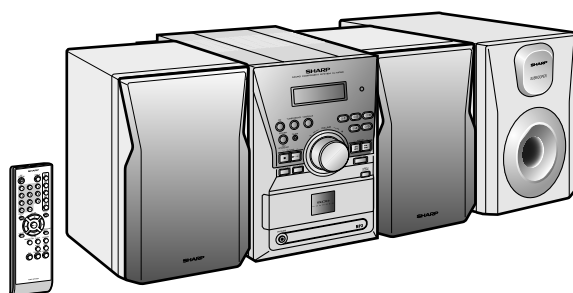


SHARP SERVICE MANUAL

No. S2509XLMP60U/



MICRO COMPONENT SYSTEM

MODEL XL-MP60

XL-MP60 Micro Component System consisting of XL-MP60 (main unit), CP-MP60F (front speakers) and CP-MP60SW (subwoofer).

COMPACT
disc
DIGITAL AUDIO

MP3

CD-R/RW
Playable

5CD CHANGER

• 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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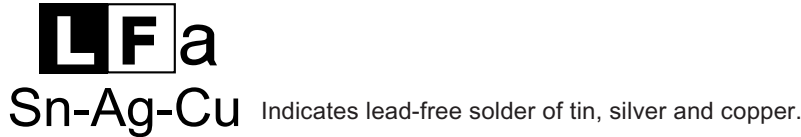
CHAPTER 1. GENERAL DESCRIPTION

[1] PRECAUTIONS FOR USING LEAD-FREE SOLDER

1. Employing lead-free solder

"MAIN,TUNER,CD/MP3,DISPLAY,POWER AMP.,JACK,SWITCH" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWB and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:



2. Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40 °C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

3. Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220 °C which is higher than the conventional lead solder by 40 °C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corrected. Make sure to turn on and off the power of the bit as required.

If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Ref No.	Parts No.	Description
PWB-A	DCEKKV517SJ03	Main(A1)/Tuner(A2)/CD/MP3(A3)/Display(A4)/POWER AMP.(A5)/Jack(A6)/Switch(A7)

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

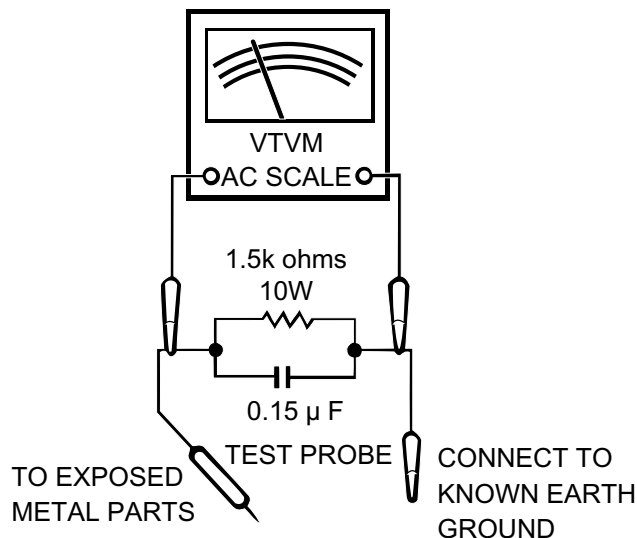
[2] IMPORTANT SERVICE NOTES (FOR U.S.A. ONLY)

BEFORE RETURNING THE AUDIO PRODUCT

(Fire & Shock Hazard)

Before returning the audio product to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the audio product.
2. Inspect all protective devices such as insulating materials, cabinet, terminal board, adjustment and compartment covers or shields, mechanical insulators etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.
 - * Plug the AC line cord directly into a 120 volt AC outlet.
 - * Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as conduit or electrical ground connected to earth ground.
 - * Use a VTVM or VOM with 1000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor (See diagram).
 - * Connect the resistor connection to all exposed metal parts having a return path to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.



All check must be repeated with the AC line cord plug connection reversed.

Any reading of 0.3 volt RMS (this corresponds to 0.2 milliamp. AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the audio product to the owner.

[3] SPECIFICATIONS

For U.S.A.

General

Power source	AC 120 V, 60 Hz
Power consumption	121 W
Dimensions	Width: 6-5/16" (160 mm) Height: 9-7/16" (240mm) Depth: 12-9/16" (319mm)
Weight	11.5 lbs. (5.2 kg)

Amplifier

Output power	Front speakers: 37.5 watts minimum RMS per channel into 6 ohms from 100 Hz to 20 kHz, 10% total harmonic distortion Subwoofer: 45 watts minimum RMS into 6 ohms from 70 Hz to 130 Hz, 10% total harmonic distortion
Output terminals	Front speakers and subwoofer: 6 ohms Headphones: 16 - 50 ohms (recommended: 32 ohms)
Input terminals	Video/Auxiliary (audio signal): 500 mV/47 k ohms

CD player

Type	5-disc multi-play compact disc player
Signal readout	Non-contact, 3-beam semiconductor laser pickup
D/A converter	1-bit D/A converter
Frequency response	20 - 20,000 Hz
Dynamic range	90 dB (1 kHz)

Tuner

Frequency range	FM: 87.5 - 108 MHz AM: 530 - 1,720 kHz
------------------------	---

Front speaker

Type	2-way type speaker system (magnetic shield) 1.5" (4 cm) tweeter 4" (10 cm) woofer
Maximum input power	75 W
Rated input power	37.5 W
Impedance	6 ohms
Dimensions	Width: 6-1/2" (165 mm) Height: 9-7/16" (240 mm) Depth: 8-3/16" (208 mm)
Weight	4.9 lbs. (2.2 kg)/each

Subwoofer

Type	5-1/8" (13 cm) subwoofer system (magnetic shield)
Maximum input power	90 W
Rated input power	45 W
Impedance	6 ohms
Dimensions	Width: 6-5/16" (160 mm) Height: 9-7/16" (240 mm) Depth: 11-1/4" (285mm)
Weight	7.3 lbs. (3.3 kg)/each

Except for U.S.A

■ **General**

Power source	AC 120 V, 60 Hz
Power consumption	121 W
Dimensions	Width: 160 mm (6-5/16") Height: 240 mm (9-7/16") Depth: 319 mm (12-9/16")
Weight	5.2 kg (11.5 lbs.)

■ **Amplifier**

Output power	Front speakers: RMS: 75 W (37.5 W + 37.5 W) (10 % T.H.D.) Subwoofer: RMS: 45 W (10 % T.H.D.)
Output terminals	Front speakers and subwoofer: 6 ohms Headphones: 16 - 50 ohms (recommended: 32 ohms)
Input terminals	Video/Auxiliary (audio signal): 500 mV/47 k ohms

■ **CD player**

Type	5-disc multi-play compact disc player
Signal readout	Non-contact, 3-beam semiconductor laser pickup
D/A converter	1-bit D/A converter
Frequency response	20 - 20,000 Hz
Dynamic range	90 dB (1 kHz)

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

■ **Tuner**

Frequency range	FM: 87.5 - 108 MHz AM: 530 - 1,720 kHz
------------------------	---

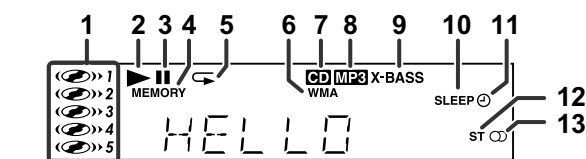
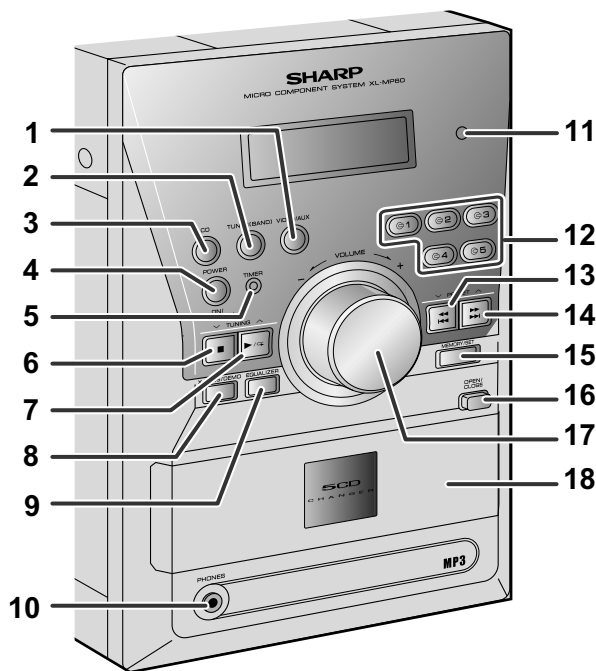
■ **Front speaker**

Type	2-way type speaker system (magnetic shield) 4 cm (1.5") tweeter 10 cm (4") woofer
Maximum input power	75 W
Rated input power	37.5 W
Impedance	6 ohms
Dimensions	Width: 165 mm (6-1/2") Height: 240 mm (9-7/16") Depth: 208 mm (8-3/16")
Weight	2.2 kg (4.9 lbs.)/each

■ **Subwoofer**

Type	13 cm (5-1/8") subwoofer system (magnetic shield)
Maximum input power	90 W
Rated input power	45 W
Impedance	6 ohms
Dimensions	Width: 160 mm (6-5/16") Height: 240 mm (9-7/16") Depth: 285 mm (11-1/4")
Weight	3.3 kg (7.3 lbs.)

[4] NAMES OF PARTS



■ Front panel

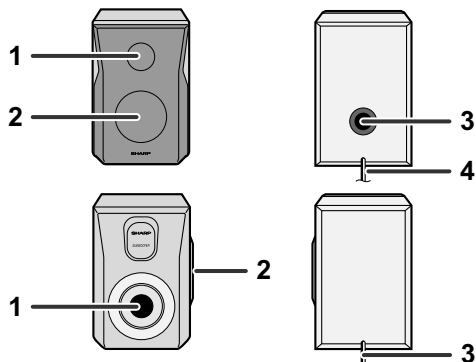
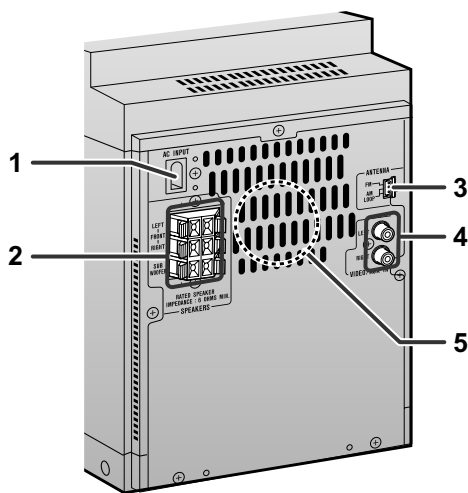
1. Video/Auxiliary Button
2. Tuner (Band) Button
3. CD Button
4. Power On/Stand-by Button
5. Timer Indicator
6. Disc Stop, Tuning Down Button
7. Disc Play or Repeat, Tuning Up Button
8. Extra Bass/Demo Mode Button
9. Equalizer Mode Select Button
10. Headphone Jack
11. Remote Sensor
12. Disc Number Select Buttons
13. Disc Track Down or Fast Reverse, Tuner Preset Down Button
14. Disc Track Up or Fast Forward, Tuner Preset Up Button
15. Memory/Set Button
16. Disc Compartment Open/Close Button
17. Volume Control
18. Disc Compartment

■ Display

1. Disc Number Indicators
2. Disc Play Indicator
3. Disc Pause Indicator
4. Memory Indicator
5. Disc Repeat Play Indicator
6. WMA Track Indicator
7. CD Indicator
8. MP3 Track Indicator
9. Extra Bass Indicator
10. Sleep Indicator
11. Timer Play Indicator
12. FM Stereo Mode Indicator
13. FM Stereo Receiving Indicator

■ Rear panel

1. AC Power Input Jack
2. Speaker Terminals
3. FM/AM Loop Antenna Jack
4. Video/Auxiliary (Audio Signal) Input Jacks
5. Cooling Fan



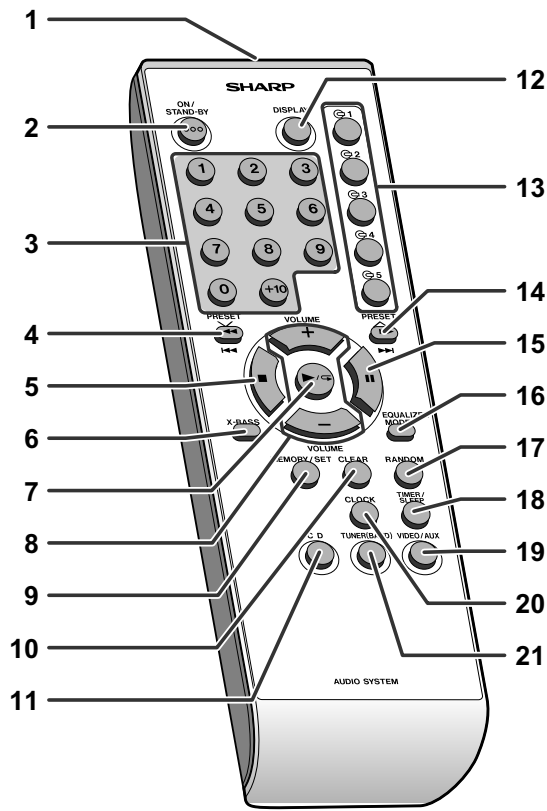
■ Front speaker

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

■ Subwoofer

1. Sub Duct Pipe
2. Subwoofer
3. Speaker Wire

Note:
The speaker grilles are not removable.



■ Remote control

1. Remote Control Transmitter
2. Power On/Stand-by Button
3. Direct Track Search Buttons
4. Disc Track Down or Fast Reverse, Tuner Preset Down, Time Down Button
5. Disc Stop Button
6. Extra Bass Button
7. Disc Play or Repeat Button
8. Volume Up and Down Buttons
9. Memory/Set Button
10. Disc Clear Button
11. CD Button
12. MP3/WMA Display Button
13. Disc Number Select Buttons
14. Disc Track Up or Fast Forward, Tuner Preset Up, Time Up Button
15. Disc Pause Button
16. Equalizer Mode Select Button
17. Disc Random Button
18. Timer/Sleep Button
19. Video/Auxiliary Button
20. Clock Button
21. Tuner (Band) Button

CHAPTER 2. ADJUSTMENTS

[1] ADJUSTMENT

1. 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
IF	450 kHz	1,602 kHz	L305	*1
AM Band Coverage	—	522 kHz	(fL): L306 1.1 ± 0.1 V	*2
AM Tracking	990 kHz	990 kHz	L302	*3

*1. Input: IC301 1Pin Output: IC301 23Pin

*2. Input: Input is not connected Output: TP-VT(IC301 28Pin)

*3. Input: Antenna Output:IC301 23Pin

• **Check FM VT**

Signal generator: 1 kHz, 40 kHz dev., FM modulated

Frequency	Display	Check Point	Instrument Connection
87.5 MHz	87.5 MHz	1.5V ± 1.0V	TP-VT
108 MHz	108 MHz	5.0V ± 1.0V	TP-VT

• **FM Mute Level**

Signal generator: 1 kHz, 40 kHz dev., FM modulated

Frequency	Display	Adjusting Parts	Instrument Connection
98.00 MHz (30 dB μ V)	98.00 MHz	—	Input: Antenna Output: Speaker Terminal

• **FM Detection**

Signal generator: 10.7 MHz FM sweep generator

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection
FM IF	10.7 MHz	98.00 MHz	—	Input: Pin 36 of IC301 Output: Pin 23 of IC301

• **FM RF**

Signal generator: 1 kHz, 75 kHz dev., FM modulated

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection
FM Band Coverage	—	87.50 MHz	(fL): L307 1.5 ± 0.1 V	*1
FM RF	98.00 MHz (10 ~ 20dB)	98.00 MHz	L304	*1

*1. Input: Antenna Output: 23 Pin of IC301

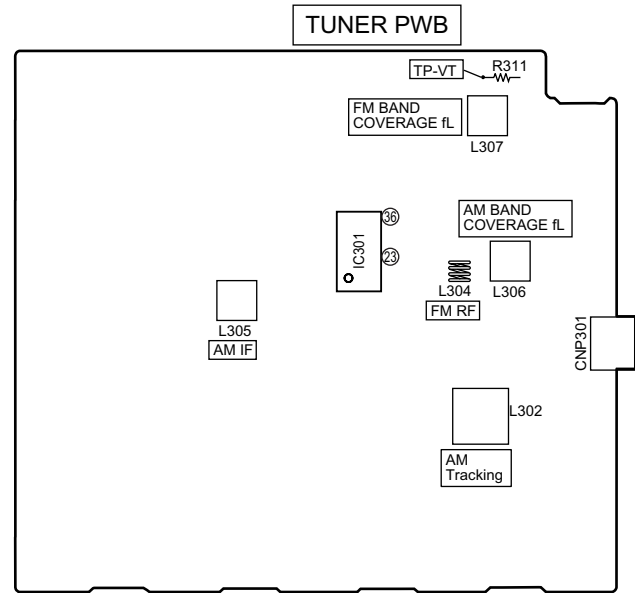


Figure 1 ADJUSTMENT POINTS

2. 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.

[2] TEST MODE

The test mode applied to this microcomputer has three modes, namely the ordinary test mode for adjustment or measurement, the aging test mode, and the self-diagnosis test mode for self-judgment in case of final product inspection.

1. Turning on the test mode

For obtaining each test mode, press the Power ON/STAND BY button, while keeping pressing the following two buttons in the ordinary standby mode (power off). In this case, the main unit buttons are valid. When turning the POWER on with remote control buttons, test modes are not obtained.

[Ordinary test mode]

1. CD Test Mode (TEST 1).....
CD + DISC1
2. Tuner Test Mode (TEST 2).....
TUNER(BAND) + DISC1
3. Electronic Volume Test Mode (TEST 3).....
TUNING DOWN + VOLUME UP
4. Timer Test Mode (TEST 4).....
TUNING UP + DISC5
5. FL Test Mode (TEST 5).....
PRESET DOWN + VOLUME DOWN
6. CD MECHANISM Aging Test Mode (TEST 8).....
CD + Equalizer

[Self-diagnosis Test Mode]

1. Button input diagnosis test mode (TEST 6).....
PRESET UP + DISC5

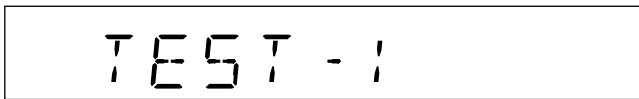
Processes are different depending on destinations at initial settings.

2. CD Test Mode (TEST 1)

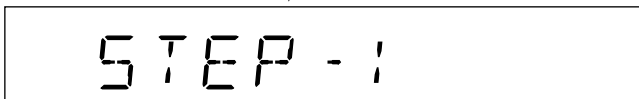
In the CD test mode the operation of each step is possible even if the LID-SW is off. If focus cannot be taken in step 3 or any error is processed, it is impossible to proceed to the next step. During error processing, end the test mode by pressing the Power ON/STAND BY button or return to the step 1 by pressing the CD STOP button. Any other operations are inhibited.

1. Step 1 Mode

When the CD test mode is obtained, the following display lights up. Then CD initialization operation flow proceeds up to CD STB off to wait for the following buttons to be pressed.



One second after display lights up



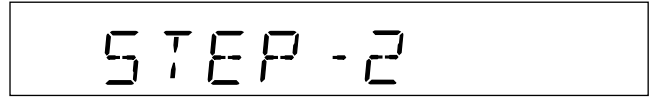
Press the following buttons in this state to obtain the operations specified below.

- "POWER ON/STAND BY".... Test mode and power turned off to shift to the ordinary standby mode.
- "FWD"..... After the pickup returns to the innermost periphery, it slides toward the outer periphery while this button is pressed.
- "REV"..... After the pickup returns to the innermost periphery, it slides toward the inner periphery while this button is pressed. If PICKUP IN is on, input is invalid.
- "MEMORY/SET"..... Shift to step 2

- "STOP"..... Invalid
- "VIDEO/AUX"..... CLV

2. Step 2 Mode

Press the "MEMORY/SET" button in this mode to transmit the laser lighting command LDON (8400) and turn on the laser. Any other operations are not performed in this case.



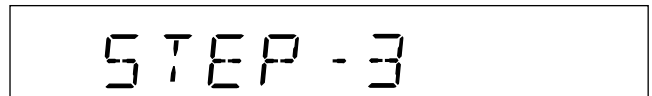
Press the following buttons in this state to obtain the operations specified below.

- "POWER ON/STAND BY".... Test mode and power turned off to shift to the ordinary standby mode.
- "FWD"..... The pickup slides toward the outer periphery while this button is pressed.
- "REV"..... The pickup slides toward the inner periphery while this button is pressed. If PICKUP IN is on, input is invalid.
- "MEMORY/SET"..... Shift to step 3

3. Step 3 Mode

While the laser keeps lighting, CD initialization operation flow proceeds up to 'CLV servo ON' to wait for the following buttons to be pressed.(Focus servo turned on for focus search)

The focus search is repeated to take focus.



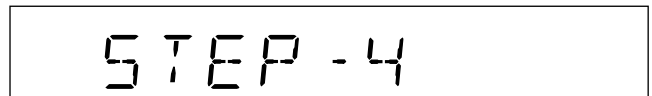
Press the following buttons in this state to obtain the operations specified below.

- "POWER ON/STAND BY"..... Test mode and power turned off to shift to the ordinary standby mode.
- "FWD"..... The pickup slides toward the outer periphery while this button is pressed.
- "REV"..... The pickup slides toward the inner periphery while this button is pressed. If PICKUP IN is on, input is invalid.
- "MEMORY/SET"..... If focus has been taken, shift to step 4 is executed. If not, acceptance is inhibited.

*If the focus is not received after it has been taken, the process returns to step 1.

4. Step 4 Mode

The CLV servo ON command (8600) is transmitted to wait for the following buttons to be pressed. (The disc is rotated for CLV lock.)



The time display always indicates "0:00".

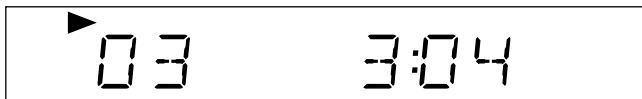
Press the following buttons in this state to obtain the operations specified below.

- "POWER ON/STAND BY".... Test mode and power turned off to shift to the ordinary standby mode.
- "FWD"..... The pickup slides toward the outer periphery while this button is pressed.
- "REV"..... The pickup slides toward the inner periphery while this button is pressed. If PICKUP IN is on, input is invalid.
- "MEMORY/SET"..... Return to step 5

*If the focus is not received, the process returns to step 1.

5. Step 5 Mode

When the CD initialization operation flow is completed, the mute is turned off, and playback is started. Even if playback reaches the outermost periphery of disc, the operation does not stop. The LCD display indicates the playback passage time as in case of ordinary CD playback.



Press the following buttons in this state to obtain the operations specified below.

- "POWER ON/STAND BY".... Test mode and power turned off to shift to the ordinary standby mode.
- "FWD"..... The pickup slides toward the outer periphery while this button is pressed.
- "REV"..... The pickup slides toward the inner periphery while this button is pressed. If PICKUP IN is on, input is invalid.
- "PLAY"..... Invalid
- "STOP"..... Return to step 1

*If the focus is not received, the process returns to step 1.

Other cautions

- TOC IL is not available for this test mode.

3. Tuner Test Mode (TEST 2)

1. Outline of tuner (radio) test mode

The tuner test mode is intended to store the adjustment and measurement frequencies in the preset memory CH. When adjusting the tuner section in the production line, adjusting personnel are not required to set frequency.

2. Details of tuner test mode

Press the "TUNER(BAND)" and "DISC1" buttons in POWER OFF state and turn on the power by the use of "POWER ON/STAND BY" button to preset and store frequency for adjustment and measurement of destination specified by the AREA terminal in the preset memory CH. However, Ordinary 1 and Ordinary 2 are stored in the destinations when the test mode is obtained.

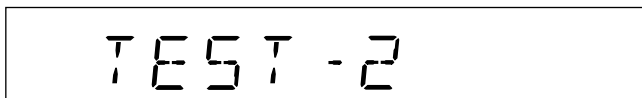
(As for frequencies to be preset and stored for each destination, refer to item 3.)

The tuner test mode is started from preset No.1.

The operations of test mode are identical with the ordinary operations of TUNER function. FUNCTION switching is invalid.

It is necessary to discard the content of preset memory when the tuner test mode is ended; be sure to write "0000" or "1111" bits in the memory to be checked for judging memory error at initial setting and to initialize memory.

When the tuner test mode is obtained, the following display lights for one second.



- The TUNER TEST 2 mode is obtained with >> + MEMORY/SET + POWER ON/STAND-BY. ->Turn off AC in the TEST 2 mode to restore the initial state.



Turn off POWER to protect the memory of TEST 2 mode.

Turn off POWER again to obtain the ordinary operation while the data is stored in the memory (besides TUNER).



If AC OFF state is maintained in this state for about 1/2 day, start is executed in the initial state.

- To clear the whole memory, insert the AC cord, pressing TUNER(BAND) + DISC2.

3. Preset frequencies for various destinations

(random preset memory)

CH	BAND	FM
1	FM STEREO	FM 87.5 MHz
2		FM108.0 MHz
3		FM 98.0 MHz
4		FM 90.0 MHz
5		FM106.0 MHz

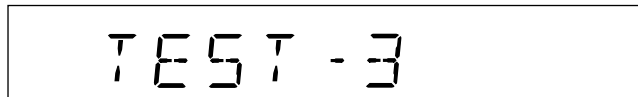
CH	BAND	FM
6	AM	AM 530 kHz
7		AM1720 kHz
8		AM 990 kHz
9		AM 600 kHz
10		AM1400 kHz

CH	BAND	FM
16-35		—————
36	FM MONO	FM106.0 MHz
37		FM 90.0 MHz
38		FM 98.0 MHz
39		FM108.0 MHz
40		FM 87.5 MHz

- The slant line sections of the table store no memory.

4. Electronic volume Test Mode (TEST 3)

When this test mode is obtained, the following display lights for one second.

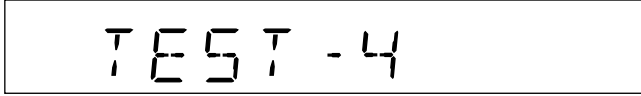


In this mode, volume is Volume -14 dB (STEP 23), FLAT AND X-BASS ON, and start-up function to CD, respectively. The button operations in the test mode are the same as those of ordinary operation except volume UP/DOWN.

- 1) The display is the same as that of ordinary operation except test mode setting.
- 2) Unlike the ordinary state, the volume is controlled with the volume UP/DOWN button in accordance with the following three steps.
 - Volume- ∞ (STEP 0) <-> Volume-14 dB (STEP 23) <-> Volume-0 (STEP 30)
- 3) X-BASS is switched when button is pressed.

5. Timer test Mode (TEST 4)

When this test mode is obtained, the following display lights for one second.



Set the current time and timer time according to the following procedure to reproduce the timer.

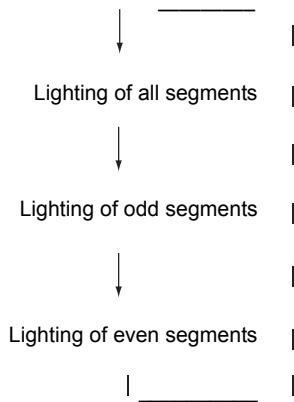
1. Set the current time to 1:00, the timer to ON time 1:05, the function to CD, and volume to STEP 12, respectively. One minute is counted as one second, and the timer is reproduced. The fade-in (when playback is started) is executed at a rate of one step for 1 sec. After completion of fade-in, the fade-out is executed at a rate of one step for 1 sec (WAIT 1 sec inserted).

After completion of fade-out, the power is turned off (after WAIT 1 sec), and the mode is shifted to the standby.

The display during operation is the same as that of ordinary timer operation.

6. FL Test Mode (TEST 5)

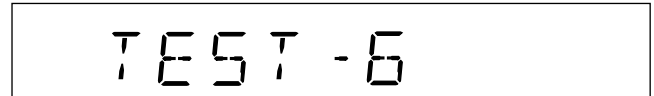
When the FL test mode is obtained, all the FL segments are lighted. Then pressing the "PLAY" button switches display as below.



7. Button input diagnosis Test Mode (TEST 6)

When the test mode is obtained, the following is displayed.

(STAND-BY AND DEMO OFF STATUS)



This test mode is intended to check whether all the main unit buttons can be detected. Accordingly, in this test mode, it is checked whether the "POWER ON/STAND BY" button was pressed after all the buttons shown below were pressed. If the result is OK, OK is displayed. If any one of keys was not pressed, an error is displayed. In both cases of OK termination or error termination, the mode is shifted to the standby mode if the "POWER ON/STAND BY" button is pressed subsequently.

All models using this type of microcomputer are not always provided with the same buttons. Since the buttons used are different depending on models, types of buttons to be used are determined by whether SURROUND, and an electric lid are available at the initial setting by MODEL port.

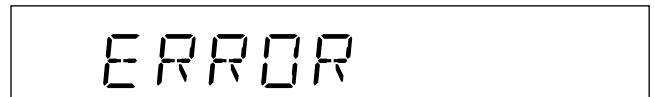
The order of buttons to be pressed is not determined. Accordingly, it is checked whether all buttons have been pressed.

1. PU-IN buttons: CUE/PRESET UP + CD STOP

Since this model is provided with SURROUND (HAVE OR NOT), and electric CD lid, the following 10 buttons are detected as all buttons.

PLAY, X-BASS/DEMO, FUNCTION, VOLUME UP/DOWN, MEMORY/SET, REV, FWD, STOP, CD-OPEN/CLOSE

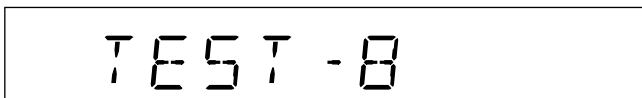
The OK/ERROR display of test result is as follows.



8. CD MECHANISM Aging Test Mode (TEST 8)

OPEN/CLOSE & 5 DISC CHANGER aging test.

DISPLAY:

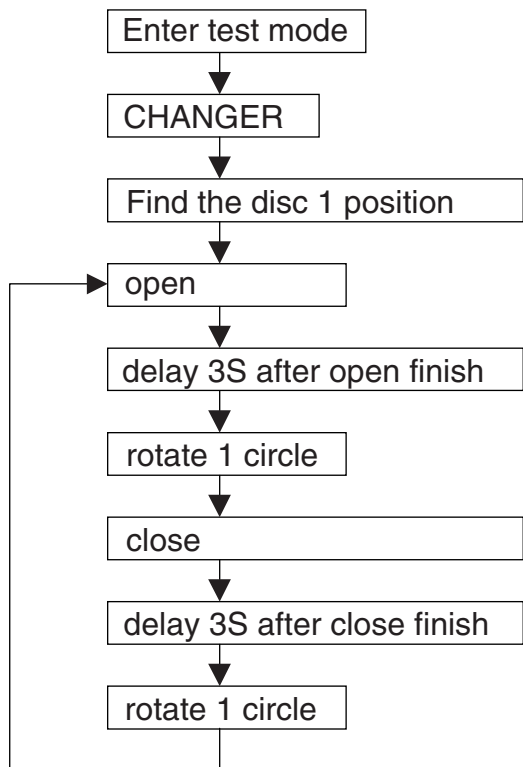


FUNCTION:

Enter the TEST MODE 8, MCU control the 5 DISC CHANGER OPEN/CLOSE. After close finished, disc1 to disc5 move in then out for 1 cycle. Then start the next cycle.

Request:

Every period include 4 operation. Below is TIMING:open->close->disc1->disc2->disc3->disc4->disc5->open



CHAPTER 3. MECHANICAL DESCRIPTION

[1] REMOVING AND REINSTALLING THE MAIN PARTS

1. How to remove CD Disc manually (See Fig. 1,2)

Perform steps 1 to 10 of the disassembly method to remove the CD Changer unit.(see page 3-2,3-3)

1. Rotate the gear cam until the arm switch C becomes the position of the Figure 1.
2. Pull the drawer to the front like the Figure 2.
And the CD disc on the carriage is taken out.

