

DVD PLAYER DVD-S830

SERVICE MANUAL

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

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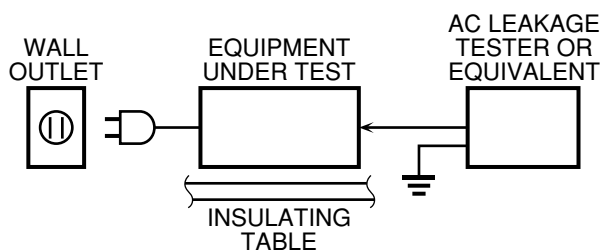


このサービスマニュアルは、エコマーク認定の再生紙を使用しています。
This Service Manual uses recycled paper.



■ TO SERVICE PERSONNEL

1. Critical Components Information
Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
 2. Leakage Current Measurement (For 120V Models Only)
When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.
- Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F.



- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

WARNING: Laser Safety

This product contains a laser beam component. This component may emit invisible, as well as visible radiation, which may cause eye damage. To protect your eyes and skin from laser radiation, the following precautions must be used during servicing of the unit.

- 1) When testing and/or repairing any component within the product, keep your eyes and skin more than 30 cm away from the laser pick-up unit at all times. Do not stare at the laser beam at any time.
- 2) Do not attempt to readjust, disassemble or repair the laser pick-up, unless noted elsewhere in this manual.
- 3) CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Emitting conditions:

- 1) When the Top Cover is removed, and the "STANDBY/ON" SW is turned to the "ON" position, the laser component will emit a beam for several seconds to detect if a disc is present. During this time (5-10 sec.) the laser may radiate through the lens of the laser pick-up unit. Do not attempt any servicing during this period!
If no disc is detected, the laser will stop emitting the beam. When a disc is set, you will not be exposed to any laser emissions.
- 2) The laser power level can be adjusted with the VR on the pick-up PWB. However, this level has been set by the factory prior to shipping from the factory. Do not adjust this laser level control unless instruction is provided elsewhere in this manual.
Adjustment of this control can increase the laser emission level from the device.

Laser Diode Properties

Type: Semiconductor laser GaAlAs
Wave length: 658 nm (DVD)
790 nm (VCD/CD)
Output Power: CLASS IIa 1mW (DVD)
CLASS I 1mW (VCD/CD)

VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASER-SÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

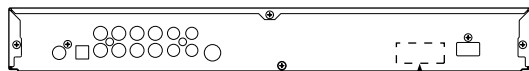
WARNING! : OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRakta EJ STRÅLEN.

WARNING

The use of optical instruments with this product will increase eye hazard.

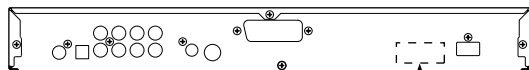
Repair handling should take place as much as possible with a disc loaded inside the player

A, R models



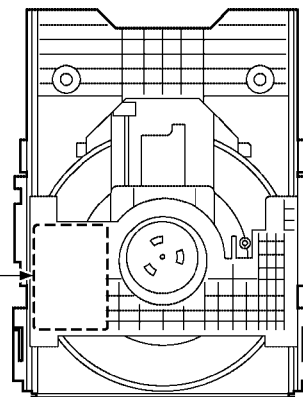
CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT
PRODUIT LASER DE CLASSE 1

B, G models



CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT
PRODUIT LASER DE CLASSE 1

DANGER	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1)
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	- AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASER-SÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	- SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
注意	- 打开时有可见及不可见激光辐射。避免激光束照射。
注意	- ここを開くと可燃物に不可視のレーザー光が出ます。ビームを直接見たり、触れたりしないでください。 ROL S0233



DVD-S830

■ PREVENTION OF ELECTRO STATIC DISCHARGE

The laser diode in the traverse unit (optical pickup) may be damaged due to static electricity from clothes or the human body. Use caution to prevent electrostatic damage when servicing or handling the laser diode.

1. Grounding for Electrostatic Damage Prevention

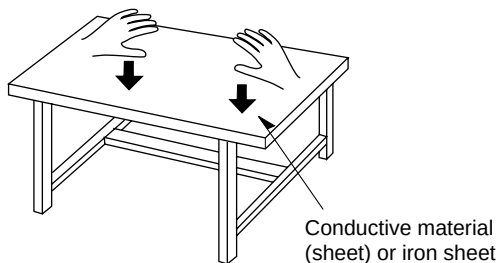
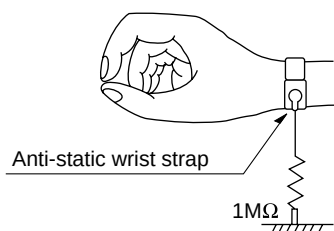
Some devices, such as the DVD player, use an optical pickup (laser diode) that will be damaged by static electricity in the working environment. Only attempt service after ensuring that all grounding procedures have been completed.

1. Worktable grounding

Put a grounded conductive material (sheet) or iron sheet on the area where the optical pickup is placed.

2. Human body grounding

Use an anti-static wrist strap to discharge the static electricity from your body.



2. Handling of the Optical Pickup

1. To prevent damage to the optical pickup replacement parts during transportation and before installation, both ends of the laser diode are short-circuited. After installing the new part, remove the short circuit according to the correct procedure in this service manual.
2. Do not use a tester to check the laser diode in the optical pickup. The power supply in the tester will damage the laser diode.

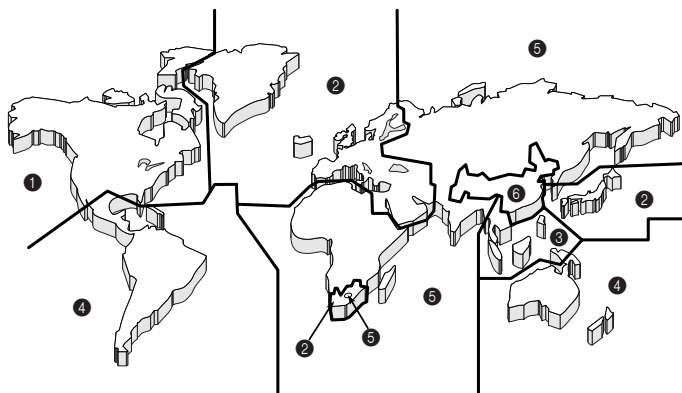
3. Handling Precautions for the Traverse Unit (Optical Pickup)

1. Handle the traverse unit (optical pickup) gently, as it is an extremely high-precision assembly.
2. The flexible cable lines may break if an excessive force is applied to it. Use caution when handling the cable.
3. The semi-fixed resistor for laser power adjustment should not be adjusted. Do not turn the resistor.

■ LOCALE MANAGEMENT INFORMATION

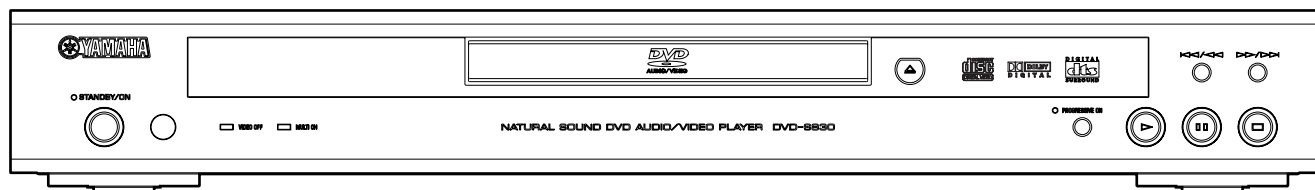
Locale Management Information : This DVD player is designed and manufactured to respond to the Locale Management Information that is recorded on the DVD disc. If the Locale number described on the DVD disc does not correspond to the Locale number of this DVD player, this DVD player cannot play this disc.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.



■ FRONT PANELS

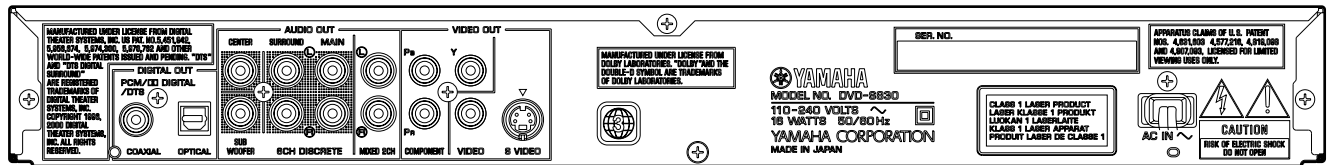
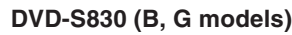
DVD-S830 (A, R models)



DVD-S830 (B, G models)



DVD-S830 (A model)



The diagram shows the layout of the remote control with various buttons and their functions:

- POWER**: Button with a power symbol and a slash.
- OPEN/CLOSE**: Button with a double arrow pointing right.
- STOP**: Button with a square symbol.
- PAUSE**: Button with two vertical bars.
- PLAY**: Button with a right-pointing triangle.
- SKIP**: Two buttons with left and right double arrows.
- SLOW SEARCH**: Two buttons with left and right double arrows and a magnifying glass icon.
- TOP MENU**: Button with a left arrow.
- MENU**: Button with a right arrow.
- ENTER**: Button with a central square and four arrows pointing towards it.
- ON SCREEN**: A row of four buttons: **SET UP**, **SUB TITLE**, **AUDIO**, and **RETURN**.
- ANGLE**: Button with a right arrow.
- RANDOM**: Button with a square symbol.
- 1**, **2**, **3**: Numbered buttons.
- REPEAT**: Button with a circular arrow symbol.
- 4**, **5**, **6**: Numbered buttons.
- A-B**: Button with a vertical bar and a right arrow.
- 7**, **8**, **9**: Numbered buttons.
- PROG**: Button with a square symbol.
- CANCEL**: Button with a square symbol.
- 10**: Button with a square symbol.
- 11**: Button with a square symbol.
- GROUP**, **PAGE**, **VIDEO OFF**, **POS. MEMO.**: A row of four buttons.
- ZOOM**, **CINEMA**, **V.S.S.**: A row of three buttons.
- DVD**: DVD logo.
- YAMAHA**: Yamaha logo.

SPECIFICATIONS

Signal System: PAL 625/50, PAL525/60, NTSC

Operating Temperature Range: +5 to +35°C

Operating Humidity Range:
5 to 90 % RH (no condensation)

Discs Played [8 cm or 12 cm]:

- (1) DVD-Audio
 - (2) DVD-Video
 - (3) DVD+RW/DVD+R
 - (4) DVD-R/DVD-RW (DVD-Video compatible)
 - (5) CD-Audio (CD-DA)
 - (6) Video CD
 - (7) CD-R/CD-RW (CD-DA, Video-CD formatted discs)
 - (8) MP3
- Maximum Number of Tracks and Groups Recognizable:
999 tracks and 99 groups
 - Compatible Compression Rate:
between 32 kbps and 320 kbps

Video Output:

Output Level: 1 Vp-p (75 Ω)
Output Terminal: Pin jack (1 system)

S Video Output:

Y Output Level: 1 Vp-p (75 Ω)
C Output Level:
NTSC; 0.286 Vp-p (75 Ω)
PAL; 0.300 Vp-p (75 Ω)
Output Terminal: S terminal (1 system)

RGB Video Output [B, G models]:

R Output Level: 0.7 Vp-p (75 Ω)
G Output Level: 0.7 Vp-p (75 Ω)
B Output Level: 0.7 Vp-p (75 Ω)
Output Connector: SCART

Component Video Output [A, R models]:

(NTSC: 480P/480i, PAL: 576i)
Y Output Level: 1 Vp-p (75 Ω)
P_B Output Level: 0.7 Vp-p (75 Ω)
P_R Output Level: 0.7 Vp-p (75 Ω)
Output Connector: Pin jack
(Y: green, P_B : blue, P_R : red)
Number of Connectors: 1 system

Audio Output:

Output Level: 2 Vrms (1 kHz, 0 dB)
Output Connector: Pin jack
Number of Connectors:
2 Channel: 1 system
5.1-channel Discrete Output (5.1 Channel): 1 system

Audio Performance:

- (1) Frequency Response:
 - DVD (linear audio): 2 Hz–22 kHz (48 kHz sampling)
2 Hz–44 kHz (96 kHz sampling)
 - DVD-Audio: 2 Hz–88 kHz (192 kHz sampling)
 - CD audio: 2 Hz –20 kHz
- (2) S/N Ratio:
 - CD audio: 115 dB
- (3) Dynamic Range:
 - DVD (linear audio): 102 dB
 - CD audio: 98 dB
- (4) Total Harmonic Distortion:
 - CD audio: 0.0025 %

Digital Audio Output:

Optical Digital Output: Optical terminal
Coaxial Digital Output: Pin jack

Pickup: Wave Length: 658 nm/790 nm
Laser power: CLASS 2/CLASS 1

Power Supply:

A, B, G models: AC 220–240 V, 50 Hz
R model: AC 110–240 V, 50/60 Hz

Power Consumption:

A, B, G models: 15 W
R model: 16 W

Standby Power Consumption: approx. 4 W

Dimensions (W x H x D): 435 x 60 x 258 mm
(17-1/8" x 2-3/8" x 10-1/8")

Weight:

3.3 kg (7 lbs. 4 oz.)

Finish:

Gold color: R model
Black color: A, B, G models
Titanium color: B, G models

Accessories:

Remote Control, Batteries, Audio/Video Cable, Power Cable

* Specifications are subject to change without notice due to product improvements.

A Australian model B British model
G European model R General model



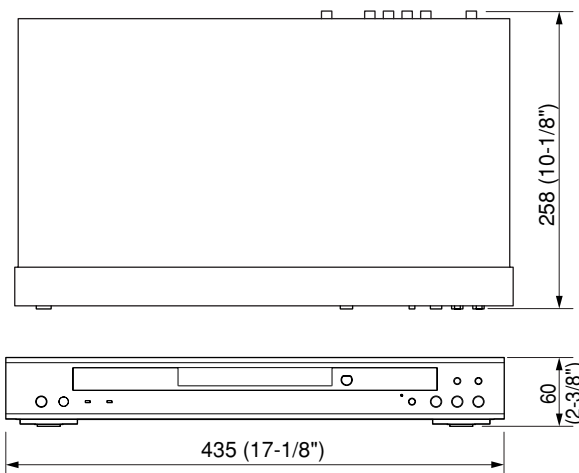
Manufactured under license from Dolby Laboratories.

"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.



"DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

DIMENSIONS



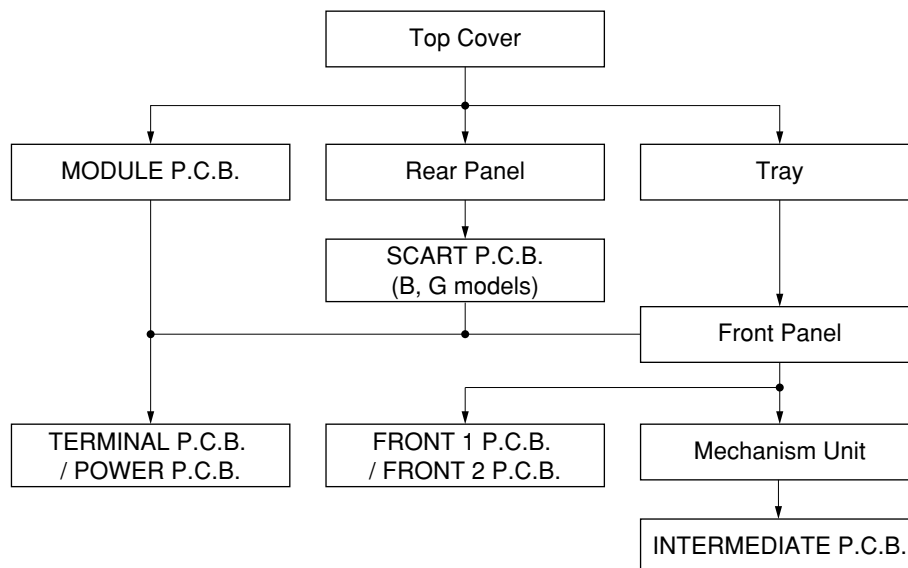
Unit : mm (inch)
単位: mm (インチ)

■ DISASSEMBLY PROCEDURES AND SERVICE POSITION

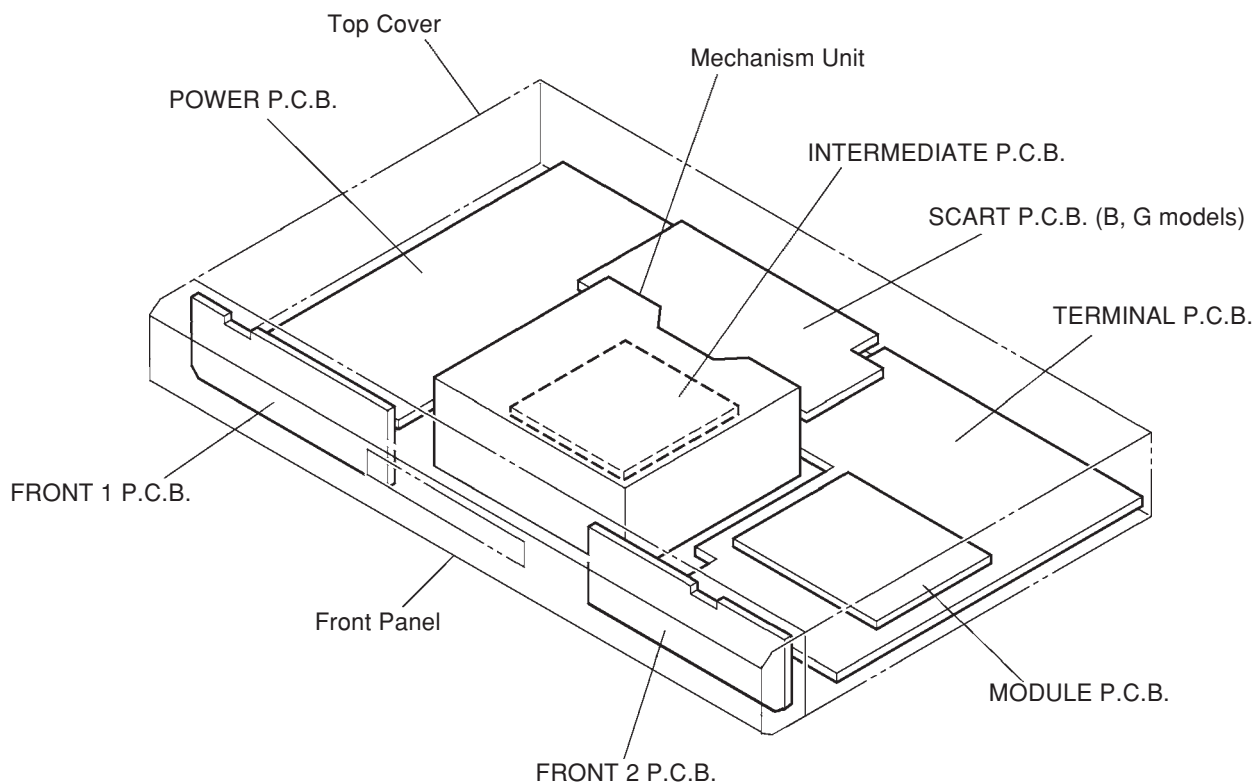
(Remove parts in the order as numbered.)

Disconnect the power cable from the AC outlet.

1. Disassembly Procedure

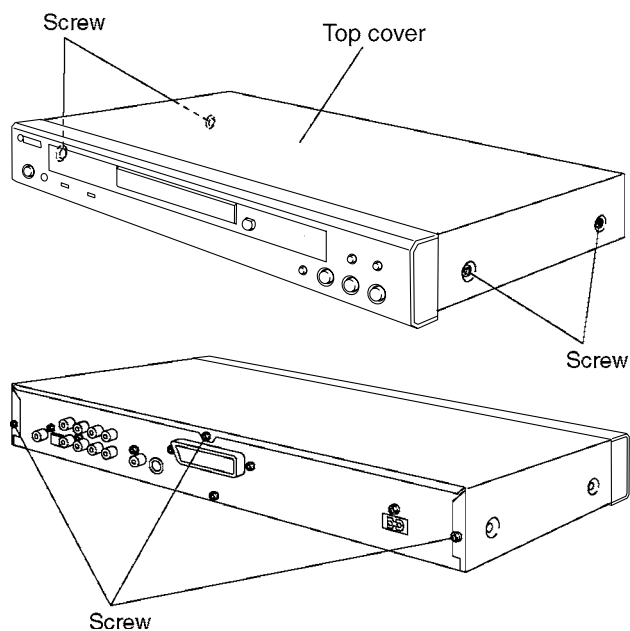


2. Casing Parts and P.C.B. Locations



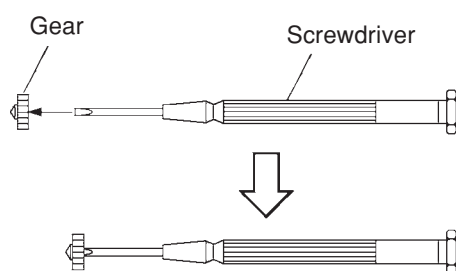
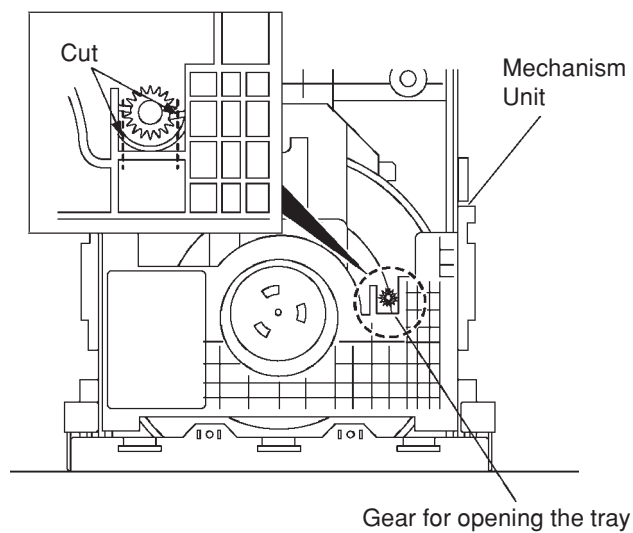
3. Top Cover

Remove the screws.

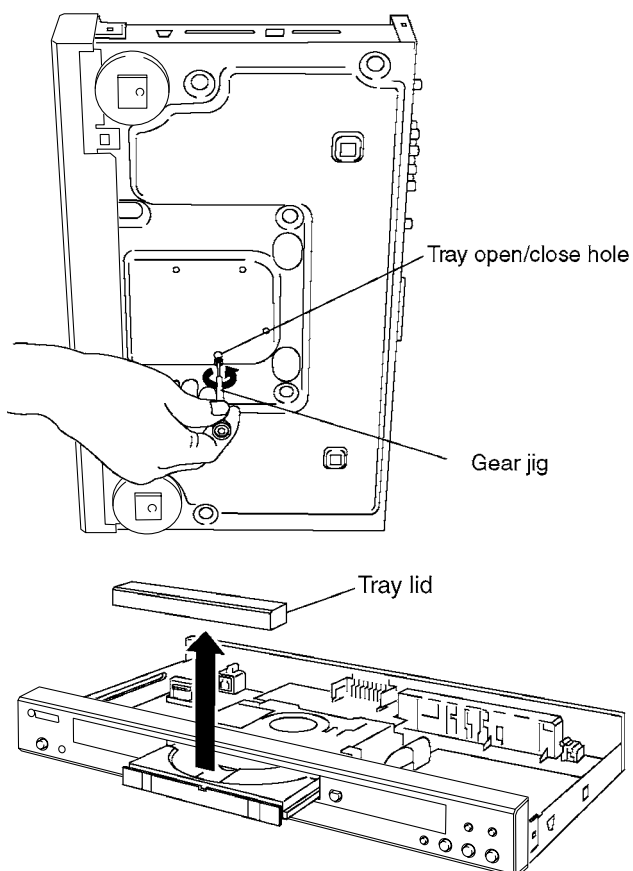


4. Tray

1. Remove the gear for opening the tray from the mechanism unit and install it onto a screwdriver to make a gear jig.
2. Insert the gear jig into the tray open/close hole.
3. Turn the gear jig counterclockwise to open the tray.
4. Remove the tray lid from the tray section.

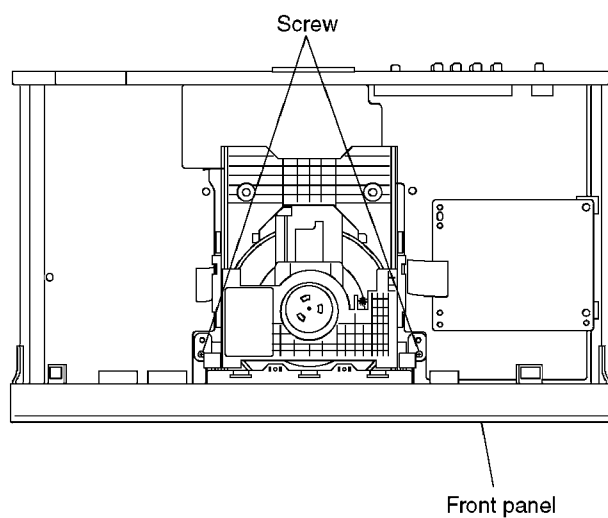


<Gear jig>

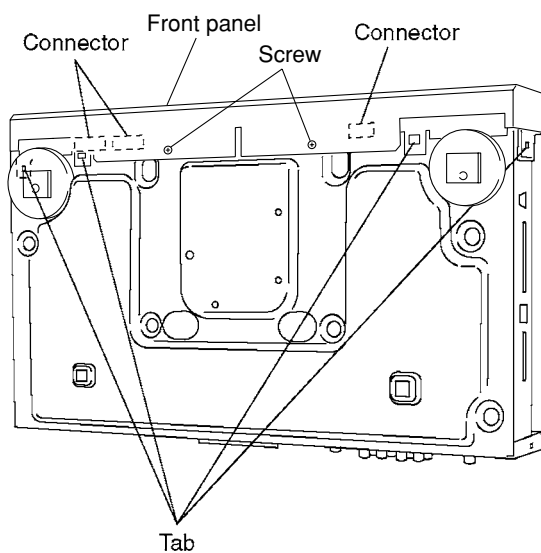


5. Front Panel

1. Remove the screws.

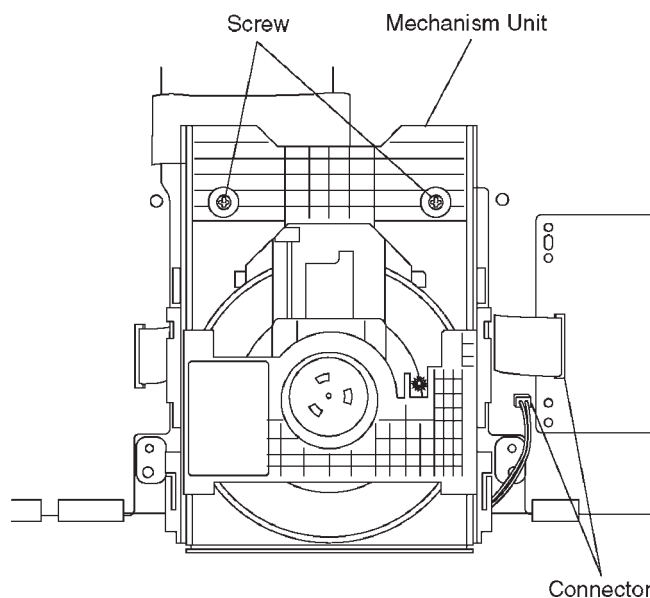


2. Release the tabs.
3. Remove the connectors.



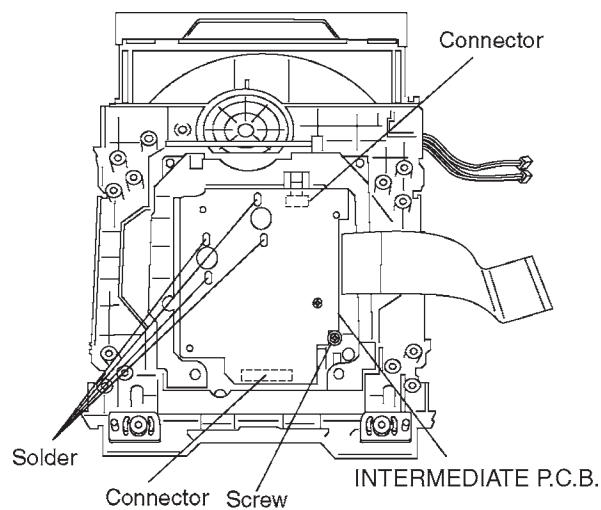
6. Mechanism Unit

1. Remove the screws.
2. Remove the connectors.
3. Pull out the mechanism unit vertically.



7. INTERMEDIATE P.C.B.

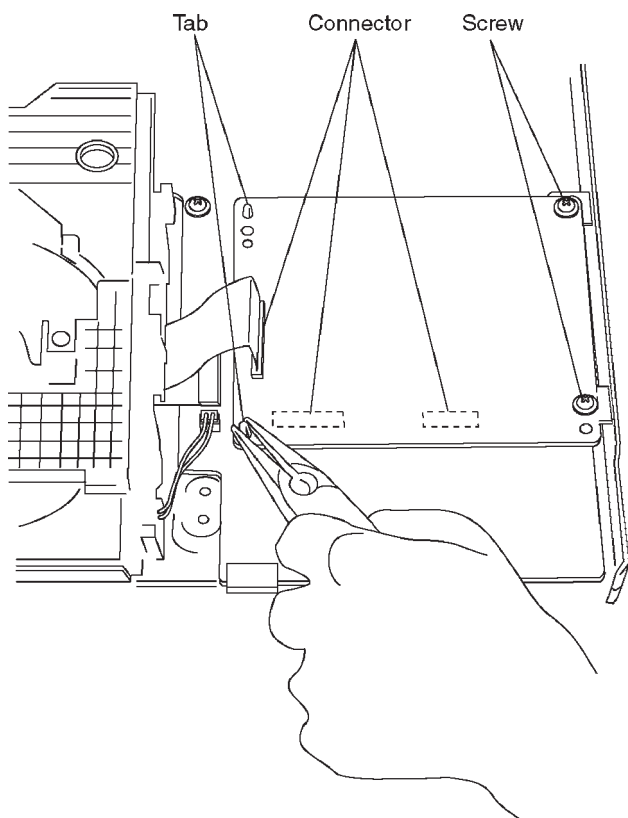
1. Remove the screws.
2. Remove the solders.
3. Remove the connectors.



<Mechanism unit bottom>

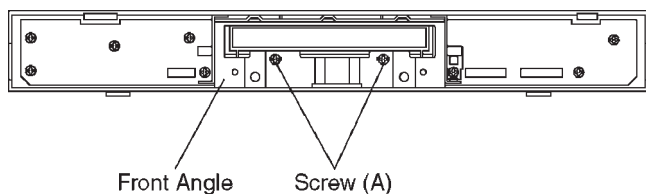
8. MODULE P.C.B.

1. Remove the screws.
2. Remove the connectors.
3. Squeeze each tab with pliers to pull out the MODULE P.C.B. vertically.

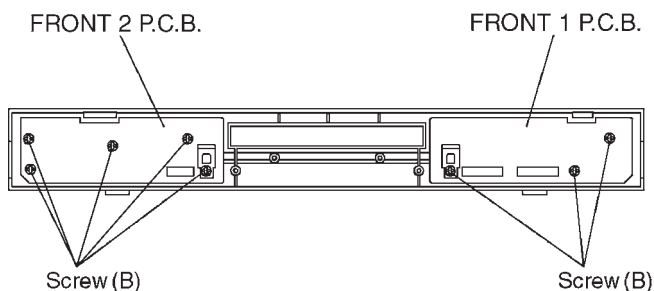


9. FRONT 1 P.C.B. and FRONT 2 P.C.B.

1. Remove the screws (A).
2. Remove the Front Angle.

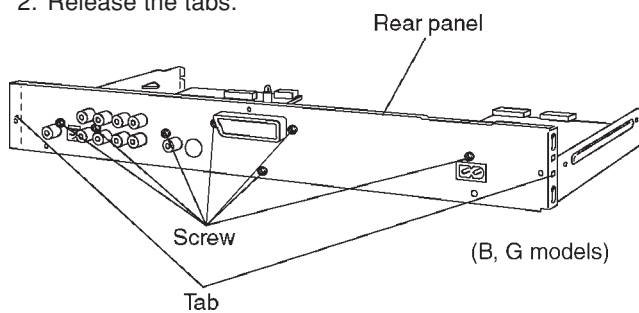


3. Remove the screws (B).



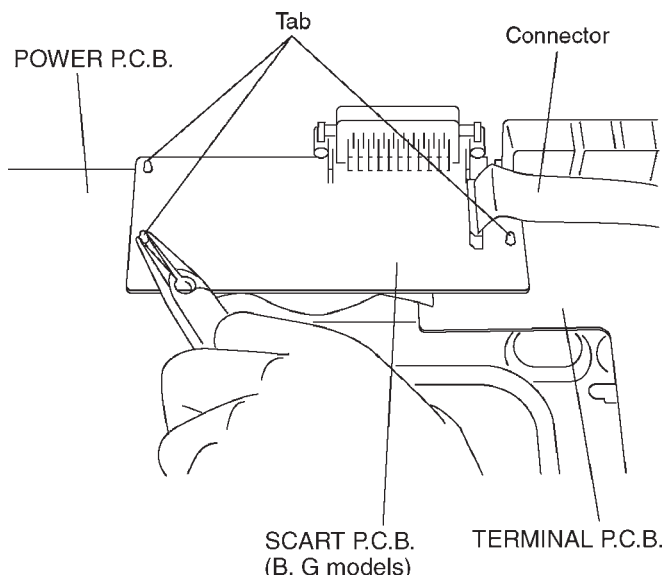
10. Rear Panel

1. Remove the screws.
2. Release the tabs.



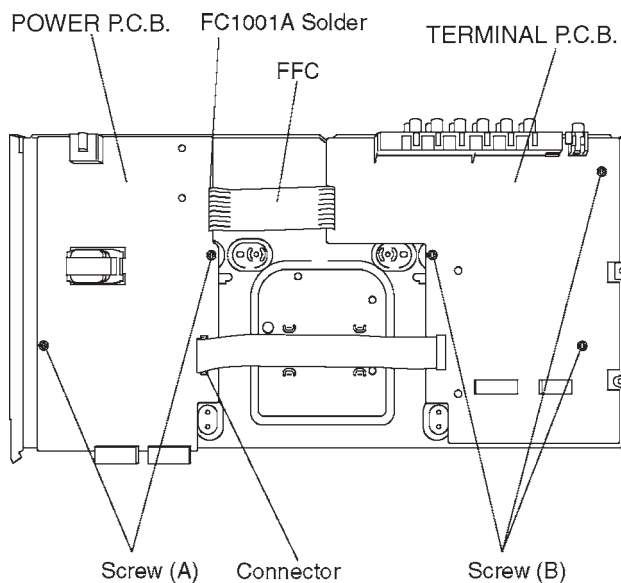
11. SCART P.C.B. (B, G models)

1. Remove the connectors.
2. Squeeze each tab with pliers to pull out the SCART P.C.B. vertically.



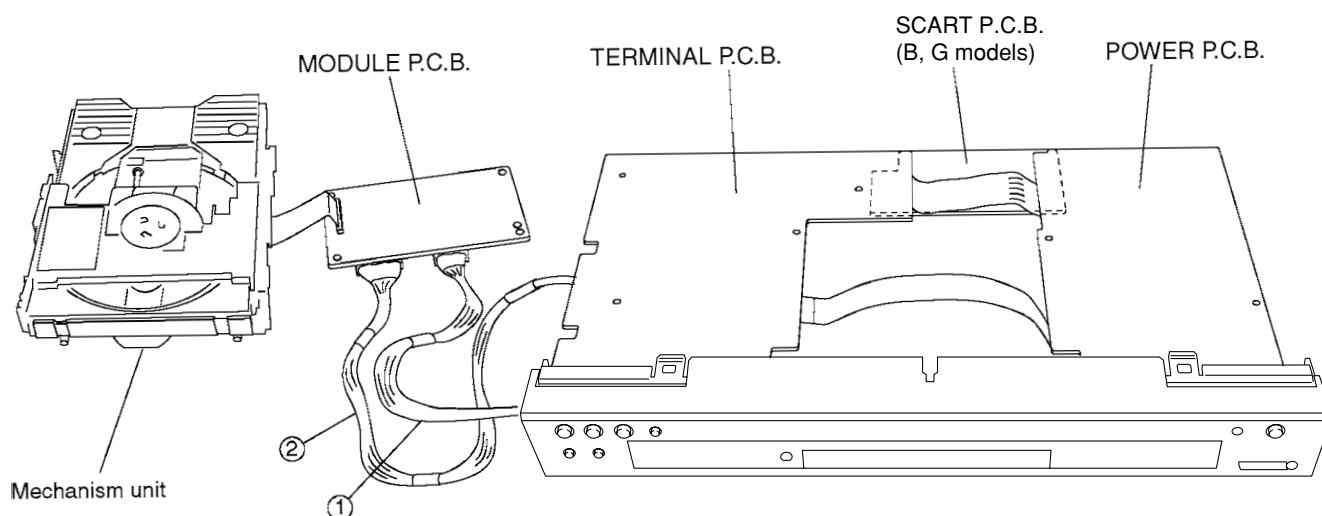
12. TERMINAL and POWER P.C.B.

1. Remove the connectors
2. Remove the screws.
3. Remove the FC1001A Solder.

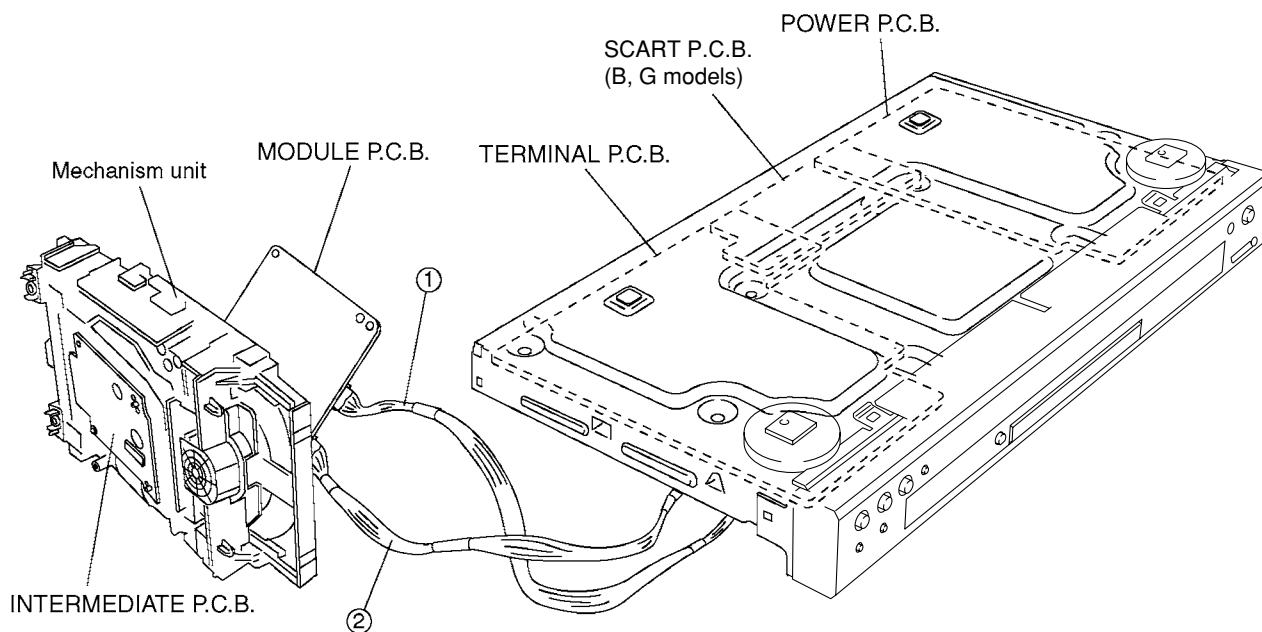


13. Servicing Position

13.1. Servicing position of the MODULE P.C.B.



13.2. Servicing position of the INTERMEDIATE P.C.B.



13.3. List of the Extension Cables

①	TX946370	26 pins	PS4201 (MODULE P.C.B.) – PP4301 (TERMINAL P.C.B.)	JGS0098
②	AAX16610	22 pins	PS3201 (MODULE P.C.B.) – PP3201 (TERMINAL P.C.B.)	JGS0116

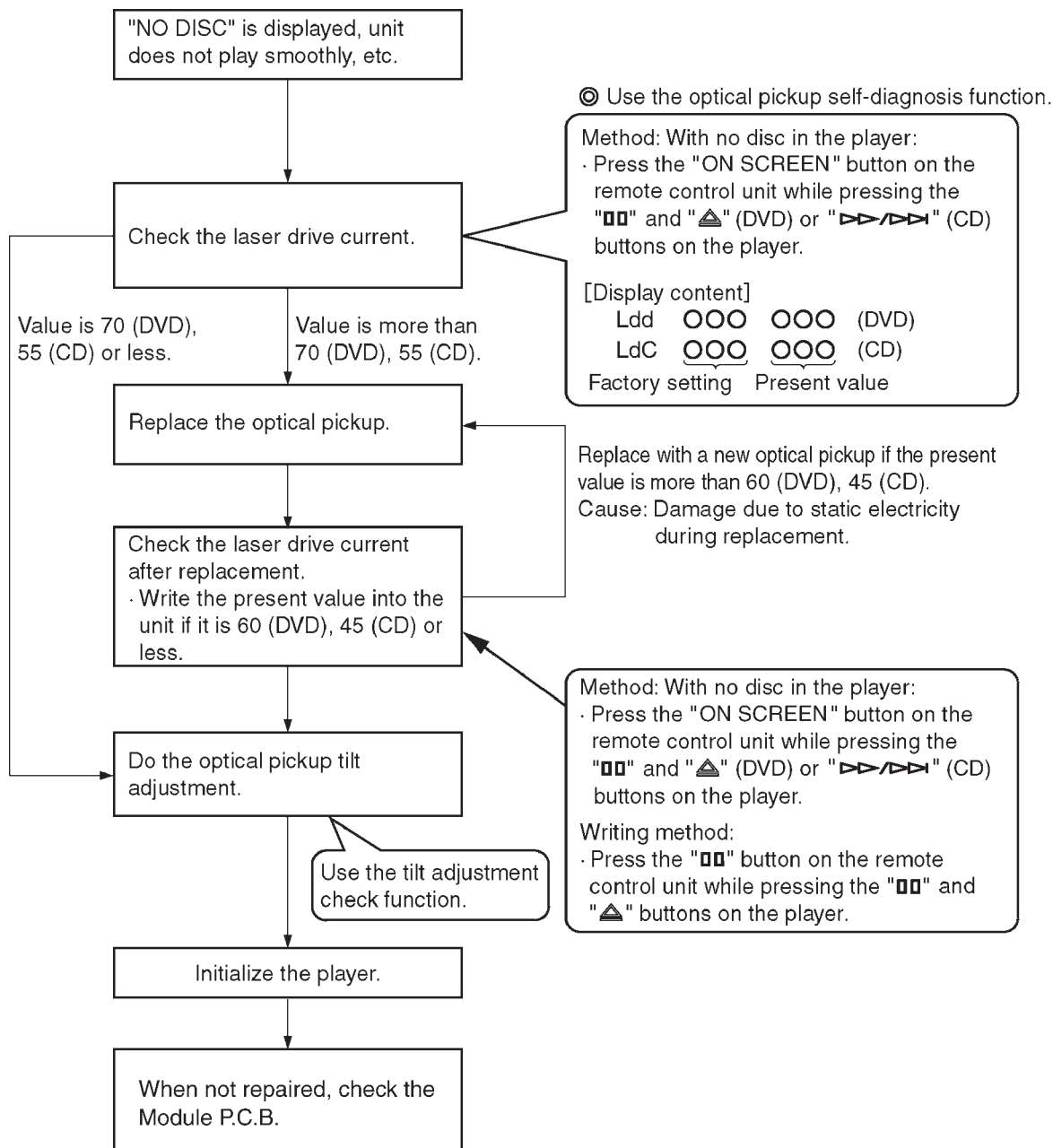
■ OPTICAL PICKUP SELF-DIAGNOSIS AND REPLACEMENT PROCEDURE

1. Self-diagnosis

An optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment. Be sure to use the self-diagnosis function before replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the CD laser drive current is more than 55 (70 for DVD).

Note:

Press the STANDBY/ON button to turn on the power. Check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)



2. Cautions to Be Used Before Replacing the Optical Pickup Unit and Spindle Motor Assembly

Before replacing the optical pickup unit and spindle motor assembly, check the total usage hours for each of them. The checking method is as follows:

Note: Each of these procedures should start with the unit stopped.

	Operating state & Key operation	Display
Usage hours of laser	Press " 5 " button on the remote control while pressing the "□□" and "▶▶▶▶" buttons on the player. In this order while the unit is stopped.	t1_xxxx_yyyy xxxx: DVD laser Usage hours yyyy: CD laser Usage hours Total hours are displayed by 4-digit figures (unit: 10 hours).
Usage hours of SP motor	Press " 6 " button on the remote control while pressing the "□□" and "▶▶▶▶" buttons on the player. In this order while the unit is stopped.	t2_xxxxx Total hours are displayed by 4-digit figures (unit: 10 hours).
Resetting usage hours of laser	While displaying the usage hours of the laser, press "□" and "▶▶▶▶" buttons on the player, and " 5 " button on the remote control unit.	t1_0000_0000
Resetting usage hours of SP motor	While displaying the usage hours of the SP motor, press "□" and "▶▶▶▶" buttons on the player, and " 6 " button on the remote control unit.	t2_00000

Cautions to be taken when replacing the optical pickup

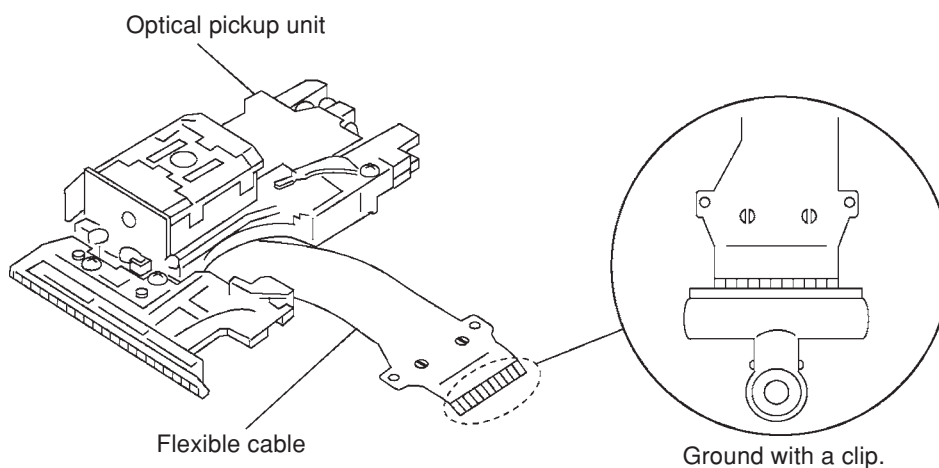
The optical pickup may become damaged due to static electricity from the human body. Take proper protection measures against static electricity before repairing the parts around the optical pickup. (See the page describing the PREVENTION OF ELECTRO STATIC DISCHARGE.)

1. Do not touch the areas around the laser diode and actuator.
2. Do not judge the laser diode with a tester. (The tester will damage the diode.)
3. It is recommended to use an anti-static soldering iron for soldering or desoldering on the pickup.
(Recommended soldering iron) HAKKO ESD Product

4. Solder the land of the flexible cable in the optical pickup.

Note:

- When using a soldering iron which is not anti-static, short-circuit the terminal face of the flexible cable with a clip. After that, short-circuit the land.
- After the repairing work is completed, remove the solder according to the correct procedure shown in this service manual.



■ SELF-DIAGNOSIS FUNCTION AND SERVICE MODES

1. Service Mode Table

Pressing various button combinations on the player and remote control unit can activate the service modes.

Note: For jitter check, load the DVD test disc or the CD test disc. (See page 29)

Item	Player mode and button combination	Function	Display	Cancellation method
Jitter check	In PLAY mode, press "00" and "▲" buttons on the player, and "5" button on the remote control unit.	Jitter check Jitter rate is measured and displayed.	Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	Press STOP or OPEN button.
Error code check	In STOP mode, press "00" and "▲" buttons on the player, and "0" button on the remote control unit. * With pointing of cursor up and down on display, the panel controller switches serial number of history and sends out the command accordingly.	Error code check The latest error code stored in EEPROM is displayed.	Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: → nn UXX Error code = 0 x DBXX is expressed: → nn HXX Error code = 0 x DXXX is expressed: → nn FXXX Error code = 0 x 0000 is expressed: → nn F--- * "nn" denotes the serial number of history.	Cancelled automatically 5 seconds later.
Initial setting of laser drive current	In STOP mode, press "00" and "▲" buttons on the player, and "00" button on the remote control unit.	Initial setting of laser drive current. The Initial current value for each DVD laser and CD laser is separately saved in EEPROM.	The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is switched on.	Cancelled automatically 5 seconds later.
DVD laser drive current measurement	In STOP mode, press "00" and "▲" buttons on the player, and "ON SCREEN" button on the remote control unit.	DVD laser drive current measurement. DVD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, DVD laser emission is kept on. It is turned off when the POWER key is switched off. (It is also turned off when the primary power is switched off.)	The value denotes the current in decimal notation. The above example shows the initial current is 34mA and the measured value is 32mA.	Cancelled automatically 5 seconds later.
ADSC internal RAM data check	In STOP mode, press "00" and "▲" buttons on the player, and "RETURN" button on the remote control unit.	ADSC internal RAM data check. ADSC internal RAM data is read out and displayed. Change the address with CANCEL key operation to show the data for 11 addresses.	The value is shown in hexadecimal notation. The above example shows the data in ADSC address DFAh is 6901h.	Press STOP or OPEN button.
Servo process display	In STOP mode, press "00" and "▶▶▶▶" buttons on the player, and "7" button on the remote control unit.	Servo process display The servo process from STOP to ACCESS is displayed.	_____	Pull out the power cable.
CD laser drive current measurement	In STOP mode, press "00" and "▶▶▶▶" buttons on the player, and "ON SCEEN" button on the remote control unit.	CD laser drive current measurement CD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, CD laser emission is kept on. It is turned off when the POWER key is switched off. (It is also turned off when the primary power is switched off.)	The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	_____

Item	Player mode and button combination	Function	Display	Cancellation method
Version display	In STOP mode, press "00" and "▲" buttons on the player, and "7" button on the remote control unit.	Version display	srrr_xyzzzz System controller release number System controller model number System controller generation Panel controller release number Panel controller model number	Cancelled automatically 5 seconds later.
Lighting of display tube	In STOP mode, press "00" and "▲" buttons on the player, and "9" button on the remote control unit.	Lighting of display tube	_____	Turn off the power.
Dealer's lock	In STOP mode, keep pressing "□" button on the player and "POWER" button on the remote control unit for a few seconds.	Dealer's lock The lock is switched ON or OFF. When dealer's lock is ON, it prohibits switching off of the secondary power and tray opening. When the lock is switched, its ON/OFF status is stored in EEPROM.	· "LOCK" is displayed when dealer's lock is switched on, or when secondary power key or tray opening key is pressed while the lock is on. · "UNLOCK" is displayed when dealer's lock is switched off.	Repeat the same operation.
Initialization	In STOP mode, press "00", "◀◀◀" and "▲" buttons on the player for 3 seconds or longer.	Initialization User settings are cancelled and player is initialized to factory setting.	"INIT"	
Region display	In STOP mode, press "00", "▲" and buttons on the player, and "6" button on the remote control unit.	Region display	x_yy_zzz N: NTSC / 6: PAL60 N: noPAL / P: PAL Region No.	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Timer 1 check	In STOP mode, press "00" and "▶▶▶▶" buttons on the player, and "5" button on the remote control unit.	Timer 1 check Laser operation timer: Operation time is measured separately for DVD laser and CD laser.	t1_1234_5678 Shown to the left is DVD laser time, and to the right CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 1 reset	While displaying Timer 1 data, press "□" and "▶▶▶▶" buttons on the player, and "5" button on the remote control unit.	Timer 1 reset Laser operation timer: Operation time of both DVD laser and CD laser is reset all at once.	t1_0000_0000	Cancelled automatically 5 seconds later.
Timer 2 check	In STOP mode, press "00" and "▶▶▶▶" buttons on the player, and "6" button on the remote control unit.	Timer 2 check Spindle motor operation timer	t2_12345 Time is shown in 5 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 2 reset	While displaying Timer 2 data, press "□" and "▶▶▶▶" buttons on the player, and "6" button on the remote control unit.	Timer 2 reset Spindle motor operation timer reset	t2_00000	Cancelled automatically 5 seconds later.

