17. SCHEMATIC DIAGRAM – POWER (SMPS) SECTION –



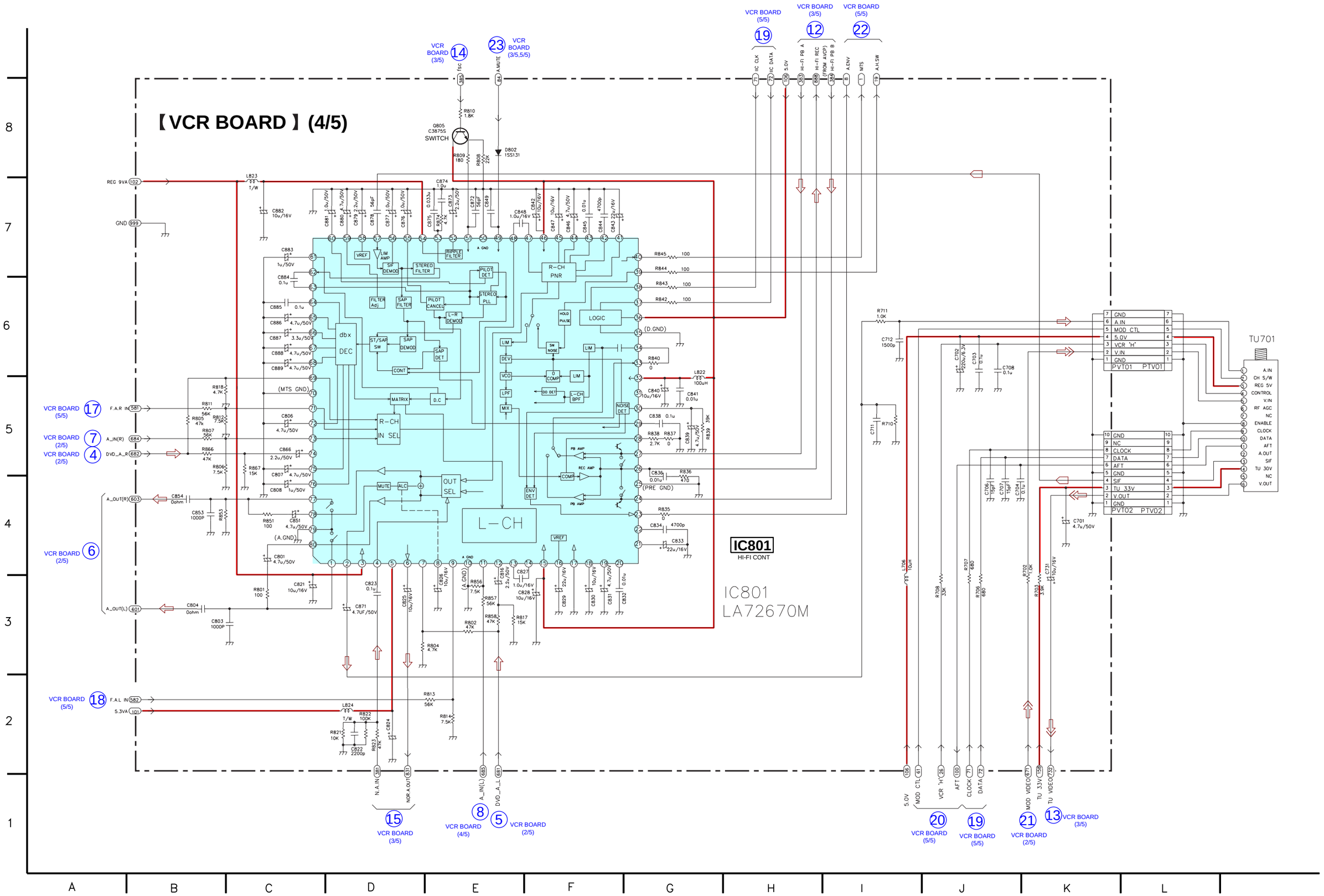
5-18. SCHEMATIC DIAGRAM – JACK, TUNER SECTION –



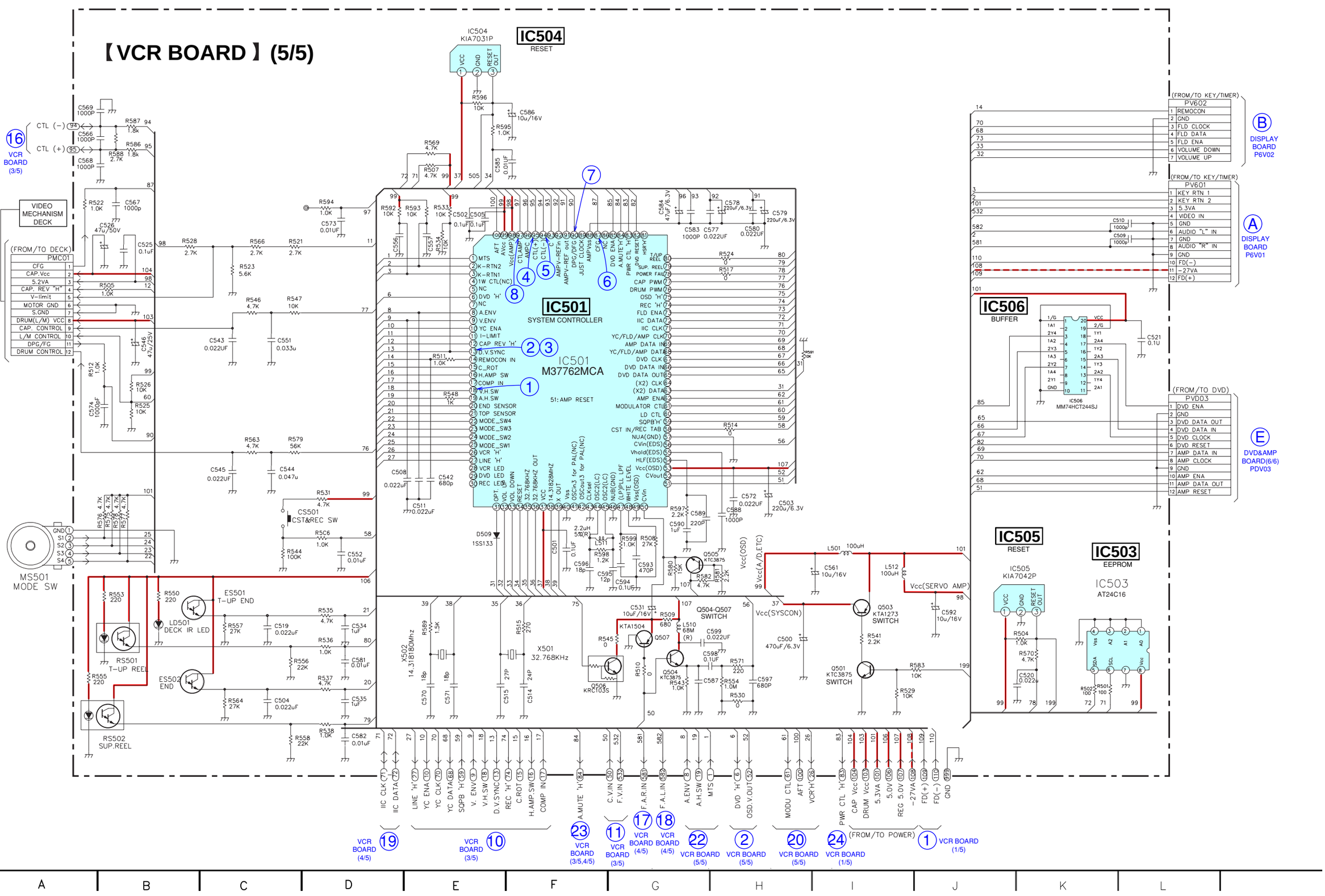
5-19. SCHEMATIC DIAGRAM – A/V SECTION –



5-20. SCHEMATIC DIAGRAM – HI-FI SECTION –



5-21. SCHEMATIC DIAGRAM – SYSTEM SECTION –



• VOLTAGE CHART (VCR BOARD)

MODE / PIN NO.	EE	PLAY
	IC301	
1	2.3	2.31
2	2.29	2.28
3	2.29	2.28
4	2.29	2.28
5	2.31	2.29
6	2.3	2.31
7	0	2.31
8	2.31	2.32
9	2.31	2.31
10	2.25	2.27
11	4.93	4.93
12	1	1
13	0.97	0.97
14	1.92	1.89
15	1.55	1.53
16	0	0
17	2.37	2.55
18	2.39	1.45
19	0	0
20	2.46	2.49
21	1.73	1.79
22	3.07	2.29
23	4.96	4.95
24	0	0
25	0.36	0.35
26	1.83	1.87
27	1.47	1.6
28	2.25	2.56
29	2.32	2.31
30	2.25	2.26
31	4.08	4.08
32	2.25	2.26
33	3.62	2.8
34	2.97	2.93
35	3.13	3.14
36	2.37	2.37
37	2.35	2.29
38	0	0
39	1.82	1.87
40	0	0
41	0.83	0.83
42	2.34	2.37
43	0	0
44	4.92	4.92
45	4.95	4.95
46	2.27	3.17
47	3.31	3.31
48	3.32	3.32
49	3.94	3.94
50	2.54	2.55
51	2.12	2.09
52	4.95	4.95
53	4.75	4.62
54	4.7	4.52

MODE / PIN NO.	EE	PLAY
55	0.68	0.93
56	0	0
57	0	2.56
58	0	1.61
59	0	2.9
60	4.91	0.94
61	2.92	1.94
62	0	0
63	3.96	3.98
64	1.76	1.72
65	1.84	1.85
66	1.84	1.86
67	1.84	1.86
68	4.93	4.93
69	0.18	0
70	0.15	0
71	0	0
72	1.82	0.71
73	1.82	0.71
74	1.82	0.71
75	0	0
76	2.3	2.3
77	4.96	4.96
78	2.3	2.3
79	0	0
80	2.3	2.3
	IC302	
1	2.96	2.96
2	0	0
3	3.01	3
4	5.12	5.12
5	2.95	2.95
6	4.97	4.97
7	2.2	2.2
8	0	0
	IC501	
1	0.97	0
2	5.17	5.17
3	5.17	5.16
4	0	0
5	0.5	0.54
6	0	0
7	0.4	0.42
8	0.19	4.06
9	0.29	3.91
10	0.68	0.99
11	0	3.42
12	0	0
13	0	0
14	4.78	4.78
15	0	2.57
16	0	0
17	0.68	0.43
18	2.56	2.57
19	2.57	2.57

