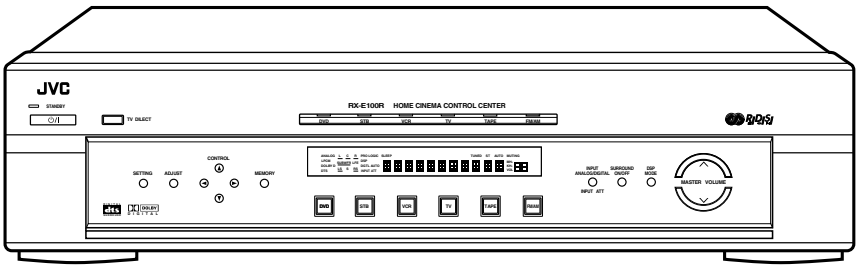
JVC

SERVICE MANUAL

AUDIO/VIDEO CONTROL RECEIVER

RX-E100RSL
RX-E100RSB

Area Suffix	
RX-E100RSL	
B	U.K.
E	Continental Europe
EN	Northern Europe
RX-E100RSB	
E	Continental Europe
EN	Northern Europe



Each difference points

MODEL	Source indication lens colour
RX-E100RSL	SILVER
RX-E100RSB	SILVER BLACK

Contents

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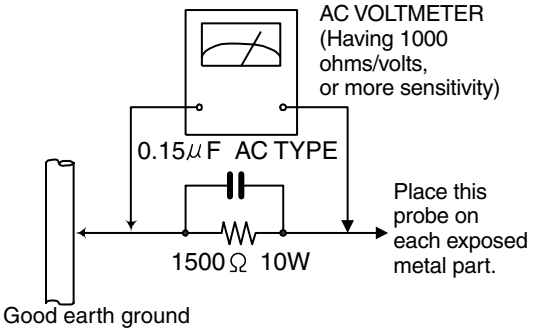
No.20951
May 2001

http://getMANUAL.com

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 1,500Ω 10W resistor paralleled by a 0.15μF 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.).



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)

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.

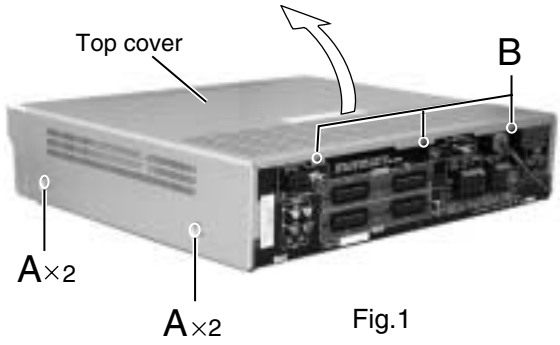


Fig.1

■ Removing the front panel assembly (See Fig.2 and 3)

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

1. Disconnect the card wire from connector CN411 on the audio board, CN412 on the input board and CN204 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.

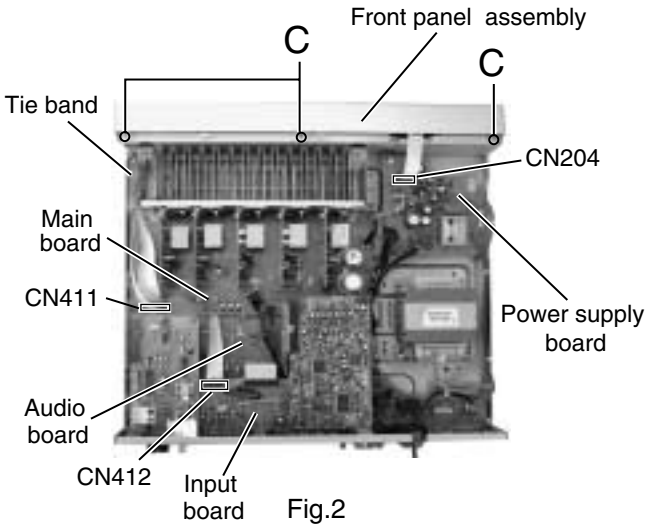


Fig.2

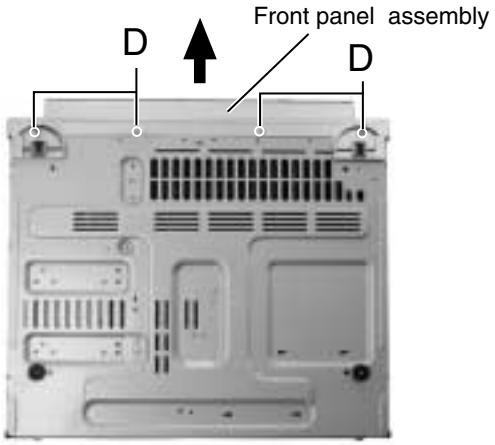


Fig.3

■ Removing the rear panel (See Fig.4)

・ 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 twenty one screws E attaching the each boards to the rear panel on the back of the body.

3. Remove the four screws F attaching the rear panel on the back of the body.

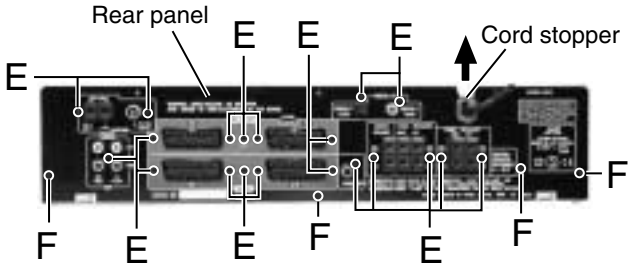


Fig.4

■ Removing each board connected to the rear side of the audio board

(See Fig.5 to 7)

- 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 tuner board and DSP board from connector CN111,CN112 and CN681 on the each Relay board.
3. Disconnect the Relay board from connector CN503, CN504 and CN501 on the audio board.
4. Disconnect the card wire connected to connector CN412 and CN512 on the Input board.

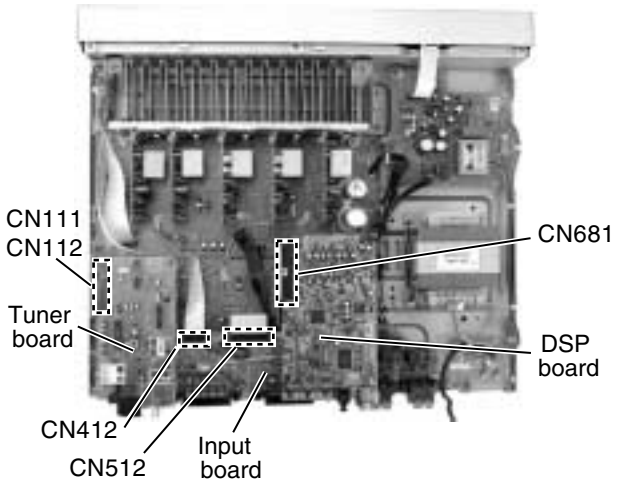


Fig.5

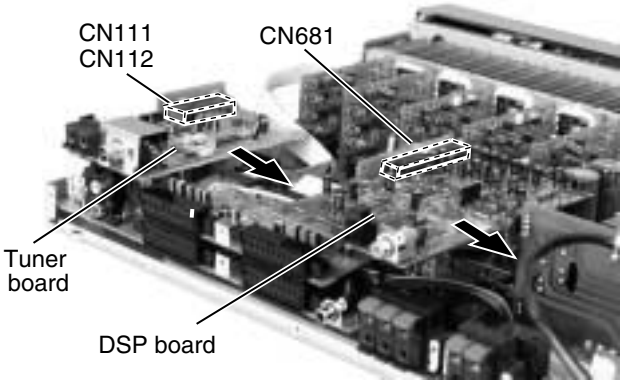


Fig.6

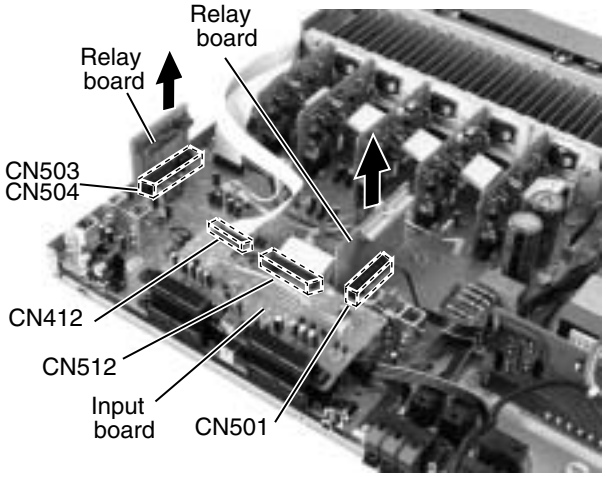


Fig.7

■ Removing the audio board (See Fig.8)

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

1. Disconnect the card wire from connector CN411 on the audio board.
2. Disconnect the harness from connector CN205 on the audio board.
3. Disconnect the harness from connector CN515, CN516, and CN517on the main board.
4. Remove the harness band fixing the harness.
5. Remove the three screws G attaching the audio board assembly.

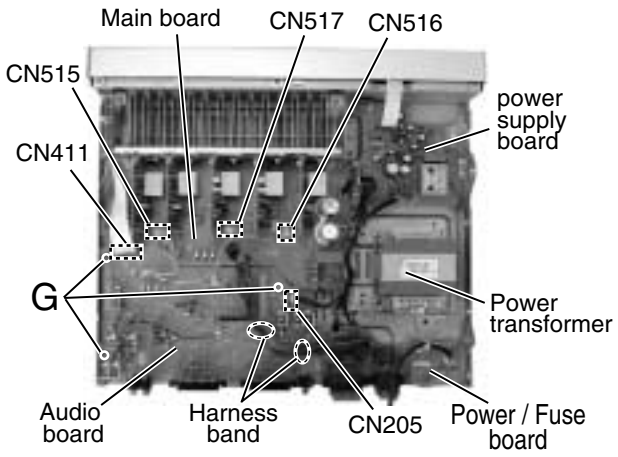


Fig.8

■ Removing the main board (See Fig.9)

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

1. Remove the harness band fixing the harness.
2. Disconnect the harness from connector CN707 on the power supply board .
3. Disconnect the harness from connector CN202 and CN206 on the main board .
4. Remove the five screws H and the two screws I attaching the main board.

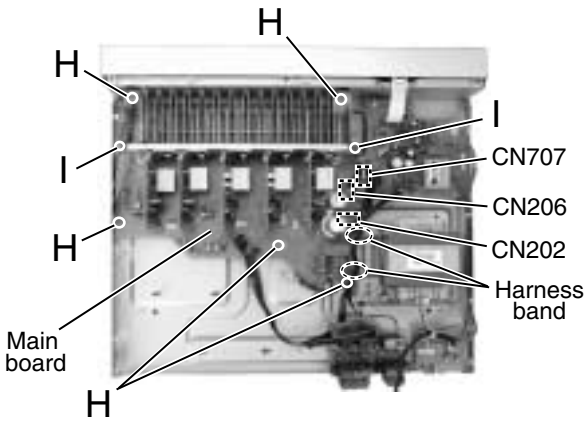


Fig.9

■ Removing the Heat sink (See Fig.10 to 11)

1. Remove the ten screws K and four screws L attaching the heat sink.
2. Remove the two screws J attaching the heat sink from the rear side of main board.

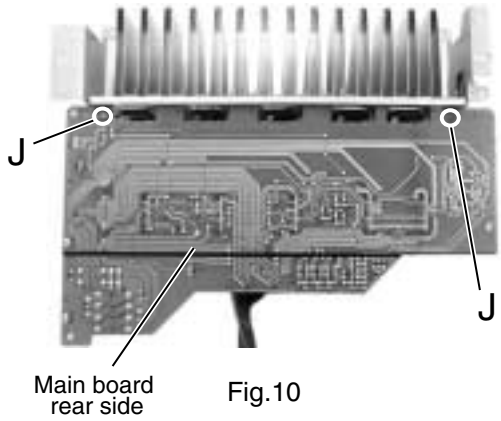


Fig.10

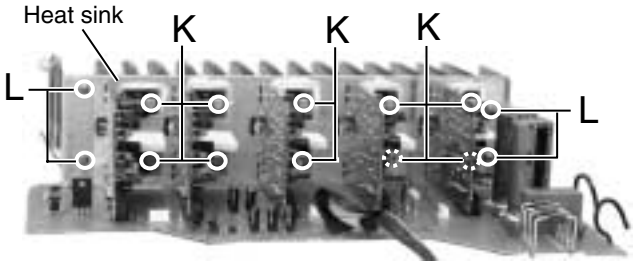


Fig.11

■Removing the power supply board (See Fig.12)

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

1. Disconnect the card wire from connector CN204 on the power supply board.
2. Disconnect the harness connected to connector CN201 and CN707 on the power supply board (If necessary, cut off the band fixing the harness on the side of the base chassis).
3. Disconnect the harness connected to connector CN206 on the main board
4. Remove the three screws N attaching the power supply board.
5. Unsolder the three harnesses connected to the power supply board.

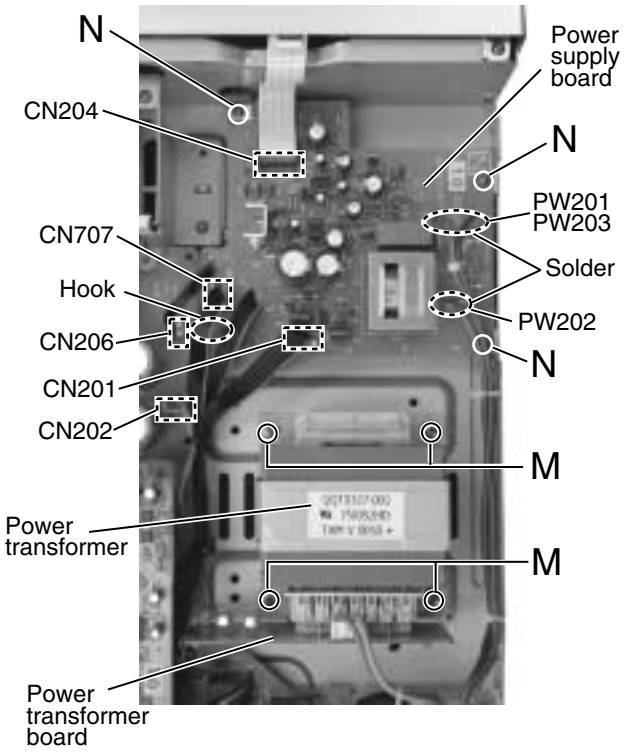


Fig.12

■Removing the power transformer (See Fig.12 and 13)

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

1. Disconnect the harness from connector CN217 on the power / fuse board.
2. Disconnect the harness from connector CN201 and CN202 on the power supply board and main board.
3. Remove the four screws M attaching the power transformer.

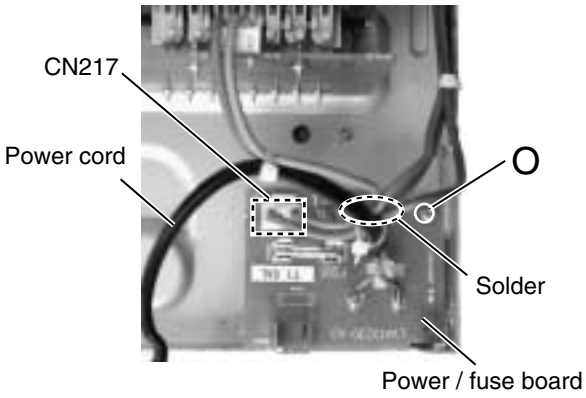


Fig.13

■Removing the power / fuse board (See Fig.13)

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

1. Disconnect the harness connected to connector CN217 on the power / fuse board (If necessary, cut off the band fixing the harness on the side of the base chassis).
2. Unsolder the power cord and other harnesses connected to the power / fuse board.
3. Remove the screw O attaching the power / fuse board.

■Removing the system control board / power switch board (See Fig.14)

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

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

2. Remove the eight screws Q attaching the system control board.

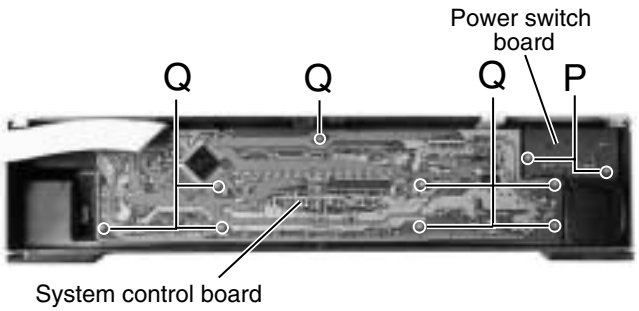


Fig.14

Adjustment method

■ Power amplifier section

Adjustment of idling current

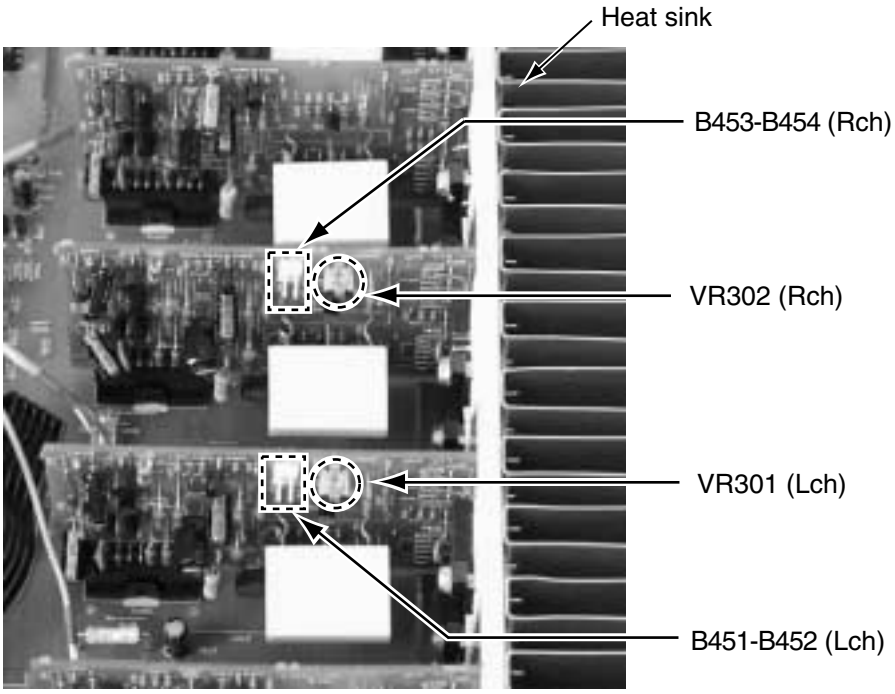
Measurement terminal	B451-B452(Lch) , B453-B454(Rch)
Adjustment volume	VR301(Lch) , VR302(Rch)

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 (VR301(Lch),VR302(Rch)) counterclockwise direction and connect the DC voltmeter to the measuring terminal(B451-B452(Lch) , B453-B454(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).

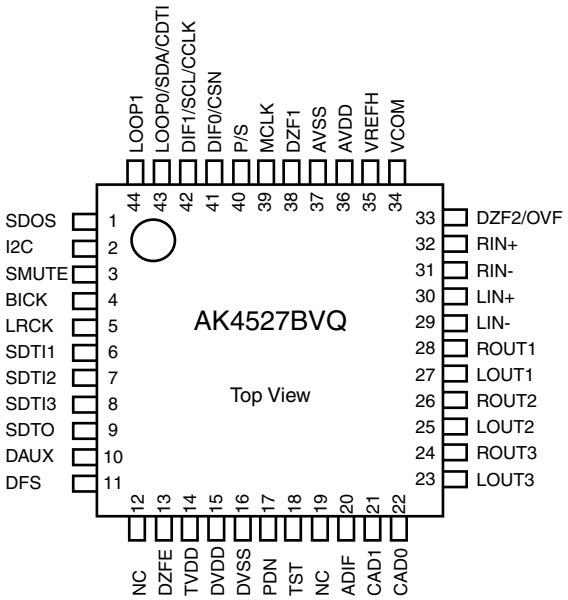
* It is not abnormal though the idling current might not become 0mA even if it is finished to turn variable resistance (VR301VR302) in the direction of counterclockwise.



Description of major ICs

■ AK4527B (IC601) : A/D,D/A Converter

1.Pin layout



2. Pin function (1/2)

AK4527(1/2)

No.	Pin name	I/O	Function
1	SDOS	I	SDTO Source Select Pin (Note 1) "L" : Internal ADC output, "H" : DAUX input
2	I2C	I	Control Mode Select Pin "L" : 3-wire Serial, "H" : I2C Bus
3	SMUTE	I	Soft Mute Pin (Note 1) When this pin goes to "H", soft mute cycle is initialized. When returning to "L", the output mute releases.
4	BICK	I	Audio Serial Data Clock Pin
5	LRCK	I/O	Input 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	Sub Audio Serial Data Input Pin
11	DFS	I	Double Speed Sampling Mode Pin (Note 1) "L" : Normal Speed, "H" : Double Speed
12	NC	-	No Connect No internal bonding.
13	DZEF	I	Zero Input Detect Enable Pin "L" : mode 7 (disable) at parallel mode, zero detect mode is selectable by DZFM2-0 bits at serial mode. "H" : mode 0 (DZF is AND of all six channels)
14	TVDD	-	Output Buffer Power supply Pin, 2.7V~5.5V
15	DVDD	-	Digital Power Supply Pin, 4.5V~5.5V
16	DVSS	-	De-emphasis Pin, 0V
17	PDN	I	Power-Down & Reset Pin When "L", the AK4527B is powered-down and the control registers are reset to default state. If the state of P/S or CAD0-1 changes, then the AK4527B must be reset by PDN.
18	TST	I	Test Pin This pin should be connected to DVSS.

Pin function (2/2)

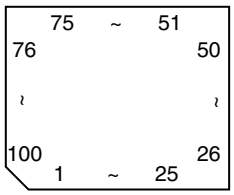
AK4527(1/2)

No.	Pin name	I/O	No Connect Function
19	NC	-	No internal bonding. Analog Input Format Select Pin
20	ADIF	I	"H" : Full-differential input, "L" : Single-ended input Chip Address 1 Pin
21	CAD1	I	Chip Address 0 Pin
22	CAD0	I	DAC3 Lch Analog Output Pin
23	LOUT3	O	DAC3 Rch Analog Output Pin
24	ROUT3	O	DAC2 Lch Analog Output Pin
25	LOUT2	O	DAC2 Rch Analog Output Pin
26	ROUT2	O	DAC1 Lch Analog Output Pin
27	LOUT1	O	DAC1 Rch Analog Output Pin
28	ROUT1	O	Lch Analog Negative Input Pin
29	LIN-	I	Lch Analog Positive Input Pin
30	LIN+	I	Rch Analog Negative Input Pin
31	RIN-	I	Rch Analog Positive Input Pin
32	RIN+	I	Zero Input Detect 2 Pin (Note 2)
33	DZF2	O	When the input data of the group 1 follow total 8192LRCK cycles with "0" input data, this pin goes to "H". Analog Input Overflow Detect Pin (Note 3)
	OVF	O	This pin goes to "H" if the analog input of Lch or Rch is overflows. Common Voltage Output Pin,AVDD/2
34	VCOM	O	Large external capacitor around 2.2uF is used to reduce power-supply noise. Positive Voltage Reference Input Pin,AVDD
35	VREFH	I	Analog Power Supply Pin,4.5V~5.5V
36	AVDD	-	Analog Ground Pin,0V
37	AVSS	-	Zero Input Detect 1 Pin (Note 2)
38	DZF1	O	When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H". Master Clock Input Pin
39	MCLK	I	Parallel / Serial Select Pin
40	P/S	I	"L" : Serial control mode, "H" : Parallel control mode Audio Data Interface Format 0 Pin in parallel mode
41	DIF0	I	Chip select pin in 3-wire serial control mode
	CSN	I	This pin should be connected to DVDD at I2C bus control mode Audio Data Interface Format 1 Pin in parallel mode
42	DIF1	I	Control Data Clock Pin in serial control mode
	SCL/CCLK	I	I2C = "L" : CCLK(3-wire Serial), I2C = "H" : SCL(I2CBus) Loopback Mode 0 Pin in parallel control mode
43	LOOP0	I	Enables digital loop-back from ADC to 3 DACs. Control Data Input Pin in serial control mode
	SAD/CDTI	I/O	I2C = "L" : CDTI(3-wire Serial), I2C = "H" : SDA(I2CBus) Loopback Mode 1 Pin (Note 1)
44	LOOP1	I	Enable all 3 DAC channels to be input from SDTII.

Notes : 1. SDOS, SMUTE, DFS, and LOOP1 pins are ORed with register data if P/S = "L".
2. The group 1 and 2 can be selected by DZFM2-0 bit if P/S = "L" and DZFME = "L".
3. This pin becomes OVF pin if OVFE bit is set to "1" at serial control mode.
4. All input pins should not be left floating.

■ UPD784215AGC103 (IC671) : UNIT CPU

1.Pin layout



2.Pin function

Pin No.	Symbol	I/O	Function
1~8		-	Non connect
9	VDD	-	Power supply terminal
10	X2	O	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	O	Connecting the crystal oscillator for system sub clock
14	XT1	I	Connecting the crystal oscillator for system sub clock
15	$\overline{\text{RESET}}$	I	System reset signal input
16	$\overline{\text{AUTODATA}}$	I	Output of DSP to general-purpose port
17	LOCK	I	Output of DSP to general-purpose port
18	DIGITAL0	I	Output of DSP to general-purpose port
19	FORMAT	I	Output of DSP to general-purpose port
20	CHANNEL	I	Output of DSP to general-purpose port
21	ERR	I	Output of DSP to general-purpose port
22	$\overline{\text{RSTDET}}$	I	Reset signal input
23	AVDD	-	Power supply terminal
24	AVREF0	-	Connect to GND
25~32		-	Connect to GND
33	AVSS	-	Connect to GND
34,35		-	Non connect
36	AV REF1	-	Power supply terminal
37,38	RX,TX	-	Not use
39		-	Non connect
40	DSPCOM	I	Communication port from IC701
41	DSPSTS	O	Status communication port to IC701
42	$\overline{\text{DSPCLK}}$	I	Clock input from IC701
43	DSPRDY	I	Ready signal input from IC701
44		-	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	$\overline{\text{MICS}}$	O	Interface I/O terminal with microcomputer of chip select
49	$\overline{\text{MILP}}$	O	Interface I/O termonal with microcomputer
50	$\overline{\text{MIACK}}$	O	Interface I/O termonal with microcomputer
51,52		-	Non connect
53	$\overline{\text{DSPRST}}$	O	Reset signal output of DSP
54~63		-	Non connect
64,65	CDTI/CDTO	I/O	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	Interface I/O terminal with microcomputer of chip select
68	XTS	O	OSC Select
69,70		-	Non connect
71	$\overline{\text{PD}}$	O	Reset signal output
72	GND	-	Connect to GND
73~80		-	Non connect
81	VDD	-	Power supply
82	$\overline{\text{3D-ON}}$	-	Non connect
83	3D-ON	O	Switch at output destination of surround channel
84	ANA/T-TONE	O	Test tone control
85	REF-MIX	O	Control at output destination of LFE channel
86		-	Non connect
87	D.MUTE	O	Mute of the digital out terminal is controlled
88	$\overline{\text{S.MUTE}}$	O	Mute of the audio signal is controlled
89		-	Non connect
90~93	ASW1~4	O	Selection of digital input selector
94	TEST	-	Test terminal
95~100		-	Non connect

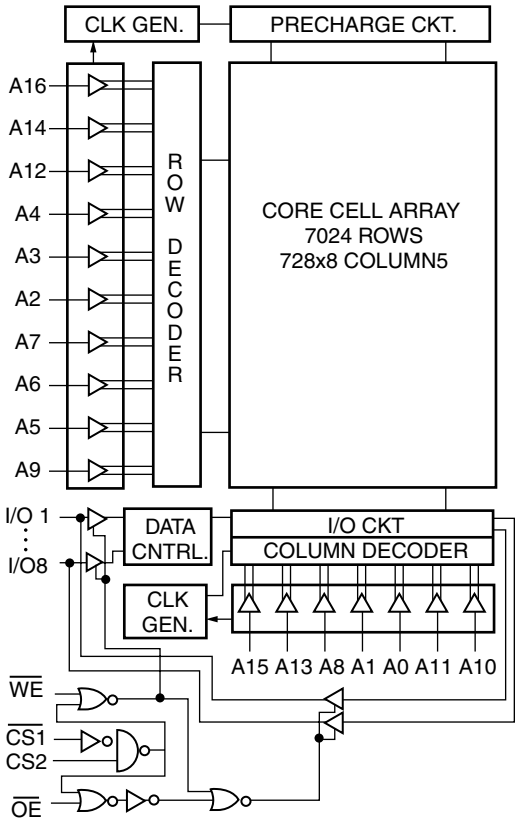
■ TC9446F-014 (IC631) : Digital signal processor for dolby digital (AC-3) / MPEG2 audio decode

Pin No.	Symbol	I/O	Function
1	$\overline{RST}$	I	Reset signal input terminal (L:reset H:Operation usually)
2	MIMD	I	Microcomputer interface mode selection input terminal (L:serial H:IC bus)
3	$\overline{MICS}$	I	Microcomputer interface chip select input terminal
4	$\overline{MILP}$	I	Microcomputer interface latch pulse input
5	MIDIO	I/O	Microcomputer interface data I/O terminal
6	$\overline{MICK}$	I	Microcomputer interface clock input terminal
7	MIACK	O	Microcomputer interface acknowledge output terminal
8~11	FI0~3	I	Flag input terminal 0~3
12	IRQ	I	Interrupt input terminal
13	VSS	-	Digital ground terminal
14	LRCKA	I	Audio interface LR clock input terminal A
15	BCKA	I	Audio interface bit clock input terminal A
16~18	SDO0~2	O	Audio interface data output terminal 0
19	SD03	-	Non connect
20	LRCKB	I	Audio interface LR clock input terminal B
21	BCKB	I	Audio interface bit clock input terminal B
22	SDT0	I	Audio interface data input terminal 0
23	SDT1	I	Audio interface data input terminal 1
24	VDD	-	Power supply for digital circuit
25	LRCKOA	O	Audio interface LR clock output terminal A
26	BCKOA	O	Audio interface bit clock output terminal A
27,28	$\overline{TEST0,1}$	I	Test input terminal 0/1 (L:test H:operation usually)
29~31	LRCKOB,BCKOB,TXO	-	Non connect
32,33	$\overline{TEST2,3}$	I	Test input terminal (L:test H:operation usually)
34	RX	I	SPDIF input terminal
35	VSS	-	Ground terminal for digital circuit
36	$\overline{TSTSUB0}$	I	Test sub input terminal 0 (L:test H:operation usually)
37	FCONT	O	VCO Frequency control output terminal
38,39	$\overline{TSTSUB1,TSTSUB2}$	I	Test sub input terminal 1,2 (L:test H:operation usually)
40	PDO	O	Phase error signal output terminal
41	VDDA	-	Power supply for analog circuit
42	PLON	I	Clock selection input terminal (L:external clock H:VCO clock)
43	AMPI	I	AMP.input terminal for LPF
44	AMPO	O	AMP.output terminal for LPF
45	CKI	I	External clock input terminal
46	VSSA	-	Ground terminal for analog circuit
47	CKO	O	DIR Clock output terminal
48	LOCK	O	VCO Lock detection output terminal
49	VSS	-	Ground terminal for digital circuit
50	$\overline{WR}$	O	External SRAM writing signal output terminal
51	$\overline{OE}$	O	External SRAM output enable signal output terminal
52	$\overline{CE}$	O	External SRAM chip enable signal output terminal
53	VDD	-	Power supply terminal for digital circuit
54~61	IO7~0	I/O	External SRAM data I/O terminal 7~0
62	VSS	-	Ground terminal for digital circuit
63~70	AD0~7	O	External SRAM address output terminal 0~7
71	VDD	-	Power supply terminal for digital circuit
72~80	AD8~16	O	External SRAM address output terminal 8~16
81	VSS	-	Ground terminal for digital circuit
82~89	PO0~7	O	General purpose output terminal 0~7
90	VDDDL	-	Power supply terminal for DLL
91	LPFO	O	LPF output terminal for DLL
92,93	DLON,DLCKS	I	Refer to the undermentioned table
94	SCKO	-	Non connect
95	VSSDL	-	Ground terminal for DLL
96	SCKI	I	External system clock input terminal
97	VSSX	-	Ground termonal for oscillation circuit
98,99	XO,XI	I/O	Oscillation I/O terminal
100	VDDX	-	Power supply terminal for oscillation circuit

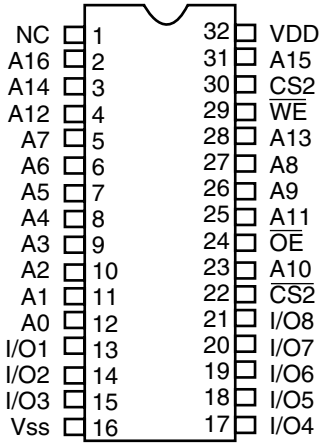
DLCKS terminal	DLONterminal	DLL clock setting
L	L	SCKI input (DLL circuit OFF)
L	H	Four times XI clock
H	L	Three times XI clock
H	H	Six times XI clock

■ W24L010AJ-12 (IC641) : CMOS SRAM

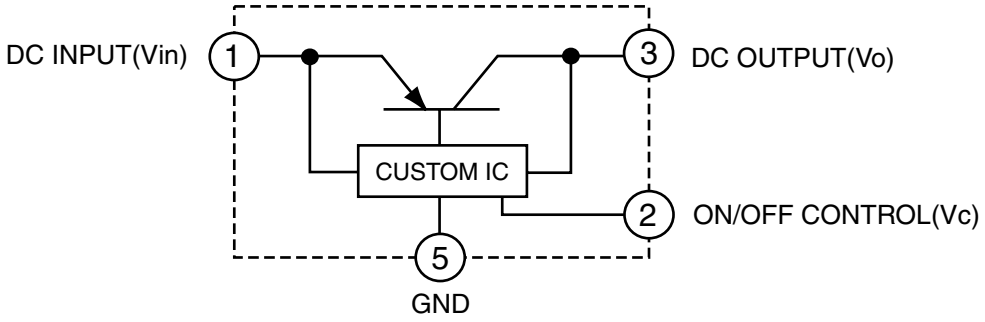
Block diagram



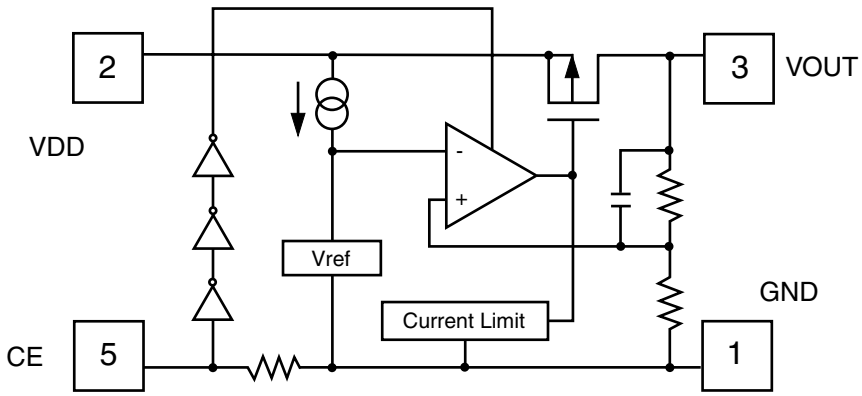
Pin layout



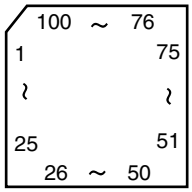
■ PQ3DZ53 (IC681) : Regulator IC



■ RN5RZ33BA (IC683) : Voltage regurator



■ MN101C35DHR (IC401) : System controller



Pin function (1/2)

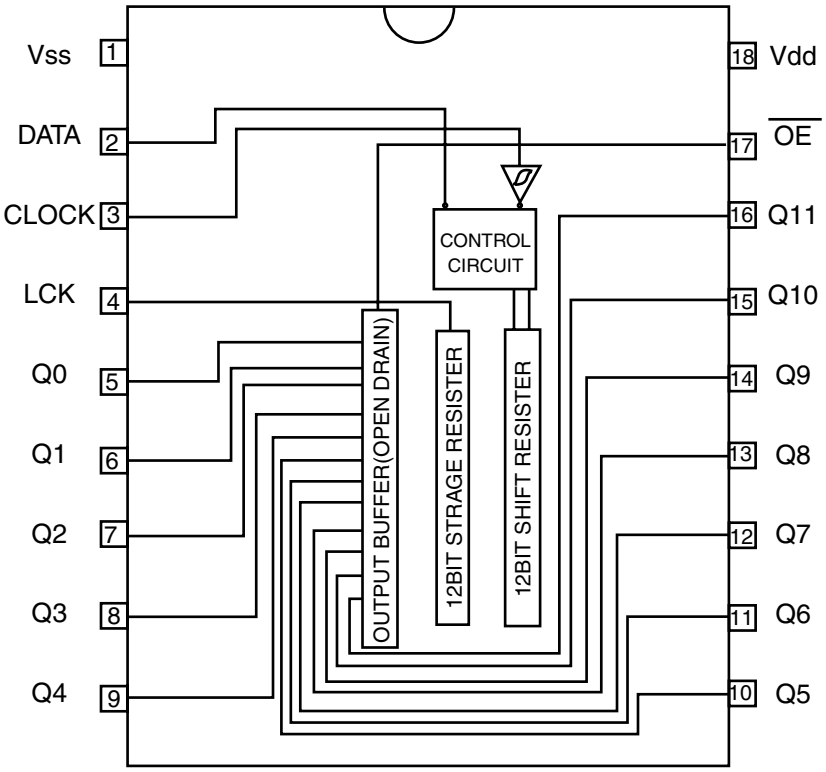
Pin No.	Symbol	I/O	Function
1	TXD/SB00/P00	-	GND
2	RXD/SBI0/P01	-	GND
3	SBT0/P02	I	PROTECTOR INPUT
4	SB01/P03	-	GND
5	SBI1/P04	-	GND
6	SBT1/P05	I	GND (TV LINK INPUT)
7	BUZZER/P06	I	SLOW SW L INPUT
8	VDD	-	POWER SUPPLY +5V
9,10	OSC1,2	I/O	OSC (8MHz)
11	VSS	-	GND
12	XI	-	GND
13	X0	O	OPEN
14	MMOD	-	GND
15	VREF-	-	GND
16	AN0/PA0	I	KEY INPUT 1 (7KEY)
17	AN1/PA1	I	KEY INPUT 2 (7KEY)
18	AN2/PA2	I	KEY INPUT 3 (7KEY)
19	AN3/PA3	I	CHIP SELECT 1
20	AN4/PA4	I	CHIP SELECT 2
21	AN5/PA5	I	SCART DVD INPUT
22	AN6/PA6	I	SCART STB INPUT
23	AN7/PA7	I	SCART VCR INPUT
24	VREF+	-	POWER SUPPLY +5V
25	P07	O	SLOW SW M OUTPUT
26	RST /P27	I	RESET INPUT
27	TM0IO/P10	O	RDS SDA IN/OUT
28	TM1IO/P11	I	RDS SCL IN/OUT
29	TM2IO/P12	O	TUNER CE
30	TM3IO/P13	I	TUNER MUTE
31	TM4IO/P14	O	TUNER CLK
32	P15	I/O	TUNER DATA IN/OUT
33	IRQ0/P20	-	GND
34	SENS/IRQ1/P21	I	REMOCON INPUT
35	IRQ2/P22	I	INH INPUT
36	IRQ3/P23	I	RDS DAVN INPUT
37	IRQ4/P24	I	TUNED INPUT
38	P25	I	STEREO INPUT
39	SB02/P30	O	DSP MICON COMMAND
40	SBI2/P31	I	DSP MICON STATUS

Pin function (2/2)

Pin No.	Symbol	I/O	Function
41	SBT2/P32	O	DSP MICON CLK
42	P50	O	DSP MICON READY
43	P51	O	DSP MICON RESET
44	P52	O	M61501 CLK
45	P53	O	M61501 DATA
46	P54	O	M61501 LATCH
47 ~ 50	DGT17/P67 ~ DGT14/P64	O	VIDEO SELECT 1 ~ VIDEO SELECT 4
51 ~ 54	DGT13/P63 ~ DGT10/P60	O	GRID 1 ~ GRID 4
55	DGT9/P41	O	GRID 5
56	DGT8/P40	O	GRID 6
57 ~ 63	SEG0/DGT7/P77 ~ SEG6/DGT1/P71	O	GRID 7 ~ GRID 13
64	SEG7/DGY0/P7	O	SEGMENT 17
65 ~ 72	SEG8/P87 ~ SEG15/P80	O	SEGMENT 18 ~ SEGMENT 25
73 ~ 88	SEG16/P97 ~ SEG31/PB3	O	SEGMENT 1 ~ SEGMENT 16
89	SEG32/PB2	O	STANDBY LED
90	SEG33/PB1	O	EXPANSION BU2092 LCK
91	SEG34/PB0	O	EXPANSION BU2092 DATA
92	SEG35/PD7	O	EXPANSION BU2092 CLK
93	SEG36/PD6	O	FRONT SPK RELAY
94	SEG37/PD5	O	CENTER SPK RELAY
95	SEG38/PD4	O	REAR SPK RELAY
96	SEG39/PD3	O	POWER ON
97	SEG40/PD2	O	SWITCH MODE ON
98	SEG41/PD1	O	SUBWFR MUTE
99	SEG42/PD0	O	SOURCE MUTE
100	VPP	O	VPP

■ BU2092 (IC642) : Port expander

1.Terminal Layout

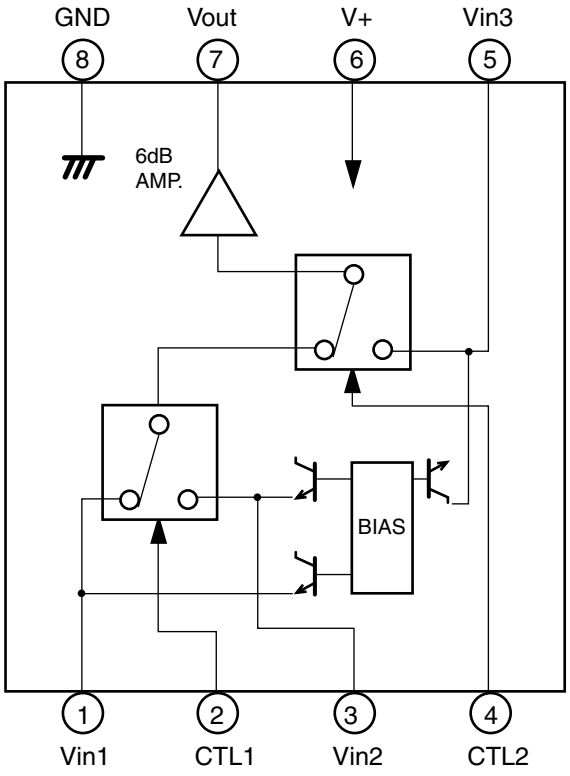


2.Pin Function

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 Latch Data: L / H OUTPUT: ON / OFF
17	$\overline{OE}$	I	Output Enable
18	Vdd	-	Power Supply