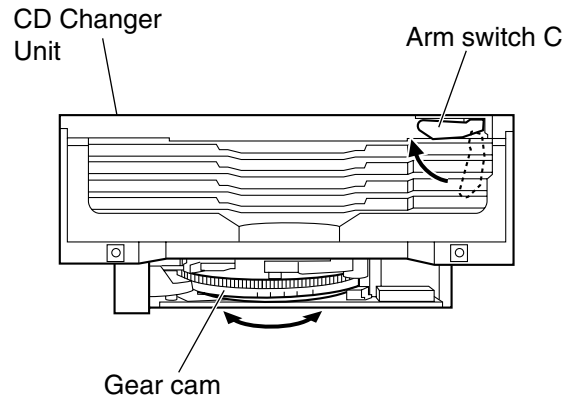


Figure 1

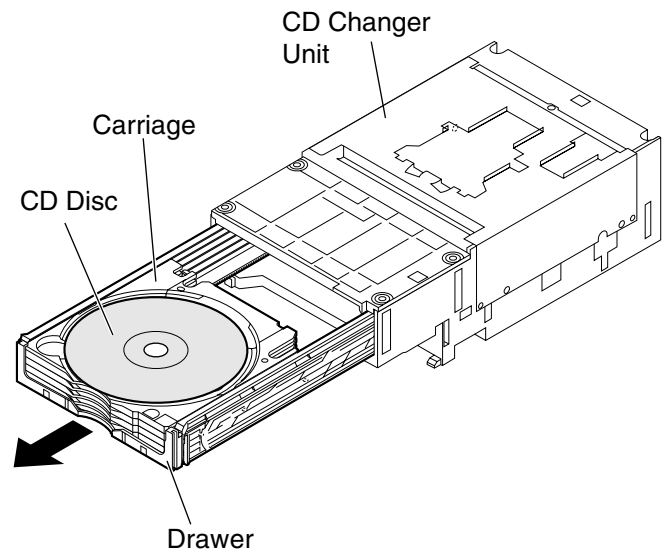


Figure 2

[2] 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) Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
- 2) 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.
- 3) Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Top Cabinet	1. Screw.....(A1) x 5	1
2	Side Panel	1. Screw.....(B1) x 8	1
3	Rear Panel	1. Screw.....(C1) x 6	2
4	Tuner PWB	1. Screw.....(D1) x 1 2. Socket.....(D2) x 3	2
5	Main PWB	1. Screw.....(E1) x 3 2. Socket.....(E2) x 10	3
6	POWER AMP. PWB	1. Screw.....(F1) x 4	3
7	Transformer	1. Screw.....(G1) x 4	4
8	Fan Motor	1. Screw.....(H1) x 2	4
9	Front Panel/CD Tray Cover	1. Screw.....(J1) x 2 2. Flat cable.....(J2) x 1 3. Socket.....(J3) x 1 4. CD Tray cover.....(J4) x 1	5
10	Chassis	2. Screw.....(K1) x 6	6
11	CD/MP3 PWB (Note 1)	1. Flat cable.....(L1) x 1 2. Socket.....(L2) x 2 3. Screw.....(L3) x 4 4. Screw.....(L4) x 2	7
12	CD Changer Unit	1. Screw.....(M1) x 6	7
13	CD Mechanism	1. Screw.....(N1) x 4	7
14	Display PWB	1. Knob.....(P1) x 1 2. Screw.....(P2) x 10	8
15	Jack PWB	1. Screw.....(Q1) x 1	8

Note 1:

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

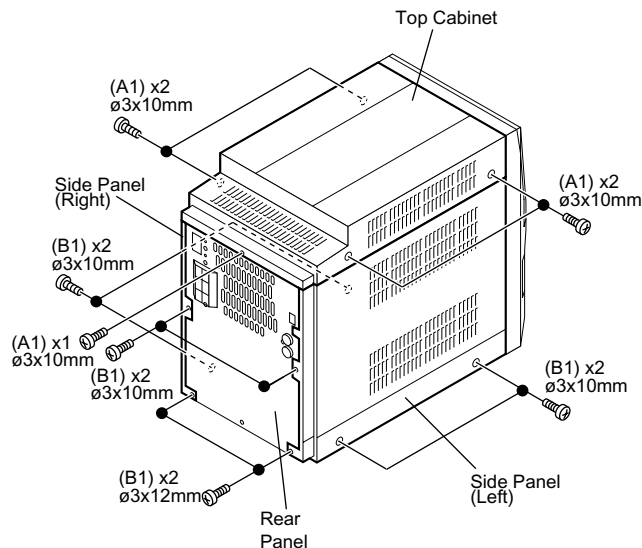


Figure 1

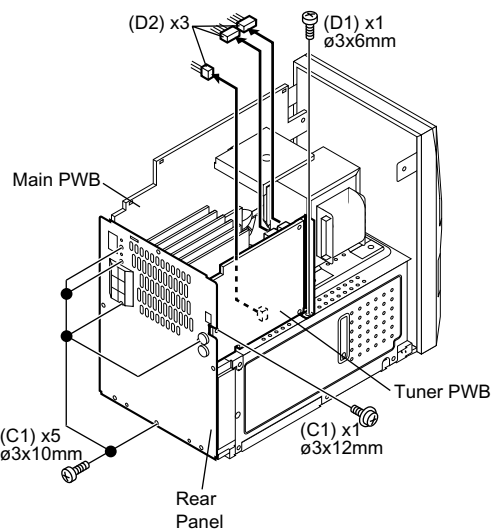


Figure 2

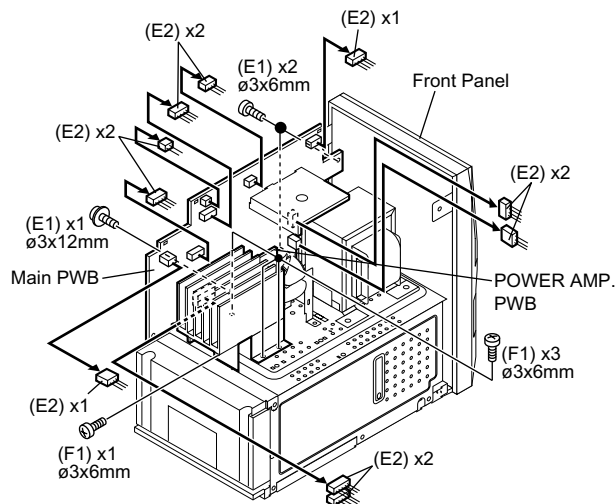


Figure 3

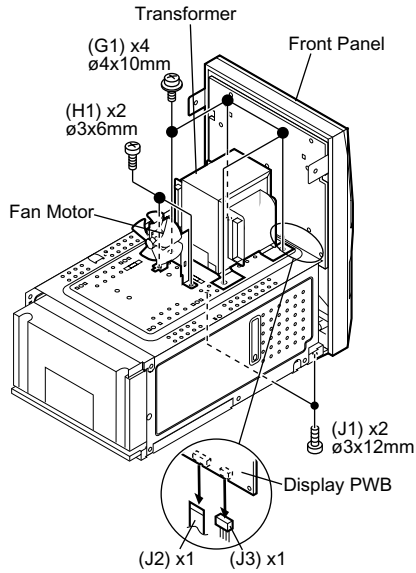


Figure 4

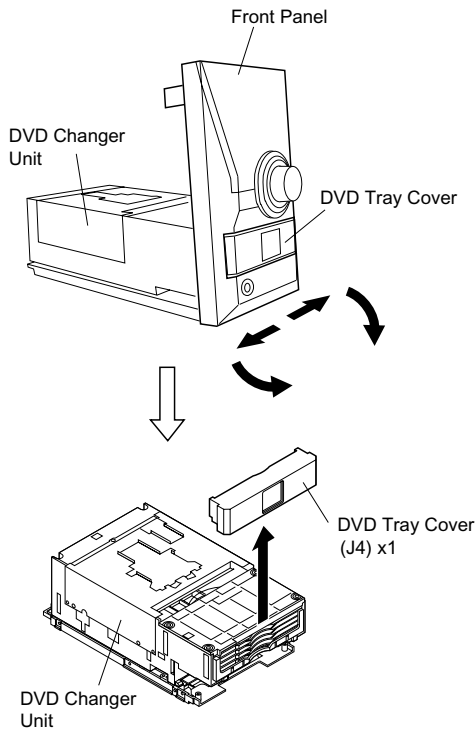


Figure 5

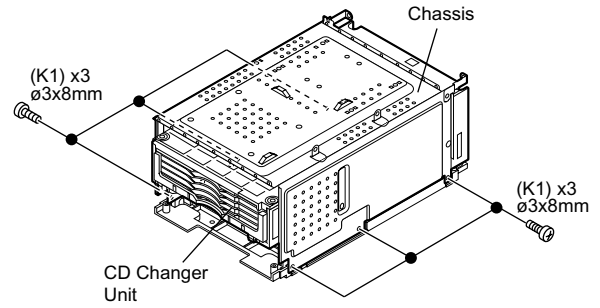


Figure 6

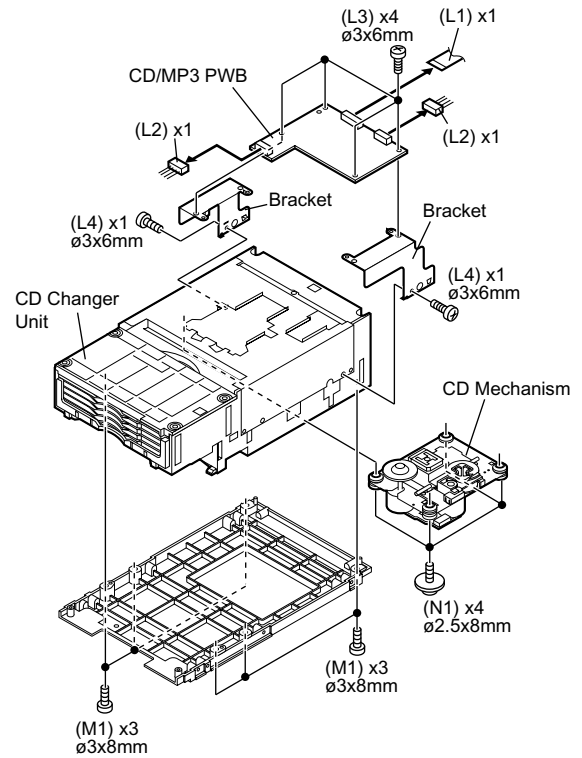


Figure 7

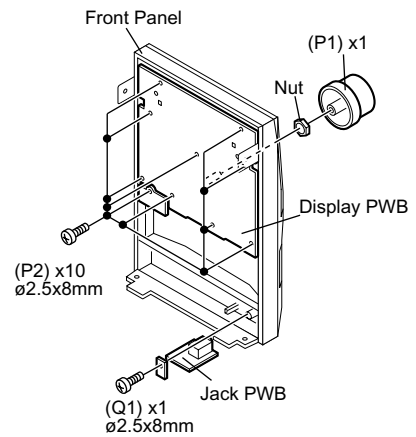


Figure 8

CP-MP60F, CP-MP60SW

These speaker CP-MP60F, CP-MP60SW are available in assemblies only and may not be disassembled.

-MEMO-

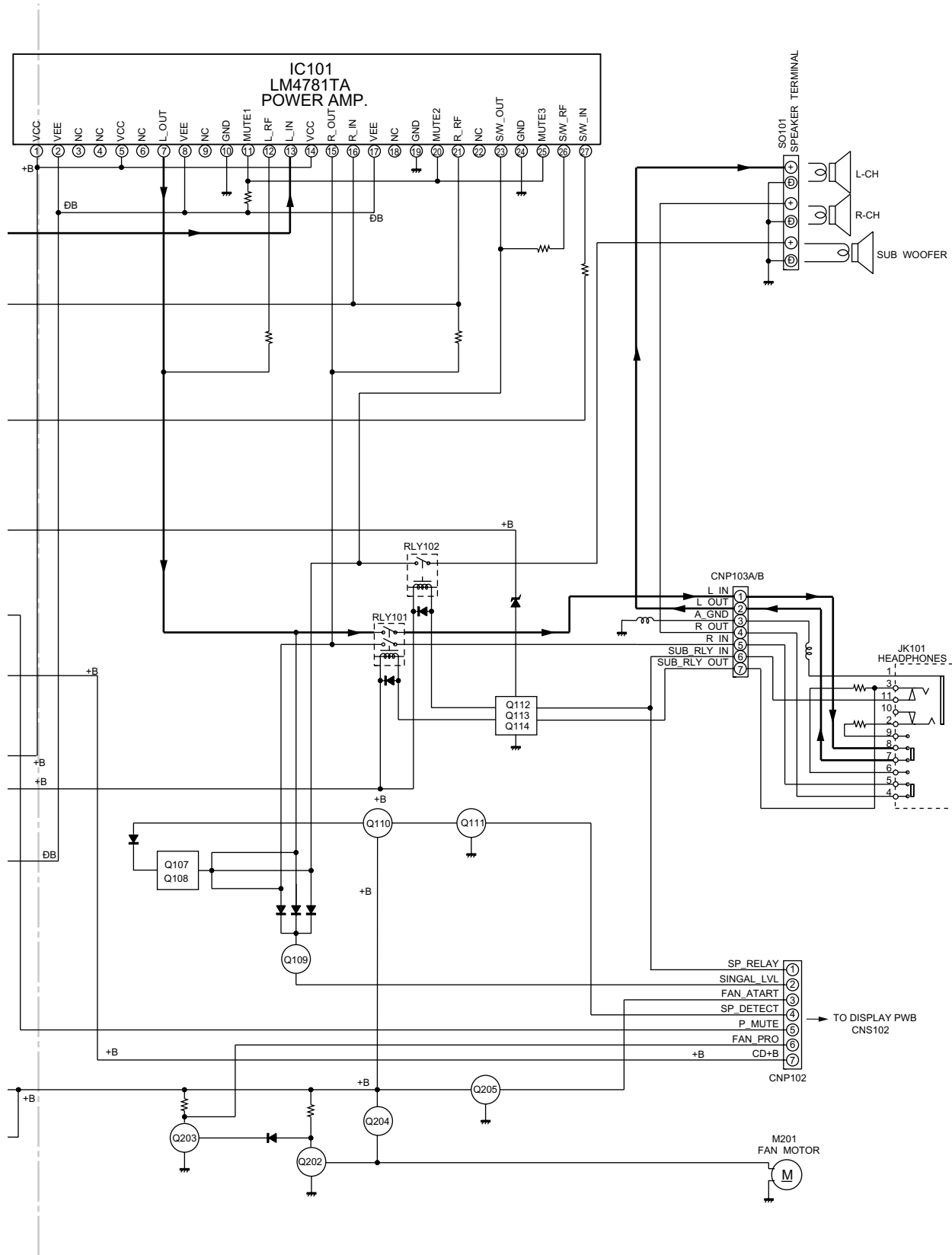


Figure 4-1 BLOCK DIAGRAM (1/6)

[2] BLOCK DIAGRAM TUNER

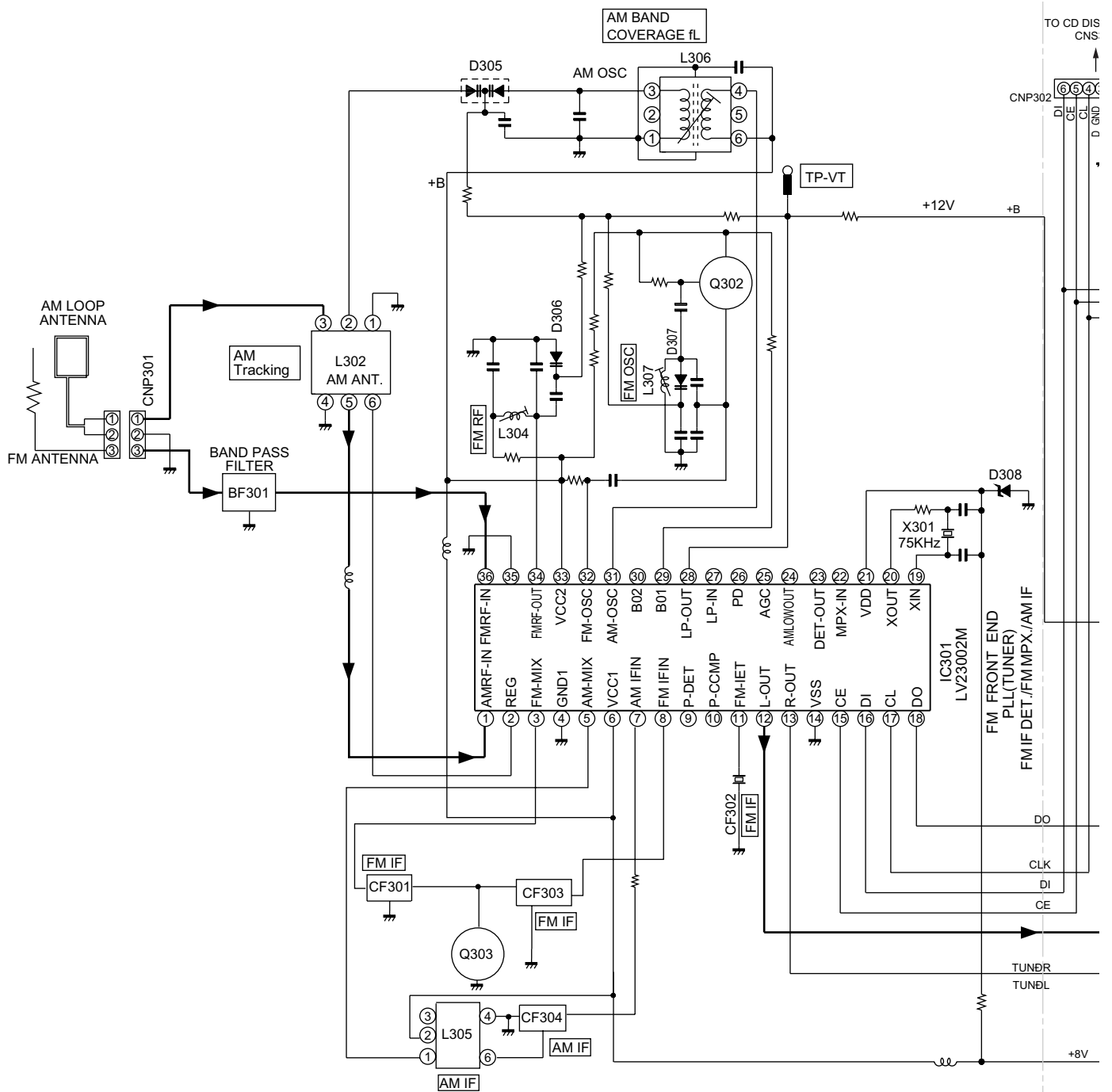


Figure 4-3 BLOCK DIAGRAM (3/6)

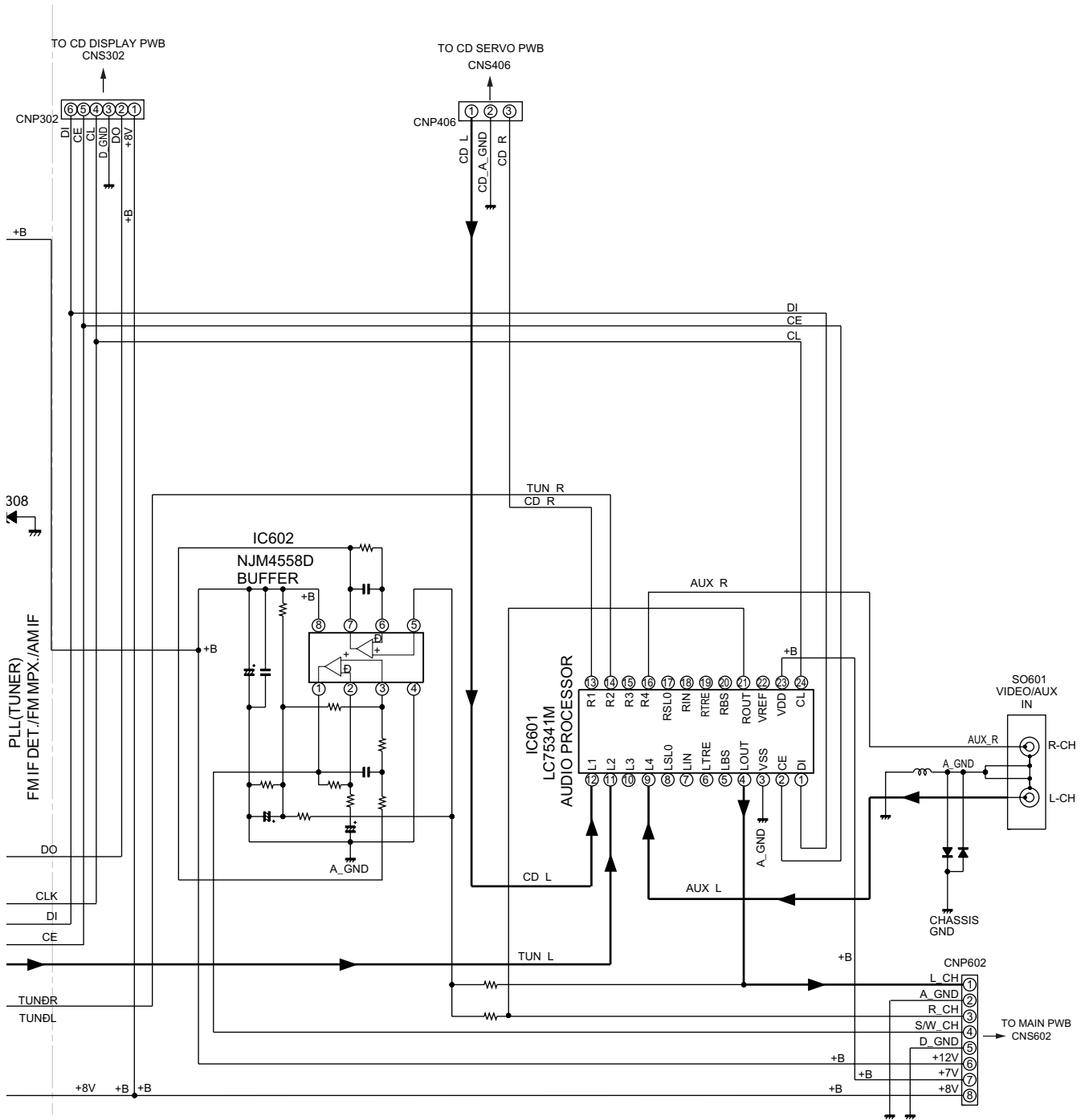


Figure 4-4 BLOCK DIAGRAM (4/6)

[3] BLOCK DIAGRAM CD/MP3 DISPLAY

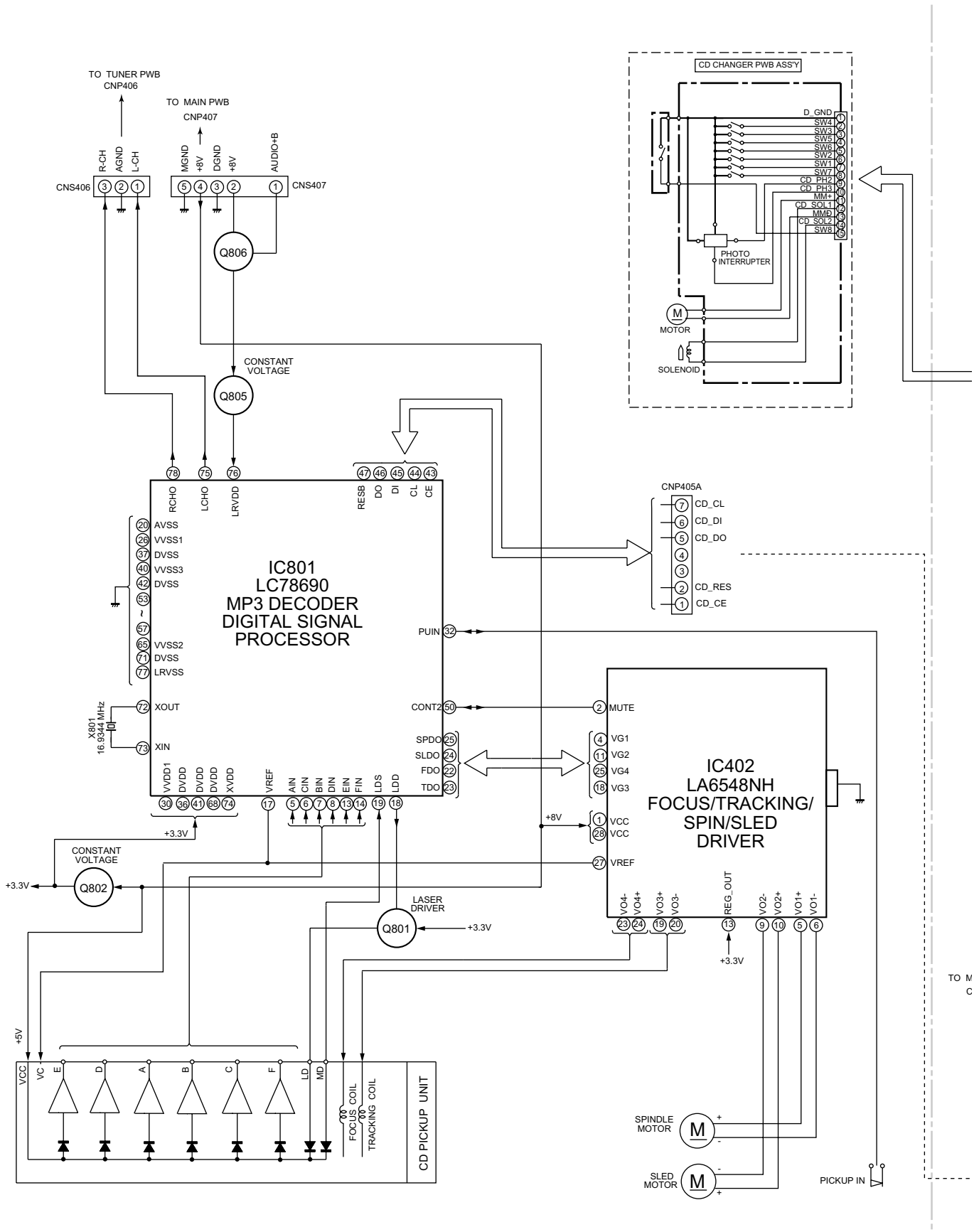


Figure 4-5 BLOCK DIAGRAM (5/6)

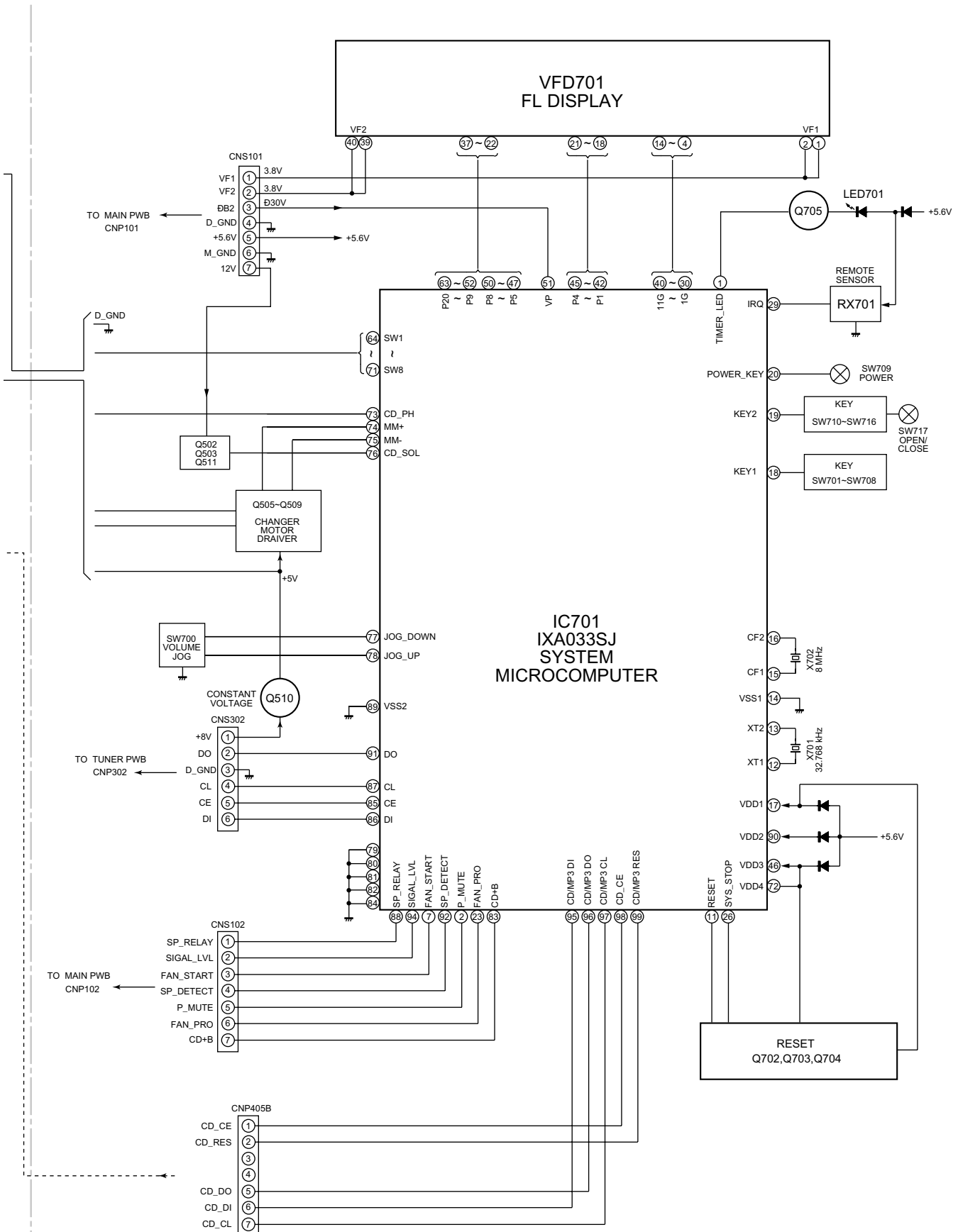
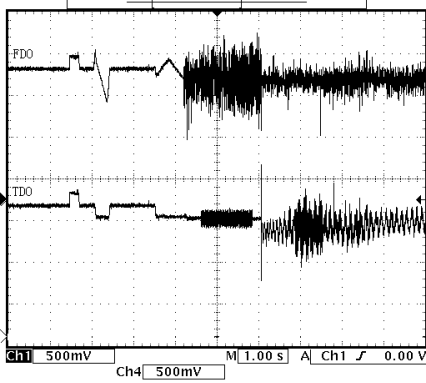


Figure 4-6 BLOCK DIAGRAM (6/6)

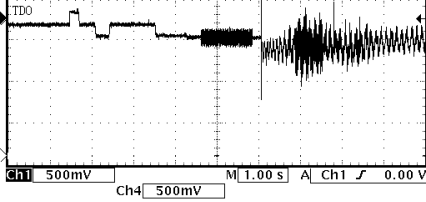
CHAPTER 5. CIRCUIT DESCRIPTION

[1] WAVEFORMS OF CD CIRCUIT

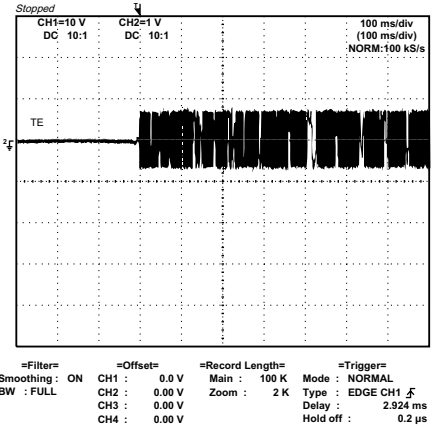
1 IC801 (22)



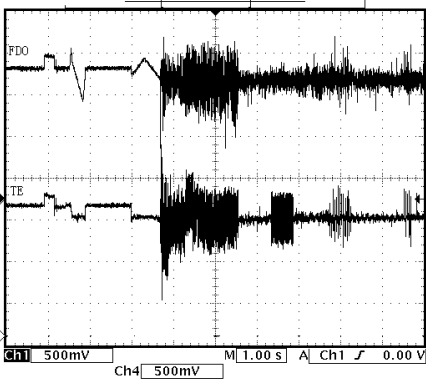
2 IC801 (23)



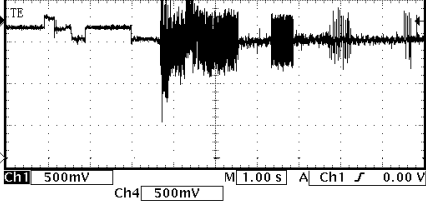
3 IC801 (16)



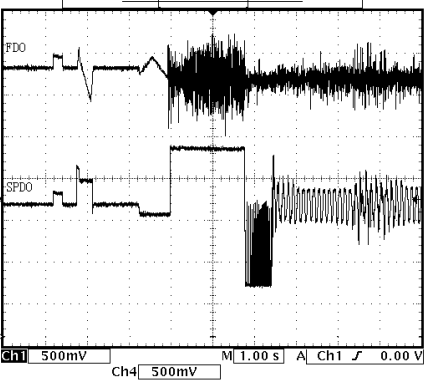
1 IC801 (22)



3 IC801 (16)

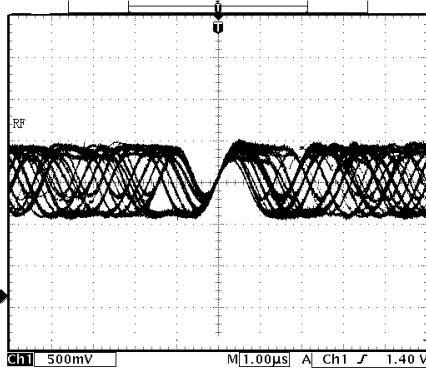


1 IC801 (22)

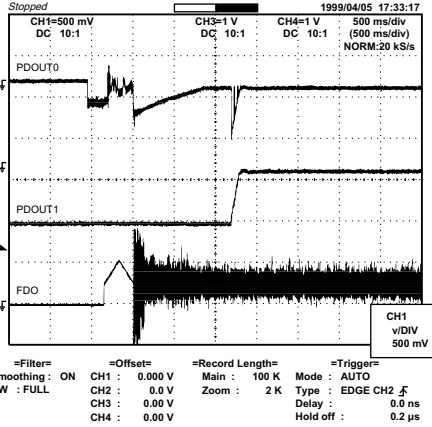


5 IC801 (25)

4 IC801 (2)



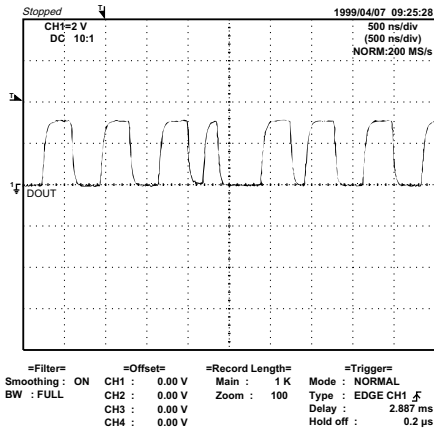
6 IC801 (26)



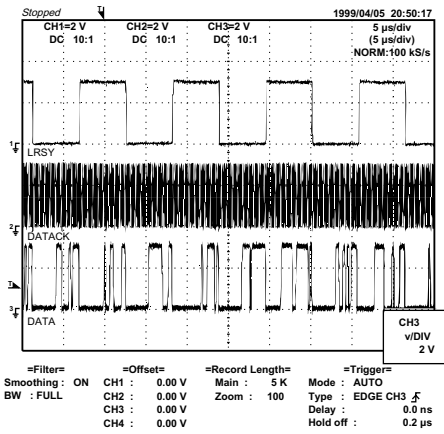
7 IC801 (27)

1 IC801 (22)

8 IC801 (69)



9 IC801 (60)

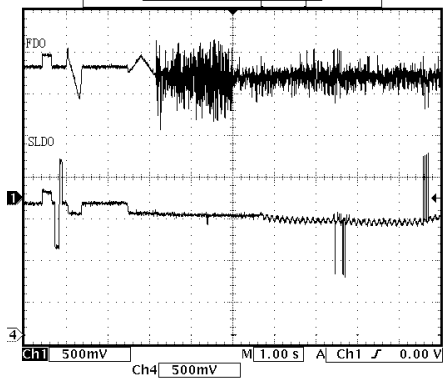


10 IC801 (59)

11 IC801 (58)

1 IC801 (22)

12 IC801 (24)



[2] VOLTAGE

IC101	
PIN NO.	VOLTAGE
1	30 V
2	-30 V
3	30 V
4	-30 V
5	30 V
6	-30 V
7	0 V
8	-30 V
9	0 V
10	0 V
11	-3 V
12	0 V
13	0 V
14	30 V
15	0 V
16	0 V
17	-30 V
18	0 V
19	0 V
20	-3 V
21	0 V
22	0 V
23	0 V
24	0 V
25	-3 V
26	0 V
27	0 V

IC201	
PIN NO.	VOLTAGE
1	10 V
2	0.6 V
3	5.6 V

IC202	
PIN NO.	VOLTAGE
1	19.8 V
2	0 V
3	12 V

IC203	
PIN NO.	VOLTAGE
1	19.8 V
2	0 V
3	8 V

IC801	
PIN NO.	VOLTAGE
1	1.65 V
2	1.6 V
3	1.6 V
4	1.8 V
5	1.7 V
6	1.7 V
7	1.7 V
8	1.7 V
9	1.6 V
10	1.7 V
11	1.7 V
12	2.8 V
13	1.7 V
14	1.7 V
15	1.7 V
16	1.7 V
17	1.7 V
18	3.4 V
19	0 V
20	0 V
21	3.3 V
22	1.7 V
23	1.7 V
24	1.7 V
25	1.7 V
26	0 V
27	0 V
28	0.8 V
29	1 V
30	3.1 V
31	0 V
32	3.1 V
33	0 V
34	0 V
35	0 V
36	3.1 V
37	0 V
38	1.8 V
39	3.1 V
40	0 V
41	3.1 V
42	0 V
43	0 V
44	3.6 V
45	3.6 V
46	0 V
47	3.6 V
48	0 V
49	0 V
50	0 V
51	0 V
52	0 V
53	0 V
54	0 V
55	0 V
56	0 V
57	0 V
58	0 V
59	0 V
60	0 V
61	2.9 V
62	1.5 V
63	1.9 V
64	1.9 V
65	0 V
66	1.8 V
67	0 V
68	3.1 V
69	0 V
70	0 V
71	0 V
72	1.3 V
73	1.4 V
74	3 V
75	1.6 V
76	3.1 V
77	0 V
78	1.6 V
79	3.2 V
80	1.6 V

IC301	
PIN NO.	VOLTAGE
1	2.23 V
2	2.23 V
3	2.5 V
4	0 V
5	5.1 V
6	5.1 V
7	2.2 V
8	2.2 V
9	4.1 V
10	3.96 V
11	2.9 V
12	2.3 V
13	2.3 V
14	0 V
15	0 V
16	0 V
17	3.4 V
18	3.4 V
19	1.6 V
20	1.7 V
21	3.5 V
22	2.2 V
23	2.26 V
24	0 V
25	0.75 V
26	0 V
27	2 V
28	1.45 V
29	2.7 V
30	0 V
31	5 V
32	5 V
33	5 V
34	5 V
35	0 V
36	0.98 V

IC402	
PIN NO.	VOLTAGE
1	7.7 V
2	0 V
3	1.65 V
4	1.65 V
5	3.4 V
6	3.4 V
7	0 V
8	0 V
9	0 V
10	3.3 V
11	3.3 V
12	1.65 V
13	1.65 V
14	3.3 V
15	7.12 V
16	3.3 V
17	4 V
18	1.65 V
19	1.65 V
20	3.5 V
21	3.5 V
22	0 V
23	0 V
24	0 V
25	3.3 V
26	3.5 V
27	3.5 V
28	1.65 V
29	1.65 V
30	7.7 V

IC601	
PIN NO.	VOLTAGE
1	0 V
2	0 V
3	0 V
4	3.6 V
5	3.6 V
6	3.6 V
7	3.6 V
8	3.6 V
9	0 V
10	3.6 V
11	3.6 V
12	3.6 V
13	3.6 V
14	3.6 V
15	3.6 V
16	3.6 V
17	3.6 V
18	3.6 V
19	3.6 V
20	3.6 V
21	3.6 V
22	3.6 V
23	7.3 V
24	0 V

IC602	
PIN NO.	VOLTAGE
1	6 V
2	6 V
3	6 V
4	0 V
5	6 V
6	6 V
7	6 V
8	12 V

IC701			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0 V	51	0 V
2	0 V	52	-3.9 V
3	0 V	53	-28.5 V
4	0 V	54	-3.9 V
5	0 V	55	-3.1 V
6	5 V	56	-3.9 V
7	0 V	57	-3.9 V
8	0 V	58	-3.1 V
9	0 V	59	-3.9 V
10	0 V	60	-28.5 V
11	4.85 V	61	-3.9 V
12	2 V	62	-3.1 V
13	2.4 V	63	-3.9 V
14	0 V	64	4.77 V
15	2.3 V	65	4.77 V
16	2.5 V	66	4.77 V
17	4.9 V	67	4.77 V
18	4.9 V	68	4.77 V
19	4.9 V	69	4.77 V
20	4.9 V	70	4.77 V
21	0 V	71	4.77 V
22	0 V	72	4.86 V
23	0 V	73	4.77 V
24	0 V	74	0 V
25	0 V	75	0 V
26	4.9 V	76	0 V
27	4.9 V	77	4.77 V
28	0 V	78	4.77 V
29	5.1 V	79	-0.4 V
30	-26.4 V	80	-0.4 V
31	-26.4 V	81	-0.4 V
32	-26.4 V	82	-0.4 V
33	-26.4 V	83	0 V
34	-26.4 V	84	0 V
35	-26.4 V	85	0 V
36	-26.4 V	86	0 V
37	-26.4 V	87	0 V
38	-26.4 V	88	5 V
39	-26.4 V	89	0 V
40	-26.4 V	90	5 V
41	0 V	91	3.5 V
42	-28.5 V	92	4.8 V
43	-28.5 V	93	0 V
44	-28.5 V	94	5.6 V
45	-3.94 V	95	0 V
46	4.8 V	96	0.3 V
47	-28.5 V	97	0 V
48	-28.5 V	98	0 V
49	-3.9 V	99	0.5 V
50	-3.1 V	100	0.5 V