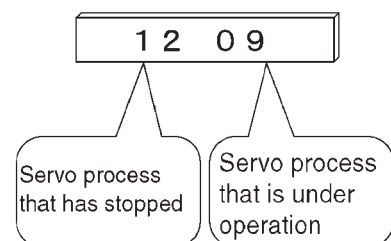
Use of operation time display function

When repairing a trouble, check these figures and use them for reference.

When performing replacement, be sure to check the total operation time and reset the time after replacement.

2. Servo Process Flow

Specification of the servo process display in the starting flow



(Restrictions)

All processes that are under operation cannot be displayed due to the limit of the processing time.

Starting flow	Range of the servo process numbers	Processing items	
		Number	Contents of each process
START			
Initial setting Tray control	00	00	Each initial setting
TRV initial movement	01	01	TRV initial movement
Disc detection	02~08	02	Initial setting in FE system
		05	Detecting LD ON HALF
		08	Detecting CD LD ON
Disc type distinction	02~08	02	Initial setting in FE system
Focus servo	10~13	12	Focus ON
		13	FBAL adjustment
Tracking servo	14~15	15	Tracking ON
Gain learning	17	17	Gain adjustment in ADSC focus system
ID read	18~1A	19	DBAL/equalizer adjustment
		1A	ID read

LD: Laser Diode

3. Servo Process Display Mode

In starting operation of the player, a number is allotted to each servo process so that the operation of each step can be seen. Use that number in combination with the error code, RAM learned value in ADSC and others for reference when diagnosing troubles. The relation between the process and the displayed number are as follows:

Number allotment to the servo process

Process classification	Each processing item	Description	Process number
Initial start process	Initial start	The process starts after the tray is loaded. (The state is changed to "READY" or PREPARE".)	0~40
	Secondary learning	Servos for the DVD-DL 1st layer and the CD-DA double speed are learned in this step.	50~7F
Restart process	Restart	When a user operates in the "READY" state, each servo is turned on.	80~9F
Seek process	Seek	The optical pickup is moved to the disc destination in this process.	A0~BF
Repair process	Recover		
	(Error check)	An error is searched in the PLAY/SEEK state.	C1~C3
	(Attention)	An error is recovered following the attention error interrupt from the S-ODC.	C4~C6
	(Q code read)	If any Q code is improperly read, reset and retry.	C7~C9
Stop process	Stop	A servo is controlled in response to the user's operation to stop the disc completely.	F0~FF

4. Sales Demonstration Lock Function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCK" is displayed on the unit, and ordinary operation is disabled.

4.1. Setting

The sales demonstration lock is set by simultaneously pressing the "□" button on the player and the "POWER" button on the remote control unit for a few second.

4.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. "UNLOCK" is displayed on cancellation. (Disconnecting the power cable from the power outlet does not cancel the lock function.)

5. Service Precautions

5.1. Recovery after the DVD player is repaired

When a FROM or an EEPROM in and on the module P.C.B. has been replaced, carry out the recovery disc procedure to optimize the drive.

Playback the disc above to perform the recovery automatically,

Recovery disc: RFKZD5TR006 (AAX42050)

1. Load the recovery disc in the player and play it.
2. The recovery function is automatically executed and a message indicating its end appears on the screen.
3. Take out the disc.
4. Turn off the power.

Note:

This unit requires no initialization procedure carried out as when traditional DVD players were repaired.

When the recovery measures are taken, the customer setting will return to the factory setting and the player will be reset.

5.2. Firmware version-up of the DVD player

The firmware of the DVD player may be updated to improve the quality, including optimizing operation ability and playability with substandard discs.

The version-update disc also has a recovery function so that you don't need to use the recovery disc again.

Detailed information on supply of the version-update disc will be provided in Service News.

Note:

If the AC power supply is lost during version-updating due to a power failure, the version-update is improperly carried out.

In such a case, replace the FROM and carry out the version-update again.

6. Handling After Completing Repairs

Use the following procedure after completing repairs.

6.1. Method

Confirm that the power is turned on:

1. Press the "OPEN/CLOSE" button to close the tray.
2. Press the "POWER" button to turn off the power.
3. Disconnect the power plug from the outlet.

6.2. Precautions

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually.

7. Error Code

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	Defect 4
	U, H error					
U11	Focus error					
H01	Tray loading error					
H02	Spindle servo error	(Spindle servo, DSC (IC2001) SP motor, CLV servo error)				
H03	Traverse servo error					
H04	Tracking servo error					
H05	Seek error					
H06	Power error	Cannot switch off the power because of the panel and system computer communication error				
H07	Spindle motor drive error					
	DSC related					
F500	DSC error	DSC (IC2001) stops in the occurrence of servo error (starup, focus error, etc)	Optical pickup	ADSC (IC2001)	FEP (IC5201)	servo drive
F501	DSC not Ready	DSC-system computer communication error (Communication failure caused by idling of DSC)	ADSC (IC2001)	CPU (IC6201)		
F502	DSC Time out error	Similar disposal as F500	Optical pickup	ADSC (IC2001)	FEP (IC5201)	servo drive
F503	DSC communication Failure	Communication error (result error occurred although communication command was sent)	ADSC (IC2001)	FEP (IC5201)	EEPROM (IC6221)	
F505	DSC Attention error	Similar disposal as F500	Optical pickup	ADSC (IC2001)	FEP (IC5201)	servo drive
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc	DISC	FEP (IC5201)	ADSC (IC2001)	ODC (IC2001)
	ODC related					
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect	ODC (IC2001)	FEP (IC5201)	ADSC (IC2001)	
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data	ODC (IC2001)	FEP (IC5201)	ADSC (IC2001)	
F602	Access failure to LEAD-IN caused by demodulation error	LEAD IN data unreadable				
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc				
F610	ODC abnormality	No permission for command execution	ODC (IC2001)			
F611	6626 QCODE don't read Error	Access failure to seek address in CD series	ODC (IC2001)			
F612	No CRC OK for a specific time	Access failure to ID data in DVD series	ODC (IC2001)			
F630	No reply to KEY DET enquiry	(for internal use only)				
F631	CPPM KEY DET is not available till the FILE terminal	(CPPM file system is unreadable caused by scratches)	DISC	CPPM (*1)		
F632	CPPM KEY DET is not available	Been revoked or falsified	DISC	EEPROM (IC6221)	CPPM (*1)	
	Disc code					
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display	DISC			
	HIC Error					
F4FF	Force initialize failure (time out)		EEPROM (IC6221)	CPU (IC6201)	FEP (IC5201)	ADSC (IC2001)
	Micro computer error					
F700	MBX overflow	When replying message to disc manager				
F701	Message command does not end	Next message is sent before replying to disc manager				
F702	Message command changes	Message is changed before it is sent as a reply to disc manager				

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	Defect 4
F880	Task number is not appropriate	Message coming from a non-existing task				
F890	Sending message when message is being sent to AV task	Sending message to AV task				
F891	Message couldn't be sent to AV task	Begin sending message to AV task				
F893	FROM falsification		FROM (IC6301)	CPU (IC6201)		
F894	EEPROM abnormality		EEPROM (IC6221)	Serial communication on lone		
F895	Language area abnormality	Firm version agreement check for factory preset setting failure prevention	FROM (IC6301)	Jumper(*2)		
F896	No existence model	Firm version agreement check for factory preset setting failure prevention	Jumper(*2)			
F897	Initialize is not completed	Initialize completion check for factory preset setting failure prevention				
F8A0	Message command is not appropriate	Begin sending message to AV task				

Note:

An error code will be canceled if a power supply is turned OFF.

*1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.

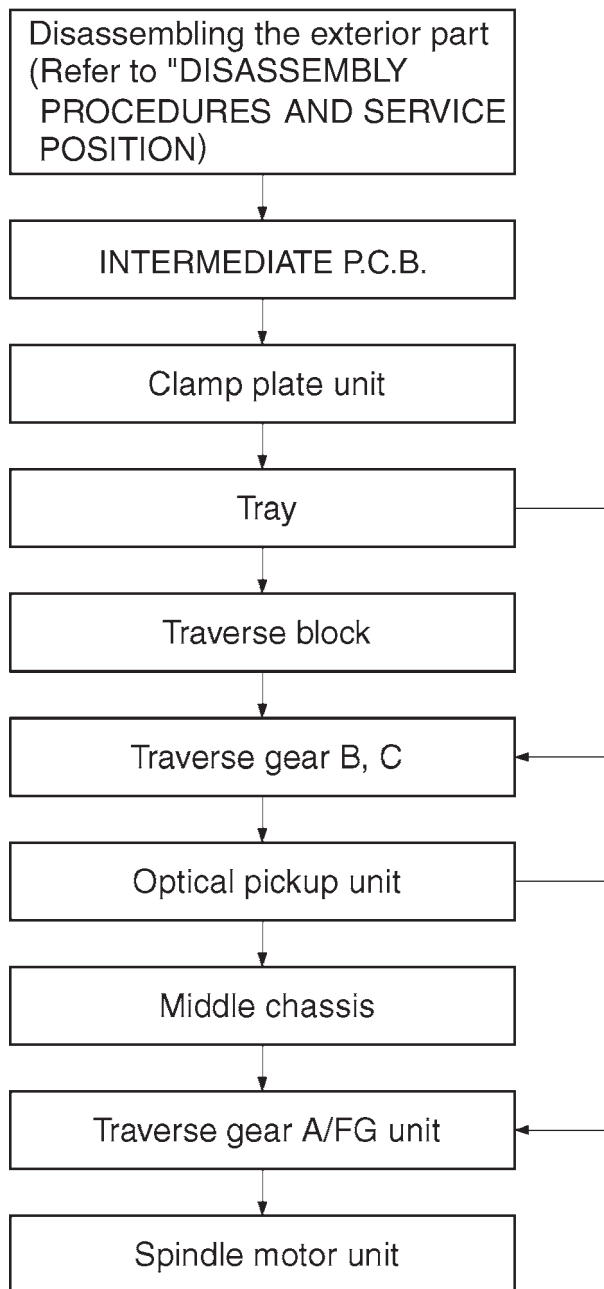
*2: Jumper ... R6022, R6024 and R6026.

8. Last Error Code Saved During NO PLAY

Error code	Error content	System computer	Setting task	System computer internal error code
F0BF	6) Cannot playback because physical layer is not recognizable	PCND_NOPLAY_PHYSICAL 0x50	Drive Manager	0xD0BF
F0C0	8) DVD: Cannot playback because it is not DVD Video/Audio/VR	PCND_NOPLAY_VIDEO 0x70	Disc Manager	0xD0C0
F0C1	9) DVD: Prohibited by the restricted region code	PCND_NOPLAY_RCD 0x80	Disc Manager	0xD0C1
F0C2	A) DVD: PAL restricted playback	PCND_NOPLAY_PAL 0x90	Disc Manager	0xD0C2
F0C3	B) DVD: Parental lock setting prohibits the playback of the entire title	PCND_NOPLAY_PTL 0xA0	Disc Manager	0xD0C3
F0C4	C) VCD: Prohibited because it is in PHOTO CD format	PCND_NOPLAY_PHOTOCD 0xB0	Disc Manager	0xD0C4
F0C5	D) VCD/CD: Prohibited because it is CD-ROM without CD-DA	PCND_NOPLAY_CDROM 0xC0	Disc Manager	0xD0C5

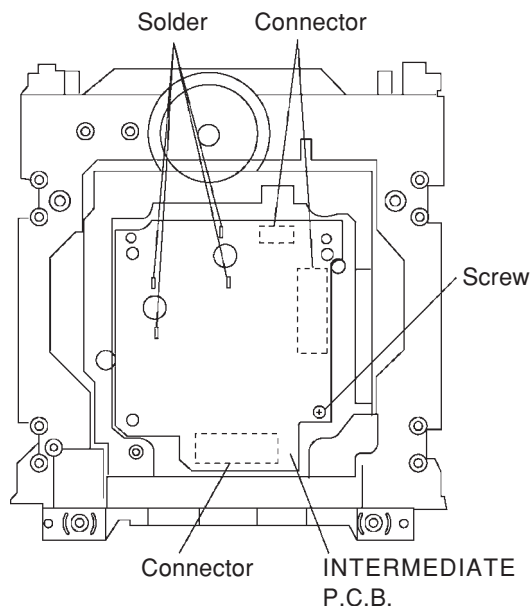
■ ASSEMBLING AND DISASSEMBLING THE MECHANISM UNIT

1. Disassembly Procedure



2. INTERMEDIATE P.C.B.

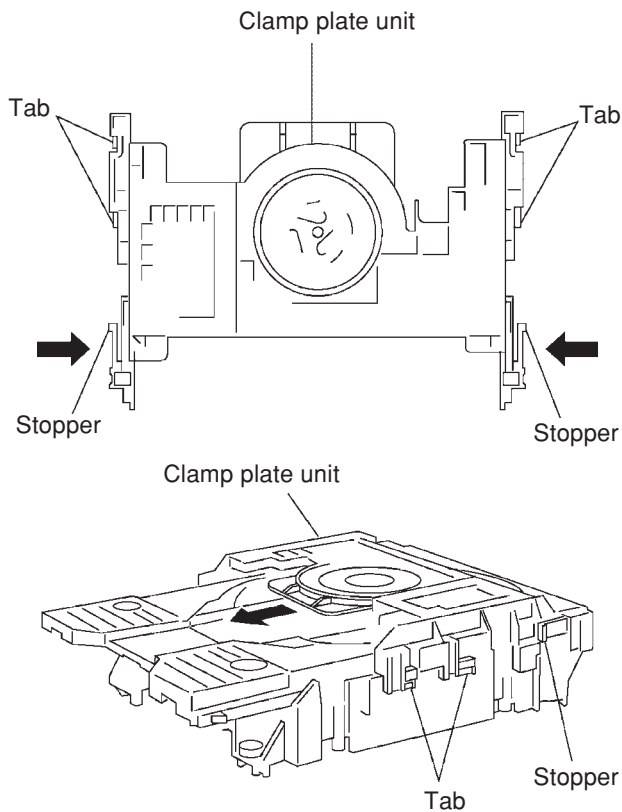
1. Remove the screws.
2. Remove the solder from the motor connections.
3. Remove the connectors.



<Mechanism unit bottom>

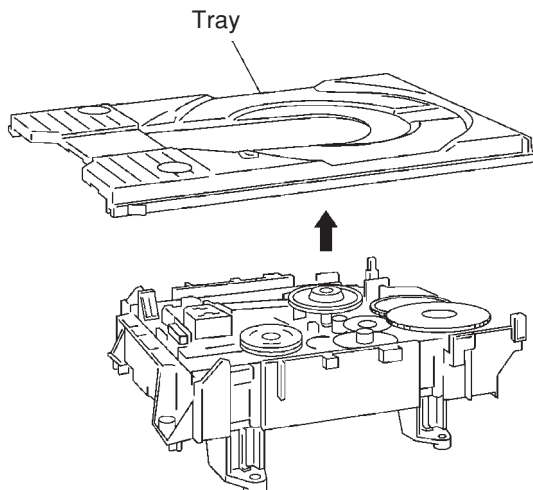
3. Clamp Plate Unit

Spread the stopper with hand to slide the tabs and remove the clamp plate unit.



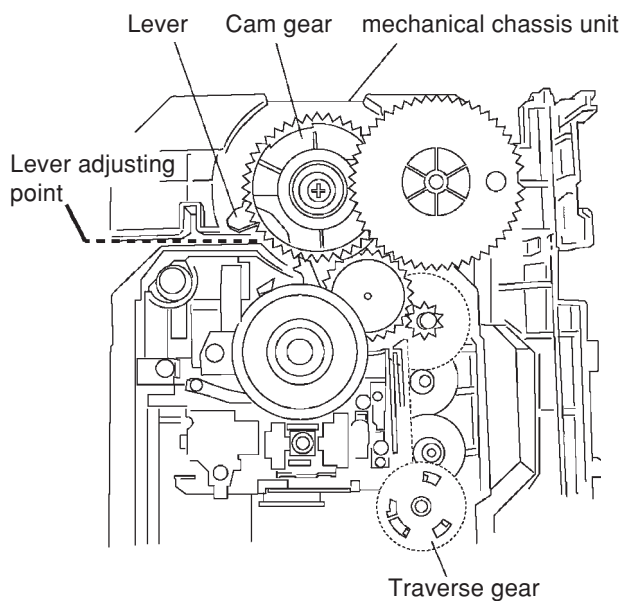
4. Tray

Lift the tray.

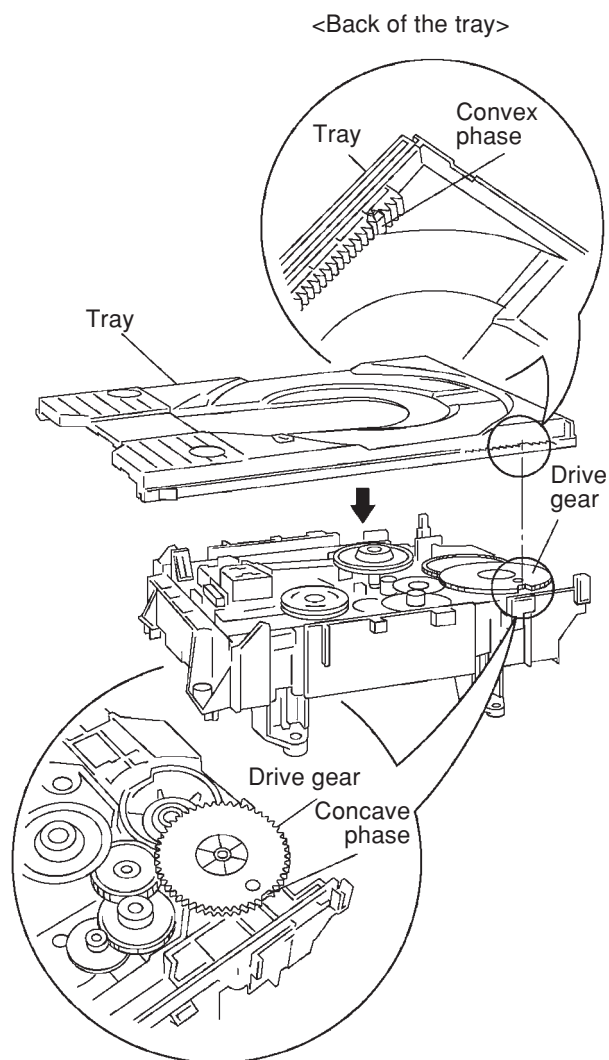


<Precautions in reassembling the tray>

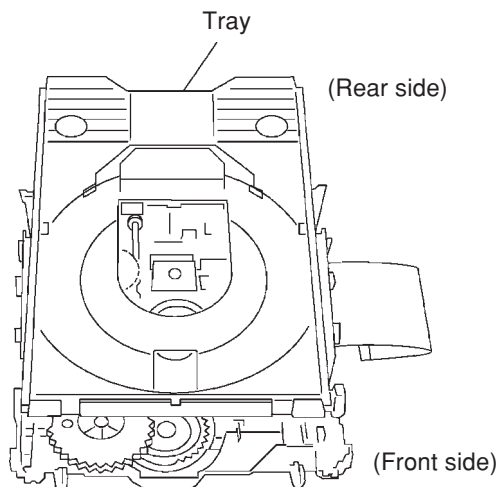
- Reassemble the tray so that it is in the backmost position.
1. Turn traverse gear until cam gear lever comes to the lever adjusting position at the end of the mechanical chassis unit.



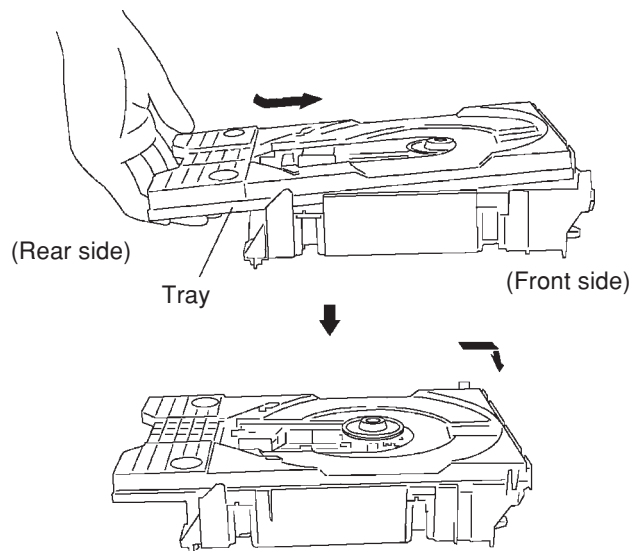
2. Check the position of convex phase on back of the tray, and that of concave phase on drive gear.



- a. Place the tray on the unit from rearward.

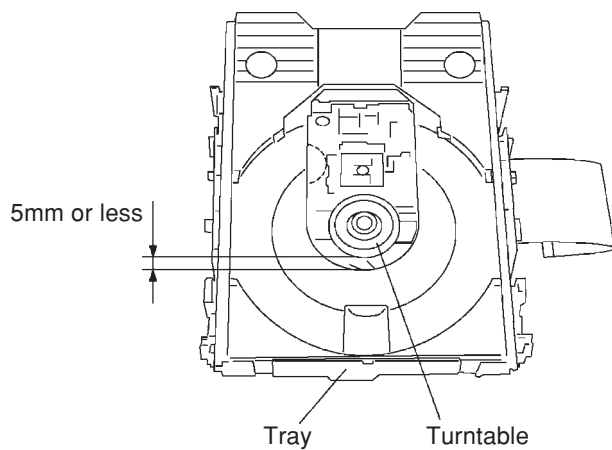


- b. Inch the tray frontward until convex phase and concave phase mate.



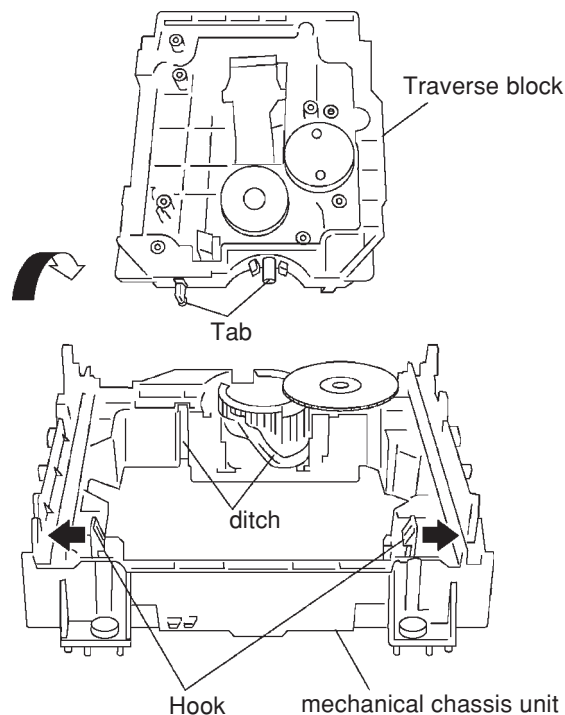
Caution:

Make sure to mate convex phase and concave phase properly, so that the gap between turntable and tray becomes 5mm or less.



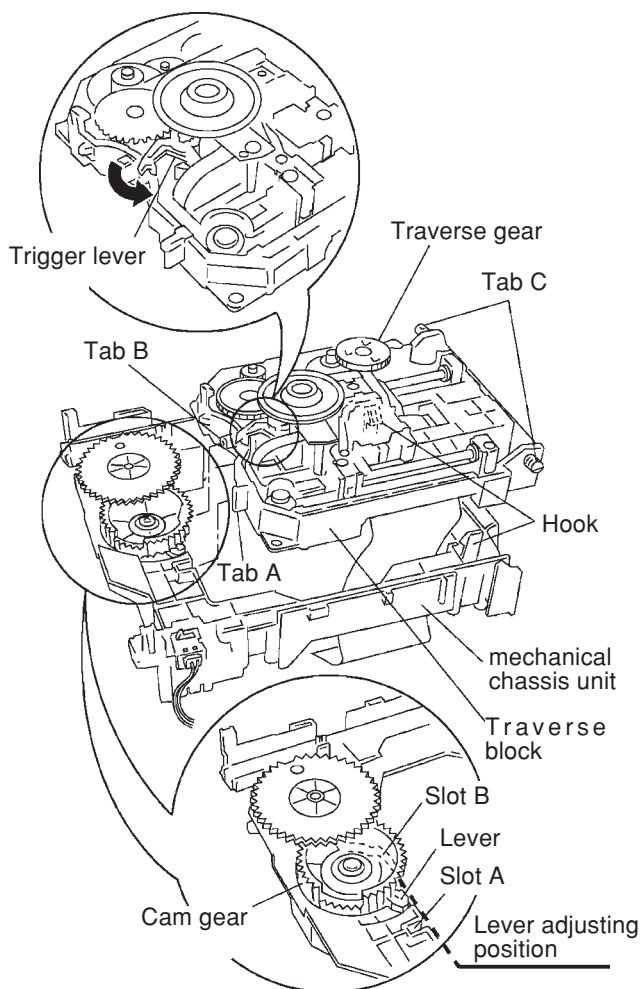
5. Traverse Block

1. Lift the traverse block while spreading the hook of the mechanical chassis unit.
2. Disengage the tabs from the holes of the mechanical chassis unit.



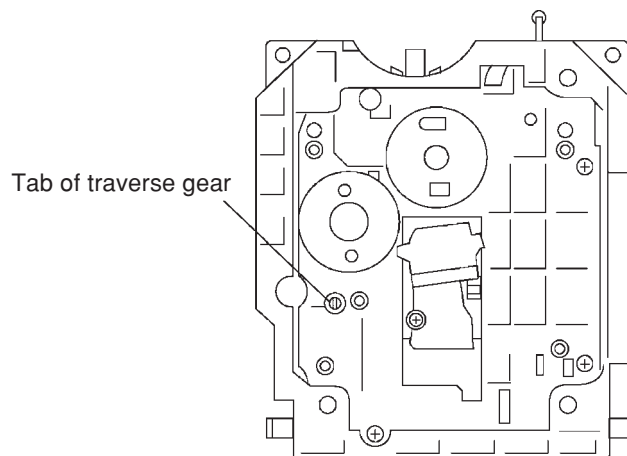
<Precautions on reassembling the traverse block>

- Take the following precautions when reassembling the traverse block.
- Turn traverse gear on the traverse block to let trigger lever turn rightward.
 - Bring cam gear lever to the lever adjusting position at the end of mechanical chassis unit.
 - Put tabs A and B into slots A and B respectively. Place tabs C into hooks to mount the traverse block on mechanical chassis unit. (Slot A... Mechanical Chassis, Slot B... Cam Gear)

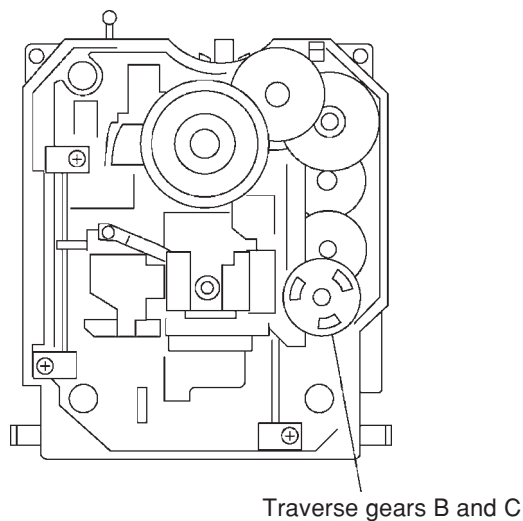


6. Traverse Gear B, C

- Disengage the tabs from the traverse gear.
- Remove the traverse gears B and C.



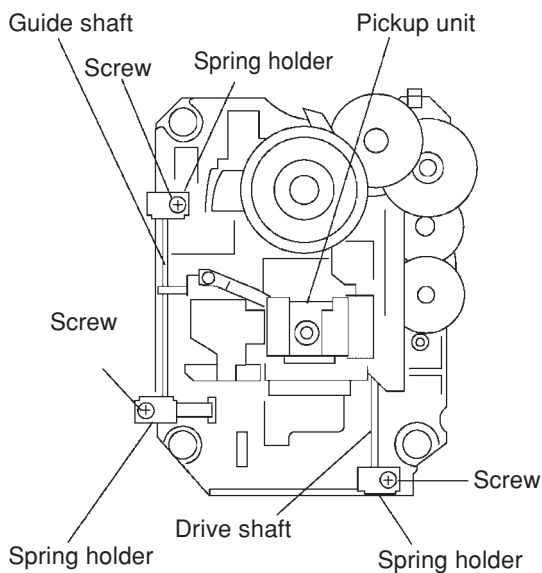
<Traverse block bottom>



Note: The traverse gear B is under the traverse gear C.

7. Optical Pickup Unit

1. Remove the screws.
2. Remove the spring holders and the springs.
3. Pull out the drive shaft and guide shaft.



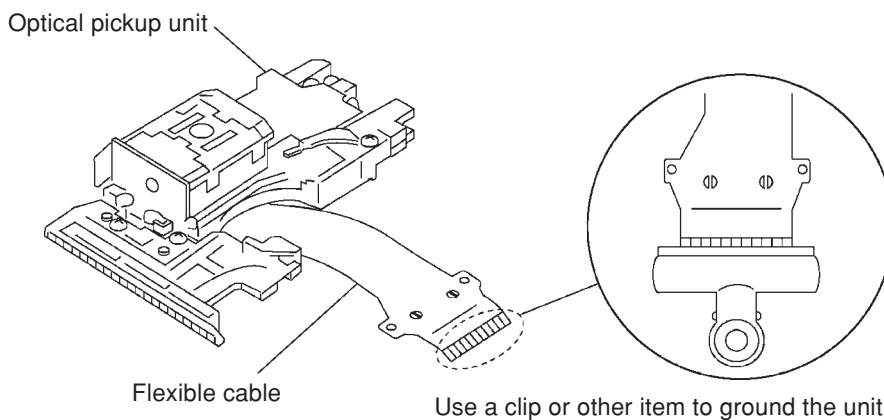
7.1 Precautions on optical pickup replacement

The optical pickup can be damaged by static electricity from your body. Be sure to take static electricity countermeasures when working around the optical pickup. (Refer to the related page in this Manual about the countermeasures.)

1. Do not touch the laser diode, actuator or their associated parts.
2. Do not use a tester to check the laser diode. (Laser diode can be damaged easily.)
3. Use an anti-static soldering iron when adding or removing the laser diode shorting jumper.
4. Solder the land on flexible cable of optical pickup unit.

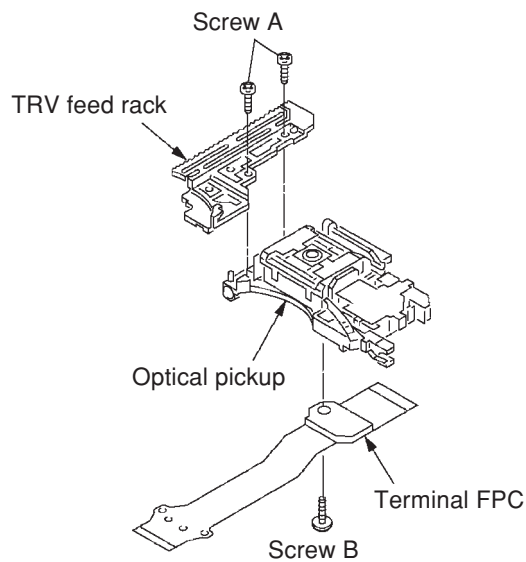
Caution

- When using the soldering iron without anti-static feature, short-circuit the flexible cable terminal with a clip before short-circuiting the land.
- After completing the repair, remove the solder from the laser diode shorting jumper properly following the procedures described in this Manual.



7.2 Disassembling the Optical Pickup Unit

1. Remove 2 screws (A) and remove the TRV feed rack.
2. Remove the screw (B) and remove the Terminal FPC.
3. Remove the optical pickup.

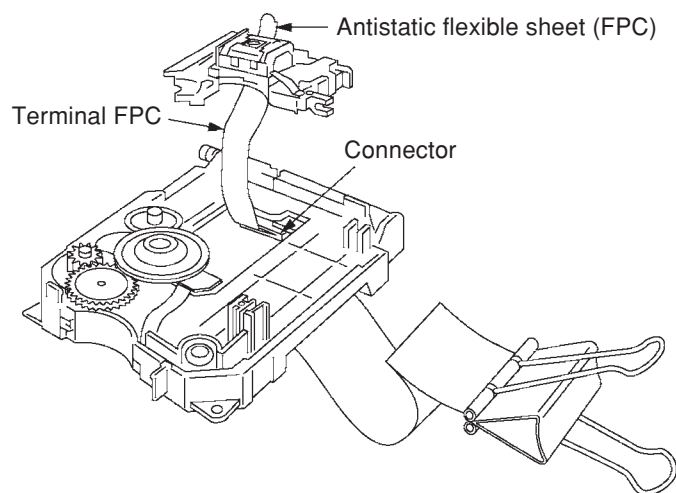


<Fig. A>

7.3 Cautions to Be Taken When Replacing the Optical Pickup

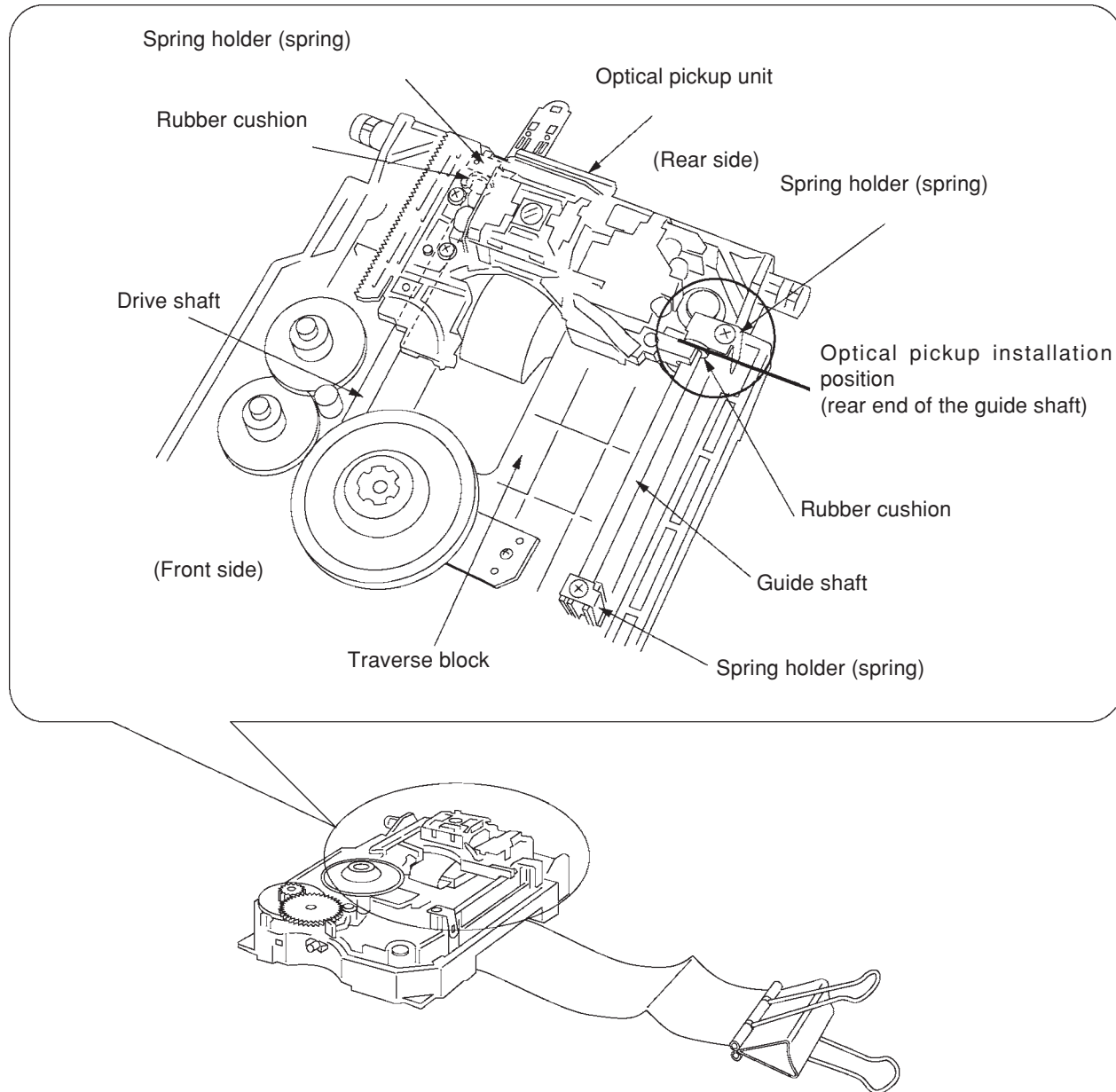
An antistatic flexible sheet (FPC) is connected with the new optical pickup. Replace the optical pickup according to the following procedure.

1. Install the Terminal FPC, TRV feed rack on the optical pickup. (See Fig. A)
2. Install the Terminal FPC in the connector on the Terminal P.C.B..



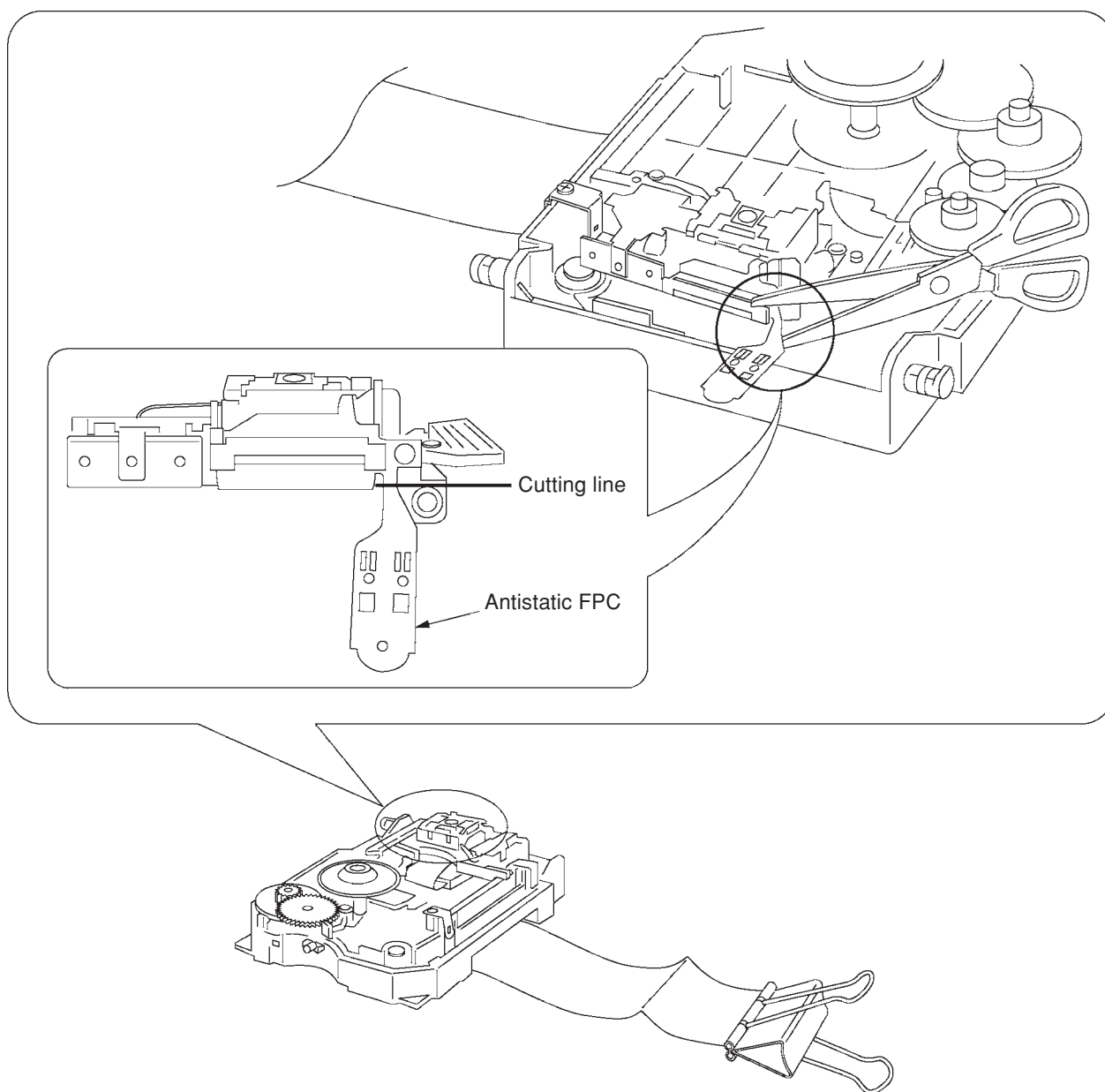
Ground the optical pickup with a clip.

3. Install the optical pickup unit, spring drive shaft, guide shaft, rubber cushion, and spring holder on the traverse block.



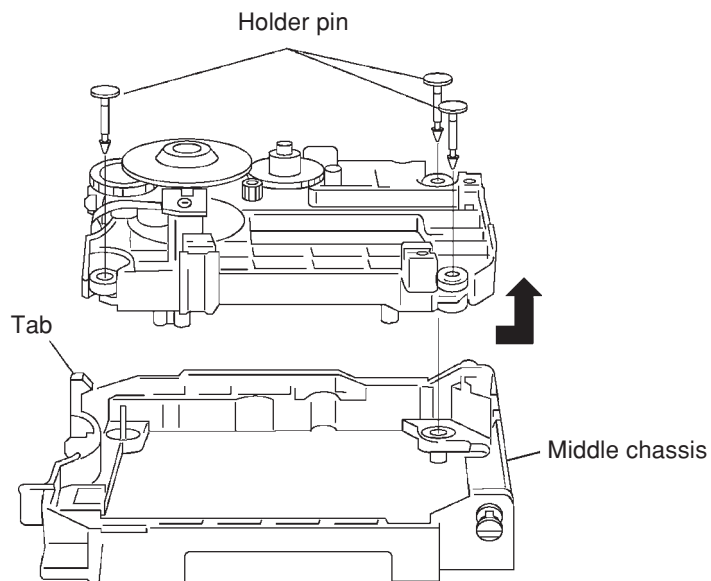
Cautions to be taken when assembling the unit: Install the pickup unit so that it is located at the rear end of the guide shaft.

4. Cut the antistatic flexible sheet for the optical pickup unit.



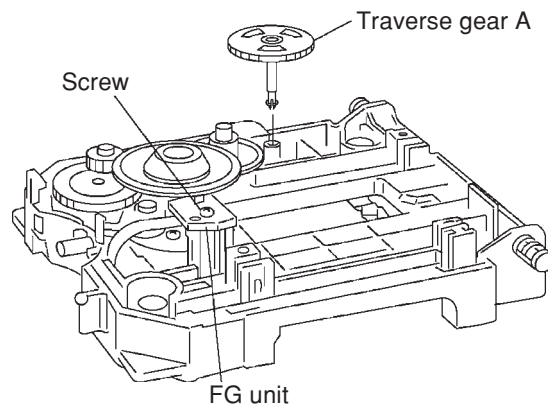
8. Disassembling the Middle Chassis

1. Remove the holder pins.
2. Remove the tab.
3. Lift up the upper part in the direction of the arrow.



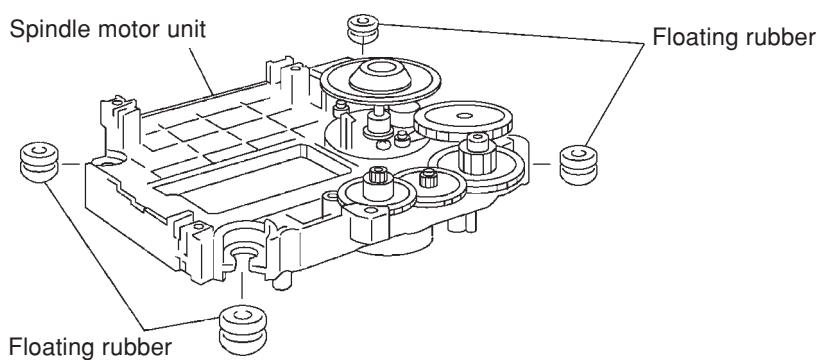
9. Disassembling the Traverse Gear A/FG unit

1. Remove the screw.
2. Remove the traverse gear A.



10. Disassembling the Spindle Motor Unit

Remove the floating rubbers.



■ ADJUSTMENT

1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 (AAX07320) or DVDT-S01
	Hex wrench	JZS0100 (TX946380)
Inspection	Extension cable 26P (MODULE P.C.B. to TERMINAL P.C.B.)	JGS0098 (TX946370)
	Extension cable 22P (MODULE P.C.B. to TERMINAL P.C.B.)	JGS0116 (AAX16610)
Others	Screw lock	RZZ0L01 (TX946400)
	Grease 1	RFKXGAK152 (AAX27800)
	Grease 2	PFKXPG641 (AAX46440)
	Oil	RFKXGA1280 (AAX27790)
Confirmation	CD test disc	PVCD-K06 (TX946090) or any other commercially available disc
	VCD test disc	PVCD-K06 (TX946090) or any other commercially available disc
	Recovery disc	RFKZD5TR006 (AAX42050)

2. Important Points in Adjustment

- Before starting optical pickup tilt adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is necessary after replacement of the following components.
 1. Optical pickup unit
 2. Spindle motor unit
 3. Optical pickup peripheral parts (such as the rail)

Notes

Adjustment is generally unnecessary after replacing the other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment is generally unnecessary after replacing the traverse unit.

3. Storing and Handling Test Discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.
 1. Do not place discs directly onto the workbench, etc., after use.
 2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
 3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
 4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

4. Optical Pickup Tilt Adjustment

Adjustment point	Tangential adjustment screw, Tilt adjustment screw
Mode	T01 (inner periphery) play, T43 (outer periphery) play
Disc	DVDT-S15 (AAX07320) or DVDT-S01
Measuring equipment	None (Use main unit servicing display.)
Adjustment value	Adjust to the minimum jitter value.

4.1. Adjustment Procedure

1. While pressing the " " button and the " " button on the main unit, press the "5" button on the remote control unit.
2. Confirm that "J_xxx_yyy_zz" is shown on the front display.

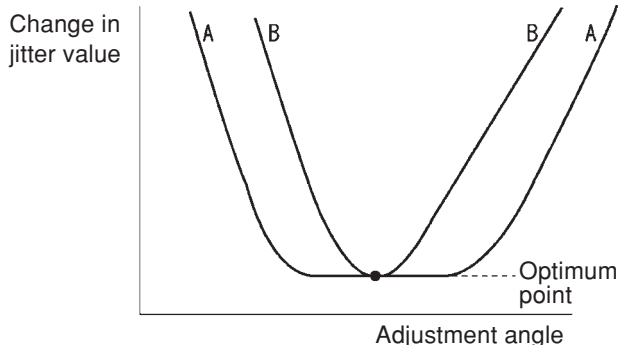
For your Information:

"xxx" is the jitter rate. "yyy" is the error counter, while "zz" is the focus drive value.

3. Play test disc T01 (inner periphery).
4. Adjust tangential adjustment screw so that the jitter value is minimized.
5. Play test disc T43 (outer periphery).
6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
7. Play test disc T43 (outer periphery).
8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
9. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

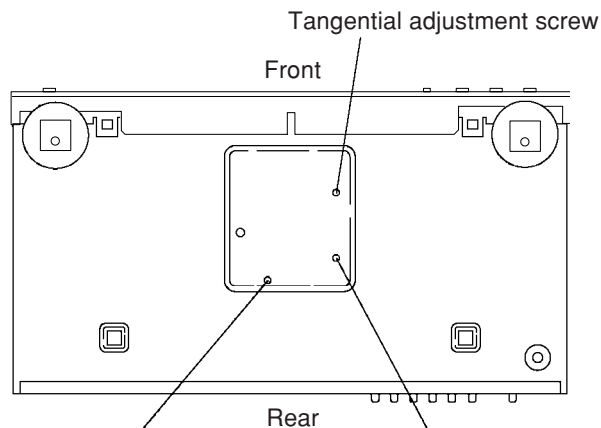
4.2. Important Points

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



• Jitter value depends on the model:

1. If the jitter value changes like B, the optimum point is easy to find.
2. If the jitter value changes like A, set the optimum point near the middle.

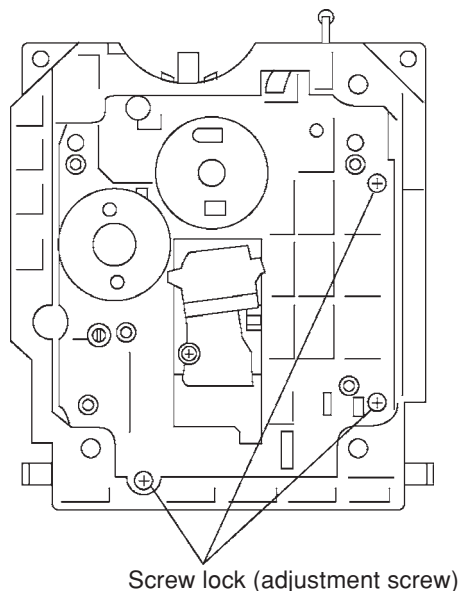


4.3. Check after Adjustment

Play a test disc or any other disc to make sure that there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

4.4. Procedure for Screw Lock

1. After adjustment, remove the top cover, tray, clamper base and traverse unit in this sequence.
2. Lay the traverse unit upside down, and lock the adjustment screw with screw lock.
3. After locking, reassemble the traverse unit, clamper base, tray and top cover.