■ NJM2246M (IC511,IC512,IC513) : Video switch

Block diaglam

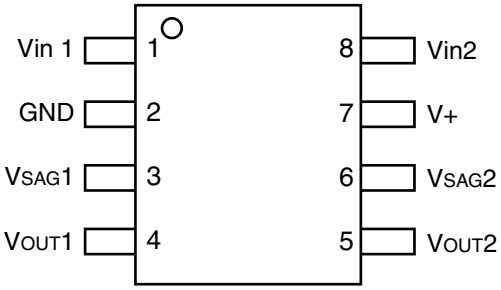


INPUT CONTROL SIGNAL- OUTPUT SIGNAL

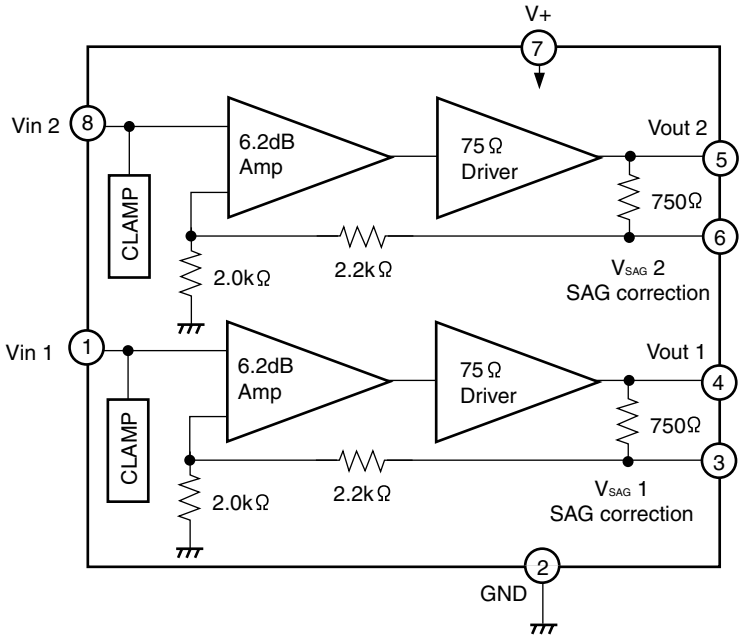
CTL1	CTL2	OUTPUT SIGNAL
L	L	Vin1
H	L	Vin2
L/ H	H	Vin3

■ NJM2267M (IC516) : Video switch

1. Pin layout

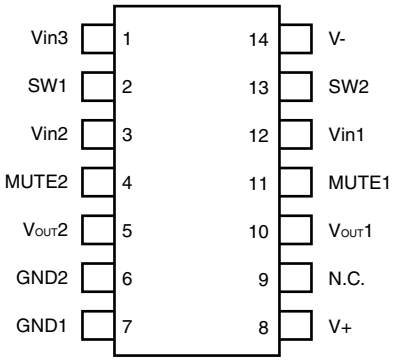


2. Block diaglam

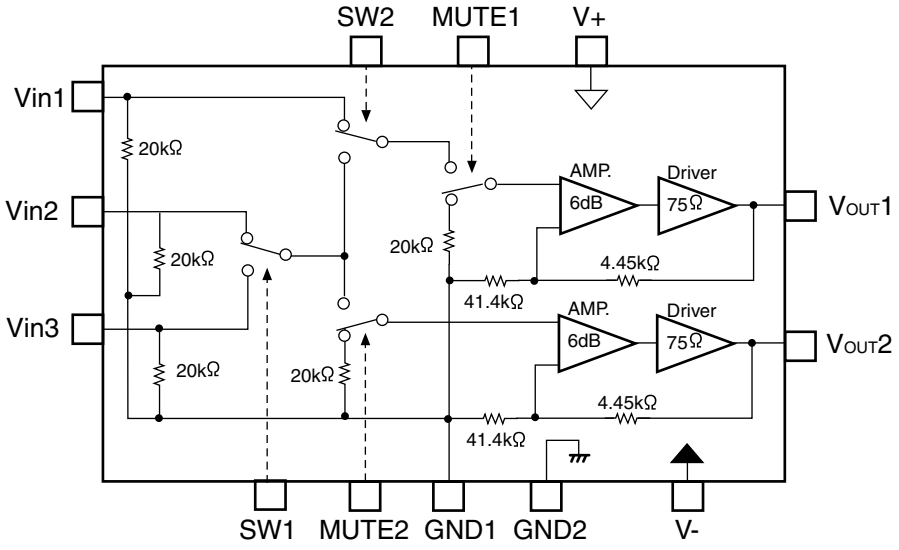


■ NJM2279M (IC515) : Video switch

1. Pin layout

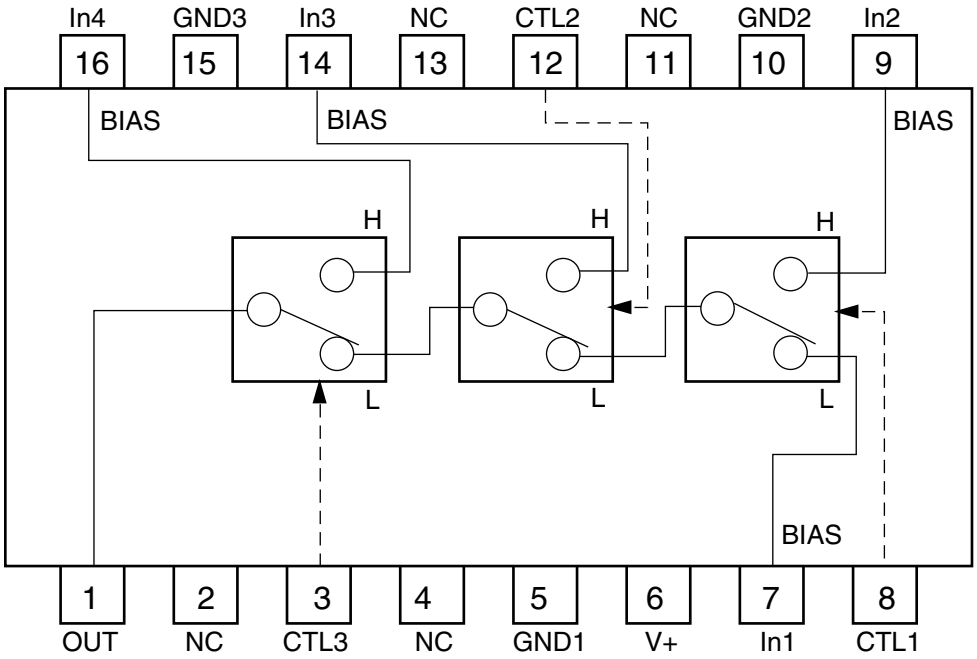


2. Block diaglam

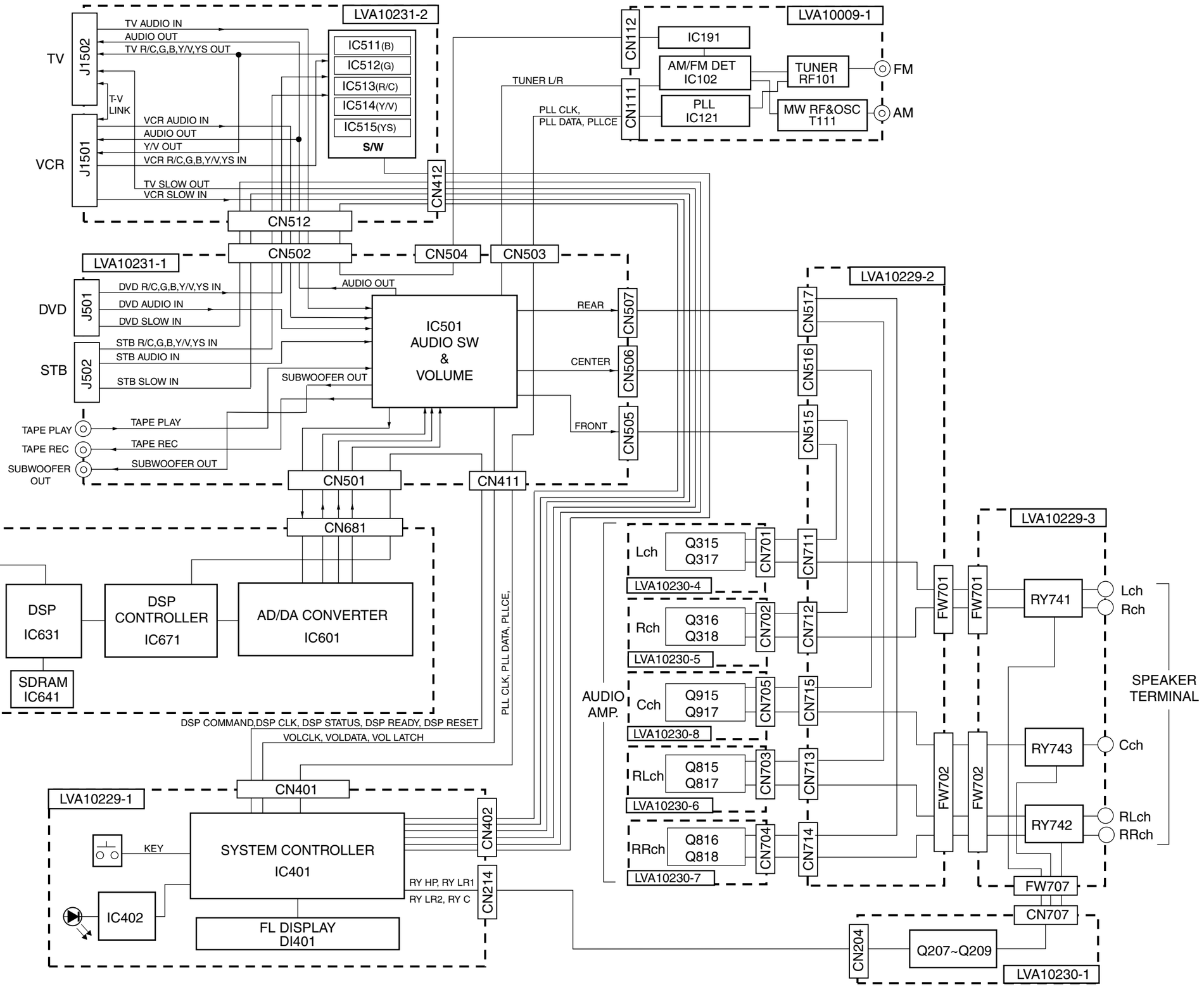


■ NJM2293 (IC514) : Video switch

Block diaglam



Block diagram



Standard schematic diagrams

■ Power supply section

B/E/EN

LVA10230-1

LVA10230-2

LVA10230-3

POWER TRANSFORMER
T201

TO CN202 OF LVA10229-2 (SHEET 2/8)
S1
COM
S1
FW202

F202 T2AL
F203 T2AL
R201 5.6 UNF. (1/4W)
TH. FUSE

CN207
CN217

EP202

TO CN214 OF LVA10229-1 (SHEET 6/8)
TV_DIRECT
5.6V
B+5V
D.GND
F2
-VPP
F1
POWER
RELAY_LR
RELAY_C
RELAY_S
PROTECTOR
CN204

S2 COM S2 S3 S3
FW201
CN201

PW201
PW203
PW202
PW101
PW103
PW102

F201 T1.6AL
F204 T100MAL
TA201
TA202

MAINS PLUG
AC230V/50Hz

D201 10E2-FD
D202 1SR35-400A
D203 10E2-FD
D204 1SR35-400A
D219 1SR35
D220 1SR35
C201 0.1 (100V)
C202 0.1 (100V)
C203 0.1 (100V)
C206 0.047
C207 0.047
C204 2200/35
C205 1000/35

T202 QQ10281-002
C210 0.0047
RY201 QSK0055-001
C208 0.0047/100
R202 10 UNF. (1/4W)
D210 1SS133
Q202 KRC105M
D206 1SR35-400A
D207 1SR35-400A
D208 1SR35-400A
D209 1SR35-400A
R203 10 UNF (1/4W)
C209 470/25
Q203 KTC3203/OY
R204 820 UNF. (1/4W)
C212 470/16
D211 MTZJ6.2C
POWER
D212 1SR35
R213 330
C213 2200/6.3

TO CN205 OF LVA10231-1 (SHEET 4/8)
+B2
A.GND
-B2
5.6V
FW205

R209 100k
Q205 KTC3200/GL
C218 1/50
D217 MTZJ6.2C
R208 10 UNF (1/4W)
Q204 KTA1046/Y
D215 1SR35-400A
C214 220/50
TH201 QAD0095-4R7
R206 3.3k UNF (1/4W)
C215 100/63
D213 1SR35-400A
C216 22/50
D214 1SR35-400A
D216 MTZJ33C
R207 22k
C217 22/50

EP201

FW206
S1RELAY
PROTECTOR
+B2
TO CN206 OF LVA10229-2 (SHEET 2/8)
Q212 KRC105M
R214 12 UNF. (1/4W)

Q211 2SD2395/EF
R211 12 (1/4W)
R212 6.8K UNF (1/4W)
C221 100/25
D221 MTZJ6.2C

RELAY_C
RELAY_S
RELAY_LR
Q209 KRC105M
Q208 KRC105M
Q207 KRC105M

CN707
+B2
RELAY LR
RELAY S
RELAY C
TO FW707 OF LVA10229-3 (SHEET 2/8)

SHEET NUMBER	CIRCUIT DESCRIPTION
1 / 8	POWER SUPPLY
2 / 8	SPEAKER TERMINAL
3 / 8	AUDIO AMP
4 / 8	AUDIO SIGNAL INPUT TERMINAL
5 / 8	VIDEO&AUDIO SIGNAL INPUT TERMINAL
6 / 8	SYSTEM CONTROL & FL DISPLAY
7 / 8	DSP
8 / 8	TUNER

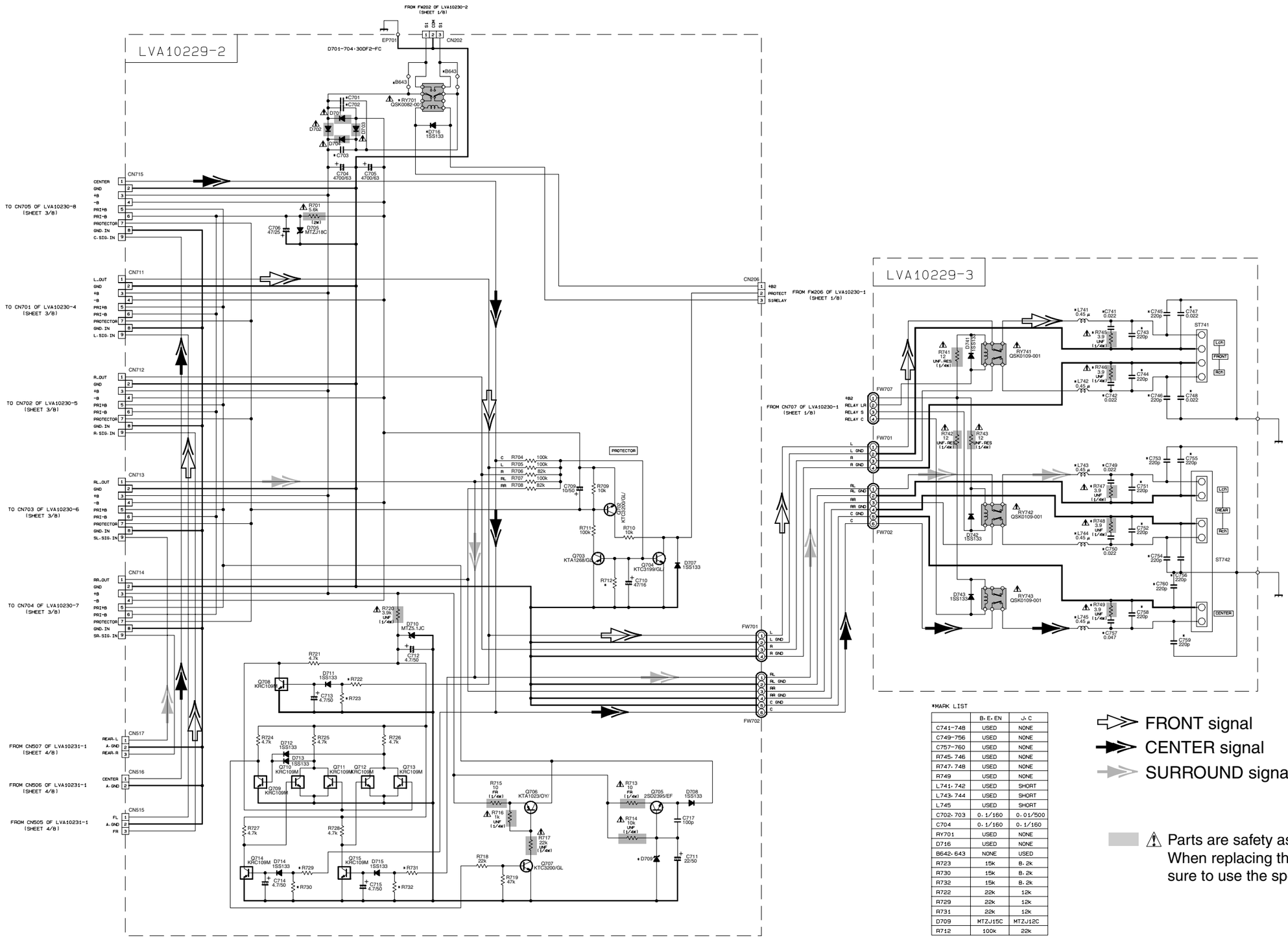
⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified.

SHEET 1/8

5 4 3 2 1

A B C 2-2 D E F G H

■ Speaker terminal section



*MARK LIST

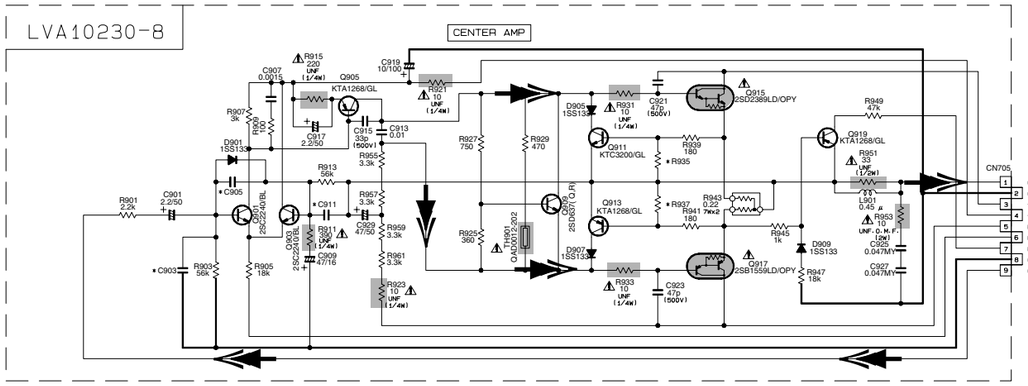
	B.E.EN	J.C
C741-748	USED	NONE
C749-756	USED	NONE
C757-760	USED	NONE
R745, 746	USED	NONE
R747, 748	USED	NONE
R749	USED	NONE
L741, 742	USED	SHORT
L743, 744	USED	SHORT
L745	USED	SHORT
C702, 703	0.1/160	0.01/500
C704	0.1/160	0.1/160
RY701	USED	NONE
D716	USED	NONE
B642, 643	NONE	USED
R723	15k	8.2k
R730	15k	8.2k
R732	15k	8.2k
R722	22k	12k
R729	22k	12k
R731	22k	12k
D709	MTZJ15C	MTZJ12C
R712	100k	22k

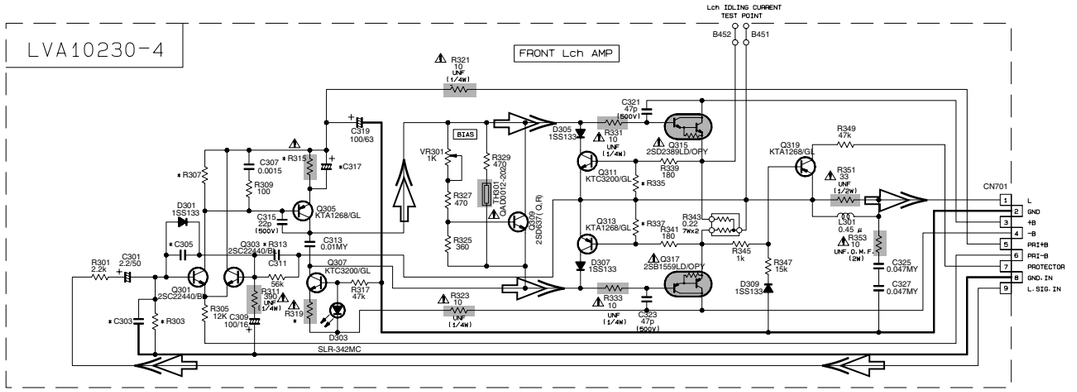
FRONT signal
CENTER signal
SURROUND signal

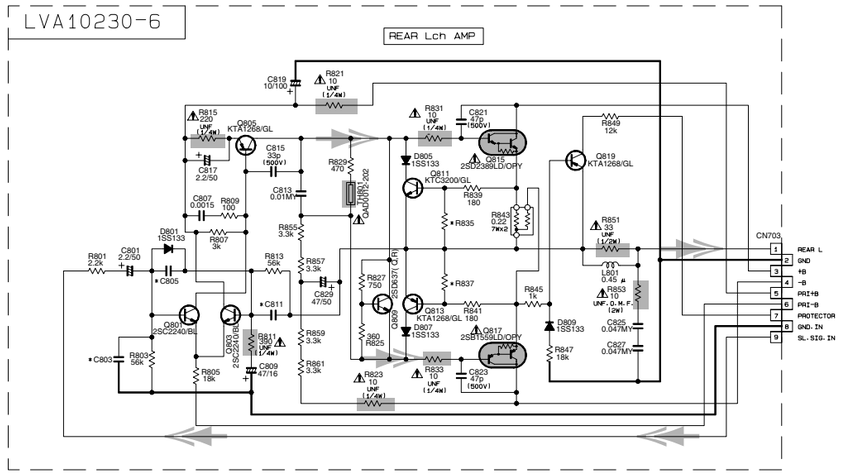
⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified.

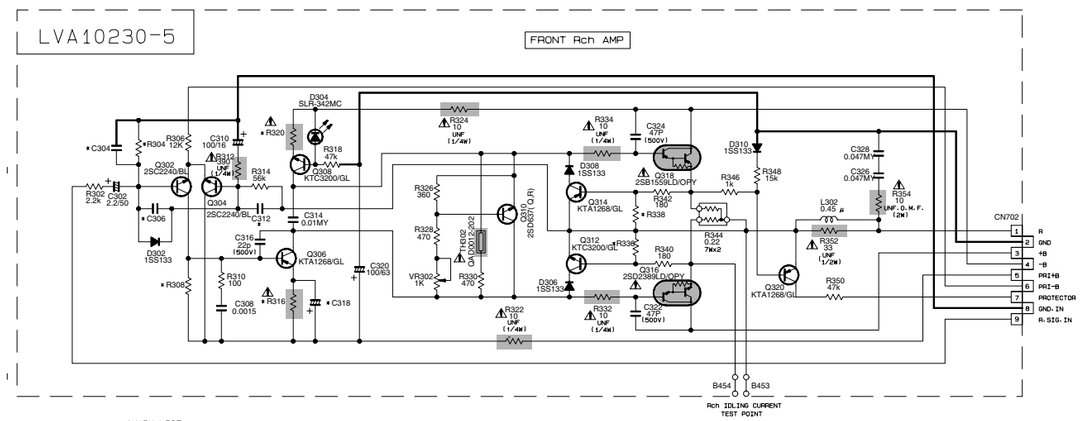
SHEET 2/8

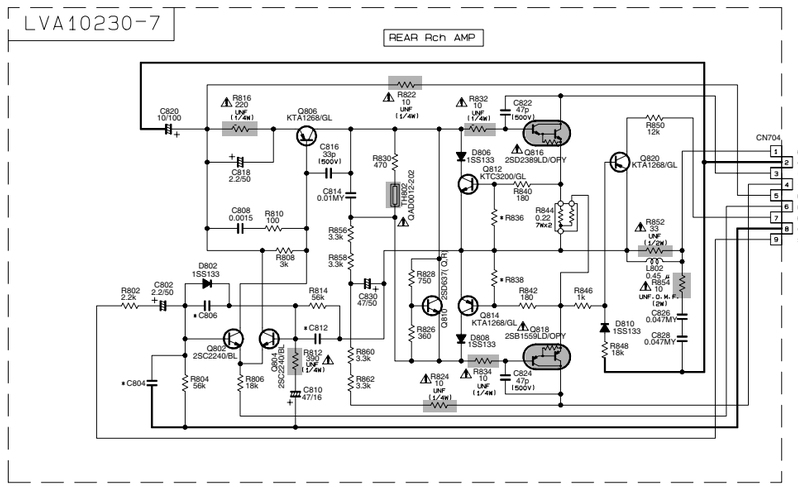
■ Audio amp section











*MARK LIST

	B, E, EN	J, C
R303, 304	68k	56k
R307, 308	2k	3.3k
R315, 316	120 UNF (1/4W)	330 UNF (1/4W)
R319, 320	470 UNF (1/4W)	330 UNF (1/4W)
R335~338	82	120
R835~838	100	180
R935	100	180
R937	100	180
C317, 318	33/50	2.2/50

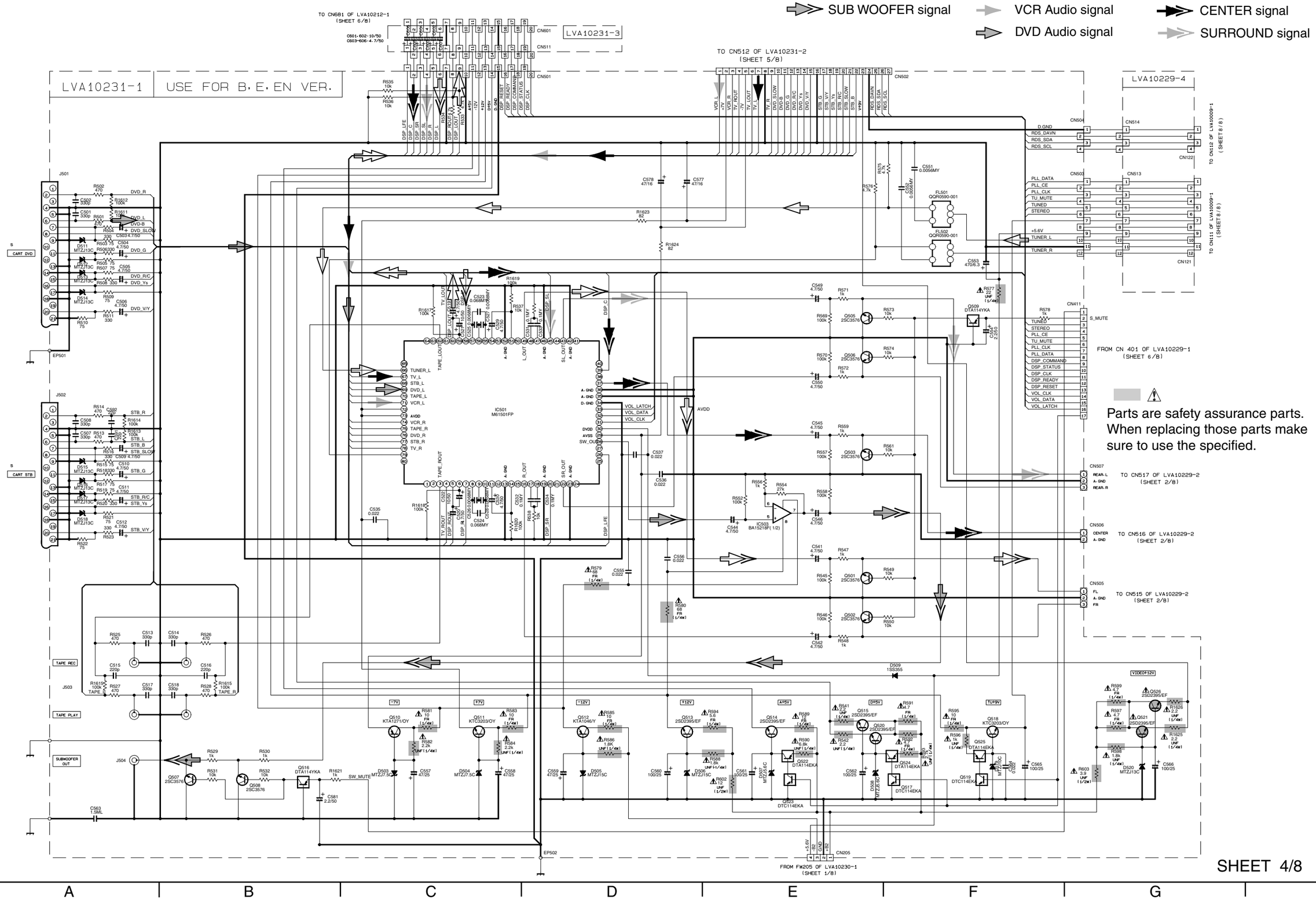
	B, E, EN	J, C
C311, 312	10p	22p
C811, 812	10p	22p
C911	10p	22p
C303, 304	68p	270p
C803, 804	68p	270p
C903	68p	270p
C305, 306	220p	100p
C805, 806	220p	100p
C905	220p	100p

FRONT signal
CENTER signal
SURROUND signal

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

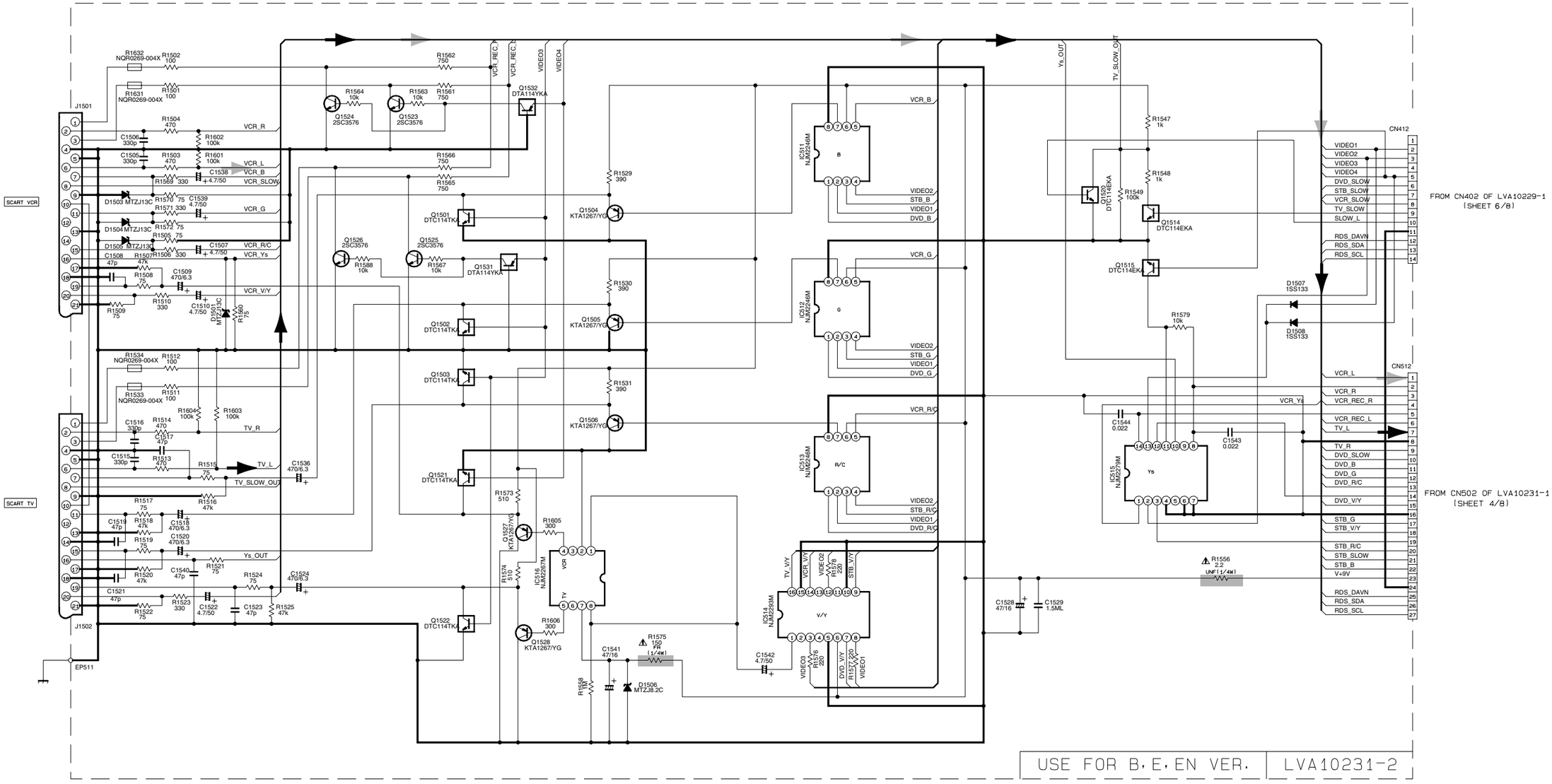
■ Audio signal input terminal section

DSP signal
TUNER signal
SUB WOOFER signal
TV Audio signal
VCR Audio signal
DVD Audio signal
FRONT signal
CENTER signal
SURROUND signal



SHEET 4/8

■ Video & Audio input terminal section

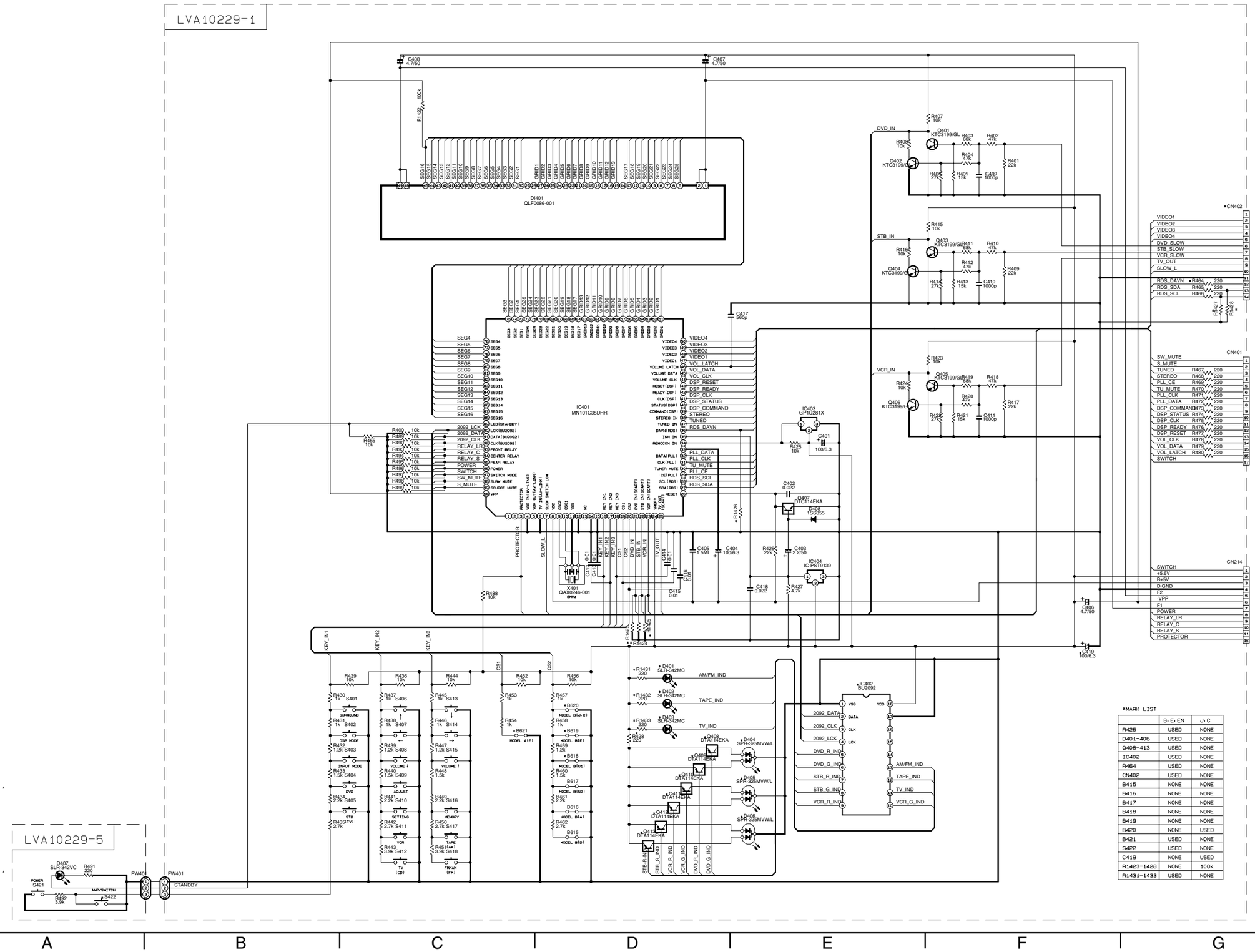


⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified.

TV Audio signal

VCR Audio signal

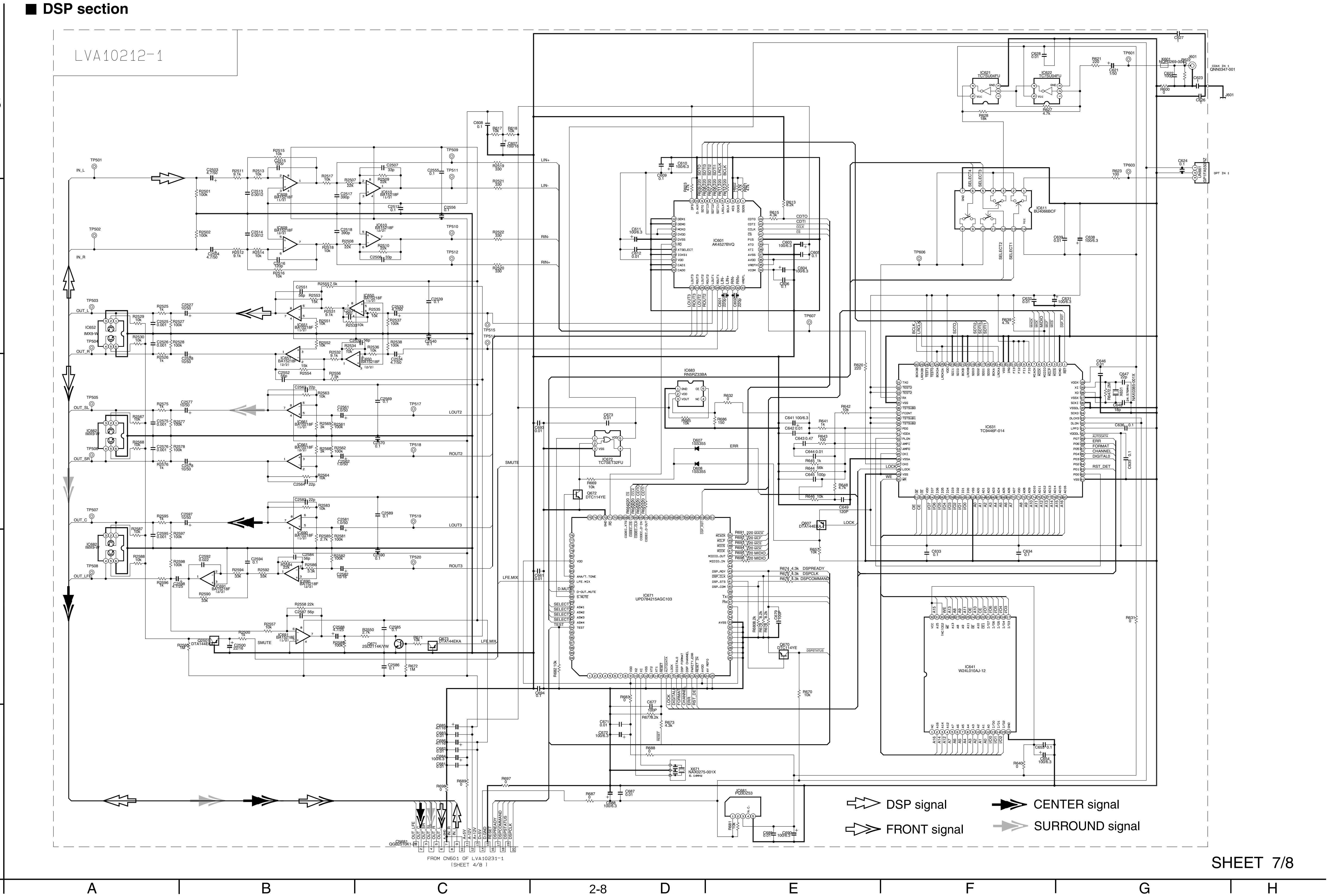
■ System control & FL displaying section



	B・E・EN	J・C
R426	USED	NONE
D401-406	USED	NONE
Q408-413	USED	NONE
IC402	USED	NONE
R464	USED	NONE
CN402	USED	NONE
B415	NONE	NONE
B416	NONE	NONE
B417	NONE	NONE
B418	NONE	NONE
B419	NONE	NONE
B420	NONE	USED
B421	USED	NONE
S422	USED	NONE
C419	NONE	USED
R1423-1428	NONE	100k
R1431-1433	USED	NONE

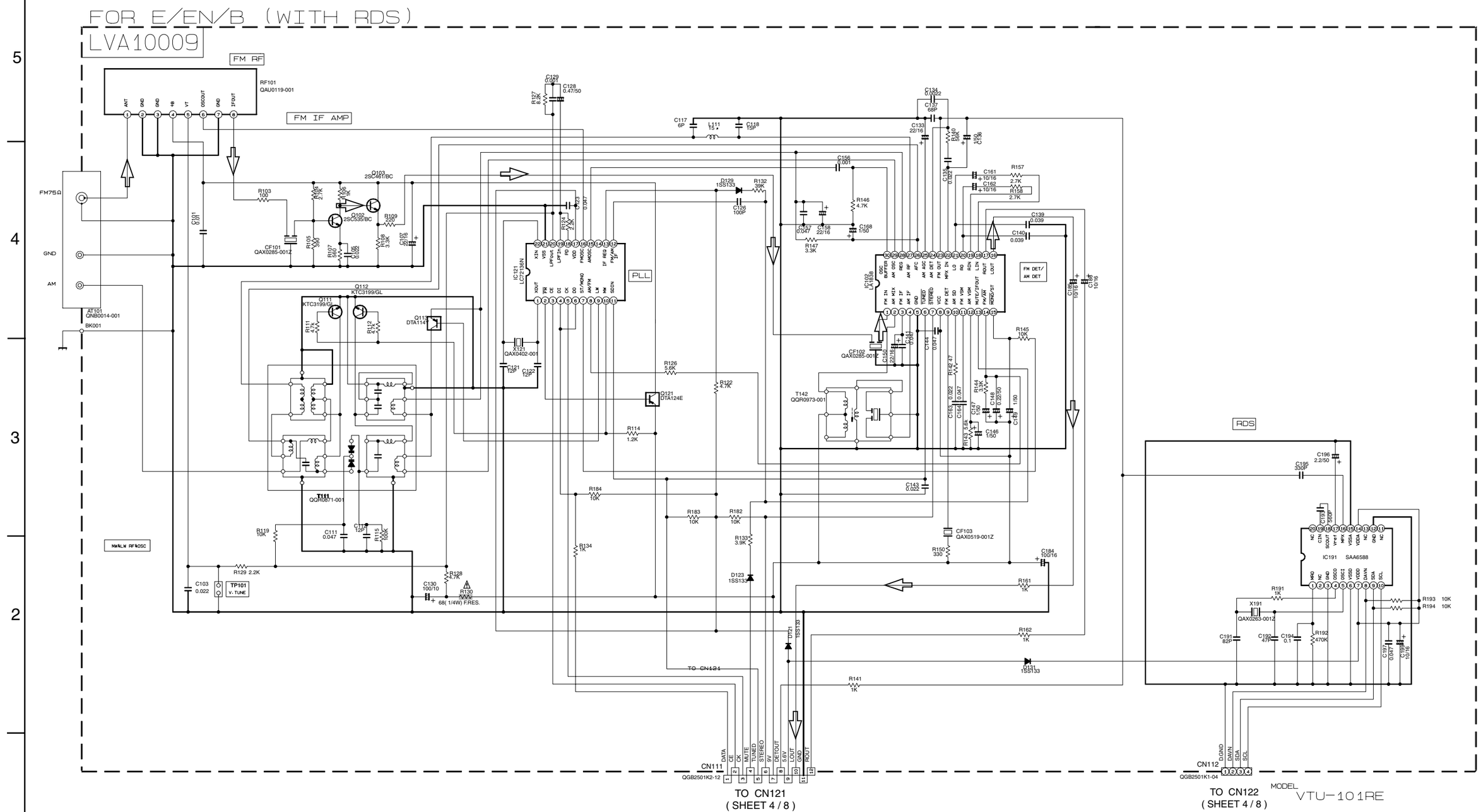
SHEET 6/8

■ DSP section



LVA10212-1
IC601 AK4527BVQ
IC631 TC9446F-014
IC641 W24L010AJ-12
IC671 UPD784215AGC103
IC611 BU4066BCF
IC683 RN5RZ33BA
IC672 TC7SET32FU
IC621 TC7SU04FU
IC622 TC7SU04FU
FROM CN601 OF LVA10231-1 (SHEET 4/8)
DSP signal
FRONT signal
CENTER signal
SURROUND signal

