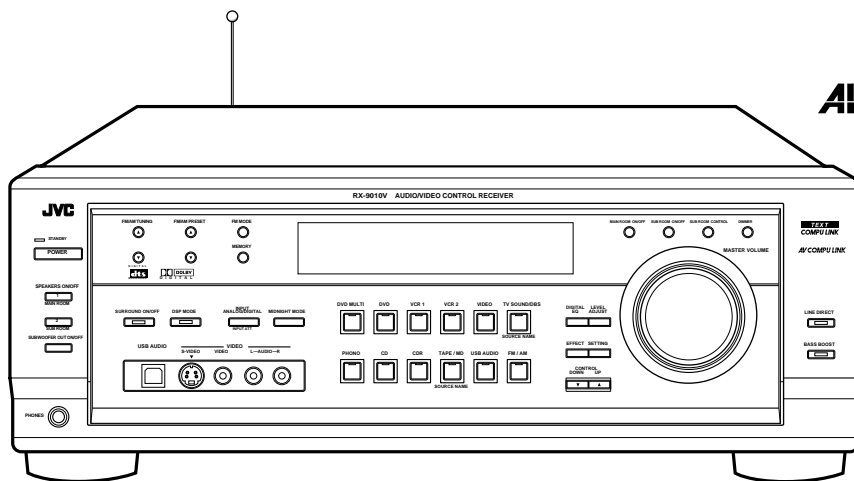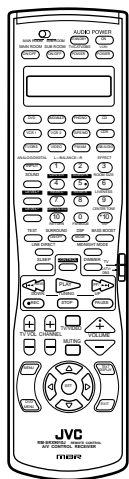# JVC

SERVICE MANUAL

AUDIO/VIDEO CONTROL RECEIVER

RX-9010VBK

Area Suffix

J ------------ U.S.A.

AV COMPU LINK

TEXT
COMPU LINK

DIGITAL
dts
SURROUND

DOLBY
DIGITAL

Contents

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No.20940
Apr. 2001

RX-9010VBK

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.

2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.

3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.

4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.

   ● Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).

   ● Alternate check method
   Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground.
   Measure the AC voltage across the resistor with the AC voltmeter.
   Move the resistor connection to eachexposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured Any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).

AC VOLTMETER (Having 1000 ohms/volts, or more sensitivity)

0.15 μ F AC TYPE

1500 Ω 10W

Place this probe on each exposed metal part.

Good earth ground
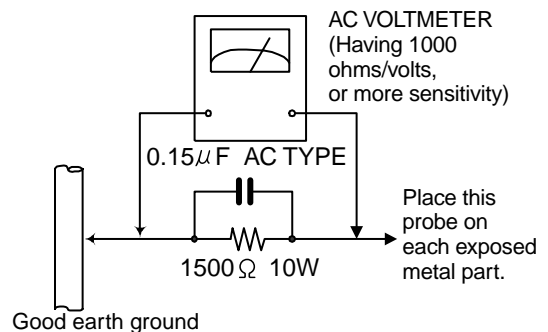
Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.
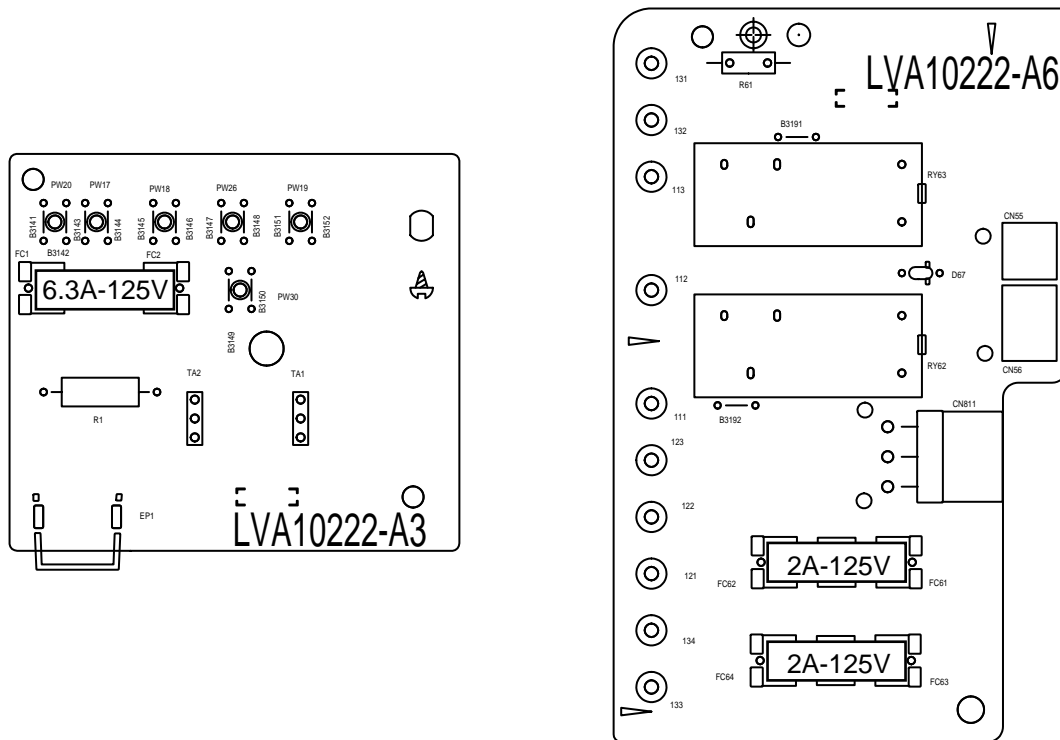
⚠ CAUTION

Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.
When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the JC version)

Importance administering point on the safety

For USA and Canada / pour États - Unis d' Amérique et Canada
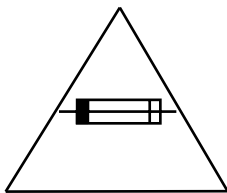
Caution: For continued protection against risk of fire, replace only with same type 6.3A/125V for F201, 2A/125V for F202 and F203. This symbol specifies type of fast operating fuse.

Précaution: Pour eviter risques de feux, remplacez le fusible de sureté de F201 comme le meme type que 6.3A/125V, et 2A/125V pour F202 et F203. Ce sont des fusibles sûretes qui functionnes rapide.

Disassembly method

■ Removing the top cover (See Fig.1)

1. Remove the four screws A attaching the top cover on both sides of the body.

2. Remove the three screws B on the back of the body.

3. Remove the top cover from behind in the direction of the arrow while pulling both sides outward.
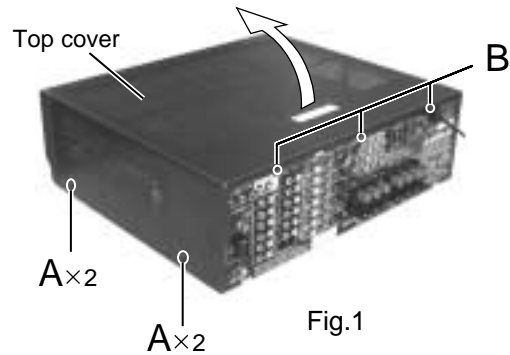
■ Removing the front panel assembly (See Fig.2 to 4)

・ Prior to performing the following procedure, remove the top cover.

1. Disconnect the card wire from connector CN400 on the audio board and CN402 on the power supply board in the front panel assembly.

2. Cut off the tie band fixing the harness.

3. Remove the three screws C attaching the front panel assembly.

4. Remove the four screws D attaching the front panel assembly on the bottom of the body. Detach the front panel assembly toward the front.

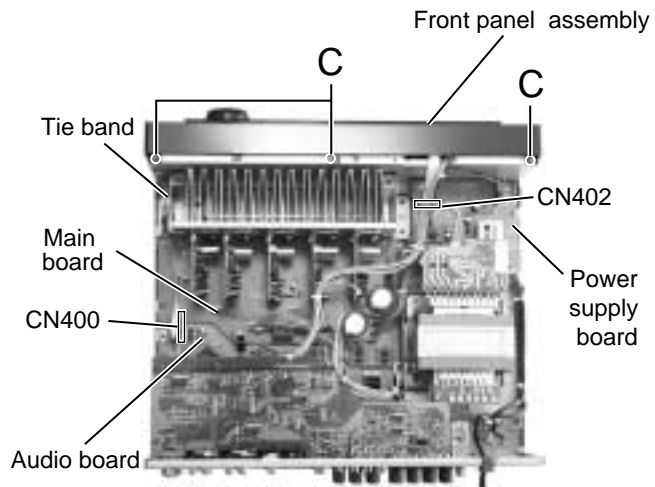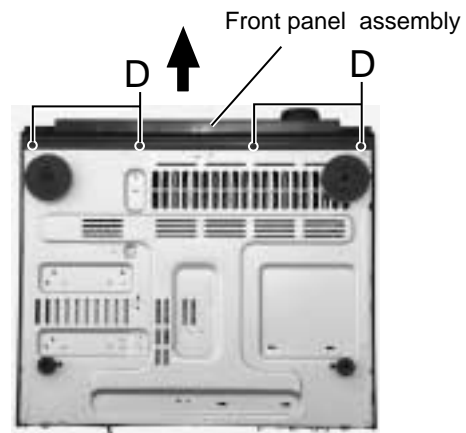5. Remove the screw **a** fixing a bonding ground.

Fig.1

Fig.2

Fig.3

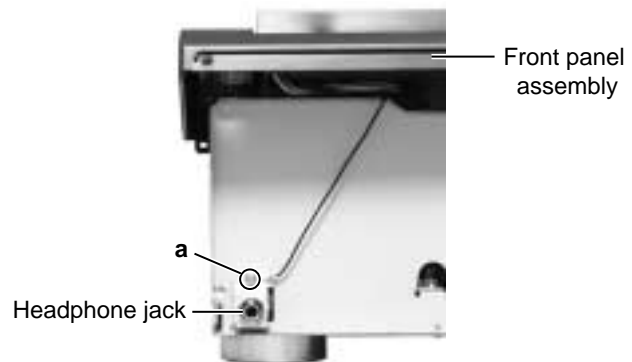

Fig.4

■Removing the rear panel (See Fig.5)

・Prior to performing the following procedure, remove the top cover.

1. Remove the power cord stopper from the rear panel by moving it in the direction of the arrow.

2. Remove the thirty five screws E and a hexagon nut **b** attaching the each boards to the rear panel on the back of the body.

3. Remove the three screws F attaching the rear panel on the back of the body.
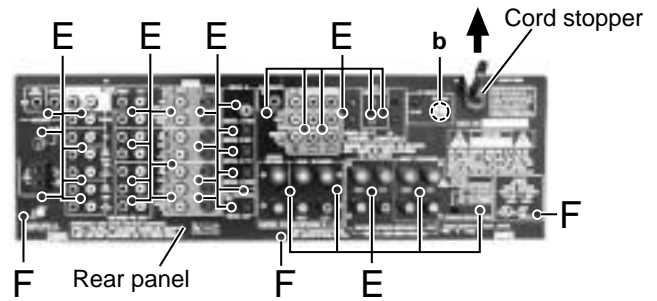
Fig.5

■Removing each board connected to the rear side of the audio board
(See Fig.6 to 12)

・Prior to performing the following procedure, remove the top cover and the rear panel.

1. Cut off the tie band fixing the harness.

2. Disconnect the connect CN501, CN243, CN205, CN381, CN361 on the DVD board.

3. Disconnect the harness from connector CN721, CN722 and CN723 on the main board.

4. Disconnect the harness from connector CN1 on the antenna unit and remove the antenna unit.

5. Disconnect the harness from connector CN491 on the relay board.

6. Disconnect the tuner board and audio board from connector CN101 and CN301 on the audio board.

7. Pull out the video audio board, video board, S-video board.

8. Disconnect the DSP board from connector CN601 on the audio board.

Fig.6

Fig.7

Fig.8

Tuner board

CN101　　　CN301　　　Audio input board

Fig.9

Audio board　　CN416　　　CN206

CN303　　　　　　　　　　　　　　CN244

CN201

CN241

Video audio board　　Video board　　S Video board

Fig.10

Video audio board　　Video board　　S Video board

Fig.11

DSP board
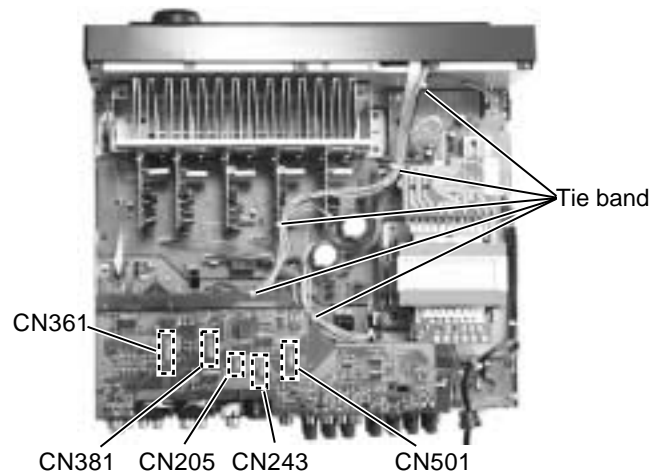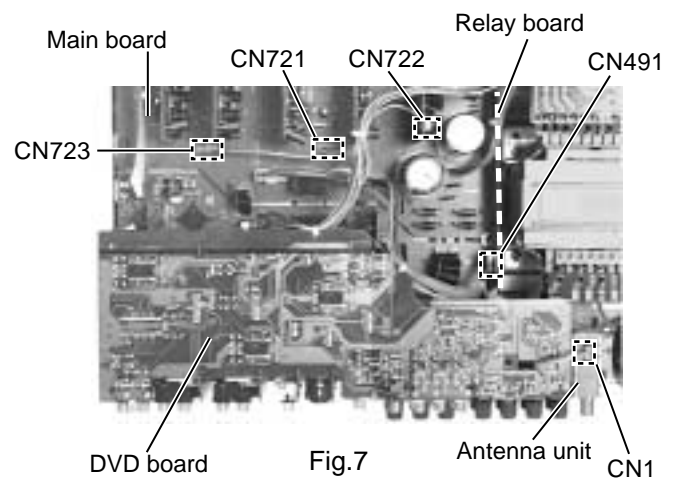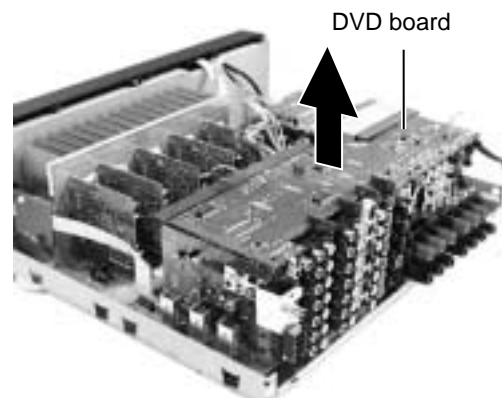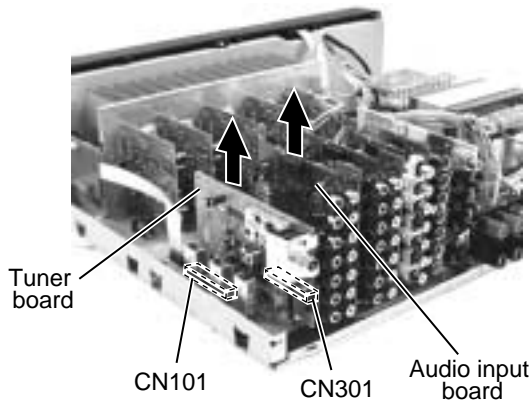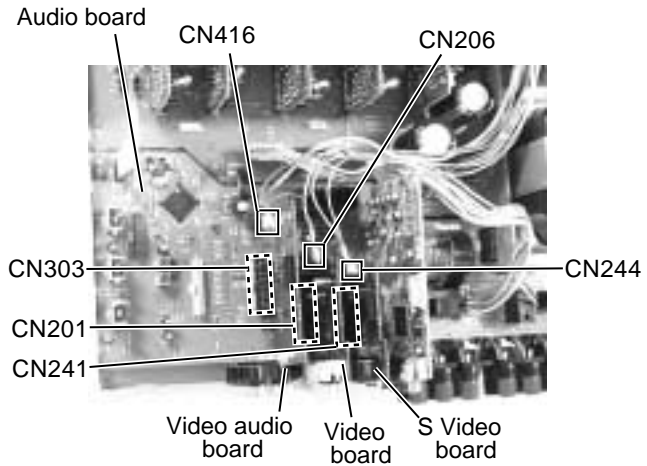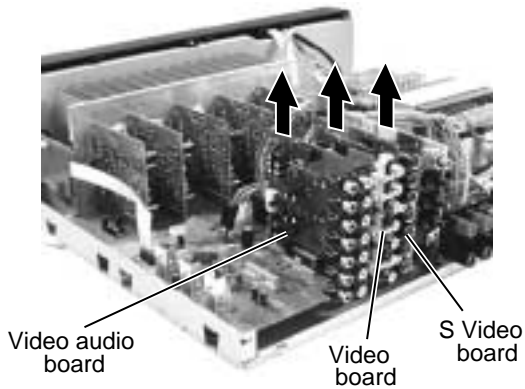
CN601

Fig.12

■ Removing the audio board
(See Fig.13 to 14)

· Prior to performing the following procedure, remove the top cover and the rear panel.

1. Disconnect the harness from connector CN813 and CN814 on the main board.

2. Disconnect the card wire from connector CN931 and CN932 on the audio board.

3. Cut off the tie band fixing the harness.

4. Disconnect the relay board from the audio board and the power supply board. (CN71,CN81)

5. Disconnect the card wire from connector CN831 on the main board.

6. Remove the three screws G attaching the audio board assembly.

7. Remove the screw H attaching the audio board assembly.

Relay board

CN814　CN813　　　CN71

power supply board

Main board

Tie band

Power transformer

Audio board　　CN931/ 932　　CN81　　Power / Fuse board

Fig.13

CN831

G

G　H
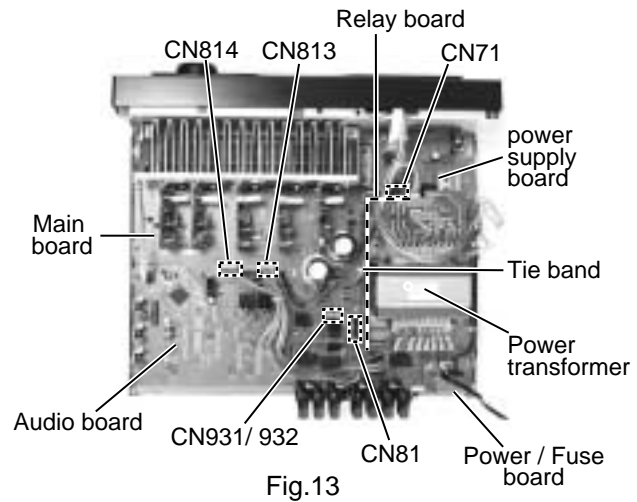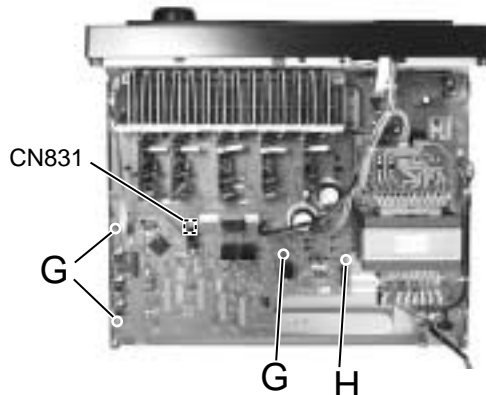
Fig.14

■Removing the main board　(See Fig.15)

・Prior to performing the following procedure, remove the top cover, the rear panel and audio board.

1. Cut off the tie band fixing the harness.

2. Disconnect the harness from connector CN811 on the power supply board respectively.

3. Disconnect the harness from connector CN881 on the main board.

　NOTE:
　In order to prevent the wire of CN881 from touching to the wire of CN813,the wire of CN881 is secured by tape. This is one of the preventive measures for possible troubles of the remote controller.
　When assembling the unit,secure the wire of CN881 with the original tape so as to prevent both wire from touching each other.

4. Remove the four screws I and the two screws J attaching the main board.
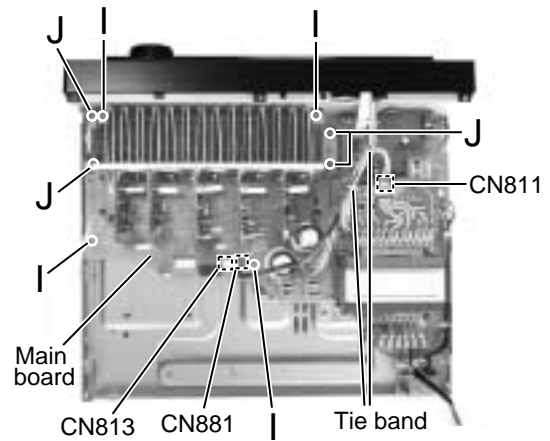
Fig.15

■Removing the Amp board
(See Fig.16 to 17)

1. Remove the two screws L attaching the rear side of main board from the heat sink .

2. Remove the ten screws K attaching each amp board from the heat sink.
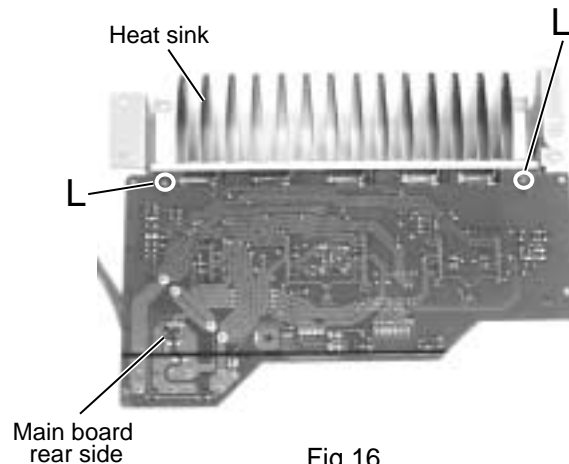
Fig.16
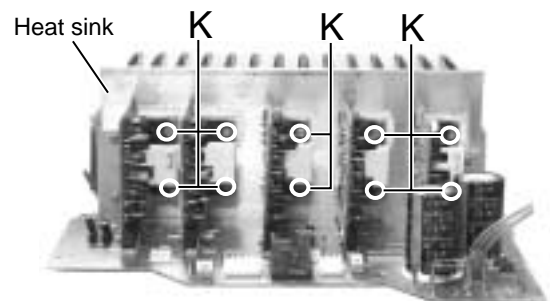
Fig.17

■Removing the power transformer
(See Fig.18)

・ Prior to performing the following procedures, remove the top cover.

1. Unsolder the two harnesses connected to the power transformer.

2. Disconnect the harness from connector CN55 and CN56 on the power transformer board.
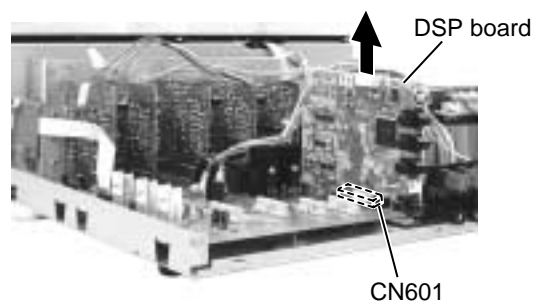
3. Remove the four screws M attaching the power transformer.
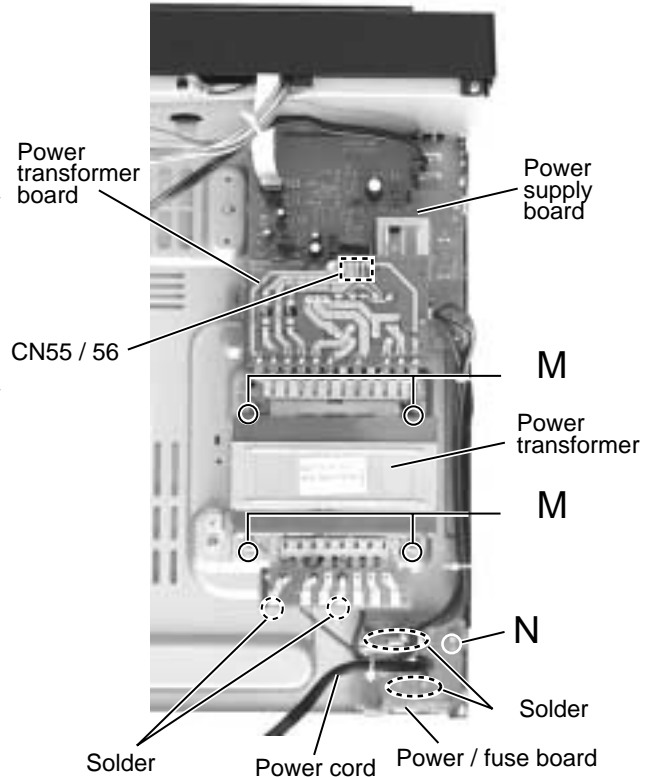
■Removing the power / fuse board
(See Fig.18)

・ Prior to performing the following procedure, remove the top cover and the rear panel.

1. Remove the screw N attaching the power / fuse board.

2. Unsolder the power cord and other harnesses connected to the power / fuse board.

■Removing the power supply board
(See Fig.19 to 20)

・ Prior to performing the following procedure, remove the top cover and the front panel.

1. Remove the one nut attaching the headphone jack of the power supply board on the front side of the body.

2. Disconnect the card wire from connector CN402 on the power supply board.

3. Remove the three screws O attaching the power supply board and pull out the power supply board from the front bracket backward.

4. Unsolder the three harnesses connected to the power supply board.

Power transformer board

Power supply board

CN55 / 56

M

Power transformer

M

N

Solder

Solder

Power cord

Power / fuse board

Fig.18

Power supply board

Headphone jack

Nut

Fig.19

Power supply board

Headphone jack

O

CN402

O

Hook

Tie band

O

Tie band

Solder
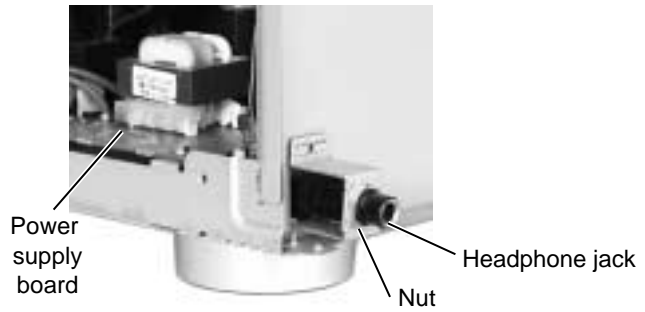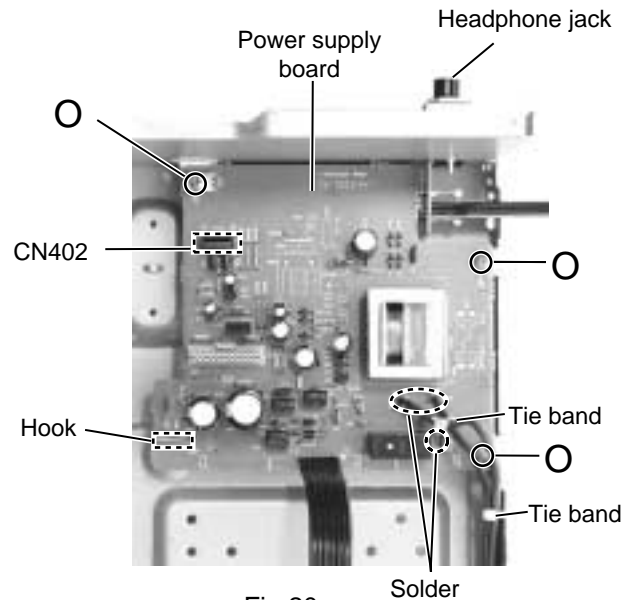
Fig.20

■Removing the system control board / power switch board (See Fig.21 to 23)

・Prior to performing the following procedure, remove the top cover and the front panel assembly.

1. Pull out the volume knob on the front side of the front panel and remove the nut attaching the system control board.

2. Remove the two screws P attaching the power switch board.

3. Remove the two screws Q attaching the switch board.

4. Remove the cords from the three hooks **a**.

5. Remove the eight screws R attaching the system control board on the back of the front panel.

6. On the back of the front panel, release the four joints by pushing the joint tabs inward.
Remove the operation switch panel toward the front.

7. Disconnect the harness from connector CN420 and CN422 on the system control board.

8. Release the two hooks **b** attaching the system control board.

Operation switch panel Nut Front panel assembly

Volume knob

Fig.21

Switch board R R Cords Power switch board R

Q

P

Joint Joint Joint Joint

Hook a

Fig.22

System control board
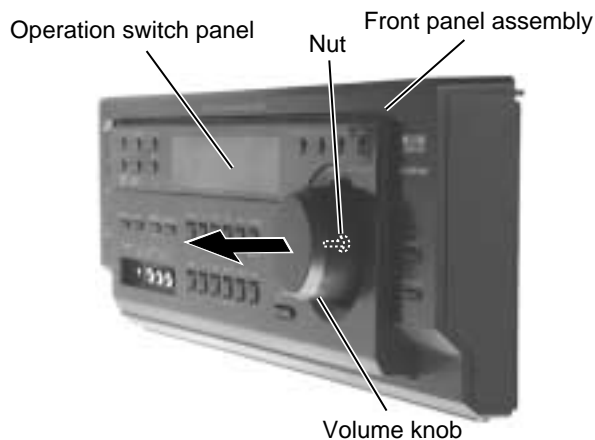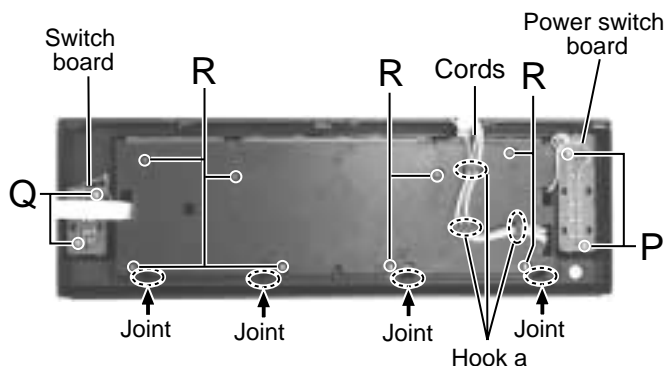
CN420 Hook b Hook b CN422
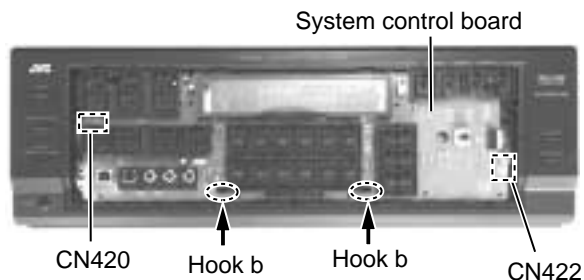
Fig.23

■Matters that require attention during replacement of IC400 (See Fig.24 to 25)

・In case where there is a resistance array:
Both onetime IC and mask IC can be used

・In case where there is no resistance array:
Only mask IC can be used

System control board reverse side

IC400

Fig.24

System control board top view
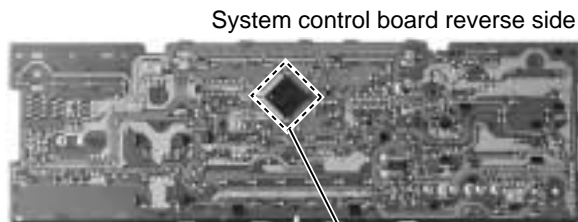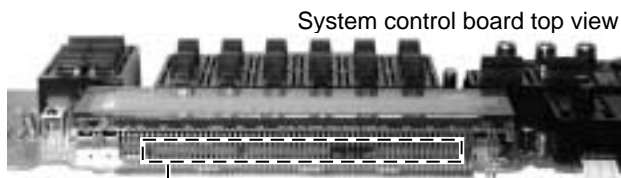
Resistance array Fig.25

Adjustment method

■ Power amplifier section

Adjustment of idling current

Measurement terminal   B2204-B2205(Lch) , B2213-2214(Rch)

Adjustment volume   VR787(Lch) , VR788(Rch)

Attention
This adjustment does not obtain a correct adjustment value immediately after the amplifier is
used (state that an internal temperature has risen).
Please adjust immediately after using the amplifier after turning off the power supply of the
amplifier and falling an internal temperature.

<Adjustment method>

1. Prior to turning the power ON, fully turn the adjusting resistor (VR787(Lch),VR788(Rch)) counterclockwise

   direction and connect the DC voltmeter to the measuring terminal(B2204-B2205(Lch) , B2213-2214(Rch)).

2. Set the surround mode OFF.

3. Adjust the resistor so that the measured value becomes 2mV immediately after turning the power ON.

4. When the idling current has been stable (about 30 minutes after the power is turned ON),
   confirm that the measured value falls within 1.0mV `10mV(2.3mV).

* It is not abnormal though the idling current might not become 0mA even if it is finished to turn variable
  resistance (VR787,VR788) in the direction of counterclockwise.

Heat sink

B2213, B2214 (Rch)

VR788 (Rch)

VR787 (Lch)

B2204, B2205 (Lch)
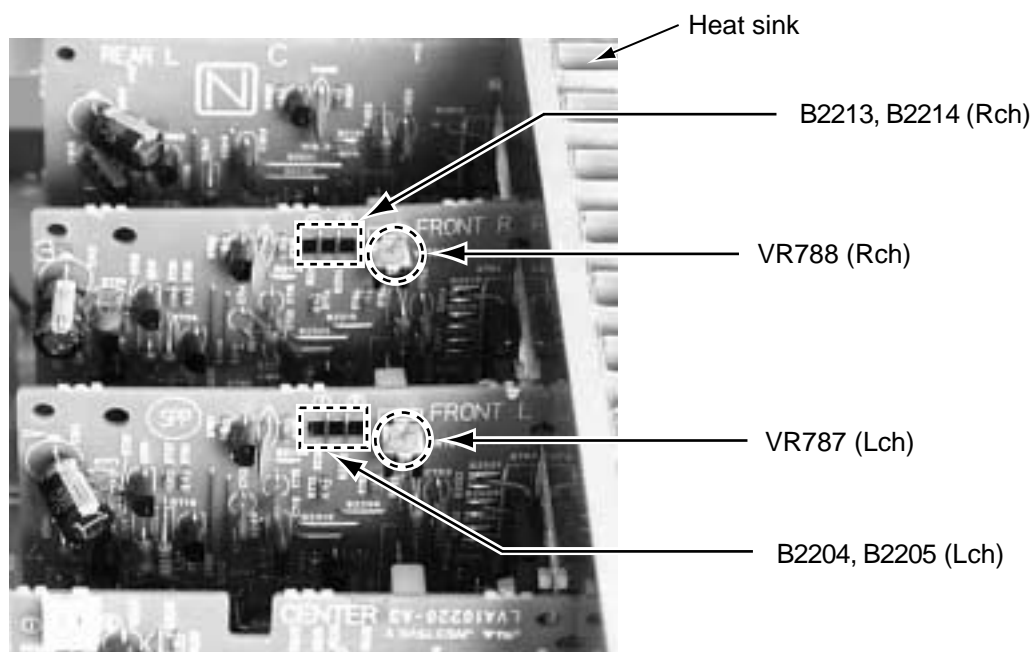
Self-diagnose function

1. Detection of abnormal power supply and voltage

- When the power is turned ON, if an abnormality is detected during the signal input at the A/D port (IC901, pin 2-5, 7) for one second continuously, the status will become STANDBY mode immediately.

- When the power is turned ON again, detection of abnormal power supply and voltage will not be carried out during the first 4 seconds.

- Given below is a list of threshold values at the detection of abnormalities.

	At abnormal state (Low voltage)	At abnormal state	At abnormal state (High voltage)
Pin 2 Micro-computer+5V	Analog value 0 - 2.2V	Analog value 2.2 - 2.8V	Analog value 2.8 - 5.0V
Pin 3 Digital+5V	Analog value 0 - 2.2V	Analog value 2.2 - 2.8V	Analog value 2.8 - 5.0V
Pin 4 Analog+5V	Analog value 0 - 2.2V	Analog value 2.2 - 2.8V	Analog value 2.8 - 5.0V
Pin 5 +12V	Analog value 0 - 2.2V	Analog value 2.2 - 2.8V	Analog value 2.8 - 5.0V
Pin 7 Tuner+9V	Analog value 0 - 2.2V	Analog value 2.2 - 2.8V	Analog value 2.8 - 5.0V

2. Initial setting on ship

- To gain the initial setting on ship, put the power plug in the socket while pressing DOWN key and UP key together simultaneously, then turn the power ON.

3. Test mode

- To enter the test mode, put the power plug in the socket while pressing EFFECT key and UP key together simultaneously, then turn the power ON.

- Workings of test mode:
  ① All FLs are turned ON for 3 seconds. (the FLs, which are divided in two groups, are turned ON alternatively)
  ② Faster volume UP/DOWN operation can be achieved with the remote controller.

- When the power is turned OFF, the test mode will be released.

- The FL display returns to normal after the three seconds. Then the STANDBY LED is turned ON (flashing ON and OFF for each one second) to show the present status being a test mode.

4. Self-diagnose

• To enter the self-diagnose mode, put the power plug in the socket while pressing SETTING key and UP key together simultaneously, then turn the power ON. With the UP/DOWN key operation, DSP microcomputer, ROM No.of system microcomputer as well as working status of DSP can be displayed for five seconds. While the working status is being displayed, the followings items can be switched with the UP/DOWN key operation.

VERSION of system microcomputer → Local microcomputer CH0 →
Local microcomputer CH01 → Local microcomputer CH2 →
Local microcomputer CH3 → Local microcomputer CH4

• When the power is turned OFF, the self-diagnose mode will be released.
• During the self-diagnose mode, the STANDBY LED is turned ON .
                          (flashing ON for one second then OFF for three seconds)
• FL transient display will be carried out as follows. When the transient display is not carried out, normal display/workings are carried out.

Upper 1 2 3 4 5 digits

Lower 1 2 3 4 5 6 7 8 9 10 digits
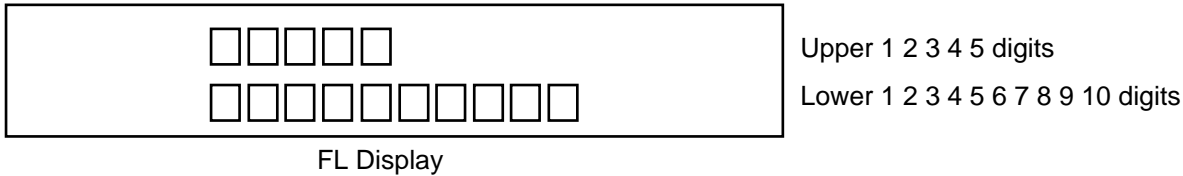
FL Display

S 0 0 1 1
2 0 0 0 1 2 0 9 0 0   • Information on VERSION of system microcomputer (IC901)
                      Example : VER1.1 2000/12/9
↓

D 0 0
    • Display of communication information on DSP microcomputer (IC581)
↓

D 0 1
    • Display of communication information on DIR AK4112A (IC551)
↓

D 0 2
    • Display of communication information on DSP XCA56367 (IC501)
↓

D 0 3
    • Display of communication information on CODEC AK4527 (IC571)
↓

D 0 4 1 1
2 0 0 0 1 2 0 9 0 0   • Information on VERSION of DSP microcomputer (IC581)
                      Example :VER1.1 2000/12/9

Description of major ICs

■ AK4527 (IC571) : A/D,D/A Converter

1.Pin layout

Top pins (left to right, 44–34): LOOP1, LOOP0/SDA/CDTI, DIF1/SCL/CCLK, DIF0/CSN, P/S, MCLK, DZF1, AVSS, AVDD, VREFH, VCOM

Left side (pins 1–11):
Pin	Signal
1	SDOS
2	OCKS
3	MIS
4	BCLK
5	LRCK
6	SDTI1
7	SDTI2
8	SDTI3
9	SDTO
10	DAUX
11	DFS

Right side (pins 33–23):
Pin	Signal
33	VREFL
32	RIN+
31	RIN-
30	LIN+
29	LIN-
28	ROUT1
27	LOUT1
26	ROUT2
25	LOUT2
24	ROUT3
23	LOUT3

Bottom pins (12–22): DEM1, DEM0, MCKO, DVDD, DVSS, PD, XTS, ICKS1, ICKS0, CAD1, CAD0

2.Block diagram

Block Diagram (DIR and AC-3) DSP are external parts)

RX-9010VBK

AK4527(1/2)

No.	Pin name	I/O	Function
1	SDOS	I	SDTO Source select pin "L" : Internal ADC output, "H" : DAUX input ORed with serial control register if P/S="L".
2	OCKS	I	MCKO Clock frequency select pin "L" : MCLK, "H" : MCLK/2. ORed with serial control register if P/S= "L".
3	MIS	I	Connect to GND
4	BICK	I	Audio serial data clock pin
5	LRCK	I/O	Input/Output channel clock pin
6	SDTI1	I	DAC1 Audio serial data input pin
7	SDTI2	I	DAC2 Audio serial data input pin
8	SDTI3	I	DAC3 Audio serial data input pin
9	SDTO	O	Audio serial data output pin
10	DAUX	I	AUX Audio serial data input pin
11	DFS	I	Double speed sampling mode pin "L" : Normal speed, "H" : Double speed, the ADC is powered down. ORed with serial control register if P/S="L".
12	DEM1	I	De-emphasis pin ORed with serial control register if P/S="L"
13	DEM0	I	De-emphasis Pin ORed with serial control register if P/S="L"
14	MCKO	O	Master clock output pin
15	DVDD	-	Digital power supply pin
16	DVSS	-	Digital ground pin
17	$\overline{PD}$	I	Power-down & Reset pin When "L", the AK4527 is powered-down and the control registers are reset to default state. If the state of CAD0-1 changes, then the AK4527 must be reset by PDN.
18	XTS	I	X'tal oscillator Select/Test mode pin "H" : X'tal Oscillator selected "L" : External clock source selected
19	ICKS1	I	Input clock select 1 pin
20	ICKS0	I	Input clock select 0 pin
21	CAD1	I	Chip address pin Used during the serial control mode.
22	CAD0	I	Chip address pin Used during the serial control mode.
23	LOUT3	O	Lch #3 analog output pin
24	ROUT3	O	Rch #3 analog output pin
25	LOUT2	O	Lch #2 analog output pin
26	ROUT2	O	Rch #2 analog output pin
27	LOUT1	O	Lch #2 analog output pin
28	ROUT1	O	Rch #1 analog output pin
29	LIN-	I	Lch analog negative Input Pin
30	LIN+	I	Lch analog positive Input Pin
31	RIN-	I	Rch analog negative Input Pin
32	RIN+	I	Rch analog positive Input Pin

3.Pin function (2/2)

No.	Pin Name	I/O	Function
33	VREFL	I	Negative voltage reference Input pin, AVSS
34	VCOM	O	Common voltage output pin,AVDD/2 Large external capacitor around 2.2uF is used to reduce power-supply noise
35	VREFH	I	Positive voltage reference input pin,AVDD
36	AVDD	-	Analog power supply pin
37	AVSS	-	Analog ground pin
38	XTI	I	X'tal input pin
39	XTO	O	X'tal output pin if XTS="H"
	MCKI	I	External master clock input pin if XTS="L"
40	P/S	I	Parallel/Serial select pin "L" : Serial control mode, "H" : Parallel control mode
41	DIF0	I	Audio data interface format pin in parallel mode
	$\overline{CS}$	I	Chip select pin in serial mode
42	DIF1	I	Audio data interface format pin in parallel mode
	CCLK	I	Control data clock pin in serial mode
43	LOOP0	I	Loop back mode pin in parallel mode Enables digital loop-back from ADC to 3 DACs.
	CDTI	I	Control data input pin in serial mode
44	LOOP1	I	Loop back mode pin in parallel mode Enable all 3 DAC channels to be input from SDTII.
	CDTO	O	Control data output pin in serial mode

■ BA15218F(IC303, IC304, IC372, IC385, IC384, IC386) : OP AMP.

OUT1	1		8	Vcc
-IN1	2		7	OUT2
+IN1	3		6	-IN2
VEE	4		5	+IN2
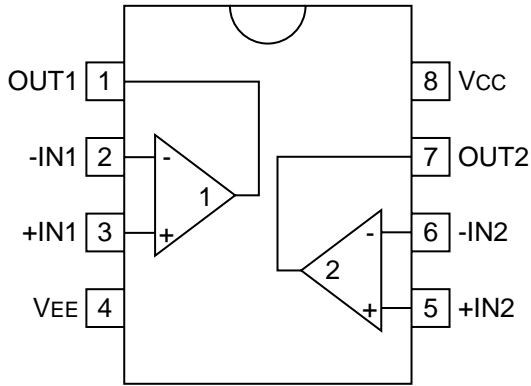
■ BA7625 (IC201, IC242) : Video selector
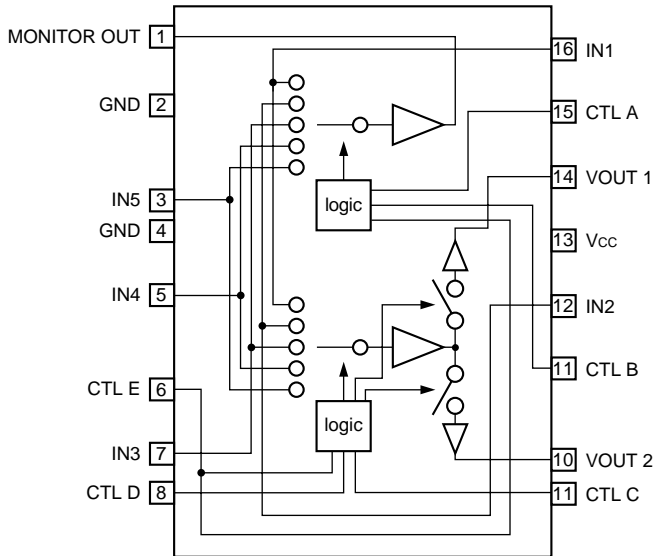
A	B	E	MONITOR OUT
L	L	*	IN1
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	VOUT1
L	L	*	--
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	VOUT2
L	L	*	IN1
H	L	*	--
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

■ BA7626 (IC241) : Video selector
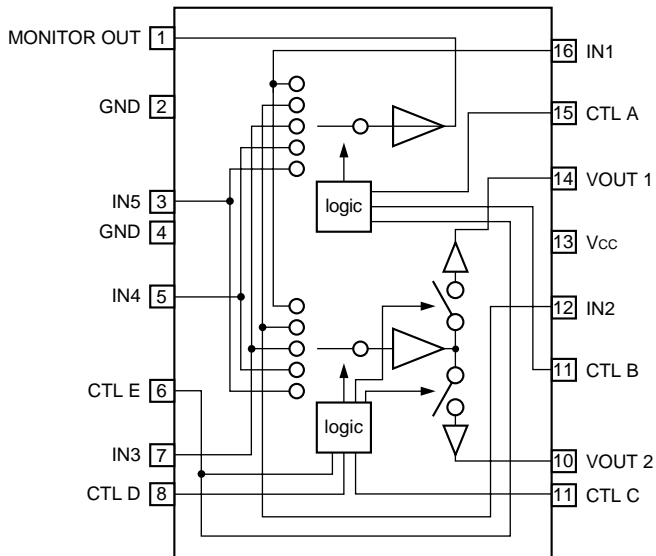
A	B	E	MONITOR OUT
L	L	*	IN1
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	VOUT1
L	L	*	--
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	VOUT2
L	L	*	IN1
H	L	*	--
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

■ BU2092(IC402):PORT EXPANDER

1.Terminal Layout
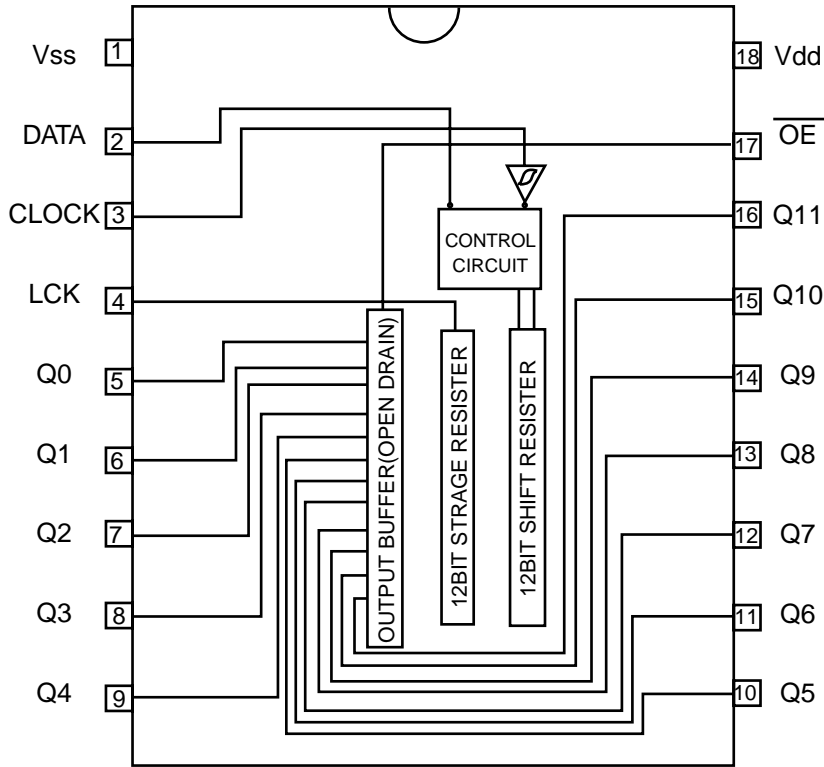
2.Pin Function

Pin No.	Symbol	I/O	Function
1	Vss	-	Connect to GND
2	DATA	I	Serial Data input
3	CLOCK	I	Shift Clock of Data
4	LCK	I	Latch Clock of Data
5~16	Q0~Q11	O	Parallel Data Output
			<table><tr><td>Latch Data</td><td>L</td><td>H</td></tr><tr><td>OUTPUT</td><td>ON</td><td>OFF</td></tr></table>
17	$\overline{OE}$	I	Output Enable
18	Vdd	-	Power Supply

■ MB90088 (IC203) : On screen display controller

1.Terminal Layout

```
        YIN  ┌─┐  ● 1        28 ┌─┐  AVss
        VIN  └─┘    2        27 └─┘  YOUT
        CIN  ┌─┐    3        26 ┌─┐  VOUT
       AVcc  └─┘    4        25 └─┘  COUT
       IOUT  ┌─┐    5        24 ┌─┐  CS
        VOC  └─┘    6        23 └─┘  SIN
        Vcc  ┌─┐    7        22 ┌─┐  SCLK
        EXS  └─┘    8        21 └─┘  TEST
         XS  ┌─┐    9        20 ┌─┐  BOUT
      HSYNC  └─┘   10        19 └─┘  ROUT
      VSYNC  ┌─┐   11        18 ┌─┐  GOUT
     EXHSYN  └─┘   12        17 └─┘  VOB
     EXVSYN  ┌─┐   13        16 ┌─┐  XD
        Vss  └─┘   14        15 └─┘  EXD
```
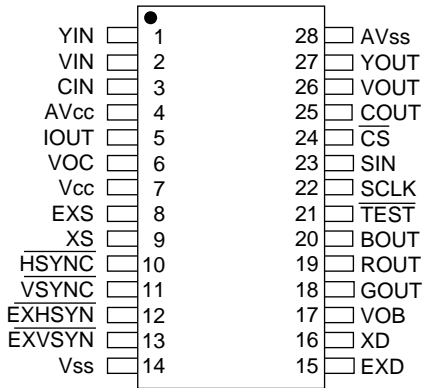
2.Block Diagram
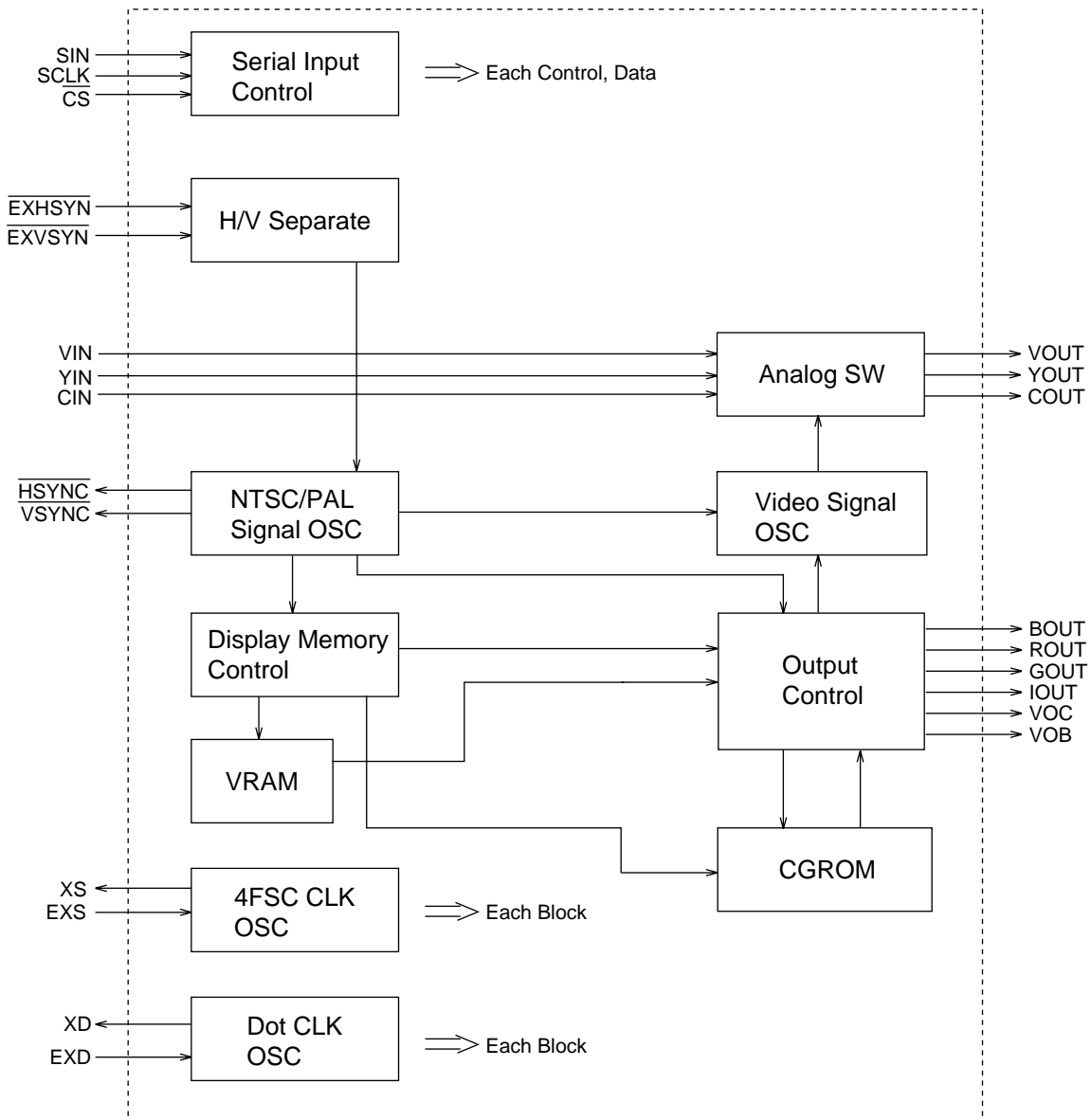
3.Functions

pin no	Symbol	I/O	Function
1	YIN	I	Lux signal Input terminal for Superinpause indication
2	VIN	I	Composite video signal input terminal for Superinpause indication
3	CIN	I	Contrast signal input terminal for Superinpause indication
4	AVcc	-	Analog power supply terminal
5	IOUT	O	Color (Lux) signal output terminal
6	VOC	O	Character output terminal
7	Vcc	-	Power supply terminal
8	EXS	I	Clock generater outside circuit terminal for color burst
9	XS	O	
10	$\overline{HSYNC}$	O	Horizontal signal output terminal
11	$\overline{VSYNC}$	O	Vertical signal output terminal
12	$\overline{EXHSYN}$	I	EXT horizontal signal input terminal
13	$\overline{EXVSYN}$	I	EXT vertical signal input terminal
14	Vss	-	GND
15	EXD	I	Dot clock generater outside circuit signal terminal for indication
16	XD	O	
17	VOB	O	Character & background signal output terminal
18	GOUT	O	Color signal (Green, Red, Blue)
19	ROUT		
20	BOUT		
21	$\overline{TEST}$	I	Test signal input terminal
22	SCLK	I	Shift clock input terminal for serial transmission
23	SIN	I	Serial data input terminal
24	$\overline{CS}$	I	Chip select terminal
25	COUT	O	Contrast signal output terminal
26	VOUT	O	Composite video signal output terminal
27	YOUT	O	Lux signal output terminal
28	AVss	-	Analog GND terminal

■MAX4018ESD (IC390) : OP AMP.

```
ENA   □ 1        16 □  OUTC
ENC   □ 2        15 □  INC-
ENB   □ 3        14 □  INC+
Vcc   □ 4        13 □  VEE
INA+  □ 5        12 □  INB+
INA-  □ 6        11 □  INB-
OUTA  □ 7        10 □  OUTB
N.C.  □ 8         9 □  N.C.
```
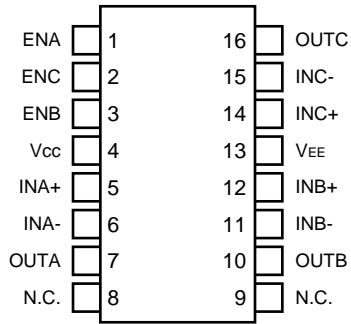
■NJM2285V-W(IC202) : 2-INPUT 3CHANNEL VIDEO SWITCH

IN1A	GND1	IN2B	V	CTL2	IN2A	GND3	IN3B
16	15	14	13	12	11	10	9

BIAS TYPE

CLAMP TYPE

CLAMP TYPE

1	2	3	4	5	6	7	8
IN1B	CTL1	OUT1	GND2	OUT2	OUT3	CTL3	IN3A
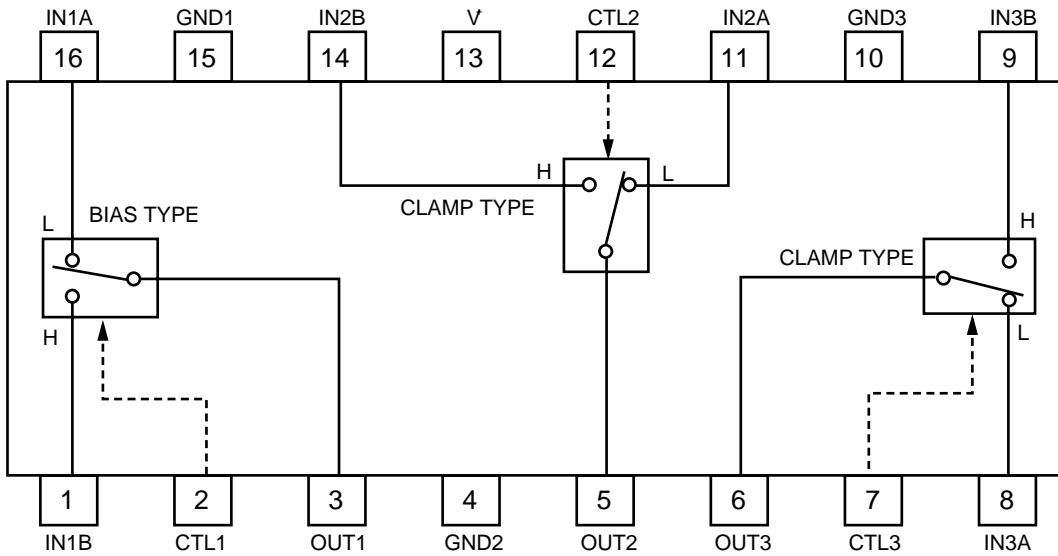
■NJM2406F-X(IC387): SINGLE-SUPPLY COMPARATORS

```
┌──────────┐
│ 1      5 │
│ 2        │
│ 3      4 │
└──────────┘
```

PIN FUNCTION
1. -INPUT
2. GND
3. +INPUT
4. OUTPUT
5.V$^+$
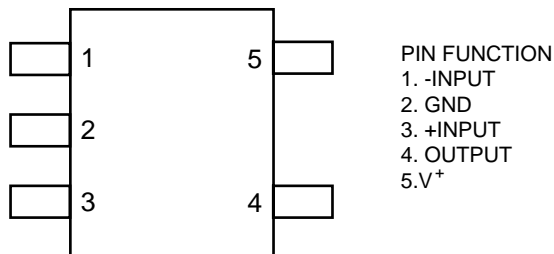
■ NJM4580D (IC301) : LPF, Mic and H.phone Amp.

1.Terminal layout

```
        ┌───────────────┐
        │      ○        │
A  OUT  │1│           │8│  V⁺
        │               │
A  -IN  │2│    ╱A  B╲  │7│  B  OUT
        │  ╱A╲   ╱B╲    │
A  +IN  │3│ ╲ ╱   ╲ ╱ │6│  B  -IN
        │               │
V ⁻     │4│           │5│  B  +IN
        └───────────────┘
```

(TOP VIEW)

2.Block diagram

V⁺

INPUT

−

+

OUTPUT

V⁻
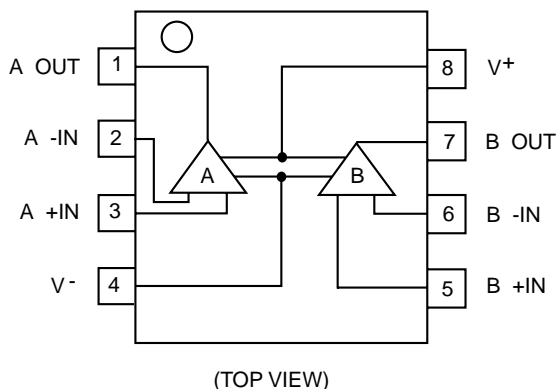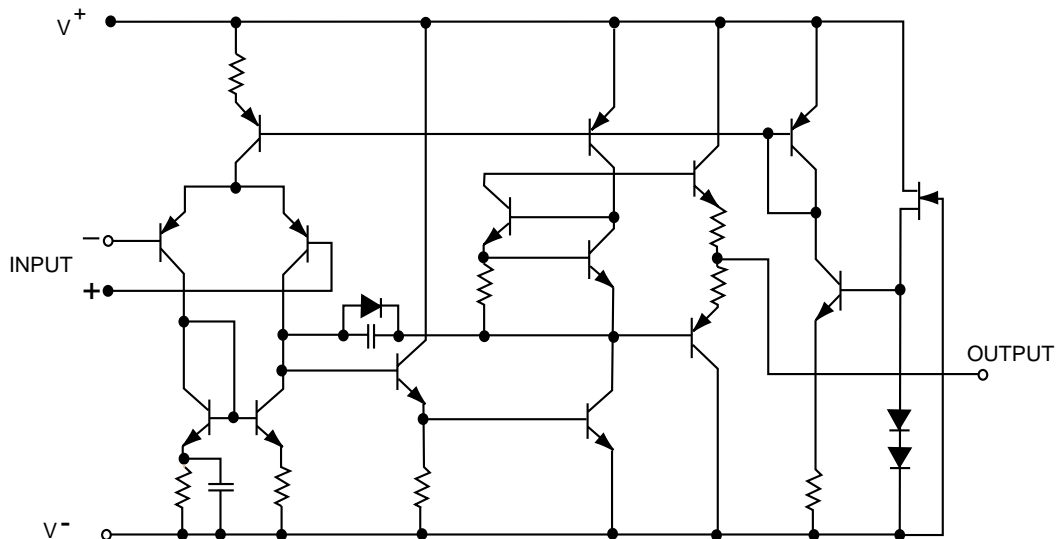
■ NJU7241F33(IC411) : VOLTAGE REGULATOR

```
      ┌───────────────┐
  ───┤1           5├───
      │               │
  ───┤2              │
      │               │
  ───┤3           4├───
      └───────────────┘
```
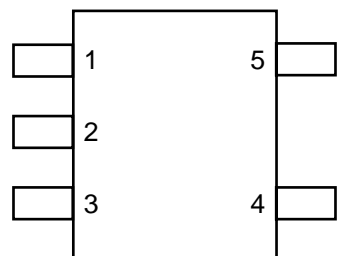
PIN FUNCTION
1. GND
2. V$_{IN}$
3. V$_{OUT}$
4. +NC
5. STB

■ PCM2702E-X (IC410) : DIGITAL / ANALOG CONVERTER

1.Pin layout

2. Block diagram

3.Pin function

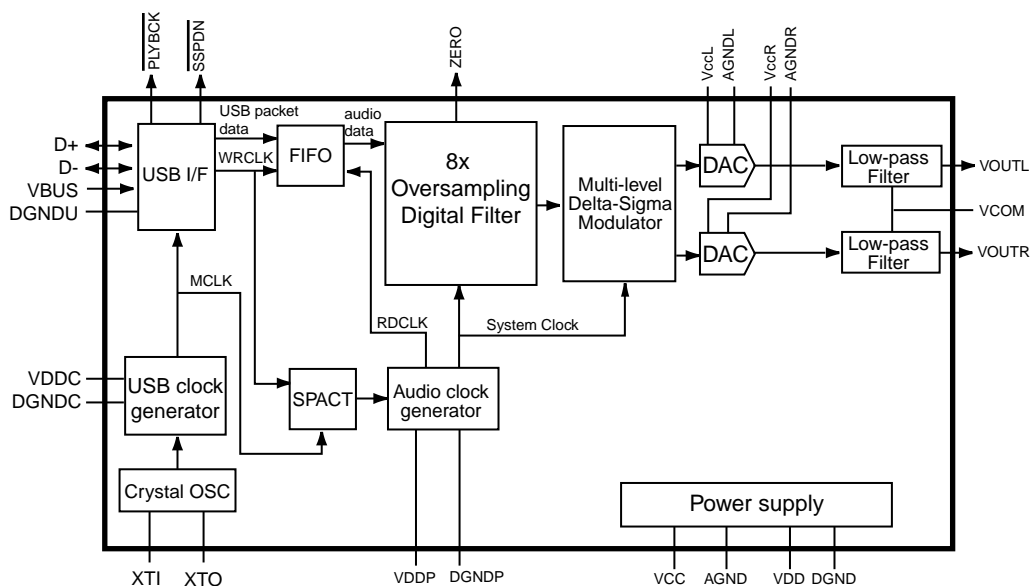| PIN	Symbol	I/O	Function	
1	XTI	IN	Crystal Oscillator Input.	(1)
2	VDDC	-	Digital Power Supply for Clock Generator, +3.3V.	
3	DGNDC	-	Digital Ground for Clock Generator.	
4	VDD	-	Digital Power Supply, +3.3V.	
5	DGND	-	Digital Ground.	
6	D+	I/O	USB Differential Input/Output Plus.	
7	D-	I/O	USB Differential Input/Output Minus.	
8	VBUS	IN	USB Bus Power (This pin NEVER consumes the USB bus power).	(2)
9	DGNDU	-	Digital Ground for USB Transceiver.	
10	PLYBCK	OUT	Playback flag, active LOW. (LOW: playback, HIGH: idle).	
11	SSPND	OUT	Suspend flag, active LOW. (LOW: suspend, HIGH: operational).	
12	ZERO	OUT	Zero flag, (LOW: Normal, HIGH: ZERO).	
13	TEST3	IN	Test pin 3. Connect to digital ground.	(2)
14	TEST2	IN	Test pin 2. Connect to digital ground.	(2)
15	TEST1	IN	Test pin 1. Connect to digital ground.	(2)
16	TEST0	IN	Test pin 0. Connect to digital ground.	(2)
17	VccR	-	Analog Supply for R-channel, +5V.	
18	AGNDR	-	Analog Ground for R-channel.	
19	VOUTR	OUT	Analog Output for R-channel.	
20	AGND	-	Analog Ground.	
21	VCOM	-	Common for DAC.	
22	Vcc	-	Analog Supply, +5V.	
23	VOUTL	OUT	Analog output for L-channel.	
24	AGNDL	-	Analog Ground for L-channel.	
25	VccL	-	Analog Supply for L-channel, +5V.	
26	AGNDP	-	Analog Ground for PLL.	
27	VccP	-	Analog Supply for PLL, +5V.	
28	XTO	OUT	Crystal Oscillator Output.	

Note:

(1) 3.3V tolerant.

(2) Schmitt trigger input with internal pull-down, 5V tolerant.

■ TC9162AN (IC380) : ANALOG SWITCH

VSS	1	28	VDD	
L-S1	2	27	R-S1	
L-S2	3	26	R-S2	
L-COM1	4	25	R-COM1	
L-S3	5	24	R-S3	
L-S4	6	23	R-S4	
L-COM2	7	22	R-COM2	
L-S5	8	21	R-S5	
L-S6	9	20	R-S6	
L-COM3	10	19	R-COM3	
L-S7	11	18	R-S7	
L-COM4	12	17	R-COM4	
ST	13	16	DATA	
GND	14	15	CK	

VSS (1) GND (14) VDD (28)

L-S1 (2) L-S2 (3) L-COM1 (4) L-S3 (5) L-S4 (6) L-COM2 (7) L-S5 (8) L-S6 (9) L-COM3 (10) L-S7 (11) L-COM4 (12) ST (13)

LEVEL SHIFTER LATCH CIRCUIT LATCH CIRCUIT LEVEL SHIFTER

SHIFT REGISTER

R-S1 (27) R-S2 (26) R-COM1 (25) R-S3 (24) R-S4 (23) R-COM2 (22) R-S5 (21) R-S6 (20) R-COM3 (19) R-S7 (18) R-COM4 (17) DATA (16) CK (15)

RX-9010VBK

■**TC9163AF-X (IC371, IC392) : ANALOG SWITCH**

Pin	Name	Pin	Name
1	VSS	28	VDD
2	L-S1	27	R-S1
3	L-S2	26	R-S2
4	L-S3	25	R-S3
5	L-COM1	24	R-COM1
6	L-S4	23	R-S4
7	L-S5	22	R-S5
8	L-S6	21	R-S6
9	L-COM2	20	R-COM2
10	L-S7	19	R-S7
11	L-S8	18	R-S8
12	L-COM3	17	R-COM3
13	ST	16	DATA
14	GND	15	CK

1-24
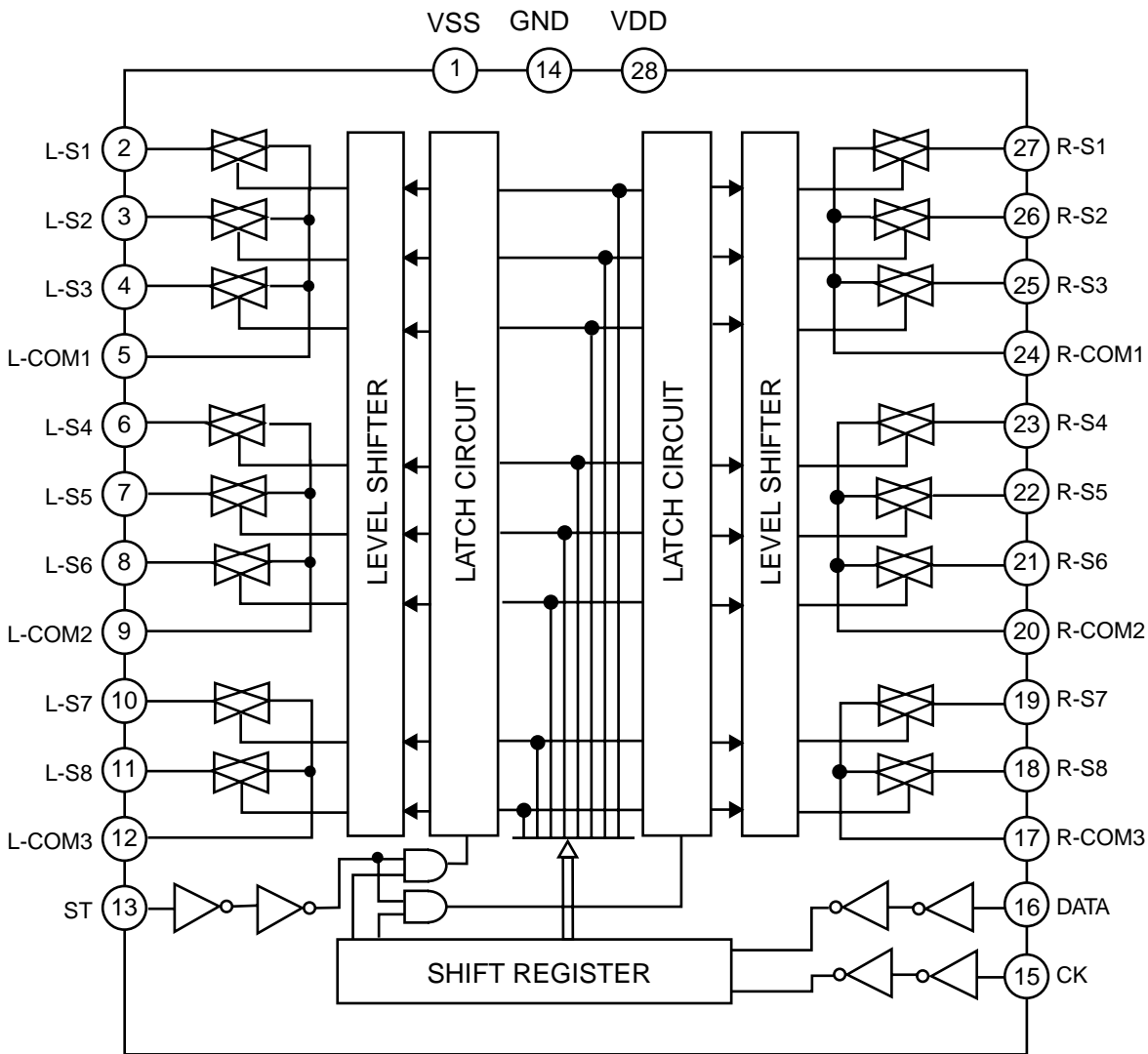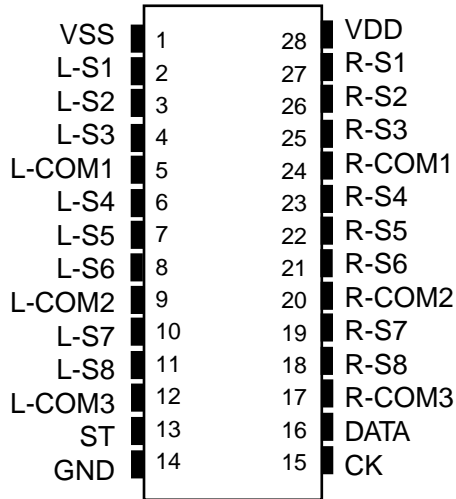
■ TC9164AF-X (IC302, IC391) : ANALOG SWITCH

■ TC9459F (IC381, IC382, IC383, IC393) : Electronic volume control

1.Terminal layout
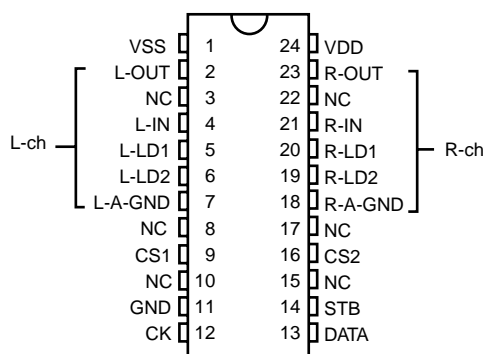
2. Block diagram
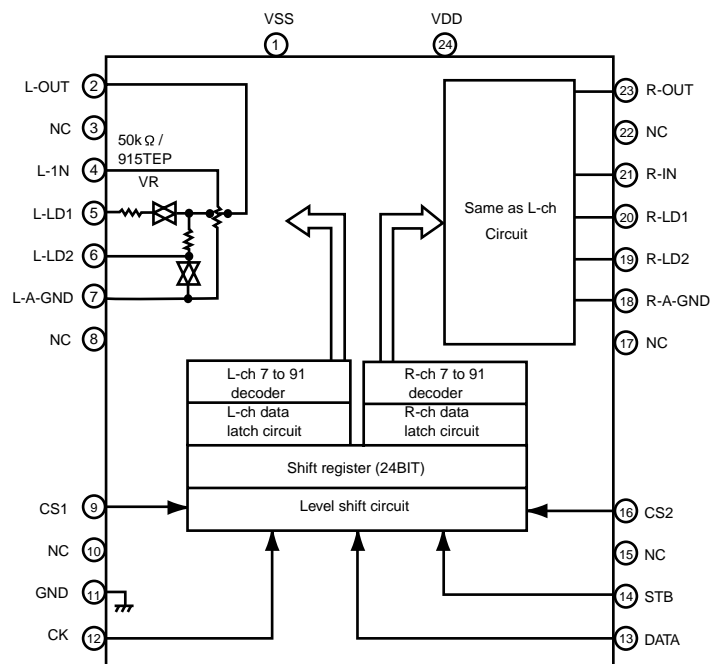
3.Pin function

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	VSS	Negative power supply pin	13	DATA	Data input pin
2	L-OUT	Volume output pin	14	STB	Strobe input pin
3	NC	No connection	15	NC	No connection
4	NC	No connection	16	CS2	Chip select input pin
5	L-LD1	Loudness tap output pin	17	NC	No connection
6	L-LD2	Loudness tap output pin	18	R-A-GND	Analog GND pin
7	L-A-GND	Analog GND pin	19	R-LD2	Loudness tap output pin
8	NC	No connection	20	R-LD1	Loudness tap output pin
9	CS1	Chip select input pin	21	R-IN	Volume input pin
10	NC	No connection	22	NC	No connection
11	NC	No connection	23	R-OUT	Volume output pin
12	CK	Clock input pin	24	VDD	Positive power supply pin

■ PQ3DZ53 (IC583) : Regulator IC
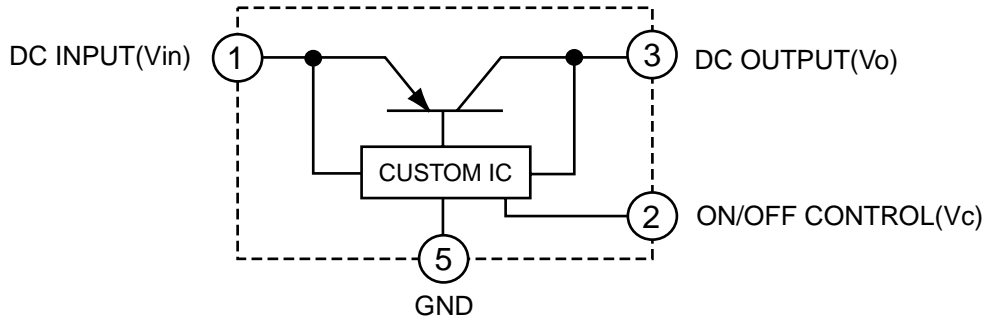
■ TC74HC4053AF (IC388, IC389) : MULTIPLEXER
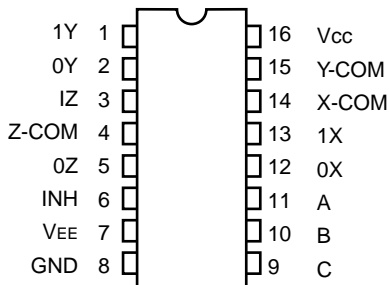
CONTROL INPUTS			
INHIBIT	C	B	A
L	L	L	K
L	L	L	H
L	L	H	K
L	L	H	H
L	H	L	K
L	H	L	H
L	H	H	K
L	H	H	H
H	X	X	X

X: Don't Care.