1

■ BLOCK DIAGRAM
OVERALL BLOCK DIAGRAM

B, G models

2

3

4

5

6

7

MECHANISM UNIT

INTERMEDIATE P.C.B.

MODULE P.C.B.

TERMINAL P.C.B.

OPTICAL PICK UP UNIT

ACTUATOR

IC2501

MOTOR DRIVE

SPINDLE MOTOR

TRAVERSE MOTOR

IC5201

FRONT END PROCESSOR (FEP)

IC2001

OPTICAL DISC CONTROLLER (DSC/ODC)

IC3001

AV DECODER (AV DEC)

IC4211

AUDIO D/A CONVERTER

POWER P.C.B.

IC6001

OPERATION CPU

FL

LED

REMOTE CTL

KEY

TRAY

(DATA BUS)

IC6801

WM

IC6301

16Mbit FLASH ROM

IC6201

MAIN CPU

IC6221

EEP-ROM

(ADDRESS BUS)

IC3061

64Mbit SDRAM

IC6561

CLK

IC3201

VIDEO DAC

IC3501

VIDEO BUFFER

IC3801

V/Y SELECT SW.

IC3841

V.SELECT SW.

IC3842

BUFFER

AV 21 PIN

L OUT
R OUT
MIX L
MIX R

FL
FR
SL
SR
CNT
SW

DIGITAL AUDIO OUT (OPTICAL)
DIGITAL AUDIO OUT (COX)

VIDEO OUT (LINE)
S-VIDEO OUT

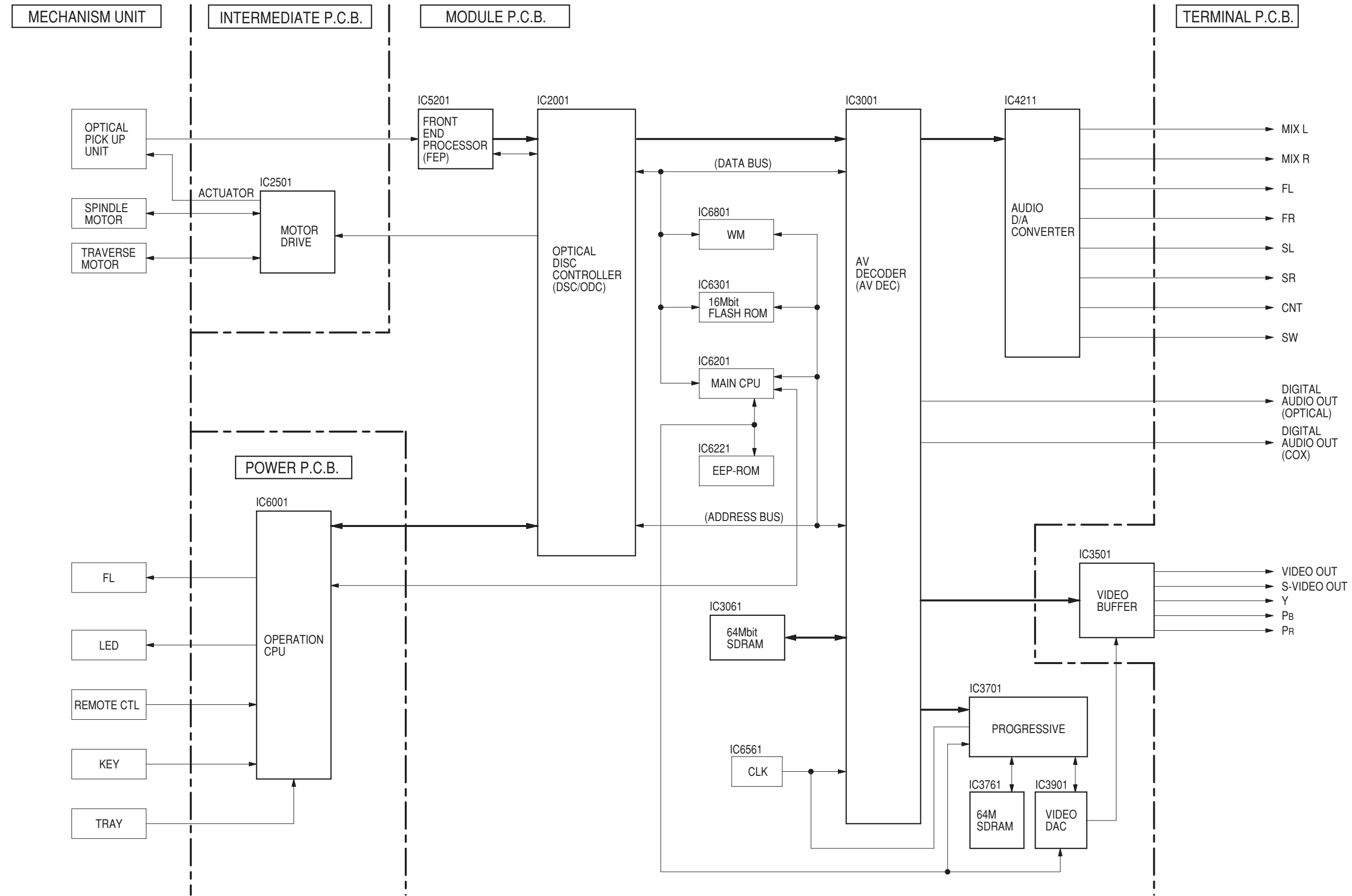
VIDEO OUT (AV 21 PIN)

R
G
B
AV 21 PIN

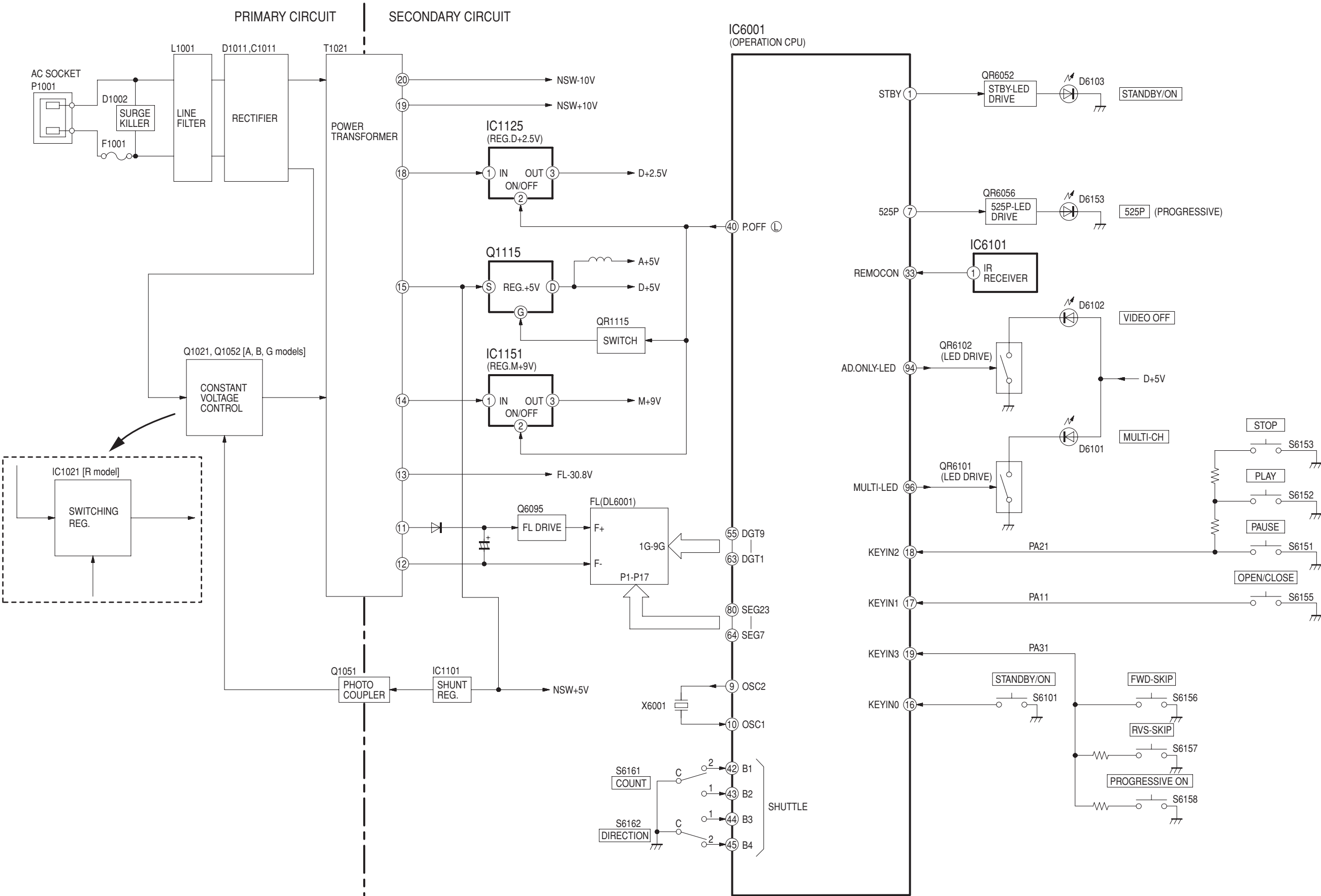
SCART P.C.B.

OVERALL BLOCK DIAGRAM

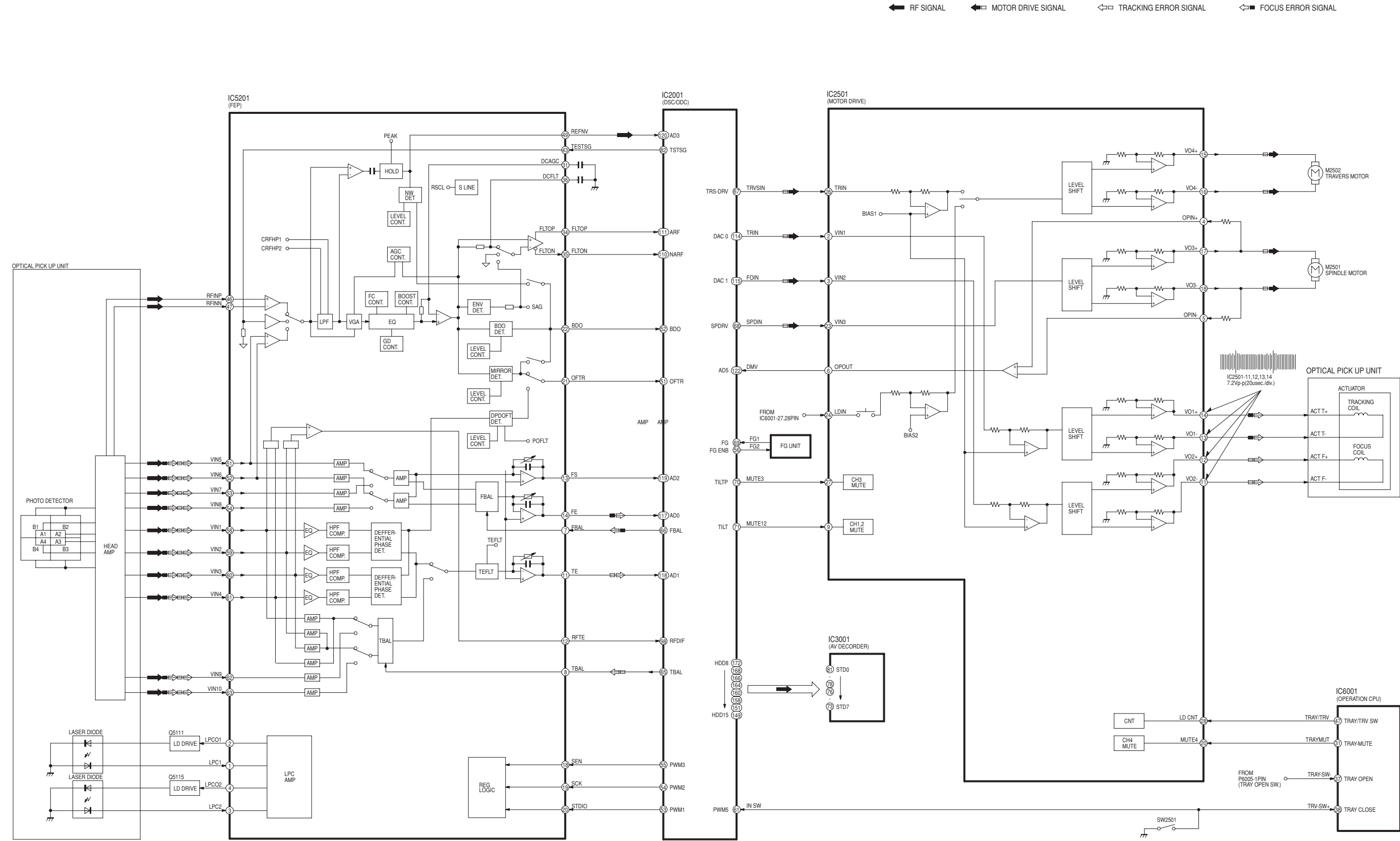
A, R models



POWER BLOCK DIAGRAM



SERVO BLOCK DIAGRAM

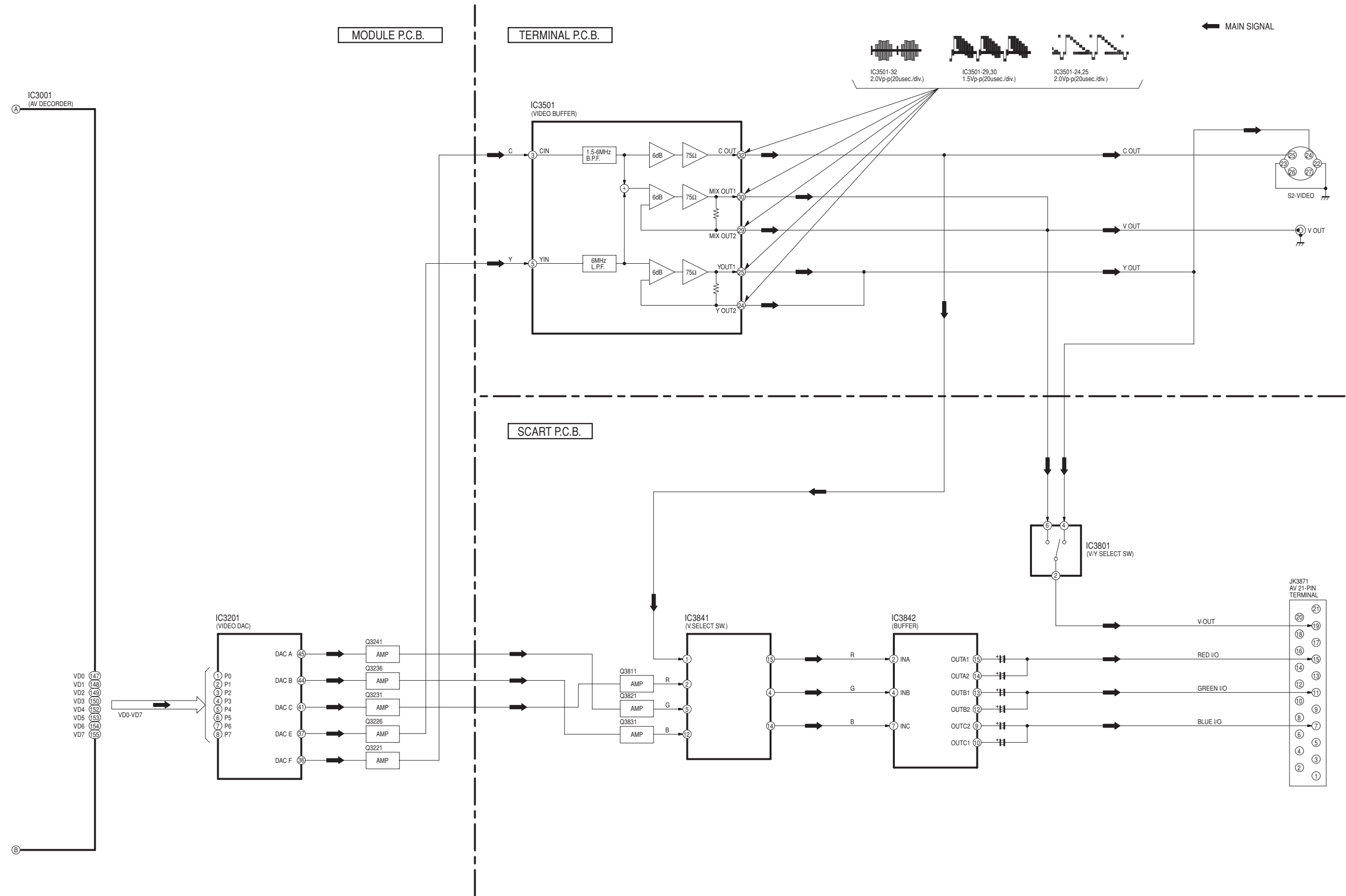


B, G models



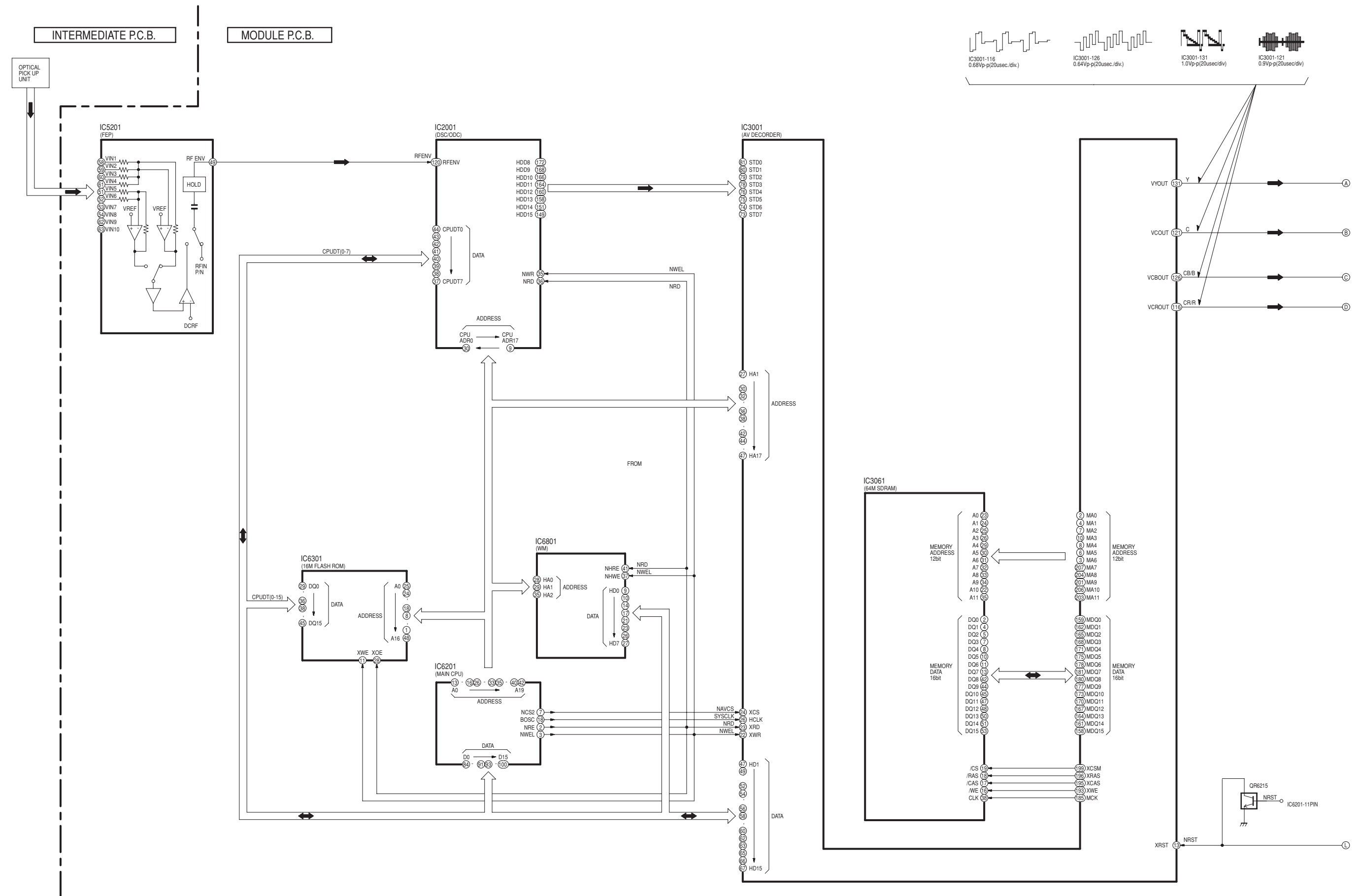
VIDEO BLOCK DIAGRAM 2/2

B, G models



VIDEO BLOCK DIAGRAM 1/2

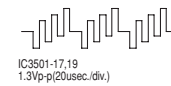
A, R models



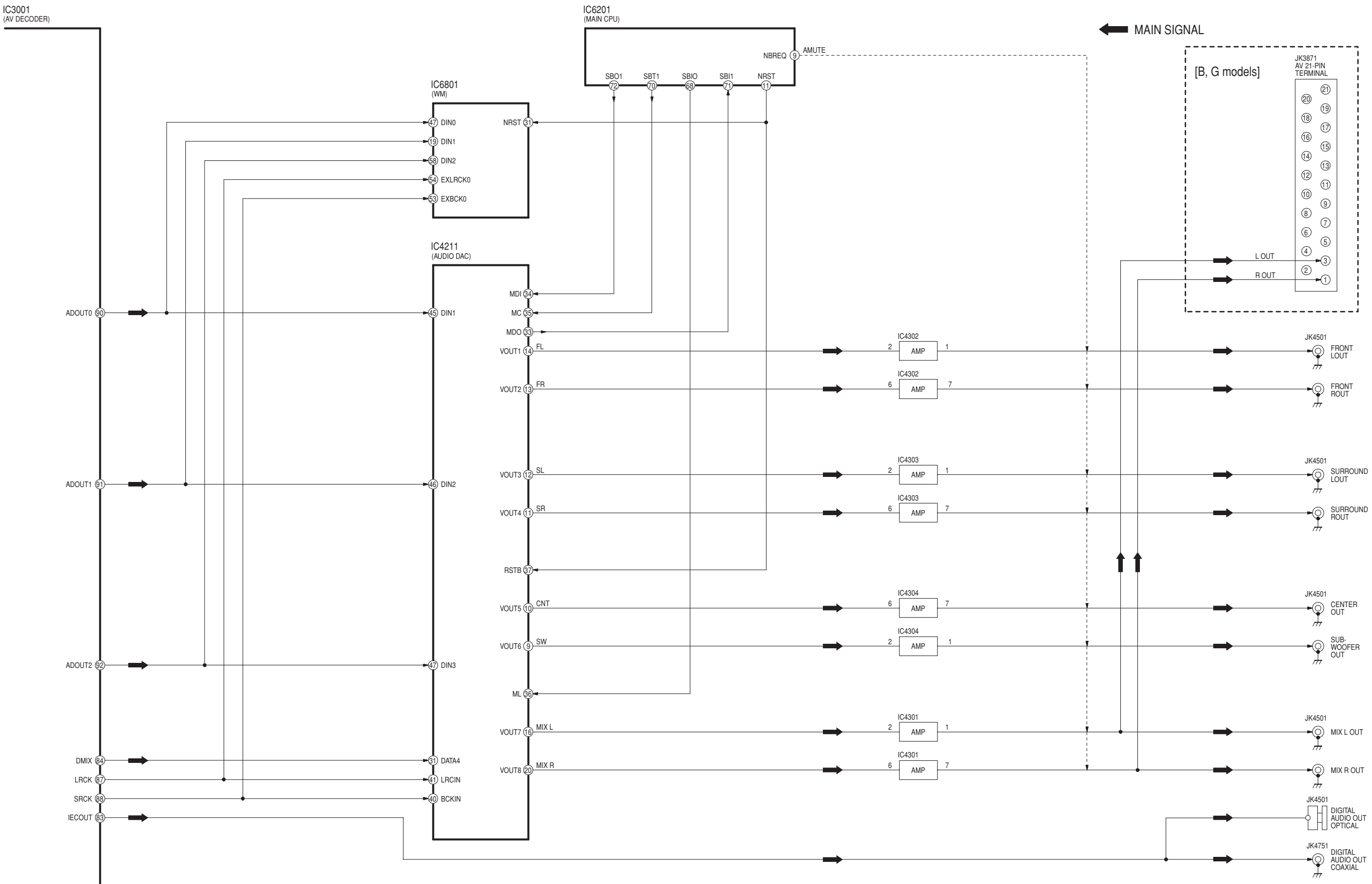
IC3501-29,30
2.2Vp-p(20usec/div.)

IC3501-32
1.8Vp-p(20usec/div.)

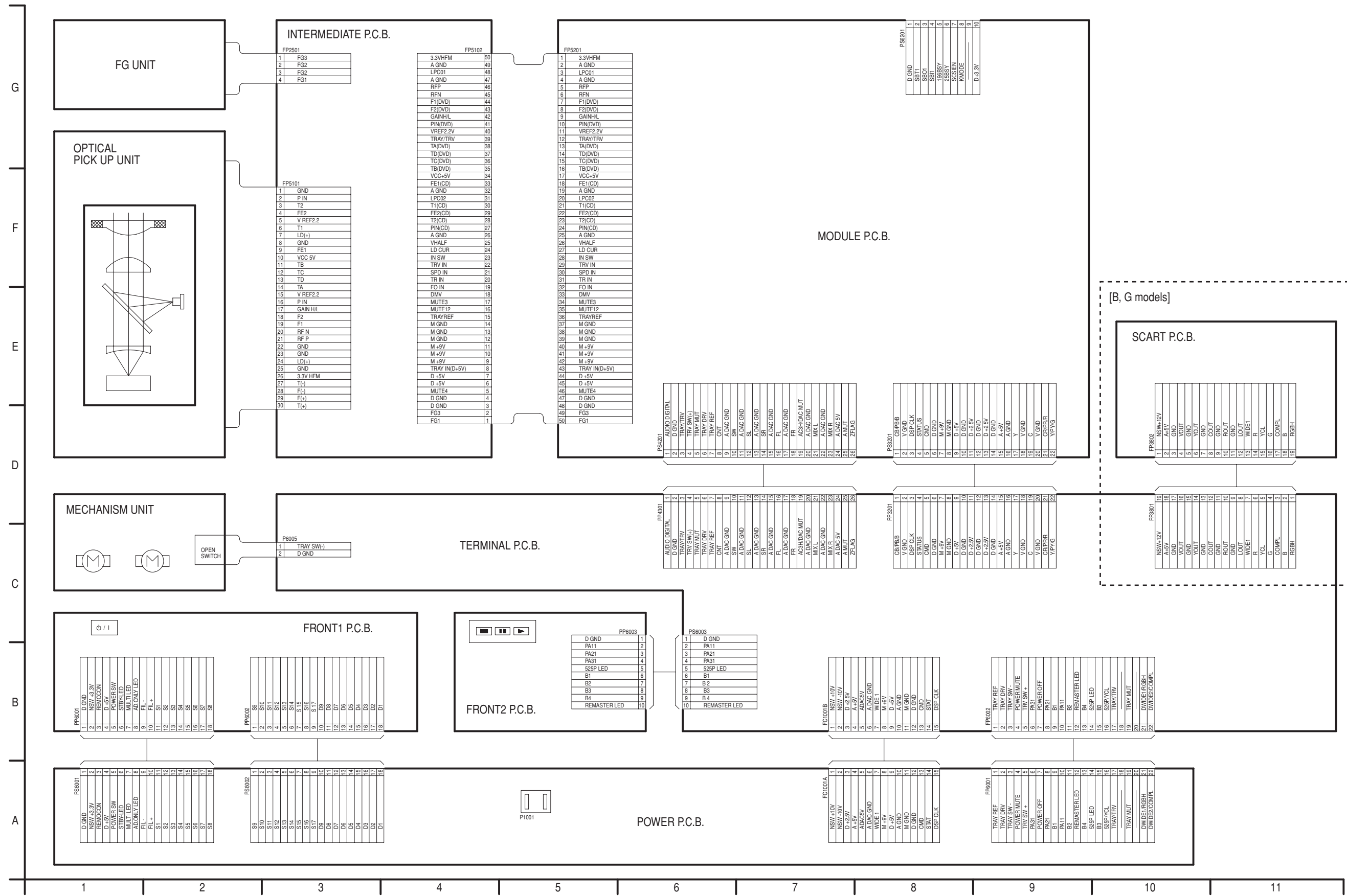
IC3501-24,25
1.9Vp-p(20usec/div.)



AUDIO BLOCK DIAGRAM



INTERCONNECTION SCHEMATIC DIAGRAM



■ ABBREVIATIONS

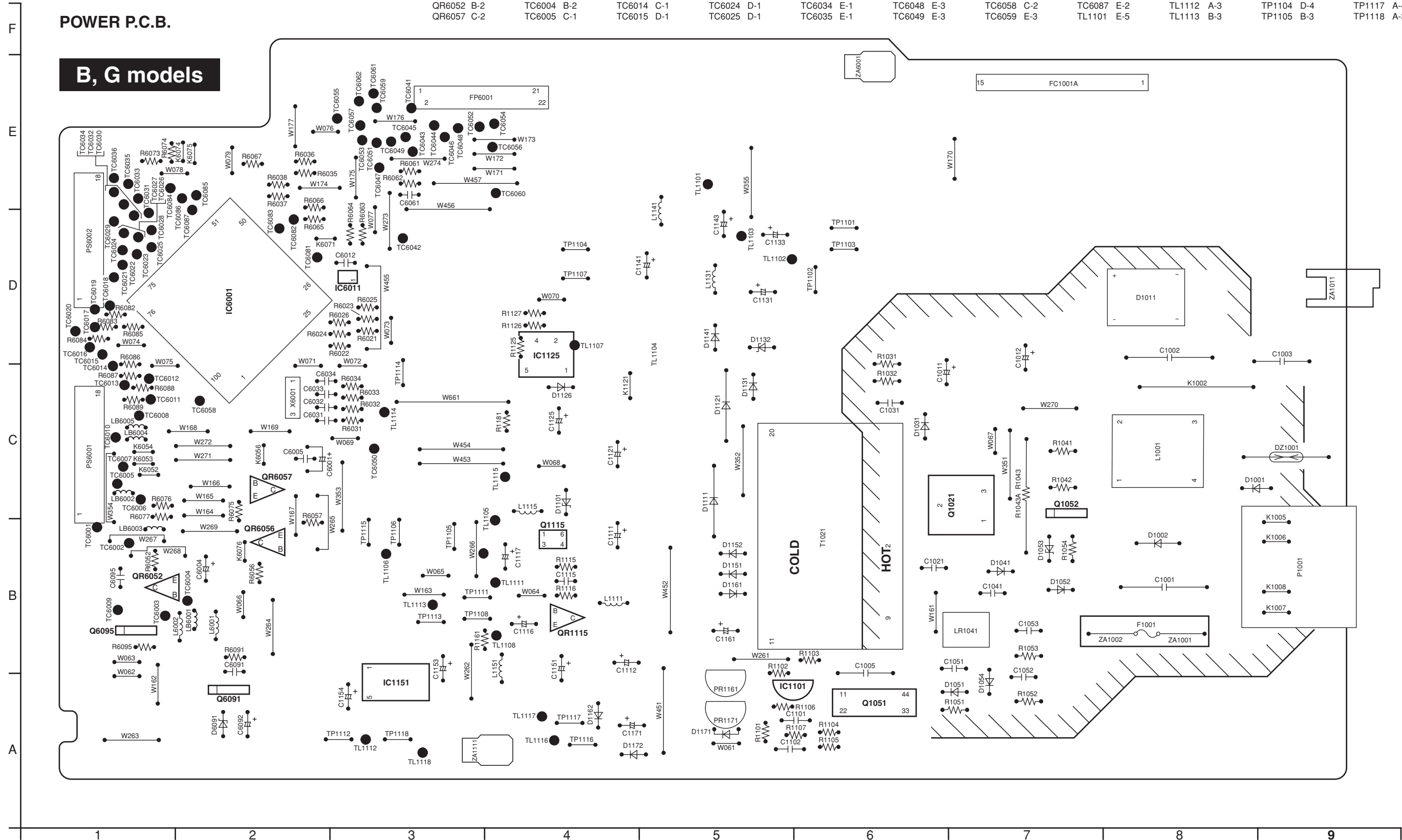
	ABBREVIATIONS	DEFINITIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PACKET REQUEST
	ARF	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
	ASO	SERVO AMP OUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPASS
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCK SELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIP SELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON / OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DIM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT
	DOUTO~UP	DATA OUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLIF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/40.5MH z)
	ETSCLK	EXTERNAL S CLOCK (54MHz)

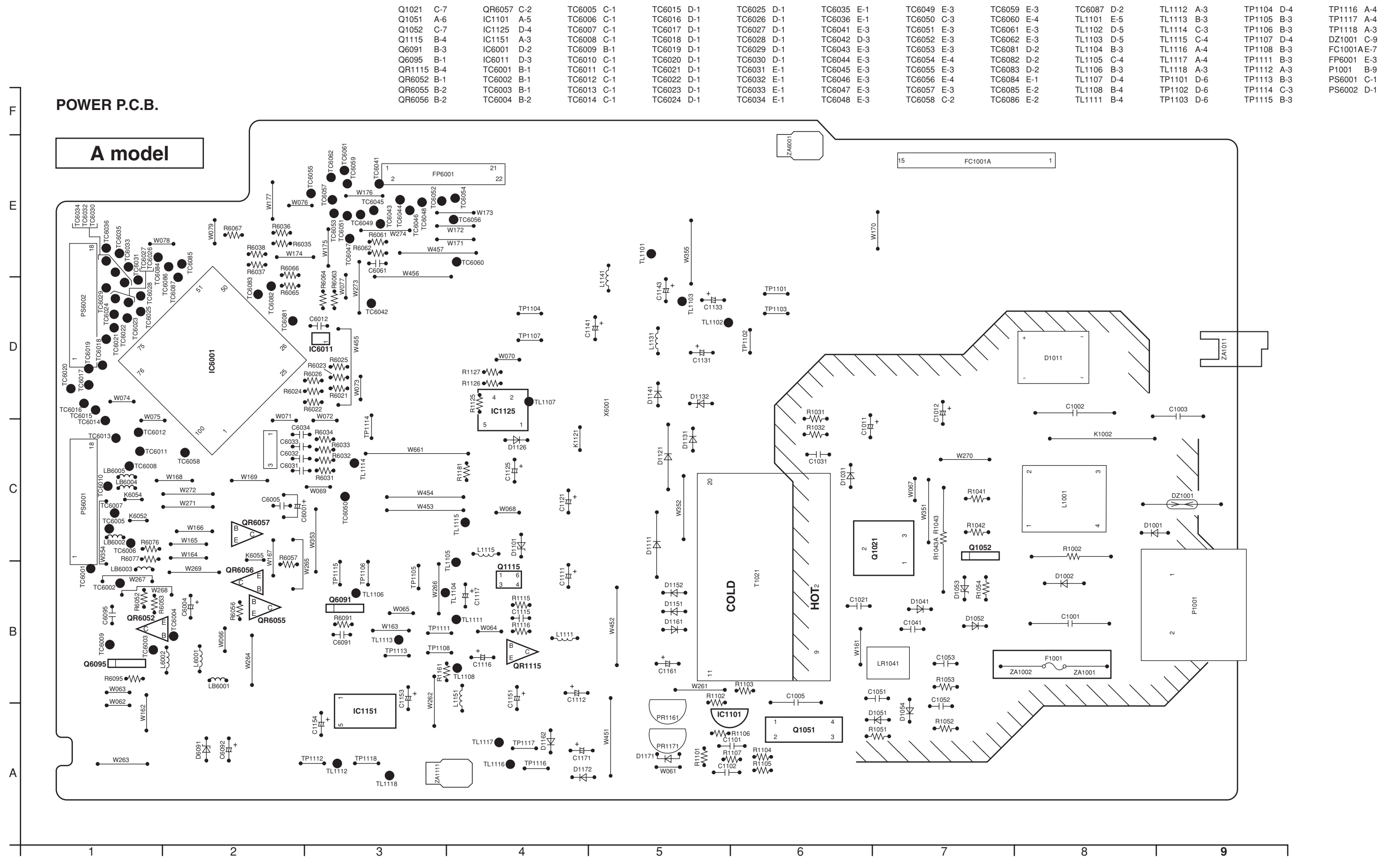
	ABBREVIATIONS	DEFINITIONS
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP INVERTED INPUT
	FEO	FOCUS ERROR AMP OUTPUT
	FG	FREQUENCY GENERATOR
	FSC	FREQUENCY SUB CARRIER
	FSCK	FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE
I	IECOUT	IEC958 FORMAT DATA OUTPUT
	IPFLAG	INTERPOLATION FLAG
	IREF	I (CURRENT) REFERENCE
	ISEL	INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION CLOCK
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND CLOCK
	MDATA	MEMORY SERIAL COMMAND DATA
	MDQ0~UP	MEMORY DATA INPUT/OUTPUT
	MDQM	MEMORY DATA I/O MASK
	MLD	MEMORY SERIAL COMMAND LOAD
	MPEG	MOVING PICTURE EXPERTS GROUP
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE DIFFERENCE
	PCK	PLL CLOCK
	PDVD	DVD TRACKING PHASE DIFFERENCE
	PEAK	CAP. FOR PEAK HOLD
	PLLCLK	CHANNEL PLL CLOCK
	PLLOK	PLL LOCK
	PWMCTL	PWM OUTPUT CONTROL
	PWMDA	PULSE WAVE MOTOR DRIVE A
	PWMOA,B	PULSE WAVE MOTOR OUT A, B
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE OUTPUT
	RS	(CD-ROM) REGISTER SELECT
	RSEL	RF POLARITY SELECT
	RST	RESET
	RSV	RESERVE
S	SCK	SERIAL CLOCK
	SCKR	AUDIO SERIAL CLOCK RECEIVER
	SCL	SERIAL CLOCK
	SCLK	SERIAL CLOCK
	SDA	SERIAL DATA
	SDI0,1	SERIAL DATA INPUT
	SDO0	SERIAL DATA OUTPUT
	SDT0,1	SERIAL DATA CLOCK
	SEG0~UP	FL SEGMENT OUTPUT
	SELCLK	SELECT CLOCK

	ABBREVIATIONS	DEFINITIONS
S	SEN	SERIAL PORT ENABLE
	SIN1,2	SERIAL DATA IN
	SOUT1,2	SERIAL DATA OUT
	SPDI	SERIAL PORT DATA INPUT
	SPDO	SERIAL PORT DATA OUTPUT
	SPEN	SERIAL PORT R/W ENABLE
	SPRCLK	SERIAL PORT READ CLOCK
	SPWCLK	SERIAL PORT WRITE CLOCK
	SQCK	SUB CODE Q CLOCK
	SQCX	SUB CODE Q DATA READ CLOCK
	SRDATA	SERIAL DATA
	SRMADR	SRAM ADDRESS BUS
	SRMDT0~7	SRAM DATA BUS 0~7
	SS	START/STOP
	STAT	STATUS
	STCLK	STREAM DATA CLOCK
	STD0~UP	STREAM DATA
	STENABLE	STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY SELECT
	STVALID	STREAM DATA VALIDITY
	SUBC	SUB CODE SERIAL
	SBCK	SUB CODE CLOCK
	SUBQ	SUB CODE Q DATA
	SYSCLK	SYSTEM CLOCK
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TRCRS	TRACK CROSS SIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
	VREF	VOLTAGE REFERENCE
	VSS	SOURCE POWER SUPPLY VOLTAGE
W	WAIT	SUB CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER
X	X	X'TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPT REQUEST
	XI	X'TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X'TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIP SELECT
	XVDS	X V-DEC CONTROL BUS STROBE
	XVSYNCO	X VERTICAL SYNC OUTPUT

POWER P.C.B.

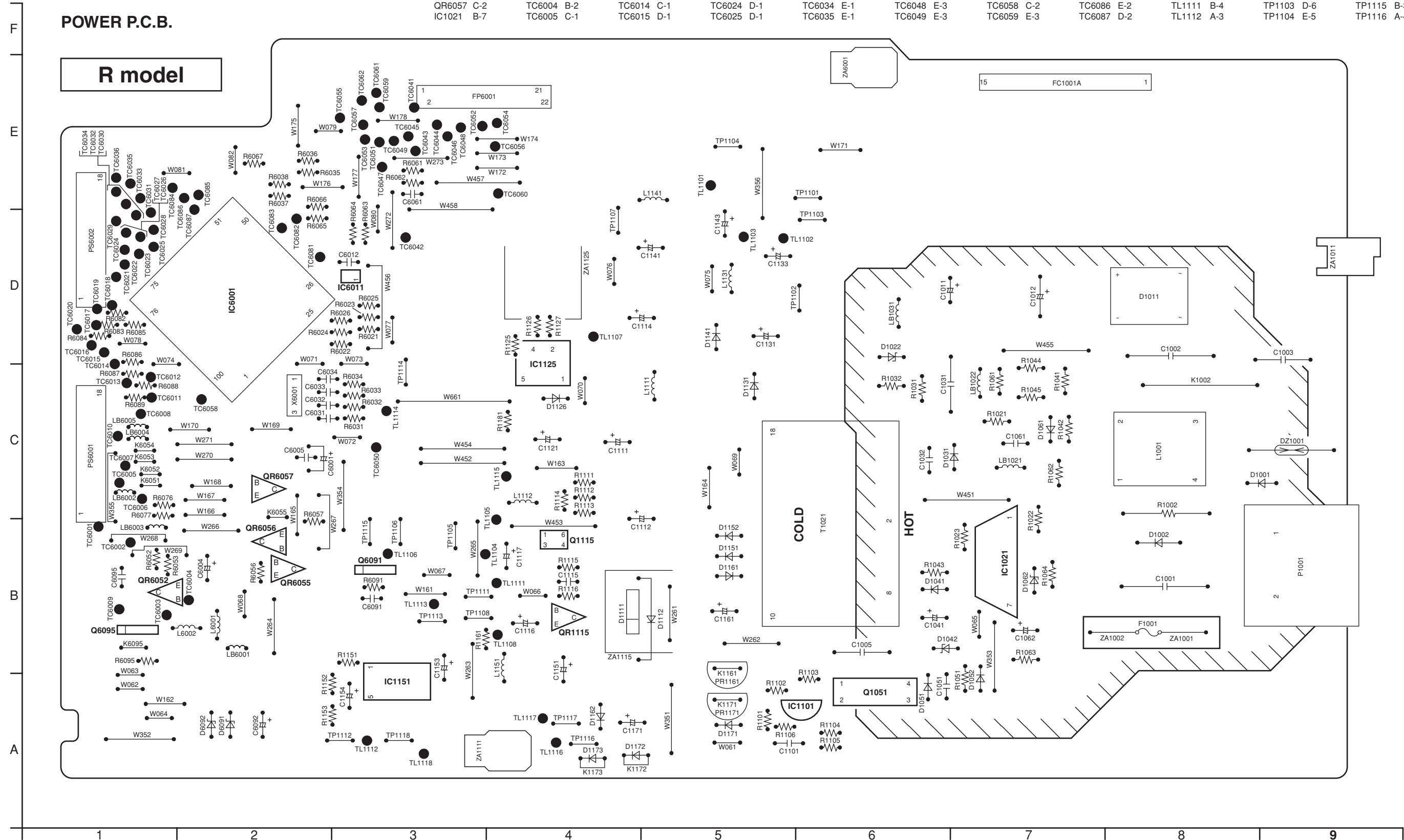
B, G models





POWER P.C.B.

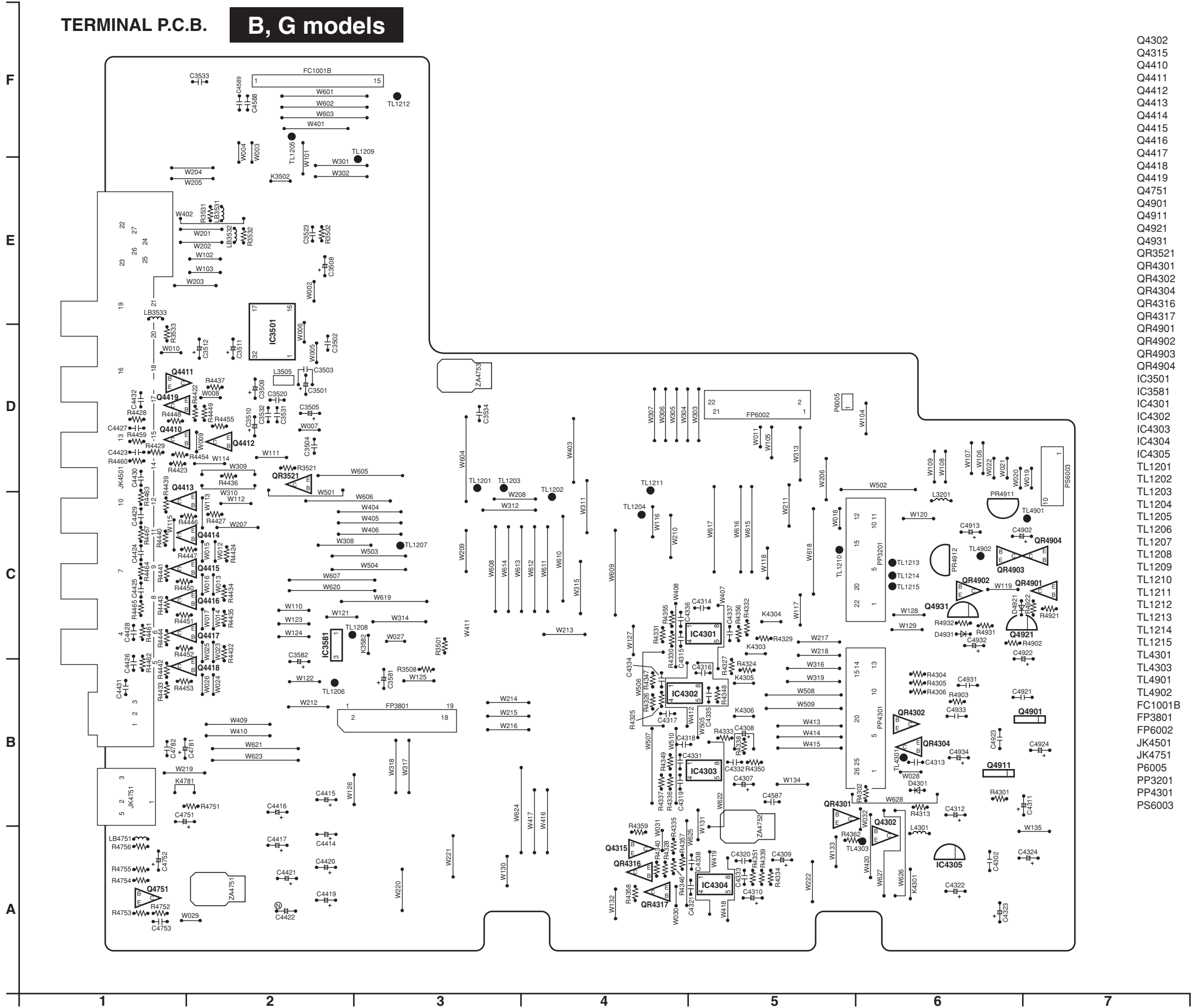
R model



PRINTED CIRCUIT BOARD

TERMINAL P.C.B.

B, G models

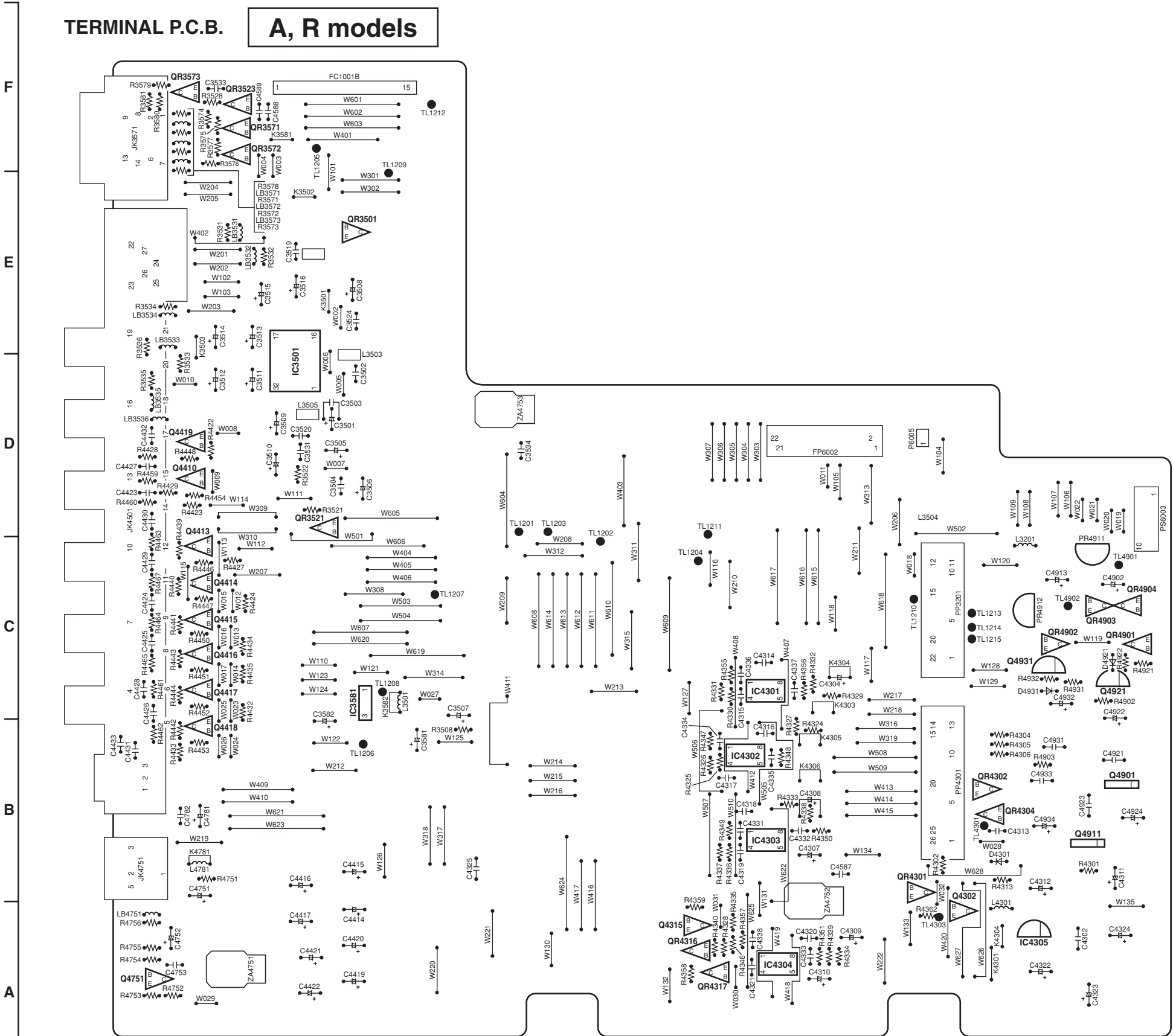


Q4302	A-6
Q4315	A-4
Q4410	D-1
Q4411	D-1
Q4412	D-2
Q4413	D-1
Q4414	C-2
Q4415	C-2
Q4416	C-2
Q4417	C-2
Q4418	B-2
Q4419	D-1
Q4751	A-1
Q4901	B-7
Q4911	B-6
Q4921	C-6
Q4931	C-6
QR3521	D-2
QR4301	B-5
QR4302	B-6
QR4303	B-6
QR4316	A-4
QR4317	A-4
QR4901	C-7
QR4902	C-6
QR4903	C-6
QR4904	C-7
IC3501	D-2
IC3581	C-2
IC4301	C-5
IC4302	B-4
IC4303	B-5
IC4304	A-5
IC4305	A-6
TL1201	D-3
TL1202	C-4
TL1203	D-3
TL1204	C-4
TL1205	F-2
TL1206	B-2
TL1207	C-3
TL1208	C-2
TL1209	E-3
TL1210	C-5
TL1211	D-4
TL1212	F-3
TL1213	C-6
TL1214	C-6
TL1215	C-6
TL4301	B-6
TL4303	A-6
TL4901	C-7
TL4902	C-6
FC1001B	F-2
FP3801	B-3
FP6002	D-5
JK4501	D-1
JK4751	B-1
P6005	D-5
PP3201	C-6
PP4301	B-6
PS6003	D-7

PRINTED CIRCUIT BOARD

TERMINAL P.C.B.