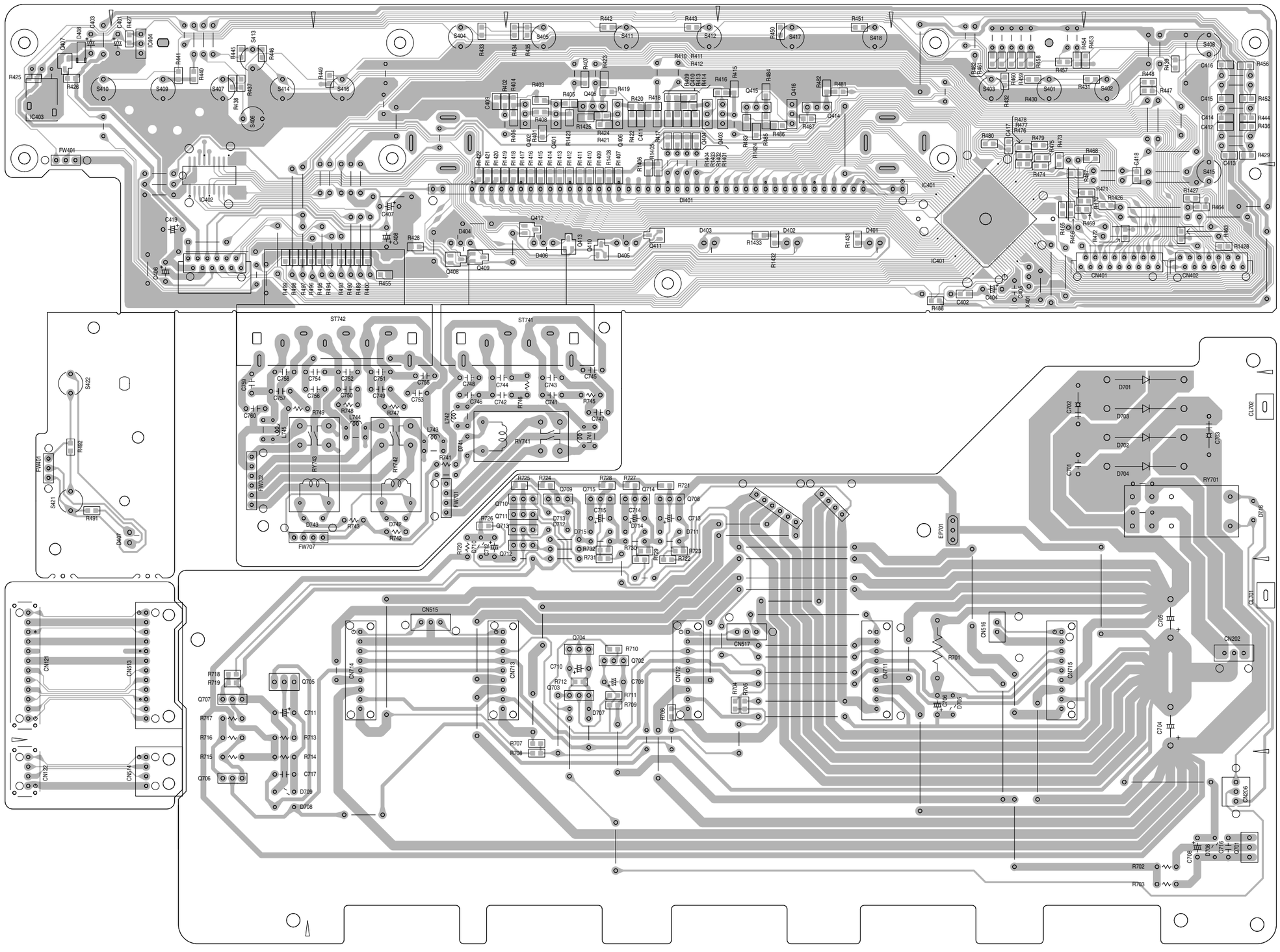
■ Tuner section



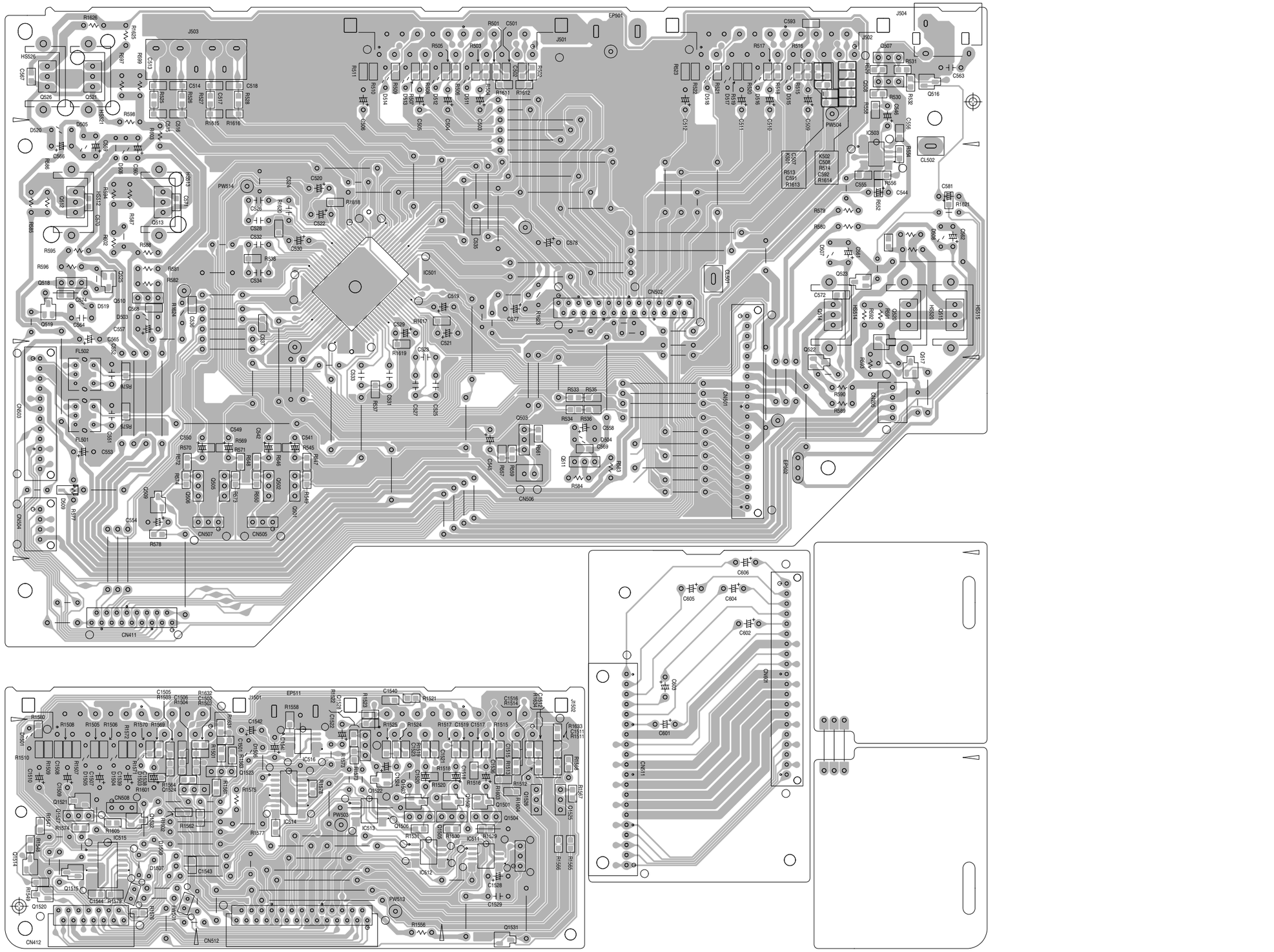
SHEET 8/8

Printed circuit boards

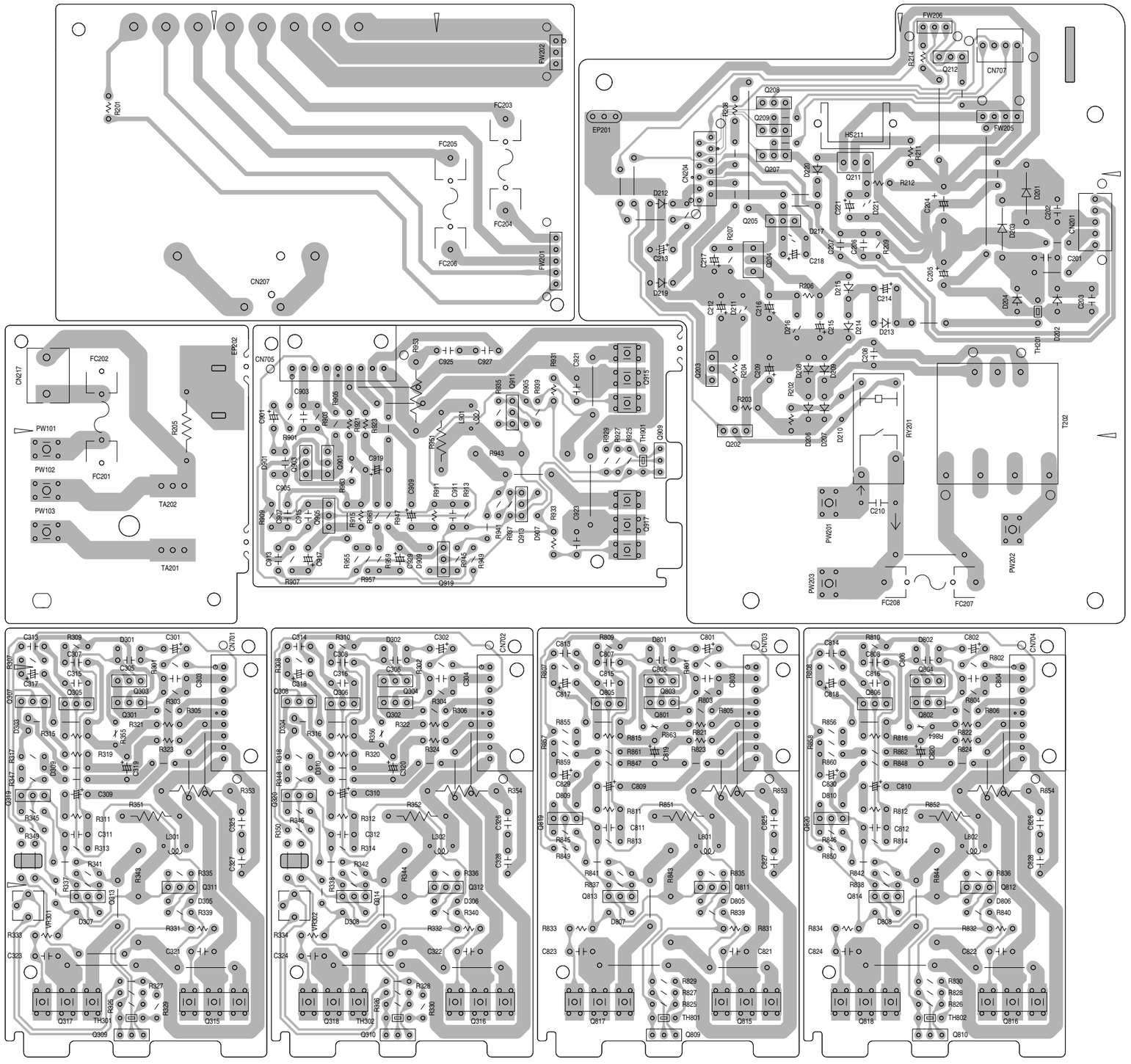
■ Main & System control board



■ Audio signal input board



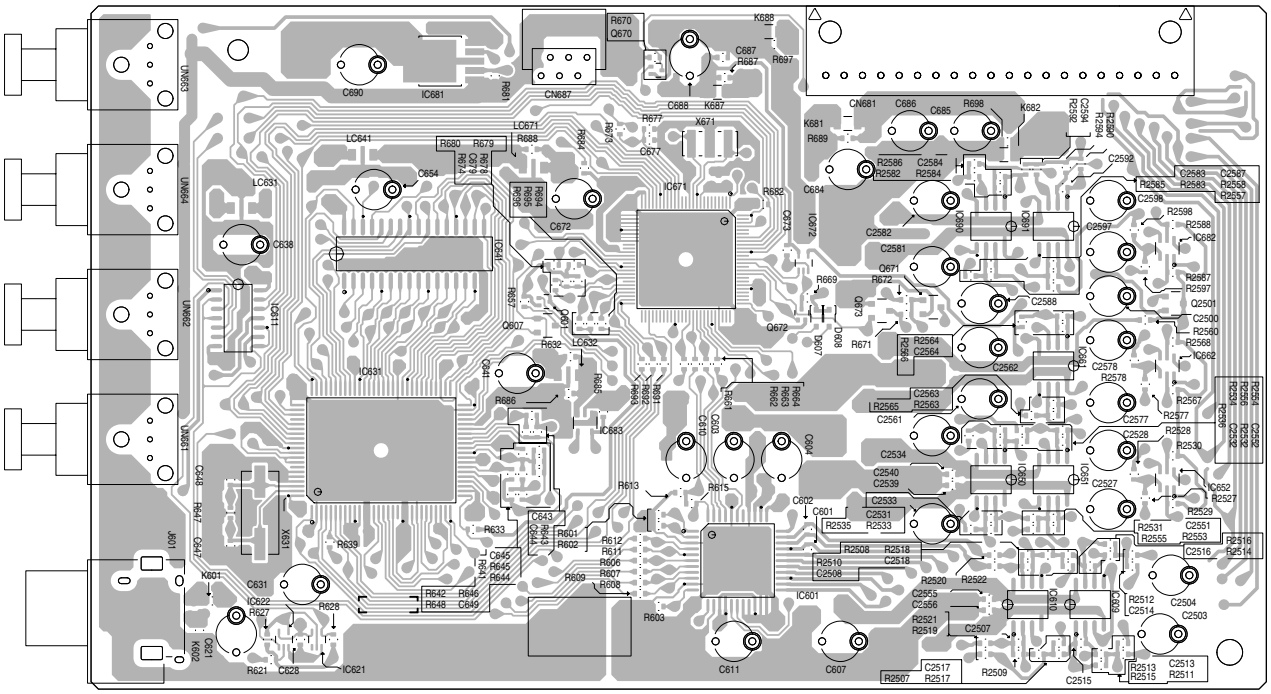
■ power amp. board



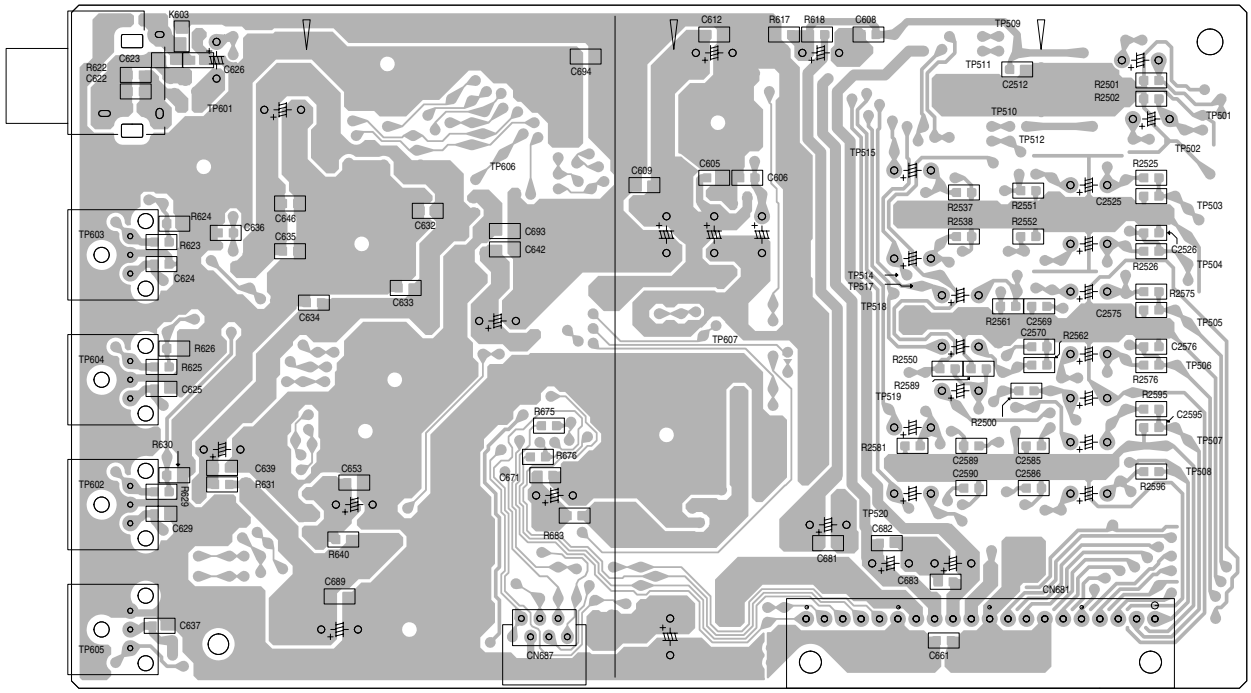
A B C 2-12 D E F G H

■ DSP board

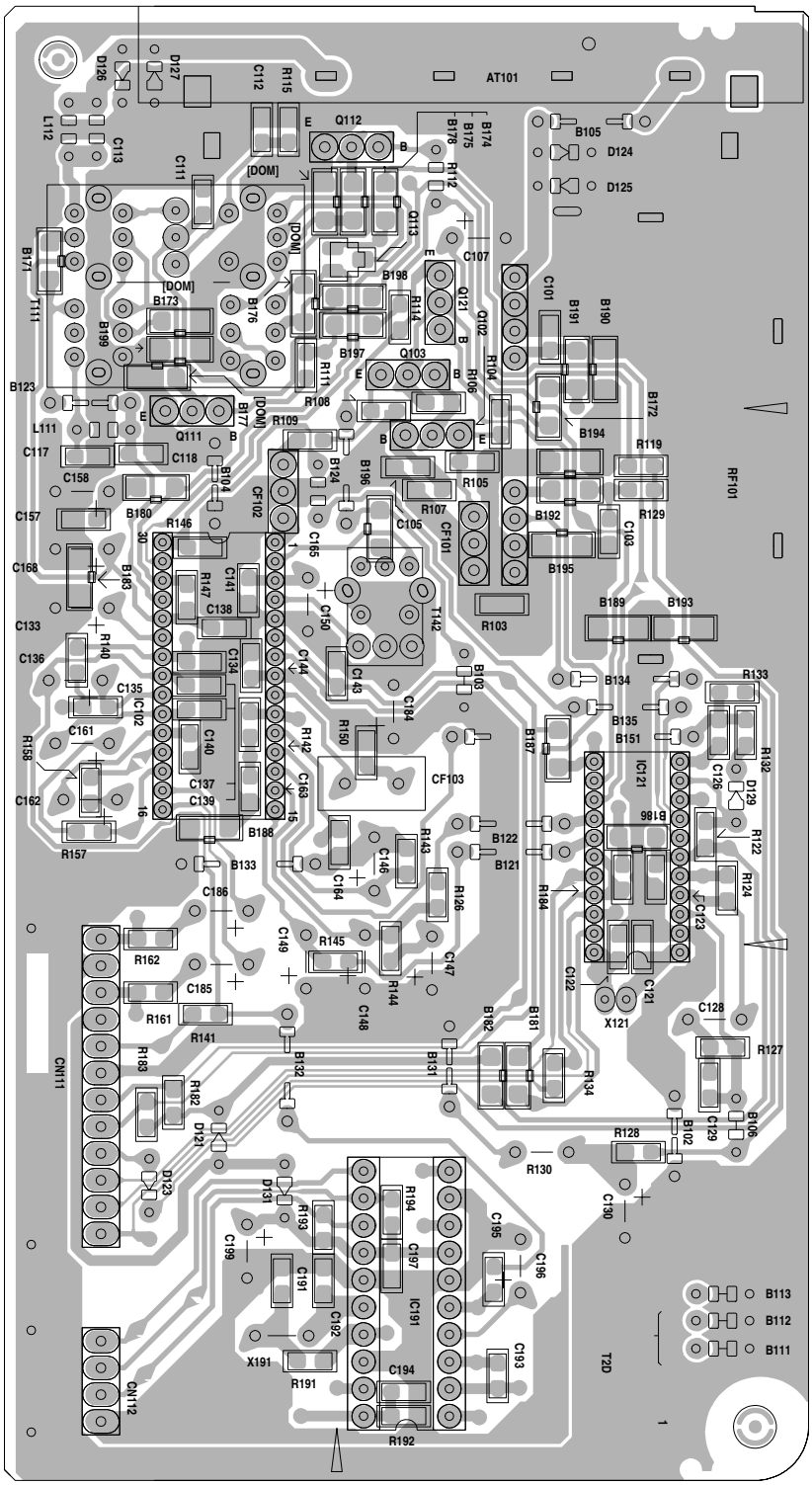
Forward side



Reverse side



■ Tuner board


AT101
RF101
CF101
CF102
CF103
IC101
IC102
IC191
X121
X191
T142
T2D
CN111
CN112
Q111
Q112
Q113
Q121
Q103
L111
L112
D123
D124
D125
D126
D127
D129
D131
[DOM]

PARTS LIST

[RX-E100RSL]
[RX-E100RSB]

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

RX-E100RSL

Area suffix

B ---------- U.K.
E ---------- Continental Europe
EN ---------- Northern Europe

RX-E100RSB

Area suffix

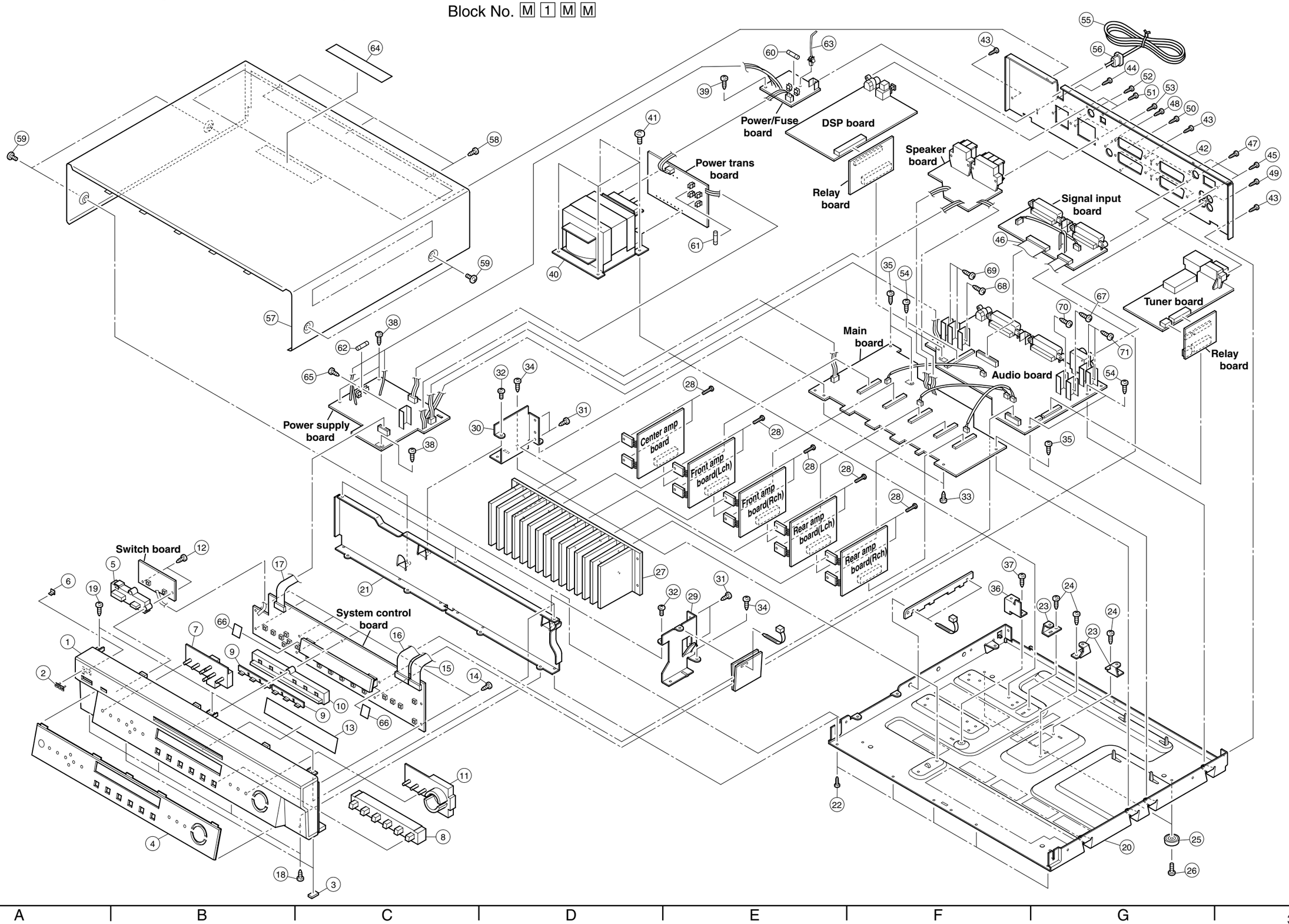
E ---------- Continental Europe
EN ---------- Northern Europe

- Contents -

< MEMO >

Exploded view of general assembly and parts list

Block No. M 1 M M



■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV10482-001A	FRONT PANEL	1		
	2	VJD5429-002SS	JVC MARK	1		
	3	E75896-003	FELT SPACER	2	FOR FRONT FOOT	
	4	LV20958-005A	LENS	1	RX-E100RSB	
		LV20958-001A	LENS	1	RX-E100RSL	
	5	LV20991-001A	POWER BUTTON	1		
	6	LV42096-001A	INDICATOR	1		
	7	LV32517-001A	CONTROL BUTTON	1		
	8	LV20959-001A	SOURCE BUTTON	1		
	9	LV32519-001A	SOURCE INDICATO	2		
	10	LV32552-003A	INDI.ESCUTCHEON	1		
	11	LV20992-001A	VOLUME BUTTON	1		
	12	QYSBSF2608Z	T.SCREW	2	F.C.B POWER+F.PANEL	
	13	LV42195-001A	FL SCREEN	1	TO FRONT PANEL	
	14	QYSBSF2608Z	T.SCREW	8	F.C.B FL+F.PANEL	
	15	QUQ412-1448CJ	FFC WIRE	1		
	16	QUQ412-1738CJ	FFC WIRE	1		
	17	QUQ412-1213CJ	FFC WIRE	1		
	18	QYSBSG3006Z	T.SCREW	4	F.PANEL+C.BASE	
	19	QYSBSG3006Z	T.SCREW	3	F.PANEL+F.BKT	
	20	LV10019-003A	CHASSIS BASE	1		
	21	LV10483-001A	FRONT BRACKET	1		
	22	QYSBSG3006Z	T.SCREW	5	C.BASE+F.BKT	
	23	E68587-223SM	CB BKT	3		
	24	QYSBSG3006Z	T.SCREW	3	CB BKT+C.BASE	
	25	E47227-021	FOOT ASS'Y	2		
	26	QYSBSG3006Z	T.SCREW	2	FOOT ASS'Y+C.BASE	
	27	LV20960-001A	HEAT SINK	1		
	28	E73525-003SS	SCREW	10	TR	
	29	LV32433-001A	H.S BRACKET(R)	1		
	30	LV32434-001A	H.S BRACKET(L)	1		
	31	QYSBSG3008Z	T.SCREW	4	H.SINK BKT+H.SINK	
	32	QYSBSG3006Z	T.SCREW	2	H.SINK BKT+F.BKT	
	33	QYSBSG3006Z	T.SCREW	2	AMP M.C.B+H.SINK BKT	
	34	QYSBSG3006Z	T.SCREW	2	H.SINK BKT+C.BASE	
	35	QYSBSG3006Z	T.SCREW	3	A.M.C.B+C.B.&CB BKT	
	36	LV42098-001A	C.B BKT	1		
	37	QYSBSG3006Z	T.SCREW	1	C.B.BKT+C.BASE	
	38	QYSBSG3006Z	T.SCREW	3	T.C.B+C.BASE&F.BKT	
	39	QYSBSG3006Z	T.SCREW	1	P.CORD C.B+C.BASE	
⚠	40	QQT0327-002	POWER TRANSF	1	T201	
	41	QYSDSTL4008Z	SPECIAL SCREW	4	P.TRANS	
	42	LV20961-006A	REAR PANEL	1	RX-E100RSB	
		LV20961-003A	REAR PANEL	1	RX-E100RSL	
	43	QYSBSGY3008M	SPECIAL SCREW	3	R.PANEL+C.BASE	
	44	QYSBSGY3008M	SPECIAL SCREW	1	R.PANEL+ud---	
	45	QYSBSGY3008M	SPECIAL SCREW	2	TUNER	
	46	QUQ412-2706CJ	FFC WIRE	1	I.M.C.B TO SCARRTE	

■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	47	QYSBSGY3008M	SPECIAL SCREW	5	SCART 2	
	48	QYSBSGY3008M	SPECIAL SCREW	1	SUB WOOFER	
	49	QYSBSGY3008M	SPECIAL SCREW	1	TAPE	
	50	QYSBSGY3008M	SPECIAL SCREW	5	SCART	
	51	QYSBSGY3008M	SPECIAL SCREW	2	DIGITAL	
	52	QYSBSGY3008M	SPECIAL SCREW	2	F.SPK TERM.+R.PANEL	
	53	QYSBSGY3008M	SPECIAL SCREW	2	R.SPK TERM.+R.PANEL	
	54	QYSBSG3006Z	T.SCREW	3	INPUT M.C.B+C.BASE	
⚠	55	QMPN100-200-JD	POWER CORD	1		B
⚠		QMPK150-200-JD	POWER CORD	1		E, EN
⚠	56	QZW0033-001	STRAIN RELIEF	1		
	57	LV20962-001A/S/	TOP COVER	1		
	58	QYSBSGY3008M	SPECIAL SCREW	3		
	59	E406308-004	SPECIAL SCREW	4	RX-E100RSL	
⚠	60	QMF51E2-1R6-J1	FUSE	1	F201	
⚠	61	QMF51E2-2R0-J1	FUSE	2	F202 F203	
⚠	62	QMF51E2-R10-J1	FUSE	1	F204	
	63	E307572-001	FASTENER	1		
	64	E409396-002	CAUTION LABEL	1		
	65	QYSBSG3008E	T.SCREW	1		
	66	LV30225-0C1A	FELT SPACER	2	FS400 FS401	
	67	QYSBSG3008E	T.SCREW	1		
	68	QYSBSG3008E	T.SCREW	1		
	69	QYSBSG3008E	T.SCREW	2		
	70	QYSBSG3008E	T.SCREW	1		
	71	QYSBSG3008E	T.SCREW	2		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	C 201	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 202	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 203	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 204	QETM1VM-228	E CAPACITOR	2200MF 20% 35V	
	C 205	QETM1VM-108	E CAPACITOR	1000MF 20% 35V	
	C 206	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 207	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 208	QFLC2AJ-472Z	M CAPACITOR	4700PF 5% 100V	
	C 209	QETN1EM-477Z	E CAPACITOR	470MF 20% 25V	
⚠	C 210	QCZ9104-472	C CAPACITOR	4700PF	
	C 212	QETN1CM-477Z	E CAPACITOR	470MF 20% 16V	
	C 213	QETN0JM-228Z	E CAPACITOR	2200MF 20% 6.3V	
	C 214	QETN1HM-227Z	E CAPACITOR	220MF 20% 50V	
	C 215	QETN1JM-107Z	E CAPACITOR	100MF 20% 63V	
	C 216	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 217	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 218	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 221	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 301	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 302	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 303	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V	
	C 304	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V	
	C 305	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 306	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 307	QCB31HK-152Z	C CAPACITOR	1500PF 10% 50V	
	C 308	QCB31HK-152Z	C CAPACITOR	1500PF 10% 50V	
	C 309	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 310	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 311	QCS31HJ-100Z	C CAPACITOR	10PF 5% 50V	
	C 312	QCS31HJ-100Z	C CAPACITOR	10PF 5% 50V	
	C 313	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 314	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 315	QCS32HJ-220Z	C CAPACITOR	22PF 5% 500V	
	C 316	QCS32HJ-220Z	C CAPACITOR	22PF 5% 500V	
	C 317	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 318	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 319	QETN1JM-107Z	E CAPACITOR	100MF 20% 63V	
	C 320	QETN1JM-107Z	E CAPACITOR	100MF 20% 63V	
	C 321	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 322	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 323	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 324	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 325	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 326	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 327	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 328	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 801	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 802	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 803	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V	
	C 804	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V	
	C 805	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 806	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 807	QCB31HK-152Z	C CAPACITOR	1500PF 10% 50V	
	C 808	QCB31HK-152Z	C CAPACITOR	1500PF 10% 50V	
	C 809	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 810	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 811	QCS31HJ-100Z	C CAPACITOR	10PF 5% 50V	
	C 812	QCS31HJ-100Z	C CAPACITOR	10PF 5% 50V	
	C 813	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 814	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 815	QCS32HJ-330Z	C CAPACITOR	33PF 5% 500V	
	C 816	QCS32HJ-330Z	C CAPACITOR	33PF 5% 500V	
	C 817	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C 818	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 819	QETN2AM-106Z	E CAPACITOR	10MF 20% 100V	
	C 820	QETN2AM-106Z	E CAPACITOR	10MF 20% 100V	
	C 821	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 822	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 823	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 824	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 825	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 826	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 827	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 828	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 829	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V	
	C 830	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V	
	C 901	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 903	QCS31HJ-680Z	C CAPACITOR	68PF 5% 50V	
	C 905	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 907	QCB31HK-152Z	C CAPACITOR	1500PF 10% 50V	
	C 909	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 911	QCS31HJ-100Z	C CAPACITOR	10PF 5% 50V	
	C 913	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 915	QCS32HJ-330Z	C CAPACITOR	33PF 5% 500V	
	C 917	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 919	QETN2AM-106Z	E CAPACITOR	10MF 20% 100V	
	C 921	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 923	QCS32HJ-470Z	C CAPACITOR	47PF 5% 500V	
	C 925	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 927	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 929	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V	
	CN201	QGD2501C1-05Z	SOCKET		
	CN204	QGF1205C1-12	CONNECTOR		
	CN207	WJK0037-001A	E-SI C WIRE C-B		
	CN217	QGA7901C1-02	CONNECTOR		
	CN701	QGB2510K1-09	CONNECTOR		
	CN702	QGB2510K1-09	CONNECTOR		
	CN703	QGB2510K1-09	CONNECTOR		
	CN704	QGB2510K1-09	CONNECTOR		
	CN705	QGB2510K1-09	CONNECTOR		
	CN707	QGD2501C1-04Z	SOCKET		
⚠	D 201	10E2-FD	DIODE		
⚠	D 202	1SR35-400A-T5	DIODE		
⚠	D 203	10E2-FD	DIODE		
⚠	D 204	1SR35-400A-T5	DIODE		
⚠	D 206	1SR35-400A-T5	DIODE		
⚠	D 207	1SR35-400A-T5	DIODE		
⚠	D 208	1SR35-400A-T5	DIODE		
⚠	D 209	1SR35-400A-T5	DIODE		
	D 210	1SS133-T2	SI DIODE		
	D 211	MTZJ6.2C-T2	Z DIODE		
	D 212	1SR35-400A-T5	DIODE		
⚠	D 213	1SR35-400A-T5	DIODE		
⚠	D 214	1SR35-400A-T5	DIODE		
⚠	D 215	1SR35-400A-T5	DIODE		
	D 216	MTZJ27C-T2	Z DIODE		
	D 217	MTZJ6.2C-T2	Z DIODE		
	D 219	1SR35-400A-T5	DIODE		
	D 220	1SR35-400A-T5	DIODE		
	D 221	MTZJ6.2C-T2	Z DIODE		
	D 301	1SS133-T2	SI DIODE		
	D 302	1SS133-T2	SI DIODE		
	D 303	SLR-342MC-T	LED		
	D 304	SLR-342MC-T	LED		
	D 305	1SS133-T2	SI DIODE		
	D 306	1SS133-T2	SI DIODE		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	D 307	1SS133-T2	SI DIODE		
	D 308	1SS133-T2	SI DIODE		
	D 309	1SS133-T2	SI DIODE		
	D 310	1SS133-T2	SI DIODE		
	D 801	1SS133-T2	SI DIODE		
	D 802	1SS133-T2	SI DIODE		
	D 805	1SS133-T2	SI DIODE		
	D 806	1SS133-T2	SI DIODE		
	D 807	1SS133-T2	SI DIODE		
	D 808	1SS133-T2	SI DIODE		
	D 809	1SS133-T2	SI DIODE		
	D 810	1SS133-T2	SI DIODE		
	D 901	1SS133-T2	SI DIODE		
	D 905	1SS133-T2	SI DIODE		
	D 907	1SS133-T2	SI DIODE		
	D 909	1SS133-T2	SI DIODE		
	EP201	QNZ0136-001Z	EARTH PLATE		
	EP202	E409182-001SM	GRAND TERMINAL		
	FC201	QNG0020-001Z	FUSE CLIP	(F201)	
	FC202	QNG0020-001Z	FUSE CLIP	(F201)	
	FC203	QNG0020-001Z	FUSE CLIP	(F202)	
	FC204	QNG0020-001Z	FUSE CLIP	(F202)	
	FC205	QNG0020-001Z	FUSE CLIP	(F203)	
	FC206	QNG0020-001Z	FUSE CLIP	(F203)	
	FC207	QNG0020-001Z	FUSE CLIP	(F204)	
	FC208	QNG0020-001Z	FUSE CLIP	(F204)	
	FW201	QUM135-22DGZ4	PARA RIBON WIRE		
	FW202	QJK017-031301	SIN CR C-B WIR		
	FW205	QUM134-22DGZ4	PARA RIBON WIRE		
	FW206	QUM133-08DGZ4	PARA RIBON WIRE		
	HS211	E70306-001	HEAT SINK		
	L 301	QQLZ005-R45	INDUCTOR		
	L 302	QQLZ005-R45	INDUCTOR		
	L 801	QQLZ005-R45	INDUCTOR		
	L 802	QQLZ005-R45	INDUCTOR		
	L 901	QQLZ005-R45	INDUCTOR		
	Q 202	KRC105M-T	D TRANSISTOR		
	Q 203	KTC3203/OY/-T	TRANSISTOR		
⚠	Q 204	KTA1046/Y/	TRANSISTOR		
	Q 205	KTC3200/GL/-T	TRANSISTOR		
	Q 207	KRC105M-T	D TRANSISTOR		
	Q 208	KRC105M-T	D TRANSISTOR		
	Q 209	KRC105M-T	D TRANSISTOR		
⚠	Q 211	2SD2395/EF/	TRANSISTOR		
	Q 212	KRC105M-T	D TRANSISTOR		
	Q 301	2SC2240/L/-T	TRANSISTOR		
	Q 302	2SC2240/L/-T	TRANSISTOR		
	Q 303	2SC2240/L/-T	TRANSISTOR		
	Q 304	2SC2240/L/-T	TRANSISTOR		
	Q 305	KTA1268/GL/-T	TRANSISTOR		
	Q 306	KTA1268/GL/-T	TRANSISTOR		
	Q 307	KTC3200/GL/-T	TRANSISTOR		
	Q 308	KTC3200/GL/-T	TRANSISTOR		
	Q 309	2SD637/QR/	TRANSISTOR		
	Q 310	2SD637/QR/	TRANSISTOR		
	Q 311	KTC3200/GL/-T	TRANSISTOR		
	Q 312	KTC3200/GL/-T	TRANSISTOR		
	Q 313	KTA1268/GL/-T	TRANSISTOR		
	Q 314	KTA1268/GL/-T	TRANSISTOR		
⚠	Q 315	2SD2389/OPY/-F6	TRANSISTOR		
⚠	Q 316	2SD2389/OPY/-F6	TRANSISTOR		
⚠	Q 317	2SB1559/OPY/-F6	TRANSISTOR		
⚠	Q 318	2SB1559/OPY/-F6	TRANSISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 319	KTA1268/GL/-T	TRANSISTOR		
	Q 320	KTA1268/GL/-T	TRANSISTOR		
	Q 801	2SC2240/L/-T	TRANSISTOR		
	Q 802	2SC2240/L/-T	TRANSISTOR		
	Q 803	2SC2240/L/-T	TRANSISTOR		
	Q 804	2SC2240/L/-T	TRANSISTOR		
	Q 805	KTA1268/GL/-T	TRANSISTOR		
	Q 806	KTA1268/GL/-T	TRANSISTOR		
	Q 809	2SD637/QR/	TRANSISTOR		
	Q 810	2SD637/QR/	TRANSISTOR		
	Q 811	KTC3200/GL/-T	TRANSISTOR		
	Q 812	KTC3200/GL/-T	TRANSISTOR		
	Q 813	KTA1268/GL/-T	TRANSISTOR		
	Q 814	KTA1268/GL/-T	TRANSISTOR		
⚠	Q 815	2SD2389/OPY/-F6	TRANSISTOR		
⚠	Q 816	2SD2389/OPY/-F6	TRANSISTOR		
⚠	Q 817	2SB1559/OPY/-F6	TRANSISTOR		
⚠	Q 818	2SB1559/OPY/-F6	TRANSISTOR		
	Q 819	KTA1268/GL/-T	TRANSISTOR		
	Q 820	KTA1268/GL/-T	TRANSISTOR		
	Q 901	2SC2240/L/-T	TRANSISTOR		
	Q 903	2SC2240/L/-T	TRANSISTOR		
	Q 905	KTA1268/GL/-T	TRANSISTOR		
	Q 909	2SD637/QR/	TRANSISTOR		
	Q 911	KTC3200/GL/-T	TRANSISTOR		
	Q 913	KTA1268/GL/-T	TRANSISTOR		
⚠	Q 915	2SD2389/OPY/-F6	TRANSISTOR		
⚠	Q 917	2SB1559/OPY/-F6	TRANSISTOR		
	Q 919	KTA1268/GL/-T	TRANSISTOR		
⚠	R 201	QRJ146J-5R6X	UNF C RESISTOR	5.6 5% 1/4W	
⚠	R 202	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 203	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 204	QRJ146J-821X	UNF C RESISTOR	820 5% 1/4W	
⚠	R 206	QRJ146J-332X	UNF C RESISTOR	3.3K 5% 1/4W	
	R 207	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
⚠	R 208	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 209	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
⚠	R 211	QRZ9005-120X	F RESISTOR	12 1/0W	
⚠	R 212	QRJ146J-682X	UNF C RESISTOR	6.8K 5% 1/4W	
	R 213	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
⚠	R 214	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
	R 301	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 302	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 303	QRE141J-683Y	C RESISTOR	68K 5% 1/4W	
	R 304	QRE141J-683Y	C RESISTOR	68K 5% 1/4W	
	R 305	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 306	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 307	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R 308	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R 309	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 310	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
⚠	R 311	QRJ146J-391X	UNF C RESISTOR	390 5% 1/4W	
⚠	R 312	QRJ146J-391X	UNF C RESISTOR	390 5% 1/4W	
	R 313	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 314	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 315	QRJ146J-121X	UNF C RESISTOR	120 5% 1/4W	
⚠	R 316	QRJ146J-121X	UNF C RESISTOR	120 5% 1/4W	
	R 317	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 318	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
⚠	R 319	QRJ146J-471X	UNF C RESISTOR	470 5% 1/4W	
⚠	R 320	QRJ146J-471X	UNF C RESISTOR	470 5% 1/4W	
⚠	R 321	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 322	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	