■ W24L010AJ-12 (IC511) : CMOS STATIC RAM

1. Pin layout
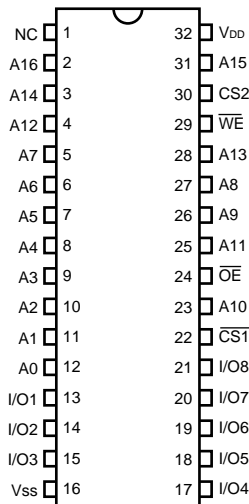
2. Block diaglam

3. Pin function

SYMBOL	DESCRIPTION
A0 - A16	Address Input
I/O1 - I/O8	Data Input/Output
$\overline{CS1}$, CS2	Chip Select Inputs
$\overline{WE}$	Write Enable Input
$\overline{OE}$	Output Enable Input
VDD	Power Supply
Vss	Ground
NC	No Connection

RX-9010VBK
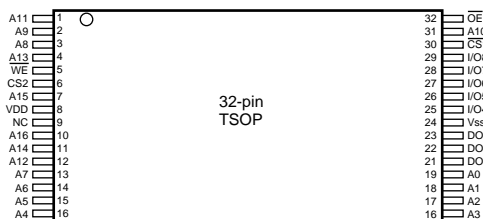
■ UPD784215AGC132(IC581) : UNIT CPU

1.Pin layout

```
        75   ~   51
 76                50

  ↕                ↕

|100               26
     1   ~   25
```
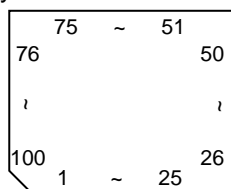
2.Pin function

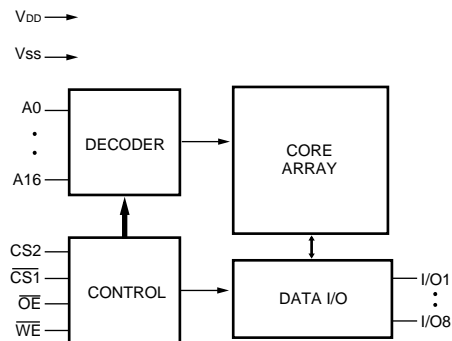| Pin No.	Symbol	I/O	Function
1~8		-	Non connect
9	VDD	-	Power supply terminal
10	X2	-	Connecting the crystal oscillator for system main clock
11	X1	I	Connecting the crystal oscillator for system main clock
12	VSS	-	Connect to GND
13	XT2	-	Connecting the crystal oscillator for system sub clock
14	XT1	I	Connect VSS
15	$\overline{\text{RESET}}$	I	System reset signal input
16	AUTO	I	Output of DSP to general-purpose port
17	ERR	I	Output of DSP to general-purpose port
18	Fz96k	I	Output of DSP to general-purpose port
19~22	P03~P06	I	Output of DSP to general-purpose port
23	AVDD	-	Power supply terminal
24	AV REF0	-	Connect to GND
25~32	P10~P17	-	Connect to GND
33	AVSS	-	Connect to GND
34,35	P130, P131	O	Non connect
36	AV REF1	-	Power supply terminal
37,38	RX, TX	O	Not use
39		O	Non connect
40	DSPCOM	I	Communication port from IC901
41	DSPSTS	O	Status communication port to IC901
42	DSPCLK	I	Clock input from IC901
43	DSPRDY	I	Ready signal input from IC901
44		O	Non connect
45,46	MIDIO_IN/OUT	I/O	Interface I/O terminal with microcomputer
47	$\overline{\text{MICK}}$	O	Interface I/O terminal with microcomputer of clock signal
48	HREQ	I	HREQ
49	SS	O	System slave select
50,51		-	Non connect
52	$\overline{\text{DSP\_RST}}$	O	Reset signal output of DSP
53		-	Non connect
54	$\overline{\text{D\_CS}}$	O	Chip select output
55		-	Non connect
56	PD/ DIR	O	Reset signal output
57~63		-	Non connect
64,65	CDTI/CDTO	O/I	Interface I/O terminal with microcomputer
66	$\overline{\text{CCLK}}$	O	Interface I/O terminal with microcomputer of clock signal
67	$\overline{\text{CS}}$	O	CS
68~70		-	Non connect
71	$\overline{\text{PD}}$	O	Reset signal output
72	GND	-	Connect to GND
73~75		-	Non connect
76	EQ	O	EQ
77	CTR TONE	O	CENTER TONE
78	3D	O	3D-Phonic
79,80		-	Non connect
81	VDD	-	Power supply
82,83		-	Non connect
84	ANA_TT	O	Analog./T.TONE
85	LEF_MIX	O	Select 1
86	LEF_OUT	O	Select 2
87	MIX_OUT	O	Select 3
88	$\overline{\text{S\_MUTE}}$	O	S.MUTE
89~93		-	Non connect
94	TEST	-	Test terminal
95~100		-	Non connect

■ LC72136N (IC121) : PLL frequency synthesizer

1. Pin layout

```
       XT  | 1      22 | XT
     FM/AM | 2      21 | GND
        CE | 3      20 | LPFOUT
        DI | 4      19 | LPFIN
     CLOCK | 5      18 | PD
        DO | 6      17 | VCC
 FM/ST/VCO | 7      16 | FMIN
     AM/FM | 8      15 | AMIN
           | 9      14 |
           | 10     13 | IFCONT
      SDIN | 11     12 | IFIN
```

2. Block diagram
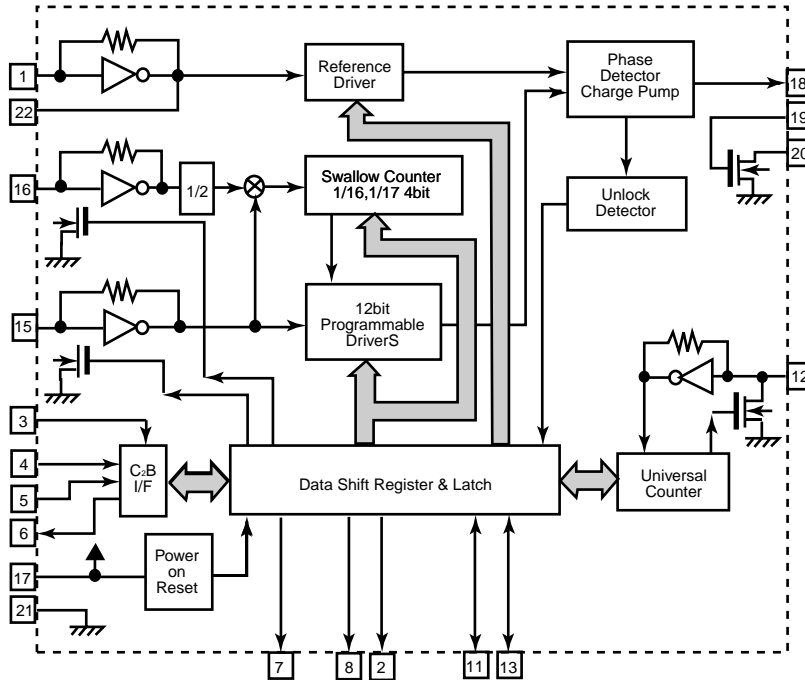
3. Pin function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XT	I	X'tal oscillator connect (75kHz)	12	IFIN	I	IF counter signal input
2	FM/AM	O	LOW:FM mode	13	IFCONT	O	IF signal output
3	CE	I	When data output/input for 4pin(input) and 6pin(output): H	14		-	Not use
4	DI	I	Input for receive the serial data from controller	15	AMIN	I	AM Local OSC signal output
5	CLOCK	I	Sync signal input use	16	FMIN	I	FM Local OSC signal input
6	DO	O	Data output for Controller Output port	17	VCC	-	Power suplly(VDD=4.5-5.5V) When power ON:Reset circuit move
7	FM/ST/VCO	O	"Low": MW mode	18	PD	O	PLL charge pump output(H: Local OSC frequency Height than Reference frequency. L: Low Agreement: Height impedance)
8	AM/FM	O	Open state after the power on reset	19	LPFIN	I	Input for active lowpassfilter of PLL
9	LW	I/O	Input/output port	20	LPFOUT	O	Output for active lowpassfilter of PLL
10	MW	I/O	Input/output port	21	GND	-	Connected to GND
11	SDIN	I/O	Data input/output	22	XT	I	X'tal oscillator(75KHz)

■ LA1838(IC102): FM AM IF AMP&detector, FM MPX decoder

1. Block Diagram
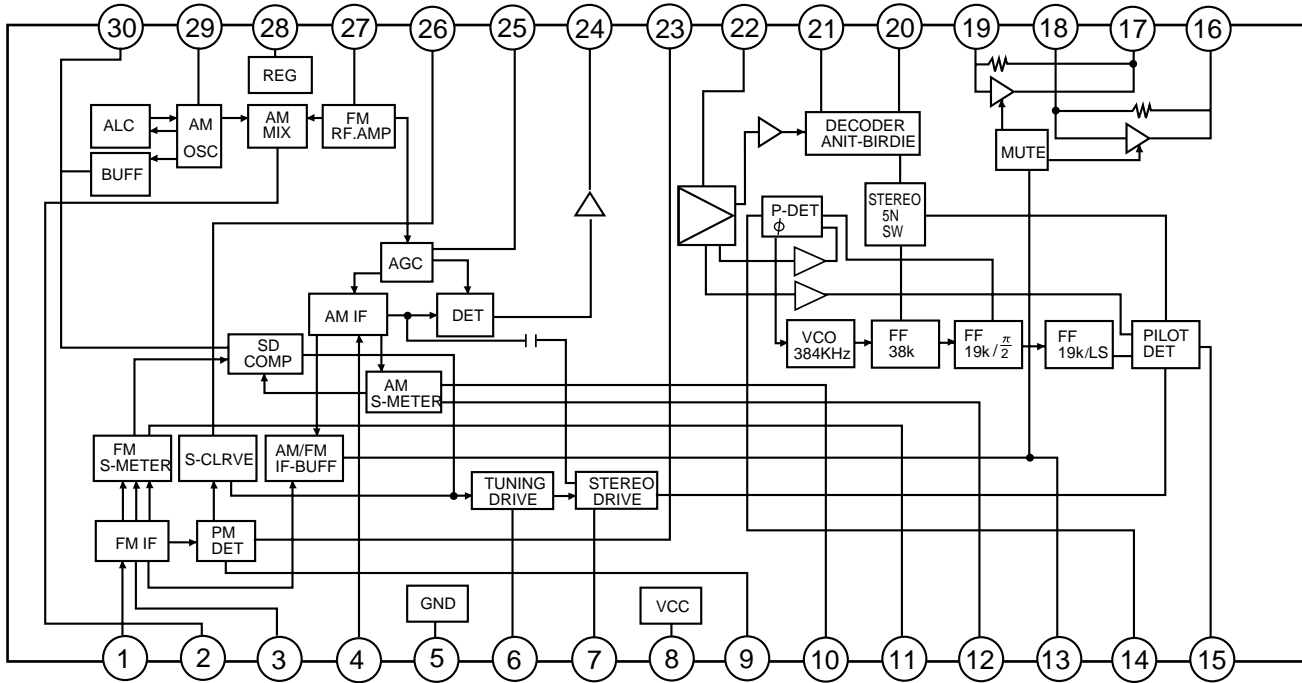
2. Pin Function

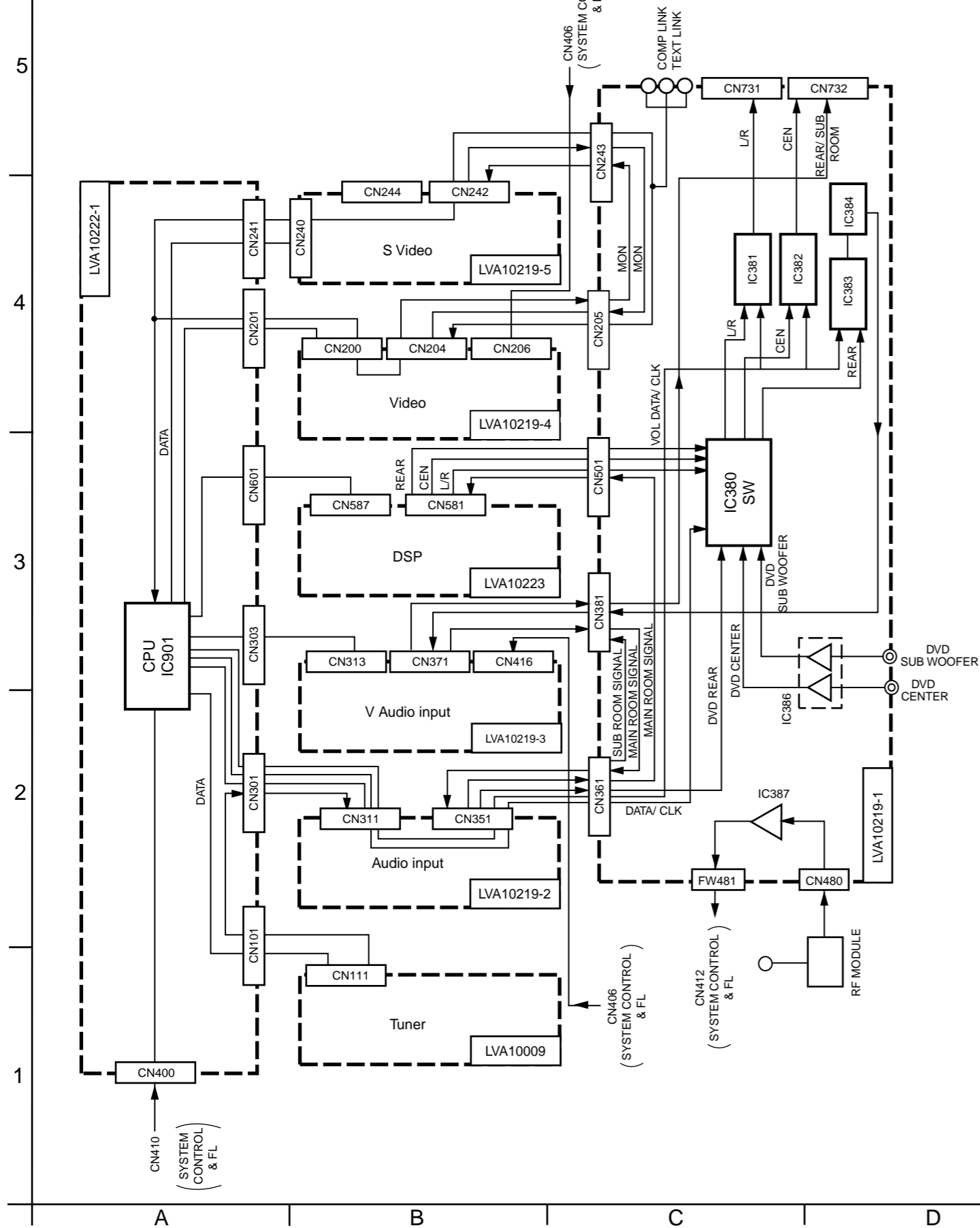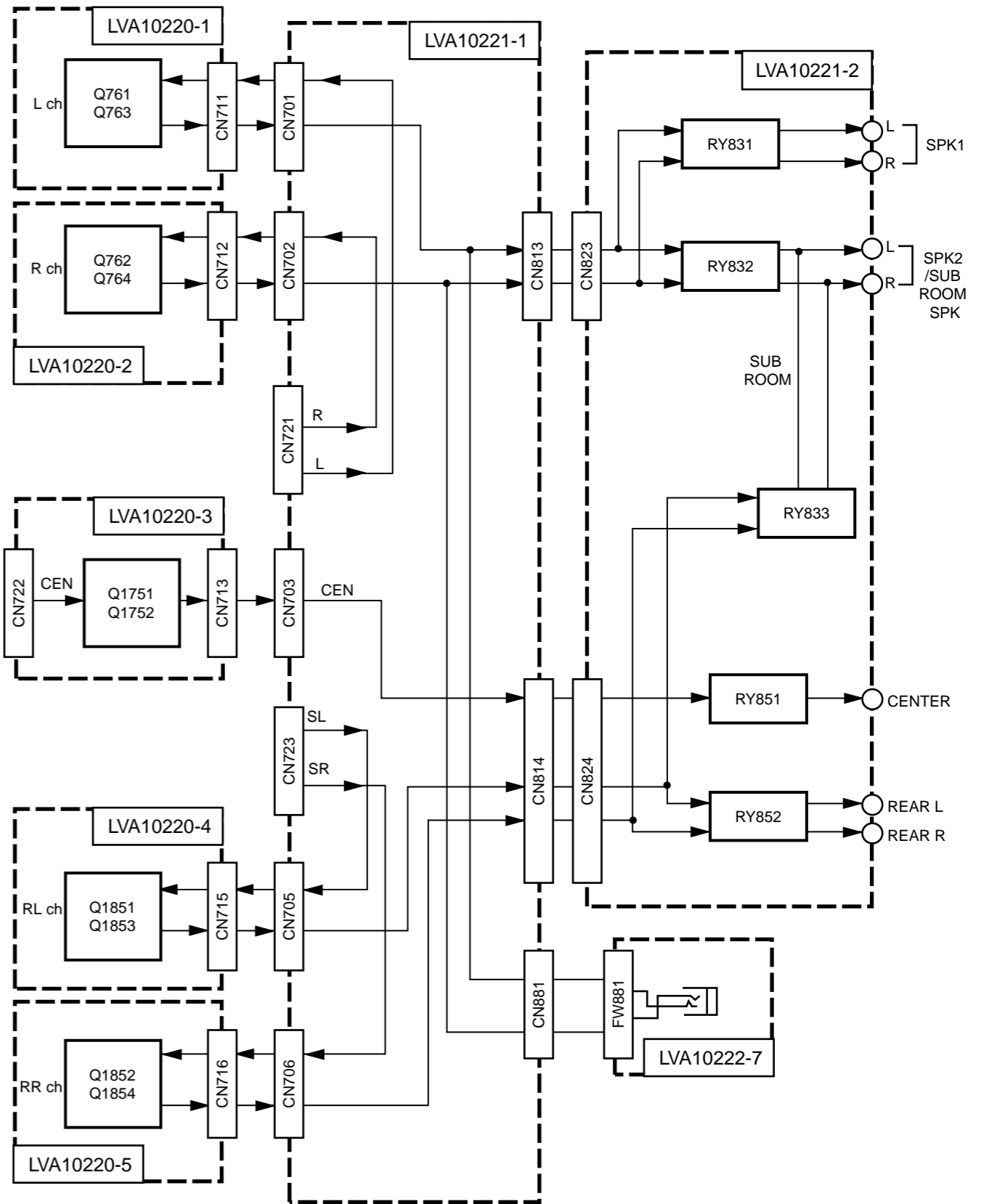| Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	FM IN	I	This is an input terminal of FM IF signal.	16	L OUT	O	Left channel signal output.
2	AM MIX	O	This is an out put terminal for AM mixer.	17	R OUT	O	Right channel signal output.
3	FM IF	I	Bypass of FM IF	18	L IN	I	Input terminal of the left channel post AMP.
4	AM IF	I	Input of AM IF Signal.	19	R IN	I	Input terminal of the right channel post AMP.
5	GND	—	This is the device ground terminal.	20	RO	O	Mpx Right channel signal output.
6	TUNED	O	When the set is tuning, this terminal becomes "L".	21	LO	O	Mpx Left channel signal output.
7	STEREO	O	Stereo indicator output. Stereo "L", Mono: "H"	22	IF IN	I	Mpx input terminal
8	VCC	—	This is the power supply terminal.	23	FM OUT	O	FM detection output.
9	FM DET	—	FM detect transformer.	24	AM DET	O	AM detection output.
10	AM SD	—	This is a terminal of AM ceramic filter.	25	AM AGC	I	This is an AGC voltage input terminal for AM
11	FM VSM	O	Adjust FM SD sensitivity.	26	AFC	—	This is an output terminal of voltage for FM-AFC.
12	AM VSM	O	Adjust AM SD sensitivity.	27	AM RF	I	AM RF signal input.
13	MUTE	I/O	When the signal of IF REQ of IC121(LC72131) appear, the signal of FM/AM IF output. //Muting control input.	28	REG	O	Register value between pin 26 and pin28 desides the frequency width of the input signal.
14	FM/AM	I	Change over the FM/AM input. "H" :FM, "L" : AM	29	AM OSC	—	This is a terminal of AM Local oscillation circuit.
15	MONO/ST	O	Stereo : "H", Mono: "L"	30	OSC BUFFER	O	AM Local oscillation Signal output.

Block diagrams

■ Signal I/O block section

■ Main section

RX-9010VBK

■ Video section

LVA10219-4

DVD

TV/DBS

VCR1 — R / P

VCR2 — R / P

MON

SW IC 201 → Y/C SEP IC 202

IC 203 → DATA → CN200

MON Y/C OUT → CN204

MON Y/C IN

FRONT VIDEO IN (RCA) → CN206

■ S Video section

LVA10219-5

DVD

TV/DBS

VCR1 — R / P

VCR2 — R / P

MON

IC 241 SW (C)

DATA → CN240

C

FRONT Y/C → CN244

Y

IC 242 SW (Y)

C

Y → MON Y/C → CN242

MON Y/C

■ V Audio input section

LVA10219-3

DVD F

TV/DBS

VCR1 REC

VCR1 P.B

VCR2 REC

VCR2 P.B

SUB PRE OUT

SOUTCE SELECTOR IC 371

MAIN ROOM SIG → CN313

DATA/CLK

SUB DATA/CLK

IC 394 IC 393 IC 395

SUB ROOM SIG

SUB DATA/ CLK

REAR/ SUB ROOM SIGNAL

REAR SIG

SUB ROOM SIG

MAIN ROOM SIG → CN371

SUB ROOM SIG

SOUTCE SELECTOR IC 392

IC372 → USB → CN416

FRONT VIDEO

■ DSP section

LVA10223

DIGITAL IN1

DIGITAL IN2

DIGITAL IN3

DIGITAL IN4

DIGITAL OUT

SELECTOR IC 551

DSP CONTROLLER IC 581

DATA → CN587

AD/DA CONVERTER IC 571

R/L C SR/SL → CN581

DSP IC 501

SD RAM IC 511

A   B   C   2-2   D   E   F   G   H

■ Audio input section

LVA10219-2

PHONO L/R

EQ IC 301

CD L/R

DATA/CLK
TUNER
SUB DATA/ CLK

CN311

TAPE P.B

TAPE REC

SOURCE SELECTOR IC 302

VOL DATA/ CLK

CDR P.B

CDR REC

MAIN ROOM SIGNAL

IC 303
AUDIO

CN351

SOURCE SELECTOR IC 391

SUB ROOM SIGNAL

DVD REAR

IC 304

DVD REAR
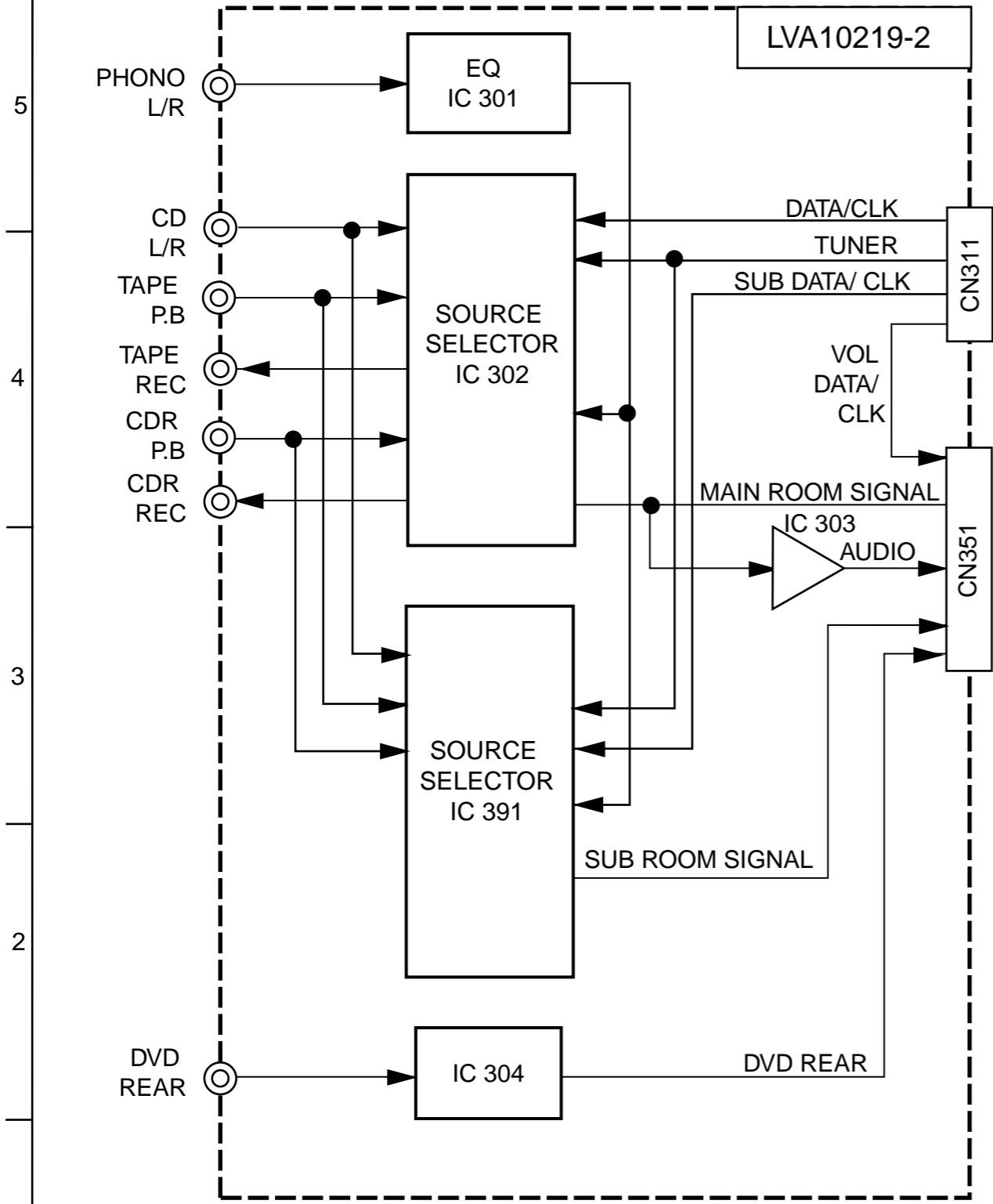
■ System control & FL section

LVA10218-1

FL DISPLAY D400

CN412

KEY

SYSTEM CONTROLLER IC 400

CN410

Y/C

VIDEO

AUDIO

USB

CN406

■ Tuner section

LVA10009

FM

TUNER RF 101

AM/FM DET IC102

AM

MW RF & OSC T111

PLL IC102

TUNER

DATA

CN111
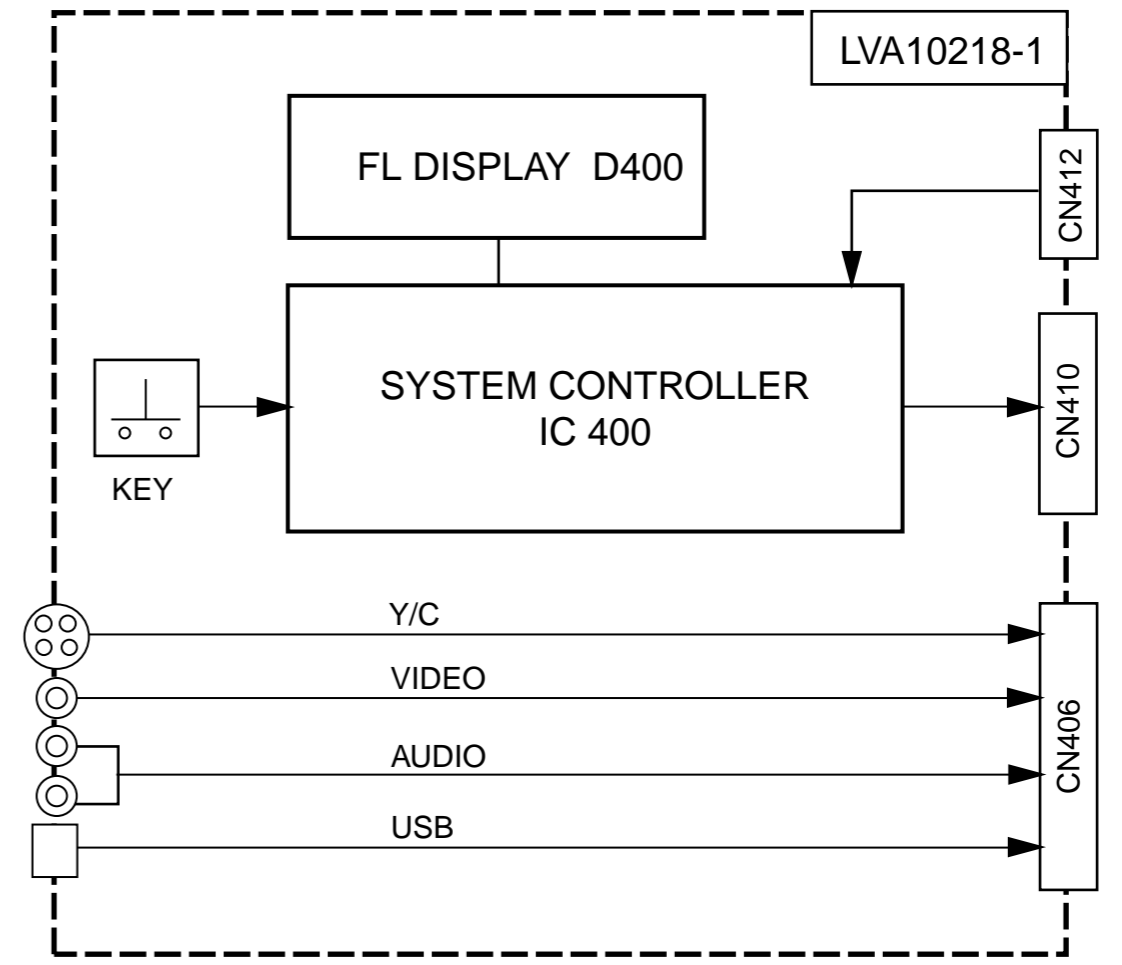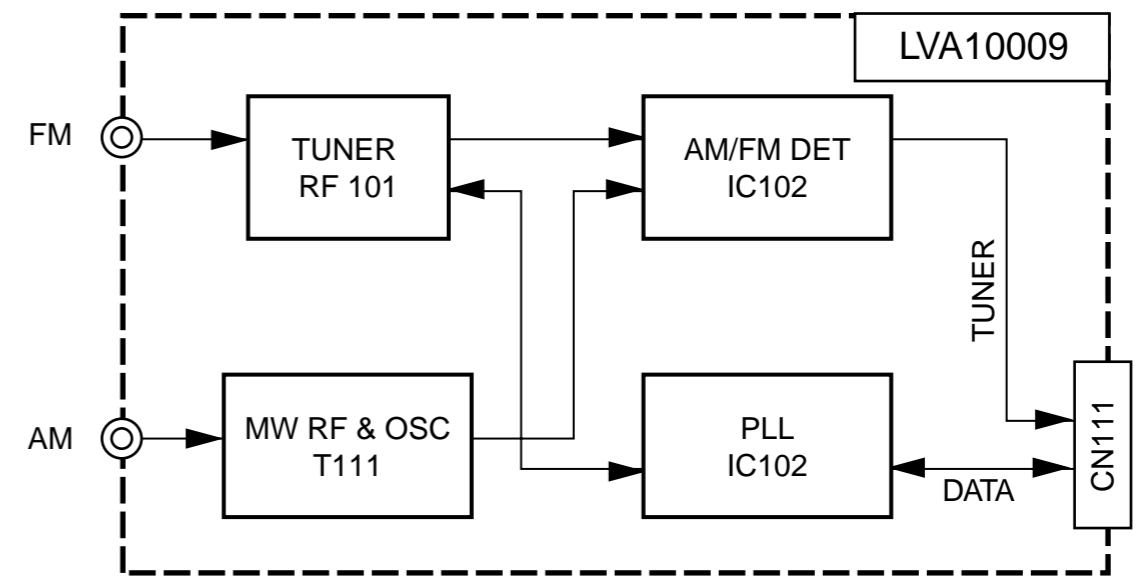
Standard schematic diagrams

■ Power supply section

LVA10222-6

POWER TRANSFORMER

LVA10222-4

LVA10222-3

*MARK LIST

	RX-8010VBK	RX-9010VBK
Q42		USE
R44		USE
C44		USE
C45		USE
D46		USE
CN491		USE

TO CNB01
OF LVA10221-1

CN811
1 S1
2 COM
3 S1

RY63 QSK0068-001
RY62 QSK0068-001

D67 1SS133

131
132
113
112
111
123
122
121
134
133

PW10
PW11
PW12
PW13
PW14
PW15
PW16

PW20
PW17

F61 2A-125V
F62 2A-125V
R61 3.3 UNF(1/4w)

TH. FUSE

LVA10222-2

8 RF.DATA
7 D.GND
6 D5V
5 FL1
4 -VPP
3 FL2
2 A5V
1

TO CN412
OF LVA10218-1

sheet 10/11

CN402

PW26
PW28
PW29
PW40

PW18
PW19
PW30

F1 6.3A-125V TA1
LIVE/BRN
NEUTRAL/BLU
TA2

R1 3.3M COMP (1/2W)

MAINS PLUG

AC120V 60Hz

C69 0.047MY
C68 0.047MY
R74 100K

VH/VL +B2 S2 COM S3 S3

CN55 CN56

FW51

R87 12 UNF(1/4W)

C61 0.1MY (100V)
C63 0.1MY (100V)

1SR35-400A
D61 10E2-FD
D62
D63 10E2-FD
D64 1SR35-400A

C62 0.1MY (100V)

Q61 KRC105M

C51 0.0047/100
T2 QQT0281-005
C1 0.047
RY1 QSK0098-001

D51 1SR35-400A
D52 1SR35-400A
D53 1SR35-400A
D54 1SR35-400A

D57 1SS133

Q53 KRC105M

LVA10222-8

CN72
1
2
3
4
5
6
7
8
9

11
10
9
8
7
6
5
4
3

TO CNB1
OF LVA10222-1

sheet 3/11

CN82

*CN491
RF5V
RF.DATA
D.GND
IR5V
1 2 3 4

TO FW481

sheet 6/11

CN71
11 +B2
10 A.GND
9 -B2
8 B5V
7 D5V
6 USB5V
5 VL/VH
4 POWER ON
3 RF.DATA
2 D.GND
1 IR5V

C65 3300/35
C66 1000/35

Q71 KTA1046/Y/
D73 1SR35-400A
C70 220/50
TH71 QAD0095-4R7

Q74 KTC3200GU/
D75 MTZ8.2JC

C74 1/50
C73 22/50
R72 3.3k
C71 100/63

D71 1SR35-400A
D72 1SR35-400A

C52 1000/25
R53 6.8 UNF.RES. (1/4W)

Q52 KTD863/Y/
R54 820
C55 0.0047
D56 MTZ6.2JB
C54 470/16

*Q42 KTD863/Y/
*R44 820
*C45 0.0047
*C44 470/16
*D46 MTZ6.2JA

R73 22K
D74 MTZ33JC
C72 22/50

EP51

SHEET NUMBER	CIRCUIT DESCRIPTION
1/11	POWER SUPPLY
2/11	MAIN
3/11	AUDIO
4/11	AUDIO SIGNAL INPUT
5/11	VIDEO SIGNAL INPUT
6/11	VOLUME COMPONENT
7/11	AUDIO AMP (FRONT CHANNEL)
8/11	AUDIO AMP (CENTER, REAR CHANNEL)
9/11	DSP
10/11	SYSTEM CONTROL
11/11	TUNER

⚠ Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

5   4   3   2   1

A   B   C   2-4   D   E   F   G   H

■ **Main & Speaker terminal section**

LVA10221-2

LVA10221-1

sheet 1/11
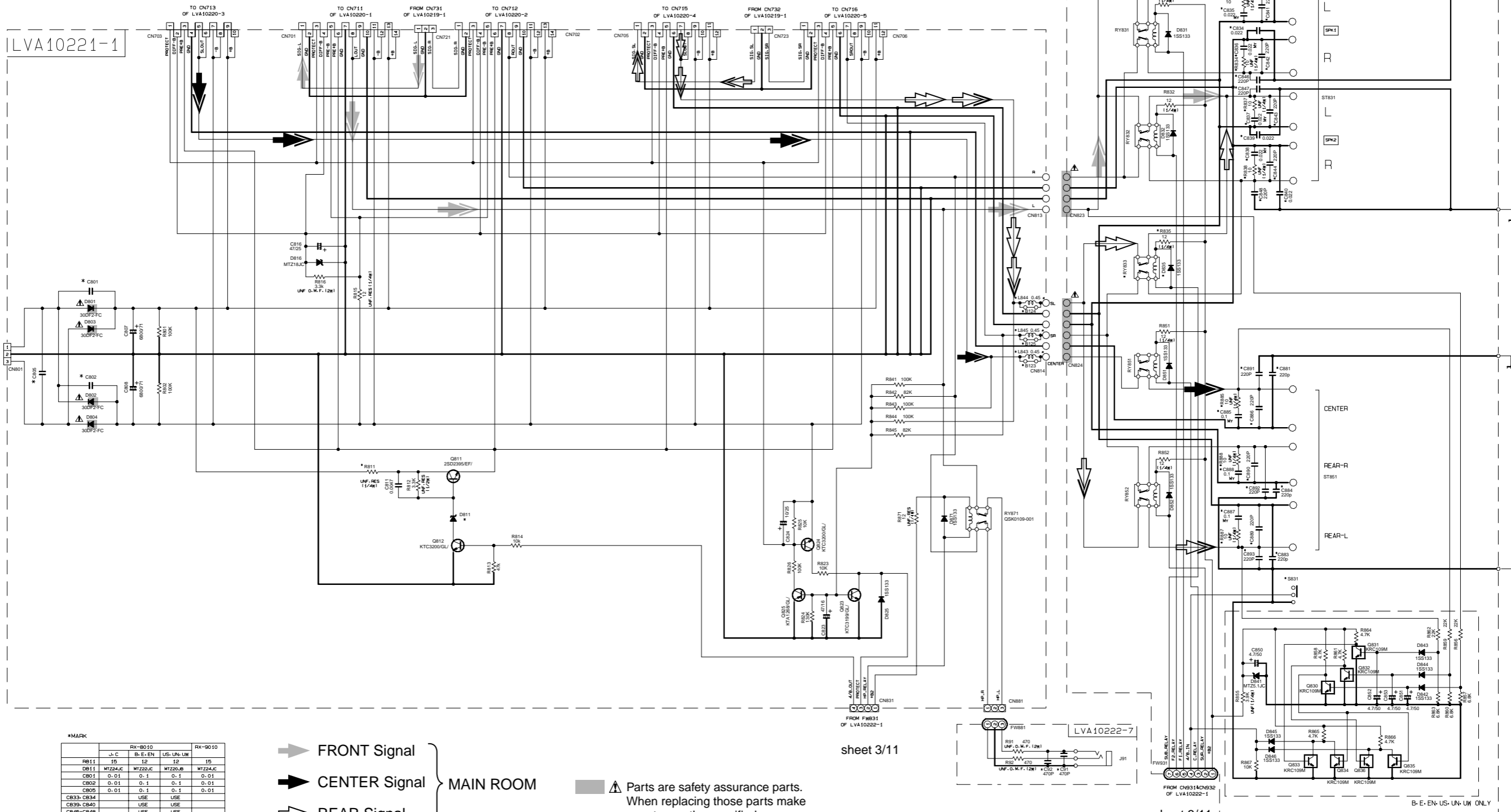
*MARK

	RX-8010			RX-9010
	J･C	B･E･EN	US･UN･UW	
R811	15	12	12	15
D811	MTZ24JC	MTZ22JC	MTZ20JB	MTZ24JC
C801	0.01	0.1	0.1	0.01
C802	0.01	0.1	0.1	0.01
C805	0.01	0.1	0.1	0.01
C833･C834		USE	USE	
C839･C840		USE	USE	
C845･C846		USE	USE	
C841･C844		USE	USE	
R833･R834		USE	USE	
R837･R838		USE	USE	
C835･C838		USE	USE	
C881		USE	USE	
C891		USE	USE	
C886		USE	USE	
R885		USE	USE	
C885		USE	USE	
C883･C884		USE	USE	
C892･C893		USE	USE	
C889･C890		USE	USE	
R887･R888		USE	USE	
C887･C888		USE	USE	
RY833				USE
R835				USE
D835				USE
C91･C92		USE	USE	
L843･L845		USE	USE	
B123-B125	USE			USE

→ (grey arrow) FRONT Signal ⎫
➡ (black arrow) CENTER Signal ⎬ MAIN ROOM
⇨ (white arrow) REAR Signal ⎭

⇛ SUB ROOM Signal

⚠ Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

sheet 3/11

LVA10222-7

sheet 3/11

B･E･EN･US･UN･UW ONLY.

SHEET 2/11

| A | B | C | D | E | F | G | 2-5 |

■ Audio section

LVA10222-1

TUNER Signal

Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

■ **Audio / V Audio signal input section**

LVA10219-2

LVA10219-3
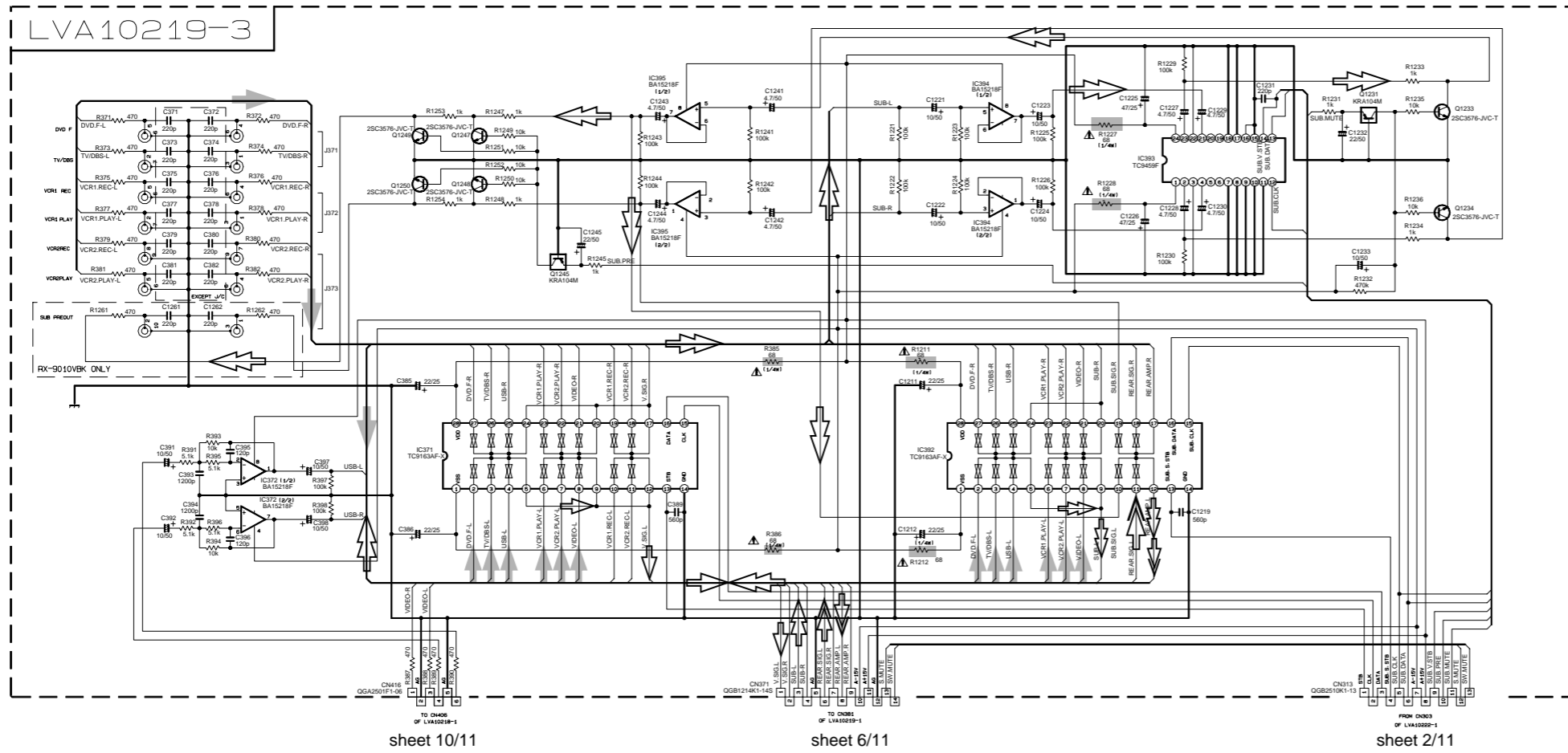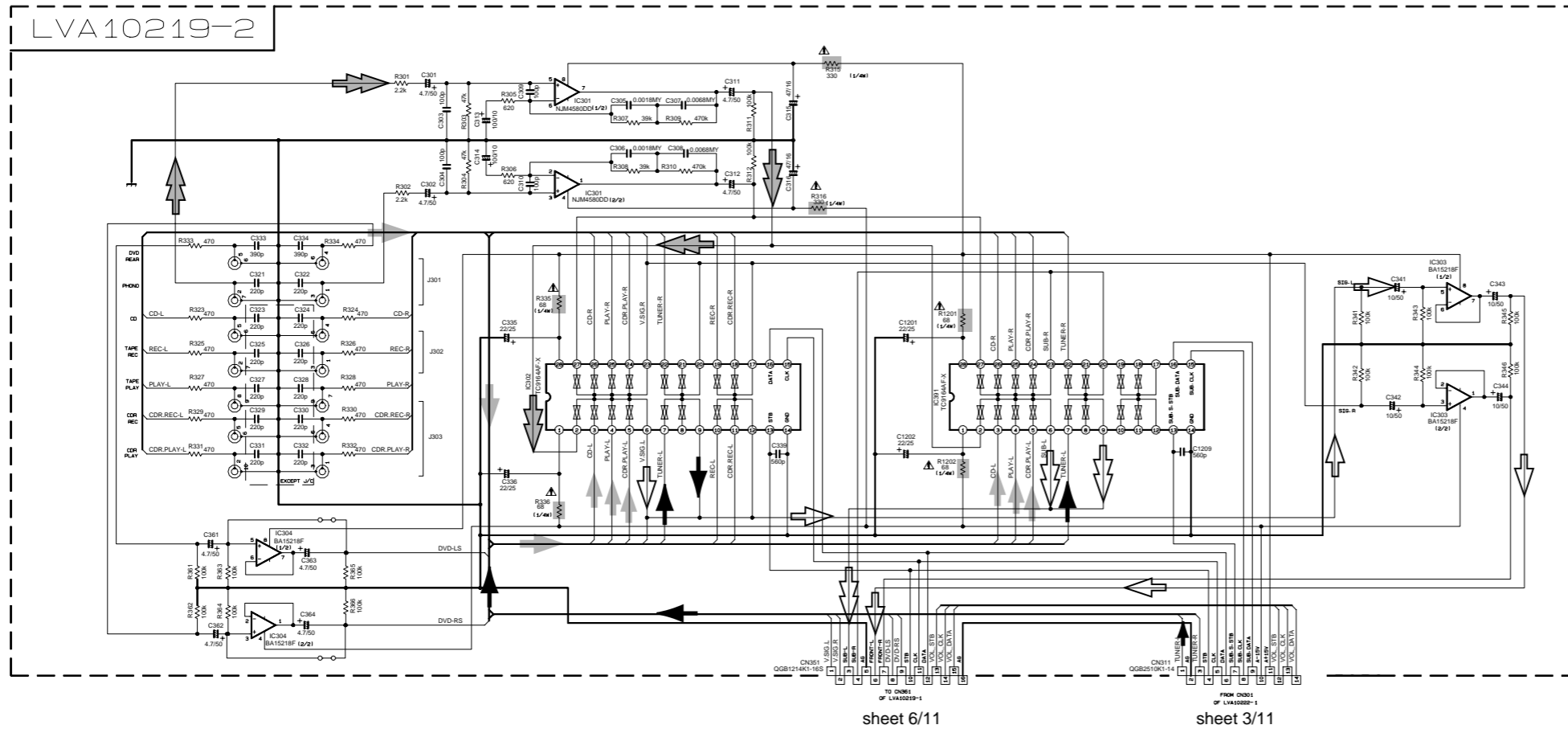
AUDIO Signal

TUNER Signal

PHONO Signal

REAR Signal

SUB ROOM Signal

MAIN ROOM Signal

Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

sheet 6/11

sheet 3/11

sheet 10/11

sheet 6/11

sheet 2/11

SHEET 4/11

2-7

■ **Video / S video signal input section**

sheet 3/11
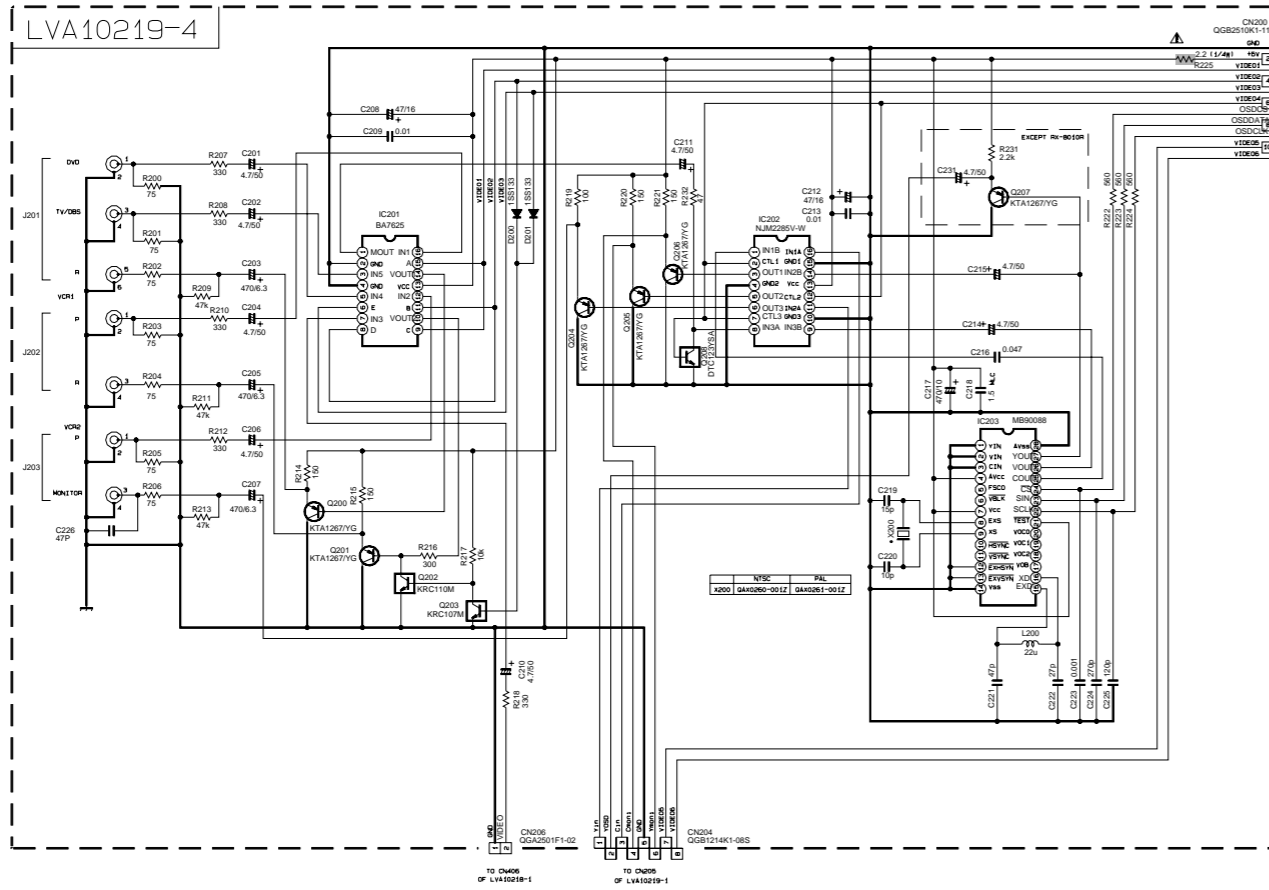
sheet 10/11   sheet 6/11
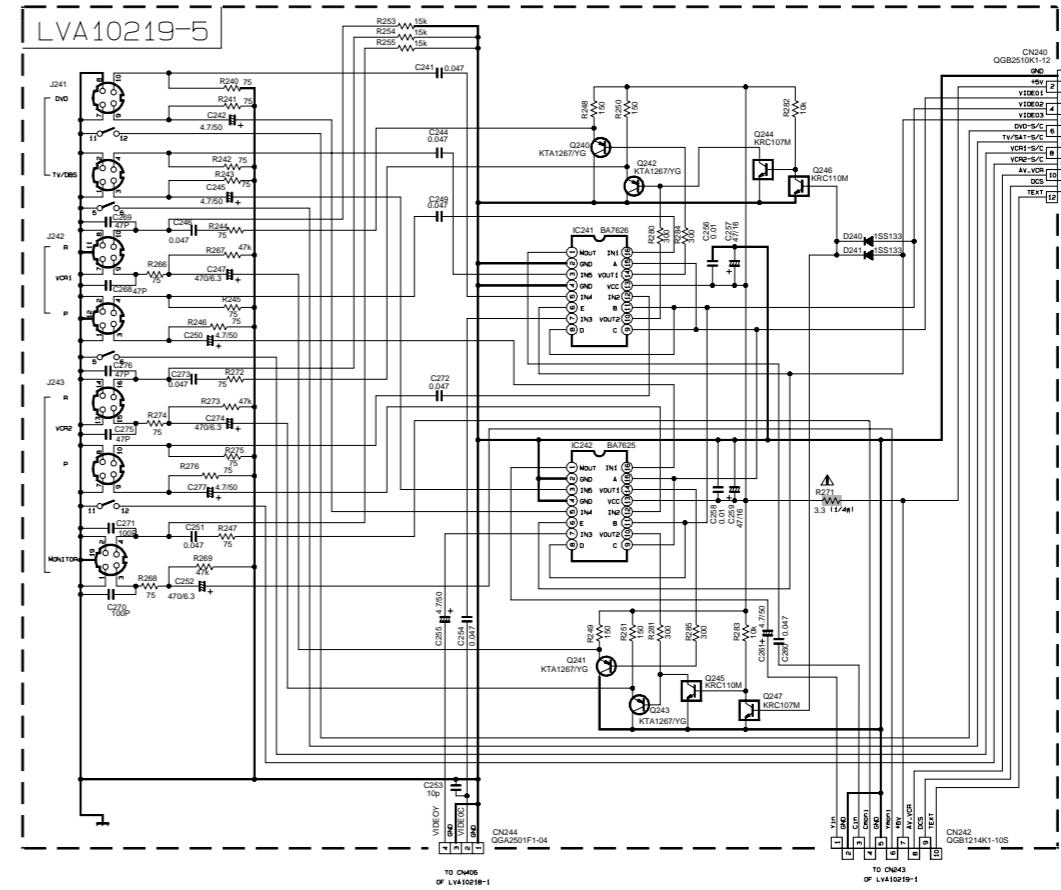
sheet 3/11
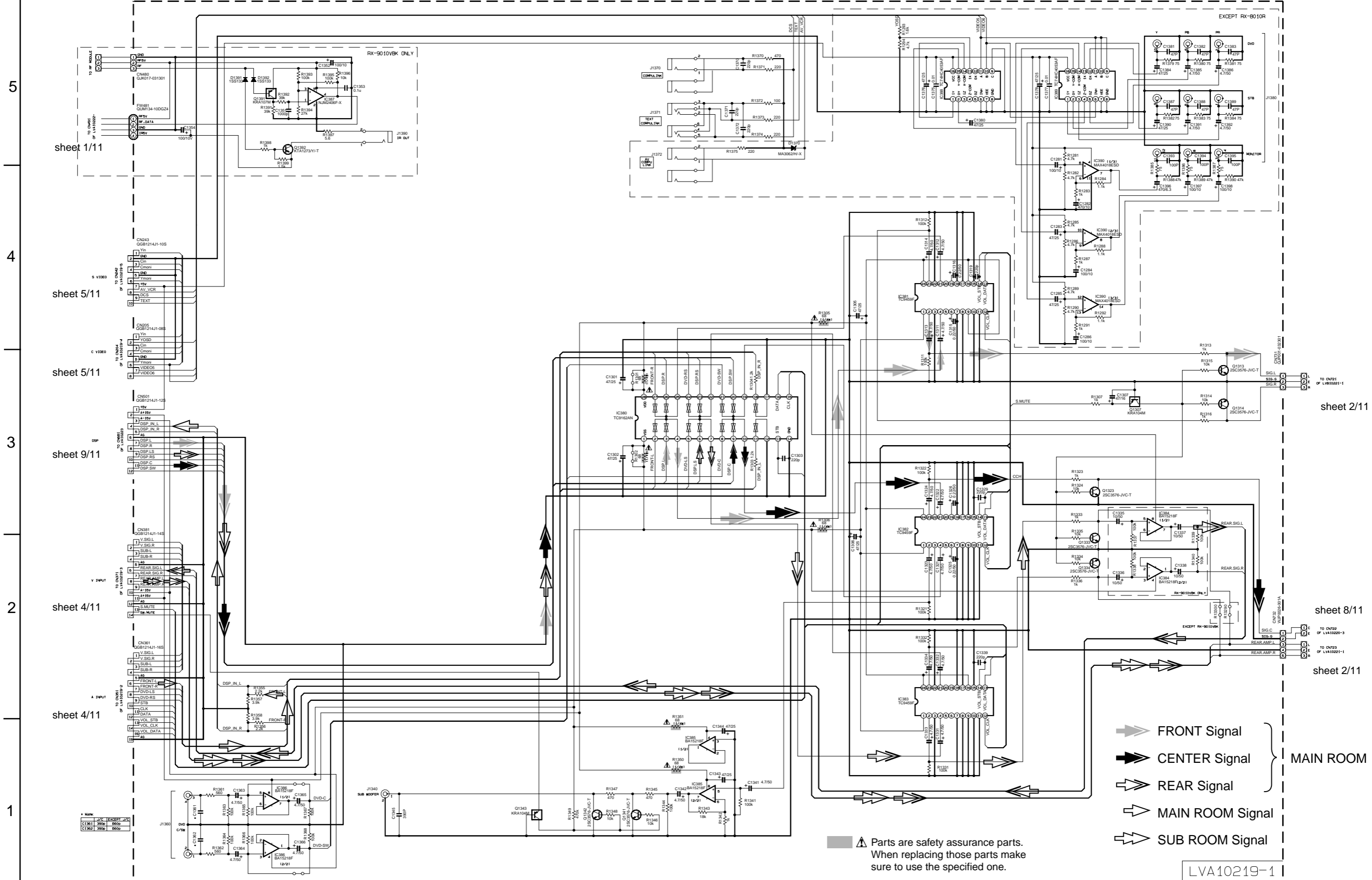
sheet 10/11   sheet 6/11

⚠ Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

■ **VOLUME/ COMPONENT section**

FRONT Signal
CENTER Signal
REAR Signal ⎤ MAIN ROOM
MAIN ROOM Signal ⎦
SUB ROOM Signal

⚠ Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

LVA10219-1

SHEET 6/11

■ **Audio amplifier section (1/2)**

LVA10220-1

sheet 2/11

FROM CN701 OF LVA10221-1

LVA10220-2

FROM CN702 OF LVA10221-1

sheet 2/11

*MARK

		RX-8010		RX-9010
	B･E･EN･US･UN･UW	J･C	
Q761･Q762	2SD2390/0PY/-F6	2SD2560/0PY/-F6	2SD2560/0PY/-F6
Q763･Q764	2SB1560/0PY/-F6	2SB1647/0PY/-F6	2SB1647/0PY/-F6

FRONT Signal

⚠ Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

2-10

RX-9010VBK
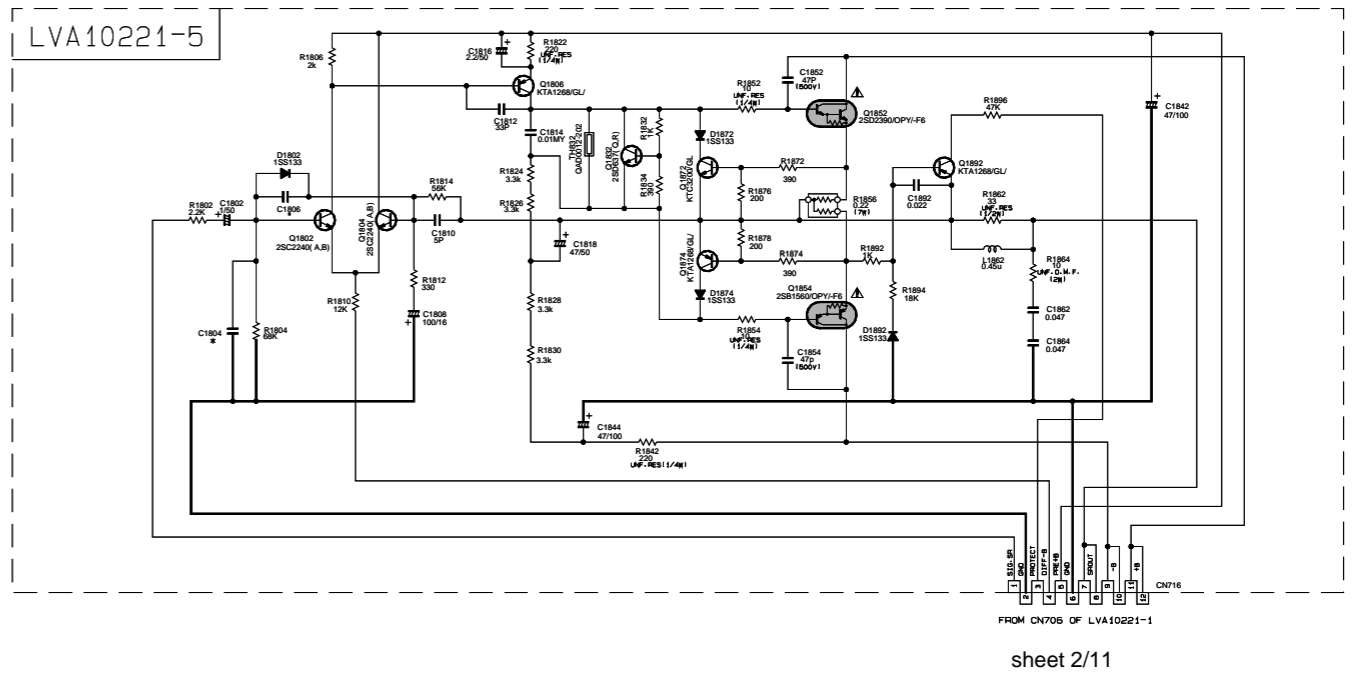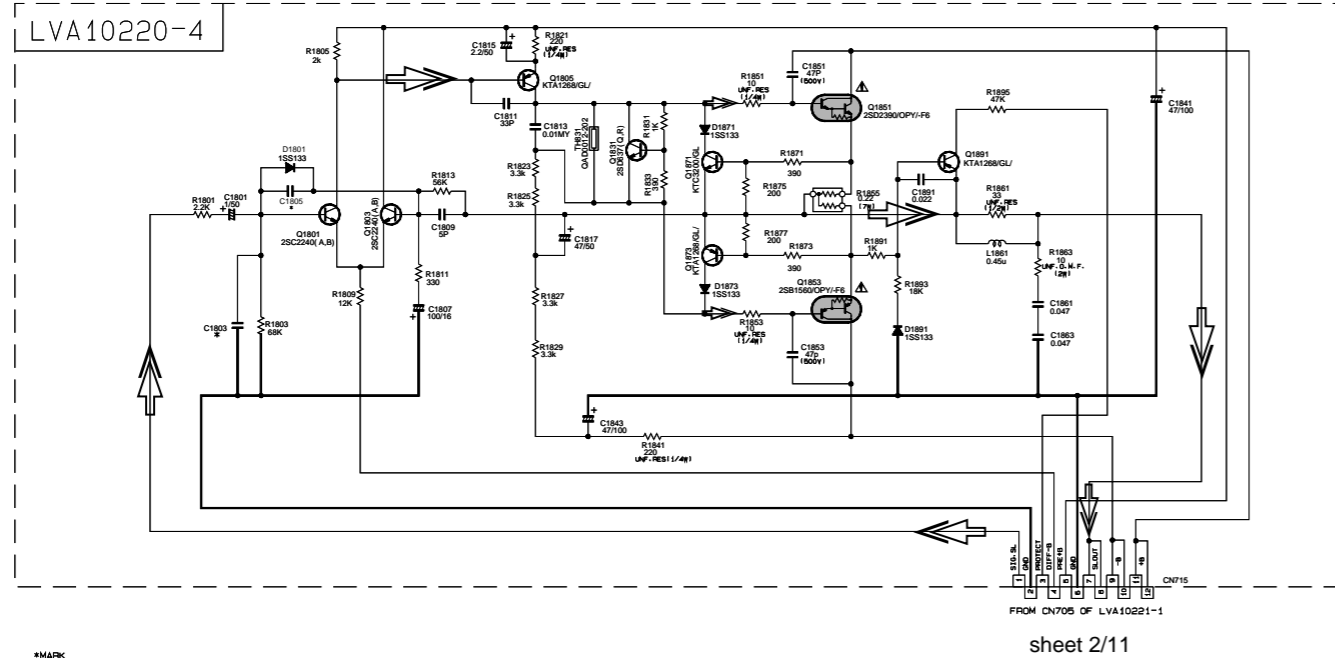
■ **DSP section**
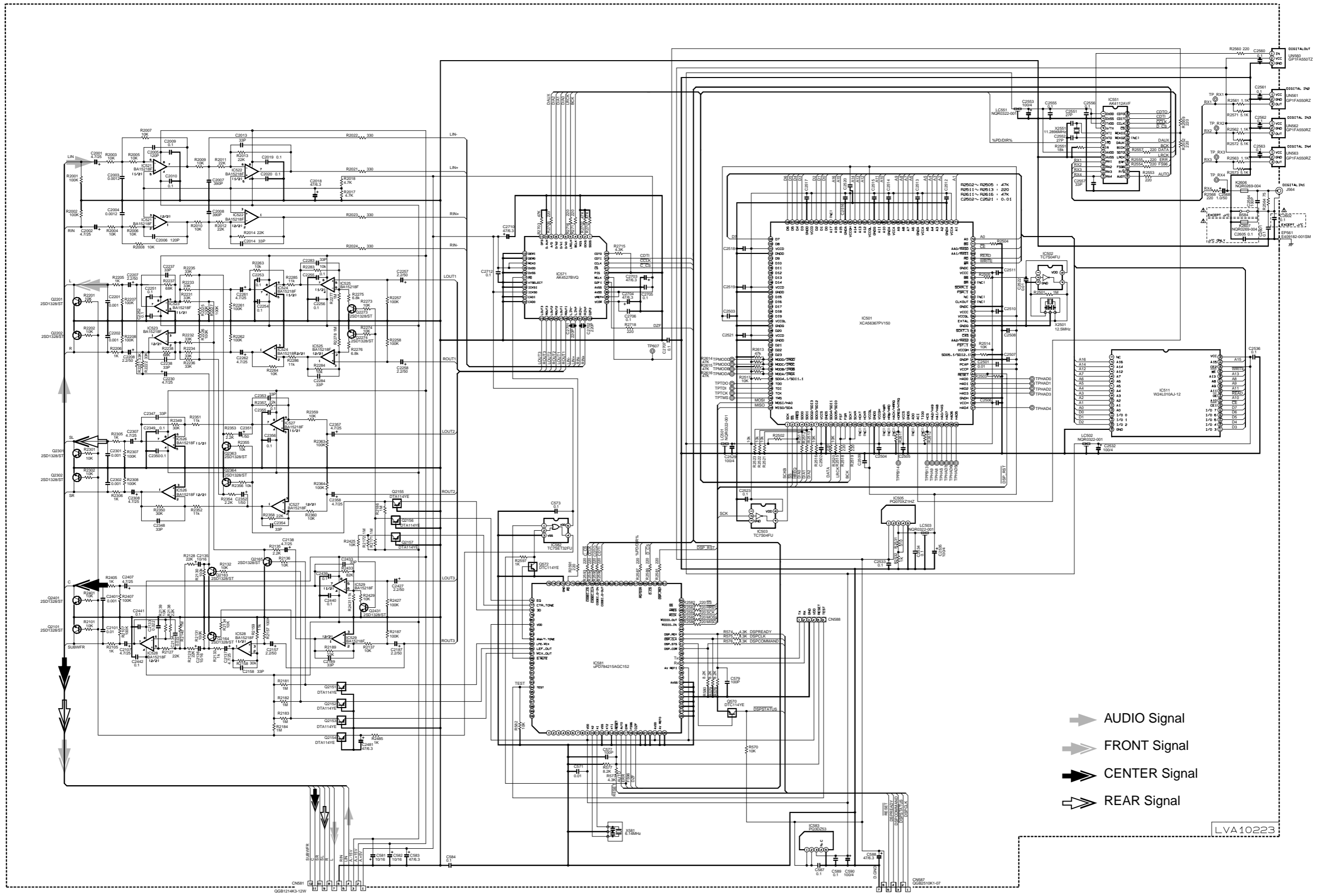
AUDIO Signal
FRONT Signal
CENTER Signal
REAR Signal

LVA10223

sheet 6/11

sheet 3/11

SHEET 9/11

■ System control & FL display section

LVA10218-1

sheet 1/11

sheet 2/11

sheet 5/11 TO CN244 OF LVA10219-5

sheet 5/11 TO CN206 OF LVA10219-4

sheet 4/11 TO CN16 OF LVA10219-3

IC400
MN101C35DHL1

IC411
NJU7241F33

IC410
PCM2702E-X

IC404
GP1U281X

IC402
BU2092

DI400
QLF0084-001

VOLUME
QSW0898-001

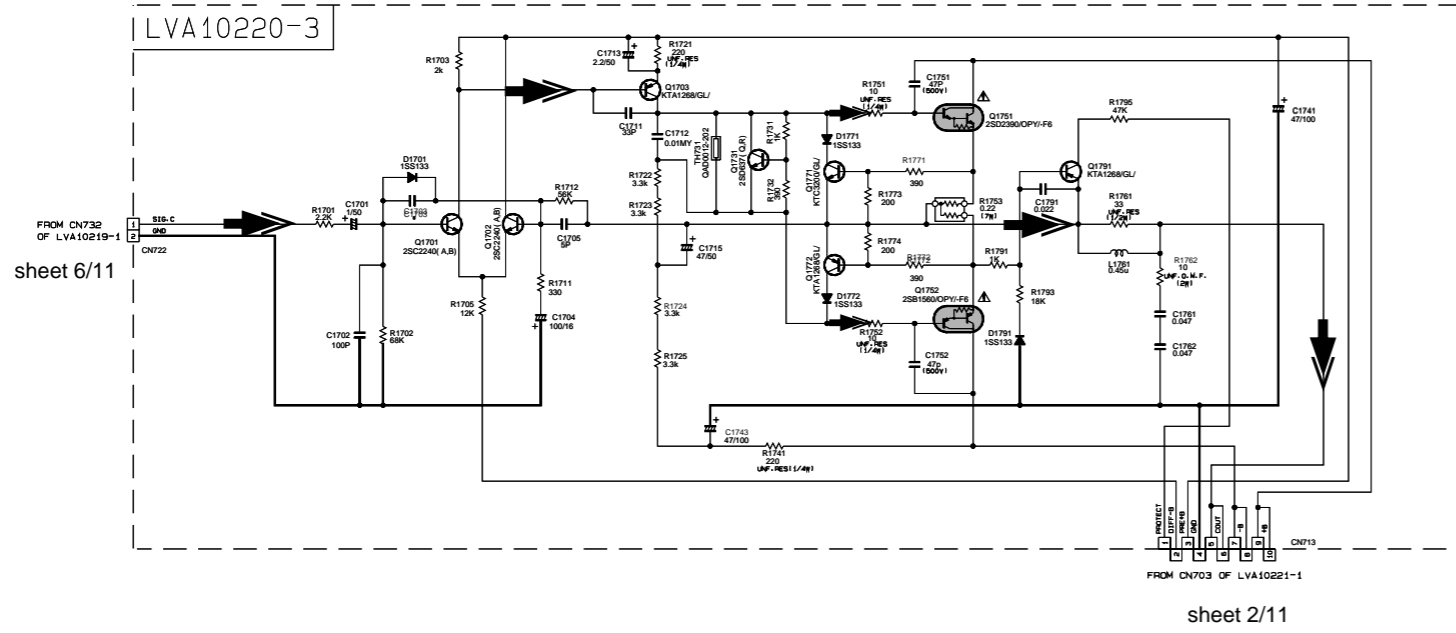|	RX-9010VBK	RX-8010R	OTHERS
S427	QSW0683-001Z	QSW0683-001Z	-
S428	QSW0683-001Z	QSW0683-001Z	-
S429	QSW0683-001Z	QSW0683-001Z	-
S430	QSW0683-001Z	QSW0683-001Z	-
R427	1.5k	-	-
R428	2.2k	-	-
R429	2.7k	-	-
R430	3.9k	-	-
B400	-	7.5mm	-
B401	-	7.5mm	-
B402	-	7.5mm	-
B403	-	7.5mm	-

	J/C	B/E/EN	US/LA	LW/UP/UT	9010V
R437	-	1k	1k	-	1k
R438	-	1.2k	1.2k	1.2k	1.2k
R439	-	1.5k	1.5k	1.5k	1.2k
R440	-	2.2k	2.2k	2.2k	1.5k
R441	-	-	-	-	2.7k
R442	-	-	-	-	3.9k
R444	7.5mm	1k	1k	-	-
B405	-	-	-	-	-
B406	-	7.5mm	-	-	-
B407	-	-	-	-	-
B408	-	-	7.5mm	7.5mm	-
B409	-	-	-	-	-
B410	5mm	-	-	5mm	5mm
C461	-	220P	220P	220P	-
C462	-	220P	220P	220P	-
C463	-	47P	47P	47P	-
C464	-	47P	47P	47P	-
C465	-	47P	47P	47P	-

	J/C	EXCEPT J/C
C430	0.022	0.1

LVA10218-2

LVA10218-3

A	B	C	D	E	F	G

2-13

■ **Tuner section**

FOR J,C,U,A

LVA10009

FM RF

FM IF AMP

MW RF&OSC

FM DET/AM DET

PLL

FM/TUNER Signal
AM Signal

/s/R/STDTUPWB4

Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.
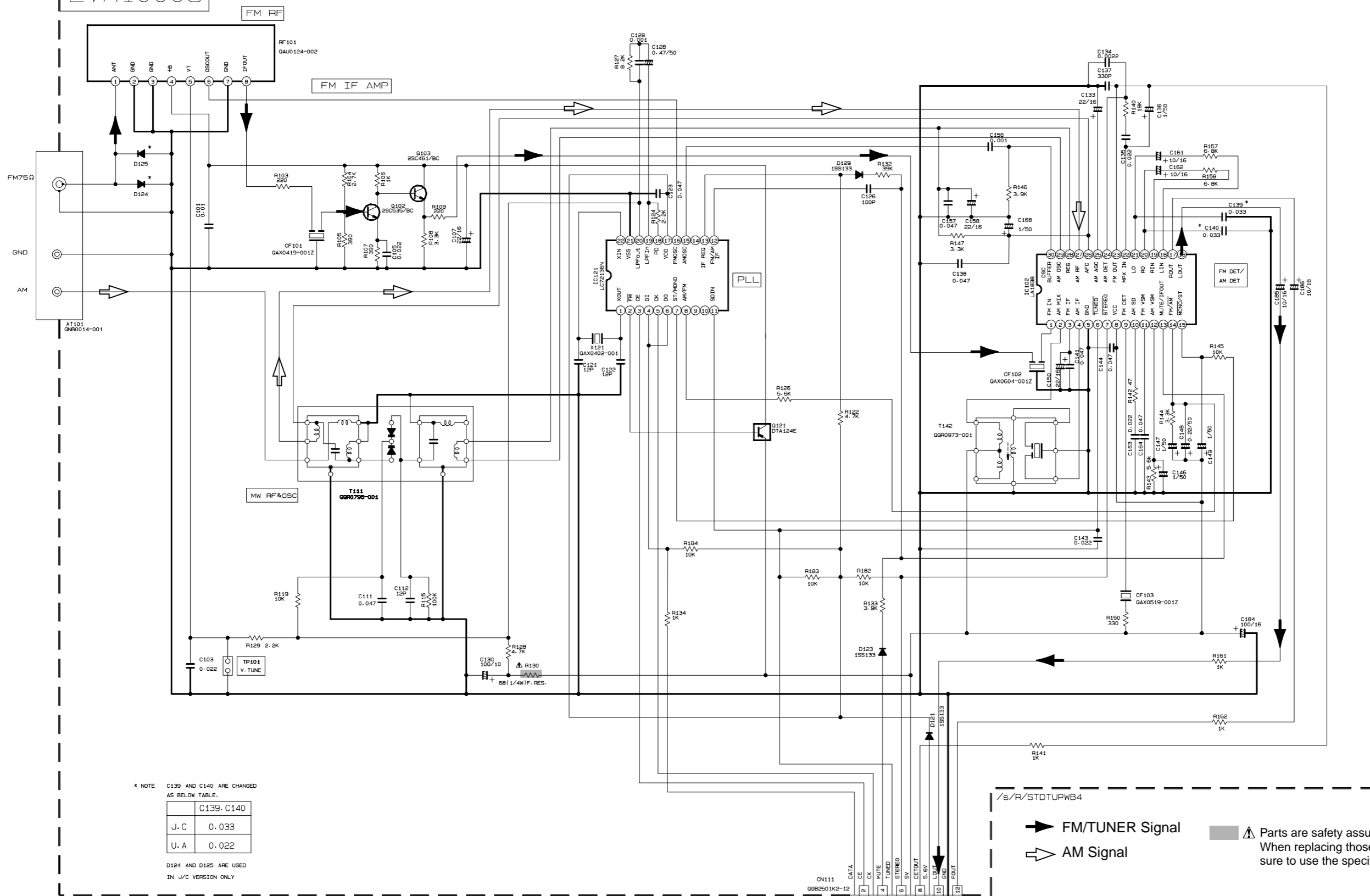
* NOTE C139 AND C140 ARE CHANGED
AS BELOW TABLE.