MODE / PIN NO.	EE	PLAY
20	0	0
21	0.11	0.11
22	5.17	5.17
23	]5.17	5.17
24	5.17	5.17
25	0	0
26	5.13	5.13
27	5.13	5.17
28	5.13	5.13
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	5.15	5.15
35	1.52	1.51
36	1.43	1.44
37	5.15	5.15
38	2.19	2.18
39	2.28	2.27
40	0	0
41	0.51	0.55
42	0.26	0.55
43	0.26	0
44	2.35	2.34
45	2.41	2.41
46	0	0
47	1.29	0
48	0	0
49	0	0
50	1.88	1.99
51	0.53	0.57
52	1.88	1.98
53	4.96	4.95
54	2.03	2.03
55	2.6	1.92
56	1.96	2.05
57	0	0
58	0	0
59	0	0
60	2.57	2.58
61	0	4.28
62	0	0
63	0	0
64	0	0
65	0.97	0.86
66	2.38	0
67	5.07	5.07
68	4.7	4.45
69	5.02	4.97
70	4.75	4.61
71	5.17	5.17
72	5.17	5.17
73	0	0
74	0	0

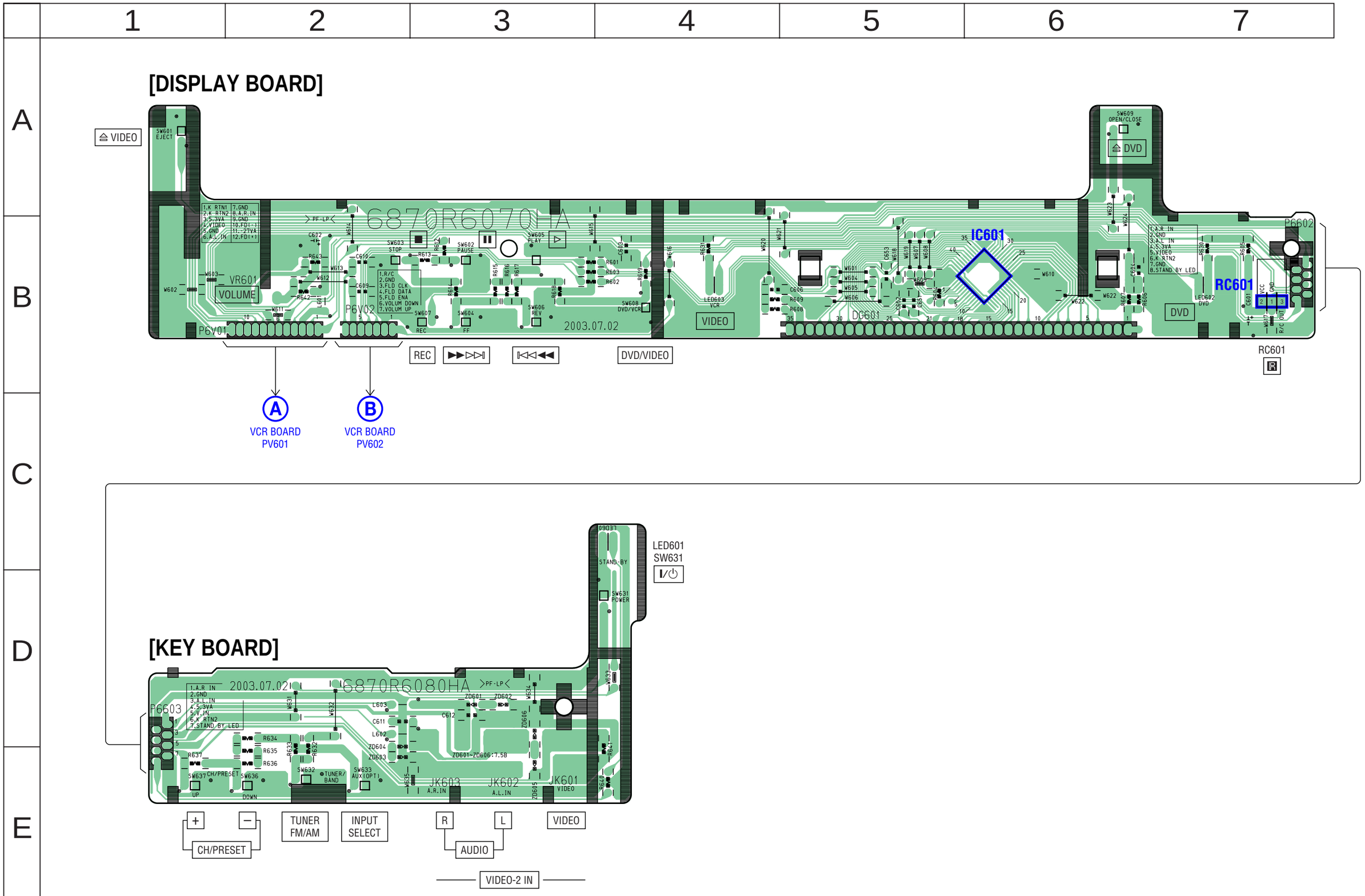
MODE / PIN NO.	EE	PLAY
75	0	0
76	0	1.79
77	0	2.72
78	0	4.76
79	0	0
80	0	0
81	0	0
82	4.94	4.94
83	5.03	4.98
84	0	0
85	2.69	2.67
86	0.58	0.68
87	0.17	2.36
88	0	0
89	0.54	0
90	0.1	1.36
91	2.53	2.54
92	2.54	2.53
93	0.21	0
94	2.5	2.49
95	2.5	2.49
96	2.52	2.52
97	2.52	2.52
98	5.08	5.08
99	5.17	5.17
100	2.64	1.95
	IC504	
1	5.19	5.19
2	0	0
3	5.14	5.14
	IC505	
1	5.19	5.19
2	0	0
3	4.7	4.7
	IC602	
1	2.51	2
2	0	0
3	2.27	2.35
4	0	0
5	0	0
6	5.06	5.06
7	2.53	2.04
8	0	0
	IC801	
1	0	0
2	2.56	2.54
3	9.21	9.18
4	2.48	2.48
5	5.19	5.19
6	1.91	2.07
7	0	0
8	0.29	1.31
9	0	0
10	0	0
11	0	0

MODE / PIN NO.	EE	PLAY
12	2.5	2.5
13	1.91	2.44
14	2.49	2.49
15	5.06	5.05
16	2.51	2.51
17	0	0
18	0	0.86
19	2.51	2.44
20	2.52	2.45
21	2.52	2.43
22	2.51	2.42
23	0.19	3.66
24	2.25	2.3
25	0	0
26	2.24	2.3
27	2.25	2.3
28	0	0
29	2.48	0.11
30	0	1.34
31	2.51	3.79
32	5.02	5.01
33	2.64	2.65
34	2.64	2.64
35	0	0
36	5.06	5.05
37	5.17	5.05
38	5.17	5.17
39	0	2.57
40	0.19	0
41	2.52	2.45
42	2.51	2.43
43	2.52	2.45
44	2.52	2.45
45	0	0.25
46	5.06	5.05
47	2.49	2.49
48	1.9	2.42
49	0	0
50	0	0
51	2.05	2.06
52	1.22	0
53	3.86	0.25
54	9.2	9.19
55	6.26	0.28
56	1.96	0.29
57	2.2	2.15
58	4.56	0
59	2.52	2.35
60	3.86	0.23
61	3.15	0.24
62	4.02	0
63	3.83	0
64	2.45	0
65	3.87	0.32
66	4.09	0.32

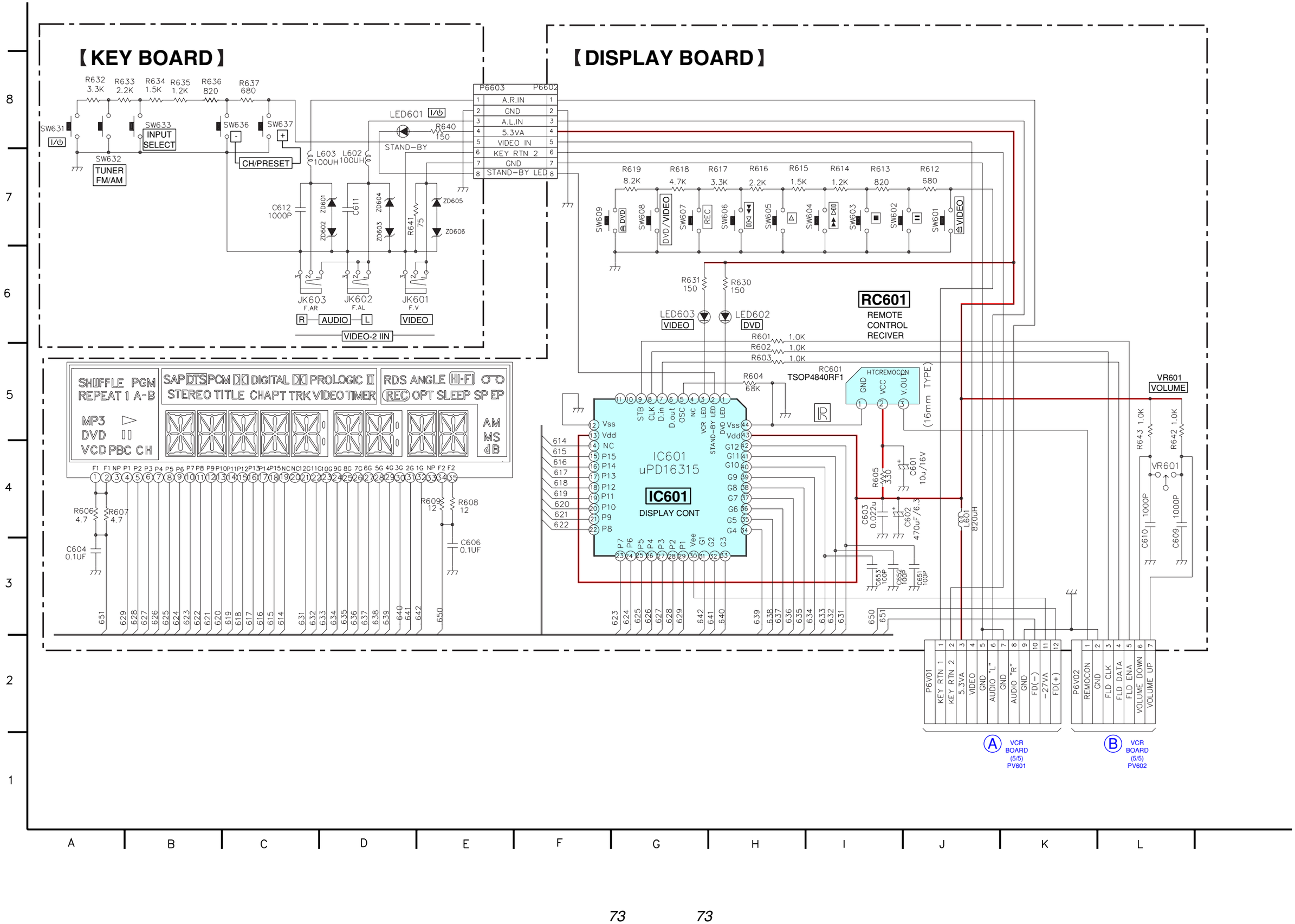
MODE / PIN NO.	EE	PLAY
67	3.88	0.31
68	3.94	0.31
69	0	0
70	0	0
71	0	0
72	3.86	0.31
73	0	0
74	2.5	2.5
75	3.87	0.4
76	3.17	0.22
77	0	0
78	4.42	4.3
79	0	0
80	4.4	4.3