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

⚠	Item	Parts number	Parts name	Remarks	Area
⚠	R 323	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 324	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 325	QRE141J-361Y	C RESISTOR	360 5% 1/4W	
	R 326	QRE141J-361Y	C RESISTOR	360 5% 1/4W	
	R 327	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 328	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 329	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 330	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
⚠	R 331	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 332	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 333	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 334	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 335	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R 336	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R 337	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R 338	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R 339	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 340	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 341	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 342	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 343	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R 344	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R 345	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 346	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 347	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 348	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 349	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 350	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
⚠	R 351	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
⚠	R 352	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
⚠	R 353	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
⚠	R 354	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
	R 801	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 802	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 803	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 804	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 805	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 806	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 807	QRE141J-302Y	C RESISTOR	3.0K 5% 1/4W	
	R 808	QRE141J-302Y	C RESISTOR	3.0K 5% 1/4W	
	R 809	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 810	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
⚠	R 811	QRJ146J-391X	UNF C RESISTOR	390 5% 1/4W	
⚠	R 812	QRJ146J-391X	UNF C RESISTOR	390 5% 1/4W	
	R 813	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 814	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 815	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
⚠	R 816	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
⚠	R 821	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 822	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 823	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 824	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 825	QRE141J-361Y	C RESISTOR	360 5% 1/4W	
	R 826	QRE141J-361Y	C RESISTOR	360 5% 1/4W	
	R 827	QRE141J-751Y	C RESISTOR	750 5% 1/4W	
	R 828	QRE141J-751Y	C RESISTOR	750 5% 1/4W	
	R 829	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 830	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
⚠	R 831	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 832	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 833	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 834	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 835	QRE141J-101Y	C RESISTOR	100 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 836	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 837	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 838	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 839	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 840	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 841	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 842	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 843	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R 844	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R 845	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 846	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 847	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 848	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 849	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 850	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
⚠	R 851	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
⚠	R 852	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
⚠	R 853	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
⚠	R 854	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
	R 855	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 856	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 857	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 858	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 859	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 860	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 861	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 862	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 901	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 903	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 905	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 907	QRE141J-302Y	C RESISTOR	3.0K 5% 1/4W	
	R 909	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
⚠	R 911	QRJ146J-391X	UNF C RESISTOR	390 5% 1/4W	
	R 913	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 915	QRJ146J-221X	UNF C RESISTOR	220 5% 1/4W	
⚠	R 921	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 923	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 925	QRE141J-361Y	C RESISTOR	360 5% 1/4W	
	R 927	QRE141J-751Y	C RESISTOR	750 5% 1/4W	
	R 929	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
⚠	R 931	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
⚠	R 933	QRJ146J-100X	UNF C RESISTOR	10 5% 1/4W	
	R 935	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 937	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 939	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 941	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 943	QRZ0218-R22	EMIT RESISTOR	1/2W	
	R 945	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 947	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 949	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
⚠	R 951	QRJ125J-330	UNF C RESISTOR	33 5% 1/2W	
⚠	R 953	QRL022J-100	UNF OMF RESISTOR	10 5% 1/2W	
	R 955	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 957	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 959	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 961	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
⚠	RY201	QSK0055-001	RELAY		
⚠	T 202	QQT0281-002	POWER TRANSF		
	TA201	QNZ0079-001Z	TAB		
	TA202	QNZ0079-001Z	TAB		
⚠	TH201	QAD0095-4R7Z	POSISTOR		
⚠	TH301	QAD0012-202	THERMISTOR		
⚠	TH302	QAD0012-202	THERMISTOR		
⚠	TH801	QAD0012-202	THERMISTOR		
⚠	TH802	QAD0012-202	THERMISTOR		
⚠	TH901	QAD0012-202	THERMISTOR		
	VR301	QVP0008-102Z	SEMI V RESISTOR		
	VR302	QVP0008-102Z	SEMI V RESISTOR		

■ **Electrical parts list (Main & System control board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	BK401	LV32554-001A	FL HOLDER(L)		
	BK402	LV32555-001A	FL HOLDER(R)		
	C 401	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 402	NCB31CK-223X	C CAPACITOR		
	C 403	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 404	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 405	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C 406	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 407	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 408	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 409	NCB31HK-102X	C CAPACITOR		
	C 410	NCB31HK-102X	C CAPACITOR		
	C 411	NCB31HK-102X	C CAPACITOR		
	C 412	NCB31HK-103X	C CAPACITOR		
	C 413	NCB31HK-103X	C CAPACITOR		
	C 414	NCB31HK-103X	C CAPACITOR		
	C 415	NCB31HK-103X	C CAPACITOR		
	C 416	NCB31HK-103X	C CAPACITOR		
	C 417	NCB31HK-561X	C CAPACITOR		
	C 418	NCB31CK-223X	C CAPACITOR		
	C 701	QFZ9076-104Z	MM CAPACITOR	.10MF	
	C 702	QFZ9076-104Z	MM CAPACITOR	.10MF	
	C 703	QFZ9076-104Z	MM CAPACITOR	.10MF	
	C 704	QTE1J45-478	E CAPACITER		
	C 705	QTE1J45-478	E CAPACITER		
	C 706	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 709	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 710	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 711	QEKC1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 712	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 713	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 714	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 715	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 717	QCS31HJ-101Z	C CAPACITOR	100PF 5% 50V	
	C 741	QFLC1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 742	QFLC1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 743	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 744	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 745	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 746	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 747	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 748	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 749	QFLC1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 750	QFLC1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 751	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 752	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 753	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 754	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 755	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 756	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 757	QFLC1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 758	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 759	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	C 760	QCS31HJ-221Z	C CAPACITOR	220PF 5% 50V	
	CL701	QZW0038-001	WIRE CLAMP		
	CL702	QZW0038-001	WIRE CLAMP		
	CN121	QGB2501J1-12	CONNECTOR		
	CN122	QGB2501J1-04	CONNECTOR		
	CN202	QGA2501C1-03	3P CONNECTOR		
	CN206	QGD2501C1-03Z	SOCKET		
	CN214	QGF1205F1-12	CONNECTOR		
	CN401	QGF1205F1-17	CONNECTOR		
	CN402	QGF1205F1-14	CONNECTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	CN513	QGB2510K1-12	CONNECTOR		
	CN514	QGB2510K1-04	CONNECTOR		
	CN515	QGA2501C1-03	3P CONNECTOR		
	CN516	QGA2501C1-02	2P CONNECTOR		
	CN517	QGA2501C1-03	3P CONNECTOR		
	CN711	QGB2510J1-09	CONNECTOR		
	CN712	QGB2510J1-09	CONNECTOR		
	CN713	QGB2510J1-09	CONNECTOR		
	CN714	QGB2510J1-09	CONNECTOR		
	CN715	QGB2510J1-09	CONNECTOR		
	D 401	SLR-342MC-T	LED		
	D 402	SLR-342MC-T	LED		
	D 403	SLR-342MC-T	LED		
	D 404	SPR-325MVW/L/-T	LED		
	D 405	SPR-325MVW/L/-T	LED		
	D 406	SPR-325MVW/L/-T	LED		
	D 407	SLR-342VC-T	LED		
	D 408	1SS355-X	DIODE		
⚠	D 701	30DF2-FC	DIODE		
⚠	D 702	30DF2-FC	DIODE		
⚠	D 703	30DF2-FC	DIODE		
⚠	D 704	30DF2-FC	DIODE		
	D 705	MTZJ18C-T2	Z DIODE		
	D 707	1SS133-T2	SI DIODE		
	D 708	1SS133-T2	SI DIODE		
	D 709	MTZJ15C-T2	Z DIODE		
	D 710	MTZJ5.1C-T2	Z DIODE		
	D 711	1SS133-T2	SI DIODE		
	D 712	1SS133-T2	SI DIODE		
	D 713	1SS133-T2	SI DIODE		
	D 714	1SS133-T2	SI DIODE		
	D 715	1SS133-T2	SI DIODE		
	D 716	1SS133-T2	SI DIODE		
	D 741	1SS133-T2	SI DIODE		
	D 742	1SS133-T2	SI DIODE		
	D 743	1SS133-T2	SI DIODE		
	DI401	QLF0086-001	FL TUBE		
	EP701	QNZ0136-001Z	EARTH PLATE		
	FW401	QUM133-20Z4Z4	PARA RIBON WIRE		
	FW701	QUM134-27Z4Z4	PARA RIBON WIRE		
	FW702	QUM136-24Z4Z4	PARA RIBON WIRE		
	FW707	QUM134-22DGZ4	PARA RIBON WIRE		
	IC401	MN101C35DHR	IC		
	IC402	BU2092F-X	IC		
	IC403	GP1U281X	IC		
	IC404	IC-PST9139-T	IC		
	L 741	QQLZ005-R45	INDUCTOR		
	L 742	QQLZ005-R45	INDUCTOR		
	L 743	QQLZ005-R45	INDUCTOR		
	L 744	QQLZ005-R45	INDUCTOR		
	L 745	QQLZ005-R45	INDUCTOR		
	Q 401	KTC3199/GL/-T	TRANSISTOR		
	Q 402	KTC3199/GL/-T	TRANSISTOR		
	Q 403	KTC3199/GL/-T	TRANSISTOR		
	Q 404	KTC3199/GL/-T	TRANSISTOR		
	Q 405	KTC3199/GL/-T	TRANSISTOR		
	Q 406	KTC3199/GL/-T	TRANSISTOR		
	Q 407	DTC114EKA-X	TRANSISTOR		
	Q 408	DTA114EKA-X	D TRANSISTOR		
	Q 409	DTA114EKA-X	D TRANSISTOR		
	Q 410	DTA114EKA-X	D TRANSISTOR		
	Q 411	DTA114EKA-X	D TRANSISTOR		
	Q 412	DTA114EKA-X	D TRANSISTOR		

■ **Electrical parts list (Main & System control board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 413	DTA114EKA-X	D TRANSISTOR		
	Q 702	KTC3200/GL/-T	TRANSISTOR		
	Q 703	KTA1268/GL/-T	TRANSISTOR		
	Q 704	KTC3199/GL/-T	TRANSISTOR		
	Q 705	2SD2395/EF/	TRANSISTOR		
	Q 706	KTA1023/OY/-T	TRANSISTOR		
	Q 707	KTC3200/GL/-T	TRANSISTOR		
	Q 708	KRC109M-T	D TRANSISTOR		
	Q 709	KRC109M-T	D TRANSISTOR		
	Q 710	KRC109M-T	D TRANSISTOR		
	Q 711	KRC109M-T	D TRANSISTOR		
	Q 712	KRC109M-T	D TRANSISTOR		
	Q 713	KRC109M-T	D TRANSISTOR		
	Q 714	KRC109M-T	D TRANSISTOR		
	Q 715	KRC109M-T	D TRANSISTOR		
	R 400	NRSA63J-103X	MG RESISTOR		
	R 401	NRSA63J-223X	MG RESISTOR		
	R 402	NRSA63J-473X	MG RESISTOR		
	R 403	NRSA63J-683X	MG RESISTOR		
	R 404	NRSA63J-473X	MG RESISTOR		
	R 405	NRSA63J-153X	MG RESISTOR		
	R 406	NRSA63J-273X	MG RESISTOR		
	R 407	NRSA63J-103X	MG RESISTOR		
	R 408	NRSA63J-103X	MG RESISTOR		
	R 409	NRSA63J-473X	MG RESISTOR		
	R 410	NRSA63J-473X	MG RESISTOR		
	R 411	NRSA63J-683X	MG RESISTOR		
	R 412	NRSA63J-473X	MG RESISTOR		
	R 413	NRSA63J-153X	MG RESISTOR		
	R 414	NRSA63J-273X	MG RESISTOR		
	R 415	NRSA63J-103X	MG RESISTOR		
	R 416	NRSA63J-103X	MG RESISTOR		
	R 417	NRSA63J-223X	MG RESISTOR		
	R 418	NRSA63J-473X	MG RESISTOR		
	R 419	NRSA63J-683X	MG RESISTOR		
	R 420	NRSA63J-473X	MG RESISTOR		
	R 421	NRSA63J-153X	MG RESISTOR		
	R 422	NRSA63J-273X	MG RESISTOR		
	R 423	NRSA63J-103X	MG RESISTOR		
	R 424	NRSA63J-103X	MG RESISTOR		
	R 425	NRSA63J-103X	MG RESISTOR		
	R 426	NRSA63J-223X	MG RESISTOR		
	R 427	NRSA63J-472X	MG RESISTOR		
	R 428	NRSA63J-221X	MG RESISTOR		
	R 429	NRSA63J-103X	MG RESISTOR		
	R 430	NRSA63J-102X	MG RESISTOR		
	R 431	NRSA63J-102X	MG RESISTOR		
	R 432	NRSA63J-122X	MG RESISTOR		
	R 433	NRSA63J-152X	MG RESISTOR		
	R 434	NRSA63J-222X	MG RESISTOR		
	R 435	NRSA63J-272X	MG RESISTOR		
	R 436	NRSA63J-103X	MG RESISTOR		
	R 437	NRSA63J-102X	MG RESISTOR		
	R 438	NRSA63J-102X	MG RESISTOR		
	R 439	NRSA63J-122X	MG RESISTOR		
	R 440	NRSA63J-152X	MG RESISTOR		
	R 441	NRSA63J-222X	MG RESISTOR		
	R 442	NRSA63J-272X	MG RESISTOR		
	R 443	NRSA63J-392X	MG RESISTOR		
	R 444	NRSA63J-103X	MG RESISTOR		
	R 445	NRSA63J-102X	MG RESISTOR		
	R 446	NRSA63J-102X	MG RESISTOR		
	R 447	NRSA63J-122X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R 448	NRSA63J-152X	MG RESISTOR		
	R 449	NRSA63J-222X	MG RESISTOR		
	R 450	NRSA63J-272X	MG RESISTOR		
	R 451	NRSA63J-392X	MG RESISTOR		
	R 452	NRSA63J-103X	MG RESISTOR		
	R 453	NRSA63J-102X	MG RESISTOR		
	R 454	NRSA63J-102X	MG RESISTOR		
	R 455	NRSA63J-103X	MG RESISTOR		
	R 456	NRSA63J-103X	MG RESISTOR		
	R 464	NRSA63J-221X	MG RESISTOR		
	R 465	NRSA63J-221X	MG RESISTOR		
	R 466	NRSA63J-221X	MG RESISTOR		
	R 467	NRSA63J-221X	MG RESISTOR		
	R 468	NRSA63J-221X	MG RESISTOR		
	R 469	NRSA63J-221X	MG RESISTOR		
	R 470	NRSA63J-221X	MG RESISTOR		
	R 471	NRSA63J-221X	MG RESISTOR		
	R 472	NRSA63J-221X	MG RESISTOR		
	R 473	NRSA63J-221X	MG RESISTOR		
	R 474	NRSA63J-221X	MG RESISTOR		
	R 475	NRSA63J-221X	MG RESISTOR		
	R 476	NRSA63J-221X	MG RESISTOR		
	R 477	NRSA63J-221X	MG RESISTOR		
	R 478	NRSA63J-221X	MG RESISTOR		
	R 479	NRSA63J-221X	MG RESISTOR		
	R 480	NRSA63J-221X	MG RESISTOR		
	R 488	NRSA63J-103X	MG RESISTOR		
	R 489	NRSA63J-103X	MG RESISTOR		
	R 490	NRSA63J-103X	MG RESISTOR		
	R 491	NRSA63J-221X	MG RESISTOR		
	R 492	NRSA63J-392X	MG RESISTOR		
	R 493	NRSA63J-103X	MG RESISTOR		
	R 494	NRSA63J-103X	MG RESISTOR		
	R 495	NRSA63J-103X	MG RESISTOR		
	R 496	NRSA63J-103X	MG RESISTOR		
	R 497	NRSA63J-103X	MG RESISTOR		
	R 498	NRSA63J-103X	MG RESISTOR		
	R 499	NRSA63J-103X	MG RESISTOR		
⚠	R 701	QRL022J-562	UNF OMF RESISTOR	5.6K 5% 1/2W	
	R 704	NRSA63J-104X	MG RESISTOR		
	R 705	NRSA63J-104X	MG RESISTOR		
	R 706	NRSA63J-823X	MG RESISTOR		
	R 707	NRSA63J-104X	MG RESISTOR		
	R 708	NRSA63J-823X	MG RESISTOR		
	R 709	NRSA63J-103X	MG RESISTOR		
	R 710	NRSA63J-103X	MG RESISTOR		
	R 711	NRSA63J-104X	MG RESISTOR		
	R 712	NRSA63J-104X	MG RESISTOR		
⚠	R 713	QRZ9005-100X	F RESISTOR	10 1/0W	
⚠	R 714	QRJ146J-103X	UNF C RESISTOR	10K 5% 1/4W	
⚠	R 715	QRZ9005-100X	F RESISTOR	10 1/0W	
⚠	R 716	QRJ146J-102X	UNF C RESISTOR	1.0K 5% 1/4W	
⚠	R 717	QRJ146J-223X	UNF C RESISTOR	22K 5% 1/4W	
	R 718	NRSA63J-103X	MG RESISTOR		
	R 719	NRSA63J-473X	MG RESISTOR		
⚠	R 720	QRJ146J-392X	UNF C RESISTOR	3.9K 5% 1/4W	
	R 721	NRSA63J-472X	MG RESISTOR		
	R 722	NRSA63J-223X	MG RESISTOR		
	R 723	NRSA63J-153X	MG RESISTOR		
	R 724	NRSA63J-472X	MG RESISTOR		
	R 725	NRSA63J-472X	MG RESISTOR		
	R 726	NRSA63J-472X	MG RESISTOR		
	R 727	NRSA63J-472X	MG RESISTOR		

■ **Electrical parts list (Main & System control board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 728	NRSA63J-472X	MG RESISTOR		
	R 729	NRSA63J-223X	MG RESISTOR		
	R 730	NRSA63J-153X	MG RESISTOR		
	R 731	NRSA63J-223X	MG RESISTOR		
	R 732	NRSA63J-153X	MG RESISTOR		
⚠	R 741	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
⚠	R 742	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
⚠	R 743	QRJ146J-120X	UNF C RESISTOR	12 5% 1/4W	
⚠	R 745	QRJ146J-3R9X	UNF C RESISTOR	3.9 5% 1/4W	
⚠	R 746	QRJ146J-3R9X	UNF C RESISTOR	3.9 5% 1/4W	
⚠	R 747	QRJ146J-3R9X	UNF C RESISTOR	3.9 5% 1/4W	
⚠	R 748	QRJ146J-3R9X	UNF C RESISTOR	3.9 5% 1/4W	
⚠	R 749	QRJ146J-3R9X	UNF C RESISTOR	3.9 5% 1/4W	
⚠	RY701	QSK0082-001	RELAY		
⚠	RY741	QSK0109-001	RELAY		
⚠	RY742	QSK0109-001	RELAY		
⚠	RY743	QSK0109-001	RELAY		
	R1422	NRSA63J-104X	MG RESISTOR		
	R1431	NRSA63J-221X	MG RESISTOR		
	R1432	NRSA63J-221X	MG RESISTOR		
	R1433	NRSA63J-221X	MG RESISTOR		
	S 401	QSW0683-001Z	PUSH SWITCH	SURROUND	
	S 402	QSW0683-001Z	PUSH SWITCH	DSP MODE	
	S 403	QSW0683-001Z	PUSH SWITCH	INPUT MODE	
	S 404	QSW0683-001Z	PUSH SWITCH	DVD	
	S 405	QSW0683-001Z	PUSH SWITCH	STB	
	S 406	QSW0683-001Z	PUSH SWITCH	UP	
	S 407	QSW0683-001Z	PUSH SWITCH	LEFT	
	S 408	QSW0683-001Z	PUSH SWITCH	VOL.DOWN	
	S 409	QSW0683-001Z	PUSH SWITCH	ADJUST	
	S 410	QSW0683-001Z	PUSH SWITCH	SETTING	
	S 411	QSW0683-001Z	PUSH SWITCH	VCR	
	S 412	QSW0683-001Z	PUSH SWITCH	TV	
	S 413	QSW0683-001Z	PUSH SWITCH	DOWN	
	S 414	QSW0683-001Z	PUSH SWITCH	RIGHT	
	S 415	QSW0683-001Z	PUSH SWITCH	VOL.UP	
	S 416	QSW0683-001Z	PUSH SWITCH	MEMORY	
	S 417	QSW0683-001Z	PUSH SWITCH	TAPE	
	S 418	QSW0683-001Z	PUSH SWITCH	FM/AM	
	S 421	QSW0683-001Z	PUSH SWITCH	POWER	
	S 422	QSW0683-001Z	PUSH SWITCH	AMP/SWITCH	
	ST741	QNB0082-001	SPK TERMINAL	FRONT	
	ST742	QNB0016-001	SPK TERMINAL	CNT/SR	
	X 401	QAX0246-001Z	RESONATOR		

■ **Electrical parts list (Audio signal input board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 501	NCS31HJ-331X	C CAPACITOR		
	C 502	NCS31HJ-331X	C CAPACITOR		
	C 503	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 504	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 505	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 506	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 507	NCS31HJ-331X	C CAPACITOR		
	C 508	NCS31HJ-331X	C CAPACITOR		
	C 509	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 510	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 511	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 512	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 513	NCS31HJ-331X	C CAPACITOR		
	C 514	NCS31HJ-331X	C CAPACITOR		
	C 515	NCS31HJ-221X	C CAPACITOR		
	C 516	NCS31HJ-221X	C CAPACITOR		
	C 517	NCS31HJ-331X	C CAPACITOR		
	C 518	NCS31HJ-331X	C CAPACITOR		
	C 519	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 520	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 521	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 522	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 523	QFLC1HJ-683Z	M CAPACITOR	.068MF 5% 50V	
	C 524	QFLC1HJ-683Z	M CAPACITOR	.068MF 5% 50V	
	C 525	QFLC1HJ-682Z	M CAPACITOR	6800PF 5% 50V	
	C 526	QFLC1HJ-682Z	M CAPACITOR	6800PF 5% 50V	
	C 527	QFLC1HJ-682Z	M CAPACITOR	6800PF 5% 50V	
	C 528	QFLC1HJ-682Z	M CAPACITOR	6800PF 5% 50V	
	C 529	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 530	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 531	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 532	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 533	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 534	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 535	NCB31CK-223X	C CAPACITOR		
	C 536	NCB31CK-223X	C CAPACITOR		
	C 537	NCB31CK-223X	C CAPACITOR		
	C 541	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 542	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 544	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 545	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 546	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 549	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 550	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 551	QFLC1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
	C 552	QFLC1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
	C 553	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C 554	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 555	NCB31CK-223X	C CAPACITOR		
	C 556	NCB31CK-223X	C CAPACITOR		
	C 557	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 558	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 559	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 560	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 561	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 562	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 563	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C 564	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 565	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 566	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 577	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 578	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 581	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C 591	NCS31HJ-220X	C CAPACITOR		
	C 592	NCS31HJ-220X	C CAPACITOR		
	C 601	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 602	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 603	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 604	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 605	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 606	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	CL501	QZW0038-001	WIRE CLAMP		
	CL502	QZW0038-001	WIRE CLAMP		
	CN205	QGD2501C1-04Z	SOCKET		
	CN411	QGF1205C1-17	CONNECTOR		
	CN412	QGF1205F1-14	CONNECTOR		
	CN501	QGB2510J1-20	CONNECTOR		
	CN502	QGF1205C1-27	CONNECTOR		
	CN503	QGB2510J1-12	CONNECTOR		
	CN504	QGB2510J1-04	CONNECTOR		
	CN505	QJP001-031401	SHI CR C-B WIRE		
	CN506	QJP002-021401	SHI CR C-B WIRE		
	CN507	QJP001-031101	SHI CR C-B WIRE		
	CN508	QJQ007-031201	SKT WIRE ASSY		
	CN511	QGB2510K1-20	B TO B CONNE		
	CN512	QGF1205F1-27	CONNECTOR		
	CN601	QGB2510J1-20	CONNECTOR		
	C1505	NCS31HJ-331X	C CAPACITOR		
	C1506	NCS31HJ-331X	C CAPACITOR		
	C1507	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1508	NCS31HJ-470X	C CAPACITOR		
	C1509	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C1510	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1515	NCS31HJ-331X	C CAPACITOR		
	C1516	NCS31HJ-331X	C CAPACITOR		
	C1517	NCS31HJ-470X	C CAPACITOR		
	C1518	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C1519	NCS31HJ-470X	C CAPACITOR		
	C1520	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C1521	NCS31HJ-470X	C CAPACITOR		
	C1522	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1523	NCS31HJ-470X	C CAPACITOR		
	C1524	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C1528	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C1529	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C1536	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C1538	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1539	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1540	NCS31HJ-470X	C CAPACITOR		
	C1541	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C1542	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1543	NCB31CK-223X	C CAPACITOR		
	C1544	NCB31CK-223X	C CAPACITOR		
	D 503	MTZJ7.5C-T2	Z DIODE		
	D 504	MTZJ7.5C-T2	Z DIODE		
	D 505	MTZJ15C-T2	Z DIODE		
	D 506	MTZJ15C-T2	Z DIODE		
	D 507	MTZJ5.6C-T2	Z DIODE		
	D 508	MTZJ5.6C-T2	Z DIODE		
	D 509	1SS355-X	DIODE		
	D 511	MTZJ13C-T2	Z DIODE		
	D 512	MTZJ13C-T2	Z DIODE		
	D 513	MTZJ13C-T2	Z DIODE		
	D 514	MTZJ13C-T2	Z DIODE		
	D 515	MTZJ13C-T2	Z DIODE		
	D 516	MTZJ13C-T2	Z DIODE		

■ **Electrical parts list (Audio signal input board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	D 517	MTZJ13C-T2	Z DIODE		
	D 518	MTZJ13C-T2	Z DIODE		
	D 519	MTZJ10C-T2	Z DIODE		
	D 520	MTZJ13C-T2	Z DIODE		
	D1501	MTZJ13C-T2	Z DIODE		
	D1503	MTZJ13C-T2	Z DIODE		
	D1504	MTZJ13C-T2	Z DIODE		
	D1505	MTZJ13C-T2	Z DIODE		
	D1506	MTZJ8.2C-T2	Z DIODE		
	D1507	1SS133-T2	SI DIODE		
	D1508	1SS133-T2	SI DIODE		
	EP501	E409182-001SM	GRAND TERMINAL		
	EP502	QNZ0136-001Z	EARTH PLATE		
	EP511	E409182-001SM	GRAND TERMINAL		
	FL501	QQR0590-001	FILTER		
	FL502	QQR0590-001	FILTER		
	FW501	QUM132-06Z4Z4	PARA RIBON WIRE		
	HS512	E70306-001	HEAT SINK		
	HS513	E70306-001	HEAT SINK		
	HS514	E70306-001	HEAT SINK		
	HS515	E70306-001	HEAT SINK		
	HS520	E70306-001	HEAT SINK		
	HS521	E70306-001	HEAT SINK		
	HS526	E70306-001	HEAT SINK		
	IC501	M61501FP	IC		
	IC503	BA15218F-XE	IC		
	IC511	NJM2246M-X	IC		
	IC512	NJM2246M-X	IC		
	IC513	NJM2246M-X	IC		
	IC514	NJM2293M-W	IC		
	IC515	NJM2279M-W	IC		
	IC516	NJM2267M-W	IC		
	J 501	QNZ0502-001	RGB CONNECTOR	DVD	
	J 502	QNZ0502-001	RGB CONNECTOR	STB	
	J 503	QNN0163-001	PIN JACK		
	J 504	QNN0060-001	PIN JACK	SUBWOOFER OUT	
	J1501	QNZ0502-001	RGB CONNECTOR	VCR	
	J1502	QNZ0502-001	RGB CONNECTOR	TV	
	K 501	NRSA63J-0R0X	MG RESISTOR		
	K 502	NRSA63J-0R0X	MG RESISTOR		
	Q 501	2SC3576-JVC-T	TRANSISTOR		
	Q 502	2SC3576-JVC-T	TRANSISTOR		
	Q 503	2SC3576-JVC-T	TRANSISTOR		
	Q 505	2SC3576-JVC-T	TRANSISTOR		
	Q 506	2SC3576-JVC-T	TRANSISTOR		
	Q 507	2SC3576-JVC-T	TRANSISTOR		
	Q 508	2SC3576-JVC-T	TRANSISTOR		
	Q 509	DTA114YKA-X	TRANSISTOR		
⚠	Q 510	KTA1271/OY/-T	TRANSISTOR		
⚠	Q 511	KTC3203/OY/-T	TRANSISTOR		
⚠	Q 512	KTA1046/Y/	TRANSISTOR		
⚠	Q 513	2SD2395/EF/	TRANSISTOR		
⚠	Q 514	2SD2395/EF/	TRANSISTOR		
⚠	Q 515	2SD2395/EF/	TRANSISTOR		
	Q 516	DTA114YKA-X	TRANSISTOR		
	Q 517	DTC114EKA-X	TRANSISTOR		
⚠	Q 518	KTC3203/OY/-T	TRANSISTOR		
	Q 519	DTC114EKA-X	TRANSISTOR		
⚠	Q 520	2SD2395/EF/	TRANSISTOR		
⚠	Q 521	2SD2395/EF/	TRANSISTOR		
	Q 522	DTA114EKA-X	D TRANSISTOR		
	Q 523	DTC114EKA-X	TRANSISTOR		
	Q 524	DTA114EKA-X	D TRANSISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 525	DTA114EKA-X	D TRANSISTOR		
⚠	Q 526	2SD2395/EF/	TRANSISTOR		
	Q1501	DTC114TKA-X	TRANSISTOR		
	Q1502	DTC114TKA-X	TRANSISTOR		
	Q1503	DTC114TKA-X	TRANSISTOR		
	Q1504	KTA1267/YG/-T	TRANSISTOR		
	Q1505	KTA1267/YG/-T	TRANSISTOR		
	Q1506	KTA1267/YG/-T	TRANSISTOR		
	Q1514	DTC114EKA-X	TRANSISTOR		
	Q1515	DTC114EKA-X	TRANSISTOR		
	Q1520	DTC114EKA-X	TRANSISTOR		
	Q1521	DTC114TKA-X	TRANSISTOR		
	Q1522	DTC114TKA-X	TRANSISTOR		
	Q1523	2SC3576-JVC-T	TRANSISTOR		
	Q1524	2SC3576-JVC-T	TRANSISTOR		
	Q1525	2SC3576-JVC-T	TRANSISTOR		
	Q1526	2SC3576-JVC-T	TRANSISTOR		
	Q1527	KTA1267/YG/-T	TRANSISTOR		
	Q1528	KTA1267/YG/-T	TRANSISTOR		
	Q1531	DTA114YKA-X	TRANSISTOR		
	Q1532	DTA114YKA-X	TRANSISTOR		
	R 501	NRSA63J-471X	MG RESISTOR		
	R 502	NRSA63J-471X	MG RESISTOR		
	R 503	NRSA63J-750X	MG RESISTOR		
	R 504	NRSA63J-331X	MG RESISTOR		
	R 505	NRSA63J-750X	MG RESISTOR		
	R 506	NRSA63J-331X	MG RESISTOR		
	R 507	NRSA63J-750X	MG RESISTOR		
	R 508	NRSA63J-331X	MG RESISTOR		
	R 509	NRSA63J-750X	MG RESISTOR		
	R 510	NRSA63J-750X	MG RESISTOR		
	R 511	NRSA63J-331X	MG RESISTOR		
	R 513	NRSA63J-471X	MG RESISTOR		
	R 514	NRSA63J-471X	MG RESISTOR		
	R 515	NRSA63J-750X	MG RESISTOR		
	R 516	NRSA63J-331X	MG RESISTOR		
	R 517	NRSA63J-750X	MG RESISTOR		
	R 518	NRSA63J-331X	MG RESISTOR		
	R 519	NRSA63J-750X	MG RESISTOR		
	R 520	NRSA63J-331X	MG RESISTOR		
	R 521	NRSA63J-750X	MG RESISTOR		
	R 522	NRSA63J-750X	MG RESISTOR		
	R 523	NRSA63J-331X	MG RESISTOR		
	R 525	NRSA63J-471X	MG RESISTOR		
	R 526	NRSA63J-471X	MG RESISTOR		
	R 527	NRSA63J-471X	MG RESISTOR		
	R 528	NRSA63J-471X	MG RESISTOR		
	R 529	NRSA63J-102X	MG RESISTOR		
	R 530	NRSA63J-102X	MG RESISTOR		
	R 531	NRSA63J-103X	MG RESISTOR		
	R 532	NRSA63J-103X	MG RESISTOR		
	R 533	NRSA63J-472X	MG RESISTOR		
	R 534	NRSA63J-472X	MG RESISTOR		
	R 535	NRSA63J-103X	MG RESISTOR		
	R 536	NRSA63J-103X	MG RESISTOR		
	R 537	NRSA63J-103X	MG RESISTOR		
	R 538	NRSA63J-103X	MG RESISTOR		
⚠	R 541	QRJ146J-2R2X	UNF C RESISTOR	2.2 5% 1/4W	
⚠	R 542	QRJ146J-2R2X	UNF C RESISTOR	2.2 5% 1/4W	
	R 545	NRSA63J-104X	MG RESISTOR		
	R 546	NRSA63J-104X	MG RESISTOR		
	R 547	NRSA63J-102X	MG RESISTOR		
	R 548	NRSA63J-102X	MG RESISTOR		