A, R models

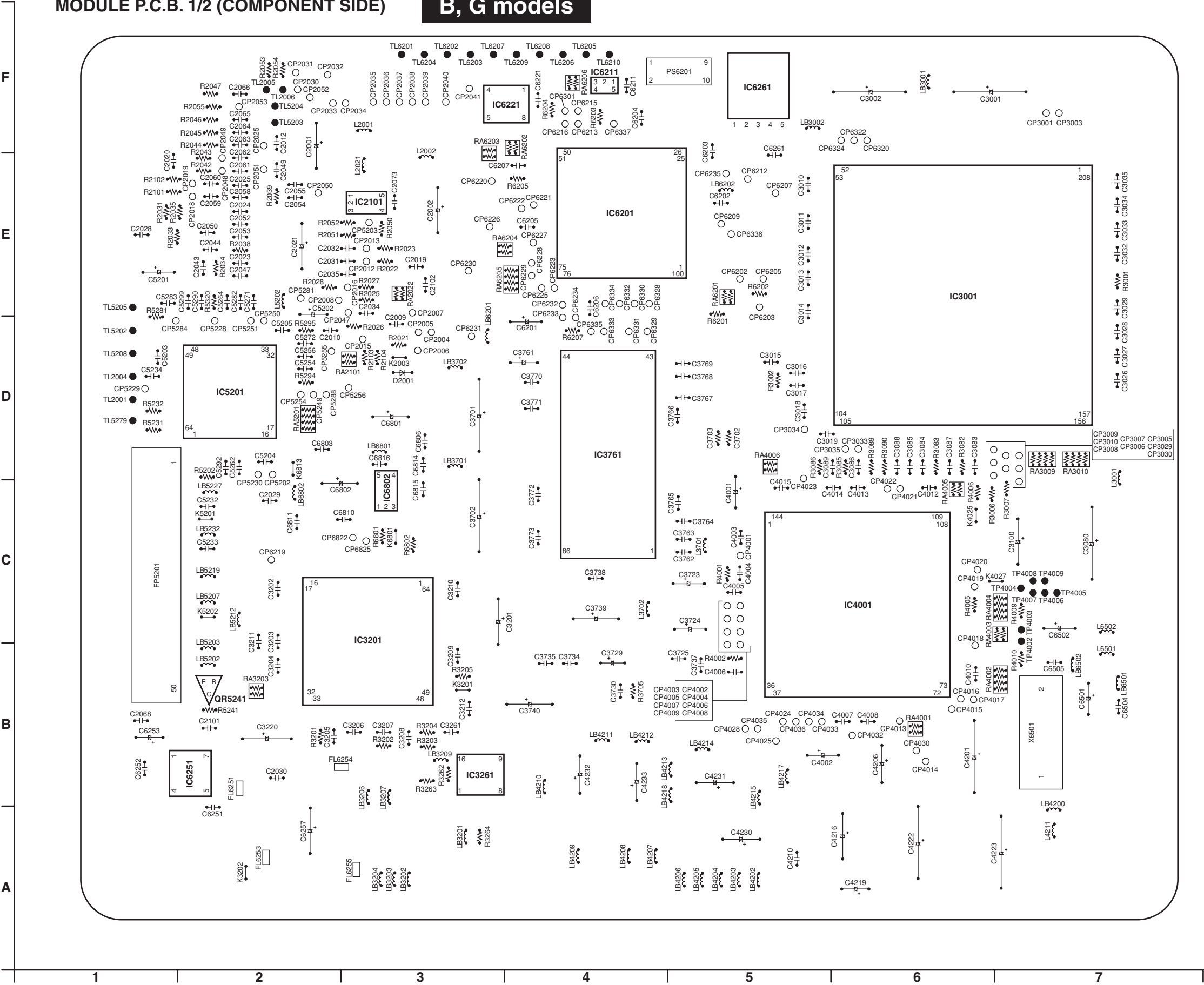


Q4302	A-6
Q4315	A-4
Q4410	D-1
Q4413	C-2
Q4414	C-2
Q4415	C-2
Q4416	C-2
Q4417	C-2
Q4418	B-2
Q4419	D-1
Q4751	A-1
Q4901	B-7
Q4911	B-6
Q4921	C-6
Q4931	C-6
QR3501	E-2
QR3521	D-2
QR3523	F-2
QR3571	F-2
QR3572	F-2
QR3573	F-1
QR4301	B-5
QR4302	B-6
QR4304	B-6
QR4316	A-4
QR4317	A-4
QR4901	C-7
QR4902	C-6
QR4903	C-6
QR4904	C-7
IC3501	D-2
IC3581	C-2
IC4301	C-5
IC4302	B-4
IC4303	B-5
IC4304	A-5
IC4305	A-6
TL1201	D-3
TL1202	C-4
TL1203	D-3
TL1204	C-4
TL1205	F-2
TL1206	B-2
TL1207	C-3
TL1208	C-2
TL1209	E-3
TL1210	C-5
TL1211	D-4
TL1212	F-3
TL1213	C-6
TL1214	C-6
TL1215	C-6
TL4301	B-6
TL4303	A-6
TL4901	C-7
TL4902	C-6
FC1001B	F-2
FP6002	D-5
JK3571	F-1
JK4501	D-1
JK4751	B-1
P6005	D-5
PP3201	C-6
PP4301	B-6
PS6003	D-7

PRINTED CIRCUIT BOARD

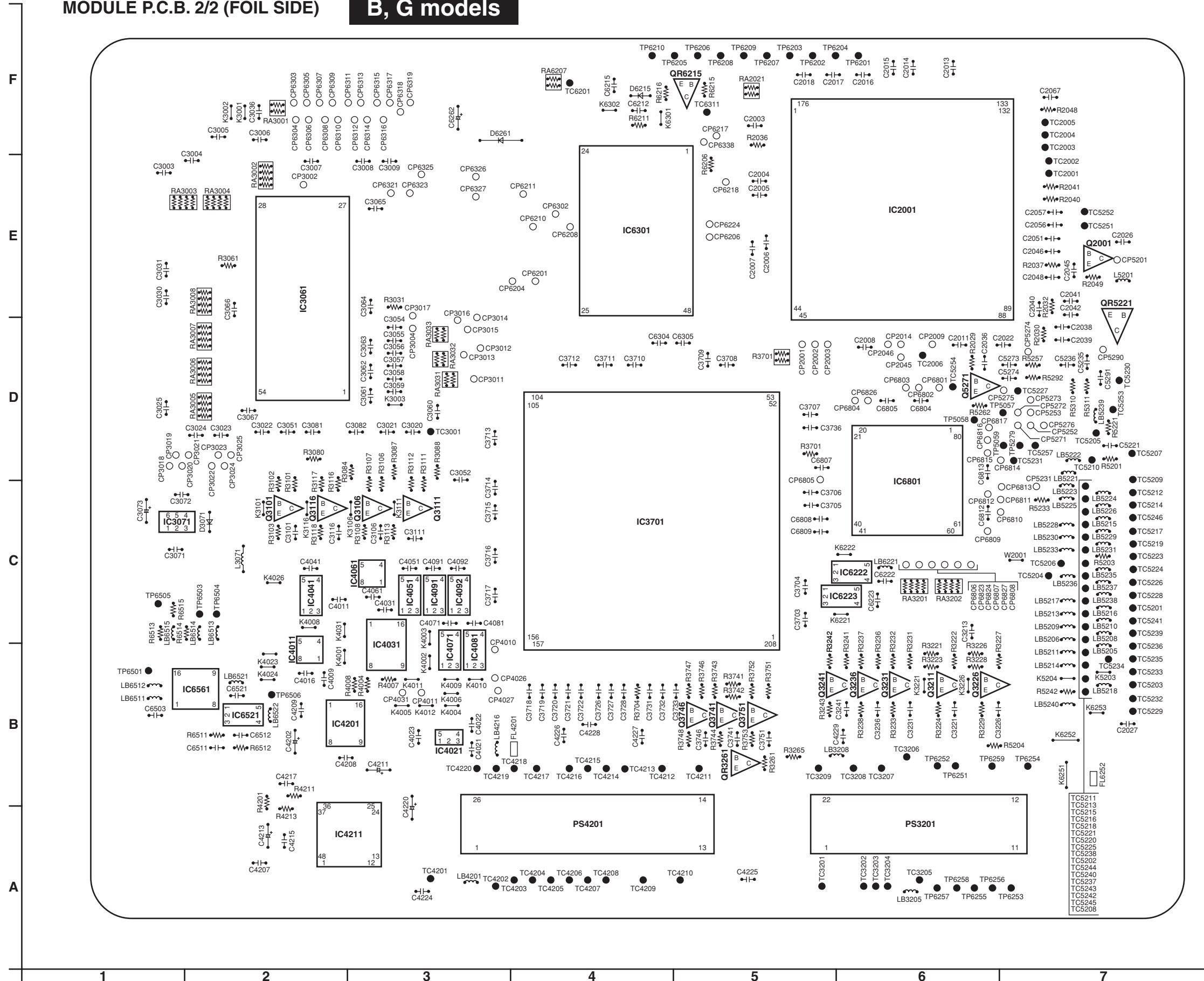
MODULE P.C.B. 1/2 (COMPONENT SIDE)

B, G models



QR5241	B-2	CP4023	D-5	TL6201	F-3
IC2101	E-3	CP4024	B-5	TL6202	F-3
IC3001	E-6	CP4025	B-5	TL6203	F-3
IC3201	B-3	CP4028	B-5	TL6204	F-3
IC3261	B-3	CP4030	B-6	TL6205	F-4
IC3761	D-4	CP4032	B-6	TL6206	F-4
IC4001	C-6	CP4032	B-6	TL6207	F-3
IC5201	D-2	CP4033	B-5	TL6208	F-4
IC6201	E-4	CP4034	B-5	TL6209	F-4
IC6211	F-4	CP4035	B-5	TL6210	F-4
IC6221	F-3	CP4036	B-5	TP4002	C-7
IC6251	B-2	CP5202	D-2	TP4003	C-7
IC6261	F-5	CP5203	E-3	TP4004	C-7
IC6802	C-3	CP5228	D-2	TP4005	C-7
CP2004	D-3	CP5229	D-1	TP4006	C-7
CP2005	D-3	CP5230	D-2	TP4007	C-7
CP2006	D-3	CP5249	D-2	TP4008	C-7
CP2007	E-3	CP5250	D-2	TP4009	C-7
CP2008	E-2	CP5251	D-2	FP5201	C-1
CP2012	E-3	CP5254	D-2	PS6201	F-5
CP2013	E-3	CP5255	D-2		
CP2015	D-3	CP5256	D-3		
CP2016	E-3	CP5281	E-2		
CP2018	E-2	CP5284	D-1		
CP2019	E-2	CP5288	D-2		
CP2025	F-2	CP6202	E-5		
CP2030	F-2	CP6203	E-5		
CP2031	F-2	CP6205	E-5		
CP2032	F-2	CP6207	E-5		
CP2033	F-2	CP6209	E-5		
CP2034	F-3	CP6212	E-5		
CP2035	F-3	CP6213	F-4		
CP2036	F-3	CP6215	F-4		
CP2037	F-3	CP6216	F-4		
CP2038	F-3	CP6219	C-2		
CP2039	F-3	CP6220	E-3		
CP2040	F-3	CP6221	E-4		
CP2041	F-3	CP6222	E-4		
CP2047	E-3	CP6223	E-4		
CP2048	E-2	CP6225	E-4		
CP2049	E-2	CP6226	E-3		
CP2050	E-2	CP6227	E-4		
CP2051	E-2	CP6228	E-4		
CP2052	F-2	CP6229	E-4		
CP2053	F-2	CP6230	E-3		
CP3001	F-7	CP6231	D-3		
CP3003	F-7	CP6232	E-4		
CP3005	D-7	CP6233	D-4		
CP3006	D-7	CP6234	D-4		
CP3007	D-7	CP6235	D-4		
CP3008	D-7	CP6235	E-5		
CP3009	D-7	CP6301	F-4		
CP3010	D-7	CP6320	F-6		
CP3029	D-7	CP6322	F-6		
CP3030	C-7	CP6324	F-6		
CP3033	D-6	CP6328	E-4		
CP3034	D-5	CP6329	D-4		
CP3035	D-6	CP6330	E-4		
CP4001	C-5	CP6331	D-4		
CP4002	C-5	CP6332	E-4		
CP4003	C-5	CP6333	D-4		
CP4004	C-5	CP6334	E-4		
CP4005	C-5	CP6336	E-5		
CP4006	C-5	CP6337	F-4		
CP4008	B-5	CP6822	C-3		
CP4009	B-5	CP6825	C-3		
CP4013	B-6	TL2001	D-1		
CP4014	B-6	TL2004	D-1		
CP4015	B-6	TL2005	F-2		
CP4016	B-6	TL2006	F-2		
CP4017	B-6	TL5202	D-1		
CP4018	B-6	TL5203	F-2		
CP4019	C-6	TL5204	F-2		
CP4020	C-6	TL5205	E-1		
CP4021	C-6	TL5208	D-1		
CP4022	C-6	TL5279	D-1		

B, G models

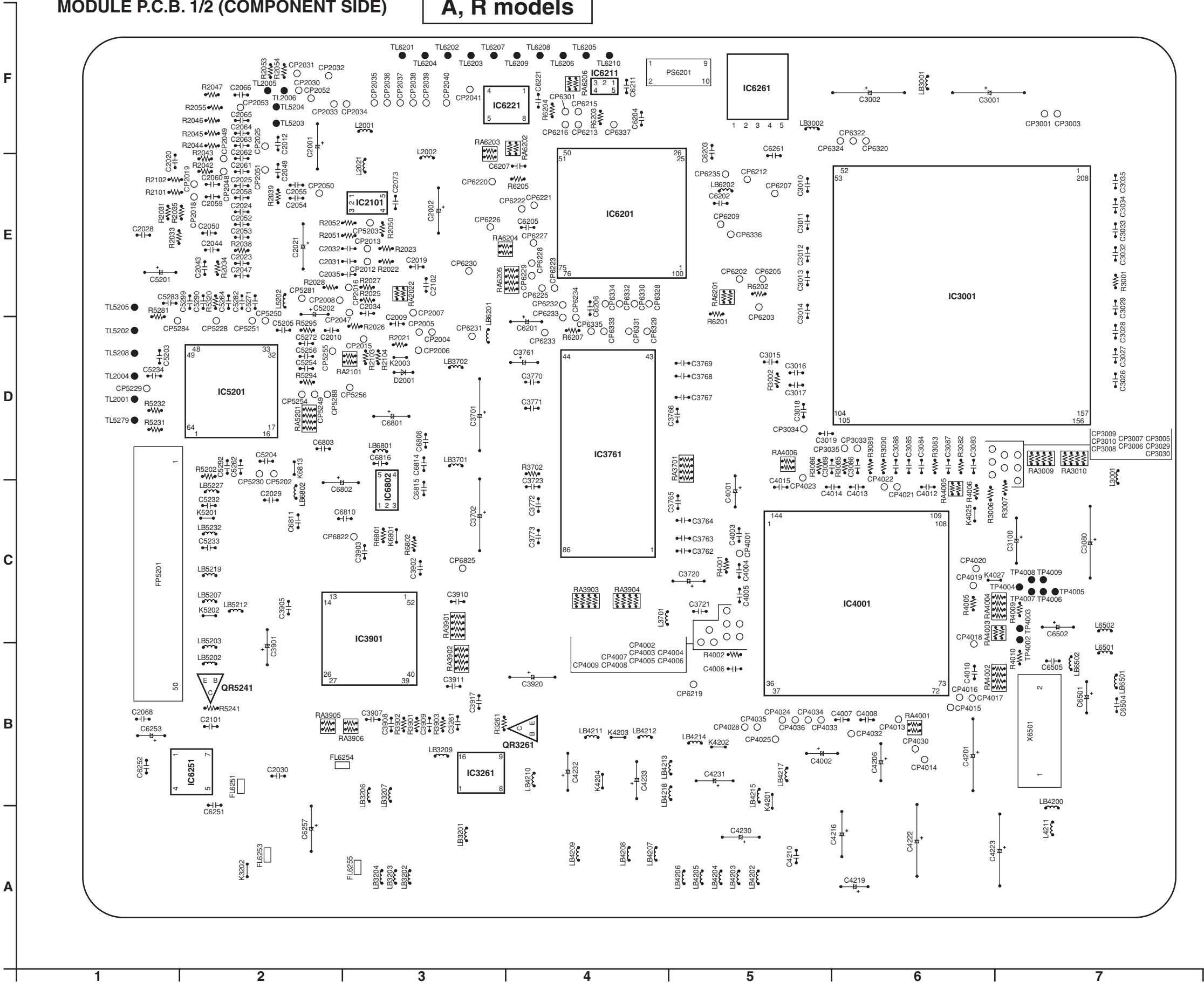


Q3101	C-2	CP6003	F-2	TC4209	A-4	TP6210	F-4
Q3116	C-2	CP6004	F-2	TC4210	A-5	TP6251	B-6
Q3106	C-3	CP6005	F-2	TC4211	B-5	TP6252	B-6
Q3111	C-3	CP6006	F-2	TC4212	B-4	TP6253	A-7
Q3746	B-5	CP6007	F-2	TC4213	B-4	TP6254	B-7
Q3741	B-5	CP6008	F-2	TC4214	B-4	TP6255	A-6
Q3751	B-5	CP6009	F-2	TC4215	B-4	TP6256	A-6
Q3241	B-5	CP6010	F-2	TC4216	B-4	TP6257	A-6
Q3236	B-6	CP6201	E-4	TC4217	B-4	TP6258	A-6
Q3231	B-6	CP6204	E-4	TC4218	B-4	TP6501	B-1
Q3211	B-6	CP6206	E-5	TC4219	B-3	TP6503	C-2
Q3226	B-6	CP6208	E-4	TC4220	B-3	TP6504	C-2
Q5271	D-6	CP6210	E-4	TC5201	B-7	TP6505	C-1
Q2001	E-7	CP6211	E-4	TC5202	B-7	TP6506	B-2
QR3261	B-5	CP6217	F-6	TC5203	B-7	PS3201	A-6
QR5221	D-7	CP6218	E-5	TC5204	B-7	PS4201	A-4
QR6215	F-5	CP6224	E-5	TC5205	D-7		
IC2001	E-6	CP6302	E-4	TC5206	B-7		
IC3061	E-2	CP6311	F-3	TC5207	D-7		
IC3071	C-1	CP6312	F-3	TC5208	B-7		
IC3701	C-4	CP6313	F-3	TC5209	B-7		
IC4011	B-2	CP6314	F-3	TC5210	D-7		
IC4021	B-3	CP6315	F-3	TC5211	B-7		
IC4031	B-3	CP6316	F-3	TC5212	B-7		
IC4041	C-2	CP6317	F-3	TC5213	B-7		
IC4051	C-3	CP6318	F-3	TC5214	B-7		
IC4061	C-3	CP6319	F-3	TC5215	B-7		
IC4071	B-3	CP6321	E-3	TC5216	B-7		
IC4081	B-3	CP6323	E-3	TC5217	B-7		
IC4091	C-3	CP6325	E-3	TC5218	B-7		
IC4092	C-3	CP6326	E-3	TC5219	B-7		
IC4201	B-2	CP6327	E-3	TC5220	B-7		
IC4211	A-2	CP6338	F-6	TC5221	B-7		
IC6222	C-6	CP6801	D-6	TC5223	B-7		
IC6223	C-6	CP6802	D-6	TC5224	B-7		
IC6301	E-4	CP6803	C-6	TC5225	B-7		
IC6521	B-2	CP6803	D-6	TC5226	B-7		
IC6561	B-2	CP6804	D-6	TC5227	D-7		
IC6801	C-6	CP6805	C-5	TC5228	B-7		
CP2001	D-5	CP6807	C-6	TC5229	B-7		
CP2002	D-5	CP6808	C-6	TC5230	D-7		
CP2003	D-5	CP6809	C-6	TC5231	D-7		
CP2009	D-6	CP6810	B-7	TC5232	B-7		
CP2014	D-6	CP6811	B-7	TC5233	B-7		
CP2045	D-6	CP6812	C-6	TC5234	B-7		
CP2046	D-6	CP6813	B-7	TC5235	B-7		
CP3002	E-2	CP6814	D-6	TC5236	B-7		
CP3004	D-3	CP6815	D-6	TC5237	B-7		
CP3011	D-3	CP6816	D-6	TC5238	B-7		
CP3012	D-3	CP6817	D-6	TC5239	B-7		
CP3013	D-3	CP6823	C-6	TC5240	B-7		
CP3014	D-3	CP6824	C-6	TC5241	B-7		
CP3015	D-3	CP6826	D-6	TC5242	B-7		
CP3016	D-3	CP6827	C-6	TC5243	B-7		
CP3017	D-3	TC2001	E-7	TC5244	B-7		
CP3018	D-1	TC2002	E-7	TC5245	B-7		
CP3019	D-1	TC2003	F-7	TC5246	B-7		
CP3020	D-1	TC2004	F-7	TC5251	E-7		
CP3021	D-2	TC2005	F-7	TC5252	E-7		
CP3022	D-2	TC2006	D-6	TC5253	D-7		
CP3023	D-2	TC3001	D-3	TC5254	D-6		
CP3024	D-2	TC3201	A-5	TC5257	D-7		
CP3025	D-2	TC3202	A-6	TC6201	F-4		
CP4010	B-3	TC3203	A-6	TC6311	F-6		
CP4011	B-3	TC3204	A-6	TP5057	D-7		
CP4026	B-3	TC3205	A-6	TP5058	D-6		
CP4027	B-3	TC3206	B-6	TP5059	D-7		
CP4031	B-3	TC3207	B-6	TP5279	D-7		
CP5201	E-7	TC3208	B-6	TP6201	F-6		
CP5231	B-7	TC3209	B-5	TP6202	F-6		
CP5252	D-7	TC4201	A-3	TP6203	F-6		
CP5253	D-7	TC4202	A-3	TP6204	F-6		
CP5271	D-7	TC4203	A-4	TP6205	F-4		
CP5272	D-7	TC4204	A-4	TP6205	F-6		
CP5273	D-7	TC4205	A-4	TP6206	F-6		
CP5274	D-7	TC4206	A-4	TP6207	F-6		
CP5275	D-7	TC4207	A-4	TP6208	F-6		
CP5290	D-7	TC4208	A-4	TP6209	F-6		

PRINTED CIRCUIT BOARD

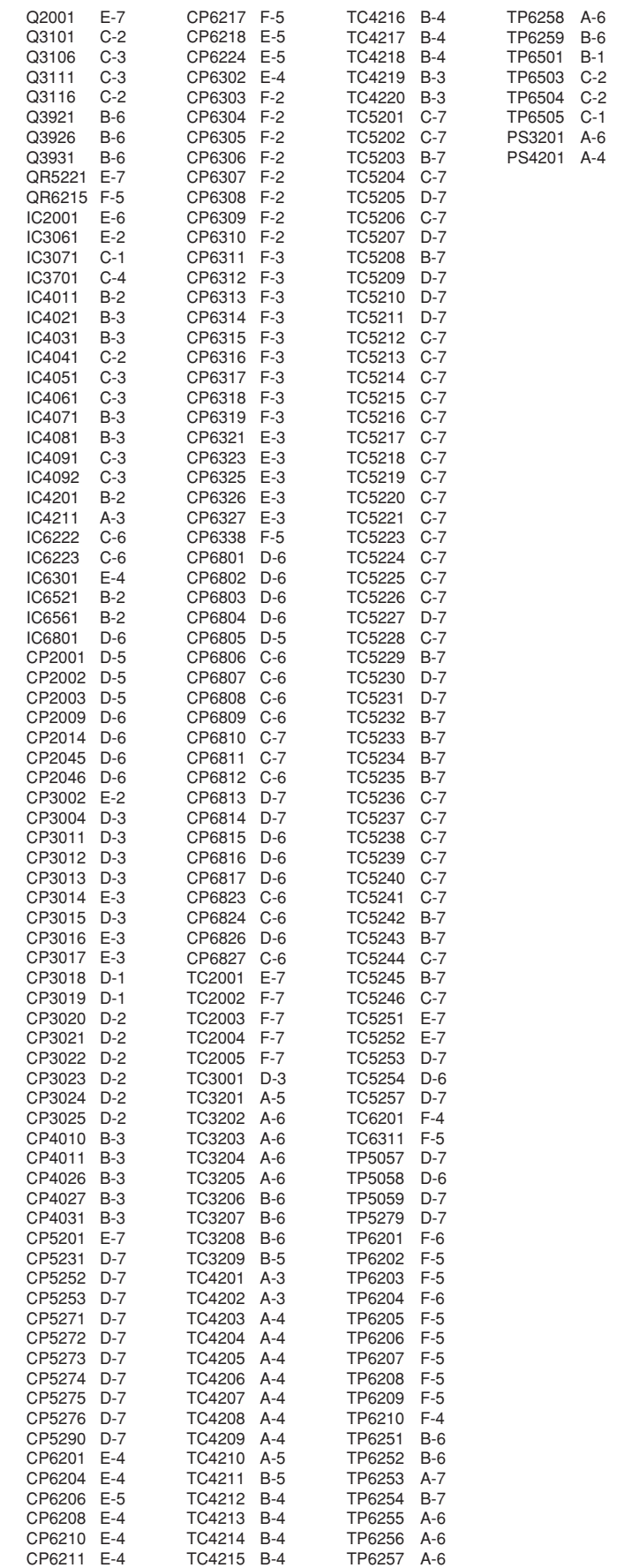
MODULE P.C.B. 1/2 (COMPONENT SIDE)

A, R models



QR3261	B-4	CP4021	C-6	TL5208	D-1
QR5241	B-2	CP4022	C-6	TL5279	D-1
IC2101	E-3	CP4023	D-5	TL6201	F-3
IC3001	E-6	CP4024	B-5	TL6202	F-3
IC3261	B-3	CP4025	B-5	TL6203	F-3
IC3761	D-4	CP4028	B-5	TL6204	F-3
IC3901	C-3	CP4030	B-6	TL6205	F-4
IC4001	C-6	CP4032	B-6	TL6206	F-4
IC5201	D-2	CP4033	B-5	TL6207	F-3
IC6201	E-4	CP4034	B-5	TL6208	F-4
IC6211	F-4	CP4035	B-5	TL6209	F-4
IC6221	F-4	CP4036	B-5	TL6210	F-4
IC6251	B-2	CP5202	D-2	TP4002	C-7
IC6261	F-5	CP5203	E-3	TP4003	C-7
IC6802	C-3	CP5228	D-2	TP4004	C-7
CP2004	D-3	CP5229	D-1	TP4005	C-7
CP2005	D-3	CP5230	D-2	TP4006	C-7
CP2006	D-3	CP5249	D-2	TP4007	C-7
CP2007	E-3	CP5250	D-2	TP4008	C-7
CP2008	E-3	CP5251	D-2	TP4009	C-7
CP2012	E-3	CP5254	D-2	FP5201	C-1
CP2013	E-3	CP5255	D-2	PS6201	F-5
CP2015	D-3	CP5256	D-3		
CP2016	E-3	CP5281	E-2		
CP2018	E-2	CP5284	D-2		
CP2019	E-2	CP5288	D-2		
CP2025	F-2	CP6202	E-5		
CP2030	F-2	CP6203	E-5		
CP2031	F-2	CP6205	E-5		
CP2032	F-2	CP6207	E-5		
CP2033	F-2	CP6209	E-5		
CP2034	F-3	CP6212	E-5		
CP2035	F-3	CP6213	F-4		
CP2036	F-3	CP6215	F-4		
CP2037	F-3	CP6216	F-4		
CP2038	F-3	CP6219	B-5		
CP2039	F-3	CP6220	E-3		
CP2040	F-3	CP6221	E-4		
CP2041	F-3	CP6222	E-4		
CP2047	E-3	CP6223	E-4		
CP2048	E-2	CP6225	E-4		
CP2049	E-2	CP6226	E-3		
CP2050	E-2	CP6227	E-4		
CP2051	E-2	CP6228	E-4		
CP2052	F-2	CP6229	E-4		
CP2053	F-2	CP6230	E-3		
CP3001	F-7	CP6231	D-3		
CP3003	F-7	CP6232	E-4		
CP3005	D-7	CP6233	E-4		
CP3006	D-7	CP6233	D-4		
CP3007	D-7	CP6234	E-4		
CP3008	D-7	CP6235	E-5		
CP3009	D-7	CP6301	F-4		
CP3010	D-7	CP6320	F-6		
CP3029	D-7	CP6322	F-6		
CP3030	D-7	CP6324	F-6		
CP3033	D-6	CP6328	E-4		
CP3034	D-5	CP6329	D-4		
CP3035	D-6	CP6330	E-4		
CP4001	C-5	CP6331	D-4		
CP4002	C-5	CP6332	E-4		
CP4003	C-5	CP6333	D-4		
CP4004	C-5	CP6334	E-4		
CP4005	C-5	CP6335	D-4		
CP4006	C-5	CP6336	E-5		
CP4007	C-5	CP6337	F-4		
CP4008	C-5	CP6822	C-3		
CP4009	C-5	CP6825	C-3		
CP4013	B-6	TL2001	D-1		
CP4014	B-6	TL2004	D-1		
CP4015	B-6	TL2005	F-2		
CP4016	B-6	TL2006	F-2		
CP4017	B-6	TL5202	D-1		
CP4018	C-6	TL5203	F-2		
CP4019	C-6	TL5204	F-2		
CP4020	C-6	TL5205	E-1		

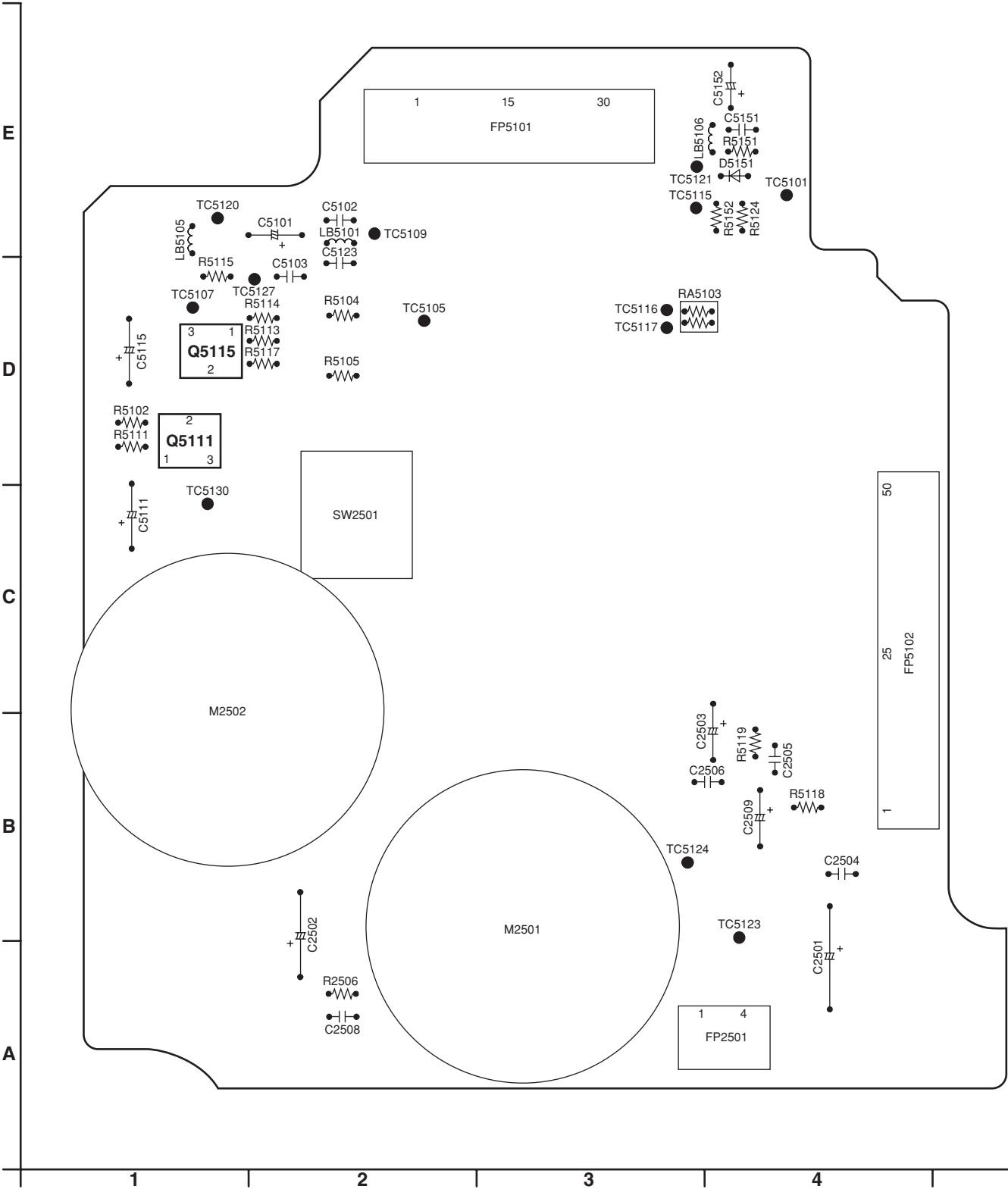
A, R models



■ PRINTED CIRCUIT BOARD

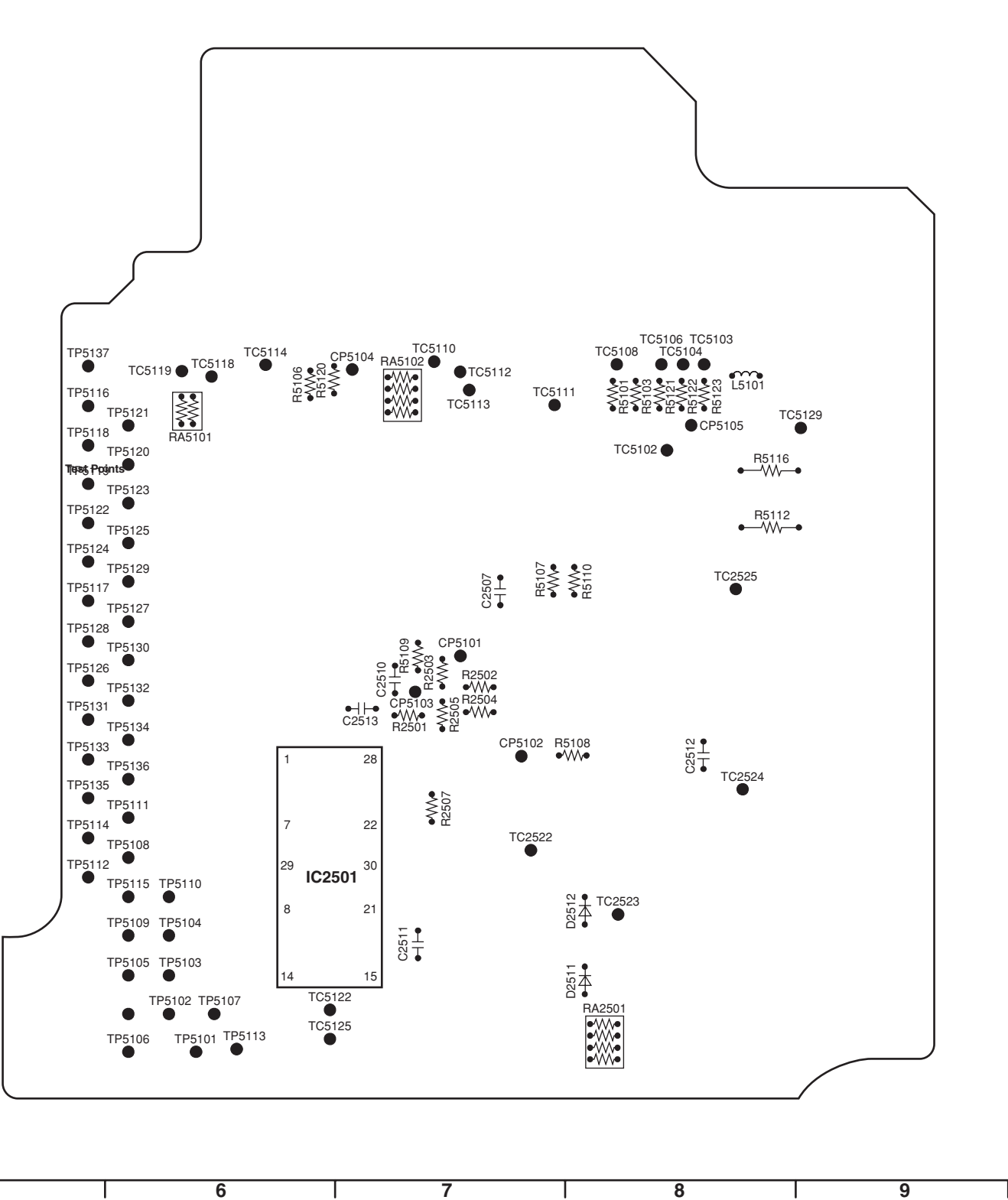
INTERMEDIATE P.C.B. 1/2 (COMPONENT SIDE)

Q5111	D-1	TC5120	E-1
Q5115	D-1	TC5121	E-3
TC5101	E-4	TC5123	B-4
TC5105	D-2	TC5124	B-3
TC5107	D-1	TC5127	D-2
TC5109	E-2	TC5130	C-1
TC5115	E-3	FP2501	A-4
TC5116	D-3	FP5101	E-3
TC5117	D-3	FP5102	C-4



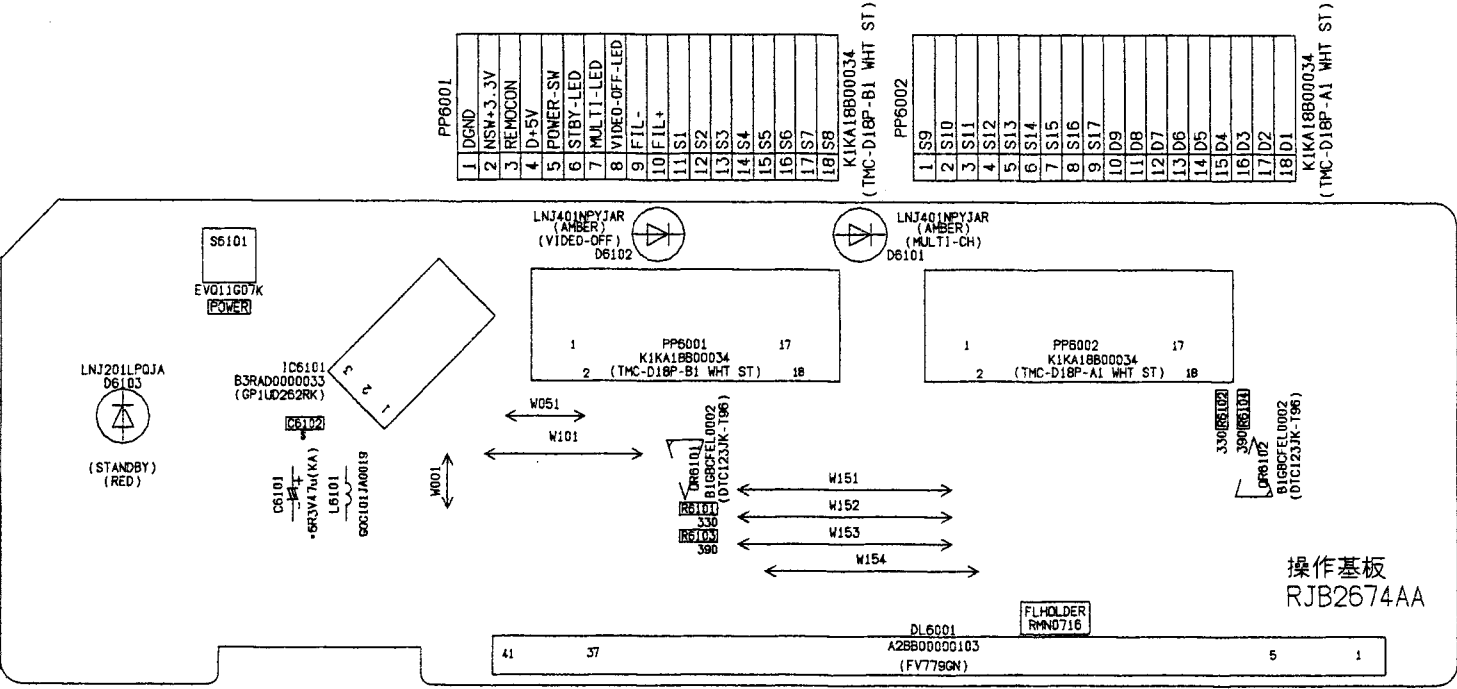
INTERMEDIATE P.C.B. 2/2 (FOIL SIDE)

IC2501	B-6	TC2525	C-8	TC5113	D-7	TP5103	A-6	TP5112	B-5	TP5121	D-6	TP5130	C-6
CP5101	C-7	TC5102	D-8	TC5114	D-6	TP5104	B-6	TP5113	A-6	TP5122	C-5	TP5131	C-5
CP5102	B-7	TC5103	D-8	TC5118	D-6	TP5105	A-6	TP5114	B-5	TP5123	C-6	TP5132	C-6
CP5103	C-7	TC5104	D-8	TC5119	D-6	TP5106	A-6	TP5115	B-6	TP5124	C-5	TP5133	B-5
CP5104	D-7	TC5106	D-8	TC5122	A-6	TP5107	A-6	TP5116	D-5	TP5125	C-6	TP5134	B-6
CP5105	D-8	TC5108	D-8	TC5125	A-6	TP5108	B-6	TP5117	C-5	TP5126	C-5	TP5135	B-5
TC2522	B-7	TC5110	D-7	TC5129	D-9	TP5109	B-6	TP5118	D-5	TP5127	C-6	TP5136	B-6
TC2523	B-8	TC5111	D-7	TP5101	A-6	TP5110	B-6	TP5119	D-5	TP5128	C-5	TP5137	D-5
TC2524	B-8	TC5112	D-7	TP5102	A-6	TP5111	B-6	TP5120	D-6	TP5129	C-6		



PRINTED CIRCUIT BOARD

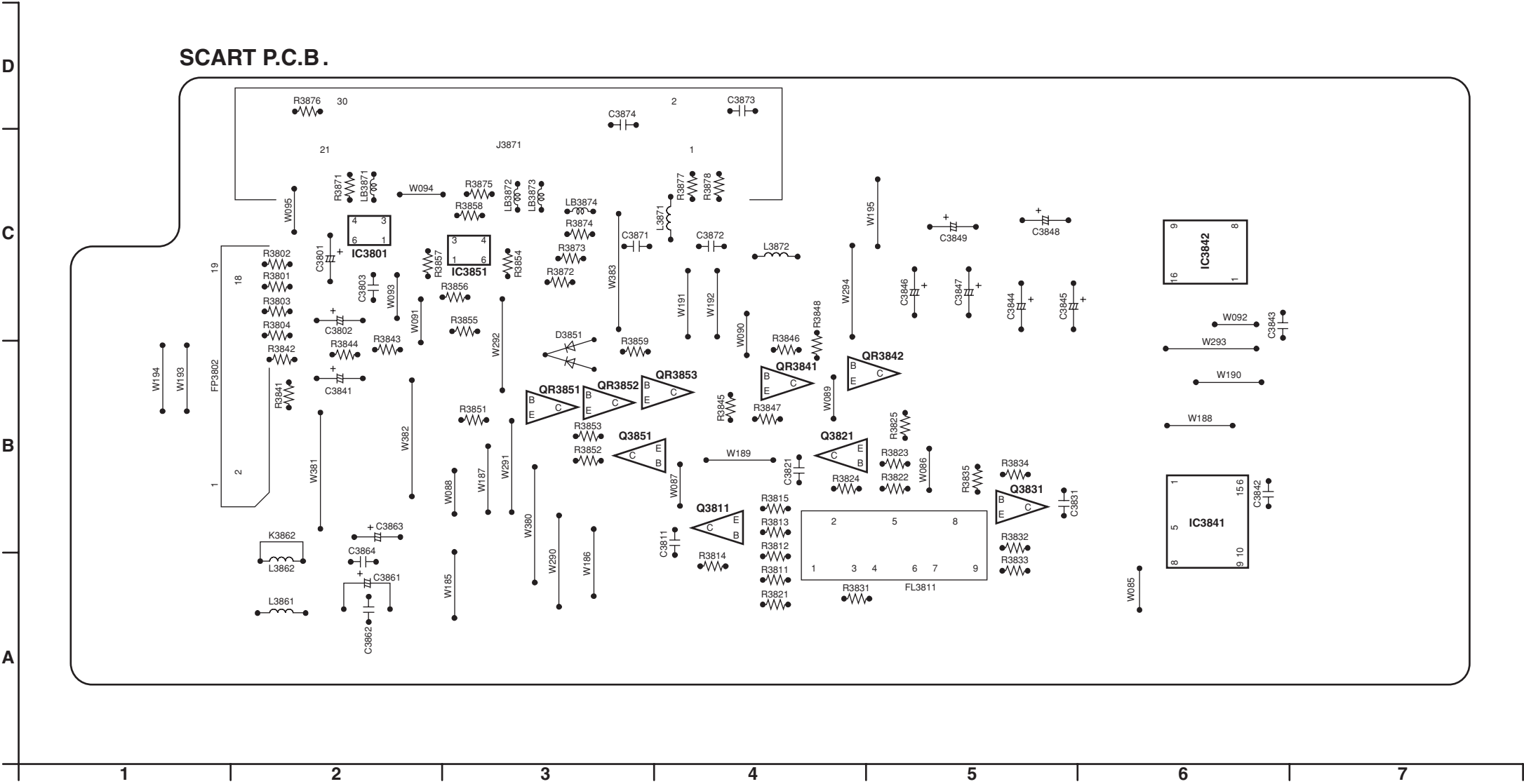
FRONT 1 P.C.B.



■ PRINTED CIRCUIT BOARD

SCART P.C.B.

