

DVD PLAYER DVD-C996 DV-C6280

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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This Service Manual uses recycled paper.



■ TO SERVICE PERSONNEL

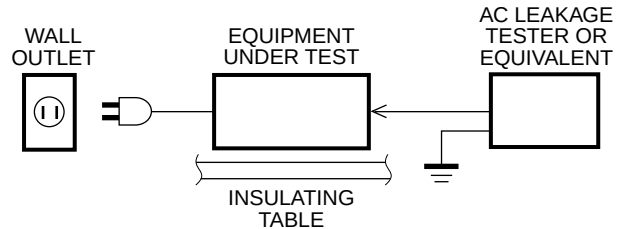
1. Critical Components Information

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 0.15μF.



- 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.

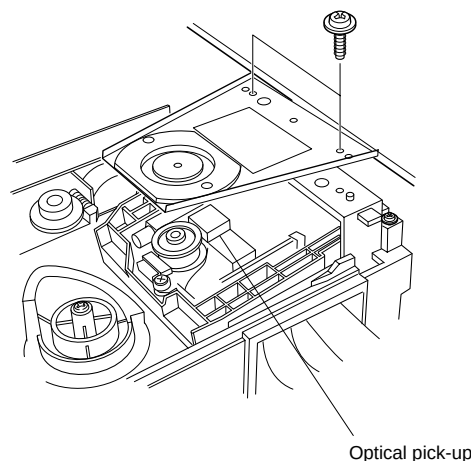
- 1) When testing and/or repairing any component within the product, keep your eyes and skin more than 30 cm away from the laser pick-up unit at all times. Do not stare at the laser beam at any time.
- 2) Do not attempt readjustment, disassembly or repair of the laser pick-up, unless noted elsewhere 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 POWER 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

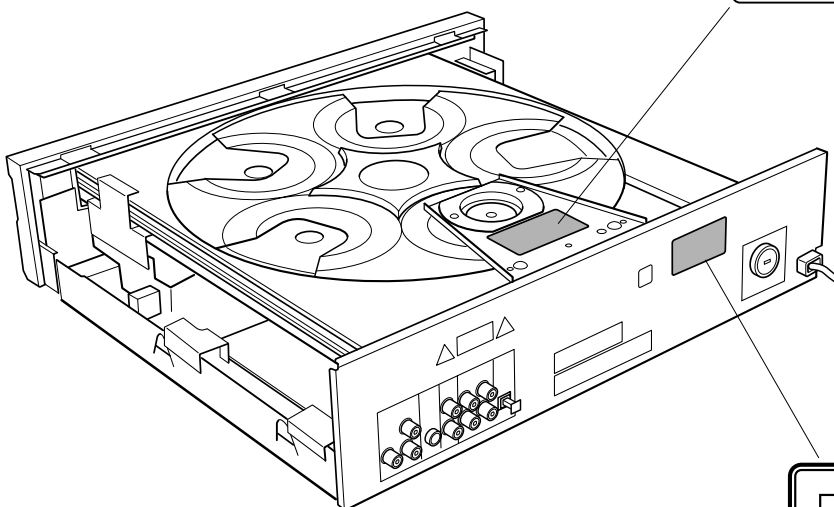
Wave length : 665 nm
 Laser power : CLASS II
 Laser output : Max. 1.0mW (Continuous)
 Output value determined by 21 CFR CHAPTER1,
 SUBCHAPTER J



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

VARNING! : OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

CAUTION	- VISIBLE AND / OR INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
VARNING	- SYNLIG OCH / ELLER OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STRÅLEN ÄR FARLIG.
VARO !	AVATTAESSA OLET ALTTIINA NÄKYVÄLLE JA / TAI NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	- SYNLIG OCH / ELLER OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
VORSICHT !	SICHTBARE UND / ODER UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.



A, B, G, R models

CLASS 1 LASER PRODUCT
 LASER KLASSE 1 PRODUKT
 LUOKAN 1 LASERLAITE
 KLASS 1 LASER APPARAT

■ PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
 2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
 3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
 4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
 5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
 6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
 7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

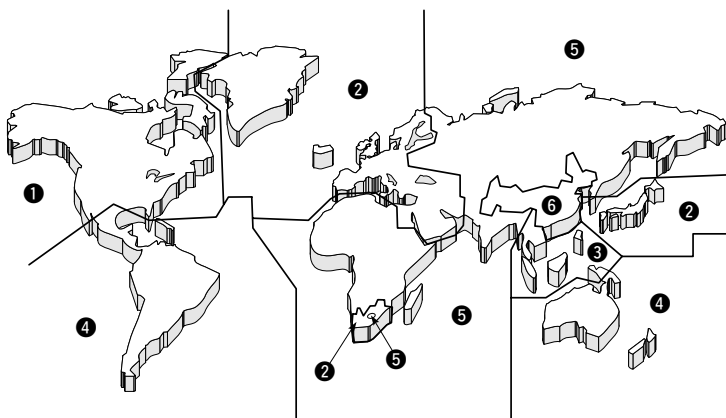
IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked $\triangle$ by in the schematic diagrams, exploded views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

LOCALE MANAGEMENT INFORMATION

Locale Management Information : This DVD player is designed and manufactured to respond to the Locale Management Information that is recorded on a 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.



■ PRECAUTION, LASER DIODE

CAUTION:

This unit utilizes a class II laser. Visible laser radiation is emitted from the optical pickup lens when the unit is turned on:

1. Do not look directly into the pickup lens.
2. Do not use optical instruments to look at the pickup lens.
3. Do not adjust the preset variable resistor on the optical pickup.
4. Do not disassemble the optical pickup unit.
5. If the optical pickup is replaced, use the manufactures specified replacement pickup only.
6. Use of control or adjustment or performance of procedures other than those specified herein may result in hazardous radiation exposure.

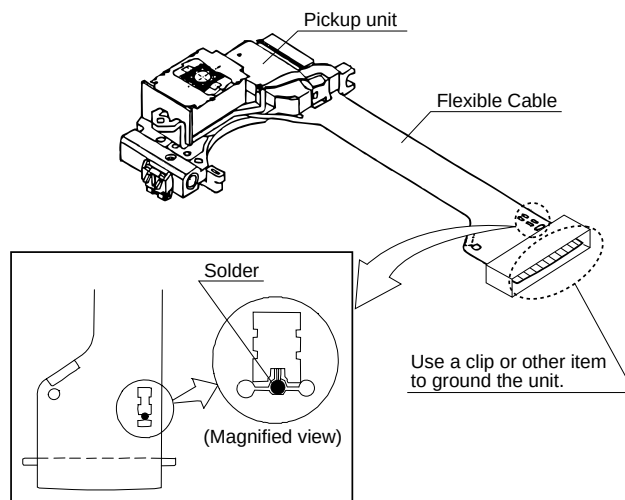
■ HANDLING PRECAUTIONS FOR TRAVERSE DECK

The laser diode in the optical pickup may break down due to potential difference caused by static electricity of clothes or human body.

So be careful of electrostatic breakdown during repair of the optical pickup.

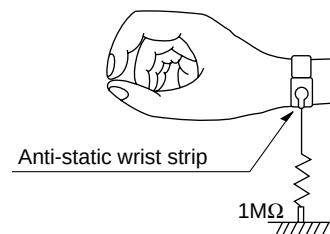
Handling of optical pickup

1. Do not subject the optical pickup to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting bridge is soldered into the flexible board (FPC Board).
When removing or connecting the shorting bridge, finish the job in as short times as possible.
3. Be careful not to apply excessive stress to the flexible board (FPC Board).
4. Do not turn the variable resistor (Laser power adjustment). It has already been adjusted.



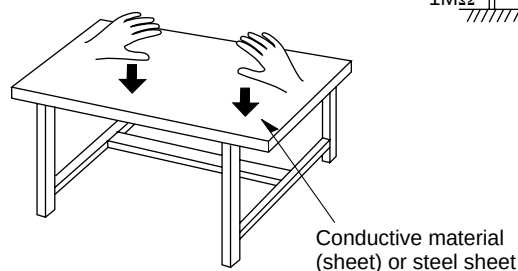
Grounding for electrostatic breakdown prevention

1. Human body grounding.
Use the antistatic wrist strap to discharge the static electricity from your body.
2. Work table grounding.
Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed and ground the sheet.



Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So take care not to let your clothes touch the optical pickup.

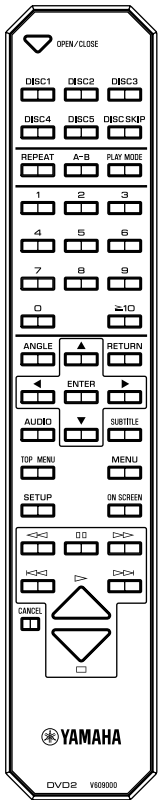


FRONT PANELS

DVD-C996



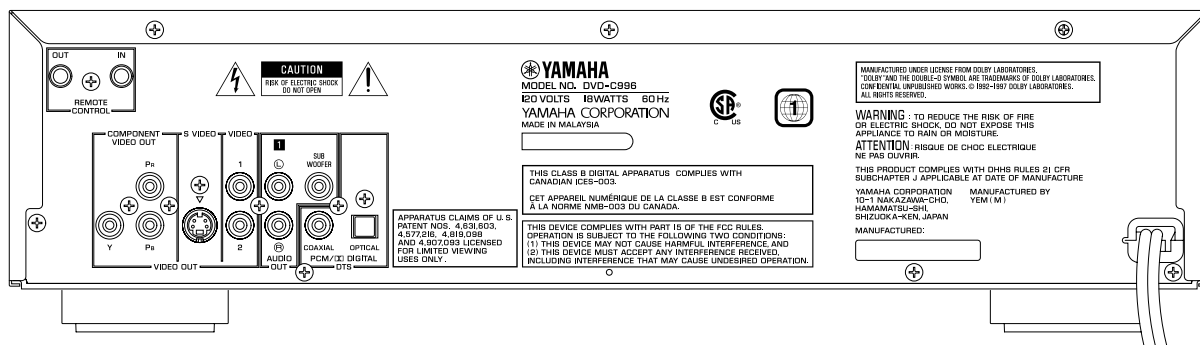
DV-C6280



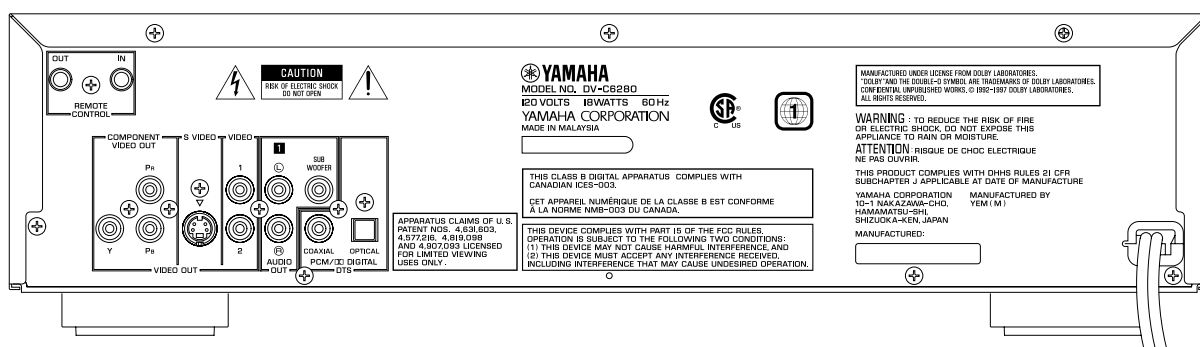
DVD-C996
DV-C6280

REAR PANELS

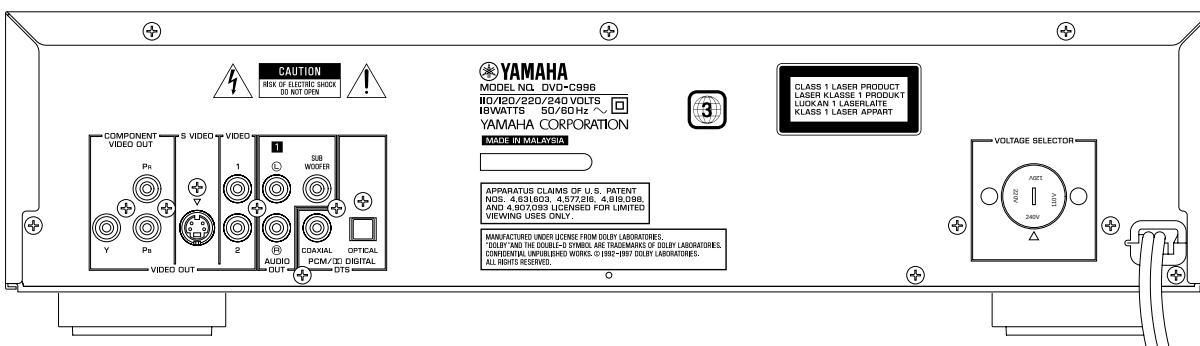
▼ DVD-C996 U, C models



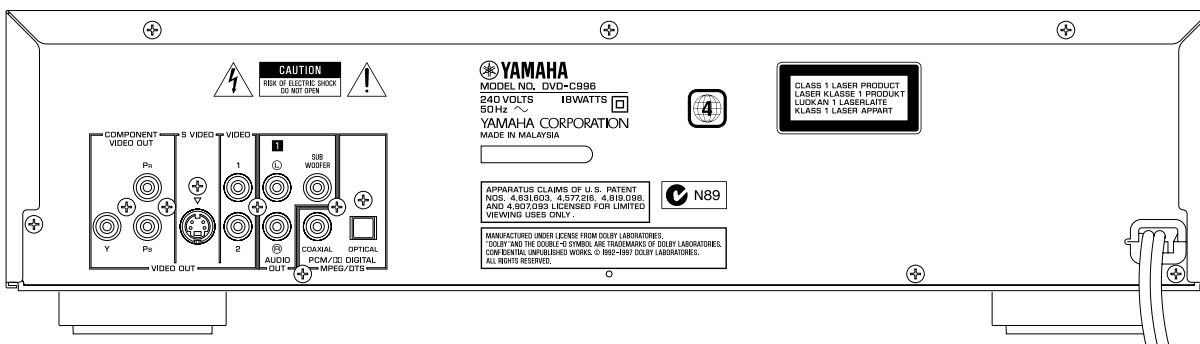
▼ DV-C6280 U model



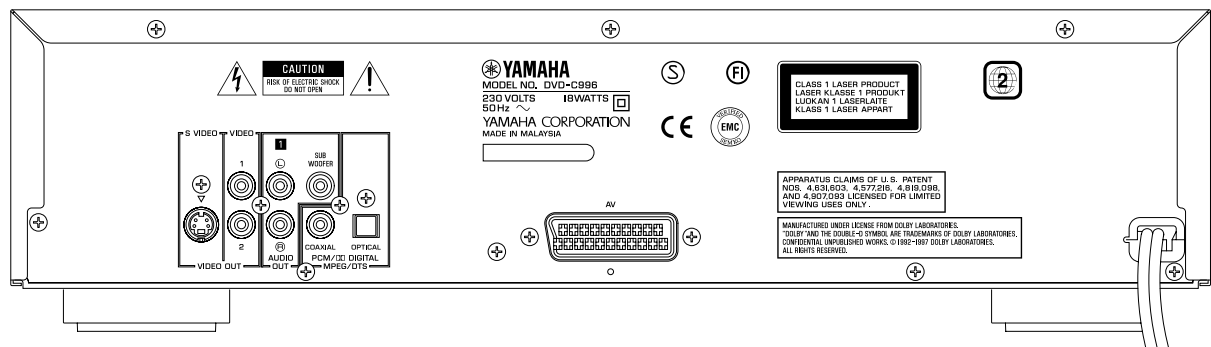
▼ DVD-C996 R model



▼ DVD-C996 A model



▼ DVD-C996 B, G models



■ SPECIFICATIONS

■ AUDIO SECTION

Frequency Response	
DVD (48kHz Sampling)	2 Hz to 22 kHz
DVD (96kHz Sampling)	2 Hz to 44 kHz
CD, Video CD	2 Hz to 20 kHz
Harmonic Distortion+Noise (1kHz)	0.002%
S/N Ratio	115 dB (Weighted)
Dynamic Range	
DVD (48kHz, 24 bit)	103 dB
CD, Video CD	99 dB
Output Voltage (1 kHz, 0 dB)	2.0 V

■ VIDEO SECTION

VIDEO output	1 Vp-p (75 ohms)
S VIDEO output	
Y output	1 Vp-p (75 ohms)
C output	
U, C, R models	0.286 Vp-p (75 ohms)
A, B, G models	0.3 Vp-p (75 ohms)
COMPONENT VIDEO output (U, C, R, A only)	
Y output	1 Vp-p (75 ohms)
Pb output	0.7 Vp-p (75 ohms)
Pr output	0.7 Vp-p (75 ohms)

■ GENERAL

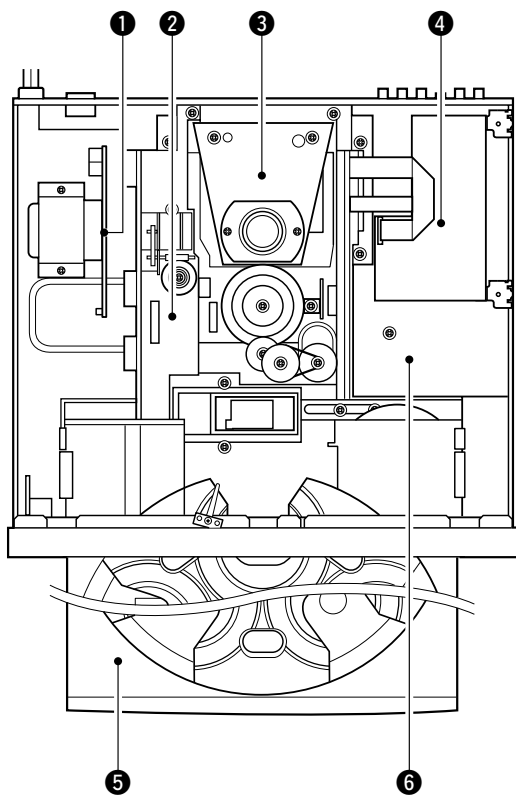
Power Requirements	
U, C models	120V, 60Hz
A model	240V, 50Hz
B, G models	230V, 50Hz
R model	110/120/220/240V, 50/60Hz
Power Consumption	18W
Dimensions (W x H x D)	
435 x 116 x 404 mm	
(17-1/8" x 4-9/16" x 15-7/8")	
Weight	6.1 kg (13 lbs 7 oz)
Finish	
DVD-C996 (U, C, A, B, G)	Black color
DVD-C996 (U, C, R, A)	Gold color
DV-C6280 (U)	Black color
Accessories	
Audio/video connection cord	
Remote control transmitter	
Battery: x2 (Size "AA", R06)	

* Specifications subject to change without notice.

U *USA model*
C *Canadian model*
A *Australian model*
B *British model*
G *European model*
R *General model*

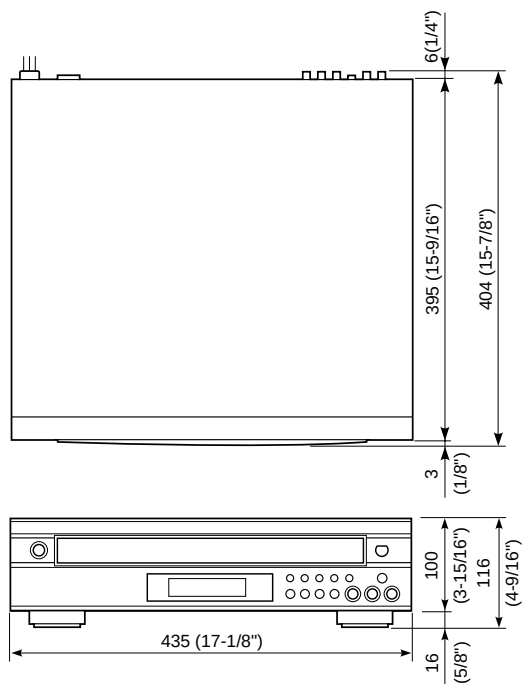
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INTERNAL VIEW



- ① MAIN (3) P.C.B.
- ② CM-220 UNIT
- ③ CLAMPER ASS'Y
- ④ DVD MODULE P.C.B.
- ⑤ TRAY ASS'Y
- ⑥ MAIN (1) P.C.B.

DIMENSION



Unit : mm (inch)

■ OPTICAL PICKUP SELF-DIAGNOSIS AND REPLACEMENT PROCEDURE

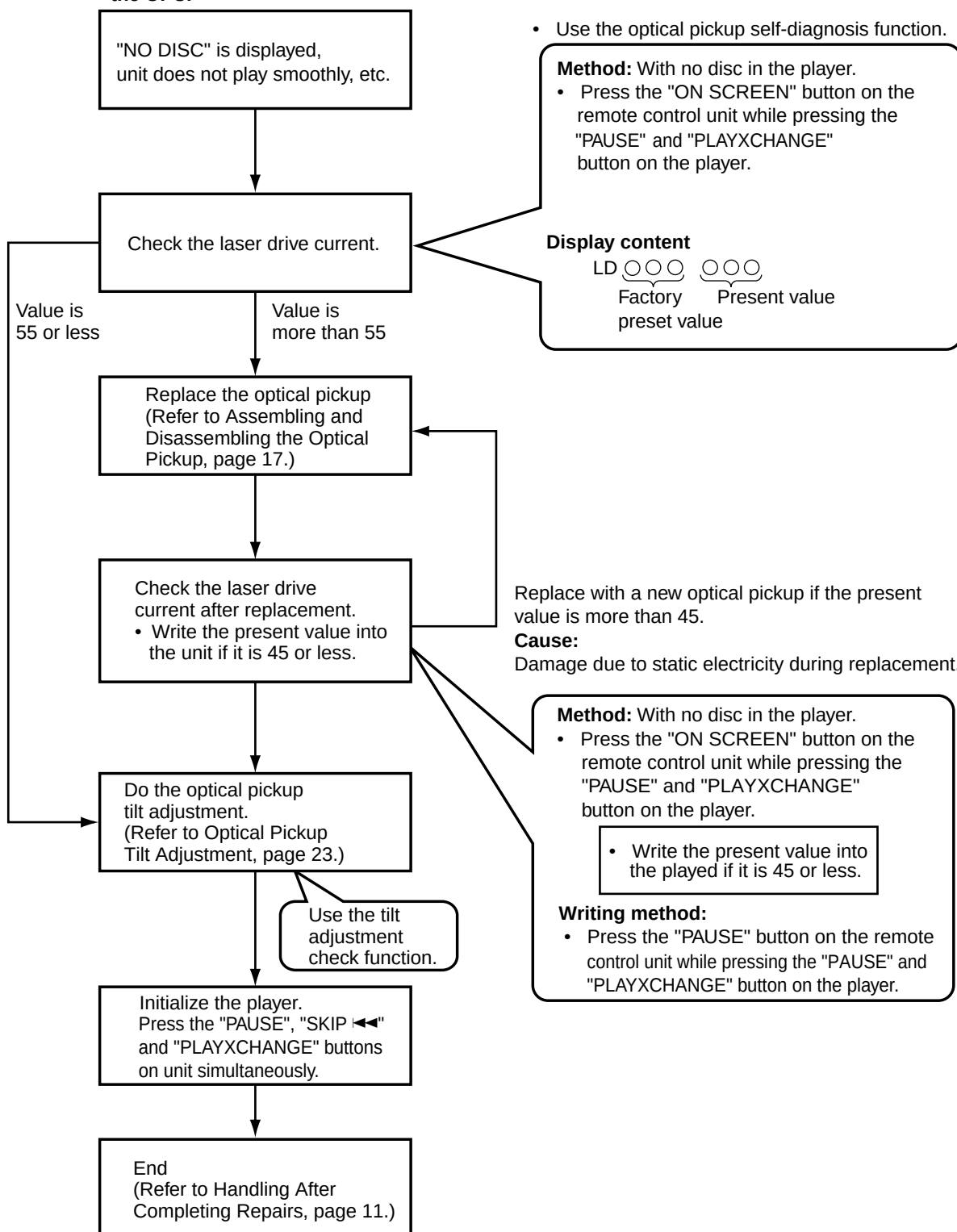
The optical pickup self-diagnosis function and tilt adjustment check function have been newly added to this player. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment.

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 laser drive current is more than 55.

Note

Press the power button to turn on the power, and check the value before the unit warms up (within three minutes).

- Use the self diagnosis function below when "NO DISC" is displayed or unit doesn't read a disc, before replacing the OPU.



■ SELF-DIAGNOSIS FUNCTION AND SERVICE MODES

1. Service Mode Table

The service mode can be activated by pressing various button combinations on the player and remote control unit.

Player buttons	Remote control unit button	Application	Note
PAUSE + PLAYXCHANGE	0	Displaying the UHF display F _ _ _	Refer to Self-Diagnosis Function (UHF Display), in page 10.
	5	Tilt adjustment and jitter check	Refer to Optical Pickup Tilt Adjustment, in page 23.
	6	Checking the region numbers and broadcast system	
	7	Checking the program version	Check the IC6302 FLASH ROM program.
	9	Lighting Confirmation Function of Display Tube	
	ON SCREEN	Checking the laser drive current	Refer to Optical Pickup Self-Diagnosis and Replacement, in page 9.
	PAUSE	Writing the laser drive current value after replacing the optical pickup (do not use for anything other than optical pickup replacement)	Procedure.
PAUSE SKIP ◀◀ PLAYXCHANGE	—	Initializing the DVD player (restoring factory preset settings) Use when replacing a microprocessor, microprocessor peripheral parts, or P.C.B.	Refer to Initializing the DVD Player, in page 11.

2. Self-Diagnosis Function (UHF Display)

This unit incorporates a convenient self-diagnosis function for use in troubleshooting.

Display method	Display	Diagnosis	Checkpoints
Service numbers displayed during use.	U11	Focus error	IC2001, IC2511, IC5201, pickup
	H01	Tray loading error	
	H02	Spindle servo error	
	H03	Traverse error	
	H04	Tracking servo error	
	H05	Seek error	
	H06	Power supply error	
Press the "0" button on the remote control unit while pressing the "PAUSE" and "PLAYXCHANGE" button on the player.	F0**	Disc format error	If this type of error occurs, refer to Examples of Repairs Using Error Codes, in page 11.
	F1**	Disc code error	
	F2**	Decoder LSI error	
	F3**	SDRAM error	
	F4**	IIC BUS error	
	F5**	DSC	
	F6**	ECC error	
	F7**	Microprocessor error	
	F8**	Microprocessor error	

3. Examples of Repairs Using Error Code

Refer to this section when carrying out repairs.

Error display	Malfunction example
F0**	Disc, IC7001
F103	Disc, IC7001
F4FF	IC351
F500	Optical pickup, IC2001, IC5201, IC2511, IC2501
F501	IC2001, IC6201
F502	IC2501, IC2511, IC2001, IC5201
F504	IC5201, IC2001
F505	Disc, IC2501, IC2511, IC5201, IC2001
F506	Disc, Optical pickup, IC2001
F600	Disc, IC7001, IC5201, IC2001
F601	Disc, IC7001
F602	Disc, IC5201, IC2001
F603	Disc, IC5201, IC2001
F610	IC7001
F611	IC7001, IC5201, IC2001
F612	IC7001, IC5201, IC2001
F620	Laser drive circuit
F621	Laser drive circuit
F700	IC6201
F701	IC6201
F702	IC6201
F880	IC6201
F890	IC6201
F891	IC6201
F8A0	IC6201
F893	IC6302
F894	IC6303

■ SERVICE PRECAUTIONS

1. Initializing the DVD Player

Initialize the DVD player whenever you replace a microprocessor, microprocessor peripheral parts, module P.C.B. or main P.C.B.

1-1. Precautions

The customer settings will return to factory preset settings when the player is initialized. Make a note of the settings and reset them after initializing.

- When resetting, see the Initial Setting in the Operating Instructions.

1-2. Initialization Method

The player will be initialized (return to the factory preset condition) when you press the "PAUSE", "SKIP ◀◀" and "PLAYXCHANGE" buttons simultaneously. When the DVD player is initialized, it also displays "INITIALIZED".

2. Handling After Completing Repairs

Use the following procedure to secure the traverse unit in the standby position.

2-1. Method

With the power 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.

2-2. Precautions

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually. If you were to do so, the traverse unit would not go to the upper (standby) position, and the player could not be transported.

■ SERVICE TOOLS AND EQUIPMENT

1. Service Tools and Equipment Table

Application	Name	Number
General	DVD test disc	DVDT-S15 (AAX07320) or DVDT-S01 (TX946080)
Tilt adjustment	Hex wrench	JZS0100 (TX946380) , 1.2mm
Inspection	Extension cable (module P.C.B. to main P.C.B.)	JGS0116 (AAX16610)
	Extension cable (module P.C.B. to main P.C.B.)	VUC8026 (AAX16590)
Others	Screw lock	RZZ0L01 (TX946400)
	Grease	JGS0091 (TX946260) JGS0092 (TX946270)
	Lubricant	JZS0648 (TX946410)
	Grease	JGS0101 (TX946390)
Confirmation	CD test disc	PVCD_K06 (TX946090)
	VCD test disc	PVCD_K06 (TX946090)
Electrical adjustment	Oscilloscope	
	Probe	
	AV cable	VJA0658 (MX605190)
	TV monitor	
General	General tools (Screwdriver, etc.)	
Static electricity countermeasures	Soldering iron (with ESD countermeasure)	
	Anti-static wrist strap	
	Conductive material (conductive sheet)	

2. 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 from being 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.

■ DISASSEMBLY PROCEDURES (Remove parts in the order as numbered.)