Q101	
PIN NO.	VOLTAGE
E	0 V
C	0 V
B	0.6 V

Q102	
PIN NO.	VOLTAGE
E	0 V
C	0 V
B	0.6 V

Q103	
PIN NO.	VOLTAGE
E	0 V
C	0 V
B	0.6 V

Q107	
PIN NO.	VOLTAGE
E	0 V
C	5.7 V
B	0 V

Q108	
PIN NO.	VOLTAGE
E	0 V
C	5.7 V
B	0 V

Q109	
PIN NO.	VOLTAGE
E	0 V
C	5.7 V
B	0 V

Q110	
PIN NO.	VOLTAGE
1	5.5 V
2	0 V
3	5.6 V

Q111	
PIN NO.	VOLTAGE
1	0 V
2	4.8 V
3	0 V

Q112	
PIN NO.	VOLTAGE
E	0 V
C	0.2 V
B	0.84 V

Q113	
PIN NO.	VOLTAGE
E	0 V
C	0 V
B	0.8 V

Q114	
PIN NO.	VOLTAGE
E	0 V
C	4 V
B	0 V

Q201	
PIN NO.	VOLTAGE
E	-28.6 V
C	-36.8 V
B	-29.2 V

Q202	
PIN NO.	VOLTAGE
E	-0.4 V
C	0 V
B	0.7 V

Q203	
PIN NO.	VOLTAGE
E	-0.3 V
C	5 V
B	-0.1 V

Q204	
PIN NO.	VOLTAGE
E	5.6 V
C	0 V
B	5.6 V

Q205	
PIN NO.	VOLTAGE
E	0 V
C	5.6 V
B	0 V

Q302	
PIN NO.	VOLTAGE
E	1 V
C	2.8 V
B	1.8 V

Q303	
PIN NO.	VOLTAGE
E	0 V
C	3.6 V
B	0.8 V

Q413	
PIN NO.	VOLTAGE
E	0 V
C	7.8 V
B	0 V

Q414	
PIN NO.	VOLTAGE
E	0.7 V
C	0 V
B	0.3 V

Q502	
PIN NO.	VOLTAGE
1	0 V
2	11.3 V
3	0 V

Q503	
PIN NO.	VOLTAGE
E	11.4 V
C	0.3 V
B	11.3 V

Q504	
PIN NO.	VOLTAGE
E	0 V
C	0 V
B	0 V

Q505	
PIN NO.	VOLTAGE
E	5 V
C	0 V
B	4.7 V

Q506	
PIN NO.	VOLTAGE
E	0 V
C	4.7 V
B	0 V

Q507	
PIN NO.	VOLTAGE
E	0 V
C	4.7 V
B	0 V

Q508	
PIN NO.	VOLTAGE
E	5 V
C	0 V
B	4.7 V

Q509	
PIN NO.	VOLTAGE
E	0 V
C	0 V
B	0 V

Q510	
PIN NO.	VOLTAGE
E	5 V
C	7.2 V
B	5.8 V

Q511	
PIN NO.	VOLTAGE
E	0 V
C	0 V
B	0 V

Q702	
PIN NO.	VOLTAGE
1	0 V
2	4.8 V
3	0 V

Q703	
PIN NO.	VOLTAGE
E	0.3 V
C	4.8 V
B	0.3 V



Q704	
PIN NO.	VOLTAGE
E	0.3 V
C	4.8 V
B	6.8 V

Q705	
PIN NO.	VOLTAGE
E	0 V
C	3.6 V
B	0 V

Q801	
PIN NO	

CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

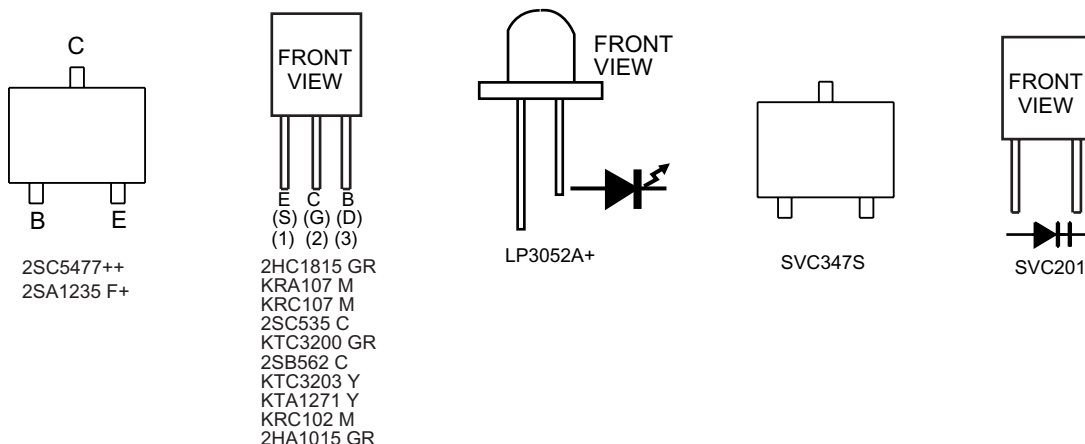
[1] NOTES ON SCHEMATIC DIAGRAM

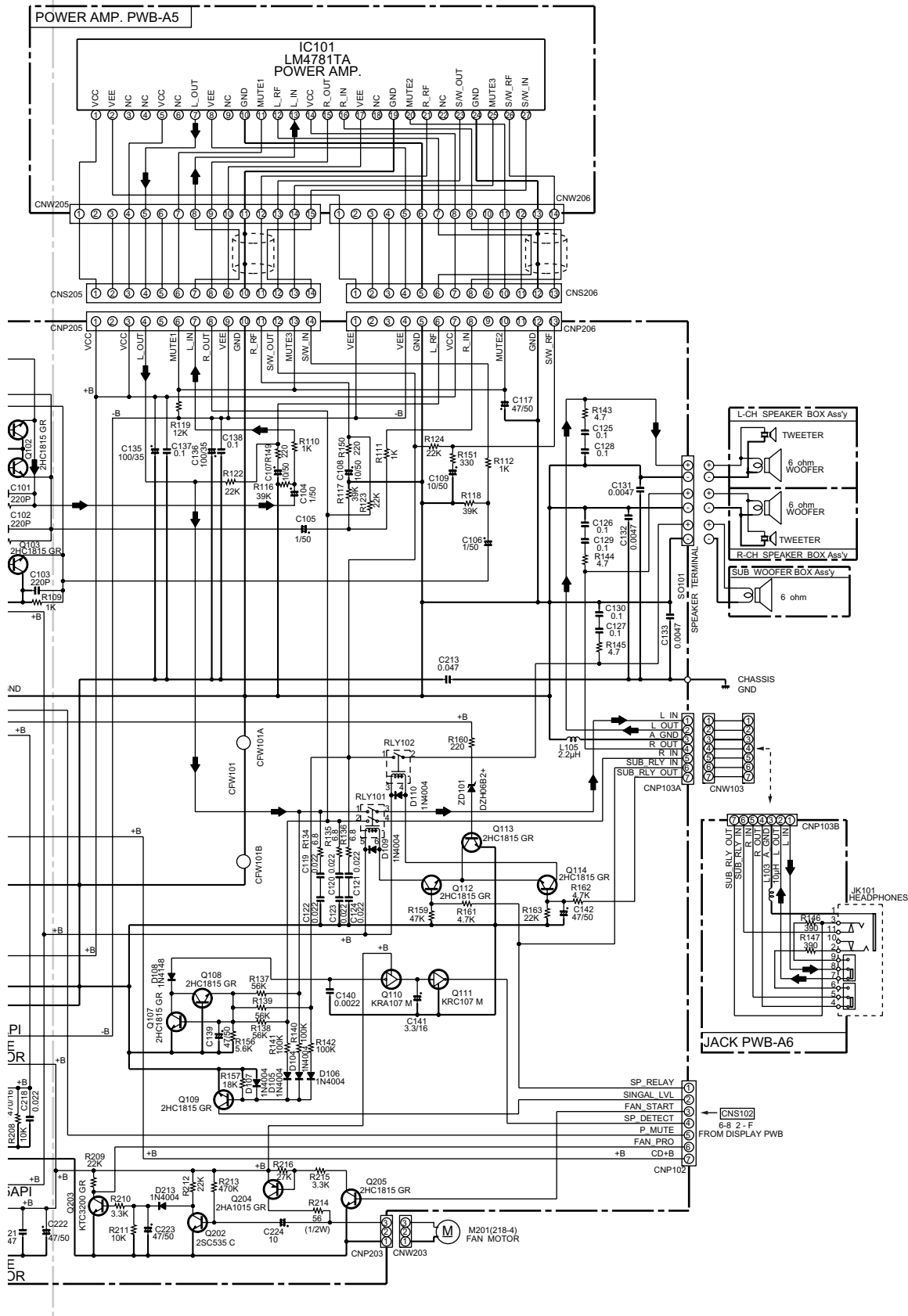
- Resistor:
To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with "Fusible" is a fuse type.
- Capacitor:
To indicate the unit of capacitor, 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
SW700	VOLUME	ON—OFF
SW701	EQUALIZER	ON—OFF
SW702	TUNING DOWN/STOP	ON—OFF
SW703	TUNING UP/PLAY	ON—OFF
SW704	PRESET UP	ON—OFF
SW705	PRESET DOWN	ON—OFF
SW706	DISC1	ON—OFF
SW707	DISC2	ON—OFF
SW708	MEMORY/SET	ON—OFF

REF. NO	DESCRIPTION	POSITION
SW709	POWER ON/STAND-BY	ON—OFF
SW710	X-BASS/DEMO	ON—OFF
SW711	CD	ON—OFF
SW712	TUNER(BAND)	ON—OFF
SW713	VIDEO/AUX	ON—OFF
SW714	DISC3	ON—OFF
SW715	DISC4	ON—OFF
SW716	DISC5	ON—OFF
SW717	OPEN/CLOSE	ON—OFF

[2] TYPES OF TRANSISTOR AND LED

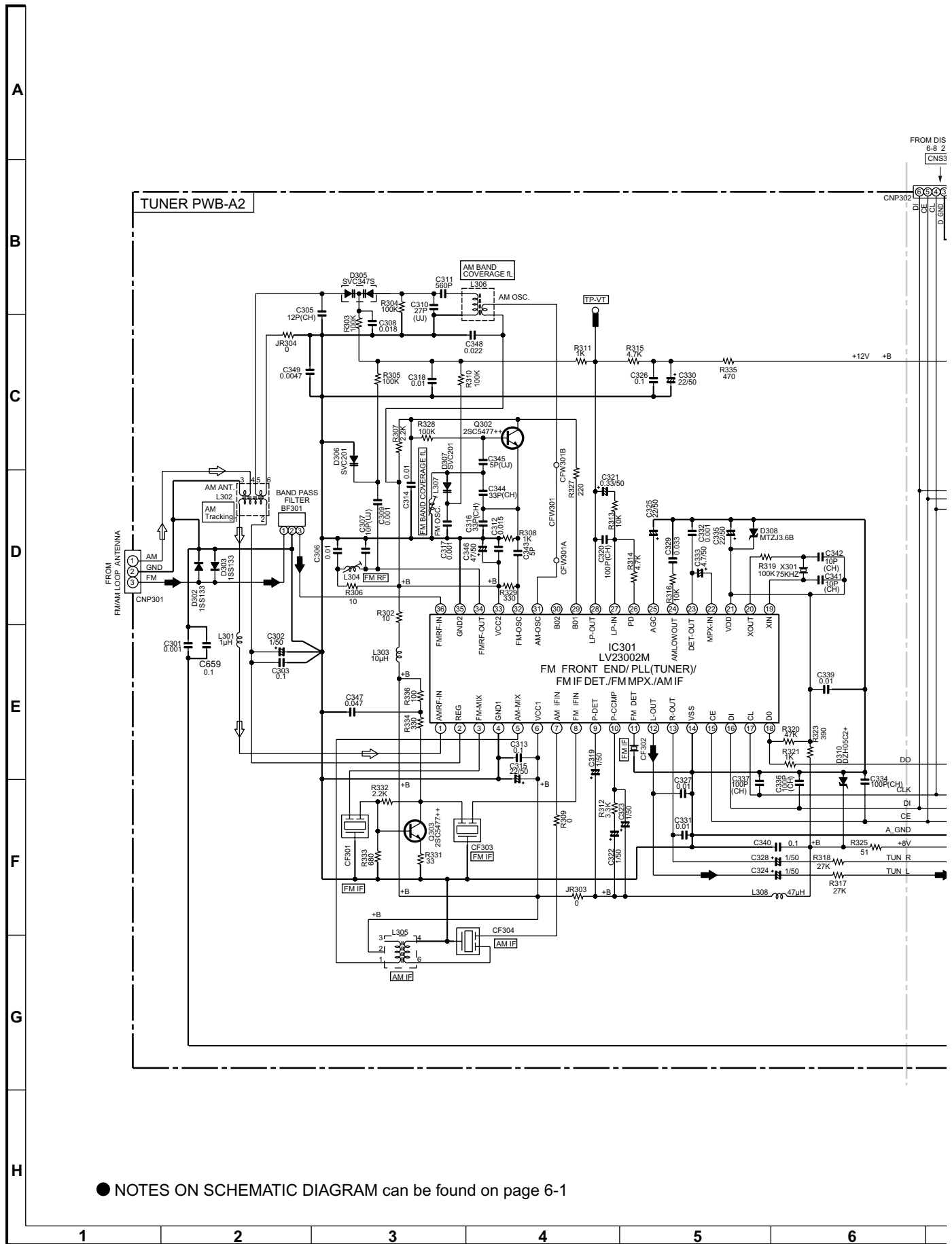




7	8	9	10	11	12
---	---	---	----	----	----

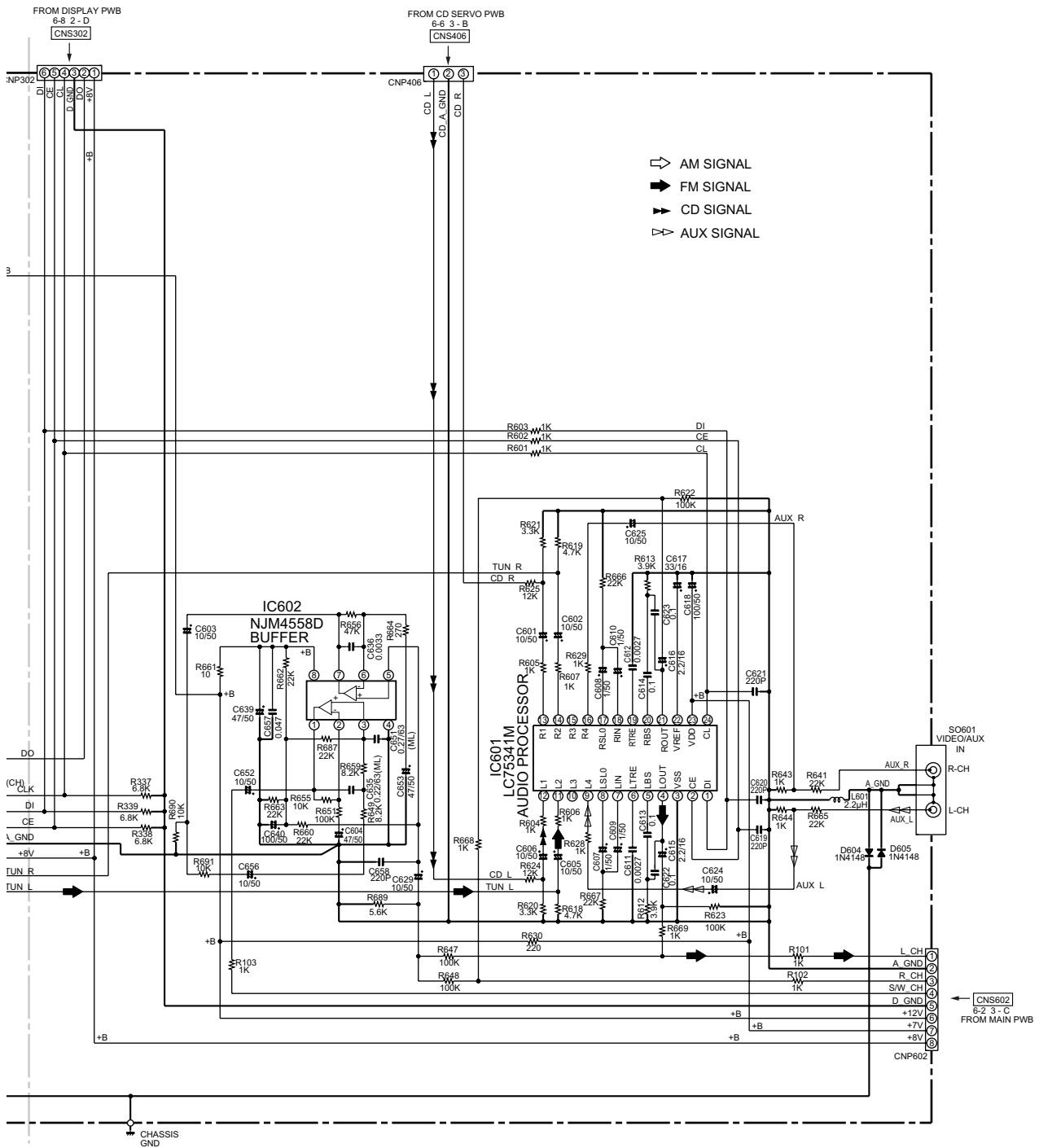
Figure 6-3 SCHEMATIC DIAGRAM (2/8)

[4] SCHEMATIC DIAGRAM TUNER



● NOTES ON SCHEMATIC DIAGRAM can be found on page 6-1

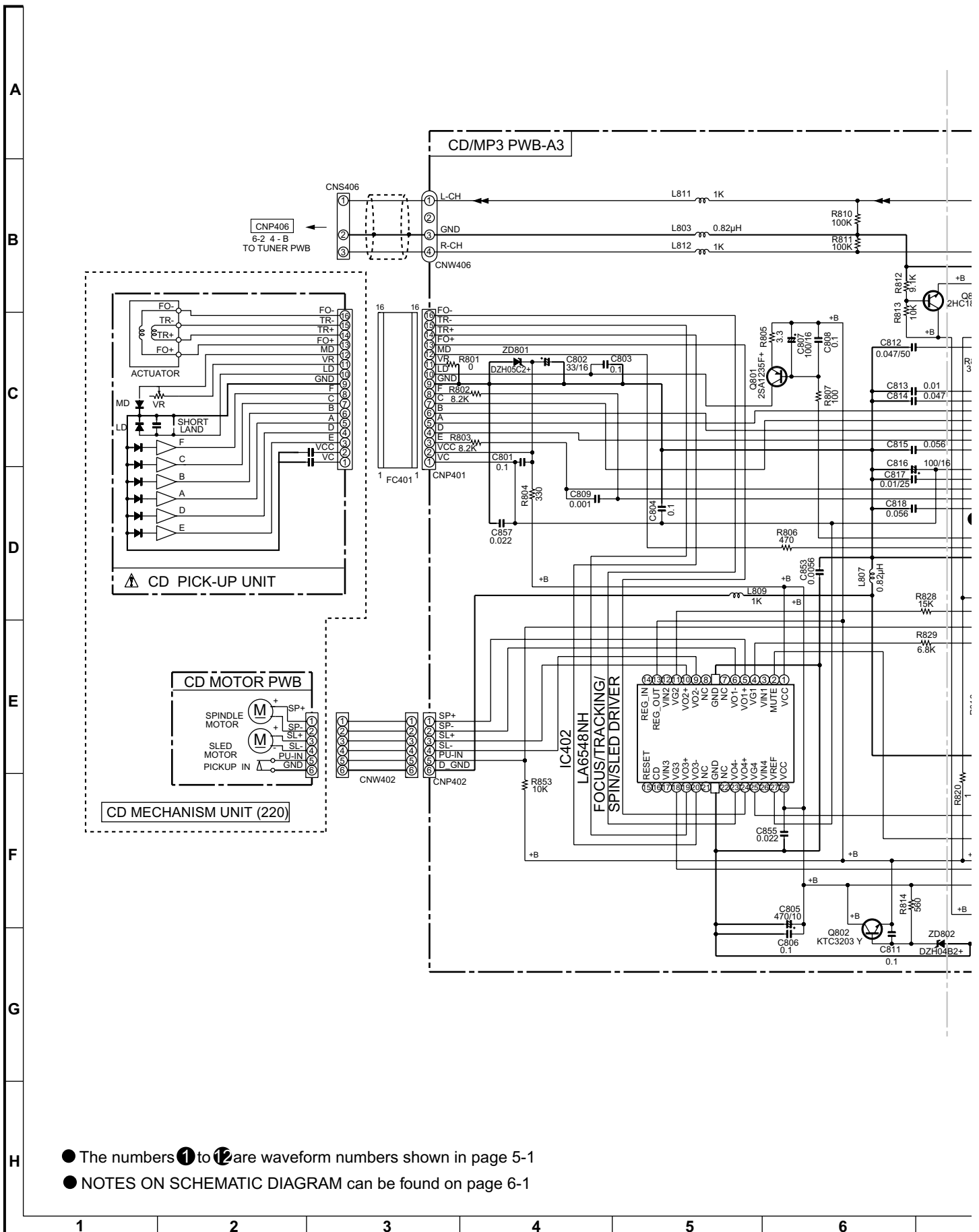
Figure 6-4 SCHEMATIC DIAGRAM (3/8)



7	8	9	10	11	12
---	---	---	----	----	----

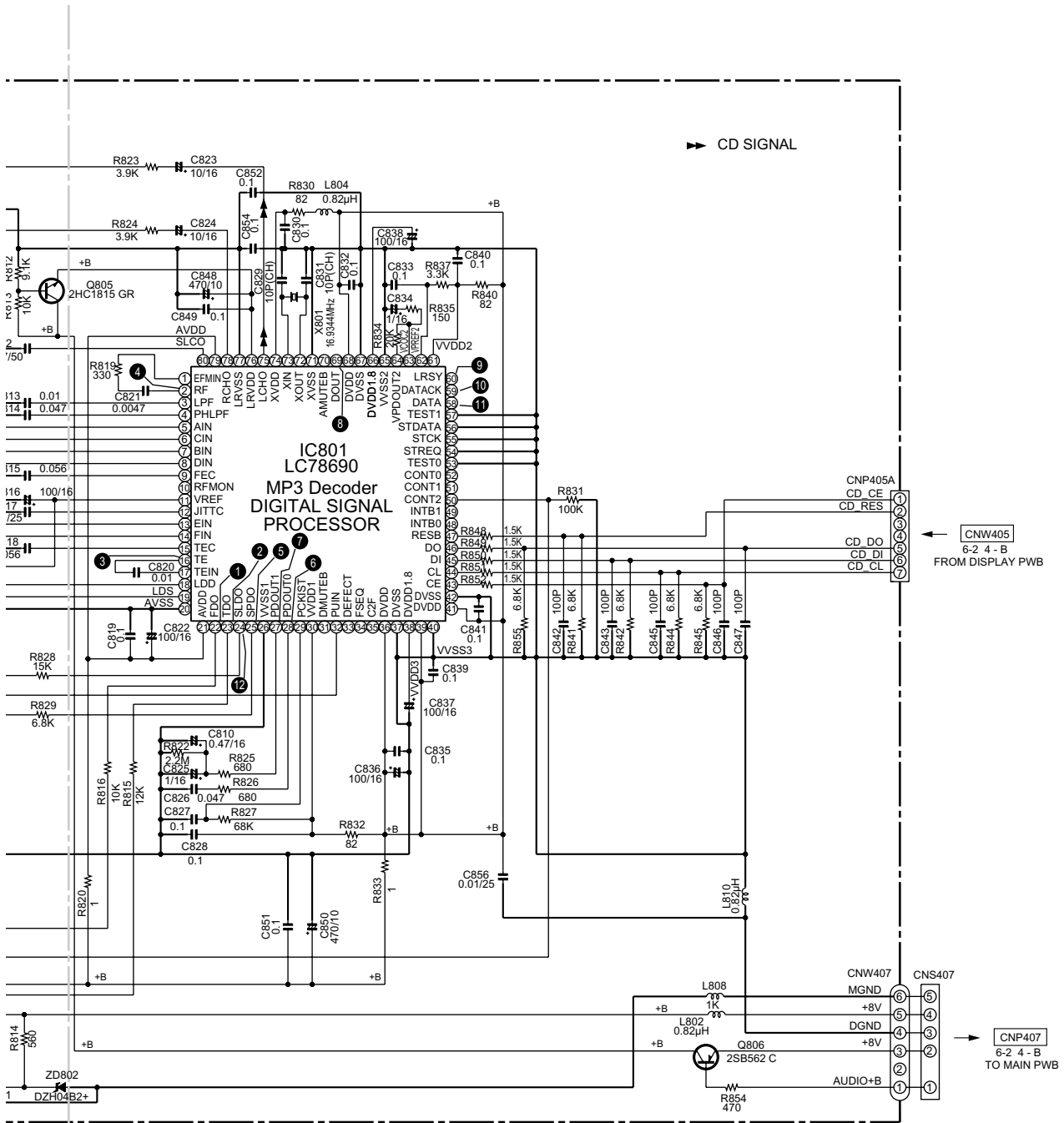
Figure 6-5 SCHEMATIC DIAGRAM (4/8)

[5] SCHEMATIC DIAGRAM CD/MP3



- The numbers ① to ⑫ are waveform numbers shown in page 5-1
- NOTES ON SCHEMATIC DIAGRAM can be found on page 6-1

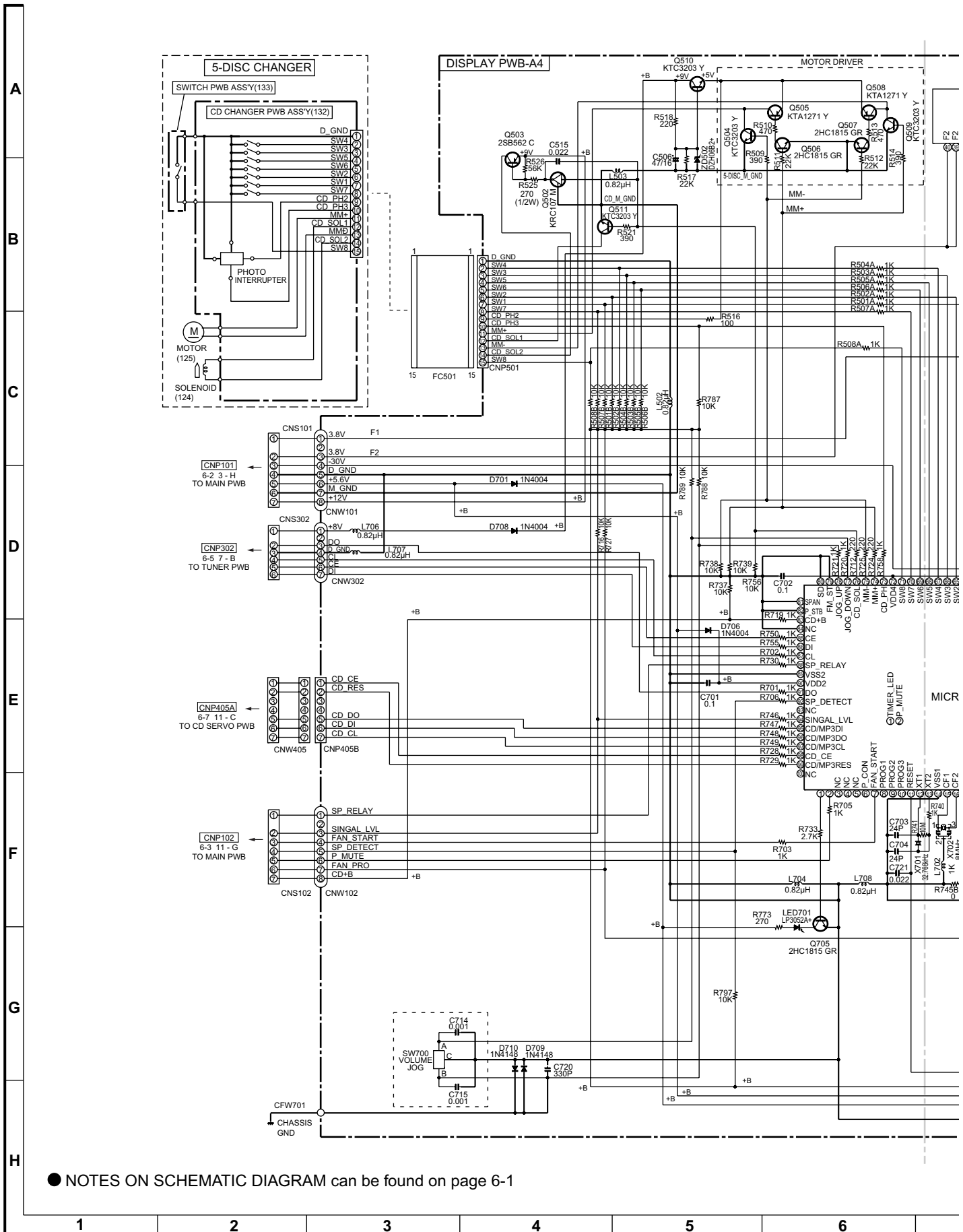
Figure 6-6 SCHEMATIC DIAGRAM (5/8)



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

[6] SCHEMATIC DIAGRAM DISPLAY



● NOTES ON SCHEMATIC DIAGRAM can be found on page 6-1

Figure 6-8 SCHEMATIC DIAGRAM (7/8)

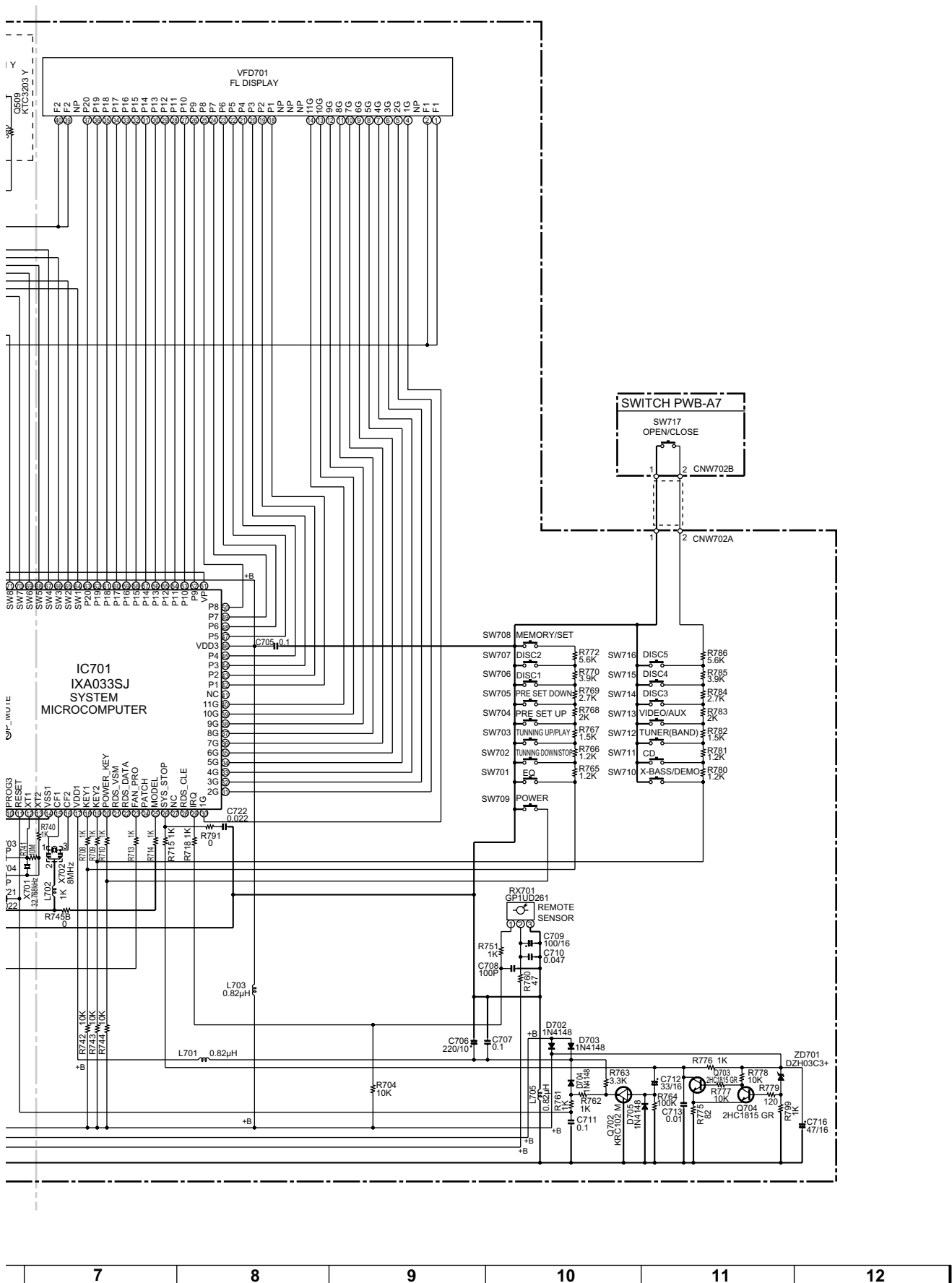


Figure 6-9 SCHEMATIC DIAGRAM (8/8)

XL-MP60
[7] WIRING SIDE OF PWB

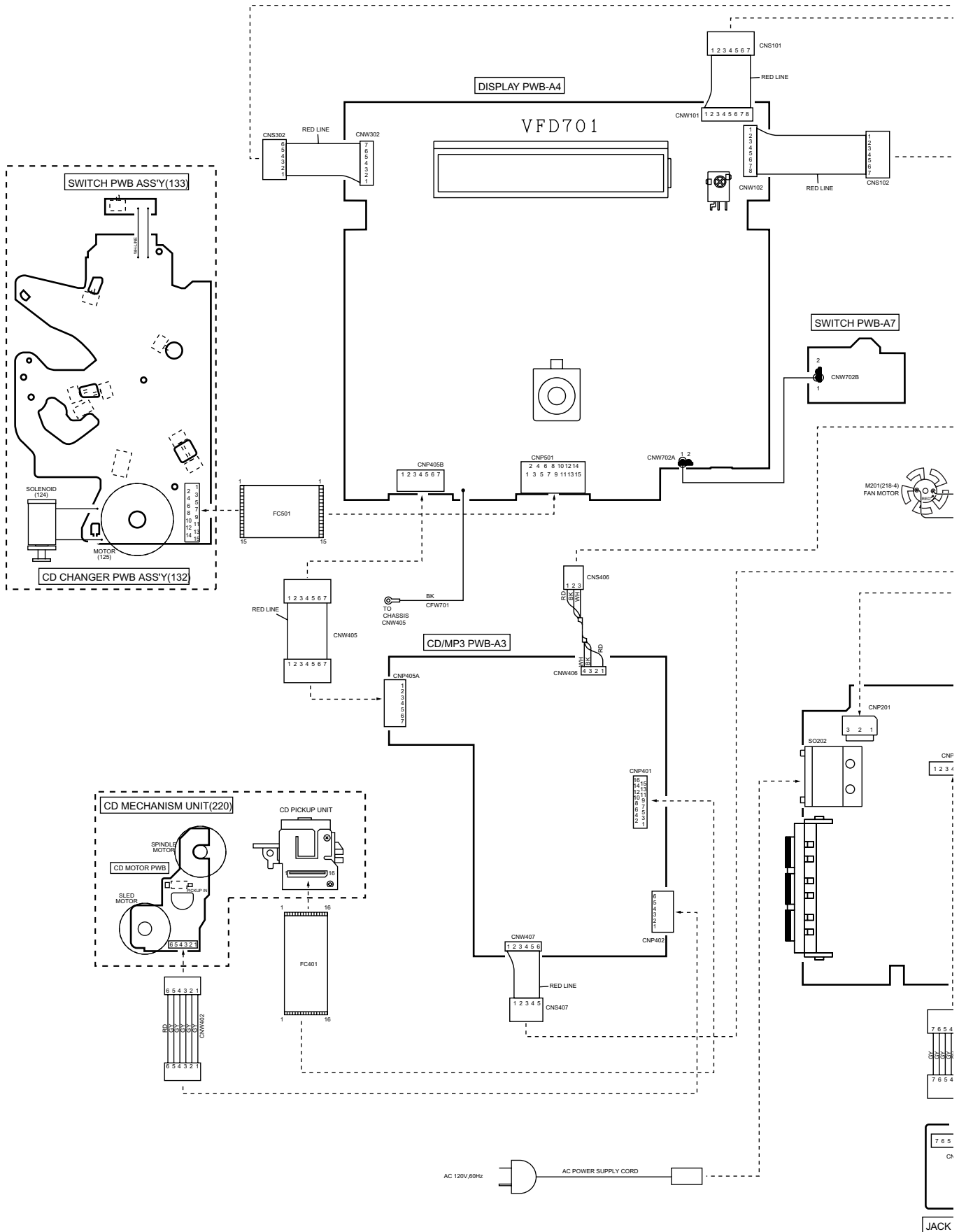


Figure 6-10 WIRING SIDE OF PWB (1/12)