	C139,C140
J,C	0.033
U,A	0.022

D124 AND D125 ARE USED
IN J/C VERSION ONLY

TO CN101
sheet 3/11

SHEET 11/11

2-14

Printed curcuit boards

■ **Main board**
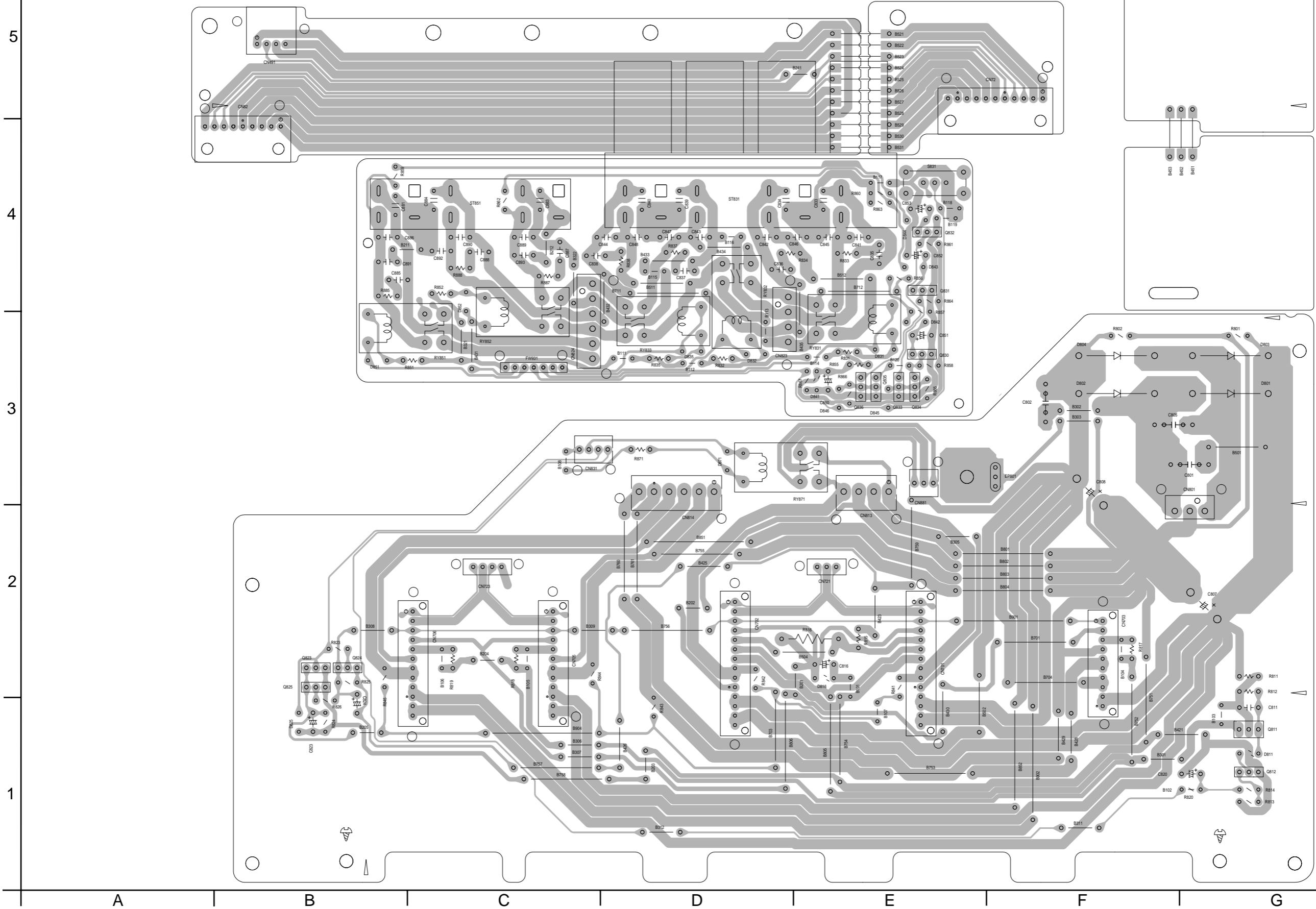
RX-9010VBK

■ **Micon board**
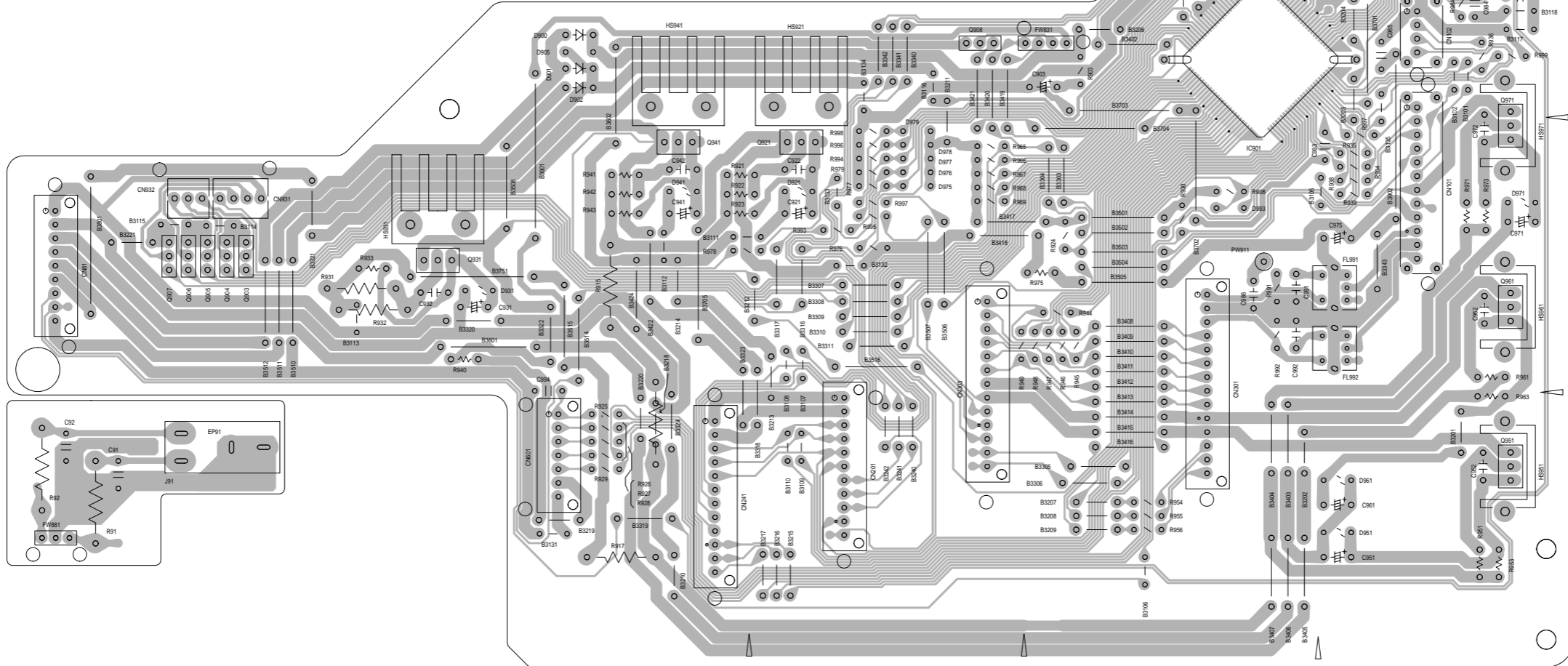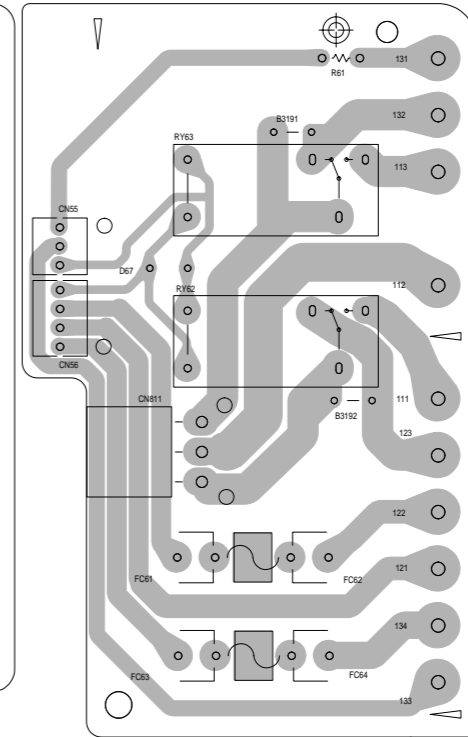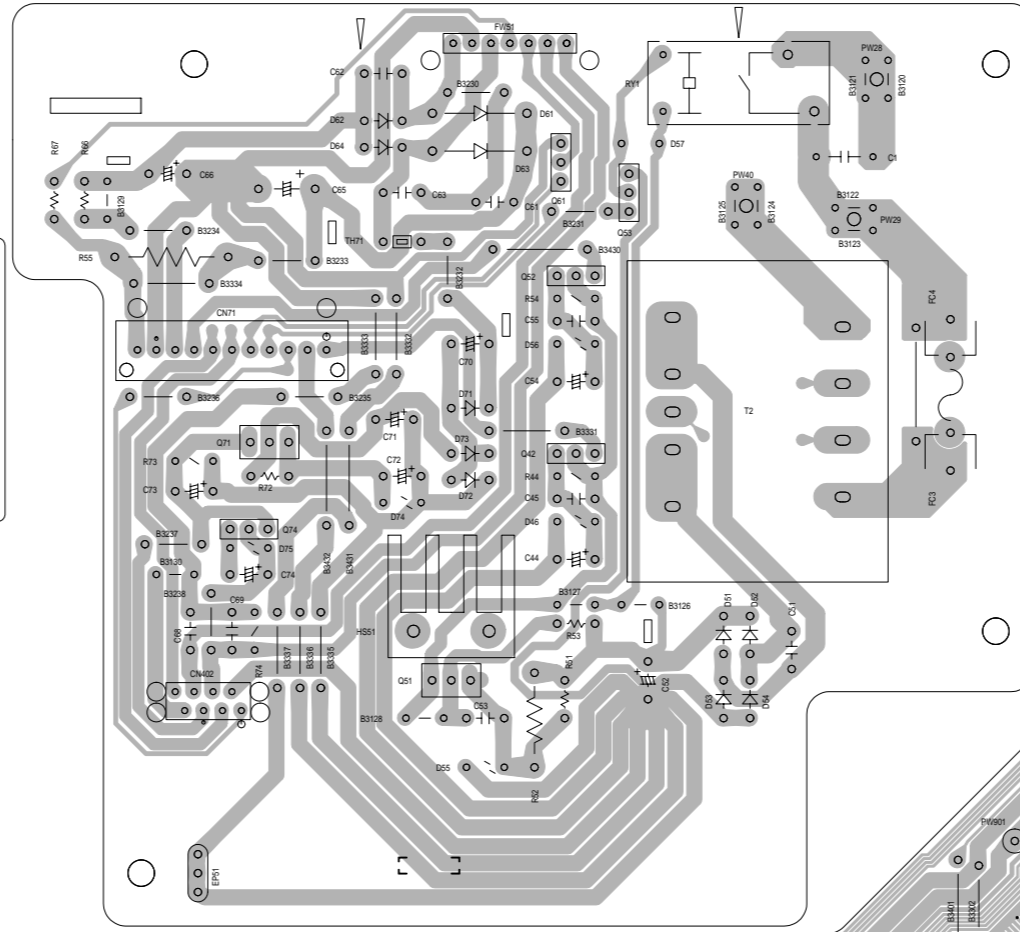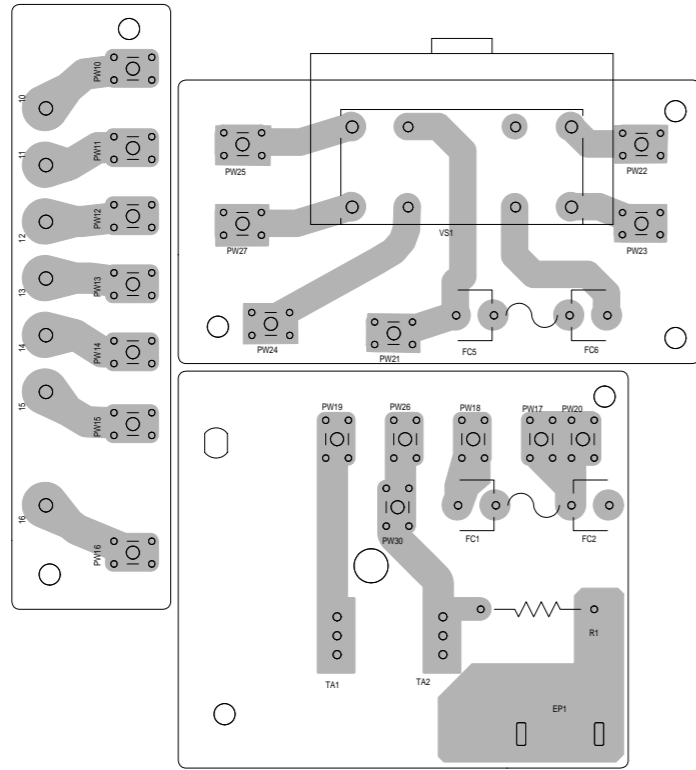
A   B   C   D   E   F   G   H

■ Front board
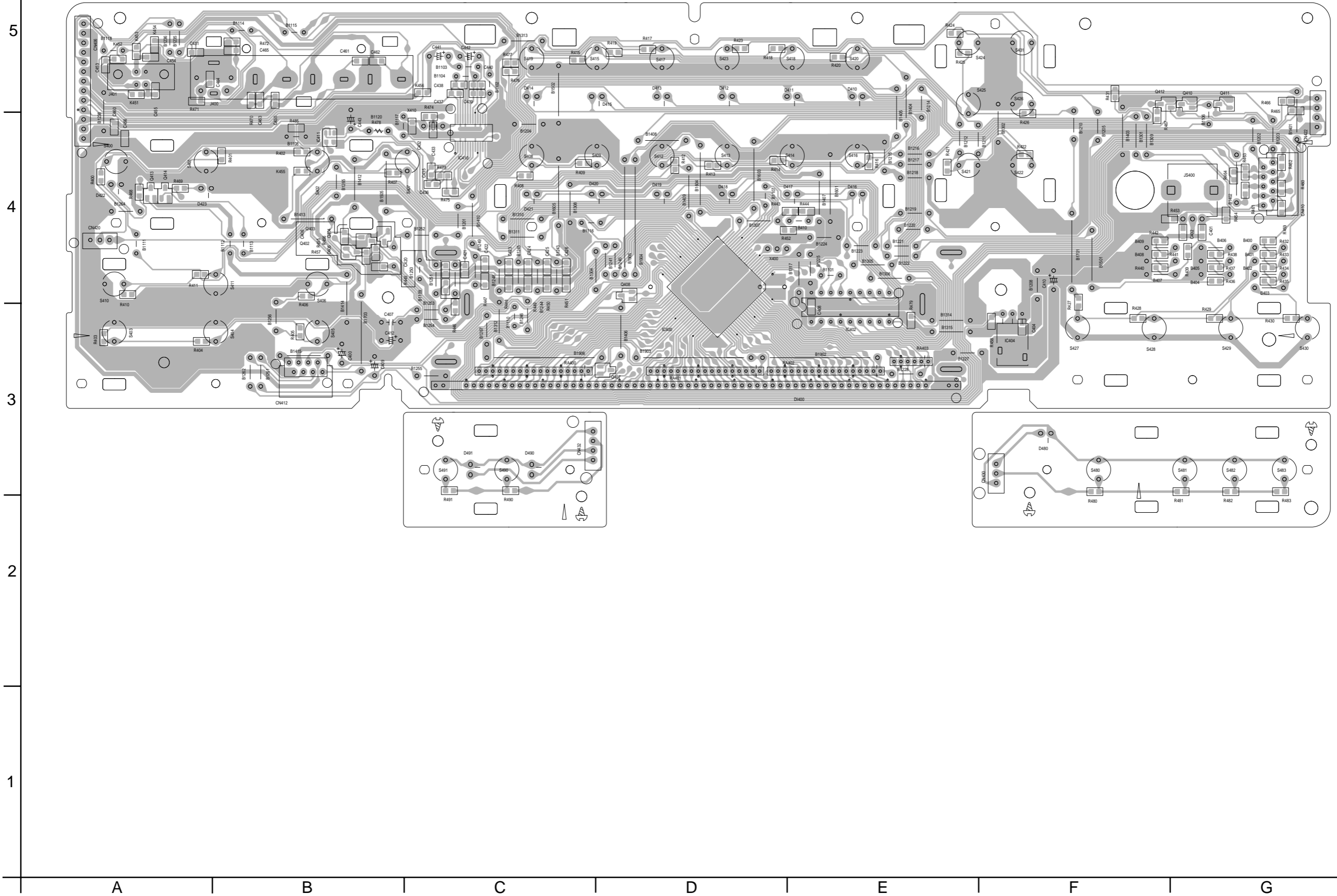
■ **Input board** (Reverse side)
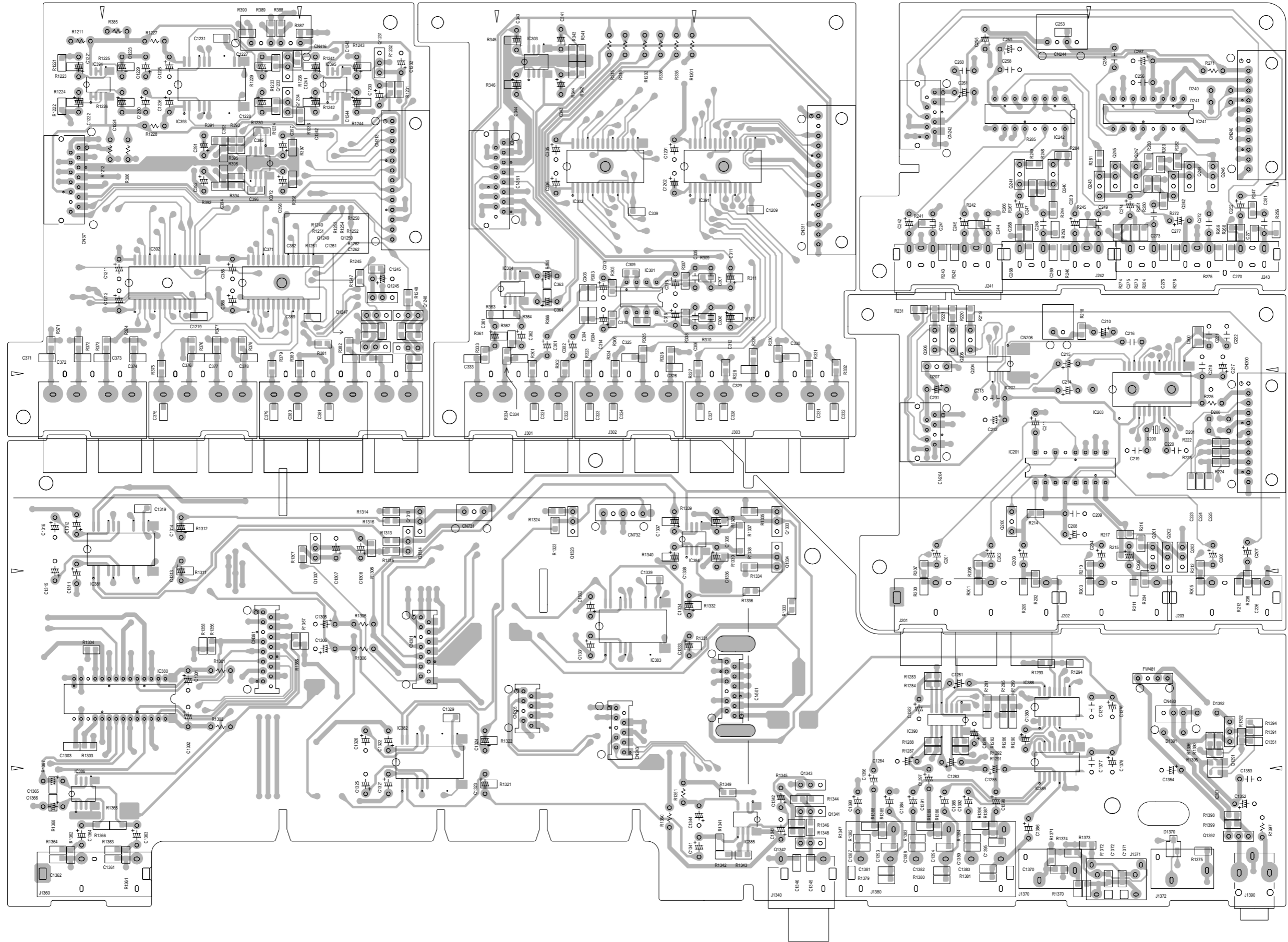
■ **Input board** (Forward side)
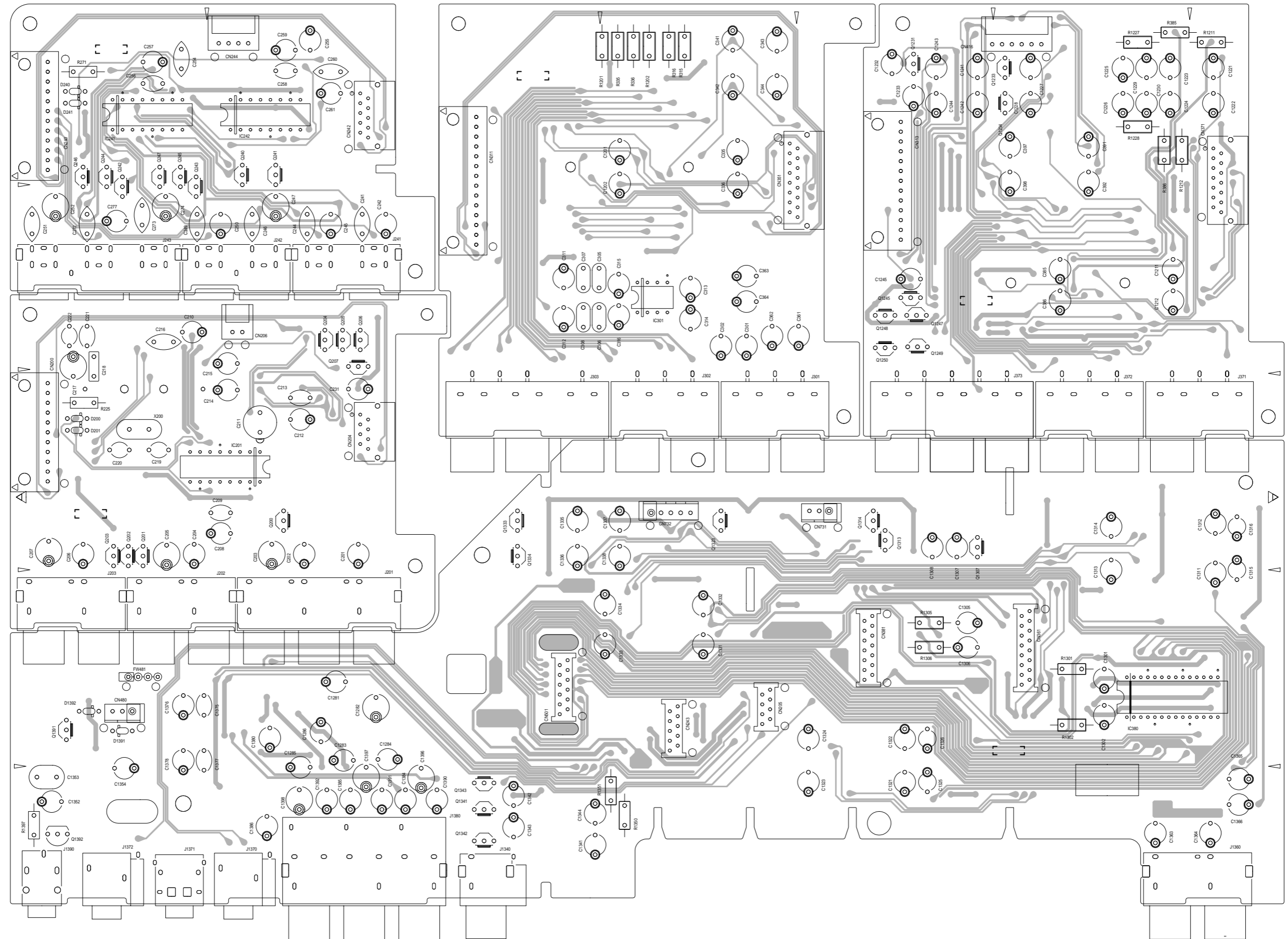
■ **Power board**
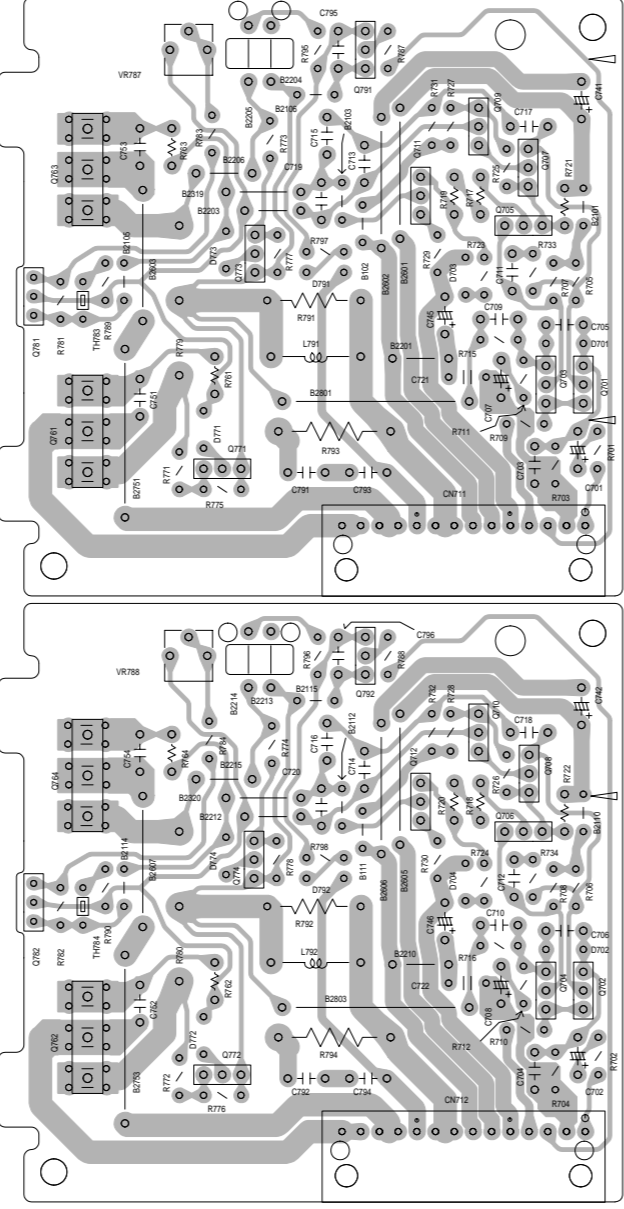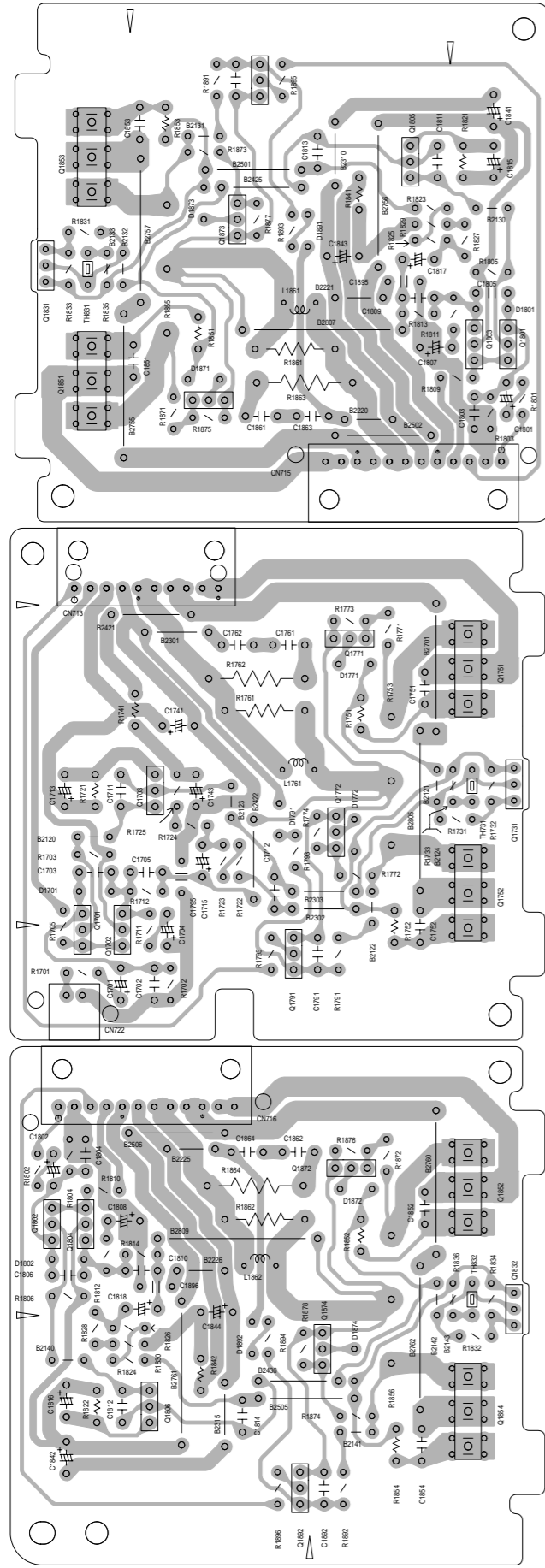
■ **DSP board**

Reverse side
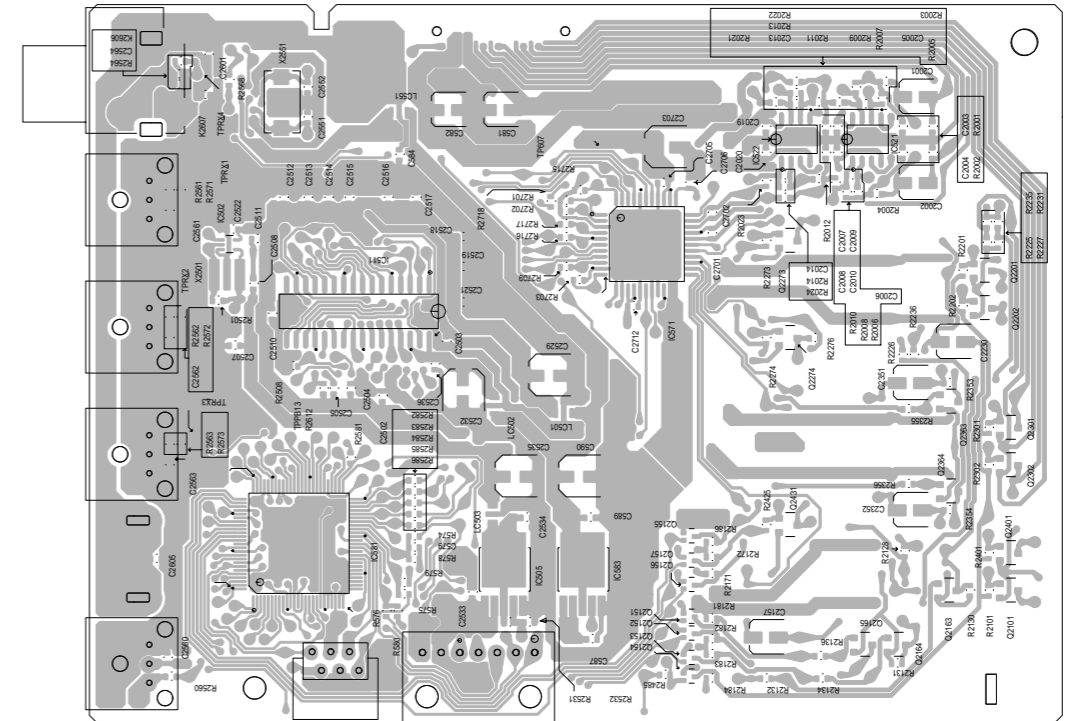
Forward side
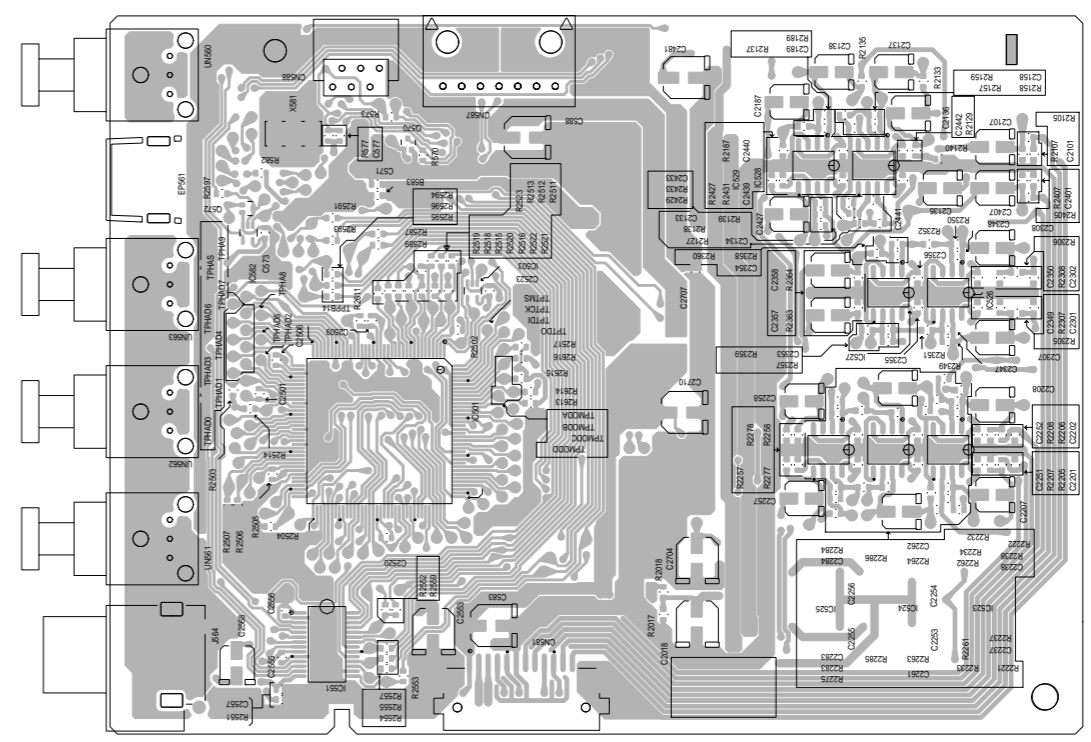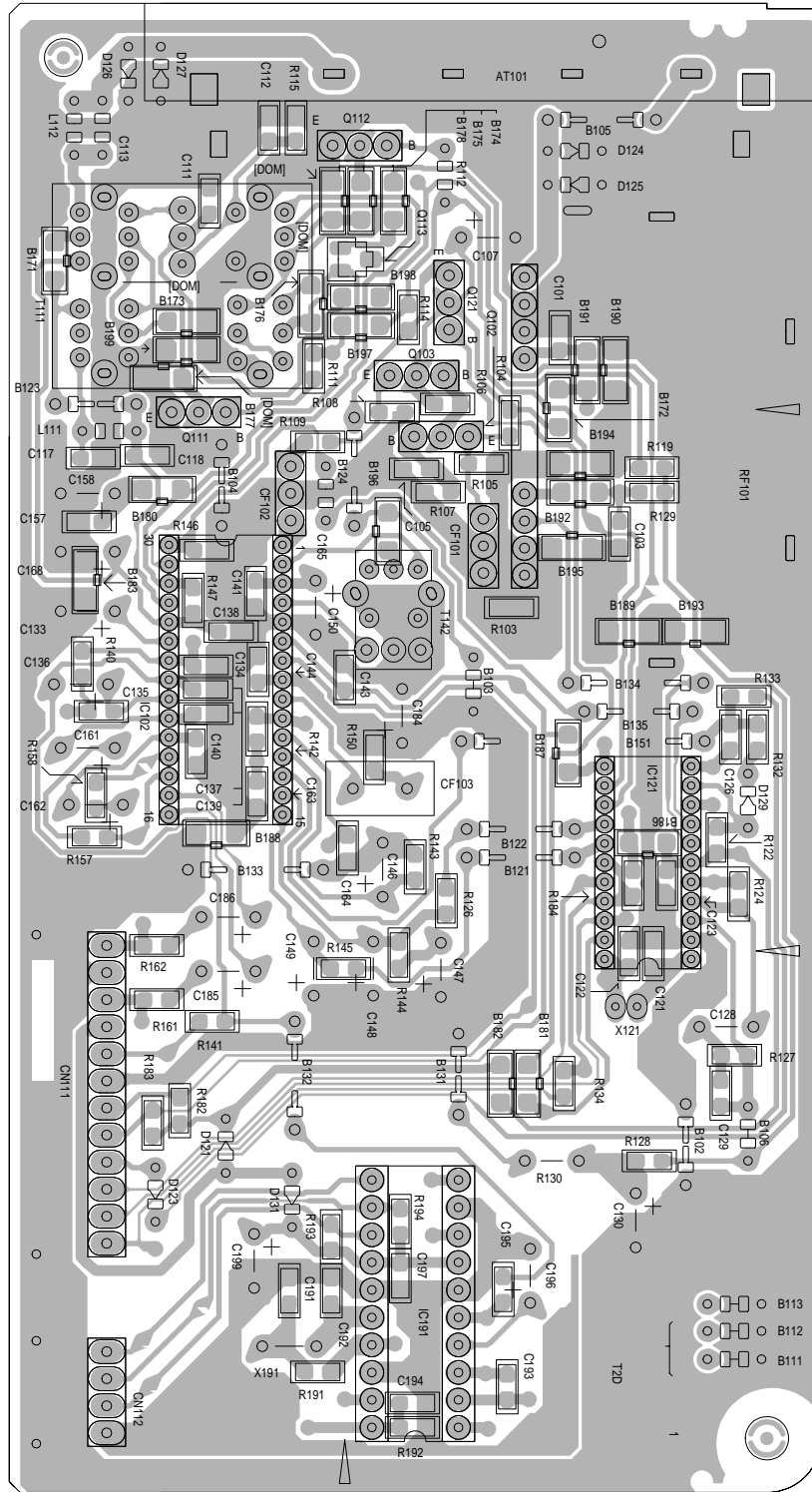
■ **Tuner board**

<div style="border:1px solid">

PARTS LIST

</div>

[RX-9010VBK]

* All printed circuit boards and its assemblies are not available as service parts.

<div style="border:1px dotted">

Area suffix

J ---------------------------- U.S.A.

</div>

- Contents -

< M E M O >

Exploded view of general assembly and parts list

Block No. M 1 M M

Power trans board ②

Power trans board ①

I/O board

Power/Fuse board

DSP board

S Video board

Video board

V Audio input board

Audio input board

Tuner board

Speaker board

Relay board

Power supply board

Main board

Audio board

power switch board

Center board

Front board (L)

Front board (R)

Rear board (L)

Rear board (R)

Front key & System control board

Switch board
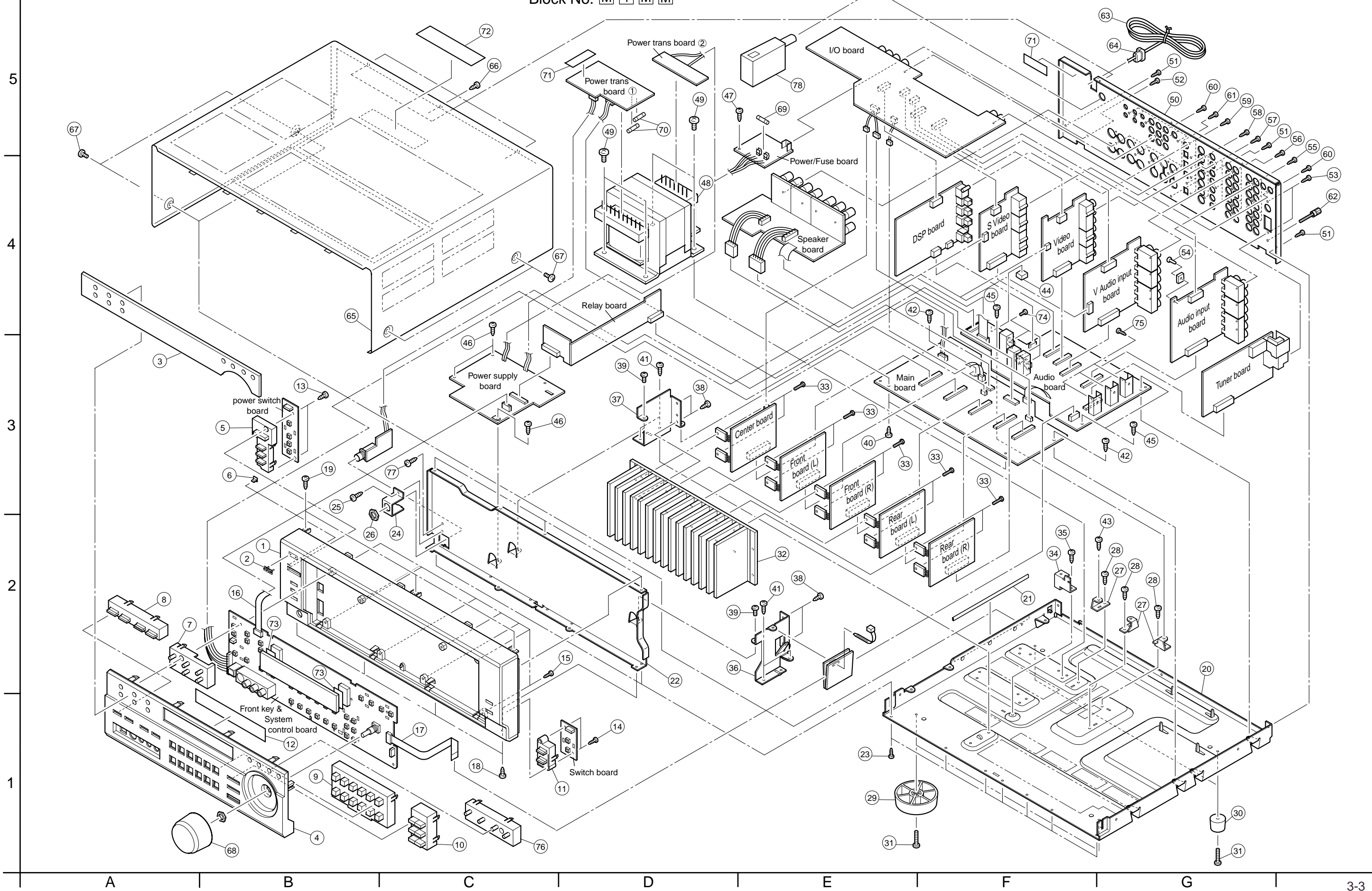
■ Parts list (General assembly) Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
⚠	1	LV10469-007A	FRONT PANEL	1		
	2	VJD5429-001SS	JVC MARK	1		
	3	LV20950-004A	LENS	1		
	4	LV10470-001A	SUB PANEL	1		
	5	LV20939-001A	PUSH BUTTON	1	POWER	
	6	LV42096-001A	INDICATOR	1	POWER	
	7	LV20951-001A	PUSH BUTTON	1	TUNER	
	8	LV20940-001A	P.BUTTON ASSY	1	DOLBY	
	9	LV20944-001A	P.BUTTON ASSY	1	SOURCE	
	10	LV20942-001A	PUSH BUTTON	1	SEA	
	11	LV32486-001A	P.BUTTON ASSY	1	LINE STRAIGHT	
	12	LV42095-002A	FL SCREEN	1	FL	
	13	QYSBSF2610Z	SCREW	2	FRONT C.B	
	14	QYSBSF2610Z	SCREW	2		
	15	QYSBSF2610Z	SCREW	8	FRONT C.B FL	
	16	QUQ412-0815CJ	FFC WIRE	1		
	17	QUQ412-1030CJ	FFC WIRE	1		
	18	QYSDSG3006Z	SCREW	4	FRONT D	
	19	QYSBSG3006Z	T.SCREW	3	FRONT U	
	20	LV10019-003A	CHASSIS BASE	1		
	21	EXO150010H09S11	FELT SPACER	1	FOR C.BASE	
	22	LV10471-002A	FRONT BRACKET	1		
	23	QYSDSG3006Z	SCREW	7	C.B-F.B	
	24	LV42094-002A	H.P. BKT	1		
	25	QYSBSG3006Z	T.SCREW	1	H.P BKT-F.B	
	26	VKZ4150-001	SPECIAL NUT	1		
	27	E68587-223SM	CB BKT	3		
	28	QYSBST3006Z	T.SCREW	3	C.B-BKT	
	29	QZF6018-001	FOOT	2		
	30	E47227-036	FOOT	2		
	31	QYSBST3010Z	T.SCREW	4	FOOT	
	32	LV20984-002A	HEAT SINK	1		
	33	E73525-003SS	SCREW	10	TR	
	34	LV42098-001A	C.B BKT	1	PRI/SEC C.B	
	35	QYSBST3006Z	T.SCREW	1	C.B BKT	
	36	LV32433-001A	H.S BRACKET(R)	1		
	37	LV32434-001A	H.S BRACKET(L)	1		
	38	QYSBSG3008Z	T.SCREW	4	H.S-BKT	
	39	QYSBSG3006Z	T.SCREW	2	H.S BKT-F.BKT	
	40	QYSBSG3006Z	T.SCREW	2	H.S BKT	
	41	QYSBST3006Z	T.SCREW	4	H.S BKT-CHASSIS	
	42	QYSBSG3006Z	T.SCREW	2	M.C.B	
	43	E65923-003	TAPPING SCREW	1	M.C.B	
	44	LV30225-0B2A	SPACER	1		
	45	QYSBSG3006Z	T.SCREW	3	H.S-C.B	
	46	QYSBSG3006Z	T.SCREW	3	P.C.B	
	47	QYSBSG3006Z	T.SCREW	1	C.B-CHASSIS	
⚠	48	QQT0325-001	POWER TRANS.	1		

■ Parts list (Genaral assembly) Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	49	QYSDSTL4008Z	SPECIAL SCREW	4	P.TRANS	
	50	LV10472-012A	REAR PANEL	1		
	51	QYSBSGY3008M	SPECIAL SCREW	3	R.P-C.BASE	
	52	QYSBSGY3008M	SPECIAL SCREW	1	R.P-ud---	
	53	QYSBSGY3008M	SPECIAL SCREW	2	TUNER	
	54	FMYH4004-001	PLASTIC RIVET	1	A.INPUT	
	55	QYSBSGY3008M	SPECIAL SCREW	4	A.INPUT	
	56	QYSBSGY3008M	SPECIAL SCREW	4	V.INPUT	
	57	QYSBSGY3008M	SPECIAL SCREW	3	VIDEO	
	58	QYSBSGY3008M	SPECIAL SCREW	4	S VIDEO	
	59	QYSBSGY3008M	SPECIAL SCREW	6	DIGITAL	
	60	QYSBSGY3008M	SPECIAL SCREW	7	COMPONENT	
	61	QYSBSGY3008M	SPECIAL SCREW	4	SPK C.B	
	62	E409257-001	GND TERMINAL	1		
⚠	63	QMPD220-200-JD	POWER CORD	1		
⚠	64	QZW0033-001	STRAIN RELIEF	1		
	65	LV20038-009A/S/	TOP COVER	1		
	66	QYSBSGY3008M	SPECIAL SCREW	3		
	67	E406308-003	SPECIAL SCREW	4		
	68	LV32435-003A	VOL KNOB	1	BK	
⚠	69	QMF51U1-6R3-J8	FUSE	1	F1	
⚠	70	QMF51U1-2R0-J8	FUSE	2	F61 F62	
	71	LV42388-001A	FUSE CAUTION	2		
	72	E409394-001	CAUTION LABEL	1		
	73	E3400-444	FELT SPACER	2	FS400 FS401	
	74	QYSBSG3008E	T.SCREW	3		
	75	QYSBSG3008E	T.SCREW	3		
	76	LV20952-001A	PUSH BUTTON	1	RDS/M.ROOM	
	77	QYSBSG3006Z	T.SCREW	1		
	78	QAU0237-001	RF MODULE UNIT	1	RF UNIT	

■ Electrical parts list (Main board)   **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 801	QCE22HP-103	C CAPACITOR	.010MF +100:-0%	
	C 802	QCE22HP-103	C CAPACITOR	.010MF +100:-0%	
	C 805	QCE22HP-103	C CAPACITOR	.010MF +100:-0%	
	C 807	QEZ0462-688	E CAPACITOR	6800MF	
	C 808	QEZ0462-688	E CAPACITOR	6800MF	
	C 811	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%	
	C 816	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 823	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 824	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	CN 72	QGB2510K1-11	CONNECTOR		
	CN 82	QGB2510K1-09	CONNECTOR		
	CN491	QGD2503F1-04	SOCKET		
	CN701	QGB2510J1-14	CONNECTOR		
	CN702	QGB2510J1-14	CONNECTOR		
	CN703	QGB2510J1-10	CONNECTOR		
	CN705	QGB2510J1-12	CONNECTOR		
	CN706	QGB2510J1-12	CONNECTOR		
	CN721	QGA2501C1-03	3P CONNECTOR		
	CN723	QGA2501C1-04	4P CONNECTOR		
	CN801	QJK012-032403	SKT WIRE ASSY		
	CN813	QGA3901C1-04	4P CONNECTOR		
	CN814	QGA3901C1-06	6P PLUG ASSY		
⚠	CN823	QJK015-043004	SKT WIRE ASSY		
⚠	CN824	QJK015-063504	SKT WIRE ASSY		
	CN831	QGD2501C1-04Z	SOCKET		
	CN881	QGD2501C1-03Z	SOCKET		
⚠	D 801	30DF2-FC	DIODE		
⚠	D 802	30DF2-FC	DIODE		
⚠	D 803	30DF2-FC	DIODE		
⚠	D 804	30DF2-FC	DIODE		
	D 811	MTZJ24C-T2	Z DIODE		
	D 816	MTZJ18C-T2	Z DIODE		
	D 825	1SS133-T2	SI DIODE		
	D 831	1SS133-T2	SI DIODE		
	D 832	1SS133-T2	SI DIODE		
	D 835	1SS133-T2	SI DIODE		
	D 851	1SS133-T2	SI DIODE		
	D 852	1SS133-T2	SI DIODE		
	D 871	1SS133-T2	SI DIODE		
	EP801	QNZ0136-001Z	EARTH PLATE		
	FW931	QUM137-08DGZ4	PARA RIBON WIRE		
	Q 811	2SD2395/EF/	TRANSISTOR		
	Q 812	KTC3200/GL/-T	TRANSISTOR		
	Q 823	KTC3199/GL/-T	TRANSISTOR		
	Q 824	KTC3200/GL/-T	TRANSISTOR		
	Q 825	KTA1268/GL/-T	TRANSISTOR		
	R 801	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 802	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 811	QRJ146J-150X	UNF C RESISTOR	15 5% 1/4W	
	R 812	QRK126J-332X	UNF C RESISTOR	3.3K 5% 1/2W	
	R 813	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 814	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 815	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	R 816	QRL022J-332	UNF OMF RESISTOR	3.3K 5% 1/2W	
	R 823	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 824	QRE141J-134Y	C RESISTOR	130K 5% 1/4W	
	R 825	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 826	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 831	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	R 832	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	R 835	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	R 841	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 842	QRE141J-823Y	C RESISTOR	82K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 843	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 844	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 845	QRE141J-823Y	C RESISTOR	82K 5% 1/4W	
	R 851	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	R 852	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	R 871	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	RY831	QSK0109-001	RELAY		
	RY832	QSK0109-001	RELAY		
	RY833	QSK0109-001	RELAY		
	RY851	QSK0109-001	RELAY		
	RY852	QSK0109-001	RELAY		
	RY871	QSK0109-001	RELAY		
	S 831	QSW0509-001	SLIDE SW		
	ST831	QNB0105-002	SPK TERMINAL		
	ST851	QNB0078-001	SPK TERMINAL		

RX-9010VBK

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	BK400	LV42092-001A	FL HOLDER(R)				IC410	PCM2702E-X	IC		
	BK401	LV42093-001A	FL HOLDER(L)				IC411	NJU7241F33-X	IC		
	C 400	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V			J 400	QND0026-001	S JACK		
	C 401	NCB31CK-104X	C CAPACITOR				J 401	QNZ0541-001	USB JACK		
	C 402	NCB31CK-104X	C CAPACITOR				JS400	QSW0898-001	JOG VOLUME		
	C 404	NCB31EK-223X	C CAPACITOR				K 451	NQR0201-018X	INDUCTOR		
	C 406	NCB31HK-331X	C CAPACITOR				K 452	NQR0201-018X	INDUCTOR		
	C 407	QCZ0205-155Z	ML C CAPACITOR	1.5MF			K 453	NQR0201-018X	INDUCTOR		
	C 408	NCB31EK-223X	C CAPACITOR				K 454	NQR0201-018X	INDUCTOR		
	C 409	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V			K 455	NQR0201-018X	INDUCTOR		
	C 410	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V			K 456	NQR0201-018X	INDUCTOR		
	C 411	NCB21AK-225X	C CAPACITOR				Q 402	DTC114TKA-X	TRANSISTOR		
	C 412	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V			Q 403	DTC144WKA-X	TRANSISTOR		
	C 420	NCB31HK-471X	C CAPACITOR				Q 404	DTC114YKA-X	D TRANSISTOR		
	C 421	NCB31HK-471X	C CAPACITOR				Q 407	DTC114YKA-X	D TRANSIST		
	C 422	NCB31HK-471X	C CAPACITOR				Q 408	DTC114YKA-X	D TRANSIST		
	C 423	NCB31HK-471X	C CAPACITOR				Q 410	DTA114YKA-X	TRANSISTOR	(DIRECT)	
	C 424	NCB31HK-471X	C CAPACITOR				Q 411	DTA114YKA-X	TRANSISTOR	(BASS)	
	C 425	NCB31HK-471X	C CAPACITOR				Q 412	DTA114YKA-X	TRANSISTOR	(STANBY)	
	C 430	NCB31EK-223X	C CAPACITOR				Q 413	DTA114YKA-X	TRANSISTOR	(SURROUND)	
	C 431	NCB31EK-223X	C CAPACITOR				Q 414	DTA114YKA-X	TRANSISTOR	(DSP)	
	C 432	NCS31HJ-220X	C CAPACITOR				R 400	NRSA63J-102X	MG RESISTOR		
	C 433	NCS31HJ-220X	C CAPACITOR				R 401	NRSA63J-102X	MG RESISTOR		
	C 435	NCB31EK-104X	C CAPACITOR				R 402	NRSA63J-122X	MG RESISTOR		
	C 436	NCB31EK-104X	C CAPACITOR				R 403	NRSA63J-102X	MG RESISTOR		
	C 437	NCB31EK-104X	C CAPACITOR				R 404	NRSA63J-102X	MG RESISTOR		
	C 438	NCB31EK-104X	C CAPACITOR				R 405	NRSA63J-122X	MG RESISTOR		
	C 439	NCB31EK-104X	C CAPACITOR				R 406	NRSA63J-152X	MG RESISTOR		
	C 440	NCB31EK-104X	C CAPACITOR				R 407	NRSA63J-222X	MG RESISTOR		
	C 441	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V			R 408	NRSA63J-272X	MG RESISTOR		
	C 442	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V			R 409	NRSA63J-392X	MG RESISTOR		
	C 443	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V			R 410	NRSA63J-102X	MG RESISTOR		
	C 444	NCS31HJ-331X	C CAPACITOR				R 411	NRSA63J-102X	MG RESISTOR		
	C 456	NCB31EK-104X	C CAPACITOR				R 412	NRSA63J-122X	MG RESISTOR		
	CN406	WJP0031-001A	C-B WIRE ASSY				R 413	NRSA63J-152X	MG RESISTOR		
	CN410	QGF1205F1-10	CONNECTOR				R 414	NRSA63J-222X	MG RESISTOR		
	CN412	QGF1205F1-08	CONNECTOR				R 415	NRSA63J-272X	MG RESISTOR		
	CN420	QJK025-031301	C-B WIRE ASSY	(LEFT)			R 416	NRSA63J-392X	MG RESISTOR		
	CN422	QJK025-041201	SIN ID C-B WIRE	(RIGHT)			R 417	NRSA63J-102X	MG RESISTOR		
	CN430	QGA2501C1-03	3P CONNECTOR				R 418	NRSA63J-102X	MG RESISTOR		
	CN432	QGA2501C1-04	4P CONNECTOR				R 419	NRSA63J-122X	MG RESISTOR		
	D 405	1SS133-T2	SI DIODE				R 420	NRSA63J-152X	MG RESISTOR		
	D 410	SLR-342VC-T	LED	(FM/AM)			R 421	NRSA63J-222X	MG RESISTOR		
	D 411	SLR-342VC-T	LED	(USB)			R 422	NRSA63J-272X	MG RESISTOR		
	D 412	SLR-342VC-T	LED	(TAPE)			R 423	NRSA63J-392X	MG RESISTOR		
	D 413	SLR-342VC-T	LED	(CDR)			R 424	NRSA63J-102X	MG RESISTOR		
	D 414	SLR-342VC-T	LED	(PHONE)			R 425	NRSA63J-102X	MG RESISTOR		
	D 415	SLR-342VC-T	LED	(CD)			R 426	NRSA63J-122X	MG RESISTOR		
	D 416	SLR-342VC-T	LED	(TV/DBS)			R 427	NRSA63J-152X	MG RESISTOR		
	D 417	SLR-342VC-T	LED	(VIDEO)			R 428	NRSA63J-222X	MG RESISTOR		
	D 418	SLR-342VC-T	LED	(VCR2)			R 429	NRSA63J-272X	MG RESISTOR		
	D 419	SLR-342VC-T	LED	(VCR1)			R 430	NRSA63J-392X	MG RESISTOR		
	D 420	SLR-342VC-T	LED	(DVD MULTI)			R 431	NRSA63J-102X	MG RESISTOR		
	D 421	SLR-342VC-T	LED	(DVD)			R 432	NRSA63J-102X	MG RESISTOR		
	D 422	SLR-342VC-T	LED	(SURROUND)			R 433	NRSA63J-122X	MG RESISTOR		
	D 423	SLR-342VC-T	LED	(DSP)			R 434	NRSA63J-152X	MG RESISTOR		
	D 480	SLR-342VC-T	LED	(STANDBY)			R 435	NRSA63J-222X	MG RESISTOR		
	D 490	SLR-342VC-T	LED	(DIRECT)			R 436	NRSA63J-102X	MG RESISTOR		
	D 491	SLR-342VC-T	LED	(BASS)			R 437	NRSA63J-102X	MG RESISTOR		
	DI400	QLF0084-001	FL TUBE				R 438	NRSA63J-122X	MG RESISTOR		
	IC400	MN101C35DHL1	IC	u-h--			R 439	NRSA63J-152X	MG RESISTOR		
	IC402	BU2092	IC				R 440	NRSA63J-222X	MG RESISTOR		
	IC404	GP1U281X	IC				R 441	NRSA63J-272X	MG RESISTOR		

■ Electrical parts list (Front board) Block No. 02

⚠	Item	Parts number	Parts name	Remarks	Area
	R 442	NRSA63J-392X	MG RESISTOR		
	R 443	NRSA63J-102X	MG RESISTOR		
	R 445	NRSA63J-103X	MG RESISTOR		
	R 446	NRSA63J-103X	MG RESISTOR		
	R 447	NRSA63J-103X	MG RESISTOR		
	R 448	NRSA63J-103X	MG RESISTOR		
	R 449	NRSA63J-103X	MG RESISTOR		
	R 450	NRSA63J-103X	MG RESISTOR		
	R 451	NRSA63J-103X	MG RESISTOR		
	R 452	NRSA63J-103X	MG RESISTOR		
	R 453	NRSA63J-103X	MG RESISTOR		
	R 454	NRSA63J-103X	MG RESISTOR		
	R 455	NRSA63J-471X	MG RESISTOR		
	R 456	NRSA63J-103X	MG RESISTOR		
	R 457	NRSA63J-103X	MG RESISTOR		
	R 458	NRSA63J-103X	MG RESISTOR		
	R 459	NRSA63J-221X	MG RESISTOR		
	R 460	NRSA63J-221X	MG RESISTOR		
	R 461	NRSA63J-221X	MG RESISTOR		
	R 462	NRSA63J-221X	MG RESISTOR		
	R 463	NRSA63J-221X	MG RESISTOR		
	R 464	NRSA63J-221X	MG RESISTOR		
	R 465	NRSA63J-331X	MG RESISTOR		
	R 466	NRSA63J-331X	MG RESISTOR		
	R 467	NRSA63J-221X	MG RESISTOR		
	R 468	NRSA63J-221X	MG RESISTOR		
	R 469	NRSA63J-221X	MG RESISTOR		
	R 470	NRSA63J-750X	MG RESISTOR		
	R 471	NRSA63J-750X	MG RESISTOR		
	R 472	NRSA63J-750X	MG RESISTOR		
	R 473	NRSA63J-152X	MG RESISTOR		
	R 474	NRSA63J-105X	MG RESISTOR		
	R 475	NRSA63J-220X	MG RESISTOR		
	R 476	NRSA63J-220X	MG RESISTOR		
	R 477	NRSA63J-220X	MG RESISTOR		
	R 479	NRSA63J-181X	MG RESISTOR		
	R 480	NRSA63J-152X	MG RESISTOR		
	R 481	NRSA63J-222X	MG RESISTOR		
	R 482	NRSA63J-272X	MG RESISTOR		
	R 483	NRSA63J-392X	MG RESISTOR		
	R 490	NRSA63J-272X	MG RESISTOR		
	R 491	NRSA63J-392X	MG RESISTOR		
	R 495	NRSA63J-102X	MG RESISTOR		
	S 400	QSW0683-001Z	PUSH SWITCH	(SURROUND)	
	S 401	QSW0683-001Z	PUSH SWITCH	(DSP MODE)	
	S 402	QSW0683-001Z	PUSH SWITCH	(INPUT MODE)	
	S 403	QSW0683-001Z	PUSH SWITCH	(TUNING UP)	
	S 404	QSW0683-001Z	PUSH SWITCH	(PRESET UP)	
	S 405	QSW0683-001Z	PUSH SWITCH	(FM MODE)	
	S 406	QSW0683-001Z	PUSH SWITCH	(MEMORY)	
	S 407	QSW0683-001Z	PUSH SWITCH	(MIDNIGHT MODE)	
	S 408	QSW0683-001Z	PUSH SWITCH	(DVD)	
	S 409	QSW0683-001Z	PUSH SWITCH	(DVD MULTI)	
	S 410	QSW0683-001Z	PUSH SWITCH	(TUNING DOWN)	
	S 411	QSW0683-001Z	PUSH SWITCH	(PRESET DOWN)	
	S 412	QSW0683-001Z	PUSH SWITCH	(VCR1)	
	S 413	QSW0683-001Z	PUSH SWITCH	(VCR2)	
	S 414	QSW0683-001Z	PUSH SWITCH	(VIDEO)	
	S 415	QSW0683-001Z	PUSH SWITCH	(CD)	
	S 416	QSW0683-001Z	PUSH SWITCH	(TV/DBS)	
	S 417	QSW0683-001Z	PUSH SWITCH	(CDR)	
	S 418	QSW0683-001Z	PUSH SWITCH	(USB AUDIO)	
	S 419	QSW0683-001Z	PUSH SWITCH	(PHONE)	

⚠	Item	Parts number	Parts name	Remarks	Area
	S 420	QSW0683-001Z	PUSH SWITCH	(FM/AM)	
	S 421	QSW0683-001Z	PUSH SWITCH	(DIGITAL SEA)	
	S 422	QSW0683-001Z	PUSH SWITCH	(LEVEL ADJUST)	
	S 423	QSW0683-001Z	PUSH SWITCH	(TAPE/MD)	
	S 424	QSW0683-001Z	PUSH SWITCH	(DOWN)	
	S 425	QSW0683-001Z	PUSH SWITCH	(EFECT)	
	S 426	QSW0683-001Z	PUSH SWITCH	(SETTING)	
	S 427	QSW0683-001Z	PUSH SWITCH	(MAIN/EON)	
	S 428	QSW0683-001Z	PUSH SWITCH	(SUB/PTY)	
	S 429	QSW0683-001Z	PUSH SWITCH	(SUB CTL/TA)	
	S 430	QSW0683-001Z	PUSH SWITCH	(DIMMER/DISP)	
	S 431	QSW0683-001Z	PUSH SWITCH	(UP)	
	S 480	QSW0683-001Z	PUSH SWITCH	(POWER)	
	S 481	QSW0683-001Z	PUSH SWITCH	(SPK1)	
	S 482	QSW0683-001Z	PUSH SWITCH	(SPK2)	
	S 483	QSW0683-001Z	PUSH SWITCH	(SUBWFR)	
	S 490	QSW0683-001Z	PUSH SWITCH	(DIRECT)	
	S 491	QSW0683-001Z	PUSH SWITCH	(BASS)	
	X 400	QAX0246-001Z	RESONATOR		
	X 410	QAX0320-001Z	CRYSTAL		

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■ **Electrical parts list (Power board)**　　　Block No.　03

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	C 701	QTE1V06-106Z	E CAPACITOR				C1808	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 702	QTE1V06-106Z	E CAPACITOR				C1809	QCS31HJ-5R0Z	C CAPACITOR	5.0PF 5% 50V	
	C 703	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V			C1810	QCS31HJ-5R0Z	C CAPACITOR	5.0PF 5% 50V	
	C 704	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V			C1811	QCS32HJ-330Z	C CAPACITOR	33PF 5% 500V	
	C 705	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V			C1812	QCS32HJ-330Z	C CAPACITOR	33PF 5% 500V	
	C 706	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V			C1813	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 707	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V			C1814	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 708	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V			C1815	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 709	QCS31HJ-100Z	C CAPACITOR	10PF 5% 50V			C1816	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 710	QCS31HJ-100Z	C CAPACITOR	10PF 5% 50V			C1817	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V	
	C 711	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V			C1818	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V	
	C 712	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V			C1841	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V	
	C 713	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V			C1842	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V	
	C 714	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V			C1843	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V	
	C 715	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V			C1844	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V	
	C 716	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V			C1851	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 717	QCS32HJ-220Z	C CAPACITOR	22PF 5% 500V			C1852	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 718	QCS32HJ-220Z	C CAPACITOR	22PF 5% 500V			C1853	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 719	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V			C1854	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 720	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V			C1861	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 741	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V			C1862	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 742	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V			C1863	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 745	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V			C1864	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 746	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V			C1891	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 751	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V			C1892	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 752	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V			D 701	1SS133-T2	SI DIODE		
	C 753	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V			D 702	1SS133-T2	SI DIODE		
	C 754	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V			D 703	1SS133-T2	SI DIODE		
	C 791	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V			D 704	1SS133-T2	SI DIODE		
	C 792	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V			D 771	1SS133-T2	SI DIODE		
	C 793	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V			D 772	1SS133-T2	SI DIODE		
	C 794	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V			D 773	1SS133-T2	SI DIODE		
	C 795	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%			D 774	1SS133-T2	SI DIODE		
	C 796	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%			D 791	1SS133-T2	SI DIODE		
	CN711	QGB2510K1-14	CONNECTOR				D 792	1SS133-T2	SI DIODE		
	CN712	QGB2510K1-14	CONNECTOR				D1701	1SS133-T2	SI DIODE		
	CN713	QGB2510K1-10	CONNECTOR				D1771	1SS133-T2	SI DIODE		
	CN715	QGB2510K1-12	CONNECTOR				D1772	1SS133-T2	SI DIODE		
	CN716	QGB2510K1-12	CONNECTOR				D1791	1SS133-T2	SI DIODE		
	CN722	QGA2501F1-02	CONNECTOR				D1801	1SS133-T2	SI DIODE		
	C1701	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V			D1802	1SS133-T2	SI DIODE		
	C1702	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V			D1871	1SS133-T2	SI DIODE		
	C1703	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V			D1872	1SS133-T2	SI DIODE		
	C1704	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V			D1873	1SS133-T2	SI DIODE		
	C1705	QCS31HJ-5R0Z	C CAPACITOR	5.0PF 5% 50V			D1874	1SS133-T2	SI DIODE		
	C1711	QCS32HJ-330Z	C CAPACITOR	33PF 5% 500V			D1891	1SS133-T2	SI DIODE		
	C1712	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V			D1892	1SS133-T2	SI DIODE		
	C1713	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V			L 791	QQLZ003-1R0	INDUCTOR		
	C1715	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V			L 792	QQLZ003-1R0	INDUCTOR		
	C1741	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V			L1761	QQLZ005-R45	INDUCTOR		
	C1743	QETN2AM-476Z	E CAPACITOR	47MF 20% 100V			L1861	QQLZ005-R45	INDUCTOR		
	C1751	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V			L1862	QQLZ005-R45	INDUCTOR		
	C1752	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V			Q 701	2SC2240-BL/AB/T	TRANSISTOR		
	C1761	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V			Q 702	2SC2240-BL/AB/T	TRANSISTOR		
	C1762	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V			Q 703	2SC2240-BL/AB/T	TRANSISTOR		
	C1791	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%			Q 704	2SC2240-BL/AB/T	TRANSISTOR		
	C1801	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V			Q 705	KTA1268/GL/-T	TRANSISTOR		
	C1802	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V			Q 706	KTA1268/GL/-T	TRANSISTOR		
	C1803	QCS31HJ-181Z	C CAPACITOR	180PF 5% 50V			Q 707	KTA1268/GL/-T	TRANSISTOR		
	C1804	QCS31HJ-181Z	C CAPACITOR	180PF 5% 50V			Q 708	KTA1268/GL/-T	TRANSISTOR		
	C1805	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V			Q 709	KTA1268/GL/-T	TRANSISTOR		
	C1806	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V			Q 710	KTA1268/GL/-T	TRANSISTOR		
	C1807	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V			Q 711	KTC3200/GL/-T	TRANSISTOR		

■ Electrical parts list (Power board)   Block No. 03

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 712	KTC3200/GL/-T	TRANSISTOR		
⚠	Q 761	2SD2560/OPY/-F6	TRANSISTOR		
⚠	Q 762	2SD2560/OPY/-F6	TRANSISTOR		
⚠	Q 763	2SB1647/OPY/-F6	TRANSISTOR		
⚠	Q 764	2SB1647/OPY/-F6	TRANSISTOR		
	Q 771	KTC3200/GL/-T	TRANSISTOR		
	Q 772	KTC3200/GL/-T	TRANSISTOR		
	Q 773	KTA1268/GL/-T	TRANSISTOR		
	Q 774	KTA1268/GL/-T	TRANSISTOR		
	Q 781	2SD637/QR/	TRANSISTOR		
	Q 782	2SD637/QR/	TRANSISTOR		
	Q 791	KTA1268/GL/-T	TRANSISTOR		
	Q 792	KTA1268/GL/-T	TRANSISTOR		
	Q1701	2SC2240-BL/AB/T	TRANSISTOR		
	Q1702	2SC2240-BL/AB/T	TRANSISTOR		
	Q1703	KTA1268/GL/-T	TRANSISTOR		
	Q1731	2SD637/QR/	TRANSISTOR		
⚠	Q1751	2SD2390/OPY/-F6	TRANSISTOR		
⚠	Q1752	2SB1560/OPY/-F6	TRANSISTOR		
	Q1771	KTC3200/GL/-T	TRANSISTOR		
	Q1772	KTA1268/GL/-T	TRANSISTOR		
	Q1791	KTA1268/GL/-T	TRANSISTOR		
	Q1801	2SC2240-BL/AB/T	TRANSISTOR		
	Q1802	2SC2240-BL/AB/T	TRANSISTOR		
	Q1803	2SC2240-BL/AB/T	TRANSISTOR		
	Q1804	2SC2240-BL/AB/T	TRANSISTOR		
	Q1805	KTA1268/GL/-T	TRANSISTOR		
	Q1806	KTA1268/GL/-T	TRANSISTOR		
	Q1831	2SD637/QR/	TRANSISTOR		
	Q1832	2SD637/QR/	TRANSISTOR		
⚠	Q1851	2SD2390/OPY/-F6	TRANSISTOR		
⚠	Q1852	2SD2390/OPY/-F6	TRANSISTOR		
⚠	Q1853	2SB1560/OPY/-F6	TRANSISTOR		
⚠	Q1854	2SB1560/OPY/-F6	TRANSISTOR		
	Q1871	KTC3200/GL/-T	TRANSISTOR		
	Q1872	KTC3200/GL/-T	TRANSISTOR		
	Q1873	KTA1268/GL/-T	TRANSISTOR		
	Q1874	KTA1268/GL/-T	TRANSISTOR		
	Q1891	KTA1268/GL/-T	TRANSISTOR		
	Q1892	KTA1268/GL/-T	TRANSISTOR		
	R 701	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 702	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 703	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 704	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 705	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R 706	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R 707	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R 708	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R 709	QRE141J-912Y	C RESISTOR	9.1K 5% 1/4W	
	R 710	QRE141J-912Y	C RESISTOR	9.1K 5% 1/4W	
	R 711	QRE141J-621Y	C RESISTOR	620 5% 1/4W	
	R 712	QRE141J-621Y	C RESISTOR	620 5% 1/4W	
	R 715	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 716	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 717	QRJ146J-562X	UNF C RESISTOR	5.6K 5% 1/4W	
	R 718	QRJ146J-562X	UNF C RESISTOR	5.6K 5% 1/4W	
	R 719	QRK126J-103X	UNF C RESISTOR	10K 5% 1/2W	
	R 720	QRK126J-103X	UNF C RESISTOR	10K 5% 1/2W	
	R 721	QRJ146J-151X	UNF C RESISTOR	150 5% 1/4W	
	R 722	QRJ146J-151X	UNF C RESISTOR	150 5% 1/4W	
	R 723	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 724	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 725	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 726	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 727	QRE141J-333Y	C RESISTOR	33K 5% 1/4W	
	R 728	QRE141J-333Y	C RESISTOR	33K 5% 1/4W	
	R 729	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 730	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 731	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 732	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 733	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 734	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 761	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 762	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 763	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 764	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 771	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 772	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 773	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 774	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 775	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 776	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 777	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 778	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 779	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R 780	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R 781	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 782	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R 783	QRE141J-621Y	C RESISTOR	620 5% 1/4W	
	R 784	QRE141J-621Y	C RESISTOR	620 5% 1/4W	
	R 787	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 788	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 789	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 790	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 791	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
	R 792	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
	R 793	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
	R 794	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
	R 795	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 796	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 797	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 798	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R1701	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R1702	QRE141J-683Y	C RESISTOR	68K 5% 1/4W	
	R1703	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R1705	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R1711	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R1712	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R1721	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
	R1722	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1723	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1724	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1725	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1731	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1732	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1741	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
	R1751	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R1752	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R1753	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R1761	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
	R1762	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
	R1771	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1772	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1773	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R1774	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R1791	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	