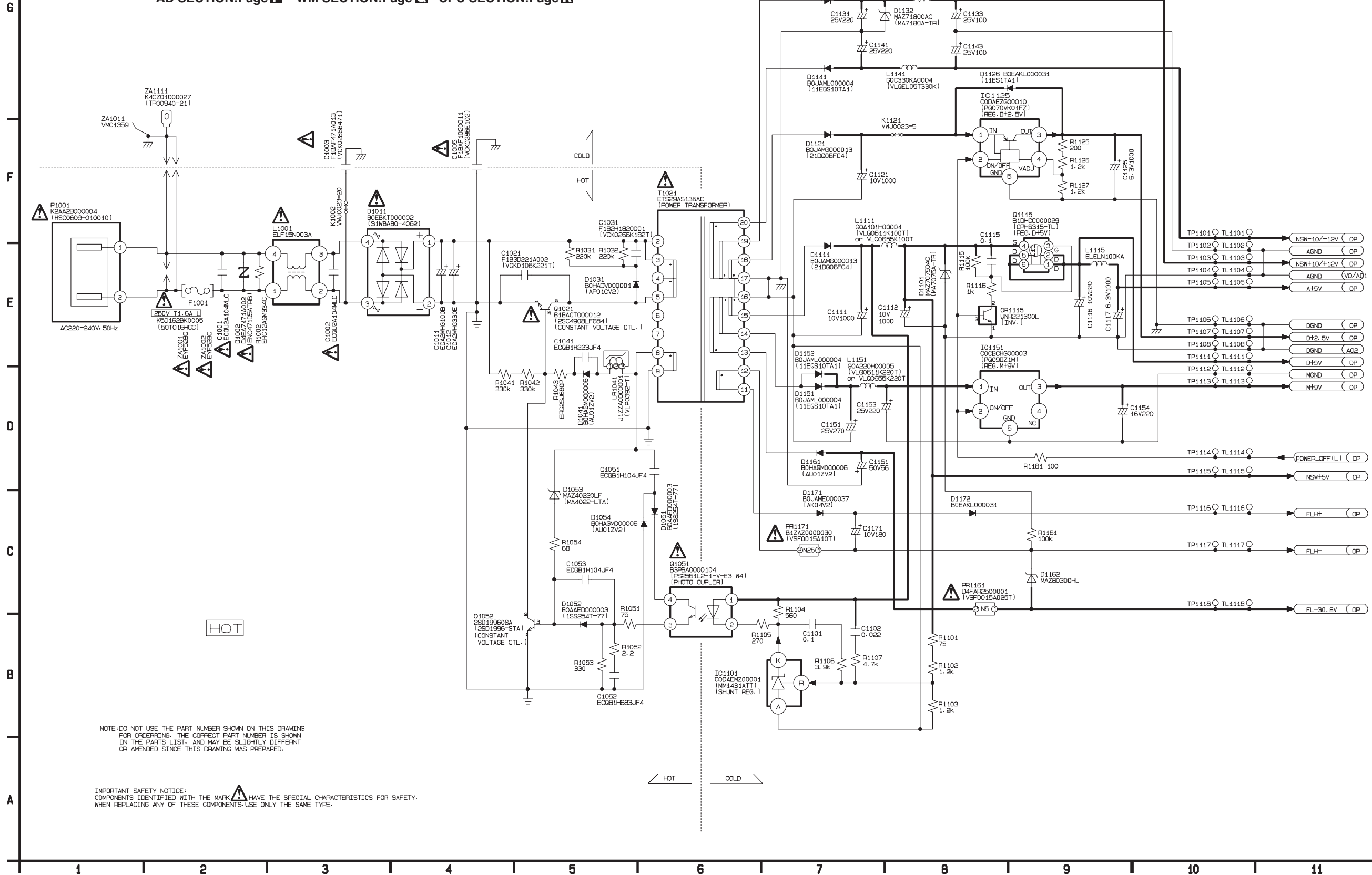
- Q3811 B-4
- Q3821 B-4
- Q3831 B-5
- Q3851 B-3
- QR3841 B-4
- QR3842 B-4
- QR3851 B-3
- QR3852 B-3
- QR3853 B-4
- IC3801 C-2
- IC3841 B-6
- IC3842 C-6
- IC3851 C-3
- FP3802 B-2



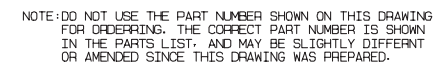
■ SCHEMATIC DIAGRAM
POWER P.C.B. 1/2 (POWER SECTION)

B, G models

POWER SECTION:Page A OP SECTION:Page B VO SECTION:Page F
AO1 SECTION:Page G AO2 SECTION:Page H FEP SECTION:Page I
SODC SECTION:Page M AVDEC SECTION:Page N VD SECTION:Page O
AD SECTION:Page P WM SECTION:Page Q CPU SECTION:Page R



B, G models

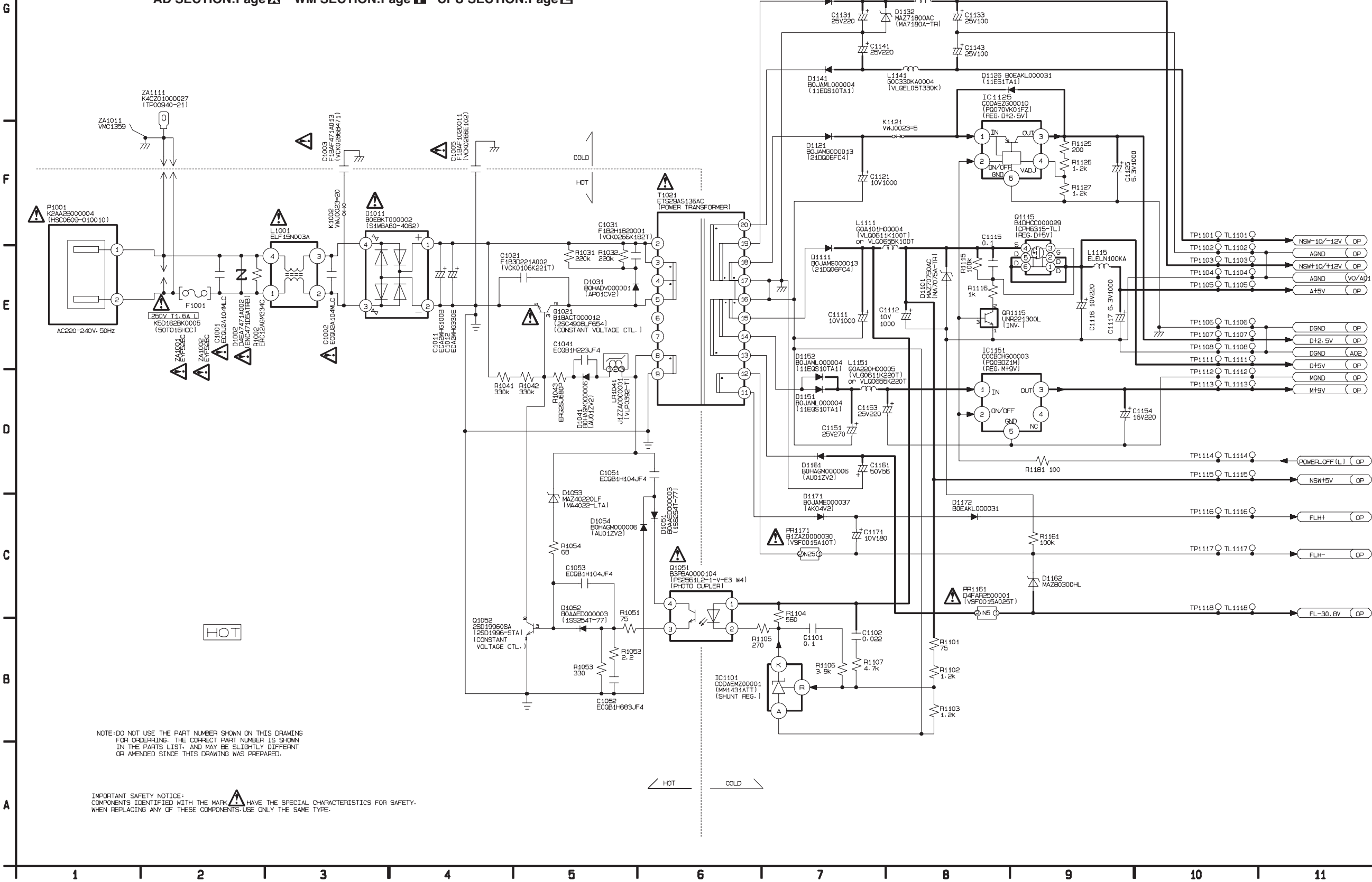


SCHEMATIC DIAGRAM
POWER P.C.B. 1/2 (POWER SECTION)

A model

POWER SECTION:Page G OP SECTION:Page F VO SECTION:Page E
AO1 SECTION:Page D AO2 SECTION:Page C FEP SECTION:Page B
SODC SECTION:Page A AVDEC SECTION:Page W VD SECTION:Page W
AD SECTION:Page X WM SECTION:Page Y CPU SECTION:Page Z

C

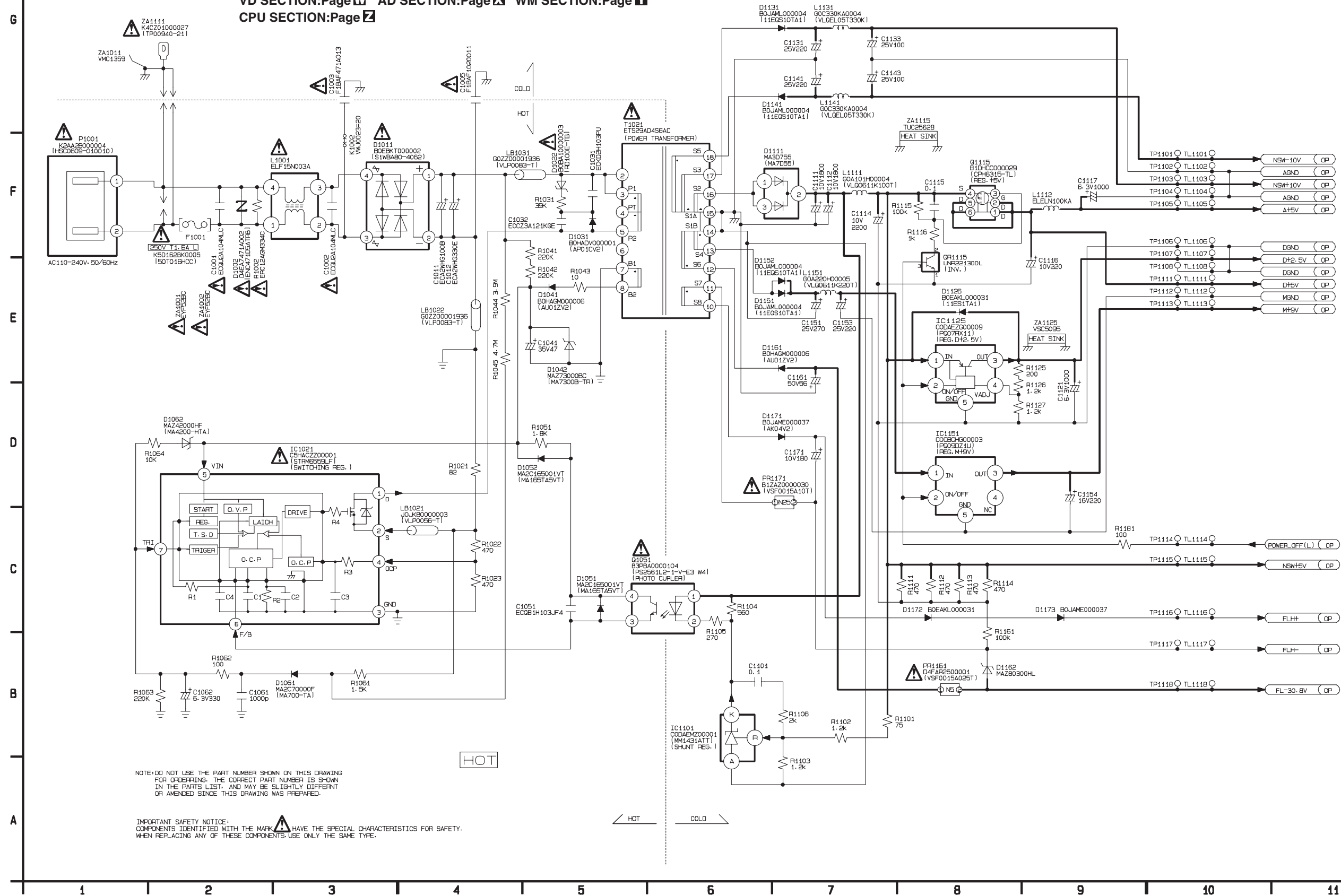


SCHEMATIC DIAGRAM

POWER P.C.B. 1/2 (POWER SECTION)

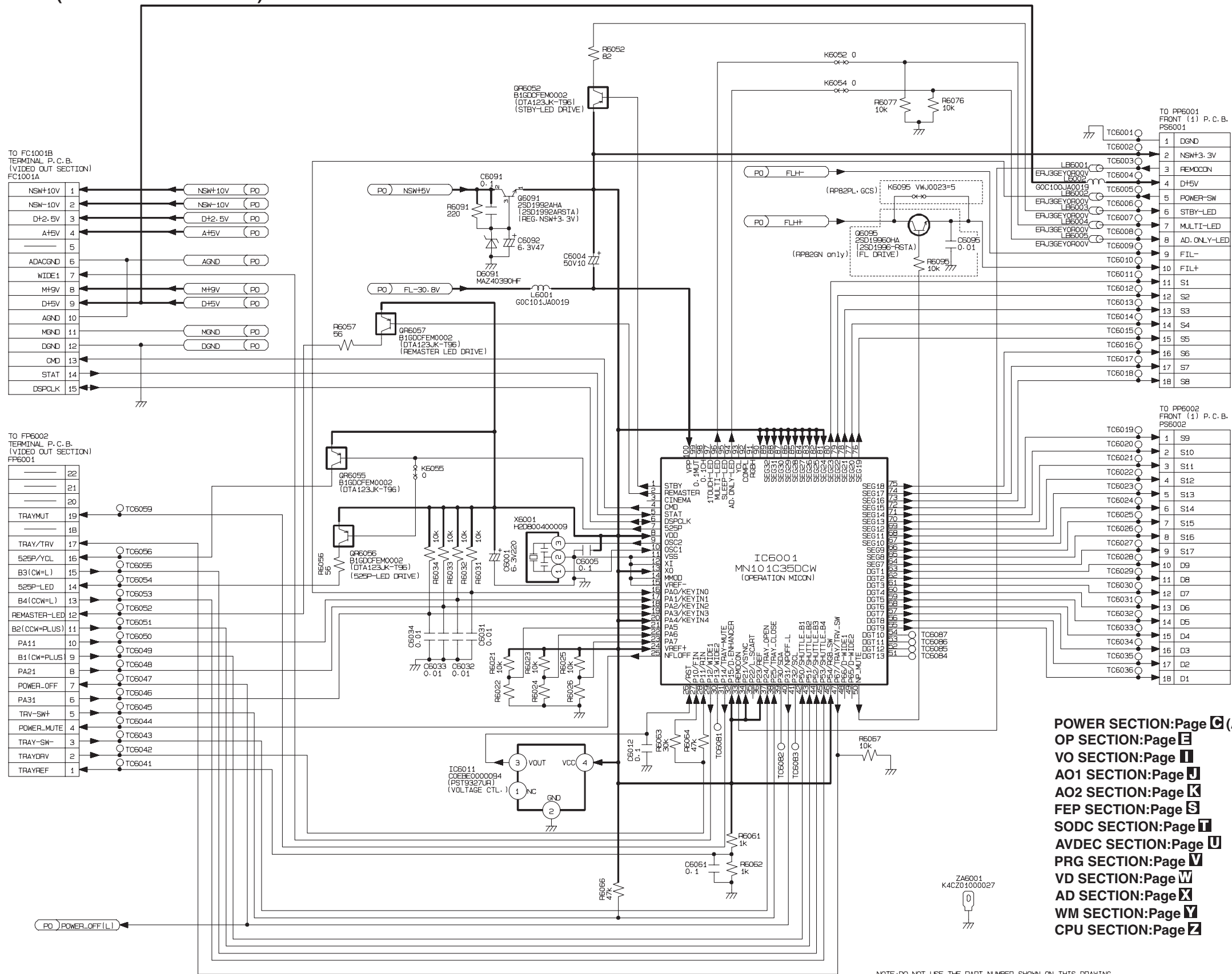
POWER SECTION:Page **D** OP SECTION:Page **E** VO SECTION:Page **F**
 AO1 SECTION:Page **G** AO2 SECTION:Page **H** FEP SECTION:Page **I**
 SODC SECTION:Page **J** AVDEC SECTION:Page **K** PRG SECTION:Page **L**
 VD SECTION:Page **M** AD SECTION:Page **N** WM SECTION:Page **O**
 CPU SECTION:Page **P**

R model

D


SCHEMATIC DIAGRAM
POWER P.C.B. 2/2 (OPERATION SECTION)

A, R models

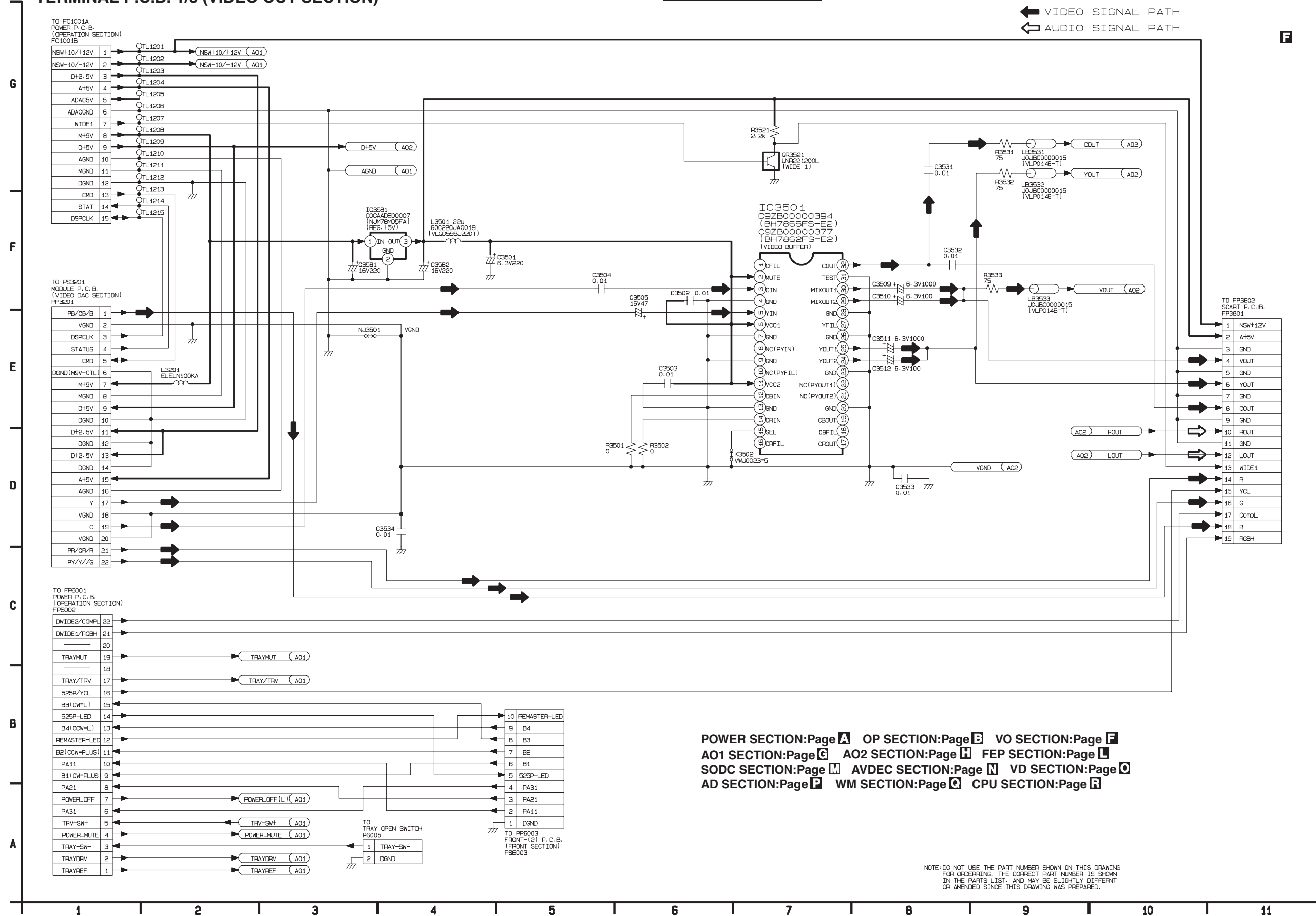


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING
FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN
IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT
OR AMENDED SINCE THIS DRAWING WAS PREPARED.

■ SCHEMATIC DIAGRAM

TERMINAL P.C.B. 1/3 (VIDEO OUT SECTION)

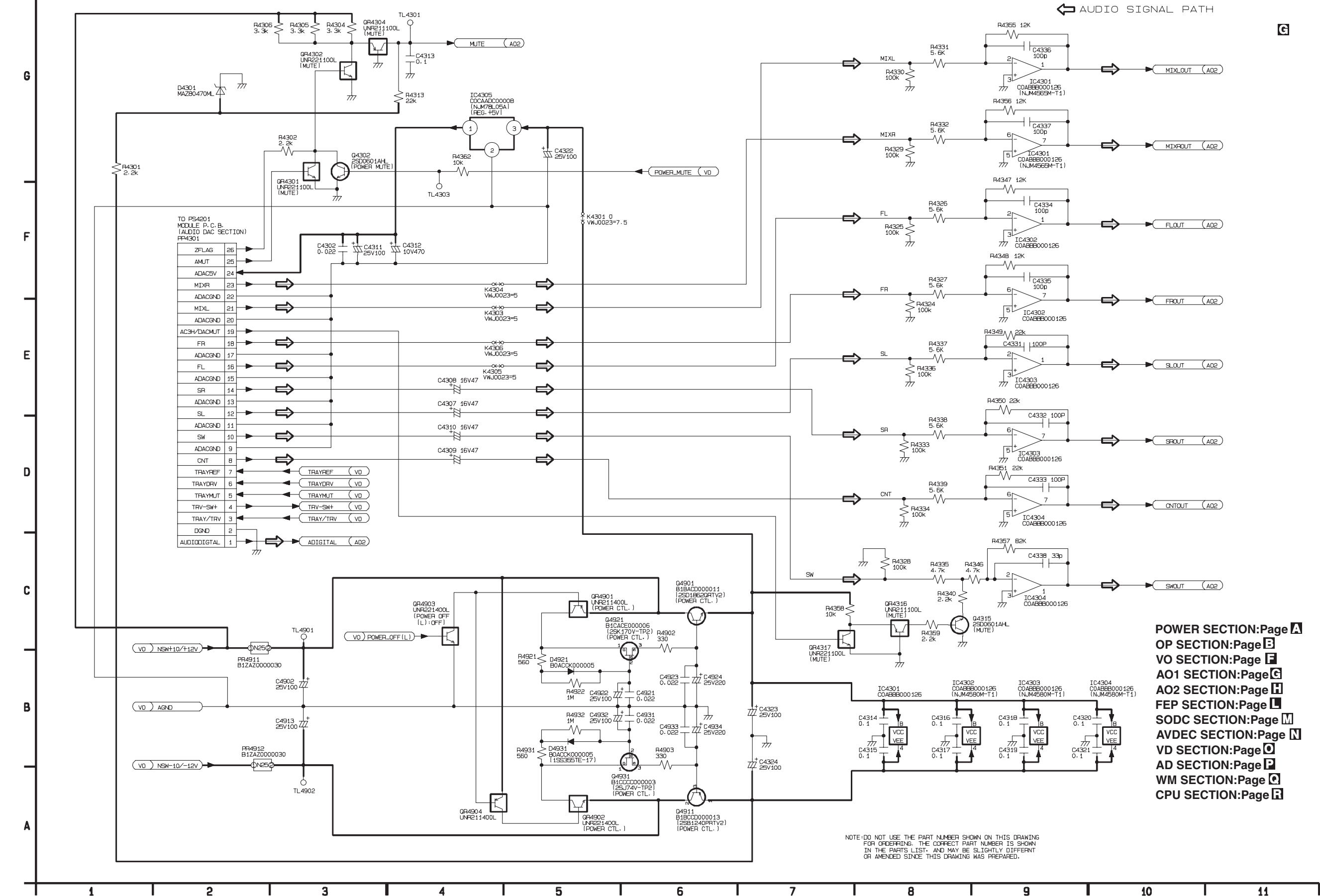
B, G models



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING
FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN
IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT
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TERMINAL P.C.B. 2/3 (AUDIO OUT 1 SECTION)

B, G models



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING
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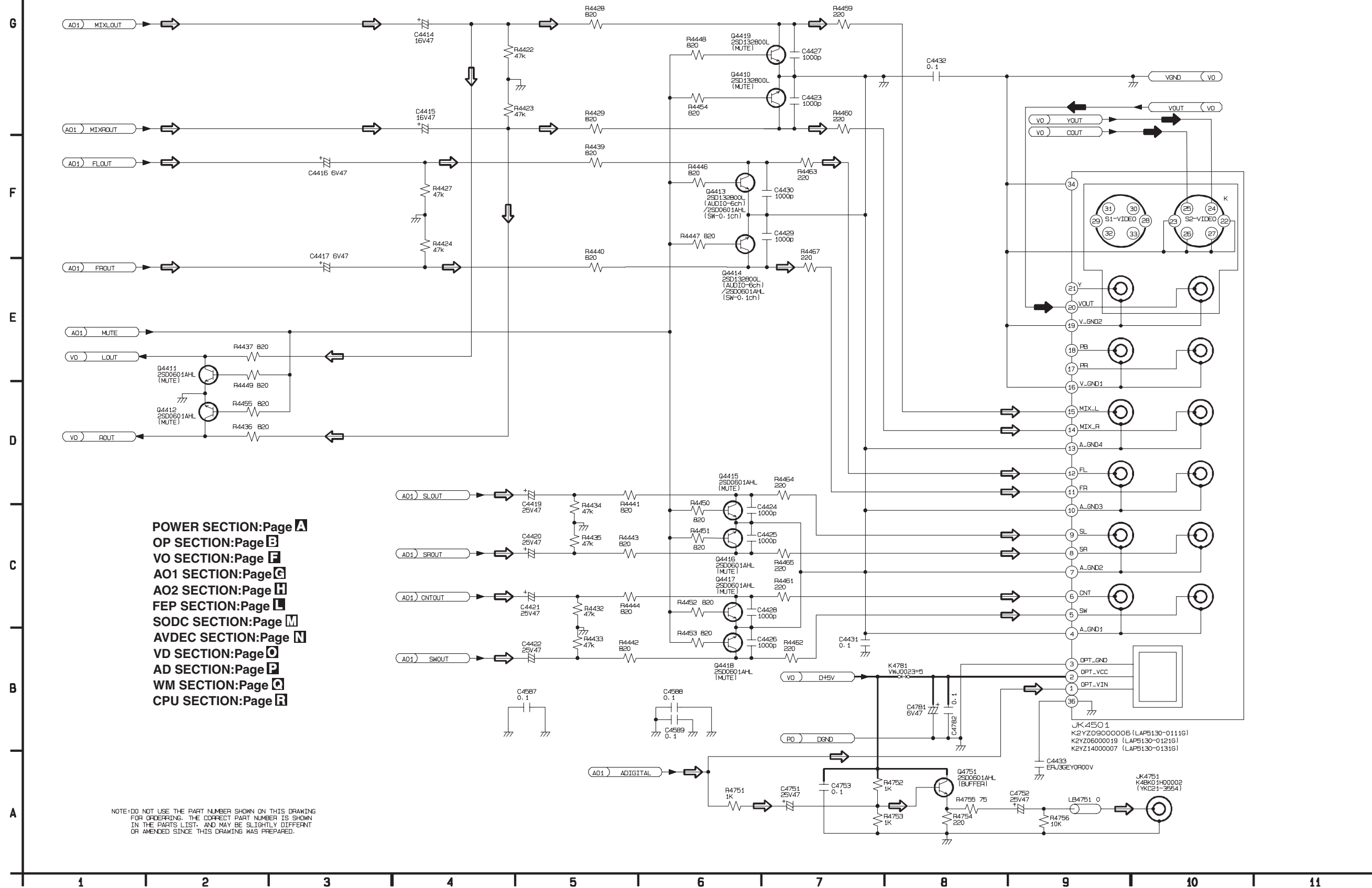
SCHEMATIC DIAGRAM

TERMINAL P.C.B. 3/3 (AUDIO OUT 2 SECTION)

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH

B, G models

H



POWER SECTION:Page A
OP SECTION:Page B
VO SECTION:Page C
AO1 SECTION:Page D
AO2 SECTION:Page E
FEP SECTION:Page F
SODC SECTION:Page G
AVDEC SECTION:Page H
VD SECTION:Page I
AD SECTION:Page J
WM SECTION:Page K
CPU SECTION:Page L

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

SCHEMATIC DIAGRAM

TERMINAL P.C.B. 1/3 (VIDEO OUT SECTION)

A, R models

VIDEO SIGNAL PATH

1

G

F

E

D

C

B

A

TO FC1001A
POWER P.C.B.
(OPERATION SECTION)
FC1001B

NSW+10V	1	OTL1201	NSW+10V (AO1)
NSW-10V	2	OTL1202	NSW-10V (AO1)
D+2.5V	3	OTL1203	
A+5V	4	OTL1204	
	5		
ADACGND	6	OTL1206	
WIDE1	7	OTL1207	
M+5V	8	OTL1208	
D+5V	9	OTL1209	
AGND	10	OTL1210	
M+5V	11	OTL1211	
D+5V	12	OTL1212	
STAT	13	OTL1213	
DSPCLK	14	OTL1214	
	15	OTL1215	

TO PS3201
MODULE P.C.B.
(VIDEO DAC SECTION)
PS3201

PB/CB/B	1		
VGND	2		
DSPCLK	3		
STATUS	4		
CMD	5		
D+5V	6	L3201 EELN100KA	
M+5V	7		
M+5V	8		
D+5V	9		
D+5V	10		
D+5V	11		
D+5V	12		
D+5V	13		
D+5V	14		
A+5V	15		
AGND	16		
Y	17		
VGND	18		
C	19		
VGND	20		
PR/CR/R	21		
PY/Y/G	22		

TO FP6001
POWER P.C.B.
(OPERATION SECTION)
FP6002

	22		
	21		
	20		
TRAYMUT	19	TRAYMUT (AO1)	
	18		
TRAY/TRV	17	TRAY/TRV (AO1)	
52SP/YCL	16		
B3(CW=L)	15		
52SP-LED	14		
B4(CW=L)	13		
REMASTER-LED	12		
B2(CW=PLUS)	11		
PA11	10		
B1(CW=PLUS)	9		
PA21	8		
POWER-OFF	7	POWER-OFF (L) (AO1)	
PA31	6		
TRV-SW+	5	TRV-SW+ (AO1)	
POWER_MUTE	4	POWER_MUTE (AO1)	
TRAY-SW-	3		
TRAYDRV	2		
TRAYREF	1		

TO TRAY OPEN SWITCH PE005	
1 TRAY-SW-	
2 DGND	

10 REMASTER-LED	
9 B4	
8 B3	
7 B2	
6 B1	
5 52SP-LED	
4 PA31	
3 PA21	
2 PA11	
1 DGND	

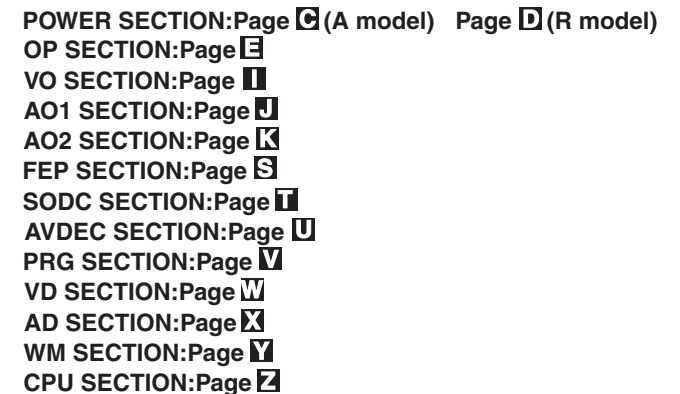
TO FP6003
FRONT-(2) P.C.B.
FP6003

POWER SECTION:Page G (A model) Page D (R model)
OP SECTION:Page F
VO SECTION:Page 1
AO1 SECTION:Page J
AO2 SECTION:Page K
FEP SECTION:Page S
SODC SECTION:Page T
AVDEC SECTION:Page U
PRG SECTION:Page V
VD SECTION:Page W
AD SECTION:Page X
WM SECTION:Page Y
CPU SECTION:Page Z

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A, R models

← AUDIO SIGNAL PATH



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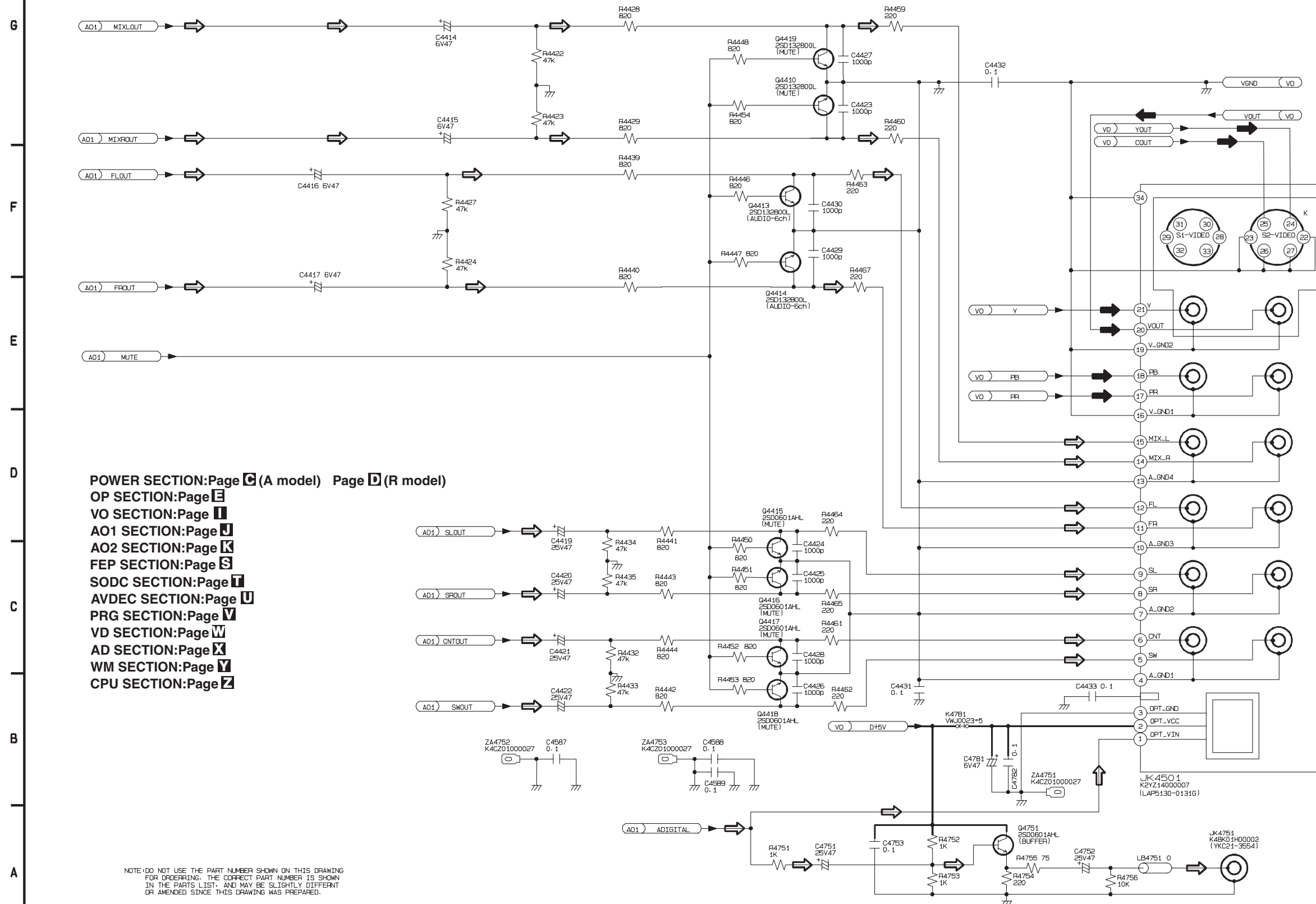
■ SCHEMATIC DIAGRAM

TERMINAL P.C.B. 3/3 (AUDIO OUT 2 SECTION)

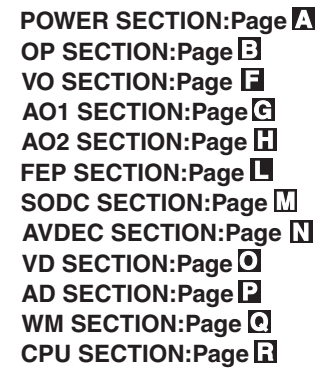
← VIDEO SIGNAL PATH

← AUDIO SIGNAL PATH

A, R models

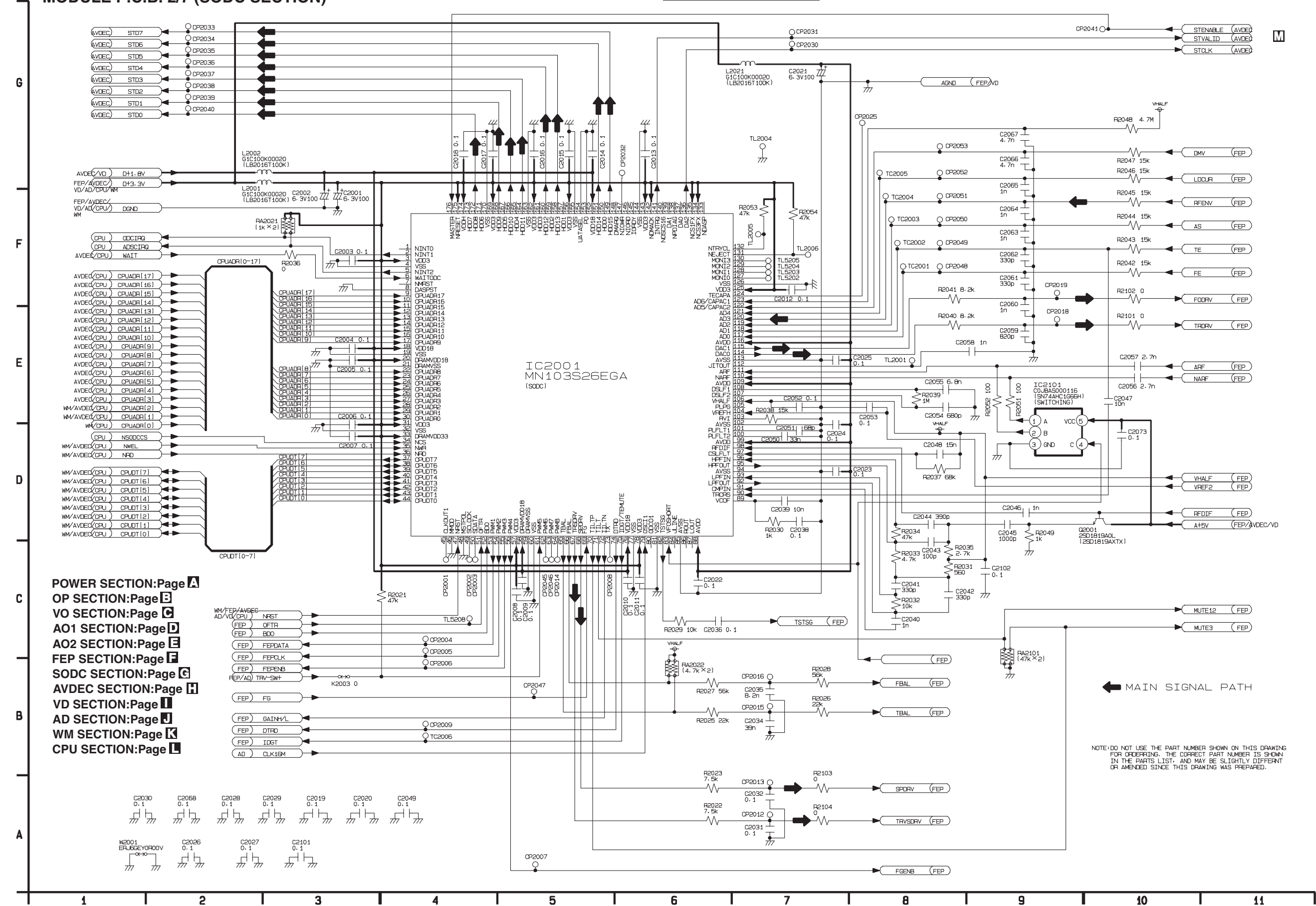


B, G models

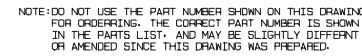


SCHEMATIC DIAGRAM
MODULE P.C.B. 2/7 (SODC SECTION)

B, G models



B, G models



SCHEMATIC DIAGRAM

MODULE P.C.B. 4/7 (VIDEO-DAC SECTION)

B, G models

POWER SECTION:Page 1 OP SECTION:Page 2 VO SECTION:Page 3
AO1 SECTION:Page 4 AO2 SECTION:Page 5 FEP SECTION:Page 6
SODC SECTION:Page 7 AVDEC SECTION:Page 8 VD SECTION:Page 9
AD SECTION:Page 10 WM SECTION:Page 11 CPU SECTION:Page 12

VIDEO SIGNAL PATH

10

G

F

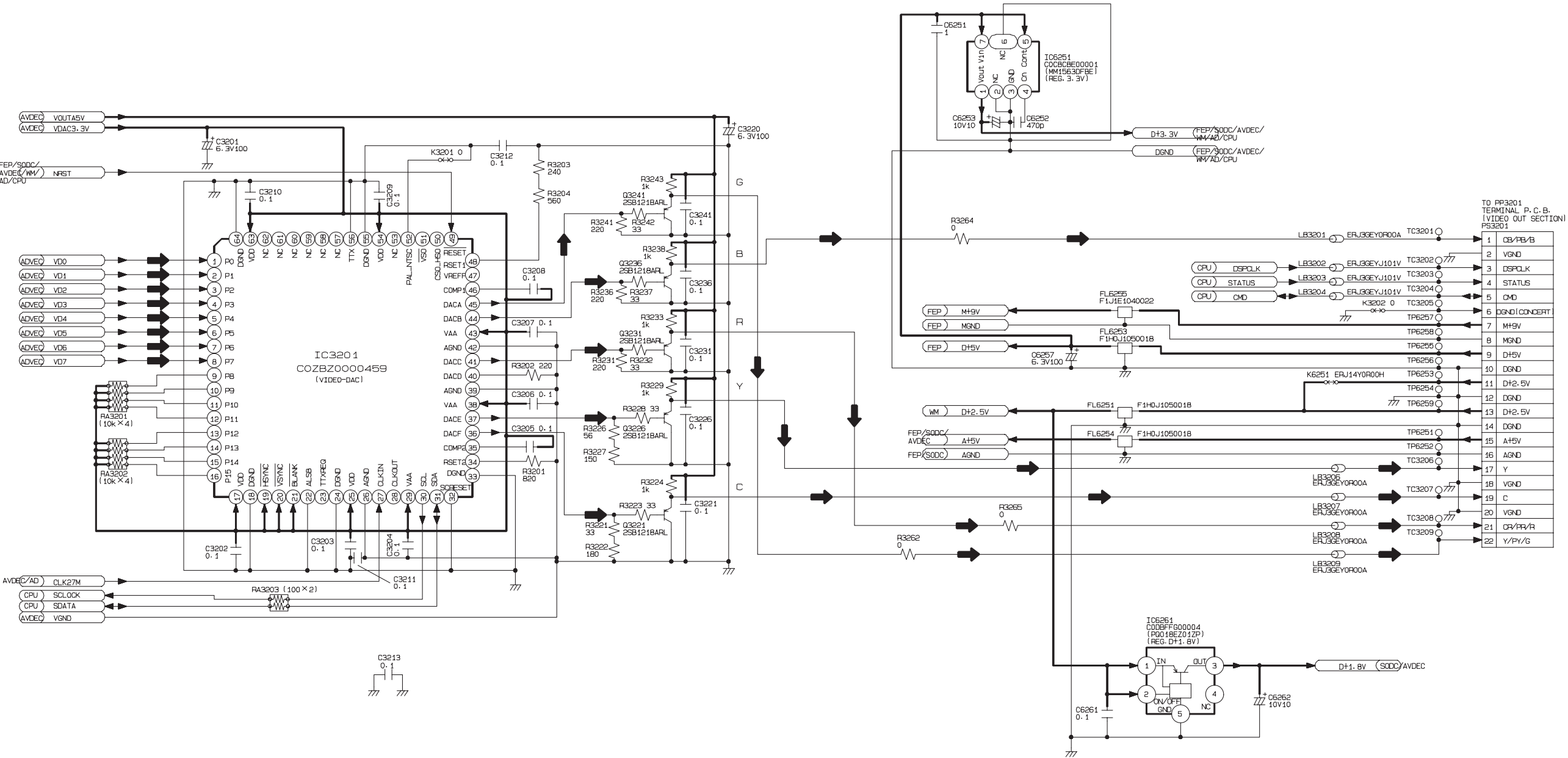
E

D

C

B

A



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

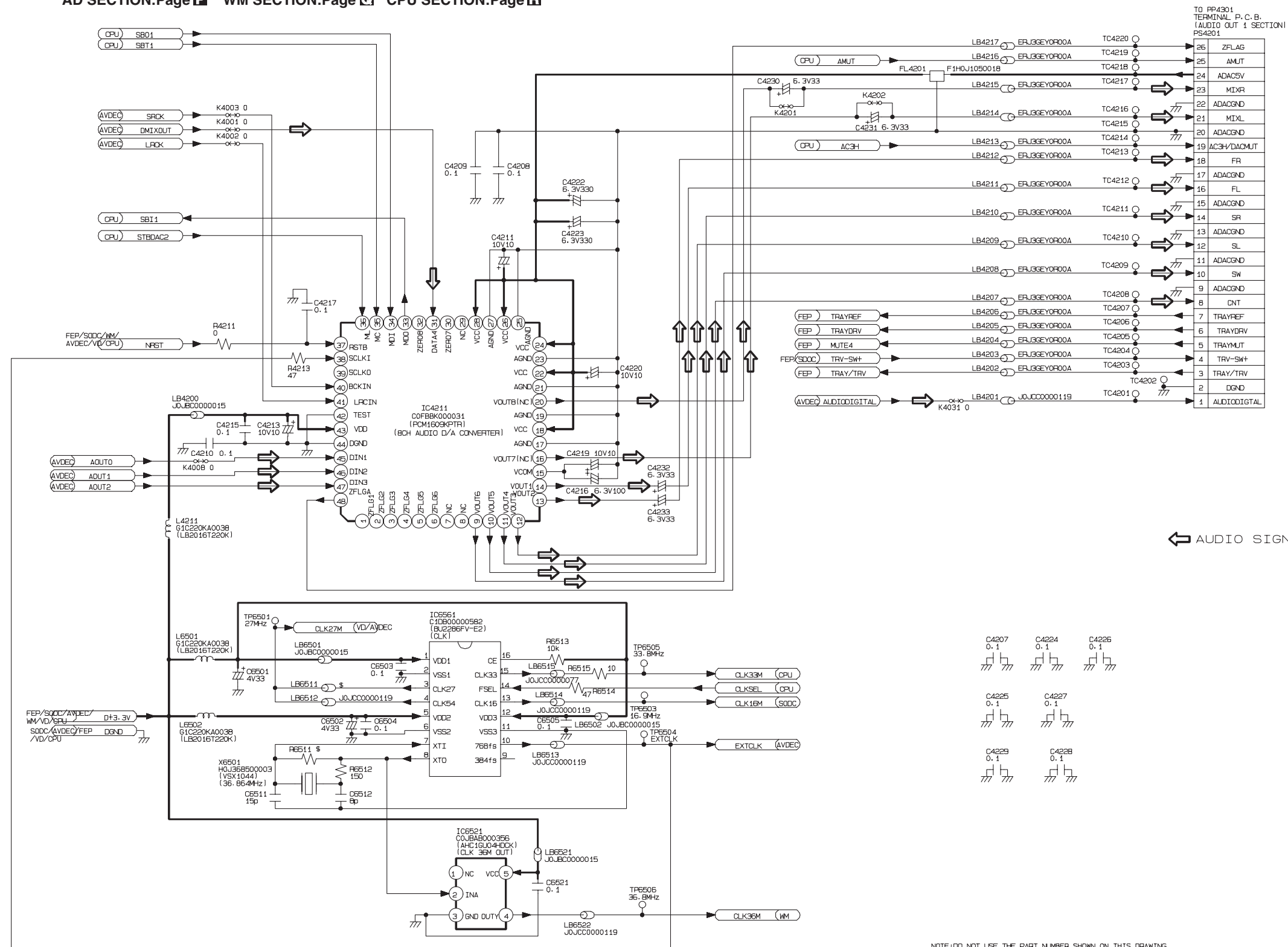
■ SCHEMATIC DIAGRAM

MODULE P.C.B. 5/7 (AUDIO DAC SECTION)

POWER SECTION:Page **A** OP SECTION:Page **B** VO SECTION:Page **F**
 AO1 SECTION:Page **G** AO2 SECTION:Page **H** FEP SECTION:Page **L**
 SODC SECTION:Page **M** AVDEC SECTION:Page **N** VD SECTION:Page **O**
 AD SECTION:Page **P** WM SECTION:Page **Q** CPU SECTION:Page **R**

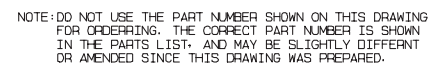
B, G models

P

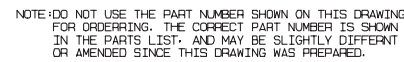


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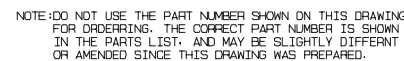
← AUDIO SIGNAL PATH



B, G models

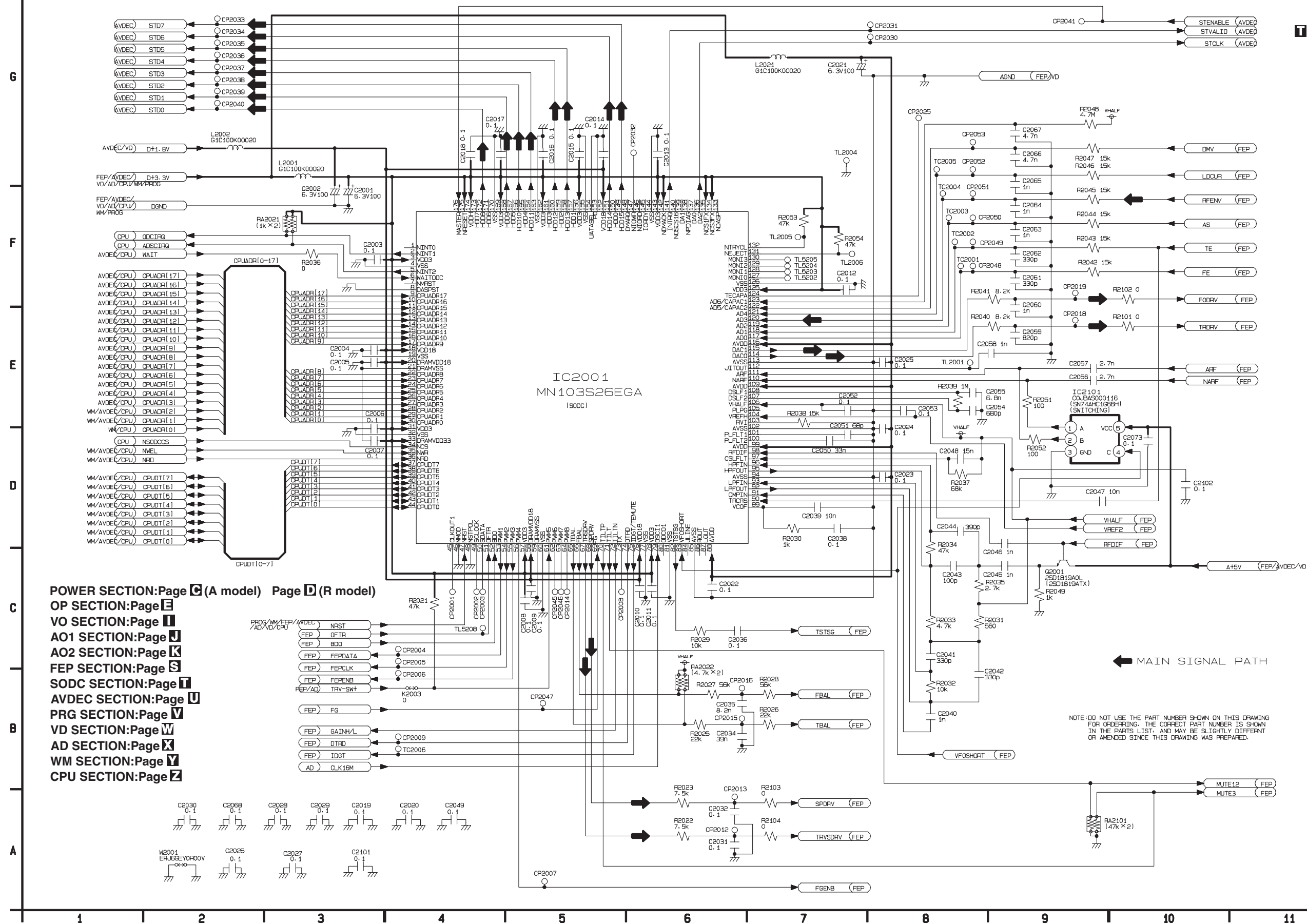


S



■ SCHEMATIC DIAGRAM MODULE P.C.B. 2/8 (SODC SECTION)