■ **Electrical parts list (Audio signal input board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 549	NRSA63J-103X	MG RESISTOR		
	R 550	NRSA63J-103X	MG RESISTOR		
	R 552	NRSA63J-104X	MG RESISTOR		
	R 554	NRSA63J-273X	MG RESISTOR		
	R 556	NRSA63J-102X	MG RESISTOR		
	R 557	NRSA63J-104X	MG RESISTOR		
	R 558	NRSA63J-104X	MG RESISTOR		
	R 559	NRSA63J-102X	MG RESISTOR		
	R 561	NRSA63J-103X	MG RESISTOR		
	R 569	NRSA63J-104X	MG RESISTOR		
	R 570	NRSA63J-104X	MG RESISTOR		
	R 571	NRSA63J-102X	MG RESISTOR		
	R 572	NRSA63J-102X	MG RESISTOR		
	R 573	NRSA63J-103X	MG RESISTOR		
	R 574	NRSA63J-103X	MG RESISTOR		
	R 575	NRSA63J-472X	MG RESISTOR		
	R 576	NRSA63J-472X	MG RESISTOR		
⚠	R 577	QRJ146J-220X	UNF C RESISTOR	22 5% 1/4W	
	R 578	NRSA63J-102X	MG RESISTOR		
⚠	R 579	QRZ9005-680X	F RESISTOR	68 1/0W	
⚠	R 580	QRZ9005-680X	F RESISTOR	68 1/0W	
⚠	R 581	QRZ9005-100X	F RESISTOR	10 1/0W	
⚠	R 582	QRJ146J-222X	UNF C RESISTOR	2.2K 5% 1/4W	
⚠	R 583	QRZ9005-100X	F RESISTOR	10 1/0W	
⚠	R 584	QRJ146J-222X	UNF C RESISTOR	2.2K 5% 1/4W	
⚠	R 585	QRZ9005-100X	F RESISTOR	10 1/0W	
⚠	R 586	QRJ146J-182X	UNF C RESISTOR	1.8K 5% 1/4W	
⚠	R 588	QRJ146J-182X	UNF C RESISTOR	1.8K 5% 1/4W	
⚠	R 589	QRZ9005-120X	F RESISTOR	12 1/0W	
⚠	R 590	QRJ146J-682X	UNF C RESISTOR	6.8K 5% 1/4W	
⚠	R 591	QRZ9006-4R7X	F RESISTOR	4.7 1/0W	
⚠	R 592	QRZ9006-4R7X	F RESISTOR	4.7 1/0W	
⚠	R 593	QRJ146J-272X	UNF C RESISTOR	2.7K 5% 1/4W	
⚠	R 594	QRZ9006-5R6X	F RESISTOR	5.6 1/0W	
⚠	R 595	QRZ9005-100X	F RESISTOR	10 1/0W	
⚠	R 596	QRJ146J-102X	UNF C RESISTOR	1.0K 5% 1/4W	
⚠	R 597	QRZ9006-4R7X	F RESISTOR	4.7 1/0W	
⚠	R 598	QRJ146J-182X	UNF C RESISTOR	1.8K 5% 1/4W	
⚠	R 599	QRZ9006-4R7X	F RESISTOR	4.7 1/0W	
⚠	R 602	QRK126J-120X	UNF C RESISTOR	12 5% 1/2W	
⚠	R 603	QRK126J-3R9X	C RESISTOR	3.9 5% 1/2W	
	R1501	NRSA63J-101X	MG RESISTOR		
	R1502	NRSA63J-101X	MG RESISTOR		
	R1503	NRSA63J-471X	MG RESISTOR		
	R1504	NRSA63J-471X	MG RESISTOR		
	R1505	NRSA63J-750X	MG RESISTOR		
	R1506	NRSA63J-331X	MG RESISTOR		
	R1507	NRSA63J-473X	MG RESISTOR		
	R1508	NRSA63J-750X	MG RESISTOR		
	R1509	NRSA63J-750X	MG RESISTOR		
	R1510	NRSA63J-331X	MG RESISTOR		
	R1511	NRSA63J-101X	MG RESISTOR		
	R1512	NRSA63J-101X	MG RESISTOR		
	R1513	NRSA63J-471X	MG RESISTOR		
	R1514	NRSA63J-471X	MG RESISTOR		
	R1515	NRSA63J-750X	MG RESISTOR		
	R1516	NRSA63J-473X	MG RESISTOR		
	R1517	NRSA63J-750X	MG RESISTOR		
	R1518	NRSA63J-473X	MG RESISTOR		
	R1519	NRSA63J-750X	MG RESISTOR		
	R1520	NRSA63J-473X	MG RESISTOR		
	R1521	NRSA63J-750X	MG RESISTOR		
	R1522	NRSA63J-750X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R1523	NRSA63J-331X	MG RESISTOR		
	R1524	NRSA63J-750X	MG RESISTOR		
	R1525	NRSA63J-473X	MG RESISTOR		
	R1529	NRSA63J-391X	MG RESISTOR		
	R1530	NRSA63J-391X	MG RESISTOR		
	R1531	NRSA63J-391X	MG RESISTOR		
	R1547	NRSA63J-102X	MG RESISTOR		
	R1548	NRSA63J-102X	MG RESISTOR		
	R1549	NRSA63J-104X	MG RESISTOR		
⚠	R1556	QRJ146J-2R2X	UNF C RESISTOR	2.2 5% 1/4W	
	R1558	NRSA63J-105X	MG RESISTOR		
	R1560	NRSA63J-750X	MG RESISTOR		
	R1561	NRSA63J-751X	MG RESISTOR		
	R1562	NRSA63J-751X	MG RESISTOR		
	R1563	NRSA63J-103X	MG RESISTOR		
	R1564	NRSA63J-103X	MG RESISTOR		
	R1565	NRSA63J-751X	MG RESISTOR		
	R1566	NRSA63J-751X	MG RESISTOR		
	R1567	NRSA63J-103X	MG RESISTOR		
	R1568	NRSA63J-103X	MG RESISTOR		
	R1569	NRSA63J-331X	MG RESISTOR		
	R1570	NRSA63J-750X	MG RESISTOR		
	R1571	NRSA63J-331X	MG RESISTOR		
	R1572	NRSA63J-750X	MG RESISTOR		
	R1573	NRSA63J-511X	MG RESISTOR		
	R1574	NRSA63J-511X	MG RESISTOR		
⚠	R1575	QRZ9005-101X	F RESISTOR	100 1/0W	
	R1576	NRSA63J-221X	MG RESISTOR		
	R1577	NRSA63J-221X	MG RESISTOR		
	R1578	NRSA63J-221X	MG RESISTOR		
	R1579	NRSA63J-103X	MG RESISTOR		
	R1601	NRSA63J-104X	MG RESISTOR		
	R1602	NRSA63J-104X	MG RESISTOR		
	R1603	NRSA63J-104X	MG RESISTOR		
	R1604	NRSA63J-104X	MG RESISTOR		
	R1605	NRSA63J-301X	MG RESISTOR		
	R1606	NRSA63J-301X	MG RESISTOR		
	R1611	NRSA63J-104X	MG RESISTOR		
	R1612	NRSA63J-104X	MG RESISTOR		
	R1613	NRSA63J-104X	MG RESISTOR		
	R1614	NRSA63J-104X	MG RESISTOR		
	R1615	NRSA63J-104X	MG RESISTOR		
	R1616	NRSA63J-104X	MG RESISTOR		
	R1617	NRSA63J-104X	MG RESISTOR		
	R1618	NRSA63J-104X	MG RESISTOR		
	R1619	NRSA63J-104X	MG RESISTOR		
	R1620	NRSA63J-104X	MG RESISTOR		
	R1621	NRSA63J-102X	MG RESISTOR		
	R1623	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R1624	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
⚠	R1625	QRJ146J-2R2X	UNF C RESISTOR	2.2 5% 1/4W	
⚠	R1626	QRJ146J-2R2X	UNF C RESISTOR	2.2 5% 1/4W	
	R1631	NQR0269-004X	FERRITE BEADS		
	R1632	NQR0269-004X	FERRITE BEADS		
	R1633	NQR0269-004X	FERRITE BEADS		
	R1634	NQR0269-004X	FERRITE BEADS		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	C 601	NCB31HK-221X	C CAPACITOR		
	C 602	NCB31HK-221X	C CAPACITOR		
	C 603	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 604	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 605	NCF31CZ-104X	C CAPACITOR		
	C 606	NCF31CZ-104X	C CAPACITOR		
	C 607	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 608	NCF31CZ-104X	C CAPACITOR		
	C 609	NCF31CZ-104X	C CAPACITOR		
	C 610	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 611	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 612	NCB31CK-103X	C CAPACITOR		
	C 621	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 622	NCS31HJ-101X	C CAPACITOR		
	C 624	NCF31CZ-104X	C CAPACITOR		
	C 626	NCB31CK-104X	C CAPACITOR		
	C 628	NCB31CK-103X	C CAPACITOR		
	C 631	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 632	NCB31CK-103X	C CAPACITOR		
	C 633	NCF31CZ-104X	C CAPACITOR		
	C 634	NCF31CZ-104X	C CAPACITOR		
	C 635	NCF31CZ-104X	C CAPACITOR		
	C 636	NCB31CK-473X	C CAPACITOR		
	C 638	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 639	NCB31CK-103X	C CAPACITOR		
	C 641	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 642	NCB31CK-103X	C CAPACITOR		
	C 643	NCB31AK-474X	C CAPACITOR		
	C 644	NCB31CK-103X	C CAPACITOR		
	C 645	NCS31HJ-101X	C CAPACITOR		
	C 646	NCB31CK-103X	C CAPACITOR		
	C 647	NCS31HJ-220X	C CAPACITOR		
	C 648	NCS31HJ-180X	C CAPACITOR		
	C 649	NCS31HJ-121X	C CAPACITOR		
	C 653	NCB31CK-104X	C CAPACITOR		
	C 654	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 661	NCB31CK-103X	C CAPACITOR		
	C 671	NCB31CK-103X	C CAPACITOR		
	C 672	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 673	NCB31CK-103X	C CAPACITOR		
	C 677	NCS31HJ-101X	C CAPACITOR		
	C 679	NCS31HJ-101X	C CAPACITOR		
	C 681	NCB31CK-103X	C CAPACITOR		
	C 682	NCB31CK-103X	C CAPACITOR		
	C 683	NCB31CK-103X	C CAPACITOR		
	C 684	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 685	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 686	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 687	NCB31CK-103X	C CAPACITOR		
	C 688	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 689	NCB31CK-103X	C CAPACITOR		
	C 690	QETN0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 693	NCB31CK-103X	C CAPACITOR		
	C 694	NCB31CK-104X	C CAPACITOR		
	CN681	QGB2510K1-20	B TO B CONNE		
	C2500	QETN1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C2503	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2504	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2507	NCS31HJ-330X	C CAPACITOR		
	C2508	NCS31HJ-330X	C CAPACITOR		
	C2512	NCF31CZ-104X	C CAPACITOR		
	C2513	NCB31HK-122X	C CAPACITOR		
	C2514	NCB31HK-122X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C2515	NCS31HJ-121X	C CAPACITOR		
	C2516	NCS31HJ-121X	C CAPACITOR		
	C2517	NCS31HJ-391X	C CAPACITOR		
	C2518	NCS31HJ-391X	C CAPACITOR		
	C2525	NCB31HK-102X	C CAPACITOR		
	C2526	NCB31HK-102X	C CAPACITOR		
	C2527	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C2528	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C2531	NCS31HJ-560X	C CAPACITOR		
	C2532	NCS31HJ-560X	C CAPACITOR		
	C2533	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2534	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2539	NCF31CZ-104X	C CAPACITOR		
	C2540	NCF31CZ-104X	C CAPACITOR		
	C2551	NCS31HJ-560X	C CAPACITOR		
	C2552	NCS31HJ-560X	C CAPACITOR		
	C2555	NCF31CZ-104X	C CAPACITOR		
	C2556	NCF31CZ-104X	C CAPACITOR		
	C2561	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C2562	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C2563	NCS31HJ-220X	C CAPACITOR		
	C2564	NCS31HJ-220X	C CAPACITOR		
	C2569	NCF31CZ-104X	C CAPACITOR		
	C2570	NCF31CZ-104X	C CAPACITOR		
	C2575	NCB31HK-102X	C CAPACITOR		
	C2576	NCB31HK-102X	C CAPACITOR		
	C2577	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C2578	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C2581	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C2582	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C2583	NCS31HJ-220X	C CAPACITOR		
	C2584	NCS31HJ-560X	C CAPACITOR		
	C2585	NCF31CZ-104X	C CAPACITOR		
	C2586	NCF31CZ-104X	C CAPACITOR		
	C2587	NCS31HJ-560X	C CAPACITOR		
	C2588	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2589	NCF31CZ-104X	C CAPACITOR		
	C2590	NCF31CZ-104X	C CAPACITOR		
	C2592	NCB31HK-223X	C CAPACITOR		
	C2594	NCF31CZ-104X	C CAPACITOR		
	C2595	NCB31HK-102X	C CAPACITOR		
	C2597	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C2598	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	D 607	1SS355-X	DIODE		
	D 608	1SS355-X	DIODE		
	IC601	AK4527BVQ	IC		
	IC609	BA15218F-XE	IC		
	IC610	BA15218F-XE	IC		
	IC611	BU4066BCF-X	IC		
	IC621	TC7SU04FU-X	IC		
	IC622	TC7SU04FU-X	IC		
	IC631	TC9446F-014	IC		
	IC641	W24L010AJ-12-X	IC		
	IC650	BA15218F-XE	IC		
	IC651	BA15218F-XE	IC		
	IC652	IMX9-W	TRANSISTOR		
	IC661	BA15218F-XE	IC		
	IC662	IMX9-W	TRANSISTOR		
	IC671	UPD784215AGC103	IC		
	IC672	TC7SET32FU-X	IC		
	IC681	PQ3DZ53-X	IC		
	IC682	IMX9-W	TRANSISTOR		
	IC683	RN5RZ33BA-X	IC		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	IC690	BA15218F-XE	IC		
	IC691	BA15218F-XE	IC		
	J 601	QNN0347-001	PIN JACK		
	K 601	NQR0269-004X	FERRITE BEADS		
	K 603	NQR0269-004X	FERRITE BEADS		
	K 681	NQR0319-001X	F BEADS		
	K 682	NQR0319-001X	F BEADS		
	K 687	NQR0319-001X	F BEADS		
	K 688	NQR0319-001X	F BEADS		
	LC631	NQR0321-001X	EMI FILTER		
	Q 601	DTC114YE-X	TRANSISTOR		
	Q 607	DTA144EKA-X	TRANSISTOR		
	Q 670	DTC114YE-X	TRANSISTOR		
	Q 671	2SD2114K/VW/-X	CHIP TRANSISTOR		
	Q 672	DTC114YE-X	TRANSISTOR		
	Q 673	DTA144EKA-X	TRANSISTOR		
	Q2501	DTA144EKA-X	TRANSISTOR		
	R 600	NRSA63J-0R0X	MG RESISTOR		
	R 601	NRSA63J-473X	MG RESISTOR		
	R 602	NRSA63J-473X	MG RESISTOR		
	R 603	NRSA63J-473X	MG RESISTOR		
	R 606	NRSA63J-221X	MG RESISTOR		
	R 607	NRSA63J-221X	MG RESISTOR		
	R 608	NRSA63J-221X	MG RESISTOR		
	R 609	NRSA63J-221X	MG RESISTOR		
	R 611	NRSA63J-221X	MG RESISTOR		
	R 612	NRSA63J-221X	MG RESISTOR		
	R 613	NRSA63J-822X	MG RESISTOR		
	R 615	NRSA63J-432X	MG RESISTOR		
	R 617	NRSA63J-103X	MG RESISTOR		
	R 618	NRSA63J-103X	MG RESISTOR		
	R 621	NRSA63J-221X	MG RESISTOR		
	R 622	NRSA63J-750X	MG RESISTOR		
	R 623	NRSA63J-101X	MG RESISTOR		
	R 627	NRSA63J-472X	MG RESISTOR		
	R 628	NRSA63J-183X	MG RESISTOR		
	R 632	NRSA63J-0R0X	MG RESISTOR		
	R 633	NRSA63J-221X	MG RESISTOR		
	R 639	NRSA63J-472X	MG RESISTOR		
	R 640	NRSA63J-0R0X	MG RESISTOR		
	R 641	NRSA63J-102X	MG RESISTOR		
	R 642	NRSA63J-103X	MG RESISTOR		
	R 643	NRSA63J-101X	MG RESISTOR		
	R 644	NRSA63J-563X	MG RESISTOR		
	R 645	NRSA63J-102X	MG RESISTOR		
	R 646	NRSA63J-103X	MG RESISTOR		
	R 647	NRSA63J-225X	MG RESISTOR		
	R 648	NRSA63J-472X	MG RESISTOR		
	R 657	NRSA63J-103X	MG RESISTOR		
	R 661	NRSA63J-221X	MG RESISTOR		
	R 662	NRSA63J-221X	MG RESISTOR		
	R 663	NRSA63J-221X	MG RESISTOR		
	R 664	NRSA63J-221X	MG RESISTOR		
	R 669	NRSA63J-103X	MG RESISTOR		
	R 670	NRSA63J-103X	MG RESISTOR		
	R 671	NRSA63J-103X	MG RESISTOR		
	R 672	NRSA63J-105X	MG RESISTOR		
	R 673	NRSA63J-432X	MG RESISTOR		
	R 674	NRSA63J-432X	MG RESISTOR		
	R 675	NRSA63J-432X	MG RESISTOR		
	R 676	NRSA63J-432X	MG RESISTOR		
	R 677	NRSA63J-822X	MG RESISTOR		
	R 678	NRSA63J-822X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R 679	NRSA63J-822X	MG RESISTOR		
	R 680	NRSA63J-822X	MG RESISTOR		
	R 681	NRSA63J-103X	MG RESISTOR		
	R 682	NRSA63J-103X	MG RESISTOR		
	R 683	NRSA63J-0R0X	MG RESISTOR		
	R 684	NRSA63J-0R0X	MG RESISTOR		
	R 685	NRSA63J-103X	MG RESISTOR		
	R 686	NRSA63J-151X	MG RESISTOR		
	R 688	NRSA63J-0R0X	MG RESISTOR		
	R 691	NRSA63J-221X	MG RESISTOR		
	R 692	NRSA63J-221X	MG RESISTOR		
	R 693	NRSA63J-221X	MG RESISTOR		
	R 694	NRSA63J-221X	MG RESISTOR		
	R 695	NRSA63J-221X	MG RESISTOR		
	R 696	NRSA63J-221X	MG RESISTOR		
	R2500	NRSA63J-102X	MG RESISTOR		
	R2501	NRSA63J-104X	MG RESISTOR		
	R2502	NRSA63J-104X	MG RESISTOR		
	R2507	NRSA63J-223X	MG RESISTOR		
	R2508	NRSA63J-223X	MG RESISTOR		
	R2509	NRSA63J-223X	MG RESISTOR		
	R2510	NRSA63J-223X	MG RESISTOR		
	R2511	NRSA63J-912X	MG RESISTOR		
	R2512	NRSA63J-912X	MG RESISTOR		
	R2513	NRSA63J-103X	MG RESISTOR		
	R2514	NRSA63J-103X	MG RESISTOR		
	R2515	NRSA63J-103X	MG RESISTOR		
	R2516	NRSA63J-103X	MG RESISTOR		
	R2517	NRSA63J-103X	MG RESISTOR		
	R2518	NRSA63J-103X	MG RESISTOR		
	R2519	NRSA63J-331X	MG RESISTOR		
	R2520	NRSA63J-331X	MG RESISTOR		
	R2521	NRSA63J-331X	MG RESISTOR		
	R2522	NRSA63J-331X	MG RESISTOR		
	R2525	NRSA63J-471X	MG RESISTOR		
	R2526	NRSA63J-471X	MG RESISTOR		
	R2527	NRSA63J-104X	MG RESISTOR		
	R2528	NRSA63J-104X	MG RESISTOR		
	R2529	NRSA63J-103X	MG RESISTOR		
	R2530	NRSA63J-103X	MG RESISTOR		
	R2531	NRSA63J-912X	MG RESISTOR		
	R2532	NRSA63J-912X	MG RESISTOR		
	R2533	NRSA63J-103X	MG RESISTOR		
	R2534	NRSA63J-103X	MG RESISTOR		
	R2535	NRSA63J-103X	MG RESISTOR		
	R2536	NRSA63J-103X	MG RESISTOR		
	R2537	NRSA63J-104X	MG RESISTOR		
	R2538	NRSA63J-104X	MG RESISTOR		
	R2550	NRSA63J-272X	MG RESISTOR		
	R2551	NRSA63J-103X	MG RESISTOR		
	R2552	NRSA63J-103X	MG RESISTOR		
	R2553	NRSA63J-153X	MG RESISTOR		
	R2554	NRSA63J-153X	MG RESISTOR		
	R2555	NRSA63J-752X	MG RESISTOR		
	R2556	NRSA63J-752X	MG RESISTOR		
	R2557	NRSA63J-103X	MG RESISTOR		
	R2558	NRSA63J-223X	MG RESISTOR		
	R2560	NRSA63J-105X	MG RESISTOR		
	R2561	NRSA63J-104X	MG RESISTOR		
	R2562	NRSA63J-104X	MG RESISTOR		
	R2563	NRSA63J-103X	MG RESISTOR		
	R2564	NRSA63J-103X	MG RESISTOR		
	R2565	NRSA63J-302X	MG RESISTOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	R2566	NRSA63J-302X	MG RESISTOR		
	R2567	NRSA63J-103X	MG RESISTOR		
	R2568	NRSA63J-103X	MG RESISTOR		
	R2575	NRSA63J-102X	MG RESISTOR		
	R2576	NRSA63J-102X	MG RESISTOR		
	R2577	NRSA63J-104X	MG RESISTOR		
	R2578	NRSA63J-104X	MG RESISTOR		
	R2581	NRSA63J-104X	MG RESISTOR		
	R2582	NRSA63J-104X	MG RESISTOR		
	R2583	NRSA63J-103X	MG RESISTOR		
	R2584	NRSA63J-223X	MG RESISTOR		
	R2585	NRSA63J-272X	MG RESISTOR		
	R2586	NRSA63J-332X	MG RESISTOR		
	R2587	NRSA63J-103X	MG RESISTOR		
	R2588	NRSA63J-103X	MG RESISTOR		
	R2589	NRSA63J-104X	MG RESISTOR		
	R2590	NRSA63J-333X	MG RESISTOR		
	R2592	NRSA63J-333X	MG RESISTOR		
	R2594	NRSA63J-333X	MG RESISTOR		
	R2595	NRSA63J-102X	MG RESISTOR		
	R2596	NRSA63J-102X	MG RESISTOR		
	R2597	NRSA63J-104X	MG RESISTOR		
	R2598	NRSA63J-104X	MG RESISTOR		
	UN661	GP1FA550RZ	OPT RECEIVER		
	X 631	NAX0385-001X	CRYSTAL		
	X 671	NAX0275-001X	1COSCIALLATOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	AT101	QNB0014-001	ANT TERMINAL		
	BK 1	LV31618-001A	SHIELD BKT		
	C 101	NCB21HK-103X	C CAPACITOR		
	C 103	NCB21HK-223X	C CAPACITOR		
	C 105	NCB21HK-223X	C CAPACITOR		
	C 107	QEKC1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 111	NCB21HK-473X	C CAPACITOR		
	C 112	NDC21HJ-120X	C CAPACITOR		
	C 113	QCSB1HJ-120Y	C CAPACITOR	12PF 5% 50V	
	C 121	NDC21HJ-120X	C CAPACITOR		
	C 122	NDC21HJ-120X	C CAPACITOR		
	C 123	NCB21HK-473X	C CAPACITOR		
	C 126	NCS21HJ-101X	C CAPACITOR		
	C 128	QENC1HM-474Z	NP E CAPACITOR	.47MF 20% 50V	
	C 129	NCB21HK-102X	C CAPACITOR		
	C 130	QEKC1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 133	QEKC1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 134	NCB21HK-222X	C CAPACITOR		
	C 135	NCB21HK-223X	C CAPACITOR		
	C 136	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 137	NCS21HJ-680X	C CAPACITOR		
	C 139	NCB21HK-393X	C CAPACITOR		
	C 140	NCB21HK-393X	C CAPACITOR		
	C 141	NCB21HK-473X	C CAPACITOR		
	C 143	NCB21HK-223X	C CAPACITOR		
	C 144	NCB21HK-473X	C CAPACITOR		
	C 146	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 147	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 148	QEKC1HM-224Z	E CAPACITOR	.22MF 20% 50V	
	C 149	QEKC1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 150	QEKC1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 156	QDGB1HK-102Y	C CAPACITOR		
	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	
	C 191	NCS21HJ-820X	C CAPACITOR		
	C 192	NCS21HJ-470X	C CAPACITOR		
	C 193	NCB21HK-561X	C CAPACITOR		
	C 194	NCB21HK-104X	C CAPACITOR		
	C 195	NCB21HK-331X	C CAPACITOR		
	C 196	QEKC1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 197	NCB21HK-473X	C CAPACITOR		
	C 199	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	CF101	QAX0285-001Z	C FILTER		
	CF102	QAX0285-001Z	C FILTER		
	CF103	QAX0519-001Z	C FILTER		
	CN111	QGB2501K2-12	CONECTOR		
	CN112	QGB2501K1-04	CONNECTOR		
	D 121	1SS133-T2	SI DIODE		
	D 123	1SS133-T2	SI DIODE		
	D 129	1SS133-T2	SI DIODE		
	D 131	1SS133-T2	SI DIODE		
	IC102	LA1838	IC		
	IC121	LC72136N	IC		
	IC191	SAA6588	IC(RDS)		
	L 112	QQL231K-2R7Y	INDUCTOR		

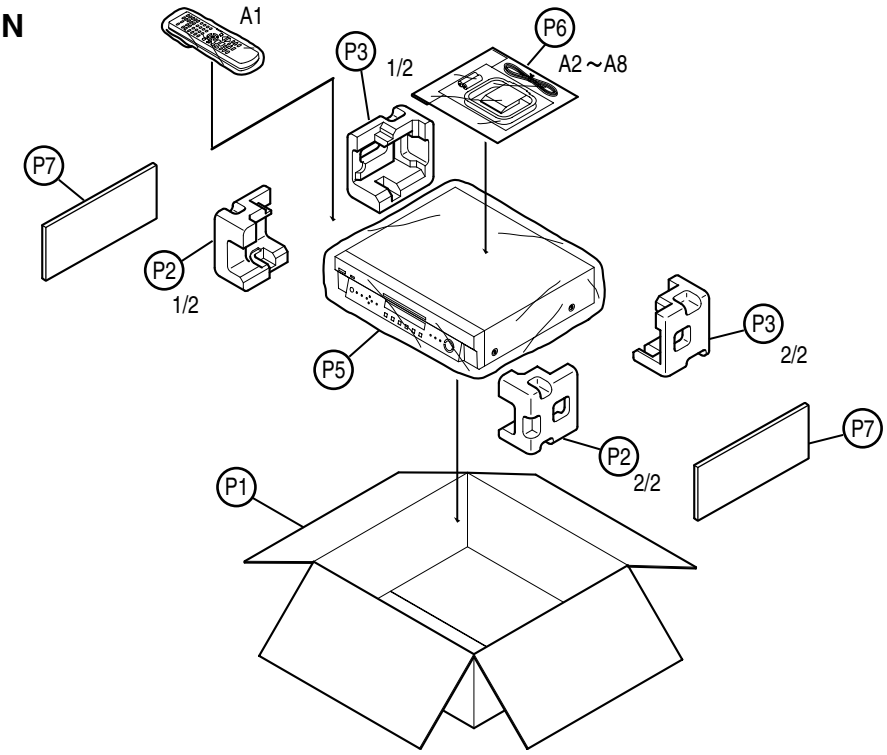
⚠	Item	Parts number	Parts name	Remarks	Area
	Q 102	2SC535/BC/-T	TRANSISTOR		
	Q 103	2SC461/BC/-T	TRANSISTOR		
	Q 111	KTC3199/GL/-T	TRANSISTOR		
	Q 112	KTC3199/GL/-T	TRANSISTOR		
	Q 113	DTA114YKA-X	TRANSISTOR		
	Q 121	KRA103M-T	TRANSISTOR		
	R 103	NRSA02J-221X	MG RESISTOR		
	R 104	NRSA02J-272X	MG RESISTOR		
	R 105	NRSA02J-391X	MG RESISTOR		
	R 106	NRSA02J-102X	MG RESISTOR		
	R 107	NRSA02J-561X	MG RESISTOR		
	R 108	NRSA02J-332X	MG RESISTOR		
	R 109	NRSA02J-221X	MG RESISTOR		
	R 111	NRSA02J-182X	MG RESISTOR		
	R 112	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R 114	NRSA02J-272X	MG RESISTOR		
	R 115	NRSA02J-104X	MG RESISTOR		
	R 119	NRSA02J-103X	MG RESISTOR		
	R 122	NRSA02J-472X	MG RESISTOR		
	R 124	NRSA02J-222X	MG RESISTOR		
	R 126	NRSA02J-562X	MG RESISTOR		
	R 127	NRSA02J-822X	MG RESISTOR		
	R 128	NRSA02J-472X	MG RESISTOR		
	R 129	NRSA02J-222X	MG RESISTOR		
	R 130	QRZ9005-680X	F RESISTOR	68 1/0W	
	R 132	NRSA02J-393X	MG RESISTOR		
	R 133	NRSA02J-392X	MG RESISTOR		
	R 134	NRSA02J-102X	MG RESISTOR		
	R 140	NRSA02J-473X	MG RESISTOR		
	R 141	NRSA02J-102X	MG RESISTOR		
	R 142	NRSA02J-470X	MG RESISTOR		
	R 143	NRSA02J-562X	MG RESISTOR		
	R 144	NRSA02J-332X	MG RESISTOR		
	R 145	NRSA02J-103X	MG RESISTOR		
	R 146	NRSA02J-472X	MG RESISTOR		
	R 147	NRSA02J-332X	MG RESISTOR		
	R 150	NRSA02J-331X	MG RESISTOR		
	R 157	NRSA02J-332X	MG RESISTOR		
	R 158	NRSA02J-332X	MG RESISTOR		
	R 161	NRSA02J-102X	MG RESISTOR		
	R 162	NRSA02J-102X	MG RESISTOR		
	R 182	NRSA02J-103X	MG RESISTOR		
	R 183	NRSA02J-103X	MG RESISTOR		
	R 184	NRSA02J-103X	MG RESISTOR		
	R 191	NRSA02J-102X	MG RESISTOR		
	R 192	NRSA02J-474X	MG RESISTOR		
	R 193	NRSA02J-103X	MG RESISTOR		
	R 194	NRSA02J-103X	MG RESISTOR		
	RF101	QAU0119-001	FRONT END	FOR FTZ	
	T 111	QQR0871-001	COIL BLOCK		
	T 142	QQR0973-001	IFT		
	X 121	QAX0402-001	CRYSTAL		
	X 191	QAX0263-001Z	CRYSTAL		

Packing materials and accessories parts list

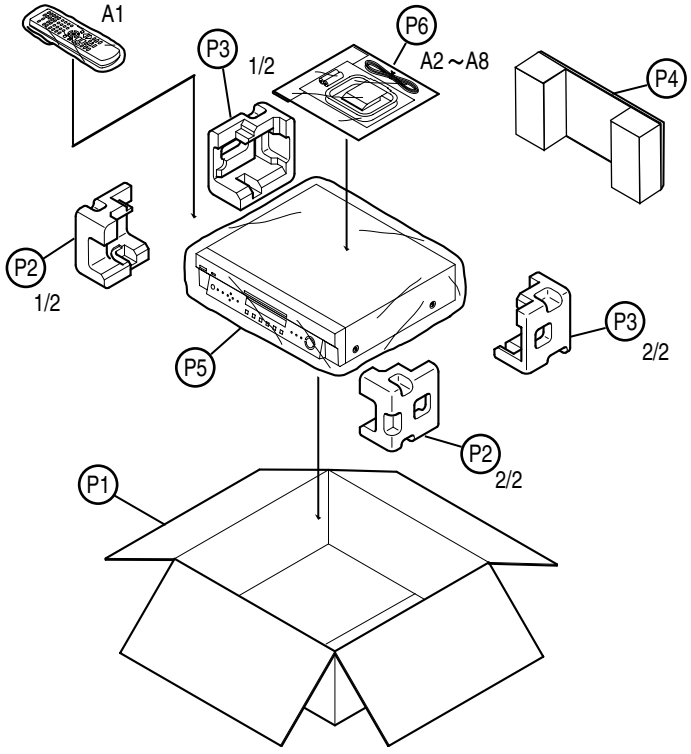
Block No. M 2 M M

Block No. M 3 M M

Ver.E/EN



Ver.B



■ Parts list (Packing)

Block No. M2MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	LV20978-006A	CARTON BOX	1	RX-E100RSL	E, EN
		LV20978-007A	CARTON BOX	1	RX-E100RSB	E, EN
		LV20978-001A	CARTON BOX	1	RX-E100RSL	B
	P 2	LV20963-001A	CUSHION(FRONT)	1		
	P 3	LV20964-001A	CUSHION(REAR)	1		
	P 4	LV32804-001A	PACKING SHEET	1		B
	P 5	QPC06507015P	POLY BAG	1	FOR SET	
	P 6	QPA02503505P	POLY BAG	1	FOR INST	
	P 7	LV32034-005A	SHEET	2		E, EN

■ Parts list (Accessories)

Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	RM-SRXE100R	REMOCON	1		
	A 2	----------	BATTERY	2		
	A 3	LVT0650-003A	INST BOOK	1	ENG	B
		LVT0650-005A	INST BOOK	1	SWE, FIN, DAN, GER	EN
		LVT0650-005A	INST BOOK	1	FRE, SPA, ITA	EN
		LVT0650-004A	INST BOOK	1	GER, FRE, DUT	E
	A 4	EWP503-001C	ANT.WIRE	1		
	A 5	QAL0204-001	AM LOOP ANT	1		
	A 6	E43486-340A	BS=SAFETY INST	1		B
	A 7	VNA3000-204	REGIST.CARD	1		B
	A 8	BT-54013-1	WARRANTY CARD	1		E
		BT-54008-2	WARRANTY CARD	1		B, EN

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO & COMMUNICATION BUSINESS DIVISION
PERSONAL & MOBILE NETWORK BUSINESS UNIT. 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

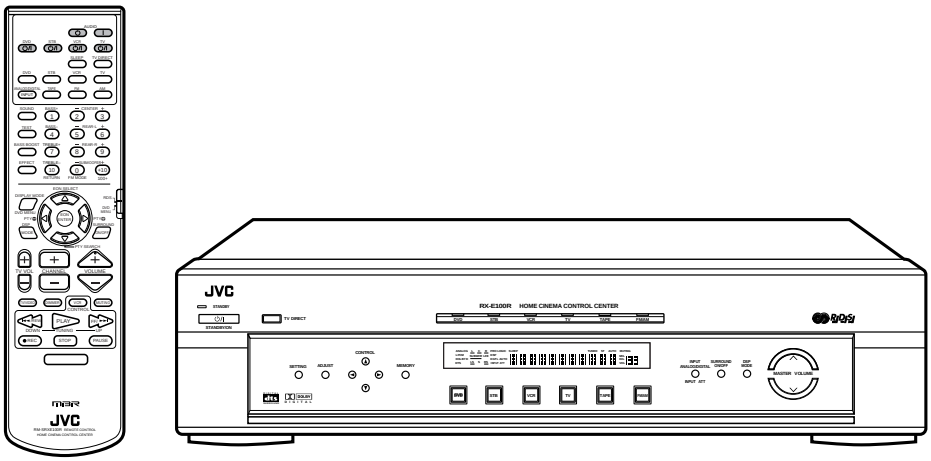
(No.20951)

Printed in Japan
200105(V)

JVC

HOME CINEMA CONTROL CENTER

RX-E100RSL



INSTRUCTIONS

For Customer Use:

Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

LVT0650-003A
[B]

Warnings, Cautions and Others

IMPORTANT for the U.K.

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted.

If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below:

IMPORTANT.

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue : Neutral
Brown : Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.

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.

Caution –– ⏻/I switch!

Disconnect the mains plug to shut the power off completely. The ⏻/I switch in any position does not disconnect the mains line. The power can be remote controlled.

CAUTION

- Do not block the ventilation openings or holes. (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
- Do not place any naked flame sources, such as lighted candles, on the apparatus.
- When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.
- Do not use this apparatus in a bathroom or places with water. Also do not place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups, etc.) on top of this apparatus.

SAFETY INSTRUCTIONS
“SOME DOS AND DON’TS ON THE SAFE USE OF EQUIPMENT”

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

****

Do read the operating instructions before you attempt to use the equipment.

Do ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer’s instructions. Switch off and withdraw the mains plug when making or changing connections.

Do consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

Do be careful with glass panels or doors on equipment.

****

DON’T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way–switch off, withdraw the mains plug and consult your dealer.

DON’T remove any fixed cover as this may expose dangerous voltages.

DON’T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode.
Switch off using the switch on the equipment and make sure that your family know how to do this.

Special arrangements may need to be made for infirm or handicapped people.

DON’T use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

DON’T listen to headphones at high volume as such use can permanently damage your hearing.

DON’T obstruct the ventilation of the equipment, for example with curtains or soft furnishings.

Overheating will cause damage and shorten the life of the equipment.

DON’T use makeshift stands and NEVER fix legs with wood screws — to ensure complete safety always fit the manufacturer’s approved stand or legs with the fixings provided according to the instructions.

DON’T allow electrical equipment to be exposed to rain or moisture.

ABOVE ALL

— NEVER let anyone, especially children, push anything into holes, slots or any other opening in the case -this could result in a fatal electrical shock.;

— NEVER guess or take chances with electrical equipment of any kind — it is better to be safe than sorry!

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.

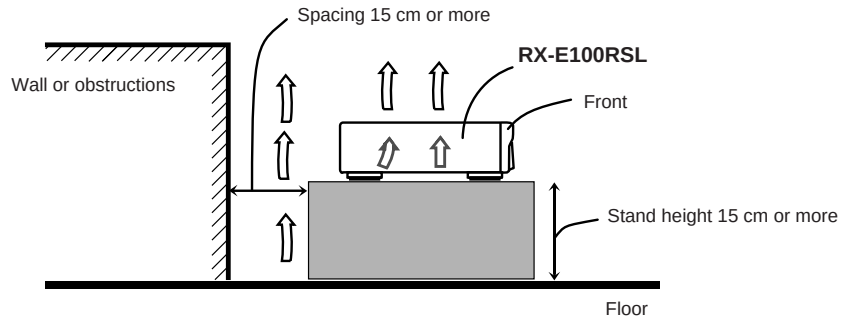


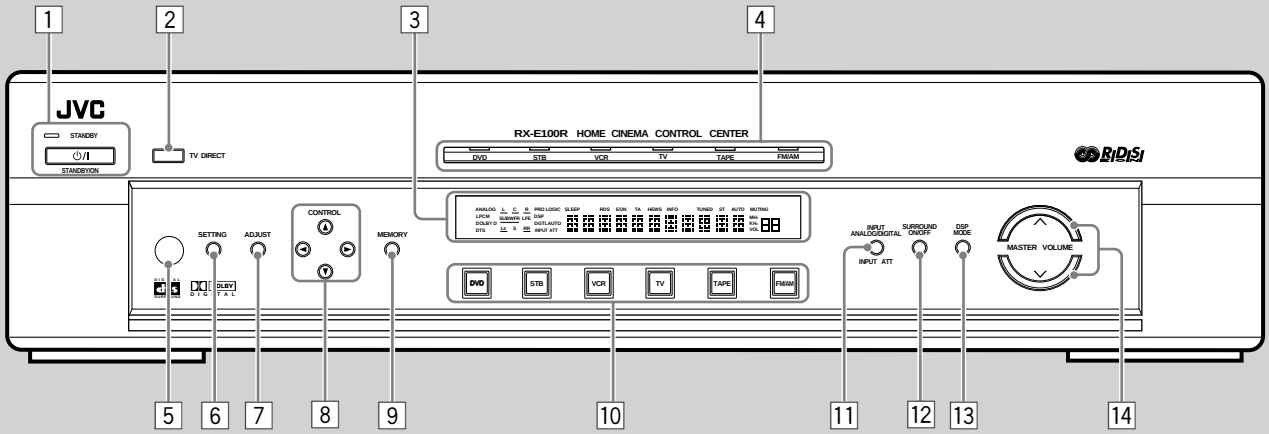
Table of Contents

This mark indicates that the remote control CAN ONLY be used for the operation explained.

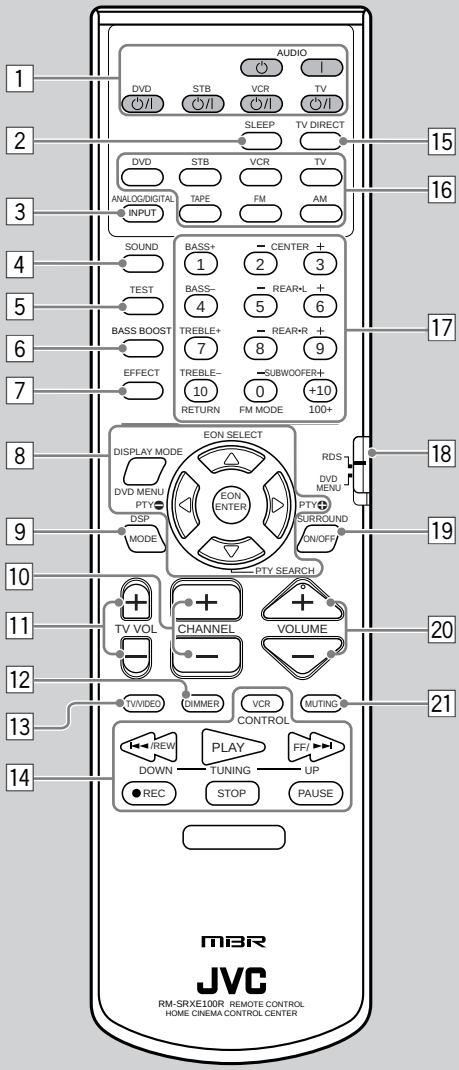
This mark indicates that only the remote control CANNOT be used for the operation explained.

Parts Identification

Front Panel



Remote Control



See pages in the parentheses for details.

Front Panel

1 ⏻/| STANDBY/ON button and STANDBY lamp (10)
2 TV DIRECT button (11)
3 Display
4 Source indicators
5 Remote sensor
6 SETTING button (13, 15, 17 – 19)
7 ADJUST button (20 – 22, 37 – 39)
8 CONTROL buttons (13 – 25, 37 – 39)
▲ / ▼ / ◄ / ►
9 MEMORY button (24)
10 Source selecting buttons (10, 11, 14, 23, 25)
DVD, STB, VCR, TV, TAPE, FM/AM
11 INPUT ANALOG/DIGITAL button (14)
INPUT ATT button (20)
12 SURROUND ON/OFF button (32, 37)
13 DSP MODE button (32, 38, 39)
14 MASTER VOLUME ^ / v buttons (10)

Remote Control

1 POWER buttons (10, 40, 42, 43)
AUDIO ⏻ , |, DVD ⏻/|, STB ⏻/|, VCR ⏻/|, TV ⏻/|
2 SLEEP button (12, 40)
3 ANALOG/DIGITAL INPUT button (14, 40)
4 SOUND button (21, 34 – 36, 40)
5 TEST button (33 – 35, 40)
6 BASS BOOST button (21, 40)
7 EFFECT button (35, 36, 40)
8 RDS/DVD MENU mode selector (26 – 28, 41, 42)
9 DSP MODE button (32, 35, 36, 40)
10 CHANNEL +/– buttons (41 – 43)
11 TV VOL +/– buttons (41, 43)
12 DIMMER button (12, 40)
13 TV/VIDEO button (41, 43)
14 Operating buttons for audio/video components (23, 41 – 43)
15 TV DIRECT button (11, 40)
16 Source selecting buttons (10, 11, 14, 23, 25, 40, 42, 43)
DVD, STB, VCR, TV, TAPE, FM, AM
17 • 10 keys for selecting preset channels (25, 41 – 43)
• 10 keys for adjusting sound (34 – 36, 41)
• 10 keys for operating audio/video components (41 – 43)
18 RDS/DVD MENU selector (26 – 28, 41, 42)
19 SURROUND ON/OFF button (32, 33, 38, 40)
20 VOLUME +/– buttons (10, 40)
21 MUTING button (12, 40)

Before Installation

General Precautions

- DO NOT insert any metal object into the unit.
- DO NOT disassemble the unit or remove screws, covers, or cabinet.
- DO NOT expose the unit to rain or moisture.

Locations

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

Handling the unit

- 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.
- Keep the power cord away from the connecting cords and the antenna. The power cord may cause noise or screen interference. It is recommended to use a coaxial cable for antenna connection, since it is well-shielded against interference.
- When a power failure occurs, or when you unplug the power cord, the preset settings such as preset FM/AM (MW/LW) channels and sound adjustments may be erased in a few days.

Checking the Supplied Accessories

Check to be sure you have all of the following supplied accessories. The number in the parentheses indicates the quantity of the pieces supplied.

- **Remote Control (1)**
- **Batteries (2)**
- **AM (MW/LW) Loop Antenna (1)**
- **FM Antenna (1)**

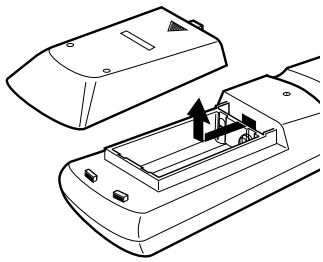
If anything is missing, contact your dealer immediately.

Putting Batteries in the Remote Control

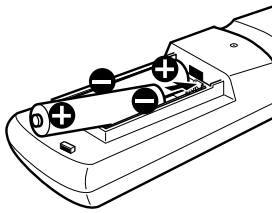
Before using the remote control, put two supplied batteries first.

- When using the remote control, aim the remote control directly at the remote sensor on the unit.

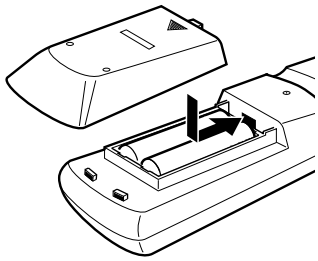
1. On the back of the remote control, remove the battery cover.



2. Insert batteries. Make sure to match the polarity: (+) to (+) and (–) to (–).



3. Replace the cover.



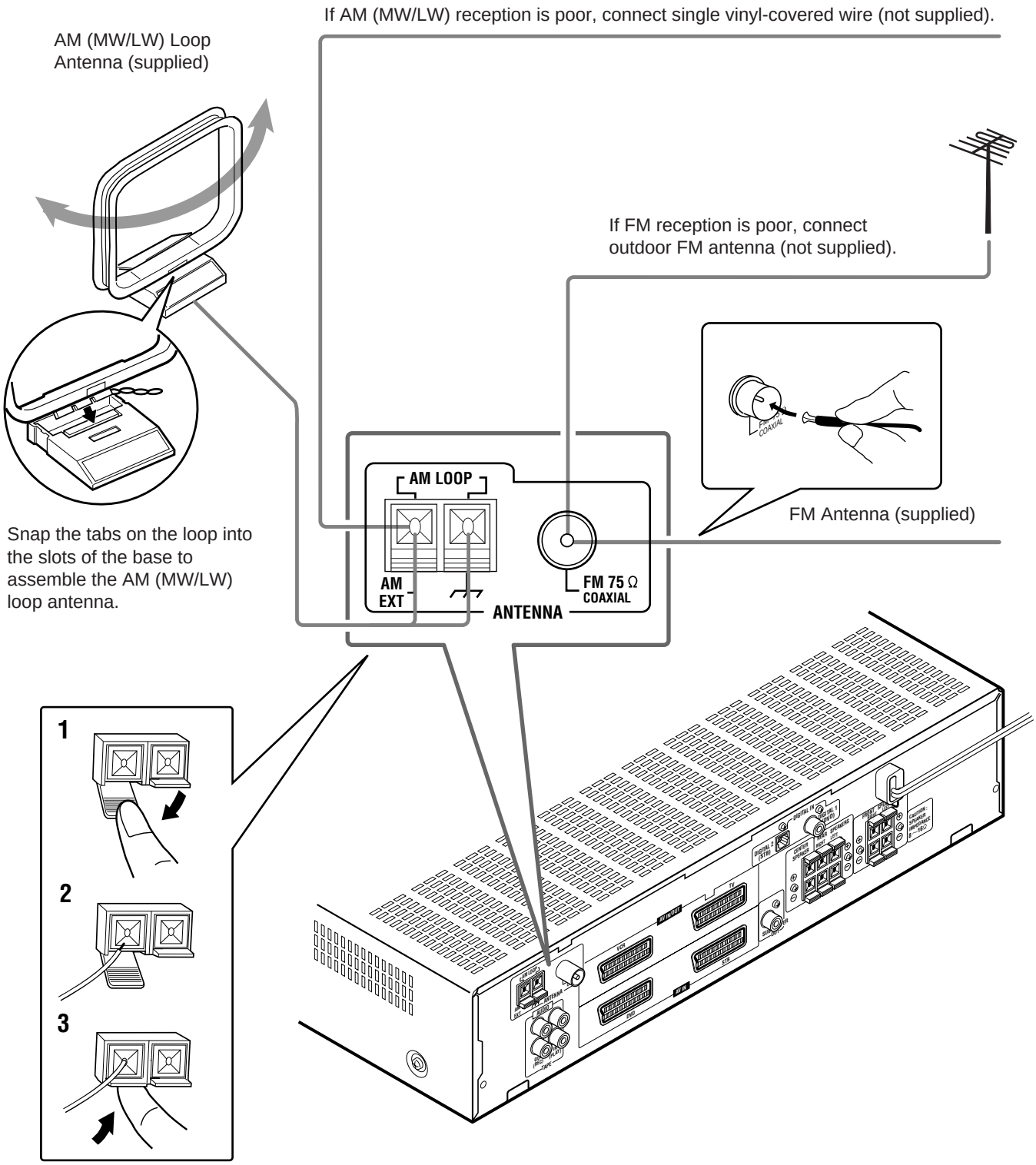
If the range or effectiveness of the remote control decreases, replace the batteries. Use two R6P(SUM-3)/AA(15F) type dry-cell batteries.

CAUTION:

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.

Connecting the FM and AM (MW/LW) Antennas



AM (MW/LW) antenna connection

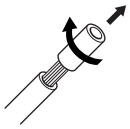
Connect the AM (MW/LW) loop antenna supplied to the AM LOOP terminals.
Turn the loop until you have the best reception.
- If reception is poor, connect an outdoor single vinyl-covered wire to the AM EXT terminal. Keep the AM (MW/LW) loop antenna connected.

FM antenna connection

Connect the FM antenna supplied to the FM 75 Ω COAXIAL terminal as temporary measure.
Extend the supplied FM antenna horizontally.
- If reception is poor, connect an outdoor antenna. Before attaching a 75 Ω coaxial cable (with a standard type connector), disconnect the supplied FM antenna.

Notes:

- *If the AM (MW/LW) loop antenna wire is covered with vinyl, remove the vinyl while twisting it as shown to the right.*
- *Make sure the antenna conductors do not touch any other terminals, connecting cords and power cord. This could cause poor reception.*



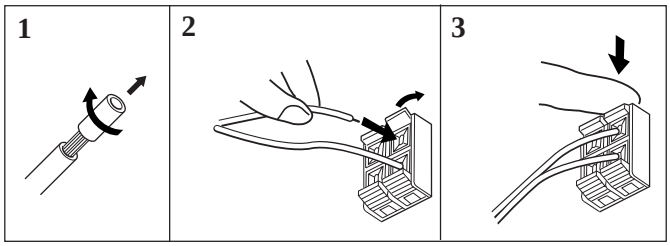
Connecting the Speakers

After connecting the front, center, rear speakers and/or a subwoofer, set the speaker setting information properly to obtain the best possible DSP effect. For details, see page 15.

CAUTION:

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

Connecting the front, center, and rear speakers



For each speaker, connect the (+) and (–) terminals on the rear panel to the (+) and (–) terminals marked on the speakers respectively.

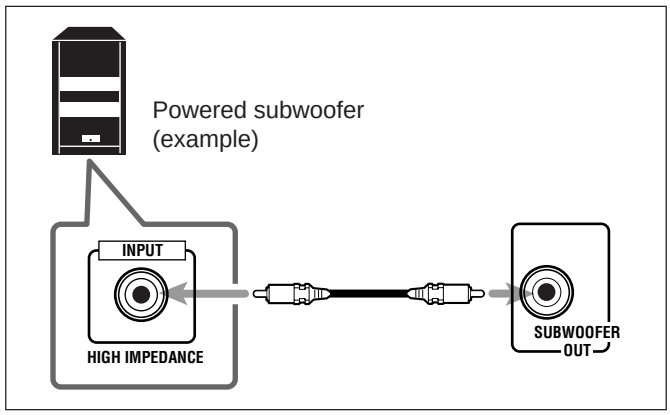
1 Cut, twist and remove the insulation at the end of each speaker cord (not supplied).

