

SHARP SERVICE MANUAL

No. S5041CDBK1600

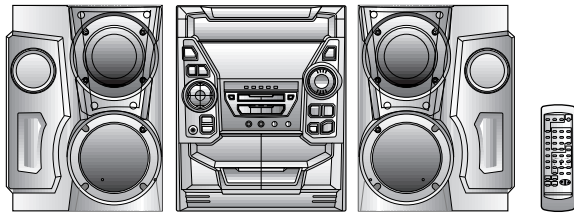


Illustration: CD-BK1600V

VIDEO CD MINI SYSTEM

MODEL CD-BK1600V

CD-BK1600V Video CD Mini System consisting of CD-BK1600V (main unit) and CP-BK1600 (speaker system).

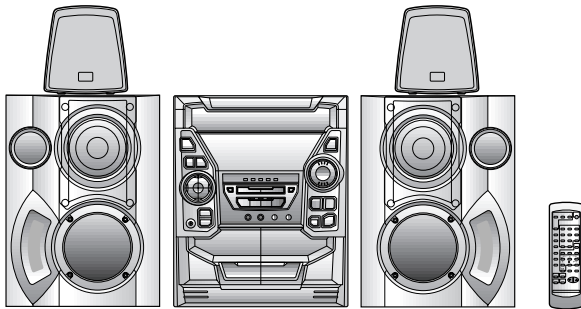


Illustration: CD-BK1800V

MODEL CD-BK1800V

CD-BK1800V Video CD Mini System consisting of CD-BK1800V (main unit), CP-BK1800 (front speakers) and GBOXS0041AWM1 (surround speakers).

MODEL CD-BK190V

CD-BK190V Video CD Mini System consisting of CD-BK190V (main unit), CP-BK190 (front speakers) and GBOXS0041AWM1 (surround speakers).

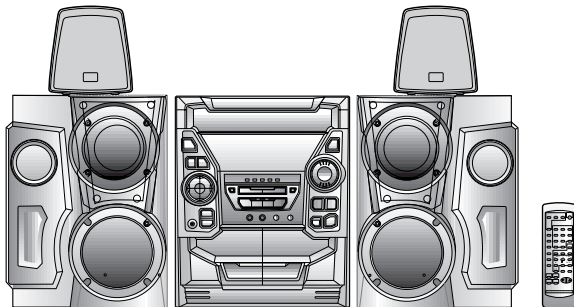


Illustration: CD-BK190V

• In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.



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SAFETY PRECAUTION FOR SERVICE MANUAL

Precaution to be taken when replacing and servicing the Laser Pickup.

The AEL (Accessible Emission Level) of Laser Power Output for this model is specified to be lower than Class 1 Requirements. However, the following precautions must be observed during servicing to protect your eyes against exposure to the Laser beam.

- (1) When the cabinet has been removed, the power is turned on without a compact disc, and the Pickup is on a position outer than the lead-in position, the Laser will light for several seconds to detect a disc. Do not look into the Pickup Lens.
- (2) The Laser Power Output of the Pickup inside the unit and replacement service parts have already been adjusted prior to shipping.
- (3) No adjustment to the Laser Power should be attempted when replacing or servicing the Pickup.
- (4) Under no circumstances look directly into the Pickup Lens at any time.
- (5) CAUTION - Use of controls or adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION

CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1
PRODUCTO LASER DE CLASE 1

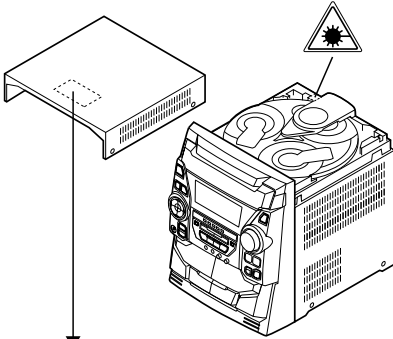
This Video CD Mini System is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear cover.

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

As the laser beam used in this compact disc player is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

Laser Diode Properties
 Material: GaAlAs
 Wavelength: 780 nm
 Emission Duration: continuous
 Laser Output: max. 0.6 mW

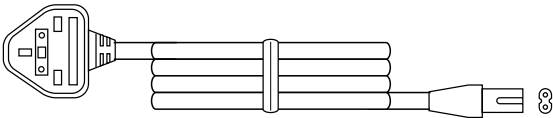


CAUTION-INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.
 VARNING-ÖSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ IN I STRÅLEN OCH BETRÄKTA EJ STRÅLEN MED OPTISKA INSTRUMENT.
 ADVARSEL-ØSYNLIG LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN HELLER IKKE MED OPTISKE INSTRUMENTER.
 VARO! AVARTAJESSA OLEET ALTIINNA NÄKYMÄTÖN LASERSÄTEI VILLE. ÄLÄ TUDOTA SÄTEESEEN ÄLÄKÄ KATSO SITA OPTISEN LAITTEEN LÄPI.
 VARNING-ÖSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ IN I STRÅLEN OCH BETRÄKTA EJ STRÅLEN GENOM OPTISKT INSTRUMENT.
 ADVARSEL-ØSYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES. STIRR IKKE INN I STRÅLEN ELLER SE DIREKTE MED OPTISKE INSTRUMENTER.

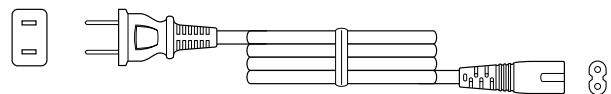
VOLTAGE SELECTION

The voltage selector is located on the rear panel of the unit. If adjustment is necessary, use a screwdriver in order to turn the selector in either direction until the correct voltage figure is displayed in the window.

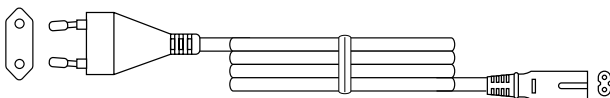
QACCB0012AW00



QACCA0004AW00



QACCE0007AW00



QPLGA0003AWZZ



QPLGA0004AWZZ



QACCJ0006AW00

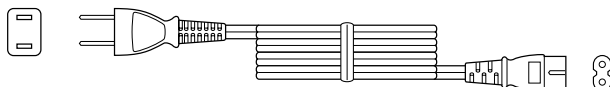


Figure 2 AC POWER SUPPLY CORD AND PLUG ADAPTOR

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

SPECIFICATIONS

CD-BK1600V/1800V/190V

■ General

Power source:	AC 110/127/220/230-240 V, 50/60 Hz
Power consumption:	100 W
Dimensions:	Width; 270 mm (10-5/8") Height; 330 mm (13") Depth; 355 mm (14")
Weight:	6.8 kg (14.9 lbs.)

■ Amplifier section

Output power:	MPO; 160 W (80 W + 80 W) (10 % T.H.D.) RMS; 100 W (50 W + 50 W) (10 % T.H.D.) RMS; 74 W (37 W + 37 W) (0.9 % T.H.D.)
Input terminals:	Video/Auxiliary (audio signal); 500 mV/47 kohms Microphone 1/2; 1 mV/600 ohms
Output terminals:	Front speakers; 6 ohms (BK1600V) Front speakers; 8 ohms (BK1800V/190V) Surround speakers; 16 ohms (BK1800V/190V Only) Headphones; 16-50 ohms (recommended; 32 ohms) Video out; 1 Vp-p (75 ohms)

■ Compact disc player section

Type:	3-disc multi-play compact disc player
Signal readout:	Non-contact, 3-beam semi-conductor laser pickup
D/A converter:	1-bit D/A converter
Frequency response:	20 - 20,000 Hz
Dynamic range:	90 dB (1 kHz)

■ Video CD section

Video output format:	PAL/PAL 60/NTSC
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■ Tuner section

Frequency range:	FM; 88 - 108 MHz AM; 531 - 1,602 kHz
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■ Cassette deck section

Frequency response:	50 - 14,000 Hz (Normal tape)
Signal/noise ratio:	55 dB (TAPE 1, playback) 50 dB (TAPE 2, recording/playback)
Wow and flutter:	0.3 % (WRMS)

CP-BK1600V

Type:	3-way [10 cm (4") woofer×2 and 5 cm (2") tweeter]
Maximum input power:	100 W
Rated input power:	50 W
Impedance:	6 ohms
Dimensions:	Width; 231.5 mm (9-1/8") Height; 330 mm (13") Depth; 210 mm (8-1/4")
Weight:	3.1 kg (6.8 lbs.)/each

CP-BK1800V

Type:	3-way [10 cm (4") woofer × 2 and 5 cm (2") t weeter]
Maximum input power:	80 W
Rated input power:	40 W
Impedance:	8 ohms
Dimensions:	Width; 220 mm (8-11/16") Height; 330 mm (13") Depth; 227 mm (8-15/16")
Weight:	3.0 kg (6.6 lbs.)/each

CP-BK190V

Type:	3-way [10 cm (4") woofer × 2 and 5 cm (2") t weeter]
Maximum input power:	80 W
Rated input power:	40 W
Impedance:	8 ohms
Dimensions:	Width; 231.5 mm (9-1/8") Height; 330 mm (13") Depth; 210 mm (8-1/4")
Weight:	3.1 kg (6.8 lbs.)/each

GBOXS0041AWM1

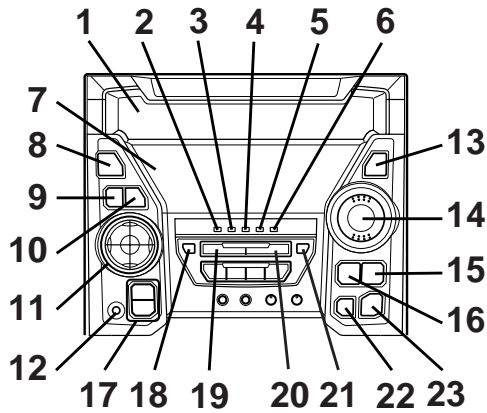
Type:	10 cm (4") full-range speaker
Maximum input power:	30 W
Rated input power:	15 W
Impedance:	16 ohms
Dimensions:	Width; 170 mm (6-3/4") Height; 170 mm (6-3/4") Depth; 88 mm (3-1/2")
Weight:	0.5 kg (1.0 lbs.)/each

Specifications for this model are subject to change without prior notice.

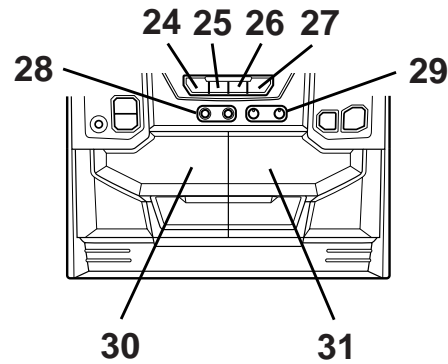
NAMES OF PARTS

CD-BK1600V/1800V/190V

■ Front panel

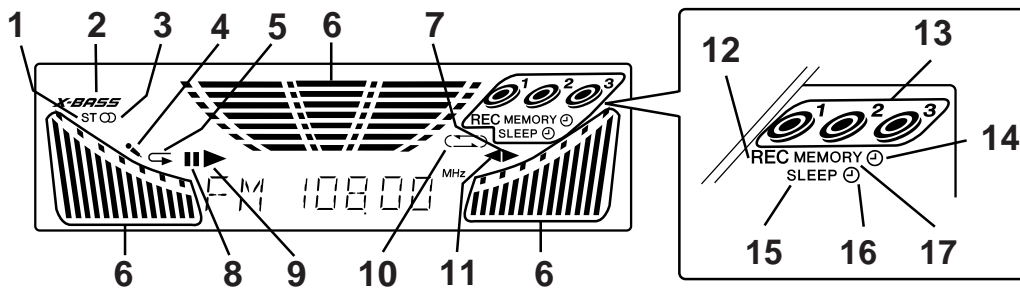


1. Disc Tray
2. (VCD/CD) Karaoke Mode Button
3. (VCD) Playback Control Button
4. (VCD) On Screen Display On/Off Button
5. (VCD) Digest Button
6. (VCD) Bookmark Button
7. Timer Set Indicator
8. On/Stand-by Button
9. Clock Button
10. Timer/Sleep Button
11. Function Selector Buttons
12. Headphone Socket
13. Dimmer Button
14. Volume Up/Down Buttons
15. Extra Bass/Demo Mode Button
16. Equalizer Mode Selector Button
17. Tuning and Time Up/Down Buttons
18. Memory/Set Button
19. (VCD) Skip/Previous Button
(CD) Track Down/Review Button
(TUNER) Preset Down Button
(TAPE 2) Fast Wind Button
20. (VCD) Skip/Next Button
(CD) Track Up/Cue Button
(TUNER) Preset Up Button
(TAPE 2) Fast Wind Button
21. (TAPE 2) Record Pause Button
22. (VCD/CD) Disc Skip Button
23. (VCD/CD) Open/Close Button



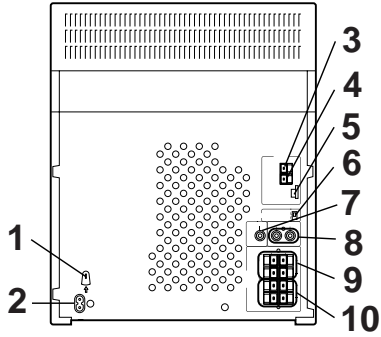
24. (TAPE 2) Reverse Play Button
25. (VCD) Stop/Return Button
(CD/TAPE) Stop Button
26. (TAPE 2) Reverse Mode Button
27. (VCD/CD) Play/Repeat Button
(TAPE 1) Play Button
(TAPE 2) Forward Play Button
28. Microphone Sockets
29. Microphone Level Controls
30. (TAPE 1) Cassette Compartment
31. (TAPE 2) Cassette Compartment

■ Display



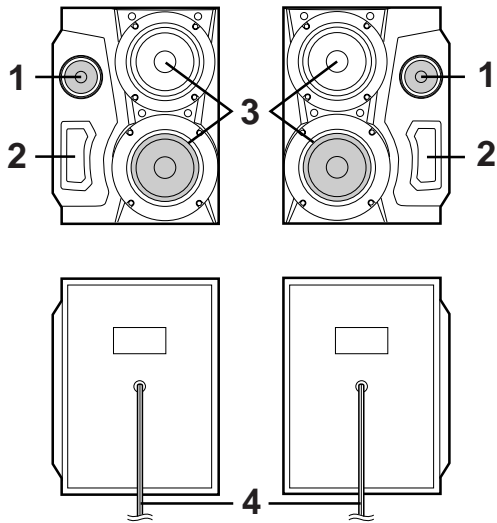
1. FM Stereo Mode Indicator
2. Extra Bass Indicator
3. FM Stereo Indicator
4. Karaoke Mode Indicator
5. (VCD/CD) Repeat Indicator
6. Spectrum Analyzer/Volume Level Indicator
7. (TAPE 1) Play Indicator
(TAPE 2) Forward Play Indicator
8. (VCD/CD) Pause Indicator
9. (VCD/CD) Play Indicator
10. (TAPE 2) Reverse Mode Indicator
11. (TAPE 2) Reverse Play Indicator
12. (TAPE 2) Record Indicator
13. (VCD/CD) Disc Number Indicators
14. Timer Play Indicator
15. Sleep Indicator
16. Timer Record Indicator
17. (VCD/CD/TUNER) Memory Indicator

Rear panel



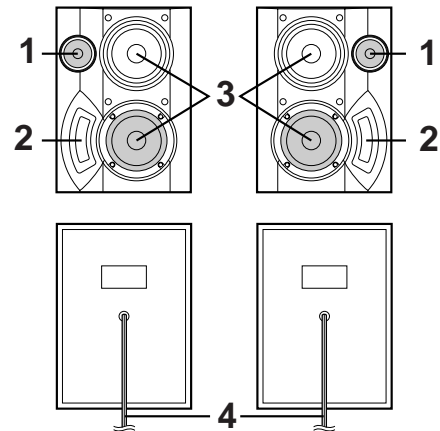
- 1. AC Voltage Selector
- 2. AC Power Input Socket
- 3. FM 75 Ohms Aerial Terminal
- 4. FM Aerial Earth Terminal
- 5. AM Loop Aerial Terminal
- 6. Span Selector Switch
- 7. Video Output Socket
- 8. Video/Auxiliary (Audio Signal) Input Sockets
- 9. Front Speaker Terminals
- 10. Surround Speaker Terminals (CD-BK1800V/BK190V Only)

CP-BK1600/BK190



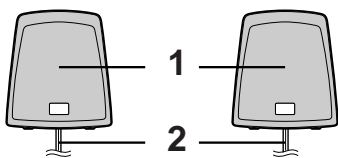
- 1. Tweeter
- 2. Bass Reflex Duct
- 3. Woofer
- 4. Speaker Wire

CP-BK1800



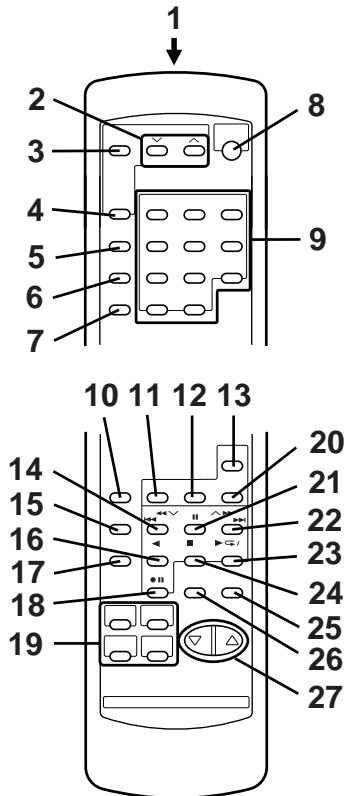
- 1. Tweeter
- 2. Bass Reflex Duct
- 3. Woofer
- 4. Speaker Wire

GBOXS0041AWM1



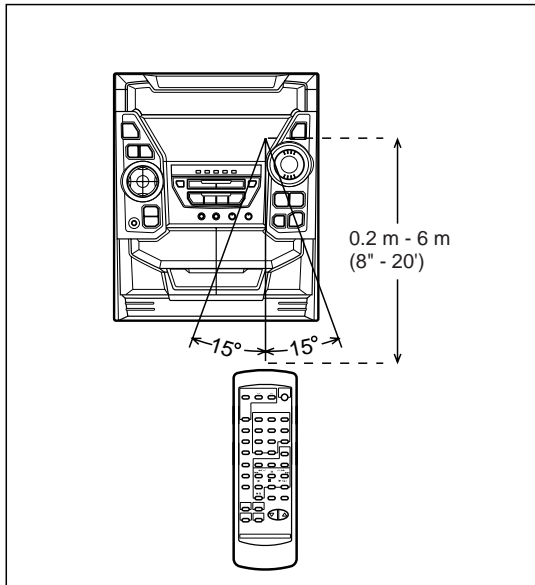
- 1. Full-Range Speaker
- 2. Speaker Wire

Remote control



1. Remote Control Transmitter LED
2. Echo Level Up/Down Buttons
3. Karaoke Mode Button
4. Vocal Replacer Button
5. (VCD) VCD Auto/On Button
6. (VCD) Playback Control Auto/Off Button
7. (VCD) On Screen Display On/Off Button
8. On/Stand-by Button
9. (VCD) Direct Search Button
10. (VCD) Digest/Time Search Button
11. (VCD/CD) Clear Button
12. (VCD/CD) Memory Button
13. (VCD/CD) Disc Skip Button
14. (VCD) Skip/Previous Button
(CD) Track Down/Review Button
(TUNER) Preset Down Button
(TAPE 2) Fast Wind Button
15. (VCD) Bookmark Button
16. (TAPE 2) Reverse Play Button
17. (VCD) PAL/NTSC Select Button
18. (TAPE 2) Record Pause Button
19. Function Selector Buttons
20. (VCD/CD) Random Button
21. (VCD/CD) Pause Button
22. (VCD) Skip/Next Button
(CD) Track Up/Cue Button
(TUNER) Preset Up Button
(TAPE 2) Fast Wind Button
23. (VCD) Play/Repeat/Select/Resume Button
(CD) Play/Repeat Button
(TAPE 1) Play Button
(TAPE 2) Forward Play Button
24. (VCD) Stop/Return Button
(CD/TAPE) Stop Button
25. Extra Bass Button
26. Equalizer Mode Selector Button
27. Volume Up/Down Buttons

OPERATION MANUAL



Notes concerning use:

- Replace the batteries if the operating distance is reduced or if the operation becomes erratic.
- Periodically clean the transmitter LED on the remote control and the sensor on the main unit with a soft cloth.
- Exposing the sensor on the main unit to strong light may interfere with operation. Change the lighting or the direction of the unit.
- Keep the remote control away from moisture, excessive heat, shock, and vibrations.

RESETTING THE MICROCOMPUTER

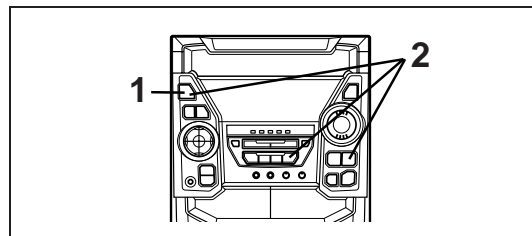
Reset the microcomputer under the following conditions:

- To erase all of the stored memory contents (clock and timer settings, and tuner and CD presets).
- If the display is not correct.
- If the operation is not correct.

1 Press the ON/STAND-BY button to enter the stand-by mode.

2 Whilst pressing down the ► button and the X-BASS/ DEMO button, hold down the ON/STAND-BY button for at least 1 second.

- "CLEAR AL" will appear.



Caution:

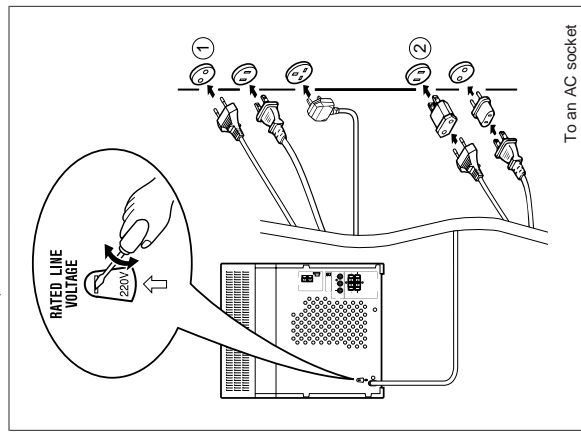
- The operation explained above will erase all data stored in memory including clock and timer settings, and tuner and CD presets.

(Continued)

■ Connecting the AC power lead

Check the setting of the AC voltage selector located on the rear panel before plugging the unit into an AC socket. If necessary, adjust the selector to correspond to the AC power voltage used in your area.

Selector adjustment:
Turn the selector with a screwdriver until the appropriate voltage number appears in the window (110V, 127V, 220V or 230V - 240V AC).



- Notes:**
- Plug the AC power lead into an AC socket, after any connections.
 - Unplug the AC power lead from the AC socket if the unit will not be in use for a prolonged period of time.

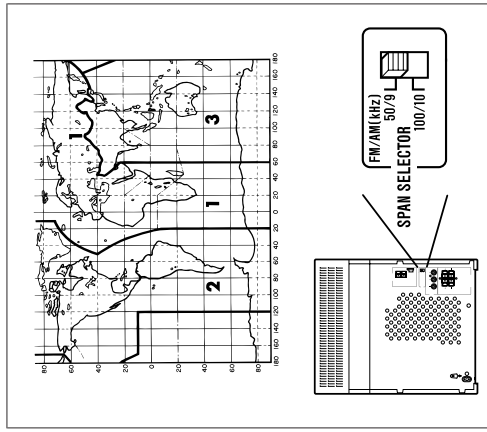
AC Plug Adaptor

In areas (or countries) where an AC socket as shown in illustration ② is used, connect the unit using the AC plug adaptor supplied with the unit, as illustrated. The AC plug adaptor is not included in areas where the AC wall socket and AC power plug can be directly connected (see illustration ③).

■ AM/FM interval (span)

The International Telecommunication Union (ITU) has established that member countries should maintain either a 10 kHz or a 9 kHz interval between broadcasting frequencies of any AM station. The illustration shows the 9 kHz interval zones (regions 1 and 3), and the 10 kHz interval zone (region 2).

Before using the unit, set the SPAN SELECTOR switch (on the rear panel) to AM tuning interval (span) of your area.



To change the tuning zone:

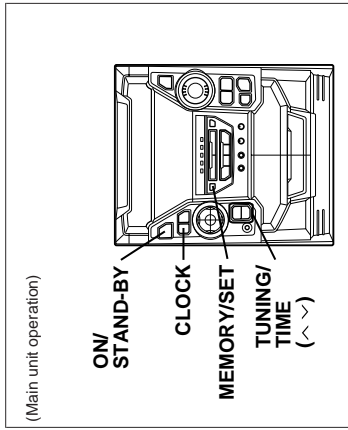
- 1 Press the **ON/STAND-BY** button to enter the stand-by mode.
 - 2 Set the **SPAN SELECTOR** switch to "50/9" for 9 kHz AM interval (50 kHz FM interval), and "100/10" for 10 kHz AM interval (100 kHz FM interval).
 - 3 Whilst pressing down the **▶** button and the **X-BASS/DEMO** button, hold down the **ON/STAND-BY** button for at least 1 second.
- "CLEAR AL" will appear.

Caution:

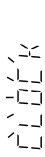
- The operation explained above will erase all data stored in memory including clock and timer settings, and tuner and CD presets.

SETTING THE CLOCK

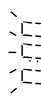
In this example, the clock is set for the 24-hour (0:00) system.



- 1 Press the **ON/STAND-BY** button to enter the stand-by mode.
- 2 Press the **CLOCK** button.



- 3 Within 5 seconds, press the **MEMORY/SET** button.



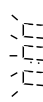
- 4 Press the **TUNING/TIME (v or ^)** button to select the time display mode.

"0:00" → The 24-hour display will appear. (0:00 - 23:59)

"AM 0:00" → The 12-hour display will appear. (AM 0:00 - PM 11:59)

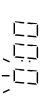
"AM 12:00" → The 12-hour display will appear. (AM 12:00 - PM 11:59)

- Note that this can only be set when the unit is first installed or it has been reset.



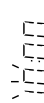
0:00 ↔ AM 0:00 ↔ AM 12:00

- 5 Press the **MEMORY/SET** button.

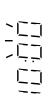


- 6 Press the **TUNING/TIME (v or ^)** button to adjust the hour.

- Press the **TUNING/TIME (v or ^)** button once to advance the time by 1 hour. Hold it down to advance continuously.
- When the 12-hour display is selected, "AM" will change automatically to "PM".

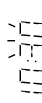


- 7 Press the **MEMORY/SET** button.



- 8 Press the **TUNING/TIME (v or ^)** button to adjust the minutes.

- Press the **TUNING/TIME (v or ^)** button once to advance the time by 1 minute. Hold it down to change the time in 5-minute intervals.
- The hour setting will not advance even if minutes advance from "59" to "00".



- 9 Press the **MEMORY/SET** button.

- The clock starts operating from "0" second. (Seconds are not displayed.) And then the clock display will disappear after a few seconds.



To see the time display:
Press the **CLOCK** button.

- The time display will appear for about 5 seconds.

Note:

- The clock display will flash on and off at the push of the **CLOCK** button when the AC power supply is restored after a power failure occurs or after the AC power lead is disconnected. If this happens, follow the procedure below to change the clock time.

To change the clock time:

- 1 Press the **CLOCK** button.
- 2 Within 5 seconds, press the **MEMORY/SET** button.
- 3 Perform steps 6 - 9 above.

To change the time display mode:

- 1 Perform steps 1 - 2 in "RESETTING THE MICROCOMPUTER".
- 2 Perform steps 1 - 9 above.

DISASSEMBLY

Caution on Disassembly

Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent performance:

1. Take cassette tape and compact disc out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need to be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

CD-BK1600V/1800V/190V

STEP	REMOVAL	PROCEDURE	FIGURE
1	Top Cabinet	1. Screw (A1) x4	8-1
2	Side Panel (Left/right)	1. Screw (B1) x8	8-1
3	CD Player Unit/ CD Tray Cover	1. Turn on the power supply, open the disc tray, take out the CD cover, and close. (Note 1) 2. Screw (C1) x1 3. Hook (C2) x3 4. Hook (C3) x2 5. Socket (C4) x3	8-2
4	Rear Panel	1. Screw (D1) x6	8-2
5	Main PWB	1. Screw (E1) x4 2. Socket (E2) x5 3. Flat Cable (E3) x1 4. Lug Wire (E4) x1 5. Flat Wire (E5) x1	8-2,9-2
6	Socket PWB	1. Screw (F1) x1 2. Socket (F2) x1	9-2
7	Kraoke PWB	1. Screw (G1) x2	9-3
8	Front Panel	1. Screw (H1) x2	9-2
9	Display PWB	1. Screw (J1) x15 2. Flat Cable (J2) x1	9-4
10	Tape Mechanism	1. Open the cassette holder. 2. Screw (K1) x6	9-4
10	Headphones PWB	1. Screw (L1) x1	9-4
11	Turntable	1. Hook (M1) x2 2. Cover (M2) x1	9-4
12	Disc Tray	1. Turn fully the lock lever in the arrow direction. 2. While holding the lock lever, rotate the cam gear until the cam gear rib engages with the clamp lever. 3. Push the slide holder backward to engage the claw with the groove and remove it in the direction of the arrow. (N1) x6	8-3 9-1 9-6
13	Video CD PWB (Note 2)	1. Hook (P1) x3 2. Socket (P2) x4	10-1
14	CD Mechanism	1. Hook (Q1) x2 2. Hook (Q2) x3	10-2

Note 1:

How to open the changer manually. (Fig. 8-3)

1. In this state, turn fully the lock lever in the arrow direction through the hole on the loading chassis bottom.
2. While holding the lock lever, rotate the cam gear anticlockwise until the cam gear rib engages with the clamp lever. (Fig. 9-1)
3. After that, push forward the CD slide holder.

CD-BK1600V/1800V/190V

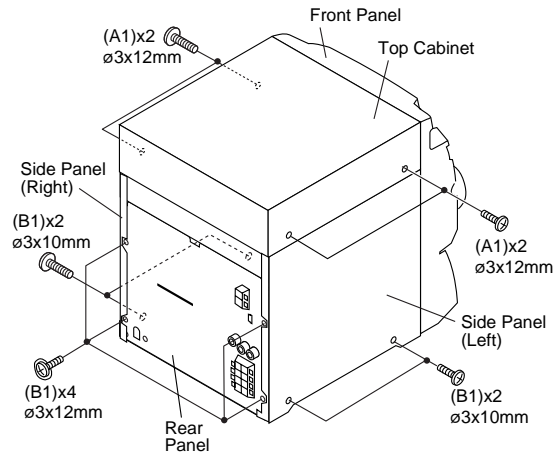


Figure 8-1

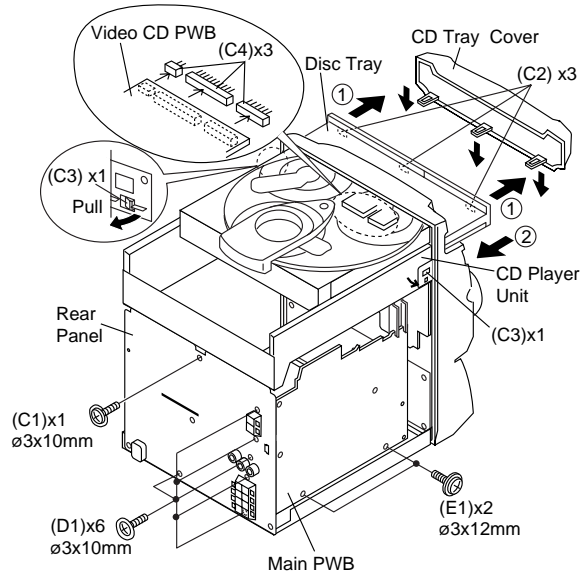


Figure 8-2

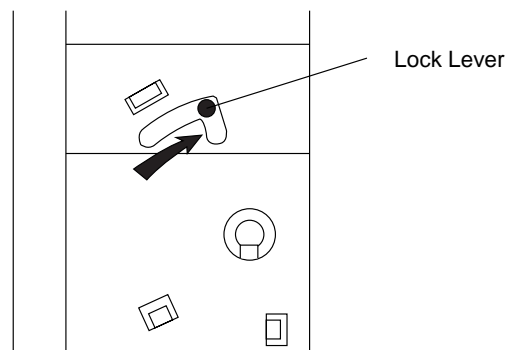


Figure 8-3

Note 2:

1. After removing the connector for the optical pickup from the connector, wrap the conductive aluminium foil around the front end of the connector remove to protect the optical pickup from electrostatic damage.

Note 3:

1. Be careful not to break the claw of the CD mechanism.
2. When fining back the cam gear assembly, let it lock by front movement.