A, R models

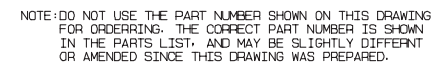


WM SECTION:Page Y

A, R models

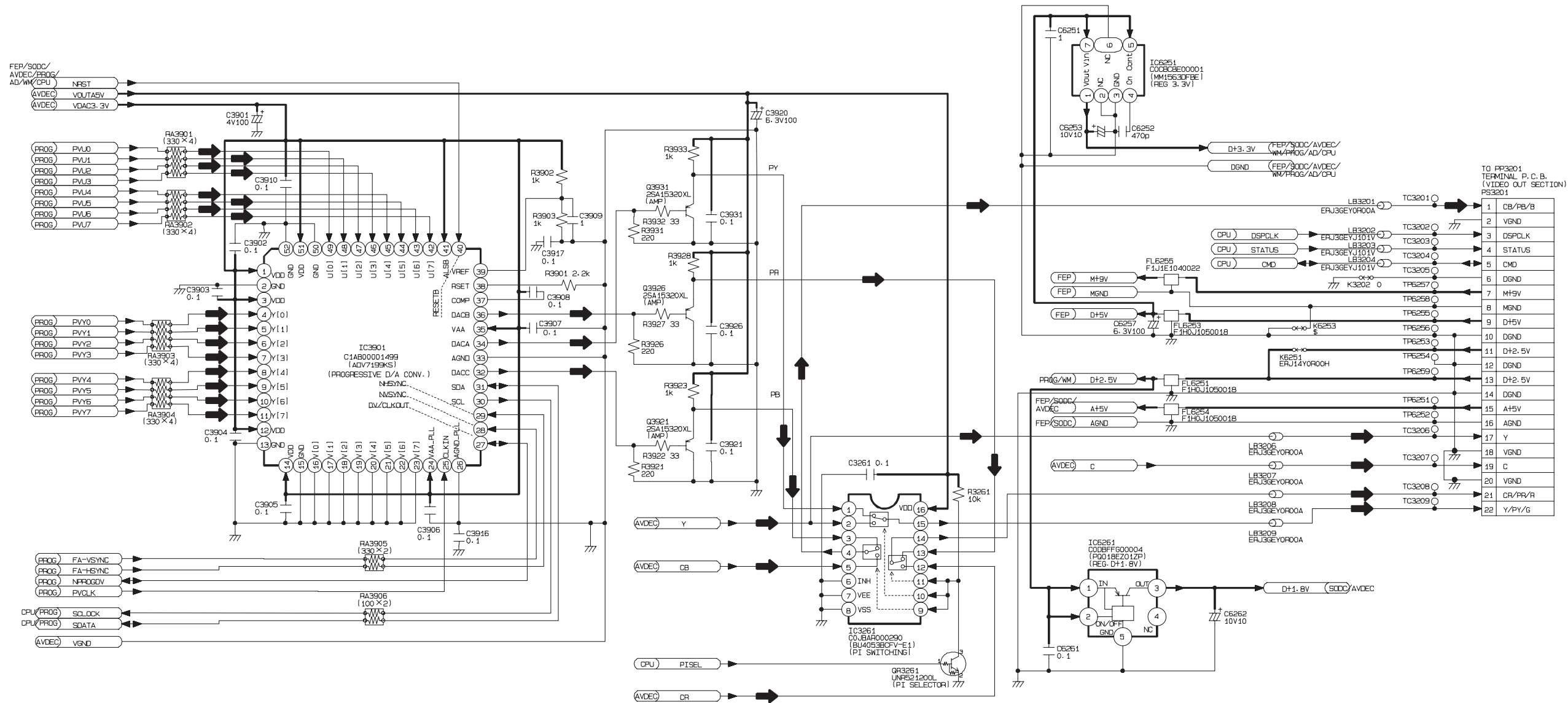
← VIDEO SIGNAL PATH

V



A, R models

← VIDEO SIGNAL PATH



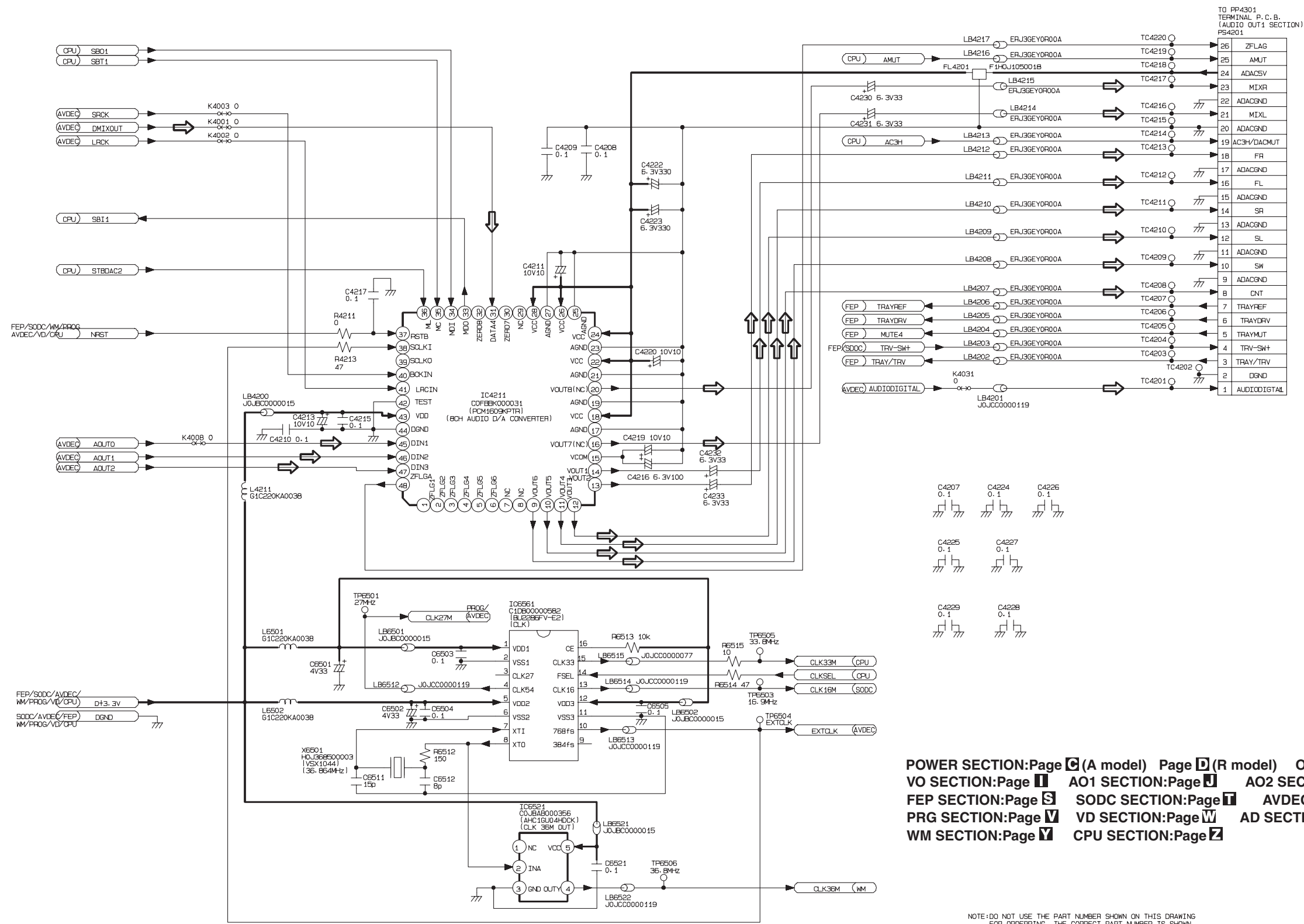
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING
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■ SCHEMATIC DIAGRAM
MODULE P.C.B. 6/8 (AUDIO DAC SECTION)

A, R models

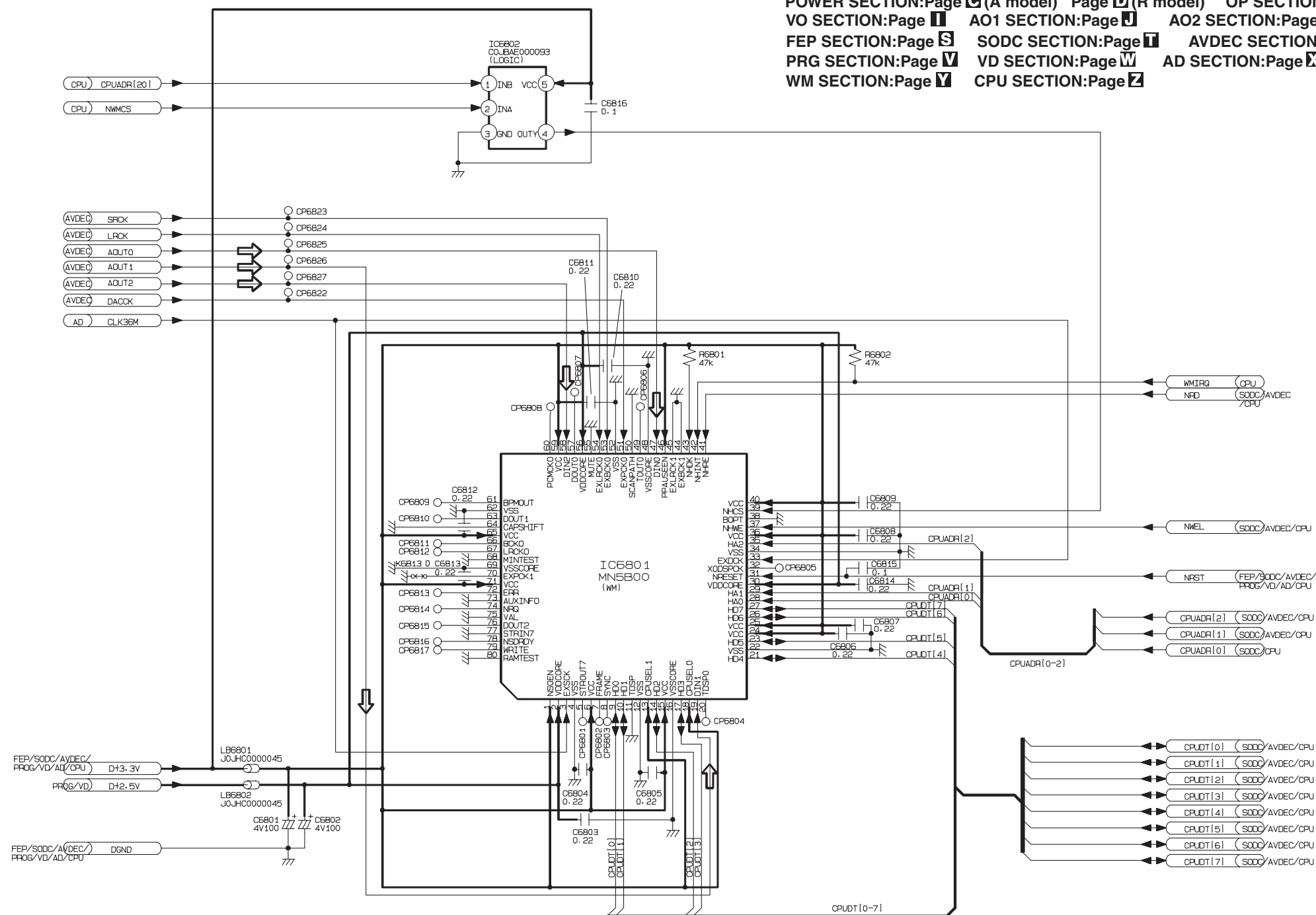
← AUDIO SIGNAL PATH

X



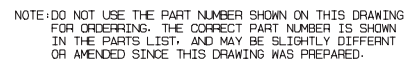
← AUDIO SIGNAL PATH

POWER SECTION:Page **C** (A model) Page **D** (R model) OP SECTION:Page **E**
VO SECTION:Page **I** AO1 SECTION:Page **J** AO2 SECTION:Page **K**
FEP SECTION:Page **S** SODC SECTION:Page **T** AVDEC SECTION:Page **U**
PRG SECTION:Page **V** VD SECTION:Page **W** AD SECTION:Page **X**
WM SECTION:Page **Y** CPU SECTION:Page **Z**

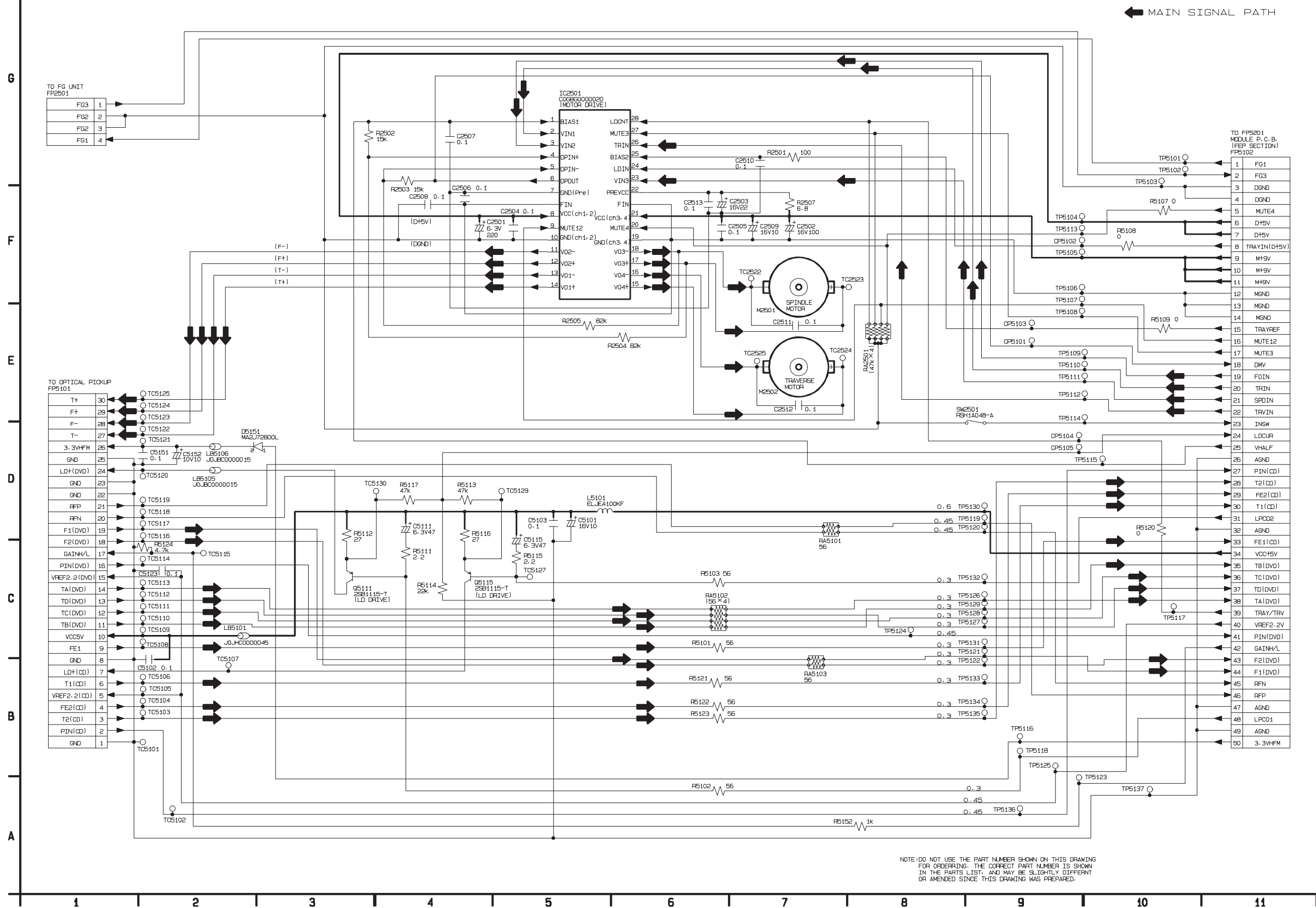


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING
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A, R models

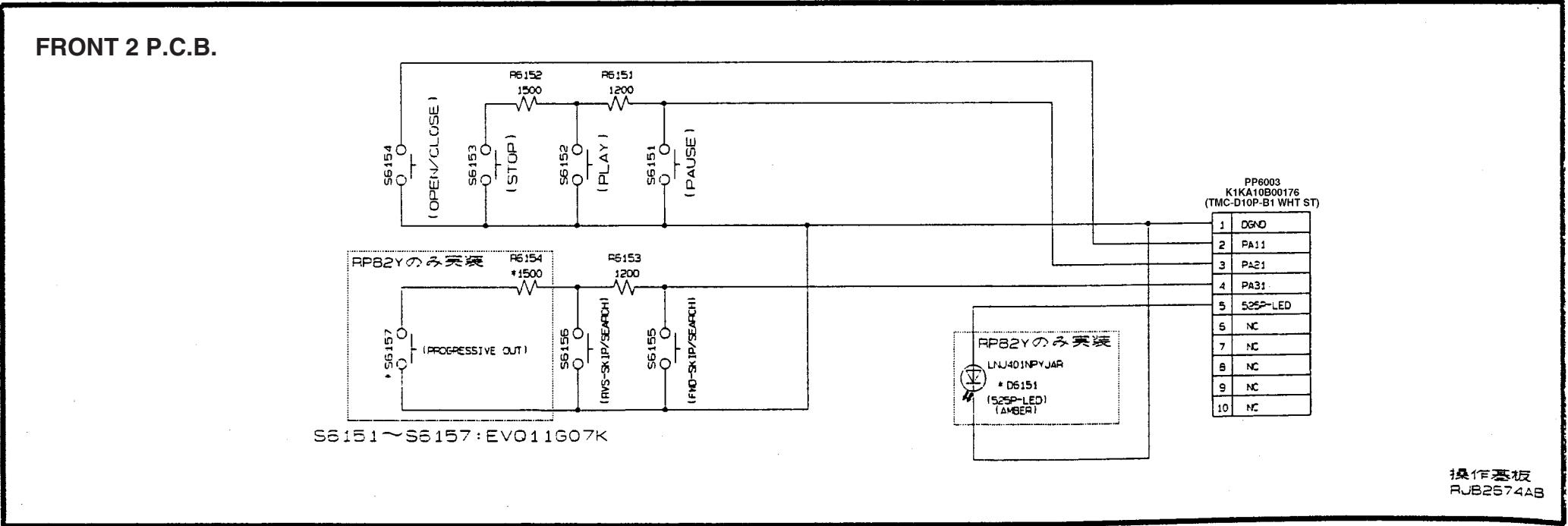
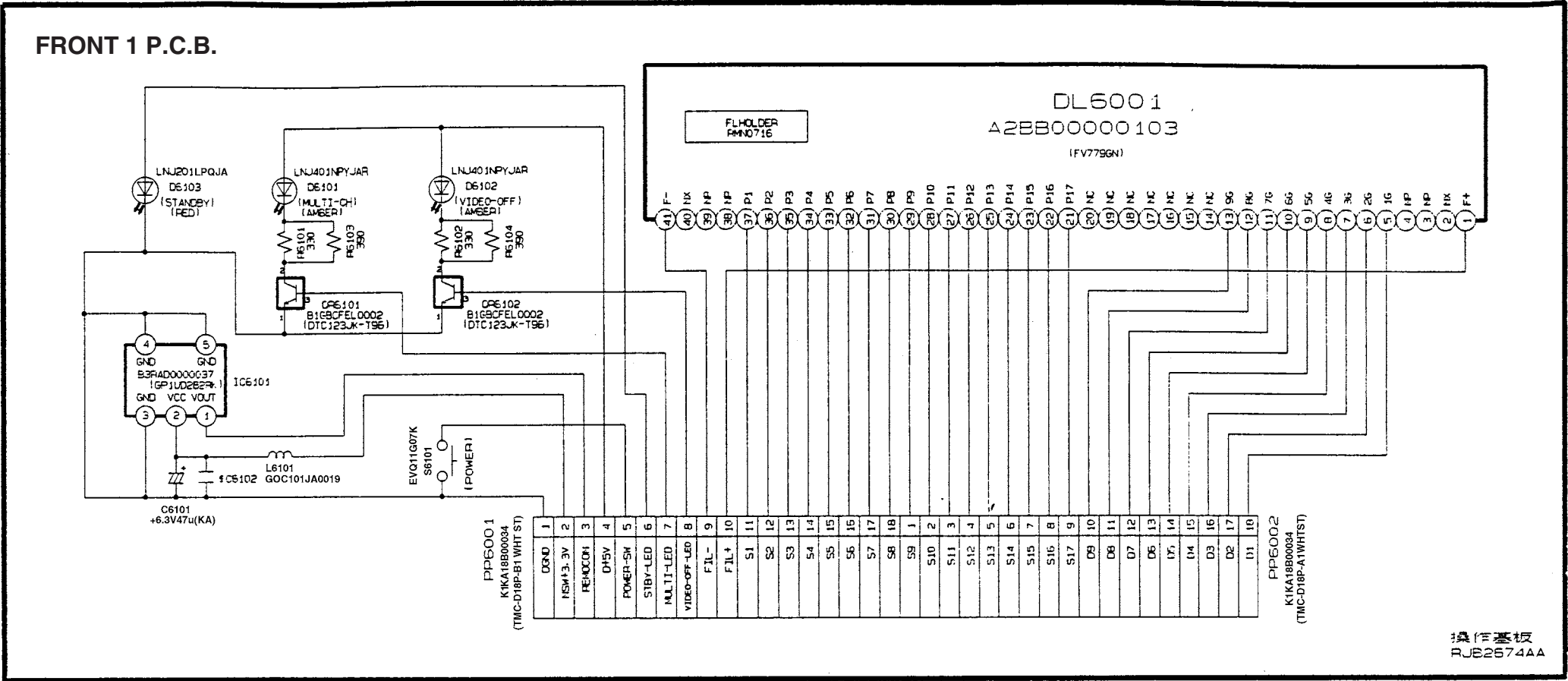


■ SCHEMATIC DIAGRAM
INTERMEDIATE P.C.B.



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

■ SCHEMATIC DIAGRAM
FRONT 1 and FRONT 2 P.C.B.



SCHEMATIC DIAGRAM
SCART P.C.B.

B, G models

← VIDEO SIGNAL PATH
↔ AUDIO SIGNAL PATH

G

F

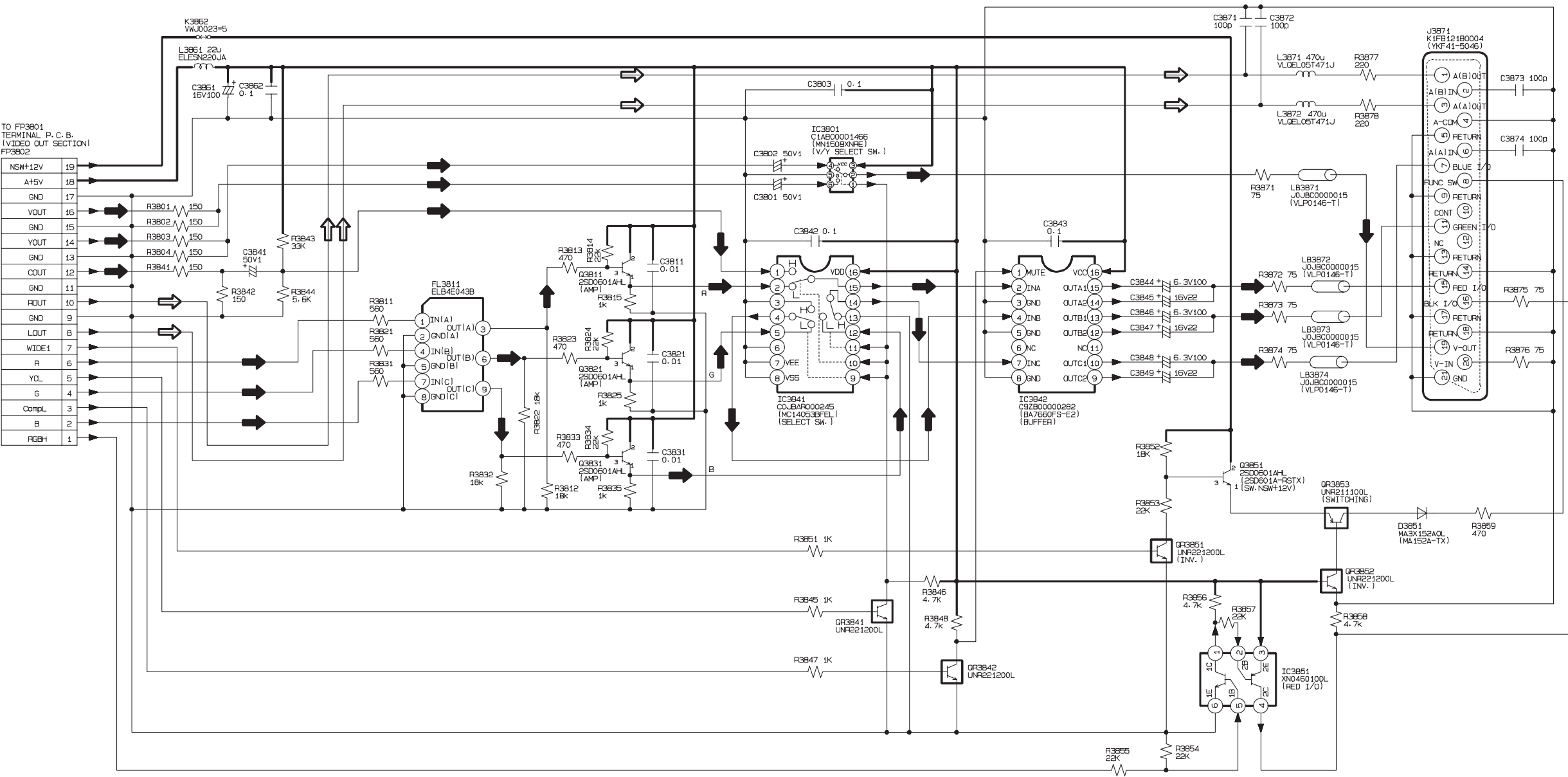
E

D

C

B

A



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING
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■ VOLTAGE CHART

1. POWER P.C.B.

B, G models

Ref No.	IC1101				IC1125					IC1151										
MODE	K	R	A		1	2	3	4	5		1	2	3	4	5					
PLAY	2.5	0	3.7		3.7	3.2	2.7	1.2	0		9.7	3.2	9.0	-	0					
STOP	2.5	0	3.6		3.7	3.1	2.7	1.2	0		9.7	3.1	9.0	-	0					
Ref No.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	3.3	3.3	1.0	2.8	3.0	3.2	3.3	1.5	1.6	0	0	3.3	0	0	3.3	3.3	3.3	3.3	3.3
STOP	3.2	3.2	3.2	1.0	2.7	2.9	3.2	3.2	1.5	1.6	0	0	3.2	0	0	3.2	3.2	3.2	3.2	3.2
Ref No.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	1.0	2.0	3.3	0	3.3	1.6	1.6	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.2
STOP	0	1.0	1.9	3.2	0	3.2	1.6	1.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	0	3.2
Ref No.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	2.9	-	-	-	-	27.7	-27.6	-27.7	-27.7	-27.6	-27.7
STOP	0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.9	-	-	-	-	27.3	-27.3	-27.3	-27.3	-27.3	-27.3
Ref No.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	-27.8	-27.8	-28.3	-23.9	-24.0	-17.2	-10.4	-7.1	-13.7	-27.3	-27.3	-23.9	-24.2	24.1	-24.2	-27.5	-27.5	-7.3	-17.5	-13.9
STOP	-27.5	-27.4	-27.9	-26.9	-30.2	-23.6	-16.9	-20.3	-20.2	-26.9	-23.5	-26.7	-20.7	-23.9	-27.1	-23.8	-30.4	-17.2	-17.2	-13.7
Ref No.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	-	-	3.2	-	-	-	-	3.1	-4.7	-31.0
STOP	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	-	-	3.2	-	-	-	-	3.1	-4.7	-30.5
Ref No.																				
MODE																				
PLAY																				
STOP																				
Ref No.	IC6011																			
MODE	1	2	3	4																
PLAY	-	0	3.3	3.3																
STOP	-	0	3.3	3.3																
Ref No.	Q1021				Q1051				Q1052				Q1115							
MODE	1	2	3		1	2	3	4		1	2	3			1	2	3	4	5	6
PLAY	0	51.0	-0.3		5.2	4.1	0.7	13.0		0	-0.2	0			5.1	5.1	0	5.1	5.1	5.1
STOP	0	165.7	-0.2		5.2	4.1	0.8	12.6		0	-0.2	0			5.1	5.1	0	5.1	5.1	5.1
Ref No.	Q6091				Q6095				QR1115				QR6052				QR6056			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	3.3	5.1	4.0		-24.5	-24.5	-23.8		0	0	3.2		3.3	-0.4	3.3		3.3	0	3.2	
STOP	3.3	5.1	3.9		-24.1	-24.1	-23.4		0	0	3.1		3.3	-0.3	3.3		3.3	0	3.2	
Ref No.	QR6057																			
MODE	E	C	B																	
PLAY	3.2	0	3.2																	
STOP	3.2	0	3.2																	

A model

Ref No.	IC1101				IC1125					IC1151										
MODE	K	R	A		1	2	3	4	5		1	2	3	4	5					
PLAY	3.7	2.5	0		3.7	3.0	2.7	1.3	0		9.8	3.1	9.1	-	0					
STOP	3.6	2.5	0		3.7	3.0	2.7	1.3	0		9.8	3.1	9.1	-	0					
Ref No.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	3.3	3.3	1.0	2.8	3.0	3.2	3.3	1.5	1.0	0	0	3.3	0	0	3.3	3.3	3.3	3.3	3.3
STOP	3.2	3.2	3.2	1.0	2.7	2.9	3.2	3.2	1.5	1.0	0	0	3.2	0	0	3.2	3.2	3.2	3.2	3.2
Ref No.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	1.5	1.1	3.3	0	3.3	1.6	1.6	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.2
STOP	0	1.5	1.1	3.2	0	3.2	1.6	1.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	0
Ref No.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	2.9	-0.8	-0.8	-0.8	-0.8	-27.8	-27.6	-27.7	-27.7	-27.6	-27.7
STOP	0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.9	-0.8	-0.8	-0.8	-0.8	-27.8	-27.3	-27.3	-27.3	-27.3	-27.3
Ref No.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	-27.8	-27.8	-28.3	-27.5	-20.7	-20.6	-10.4	-10.4	-17.2	-27.3	-27.5	-27.4	-27.5	-20.6	-27.5	-30.8	-20.6	-13.8	-17.5	-20.7
STOP	-27.5	-27.4	-27.9	-27.5	-20.7	-20.6	-10.4	-10.4	-17.2	-26.9	-27.5	-27.4	-27.5	-20.6	-27.5	-30.8	-20.6	-13.8	-17.2	-20.7
Ref No.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	-	-	3.2	0	-	0	-	3.3	3.3	-31.0
STOP	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	-	-	3.2	0	-	0	-	3.3	3.3	-30.5
Ref No.	IC6011																			
MODE	1	2	3	4																
PLAY	-	0	3.3	3.3																
STOP	-	0	3.3	3.3																
Ref No.	Q1021				Q1051				Q1052				Q1115							
MODE	1	2	3		1	2	3	4		1	2	3		1	2	3	4	5	6	
PLAY	0	126.3	0.3		5.2	4.1	0.2	1.8		0	0.3	0.1		5.1	5.1	0	5.1	5.1	5.1	
STOP	0	119.3	0.2		5.2	4.1	0.1	1.7		0	0.2	0.1		5.1	5.1	0	5.1	5.1	5.1	
Ref No.	Q6091				Q6095				QR1115				QR6052				QR6055			
MODE	E	C	B		E	C	B		1	2	3		E	C	B		E	C	B	
PLAY	3.3	5.1	4.0		-24.8	-24.7	-24.0		0	0	3.0		3.3	0	3.3		3.3	0.1	3.3	
STOP	3.3	5.1	3.9		-24.2	-24.1	-23.4		0	0	3.0		3.3	-0.1	3.3		3.3	0.1	3.3	
Ref No.	QR6056				QR6057															
MODE	E	C	B		E	C	B													
PLAY	3.3	0	3.3		3.2	0	3.2													
STOP	3.3	0	3.3		3.2	0	3.2													

R model

Ref No.	IC1021								IC1101				IC1125								
MODE	1	2	3	4	5	6	7		K	R	A		1	2	3	4	5				
PLAY	24.5	0.1	0	0	18.6	0.5	0.3		4.1	2.5	0		5.2	3.0	2.7	1.3	0				
STOP	34.4	0.1	0	0	18.2	0.5	0.2		4.1	2.5	0		5.2	3.0	2.7	1.3	0				
Ref No.	IC1151																				
MODE	1	2	3	4	5																
PLAY	9.9	3.0	9.0	-	0																
STOP	10.0	3.0	9.0	-	0																
Ref No.	IC6001																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLAY	3.3	3.3	3.3	1.1	2.8	3.0	3.2	3.3	1.5	1.0	0	0	3.3	0	0	3.3	3.3	3.3	3.3	3.3	
STOP	3.2	3.2	3.3	1.1	2.7	2.9	3.2	3.2	1.5	1.0	0	0	3.2	0	0	3.2	3.2	3.2	3.2	3.2	
Ref No.	IC6001																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
PLAY	0	1.5	1.1	3.3	0	3.3	1.6	1.6	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.2	
STOP	0	1.5	1.1	3.2	0	3.2	1.6	1.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	0	3.2	
Ref No.	IC6001																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
PLAY	0	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	-0.8	-0.8	-0.8	-0.8	-27.8	-27.6	-27.7	-27.7	-27.6	-27.7	
STOP	0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	-0.8	-0.8	-0.8	-0.8	-27.8	-27.3	-27.3	-27.3	-27.3	-27.3	
Ref No.	IC6001																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
PLAY	-27.8	-27.8	-28.3	-27.5	-20.7	-20.6	-10.4	-10.4	-17.2	-27.3	-27.5	-27.4	-27.5	-20.6	-27.5	-30.8	-20.6	-13.8	-17.3	-20.7	
STOP	-27.5	-27.4	-27.9	-27.5	-20.7	-20.6	-10.4	-10.4	-17.2	-26.9	-27.5	-27.4	-27.5	-20.6	-27.5	-30.8	-20.6	-13.8	-17.2	-20.7	
Ref No.	IC6001																				
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
PLAY	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	-	-	3.3	0	-	0	-	3.3	3.3	-31.2	
STOP	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	-	-	3.3	0	-	0	-	3.3	3.3	-31.2	
Ref No.	IC6011																				
MODE	1	2	3	4																	
PLAY	-	0	3.3	3.3																	
STOP	-	0	3.3	3.3																	
Ref No.	Q1051					Q1115							Q6091								
MODE	1	2	3	4		1	2	3	4	5	6		E	C	B						
PLAY	5.2	4.2	0.5	17.9		5.1	5.1	0.1	5.2	5.1	5.1		3.3	5.2	4.0						
STOP	5.2	4.2	0.5	17.5		5.1	5.1	0.1	5.2	5.1	5.1		3.3	5.2	4.0						
Ref No.	QR1115					QR6052				QR6055				QR6056				QR6057			
MODE	1	2	3		E	C	B		E	C	B		E	C	B		E	C	B		
PLAY	0	0	3.0		3.3	-0.8	3.3		3.3	0.1	3.3		3.3	-0.6	3.3		3.3	-0.6	3.3		
STOP	0	0	3.0		3.3	-0.4	3.3		3.3	0.1	3.3		3.3	-0.1	3.3		3.3	-0.1	3.3		

2. TERMINAL P.C.B.

B, G models

Ref No.	IC3501																					
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
PLAY	2.1	5.0	2.8	0	2.6	5.0	0	2.5	0	1.9	5.0	2.8	0	2.8	5.0	2.2	2.3	-	2.3	0		
STOP	2.1	5.0	2.8	2.4	2.4	5.0	0	2.4	0	1.8	5.0	2.8	0	2.8	5.0	2.2	2.3	-	2.3	0		
Ref No.	IC3501														IC3581							
MODE	21	22	23	24	25	26	27	28	29	30	31	32			1	2	3					
PLAY	2.1	2.1	0	2.0	2.1	0	1.9	0	2.0	2.0	0	2.3			8.9	0	5.1					
STOP	1.7	1.7	0	1.7	1.7	0	1.8	0	1.7	1.6	0	2.3			8.9	0	5.1					
Ref No.	IC4301											IC4302										
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8				
PLAY	0	0	0	-10.4	0	0	0	10.2			0	0	0	-9.7	0	0	0	9.0				
STOP	0	0	0	-10.3	0	0	0	10.1			0	0	0	-9.6	0	0	0	9.0				
Ref No.	IC4303											IC4304										
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8				
PLAY	0	0	0	-9.7	0	0	0	9.0			0	0	0	-9.7	0	0	0	9.0				
STOP	0	0	0	-9.6	0	0	0	9.0			0	0	0	-9.6	0	0	0	9.0				
Ref No.	IC4305																					
MODE	1	2	3																			
PLAY	4.9	0	9.0																			
STOP	4.9	0	9.0																			
Ref No.	Q4302				Q4315				Q4410				Q4411				Q4412					
MODE	E	C	B				E	C	B				E	C	B				E	C	B	
PLAY	0	2.8	0				0	0	-0.4				0	0	-4.7				0	0	-4.7	
STOP	0	0	0				0	0	-0.3				0	0	0.7				0	0	0.7	
Ref No.	Q4413				Q4414				Q4415				Q4416				Q4417					
MODE	E	C	B				E	C	B				E	C	B				E	C	B	
PLAY	0	0	-4.7				0	0	-4.7				0	0	-4.7				0	0	-4.7	
STOP	0	0	-4.7				0	0	0.7				0	0	0.7				0	0	0.7	
Ref No.	Q4418				Q4419				Q4751				Q4901				Q4911					
MODE	E	C	B				E	C	B				E	C	B				E	C	B	
PLAY	0	0	-4.7				0	0	-4.7				1.7	4.9	2.4				9.1	-10.4	-10.4	
STOP	0	0	0.7				0	0	0.7				1.8	4.9	2.4				9.1	9.7	9.6	
Ref No.	Q4921				Q4931				QR3521				QR3523				QR4301					
MODE	E	C	B				E	C	B				E	C	B				E	C	B	
PLAY	9.8	9.7	9.8				-10.4	-10.4	-10.4				0	0	3.2				0	2.8	0	
STOP	9.7	9.7	9.7				-10.3	-10.3	-10.3				0	0	3.2				0	0	3.2	
Ref No.	QR4302				QR4304				QR4316				QR4317				QR4901					
MODE	E	C	B				E	C	B				E	C	B				E	C	B	
PLAY	0	0.1	2.8				0.1	-4.7	0				0	-0.4	0				9.8	9.8	0	
STOP	0	1.5	0				1.5	1.3	0				0	-0.3	0				9.7	9.7	0	
Ref No.	QR4902				QR4903				QR4904													
MODE	E	C	B				E	C	B													
PLAY	-10.4	-10.4	9.8				0	0	3.0				9.8	9.8	0							
STOP	-10.3	-10.3	9.7				0	0	3.0				9.7	9.7	0							

A, R models

Ref No.	IC3501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	2.1	5.0	2.8	0	2.6	5.0	0	2.5	0	1.9	5.0	2.8	0	2.8	5.0	2.2	2.3	-	2.3	0
STOP	2.1	5.0	2.8	2.4	2.4	5.0	0	2.4	0	1.8	5.0	2.8	0	2.8	5.0	2.2	2.3	-	2.3	0
Ref No.	IC3501										IC3581									
MODE	21	22	23	24	25	26	27	28	29	30	31	32			1	2	3			
PLAY	2.1	2.1	0	2.0	2.1	0	1.9	0	2.0	2.0	0	2.3			8.9	0	5.1			
STOP	1.7	1.7	0	1.7	1.7	0	1.8	0	1.7	1.6	0	2.3			8.9	0	5.1			
Ref No.	IC4301										IC4302									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
PLAY	0	0	0	-10.4	0	0	0	10.2			0	0	0	-9.7	0	0	0	9.0		
STOP	0	0	0	-10.3	0	0	0	10.1			0	0	0	-9.6	0	0	0	9.0		
Ref No.	IC4303										IC4304									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
PLAY	0	0	0	-9.7	0	0	0	9.0			0	0	0	-9.7	0	0	0	9.0		
STOP	0	0	0	-9.6	0	0	0	9.0			0	0	0	-9.6	0	0	0	9.0		
Ref No.	IC4305																			
MODE	1	2	3																	
PLAY	4.9	0	9.0																	
STOP	4.9	0	9.0																	
Ref No.	Q4302					Q4315					Q4410					Q4413				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
PLAY	0	2.8	0			0	0	-0.4			0	0	-4.7			0	0	-4.7		
STOP	0	0	0			0	0	-0.3			0	0	0.7			0	0	-4.7		
Ref No.	Q4415					Q4416					Q4417					Q4418				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
PLAY	0	0	-4.7			0	0	-4.7			0	0	-4.7			0	0	-4.7		
STOP	0	0	0.7			0	0	0.7			0	0	0.7			0	0	0.7		
Ref No.	Q4751					Q4901					Q4911					Q4921				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
PLAY	1.7	4.9	2.4			9.1	9.8	9.7			-9.7	-10.4	-10.4			9.8	9.7	9.8		
STOP	1.8	4.9	2.4			9.1	9.8	9.7			9.0	9.7	9.6			9.7	9.7	9.7		
Ref No.	QR3501					QR3521					QR3523					QR4301				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
PLAY	0	0	3.2			0	0	3.2			0	3.5	0			0	2.8	0		
STOP	0	0	3.2			0	0	3.2			0	3.5	0			0	0	3.2		
Ref No.	QR4304					QR4316					QR4317					QR4901				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
PLAY	0.1	-4.7	0			0	-0.4	0			0	0	3.2			9.8	9.8	0		
STOP	1.5	1.3	0			0	-0.3	0			0	0	3.2			9.7	9.7	0		
Ref No.	QR4903					QR4904														
MODE	E	C	B			E	C	B												
PLAY	0	0	3.0			9.8	9.8	0												
STOP	0	0	3.0			9.7	9.7	0												

3. MODULE P.C.B.

B, G models

Ref No.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	3.3	3.3	0	3.3	3.3	0	0	2.3	2.1	2.3	2.3	2.4	2.5	2.4	2.4	2.5	1.8	0	1.8
STOP	0	3.3	3.3	0	3.3	3.3	0	0	2.7	2.6	2.7	2.8	2.7	2.7	2.6	2.7	3.1	1.8	0	1.8
Ref No.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	2.4	2.5	2.7	2.5	2.7	2.6	2.6	2.7	2.0	3.3	0	3.3	3.3	3.3	2.6	2.8	2.8	2.7	2.7
STOP	0	3.1	3.1	3.1	2.8	2.4	1.3	2.0	2.0	3.1	3.3	0	3.3	3.3	3.3	3.0	3.1	3.1	3.0	3.3
Ref No.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.7	2.7	2.6	2.7	1.4	0	3.2	0	3.3	3.3	0	0	0	0	3.3	0.1	3.3	1.8	0	0
STOP	3.0	3.1	3.0	3.0	1.4	0	3.2	0	3.3	3.3	3.3	0	0	0	3.3	3.3	3.3	1.8	0	0
Ref No.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.3	3.3	3.3	0	1.6	1.3	1.6	2.1	1.2	3.3	3.3	0	3.3	3.3	0	1.8	0	3.3	1.5	1.5
STOP	3.3	3.3	0	0	1.6	1.3	1.6	1.6	3.3	0	0	1.2	3.3	3.3	0	1.8	0	3.3	1.5	1.5
Ref No.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0	0	0	1.6	0	1.6	1.6	3.3	0	1.6	1.6	0	0	0	1.6	1.6	1.4	1.6	3.3	1.3
STOP	0	0	0	1.6	0	1.6	3.3	3.3	0	1.6	1.6	0	0	0	1.6	1.6	1.4	1.6	3.3	0
Ref No.	IC2001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	1.3	0	1.5	2.2	3.1	1.6	1.4	1.6	3.3	1.6	1.6	2.0	0	1.7	1.6	3.3	1.6	1.7	2.4	2.4
STOP	0	0	1.5	2.2	2.8	1.6	1.5	1.6	3.3	1.6	1.6	2.3	0	0	1.6	3.3	1.6	1.6	1.6	1.6
Ref No.	IC2001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	2.1	2.2	1.3	1.4	3.3	0	0	0	0	0	3.2	3.3	0	3.3	3.3	1.7	3.3	0	3.3	0
STOP	2.4	1.6	1.4	0.1	3.3	0	0	0	0	0	3.3	3.3	0	3.3	3.3	1.7	3.3	0	3.3	0
Ref No.	IC2001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
PLAY	0.5	3.3	3.3	0	0	1.4	3.3	3.3	1.0	0	1.0	1.8	0	0	0	3.3	0	0	0	1.0
STOP	0	3.3	3.3	0	0	1.6	2.4	3.3	0	0	0	1.8	0	0	0	3.3	0	0	0	0
Ref No.	IC2001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176				
PLAY	0	3.3	0	1.0	0	1.8	0	1.0	3.3	0	0	1.0	0	3.3	3.3	3.3				
STOP	0	3.3	0	1.0	0	0	0	0	3.3	0	0	0	0	3.3	3.3	3.3				
Ref No.	IC2101																			
MODE	1	2	3	4	5															
PLAY	1.6	1.6	0	0	5.0															
STOP	1.6	1.6	0	0	5.0															
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	0.2	1.5	0.1	1.8	1.7	0.1	1.5	0	1.6	3.3	3.3	3.2	0	0	1.8	3.2	3.2	3.3	0
STOP	3.3	0	1.1	0	1.8	1.1	0.1	1.0	0	1.1	3.3	3.3	3.2	0	0	1.8	3.2	3.3	3.3	0
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.2	3.2	2.6	3.2	3.3	1.5	3.3	0	3.3	3.3	0	0	0	0	0	0	1.8	2.5	2.4	2.5
STOP	3.3	3.3	3.0	3.2	3.3	1.5	3.0	3.0	3.0	3.0	0	2.9	3.0	2.8	2.8	2.8	1.8	2.7	2.6	2.7
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.3	2.3	0	2.2	2.0	2.2	2.5	3.3	2.5	2.7	2.7	2.6	0	2.7	2.8	2.8	1.8	2.6	2.5	0.7
STOP	2.7	2.8	0	2.7	2.6	2.7	3.0	3.3	2.9	3.0	3.0	3.0	0	3.0	3.0	3.1	1.8	3.0	3.0	3.0
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.3	2.7	2.8	0	2.7	2.8	2.8	3.3	0.5	1.6	3.2	0	0.6	0.7	0.6	0.7	1.8	1.7	1.1	0.9
STOP	3.3	3.0	3.0	0	3.0	3.1	3.1	3.3	0	1.6	0	0	0	0	0	0	1.8	0.00		
Ref No.	IC3001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0.8	0	1.6	1.2	3.3	1.4	1.6	1.6	0	1.2	0	0	3.3	0	0	1.5	1.8	0	1.8	1.6
STOP	0	0	1.6	0	3.3	1.5	1.6	1.6	0	0	0	0	3.3	0	0	1.5	1.8	0	1.8	1.5
Ref No.	IC3001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	3.3	0.1	0	0	3.3	3.3	1.8	0	3.3	0	0	3.3	0	0	2.9	0	3.3	0	0	2.9
STOP	3.3	0.1	0	0	3.3	0	1.8	0	3.3	0	0	3.3	0	0	2.9	0	3.3	0	0	2.9
Ref No.	IC3001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	0	0	0	0	2.9	0	3.3	0	0	2.8	0	0	0	0	0	1.5	0	0	0	0
STOP	0	0	0	0	2.9	0	3.3	0	0	2.8	0	0	0	0	0	1.5	0	0	0	0
Ref No.	IC3001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
PLAY	3.3	0	0	3.2	3.0	1.8	1.2	1.1	1.0	1.1	0	1.3	1.3	1.3	2.0	3.3	0	2.5	2.7	3.3
STOP	3.3	0	0	3.3	3.0	1.8	1.1	0.4	0.5	0.6	0	1.9	0.2	0.2	1.3	3.3	0	2.9	2.8	3.3
Ref No.	IC3001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
PLAY	2.6	2.4	2.6	2.5	3.3	2.6	3.0	2.5	0	2.4	2.7	3.3	2.5	1.8	2.6	0	2.6	2.6	3.3	2.8
STOP	2.5	2.6	0	2.5	2.7	3.3	2.9	2.7	0	2.6	3.0	3.3	2.6	1.8	2.6	0	2.6	2.6	3.3	2.8
Ref No.	IC3001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
PLAY	2.9	0	1.7	1.8	1.7	0	3.3	3.3	1.7	0.8	1.8	1.8	3.1	0	3.0	3.1	3.3	1.6	2.9	0
STOP	0	2.6	2.6	3.3	1.7	0	3.3	3.3	2.4	0.1	1.8	2.4	3.2	0	3.2	3.2	3.3	3.3	3.0	0