Location No.	Base		Emitter		Collector	
	EE	PB	EE	PB	EE	PB
Q301	4.26	4.26	4.97	4.96	4.907	4.91
Q302	0.758	1.74	0	0	0	0
Q303	0.734	0.72	0	0	0	0
Q304	0	0	0	0	0	0
Q305	4.92	4.92	4.94	4.93	0	0
Q306	1.828	1.86	2.45	2.5	0	0
Q307	1.843	2.05	2.51	2.62	0	0
Q308	5.19	5.19	4.87	4.91	4.93	4.92
Q309	0	0	0	0	4.91	4.97
Q501	0.68	0.68	0	0	0	0
Q503	5.17	5.17	4.48	4.48	5.15	5.15
Q504	2.82	2.94	2.18	2.27	4.95	4.95
Q505	1.58	1.58	1.03	2.24	4.96	4.96
Q506	5.07	0	0	0	0	3.29
Q507	2.8	2.6	0	3.23	0	0
Q805	2.56	2.56	2.08	2.08	5.06	5.05

5-22. PRINTED WIRING BOARD – DISPLAY/KEY SECTION – • See page 47 for Circuit Board Location.

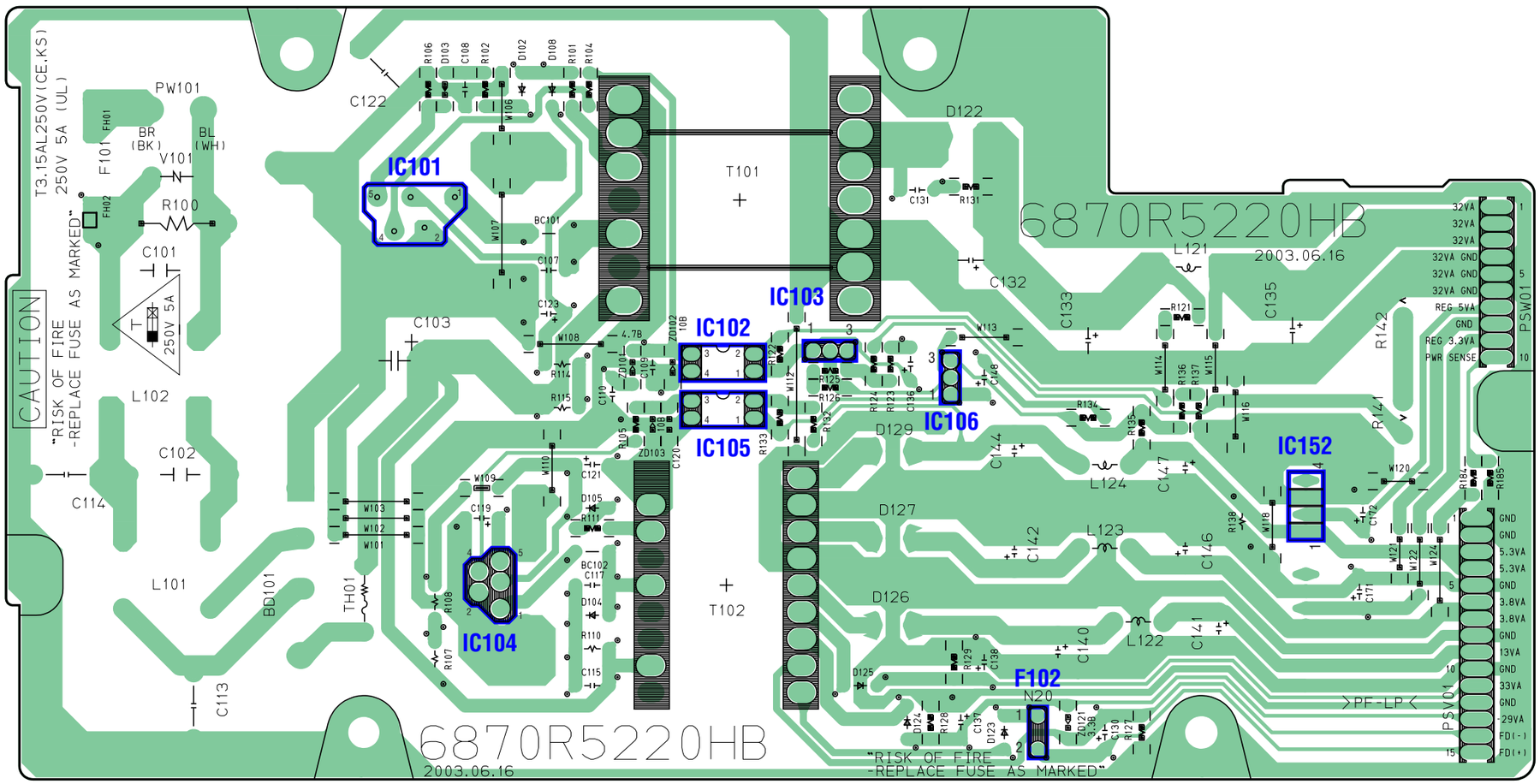


5-23. SCHEMATIC DIAGRAM – DISPLAY/KEY SECTION –



5-24. PRINTED WIRING BOARD – SMPS SECTION – • See page 47 for Circuit Board Location.

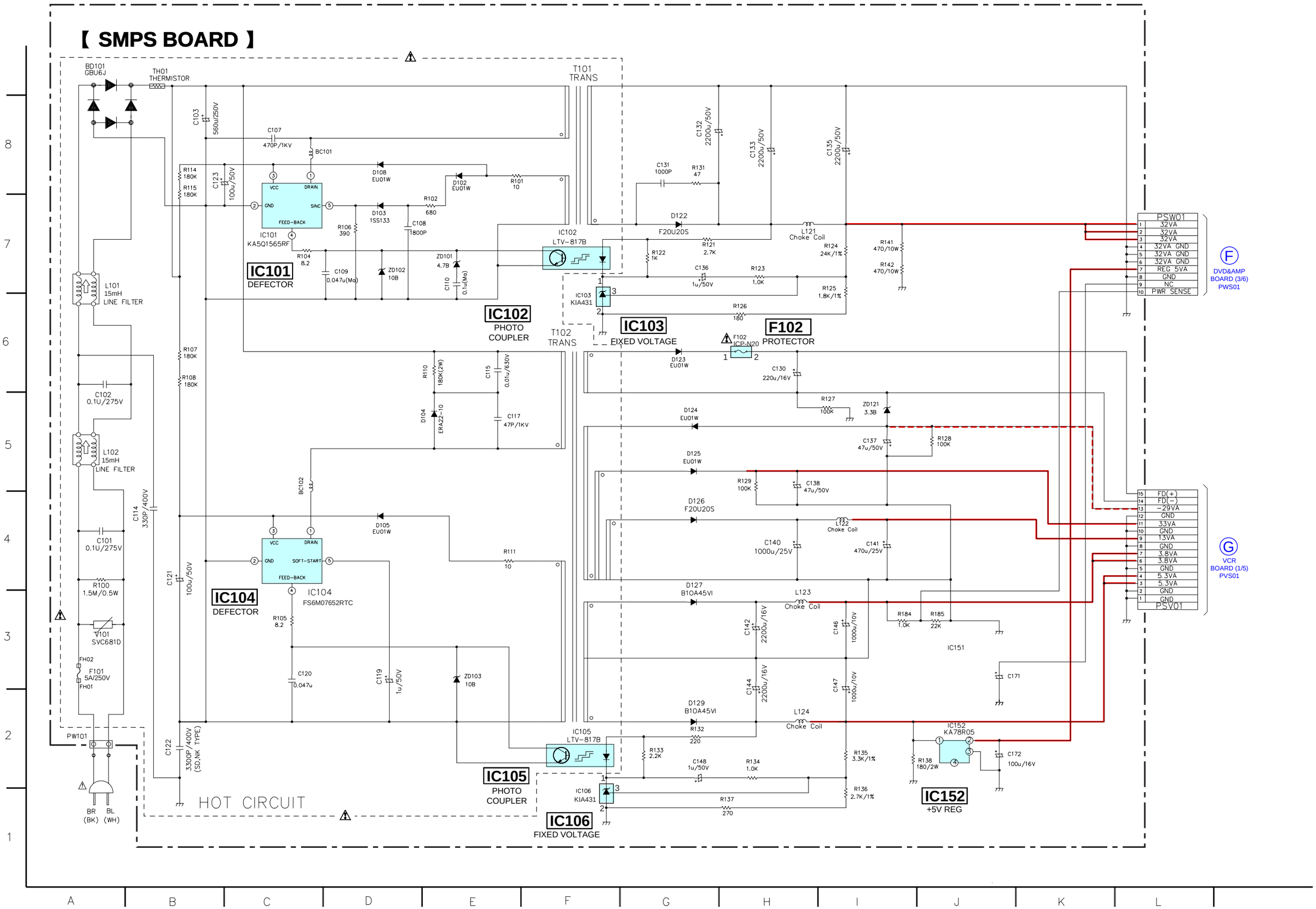
[SMPS BOARD]