1. Removal of Top Cover

- a. Remove 4 screws (①) and also 3 screws (②) in Fig. 1.

2. Removal of Tray Ass'y

- a. Remove 1 screw (③) in Fig. 1.
b. Turn Gear/L0 as shown in Fig. 2 counter clockwise gradually till immediately before the tray starts to move and stop it there.

CAUTION: Gear/L0, if turned counter clockwise continuously, will mesh with the gear of the tray and the tray will come out. When removing the tray, use care so that Gear/L0 will not mesh with the gear of the tray.

- c. Pull out the Tray Ass'y.

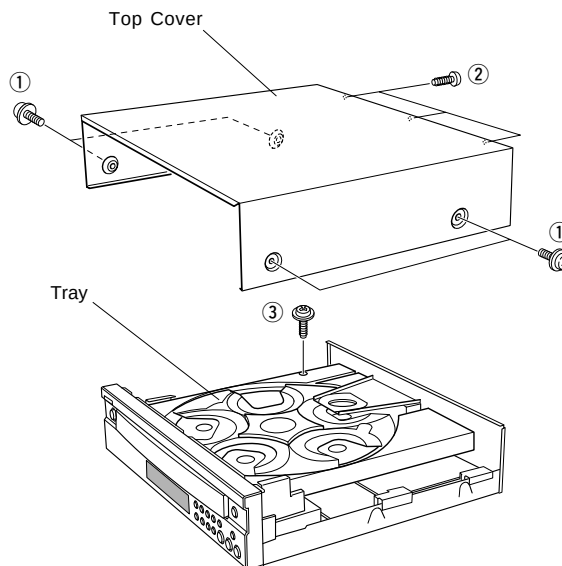


Fig. 1

● Precaution for installation of the Tray Ass'y.

On Tray Ass'y setting.

Check the Direction of marking "▲" on gear according to this drawing.

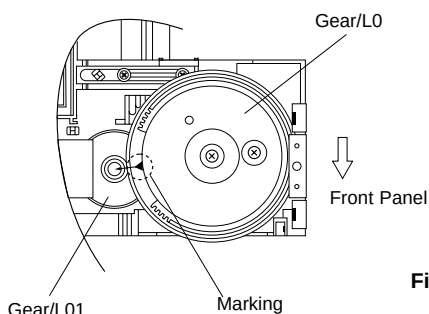


Fig. A

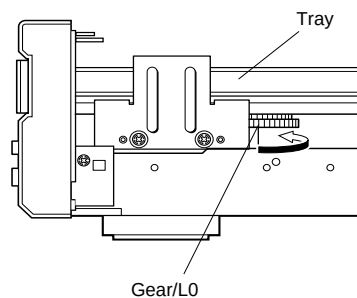


Fig. 2

3. Removal of Table

- a. Remove 2 screws (④) and then remove the Roller Ass'y in Fig. 3.
b. Remove the Plate/Table in Fig. 3.
c. Remove 1 screw (⑤) and then take off the Table in Fig. 3.

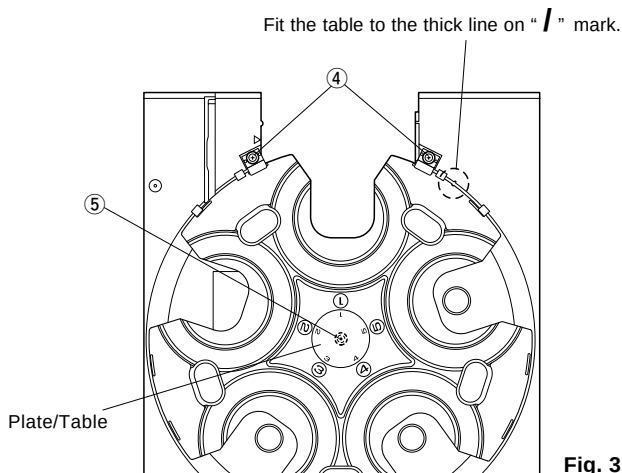


Fig. 3

IMPORTANT: Installation of Table.

Install the table according to the following procedure.

- 1) Slide the Lever so that the Gear/RT becomes free. (Fig.B)
- 2) With the "▲" mark on the Gear/RT aligned with the same mark on the Tray, lock it with the Lever. (Fig.B)
- 3) Install the Table by aligning it to the thick line on "I" mark. (Fig.3)

*Check that the Table is locked after installation.

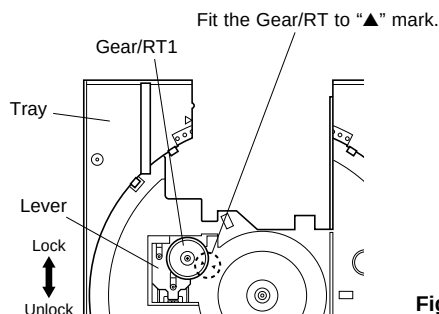


Fig. B

4. Removal of CM-220 Unit

- Remove 5 screws (⑥) in Fig. 4.
- Disconnect 2 flexible cables (#501, #503) on the Module P.C.B.

CAUTION

The flexible cable #501 is used to connect the traverse unit (laser pickup). Its terminal must not be touched. (The laser pickup is easily damaged.)

- Disconnect 1 flexible cable (#201) on the Main P.C.B.
- Take the CM-220 Unit out slowly.

5. Removal of Module P.C.B.

- Remove screw (⑦) and then remove the Main (6) P.C.B. in Fig. 5.
- Remove 4 screws (⑧) and then remove the Support P.C.B. in Fig. 4.
- Release 2 hooks (⑨) in Fig. 4.
- Pull out the Module P.C.B. vertically in Fig. 4.

Note

There is a danger of damaging the connectors.

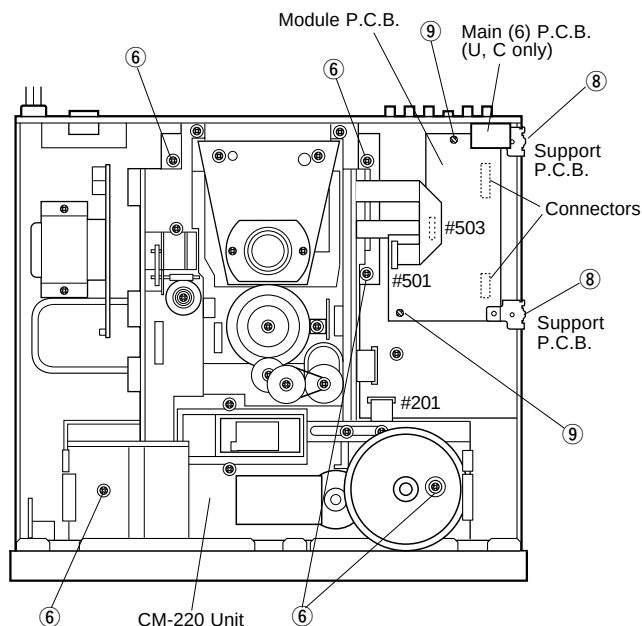


Fig. 4

6. Removal of Main (1) P.C.B.

- Remove 6 screws (⑩) in Fig. 5.
- Remove 4 screws (⑪) in Fig. 6.
- Pull out the Main (1) P.C.B.

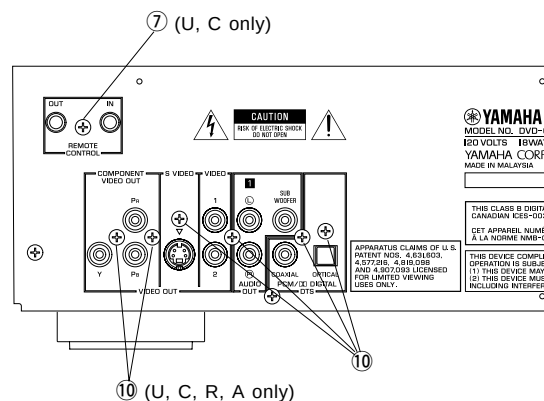


Fig. 5

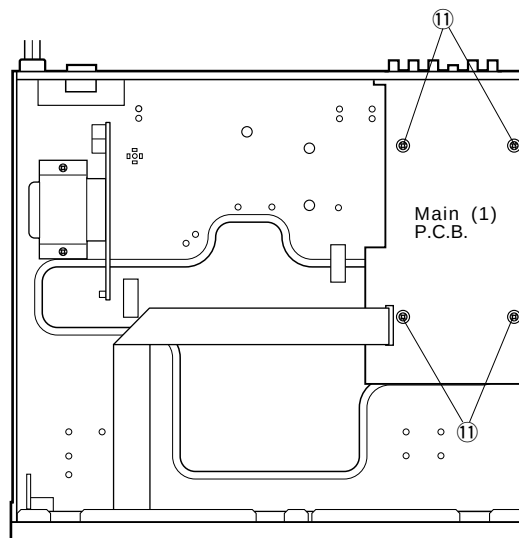


Fig. 6

7. Removal of Clamper Ass'y

Remove 2 screws (⑫) in Fig. 7.

8. Removal of PU Ass'y

- Remove 2 screws (⑬) in Fig. 7.
- Take the PU Ass'y out slowly.

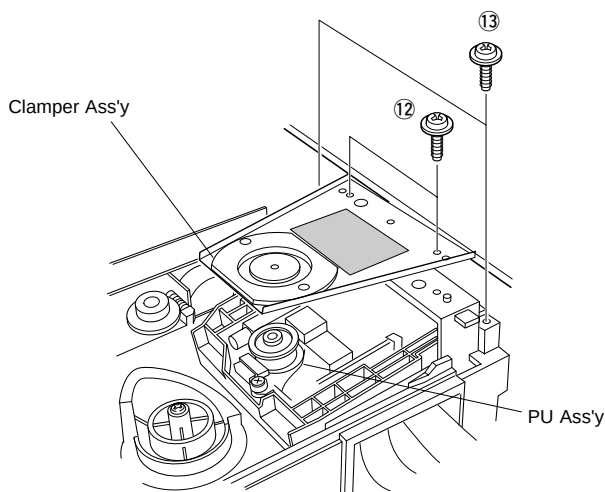


Fig. 7

9. Removal of Traverse Unit

- Remove 3 screws (⑭) in Fig. 8.

Note: Be sure to take static electricity countermeasures before disconnecting the flexible cable. (Refer to page 18, Static Electricity Countermeasures.)

- Disconnect 2 flexible cables (#502, #503)

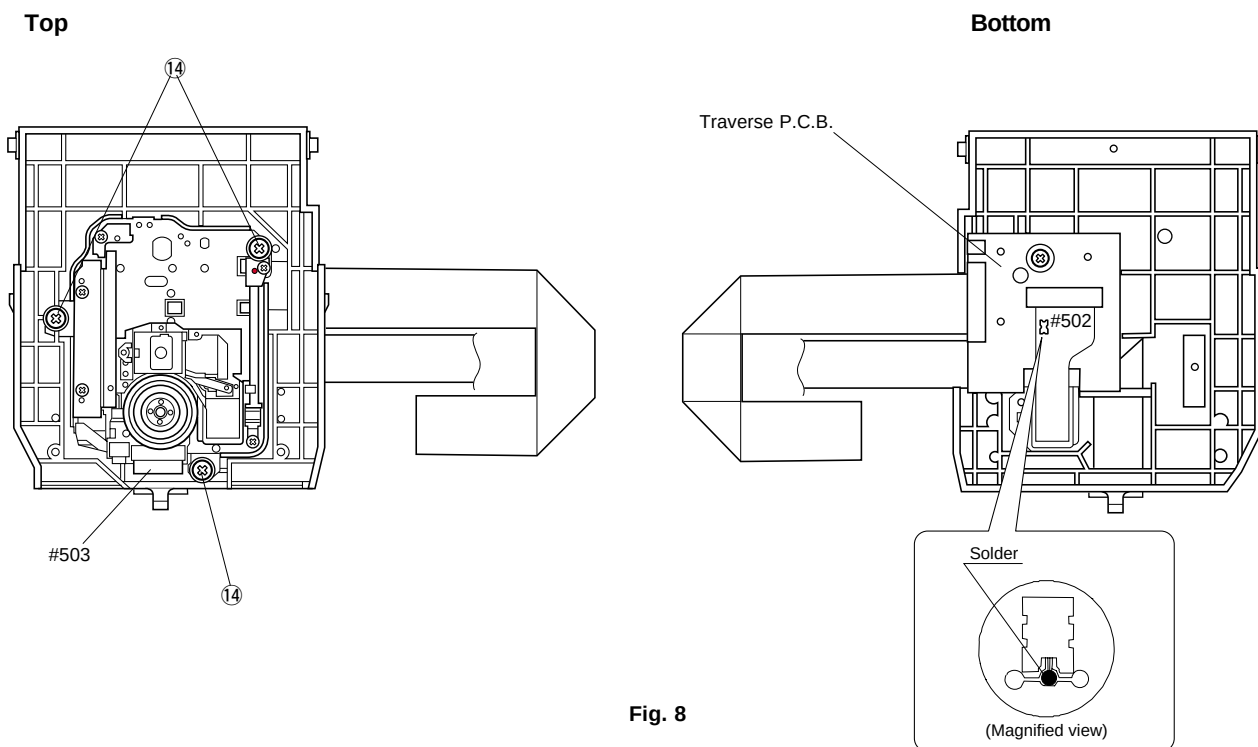


Fig. 8

● Service Position

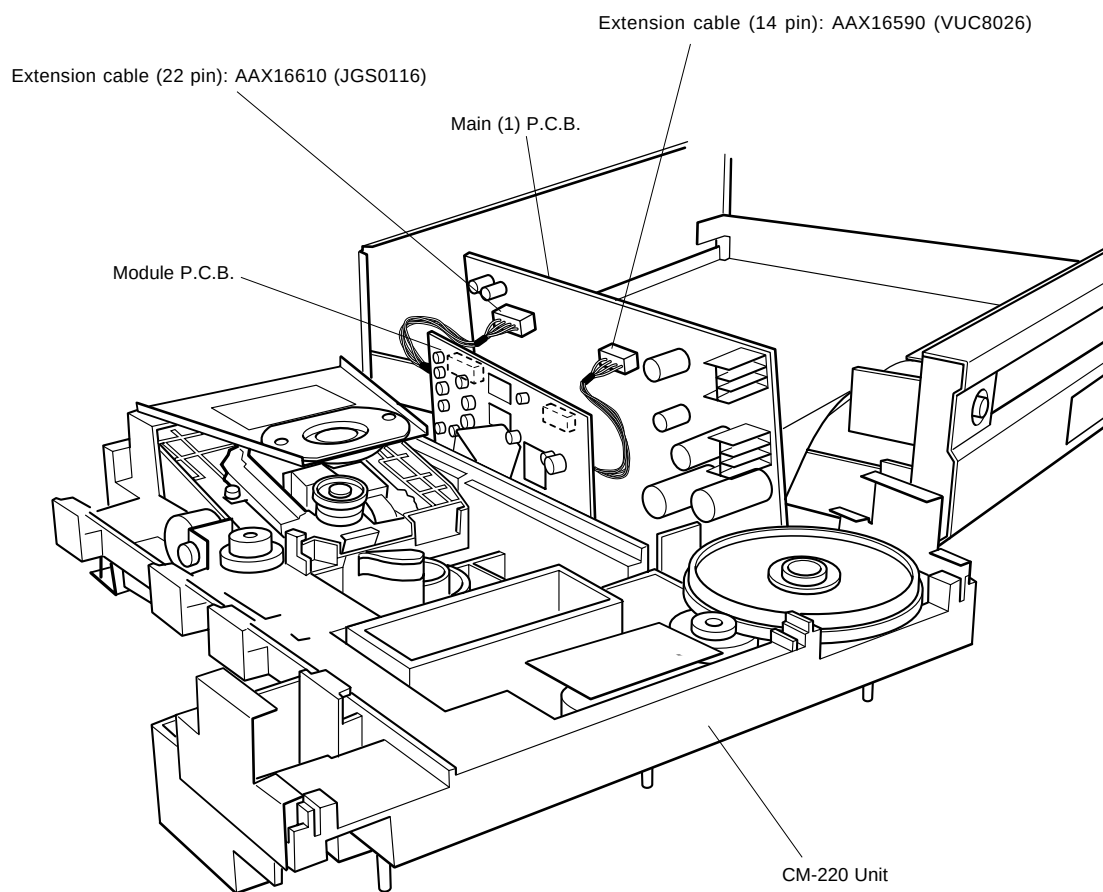
Checked by connecting the Module P.C.B. and the Main P.C.B. with the extension cables.

Extension cable (14 pin): AAX16590 (VUC8026)

Extension cable (22 pin): AAX16610 (JGS0116)

CAUTION

- As the grounding becomes loose when the Main P.C.B. is removed from the chassis, ground the board to the chassis.
- Do not allow anything like cloth (insulating material) to enter and contact between the Module P.C.B. and the Main P.C.B.



■ ASSEMBLING AND DISASSEMBLING THE OPTICAL PICKUP (MECHANICAL PARTS)

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.

1. Handling the Optical Pickup

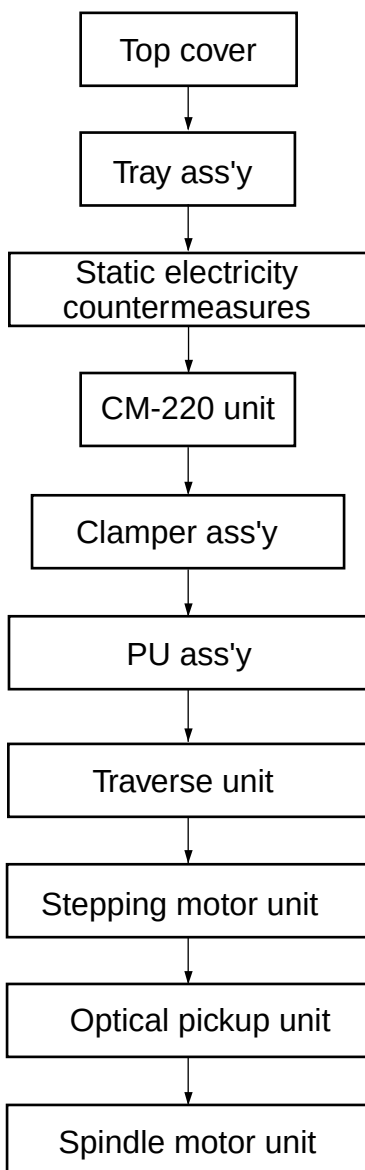
The optical pickup can be damaged by static electricity from your body. Be sure to take static electricity countermeasures when working around the optical pickup.

1. The optical pickup is an extremely high-precision mechanism. Do not subject it to strong impact.
2. To preserve the quality of the optical pickup replacement parts during transport and installation, the terminals of the laser diode are short-circuited. After replacing the parts, use the proper procedure to return the laser diode to its original condition. (Refer to page 22, Assembling the Optical Pickup.)
3. Testers cannot be used to check the laser diode of the optical pickup. The power supply inside the tester can easily damage the laser diode.
4. Take care when handling the flexible cable because excessive force can cause it to break.
5. You cannot adjust the semifixed resistor for laser power adjustment. Do not turn it.

2. Disassembly Procedure

Use the following procedure to replace major parts.

For the assembly procedure, follow the flow chart in reverse.

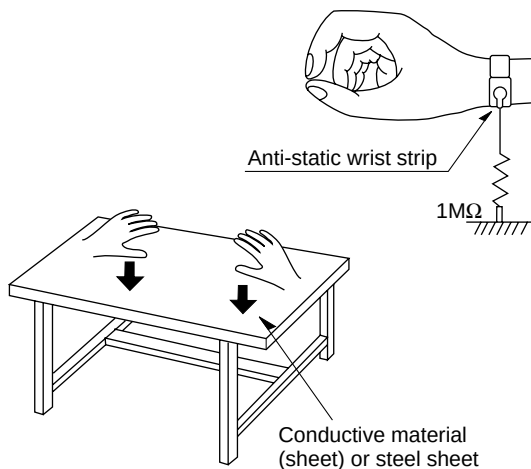


3. Static Electricity Countermeasures

The laser diode inside the traverse unit (optical pickup) can be damaged by static electricity from your body. Be sure to take static electricity countermeasures when working around the optical pickup.

3-1. Static Electricity Countermeasure Methods

1. Ground yourself
Use an anti-static wrist strap to discharge static electricity from your body.
2. Ground the workbench
Lay a conductive material (sheet) or steel sheet on the surface where the traverse unit (optical pickup) is to be placed, then ground the sheet.

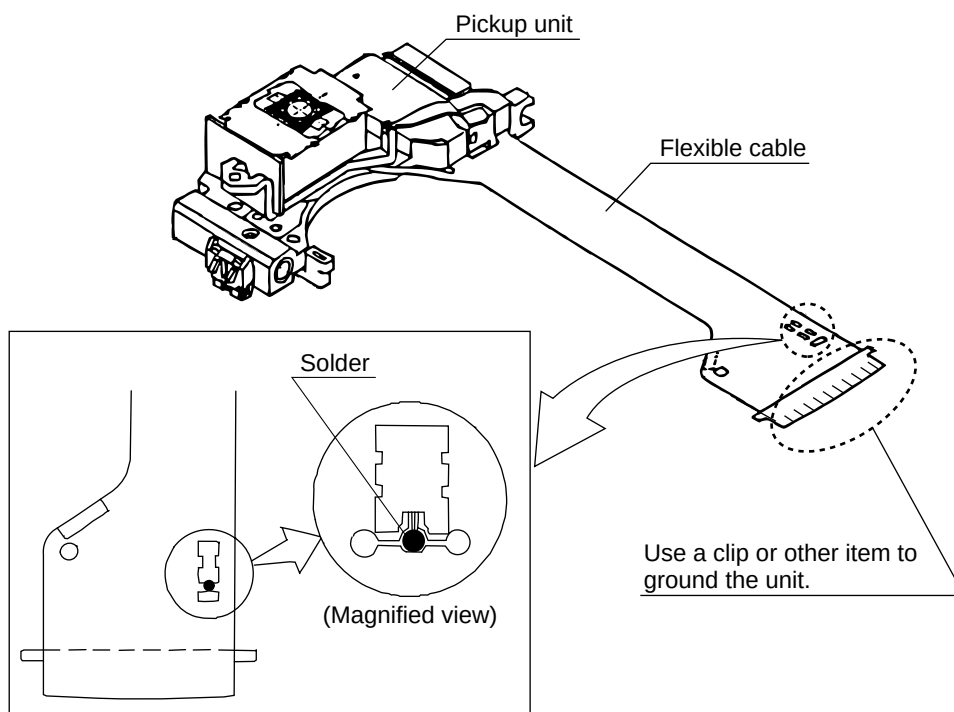


3-2. Short-circuit the laser diode

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

Notes

- Be sure to do this before disconnecting the flexible cable of the optical pickup from the traverse P.C.B.
- Use an anti-static soldering iron to short-circuit and unshort-circuit laser diode.
(Recommended soldering iron: Hakko with ESD countermeasure)
- After you have finished repairing the laser diode, follow the correct procedure to remove the solder from the short-circuit location.

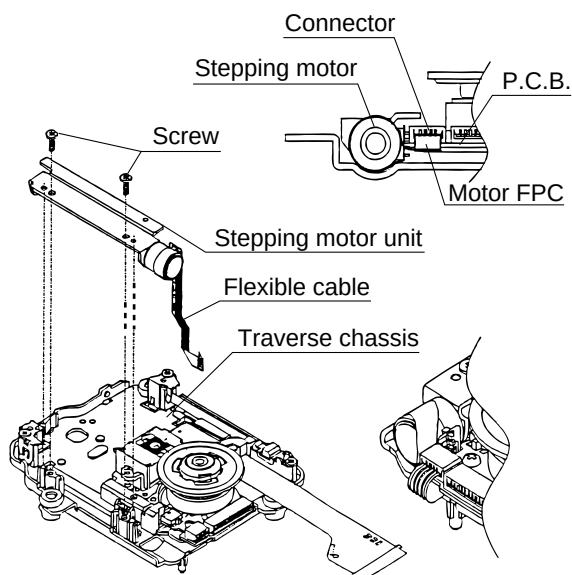


4. Disassembling the Stepping Motor Unit

1. Disconnect the flexible cable.
2. Remove the 2 screws.

Note

Take care when handling the flexible cable because it can be broken by excessive force.



5. Disassembling the Optical Pickup Unit

1. Remove the screw.
2. Release the tab, then remove spring holder 1.

Note

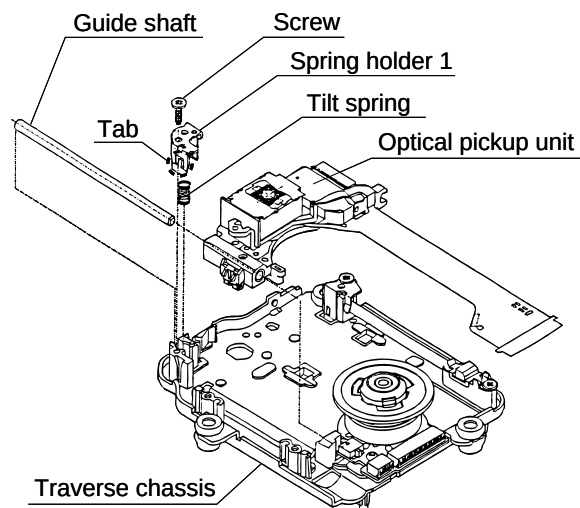
Be sure not to lose the spring.

3. Remove the guide shaft.

Note

Be sure to adjust the optical pickup tilt after replacing the optical pickup.

(Refer to page 23, Optical Pickup Tilt Adjustment.)

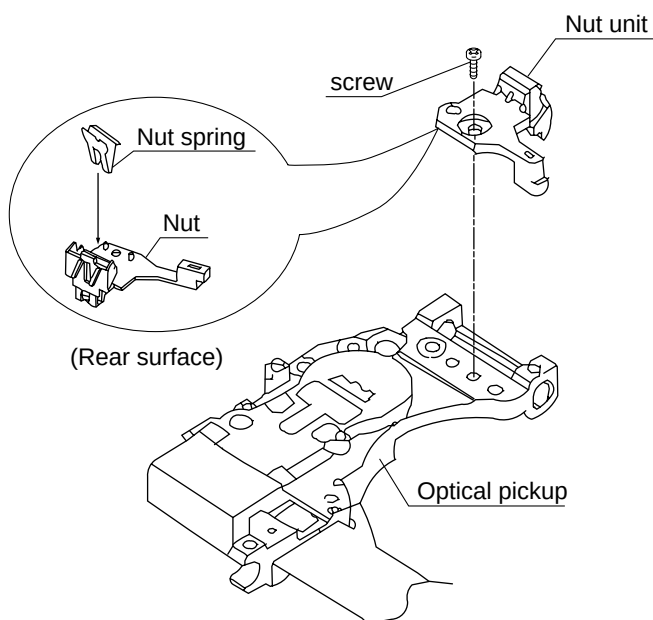


6. Disassembling the Nut Unit

Remove the screw.

Notes

- The nut unit is not part of the optical pickup.
- Before replacing the optical pickup, remove the nut unit for use with the new optical pickup.
- After installation, use screw lock to lock the screw in position.

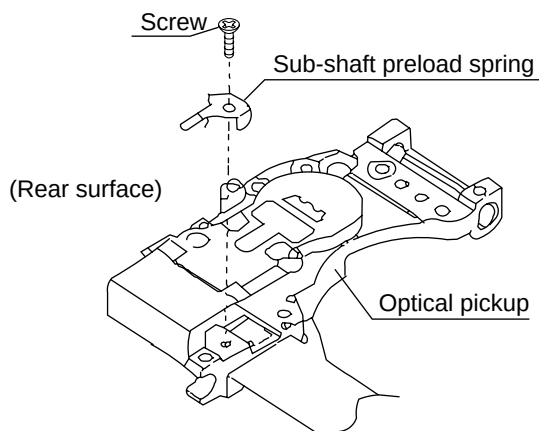


7. Disassembling the Sub-Shaft Preload Spring

Remove the screw.

Notes

- Handle the sub-shaft preload spring carefully because the shape of the tip is easily deformed.
- The sub-shaft preload spring is not part of the optical pickup. Before replacing the optical pickup, remove the sub-shaft preload spring for use with the new optical pickup.
- After installation, use screw lock to lock the screw in position.

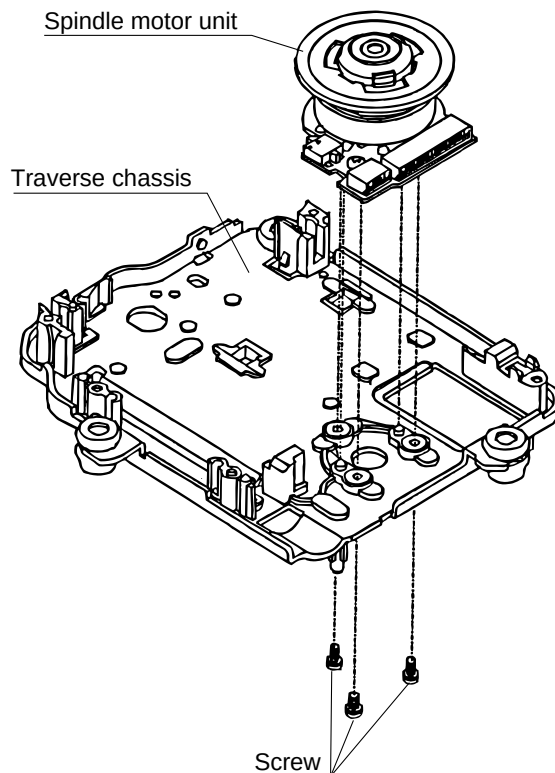


8. Disassembling the Spindle Motor Unit

Remove the three screws.