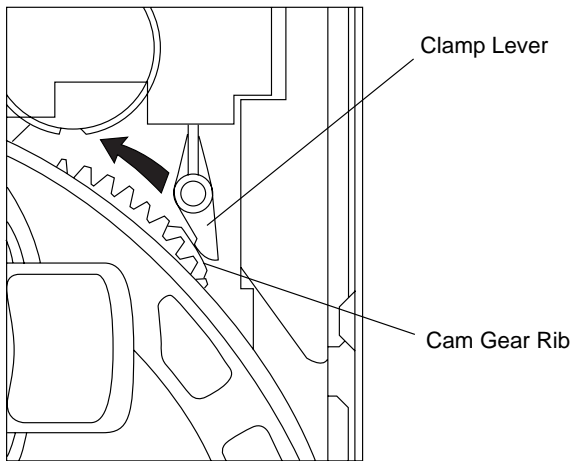


Figure 9-1

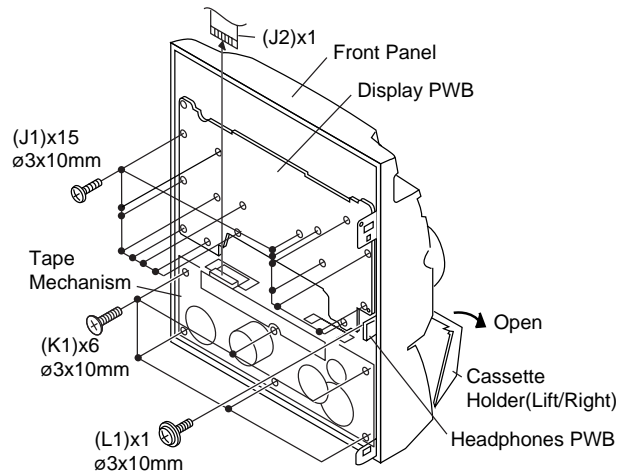


Figure 9-4

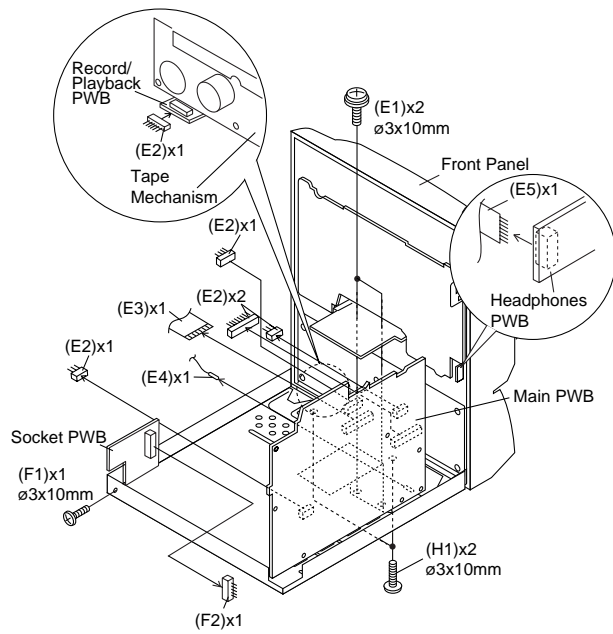


Figure 9-2

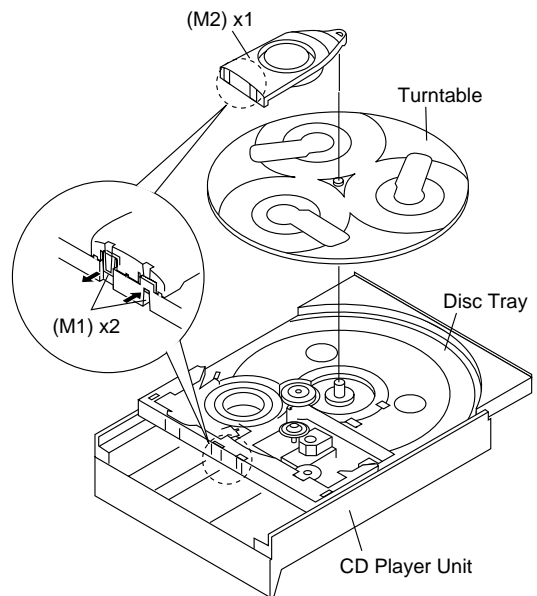


Figure 9-5

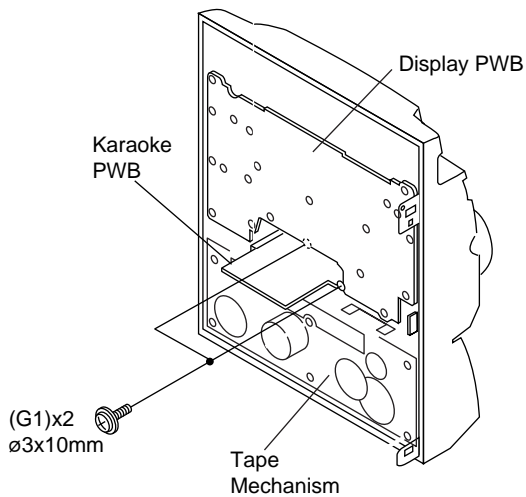


Figure 9-3

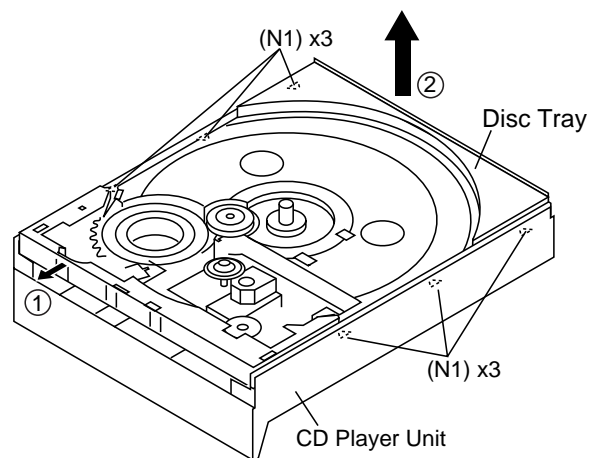


Figure 9-6

CD-BK1600V/1800V/190V

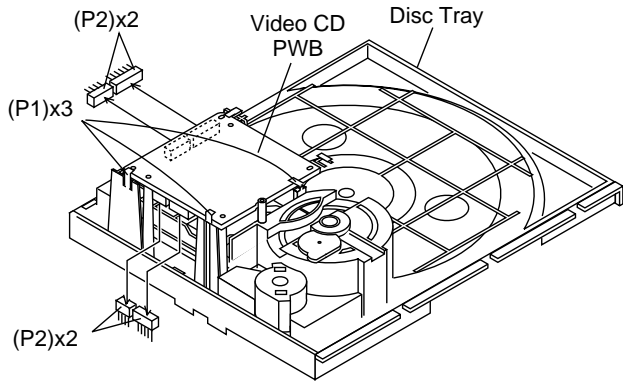


Figure 10-1

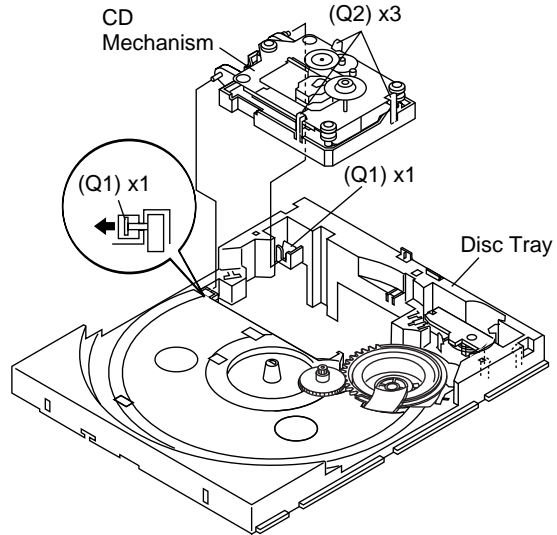


Figure 10-2

CP-BK1600/BK190			
STEP	REMOVAL	PROCEDURE	FIGURE
1	Woofers/ Sub Woofer	1. Front Panel (A1) x1	10-3
		2. Screw (A2) x8	10-4
2	Tweeter	1. Screw (B1) x2	10-4

CP-BK1800			
STEP	REMOVAL	PROCEDURE	FIGURE
1	Woofers/ Sub Woofer	1. Front Panel (A1) x1	10-5
		2. Screw (A2) x8	10-6
2	Tweeter	1. Screw (B1) x2	10-6

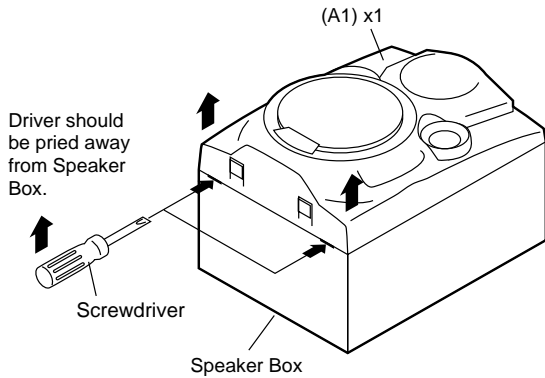


Figure 10-3

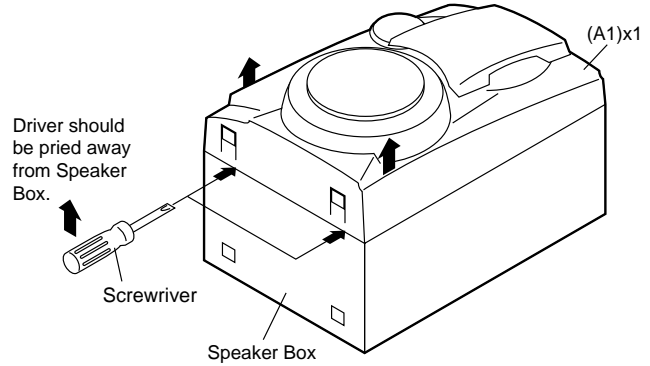


Figure 10-5

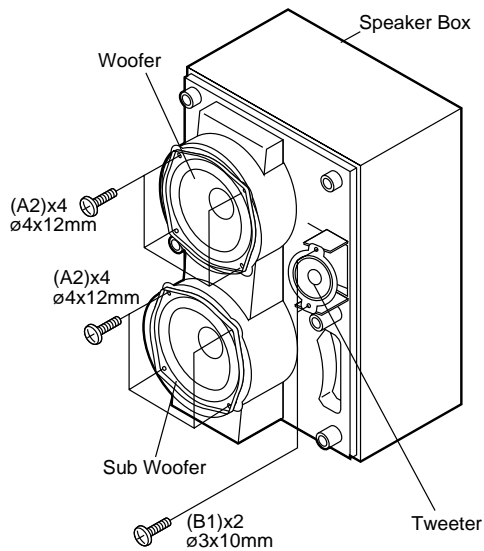


Figure 10-4

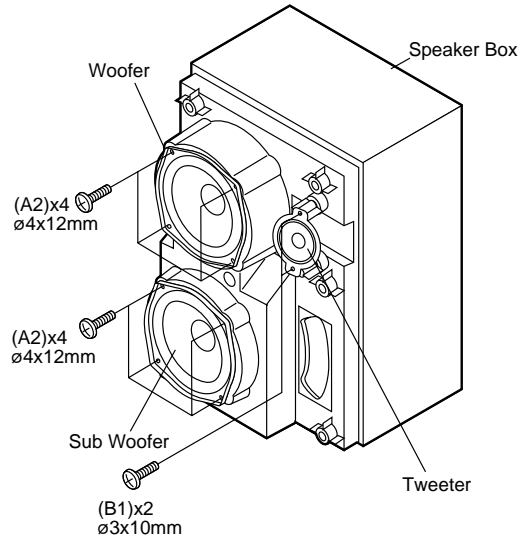


Figure 10-6

REMOVING AND REINSTALLING THE MAIN PARTS

TAPE MECHANISM SECTION

Perform steps 1, 2, 3, 4, 5, 7, 8 and 10 of the disassembly method to remove the tape mechanism.

How to remove the record/playback and erase heads (Tape 2) (See Fig. 11-1)

1. Carefully remove the record/playback head and erase head screws (A1) x 2 pcs.

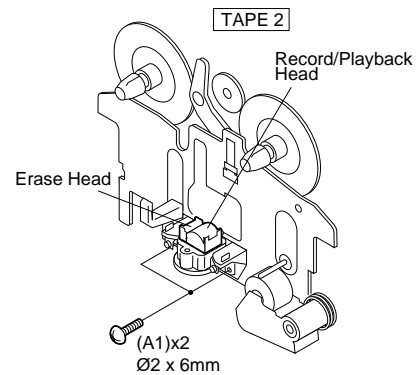


Figure 11-1

How to remove the playback head (Tape 1) (See Fig. 11-2)

1. Carefully remove the playback head screws (B1) x 2 pcs.

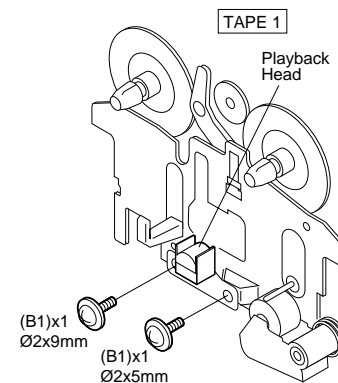


Figure 11-2

How to remove the pinch roller (Tape 1/2) (See Fig. 11-3)

1. Carefully bend the pinch roller pawl in the direction of the arrow <A>, and remove the pinch roller (C1) x 1 pc., in the direction of the arrow .

Note:

When installing the pinch roller, pay attention to the spring mounting position.

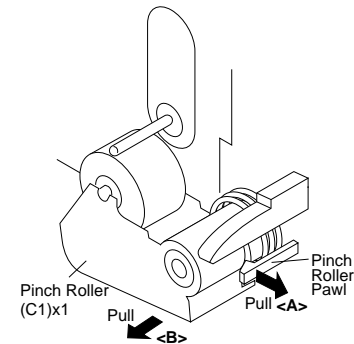


Figure 11-3

How to remove the belt (Tape 2) (See Fig. 11-4)

1. Remove the main belt (D1) x 1 pc., from the motor side.
2. Remove the FF/REW belt (D2) x 1 pc.

How to remove the belt (Tape 1) (See Fig. 11-4)

1. Remove the main belt (E1) x 1 pc., from the motor side.
2. Remove the FF/REW belt (E2) x 1 pc.

How to remove the motor (See Fig. 11-5)

1. Remove the screws (F1) x 2 pcs., to remove the motor.

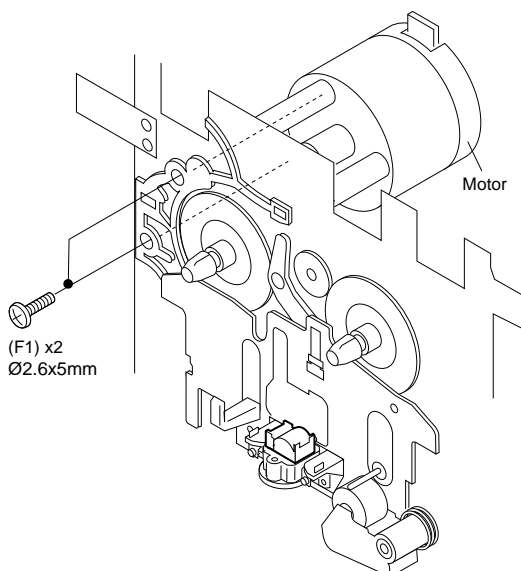


Figure 11-5

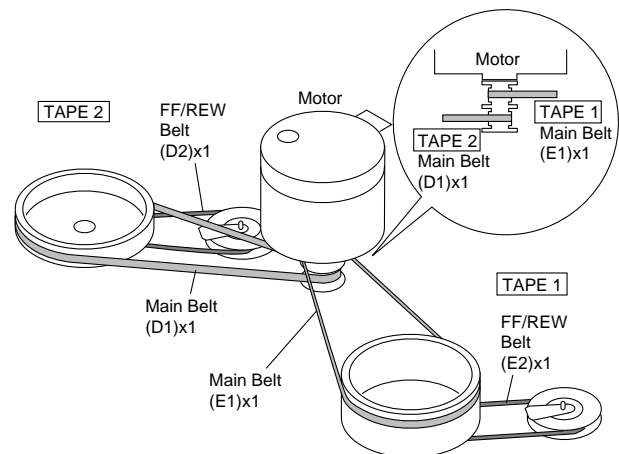


Figure 11-4

CD-BK1600V/1800V/190V

CD MECHANISM SECTION

Perform steps 1, 2, 3, 11, 12, 13, 14 and 15 of the disassembly method to remove the CD mechanism.

How to remove the T/T Up/Down motor (See Fig. 12-1)

1. Bend the hooks (A1) x 5 pcs., to remove the T/T Up/Down motor.
2. Remove the drive belt (A2) x 1 pc.

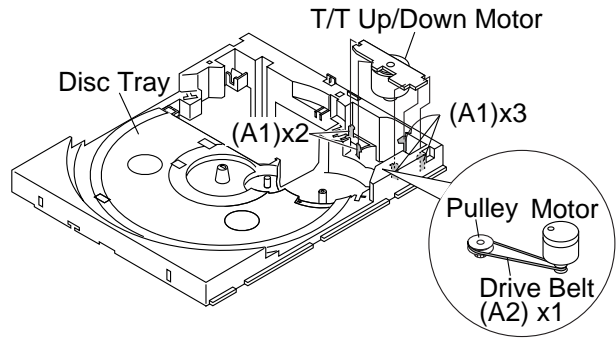


Figure 12-1

How to remove the pickup (See Fig. 12-2)

1. Remove the screws (B1) x 2 pcs., to remove the shaft (B2).
2. Remove the stop washer (B3) x 1 pc., to remove the gear (B4).
3. Remove the pickup.

Note

After removing the connector for the optical pickup from the connector, wrap the conductive aluminium foil around the front end of connector remove to protect the optical pickup from electrostatic damage.

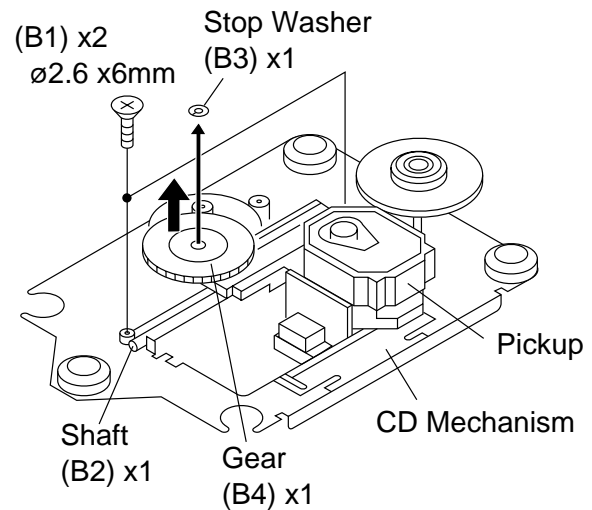


Figure 12-2

ADJUSTMENT

MECHANISM SECTION

• Driving Force Check

Torque Meter	Specified Value
Play: TW-2111	Tape 1: Over 80 g Tape 2: Over 80 g

• Torque Check

Torque Meter	Specified Value	
	Tape 1	Tape 2
Play: TW-2111	30 to 80 g.cm	30 to 80 g.cm
Fast forward: TW-2231	—	70 to 180 g.cm
Rewind: TW-2231	—	70 to 180 g.cm

• Tape Speed

	Test Tape	Adjusting Point	Specified Value	Instrument Connection
Normal speed	MTT-111	Variable Resistor in motor.	3,000 ± 30 Hz	Speaker terminal (Load resistance: 6 ohms)

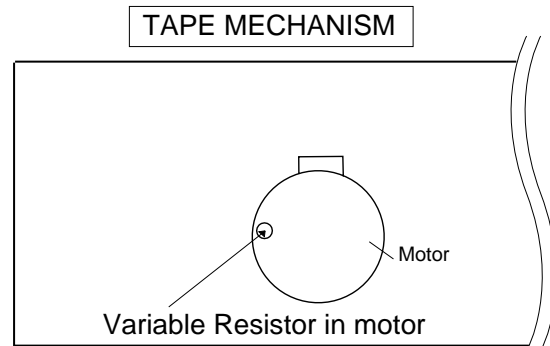


Figure 12-3

TUNER SECTION

fL: Low-range frequency
fH: High-range frequency

• **AM IF/RF**

Signal generator: 400 Hz, 30%, AM modulated

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection
AM IF	450 kHz	1,602 kHz	T351	*1
AM Band Coverage	—	531 kHz	(fL): T306 1.1 ± 0.1 V	*2
AM Tracking	990 kHz	990 kHz	(fL): T303	*1

*1. Input: Antenna Output: TP302
*2. Input: Antenna Output: TP301

• **FM RF**

Signal generator: 400Hz, 22.5 kHz dev., FM modulated

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Point	Instrument Connection
FM Band Coverage	—	87.50 MHz	T301(fL): 3.4 V ± 0.1V	*1
FM RF	98.00 MHz (10-30 dB)	98.00 MHz	L312	*2

*1. Input: Antenna Output: TP301
*2. Input: Antenna Output: Speaker terminal

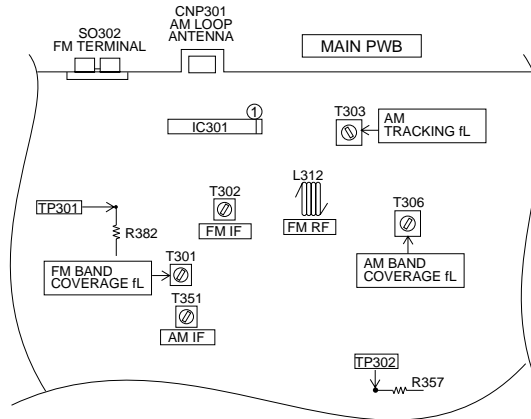


Figure 13-1 ADJUSTMENT POINTS

CD SECTION

• **Adjustment**

Since this CD system incorporates the following automatic adjustment functions, readjustment is not needed when replacing the pickup. Therefore, different PWBs and pickups can be combined freely.

Each time a disc is changed, these adjustments are performed automatically. Therefore, playback of each disc can be performed under optimum conditions.

Items adjusted automatically

- Offset adjustment (The offset voltage between the head amplifier output and the VREF reference voltage is compensated inside the IC.)
 - * Focus offset adjustment
 - * Tracking offset adjustment
- Tracking balance adjustment (waveform drawing Fig. 13-2 EFBL)
- Gain adjustment (The gain is compensated inside the IC so that the loop gain at the gain crossover frequency will be 0 dB.)
 - * Focus gain adjustment
 - * Tracking gain adjustment

CD ERROR CODE DESCRIPTION

Error	State Code
0001 0002	[Servo System Error] Cannot detect Pickup-in SW DSP access error
0101 0103	[Error during close operation] Open/Close SW Low → High not functioning Open/Close SW High → Low not functioning
0201 0203	[Error during open operation] Open/Close SW Low → High not functioning Open/Close SW High → Low not functioning
0302 0306 0307 0308	[Error during skip operation] Pickup-in SW is not detected During Disc 1 search, Open/Close SW or Clamp SW or Disc SW do not change to low. Clamp SW Low → High not functioning Clamp SW High → Low not functioning

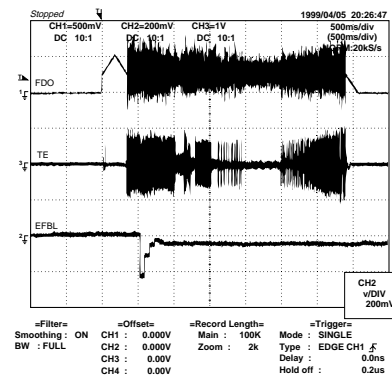


Figure 13-2

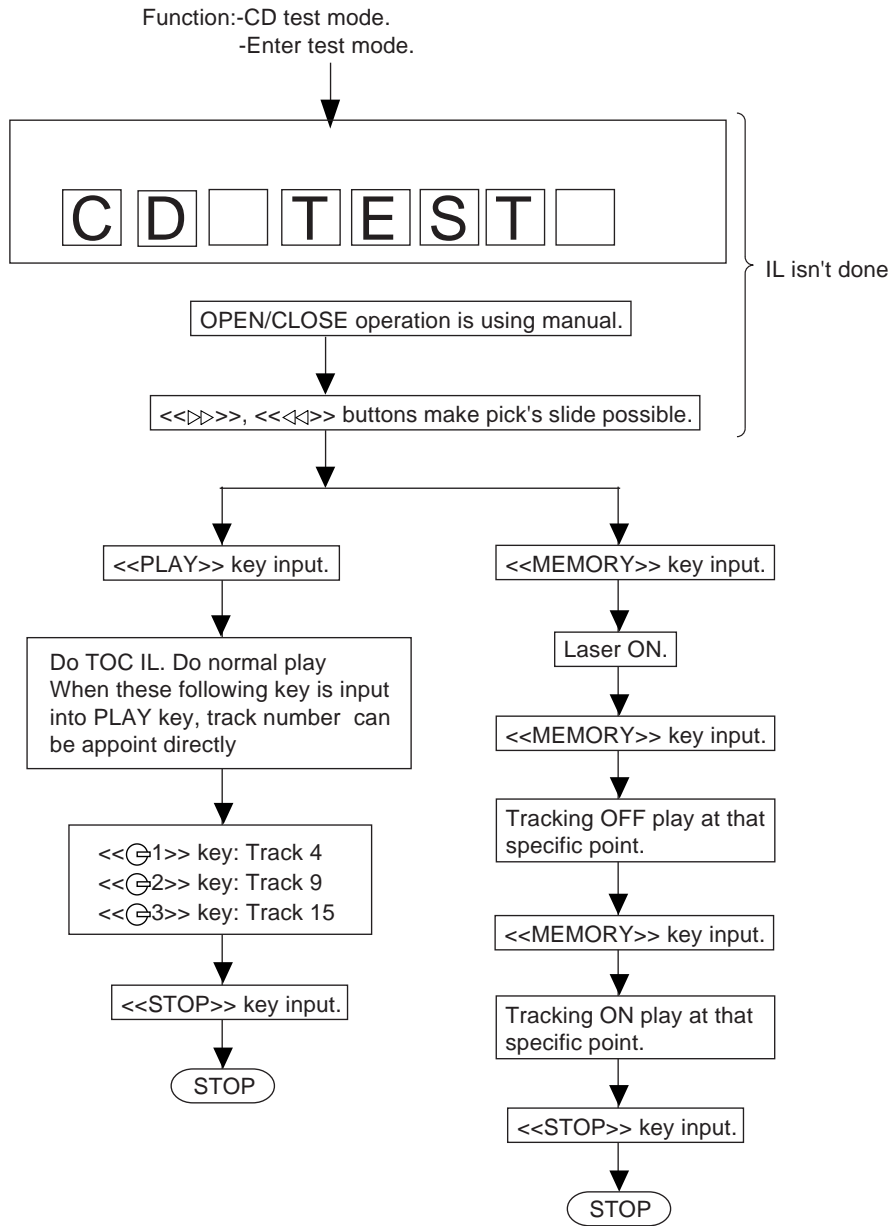
CD-BK1600V/1800V/190V

• TEST MODE

Setting of test mode

Any one test mode can be set by pressing several keys as follows.

<X-BASS> + <CD> + <POWER> TEST: CD operation test



VOL — Last memory
BAL — CENTER
P.GEQ — FLAT
X-BASS — OFF

To cancel : Power OFF

Sliding the PICKUP with
<<D>>, <<L>> button
must only be in STOP mode.

NOTES ON SCHEMATIC DIAGRAM

- Resistor:
To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with "Fusible" is a fuse type.
- Capacitor:
To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression "capacitance/withstand voltage" is used.
(CH), (TH), (RH), (UJ): Temperature compensation
(ML): Mylar type
(P.P.): Polypropylene type
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
 1. In the tuner section,
() indicates AM
< > indicates FM stereo
 2. In the main section, a tape is being played back.
 3. In the deck section, a tape is being played back.
() indicates the record state.
 4. In the power section, a tape is being played back.
 5. In the CD section, the CD is stopped.
- Parts marked with "△" (□ = = = □) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
SW1	OPEN/CLOSE	ON—OFF
SW2	CLAMP	ON—OFF
SW3	DISC NUMBER	ON—OFF
SW4	PICKUP IN	ON—OFF
SW401	SPAN SELECTOR	50/9—100/10
SW601	ON/STAND BY	ON—OFF
SW602	CLOCK	ON—OFF
SW603	TIMER/SLEEP	ON—OFF
SW604	AUDIO KARAOKE	ON—OFF
SW605	PBC	ON—OFF
SW606	OSD/ON/OFF	ON—OFF
SW607	DIGEST	ON—OFF
SW608	BOOK MARK	ON—OFF
SW609	DISC SKIP	ON—OFF
SW610	OPEN/CLOSE	ON—OFF
SW611	DIMMER	ON—OFF
SW612	X-BASS/DEMO	ON—OFF
SW613	EQUALIZER	ON—OFF

REF. NO	DESCRIPTION	POSITION
SW614	VOLUME UP	ON—OFF
SW615	VOLUME DOWN	ON—OFF
SW616	CD	ON—OFF
SW617	TAPE	ON—OFF
SW618	TUNING /TIME DOWN	ON—OFF
SW619	MEMORY/SET	ON—OFF
SW620	REWIND	ON—OFF
SW621	FAST FORWARD	ON—OFF
SW622	PLAY/REPEAT	ON—OFF
SW623	STOP	ON—OFF
SW624	REVERSE PLAY	ON—OFF
SW625	REC/PAUSE	ON—OFF
SW626	TUNING/TIME UP	ON—OFF
SW627	VIDEO/AUX	ON—OFF
SW628	TUNER (BAND)	ON—OFF
SW629	REVERSE MODE	ON—OFF
SW801	VOLTAGE SELECTOR	110—127— 220—230-240

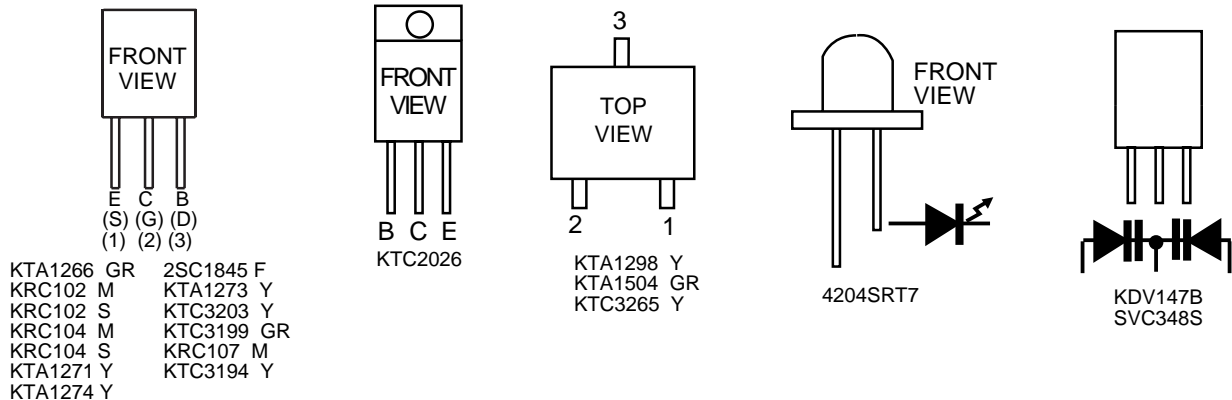


Figure 15 TYPES OF TRANSISTOR AND LED

CD-BK1600V/1800V/190V

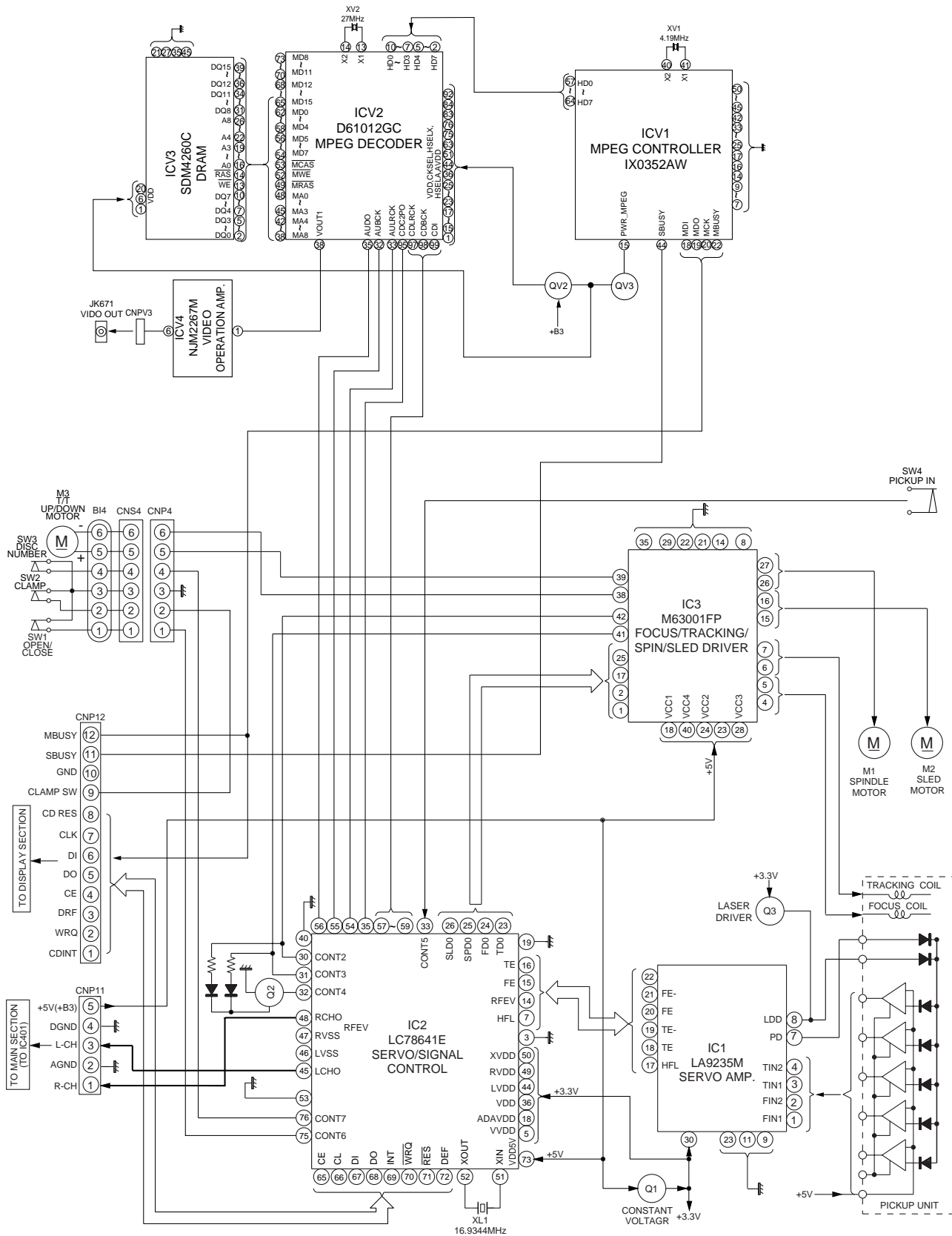


Figure 16 BLOCK DIAGRAM (1/4)

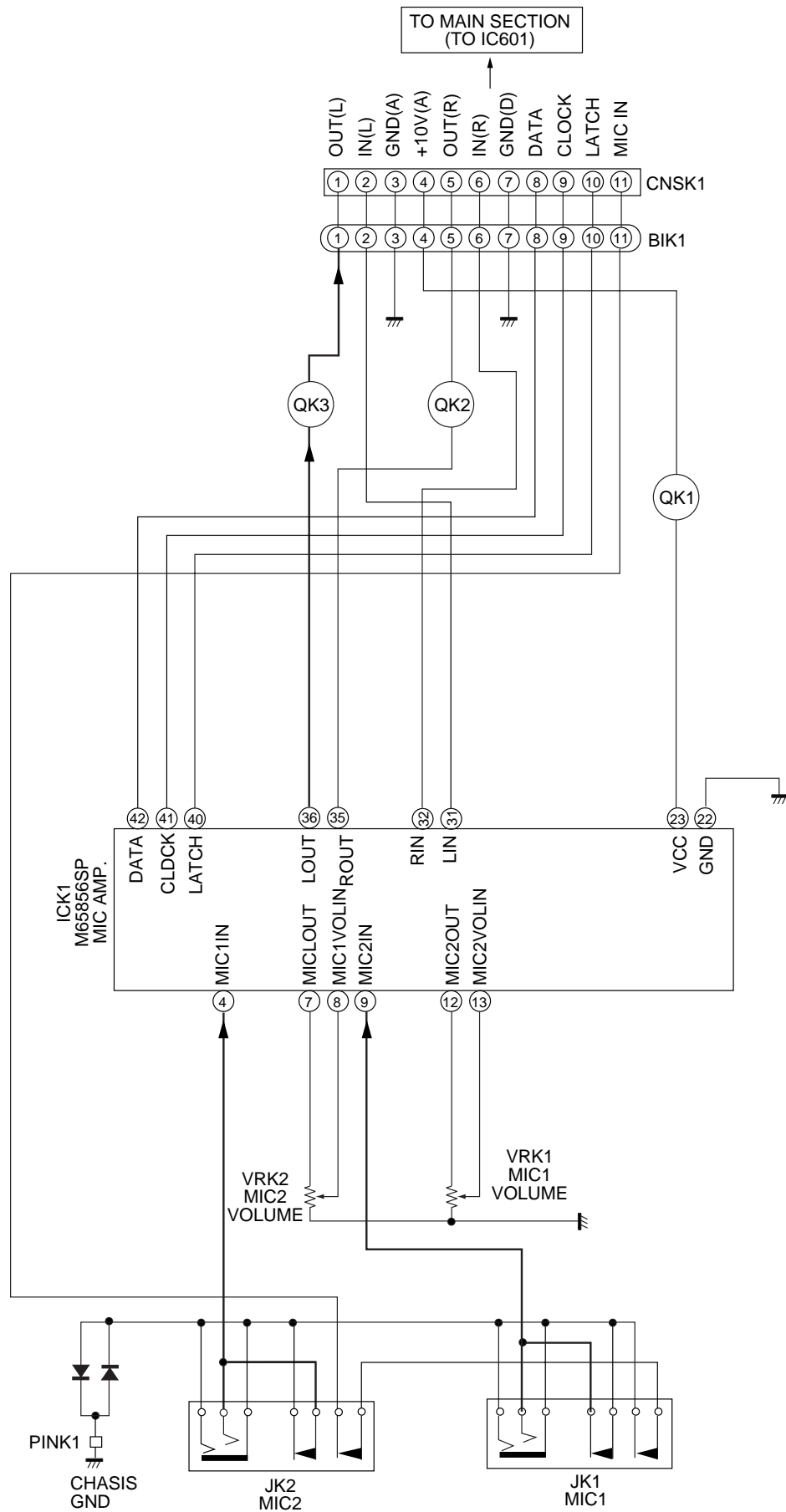


Figure 17 BLOCK DIAGRAM (2/4)