• **Semiconductor Location**

Ref. No.	Location
D101	C-2
D102	A-2
D103	A-2
D104	C-3
D105	B-3
D108	A-3
D122	A-4
D123	C-4
D124	C-4
D125	C-4
D126	C-4
D127	B-4
D129	B-4
IC101	A-2
IC102	B-3
IC103	B-3
IC104	C-2
IC105	B-3
IC106	B-4
IC152	B-5
ZD101	B-3
ZD102	B-3
ZD103	B-3
ZD121	C-4

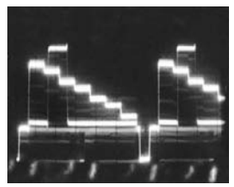
5-25. SCHEMATIC DIAGRAM – SMPS SECTION –



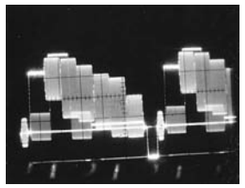
AVD-K600P

- **WAVEFORMS**

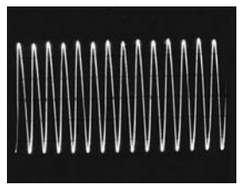
* IC301 (VCR BOARD)

① 

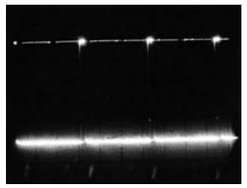
IC301 Pins 20, 21, 22
100mV/10msec DIV
VV/EE
20 Main DE Emphasis Filter
21 Main DE Emphasis out
22 Clamp in

② 

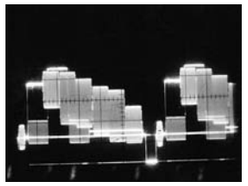
IC301 Pin 32
200mV/10msec DIV
EE
(VIDEO IN)

③ 

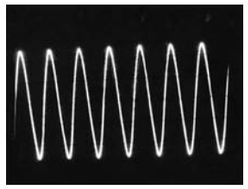
IC301 Pin 41
100mV/0.2msec DIV
REC/PB
(2fsc)

④ 

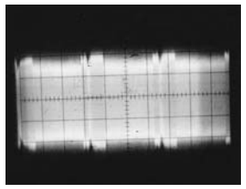
IC301 Pin 25
1.0V/20msec DIV
VV/EE
(C-SYNC OUT)

⑤ 

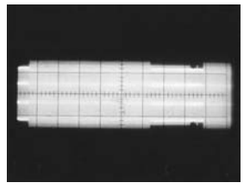
IC301 Pin 26
500mV/10msec DIV
EE
(VIDEO OUT)

⑥ 

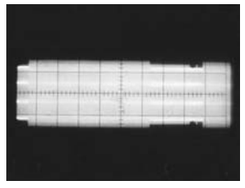
IC301 Pin 49
100mV/0.2msec DIV
PB/REC
(3.58MHz X-TAL IN)

⑦ 

IC301 Pin 14
100mV/5msec DIV
PB
(PB RF out)

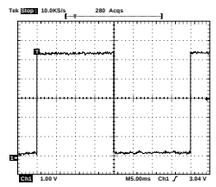
⑧ 

IC301 Pin 73
500mV/2msec DIV
SP REC
(REC RF)

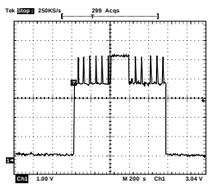
⑨ 

IC301 Pin 66
500mV/2msec DIV
EP REC
(REC RF)

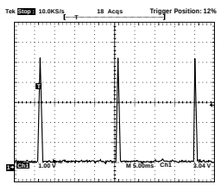
* IC501 (VCR BOARD)

① 

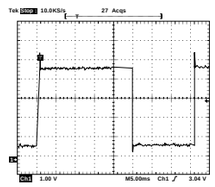
IC501 Pin 18
REC/PB

② 

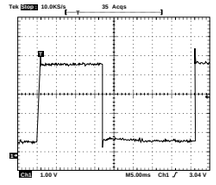
IC501 Pin 13
QUE/REV

③ 

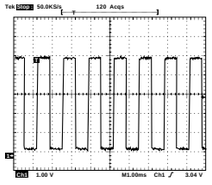
IC501 Pin 13
QUE/REV

④ 

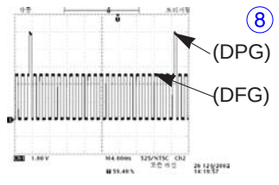
IC501 Pin 95
REC

⑤ 

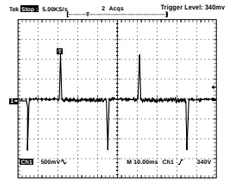
IC501 Pin 94
REC

⑥ 

IC501 Pin 87
REC/PB

⑦ 

IC501 Pin 90
REC/PB
(DPG/DFG)

⑧ 

IC501 Pin 97
PB
(CTL OUT)

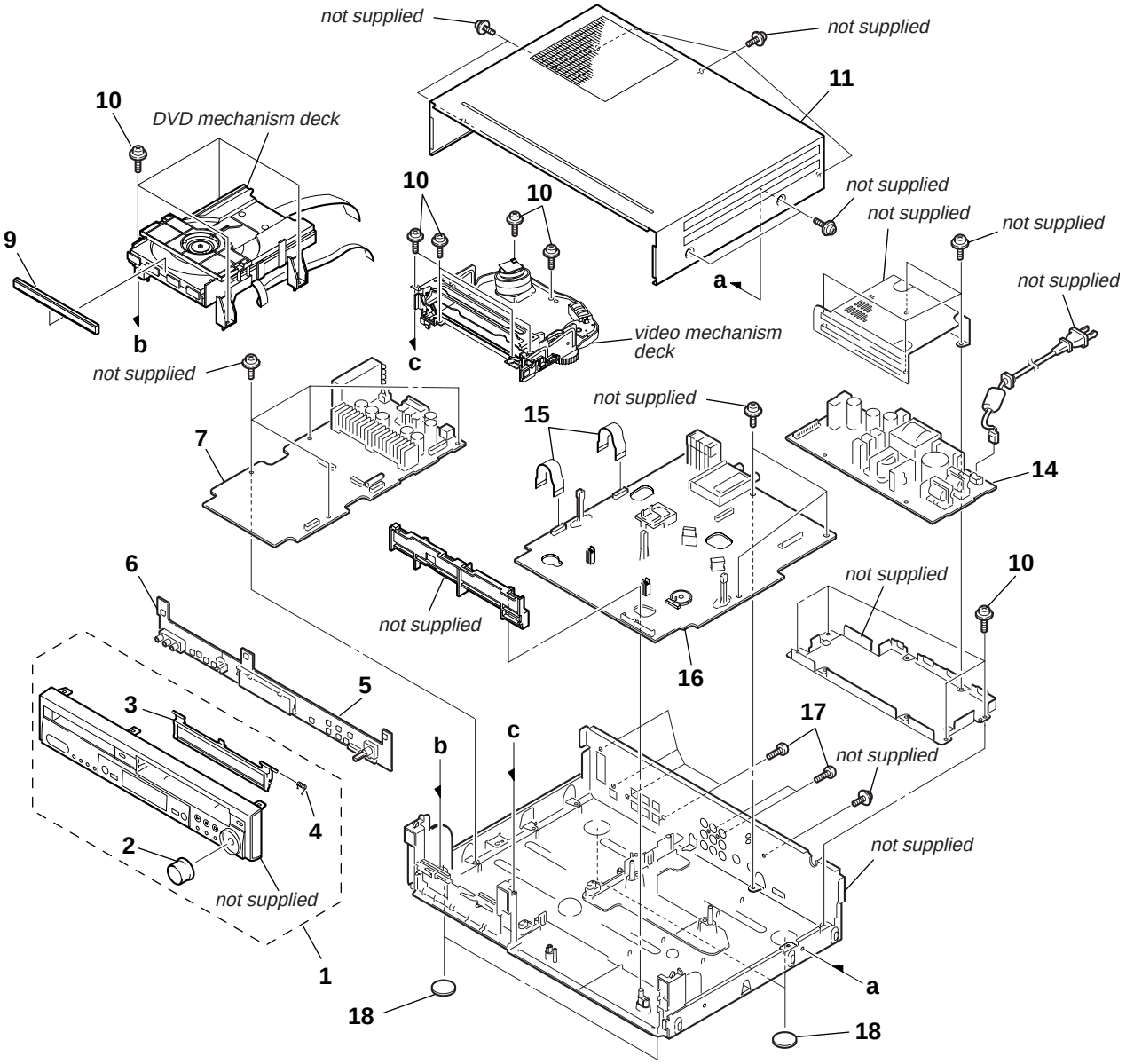
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  CND : Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