2 Open the terminal, then insert the speaker cord.

3 Close the terminal.

Connecting the subwoofer speaker

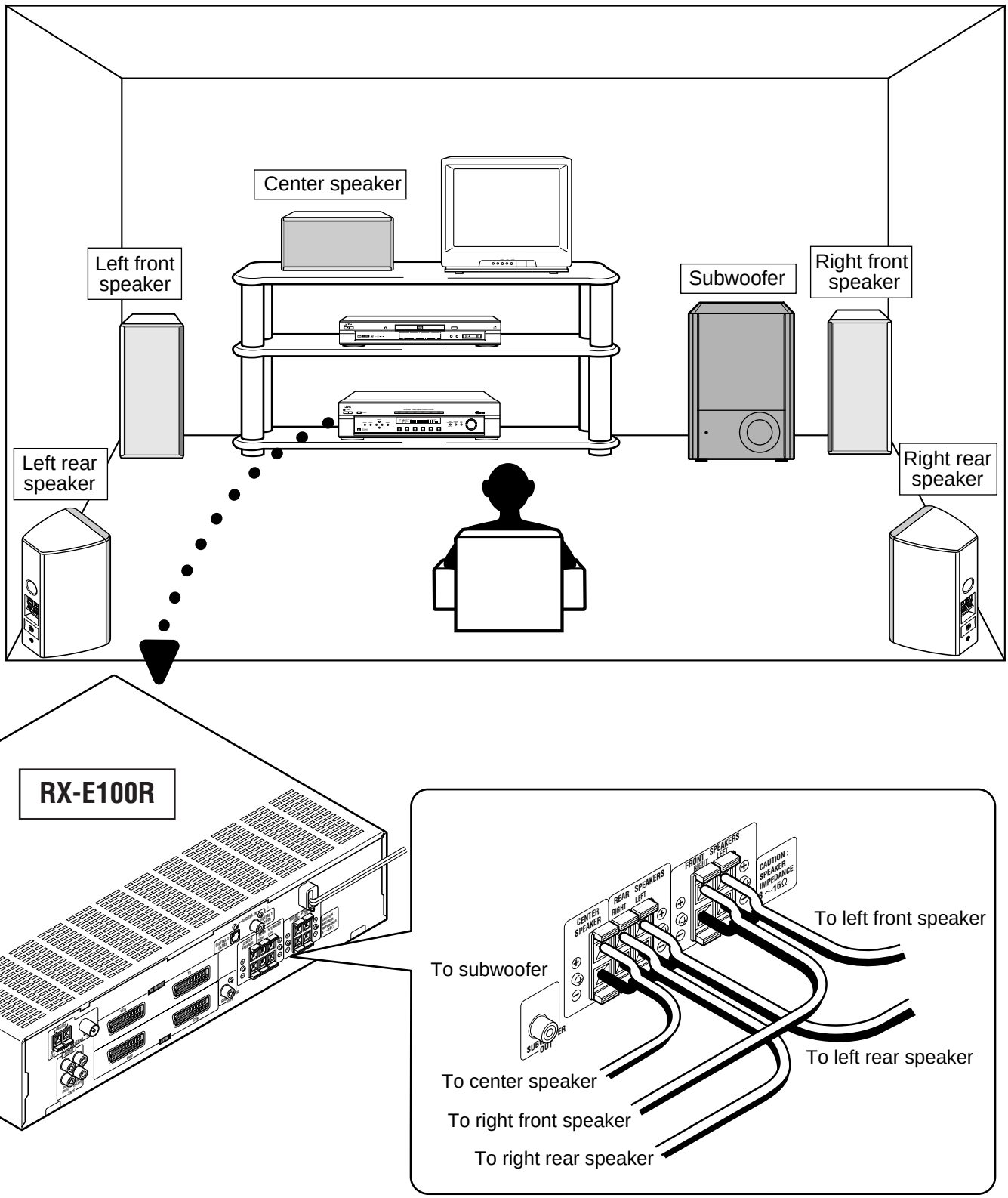
By connecting a subwoofer, you can enhance the bass or reproduce the original LFE signals recorded in the digital software.



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).
• Refer also to the manual supplied for your subwoofer.

Since bass sound is non-directional, you can place a subwoofer wherever you like. Normally place it in front of you.

Speaker Layout Diagram

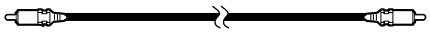


Connecting Audio/Video Components

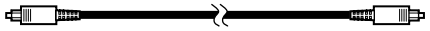
Turn the power off to all components before connections.

Connecting cords are not supplied with this unit. Use the cords supplied for the other components or purchase them at an audio or electric appliance store.

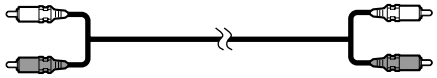
A Coaxial digital cord



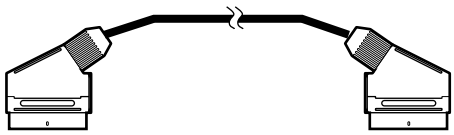
B Optical digital cord



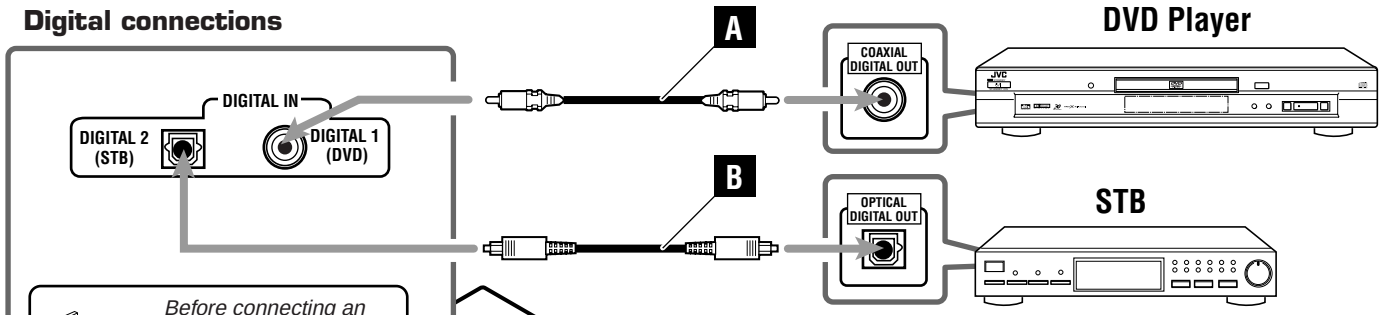
C Audio cord



D SCART cable



Digital connections

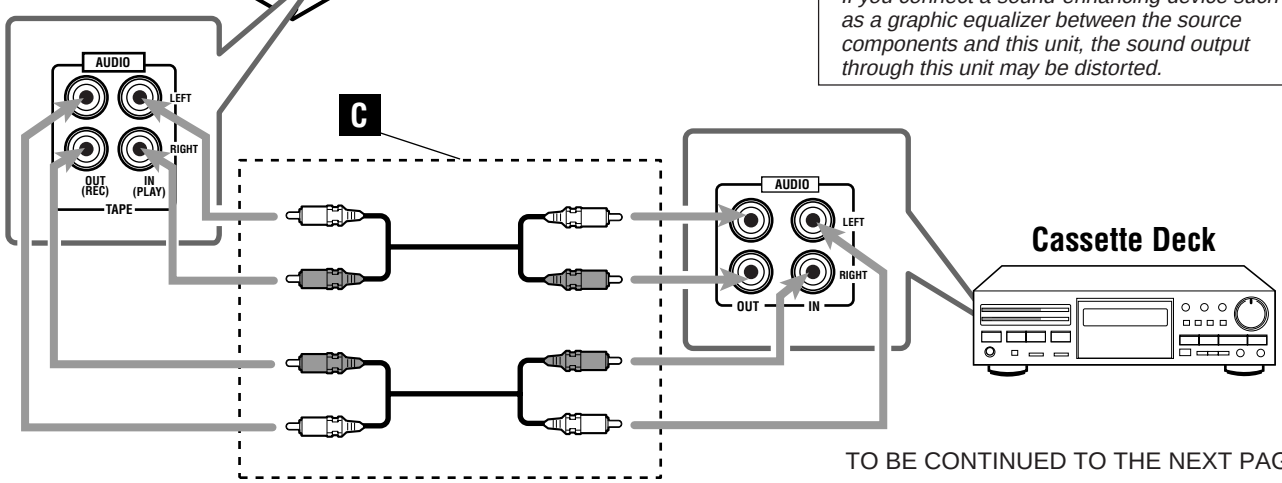


Illustrations of the input/output terminals are typical examples.
When you connect other components, refer also to their manuals since the terminal names actually printed on the rear vary among the components.

- *When shipped from the factory, the DIGITAL IN terminals have been set for use with the following components.*
  – DIGITAL 1 (coaxial): For DVD player
  – DIGITAL 2 (optical): For STB
  If you connect other components, change the digital input (DIGITAL IN) terminal setting correctly. See "Setting the Digital Input Terminals" on page 13.
- *Select the digital input mode correctly. See "Selecting the Analogue or Digital Input Mode" on page 13.*

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

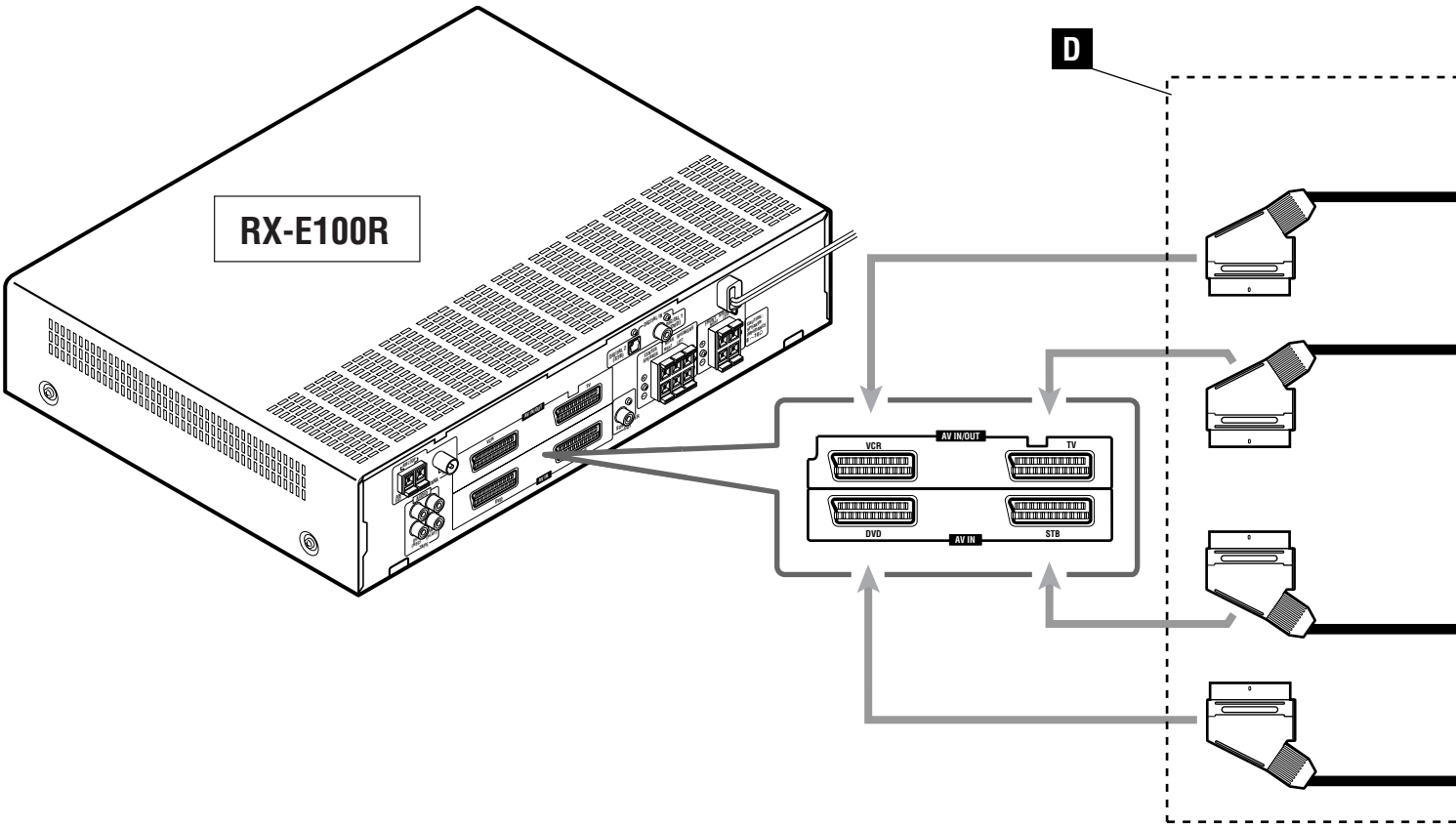
Analogue connections



TO BE CONTINUED TO THE NEXT PAGE

Turn the power off to all components before connections.

Illustrations of the input/output terminals below are typical examples.
When you connect other components, refer also to their manuals since the terminal names actually printed on the rear vary among the components.



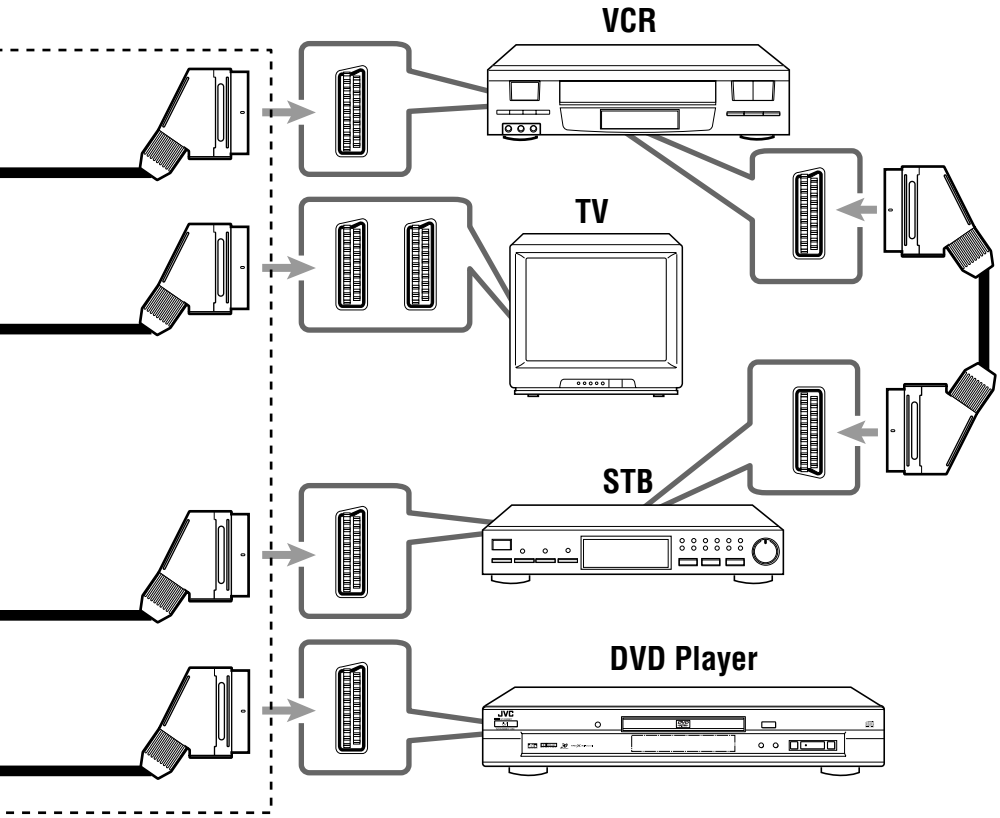
SCART Terminal Specifications

			TV	VCR	STB	DVD
IN	AUDIO	L/R	○	○	○	○
	VIDEO	Composite	○	○	○	○
		S-VIDEO	–	○	○	○
		RGB	–	○	○	○
OUT	AUDIO	L/R	○*1	○*1		
	VIDEO	Composite	○*1*2	○*1*2		
		S-VIDEO	○*2	–		
		RGB	○*2	–		
T-V LINK			○*3	○*3		

*1 The signals input from a SCART terminal cannot be output through the same SCART terminal.

*2 The video format of the output video signals are consistent with that of the input video signals. For example, if S-VIDEO signals are input to this unit, no signals other than S-VIDEO signals can be output from this unit. Refer to the manuals supplied with the video components to check the setting of the input/output video signals.

*3 The signals for T-V LINK function are always going through the unit.



For digital sounds

- *To enjoy the DVD software encoded with Dolby Digital or DTS Digital Surround, connect the DVD player using one of the DIGITAL IN terminals (see page 7).*
- *To enjoy the digital sounds, use both the SCART cable connection and the digital connection (see page 7).*
- *To enjoy the digital broadcast sounds, connect the STB and/or TV to the DIGITAL IN terminals (see page 7).*

For T-V LINK

- *You can also use T-V LINK function if you connect the T-V LINK compatible TV and VCR to this unit with a fully wired SCART cables. For details on T-V LINK, see the manuals supplied with the TV and the VCR.*
- *Connect SCART cable to EXT-2 terminal on your TV for T-V LINK function.*

For recording pictures from STB

When you connect a STB and a VCR directly with a SCART cable, you can enjoy recording the pictures from the STB on VCR tapes without menu screens of STB. For details, see the manuals supplied with the STB.

For an analogue decoder

To watch or record a scrambled program on your VCR, connect the analogue decoder to your VCR and select the scrambled channel on your VCR.
If there is not an appropriate terminal for the decoder on your VCR, connect the decoder to the TV.
Refer also to the manuals supplied with these equipment.

For TV and video format

When the TV is equipped with the plural SCART terminals, see the manual supplied with the TV to check the available video signals for each terminal, then connect SCART cable correctly. For details, see the manuals supplied with the TV.

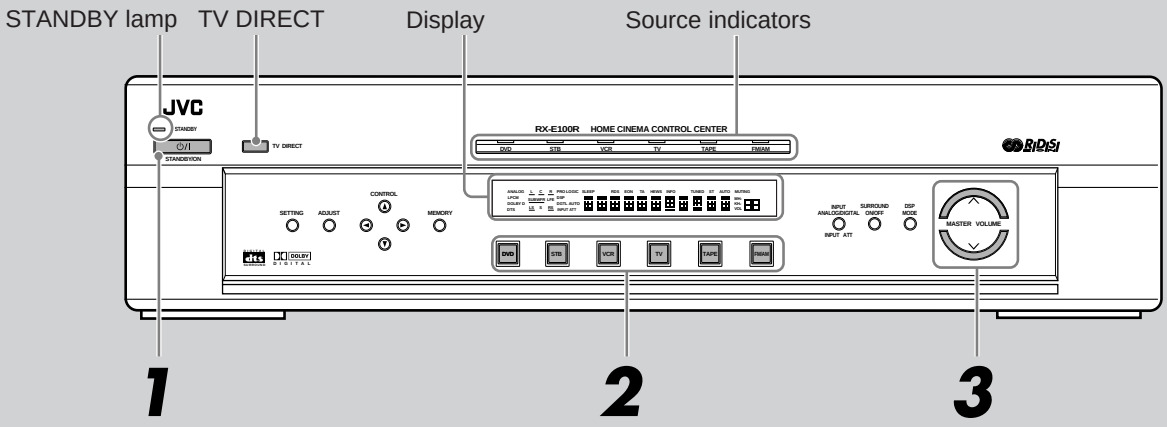
This unit cannot change the video signals (S-video or Composite). When the video signal of one video component is different from that of the other (for example, one is S-video, the other is Composite), you may not see the pictures appropriately. In this case, unify the video signals of all the video components into S-video or Composite, or you need to switch the video signal of TV each time you change the source.

Connecting the Power Cord

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

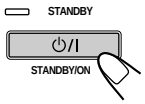
Plug the power cord into an AC outlet.

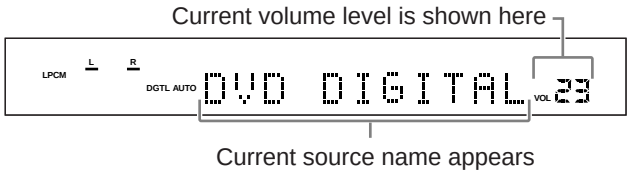
This manual mainly explains operations using the buttons and controls on the front panel. You can also use the buttons on the remote control if they have the similar names (or marks) as those on the front panel.
If operations using the remote control are different from those using the front panel, they are then explained.
• You can also see “Mastering Remote Operations” on page 40.



1 Turn On the Power

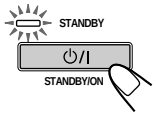
Press ⏻/I (or AUDIO I button on the remote control).
The STANDBY lamp goes off. The current source indicator lights green. The name of the current source (or station frequency) appears on the display.





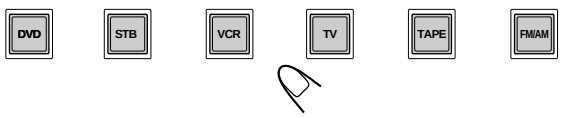
To turn off the power (into standby)

Press ⏻/I (or AUDIO ⏻) 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.



2 Select the Source to Play

Press one of the source selecting buttons.



DVD : Select the DVD player.
STB : Select STB.
VCR : Select the VCR.
TV : Select the TV tuner.
TAPE : Select the cassette recorder.
FM/AM : Select an FM or AM broadcast.

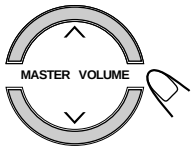
The selected source indicator lights green.

Note:

When you have connected some digital source components using the digital terminals (see page 7), see “Basic Settings” on pages 13, 14, and 15 to finish the digital input terminal setting and digital input mode setting correctly before use.

3 Adjust the Volume

To increase the volume, press and hold MASTER VOLUME ∧ (or VOLUME + on the remote control).
To decrease the volume, press and hold MASTER VOLUME ∨ (or VOLUME – on the remote control).



CAUTION:

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.

Notes:

- *The volume level can be adjusted within the range of “0” (minimum) to “70” (maximum).*
- *Each time you press the button, the volume level changes by 2 steps from “0” (minimum) to “14” and by 1 step from “14” to “70” (maximum).*

Activating TV Direct

TV Direct is enable you to use this unit as an AV selector while the unit is not turned on.
When TV Direct is activated, the pictures and sounds go from the video components such as DVD player to the TV through this unit. In this case, you can use the video components and the TV as if you connect them directly.

- This function takes effect only when the video components and TV are connected to this unit with SCART cables.
- This function takes effect to the following sources — DVD, STB, and VCR.
- This unit can be automatically turned on or off, and/or select the source automatically when you set the TV Direct mode to "AUTO 1" or "AUTO 2." For details, see "Setting the TV Direct mode" on page 19.

To activate (or deactivate) TV Direct, follow the procedure below.

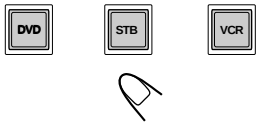
1 Press TV DIRECT.

All the indications disappear, then the source indicator currently selected lights red.

2 Turning on the video component and TV.

3 Press one of the source selecting buttons — DVD, STB, or VCR.

The indicator corresponding to the selected source lights red.



To cancel TV Direct and turn off the unit, press ⏻/I (or AUDIO ⏻ on the remote control).
The unit is turned off and the STANDBY lamp lights up.

To cancel TV Direct and turn on the unit, press TV DIRECT on the unit (or AUDIO I on the remote control).
The unit is turned on and the source indicator currently selected lights green.

Notes:

- *When TV Direct is activated, you cannot enjoy all the sound effects this unit produces, and use the speakers connected to this unit.*
- *You can use T-V LINK function between TV and VCR while the TV Direct is activated.*

Basic adjustment auto memory

This unit memorizes sound settings for each source ....

- when you turn on the power,
- when you change the source, and
- when you change the analogue/digital input mode (see page 14).

When you change the source, the memorized settings for the newly selected source are automatically recalled.
The following can be stored for each source:

- Analogue/digital input mode (see page 14)
- Input attenuator mode (see page 20)
- Balance (see page 20)
- Bass boost (see page 21)
- Tone adjustment (see page 21)
- Subwoofer output level (see page 22)
- Surround mode settings (see pages 33, 37)
  Theatre Surround settings (see pages 35, 38)
  DAP mode settings (see pages 36, 39)

Note:

If the source is FM or AM, you can assign a different setting for each band.

For recording

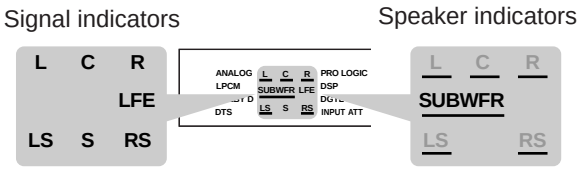
You can record sounds of any source playing through the unit to the VCR or the cassette deck.

While recording, you can listen to the selected sound source at whatever sound level you like without affecting the sound levels of the recording.

Note:

Sound adjustments (see page 20) and DSP modes (see page 32) cannot affect the recording.

Signal and speaker indicators on the display

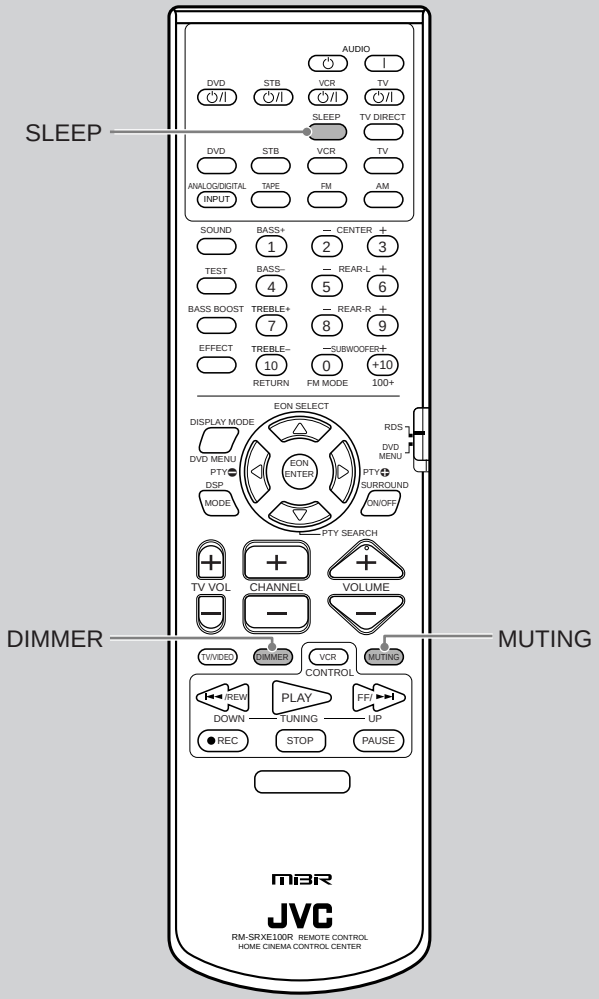


The following signal indicators light up —:

L: • **When digital input is selected:** Lights up when the left channel signal comes in.
• **When analog input is selected:** Always lights up.
R: • **When digital input is selected:** Lights up when the right channel signal comes in.
• **When analog input is selected:** Always lights up.
C : Lights up when the center channel signal comes in.
LS : Lights up when the left rear channel signal comes in.
RS : Lights up when the right rear channel signal comes in.
S : Lights up when the monaural rear channel signal comes in.
LFE: Lights up when the LFE channel signal comes in.

The speaker indicators light up as follows:

- The subwoofer speaker indicator (SUBWFR) lights up when "SUBWFR" is set to "YES" (see page 15).
- The other speaker indicators light up only when the corresponding speaker is activated AND when the corresponding speaker is required for the DSP mode currently selected.

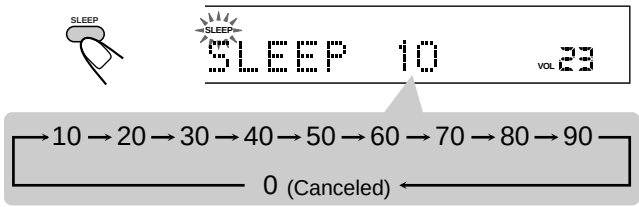


Turning Off the Power with the Timer

Remote ONLY

You can fall asleep while listening to music — Sleep Timer.

Press SLEEP **on the remote control** repeatedly.
The SLEEP indicator lights up on the display, and the shut-off time changes in 10 minute intervals.



When the shut-off time comes
The unit turns off automatically.

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

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

Changing the Display Brightness

Remote ONLY

You can dim the display.

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

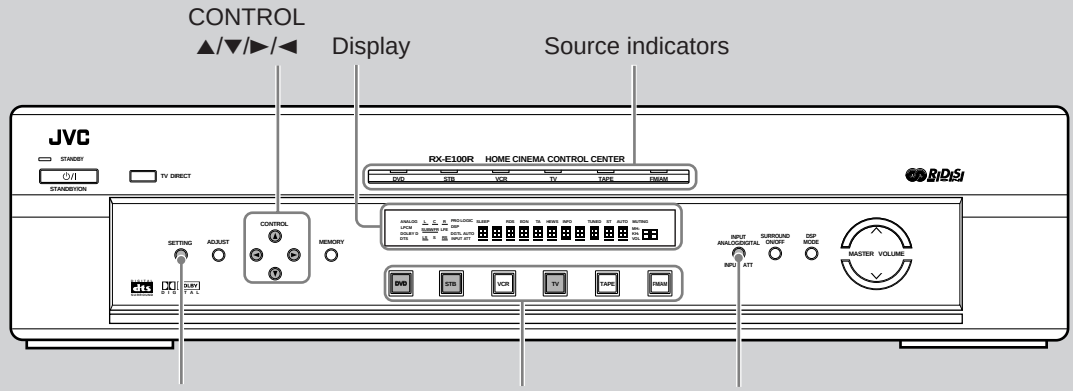
Turning Off the Sounds Temporarily

Remote ONLY

Press MUTING **on the remote control** to mute the sound through all speakers connected.

“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.
• Pressing MASTER VOLUME ∧/∨ (or VOLUME +/–) also restores the sound.



Setting the Digital Input Terminals

Remote NOT

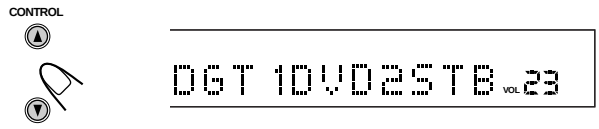
When you use the digital input terminals, register what components are connected to which terminals (DIGITAL IN 1/2) so that the correct source name will appear when you select the digital source.

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.

1 Press SETTING.

The CONTROL buttons now work for basic settings.

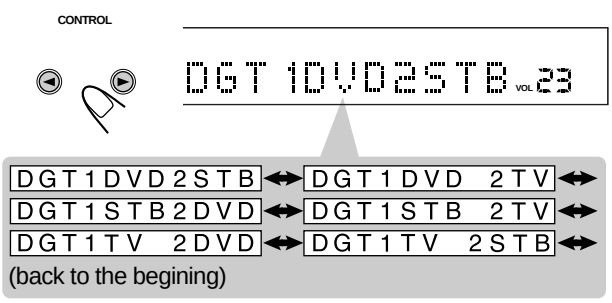
2 Press CONTROL ▼ (or ▲) repeatedly until "DGT (Digital)" (with the current setting)* appears on the display.



* "1DVD2STB" is the initial setting. If you have already changed setting, another combination will be shown.

3 Press CONTROL ► (or ◄) to select the appropriate digital terminal setting.

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



Note:

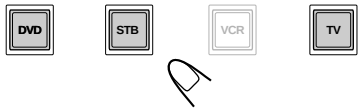
When shipped from the factory, the DIGITAL IN terminals have been set for use with the following components.

- *DIGITAL 1 (coaxial): For DVD player*
- *DIGITAL 2 (optical): For STB*

Selecting the Analogue or Digital Input Mode

When you have connected digital source components using both the analogue connection and the digital connection methods (see page 7), you need to select the input mode correctly.

1 Press one of the source selecting buttons (DVD, STB, or TV)* for which you want to change the input mode.

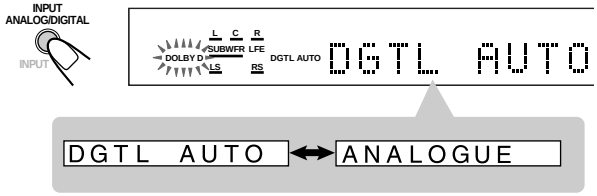


Note:

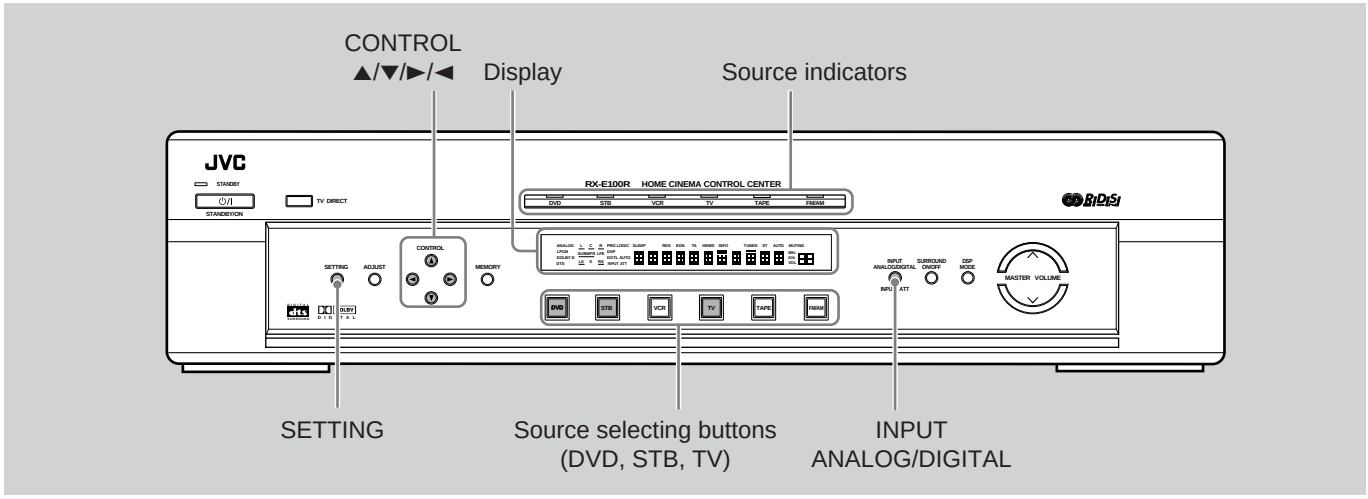
** Among the sources listed above, you can select the digital input only for the sources which you have selected the digital input terminals for. (See "Setting the Digital Input Terminals" .)*

2 Press INPUT ANALOG/DIGITAL (or ANALOG/DIGITAL INPUT on the remote control) to select the analogue or digital input mode.

- Each time you press the button, the input mode alternates between the analogue input (ANALOGUE) and the digital input (DGTL AUTO).



TO BE CONTINUED TO THE NEXT PAGE

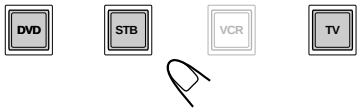


DGTL AUTO	: Select this for the digital input mode. The unit automatically detects the incoming signal format. (The DGTL AUTO indicator lights up on the display, then the digital signal indicator for the detected signals lights up.)
ANALOGUE	: Select this for the analogue input mode. (Initial setting when shipped from the factory.)

If the following symptoms occur while playing Dolby Digital or DTS Digital Surround software with "DGTL AUTO" selected, follow the procedure below.

- Sound does not come out at the beginning of playback.
- Noise comes out while searching or skipping chapters or tracks.

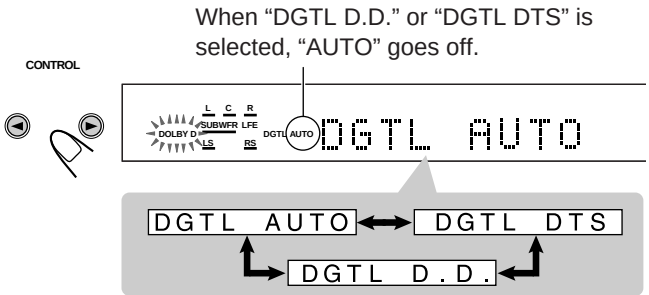
1 Press one of the source selecting buttons (DVD, STB, or TV) for which you want to change the input mode.



2 Press INPUT ANALOG/DIGITAL (or ANALOG/DIGITAL INPUT) to select the digital input mode (DGTL AUTO).

3 Press CONTROL ► (or ◄) to select "DGTL D.D." or "DGTL DTS" while "DGTL AUTO" still remains on the display.

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



- To play back software encoded with Dolby Digital, select "DGTL D.D."
- To play back software encoded with DTS Digital Surround, select "DGTL DTS."

Note:

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

The following are the analogue/digital signal indicators on the display to indicate what type of the signal comes into the unit.

ANALOGUE	: Lights when the analogue input is selected.
LPCM	: Lights when Linear PCM signals come in.
DOLBY D	: • Lights when Dolby Digital signals come in. • Flashes when "DGTL D.D." is selected for software not encoded with Dolby Digital.
DTS	: • Lights when DTS Digital Surround signals come in. • Flashes when "DGTL DTS" is selected for software not encoded with DTS Digital Surround.

Note:

When "DGTL AUTO" cannot recognize the incoming signals, no digital signal indicators light up on the display.

Setting the Subwoofer Information

Remote NOT

When you have connected a subwoofer, follow the procedure below. If you do not use a subwoofer, you can skip this 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.

1 Press SETTING.

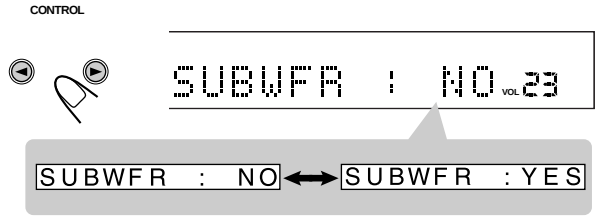
The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until "SUBWFR (Subwoofer)" (with the current setting)* appears on the display.

* "NO" is the initial setting. If you have already changed the setting, "YES" will be shown.

3 Press CONTROL ► (or ◄) to select "YES."

- Each time you press the button, the subwoofer setting alternates between "YES" and "NO."



YES	: Select this when a subwoofer is used. The subwoofer speaker indicator (SUBWFR) lights up on the display (see page 11). You can adjust the subwoofer output level (see page 22).
NO	: Select this when you have not connected or have disconnected a subwoofer.

Setting the Speakers for DSP Modes

Remote NOT

To obtain the best possible surround effect from the DSP (Digital Signal Processor) modes (see page 32), register the following information after all connections are completed.

- Speaker Size — FR SP, CTR SP, REAR SP
- Delay Time — CTR DL, REAR DL
- Crossover Frequency — CROSS
- Dynamic Range Compression — D.R.C.
- Low Frequency Effect Attenuator — LFE

Speaker Size — FR SP, CTR SP, REAR SP

Register the sizes of all the connected speakers.

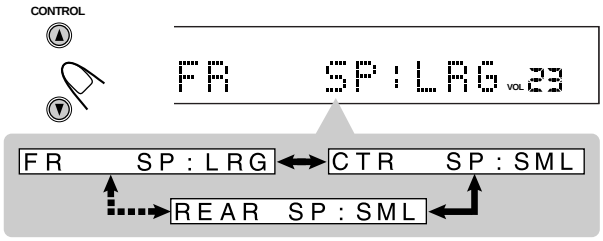
- When you change your speakers, register the information about the speakers again.

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.

1 Press SETTING.

The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until one of the following speakers (with the current setting)* appears.

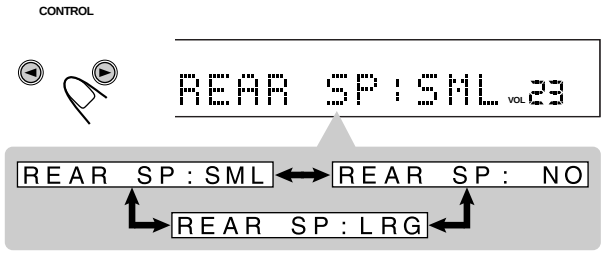


FR SP (Front Speaker)	: To register the front speaker size.
CTR SP (Center Speaker)	: To register the center speaker size.
REAR SP (Rear Speaker)	: To register the rear speaker size.

* "LRG (large)" is the initial setting for the front speakers, and "SML (small)" is for the center and rear speakers.
If you have already changed the setting, another size will be shown.

3 Press CONTROL ► (or ◄) to select the appropriate speaker size.

- Each time you press the button, the speaker size changes as follows:



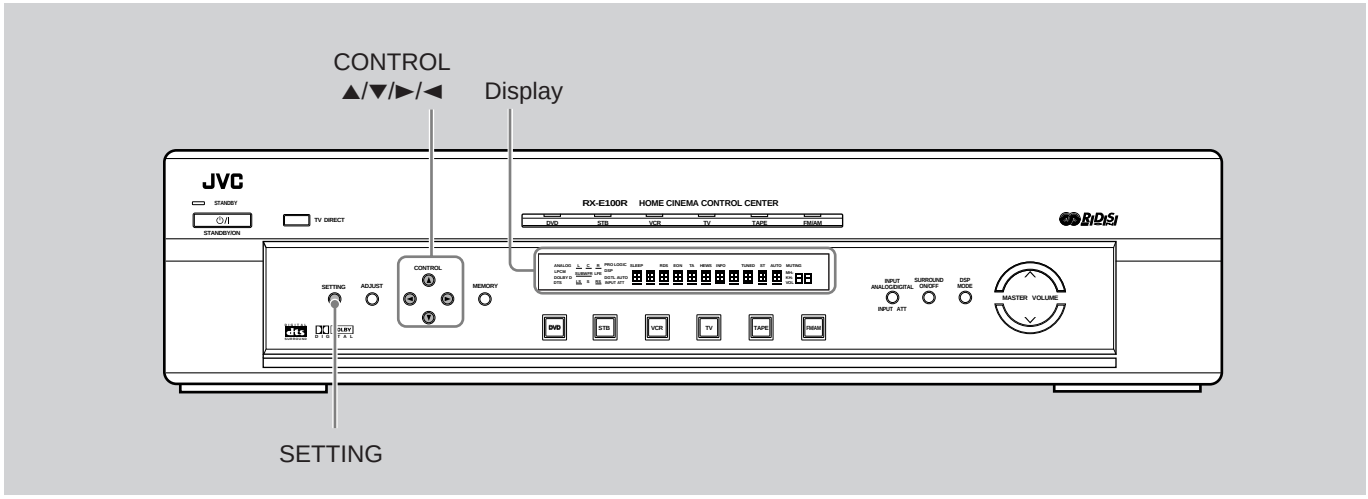
Ex.: When registering the rear speaker size

LRG (Large)	: Select this when the speaker size is relatively large. (See "Notes" below.)
SML (Small)	: Select this when the speaker size is relatively small. (See "Notes" below.)
NO	: Select this when you have not connected a speaker. (Not selectable for the front speakers.)

4 Repeat steps 2 and 3 to select the appropriate size for the other speakers.

Notes:

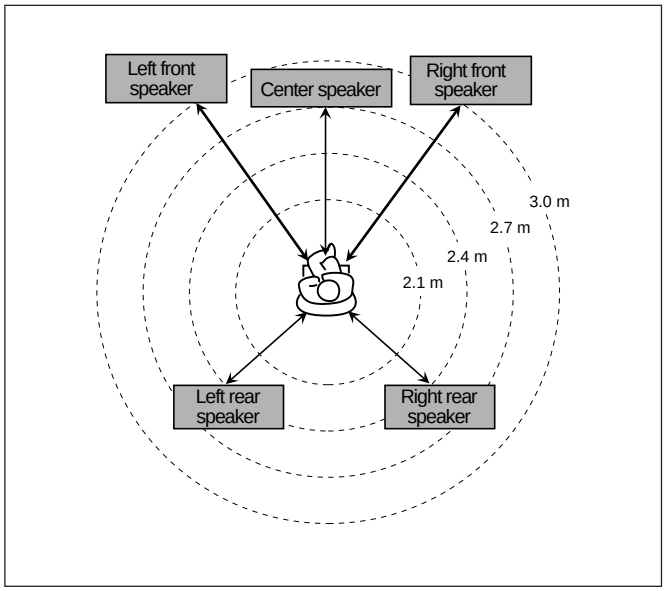
- *Use the following criteria as reference when adjusting:*
  - *– If the size of the cone speaker unit built in your speaker is greater than 4 3/4 inches (12 cm), select "LRG (large)," and if it is smaller than 4 3/4 inches (12 cm), select "SML (small)."*
- *If you have selected "NO" for the subwoofer, you can only select "LRG (large)" for the front speaker size.*
- *If you have selected "SML (small)" for the front speaker size, you cannot select "LRG (large)" for the center and rear speaker sizes.*



Delay Time — CTR DL, REAR DL

Adjust the delay time of the sounds from the center speaker and from the rear speakers, comparing to that of the sound from the front speakers. If the distance to the center speaker and/or the rear speakers from your listening point is almost the same as that to the front speakers, select 0 msec.