Note

Be sure to adjust the optical pickup tilt after replacing the spindle motor unit.

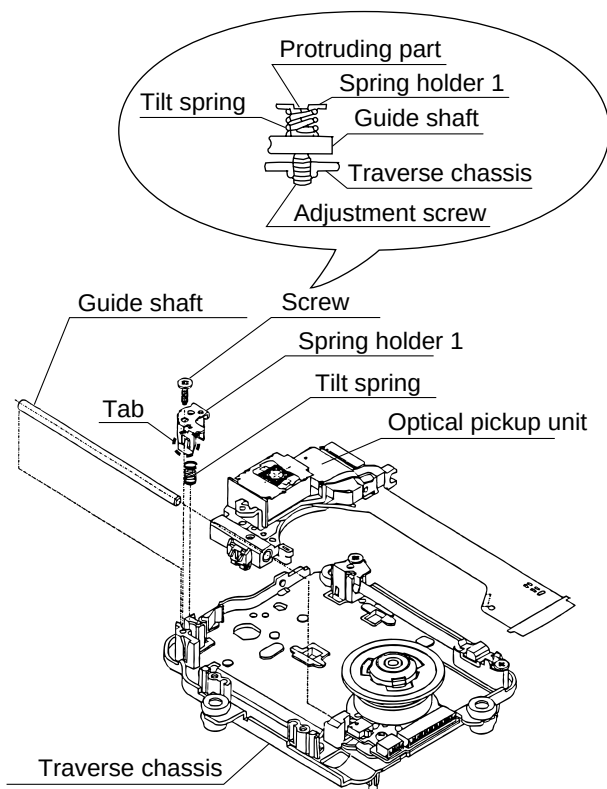


9. Assembling the Optical Pickup

1. Install the optical pickup.

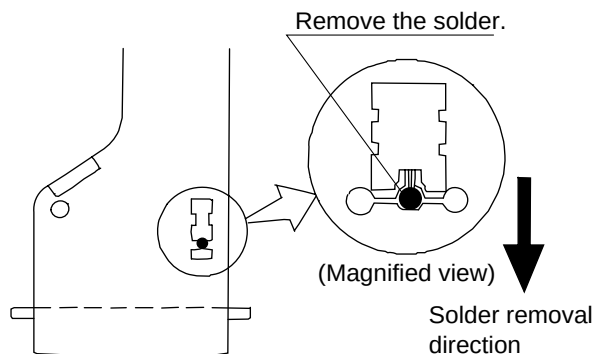
Note

Take care not to attach the tilt spring and guide shaft in the wrong order.



2. Insert the pickup FPC into connector CB502 on the traverse P.C.B.

3. Remove the protective solder-bridge from the pickup.



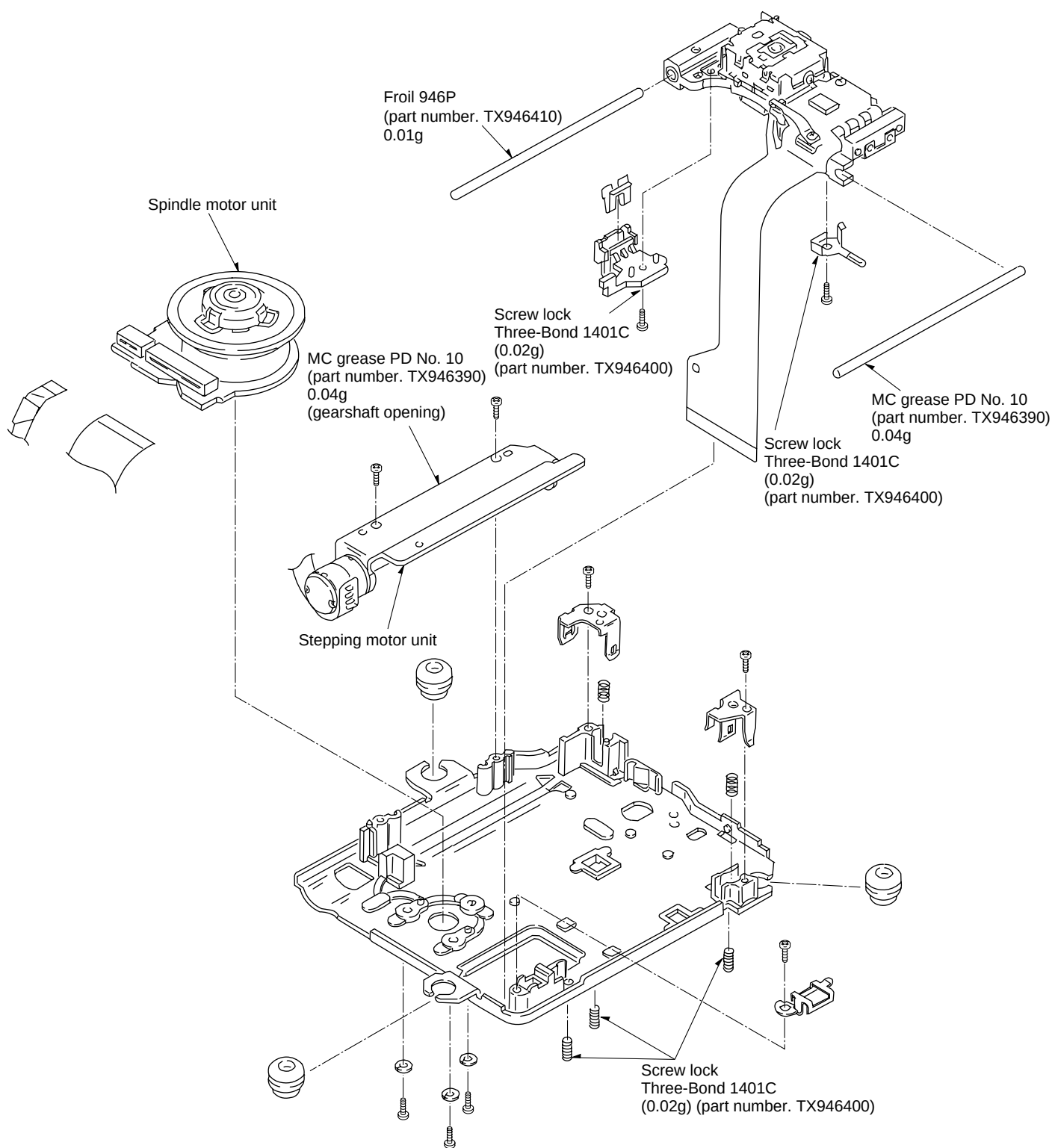
Open the circuit after short-circuiting it.

4. If installing a new pickup, write the new head current into memory as shown on page 9.
Do this first after turning on the unit with NO disc and while the unit is cold (within the first 3 minutes of power ON), or the jitter reading will not be accurate for the new pickup head.

5. Adjust the optical pickup tilt after removing the solder.
(Refer to page 23, Optical Pickup Tilt Adjustment.)

10. Lubricating the Optical Pickup and Peripheral Parts

When replacing parts, lubricate the parts marked “xxx” in the diagram.

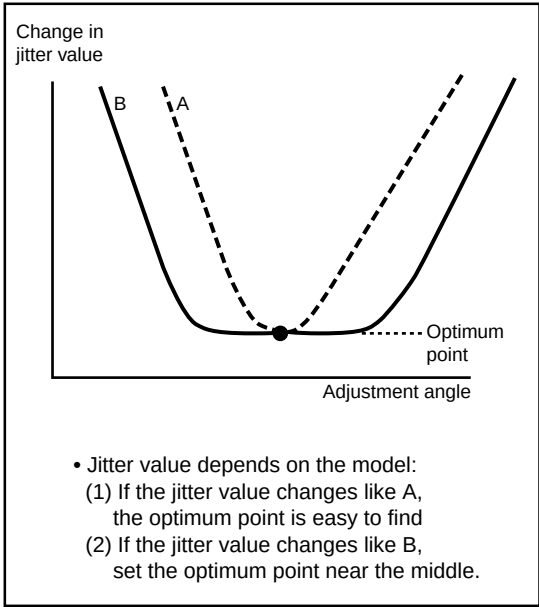
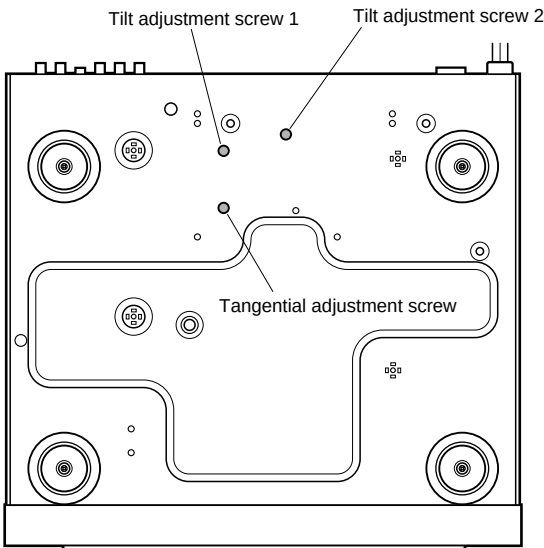
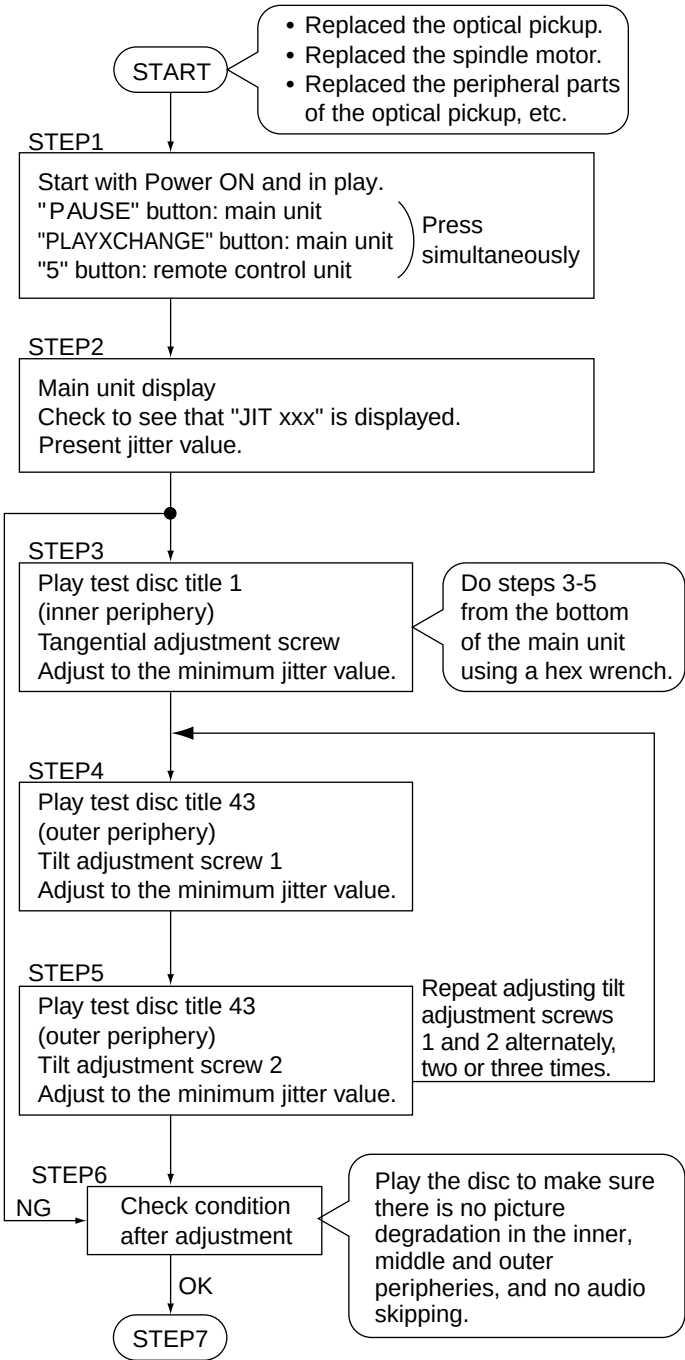


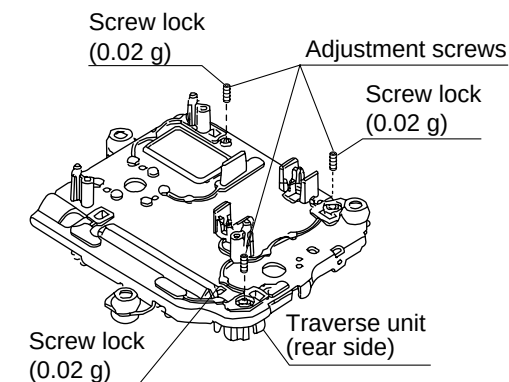
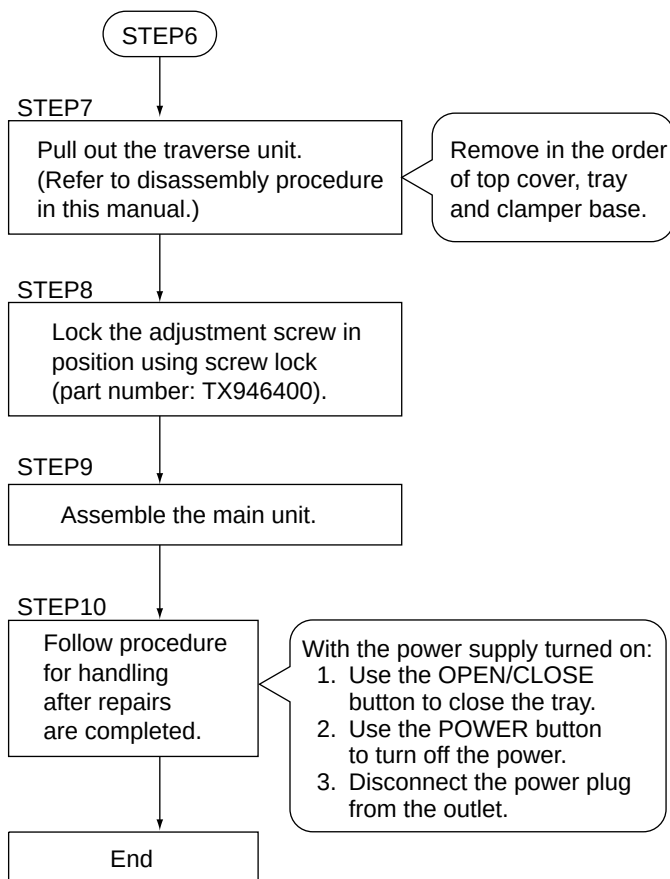
ADJUSTMENT

Optical Pickup Tilt Adjustment

Measurement point	Adjustment point	Mode	Disc
Main unit service display	Tangential adjustment screw Tilt adjustment screw	T1 (inner periphery) play T2 (outer periphery) play	DVDT-S15 (AAX07320) or DVDT-S01 (TX946080)
Measuring equipment, tools		Adjustment value	
Hex wrench (part number: TX946380), 1.2mm Screw lock (part number: TX946400)		Adjust to the minimum jitter value.	

(070 = 7% and 090 = 9% jitter.)





Notes

- Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, adjust 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.

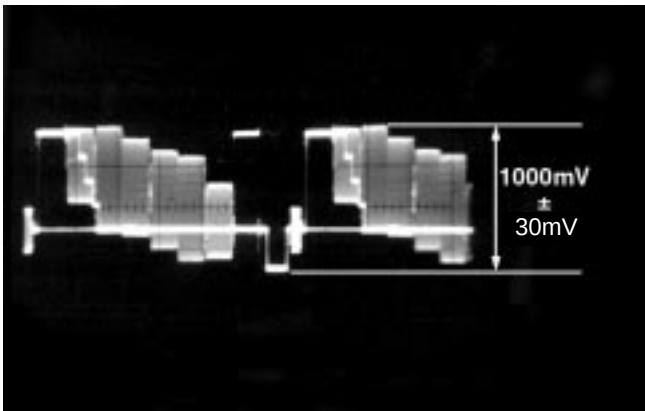
ELECTRICAL CONFIRMATION

1. Video Output (Luminance Signal) Confirmation

Do this confirmation after replacing a P.C.B

Measurement point	Mode	Disc
Video output terminal	Color bar 75% PLAY (Title 46): DVD-T-S15 PLAY (Title 10): DVD-T-S01	DVDT-S15 (AAX07320) or DVDT-S01 (TX946080)
Measuring equipment, tools	Confirmation value	
Screwdriver, Oscilloscope 200mV/div, 10 usec/div	1000mVp-p±30mV	

- Purpose:** To maintain video signal output compatibility.
- 1. Connect the oscilloscope to the video output terminal and terminate at 75 ohms.
 - 2. Confirm that the luminance signal (Y+S) level is 1000 mVp-p ±30 mV.

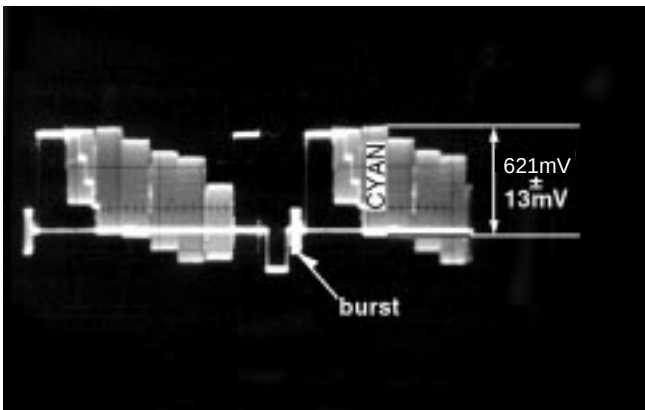


2. Video Output (Chrominance Signal) Confirmation

Do this confirmation after replacing a P.C.B.

Measurement point	Mode	Disc
Video output terminal	Color bar 75% PLAY (Title 46): DVD-T-S15 PLAY (Title 10): DVD-T-S01	DVDT-S15 (AAX07320) or DVDT-S01 (TX946080)
Measuring equipment, tools	Confirmation value	
Screwdriver, Oscilloscope 200mV/div, 10 usec/div	621mVp-p±13mV	

- Purpose:** To maintain video signal output compatibility.
- 1. Connect the oscilloscope to the video output terminal and terminate at 75 ohms.
 - 2. Confirm that the chrominance signal (C) level is 621 mVp-p ±13 mV.



3. Video Component Signal (CB) Output Confirmation

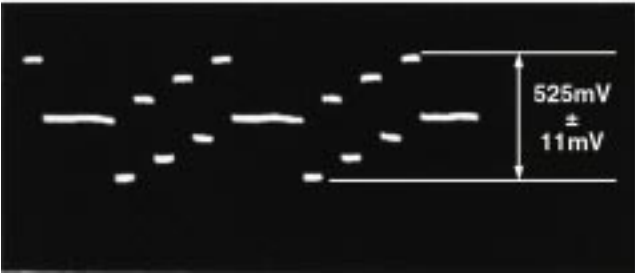
Do this confirmation after replacing a P.C.B.

Measurement point	Mode	Disc
Video output terminal (Y) (CB) Output terminal	Color bar 75% PLAY (Title 46): DVD-T-S15 PLAY (Title 10): DVD-T-S01	DVDT-S15 (AAX07320) or DVDT-S01 (TX946080)
Measuring equipment, tools	Confirmation value	
Screwdriver, Oscilloscope 100mV/div, 10 usec/div	525mVp-p±11mV (B, A, G Models) 486mVp-p±10mV (U, C, R Models)	

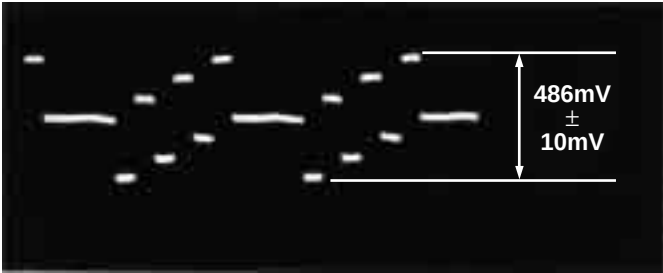
Purpose: To maintain video signal output compatibility.

- 1. Connect the oscilloscope to the video output terminal and terminate at 75 ohms.
- 2. Apply the trigger at the Y output terminal signal.
- 3. Confirm that the video component signal (CB) level is 525 mVp-p ±11 mV (B, A, G Models) /486mVp-p ± 10 mV(U, C, R Models).

For B, A, G Models



For U, C, R Models



■ SPECIAL FUNCTIONS FOR MAINTENANCE

1. Panel microprocessor test mode

● How to enter the test mode

- 1) If the power has been turned on, press the "PLAY" button of the remote controller while pressing the "PAUSE" and "SEARCH ◀◀" buttons on the player.
- 2) If the power has not been turned on, turn on the power while pressing the "PAUSE" and "SEARCH ◀◀" buttons on the player.
- 3) The entire display lights up and then the panel program version appears.
- 4) Select the test mode 1 or 2 by using the OPEN/CLOSE button.

● Test mode 1 ("DVD" segment of FL turned off)

No.	Player button	Action	Remarks
1	DISC 1	Moves the table to DISC1.	The tray must be closed and the clamp set down.
2	DISC 2	Moves the table to DISC2.	Same as above.
3	DISC 3	Moves the table to DISC3.	Same as above.
4	DISC 4	Moves the table to DISC4.	Same as above.
5	DISC 5	Moves the table to DISC5.	Same as above.
6	SEARCH ◀◀	Sets down the clamp.	
7	SEARCH ▶▶	Sets up the clamp.	
8	SKIP ◀◀	Closes the tray.	
9	SKIP ▶▶	Opens the tray.	
10	PLAY	Displays the panel program version.	
11	PAUSE	Returns to the production mode by using the mechanism simulation mode.	
12	STOP	Turns off all FL segments and stops the mechanism.	
13	PLAYXCHANGE	Moves the table to the home position.	The tray must be closed and the clamp set down.
14	OPEN/CLOSE	Enters Test mode 2.	

● Test mode 2 ("DVD" segment of FL turned on)

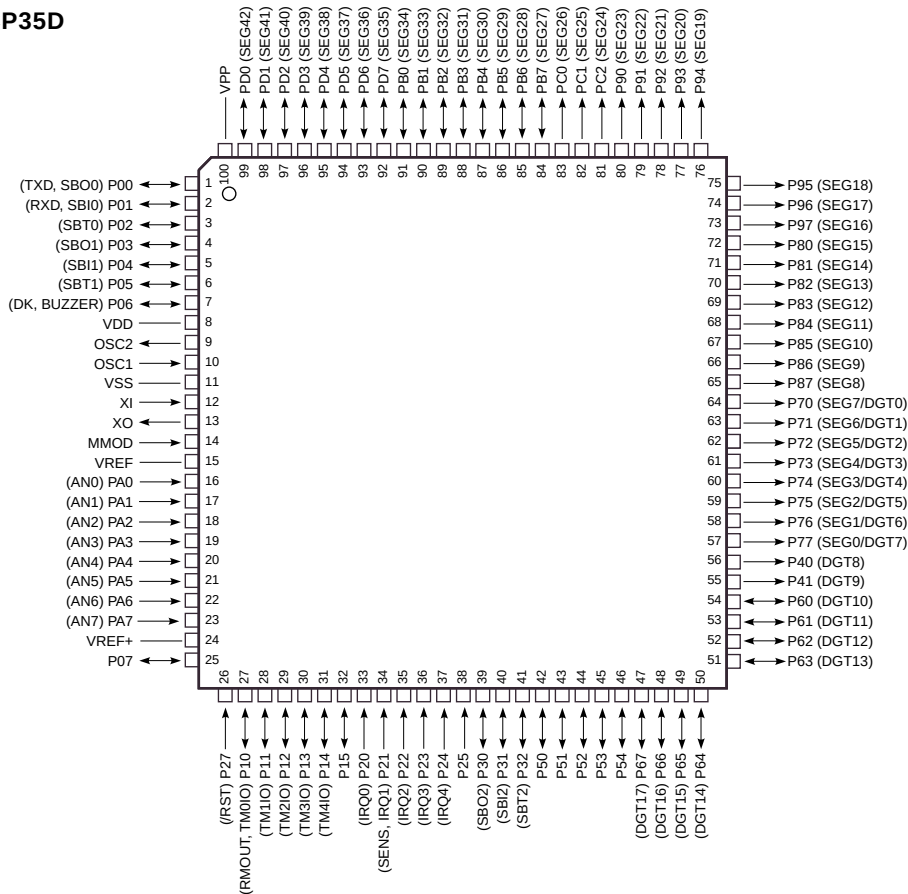
Not used (Do not use this function as it is not for servicing)

No.	Player button	Action
1	DISC 1	Changes the current table parameter to "Braking when making a left turn". The numeric value is displayed as "BL-xx" on FL.
2	DISC 2	Changes the current table parameter to "Braking when making a right turn". The numeric value is displayed as "BR-xx" on FL.
3	DISC 3	Changes the current table parameter to "Duty when making a left turn at low speed". The numeric value is displayed as "DL-xx" on FL.
4	DISC 4	Changes the current table parameter to "Duty when making a right turn at low speed". The numeric value is displayed as "DR-xx" on FL.
5	DISC 5	
6	SEARCH ◀◀	Subtracts 10 from the current table parameter.
7	SEARCH ▶▶	Adds 10 from the current table parameter.
8	SKIP ◀◀	Subtracts 1 from the current table parameter.
9	SKIP ▶▶	Adds 1 to the current table parameter.
10	PLAY	Tests EEPROM.
11	PAUSE	Starts the changer mechanism endurance test.
12	STOP	Turns off all FL segments except "DVD" and stops the mechanism.
13	PLAYXCHANGE	1. Turns on the flag to enable display of the measured results of the table parameter. (It cannot be turned off again.) Then displays as "Hxxx Lyyy" in the disc searches degree 14 segment, where; xxx: Time required to pass the normal speed area (Unit: ms) yyy: Low speed driving time (Unit: ms) 2. Turn on the flag to disable/enable automatic adjustment of the table. "VCD"=OFF: Automatic adjustment enabled "VCD"=ON: Automatic adjustment disabled
14	OPEN/CLOSE	Enters Test mode 1.