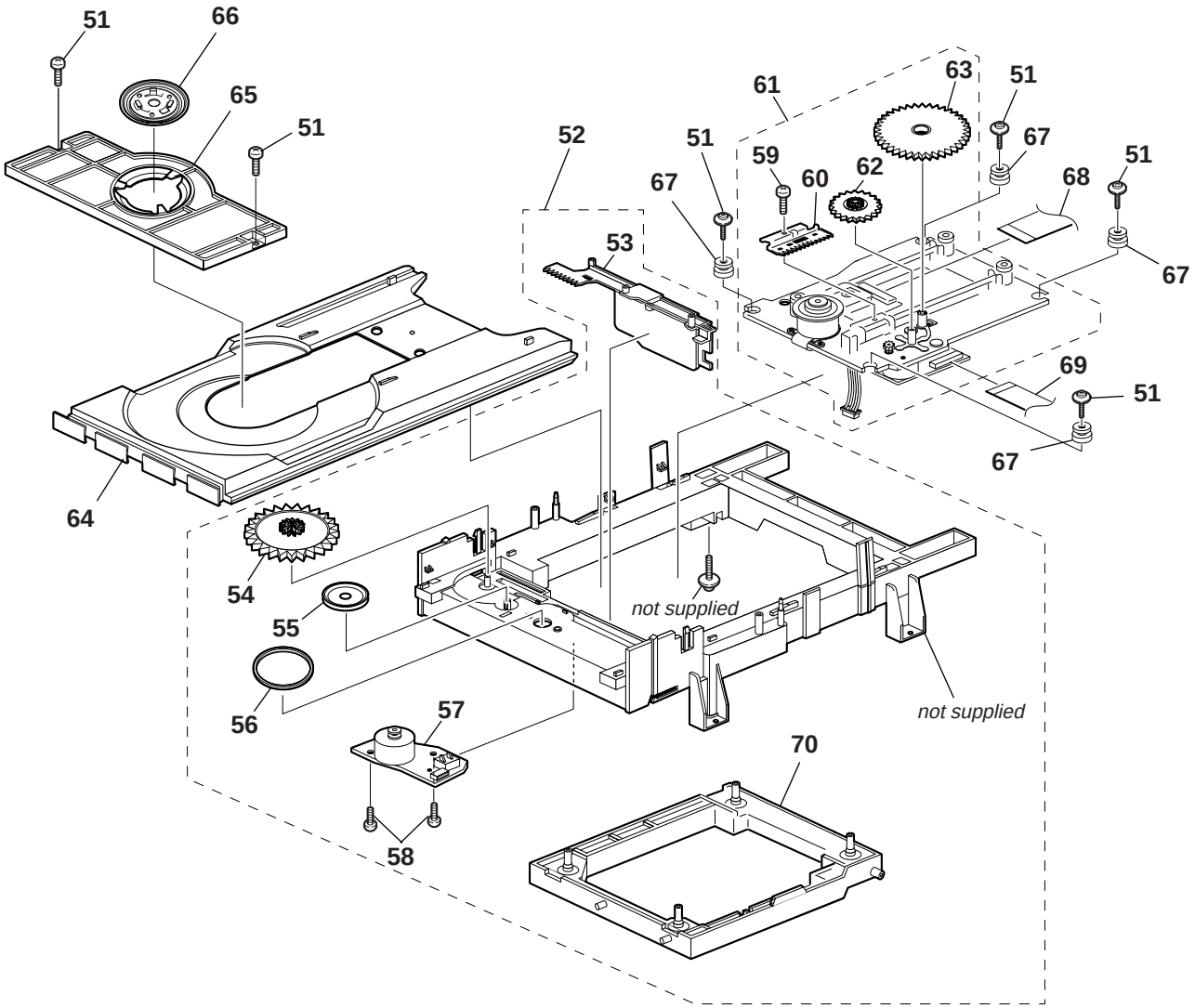
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. OVERALL SECTION



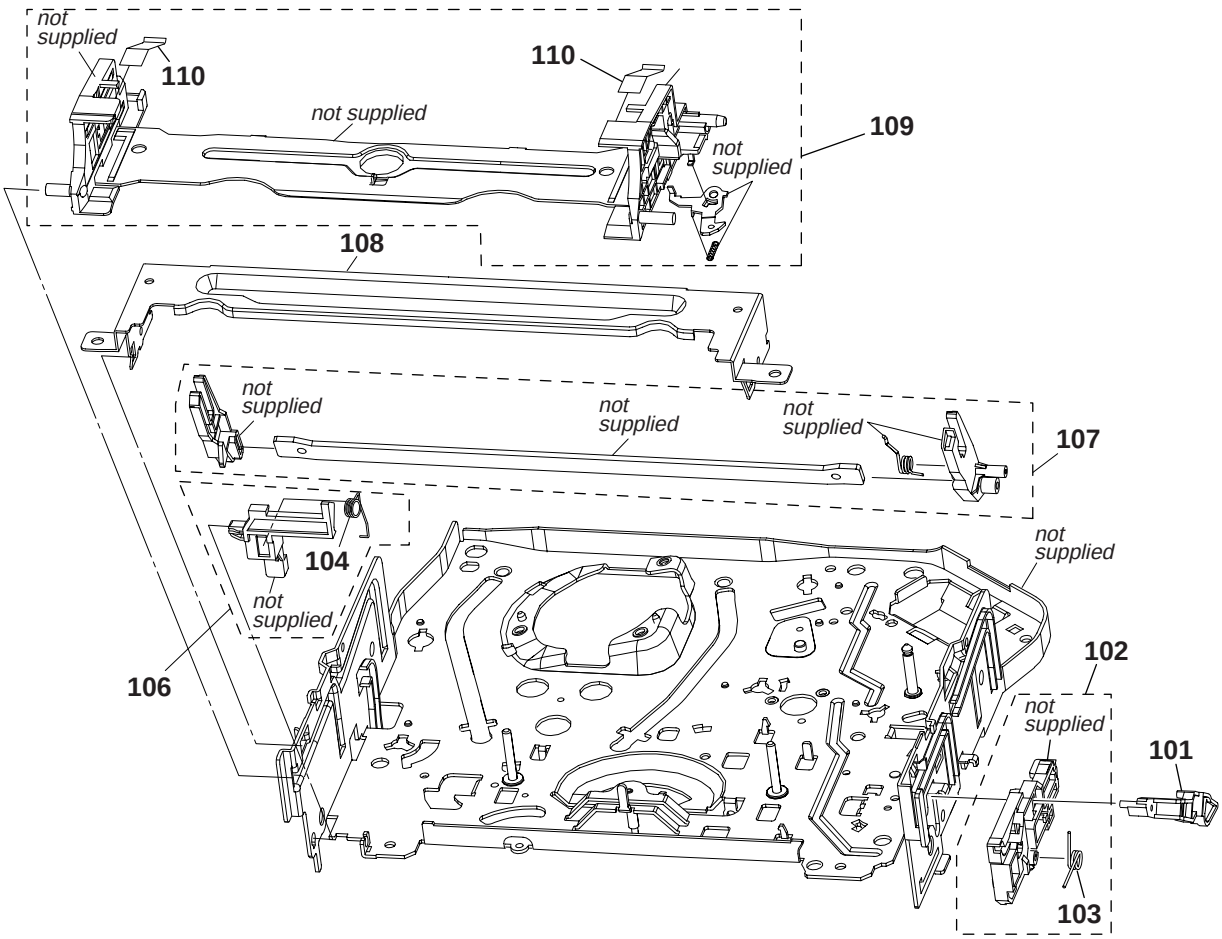
Ref. No.	Part No.	Description	Remark
1	9-885-055-41	PANEL ASSEMBLY,FRONT	
2	9-885-055-34	KNOB,VOLUME	
3	9-885-055-43	DOOR,CASE	
4	9-885-034-41	SPRING,DOOR	
5	9-885-055-48	DISPLAY BOARD, COMPLETE	
6	9-885-055-49	KEY BOARD, COMPLETE	
7	9-885-055-46	DVD & AMP BOARD, COMPLETE	
9	9-885-055-35	DOOR,CASE	
10	9-885-034-51	SCREW SPECIAL (3X12)	
11	9-885-055-32	COVER	
14	9-885-055-45	SMPS BOARD, COMPLETE	
15	9-885-055-44	FFC,12CORE 1.25 60MM SHIELD	
16	9-885-055-47	VCR BOARD, COMPLETE	
17	9-885-039-85	SCREW SPECIAL (3X10)	
18	9-885-055-38	RUBBER,FOOT	

6-2. DVD MECHANISM DECK



Ref. No.	Part No.	Description	Remark
51	9-885-039-79	SCREW B-TITE	
52	9-885-041-44	BASE ASSY MAIN DP7C	
53	9-885-040-08	GUIDE UP/DOWN	
54	9-885-039-99	GEAR LOADING	
55	9-885-056-19	GEAR PULLEY	
56	9-885-056-18	BELT	
57	9-885-040-26	PWB(PCB) ASSY OTHERS	
58	9-885-039-77	SCREW DRAWING SWERCH16A/ZNBK	
59	9-885-039-78	SCREW MACHINE	
60	9-885-039-95	GEAR ASSY	
61	9-885-041-45	BASE ASSY SLED DP-7C	
62	9-885-039-97	GEAR MIDDLE DP7C	
63	9-885-039-96	GEAR, PINION DP7C	
64	9-885-056-05	TRAY, DISK	
65	9-885-056-01	HOLDER, CLAMP	
66	9-885-056-07	CLAMP ASSEMBLY	
67	9-885-056-04	RUBBER, DAMPER DP7	
68	9-885-056-06	CABLE,FLAT 23 CORE	
69	9-885-056-02	CABLE,FLAT 11 CORE	
70	9-885-056-03	FRAME, UP/DOWN DP7C	