B, G models

Ref No.	IC3001																			
MODE	201	202	203	204	205	206	207	208												
PLAY	0	1.8	1.3	0	3.3	0	1.4	0												
STOP	0	1.8	1.0	0	3.3	0	1.1	0												
Ref No.	IC3061																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	2.8	3.3	2.5	2.8	2.5	2.5	2.8	3.3	2.7	2.8	0	2.8	3.3	1.9	3.2	3.1	3.2	3.0	1.4
STOP	3.3	2.8	3.3	2.6	2.7	0	2.7	3.0	3.3	2.6	2.6	0	2.7	3.3	2.5	3.2	3.2	3.2	3.1	1.0
Ref No.	IC3061																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0.3	0	0.2	0.2	0.2	1.6	3.3	0	1.5	1.6	1.6	1.5	0	0	1.2	-	3.3	1.7	1.9	-
STOP	0.1	0	0.1	0.1	0.1	1.1	3.3	0	1.0	1.1	1.1	1.1	0	0	1.6	-	3.3	1.7	2.5	-
Ref No.	IC3061																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
PLAY	0	2.8	3.3	2.6	2.6	0	2.8	3.0	3.3	2.6	2.7	0	2.6	0						
STOP	0	0	3.3	2.6	2.6	0	2.6	2.9	3.3	2.5	2.5	0	2.9	0						
Ref No.	IC3071																			
MODE	1	2	3	4	5	6														
PLAY	4.9	0	4.9	1.3	0	3.3														
STOP	4.9	0	4.9	1.2	0	3.3														
Ref No.	IC3201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	1.2	1.3	1.1	1.0	1.4	1.2	1.3	1.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3	3.3
STOP	1.1	0.5	0.6	0.6	1.9	0.3	0.2	1.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3	3.3
Ref No.	IC3201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.3	0	0	0	3.3	0	1.5	-	3.3	3.3	3.3	0	0	1.2	1.5	0.7	0.6	3.3	0	0
STOP	2.1	0	0	0	3.3	0	1.5	-	3.3	3.3	3.3	0	0	1.2	1.5	0.7	0.3	3.3	0	0
Ref No.	IC3201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0.4	0	3.3	0.2	0.4	1.5	1.2	1.2	3.2	3.0	3.3	0	-	3.3	0	0	-	-	-	-
STOP	0.1	0	3.3	0.1	0.1	1.5	1.2	1.2	3.2	3.0	3.3	0	-	3.3	0	0	-	-	-	-
Ref No.	IC3201																			
MODE	61	62	63	64																
STOP	-	-	3.3	0																
PLAY	-	-	3.3	0																
Ref No.	IC4211																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	3.3	0	0	0	0	-	2.4	2.4	2.5	2.4	2.5	2.4	2.5	2.5	2.5	0	4.9	0	2.4
STOP	0	0	0	0	0	0	-	1.0	2.4	2.5	2.4	2.5	2.4	2.5	2.4	2.5	0	4.9	0	2.4
Ref No.	IC4211																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	4.9	0	4.9	0	4.9	0	4.9	-	-	1.2	3.3	3.3	3.3	2.8	3.3	3.2	1.6	1.4	1.6
STOP	0	4.9	0	4.9	0	4.9	0	4.9	-	-	0	0	3.3	3.3	2.8	3.3	3.2	1.6	1.5	1.6
Ref No.	IC4211																			
MODE	41	42	43	44	45	46	47	48												
PLAY	1.7	0	3.3	0	1.2	0	0	3.2												
STOP	1.7	0	3.3	0	0	0	0	0												
Ref No.	IC5201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0.5	3.2	0	4.9	1.4	-	1.6	1.6	1.6	-	1.6	0	2.4	1.6	1.6	0	3.2	3.3	3.3	0
STOP	0	4.9	0	4.9	1.6	-	1.6	1.6	1.6	-	1.6	0	1.6	1.6	1.6	0	3.2	3.3	3.3	0
Ref No.	IC5201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	0	3.3	0	3.3	-	0.5	0	1.3	1.2	1.8	1.1	3.3	1.8	1.8	1.7	1.0	1.4	0	-
STOP	3.3	0	3.3	0	3.3	-	0.5	0	1.1	1.1	1.9	1.1	3.3	1.8	1.8	1.7	1.0	0.6	0	-
Ref No.	IC5201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0	0	1.7	0.9	0	2.1	2.1	2.0	2.3	5.0	2.2	2.2	2.3	2.3	2.2	1.8	-	2.3	2.2	2.2
STOP	0	0	1.7	0.9	0	2.1	2.1	1.6	1.6	5.0	2.2	2.2	2.2	2.2	2.2	1.8	-	2.2	2.2	2.2
Ref No.	IC5201																			
MODE	61	62	63	64																
PLAY	2.2	2.2	2.2	0																
STOP	2.2	2.2	2.2	0																
Ref No.	IC6201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	2.6	3.2	3.2	3.3	3.3	3.2	2.5	0	3.3	0	0.1	1.9	2.7	2.6	2.6	3.3	1.3	0	3.3
STOP	3.3	3.0	3.3	3.3	3.3	3.3	3.2	3.0	3.2	3.3	0	3.3	2.6	3.0	3.0	2.9	3.3	1.3	0	3.3
Ref No.	IC6201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.3	3.3	1.6	1.5	3.3	2.6	2.5	2.6	2.5	2.4	2.5	2.4	2.4	3.3	2.5	2.4	2.3	2.2	2.0	2.2
STOP	3.3	3.3	1.6	1.5	3.3	3.0	2.9	3.3	3.3	2.8	2.8	2.7	2.6	3.3	2.7	2.7	2.8	0	0	0
Ref No.	IC6201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.5	1.9	0	1.8	1.8	3.3	0	0	3.3	3.0	1.1	2.7	3.3	3.3	3.2	3.3	3.3	0	0	3.2
STOP	0	0	0	0	0	3.3	0	0	3.3	3.3	1.1	2.7	3.3	3.3	0	3.3	3.3	0	0	3.2
Ref No.	IC6201																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	0	0	0	0	0	3.3	3.2	3.3	3.3	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0.1	0.1	0.1
STOP	0	0	0	0	0	3.3	3.2	3.3	3.3	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0.1	0.1	0.1
Ref No.	IC6201																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0	3.3	3.3	2.6	2.6	2.1	2.6	2.6	2.6	2.7	2.8	0	2.6	2.5	0.1	2.6	2.7	2.7	2.8	2.8
STOP	3.3	3.3	3.3	3.0	2.9	2.0	3.0	3.0	3.0	3.0	3.1	0	2.6	2.5	3.3	3.2	3.2	3.2	3.2	3.3
Ref No.	IC6211										IC6221									
MODE	1	2	3	4	5						1	2	3	4	5	6	7	8		
PLAY	0	0	0	3.3	3.3						0	0	0	0	3.3	3.3	0	3.3		
STOP	0	0	0	3.3	3.3						0	0	0	0	3.3	3.3	0	3.3		

B, G models

Ref No.	IC6251										IC6261									
MODE	1	2	3	4	5	6	7				1	2	3	4	5					
PLAY	3.3	0	0	1.9	5.0	0	5.0				2.6	2.6	1.8	-	0					
STOP	3.3	0	0	1.9	5.0	0	5.0				2.6	2.6	1.8	-	0					
Ref No.	IC6301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	2.0	2.2	2.3	2.4	2.6	2.4	2.6	2.6	2.0	-	3.3	3.3	-	-	-	2.0	2.5	2.5	2.5	2.6
STOP	2.6	0.1	2.8	2.8	2.8	2.7	2.8	2.7	2.6	-	3.3	3.3	-	-	-	2.5	2.8	2.8	2.8	3.0
Ref No.	IC6301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	2.5	2.6	2.6	2.6	2.7	2.5	0	2.6	2.6	2.5	2.5	2.5	2.7	2.7	2.6	2.7	3.3	2.6	2.7	2.6
STOP	2.9	3.0	2.9	3.0	3.0	2.9	0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.0	3.0	3.0
Ref No.	IC6301																			
MODE	41	42	43	44	45	46	47	48												
PLAY	2.6	2.7	2.8	2.8	2.8	0	3.3	2.6												
STOP	3.0	3.0	3.1	3.1	3.1	0	3.3	2.7												
Ref No.	IC6521																			
MODE	1	2	3	4	5															
PLAY	-	1.6	0	1.6	3.3															
STOP	-	1.5	0	1.6	3.3															
Ref No.	IC6561																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15					
PLAY	3.3	0	1.6	1.5	3.3	0	1.5	1.6	1.3	1.6	0	3.3	1.5	3.3	1.4	3.3				
STOP	3.2	0	1.6	1.5	3.3	0	1.5	1.5	1.3	1.5	0	3.3	1.4	3.3	1.4	3.3				
Ref No.	IC6801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	2.6	1.7	0	0	3.3	0	0	2.6	2.6	0	0	3.3	2.8	3.3	0	0	3.3	0	0
STOP	3.3	2.6	1.7	0	0	3.3	0	0	3.0	3.0	0	0	3.3	1.5	3.3	0	1.8	3.3	0	0
Ref No.	IC6801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	3.3	0	3.3	3.3	3.3	3.3	3.3	0	0	2.6	3.2	0	1.7	0	2.6	3.3	3.3	0	3.3	3.3
PLAY	0.4	0	1.5	3.3	3.3	1.4	2.5	1.6	1.6	2.6	3.2	0	1.7	0	2.9	3.3	3.3	0	3.3	3.3
Ref No.	IC6801																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	3.3	3.3	3.3	0	0	3.3	0	0	0	0	1.3	0	1.6	1.7	0	2.6	0	0	3.3	1.3
STOP	3.0	3.3	3.3	0	0	3.3	0	0	0	0	1.3	0	1.6	1.7	0	2.6	0	0	3.3	1.3
Ref No.	IC6801																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.3	0	0	0	3.3	0	0	0	0	0	3.3	0	0	3.3	0	0	0	3.3	0	0
STOP	3.3	0	0	0	3.3	0	0	0	0	0	3.3	0	0	3.3	0	0	0	3.3	0	0
Ref No.	IC6802																			
MODE	1	2	3	4	5															
PLAY	1.9	3.3	0	3.3	3.3															
STOP	2.6	3.3	0	3.3	3.3															
Ref No.																				
MODE																				
PLAY																				
STOP																				
Ref No.	Q2001					Q3221					Q3226					Q3231				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
STOP	0	5.0	1.0			1.3	0	0.7			1.3	0	0.6			1.1	0	0.5		
PLAY	0	5.0	0.6			1.3	0	0.7			1.0	0	0.3			0.7	0	0.1		
Ref No.	Q3241					Q5271					QR5221					QR5241				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
PLAY	1.1	0	0.3			0	0	3.3			3.3	3.3	0.1			3.3	3.2	0		
STOP	0.7	0	0.1			0	0	3.3			3.3	0.3	3.3			3.3	-0.2	3.3		

A, R models

Ref No.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0.3	3.3	3.3	0	3.2	3.3	0.3	0	0.8	0.5	0.8	1.0	0.9	1.3	1.1	1.0	1.0	1.8	0	1.8
STOP	0.2	3.3	3.3	0	3.3	3.3	0.3	0	0.8	0.5	0.6	0.7	0.8	0.7	0.7	0.8	0.7	1.8	0	1.8
Ref No.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	1.1	1.4	2.5	1.6	2.7	2.3	2.7	2.4	1.9	3.3	0	3.3	3.3	3.2	2.6	1.6	1.2	1.3	2.5
STOP	0	0.8	0.7	3.0	1.4	3.0	2.4	2.9	3.0	2.6	3.2	0	3.3	3.3	3.2	3.0	1.6	0.8	1.2	2.9
Ref No.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.2	2.1	1.9	1.9	1.4	0	3.2	0	3.3	3.3	0	0	0	0	3.3	0	3.3	1.8	0	0
STOP	2.3	2.4	2.3	2.4	1.4	0	3.2	0	3.3	3.3	3.3	0	0	0	3.3	3.3	3.3	1.8	0	0
Ref No.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.3	3.3	3.3	0.2	1.6	1.4	1.6	1.5	1.4	3.3	3.3	0	3.3	3.3	0	1.8	0	3.3	1.5	1.5
STOP	3.2	3.3	0	0.2	1.6	1.3	1.6	1.6	1.6	2.7	0	0	3.3	3.3	0	1.8	0	3.3	1.5	1.5
Ref No.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0	0	0	1.6	0	1.6	1.6	3.3	0	1.6	1.6	0	0	0	0	0	1.3	1.6	3.3	1.6
STOP	0	1.0	0	1.6	0	1.6	1.6	3.2	0	1.6	1.6	0	0	0	0	0	1.3	1.6	3.2	0
Ref No.	IC2001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	1.0	0	1.5	2.2	2.9	1.6	1.5	1.6	3.3	1.6	1.6	1.9	0	1.7	1.6	3.3	1.7	1.6	2.3	2.3
STOP	0	0	1.5	2.2	2.9	1.6	1.5	1.6	3.3	1.6	1.6	2.1	0	1.6	1.6	3.3	1.6	1.6	1.6	1.6
Ref No.	IC2001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	2.0	1.6	1.6	0.2	3.3	0	0	0	0	0	0	3.3	0	3.3	3.3	1.7	3.3	0	3.3	0
STOP	1.6	1.6	0.2	0.2	3.3	0	0	0	0	0	3.3	3.3	0	3.3	3.3	1.7	3.3	0	3.3	0
Ref No.	IC2001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
PLAY	0.4	3.3	3.3	0	0	1.5	3.3	3.3	2.1	0	2.2	1.8	0	0	0	3.3	0	2.3	0	2.1
STOP	0	3.3	3.3	0	0	1.5	3.3	3.3	0	0	0	1.8	0	0	0	3.3	0	0	0	0
Ref No.	IC2001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176				
PLAY	0	3.3	0	2.3	0	2.2	0	2.1	3.2	0	0	2.3	0	3.3	3.3	3.2				
STOP	0	3.3	0	0	0	0	0	0	3.3	0	0	0	0	3.3	3.3	3.3				
Ref No.	IC2101																			
MODE	1	2	3	4	5															
PLAY	1.6	1.6	0	0	4.9															
STOP	1.6	1.6	0	0	5.0															
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	0.2	1.5	0.2	1.8	1.6	0.2	1.5	0	1.6	3.3	3.3	3.2	0	0	1.8	3.1	3.2	3.2	0
STOP	3.3	0.1	1.1	0.1	1.8	1.1	0.1	1.0	0	1.1	3.3	3.3	3.3	3.2	0	0	1.8	3.2	3.2	0
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.2	3.2	2.7	3.2	3.3	1.6	2.4	2.6	2.2	2.6	0	1.7	2.5	1.4	1.0	1.0	1.8	1.0	1.1	1.3
STOP	3.2	3.2	3.0	3.2	3.3	1.6	3.0	2.9	2.5	3.0	0	1.4	2.9	0.7	0.7	0.7	1.8	0.8	0.6	0.7
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0.9	1.1	-	0.8	0.5	0.9	2.0	3.3	1.9	2.1	2.1	2.5	0	1.4	1.2	1.5	1.8	1.8	1.6	1.2
STOP	0.7	0.7	0	0.6	0.5	1.8	2.3	3.3	2.3	2.4	2.3	2.9	0	1.3	0.8	1.4	1.8	2.4	1.2	0
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.3	1.1	2.5	0	1.0	1.3	2.3	3.3	0.5	1.7	3.2	0	0.7	0.9	1.0	1.0	1.8	0.7	0.6	0.5
STOP	3.3	0	0	0	0	0	0	3.3	0	1.6	3.3	0	0	0	0	0	1.8	0	0	0
Ref No.	IC3001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0.7	0	1.6	1.2	3.3	1.4	1.6	1.6	0	1.2	0	0	3.3	0	0	1.5	1.8	0	1.8	1.6
STOP	0	0	1.6	0	3.3	1.3	1.6	1.6	0	0	0	0	3.3	0	0	1.5	1.8	0	1.8	1.6
Ref No.	IC3001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	3.3	0.3	0	0	3.3	3.3	1.8	0	3.3	0	0	3.3	0.6	0.6	2.3	0.4	3.3	0.9	0.9	2.3
STOP	3.3	0.4	0	0	3.3	3.3	1.8	0	3.3	0	0	3.3	0.6	0.6	2.3	0.4	3.3	0.9	0.9	2.3
Ref No.	IC3001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	0.6	0	0.6	0.6	2.3	0.4	3.3	1.3	1.3	2.2	0.6	0	0	0	0	1.5	0	0	0	0
STOP	0.6	0	0.6	0.6	2.3	0.4	3.3	1.3	1.3	2.2	0.4	0	0	0	0	1.5	0	0	0	0
Ref No.	IC3001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
PLAY	3.3	0	0	3.2	3.0	1.8	1.2	1.2	1.1	1.2	0	1.5	1.3	1.1	1.8	3.3	0	2.4	2.5	3.3
STOP	3.3	0	0	3.2	3.0	1.8	1.3	0.6	0.6	0.7	0	1.9	0.3	0.3	1.2	3.3	0	2.8	2.8	3.3
Ref No.	IC3001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
PLAY	2.7	2.5	0	2.5	2.5	3.3	2.5	2.6	0	2.5	2.3	3.3	2.4	1.8	3.1	0	2.6	3.1	3.3	2.5
STOP	2.4	2.6	0	2.4	2.7	3.3	2.9	2.7	0	2.6	3.0	3.3	2.6	1.8	2.6	0	2.6	2.6	3.3	2.9
Ref No.	IC3001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
PLAY	2.8	0	1.7	1.8	1.7	0	3.3	3.3	1.9	0.3	1.8	1.9	3.1	0	3.0	3.1	3.3	1.4	2.9	0
STOP	2.6	0	1.7	1.8	1.7	0	3.3	3.3	2.4	0	1.8	2.4	3.2	0	3.1	3.2	3.3	1.4	3.1	0
Ref No.	IC3001																			
MODE	201	202	203	204	205	206	207	208												
PLAY	0	1.8	1.3	0	3.3	0	1.4	0												
STOP	0	1.8	1.0	0	3.3	0	1.1	0												
Ref No.	IC3061																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	2.7	3.3	2.8	2.5	0	2.5	2.7	3.3	2.5	2.5	0	2.9	3.3	1.9	3.1	3.0	3.2	2.9	1.3
STOP	3.3	2.8	3.3	2.6	2.7	0	2.7	3.0	3.3	2.6	2.6	0	2.6	3.3	2.4	3.2	3.2	3.2	3.1	1.0
Ref No.	IC3061																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0.3	0	0.2	0.2	1.6	3.3	0	1.5	1.6	1.6	1.5	0	0	0	1.3	-	3.3	1.7	2.0	-
STOP	0.1	0	0.1	0.1	1.1	3.3	0	1.0	1.1	1.1	1.1	0	0	0	1.4	-	3.3	1.7	2.4	-

A, R models

Ref No.	IC3061																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
PLAY	0	2.8	3.3	2.7	2.6	0	2.6	2.8	3.3	2.3	2.5	0	2.6	0						
STOP	0	2.9	3.3	2.6	2.6	0	2.6	2.9	3.3	2.4	2.4	0	2.8	0						
Ref No.	IC3071																			
MODE	1	2	3	4	5	6														
PLAY	4.8	0	4.8	1.2	0	3.3														
STOP	4.9	0	4.9	1.2	0	3.3														
Ref No.	IC3261																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	1.3	1.3	1.2	1.0	1.0	0	0	0	0	0	0	1.1	1.2	1.1	1.3	4.8				
STOP	1.1	1.0	1.2	1.1	1.1	0	0	0	0	0	0	1.1	1.2	1.1	1.0	4.9				
Ref No.	IC3701																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	0	0	0	0	0	0	1.2	1.2	1.3	1.3	1.5	1.3	1.2	2.0	2.4	0	0	0	0
STOP	3.3	0	0	0	0	0	0	1.3	0.6	0.7	0.7	2.0	0.3	0.3	1.3	2.5	0	0	0	0
Ref No.	IC3701																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	0	0	0	0	0	0	0	0	0	0	0	3.3	0	0	0	0	0	0	1.5
STOP	0	0	0	0	0	0	0	0	0	0	0	0	3.3	0	0	0	0	0	0	1.5
Ref No.	IC3701																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0	2.4	0	0	0	0	3.3	3.3	3.2	0	0	3.3	3.3	2.4	0	3.3	3.3	0	0	3.3
STOP	0	2.5	0	0	0	0	3.3	3.3	3.2	0	0	3.3	3.3	2.5	0	3.3	3.3	0	0	3.3
Ref No.	IC3701																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	0	3.3	3.3	0	1.9	0.6	1.4	2.1	1.3	1.3	1.2	1.2	3.3	0	0.6	0	0	0	0	0
PLAY	0	3.3	3.3	0	0	0	0	3.2	0.5	0.5	0.5	0.9	3.3	0	0	0	0	0	0	0
Ref No.	IC3701																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0	0	0	3.3	0	0	0	0	3.0	2.7	3.2	3.0	2.0	1.3	3.3	0	1.2	1.3	1.2	1.2
STOP	0	0	0	3.3	0	0	0	0	3.0	2.7	3.2	3.0	2.7	0.6	3.3	0	0.6	0.9	0.9	0.9
Ref No.	IC3701																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	1.2	1.3	0.8	0.6	3.3	0	2.4	0	0	0	0.1	0	0	3.3	0	0.7	1.6	1.7	3.1	2.5
STOP	0.6	1.8	0.4	0.3	3.3	0	2.5	0	0	0	0.1	0	0	3.3	0	0.7	1.6	1.7	3.1	2.5
Ref No.	IC3701																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	2.5	1.3	3.3	0	2.5	0.7	0.7	1.6	1.6	1.6	1.6	0	1.6	2.5	0.7	0.7	3.3	0	0	0
STOP	2.5	1.3	3.3	0	2.5	0.7	0.7	1.6	1.6	1.6	1.6	0	1.6	2.5	0.7	0.7	3.3	0	0	0
Ref No.	IC3701																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
PLAY	1.1	1.1	1.1	3.3	0	1.1	1.5	1.1	1.1	1.5	3.3	0	0	0	1.2	1.2	1.1	2.4	0	1.5
STOP	1.3	0.5	0.6	3.3	0	0.6	2.1	0.3	0.2	1.2	3.2	0	0	0	1.3	0.6	0.6	2.5	0	0.7
Ref No.	IC3701																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176				
PLAY	1.6	1.0	1.4	1.3	0	0	3.3	0	1.2	1.2	1.1	1.2	1.6	0.8	1.1	1.7				
STOP	2.1	0.3	0.3	1.2	0	0	3.3	0	1.3	0.5	0.6	0.7	2.1	0.3	0.2	1.2				
Ref No.	IC3761																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	0	3.3	0	1.2	0	1.1	1.1	3.1	1.1	1.6	0	1.1	-	3.3	0	3.1	2.5	2.5	0
STOP	3.2	0	3.2	0	1.2	0	0.5	0.6	3.2	0.7	2.1	0	0.3	-	3.3	0	3.1	2.5	2.5	0
Ref No.	IC3761																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	1.3	0	2.5	0.7	0.7	2.5	0	3.3	-	1.3	0	2.0	1.7	3.3	1.1	0	0	0	1.2
STOP	-	1.3	0	2.5	0.7	0.7	0.7	0	3.3	-	2.1	0	0.3	0.2	3.3	1.2	0	0	0	1.2
Ref No.	IC3761																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	3.3	1.2	3.3	0	1.1	0	1.2	1.6	3.3	1.0	1.1	0	1.5	0	3.3	0	-	0	0	1.6
STOP	3.3	0.5	3.3	0	0.6	0	0.7	2.1	3.3	0.3	0.3	0	1.2	0	3.3	0	-	0	0	1.6
Ref No.	IC3761																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	1.6	1.6	1.6	1.6	0.7	0.7	3.3	1.7	-	-	0	0	0	1.3	3.3	1.8	0	0	0	1.2
STOP	1.6	1.6	1.6	1.6	0.7	0.7	3.3	1.6	-	-	0	0	-	0.3	3.3	1.2	0	0	0	1.3
Ref No.	IC3761																			
MODE	81	82	83	84	85	86														
PLAY	3.3	1.3	1.1	0	0.9	0														
STOP	3.3	0.5	0.6	0	0.6	0														
Ref No.	IC3901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	0	3.3	1.2	1.3	1.2	1.4	2.0	1.3	1.3	1.6	3.3	0	3.3	0	0	0	0	0	0
STOP	3.3	0	3.3	0.9	0.5	0.5	0.5	3.2	0.1	0	0	3.3	0	3.3	0	0	0	0	0	0
Ref No.	IC3901																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	0	0	3.3	1.6	0	3.0	3.2	3.0	3.2	3.2	0.5	0	0.6	3.3	0.5	1.7	1.6	1.6	3.2
STOP	0	0	0	3.3	1.6	0	3.0	3.2	3.0	3.2	3.3	0.5	0	0.4	3.3	0.5	1.7	1.6	1.6	3.2
Ref No.	IC3901																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52								
PLAY	3.3	2.1	1.2	1.3	0.9	1.0	1.1	1.1	1.2	0	3.3	0								
STOP	3.3	2.7	0.6	0.6	0.9	0.9	0.9	0.6	1.8	0	3.3	0								
Ref No.	IC4001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0	0	3.3	1.1	0	1.3	0.9	1.0	0.8	0.5	1.6	3.3	0	0	1.6	3.3	3.2	3.3	3.3
STOP	0	0	0	3.3	0	0	0	0	0	0	0	1.6	3.2	0	0	1.6	3.3	0	3.3	3.3
Ref No.	IC4001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	0	3.3	0	0.7	0.6	0	0.1	0.1	0
STOP	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	0	3.3	0	0.1	0.1	0	0.2	0.2	0
Ref No.	IC4001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0.1	1.6	0.1	1.6	0.1	0.1	1.2	0.1	0	0	0	1.6	0.1	0	3.3	3.3	0	0	0.1	0.1
STOP	0.2	1.6	0.2	1.6	0.2	0.2	0	0.2	0	0	0	1.6	0.2	0	3.3	3.3	0	0	0.2	0.2

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Ref No.	IC4001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.3	3.3	3.3	3.2	3.2	0	3.2	1.6	0	0	1.5	0	1.6	1.6	3.3	0	0	3.2	0	3.3
STOP	3.3	3.3	3.2	3.2	3.2	0	3.2	1.6	0	0	1.5	0	1.6	1.6	3.3	0	0	3.2	0	3.3
Ref No.	IC4001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	0	1.4	3.3	3.3	0.1	3.3	0	3.3	3.3	0	1.6	3.3	0	1.5	0	0.6	1.5	3.2	1.9	2.0
STOP	0	1.3	3.3	3.3	0.4	3.3	0	3.3	3.3	0	1.6	3.3	0	1.6	0	0.5	1.5	3.2	0	0
Ref No.	IC4001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	2.1	2.1	2.4	1.4	0.9	0	3.1	0	0	0	0	3.2	1.2	1.6	1.8	1.6	1.4	1.3	2.3	0
STOP	0	0	0	0	0	0	3.1	0	0	0	0	3.2	0	0	0	0	0	0	0	0
Ref No.	IC4001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	1.2	1.4	2.3	0	1.6	0	2.6	0	3.2	3.2	2.4	2.6	2.1	2.5	0	1.6	2.5	1.4	1.1	1.0
STOP	0	0	0	0	1.6	0	0	0	3.2	3.2	0	0	0	0	0	0	0	0	0	0
Ref No.	IC4001																			
MODE	141	142	143	144																
STOP	1.1	1.6	0	0																
PLAY	0	1.6	0	0																
Ref No.	IC4011										IC4021									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5					
PLAY	0.8	0.3	2.5	0	0.8	0	0	3.3			3.3	0	3.3	1.3	1.6					
STOP	0	0.2	3.3	0	0	0	0	3.3			3.3	0	3.3	1.3	1.6					
Ref No.	IC4031																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	0	1.6	0	1.6	1.2	0.2	1.2	0	1.6	0	1.6	1.6	0	1.6	0	3.3				
STOP	0	1.6	0	1.6	0	0.2	0	0	1.6	0	1.6	1.6	0	1.6	0	3.3				
Ref No.	IC4041										IC4051									
MODE	1	2	3	4	5						1	2	3	4	5					
PLAY	3.2	3.3	0	3.3	3.3						2.5	3.2	0	2.5	3.3					
STOP	3.2	3.3	0	3.2	3.3						3.0	3.3	0	3.0	3.3					
Ref No.	IC4061										IC4091					IC4092				
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5		1	2	3	4	5
PLAY	1.6	2.6	0.7	0	2.6	3.3	3.3	3.3		-	1.9	0	1.5	3.3		1.3	3.3	0	3.3	3.3
STOP	1.6	3.0	0.3	0	3.0	3.3	3.3	3.3		-	2.5	0	0.8	3.3		0.8	3.3	0	3.3	3.3
Ref No.	IC4201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	1.6	1.2	1.7	0	3.3	4.9	2.5	2.4	0	2.5	3.2	0	3.3	2.7	3.3	1.6				
STOP	1.6	0	1.6	0	3.3	4.9	2.5	2.4	0	2.4	0	0	3.3	2.7	3.3	1.6				
Ref No.	IC4211																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.2	3.2	-0.1	-0.1	-0.1	-0.1	-	-	2.4	2.5	2.4	2.4	2.4	2.5	2.4	2.5	-0.1	4.9	-0.1	2.3
STOP	0	0	0	0	0	0	-	-	2.4	2.5	2.4	2.5	2.4	2.5	2.4	2.5	-0.1	4.9	-0.1	2.3
Ref No.	IC4211																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	-0.1	4.9	-0.1	4.9	-0.1	4.9	-0.1	4.9	-	3.2	0.8	3.2	3.3	3.2	2.7	3.2	3.2	1.6	1.5	1.6
STOP	-0.1	4.9	-0.1	4.9	-0.1	4.9	-0.1	4.9	-	0	0	0	3.3	3.3	2.7	3.2	3.2	1.6	1.5	1.6
Ref No.	IC4211																			
MODE	41	42	43	44	45	46	47	48												
PLAY	1.6	-0.1	3.2	-0.1	0.8	0	0	3.2												
STOP	1.6	-0.1	3.2	-0.1	0	0	0	0												
Ref No.	IC5201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0.5	3.1	0	4.8	1.4	0.1	1.6	1.6	1.6	-	1.6	-	2.3	1.6	1.6	0	3.2	3.3	0	0
STOP	0	4.8	0	4.8	1.6	0.2	1.6	1.6	1.6	0.1	1.6	-	1.6	1.6	1.6	0	3.2	3.3	0	0
Ref No.	IC5201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	0	3.3	0	3.2	0.1	0.5	0	1.3	1.3	1.8	1.2	3.2	1.8	1.8	1.8	1.1	1.4	0	0.2
STOP	3.2	0	3.2	0	3.2	0.1	0.5	0	1.1	1.1	2.0	1.2	3.2	1.8	1.8	1.8	1.1	0.6	0	0.2
Ref No.	IC5201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	0	0	1.7	0.9	-	2.1	2.1	2.0	2.3	4.9	2.2	2.2	2.3	2.3	2.2	1.8	0.1	2.3	2.3	2.3
STOP	0	0	1.7	0.9	-	2.1	2.1	1.6	1.6	4.8	2.2	2.2	2.2	2.2	2.2	1.8	0.1	2.2	2.2	2.2
Ref No.	IC5201																			
MODE	61	62	63	64																
PLAY	2.3	2.2	2.2	0																
STOP	2.2	2.2	2.2	0																
Ref No.	IC6201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.2	2.5	3.2	3.2	3.2	3.2	3.1	2.4	0	3.2	0	0	1.8	2.4	2.6	2.1	3.2	1.5	0	3.2
STOP	3.2	0	0	0	3.2	3.2	0	3.2	3.2	3.2	0	3.2	0	0	0	0	3.2	1.5	0	3.2
Ref No.	IC6201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.2	3.2	1.6	1.5	3.2	2.6	1.6	2.5	1.4	1.1	1.1	1.1	1.1	3.2	1.4	0.9	1.1	0.9	0.5	0.8
STOP	3.2	3.2	1.6	1.5	3.2	0	0	0	0	0	0	0	0	3.2	0	0	0	0	0	0
Ref No.	IC6201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.4	1.8	0	1.8	1.8	3.2	0	0	3.2	2.9	1.0	2.7	3.2	3.2	3.2	3.2	3.2	0	0	3.2
STOP	0	0	0	0	0	3.2	0	0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	0	0	3.2
Ref No.	IC6201																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	0	0	0	0	0	3.2	3.2	3.2	3.2	2.7	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.1	3.2	3.3
STOP	0	0	0	0	0	3.2	3.2	3.2	3.2	2.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	0.1	3.2	0
Ref No.	IC6201																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	3.2	3.2	3.3	1.9	1.9	2.1	2.1	2.5	1.4	1.2	1.6	0	1.9	1.5	1.4	1.2	2.4	1.1	1.4	2.4
STOP	3.2	3.2	3.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC6211										IC6221									
MODE	1	2	3	4	5						1	2	3	4	5	6	7	8		
PLAY	0	0	0	3.2	3.2						0	0	0	0	0	3.2	3.2	0	3.2	
STOP	0	0	0	3.2	3.3						0	0	0	0	0	3.3	3.3	0	3.3	

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Ref No.	IC6251										IC6261									
MODE	1	2	3	4	5	6	7				1	2	3	4	5					
PLAY	3.3	0	0	1.9	4.9	0	4.9				2.5	2.5	1.8	-	0					
STOP	3.3	0	0	1.9	4.9	0	4.9				2.5	2.5	1.8	-	0					
Ref No.	IC6301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0.5	0.8	0.9	0.9	1.3	1.0	1.0	1.0	1.8	-	3.2	3.2	-	-	0.2	1.8	2.5	1.0	1.4	2.5
STOP	0.5	0.6	0.7	0.7	0.7	0.7	0.8	0.7	2.5	-	3.3	3.3	-	-	0.2	2.5	2.7	0.7	0.7	3.0
Ref No.	IC6301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	1.7	2.5	2.1	2.7	2.4	2.4	0	2.6	1.9	1.8	2.0	1.5	2.1	1.2	2.1	1.1	3.3	2.6	2.3	1.3
STOP	1.4	3.0	2.5	2.9	2.9	2.9	0	3.0	2.3	2.4	2.2	1.2	2.4	0.8	2.3	0.7	3.3	2.9	2.9	1.3
Ref No.	IC6301																			
MODE	41	42	43	44	45	46	47	48												
PLAY	1.2	1.2	1.4	1.6	2.4	0	3.3	0.8												
STOP	0.7	0.8	0.7	1.5	2.9	0	3.2	0.8												
Ref No.	IC6521																			
MODE	1	2	3	4	5															
PLAY	-	1.5	0	1.7	3.3															
STOP	-	1.5	0	1.7	3.3															
Ref No.	IC6561																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	3.3	0	1.6	1.4	3.3	0	1.5	1.6	1.3	1.6	0	3.2	1.5	3.3	1.6	3.2				
STOP	3.3	0	1.6	1.4	3.3	0	1.5	1.6	1.3	1.6	0	3.2	1.5	3.3	1.6	3.2				
Ref No.	IC6801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	2.5	1.7	0	0	3.3	0	0	2.2	1.9	0	0	3.3	2.4	3.3	0	2.2	3.3	0	0
STOP	3.3	2.5	1.7	0	0	3.3	0	0	2.6	2.3	0	0	3.3	2.3	3.3	0	2.3	3.3	0	0
Ref No.	IC6801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	2.4	0	1.4	3.3	3.3	1.5	1.6	2.6	2.3	2.5	3.2	-	1.7	0	2.2	3.3	3.2	0	3.3	3.3
STOP	2.7	0	0	3.3	3.3	0	0	0	0	2.5	3.2	-	1.7	0	0	3.3	0	0	3.3	3.3
Ref No.	IC6801																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.6	3.3	3.3	0	0	3.3	0.8	0	3.3	0	1.5	0	1.6	1.6	0	2.5	0	0	3.3	1.5
STOP	0	3.2	3.1	0	0	3.3	0	0	3.3	0	1.5	0	1.6	1.6	0	2.5	0	0	3.3	1.5
Ref No.	IC6801																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.3	0	0	0	3.3	1.6	1.6	0	0	0	3.3	0	0	3.3	0	0	0	3.3	0	0
STOP	3.3	0	0	0	3.3	1.6	1.6	0	0	0	3.3	0	0	3.3	0	0	0	3.3	0	0
Ref No.	IC6802																			
MODE	1	2	3	4	5															
PLAY	1.8	3.2	0	3.3	3.3															
STOP	2.5	3.3	0	3.3	3.3															
Ref No.	Q2001				Q3101				Q3111				Q3116				Q3921			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	0	4.9	0.1		1.3	0	0.6		1.1	0	0.4		1.0	0	0.3		1.2	0	0.5	
STOP	0	4.9	0.1		1.0	0	0.4		1.1	0	0.4		1.1	0	0.4		1.2	0	0.5	
Ref No.	Q3926				Q3931				Q5271											
MODE	E	C	B		E	C	B		E	C	B									
PLAY	1.1	0	0.3		1.4	0	0.6		0	0	3.2									
STOP	1.2	0	0.5		1.2	0	0.4		0	0	3.2									
Ref No.	QR3261				QR5221				QR5241				QR6215							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
PLAY	0	0	3.2		3.3	3.2	0.1		3.3	3.2	0		0	3.2	0					
STOP	0	0	3.2		3.3	0.3	3.3		3.3	-0.4	3.3		0	3.2	0					

4. INTERMEDIATE P.C.B.

Ref No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	1.6	1.6	1.6	2.3	2.3	2.2	0	4.8	3.3	0	2.8	2.6	2.8	2.8	4.2	4.2	5.9	2.4	0	3.2
STOP	1.6	1.6	1.8	2.0	2.0	1.6	0	4.9	3.3	0	2.8	2.8	2.8	2.8	4.2	4.2	4.2	4.2	0	3.2

Ref No.	IC2501																			
MODE	21	22	23	24	25	26	27	28												
PLAY	8.8	8.7	1.8	1.6	1.6	1.6	3.3	3.1												
STOP	8.9	8.8	1.6	1.6	1.6	1.6	3.3	3.2												

Ref No.	Q5111				Q5115															
MODE	E	C	B		E	C	B													
PLAY	5.0	2.2	4.6		5.0	1.2	4.6													
STOP	4.0	0.9	3.3		5.0	1.2	4.6													

5. FRONT 1 P.C.B.

Ref No.	IC6101			QR6101			QR6102													
MODE	1	2	3	E	C	B	E	C	B											
PLAY	3.2	3.3	0	0	5.0	0	0	5.0	0											
STOP	3.2	3.3	0	0	5.0	0	0	5.0	0											

6. SCART P.C.B.

B, G models

Ref No.	IC3801																			
MODE	1	2	3	4	5	6														
PLAY	0	2.2	5.0	1.9	0	1.8														
STOP	0	1.6	5.0	1.9	0	1.5														

Ref No.	IC3841																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	0.7	0.7	0	0.5	0.5	0	0	0	0	0	0	0.4	0	0.4	0.6	5.0				
STOP	0.7	0.3	0	0	0.3	0	0	0	0	0	0	0.3	0	0.3	0.3	5.0				

Ref No.	IC3842																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	3.7	0.3	0	0.5	0	-	0.5	0	2.7	2.9	-	2.7	2.9	2.7	2.9	5.0				
STOP	3.7	0	0	0.3	0	-	0.3	0	2.7	2.9	-	2.7	2.9	2.7	2.9	5.0				

Ref No.	IC3851																			
MODE	1	2	3	4	5	6														
PLAY	5.0	4.9	5.0	0	0	0														
STOP	5.0	4.9	5.0	0	0	0														

Ref No.																				
MODE																				
PLAY																				
STOP																				

Ref No.	Q3811				Q3821				Q3831				Q3851							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
PLAY	0.3	5.0	1.0		0.7	5.0	1.3		0.4	5.0	1.2		11.8	12.5	12.4					
STOP	0.3	5.0	0.9		0.3	5.0	0.9		0.3	5.0	0.9		11.6	12.3	12.2					

Ref No.	QR3841				QR3842				QR3851				QR3852				QR3853			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	0	0	3.1		0	3.7	0		0	12.3	0		0	0	5.0		11.8	11.8	0	
STOP	0	0	3.1		0	3.7	0		0	0	12.2		0	0	5.0		11.7	11.6	0	

PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.

- Carbon resistors (1/6W or 1/4W) and chip carbon resistors are not included in the ELECTRICAL PARTS List. For the parts No. of them, refer to last two pages.

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS:

C.A.EL.CHP	: CHIP ALUMI.ELECTROLYTIC CAP	L.EMIT	: LIGHT EMITTING MODULE
C.CE	: CERAMIC CAP	LED.DSPLY	: LED DISPLAY
C.CE.ARRAY	: CERAMIC CAP ARRAY	LED.INFRD	: LED,INFRARED
C.CE.CHP	: CHIP CERAMIC CAP	MODUL.RF	: MODULATOR,RF
C.CE.ML	: MULTILAYER CERAMIC CAP	PHOT.CPL	: PHOTO COUPLER
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP	PHOT.INTR	: PHOTO INTERRUPTER
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP	PHOT.RFLCT	: PHOTO REFLECTOR
C.CE.TUBLR	: CERAMIC TUBULAR CAP	PIN.TEST	: PIN,TEST POINT
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP	PLST.RIVET	: PLASTIC RIVET
C.EL	: ELECTROLYTIC CAP	R.ARRAY	: RESISTOR ARRAY
C.MICA	: MICA CAP	R.CAR.	: CARBON RESISTOR
C.ML.FLM	: MULTILAYER FILM CAP	R.CAR.CHP	: CHIP RESISTOR
C.MP	: METALLIZED PAPER CAP	R.CAR.FP	: FLAME PROOF CARBON RESISTOR
C.MYLAR	: MYLAR FILM CAP	R.FUS	: FUSABLE RESISTOR
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP	R.MTL.CHP	: CHIP METAL FILM RESISTOR
C.PAPER	: PAPER CAPACITOR	R.MTL.FLM	: METAL FILM RESISTOR
C.PLS	: POLYSTYRENE FILM CAP	R.MTL.OXD	: METAL OXIDE FILM RESISTOR
C.POL	: POLYESTER FILM CAP	R.MTL.PLAT	: METAL PLATE RESISTOR
C.POLY	: POLYETHYLENE FILM CAP	RSNR.CE	: CERAMIC RESONATOR
C.PP	: POLYPROPYLENE FILM CAP	RSNR.CRYS	: CRYSTAL RESONATOR
C.TNTL	: TANTALUM CAP	R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
C.TNTL.CHP	: CHIP TANTALUM CAP	R.WW	: WIRE WOUND RESISTOR
C.TRIM	: TRIMMER CAP	SCR.BND.HD	: BIND HEAD B-TITE SCREW
CN	: CONNECTOR	SCR.BW.HD	: BW HEAD TAPPING SCREW
CN.BS.PIN	: CONNECTOR,BASE PIN	SCR.CUP	: CUP TITE SCREW
CN.CANNON	: CONNECTOR,CANNON	SCR.TERM	: SCREW TERMINAL
CN.DIN	: CONNECTOR,DIN	SCR.TR	: SCREW,TRANSISTOR
CN.FLAT	: CONNECTOR,FLAT CABLE	SUPRT.PCB	: SUPPORT,P.C.B.
CN.POST	: CONNECTOR,BASE POST	SURG.PRTCT	: SURGE PROTECTOR
COIL.MX.AM	: COIL,AM MIX	SW.TACT	: TACT SWITCH
COIL.AT.FM	: COIL,FM ANTENNA	SW.LEAF	: LEAF SWITCH
COIL.DT.FM	: COIL,FM DETECT	SW.LEVER	: LEVER SWITCH
COIL.MX.FM	: COIL,FM MIX	SW.MICRO	: MICRO SWITCH
COIL.OUTPT	: OUTPUT COIL	SW.PUSH	: PUSH SWITCH
DIOD.ARRAY	: DIODE ARRAY	SW.RT.ENC	: ROTARY ENCODER
DIODE.BRG	: DIODE BRIDGE	SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
DIODE.CHP	: CHIP DIODE	SW.RT	: ROTARY SWITCH
DIODE.SHOT	: SCHOTTKY BARRIER DIODE	SW.SLIDE	: SLIDE SWITCH
DIODE.VAR	: VARACTOR DIODE	TERM.SP	: SPEAKER TERMINAL
DIOD.Z.CHP	: CHIP ZENER DIODE	TERM.WRAP	: WRAPPING TERMINAL
DIODE.ZENR	: ZENER DIODE	THRMST.CHP	: CHIP THERMISTOR
DSCR.CE	: CERAMIC DISCRIMINATOR	TR.CHP	: CHIP TRANSISTOR
FER.BEAD	: FERRITE BEADS	TR.DGT	: DIGITAL TRANSISTOR
FER.CORE	: FERRITE CORE	TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
FET.CHP	: CHIP FET	TRANS	: TRANSFORMER
FL.DSPLY	: FLUORESCENT DISPLAY	TRANS.PULS	: PULSE TRANSFORMER
FLTR.CE	: CERAMIC FILTER	TRANS.PWR	: POWER TRANSFORMER ASS'Y
FLTR.COMB	: COMB FILTER MODULE	TUNER.AM	: TUNER PACK,AM
FLTR.LC.RF	: LC FILTER,EMI	TUNER.FM	: TUNER PACK,FM
GND.MTL	: GROUND PLATE	TUNER.PK	: FRONT-END TUNER PACK
GND.TERM	: GROUND TERMINAL	VR	: ROTARY POTENTIOMETER
HOLDER.FUS	: FUSE HOLDER	VR.MTR	: POTENTIOMETER WITH MOTOR
IC.PRTCT	: IC PROTECTOR	VR.SW	: POTENTIOMETER WITH ROTARY SW
JUMPER.CN	: JUMPER CONNECTOR	VR.SLIDE	: SLIDE POTENTIOMETER
JUMPER.TST	: JUMPER,TEST POINT	VR.TRIM	: TRIMMER POTENTIOMETER
L.DTCT	: LIGHT DETECTING MODULE		

Note) Those parts marked with “#” are not included in the P.C.B. ass'y.

P.C.B.