RX-9010VBK

■ **Electrical parts list (Power board)**   **Block No.   03**

⚠	Item	Parts number	Parts name	Remarks	Area
	R1793	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R1795	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R1801	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R1802	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R1803	QRE141J-683Y	C RESISTOR	68K 5% 1/4W	
	R1804	QRE141J-683Y	C RESISTOR	68K 5% 1/4W	
	R1805	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R1806	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R1809	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R1810	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R1811	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R1812	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R1813	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R1814	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R1821	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
	R1822	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
	R1823	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1824	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1825	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1826	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1827	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1828	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1829	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1830	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1831	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1832	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1833	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1834	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1841	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
	R1842	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
	R1851	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R1852	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R1853	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R1854	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R1855	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R1856	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R1861	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
	R1862	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
	R1863	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
	R1864	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
	R1871	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1872	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1873	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1874	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R1875	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R1876	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R1877	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R1878	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R1891	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1892	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1893	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R1894	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R1895	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R1896	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	TH731	QAD0012-202	THERMISTOR		
	TH783	QAD0012-202	THERMISTOR		
	TH784	QAD0012-202	THERMISTOR		
	TH831	QAD0012-202	THERMISTOR		
	TH832	QAD0012-202	THERMISTOR		
	VR787	QVP0008-501Z	SEMI V RESISTOR		
	VR788	QVP0008-501Z	SEMI V RESISTOR		

■ Electrical parts list (Input board)　　**Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	C 201	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 308	QFLC1HJ-682Z	M CAPACITOR	6800PF 5% 50V	
	C 202	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 309	NCS31HJ-101X	C CAPACITOR		
	C 203	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V			C 310	NCS31HJ-101X	C CAPACITOR		
	C 204	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 311	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 205	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V			C 312	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 206	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 313	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 207	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V			C 314	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 208	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V			C 315	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 209	QCF31HZ-103Z	C CAPACITOR	.010MF +80:-20%			C 316	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 210	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 321	NCB31HK-221X	C CAPACITOR		
	C 211	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 322	NCB31HK-221X	C CAPACITOR		
	C 212	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V			C 333	NCB31HK-391X	C CAPACITOR		
	C 213	QCF31HZ-103Z	C CAPACITOR	.010MF +80:-20%			C 334	NCB31HK-391X	C CAPACITOR		
	C 214	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 335	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 215	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 336	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 216	QDX31EM-473Z	C CAPACITOR				C 339	NCB31HK-561X	C CAPACITOR		
	C 217	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V			C 341	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 218	QCZ0202-155Z	ML C CAPACITOR	1.5MF			C 342	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 219	QDC31HJ-150Z	C CAPACITOR				C 343	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 220	QDC31HJ-100Z	C CAPACITOR				C 344	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 221	QDC31HJ-470Z	C CAPACITOR				C 361	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 222	QDC31HJ-270Z	C CAPACITOR				C 362	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 223	NCB31HK-102X	C CAPACITOR				C 363	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 224	NCB31HK-271X	C CAPACITOR				C 364	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 225	NCS31HJ-121X	C CAPACITOR				C 385	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 226	NCS31HJ-470X	C CAPACITOR				C 386	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 231	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 389	NCB31HK-561X	C CAPACITOR		
	C 241	QDX31EM-473Z	C CAPACITOR				C 391	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 242	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 392	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 244	QDX31EM-473Z	C CAPACITOR				C 393	NCB31HK-122X	C CAPACITOR		
	C 245	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 394	NCB31HK-122X	C CAPACITOR		
	C 246	QDX31EM-473Z	C CAPACITOR				C 395	NCS31HJ-121X	C CAPACITOR		
	C 247	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V			C 396	NCS31HJ-121X	C CAPACITOR		
	C 249	QDX31EM-473Z	C CAPACITOR				C 397	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 250	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C 398	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 251	QDX31EM-473Z	C CAPACITOR				CN200	QGB2510K1-11	CONNECTOR		
	C 252	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V			CN204	QGB1214K1-08S	CONNECTOR		
	C 253	NCS31HJ-100X	C CAPACITOR				CN205	QGB1214J1-08S	CONNECTOR		
	C 254	QDX31EM-473Z	C CAPACITOR				CN206	QGA2501F1-02	CONNECTOR		
	C 255	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			CN240	QGB2510K1-12	CONNECTOR		
	C 256	QCF31HZ-103Z	C CAPACITOR	.010MF +80:-20%			CN242	QGB1214K1-10S	CONNECTOR		
	C 257	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V			CN243	QGB1214J1-10S	CONNECTOR		
	C 258	QCF31HZ-103Z	C CAPACITOR	.010MF +80:-20%			CN244	QGA2501F1-04	CONNECTOR		
	C 259	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V			CN311	QGB2510K1-14	CONNECTOR		
	C 260	QDX31EM-473Z	C CAPACITOR				CN313	QGB2510K1-13	CONNECTOR		
	C 261	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			CN351	QGB1214K1-16S	CONNECTOR		
	C 268	NCS31HJ-470X	C CAPACITOR				CN361	QGB1214J1-16S	CONNECTOR		
	C 269	NCS31HJ-470X	C CAPACITOR				CN371	QGB1214K1-14S	CONNECTOR		
	C 270	NCS31HJ-101X	C CAPACITOR				CN381	QGB1214J1-14S	CONNECTOR		
	C 271	NCS31HJ-101X	C CAPACITOR				CN416	QGA2501F1-06	CONNECTOR		
	C 272	QDX31EM-473Z	C CAPACITOR				CN480	QJK017-031301	SIN CR C-B WIR		
	C 273	QDX31EM-473Z	C CAPACITOR				CN501	QGB1214J1-12S	CONNECTOR		
	C 274	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V			CN731	QJP001-032301	SHI CR C-B WIRE		
	C 275	NCS31HJ-470X	C CAPACITOR				CN732	WJP0026-001A	CONNECTOR		
	C 276	NCS31HJ-470X	C CAPACITOR				C1201	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 277	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1202	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 301	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1209	NCB31HK-561X	C CAPACITOR		
	C 302	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1211	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 303	NCS31HJ-101X	C CAPACITOR				C1212	QETN1EM-226Z	E CAPACITOR	22MF 20% 25V	
	C 304	NCS31HJ-101X	C CAPACITOR				C1219	NCB31HK-561X	C CAPACITOR		
	C 305	QFLC1HJ-182Z	M CAPACITOR	1800PF 5% 50V			C1221	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 306	QFLC1HJ-182Z	M CAPACITOR	1800PF 5% 50V			C1222	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 307	QFLC1HJ-682Z	M CAPACITOR	6800PF 5% 50V			C1223	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	

RX-9010VBK

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	C1224	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V			C1363	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1225	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			C1364	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1226	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			C1365	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1227	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1366	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1228	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1370	NCB31HK-221X	C CAPACITOR		
	C1229	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1371	NCB31HK-221X	C CAPACITOR		
	C1230	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1372	NCB31HK-221X	C CAPACITOR		
	C1231	NCB31HK-221X	C CAPACITOR				C1375	QCF31HZ-103Z	C CAPACITOR	.010MF +80:-20%	
	C1232	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V			C1376	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1233	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V			C1377	QCF31HZ-103Z	C CAPACITOR	.010MF +80:-20%	
	C1241	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1378	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1242	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1380	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1243	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1381	NCS31HJ-470X	C CAPACITOR		
	C1244	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1382	NCS31HJ-470X	C CAPACITOR		
	C1245	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V			C1383	NCS31HJ-470X	C CAPACITOR		
	C1261	NCB31HK-221X	C CAPACITOR				C1384	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1262	NCB31HK-221X	C CAPACITOR				C1385	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1281	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V			C1386	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1282	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V			C1387	NCS31HJ-470X	C CAPACITOR		
	C1283	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			C1388	NCS31HJ-470X	C CAPACITOR		
	C1284	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V			C1389	NCS31HJ-470X	C CAPACITOR		
	C1285	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			C1390	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1286	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V			C1391	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1301	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			C1392	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1302	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			C1393	NCS31HJ-101X	C CAPACITOR		
	C1303	NCB31HK-221X	C CAPACITOR				C1394	NCS31HJ-101X	C CAPACITOR		
	C1305	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			C1395	NCS31HJ-101X	C CAPACITOR		
	C1306	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			C1396	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C1307	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V			C1397	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C1311	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			C1398	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C1312	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			D 200	1SS133-T1	SI DIODE		
	C1313	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			D 201	1SS133-T1	SI DIODE		
	C1314	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			D 240	1SS133-T1	SI DIODE		
	C1315	QER61HM-224Z	E CAPACITOR	.22MF 20% 50V			D 241	1SS133-T1	SI DIODE		
	C1316	QER61HM-224Z	E CAPACITOR	.22MF 20% 50V			D1370	MA3062/H/-X	Z DIODE		
	C1319	NCB31HK-221X	C CAPACITOR				D1391	1SS133-T1	SI DIODE		
	C1321	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			D1392	1SS133-T1	SI DIODE		
	C1322	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			FW481	QUM134-10DGZ4	PARA RIBON WIRE		
	C1323	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			HL203	VYH7653-005	IC HOLDER		
	C1324	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			IC201	BA7625	IC		
	C1325	QER61HM-224Z	E CAPACITOR	.22MF 20% 50V			IC202	NJM2285V-W	IC		
	C1326	QER61HM-224Z	E CAPACITOR	.22MF 20% 50V			IC203	MB90088PF-131	IC		
	C1329	NCB31HK-221X	C CAPACITOR				IC241	BA7626	IC		
	C1331	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			IC242	BA7625	IC		
	C1332	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			IC301	NJM4580D-D	IC		
	C1333	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			IC302	TC9164AF-X	IC		
	C1334	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			IC303	BA15218F-XE	IC		
	C1335	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V			IC304	BA15218F-XE	IC		
	C1336	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V			IC371	TC9163AF-X	IC		
	C1337	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V			IC372	BA15218F-XE	IC		
	C1338	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V			IC380	TC9162AN	IC		
	C1339	NCB31HK-221X	C CAPACITOR				IC381	TC9459F-X	IC		
	C1341	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			IC382	TC9459F-X	IC		
	C1342	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V			IC383	TC9459F-X	IC		
	C1343	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			IC384	BA15218F-XE	IC		
	C1344	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V			IC385	BA15218F-XE	IC		
	C1345	NCB31HK-391X	C CAPACITOR				IC386	BA15218F-XE	IC		
	C1351	NCB31HK-102X	C CAPACITOR				IC387	NJM2406F-X	IC		
	C1352	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V			IC388	TC74HC4053AF-X	IC		
	C1353	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V			IC389	TC74HC4053AF-X	IC		
	C1354	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V			IC390	MAX4018ESD-X	IC		
	C1361	NCB31HK-391X	C CAPACITOR				IC391	TC9164AF-X	IC		
	C1362	NCB31HK-391X	C CAPACITOR				IC392	TC9163AF-X	IC		

■ Electrical parts list (Input board)   Block No. 04

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	IC393	TC9459F-X	IC				R 204	NRSA63J-750X	MG RESISTOR		
	IC394	BA15218F-XE	IC				R 205	NRSA63J-750X	MG RESISTOR		
	IC395	BA15218F-XE	IC				R 206	NRSA63J-750X	MG RESISTOR		
	J 201	QNN0078-001	PIN JACK				R 207	NRSA63J-331X	MG RESISTOR		
	J 202	QNN0011-001	PIN JACK				R 208	NRSA63J-331X	MG RESISTOR		
	J 203	QNN0011-001	PIN JACK				R 209	NRSA63J-473X	MG RESISTOR		
	J 241	QND0002-001	S-CONNECTOR				R 210	NRSA63J-331X	MG RESISTOR		
	J 242	QND0028-001	DIN CONNECTOR				R 211	NRSA63J-473X	MG RESISTOR		
	J 243	QND0088-001	S JACK				R 212	NRSA63J-331X	MG RESISTOR		
	J 301	QNN0056-001	PIN JACK				R 213	NRSA63J-473X	MG RESISTOR		
	J 302	QNN0056-001	PIN JACK				R 214	NRSA63J-151X	MG RESISTOR		
	J 303	QNN0058-001	PIN JACK				R 215	NRSA63J-151X	MG RESISTOR		
	J 371	QNN0056-001	PIN JACK				R 216	NRSA63J-301X	MG RESISTOR		
	J 372	QNN0056-001	PIN JACK				R 217	NRSA63J-103X	MG RESISTOR		
	J 373	QNN0058-001	PIN JACK				R 218	NRSA63J-331X	MG RESISTOR		
	J1340	QNN0060-001	PIN JACK				R 219	NRSA63J-101X	MG RESISTOR		
	J1360	QNN0390-001	PIN JACK				R 220	NRSA63J-151X	MG RESISTOR		
	J1370	QNS0083-001	3.5 JACK				R 221	NRSA63J-151X	MG RESISTOR		
	J1371	QNS0077-001	3.5 JACK				R 222	NRSA63J-561X	MG RESISTOR		
	J1372	QNS0083-001	3.5 JACK				R 223	NRSA63J-561X	MG RESISTOR		
	J1380	QNN0391-001	PIN JACK				R 224	NRSA63J-561X	MG RESISTOR		
	J1390	QNS0001-001	3.5 JACK(JES)			⚠	R 225	QRJ146J-2R2X	UNF C RESISTOR	2.2 5% 1/4W	
	L 200	NQL085J-220X	INDUCTOR				R 231	NRSA63J-222X	MG RESISTOR		
	Q 200	KTA1267/YG/-T	TRANSISTOR				R 232	NRSA63J-470X	MG RESISTOR		
	Q 201	KTA1267/YG/-T	TRANSISTOR				R 240	NRSA63J-750X	MG RESISTOR		
	Q 202	KRC110M-T	TRANSISTOR				R 241	NRSA63J-750X	MG RESISTOR		
	Q 203	KRC107M-T	D TRANSISTOR				R 242	NRSA63J-750X	MG RESISTOR		
	Q 204	KTA1267/YG/-T	TRANSISTOR				R 243	NRSA63J-750X	MG RESISTOR		
	Q 205	KTA1267/YG/-T	TRANSISTOR				R 244	NRSA63J-750X	MG RESISTOR		
	Q 206	KTA1267/YG/-T	TRANSISTOR				R 245	NRSA63J-750X	MG RESISTOR		
	Q 207	KTA1267/YG/-T	TRANSISTOR				R 246	NRSA63J-750X	MG RESISTOR		
	Q 208	DTC123YSA-T	D TRANSISTOR				R 247	NRSA63J-750X	MG RESISTOR		
	Q 240	KTA1267/YG/-T	TRANSISTOR				R 248	NRSA63J-151X	MG RESISTOR		
	Q 241	KTA1267/YG/-T	TRANSISTOR				R 249	NRSA63J-151X	MG RESISTOR		
	Q 242	KTA1267/YG/-T	TRANSISTOR				R 250	NRSA63J-151X	MG RESISTOR		
	Q 243	KTA1267/YG/-T	TRANSISTOR				R 251	NRSA63J-151X	MG RESISTOR		
	Q 244	KRC110M-T	TRANSISTOR				R 253	NRSA63J-153X	MG RESISTOR		
	Q 245	KRC110M-T	TRANSISTOR				R 254	NRSA63J-153X	MG RESISTOR		
	Q 246	KRC107M-T	D TRANSISTOR				R 255	NRSA63J-153X	MG RESISTOR		
	Q 247	KRC107M-T	D TRANSISTOR				R 266	NRSA63J-750X	MG RESISTOR		
	Q1231	KRA104M-T	D TRANSISTOR				R 267	NRSA63J-473X	MG RESISTOR		
	Q1233	2SC3576-JVC-T	TRANSISTOR				R 268	NRSA63J-750X	MG RESISTOR		
	Q1234	2SC3576-JVC-T	TRANSISTOR				R 269	NRSA63J-473X	MG RESISTOR		
	Q1245	KRA104M-T	D TRANSISTOR			⚠	R 271	QRJ146J-3R3X	UNF C RESISTOR	3.3 5% 1/4W	
	Q1247	2SC3576-JVC-T	TRANSISTOR				R 272	NRSA63J-750X	MG RESISTOR		
	Q1248	2SC3576-JVC-T	TRANSISTOR				R 273	NRSA63J-473X	MG RESISTOR		
	Q1249	2SC3576-JVC-T	TRANSISTOR				R 274	NRSA63J-750X	MG RESISTOR		
	Q1250	2SC3576-JVC-T	TRANSISTOR				R 275	NRSA63J-750X	MG RESISTOR		
	Q1307	KRA104M-T	D TRANSISTOR				R 276	NRSA63J-750X	MG RESISTOR		
	Q1313	2SC3576-JVC-T	TRANSISTOR				R 280	NRSA63J-301X	MG RESISTOR		
	Q1314	2SC3576-JVC-T	TRANSISTOR				R 281	NRSA63J-301X	MG RESISTOR		
	Q1323	2SC3576-JVC-T	TRANSISTOR				R 282	NRSA63J-103X	MG RESISTOR		
	Q1333	2SC3576-JVC-T	TRANSISTOR				R 283	NRSA63J-103X	MG RESISTOR		
	Q1334	2SC3576-JVC-T	TRANSISTOR				R 284	NRSA63J-301X	MG RESISTOR		
	Q1341	2SC3576-JVC-T	TRANSISTOR				R 285	NRSA63J-301X	MG RESISTOR		
	Q1342	2SC3576-JVC-T	TRANSISTOR				R 301	NRSA63J-222X	MG RESISTOR		
	Q1343	KRA104M-T	D TRANSISITOR				R 302	NRSA63J-222X	MG RESISTOR		
	Q1391	KRA107M-T	D TRANSISTOR				R 303	NRSA63J-473X	MG RESISTOR		
	Q1392	KTA1273/Y/-T	TRANSISTOR				R 304	NRSA63J-473X	MG RESISTOR		
	R 200	NRSA63J-750X	MG RESISTOR				R 305	NRSA63J-621X	MG RESISTOR		
	R 201	NRSA63J-750X	MG RESISTOR				R 306	NRSA63J-621X	MG RESISTOR		
	R 202	NRSA63J-750X	MG RESISTOR				R 307	NRSA63J-393X	MG RESISTOR		
	R 203	NRSA63J-750X	MG RESISTOR				R 308	NRSA63J-393X	MG RESISTOR		

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■ **Electrical parts list (Input board)**   **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	R 309	NRSA63J-474X	MG RESISTOR				R1222	NRSA63J-104X	MG RESISTOR		
	R 310	NRSA63J-474X	MG RESISTOR				R1223	NRSA63J-104X	MG RESISTOR		
	R 311	NRSA63J-104X	MG RESISTOR				R1224	NRSA63J-104X	MG RESISTOR		
	R 312	NRSA63J-104X	MG RESISTOR				R1225	NRSA63J-104X	MG RESISTOR		
⚠	R 315	QRJ146J-331X	UNF C RESISTOR	330 5% 1/4W			R1226	NRSA63J-104X	MG RESISTOR		
⚠	R 316	QRJ146J-331X	UNF C RESISTOR	330 5% 1/4W		⚠	R1227	QRZ9005-680X	F RESISTOR	68 1/0W	
	R 323	NRSA63J-471X	MG RESISTOR			⚠	R1228	QRZ9005-680X	F RESISTOR	68 1/0W	
	R 324	NRSA63J-471X	MG RESISTOR				R1229	NRSA63J-104X	MG RESISTOR		
	R 325	NRSA63J-471X	MG RESISTOR				R1230	NRSA63J-104X	MG RESISTOR		
	R 326	NRSA63J-471X	MG RESISTOR				R1231	NRSA63J-102X	MG RESISTOR		
	R 327	NRSA63J-471X	MG RESISTOR				R1232	NRSA63J-474X	MG RESISTOR		
	R 328	NRSA63J-471X	MG RESISTOR				R1233	NRSA63J-102X	MG RESISTOR		
	R 329	NRSA63J-471X	MG RESISTOR				R1234	NRSA63J-102X	MG RESISTOR		
	R 330	NRSA63J-471X	MG RESISTOR				R1235	NRSA63J-103X	MG RESISTOR		
	R 331	NRSA63J-471X	MG RESISTOR				R1236	NRSA63J-103X	MG RESISTOR		
	R 332	NRSA63J-471X	MG RESISTOR				R1241	NRSA63J-104X	MG RESISTOR		
	R 333	NRSA63J-471X	MG RESISTOR				R1242	NRSA63J-104X	MG RESISTOR		
	R 334	NRSA63J-471X	MG RESISTOR				R1243	NRSA63J-104X	MG RESISTOR		
⚠	R 335	QRZ9005-680X	F RESISTOR	68 1/0W			R1244	NRSA63J-104X	MG RESISTOR		
⚠	R 336	QRZ9005-680X	F RESISTOR	68 1/0W			R1245	NRSA63J-102X	MG RESISTOR		
	R 341	NRSA63J-104X	MG RESISTOR				R1247	NRSA63J-102X	MG RESISTOR		
	R 342	NRSA63J-104X	MG RESISTOR				R1248	NRSA63J-102X	MG RESISTOR		
	R 343	NRSA63J-104X	MG RESISTOR				R1249	NRSA63J-103X	MG RESISTOR		
	R 344	NRSA63J-104X	MG RESISTOR				R1250	NRSA63J-103X	MG RESISTOR		
	R 345	NRSA63J-104X	MG RESISTOR				R1251	NRSA63J-103X	MG RESISTOR		
	R 346	NRSA63J-104X	MG RESISTOR				R1252	NRSA63J-103X	MG RESISTOR		
	R 361	NRSA63J-104X	MG RESISTOR				R1253	NRSA63J-102X	MG RESISTOR		
	R 362	NRSA63J-104X	MG RESISTOR				R1254	NRSA63J-102X	MG RESISTOR		
	R 363	NRSA63J-104X	MG RESISTOR				R1261	NRSA63J-471X	MG RESISTOR		
	R 364	NRSA63J-104X	MG RESISTOR				R1262	NRSA63J-471X	MG RESISTOR		
	R 365	NRSA63J-104X	MG RESISTOR				R1281	NRSA63J-472X	MG RESISTOR		
	R 366	NRSA63J-104X	MG RESISTOR				R1282	NRSA63J-472X	MG RESISTOR		
	R 371	NRSA63J-471X	MG RESISTOR				R1283	NRSA63J-102X	MG RESISTOR		
	R 372	NRSA63J-471X	MG RESISTOR				R1284	NRSA63J-112X	MG RESISTOR		
	R 373	NRSA63J-471X	MG RESISTOR				R1285	NRSA63J-472X	MG RESISTOR		
	R 374	NRSA63J-471X	MG RESISTOR				R1286	NRSA63J-472X	MG RESISTOR		
	R 375	NRSA63J-471X	MG RESISTOR				R1287	NRSA63J-102X	MG RESISTOR		
	R 376	NRSA63J-471X	MG RESISTOR				R1288	NRSA63J-112X	MG RESISTOR		
	R 377	NRSA63J-471X	MG RESISTOR				R1289	NRSA63J-472X	MG RESISTOR		
	R 378	NRSA63J-471X	MG RESISTOR				R1290	NRSA63J-472X	MG RESISTOR		
	R 379	NRSA63J-471X	MG RESISTOR				R1291	NRSA63J-102X	MG RESISTOR		
	R 380	NRSA63J-471X	MG RESISTOR				R1292	NRSA63J-112X	MG RESISTOR		
	R 381	NRSA63J-471X	MG RESISTOR				R1293	NRSA63J-162X	MG RESISTOR		
	R 382	NRSA63J-471X	MG RESISTOR				R1294	NRSA63J-472X	MG RESISTOR		
⚠	R 385	QRZ9005-680X	F RESISTOR	68 1/0W		⚠	R1301	QRZ9005-680X	F RESISTOR	68 1/0W	
⚠	R 386	QRZ9005-680X	F RESISTOR	68 1/0W		⚠	R1302	QRZ9005-680X	F RESISTOR	68 1/0W	
	R 387	NRSA63J-471X	MG RESISTOR				R1303	NRSA63J-122X	MG RESISTOR		
	R 388	NRSA63J-471X	MG RESISTOR				R1304	NRSA63J-122X	MG RESISTOR		
	R 389	NRSA63J-471X	MG RESISTOR			⚠	R1305	QRZ9005-680X	F RESISTOR	68 1/0W	
	R 390	NRSA63J-471X	MG RESISTOR			⚠	R1306	QRZ9005-680X	F RESISTOR	68 1/0W	
	R 391	NRSA63J-512X	MG RESISTOR				R1307	NRSA63J-102X	MG RESISTOR		
	R 392	NRSA63J-512X	MG RESISTOR				R1311	NRSA63J-104X	MG RESISTOR		
	R 393	NRSA63J-103X	MG RESISTOR				R1312	NRSA63J-104X	MG RESISTOR		
	R 394	NRSA63J-103X	MG RESISTOR				R1313	NRSA63J-102X	MG RESISTOR		
	R 395	NRSA63J-512X	MG RESISTOR				R1314	NRSA63J-103X	MG RESISTOR		
	R 396	NRSA63J-512X	MG RESISTOR				R1315	NRSA63J-103X	MG RESISTOR		
	R 397	NRSA63J-104X	MG RESISTOR				R1316	NRSA63J-102X	MG RESISTOR		
	R 398	NRSA63J-104X	MG RESISTOR				R1321	NRSA63J-104X	MG RESISTOR		
⚠	R1201	QRZ9005-680X	F RESISTOR	68 1/0W			R1322	NRSA63J-104X	MG RESISTOR		
⚠	R1202	QRZ9005-680X	F RESISTOR	68 1/0W			R1323	NRSA63J-102X	MG RESISTOR		
⚠	R1211	QRZ9005-680X	F RESISTOR	68 1/0W			R1324	NRSA63J-103X	MG RESISTOR		
⚠	R1212	QRZ9005-680X	F RESISTOR	68 1/0W			R1328	NRSA63J-0R0X	MG RESISTOR		
	R1221	NRSA63J-104X	MG RESISTOR				R1331	NRSA63J-104X	MG RESISTOR		

■ **Electrical parts list (Input board)**　　　　　**Block No.　04**

⚠	Item	Parts number	Parts name	Remarks	Area
	R1332	NRSA63J-104X	MG RESISTOR		
	R1333	NRSA63J-102X	MG RESISTOR		
	R1334	NRSA63J-103X	MG RESISTOR		
	R1335	NRSA63J-103X	MG RESISTOR		
	R1336	NRSA63J-102X	MG RESISTOR		
	R1337	NRSA63J-104X	MG RESISTOR		
	R1338	NRSA63J-104X	MG RESISTOR		
	R1339	NRSA63J-104X	MG RESISTOR		
	R1340	NRSA63J-104X	MG RESISTOR		
	R1341	NRSA63J-104X	MG RESISTOR		
	R1342	NRSA63J-102X	MG RESISTOR		
	R1343	NRSA63J-183X	MG RESISTOR		
	R1344	NRSA63J-104X	MG RESISTOR		
	R1345	NRSA63J-471X	MG RESISTOR		
	R1346	NRSA63J-103X	MG RESISTOR		
	R1347	NRSA63J-471X	MG RESISTOR		
	R1348	NRSA63J-103X	MG RESISTOR		
	R1349	NRSA63J-474X	MG RESISTOR		
⚠	R1350	QRZ9005-680X	F RESISTOR	68 1/0W	
⚠	R1351	QRZ9005-680X	F RESISTOR	68 1/0W	
	R1355	NRSA63J-222X	MG RESISTOR		
	R1356	NRSA63J-222X	MG RESISTOR		
	R1357	NRSA63J-392X	MG RESISTOR		
	R1358	NRSA63J-392X	MG RESISTOR		
	R1361	NRSA63J-561X	MG RESISTOR		
	R1362	NRSA63J-561X	MG RESISTOR		
	R1363	NRSA63J-104X	MG RESISTOR		
	R1364	NRSA63J-104X	MG RESISTOR		
	R1365	NRSA63J-104X	MG RESISTOR		
	R1366	NRSA63J-104X	MG RESISTOR		
	R1367	NRSA63J-104X	MG RESISTOR		
	R1368	NRSA63J-104X	MG RESISTOR		
	R1370	NRSA63J-471X	MG RESISTOR		
	R1371	NRSA63J-221X	MG RESISTOR		
	R1372	NRSA63J-101X	MG RESISTOR		
	R1373	NRSA63J-221X	MG RESISTOR		
	R1374	NRSA63J-221X	MG RESISTOR		
	R1375	NRSA63J-221X	MG RESISTOR		
	R1379	NRSA63J-750X	MG RESISTOR		
	R1380	NRSA63J-750X	MG RESISTOR		
	R1381	NRSA63J-750X	MG RESISTOR		
	R1382	NRSA63J-750X	MG RESISTOR		
	R1383	NRSA63J-750X	MG RESISTOR		
	R1384	NRSA63J-750X	MG RESISTOR		
	R1385	NRSA63J-750X	MG RESISTOR		
	R1386	NRSA63J-750X	MG RESISTOR		
	R1387	NRSA63J-750X	MG RESISTOR		
	R1388	NRSA63J-473X	MG RESISTOR		
	R1389	NRSA63J-473X	MG RESISTOR		
	R1390	NRSA63J-473X	MG RESISTOR		
	R1391	NRSA63J-393X	MG RESISTOR		
	R1392	NRSA63J-393X	MG RESISTOR		
	R1393	NRSA63J-104X	MG RESISTOR		
	R1394	NRSA63J-273X	MG RESISTOR		
	R1395	NRSA63J-104X	MG RESISTOR		
	R1396	NRSA63J-103X	MG RESISTOR		
	R1397	QRJ146J-5R6X	UNF C RESISTOR	5.6 5% 1/4W	
	R1398	NRSA63J-102X	MG RESISTOR		
	R1399	NRSA63J-152X	MG RESISTOR		
	X 200	QAX0260-001Z	CRYSTAL	NTSC ONLY	

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■ **Electrical parts list (DSP board)**　　　**Block No. 05**

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	C 571	NCB31HK-103X	C CAPACITOR				C2308	NEA71EM-475X	E CAPACITOR		
	C 573	NCF31CZ-104X	C CAPACITOR				C2347	NCS31HJ-330X	C CAPACITOR		
	C 577	NCS31HJ-101X	C CAPACITOR				C2348	NCS31HJ-330X	C CAPACITOR		
	C 579	NCS31HJ-101X	C CAPACITOR				C2349	NCF31CZ-104X	C CAPACITOR		
	C 581	NEA71CM-106X	E CAPACITOR				C2350	NCF31CZ-104X	C CAPACITOR		
	C 582	NEA71CM-106X	E CAPACITOR				C2351	NEA71HM-105X	E CAPACITOR		
	C 583	NEA70JM-476X	E CAPACITOR				C2352	NEA71HM-105X	E CAPACITOR		
	C 584	NCB31CK-104X	C CAPACITOR				C2353	NCS31HJ-330X	C CAPACITOR		
	C 587	NCF31CZ-104X	C CAPACITOR				C2354	NCS31HJ-330X	C CAPACITOR		
	C 588	NEA70JM-476X	E CAPACITOR				C2355	NCF31CZ-104X	C CAPACITOR		
	C 589	NCF31CZ-104X	C CAPACITOR				C2356	NCF31CZ-104X	C CAPACITOR		
	C 590	NEA70GM-107X	E CAPACITOR				C2357	NEA71EM-475X	E CAPACITOR		
	CN581	QGB1214K3-12W	CONNECTOR				C2358	NEA71EM-475X	E CAPACITOR		
	CN587	QGB2510K1-07	CONNECTOR				C2401	NCB31HK-102X	C CAPACITOR		
	C2001	NEA71EM-475X	E CAPACITOR				C2407	NEA71EM-475X	E CAPACITOR		
	C2002	NEA71EM-475X	E CAPACITOR				C2427	NEA71HM-225X	E CAPACITOR		
	C2003	NCB31HK-122X	C CAPACITOR				C2433	NCS31HJ-330X	C CAPACITOR		
	C2004	NCB31HK-122X	C CAPACITOR				C2439	NCF31CZ-104X	C CAPACITOR		
	C2005	NCS31HJ-121X	C CAPACITOR				C2440	NCF31CZ-104X	C CAPACITOR		
	C2006	NCS31HJ-121X	C CAPACITOR				C2441	NCF31CZ-104X	C CAPACITOR		
	C2007	NCS31HJ-391X	C CAPACITOR				C2442	NCF31CZ-104X	C CAPACITOR		
	C2008	NCS31HJ-391X	C CAPACITOR				C2481	NEA70JM-476X	E CAPACITOR		
	C2009	NCF31CZ-104X	C CAPACITOR				C2501	NCB31HK-103X	C CAPACITOR		
	C2010	NCF31CZ-104X	C CAPACITOR				C2502	NCB31HK-103X	C CAPACITOR		
	C2013	NCS31HJ-330X	C CAPACITOR				C2503	NCB31HK-103X	C CAPACITOR		
	C2014	NCS31HJ-330X	C CAPACITOR				C2504	NCB31HK-103X	C CAPACITOR		
	C2018	NEA70JM-476X	E CAPACITOR				C2505	NCB31HK-103X	C CAPACITOR		
	C2019	NCF31CZ-104X	C CAPACITOR				C2506	NCB31HK-103X	C CAPACITOR		
	C2020	NCF31CZ-104X	C CAPACITOR				C2507	NCB31HK-103X	C CAPACITOR		
	C2101	NCB31HK-103X	C CAPACITOR				C2508	NCB31HK-103X	C CAPACITOR		
	C2107	NEA71EM-475X	E CAPACITOR				C2509	NCB31HK-103X	C CAPACITOR		
	C2133	NCB31EK-223X	C CAPACITOR				C2510	NCB31HK-103X	C CAPACITOR		
	C2134	NCB31EK-223X	C CAPACITOR				C2511	NCB31HK-103X	C CAPACITOR		
	C2135	NEA71CM-106X	E CAPACITOR				C2512	NCB31HK-103X	C CAPACITOR		
	C2136	NEA71CM-106X	E CAPACITOR				C2513	NCB31HK-103X	C CAPACITOR		
	C2137	NEA71EM-475X	E CAPACITOR				C2514	NCB31HK-103X	C CAPACITOR		
	C2138	NEA71EM-475X	E CAPACITOR				C2515	NCB31HK-103X	C CAPACITOR		
	C2157	NEA71HM-225X	E CAPACITOR				C2516	NCB31HK-103X	C CAPACITOR		
	C2158	NCS31HJ-330X	C CAPACITOR				C2517	NCB31HK-103X	C CAPACITOR		
	C2187	NEA71HM-225X	E CAPACITOR				C2518	NCB31HK-103X	C CAPACITOR		
	C2189	NCS31HJ-330X	C CAPACITOR				C2519	NCB31HK-103X	C CAPACITOR		
	C2201	NCB31HK-102X	C CAPACITOR				C2520	NCB31HK-103X	C CAPACITOR		
	C2202	NCB31HK-102X	C CAPACITOR				C2521	NCB31HK-103X	C CAPACITOR		
	C2207	NEA71HM-225X	E CAPACITOR				C2522	NCB31HK-103X	C CAPACITOR		
	C2208	NEA71HM-225X	E CAPACITOR				C2523	NCF31CZ-104X	C CAPACITOR		
	C2230	NEA71EM-475X	E CAPACITOR				C2529	NEA70GM-107X	E CAPACITOR		
	C2237	NCS31HJ-330X	C CAPACITOR				C2532	NEA70GM-107X	E CAPACITOR		
	C2238	NCS31HJ-330X	C CAPACITOR				C2533	NCF31CZ-104X	C CAPACITOR		
	C2251	NCF31CZ-104X	C CAPACITOR				C2534	NCF31CZ-104X	C CAPACITOR		
	C2252	NCF31CZ-104X	C CAPACITOR				C2535	NEA70GM-107X	E CAPACITOR		
	C2253	NCF31CZ-104X	C CAPACITOR				C2536	NCF31CZ-104X	C CAPACITOR		
	C2254	NCF31CZ-104X	C CAPACITOR				C2551	NCS31HJ-270X	C CAPACITOR		
	C2255	NCF31CZ-104X	C CAPACITOR				C2552	NCS31HJ-270X	C CAPACITOR		
	C2256	NCF31CZ-104X	C CAPACITOR				C2553	NEA70GM-107X	E CAPACITOR		
	C2257	NEA71HM-225X	E CAPACITOR				C2555	NCF31CZ-104X	C CAPACITOR		
	C2258	NEA71HM-225X	E CAPACITOR				C2556	NCF31CZ-104X	C CAPACITOR		
	C2261	NEA71EM-475X	E CAPACITOR				C2557	NCS31HJ-330X	C CAPACITOR		
	C2262	NEA71EM-475X	E CAPACITOR				C2560	NCF31CZ-104X	C CAPACITOR		
	C2283	NCS31HJ-330X	C CAPACITOR				C2561	NCF31CZ-104X	C CAPACITOR		
	C2284	NCS31HJ-330X	C CAPACITOR				C2562	NCF31CZ-104X	C CAPACITOR		
	C2301	NCB31HK-102X	C CAPACITOR				C2563	NCF31CZ-104X	C CAPACITOR		
	C2302	NCB31HK-102X	C CAPACITOR				C2564	NCS31HJ-101X	C CAPACITOR		
	C2307	NEA71EM-475X	E CAPACITOR				C2568	NEA71HM-105X	E CAPACITOR		

■ Electrical parts list (DSP board)　　**Block No. 05**

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	C2601	NCB31CK-104X	C CAPACITOR				R 574	NRSA63J-432X	MG RESISTOR		
	C2605	NCB31CK-104X	C CAPACITOR				R 575	NRSA63J-432X	MG RESISTOR		
	C2701	NCB31HK-221X	C CAPACITOR				R 576	NRSA63J-432X	MG RESISTOR		
	C2702	NCB31HK-221X	C CAPACITOR				R 577	NRSA63J-822X	MG RESISTOR		
	C2703	NEA70JM-476X	E CAPACITOR				R 578	NRSA63J-822X	MG RESISTOR		
	C2704	NEA70JM-476X	E CAPACITOR				R 579	NRSA63J-822X	MG RESISTOR		
	C2705	NCF31CZ-104X	C CAPACITOR				R 580	NRSA63J-822X	MG RESISTOR		
	C2706	NCF31CZ-104X	C CAPACITOR				R 582	NRSA63J-103X	MG RESISTOR		
	C2707	NCB31CK-104X	C CAPACITOR				R2001	NRSA63J-104X	MG RESISTOR		
	C2710	NEA70JM-476X	E CAPACITOR				R2002	NRSA63J-104X	MG RESISTOR		
	C2712	NCF31CZ-104X	C CAPACITOR				R2003	NRSA63J-103X	MG RESISTOR		
	EP561	E409182-001SM	GRAND TERMINAL				R2004	NRSA63J-103X	MG RESISTOR		
	IC501	XCA56367PV150	IC				R2005	NRSA63J-103X	MG RESISTOR		
	IC502	TC7S04FU-X	IC				R2006	NRSA63J-103X	MG RESISTOR		
	IC503	TC7S04FU-X	IC				R2007	NRSA63J-103X	MG RESISTOR		
	IC505	PQ070XZ1HZ-X	IC				R2008	NRSA63J-103X	MG RESISTOR		
	IC511	W24L010AJ-12-X	IC				R2009	NRSA63J-103X	MG RESISTOR		
	IC521	BA15218F-XE	IC				R2010	NRSA63J-103X	MG RESISTOR		
	IC522	BA15218F-XE	IC				R2011	NRSA63J-223X	MG RESISTOR		
	IC523	BA15218F-XE	IC				R2012	NRSA63J-223X	MG RESISTOR		
	IC524	BA15218F-XE	IC				R2013	NRSA63J-223X	MG RESISTOR		
	IC525	BA15218F-XE	IC				R2014	NRSA63J-223X	MG RESISTOR		
	IC526	BA15218F-XE	IC				R2017	NRSA63J-472X	MG RESISTOR		
	IC527	BA15218F-XE	IC				R2018	NRSA63J-472X	MG RESISTOR		
	IC528	BA15218F-XE	IC				R2021	NRSA63J-331X	MG RESISTOR		
	IC529	BA15218F-XE	IC				R2022	NRSA63J-331X	MG RESISTOR		
	IC551	AK4112AVF-X	IC				R2023	NRSA63J-331X	MG RESISTOR		
	IC571	AK4527BVQ	IC				R2024	NRSA63J-331X	MG RESISTOR		
	IC581	UPD784215AGC152	IC				R2101	NRSA63J-103X	MG RESISTOR		
	IC582	TC7SET32FU-X	IC				R2105	NRSA63J-102X	MG RESISTOR		
	IC583	PQ3DZ53-X	IC				R2107	NRSA63J-104X	MG RESISTOR		
	J 564	QNN0347-001	PIN JACK				R2127	NRSA63J-223X	MG RESISTOR		
	K2606	NQR0269-004X	FERRITE BEADS				R2128	NRSA63J-223X	MG RESISTOR		
	K2607	NQR0269-004X	FERRITE BEADS				R2129	NRSA63J-223X	MG RESISTOR		
	LC501	NQR0322-001X	EMI FILTER				R2130	NRSA63J-104X	MG RESISTOR		
	LC502	NQR0322-001X	EMI FILTER				R2131	NRSA63J-104X	MG RESISTOR		
	LC503	NQR0322-001X	EMI FILTER				R2132	NRSA63J-103X	MG RESISTOR		
	LC551	NQR0322-001X	EMI FILTER				R2133	NRSA63J-102X	MG RESISTOR		
	Q 570	DTC114YE-X	TRANSISTOR				R2134	NRSA63J-103X	MG RESISTOR		
	Q 572	DTC114YE-X	TRANSISTOR				R2135	NRSA63J-222X	MG RESISTOR		
	Q2101	2SD1328/ST/-X	TRANSISTOR				R2136	NRSA63J-103X	MG RESISTOR		
	Q2151	DTA114YE-X	TRANSISTOR				R2137	NRSA63J-103X	MG RESISTOR		
	Q2152	DTA114YE-X	TRANSISTOR				R2138	NRSA63J-223X	MG RESISTOR		
	Q2153	DTA114YE-X	TRANSISTOR				R2139	NRSA63J-103X	MG RESISTOR		
	Q2154	DTA114YE-X	TRANSISTOR				R2140	NRSA63J-105X	MG RESISTOR		
	Q2155	DTA114YE-X	TRANSISTOR				R2157	NRSA63J-104X	MG RESISTOR		
	Q2156	DTA114YE-X	TRANSISTOR				R2158	NRSA63J-303X	MG RESISTOR		
	Q2157	DTA114YE-X	TRANSISTOR				R2159	NRSA63J-113X	MG RESISTOR		
	Q2163	2SD1328/ST/-X	TRANSISTOR				R2171	NRSA63J-105X	MG RESISTOR		
	Q2164	2SD1328/ST/-X	TRANSISTOR				R2172	NRSA63J-105X	MG RESISTOR		
	Q2165	2SD1328/ST/-X	TRANSISTOR				R2181	NRSA63J-105X	MG RESISTOR		
	Q2201	2SD1328/ST/-X	TRANSISTOR				R2182	NRSA63J-105X	MG RESISTOR		
	Q2202	2SD1328/ST/-X	TRANSISTOR				R2183	NRSA63J-105X	MG RESISTOR		
	Q2273	2SD1328/ST/-X	TRANSISTOR				R2184	NRSA63J-105X	MG RESISTOR		
	Q2274	2SD1328/ST/-X	TRANSISTOR				R2186	NRSA63J-105X	MG RESISTOR		
	Q2301	2SD1328/ST/-X	TRANSISTOR				R2187	NRSA63J-104X	MG RESISTOR		
	Q2302	2SD1328/ST/-X	TRANSISTOR				R2189	NRSA63J-223X	MG RESISTOR		
	Q2363	2SD1328/ST/-X	TRANSISTOR				R2201	NRSA63J-103X	MG RESISTOR		
	Q2364	2SD1328/ST/-X	TRANSISTOR				R2202	NRSA63J-103X	MG RESISTOR		
	Q2401	2SD1328/ST/-X	TRANSISTOR				R2205	NRSA63J-102X	MG RESISTOR		
	Q2431	2SD1328/ST/-X	TRANSISTOR				R2206	NRSA63J-102X	MG RESISTOR		
	R 570	NRSA63J-103X	MG RESISTOR				R2207	NRSA63J-104X	MG RESISTOR		
	R 573	NRSA63J-432X	MG RESISTOR				R2208	NRSA63J-104X	MG RESISTOR		

RX-9010VBK

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	R2221	NRSA63J-333X	MG RESISTOR				R2506	NRSA63J-473X	MG RESISTOR		
	R2222	NRSA63J-333X	MG RESISTOR				R2507	NRSA63J-473X	MG RESISTOR		
	R2225	NRSA63J-104X	MG RESISTOR				R2508	NRSA63J-473X	MG RESISTOR		
	R2226	NRSA63J-104X	MG RESISTOR				R2511	NRSA63J-221X	MG RESISTOR		
	R2227	NRSA63J-104X	MG RESISTOR				R2512	NRSA63J-221X	MG RESISTOR		
	R2231	NRSA63J-333X	MG RESISTOR				R2513	NRSA63J-221X	MG RESISTOR		
	R2232	NRSA63J-333X	MG RESISTOR				R2514	NRSA63J-103X	MG RESISTOR		
	R2233	NRSA63J-333X	MG RESISTOR				R2515	NRSA63J-103X	MG RESISTOR		
	R2234	NRSA63J-333X	MG RESISTOR				R2516	NRSA63J-103X	MG RESISTOR		
	R2235	NRSA63J-333X	MG RESISTOR				R2517	NRSA63J-103X	MG RESISTOR		
	R2236	NRSA63J-333X	MG RESISTOR				R2518	NRSA63J-221X	MG RESISTOR		
	R2237	NRSA63J-683X	MG RESISTOR				R2519	NRSA63J-221X	MG RESISTOR		
	R2238	NRSA63J-683X	MG RESISTOR				R2520	NRSA63J-221X	MG RESISTOR		
	R2257	NRSA63J-104X	MG RESISTOR				R2521	NRSA63J-103X	MG RESISTOR		
	R2258	NRSA63J-104X	MG RESISTOR				R2522	NRSA63J-103X	MG RESISTOR		
	R2261	NRSA63J-104X	MG RESISTOR				R2523	NRSA63J-103X	MG RESISTOR		
	R2262	NRSA63J-104X	MG RESISTOR				R2531	NRSA63F-511X	MG RESISTOR		
	R2263	NRSA63J-103X	MG RESISTOR				R2532	NRSA63F-102X	MG RESISTOR		
	R2264	NRSA63J-103X	MG RESISTOR				R2551	NRSA63J-183X	MG RESISTOR		
	R2273	NRSA63J-103X	MG RESISTOR				R2552	NRSA63J-221X	MG RESISTOR		
	R2274	NRSA63J-103X	MG RESISTOR				R2553	NRSA63J-221X	MG RESISTOR		
	R2275	NRSA63J-682X	MG RESISTOR				R2554	NRSA63J-221X	MG RESISTOR		
	R2276	NRSA63J-682X	MG RESISTOR				R2555	NRSA63J-221X	MG RESISTOR		
	R2277	NRSA63J-105X	MG RESISTOR				R2557	NRSA63J-221X	MG RESISTOR		
	R2278	NRSA63J-105X	MG RESISTOR				R2559	NRSA63J-221X	MG RESISTOR		
	R2283	NRSA63J-103X	MG RESISTOR				R2560	NRSA63J-221X	MG RESISTOR		
	R2284	NRSA63J-103X	MG RESISTOR				R2561	NRSA63J-112X	MG RESISTOR		
	R2285	NRSA63J-113X	MG RESISTOR				R2562	NRSA63J-112X	MG RESISTOR		
	R2286	NRSA63J-113X	MG RESISTOR				R2563	NRSA63J-112X	MG RESISTOR		
	R2301	NRSA63J-103X	MG RESISTOR				R2564	NRSA63J-750X	MG RESISTOR		
	R2302	NRSA63J-103X	MG RESISTOR				R2568	NRSA63J-221X	MG RESISTOR		
	R2305	NRSA63J-102X	MG RESISTOR				R2571	NRSA63J-512X	MG RESISTOR		
	R2306	NRSA63J-102X	MG RESISTOR				R2572	NRSA63J-512X	MG RESISTOR		
	R2307	NRSA63J-104X	MG RESISTOR				R2573	NRSA63J-512X	MG RESISTOR		
	R2308	NRSA63J-104X	MG RESISTOR				R2581	NRSA63J-221X	MG RESISTOR		
	R2349	NRSA63J-303X	MG RESISTOR				R2582	NRSA63J-221X	MG RESISTOR		
	R2350	NRSA63J-303X	MG RESISTOR				R2583	NRSA63J-221X	MG RESISTOR		
	R2351	NRSA63J-113X	MG RESISTOR				R2584	NRSA63J-221X	MG RESISTOR		
	R2352	NRSA63J-113X	MG RESISTOR				R2585	NRSA63J-221X	MG RESISTOR		
	R2353	NRSA63J-222X	MG RESISTOR				R2586	NRSA63J-221X	MG RESISTOR		
	R2354	NRSA63J-222X	MG RESISTOR				R2587	NRSA63J-221X	MG RESISTOR		
	R2355	NRSA63J-103X	MG RESISTOR				R2589	NRSA63J-221X	MG RESISTOR		
	R2356	NRSA63J-103X	MG RESISTOR				R2591	NRSA63J-221X	MG RESISTOR		
	R2357	NRSA63J-223X	MG RESISTOR				R2593	NRSA63J-221X	MG RESISTOR		
	R2358	NRSA63J-223X	MG RESISTOR				R2594	NRSA63J-221X	MG RESISTOR		
	R2359	NRSA63J-103X	MG RESISTOR				R2595	NRSA63J-221X	MG RESISTOR		
	R2360	NRSA63J-103X	MG RESISTOR				R2596	NRSA63J-221X	MG RESISTOR		
	R2363	NRSA63J-104X	MG RESISTOR				R2597	NRSA63J-102X	MG RESISTOR		
	R2364	NRSA63J-104X	MG RESISTOR				R2611	NRSA63J-473X	MG RESISTOR		
	R2401	NRSA63J-103X	MG RESISTOR				R2612	NRSA63J-473X	MG RESISTOR		
	R2405	NRSA63J-102X	MG RESISTOR				R2613	NRSA63J-473X	MG RESISTOR		
	R2407	NRSA63J-104X	MG RESISTOR				R2614	NRSA63J-473X	MG RESISTOR		
	R2425	NRSA63J-103X	MG RESISTOR				R2615	NRSA63J-473X	MG RESISTOR		
	R2427	NRSA63J-104X	MG RESISTOR				R2616	NRSA63J-473X	MG RESISTOR		
	R2429	NRSA63J-103X	MG RESISTOR				R2701	NRSA63J-473X	MG RESISTOR		
	R2431	NRSA63J-113X	MG RESISTOR				R2702	NRSA63J-473X	MG RESISTOR		
	R2433	NRSA63J-823X	MG RESISTOR				R2703	NRSA63J-473X	MG RESISTOR		
	R2485	NRSA63J-102X	MG RESISTOR				R2709	NRSA63J-221X	MG RESISTOR		
	R2501	NRSA63J-105X	MG RESISTOR				R2715	NRSA63J-432X	MG RESISTOR		
	R2502	NRSA63J-473X	MG RESISTOR				R2716	NRSA63J-221X	MG RESISTOR		
	R2503	NRSA63J-473X	MG RESISTOR				R2717	NRSA63J-221X	MG RESISTOR		
	R2504	NRSA63J-473X	MG RESISTOR				R2718	NRSA63J-221X	MG RESISTOR		
	R2505	NRSA63J-473X	MG RESISTOR				UN560	GP1FA550TZ	OPT TRANSMITTER		
							UN561	GP1FA550RZ	OPT RECEIVER		
							UN562	GP1FA550RZ	OPT RECEIVER		
							UN563	GP1FA550RZ	OPT RECEIVER		
							X 581	NAX0275-001X	1COSCIALLATOR		
							X2501	NAX0308-001X	RESONATOR		
							X2551	NAX0213-001X	CRYSTAL		

■ Electrical parts list (Micon board) **Block No. 06**

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
⚠	C 1	QCZ9104-472	C CAPACITOR	4700PF		⚠	D 52	1SR35-400A-T5	DIODE		
	C 44	QETN1CM-477Z	E CAPACITOR	470MF 20% 16V		⚠	D 53	1SR35-400A-T5	DIODE		
	C 45	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%		⚠	D 54	1SR35-400A-T5	DIODE		
	C 51	QFLC2AJ-472Z	M CAPACITOR	4700PF 5% 100V			D 56	MTZJ6.2B-T2	Z DIODE		
	C 52	QETM1EM-108	E CAPACITOR	1000MF 20% 25V			D 57	1SS133-T2	SI DIODE		
	C 54	QETN1CM-477Z	E CAPACITOR	470MF 20% 16V		⚠	D 61	10E2-FD	DIODE		
	C 55	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%		⚠	D 62	1SR35-400A-T5	DIODE		
	C 61	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V		⚠	D 63	10E2-FD	DIODE		
	C 62	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V		⚠	D 64	1SR35-400A-T5	DIODE		
	C 63	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V			D 67	1SS133-T2	SI DIODE		
	C 65	QETM1VM-338	E CAPACITOR	3300MF 20% 35V			D 71	1SR35-400A-T5	DIODE		
	C 66	QETM1VM-108	E CAPACITOR	1000MF 20% 35V			D 72	1SR35-400A-T5	DIODE		
	C 68	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V			D 73	1SR35-400A-T5	DIODE		
	C 69	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V			D 74	MTZJ33C-T2	Z DIODE		
	C 70	QETN1HM-227Z	E CAPACITOR	220MF 20% 50V			D 75	MTZJ8.2C-T2	Z DIODE		
	C 71	QETN1JM-107Z	E CAPACITOR	100MF 20% 63V			D 900	1SR35-400A-T5	DIODE		
	C 72	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V			D 901	1SR35-400A-T5	DIODE		
	C 73	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V			D 902	1SR35-400A-T5	DIODE		
	C 74	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V			D 903	1SR35-400A-T5	DIODE		
	C 901	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V			D 904	1SS133-T2	SI DIODE		
	C 902	QCZ0205-155Z	ML C CAPACITOR	1.5MF			D 921	MTZJ5.6C-T2	ZENER DIODE		
	C 903	QETN0JM-228Z	E CAPACITOR	2200MF 20% 6.3V			D 931	MTZJ6.2C-T2	Z DIODE		
	C 904	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V			D 941	MTZJ5.6C-T2	Z DIODE		
	C 905	QDVB1EZ-223Y	C CAPACITOR				D 951	MTZJ13C-T2	Z DIODE		
	C 921	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V			D 961	MTZJ13C-T2	Z DIODE		
	C 922	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%			D 971	MTZJ10C-T2	Z DIODE		
	C 931	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V			D 975	1SS133-T2	SI DIODE		
	C 932	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%			D 976	1SS133-T2	SI DIODE		
	C 941	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V			D 977	1SS133-T2	SI DIODE		
	C 942	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%			D 978	1SS133-T2	SI DIODE		
	C 951	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V			D 979	1SS133-T2	SI DIODE		
	C 952	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%			D 993	1SS133-T2	SI DIODE		
	C 961	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V			EP 1	E409182-001SM	GRAND TERMINAL		
	C 962	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%			EP 51	QNZ0136-001Z	EARTH PLATE		
	C 971	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V			EP 91	E406523-001SM	GND BKT		
	C 972	QCF31HZ-472Z	C CAPACITOR	4700PF +80:-20%			EP901	QNZ0136-001Z	EARTH PLATE		
	C 975	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V			FC 1	QNG0020-001Z	FUSE CLIP	F001	
	C 981	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V			FC 2	QNG0020-001Z	FUSE CLIP	F001	
	C 982	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V			FC 61	QNG0020-001Z	FUSE CLIP	F061	
	C 983	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V			FC 62	QNG0020-001Z	FUSE CLIP	F061	
	C 984	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V			FC 63	QNG0020-001Z	FUSE CLIP	F062	
	C 985	QCBB1HK-103Y	C CAPACITOR	.010MF 10% 50V			FC 64	QNG0020-001Z	FUSE CLIP	F062	
	C 991	QFLC1HJ-562Z	M CAPACITOR	5600PF 5% 50V			FL991	QQR0590-001	FILTER		
	C 992	QFLC1HJ-562Z	M CAPACITOR	5600PF 5% 50V			FL992	QQR0590-001	FILTER		
	C 993	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V			FW 51	QUM137-10DGZ4	PARA RIBON WIRE		
	C 994	QCBB1HK-271Y	C CAPACITOR	270PF 10% 50V			FW831	QUM134-08DGZ4	PARA RIBON WIRE		
	CN 55	QGD2501C1-03Z	SOCKET				FW881	QUM133-44DGZ4	PARA RIBON WIRE		
	CN 56	QGD2501C1-04Z	SOCKET				HL901	VYH7237-002	IC HOLDER		
	CN 71	QGB2510J1-11	CONNECTOR				HS921	E70945-H40B	HEAT SINK		
	CN 81	QGB2510J1-09	CONNECTOR				HS931	E70945-H40B	HEAT SINK		
	CN101	QGB2501J1-12	CONNECTOR				HS941	E70945-H40B	HEAT SINK		
	CN201	QGB2510J1-11	CONNECTOR				HS951	E70306-001	HEAT SINK		
	CN241	QGB2510J1-12	CONNECTOR				HS961	E70306-001	HEAT SINK		
	CN301	QGB2510J1-14	CONNECTOR				HS971	E70306-001	HEAT SINK		
	CN303	QGB2510J1-13	CONNECTOR			⚠	IC901	MN101C49GHM	IC	u-h--	
	CN400	QGF1205C1-10	CONNECTOR				IC903	IC-PST9139-T	IC		
	CN402	QGF1205C1-08	CONNECTOR				J 91	QNS0022-001	JACK		
	CN601	QGB2510J1-07	CONNECTOR				Q 42	KTD863/Y/-T	TRANSISTOR		
	CN811	QGA3901F2-03	CONNECTOR				Q 52	KTD863/Y/-T	TRANSISTOR		
	CN931	QGD2501C1-04Z	SOCKET				Q 53	KRC105M-T	D TRANSISTOR		
	CN932	QGD2501C1-03Z	SOCKET				Q 61	KRC105M-T	D TRANSISTOR		
	D 46	MTZJ6.2A-T2	Z DIODE				Q 71	KTA1046/Y/	TRANSISTOR		
⚠	D 51	1SR35-400A-T5	DIODE				Q 74	KTC3200/GL/-T	TRANSISTOR		

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⚠	Item	Parts number	Parts name	Remarks	Area
	Q 901	KRC107M-T	D TRANSISTOR		
	Q 903	KRC105M-T	D TRANSISTOR		
	Q 904	KRC105M-T	D TRANSISTOR		
	Q 905	KRC105M-T	D TRANSISTOR		
	Q 906	KRC105M-T	D TRANSISTOR		
	Q 907	KRC105M-T	D TRANSISTOR		
	Q 908	KRC105M-T	D TRANSISTOR		
⚠	Q 921	2SD2395/EF/	TRANSISTOR		
⚠	Q 931	2SD2395/EF/	TRANSISTOR		
⚠	Q 941	2SD2395/EF/	TRANSISTOR		
⚠	Q 951	2SD2395/EF/	TRANSISTOR		
⚠	Q 961	KTA1046/Y/	TRANSISTOR		
⚠	Q 971	2SD2395/EF/	TRANSISTOR		
⚠	R 1	QRZ9044-335	COMP RESISTOR	3.3M 1/0W	
	R 44	QRE141J-821Y	C RESISTOR	820 5% 1/4W	
⚠	R 53	QRJ146J-6R8X	UNF C RESISTOR	6.8 5% 1/4W	
	R 54	QRE141J-821Y	C RESISTOR	820 5% 1/4W	
	R 61	QRJ146J-3R3X	UNF C RESISTOR	3.3 5% 1/4W	
⚠	R 67	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	R 72	QRJ146J-332X	UNF C RESISTOR	3.3K 5% 1/4W	
	R 73	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 74	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 91	QRL022J-471	UNF OMF RESISTOR	470 5% 1/2W	
	R 92	QRL022J-471	UNF OMF RESISTOR	470 5% 1/2W	
	R 903	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R 908	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 910	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 911	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
⚠	R 915	QRT022J-8R2	UNF MF RESISTOR	8.2 5% 1/2W	
⚠	R 916	QRT022J-8R2	UNF MF RESISTOR	8.2 5% 1/2W	
⚠	R 917	QRL012J-100	UNF OMF RESISTOR	10 5% 1/1W	
⚠	R 921	QRK126J-330X	UNF C RESISTOR	33 5% 1/2W	
⚠	R 922	QRK126J-330X	UNF C RESISTOR	33 5% 1/2W	
⚠	R 923	QRJ146J-272X	UNF C RESISTOR	2.7K 5% 1/4W	
	R 924	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 925	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 926	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 927	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 928	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 929	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 930	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 931	QRL017J-390	UNF OMF RESISTOR	39 5% 1/1W	
⚠	R 932	QRL017J-390	UNF OMF RESISTOR	39 5% 1/1W	
⚠	R 933	QRJ146J-272X	UNF C RESISTOR	2.7K 5% 1/4W	
	R 937	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 938	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 939	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 940	QRJ146J-4R7X	UNF C RESISTOR	4.7 5% 1/4W	
⚠	R 941	QRK126J-330X	UNF C RESISTOR	33 5% 1/2W	
⚠	R 942	QRK126J-330X	UNF C RESISTOR	33 5% 1/2W	
⚠	R 943	QRJ146J-272X	UNF C RESISTOR	2.7K 5% 1/4W	
	R 944	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 945	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 946	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 947	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 948	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 949	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
⚠	R 951	QRK126J-120X	UNF C RESISTOR	12 5% 1/2W	
⚠	R 953	QRJ146J-222X	UNF C RESISTOR	2.2K 5% 1/4W	
	R 954	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 955	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 956	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
⚠	R 961	QRK126J-120X	UNF C RESISTOR	12 5% 1/2W	

⚠	Item	Parts number	Parts name	Remarks	Area
⚠	R 963	QRJ146J-222X	UNF C RESISTOR	2.2K 5% 1/4W	
	R 965	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 966	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 967	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 968	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 969	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 971	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
⚠	R 973	QRJ146J-332X	UNF C RESISTOR	3.3K 5% 1/4W	
	R 975	QRJ146J-220X	UNF C RESISTOR	22 5% 1/4W	
	R 976	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 977	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 978	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 979	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 980	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 981	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 982	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 983	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 984	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 985	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 986	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 987	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 991	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 992	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 993	QRE141J-622Y	C RESISTOR	6.2K 5% 1/4W	
	R 994	QRE141J-512Y	C RESISTOR	5.1K 5% 1/4W	
	R 995	QRE141J-133Y	C RESISTOR	13K 5% 1/4W	
	R 996	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 997	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 998	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 999	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	RY 1	QSK0098-001	RELAY		
	RY 62	QSK0088-001	RELAY		
	RY 63	QSK0088-001	RELAY		
⚠	T 2	QQT0317-001	POWER TRANSF		
	TA 1	QNZ0079-001Z	TAB		
	TA 2	QNZ0079-001Z	TAB		
⚠	TH 71	QAD0095-4R7Z	POSISTOR		
	X 901	QAX0246-001Z	RESONATOR		

■ Electrical parts list (Tuner board) **Block No. 07**

⚠	Item	Parts number	Parts name	Remarks	Area	⚠	Item	Parts number	Parts name	Remarks	Area
	AT101	QNB0014-001	ANT TERMINAL				R 115	NRSA02J-104X	MG RESISTOR		
	BK 1	LV31618-001A	SHIELD BKT				R 119	NRSA02J-103X	MG RESISTOR		
	C 101	NCB21HK-103X	C CAPACITOR				R 122	NRSA02J-472X	MG RESISTOR		
	C 103	NCB21HK-223X	C CAPACITOR				R 124	NRSA02J-222X	MG RESISTOR		
	C 105	NCB21HK-223X	C CAPACITOR				R 126	NRSA02J-562X	MG RESISTOR		
	C 107	QEKC1CM-226Z	E CAPACITOR	22MF 20% 16V			R 127	NRSA02J-822X	MG RESISTOR		
	C 111	NCB21HK-473X	C CAPACITOR				R 128	NRSA02J-472X	MG RESISTOR		
	C 112	NDC21HJ-120X	C CAPACITOR				R 129	NRSA02J-222X	MG RESISTOR		
	C 121	NDC21HJ-120X	C CAPACITOR			⚠	R 130	QRZ9005-680X	F RESISTOR	68 1/0W	
	C 122	NDC21HJ-120X	C CAPACITOR				R 132	NRSA02J-393X	MG RESISTOR		
	C 123	NCB21HK-473X	C CAPACITOR				R 133	NRSA02J-392X	MG RESISTOR		
	C 126	NCS21HJ-101X	C CAPACITOR				R 134	NRSA02J-102X	MG RESISTOR		
	C 128	QENC1HM-474Z	NP E CAPACITOR	.47MF 20% 50V			R 140	NRSA02J-183X	MG RESISTOR		
	C 129	NCB21HK-102X	C CAPACITOR				R 141	NRSA02J-102X	MG RESISTOR		
	C 130	QEKC1AM-107Z	E CAPACITOR	100MF 20% 10V			R 142	NRSA02J-470X	MG RESISTOR		
	C 133	QEKC1CM-226Z	E CAPACITOR	22MF 20% 16V			R 143	NRSA02J-562X	MG RESISTOR		
	C 134	NCB21HK-222X	C CAPACITOR				R 144	NRSA02J-332X	MG RESISTOR		
	C 135	NCB21HK-223X	C CAPACITOR				R 145	NRSA02J-103X	MG RESISTOR		
	C 136	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V			R 146	NRSA02J-392X	MG RESISTOR		
	C 137	NCB21HK-331X	C CAPACITOR				R 147	NRSA02J-332X	MG RESISTOR		
	C 138	NCB21HK-473X	C CAPACITOR				R 150	NRSA02J-331X	MG RESISTOR		
	C 139	NCB21HK-333X	C CAPACITOR				R 157	NRSA02J-682X	MG RESISTOR		
	C 140	NCB21HK-333X	C CAPACITOR				R 158	NRSA02J-682X	MG RESISTOR		
	C 141	NCB21HK-473X	C CAPACITOR				R 161	NRSA02J-102X	MG RESISTOR		
	C 143	NCB21HK-223X	C CAPACITOR				R 162	NRSA02J-102X	MG RESISTOR		
	C 144	NCB21HK-473X	C CAPACITOR				R 182	NRSA02J-103X	MG RESISTOR		
	C 146	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V			R 183	NRSA02J-103X	MG RESISTOR		
	C 147	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V			R 184	NRSA02J-103X	MG RESISTOR		
	C 148	QEKC1HM-224Z	E CAPACITOR	.22MF 20% 50V			RF101	QAU0124-002	FRONT END		
	C 149	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V			T 111	QQR0796-001	COIL BLOCK		
	C 150	QEKC1CM-226Z	E CAPACITOR	22MF 20% 16V			T 142	QQR0973-001	IFT		
	C 156	QDGB1HK-102Y	C CAPACITOR				X 121	QAX0402-001	CRYSTAL		
	C 157	NCB21HK-473X	C CAPACITOR		
	C 158	QEKC1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 161	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 162	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 163	NCB21HK-223X	C CAPACITOR		
	C 164	NCB21HK-473X	C CAPACITOR		
	C 168	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 184	QEKC1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 185	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 186	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	CF101	QAX0419-001Z	C FILTER		
	CF102	QAX0604-001Z	C FILTER		
	CF103	QAX0519-001Z	C FILTER		
	CN111	QGB2501K2-12	CONECTOR		
	D 121	1SS133-T2	SI DIODE		
	D 123	1SS133-T2	SI DIODE		
	D 124	1SS133-T2	SI DIODE		
	D 125	1SS133-T2	SI DIODE		
	D 129	1SS133-T2	SI DIODE		
	IC102	LA1838	IC		
	IC121	LC72136N	IC		
	Q 102	2SC535/BC/-T	TRANSISTOR		
	Q 103	2SC461/BC/-T	TRANSISTOR		
	Q 121	KRA103M-T	TRANSISTOR	FM+B	
	R 103	NRSA02J-221X	MG RESISTOR		
	R 104	NRSA02J-272X	MG RESISTOR		
	R 105	NRSA02J-391X	MG RESISTOR		
	R 106	NRSA02J-102X	MG RESISTOR		
	R 107	NRSA02J-391X	MG RESISTOR		
	R 108	NRSA02J-332X	MG RESISTOR		
	R 109	NRSA02J-221X	MG RESISTOR		

Packing materials and accessories parts list

Block No. Ⓜ ② Ⓜ Ⓜ
Block No. Ⓜ ③ Ⓜ Ⓜ

A1

(P4)

(P1) 1/2
A2~A10

(P3)

(P4)
2/2

(P5)
1/2

(P3)

(P5)
2/2

(P6)

(P2)
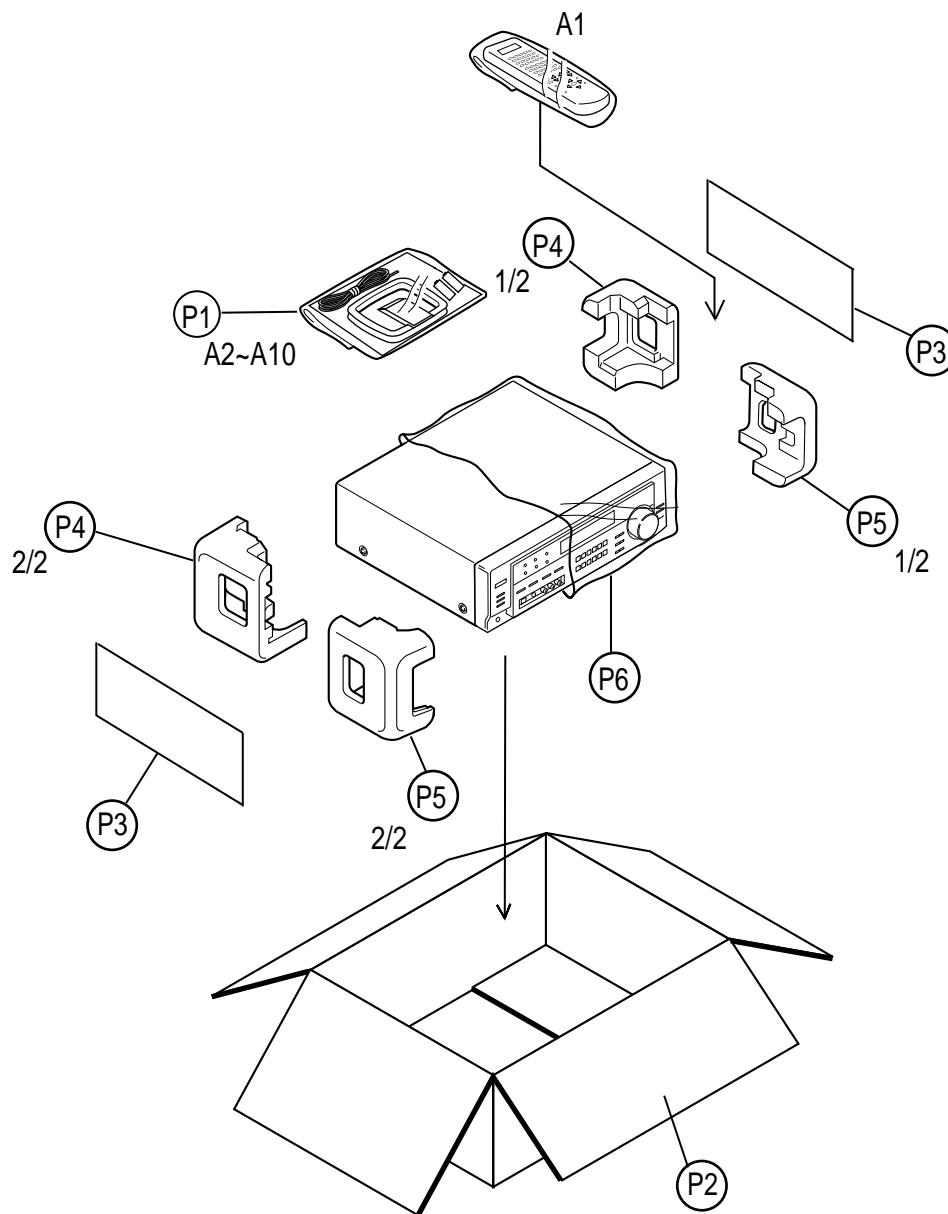
■ Parts list (Packing)

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	QPA02503505P	POLY BAG	1	FOR INST	
	P 2	LV20989-018A	CARTON BOX	1		
	P 3	LV32034-003A	SHEET	2		
	P 4	LV20947-001A	PACKING PAD	1		
	P 5	LV20948-001A	PACKING PAD	1		
	P 6	QPC06507015P	POLY BAG	1	FOR SET	

■ Parts list (Accessories)

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	RM-SRX9010J	REMOCON	1		
	A 2	LV42570-001A	SHEET	1		
	A 3	-----------	BATTERY	2		
	A 4	LVT0620-001B	INST BOOK	1	ENG	
	A 5	QAL0236-001	ANTENNA	1		
	A 6	QAL0219-001	LED CABLE ASSY	1		
	A 7	EWP503-001C	ANT.WIRE	1		
	A 8	QAL0204-001	AM LOOP ANT	1		
	A 9	BT-51020-2	J=REGIST CARD	1		
	A 10	YU20333	SAFETY INST.	1		

RX-9010VBK

JVC

AUDIO/VIDEO CONTROL RECEIVER
RX-9010VBK
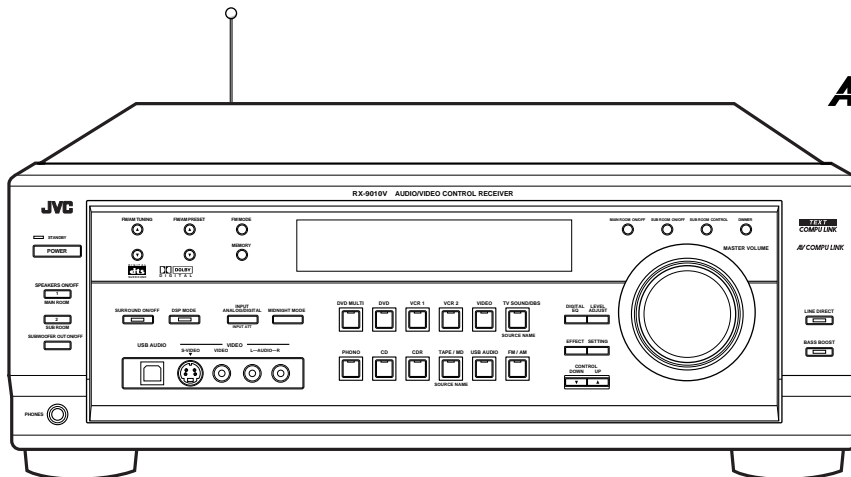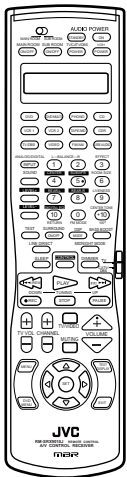
AV COMPU LINK

TEXT COMPU LINK

DIGITAL dts SURROUND

DOLBY DIGITAL

INSTRUCTIONS

Warnings, Cautions and Others/
Mises en garde, précautions et indications diverses

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION
To reduce the risk of electrical shocks, fire, etc.:
1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

ATTENTION
Afin d'éviter tout risque d'électrocution, d'incendie, etc.:
1. Ne pas enlever les vis ni les panneaux et ne pas ouvrir le coffret de l'appareil.
2. Ne pas exposer l'appareil à la pluie ni à l'humidité.

Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Caution — POWER switch!
Disconnect the mains plug to shut the power off completely. The POWER switch in any position does not disconnect the mains line. The power can be remote controlled.

Attention — Commutateur POWER!
Déconnecter la fiche de secteur pour couper complètement le courant. Le commutateur POWER ne coupe jamais complètement la ligne de secteur, quelle que soit sa position. Le courant peut être télécommandé.

Caution — SPEAKER LOAD SELECTOR switch!
Match the position of SPEAKER LOAD SELECTOR switch on the back panel to the impedance of the speaker connected, to protect from overheating.

For the main unit:
Declaration of Conformity
Model Number: RX-9010VBK
Trade Name: JVC
Responsible Party: JVC Americas Corp.
Address: 1700 Valley Road, Wayne
                     New Jersey 07470
Telephone Number: 973-315-5000

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Pour l'appareil principal:
Déclaration de conformité
Numéro de modèle: RX-9010VBK
Nom de marque: JVC
Personne responsable: US JVC CORP.
Adresse: 1700 Valley Road
                       Wayne, N.J. 07470
Numéro de téléphone: (973) 315-5000

Cet ensemble se conforme à la partie 15 des règles de la FCC (Federal Communications Commission), Le fonctionnement est sujet aux deux conditions suivantes:
(1) Cet appareil ne peut pas causer d'interférences nuisibles, et (2) cet appareil doit accepter toute interférence reçue, comprenant des interférences qui peuvent causer un mauvais fonctionnement.

For the main unit:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment.

For the remote control:
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment.

For Canada/pour Le Canada

For the main unit / Pour l'appareil principal

THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE INTERFERENCE-CAUSING EQUIPMENT STANDARD ENTITLED "DIGITAL APPARATUS," ICES-003 OF THE DEPARTMENT OF COMMUNICATIONS.
CET APPAREIL NUMERIQUE RESPECTE LES LIMITES DE BRUITS RADIOELECTRIQUES APPLICABLES AUX APPAREILS NUMERIQUES DE CLASSE B PRESCRITES DANS LA NORME SUR LE MATERIEL BROUILLEUR; "APPAREILS NUMERIQUES", NMB-003 EDICTEE PAR LE MINISTRE DES COMMUNICATIONS.