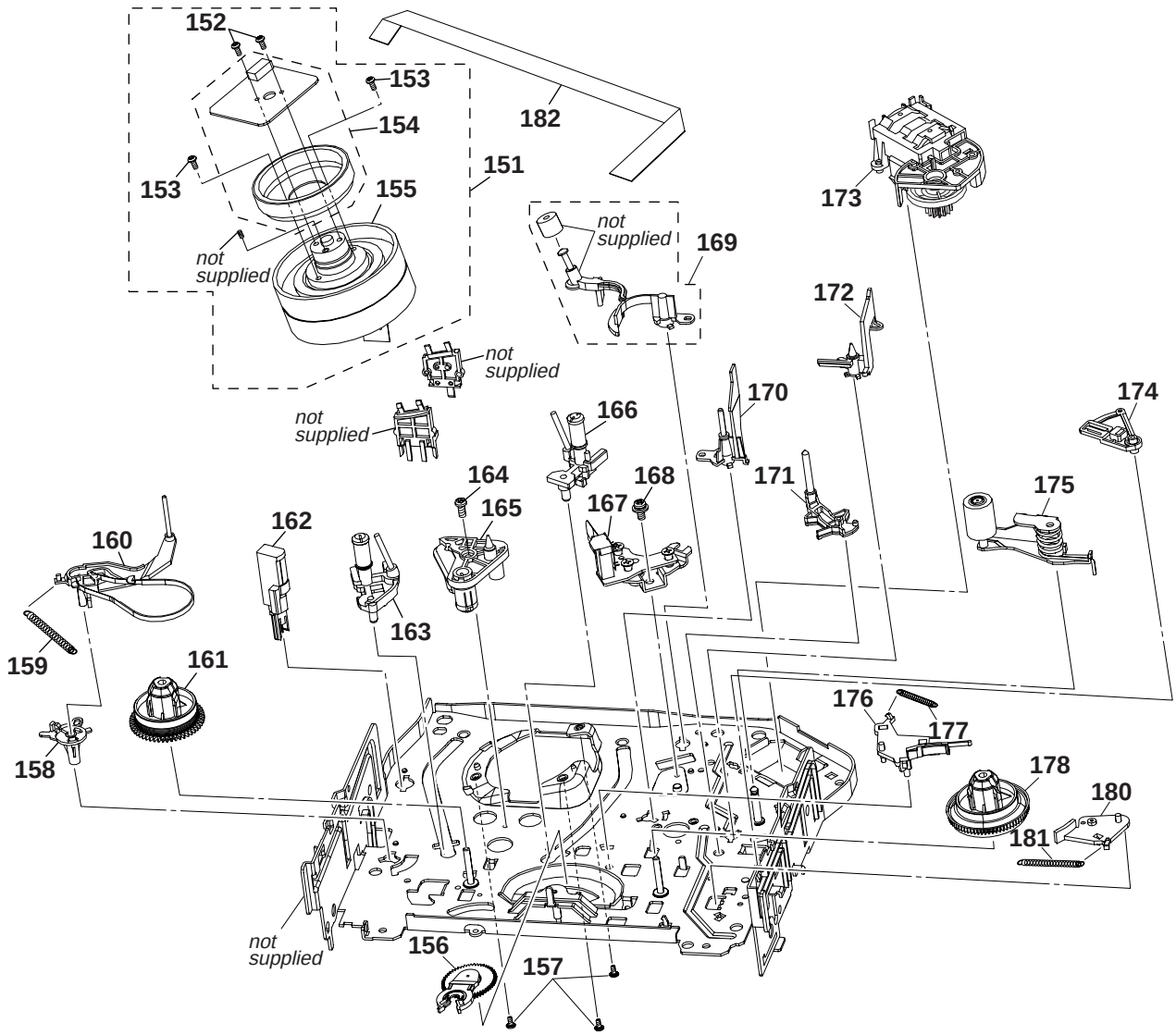
6-3. VIDEO MECHANISM DECK -1



Ref. No.	Part No.	Description	Remark
101	9-885-034-28	OPENER DOOR	
102	9-885-034-71	GEAR ASSY RACK F/L	
103	9-885-056-15	SPRING COIL D35	
104	9-885-034-34	SPRING COIL D35 SWITCH	
106	9-885-034-73	LEVER ASSY SWITCH	

Ref. No.	Part No.	Description	Remark
107	9-885-034-72	ARM ASSY F/L	
108	9-885-056-14	PLATE TOP	
109	9-885-034-70	HOLDER ASSY CST	
110	9-885-056-16	PLATE SPRING CST	

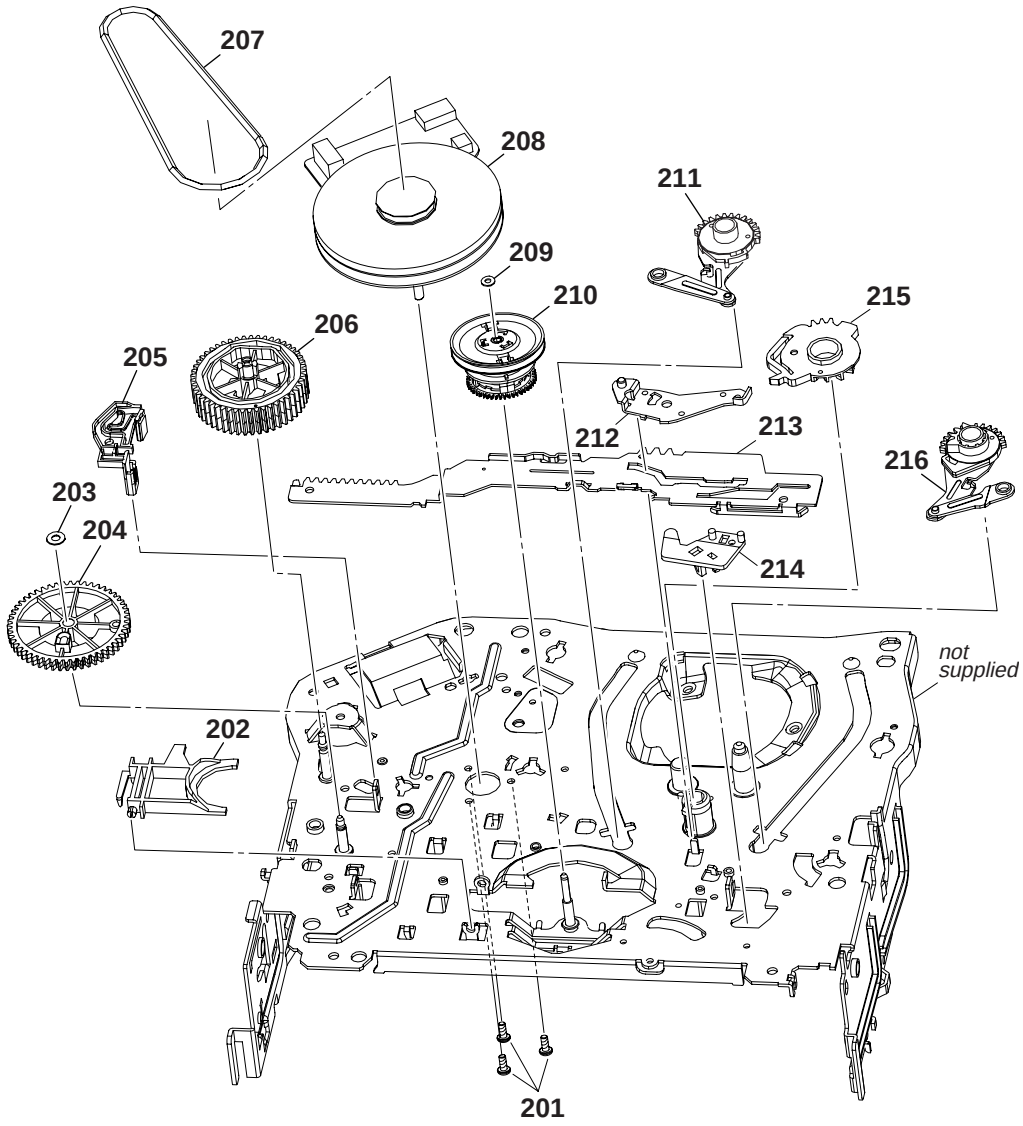
6-4. VIDEO MECHANISM DECK -2



Ref. No.	Part No.	Description	Remark
151	9-885-056-17	DRUM ASSY D35-6CH NTSC	
152	9-885-034-44	SCREW D2.6 L4.5 MSWR3/FZY	
153	9-885-034-45	SCREW D2.6 L4.0 MSWR3/FZY	
154	9-885-033-74	MOTOR. DRUM120AL05	
155	9-885-040-03	MOTOR (MECH) DRUM MDVC-035AA	
156	9-885-056-11	ARM ASSY IDLER	
157	9-885-034-47	SCREW D3.0 L6.0 MSWR3/FZY	
158	9-885-034-21	BASE TENSION	
159	9-885-034-02	SPRING COIL TENSION	
160	9-885-033-82	ARM ASSY TENSION	
161	9-885-033-88	REEL S	
162	9-885-033-93	HEAD D35 FE ST	
162	9-885-040-18	HEAD(CIRC) D35 FE TDK 6	
163	9-885-033-83	BASE ASSY P2	
164	9-885-034-46	SCREW D2.6 L5.8 SWRCH16A/FZY	
165	9-885-039-82	BASE ASSY SLED (DP-5-4V)	

Ref. No.	Part No.	Description	Remark
166	9-885-033-84	BASE ASSY P3	
167	9-885-033-87	BASE ASSY A/C HEAD	
168	9-885-034-48	SCREW D2.6 L5.0 SWRCH18A/FZY	
169	9-885-034-66	ARM ASSY CLEANER	
170	9-885-033-85	BASE ASSY P4	
171	9-885-033-80	ARM T/UP	
172	9-885-033-86	OPENER	
173	9-885-040-06	MOTOR ASSY LOADING	
174	9-885-034-01	LEVER T/UP	
175	9-885-034-00	ARM ASSY DECK/MECHA PINCH	
176	9-885-033-90	BRAKE ASSY RS	
177	9-885-033-89	SPRING COIL RS D35	
178	9-885-033-99	REEL T	
180	9-885-033-92	BRAKE ASSY T	
181	9-885-033-91	SPRING COIL D35	
182	9-885-056-10	CABLE,FLAT 7 CORE	

6-5. VIDEO MECHANISM DECK -3



Ref. No.	Part No.	Description	Remark
201	9-885-034-49	SCREW D2.6 L6.8 MSWR3/FZY	
202	9-885-034-10	LEVER F/R	
203	9-885-034-54	WASHER STOPPER	
204	9-885-034-07	GEAR DRIVE	
205	9-885-034-09	BRAKE ASSY CAPSTAN	
206	9-885-034-08	GEAR CAM	
207	9-885-034-04	BELT CAPSTAN	
208	9-885-056-12	MOTOR CAPSTAN	