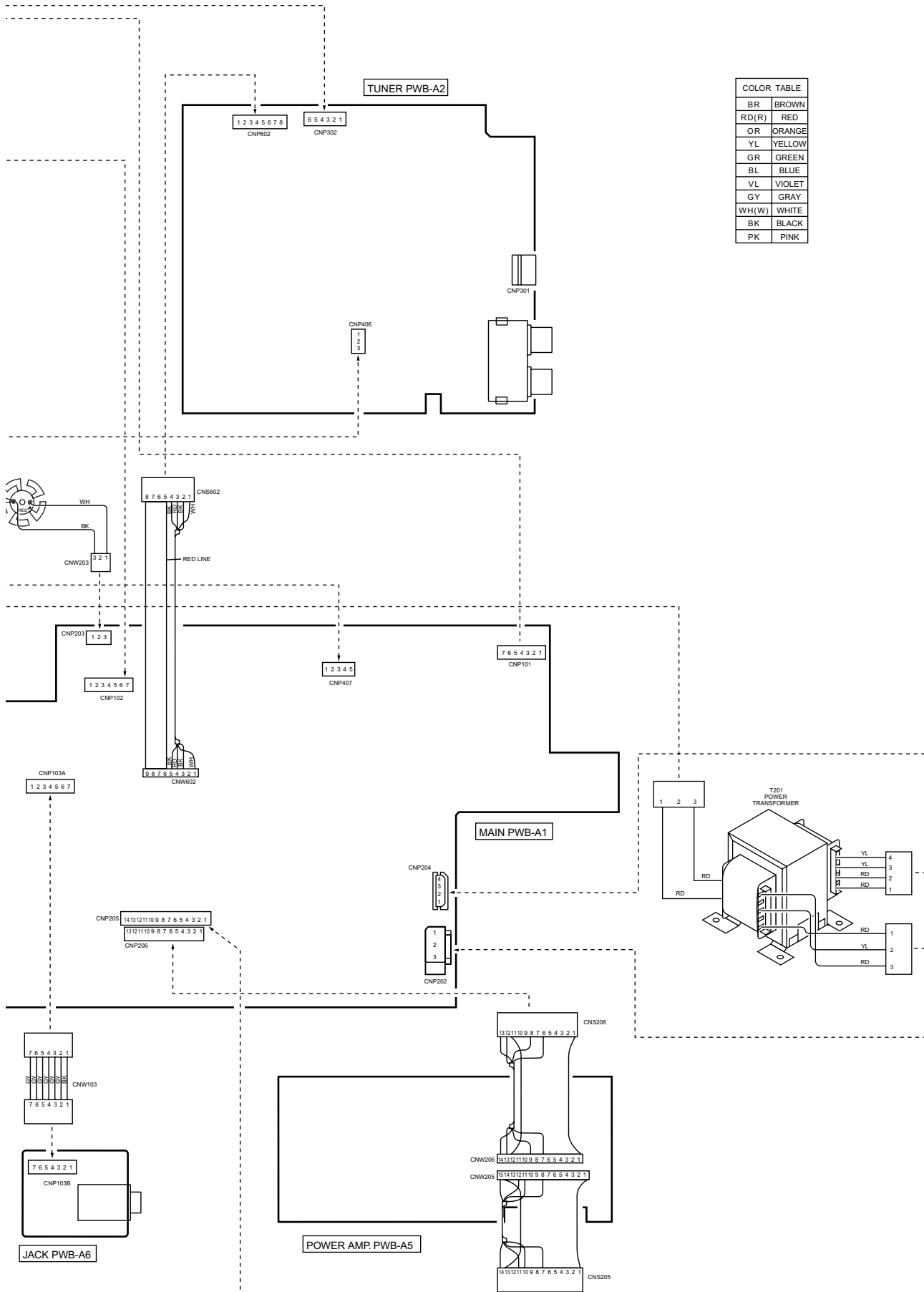
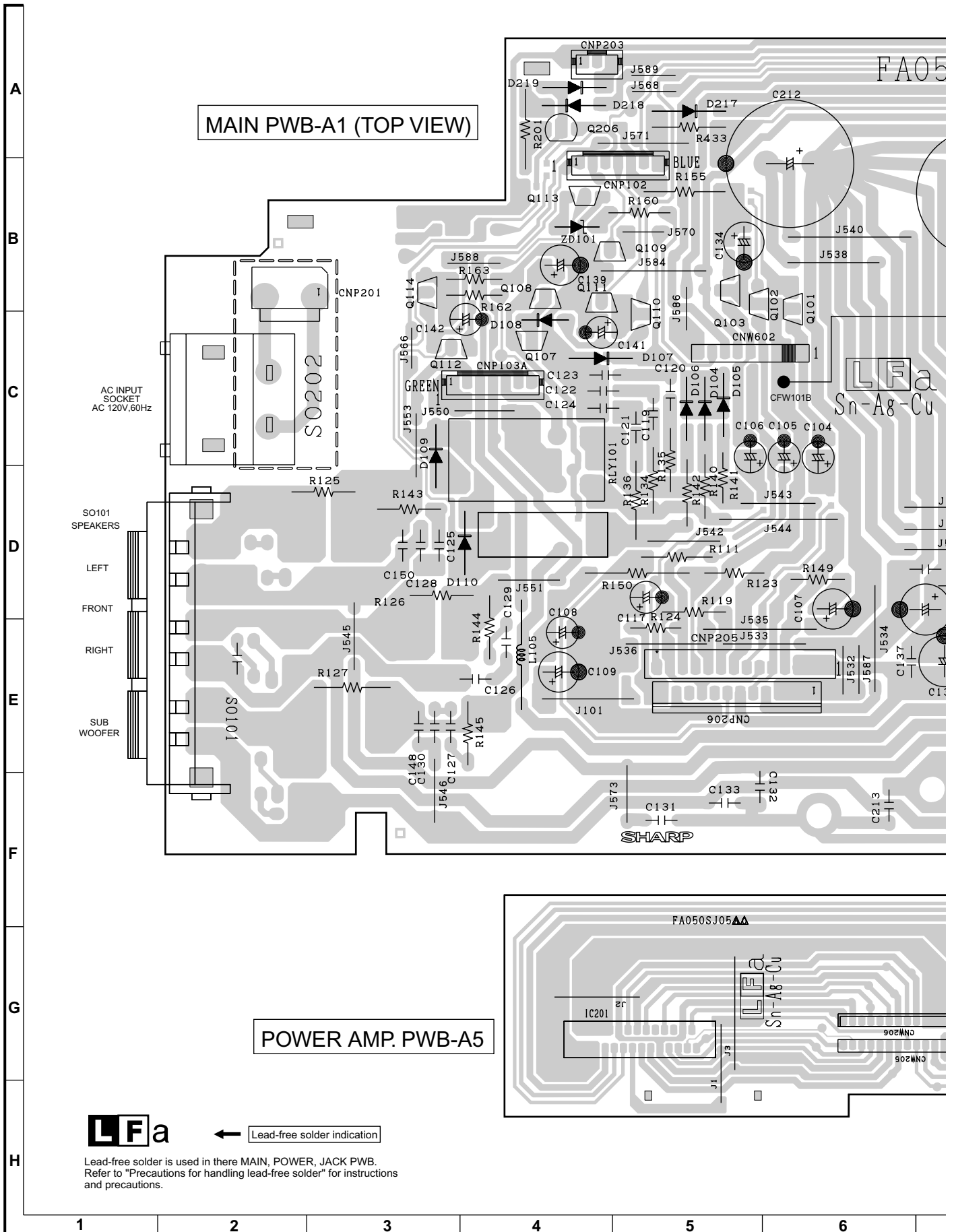


Figure 6-11 WIRING SIDE OF PWB (2/12)

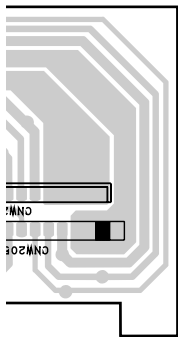
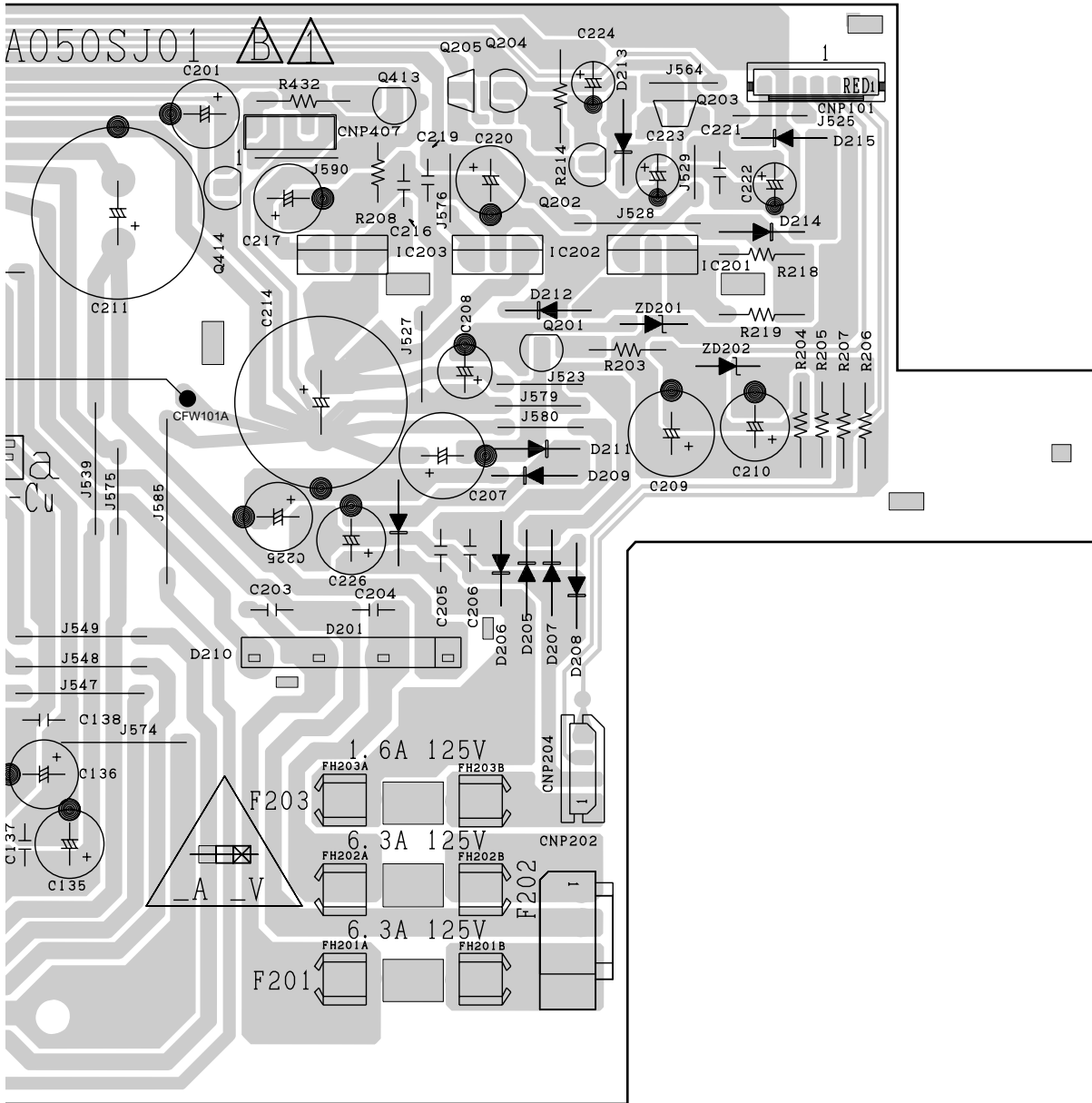
[8] WIRING SIDE OF PWB MAIN TOP/POWER AMP./JACK



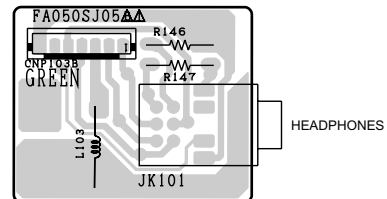
LFA ← Lead-free solder indication

Lead-free solder is used in there MAIN, POWER, JACK PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

Figure 6-12 WIRING SIDE OF PWB (3/12)



JACK PWB-A6



7	8	9	10	11	12
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Figure 6-13 WIRING SIDE OF PWB (4/12)

[9] WIRING SIDE OF PWB MAIN BOTTOM

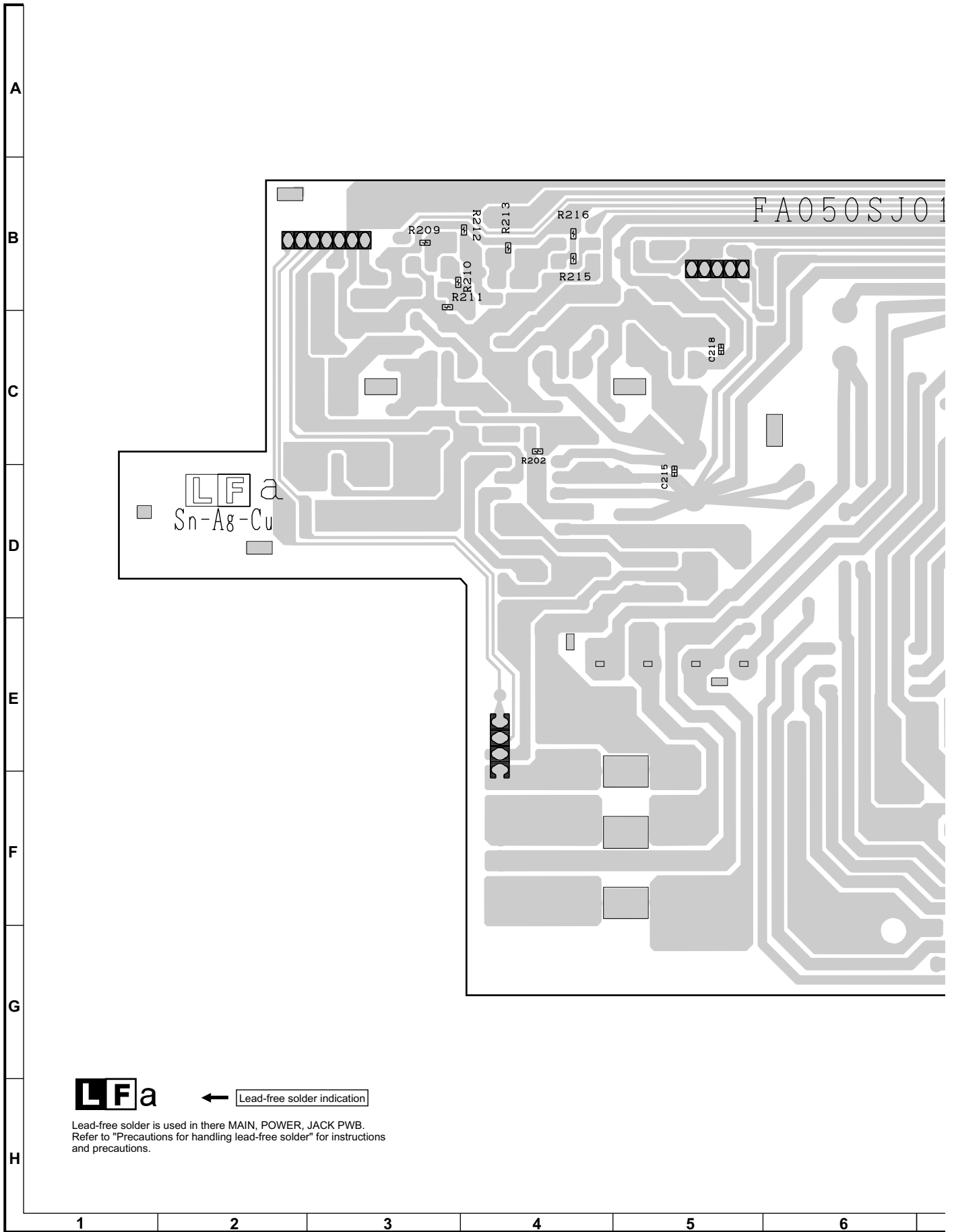
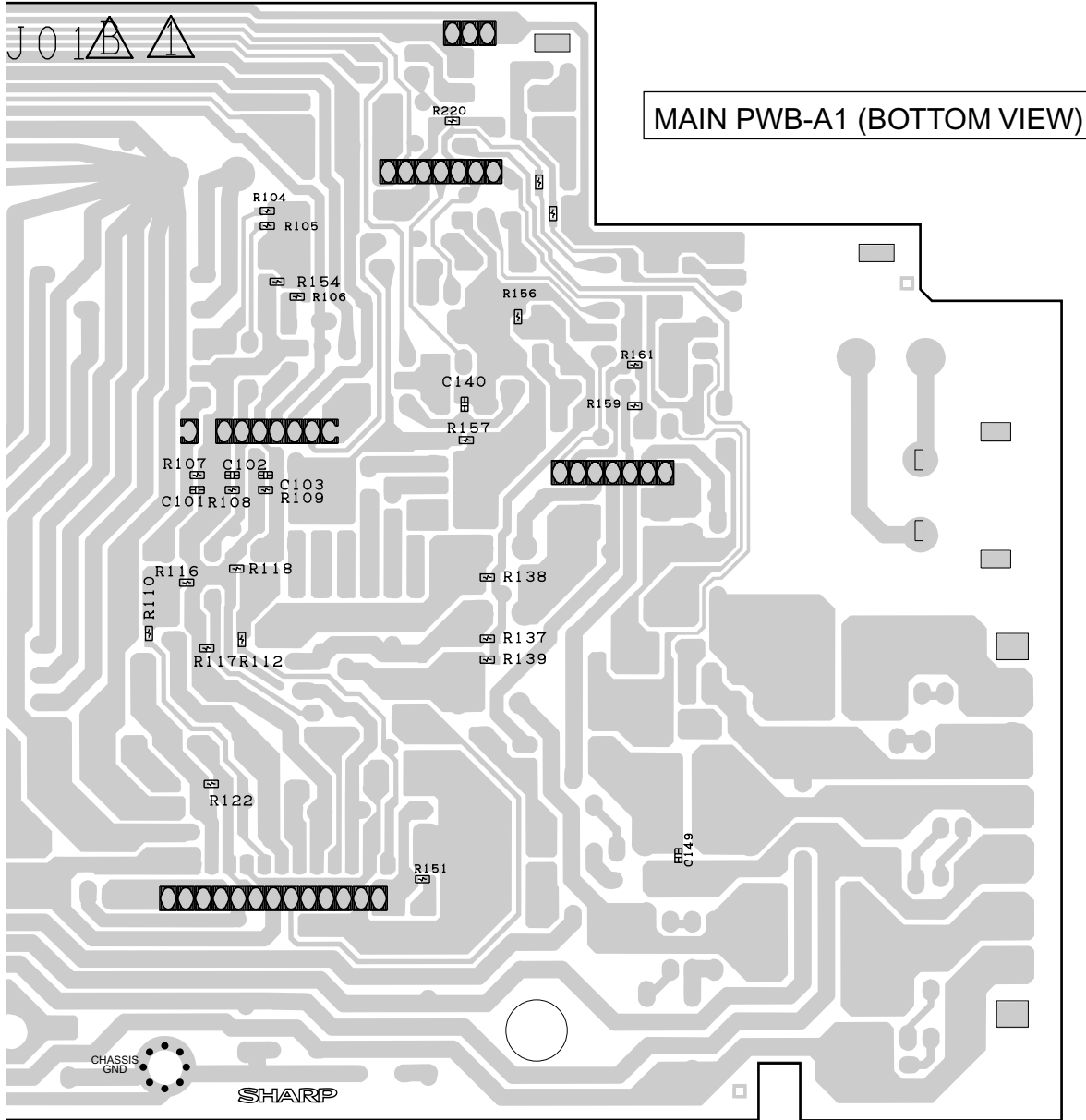


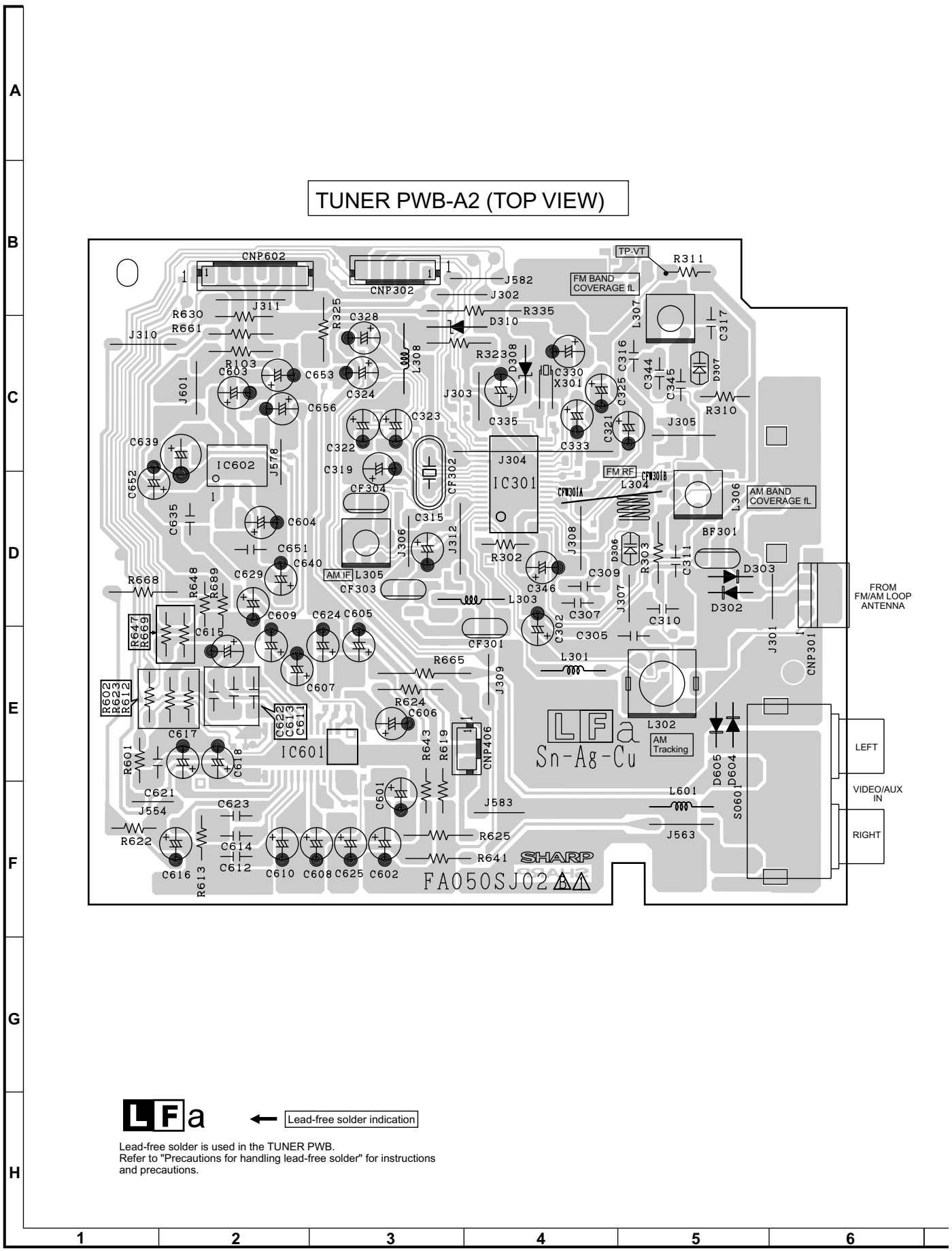
Figure 6-14 WIRING SIDE OF PWB (5/12)



	7	8	9	10	11	12
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Figure 6-15 WIRING SIDE OF PWB (6/12)

[10] WIRING SIDE OF PWB TUNER



TUNER PWB-A2 (TOP VIEW)

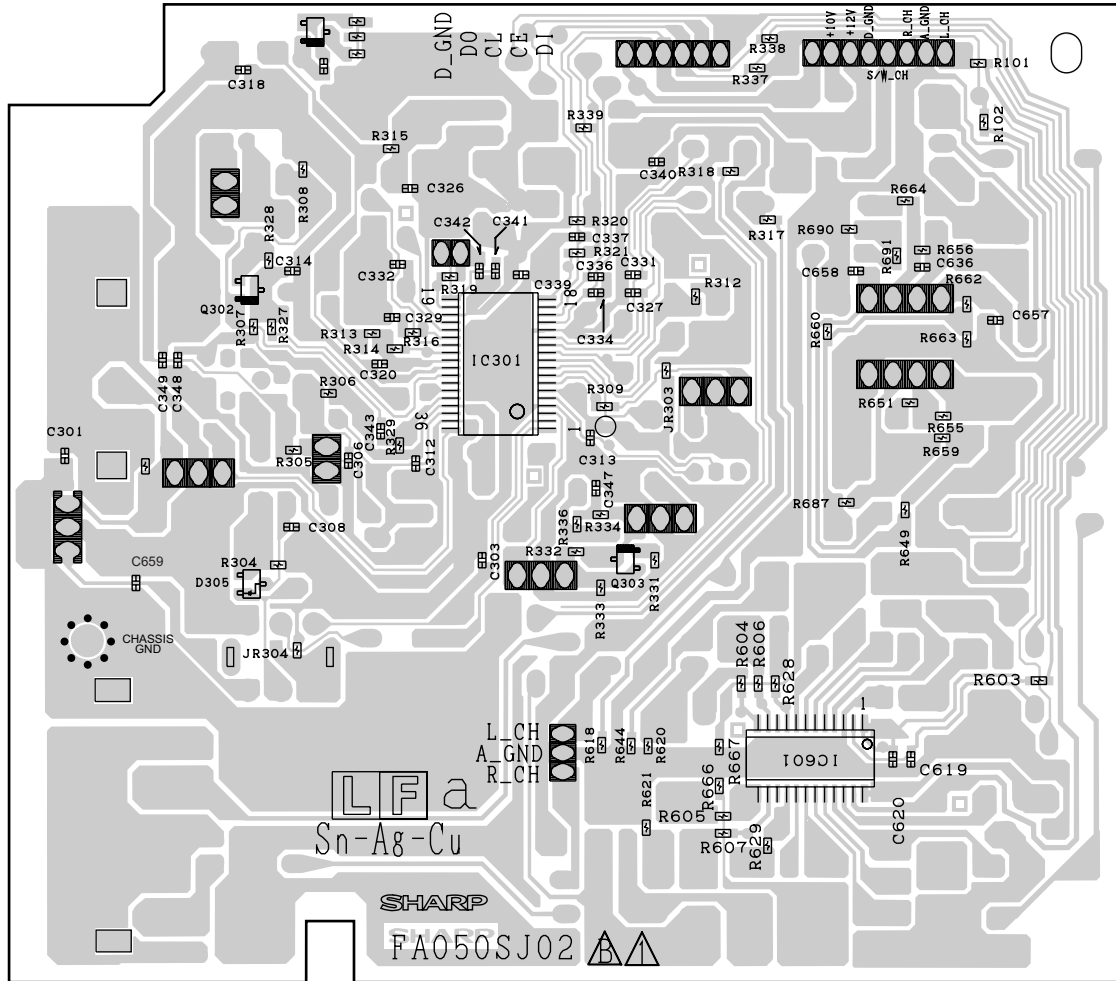


← Lead-free solder indication

Lead-free solder is used in the TUNER PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

Figure 6-16 WIRING SIDE OF PWB (7/12)

TUNER PWB-A2 (BOTTOM VIEW)



OP
A
<

7	8	9	10	11	12
---	---	---	----	----	----

Figure 6-17 WIRING SIDE OF PWB (8/12)

[11] WIRING SIDE OF PWB CD/MP3

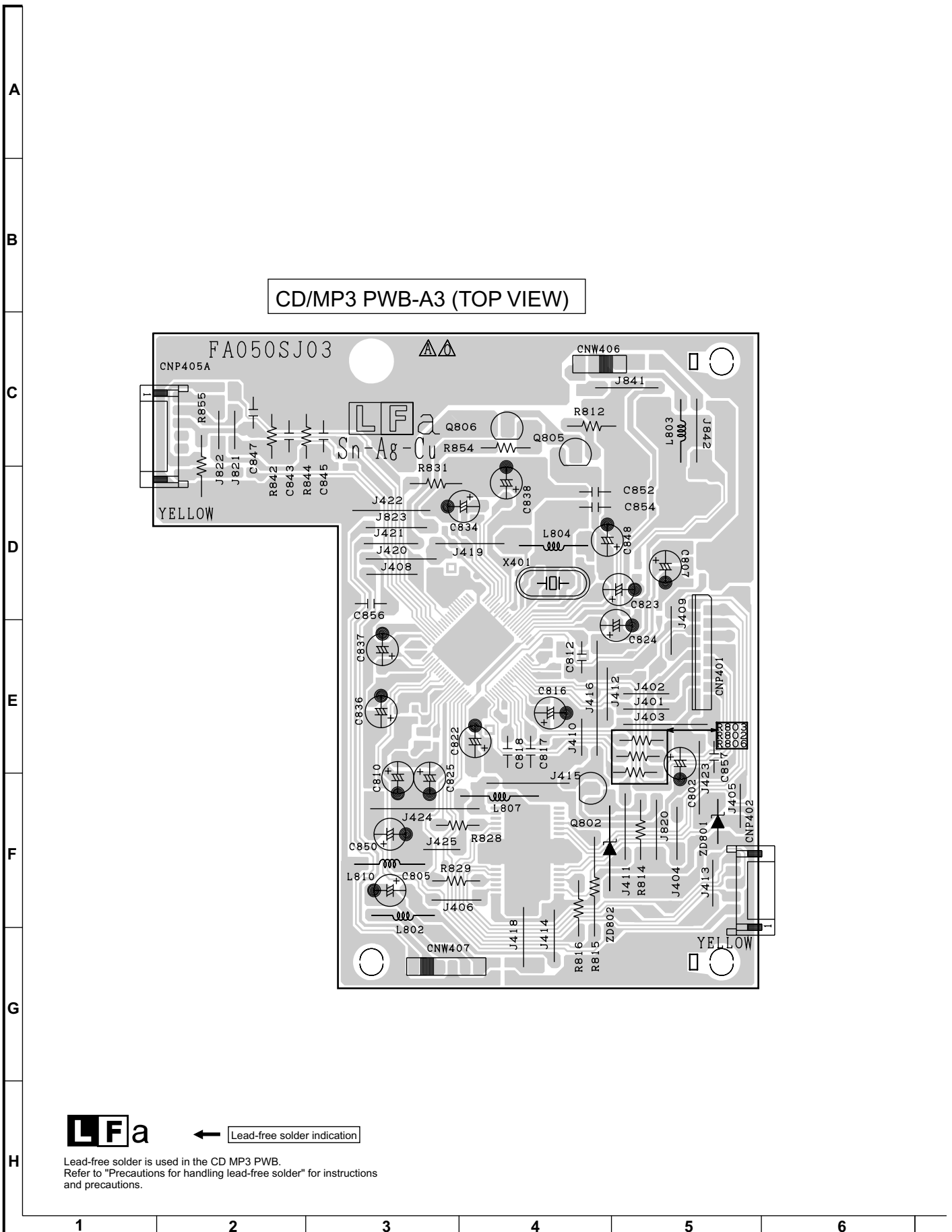
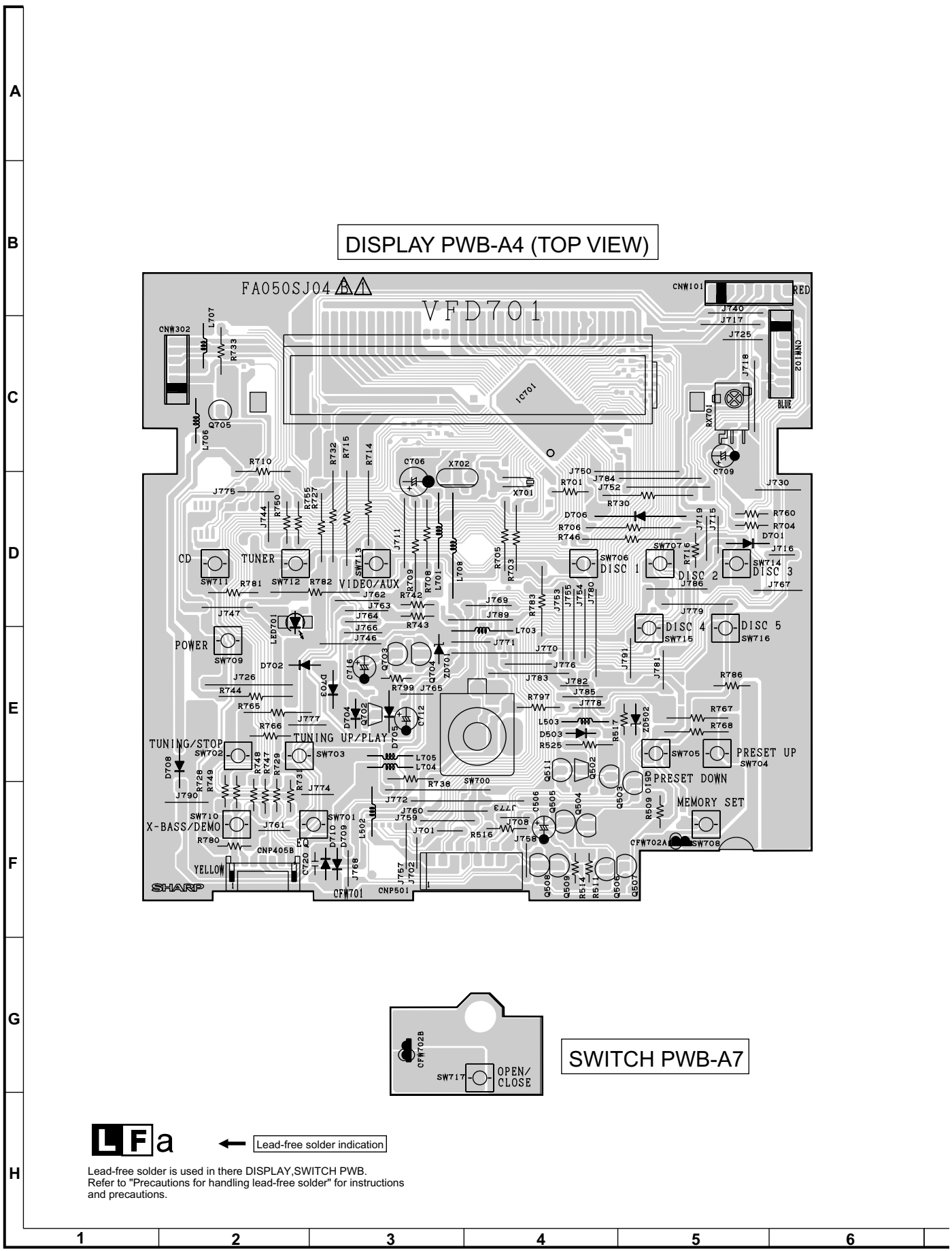


Figure 6-18 WIRING SIDE OF PWB (9/12)

[12] WIRING SIDE OF PWB DISPLAY/SWITCH



DISPLAY PWB-A4 (TOP VIEW)

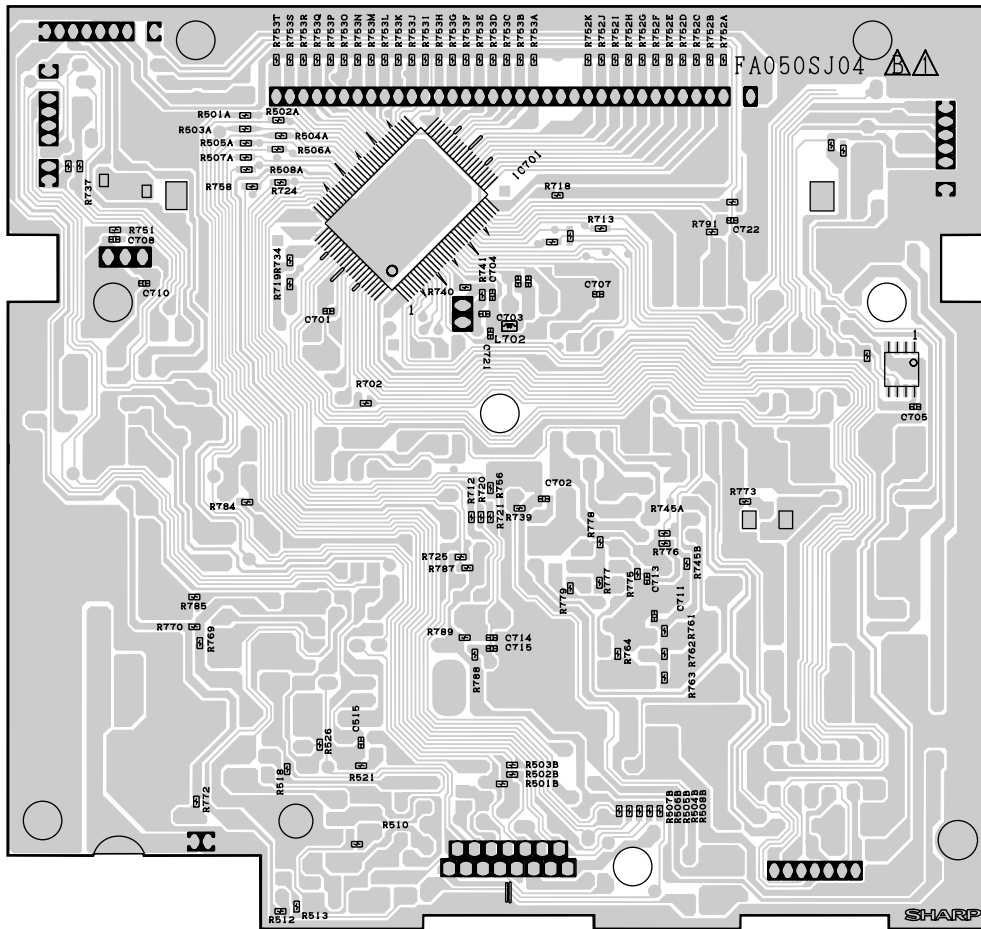
SWITCH PWB-A7

LFa ← Lead-free solder indication

Lead-free solder is used in there DISPLAY, SWITCH PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

Figure 6-20 WIRING SIDE OF PWB (11/12)

DISPLAY PWB-A4 (BOTTOM VIEW)



7	8	9	10	11	12
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Figure 6-21 WIRING SIDE OF PWB (12/12)

CHAPTER 7. FLOWCHART

[1] TROUBLESHOOTING

1. When the CD does not function

The CD section may not operate when the objective lens of the optical pickup is dirty. 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 or 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.