MEMO

IC DATA

IC351 : MN101CP35D
Panel CPU



No.	Port	Name	Function
1	P00 (TXD, SBO0)	CMD	Command signal output to system μ-com (MN102H55)
2	P01 (RXD, SBI0)	STATUS	Status signal input from system μ-com (MN102H55)
3	P02 (SBT0)	DSPCLK	Clock input from system μ-com (MN102H55)
4	P03 (SBO1)	SO	Data signal output to EEPROM
5	P04 (SBI1)	SI	Data signal input from EEPROM
6	P05 (SBT1)	/SCK	Clock signal output to EEPROM
7	P06 (BUZZER)	CS_EEPROM	Chip select output to EEPROM
8	VDD	VDD	+5V
9	OSC2	OSC2	8MHz clock input
10	OSC1	OSC1	8MHz clock output
11	VSS	VSS	GND
12	XI	XI	32.768kHz clock input
13	XO	XO	NC
14	MMOD	MMOD	GND
15	VREF-	VREF-	GND
16	PA0	KEYIN0	Key input 0
17	PA1 (AN1)	KEYIN1	Key input 1
18	PA2 (AN2)	KEYIN2	Key input 2
19	PA3 (AN3)	PA3	NC
20	PA4 (AN4)	UPSW	Clamp Up switch signal input (L: active)
21	PA5 (AN5)	DOWNSW	Clamp Down switch signal input (L: active)
22	PA6 (AN6)	TBL_POS	Table position sensor signal input
23	PA7 (AN7)	PA7	NC
24	VREF+	VREF+	+5V
25	P07	SDATA	Data signal output for SCART multiplexer
26	P27 (/RST)	/RST	Reset signal input

IC351 : MN101CP35D

Panel CPU

No.	Port	Name	Function
27	P10 (RMOUT, TM0IO)	OPSW	Tray Open switch signal input (L: active)
28	P11 (TM1IO)	CLSW	Tray Close switch signal input (L: active)
29	P12 (TM2IO)	PWM	Motor drive signal output
30	P13 (TM3IO)	CL_DOWN	Clamp down control output
31	P14 (TM4IO)	CL_UP	Clamp up control output
32	P15	SCLOCK	Clock signal output for SCART multiplexer
33	P20 (IRQ0)	/IR	Remote control signal input
34	P21 (SENS, IRQ1)	P21	NC
35	P22 (IRQ2)	P22	NC
36	P23 (IRQ3)	P23	NC
37	P24 (IRQ4)	P24	NC
38	P25	P25	NC
39	P30 (SBO2)	SEL0	Motor select signal output Bit 0
40	P31 (SBI2)	SWOFF	Control signal output to cut off subwoofer output
41	P32 (SBT2)	SEL1	Motor select signal output Bit 1
42	P50	P50	NC
43	P51	P51	NC
44	P52	P52	NC
45	P53	P53	Model setting terminal
46	P54	P54	Model setting terminal
47	P67 (DGT17)	P67	Model setting terminal
48	P66 (DGT16)	P66	Model setting terminal
49	P65 (DGT15)	P65	Model setting terminal
50	P64 (DGT14)	P64	NC
51	P63 (DGT13)	1G	Grid signal output for FL display
52	P62 (DGT12)	2G	Grid signal output for FL display
53	P61 (DGT11)	3G	Grid signal output for FL display
54	P60 (DGT10)	4G	Grid signal output for FL display
55	P41 (DGT9)	5G	Grid signal output for FL display
56	P40 (DGT8)	6G	Grid signal output for FL display
57	P77 (SEG0/DGT7)	7G	Grid signal output for FL display
58	P76 (SEG1/DGT6)	8G	Grid signal output for FL display
59	P75 (SEG2/DGT5)	9G	Grid signal output for FL display
60	P74 (SEG3/DGT4)	10G	Grid signal output for FL display
61	P73 (SEG4/DGT3)	11G	Grid signal output for FL display
62	P72 (SEG5/DGT2)	12G	Grid signal output for FL display
63	P71 (SEG6/DGT1)	13G	Grid signal output for FL display
64	P70 (SEG7/DGT0)	P70	NC
65	P87 (SEG8)	P87	NC
66	P86 (SEG9)	P15	Segment signal output for FL display
67	P85 (SEG10)	P14	Segment signal output for FL display
68	P84 (SEG11)	P13	Segment signal output for FL display
69	P83 (SEG12)	P12	Segment signal output for FL display
70	P82 (SEG13)	P11	Segment signal output for FL display
71	P81 (SEG14)	P10	Segment signal output for FL display
72	P80 (SEG15)	P9	Segment signal output for FL display
73	P97 (SEG16)	P8	Segment signal output for FL display
74	P96 (SEG17)	P7	Segment signal output for FL display
75	P95 (SEG18)	P6	Segment signal output for FL display
76	P94 (SEG19)	P5	Segment signal output for FL display
77	P93 (SEG20)	P4	Segment signal output for FL display
78	P92 (SEG21)	P3	Segment signal output for FL display
79	P91 (SEG22)	P2	Segment signal output for FL display
80	P90 (SEG23)	P1	Segment signal output for FL display

IC351 : MN101CP35D

Panel CPU

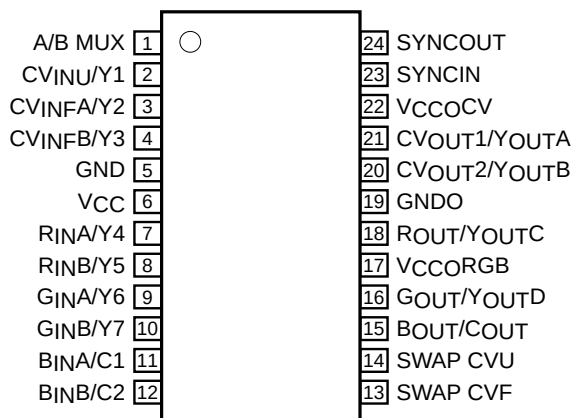
No.	Port	Name	Function
81	PC2 (SEG24)	PC2	NC
82	PC1 (SEG25)	PC1	NC
83	PC0 (SEG26)	PC0	NC
84	PB7 (SEG27)	PB7	NC
85	PB6 (SEG28)	PB6	NC
86	PB5 (SEG29)	PB5	NC
87	PB4 (SEG30)	PB4	NC
88	PB3 (SEG31)	PB3	NC
89	PB2 (SEG32)	PB2	NC
90	PB1 (SEG33)	PB1	NC
91	PB0 (SEG34)	PB0	NC
92	PD7 (SEG35)	PD7	NC
93	PD6 (SEG36)	PD6	NC
94	PD5 (SEG37)	PD5	NC
95	PD4 (SEG38)	PD4	NC
96	PD3 (SEG39)	PD3	NC
97	PD2 (SEG40)	PD2	NC
98	PD1 (SEG41)	PD1	NC
99	PD0 (SEG42)	PD0	NC
100	VPP	VPP	-25V

● KEY INPUT

Voltage	0.38	0.77	1.16	1.56	2.23	2.65	3.08	3.48	3.88	4.26	4.63
PA0	STOP	PAUSE	PLAY	OPEN/CLOSE	DISC1	DISC2	DISC3	DISC4	DISC5	—	—
PA1	—	—	—	—	—	—	—	—	—	SKIP ◀◀	SKIP ▶▶
PA2	—	PLAY/XCHANGE	—	—	—	—	—	—	SEARCH ◀◀	SEARCH ▶▶	—

IC5 : ML6427CS

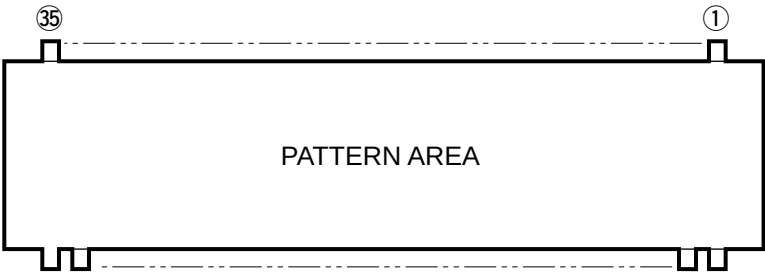
Lowpass Video Filter



Pin No.	Pin Name	Function
1	A/B MUX	Logic input pin to select between Bank <A> or of the CV, RGB, or Y/C inputs. Internally pulled high.
2	CVINU/Y1	Unfiltered analog composite video or luma video input. Internally pulled high. A composite or luma or green signal must be present on either the CVINFAY2 or the CVINFB/Y3 input to provide necessary sync signals to other channels (R, G, B, Y, C). Otherwise, sync must be provided at SYNCIN. For RGB applications the green channel with sync can be used as an input to this pin.
3	CVINFAY2	Filtered analog composite video or luma video input for Bank <A>. Note that SYNC is stripped from this signal for the other channels. A composite or luma or green signal must be present on either the CVINFAY2 or the CVINFB/Y3 input to provide necessary sync signals to other channels (R, G, B, Y, C). Otherwise, sync must be provided at SYNCIN. For RGB applications the green channel with sync can be used as an input to this pin.
4	CVINFB/Y3	Filtered analog composite video or luma video input for Bank . Note that SYNC is stripped from this signal for the other channels.
5	GND	Analog ground
6	VCC	Analog 5V supply
7	RINA/Y4	Filtered analog RED video or luma video input for Bank <A>.
8	RINB/Y5	Filtered analog RED video or luma video input for Bank .
9	GINA/Y6	Filtered analog GREEN video or luma video input for Bank <A>.
10	GINB/Y7	Filtered analog GREEN video or luma video input for Bank .
11	BINA/C1	Filtered analog BLUE video or chroma video input for Bank <A>.
12	BINB/C2	Filtered analog BLUE video or chroma video input for Bank .
13	SWAP CVF	Logic input pin to select whether the outputs of CVOUT1/YOUTA and CVOUT2/YOUTB are from filtered or unfiltered CV sources. Internally pulled low.
14	SWAP CVU	Logic input pin to select whether the outputs of CVOUT1/YOUTA and CVOUT2/YOUTB are from filtered or unfiltered CV sources. Internally pulled low.
15	BOUT/COU	Analog BLUE video output or chroma output from either BINA/C1 or BINB/C2
16	GOUT/YOUTD	Analog GREEN video output or luma output from either GINA/Y6 or GINB/Y7
17	VCCORGB	5V-power supply for output buffers of the RGB drivers
18	ROUT/YOUTC	Analog RED video output or luma output from either RINA/Y4 or RINB/Y5
19	GNDO	Ground for output buffers
20	CVOUT2/YOUTB	Composite video output for channel 2 or luma output.
21	CVOUT1/YOUTA	Composite video output for channel 1 or luma output.
22	VCCOCV	5V-power supply for output buffers of the CV drivers
23	SYNCIN	Input for an external H-sync logic signal for filtered channels. TTL or CMOS. For normal operation SYNCOUT is connected to SYNCIN.
24	SYNCOUT	Logic output for H-sync detects for CVINFAY2 or CVINFB/Y3. TTL or CMOS. For normal operation SYNCOUT is connected to SYNCIN.

■ DISPLAY DATA

● V351 : 13-BT-178GNK (V6267400)



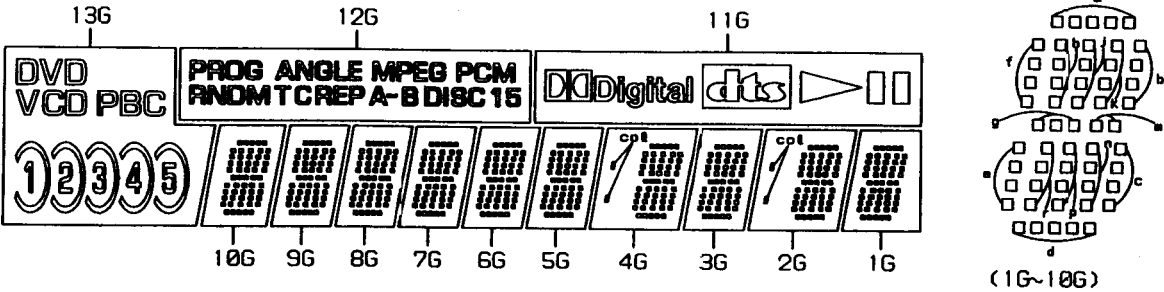
● PIN CONNECTION

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Connection	F1	F1	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	NC	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G

Pin No.	31	32	33	34	35																									
Connection	2G	1G	NP	F2	F2																									

Note 1) F1, F2 Filament 3) NC No Connection 5) 1G~13G Grid
2) NP No Pin 4) P1~P15 Datum Line

● GRID ASSIGNMENT



● ANODE CONNECTION

	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	-	5		a	a	a	a	a	a	a	a	a	a
P2	(5))	1	▷	h	h	h	h	h	h	h	h	h	h
P3	5	DISC	disc	j	j	j	j	j	j	j	j	j	j
P4	(4))	B	Digital	k	k	k	k	k	k	k	k	k	k
P5	4	A-	-	b	b	b	b	b	b	b	b	b	b
P6	(3))	PCM	-	f	f	f	f	f	f	f	f	f	f
P7	3	MPEG	-	m	m	m	m	m	m	m	m	m	m
P8	(2))	REP	-	g	g	g	g	g	g	g	g	g	g
P9	2	ANGLE	-	c	c	c	c	c	c	c	c	c	c
P10	(1))	(T) C	-	e	e	e	e	e	e	e	e	e	e
P11	1	T (C)	-	r	r	r	r	r	r	r	r	r	r
P12	PBC	RNDM	-	p	p	p	p	p	p	p	p	p	p
P13	CD	PROG	-	n	n	n	n	n	n	n	n	n	n
P14	V	-	-	d	d	d	d	d	d	d	d	d	d
P15	DVD	-	-	-	-	-	-	-	-	col	-	col	-

■ ABBREVIATIONS

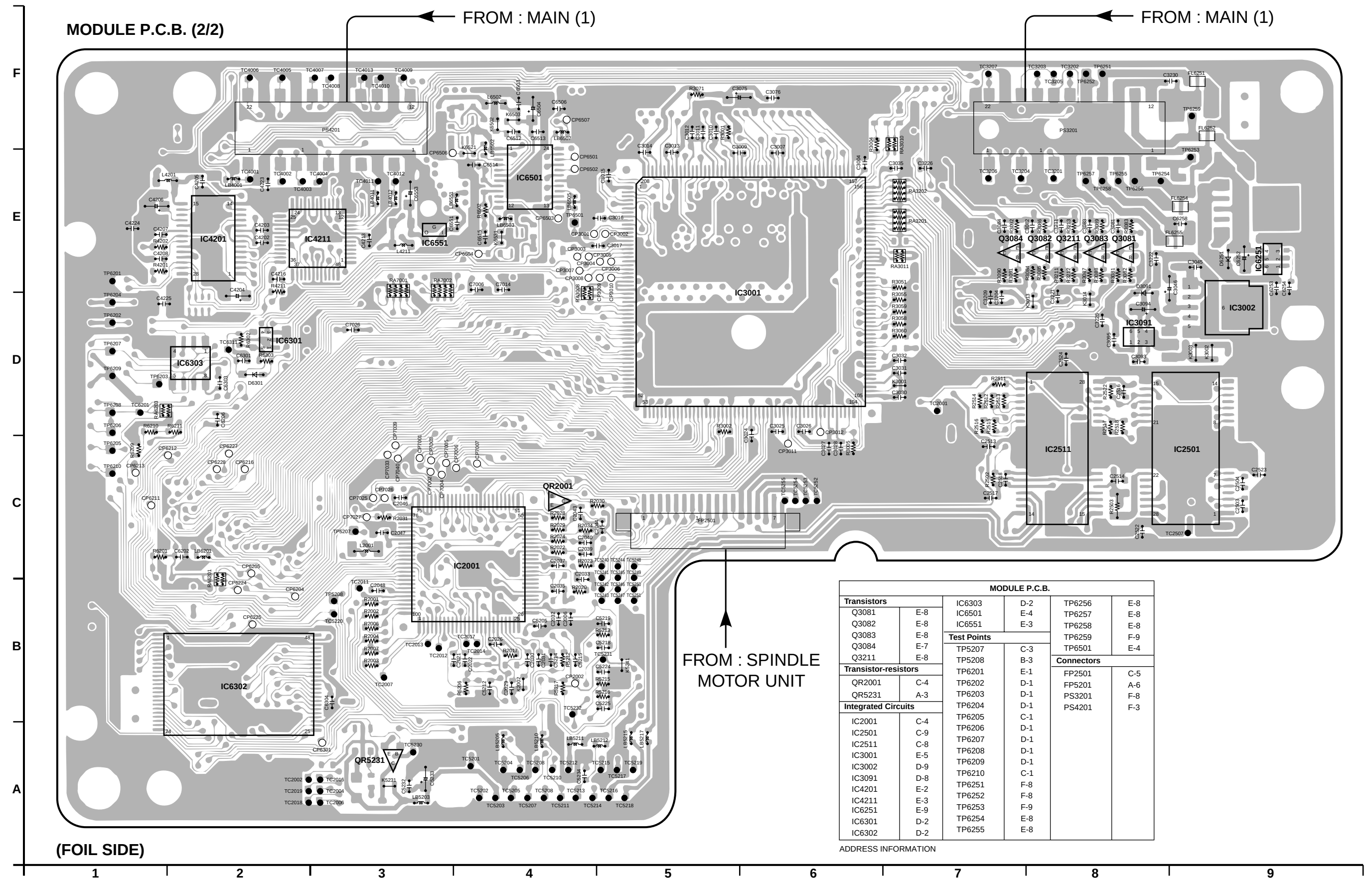
INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARE	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
B	ASO	SERVO AMP OUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	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	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT
	DOUT0~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

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/40.5MHz)
	ETSCLK	ETSCLK EXTERNAL S CLOCK (54MHz)
F	FBALFCLK	FOCUS BALANCE/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
	IPFRAG	INTERPOLATION FLAG
	IREF	I (CURRENT) REFERENCE
	ISEL	INTERFACE MODE SELECT
L	LDONL	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
M	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND CLOCK
	MDQ0~UP	MEMORY SERIAL COMMAND DATA
	MDQM	MEMORY DATA INPUT/OUTPUT
	MLD	MEMORY DATA I/O MASK
	MPEG	MEMORY SERIAL COMMAND LOAD
		MOTION PICTURE IMAGE CODING
		EXPERT 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
	PLLCLKPLLO	CHANNEL PLL CLOCK
	K	PLL LOCK
	PWMCTL	PWM OUTPUT CONTROL
	PWMDA	PULSE WAVE MOTOR DRIVE A
	PWMOA, B	PULSE WAVE MOTOR OUT A, B

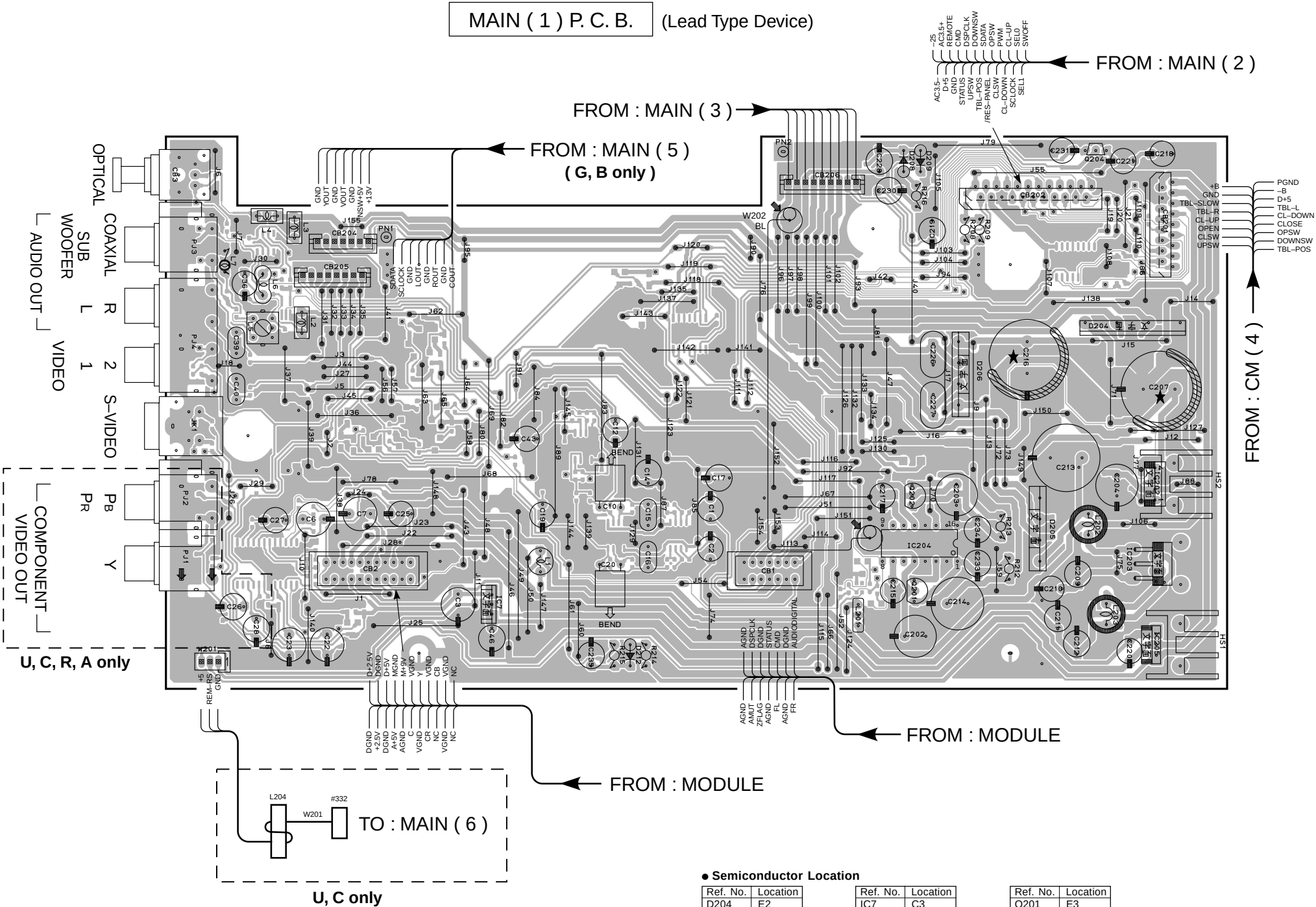
INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE OUTPUT
	RS	(CD-ROM) REGISTER SELECT
	RSEL	PF POLARITY SELECT
	RST	RESET
S	RSV	RESERVE
	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK RECEIVER
	SCL	SERIAL CLOCK
	SCLK	SERIAL CLOCK
	SDA	SERIAL DATA
	SEG0~UP	FL SEGMENT OUTPUT
	SELCLK	SELECT CLOCK
	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
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSS SIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
W	VREF	VOLTAGE REFERENCE
	VSS	SOURCE POWER SUPPLY VOLTAGE
	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
X	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER
	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
X	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

■ PRINTED CIRCUIT BOARD (Foil side)



PRINTED CIRCUIT BOARD (Foil side)



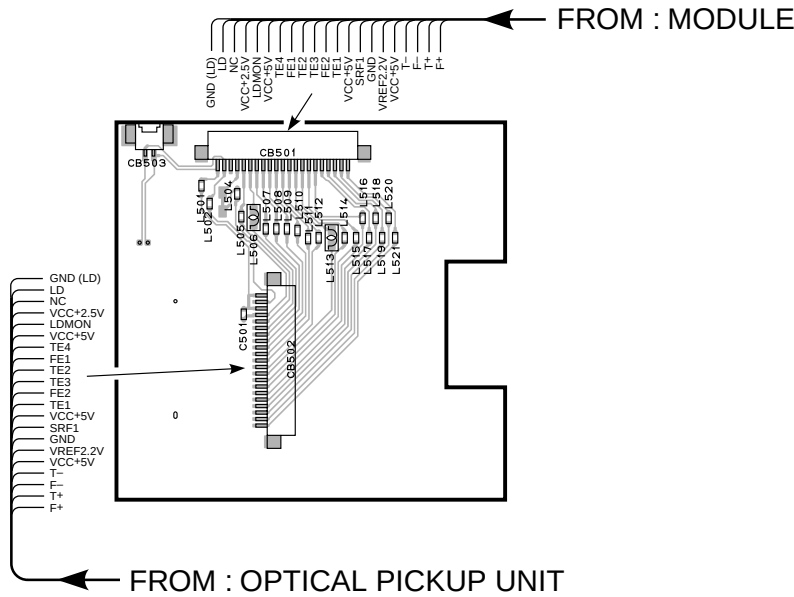
Semiconductor Location

Ref. No.	Location
D204	E2
D205	E3
D206	E3
D208	D2
D209	E2
D212	C4

Ref. No.	Location
IC7	C3
IC202	E3
IC203	E3
IC204	E3
IC205	E4

Ref. No.	Location
Q201	E3
Q202	E3
Q204	E2

TRAVERSE P. C. B.



Ref. No.	Location
IC351	D4
IC352	C4
IC353	F4
IC354	B4

An oscilloscope trace showing a square wave signal. The signal is periodic, alternating between a high level and a low level. The high level is approximately 2.5 divisions above the 0V reference line, and the low level is approximately 1.5 divisions below the 0V reference line. The period of the signal is approximately 2 divisions. The signal is labeled '0V' on the left side of the trace.

■ PRINTED CIRCUIT BOARD (Foil side)

1

● R only

MAIN (7) P. C. B.

MAIN (3) P. C. B.

FROM : POWER CORD

FROM : MAIN (4)

2

VOLTAGE
SELECTOR

3

TO : MAIN (1)

- U, C only

MAIN (6) P. C. B.	(Lead Type Device)
---------------------	--------------------

FROM : MAIN (1)

- U, C only

MAIN (6) P. C. B. (Surface Mount Device)

- **Semiconductor Location**

Ref. No.	Location
D286	G5
D331	F2

Ref. No.	Location
IC351	D4
IC352	C4
IC353	F4
IC354	B4

Ref. No.	Location
Q286	G5
Q288	G5
Q331	F4

4

MAIN (4) P. C. B.

● G, B only

MAIN (5) P. C. B.

(Lead Type Device)

TO : MAIN (1)

TO : MAIN (1)

5

POWER

TO: MAIN (3)

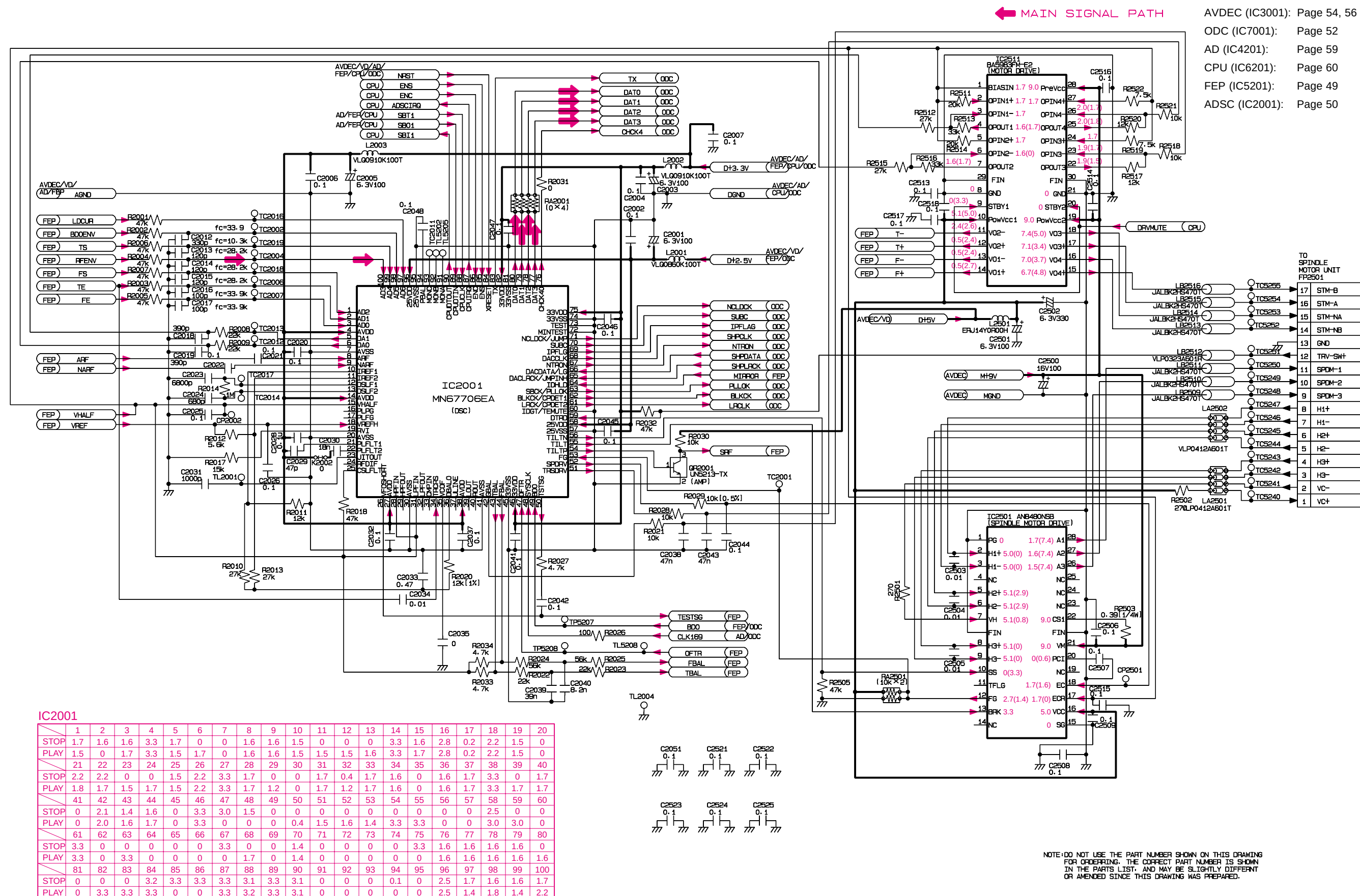
6

AV

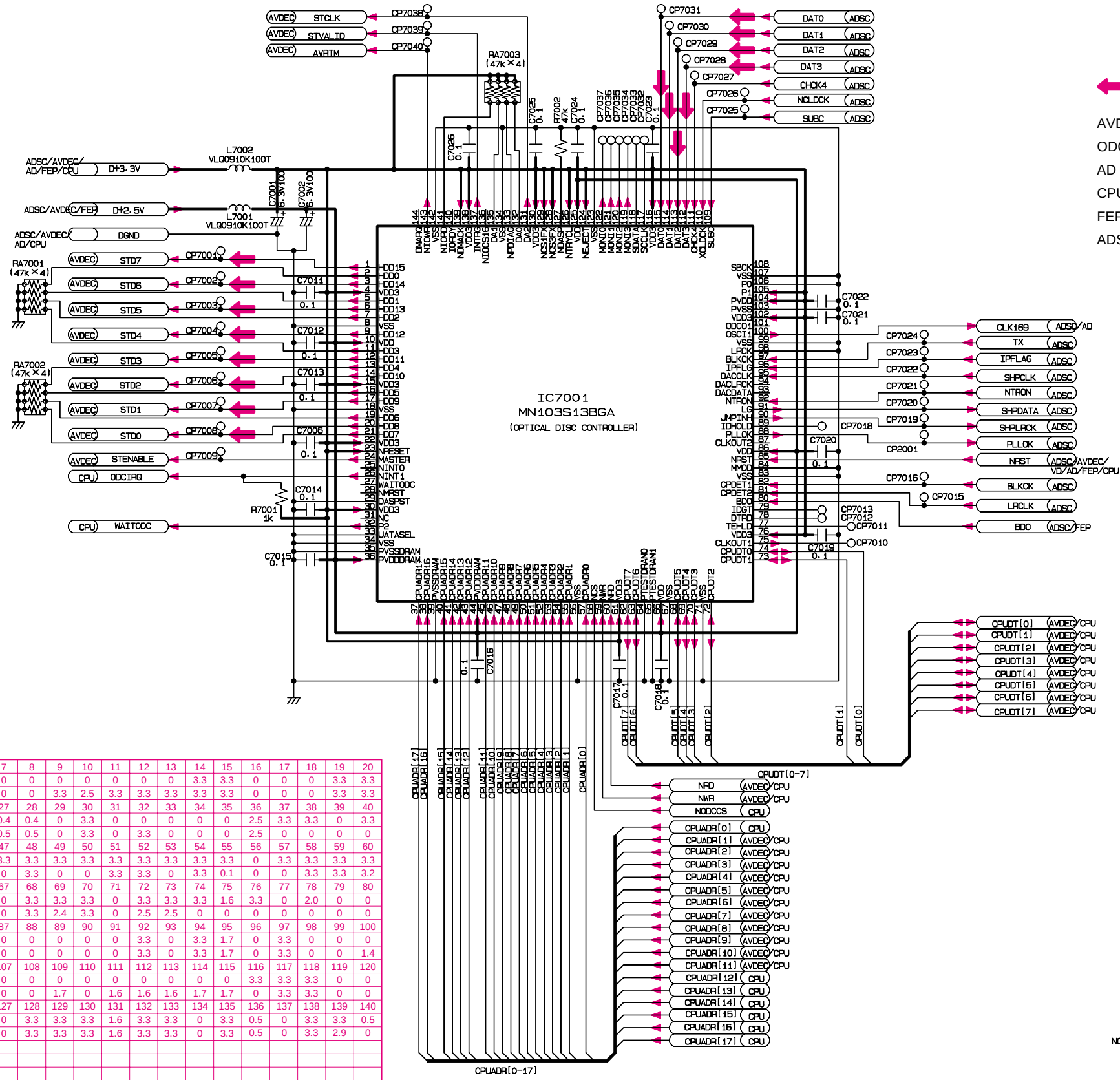
● G, B only

MAIN (5) P. C. B.	(Surface Mount Device)
---------------------	------------------------