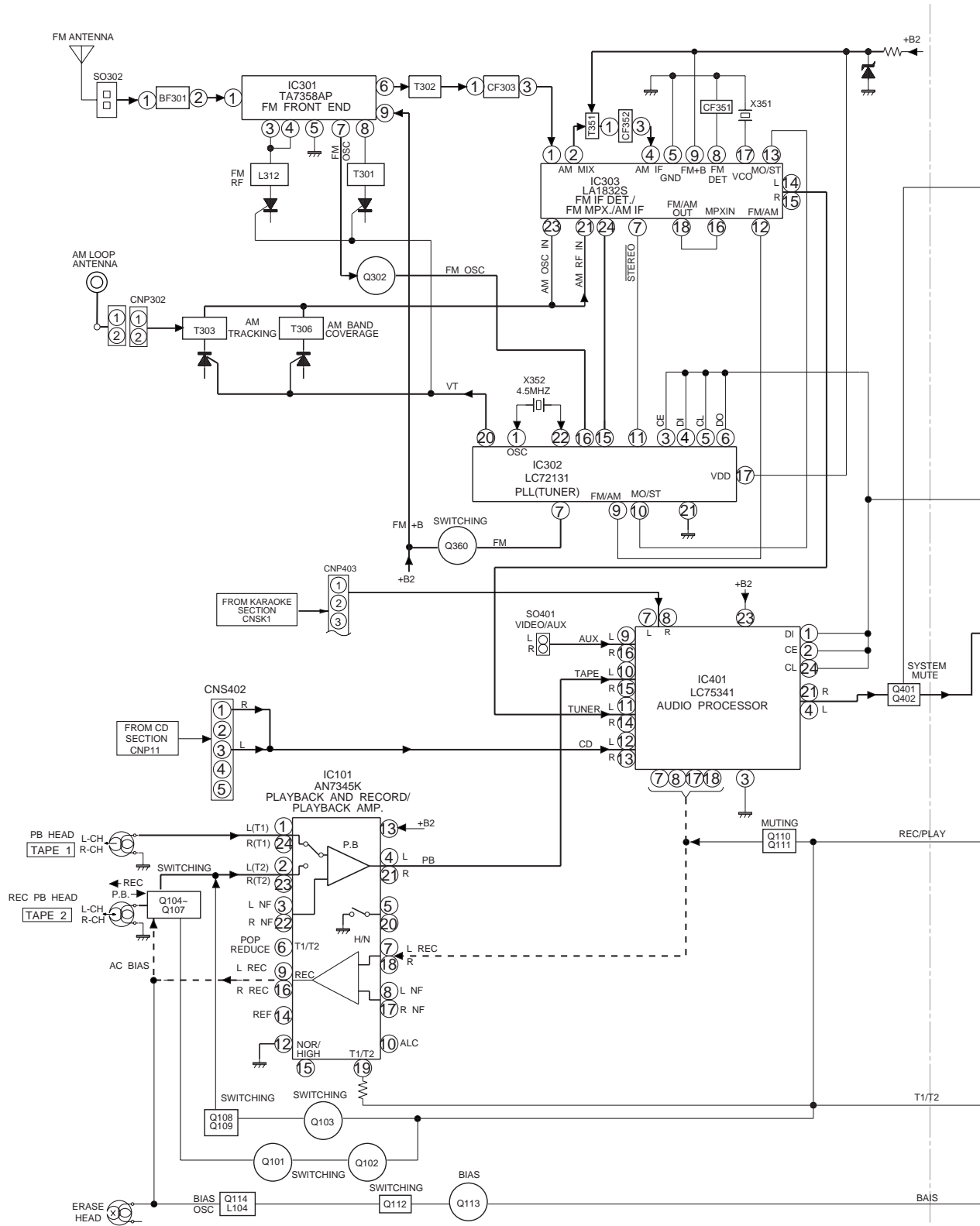


Figure 18 BLOCK DIAGRAM (3/4)

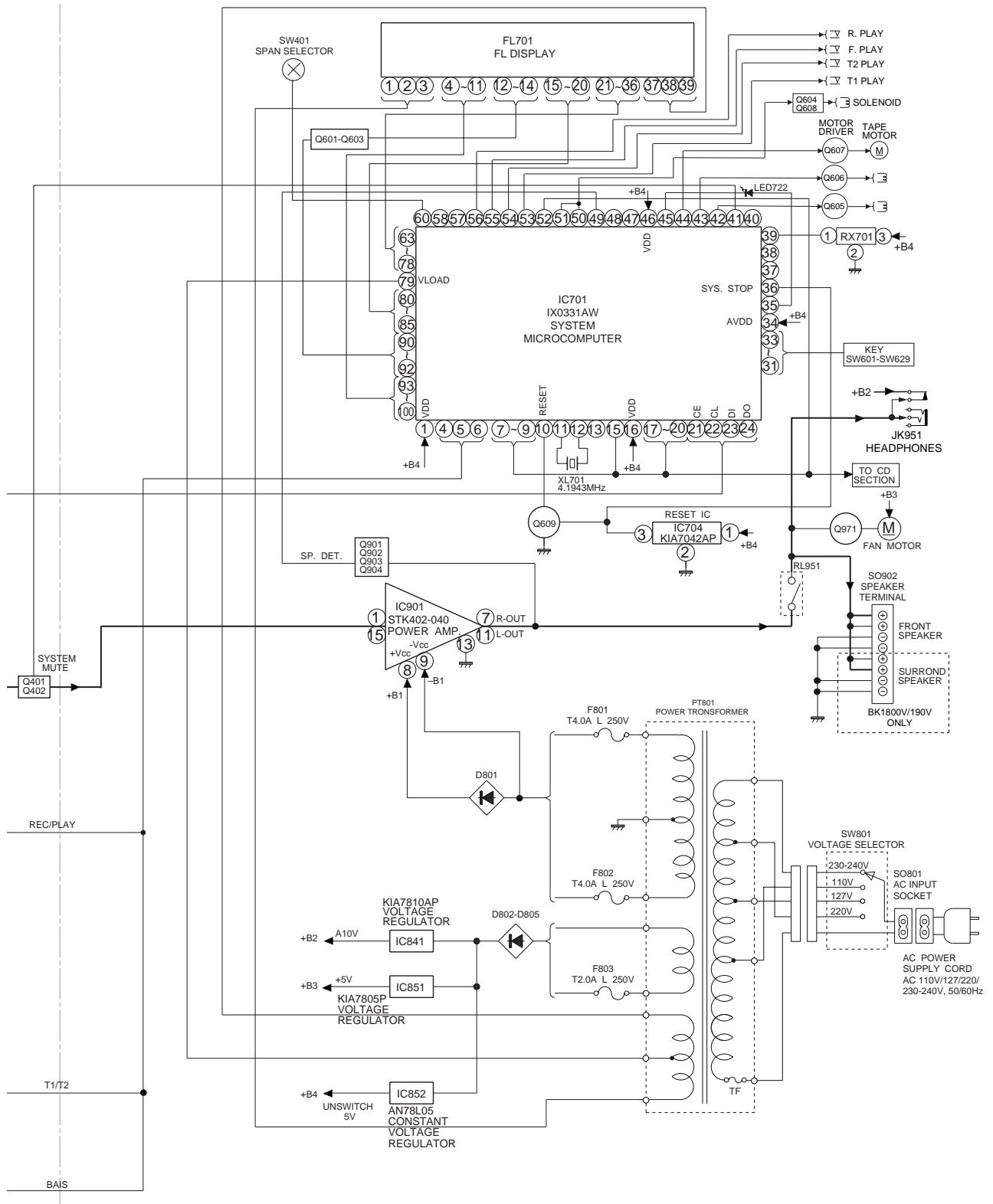
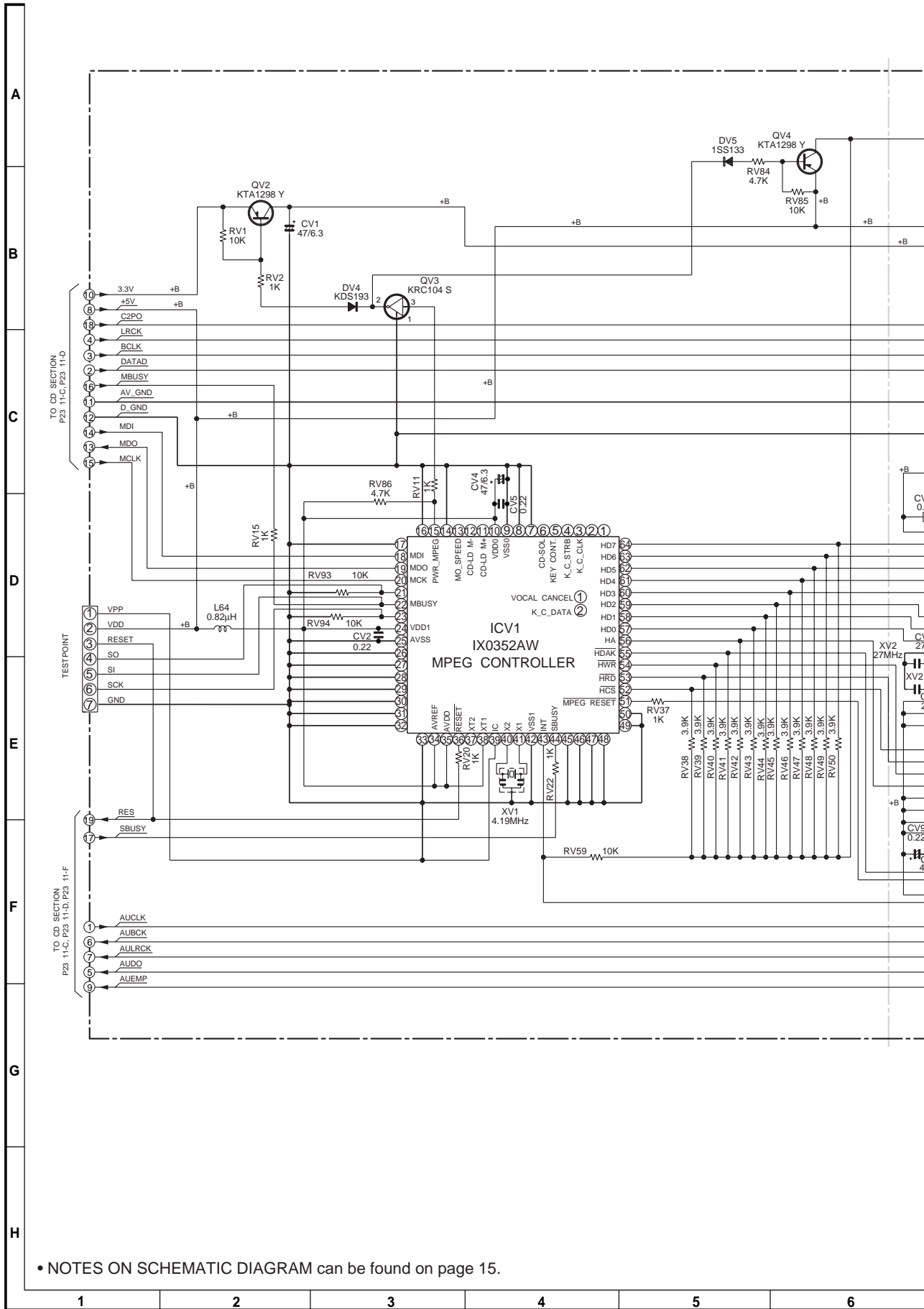


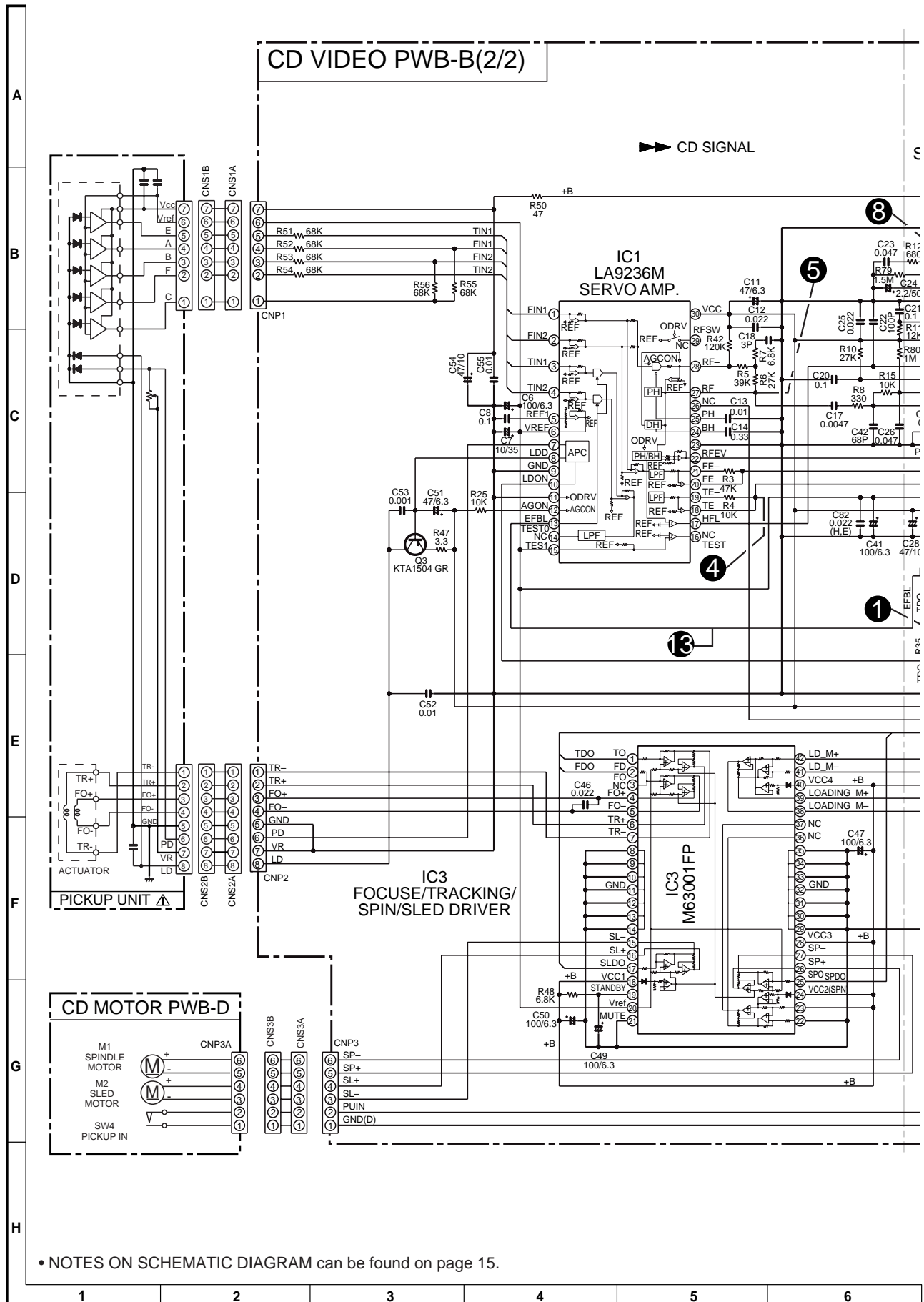
Figure 19 BLOCK DIAGRAM (4/4)

CD-BK1600V/1800V/190V



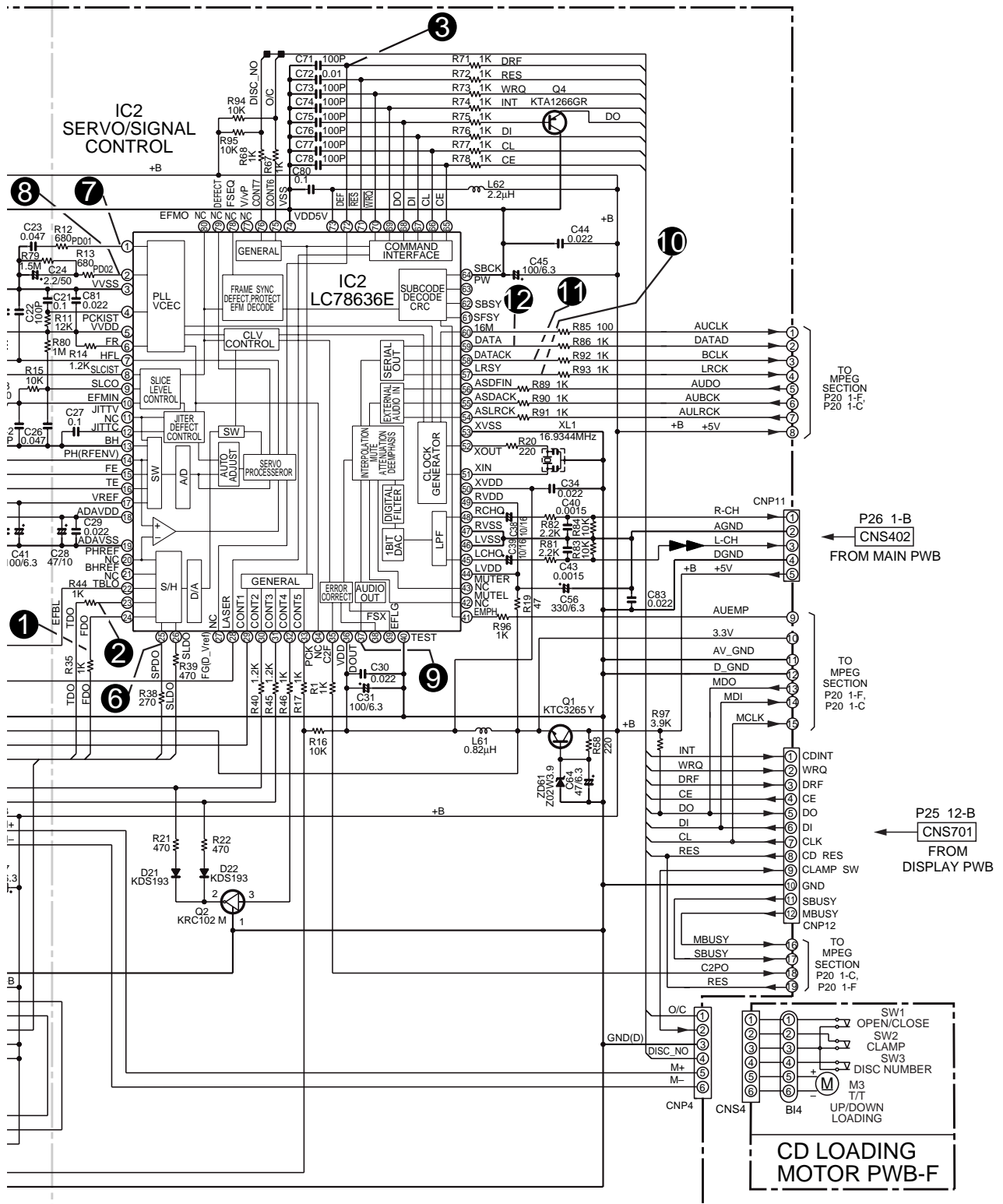
• NOTES ON SCHEMATIC DIAGRAM can be found on page 15.

Figure 20 SCHEMATIC DIAGRAM (1/12)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 15.

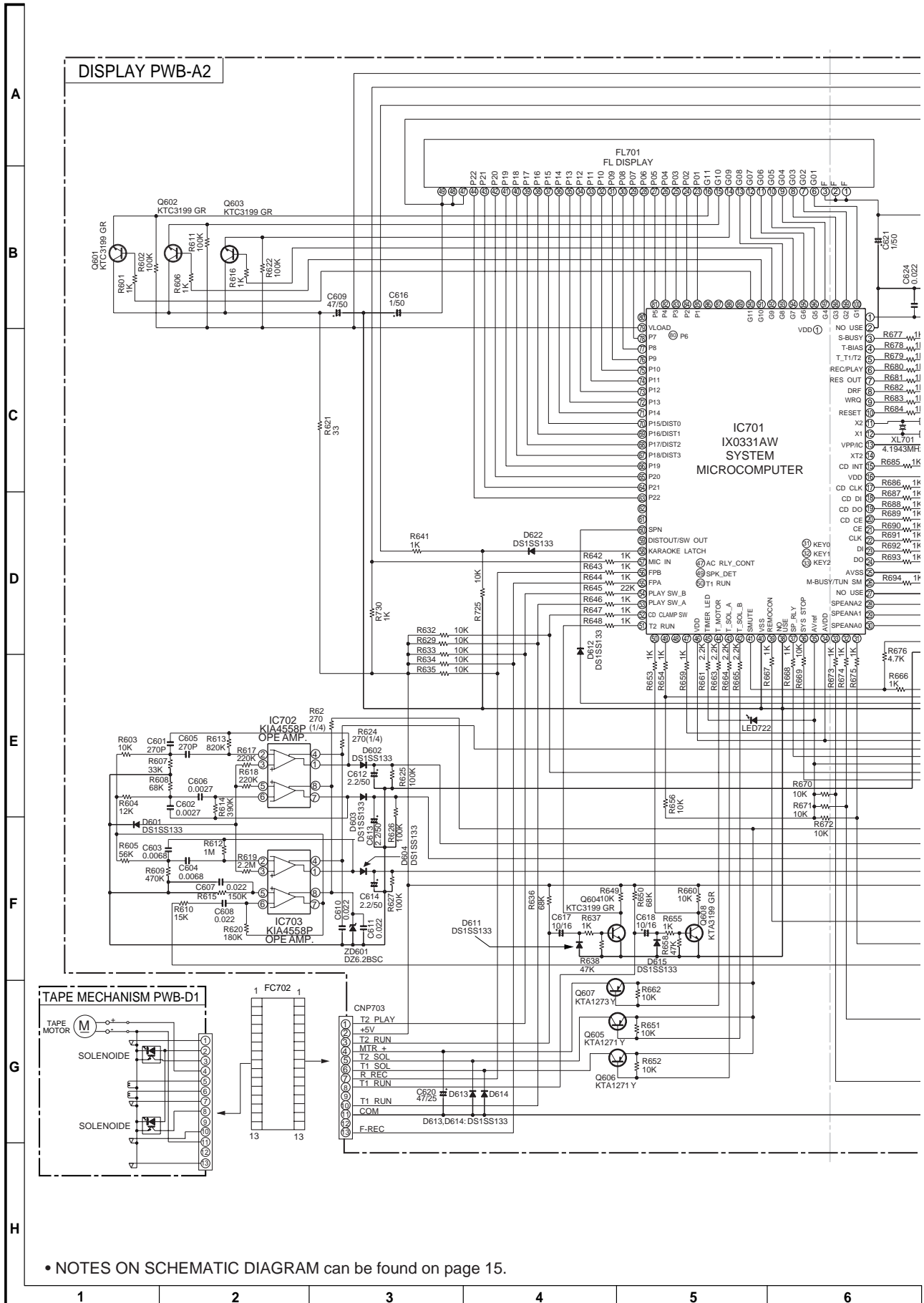
Figure 22 SCHEMATIC DIAGRAM (3/12)



• The numbers 1 to 13 are waveform numbers shown in page 40.

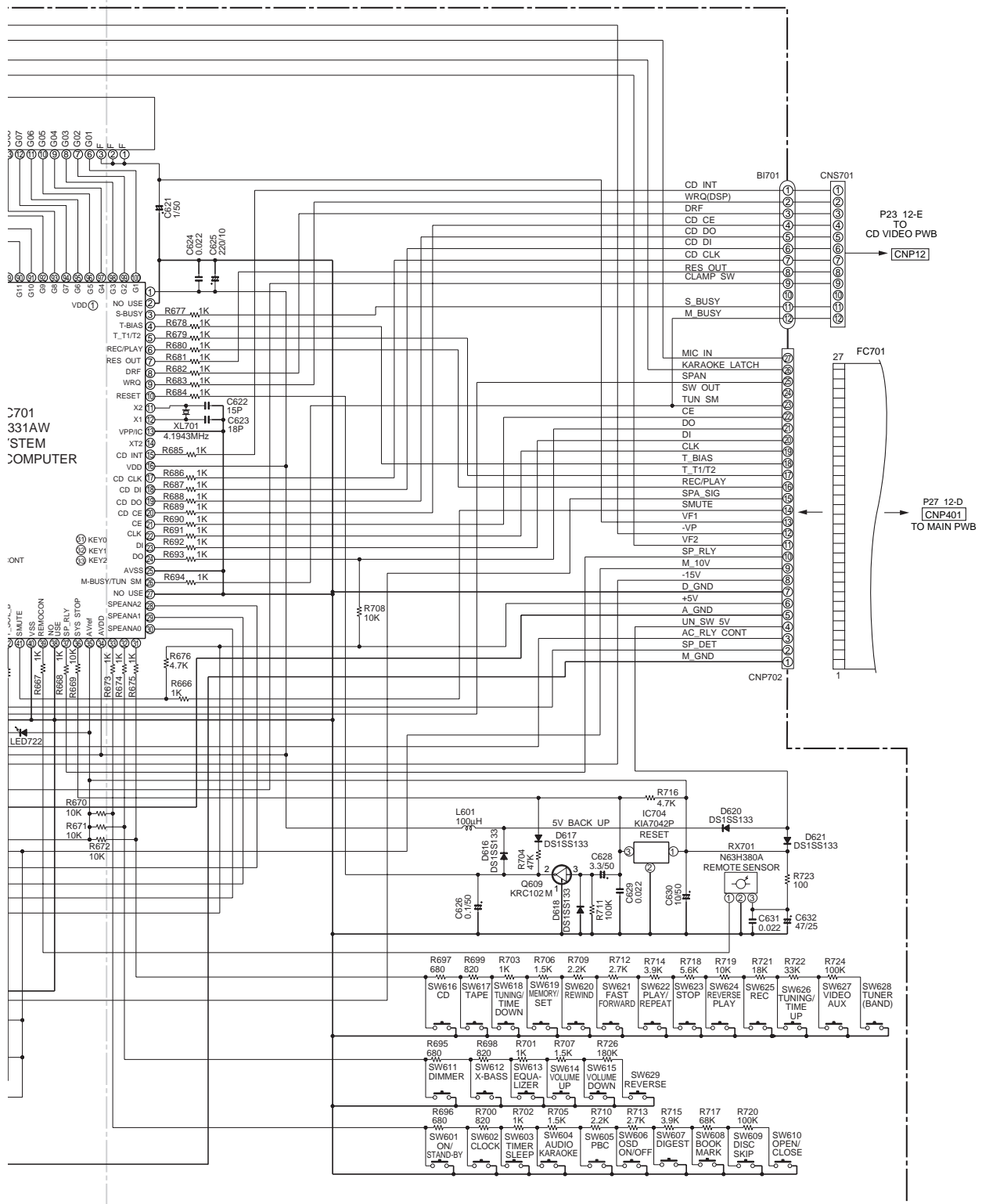
7	8	9	10	11	12
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Figure 23 SCHEMATIC DIAGRAM (4/12)



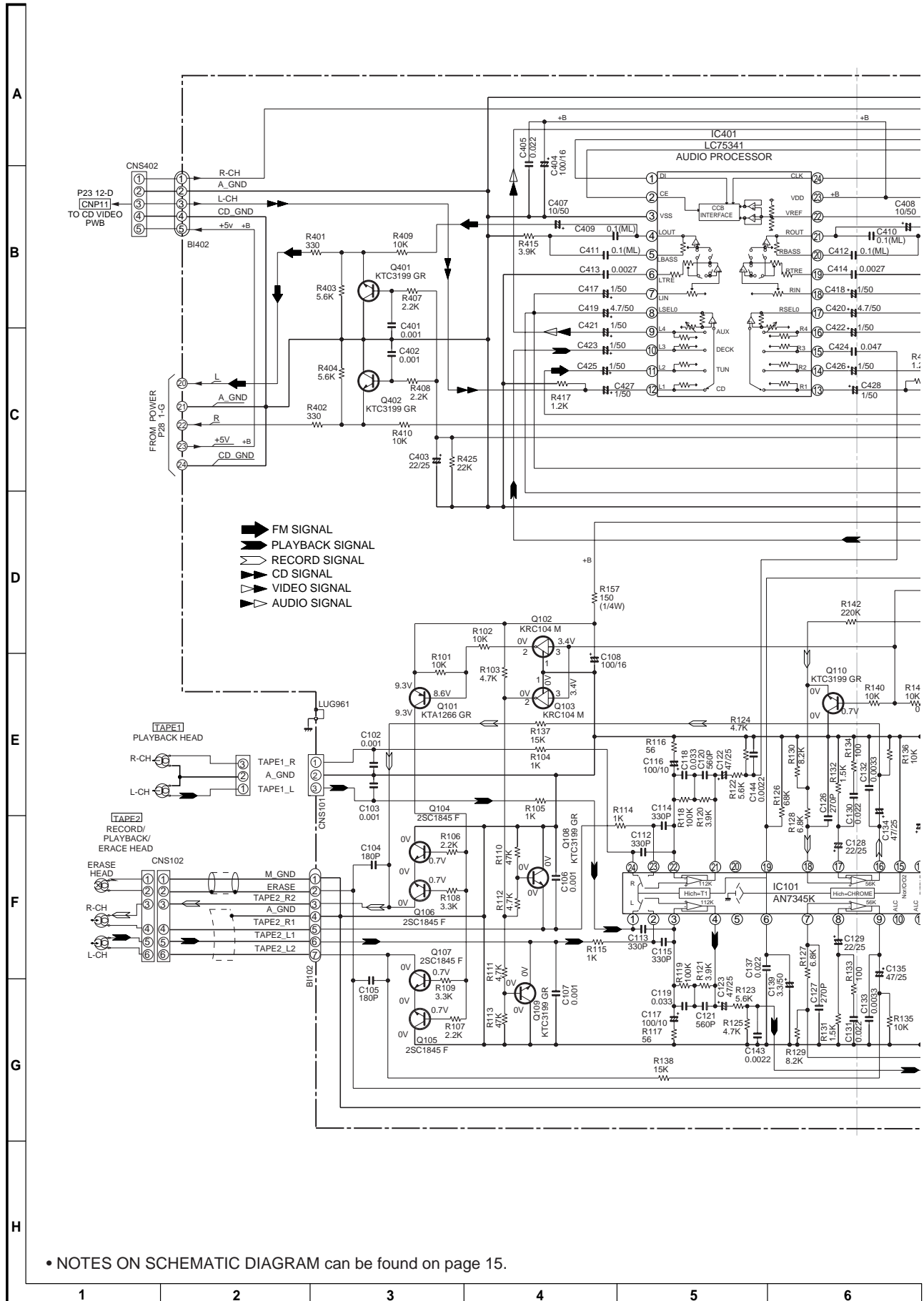
• NOTES ON SCHEMATIC DIAGRAM can be found on page 15.

Figure 24 SCHEMATIC DIAGRAM (5/12)



7	8	9	10	11	12
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Figure 25 SCHEMATIC DIAGRAM (6/12)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 15.

Figure 26 SCHEMATIC DIAGRAM (7/12)

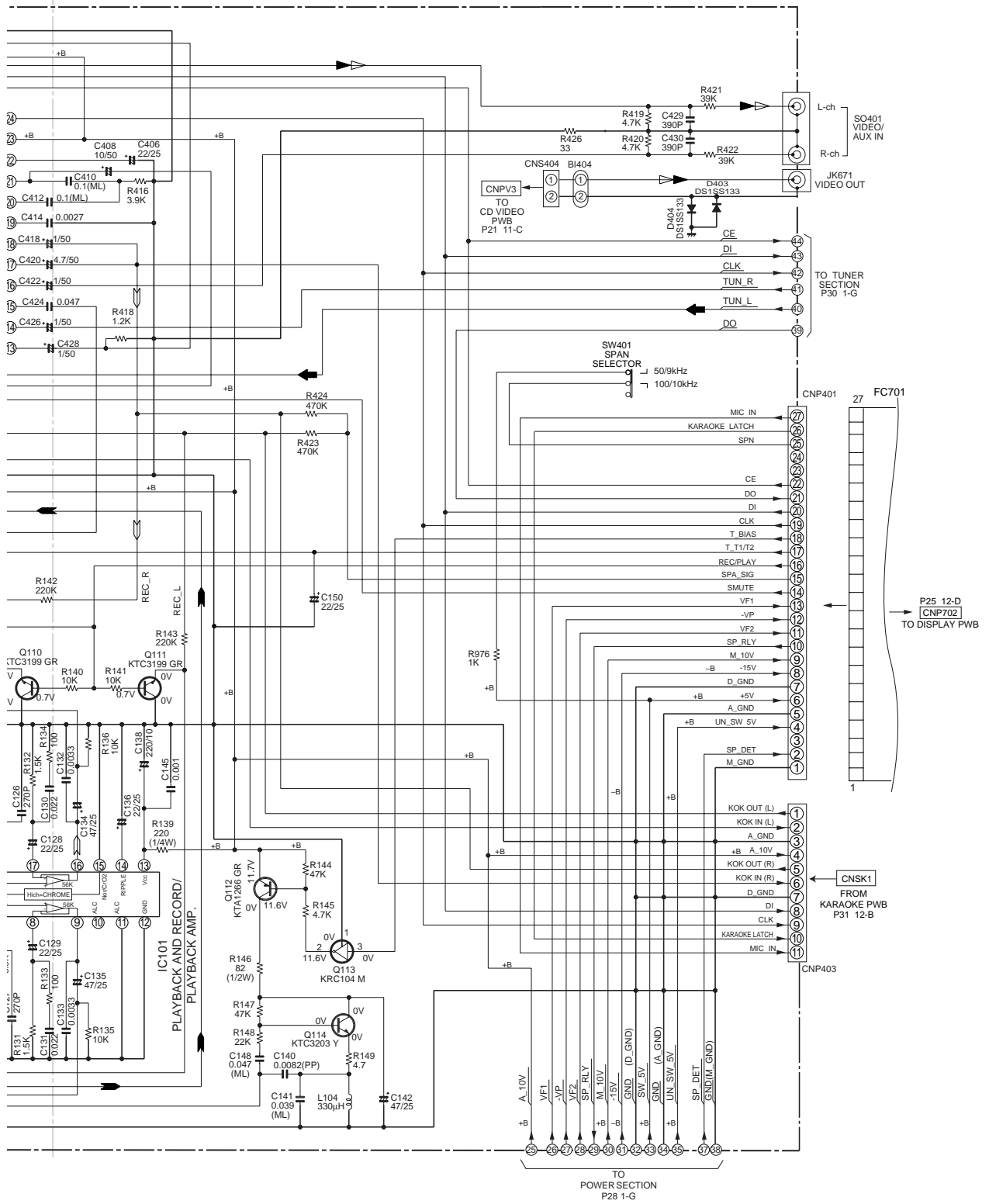


Figure 27 SCHEMATIC DIAGRAM (8/12)