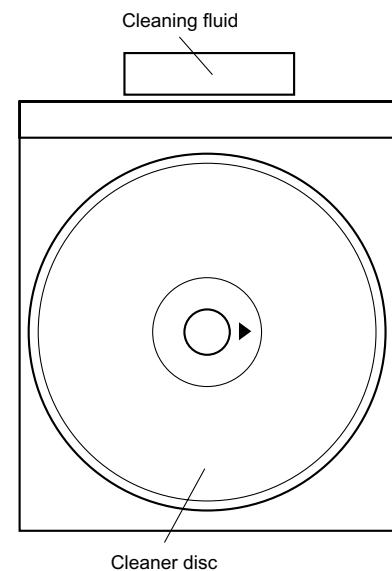
		Parts code
1.	CD optical pickup Lens cleaner disc	UDSKA0004AFZZ

HOW TO USE

1. 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.
2. Place the CD cleaner disc onto the CD disc tray with the brush side down, then press the play button.
3. You will hear music for about 20 seconds and the CD player will automatically stop. If it still play continuously, 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 replace 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 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 disc 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.



2. When a CD cannot be played

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

- 1) Focus-HF system check
- 2) Tracking system check
- 3) Spin system check
- 4) PLL system check
- 5) Others

(1) Focus-HF system check.

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

Press the OPEN/CLOSE switch (SW717) without inserting a disc, and try starting the playback operation.

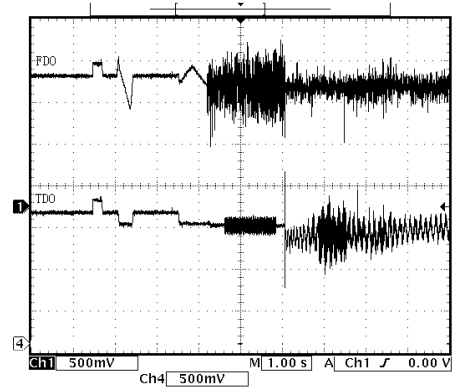


Figure 1

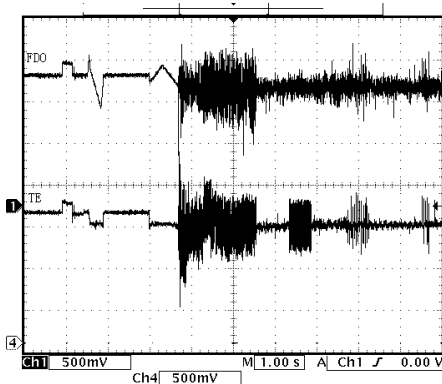
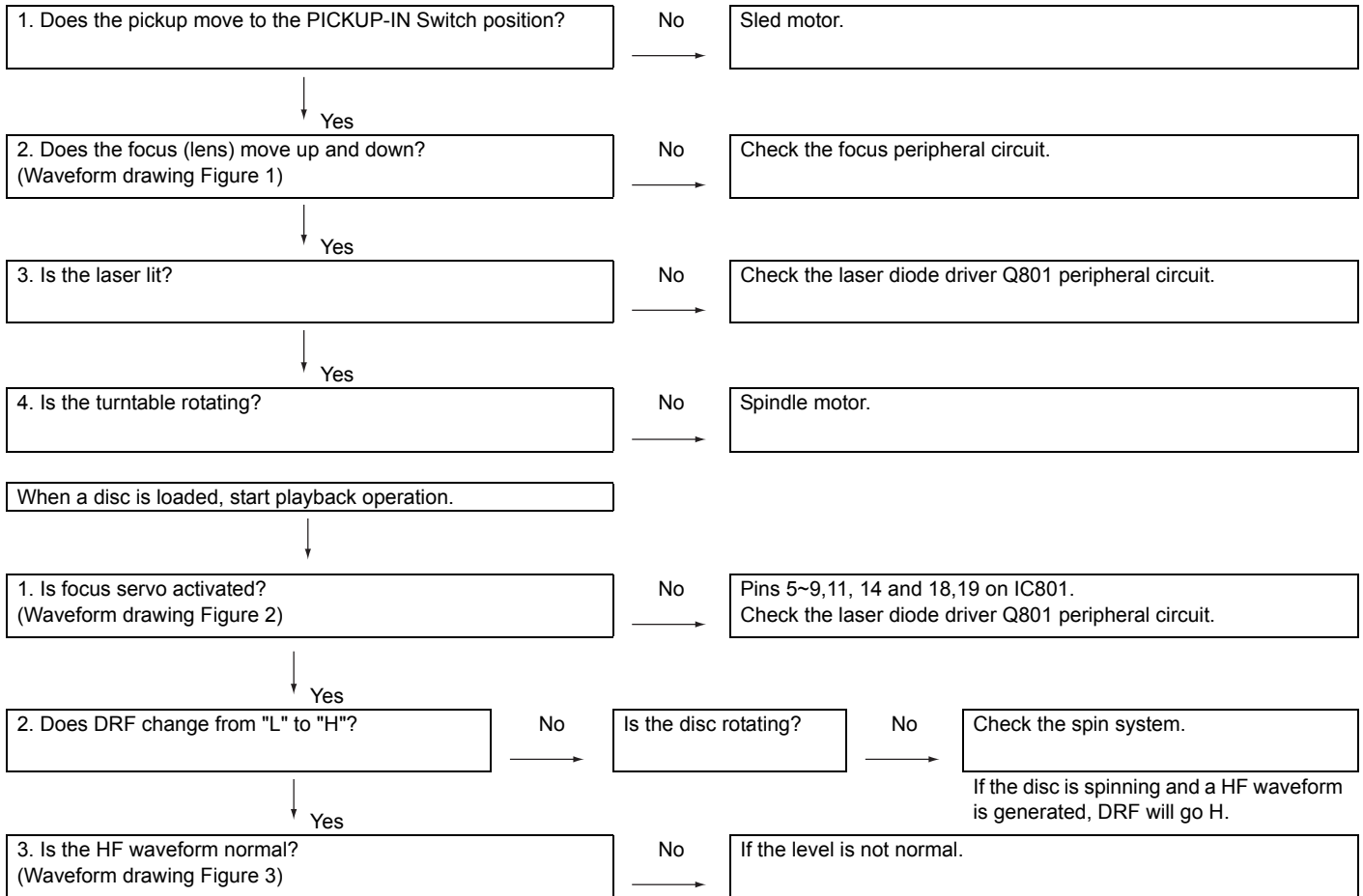


Figure 2

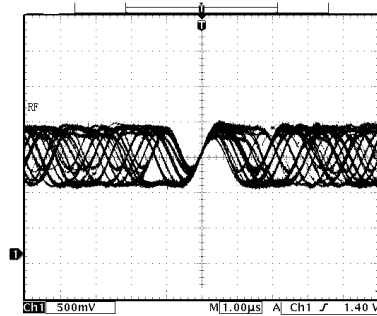


Figure 3

(2) Tracking system check.

Check the TE waveform at pin 16 on IC 801.

If the waveform shown in Figure 4 appears and soon after NO DISC appears?

Yes

The tracking servo is not activated.
Check the peripheral circuits at pins 15, 16 and 23 on IC801, and FC401.

No

"Initialization" is possible, but play is not possible?

Yes

A normal jump operation cannot be completed or the beginning of the track cannot be found.
Check the around pin 23 on IC801.

No

"Initialization" is not possible.

Data cannot be read. Check the VCO-PLL (Pin26~30 on IC801) system.

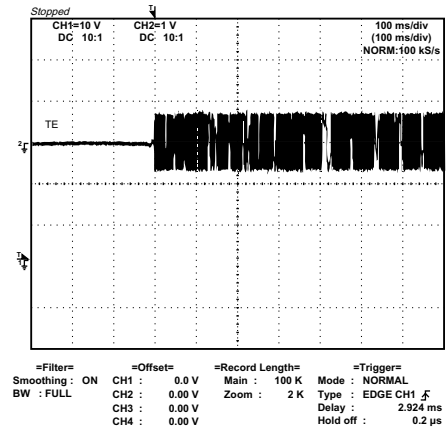


Figure 4

(3) Spin system check.

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

1. The turntable rotates a little?
(Waveform drawing Figure 5)

Yes

The spin driver circuit is OK.

No

2. The turntable doesn't rotate.

Check around pin 25 on IC801, pins 10 and 11 on IC402, and CNP402.

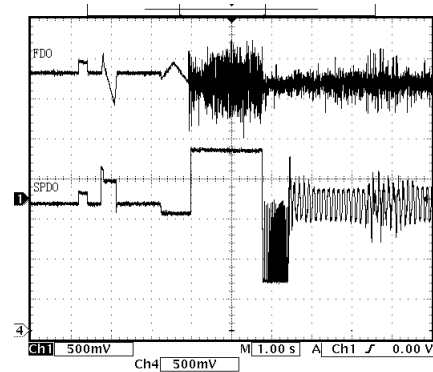


Figure 5

(4) PLL system check.

When a disc is loaded, start play operation.



The HF waveform is normal, but the TOC data cannot be read.



Check the PDOUT waveform. (Figure 6)



Check around pins 26~30 on IC801.

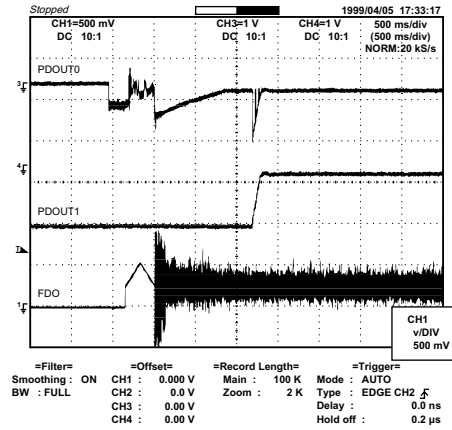


Figure 6

(5) Others.

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

Is pin 35 (C2F) on IC801 "L"?



There are too many error flags on a damaged disc which makes error correction impossible.



Check again using a known good disc.



1. When playing at normal speed. Check the peripheral circuit at pin 69 (DOUT) on IC801 and the waveform (Figure 7).



If OK, Check the unit.

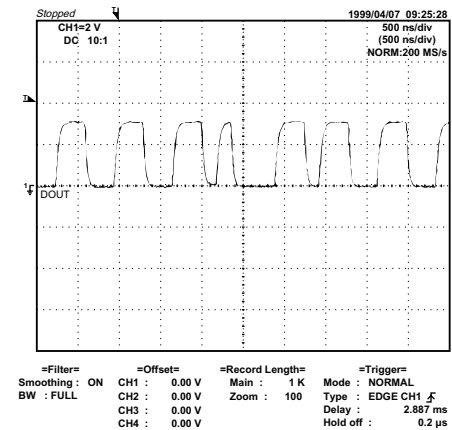


Figure 7

CHAPTER 8. OTHERS**[1] FUNCTION TABLE OF IC****IC402 VHILA6548NH-1: Focus/Tracking/Spin Sled Driver (LA6548NH)**

Pin No.	Terminal Name	Function
1	VCC1	Power supply (short-circuited with VCC 2, pin 28)
2	MUTE	Output ON/OFF
3*	VIN1	CH 1, input
4	VG1	CH 1, input (gain setting)
5	VO1+	CH 1, output (+)
6	VO1-	CH 1, output (-)
7*	NC	Not available
8*	NC	Not available
9	VO2-	CH 2, output (-)
10	VO2+	CH 2, output (+)
11	VG2	CH 2, input (gain setting)
12*	VIN2	CH 2, input
13	REG_C	Connect the collector of the external PNP transistor. 3.3 V regulator output.
14*	REG_B	Connect the base of the external PNP transistor.
15*	RESET	RESET output
16*	CD	Connect RESET delay time setting capacitor.
17*	VIN3	CH 3, input (gain setting)
18	VG3	CH 3, input (gain setting)
19	VO3+	CH 3, output (+)
20	VO3-	CH 3, output (-)
21*	NC	Not available
22*	NC	Not available
23	VO4-	CH 4, output (-)
24	VO4+	CH 4, output (+)
25	VG4	CH 4, input (gain setting)
26*	VIN4	CH 4, input (gain setting)
27	VREF	Apply reference voltage.
28	VCC2	Power supply (short-circuited with VCC 1, pin 1)

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

IC402 VHILA6548NH-1: Focus/Tracking/Spin Sled Driver (LA6548NH)

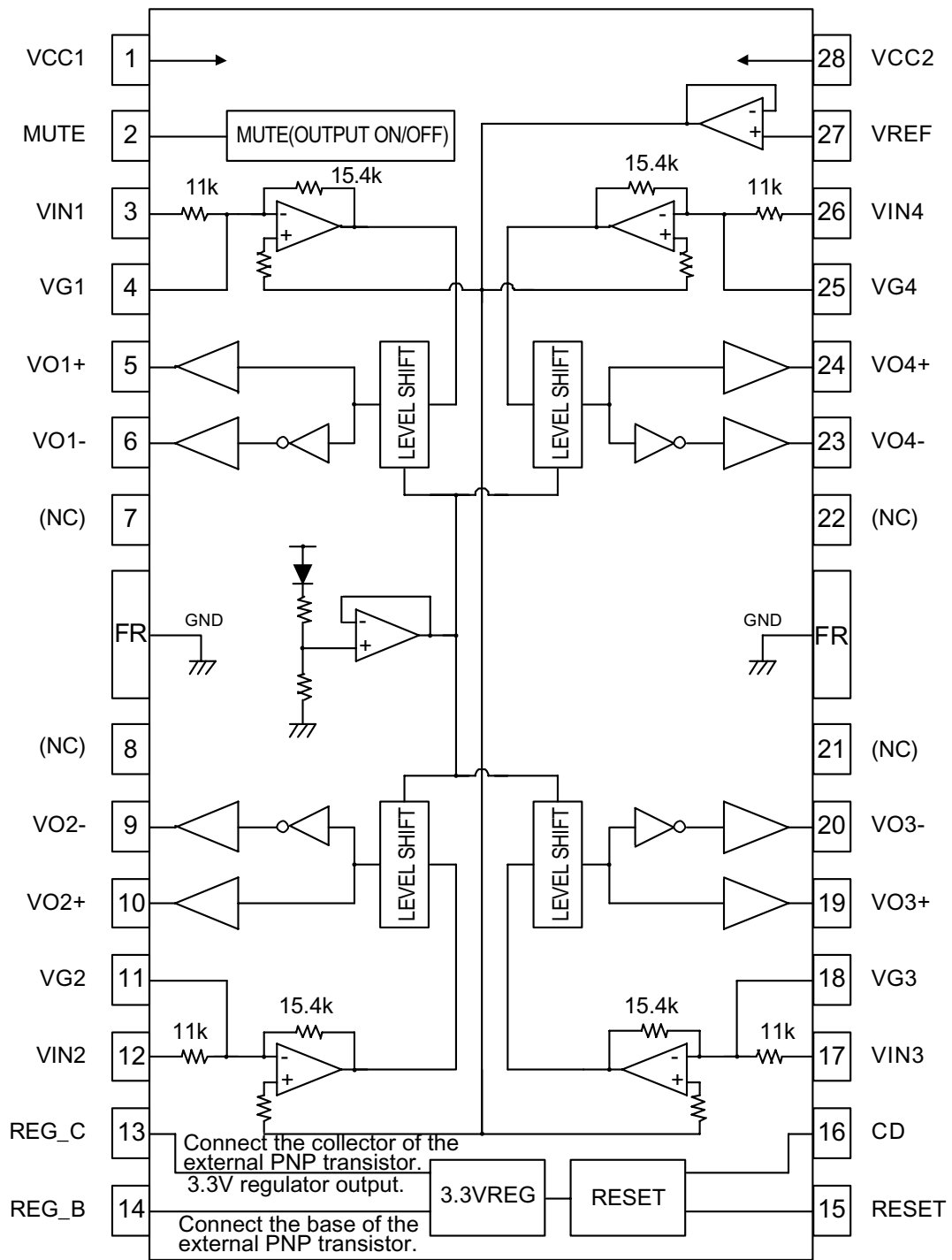


Figure 1 BLOCK DIAGRAM OF IC

Pin No.	Port Name	Input/Output	Function																														
14,89	VSS1,VSS2	-	<ul style="list-style-type: none"> Power supply (-) 																														
17,46,72,90	VDD1,VDD2,VDD3,VDD4	-	<ul style="list-style-type: none"> Power supply (+) 																														
51	VP	-	<ul style="list-style-type: none"> VFD Power supply (-) 																														
85,86,87,88,91,92,93*,94	PORT0 P00 to P07	I/O	<ul style="list-style-type: none"> 8bit input/output port Data direction programmable in nibble units Use of pull-up resistor can be specified in nibble units Input for HOLD release Input for port 0 interrupt 14V withstand at N-channel open drain output Other functions P05: clock output (system clock / can selected from sub clock) P06: timer 6 toggle output P07: timer 7 toggle output 																														
1,2,95,96,97,98,99,100*	PORT1 P10 to P17	I/O	<ul style="list-style-type: none"> 8bit input/output port Data direction programmable for each bit Use of pull-up resistor can be specified for each bit Other pin functions P10: SIO0 data output P11: SIO0 data input / bus input / output P12: SIO0 clock input / output P13: SIO1 data output P14: SIO1 data input / bus input / output P15: SIO1 clock input / output P16: Timer 1 PWML output P17: Timer 1 PWMH output / Buzzer output 																														
5*,6*,7,8*,9*,10*	PORT3 P32 to P37	I/O	<ul style="list-style-type: none"> 6bit input/output port Data direction can be specified for each bit Use of pull-up resistor can be specified for each bit 14V withstand at P32 to P35 N-channel open drain output Other functions: P32, P33: INT4 input / HOLD release input / Timer 1 event input / Timer 0L capture input / Timer 0H capture input P34 to P37: INT5 input / HOLD release input / Timer 1 event input / Timer 0L capture input / Timer 0H capture input AD input port: AN12(P36), AN13(P37) <p>The following types of interrupt detection are possible:</p> <table border="1"> <thead> <tr> <th></th> <th>Rising</th> <th>Falling</th> <th>Rising/ Falling</th> <th>H level</th> <th>L level</th> </tr> </thead> <tbody> <tr> <td>INT4</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> <tr> <td>INT5</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> </tbody> </table>		Rising	Falling	Rising/ Falling	H level	L level	INT4	Yes	Yes	Yes	No	No	INT5	Yes	Yes	Yes	No	No												
	Rising	Falling	Rising/ Falling	H level	L level																												
INT4	Yes	Yes	Yes	No	No																												
INT5	Yes	Yes	Yes	No	No																												
26,27*,28*,29	PORT7 P70 to P73	I/O	<ul style="list-style-type: none"> 4bit input/output port Data direction can be specified for each bit Use of pull-up resistor can be specified for each bit Other functions P70: INT0 input / HOLD release input / Timer0L capture input / Output for watchdog timer P71: INT1 input / HOLD release input / Timer0H capture input P72: INT2 input / HOLD release input / Timer 0 event input / Timer0L capture input / High speed clock counter input P73: INT3 input(noise rejection filter attached input) / Timer 0 event input /Timer 0H capture input <p>AD input port: AN8(P70), AN9(P71)</p> <p>The following types of interrupt detection are possible:</p> <table border="1"> <thead> <tr> <th></th> <th>Rising</th> <th>Falling</th> <th>Rising/ Falling</th> <th>H level</th> <th>L level</th> </tr> </thead> <tbody> <tr> <td>INT0</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>INT1</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>INT2</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> <tr> <td>INT3</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> </tbody> </table>		Rising	Falling	Rising/ Falling	H level	L level	INT0	Yes	Yes	No	Yes	Yes	INT1	Yes	Yes	No	Yes	Yes	INT2	Yes	Yes	Yes	No	No	INT3	Yes	Yes	Yes	No	No
	Rising	Falling	Rising/ Falling	H level	L level																												
INT0	Yes	Yes	No	Yes	Yes																												
INT1	Yes	Yes	No	Yes	Yes																												
INT2	Yes	Yes	Yes	No	No																												
INT3	Yes	Yes	Yes	No	No																												
18,19,20,21*,22*,23,24,25	PORT8 P80 to P87	I/O	<ul style="list-style-type: none"> 8bit input/output port Input/output can be specified in a bit unit Other functions: AD input port: AN0 to AN7 Weak signal detector input port: MICIN(P87) 																														

Pin No.	Port Name	Input/Output	Function												
3*	PWM2	I/O	<ul style="list-style-type: none"> PWM2 output port, general input/output port Other functions PWM2:INT4 input / HOLD release input / Timer 1 event input / Timer0L capture input / Timer0H capture input <p>The following types of interrupt detection are possible:</p> <table border="1"> <thead> <tr> <th></th> <th>Rising</th> <th>Falling</th> <th>Rising/ Falling</th> <th>H level</th> <th>L level</th> </tr> </thead> <tbody> <tr> <td>INT4</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> </tbody> </table>		Rising	Falling	Rising/ Falling	H level	L level	INT4	Yes	Yes	Yes	No	No
	Rising	Falling	Rising/ Falling	H level	L level										
INT4	Yes	Yes	Yes	No	No										
4*	PWM3	I/O	<ul style="list-style-type: none"> PWM3 output port, general input/output port Other functions PWM3:INT4 input / HOLD release input / Timer 1 event input / Timer0L capture input / Timer0H capture input <p>The following types of interrupt detection are possible:</p> <table border="1"> <thead> <tr> <th></th> <th>Rising</th> <th>Falling</th> <th>Rising/ Falling</th> <th>H level</th> <th>L level</th> </tr> </thead> <tbody> <tr> <td>INT4</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> </tbody> </table>		Rising	Falling	Rising/ Falling	H level	L level	INT4	Yes	Yes	Yes	No	No
	Rising	Falling	Rising/ Falling	H level	L level										
INT4	Yes	Yes	Yes	No	No										
30,31,32, 33,34,35, 36,37,38	S0/T0 to S8/ T8	O	<ul style="list-style-type: none"> Large current output for VFD display controller digit (can be used for segment) 												
39,40, 41*,42,43, 44,45	S9/T9 to S15/ T15	O	<ul style="list-style-type: none"> Large current output for VFD display controller segment/digit 												
47,48,49, 50,52,53, 54,55	S16 to S23	I/O	<ul style="list-style-type: none"> Output for VFD display controller segment/digit Other functions: High voltage input port: PC0 to PC7 												
56,57,58, 59,60,61, 62,63	S24 to S31	I/O	<ul style="list-style-type: none"> Output for VFD display controller segment Other functions: High voltage input port: PD0 to PD7 												
64,65,66, 67,68,69, 70,71	S32 to S39	I/O	<ul style="list-style-type: none"> Output for VFD display controller segment Other functions: High voltage input port: PE0 to PE7 												
73,74,75, 76,77,78, 79,80	S40 to S47	I/O	<ul style="list-style-type: none"> Output for VFD display controller segment Other functions: High voltage input/output port: PF0 to PF7 												
81,82,83, 84	S48 to S51	I/O	<ul style="list-style-type: none"> Output for VFD display controller segment Other functions: High voltage input/output port: PG0 to PG7 												
11	RES	I	Reset terminal												
12	XT1	I	<ul style="list-style-type: none"> Input for 32.768kHz crystal oscillation Other functions: General purpose input port When not in use, connect to VDD1. AD input port: AN10 												
13	XT2	I/O	<ul style="list-style-type: none"> Output for 32.768kHz crystal oscillation Other functions: General purpose input/output port When not in use, set to oscillation mode and leave open circuit. AD input port: AN11 												
15	CF1	I	Input terminal for ceramic oscillator												
16	CF2	O	Output terminal for ceramic oscillator												

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

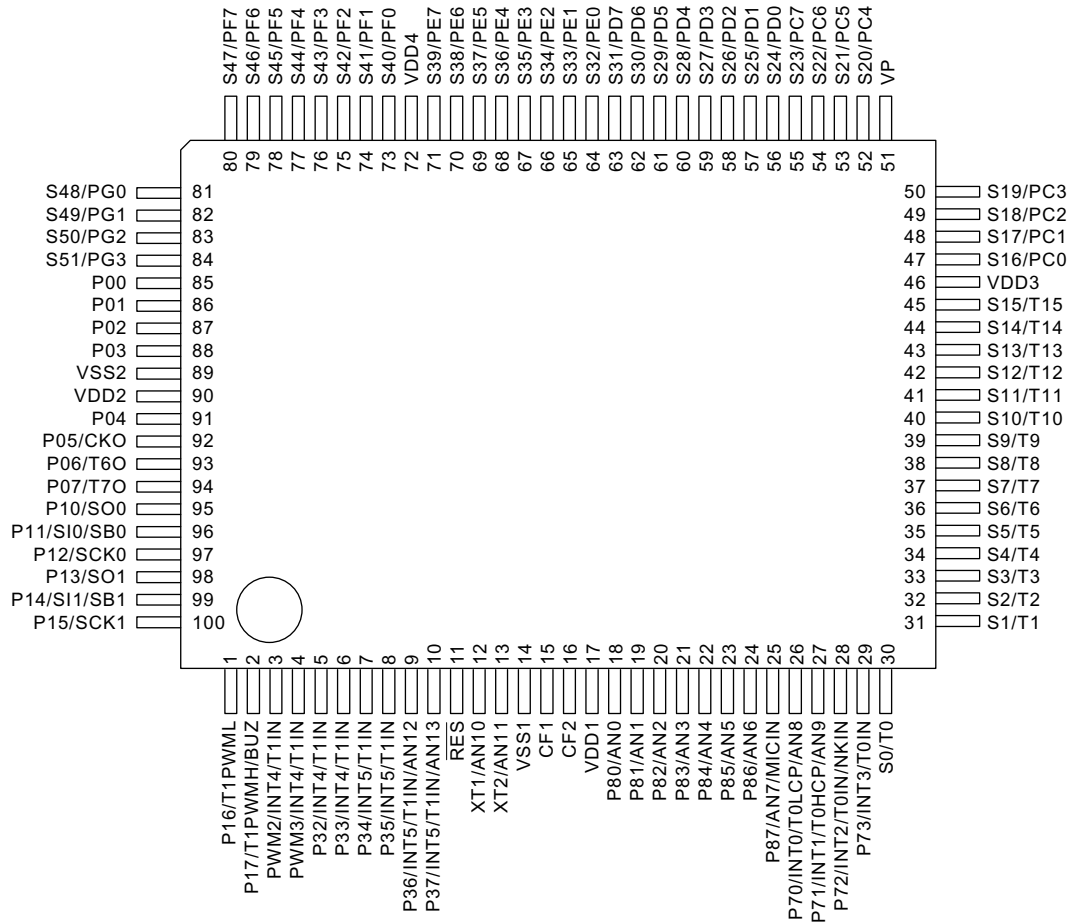


Figure 2 BLOCK DIAGRAM OF IC

IC801 VHILC7890/-1: MP3 Decoder Digital Signal Processor (LC78690)

Pin No.	Terminal Name	Input/Output	Setting in Reset	Function	
1	EFMIN	Input	Input	RF signal input.	
2	RFOUT	Output	Unfix	RF signal output.	
3	LPF	Output	Unfix	To LPF capacitor for detecting DC level of RF signal.	
4	PHLPF	Output	Unfix	To LPF capacitor for detecting scratch.	
5	AIN	Input	Input	A signal input.	
6	CIN	Input	Input	C signal input.	
7	BIN	Input	Input	B signal input.	
8	DIN	Input	Input	D signal input.	
9	FEC	Output	Unfix	To LPF capacitor for FE signal.	
10*	RFMON	Output	Unfix	Monitoring for LSI internal analog signal.	
11	VREF	Output	AVDD/2	VREF voltage output.	
12	JITTC	Output	Unfix	For jitter detection capacitor.	
13	EIN	Input	Input	E signal input.	
14	FIN	Input	Input	F signal input.	
15	TEC	Output	Unfix	To LPF capacitor for TE signal.	
16	TE	Output	Unfix	TE signal output.	
17	TEIN	Input	Input	TE signal input for TES signal generation.	
18	LDD	Output	Unfix	Laser power control signal output.	
19	LDS	Input	Input	Laser power detection signal input.	
20	AVSS	-	-	Analog GND. Connected to 0V.	
21	AVDD	-	-	Analog power supply.	
22	FDO	Output	AVDD/2	Focus control signal output. D/A output.	
23	TDO	Output	AVDD/2	Tracking control signal output. D/A output.	
24	SLDO	Output	AVDD/2	Sled control signal output. D/A output.	
25	SPDO	Output	AVDD/2	Spindle control signal output. D/A output.	
26	VVSS1	-	-	For EFM PLL	GND for built-in VCO. Connected to 0V.
27	PDOUT1	Output	Unfix		Phase comparison output pin 1 for built-in VCO control.
28	PDOUT0	Output	Unfix		Phase comparison output pin 0 for built-in VCO control.
29	PCKIST	Input	Input		To resistance for current setting of PDOUT0, 1 output.
30	VVDD1	-	-		Power supply for built-in VCO
31*	DMUTE _B	Output	L	DMUTE _B (general-purpose) output	
32	PUIN	Input/Output	Input	PUIN (general-purpose) input/output (Built-in Pull-Up resistance)	
33*	DEFECT	Output	L	Scratch detection signal output	
34*	FSEQ	Output	L	Sync signal output. Switches to "H" when sync signal detected from EFM signal and sync signal generated internally are the same.	
35*	C2F	Output	L	C2 error signal output.	
36	DVDD	-	-	Digital power supply.	
37	DVSS	-	-	Digital GND. Connected to 0V.	
38	DVDD1.8	Output	H	To power supply capacitor for digital circuit.	
39	VVDD3	-	-	Power supply for built-in PLL.	
40	VVSS3	-	-	GND for built-in PLL. Connected to 0V.	
41	DVDD	-	-	Digital power supply.	
42	DVSS	-	-	Digital GND. Connected to 0V.	
43	CE	Input	Input	For micro-processor interface	Enable signal input.
44	CL	Input	Input		Data transfer clock input.
45	DI	Input	Input		Data input
46	DO	Output	(H)		Data output (Tri-state output: Built-in Pull-Up resistance)
47	RESB	Input	-	Reset input for this LSI. Set as "L" when turning power on.	
48*	INTB0	Output	H	Interrupt signal output pin 0 (Servo section)	
49*	INTB1	Output	H	Interrupt signal output pin 1 (Decoder section)	
50	CONT2	Input/Output	Input	General-purpose input/output pin 2	Controlled by command from microprocessor. When not in use, set as input and connect to 0V, or set as output and leave open.
51*	CONT1	Input/Output	Input	General-purpose input/output pin 1	
52*	CONT0	Input/Output	Input	General-purpose input/output pin 0 (Built-in Pull-Up resistance)	
53	TEST0	Input	L	Input for testing. Connected to 0V.	
54	STREQ	Input/Output	Input	Stream data request signal output.	
55	STCK	Input/Output	Input	Bit clock input for stream data.	
56	STDATA	Input/Output	Input	Stream data input.	
57	TEST1	Input	L	Input for testing. Connected to 0V.	
58*	DATA	Output	L	L/R channel data output.	
59*	DATA _{CK}	Output	L	Bit clock output	

XL-MP60

Pin No.	Terminal Name	Input/Output	Setting in Reset	Function	
60*	LRSY	Output	L	L/R ch clock output	
61	VVDD2	-	-	For EFM PLL	Power supply for built-in VCO
62	VPREF2	Input	Input		Input for oscillation range setting of built-in VCO.
63	VCOC2	Input	Input		Input for control voltage setting of built-in VCO.
64	VPDOOUT2	Output	Unfix		Output for controlling built-in VCO.
65	VVSS2	-	-		GND for built-in VCO. Connected to 0V.
66	DVDD1.8	Output	H	To power supply capacitor for digital circuit.	
67	DVSS	-	-	Digital GND. Connected to 0V.	
68	DVDD	-	-	Digital power supply.	
69*	DOUT	Output	L	Digital OUT output. EIAJ format.	
70*	AMUTE _B	Output	L	AMUTE _B (general-purpose) output.	
71	XVSS	-	-	Digital GND. Connected to 0V.	
72	XOUT	Output	Oscillator	For crystal oscillation	To 16.9344 MHz oscillator
73	XIN	Input	Oscillator		
74	XVDD	-	-	Digital power supply	
75	LCHO	Output	LRVDD/2	D/A con- verter	L channel output.
76	LRVDD	-	-		Power supply for LR channel.
77	LRVSS	-	-		GND for LR channel. Connected to 0V.
78	RCHO	Output	LRVDD/2		R channel output.
79	AVDD	-	-	Analog power supply.	
80	SLCO	Output	Unfix	Slice level control output.	

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

IC801 VHiLC7890/-1: MP3 Decoder Digital Signal Processor (LC78690)

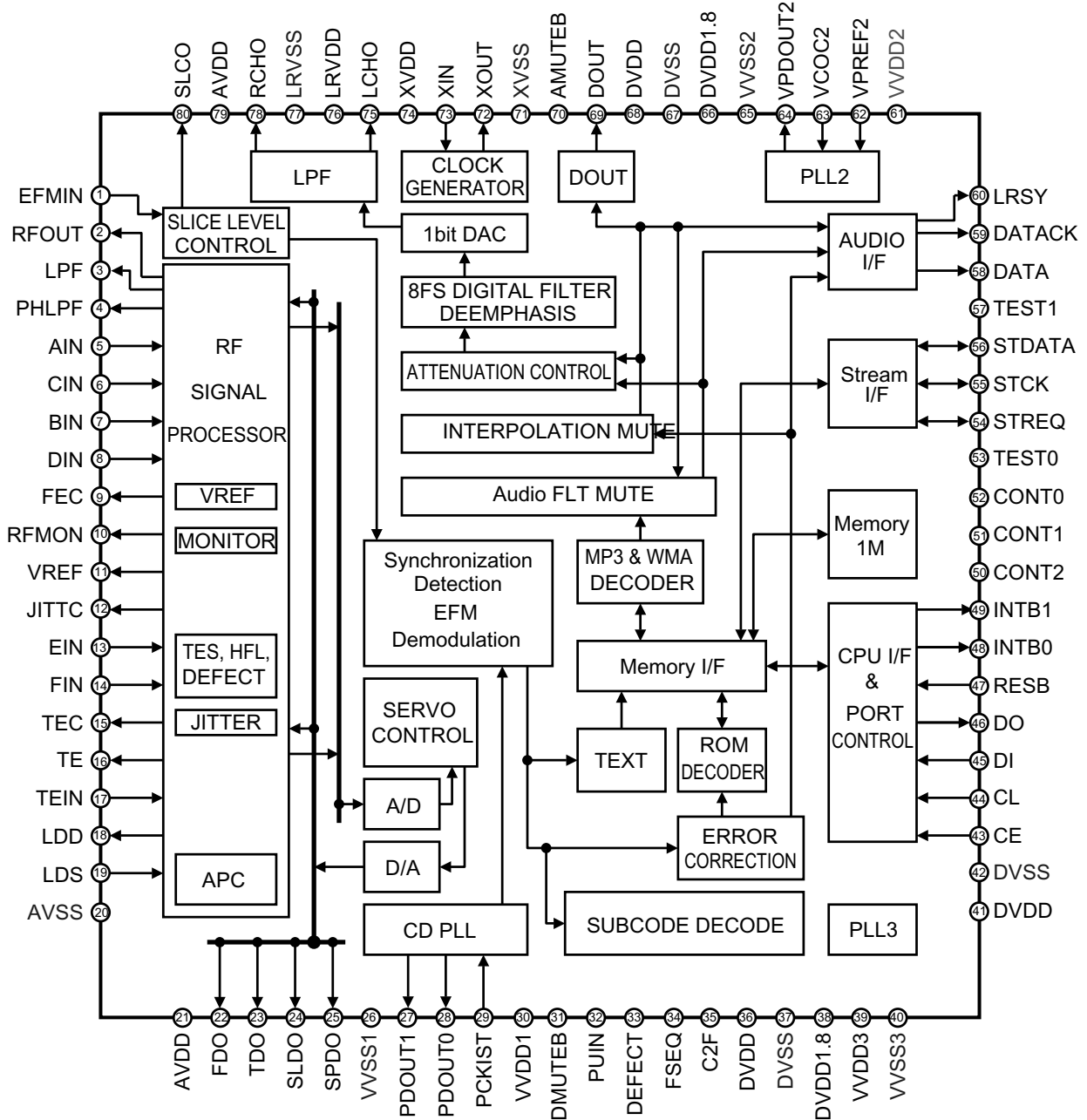
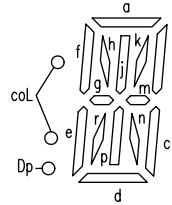
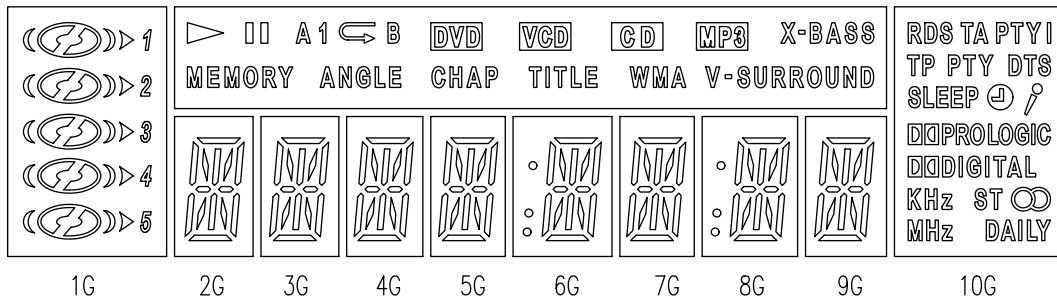


Figure 3 BLOCK DIAGRAM OF IC

GRID ASSIGNMENT

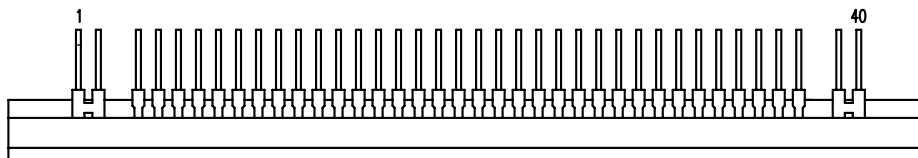
11G



ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G
P1	S1-1										
P2	S1-2										
P3	S1-3										▷
P4	1										X-BASS
P5	S2-1					Dp		Dp		RDS	MEMORY
P6	S2-2					col		col		TA	ANGLE
P7	S2-3	a	a	a	a	a	a	a	a	PTYI	CHAP
P8	2	f	f	f	f	f	f	f	f	TP	TITLE
P9	S3-1	h	h	h	h	h	h	h	h	PTY	WMA
P10	S3-2	j	j	j	j	j	j	j	j	DTS	V-
P11	S3-3	k	k	k	k	k	k	k	k	SLEEP	SURROUND
P12	3	b	b	b	b	b	b	b	b	⊖	MP3
P13	S4-1	g	g	g	g	g	g	g	g	⌘	CD
P14	S4-2	m	m	m	m	m	m	m	m	DIGITAL	VCD
P15	S4-3	e	e	e	e	e	e	e	e	DIPROLOGIC	DVD
P16	4	n	n	n	n	n	n	n	n	KHz	B
P17	S5-1	p	p	p	p	p	p	p	p	ST	↶
P18	S5-2	r	r	r	r	r	r	r	r	∞	A
P19	S5-3	c	c	c	c	c	c	c	c	MHz	1
P20	5	d	d	d	d	d	d	d	d	DAILY	∥

OUTER DRAWING



PIN CONNECTION

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CONNECTION	F	F	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	NC	NC	NC	P1	P2	P3
PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CONNECTION	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	NP	F	F

SHARP PARTS GUIDE

MICRO COMPONENT SYSTEM

MODEL **XL-MP60**

XL-MP60 Micro Component System consisting of XL-MP60 (main unit), CP-MP60F (front speakers) and CP-MP60SW (subwoofer).