For Canada/pour le Canada

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQUAU FOND

For the remote control / Pour la télécommande
This device complies with RSS-210 of Industry Canada Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme au règlement CNR-210 de l'industrie du Canada. L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Caution: Proper Ventilation
To avoid risk of electric shock and fire and to protect from damage.
Locate the apparatus as follows:
Front: No obstructions open spacing.
Sides: No obstructions in 10 cm from the sides.
Top: No obstructions in 10 cm from the top.
Back: No obstructions in 15 cm from the back
Bottom: No obstructions, place on the level surface.
In addition, maintain the best possible air circulation as illustrated.

Attention: Ventilation Correcte
Pour éviter les chocs électriques, l'incendie et tout autre dégât.
Disposer l'appareil en tenant compte des impératifs suivants
Avant: Rien ne doit gêner le dégagement
Flancs: Laisser 10 cm de dégagement latéral
Dessus: Laisser 10 cm de dégagement supérieur
Arrière: Laisser 15 cm de dégagement arrière
Dessous: Rien ne doit obstruer par dessous; poser l'appareil sur une surface plate.
Veiller également à ce que l'air circule le mieux possible comme illustré.

Spacing 15 cm or more
Dégagement de 15 cm ou plus

RX-9010VBK

Wall or obstructions
Mur, ou obstruction

Front
Avant

Stand height 15 cm or more
Hauteur du socle: 15 cm ou plus

Floor
Plancher

Table of Contents

You can use "On-screen Menu" for most of the main room operations. For details, see page 50.

SUB — Indicates the functions YOU CAN ALSO USE when the receiver is ready for the sub-room operations.

Introduction

We would like to thank you for purchasing one of our JVC products.
Before operating this unit, read this manual carefully and thoroughly to obtain the best possible performance
from your unit, and retain this manual for future reference.

Features

Dolby Digital Decoder Incorporated

You can enjoy Dolby Digital, one of the most advanced home theater sound systems available. Dolby Digital, with five full-range channels and a LFE (subwoofer) channel, lets you enjoy the most spectacular theater sound at home when you view movies on DVD.

Compatible with DTS Digital Surround

The RX-9010VBK is compatible with DTS Digital Surround as well. DTS Digital Surround is the digital movie soundtrack format that delivers 5.1-channel audio like Dolby Digital. Using a low audio-data compression rate, it features natural, solid and clear sound.

Multi-room Operations

You can connect two pairs of the front speakers to the RX-9010VBK, and use them to listen to different sources in the different rooms (Main room and Sub-room) at the same time.

RF/IR Multi-brand Remote Control

The remote control sends out not only IR (infrared) signals but also RF (radio frequency) signals as coded commands to control the receiver. The RF rod antenna can receive the RF (Radio Frequency) signals sent from the remote control to operate the receiver. In addition, the supplied RF signal transmitter can transmit IR signals which could control other video components.
• The remote control provided for this receiver can transmit control signals for many manufacturers' components.

COMPU LINK Remote Control System

The COMPU LINK remote control system allows you to operate other JVC audio components from this receiver.

TEXT COMPU LINK Remote Control System

The TEXT COMPU LINK remote control system has been developed to deal with the disc information recorded on the CD Text and MDs. Using this information on the discs, you can operate the CD player or MD recorder through the receiver.

AV COMPU LINK Remote Control System

The AV COMPU LINK remote control system allows you to operate other JVC video components from this receiver.

Precautions

Power sources

• When unplugging the receiver from the wall outlet, always pull the plug, not the AC power cord.
• Do not handle the AC power cord with wet hands.
• If you are not going to operate the receiver for an extended period of time, unplug the AC power cord from the wall outlet.

Multi-room operations

• Do not use the remote control outdoors or install the speakers outdoors.
• When operating the receiver from the place where you cannot see the receiver (for example, when controlling the receiver installed in the living room from the kitchen), pay attention to the following not to surprise other people:
 – Be careful not to turn up the volume so high when controlling the receiver without listening to the playback sound.
 – Be careful not to surprise other people with a sudden sound coming out of the receiver when turning it on. (A sudden stop of the sound may also surprise other people.)
• If the receiver operates by itself or malfunctions, the following causes will be considered:
 – Interference to RF communication between the receiver and the remote control from outside.
 – The remote control is operated unintentionally. For example, a book is placed on the remote control, possibly, depressing some buttons on the remote control.
• If your neighbour uses the same or similar RF remote control system, the receiver may happen to receive the RF signals sent from such an RF remote control system, which could cause your receiver to be operated unintentionally. If this happen, stop using the RF rod antenna and the remote control, and consult your JVC dealer or the nearest JVC Service Center.

Others

• Should any metallic object or liquid fall into the unit, unplug the unit and consult your dealer before operating any further.
• Do not disassemble the unit since there are no user serviceable parts inside.

If anything goes wrong, unplug the AC power cord and consult your JVC dealer.

2

Parts Identification

Refer to the pages in parentheses for details.

Front Panel

1 POWER button and STANDBY lamp (15 – 17, 23)
2 • SPEAKERS ON/OFF 1 (MAIN ROOM) buttons (15, 20)
   • SPEAKERS ON/OFF 2 (SUB ROOM) buttons (15, 20, 26)
3 FM/AM TUNING ▲/▼ buttons (35)
4 DSP MODE button and lamp (42, 45, 46)
5 FM/AM PRESET ▲/▼ buttons (35, 36)
6 • INPUT ANALOG/DIGITAL button (31)
   • INPUT ATT button (21)
7 FM MODE button (36)
8 MEMORY button (35, 36)
9 Display (17, 18, 23, 25)
10 DIGITAL EQ button (20)
11 LEVEL ADJUST button (27, 28, 41, 45, 46, 48, 49)
12 Remote sensor (13)
13 MAIN ROOM ON/OFF button (18)
14 SUB ROOM ON/OFF button (16, 23, 24)
15 SUB ROOM CONTROL button (16, 23, 24)
16 DIMMER button (22)

17 PHONES jack (20)
18 SUBWOOFER OUT ON/OFF button (21)
19 SURROUND ON/OFF button and lamp (41, 45)
20 USB AUDIO terminal (11)
21 VIDEO input terminals (9)
22 MIDNIGHT MODE button (21)
23 Source selecting buttons and lamps (18, 25)
   DVD MULTI, DVD, VCR 1, VCR 2, VIDEO,
   TV SOUND/DBS, PHONO, CD, CDR, TAPE/MD, USB
   AUDIO, FM/AM
24 SOURCE NAME buttons (33)
25 EFFECT button (41, 42, 45 – 48)
26 CONTROL UP ▲/DOWN ▼ buttons
   (20, 27 – 34, 41, 42, 45 – 49)
27 SETTING button (27 – 34)
28 MASTER VOLUME control (15, 16, 19, 25)
29 BASS BOOST button and lamp (21)
30 LINE DIRECT button and lamp (22)

Remote Control

① MAIN ROOM/SUB ROOM selector (15 – 17, 23, 24)
② MAIN ROOM ON/OFF button (18)
   SUB ROOM ON/OFF button (24)
③ Display window (17, 23, 27, 40, 49, 50, 58, 65, 67, 68)
   a. MAIN ROOM/SUB ROOM indicators
   b. Remote control mode operation indicator
   c. Signal transmission indicator
      Lights up when transmitting the remote control signals.
④ Source selecting buttons (18, 25)
   DVD, DVD MULTI, PHONO, CD, VCR 1, VCR 2,
   TAPE/MD, CDR, TV/DBS, VIDEO, FM/AM, USB AUDIO
⑤ ANALOG/DIGITAL INPUT button (32)
⑥ SOUND button (20, 28, 40, 43, 44, 46 – 49, 65)
⑦ LEVEL +/LEVEL – buttons (20, 28, 40, 43, 44, 47 – 49)
⑧ TEST button (40, 44)
⑨ SURROUND ON/OFF button (39, 40, 44)
⑩ LINE DIRECT button (22)
⑪ SLEEP button (22)
⑫ Operating buttons for audio/video components (35, 65 – 70)
⑬ On-screen operation buttons
   MENU, SET, EXIT, △, ▽, ◁, ▷ (50, 58, 67, 70)
⑭ DVD MENU button (67, 70)
⑮ AUDIO POWER buttons
   STANDBY, ON (15 – 17, 24)
⑯ AUDIO POWER buttons
   TV/CATV/DBS POWER, VCR 1 POWER (67 – 70)
⑰ • 10 keys for selecting preset channels (36)
   • 10 keys for adjusting sound
     (20, 28, 36, 40, 41, 43 – 45, 47 – 49, 65)
   • 10 keys for operating audio/video components
     (65 – 70)
⑱ BASS BOOST button (21)
⑲ DSP MODE button (43, 44, 47, 48)
⑳ MIDNIGHT MODE button (21)
㉑ TV/CATV/DBS selector (67, 68)
㉒ DIMMER button (22)
㉓ VOLUME +/– button (15, 16, 19, 25)
㉔ MUTING button (21, 26)
㉕ TEXT DISPLAY button (58)

4

Getting Started

This section explains how to connect audio/video components and speakers to the receiver, and how to connect the power supply.

Before Installation

General
• Be sure your hands are dry.
• Turn the power off to all components.
• Read the manuals supplied with the components you are going to connect.

Locations
• Install the receiver in a location that is level and protected from moisture.
• The temperature around the receiver must be between –5˚C and 35˚C (23˚F and 95˚F).
• Make sure there is good ventilation around the receiver. Poor ventilation could cause overheating and damage the receiver.

Handling the receiver
• Do not insert any metal object into the receiver.
• Do not disassemble the receiver or remove screws, covers, or cabinet.
• Do not expose the receiver to rain or moisture.

Checking the Supplied Accessories

Check to be sure you have all of the following items, which are supplied with the receiver.
The number in the parentheses indicates quantity of the pieces supplied.

• **Remote Control (1)**

• **Batteries (2)**

• **AM Loop Antenna (1)**

• **FM Antenna (1)**

• **RF Rod Antenna (1)**

• **IR Signal Transmitter (1)**

If anything is missing, contact your dealer immediately.

Connecting the FM and AM Antennas

FM Antenna Connections

FM Antenna

Extend the supplied FM antenna horizontally.

Outdoor FM Antenna Cable (not supplied)
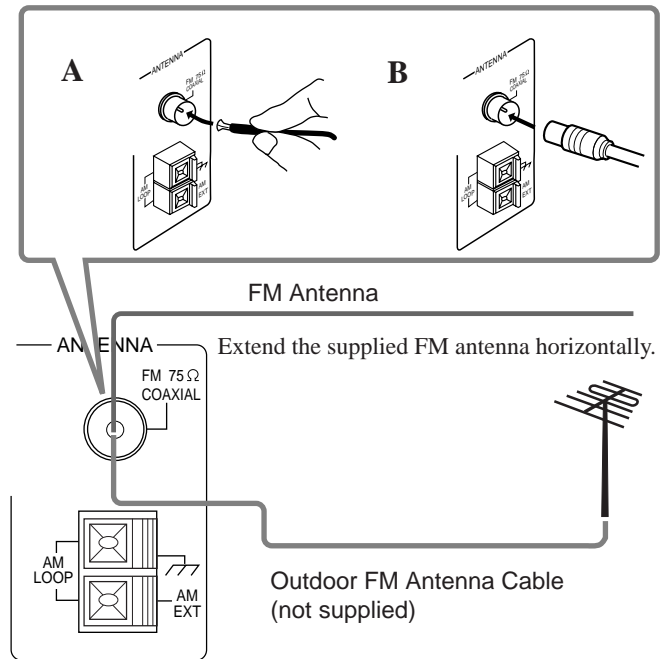
A. Using the Supplied FM Antenna
The FM antenna provided can be connected to the FM 75Ω COAXIAL terminal as a temporary measure.

B. Using the Standard Type Connector with Outdoor FM Antenna (Not Supplied)
A standard type connector should be connected to the FM 75Ω COAXIAL terminal.

Note:

If reception is poor, connect the outdoor antenna.
Before attaching a 75Ω coaxial cable (the kind with a round wire going to an outdoor antenna), disconnect the supplied FM antenna.

AM Antenna Connections

ANTENNA

FM 75 Ω
COAXIAL

AM LOOP

AM EXT

Snap the tabs on the loop into the slots of the base to assemble the AM loop.

AM Loop Antenna

1

2

3

Outdoor single vinyl-covered wire (not supplied)
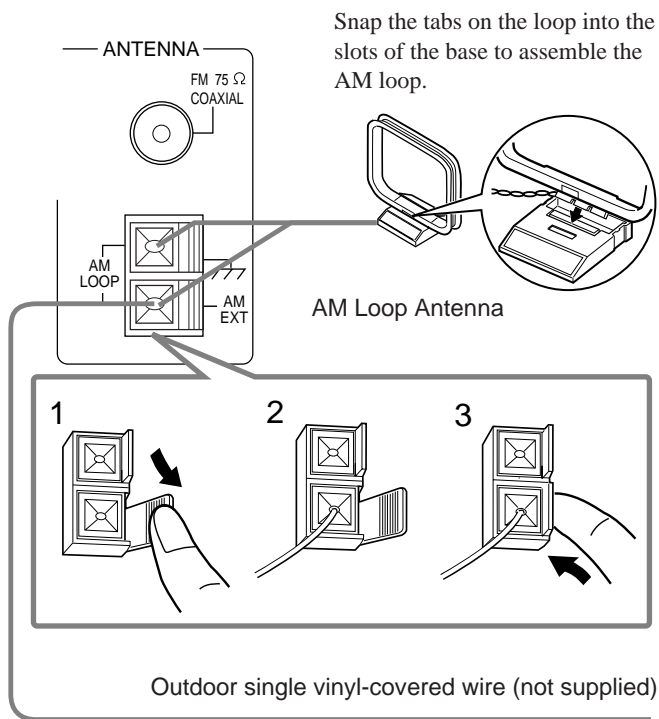
Turn the loop until you have the best reception.

Notes:

• *If the AM loop antenna wire is covered with vinyl, remove the vinyl by twisting it as shown in the diagram.*
• *Make sure the antenna conductors do not touch any other terminals, connecting cords and power cord. This could cause poor reception.*
• *If reception is poor, connect an outdoor single vinyl-covered wire to the AM EXT terminal. (Keep the AM loop antenna connected.)*

Connecting the Speakers

You can connect the following speakers:
• Two pairs of front speakers to produce normal stereo sound.
• One pair of rear speakers to enjoy the surround effect.
• One center speaker to produce more effective surround effect (to emphasize human voices).
• One powered subwoofer to enhance the bass.

IMPORTANT:
After connecting the speakers listed above, set the speaker setting information properly:
• **To obtain the best possible Surround and DSP effect in the main room, see page 29.**
• **To use the Multi-room function, see "Setting the Front Speakers Either for the Main Room or Sub-room" on page 27.**

For each speaker (except for a subwoofer), connect the (+) and (–) terminals on the rear panel to the (+) and (–) terminals marked on the speakers. For connecting a subwoofer, see page 7.

CAUTION:

Use speakers with the SPEAKER IMPEDANCE indicated by the speaker terminals.

Basic connecting procedure

1	2	3	4
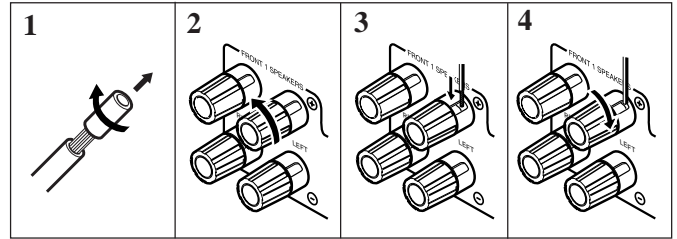
1 **Cut, twist and remove the insulation at the end of each speaker signal cable (not supplied).**

2 **Turn the knob counterclockwise.**

3 **Insert the speaker signal cable.**

4 **Turn the knob clockwise.**

Connecting the front speakers

You can connect two pairs of front speakers — one pair to the FRONT 1 SPEAKERS terminals, and the other pair to the FRONT 2 / SUB ROOM SPEAKERS terminals.

The speakers connected to the FRONT 2 / SUB ROOM SPEAKERS terminals can be used as follows:
• As the second front speakers in the main listening room
• As the main speakers in the sub listening room when using the Multi-room function.

Right speaker —— FRONT 1 SPEAKERS —— Left speaker

FRONT 1 SPEAKERS

RIGHT   LEFT   RIGHT   LEFT

CAUTION :
SPEAKER IMPEDANCE

4～6 Ω LOW
8～16 Ω HIGH

SPEAKER LOAD SELECTOR

CAUTION : SPEAKER IMPEDANCE 8～16 Ω
FRONT 2 / SUB ROOM SPEAKERS
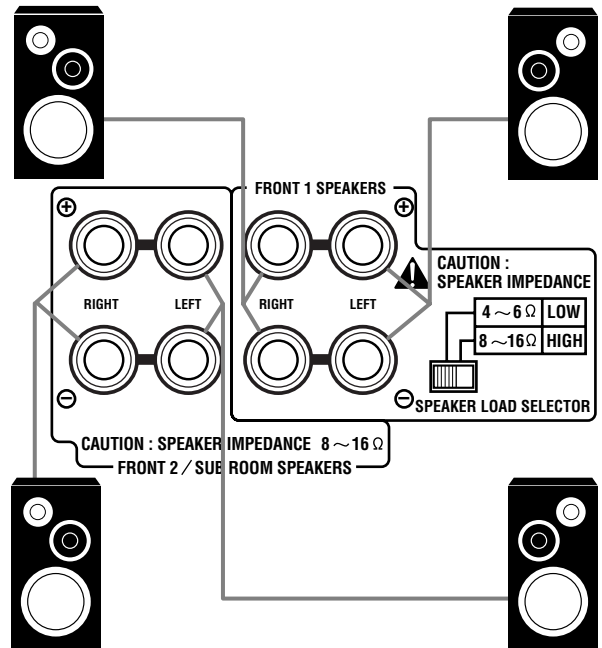
Right speaker —— FRONT 2 / SUB ROOM —— Left speaker
SPEAKERS

IMPORTANT for FRONT 1 SPEAKERS connection:

To obtain the best possible output power from the receiver, and to prevent the receiver from being overheated, the receiver has the SPEAKER LOAD SELECTOR which has to be set as follows:
• Set it to the "HIGH" position when the impedance of the front speakers connected is within the range of 8 Ω to 16 Ω.
• Set it to the "LOW" position when the impedance of the front speakers connected is within the range of 4 Ω to 6 Ω.

6

Connecting the rear and center speakers

Connect rear speakers to the REAR SPEAKERS terminals and a center speaker to the CENTER SPEAKER terminals.
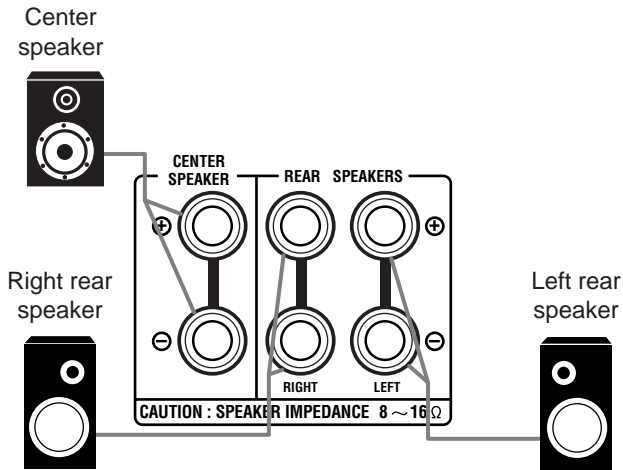
Connecting the subwoofer speaker

You can enhance the bass by connecting a subwoofer.
Connect the input jack of a powered subwoofer to the SUBWOOFER OUT jack on the rear panel, using a cable with RCA pin plugs (not supplied).

Powered subwoofer

Connecting Audio/Video Components

You can connect the following audio/video components to this receiver. Refer also to the manuals supplied with your components.

Audio Components	Video Components
• Turntable	• DVD player*
• CD player*	• TV*
• Cassette deck or MD recorder*	• DBS tuner*
	• VCR(s)
• CD recorder*	• Video camera
• Personal Computer (PC)	

* *You can connect these components using the methods described in "Analog connections" (to the right) or in "Digital connections" (see page 10).*

Analog Connections

Audio component connections

Use the cables with RCA pin plugs (not supplied).
Connect the white plug to the audio left jack, and the red plug to the audio right jack.

CAUTION:

If you connect a sound-enhancing device such as a graphic equalizer between the source components and this receiver, the sound output through this receiver may be distorted.

Turntable
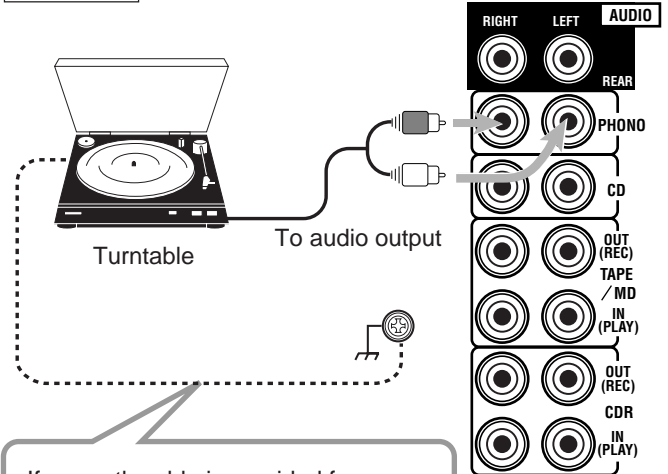
If an earth cable is provided for your turntable, connect the cable to the screw marked (⏚) on the rear panel.

Ex. This connection is for the turntable with an MM (moving-magnet) type cartridge.

Note:

Any turntables incorporating a small-output cartridge such as an MC (moving-coil) type must be connected to this receiver through a commercial head amplifier or step-up transformer. Direct connection may result in insufficient volume.

CD player

CD player

To audio output

Cassette deck or MD recorder

Cassette deck

To audio input   To audio output

RIGHT   LEFT   AUDIO

REAR

PHONO

CD

OUT
(REC)
TAPE
/MD
IN
(PLAY)

To audio input   To audio output
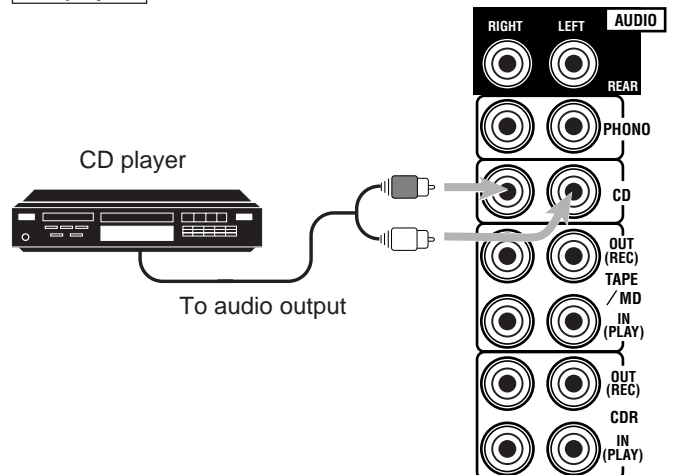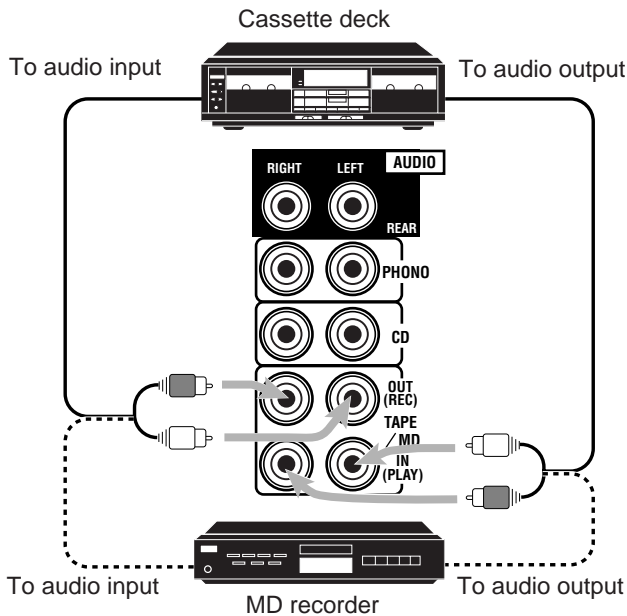
MD recorder

Note:

You can connect either a cassette deck or an MD recorder to the TAPE/MD jacks. When connecting an MD recorder to the TAPE/MD jacks, change the source name, which will be shown on the display when selected as the source, to "MD." See page 33 for details.

CD recorder

CD recorder

To audio input   To audio output

RIGHT   LEFT   AUDIO

REAR

PHONO

CD

OUT
(REC)
TAPE
/MD
IN
(PLAY)

OUT
(REC)
CDR
IN
(PLAY)
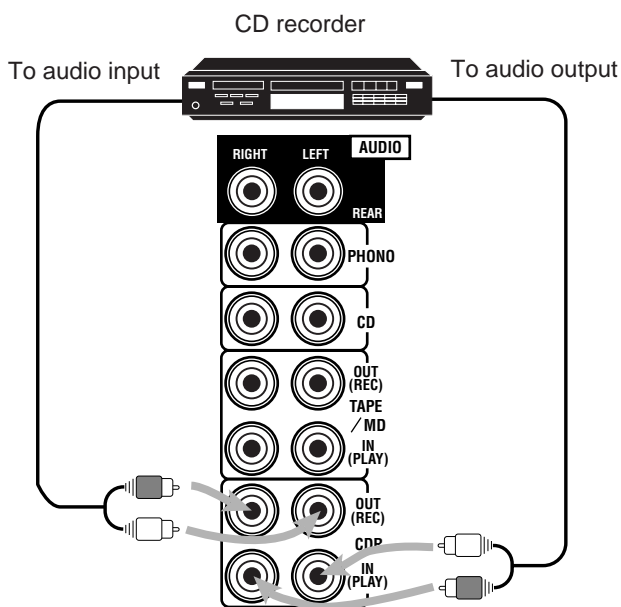
If your audio components have a COMPU LINK or TEXT COMPU LINK jack
- See page 55 for detailed information about the connection and the COMPU LINK remote control system.
- See page 57 for detailed information about the connection and the TEXT COMPU LINK remote control system.

Video component connections

Use the cables with RCA pin plugs (not supplied).
Connect the white plug to the audio left jack, the red plug to the audio right jack, and the yellow plug to the video jack.
- If your video components have S-video (Y/C-separation) and/or component video (Y, P_B/C_B, P_R/C_R) jacks, connect them using an S-video cable (not supplied) and/or component video cable (not supplied). By using these jacks, you can get a better picture quality — in the order : Component video > S-video > Composite video.

IMPORTANT:

This receiver is equipped with the following video jacks — composite video, S-video and component video jacks. You can use any of the three to connect a video component.
However, **remember that the video signals from one type of these input jacks are output only through the video output jacks of the same type.**
Therefore, if a recording video component and a playing video component are connected to the receiver through the different video jacks, you cannot record the picture from the playing component on the recording component. In addition, if the TV and a playing video component are connected to the receiver through the different video jacks, you cannot view the playback picture from the playing component on the TV.

VCR(s)

S-VHS (or VHS) VCR

A   C D

B   E F

VIDEO

AUDIO   RIGHT   LEFT   VIDEO   S-VIDEO

DVD
FRONT

TV SOUND
/DBS

OUT
(REC)
VCR1
IN
(PLAY)

OUT
(REC)
VCR2
IN
(PLAY)

MONITOR
OUT

A   C D

B   E F

S-VHS (or VHS) VCR
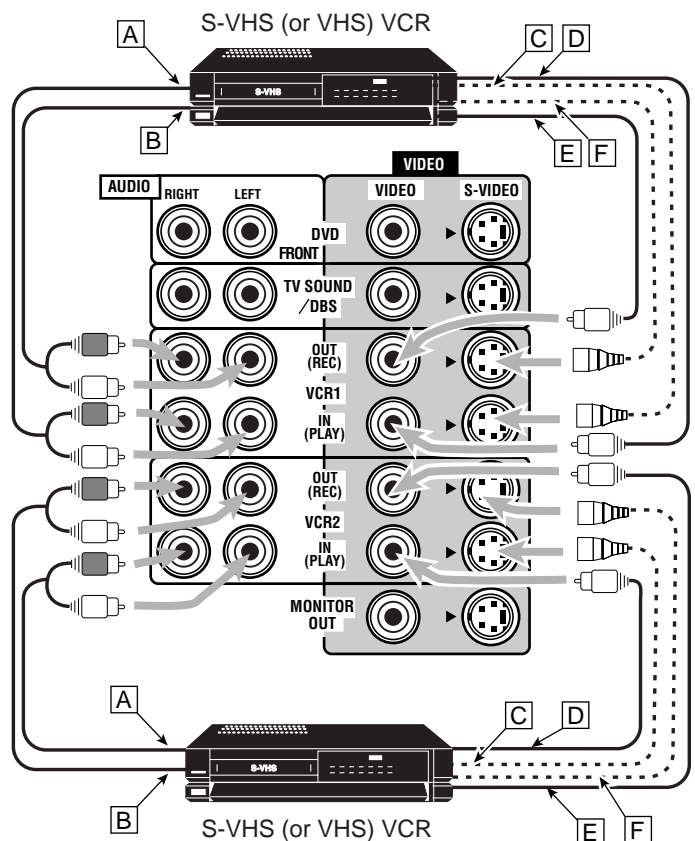
A To left/right channel audio output
B To left/right channel audio input
C To S-video output
D To composite video output
E To composite video input
F To S-video input

8

When connecting the TV to the AUDIO jacks (TV SOUND/DBS), DO NOT connect the TV's video output to these video input jacks.

Connect the TV to the MONITOR OUT jack to view the playback picture from the other connected video components.
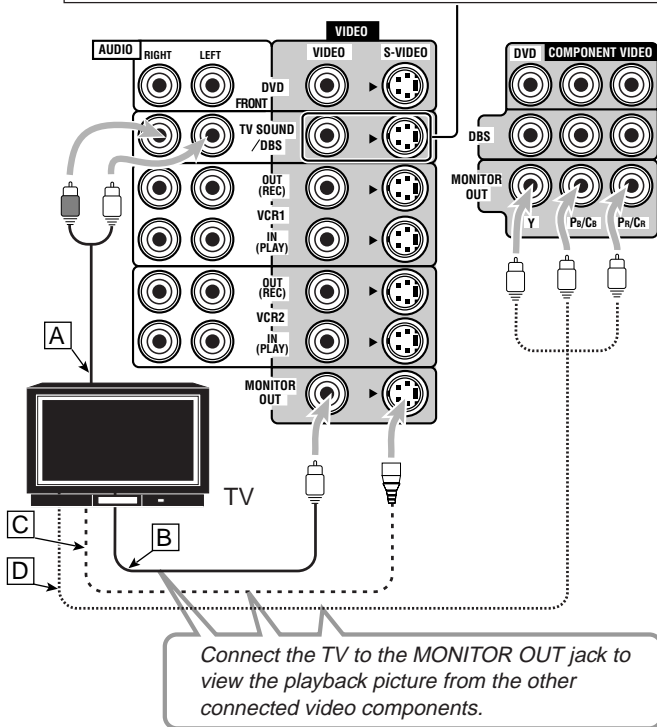
A To audio output
B To composite video input
C To S-video input
D To component video input

A To audio output
B To composite video output
C To S-video output
D To component video output

Notes:

• When connecting the DBS tuner to the TV SOUND/DBS jacks, change the source name, which will be shown on the display when selected as the source, to "DBS." See page 33 for details.
• When operating the DBS tuner by using the AV COMPU LINK remote control system, change the video input terminal setting correctly. See page 32 for details.

The VIDEO input jacks on the front panel are convenient when connecting and disconnecting the equipment frequently.

To audio output
To S-video output
To composite video output
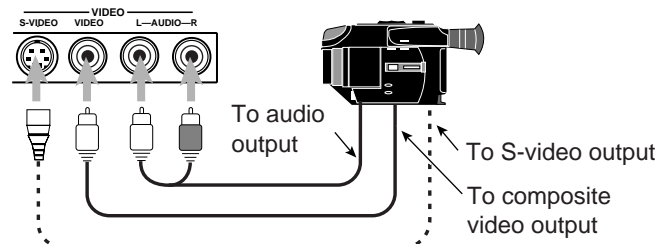
DVD player

• When you connect the DVD player with stereo output jacks:

A To front left/right channel audio output (or to audio mixed output if necessary)
B To composite video output
C To S-video output
D To component video output
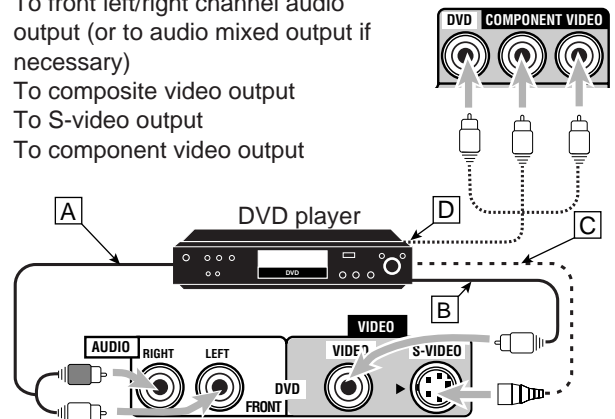
DVD player

• When you connect the DVD player with its analog discrete output (5.1 CH reproduction) jacks:

A To subwoofer output
B To center channel audio output
C To rear left/right channel audio output
D To front left/right channel audio output
E To composite video output
F To S-video output
G To component video output
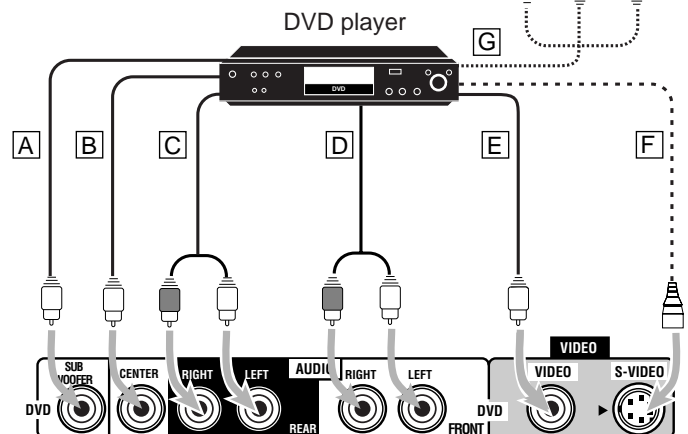
DVD player

Note:

When operating the DVD player by using the AV COMPU LINK remote control system, change the video input terminal setting correctly. See page 32 for details.

■ Digital Connections

This receiver is equipped with four DIGITAL IN terminals — one digital coaxial terminal and three digital optical terminals — and one DIGITAL OUT terminal.

IMPORTANT:

• When connecting the DVD player, digital TV broadcast tuner or DBS tuner using the digital terminals, you also need to connect it to the video terminal on the rear. Without connecting it to the video terminal, you can view no playback picture.
• After connecting the components using the DIGITAL IN terminals, set the following correctly if necessary.
  – Set the digital input (DIGITAL IN) terminal setting correctly. For details, see "Digital Input (DIGITAL IN) Terminal Setting" on page 30.
  – Select the digital input mode correctly. For details, see "Selecting the Analog or Digital Input Mode" on page 31.

Digital output terminal

CD recorder   MD recorder

Digital optical cable (not supplied) between digital optical terminals

Digital input terminals

You can connect any digital equipment as follows:

Digital TV

DBS tuner

DVD player

CD player

CD recorder

MD recorder

Digital coaxial cable (not supplied) between digital coaxial terminals

Digital optical cable (not supplied) between digital optical terminals

When the digital recording equipment such as an MD recorder and a CD recorder has a digital optical input terminal, connecting it to the DIGITAL OUT terminal enables you to perform digital-to-digital recording.

PCM/DOLBY DIGITAL /DTS
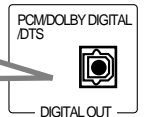
DIGITAL OUT

Note:

The digital signal format output through the DIGITAL OUT terminal is the same as that of the input signal. This means that when the DTS Digital Surround signals are input, the DTS Digital Surround signals are output.

When the component has a digital coaxial output terminal, connect it to the DIGITAL 1 (DVD) terminal, using the digital coaxial cable (not supplied).

When the component has a digital optical output terminal, connect it to the DIGITAL 2 (CD), DIGITAL 3 (TV) or DIGITAL 4 (CDR) terminal, using the digital optical cable (not supplied).

Before connecting a digital optical cable, unplug the protective plug.

DIGITAL IN

DIGITAL 1 (DVD)

DIGITAL 2 (CD)

DIGITAL 3 (TV)

DIGITAL 4 (CDR)

10

■ USB Connection

This receiver is equipped with a USB terminal on the front panel.
You can connect your PC to this terminal and enjoy sound
reproduced through your PC.
When you connect your PC for the first time, follow the procedure
below.
• Remember you cannot send any signal or data to your PC from
  this receiver.

IMPORTANT
• Check if your PC equipped with the CD-ROM drive is running on
  Windows® 98*, Windows® Me*, or Windows® 2000* and prepare
  its CD-ROM.
• Check your PC's BIOS setting — whether USB is available, and
  whether USB IRQ is set to "AUTO" or to available IRQ number.

How to install the USB drivers
The following procedure is described using the English version of
Windows® 98. If your PC is running on a different version of
Windows, the screens shown on your PC's monitor will differ from
the ones used in the following procedure.

1. **Turn on your PC and start running Windows® 98, Windows®
   Me or Windows® 2000.**
   If the PC has been turned on, quit all the applications now running.

2. **Turn on the receiver, and press USB AUDIO on the front
   panel or USB on the remote control.**
   The lamp on the USB AUDIO button lights up.

3. **Connect the receiver to the PC using a USB cable (not
   supplied).**
   Your PC automatically recognizes this connection, and shows
   the following screen on the monitor.
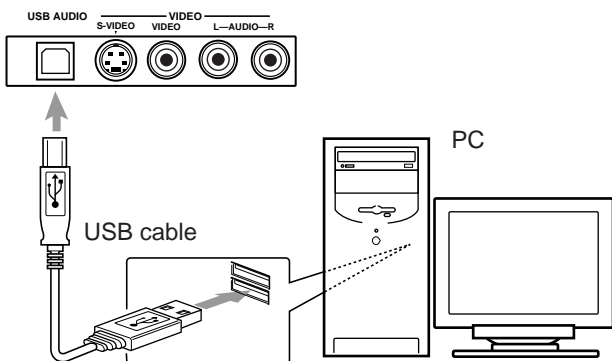
4. **Install the USB drivers following the instructions on the PC's
   monitor.**

5. **Check if the drivers are correctly installed.**
   1. Open the Control Panel on your PC: Select [Start] →
      [Settings] → [Control Panel]
   2. Click [System] → [Device Manager] → [Sound, video and
      game controllers] and [Universal Serial Bus controllers]
      The following window appears, and you can check whether
      the drivers are installed.

Note:
*The items shown on the PC's monitor differs
depending on your PC settings.*
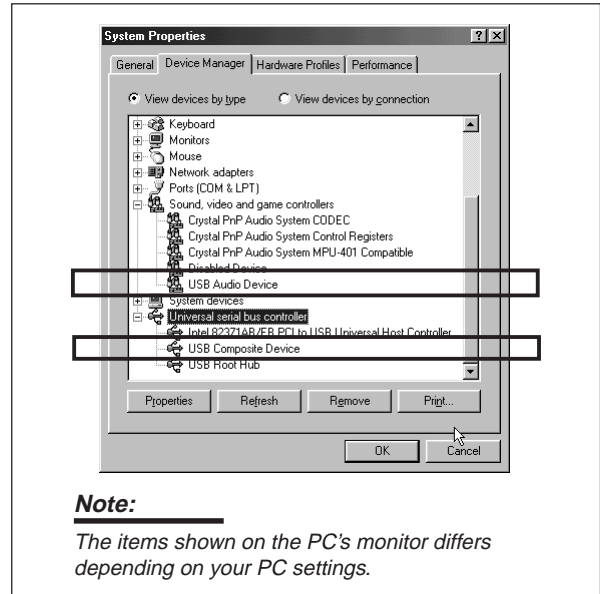
6. **Change the PC audio setting.**
   1. If you have closed Control Panel, open it again: Select [Start]
      → [Setting] → [Control Panel]
   2. Click [Multimedia Properties], then select "USB Audio
      Device [1]" for "Playback" of "Audio," and close the window.

To play back a CD from CD-ROM drive on PC, click
[Multimedia], [CD Music], then check [Enable digital CD audio for
this CD-ROM device].

Now PC is ready for playback through the USB connection.

After installation is completed, you can use your PC as the playback
source. The PC automatically recognizes the receiver whenever a
USB cable is connected to the PC and the receiver while the receiver
is turned on.
• When not using the PC as the playback source, disconnect the
  USB cable.

To play back sounds on the PC, refer to the manuals supplied with
the sound reproduction application installed in the PC.

Notes:
• *DO NOT turn off the receiver or disconnect the USB cable while
  installing the drivers and for a several seconds each time your PC is
  recognizing the receiver.*
• *Use a full speed USB cable (revision 1.0).*
• *If your PC does not recognize the receiver, disconnect the USB
  cable and connect it again. If this does not work, restart Windows.*
• *The drivers installed can be recognized only when the USB cable is
  connected between the receiver and your PC.*
• *The sound may not be played back correctly — interrupted or
  degraded — due to your PC settings and PC specifications.*

* *Microsoft ®, Windows® 98, Windows® Me and Windows® 2000 are
  registered trademarks of Microsoft corporation.*

Setting Up the RF Rod Antenna

The remote control supplied for this receiver can transmit RF (Radio Frequency) signal. The RF rod antenna can receive the RF signals emitted from the remote control. So, with the RF rod antenna connected, you can operate the receiver at a distance of up to 50 feet (15 m) using the remote control. However, if the antenna cannot receive signals stably, you cannot operate the receiver correctly.
• The signal-reachable distance may differ depending on the operating conditions and circumstances. To improve transmitting conditions, change the distance to the receiver and the direction to transmit while operating the remote control.
• Without the RF rod antenna connected, you can operate the receiver with the remote control, aiming the remote control directly toward the remote sensor on the receiver.

To set up the RF rod antenna

1. **Insert the RF rod antenna to the RF REMOTE ANTENNA terminal.**
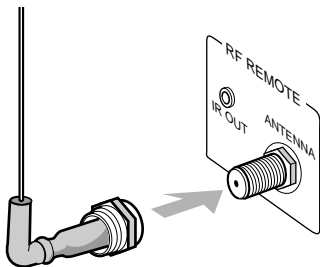
2. **Rotate the fixing nut to attach the RF rod antenna firmly.**
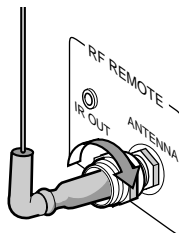
The RF rod antenna and IR signal Transmitter

The combination of the RF rod antenna and the IR signal transmitter (see to the right) allows you to use the Multi-room function more conveniently.
The remote control supplied for this receiver can transmit both RF (Radio Frequency) signal and IR (infrared) signal at the same time. This receiver catches the RF signals emitted from the remote control, and converts them into IR signals, then transmits the converted signals to the remote sensor on the other components through IR signal transmitter.
This means that you can control not only this receiver but the other components from the sub-room.

Note:

To avoid a failure in the reception from the remote control, keep the connecting cables and the IR signal transmitter's cable away from the RF rod antenna.

Setting Up the IR Signal Transmitter

The IR signal transmitter can transmit the IR signals.
It allows you to use the AV COMPULINK system, and to operate other manufacturers' components without aiming the remote control directly toward the remote sensor on the target components. In addition, the IR signal transmitter reduces the possibility of malfunction.
• The IR signal transmitter may not operate the target components depending on the operating conditions and circumstances — including the aiming angle and direction of the IR signal transmitter toward the remote sensors of the target components. If this occurs, changing its aiming angle and direction toward the remote sensors may solve the problem.

To set up the IR signal transmitter

1. **Find the place where you attach the IR signal transmitter.**
   • Place it where the signal can reach the remote sensor of the target components directly (in the line-of-sight).
   • If the cord length of the IR signal transmitter is not long enough, use an extension cord (not supplied).

2. **Attach the double-sided adhesive tape (supplied) to the IR signal transmitter.**

IR signal transmitter

Double-sided adhesive tape
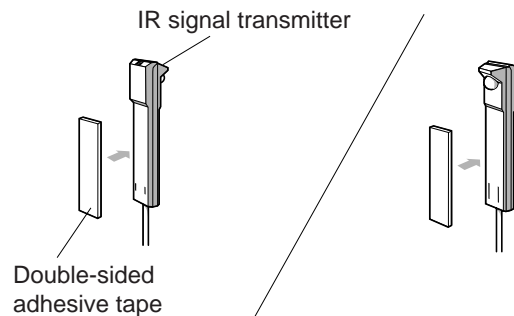
3. **Connect the plug of the transmitter to the IR OUT jack of the receiver and place the transmitter.**
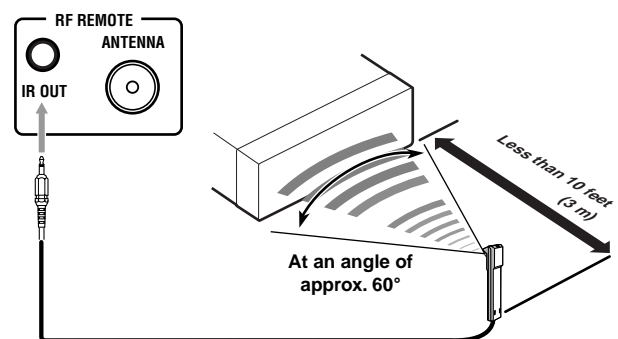
Signal-emitting angle of the transmitter

12
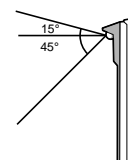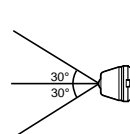
Connecting the Power Cord

Before plugging the receiver into an AC outlet, make sure that all connections have been made.

Plug the power cord into an AC outlet.
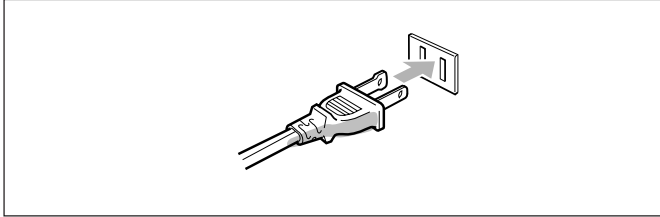
Keep the power cord away from the connecting cables and the antenna. The power cord may cause noise or screen interference. We recommend that you use a coaxial cable to connect the antenna, since it is well-shielded against interference.

Note:

The preset settings such as preset channels and sound adjustment may be erased in a few days in the following cases:
– When you unplug the power cord.
– When a power failure occurs.

CAUTIONS:

• Do not touch the power cord with wet hands.
• Do not pull on the power cord to unplug the cord. When unplugging the cord, always grasp the plug so as not to damage the cord.

Putting Batteries in the Remote Control

Before using the remote control, put two supplied batteries first.

1. On the back of the remote control, remove the battery cover.
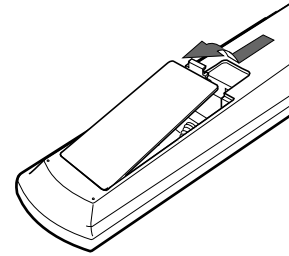
2. Insert batteries. Make sure to match the polarity: (+) to (+).

R6P(SUM3)/AA(15F)
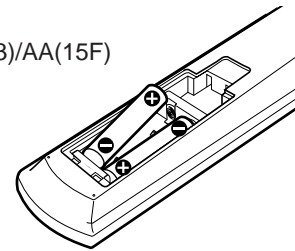
3. Replace the cover.
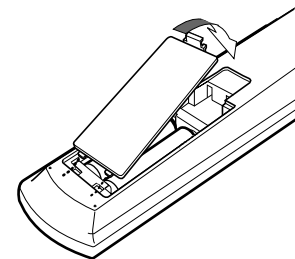
If the remote control cannot transmit signals and operate the receiver correctly, replace the batteries. Use two R6P(SUM3)/AA(15F) type dry-cell batteries.

Notes:

• *When you can aim the remote control directly at the remote sensor on the receiver, you can operate the receiver at a distance of up to 23 feet (7 m).*
• *After replacing the batteries, set the manufacturers' codes again (see page 68).*

CAUTIONS:

Follow these precautions to avoid leaking or cracking cells:
• Place batteries in the remote control so they match the polarity: (+) to (+) and (–) to (–).
• Use the correct type of batteries. Batteries that look similar may differ in voltage.
• Always replace both batteries at the same time.
• Do not expose batteries to heat or flame.

13

Multi-room Operations

Before operating this receiver any further, be familiar with this Multi-room function.
This function enables you to listen to different sources in two different places (we call these two places "main room" and "sub-room") by using this receiver only.

This section explains only required speaker connections, the concept, and basic operations of the Multi-room function. For more detailed operations, see the respective pages in this manual.

Required Speaker Connections for the Sub-room

Connection Ⓐ
See also "Connecting the front speakers" on page 6.

Right speaker —— MAIN ROOM SPEAKERS —— Left speaker

FRONT 1 SPEAKERS

RIGHT   LEFT

RIGHT   LEFT

CAUTION :
SPEAKER IMPEDANCE

| 4～6 Ω | LOW |
| 8～16Ω | HIGH |

SPEAKER LOAD SELECTOR

CAUTION : SPEAKER IMPEDANCE 8～16 Ω
FRONT 2 / SUB ROOM SPEAKERS
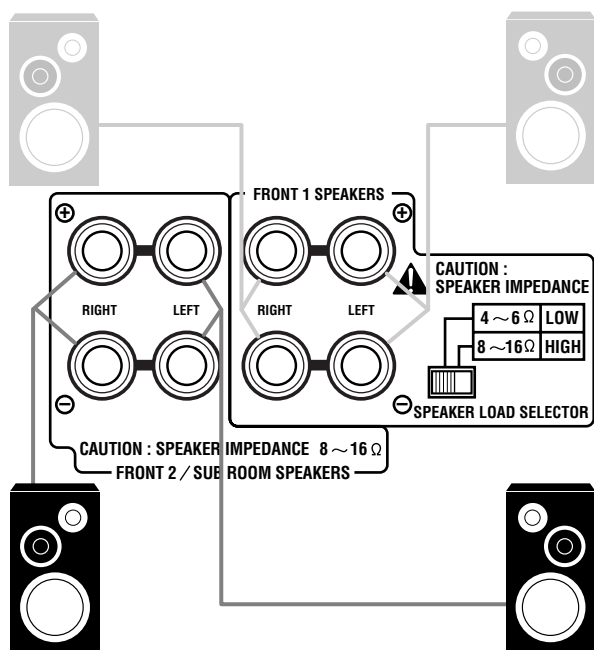
Right speaker —— SUB ROOM SPEAKERS —— Left speaker

> *Merits:*
> • This connection DOES NOT require a power amplifier.
> *Demerits:*
> • When the sub-room speakers are activated, this connection DOES NOT allow you to use the Surround/DSP modes using the center/rear speakers (see page 37) and the DVD MULTI playback mode (see page 49) for the main room sources.

To use the front speakers connected to the FRONT 2/SUB ROOM SPEAKERS terminals for the sub-room
See "Setting the Front Speakers Either for the Main Room or Sub-room" on page 27, and "Activating the Sub-room Front Speakers" on page 26.

Note:

Using long speaker signal cables will deteriorate the signals, and will result in poor sound quality.

Connection Ⓑ
Connect the input jacks of another amplifier to the SUB ROOM PRE OUT jacks on the rear panel, using a cable with RCA pin plugs (not supplied).

SUB ROOM PRE OUT

(right)   (left)

Another amplifier
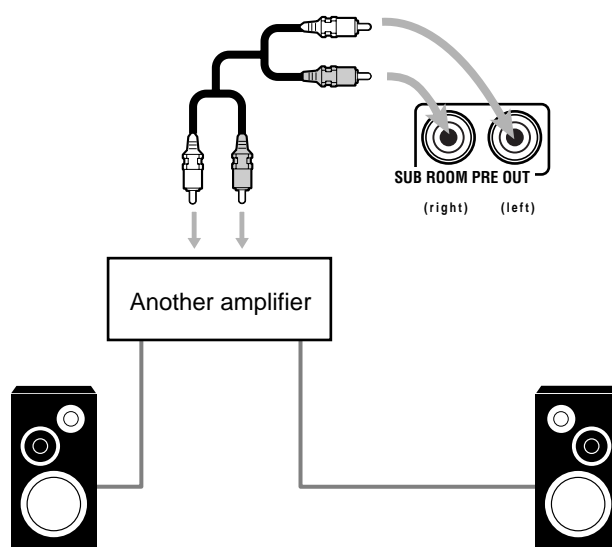
Right speaker —— SUB ROOM SPEAKERS —— Left speaker

> *Merits:*
> • This connection DOES allow you to use the Surround/DSP mode using the center/rear speakers (see page 37) and the DVD MULTI playback mode (see page 49) for the main room sources.
> *Demerits:*
> • This connection DOES require another amplifier.

To use the front speakers in the sub-room
• No settings are required on this receiver.
• Turn on and operate the other amplifier connected to the SUB ROOM PRE OUT jacks correctly.

Note:

Using long cables will deteriorate the signals, and will result in poor sound quality.

14

Basic Operating Procedure for Main Room

On the front panel:

1. Press POWER.

The STANDBY lamp on the front panel goes off, and the MAIN ROOM indicator lights on the display.
• For more details, "Turning the Power On and Off (Standby)" on page 17.
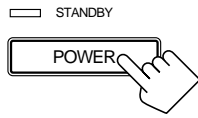
STANDBY

POWER

The sound comes out of the speakers in the main room, and the buttons and controls on the front panel work for the main room operations.

2. If no sounds come out of the front speakers, press SPEAKERS ON/OFF 1 and/or SPEAKERS ON/OFF 2 which you want to use.

SPEAKERS ON/OFF

1

MAIN ROOM

2

SUB ROOM
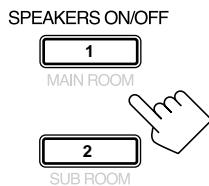
The selected indicator(s) light(s) on the display.
• For more details, see "Activating the Main Room Front Speakers" on page 19.

3. Select and play a source.

DVD MULTI   DVD   VCR 1   VCR 2   VIDEO   TV SOUND/DBS

SOURCE NAME

PHONO   CD   CDR   TAPE / MD   USB AUDIO   FM / AM

SOURCE NAME

4. Turn MASTER VOLUME to adjust the volume level of the sound from the speakers in the main room.
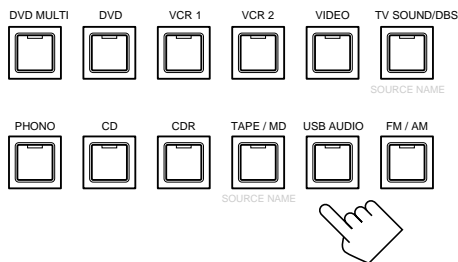
MASTER VOLUME
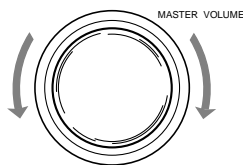
From the remote control:

1. Set MAIN ROOM/SUB ROOM selector to "MAIN ROOM."

MAIN ROOM   SUB ROOM
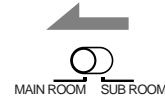
Now the buttons and controls on the remote control work for the main room operations.

2. Press AUDIO POWER ON.

The STANDBY lamp on the front panel goes off, and the MAIN ROOM indicator lights on the display.
• See also "Turning the Power On and Off (Standby)" on page 17.

AUDIO POWER

STANDBY   ON

The sound comes out of the speakers in the main room.
• If no sounds come out of the front speakers, press SPEAKERS ON/OFF 1 and/or SPEAKERS ON/OFF 2 on the front panel. The SPEAKERS 1 and/or 2 indicator(s) light(s) on the display.
For more details, see "Activating the Main Room Front Speakers" on page 19.

3. Select and play a source.

DVD   DVD MULTI   PHONO   CD

VCR 1   VCR 2   TAPE/MD   CDR

TV/DBS   VIDEO   FM/AM   USB AUDIO

4. Press VOLUME +/– to adjust the volume level of the sound from the speakers in the main room.

VOLUME

15
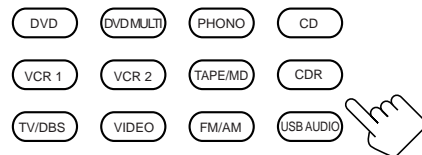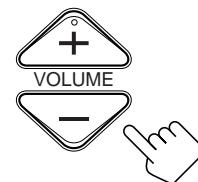
Basic Operating Procedure for Sub-Room

The sources and functions available for the sub-room operations are limited.
For more details on the sub-room operations, see "Sub-Room Operations" on pages 23 to 26.

On the front panel:

1. Press POWER.

STANDBY

POWER

The STANDBY lamp on the front panel goes off, and the MAIN ROOM indicator lights on the display.
- For more details, see "Turning the Power On and Off (Standby) and Selecting the Sub-room Operations" on page 23.
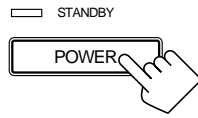
The sound comes out of the speakers in the main room, and the buttons and controls on the front panel work for the main room operations.

2. Press SUB ROOM ON/OFF so that the SUB ROOM indicator lights on the display.

SUB ROOM ON /OFF

The sound comes out of the front speakers in the sub-room.
If no sounds come out of the front speakers, press SPEAKERS ON/OFF SUB ROOM so that the SPEAKERS SUB ROOM indicator lights on the display.
- See also "Setting the Front Speakers Either for the Main Room or Sub-room" on page 27, and "Activating the Sub-room Front Speakers" on page 26.

Note:

If the center speaker or rear speakers are used for the Surround/ DSP modes (see page 37) for the main room operations, the SPEAKERS ON/OFF SUB ROOM button does not work.

3. Press SUB ROOM CONTROL so that "SUB" and the previously selected source name for the sub-room appear on the display.

SUB ROOM CONTROL

Now the buttons and controls on the front panel work for the sub-room operations.

4. Select and play a source.
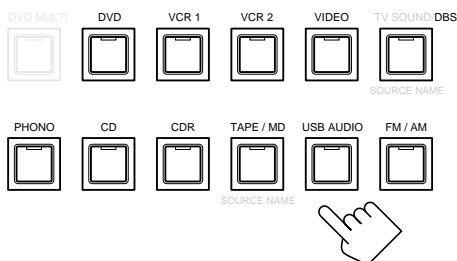
| DVD MULTI | DVD | VCR 1 | VCR 2 | VIDEO | TV SOUND/DBS |

SOURCE NAME

| PHONO | CD | CDR | TAPE / MD | USB AUDIO | FM / AM |

SOURCE NAME

Notes:

- *You cannot select DVD MULTI as a source for the sub-room.*
- *When the source name of TV SOUND/DBS is assigned to "TV SOUND," TV SOUND/DBS buttons does not work. To change the source name, see "Changing the Source Name" on page 33.*

5. Turn MASTER VOLUME to adjust the volume level of the sound from the front speakers in the sub-room.

MASTER VOLUME

From the remote control:

1. Set MAIN ROOM/SUB ROOM selector to "SUB ROOM."

MAIN ROOM   SUB ROOM

Now the buttons and controls on the remote control work for the sub-room operations.

2. Press AUDIO POWER ON.

The STANDBY lamp on the front panel goes off, and the SUB ROOM indicator lights on the display.
- See also "Turning the Power On and Off (Standby) and Selecting the Sub-room Operations" on page 23.

AUDIO POWER

STANDBY   ON

The sound comes out of the front speakers in the sub-room.
If no sounds come out of the front speakers, press SPEAKERS ON/OFF SUB ROOM on the front panel so that the SPEAKERS SUB ROOM indicator lights on the display.
- See also "Activating the Sub-room Front Speakers" on page 26.

Note:

If the center speaker or rear speakers are used for the Surround/ DSP mode (see page 37) for the main room operations, the SPEAKERS ON/OFF SUB ROOM button does not work.

3. Select and play a source.
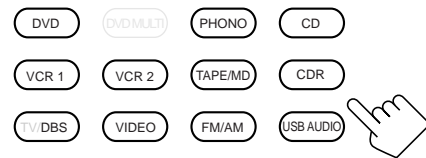
DVD	DVD MULTI	PHONO	CD
VCR 1	VCR 2	TAPE/MD	CDR
TV/DBS	VIDEO	FM/AM	USB AUDIO

Notes:

- *You cannot select DVD MULTI as a source for the sub-room.*
- *When the source name of TV SOUND/DBS is assigned to "TV SOUND," TV SOUND/DBS buttons does not work. o change the source name, see "Changing the Source Name" on page 33.*
- *See also "Operating the Playback Source for the Sub-room" on page 26.*

4. Press VOLUME +/– to adjust the volume level of the sound from the front speakers in the sub-room.

VOLUME

16
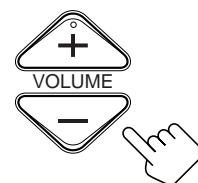
Main Room Basic Operations

This section explains only the operations commonly used when you play any sound source in the main room.
See pages 23 for the sub-room operations.
You can use "On-screen Menu" for most of the main room operations. For details, see page 50.

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
- The MAIN ROOM indicator is lit.
- The source name for the sub-room is not lit on the display.

- **When using the remote control:**
  - Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
  - Check to see if the following informations appear on the display window on the remote control:
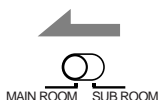
MAIN ROOM   SUB ROOM

MAIN ROOM/ SUB ROOM selector	Indications
MAIN ROOM	MAIN ROOM *
SUB ROOM	SUB ROOM *

Buttons	Indications
FM/AM	TUNER
CD	CD
PHONO	PHONO
TAPE/MD	TAPE
DVD or DVD MULTI	DVD
CDR	CDR
USB AUDIO	USB
TV/DBS	TV**
VCR 1	VCR 1
VCR 2	VCR 2
VIDEO	VIDEO
SOUND	SOUND

After pressing SOUND:

DIGITAL EQ	EQ

Ex. When you press CD with MAIN ROOM/SUB ROOM selector set to "MAIN ROOM."
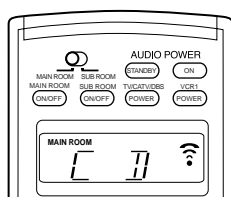
When you set MAIN ROOM/SUB ROOM selector* and press the buttons listed above, the corresponding indication appears for 10 seconds for your confirmation.

Notes:

* MAIN ROOM or SUB ROOM indicator does not appear when no indicators appear on the display window.
** When you set TV/CATV/DBS selector to "CATV/DBS," "CATV" appears as the indication. (See page 68.)

Turning the Power On and Off (Standby)

On the front panel:

To turn on the power, press POWER.
The STANDBY lamp on the front panel goes off, and the MAIN ROOM indicator lights up on the display. The name of the current main room source and Surround/DSP mode appear on the display.

STANDBY
POWER

Current source name and Surround/DSP modes for the main room appear

ANALOG   L   R   SPEAKERS 1   DVD SURR. OFF   MAIN ROOM VOLUME 40
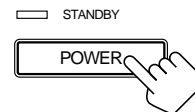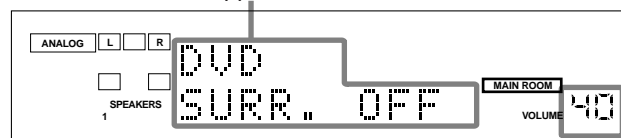
Current volume level for the main room is shown here

The currently selected SPEAKERS 1 and/or 2 indicator(s) also light up on the display.
- If the SPEAKERS 1 and/or 2 indicator(s) are not lit on the display, see "Activating the Main Room Front Speakers" on page 19.

To turn off the power (into standby mode), press POWER again.
The STANDBY lamp lights up. A small amount of power is consumed in standby mode. To turn the power off completely, unplug the AC power cord.
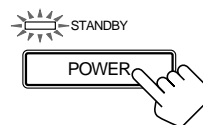
STANDBY
POWER

From the remote control:

To turn on the power, press AUDIO POWER ON.
The STANDBY lamp on the front panel goes off, and the MAIN ROOM indicator lights up on the display. The name of the current main room source and Surround/DSP mode appear on the display.
The currently selected SPEAKERS 1 and/or 2 indicator(s) also light up on the display.
- If the SPEAKERS 1 and/or 2 indicator(s) are not lit on the display, see "Activating the Main Room Front Speakers" on page 19.

AUDIO POWER
STANDBY   ON

To turn off the power (into standby mode), press AUDIO POWER STANDBY.
The STANDBY lamp lights red.*

AUDIO POWER
STANDBY   ON

Notes:

- *When you turn off the receiver in the main room, make sure if other people are listening to any source in the sub-room (the SUB ROOM and SPEAKERS SUB ROOM indicators are lit on the display).*
- *If you have turned off the receiver with the volume level set at more than level "40," the volume level will be automatically set at level "40" next time you turn on the receiver.*
- *If "TURN ON MAIN OR SUB ROOM" appears on the display, press MAIN ROOM ON/OFF or SUB ROOM ON/OFF to listen to the sound in the main room or in the sub-room; otherwise, the receiver will turn off after about 1 minute. In this case, the receiver is turned on with the main room operations activated by pressing POWER (AUDIO POWER ON on the remote control).*

Canceling the Main Room Operations

To stop the main room operations and sounds from the main room speakers, press MAIN ROOM ON/OFF.

MAIN ROOM ON /OFF

MAIN ROOM ON/OFF   SUB ROOM ON/OFF

On the front panel   From the remote control

The MAIN ROOM indicator on the display goes off, and the currently selected front speaker indicators also goes off (no sound will be heard in the main room).
• You cannot use this receiver for the main room operations any more.

To use this receiver for the main room operations again, press MAIN ROOM ON/OFF again.
The MAIN ROOM indicator lights on the display, and the front speaker indicators previously selected also light.

Now the buttons and controls on the front panel work for the main room operations.

Notes:

• If you have turned off the receiver with the volume level set at more than level "40," the volume level will be automatically set at level "40" next time you turn on the receiver.
• If "TURN ON MAIN OR SUB ROOM" appears on the display, press MAIN ROOM ON/OFF or SUB ROOM ON/OFF to listen to the sound in the main room or in the sub-room; otherwise, the receiver will turn off after about 1 minute.

Selecting the Main Room Source to Play

Press one of the source selecting buttons.
The lamp on the front panel button for selected source lights up.
• The selected source name and Surround/DSP mode also appear on the display.

On the front panel:
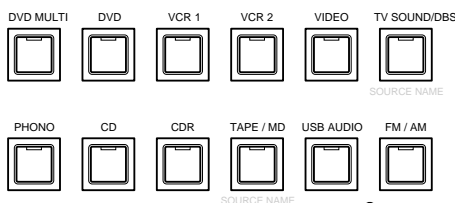
From the remote control:
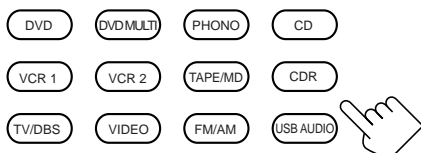
Selected source name and current Surround/DSP mode appear

ANALOG	L	C	R	DGTL	AUTO	DVD	MULTI	PRO LOGIC	AUTO MUTING	TUNED	STEREO
LINEAR PCM	SUBWFR	LFE						DSP	3D–PHONIC	MIDNIGHT MODE
DIGITAL	LS	S	RS					HEADPHONE	DIGITAL EQ	INPUT ATT	ONE TOUCH OPERATION
dts	SPEAKERS 1 2									SLEEP	VOLUME
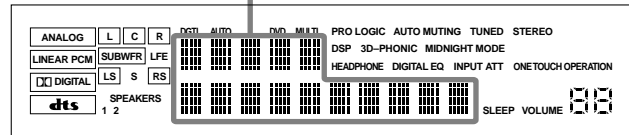
DVD	Select the DVD player.
DVD MULTI	Select the DVD player for viewing the digital video disc using the analog discrete output mode (5.1CH reproduction). To enjoy the DVD MULTI playback, see page 49.
CD*	Select the CD player.
TAPE/MD*	Select the cassette deck (or the MD recorder).
TV (SOUND)/DBS	Select TV sounds (or the DBS tuner).
VIDEO	Select video component connected to the VIDEO jacks.
PHONO*	Select the turntable.
FM/AM*	Select an FM or AM broadcast. • Each time you press the button, the band alternates between FM and AM.
VCR 1	Select the video component connected to the VCR 1 jacks.
VCR 2	Select the video component connected to the VCR 2 jacks.
CDR*	Select the CD recorder.
USB AUDIO*	Select the personal computer (PC) connected to the USB terminal.

Notes:

• When connecting an MD recorder (to the TAPE/MD jacks), and a DBS tuner (to the TV SOUND/DBS jacks), change the source names shown on the display. For details, see page 33.
• When you press one of the source selecting buttons on the remote control marked with an asterisk (*), the receiver automatically turns on.

Selecting different sources for picture and sound

You can watch picture from a video component while listening to sound from another component.

Press one of the audio source selecting buttons — PHONO, CD, CDR, TAPE/MD, USB(AUDIO), FM/AM — while viewing the picture from a video component such as the VCR or DVD player, etc.
The lamp on the front panel button for selected source lights up.

On the front panel:

18

DVD	DVD MULTI	PHONO	CD
VCR 1	VCR 2	TAPE/MD	CDR
TV/DBS	VIDEO	FM/AM	USB AUDIO
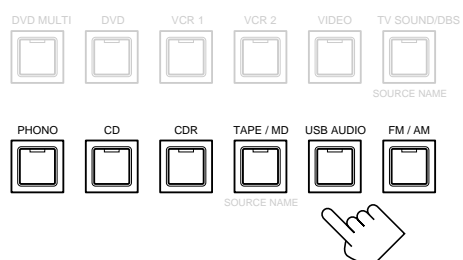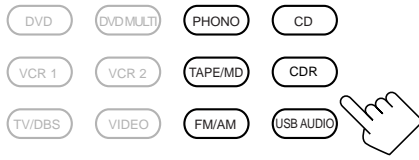
Note:

Once you have selected a video source, pictures of the selected source are sent to the TV until you select another video source.

Speaker and signal indicators on the display

By checking the following indicators, you can easily confirm which speakers you are activating and which signals are coming into this receiver from the source.

Speaker indicators (white)	Signal indicators (red)
L C R	L C R
SUBWFR	LFE
LS RS	LS S RS
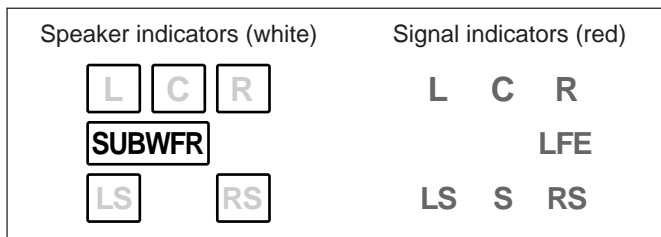
The speaker indicators

The indicators correspond to the speakers as follows:

Frame	Speaker	
L	Left front	It always lights while the main room is activated.
R	Right front	
C	Center	It lights when you set the corresponding speaker correctly. (For details, see page 29.)
LS	Left rear	
RS	Right rear	
SUBWFR	Subwoofer	It always lights when "SUBWOOFER" is set to "YES."* (For details, see page 28.)

The signal indicators

The signal indicators light in the following cases:
• When the DIGITAL input mode (see page 31) is selected, only the indicators for the incoming signals light.
• When the ANALOG input mode (see page 31) is selected, the indicators light as follows:
  - When selecting "DVD MULTI" (see pages 9 and 49), all the signal indicators except "S" always light on the display.
  - When selecting the sources other than "DVD MULTI," only "L" and "R" always light on the display.

To bring out the best performance of this receiver, check the speaker and signal indicators on the display carefully and set the speakers correctly.

L C R
LFE
LS RS

Ex. The center signals are coming from the source, but the center speaker is not prepared.
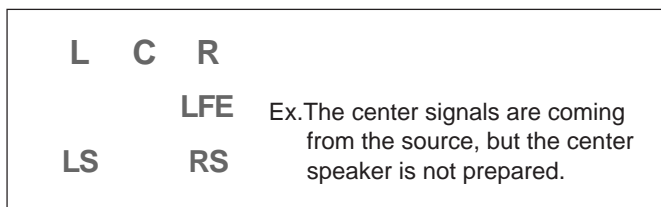
Notes:

• "S" is the monaural rear signal. It is automatically mixed down to "LS" and "RS."
• "LFE" signals are automatically mixed down to the other signals when you select the digital input mode. However, when you select "DVD MULTI," this receiver reproduces the LFE signals only through subwoofer channel.
* When you do not press SUBWOOFER OUT ON/OFF to deactivate the subwoofer.

Adjusting the Main Room Volume

On the front panel:

To increase the volume, turn MASTER VOLUME clockwise.
To decrease the volume, turn it counterclockwise.

MASTER VOLUME

• When you turn MASTER VOLUME rapidly, the volume level also changes rapidly.
• When you turn MASTER VOLUME slowly, the volume level also changes slowly.

From the remote control:

To increase the volume, press VOLUME +.
To decrease the volume, press VOLUME –.

VOLUME

CAUTIONS:

• Always set the volume to the minimum before starting any source. If the volume is set at its high level, the sudden blast of sound energy can permanently damage your hearing and/or ruin your speakers.
• Be careful not to turn up the volume so high when controlling the receiver without listening to the playback sound. For example, when adjusting the volume level in the sub-room from the main room.

Notes:

• The volume level can be adjusted within the range of "0" (minimum) to "90" (maximum).
• If you set One Touch Operation to "ON" (see page 34), you do not have to adjust the volume level each time you change the source. It is automatically set to the stored level for the previous setting.

Activating the Main Room Front Speakers

When shipped from the factory, both pairs of the front speakers have been set to be used in the main room.
• To use the front speakers connected to the FRONT 2/SUB ROOM SPEAKERS terminals for the sub-room, see "Setting the Front Speakers Either for the Main Room or Sub-room" on page 27, and "Activating the Sub-room Front Speakers" on page 26.

IMPORTANT:

You can activate two pairs of the front speakers at the same time only when the SPEAKER LOAD SELECTOR switch on the rear panel is set to the "HIGH" position and when no signals are sent to the center and rear speakers. Otherwise, activating one pair of the speakers deactivates the other.

On the front panel ONLY:

When you have connected two pairs of the front speakers and set them to the main room, you can select which to use in the main room.

To use the speakers connected to the FRONT 1 SPEAKERS terminals, press SPEAKERS ON/OFF 1 so that SPEAKERS 1 indicator lights up on the display. (Make sure that the SPEAKERS 2 is not on the display.)
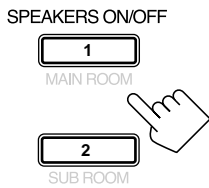
SPEAKERS ON/OFF
1
MAIN ROOM

To use the speakers connected to the FRONT 2/SUB ROOM SPEAKERS terminals, press SPEAKERS ON/OFF 2 so that SPEAKERS 2 indicator lights up on the display. (Make sure that the SPEAKERS 1 is not on the display.)

2
SUB ROOM

To use both sets of the speakers, press SPEAKERS ON/OFF 1 and SPEAKERS ON/OFF 2 so that the SPEAKERS 1 and SPEAKERS 2 indicators light up on the display.

To use neither sets of the speakers, press SPEAKERS ON/OFF 1 and SPEAKERS ON/OFF 2 so that the SPEAKERS 1 and SPEAKERS 2 indicators disappear from the display.
The HEADPHONE indicator lights up and "HEADPHONE"* appears on the display.
• Activating the speaker turns on the Surround and DSP modes previously selected.
• **Listening only with headphones:**
   You can listen with the headphones without deactivating both pairs of speakers by connecting a pair of headphones to the PHONES jack on the front panel. If you want to use a pair of headphones without outputting sounds from the front speakers, you must turn off both pairs of the front speakers as mentioned above.

Notes:

• *If you select any of the Surround/DSP modes with the center and/or rear speaker(s) or "DVD MULTI" when both front speakers are activated, the speakers connected to the FRONT 2/SUB ROOM SPEAKERS terminals are deactivated.*
* *If you use a Surround with DAP mode or a DSP mode, "HEADPHONE DSP" appears on the display. You can enjoy spacious stereo effect with this mode.*

CAUTION:

Be sure to turn down the volume before connecting or putting on headphones, as high volume can damage both the headphones and your hearing.

Adjusting the Equalization Patterns

You can adjust equalization patterns to your preference.
• You can do this setting for each source.

Before you start, remember....
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

On the front panel:

1. **Press DIGITAL EQ (Equalization) repeatedly to select the frequency.**
   The display changes to show the current setting.
   • Each time you press the button, the frequency and its level change as follows:

DIGITAL EQ

EQ 63Hz and its level → EQ250Hz and its level → EQ 1kHz and its level → EQ16kHz and its level ← EQ 4kHz and its level ←
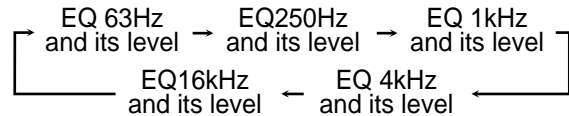
2. **Press CONTROL UP ▲/DOWN ▼ repeatedly to adjust the frequency level.**
   The frequency level changes by 2 dB from – 8 dB to +8 dB.
   The DIGITAL EQ indicator lights on the display.
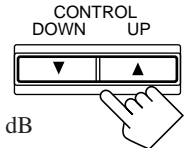
CONTROL
DOWN   UP
▼   ▲

3. **Repeat Steps 1 and 2 to adjust the other frequencies.**

To flat the frequency patterns for digital equalization
Set all the frequency levels to "0" in step 2. The DIGITAL EQ indicator goes off from the display.