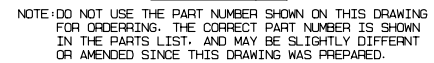
■ SCHEMATIC DIAGRAM (MODULE P.C.B. (2/6): ADSC SECTION)



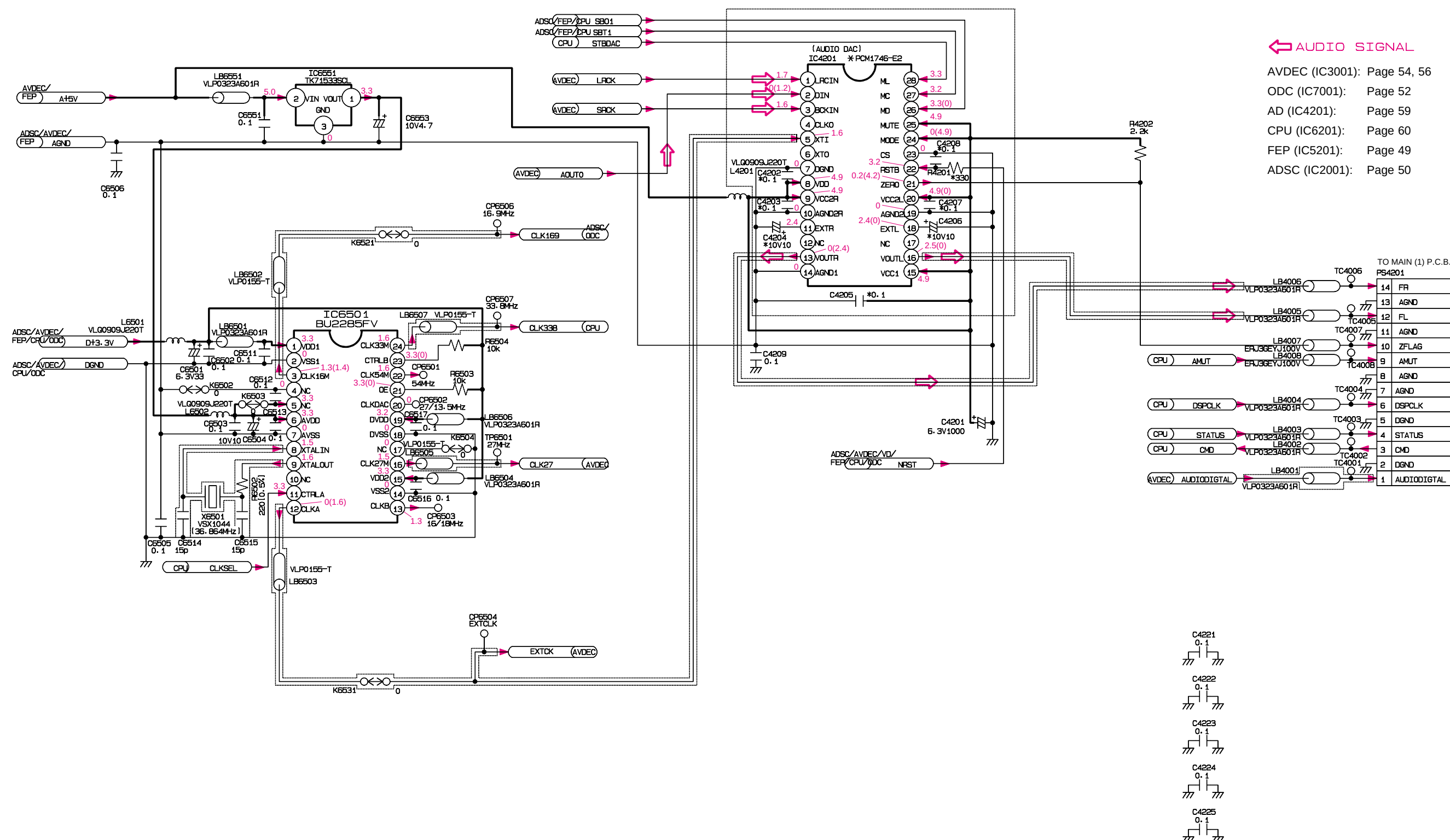
SCHEMATIC DIAGRAM (MODULE P.C.B. (3/6): ODC SECTION)



6



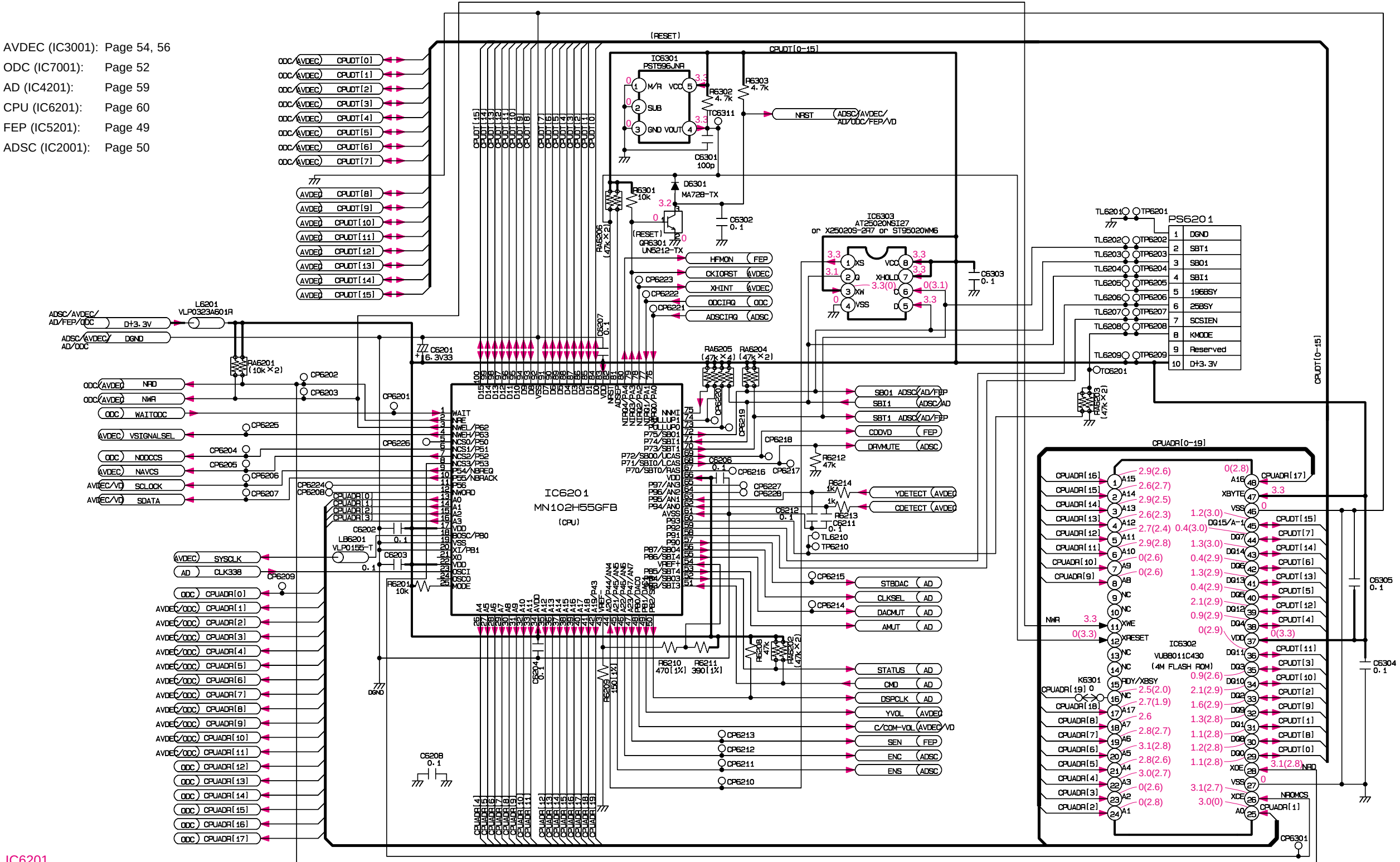
AVDEC (IC3001): Page 54, 56
ODC (IC7001): Page 52
AD (IC4201): Page 59
CPU (IC6201): Page 60
FEP (IC5201): Page 49
ADSC (IC2001): Page 50



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

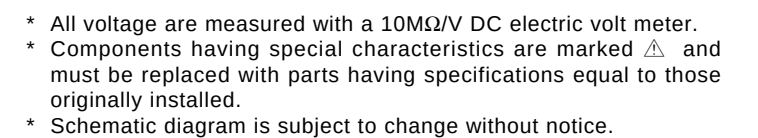
■ SCHEMATIC DIAGRAM (MODULE P.C.B. (6/6): CPU SECTION)

AVDEC (IC3001): Page 54, 56
ODC (IC7001): Page 52
AD (IC4201): Page 59
CPU (IC6201): Page 60
FEP (IC5201): Page 49
ADSC (IC2001): Page 50



IC6201																																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
STOP	3.3	3.1	3.3	2.1	0	3.3	3.3	3.0	3.3	0	3.3	3.3	2.5	3.0	0	0	3.3	0	0	0	3.3	3.3	1.6	1.6	3.3	3.0	2.8	3.0	3.3	0.3	0	0.1	0.3	3.3	0	3.3	3.3	3.3	3.3	0.1	
PLAY	3.3	0	3.3	2.3	0	0	3.3	2.7	0	0	0	0	0	2.7	0	0	0	0	0	0	3.3	3.3	1.6	1.6	3.3	2.7	2.6	2.7	2.7	2.6	2.6	2.6	2.7	3.3	2.4	2.3	2.5	2.7	2.5	2.8	
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
STOP	0.1	0.3	0	0.5	0.4	0.5	2.7	1.0	1.3	3.3	3.3	3.3	3.2	1.3	3.3	3.3	0.4	0.4	0.4	0	0	1.3	1.0	0.5	0.5	3.3	0	0	0	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3	0	0	0	
PLAY	1.9	2.0	0.8	3.3	3.3	3.3	3.3	1.0	1.2	2.8	1.5	2.5	0	1.3	3.3	3.3	3.3	0	0	0.1	0	1.3	1.2	3.3	0	3.3	3.3	3.3	0	3.3	2.8	3.3	3.2	0	3.2	3.3	0.1	0	0	0.1	
	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																					
STOP	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3	3.3	3.3	0	3.3	3.3	3.3	3.3	0	0	0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
PLAY	3.2	3.3	3.3	0	2.6	0	0	0	3.3	3.3	2.4	0	0	0	2.5	0	0	3.3	3.3	3.3																					

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 (MAIN P.C.B. (2/3) & CM P.C.B.)

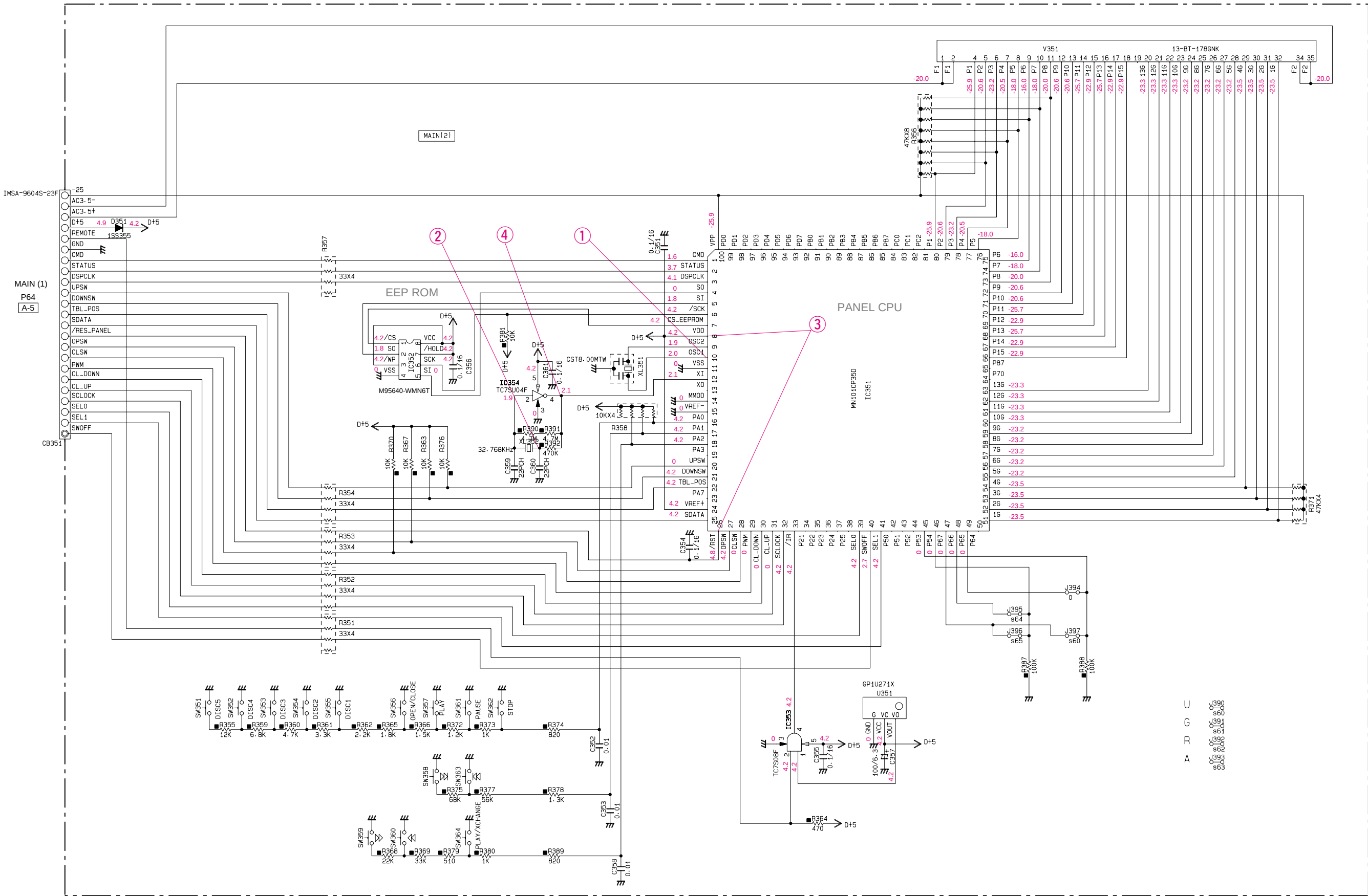
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
⊠	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
⊙	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
⊠	FIRE PROOF CARBON FILM RESISTOR
⊠	CEMENT MOLDED RESISTOR
⊠	SEMI VARIABLE RESISTOR
⊠	CHIP RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊙	CERAMIC TUBULAR CAPACITOR
⊙	POLYESTER FILM CAPACITOR
⊙	POLYSTYRENE FILM CAPACITOR
⊙	MICA CAPACITOR
⊙	POLYPROPYLENE FILM CAPACITOR
⊙	SEMICONDUCTIVE CERAMIC CAPACITOR
⊙	POLYPHENYLENE SULFIDE FILM CAPACITOR

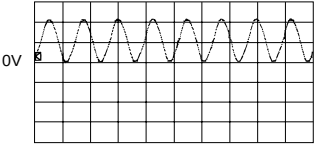
NOTICE (model)
(J)..... JAPANESE
(U)..... U.S.A
(C)..... CANADIAN
(R)..... GENERAL
(A)..... AUSTRALIAN
(B)..... BRITISH
(G)..... EUROPEAN
(T)..... CHINA
(L)..... SINGAPORE

CIRCUIT CHANGES BY MARKET.

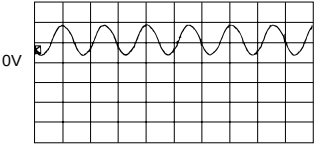
		UC	R	A	B6
s60	J390.397	0 R035000			
s61	J391				0 R035000
s62	J392	0 R035000			
s63	J393			0 R035000	
s64	J395	0 R035000	0 R035000	0 R035000	
s65	J396		0 R035000	0 R035000	0 R035000



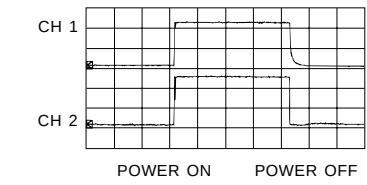
Point ① (Pin10 of IC351)
V : 2V/div H : 0.1 μsec/div
DC range 1 : 1 probe



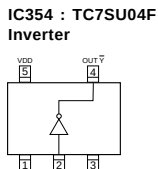
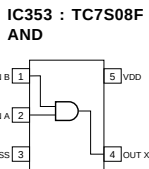
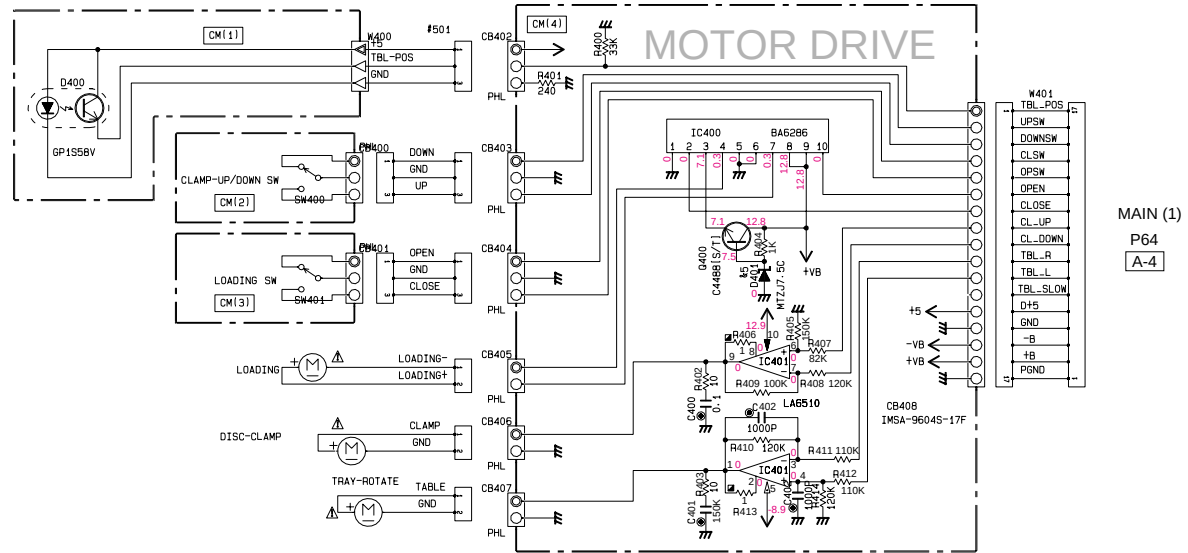
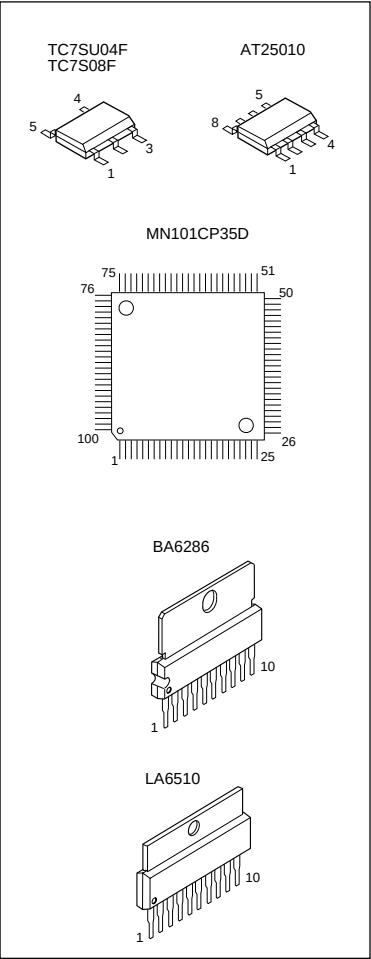
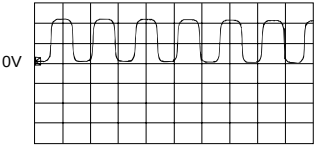
Point ② (XL352)
V : 2V/div H : 20 μsec/div
DC range 1 : 1 probe



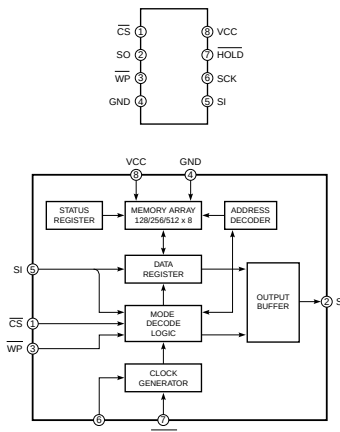
Point ③
CH1 : Pin8 of IC351 V : 2V/div (CH1)
CH2 : Pin26 of IC351 V : 2V/div (CH2)
H : 5 sec/div DC range 1 : 1 probe



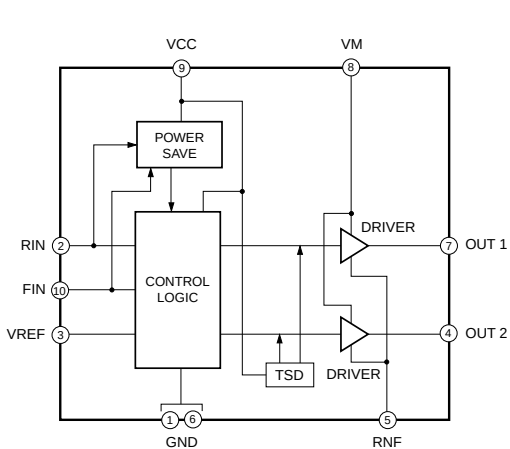
Point ④ (Pin4 of IC354)
V : 2V/div H : 20 μsec/div
DC range 1 : 1 probe



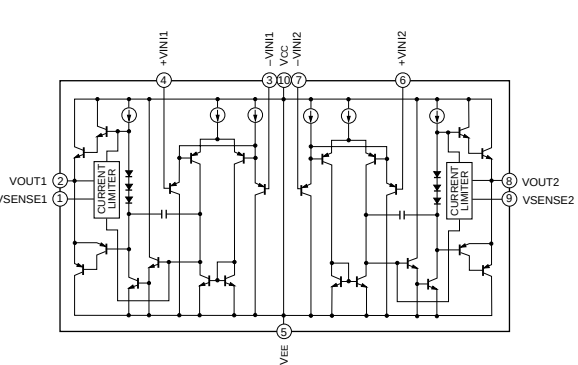
IC352 : M95640-WMN6T
Electrically Erasable PROM



IC400 : BA6286
Motor Driver



IC401 : LA6510
Dual Power Operational Amp



* All voltage are measured with a 10MΩ/V DC electric volt meter.
* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

SCHEMATIC DIAGRAM (MAIN P.C.B. (3/3))

CIRCUIT CHANGES BY MARKET.

	UC	R	A	BG
96	Q331	C241K(10/5/S)		
97	R333	R035647		
98	D331	DN3131		
99	R331-332	10K		
100	C331	0.1/16		
101	CB203-332	PHI		
102	JK331-332	16Y8501-0600		
103	M341			
104	M342			
105	M343			
106	M344			
107	M345			
108	SW341			
109	T341			
110	Q286-288	XY791	XY793	XY794
111	R299			
112	R309-315			
113	R289-290			
114	R301			
115	R288-286-297-298			
116	R305			
117	R306-307			
118	R292			
119	R304-313			
120	R291-293-310-311			
121	R303			
122	R286-287			

	UC	R	A	BG
133	C306			
134	C319			
135	C307			
136	C304-305			
137	C298-319			
138	C290-291			
139	C295			
140	C323-325			
141	C309-310			
142	D202-207			
143	C287-288-294-308			
144	CB288			
145	LR286-288			
146	CB204-286			
147	CB205-287			
148	CB286			
149	LR291-292			
150	IC288			
151	IC289			
152	IC287			
153	IC286			
154	CB286-322			
155	R300			
156	M286			
157	M287			
158	M201			

	UC	R	A	BG
177	C306			
178	C319			
179	C307			
180	C304-305			
181	C298-319			
182	C290-291			
183	C295			
184	C323-325			
185	C309-310			
186	D202-207			
187	C287-288-294-308			
188	CB288			
189	LR286-288			
190	CB204-286			
191	CB205-287			
192	CB286			
193	LR291-292			
194	IC288			
195	IC289			
196	IC287			
197	IC286			
198	CB286-322			
199	R300			
200	M286			
201	M287			
202	M201			

	UC	R	A	BG
227	C306			
228	C319			
229	C307			
230	C304-305			
231	C298-319			
232	C290-291			
233	C295			
234	C323-325			
235	C309-310			
236	D202-207			
237	C287-288-294-308			
238	CB288			
239	LR286-288			
240	CB204-286			
241	CB205-287			
242	CB286			
243	LR291-292			
244	IC288			
245	IC289			
246	IC287			
247	IC286			
248	CB286-322			
249	R300			
250	M286			
251	M287			
252	M201			

	UC	R	A	BG
277	C306			
278	C319			
279	C307			
280	C304-305			
281	C298-319			
282	C290-291			
283	C295			
284	C323-325			
285	C309-310			
286	D202-207			
287	C287-288-294-308			
288	CB288			
289	LR286-288			
290	CB204-286			
291	CB205-287			
292	CB286			
293	LR291-292			
294	IC288			
295	IC289			
296	IC287			
297	IC286			
298	CB286-322			
299	R300			
300	M286			
301	M287			
302	M201			

	UC	R	A	BG
327	C306			
328	C319			
329	C307			
330	C304-305			
331	C298-319			
332	C290-291			
333	C295			
334	C323-325			
335	C309-310			
336	D202-207			
337	C287-288-294-308			
338	CB288			
339	LR286-288			
340	CB204-286			
341	CB205-287			
342	CB286			
343	LR291-292			
344	IC288			
345	IC289			
346	IC287			
347	IC286			
348	CB286-322			
349	R300			
350	M286			
351	M287			
352	M201			

	UC	R	A	BG
377	C306			
378	C319			
379	C307			
380	C304-305			
381	C298-319			
382	C290-291			
383	C295			
384	C323-325			
385	C309-310			
386	D202-207			
387	C287-288-294-308			
388	CB288			
389	LR286-288			
390	CB204-286			
391	CB205-287			
392	CB286			
393	LR291-292			
394	IC288			
395	IC289			
396	IC287			
397	IC286			
398	CB286-322			
399	R300			
400	M286			
401	M287			
402	M201			

	UC	R	A	BG
427	C306			
428	C319			
429	C307			
430	C304-305			
431	C298-319			
432	C290-291			
433	C295			
434	C323-325			
435	C309-310			
436	D202-207			
437	C287-288-294-308			
438	CB288			
439	LR286-288			
440	CB204-286			
441	CB205-287			
442	CB286			
443	LR291-292			
444	IC288			
445	IC289			
446	IC287			
447	IC286			
448	CB286-322			
449	R300			
450	M286			
451	M287			
452	M201			

	UC	R	A	BG
477	C306			
478	C319			
479	C307			
480	C304-305			
481	C298-319			
482	C290-291			
483	C295			
484	C323-325			
485	C309-310			
486	D202-207			
487	C287-288-294-308			
488	CB288			
489	LR286-288			
490	CB204-286			
491	CB205-287			
492	CB286			
493	LR291-292			
494	IC288			
495	IC289			
496	IC287			
497	IC286			
498	CB286-322			
499	R300			
500	M286			
501	M287			
502	M201			

	UC	R	A	BG
527	C306			
528	C319			
529	C307			
530	C304-305			
531	C298-319			
532	C290-291			
533	C295			
534	C323-325			
535	C309-310			
536	D202-207			
537	C287-288-294-308			
538	CB288			
539	LR286-288			
540	CB204-286			
541	CB205-287			
542	CB286			
543	LR291-292			
544	IC288			
545	IC289			
546	IC287			
547	IC286			
548	CB286-322			
549	R300			
550	M286			
551	M287			
552	M201			