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| [2] TRANSISTORS | [11] CHANGER MECHANISM PARTS |
| [3] DIODES | [12] CABINET PARTS |
| [4] FILTERS | [13] SPEAKER BOX PARTS |
| [5] TRANSFORMERS | [14] PACKING PARTS |
| [6] COILS | [15] ACCESSORIES |
| [7] VIBRATORS | [16] P.W.B. ASSEMBLY (Not Replacement Item) |
| [8] CAPACITORS | [17] OTHER SERVICE PARTS |
| [9] RESISTORS | ■ INDEX |

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.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[1] INTEGRATED CIRCUITS					
IC101	VHILM4781TA-1	AZ			Power Amp.,LM4781TA
IC201	VHiKiA7805APi	AF			Voltage Regulator,KIA7805API
IC202	VHiKiA7812APi	AE			Voltage Regulator,KIA7812API
IC203	VHiKiA7808APi	AF			Voltage Regulator,KIA7808API
IC301	VHiLV23002M-1	AS			FM FRONT END/PLL (Tuner)/FM IF Det./FM Mpx./AM IF,
IC402	VHiLA6548NH-1	AL			Focus/Tracking/Spin/Sled Driver,LA6548NH
IC601	VHiLC75341M-1	AM			Audio Processor,LC75341M
IC602	VHiNJM4558D-1	AH			Buffer,NJM4558D or AN4558
IC701	RH-iXA033SJZZ	BF			System Microcomputer,IXA033SJ
IC801	VHiLC78690/-1	BE			MP3 Decoder Digital Signal Processor,LC78690
[2] TRANSISTORS					
Q101	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q102	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q103	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q107	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q108	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q109	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q110	VSKRA107M//-1	AE			Digital,PNP,KRA107 M
Q111	VSKRC107M//-1	AC			Digital,NPN,KRC107 M
Q112	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q113	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q114	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q201	VS2HA1015GR-1	AB			Silicon,PNP,2HA1015 GR
Q202	VS2SC535-C/-1	AC			Silicon,NPN,2SC535 C
Q203	VSKTC3200GR-1	AC			Silicon,NPN,KTC3200 GR
Q204	VS2HA1015GR-1	AB			Silicon,PNP,2HA1015 GR
Q205	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q302	VS2SC5477++-1	AD			Silicon,NPN,2SC5477++
Q303	VS2SC5477++-1	AD			Silicon,NPN,2SC5477++
Q413	VS2SB562-C/-1	AD			Silicon,PNP,2SB562 C
Q414	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q502	VSKRC107M//-1	AC			Digital,NPN,KRC107 M
Q503	VS2SB562-C/-1	AD			Silicon,PNP,2SB562 C
Q504	VSKTC3203Y/-1	AC			Silicon,NPN,KTC3203 Y
Q505	VSKTA1271Y/-1	AC			Silicon,PNP,KTA1271 Y
Q506	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q507	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q508	VSKTA1271Y/-1	AC			Silicon,PNP,KTA1271 Y
Q509	VSKTC3203Y/-1	AC			Silicon,NPN,KTC3203 Y
Q510	VSKTC3203Y/-1	AC			Silicon,NPN,KTC3203 Y
Q511	VSKTC3203Y/-1	AC			Silicon,NPN,KTC3203 Y
Q702	VSKRC102M//-1	AC			Digital,NPN,KRC102 M
Q703	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q704	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q705	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q801	VS2SA1235F+-1	AD			Silicon,PNP,2SA1235 F+
Q802	VSKTC3203Y/-1	AC			Silicon,NPN,KTC3203 Y
Q805	VS2HC1815GR-1	AB			Silicon,NPN,2HC1815 GR
Q806	VS2SB562-C/-1	AD			Silicon,PNP,2SB562 C
[3] DIODES					
D104	VHD1N4004//-1	AB			Silicon,1N4004
D105	VHD1N4004//-1	AB			Silicon,1N4004
D106	VHD1N4004//-1	AB			Silicon,1N4004
D107	VHD1N4004//-1	AB			Silicon,1N4004
D108	VHD1N4148//-1	AA			Silicon,1N4148
D109	VHD1N4004//-1	AB			Silicon,1N4004
D110	VHD1N4004//-1	AB			Silicon,1N4004
D201	VHDTS6B04GM-1	AP			Silicon,TS6B04GM-1
D205	VHD1N4004//-1	AB			Silicon,1N4004
D206	VHD1N4004//-1	AB			Silicon,1N4004
D207	VHD1N4004//-1	AB			Silicon,1N4004
D208	VHD1N4004//-1	AB			Silicon,1N4004
D209	VHD1N4004//-1	AB			Silicon,1N4004
D210	VHD1N4004//-1	AB			Silicon,1N4004
D211	VHD1N4004//-1	AB			Silicon,1N4004
D212	VHD1N4004//-1	AB			Silicon,1N4004
D213	VHD1N4004//-1	AB			Silicon,1N4004
D214	VHD1N4004//-1	AB			Silicon,1N4004
D215	VHD1N4004//-1	AB			Silicon,1N4004
D217	VHD1N4148//-1	AA			Silicon,1N4148
D302	VHD1SS133//-1	AA			Silicon,1SS133
D303	VHD1SS133//-1	AA			Silicon,1SS133
D305	VHCSVC347S/-1	AG			Variable Capacitance,SVC347S
D306	VHCSVC201//-1	AE			Variable Capacitance,SVC201
D307	VHCSVC201//-1	AE			Variable Capacitance,SVC201
D308	VHEMTZJ3R6B-1	AC			Zener,3.6V,MTZJ3.6B
D310	VHEDZH05C2+-1	AB			Zener,5.1V,DZH05C2+
D604	VHD1N4148//-1	AA			Silicon,1N4148
D605	VHD1N4148//-1	AA			Silicon,1N4148
D701	VHD1N4004//-1	AB			Silicon,1N4004
D702	VHD1N4148//-1	AA			Silicon,1N4148
D703	VHD1N4148//-1	AA			Silicon,1N4148

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] DIODES					
D704	VHD1N4148//--1	AA			Silicon,1N4148
D705	VHD1N4148//--1	AA			Silicon,1N4148
D706	VHD1N4004//--1	AB			Silicon,1N4004
D708	VHD1N4004//--1	AB			Silicon,1N4004
D709	VHD1N4148//--1	AA			Silicon,1N4148
D710	VHD1N4148//--1	AA			Silicon,1N4148
LED701	VHPLP3052A+-1	AC			LED,Red,LP3052A+
ZD101	VHEDZH06B2+-1	AB			Zener,6.2V,DZH06B2+
ZD201	VHEDZH3001+-1	AB			Zener,30V,DZH3001+
ZD202	VHEDZH06C2+-1	AB			Zener,6.2V,DZH06C2+
ZD502	VHEDZH06B2+-1	AB			Zener,6.2V,DZH06B2+
ZD701	VHEDZH03C3+-1	AB			Zener,3.3V,DZH03C3+
ZD801	VHEDZH05C2+-1	AB			Zener,5.1V,DZH05C2+
ZD802	VHEDZH04B2+-1	AB			Zener,3.9V,DZH04B2+
[4] FILTERS					
BF301	RF i LRA001SJZZ	AD			Band Pass Filter
CF301	RF i LFA001SJZZ	AE			FM IF
CF302	RF i LFO003AWZZ	AK			FM IF
CF303	RF i LFA001SJZZ	AE			FM IF
CF304	RF i LA0003SJZZ	AF			AM IF
[5] TRANSFORMERS					
T201	RTRNPA031SJZZ	BA			Power
[6] COILS					
L103	VP-DH100K0000	AB			10 μ H,Choke
L105	VP-DH2R2K0000	AB			2.2 μ H,Peaking
L301	VP-DH1R0K0000	AC			1 μ H
L302	RC i LAA002SJZZ	AC			AM Antenna
L303	VP-DH100K0000	AB			10 μ H,Choke
L304	RC i LRA001SJZZ	AA			FM RF
L305	RC i LIA001SJZZ	AC			AM IF
L306	RC i LBA006SJZZ	AC			AM OSC.
L307	RC i LBA004SJZZ	AD			FM OSC.
L308	VP-DH470K0000	AB			47 μ H,Choke
L502	VP-DHR82K0000	AE			0.82 μ H,Choke
L503	VP-DHR82K0000	AE			0.82 μ H,Choke
L601	VP-DH2R2K0000	AB			2.2 μ H,Peaking
L701	VP-DHR82K0000	AE			0.82 μ H,Choke
L702	RBLN-A003SJZZ	AB			Ferrite Bead,1 kohms
L703	VP-DHR82K0000	AE			0.82 μ H,Choke
L704	VP-DHR82K0000	AE			0.82 μ H,Choke
L705	VP-DHR82K0000	AE			0.82 μ H,Choke
L706	VP-DHR82K0000	AE			0.82 μ H,Choke
L707	VP-DHR82K0000	AE			0.82 μ H,Choke
L708	VP-DHR82K0000	AE			0.82 μ H,Choke
L802	VP-DHR82K0000	AE			0.82 μ H,Choke
L803	VP-DHR82K0000	AE			0.82 μ H,Choke
L804	VP-DHR82K0000	AE			0.82 μ H,Choke
L807	VP-DHR82K0000	AE			0.82 μ H,Choke
L808	RBLN-A003SJZZ	AB			Ferrite Bead,1 kohms
L809	RBLN-A003SJZZ	AB			Ferrite Bead,1 kohms
L810	VP-DHR82K0000	AE			0.82 μ H,Choke
L811	RBLN-A005SJZZ	AB			220 ohms (100MHZ)
L812	RBLN-A005SJZZ	AB			220 ohms (100MHZ)
[7] VIBRATORS					
X301	RCRSPA006SJZZ	AF			Crystal,75 kHz
X701	RCRSPA007SJZZ	AE			Crystal,32.768 kHz
X702	RCRM-0008SJZZ	AG			Ceramic,8 MHz
X801	RCRSPA002SJZZ	AE			Crystal,16.9344 MHz
[8] CAPACITORS					
C101	VCKYCY1HB221K	AA			220 pF,50V
C102	VCKYCY1HB221K	AA			220 pF,50V
C103	VCKYCY1HB221K	AA			220 pF,50V
C104	RC-GZA105AF1H	AB			1 μ F,50V,Electrolytic
C105	RC-GZA105AF1H	AB			1 μ F,50V,Electrolytic
C106	RC-GZA105AF1H	AB			1 μ F,50V,Electrolytic
C107	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C108	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C109	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C117	RC-GZA476AF1H	AB			47 μ F,50V,Electrolytic
C119	VCKYPA1HF223Z	AB			0.022 μ F,50V
C120	VCKYPA1HF223Z	AB			0.022 μ F,50V
C121	VCKYPA1HF223Z	AB			0.022 μ F,50V
C122	VCKYPA1HF223Z	AB			0.022 μ F,50V
C123	VCKYPA1HF223Z	AB			0.022 μ F,50V
C124	VCKYPA1HF223Z	AB			0.022 μ F,50V
C125	VCFYFA1HA104J	AC			0.1 μ F,50V,Thin Film
C126	VCFYFA1HA104J	AC			0.1 μ F,50V,Thin Film
C127	VCFYFA1HA104J	AC			0.1 μ F,50V,Thin Film
C128	VCFYFA1HA104J	AC			0.1 μ F,50V,Thin Film

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] CAPACITORS					
C129	VCFYFA1HA104J	AC			0.1 μ F, 50V, Thin Film
C130	VCFYFA1HA104J	AC			0.1 μ F, 50V, Thin Film
C131	VCKYPA1HB472K	AB			0.0047 μ F, 50V
C132	VCKYPA1HB472K	AB			0.0047 μ F, 50V
C133	VCKYPA1HB472K	AB			0.0047 μ F, 50V
C134	RC-GZA106AF1C	AB			10 μ F, 16V, Electrolytic
C135	RC-EZ3001SJZZ	AB			100 μ F, 35V, Electrolytic
C136	RC-EZ3001SJZZ	AB			100 μ F, 35V, Electrolytic
C137	VCKYPA1HB104K	AC			0.1 μ F, 50V
C138	VCKYPA1HB104K	AC			0.1 μ F, 50V
C139	RC-GZA476AF1H	AB			47 μ F, 50V, Electrolytic
C140	VCKYCY1HB222K	AA			0.0022 μ F, 50V
C141	RC-GZA335AF1C	AB			3.3 μ F, 16V, Electrolytic
C142	RC-GZA476AF1H	AB			47 μ F, 50V, Electrolytic
C201	RC-GZA476AF1H	AB			47 μ F, 50V, Electrolytic
C203	VCFYFA1HA104J	AC			0.1 μ F, 50V, Thin Film
C204	VCFYFA1HA104J	AC			0.1 μ F, 50V, Thin Film
C205	VCFYFA1HA104J	AC			0.1 μ F, 50V, Thin Film
C206	VCFYFA1HA104J	AC			0.1 μ F, 50V, Thin Film
C207	RC-GZV227AF1H	AC			220 μ F, 50V, Electrolytic
C208	RC-GZA476AF1H	AB			47 μ F, 50V, Electrolytic
C209	RC-GZV337AF1V	AB			330 μ F, 35V, Electrolytic
C210	RC-GZA107AF1H	AC			100 μ F, 50V, Electrolytic
C211	RC-GZW478AF1V	AH			4700 μ F, 35V, Electrolytic
C212	RC-GZW478AF1V	AH			4700 μ F, 35V, Electrolytic
C213	VCKYPA1HF473Z	AB			0.047 μ F, 50V
C214	RC-GZW688AF1E	AH			6800 μ F, 25V, Electrolytic
C215	VCKYCY1HB473K	AB			0.047 μ F, 50V
C216	VCKYPA1HF223Z	AB			0.022 μ F, 50V
C217	RC-GZA477AF1C	AC			470 μ F, 16V, Electrolytic
C218	VCKYCY1HF223Z	AA			0.022 μ F, 50V
C219	VCKYPA1HF223Z	AB			0.022 μ F, 50V
C220	RC-GZA227AF1E	AB			220 μ F, 25V, Electrolytic
C221	VCFYFA1HA473J	AB			0.047 μ F, 50V, Thin Film
C222	RC-GZA476AF1H	AB			47 μ F, 50V, Electrolytic
C223	RC-GZA476AF1H	AB			47 μ F, 50V, Electrolytic
C224	RC-GZA106AF1H	AB			10 μ F, 50V, Electrolytic
C225	RC-GZA107AF1H	AC			100 μ F, 50V, Electrolytic
C226	RC-GZA107AF1H	AC			100 μ F, 50V, Electrolytic
C301	VCKYCY1HB102K	AA			0.001 μ F, 50V
C302	RC-GZA105AF1H	AB			1 μ F, 50V, Electrolytic
C303	VCKYCY1HF104Z	AB			0.1 μ F, 50V
C305	VCCCPA1HH120J	AA			12 pF (CH), 50V
C306	VCKYCY1EB103K	AA			0.01 μ F, 25V
C307	VCCUPA1HJ100D	AA			10 pF (UJ), 50V
C308	VCKYCY1EB183K	AB			0.018 μ F, 25V
C309	VCKYPA1HB102J	AA			0.001 μ F, 50V
C310	VCCUPA1HJ270J	AA			27 pF (UJ), 50V
C311	VCKYPA1HB561K	AA			560 pF, 50V
C312	VCKYCY1EB153K	AA			0.015 μ F, 25V
C313	VCKYCY1HF104Z	AB			0.1 μ F, 50V
C314	VCKYCY1EB103K	AA			0.01 μ F, 25V
C315	RC-GZA226AF1H	AB			22 μ F, 50V, Electrolytic
C316	VCCCPA1HH330J	AA			33 pF (CH), 50V
C317	VCKYPA1HB102J	AA			0.001 μ F, 50V
C318	VCKYCY1EB103K	AA			0.01 μ F, 25V
C319	RC-GZA105AF1H	AB			1 μ F, 50V, Electrolytic
C320	VCCCCY1HH101J	AA			100 pF (CH), 50V
C321	RC-GZA334AF1H	AA			0.33 μ F, 50V, Electrolytic
C322	RC-GZA105AF1H	AB			1 μ F, 50V, Electrolytic
C323	RC-GZA105AF1H	AB			1 μ F, 50V, Electrolytic
C324	RC-GZA105AF1H	AB			1 μ F, 50V, Electrolytic
C325	RC-GZA226AF1H	AB			22 μ F, 50V, Electrolytic
C326	VCKYCY1HF104Z	AB			0.1 μ F, 50V
C327	VCKYCY1EB103K	AA			0.01 μ F, 25V
C328	RC-GZA105AF1H	AB			1 μ F, 50V, Electrolytic
C329	VCKYCY1EB333K	AC			0.033 μ F, 25V
C330	RC-GZA226AF1H	AB			22 μ F, 50V, Electrolytic
C331	VCKYCY1EB103K	AA			0.01 μ F, 25V
C332	VCKYCY1HB102K	AA			0.001 μ F, 50V
C333	RC-GZA475AF1H	AB			4.7 μ F, 50V, Electrolytic
C334	VCCCCY1HH101J	AA			100 pF (CH), 50V
C335	RC-GZA226AF1H	AB			22 μ F, 50V, Electrolytic
C336	VCCCCY1HH101J	AA			100 pF (CH), 50V
C337	VCCCCY1HH101J	AA			100 pF (CH), 50V
C339	VCKYCY1HF103Z	AB			0.01 μ F, 50V
C340	VCKYCY1HF104Z	AB			0.1 μ F, 50V
C341	VCCCCY1HH100J	AA			10 pF (CH), 50V
C342	VCCCCY1HH100J	AA			10 pF (CH), 50V
C343	VCCSCY1HL5R0C	AD			5 pF, 50V
C344	VCCCPA1HH330J	AA			33 pF (CH), 50V
C345	VCCUPA1HJ5R0C	AA			5 pF (UJ), 50V
C346	RC-GZA476AF1H	AB			47 μ F, 50V, Electrolytic
C347	VCKYCY1HB473K	AB			0.047 μ F, 50V
C348	VCKYCY1HB223K	AA			0.022 μ F, 50V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] CAPACITORS					
C349	VCKYCY1HB472K	AA			0.0047 μ F,50V
C506	RC-EZD476AF1C	AC			47 μ F,16V,Electrolytic
C515	VCKYCY1EF223Z	AB			0.022 μ F,25V
C601	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C602	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C603	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C604	RC-GZA476AF1H	AB			47 μ F,50V,Electrolytic
C605	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C606	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C607	RC-GZA105AF1H	AB			1 μ F,50V,Electrolytic
C608	RC-GZA105AF1H	AB			1 μ F,50V,Electrolytic
C609	RC-GZA105AF1H	AB			1 μ F,50V,Electrolytic
C610	RC-GZA105AF1H	AB			1 μ F,50V,Electrolytic
C611	VCKYPA1HB272K	AA			0.0027 μ F,50V
C612	VCKYPA1HB272K	AA			0.0027 μ F,50V
C613	VCFYFA1HA104J	AC			0.1 μ F,50V,Thin Film
C614	VCFYFA1HA104J	AC			0.1 μ F,50V,Thin Film
C615	RC-GZA225AF1C	AC			2.2 μ F,16V,Electrolytic
C616	RC-GZA225AF1C	AC			2.2 μ F,16V,Electrolytic
C617	RC-GZA336AF1C	AB			33 μ F,16V,Electrolytic
C618	RC-GZA107AF1H	AC			100 μ F,50V,Electrolytic
C619	VCKYCY1HB221K	AA			220 pF,50V
C620	VCKYCY1HB221K	AA			220 pF,50V
C621	VCKYPA1HB221K	AA			220 pF,50V
C622	VCKYPA1HB104K	AC			0.1 μ F,50V
C623	VCKYPA1HB104K	AC			0.1 μ F,50V
C624	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C625	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C629	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C635	VCQYKA1JM224J	AC			0.22 μ F,63V,Mylar
C636	VCKYCY1HB332K	AA			0.0033 μ F,50V
C639	RC-GZA476AF1H	AB			47 μ F,50V,Electrolytic
C640	RC-GZA107AF1H	AC			100 μ F,50V,Electrolytic
C651	VCQYKA1JM274J	AC			0.27 μ F,63V,Mylar
C652	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C653	RC-GZA476AF1H	AB			47 μ F,50V,Electrolytic
C656	RC-GZA106AF1H	AB			10 μ F,50V,Electrolytic
C657	VCKYCY1EF473Z	AB			0.047 μ F,25V
C658	VCKYCY1HB221K	AA			220 pF,50V
C659	VCKYCY1HB104K	AD			0.1 μ F,50V
C701	VCKYCY1EB104K	AD			0.1 μ F,25V
C702	VCKYCY1EB104K	AD			0.1 μ F,25V
C703	VCCCCY1HH240J	AA			24 pF,50V
C704	VCCCCY1HH240J	AA			24 pF,50V
C705	VCKYCY1EB104K	AD			0.1 μ F,25V
C706	RC-EZD227AF1A	AC			220 μ F,10V,Electrolytic
C707	VCKYCY1EB104K	AD			0.1 μ F,25V
C708	VCCSCY1HL101J	AA			100 pF,50V
C709	RC-EZD107AF1C	AC			100 μ F,16V,Electrolytic
C710	VCKYCY1EF473Z	AB			0.047 μ F,25V
C711	VCKYCY1EB104K	AD			0.1 μ F,25V
C712	RC-EZD336AF1C	AB			33 μ F,16V,Electrolytic
C713	VCKYCY1EB103K	AA			0.01 μ F,25V
C714	VCKYCY1HB102K	AA			0.001 μ F,50V
C715	VCKYCY1HB102K	AA			0.001 μ F,50V
C716	RC-EZD476AF1C	AC			47 μ F,16V,Electrolytic
C720	VCKYPA1HB331K	AA			330 pF,50V
C721	VCKYCY1EF223Z	AB			0.022 μ F,25V
C722	VCKYCY1EF223Z	AB			0.022 μ F,25V
C801	VCKYCY1EF104Z	AA			0.1 μ F,25V
C802	RC-EZD336AF1C	AB			33 μ F,16V,Electrolytic
C803	VCKYCY1EF104Z	AA			0.1 μ F,25V
C804	VCKYCY1EF104Z	AA			0.1 μ F,25V
C805	RC-EZD477AF1A	AB			470 μ F,10V,Electrolytic
C806	VCKYCY1EF104Z	AA			0.1 μ F,25V
C807	RC-EZD107AF1C	AC			100 μ F,16V,Electrolytic
C808	VCKYCY1EF104Z	AA			0.1 μ F,25V
C809	VCKYCY1HB102K	AA			0.001 μ F,50V
C810	RC-EZD474AF1C	AA			0.47 μ F,16V,Electrolytic
C811	VCKYCY1EF104Z	AA			0.1 μ F,25V
C812	VCKYPA1HF473Z	AB			0.047 μ F,50V
C813	VCKYCY1EF103Z	AA			0.01 μ F,25V
C814	VCKYCY1EF473Z	AB			0.047 μ F,25V
C815	VCKYCY1EB563K	AD			0.056 μ F,25V
C816	RC-EZD107AF1C	AC			100 μ F,16V,Electrolytic
C817	VCKYPA1EF103Z	AA			0.01 μ F,25V
C818	VCKYPA1HB563K	AC			0.056 μ F,50V
C819	VCKYCY1EF104Z	AA			0.1 μ F,25V
C820	VCKYCY1EF103Z	AA			0.01 μ F,25V
C821	VCKYCY1HB472K	AA			0.0047 μ F,50V
C822	RC-EZD107AF1C	AC			100 μ F,16V,Electrolytic
C823	RC-EZD106AF1C	AB			10 μ F,16V,Electrolytic
C824	RC-EZD106AF1C	AB			10 μ F,16V,Electrolytic
C825	RC-EZD105AF1C	AB			1 μ F,16V,Electrolytic
C826	VCKYCY1EF473Z	AB			0.047 μ F,25V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] CAPACITORS					
C827	VCKYCY1EF104Z	AA			0.1 μ F,25V
C828	VCKYCY1EF104Z	AA			0.1 μ F,25V
C829	VCCCCY1HH100J	AA			10 pF (CH),50V
C830	VCKYCY1HB104K	AD			0.1 μ F,50V
C831	VCCCCY1HH100J	AA			10 pF (CH),50V
C832	VCKYCY1HB104K	AD			0.1 μ F,50V
C833	VCKYCY1HB104K	AD			0.1 μ F,50V
C834	RC-EZD105AF1C	AB			1 μ F,16V,Electrolytic
C835	VCKYCY1HB104K	AD			0.1 μ F,50V
C836	RC-EZD107AF1C	AC			100 μ F,16V,Electrolytic
C837	RC-EZD107AF1C	AC			100 μ F,16V,Electrolytic
C838	RC-EZD107AF1C	AC			100 μ F,16V,Electrolytic
C839	VCKYCY1HB104K	AD			0.1 μ F,50V
C840	VCKYCY1HB104K	AD			0.1 μ F,50V
C841	VCKYCY1HB104K	AD			0.1 μ F,50V
C842	VCKYCY1HB101K	AB			100 pF,50V
C843	VCKYPA1HB101K	AA			100 pF,50V
C845	VCKYPA1HB101K	AA			100 pF,50V
C846	VCCSCY1HL101J	AA			100 pF,50V
C847	VCKYPA1HB101K	AA			100 pF,50V
C848	RC-EZD477AF1A	AB			470 μ F,10V,Electrolytic
C849	VCKYCY1EF104Z	AA			0.1 μ F,25V
C850	RC-EZD477AF1A	AB			470 μ F,10V,Electrolytic
C851	VCKYCY1EF104Z	AA			0.1 μ F,25V
C852	VCKYPA1HB104K	AC			0.1 μ F,50V
C853	VCKYCY1HB562K	AA			0.0056 μ F,50V
C854	VCKYPA1HB104K	AC			0.1 μ F,50V
C855	VCKYCY1EF223Z	AB			0.022 μ F,25V
C856	VCKYPA1EF103Z	AA			0.01 μ F,25V
C857	VCKYPA1HF223Z	AB			0.022 μ F,50V
[9] RESISTORS					
JR303	VRS-CY1JB000J	AA			0 ohm,Jumper,0.8x1.55mm,Green
JR304	VRS-CY1JB000J	AA			0 ohm,Jumper,0.8x1.55mm,Green
R101	VRS-CY1JB102J	AA			1 kohm,1/16W
R102	VRS-CY1JB102J	AA			1 kohm,1/16W
R103	VRD-ST2CD102J	AA			1 kohm,1/6W
R104	VRS-CY1JB103J	AA			10 kohm,1/16W
R105	VRS-CY1JB103J	AA			10 kohm,1/16W
R106	VRS-CY1JB103J	AA			10 kohm,1/16W
R107	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R108	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R109	VRS-CY1JB102J	AA			1 kohm,1/16W
R110	VRS-CY1JB102J	AA			1 kohm,1/16W
R111	VRD-ST2CD102J	AA			1 kohm,1/6W
R112	VRS-CY1JB102J	AA			1 kohm,1/16W
R116	VRS-CY1JB393J	AA			39 kohms,1/16W
R117	VRS-CY1JB393J	AA			39 kohms,1/16W
R118	VRS-CY1JB393J	AA			39 kohms,1/16W
R119	VRD-ST2EE123J	AA			12 kohms,1/4W
R122	VRS-CY1JB223J	AA			22 kohms,1/16W
R123	VRD-ST2CD223J	AA			22 kohms,1/6W
R124	VRD-ST2CD223J	AA			22 kohms,1/6W
R134	VRD-ST2EE6R8J	AA			6.8 ohms,1/4W
R135	VRD-ST2EE6R8J	AA			6.8 ohms,1/4W
R136	VRD-ST2EE6R8J	AA			6.8 ohms,1/4W
R137	VRS-CY1JB563J	AA			56 kohms,1/16W
R138	VRS-CY1JB563J	AA			56 kohms,1/16W
R139	VRS-CY1JB563J	AA			56 kohms,1/16W
R140	VRD-ST2CD104J	AA			100 kohm,1/6W
R141	VRD-ST2CD104J	AA			100 kohm,1/6W
R142	VRD-ST2CD104J	AA			100 kohm,1/6W
R143	VRD-ST2EE4R7J	AA			4.7 ohms,1/4W
R144	VRD-ST2EE4R7J	AA			4.7 ohms,1/4W
R145	VRD-ST2EE4R7J	AA			4.7 ohms,1/4W
R146	VRD-ST2EE391J	AA			390 ohms,1/4W
R147	VRD-ST2EE391J	AA			390 ohms,1/4W
R149	VRD-ST2EE221J	AA			220 ohms,1/4W
R150	VRD-ST2EE221J	AA			220 ohms,1/4W
R151	VRS-CY1JB331J	AA			330 ohms,1/16W
R154	VRS-CY1JB682J	AA			6.8 kohms,1/16W
R155	VRD-ST2EE332J	AA			3.3 kohms,1/4W
R156	VRS-CY1JB562J	AA			5.6 kohms,1/16W
R157	VRS-CY1JB183J	AA			18 kohms,1/16W
R159	VRS-CY1JB473J	AA			47 kohms,1/16W
R160	VRD-ST2CD221J	AA			220 ohms,1/6W
R161	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R162	VRD-ST2EE472J	AA			4.7 kohms,1/4W
R163	VRD-ST2CD223J	AA			22 kohms,1/6W
R202	VRS-CY1JB223J	AA			22 kohms,1/16W
R203	VRD-ST2EE100J	AA			10 ohm,1/4W
R204	VRD-ST2CD473J	AA			47 kohms,1/6W
R205	VRD-ST2CD123J	AA			12 kohms,1/6W
R206	VRD-ST2CD331J	AA			330 ohms,1/6W
R207	VRD-ST2CD331J	AA			330 ohms,1/6W