From the remote control:

1. **Press SOUND.**
   The 10 keys are activated for sound adjustments.

SOUND
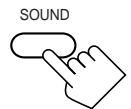
2. **Press DIGITAL EQ repeatedly to select the frequency you want.**
   The display changes to show the current setting.
   • Each time you press the button, the frequency and its level change as follows:

DIGITAL EQ
10

EQ 63Hz and its level → EQ250Hz and its level → EQ 1kHz and its level → EQ16kHz and its level ← EQ 4kHz and its level ←
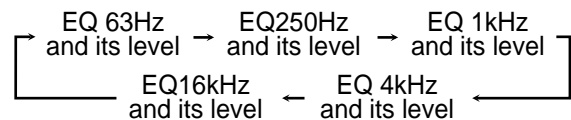
3. **Press LEVEL + or LEVEL – repeatedly to adjust the frequency level.**
   The frequency level changes by 2 dB from – 8 dB to +8 dB.
   The DIGITAL EQ indicator lights on the display.
   • Each time you press the button, "EQ" appears on the display window on the remote control.
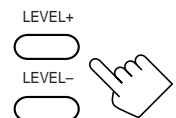
LEVEL+
LEVEL–

4. **Repeat steps 2 and 3 to adjust the other frequencies.**

To flat the frequency patterns for digital equalization
Set all the frequency levels to "0" in step 3. The DIGITAL EQ indicator goes off from the display.

Notes:

• *This function is applied only to the main room sources.*
• *When the Line Direct function is turned on, the Digital Equalization cannot be adjusted. (See page 22.)*
• *The Digital Equalization affects the front speaker sounds only.*

Listening at Night — Midnight Mode

Using the midnight mode, you can enjoy a powerful sound at night even at a low volume level.
• You can do this setting for each source.

Press MIDNIGHT MODE.

MIDNIGHT MODE

MIDNIGHT MODE

On the front panel   From the remote control

• Each time you press the button, the midnight mode changes as follows:

MIDNIGHT 1 ⟶ MIDNIGHT 2 ⟶ NORMAL ⟶ (back to MIDNIGHT 1)
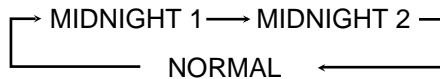
MIDNIGHT 1:	Select this when you want to compress the dynamic range a little. The MIDNIGHT MODE indicator lights on the display.
MIDNIGHT 2:	Select this when you want to compress the dynamic range fully. (useful at midnight) The MIDNIGHT MODE indicator lights on the display.
NORMAL:	Select this when you want to enjoy surround with its full dynamic range. (no effect applied) The MIDNIGHT MODE indicator goes off from the display.

Notes:
• *This function is applied only to the main room sources.*
• *When the Line Direct function is turned on, the midnight mode is canceled. (See page 22.)*
• *The midnight mode is not valid for the DVD MULTI playback mode.*

Activating the Subwoofer Sound

You can cancel the subwoofer sound even though you have connected a subwoofer and have set "SUBWOOFER" to "YES" (see page 28). This is useful when enjoying surround sound at night.

On the front panel ONLY:
Press SUBWOOFER OUT ON/OFF to cancel the subwoofer sound output.

SUBWOOFER OUT ON/OFF

Each time you press the button, the subwoofer sound output is deactivated ("SUBWFR OFF") or activated ("SUBWFR ON").
  – Select "SUBWFR OFF" to deactivate the subwoofer sound output.
  – Select "SUBWFR ON" to activate it.
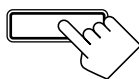
Note:
You cannot select "SUBWFR OFF" when you have set "FRONT SPK" to "SMALL." See page 29.

Reinforcing the Bass

You can boost the bass level.
• You can do this setting for each source.

Press BASS BOOST.

BASS BOOST
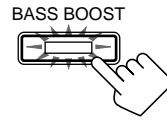
BASS BOOST

On the front panel   From the remote control

The BASS BOOST lamp on the front panel button lights up.
• Each time you press the button, the bass boost function turns on ("BOOST ON") and off ("BOOST OFF").
  – Select "BOOST ON" to activate the bass boost function. The BASS BOOST lamp on the front panel button lights up.
  – Select "BOOST OFF" to cancel it. The BASS BOOST lamp on the front panel button goes off.

Notes:
• *This function is applied only to the main room sources.*
• *This function does not affect the sound outputting from the rear speakers.*

Muting the Main Room Sound

From the remote control ONLY:
Press MUTING to mute the sound through all speakers in the main room and headphones connected.
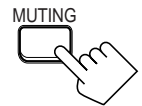
MUTING

"MUTING" appears on the display and the volume turns off (the volume level indicator goes off).

To restore the sound, press MUTING again so that "MUTING OFF" appears on the display.
• Turning MASTER VOLUME on the front panel or pressing VOLUME +/– on the remote control also restores the sound.

Attenuating the Input Signal

When the input level of the playing source is too high, the sounds will be distorted. If this happens, you need to attenuate the input signal level to prevent the sound distortion.
• You can do this setting for each source.

On the front panel ONLY:
Press and hold INPUT ATT so that the INPUT ATT indicator lights up on the display.

INPUT
ANALOG/DIGITAL
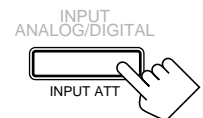
INPUT ATT

• Each time you press and hold the button, the input attenuator mode turns on ("ATT ON") or off ("NORMAL").

Notes:
• *This effect is applied to only the main room sources connected to the analog terminals.*
• *This function is not valid for the DVD MULTI playback mode.*

21

Selecting the Line Direct Function

You can enjoy the sound closer to original source by skipping the sound adjustments such as Digital Equalization and Midnight Mode. Only the volume level and Bass Boost are adjustable when the Line Direct function is turned on.
• You can do this setting for each source.

Press LINE DIRECT.
The LINE DIRECT lamp on the front panel button lights up.

LINE DIRECT
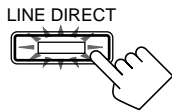
On the front panel

LINE DIRECT

From the remote control

• Each time you press the button, the Line Direct function turns on ("DIRECT ON") and off ("DIRECT OFF").
  – Select "DIRECT ON" to activate the Line Direct function.
    The LINE DIRECT lamp on the front panel button lights up.
  – Select "DIRECT OFF" to cancel it.
    The LINE DIRECT lamp on the front panel button goes off.

Notes:
• *This function is applied only to the main room sources.*
• *If you turn on the Line Direct function while using the Surround and DSP modes, the effect changes as follows:*

Input \ Mode	Surround	DSP
Analog	Not valid	Not valid
Digital	Valid	Not valid

• *Turning off the Line Direct function activates the sound adjustments previously selected such as the Digital Equalization and Midnight Mode.*

Changing the Display Brightness

You can dim the display.

Press DIMMER.
• Each time you press the button, the display dims and brightens alternately.

DIMMER

On the front panel

DIMMER

From the remote control

Note:
Even though you have made the display dimmer, it brightens for a while when you operate the receiver (except SURROUND ON/OFF, source selecting buttons, MAIN ROOM ON/OFF, SUBROOM ON/OFF, and SUB ROOM CONTROL).

Using the Sleep Timer

Using the Sleep Timer, you can fall asleep to music and know the receiver will turn off by itself rather than play all night.

From the remote control ONLY:
Press SLEEP repeatedly.
The SLEEP indicator lights up on the display, and the shut-off time changes as follows (in minutes):

SLEEP

$\rightarrow 10 \rightarrow 20 \rightarrow 30 \rightarrow 40 \rightarrow 50 \rightarrow 60 \rightarrow 70 \rightarrow 80 \rightarrow 90 \rightarrow$
0 (Canceled) ←
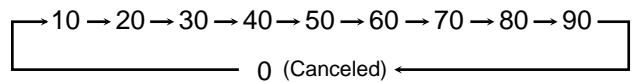
When the shut-off time comes
The receiver turns off automatically.
• If the sub-room source is still played (the SUB ROOM and SPEAKERS SUB ROOM indicators are lit on the display) when the shut-off time comes, the receiver will not turn off, but only the main room sound will shut off.

To check or change the time remaining until the shut-off time
Press SLEEP once.
The remaining time until the shut-off time appears in minutes.
• To change the shut-off time, press SLEEP repeatedly.

To cancel the Sleep Timer
Press SLEEP repeatedly until "SLEEP 0min" appears on the display. (The SLEEP indicator goes off.)
• Turning off the power also cancels the Sleep Timer.

Recording a Source

For analog-to-analog recording
You can record any analog source through the receiver to —
• the cassette deck (or MD recorder) connected to the TAPE/MD jacks,
• the VCRs connected to the VCR 1 and VCR 2 jacks, and
• the CD recorder connected to the CDR jacks
— at the same time.

For digital-to-digital recording
You can record the currently selected digital input source through the receiver to a digital recording device connected to the DIGITAL OUT terminal.

Notes:
• *Analog-to-digital and digital-to-analog recordings are not possible.*
• *The output volume level, Midnight Mode (see page 21), Bass Boost (see page 21), Digital Equalization (see page 20), Surround/DSP modes (see page 37) cannot affect the recording.*
• *The test tone signal (see pages 40) does not come out through the DIGITAL OUT terminal.*

IMPORTANT:
• While recording, do not turn off the receiver or main room source; otherwise, recording will stop.
• If the same source is selected both for the main room and the sub-room, operating the sub-room source will affect the recording.

22

Sub-Room Operations SUB

This section explains only the operations used when you play any sound source in the sub-room.
See pages 17 for the main room operations.

IMPORTANT:
Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

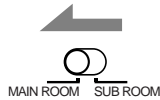**For the sub-room operations:**
- The SUB ROOM indicator is lit.
- The source name for the sub-room is lit on the display.

- **When using the remote control:**
  – Set MAIN ROOM/SUB ROOM selector to **"SUB ROOM."**
 – Check to see if the following information appear on the display window on the remote control:
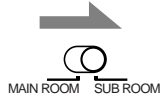
MAIN ROOM   SUB ROOM

MAIN ROOM/ SUB ROOM selector	Indications
MAIN ROOM	MAIN ROOM ∗
SUB ROOM	SUB ROOM ∗

Buttons	Indications
FM/AM	TUNER
CD	CD
PHONO	PHONO
TAPE/MD	TAPE
DVD	DVD
CDR	CDR
USB AUDIO	USB
TV/DBS	TV**
VCR 1	VCR 1
VCR 2	VCR 2
VIDEO	VIDEO

Ex. When you press CD with
MAIN ROOM/SUB ROOM
selector set to "SUB ROOM."
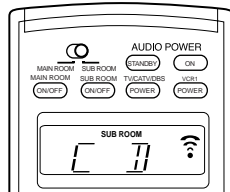
When you set MAIN ROOM/SUB ROOM selector∗ and press the buttons listed above, the corresponding indication appears for 10 seconds for your confirmation.

Notes:

- *You can only select the analog input as the sub-room source.*
- ∗ *MAIN ROOM or SUB ROOM indicator does not appear when no indicators appear on the display window.*
- ∗∗ *When you set TV/CATV/DBS selector to "CATV/DBS," "CATV" appears as the indication. (See page 68.)*

Turning the Power On and Off (Standby) and Selecting the Sub-room Operations

On the front panel:

1. Press POWER.
The STANDBY lamp on the front panel goes off, and the MAIN ROOM indicator lights up on the display. The name of the current main room source (or station frequency) appears on the display.
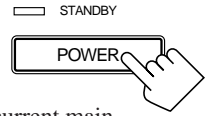
Current source name and Surround/DSP modes for the main room appear
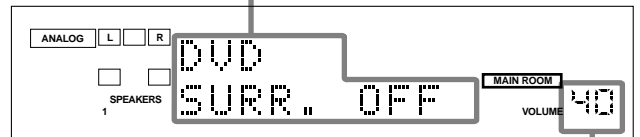
Current volume level for the main room is shown here

The currently selected SPEAKERS 1 and/or 2 indicator(s) light(s) up on the display.

2. Press SUB ROOM ON/OFF.
The SUB ROOM indicator lights up on the display (and the SPEAKERS SUB ROOM indicator lights up on the display if it has been activated).
- If the SPEAKERS SUB ROOM indicator is not lit on the display, see also "Setting the Front Speakers Either for the Main Room or Sub-room" on page 27, and "Activating the Sub-room Front Speakers" on page 26.

3. Press SUB ROOM CONTROL.
The current source name for the sub-room appears on the display.

"SUB" and the source name for the sub-room appear
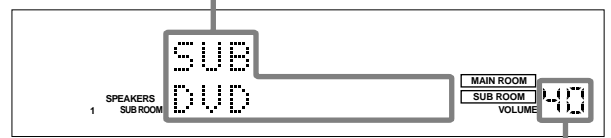
Current volume level for the sub-room is shown here

Now the buttons and controls on the front panel work for the sub-room operations.
- Each time you press the button, the buttons and controls on the front panel alternate between for the main room and for the sub-room.

To turn off the power (into standby mode),
press POWER again.
The STANDBY lamp lights red. A small amount of power is consumed in standby mode. To turn the power off completely, unplug the AC power cord.
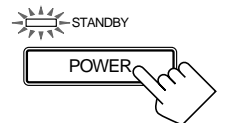
1. Set MAIN ROOM/SUB ROOM selector to "SUB ROOM."

MAIN ROOM   SUB ROOM
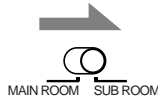
Now the buttons on the remote control work for the sub-room operations.
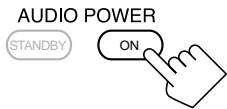
2. Press AUDIO POWER ON.

AUDIO POWER
STANDBY   ON

The STANDBY lamp on the front panel goes off, and the SUB ROOM indicator lights up on the display (and the SPEAKERS SUB ROOM indicator also lights up on the display if it has been activated).
• The display does not show the indication for the sub-room operations, but you can operate the sub-room.
• If the SPEAKERS SUB ROOM indicator is not lit on the display, see "Activating the Sub-room Front Speakers" on page 26.

To turn off the power (into standby mode), press AUDIO POWER STANDBY.

AUDIO POWER
STANDBY   ON

The STANDBY lamp lights red.

Note:

If you have turned off the receiver with the volume level set at more than level "40," the volume level will be automatically set at level "40" next time you turn on the receiver.

Canceling the Sub-room Operations

To stop the sub-room operations and sounds from the sub-room speakers, press SUB ROOM ON/OFF.
SUB ROOM ON/OFF

The SUB ROOM indicator on the display goes off, and the SPEAKERS SUB ROOM indicator on the display also goes off (no sound will be heard in the sub-room).
• You cannot use this receiver for the sub-room operations any more.

To use this receiver for the sub-room operations again
1. Press SUB ROOM ON/OFF.
SUB ROOM ON/OFF

The SUB ROOM indicator lights up on the display, and the SPEAKERS SUB ROOM indicator also lights up on the display if it has been activated.
2. Press SUB ROOM CONTROL.
SUB ROOM CONTROL

The name of the current source for the sub-room appears on the display.

To stop the sub-room operations and sounds from the sub-room speakers, press SUB ROOM ON/OFF.
MAIN ROOM   SUB ROOM
ON/OFF   ON/OFF

The SUB ROOM indicator on the display goes off, and the SPEAKERS SUB ROOM indicator on the display also goes off (no sound will be heard in the sub-room).
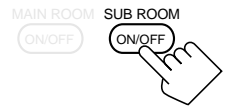
To use this receiver for the sub-room operations again, press SUB ROOM ON/OFF again.
The SUB ROOM indicator lights up on the display, and the SPEAKERS SUB ROOM indicator also lights up on the display if it has been activated.

Notes:

• If you have turned off the sub-room sound with the volume level set at more than level "40, the volume level will be automatically set at level "40" next time you turn on the sub-room sound.
• If "TURN ON MAIN OR SUB ROOM" appears on the display, press MAIN ROOM ON/OFF or SUB ROOM ON/OFF to listen to the sound in the main room or in the sub-room; otherwise, the receiver will turn off after about 1 minute.

24

Selecting the Sub-room Source to Play

Press one of the source selecting buttons.
The lamp on the front panel button for selected source lights up.
• The selected source name also appears on the display.
• When the source name of TV SOUND/DBS is assigned to "TV SOUND," TV SOUND/DBS buttons does not work. To change the source name, see "Changing the Source Name" on page 33.

On the front panel:

From the remote control:

Selected source name for the sub-room appears

Current volume level for the sub-room is shown here
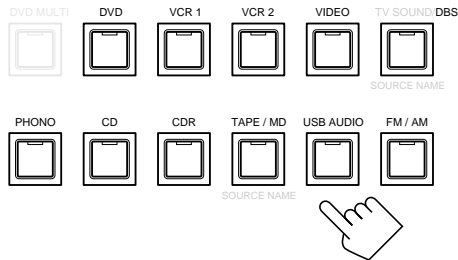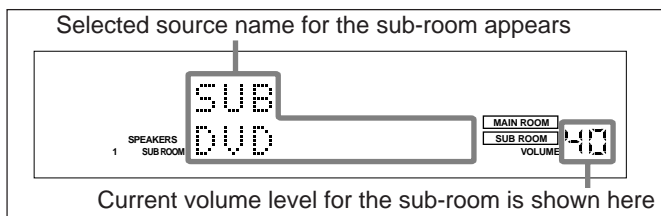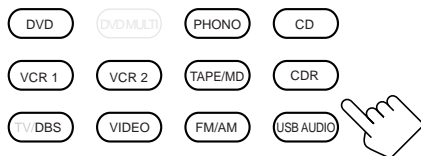
DVD	Select the DVD player.
CD*	Select the CD player.
TAPE/MD*	Select the cassette deck (or the MD recorder).
TV (SOUND)/DBS	Select DBS tuner. • Does not work for selecting TV.
VIDEO	Select video component connected to the VIDEO jacks.
PHONO*	Select the turntable.
FM/AM*	Select an FM or AM broadcast. • Each time you press the button, the band alternates between FM and AM.
VCR 1	Select the video component connected to the VCR 1 jacks.
VCR 2	Select the video component connected to the VCR 2 jacks.
CDR*	Select the CD recorder.
USB AUDIO*	Select the personal computer (PC) connected to the USB terminal.

Notes:
• *When connecting an MD recorder (to the TAPE/MD jacks), and a DBS tuner (to the TV SOUND/DBS jacks), change the source names shown on the display. For details, see page 33.*
• *When you press one of the source selecting buttons on the remote control marked with an asterisk (∗), the receiver automatically turns on. If you turn on the receiver with MAIN ROOM/SUB ROOM selector set to "SUB ROOM", press MAIN ROOM ON/OFF to activate the main room operations.*
• *The source lamp does not light up for the sub-room source.*
• *You cannot select the following as the sub-room source:*
  – *"TV SOUND"*
  – *"DVD MULTI"*
  – *Any digital input*
    You can only select the analog input as the sub-room source.
• *You can select the video components as the sub-room source; however, you can see no pictures.*

Adjusting the Sub-room Volume

On the front panel:

To increase the volume, turn MASTER VOLUME clockwise.
To decrease the volume, turn it counterclockwise.
• When you turn MASTER VOLUME rapidly, the volume level also changes rapidly.
• When you turn MASTER VOLUME slowly, the volume level also changes slowly.
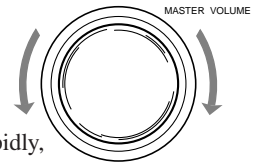
From the remote control:

To increase the volume, press VOLUME +.
To decrease the volume, press VOLUME −.

CAUTIONS:
• Always set the volume to the minimum before starting any source. If the volume is set at its high level, the sudden blast of sound energy can permanently damage your hearing and/or ruin your speakers.
• Be careful not to turn up the volume so high when controlling the receiver without listening to the playback sound. For example, when adjusting the volume level in the sub-room from the main room.

Note:
The volume level can be adjusted within the range of "0" (minimum) to "90" (maximum).

25

Activating the Sub-room Front Speakers

This section is not for the persons who connect the sub-room front speakers to the SUB ROOM PRE OUT jacks using another amplifier (see page 14).

Before you start, remember...
• When shipped from the factory, both pairs of the front speakers have been set to be used in the main room. To use the front speakers connected to the FRONT 2/SUB ROOM SPEAKERS terminals for the sub-room, see "Setting the Front Speakers Either for the Main Room or Sub-room" on page 27.

On the front panel ONLY:

Press SPEAKERS ON/OFF SUB ROOM to activate the front speakers in the sub-room.
The SPEAKERS SUB ROOM indicator lights up on the display.
• Each time you press the button, the lamp on the button turns on and off.

SPEAKERS ON/OFF
1 MAIN ROOM
2 SUB ROOM

To deactivate the front speakers in the sub-room, press SPEAKERS ON/OFF SUB ROOM again.
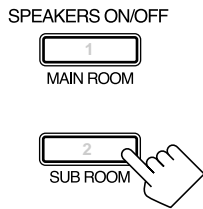
Note:

If the center speaker or rear speakers are used for the Surround/DSP mode (see page 37) for the main room operations, the SPEAKERS ON/OFF SUB ROOM button does not work.

Muting the Sub-room Sound

From the remote control ONLY:

Press MUTING to mute the sound through the front speaker in the sub-room.
The volume level indicator goes off.

MUTING

To restore the sound, press MUTING again so that the volume level indicator appears on the display.
• Turning MASTER VOLUME on the front panel or pressing VOLUME +/– on the remote control also restores the sound.
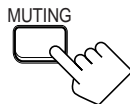
Operating the Playback Source for the Sub-room

• When you select "FM" or "AM" as the sub-room source, you can do the following:
 – Tune into any station frequency manually (see page 35).

FM/AM TUNING
▲
▼

◄◄/REV   PLAY   FF/►►
DOWN — TUNING — UP
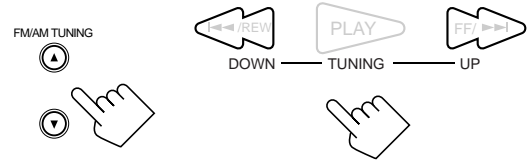
On the front panel   From the remote control

 – Select a preset station (see pages 35 and 36).

FM/AM PRESET
▲
▼

L—BALANCE—R   EFFECT
1   2   3
CENTER   SUBWFR   ROOM SIZE
4   5   6
REAR-L   REAR-R   LIVENESS
7/P   8   9
DIGITAL EQ   CENTER TONE
10   0   +10
RETURN   FM MODE   100⁺
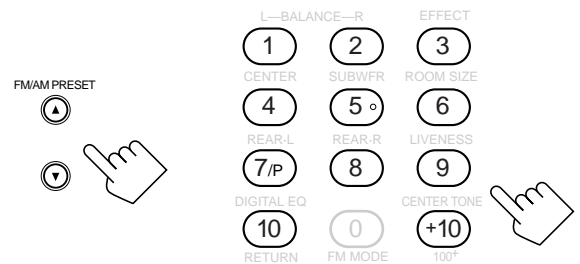
On the front panel   From the remote control

 – Select FM reception mode (see page 36).

FM MODE

0 FM MODE

On the front panel   From the remote control

• When you select the other sources as the sub-room source, you can operate them by using the remote control supplied with this receiver. ("TV SOUND," "DVD MULTI" and the digital input cannot be selected as the sub-room source.)
 – If they are one of the JVC products equipped with the COMPU LINK remote control system or the AV COMPU LINK remote control system, see pages 55 to 64.
 – If they are one of the JVC products, but not equipped with the above remote control systems, or if they are the products of the other manufacturers, see pages 65 to 71.

CAUTION:

Be careful not to turn up the volume so high when controlling the receiver without listening to the playback sound. For example, when adjusting the volume level in the sub-room from the main room.

Notes:

• *Any sound adjustments such as the Surround/DSP modes cannot be applied to the sub-room source. You can only adjust the volume level.*
• *The One Touch Operation function (see page 34) cannot be used for the sub-room sources.*

26

Basic Settings

Some of the following settings are required after connecting and positioning your speakers, while others will make operations easier.
• *You can use "On-screen Menu" for most of the main room operations. For details, see page 50.*

The following operations are only possible while the receiver is ready for the main room operations.

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
• The MAIN ROOM indicator is lit.
• The source name for the sub-room is not lit on the display.
• **When using the remote control:**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
  – Check to see if the following information appear on the display window on the remote control:

MAIN ROOM/ SUB ROOM selector	Indications
MAIN ROOM	MAIN ROOM *
SUB ROOM	SUB ROOM *

Buttons	Indications
SOUND	SOUND

After pressing SOUND, the following function are assigned to the specific number buttons:

Buttons	Indications
BALANCE L	SOUND
BALANCE R	
SUBWFR	S WFR

Ex. When you press SOUND with MAIN ROOM/SUB ROOM selector set to "MAIN ROOM."
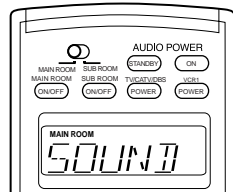
When you set MAIN ROOM/SUB ROOM selector∗ and press the buttons listed above, the corresponding indication appears for 10 seconds for your confirmation.

Note:
∗ *MAIN ROOM or SUB ROOM indicator does not appear when no indicators appear on the display window.*

Setting the Front Speakers Either for the Main Room or Sub-room

You can use the front speakers connected to the FRONT 2/SUB ROOM SPEAKERS terminals either as the 2nd front speakers for the main room or as the front speakers for the sub-room.

Before you start, remember...
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

On the front panel ONLY:

1. **Press SETTING repeatedly until "FRONT SPK 2:" appears on the display.**
   The display changes to show the current setting.
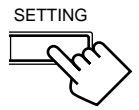
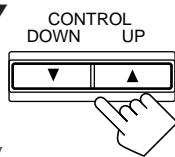2. **Press CONTROL UP ▲/DOWN ▼ to specify the way you want to use the speakers connected to the FRONT 2/SUB ROOM SPEAKERS terminals.**
   • Each time you press the buttons, the display changes to show the following:
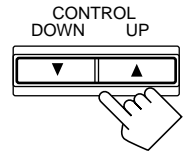
   MAIN ⟷ SUB

MAIN:	Select this to use as the 2nd front speakers for the main room.
SUB:	Select this to use as the front speakers for the sub-room.

Note:
You can also adjust the front speakers setting with "On-screen Menus" by using remote control. (See page 54.)

Adjusting the Front Speaker Output Balance

If the sounds you hear from the front right and left speakers are unequal, you can adjust the speaker output balance.
• You can do this setting for each source.

Before you start, remember....
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

On the front panel:

1. **Press LEVEL ADJUST repeatedly until "BAL – (with current setting)" appears on the display.**

2. **Press CONTROL UP ▲/DOWN ▼ to adjust the balance.**
   • Pressing CONTROL UP ▲ decreases the left channel output (from R –21 to CENTER, from CENTER to L –21).
   • Pressing CONTROL DOWN ▼ decreases the right channel output (from L –21 to CENTER, from CENTER to R –21).
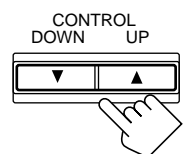
From the remote control:

1. Press SOUND.

The 10 keys are activated for sound adjustments.

SOUND
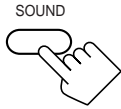
2. Press BALANCE R or BALANCE L to adjust the balance.

L—BALANCE—R

- Pressing BALANCE R decreases the left channel output (from R –21 to CENTER, from CENTER to L –21).
- Pressing BALANCE L decreases the right channel output (from L –21 to CENTER, from CENTER to R –21).
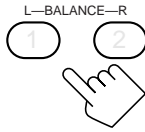
Note:

This function is applied only to the main room sources.

Setting the Subwoofer Information

Register whether you have connected a subwoofer or not.

Before you start, remember....
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

On the front panel ONLY:

1. Press SETTING repeatedly until "SUBWOOFER" appears on the display.

SETTING

The display changes to show the current setting.
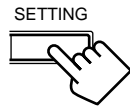
2. Press CONTROL UP ▲/DOWN ▼ to select "YES" or "NO."

CONTROL DOWN UP

- Each time you press the button, the display alternates between "YES" and "NO."
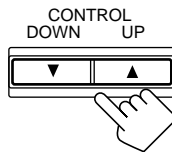
YES:	Select this when a subwoofer is connected.
NO:	Select this when no subwoofer is used.

Note:

You cannot use SUBWOOFER OUT ON/OFF on the front panel (see page 21) and adjust the subwoofer output level (see to the right) when "SUBWOOFER" is set to "NO."

Adjusting the Subwoofer Output Level

You can adjust the subwoofer output level if you have selected "YES" for the "SUBWOOFER" (see to the left).
- You can do this setting for each source.

Before you start, remember....
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.
- When the front speakers are all deactivated, the subwoofer level cannot be adjusted.

On the front panel:

1. Press LEVEL ADJUST repeatedly until "SUBWFR" appears on the display.

LEVEL ADJUST

The display changes to show the current setting.

2. Press CONTROL UP ▲/DOWN ▼ to adjust the subwoofer output level (from –20 dB to +10 dB).

CONTROL DOWN UP
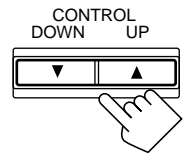
From the remote control:

1. Press SOUND.

SOUND

The 10 keys are activated for sound adjustments.
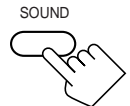
2. Press SUBWFR.

SUBWFR

3. Press LEVEL + or LEVEL – to adjust the subwoofer output level from –20 dB to + 10 dB.

- Each time you press the button, "S WFR" appears on the display on the remote control.

LEVEL+

LEVEL–

28
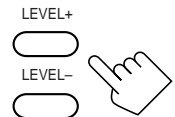
Setting the Speakers for a Surround Field

To obtain the best possible surround sound of the Surround and DSP modes, you have to register the information about the speakers arrangement after all connections are completed.
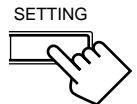• This function is applied only to the main room sources.

Before you start, remember....
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

Front, Center, and Rear Speaker Setting

Register the sizes of all the connected speakers.
• When you change your speakers, you need to register the information about the speakers again.

On the front panel ONLY:

1. **Press SETTING repeatedly until "FRONT SPK" (Front Speaker), "CTR SPK" (Center Speaker) or "REAR SPK" (Rear Speaker) appears on the display.**
   The display changes to show the current setting.
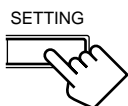
2. **Press CONTROL UP ▲ /DOWN ▼ to select the appropriate item about the speaker selected in the above step.**
   • Each time you press the button, the display changes to show the following:
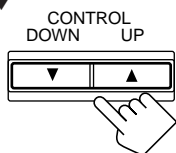
   ┌→ LARGE ←→ SMALL ←→ NONE ←┐

LARGE:	Select this when the speaker size is relatively large.
SMALL:	Select this when the speaker size is relatively small.
NONE:	Select this when you have not connected a speaker. (Not selectable for the front speakers)

3. **Repeat steps 1 and 2 to select the appropriate items for the other speakers.**

Notes:
• *Keep the following comment in mind as reference when adjusting.*
  – *If the size of the cone speaker unit built in your speaker is greater than 4 ^{3}/$_4$ inches (12 cm), select "LARGE," and if it is smaller than 4 ^{3}/$_4$ inches (12 cm), select "SMALL."*
• *If you have selected "NO" for the subwoofer setting, you can only select "LARGE" for the front speaker setting.*
• *If you have selected "SMALL" for the front speaker setting, you cannot select "LARGE" for the center and rear speaker settings.*

Center Delay Time Setting

Register the delay time of the sound from the center speaker, comparing to that of the sound from the front speakers.
If the distance from your listening point to the center speaker is equal to that to the front speakers, select 0 ms. As the distance to the center speaker becomes shorter, increase the delay time.
• 1 msec increase (or decrease) in delay time corresponds to 11 ^{13}/$_{16}$ inches (30 cm) decrease (or increase) in distance.
• When shipped from the factory, the delay time is set to 0 ms.

On the front panel ONLY:

1. **Press SETTING repeatedly until "CTR DELAY" (Center Delay) appears on the display.**
   The display changes to show the current setting.
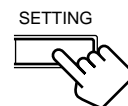
2. **Press CONTROL UP ▲ /DOWN ▼ to select the delay time of the center speaker output (from 0 ms to 5ms).**
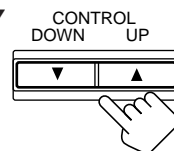
Notes:
• *Center delay time is not valid for the DVD MULTI playback mode.*
• *You cannot adjust the center delay time when you have set "CTR SPK" to "NONE."*

Rear Delay Time Setting

Register the delay time of the sound from the rear speakers, comparing to that of the sound from the front speakers.
If the distance from your listening point to the rear speakers is equal to that to the front speakers, select 0 ms. As the distance to the rear speakers becomes shorter, increase the delay time.
• 1 msec increase (or decrease) in delay time corresponds to 11 ^{13}/$_{16}$ inches (30 cm) decrease (or increase) in distance.
• When shipped from the factory, the delay time is set to 5 ms.

On the front panel ONLY:

1. **Press SETTING repeatedly until "REAR DELAY" appears on the display.**
   The display changes to show the current setting.
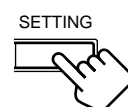
2. **Press CONTROL UP ▲ /DOWN ▼ to select the delay time of the rear speaker output (from 0 ms to 15 ms).**
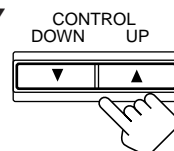
Notes:
• *Rear delay time is not valid for the DVD MULTI playback mode.*
• *You cannot adjust the rear delay time when you have set "REAR SPK" to "NONE."*

Center speaker

Front speaker   Front speaker

3.0 m
2.7 m
2.4 m
2.1 m

Rear speakers

EX. In this case, set the center delay time to
"1 ms" and the rear delay time to "2 ms."
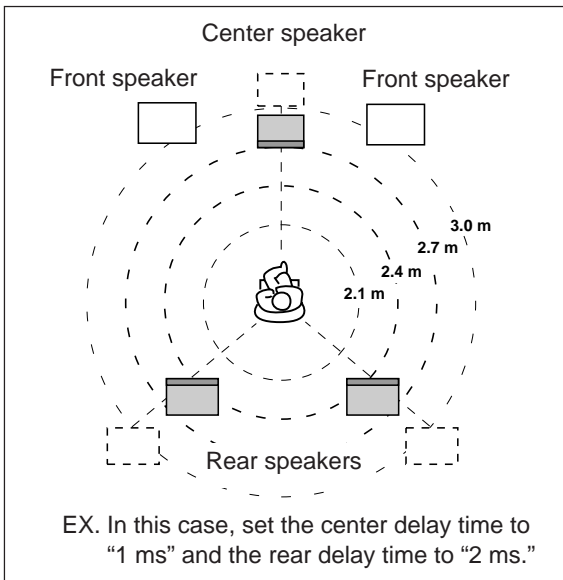
Crossover Frequency Setting

Small speakers cannot reproduce the bass sound very well. So, if you have used a small speaker for any of the front, center, and rear channels, this receiver automatically reallocate the bass elements, originally assigned to the channel for which you have connected the small speaker, to another channel (for which you have connected the large speaker).
To use this function properly, you need to set the crossover frequency level according to the size of the small speaker connected.
• If you have selected "LARGE" for all speakers (see page 29), this function cannot be adjusted.

On the front panel ONLY:

1. **Press SETTING repeatedly until "CROSS OVER" appears on the display.**
   The display changes to show the current setting.
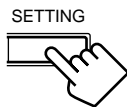
   SETTING

2. **Press CONTROL UP ▲/ DOWN ▼ to select the crossover frequency level according to the size of the small speaker connected.**

   CONTROL
   DOWN   UP
   ▼   ▲

   • Each time you press the button, the display changes to show the following:

   80Hz ←→ 100Hz ←→ 120Hz
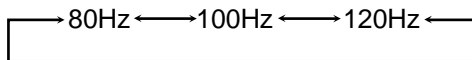
   • Use the following comments as reference when adjusting:

80Hz:	Select this when the cone speaker unit built in the speaker is about 4 $^3/_4$ inches (12 cm).
100Hz:	Select this when the cone speaker unit built in the speaker is about 3 $^{15}/_{16}$ inches (10 cm).
120Hz:	Select this when the cone speaker unit built in the speaker is about 3 $^3/_{16}$ inches (8 cm).

Note:

Crossover frequency is not valid for the DVD MULTI playback mode, 5 CH/4 CH Stereo mode, 3D-PHONIC mode, and HEADPHONE DSP mode.

Low Frequency Effect Attenuator Setting

If the bass sound is distorted while playing back a source using Dolby Digital or DTS Digital Surround, follow the procedure below.

On the front panel ONLY:

1. **Press SETTING repeatedly until "LFE ATT" (Low Frequency Effect Attenuator) appears on the display.**
   The display changes to show the current setting.
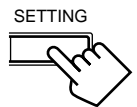
   SETTING

2. **Press CONTROL UP ▲/DOWN ▼ to select the low frequency effect attenuator level.**

   CONTROL
   DOWN   UP
   ▼   ▲
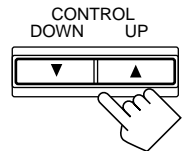
   • Each time you press the button, the display changes to show the following:

   0dB ←→ 10dB

0dB:	Normally select this.
10dB:	Select this when the bass sound is distorted.

Notes:

• *Low frequency effect attenuator is not valid for the DVD MULTI playback mode.*
• *This function takes effect only when the Dolby Digital or DTS Digital Surround sounds with LFE signals comes in and "SUBWOOFER" is set to "YES."*

Digital Input (DIGITAL IN) Terminal Setting

When you use the digital input terminals, you have to register what components are connected to which terminals (DIGITAL 1/2/3/4).

Before you start, remember...
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

On the front panel ONLY:
To set the DIGITAL 1 terminal:

1. **Press SETTING repeatedly until "DGTL COAX" (Digital Coaxial) appears on the display.**
   The display changes to show the current setting for DIGITAL 1 terminal.

   SETTING

2. **Press CONTROL UP ▲/DOWN ▼ to select the appropriate digital terminal setting.**

   CONTROL
   DOWN   UP
   ▼   ▲
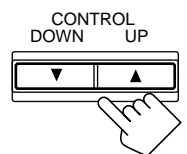
   • Each time you press the button, the display changes to show the following:

   1: DVD ⇌ 1: MD** ⇌ 1: CDR ⇌ 1: TV (or DBS*) ⇌ 1: CD ⇌ (back to the beginning)

   * *If you have changed the source name from "TV" to "DBS," "DBS" appears (see page 33).*
   ** *Change the source name to "MD" for TAPE/MD terminals when you use an MD recorder (see page 33).*

To set the DIGITAL 2/3/4 terminals:

1. **Press SETTING until DIGITAL 2/3/4 terminals setting appears on the display.**
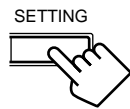
   SETTING

   The display changes to show the current settings for the DIGITAL 2/3/4 terminals.

   DIGITAL 2 terminal setting

   ```
   2:CD
   3:TV  4:CDR
   ```

   DIGITAL 3 terminal setting   DIGITAL 4 terminal setting

2. **Press CONTROL UP ▲/DOWN ▼ to select the appropriate digital terminal settings.**

   CONTROL
   DOWN   UP
   ▼   ▲
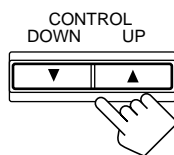
   • Each time you press the buttons, the display changes to show the following:

   When the DGTL COAX (DIGITAL 1) is set to "DVD"

   2: CD 3: TV (or DBS*) 4: CDR ⇄ 2: CD 3: TV (or DBS*) 4:MD** ⇄
   2: CD 3: MD** 4: CDR ⇄ 2: MD** 3: TV (or DBS*) 4: CDR ⇄
   (back to the beginning)

   *When the DGTL COAX (DIGITAL 1) is set to "MD"***

   2: CD 3: TV (or DBS*) 4: CDR ⇄ 2: CD 3: TV (or DBS*) 4: DVD ⇄
   2: CD 3: DVD 4: CDR ⇄ 2: DVD 3: TV (or DBS*) 4: CDR ⇄
   (back to the beginning)

   When the DGTL COAX (DIGITAL 1) is set to "CDR"

   2: CD 3: TV (or DBS*) 4: DVD ⇄ 2: CD 3: TV (or DBS*) 4: MD** ⇄
   2: CD 3: MD** 4: DVD ⇄ 2: MD** 3: TV (or DBS*) 4: DVD ⇄
   (back to the beginning)

   When the DGTL COAX (DIGITAL 1) is set to "TV" or "DBS"

   2: CD 3: DVD 4: CDR ⇄ 2: CD 3: DVD 4: MD** ⇄
   2: CD 3: MD** 4: CDR ⇄ 2: MD** 3: DVD 4: CDR ⇄
   (back to the beginning)

   When the DGTL COAX (DIGITAL 1) is set to "CD"

   2: DVD 3: TV (or DBS*) 4: CDR ⇄ 2: DVD 3: TV (or DBS*) 4: MD** ⇄
   2: DVD 3: MD** 4: CDR ⇄2: MD** 3: TV (or DBS*) 4: CDR ⇄
   (back to the beginning)

   * If you have changed the source name from "TV" to "DBS," "DBS" appears (see page 33).
   ** Change the source name to "MD" for TAPE/MD jacks when you use an MD recorder (see page 33).

   Note:

   When shipped from the factory, the DIGITAL IN terminals can be used as the digital input for the following components:
   • DIGITAL 1 (coaxial): For DVD player
   • DIGITAL 2 (optical): For CD player
   • DIGITAL 3 (optical): For digital TV broadcast tuner
   • DIGITAL 4 (optical): For CD recorder

Selecting the Analog or Digital Input Mode

When you have connected digital source components using the digital terminals (see page 10), you need to change the input mode for these components to the appropriate digital input mode correctly — DGTL AUTO, DGTL DTS, or DGTL D.D.

Before you start, remember...
• **The digital input (DIGITAL IN) terminal setting should be correctly done for the sources you want to select the digital input mode for.** Without setting this digital input terminal correctly, you cannot change the input mode from analog input to digital input even if you follow the procedure below.
• The digital input can be used for the main room sources. The analog input is always selected as the sub-room source without respect to this setting.

On the front panel:

1. **Press one of the source selecting button (DVD, TV SOUND/DBS, CD, CDR, or TAPE/MD)* for which you want to change the input mode.**

   The lamp on the front panel button for selected source lights up.
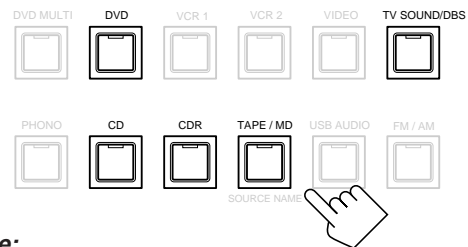
   DVD MULTI   DVD   VCR 1   VCR 2   VIDEO   TV SOUND/DBS

   PHONO   CD   CDR   TAPE / MD   USB AUDIO   FM / AM

   SOURCE NAME

   Note:

   * You can select the digital input only for the sources which you have selected the digital input terminals for. (See "Digital Input (DIGITAL IN) Terminal Setting" on page 30.)

2. **Press INPUT ANALOG/DIGITAL briefly to change the input mode.**

   INPUT
   ANALOG/DIGITAL

   INPUT ATT
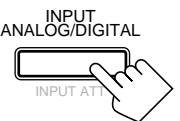
   • Each time you press the button, the input mode changes as follows:

   DGTL AUTO ⟷ ANALOG
   (Digital)

   DGTL AUTO: Select this for the digital input mode. The receiver automatically detects the incoming signal.
   DGTL AUTO always lights up on the display, and the digital signal indicator for the detected signals also lights up.

   ANALOG: Select this for the analog input mode.
   ANALOG always lights up.

   When selecting "DGTL AUTO", following indicators showing detected signals light up on the display.

LINEAR PCM	: Lights up when Linear PCM signals come in.
	• Flashes while seaching the incoming signals.
LINEAR PCM	: Lights up when the digital signals are not recognized.
⫿⫿ DIGITAL	: Lights up when Dolby Digital signals come in.
dts	: Lights up when DTS Digital Surround signals come in.

31

When playing a software encoded with the Dolby Digital or DTS Digital Surround, the following symptoms may occur:
- Sound does not come out at the beginning of playback.
- Noise comes out while using the searching for or skipping chapters or tracks.

In this case press CONTROL UP ▲/DOWN ▼ to select "DGTL D.D" or "DGTL DTS" while "DGTL AUTO" still remains on the display.

CONTROL
DOWN   UP

▼   ▲

- Each time you press the button, the input mode changes as follows:

```
      ┌─→ DGTL AUTO ←──→ DGTL D.D ─┐
      │     (Digital)    (Digital Dolby Digital) │
      └──→ DGTL DTS ←─────────────┘
              (Digital)
```
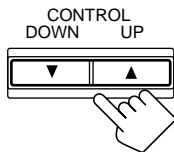
- "DGTL" lights instead of "DGTL AUTO" on the display when "DGTL D.D" or "DGTL DTS" is selected.

When selecting "DGTL D.D" or "DGTL DTS", following indicators showing detected signals light up on the display.

DGTL : Always lights up when "DGTL D.D" or "DGTL DTS" is selected.

When selecting "DGTL D.D"

▯▯ DIGITAL : • Lights up when Dolby Digital signals come in.
• Flashes when Dolby Digital signals are not recognized.

When selecting "DGTL DTS"

dts : • Lights up when DTS Digital Surround signals come in.
• Flashes when DTS Digital Surround signals are not recognized.

Note:

When you turn off the power or select another source, "DGTL DTS" and "DGTL D.D" settings are canceled and the digital input mode is automatically reset to "DGTL AUTO."

To change the input mode back to analog input, select "ANALOG" in step 2.

From the remote control:

1. **Press the source selecting button (DVD, CD, TAPE/MD, CDR or TV/DBS)* for which you want to change the input mode.**
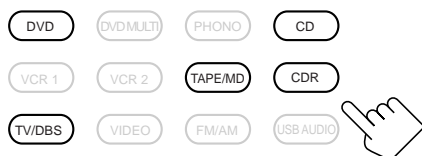
DVD	DVD MULTI	PHONO	CD
VCR 1	VCR 2	TAPE/MD	CDR
TV/DBS	VIDEO	FM/AM	USB AUDIO

Note:

* You can select the digital input only for the sources which you have selected the digital input terminals for. (See "Digital Input (DIGITAL IN) Terminal Setting" on page 30.)

2. **Press ANALOG/DIGITAL INPUT to change the input mode.**
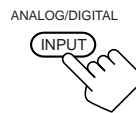
ANALOG/DIGITAL

INPUT

- Each time you press the button, the input mode changes as follows:

```
DGTL AUTO ←──────→ ANALOG
  (Digital)
```
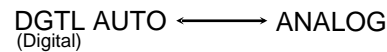
When playing a software encoded with the Dolby Digital or DTS Digital Surround, "DGTL AUTO" may not happen to work well. In this case press CONTROL UP ▲/DOWN ▼ on the front panel to select "DGTL D.D" or "DGTL DTS" (while "DGTL AUTO" remains on the display).

Note:

You can select "DGTL D.D" or "DGTL DTS" with "On-screen Menus" by using the remote control (see page 50).

Selecting the Video Input Terminal

This receiver is equipped with component video input terminals for the DVD player and DBS tuner, which give you higher picture quality. When you use the component video input terminals for the DVD player and/or DBS tuner, change the video input terminal setting.

Before you start, remember....
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

On the front panel ONLY:

1. **Press SETTING repeatedly until "VIDEO DVD" or "VIDEO DBS" appears on the display.**
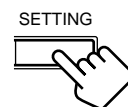
SETTING

The display changes to show the current setting.
- Select "VIDEO DVD" to select the video input terminal for the DVD player and "VIDEO DBS" for the DBS tuner.

2. **Press CONTROL UP ▲/DOWN ▼ to select the appropriate video input terminal.**

CONTROL
DOWN   UP

▼   ▲

- Each time you press the button, the display changes to show the following:

```
COMPNT ←──────→ S/C
(Component)   (S-video/Composite)
```
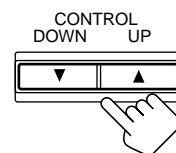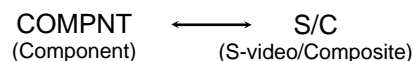
| **COMPNT:** | Select this when you connect the DVD player or DBS tuner to the component video input terminals. |
| **S/C:** | Select this when you connect the DVD player or DBS tuner to the composite video or S-video input terminal. |

Note:

Without changing the video input terminal setting, you can see the picture through the video input terminals, but cannot use the AV COMPU LINK remote control system correctly (see page 62).

32

Changing the Source Name

When you have connected an MD recorder to the TAPE/MD jacks or the DBS tuner to the TV SOUND/DBS jacks on the rear panel, change the source name which will be shown on the display when you select the MD recorder or DBS tuner as the source.
• When you select DBS as a source for the sub-room, you cannot change the source name.

On the front panel ONLY:

When changing the source name from "TAPE" to "MD":
•   **Press and hold SOURCE NAME (TAPE/MD) until "ASSGN. MD" appears on the display.**

TAPE / MD

SOURCE NAME

When changing the source name from "TV " to "DBS":
•   **Press and hold SOURCE NAME (TV SOUND/ DBS) until "ASSGN. DBS" appears on the display.**

TV SOUND/DBS
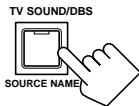
SOURCE NAME

To change the source name to "TAPE" or "TV," repeat the same procedure above — press and hold SOURCE NAME (TAPE/MD) to select "TAPE," or press and hold SOURCE NAME (TV SOUND/DBS) to select "TV."

Note:
Without changing the source name, you can still use the connected components. However, there may be some inconvenience.
• "TAPE" or "TV SOUND" will appear on the display when you select the MD recorder or DBS tuner.
• You cannot use the digital input (see page 30) for the MD recorder.
• You cannot use the COMPU LINK remote control system (see page 55) to operate the MD recorder.

Showing the Text Information on the Display

When you have connected an MD recorder or CD player equipped with TEXT COMPU LINK remote control system (see page 57), you can show the text information, such as disc title or track title, on the display of this receiver. To show it on the display, follow the procedure below.

Before you start, remember....
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.
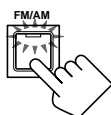
On the front panel ONLY:

1. **Press SETTING repeatedly until "FL DISP" (Display) appears on the display.**
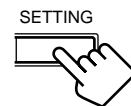
SETTING

The display changes to show the current setting.

2. **Press CONTROL UP ▲/DOWN ▼ to select either the source name or the text information to be shown on the display.**

CONTROL
DOWN   UP

▼   ▲
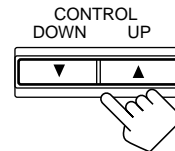
• Each time you press the button, the display changes to show the following:

NORM ←——→ TEXT
(Normal)

| **NORM:** | Source name and Surround/DSP appear during play. |
| **TEXT:** | Text information appears during play. |

Note:
Though you have selected "TEXT," the source name and Surround/DSP mode appear if a playing disc has no text information.

Basic Setting and Adjustment — Auto Memory

Without any setting required, this receiver stores different sound settings for each different playing source automatically whenever you do the following:
• Turning on the power (see page 17)
• Changing the source to play (see page 18)
• Changing the source name (see page 33)

So, you do not have to change the sound settings next time you select the same source. The stored settings for the selected source are automatically recalled.

The following settings are automatically stored for each source:

• Analog/digital input mode (see page 31)
• Bass boost (see page 21)
• Digital equalization adjustment (see page 20)
• DVD MULTI playback mode setting (see page 49)
• Front speaker output balance (see page 27)
• Input attenuator mode (see page 21)
• Line direct (see page 22)
• Midnight mode (see page 21)
• Subwoofer setting and its output level (see pages 21 and 28)
• Surround mode on/off (see page 39)
• Surround/DSP mode setting (see pages 40 – 48)

You can also assign and store the volume level for each source. See "To store the volume level" to the right.

Notes:
• *This function cannot be used for the sub-room sources.*
• *If the source is FM or AM, you can assign different settings for each band.*
• *You cannot assign and store different settings for digital input mode and analog input mode (when selecting a digital source).*
• *The Surround modes and DSP modes cannot be used with DVD MULTI playback mode at the same time.*

To store the volume level (ONE TOUCH OPERATION)

Before you start, remember....
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

On the front panel ONLY:

1. Press SETTING repeatedly until "ONE TOUCH" appears on the display.
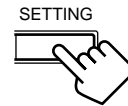
SETTING

The display changes to show the current setting.

2. Press CONTROL UP ▲/DOWN ▼ to turn on the One Touch Operation.

CONTROL
DOWN   UP
▼   ▲
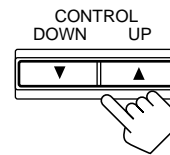
The ONE TOUCH OPERATION indicator lights up on the display.
• Each time you press the button, the one touch operation function turns on ("ON") and off ("OFF").

To recall the volume level
With the ONE TOUCH OPERATION indicator lit, the volume level for the currently selected source is recalled when the source is selected.

To cancel the One Touch Operation
Select "OFF" in step 2 above so that the ONE TOUCH OPERATION indicator goes off. (Even though the One Touch Operation is canceled, the recalled volume remains active.)

34

Receiving Radio Broadcasts

You can browse through all the stations or use the preset function to go immediately to a particular station.
- *You can use "On-screen Menu" for most of the main room operations. For details, see page 50.*

SUB Indicates the functions YOU CAN ALSO USE when the receiver is ready for the sub-room operations.

IMPORTANT:

Check to see if the proper indicator(s) and information(s) appear on the display on the front panel before/while using the buttons and controls.

When using the buttons and controls on the front panel:

- **For the main room operations**
  - The MAIN ROOM indicator is lit.
  - The source name for the sub-room is not lit on the display.
- **For the sub-room operations**
  - The SUB ROOM indicator is lit.
  - The source name for the sub-room is lit on the display.

When using the remote control:

- **For the main room operations**
  - Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
- **For the sub-room operations**
  - Set MAIN ROOM/SUB ROOM selector to **"SUB ROOM."**

MAIN ROOM   SUB ROOM

Tuning in Stations Manually   SUB

On the front panel:

1. **Press FM/AM to select the band (FM or AM).**

   The last received station of the selected band is tuned in.
   - Each time you press the button, the band alternates between FM and AM.

   For the main room

   ```
   ANALOG  L  R
              FM                  AUTO MUTING  TUNED  STEREO
        □  □  SPEAKERS  87.5 MHz   MAIN ROOM  25
        1                                    VOLUME
   ```

   For the sub-room

   ```
                SUB              AUTO MUTING  TUNED  STEREO
        SPEAKERS
        SUB ROOM  FM 87.5MHz   SUB ROOM  25
                                          VOLUME
   ```

2. **Press FM/AM TUNING ▲/▼ until you find the frequency you want.**
   - Pressing FM/AM TUNING ▲ increases the frequency.
   - Pressing FM/AM TUNING ▼ decreases the frequency.

From the remote control:

1. **Press FM/AM to select the band (FM or AM).**

   The last received station of the selected band is tuned in.
   - Each time you press the button, the band alternates between FM and AM.

2. **Press TUNING UP or TUNING DOWN until you find the frequency you want.**
   - Pressing TUNING UP increases the frequency.
   - Pressing TUNING DOWN decreases the frequency.

DOWN — TUNING — UP

Notes:

- When a station of sufficient signal strength is tuned in, the TUNED indicator lights on the display.
- When an FM stereo program is received, the STEREO indicator also lights up.
- When you hold the button (and release it) in step 2, the frequency keeps changing until a station is tuned in.
- You can only select the same station of the same band (FM or AM) both for the main room and sub-room operations. If you change the station for the sub-room, it also changes for the main room (and vice versa). This also means that if you change the station for the sub-room while recording a broadcasting program in the main room, recording in the main room will be interrupted.

Using Preset Tuning

Once a station is assigned to a channel number, the station can be quickly tuned. You can preset up to 30 FM and 15 AM stations.

To store the preset stations

Before you start, remember...
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

On the front panel ONLY:

1. **Tune in the station you want to preset (see "Tuning in Stations Manually" to the left).**
   - If you want to store the FM reception mode for this station, select the FM reception mode you want. See "Selecting the FM Reception Mode" on page 36.

   ```
   ANALOG  L  R
              FM                  AUTO MUTING  TUNED  STEREO
        □  □  SPEAKERS  87.5 MHz   MAIN ROOM  25
        1                                    VOLUME
   ```

2. **Press MEMORY.**

   ```
   ANALOG  L  R
              FM                  AUTO MUTING  TUNED  STEREO
        □  □  SPEAKERS  87.5 MHz   MAIN ROOM  25
        1                                    VOLUME
   ```

   The channel number position starts flashing on the display for about 10 seconds.

3. **Press FM/AM PRESET ▲/▼ to select a channel number while the channel number position is flashing.**

35
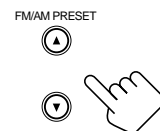
4. Press MEMORY again while the selected channel number is flashing on the display.

MEMORY

The selected channel number stops flashing.
The station is assigned to the selected channel number.

```
ANALOG  L  □ R   FM  1          AUTO MUTING  TUNED  STEREO
         □  □                            MAIN ROOM
    SPEAKERS       87.5 MHz           VOLUME  25
    1
```
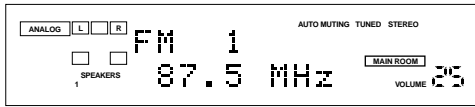
5. Repeat steps 1 to 4 until you store all the stations you want.

To erase a stored preset station
Storing a new station on a used number erases the previously stored one.

To tune in a preset station

SUB

On the front panel:

1. Press FM/AM.

FM/AM

The last received station of the selected band is tuned in.
• Each time you press the button, the band alternates between FM and AM.

2. Press FM/AM PRESET ▲/▼ until you find the channel you want.

FM/AM PRESET

• Pressing FM/AM PRESET ▲ increases the number.
• Pressing FM/AM PRESET ▼ decreases the number.

From the remote control:

1. Press FM/AM.

FM/AM

The last received station of the selected band is tuned in.
• Each time you press the button, the band alternates between FM and AM.

2. Press the 10 keys to select a preset channel number.

• For channel number 5, press 5.
• For channel number 15, press +10 then 5.
• For channel number 20, press +10 then 10.
• For channel number 30, press +10, +10, then 10.
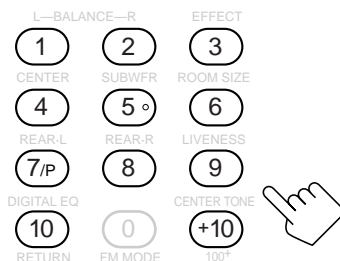
L—BALANCE—R   EFFECT
(1) (2) (3)
CENTER SUBWFR ROOM SIZE
(4) (5○) (6)
REAR-L REAR-R LIVENESS
(7/P) (8) (9)
DIGITAL EQ   CENTER TONE
(10) (0) (+10)
RETURN FM MODE 100⁺

Notes:

• You can only select the same station of the same band (FM or AM) both for the main room and sub-room operations. If you change the station for the sub-room, it also changes for the main room (and vice versa). This also means that if you change the station for the sub-room while recording a broadcasting program in the main room, recording in the main room will be interrupted.
• When you use the 10 keys on the remote control, be sure that "TUNER" appears on the display window on the remote control. If not, start at step 1.
• The preset number does not appear for the sub-room.

Selecting the FM Reception Mode SUB

When an FM stereo broadcast is hard to receive or noisy

You can change the FM reception mode while receiving an FM broadcast.
• You can store the FM reception mode for each preset station.

Press FM MODE.

• Each time you press the button, the FM reception mode alternates between "AUTOMUTING" and "MONO."

FM MODE

0
FM MODE

On the front panel   From the remote control

```
ANALOG  L  □ R   FM               AUTO MUTING  TUNED  STEREO
         □  □                            MAIN ROOM
    SPEAKERS    AUTOMUTING           VOLUME  25
    1
```

```
ANALOG  L  □ R   FM                            TUNED
         □  □                            MAIN ROOM
    SPEAKERS    MODE MONO             VOLUME  25
    1
```
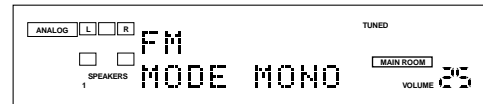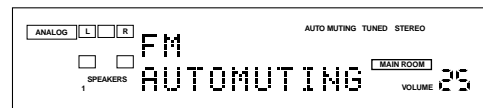
AUTOMUTING: When a program is broadcasted in stereo, you will hear stereo sound; when in monaural, you will hear monaural sounds. This mode is also useful to suppress static noise between stations. The AUTO MUTING indicator lights on the display.

MONO: Reception will be improved although you will lose the stereo effect. In this mode, you will hear noise while tuning into the stations. The AUTO MUTING and STEREO indicator go off from the display.

Note:

Before you use the FM MODE button on the remote control, press FM/AM on the remote control to set the mode of the remote control to "TUNER."

36

Creating a Surround Field in the Main Room

The built-in Surround Processor provides Surround mode and four types of the DSP (Digital Signal Processor) mode — DAP (Digital Acoustic Processor) mode, 5 CH/4 CH Stereo mode, 3D-PHONIC mode and HEADPHONE DSP mode. With this receiver, you can use a Surround mode and a DSP mode at the same time. Once you have adjusted Surround and/or DSP modes, the adjustments done for each source are memorized.
- *You can use "On-screen Menu" for most of the main room operations. For details, see page 50.*
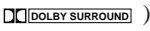
The following operations are only possible while the receiver is ready for the main room operations, and are only used for the main room sources.

Surround modes

With this receiver, you can use two types of the Surround mode. **Following modes cannot be used when only the front speakers are connected to this receiver (without the rear speakers or center speaker).**

Dolby Surround (Dolby Digital and Dolby Pro Logic) *

Used to watch the soundtracks of software encoded with Dolby Digital (bearing the mark ⊡⊡ DOLBY) or with Dolby Surround (bearing the mark ⊡⊡ DOLBY SURROUND).

Dolby Surround encoding format records the left front channel, right front channel, center channel, and rear channel (total 4 channels) signals into 2 channels. The Dolby Pro Logic decoder built in this receiver decode these 2 channel signals into original 4 channel signals — matrix-based multichannel reproduction, and allows you to enjoy the realistic sound field in your listening room.

On the other hand, Dolby Digital encoding method (so called a discrete 5.1 channel digital audio format) records and compresses the left front channel, right front channel, center channel, left rear channel, right rear channel, and LFE channel (total 6 channels, but LFE channel is counted as 0.1 channel, therefore called 5.1 channels) signals digitally. Each channel is completely independent from other channel signals to avoid interference, therefore, you can obtain much better sound quality with much stereo and surround effects.

The Dolby Digital decoder built in this receiver can create much more realistic sound field in your listening room. You may feel as if you were in a real theater.

In addition, Dolby Digital enables stereo rear sounds, and sets the cutoff frequency of the rear treble at 20 kHz, comparing to 7 kHz for Dolby Pro Logic. These facts enhance the sound movement and being-there feelings much more than Dolby Pro Logic.
- To enjoy the software encoded with Dolby Digital, you must connect the source component using the digital terminal on the rear of this receiver. (See page 10.)

DTS Digital Surround **

DTS Digital Surround (bearing the mark dts) is another discrete 5.1 channel digital audio format available on CD, LD, and DVD software.

Comparing to Dolby Digital, audio compression rate is relatively low. This fact allows DTS Digital Surround format to add breadth and depth to the reproduced sounds. As a result, DTS Digital Surround features natural, solid and clear sound.
- To enjoy the software encoded with DTS Digital Surround, you must connect the source component using the digital terminal on the rear of this receiver. (See page 10.)

DSP modes

With this receiver, you can use four types of the DSP mode.

DAP modes

In order to reproduce a more acoustic sound field in your listening room while playing music sources, you can use DAP modes. **This mode can be used when the front speakers are connected to this receiver (without respect to the rear/center speaker connection).**

THEATER 1:	Reproduces the sound field of a large theater (where the seating capacity about 1,000).
THEATER 2:	Reproduces the sound field of a small theater (where the seating capacity about 300).
HALL 1:	Gives clear vocal and the feeling of a large concert hall (where the seating capacity about 1,000).
HALL 2:	Gives clear vocal and the feeling of a small concert hall (where the seating capacity about 300).
LIVE CLUB:	Gives the feeling of a live music club with a low ceiling.
DANCE CLUB:	Gives a throbbing bass beat.
PAVILION:	Gives the spacious feeling of a pavilion with a high ceiling.

5 CH/4 CH Stereo mode

You can create more powerful sound field for both of the digital and analog stereo sounds source. The 4 CH Stereo mode reproduces a sound filed through the front left and right speakers and rear left and right speakers. The 5 CH Stereo mode adds the center channel element to the 4 CH Stereo sound field by outputting mixed left and right signals through the center speaker. **This mode cannot be used when only the front speakers are connected to this receiver without the rear speakers.**

Note:

"5CH STEREO" is selected when setting the center speaker to "LARGE" or "SMALL." "4CH STEREO" is selected when setting the center speaker to "NONE" (see page 29).

3D-PHONIC modes

The 3D-PHONIC mode gives you such a nearly surround effect as is reproduced through the Dolby Surround decoder, which is widely used to reproduce sounds with a feeling of movement like those experienced in movie theaters. The 3D-PHONIC mode is the result of research on sound localization technology carried out at JVC for many years. **This mode can be used when the front speakers are connected to this receiver (without respect to the rear/center speaker connection).** When the 3D PHONIC mode is reproduced with the center speaker connected, you can feel as if actors on the screen actually speak in your room.
- You can select "3D ACTION" only when playing an analog or linear PCM (digital) source.
- You can select "3D DIGITAL" only when playing a source encoded with Dolby Digital or DTS Digital Surround.

3D ACTION:	Best for action and war movies — where the action is fast and explosive.
3D DIGITAL:	Reproduces multichannel source encoded with Dolby Digital or with DTS Digital Surround.

HEADPHONE DSP mode

The HEADPHONE DSP mode can create the stereo sound while listening to a source using headphones as if you listen through the speakers. So you can feel as if you were in a music room. **This mode can be used only when both of the front speakers are deactivated (see page 19).**

Notes:
- *When the SUB ROOM and SPEAKERS SUB ROOM indicators are lit on the display, the SURROUND ON/OFF button do not work.*
- *When the SUB ROOM and SPEAKERS SUB ROOM indicators are lit on the display, you can only use DAP and 3D-PHONIC modes for the main room source. In this case, "DSP" and "3D-PHONIC" indicators light up on the front panel.*
- *When you select "DVD MULTI" as the source to play, you cannot select or adjust the Surround and DSP modes.*
- *When the Line Direct function is turned on, the DSP modes are canceled temporarily (see page 22).*
- *No adjustment can be made for the HEADPHONE DSP mode.*

Reproducing the Sound Field

The sound heard in a concert hall or club consists of direct sound and indirect sound — early reflections and reflections from behind. Direct sounds reach the listener directly without any reflection. On the other hand, indirect sounds are delayed by the distances of the ceiling and walls. These direct sounds and indirect sounds are the most important elements of the acoustic surround effects.
The Surround and DSP modes can create these important elements, and give you a real "being there" feeling.
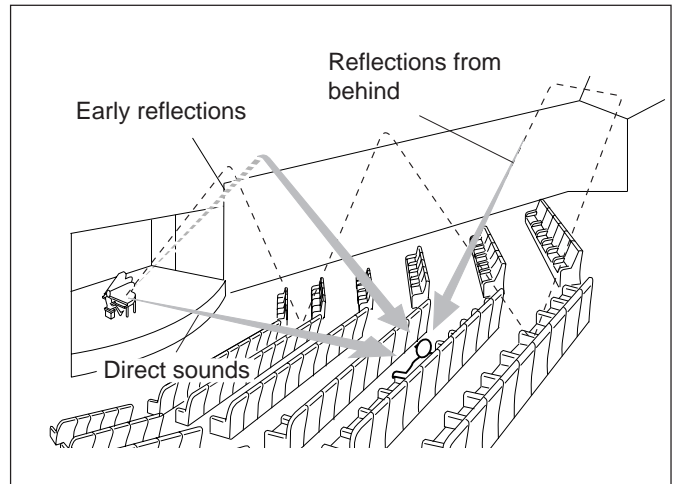
DVD MULTI Playback Mode

This receiver provides the DVD MULTI playback mode for reproducing the analog discrete 5.1 channel output mode of the DVD player or other equipment.
You can adjust the DVD MULTI playback mode while playing back a video software such as a DVD using the analog discrete 5.1 channel output mode.
- For the DVD MULTI playback mode connection, see page 9.
- For details on the DVD MULTI playback mode, see page 49.

DSP Modes Available to Input Mode								○: Possible / ×: Impossible
MODE INPUT SIGNAL	SURROUND	D S P			SURROUND with DAP	SURR. OFF (DSP OFF/ SURROUND OFF)	HEADPHOHE	
		DAP MODE	3D ACTION (DIGITAL)	5 CH/4 CH Stereo			HEADPHONE DSP	HEADPHONE
ANALOG (2 CH)	○ (DOLBY PRO LOGIC)	○	○ (3D ACTION)	○	○	○	○	○
DVD MULTI (5.1 CH)	×	×	×	×	×	×	×	○
LINEAR PCM	○ (DOLBY PRO LOGIC)	○	○ (3D ACTION)	○	○	○	○	○
DOLBY DIGITAL	○ *1 (DOLBY DIGITAL)	○	○ (3D DIGITAL)	○	○	○	○	○
DTS	○ *2 (DTS SURROUND)	○	○ (3D DIGITAL)	○	○	○	○	○
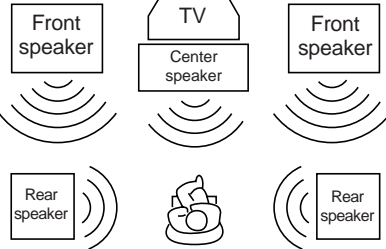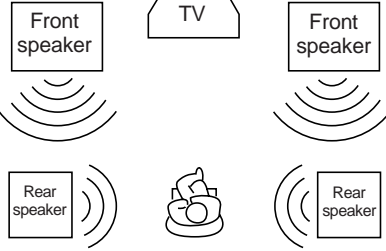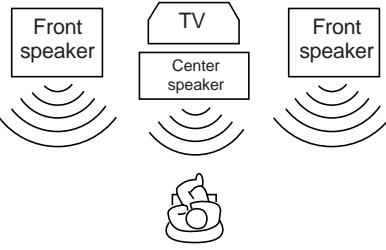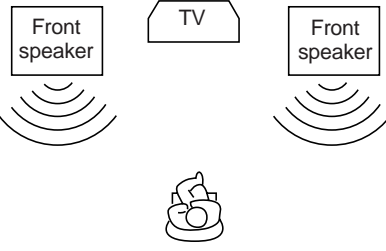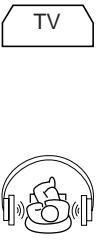
*1 When 2 channel signal comes in, DOLBY PRO LOGIC is selected. When other signals come in, DOLBY DIGITAL is selected.
*2 When 2 channel signal comes in, DOLBY PRO LOGIC is selected. When other signals come in, DTS SURROUND is selected.

Available DSP Modes According to the Speaker Arrangement

Available DSP modes will vary depending on how many speakers are used with this receiver.
Make sure that you have set the speaker information correctly (see page 29).

Speaker arrangements	Available DSP modes Each time you press DSP MODE, the DSP modes change as follows:
Front speaker / TV / Center speaker / Front speaker / Rear speaker / Rear speaker Front speaker / TV / Front speaker / Rear speaker / Rear speaker	THEATER 1 ➡ THEATER 2 ➡ HALL 1 ➡ HALL 2 ➡ LIVE CLUB ➡ DANCE CLUB ➡ PAVILION ➡ 5 CH STEREO (when using 5 speakers) or 4 CH STEREO (when using 4 speakers)* ➡ 3D ACTION or 3D DIGITAL ➡ SURR. OFF (DSP OFF) ➡ (Back to the beginning) **To activate the Surround mode,** press SURROUND ON/OFF button so that the SURROUND ON/OFF lamp on the front panel button lights up. *Notes:* • *If the settings for the center and the rear speakers are changed to "NONE" (see page 29), the Surround mode will be canceled.* • *When both of the Surround mode and DSP mode are deactivated, "SURR. OFF" appears on the display.* * *"5CH STEREO" is selected when setting the center speaker to "LARGE" or "SMALL," and "4CH STEREO" is selected when setting the center speaker to "NONE" (see page 29).*
Front speaker / TV / Center speaker / Front speaker	THEATER 1 ➡ THEATER 2 ➡ HALL 1 ➡ HALL 2 ➡ LIVE CLUB ➡ DANCE CLUB ➡ PAVILION ➡ 3D ACTION or 3D DIGITAL ➡ SURR. OFF (DSP OFF) ➡ (Back to the beginning) **To activate the Surround mode,** press SURROUND ON/OFF button so that the SURROUND ON/OFF lamp on the front panel button lights up. *Notes:* • *If the setting for the center speaker is changed to "NONE" (see page 29), the Surround mode will be canceled.* • *When both of the Surround mode and DSP mode are deactivated, "SURR. OFF" appears on the display.*
Front speaker / TV / Front speaker	THEATER 1 ➡ THEATER 2 ➡ HALL 1 ➡ HALL 2 ➡ LIVE CLUB ➡ DANCE CLUB ➡ PAVILION ➡ 3D ACTION or 3D DIGITAL ➡ SURR. OFF (DSP OFF) ➡ (Back to the beginning) *Note:* *Surround mode cannot be used when only the front speakers are connected.*
TV	HEADPHONE ⬌ HEADPHONE DSP *Note:* *To use the HEADPHONE or HEADPHONE DSP mode, deactivate both of the front speakers (see page 19).*

When the SUB ROOM and SPEAKERS SUB ROOM indicators are lit on the front panel
You can only use 3D-PHONIC modes for the main room source, without respect to the center/rear speaker connection.

Adjusting the Surround Modes

Once you have adjusted the Surround modes, the adjustment is memorized for each source. You can also use a Surround mode with a DAP mode (see page 43).

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
• The MAIN ROOM indicator is lit.
• The source name for the sub-room is not lit on the display.

• **When using the remote control:**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
  – Check to see if the following information appear on the display window on the remote control.

MAIN ROOM   SUB ROOM

Buttons	Indications
SOUND	SOUND

After pressing SOUND, the following function are assigned to the specific number buttons:

Buttons	Indications
CENTER TONE	SOUND
CENTER	CTR
REAR•L	REARL
REAR•R	REARR

Ex. "SOUND" appears on the display window.

AUDIO POWER
MAIN ROOM SUB ROOM STANDBY ON
MAIN ROOM SUB ROOM TV/CAT/DBS VCR1
ON/OFF ON/OFF POWER POWER

MAIN ROOM
SOUND

When you press the buttons listed above, the indication appears for 5 – 10 seconds for your confirmation.

Before you start, remember...
• **Make sure that you have set the speaker information correctly (see page 29).**
• When the SUB ROOM and SPEAKERS SUB ROOM indicators are lit on the display, the SURROUND ON/OFF button does not work.
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 3 again.
• You cannot adjust the center speaker output level and center tone when you have set "CTR SPK" to "NONE." See page 29.
• You cannot adjust the rear speaker output levels when you have set "REAR SPK" to "NONE." See page 29.
• To adjust the front speaker output balance and subwoofer output level, see pages 27 and 28.

From the remote control:

1. **Select and play a sound source.**
   • To enjoy Dolby Pro Logic, play back a software encoded with Dolby Surround and labeled with ⊡⊡ DOLBY SURROUND mark.
   • To enjoy Dolby Digital, play back a software encoded with Dolby Digital and labeled with ⊡⊡ DOLBY DIGITAL mark.
   • To enjoy DTS Digital Surround, play back a software encoded with DTS Digital Surround and labeled with dts SURROUND mark.

2. **Press SURROUND ON/OFF to activate an appropriate Surround mode — PRO LOGIC, DOLBY DIGITAL or DTS SURROUND.**

   SURROUND
   ON/OFF

   The SURROUND ON/OFF lamp on the front panel button lights up.
   • Each time you press the button, the Surround mode turns on and off alternately.
   • When "PRO LOGIC" is selected, the PRO LOGIC indicator lights up on the display.

3. **Press TEST to check the speaker output balance.**

   TEST

   "TEST TONE L" starts flashing on the display, and a test tone comes out of the speakers in the following order:

   TEST TONE L → TEST TONE C → TEST TONE R
   (Left front speaker) (Center speaker) (Right front speaker)
   TEST TONE LS ← TEST TONE RS
   (Left rear speaker) (Right rear speaker)

   Notes:
   • *You can adjust the speaker output levels without outputting the test tone.*
   • *No test tone comes out of the center speaker when "CTR SPK" is set to "NONE" (see page 29).*
   • *No test tone comes out of the rear speakers when "REAR SPK" is set to "NONE" (see page 29).*
   • *If the TV is turned on and the proper video input is selected on the TV, the test tone screen will appear on the TV.*

4. **Press SOUND.**
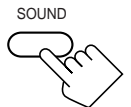
   SOUND

   The 10 keys are activated for sound adjustments.

5. **Select the speaker you want to adjust.**
   • To select the center speaker level, press CENTER.
   • To select the left rear speaker level, press REAR•L.
   • To select the right rear speaker level, press REAR•R.

   CENTER   REAR•L   REAR•R
   4   7/P   8

6. **Press LEVEL + or LEVEL – to adjust the speaker output levels (– 10 dB to +10 dB).**
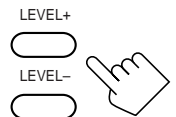
   LEVEL+
   LEVEL–

   • Each time you press the button, the indication corresponding to the button selected in step 5 appears on the display window on the remote control.

7. **Repeat steps 5 and 6 to adjust the other speaker output levels.**

8. **Press TEST again to stop the test tone.**

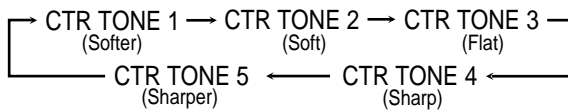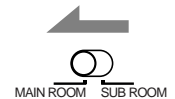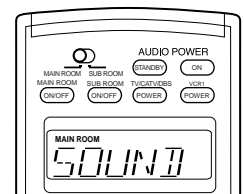   TEST

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9. Press CENTER TONE to select the center tone level you want.