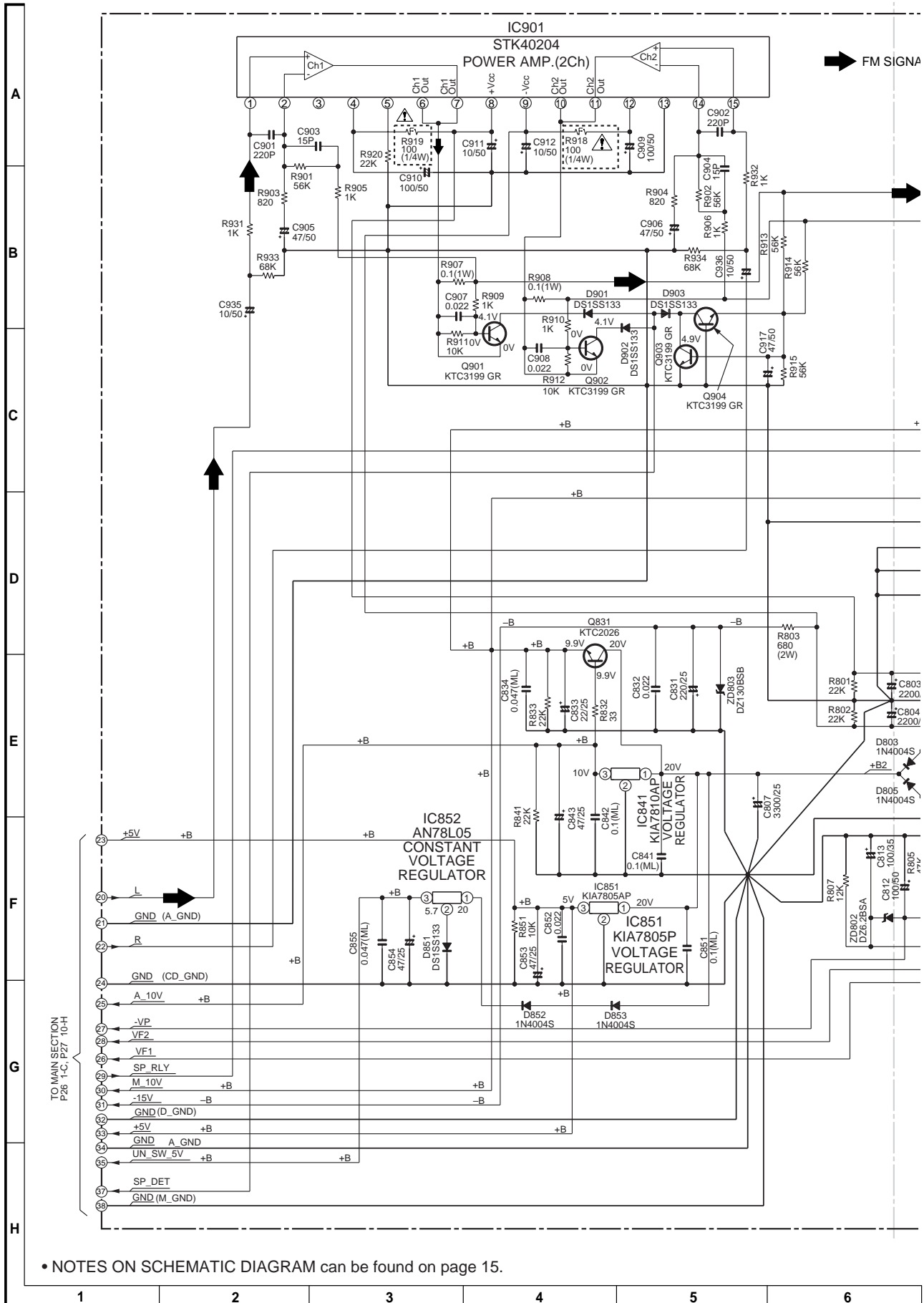
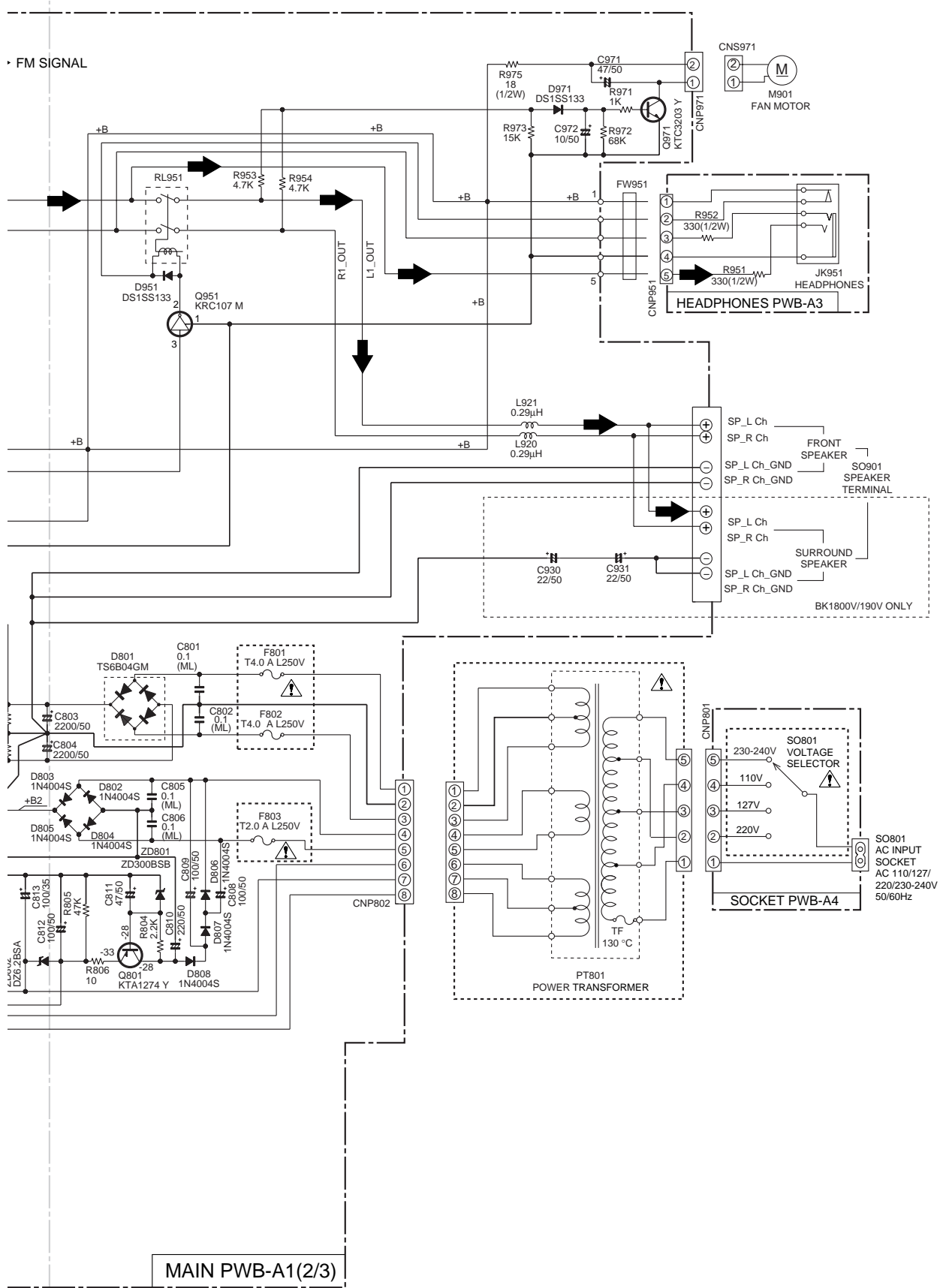


Figure 28 SCHEMATIC DIAGRAM (9/12)



7	8	9	10	11	12
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Figure 29 SCHEMATIC DIAGRAM (10/12)

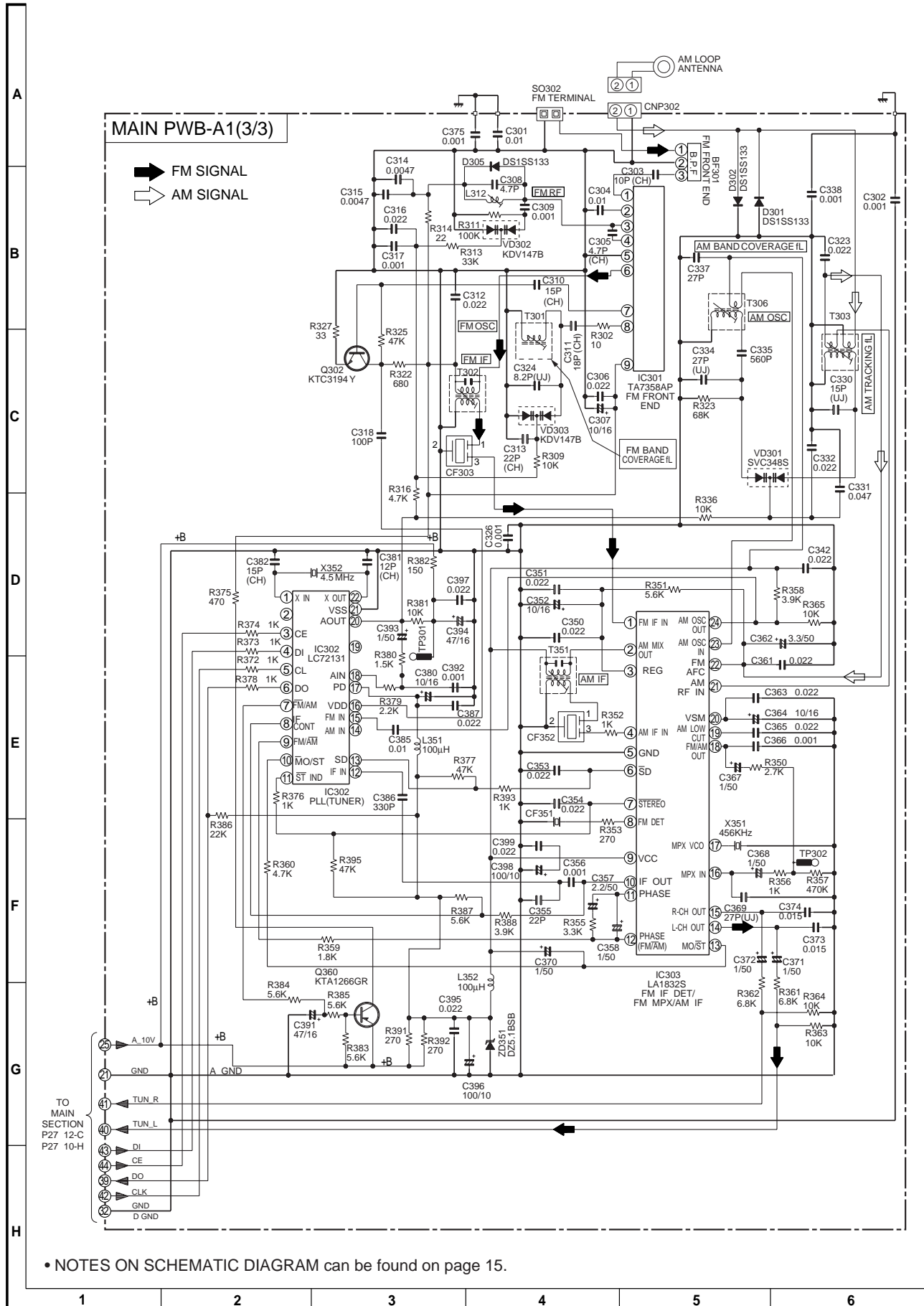


Figure 30 SCHEMATIC DIAGRAM (11/12)

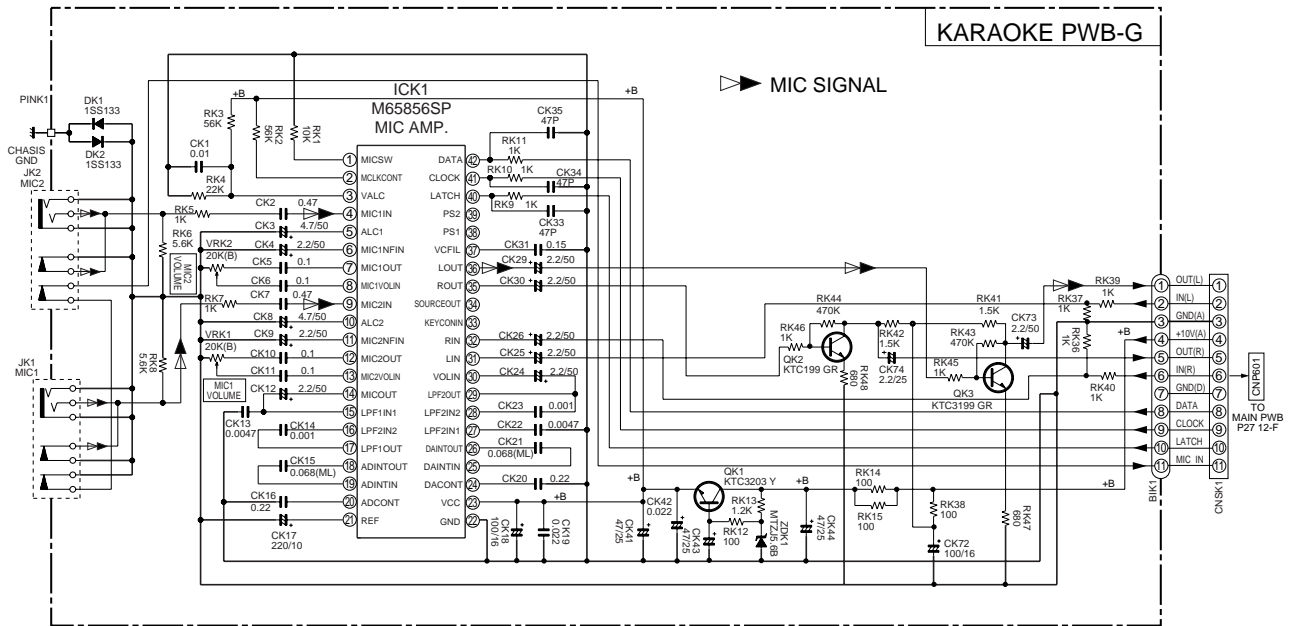


Figure 31 SCHEMATIC DIAGRAM (12/12)

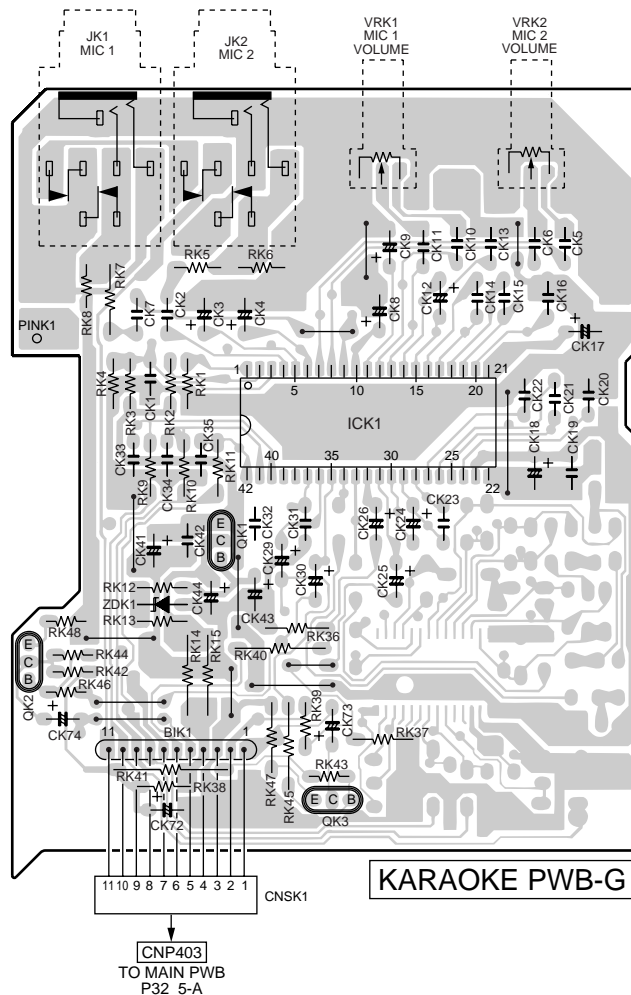


Figure 31 WIRING SIDE OF P.W.BOARD (1/8)

7	8	9	10	11	12
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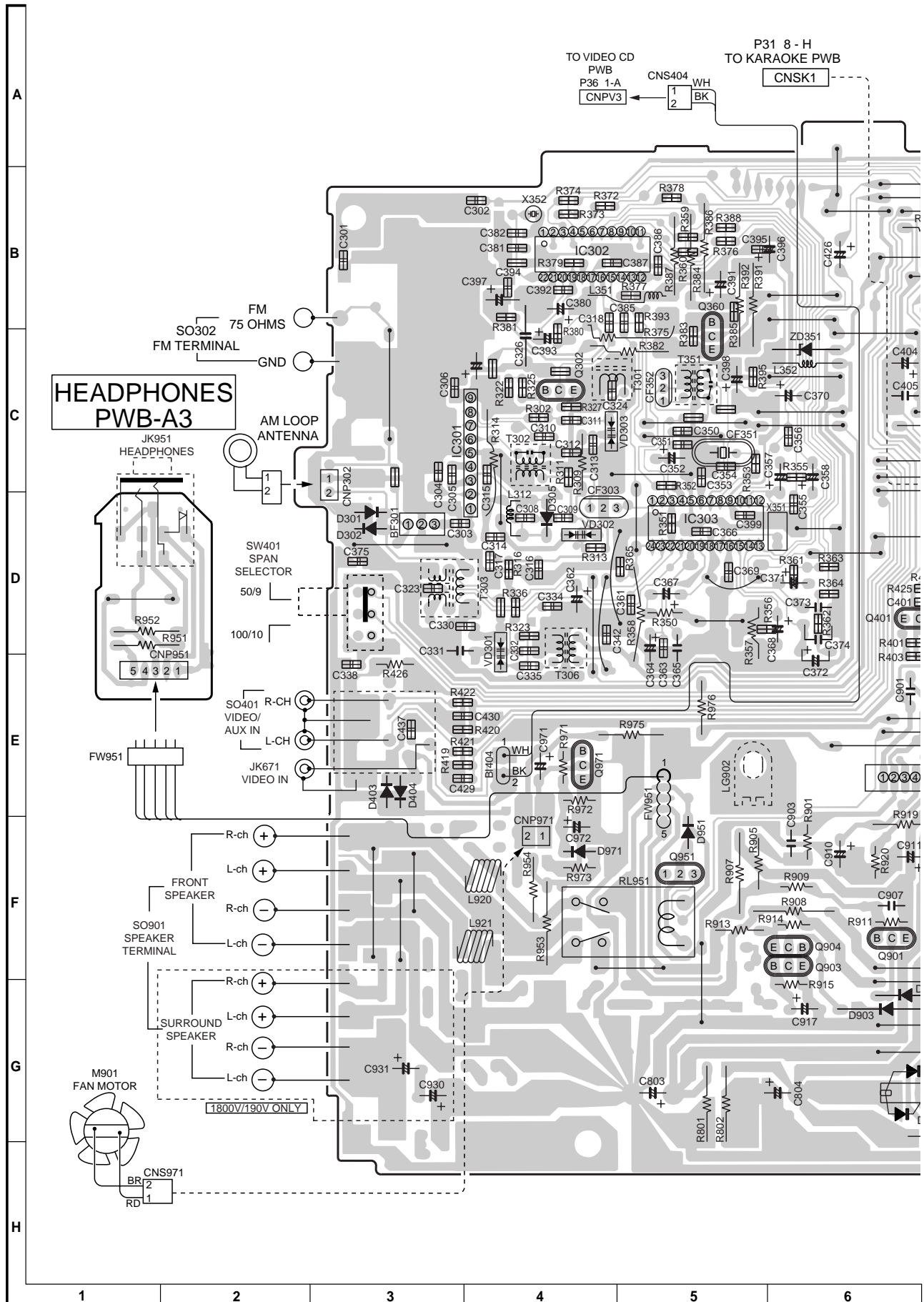
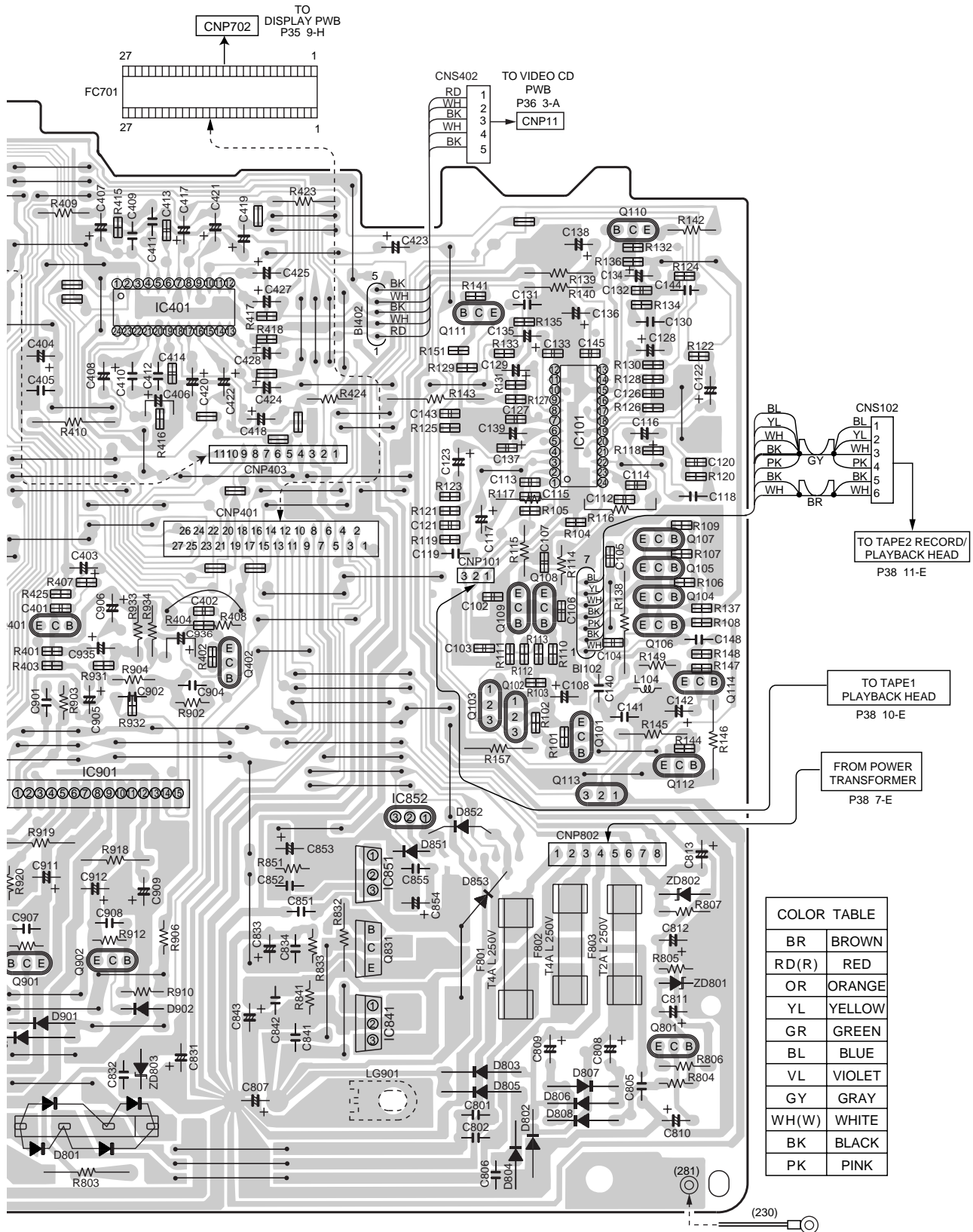


Figure 32 WIRING SIDE OF P.W. BOARD (2/8)



COLOR TABLE

BR	BROWN
RD(R)	RED
OR	ORANGE
YL	YELLOW
GR	GREEN
BL	BLUE
VL	VIOLET
GY	GRAY
WH(W)	WHITE
BK	BLACK
PK	PINK

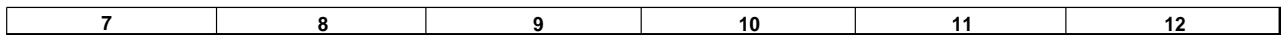


Figure 33 WIRING SIDE OF P.W.BOARD (3/8)

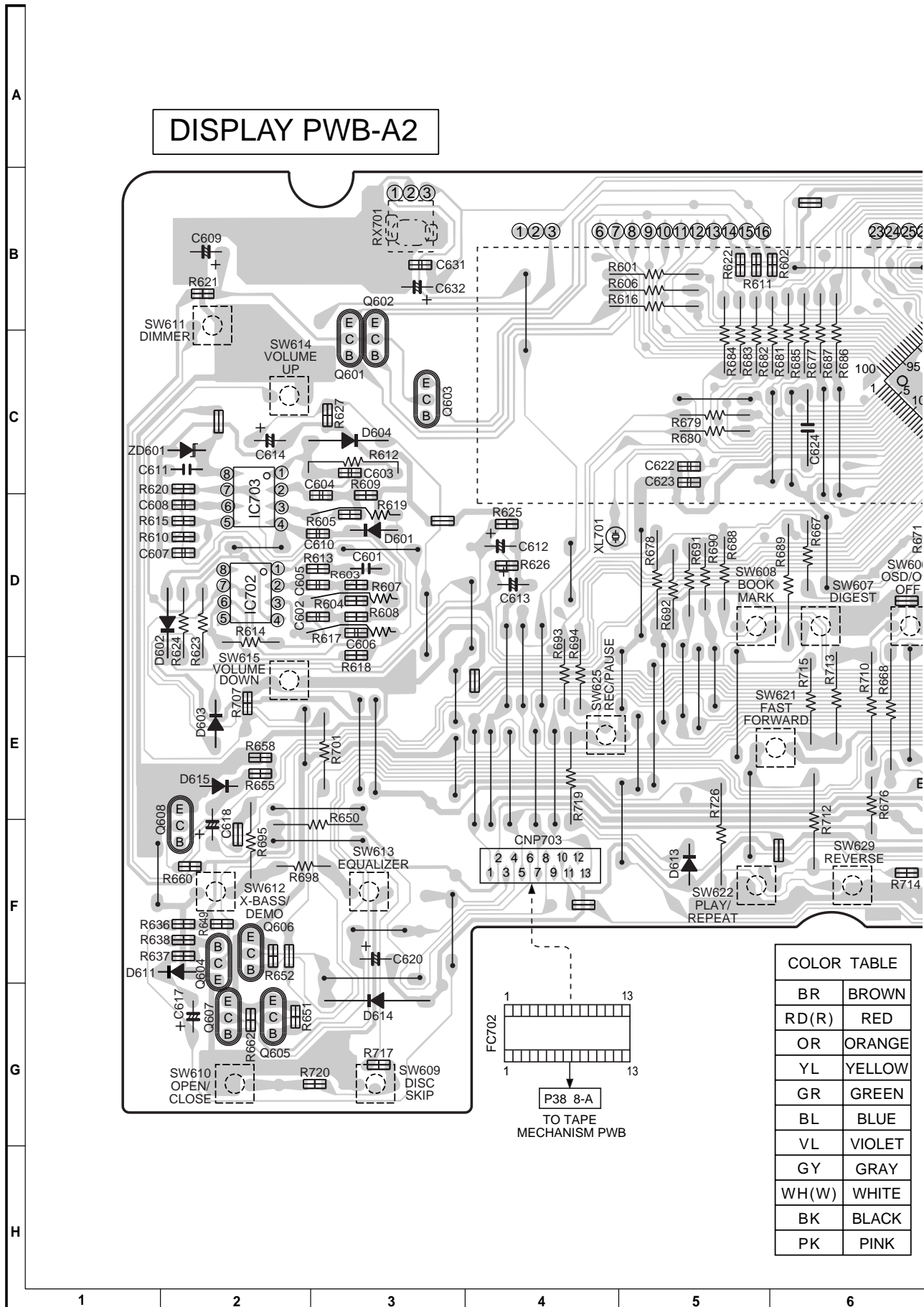


Figure 34 WIRING SIDE OF P.W.BOARD (4/8)

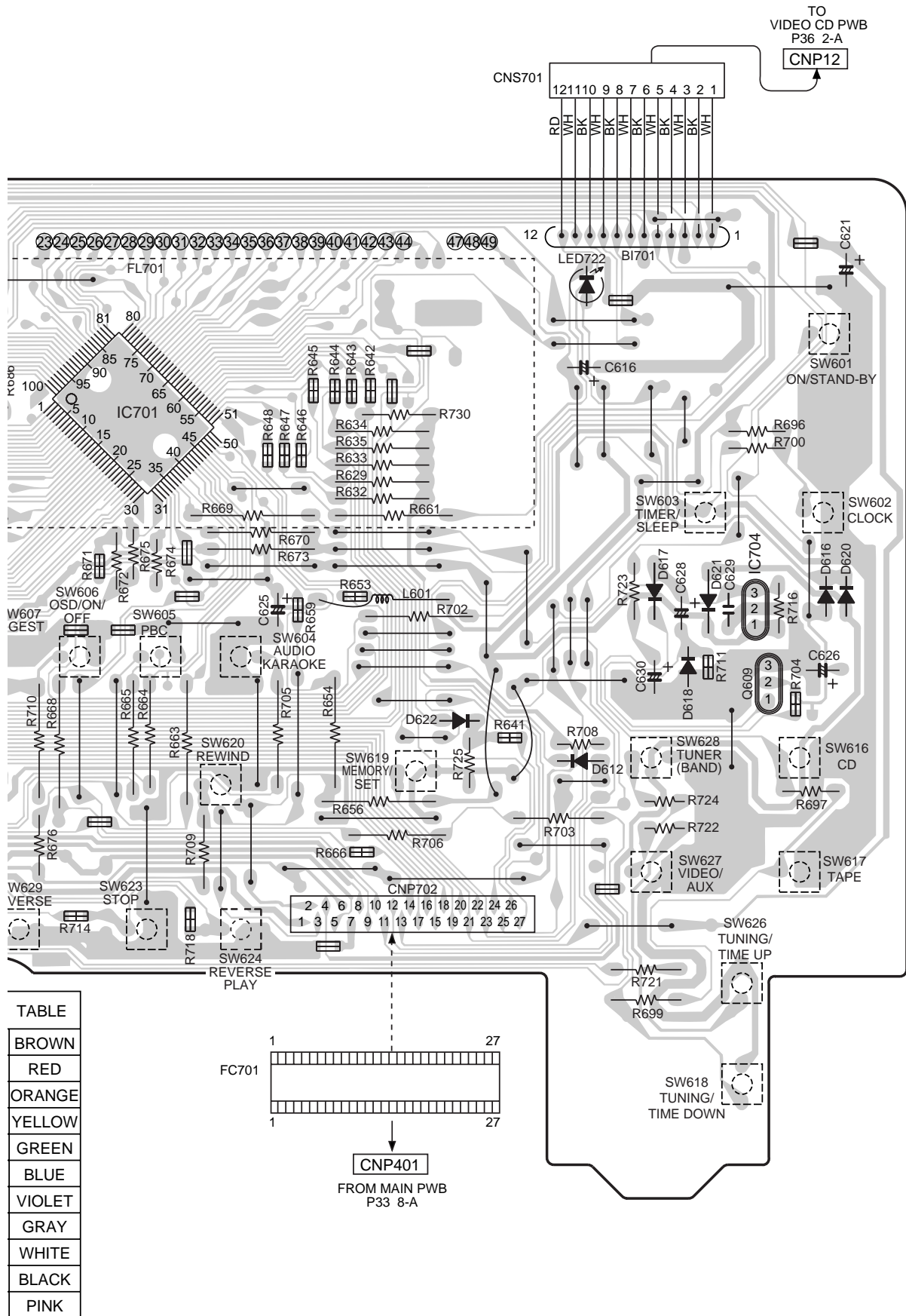
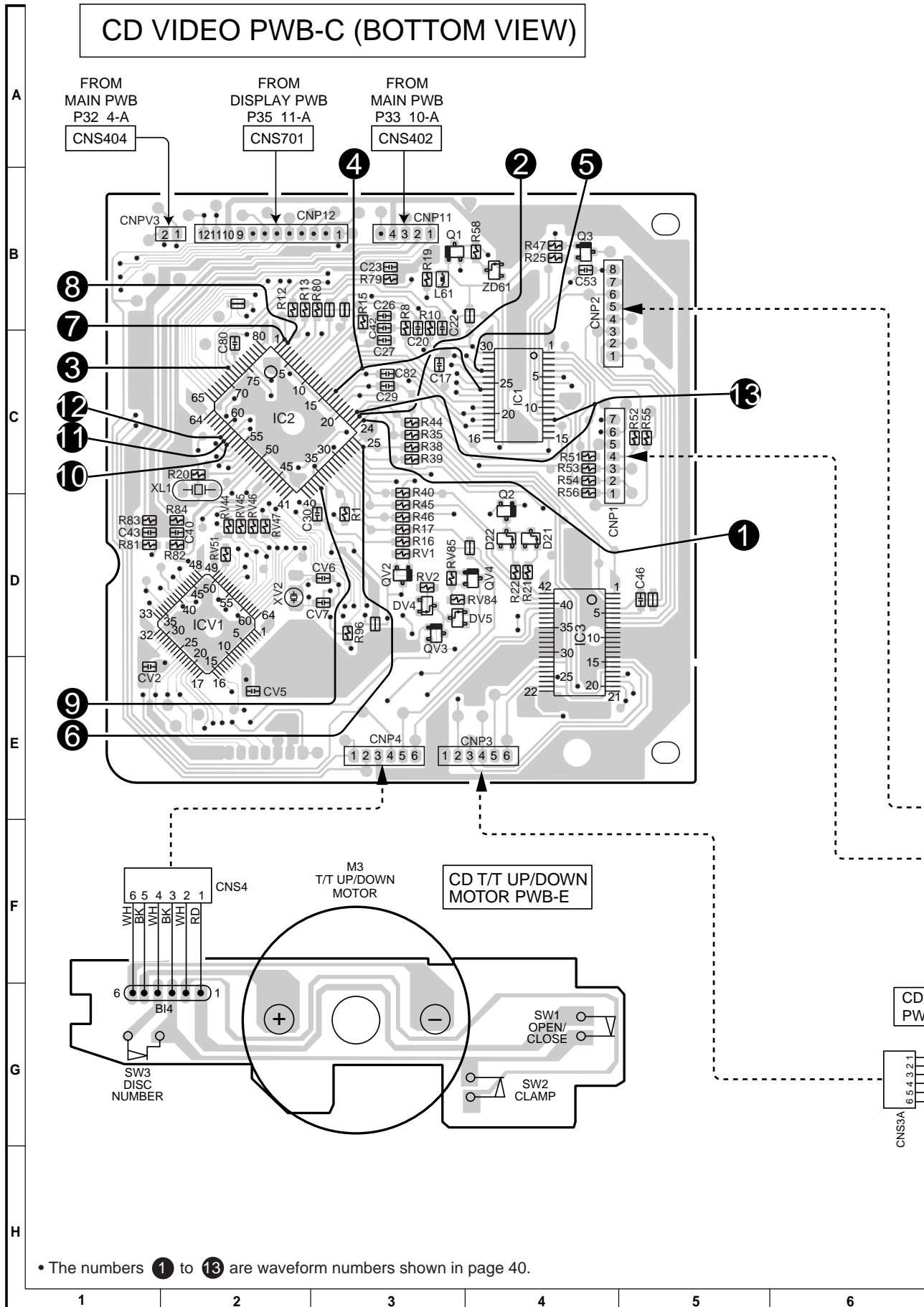


Figure 35 WIRING SIDE OF P.W.BOARD (5/8)

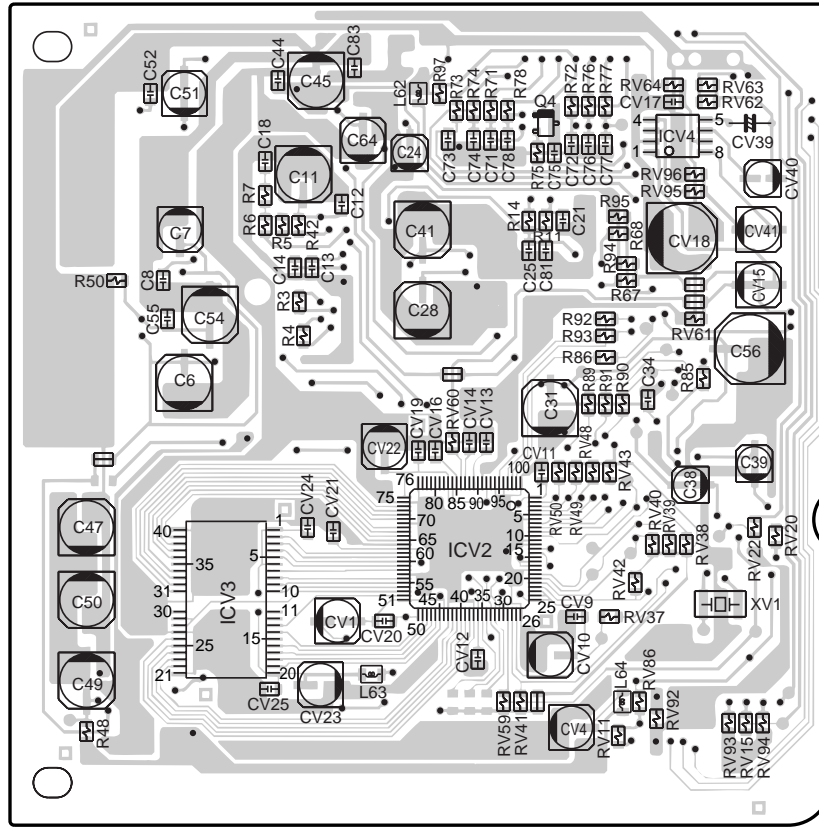
CD VIDEO PWB-C (BOTTOM VIEW)



• The numbers 1 to 13 are waveform numbers shown in page 40.