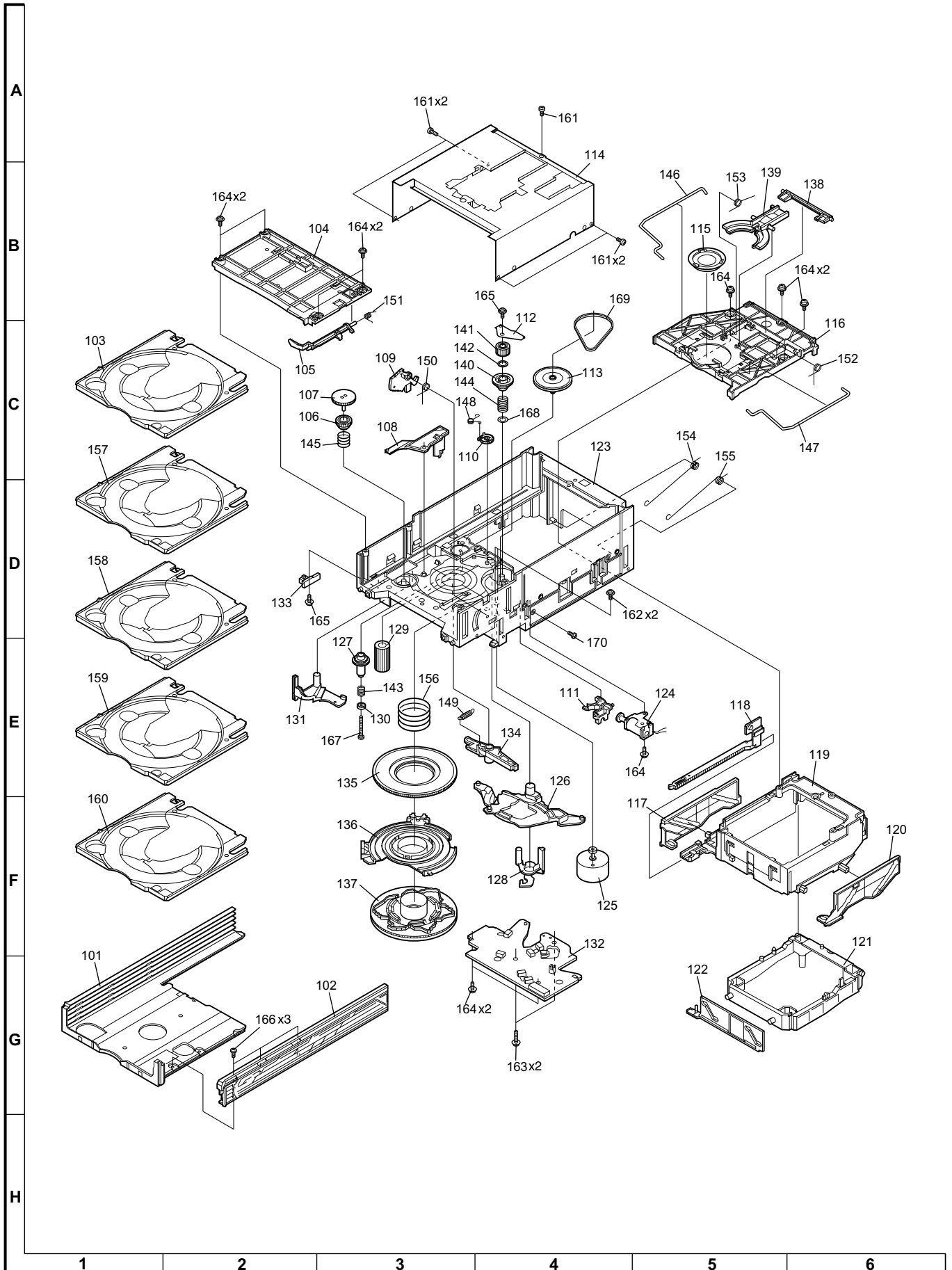
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] RESISTORS					
R208	VRD-ST2CD103J	AA			10 kohm,1/6W
R209	VRS-CY1JB223J	AA			22 kohms,1/16W
R210	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R211	VRS-CY1JB103J	AA			10 kohm,1/16W
R212	VRS-CY1JB223J	AA			22 kohms,1/16W
R213	VRS-CY1JB474J	AA			470 kohms,1/16W
R214	VRS-VV3AA560J	AB			56 ohms,1W
R215	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R216	VRS-CY1JB273J	AA			27 kohms,1/16W
R218	VRD-RT2HD620J	AA			62 ohms,1/2W
R219	VRD-RT2HD620J	AA			62 ohms,1/2W
R302	VRD-ST2CD100J	AA			10 ohm,1/6W
R303	VRD-ST2CD104J	AA			100 kohm,1/6W
R304	VRS-CY1JB104J	AA			100 kohm,1/16W
R305	VRS-CY1JB104J	AA			100 kohm,1/16W
R306	VRS-CY1JB100J	AA			10 ohm,1/16W
R307	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R308	VRS-CY1JB102J	AA			1 kohm,1/16W
R309	VRS-CY1JB000J	AA			0 ohm,Jumper,0.8x1.55mm,Green
R310	VRD-ST2CD104J	AA			100 kohm,1/6W
R311	VRD-ST2CD102J	AA			1 kohm,1/6W
R312	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R313	VRS-CY1JB103J	AA			10 kohm,1/16W
R314	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R315	VRS-CY1JB472J	AA			4.7 kohms,1/16W
R316	VRS-CY1JB103J	AA			10 kohm,1/16W
R317	VRS-CY1JB273J	AA			27 kohms,1/16W
R318	VRS-CY1JB273J	AA			27 kohms,1/16W
R319	VRS-CY1JB104J	AA			100 kohm,1/16W
R320	VRS-CY1JB473J	AA			47 kohms,1/16W
R321	VRS-CY1JB102J	AA			1 kohm,1/16W
R323	VRD-ST2CD391J	AA			390 ohms,1/6W
R325	VRD-ST2EE510J	AA			51 ohms,1/4W
R327	VRS-CY1JB221J	AA			220 ohms,1/16W
R328	VRS-CY1JB104J	AA			100 kohm,1/16W
R329	VRS-CY1JB331J	AA			330 ohms,1/16W
R331	VRS-CY1JB330J	AA			33 ohms,1/16W
R332	VRS-CY1JB222J	AA			2.2 kohms,1/16W
R333	VRS-CY1JB681J	AA			680 ohms,1/16W
R334	VRS-CY1JB331J	AA			330 ohms,1/16W
R335	VRD-ST2EE471J	AA			470 ohms,1/4W
R336	VRS-CY1JB101J	AA			100 ohm,1/16W
R337	VRS-CY1JB682J	AA			6.8 kohms,1/16W
R338	VRS-CY1JB682J	AA			6.8 kohms,1/16W
R339	VRS-CY1JB682J	AA			6.8 kohms,1/16W
R432	VRD-ST2EE561J	AA			560 ohms,1/4W
R433	VRD-ST2CD102J	AA			1 kohm,1/6W
R501A	VRS-CY1JB102J	AA			1 kohm,1/16W
R501B	VRS-CY1JB103J	AA			10 kohm,1/16W
R502A	VRS-CY1JB102J	AA			1 kohm,1/16W
R502B	VRS-CY1JB103J	AA			10 kohm,1/16W
R503A	VRS-CY1JB102J	AA			1 kohm,1/16W
R503B	VRS-CY1JB103J	AA			10 kohm,1/16W
R504A	VRS-CY1JB102J	AA			1 kohm,1/16W
R504B	VRS-CY1JB103J	AA			10 kohm,1/16W
R505A	VRS-CY1JB102J	AA			1 kohm,1/16W
R505B	VRS-CY1JB103J	AA			10 kohm,1/16W
R506A	VRS-CY1JB102J	AA			1 kohm,1/16W
R506B	VRS-CY1JB103J	AA			10 kohm,1/16W
R507A	VRS-CY1JB102J	AA			1 kohm,1/16W
R507B	VRS-CY1JB103J	AA			10 kohm,1/16W
R508A	VRS-CY1JB102J	AA			1 kohm,1/16W
R508B	VRS-CY1JB103J	AA			10 kohm,1/16W
R509	VRD-ST2CD391J	AA			390 ohms,1/6W
R510	VRS-CY1JB471J	AA			470 ohms,1/16W
R511	VRD-ST2CD223J	AA			22 kohms,1/6W
R512	VRS-CY1JB223J	AA			22 kohms,1/16W
R513	VRS-CY1JB471J	AA			470 ohms,1/16W
R514	VRD-ST2CD391J	AA			390 ohms,1/6W
R516	VRD-ST2EE101J	AA			100 ohm,1/4W
R517	VRD-ST2CD223J	AA			22 kohms,1/6W
R518	VRS-CY1JB221J	AA			220 ohms,1/16W
R521	VRS-CY1JB391J	AA			390 ohms,1/16W
R525	VRS-VV3AA271J	AB			270 ohms,1W
R526	VRS-CY1JB563J	AA			56 kohms,1/16W
R601	VRD-ST2CD102J	AA			1 kohm,1/6W
R602	VRD-ST2CD102J	AA			1 kohm,1/6W
R603	VRS-CY1JB102J	AA			1 kohm,1/16W
R604	VRS-CY1JB102J	AA			1 kohm,1/16W
R605	VRS-CY1JB102J	AA			1 kohm,1/16W
R606	VRS-CY1JB102J	AA			1 kohm,1/16W
R607	VRS-CY1JB102J	AA			1 kohm,1/16W
R612	VRD-ST2CD392J	AA			3.9 kohms,1/6W
R613	VRD-ST2CD392J	AA			3.9 kohms,1/6W
R618	VRS-CY1JB472J	AA			4.7 kohms,1/16W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] RESISTORS					
R619	VRD-ST2CD472J	AA			4.7 kohms,1/6W
R620	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R621	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R622	VRD-ST2CD104J	AA			100 kohm,1/6W
R623	VRD-ST2CD104J	AA			100 kohm,1/6W
R624	VRD-ST2CD123J	AA			12 kohms,1/6W
R625	VRD-ST2CD123J	AA			12 kohms,1/6W
R628	VRS-CY1JB102J	AA			1 kohm,1/16W
R629	VRS-CY1JB102J	AA			1 kohm,1/16W
R630	VRD-ST2EE221J	AA			220 ohms,1/4W
R641	VRD-ST2CD223J	AA			22 kohms,1/6W
R643	VRD-ST2CD102J	AA			1 kohm,1/6W
R644	VRS-CY1JB102J	AA			1 kohm,1/16W
R647	VRD-ST2CD104J	AA			100 kohm,1/6W
R648	VRD-ST2CD104J	AA			100 kohm,1/6W
R649	VRS-CY1JB822J	AA			8.2 kohms,1/16W
R651	VRS-CY1JB104J	AA			100 kohm,1/16W
R655	VRS-CY1JB103J	AA			10 kohm,1/16W
R656	VRS-CY1JB473J	AA			47 kohms,1/16W
R659	VRS-CY1JB822J	AA			8.2 kohms,1/16W
R660	VRS-CY1JB223J	AA			22 kohms,1/16W
R661	VRD-ST2EE100J	AA			10 ohm,1/4W
R662	VRS-CY1JB223J	AA			22 kohms,1/16W
R663	VRS-CY1JB223J	AA			22 kohms,1/16W
R664	VRS-CY1JB271J	AA			270 ohms,1/16W
R665	VRD-ST2CD223J	AA			22 kohms,1/6W
R666	VRS-CY1JB223J	AA			22 kohms,1/16W
R667	VRS-CY1JB223J	AA			22 kohms,1/16W
R668	VRD-ST2CD102J	AA			1 kohm,1/6W
R669	VRD-ST2CD102J	AA			1 kohm,1/6W
R687	VRS-CY1JB223J	AA			22 kohms,1/16W
R689	VRD-ST2CD562J	AA			5.6 kohms,1/6W
R690	VRS-CY1JB103J	AA			10 kohm,1/16W
R691	VRS-CY1JB103J	AA			10 kohm,1/16W
R701	VRD-ST2CD102J	AA			1 kohm,1/6W
R702	VRS-CY1JB102J	AA			1 kohm,1/16W
R703	VRD-ST2CD102J	AA			1 kohm,1/6W
R704	VRD-ST2CD103J	AA			10 kohm,1/6W
R705	VRD-ST2CD102J	AA			1 kohm,1/6W
R706	VRD-ST2CD102J	AA			1 kohm,1/6W
R708	VRD-ST2CD102J	AA			1 kohm,1/6W
R709	VRD-ST2CD102J	AA			1 kohm,1/6W
R710	VRD-ST2CD102J	AA			1 kohm,1/6W
R712	VRS-CY1JB221J	AA			220 ohms,1/16W
R713	VRS-CY1JB102J	AA			1 kohm,1/16W
R714	VRD-ST2CD102J	AA			1 kohm,1/6W
R715	VRD-ST2CD102J	AA			1 kohm,1/6W
R716	VRD-ST2CD103J	AA			10 kohm,1/6W
R718	VRS-CY1JB102J	AA			1 kohm,1/16W
R719	VRS-CY1JB102J	AA			1 kohm,1/16W
R720	VRS-CY1JB102J	AA			1 kohm,1/16W
R721	VRS-CY1JB102J	AA			1 kohm,1/16W
R724	VRS-CY1JB221J	AA			220 ohms,1/16W
R725	VRS-CY1JB221J	AA			220 ohms,1/16W
R727	VRD-ST2CD103J	AA			10 kohm,1/6W
R728	VRD-ST2CD102J	AA			1 kohm,1/6W
R729	VRD-ST2CD102J	AA			1 kohm,1/6W
R730	VRD-ST2CD102J	AA			1 kohm,1/6W
R733	VRD-ST2CD272J	AA			2.7 kohms,1/6W
R737	VRS-CY1JB103J	AA			10 kohm,1/16W
R738	VRD-ST2CD103J	AA			10 kohm,1/6W
R739	VRS-CY1JB103J	AA			10 kohm,1/16W
R740	VRS-CY1JB102J	AA			1 kohm,1/16W
R741	VRS-CY1JB106J	AA			10 Mohm,1/16W
R742	VRD-ST2CD103J	AA			10 kohm,1/6W
R743	VRD-ST2CD103J	AA			10 kohm,1/6W
R744	VRD-ST2CD103J	AA			10 kohm,1/6W
R745B	VRS-CY1JB000J	AA			0 ohm,Jumper,0.8x1.55mm,Green
R746	VRD-ST2CD102J	AA			1 kohm,1/6W
R747	VRD-ST2CD102J	AA			1 kohm,1/6W
R748	VRD-ST2CD102J	AA			1 kohm,1/6W
R749	VRD-ST2CD102J	AA			1 kohm,1/6W
R750	VRD-ST2CD102J	AA			1 kohm,1/6W
R751	VRS-CY1JB102J	AA			1 kohm,1/16W
R755	VRD-ST2CD102J	AA			1 kohm,1/6W
R756	VRS-CY1JB103J	AA			10 kohm,1/16W
R758	VRS-CY1JB102J	AA			1 kohm,1/16W
R760	VRD-ST2EE470J	AA			47 ohms,1/4W
R761	VRS-CY1JB102J	AA			1 kohm,1/16W
R762	VRS-CY1JB102J	AA			1 kohm,1/16W
R763	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R764	VRS-CY1JB104J	AA			100 kohm,1/16W
R765	VRD-ST2CD122J	AA			1.2 kohms,1/6W
R766	VRD-ST2CD122J	AA			1.2 kohms,1/6W
R767	VRD-ST2CD152J	AA			1.5 kohms,1/6W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] RESISTORS					
R768	VRD-ST2CD202J	AA			2 kohms,1/6W
R769	VRS-CY1JB272J	AA			2.7 kohms,1/16W
R770	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R772	VRS-CY1JB562J	AA			5.6 kohms,1/16W
R773	VRS-CY1JB271J	AA			270 ohms,1/16W
R775	VRS-CY1JB820J	AA			82 ohms,1/16W
R776	VRS-CY1JB102J	AA			1 kohm,1/16W
R777	VRS-CY1JB103J	AA			10 kohm,1/16W
R778	VRS-CY1JB103J	AA			10 kohm,1/16W
R779	VRS-CY1JB121J	AA			120 ohms,1/16W
R780	VRD-ST2CD122J	AA			1.2 kohms,1/6W
R781	VRD-ST2CD122J	AA			1.2 kohms,1/6W
R782	VRD-ST2CD152J	AA			1.5 kohms,1/6W
R783	VRD-ST2CD202J	AA			2 kohms,1/6W
R784	VRS-CY1JB272J	AA			2.7 kohms,1/16W
R785	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R786	VRD-ST2CD562J	AA			5.6 kohms,1/6W
R787	VRS-CY1JB103J	AA			10 kohm,1/16W
R788	VRS-CY1JB103J	AA			10 kohm,1/16W
R789	VRS-CY1JB103J	AA			10 kohm,1/16W
R791	VRS-CY1JB000J	AA			0 ohm,Jumper,0.8x1.55mm,Green
R797	VRD-ST2CD103J	AA			10 kohm,1/6W
R799	VRD-ST2CD102J	AA			1 kohm,1/6W
R801	VRS-CY1JB000J	AA			0 ohm,Jumper,0.8x1.55mm,Green
R802	VRD-ST2CD822J	AA			8.2 kohms,1/6W
R803	VRD-ST2CD822J	AA			8.2 kohms,1/6W
R804	VRS-CY1JB331J	AA			330 ohms,1/16W
R805	VRS-CY1JB3R3J	AA			3.3 ohms,1/16W
R806	VRD-ST2CD471J	AA			470 ohms,1/6W
R807	VRS-CY1JB101J	AA			100 ohm,1/16W
R810	VRS-CY1JB104J	AA			100 kohm,1/16W
R811	VRS-CY1JB104J	AA			100 kohm,1/16W
R812	VRD-ST2CD912J	AA			9.1 kohms,1/6W
R813	VRS-CY1JB103J	AA			10 kohm,1/16W
R814	VRD-ST2CD561J	AA			560 ohms,1/6W
R815	VRD-ST2CD123J	AA			12 kohms,1/6W
R816	VRD-ST2CD103J	AA			10 kohm,1/6W
R819	VRS-CY1JB331J	AA			330 ohms,1/16W
R820	VRS-CY1JB1R0J	AA			1 ohm,1/16W
R822	VRS-CY1JB225J	AA			2.2 Mohms,1/16W
R823	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R824	VRS-CY1JB392J	AA			3.9 kohms,1/16W
R825	VRS-CY1JB681J	AA			680 ohms,1/16W
R826	VRS-CY1JB681J	AA			680 ohms,1/16W
R827	VRS-CY1JB683J	AA			68 kohms,1/16W
R828	VRD-ST2CD153J	AA			15 kohms,1/6W
R829	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R830	VRS-CY1JB820J	AA			82 ohms,1/16W
R831	VRD-ST2CD104J	AA			100 kohm,1/6W
R832	VRS-CY1JB820J	AA			82 ohms,1/16W
R833	VRS-CY1JB1R0J	AA			1 ohm,1/16W
R834	VRS-CY1JB203J	AA			20 kohms,1/16W
R835	VRS-CY1JB151J	AA			150 ohms,1/16W
R837	VRS-CY1JB332J	AA			3.3 kohms,1/16W
R840	VRS-CY1JB820J	AA			82 ohms,1/16W
R841	VRS-CY1JB682J	AA			6.8 kohms,1/16W
R842	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R844	VRD-ST2CD682J	AA			6.8 kohms,1/6W
R845	VRS-CY1JB682J	AA			6.8 kohms,1/16W
R848	VRS-CY1JB152J	AA			1.5 kohms,1/16W
R849	VRS-CY1JB152J	AA			1.5 kohms,1/16W
R850	VRS-CY1JB152J	AA			1.5 kohms,1/16W
R851	VRS-CY1JB152J	AA			1.5 kohms,1/16W
R852	VRS-CY1JB152J	AA			1.5 kohms,1/16W
R853	VRS-CY1JB103J	AA			10 kohm,1/16W
R854	VRD-ST2EE471J	AA			470 ohms,1/4W
R855	VRD-ST2CD682J	AA			6.8 kohms,1/6W
[10] OTHER CIRCUITRY PARTS					
CFW101	QCWNNA341SJZZ				Lead Wire,A-B
CFW301	QCWNNA374SJZZ				Lead Wire,A-B
CFW701	QCWNNA373SJZZ				Lead Wire Ass'y
CFW702	QCWNNA377SJZZ				Flat Wire,A-B
CNP101	QCNCM059GSJZZ	AB			Plug,7Pin
CNP102	QCNCMA015SJ07	AB			Plug,7Pin
CNP103A	QCNCMA014SJ07	AB			Plug,7Pin
CNP103B	QCNCMA014SJ07	AB			Plug,7Pin
△ CNP201	QCNCM017BSJZZ	AD			Plug,3Pin
CNP202	QCNCM018CSJZZ	AC			Plug,3Pin
CNP203	QCNCM999CAFZZ	AG			Plug,3Pin
CNP204	QCNCM998DAFZZ	AB			Plug,4Pin
CNP205	QCNCM999PAFZZ	AC			Plug,14Pin
CNP206	QCNCM999NAFZZ	AC			Plug,13Pin
CNP301	QCNCM052CSJZZ	AB			Plug,3Pin
CNP302	QCNCM999FAFZZ	AE			Plug,6Pin

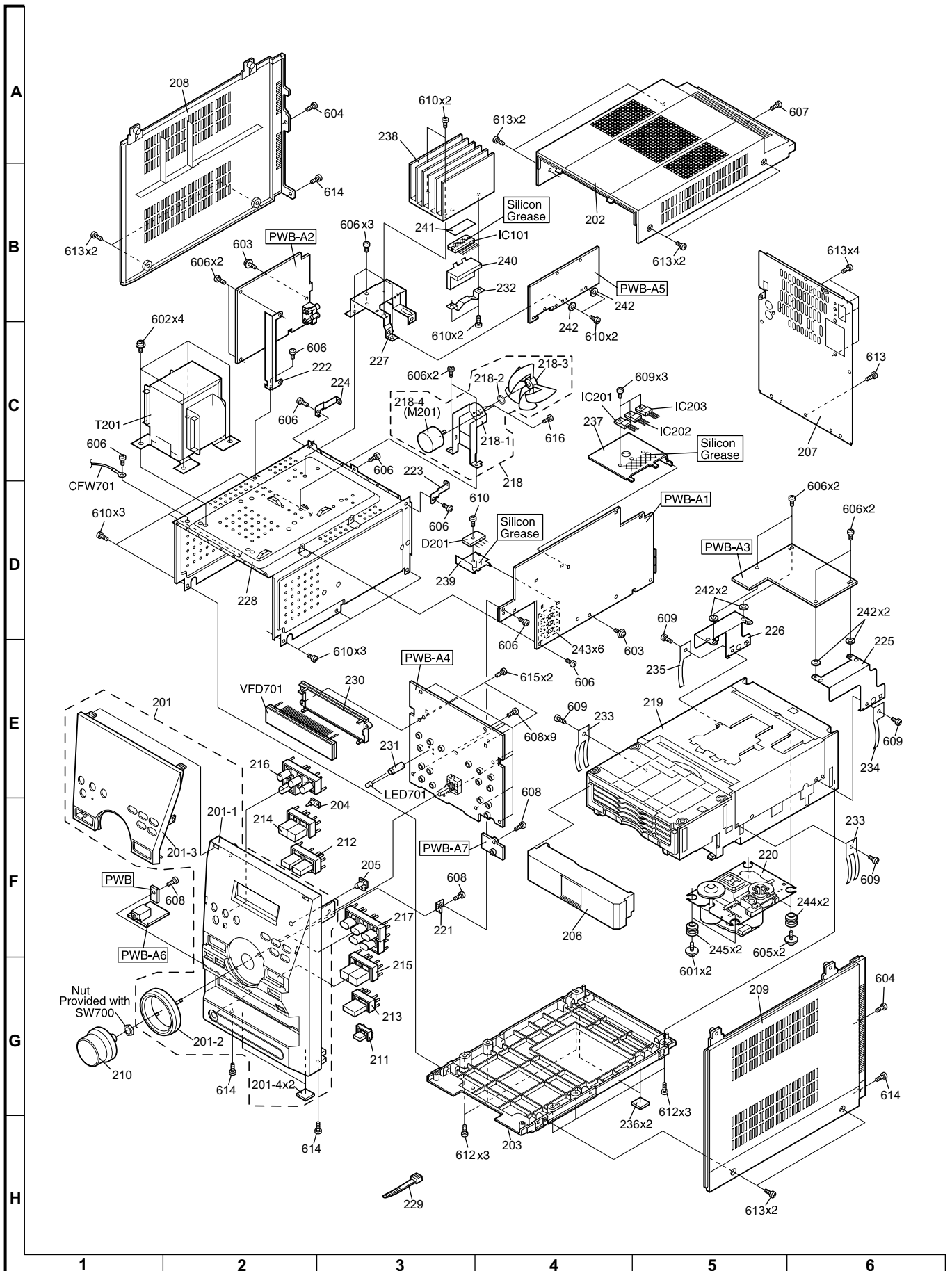
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[10] OTHER CIRCUITRY PARTS					
	CNP402	QCNCMA018SJ06	AB		Plug,6Pin
	CNP405A	QCNCMA013SJ07	AC		Plug,7Pin
	CNP405B	QCNCMA013SJ07	AC		Plug,7Pin
	CNP406	QCNCM073CSJZZ	AB		Plug,3Pin
	CNP407	QCNCM999EAFZZ	AG		Plug,5Pin
	CNP501	QCNCW015QSJZZ	AE		Socket,15Pin
	CNP602	QCNCM999HAFZZ	AD		Plug,8Pin
	CNP801	QCNCW014RSJZZ	AD		Socket,16Pin
	CNW101	QCNWNA368SJZZ			Connector Ass'y,8/7Pin with CNS101
	CNW102	QCNWNA369SJZZ			Connector Ass'y,8/7Pin with CNS102
	CNW103	QCNWNA340SJZZ			Connector Ass'y,7/7Pin
	CNW203	QCNWNA314SJZZ			Connector Ass'y,3Pin
	CNW205	QCNWNA376SJZZ			Connector Ass'y,15/14Pin with CNS205
	CNW206	QCNWNA375SJZZ			Connector Ass'y,14/13Pin with CNS206
	CNW302	QCNWNA371SJZZ			Connector Ass'y,7/6Pin with CNS302
	CNW402	QCNWNA372SJZZ			Connector Ass'y,6/6Pin
	CNW405	QCNWNA370SJZZ			Connector Ass'y,7/7Pin
	CNW406	QCNWNA296SJZZ	AB		Connector Ass'y,4/3Pin with CNS406
	CNW407	QCNWNA313SJZZ	AE		Connector Ass'y,6/5Pin with CNS407
	CNW602	QCNWNA367SJZZ			Connector Ass'y,9/8Pin with CNS602
	CNW702	QCNWNA295SJZZ	AB		Flat Wire,A-B
△	F201	QFS-D632BSJNi	AC		Fuse,6.3A/125V
△	F202	QFS-D632BSJNi	AC		Fuse,6.3A/125V
△	F203	QFS-D162BSJNi	AE		Fuse,1.6A/125V
	FC401	QCNWNA287SJZZ	AD		Flat Cable,16Pin
	FC501	QCNWNA286SJZZ			Flat Cable,15Pin
	JK101	QJAKMA001SJZZ	AG		Jack,Headphones
	M201	RMOTV0409AFZZ	AL		Motor,Air Cooling Fan (218-4)
	RLY101	RRLYD0014AWZZ	AK		Relay
	RLY102	RRLYDA001SJZZ	AH		Relay
	RX701	VHLP1UD261-1	AK		Remote Sensor,GP1UD261
	SO101	QTANAA001SJZZ	AF		Terminal,Speaker
△	SO202	QS0CA0214AWZZ	AD		Socket AC Input
	SO601	QSOCJ0003SJZZ	AG		Socket,Video/AUX Input
	SW700	QSW-Z0003SJZZ	AG		Jog [VOLUME]
	SW701	QSW-K0002SJZZ	AC		Switch,Key Type [EQUALISER]
	SW702	QSW-K0002SJZZ	AC		Switch,Key Type [TUNING DOWN/STOP]
	SW703	QSW-K0002SJZZ	AC		Switch,Key Type [TUNING UP/PLAY]
	SW704	QSW-K0002SJZZ	AC		Switch,Key Type [PRESET UP]
	SW705	QSW-K0002SJZZ	AC		Switch,Key Type [PRESET DOWN]
	SW706	QSW-K0002SJZZ	AC		Switch,Key Type [DISC 1]
	SW707	QSW-K0002SJZZ	AC		Switch,Key Type [DISC 2]
	SW708	QSW-K0002SJZZ	AC		Switch,Key Type [MEMORY/SET]
	SW709	QSW-K0002SJZZ	AC		Switch,Key Type [POWER ON/STAND-BY]
	SW710	QSW-K0002SJZZ	AC		Switch,Key Type [X-BASS/DEMO]
	SW711	QSW-K0002SJZZ	AC		Switch,Key Type [CD]
	SW712	QSW-K0002SJZZ	AC		Switch,Key Type [TUNER (BAND)]
	SW713	QSW-K0002SJZZ	AC		Switch,Key Type [VIDEO/AUX]
	SW714	QSW-K0002SJZZ	AC		Switch,Key Type [DISC 3]
	SW715	QSW-K0002SJZZ	AC		Switch,Key Type [DISC 4]
	SW716	QSW-K0002SJZZ	AC		Switch,Key Type [DISC 5]
	SW717	QSW-K0002SJZZ	AC		Switch,Key Type [OPEN/CLOSE]
	VFD701	VVK251116// -1	AV		FL Display

[11] CHANGER MECHANISM PARTS



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[11] CHANGER MECHANISM PARTS					
101	9GD662641004	AU			Drawer L
102	9GD662641033	AP			Drawer R
103	9GD660934115H	AT			Disc 1 Carriage Ass'y
104	9GD662192019	AP			Frame
105	9GD662393025	AE			Arm Switch C
106	9GD662224013	AD			Gear D1
107	9GD662224014	AD			Gear D2
108	9GD662393018	AG			Arm Switch D
109	9GD662393024	AF			Arm Switch B
110	9GD662393020	AE			Arm Lock
111	9GD582593021	AE			Lever GC
112	9GD581194039	AE			S Bracket
113	9GD662224010	AG			Gear Pulley
114	9GD661192094	AU			Cover
115	9GD660934103H	AP			Clamper SA-S Ass'y
116	9GD662392085	AP			Arm Clamper
117	9GD662393007	AK			Lift Slider L
118	9GD662393005	AK			PP Slider
119	9GD662112002	AR			FL Base
120	9GD662393008	AK			Lift Slider R
121	9GD662113026	AN			Up/Down Base
122	9GD662393006	AK			Up/Down Slider
123	9GD662101001	AZ			Main Chassis
124	9GD660934077H	AM			Solenoid Ass'y
125	9GD660934073H	AN			Motor Ass'y
126	9GD662392022	AL			Arm Lift
127	9GD662224015	AD			Gear E
128	9GD662393039	AF			Arm CC Switch
129	9GD662224016	AD			Gear F
130	9GD663634068	AG			Gear E Collar
131	9GD662393017	AF			Arm P Switch
132	9GD660934076H	BA			CD Changer PWB Ass'y
133	9GD660934072H	AK			Switch PWB Ass'y
134	9GD662393023	AF			Arm Switch A
135	9GD662233009	AL			Gear B
136	9GD662192003	AL			Plate Cam
137	9GD662213021	AM			Gear Cam
138	9GD662593086	AG			Lever CL 1
139	9GD662593090	AL			Lever CL 2
140	9GD662224088	AH			Gear 1
141	9GD662224089	AH			Gear 2
142	9GD660004091	AD			Felt
143	9GD010814711	AC			Gear E Spring
144	9GD010814710	AC			Gear 1 Spring
145	9GD010814712	AC			Gear D Spring
146	9GD660824059	AD			Stop Spring L
147	9GD660824060	AD			Stop Spring R
148	9GD010824696	AD			Spring
149	9GD010804727	AC			Spring A
150	9GD010824717	AG			Spring B
151	9GD010824718	AD			Spring C
152	9GD010824735	AC			Spring 1
153	9GD010824736	AD			Spring 2
154	9GD010824737	AD			Spring SL
155	9GD010824738	AD			Spring SR
156	9GD010814739	AH			Spring Gear B
157	9GD660934117H	AT			Disc 2 Carriage Ass'y
158	9GD660934118H	AT			Disc 3 Carriage Ass'y
159	9GD660934119H	AT			Disc 4 Carriage Ass'y
160	9GD660934120H	AT			Disc 5 Carriage Ass'y
161	9GDGSL20A2606	AB			Screw,M2.5x6mm
162	9GDGSP14A2504	AC			Screw,M2.5x4mm
163	9GDGSL15A2616	AC			Screw,M2.5x16mm
164	9GDGSL15A2608	AC			L Screw,M2.5x8mm
165	9GD033004585	AB			Screw,M2x6mm
166	9GD033004581	AB			Screw,M2x3mm
167	9GD033004577	AC			Screw,M2x16mm
168	GEP65X110030	AD			Washer
169	9GD020834262	AG			Belt
170	9GD033004584	AB			Screw,M2.5x5mm

[12] CABINET PARTS

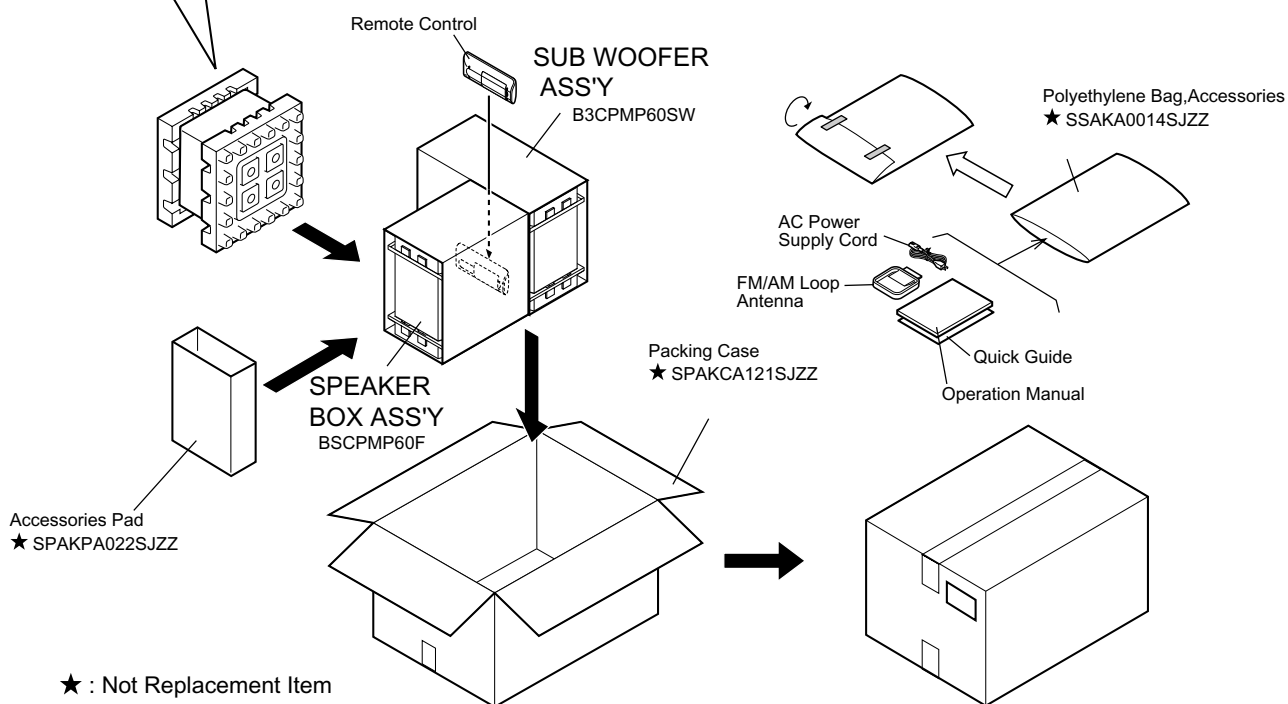
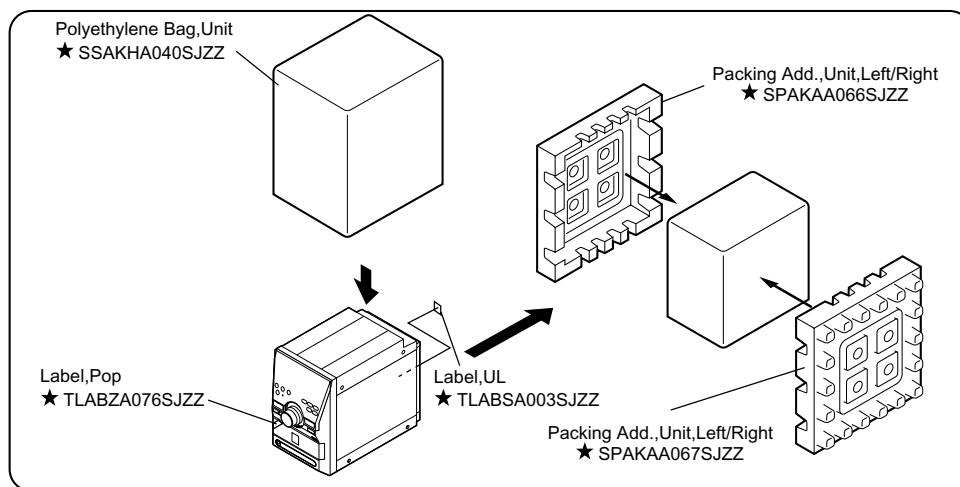


NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[12] CABINET PARTS					
201	CPNLCA009SJ01	AR			Front Panel Ass'y
201-1	-----	-			Front Panel
201-2	HDECQA093SJSA	AF			Decoration Panel,Center
201-3	HDECQA092SJSA	AE			Window
201-4	PCUSG0017SJSA	AB			Cushion,Leg
202	GCABCA004SJSC	AK			Top Cabinet
203	GCABDA005SJSC	AK			Chassis,Main
204	GCOVAA036SJSA	AB			Indicator
205	GCOVAA035SJSA	AB			Cover,Sensor
206	GCOVAA039SJSA	AF			Changer Cover
207	GiTARA044SJSA	AG			Rear Panel [For U.S.A.]
207	GiTARA045SJSA	AG			Rear Panel [Except for U.S.A.]
208	GiTASA003SJSC	AK			Side Panel,Left
209	GiTASA004SJSC	AK			Side Panel,Right
210	JKNBKA010SJSA	AF			Knob,Jog
211	JKNBZA053SJSA	AD			Button,OPEN/CLOSE
212	JKNBZA054SJSA	AE			Button,X-BASS
213	JKNBZA055SJSA	AE			Button,MEMORY
214	JKNBZA056SJSA	AC			Button,PLAY
215	JKNBZA057SJSA	AC			Button,PRESET
216	JKNBZA058SJSA	AC			Button,POWER
217	JKNBZA059SJSA	AD			Button,5CD Select
218	CFANPA002SJ01	AM			Fan Motor Ass'y
218-1	LANGKA067SJFW	AE			Bracket,Fan Motor
218-2	MSPRKA005SJFJ	AB			Spring,Fan Stoper
218-3	NFANPA002SJSA	AD			Fan
218-4	RMOTV0409AFZZ	AL			Motor,Air Cooling Fan (M201)
219	KMECZA001SJZZ	BM			CD Changer Unit Ass'y
△ 220	KRPLE0025JMJ2	BB			CD Mechanism Unit Ass'y
221	LANGKA076SJFW	AB			Bracket,Main PWB
222	LANGKA086SJFW	AC			Bracket,Tuner PWB
223	LANGKA087SJFW	AC			Bracket,Back Support,Right
224	LANGKA088SJFW	AC			Bracket,Back Support,Left
225	LANGKA089SJFW	AD			Bracket,MP3/CD PWB,Right
226	LANGKA090SJFW	AD			Bracket,MP3/CD PWB,Left
227	LANGKA091SJFW	AE			Bracket,Heat Sink,Main
228	LCHSSA004SJFW	AM			Chassis,Sub
229	LHLDW1001SJZZ	AD			Nylon Band
230	LHLDZA011SJSA	AC			Holder,FL Display
231	LHLDZA072SJSA	AB			Holder,LED
232	MSPRKA001SJFW	AC			Plate Spring
233	MSPRKA002SJFW	AB			Plate Spring,A
234	MSPRKA003SJFW	AB			Plate Spring,B
235	MSPRKA004SJFW	AB			Plate Spring,C
236	PCUSG0017SJSA	AB			Cushion,Leg
237	PRDARA004SJFW	AE			Heat Sink (IC)
238	PRDARA031SJFW	AN			Heat Sink,Main
239	PRDARA033SJFW	AC			Heat Sink (Diode)
240	PRDARA037SJFW	AB			Heat Sink,Sub
241	PSHEZA001SJZZ	AC			Silicon Sheet
242	PSPA iA002SJZZ	AB			Spacer,PWB
△ 243	QFSDH1013CEZZ	AB			Holder,Fuse
244	9GD450633201	AE			Insulator (Purple)
245	9GD450633202	AE			Insulator (Gray)
601	LX-JZA001SJFN	AB			Screw,M2.5x8mm
602	LX-JZA009SJFN	AB			Screw,M4x10mm
603	LX-JZA011SJFN	AB			Screw,M3x12mm
604	LX-JZA014SJF9	AB			Screw,M3x10mm
605	LX-JZA015SJFN	AB			Screw,M2.5x8mm
606	XHBSN30P06000	AA			Screw,M3x6mm
607	XHBY930P08000	AA			Screw,M3x8mm
608	XJBSN25P08000	AA			Screw,M2.5x8mm
609	XJBSN30P06000	AA			Screw,M3x6mm
610	XJBSN30P08000	AA			Screw,M3x8mm
612	XJBY930P08000				Screw,M3x8mm
613	XJBY930P10000	AA			Screw,M3x10mm
614	XJBY930P12000	AA			Screw,M3x12mm
615	XJPY930P06000	AA			Screw,M3x6mm
616	XHBSN20P03000	AA			Screw,M2x3mm
[13] SPEAKER BOX PARTS					
	B3CPMP60F	BD			Speaker Box Ass'y,L-CH/R-CH
	B3CPMP60SW	AZ			Sub Woofer Box Ass'y