Schm Ref.	PART NO.	Description	Remarks	Markets
	AAX44630	P.C.B. ASS'Y	MODULE	GB
	AAX44640	P.C.B. ASS'Y	MODULE	AR
	AAX44560	P.C.B. ASS'Y	POWER	GB
	AAX44570	P.C.B. ASS'Y	POWER	A
	AAX44580	P.C.B. ASS'Y	POWER	R
	AAX44530	P.C.B. ASS'Y	TERMINAL	GB
	AAX44540	P.C.B. ASS'Y	TERMINAL	A
	AAX44550	P.C.B. ASS'Y	TERMINAL	R
	AAX44520	P.C.B. ASS'Y	SCART	GB
	AAX44590	P.C.B. ASS'Y	FRONT 1	GB
	AAX44600	P.C.B. ASS'Y	FRONT 1	AR
	AAX44610	P.C.B. ASS'Y	FRONT 2	GB
	AAX44620	P.C.B. ASS'Y	FRONT 2	AR
	AAX45650	P.C.B. ASS'Y	INTERMEDIATE	
C1117	FX611470	C.EL	1000uF 6.3V	ECA0JM102
C1121	UR829100	C.EL	1000uF 10V	
C1125	FX611470	C.EL	1000uF 6.3V	ECA0JM102
C3509	FX611470	C.EL	1000uF 6.3V	ECA0JM102
C3511	FX611470	C.EL	1000uF 6.3V	ECA0JM102
C3513	FX611470	C.EL	1000uF 6.3V	ECA0JM102
C3501	UR818220	C.EL	220uF 6.3V	
C3515, 16	UR818330	C.EL	330uF 6.3V	
C4312	NX703890	C.EL	470uF 10V	ECA1APX471
C4307-10	AAX44690	C.EL	47uF 16V	ECA1CAD470XB
C3581, 82	NX702010	C.EL	220uF 16V	ECA1CM221
C1133	UR848100	C.EL	100uF 25V	
C1143	UR848100	C.EL	100uF 25V	
C4902	UR848100	C.EL	100uF 25V	
C4913	UR848100	C.EL	100uF 25V	
C4922	UR848100	C.EL	100uF 25V	
C4932	UR848100	C.EL	100uF 25V	
C4924	UR848220	C.EL	220uF 25V	
C4934	UR848220	C.EL	220uF 25V	
C1011	AAX44760	C.EL	10uF 450V	ECA2WHG100B
C1012	AAX44770	C.EL	33uF 450V	ECA2WHG330
C1032	FX612630	C.CE	1KV	ECCZ3A121KGE
C3510	FX611590	C.EL	100uF 6.3V	ECEAOJKS101
C3512	FX611590	C.EL	100uF 6.3V	ECEAOJKS101
C3514	FX611590	C.EL	100uF 6.3V	ECEAOJKS101
C3844	FX611590	C.EL	100uF 6.3V	ECEAOJKS101
C3846	FX611590	C.EL	100uF 6.3V	ECEAOJKS101
C3848	FX611590	C.EL	100uF 6.3V	ECEAOJKS101
C6092	AAX26460	C.EL	47uF 6.3V	ECEAOJKS470
C6101	AAX26460	C.EL	47uF 6.3V	ECEAOJKS470
C6001	FX611600	C.EL	220uF 6.3V	ECEA1AKS221
C3505	NX702060	C.EL	47uF 16V	ECEA1CKA470
C3505-08	NX702060	C.EL	47uF 16V	ECEA1CKA470
C3861	AAX18310	C.EL	100uF 16V	ECEA1CKS101
C3845	AAX18320	C.EL	22uF 16V	ECEA1CKS220
C3847	AAX18320	C.EL	22uF 16V	ECEA1CKS220
C3849	AAX18320	C.EL	22uF 16V	ECEA1CKS220
C3801, 02	AAX18330	C.EL	1uF 50V	ECEA1HKS010
C3841	AAX18330	C.EL	1uF 50V	ECEA1HKS010
C6004	AAX26480	C.EL	10uF 50V	ECEA1HKS100
C3901	UF008100	C.EL. CHP	100uF 4V	
C6801, 02	UF008100	C.EL. CHP	100uF 4V	
C3720	UF017330	C.EL. CHP	33uF 6.3V	
C6201	UF017330	C.EL. CHP	33uF 6.3V	
C6501, 02	UF017330	C.EL. CHP	33uF 6.3V	
C3080	UF118330	C.EL. CHP	330uF 6.3V	
C2502	UF038100	C.EL. CHP	100uF 16V	
C2503	UF037220	C.EL. CHP	22uF 16V	
C4302	NX704170	C.POL	0.022uF 50V	ECHR1H223JZ

* New Parts

Schm Ref.	PART NO.	Description	Remarks	Markets
C4921	NX704170	C.POL	0.022uF 50V	ECHR1H223JZ
C4923	NX704170	C.POL	0.022uF 50V	ECHR1H223JZ
C4931	NX704170	C.POL	0.022uF 50V	ECHR1H223JZ
C4933	NX704170	C.POL	0.022uF 50V	ECHR1H223JZ
C5272	US135220	C.CE. CHP	0.22uF 16V	
C2031, 32	US135100	C.CE. CHP	0.1uF 16V	
C2036	US135100	C.CE. CHP	0.1uF 16V	
C2038	US135100	C.CE. CHP	0.1uF 16V	
C3205	US135100	C.CE. CHP	0.1uF 16V	
C3208	US135100	C.CE. CHP	0.1uF 16V	
C5235, 36	US135100	C.CE. CHP	0.1uF 16V	
C5274	US135100	C.CE. CHP	0.1uF 16V	
C6215	US135100	C.CE. CHP	0.1uF 16V	
C5264	AAX44950	C.CE. CHP	0.018uF 16V	ECJ1VB1C183K
C2050	US034330	C.CE. M. CHP	0.033uF 16V	
C2034	US034390	C.CE. M. CHP	0.039uF 16V	
C5271	US063100	C.CE. M. CHP	1000pF 50V	
C5290	US063100	C.CE. M. CHP	1000pF 50V	
C2039	US064100	C.CE. M. CHP	0.01uF 50V	
C2047	US064100	C.CE. M. CHP	0.01uF 50V	
C3504	US064100	C.CE. M. CHP	0.01uF 50V	
C3531	US064100	C.CE. M. CHP	0.01uF 50V	
C3531, 32	US064100	C.CE. M. CHP	0.01uF 50V	
C5282	US064100	C.CE. M. CHP	0.01uF 50V	
C5273	US063180	C.CE. CHP	1800pF 50V	
C5256	US063220	C.CE. M. CHP	2200pF 50V	1164690
C2056, 57	US063270	C.CE. M. CHP	2700pF 50V	
C5291	US063270	C.CE. M. CHP	2700pF 50V	
C2066, 67	US063470	C.CE. CHP	4700pF 50V	
C2055	US063680	C.CE. CHP	6800pF 50V	
C2035	US063820	C.CE. CHP	8200pF 50V	
C3722, 23	US061100	C.CE. M. CHP	10pF 50V	
C2043	US062100	C.CE. M. CHP	100pF 50V	
C3520	US062100	C.CE. M. CHP	100pF 50V	
C3871-74	US062100	C.CE. M. CHP	100pF 50V	
C4331-37	US062100	C.CE. M. CHP	100pF 50V	
C5292	US062100	C.CE. M. CHP	100pF 50V	
C6212	US062100	C.CE. M. CHP	100pF 50V	
C2040	US063100	C.CE. M. CHP	1000pF 50V	
C2045, 46	US063100	C.CE. M. CHP	1000pF 50V	
C2058	US063100	C.CE. M. CHP	1000pF 50V	
C2060	US063100	C.CE. M. CHP	1000pF 50V	
C2063-65	US063100	C.CE. M. CHP	1000pF 50V	
C4423-30	US063100	C.CE. M. CHP	1000pF 50V	
C6511	US061150	C.CE. CHP	15pF 50V	
C3054	US061220	C.CE. M. CHP	22pF 50V	
C4338	US061330	C.CE. M. CHP	33pF 50V	
C6251	UB446100	C.CE. CHP	1uF 16V	
C2504-08	US035100	C.CE. M. CHP	0.1uF 16V	
C2510-13	US135100	C.CE. M. CHP	0.1uF 16V	
C5102, 03	US135100	C.CE. M. CHP	0.1uF 16V	
C5123	US135100	C.CE. M. CHP	0.1uF 16V	
C5151	US135100	C.CE. M. CHP	0.1uF 16V	
C6803-14	US135220	C.CE. CHP	0.22uF 16V	
C3502, 03	US064100	C.CE. M. CHP	0.01uF 50V	
C3533, 34	US064100	C.CE. M. CHP	0.01uF 50V	
C3811	US064100	C.CE. M. CHP	0.01uF 50V	
C3821	US064100	C.CE. M. CHP	0.01uF 50V	
C3831	US064100	C.CE. M. CHP	0.01uF 50V	
C6031-34	US064100	C.CE. M. CHP	0.01uF 50V	
C6095	US064100	C.CE. M. CHP	0.01uF 50V	
C2003-20	US035100	C.CE. M. CHP	0.1uF 16V	
C2022-30	US035100	C.CE. M. CHP	0.1uF 16V	

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Schm Ref.	PART NO.	Description	Remarks	Markets
C2049	US035100	C. CE. M. CHP 0.1uF 16V		
C2052, 53	US035100	C. CE. M. CHP 0.1uF 16V		
C2068	US035100	C. CE. M. CHP 0.1uF 16V		
C2073	US035100	C. CE. M. CHP 0.1uF 16V		
C2101, 02	US035100	C. CE. M. CHP 0.1uF 16V		
C3003-36	US035100	C. CE. M. CHP 0.1uF 16V		
C3051, 52	US035100	C. CE. M. CHP 0.1uF 16V		
C3061-67	US035100	C. CE. M. CHP 0.1uF 16V		
C3071, 72	US035100	C. CE. M. CHP 0.1uF 16V		
C3081, 82	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3087-89	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3101	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3111	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3116	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3202-04	US035100	C. CE. M. CHP 0.1uF 16V		GB
C3206, 07	US035100	C. CE. M. CHP 0.1uF 16V		GB
C3209-13	US035100	C. CE. M. CHP 0.1uF 16V		GB
C3221	US035100	C. CE. M. CHP 0.1uF 16V		GB
C3226	US035100	C. CE. M. CHP 0.1uF 16V		GB
C3231	US035100	C. CE. M. CHP 0.1uF 16V		GB
C3236	US035100	C. CE. M. CHP 0.1uF 16V		GB
C3241	US035100	C. CE. M. CHP 0.1uF 16V		GB
C3261	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3703-19	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3721	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3724	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3762-73	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3902-07	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3910	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3916, 17	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3921	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3926	US035100	C. CE. M. CHP 0.1uF 16V		AR
C3931	US035100	C. CE. M. CHP 0.1uF 16V		AR
C4207-10	US035100	C. CE. M. CHP 0.1uF 16V		
C4215	US035100	C. CE. M. CHP 0.1uF 16V		
C4217	US035100	C. CE. M. CHP 0.1uF 16V		
C4224-29	US035100	C. CE. M. CHP 0.1uF 16V		
C5203-05	US035100	C. CE. M. CHP 0.1uF 16V		
C5221	US035100	C. CE. M. CHP 0.1uF 16V		
C5232-34	US035100	C. CE. M. CHP 0.1uF 16V		
C6202-06	US035100	C. CE. M. CHP 0.1uF 16V		
C6211	US035100	C. CE. M. CHP 0.1uF 16V		
C6221	US035100	C. CE. M. CHP 0.1uF 16V		
C6261	US035100	C. CE. M. CHP 0.1uF 16V		
C6304, 05	US035100	C. CE. M. CHP 0.1uF 16V		
C6503-05	US035100	C. CE. M. CHP 0.1uF 16V		
C6521	US035100	C. CE. M. CHP 0.1uF 16V		
C6815, 16	US035100	C. CE. M. CHP 0.1uF 16V		
C1031	FX612780	C. CE 0.01uF 500V	ECKD2H103PU	R
C1061	FG613100	C. CE 1000pF 50V		R
* C1051	FX612830	C. POL 0.01uF	EC0B1H103JF	R
C1051	UA655100	C. MYLAR 0.1uF 50V	065269	AGB
C1053	UA655100	C. MYLAR 0.1uF 50V	065269	AGB
C1041	UA654220	C. MYLAR 0.022uF 50V		
C1102	UA654220	C. MYLAR 0.022uF 50V		
C1052	UA654680	C. MYLAR 0.068uF 50V	064989	
* C1001, 02	AAX45550	C. SAFTY 0.1uF	EC0U2A104MLC	
C1101	UA655100	C. MYLAR 0.1uF 50V	065269	AGB
C2048	US064150	C. CE. M. CHP 0.015uF 50V		
C1115	UB215100	C. CE. M. CHP 0.1uF 25V		
C3803	UB215100	C. CE. M. CHP 0.1uF 25V		GB
C3842, 43	UB215100	C. CE. M. CHP 0.1uF 25V		GB
C3862	UB215100	C. CE. M. CHP 0.1uF 25V		GB

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Schm Ref.	PART NO.	Description	Remarks	Markets
C4313-21	UB215100	C. CE. M. CHP 0.1uF 25V		
C4431-33	UB215100	C. CE. M. CHP 0.1uF 25V		
C4587-89	UB215100	C. CE. M. CHP 0.1uF 25V		
C4753	UB215100	C. CE. M. CHP 0.1uF 25V		
C4782	UB215100	C. CE. M. CHP 0.1uF 25V		
C6005	UB215100	C. CE. M. CHP 0.1uF 25V		
C6012	UB215100	C. CE. M. CHP 0.1uF 25V		
C6061	UB215100	C. CE. M. CHP 0.1uF 25V		
C6091	UB215100	C. CE. M. CHP 0.1uF 25V		
C6512	US060800	C. CE. CHP 8pF 50V		
C5262	US062180	C. CE. CHP 180P 50V		
C2041, 42	US062330	C. CE. M. CHP 330pF 50V		
C2061, 62	US062330	C. CE. M. CHP 330pF 50V		
C5299	US062330	C. CE. M. CHP 330pF 50V		
C2044	US062390	C. CE. CHP 390P 50V		
C5254	US062390	C. CE. CHP 390P 50V		
C6252	US062470	C. CE. M. CHP 470pF 50V		
C5283	US062560	C. CE. CHP 560pF 50V		
C2051	US061680	C. CE. CHP 68pF 50V		
C2054	US062680	C. CE. M. CHP 680pF 50V		
C3524	UB051820	C. CE. M. CHP 82pF 50V		
C2059	US062820	C. CE. CHP 820pF 50V		
C2501	UF118220	C. EL. CHP 220uF 6.3V		
C2509	UF037100	C. EL. CHP 10uF 16V		
C2001, 02	UF018100	C. EL. CHP 100uF 6.3V		
C2021	UF018100	C. EL. CHP 100uF 6.3V		
C3100	UF018100	C. EL. CHP 100uF 6.3V		
C3201	UF018100	C. EL. CHP 100uF 6.3V		
C3220	UF018100	C. EL. CHP 100uF 6.3V		
C3920	UF018100	C. EL. CHP 100uF 6.3V		
C6257	UF018100	C. EL. CHP 100uF 6.3V		
C5201	UF017330	C. EL. CHP 33uF 6.3V		
C5111	UF017470	C. EL. CHP 47uF 6.3V	EEVHB0J470R	
C5115	UF017470	C. EL. CHP 47uF 6.3V	EEVHB0J470R	
C5101	UF037100	C. EL. CHP 10uF 16V		
C1021	AAX44810	C. CE VCK0106K221T	F1B3D221A002	
C3083-86	UB446100	C. CE. CHP 1uF 16V		
C1062	UR818330	C. EL 330uF 6.3V		R
C4781	UR817470	C. EL 47uF 6.3V		
C1111	UR829100	C. EL 1000uF 10V		R
C1112	UR829100	C. EL 1000uF 10V		R
C1114	UR829220	C. EL 2200uF 10V		R
C1131	UR848220	C. EL 220uF 25V		
C1141	UR848220	C. EL 220uF 25V		
C4419-22	AAX44700	C. EL 47uF 25V	F2A1E470A205	
C4751, 52	AAX44700	C. EL 47uF 25V	F2A1E470A205	
C1041	UR857470	C. EL 47uF 35V		R
C4216	UF018100	C. EL. CHP 100uF 6.3V		
C4230-33	UF017330	C. EL. CHP 33uF 6.3V		
C3001, 02	UF118330	C. EL. CHP 330uF 6.3V		
C3701, 02	UF118330	C. EL. CHP 330uF 6.3V		AR
C4222, 23	UF118330	C. EL. CHP 330uF 6.3V		
C3073	UF037100	C. EL. CHP 10uF 16V		
C3761	UF037100	C. EL. CHP 10uF 16V		AR
C4211	UF037100	C. EL. CHP 10uF 16V		
C4213	UF037100	C. EL. CHP 10uF 16V		
C4219, 20	UF037100	C. EL. CHP 10uF 16V		
C5202	UF037100	C. EL. CHP 10uF 16V		
C6253	UF037100	C. EL. CHP 10uF 16V		
C6262	UF037100	C. EL. CHP 10uF 16V		
C5152	UF037100	C. EL. CHP 10uF 16V		
C4414-17	AAX44710	C. EL 47uF 6.3V	VCEA0JAE470B	
C1112	UR829100	C. EL 1000uF 10V		R
C1116	UR828220	C. EL 220uF 10V		

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Schm Ref.	PART NO.	Description	Remarks	Markets
C1111	UR829100	C.EL 1000uF 10V		R
C1121	UR829100	C.EL 1000uF 10V		R
C1171	AAX44750	C.EL 180uF 10V	VCEA1JH181B	
C1154	UR838220	C.EL 220uF 16V	045291	
C4311	AAX44720	C.EL 100uF 25V	VCEA1EAE101B	
C4322-24	AAX44720	C.EL 100uF 25V	VCEA1EAE101B	
C1153	UR848220	C.EL 220uF 25V		
C1151	AAX44730	C.EL 270uF 25V	VCEA1EJH271B	
C1161	AAX44740	C.EL 56uF 50V	VCEA1HJH560B	
C1031	AAX44820	C.CE 1800pF 500V	VCK0266K182T	AGB
C1003	NX702590	C.CE VCK0286B471	VCK0286B471	
C1005	NX702600	C.CE VCK0286E102	VCK0286E102	
D1002	iX636910	IC ENC471D5A	ENC471D5A	
D1011	AAX44840	DIODE S1WABAB0-4062	B0EBKT000002	
D1022	AAX44930	DIODE RD100E-TB	RD100E-TB	R
D1031	iX637340	DIODE AP01C	AP01C	
D1041	iX636960	DIODE AU01Z	AU01Z	
D1042	AAX44910	DIODE MAZ7300B-TR	MAZ73000BC	R
D1051	iX634180	DIODE 1SS254	1SS254	A
D1051	AAX44850	DIODE MA165TA5VT	MA2C165001VT	R
D1051, 52	iX634180	DIODE 1SS254	1SS254	GB
D1052	iX634180	DIODE 1SS254	1SS254	A
D1052	AAX44850	DIODE MA165TA5VT	MA2C165001VT	R
D1053	AAX44880	DIODE MA4022-LTA	MA4022LTA	AGB
D1054	iX636960	DIODE AU01Z	AU01Z	
D1061	AAX44860	DIODE MA700-TA	MA2C70000F	R
D1062	AAX44900	DIODE MAZ4200-HTA	MAZ42000HF	R
D1101	AAX27040	DIODE MAZ70750AC	MAZ70750AC	
D1111	iX636940	DIODE 21D006FC4	21D006FC4	AGB
D1111	NX702700	DIODE MA7D55	MA7D55	R
D1121	iX636940	DIODE 21D006FC4	21D006FC4	
D1126	AAX27000	DIODE 11ES1TA1	B0EAKL000031	
D1131	iX637330	DIODE.SHOT 11EQS10TA1	11EQS10TA1	
D1132	AAX44890	DIODE MA7180A-TR	MA7180A-TR	
D1141	iX637330	DIODE.SHOT 11EQS10TA1	11EQS10TA1	
D1151, 52	iX637330	DIODE.SHOT 11EQS10TA1	11EQS10TA1	
D1161	iX636960	DIODE AU01Z	AU01Z	
D1162	AAX44920	DIODE MAZ80300HL	MAZ80300HL	
D1171	iX636950	DIODE AK04	AK04	
D1172	AAX27000	DIODE 11ES1TA1	B0EAKL000031	
D1173	iX636950	DIODE AK04	AK04	R
D3071	AAX34220	DIODE MA2J11100L	MA2J11100L	
D3851	AAX44870	DIODE MA152A-TX	MA3X152A0L	GB
D4301	AAX36550	DIODE MA8047M	MA8047M	
D4921	AAX44830	DIODE ISS355 TE-17	B0ACCK000005	
D4931	AAX44830	DIODE ISS355 TE-17	B0ACCK000005	
D5151	AAX34230	DIODE MA2J72800L	MA2J72800L	
D6091	AAX36540	DIODE MA4039HTA	MA4039HTA	
D6101, 02	AAX27770	LED AMBER VIDEO OFF	LNJ401NPYJA	
D6103	NX701880	LED LNJ201LPQJA	LNJ201LPQJA	
D6151	AAX27770	LED AMBER VIDEO OFF	LNJ401NPYJA	AR
D6215	AAX34230	DIODE MA2J72800L	MA2J72800L	
DL6001	AAX45580	FL. DSPLY FV779GN	A2BB00000103	
F1001	AAX45320	FUSE T1.6A 250V	K5D162BK0005	
IC1021	iX637320	IC STRM6559LF	STRM6559LF	R
IC1101	AAX44320	IC MM1431ATT	C0DAEMZ00001	
IC1125	AAX44330	IC P0070VK01FZ	C0DAEZG00010	
IC1151	AAX44310	IC P009DZ1M	C0CBCGH00003	
IC2001	AAX26200	IC MN103S26EGA	MN103S26EGA	
IC2101	AAX26100	IC SN74AHC1G66H	C0JBAS000116	
IC2501	AAX44360	IC MOTOR DRIVE	C0GBG0000033	
IC3001	AAX26220	IC MN677531KA	MN677531KA	
IC3061	AAX44420	IC 64M-SDRAM	C3ABPG000121	

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Schm Ref.	PART NO.	Description	Remarks	Markets
IC3071	AAX26040	IC P01K333M2ZP	C0CBCBD00002	
IC3201	AAX26110	IC ADV7190KST	C0ZBZ0000459	GB
IC3261	AAX44390	IC BU4053BCFV-E1	C0JBAR000290	AR
IC3501	AAX36160	IC BH7865FS-E2	C9ZB00000394	GB
IC3501	AAX44440	IC BH7862FS-E2	C9ZB00000377	AR
IC3581	AAX44470	IC NJM78M05FA	NJM78M05FA	
IC3701	AAX34170	IC FL12200	C1AB00001554	AR
IC3761	AAX34190	IC K4S643232E-TC601	C3ABPJ000018	AR
IC3801	AAX44400	IC MN1508XNRE	C1AB00001466	GB
IC3841	AAX44380	IC MC14053BFEL	C0JBAR000245	GB
IC3842	AAX44290	IC BA7660FS-E2	BA7660FS-E2	GB
IC3851	AAX44500	IC XN4601TX	XN4601TX	GB
IC3901	AAX44410	IC ADV7199KS	C1AB00001499	AR
IC4211	AAX44350	IC PCM1609KPTR	C0FBK0000031	
IC4301-04	iX636760	IC NJM4580M	NJM4580M	
IC4305	AAX44300	IC NJM78L05A	C0CAADC00008	
IC5201	AAX44280	IC AN22030A-VT	AN22030A-VT	
IC6001	AAX44450	IC MN101C35DCW	MN101C35DCW	
IC6011	AAX16120	IC PST9327UR	PST9327UR	
IC6101	AAX36100	IC GP1UD282RK	B3RAD0000037	
IC6201	AAX26190	IC MN102H60GFB	MN102H60GFB	
IC6211	AAX03570	IC PST596JNR	PST596JNR	
IC6221	AAX44430	IC BR24C16F-E2	C3EBGC000033	
IC6251	AAX34150	IC MM1563DFBE1	C0CBCBE00001	
IC6261	AAX44340	IC P0018EZ01ZP	C0DBFFG00004	
IC6301	AAX44480	IC 16M FLASH ROM	RFKFRP65D160	
IC6521	AAX44370	IC AHC1GU04HDCK	C0JBAB000356	
IC6561	AAX34180	IC BU2286FV-E2	C1DB00000582	
IC6801	AAX44460	IC MN5B00	MN5B00	
IC6802	AAX44490	IC TC7SH32FUTL	TC7SH32FUTL	
J3871	AAX44780	JACK SCART TERMINAL	K1FB121B0004	GB
JK4501	AAX44790	JACK LAP5130	K2YZ09000007	GB
JK4751	AAX44800	JACK YKC21	K4BK01H00002	GB
P1001	AAX36430	AC INLET HSC0609	K2AA2B000004	
PR1161	AAX04040	IC.PRT VSF0015A025	VSF0015A025	
PR1171	KX604710	IC.PRT VSF0015A10	VSF0015A10	
PR4911, 12	KX604710	IC.PRT VSF0015A10	VSF0015A10	
Q1021	AAX45110	TR 2SC4908	2SC4908LF654	
Q1051	AAX45210	TR RS2561L2-1-V-E3 W4	B3BPA0000104	
Q1052	AAX45170	TR 2SD1996	2SD1996STA	
Q1115	AAX36600	TR CPH6315-TL	B1DHCC000029	
Q2001	AAX45130	TR 2SD1819	2SD1819AOL	
Q3101	AAX45090	TR 2SB1218	2SB1218ARL	AR
Q3111	AAX45090	TR 2SB1218	2SB1218ARL	AR
Q3116	AAX45090	TR 2SB1218	2SB1218ARL	AR
Q3221	AAX45090	TR 2SB1218	2SB1218ARL	GB
Q3226	AAX45090	TR 2SB1218	2SB1218ARL	GB
Q3231	AAX45090	TR 2SB1218	2SB1218ARL	GB
Q3236	AAX45090	TR 2SB1218	2SB1218ARL	GB
Q3241	AAX45090	TR 2SB1218	2SB1218ARL	GB
Q3811	AAX45180	TR 2SD601A	2SD601A-RSTX	GB
Q3821	AAX45180	TR 2SD601A	2SD601A-RSTX	GB
Q3831	AAX45180	TR 2SD601A	2SD601A-RSTX	GB
Q3851	AAX45180	TR 2SD601A	2SD601A-RSTX	GB
Q3921	AAX45070	TR 2SA1532	2SA15320XL	AR
Q3926	AAX45070	TR 2SA1532	2SA15320XL	AR
Q3931	AAX45070	TR 2SA1532	2SA15320XL	AR
Q4302	AAX45180	TR 2SD601A	2SD601A-RSTX	
Q4315	AAX45180	TR 2SD601A	2SD601A-RSTX	
Q4410	AAX45120	TR 2SD1328	2SD132800L	
Q4411, 12	AAX45180	TR 2SD601A	2SD601A-RSTX	GB
Q4413, 14	AAX45120	TR 2SD1328	2SD132800L	
Q4415-18	AAX45180	TR 2SD601A	2SD601A-RSTX	

* New Parts

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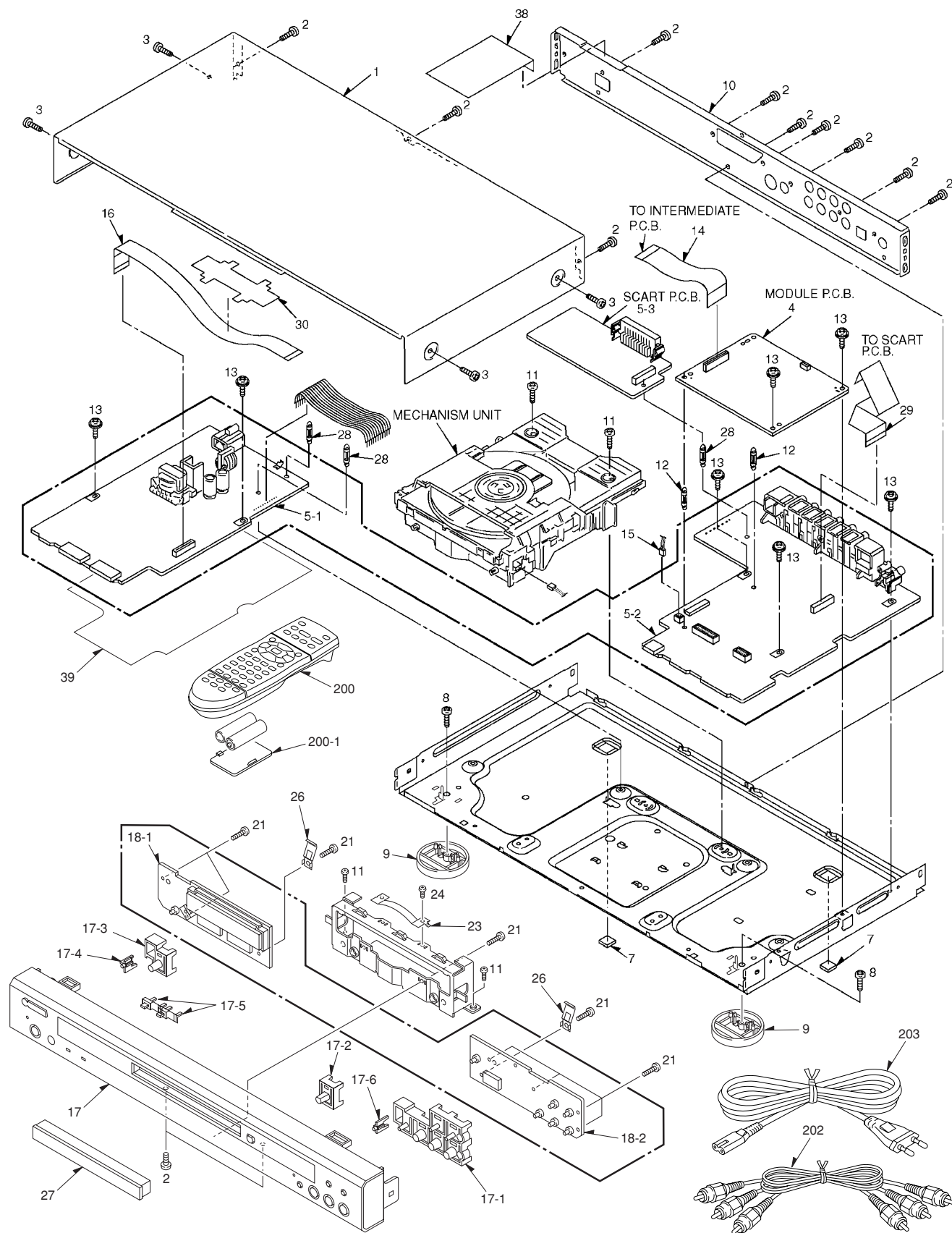
Schm Ref.	PART NO.	Description	Remarks	Markets
* Q4419	AAX45120	TR	2SD1328	
* Q4751	AAX45180	TR	2SD601A	
* Q4901	AAX45140	TR	2SD1862	
* Q4911	AAX45100	TR	2SB1240	
* Q4921	AAX45190	TR	2SK170V	
* Q4931	AAX45200	TR	2SJ74V	
* Q5111	AAX45080	TR	2SB1115	
* Q5115	AAX45080	TR	2SB1115	
* Q5271	AAX45220	TR	UNR5211	
* Q6091	AAX45150	TR	2SD1992	
* Q6095	AAX45160	TR	2SD1996	
* Q81115	AAX45030	TR. DGT	UNR2213	
* QR3261	AAX45010	TR. DGT	UN5212	AR
* QR3501	iX635550	TR. DGT	UN2212	AR
* QR3521	iX635550	TR. DGT	UN2212	
* QR3523	iX635550	TR. DGT	UN2212	AR
* QR3841, 42	iX635550	TR. DGT	UN2212	
* QR3851, 52	iX635550	TR. DGT	UN2212	
* QR3853	iX637130	TR. DGT	UN2111	GB
* QR4301, 02	AAX45020	TR. DGT	UNR2211	
* QR4304	iX637130	TR. DGT	UN2111	
* QR4316	iX637130	TR. DGT	UN2111	
* QR4317	AAX45020	TR. DGT	UNR2211	
* QR4901	AAX44980	TR. DGT	UN2114	
* QR4902, 03	AAX44990	TR. DGT	UN2114	
* QR4904	AAX44980	TR. DGT	UN2114	
* QR5221	AAX16160	TR. DGT	UN2121	
* QR5241	AAX45000	TR. DGT	UN511	
* QR6052	AAX44970	TR. DGT	DTA123JK-T96	
* QR6055, 56	AAX44970	TR. DGT	DTA123JK-T96	AR
* QR6101, 02	AAX44960	TR. DGT	DTA123JK-T96	
* QR6215	AAX45010	TR. DGT	UN5212	
* R5112	AAX45710	R. CAR. CHP	27 Ω 1/2W	
* R5116	AAX45710	R. CAR. CHP	27 Ω 1/2W	
* R1002	AAX45720	R. MTL. OXD	330K Ω 1/2W	
* R1052	HV753220	R. CAR. FP	2. 2 Ω 1/4W	
* R1031	HV758220	R. CAR. FP	220K Ω 1/4W	AGB
* R1032	HV758220	R. CAR. FP	220K Ω 1/4W	AGB
* R1041	HV758220	R. CAR. FP	220K Ω 1/4W	R
* R1042	HV758220	R. CAR. FP	220K Ω 1/4W	R
* R1063	HV758220	R. CAR. FP	220K Ω 1/4W	R
* R1054	HV754680	R. CAR. FP	68 Ω 1/4W	
* R1051	AAX15780	R. CAR. FP	75 Ω 1/4W	GB
* R1021	HL214820	R. MTL. OXD	82 Ω 1W	R
* R1043	HL224680	R. MTL. OXD	68 Ω 2W	GB
* R1022, 23	HV455470	R. CAR. FP	470 Ω 1/4W	R
* R1041	HV458330	R. CAR. FP	330K Ω 1/4W	AGB
* R1042	HV458330	R. CAR. FP	330K Ω 1/4W	AGB
* R1044	NX703640	R. CAR. FP	3. 9M Ω 1/2W	R
* R1045	NX703650	R. CAR. FR	4. 7M Ω 1/2W	R
* R1051	HV456180	R. CAR. FP	1. 8K Ω 1/4W	R
* R1053	HV455330	R. CAR. FP	330 Ω 1/4W	
* R1061	HV456150	R. CAR. FP	1. 5K Ω 1/4W	R
* R1062	HV455100	R. CAR. FP	100 Ω 1/4W	R
* R1064	HV457100	R. CAR. FP	10K Ω 1/4W	R
* R1031	AAX07250	R. MTL	39K Ω 1W	R
* R1043	NX703610	R. MTL. FLM	10 Ω 1/2W	R
* S6101	KX604670	SW	EVQ11G07K	
* S6151	KX604670	SW	EVQ11G07K	
* S6152	KX604670	SW	EVQ11G07K	
* S6153	KX604670	SW	EVQ11G07K	
* S6154	KX604670	SW	EVQ11G07K	
* S6155	KX604670	SW	EVQ11G07K	

* New Parts

Schm Ref.	PART NO.	Description	Remarks	Markets
S6156	KX604670	SW	EVQ11G07K	
S6157	KX604670	SW	EVQ11G07K	AR
SW2501	AAX44940	SW	RSH1A048-A	
* T1021	AAX28030	TRANS	ETS29AS136AC	GB
* T1021	AAX45660	TRANS	ETS29AD4S6AC	R
* T1021	AAX28030	TRANS	ETS29AS136AC	A
* X6001	AAX27620	RSNR. CE	RSXY8M00M06T	GB
* X6501	AAX45610	RSNR. CE	VSX1044 36.864MHz	GB
* X6501	AAX45620	RSNR. CE	VSX1044 36.864MHz	AR
* ZA1001, 02	AX624190	HOLDER. FUS	EYF52BC	

* New Parts

EXPLODED VIEW



MECHANICAL PARTS

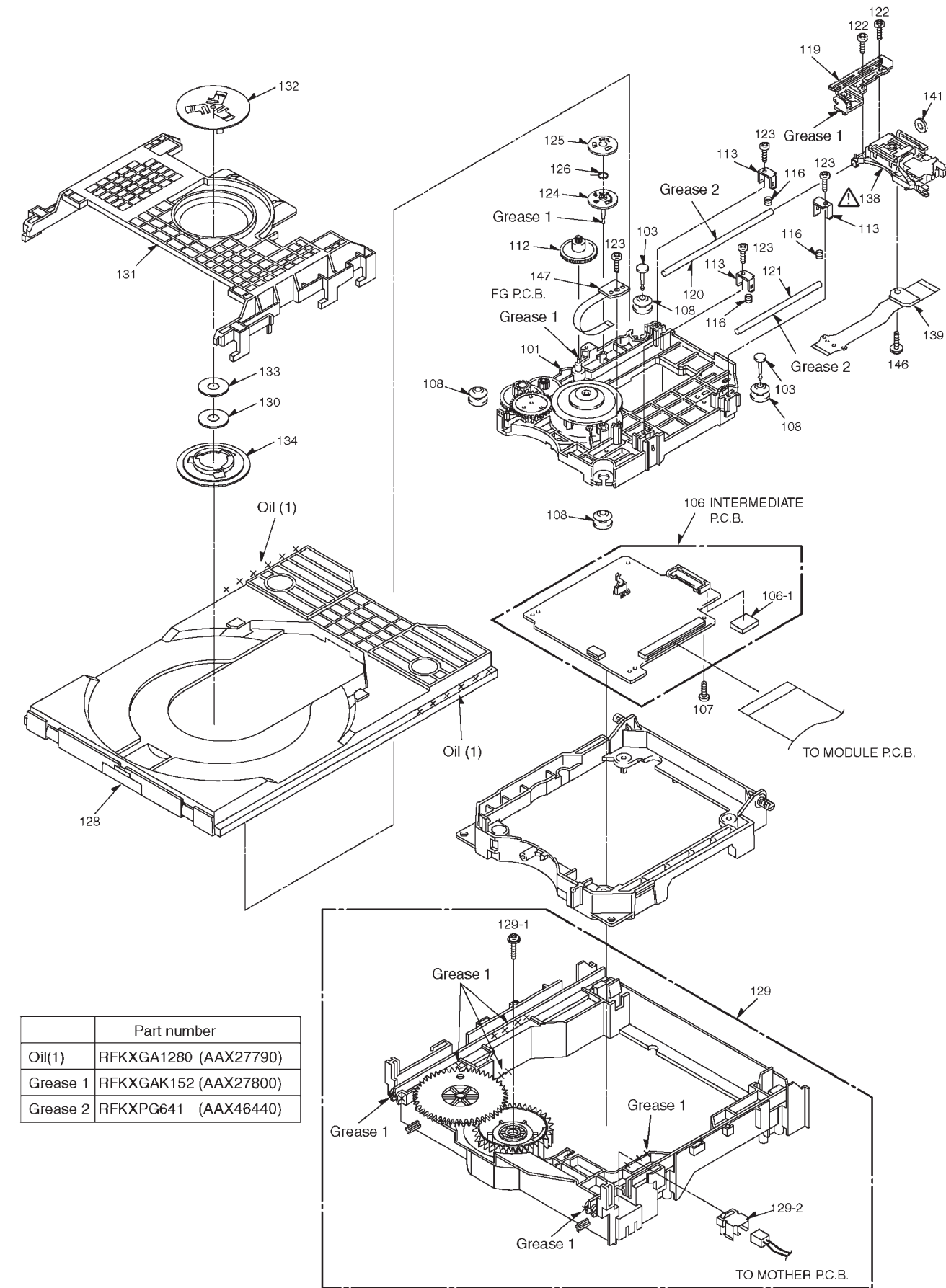
	Ref. No.	PART NO.	Description		Remarks	Markets
*	1	AAX45060	TOP COVER	GD	RKM0478-N	
*	1	AAX45050	TOP COVER	BL	RKM0478-K	
*	1	AAX45040	TOP COVER	TI	RKM0478-H	
	2	EX603920	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2BL	VHD0690	
	3	EX603960	SPECIAL SCREW	3x8 GD, TI	VHD1094	
	3	EX603940	SPECIAL SCREW	3x8 BL	VHD1041	
*	4	AAX44630	P.C.B. ASS'Y	MODULE	REP3402E	GB
*	4	AAX44640	P.C.B. ASS'Y	MODULE	REP3438E	AR
*	5-1	AAX44560	P.C.B. ASS'Y	POWER	REP3389HA	GB
*	5-1	AAX44570	P.C.B. ASS'Y	POWER	REP3389JA	A
*	5-1	AAX44580	P.C.B. ASS'Y	POWER	REP3421DA	R
*	5-2	AAX44530	P.C.B. ASS'Y	TERMINAL	REP3389HB	GB
*	5-2	AAX44540	P.C.B. ASS'Y	TERMINAL	REP3389JB	A
*	5-2	AAX44550	P.C.B. ASS'Y	TERMINAL	REP3421DB	R
*	5-3	AAX44520	P.C.B. ASS'Y	SCART	REP3389CC	GB
*	7	AAX45330	FOOT RUBBER		RKA0137-K	
*	8	AAX45300	PAN HEAD P-TITE SCREW	3x6 MFZN2Y	XTV3+6G	
*	9	AAX45570	FOOT	GD	VYK8895	
*	9	AAX45560	FOOT	BL, TI	RYQ0398-H	
*	10	AAX45520	REAR PANEL		RGR0330C-C	GB
*	10	AAX45500	REAR PANEL		RGR0330B-F	A
*	10	AAX45510	REAR PANEL		RGR0330B-G	R
	11	EX604060	PAN HEAD B-TITE SCREW	3x8 MFZN2Y	XTV3+8J	
*	12	AAX44510	PCB SUPPORT		RMR1359-W	
	13	AAX36630	PAN HEAD SEMS S-TITE SCREW	3x8 MFZN2Y	VHD1403	
*	14	AAX44240	FFC(50P)	50P	REZ1462	
	15	AAX26750	CONNECTOR CABLE	2P P6005-mecha	REX1057	
*	16	AAX44250	FFC(22P)	22P	REZ1463	
*	17	AAX45370	FRONT PANEL ASS'Y	GD	RYP1159A-N	
*	17	AAX45350	FRONT PANEL ASS'Y	BL	RYP1159-K	GB
*	17	AAX45360	FRONT PANEL ASS'Y	BL	RYP1159A-K	A
*	17	AAX45340	FRONT PANEL ASS'Y	TI	RYP1159-H	
*	17-1	AAX45440	BUTTON, OPERATION	GD	RGU2163A-N	
*	17-1	AAX45420	BUTTON, OPERATION	BL	RGU2163-K	GB
*	17-1	AAX45430	BUTTON, OPERATION	BL	RGU2163A-K	A
*	17-1	AAX45410	BUTTON, OPERATION	TI	RGU2163-H	
*	17-2	AAX45400	BUTTON, OPEN/CLOSE	GD	RGU2164-N	
*	17-2	AAX45390	BUTTON, OPEN/CLOSE	BL	RGU2164-K	
*	17-2	AAX45380	BUTTON, OPEN/CLOSE	TI	RGU2164-H	
*	17-3	AAX45470	BUTTON, POWER	GD	RGU2165-N	
*	17-3	AAX45460	BUTTON, POWER	BL	RGU2165-K	
*	17-3	AAX45450	BUTTON, POWER	TI	RGU2165-H	
*	17-4	AAX45680	LIGHTING PIECES(A)	STANDBY/ON	RGL0613-Q	
*	17-5	AAX45700	LIGHTING PIECES(C)	VIDEO, MULTI	RGL0615-Q	
*	17-6	AAX45690	LIGHTING PIECES(B)	PROGRESSIVE ON	RGL0614-Q	AR
*	18-1	AAX44590	P.C.B. ASS'Y	FRONT 1	REP3456AA	GB
*	18-1	AAX44600	P.C.B. ASS'Y	FRONT 1	REP3456BA	AR
*	18-2	AAX44610	P.C.B. ASS'Y	FRONT 2	REP3456AB	GB
*	18-2	AAX44620	P.C.B. ASS'Y	FRONT 2	REP3456BB	AR
	21	XX700860	BIND HEAD B-TITE SCREW	2.6x10 MFZN2Y	XTBS26+10J	
*	23	AAX44660	EARTH PLATE(C)		RMC0515	
*	24	AAX45290	BIND HEAD SCREW	3x4 MFZN2Y	XTB3+4F	
	26	AAX36340	EARTH PLATE B		RMC0468	

* New Parts

	Ref. No.	PART NO.	Description		Remarks	Markets
*	27	AAX45250	TRAY LID	GD	RYF0657-N	
*	27	AAX45240	TRAY LID	BL	RYF0657-K	
*	27	AAX45230	TRAY LID	TI	RYF0657-H	
*	28	AAX44650	PCB HOLDER		RMR1440-X	GB
*	29	AAX44260	FFC(19P)	19P	REZ1464	GB
*	30	AAX44270	FFC SHEET		RGO0341-K	
*	38	AAX45630	INSULATION SHEET		RMZ0659	
*	39	AAX45310	BARRIER		RMZ0662	
			ACCESORRIES			
*	200	V9756400	REMOTE CONTROL		N2QAJB000064	
*	200-1	AAX45670	BATTERY COVER		HTR028072002	
	202	MX605180	AUDIO VIDEO CABLE		VJA0788	GB
*	202	AAX45540	AUDIO VIDEO CABLE		K2KA6CA00001	AR
* ⚠	203	AAX42070	POWER CABLE	1.9m	RJA0035-2X	A
* ⚠	203	AAX42060	POWER CABLE	1.9m	RJA0019-2X	GR
* ⚠	203	AAX42080	POWER CABLE	1.9m	RJA0053-3X	B
			BATTERY			

* New Parts

DVD-MECHANISM EXPLODED VIEW



	Part number
Oil(1)	RFKXGA1280 (AAX27790)
Grease 1	RFKXGAK152 (AAX27800)
Grease 2	RFKXPG641 (AAX46440)

DVD-MECHANISM PARTS

Ref. No.	PART NO.	Description		Remarks	Markets
101	AAX36320	SPINDLE MOTOR ASS'Y	INTERMEDIATE	RXQ1015	
103	AAX27590	FIXED PIN		RMS0712	
* 106	AAX45650	P.C.B. ASS'Y		REP3406AN	
106-1	AAX26260	PCB RUBBER		RMG0558K	
* 107	AAX45280	SCREW		RHD20060	
108	AAX27340	FLOATING RUBBER		RMG0545A	
112	AAX26280	TRAVERSE GEAR(A)		RDG0499	
113	AAX27270	ADJUST SPRING HOLDER1		RMC0415	
116	AAX27680	ADJUST SPRING		RME0320	
119	AAX26320	TRAVERSE DRIVE RACK		RMM0251	
120	AAX27170	DRIVE SHAFT		RMS0710	
121	AAX26360	GUIDE SHAFT		RMS0711	
* 122	AAX45270	SCREW		RHD17045	
123	AAX04350	SCREW		VHD1224	
124	AAX26290	TRAVERSE GEAR(B)		RDG0500	
125	AAX26300	TRAVERSE GEAR(C)		RDG0501	
126	AAX26310	TRAVERSE GEAR SPRING		RME0319	
128	AAX27140	TRAY		RGQ0280K3	
* 129	AAX45490	MECHA CHASSIS ASS'Y		RXQ0727	
129-1	AAX27250	SCREW		XTW3+12S	
129-2	AAX26350	OPEN SWITCH		RSH1A049U	
* 130	AAX04650	MAGNET		JSM0048	
* 131	AAX44680	CLAMP PLATE		RMR1445K	
* 132	AAX45480	MAGNET HOLDER		RMR1447X	
* 133	AAX45600	WASHER		XWG6FFY	
* 134	AAX44670	CLAMPER		RMR1446X	
* 138	AAX45590	OPTICAL PICK-UP		RAF3023A	
* 139	AAX45640	INTERFACE FPC		RJB2308A	
* 141	AAX26370	CUSHION RUBBER		RMG0561T	
* 146	AAX45260	SCREW		RHD14108	
147	AAX25940	FG P.C.B.		REP3081A	

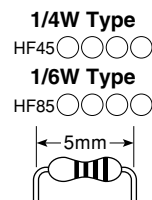
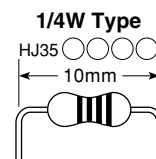
* New Parts

Parts List for Chip Carbon Resistors

Value	1/10W Type Part No.	Value	1/10W Type Part No.	Value	1/16W Type Part No.
0 Ω	RD35 0000	4.3 k Ω	RD35 6430	0 Ω	HX61 1040
1.0 Ω	RD35 3100	4.7 k Ω	RD35 6470	1 Ω	HX61 0750
2.2 Ω	RD35 3220	5.1 k Ω	RD35 6510	10 Ω	HX61 1160
2.4 Ω	RD35 3240	5.6 k Ω	RD35 6560	47 Ω	HX61 1150
4.7 Ω	RD35 3470	6.2 k Ω	RD35 6620	100 Ω	HX61 0900
10 Ω	RD35 4100	6.8 k Ω	RD35 6680	220 Ω	HX61 0960
22 Ω	RD35 4220	7.5 k Ω	RD35 6750	270 Ω	HX61 1120
27 Ω	RD35 4270	8.2 k Ω	RD35 6820	390 Ω	HX61 0990
33 Ω	RD35 4330	9.1 k Ω	RD35 6910	470 Ω	HX61 0890
39 Ω	RD35 4390	10 k Ω	RD35 7100	560 Ω	HX61 1010
43 Ω	RD35 4430	11 k Ω	RD35 7110	1 k Ω	HX61 0910
47 Ω	RD35 4470	12 k Ω	RD35 7120	1.2 k Ω	HX61 1100
51 Ω	RD35 4510	13 k Ω	RD35 7130	1.5 k Ω	HX61 1090
62 Ω	RD35 4620	15 k Ω	RD35 7150	1.8 k Ω	HX61 1050
68 Ω	RD35 4680	16 k Ω	RD35 7160	2.7 k Ω	HX61 1140
75 Ω	RD35 4750	18 k Ω	RD35 7180	3.3 k Ω	HX61 0980
82 Ω	RD35 4820	20 k Ω	RD35 7200	4.7 k Ω	HX61 1080
91 Ω	RD35 4910	22 k Ω	RD35 7220	6.8 k Ω	HX61 1030
100 Ω	RD35 5100	24 k Ω	RD35 7240	10 k Ω	HX61 0920
120 Ω	RD35 5120	27 k Ω	RD35 7270	12 k Ω	HX61 0780
130 Ω	RD35 5130	30 k Ω	RD35 7300	15 k Ω	HX61 0950
150 Ω	RD35 5150	33 k Ω	RD35 7330	18 k Ω	HX61 0770
180 Ω	RD35 5180	36 k Ω	RD35 7360	22 k Ω	HX61 1110
200 Ω	RD35 5200	39 k Ω	RD35 7390	27 k Ω	HX61 1130
220 Ω	RD35 5220	43 k Ω	RD35 7430	30 k Ω	HX61 0810
240 Ω	RD35 5240	47 k Ω	RD35 7470	47 k Ω	HX61 1060
270 Ω	RD35 5270	51 k Ω	RD35 7510	56 k Ω	HX61 1020
300 Ω	RD35 5300	56 k Ω	RD35 7560	62 k Ω	HX61 0790
330 Ω	RD35 5330	62 k Ω	RD35 7620	82 k Ω	HX61 1170
390 Ω	RD35 5390	68 k Ω	RD35 7680	100 k Ω	HX61 0930
430 Ω	RD35 5430	75 k Ω	RD35 7750	120 k Ω	HX61 0940
470 Ω	RD35 5470	82 k Ω	RD35 7820	220 k Ω	HX61 0970
510 Ω	RD35 5510	91 k Ω	RD35 7910	390 k Ω	HX61 1000
560 Ω	RD35 5560	100 k Ω	RD35 8100	560 k Ω	HX61 1010
620 Ω	RD35 5620	120 k Ω	RD35 8120	1 M Ω	HX61 1070
680 Ω	RD35 5680	150 k Ω	RD35 8150		
820 Ω	RD35 5820	160 k Ω	RD35 8160		
910 Ω	RD35 5910	180 k Ω	RD35 8180		
1 k Ω	RD35 6100	200 k Ω	RD35 8200		
1.1 k Ω	RD35 6110	220 k Ω	RD35 8220		
1.2 k Ω	RD35 6120	270 k Ω	RD35 8270		
1.3 k Ω	RD35 6130	300 k Ω	RD35 8300		
1.5 k Ω	RD35 6150	330 k Ω	RD35 8330		
1.6 k Ω	RD35 6160	390 k Ω	RD35 8390		
1.8 k Ω	RD35 6180	430 k Ω	RD35 8430		
2 k Ω	RD35 6200	470 k Ω	RD35 8470		
2.2 k Ω	RD35 6220	510 k Ω	RD35 8510		
2.4 k Ω	RD35 6240	680 k Ω	RD35 8680		
2.7 k Ω	RD35 6270	1 M Ω	RD35 9100		
3 k Ω	RD35 6300	1.5 M Ω	RD35 9150		
3.3 k Ω	RD35 6330	2.2 M Ω	RD35 9220		
3.6 k Ω	RD35 6360	4.7 M Ω	RD35 9470		
3.9 k Ω	RD35 6390	10 M Ω	RD35 A100		

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	10 k Ω	HF45 7100	HF45 7100
1.8 Ω	HJ35 3180	*	11 k Ω	HF45 7110	HF45 7110
2.2 Ω	HJ35 3220	HF85 3220	12 k Ω	HJ35 7120	HF85 7120
3.3 Ω	HJ35 3330	HF85 3330	13 k Ω	HF45 7130	HF45 7130
4.7 Ω	HJ35 3470	HF85 3470	15 k Ω	HF45 7150	HF45 7150
5.6 Ω	HJ35 3560	HF85 3560	18 k Ω	HF45 7180	HF45 7180
10 Ω	HF45 4100	HF45 4100	22 k Ω	HF45 7220	HF45 7220
15 Ω	HJ35 4150	HF85 4150	24 k Ω	HF45 7240	HF45 7240
22 Ω	HF45 4220	HF45 4220	27 k Ω	HJ35 7270	HF85 7270
27 Ω	HJ35 4270	HF85 4270	30 k Ω	HF45 7300	HF45 7300
33 Ω	HF45 4330	HF45 4330	33 k Ω	HF45 7330	HF45 7330
39 Ω	HJ35 4470	HF85 4390	36 k Ω	HF45 7360	HF45 7360
47 Ω	HF45 4470	HF45 4470	39 k Ω	HF45 7390	HF45 7390
56 Ω	HF45 4560	HF45 4560	47 k Ω	HF45 7470	HF45 7470
68 Ω	HF45 4680	HF45 4680	51 k Ω	HF45 7510	HF45 7510
75 Ω	HF45 4750	HF45 4750	56 k Ω	HF45 7560	HF45 7560
82 Ω	HF45 4820	HF45 4820	62 k Ω	HF45 7620	HF45 7620
91 Ω	HF45 4910	HF45 4910	68 k Ω	HF45 7680	HF45 7680
100 Ω	HF45 5100	HF45 5100	82 k Ω	HF45 7820	HF45 7820
110 Ω	HJ35 5110	HF85 5110	91 k Ω	HF45 7910	HF45 7910
120 Ω	HF45 5120	HF45 5120	100 k Ω	HF45 8100	HF45 8100
150 Ω	HF45 5150	HF45 5150	110 k Ω	HF45 8110	HF45 8110
160 Ω	HJ35 5160	*	120 k Ω	HF45 8120	HF45 8120
180 Ω	HF45 5180	HF45 5180	150 k Ω	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 k Ω	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 k Ω	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 k Ω	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 k Ω	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 k Ω	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 k Ω	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 k Ω	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 k Ω	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 k Ω	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 k Ω	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 M Ω	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 M Ω	HJ35 9120	*
1.0 k Ω	HF45 6100	HF45 6100	1.5 M Ω	HJ35 9150	HF85 9150
1.2 k Ω	HF45 6120	HF45 6120	1.8 M Ω	HJ35 9180	HF85 9180
1.5 k Ω	HF45 6150	HF45 6150	2.2 M Ω	HJ35 9220	HF85 9220
1.8 k Ω	HF45 6180	HF45 6180	3.3 M Ω	HJ35 9330	HF85 9330
2.0 k Ω	HJ35 6200	HF85 6200	3.9 M Ω	HJ35 9390	*
2.2 k Ω	HF45 6220	HF45 6220	4.7 M Ω	HJ35 9470	HF85 9470
2.4 k Ω	HJ35 6240	HF85 6240			
2.7 k Ω	HF45 6270	HF45 6270			
3.0 k Ω	HF45 6300	HF45 6300			
3.3 k Ω	HF45 6330	HF45 6330			
3.6 k Ω	HJ35 6360	HF85 6360			
3.9 k Ω	HF45 6390	HF45 6390			
4.7 k Ω	HF45 6470	HF45 6470			
5.1 k Ω	HF45 6510	HF45 6510			
5.6 k Ω	HF45 6560	HF45 6560			
6.8 k Ω	HF45 6680	HF45 6680			
8.2 k Ω	HF45 6820	HF45 6820			
9.1 k Ω	HF45 6910	HF45 6910			



* : Not available