Figure 36 WIRING SIDE OF P.W.BOARD (6/8)

CD VIDEO PWB-C (TOP VIEW)



COLOR TABLE	
BR	BROWN
RD(R)	RED
OR	ORANGE
YL	YELLOW
GR	GREEN
BL	BLUE
VL	VIOLET
GY	GRAY
WH(W)	WHITE
BK	BLACK
PK	PINK

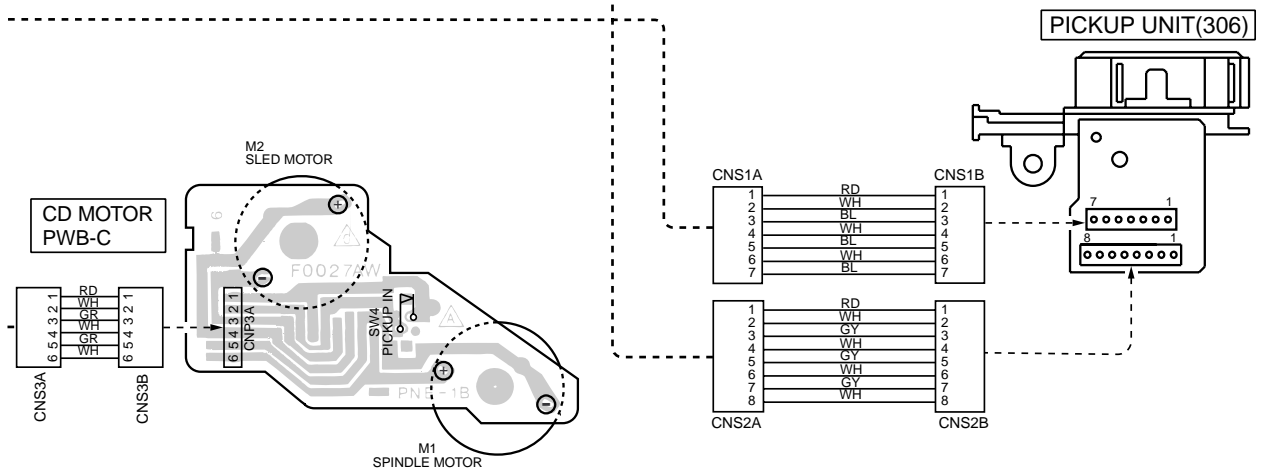


Figure 37 WIRING SIDE OF P.W. BOARD (7/8)

CD-BK1600V/1800V/190V

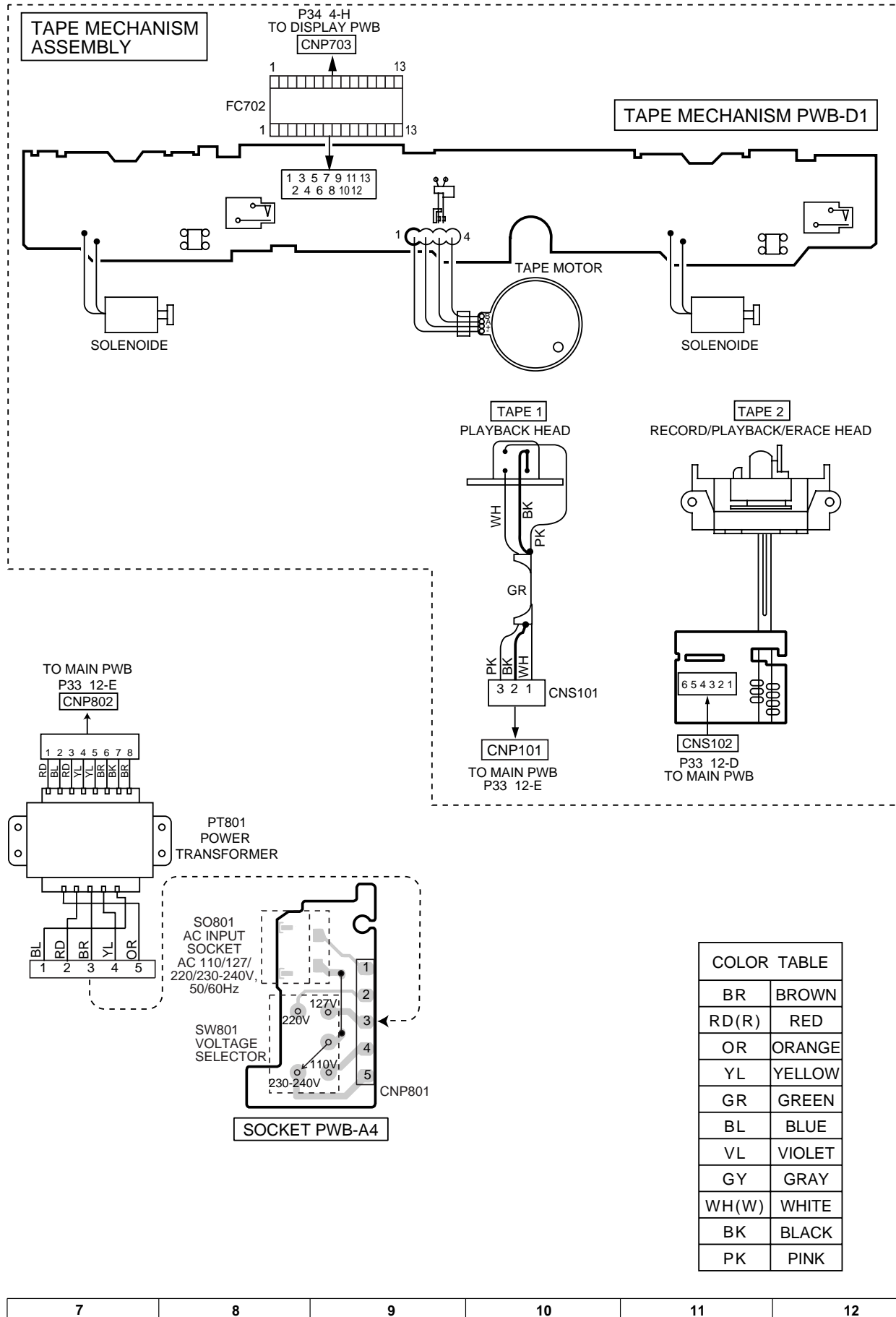
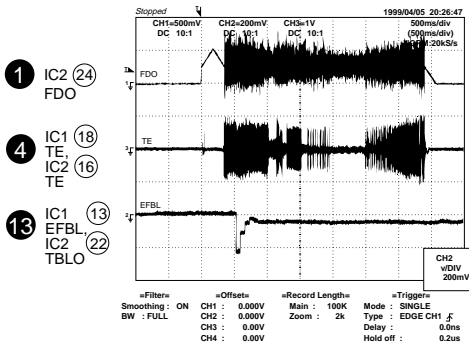
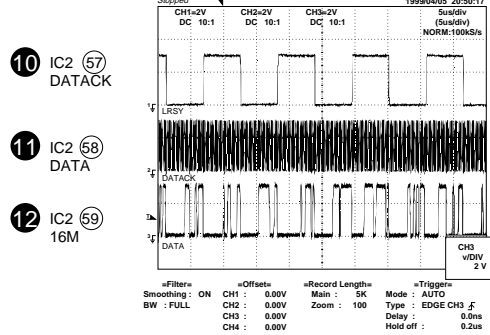
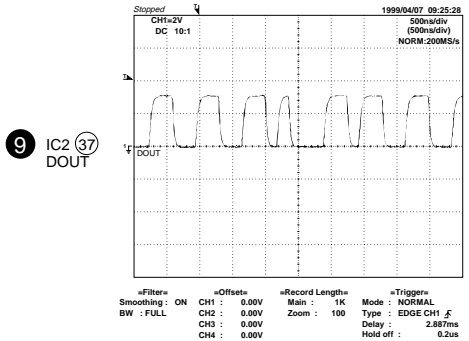
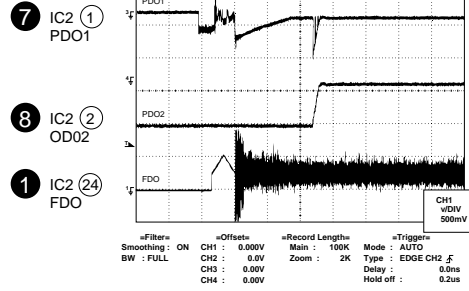
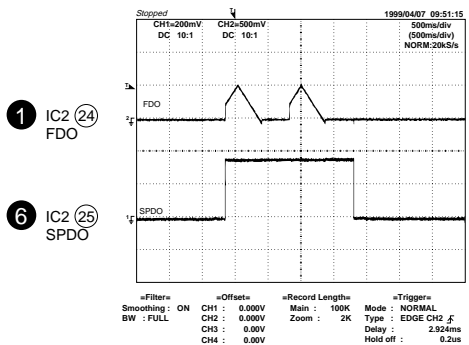
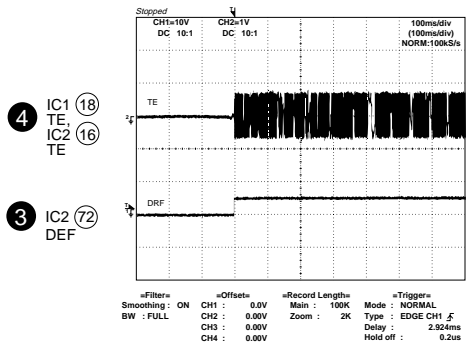
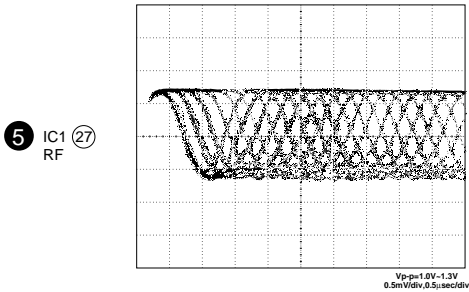
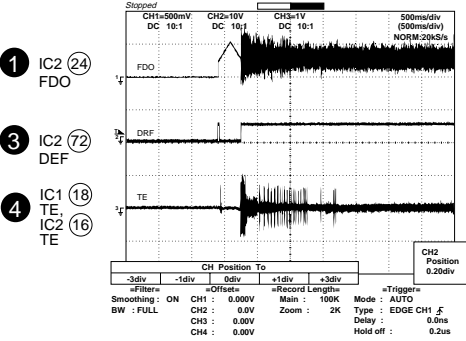
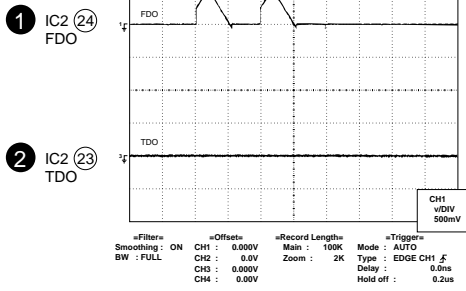


Figure 38 WIRING SIDE OF P.W.BOARD (8/8)

WAVEFORMS OF CD CIRCUIT



TROUBLE SHOOTING

When the CD does not function

When the CD section does not operate when the objective lens of the optical pickup is dirty, this section may not operate. Clean the objective lens, and check the playback operation. When this section does not operate even after the above step is taken, check the following items.

Remove the cabinet and follow the trouble shooting instructions.

"Track skipping and/or no TOC (Table Of Contents) may be caused by build up of dust other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

Turn the power off.

Gently clean the lens with a lens cleaning tissue and a small amount of isopropyl alcohol.

Do not touch the lens with the bare hand.

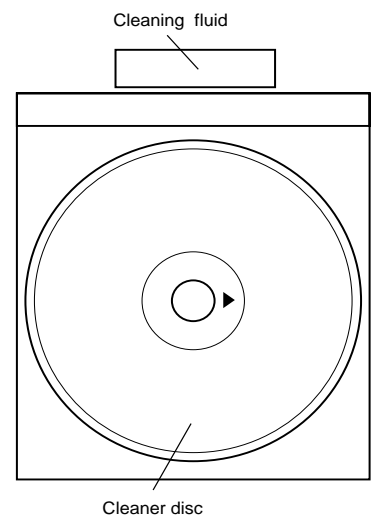
		Parts code
1.	CD optical pickup Lens cleaner disc	UDSKA0004AFZZ

HOW TO USE

- Using the brush in the cleaner cap, apply 1 or 2 drops of the cleaning fluid to the brush on the CD cleaner disc which has the mark next to it.
- Place the CD cleaner disc onto the CD disc tray with the brush side down, then press the play button.
- You will hear music for about 20 seconds and the CD player will automatically stop. If it continuous to turn, press the stop button.

CAUTION

- The CD lens cleaner should be effective for 30-50 operations, however if the brushes become worn out earlier then please the cleaner disc.
- If the CD cleaner brushes become very wet then wipe off any excess fluid with a soft cloth.
- Do not drink the cleaner fluid or allow it to come in contact with the eyes. In the event of this happening then drink and / or rinse with clean water and seek medical advice.
- The CD cleaner disk must not be used on car CD players or on computer CD-ROM drives.
- All rights reserved. Unauthorized duplicating, broadcasting and renting this product is prohibited by law.



When a CD cannot be played

1. "E-CD01" is displayed.

- Check the power to IC2 (LC78641E), the presence of the clock signal (16.93 MHz) and the status of the RESET terminal (pin 71 on IC2).
- Dose the pickup move to the PICKUP-IN Switch (SW4) position?

If (1) and (2) are OK, check the system microcomputer (especially the communication line with the DSP).

2. Pressing the CD operation key is accepted, but playback does not occur.

- Focus-HF system check
- Tracking system check
- Spin system check
- PLL system check
- Others

CD-BK1600V/1800V/190V

(1) Focus-HF system check

Although a CD is inserted and the cover is closed, "NO DISC" is displayed.

Press the OPEN/CLOSE switch (SW1) without inserting a disc, and try starting the playback operation.

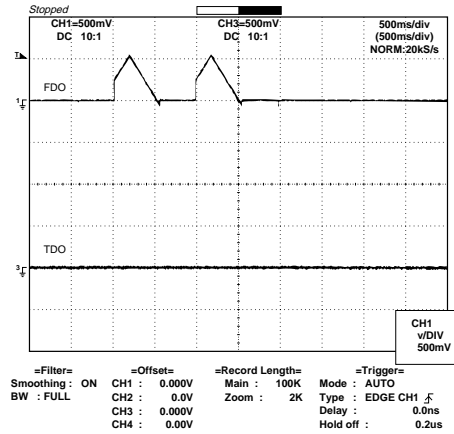
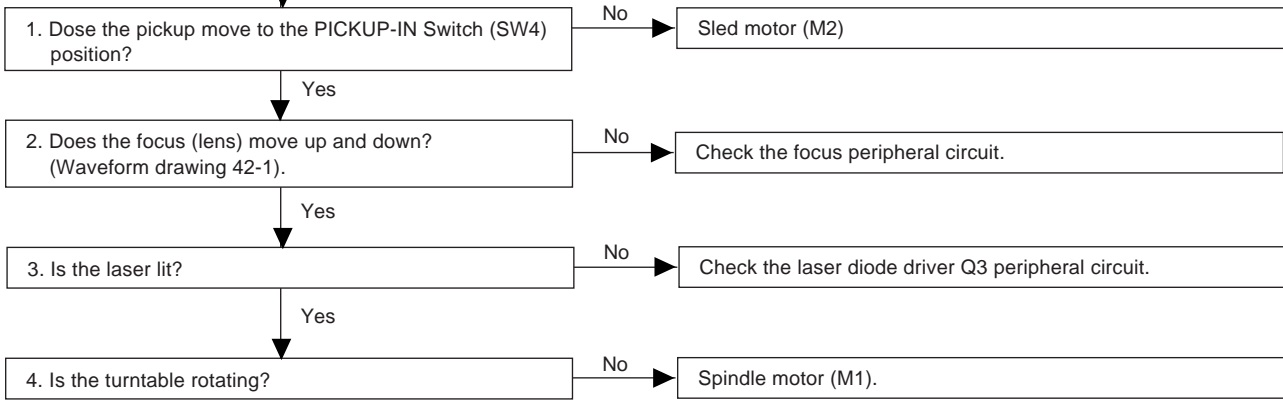


Figure 42-1



When a disc is loaded, start playback operation.

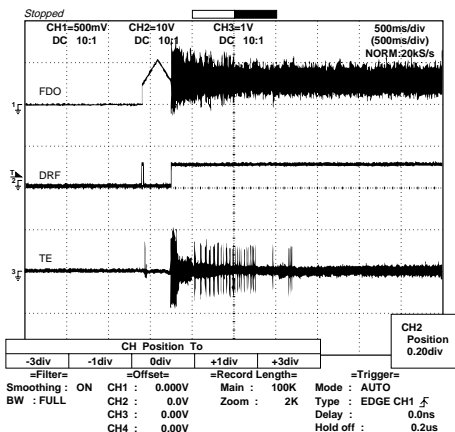
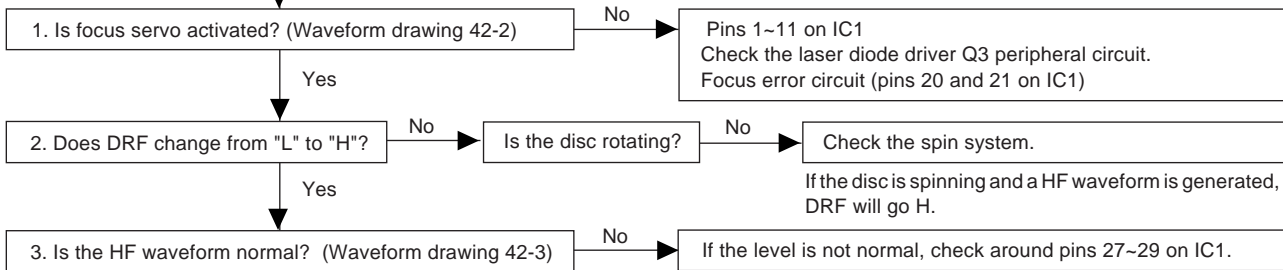


Figure 42-2

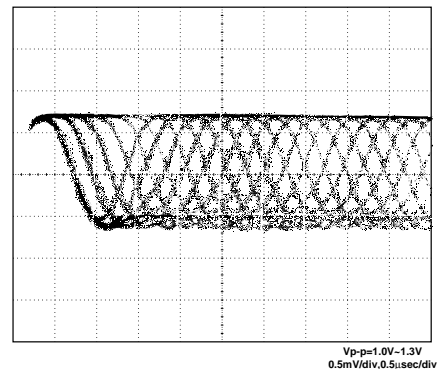


Figure 42-3

(2) Tracking system check

Check the TE waveform at pin 18 on IC1.

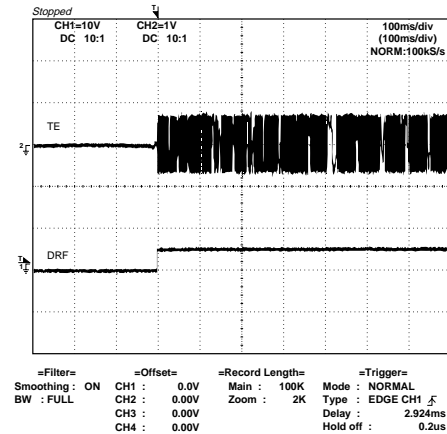
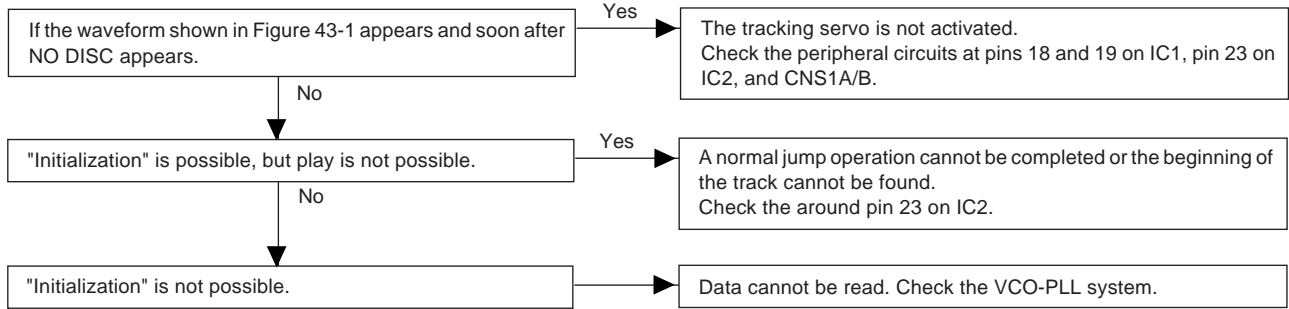


Figure 43-1

(3) Spin system check

Press the OPEN/CLOSE switch without inserting a disc, and then try starting the play operation.

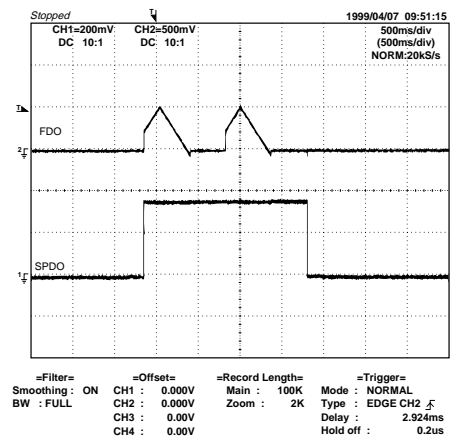
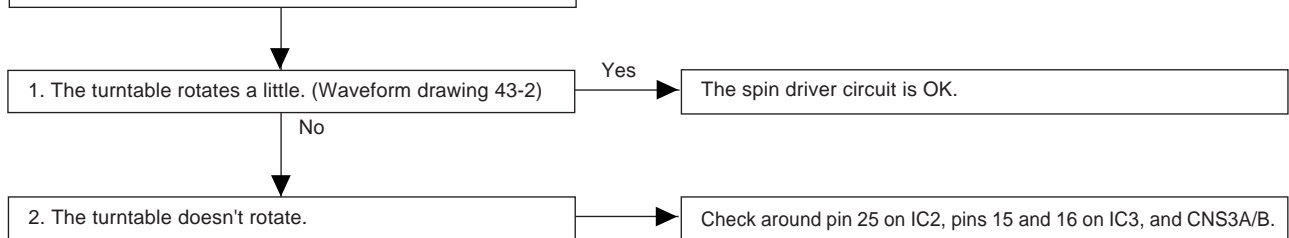


Figure 43-2

CD-BK1600V/1800V/190V

(4) PLL system check

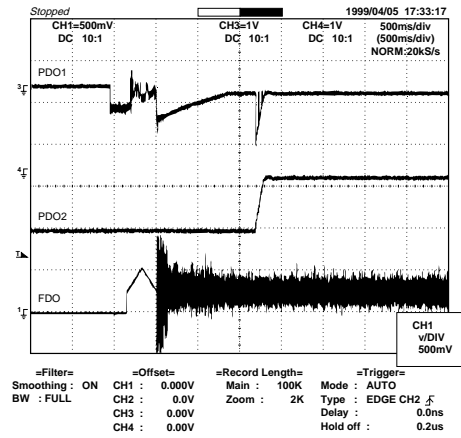
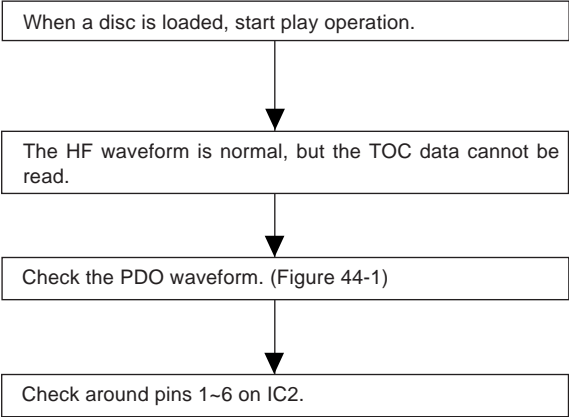


Figure 44-1

(5) Others

The HF waveform is normal and the time is displayed normally, but no sound is produced. Or the sound has dropouts.

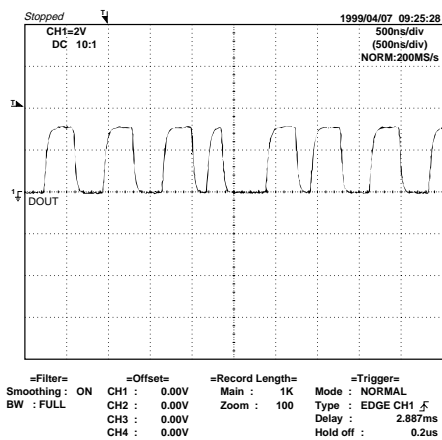
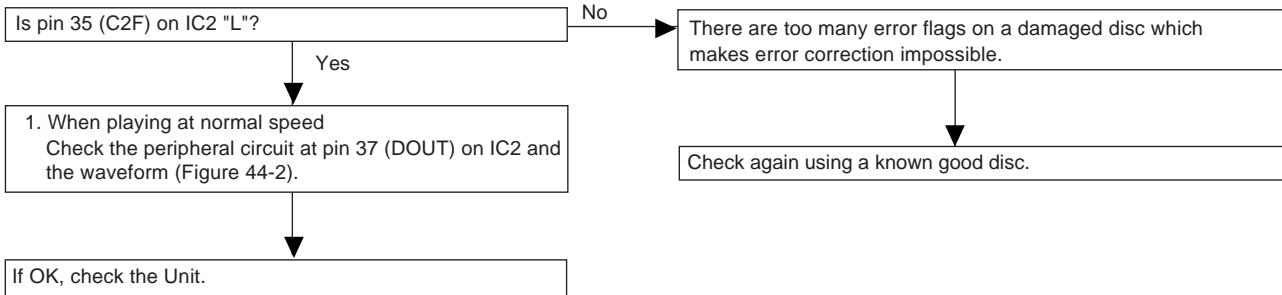
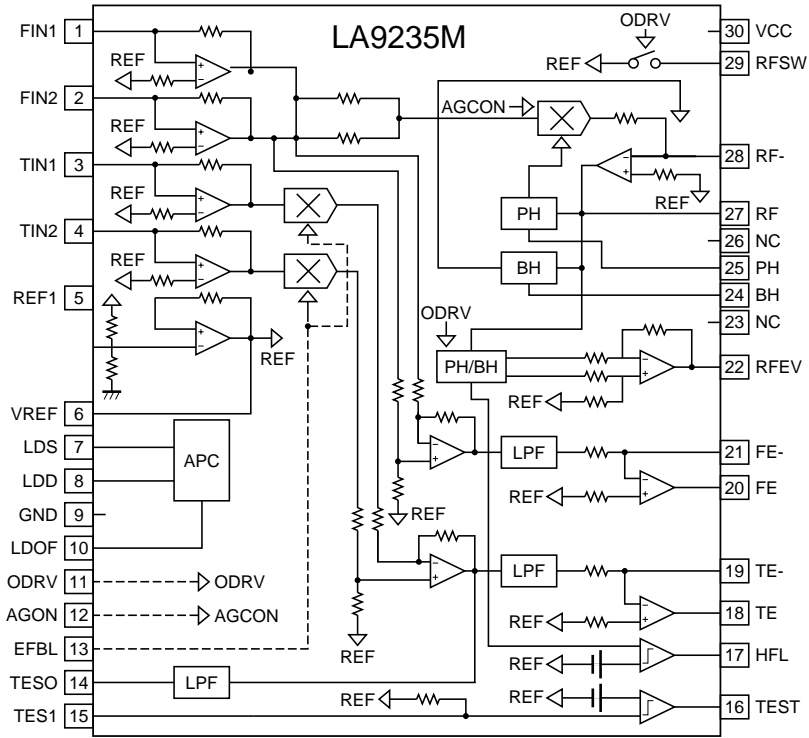


Figure 44-2

FUNCTION TABLE OF IC

IC1 VHiLA9235M/-1: Servo Amp. (LA9235M)



IC2 VHiLC78636E-1: Servo/Signal Control (LC78636E)

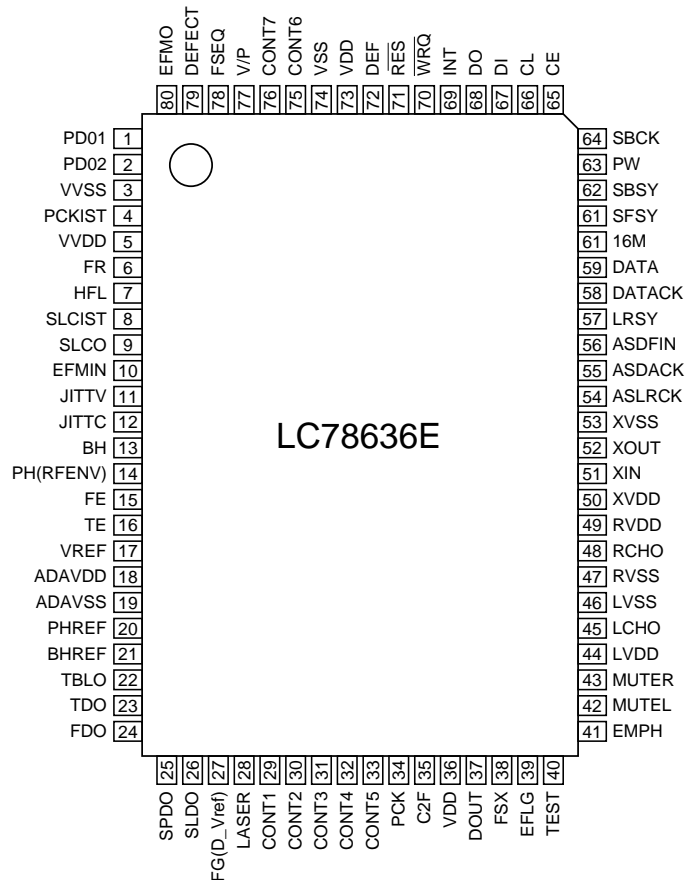


Figure 45 BLOCK DIAGRAM OF IC

CD-BK1600V/1800V/190V

IC2 VHiLC78636E-1: Servo/Signal Control (LC78636E) (1/2)

Pin No.	Terminal Name	Input/Output	Setting in Reset	Function	
1	PD01	Output	–	For PULL	Phase-comparison output terminal for built-in VOC control.
2	PD02	Output	–		Phase-comparison output terminal for built-in VOC control. Rough servo : OFF, phase servo : ON.
3	VVSS	–	–		Ground terminal for built-in VCO.
4	PCKIST	AI	–		Resistor terminal for setting the PDO output current.
5	VVDD	–	–		Power terminal for built-in VCO.
6	FR	AI	–		Resistor terminal for setting the VCO frequency range.
7	HFL	Input	–	Mirror detection signal input terminal.	
8	SLCIST	AI	–	For slice level control	Resistance connection terminal for current adjustment of SLCO output.
9	SLCO	Output	–		Control output.
10	EFMIN	Input	–		EFM signal input terminal.
11*	JITTV	Output	Unfixed	Jitter detection/monitor terminal.	
12	JITTC	Output	–	Jitter detection/adjustment terminal.	
13	BH	Input	–	BH signal input terminal. A/D input.	
14	PH(RFENV)	Input	–	PH signal or RFENV signal input terminal. A/D input.	
15	FE	Input	–	FE signal input terminal. A/D input.	
16	TE	Input	–	TE signal input terminal. A/D input.	
17	VREF	Input	–	VREF signal input terminal. A/D input.	
18	ADAVDD	–	–	AD for servo, D/A power terminal.	
19	ADAVSS	–	–	AD for servo, D/A ground terminal.	
20*	PHREF	Output	(1/2VDD)	PH reference output terminal. D/A output.	
21*	BHREF	Output	(1/2VDD)	BH reference output terminal. D/A output.	
22	TBLO	Output	(1/2VDD)	Output terminal for tracking balance. D/A output.	
23	TDO	Output	(1/2VDD)	Output terminal for tracking control. D/A output.	
24	FDO	Output	(1/2VDD)	Output terminal for focus control. D/A output.	
25	SPDO	Output	(1/2VDD)	Output terminal for spindle control. D/A output.	
26	SLDO	Output	(1/2VDD)	Output terminal for sled control. D/A output.	
27*	FG(D_Vref)	Input	–	FG signal input terminal. (When not used,connect to 0V)	
28	LASER	Output	L	LASER ON/OFF control terminal.	
29	CONT1	In/Output	Input mode	General purpose input/output terminal 1.	Controlled with serial data command from microcomputer. When not used, set it as the input terminal and open it by connecting to 0V, or set it as the output terminal and open it.
30	CONT2	In/Output	Input mode		
31	CONT3	In/Output	Input mode		
32	CONT4	In/Output	Input mode		
33	CONT5	In/Output	Input mode		
34*	PCK	Output	H	Clock monitor terminal for EFM data replay. 4.3218MHz as phase clock.	
35*	C2F	Output	H	C2 flag output terminal.	
36	VDD	–	–	Power terminal of digital system.	
37*	DOUT	Output	L	Output terminal of digital OUT. (EIAJ format)	
38*	FSX	Output	L	Output terminal of synchronous signal of 7.35kHz divided from quartz oscillation.	
39*	EFLG	Output	L	C1,C2 correct monitor terminal.	
40	TEST	Input	–	Input terminal for test. Surely connected to 0V.	
41*	EMPH	In/Output	Input mode	Emphasis terminal. After resetting, it is configured as an input terminal. It can be controlled from the outside. It is also becomes a emphasis monitor terminal under command control.	
42*	MUTEL	Output	H	Mute output terminal for L channel.	
43*	MUTER	Output	H	Mute output terminal for R channel.	

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC2 VHiLC78636E-1: Servo/Signal Control (LC78636E) (2/2)

Pin No.	Terminal Name	Input/Output	Setting in Reset	Function	
44	LVDD	–	–	L channel	Power terminal for L channel.
45	LCHO	Output	1/2VDD	D/A converter	L channel output terminal.
46	LVSS	–	–		Ground terminal for L channel. Surely connected to 0V.
47	RVSS	–	–	R channel	Ground terminal for R channel. Surely connected to 0V.
48	RCHO	Output	1/2VDD	D/A converter	R channel output terminal.
49	RVDD	–	–		Power terminal for R channel.
50	XVDD	–	–	For quartz oscillation	Power terminal for quartz oscillation.
51	XIN	Input	Oscillation		Ground terminal of 16.9344MHz quartz oscillation.
52	XOUT	Output	Oscillation		Ground terminal for quartz oscillation. Surely connected to 0V.
53	XVSS	–	–	For anti shock mode	
54	ASLRCK	Input	–		L/R clock input terminal. (When not used,connect to 0V)
55	ASDACK	Input	–		Bit clock input terminal. (When not used,connect to 0V)
56	ASDFIN	Input	–		L/R channel data input terminal. (When not used,connect to 0V)
57*	LRSY	Output	L	For digital data output	L/R clock output terminal.
58*	DATAACK	Output	L		Bit clock output terminal.
59*	DATA	Output	L		L/R channel data output terminal.
60*	16M	Output	Clock output	16.9344MHz output terminal.	
61*	SFSY	Output	L	Output terminal of synchronous signal of subcode frame. It drops when subcode stand by.	
62*	SBSY	Output	L	Output terminal of synchronous signal of subcode block.	
63*	PW	Output	L	Output terminal of subcodes P,A,R,S,T,U and W.	
64	SBCK	Input	–	Clock input terminal to read subcode. (When not used,connect to 0V)	
65	CE	Input	–	For microcomputer interface	Chip enable signal input terminal.
66	CL	Input	–		Data transmission clock input terminal.
67	DI	Input	–		Data input terminal.
68	DO	Output	L		Data output terminal.
69	INT	Output	H		Interruption signal output terminal.
70	WRQ	Output	H		Interruption signal output terminal.
71	RES	Input	–	Reset input terminal of LC78640. When turning on power, set it at "L".	
72	DEF	Output	L	Focus ON detection terminal.	
73	VDD5V	–	–	Power terminal for microcomputer interface.	
74	VSS	–	–	Ground terminal of digital system. Surely connected to 0V.	
75	CONT6	In/Output	Input mode	General purpose input/output terminal 6.	Controlled with serial data command from microcomputer. When not used, set it as the input terminal and open it by connecting to 0V, or set it as the output terminal and open it.
76	CONT7	In/Output	Input mode	General purpose input/output terminal 7.	
77*	V/P	Output	H	Monitor output terminal for automatic switch of rough servo/phase control. "H" for rough servo, and "L" for phase servo.	
78*	FSEQ	Output	L	Output terminal synchronous signal detection. "H" is output when synchronous signal detected by EFM signal matches synchronous signal internally generated.	
79*	DEFECT	In/Output	Input mode	Defect terminal. After resetting, it is configured as an input terminal. It can be controlled from the outside. It also becomes a defect monitor terminal under command control	
80*	EFMO	Output	Unfixed	EFM signal output terminal.	