Ref. No.	Part No.	Description	Remark
209	9-885-034-53	WASHER STOPPER	
210	9-885-056-13	CLUTCH ASSY D35	
211	9-885-034-68	GEAR ASSY P3	
212	9-885-034-20	LEVER TENSION	
213	9-885-034-19	PLATE SLIDER	
214	9-885-034-18	LEVER SPRING	
215	9-885-034-12	GEAR SECTOR(D35)	
216	9-885-034-69	GEAR ASSY P2	

SECTION 7
ELECTRICAL PARTS LIST

Note:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- Abbreviation
  CND : Canadian model

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
	9-885-055-48	DISPLAY BOARD,COMPLETE	
		**********	
		< INDICATOR TUBE >	
DG601	9-885-055-97	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC601	8-759-643-83	IC UPD16315GB-3BS	
		< DIODE >	
LED602	9-885-055-98	DIODE, LED DL-11S2GNS (DVD)	
LED603	9-885-055-98	DIODE, LED DL-11S2GNS (VIDEO)	
		< CONNECTOR >	
P6V01	9-885-056-99	CONNECTOR,BOARD TO BOARD 12PIN	
P6V02	9-885-056-00	CONNECTOR,BOARD TO BOARD 7PIN	
PS602	1-816-678-11	CONNECTOR,BOARD TO BOARD 8PIN	
		< IC >	
RC601	9-885-067-83	IC TSOP4840RF1 (R)	
		< SWITCH >	
SW601	1-572-184-21	SWITCH,TACT (⏏ VIDEO)	
SW602	1-572-184-21	SWITCH,TACT (❚❚)	
SW603	1-572-184-21	SWITCH,TACT (■)	
SW604	1-572-184-21	SWITCH,TACT (▶▶▷▷❙)	
SW605	1-572-184-21	SWITCH,TACT (▷)	
SW606	1-572-184-21	SWITCH,TACT (❙◁◁◀◀)	
SW607	1-572-184-21	SWITCH,TACT (REC)	
SW608	1-572-184-21	SWITCH,TACT (DVD/VIDEO)	
SW609	1-572-184-21	SWITCH,TACT (⏏ DVD)	
		< ENCODER >	
VR601	9-885-055-02	ENCODER,VOLUME (VOLUME)	
**********			
	9-885-055-46	DVD & AMP BOARD,COMPLETE	
		**********	
		< DIODE >	
D501	6-500-323-01	DIODE RL104 R	
D603	9-885-032-84	DIODE 1SS133	
D604	9-885-032-84	DIODE 1SS133	

Ref. No.	Part No.	Description	Remark
		< FILTER >	
F604	1-400-217-11	FILTER, EMC CFI06B1H 101MF	
F605	1-400-217-11	FILTER, EMC CFI06B1H 101MF	
		<IC >	
IC101	9-885-055-65	IC LC875747B-52A5	
IC102	9-885-032-96	IC KIA7031P	
IC103	9-885-032-96	IC KIA7031P	
IC104	8-759-745-64	IC NJM4560M-TE1	
IC202	9-885-055-66	IC AK4586VQ	
IC203	8-759-297-77	IC MM1231XFBE	
IC204	8-759-656-83	IC NJM4580M	
IC205	8-759-745-64	IC NJM4560M-TE1	
IC206	9-885-055-67	IC CS4334-KS	
IC301	9-885-054-83	IC PS9702B	
IC401	9-885-041-57	IC MT1336E	
IC402	6-705-366-01	IC LA6560-A-TE	
IC501	9-885-055-68	IC MT1379DEC	
IC502	6-700-173-01	IC HY57V161610DTC-7	
IC503	6-700-173-01	IC HY57V161610DTC-7	
IC505	6-702-399-01	IC S524A40X21-SCT0	
IC507	9-885-041-64	IC MM1623XFBE	
IC5A1	9-885-055-69	IC PROGRAM, DTS60910M DVD	
IC710	9-885-054-79	IC STA505	
IC730	9-885-054-79	IC STA505	
IC750	9-885-054-79	IC STA505	
IC770	9-885-054-79	IC STA505	
		< JACK/TERMINAL >	
JK601	9-885-055-70	JACK,DIN (MONITOR)	
JK602	8-749-923-05	JACK, TORX178 (VIDEO 1)	
JKS01	1-694-998-11	TERMINAL BLOCK, 6P (SPEAKERS)	
		< FILTER >	
L101	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L102	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L103	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L104	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L201	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L202	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L203	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L303	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L304	1-795-645-11	FILTER, EMC HB-1M2012-102JT	

Ref. No.	Part No.	Description	Remarks
L305	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L308	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L310	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L402	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L404	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L431	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L451	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L461	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L462	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L464	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L465	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L501	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L502	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L503	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L504	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L505	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L601	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L603	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L604	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L710	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L730	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L750	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
L770	1-795-645-11	FILTER, EMC HB-1M2012-102JT	
		< CONNECTOR >	
PDV01	9-885-055-74	CONNECTOR,MA 12PIN WH	
PDV02	9-885-054-96	CONNECTOR,12PIN 1.25mm	
PDV03	9-885-054-96	CONNECTOR,12PIN 1.25mm	
PDM03	9-885-055-75	CONNECTOR,11P 1.0mm	
PDM01	9-885-055-76	CONNECTOR,23P 1.0mm	
		< TUNER >	
PN101	9-885-055-71	TUNER KST-MJ001MV0-61L	
		< WIRE ASSEMBLY >	
PWS01	9-885-055-72	WIRE ASSEMBLY, 10PIN 70mm	
		< TRANSISTOR >	
Q401	9-885-039-69	TRANSISTOR 2SA1037K-Q	
Q402	8-729-048-50	TRANSISTOR 2SK3018	
Q403	8-729-048-50	TRANSISTOR 2SK3018	
Q404	9-885-039-69	TRANSISTOR 2SA1037K-Q	
Q405	9-885-039-69	TRANSISTOR 2SA1037K-Q	
Q406	9-885-039-74	TRANSISTOR KTC3875S	
Q407	9-885-039-67	TRANSISTOR KRC103S-T1	
Q408	9-885-039-67	TRANSISTOR KRC103S-T1	
Q410	9-885-039-69	TRANSISTOR 2SA1037K-Q	
Q411	9-885-039-67	TRANSISTOR KRC103S-T1	
Q501	9-885-039-74	TRANSISTOR KTC3875S	
Q605	9-885-039-68	TRANSISTOR KRA103S-T1	
Q606	9-885-039-68	TRANSISTOR KRA103S-T1	
Q607	9-885-039-74	TRANSISTOR KTC3875S	
Q608	9-885-039-74	TRANSISTOR KTC3875S	
Q615	9-885-039-69	TRANSISTOR 2SA1037K-Q	

Ref. No.	Part No.	Description	Remarks
		< VIBRATOR >	
X101	9-885-054-89	VIBRATOR CRYSTAL 9.8304MHz	
X201	9-885-055-90	VIBRATOR CRYSTAL 12.288MHz	
X501	9-885-040-11	VIBRATOR CRYSTAL 27MHz	
		< ZENER DIODE >	
ZD635	9-885-055-73	DIODE ZENER BZX84-C3V3	
ZD636	9-885-055-73	DIODE ZENER BZX84-C3V3	
ZD637	9-885-055-73	DIODE ZENER BZX84-C3V3	
ZD638	9-885-055-73	DIODE ZENER BZX84-C3V3	
**********			
	9-885-055-49	KEY BOARD,COMPLETE	
		**********	
		< CONNECTOR >	
PS603	1-816-677-11	CONNECTOR,BOARD TO BOARD 8PIN	
		< SWITCH >	
SW631	1-572-184-21	SWITCH,TACT (I/⏻)	
SW632	1-572-184-21	SWITCH,TACT (TUNER FM/AM)	
SW633	1-572-184-21	SWITCH,TACT (INPUT SELECT)	
SW636	1-572-184-21	SWITCH,TACT (CH/PRESET -)	
SW637	1-572-184-21	SWITCH,TACT (CH/PRESET +)	
**********			
	9-885-055-45	SMPS BOARD,COMPLETE	
		**********	
		< CAPACITOR >	
⚠C103	9-885-055-55	CAP, ELECT 560UF 250V	
		< DIODE >	
⚠BD101	9-885-055-54	DIODE GBU6J	
⚠D102	9-885-039-31	DIODE EU01W	
⚠D103	9-885-032-84	DIODE 1SS133	
⚠D104	6-500-366-01	DIODE ERA22-10	
⚠D105	9-885-039-31	DIODE EU01W	
⚠D108	9-885-039-31	DIODE EU01W	
D122	9-885-055-56	DIODE F20U20STU	
D123	9-885-039-31	DIODE EU01W	
D124	9-885-039-31	DIODE EU01W	
D125	9-885-039-31	DIODE EU01W	
D126	9-885-055-56	DIODE F20U20STU	
D127	8-719-068-69	DIODE FMB-G24H	
D129	8-719-068-69	DIODE FMB-G24H	
		< FUSE >	
⚠F101	1-532-505-51	FUSE 5000mA 250V	
		<IC >	
⚠F102	1-532-685-91	IC ICP-N20	
⚠IC101	9-885-055-57	IC KA5Q1565RF	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SMPS **VCR**