- 1 msec increase (or decrease) in delay time corresponds to 11 $^{13}/_{16}$ inch (30 cm) increase (or decrease) in distance.



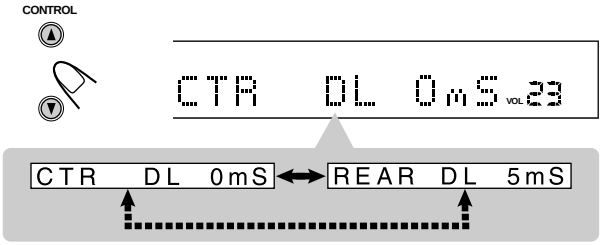
Ex.: In this case, set the center delay to “1 mS” and the rear delay to “2 mS.”

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.

1 Press SETTING.

The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until “CTR DL (Center Delay)” or “REAR DL (Rear Delay)” (with the current setting)* appears on the display.

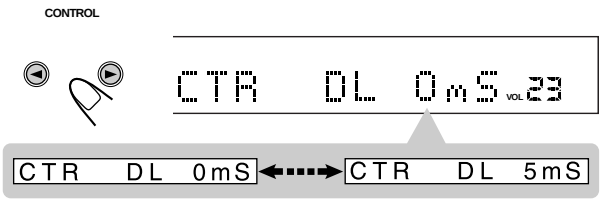


CTR DL (Center Delay)	: To adjust the center delay time (from 0 msec to 5 msec).
REAR DL (Rear Delay)	: To adjust the rear delay time (from 0 msec to 15 msec).

* “0 mS” is the initial setting for the center delay time and “5 mS” for the rear delay time. If you have already changed the setting, another setting will be shown.

3 Press CONTROL ► (or ◄) to select the delay time.

- Each time you press the button, the delay time changes by 1 msec (mS).



Ex.: When adjusting the center delay

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

Crossover Frequency — CROSS

Small speakers cannot reproduce the bass sounds efficiently. If you use a small speaker in any position, this unit automatically reallocates the bass sound elements assigned to the small speaker to the large speakers.
To use this function properly, set this crossover frequency level according to the size of the small speaker connected.

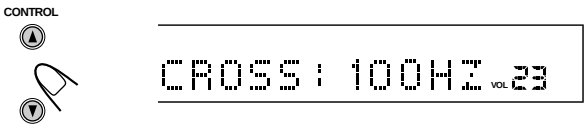
- If you have selected "LRG (large)" for all speakers, this function will not take effect.

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.

1 Press SETTING.

The CONTROL buttons now work for basic settings.

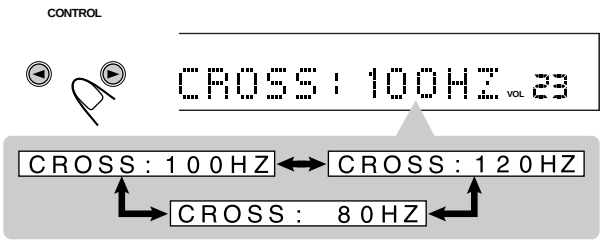
2 Press CONTROL ▼ (or ▲) repeatedly until "CROSS (Crossover)" (with the current setting)* appears on the display.



* "100HZ" is the initial setting. If you have already changed the setting, another frequency will be shown.

3 Press CONTROL ► (or ◄) to select the crossover frequency level.

- Each time you press the button, the crossover frequency level changes as follows:



- Use the following criteria as reference when adjusting:

80HZ	: Select this frequency when the cone speaker unit built in the speaker is about 4 3/4 inches (12 cm).
100HZ	: Select this frequency when the cone speaker unit built in the speaker is about 3 15/16 inches (10 cm).
120HZ	: Select this frequency when the cone speaker unit built in the speaker is about 3 3/16 inches (8 cm).

Dynamic Range Compression — D.R.C.

You can compress the dynamic range (difference between maximum sound and minimum sound) of the reproduced sound. This is useful when enjoying surround sound at night.

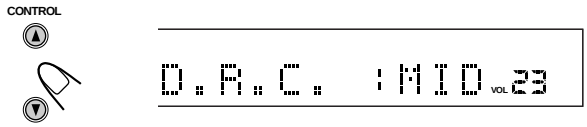
- This function takes effect only when playing back a source using Dolby Digital.

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.

1 Press SETTING.

The CONTROL buttons now work for basic settings.

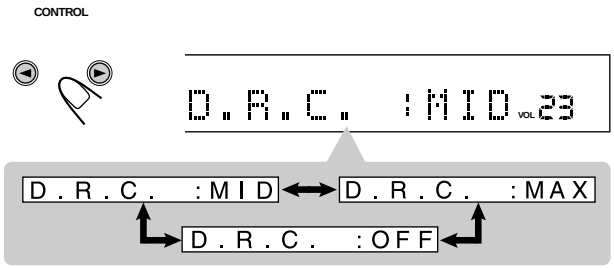
2 Press CONTROL▼ (or ▲) repeatedly until "D.R.C. (Dynamic Range Compression)" (with the current setting)* appears on the display.



* "MID" is the initial setting. If you have already changed the setting, another setting will be shown.

3 Press CONTROL ► (or ◄) to select the appropriate compression level.

- Each time you press the button, the compression level changes as follows:



OFF	: Select this when you want to enjoy surround with its full dynamic range. (No effect applied.)
MID	: Select this when you want to reduce the dynamic range a little.
MAX	: Select this when you want to apply the compression effect fully. (Useful at night.)

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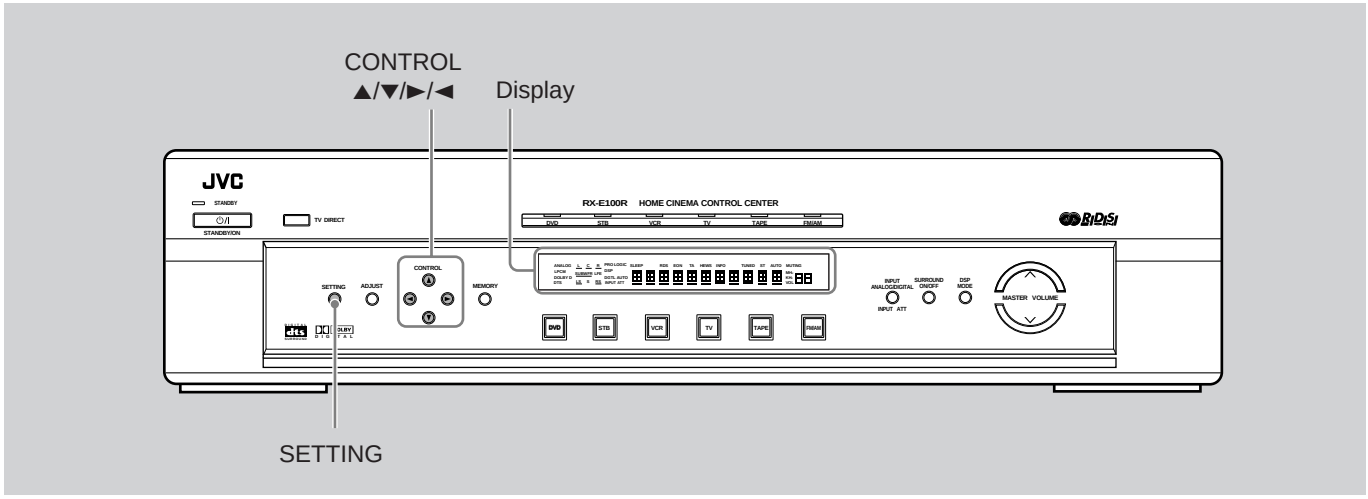


Low Frequency Effect Attenuator — LFE

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

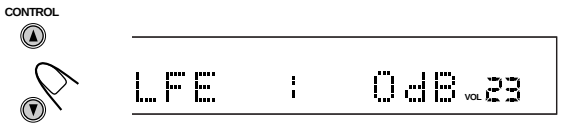
- This function takes effect only when the subwoofer (LFE) signals come in, (with "SUBWFR" set to "YES").

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.

1 Press SETTING.

The CONTROL buttons now work for basic settings.

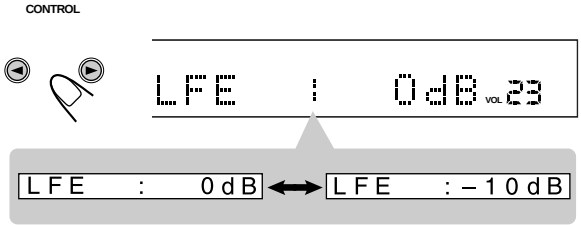
2 Press CONTROL ▼ (or ▲) repeatedly until "LFE (Low Frequency Effect)" (with the current setting)* appears on the display.



* "0" is the initial setting. If you have already changed the setting, "–10dB" will be shown.

3 Press CONTROL ► (or ◄) to select the LFE attenuator level.

- Each time you press the button, the LFE attenuator level changes as follows:



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

Setting Auto Surround

Remote NOT

Surround mode is automatically activated when a multichannel signal comes into this unit through the digital terminal.
You can enjoy Surround mode simply by selecting the source (with digital input selected for that source) — Auto Surround.

To activate Auto Surround, 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.

1 Press SETTING.

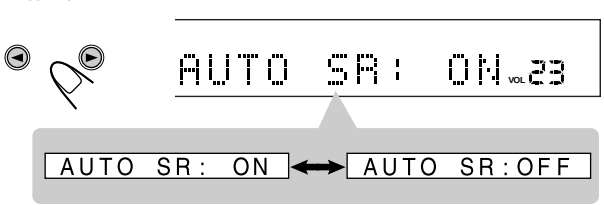
The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until "AUTO SR (Auto Surround)" (with the current setting)* appears on the display.

* "OFF" is the initial setting. If you have already changed the setting, "ON" will be shown.

3 Press CONTROL ► (or ◄) to select "ON" (or "OFF").

- Each time you press the button, Auto Surround turns "ON" or "OFF."



ON	: • If multichannel signals come in, an appropriate Surround mode will be turned on. • If Dolby Digital 2 channel or DTS 2 channel signals come in, "STEREO" will be selected. • If Linear PCM signals come in, nothing will change.
OFF	: Select this to deactivate Auto Surround.

Notes:

- *This function does not take effect in the following cases:*
  - *– While playing an analogue source.*
  - *– While selecting "DGTL D.D." or "DGTL DTS" as the fixed digital input mode (see pages 13 and 14).*
- *If Surround mode is automatically activated by Auto Surround, another DSP mode in use will be canceled temporarily. When multichannel digital signals stop coming in, the selected surround mode is canceled, and the previous DSP mode resumes.*
- *If you press SURROUND ON/OFF or DSP MODE with Auto Surround activated, Auto Surround will be canceled temporarily for the currently selected source.*
  Auto Surround setting will be restored in the following cases:
  - *– When you turn off and on the unit,*
  - *– When you change the source, and*
  - *– When you reset "AUTO SR" to "ON" again.*

To cancel Auto Surround

Repeat steps 1 and 2, then select "OFF" in step 3.

Setting the TV Direct mode

You can enjoy switching TV Direct automatically by turning on/off the video components connected to the unit with SCART cable — TV Direct auto mode.

- This function takes effect only when the video components and TV are connected to this unit with SCART cables.
- This function takes effect to the following sources — DVD, STB, and VCR.

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.

1 Press SETTING.

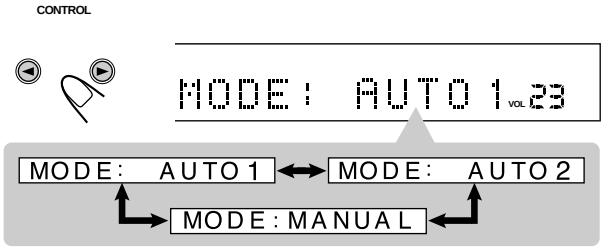
The CONTROL buttons now work for basic settings.

2 Press CONTROL ▼ (or ▲) repeatedly until "MODE" (with the current setting)* appears on the display.

* "MANUAL" is the initial setting. If you have already changed the setting, the other mode will be shown.

3 Press CONTROL ► (or ◄) to select "AUTO1" (or, "AUTO2" or "MANUAL").

- Each time you press the button, TV Direct mode turns change as follows:



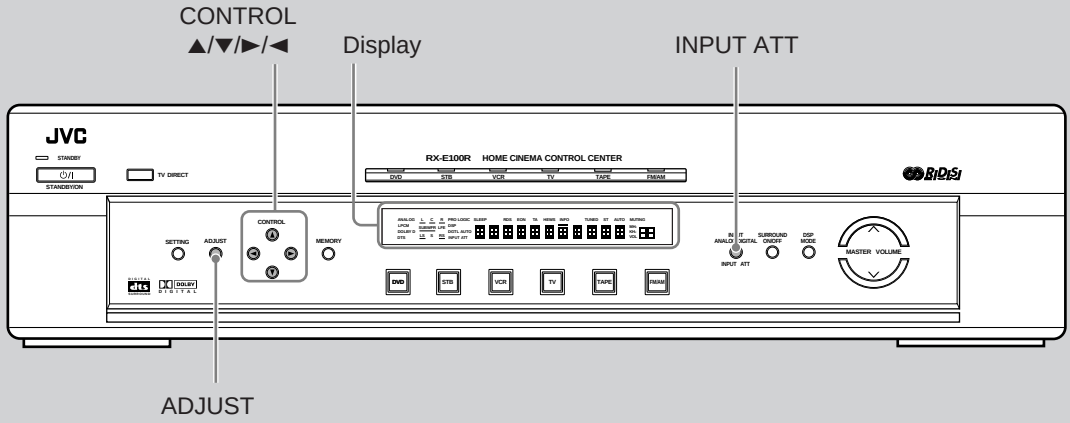
AUTO1	: When a video component is turned on while the unit is on, the unit selects the video component as the source automatically.
AUTO2	: **• When a video component is turned on** **– while the unit is off,** the unit changes the mode into TV Direct and selects the video component as the source automatically. **– while the unit is on or TV Direct is activated,** the unit selects the video component as the source automatically. **• When a video component is turned off** **– while TV Direct is activated or the unit is on with one of the video components selected,** the unit selects the previously selected video component as the source automatically. (If all the video components are turned off, the unit will be turned off automatically.)
MANUAL	: Select this to use TV Direct manually.

Note:

When a VCR is selected as the source, AUTO1 or AUTO2 does not work by turning on the VCR but by starting playback.

Sound Adjustments

You can also use the remote control for some sound adjustments.
- When using the remote control, see also “Mastering Remote Operations” on page 40.

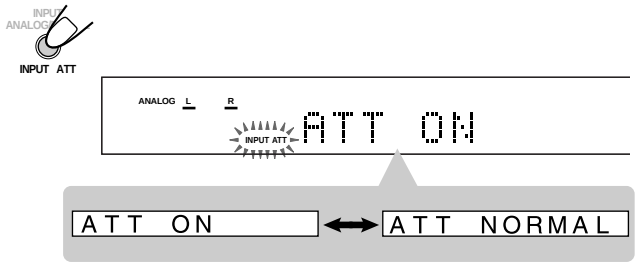


Attenuating the Input Signal

Remote NOT

When the input level of the **analogue 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 have to make this adjustment for each **analogue source**.

Press and hold INPUT ATT (INPUT ANALOG/DIGITAL) so that the INPUT ATT indicator lights up on the display.
- Each time you press and hold the button, the Input Attenuator turns on (“ATT ON”) or off (“ATT NORMAL”).



Adjusting the Front Speaker Output Balance

Remote NOT

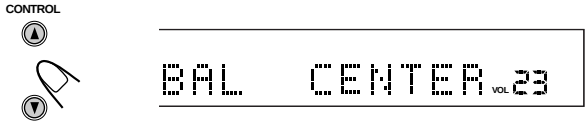
If the sounds you hear from the front right and left speakers are unequal, you can adjust the speaker output balance.
- You have to make this adjustment for each source.

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.

1 Press ADJUST.

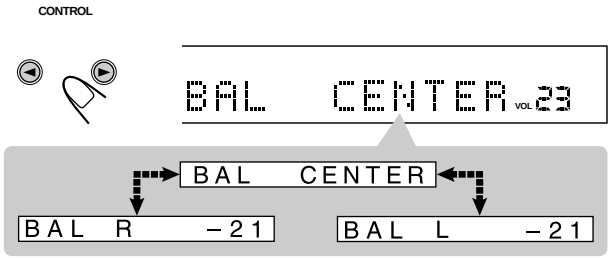
The CONTROL buttons now work for sound adjustments.

2 Press CONTROL ▼ (or ▲) repeatedly until “BAL (Balance)” (with the current setting)* appears on the display.



* “CENTER” is the initial setting. If you have already changed the setting, another setting will be shown.

3 Press CONTROL ► or ◄ to adjust the front speaker balance.



- Pressing CONTROL ► decreases the left channel output (from CENTER to L–21).
- Pressing CONTROL ◄ decreases the right channel output (from CENTER to R–21).

Reinforcing the Bass

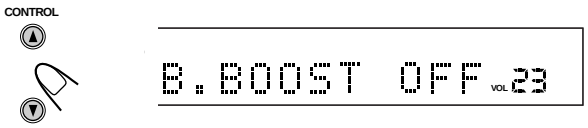
You can boost the bass level — Bass Boost.
• You have to make this adjustment for each source.

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.

1 Press ADJUST.

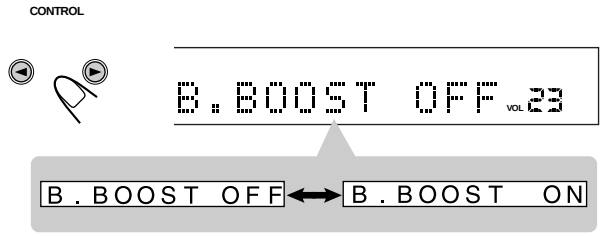
The CONTROL buttons now work for sound adjustments.

2 Press CONTROL ▼ (or ▲) repeatedly until "B. BOOST (Bass Boost)" (with the current setting)* appears on the display.



* "OFF" is the initial setting. If you have already changed the setting, "ON" will be shown.

3 Press CONTROL ► (or ◄) to turn "ON" or "OFF" Bass Boost.



ON	: Select this to boost the bass level. (Bass Boost)
OFF	: Select this to deactivate Bass Boost.

Note:

This function affects the sound outputting only through the front speakers.

When using the remote control

Press BASS BOOST.
• Each time you press the button, Bass Boost turns on and off alternately.

Adjusting the Tone

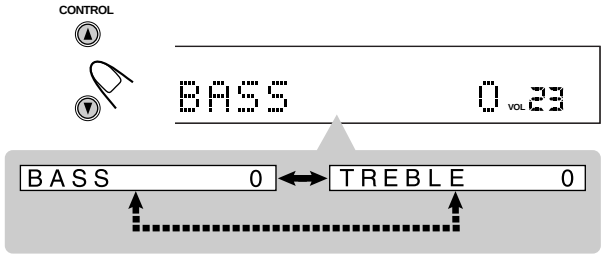
You can adjust the bass and treble sounds as you like.
• You have to make these adjustments for each source.

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.

1 Press ADJUST.

The CONTROL buttons now work for sound adjustments.

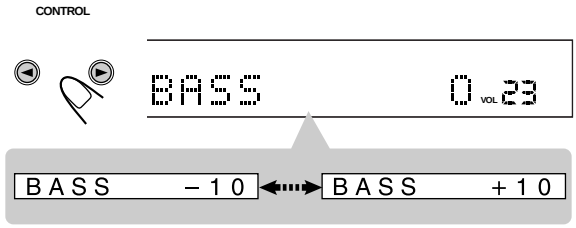
2 Press CONTROL ▼ (or ▲) repeatedly until "BASS" or "TREBLE" (with the current setting)* appears.



BASS	: To adjust the bass.
TREBLE	: To adjust the treble.

* "0" is the initial setting. If you have already changed the setting, another number (level) will be shown.

3 Press CONTROL ► or ◄ to adjust the sound level.



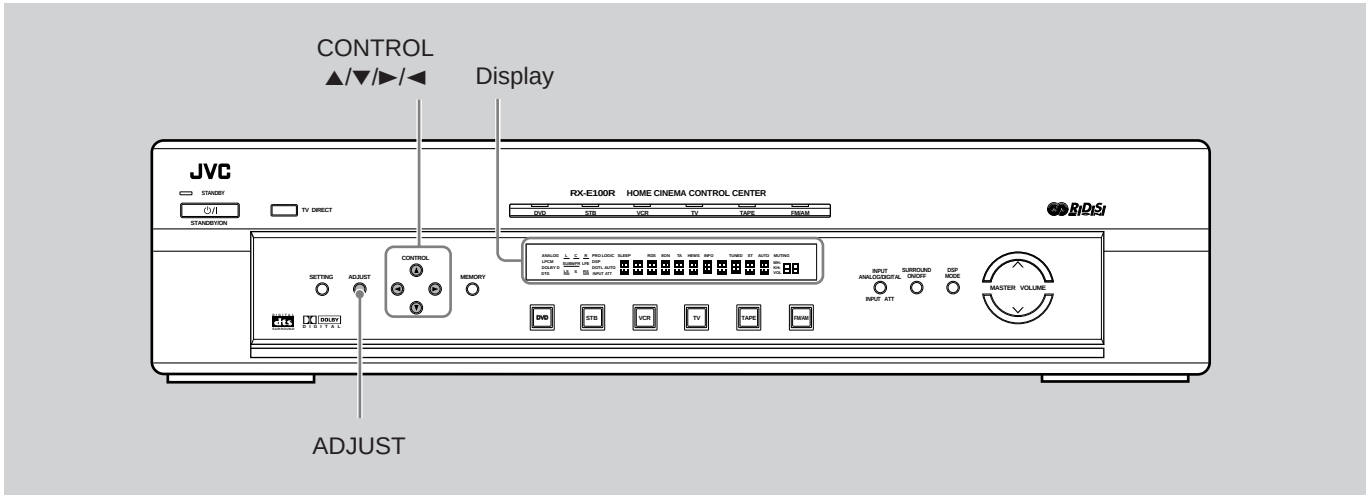
Ex.: When adjusting the bass level

• Pressing CONTROL ► increases the sound level by +2 steps (from –10 to +10).
• Pressing CONTROL ◄ decreases the sound level by –2 steps (from +10 to –10).

4 Repeat steps 2 and 3 to adjust the other sound level.

When using the remote control

1 Press SOUND.
10 keys now work for sound adjustments.
2 Press BASS +/– or TREBLE +/– to adjust the sound output level (from –10 to +10).



Adjusting the Subwoofer Output Level

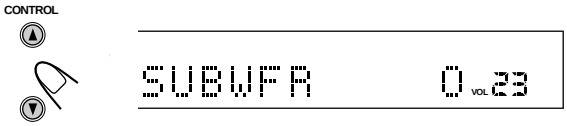
You can adjust the subwoofer output level if you have connected a subwoofer and set the subwoofer information correctly – "YES."
• You have to make this adjustment for each source.

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.

1 Press ADJUST.

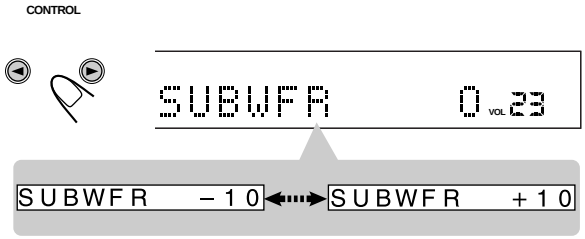
The CONTROL buttons now work for sound adjustments.

2 Press CONTROL ▼ (or ▲) repeatedly until "SUBWFR (subwoofer)" (with the current setting)* appears.



* "0" is the initial setting. If you have already changed the setting, another number (level) will be shown.

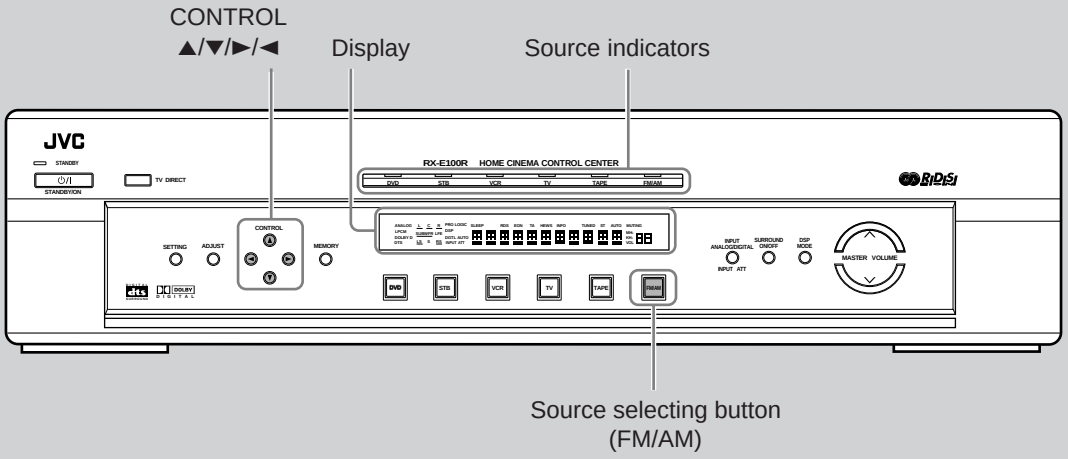
3 Press CONTROL ► or ◄ to adjust the sound output level.



• Pressing CONTROL ► increases the sound output level (from –10 to +10).
• Pressing CONTROL ◄ decreases the sound output level (from +10 to –10).

When using the remote control

1 Press SOUND.
10 keys now work for sound adjustments.
2 Press SUBWOOFER +/– to adjust the sound output level (from –10 to +10).

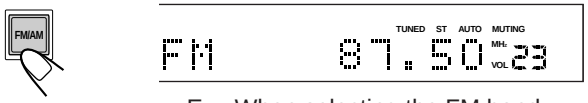


Tuning in Stations Manually

1 Press FM/AM to select the band.

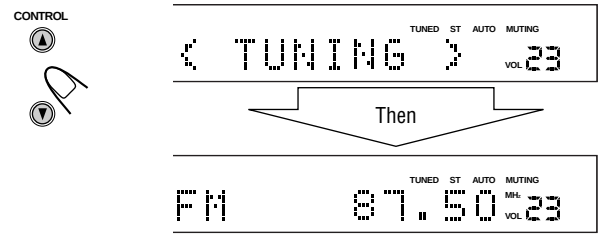
The last received station of the selected band is tuned in, and the CONTROL buttons now work for tuner operations.

- Each time you press the button, the band alternates between FM and AM (MW/LW).

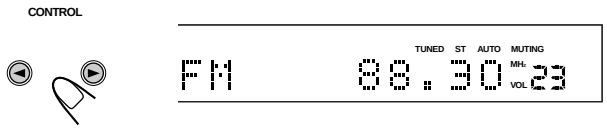


Ex.: When selecting the FM band

2 Press CONTROL ▼ (or ▲) repeatedly until "< TUNING >" appears on the display.



3 Press repeatedly or hold CONTROL ► or ◄ until you find the frequency you want.



- Pressing (or holding) CONTROL ► increases the frequencies.
- Pressing (or holding) CONTROL ◄ decreases the frequencies.

When using the remote control

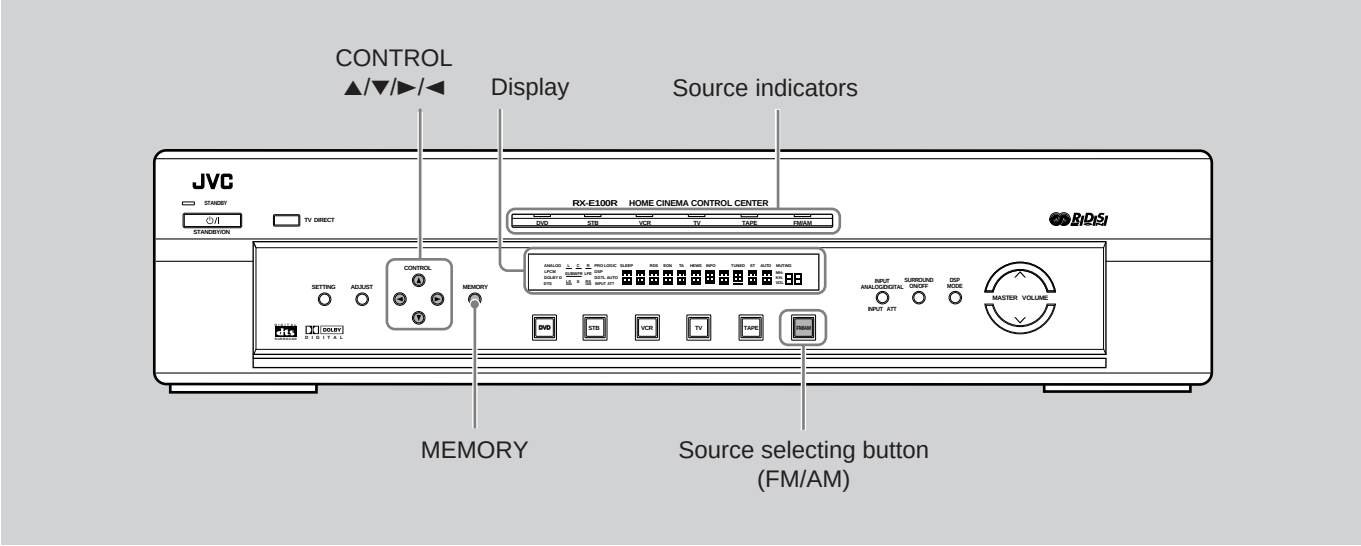
1 Press FM or AM.

2 Press repeatedly or hold TUNING UP/DOWN until you find the frequency you want.

- Pressing (or holding) TUNING UP increases the frequencies.
- Pressing (or holding) TUNING DOWN decreases the frequencies.

Notes:

- *When you hold and release CONTROL ► (TUNING UP on the remote control) or CONTROL ◄ (TUNING DOWN on the remote control), the frequency keeps changing until a station is tuned in.*
- *When a station of sufficient signal strength is tuned in, the TUNED indicator lights up on the display.*
- *When an FM stereo program is received, the ST (Stereo) indicator also lights up.*



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 (MW/LW) stations.

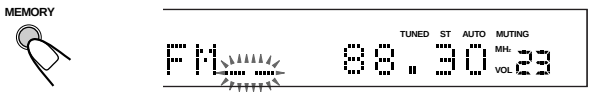
To store the preset stations

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.

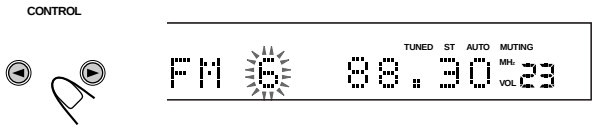
1 Tune in the station you want to preset (see "Tuning in Stations Manually" on page 23).

- 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 25.

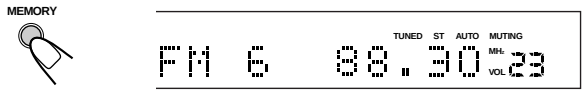
2 Press MEMORY.
The channel number position starts flashing on the display for about 10 seconds.



3 Press CONTROL ► (or ◄) to select a channel number while the channel number position is flashing.



4 Press MEMORY again while the selected channel number is flashing on the display.
The selected channel number stops flashing.
The station is assigned to the selected channel number.



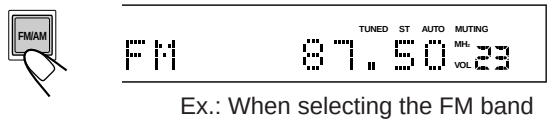
5 Repeat steps 1 to 4 until you store all the stations you want.

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

To tune in a preset station

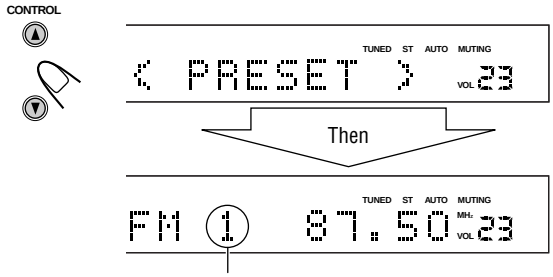
1 Press FM/AM to select the band.

The last received station of the selected band is tuned in, and the CONTROL buttons now work for tuner operations.



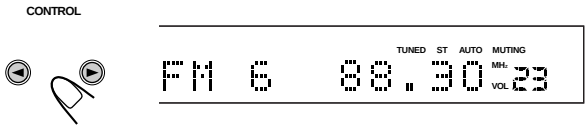
Ex.: When selecting the FM band

2 Press CONTROL ▼ (or ▲) repeatedly until "< PRESET >" appears on the display.



Preset channel number appears.

3 Press CONTROL ► or ◄ to select a preset channel number you want.



- Pressing (or holding) CONTROL ► increases the preset channel numbers.
- Pressing (or holding) CONTROL ◄ decreases the preset channel numbers.

When using the remote control

1 Press FM or AM.
The last received station of the selected band is tuned in, and the 10 keys now work for tuner operations.

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 30, press +10, +10, then 10.

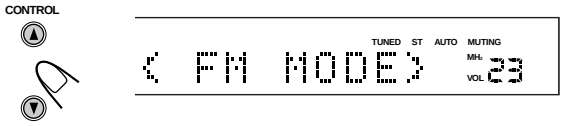
Selecting the FM Reception Mode

Remote NOT

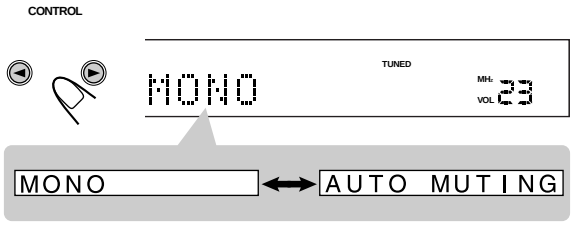
When an FM stereo broadcast is hard to receive or noisy, you can change the FM reception mode while receiving an FM broadcast.
- You can store the FM reception mode for each preset station.

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.

1 While listening to an FM station, press CONTROL ▼ (or ▲) repeatedly until "< FM MODE >" appears on the display.



2 Press CONTROL ► (or ◄) to select "MONO."
- Each time you press the button, the FM reception mode alternates between "AUTO MUTING" and "MONO."



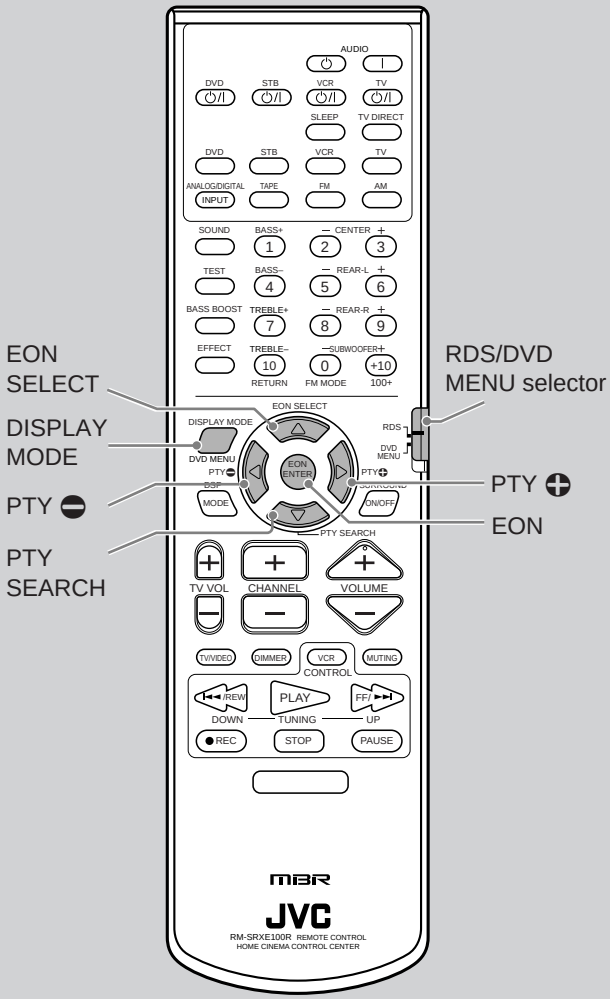
* "AUTO MUTING" is the initial setting.

MONO	: Select this to improve the reception (but stereo effect will be lost). In this mode, you will hear noise while tuning into the stations. The AUTO MUTING indicator goes off from the display. (The ST indicator also goes off.)
AUTO MUTING	: Normally select this. 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 up on the display.

To restore the stereo effect

Repeat step 1, then select "AUTO MUTING" in step 2.

You need to set RDS/DVD MENU selector to "RDS," when you want to operate RDS.



Using the RDS (Radio Data System) to Receive FM Stations

Remote ONLY

RDS allows FM stations to send an additional signal along with their regular program signals. For example, the stations send their station names, as well as information about what type of program they broadcast, such as sports or music, etc.

When tuned to an FM station which provides the RDS service, the RDS indicator lights up on the display.

With the unit, you can receive the following types of RDS signals.

PS (Program Service):	Shows commonly known station names
PTY (Program Type):	Shows types of broadcast programs
RT (Radio Text):	Shows text messages the station sends
EON (Enhanced Other Network):	See page 28.

Notes:

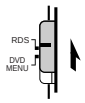
- *RDS is not available for AM (MW/LW) broadcasts.*
- *RDS may not operate correctly if the station tuned is not transmitting RDS signal properly or if the signal strength is weak.*

What information can RDS signals provide?

You can see the RDS signals the station sends on the display.

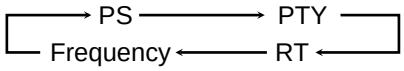
To show the RDS signals

1 Set RDS/DVD MENU mode selector to "RDS."



2 Press DISPLAY MODE while listening to an FM station.

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



PS (Program Service):
While searching, "PS" appears and then the station names will be displayed. "NO PS" appears if no signal is sent.
PTY (Program Type):
While searching, "PTY" appears and then the type of the broadcast program will be displayed. "NO PTY" appears if no signal is sent.
RT (Radio Text):
While searching, "RT" appears and then text messages the station sends will be displayed. "NO RT" appears if no signal is sent.
Frequency:
Station frequency (non-RDS service)

About characters shown on the display

When the display shows PS, PTY, or RT signals, the following characters are used.

- The display cannot differentiate upper case and lower case letters and always uses upper case letters.
- The display cannot show accented letters, "A," for instance, may stand for accented "A's" like "Å, Ä, Ã, Á, À, Â, å, ä, ã, á, à, and â."

Note:

If searching finishes at once, "PS," "PTY," and "RT" will not appear on the display.

Searching for a Program by PTY Codes

Remote ONLY

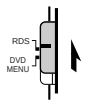
One of the advantages of the RDS service is that you can locate a particular kind of program from the preset channels (see page 24) by specifying the PTY codes.

To search for a program using the PTY codes

Before you start, remember...

- The PTY Search is only applicable to preset stations.
- To stop searching any time during the process, press PTY SEARCH while searching.
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

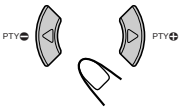
1 Set RDS/DVD MENU mode selector to "RDS."



2 Press PTY SEARCH while listening to an FM station.

"PTY SELECT" flashes on the display.

3 Press PTY ⊕ or PTY ⊖ until the PTY code you want appears on the display, while "PTY SELECT" is flashing.



- For details, see "Description of the PTY codes" on page 28.

4 Press PTY SEARCH again, while the PTY code selected in the previous step is still on the display.

While searching, "SEARCH" and the selected PTY code alternate on the display.

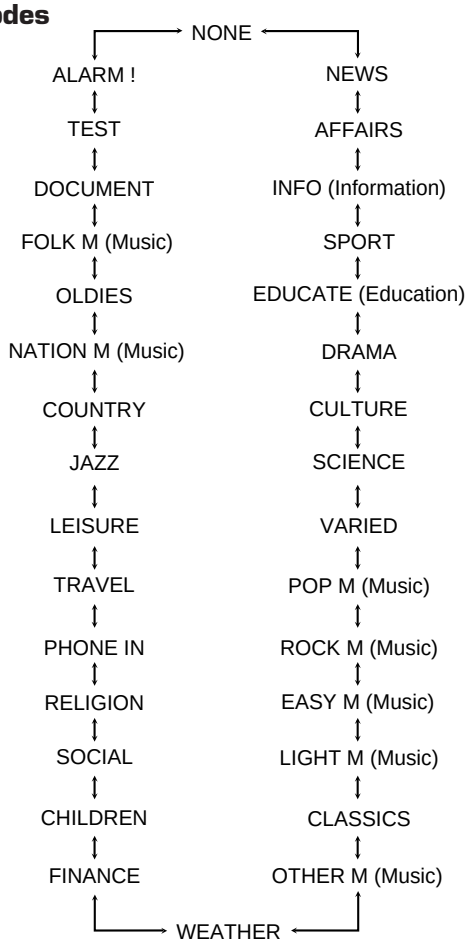
The unit searches 30 preset FM stations, stops when it finds the one you have selected, and tunes in that station.

To continue searching after the first stop

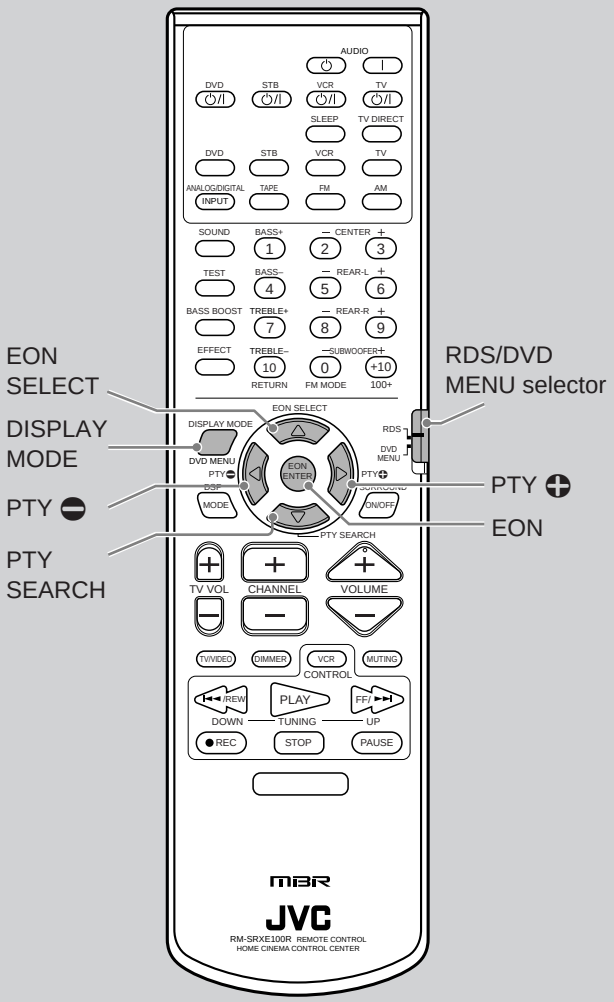
Press PTY SEARCH again while the indications on the display are flashing.

If no program is found, "NOT FOUND" appears on the display.

PTY codes



You need to set RDS/DVD MENU mode selector to "RDS," when you want to operate RDS.