CENTER TONE

The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of.

- Each time you press the button, the display changes to show the following:

CTR TONE 1 → CTR TONE 2 → CTR TONE 3
(Softer) (Soft) (Flat)
CTR TONE 5 ← CTR TONE 4
(Sharper) (Sharp)

To make the dialogue softer, select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

On the front panel:

You can also use the buttons on the front panel to adjust the Surround modes. However, no test tone is available when using the buttons on the front panel. So, make adjustments while listening to the sound of the source played back.

1. Select and play a sound source.
- To enjoy Dolby Pro Logic, play back a software encoded with Dolby Surround and labeled with □□ DOLBY SURROUND mark.
- To enjoy Dolby Digital, play back a software encoded with Dolby Digital and labeled with □□ DOLBY DIGITAL mark.
- To enjoy DTS Digital Surround, play back a software encoded with DTS Digital Surround and labeled with dts mark.

2. Press SURROUND ON/OFF to activate an appropriate Surround mode — PRO LOGIC, DOLBY DIGITAL or DTS SURROUND.

SURROUND ON/OFF

The SURROUND ON/OFF lamp on the front panel button lights up.
- Each time you press the button, the Surround mode turns on and off alternately.
- When "PRO LOGIC" is selected, the PRO LOGIC indicator lights up on the display.

3. Adjust the speaker output levels.

LEVEL ADJUST

1) Press LEVEL ADJUST repeatedly until one of the following indications appears on the display.
"CENTER":
To adjust the center speaker level.
"REAR L":
To adjust the left rear speaker level.
"REAR R":
To adjust the right rear speaker level.

CONTROL DOWN UP

2) Press CONTROL UP ▲/DOWN ▼ to adjust the selected speaker output level (from –10 dB to +10 dB).
3) Repeat 1) and 2) to adjust the other speaker output levels.

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4. Adjust the center tone.

EFFECT

1) Press EFFECT repeatedly until "CTR TONE" appears on the display.
The display changes to show the current setting.

CONTROL DOWN UP

2) Press CONTROL UP ▲/DOWN ▼ to select the center tone level you want.
- Each time you press the button, the display changes to show the following:

CTR TONE 1 ↔ CTR TONE 2 ↔ CTR TONE 3
(Softer) (Soft) (Flat)
CTR TONE 5 ← CTR TONE 4
(Sharper) (Sharp)

To make the dialogue softer, select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

Adjusting the DAP Modes

You can also use a DAP mode with a Surround mode (see page 43).

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
- The MAIN ROOM indicator is lit.
- The source name for the sub-room is not lit on the display.

- **When using the remote control:**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
  – Check to see if the following information appear on the display window on the remote control.

MAIN ROOM   SUB ROOM

Buttons	Indications
SOUND	SOUND

After pressing SOUND, the following function are assigned to the specific number buttons:

Buttons	Indications
EFFECT	SOUND
ROOM SIZE	SOUND
LIVENESS	SOUND
CENTER TONE	SOUND
CENTER	CTR
REAR•L	REARL
REAR•R	REARR

Ex. "SOUND" appears on the display window.

AUDIO POWER
MAIN ROOM SUB ROOM (STANDBY) (ON)
MAIN ROOM SUB ROOM TV/CAT/VDP VCR1
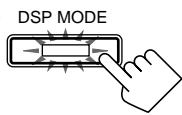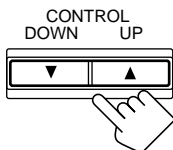(ON/OFF) (ON/OFF) (POWER) (POWER)

MAIN ROOM

SOUND

When you press the buttons listed above, the indication appears for 5 – 10 seconds for your confirmation.

Before you start, remember...
- **Make sure that you have set the speaker information correctly (see page 29).**
- When the SUB ROOM and SPEAKERS SUB ROOM indicators are lit on the display, you can only use 3D-PHONIC modes for the main room source.
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 2 again.
- You cannot adjust the center speaker output level when you have set "CTR SPK" to "NONE" (see page 29).
- You cannot adjust the rear speaker output level when you have set "REAR SPK" to "NONE" (see page 29).
- To adjust the front speaker output balance and subwoofer output level, see pages 27 and 28.

On the front panel:

1. **Press DSP MODE repeatedly until the DAP mode you want to adjust — THEATER 1, THEATER 2, HALL 1, HALL 2, LIVE CLUB, DANCE CLUB, or PAVILION — appears on the display.**

   DSP MODE

   The DSP MODE lamp on the front panel button lights up, and the DSP indicator also lights up on the display.
   - When you have set "REAR SPK" to "NONE," the 3D-PHONIC indicator also lights up.

2. **Adjust the speaker output levels.**
   1) **Press LEVEL ADJUST repeatedly until one of the following indications appears on the display.**

      LEVEL ADJUST

      "CENTER":
        To adjust the center speaker level.
      "REAR L":
        To adjust the left rear speaker level.
      "REAR R":
        To adjust the right rear speaker level.
   2) **Press CONTROL UP ▲/DOWN ▼ to adjust the selected speaker output level (from –10 dB to +10 dB).**

      CONTROL DOWN UP
      ▼ ▲
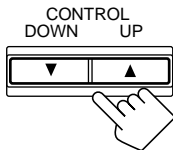
   3) **Repeat 1) and 2) to adjust the other speaker output levels.**

3. **Adjust the center tone.**
   1) **Press EFFECT repeatedly until "CTR TONE" appears on the display.**
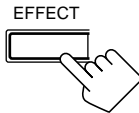
      EFFECT

      The display changes to show the current setting.
   2) **Press CONTROL UP ▲/DOWN ▼ to select the center tone level you want.**

      CONTROL DOWN UP
      ▼ ▲

      The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of.
      - Each time you press the button, the display changes to show the following:

```
  ┌─ CTR TONE 1 ⟷ CTR TONE 2 ⟷ CTR TONE 3 ─┐
  │     (Softer)        (Soft)        (Flat)   │
  └─→ CTR TONE 5 ⟵───── CTR TONE 4 ⟵─────┘
       (Sharper)              (Sharp)
```
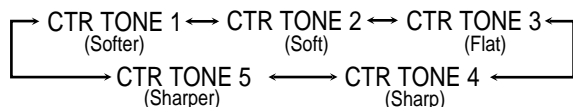
To make the dialogue softer, select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

4. **Adjust the overall levels of the effect.**
   1) **Press EFFECT repeatedly until "EFFECT" appears on the display.**
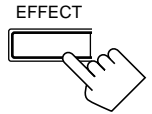
      EFFECT

      The display changes to show the current setting.
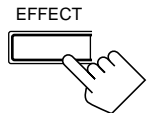   2) **Press CONTROL UP ▲/DOWN ▼ to select the effect level you want.**

      CONTROL DOWN UP
      ▼ ▲

      - Each time you press the button, the display changes to show the following:

```
  ┌─ EFFECT 1 ⟷ EFFECT 2 ⟷ EFFECT 3 ─┐
  │                                       │
  └─→ EFFECT 5 ⟷ EFFECT 4 ⟵─────────┘
```
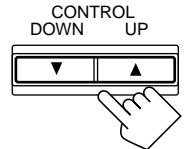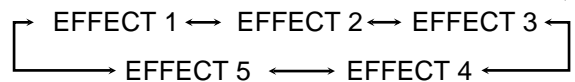
   As the number increases, the selected DAP effect becomes stronger. (Normally set it to "EFFECT 3.")
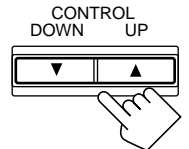
5. **Adjust the room size (sense of spaciousness).**
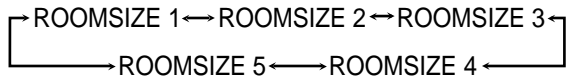   1) **Press EFFECT repeatedly until "ROOM SIZE" appears on the display.**

      EFFECT

      The display changes to show the current setting.
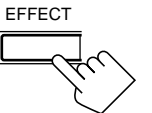   2) **Press CONTROL UP ▲/DOWN ▼ to select the room size you want.**

      CONTROL DOWN UP
      ▼ ▲

      - Each time you press the button, the display changes to show the following:

```
  ┌─ROOMSIZE 1 ⟷ ROOMSIZE 2 ⟷ ROOMSIZE 3─┐
  │                                           │
  └─→ ROOMSIZE 5 ⟵ ROOMSIZE 4 ⟵──────────┘
```

   As the number increases, the interval between reflections increases so that you will feel as if you were in a larger room. (Normally set it to "ROOMSIZE 3.")
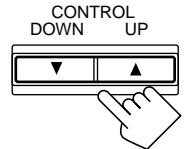
6. **Adjust the liveness.**
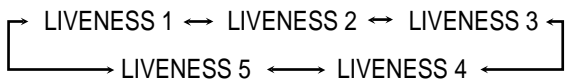   1) **Press EFFECT repeatedly until "LIVENESS" appears on the display.**

      EFFECT

      The display changes to show the current setting.
   2) **Press CONTROL UP ▲/DOWN ▼ to select the liveness level you want.**

      CONTROL DOWN UP
      ▼ ▲

      - Each time you press the button, the display changes to show the following:

```
  ┌─ LIVENESS 1 ⟷ LIVENESS 2 ⟷ LIVENESS 3 ─┐
  │                                             │
  └─→ LIVENESS 5 ⟷ LIVENESS 4 ⟵──────────┘
```
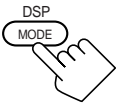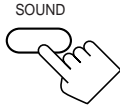
   As the number increases, the attenuation level of reflections over time decreases so that acoustics change from "Dead" to "Live." (Normally set it to "LIVENESS 3.")

1. Press DSP MODE repeatedly until the DAP mode you want to adjust — THEATER 1, THEATER 2, HALL 1, HALL 2, LIVE CLUB, DANCE CLUB, or PAVILION — appears on the display.

DSP MODE

The DSP MODE lamp on the front panel button lights up, and the DSP indicator also lights up on the display.
• When you have set "REAR SPK" to "NONE," the 3D-PHONIC indicator also lights up.

2. Press SOUND.
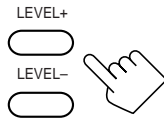
SOUND

The 10 keys are activated for sound adjustments.

3. Select the speaker you want to adjust.
• To select the center speaker level, press CENTER.
• To select the left rear speaker level, press REAR•L.
• To select the right rear speaker level, press REAR•R.

CENTER   REAR·L   REAR·R

4. Press LEVEL + or LEVEL – to adjust the speaker output levels (– 10 dB to +10 dB).

LEVEL+
LEVEL–

• Each time you press the button, the indication corresponding to the button selected in step 3 appears on the display window on the remote control.

5. Repeat steps 3 and 4 to adjust the other speaker output levels.

6. Press CENTER TONE to select the center tone level you want.

CENTER TONE

• Each time you press the button, the display changes to show the following:

CTR TONE 1 → CTR TONE 2 → CTR TONE 3 ┐
(Softer)   (Soft)   (Flat)
└ CTR TONE 5 ← CTR TONE 4 ←
(Sharper)   (Sharp)

To make the dialogue softer, select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

7. Press EFFECT to adjust the overall level of the effect.

EFFECT

• Each time you press the button, the effect level changes as follows:

EFFECT 1 → EFFECT 2 → EFFECT 3 ┐
└ EFFECT 5 ← EFFECT 4 ←
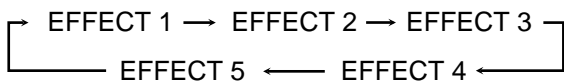
As the number increases, the selected DAP effect becomes stronger. (Normally set it to "EFFECT 3.")

**8. Press ROOM SIZE to adjust the room size (sense of spaciousness).**

ROOM SIZE

• Each time you press the button, the display changes to show the following:

ROOMSIZE 1 → ROOMSIZE 2 → ROOMSIZE 3 ┐
└ ROOMSIZE 5 ← ROOMSIZE 4 ←
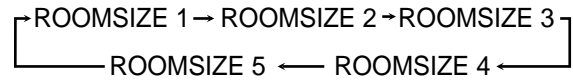
As the number increases, the interval between reflections increases so that you will feel as if you were in a larger room. (Normally set it to "ROOMSIZE 3.")

9. Press LIVENESS to adjust the liveness.

LIVENESS

• Each time you press the button, the display changes to show the following:
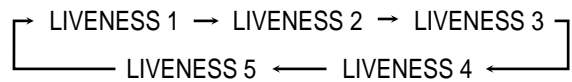
LIVENESS 1 → LIVENESS 2 → LIVENESS 3 ┐
└ LIVENESS 5 ← LIVENESS 4 ←

As the number increases, the attenuation level of reflections over time decreases so that acoustics change from "Dead" to "Live." (Normally set it to "LIVENESS 3.")

Adjusting the Surround Modes with the DAP Modes

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.
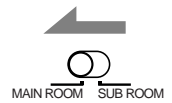
For the main room operations:
• The MAIN ROOM indicator is lit.
• The source name for the sub-room is not lit on the display.

• **When using the remote control:**
– Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
– Check to see if the following information appear on the display window on the remote control.

MAIN ROOM   SUB ROOM

Buttons	Indications
SOUND	SOUND

After pressing SOUND, the following function are assigned to the specific number buttons:

Buttons	Indications
EFFECT	SOUND
ROOM SIZE	
LIVENESS	
CENTER TONE	
CENTER	CTR
REAR•L	REARL
REAR•R	REARR

AUDIO POWER

Ex. "SOUND" appears on the display window.

SOUND

When you press the buttons listed above, the indication appears for 5 – 10 seconds for your confirmation.

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Before you start, remember...
- **Make sure that you have set the speaker information correctly (see page 29).**
- This function does not work when you activate the sub-room.
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 4 again.
- You cannot adjust the rear speaker output levels when you have set "REAR SPK" to "NONE." See page 29.
- You cannot adjust the center speaker output level and center tone when you have set "CTR SPK" to "NONE." See page 29.
- To adjust the front speaker output balance and subwoofer output level, see pages 27 and 28.

From the remote control:

1. **Select and play a sound source.**
   - To enjoy Dolby Pro Logic, play back a software encoded with Dolby Surround and labeled with ⊡⊡ DOLBY SURROUND mark.
   - To enjoy Dolby Digital, play back a software encoded with Dolby Digital and labeled with ⊡⊡ DOLBY DIGITAL mark.
   - To enjoy DTS Digital Surround, play back a software encoded with DTS Digital Surround and labeled with **dts** SURROUND mark.

2. **Press SURROUND ON/OFF to activate an appropriate Surround mode — PRO LOGIC, DOLBY DIGITAL or DTS SURROUND.**
   The SURROUND ON/OFF lamp on the front panel button lights up.
   - Each time you press the button, the Surround mode turns on and off alternately.
   - When "PRO LOGIC" is selected, the PRO LOGIC indicator lights up on the display.
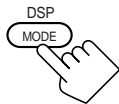
3. **Press DSP MODE repeatedly until the DAP mode you want to adjust — THEATER 1, THEATER 2, HALL 1, HALL 2, LIVE CLUB, DANCE CLUB, or PAVILION — appears on the display.**
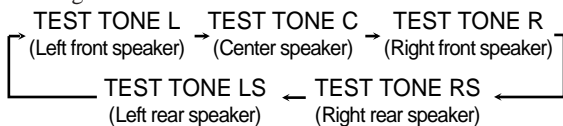   The DSP MODE lamp on the front panel button lights up, and the DSP indicator also lights up on the display.

4. **Press TEST to check the speaker output balance.**
   "TEST TONE L" starts flashing on the display, and a test tone comes out of the speakers in the following order:
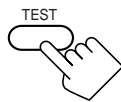
   TEST TONE L → TEST TONE C → TEST TONE R
   (Left front speaker)   (Center speaker)   (Right front speaker)
   ↑   ↓
   TEST TONE LS ← TEST TONE RS
   (Left rear speaker)   (Right rear speaker)

   Notes:
   - *You can adjust the speaker output levels without outputting the test tone.*
   - *No test tone comes out of the center speaker when "CTR SPK" is set to "NONE" (see page 29).*
   - *No test tone comes out of the rear speakers when "REAR SPK" is set to "NONE" (see page 29).*
   - *If the TV is turned on and the proper video input is selected on the TV, the test tone screen will appear on the TV.*

5. **Press SOUND.**
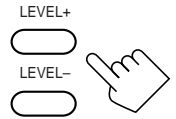   The 10 keys are activated for sound adjustments.
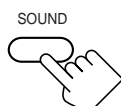
6. **Select the speaker you want to adjust.**
   - To select the center speaker level, press CENTER.
   - To select the left rear speaker level, press REAR•L.
   - To select the right rear speaker level, press REAR•R.

7. **Press LEVEL + or LEVEL – to adjust the speaker output levels (–10 dB to +10 dB).**
   - Each time you press the button, the indication corresponding to the button selected in step 6 appears on the display window on the remote control.

8. **Repeat steps 6 and 7 to adjust the other speaker output levels.**

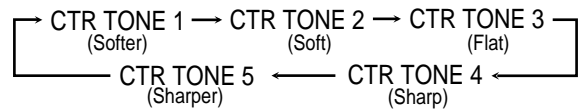9. **Press TEST again to stop the test tone.**
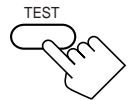
10. **Press CENTER TONE to select the center tone level you want.**
    The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of.
    - Each time you press the button, the display changes to show the following:

    → CTR TONE 1 → CTR TONE 2 → CTR TONE 3 →
       (Softer)   (Soft)   (Flat)
    ↑   ↓
    CTR TONE 5 ← CTR TONE 4
     (Sharper)   (Sharp)

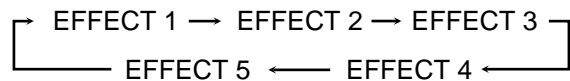   **To make the dialogue softer,** select "CTR TONE 1" or "CTR TONE 2."
    To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
    When "CTR TONE 3" is selected, no adjustment is applied.

11. **Press EFFECT to adjust the overall level of the effect.**
    - Each time you press the button, the effect level changes as follows:

    → EFFECT 1 → EFFECT 2 → EFFECT 3 →
    ↑   ↓
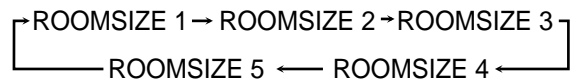   EFFECT 5 ← EFFECT 4

    As the number increases, DAP effect becomes stronger. (Normally set it to "EFFECT 3.")

12. **Press ROOM SIZE to adjust the room size (sense of spaciousness).**
   - Each time you press the button, the display changes to show the following:

    → ROOMSIZE 1 → ROOMSIZE 2 → ROOMSIZE 3 →
    ↑   ↓
    ROOMSIZE 5 ← ROOMSIZE 4

    As the number increases, the interval between reflections increases so that you will feel as if you were in a larger room. (Normally set it to "ROOMSIZE 3.")

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13.Press LIVENESS to adjust the liveness.

LIVENESS
9

- Each time you press the button, the display changes to show the following:

LIVENESS 1 → LIVENESS 2 → LIVENESS 3
LIVENESS 5 ← LIVENESS 4
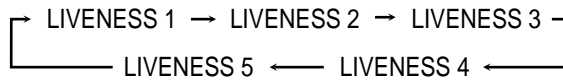
As the number increases, the attenuation level of reflections over time decreases so that acoustics change from "Dead" to "Live." (Normally set it to "LIVENESS 3.")
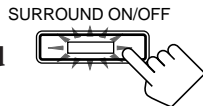
On the front panel:

You can also use the buttons on the front panel to adjust the sound with a Surround mode and a DAP mode. However, no test tone is available when using the buttons on the front panel. So, make adjustments while listening to the sound of the source played back.

1. Select and play a sound source.
- To enjoy Dolby Pro Logic, play back a software encoded with Dolby Surround and labeled with [DOLBY SURROUND] mark.
- To enjoy Dolby Digital, play back a software encoded with Dolby Digital and labeled with [DOLBY DIGITAL] mark.
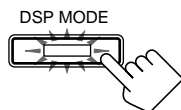- To enjoy DTS Digital Surround, play back a software encoded with DTS Digital Surround and labeled with [dts SURROUND] mark.

2. Press SURROUND ON/OFF to activate an appropriate Surround mode — PRO LOGIC, DOLBY DIGITAL or DTS SURROUND.

SURROUND ON/OFF

The SURROUND ON/OFF lamp on the front panel button lights up.
- Each time you press the button, the Surround mode turns on and off alternately.
- When "PRO LOGIC" is selected, the PRO LOGIC indicator lights up on the display.

3. Press DSP MODE repeatedly until the DAP mode you want to adjust — THEATER 1, THEATER 2, HALL 1, HALL 2, LIVE CLUB, DANCE CLUB, or PAVILION — appears on the display.

DSP MODE

The DSP MODE lamp on the front panel button lights up, and the DSP indicator also lights up on the display.

4. Adjust the speaker output levels.

LEVEL ADJUST

1) **Press LEVEL ADJUST repeatedly until one of the following indications appears on the display.**
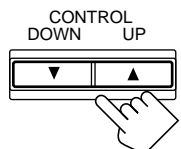"CENTER":
To adjust the center speaker level.
"REAR L":
To adjust the left rear speaker level.
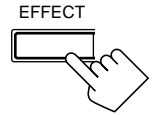"REAR R":
To adjust the right rear speaker level.
2) **Press CONTROL UP ▲/DOWN ▼ to adjust the selected speaker output level (from –10 dB to +10 dB).**

CONTROL
DOWN   UP
▼   ▲

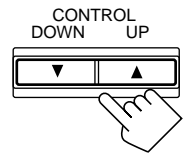3) **Repeat 1) and 2) to adjust the other speaker output levels.**

5. Adjust the center tone.

EFFECT

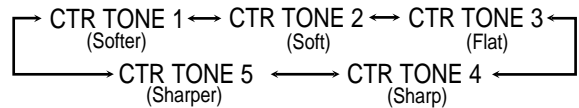1) **Press EFFECT repeatedly until "CTR TONE" appears on the display.**
The display changes to show the current setting.
2) **Press CONTROL UP ▲/DOWN ▼ to select the center tone level you want.**

CONTROL
DOWN   UP
▼   ▲

- Each time you press the button, the display changes to show the following:

CTR TONE 1 ←→ CTR TONE 2 ←→ CTR TONE 3
(Softer)   (Soft)   (Flat)
CTR TONE 5 ← CTR TONE 4
(Sharper)   (Sharp)

To make the dialogue softer, select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

6. Adjust the overall levels of the effect.

EFFECT

1) **Press EFFECT repeatedly until "EFFECT" appears on the display.**
The display changes to show the current setting.
2) **Press CONTROL UP ▲/DOWN ▼ to select the effect level you want.**

CONTROL
DOWN   UP
▼   ▲

- Each time you press the button, the display changes to show the following:

EFFECT 1 ←→ EFFECT 2 ←→ EFFECT 3
EFFECT 5 ← EFFECT 4
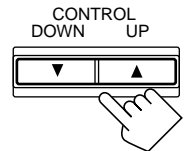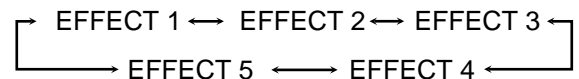
As the number increases, DAP effect becomes stronger. (Normally set it to "EFFECT 3.")

7. Adjust the room size (sense of spaciousness).

1) **Press EFFECT repeatedly until "ROOM SIZE" appears on the display.**

EFFECT

The display changes to show the current setting.

2) **Press CONTROL UP ▲/DOWN ▼ to select the room size you want.**

CONTROL
DOWN   UP
▼   ▲

- Each time you press the button, the display changes to show the following:
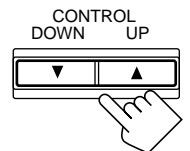
ROOMSIZE 1 ←→ ROOMSIZE 2 ←→ ROOMSIZE 3
ROOMSIZE 5 ← ROOMSIZE 4
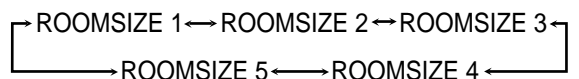
As the number increases, the interval between reflections increases so that you will feel as if you were in a larger room. (Normally set it to "ROOMSIZE 3.")

8. Adjust the liveness.

1) **Press EFFECT repeatedly until "LIVENESS" appears on the display.**
   The display changes to show the current setting.

EFFECT

2) **Press CONTROL UP ▲/DOWN ▼ to select the liveness level you want.**
   • Each time you press the button, the display changes to show the following:
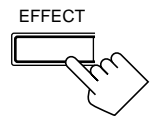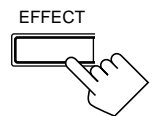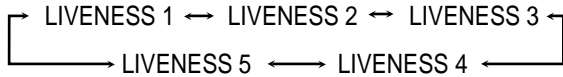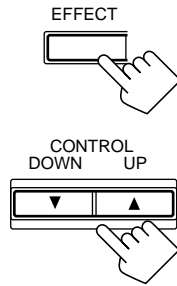
CONTROL
DOWN   UP

▼   ▲

$$\text{LIVENESS 1} \longleftrightarrow \text{LIVENESS 2} \longleftrightarrow \text{LIVENESS 3}$$
$$\text{LIVENESS 5} \longleftrightarrow \text{LIVENESS 4}$$

As the number increases, the attenuation level of reflections over time decreases so that acoustics change from "Dead" to "Live." (Normally set it to "LIVENESS 3.")
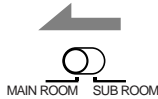
Adjusting the 5 CH/4 CH Stereo Mode

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
• The MAIN ROOM indicator is lit.
• The source name for the sub-room is not lit on the display.

• **When using the remote control:**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
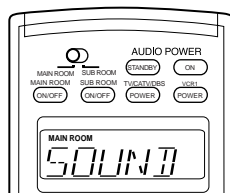 – Check to see if the following information appear on the display window on the remote control.

MAIN ROOM   SUB ROOM

Buttons	Indications
SOUND	SOUND

After pressing SOUND, the following function are assigned to the specific number buttons:

Buttons	Indications
CENTER TONE	SOUND
CENTER	CTR
REAR•L	REARL
REAR•R	REARR

Ex. "SOUND" appears on the display window.

AUDIO POWER
MAIN ROOM   SUB ROOM   STANDBY   ON
MAIN ROOM   SUB ROOM   TV/CATV/DBS   VCR1
ON/OFF   ON/OFF   POWER   POWER

MAIN ROOM
SOUND

When you press the buttons listed above, the indication appears for 5 – 10 seconds for your confirmation.

Before you start, remember...
• **Make sure that you have set the speaker information correctly (see page 29).**
• This function does not work when you activate the sub-room.
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 2 again.
• You cannot adjust the center speaker output level and select the center tone level for 4 CH Stereo mode.
• To adjust the front speaker output balance and subwoofer output level, see pages 27 and 28.

On the front panel:

1. Press DSP MODE repeatedly until "5CH STEREO*" appears on the display.
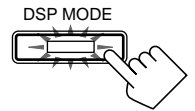
DSP MODE

The DSP MODE lamp on the front panel button lights up, and the DSP indicator also lights up on the display.
* "4CH STEREO" appears on the display when you have set "CTR SPK" to "NONE." (See page 29.)

2. Adjust the speaker output levels.

1) **Press LEVEL ADJUST repeatedly until one of the following indications appears on the display.**
   "CENTER": (for 5CH STEREO only)
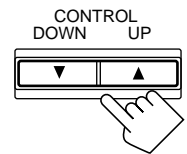   To adjust the center speaker level.
   "REAR L":
     To adjust the left rear speaker level.
   "REAR R":
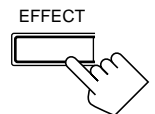   To adjust the right rear speaker level.

LEVEL
ADJUST

2) **Press CONTROL UP ▲/DOWN ▼ to adjust the selected speaker output level (from –10 dB to +10 dB).**
3) **Repeat 1) and 2) to adjust the other speaker output levels.**

CONTROL
DOWN   UP

▼   ▲

3. Adjust the center tone (for 5CH STEREO only.)

1) **Press EFFECT repeatedly until "CTR TONE" appears on the display.**
   The display changes to show the current setting.

EFFECT

2) **Press CONTROL UP ▲/DOWN ▼ to select the center tone level you want.**
   • The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of.
   • Each time you press the button, the display changes to show the following:

CONTROL
DOWN   UP

▼   ▲

$$\text{CTR TONE 1} \longleftrightarrow \text{CTR TONE 2} \longleftrightarrow \text{CTR TONE 3}$$
(Softer)   (Soft)   (Flat)
$$\text{CTR TONE 5} \longleftrightarrow \text{CTR TONE 4}$$
(Sharper)   (Sharp)

To make the dialogue softer, select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

Adjusting the 3D-PHONIC Modes

From the remote control:

1. Press DSP MODE repeatedly until "5CH STEREO*" appears on the display.

The DSP MODE lamp on the front panel button lights up, and the DSP indicator also lights up on the display.

* "4CH STEREO" appears on the display when you have set "CTR SPK" to "NONE." (See page 29.)

2. Press SOUND.

The 10 keys are activated for sound adjustments.
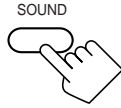
3. Select the speaker you want to adjust.
• To select the center speaker level, press CENTER (for 5CH STEREO only).
• To select the left rear speaker level, press REAR•L.
• To select the right rear speaker level, press REAR•R.

CENTER   REAR·L   REAR-R

       4   7   8

4. Press LEVEL + or LEVEL – to adjust the speaker output levels (–10 dB to +10 dB).

LEVEL+

LEVEL–

• Each time you press the button, the indication corresponding to the button selected in step 3 appears on the display window on the remote control.

5. Repeat steps 3 and 4 to adjust the other speaker output levels.

6. Press CENTER TONE to select the center tone level you want (for 5CH STEREO only).

CENTER TONE

• The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of.
• Each time you press the button, the display changes to show the following:

CTR TONE 1 → CTR TONE 2 → CTR TONE 3
(Softer)   (Soft)   (Flat)
        CTR TONE 5 ← CTR TONE 4
          (Sharper)   (Sharp)

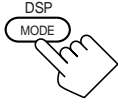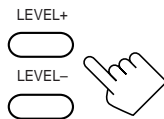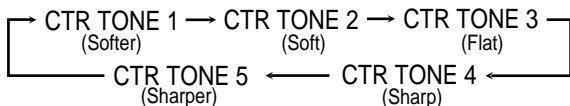**To make the dialogue softer,** select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

Once you have adjusted the 3D-PHONIC modes, the adjustment is memorized for each source.
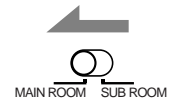
IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
• The MAIN ROOM indicator is lit.
• The source name for the sub-room is not lit on the display.

• **When using the remote control:**
– Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
– Check to see if the following information appear on the display window on the remote control.

MAIN ROOM   SUB ROOM

Buttons	Indications
SOUND	SOUND

After pressing SOUND, the following function are assigned to the specific number buttons:

Buttons	Indications
EFFECT	SOUND
CENTER TONE	
CENTER	CTR
REAR•L	REARL
REAR•R	REARR

Ex. "SOUND" appears on the display window.

MAIN ROOM   SUB ROOM   AUDIO POWER
MAIN ROOM   SUB ROOM   STANDBY   ON
ON/OFF   ON/OFF   TV/CATV/DBS   VCR1
                      POWER   POWER

MAIN ROOM
SOUND

When you press the buttons listed above, the indication appears for 5 – 10 seconds for your confirmation.

Before you start, remember...
• **Make sure that you have set the speaker information correctly (see page 29).**
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 2 again.
• You cannot adjust the center speaker output level when you have set "CTR SPK" to "NONE" See page 29.
• To adjust the front speaker output balance and subwoofer output level, see pages 27 and 28.
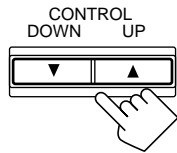
47

On the front panel:

1. Press DSP MODE repeatedly until "3D ACTION" or "3D DIGITAL" appears on the display.

DSP MODE

The DSP MODE lamp on the front panel button lights up, and the 3D-PHONIC and DSP indicators also light up on the display.
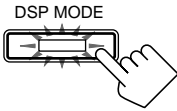
2. Adjust the center speaker output level.

LEVEL ADJUST

1) **Press LEVEL ADJUST repeatedly until "CENTER" appears on the display.**
2) **Press CONTROL UP ▲/DOWN ▼ to adjust the center speaker output level (from –10 dB to +10 dB).**
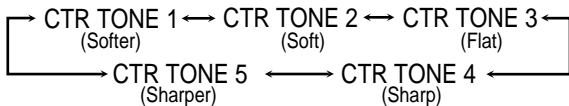
CONTROL DOWN UP

3. Adjust the center tone.

1) **Press EFFECT repeatedly until "CTR TONE" appears on the display.**
   The display changes to show the current setting.

EFFECT

2) **Press CONTROL UP ▲/DOWN ▼ to select the center tone level you want.**
   The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of.
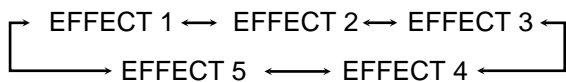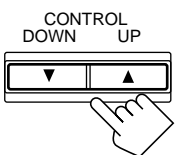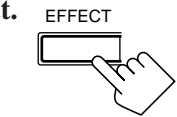   • Each time you press the button, the display changes to show the following:

CONTROL DOWN UP

> CTR TONE 1 ⟷ CTR TONE 2 ⟷ CTR TONE 3
> (Softer)   (Soft)   (Flat)
> CTR TONE 5 ⟷ CTR TONE 4
> (Sharper)   (Sharp)

To make the dialogue softer, select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

4. Adjust the overall levels of the effect.

EFFECT

1) **Press EFFECT repeatedly until "EFFECT" appears on the display.**
   The display changes to show the current setting.
2) **Press CONTROL UP ▲/DOWN ▼ to select the effect level you want.**
   • Each time you press the button, the display changes to show the following:

CONTROL DOWN UP

> EFFECT 1 ⟷ EFFECT 2 ⟷ EFFECT 3
> EFFECT 5 ⟷ EFFECT 4

As the number increases, the selected 3D effect mode becomes stronger. (Normally set it to "EFFECT 3.")

From the remote control:

1. Press DSP MODE repeatedly until "3D ACTION" or "3D DIGITAL" appears on the display.

DSP MODE

The DSP MODE lamp on the front panel button lights up, and the 3D-PHONIC and DSP indicators also light up on the display.

2. Press SOUND.

SOUND

The 10 keys are activated for sound adjustments.
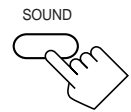
3. Press CENTER to select the center speaker.

CENTER
4

4. Press LEVEL + or LEVEL – to adjust the center speaker output levels (from –10 dB to +10 dB).

LEVEL+
LEVEL–

• Each time you press the button, "CTR" appears on the display window on the remote control.
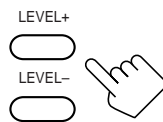
5. Press CENTER TONE to select the center tone level you want.

CENTER TONE

• Each time you press the button, the display changes to show the following:

> CTR TONE 1 → CTR TONE 2 → CTR TONE 3
> (Softer)   (Soft)   (Flat)
> CTR TONE 5 ← CTR TONE 4
> (Sharper)   (Sharp)

To make the dialogue softer, select "CTR TONE 1" or "CTR TONE 2."
To make the dialogue clearer, select "CTR TONE 4" or "CTR TONE 5."
When "CTR TONE 3" is selected, no adjustment is applied.

6. Press EFFECT to adjust the overall level of the effect.

EFFECT
3

• Each time you press the button, the effect level changes as follows:

> EFFECT 1 → EFFECT 2 → EFFECT 3
> EFFECT 5 ← EFFECT 4
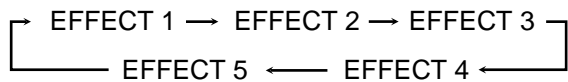
As the number increases, 3D effect mode becomes stronger. (Normally set it to "EFFECT 3.")

Using the DVD MULTI Playback Mode

This receiver provides the DVD MULTI playback mode for reproducing the analog discrete output mode of the DVD player. Before playing back a DVD, refer also to the manual supplied for the DVD player.
• You can use "On-screen Menu" for most of the main room operations. For details, see page 50.

The following operations are only possible while the receiver is ready for the main room operations, and are only used for the main room source — DVD MULTI.

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
• The MAIN ROOM indicator is lit.
• The source name for the sub-room is not lit on the display.

• **When using the remote control:**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
  – Check to see if the following information appear on the display window on the remote control.

MAIN ROOM   SUB ROOM

Buttons	Indications
SOUND	SOUND

After pressing SOUND, the following function are assigned to the specific number buttons:

Buttons	Indications
CENTER	CTR
REAR•L	REARL
REAR•R	REARR

Activating the DVD MULTI Playback Mode

You can adjust the DVD MULTI playback mode while playing back a DVD using the analog discrete output mode on the DVD player. Once you have made adjustments, the receiver memorizes the adjustments until you change them. You also need to set the DVD player to the analog discrete output mode.

Before you start, remember...
• When the SUB ROOM and the SPEAKERS SUB ROOM indicators are lit on the display, you cannot select "DVD MULTI" as the main room source.
• There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 3 again.
• To adjust the front speaker output balance and subwoofer output level, see pages 27 and 28.

On the front panel:

DVD MULTI

1. Press DVD MULTI so that "DVD MULTI" appears on the display.

   Note:

   When you select "DVD MULTI" as the main room source to play, the Surround /DSP modes are canceled temporarily, and the SURROUND ON/OFF and DSP MODE buttons do not work.

2. Select the analog discrete output mode on the DVD player, and start playing a DVD.
   • Refer to the manual supplied with the DVD player.

If you need to make any adjustment, go to the following steps.

3. Adjust the speaker output levels.

LEVEL ADJUST

   1) **Press LEVEL ADJUST repeatedly until one of the following indications appears on the display.**

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   "CENTER":
      To adjust the center speaker level.
   "REAR L":
      To adjust the left rear speaker level.
   "REAR R":
      To adjust the right rear speaker level.

2) **Press CONTROL UP ▲/DOWN ▼ to adjust the selected speaker output level (from –10 dB to +10 dB).**

CONTROL
DOWN   UP
▼   ▲

3) **Repeat 1) and 2) to adjust the other speaker output levels.**

Notes:
• *You cannot adjust the center tone level.*
• *You cannot use the Midnight Mode for DVD MULTI playback mode (see page 21).*
• *When using a pair of headphones, the sounds of front left and right are outputted from the headphones.*

From the remote control:

1. Press DVD MULTI so that "DVD MULTI" appears on the display.

DVD MULTI

   Note:

   When you select "DVD MULTI" as the main room source to play, the Surround/DSP modes are canceled temporarily, and the SURROUND ON/OFF and DSP MODE buttons do not work.

2. Select the analog discrete output mode on the DVD player, and start playing a DVD.
   • Refer to the manual supplied with the DVD player.

If you need to make any adjustment, go to the following steps.

SOUND

3. Press SOUND.

The 10 keys are activated for adjusting the sound.
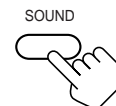
4. Select the speaker you want to adjust.
   • To select the center speaker level, press CENTER.
   • To select the left rear speaker level, press REAR•L.
   • To select the right rear speaker level, press REAR•R.
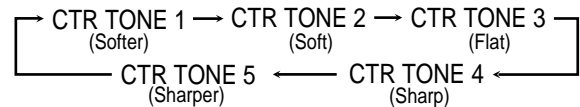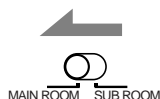
CENTER   REAR•L   REAR•R

5. Press LEVEL + or LEVEL – to adjust the speaker output levels (from –10 dB to +10 dB).
   • Each time you press the button, the indication corresponding to the button selected in step 4 appears on the display window on the remote control.
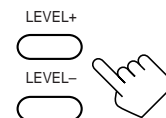
LEVEL+
LEVEL–

6. Repeat steps 4 and 5 to adjust the other speaker output levels.

Using the On-Screen Menus

You use the black-and-white color Menus on the TV screen to control the receiver.
To use this function, you need to connect the TV to the MONITOR OUT jack on the rear panel (see page 9), and set the TV's input mode to the proper position to which the receiver is connected.
* *When the TV's input mode is incorrect; for example, a different video input or TV tuner mode is selected, you cannot show the Menus on the TV screen.*

The following operations are only possible while the receiver is ready for the main room operations, and are used for the main room sources.

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
* The MAIN ROOM indicator is lit.
* The source name for the sub-room is not lit on the display.
* **When using the remote control:**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
  – Check to see if the following information appear on the display window on the remote control.

MAIN ROOM   SUB ROOM

On-Screen Operation buttons (on the remote control)

"MENU" appears on the display window of the remote control when you press the buttons — MENU, △ / ▽ / ◁ / ▷, SET, EXIT.

Ex. When you press MENU with the multi-room operation selector set to "MAIN ROOM."

■ Showing the MENU on the TV Screen

Press MENU.

The MENU appears on the TV.
* Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

```
MENU                    JVC
  SOURCE  :   CD
☞SURROUND:PRO LOGIC
  DSP MODE:THEATER1
  INPUT   :ANALOG
  x x    SOUND  CONTROL   x x
  x x    TUNER  CONTROL   x x
  x x        SETTING      x x
               ◀▶:OPERATE
  VOLUME  :  20▊▊▊--------------
```
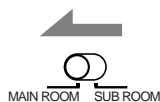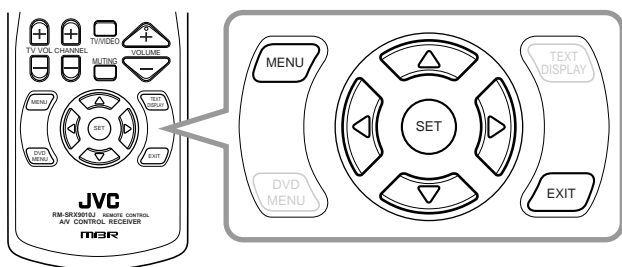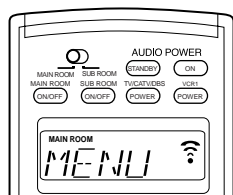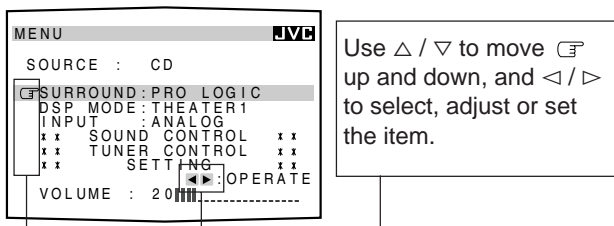
Use △ / ▽ to move ☞ up and down, and ◁ / ▷ to select, adjust or set the item.

Notes:
* "INPUT" appears only when the digital input (DIGITAL IN) terminal setting has been correctly done for the digital source currently selected. (See page 30.)
* The on-screen display will disappear if no operation is done for about 1 minute.

■ Activating the Surround Modes

(Also see page 40)

1. Press MENU.
The MENU appears on the TV.
* Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. Press △ / ▽ to move ☞ to "SURROUND."

3. Press ◁ / ▷ to select the Surround mode you want to use.

4. When you finish, press EXIT.
The menu disappears from the TV.

```
MENU                    JVC
  SOURCE  :   CD
☞SURROUND:PRO LOGIC
  DSP MODE:THEATER1
  INPUT   :ANALOG
  x x    SOUND  CONTROL   x x
  x x    TUNER  CONTROL   x x
  x x        SETTING
               ◀▶:OPERATE
  VOLUME  :  20▊▊▊--------------
```
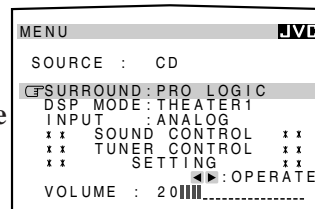
■ Activating the DAP Modes (Also see page 41)

1. Press MENU.
The MENU appears on the TV.
* Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. Press △ / ▽ to move ☞ to "DSP MODE."

3. Press ◁ / ▷ to select the DSP mode you want to use.

4. When you finish, press EXIT.
The menu disappears from the TV.

```
MENU                    JVC
  SOURCE  :   CD
  SURROUND:PRO LOGIC
☞DSP MODE:THEATER1
  INPUT   :ANALOG
  x x    SOUND  CONTROL   x x
  x x    TUNER  CONTROL   x x
  x x        SETTING      x x
               ◀▶:OPERATE
  VOLUME  :  20▊▊▊--------------
```
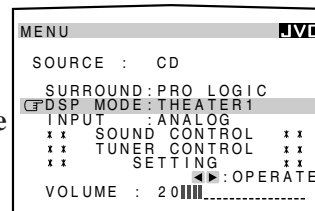
Note:
If "DVD MULTI" is selected as a playing source, "SURROUND" and "DSP MODE" do not appear on the display.

■ Selecting the Analog or Digital Input Mode

(Also see page 31)

This selection is only possible when the digital input (DIGITAL IN) terminal setting has been correctly done for the digital source currently selected. (See page 30.)

1. Press MENU.
The MENU appears on the TV.
* Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. Press △ / ▽ to move ☞ to "INPUT."

3. Press ◁ / ▷ to select the analog or digital input mode you want.
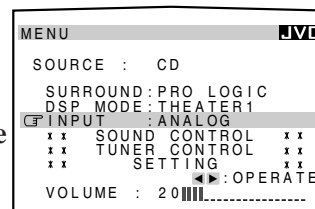
4. When you finish, press EXIT.
The menu disappears from the TV.

```
MENU                    JVC
  SOURCE  :   CD
  SURROUND:PRO LOGIC
  DSP MODE:THEATER1
☞INPUT   :ANALOG
  x x    SOUND  CONTROL   x x
  x x    TUNER  CONTROL   x x
  x x        SETTING      x x
               ◀▶:OPERATE
  VOLUME  :  20▊▊▊--------------
```

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■ Adjusting the Equalization Patterns
(Also see page 20)

1. Press MENU.
The MENU appears on the TV.
- Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. Press △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.
The SOUND CONTROL menu appears.

3. Press △ / ▽ to move ☞ to "DIGITAL EQ," then press ◁ / ▷.
The DIGITAL EQ menu appears.

```
SOUND CONTROL        JVC
☞xx     DIGITAL EQ    xx
  xx     LEVEL ADJUST  xx
  xx     EFFECT ADJUST xx
  MIDNIGHT MODE: NORMAL
  INPUT ATT   : NORMAL
  LINE DIRECT: OFF
  BASS BOOST : OFF
  SUBWOOFER  : ON
              ◀▶:ENTER
```
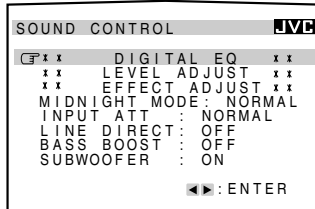
4. Press △ / ▽ to move ☞ to the frequency you want to adjust.

```
DIGITAL EQ           JVC
☞FRONT   63Hz :  0dB
  FRONT  250Hz :  0dB
  FRONT   1kHz :  0dB
  FRONT   4kHz :  0dB
  FRONT  16kHz :  0dB
              ◀▶:OPERATE
```

5. Press ◁ / ▷ to adjust the frequency level you want.
The frequency level changes by 2 dB from –8 dB to +8 dB.
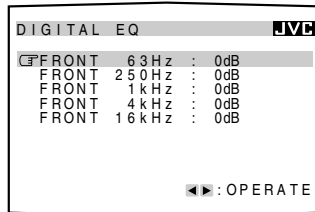
6. When you finish, press EXIT repeatedly until the menu disappears from the TV.

■ Adjusting the Surround and DSP Modes
(Also see pages 40 – 48)

You can use a Surround mode with a DAP mode, but not with the 5 CH/4 CH Stereo mode and 3D PHONIC mode.

1. Press MENU.
The MENU appears on the TV.
- Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. Select Surround mode and/or DSP mode you like to adjust (see page 50).

3. Press △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.
The SOUND CONTROL menu appears.

4. Press △ / ▽ to move ☞ to "LEVEL ADJUST," then press ◁ / ▷.
The LEVEL ADJUST menu appears.

```
SOUND CONTROL        JVC
  xx     DIGITAL EQ    xx
☞xx     LEVEL ADJUST  xx
  xx     EFFECT ADJUST xx
  MIDNIGHT MODE: NORMAL
  INPUT ATT   : NORMAL
  LINE DIRECT: OFF
  BASS BOOST : OFF
  SUBWOOFER  : ON
              ◀▶:ENTER
```

5. Press △ / ▽ to move ☞ to the item you want to set or adjust, then press ◁ / ▷.
On these adjustment menus, you can do the following:

```
LEVEL ADJUST         JVC

☞TEST TONE    : OFF
  L/R BALANCE  : CENTER
  CENTER LEVEL:    0dB
  REAR L LEVEL:    0dB
  REAR R LEVEL:    0dB
  SUBWFR LEVEL:    0dB
              ◀▶:OPERATE
```
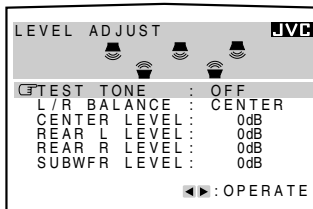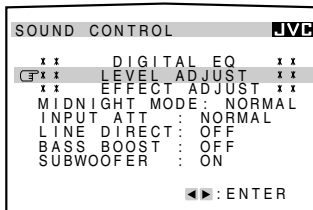
For Surround modes and Surround mode with DAP mode:

"TEST TONE":	Output a test tone.
"L/R BALANCE":	Adjust the right and left balance of the front speakers.
"CENTER LEVEL":	Adjust the center speaker output level. *
"REAR L LEVEL":	Adjust the left rear speaker output level. **
"REAR R LEVEL":	Adjust the right rear speaker output level. **
"SUBWFR LEVEL":	Adjust the subwoofer output level. ***

For DAP mode:

"L/R BALANCE":	Adjust the right and left balance of the front speakers.
"CENTER LEVEL":	Adjust the center speaker output level. *
"REAR L LEVEL":	Adjust the left rear speaker output level. **
"REAR R LEVEL":	Adjust the right rear speaker output level. **
"SUBWFR LEVEL":	Adjust the subwoofer output level. ***

For 5 CH/4 CH Stereo mode:

"L/R BALANCE":	Adjust the right and left balance of the front speakers.
"CENTER LEVEL":	Adjust the center speaker output level. ****
"REAR L LEVEL":	Adjust the left rear speaker output level. **
"REAR R LEVEL":	Adjust the right rear speaker output level. **
"SUBWFR LEVEL":	Adjust the subwoofer output level. ***

For 3D-PHONIC mode:

"L/R BALANCE":	Adjust the right and left balance of the front speakers.
"CENTER LEVEL":	Adjust the center speaker output level. *
"SUBWFR LEVEL":	Adjust the subwoofer output level.***

For SURR. OFF (DSP OFF):

"L/R BALANCE":	Adjust the right and left balance of the front speakers.
"SUBWFR LEVEL":	Adjust the subwoofer output level.***

Notes:
* You cannot select "CENTER LEVEL" when "CTR SPK" is set to "NONE" (see page 29).
** You cannot select both "REAR L LEVEL" and "REAR R LEVEL" when "REAR SPK" is set to "NONE" (see page 29).
*** You cannot select "SUBWFR LEVEL" when "SUBWFR" is set to "NO" (see page 28).
**** You cannot select "CENTER LEVEL" when 4 CH Stereo mode is selected.

6. Press EXIT once.

7. Press △ / ▽ to move ☞ to "EFFECT ADJUST," then press ◁ / ▷.
The EFFECT LEVEL menu appears.

```
SOUND CONTROL           JVC
  x x      DIGITAL EQ      x x
  x x      LEVEL ADJUST    x x
☞ x x      EFFECT ADJUST   x x
  MIDNIGHT MODE : NORMAL
  INPUT ATT    : NORMAL
  LINE DIRECT  : OFF
  BASS BOOST   : OFF
  SUBWOOFER    : ON

              ◀▶ : ENTER
```

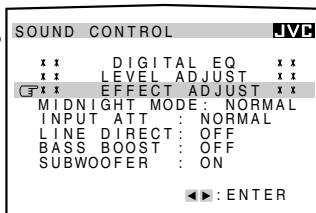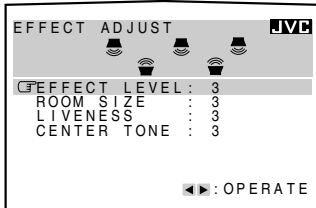**8. Press △ / ▽ to move ☞ to the item you want to adjust, then press ◁ / ▷.**
On these adjustment menus, you can do the following.

```
EFFECT ADJUST           JVC



☞ EFFECT LEVEL : 3
  ROOM SIZE    : 3
  LIVENESS     : 3
  CENTER TONE  : 3


              ◀▶ : OPERATE
```

For Surround mode:
"CENTER TONE":   Select the center tone level. *

For Surround with DAP mode, DAP mode:
"EFFECT LEVEL":   Adjust the surround effect level.
"ROOM SIZE":   Adjust the room size effect.
"LIVENESS":   Adjust the liveness level.
"CENTER TONE":   Select the center tone level. *

For 5 CH Stereo mode:
"CENTER TONE":   Select the center tone level.

For 3D-PHONIC mode:
"EFFECT LEVEL":   Adjust the surround effect level.
"CENTER TONE":   Select the center tone level. *

Note:
- *You cannot select "EFFECT ADJUST" in step 7, when both of the Surround and DSP modes are deactivated.*
- ** You cannot select "CENTER TONE" when "CTR SPK" is set to "NONE" (see page 29).*

9. When you finish, press EXIT repeatedly until the menu disappears from the TV.

■ Adjusting the DVD MULTI Playback Mode
(Also see page 49)

1. Select DVD MULTI as the playing source.
Press DVD MULTI.

2. Press MENU.
The MENU appears on the TV.
- Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

3. Press △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.
The SOUND CONTROL menu appears.

4. Press △ / ▽ to move ☞ to "LEVEL ADJUST," then press ◁ / ▷.
The LEVEL ADJUST menu appears.

```
LEVEL ADJUST            JVC



  TEST TONE    :
☞ L/R BALANCE  : CENTER
  CENTER LEVEL :    0dB
  REAR L LEVEL :    0dB
  REAR R LEVEL :    0dB
  SUBWFR LEVEL :    0dB

              ◀▶ : OPERATE
```
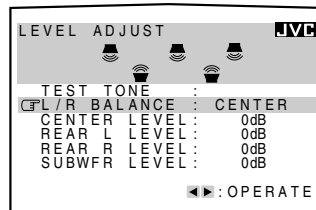
5. Press △ / ▽ to move ☞ to the item you want to set or adjust, then press ◁ / ▷.
On this adjustment menu, you can do the following:
"L/R BALANCE":   Adjust the right and left balance of the front speakers .
"CENTER LEVEL":   Adjust the center speaker output level.
"REAR L LEVEL":   Adjust the left rear speaker output level.
"REAR R LEVEL":   Adjust the right rear speaker output level.
"SUBWFR LEVEL":   Adjust the subwoofer output level.

6. When you finish, press EXIT repeatedly until the menu disappears from the TV.

■ Listening at Night — Midnight Mode
(Also see page 21)

1. Press MENU.
The MENU appears on the TV.
- Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. Press △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.
The SOUND CONTROL menu appears.

3. Press △ / ▽ to move to "MIDNIGHT MODE."

4. Press ◁ / ▷ to select the mode you want to use.

```
SOUND CONTROL           JVC
  x x      DIGITAL EQ      x x
  x x      LEVEL ADJUST    x x
  x x      EFFECT ADJUST   x x
☞ MIDNIGHT MODE : NORMAL
  INPUT ATT    : NORMAL
  LINE DIRECT  : OFF
  BASS BOOST   : OFF
  SUBWOOFER    : ON

              ◀▶ : OPERATE
```
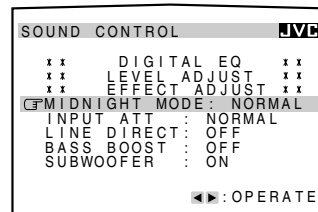
5. When you finish, press EXIT repeatedly until the menu disappears from the TV.

■ Attenuating the Input Signal
(Also see page 21)

1. Press MENU.
The MENU appears on the TV.
- Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. Press △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.
The SOUND CONTROL menu appears.

3. Press △ / ▽ to move ☞ to "INPUT ATT."

4. Press ◁ / ▷ to select the Input Attenuator mode "ATT ON" or "NORMAL."

```
SOUND CONTROL           JVC
  x x      DIGITAL EQ      x x
  x x      LEVEL ADJUST    x x
  x x      EFFECT ADJUST   x x
  MIDNIGHT MODE : NORMAL
☞ INPUT ATT    : NORMAL
  LINE DIRECT  : OFF
  BASS BOOST   : OFF
  SUBWOOFER    : ON

              ◀▶ : OPERATE
```

5. When you finish, press EXIT repeatedly until the menu disappears from the TV.

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■ Selecting the Line Direct Function
(Also see page 22)

1. **Press MENU.**
   The MENU appears on the TV.
   • Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. **Press △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears.

3. **Press △ / ▽ to move ☞ to "LINE DIRECT."**

4. **Press ◁ / ▷ to turn the line direct function "ON" or "OFF."**

```
SOUND CONTROL          JVC
  x x     DIGITAL EQ     x x
  x x    LEVEL ADJUST    x x
  x x    EFFECT ADJUST   x x
 MIDNIGHT MODE : NORMAL
 INPUT ATT   : NORMAL
☞LINE DIRECT : OFF
 BASS BOOST  : OFF
 SUBWOOFER   : ON

              ◄►:OPERATE
```

5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

■ Selecting the Bass Boost Function
(Also see page 21)

1. **Press MENU.**
   The MENU appears on the TV.
   • Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. **Press △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears.

3. **Press △ / ▽ to move ☞ to "BASS BOOST."**

4. **Press ◁ / ▷ to turn the bass boost function "ON" or "OFF."**

```
SOUND CONTROL          JVC
  x x     DIGITAL EQ     x x
  x x    LEVEL ADJUST    x x
  x x    EFFECT ADJUST   x x
 MIDNIGHT MODE : NORMAL
 INPUT ATT   : NORMAL
 LINE DIRECT : OFF
☞BASS BOOST  : OFF
 SUBWOOFER   : ON

              ◄►:OPERATE
```

5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

■ Activating the Subwoofer Sound
(Also see page 21)

1. **Press MENU.**
   The MENU appears on the TV.
   • Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. **Press △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears.

3. **Press △ / ▽ to move ☞ to "SUBWOOFER."**

4. **Press ◁ / ▷ to turn the subwoofer output "ON" or "OFF."**

```
SOUND CONTROL          JVC
  x x     DIGITAL EQ     x x
  x x    LEVEL ADJUST    x x
  x x    EFFECT ADJUST   x x
 MIDNIGHT MODE : NORMAL
 INPUT ATT   : NORMAL
 LINE DIRECT : OFF
 BASS BOOST  : OFF
☞SUBWOOFER   : ON

              ◄►:OPERATE
```

5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

■ Operating the Tuner
(Also see pages 35 and 36)

1. **Select FM or AM as the playing source.**
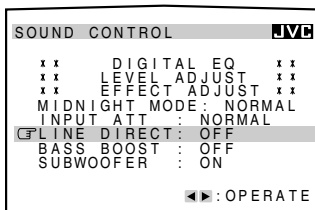   Press FM/AM.

2. **Press MENU.**
   The MENU appears on the TV.
   • Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

3. **Press △ / ▽ to move ☞ to "TUNER CONTROL," then press ◁ / ▷.**
   The TUNER CONTROL menu appears.

```
MENU                   JVC
 SOURCE : ch-- FM 87.5 MHz

 SURROUND:PRO LOGIC
 DSP MODE:THEATER1

  x x    SOUND CONTROL   x x
☞ x x    TUNER CONTROL   x x
  x x      SETTING       x x
              ◄►:ENTER
 VOLUME : 20▮▮▮▮----------
```
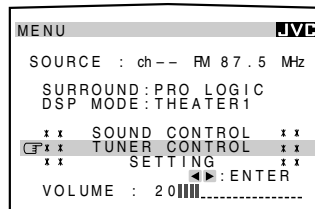
4. **Press △ / ▽ to move ☞ to the item you want to set, then press ◁ / ▷.**
   On the TUNER CONTROL menu, you can do the following:

```
TUNER CONTROL          JVC
☞BAND       : FM
 PRESET CH  : --
 FREQUENCY  : 87.5 MHz
 FM MODE    : AUTO MUTING

  x x   PRESET MEMORY   x x



              ◄►:ENTER
```
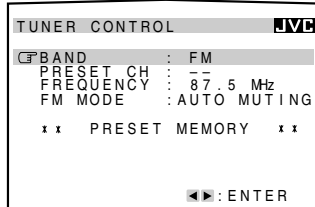
"BAND":	Select the band.
"PRESET CH":	Select a preset channel station.
"FREQUENCY":	Tune in a station manually.
"FM MODE":	Select the FM reception mode.*
"PRESET MEMORY":	See "Storing the Preset Stations" on page 54.

Note:

∗ Not displayed when an AM station is selected.

5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

■ Storing the Preset Stations (Also see page 35)
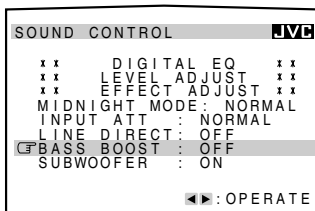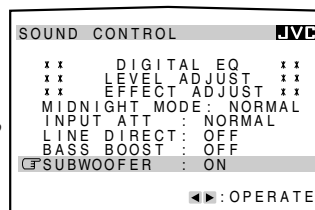
1. Press MENU.
   The MENU appears on the TV.
   • Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

2. Press △ / ▽ to move ☞ to "TUNER CONTROL," then press ◁ / ▷.
   The TUNER CONTROL menu appears.

3. Tune into a station on the TUNER CONTROL menu, referring to "Operating the Tuner" on page 53.

4. Press △ / ▽ to move ☞ to "PRESET MEMORY," then press ◁ / ▷.
   ☞ moves to "PRESET CH" and the channel number starts flashing.

```
TUNER  CONTROL            JVC
 BAND        :  FM
 PRESET CH   :  20
 FREQUENCY   :  87.5 MHz
 FM MODE     :AUTO MUTING
☞xx   PRESET  MEMORY   xx

              SET :MEMORY
              ◀▶ :OPERATE
```
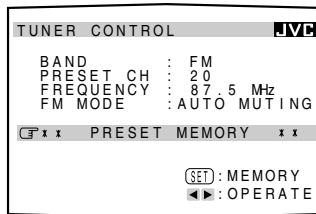
5. Press ◁ / ▷ to select a preset station number you want.

6. Press SET to store the setting.
   The selected channel number stops flashing.

7. When you finish, press EXIT repeatedly until the menu disappears from the TV.

■ Setting the Basic Setting Items
(Also see pages 27 – 34)

1. Press MENU.
   The MENU appears on the TV.
   • Pressing one of the △ / ▽ / ◁ / ▷ buttons also displays the MENU.

```
MENU                     JVC
 SOURCE  :  CD
 SURROUND:PRO LOGIC
 DSP MODE:THEATER1
 INPUT   :ANALOG
 xx   SOUND CONTROL   xx
 xx   TUNER CONTROL   xx
☞xx      SETTING      xx
              ◀▶ :ENTER
 VOLUME  :  20||||--------------
```

2. Press △ / ▽ to move ☞ to "SETTING," then press ◁ / ▷.
   The SETTING 1 appears.

```
SETTING 1                JVC
☞SUBWOOFER  :  NO
 FRONT  SPK :  LARGE
 CENTER SPK :  SMALL
 REAR   SPK :  SMALL
 CNTR  DELAY:  0msec
 REAR  DELAY:  5msec
 CROSSOVER  :  80Hz
 FRONT SPK2 :  MAIN ROOM
 ONE TOUCH OPR :  OFF
 xx    NEXT PAGE    xx
              ◀▶ :OPETATE
```

3. Press △ / ▽ to move ☞ to the item you want to set or adjust, then press ◁ / ▷.
   • To go to the SETTING 2 menu, move ☞ to "NEXT PAGE," then press ◁ / ▷.
   • To go back to the SETTING 1 menu, move ☞ to "PREVIOUS PAGE," then press ◁ / ▷.

```
SETTING 2                JVC
☞DIGITAL 1  :  DVD
 DIGITAL 2  :  CD
 DIGITAL 3  :  TV
 DIGITAL 4  :  CDR
 VIDEO DVD  :  S/C
 VIDEO DBS  :  S/C
 LFE ATT    :  0dB
 FL DISPLAY :  NORMAL

 xx   PREVIOUS PAGE   xx
              ◀▶ :OPERATE
```
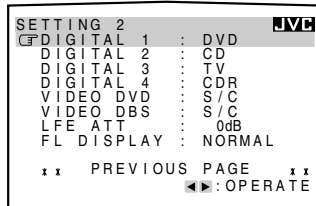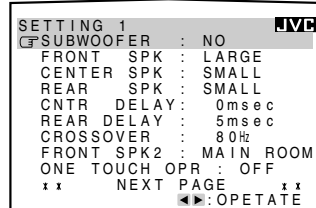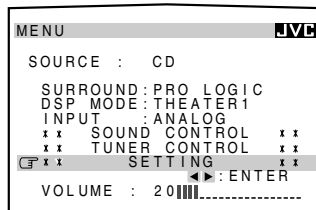
On the SETTING 1 and 2 menus, you can do the following:

SETTING 1 menu

"SUBWOOFER":	Set the subwoofer information (see page 28).
"FRONT SPK":	Set the front speaker information (see page 29).
"CENTER SPK":	Set the center speaker information (see page 29).
"REAR SPK":	Set the rear speaker information (see page 29).
"CNTR DELAY":	Adjust the delay time of the center speaker output (see page 29). *
"REAR DELAY":	Adjust the delay time of the rear speaker output (see page 29). **
"CROSSOVER":	Set the crossover frequency (see page 30).
"FRONT SPK2":	Set the front speaker 2 information (see page 27).
"ONE TOUCH OPR":	Set the one touch operation. (see page 34).

SETTING 2 menu

"DIGITAL 1/2/3/4":	Set the digital input terminal (see page 30).
"VIDEO DVD":	Set the video input terminal for the DVD player (see page 32).
"VIDEO DBS":	Set the video input terminal for the DBS tuner (see page 32).
"LFE ATT":	Set the low frequency effect attenuator level (see page 30).
"FL DISPLAY":	Shows the disc text information on the display (see page 33).

Notes:
* Not adjustable when "CTR SPK" is set to "NONE" (see page 29).
**Not adjustable when "REAR SPK" is set to "NONE" (see page 29).

4. When you finish, press EXIT repeatedly until the menu disappears from the TV.

54

COMPU LINK Remote Control System

The COMPU LINK remote control system allows you to operate JVC audio components through this receiver.

To use this remote control system, you need to connect JVC audio components through the COMPU LINK (SYNCHRO) jacks (see below) in addition to the connections using cables with RCA pin plugs (see pages 7 and 8).
• Make sure that the AC power cords of these components are unplugged before connection. Plug the AC power cords only after all connections are complete.

CD player

CD recorder

Cassette deck
or
MD recorder

RX-9010VBK

COMPU LINK – 4 (SYNCHRO)

Turntable

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

When using the buttons and controls on the front panel:

• **For the main room operations**
  – The MAIN ROOM indicator is lit.
  – The source name for the sub-room is not lit on the display.

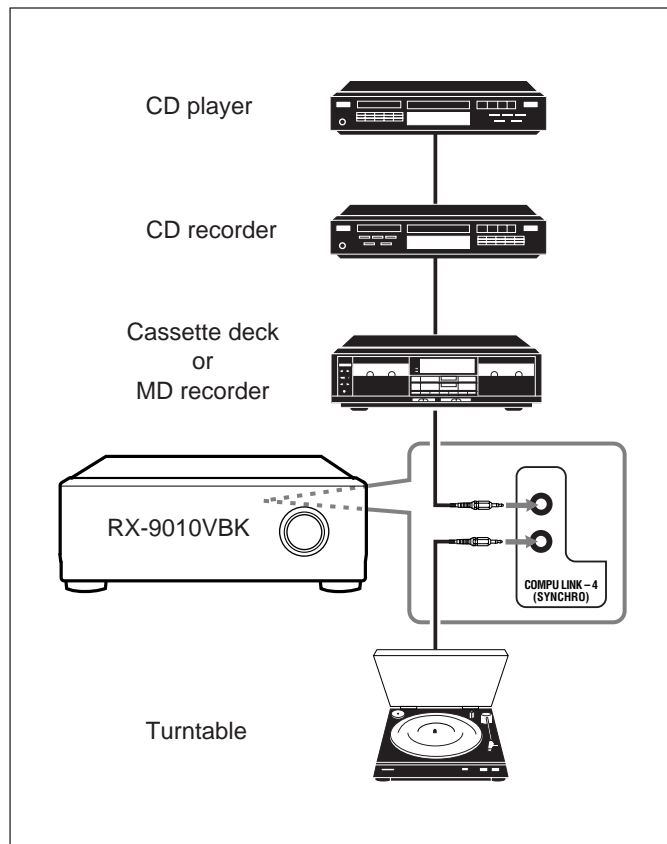• **For the sub-room operations**
  – The SUB ROOM indicator is lit.
  – The source name for the sub-room is lit on the display.

When using the remote control:

• **For the main room operations**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**

MAIN ROOM   SUB ROOM

• **For the sub-room operations**
  – Set MAIN ROOM/SUB ROOM selector to **"SUB ROOM."**

Notes:
• *There are four versions of COMPU LINK remote control system. This receiver is equipped with the fourth version — COMPU LINK-4. This version is created by adding systematic operations with the CD recorder to the previous version — COMPU LINK-3.*
• *If your audio component has two COMPU LINK jacks, you can use either one. If it has only one COMPU LINK jack, connect it so that it is the last item in the series of components. (For example, the turntable or CD player in the diagram above.)*
• *To operate the cassette deck or MD recorder using the COMPU LINK remote control system, set the source name correctly. (See page 33.)*
• *Refer also to the manuals supplied with your audio components.*

This remote control system allows you to use four functions listed below.

Remote Control through the Remote Sensor on the Receiver

You can control the connected audio components through the receiver using this remote control. For details, see pages 65 – 67.

Automatic Source Selection

• When you press the play (▶) button on a connected component or on its own remote control, the receiver automatically turns on and changes the **main room source** to the component.

ANALOG   L   R
SPEAKERS 1   CD
SURR. OFF   MAIN ROOM   VOLUME   40

– If the receiver is already turned on, and the SUB ROOM indicator and the source name for the sub-room are lit on the display, the receiver changes the **sub-room source** to the component.

SPEAKERS SUB ROOM   SUB TAPE   SUB ROOM VOLUME   40

• When you press PLAY on the remote control supplied for this receiver, the receiver automatically turns on and changes the **main room source** or **sub-room source** (depending on MAIN ROOM/SUB ROOM selector setting on the remote control) to the target component.

PLAY

• When you select a new source on the receiver or on the remote control supplied for this receiver either for **the main room** or **sub-room**, the newly selected component begins playing immediately, and the previously selected source continues playing without sound for a few seconds.

Automatic Power On/Off (Standby): only possible with the COMPU LINK-3 and COMPU LINK--4 connection

Automatic Power On:

• **When you turn on the receiver by pressing POWER on the front panel or AUDIO POWER ON on the remote control (with MAIN ROOM/SUB ROOM selector set to "MAIN ROOM"):**

OR

When you turn on the main room sound by pressing MAIN ROOM ON/OFF while the receiver is turned on:

➡ The MAIN ROOM indicator and the source name for the main room light up on the display, and one of the connected components will turn on automatically, depending on which component has been previously selected as the **main room source**.

• **When you turn on the receiver by pressing AUDIO POWER ON on the remote control (with MAIN ROOM/SUB ROOM selector set to "SUB ROOM"):**

OR

When you turn on the sub-room sound by pressing SUB ROOM ON/OFF while the receiver is turned on:

➡ The SUB ROOM indicator and the source name for the sub-room light up on the display, and one of the connected components will turn on automatically, depending on which component has been previously selected as the **sub-room source**.

Automatic Power Off (Standby):

• **When you turn off the receiver by pressing POWER,** the connected components will turn off (standby).

• **When you turn off the main room sound by pressing MAIN ROOM ON/OFF,** the selected **main room source** component turns off (unless the same component is selected as the sub-room source).
  – If the SUB ROOM indicator and the source name for the sub-room are lit on the display, the **main room source** will stop playing, but will not turn off.

• **When you turn off the sub-room source by pressing SUB ROOM ON/OFF,** the selected **sub-room source** component turns off (unless the same component is selected as the main room source).
  – If the MAIN ROOM indicator and the source name for the main room are lit on the display, the **main room source** will stop playing, but will not turn off.

Synchronized Recording

This operation is only possible while the receiver is ready for the main room operations.

Synchronized recording means the cassette deck (or MD recorder) starts recording as soon as a CD begins playing.
• When using a CD player for synchronized recording, refer to the manual supplied with it.

To use synchronized recording, follow these steps:

1. **Put a tape in the cassette deck (or an MD in the MD recorder), and a disc in the CD player.**

2. **Press the record (●) button and the pause (❚❚) button on the cassette deck (or MD recorder) at the same time.**
   This puts the cassette deck (or MD recorder) into recording pause.
   If you do not press the record (●) button and pause (❚❚) button at the same time, the synchronized recording feature will not operate.

3. **Press the play (►) button on the CD player.**
   The **main room source** changes on the receiver, and as soon as play starts, the cassette deck (or MD recorder) starts recording. When the play ends, the cassette deck (or MD recorder) enters recording pause, and stops about 4 seconds later.

Notes:
• *During synchronized recording;*
  – *the selected main room source cannot be changed. (You can change the sub-room source.)*
  – *If the same source is selected both for the main room and the sub-room, operating the sub-room source will affect the recording.*
• *The COMPU LINK remote control system may not operate properly during synchronized recording;*
  – *If the power of any component is shut off.*
  – *If the main room sound is turned off by pressing MAIN ROOM ON/OFF.*
    In this case, you must start again from the beginning.

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TEXT COMPU LINK Remote Control System

The TEXT COMPU LINK remote control system has been developed to deal with the disc information recorded in the CD Text* and MDs. Using this information in the discs, you can operate the CD player or MD recorder equipped with the TEXT COMPU LINK remote control system through the receiver.

The following operations are only possible while the receiver is ready for the main room operations, and are used for the main room sources.

CONNECTIONS:

To use this remote control system, you need to connect the CD player and/or MD recorder you want to operate, following the procedures below.

1. **If you have already plugged your CD player, MD recorder, and this receiver into the AC outlets, unplug their AC power cords first.**

2. **Connect your CD player, MD recorder, and this receiver as follows, through the COMPU LINK jacks and TEXT COMPU LINK jacks.**

   1) **COMPU LINK jacks:** Use the cables with the monaural mini-plugs (not supplied with this receiver).

   CD player

   MD recorder

   COMPU LINK – 4
   (SYNCHRO)
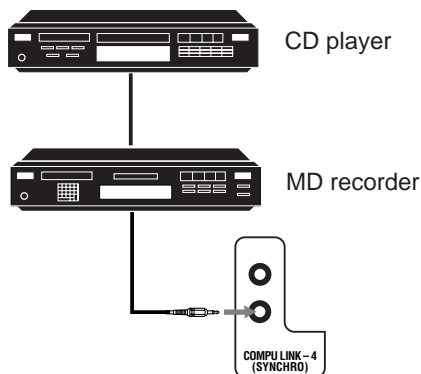
   2) **TEXT COMPU LINK jacks:** Use the cables with the stereo mini-plugs (not supplied with this receiver).

   CD player

   MD recorder

   TEXT
   COMPU LINK
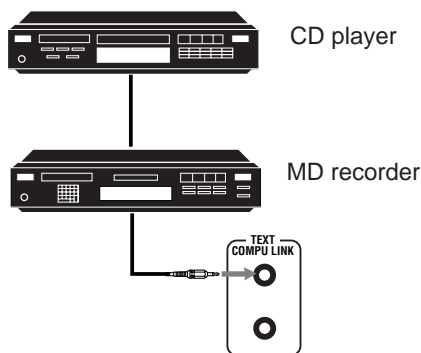
3. **Connect your CD player, MD recorder and this receiver, using the cables with RCA pin plugs (see pages 7 and 8).**

4. **Plug the AC power cords of these components above into the AC outlets.**

5. **When turning on these components for the first time, turn on the connected components first, then turn on this receiver.**

FUNCTIONS:

This remote control system allows you to use the functions listed below.

Displaying the Disc Information on the TV screen

Disc information such as its performer and disc title (and track titles only when a CD Text is selected) is shown on the TV screen.

Disc Search: Only for CD Player

This remote control system can allow you to search for discs by the performer, disc title, and music genre.
With this disc search, you can easily find the disc you want to play.

Disc Title Input:

If your CD player or MD recorder has the disc memory function, you can input the following information about the normal audio CDs or MDs on the TV screen.
• For CDs: Performer, disc title, and music genre
• For MDs: Disc title and song titles

*What is a CD Text?

In a CD Text, some information about the disc (its disc title, performer, composer, arranger, etc.) is recorded.

Notes:

• If your audio component has two COMPU LINK jacks, you can use either one. If it has only one COMPU LINK jack, connect it so that it is the last item in the series of components. (For example, the CD player in the diagram in the left column.)
• If your audio component has two TEXT COMPU LINK jacks, you can use either one. If it has only one TEXT COMPU LINK jack, connect it so that it is the last item in the series of components. (For example, the CD player in the diagram in the left column.)
• "TEXT COMPULINK SOURCE NOT CONNECTED" appears on the display in the following cases:
  – When the connections explained on the left are not correctly done.
  – When you try to use the TEXT COMPULINK function a few seconds after you turn on the connected equipment. This is not a malfunction of the units.
• Refer also to the manuals supplied with your CD player or MD recorder.

IMPORTANT:

If you turn on the receiver before turning on the other components after connecting the components, the TEXT COMPU LINK remote control system does not work correctly.
If this happens:
1. Turn off all the components including this receiver.
2. Turn on the connected components.
3. Turn on this receiver.