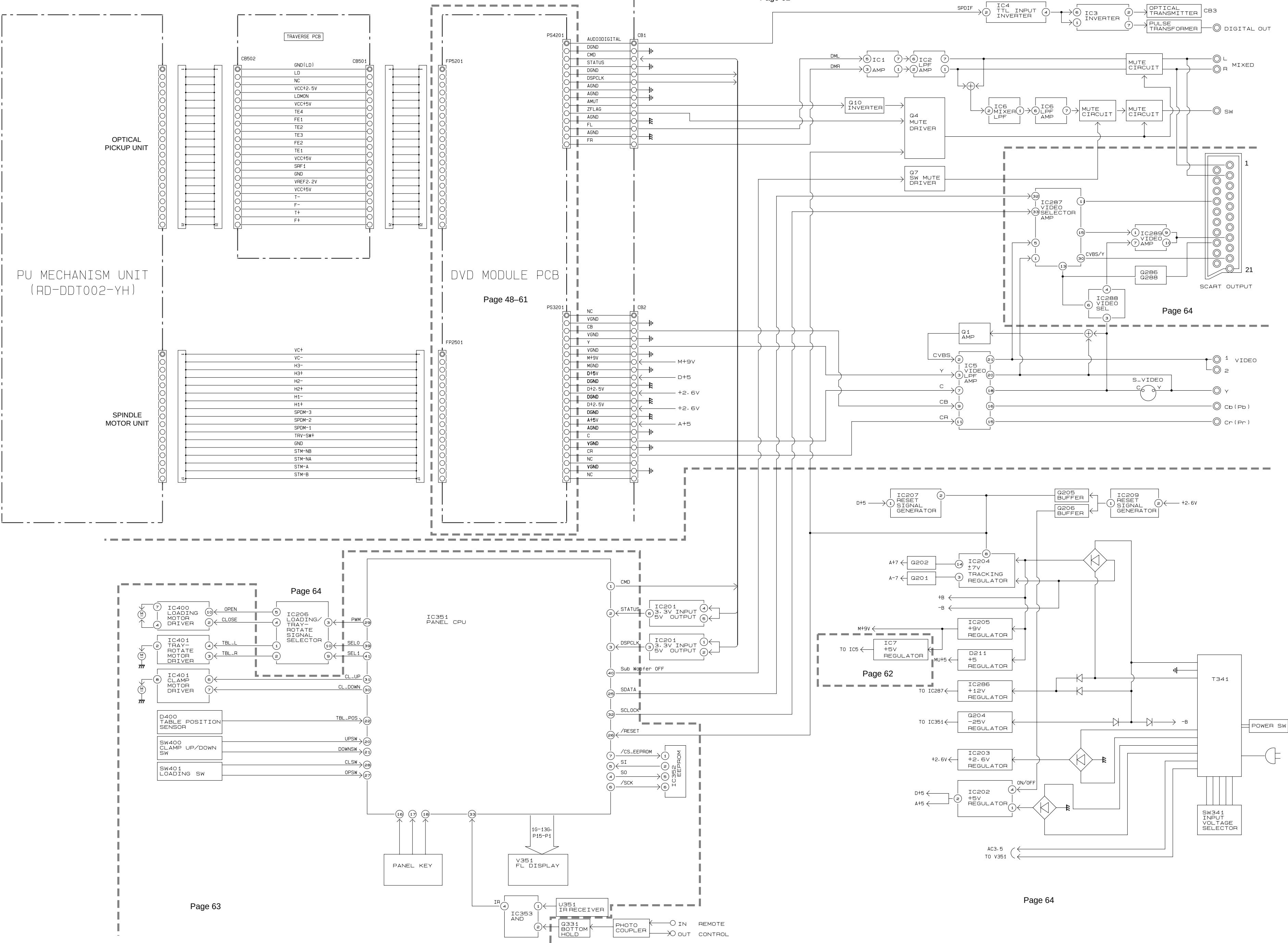
	UC	R	A	BG
577	C306			
578	C319			
579	C307			
580	C304-305			
581	C298-319			
582	C290-291			
583	C295			
584	C323-325			
585	C309-310			
586	D202-207			
587	C287-288-294-308			
588	CB288			
589	LR286-288			
590	CB204-286			
591	CB205-287			
592	CB286			
593	LR291-292			
594	IC288			
595	IC289			
596	IC287			
597	IC286			
598	CB286-322			
599	R300			
600	M286			
601	M287			
602	M201			

	UC	R	A	BG
627	C306			
628	C319			
629	C307			
630	C304-305			
631	C298-319			
632	C290-291			
633	C295			
634	C323-325			
635	C309-310			
636	D202-207			
637	C287-288-294-308			
638	CB288			
639	LR286-288			
640	CB204-286			
641	CB205-287			
642	CB286			
643	LR291-292			
644	IC288			
645	IC289			
646	IC287			
647	IC286			
648	CB286-322			
649	R300			
650	M286			
651	M287			
652	M201			

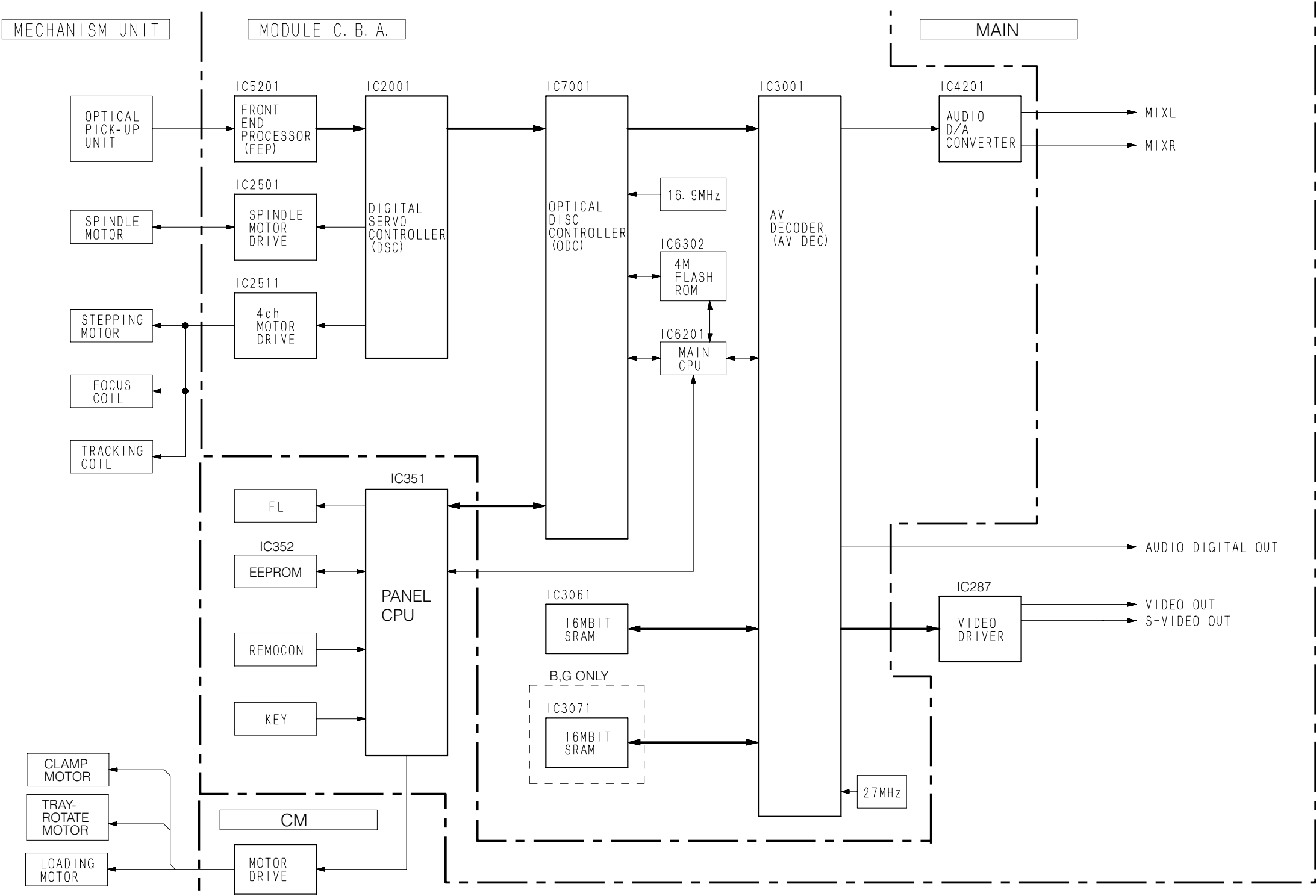
	UC	R	A	BG
677	C306			
678	C319			
679	C307			
680	C304-305			
681	C298-319			
682	C290-291			
683	C295			
684	C323-325			
685	C309-310			
686	D202-207			
687	C287-288-294-308			
688	CB288			
689	LR286-288			
690	CB204-286			
691	CB205-287			
692	CB286			
693	LR291-292			
694	IC288			
695	IC289			
696	IC287			
697	IC286			
698	CB286-322			
699	R300			
700	M286			
701	M287			
702	M201			

|--|

■ BLOCK DIAGRAM

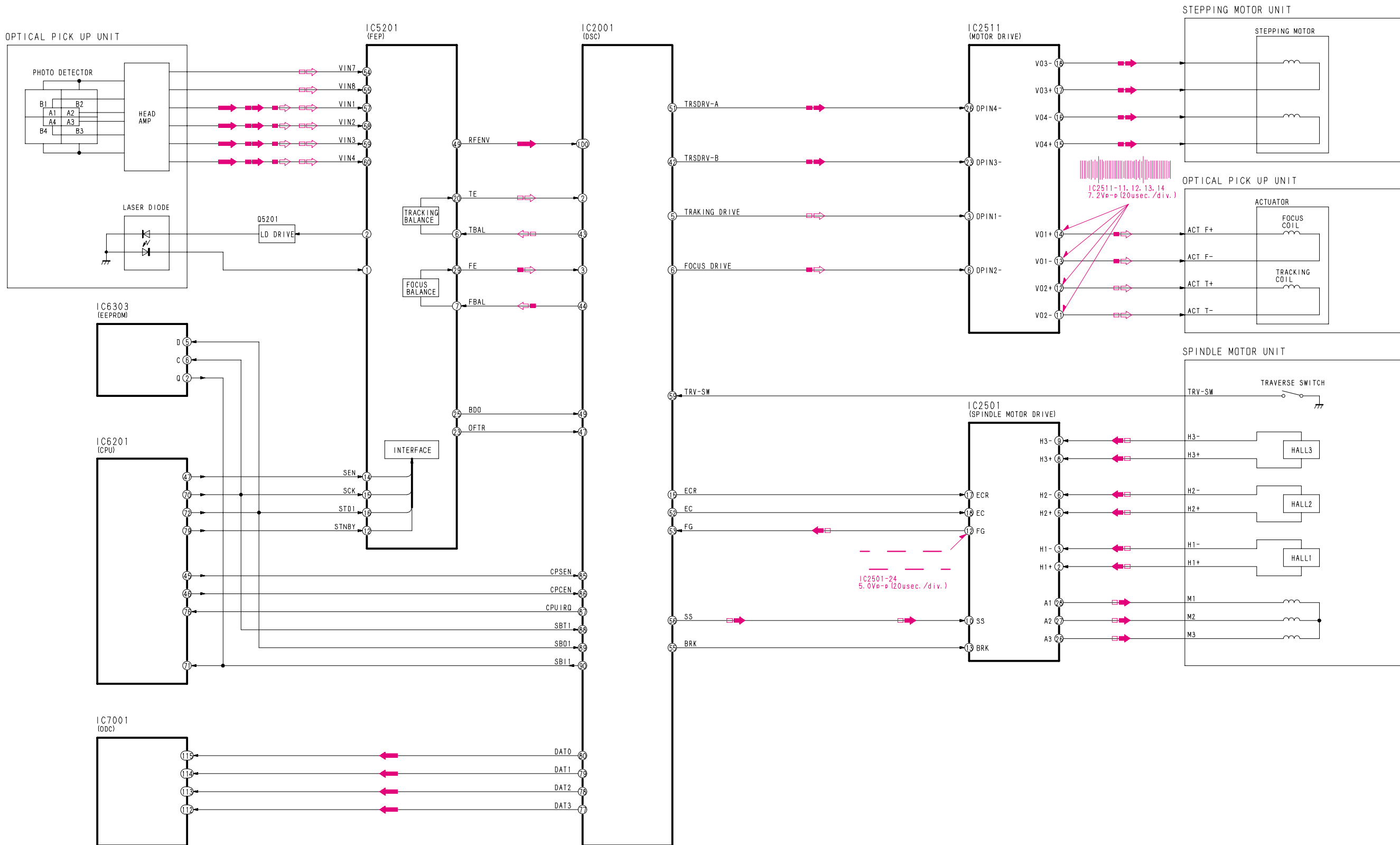


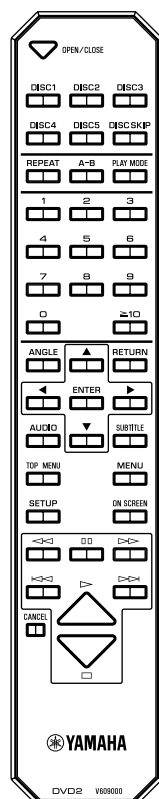
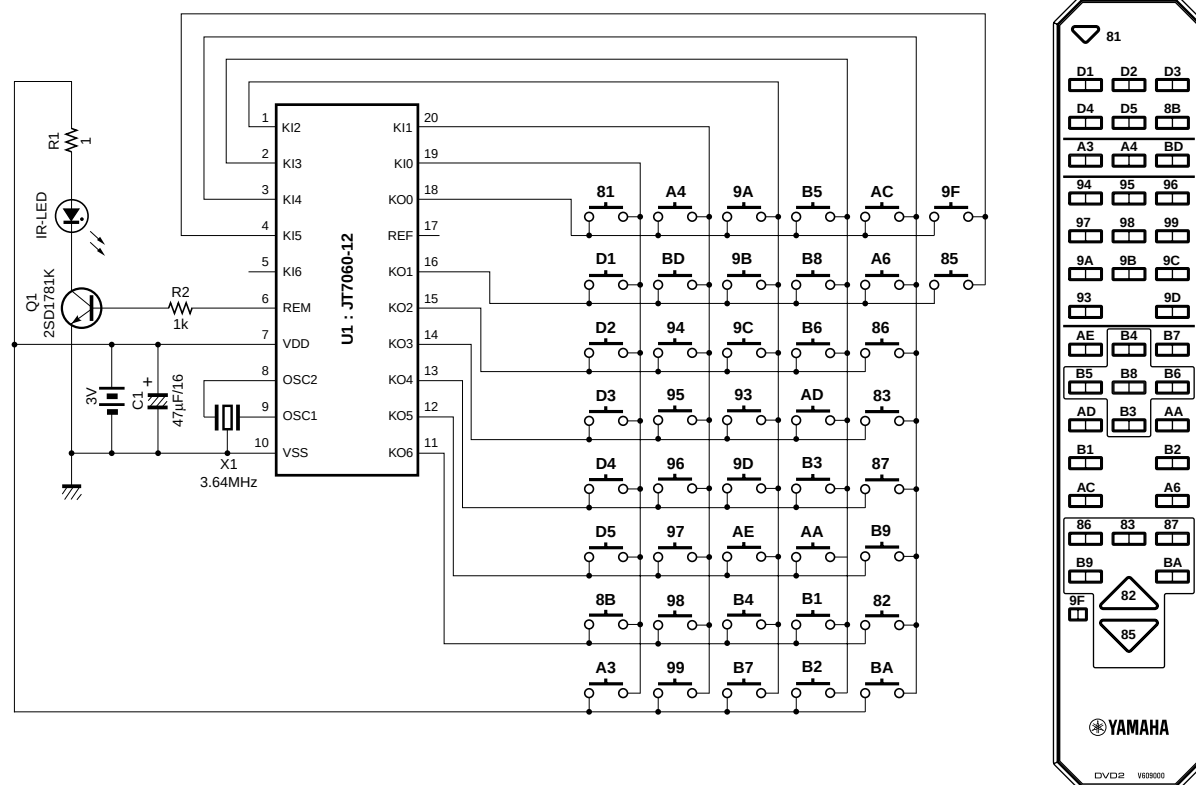
■ BLOCK DIAGRAM (MODULE BLOCK)



■ BLOCK DIAGRAM (SERVO BLOCK)

RF SIGNAL SPINDLE MOTOR DRIVE SIGNAL STEPPING MOTOR DRIVE SIGNAL TRACKING ERROR SIGNAL FOCUS ERROR SIGNAL





FUNCTION	CUSTOM (HEX)	DATA (HEX)
OPEN/CLOSE	7C	81
DISC1	7C	D1
DISC2	7C	D2
DISC3	7C	D3
DISC4	7C	D4
DISC5	7C	D5
DISC SKIP	7C	8B
REPEAT	7C	A3
A-B	7C	A4
PLAY MODE	7C	BD
1	7C	94
2	7C	95
3	7C	96
4	7C	97
5	7C	98
6	7C	99
7	7C	9A
8	7C	9B
9	7C	9C
0	7C	93
≥10	7C	9D
ANGLE	7C	AE
▲	7C	B4
RETURN	7C	B7
◀	7C	B5

[illegible]

PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

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

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

- Chip resistors are listed on page 71.

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.FBRLINK	: CONNECTOR, FIBER LINK	SUPRT.PCB	: SUPPORT, P.C.B.
CN.FLAT	: CONNECTOR, FLAT CABLE	SURG.PRTCT	: SURGE PROTECTOR
CN.POST	: CONNECTOR, BASE POST	SW.TACT	: TACT SWITCH
COIL.MX.AM	: COIL, AM MIX	SW.LEAF	: LEAF SWITCH
COIL.AT.FM	: COIL, FM ANTENNA	SW.LEVER	: LEVER SWITCH
COIL.DT.FM	: COIL, FM DETECT	SW.MICRO	: MICRO SWITCH
COIL.MX.FM	: COIL, FM MIX	SW.PUSH	: PUSH SWITCH
COIL.OUTPT	: OUTPUT COIL	SW.RT.ENC	: ROTARY ENCODER
DIOD.ARRAY	: DIODE ARRAY	SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
DIODE.BRG	: DIODE BRIDGE	SW.RT	: ROTARY SWITCH
DIODE.CHP	: CHIP 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. MAIN

Schm Ref.	PART NO.	Description
* V6214300	P.C.B.	MAIN(UC)
* V6214400	P.C.B.	MAIN(R)
* V6214600	P.C.B.	MAIN(A)
* V6214700	P.C.B.	MAIN(BG)
* CB1	V6088500	CN TKC 14P TE
* CB2	V6088600	CN TKC 22P TE
* CB3	V4707800	CN.FBRLINK 1P GPIF38T2
* CB201	VU271700	CN 17P
* CB202	VU272300	CN 9604S 23P TE
* CB204	VB390300	CN.BS.PIN 7P(BG)
* CB205	VB390400	CN.BS.PIN 8P(BG)
* CB206	VB390500	CN.BS.PIN 9P
* CB288	V5993600	CN 21P(BG)
* CB332	VB389900	CN.BS.PIN 3P
* CB342	VG879900	CN.BS.PIN 2P
* CB343	VG879900	CN.BS.PIN 2P
* CB351	VU282300	CN 9604S 23P SE
* C1	V6511100	C.EL 47uF 16V
* C2	V6511100	C.EL 47uF 16V
* C3	V6267900	C.EL 220uF 6.3V
* C4	US064100	C.CE.M.CHP 0.01uF 50V
* C5	US064100	C.CE.M.CHP 0.01uF 50V
* C6	V6267700	C.EL 470uF 4V
* C7	V6267700	C.EL 470uF 4V
* C8	US062470	C.CE.M.CHP 470pF 50V
* C9	US064100	C.CE.M.CHP 0.01uF 50V
* C10	V6699800	C.PP 100pF 125V
* C12	V6511100	C.EL 47uF 16V
* C14	V6511000	C.EL 100uF 10V
* C15	Vi715500	C.MYLAR 1000pF 50V
* C16	Vi715500	C.MYLAR 1000pF 50V
* C17	V6511000	C.EL 100uF 10V
* C19	V6511100	C.EL 47uF 16V
* C20	V6699800	C.PP 100pF 125V
* C22	UR819100	C.EL 1000uF 6.3V
* C23	UR819100	C.EL 1000uF 6.3V
* C24	US064100	C.CE.M.CHP 0.01uF 50V
* C25	UM517470	C.EL 47uF 6.3V
* C26	UM388100	C.EL 100uF 10V
* C27	UM517470	C.EL 47uF 6.3V
* C28	UM388100	C.EL 100uF 10V
* C29	US034330	C.CE.M.CHP 0.0330 16V
* C30	US135100	C.CE.CHP 0.1uF 16V
* C31	US064100	C.CE.M.CHP 0.01uF 50V
* C32	US135100	C.CE.CHP 0.1uF 16V
* C33	US135100	C.CE.CHP 0.1uF 16V
* C34	US135100	C.CE.CHP 0.1uF 16V
* C35	US061390	C.CE.M.CHP 39pF 50V
* C36	UR837330	C.EL 33uF 16V
* C37	US062330	C.CE.M.CHP 330pF 50V
* C38	US062330	C.CE.M.CHP 330pF 50V
* C39	Vi715500	C.MYLAR 1000pF 50V
* C40	Vi715500	C.MYLAR 1000pF 50V

* New Parts

Schm Ref.	PART NO.	Description
* C41	US064100	C.CE.M.CHP 0.01uF 50V
* C42	US135100	C.CE.CHP 0.1uF 16V
* C43	V6511100	C.EL 47uF 16V
* C44	US035100	C.CE.M.CHP 0.1uF 16V
* C45	US063100	C.CE.M.CHP 1000pF 50V
* C46	UM527470	C.EL 47uF 16V
* C201	US135100	C.CE.CHP 0.1uF 16V
* C202	V5618300	C.EL 470uF 16V
* C203	V5618300	C.EL 470uF 16V
* C204	V5617400	C.EL 470uF 6.3V
* C205	US135330	C.CE.CHP 0.33uF 16V
* C206	US135330	C.CE.CHP 0.33uF 16V
* C207	UU13A100	C.EL 10000uF 16V
* C208	US064100	C.CE.M.CHP 0.01uF 50V
* C209	V6267200	C.AL 10uF 10V
* C210	UR828100	C.EL 100uF 10V
* C211	V6267700	C.EL 470uF 4V
* C212	V6267300	C.AL 15uF 6.3V
* C213	UR729680	C.EL 6800uF 10V
* C214	VG289300	C.EL 1000uF 25V
* C215	UM545470	C.EL 0.47uF 50V
* C216	VN824400	C.EL 4700uF 25V
* C217	UM546470	C.EL 4.7uF 50V
* C218	UR867100	C.EL 10uF 50V
* C219	UR867470	C.EL 47uF 50V
* C220	UR838100	C.EL 100uF 16V
* C221	UR867100	C.EL 10uF 50V
* C222	US064100	C.CE.M.CHP 0.01uF 50V
* C223	US064100	C.CE.M.CHP 0.01uF 50V
* C224	US064100	C.CE.M.CHP 0.01uF 50V
* C225	US064100	C.CE.M.CHP 0.01uF 50V
* C226	VF279800	C.PP 0.01uF 100V
* C227	VF279800	C.PP 0.01uF 100V
* C228	UR867470	C.EL 47uF 50V
* C229	US064100	C.CE.M.CHP 0.01uF 50V
* C230	UR867470	C.EL 47uF 50V
* C231	UR866470	C.EL 4.7uF 50V
* C232	US135100	C.CE.CHP 0.1uF 16V
* C233	V5618900	C.EL 47uF 25V
* C234	V5618900	C.EL 47uF 25V
* C235	UR848100	C.EL 100uF 25V
* C286	UR848470	C.EL 470uF 25V (BG)
* C287	US135100	C.CE.CHP 0.1uF 16V (BG)
* C288	US135100	C.CE.CHP 0.1uF 16V (BG)
* C290	UR837470	C.EL 47uF 16V (BG)
* C291	UR837470	C.EL 47uF 16V (BG)
* C294	US135100	C.CE.CHP 0.1uF 16V (BG)
* C295	UR838100	C.EL 100uF 16V (BG)
* C298	UR837220	C.EL 22uF 25V (BG)
* C304	UR818330	C.EL 330uF 6.3V (BG)
* C305	UR818330	C.EL 330uF 6.3V (BG)
* C306	UN827470	C.EL 47uF 10V (BG)
* C307	UR818220	C.EL 220uF 6.3V (BG)

* New Parts

P.C.B. MAIN

Schm Ref.	PART NO.	Description
* C308	US135100	C.CE.CHP 0.1uF 16V(BG)
* C309	US062100	C.CE.M.CHP 100pF 50V(BG)
* C310	US062100	C.CE.M.CHP 100pF 50V(BG)
* C315	US135100	C.CE.CHP 0.1uF 16V(BG)
C318	UR818100	C.EL 100uF 6.3V(BG)
C319	UR837220	C.EL 22uF 25V(BG)
C322	UR848470	C.EL 470uF 25V(BG)
* C323	US135330	C.CE.CHP 0.33uF 16V(BG)
* C324	US135330	C.CE.CHP 0.33uF 16V(BG)
* C325	US135330	C.CE.CHP 0.33uF 16V(BG)
* C331	US135100	C.CE.CHP 0.1uF 16V
C341	VS741700	C.CE.SAFTY 0.01uF 275V
C342	VS741700	C.CE.SAFTY 0.01uF 275V
C346	VS741700	C.CE.SAFTY 0.01uF 275V
* C351	US135100	C.CE.CHP 0.1uF 16V
* C352	US064100	C.CE.M.CHP 0.01uF 50V
* C353	US064100	C.CE.M.CHP 0.01uF 50V
* C354	US135100	C.CE.CHP 0.1uF 16V
* C355	US135100	C.CE.CHP 0.1uF 16V
* C356	US135100	C.CE.CHP 0.1uF 16V
C357	UM388100	C.EL 100uF 10V
* C358	US064100	C.CE.M.CHP 0.01uF 50V
* C359	US061220	C.CE.M.CHP 22pF 50V
* C360	US061220	C.CE.M.CHP 22pF 50V
* C361	US135100	C.CE.CHP 0.1uF 16V
D1	VT332900	DIODE 1SS355
D2	VT332900	DIODE 1SS355
D3	VT332900	DIODE 1SS355
* D4	VU990300	DIODE.ZENR MA8027-H 2.8V
* D201	V6267600	DIODE RB051L-40
* D202	V6267600	DIODE RB051L-40(BG)
D203	VU993000	DIODE.ZENR MA8056-M 5.6V
* D204	V4870400	DIODE.BRG D4SBS4 4.0A
D205	V4269600	DIODE.BRG D2SBA20 1.5A 200V
D206	V4269600	DIODE.BRG D2SBA20 1.5A 200V
* D207	V6267600	DIODE RB051L-40(BG)
D208	VV307700	DIODE 1N4002S
D209	VV307700	DIODE 1N4002S
* D210	VV663700	DIODE.ZENR RLZ27.0C 27.0V
* D211	VB506200	DIODE.ZENR RLZ5.1A 5.1V
D212	VV307700	DIODE 1N4002S
D286	VT332900	DIODE 1SS355(BG)
* D331	VT522800	PHOT.CPL ON3131
D351	VT332900	DIODE 1SS355
HS1	VR506800	HEAT.SINK PUH16-25
HS2	VR506800	HEAT.SINK PUH16-25
* IC1	XQ178A00	IC NJM4580E-T1 OP AMP
* IC2	XQ178A00	IC NJM4580E-T1 OP AMP
* IC3	XN567A00	IC TC7WU04F INV
* IC4	XT785A00	IC TC7ST04F NAND
* IC5	XZ232A00	IC ML6427CS VIDEO AMP
* IC6	iG103520	IC NJM4558MT-1
IC7	XA507A00	IC AN78N05

* New Parts

Schm Ref.	PART NO.	Description
* IC201	XV495A00	IC TC74VHCT08AF AND
* IC202	XU814A00	IC PQ05RD11 +5V 1.0A
* IC203	XY455A00	IC PQ1CG21H2F SW
IC204	XD201A00	IC M5290P
* IC205	XJ609A00	IC NJM7809FA 9V
* IC206	XS790A00	IC TC74HC4052AF MPX
* IC207	XZ223A00	IC M51951BHP
* IC209	XZ418A00	IC S-808XXANNP
* IC286	XZ233A00	IC PQ12DZ5U 12V(BG)
* IC287	XZ132A00	IC MM1443XJBE(BG)
* IC288	XY879A00	IC TC74HC4053AF(BG)
* IC289	XV169A00	IC BA7660FS-E2(BG)
* IC351	XZ159C00	IC CPU WRITTEN BY YEM
* IC352	XZ520A00	IC M95640-WMN6T
* IC353	XM616A00	IC TC7S08F AND
* IC354	XY447A00	IC TC7SU04F INV
JK1	VT034300	CN.DIN 1P
JK331	VJ726800	JACK.MNI
JK332	VJ726800	JACK.MNI
* L1	V6268000	COIL 10uH EL0305RA-100J
L2	VD473700	COIL 60uH
L3	VD473700	COIL 60uH
L4	VD473700	COIL 60uH
L5	Vi530800	TRANS.PULS 3PTD-001
L6	VB871100	FER.BEAD BL02RN2-R62
L7	GE300610	FER.BEAD BL02RN1-R62T4
* L201	VG594300	FLTR.LC.RF DSS30693B101M
* L202	V6267100	COIL 100uH LHL08TB101K
* L203	V6267100	COIL 100uH LHL08TB101K
L204	Vi491100	FER.CORE BP53RB19012080M
* L286	V6268000	COIL 10uH(BG)
* L287	V6268000	COIL 10uH(BG)
* L288	V6268000	COIL 10uH(BG)
* L291	VY656400	COIL.CHP 120uH(BG)
* L292	VY656400	COIL.CHP 120uH(BG)
L341	VU984000	FLTR IE-UU10.5-009
L342	VV900900	FLTR 3071-012-0
L343	Vi491100	FER.CORE BP53RB19012080M
* PJ1	V6266600	JACK.PIN GR YKC21-3919
* PJ2	V6266700	JACK.PIN RE/BL YKC21-4
* PJ3	V6266800	JACK.PIN GR/OR YKC21-4
* PJ4	V6266900	JACK.PIN YKC21-4258
PN1	V3750100	PIN L=50(BG)
PN2	V3750100	PIN L=50
PN286	V3750100	PIN L=50(BG)
PN331	V3750100	PIN L=50
PN341	V3750100	PIN L=50
Q1	VV556400	TR 2SC2412K Q,R,S
Q2	VZ725900	TR 2SD1938F S,T
Q3	VZ725900	TR 2SD1938F S,T
Q4	iA103700	TR.CHP 2SA1037 Q,R,S
Q5	VZ725900	TR 2SD1938F S,T
Q6	VZ725900	TR 2SD1938F S,T