[14] PACKING PARTS

PACKING METHOD (FOR U.S.A. ONLY)

Setting position of switches and knobs	
CD Lid	CLOSE



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[14] PACKING PARTS					
	SPAKAA066SJZZ	AG			Packing Add.,Unit,Left
	SPAKAA067SJZZ	AG			Packing Add.,Unit,Right
	SPAKCA122SJZZ	AU			Packing Case
	SPAKPA022SJZZ	AE			Pad,Accessories
	SSAKA0014SJZZ	AB			Polyethylene Bag,Accessories
	SSAKHA040SJZZ	AD			Polyethylene Bag,Unit
	TLABS0046SJZZ	AB			Label,CUL
	TLABZA063SJZZ				Label,VJ

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[15] ACCESSORIES					
△	QACCU0003SJ00	AH			AC Power Supply Cord
	QANTL0009SJZZ	AG			FM/AM Loop Antenna
	T iNSEA043SJZZ	AE			Operation Manual [For U.S.A.]
	T iNSEA044SJZZ	AD			Quick Guide [For U.S.A. Only]
	T iNSKA006SJZZ	AE			Operation Manual [Except for U.S.A.]
	3 RRMCGA029SJSA	AP			Remote Control
	3-1 GCOVAA026SJSA	AC			Battery Lid,Remote Control
[16] P.W.B. ASSEMBLY (Not Replacement Item)					
△	PWB-A DCEKKV517SJ03	-			Main/Tuner/etc.(A1)-(A7)
[17] OTHER SERVICE PARTS					
	UDSKA0004AFZZ	AZ			CD Optical Pickup Lens Cleaner Disc

INDEX

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[B]				
B3CPMP60F	13-	BD		
B3CPMP60SW	13-	AZ		
[C]				
CFANPA002SJ01	12-218	AM		
CPNLCA009SJ01	12-201	AR		
[D]				
DCEKKV517SJ03	16-PWB-A	-		
[G]				
GCABCA004SJSC	12-202	AK		
GCABDA005SJSC	12-203	AK		
GCOVAA026SJSA	15-3-1	AC		
GCOVAA035SJSA	12-205	AB		
GCOVAA036SJSA	12-204	AB		
GCOVAA039SJSA	12-206	AF		
GEP65X110030	11-168	AD		
GiTARA044SJSA	12-207	AG		
GiTARA045SJSA	12-207	AG		
GiTASA003SJSC	12-208	AK		
GiTASA004SJSC	12-209	AK		
[H]				
HDECA092SJSA	12-201-3	AE		
HDECA093SJSA	12-201-2	AF		
[J]				
JKNBKA010SJSA	12-210	AF		
JKNBZA053SJSA	12-211	AD		
JKNBZA054SJSA	12-212	AE		
JKNBZA055SJSA	12-213	AE		
JKNBZA056SJSA	12-214	AC		
JKNBZA057SJSA	12-215	AC		
JKNBZA058SJSA	12-216	AC		
JKNBZA059SJSA	12-217	AD		
[K]				
KMECZA001SJZZ	12-219	BM		
KRPLE00255JM2	12-220	BB		
[L]				
LANGKA067SJFW	12-218-1	AE		
LANGKA076SJFW	12-221	AB		
LANGKA086SJFW	12-222	AC		
LANGKA087SJFW	12-223	AC		
LANGKA088SJFW	12-224	AC		
LANGKA089SJFW	12-225	AD		
LANGKA090SJFW	12-226	AD		
LANGKA091SJFW	12-227	AE		
LCHSSA004SJFW	12-228	AM		
LHLDW1001SJZZ	12-229	AD		
LHLDZA011SJSA	12-230	AC		
LHLDZA072SJSA	12-231	AB		
LX-JZA001SJFN	12-601	AB		
LX-JZA009SJFN	12-602	AB		
LX-JZA011SJFN	12-603	AB		
LX-JZA014SJF9	12-604	AB		
LX-JZA015SJFN	12-605	AB		
[M]				
MSPRKA001SJFW	12-232	AC		
MSPRKA002SJFW	12-233	AB		
MSPRKA003SJFW	12-234	AB		
MSPRKA004SJFW	12-235	AB		
MSPRKA005SJFJ	12-218-2	AB		
[N]				
NFANPA002SJSA	12-218-3	AD		
[P]				
PCUSG0017SJSA	12-236	AB		
"	12-201-4	AB		
PRDARA004SJFW	12-237	AE		
PRDARA031SJFW	12-238	AN		
PRDARA033SJFW	12-239	AC		
PRDARA037SJFW	12-240	AB		
PSHEZA001SJZZ	12-241	AC		
PSPA1A002SJZZ	12-242	AB		
[Q]				
QACCU0003SJ00	15-	AH		
QANTL0009SJZZ	15-	AG		
QCNCM017BSJZZ	10-CNP201	AD		
QCNCM018CSJZZ	10-CNP202	AC		
QCNCM052CSJZZ	10-CNP301	AB		
QCNCM059GSJZZ	10-CNP101	AB		
QCNCM073CSJZZ	10-CNP406	AB		
QCNCM998DAFZZ	10-CNP204	AB		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
QCNCM999CAFZZ	10-CNP203	AG		
QCNCM999EAFZZ	10-CNP407	AG		
QCNCM999FAFZZ	10-CNP302	AE		
QCNCM999HAFZZ	10-CNP602	AD		
QCNCM999NAFZZ	10-CNP206	AC		
QCNCM999PAFZZ	10-CNP205	AC		
QCNCMA013SJ07	10-CNP405A	AC		
"	10-CNP405B	AC		
QCNCMA014SJ07	10-CNP103A	AB		
"	10-CNP103B	AB		
QCNCMA015SJ07	10-CNP102	AB		
QCNCMA018SJ06	10-CNP402	AB		
QCNCW014RSJZZ	10-CNP801	AD		
QCNCW015QSJZZ	10-CNP501	AE		
QCWNWA286SJZZ	10-FC501			
QCWNWA287SJZZ	10-FC401	AD		
QCWNWA295SJZZ	10-CNW702	AB		
QCWNWA296SJZZ	10-CNW406	AB		
QCWNWA313SJZZ	10-CNW407	AE		
QCWNWA314SJZZ	10-CNW203			
QCWNWA340SJZZ	10-CNW103			
QCWNWA341SJZZ	10-CFW101			
QCWNWA367SJZZ	10-CNW602			
QCWNWA368SJZZ	10-CNW101			
QCWNWA369SJZZ	10-CNW102			
QCWNWA370SJZZ	10-CNW405			
QCWNWA371SJZZ	10-CNW302			
QCWNWA372SJZZ	10-CNW402			
QCWNWA373SJZZ	10-CFW701			
QCWNWA374SJZZ	10-CFW301			
QCWNWA375SJZZ	10-CNW206			
QCWNWA376SJZZ	10-CNW205			
QCWNWA377SJZZ	10-CFW702			
QFS-D162BSJNi	10-F203	AE		
QFS-D632BSJNi	10-F201	AC		
"	10-F202	AC		
QFSD1013CEZZ	12-243	AB		
QJAKMA001SJZZ	10-JK101	AG		
QSOCA0214AWZZ	10-SO202	AD		
QSOCJ0003SJZZ	10-SO601	AG		
QSW-K0002SJZZ	10-SW701	AC		
"	10-SW702	AC		
"	10-SW703	AC		
"	10-SW704	AC		
"	10-SW705	AC		
"	10-SW706	AC		
"	10-SW707	AC		
"	10-SW708	AC		
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"	10-SW713	AC		
"	10-SW714	AC		
"	10-SW715	AC		
"	10-SW716	AC		
"	10-SW717	AC		
QSW-Z0003SJZZ	10-SW700	AG		
QTANAA001SJZZ	10-SO101	AF		
[R]				
RBLN-A003SJZZ	6-L702	AB		
"	6-L808	AB		
"	6-L809	AB		
RBLN-A005SJZZ	6-L811	AB		
"	6-L812	AB		
RC-EZ3001SJZZ	8-C135	AB		
"	8-C136	AB		
RC-EZD105AF1C	8-C825	AB		
"	8-C834	AB		
RC-EZD106AF1C	8-C823	AB		
"	8-C824	AB		
RC-EZD107AF1C	8-C709	AC		
"	8-C807	AC		
"	8-C816	AC		
"	8-C822	AC		
"	8-C836	AC		
"	8-C837	AC		
"	8-C838	AC		
RC-EZD227AF1A	8-C706	AC		
RC-EZD336AF1C	8-C712	AB		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
RC-EZD474AF1C	8-C802	AB		
RC-EZD476AF1C	8-C810	AA		
RC-EZD477AF1A	8-C506	AC		
RC-EZD477AF1A	8-C716	AC		
RC-EZD477AF1A	8-C805	AB		
RC-EZD477AF1A	8-C848	AB		
RC-EZD477AF1A	8-C850	AB		
RC-GZA105AF1H	8-C104	AB		
RC-GZA105AF1H	8-C105	AB		
RC-GZA105AF1H	8-C106	AB		
RC-GZA105AF1H	8-C302	AB		
RC-GZA105AF1H	8-C319	AB		
RC-GZA105AF1H	8-C322	AB		
RC-GZA105AF1H	8-C323	AB		
RC-GZA105AF1H	8-C324	AB		
RC-GZA105AF1H	8-C328	AB		
RC-GZA105AF1H	8-C607	AB		
RC-GZA105AF1H	8-C608	AB		
RC-GZA105AF1H	8-C609	AB		
RC-GZA105AF1H	8-C610	AB		
RC-GZA106AF1C	8-C134	AB		
RC-GZA106AF1H	8-C107	AB		
RC-GZA106AF1H	8-C108	AB		
RC-GZA106AF1H	8-C109	AB		
RC-GZA106AF1H	8-C224	AB		
RC-GZA106AF1H	8-C601	AB		
RC-GZA106AF1H	8-C602	AB		
RC-GZA106AF1H	8-C603	AB		
RC-GZA106AF1H	8-C605	AB		
RC-GZA106AF1H	8-C606	AB		
RC-GZA106AF1H	8-C624	AB		
RC-GZA106AF1H	8-C625	AB		
RC-GZA106AF1H	8-C629	AB		
RC-GZA106AF1H	8-C652	AB		
RC-GZA106AF1H	8-C656	AB		
RC-GZA107AF1H	8-C210	AC		
RC-GZA107AF1H	8-C225	AC		
RC-GZA107AF1H	8-C226	AC		
RC-GZA107AF1H	8-C618	AC		
RC-GZA107AF1H	8-C640	AC		
RC-GZA225AF1C	8-C615	AC		
RC-GZA225AF1C	8-C616	AC		
RC-GZA226AF1H	8-C315	AB		
RC-GZA226AF1H	8-C325	AB		
RC-GZA226AF1H	8-C330	AB		
RC-GZA226AF1H	8-C335	AB		
RC-GZA227AF1E	8-C220	AB		
RC-GZA334AF1H	8-C321	AA		
RC-GZA335AF1C	8-C141	AB		
RC-GZA336AF1C	8-C617	AB		
RC-GZA475AF1H	8-C333	AB		
RC-GZA476AF1H	8-C117	AB		
RC-GZA476AF1H	8-C139	AB		
RC-GZA476AF1H	8-C142	AB		
RC-GZA476AF1H	8-C201	AB		
RC-GZA476AF1H	8-C208	AB		
RC-GZA476AF1H	8-C222	AB		
RC-GZA476AF1H	8-C223	AB		
RC-GZA476AF1H	8-C346	AB		
RC-GZA476AF1H	8-C604	AB		
RC-GZA476AF1H	8-C639	AB		
RC-GZA476AF1H	8-C653	AB		
RC-GZA477AF1C	8-C217	AC		
RC-GZV227AF1H	8-C207	AC		
RC-GZV337AF1V	8-C209	AB		
RC-GZW478AF1V	8-C211	AH		
RC-GZW478AF1V	8-C212	AH		
RC-GZW688AF1E	8-C214	AH		
RCiLAA002SJZZ	6-L302	AC		
RCiLBA004SJZZ	6-L307	AD		
RCiLBA006SJZZ	6-L306	AC		
RCiLiA001SJZZ	6-L305	AC		
RCiLRA001SJZZ	6-L304	AA		
RCRM-0008SJZZ	7-X702	AG		
RCRSPA002SJZZ	7-X801	AE		
RCRSPA006SJZZ	7-X301	AF		
RCRSPA007SJZZ	7-X701	AE		
RFiLA0003SJZZ	4-CF304	AF		
RFiLF0003AWZZ	4-CF302	AK		
RFiLFA001SJZZ	4-CF301	AE		
RFiLFA001SJZZ	4-CF303	AE		
RFiLRA001SJZZ	4-BF301	AD		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
RH-iXA033SJZZ	1-iC701	BF		
RMOTV0409AFZZ	10-M201	AL		
RMOTV0409AFZZ	12-218-4	AL		
RRLYD0014AWZZ	10-RLY101	AK		
RRLYDA001SJZZ	10-RLY102	AH		
RRMCGA029SJSA	15-3	AP		
RTRNPA031SJZZ	5-T201	BA		
【 S 】				
SPAKAA066SJZZ	14-	AG		
SPAKAA067SJZZ	14-	AG		
SPAKCA122SJZZ	14-	AU		
SPAKPA022SJZZ	14-	AE		
SSAKA0014SJZZ	14-	AB		
SSAKHA040SJZZ	14-	AD		
【 T 】				
TiNSEA043SJZZ	15-	AE		
TiNSEA044SJZZ	15-	AD		
TiNSKA006SJZZ	15-	AE		
TLABS0046SJZZ	14-	AB		
TLABZA063SJZZ	14-			
【 U 】				
UDSKA0004AFZZ	17-	AZ		
【 V 】				
VCCCCY1HH100J	8-C341	AA		
VCCCCY1HH100J	8-C342	AA		
VCCCCY1HH100J	8-C829	AA		
VCCCCY1HH100J	8-C831	AA		
VCCCCY1HH101J	8-C320	AA		
VCCCCY1HH101J	8-C334	AA		
VCCCCY1HH101J	8-C336	AA		
VCCCCY1HH101J	8-C337	AA		
VCCCCY1HH240J	8-C703	AA		
VCCCCY1HH240J	8-C704	AA		
VCCCPA1HH120J	8-C305	AA		
VCCCPA1HH330J	8-C316	AA		
VCCCPA1HH330J	8-C344	AA		
VCCSCY1HL101J	8-C708	AA		
VCCSCY1HL101J	8-C846	AA		
VCCSCY1HL5R0C	8-C343	AD		
VCCUPA1HJ100D	8-C307	AA		
VCCUPA1HJ270J	8-C310	AA		
VCCUPA1HJ5R0C	8-C345	AA		
VCFYFA1HA104J	8-C125	AC		
VCFYFA1HA104J	8-C126	AC		
VCFYFA1HA104J	8-C127	AC		
VCFYFA1HA104J	8-C128	AC		
VCFYFA1HA104J	8-C129	AC		
VCFYFA1HA104J	8-C130	AC		
VCFYFA1HA104J	8-C203	AC		
VCFYFA1HA104J	8-C204	AC		
VCFYFA1HA104J	8-C205	AC		
VCFYFA1HA104J	8-C206	AC		
VCFYFA1HA104J	8-C613	AC		
VCFYFA1HA104J	8-C614	AC		
VCFYFA1HA473J	8-C221	AB		
VCKYCY1EB103K	8-C306	AA		
VCKYCY1EB103K	8-C314	AA		
VCKYCY1EB103K	8-C318	AA		
VCKYCY1EB103K	8-C327	AA		
VCKYCY1EB103K	8-C331	AA		
VCKYCY1EB103K	8-C713	AA		
VCKYCY1EB104K	8-C701	AD		
VCKYCY1EB104K	8-C702	AD		
VCKYCY1EB104K	8-C705	AD		
VCKYCY1EB104K	8-C707	AD		
VCKYCY1EB104K	8-C711	AD		
VCKYCY1EB153K	8-C312	AA		
VCKYCY1EB183K	8-C308	AB		
VCKYCY1EB333K	8-C329	AC		
VCKYCY1EB563K	8-C815	AD		
VCKYCY1EF103Z	8-C813	AA		
VCKYCY1EF103Z	8-C820	AA		
VCKYCY1EF104Z	8-C801	AA		
VCKYCY1EF104Z	8-C803	AA		
VCKYCY1EF104Z	8-C804	AA		
VCKYCY1EF104Z	8-C806	AA		
VCKYCY1EF104Z	8-C808	AA		
VCKYCY1EF104Z	8-C811	AA		
VCKYCY1EF104Z	8-C819	AA		
VCKYCY1EF104Z	8-C827	AA		
VCKYCY1EF104Z	8-C828	AA		
VCKYCY1EF104Z	8-C849	AA		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
"	8-C851	AA		
VCKYCY1EF223Z	8-C515	AB		
"	8-C721	AB		
"	8-C722	AB		
"	8-C855	AB		
VCKYCY1EF473Z	8-C657	AB		
"	8-C710	AB		
"	8-C814	AB		
"	8-C826	AB		
VCKYCY1HB101K	8-C842	AB		
VCKYCY1HB102K	8-C301	AA		
"	8-C332	AA		
"	8-C714	AA		
"	8-C715	AA		
"	8-C809	AA		
VCKYCY1HB104K	8-C659	AD		
"	8-C830	AD		
"	8-C832	AD		
"	8-C833	AD		
"	8-C835	AD		
"	8-C839	AD		
"	8-C840	AD		
"	8-C841	AD		
VCKYCY1HB221K	8-C101	AA		
"	8-C102	AA		
"	8-C103	AA		
"	8-C619	AA		
"	8-C620	AA		
"	8-C658	AA		
VCKYCY1HB222K	8-C140	AA		
VCKYCY1HB223K	8-C348	AA		
VCKYCY1HB332K	8-C636	AA		
VCKYCY1HB472K	8-C349	AA		
"	8-C821	AA		
VCKYCY1HB473K	8-C215	AB		
"	8-C347	AB		
VCKYCY1HB562K	8-C853	AA		
VCKYCY1HF103Z	8-C339	AB		
VCKYCY1HF104Z	8-C303	AB		
"	8-C313	AB		
"	8-C326	AB		
"	8-C340	AB		
VCKYCY1HF223Z	8-C218	AA		
VCKYPA1EF103Z	8-C817	AA		
"	8-C856	AA		
VCKYPA1HB101K	8-C843	AA		
"	8-C845	AA		
"	8-C847	AA		
VCKYPA1HB102J	8-C309	AA		
"	8-C317	AA		
VCKYPA1HB104K	8-C137	AC		
"	8-C138	AC		
"	8-C622	AC		
"	8-C623	AC		
"	8-C852	AC		
"	8-C854	AC		
VCKYPA1HB221K	8-C621	AA		
VCKYPA1HB272K	8-C611	AA		
"	8-C612	AA		
VCKYPA1HB331K	8-C720	AA		
VCKYPA1HB472K	8-C131	AB		
"	8-C132	AB		
"	8-C133	AB		
VCKYPA1HB561K	8-C311	AA		
VCKYPA1HB563K	8-C818	AC		
VCKYPA1HF223Z	8-C119	AB		
"	8-C120	AB		
"	8-C121	AB		
"	8-C122	AB		
"	8-C123	AB		
"	8-C124	AB		
"	8-C216	AB		
"	8-C219	AB		
"	8-C857	AB		
VCKYPA1HF473Z	8-C213	AB		
"	8-C812	AB		
VQYKA1JM224J	8-C635	AC		
VQYKA1JM274J	8-C651	AC		
VHCSVC201/-1	3-D306	AE		
"	3-D307	AE		
VHCSVC347S/-1	3-D305	AG		
VHD1N4004/-1	3-D104	AB		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
"	3-D105	AB		
"	3-D106	AB		
"	3-D107	AB		
"	3-D109	AB		
"	3-D110	AB		
"	3-D205	AB		
"	3-D206	AB		
"	3-D207	AB		
"	3-D208	AB		
"	3-D209	AB		
"	3-D210	AB		
"	3-D211	AB		
"	3-D212	AB		
"	3-D213	AB		
"	3-D214	AB		
"	3-D215	AB		
"	3-D701	AB		
"	3-D706	AB		
"	3-D708	AB		
VHD1N4148//1	3-D108	AA		
"	3-D217	AA		
"	3-D604	AA		
"	3-D605	AA		
"	3-D702	AA		
"	3-D703	AA		
"	3-D704	AA		
"	3-D705	AA		
"	3-D709	AA		
"	3-D710	AA		
VHD1SS133//1	3-D302	AA		
"	3-D303	AA		
VHDS6B04GM-1	3-D201	AP		
VHEDZH03C3+-1	3-ZD701	AB		
VHEDZH04B2+-1	3-ZD802	AB		
VHEDZH05C2+-1	3-D310	AB		
"	3-ZD801	AB		
VHEDZH06B2+-1	3-ZD101	AB		
"	3-ZD502	AB		
VHEDZH06C2+-1	3-ZD202	AB		
VHEDZH3001+-1	3-ZD201	AB		
VHEMTZJ3R6B-1	3-D308	AC		
VHiKiA7805APi	1-iC201	AF		
VHiKiA7808APi	1-iC203	AF		
VHiKiA7812APi	1-iC202	AE		
VHiLA6548NH-1	1-iC402	AL		
VHiLC75341M-1	1-iC601	AM		
VHiLC78690/-1	1-iC801	BE		
VHiLM4781TA-1	1-iC101	AZ		
VHiLV23002M-1	1-iC301	AS		
VHiNJM4558D-1	1-iC602	AH		
VHLGP1UD261-1	10-RX701	AK		
VHPLP3052A+-1	3-LED701	AC		
VP-DH100K0000	6-L103	AB		
"	6-L303	AB		
VP-DH1R0K0000	6-L301	AC		
VP-DH2R2K0000	6-L105	AB		
"	6-L601	AB		
VP-DH470K0000	6-L308	AB		
VP-DHR82K0000	6-L502	AE		
"	6-L503	AE		
"	6-L701	AE		
"	6-L703	AE		
"	6-L704	AE		
"	6-L705	AE		
"	6-L706	AE		
"	6-L707	AE		
"	6-L708	AE		
"	6-L802	AE		
"	6-L803	AE		
"	6-L804	AE		
"	6-L807	AE		
"	6-L810	AE		
VRD-RT2HD620J	9-R218	AA		
"	9-R219	AA		
VRD-ST2CD100J	9-R302	AA		
VRD-ST2CD102J	9-R103	AA		
"	9-R111	AA		
"	9-R311	AA		
"	9-R433	AA		
"	9-R601	AA		
"	9-R602	AA		
"	9-R643	AA		

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PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
"	9-R668	AA		
"	9-R669	AA		
"	9-R701	AA		
"	9-R703	AA		
"	9-R705	AA		
"	9-R706	AA		
"	9-R708	AA		
"	9-R709	AA		
"	9-R710	AA		
"	9-R714	AA		
"	9-R715	AA		
"	9-R728	AA		
"	9-R729	AA		
"	9-R730	AA		
"	9-R746	AA		
"	9-R747	AA		
"	9-R748	AA		
"	9-R749	AA		
"	9-R750	AA		
"	9-R755	AA		
"	9-R799	AA		
VRD-ST2CD103J	9-R208	AA		
"	9-R704	AA		
"	9-R716	AA		
"	9-R727	AA		
"	9-R738	AA		
"	9-R742	AA		
"	9-R743	AA		
"	9-R744	AA		
"	9-R797	AA		
"	9-R816	AA		
VRD-ST2CD104J	9-R140	AA		
"	9-R141	AA		
"	9-R142	AA		
"	9-R303	AA		
"	9-R310	AA		
"	9-R622	AA		
"	9-R623	AA		
"	9-R647	AA		
"	9-R648	AA		
"	9-R831	AA		
VRD-ST2CD122J	9-R765	AA		
"	9-R766	AA		
"	9-R780	AA		
"	9-R781	AA		
VRD-ST2CD123J	9-R205	AA		
"	9-R624	AA		
"	9-R625	AA		
"	9-R815	AA		
VRD-ST2CD152J	9-R767	AA		
"	9-R782	AA		
VRD-ST2CD153J	9-R828	AA		
VRD-ST2CD202J	9-R768	AA		
"	9-R783	AA		
VRD-ST2CD221J	9-R160	AA		
VRD-ST2CD223J	9-R123	AA		
"	9-R124	AA		
"	9-R163	AA		
"	9-R511	AA		
"	9-R517	AA		
"	9-R641	AA		
"	9-R665	AA		
VRD-ST2CD272J	9-R733	AA		
VRD-ST2CD331J	9-R206	AA		
"	9-R207	AA		
VRD-ST2CD391J	9-R323	AA		
"	9-R509	AA		
"	9-R514	AA		
VRD-ST2CD392J	9-R612	AA		
"	9-R613	AA		
VRD-ST2CD471J	9-R806	AA		
VRD-ST2CD472J	9-R619	AA		
VRD-ST2CD473J	9-R204	AA		
VRD-ST2CD561J	9-R814	AA		
VRD-ST2CD562J	9-R689	AA		
"	9-R786	AA		
VRD-ST2CD682J	9-R829	AA		
"	9-R842	AA		
"	9-R844	AA		
"	9-R855	AA		
VRD-ST2CD822J	9-R802	AA		
"	9-R803	AA		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRD-ST2CD912J	9-R812	AA		
VRD-ST2EE100J	9-R203	AA		
"	9-R661	AA		
VRD-ST2EE101J	9-R516	AA		
VRD-ST2EE123J	9-R119	AA		
VRD-ST2EE221J	9-R149	AA		
"	9-R150	AA		
"	9-R630	AA		
VRD-ST2EE332J	9-R155	AA		
VRD-ST2EE391J	9-R146	AA		
"	9-R147	AA		
VRD-ST2EE470J	9-R760	AA		
VRD-ST2EE471J	9-R335	AA		
"	9-R854	AA		
VRD-ST2EE472J	9-R162	AA		
VRD-ST2EE4R7J	9-R143	AA		
"	9-R144	AA		
"	9-R145	AA		
VRD-ST2EE510J	9-R325	AA		
VRD-ST2EE561J	9-R432	AA		
VRD-ST2EE6R8J	9-R134	AA		
"	9-R135	AA		
"	9-R136	AA		
VRS-CY1JB000J	9-R309	AA		
"	9-R791	AA		
"	9-R801	AA		
"	9-JR303	AA		
"	9-JR304	AA		
"	9-R745B	AA		
VRS-CY1JB100J	9-R306	AA		
VRS-CY1JB101J	9-R336	AA		
"	9-R807	AA		
VRS-CY1JB102J	9-R101	AA		
"	9-R102	AA		
"	9-R109	AA		
"	9-R110	AA		
"	9-R112	AA		
"	9-R308	AA		
"	9-R321	AA		
"	9-R603	AA		
"	9-R604	AA		
"	9-R605	AA		
"	9-R606	AA		
"	9-R607	AA		
"	9-R628	AA		
"	9-R629	AA		
"	9-R644	AA		
"	9-R702	AA		
"	9-R713	AA		
"	9-R718	AA		
"	9-R719	AA		
"	9-R720	AA		
"	9-R721	AA		
"	9-R740	AA		
"	9-R751	AA		
"	9-R758	AA		
"	9-R761	AA		
"	9-R762	AA		
"	9-R776	AA		
"	9-R501A	AA		
"	9-R502A	AA		
"	9-R503A	AA		
"	9-R504A	AA		
"	9-R505A	AA		
"	9-R506A	AA		
"	9-R507A	AA		
"	9-R508A	AA		
VRS-CY1JB103J	9-R104	AA		
"	9-R105	AA		
"	9-R106	AA		
"	9-R211	AA		
"	9-R313	AA		
"	9-R316	AA		
"	9-R655	AA		
"	9-R690	AA		
"	9-R691	AA		
"	9-R737	AA		
"	9-R739	AA		
"	9-R756	AA		
"	9-R777	AA		
"	9-R778	AA		
"	9-R787	AA		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
"	9-R788	AA		
"	9-R789	AA		
"	9-R813	AA		
"	9-R853	AA		
"	9-R501B	AA		
"	9-R502B	AA		
"	9-R503B	AA		
"	9-R504B	AA		
"	9-R505B	AA		
"	9-R506B	AA		
"	9-R507B	AA		
"	9-R508B	AA		
VRS-CY1JB104J	9-R304	AA		
"	9-R305	AA		
"	9-R319	AA		
"	9-R328	AA		
"	9-R651	AA		
"	9-R764	AA		
"	9-R810	AA		
"	9-R811	AA		
VRS-CY1JB106J	9-R741	AA		
VRS-CY1JB121J	9-R779	AA		
VRS-CY1JB151J	9-R835	AA		
VRS-CY1JB152J	9-R848	AA		
"	9-R849	AA		
"	9-R850	AA		
"	9-R851	AA		
"	9-R852	AA		
VRS-CY1JB183J	9-R157	AA		
VRS-CY1JB1R0J	9-R820	AA		
"	9-R833	AA		
VRS-CY1JB203J	9-R834	AA		
VRS-CY1JB221J	9-R327	AA		
"	9-R518	AA		
"	9-R712	AA		
"	9-R724	AA		
"	9-R725	AA		
VRS-CY1JB222J	9-R107	AA		
"	9-R108	AA		
"	9-R307	AA		
"	9-R332	AA		
VRS-CY1JB223J	9-R122	AA		
"	9-R202	AA		
"	9-R209	AA		
"	9-R212	AA		
"	9-R512	AA		
"	9-R660	AA		
"	9-R662	AA		
"	9-R663	AA		
"	9-R666	AA		
"	9-R667	AA		
"	9-R687	AA		
VRS-CY1JB225J	9-R822	AA		
VRS-CY1JB271J	9-R664	AA		
"	9-R773	AA		
VRS-CY1JB272J	9-R769	AA		
"	9-R784	AA		
VRS-CY1JB273J	9-R216	AA		
"	9-R317	AA		
"	9-R318	AA		
VRS-CY1JB330J	9-R331	AA		
VRS-CY1JB331J	9-R151	AA		
"	9-R329	AA		
"	9-R334	AA		
"	9-R804	AA		
"	9-R819	AA		
VRS-CY1JB332J	9-R210	AA		
"	9-R215	AA		
"	9-R312	AA		
"	9-R620	AA		
"	9-R621	AA		
"	9-R763	AA		
"	9-R837	AA		
VRS-CY1JB391J	9-R521	AA		
VRS-CY1JB392J	9-R770	AA		
"	9-R785	AA		
"	9-R823	AA		
"	9-R824	AA		
VRS-CY1JB393J	9-R116	AA		
"	9-R117	AA		
"	9-R118	AA		
VRS-CY1JB3R3J	9-R805	AA		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CY1JB471J	9-R510	AA		
"	9-R513	AA		
VRS-CY1JB472J	9-R161	AA		
"	9-R314	AA		
"	9-R315	AA		
"	9-R618	AA		
VRS-CY1JB473J	9-R159	AA		
"	9-R320	AA		
"	9-R656	AA		
VRS-CY1JB474J	9-R213	AA		
VRS-CY1JB562J	9-R156	AA		
"	9-R772	AA		
VRS-CY1JB563J	9-R137	AA		
"	9-R138	AA		
"	9-R139	AA		
"	9-R526	AA		
VRS-CY1JB681J	9-R333	AA		
"	9-R825	AA		
"	9-R826	AA		
VRS-CY1JB682J	9-R154	AA		
"	9-R337	AA		
"	9-R338	AA		
"	9-R339	AA		
"	9-R841	AA		
"	9-R845	AA		
VRS-CY1JB683J	9-R827	AA		
VRS-CY1JB820J	9-R775	AA		
"	9-R830	AA		
"	9-R832	AA		
"	9-R840	AA		
VRS-CY1JB822J	9-R649	AA		
"	9-R659	AA		
VRS-VV3AA271J	9-R525	AB		
VRS-VV3AA560J	9-R214	AB		
VS2HA1015GR-1	2-Q201	AB		
"	2-Q204	AB		
VS2HC1815GR-1	2-Q101	AB		
"	2-Q102	AB		
"	2-Q103	AB		
"	2-Q107	AB		
"	2-Q108	AB		
"	2-Q109	AB		
"	2-Q112	AB		
"	2-Q113	AB		
"	2-Q114	AB		
"	2-Q205	AB		
"	2-Q414	AB		
"	2-Q506	AB		
"	2-Q507	AB		
"	2-Q703	AB		
"	2-Q704	AB		
"	2-Q705	AB		
"	2-Q805	AB		
VS2SA1235F+-1	2-Q801	AD		
VS2SB562-C/-1	2-Q413	AD		
"	2-Q503	AD		
"	2-Q806	AD		
VS2SC535-C/-1	2-Q202	AC		
VS2SC5477+-1	2-Q302	AD		
"	2-Q303	AD		
VSKRA107M//--1	2-Q110	AE		
VSKRC102M//--1	2-Q702	AC		
VSKRC107M//--1	2-Q111	AC		
"	2-Q502	AC		
VSKTA1271Y/-1	2-Q505	AC		
"	2-Q508	AC		
VSKTC3200GR-1	2-Q203	AC		
VSKTC3203Y/-1	2-Q504	AC		
"	2-Q509	AC		
"	2-Q510	AC		
"	2-Q511	AC		
"	2-Q802	AC		
VVK251116//--1	10-VFD701	AV		
【 X 】				
XHBSN20P03000	12-616	AA		
XHBSN30P06000	12-606	AA		
XHBY930P08000	12-607	AA		
XJBSN25P08000	12-608	AA		
XJBSN30P06000	12-609	AA		
XJBSN30P08000	12-610	AA		
XJBY930P08000	12-612			
XJBY930P10000	12-613	AA		

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PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
XJBY930P12000	12-614	AA		
XJPY930P06000	12-615	AA		
【 9 】				
9GD010804727	11-149	AC		
9GD010814710	11-144	AC		
9GD010814711	11-143	AC		
9GD010814712	11-145	AC		
9GD010814739	11-156	AH		
9GD010824696	11-148	AD		
9GD010824717	11-150	AG		
9GD010824718	11-151	AD		
9GD010824735	11-152	AC		
9GD010824736	11-153	AD		
9GD010824737	11-154	AD		
9GD010824738	11-155	AD		
9GD020834262	11-169	AG		
9GD033004577	11-167	AC		
9GD033004581	11-166	AB		
9GD033004584	11-170	AB		
9GD033004585	11-165	AB		
9GD450633201	12-244	AE		
9GD450633202	12-245	AE		
9GD581194039	11-112	AE		
9GD582593021	11-111	AE		
9GD660004091	11-142	AD		
9GD660824059	11-146	AD		
9GD660824060	11-147	AD		
9GD660934072H	11-133	AK		
9GD660934073H	11-125	AN		
9GD660934076H	11-132	BA		
9GD660934077H	11-124	AM		
9GD660934103H	11-115	AP		
9GD660934115H	11-103	AT		
9GD660934117H	11-157	AT		
9GD660934118H	11-158	AT		
9GD660934119H	11-159	AT		
9GD660934120H	11-160	AT		
9GD661192094	11-114	AU		
9GD662101001	11-123	AZ		
9GD662112002	11-119	AR		
9GD662113026	11-121	AN		
9GD662192003	11-136	AL		
9GD662192019	11-104	AP		
9GD662213021	11-137	AM		
9GD662224010	11-113	AG		
9GD662224013	11-106	AD		
9GD662224014	11-107	AD		
9GD662224015	11-127	AD		
9GD662224016	11-129	AD		
9GD662224088	11-140	AH		
9GD662224089	11-141	AH		
9GD662233009	11-135	AL		
9GD662392022	11-126	AL		
9GD662392085	11-116	AP		
9GD662393005	11-118	AK		
9GD662393006	11-122	AK		
9GD662393007	11-117	AK		
9GD662393008	11-120	AK		
9GD662393017	11-131	AF		
9GD662393018	11-108	AG		
9GD662393020	11-110	AE		
9GD662393023	11-134	AF		
9GD662393024	11-109	AF		
9GD662393025	11-105	AE		
9GD662393039	11-128	AF		
9GD662593086	11-138	AG		
9GD662593090	11-139	AL		
9GD662641004	11-101	AU		
9GD662641033	11-102	AP		
9GD663634068	11-130	AG		
9GDGSL15A2608	11-164	AC		
9GDGSL15A2616	11-163	AC		
9GDGSL20A2606	11-161	AB		
9GDGSP14A2504	11-162	AC		

“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

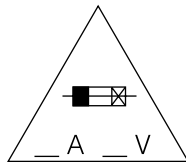
- VCC Ceramic type
- VCK Ceramic type
- VCT Semiconductor type
- VC •• MF Cylindrical type (without lead wire)
- VC •• MN Cylindrical type (without lead wire)
- VC •• TV Square type (without lead wire)
- VC •• TQ Square type (without lead wire)
- VC •• CY Square type (without lead wire)
- VC •• CZ Square 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.



CAUTION:FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F201 6.3A, 125V,F202 6.3A, 125V, F203 1.6A, 125V FUSES.

ATTENTION:POUR ASSURER UNE LONGUE PROTECTION CONTRE UN INCENDIE, REMPLACER SEULEMENT PAR UN FUSIBLE DE TYPE F201 6.3A, 125V,F202 6.3A, 125V, F203 1.6A, 125V FUSES.

XL-MP60

-MEMO-

-MEMO-

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