Ref. No.	Part No.	Description	Remarks
⚠IC102	8-749-018-95	SENSOR, LTV-817B	
IC103	9-885-032-92	IC KIA431	
⚠IC104	9-885-055-58	IC FS6M07652RTC	
⚠IC105	8-749-018-95	SENSOR, LTV-817B	
IC106	9-885-032-92	IC KIA431	
IC152	8-759-457-44	IC KA78R05TSTU	
		<TRANSFORMER >	
⚠T101	9-885-055-59	TRANSFORMER EER424220	
⚠T102	9-885-055-60	TRANSFORMER EER3530	
		< THERMISTOR >	
⚠TH01	9-885-055-61	THERMISTOR, 4.0OHM	
		< VARISTOR >	
⚠V101	9-885-035-07	VARISTOR, SVC681D	
		< ZENER DIODE >	
⚠ZD101	9-885-055-62	DIODE ZENER UZ-4.7BSB	
⚠ZD102	9-885-055-63	DIODE ZENER UZ-10BSB	
⚠ZD103	9-885-055-63	DIODE ZENER UZ-10BSB	
ZD121	9-885-055-64	DIODE ZENER UZ-3.3BSB	
**********			
	9-885-055-47	VCR BOARD,COMPLETE	
		**********	
		< SWITCH >	
CS501	9-885-055-77	SWITCH,PUSH	
		< DIODE >	
D161	6-500-323-01	DIODE RL104 R	
D163	6-500-323-01	DIODE RL104 R	
D165	9-885-032-84	DIODE 1SS133	
D509	9-885-032-84	DIODE 1SS133	
D802	9-885-032-84	DIODE 1SS133	
		< HOLDER >	
ES501	9-885-055-78	HOLDER ASSEMBLY	
ES502	9-885-055-78	HOLDER ASSEMBLY	
		< FILTER >	
F616	1-400-217-11	FILTER, EMC CFI06B1H101MF	
F617	1-400-217-11	FILTER, EMC CFI06B1H101MF	
F618	1-400-217-11	FILTER, EMC CFI06B1H101MF	
		< COIL >	
FL301	9-885-055-79	COIL, 75M	
		< IC >	
IC160	8-759-544-12	IC KA78R08TSTU	
IC161	8-759-544-11	IC KA78R33TSTU	
IC162	8-759-544-11	IC KA78R33TSTU	
IC301	9-885-039-51	IC LA71206M-MPB	
IC302	9-885-039-44	IC NJM2234L	
IC501	9-885-055-81	IC M37762MCA-1P2GP	
IC503	9-885-035-06	IC AT24C16	

Ref. No.	Part No.	Description	Remarks
IC504	9-885-032-96	IC KIA7031P	
IC505	9-885-032-97	IC KIA7042P	
IC506	8-759-674-43	IC MM74HCT244SJ	
IC602	8-759-567-33	IC MM1225XFBE	
IC801	9-885-042-47	IC LA72670M-MPB	
		< JACK >	
JK801	9-885-055-83	JACK,RCA-907A-01G (COMPONENT)	
		< COIL >	
L301	1-410-482-21	INDUCTOR, 100M	
L303	1-410-482-21	INDUCTOR, 100M	
L501	1-410-482-21	INDUCTOR, 100M	
L512	1-410-482-21	INDUCTOR, 100M	
L822	1-410-482-21	INDUCTOR, 100M	
		< SWITCH >	
MS501	9-885-040-19	SWITCH MODE	
		<TRANSISTOR >	
Q161	8-729-043-89	TRANSISTOR KTC3205-TP-Y	
Q162	8-729-043-89	TRANSISTOR KTC3205-TP-Y	
Q163	9-885-033-21	TRANSISTOR KTA1268-BL	
Q166	8-729-043-89	TRANSISTOR KTC3205-TP-Y	
Q167	9-885-039-11	TRANSISTOR KSA928A-Y	
Q167	9-885-033-20	TRANSISTOR KTA1273-TP-Y	
Q168	9-885-039-11	TRANSISTOR KSA928A-Y	
Q168	9-885-033-20	TRANSISTOR KTA1273-TP-Y	
Q169	9-885-033-24	TRANSISTOR 2SC5343-L	
Q301	9-885-039-73	TRANSISTOR KTA1504-GR-T1	
Q302	9-885-039-74	TRANSISTOR KTC3875S	
Q303	9-885-039-74	TRANSISTOR KTC3875S	
Q304	9-885-033-28	TRANSISTOR 2SC5344Y	
Q305	9-885-039-11	TRANSISTOR KSA928A-Y	
Q305	9-885-033-20	TRANSISTOR KTA1273-TP-Y	
Q306	9-885-039-73	TRANSISTOR KTA1504-GR-T1	
Q307	9-885-039-73	TRANSISTOR KTA1504-GR-T1	
Q308	9-885-039-11	TRANSISTOR KSA928A-Y	
Q308	9-885-033-20	TRANSISTOR KTA1273-TP-Y	
Q309	9-885-039-67	TRANSISTOR KRC103S-T1	
Q310	9-885-039-68	TRANSISTOR KRA103S-T1	
Q501	9-885-039-74	TRANSISTOR KTC3875S	
Q503	9-885-033-20	TRANSISTOR KTA1273-TP-Y	
Q504	9-885-039-74	TRANSISTOR KTC3875S	
Q505	9-885-039-74	TRANSISTOR KTC3875S	
Q506	9-885-039-67	TRANSISTOR KRC103S-T1	
Q507	9-885-039-73	TRANSISTOR KTA1504-GR-T1	
Q805	9-885-039-74	TRANSISTOR KTC3875S	
		< CONNECTOR >	
P3D01	9-885-055-92	CONNECTOR,9PIN 1.25mm	
P3D02	9-885-055-93	CONNECTOR,6PIN 2mm	

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Ref. No.	Part No.	Description	Remarks
P3D03	9-885-055-94	CONNECTOR,2PIN	
PMC01	9-885-055-91	CONNECTOR,BOARD TO BOARD 12PIN	
PV601	9-885-055-95	CONNECTOR,12PIN 2.0mm	
PV602	9-885-055-96	CONNECTOR,7PIN 2.0mm	
PVD01	9-885-055-90	CONNECTOR ASSEMBLY,12PIN 200mm	
PVD02	9-885-054-96	CONNECTOR,12P	
PVD03	9-885-054-96	CONNECTOR,12P	
		< SENSOR >	
RS501	9-885-033-37	SENSOR SG-260	
RS502	9-885-033-37	SENSOR SG-260	
		< TUNER >	
TU701	9-885-055-84	TUNER TADM-H102F	
		< VIBRATOR >	
X301	9-885-040-09	VIBRATOR CRYSTAL (3.579575MHz)	
X501	9-885-039-16	VIBRATOR CRYSTAL (32.768kHz)	
X502	9-885-055-87	VIBRATOR CRYSTAL (14.31818Hz)	
		< ZENER DIODE >	
ZD161	9-885-055-88	DIODE ZENER MTZ5.6C	
ZD162	9-885-055-89	DIODE ZENER UZ-10BM	
ZD163	9-885-055-89	DIODE ZENER UZ-10BM	

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MEMO

AVD-K600P

SONY

US Model
Canadian Model

SERVICE MANUAL

Ver 1.1 2004.02

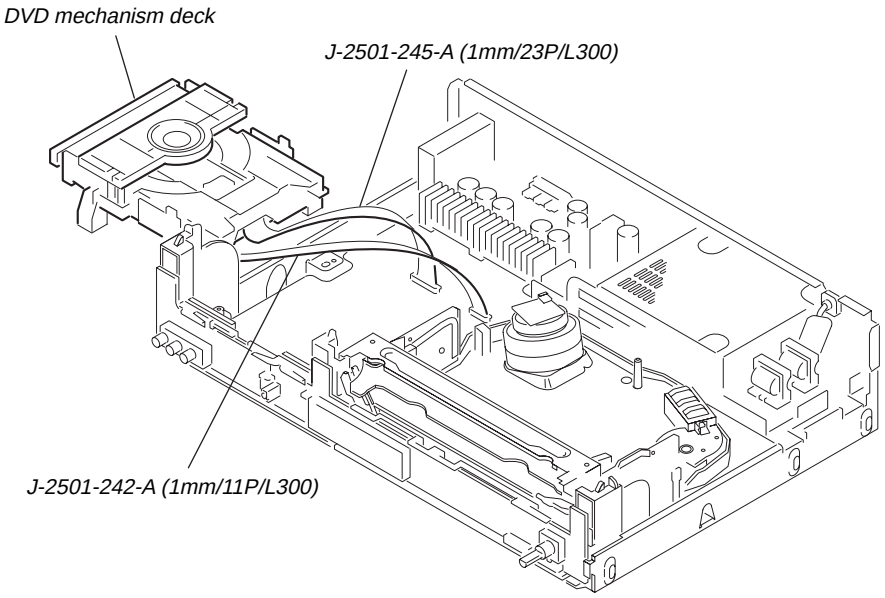
SUPPLEMENT-1

Subject: SERVICE POSITION

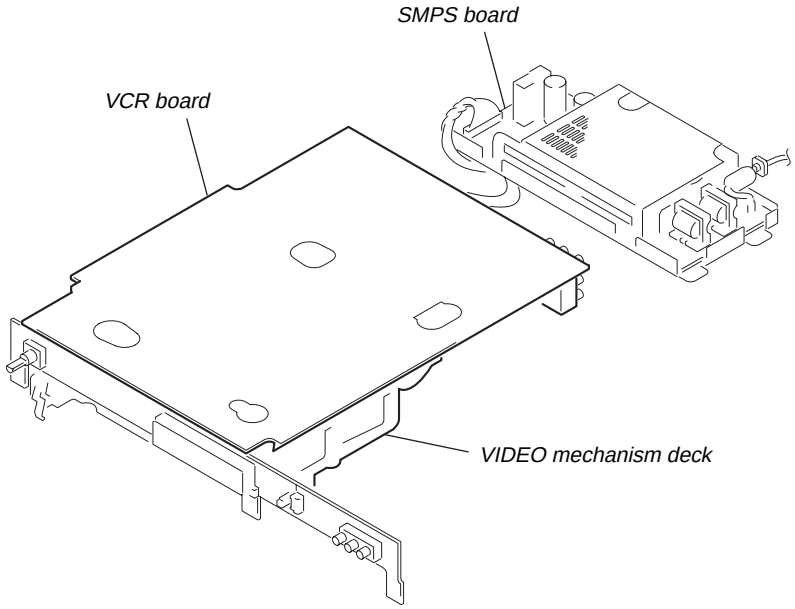
(SPM-04005)

9-877-542-81

- **SERVICE POSITION-1 (DVD Mechanism Deck)**
  Extension cable (J-2501-242-A, J-2501-245-A) is required to inspect the DVD mechanism deck.



- **SERVICE POSITION-2 (VIDEO Mechanism Deck)**
  Perform the operation check of the VIDEO mechanism deck after the VCR board and the VIDEO mechanism deck are turned upside down.



REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.01	New
1.1	2004.02	Addition of SUPPLEMENT-1 (SERVICE POSITION) (SPM-04005)
1.2	2004.12	Change of Part No. of RC601 (DISPLAY BOARD) (SPM-04130)