* New Parts

P.C.B. MAIN & TRAVERSE

Schm Ref.	PART NO.	Description
Q7	VV655000	TR.DGT DTA114EKA
Q8	VZ725900	TR 2SD1938F S,T
Q9	VZ725900	TR 2SD1938F S,T
Q10	VV655000	TR.DGT DTA114EKA
Q201	iD040040	TR 2SD400
Q202	iB054430	TR 2SB544 D,E,F,G
Q204	iA093320	TR 2SA933S Q,R
Q205	iA103700	TR.CHP 2SA1037 Q,R,S
Q206	iA103700	TR.CHP 2SA1037 Q,R,S
Q286	iA103700	TR.CHP 2SA1037 Q,R,S(BG)
Q288	iA103700	TR.CHP 2SA1037 Q,R,S(BG)
Q331	VV556400	TR 2SC2412K Q,R,S
R208	HV755100	R.CAR.FP 100Ω 1/4W
R209	HV755100	R.CAR.FP 100Ω 1/4W
R212	HV753220	R.CAR.FP 2.2Ω 1/4W
R213	HV753220	R.CAR.FP 2.2Ω 1/4W
R214	HV753220	R.CAR.FP 2.2Ω 1/4W
R215	VP941000	R.MTL.OXD 680Ω 1W
R216	HV755220	R.CAR.FP 220Ω 1/4W
* R303	RD357330	R.MTL.CHP 33KΩ 1/10W(BG)
* R351	RE044330	R.ARRAY 33Ωx4
* R352	RE044330	R.ARRAY 33Ωx4
* R353	RE044330	R.ARRAY 33Ωx4
* R354	RE044330	R.ARRAY 33Ωx4
R356	VF238600	R.ARRAY RGL8X473J
* R357	RE044330	R.ARRAY 33Ωx4
* R358	VF773500	R.ARRAY RGL4X103J
* R369	RD357330	R.MTL.CHP 33KΩ 1/10W
* R371	VF773900	R.ARRAY RGL4X473J
ST286	V4040500	SCR.TERM M3 (BG)
ST331	V4040500	SCR.TERM M3
ST341	V4040500	SCR.TERM M3 (R)
ST342	V4040500	SCR.TERM M3 (R)
* SW341	V5993500	VOLT.SELCT VSA-14-1 (R)
SW346	VZ364100	SW.PUSH SDDL1-A2-F-1
SW351	VG392900	SW.TACT SKHVAA
SW352	VG392900	SW.TACT SKHVAA
SW353	VG392900	SW.TACT SKHVAA
SW354	VG392900	SW.TACT SKHVAA
SW355	VG392900	SW.TACT SKHVAA
SW356	VG392900	SW.TACT SKHVAA
SW357	VG392900	SW.TACT SKHVAA
SW358	VG392900	SW.TACT SKHVAA
SW359	VG392900	SW.TACT SKHVAA
SW360	VG392900	SW.TACT SKHVAA
SW361	VG392900	SW.TACT SKHVAA
SW362	VG392900	SW.TACT SKHVAA
SW363	VG392900	SW.TACT SKHVAA
SW364	VG392900	SW.TACT SKHVAA
* T341	XY791A00	TRANS.PWR (UC)
* T341	XY792A00	TRANS.PWR (BG)
* T341	XY793A00	TRANS.PWR (R)
* T341	XY794A00	TRANS.PWR (A)

* New Parts

Schm Ref.	PART NO.	Description
* TH301	V6265200	SW.POLY RUE110 1.1A 30V
* TH302	V6265200	SW.POLY RUE110 1.1A 30V
* TH303	V6265200	SW.POLY RUE110 1.1A 30V
* TH304	V6265200	SW.POLY RUE110 1.1A 30V
U351	VU591000	L.DTCT GPIU271X
* V351	V6267400	FL.DSPLY 13-BT-178GNK
XL351	VJ802400	RSNR.CE 8MHz
XL352	VQ328900	RSNR.CRYS 32.768KHz
	VQ948800	SHEET.FL
	V3747400	SPACER.FL T4x6x18
	EG330030	SCR.BND.HD 3x6 FCRM3-BL
*	V6214900	P.C.B TRAVERSE
* CB501	V6367700	CN 9611S 21P SE
* CB502	V6367700	CN 9611S 21P SE
* CB503	VQ992300	CN 53261-0290 2PIN
* C501	US135330	C.CE.CHP 0.33uF 16V
* L501	VY656400	COIL.CHP 120uH
* L502	VY656400	COIL.CHP 120uH
* L504	VY656400	COIL.CHP 120uH
* L505	VY656400	COIL.CHP 120uH
* L506	VZ250100	COIL.CHP BK2125HS470-T
* L507	VY656400	COIL.CHP 120uH
* L508	VY656400	COIL.CHP 120uH
* L509	VY656400	COIL.CHP 120uH
* L510	VY656400	COIL.CHP 120uH
* L511	VY656400	COIL.CHP 120uH
* L512	VY656400	COIL.CHP 120uH
* L513	VZ250100	COIL.CHP BK2125HS470-T
* L514	VY656400	COIL.CHP 120uH
* L515	VY656400	COIL.CHP 120uH
* L516	VY656400	COIL.CHP 120uH
* L517	VY656400	COIL.CHP 120uH
* L518	VY656400	COIL.CHP 120uH
* L519	VY656400	COIL.CHP 120uH
* L520	VY656400	COIL.CHP 120uH
* L521	VY656400	COIL.CHP 120uH

* New Parts

P.C.B. CM & CHIP RESISTOR

Schm Ref.	PART NO.	Description
	V3172600	P.C.B. CM
CB400	VB858200	CN.BS.PIN 3P
CB401	VB858200	CN.BS.PIN 3P
CB402	VB858200	CN.BS.PIN 3P
CB403	VB858200	CN.BS.PIN 3P
CB404	VB858200	CN.BS.PIN 3P
CB405	VB858100	CN.BS.PIN 2P
CB406	VB858100	CN.BS.PIN 2P
CB407	VB858100	CN.BS.PIN 2P
CB408	VU281700	CN 17P
C400	VJ599100	C.CE.TUBLR 0.1uF 50V
C401	VJ599100	C.CE.TUBLR 0.1uF 50V
C402	VF467000	C.CE.TUBLR 1000pF 50V
C403	VF467000	C.CE.TUBLR 1000pF 50V
D400	V2363400	PHOT.INTR ON1024
D401	VG438700	DIODE.ZENR MTZJ7.5C 7.5V
IC400	XQ135A00	IC BA6286
IC401	XF947A00	IC LA6510
Q400	VP872700	TR 2SC4488 S,T
R406	HV753100	R.CAR.FP 1Ω 1/4W
R413	HV753100	R.CAR.FP 1Ω 1/4W
SW400	Vi294000	SW.LEVER SSCF21
SW401	Vi294000	SW.LEVER SSCF21

* New Parts

Schm Ref.	PART NO.	Description
*	RD350000	R.CAR.CHP 0Ω 1/10W(A)
*	RD354620	R.CAR.CHP 62Ω 1/10W
*	RD354680	R.CAR.CHP 68Ω 1/16W(BG)
*	RD354750	R.CAR.CHP 75Ω 1/10W
*	RD355100	R.CAR.CHP 100Ω 1/10W
*	RD355120	R.CAR.CHP 120Ω 1/10W(BG)
*	RD355150	R.CAR.CHP 150Ω 1/10W(BG)
*	RD355220	R.CAR.CHP 220Ω 1/10W
*	RD355470	R.CAR.CHP 470Ω 1/10W
*	RD355510	R.CAR.CHP 510Ω 1/16W
*	RD355820	R.CAR.CHP 820Ω 1/10W(BG)
*	RD356100	R.CAR.CHP 1KΩ 1/10W
*	RD356120	R.CAR.CHP 1.2KΩ 1/10W
*	RD356130	R.CAR.CHP 1.3KΩ 1/10W
*	RD356150	R.CAR.CHP 1.5KΩ 1/10W
*	RD356180	R.CAR.CHP 1.8KΩ 1/10W
*	RD356220	R.CAR.CHP 2.2KΩ 1/10W
*	RD356330	R.CAR.CHP 3.3KΩ 1/10W
*	RD356430	R.CAR.CHP 4.3KΩ 1/10W
*	RD356470	R.CAR.CHP 4.7KΩ 1/10W(BG)
*	RD356560	R.CAR.CHP 5.6KΩ 1/10W(BG)
*	RD356680	R.CAR.CHP 6.8KΩ 1/10W
*	RD357100	R.CAR.CHP 10KΩ 1/10W
*	RD357120	R.CAR.CHP 12KΩ 1/10W
*	RD357150	R.CAR.CHP 15KΩ 1/10W(BG)
*	RD357220	R.CAR.CHP 22KΩ 1/10W
*	RD357470	R.CAR.CHP 47KΩ 1/10W
*	RD357560	R.CAR.CHP 56KΩ 1/10W
*	RD357680	R.CAR.CHP 68KΩ 1/10W
*	RD358100	R.CAR.CHP 100KΩ 1/10W
*	RD358470	R.CAR.CHP 470KΩ 1/10W
*	RD359470	R.CAR.CHP 4.7MΩ 1/10W
*	RF356750	R.CAR.CHP 7.5KΩ 1/10W
*	RF357100	R.CAR.CHP 10KΩ 1/10W
*	V6266400	R.CAR.CHP 1.2K 1/10W
*	V6266500	R.CAR.CHP 1.3K 1/10W

* New Parts

P.C.B. MODULE

Schm Ref.	PART NO.	Description	Remarks
* V6293000	P.C.B	MODULE(UC)	
* V6293100	P.C.B	MODULE(R)	
* V6293200	P.C.B	MODULE(A)	
* V6293300	P.C.B	MODULE(BG)	
C2001	NX702100	C.EL 100uF 6.3V	EEVHB0J101
C2002	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2003	NX702100	C.EL 100uF 6.3V	EEVHB0J101
C2004	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2005	NX702100	C.EL 100uF 6.3V	EEVHB0J101
C2006	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C2007	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2012	FX612430	C.CE 330P 50V CH	ECUX1H331JCV
C2013	FX612350	C.CE 120pF 50V CH	ECUX1H121JCV
C2014	FX612350	C.CE 120pF 50V CH	ECUX1H121JCV
C2015	FX612350	C.CE 120pF 50V CH	ECUX1H121JCV
C2016	NX702500	C.CE 10pF 50V CH	ECUX1H101JCV
C2017	NX702500	C.CE 10pF 50V CH	ECUX1H101JCV
C2018	FG212390	C.CE 390pF 50V	ECUX1H391JCV
C2019	FG212390	C.CE 390pF 50V	ECUX1H391JCV
C2020	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2021	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C2022	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C2023	NX702560	C.CE 6800pF 50V CH	ECUX1H682KBV
C2024	FX612480	C.CE 680pF 50V CH	ECUX1H681JCV
C2025	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2026	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2028	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2029	FX612440	C.CE 47pF 50V CH	ECUX1H470JCV
C2030	FX612240	C.CE 0.018uF 16V CH	ECUX1C183KBV
C2031	NX702510	C.CE 1000pF 50V CH	ECUX1H102JCV
C2032	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2033	FX612040	C.CE 0.47uF 16V CH	ECUM1C474KBN
C2034	Fi544100	C.CE 0.01uF 16V	ECUX1C103KBV
C2037	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C2038	AAX15610	C.CE 0.047uF 16V	ECUX1C473KBV
C2039	AAX05620	C.CE 0.039uF 16V CH	ECUX1C393KBV
* C2040	AAX15620	C.CE 8200pF 50V	ECUX1H822KBV
C2041	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2042	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
* C2043	AAX15610	C.CE 0.047uF 16V	ECUX1C473KBV
C2044	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C2045	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2046	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2047	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2048	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2051	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C2500	AAX15520	C.EL 100uF 16V	ECEV1CA101W
C2501	NX702100	C.EL 100uF 6.3V	EEVHB0J101
C2502	FX611790	C.EL 330uF 6.3VCH	ECEV0JA331
C2503	FX612310	C.CE 0.01uF 50V CH	ECUX1H103KBV
C2504	FX612310	C.CE 0.01uF 50V CH	ECUX1H103KBV
C2505	FX612310	C.CE 0.01uF 50V CH	ECUX1H103KBV
C2506	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB

* New Parts

Schm Ref.	PART NO.	Description	Remarks
C2507	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C2508	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C2509	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2513	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2514	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2515	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2516	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2517	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2518	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2521	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2522	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2523	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2524	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C2525	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3001	FX611790	C.EL 330uF 6.3VCH	ECEV0JA331
C3002	FX611790	C.EL 330uF 6.3VCH	ECEV0JA331
C3003	FX611790	C.EL 330uF 6.3VCH	ECEV0JA331
* C3004	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
C3005	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3006	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C3007	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
* C3008	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
C3009	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3010	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3011	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C3012	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
* C3012	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
C3014	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3015	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C3016	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
C3017	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3018	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C3019	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
* C3020	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
C3021	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3022	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C3024	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
C3025	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C3026	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
C3027	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3028	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3029	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
* C3030	AAX15600	C.CE 1.0uF 10V	ECUX1A105ZFB
C3031	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3032	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3033	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3033	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3034	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3035	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3036	FX612380	C.CE 22pF 50V CH	ECUX1H220JCV
C3042	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3043	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB
C3045	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFB

* New Parts

P.C.B. MODULE

Schm Ref.	PART NO.	Description	Remarks
* C3046	AAX15550	C.TNTL.CHP 10uF 6.3V	ECST0JY106Z
C3051	FX611790	C.EL 330uF 6.3VCH	ECEVOJA331
C3052	FX611980	C.CE 1uF 10V CH	ECUM1A105KBN
C3053	FX611980	C.CE 1uF 10V CH	ECUM1A105KBN
C3054	FX611980	C.CE 1uF 10V CH	ECUM1A105KBN
C3055	FX611980	C.CE 1uF 10V CH	ECUM1A105KBN
C3056	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3057	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3058	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3059	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3060	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3061	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3062	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3063	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3064	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
* C3065	AAX16240	C.TNTL.CHP 10uF 10V	VCS1AS106
C3066	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3071	FX612220	C.CE 0.1uF 16V (BG)	ECUX1C104ZFV
C3072	FX612220	C.CE 0.1uF 16V (BG)	ECUX1C104ZFV
C3073	FX612220	C.CE 0.1uF 16V (BG)	ECUX1C104ZFV
C3074	FX612220	C.CE 0.1uF 16V (BG)	ECUX1C104ZFV
C3075	AAX16240	C.TNTL.CHP 10uF 10V (BG)	VCS1AS106
C3076	FX612220	C.CE 0.1uF 16V (BG)	ECUX1C104ZFV
C3081	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3082	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3083	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3084	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3085	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3091	NX702100	C.EL 100uF 6.3V	EEVHBJ101
C3092	NX702100	C.EL 100uF 6.3V	EEVHBJ101
C3093	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
* C3094	AAX16240	C.TNTL.CHP 10uF 10V	VCS1AS106
C3095	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3221	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3222	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3223	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3224	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3225	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3226	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3227	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3228	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3229	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3230	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C3231	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C4201	FX612660	C.EL 1000uF 6.3V	ECEVOJA102
C4202	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C4203	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
* C4204	AAX16240	C.TNTL.CHP 10uF 10V	VCS1AS106
C4205	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
* C4206	AAX16240	C.TNTL.CHP 10uF 10V	VCS1AS106
C4207	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C4208	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C4209	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV

* New Parts

Schm Ref.	PART NO.	Description	Remarks
C4221	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C4222	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C4223	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C4224	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C4225	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5201	FX611880	C.EL 33uF 6.3V	EEVHBJ330
C5202	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5203	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5204	FX611880	C.EL 33uF 6.3V	EEVHBJ330
C5205	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5211	AAX05250	C.EL 47uF 6.3V	EEVHBJ470
C5212	FX612390	C.CE 220pF 50V CH	ECUX1H221JCV
C5213	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C5214	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5215	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5216	NX702510	C.CE 1000pF 50V CH	ECUX1H102JCV
C5217	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C5218	AAX05640	C.CE 18pF 50V CH	ECUX1H180JCV
C5219	NX702540	C.CE 1800pF 50V CH	ECUX1H182KBV
C5220	NX702500	C.CE 10pF 50V CH	ECUX1H101JCV
C5221	FX611800	C.EL 39pF 50V CH	ECUX1H390JCV
* C5222	AAX15560	C.CE 0.47uF 10V	ECUM1A474KBV
* C5223	AAX15560	C.CE 0.47uF 10V	ECUM1A474KBV
C5224	FX612390	C.CE 220pF 50V CH	ECUX1H221JCV
C5225	FX612390	C.CE 220pF 50V CH	ECUX1H221JCV
C5226	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C5227	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5232	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
* C5233	AAX16240	C.TNTL.CHP 10uF 10V	VCS1AS106
C5234	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5241	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C5242	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6202	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6203	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6204	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6206	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6207	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6208	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6211	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6212	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6251	NX702100	C.EL 100uF 6.3V	EEVHBJ101
* C6252	AAX16240	C.TNTL.CHP 10uF 10V	VCS1AS106
C6253	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6254	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6255	FX611880	C.EL 33uF 6.3V	EEVHBJ330
C6256	FX611790	C.EL 330uF 6.3VCH	ECEVOJA331
C6257	NX702100	C.EL 100uF 6.3V	EEVHBJ101
C6258	FX612310	C.CE 0.01uF 50V CH	ECUX1H103KBV
C6301	NX702500	C.CE 10pF 50V CH	ECUX1H101JCV
C6302	FX612210	C.CE 0.1uF 16V CH	ECUX1C104KBV
C6303	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6304	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV
C6305	FX612220	C.CE 0.1uF 16V CH	ECUX1C104ZFV

* New Parts

P.C.B. MODULE

Schm Ref.	PART NO.	Description	Remarks
C6501	FX611880	C.EL	33uF 6.3V EEVHB0J330
C6502	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C6503	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
* C6504	AAX16240	C.TNTL..CHP	10uF 10V VCS1AS106
C6505	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C6506	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C6511	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C6512	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C6513	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C6514	NX702530	C.CE	15pF 50V CH ECUX1H150JCV
C6515	NX702530	C.CE	15pF 50V CH ECUX1H150JCV
C6516	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C6517	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C6551	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
* C6553	AAX16250	C.TNTL..CHP	4.7uF 10V VCS1AS475
C7001	NX702100	C.EL	100uF 6.3V EEVHB0J101
C7002	NX702100	C.EL	100uF 6.3V EEVHB0J101
C7006	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7011	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7012	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7013	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7014	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7015	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7016	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7017	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7018	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7019	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7020	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7021	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7022	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7023	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7024	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7025	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
C7026	FX612220	C.CE	0.1uF 16V CH ECUX1C104ZFV
D3091	NX702630	DIODE	MA111 MA111
D6251	NX702630	DIODE	MA111 MA111
D6301	NX702680	DIODE	MA728 MA728
* FL6251	AAX16450	CONNECTOR	VLF1491S105 VLF1491S105
* FL6252	AAX16450	CONNECTOR	VLF1491S105 VLF1491S105
* FL6254	AAX16450	CONNECTOR	VLF1491S105 VLF1491S105
* FL6255	AAX16440	CONNECTOR	VLF1491S104 VLF1491S104
* FP2501	AAX16430	CONNECTOR	17P VJS4383B017B
FP5201	AAX03990	CN	21P VJS3913A021
* IC2001	AAX16050	IC	MN67706EA MN67706EA
* IC2501	AAX15460	IC	AN8480NSB AN8480NSB
IC2511	AAX03430	IC	BA5983FM BA5983FM
* IC3001	AAX16060	IC	MN677532JA MN677532JA
* IC3002	AAX16090	IC	PQ018EZ01ZP PQ018EZ01ZP
IC3061	AAX03520	IC	MNX7160BT1 MNX7160BT1
IC3071	AAX03520	IC	MNX7160BT1(BG) MNX7160BT1
* IC3081	AAX16130	IC	TC4W66FU TC4W66FU
IC3091	NX701770	IC	PQ1R33 PQ1R33
* IC4201	AAX16080	IC	PCM1746E PCM1746E

* New Parts

Schm Ref.	PART NO.	Description	Remarks
* IC5201	AAX15470	IC	AN8707FH AN8707FH
* IC6201	AAX16040	IC	MN102H55GFB MN102H55GFB
IC6251	NX701770	IC	PQ1R33 PQ1R33
IC6301	AAX03570	IC	PST596JNR PST596JNR
* IC6302	AAX16530	IC	VUB8011C430(UCAR) VUB8011C430
* IC6302	AAX18280	IC	VUB8011C492(BG) VUB8011C492
* IC6303	AAX15480	IC	AT25020NSI27 AT25020NSI27
* IC6501	AAX15500	IC	BU2285FV BU2285FV
* IC6551	AAX16150	IC	TK71533SCL TK71533SCL
* IC7001	AAX16670	IC	MN103S13BGA MN103S13BGA
K2002	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K3001	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K3002	HX610350	R.MTL..CHP	0Ω 1/10W ERJ6GEYOR00
K3003	HX610350	R.MTL..CHP	0Ω 1/10W ERJ6GEYOR00
K3013	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K3014	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K3021	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K5231	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K5241	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K6251	HX609860	R.MTL..CHP	0Ω 1/4W ERJ14YOR00
K6301	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K6502	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K6503	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K6504	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K6521	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
K6531	HX609880	R.MTL..CHP	0Ω 1/16W ERJ3GEYOR00
* L2001	AAX16490	COIL	10uH VLQ0860K100
* L2002	AAX16510	COIL	10uH VLQ0910K100
* L2003	AAX16510	COIL	10uH VLQ0910K100
L2501	HX609860	R.MTL..CHP	0Ω 1/4W ERJ14YOR00
* L3091	AAX16490	COIL	10uH VLQ0860K100
* L4201	AAX16500	COIL	22uH VLQ0909J220
* L5201	AAX16490	COIL	10uH VLQ0860K100
* L5202	AAX16510	COIL	10uH VLQ0910K100
L6201	NX702750	COIL..CHP	VLP0323A601T VLP0323A601T
* L6501	AAX16500	COIL	22uH VLQ0909J220
* L6502	AAX16500	COIL	22uH VLQ0909J220
* L7001	AAX16510	COIL	10uH VLQ0910K100
* L7002	AAX16510	COIL	10uH VLQ0910K100
* LA2501	AAX16480	COIL..CHP	VLP0412A601
* LA2502	AAX16480	COIL..CHP	VLP0412A601
LB2509	GX609400	COIL	JALBK2HS470T
LB2510	GX609400	COIL	JALBK2HS470T
LB2511	GX609400	COIL	JALBK2HS470T
LB2512	NX702750	COIL..CHP	VLP0323A601T VLP0323A601T
LB2513	GX609400	COIL	JALBK2HS470T
LB2514	GX609400	COIL	JALBK2HS470T
LB2515	GX609400	COIL	JALBK2HS470T
LB2516	GX609400	COIL	JALBK2HS470T
LB3201	NX702750	COIL..CHP	VLP0323A601T VLP0323A601T
LB3202	NX702750	COIL..CHP	VLP0323A601T VLP0323A601T
LB3203	NX702750	COIL..CHP	VLP0323A601T(UCAR) VLP0323A601T
LB3204	NX702750	COIL..CHP	VLP0323A601T(UCAR) VLP0323A601T

* New Parts

P.C.B. MODULE

Schm Ref.	PART NO.	Description	Remarks
LB4001	NX702750	COIL.CHP	VLP0323A601T
LB4002	NX702750	COIL.CHP	VLP0323A601T
LB4003	NX702750	COIL.CHP	VLP0323A601T
LB4004	NX702750	COIL.CHP	VLP0323A601T
LB4005	NX702750	COIL.CHP	VLP0323A601T
LB4006	NX702750	COIL.CHP	VLP0323A601T
LB4007	HX609980	R.MTL.CHP	10Ω 1/16W
LB4008	HX609980	R.MTL.CHP	10Ω 1/16W
LB5201	NX702750	COIL.CHP	VLP0323A601T
LB5202	NX702750	COIL.CHP	VLP0323A601T
LB5203	NX702750	COIL.CHP	VLP0323A601T
LB5204	NX702750	COIL.CHP	VLP0323A601T
LB5205	NX702750	COIL.CHP	VLP0323A601T
LB5206	NX702750	COIL.CHP	VLP0323A601T
LB5207	NX702750	COIL.CHP	VLP0323A601T
LB5208	NX702750	COIL.CHP	VLP0323A601T
LB5209	NX702750	COIL.CHP	VLP0323A601T
LB5210	NX702750	COIL.CHP	VLP0323A601T
LB5211	GX609400	COIL	JALBK2HS470T
LB5212	NX702750	COIL.CHP	VLP0323A601T
LB5213	NX702750	COIL.CHP	VLP0323A601T
LB5214	NX702750	COIL.CHP	VLP0323A601T
* LB5215	AAX16460	COIL	VLP0174
* LB5216	AAX16460	COIL	VLP0174
* LB5217	AAX16460	COIL	VLP0174
* LB5218	AAX16460	COIL	VLP0174
LB6201	GX609450	COIL	VLP0155
LB6501	NX702750	COIL.CHP	VLP0323A601T
LB6502	GX609450	COIL	VLP0155
LB6503	GX609450	COIL	VLP0155
LB6504	NX702750	COIL.CHP	VLP0323A601T
LB6505	GX609450	COIL	VLP0155
LB6506	NX702750	COIL.CHP	VLP0323A601T
LB6507	GX609450	COIL	VLP0155
LB6551	NX702750	COIL.CHP	VLP0323A601T
* PS3201	AAX16410	CONNECTOR	22P FEMALE(UCAR)
PS3201	AAX16400	CONNECTOR	14P FEMALE(BG)
* PS4201	AAX16400	CONNECTOR	14P
PS6201	AAX03930	CN	10P
Q3081	NX702830	TR	2SB1218A-R
Q3082	NX702830	TR	2SB1218A-R(UCAR)
Q3083	NX702830	TR	2SB1218A-R(UCAR)
Q3084	NX702830	TR	2SB1218A-R
Q5201	ix637190	TR	2SB1115T(BG)
Q5201	AAX05780	TR	2SB1115
QR2001	AAX04240	TR.DGT	UN5213
QR5201	ix637160	TR.DGT	UN5212
* QR5231	AAX16160	TR	UN2121
QR6301	ix637160	TR.DGT	UN5212
R2001	HX610190	R.MTL.CHP	47KΩ 1/16W
R2002	HX610190	R.MTL.CHP	47KΩ 1/16W
R2003	HX610190	R.MTL.CHP	47KΩ 1/16W
R2004	HX610190	R.MTL.CHP	47KΩ 1/16W

* New Parts

Schm Ref.	PART NO.	Description	Remarks
R2005	HX610190	R.MTL.CHP	47KΩ 1/16W
R2006	HX610190	R.MTL.CHP	47KΩ 1/16W
R2007	HX610190	R.MTL.CHP	47KΩ 1/16W
R2008	HX610120	R.MTL.CHP	22KΩ 1/16W
R2009	HX610120	R.MTL.CHP	22KΩ 1/16W
R2010	HX610160	R.MTL.CHP	27KΩ 1/16W
R2011	HX610040	R.MTL.CHP	12KΩ 1/16W
R2012	HX610220	R.MTL.CHP	5.6KΩ 1/16W
R2013	HX610160	R.MTL.CHP	27KΩ 1/16W
R2014	NX703300	R.MTL.CHP	1MΩ 1/16W
* R2017	AAX15810	R.MTL.CHP	15KΩ 1/16W
R2018	HX610190	R.MTL.CHP	47KΩ 1/16W
R2020	AAX06360	R.MTL.CHP	12KΩ 1/16W
R2021	HX610010	R.MTL.CHP	10KΩ 1/16W
R2022	HX610120	R.MTL.CHP	22KΩ 1/16W
R2023	HX610120	R.MTL.CHP	22KΩ 1/16W
R2024	NX703380	R.MTL.CHP	56KΩ 1/16W
R2025	NX703380	R.MTL.CHP	56KΩ 1/16W
R2026	HX609990	R.MTL.CHP	100Ω 1/16W
R2027	HX609950	R.MTL.CHP	4.7KΩ 1/16W
R2028	HX610010	R.MTL.CHP	10KΩ 1/16W
R2029	NX703420	R.MTL.CHP	10KΩ 1/16W
R2030	HX610010	R.MTL.CHP	10KΩ 1/16W
R2031	HX609880	R.MTL.CHP	0Ω 1/16W
R2032	HX610190	R.MTL.CHP	47KΩ 1/16W
R2033	HX609950	R.MTL.CHP	4.7KΩ 1/16W
R2034	HX609950	R.MTL.CHP	4.7KΩ 1/16W
R2501	HX610140	R.MTL.CHP	270Ω 1/16W
R2502	HX610140	R.MTL.CHP	270Ω 1/16W
R2503	NX703240	R.MTL.CHP	0.39Ω 1/4W
R2505	HX610190	R.MTL.CHP	47KΩ 1/16W
* R2511	AAX15880	R.MTL.CHP	20KΩ 1/16W
R2512	HX610160	R.MTL.CHP	27KΩ 1/16W
R2513	NX703340	R.MTL.CHP	33KΩ 1/16W
* R2514	AAX15880	R.MTL.CHP	20KΩ 1/16W
R2515	HX610160	R.MTL.CHP	27KΩ 1/16W
R2516	NX703340	R.MTL.CHP	33KΩ 1/16W
R2517	HX610040	R.MTL.CHP	12KΩ 1/16W
R2518	HX610010	R.MTL.CHP	10KΩ 1/16W
R2519	NX703390	R.MTL.CHP	7.5KΩ 1/16W
R2520	HX610040	R.MTL.CHP	12KΩ 1/16W
R2521	HX610010	R.MTL.CHP	10KΩ 1/16W
R2522	NX703390	R.MTL.CHP	7.5KΩ 1/16W
R3001	HX610090	R.MTL.CHP	22Ω 1/16W
R3002	HX609950	R.MTL.CHP	4.7KΩ 1/16W
R3003	HX609990	R.MTL.CHP	100Ω 1/16W
R3004	HX609880	R.MTL.CHP	0Ω 1/16W
R3005	HX610190	R.MTL.CHP	47KΩ 1/16W
R3051	AAX06630	R.MTL.CHP	7.5KΩ 1/16W
R3052	HX609990	R.MTL.CHP	100Ω 1/16W
R3055	AAX06630	R.MTL.CHP	7.5KΩ 1/16W
R3057	AAX06540	R.MTL.CHP	18KΩ 1/16W
* R3058	AAX15890	R.MTL.CHP	4.3KΩ 1/16W