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

Be sure to supply the same potential to each power terminal. (VVDD,ADAVDD,VDD,LVDD,RVDD,XVDD)

Terminal witch is controlled by the power terminal (VDD5V) for a microcomputer interface :

CE (65pin), CL (66pin), DI (67pin), DO (68pin), INT (69pin), WRQ (70pin), RES (71pin), DRF (72pin), CONT6 (75pin), CONT7 (76pin)

CD-BK1600V/1800V/190V

IC701 RH-iX0331AWZZ: System Microcomputer (IX0331AW) (1/2)

Pin No.	Port Name	Terminal Name	Input/Output	Function
1	VDD	VDD	—	(+) Power supply
2	P37	—	—	GND
3	P36	S-BUSY	Output	Commintcate to mpeg microcomputer
4	P35	T-BIAS	Output	Tape record bias
5	P34	T-T1/T2	Output	Tape T1/T2 change
6	P33	REC/PLAY	Output	Tape rec/play change
7	P32	RES OUT	Output	CD DSP reset & mpeg microcomputer reset
8	P31	DRF	Input	CD RF level detection
9	P30	WRQ	Input	CD DSP write requeset
10	RESET	RESET	Input	Reset
11	X2	X2	Output	Main clock
12	X1	X1	Input	Main clock
13	VPP/IC	VPP/IC	—	GND
14*	XT2	XT2	—	Open
15	P04	CD INT	Input	CD DSP interrupt
16	VDD	VDD	—	(+) Power supply
17	P27	CD CLK	Output	CD DSP clock/mpeg microcomputer clock
18	P26	CD DI	Output	CD DSP command/mpeg microcomputer comma
19	P25	CD DO	Input	CD DSP code Q out/mpeg microcomputer data input
20	P24	CD CE	Output	CD DSP CE output
21	P23	CE	Output	CE output
22	P22	CLK	Output	Clock output
23	P21	DI	Output	Data output
24	P20	DO	Output	Data input
25	AVSS	AVSS	—	Analog ground
26	ANI7 P17	TUN SM M-BUSY	Input Input	Tuner signal meter input Commintcate to mpeg microcomputer m_busy
27	ANI6	NO USE	Input	GND
28	ANI5	SPEANA 2	Input	Speana data input 16 kHz
29	ANI4	SPEANA 1	Input	Speana data input 1 kHz
30	ANI3	SPEANA 0	Input	Speana data input 63 kHz
31-33	ANI2-ANI0	KEY2-KEY0	Input	Key input
34	AVDD	AVDD	—	Analog VDD
35	AVref	AVref	—	Analog ref voltage
36	INTP3	SYS STOP	Input	System stop input
37	P02	SP_RLY	Output	Speaker output relay control
38	INTP1	NO USE	Input	GND
39	INTP0	REMOCON	Input	Remocon input
40	VSS	VSS	—	Ground voltage
41	P74	SMUTE	Output	System mute control
42	P73	T_SOL_B	Output	Tape 2 solenoid control
43	P72	T_SOL_A	Output	Tape 1 solenoid control
44	P71	T_MOTOR	Output	Tape motor control
45	P70	TIMER LED	Output	Timer LED control
46	VDD	VDD	—	(+) Power supply
47	P127	AC RLY_CONT	Output	AC relay control
48*	P126	SPRLY	Output	Speaker output relay control
49	P125	SPK_DET	Input	Speaker output detdction
50	P124	T1 RUN	Input	Tape 1 run pulse input
51	P123	T2 RUN	Input	Tape 2 run pulse input
52	P122	CD CLAMP SW	Intput	CD changer clamp switch
53	P121	PLAY SW_A	Input	Play switch for Tape 1

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC701 RH-iX0331AWZZ: System Microcomputer (IX0331AW) (2/2)

Pin No.	Port Name	Terminal Name	Input/Output	Function
54	P120	PLAY SW_B	Input	Play switch for Tape 2
55	P119	PPA	Input	Tape 2 A-side full proof
56	P118	FPB	Input	Tape 2 B_side full proof
57	P117	MIC IN	Input	MIC switch
58	P116	KARAOKE LATCH	Output	Karaoke latch
59*	P115	DISTOUT/SW OUT	Output	Destination output
60	FIP39	SPN	Input	Tuner span change
61*,62*	FIP38-FIP37	NO USE	Input	Open
63-66	FIP36-FIP33	P22-P19	Output	FL display driver
67-70	FIP32-FIP29 P103-P100	P18-P15 DIST3-DIST0	Output Input	FL display driver Destination input
71-78	FIP28-FIP21	P14-P7	Output	FL display driver
79	VLOAD	VLOAD	—	FL driver (-) power supply.-30V
80-85	FIP20-FIP15	P6-P1	Output	FL display segment
86*-89*	FIP14-FIP11	—	Input	Open
90-100	FIP30-FIP0	G11-G1	Output	FL display segment driver

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC3 VHiM63001FP-1: Focus/Tracking/Spin/Sled Driver (M63001FP)

Pin No.	Terminal Name	Function
1	TO	CH2 inverted input.
2	FD	CH1 inverted input.
3*	FO	CH1 output offset control.
4	FO+	CH1 inverted output.
5	FO-	CH1 non-inverted output.
6	TR+	CH2 inverted output.
7	TR-	CH2 non-inverted output.
8-14	GND	GND
15	SL-	CH3 non-inverted output.
16	SL+	CH3 inverted output.
17	SLDO	CH3 inverted input.
18	VCC1	Power supply 1 (CH1, CH2, CH3)
19	STANDBY	STANDBY signal input.
20	VRFE	CH1-CH4 Reference voltage input.
21	MUTE	Mute signal input (CH6).
22	IN5-	CH5 inverted input.
23	IN5+	CH5 non-inverted input.
24	VCC2	Power supply 2 (CH4).
25	SPO SPDO	CH4 inverted input.
26	SP+	CH4 inverted output.
27	SP-	CH4 non-inverted output.
28	VCC3	Power supply 3 (CH5).
29-35	GND	GND
36*	OUT5+	CH5 non-inverted output.
37*	OUT5-	CH5 inverted output.
38	LOADIING M+	CH6 non-inverted output.
39	LOADIING M-	CH6 inverted output.
40	VCC4	Power supply 4 (CH6).
41	LD_M-	CH6 inverted input.
42	LD_M+	CH6 non-inverted input.

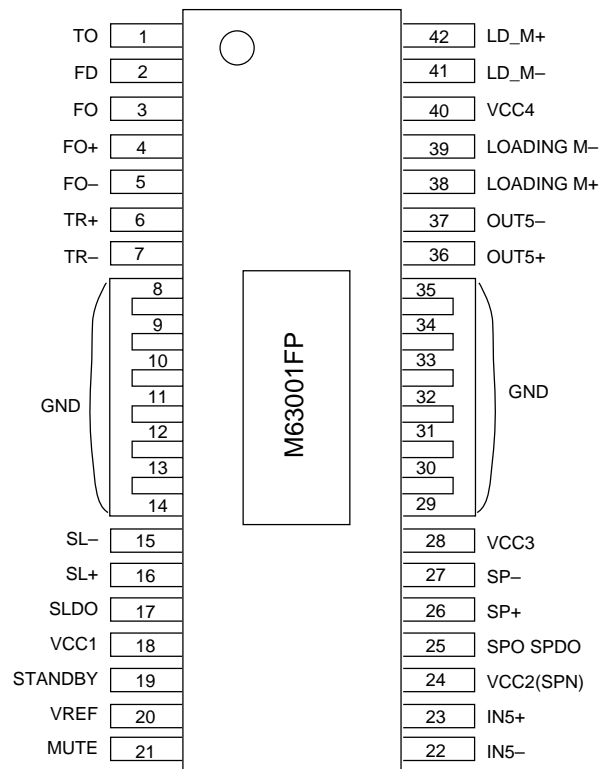


Figure 49 BLOCK DIAGRAM OF IC

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

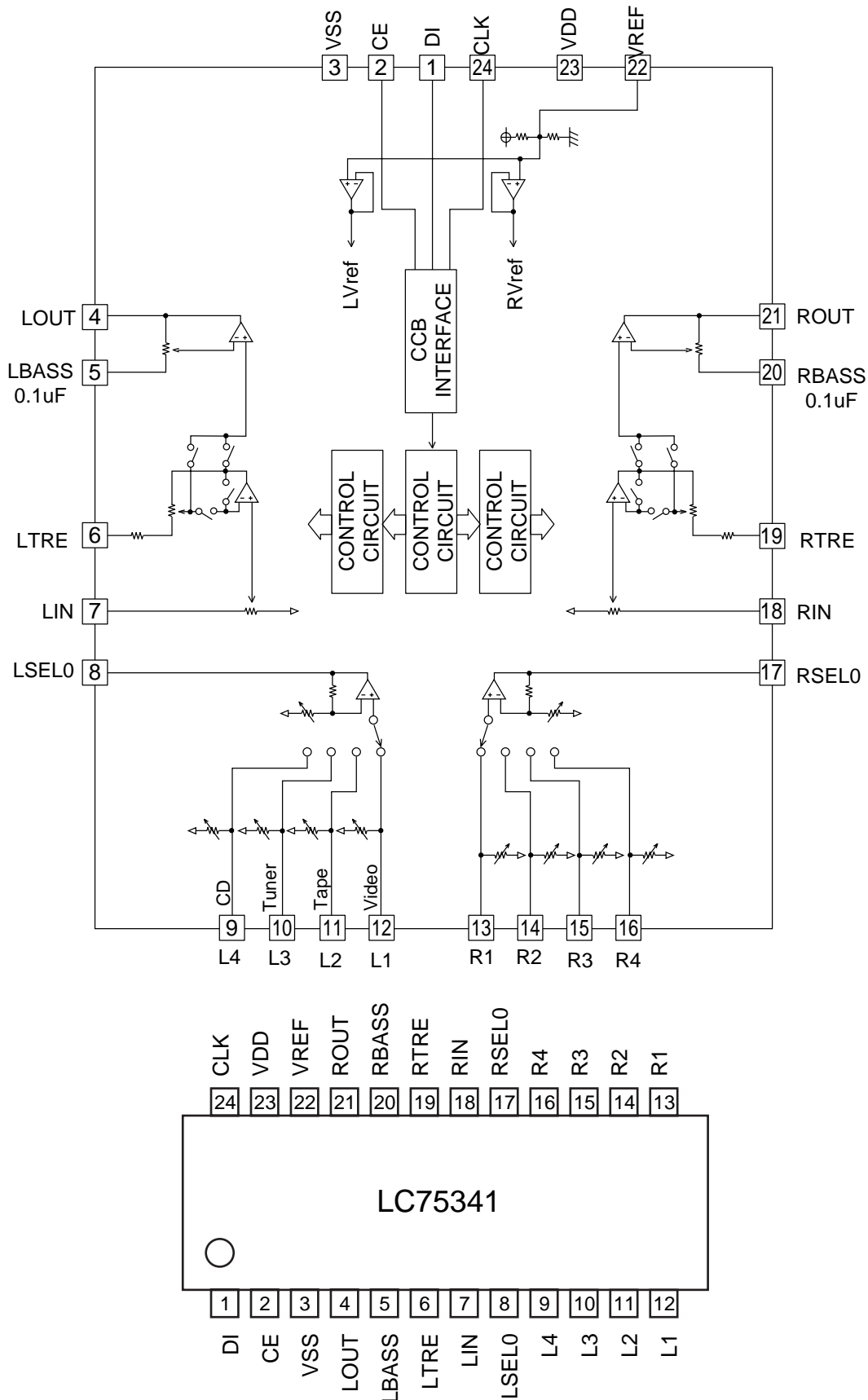


Figure 50 BLOCK DIAGRAM OF IC

ICV1 RH-iX0352AWZZ: MPEG Controller (IX0352AW)

Pin No.	Port Name	Terminal Name	Input/Output	Function
1*	P50	VOCAL CANCEL	Output	Vocal cancel
2*	P51	K_C_DATA	Output	Key control IC data
3*	P52	K_C_CLOCK	Output	Key control IC clock
4*	P53	K_C_STROBE	Output	Key control IC strobe
5*	P54	KEY CONT.	Output	Key control
6*	P55	CD-SOL	Output	CD changer solenoid control
7,8	P56, P57	NO USE	Output	Joint 10 kohm to GND
9	VSS0	VSS0	—	Ground voltage
10	VDD0	VDD0	—	VDD
11*	P30	CD-LD M+	Output	CD changer motor control
12*	P31	CD-LD M-	Output	CD changer motor control
13*	P32	MO_SPEED	Output	CD changer motor speed control
14	P33	NO USE	Output	Joint 10 kohm to GND
15	P34	POWER_MPEG	Output	MPEG power supply control
16,17	P35, P36	NO USE	Output	Joint 10 kohm to GND
18	P20	MDI	Input	Communicate to system microcomputer DI
19	P21	MDO	Output	Communicate to system microcomputer DO
20	P22	MCK	Input	Communicate to system microcomputer CLK
21	P23	NO USE	Output	Joint 10 kohm to GND
22	P24	MBUSY	Output	Communicate to system microcomputer MBUSY
23	P25/ASCK0	NO USE	Output	Joint 10 kohm to GND
24	VDD1	VDD1	—	VDD
25	AVSS	AVSS	—	Ground
26-33	P17-P10	NO USE	Output	Joint 10 kohm to GND
34	AVREF	AVREF	—	Conect to VDD
35	AVDD	AVDD	—	Conect to VDD
36	$\overline{\text{RESET}}$	$\overline{\text{RESET}}$	Input	Common use DSP_RESET
37*	XT2	XT2	—	Open
38	XT1	XT1	—	Conect to VDD
39	IC	IC	—	Conect to ground
40	X2	X2	Output	Main clock
41	X1	X1	Input	Main clock
42	VSS1	VSS1	—	Ground voltage
43	INTP0	INT	Output	Interrupt request
44	INTP1	SBUSY	Input	Communicate to system microcomputer SBUSY
45,46	P02, P03	NO USE	Output	Joint 10 kohm to GND
47-50	P70-P73	NO USE	Output	Joint 10 kohm to GND
51	P74	$\overline{\text{MPEG RESET}}$	Output	MPEG decoder reset
52	BUZ	$\overline{\text{HCS}}$	Output	Chip select
53	P64/RD	$\overline{\text{HRD}}$	Output	Reas strobe
54	$\overline{\text{WR}}$	$\overline{\text{HWR}}$	Output	Write strobe
55	$\overline{\text{WAIT}}$	$\overline{\text{HDAK}}$	Input	Bus cycle acknowledge
56	ASTB	HA	Output	Address strobe
57-64	AD0-AD7	HD0-HD7	Input/Output	Host parallel interface

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

CD-BK1600V/1800V/190V

ICV2 VHiD61012GC-1: MPEG Decoder (D61012GC) (1/2)

Pin No.	Terminal Name	Input/Output	Function
1	V _{DD}	—	Digital supply.
2-5	HD7-HD4	Input/Output	Host data bus. HD7 = MSB, HD0 = LSB. Internally pulled down. Pull down resistance = approx. 42 kohms. Can quit this pull down with the HD_PD_OFF register (74H, bo).
6	GND	—	Ground
7-10	HD3-HD0	Input/Output	Host data bus. HD7 = MSB, HD0 = LSB Internally pulled down. Pull down resistance is approx. 42 kohms. Can quit this pull down with the HD_PD_OFF register (74H, bo).
11,12	GND	—	Ground
13	X1	Input	To connect a 27 MHz oscillator. Open when not using.
14	X2	Input	To connect a 27 MHz oscillator or input 27 MHz clock. Set the clock at CKSEL terminal. Signal input at 3.3 Vp-p.
15	V _{DD}	—	Digital supply.
16	CKSEL	Input	Select a clock to be input to X2 terminal. Use CKSEL = High: oscillator. CKSEL = Low : 27 MHz clock input.
17	V _{DD}	—	Digital supply.
18	GND	—	Ground
19	\overline{HCS}	Input	Chip select signal.
20	\overline{HRD}	Input	Read strobe signal.
21	\overline{HWR}	Input	Write strobe signal.
22	HA	Input	Address / address strobe signal.
23	HSELA	Input	Host interface select signal. Select a serial interface or an 8-bit parallel interface. HSELX = High: parallel interface. HSELX = Low: serial interface.
24	HSELA	Input	Host interface mode select signal. Select multiplex mode or separate mode. HSELA = High: multiplex mode. HSELA = Low: separate mode. Fixed low when using serial interface.
25	V _{DD}	—	Digital supply.
26	GND	—	Ground
27	\overline{RESET}	Input	Reset terminal.
28	\overline{HDAK}	Output	Host bus acknowledge signal.
29	INT	Output	Interrupt signal.
30	GND	—	Ground
31	AUCLK	Input	Audio clock (16.9344 MHz).
32	AUBCK	Output	Audio bit clock.
33	AULRCK	Output	Audio L/R clock.
34*	AUEMPH	Output	Audio emphasis signal.
35	AUDO	Output	Audio data output.
36	V _{DD}	—	Digital supply.
37	GND	—	Ground
38-42	MA8-MA4	Output	DRAM address bus. MA8 = MSB, MA0 = LSB.
43	GND	—	Ground
44	V _{DD}	—	Digital supply.
45-48	MA3-MA0	Output	DRAM address bus. MA8 = MSB, MA0 = LSB.
49	$\overline{MRA\overline{S}}$	Output	DRAM low address strobe signal.
50	GND	—	Ground
51	V _{DD}	—	Digital supply.

ICV2 VHiD61012GC-1: MPEG Decoder (D61012GC) (2/2)

Pin No.	Terminal Name	Input/Output	Function
52	\overline{MWE}	Output	DRAM write enable signal.
53	\overline{MCAS}	Output	DRAM column address strobe signal.
54-56	MD7-MD5	Input/Output	DRAM data bus. MD15 = MSB, MD0 = LSB. Internally pulled down. Pull down resistance is approx. 42 kohms. Can quit this pull down with the MD_PD_OFF register (74H, b1).
57	GND	—	Ground
58-62	MD4-MD0	Input/Output	TDRAM data bus. MD15 = MSB, MD0 = LSB. Internally pulled down. Pull down resistance is approx. 42 kohms. Can quit this pull down with the MD_PD_OFF register (74H, b1).
63	VDD	—	Digital supply.
64	GND	—	Ground
65-68	MD15-MD12	Input/Output	DRAM data bus. MD15 = MSB, MD0 = LSB. Internally pulled down. Pull down resistance is approx. 42 kohms. Can quit this pull down with the MD_PD_OFF register (74H, b1).
69	GND	—	Ground
70-73	MD11-MD8	Input/Output	DRAM data bus. MD15 = MSB, MD0 = LSB. Internally pulled down. Pull down resistance is approx. 42 kohms. Can quit this pull down with the MD_PD_OFF register (74H, b1).
74	GND	—	Ground
75	VDD	—	Digital supply.
76	GND	—	Ground
77*	VCLK	—	Not used
78*	CSYNC	Output	Synchronized signal generating signal
79*	NSYNC	Output	Synchronized signal generating signal
80*	HSYNC	Output	Synchronized signal generating signal
81*,82*	—	—	Not used
83	VDD	—	Digital supply.
84	AVDD	—	Analog power supply
85	CBP1	Output	3CH Video D/A signal
86	VOUT1	Output	3CH Video D/A signal
87	CBP2	Output	3CH Video D/A signal
88*	VOUT2	Output	3CH Video D/A signal
89	CBP3	Output	3CH Video D/A signal
90*	VOUT3	Output	3CH Video D/A signal
91	AGND	—	Analog power supply
92	VDD	—	Digital supply.
93*	—	—	Not used
94	GND	—	Ground
95	CDC2PO	Input	CD data input
96	CDEMPH	Input	CD data input
97	CDLRCK	Input	CD data input
98	CDBCK	Input	CD data input
99	CDI	Input	CD data input
100	GND	—	Ground

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

CD-BK1600V/1800V/190V

ICV3 VHiSDM4260C-1: DRAM (SDM4260C)

Pin No.	Port Name	Function
1	VCC	Power supply
2-10	I/O0-I/O7	Data input/output
11*,12*	NC	Not used
13	\overline{WE}	Read/write enable
14	\overline{RAS}	Row address strobe
15*	NC	Not used
16-19	A0-A3	Address input (row/refresh: A0 to A3) (Column: A0 to A3)
20	VCC	Power supply
21	VSS	Ground
22-26	A4-A8	Address input (row/refresh: A4 to A8) (Column: A4 to A8)
27	\overline{OE}	Output enable
28,29	\overline{UCAS} , \overline{LCAS}	Column address strobe
30*	NC	Not used
31-34	I/O8-I/O11	Data input/output
35	VSS	Ground
36-39	I/O12-I/O15	Data input/output
40	VSS	Ground

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

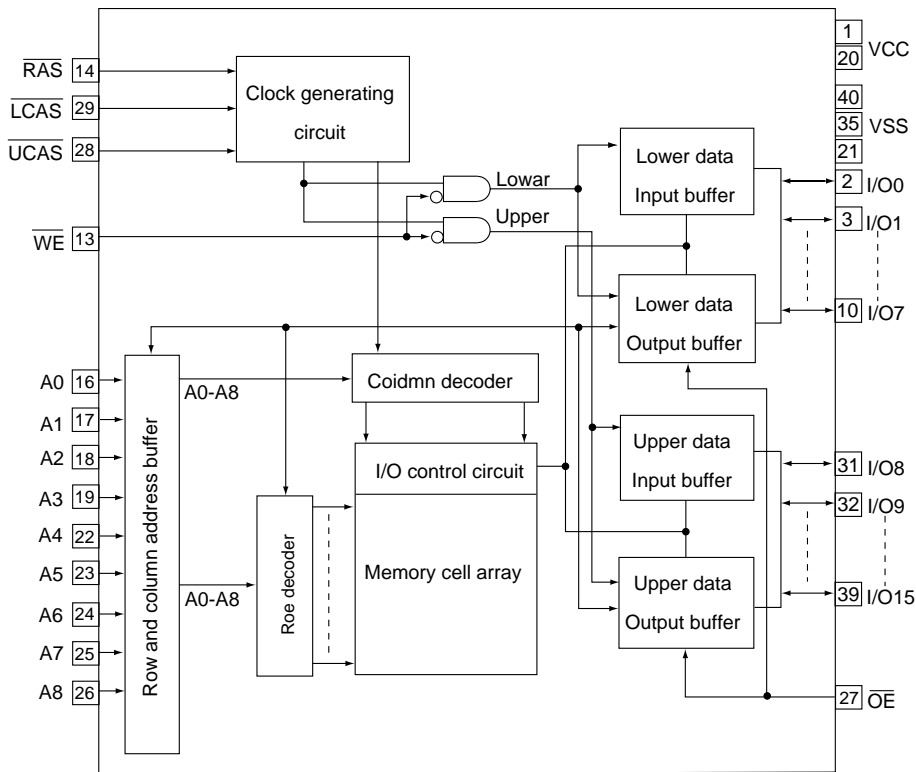


Figure 54 BLOCK DIAGRAM OF IC

ICV4 VHiNJM2267M-1: Video operation amp. (NJM2267M)

Pin No.	Terminal Name	Function
1	Clamp input terminal	Input of 1.9 V clamp, 1 Vp-p composite or Y-signal
2	GND	Ground
3	Sag correction terminal	Able to obtain an output without any sag by feeding back the sag, generated from output coupling C, using the external C (see block diagram). When not using the sag correction terminal, connect directly to the pin 4.
4,5	Output terminal	6 dB amplifier output. Able to drive 75 Ω line.
6	Sag correction terminal	Able to obtain an output without any sag by feeding back the sag, generated from output coupling C, using the external C (see block diagram). When not using the sag correction terminal, connect directly to the pin 5.
7	V+	Power source
8	Clamp input terminal	Input of 1.9 V clamp, 1 Vp-p composite or Y-signal.

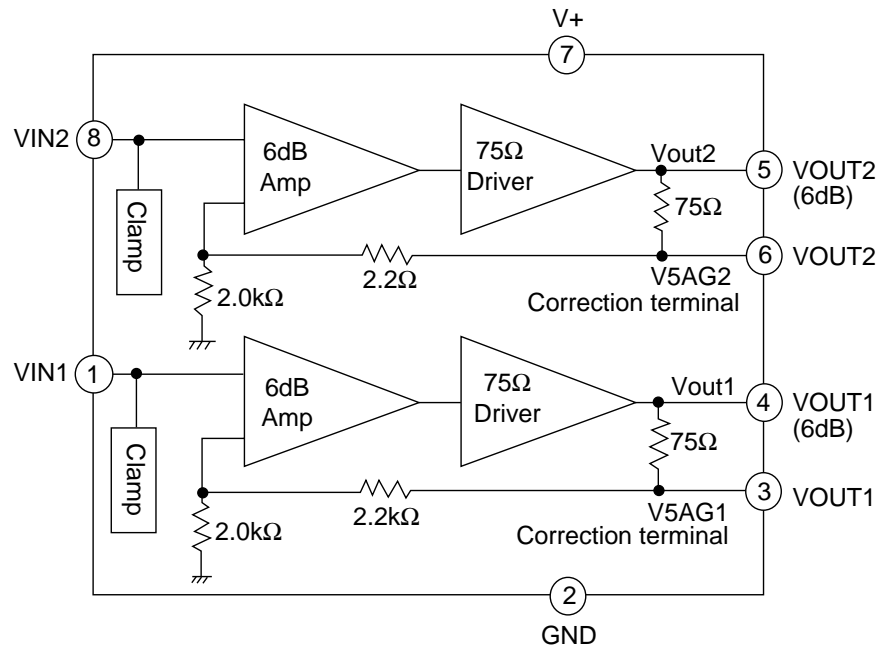
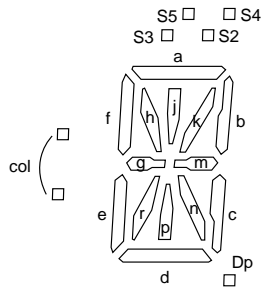
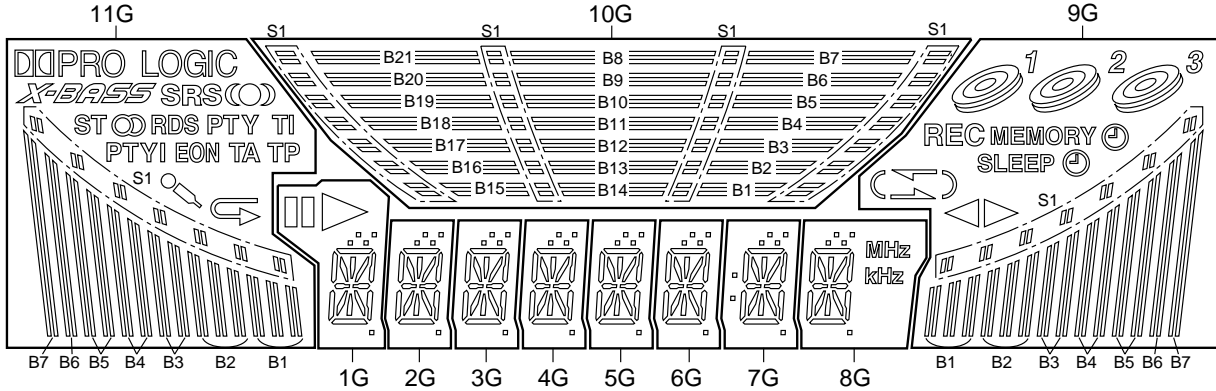


Figure 55 BLOCK DIAGRAM OF IC

CD-BK1600V/1800V/190V

FL701 VVKBJ749GNK-1: FL Display



	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S1	S1	S1	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp
P2	B1	B1	B1	d	d	d	d	d	d	d	d
P3	B2	B2	B2	c	c	c	c	c	c	c	c
P4	B3	B3	B3	n	n	n	n	n	n	n	n
P5	B4	B4	B4	p	p	p	p	p	p	p	p
P6	B5	B5	B5	r	r	r	r	r	r	r	r
P7	B6	B6	B6	e	e	e	e	e	e	e	e
P8	B7	B7	B7	m	m	m	m	m	m	m	m
P9	DIPRO LOGIC	B8		g	g	g	g	g	g	g	g
P10	X-BASS	B9		col							
P11	SRS	B10		b	b	b	b	b	b	b	b
P12	ST	B11	REC	k	k	k	k	k	k	k	k
P13		B12	MEMORY	j	j	j	j	j	j	j	j
P14	RDS	B13		h	h	h	h	h	h	h	h
P15	PTY	B14		f	f	f	f	f	f	f	f
P16	TI	B15	SLEEP	a	a	a	a	a	a	a	a
P17	TA	B16		S2	S2	S2	S2	S2	S2	S2	S2
P18	PTYI	B17		S3	S3	S3	S3	S3	S3	S3	S3
P19	EON	B18		S4	S4	S4	S4	S4	S4	S4	S4
P20	TA	B19		S5	S5	S5	S5	S5	S5	S5	S5
P21		B20		MHz							
P22		B21		kHz							

Figure 56 FL DISPLAY

SHARP PARTS GUIDE

VIDEO CD MINI SYSTEM

MODEL CD-BK1600V

CD-BK1600V Video CD Mini System consisting of CD-BK1600V (main unit) and CP-BK1600 (speaker system).

MODEL CD-BK1800V

CD-BK1800V Video CD Mini System consisting of CD-BK1800V (main unit), CP-BK1800 (front speakers) and GBOXS0041AWM1 (surround speakers).

MODEL CD-BK190V

CD-BK190V Video CD Mini System consisting of CD-BK190V (main unit), CP-BK190 (front speakers) and GBOXS0041AWM1 (surround speakers).

“HOW TO ORDER REPLACEMENT PARTS”

To have your order filled promptly and correctly, please furnish the following information.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. No. |
| 3. PART NO. | 4. DESCRIPTION |

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

VCC Ceramic type
 VCK Ceramic type
 VCT Semiconductor type
 VC •• MF Cylindrical type (without lead wire)
 VC •• MN Cylindrical type (without lead wire)
 VC •• TV Square type (without lead wire)
 VC •• TQ Square type (without lead wire)
 VC •• CY Square type (without lead wire)
 VC •• CZ Square type (without lead wire)
 VC •••••••• J .. The 13th character represents capacity difference.
 ("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
 "C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)

If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD Carbon-film type
 VRS Carbon-film type
 VRN Metal-film type
 VR •• MF Cylindrical type (without lead wire)
 VR •• MN Cylindrical type (without lead wire)
 VR •• TV Square type (without lead wire)
 VR •• TQ Square type (without lead wire)
 VR •• CY Square type (without lead wire)
 VR •• CZ Square type (without lead wire)
 VR •••••••• J .. The 13th character represents error.
 ("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.

NOTE:

Parts marked with “△” are important for maintaining the safety of the set.

Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

CD-BK1600V/1800V/190V

NO. PARTS CODE ★ PRICE RANK DESCRIPTION

CD-BK1600V/1800V/190V

INTEGRATED CIRCUITS

IC1	VHILA9235M/-1	J	AQ	Servo Amp.,LA9235M
IC2	VHILC78636E-1	J		Servo/Signal Control,LC78636E
IC3	VHIM63001FP-1	J	AX	Focus/Tracking/Spin/Sled Driver, M63001FP
IC101	VHIAN7345K/-1	J	AM	Playback and Record/Playback Amp., AN7345K
IC301	VHITA7358AP-1	J	AG	FM Front End,TA7358AP
IC302	VHILC72131/-1	J	AP	PLL (Tuner),LC72131
IC303	VHILA1832S/-1	J	AN	FM IF Det./FM Mpx./AM IF, LA1832S
IC401	VHILC75341/-1	J	AM	Audio Processor,LC75341
IC701	RH-IX0331AWZZ	J		System Microcomputer, IX0331AW
IC702,703	VHIKIA4558P-1	J	AC	Ope Amp.,KIA4558P
IC704	VHIKIA7042AP1	J	AC	Reset,KIA7042AP
IC841	VHIKIA7810AP1	J	AF	Voltage Regulator,KIA7810AP
IC851	VHIKIA7805P-1	J	AF	Voltage Regulator,KIA7805P
IC852	VHIAN78L05/-1	J	AE	Constant Voltage Regulator, AN78L05
IC901	VHISTK40204-1	J	AX	Power AMP.,STK40204
ICK1	VHIM65856SP-1	J	AX	Mic Amp.,M65856SP
ICV1	RH-IX0352AWZZ	J		MPEG Controller,IX0352AW
ICV2	VHID61012GC-1	J	BP	MPEG Decoder,D61012GC
ICV3	VHISDM4260C-1	J	AY	DRAM,SDM4260C
ICV4	VHINJM2267M-1	J	AH	Video Operation Amp., NJM2267M

TRANSISTORS

Q1	VSKTC3265Y/-1	J	AC	Silicon,NPN,KTC3265 Y
Q2	VSKRC102S/-1	J	AB	Digital,NPN,KRC102 S
Q3	VSKTA1504GR-1	J	AB	Silicon,PNP,KTA1504 GR
Q4	VSKTA1504GR-1	J	AB	Silicon,PNP,KTA1504 GR
Q101	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q102,103	VSKRC104M/-1	J	AC	Digital,NPN,KRC104 M
Q104-107	VS2SC1845F/-1	J	AC	Silicon,NPN,2SC1845 F
Q108-111	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q112	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q113	VSKRC104M/-1	J	AC	Digital,NPN,KRC104 M
Q114	VSKTC3203Y/-1	J	AC	Silicon,NPN,KTC3203 Y
Q302	VSKTC3194Y/-1	J	AD	Silicon,NPN,KTC3194 Y
Q360	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q401,402	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q601-604	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q605,606	VSKTA1271Y/-1	J	AC	Silicon,PNP,KTA1271 Y
Q607	VSKTA1273Y/-1	J	AE	Silicon,PNP,KTA1273 Y
Q608	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q609	VSKRC102M/-1	J	AC	Digital,NPN,KRC102 M
Q801	VSKTA1274Y/-1	J	AE	Silicon,PNP,KTA1274 Y
Q831	VSKTC2026/-1	J	AF	Silicon,NPN,KTC2026
Q901-904	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q951	VSKRC107M/-1	J	AC	Digital,NPN,KRC107 M
Q971	VSKTC3203Y/-1	J	AC	Silicon,NPN,KTC3203 Y
QK1	VSKTC3203Y/-1	J	AC	Silicon,NPN,KTC3203 Y
QK2,3	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
QV2	VSKTA1298Y/-1	J	AC	Silicon,PNP,KTA1298 Y
QV3	VSKRC104S/-1	J	AC	Digital,NPN,KRC104 S
QV4	VSKTA1298Y/-1	J	AC	Silicon,PNP,KTA1298 Y

DIODES

D21,22	VHDKDS193/-1	J	AC	Silicon,KDS193
D93	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D301,302	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D305	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D403,404	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D601-604	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D611-618	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D620,621	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D622	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D801	VHDT56B04GM-1	J	AP	Silicon,TS6B04GM
D802	VHD1N4004S/-1	J	AB	Silicon,1N4004S
D803	VHD1N4004S/-1	J	AB	Silicon,1N4004S
D804	VHD1N4004S/-1	J	AB	Silicon,1N4004S
D805	VHD1N4004S/-1	J	AB	Silicon,1N4004S
D806	VHD1N4004S/-1	J	AB	Silicon,1N4004S

NO. PARTS CODE ★ PRICE RANK DESCRIPTION

D807,808	VHD1N4004S/-1	J	AB	Silicon,1N4004S
D851	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D852,853	VHD1N4004S/-1	J	AB	Silicon,1N4004S
D901-903	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D951	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D971	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
DK1,2	VHD1SS133/-1	J	AA	Silicon,1SS133
DV4,5	VHDKDS193/-1	J	AC	Silicon,KDS193
LED722	VHP4204SRT7-1	J	AD	LED,Red,4204SRT7
ZD61	VHEZ02W3R9Z-1	J		Zener,3.9V,Z02W3.9Z
ZD351	VHEDZ5R1BSB-1	J	AC	Zener,5.1V,DZ5.1BSB
ZD601	VHEDZ6R2BSC-1	J	AB	Zener,6.2V,DZ6.2BSC
ZD801	VHEDZ300BSB-1	J	AB	Zener,30V,DZ300BSB
ZD802	VHEDZ6R2BSA-1	J	AB	Zener,6.2V,DZ6.2BSA
ZD803	VHEDZ130BSB-1	J	AB	Zener,13.0V,DZ130BSB
ZDK1	VHEMTZJ5R6B-1	J	AD	Zener,5.6V,MTZJ5.6B

FILTERS

CF303	RFILF0124AFZZ	J	AD	FM IF,10.7 MHz
CF351	RFILF0003AWZZ	J	AK	FM IF
CF352	RFILA0009AWZZ	J	AE	AM IF

TRANSFORMERS

△PT801	RTRNP0296AWZZ	J	BE	Power
T301	RCILB0065AWZZ	J	AC	FM OSC
T302	RCILI0017AWZZ	J	AB	FM IF
T303	RCILA0052AWZZ	J	AE	AM Antenna
T306	RCILB0058AWZZ	J	AC	AM OSC
T351	RCILI0019AWZZ	J	AD	AM IF