To use this remote control system, you need to connect the TV to the MONITOR OUT jack on the rear panel (see page 9), and set the TV's input mode to the proper position to which the receiver is connected. **Make sure you have connected the CD player or MD recorder equipped with the TEXT COMPU LINK remote control system. If not, you cannot use the following functions.**

IMPORTANT:

Check to see if the proper indicator(s) and information appear on the display on the front panel before/while using the buttons and controls.

For the main room operations:
• The MAIN ROOM indicator is lit.
• The source name for the sub-room is not lit on the display.

• **When using the remote control:**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**
  – Check to see if the following information appear on the display window on the remote control.

MAIN ROOM   SUB ROOM

On-Screen Operation buttons (on the remote control)
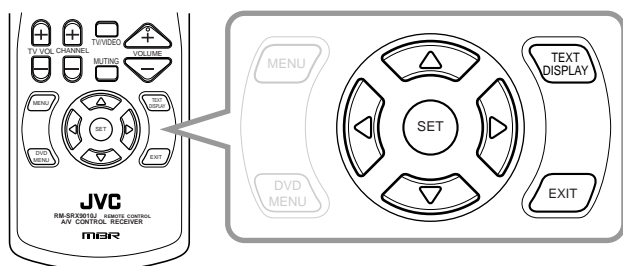
"MENU" appears on the display window of the remote control when you press the buttons — TEXT DISPLAY, △ / ▽ / ◁ / ▷, SET, EXIT.

Ex. When you press TEXT DISPLAY, "MENU" appears on the display window.
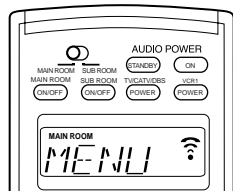
■ Showing the Disc Information on the TV Screen

Press TEXT DISPLAY while "CD" or "MD" is selected as the source.
The Disc Information screen appears on the TV.

Disc Information screen
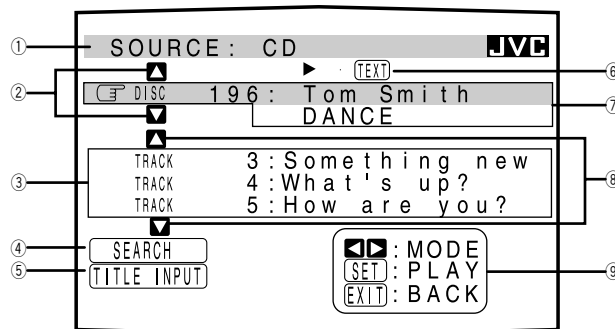
① Source name: CD or MD
② Select ▲ or ▼, then press SET to change the disc.
③ Track numbers and track titles.
   • When you move ☞ to a track number, you can change the track information by pressing ◁ / ▷. Each time you press the button, track information alternates between its track title and its performer. (You can also start playing the track by pressing SET.)
④ Select this (move ☞ in front), then press SET to go to the DISC SEARCH screen (see page 59).
⑤ Select this (move ☞ in front), then press SET to go to the TITLE INPUT screen (see page 60).
⑥ This appears only when a CD Text is selected.
⑦ Disc information such as the disc title, performer, and music genre.
   When this is selected (☞ in front), you can change the disc information by pressing ◁ / ▷. Each time you press the button, disc information (see "Note on ⑦") changes.
⑧ Select ▲ or ▼, then press SET to change the track.
⑨ Usable buttons and their functions for the current selection.
   Indication here will be changed according to what is currently selected (☞ in front) on the screen. See "Note on ⑨."

Note on ⑦:

The following information will appear on the display:
• *For CD Texts — Disc title, Performer, Genre, Song writer, Composer, Arranger, Message*
  Only recorded information will be shown. If there is no data, "NO DATA" will appear.
• *For MDs — Disc title*
  If there is no data, "NO DATA" will appear.

Note on ⑨:

For example, the SET button will be used to start play (PLAY), to go to the next screen (ENTER), and to determine the selection (ENTER).

To exit from the Disc information screen:

Press EXIT.

Notes:

• *The on-screen display will disappear in the following cases:*
  – *if no operation is done for about 10 minutes.*
  – *if you do any operation other than explained in this section.*
• *To control the MD recorder using the TEXT COMPU LINK remote control system, you have to change the source name shown on the display from "TAPE" to "MD." (See page 33.)*
• *Some special characters and marks cannot be displayed correctly.*

■ Searching for a Disc (Only for the CD player)

Search for a disc by its performer:

1. Press TEXT DISPLAY while "CD" is selected as the source.

The Disc Information screen appears on the TV.

2. Press △ / ▽ to move ☞ to "SEARCH," then press SET.

The DISC SEARCH screen appears .

3. Press △ / ▽ to move ☞ to "PERFORMER," then press SET.

The PERFORMER SEARCH screen appears.

```
 SOURCE :  CD                    JVC
 ××        DISC  SEARCH       ××
                ▲
 ☞PERFORMER
   DISC  TITLE
   GENRE
                ▼
                        SET : ENTER
                        EXIT : BACK
```

4. Press △ / ▽ / ◁ / ▷ to move ☞ in front of the first character of the performer you want to search for, then press SET.

```
 SOURCE :  CD                    JVC
 ××      PERFORMER  SEARCH   ××

 FIRST  CHARACTER : —
 ☞A  B  C  D  E  F  G  H  I  J  K
   L  M  N  O  P  Q  R  S  T  U  V
   W  X  Y  Z
   1  2  3  4  5  6  7  8  9  0
                        SET : ENTER
                        EXIT : BACK
```

To correct the incorrect entry, press △ / ▽ / ◁ / ▷ to move ☞ in front of the correct character, then press SET.

Note:

Symbols such as @, # or $ cannot be available for search.

5. Press SET again.

Disc search starts, then the SEARCH RESULT screen, showing the performers, appears.
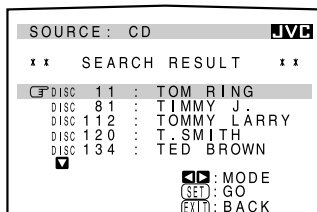
```
 SOURCE :  CD                    JVC
 ××       SEARCH  RESULT     ××

 ☞DISC  11  :  TOM  RING
   DISC  81  :  TIMMY  J.
   DISC 112  :  TOMMY  LARRY
   DISC 120  :  T.SMITH
   DISC 134  :  TED  BROWN
   ▼
                        ◀▶ : MODE
                        SET : GO
                        EXIT : BACK
```

6. On the SEARCH RESULT screen, you can do the following:

• **Changing the indication of the disc information:**
Press △ / ▽ to move ☞ to a searched for disc, then press ◁ / ▷. Each time you press ◁ / ▷, the disc information alternates between its performer and its disc title.

• **Starting a disc play and going to the Disc Information screen (see page 58):** Press △ / ▽ to move ☞ to a searched for disc, then press SET.

• **Showing unseen disc information (if more than 5 discs are listed as a result of the search):** Press △ / ▽ until they appear.

• **Going back to the PERFORMER SEARCH screen:** Press EXIT.

Search for a disc by its disc title:
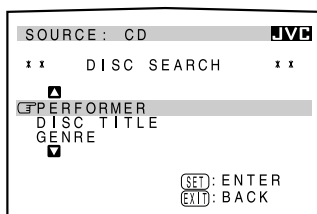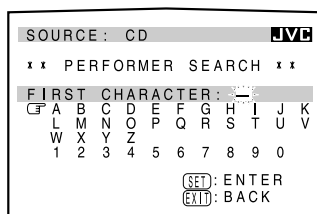
1. Press TEXT DISPLAY while "CD" is selected as the source.

The Disc Information screen appears on the TV.

2. Press △ / ▽ to move ☞ to "SEARCH," then press SET.

The DISC SEARCH screen appears.

3. Press △ / ▽ to move ☞ to "DISC TITLE," then press SET.

The DISC TITLE SEARCH screen appears.

```
 SOURCE :  CD                    JVC
 ××        DISC  SEARCH       ××
                ▲
   PERFORMER
 ☞DISC  TITLE
   GENRE
                        SET : ENTER
                        EXIT : BACK
```
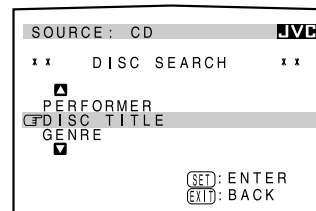
4. Press △ / ▽ / ◁ / ▷ to move ☞ in front of the first character of the disc title you want to search for, then press SET.

```
 SOURCE :  CD                    JVC
 ××   DISC  TITLE  SEARCH  ××
 FIRST  CHARACTER : —
 ☞A  B  C  D  E  F  G  H  I  J  K
   L  M  N  O  P  Q  R  S  T  U  V
   W  X  Y  Z
   1  2  3  4  5  6  7  8  9  0
                        SET : ENTER
                        EXIT : BACK
```

To correct the incorrect entry, press △ / ▽ / ◁ / ▷ to move ☞ in front of the correct character, then press SET.

Note:

Symbols such as @, # or $ cannot be available for search.

5. Press SET again.

Disc search starts, then the SEARCH RESULT screen, showing the disc titles, appears.

```
 SOURCE :  CD                    JVC
 ××       SEARCH  RESULT     ××

 ☞DISC  11  :  BEAUTY
   DISC  81  :  BE  MY  FRIEND
   DISC 112  :  BEING
   DISC 120  :  BE  A  MAN
   DISC 134  :  BIG  SHOT
   ▼
                        ◀▶ : MODE
                        SET : GO
                        EXIT : BACK
```

6. On the SEARCH RESULT screen, you can do the following:

• **Changing the indication of the disc information:**
Press △ / ▽ to move ☞ to a searched for disc, then press ◁ / ▷. Each time you press ◁ / ▷, the disc information alternates between its disc title and its performer.

• **Starting a disc play and going to the Disc Information screen (see page 58):** Press △ / ▽ to move ☞ to a searched for disc, then press SET.

• **Showing unseen disc information (if more than 5 discs are listed as a result of the search):** Press △ / ▽ until they appear.

• **Going back to the DISC TITLE SEARCH screen:** Press EXIT.

Search for a disc by its genre:

1. Press TEXT DISPLAY while "CD" is selected as the source.
The Disc Information screen appears on the TV.

2. Press △ / ▽ to move ☞ to "SEARCH," then press SET.
The DISC SEARCH screen appears.

3. Press △ / ▽ to move ☞ to "GENRE," then press SET.
The GENRE SEARCH screen appears.

```
SOURCE: CD              JVC
XX    DISC SEARCH      XX
         ▲
   PERFORMER
   DISC TITLE
 ☞GENRE
         ▼
              (SET):ENTER
              (EXIT):BACK
```
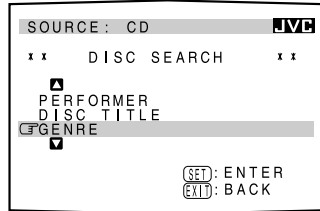
4. Press △ / ▽ to move ☞ to the genre you want to search for, then press SET.

To show the unseen genres, press △ / ▽ until they appear.

Disc search starts, then the SEARCH RESULT screen, showing the disc titles, appears.

```
SOURCE: CD              JVC
XX    GENRE SEARCH     XX
         ▲
 ☞ADULT CONTEMPORARY
   ALTERNATIVE ROCK
   CHILDRENS MUSIC
   CLASSICAL
   CONTEMPORARY CHRISTIAN
         ▼
              (SET):ENTER
              (EXIT):BACK
```

5. On the SEARCH RESULT screen, you can do the following:

```
SOURCE: CD              JVC
XX   SEARCH RESULT     XX
 ☞DISC  11  : BEAUTY
  DISC  81  : BE MY FRIEND
  DISC 112  : BEING
  DISC 120  : BE A MAN
  DISC 134  : BIG SHOT
         ▼
              (◀▶):MODE
              (SET):GO
              (EXIT):BACK
```

- **Changing the indication of the disc information:** Press △ / ▽ to move ☞ to a searched for disc, then press ◁ / ▷. Each time you press ◁ / ▷, the disc information alternates between its disc title and its performer.
- **Starting a disc play and going to the Disc Information screen (see page 58):** Press △ / ▽ to move ☞ to a searched for disc, then press SET.
- **Showing unseen disc information (if more than 5 discs are listed as a result of the search):** Press △ / ▽ until they appear.
- **Going back to the GENRE SEARCH screen:** Press EXIT.
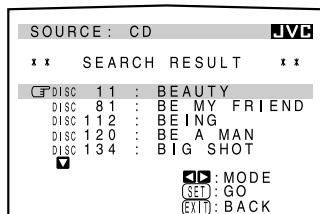
■ Entering the Disc Information

For the CD Player with the disc memory function:

You can use the disc memory function through this receiver.
The disc information (its performer, disc title, and music genre) of normal audio CDs will be stored into the memory built in the CD player.
For the disc memory function, refer to the manual supplied with your CD player.

- The performer, disc title, and music genre information are usually recorded on a CD Text. However, if a CD Text has no genre information recorded on the disc itself, you can input its music genre by yourself.

Note:

You can enter the TITLE INPUT screens for a CD Text and input its titles. However, you cannot store the titles you have input for a CD Text.

> Example: Entering the following information for Disc 1
> Performer: "MICHAEL"
> Disc title: "MY FAVORITE"

1. Press TEXT DISPLAY while "CD" is selected as the source.
The Disc Information screen appears on the TV.

2. Press △ / ▽ to move ☞ to "TITLE INPUT," then press SET.
The TITLE INPUT: PERFORMER screen appears.

```
SOURCE: CD              JVC
XX    TITLE INPUT      XX
        PERFORMER
DISC  1:
 ☞A B C D E F G H I J K
   L M N O P Q R S T U V
   W X Y Z ' ! " # $ % &
   + , - . / : ; < = > ?
   1 2 3 4 5 6 7 8 9 0 @
  (SPACE)(SHIFT) ←   → (CANCEL)
              (SET):ENTER
              (EXIT):BACK
```

3. Press △ / ▽ / ◁ / ▷ to move ☞ in front of a character you want, then press SET to enter the character.

- If the current CD is a CD Text, go to step 5 without entering the performer.

To use the lower-case letters, press △ / ▽ / ◁ / ▷ to move ☞ to (SHIFT), then press SET.

To use the upper-case letters again, press △ / ▽ / ◁ / ▷ to move ☞ to (SHIFT), then press SET.

4. Repeat step 3 until you finish putting a performer name (up to 32 characters).
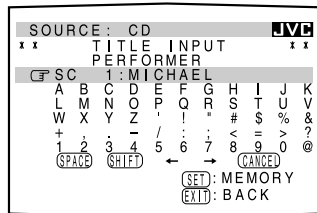
To insert a space, press △ / ▽ / ◁ / ▷ to move ☞ to SPACE , then press SET.

To correct an incorrect character:
1) Press △ / ▽ / ◁ / ▷ to move ☞ to ← or →, then press SET until the incorrect character is selected.
2) Press △ / ▽ / ◁ / ▷ to move ☞ to CANCEL , then press SET to erase the character.
3) Press △ / ▽ / ◁ / ▷ to move ☞ in front of the correct character, then press SET to enter the correct character.

```
SOURCE:  CD                JVC
xx       TITLE  INPUT        xx
         PERFORMER
☞SC   1:MICHAEL
   A  B  C  D  E  F  G  H  I  J  K
   L  M  N  O  P  Q  R  S  T  U  V
   W  X  Y  Z  '  !  "  #  $  %  &
   +  ,  .  -  /  :  ;  <  =  >  ?
   1  2  3  4  5  6  7  8  9  0  @
   SPACE  SHIFT   ←   →      CANCEL
                        SET :MEMORY
                        EXIT :BACK
```

5. Press △ / ▽ / ◁ / ▷ to move ☞ to "DISC 1: MICHAEL (in this example)," then press SET.
The TITLE INPUT: DISC TITLE screen appears.

```
SOURCE:  CD                JVC
xx       TITLE  INPUT        xx
         DISC  TITLE
DISC   1:_
☞A  B  C  D  E  F  G  H  I  J  K
   L  M  N  O  P  Q  R  S  T  U  V
   W  X  Y  Z  '  !  "  #  $  %  &
   +  ,  .  -  /  :  ;  <  =  >  ?
   1  2  3  4  5  6  7  8  9  0  @
   SPACE  SHIFT   ←   →      CANCEL
                        SET :ENTER
                        EXIT :BACK
```

6. Enter the disc title, referring to steps 3 and 4.
• If the current CD is a CD Text, go to the next step without entering the disc title.

```
SOURCE:  CD                JVC
xx       TITLE  INPUT        xx
         DISC  TITLE
☞SC   1:MY  FAVORITE
   A  B  C  D  E  F  G  H  I  J  K
   L  M  N  O  P  Q  R  S  T  U  V
   W  X  Y  Z  '  !  "  #  $  %  &
   +  ,  .  -  /  :  ;  <  =  >  ?
   1  2  3  4  5  6  7  8  9  0  @
   SPACE  SHIFT   ←   →      CANCEL
                        SET :MEMORY
                        EXIT :BACK
```
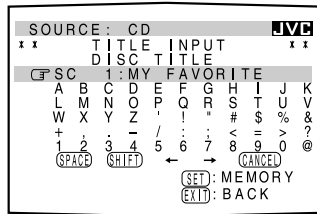
7. Press △ / ▽ / ◁ / ▷ to move ☞ to "DISC 1: MY FAVORITE (in this example)," then press SET.
The TITLE INPUT: DISC 1 GENRE screen appears.
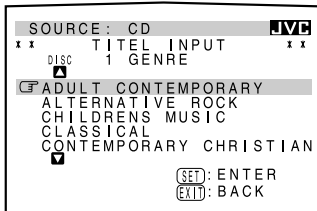
```
SOURCE:  CD                JVC
xx       TITEL  INPUT        xx
   DISC   1 GENRE
☞ADULT  CONTEMPORARY
   ALTERNATIVE  ROCK
   CHILDRENS  MUSIC
   CLASSICAL
   CONTEMPORARY  CHRISTIAN
                        SET :ENTER
                        EXIT :BACK
```

8. Press △ / ▽ to move ☞ to the genre you want, then press SET.
The Disc Information screen appears again.

To show the unseen genres, press △ / ▽ until they appear.

For the MD recorder:

You can write the disc information (disc title and song titles) into the disc. You can only write the song title for the song currently selected.
• If you have the CD-MD combination deck, you can also enter the disc information (its performer, disc title, and its music genre) of normal audio CDs into the memory built in the CD-MD combination deck. (To do this, follow the procedure of "For the CD Player with the disc memory function" on page 60.)
• If you change the disc or song title including more than 32 characters, the characters following 32nd will be erased from the title.
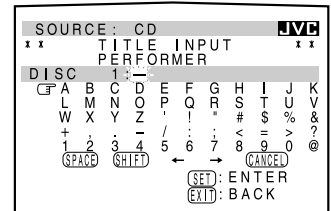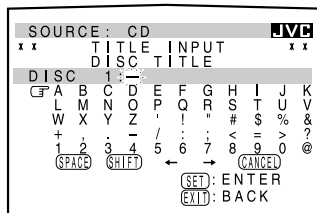
1. Press TEXT DISPLAY while "MD" is selected as the source.
The Disc Information screen appears on the TV.

2. Press △ / ▽ to move ☞ to "TITLE INPUT," then press SET.
The DISC TITLE INPUT screen appears.

```
SOURCE:  MD                JVC
☞MD         :  Hello!
   TRACK      1:  Heavens
   TRACK      2:  Angeles
   TRACK      3:  Do  it  again
   TITLE INPUT
                        SET :PLAY
                        EXIT :EXIT
```
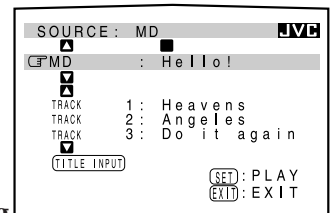
3. Enter the title, referring to steps 3 and 4 of "For the CD Player with the disc memory function" on pages 60 and 61.
• You can enter up to 32 characters for the disc title.

```
SOURCE:  MD                JVC
xx       DISC  TITLE  INPUT   xx
   MD    1:_
☞A  B  C  D  E  F  G  H  I  J  K
   L  M  N  O  P  Q  R  S  T  U  V
   W  X  Y  Z  '  !  "  #  $  %  &
   +  ,  .  -  /  :  ;  <  =  >  ?
   1  2  3  4  5  6  7  8  9  0  @
   SPACE  SHIFT   ←   →      CANCEL
                        SET :ENTER
                        EXIT :BACK
```
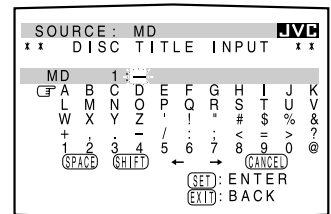
4. Press △ / ▽ / ◁ / ▷ to move ☞ to the disc title you have just entered, then press SET.
The disc title is stored into the memory, and the SONG TITLE INPUT screen for the currently selected song appears.
• You can enter a song title for the song currently selected.

```
SOURCE:  MD                JVC
xx       SONG  TITLE  INPUT   xx
☞TRACK   1:_
   A  B  C  D  E  F  G  H  I  J  K
   L  M  N  O  P  Q  R  S  T  U  V
   W  X  Y  Z  '  !  "  #  $  %  &
   +  ,  .  -  /  :  ;  <  =  >  ?
   1  2  3  4  5  6  7  8  9  0  @
   SPACE  SHIFT   ←   →      CANCEL
                        SET :ENTER
                        EXIT :BACK
```

5. Enter the song title, referring to steps 3 and 4 of "For the CD Player with the disc memory function" on pages 60 and 61.
• You can enter up to 32 characters for the song title.

6. Press △ / ▽ / ◁ / ▷ to move ☞ to the song title you have just entered, then press SET.
The song title is stored into the memory, and the Disc Information screen appears again.

AV COMPU LINK Remote Control System

This receiver is equipped with the AV COMPU LINK-III. The AV COMPU LINK remote control system allows you to operate JVC video components (TV, VCR, and DVD player) through the receiver. To use this remote control system, you need to connect the video components you want to operate, following the procedure below.

1. **If you have already plugged your VCR 1 (VCR connected to the VCR 1 jacks), DVD player, TV, and this receiver into the AC outlets, unplug their AC power cords first.**

2. **Connect the IR signal transmitter (supplied) to the IR OUT on the rear, and place it so that it is aimed at the remote sensor on the target video components.**
    • See "CONNECTIONS 1" below.

3. **Connect your VCR 1, DVD player, TV, and this receiver as follows, using the cables with the monaural mini-plugs (not supplied).**
    • See "CONNECTIONS 2" below.

4. **Connect the audio input/output jacks on VCR 1, DVD player, TV, and this receiver using the cables with RCA pin plug.**
    • See pages 8 and 9.

5. **Connect the video input/output jacks on VCR 1, DVD player, TV, and this receiver, using the cables with RCA pin plugs, with S-video plugs or with component video plugs.**
    • See "CONNECTIONS 3" on the next page.

6. **Plug the AC power cords of the components into the AC outlets.**

7. **When turning on the TV for the first time after the AV COMPU LINK connection, turn the TV volume to the minimum using the TV volume control on the TV.**
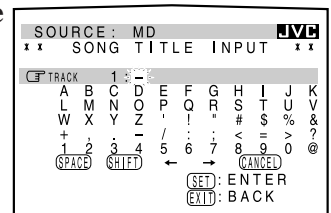
8. **Turn on the other connected components first, then turn on this receiver.**
    • When turning on the VCR 1, use the remote control supplied with this receiver (press VCR 1 POWER).

CONNECTIONS 1: IR Signal Transmitter Connection
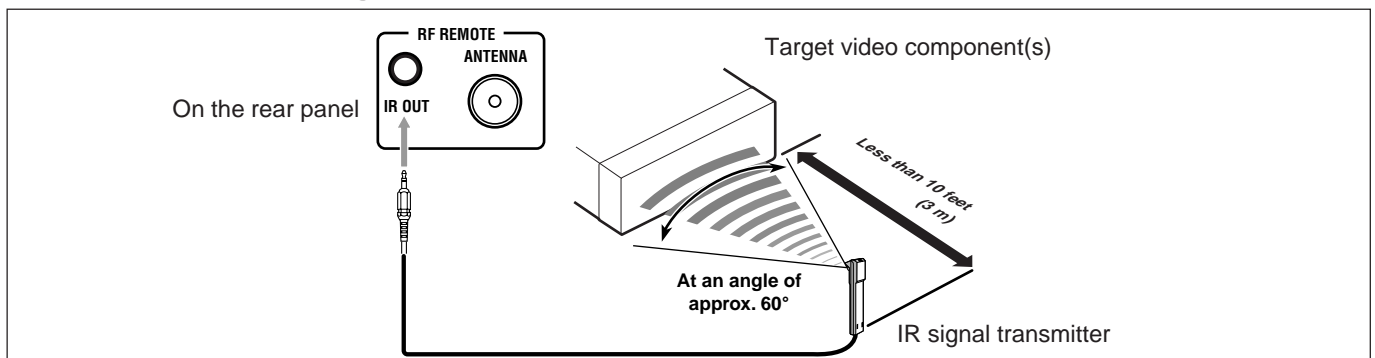
CONNECTIONS 2: AV COMP LINK Connection
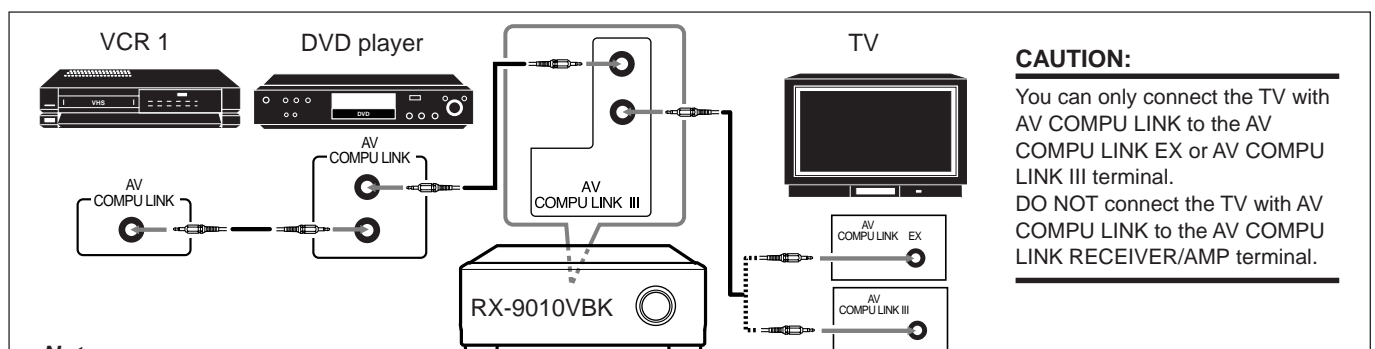
CAUTION:
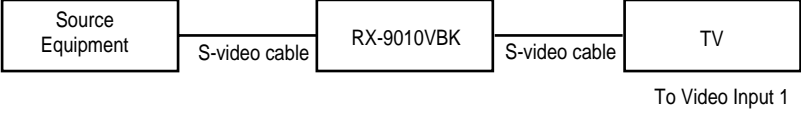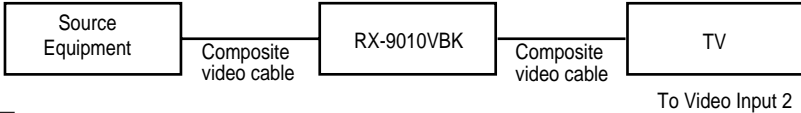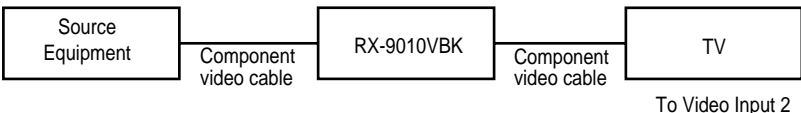
You can only connect the TV with AV COMPU LINK to the AV COMPU LINK EX or AV COMPU LINK III terminal.
DO NOT connect the TV with AV COMPU LINK to the AV COMPU LINK RECEIVER/AMP terminal.

Notes:

*   *The AV COMPU LINK remote control system cannot control the DBS tuner connected to the TV SOUND/DBS and DBS component video terminals, and video components connected to the VIDEO and VCR 2 terminals on the receiver.*
*   *When connecting only the VCR 1 and DVD player to this receiver, connect it directly to the receiver using cable with the monaural mini-plugs.*
*   *When connecting the receiver and the TV with AV COMPU LINK EX terminal by using the component video cables, you cannot use Automatic Selection of TV's Input Mode (see page 64).*
*   *Refer also to the manual supplied with your video components.*

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CONNECTIONS 3: Video Cable Connection

This receiver is equipped with three types of the video terminals — S-video, composite video, or component video, and the signals coming into this receiver through one type of video terminals can output only through the same type of the terminal. So you need to connect the VCR and/or DVD player to the TV using one of the following three ways:

CASE 1	When connecting the source equipment to the receiver using the **S-video terminals**, connect also this receiver to the TVs' Video Input 1 terminal using S-video cables. Source Equipment — S-video cable — RX-9010VBK — S-video cable — TV (To Video Input 1) ***Note:*** *If you connect the DVD player and the DBS tuner to this receiver using the composite video terminals, change the video input terminal setting to "S/C" (see page 32).*
CASE 2	When connecting the source equipment to the receiver using the **composite video terminals**, connect also this receiver to the TVs' Video Input 2 terminal (composite video input) using composite video cables. Source Equipment — Composite video cable — RX-9010VBK — Composite video cable — TV (To Video Input 2) ***Note:*** *If you connect the DVD player and the DBS tuner to this receiver using the S-video terminals, change the video input terminal setting to "S/C" (see page 32).*
CASE 3	When connecting the source equipment to the receiver using the **component video terminals**, connect also this receiver to the TVs' Video Input terminals (component video input) using component video cables. Source Equipment — Component video cable — RX-9010VBK — Component video cable — TV (To Video Input 2) ***Note:*** *If you connect the DVD player and the DBS tuner to this receiver using the video component terminals, change the video input terminal setting to "COMPNT" (see page 32).*

The AV COMPU LINK remote control system allows you to use the five basic functions listed below.

Remote Control of the TV, DVD player, and VCR Using This Remote Control

IMPORTANT:

To operate the video components using the IR signal transmitter (supplied), place it so that it is aimed at the remote sensor on the target video component(s).
• The IR signal transmitter can send signals at a distance of 10 feet (3 m).

TV

DVD player

VCR

RX-9010VBK   **IR signal transmitter**
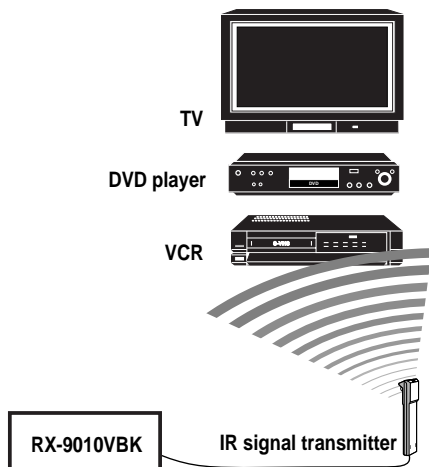
You can control the connected video components using this remote control: Aim the remote control at the remote sensors on the target video component(s) or on the receiver directly.
For details, see page 62.

One-Touch Video Play

• Simply by inserting a video cassette without its safety tab into the VCR 1 (the VCR connected to the VCR 1 jacks), you can enjoy the video playback without setting other switches manually. The receiver automatically turns on and changes the **main room source** to "VCR 1."
The TV automatically turns on and changes the input mode to the position so that you can view the playback picture.
When you insert a video cassette with its safety tab, press the play (▶) button on the VCR 1 or on its remote control. So, you can get the same result.
– If the receiver is already turned on, and the SUB ROOM indicator and the source name for the sub-room are lit on the display, the receiver changes the **sub-room source** to "VCR 1." (In this case, the TV will not turn on automatically.)
• When you press PLAY on the remote control supplied with this receiver for operating the VCR 1, the receiver automatically turns on and changes the **main room source** or **sub-room source** (depending on MAIN ROOM/SUB ROOM selector setting on the remote control) to "VCR 1."
– For main room operations only: The TV automatically turns on and changes the input mode to the position so that you can view the playback picture.

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One-Touch DVD Play

Simply by starting playback on the DVD player, you can enjoy the DVD playback without setting other switches manually.

When you press PLAY on the remote control supplied with this receiver for operating the DVD player, the receiver automatically turns on and changes the **main room source** or **sub-room source** (depending on MAIN ROOM/SUB ROOM selector setting on the remote control) to the appropriate input — "DVD," or "DVD MULTI" as the main room source, and "DVD" as the sub-room source.
The TV automatically turns on (for main room operations only) and changes the input mode to the position so that you can view the playback picture.
• _When the DVD player is connected through the analog input jacks on this receiver (and analog input is selected),_ the receiver automatically turns on and changes the source to "DVD" or "DVD MULTI."
  – If the receiver is already turned on, and the SUB ROOM indicator and the source name for sub-room are lit on the display, the receiver changes the **sub-room source** to "DVD." In this case, the TV will not turn on automatically.
• _When the DVD player is connected through the digital input terminal on this receiver (and digital input is selected),_ the receiver automatically turns on and changes the main room source to "DVD."
  – If the receiver is already turned on and the SUB ROOM indicator and the source name for sub-room are lit on the display, no sound comes out.

Automatic Selection of TV's Input Mode (Only for the Main Room Operations)

• When you select "TV" as the **main room source** to play on the receiver, the TV automatically changes the input mode to the TV tuner so that you can watch TV.
• When you select "DVD," "DVD MULTI," "VCR 1," "VCR 2, " "VIDEO" or "DBS" as the **main room source** to play on the receiver, the TV automatically changes the input mode to the appropriate position (either Video Input 1 or Video Input 2) so that you can view the playback picture.

Notes:

• _When you select "TV " as the source on the receiver, you cannot see the menu on the TV screen since the AV COMPU LINK remote control system automatically changes the TV's input mode to the TV tuner._
  If you do not mind stopping listening to the TV sounds, you can then show the on-screen displays after changing the TV's input mode to the appropriate position (either Video Input 1 or Video Input 2) the receiver is connected to.
• _This function does not work when you connect the TV with the AV COMPU LINK to the AV COMPU LINK EX. In this case, reconnect the TV referring to case 1 or case 2 on page 63._

Automatic Power On/Off (Standby)

Automatic Power On:

The TV, VCR 1 (the VCR connected to the VCR 1 jacks), and DVD player turn on and off along with the receiver.
• **When you turn on the receiver by pressing POWER on the front panel or AUDIO POWER ON on the remote control (with MAIN ROOM/SUB ROOM selector set to "MAIN ROOM"):**
<div align="center">OR</div>
  When you turn on the main room sound by pressing MAIN ROOM ON/OFF while the receiver is turned on:
  The MAIN ROOM indicator and the source name for the main room light up on the display, and —
  – If the previously selected **main room source** is "VCR 1," the TV and VCR 1 will turn on automatically.
  – If the previously selected **main room source** is "DVD," or "DVD MULTI," the TV and DVD player will turn on automatically.
  – If the previously selected **main room source** is "VIDEO," "VCR 2", "TV" or "DBS," only the TV will turn on automatically.

• **When you turn on the receiver by pressing AUDIO POWER ON on the remote control (with MAIN ROOM/SUB ROOM selector set to "SUB ROOM"):**
<div align="center">OR</div>
  When you turn on the sub-room sound by pressing SUB ROOM ON/OFF while the receiver is turned on:
  The SUB ROOM indicator and the source name for the sub-room light up on the display, and —
  – If the previously selected **sub-room source** is "VCR 1," the VCR 1 will turn on automatically.
  – If the previously selected **sub-room source** is "DVD," the DVD player will turn on automatically.
  – If the previously selected **sub-room source** is "VIDEO," "VCR 2," or "DBS," nothing happens.

Automatic Power Off (Standby):

• **When you turn off the receiver by pressing POWER,** the TV, VCR 1 and the DVD player will turn off (standby).
• **When you turn off the main room sound by pressing MAIN ROOM ON/OFF,** the selected **main room source** component turns off (unless the same component is selected as the sub-room source), and the TV also turns off.
  – If the SUB ROOM indicator and the source name for the sub-room are lit on the display, nothing happens.
• **When you turn off the sub-room sound by pressing SUB ROOM ON/OFF,** the selected **sub-room source** component turns off (unless the same component is selected as the main room source).
  – If the MAIN ROOM indicator and the source name for the main room are lit on the display, nothing happens.

Note:

If you turn off the receiver by pressing POWER or turn off the main room sound by pressing MAIN ROOM ON/OFF while recording on the VCR 1, the VCR 1 will not turn off, but continue recording.

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Operating JVC's Audio/Video Components

You can operate JVC's audio and video components with this receiver's remote control, since control signals for JVC components are preset in the remote control.

Operating Audio Components

IMPORTANT:

To operate JVC's audio components using this remote control:
• You need to connect JVC audio components through the COMPU LINK-4 (SYNCHRO) jacks (see page 55) in addition to the connections using cables with RCA pin plugs (see pages 7 and 8).
• Aim the remote control directly at the remote sensor on the receiver.
• If you use the buttons on the front panel or the menu function to choose a source, the remote control will not operate that source. To operate a source with the remote control, the source must be selected using source selecting buttons on the remote control.
• To operate the cassette deck or MD recorder using the COMPU LINK remote control system, set the source name correctly. (See page 33.)
• Refer also to the manuals supplied with your components.

When using the remote control supplied with this receiver:
• **For the main room operations**
  – Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**

• **For the sub-room operations**
  – Set MAIN ROOM/SUB ROOM selector to **"SUB ROOM."**
  – Check to see if the following information appear on the display window on the remote control:
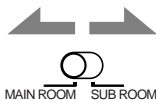
MAIN ROOM   SUB ROOM

MAIN ROOM/ SUB ROOM selector	Indications
MAIN ROOM	MAIN ROOM *
SUB ROOM	SUB ROOM *

* MAIN ROOM or SUB ROOM indicator does not appear when no indicators appear on the display window.

Buttons	Indications
FM/AM	TUNER
CD	CD
CDR	CDR
PHONO	PHONO
TAPE/MD	TAPE
CONTROL (repeatedly)	VCR1 → TAPE → CDR → CDDSC → (back to the beginning)
SOUND	SOUND

After selecting a source:

Buttons	Indications
PLAY	
◄◄/REW	one of the selected source names listed above
FF/►►◄	
STOP	
PAUSE	
1 – 10, +10, 0	

After pressing SOUND, the following function are assigned to the specific number buttons:

Buttons	Indications
BALANCE L	
BALANCE R	
EFFECT	SOUND
ROOM SIZE	
LIVENESS	
CENTER TONE	
SUBWFR	S WFR
CENTER	CTR
REAR•L	REARL
REAR•R	REARR
DIGITAL EQ	EQ

When you press the buttons listed above, the indication appears for 5 – 10 seconds for your confirmation.

Tuner SUB

You can always perform the following operations:

FM/AM: Alternates between FM and AM.

After pressing FM/AM, you can perform the following operations:

1 – 10, +10:   Selects a preset channel number directly.
                                For channel number 5, press 5.
                                For channel number 15, press +10, then 5.
                                For channel number 20, press +10, then 10.
TUNING UP/DOWN: Tunes into stations.
FM MODE: Changes the FM reception mode.

Sound control section (Amplifier)

You can always perform the following operations:

SURROUND ON/OFF: Turns on or off the Surround modes — Dolby Pro Logic, Dolby Digital, and DTS Digital Surround.
DSP MODE: Selects the DSP modes.
TEST: Turns on or off the test tone output.

After pressing SOUND, you can perform the following operations:

SUBWFR then LEVEL +/–: Adjusts the subwoofer output level.
CENTER then LEVEL +/–: Adjusts the center speaker output level.
REAR•L then LEVEL +/–: Adjusts the left rear speaker output level.
REAR•R then LEVEL +/–: Adjusts the right rear speaker output level.
DIGITAL EQ then LEVEL +/–: Selects the audio band and adjusts its frequency level.
BALANCE L/BALANCE R: Adjusts the output balance of the front speakers.
EFFECT: Selects the effect level.
CENTER TONE: Selects the center tone.
ROOM SIZE: Selects the room size.
LIVENESS: Selects the liveness.

Notes:

• *After adjusting sounds, press the corresponding source selecting button to operate your target source by using the 10 keys; otherwise, the 10 keys cannot be used for operating your target source.*
• *Each time you press LEVEL + or LEVEL –, the indication corresponding to the function you have selected appears on the display window on the remote control.*

CD player SUB

After pressing CD, you can perform the following operations on the CD player:

PLAY: Starts playing.
◄◄:   Returns to the beginning of the current (or previous) track.
►►◄:   Skips to the beginning of the next track.
STOP: Stops playing.
PAUSE: Pauses playing. To release it, press PLAY.
1 – 10, +10:   Selects a track number directly.
                 For track number 5, press 5.
                 For track number 15, press +10, then 5.
                 For track number 20, press +10, then 10.
                 For track number 30, press +10, +10, then 10.

CD player-changer [SUB]

After selecting CDDSC by pressing CONTROL repeatedly, you can perform the following operations on a CD player-changer:

PLAY: Starts playing.
|◄◄: Returns to the beginning of the current (or previous) track.
►►|: Skips to the beginning of the next track.
STOP: Stops playing.
PAUSE: Pauses playing. To release it, press PLAY.
1 – 6, 7/P: Selects the number of a disc installed in a CD player-changer.

After pressing CD, you can perform the following operations on the CD player-changer:

1 – 10, +10: Selects a track number directly.
For track number 5, press 5.
For track number 15, press +10, then 5.
For track number 20, press +10, then 10.
For track number 30, press +10, +10, then 10.

EXAMPLE:
• Selecting disc number 4, track number 12, and starting playback.
1. Press CONTROL repeatedly until "CDDSC" appears on the display window, then press 4.
2. Press CD, then press +10, 2.

If your CD changer is of 200-disc loading capability (except for XL-MC100 and XL-MC301)
you can do the following operations using the number buttons after pressing CD.

1. **Select a disc number.**
2. **Then select a track number (always enter two digits).**
3. **Start playback.**

EXAMPLES:
• Selecting disc number 3, track number 2, and starting playback. Press 3, then, 0, 2, then PLAY.
• Selecting disc number 10, track number 5, and starting playback. Press 1, 0, then, 0, 5, then PLAY.
• Selecting disc number 105, track number 12, and starting playback. Press 1, 0, 5, then 1, 2 then PLAY.

CD recorder [SUB]

After pressing CDR, you can perform the following operations on a CD recorder:

PLAY: Starts playing.
|◄◄: Returns to the beginning of the current (or previous) track.
►►|: Skips to the beginning of the next track.
STOP: Stops playing.
PAUSE: Pauses playing. To release it, press PLAY.
1 – 10, +10: Selects a track number directly.
For track number 5, press 5.
For track number 15, press +10, then 5.
For track number 20, press +10, then 10.
For track number 30, press +10, +10, then 10.

Notes:

• *When you start recording on the CD recorder, use the buttons on the CD recorder itself or on the remote control supplied with it.*
• *You can use either CDR or CONTROL to activate the buttons listed above. If you press CDR, the playing source also changes. On the other hand, if you press CONTROL repeatedly to select "CDR," the playing source does not change.*

Turntable [SUB]

After pressing PHONO, you can perform the following operations on a turntable:

PLAY: Starts playing.
STOP: Stops operations.

Cassette deck [SUB]

After pressing TAPE/MD or selecting "TAPE" by pressing CONTROL repeatedly, you can perform the following operations on a cassette deck:

PLAY: Starts playing.
REW: Fast-winds the tape from right to left.
FF: Fast-winds the tape from left to right.
STOP: Stops operations.
PAUSE: Pauses playing. To release it, press PLAY.
● REC: Press this button with the PLAY button to start recording (for the main room operation only). Press this button with the PAUSE button to enter recording pause.

Notes:

• *When you use a cassette deck or MD recorder, change the source name connected to TAPE/MD terminals correctly (see page 33).*
• *You can use either TAPE/MD or CONTROL to activate the buttons listed above. If you press TAPE/MD, the playing source also changes. On the other hand, if you press CONTROL repeatedly to select "TAPE", the playing source does not change.*

MD recorder [SUB]

After pressing TAPE/MD, you can perform the following operations on the MD recorder:

PLAY: Starts playing.
|◄◄: Returns to the beginning of the current (or previous) track.
►►|: Skips to the beginning of the next track.
STOP: Stops playing.
PAUSE: Pauses playing. To release it, press PLAY.
● REC: Press this button with the PLAY button to start recording (for the main room operation only). Press this button with the PAUSE button to enter recording pause.

Note:

When you use a cassette deck or MD recorder, change the source name connected to TAPE/MD terminals correctly (see page 33).

Operating Video Components

IMPORTANT:

To operate JVC's video components using this remote control:
- You need to connect JVC video components through the AV COMPU LINK jacks (see page 62) in addition to the connections using cables with RCA pin plugs (see pages 8 and 9).
- Some JVC VCRs can accept two types of the control signals — remote codes "A" and "B." Before using this remote control, make sure that the remote control code of the VCR connected to the VCR 1 terminals is set to code "A."
  - When another JVC VCR is connected to the VCR 2 and VIDEO jacks, set its remote control code to code "B." (This remote control cannot emit the control signals of code "B.")
- To operate the video component(s) using the remote control:
  - Aim the remote control directly at the remote sensor on each component, not on the receiver.
- To operate the video component(s) using the RF signals emitted from this remote control, the IR signal transmitter and the RF rod antenna must be connected to this receiver.
  - Place the IR signal transmitter so that it is aimed at the remote sensor on the target video component(s).
  - The RF signal-reachable distance may differ depending on the operating conditions and circumstances.
  - The IR signal transmitter can send signals at a distance of 10 feet (3 m).

When using the remote control:
Check to see if MAIN ROOM/SUB ROOM selector and TV/CATV/DBS selector are set to the correct positions:

- **TV/CATV/DBS selector:**
  To operate TVs, set it to "TV."
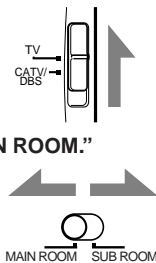
- **MAIN ROOM/SUB ROOM selector:**

  - **For the main room operations**
    Set MAIN ROOM/SUB ROOM selector to **"MAIN ROOM."**

  - **For the sub-room operations**
    Set MAIN ROOM/SUB ROOM selector to **"SUB ROOM."**

  - Check to see if the following information appear on the display window on the remote control:

MAIN ROOM/ SUB ROOM selector	Indications
MAIN ROOM	**MAIN ROOM** *
SUB ROOM	**SUB ROOM** *

* MAIN ROOM or SUB ROOM indicator does not appear when no indicators appear on the display window.

Buttons	Indications
VCR 1	VCR 1
DVD or DVD MULTI	DVD
TV/DBS	TV
CONTROL (repeatedly)	VCR1 → TAPE → CDR → CDDSC → (back to the beginning)
DVD MENU	DMENU

After selecting a source:

Buttons	Indications
PLAY	
�/REW	
FF/▶▶▌	one of the selected
STOP	source names listed
PAUSE	above
1 – 9, 0, +10, 100+	
CHANNEL +/–	VCR1 or TV

After pressing DVD MENU:

Buttons	Indications
△, ▽, ◁, ▷, SET	DMENU

When you press the buttons listed above, the corresponding indication appears for 5 – 10 seconds for your confirmation.

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VCR (VCR connected to the VCR 1 jacks)   SUB

You can always perform the following operations:

VCR 1 POWER: Turns on or off the VCR 1.

After pressing VCR 1 or selecting "VCR" by pressing CONTROL repeatedly, you can perform the following operations on a VCR:

1 – 9, 0:	Selects the TV channels on a VCR.
PLAY:	Starts playing.
REW:	Rewinds a tape.
FF:	Fast winds a tape.
STOP:	Stops operations.
PAUSE:	Pauses playing. To release it, press PLAY.
● REC:	Press this button with the PLAY button to start recording (only for the main room operations). Press this button with the PAUSE button to enter recording pause.
CHANNEL +/–:	Changes the TV channels on a VCR.

Note:

You can use either VCR 1 button or CONTROL to activate the buttons listed above. If you press VCR 1, the playing source also changes. On the other hand, if you press CONTROL repeatedly to select "VCR1," the playing source does not change.

DVD player   SUB

After pressing DVD (or DVD MULTI: only for the main room operations), you can perform the following operations on a DVD player:

1 – 10, 0, +10:	Selects the DVD titles or the tracks.
PLAY:	Starts playing.
▌◀◀:	Returns to the beginning of the current (or previous) track.
▶▶▌:	Skips to the beginning of the next track.
STOP:	Stops playing.
PAUSE:	Stops playing temporarily. To release it, press PLAY.

After pressing DVD MENU (only for the main room operations), these buttons can be used for the DVD menu operations.
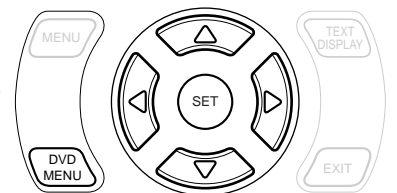
Note:

For detailed menu operations, refer to the instructions supplied with the discs or the DVD player.

TV

You can always perform the following operations (with TV/CATV/DBS selector set to "TV"):

TV/CATV/DBS POWER:	Turns on or off the TV.
TV VOL +/–:	Adjusts the volume.
TV/VIDEO:	Sets the input mode (either TV or VIDEO).

After pressing TV/DBS (with TV/CATV/DBS selector set to "TV"), you can perform the following operations on a TV:

CHANNEL +/–:	Changes the channels.
1 – 9, 0, 100+:	Selects the channels.
RETURN:	Alternates between the previously selected channel and the current channel.

Operating Other Manufacturers' Equipment

This remote control supplied with the receiver can transmit control signals for other manufacturers' VCRs, TVs, CATV converters, DBS tuners, DVD players ,and CD players. By changing the transmittable signals from preset ones to the other manufacturers', you can operate the other manufacturer's components using this remote control.

When operating the other manufacturers' components, refer also to the manuals supplied with them. To operate these components with the remote control, first you need to set the manufacturer's code each for VCR, TV, CATV converter, DBS tuner, and DVD player.

After replacing batteries of the remote control, set the manufactures' codes again.

IMPORTANT:

- To operate the video component(s) using the RF signals emitted from this remote control, the IR signal transmitter and the RF rod antenna must be connected to this receiver.
  – Place the IR signal transmitter so that it is aimed at the remote sensor on the target video component(s).
  – The RF signal-reachable distance may differ depending on the operating conditions and circumstances.
  – The IR signal transmitter can send signals at a distance of 10 feet (3 m).

When using the remote control:
Check to see if TV/CATV/DBS selector are set to the correct position:

TV/CATV/DBS selector:

- **For TV operations**
  Set TV/CATV/DBS selector to **"TV."**

- **For the CATV converter and DBS tuner operations**
  Set TV/CATV/DBS selector to **"CATV/DBS."**

- Check to see if the following information appear on the display window on the remote control.
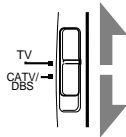
After setting the remote control mode selector to "TV" :

Buttons	Indications
TV/DBS	TV
VCR 1	VCR 1
DVD or DVD MULTI	DVD
CD	CD
DVD MENU	DMENU

After setting the remote control mode selector to "CATV/DBS" :

Buttons	Indications
TV/DBS	CATV
VCR 1	VCR 1
DVD or DVD MULTI	DVD
CD	CD
DVD MENU	DMENU

After selecting a source:

Buttons	Indications
PLAY	
◄◄	
►►I	one of the source names listed above
STOP	
PAUSE	
1 – 9, 0, +10, 100+	
CHANNEL +/–	VCR1 or TV

After pressing DVD MENU:

Buttons	Indications
△, ▽, ◁, ▷, SET	DMENU

When you press the buttons listed above, the indication appears for 5 – 10 seconds for your confirmation.

Note:

All the functions may not be assigned to the buttons in some equipment.

To change the transmittable signals for operating another manufacturer's TV

1. **Set TV/CATV/DBS selector to "TV."**

2. **Press and hold TV/CATV/DBS POWER.**

3. **Press TV/DBS.**

4. **Enter manufacturer's code using buttons 1–9, and 0.**
   See page 70 to find the code.

5. **Release TV/CATV/DBS POWER.**
   After setting TV/CATV/DBS selector to "TV," you can perform the following operations on the TV:

   TV/CATV/DBS POWER: Turns on and off the TV.
   TV VOL +/–: Adjusts the volume.
   TV/VIDEO: Sets the input mode (either TV or VIDEO).

   After pressing TV/DBS (with the remote control mode selector set to "TV"), you can perform the following operations on a TV:

   CHANNEL +/–: Changes the channels.
   1 – 10, 0, 100+ (+10): Selects the channels.
   The 10 button will function as the ENTER button if your TV requires pressing ENTER after selecting a channel number.

   Notes:

   - *Refer to the manual supplied with your TV.*
   - *You cannot change the channels of some TVs by pressing number buttons. In this case, press CHANNEL +/– for changing the channels.*

6. **Try to operate your TV by pressing TV/CATV/DBS POWER.**
   When your TV turns on or off, you have entered the correct code. **If there are more than one code listed for your brand of TV,** try each one until the correct one is entered.

To change the transmittable signals for operating a CATV converter and DBS tuner

1. **Set TV/CATV/DBS selector to "CATV/DBS."**

2. **Press and hold TV/CATV/DBS POWER.**

3. **Press TV/DBS.**

4. **Enter manufacturer's code using buttons 1–9, and 0.**
   See pages 70 and 71 to find the code.

5. **Release TV/CATV/DBS POWER.**
   After setting TV/CATV/DBS selector to "CATV/DBS," you can turn on and off the CATV convertor or on the DBS tuner:

   TV/CATV/DBS POWER: Turns on and off the CATV converter or DBS tuner.

   After pressing TV/DBS with TV/CATV/DBS selector set to "CATV/DBS," you can perform the following operations on the CATV convertor or on the DBS tuner:

   CHANNEL +/–: Changes the channels.
   1 − 10, 0, 100+ (+10): Selects the channels.
   The 10 button will function as the ENTER button if your equipment requires pressing ENTER after selecting a channel number.

   Note:
   Refer to the manual supplied with your CATV convertor or DBS tuner.

6. **Try to operate your CATV converter or DBS tuner by pressing TV/CATV/DBS POWER.**
   When your CATV converter or DBS tuner turns on or off, you have entered the correct code.
   If there are more than one code listed for your brand of CATV converter or DBS tuner, try each one until the correct one is entered.

   Note:
   You cannot use both of the CATV converter and DBS tuner at the same time.

To change the transmittable signals for operating another manufacturer's VCR

1. **Press and hold VCR 1 POWER.**

2. **Press VCR 1.**

3. **Enter manufacturer's code using buttons 1–9, and 0.**
   See page 71 to find the code.

4. **Release VCR 1 POWER.**
   The following button can be used for operating the VCR :

   VCR 1 POWER: Turns on and off the VCR.

   After pressing VCR 1, you can perform the following operations on the VCR:

   CHANNEL +/–: Changes the TV channels on the VCR.
   1 − 10, 0, 100+ (+10): Selects the TV channels.
   The 10 button will function as the ENTER button if your VCR requires pressing ENTER after selecting a channel number.
   PLAY: Starts playback.
   REW: Rewinds a video tape.
   FF: Fast-winds a video tape.
   STOP: Stops operation.
   PAUSE: Pauses.
   ● REC and PAUSE: Enters recording pause (for the main room only).
   ● REC and PLAY: Starts recording (for the main room only).

   Note:
   Refer to the manual supplied with your VCR.

5. **Try to operate your VCR by pressing VCR 1 POWER.**
   When your VCR turns on or off, you have entered the correct code.
   If there are more than one code listed for your brand of VCR, try each one until the correct one is entered.

To change the transmittable signals for operating a DVD player

1. **Press and hold VCR 1 POWER.**

2. **Press DVD.**

3. **Enter manufacturer's code using buttons 1–9, and 0.**
   See page 71 to find the code.

4. **Release VCR 1 POWER.**
   After pressing DVD or DVD MULTI, you can perform the following operations on a DVD player:

   1 − 9, 0: Selects the titles or the tracks.
   PLAY: Starts playing.
   ⏮: Returns to the beginning of the current (or previous) track.
   ⏭: Skips to the beginning of the next track.
   STOP: Stops playing.
   PAUSE: Stops playing temporarily. To release it, press PLAY.

After pressing DVD MENU (only for the main room operations), these buttons can be used for the DVD menu operations.

Note:

For detailed menu operations, refer to the instructions supplied with the discs or the DVD player.

Note:

Refer to the manual supplied with your DVD player.

5. Try to operate your DVD player by pressing one of the above buttons.
- DO NOT forget to turn on the DVD player before pressing one of the above buttons.

If there are more than one code listed for your brand of DVD player, try each one until the correct one is entered.
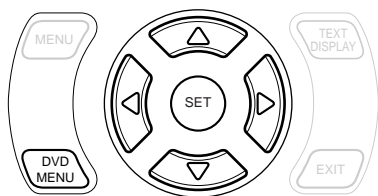
To change the transmittable signals for operating a CD player

1. Press and hold AUDIO POWER ON.

2. Press CD.

3. Enter manufacturer's code using buttons 1–9, and 0.

See page 71 to find the code.

4. Release AUDIO POWER ON.

After pressing CD (with the remote control mode selector set to "TV"), you can perform the following operations on a CD player:

1 – 9, 0, +10: Selects the tracks.
PLAY: Starts playing.
|◄◄: Returns to the beginning of the current (or previous) track.
►►|: Skips to the beginning of the next track.
STOP: Stops playing.
PAUSE: Stops playing temporarily. To release it, press PLAY.

Note:

Refer to the manual supplied with your CD player.

5. Try to operate your CD player by pressing one of the above buttons.
- DO NOT forget to turn on the CD player before pressing one of the above buttons.

If there are more than one code listed for your brand of CD, try each one until the correct one is entered.

Manufactures' codes for TV

Manufacturer	Codes
JVC	00*, 14, 74
FISHER	05
HITACHI	08, 09, 10, 49
MAGNAVOX	08, 17, 49
METS	50, 51, 52, 53
MITSUBISHI	08, 18
PANASONIC	24, 26, 76
PHILIPS	17
QUELLE	52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67
RCA/PROSC	08, 24, 29, 30, 31, 48
SAMSUNG	08, 34, 49
SANYO	05
SHARP	38, 77
SONY	39
TOSHIBA	37, 43
ZENITH	45, 46

*This figure is set to the remote control as the initial JVC cord.

Manufactures' codes for DBS tuner

Manufacturer	Codes
JVC	56, 57*, 67
AMSTRAD	43, 44, 45, 46, 47, 48, 49
BLAUPUNKT	30
ECHOSTAR	50, 51, 67
GOLDSTAR	31
GRUNDIG	32, 33
HIRSHMANN	48, 52, 53, 54, 55
INSTRUMENT	68
ITT/NOKIA	34
KATHREIN	52, 58, 59, 60, 61, 62, 63
NEC	35, 36
ORBITECH	48
PHILIPS	37, 38
RCA	65
SAMSUNG	39, 40
SCHWAIGER	61, 64
SIEMENS	41, 42
SONY	66
TECHNISAT	48

*This figure is set to the remote control as the initial JVC cord.

Note:

Manufacturers' codes are subject to change without notice. If they are changed, this remote control cannot operate the equipment.

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Manufactures' codes for CATV converter

Manufacturer	Codes
GENERAL INSTRUMENT	29
HAMLIN/RE	01, 02, 03, 04, 05
JERROLD/G	06, 07, 08, 09, 10, 11, 12, 13, 14
OAK	15, 16, 17
PANASONIC	18, 19, 20
PIONEER	21, 22
SCIENTIFF	23, 24, 25
TOCOM	26
ZENITH	27, 28

Manufactures' codes for DVD player

Manufacturer	Codes
JVC	00*, 02
DENON	01
PANASONIC	03
PHILIPS	13
PIONEER	04, 05, 06
RCA	07
SAMSUNG	08
SONY	09
TOSHIBA	10
YAMAHA	11, 12

*This figure is set to the remote control as the initial JVC cord.

Manufactures' codes for VCR

Manufacturer	Codes
JVC	00*, 26, 27
AIWA	01
BELL & HOWELL	03
EMERSON	08, 10, 11, 12, 64, 65
FISHER	03, 14, 15, 16
FUNAI	01
GE	18, 19, 20
GOLDSTAR	07
HITACHI	18, 23, 24
MAGNAVOX	04, 19, 24
MITSUBISHI	30, 31, 32, 33
NEC	26, 27
PANASONIC	19, 24, 39
PHILIPS	19, 24
RCA/PROSC	04, 18, 19, 23, 24, 43, 44, 45
SAMSUNG	45, 61, 62
SANYO	03, 48
SHARP	37, 50
SONY	52, 53, 54
TOSHIBA	43, 44
ZENITH	56, 57

*This figure is set to the remote control as the initial JVC cord.

Manufactures' codes for CD player

Manufacturer	Codes
JVC	00*, 06, 07, 08
DENON	01, 03
FISHER	04
KENWOOD	10, 11, 12
MAGNAVOX	15, 16
MARANTZ	17
ONKYO	18, 20, 21
PANASONIC	22, 24
PHILIPS	25, 26, 29
PIONEER	30
RCA	32, 33, 34
SANYO	35
SHARP	36
SONY	53
TEAC	37, 38, 39
TECHNICS	40, 41, 42, 45
YAMAHA	46, 47, 48

*This figure is set to the remote control as the initial JVC cord.

Note:

Manufacturers' codes are subject to change without notice. If they are changed, this remote control cannot operate the equipment.

Troubleshooting

Use this chart to help you solve daily operational problems. If there is any problem you cannot solve, contact your JVC service center.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The display does not light up.	The power cord is not plugged in.	Plug the power cord into an AC outlet. (See page 13.)
The buttons and controls on the front panel do not work.	The Multi-room function is not set correctly.	• Press MAIN ROOM ON/OFF for the main room operations. • Press SUB ROOM ON/OFF and SUB ROOM CONTROL for the sub-room operations.
No sound from the speakers in the main room.	Speaker signal cables are not connected properly.	Check speaker wiring and reconnect if necessary. (See pages 6 and 7.)
	The SPEAKERS ON/OFF 1 and SPEAKERS ON/OFF 2 buttons are not set correctly.	Press SPEAKERS ON/OFF 1 and SPEAKERS ON/OFF 2 correctly. (See page 19.)
	An incorrect source is selected for the main room.	Select the correct source for the main room.
	Muting is activated for the main room source.	Press MUTING to cancel the mute. (See page 21.)
	An incorrect input mode (analog or digital) is selected.	Select the correct input mode (analog or digital). (See page 31.)
	Connections are incorrect.	Check connections. For analog corrections, see page 7. For digital corrections, see page 10. For USB connection, see page 11.
No sound from the front speakers in the sub-room.	Speaker signal cables are not connected properly.	Check speaker connection and reconnect if necessary. (See page 14.)
	Main/sub setting for the speakers connected to the FRONT 2/SUB ROOM terminals are not set correctly.	Set the main/sub setting for the speakers correctly to use them as the sub-room front speakers. (See page 27.)
	Amplifier connected to the SUB ROOM PRE OUT is not turned on.	Turn on the amplifier.
	An incorrect source is selected for the sub-room.	Select the correct sub-room source.
	Muting is activated for the sub-room source.	Press MUTING to cancel the mute. (See page 26.)
	Connections are incorrect.	Check connections. For analog corrections, see page 7. For USB connection, see page 11.
Sound from one speaker only in the main room.	Speaker signal cables are not connected properly.	Check speaker connection and reconnect if necessary. (See page 14.)
	The balance is set to one extreme.	Adjust the balance properly (see page 27).
The SUB ROOM ON/OFF button does not work.	The Surround/DSP mode is used for the main room.	Cancel the Surround/DSP mode in the main room.
Surround cannot be used for the main room sources.	Sub-room sound is activated (the SUB ROOM indicator and SPEAKERS SUB ROOM indicator are lit on the display).	Deactivating the sub-room sound will allow you to use the Surround in the main room.
CD tracks are skipped, tape is rewound, or radio station is changed unintentionally.	When the same source is selected both for the main room and the sub-room, the source in one room affects the source in the other room.	This is normal, not the malfunction of the unit. Selecting different sources for the main room and the sub-room will avoid these troubles.
The receiver does not work correctly as you operate it.	Main room and sub-room operations are done at the same time.	If this happens, perform the same operation again.
Noise is heard.	An earth ($\frac{1}{r}$) cable is not connected to the AM ($\frac{1}{r}$) terminal on the rear panel.	Connect the cable to the AM ($\frac{1}{r}$) terminal on the rear panel.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Continuous hiss or buzzing during FM reception.	Incoming signal is too weak.	Connect an outdoor FM antenna or contact your dealer. (See page 5.)
	The station is too far away.	Select a new station.
	An incorrect antenna is used.	Check with your dealer to be sure you have the correct antenna.
	Antennas are not connected properly.	Check connections. (See page 5.)
Occasional cracking noise during FM reception.	Ignition noise from automobiles.	Move the antenna farther from automobile traffic.
Howling during record playing.	Your turntable is too close to speakers.	Move speakers away from the turntable.
No sound from PC connected with a USB cable.	An electrical shock is applied to the receiver, PC, or USB cable.	Turn off and on the receiver once, then restart the application installed in the PC.
	USB device is not selected on the computer.	Select "USB Audio Device [1]" for "Playback" of "Audio" (see page 11). Refer to the manuals supplied with your PC.
	"MUTE" is selected on the PC.	Check if the volume is set at low level. Refer to the manuals supplied for your PC.
Noise while reproducing PC sound connected with a USB cable.	Strong electromagnetic wave is emitted from such as television.	Move your PC away from the device emitting strong electromagnetic wave.
Sound from PC connected with a USB cable stops intermittently.	PC is subjected to excessive load due to using other applications.	Close the applications you do not use.
No sound effect such as DSP mode and digital equalization.	The Line Direct function is turned on.	Turn off the Line Direct function. (See page 22.)
"OVERLOAD" starts flashing on the display.	Speakers are overloaded because of high volume either in the main room or in the sub-room.	1. Press POWER on the front panel to turn off the receiver. 2. Stop the playback source. 3. Turn on the receiver again, and adjust the volume.
	Speakers are overloaded because of short circuit of speaker terminals.	Press POWER on the front panel to turn off the receiver, check the speaker wiring, then press it again to turn on the receiver again. If "OVERLOAD" does not disappear despite speaker wiring is not short-circuited, consult your dealer.
"TURN ON MAIN OR SUB ROOM" appears on the display.	The receiver is turned on with the main room and sub-room sounds deactivated.	• Press MAIN ROOM ON/OFF for the main room operations. • Press SUB ROOM ON/OFF for the sub-room operations.
The STANDBY lamp lights up after turning on the power, but soon the receiver turns off again (into standby mode).	The receiver is overloaded because of applying high voltage.	Press POWER on the front panel to turn off the receiver. After unplugging the AC power cord, consult your dealer.
Remote control does not work.	The MAIN ROOM/SUB ROOM selector is not set correctly.	Set the selector correctly either to "MAIN ROOM" or to "SUB ROOM."
	The TV/CATV/DBS selector is not set correctly.	Set the selector correctly either to "TV" or to "CATV/DBS."
	RF communication between the receiver and the remote control is interrupted from outside.	Consult your dealer.
	Batteries are weak.	Replace batteries. (See page 13.)
Remote control does not work properly.	An incorrect remote control operation mode is selected.	Select the correct remote control operation mode. (See page 65.)

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■ Specifications

Amplifier

Output Power

At Stereo operation:

Front channels: **120 W per channel, min. RMS, driven into 8 Ω, 20 Hz to 20 kHz with no more than 0.02% total harmonic distortion.**

120 W per channel, min. RMS, driven into 4 Ω, 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion.

At Surround operation:

Front channels: 100 W per channel, min. RMS, driven into 8 Ω at 1 kHz with no more than 0.8% total harmonic distortion.

Center channel: 100 W, min. RMS, driven into 8 Ω at 1 kHz, with no more than 0.8% total harmonic distortion.

Rear channels: 100 W per channel, min. RMS, driven into 8 Ω at 1 kHz, with no more than 0.8% total harmonic distortion.

Audio

Audio Input Sensitivity/Impedance (1 kHz):

PHONO (MM): 2.5 mV/47 kΩ

DVD, VCR 1, VCR 2, VIDEO, TV SOUND/DBS, CD, CDR, TAPE/MD: 200 mV/47 kΩ

Audio Input (DIGITAL IN)* :

Coaxial: DIGITAL 1 (DVD): 0.5 V(p-p)/75 Ω

Optical: DIGITAL 2 (CD), DIGITAL 3 (TV), DIGITAL 4 (CDR): –21 dBm to –15 dBm (660 nm ±30 nm)

* Corresponding to Linear PCM, Dolby Digital, and DTS Digital Surround (with sampling frequency — 32 kHz, 44.1 kHz, 48 kHz).

USB: Revision 1.0, Full-speed (with sampling frequency — 32 kHz, 44.1 kHz, 48 kHz)

Audio Output Level:

SUB ROOM PRE OUT: 200 mV

Recording Output Level: TAPE/MD, VCR 1, VCR 2, CDR: 200 mV

Digital output: Optical: DIGITAL OUTPUT
Signal wave length: 660 nm
Output level: –21 dBm to –15 dBm

Signal-to-Noise Ratio ('66 IHF/'78 IHF):

PHONO: 70 dB/78 dB (at REC OUT)

DVD, VCR 1, VCR 2, VIDEO, TV SOUND/DBS, CD, CDR, TAPE/MD: 92 dB/80 dB (Line Direct On)

Frequency Response (8 Ω):

PHONO: 20 Hz to 20 kHz (±1 dB)

VCR 1, VCR 2, VIDEO, TV SOUND/DBS, CD, CDR, TAPE/MD, DVD CENTER, DVD REAR, DVD FRONT
: 20 Hz to 20 kHz (±1 dB, –3 dB)

USB : 20 Hz to 20 kHz (±1 dB, –3 dB)

RIAA Phono Equalization: ±1.0 dB (20 Hz to 20 kHz)

Bass boost (Volume control at –30 dB): +6 ±1.0 dB at 100 Hz

Video

Video Input Sensitivity/Impedance:

Composite video: DVD, VCR 1, VCR 2, VIDEO, TV SOUND/DBS: 1 V(p-p)/75 Ω

S-video: DVD, VCR 1, VCR 2, VIDEO, TV SOUND/DBS:
(Y: luminance): 1 V(p-p)/75Ω
(C: chrominance, burst): 0.286 V(p-p)/75 Ω

Component: DVD, DBS
(Y: luminance): 1 V(p-p)/75 Ω
(P$_B$, P$_R$): ±0.7 V/75 Ω

Video Output Level:

Composite video: VCR 1, VCR 2, MONITOR OUT:
1 V(p-p)/75 Ω

S-video: VCR 1, VCR 2, MONITOR OUT:
(Y: luminance): 1 V(p-p)/75 Ω
(C: chrominance, burst): 0.286 V(p-p)/75 Ω

Component: MONITOR OUT
(Y: luminance): 1 V(p-p)/75 Ω
(P$_B$, P$_R$): ±0.7 V/75 Ω

Synchronization: Negative

Signal-to-Noise Ratio: 45 dB

On-Screen Color System: NTSC

FM tuner (IHF)

Tuning Range: 87.5 MHz to 108.0 MHz

Usable Sensitivity: Monaural: 12.8 dBf (1.2 µV/75 Ω)

50 dB Quieting Sensitivity:
Monaural: 21.3 dBf (3.2 µV/75 Ω)
Stereo: 41.3 dBf (31.5 µV/75 Ω)

Signal-to-Noise Ratio (IHF-A weighted):
Monaural: 78 dB at 85 dBf
Stereo: 73 dB at 85 dBf

Total Harmonic Distortion:
Monaural: 0.4% at 1 kHz
Stereo: 0.6% at 1 kHz

Stereo Separation at REC OUT: 35 dB at 1 kHz

Alternate Channel Selectivity: 45 dB: (±400 kHz)

Frequency Response: 30 Hz to 15 kHz: (+0.5 dB, –3 dB)

AM tuner

Tuning Range: 530 kHz to 1 710 kHz

Usable Sensitivity: Loop antenna: 400 µV/m

Signal-to-Noise Ratio: 50 dB (100 mV/m)

General

Power Requirements: AC 120V ∿, 60 Hz

Power Consumption: 320 W/440 VA (at operation)
2 watts (in standby mode)

Dimensions (W x H x D): 435 mm x 156.5 mm x 425.1 mm
(17 $^3/_{16}$ in. x 6 $^3/_{16}$ in. x 16 $^3/_4$ in.)

Mass: 11.6 kg (25.6 lbs)

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QUALITY **JVC** SERVICE

HOW TO LOCATE YOUR JVC SERVICE CENTER

TOLL FREE : 1-800-537-5722
http://www.jvcservice.com

Dear customer:
In order to receive the most satisfaction from your purchase, read the instruction booklet before operating the unit. In the event that repair is necessary, or for the address nearest your location, please refer to the factory service center list below or within the Continental United States, Call 1-800-537-5722 for your authorized servicer. Remember to retain your Bill of Sale for Warranty Service.

—JVC

JVC SERVICE & ENGINEERING
COMPANY OF AMERICA
DIVISION OF JVC AMERICAS CORP.

FACTORY SERVICE CENTER LOCATIONS

10 New Maple Avenue Pine Brook, NJ 07058-9641 (973) 396-1000	1500 Lakes Parkway Lawrenceville, GA 30243-5857 (770) 339-2582	705 Enterprise Street Aurora, IL 60504-8149 (630) 851-7855
5665 Corporate Avenue Cypress, CA 90630-0024 (714) 229-8011	2969 Mapunapuna Place Honolulu, HI 96819-2040 (808) 833-5828	10700 Hammerly, Suite 110 Houston, TX 77043 (713) 935-9331
13 Cummings Park Woburn, MA 01801 (781) 376-9100	8192 State Road 84 Davie, FL 33324 (954) 472-1960	890 Dubuque Avenue South San Francisco, CA 94080-1804 (650) 871-2666

Sophisticated electronic products may require occasional service. Just as quality is a keyword in the engineering and production of the wide array of JVC products, service is the key to maintaining the high level of performance for which JVC is world famous. The JVC service and engineering organization stands behind our products.

NATIONAL HEADQUARTERS
JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF JVC AMERICAS CORP.
1700 Valley Road
Wayne, NJ 07470

If you ship the product • • •

Pack your JVC unit in the original carton or one of equivalent size and strength. Enclose, with the unit, a letter stating the problem or symptom that exists and also a copy of the receipt or bill of sale you received when you purchased your JVC unit. Print your home return address on the outside and the inside of the carton. Send to the appropriate JVC Factory Service Center as listed above.

Don't service it yourself.

CAUTION

To prevent electrical shock, do not open the cabinet. No user serviceable parts inside.
Refer servicing to qualified service personnel.

ACCESSORIES
To purchase accessories for your JVC product, you may contact your local JVC Dealer.
Or from the 48 Continental United States call toll free : 800-882-2345

JVC LIMITED WARRANTY AUDIO-2

JVC COMPANY OF AMERICA warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL PURCHASER AT RETAIL to be FREE FROM DEFECTIVE MATERIAL AND WORKMANSHIP from the date of original retail purchase for the period as shown below. ("The Warranty Period.")

PARTS	LABOR
2YR	2YR

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY(50) UNITED STATES, THE DISTRICT OF COLUMBIA AND IN COMMONWEALTH OF PUERTO RICO.

WHAT WE WILL DO:
If this product is found to be defective, JVC will repair or replace defective parts at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during normal business hours at JVC authorized service centers. Parts used for replacement are warranted only for the remainder of the Warranty Period. All products and parts thereof may be brought to a JVC authorized service center on a carry-in basis except for Television sets having a screen size 25 inches and above which are covered on an in-home basis.

WHAT YOU MUST DO FOR WARRANTY SERVICE:
Return your product to a JVC authorized service center with a copy of your bill of sale. For your nearest JVC authorized service center, please call toll free: (800)537-5722.
If service is not available locally, box the product carefully, preferably in the original carton, and ship, insured, with a copy of your bill of sale plus and letter of explanation of the problem to the nearest JVC Factory Service Center, the name and location of which will be given to you by the toll-free number.
If you have any questions concerning your JVC Product, please contact our Customer Relations Department.

WHAT IS NOT COVERED:
This limited warranty provided by JVC does not cover:
1. Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model number or serial number has been altered, tampered with, defaced or removed;

2. Initial installation and installation and removal for repair;

3. Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;

4. Damage that occurs in shipment, due to act of God, and cosmetic damage;

5. Signal reception problems and failures due to line power surge;

6. Video Pick-up Tubes/CCD Image Sensor, Cartridge, Stylus(Needle) are covered for 90 days from the date of purchase;

7. Accessories;

8. Batteries (except the Rechargeable Batteries are covered for 90 days from the date of purchase);

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

JVC SHALL NOT BE LIABLE FOR THE LOSS OF USE OF THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion of incidental or consequential damages or limitations on how long an implied warranty last, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

JVC COMPANY OF AMERICA   1700 Valley Road
DIVISION OF JVC AMERICAS CORP.   Wayne, NJ 07470

REFURBISHED PRODUCTS CARRY A SEPARATE WARRANTY, THIS WARRANTY DOES NOT APPLY. FOR DETAILS OF REFURBISHED PRO DUCT WARRANTY, PLEASE REFER TO THE REFURBISHED PRODUCT WARRANTY INFORMATION PACKAGED WITH EACH REFURBISHED PRODUCT.

For customer use:

Enter below the Model No. and Serial No. which is located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No.: _____   Serial No.: _____

Purchase date: _____   Name of dealer: _____