* New Parts

P.C.B. MODULE

Schm Ref.	PART NO.	Description	Remarks
R3059	AAX06630	R.MTL.CHP 7.5K Ω 1/16W	ERJ3RBD752
R3060	AAX06630	R.MTL.CHP 7.5K Ω 1/16W	ERJ3RBD752
R3061	HX609990	R.MTL.CHP 100 Ω 1/16W	ERJ3GEYJ101
R3071	HX610010	R.MTL.CHP 10K Ω 1/16W	ERJ3GEYJ103
* R3081	AAX15900	R.MTL.CHP 75 Ω 1/16W	ERJ3RED750
R3082	NX703330	R.MTL.FLM 33 Ω 1/16W	ERJ3GEYJ330
R3083	HX609890	R.MTL.CHP 1K Ω 1/16W	ERJ3GEYG102
* R3084	AAX15900	R.MTL.CHP 75 Ω 1/16W	ERJ3RED750
R3085	NX703330	R.MTL.FLM 33 Ω 1/16W(UCAR)	ERJ3GEYJ330
R3086	HX609890	R.MTL.CHP 1K Ω 1/16W(UCAR)	ERJ3GEYG102
* R3087	AAX15900	R.MTL.CHP 75 Ω 1/16W	ERJ3RED750
R3088	NX703330	R.MTL.FLM 33 Ω 1/16W(UCAR)	ERJ3GEYJ330
R3089	HX609890	R.MTL.CHP 1K Ω 1/16W(UCAR)	ERJ3GEYG102
* R3090	AAX15900	R.MTL.CHP 75 Ω 1/16W	ERJ3RED750
R3091	NX703330	R.MTL.FLM 33 Ω 1/16W	ERJ3GEYJ330
R3092	HX610170	R.MTL.CHP 330 Ω 1/16W	ERJ3GEYJ331
R4201	HX610170	R.MTL.CHP 330 Ω 1/16W	ERJ3GEYJ331
R4202	HX610110	R.MTL.CHP 2.2K Ω 1/16W	ERJ3GEYJ222
R5201	AAX07260	R.MTL 27 Ω 1/2W	ERJ12YJ270
R5202	NX703320	R.MTL.CHP 2.2 Ω 1/16W	ERJ3GEYJ2R2
R5203	HX610120	R.MTL.CHP 22K Ω 1/16W	ERJ3GEYJ223
R5204	HX610040	R.MTL.CHP 12K Ω 1/16W	ERJ3GEYJ123
R5206	HX610070	R.MTL.CHP 150K Ω 1/16W	ERJ3GEYJ154
* R5207	AAX15870	R.MTL.CHP 5.6K Ω 1/16W	ERJ3GEYF562
R5208	HX609990	R.MTL.CHP 100 Ω 1/16W	ERJ3GEYJ101
* R5209	AAX15830	R.MTL.CHP 30K Ω 1/16W	ERJ3GEYF303
* R5210	AAX15860	R.MTL.CHP 47K Ω 1/16W	ERJ3GEYF473
* R5211	AAX15820	R.MTL.CHP 18K Ω 1/16W	ERJ3GEYF183
* R5212	AAX15870	R.MTL.CHP 5.6K Ω 1/16W	ERJ3GEYF562
R5213	HX610010	R.MTL.CHP 10K Ω 1/16W	ERJ3GEYJ103
R5214	NX703300	R.MTL.CHP 1M Ω 1/16W	ERJ3GEYJ105
R5215	NX703300	R.MTL.CHP 1M Ω 1/16W	ERJ3GEYJ105
R5216	NX703300	R.MTL.CHP 1M Ω 1/16W	ERJ3GEYJ105
R5217	HX609880	R.MTL.CHP 0 Ω 1/16W	ERJ3GEYOR00
R6201	HX610010	R.MTL.CHP 10K Ω 1/16W	ERJ3GEYJ103
R6208	HX610190	R.MTL.CHP 47K Ω 1/16W	ERJ3GEYJ473
* R6209	AAX15800	R.MTL.CHP 150 Ω 1/16W	ERJ3GEYF151
* R6210	AAX15850	R.MTL.CHP 470 Ω 1/16W	ERJ3GEYF471
* R6211	AAX15840	R.MTL.CHP 390 Ω 1/16W	ERJ3GEYF391
R6212	HX610190	R.MTL.CHP 47K Ω 1/16W	ERJ3GEYJ473
R6213	HX609890	R.MTL.CHP 1K Ω 1/16W	ERJ3GEYG102
R6214	HX609890	R.MTL.CHP 1K Ω 1/16W	ERJ3GEYG102
R6301	HX610010	R.MTL.CHP 10K Ω 1/16W	ERJ3GEYJ103
R6302	HX609950	R.MTL.CHP 4.7K Ω 1/16W	ERJ3GEYG472
R6303	HX609950	R.MTL.CHP 4.7K Ω 1/16W	ERJ3GEYG472
R6502	AAX06550	R.MTL.CHP 220 Ω 1/16W	ERJ3RBD221
R6503	HX610010	R.MTL.CHP 10K Ω 1/16W	ERJ3GEYJ103
R6504	HX610010	R.MTL.CHP 10K Ω 1/16W	ERJ3GEYJ103
R7001	HX609890	R.MTL.CHP 1K Ω 1/16W	ERJ3GEYG102
R7002	HX610190	R.MTL.CHP 47K Ω 1/16W	ERJ3GEYJ473
RA2001	AAX07220	R.ARRAY 0 Ω x4	EXBV8VR000
RA2501	NX703070	R.ARRAY EXBV4V103J	EXBV4V103J
RA3008	NX703070	R.ARRAY EXBV4V103J	EXBV4V103J

* New Parts

Schm Ref.	PART NO.	Description	Remarks
* RA3009	AAX15970	R.ARRAY 0 Ω	EXBV4VR000
* RA3010	AAX15970	R.ARRAY 0 Ω	EXBV4VR000
RA3011	NX703100	R.ARRAY EXBV4V473J	EXBV4V473J
* RA5201	AAX15960	R.ARRAY 100 Ω	EXBV4V101J
RA6201	NX703070	R.ARRAY EXBV4V103J	EXBV4V103J
RA6202	NX703100	R.ARRAY EXBV4V473J	EXBV4V473J
RA6203	NX703100	R.ARRAY EXBV4V473J	EXBV4V473J
RA6204	NX703100	R.ARRAY EXBV4V473J	EXBV4V473J
RA6205	NX703110	R.ARRAY EXBV8V473J	EXBV8V473J
RA6206	NX703100	R.ARRAY EXBV4V473J	EXBV4V473J
RA7001	NX703110	R.ARRAY EXBV8V473J	EXBV8V473J
RA7002	NX703110	R.ARRAY EXBV8V473J	EXBV8V473J
RA7003	NX703110	R.ARRAY EXBV8V473J	EXBV8V473J
S6401	KX604670	SW	EVQ11G07K
S6402	KX604670	SW	EVQ11G07K
S6403	KX604670	SW	EVQ11G07K
S6404	KX604670	SW	EVQ11G07K
S6405	KX604670	SW	EVQ11G07K
S6406	KX604670	SW	EVQ11G07K
S6407	KX604670	SW	EVQ11G07K
S6408	KX604670	SW	EVQ11G07K
W3221	HX609880	R.MTL.CHP 0 Ω 1/16W	ERJ3GEYOR00
X6501	AAX04680	RSNR	VXS1044

* New Parts

■ EXPLODED VIEW



MECHANICAL PARTS

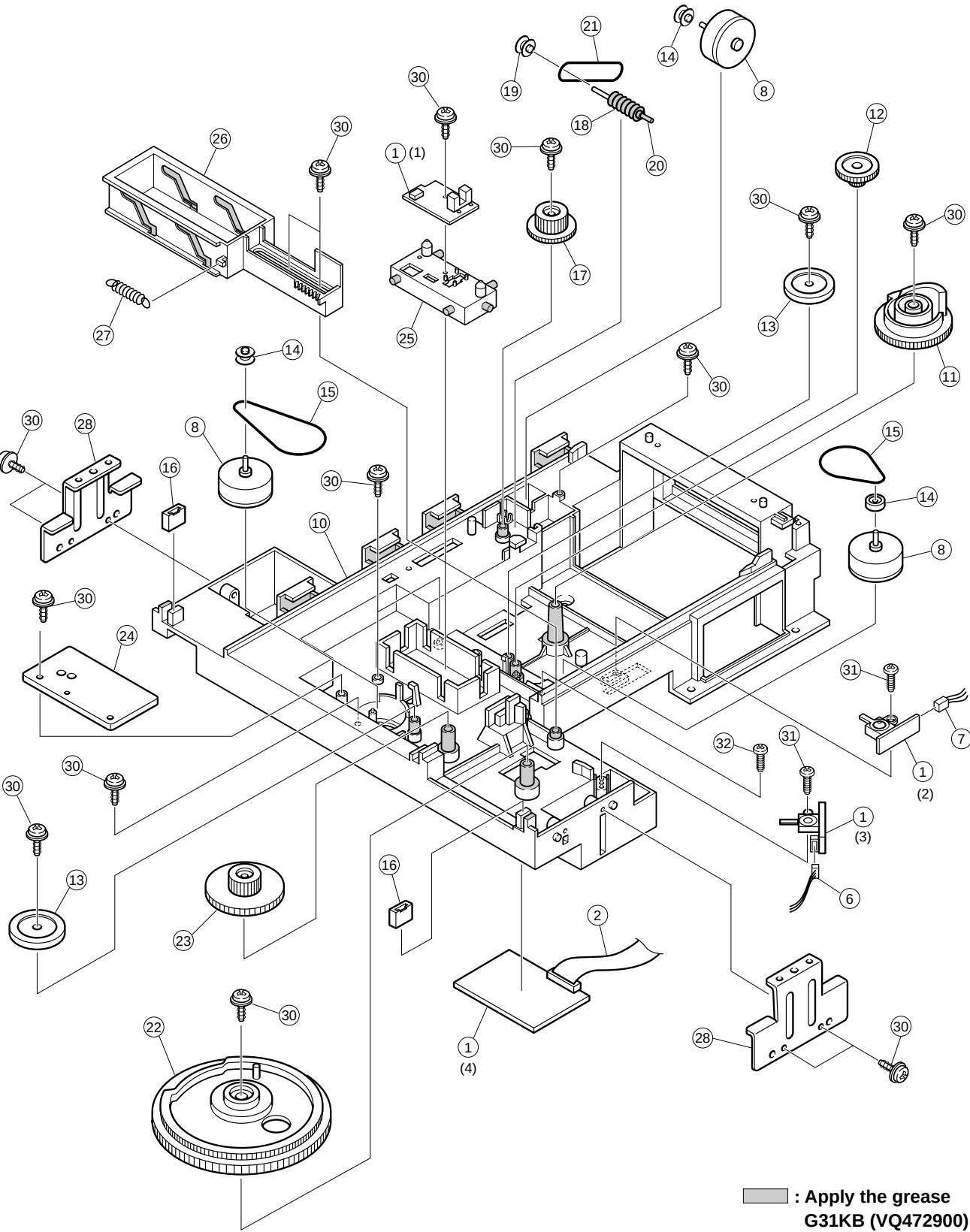
	Ref. No.	PART NO.	Description	Remarks	Markets
*	2-1	V6090300	HOLDER/CLAMPER/M		
*	2-2	V6124800	CLAMPER/M		
*	2-3	V6248000	CLAMPER WEIGHT	VMA0E54	
	2-4	VZ762600	FRAME, CLAMPER		
*	2-5	V6247900	MAGNET	RHM245ZA	
	2-10	EP600820	BIND HEAD B-TITE SCREW	3x6 FCRM3-BL	
*	3-3	MF123350	FLEXIBLE FLAT CABLE	23P 350mm P=1.25	
*	3-11	V5677500	FRONT PANEL	BL DVD-C996	
*	3-11	V5677600	FRONT PANEL	GD DVD-C996	
*	3-11	V5956700	FRONT PANEL	BL DV-C6280	
*	3-12	V5678100	SUB PANEL	BL DVD-C996	
*	3-12	V5678200	SUB PANEL	GD DVD-C996	
*	3-12	V6094200	SUB PANEL	BL DV-C6280	
*	3-13	V5954500	PLATE SIDE 996	L BL DVD-C996	
*	3-13	V5954600	PLATE SIDE 996	L GD DVD-C996	
*	3-14	V5954700	PLATE SIDE 996	R BL DVD-C996	
*	3-14	V5954800	PLATE SIDE 996	R GD DVD-C996	
*	3-15	V5914500	BUTTON/D12	BL DVD-C996	
*	3-15	V5914600	BUTTON/D12	GD DVD-C996	
*	3-15	V5914700	BUTTON/D12	BL DV-C6280	
*	3-16	V6094600	ESCUTCHEON/PLAY	BL	
*	3-16	V6094700	ESCUTCHEON/PLAY	GD	
*	3-17	V6094800	ESCUTCHEON/PW	BL	
*	3-17	V6094900	ESCUTCHEON/PW	GD	
*	3-18	V6034100	EMBLEM	BL	
*	3-18	V6034200	EMBLEM	GD	
*	3-20	V5678500	WINDOW PANEL, LID		
	3-30	EP600730	BIND HEAD P-TITE SCREW	3x8 FCRM3-BL	
	4-1	V6214900	P.C.B. ASS'Y	TRAVERSE	
*	4-2	V6158100	DVD TRAVERSE MECH	VXK1580	
*	4-3	V6303800	CONNECTOR, FLAT CABLE	21P 190mm P=1.00	
*	4-4	V6303700	CONNECTOR, FLAT CABLE	17P 240mm P=1.00	
*	4-10	V6090200	HOLDER/PU/M		
*	4-11	V6667700	DAMPER/M	BLACK	
*	4-20	V6247800	SCREW	VHD1223	
	4-21	VA775100	PW HEAD P-TITE SCREW	3x8-10 FCRM3-BL	
	5-1	VZ761500	TRAY	B	
*	5-2	VZ761600	TABLE/D	B	
	5-3	V2133100	PLATE, TABLE		
	5-4	VS037300	ROLLER		
	5-5	VV014400	LEVER	PO	
	5-6	VS036900	SPRING, RT		
	5-7	VZ761800	GEAR, RT1		
	5-8	VS037900	SHEET, TRAY	B	
*	5-9	V6090400	SUPPORT/M		
	5-10	VA775100	PW HEAD P-TITE SCREW	3x8-10 FCRM3-BL	
*	8	V6214300	P.C.B. ASS'Y	MAIN	(UC)
*	8	V6214400	P.C.B. ASS'Y	MAIN	(R)
*	8	V6214600	P.C.B. ASS'Y	MAIN	(A)
*	8	V6214700	P.C.B. ASS'Y	MAIN	(BG)
*	9	V6293000	DVD MODULE PCB		(UC)
*	9	V6293100	DVD MODULE PCB		(R)
*	9	V6293200	DVD MODULE PCB		(A)

* New Parts

	Ref. No.	PART NO.	Description	Remarks	Markets
*	9	V6293300	DVD MODULE PCB		(BG)
△	13	V2296800	POWER CORD ASS'Y		(A)
△	13	V2363800	POWER CORD ASS'Y		(UC)
△	13	VN363700	POWER CORD ASS'Y		(G)
△	13	VV437300	POWER CORD ASS'Y		(B)
△	13	VZ542500	POWER CORD ASS'Y		(R)
	14	V2438700	CORD STOPPER	10P1	
	31	VZ876600	CHASSIS, MAIN		
*	32	V5677700	REAR PANEL	DVD-C996	(UC)
*	32	V5677800	REAR PANEL	DVD-C996	(R)
*	32	V5678000	REAR PANEL	DVD-C996	(BG)
*	32	V5953400	REAR PANEL	DV-C6280	(U)
*	32	V5953500	REAR PANEL	DVD-C996	(A)
*	33	V6145700	TOP COVER	GD	
	33	VZ876700	TOP COVER	BL	
	34	VQ775900	GROUND PLATE		
	35	V0049900	LEG	D60xH16	GD DVD-C996
	35	VQ780300	LEG	D60xH16	BL DVD-C996
	35	VQ982800	LEG	D60xH16	BL DV-C6280
*	36	V5678300	LID		BL DVD-C996
*	36	V5678400	LID		GD DVD-C996
*	36	V5953300	LID		BL DV-C6280
	38	VR264400	SPACER	H8	
*	39	V5575000	SUPPORT, P.C.B.	Y 2V70 WD-50	
	50	VU984400	RING	D14	
	51	VU590000	BINDING TIE	CBTD001B	
*	52	VR101100	PUSH RIVET	P3065-B	(R)
*	53	V6270600	PLATE/SELECTOR		(R)
	55	VQ366100	DAMPER, PCB		
	56	V2879500	SPACER PCB-M		
*	57	V6270700	SPACER	DVD-T15	
	58	VT593700	CUSHION	2x8x25	
	61	21991500	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	BL
	61	VD069600	PW HEAD S-TITE SCREW	4x8-10 MFNI-33	GD
	62	VN413300	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2-BL	
	63	EP600820	BIND HEAD B-TITE SCREW	3x6 MFZN2-BL	
	64	EP600250	BIND HEAD B-TITE SCREW	3x8 ZMC2-Y	
	65	V2728500	BIND HEAD S-TITE SCREW	4x7 MFZN2-BL	
	66	VN559500	PW HEAD P-TITE SCREW	3x12-10 ZMC2-Y	
	68	VT669400	PW HEAD B-TITE SCREW	3x15-8 MFC2	
	69	VT669300	PW HEAD B-TITE SCREW	3x8-8 MFC2	
	74	VZ092400	DAMPER	6x5x10	(BG)
	75	VV499900	SPACER, FL	T7.5x10x15	
*	76	V6648800	SUPPORT, PCB		
	77	V2269100	DAMPER	T1/6/45	
			ACCESSORIES		
*	200	V6090000	REMOTE CONTROL TRANSMITTER	DVD2	
	200-1	AAX13340	LID	BLJYE 60050001	
*	201	V6400700	PIN-PLUG CORD BATTERY, MANGANESE	3P 1.5m RE/WH/YE SUM-3,AA,R06	

* New Parts

■ EXPLODED VIEW (CM-220 UNIT)

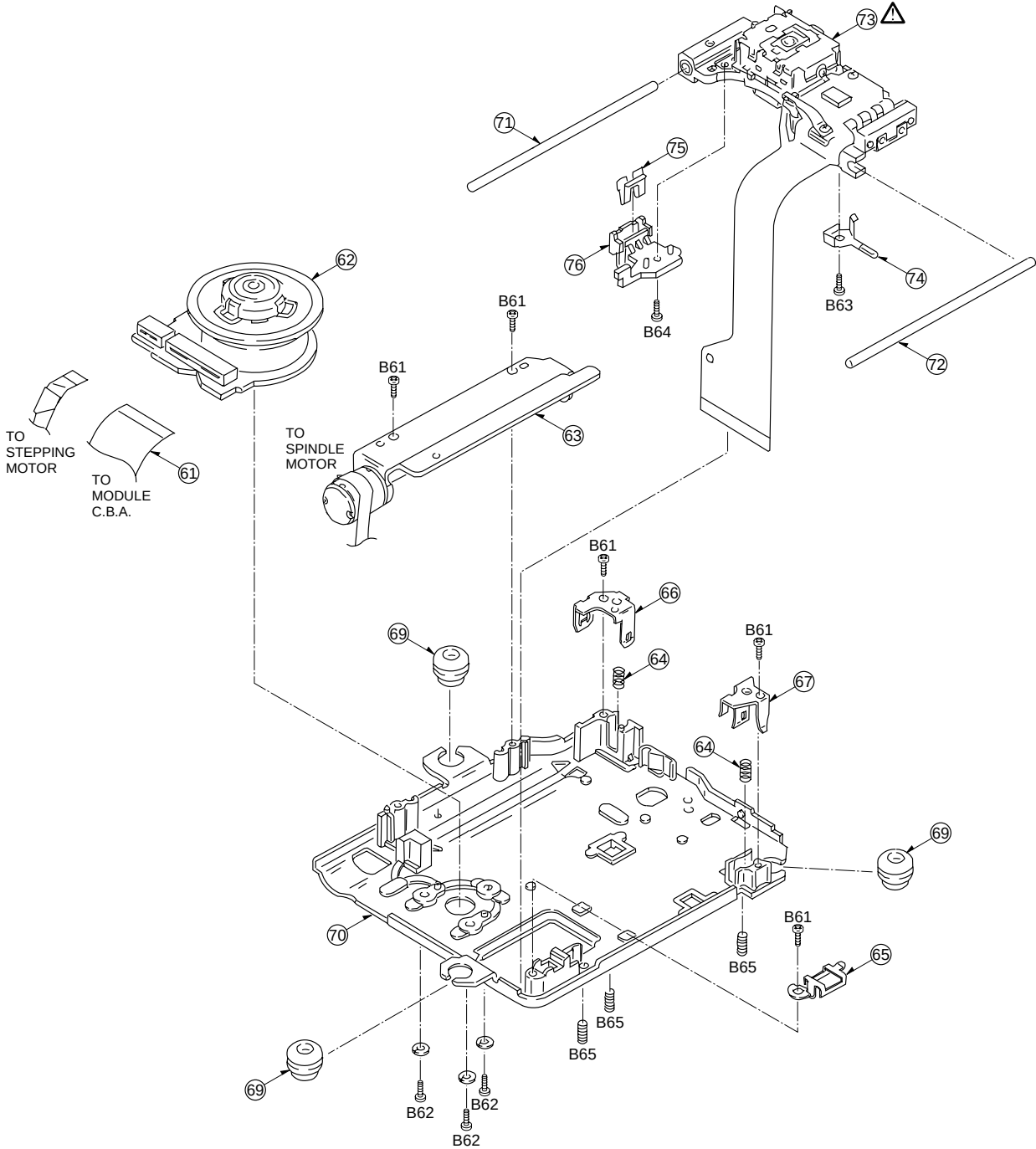


■ MECHANICAL PARTS (CM-220 UNIT)

Ref. No.	PART NO.	Description	Remarks	Markets
1	V3172600	P.C.B. ASS'Y	CM	
2	MF117080	FLEXIBLE FLAT CABLE	17P 80mm P=1.25	
6	V3175700	CONNECTOR ASS'Y	3P 220mm	
7	V3175900	CONNECTOR ASS'Y	3P 220mm	
8	VM444200	MOTOR	RF-500TB-14415	
10	VZ760500	CHASSIS	B	
11	VZ760600	CAM, CL		
12	VS035400	GEAR, CL2		
13	VS036100	GEAR PULLEY		
14	VS036200	PULLEY		
15	VQ776900	BELT	V	
16	VQ775500	DAMPER, TRAY		
17	VS035800	GEAR, WW		
18	VS035700	GEAR		
19	V2009500	PULLEY, RT		
20	VS036600	SHAFT, 2		
21	VS036500	BELT, RT		
22	VZ760700	GEAR, L01		
23	VS035300	GEAR, L01		
24	VZ760800	SHEET, BELT		
25	VZ761000	HOLDER, SENSOR		
26	VZ761200	CAM, SLIDE		
27	VS036800	SPRING, CAM		
28	VS037400	SUPPORT, TRAY		
30	VA775100	PW HEAD P-TITE SCREW	3x8-10 FCRM3-BL	
31	VF617600	PAN HEAD P-TITE SCREW	2.6x8 FCRM3-BL	
32	03786010	BIND HEAD SCREW	2.6x5 ZMC2-BL	

* New Parts

EXPLODED VIEW (TRAVERSE UNIT)

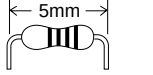


MECHANICAL PARTS (TRAVERSE UNIT)

Ref. No.	PART NO.	Description	Remarks	Markets
*	V6158100	DVD TRAVERSE MECH	VXK1580	
* 61	AAX15330	SPINDLE FFC		VWJ1388
* 62	AAX15170	SPINDLE MOTOR		BML3E4CRU
* 63	AAX15210	STEPPING MOTOR UNIT		VEM0720
64	AAX03740	SPRING		VMC1487
65	AAX04770	SPRING		VMC1606
* 66	AAX15260	SPRING HOLDER 1		VMC1607
* 67	AAX15270	SPRING HOLDER 2		VMG1166
69	AAX04500	FLOATING RUBBER		VMK0502
* 70	AAX15280	TRAVERSE CHASSIS		VMS6471
71	AAX03750	GUIDE SHAFT	1	VMS6472
72	AAX03760	GUIDE SHAFT	2	VED04021
* 73	AAX15200	OPTICAL PICK-UP		VMC1491
74	AAX04780	SPRING		VMC1490
75	AAX04330	NUT SPRING		VMD3260
76	AAX04320	NUT		
B61	AAX04350	SCREW		VHD1224
* B62	AAX15240	SCREW		VHD1358
B63	EX603950	SCREW		VHD1057
B64	EX603980	SCREW		XQNQC17+3
B65	AAX04410	SCREW		XXE26C6FN

* New Parts

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 kΩ	HF45 7100	HF45 7100
1.8 Ω	HJ35 3180	※	11 kΩ	HF45 7110	HF45 7110
2.2 Ω	HJ35 3220	HF85 3220	12 kΩ	HJ35 7120	HF85 7120
3.3 Ω	HJ35 3330	HF85 3330	13 kΩ	HF45 7130	HF45 7130
4.7 Ω	HJ35 3470	HF85 3470	15 kΩ	HF45 7150	HF45 7150
5.6 Ω	HJ35 3560	HF85 3560	18 kΩ	HF45 7180	HF45 7180
10 Ω	HF45 4100	HF45 4100	22 kΩ	HF45 7220	HF45 7220
15 Ω	HJ35 4150	HF85 4150	24 kΩ	HF45 7240	HF45 7240
22 Ω	HF45 4220	HF45 4220	27 kΩ	HJ35 7270	HF85 7270
27 Ω	HJ35 4270	HF85 4270	30 kΩ	HF45 7300	HF45 7300
33 Ω	HF45 4330	HF45 4330	33 kΩ	HF45 7330	HF45 7330
39 Ω	HJ35 4470	HF85 4390	36 kΩ	HF45 7360	HF45 7360
47 Ω	HF45 4470	HF45 4470	39 kΩ	HF45 7390	HF45 7390
56 Ω	HF45 4560	HF45 4560	47 kΩ	HF45 7470	HF45 7470
68 Ω	HF45 4680	HF45 4680	51 kΩ	HF45 7510	HF45 7510
75 Ω	HF45 4750	HF45 4750	56 kΩ	HF45 7560	HF45 7560
82 Ω	HF45 4820	HF45 4820	62 kΩ	HF45 7620	HF45 7620
91 Ω	HF45 4910	HF45 4910	68 kΩ	HF45 7680	HF45 7680
100 Ω	HF45 5100	HF45 5100	82 kΩ	HF45 7820	HF45 7820
110 Ω	HJ35 5110	HF85 5110	91 kΩ	HF45 7910	HF45 7910
120 Ω	HF45 5120	HF45 5120	100 kΩ	HF45 8100	HF45 8100
150 Ω	HF45 5150	HF45 5150	110 kΩ	HF45 8110	HF45 8110
160 Ω	HJ35 5160	※	120 kΩ	HF45 8120	HF45 8120
180 Ω	HF45 5180	HF45 5180	150 kΩ	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 kΩ	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 kΩ	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 kΩ	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 kΩ	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 kΩ	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 kΩ	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 kΩ	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 kΩ	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 kΩ	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 kΩ	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 MΩ	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 MΩ	HJ35 9120	※
1.0 kΩ	HF45 6100	HF45 6100	1.5 MΩ	HJ35 9150	HF85 9150
1.2 kΩ	HF45 6120	HF45 6120	1.8 MΩ	HJ35 9180	HF85 9180
1.5 kΩ	HF45 6150	HF45 6150	2.2 MΩ	HJ35 9220	HF85 9220
1.8 kΩ	HF45 6180	HF45 6180	3.3 MΩ	HJ35 9330	HF85 9330
2.0 kΩ	HJ35 6200	HF85 6200	3.9 MΩ	HJ35 9390	※
2.2 kΩ	HF45 6220	HF45 6220	4.7 MΩ	HJ35 9470	HF85 9470
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300		1/4W Type HJ35 ○○○○ ← 10mm →  1/6W Type HF45 ○○○○ ← 5mm → 	
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			

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