COILS

BF301	RFILR0008AWZZ	J	AE	Band Pass Filter
L61	RCILC0006AWZZ	J	AH	0.82 μH,Choke
L62	RCILC0007AWZZ	J		2.2 μH,Choke
L63,64	RCILC0006AWZZ	J	AH	0.82 μH,Choke
L104	VP-MK331K0000	J	AB	330 μH,Choke
L312	RCILR0056AWZZ	J	AB	FM RF
L351,352	VP-DH101K0000	J	AB	100 μH,Choke
L601	VP-DH101K0000	J	AB	100 μH,Choke
L920,921	RCILZ0137AFZZ	J	AA	0.29 μH

VARIABLE RESISTORS

VRK1	92LVRR1674A	J	AF	20 kohms (B) [Mic 1 Volume]
VRK2	92LVRR1674A	J	AF	20 kohms (B) [Mic 2 Volume]

VARIABLE CAPACITORS

VD301	VHCSVC348S/-1	J	AK	Variable Capacitance,SVC348S
VD302,303	VHCKDV147B/-1	J	AH	Variable Capacitance, KDV147B

VIBRATORS

X351	92LCRSTL1425A	J	AF	Crystal,456 kHz
X352	RCRSP0019AWZZ	J		Crystal,4.5 MHz
XL1	92LCRSTL1746A	J	AC	Crystal,16.93 MHz
XL701	RCRSP0003AWZZ	J	AH	Crystal,4.1943 MHz
XV1	RCRM-0201AFZZ	J	AD	Ceramic,4.19 MHz
XV2	RCRSP0013AWZZ	J	AG	Crystal,27 MHz

CAPACITORS

C6	VCEAPS107AF0J	J	AC	100 μF,10V,Electrolytic
C7	VCEAPS106AF1C	J	AB	10 μF,16V,Electrolytic
C8	VCKYTV1EF223Z	J	AA	0.022 μF,25V
C11	VCEAPS476AF0J	J	AC	47 μF,6.3V,Electrolytic
C12	VCKYTV1EF223Z	J	AA	0.022 μF,25V
C13	VCKYTV1HB103K	J	AA	0.01 μF,50V
C14	VCKYTV1CB334K	J	AC	0.33 μF,16V
C17	VCKYTV1HB472K	J	AA	0.0047 μF,50V
C18	VCCCTV1HH3R0C	J	AA	3 pF (CH),50V
C20	VCKYTV1EB104K	J	AA	0.1 μF,25V
C21	VCKYTV1EB104K	J	AA	0.1 μF,25V
C22	VCKYTV1HB101K	J	AA	100 pF,50V
C23	VCKYTV1HB473K	J	AA	0.047 μF,50V
C24	VCEAPS225AF1H	J	AB	2.2 μF,50V,Electrolytic

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION	NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
C25	VCKYTV1EF223Z	J AA	0.022 μF,25V	C338	VCKYMN1HB102K	J AA	0.001 μF,50V
C26	VCKYTV1HB473K	J AA	0.047 μF,50V	C342	VCTYMN1EF223Z	J AA	0.022 μF,25V
C27	VCKYTV1EB104K	J AA	0.1 μF,25V	C350,351	VCTYMN1EF223Z	J AA	0.022 μF,25V
C28	VCEAPS476AF1A	J AD	47 μF,10V,Electrolytic	C352	VCEAZA1CW106M	J AC	10 μF,16V,Electrolytic
C29,30	VCKYTV1EF223Z	J AA	0.022 μF,25V	C353,354	VCTYMN1EF223Z	J AA	0.022 μF,25V
C31	VCEAPS107AF0J	J AC	100 μF,6.3V,Electrolytic	C355	VCCSMN1HL220J	J AA	22 pF,50V
C34	VCKYTV1EF223Z	J AA	0.022 μF,25V	C356	VCKYMN1HB102K	J AA	0.001 μF,50V
C38,39	VCEAPS106AF1C	J AB	10 μF,16V,Electrolytic	C357	VCEAZA1HW225M	J AB	2.2 μF,50V,Electrolytic
C40	VCKYTV1HB152K	J AA	0.0015 μF,50V	C358	VCEAZA1HW105M	J AB	1 μF,50V,Electrolytic
C41	VCEAPS107AF0J	J AC	100 μF,6.3V,Electrolytic	C361	VCTYMN1EF223Z	J AA	0.022 μF,25V
C42	VCCCTV1HH680J	J AA	68 pF (CH),50V	C362	VCEAZA1HW335M	J AB	3.3 μF,50V,Electrolytic
C43	VCKYTV1HB152K	J AA	0.0015 μF,50V	C363	VCTYMN1EF223Z	J AA	0.022 μF,25V
C44	VCKYTV1EF223Z	J AA	0.022 μF,25V	C364	VCEAZA1CW106M	J AC	10 μF,16V,Electrolytic
C45	VCEAPS107AF0J	J AC	100 μF,6.3V,Electrolytic	C365	VCKZPA1HF223Z	J AA	0.022 μF,50V
C46	VCKYTV1EF223Z	J AA	0.022 μF,25V	C366	VCKYMN1HB102K	J AA	0.001 μF,50V
C47	VCEAPS107AF0J	J AC	100 μF,6.3V,Electrolytic	C367,368	VCEAZA1HW105M	J AB	1 μF,50V,Electrolytic
C49,50	VCEAPS107AF0J	J AC	100 μF,6.3V,Electrolytic	C369	VCCUMN1HJ270J	J AA	27 pF (UJ),50V
C51	VCEAPS476AF0J	J AC	47 μF,6.3V,Electrolytic	C370-372	VCEAZA1HW105M	J AB	1 μF,50V,Electrolytic
C52	VCKYTV1HB103K	J AA	0.01 μF,50V	C373,374	VCTYPA1CX153K	J AA	0.015 μF,16V
C53	VCKYTV1HB102K	J AA	0.001 μF,50V	C375	VCKYMN1HB102K	J AA	0.001 μF,50V
C54	VCEAPS476AF1A	J AD	47 μF,10V,Electrolytic	C380	VCEAZA1CW106M	J AC	10 μF,16V,Electrolytic
C55	VCKYTV1HB103K	J AA	0.01 μF,50V	C381	VCCCMN1HH120J	J AA	12 pF (CH),50V
C56	VCEAPS337AF0J	J	330 μF,6.3V,Electrolytic	C382	VCCCMN1HH150J	J AA	15 pF (CH),50V
C64	VCEAPS476AF0J	J AC	47 μF,6.3V,Electrolytic	C385	VCTYMN1CY103N	J AA	0.01 μF,16V
C71	VCKYTV1HB101K	J AA	100 pF,50V	C386	VCKYMN1HB331K	J AA	330 pF,50V
C72	VCKYTV1HB103K	J AA	0.01 μF,50V	C387	VCTYMN1EF223Z	J AA	0.022 μF,25V
C73-78	VCKYTV1HB101K	J AA	100 pF,50V	C391	VCEAZA1CW476M	J AB	47 μF,16V,Electrolytic
C80	VCKYTV1EB104K	J AA	0.1 μF,25V	C392	VCKYMN1HB102K	J AA	0.001 μF,50V
C81	VCKYTV1EF223Z	J AA	0.022 μF,25V	C393	VCEAZA1HW105M	J AB	1 μF,50V,Electrolytic
C82	VCKYTV1EF223Z	J AA	0.022 μF,25V	C394	VCEAZA1CW476M	J AB	47 μF,16V,Electrolytic
C83	VCKYTV1EF223Z	J AA	0.022 μF,25V	C395	VCTYMN1EF223Z	J AA	0.022 μF,25V
C102,103	VCKYMN1HB102K	J AA	0.001 μF,50V	C396	VCEAZA1AW107M	J AB	100 μF,10V,Electrolytic
C104,105	VCKYMN1HB181K	J AA	180 pF,50V	C397	VCTYMN1EF223Z	J AA	0.022 μF,25V
C106,107	VCKYMN1HB102K	J AA	0.001 μF,50V	C398	VCEAZA1AW107M	J AB	100 μF,10V,Electrolytic
C108	VCEAZA1CW107M	J AC	100 μF,16V,Electrolytic	C399	VCTYMN1EF223Z	J AA	0.022 μF,25V
C112-115	VCKYMN1HB331K	J AA	330 pF,50V	C401,402	VCKYMN1HB102K	J AA	0.001 μF,50V
C116,117	VCEAZA1AW107M	J AB	100 μF,10V,Electrolytic	C403	VCEAZA1EW226M	J AB	22 μF,25V,Electrolytic
C118,119	VCTYPA1EX333K	J AA	0.033 μF,25V	C404	VCEAZA1CW107M	J AC	100 μF,16V,Electrolytic
C120,121	VCKYMN1HB561K	J AA	560 pF,50V	C405	VCKZPA1HF223Z	J AA	0.022 μF,50V
C122,123	VCEAZA1EW476M	J AB	47 μF,25V,Electrolytic	C406	VCEAZA1EW226M	J AB	22 μF,25V,Electrolytic
C126,127	VCKYMN1HB271K	J AA	270 pF,50V	C407,408	VCEAZA1HW106M	J AB	10 μF,50V,Electrolytic
C128,129	VCEAZA1EW226M	J AB	22 μF,25V,Electrolytic	C409-412	VCQYKA1HM104K	J AB	0.1 μF,50V, Mylar
C130,131	VCTYPA1CX223K	J AA	0.022 μF,16V	C413,414	VCTYMN1CX272K	J AA	0.0027 μF,16V
C132,133	VCTYMN1CX332K	J AA	0.0033 μF,16V	C417,418	VCEAZA1HW105M	J AB	1 μF,50V,Electrolytic
C134,135	VCEAZA1EW476M	J AB	47 μF,25V,Electrolytic	C419,420	VCEAZA1HW475M	J AB	4.7 μF,50V,Electrolytic
C136	VCEAZA1EW226M	J AB	22 μF,25V,Electrolytic	C421-428	VCEAZA1HW105M	J AB	1 μF,50V,Electrolytic
C137	VCTYMN1EF223Z	J AA	0.022 μF,25V	C429,430	VCKYMN1HB391K	J AA	390 pF,50V
C138	VCEAZA1AW227M	J AC	220 μF,10V,Electrolytic	C601	VCCSPA1HL271J	J AA	270 pF,50V
C139	VCEAZA1HW335M	J AB	3.3 μF,50V,Electrolytic	C602	VCTYMN1CX272K	J AA	0.0027 μF,16V
C140	VCQPKA2AA822J	J AA	0.0082 μF,100V,Polypropylene	C603,604	VCTYMN1CX682K	J AA	0.0068 μF,16V
C141	VCQYKA1HM393K	J AB	0.039 μF,50V, Mylar	C605	VCKYMN1HB271K	J AA	270 pF,50V
C142	VCEAZA1EW476M	J AB	47 μF,25V,Electrolytic	C606	VCTYMN1CX272K	J AA	0.0027 μF,16V
C143	VCTYMN1CX222K	J AA	0.0022 μF,16V	C607,608	VCTYMN1EF223Z	J AA	0.022 μF,25V
C144	VCKYPA1HB222K	J AA	0.0022 μF,50V	C609	VCEAZA1HW476M	J AB	47 μF,50V,Electrolytic
C145	VCKYMN1HB102K	J AA	0.001 μF,50V	C610	VCTYMN1EF223Z	J AA	0.022 μF,25V
C148	VCQYKA1HM473K	J AB	0.047 μF,50V, Mylar	C611	VCKZPA1HF223Z	J AA	0.022 μF,50V
C150	VCEAZA1EW226M	J AB	22 μF,25V,Electrolytic	C612-614	VCEAZA1HW225M	J AB	2.2 μF,50V,Electrolytic
C301	VCTYMN1CY103N	J AA	0.01 μF,16V	C616	VCEAZA1HW105M	J AB	1 μF,50V,Electrolytic
C302	VCKYMN1HB102K	J AA	0.001 μF,50V	C617,618	VCEAZA1CW106M	J AC	10 μF,16V,Electrolytic
C303	VCCCMN1HH100J	J AA	10 pF (CH),50V	C620	VCEAZA1EW476M	J AB	47 μF,25V,Electrolytic
C304	VCTYMN1CY103N	J AA	0.01 μF,16V	C621	VCEAZA1HW105M	J AB	1 μF,50V,Electrolytic
C305	VCCCMN1HH47C	J AA	4.7 pF (CH),50V	C622	VCCCMN1HH150J	J AA	15 pF (CH),50V
C306	VCTYMN1EF223Z	J AA	0.022 μF,25V	C623	VCCCMN1HH180J	J AA	18 pF (CH),50V
C307	VCEAZA1CW106M	J AC	10 μF,16V,Electrolytic	C624	VCTYBT1EF223Z	J AA	0.022 μF,25V
C308	VCCSMN1HL47C	J AA	4.7 pF,50V	C625	VCEAZA1AW227M	J AC	220 μF,10V,Electrolytic
C309	VCKYMN1HB102K	J AA	0.001 μF,50V	C626	VCEAZA1HW104M	J AB	0.1 μF,50V,Electrolytic
C310	VCCCMN1HH150J	J AA	15 pF (CH),50V	C628	VCEAZA1HW335M	J AB	3.3 μF,50V,Electrolytic
C311	VCCCMN1HH180J	J AA	18 pF (CH),50V	C629	VCKZPA1HF223Z	J AA	0.022 μF,50V
C312	VCTYMN1EF223Z	J AA	0.022 μF,25V	C630	VCEAZA1HW106M	J AB	10 μF,50V,Electrolytic
C313	VCCCMN1HH220J	J AA	22 pF (CH),50V	C631	VCTYMN1EF223Z	J AA	0.022 μF,25V
C314,315	VCTYMN1CX472K	J AA	0.0047 μF,16V	C632	VCEAZA1EW476M	J AB	47 μF,25V,Electrolytic
C316	VCTYMN1EF223Z	J AA	0.022 μF,25V	C801,802	VCQYKA1HM104K	J AB	0.1 μF,50V, Mylar
C317	VCKYMN1HB102K	J AA	0.001 μF,50V	C803,804	VCEAZW1HW228M	J AH	2200 μF,50V,Electrolytic
C318	VCKYMN1HB101K	J AA	100 pF,50V	C805,806	VCQYKA1HM104K	J AB	0.1 μF,50V, Mylar
C323	VCTYMN1EF223Z	J AA	0.022 μF,25V	C807	VCEAZW1EW338M	J AG	3300 μF,25V,Electrolytic
C324	VCCUMN1HJ8R2D	J AA	8.2 pF (UJ),50V	C808,809	VCEAZA1HW107M	J AC	100 μF,50V,Electrolytic
C326	VCKYBT1HB102K	J AA	0.001 μF,50V	C810	VCEAZV1HW227M	J AD	220 μF,50V,Electrolytic
C330	VCCUMN1HJ150J	J AA	15 pF (UJ),50V	C811	VCEAZA1HW476M	J AB	47 μF,50V,Electrolytic
C331	VCKZPA1HF473Z	J AA	0.047 μF,50V	C812	VCEAZA1HW107M	J AC	100 μF,50V,Electrolytic
C332	VCTYMN1EF223Z	J AA	0.022 μF,25V	C813	VCEAZA1VW107M	J AC	100 μF,35V,Electrolytic
C334	VCCUMN1HJ270J	J AA	27 pF (UJ),50V	C831	VCEAZA1EW227M	J AC	220 μF,25V,Electrolytic
C335	VCKYMN1HB561K	J AA	560 pF,50V	C832	VCKZPA1HF223Z	J AA	0.022 μF,50V

CD-BK1600V/1800V/190V

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION	NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
R353	VRD-MN2BD271J	J AA	270 ohms,1/8W	R661	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R355	VRD-MN2BD332J	J AA	3.3 kohms,1/8W	R662	VRD-MN2BD103J	J AA	10 kohm,1/8W
R356	VRD-MN2BD102J	J AA	1 kohm,1/8W	R663-665	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R357	VRD-ST2CD474J	J AA	470 kohms,1/6W	R666	VRD-MN2BD102J	J AA	1 kohm,1/8W
R358	VRD-ST2CD392J	J AA	3.9 kohms,1/6W	R667,668	VRD-ST2CD102J	J AA	1 kohm,1/6W
R359	VRD-MN2BD182J	J AA	1.8 kohms,1/8W	R669,670	VRD-ST2CD103J	J AA	10 kohm,1/6W
R360	VRD-MN2BD472J	J AA	4.7 kohms,1/8W	R671	VRD-MN2BD103J	J AA	10 kohm,1/8W
R361,362	VRD-MN2BD183J	J AA	18 kohms,1/8W	R672	VRD-ST2CD103J	J AA	10 kohm,1/6W
R363-365	VRD-MN2BD103J	J AA	10 kohm,1/8W	R673-675	VRD-ST2CD102J	J AA	1 kohm,1/6W
R372-374	VRD-MN2BD102J	J AA	1 kohm,1/8W	R676	VRD-ST2CD472J	J AA	4.7 kohms,1/6W
R375	VRD-ST2CD471J	J AA	470 ohms,1/6W	R677-694	VRD-ST2CD102J	J AA	1 kohm,1/6W
R376	VRD-MN2BD102J	J AA	1 kohm,1/8W	R695-697	VRD-ST2CD681J	J AA	680 ohms,1/6W
R377	VRD-MN2BD473J	J AA	47 kohms,1/8W	R698-700	VRD-ST2CD821J	J AA	820 ohms,1/6W
R378	VRD-MN2BD102J	J AA	1 kohm,1/8W	R701-703	VRD-ST2CD102J	J AA	1 kohm,1/6W
R379	VRD-MN2BD222J	J AA	2.2 kohms,1/8W	R704	VRD-MN2BD473J	J AA	47 kohms,1/8W
R380	VRD-MN2BD152J	J AA	1.5 kohms,1/8W	R705,706	VRD-ST2CD152J	J AA	1.5 kohms,1/6W
R381	VRD-MN2BD103J	J AA	10 kohm,1/8W	R707	VRD-MN2BD152J	J AA	1.5 kohms,1/8W
R382	VRD-ST2EE151J	J AA	150 ohms,1/4W	R708	VRD-ST2CD103J	J AA	10 kohm,1/6W
R383	VRD-MN2BD562J	J AA	5.6 kohms,1/8W	R709,710	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R384	VRD-ST2CD562J	J AA	5.6 kohms,1/6W	R711	VRD-MN2BD104J	J AA	100 kohm,1/8W
R385	VRD-MN2BD562J	J AA	5.6 kohms,1/8W	R712,713	VRD-ST2CD272J	J AA	2.7 kohms,1/6W
R387	VRD-ST2CD562J	J AA	5.6 kohms,1/6W	R714	VRD-MN2BD392J	J AA	3.9 kohms,1/8W
R388	VRD-MN2BD392J	J AA	3.9 kohms,1/8W	R715	VRD-ST2CD392J	J AA	3.9 kohms,1/6W
R391,392	VRD-ST2EE271J	J AA	270 ohms,1/4W	R716	VRD-ST2CD472J	J AA	4.7 kohms,1/6W
R393	VRD-MN2BD102J	J AA	1 kohm,1/8W	R717	VRD-MN2BD683J	J AA	68 kohms,1/8W
R395	VRD-MN2BD473J	J AA	47 kohms,1/8W	R718	VRD-MN2BD562J	J AA	5.6 kohms,1/8W
R401,402	VRD-MN2BD331J	J AA	330 ohms,1/8W	R719	VRD-ST2CD103J	J AA	10 kohm,1/6W
R403,404	VRD-MN2BD562J	J AA	5.6 kohms,1/8W	R720	VRD-MN2BD104J	J AA	100 kohm,1/8W
R407	VRD-MN2BD222J	J AA	2.2 kohms,1/8W	R721	VRD-ST2CD183J	J AA	18 kohms,1/6W
R408	VRD-ST2CD222J	J AA	2.2 kohms,1/6W	R722	VRD-ST2CD333J	J AA	33 kohms,1/6W
R409,410	VRD-ST2CD103J	J AA	10 kohm,1/6W	R723	VRD-ST2CD101J	J AA	100 ohm,1/6W
R415,416	VRD-MN2BD392J	J AA	3.9 kohms,1/8W	R724	VRD-ST2CD104J	J AA	100 kohm,1/6W
R417,418	VRD-MN2BD122J	J AA	1.2 kohms,1/8W	R725	VRD-ST2CD103J	J AA	10 kohm,1/6W
R419,420	VRD-MN2BD472J	J AA	4.7 kohms,1/8W	R726	VRD-ST2CD184J	J AA	180 kohms,1/6W
R421,422	VRD-MN2BD393J	J AA	39 kohms,1/8W	R730	VRD-ST2CD102J	J AA	1 kohm,1/6W
R423,424	VRD-ST2CD474J	J AA	470 kohms,1/6W	R801,802	VRD-ST2EE223J	J AA	22 kohms,1/4W
R425	VRD-MN2BD223J	J AA	22 kohms,1/8W	R803	VRS-VV3DA681J	J AC	680 ohms,2W
R426	VRD-ST2CD330J	J AA	33 ohms,1/6W	R804	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R601	VRD-ST2CD102J	J AA	1 kohm,1/6W	R805	VRD-ST2CD473J	J AA	47 kohms,1/6W
R602	VRD-MN2BD104J	J AA	100 kohm,1/8W	R806	VRD-ST2CD100J	J AA	10 ohm,1/6W
R603	VRD-MN2BD103J	J AA	10 kohm,1/8W	R807	VRD-ST2CD123J	J AA	12 kohms,1/6W
R604	VRD-ST2CD123J	J AA	12 kohms,1/6W	R832	VRD-RT2HD330J	J AA	33 ohms,1/2W
R605	VRD-MN2BD563J	J AA	56 kohms,1/8W	R833	VRD-ST2CD223J	J AA	22 kohms,1/6W
R606	VRD-ST2CD102J	J AA	1 kohm,1/6W	R841	VRD-ST2CD223J	J AA	22 kohms,1/6W
R607	VRD-MN2BD333J	J AA	33 kohms,1/8W	R851	VRD-ST2CD103J	J AA	10 kohm,1/6W
R608	VRD-MN2BD683J	J AA	68 kohms,1/8W	R901,902	VRD-ST2CD563J	J AA	56 kohms,1/6W
R609	VRD-MN2BD474J	J AA	470 kohms,1/8W	R903,904	VRD-ST2CD821J	J AA	820 ohms,1/6W
R610	VRD-MN2BD153J	J AA	15 kohms,1/8W	R905,906	VRD-ST2CD102J	J AA	1 kohm,1/6W
R611	VRD-MN2BD104J	J AA	100 kohm,1/8W	R907,908	VRS-VV3AAR10J	J	0.1 ohm,1W
R612	VRD-ST2CD105J	J AA	1 Mohm,1/6W	R909,910	VRD-ST2CD102J	J AA	1 kohm,1/6W
R613	VRD-MN2BD824J	J AA	820 kohms,1/8W	R911,912	VRD-ST2CD103J	J AA	10 kohm,1/6W
R614	VRD-ST2CD394J	J AA	390 kohms,1/6W	R913-915	VRD-ST2CD563J	J AA	56 kohms,1/6W
R615	VRD-MN2BD154J	J AA	150 kohms,1/8W	△ R918,919	VRG-ST2EC101J	J AB	100 ohm,1/4W,Fusable
R616	VRD-ST2CD102J	J AA	1 kohm,1/6W	R920	VRD-ST2CD223J	J AA	22 kohms,1/6W
R617	VRD-ST2CD224J	J AA	220 kohms,1/6W	R931,932	VRD-MN2BD102J	J AA	1 kohm,1/8W
R618	VRD-MN2BD224J	J AA	220 kohms,1/8W	R933,934	VRD-ST2CD683J	J AA	68 kohms,1/6W
R619	VRD-ST2CD225J	J AA	2.2 Mohms,1/6W	R951,952	VRD-RT2HD331J	J AA	330 ohms,1/2W
R620	VRD-MN2BD184J	J AA	180 kohms,1/8W	R953,954	VRD-ST2CD472J	J AA	4.7 kohms,1/6W
R621	VRD-MN2BD330J	J AA	33 ohms,1/8W	R971	VRD-ST2CD102J	J AA	1 kohm,1/6W
R622	VRD-MN2BD104J	J AA	100 kohm,1/8W	R972	VRD-ST2CD683J	J AA	68 kohms,1/6W
R623,624	VRD-ST2EE271J	J AA	270 ohms,1/4W	R973	VRD-ST2CD153J	J AA	15 kohms,1/6W
R625-627	VRD-MN2BD104J	J AA	100 kohm,1/8W	R975	VRD-RT2HD180J	J AA	18 ohms,1/2W
R629	VRD-ST2CD103J	J AA	10 kohm,1/6W	R976	VRD-ST2CD102J	J AA	1 kohm,1/6W
R632-635	VRD-ST2CD103J	J AA	10 kohm,1/6W	RK1	VRD-ST2CD103J	J AA	10 kohm,1/6W
R636	VRD-MN2BD683J	J AA	68 kohms,1/8W	RK2,3	VRD-ST2CD563J	J AA	56 kohms,1/6W
R637	VRD-MN2BD102J	J AA	1 kohm,1/8W	RK4	VRD-ST2CD103J	J AA	10 kohm,1/6W
R638	VRD-MN2BD473J	J AA	47 kohms,1/8W	RK5	VRD-ST2CD102J	J AA	1 kohm,1/6W
R641	VRD-MN2BD102J	J AA	1 kohm,1/8W	RK6	VRD-ST2CD562J	J AA	5.6 kohms,1/6W
R642	VRD-MN2BD642J	J	6.4 kohm,1/8W	RK7	VRD-ST2CD102J	J AA	1 kohm,1/6W
R643,644	VRD-MN2BD102J	J AA	1 kohm,1/8W	RK8	VRD-ST2CD562J	J AA	5.6 kohms,1/6W
R645	VRD-MN2BD223J	J AA	22 kohms,1/8W	RK9-11	VRD-ST2CD102J	J AA	1 kohm,1/6W
R646-648	VRD-MN2BD102J	J AA	1 kohm,1/8W	RK12	VRD-ST2CD101J	J AA	100 ohm,1/6W
R649	VRD-MN2BD103J	J AA	10 kohm,1/8W	RK13	VRD-ST2CD122J	J AA	1.2 kohms,1/6W
R650	VRD-ST2CD683J	J AA	68 kohms,1/6W	RK14,15	VRD-RT2HD101J	J AA	100 ohm,1/2W
R651,652	VRD-MN2BD103J	J AA	10 kohm,1/8W	RK36,37	VRD-ST2CD102J	J AA	1 kohm,1/6W
R653	VRD-MN2BD102J	J AA	1 kohm,1/8W	RK38	VRD-ST2CD101J	J AA	100 ohm,1/6W
R654	VRD-ST2CD102J	J AA	1 kohm,1/6W	RK39,40	VRD-ST2CD102J	J AA	1 kohm,1/6W
R655	VRD-MN2BD102J	J AA	1 kohm,1/8W	RK41,42	VRD-ST2CD152J	J AA	1.5 kohms,1/6W
R656	VRD-ST2CD103J	J AA	10 kohm,1/6W	RK43,44	VRD-ST2CD474J	J AA	470 kohms,1/6W
R658	VRD-MN2BD473J	J AA	47 kohms,1/8W	RK45,46	VRD-ST2CD102J	J AA	1 kohm,1/6W
R659	VRD-MN2BD102J	J AA	1 kohm,1/8W	RK47,48	VRD-ST2CD681J	J AA	680 ohms,1/6W
R660	VRD-MN2BD103J	J AA	10 kohm,1/8W	RV1	VRS-TV2AB103J	J AA	10 kohm,1/10W

CD-BK1600V/1800V/190V

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
RV2	VRS-TV2AB102J	J AA	1 kohm,1/10W
RV11	VRS-TV2AB102J	J AA	1 kohm,1/10W
RV15	VRS-TV2AB102J	J AA	1 kohm,1/10W
RV20	VRS-TV2AB102J	J AA	1 kohm,1/10W
RV22	VRS-TV2AB102J	J AA	1 kohm,1/10W
RV37	VRS-TV2AB102J	J AA	1 kohm,1/10W
RV38-43	VRS-TV2AB392J	J AA	3.9 kohms,1/10W
RV44-47	VRS-TV2AB392J	J AA	3.9 kohms,1/10W
RV48-50	VRS-TV2AB392J	J AA	3.9 kohms,1/10W
RV51	VRS-TV2AB473J	J AA	47 kohms,1/10W
RV59	VRS-TV2AB103J	J AA	10 kohm,1/10W
RV60	VRS-TV2AB101J	J AA	100 ohm,1/10W
RV61	VRS-TV2AB104J	J AA	100 kohm,1/10W
RV62,63	VRS-TV2AB151J	J AA	150 ohms,1/10W
RV64	VRS-TV2AB470J	J AA	47 ohms,1/10W
RV84	VRS-TV2AB472J	J AA	4.7 kohms,1/10W
RV85	VRS-TV2AB103J	J AA	10 kohm,1/10W
RV86	VRS-TV2AB472J	J AA	4.7 kohms,1/10W
RV93,94	VRS-TV2AB103J	J AA	10 kohm,1/10W
RV95	VRS-TV2AB682J	J AA	6.8 kohms,1/10W
RV96	VRS-TV2AB333J	J AA	33 kohms,1/10W

OTHER CIRCUITRY PARTS

BI4/CNS4	QCWN1572AWZZ	J AF	Connector Ass'y,6/6Pin
BI102/CNS102	QCWN1569AWZZ	J AF	Connector Ass'y,7/6Pin
BI402/CNP402	QCWN1561AWZZ	J AF	Connector Ass'y,5/5Pin
BI404/CNS404	QCWN1644AWZZ	J AF	Connector Ass'y,3/3Pin
BI701/CNS701	QCWN1566AWZZ	J AF	Connector Ass'y,12/12Pin
BIK1/CNSK1	QCWN1573AWZZ	J AF	Connector Ass'y,11/11Pin
CNP1	QCNCM704GAWZZ	J AC	Plug,7Pin
CNP2	QCNCM704HAWZZ	J AC	Plug,8Pin
CNP3	92LCONE6P53253	J AC	Plug,6Pin
CNP3A	92LCONE6P53254	J AC	Plug,6Pin
CNP4	QCNCM705FAFZZ	J AB	Plug,6Pin
CNP11	92LCONE5P53254	J AB	Plug,5Pin
CNP12	QCNCM932MAFZZ	J AE	Plug,10Pin
CNP101	QCNCM705CAFZZ	J AA	Plug,3Pin
CNP302	92LCONE2P5268	J AB	Plug,2Pin
CNP401	QCNCWZG27AWZZ	J AE	Socket,27Pin
CNP403	92LCONEBP53253	J AC	Plug,11Pin
CNP702	QCNCWZF27AWZZ	J AE	Socket,27Pin
CNP703	QCNCWZF13AWZZ	J AC	Plug,13Pin
△ CNP801	QCNCM049EAWZZ	J AD	Plug,5Pin
CNP802	QCNCM035HAWZZ	J AB	Plug,8Pin
CNP951	QCNCW012EAWZZ	J AC	Plug,5Pin
CNP971	92LCONE2P53253	J AB	Plug,2Pin
CNPV3	92LCONE2P53254	J AB	Plug,2Pin
CNS1A/B	QCWN1537AWZZ	J AG	Connector Ass'y,7/7Pin
CNS2A/B	QCWN1538AWZZ	J AG	Connector Ass'y,8/8Pin
CNS3A/B	QCWN1539AWZZ	J AE	Connector Ass'y,6/6Pin
CNS971	QCWN1389AWZZ	J AC	Connector Ass'y,2Pin
△ F801,802	92LFUSET402E	J AD	Fuse,T4 L 250V
△ F803	92LFUSET202E	J AC	Fuse,T2A L 250V
FC701	QCWN1567AWZZ	J AE	Flat Cable,27Pin
FC702	QCWN1544AWZZ	J AE	Flat Cable,13Pin
FL701	VVKBJ749GNK-1	J BD	FL Display
FW951	QCWN1563AWZZ	J AD	Connector Ass'y,5Pin
JK1,2	QJAKJ0007AWZZ	J AF	Jack,Mic
JK671	QSOCJ0110AWZZ	J AE	Jack,Video Out
JK951	QJAKM0004AWZZ	J AK	Jack,Headphones
M1	92LMTR2790CASY	J BB	Motor with Chassis [Spindle]
M2	92LMTR1854BASY	J AP	Motor with Gear [Sled]
M3	92LTWMEN7E6Y	J AR	Motor with Worm Pulley
M901	RMOTV0027AWZZ	J AM	Motor,Air Cooling Fan
RL951	RRLYD0014AWZZ	J AK	Relay
RX701	VHLN63H380A-1	J AK	Remote Sensor,N63H380A
SO302	QTANC0206AWZZ	J J	FM Terminal
SO401	QSOCJ0305AWZZ	J J	Jack,Video/AUX
△ SO801	QSOCA0212AWZZ	J AD	Socket,AC Input
SO901	QTANA0417AWZZ	J AE	Terminal,Speaker [1600V]
SO901	QTANA0808AWZZ	J AF	Terminal,Speaker [1800V/190V]
SW1	SWMPU10780MLB	J AH	Switch,Push Type [Open/Close]
SW2	SWMPU11470MLB	J AE	Switch,Push Type [Clamp]
SW3	SWMPU11470MLB	J AE	Switch,Push Type [Disc Number]
SW4	QSW-F9001AW01	J AD	Switch,Leaf Type [Pickup In]
SW401	QSW-S0024AWZZ	J AE	Switch,Slide Type [SPAN SELECTOR]
SW601	92LSWICH1401AT	J AC	Switch,Key Type [ON/STAND-BY]
SW602	92LSWICH1401AT	J AC	Switch,Key Type [CLOCK]

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
SW603	92LSWICH1401AT	J AC	Switch,Key Type [TIMER/SLEEP]
SW604	92LSWICH1401AT	J AC	Switch,Key Type [AUDIO KARAOKE]
SW605	92LSWICH1401AT	J AC	Switch,Key Type [PBC]
SW606	92LSWICH1401AT	J AC	Switch,Key Type [OSD/ON/OFF]
SW607	92LSWICH1401AT	J AC	Switch,Key Type [DIGEST]
SW608	92LSWICH1401AT	J AC	Switch,Key Type [BOOK MARK]
SW609	92LSWICH1401AT	J AC	Switch,Key Type [DISC SKIP]
SW610	92LSWICH1401AT	J AC	Switch,Key Type [OPEN/CLOSE]
SW611	92LSWICH1401AT	J AC	Switch,Key Type [DIMMER]
SW612	92LSWICH1401AT	J AC	Switch,Key Type [X-BASS/DEMO]
SW613	92LSWICH1401AT	J AC	Switch,Key Type [EQUALIZER]
SW614	92LSWICH1401AT	J AC	Switch,Key Type [VOLUME UP]
SW615	92LSWICH1401AT	J AC	Switch,Key Type [VOLUME DOWN]
SW616	92LSWICH1401AT	J AC	Switch,Key Type [CD]
SW617	92LSWICH1401AT	J AC	Switch,Key Type [TAPE]
SW618	92LSWICH1401AT	J AC	Switch,Key Type [TUNING/TIME DOWN]
SW619	92LSWICH1401AT	J AC	Switch,Key Type [MEMORY/SET]
SW620	92LSWICH1401AT	J AC	Switch,Key Type [REWIND]
SW621	92LSWICH1401AT	J AC	Switch,Key Type [FAST FORWARD]
SW622	92LSWICH1401AT	J AC	Switch,Key Type [PLAY/REPEAT]
SW623	92LSWICH1401AT	J AC	Switch,Key Type [STOP]
SW624	92LSWICH1401AT	J AC	Switch,Key Type [REVERSE PLAY]
SW625	92LSWICH1401AT	J AC	Switch,Key Type [REC/PAUSE]
SW626	92LSWICH1401AT	J AC	Switch,Key Type [TUNING/TIME UP]
SW627	92LSWICH1401AT	J AC	Switch,Key Type [VIDEO/AUX]
SW628	92LSWICH1401AT	J AC	Switch,Key Type [TUNER (BAND)]
SW629	92LSWICH1401AT	J AC	Switch,Key Type [REVERSE]
△ SW801	QSOCE0005AWZZ	J AH	Switch,Slide Type [Voltage Selector]

MECHANICAL PARTS

301	NGERH0011AWZZ	J AC	Gear,Middle
302	NGERH0012AWZZ	J AC	Gear,Drive
303	MLEVP0080AWZZ	J AC	Rail,Guide
304	NSFTM0020AWFW	J AD	Shaft,Guide
305	92LMCUSN1524A	J AD	Cushion
△ 306	92LHPC1LXASY	J BD	Pickup Unit Ass'y
306-1	—	—	Pickup Unit (Not Replacement Item)
306-2	NGERR0043AFZZ	J AC	Gear,Rack
306-3	MSPRC0961AFZZ	J AA	Spring,Rack
701	XBSSD26P06000	J AA	Screw,ø2.6×6mm
702	XHBSD20P05000	J AA	Screw,ø2×5mm
703	XBSSD20P03000	J AA	Screw,ø2×3mm
704	LX-WZ1070AFZZ	J AA	Washer,ø1.5×ø3.8×0.25mm
M1	92LMTR2790CASY	J BB	Motor with Chassis [Spindle]
M2	92LMTR1854BASY	J AP	Motor with Gear [Sled]
SW4	QSW-F9001AW01	J AD	Switch,Leaf Type [Pickup In]

CABINET PARTS

201	92LCAB3287AASY	J J	Front Cabinet Ass'y [1600V]
201	92LCAB3291AASY	J J	Front Panel Ass'y [190V]
201	92LCAB3294AASY	J J	Front Cabinet Ass'y [1800V]
201-1	—	—	Front Panel (Not Replacement Item)
201-2	GDORF0074AWSA	J AE	Cassette Holder,Tape 1
201-3	GDORF0075AWSA	J AE	Cassette Holder,Tape 2
201-4	GCOVA1251AWSA	J AH	Cassette Cover,Tape 1
201-5	GCOVA1298AWSA	J AE	Cassette Cover,Tape 2
201-6	HDECQ0521AWSA	J AD	Panel,Cassette,Tape 1
201-7	HDECQ0522AWSA	J AD	Panel,Cassette,Tape 2
201-8	HDECQ0587AWSA	J J	Panel,Amp [1600V]
201-8	HDECQ0586AWSA	J J	Panel,Amp [1800V]
201-8	HDECQ0590AWSA	J J	Panel,Amp [190V]
201-9	PSHEM0008AWZZ	J J	Sheet,Front Panel
201-10	JKNBZ0649AWSA	J AF	Button,Volume Up/Down
201-11	JKNBZ0679AWSA	J AG	Button,Center Operation

CD-BK1600V/1800V/190V

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
201-12	JKNBZ0714AWSA	J AF	Button,ON/Stand-by/Clock
201-13	JKNBZ0723AWSA	J AF	Button,VCD/CD/Tuner (BAND)
201-14	JKNBZ0659AWSA	J AF	Button,Tape/Video/Aux
201-15	JKNBZ0660AWSA	J AF	Button,Tuning/Time
201-16	JKNBZ0661AWSA	J AE	Button,Dimmer
201-20	GCOVA1258AWSA	J AB	Cover,LED
201-21	MLIFP0008AWZZ	J AD	Damper
201-22	MSPRD0151AWFJ	J AB	Cassette Spring,Tape 1
201-23	MSPRD0152AWFJ	J AB	Cassette Spring,Tape 2
201-24	92LBADGE1671A	J AC	Badge,SHARP
201-25	JKNBZ0650AWSA	J AF	Button,Disc Skip/X-BASS
201-26	JKNBZ0651AWSA	J	Button,RDS
202	92LCAB3283BASY	J	Side Panel Ass'y,Left
202- 1	—	—	Side Panel,Left (Not Replacement Item)
202- 2	PCUSG0022AWZZ	J AB	Cushion,Leg
203	92LCAB3283CASY	J	Side Panel Ass'y,Right
203- 1	—	—	Side Panel,Right (Not Replacement Item)
203- 2	PCUSG0022AWZZ	J AB	Cushion,Leg
204	92LCOV3287AASY	J	CD Tray Cover Ass'y
204- 1	—	—	Cover,CD Tray (Not Replacement Item)
204- 2	GCOVA1254AWSA	J AE	Cover,CD Tray Panel,Left
204- 3	GCOVA1255AWSA	J AE	Cover,CD Tray Panel,Right
205	GCAB-1184AWSA	J AP	Top Cabinet
206	GITAR0598AWSA	J	Rear Panel [1800V]
206	GITAR0599AWSA	J	Rear Panel [1600V]
206	GITAR0603AWSA	J	Rear Panel [190V]
208	LANGK0110AWFW	J AE	Bracket,Cassette Lock,Tape 1
209	LANGK0111AWFW	J AE	Bracket,Cassette Lock,Tape 2
210	LANGK0192AWFW	J AD	Bracket,Fan Support
212	LANGK0207AWFW	J	Bracket,Power Transformer Support
213	LCHSM0094AWFW	J AP	Main Chassis
214	LHLDZ1241AWZZ	J AE	Holder,FL Display
219	MLOKC0003AWZZ	J AD	Lock Lever,Cassette,Tape 1
220	MLOKC0004AWZZ	J AD	Lock Lever,Cassette,Tape 2
221	MSPRD0109AWFJ	J AB	Spring,Cassette Lock,Tape 1
222	MSPRD0110AWFJ	J AB	Spring,Cassette Lock,Tape 2
223	NFANP0001AWZZ	J AD	Rotary Fan
224	92LPT0331105	J AM	Turntable
225	PCUSG0022AWZZ	J AB	Cushion,Leg
226	PRDAR0148AWFW	J AR	Heat Sink,Main
230	QCNWN1615AWZZ	J AC	Lug Wire
△ 231	QFSDH0001AWZZ	J AB	Holder,Fuse
232	92LBE241414	J AD	Belt,Drive
233	92LCSPPR1431C	J AA	Spring,Ring
234	92LEVA0330702	J AD	Cushion,CD Player Unit
235	92LMAG0104302	J AE	Magnet
236	92LMT0304302	J AB	Plate,Metal
237	92LNBAND1318A	J AA	Nylon Band,80mm
238	92LNM0305401	J AB	Velvet Cushion
239	92LPT0303002	J AB	Roller
240	92LPT0304303	J AB	Lever,Stop
241	92LPT0304304	J AB	Stopper,Cam Gear
242	92LPT0304305	J AE	Lever,Lock
243	92LPT0304306	J AG	Stabilizer
244	92LPT0304307	J AC	Support,Cam
245	92LPT0304308	J AB	Lock Gear Pin
246	92LPT0304309	J AB	Cap,Pulley Stopper
247	92LPT0305413	J AG	Cam Gear Lower
248	92LPT0309506	J AD	Gear,Turntable Drive
249	92LPT0309507	J AD	Gear,Open/Close Drive
250	92LPT0309508	J AD	Gear,Planet
251	92LPT0309509	J AD	Gear,Drive
252	92LPT0309510	J AE	Gear,Pulley
253	92LPT0309511	J AD	Gear,Middle
254	92LPT0311101	J AB	Lever,Clamp
255	92LPT0311102	J AC	Lever,Disc
256	92LPT0312005	J AL	Gear,Cam
257	92LPT0320201	J AE	Support,Stabilizer
258	92LPT0330301	J AU	Chassis,CD Player Unit
259	92LPT0330803	J AK	CD,Chassis
260	92LPT0331003	J AT	Chassis,Disc Tray
262	92LSP0304303	J AB	Spring,Stopper
263	92LSP0304305	J AB	Spring,Lock
264	92LSP0304306	J AB	Spring,Lock Gear
268	KMECB0013AWZZ	J BK	Tape Mechanism Ass'y
274	92LCAUT1706A1	J AC	Label,Class 3A Laser
275	92LCAUT1706B	J AA	Label,Laser
276	PSHEZ0067AWZZ	J AC	Sheet,PWB Support

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
280	92LRDAT1468B	J	Heat Sink,Sub
281	QLUGP0002AWZZ	J AB	Lug
282	QLUGP0001AWZZ	J AC	Lug
283	JKNBK0012AWSG	J AK	Knob,Karaoke
601	XBBS20P04000	J AA	Screw,ø2×4mm
602	XJBSF30P12000	J AA	Screw,ø3×12mm
604	LX-JZ0004AWFD	J AA	Screw,ø3×12mm
605	XESSD30P10000	J AA	Screw,ø3×10mm
606	XHBSD26P04000	J AA	Screw,ø2.6×4mm
607	XJBSD30P12000	J AA	Screw,ø3×12mm
608	XJBSD30P10000	J AA	Screw,ø3×10mm
609	XJBSD30P14000	J AA	Screw,ø3×14mm
611	XJSSD30P10000	J AA	Screw,ø3×10mm
612	LX-HZ0009AWFD	J AC	Screw,Special
613	LX-HZ0169AFFD	J AA	Screw,ø4×12mm
614	LX-JZ0010AFFD	J AA	Screw,ø3×10mm
615	XEBSD30P10000	J AA	Screw,ø3×10mm
616	LX-BZ2222AXZZ	J AB	Screw,Special
618	92LSC0308MBZI	J AB	Screw,ø3×8mm
620	LX-JZ0022AFFD	J AA	Screw,ø3×10mm

ACCESSORIES/PACKING PARTS

△	QACCA0004AW00	J	AC Power Supply Cord [For Saudi Arabia]
△	QACCB0012AW00	J	AC Power Supply Cord [For Hong Kong]
△	QACCE0007AW00	J AH	AC Power Supply Cord [For Kuwait]
△	QACCJ0006AW00	J AK	AC Power Supply Cord [For Taiwan]
	QANTL0008AWZZ	J AH	AM Loop Antenna
	QCNWG0022AWZZ	J AM	Video Cable
△	QPLGA0003AWZZ	J AF	Adaptor,AC Plug [Except for Philippines/Thailand]
△	QPLGA0004AWZZ	J AF	Adaptor,AC Plug [For Philippines/Thailand]
	SPAKA0235AWZZ	J AM	Packing Add. [1600V]
	SPAKA0245AWZZ	J AM	Packing Add. [1800V/190V]
	SPAKC0995AWZZ	J	Packing Case,1600V
	SPAKC0994AWZZ	J	Packing Case,1800V
	SPAKC1051AWZZ	J	Packing Case [1800V for Turkey]
	SPAKC0991AWZZ	J	Packing Case [190V]
	SPAKP0013AWZZ1	J AC	Polyethylene Bag,Unit
	SPAKZ0573AWZZ	J AB	Sheet,CD Tray
	SPAKZ0623AWZZ	J	Center Pad
	TCAUA0042AWZZ	J	Label,Caution [For Taiwan]
	TGANE0011AW34	J	Warranty Card [1600V for Philippines]
	TGANE0011AW36	J	Warranty Card [190V for Philippines]
	TGANE0011AW37	J	Warranty Card [1800V for Philippines]
	TGANZ0028AW38	J	Warranty Card [1600V for Taiwan]
	TGANZ0028AW40	J	Warranty Card [190V for Taiwan]
	TGANZ0028AW41	J	Warranty Card [1800V for Taiwan]
	TINST0077AWZZ	J	Operation Manual [1600V for Thailand]
	TINSZ0568AWZZ	J	Operation Manual [1600V Except for Thailand]
	TINST0067AWZZ	J	Operation Manual [1800V for Thailand]
	TINSZ0567AWZZ	J	Operation Manual [1800V Except for Thailand]
	TINST0079AWZZ	J	Operation Manual [190V for Thailand]
	TINSZ0578AWZZ	J	Operation Manual [190V Except for Thailand]
	TLABB0001AWZZ	J AB	Label,SHARP Corporation Japan for Set
	TLABE0405AWZZ	J	Label,Bar Code [1600V For Asia/Middle and Near East/Africa]
	TLABE0404AWZZ	J	Label,Bar Code [1600V Except for Asia/Middle and Near East/Africa]
	TLABE0402AWZZ	J	Label,Bar Code [1800V Except for Asia/Middle and Near East/Africa]
	TLABE0403AWZZ	J	Label,Bar Code

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NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
			[1800V For Asia/Middle and Near East/Africa]
	TLABE0419AWZZ	J	Label, Bar Code
			[190V Except for Asia/Middle and Near East/Africa]
	TLABE0420AWZZ	J	Label, Bar Code
			[190V For Asia/Middle and Near East/Africa]
	TLABG0002AWZZ	J AB	Label, Hong Kong
	TLABJ0003AWZZ	J AB	Label, SHARP Corporation Japan for Packing Case
	TLABS0247AWZZ	J	Label, Safety [For Hong Kong]
	TLABZ0692AWZZ	J	Feature Label, Tape 1
	TLABZ0733AWZZ	J	Feature Label, Tape 2
	TLABZ0735AWZZ	J	Feature Label, Tape 2 [1800V/190V]
	TLABZ0764AWZZ	J	Label, Carton [1600V]
	TLABZ0761AWZZ	J	Label, Carton [1800V]
	TLABZ0770AWZZ	J	Label, Carton [190V]
	TSPC-0723AWZZ	J	Label, Specification [1800V for Taiwan]
	TSPC-0724AWZZ	J	Label, Specification [1800V for Thailand]
	TSPC-0725AWZZ	J	Label, Specification [1600V for Taiwan]
	TSPC-0726AWZZ	J	Label, Specification [1600V for Thailand]
	TSPC-0727AWZZ	J	Label, Specification [190V for Taiwan]
	TSPC-0728AWZZ	J	Label, Specification [190V for Thailand]
	92LBAG1460C1	J AB	Polyethylene Bag, Accessories
	92LBAG1770A	J AB	Polyethylene Bag, AC Power Supply Cord
	92LBAG760C	J AA	Polyethylene Bag, AC Plug Adaptor
	92LFANT1746A	J AD	FM Antenna
	92LPANEL713A	J AB	Panel, Made in Malaysia
	92L416-0068	J	Packing Add., Surround Speaker [190V/1800V Only]
	RRMCG0227AWSA	J	Remote Control
	GFTAB1022AWSB	J AK	Battery Lid, Remote Control

P.W.B. ASSEMBLY (Not Replacement Item)

PWB-A1~4	92LPWB3287MANS	J	—	Main/Display/Headphones/Socket (Combined Ass'y) [1600V]
PWB-A1~4	92LPWB3291MANS	J	—	Main/Display/Headphones/Socket (Combined Ass'y) [1800V]
PWB-A1~4	92LPWB3294MANS	J	—	Main/Display/Headphones/Socket (Combined Ass'y) [190V]
PWB-B	92LPWB3287VCDS	J	—	CD Video
PWB-C	QPWBF0027AWZZ	J AD	—	CD Motor (PWB Only)
PWB-D		J	—	Tape Mechanism
PWB-E	92LPC99C017	J AE	—	CD Loading Motor (PWB Only)
PWB-F	92LPWB3352MICS	J	—	Mic

OTHER SERVICE PART

UDSKA0004AFZZ	J	AZ	CD Pickup Lens Cleaner
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CP-BK1600/BK190

SPEAKER BOX PARTS

901	92L051-0095	J	AY	Speaker Box Ass'y, Left
902	92L051-0096	J	AY	Speaker Box Ass'y, Right
903	92L126-0009	J	BA	Front Panel Ass'y, Left
904	92L126-0010	J	BA	Front Panel Ass'y, Right
905	92L121-0178	J	AP	Net Frame Ass'y
906	92L122-0048	J	AG	Speaker Cord Ass'y (With Capacitor)
907	92L351-0374	J		Label, Specifications [For BK-1600]
907	92L351-0376	J		Label, Specifications [For BK-190]

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
908	92L391-0027	J	Catching Holder
910	92L372-0109	J AB	Screw, ø3×10mm
911	92L372-0124	J AB	Screw, ø4×12mm
912	92L394-0056	J	Foot Cushion
913	92L394-0055	J	Port Cushion
SP1,2	VSP0051TBN78A	J	Tweeter [For BK190]
SP1,2	VSP0051TBN86A	J	Tweeter [For BK1600]
SP3,4	VSPA010WB25WA	J	Woofers [For BK190]
SP3,4	VSPA010WB27CA	J	Woofers [For BK1600]
SP5,6	VSPA010WB26WA	J	Sub Woofers [For BK190]
SP5,6	VSPA010WB28CA	J	Sub Woofers [For BK1600]

PACKING PARTS

92L412-0133	J	AN	Packing Add., Top/Bottom Layer Pad
92L416-0068	J		

CP-BK1800

SPEAKER BOX PARTS

901	92L051-0099	J	AY	Speaker Box Ass'y, Left
902	92L051-0100	J	AY	Speaker Box Ass'y, Right
903	92L126-0017	J	BA	Front Panel Ass'y, Left
904	92L126-0018	J	BA	Front Panel Ass'y, Right
905	92L121-0196	J	AN	Net Frame Ass'y
906	92L122-0048	J	AG	Speaker Cord Ass'y (With Capacitor)
907	92L351-0377	J		Label, Specifications
908	92L319-0027	J	AE	Catching Holder
909	92L372-0027	J	AC	Screw, ø3×10mm
910	92L372-0124	J	AB	Screw, ø4×12mm
911	92L394-0056	J		Foot Cushion
912	92L394-0059	J		Port Cushion
SP1,2	VSP0051TBN78A	J		Tweeter
SP3,4	VSPA010WB25WA	J		Woofers
SP5,6	VSPA010WB26WA	J		Sub Woofers

PACKING PARTS

92L412-0148	J	AM	Packing Add.
92L416-0068	J		Layer Pad

GBOXS0041AWM1

SPEAKER BOX PARTS (CD-BK1800V/190V ONLY)

901	92L32-01-0460	J		Bottom Cabinet
902	92L60-00-1190	J		Net Frame Ass'y
903	92L33-01-1430	J		Label, Part Cord
904	92L37-03-0110	J		Speaker Cord
905	92L35-02-0320	J		Screw, ø3×14mm
SP1,2	VSPA010PB23WA	J		Speaker

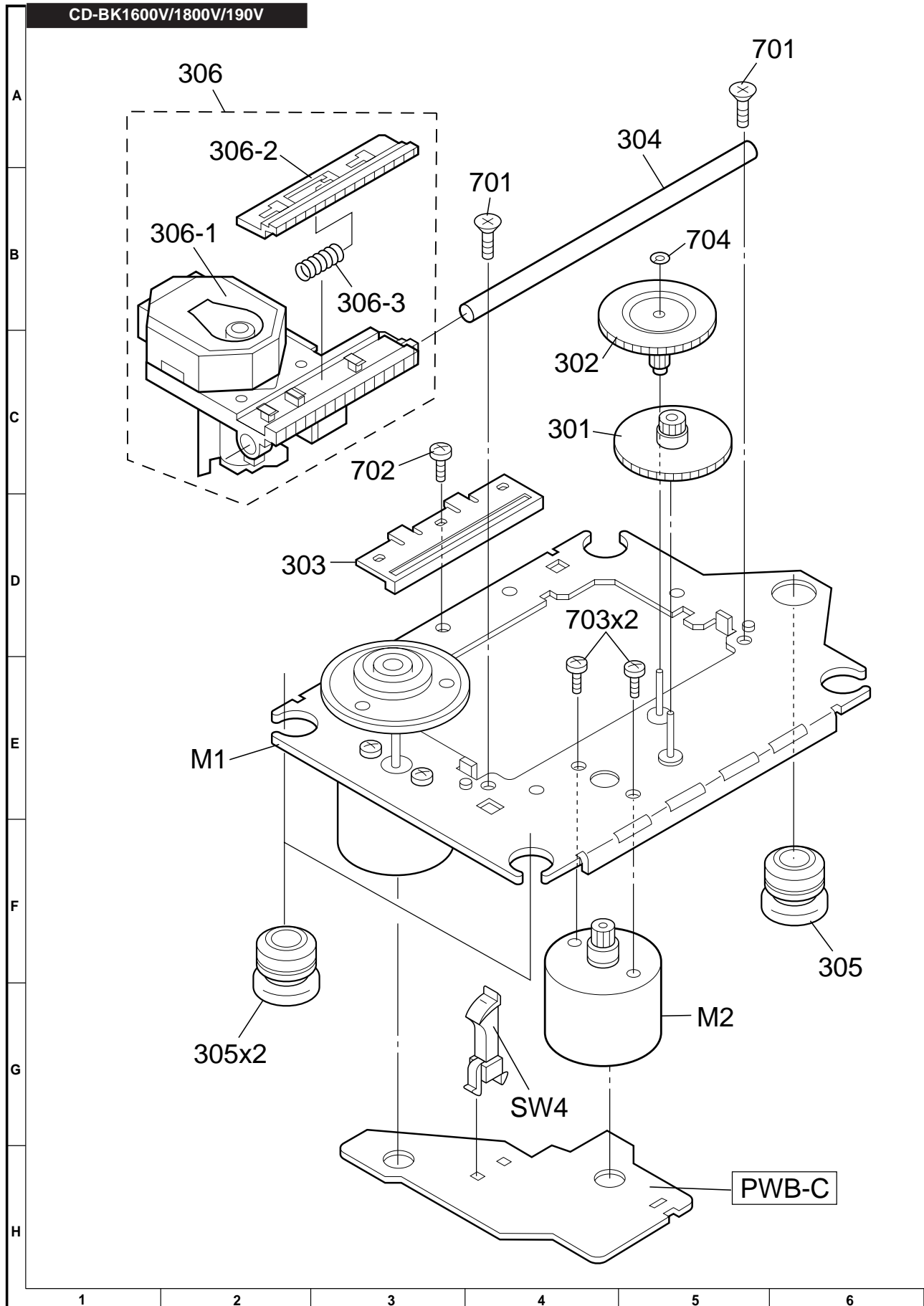


Figure 8 CD MECHANISM EXPLODED VIEW

CD-BK1600V/1800V/190V

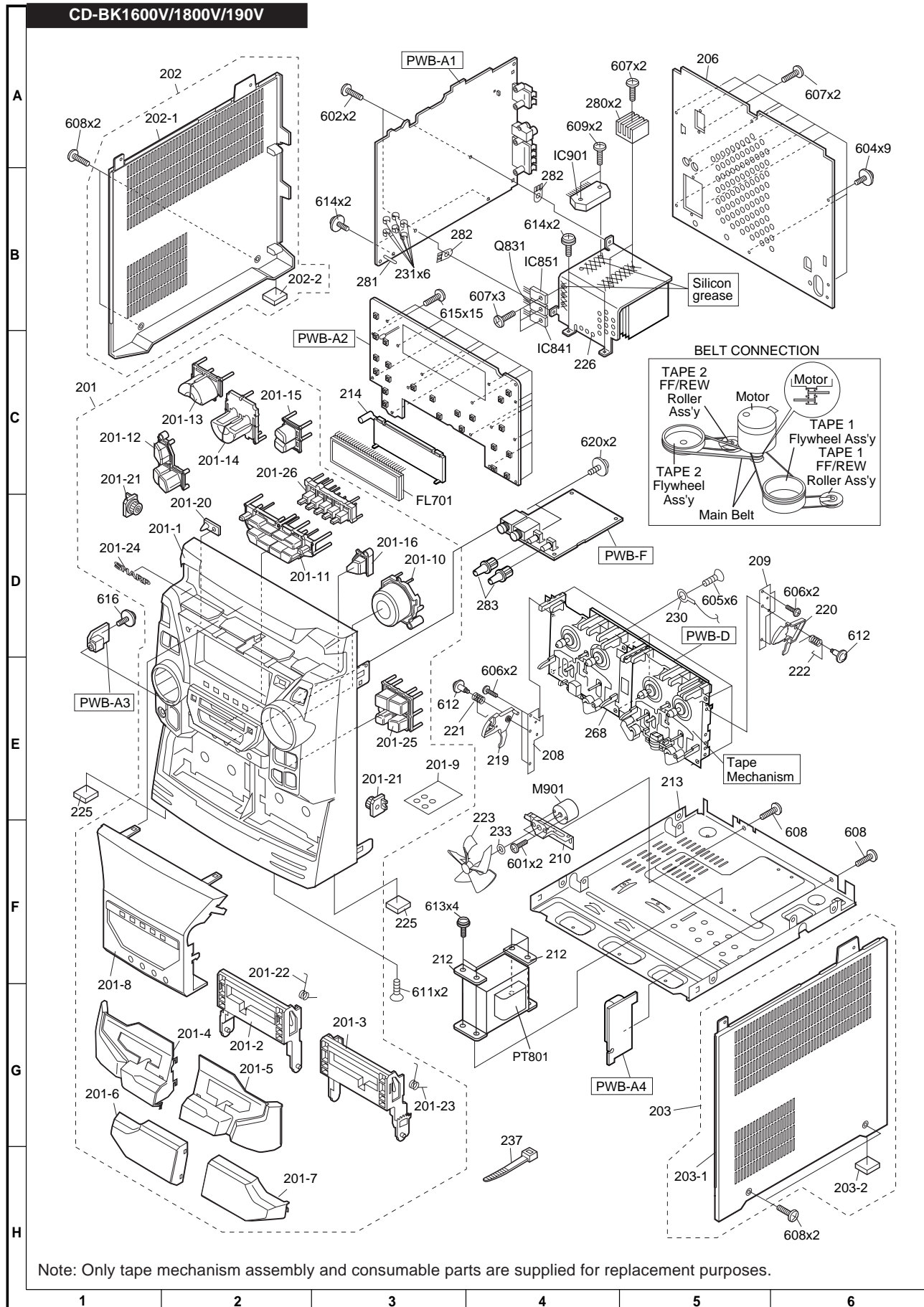


Figure 9 CABINET EXPLODED VIEW (1/2)

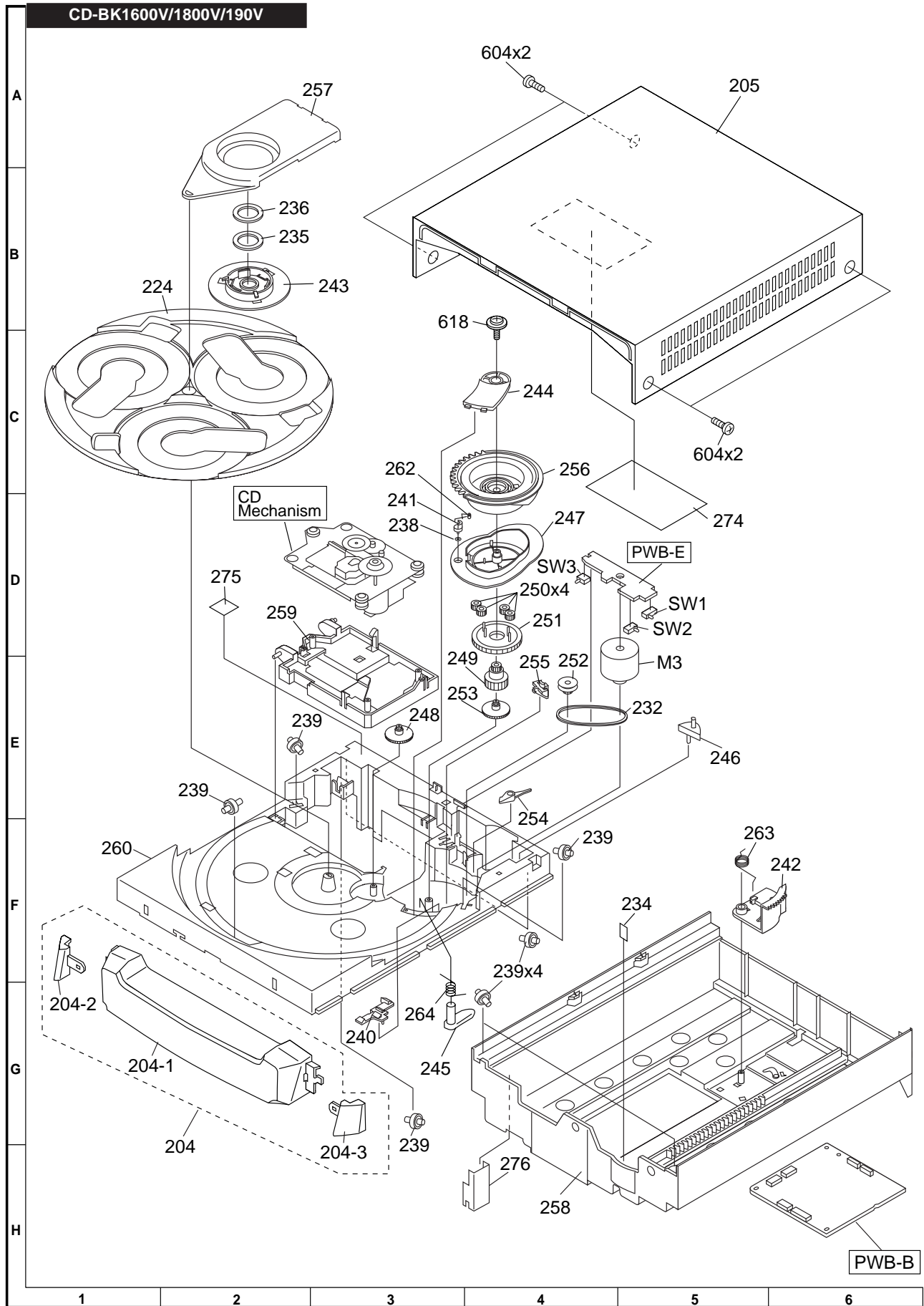


Figure 10 CABINET EXPLODED VIEW (2/2)

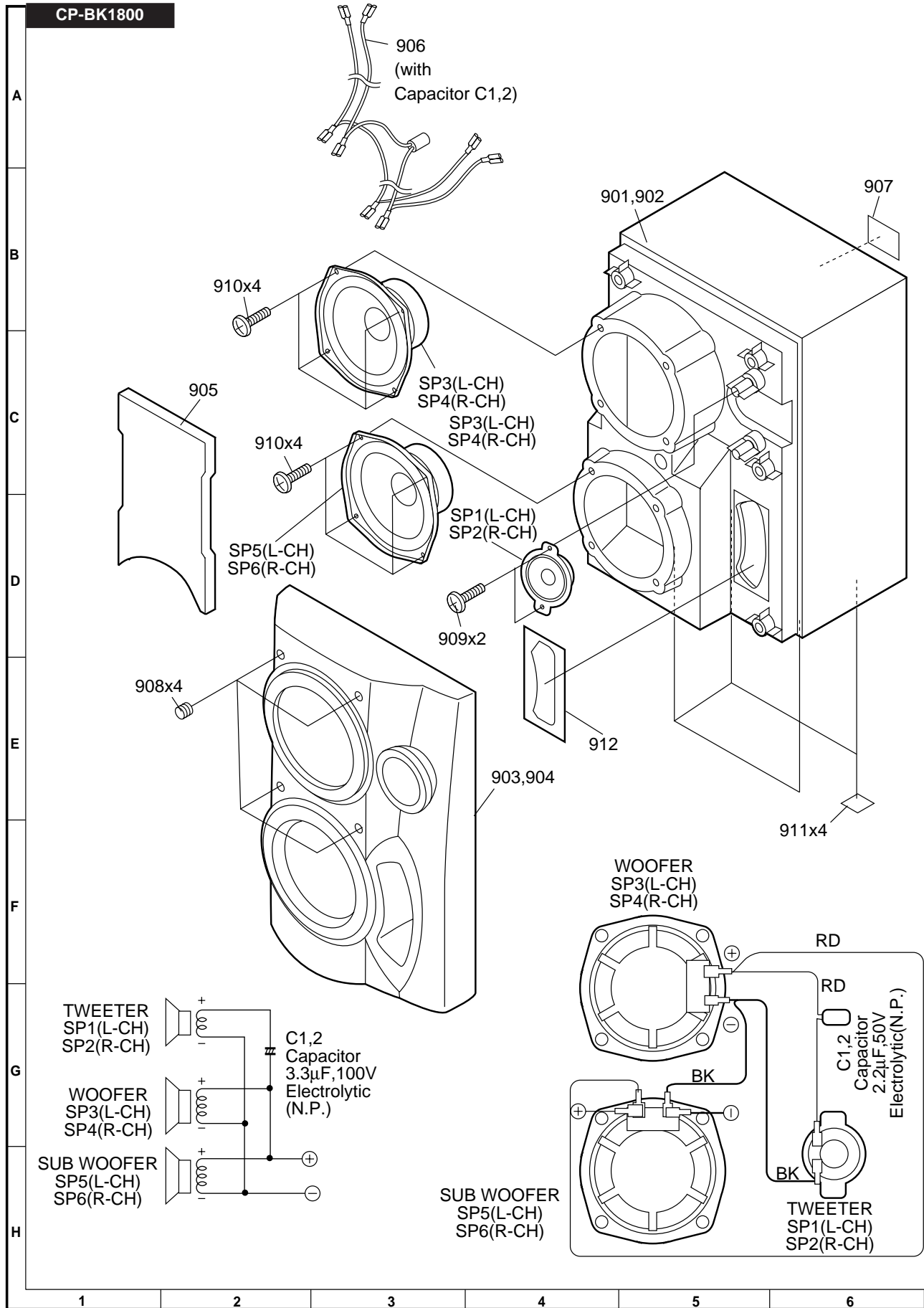


Figure 12 SPEAKER EXPLODED VIEW (2/3)

GBOXS0041AWM1

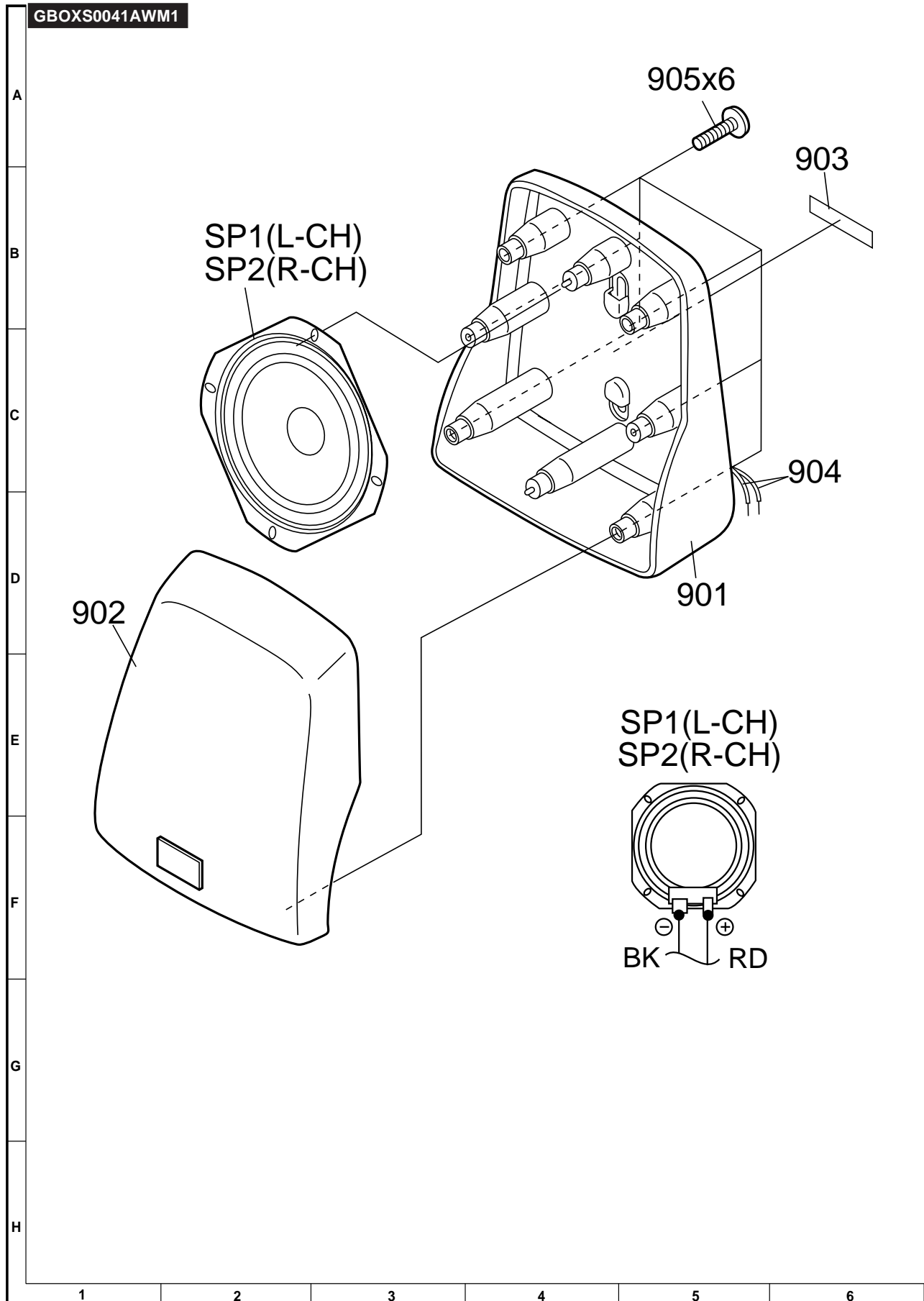


Figure 13 SPEAKER EXPLODED VIEW (3/3)

— MEMO —

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