Description of the PTY codes:

NEWS:	News.
AFFAIRS:	Topical program expanding or enlarging upon the news — debate, or analysis.
INFO:	Programs the purpose of which is to impart advice in the widest sense.
SPORT:	Programs concerned with any aspect of sports.
EDUCATE:	Educational programs.
DRAMA:	All radio plays and serials.
CULTURE:	Programs concerning any aspect of national or regional culture, including language, theater, etc.
SCIENCE:	Programs about natural sciences and technology.
VARIED:	Used for mainly speech-based programs such as quizzes, panel games and personality interviews.
POP M:	Commercial music of current popular appeal.
ROCK M:	Rock music.
EASY M:	Current contemporary music considered to be "easy-listening."
LIGHT M:	Instrumental music, and vocal or choral works.
CLASSICS:	Performances of major orchestral works, symphonies, chamber music, etc.
OTHER M:	Music not fitting into any of the other categories.
WEATHER:	Weather reports and forecasts.
FINANCE:	Stock Market reports, commerce, trading etc.
CHILDREN:	Programs targeted at a young audience.
SOCIAL:	Programs about sociology, history, geography, psychology and society.
RELIGION:	Religious programs.
PHONE IN:	Involving members of the public expressing their views either by phone or at a public forum.
TRAVEL:	Travel information.
LEISURE:	Programs about recreational activities.
JAZZ:	Jazz music.
COUNTRY:	Songs which originate from, or continue the musical tradition of the American Southern States.
NATION M:	Current popular music of the nation or region in that country's language.
OLDIES:	Music from the so-called "golden age" of popular music.
FOLK M:	Music which has its roots in the musical culture of a particular nation.
DOCUMENT:	Programs concerning factual matters, presented in an investigative style.
TEST:	Broadcasts for testing emergency broadcast equipment or unit.
ALARM !:	Emergency announcement.

Classification of the PTY codes for some FM stations may be different from the above list.

Switching to Broadcast Program of Your Choice Temporarily

Remote ONLY

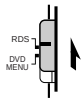
Another convenient RDS service is called “EON (Enhanced Other Network).”
The EON indicator works and lights up while receiving an FM station with the EON code.
This allows the unit to switch temporarily to a broadcast program of your choice (TA, NEWS, and/or INFO) from a different station except in the following cases:

- When you are listening to non-RDS stations (all AM — MW/LW and some FM stations).
- When the unit is in standby mode or TV Direct.
- When the unit selects the other source.

Before you start, remember...

- The EON function is only applicable to preset stations.

1 Set RDS/DVD MENU mode selector to “RDS.”



2 Press EON so that the last selected program type appears on the display.

The unit enters EON standby mode. When the unit is in EON standby mode, the unit is ready to receive the EON data (TA/NEWS/INFO) you select.

3 Press EON SELECT until the program type you want appears on the display.

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

TA ⟶ NEWS ⟶ INFO ⟶ TA/NEWS ⟶ TA/INFO ⟶ NEWS/INFO ⟶ TA/NEWS/INFO ⟶ TA

TA	: Traffic Announcement in your area.
NEWS	: News.
INFO	: Program the purpose of which is to impart advice in the widest sense.

How the EON function actually works:

CASE 1

If there is no station broadcasting the program you have selected

The unit continues tuning in the current station.

⬇

When a station starts broadcasting the program you have selected, the unit automatically switches to the station. The indicator of received PTY code starts flashing.

⬇

When the program is over, “EON END” appears in the display, and the unit goes back to the previously tuned station, but the EON function still remains activated.

CASE 2

If there is a station broadcasting the program you have selected

The unit tunes in the program. The indicator of received PTY code starts flashing.

⬇

When the program is over, “EON END” appears in the display, and the unit goes back to the previously tuned station, but the EON function still remains activated.

CASE 3

If the FM station you are listening to is broadcasting the program you have selected

The unit continues to receive the station but the indicator of received PTY code starts flashing.

⬇

When the program is over, “EON END” appears in the display, and the indicator of received PTY code stops flashing and remains lit, but the EON function still remains activated.

To stop listening to the program selected by EON

Press EON so that the program type (TA/NEWS/INFO) indicator goes off from the display. The unit enters EON off mode and goes back to the previously selected source.

- Each time you press EON, the EON mode alternates between standby mode and off mode.

When an emergency broadcast (ALARM ! signal) is sent from an FM station:

The unit automatically tunes in the station except in the following cases:

- When you are listening to non-RDS stations (all AM — MW/LW and some FM stations).
- When the unit is in standby mode or TV Direct.
- When the unit selects the other source.

While receiving an emergency broadcast, “ALARM !” appears on the display.

The TEST signal is used for equipment test — whether it can receive the ALARM ! signal correctly.

The TEST signal makes the unit work in the same way as the ALARM ! signal does. If the TEST signal is received, the unit automatically switches to the station broadcasting the TEST signal. While receiving the TEST signal, “TEST” appears on the display.

Notes:

- *EON data sent from some stations may not be compatible with this unit.*
- *While listening to a program tuned in by the EON function, the station does not change even if another network station starts broadcasting a program of the same EON data.*
- *While listening to a program tuned in by the EON function, you can only use the EON and DISPLAY MODE buttons as the tuner operation buttons.*
- *If the stations alternate intermittently between the station tuned by the EON function and the currently tuned station (“WAITING” flashes in the display), press EON to cancel the EON function. If you do not press the button, the currently tuned station is received finally, and the indication of the EON data type flashing on the display disappears.*

You can use the following DSP (Digital Signal Processor) modes to reproduce a realistic sound field.
- Surround modes
- DAP modes

■ Surround modes

Surround modes cannot be used when only the front speakers are connected to this unit (without the rear speakers or center speaker).

Dolby Surround (Dolby Pro Logic)*

Used to reproduce sound tracks of the software encoded with Dolby Surround (DOLBY SURROUND).

Dolby Surround encoding format records the left front channel, right front channel, center channel, and rear channel signals (total 4 channels) into 2 channels.
The **Dolby Pro Logic** decoder built in this unit decodes these 2 channel signals into original 4 channel signals — matrix-based multichannel reproduction, and allows you to enjoy a realistic stereo sound in your listening room.
- When Dolby Pro Logic is activated, the PRO LOGIC indicator lights up on the display.
  – Dolby Pro Logic will be activated for all 2 channel-encoded software.

Dolby Digital*

Used to reproduce multichannel sound tracks of the software encoded with Dolby Digital (DOLBY DIGITAL).
- To enjoy the software encoded with Dolby Digital, connect the source component using the digital terminal on the rear of this unit. (See page 7.)

Dolby Digital encoding method (so-called discrete 5.1 channel digital audio format) records and digitally compresses the left front channel, right front channel, center channel, left rear channel, right rear channel, and LFE channel signals (total 6 channels, but LFE channel is counted as 0.1 channel. Therefore, called 5.1 channel). Since each channel is completely independent from the other channel signals to avoid interference, you can obtain much better sound quality with much stereo and surround effects.
In addition, Dolby Digital enables stereo rear sounds, and sets the cutoff frequency of the rear treble at 20 kHz, compared to 7 kHz for Dolby Pro Logic. These facts enhance the sound movement and being-there feelings much more than Dolby Pro Logic.

DTS Digital Surround**

Used to reproduce multichannel sound tracks of the software encoded with DTS Digital Surround (dts).
- To enjoy the software encoded with DTS Digital Surround, connect the source component using the digital terminal on the rear of this unit. (See page 7.)

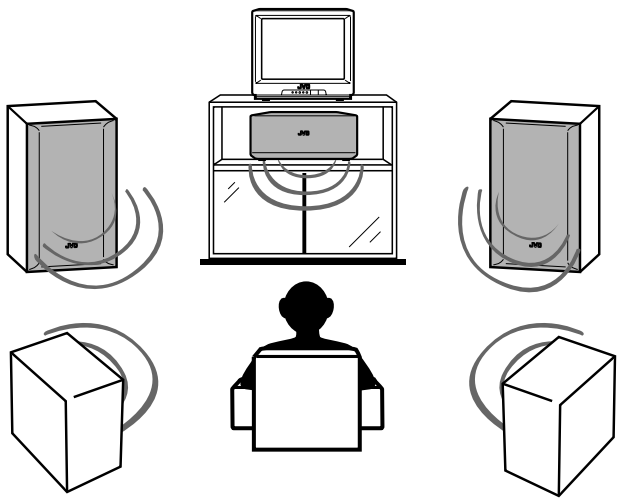
DTS Digital Surround is another discrete 5.1 channel digital audio format available on CD, LD, and DVD software.
Compared to Dolby Digital, audio compression rate is relatively low. This fact allows DTS Digital Surround format to add breadth and depth to the reproduced sounds. As a result, DTS Digital Surround features natural, solid and clear sound.

JVC Theatre Surround

Used to reproduce sound tracks of the software encoded with Dolby Surround (DOLBY SURROUND).
- **Theatre Surround can be used when the front speakers and the rear speakers are connected to this unit (without regarding the center speaker).**

Theatre Surround can add acoustic surround effects (DAP mode effects) to Dolby Surround software, and create a sound field of a theatre in your listening room.
- When Theatre Surround is selected, the PRO LOGIC and DSP indicators light up on the display.

Surround reproduction



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*** Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942 and other world-wide patents issued and pending. "DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. ©1996 Digital Theater Systems, Inc. All rights reserved.*

■ DAP (Digital Acoustic Processor) Modes

DAP modes have been designed to create important acoustic surround elements.

The sound heard in a hall, live club, dance club or pavilion 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 (see the diagram to the right).
These indirect sounds are important elements of the acoustic surround effects.

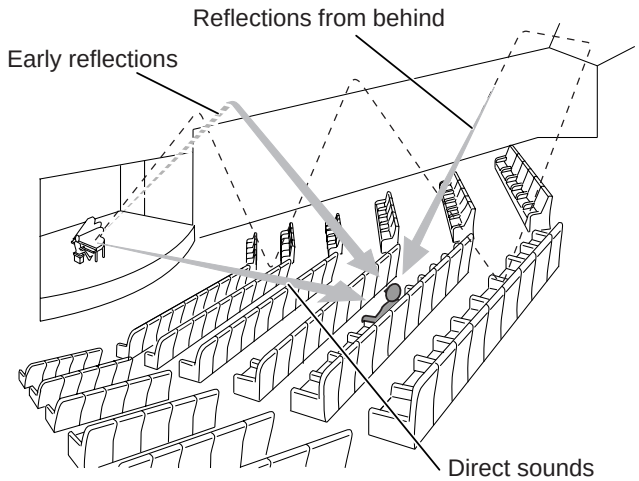
The following DAP modes are provided with this unit.

LIVE CLUB	: Gives the feeling of a live music club with a low ceiling.
DANCE CLUB	: Gives a throbbing bass beat.
HALL	: Gives clear vocal and the feeling of a concert hall.
PAVILION	: Gives the spacious feeling of a pavilion with a high ceiling.

These DAP modes can be used to add the acoustic surround effects while reproducing stereo analog software or Linear PCM digital software, and can give you a real “being there” feeling.

- **DAP modes can be used when the front and rear speakers are connected to this unit (without respect to the center speaker connection: no sound comes out of the center speaker if it is connected).**
- When one of the DAP modes is selected, the DSP indicator lights up on the display.

Creating sound field



Available DSP modes according to the input signal format

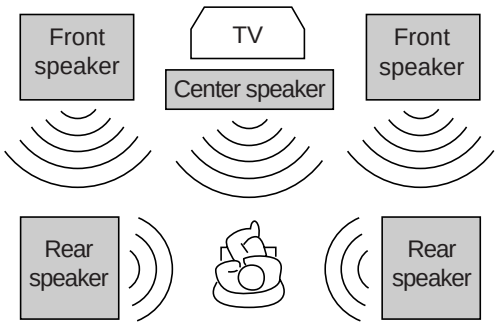
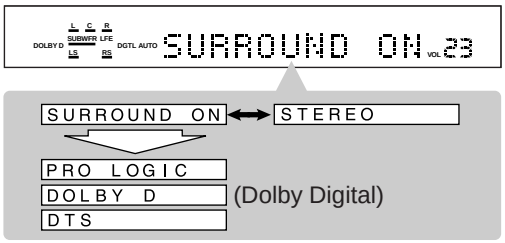
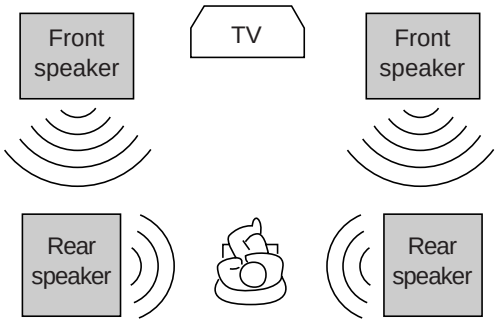
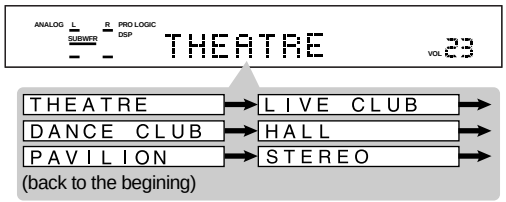
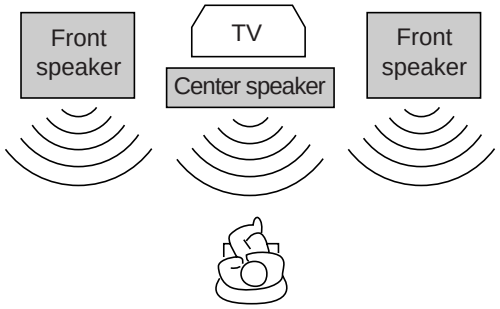
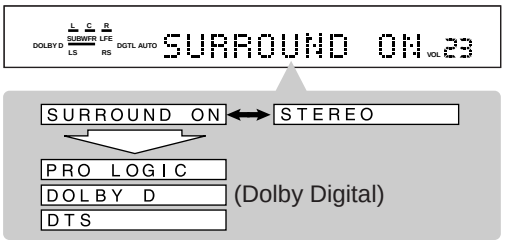
○: Possible ×: Impossible

DSP Modes		SURROUND	THEATRE	LIVE CLUB	DANCE CLUB	HALL	PAVILION	STEREO
Input Signal format	Analog	○ (Dolby Pro Logic)	○	○	○	○	○	○
	Linear PCM	○ (Dolby Pro Logic)	○	○	○	○	○	○
	Dolby Digital	○ *1 (Dolby Digital)	×	×	×	×	×	○
	DTS	○ *2 (DTS Digital Surround)	×	×	×	×	×	○

*1 Dolby Digital is activated except when 2 channel signals come in (in this case, Dolby Pro Logic is activated).
*2 DTS Digital Surround is activated except when 2 channel signals come in (in this case, Dolby Pro Logic is activated).

About Relations between Speaker Layout and DSP Modes

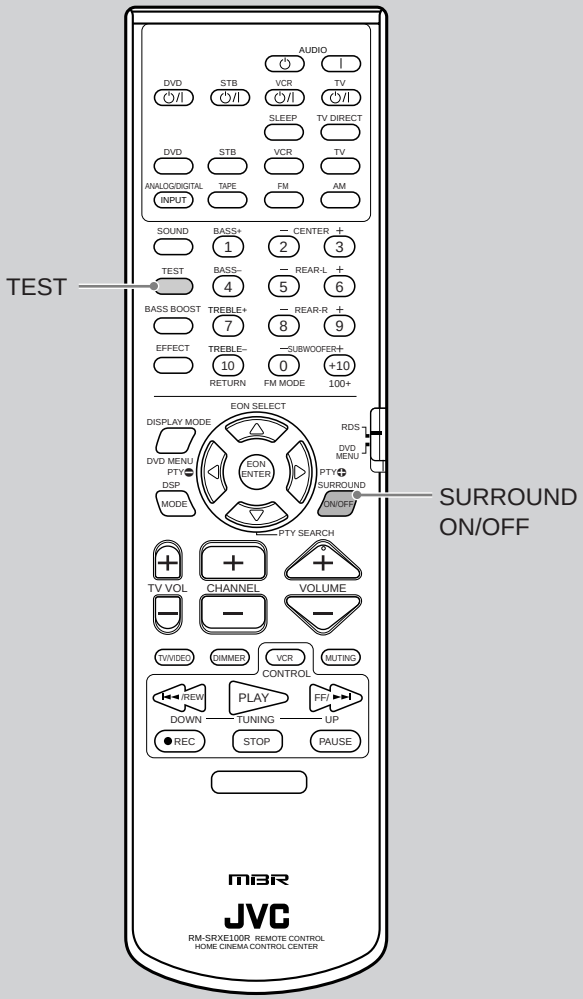
Available DSP modes will vary depending on how many speakers are used with this unit.
Make sure that you have set the speaker information correctly (see page 15).
- **If only front speakers are connected, you cannot use the DSP modes.**
- **If rear speakers are not connected, you cannot use Theater Surround and the DSP modes.**

Speaker Layouts	Available DSP modes
5 Channels 	**Surround mode** Each time you press SURROUND ON/OFF, Surround mode turns on or off (“STEREO”):  (Remote)  (Front panel) 
4 Channels 	**DSP mode** Each time you press DSP MODE, the DSP modes (Theatre Surround and DAP modes) change as follows:  (Remote)  (Front panel) 
3 Channels 	**Surround mode** Each time you press SURROUND ON/OFF, Surround mode turns on or off (“STEREO”):  (Remote)  (Front panel)  **DSP mode** All DSP modes cannot be used.

When “AUTO SR (Auto Surround)” is turned “ON”
Surround mode is automatically activated when you select and start playing back a multichannel source.

It will be convenient for you to use the remote control for DSP operations, since you can adjust them from your listening point, and use the test signal.

• When using the buttons on the front panel, see pages 37 to 39.



Before you start, remember...

- **Make sure that you have set the speaker information correctly (see page 15).**
- You cannot adjust the center speaker output level when you have set “CTR SP” to “NO.”
- You cannot adjust the rear speaker output levels when you have set “REAR SP” to “NO.”
- Remember not to change the speaker setting while using any DSP mode; otherwise, it may be canceled when you deactivate the speakers required for the DSP mode.

Using Surround Modes (Remote Control)

Surround mode cannot be used with another DSP mode. Once Surround mode is activated, the other DSP mode in use will be canceled.

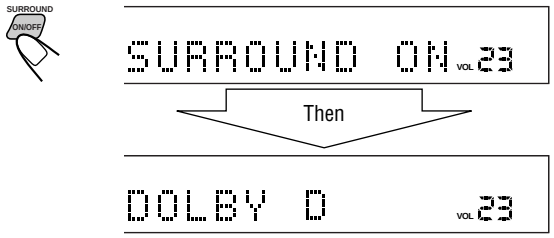
• You have to make this adjustment for each source.

1 Select and play software encoded with Dolby Surround, Dolby Digital, or DTS Digital Surround.

If “AUTO SR (Auto Surround)” is set to “ON”
Playing a digital source automatically activates an appropriate Surround mode. (See pages 18 and 19.)

2 Press SURROUND ON/OFF to activate an appropriate Surround mode — Pro Logic, Dolby Digital, or DTS Digital Surround.

• Each time you press the button, Surround mode turns on and off alternately.

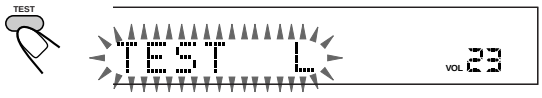


Ex.: When Dolby Digital is activated

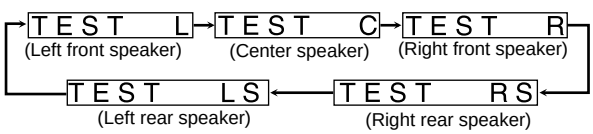
Note:

When playing back an analogue source, “SURROUND ON” will not appear, and “PRO LOGIC” appears as soon as you press SURROUND ON/OFF. (The PRO LOGIC indicator also lights up on the display.)

3 Press TEST to check the speaker output balance.



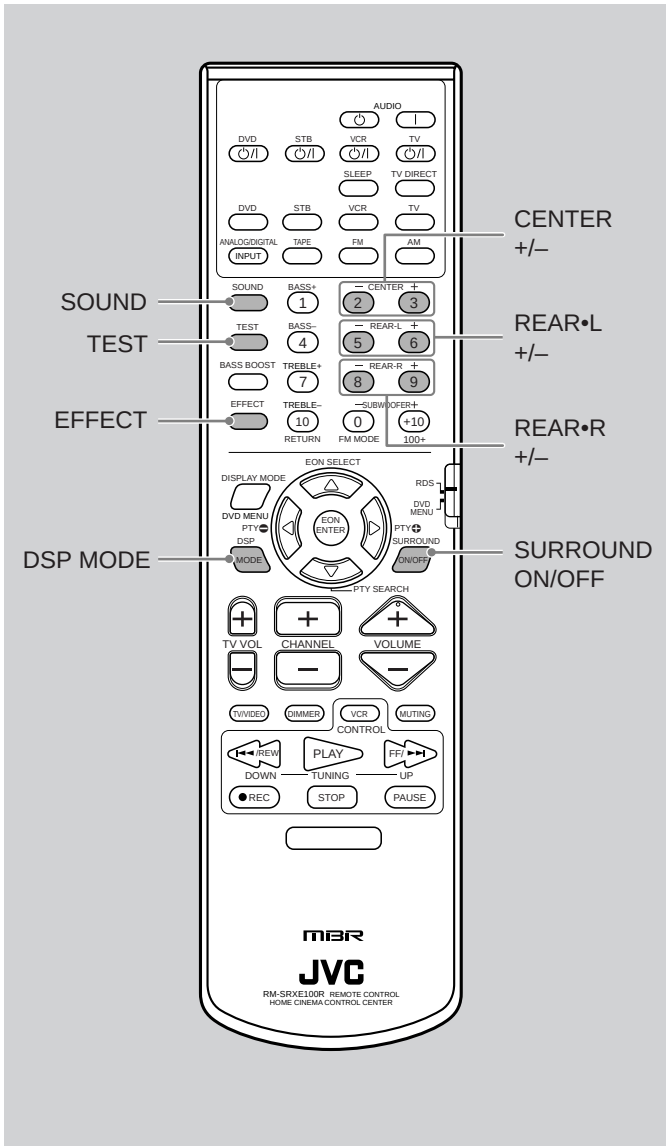
“TEST L” starts flashing on the display, and a test tone comes out of the speakers in the following order:



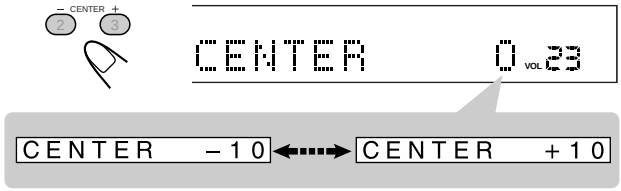
Notes:

- *You can adjust the speaker output levels without outputting the test tone.*
- *No test tone comes out of the center speaker when “CTR SP” is set to “NO.”*
- *No test tone comes out of the rear speakers when “REAR SP” is set to “NO.”*

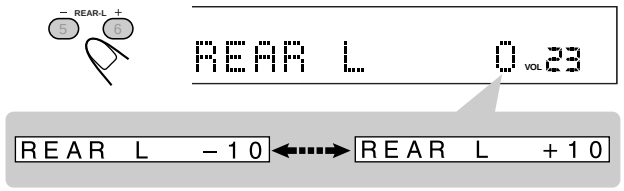
TO BE CONTINUED ON THE NEXT PAGE



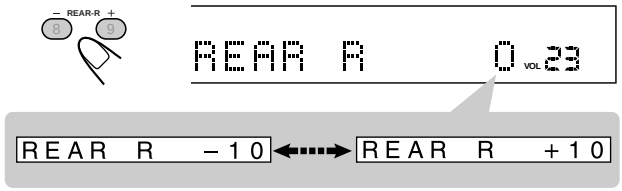
To adjust the center speaker level, press CENTER +/–.



To adjust the left rear speaker level, press REAR•L +/–.



To adjust the right rear speaker level, press REAR•R +/–.



6 Press TEST again to stop the test tone.

To cancel Surround Mode

Press SURROUND ON/OFF again so that “STEREO” appears on the display.

- If Surround mode is canceled while playing back multichannel digital software, all channel signals are mixed and output through the front speakers (and subwoofer if you have connected a subwoofer and set the subwoofer setting correctly – “YES”).

4 Press SOUND.

The 10 keys now work for sound adjustments.

5 Adjust the following speaker output levels (from –10 to +10).

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.

Using Theatre Surround (Remote Control)

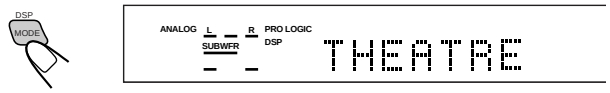
Theatre Surround cannot be used with another DSP mode. Once Theatre Surround is activated, the other DSP mode in use will be canceled.

- You have to make this adjustment for each source.
- You cannot use Theater Surround if no rear speakers are connected.

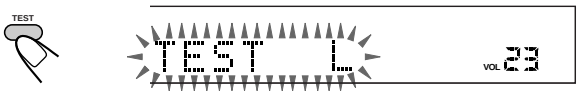
1 Select and play software encoded with Dolby Surround.

2 Press DSP MODE repeatedly until "THEATRE" appears on the display.

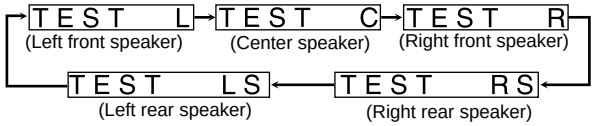
The PRO LOGIC and DSP indicator light up on the display.



3 Press TEST to check the speaker output balance.



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



Notes:

- *You can adjust the speaker output levels without outputting the test tone.*
- *No test tone comes out of the center speaker when "CTR SP" is set to "NO."*

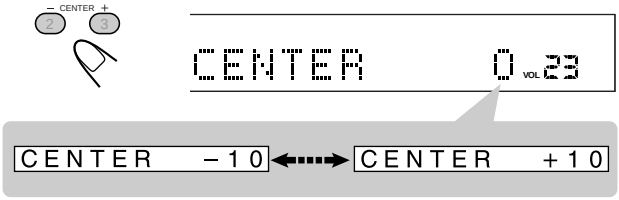
4 Press SOUND.

The 10 keys now work for sound adjustments.

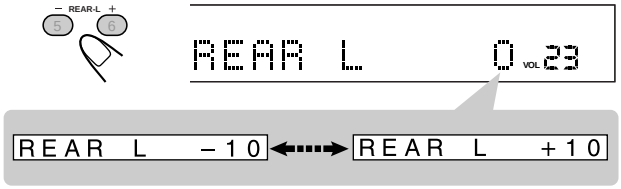
5 Adjust the following speaker output levels (from –10 to +10).

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.

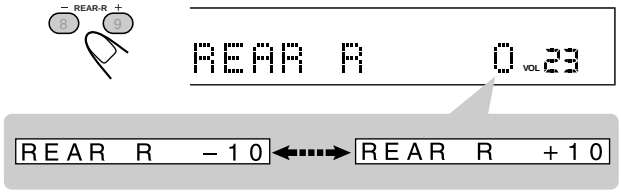
To adjust the center speaker level, press CENTER +/–.



To adjust the left rear speaker level, press REAR•L +/–.



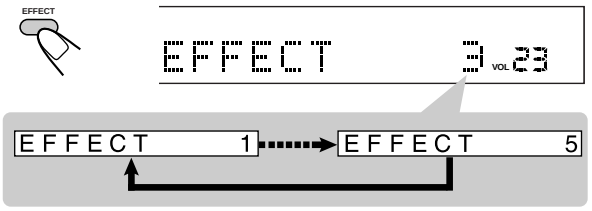
To adjust the right rear speaker level, press REAR•R +/–.



6 Press TEST again to stop the test tone.

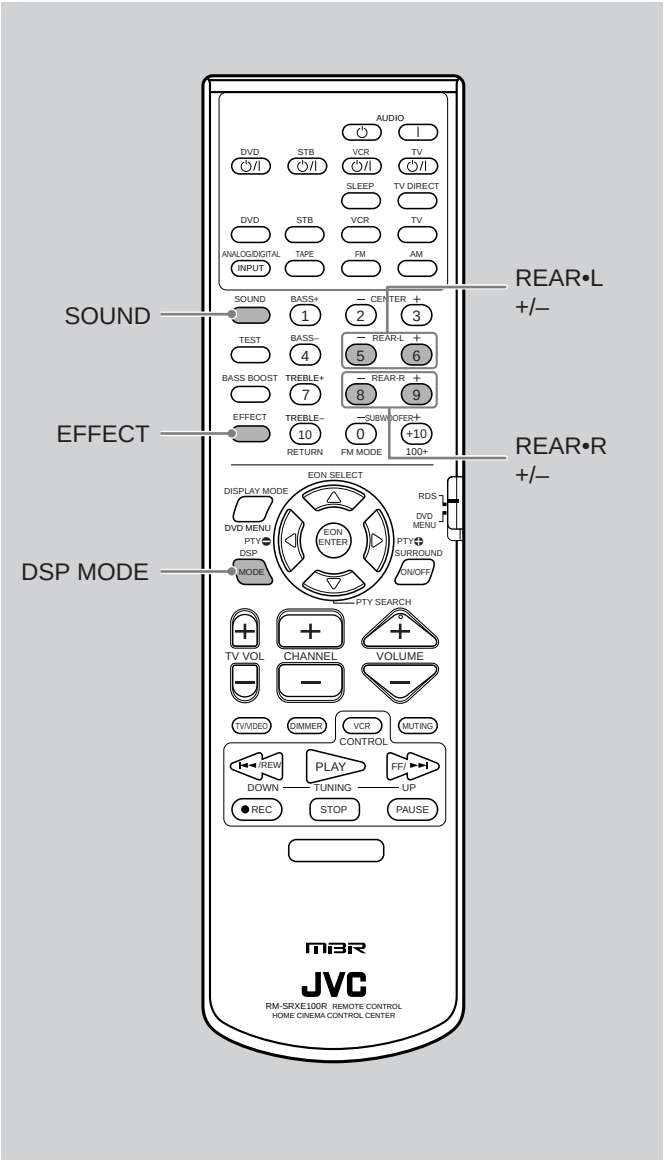
7 Press EFFECT to select the DSP effect level (1 to 5) you want.

- As the number increases, the DSP effect becomes stronger (normally set it to "EFFECT 3").



To cancel Theatre Surround

Press DSP MODE repeatedly until "STEREO" appears on the display. The PRO LOGIC and DSP indicators go off.



Using DAP Modes (Remote Control)

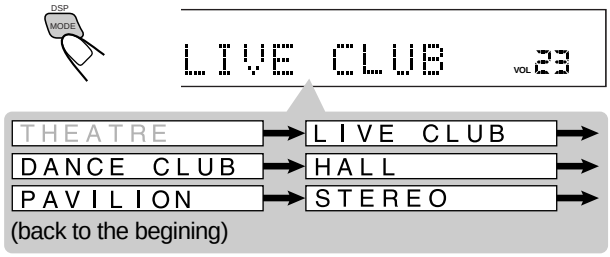
A DAP mode cannot be used with another DSP mode. Once one of the DAP modes is activated, the other DSP mode in use will be canceled.

- You have to make this adjustment for each source.
- You cannot use the DAP modes if no rear speakers are connected.

1 Select and play stereo analogue software or Linear PCM digital software.

2 Press DSP MODE repeatedly until one of the DAP modes appears on the display.

The DSP indicator lights up on the display.



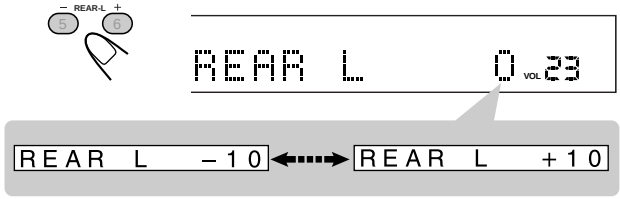
3 Press SOUND.

The 10 keys now work for sound adjustments.

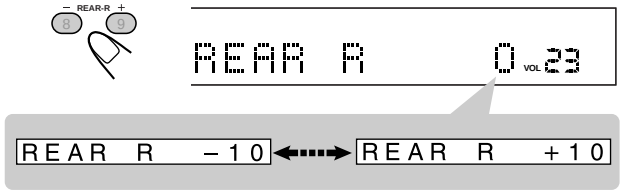
4 Adjust the rear speaker output levels (from –10 to +10).

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.

To adjust the left rear speaker level, press REAR•L +/–.

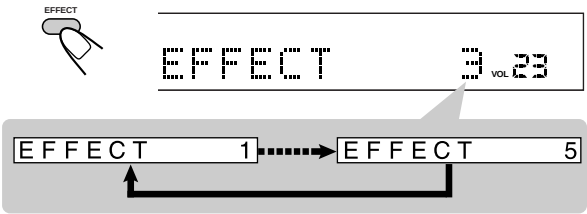


To adjust the right rear speaker level, press REAR•R +/–.



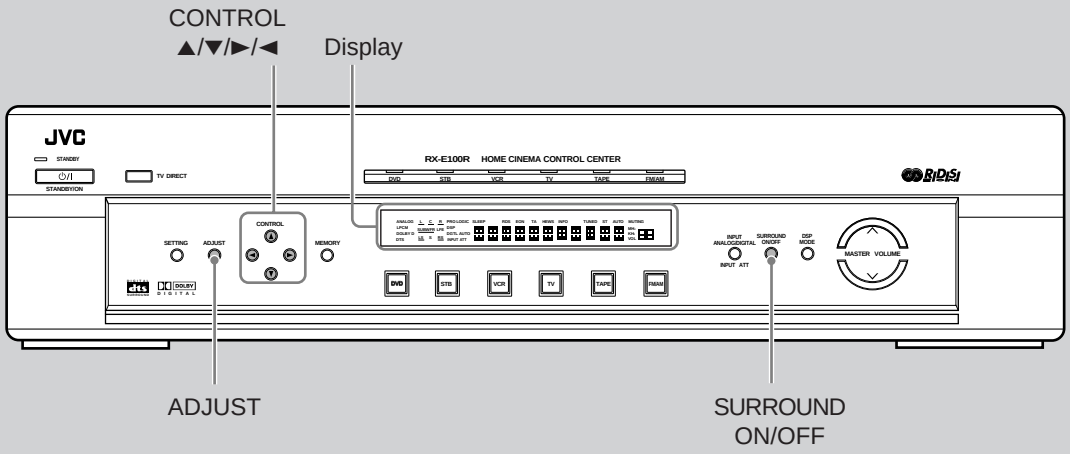
5 Press EFFECT to select the DSP effect level (1 to 5) you want.

- As the number increases, the DSP effect becomes stronger (normally set it to “EFFECT 3”).



To cancel DAP Mode

Press DSP MODE repeatedly so that “STEREO” appears on the display. The DSP indicator goes off.



When using the remote control for DSP operations, see pages 33 to 36.

Before you start, remember...

- **Make sure that you have set the speaker information correctly (see page 15).**
- You cannot adjust the center speaker output level when you have set "CTR SP" to "NO."
- You cannot adjust the rear speaker output levels when you have set "REAR SP" to "NO."

Using Surround Modes (Front Panel)

Surround mode cannot be used with another DSP mode. Once Surround mode is activated, the other DSP mode in use will be canceled.
When using the buttons on the front panel, no test tone is available. Make adjustments while listening to the sound of the source played back.

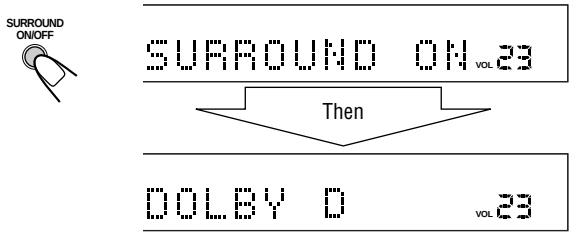
- You have to make this adjustment for each source.

1 Select and play software encoded with Dolby Surround, Dolby Digital, or DTS Digital Surround.

If "AUTO SR (Auto Surround)" is set to "ON"
Playing a digital source automatically activates an appropriate Surround mode. (See pages 18 and 19.)

2 Press SURROUND ON/OFF to activate an appropriate Surround mode — Pro Logic, Dolby Digital, or DTS Digital Surround.

- Each time you press the button, Surround mode turns on and off alternately.



Ex.: When Dolby Digital is activated

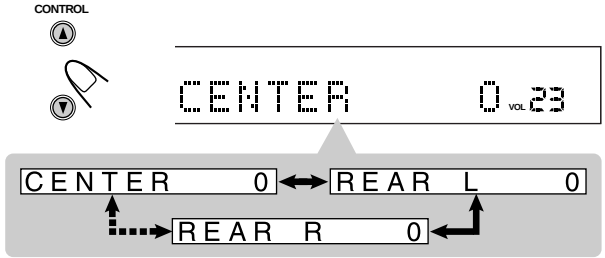
Note:

When playing back an analogue source, "SURROUND ON" will not appear, and "PRO LOGIC" appears as soon as you press SURROUND ON/OFF. (The PRO LOGIC indicator also lights up on the display.)

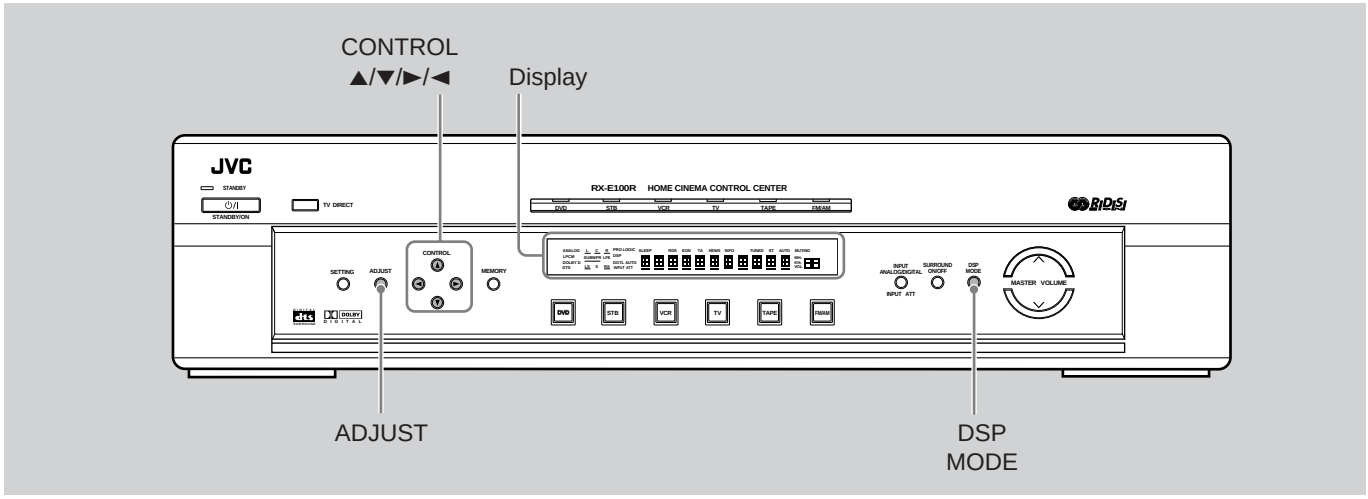
3 Press ADJUST.

The CONTROL buttons now work for sound adjustments.

4 Press CONTROL ▼ (or ▲) repeatedly until one of the following indications (with the current setting)* appears.



TO BE CONTINUED ON THE NEXT PAGE

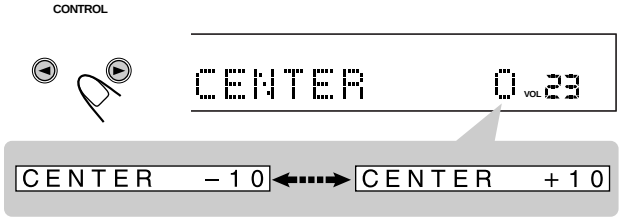


CENTER	: To adjust the center speaker output level (from –10 to +10).
REAR L	: To adjust the left rear speaker output level (from –10 to +10).
REAR R	: To adjust the right rear speaker output level (from –10 to +10).

* "0" is the initial setting for these speaker output levels. If you have already changed the setting, another setting will be shown.

5 Press CONTROL ► (or ◄) to adjust the speaker output level.

- Make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.



Ex.: When adjusting the center speaker output level

6 Repeat steps 4 and 5 to adjust the other speaker levels.

To cancel Surround Mode

Press SURROUND ON/OFF again so that "STEREO" appears on the display.

- If Surround mode is canceled while playing back multichannel digital software, all channel signals are mixed and output through the front speakers (and subwoofer if you have connected a subwoofer and set the subwoofer setting correctly – "YES").

Using Theatre Surround (Front Panel)

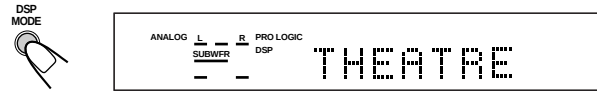
Theatre Surround cannot be used with another DSP mode. Once Theatre Surround is activated, the other DSP mode in use will be canceled.
When using the buttons on the front panel, no test tone is available. Make adjustments while listening to the sound of the source played back.

- You have to make this adjustment for each source.
- You cannot use Theater Surround if no rear speakers are connected.

1 Select and play software encoded with Dolby Surround.

2 Press DSP MODE repeatedly until "THEATRE" appears on the display.

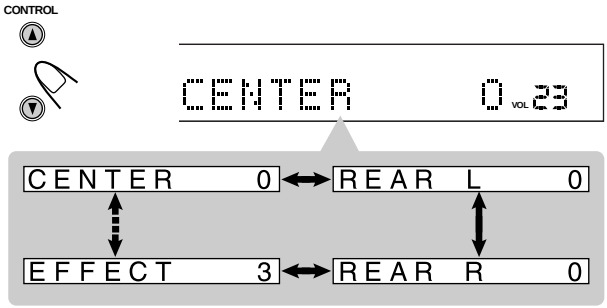
The PRO LOGIC and DSP indicators light up on the display.



3 Press ADJUST.

The CONTROL buttons now work for sound adjustments.

4 Press CONTROL ▼ (or ▲) repeatedly until one of the following indications (with the current setting)* appears.

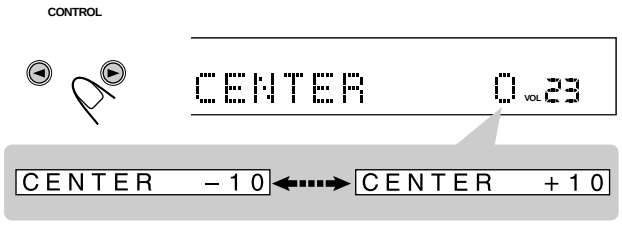


CENTER	: To adjust the center speaker output level (from –10 to +10).
REAR L	: To adjust the left rear speaker output level (from –10 to +10).
REAR R	: To adjust the right rear speaker output level (from –10 to +10).
EFFECT	: To adjust the DSP effect level. As the number increases, the effect becomes stronger (normally set it to "EFFECT 3").

* "0" is the initial setting for the speaker output levels, and "EFFECT 3" is for the DSP effect level.
If you have already changed the setting, another setting will be shown.

5 Press CONTROL ► (or ◄) to make an adjustment.

- When adjusting the speaker output levels, make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.



Ex.: When adjusting the center speaker output level

6 Repeat steps 4 and 5 to make other adjustments.

To cancel Theatre Surround

Press DSP MODE repeatedly until "STEREO" appears on the display. The PRO LOGIC and DSP indicators go off.

Using DAP Modes (Front Panel)

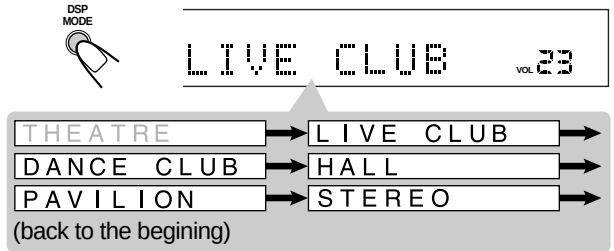
A DAP mode cannot be used with another DSP mode. Once one of the DAP modes is activated, the other DSP mode in use will be canceled.

- You have to make this adjustment for each source.
- You cannot use the DAP modes if no rear speakers are connected.

1 Select and play stereo analogue software or Linear PCM digital software.

2 Press DSP MODE repeatedly until one of the DAP modes appears on the display.

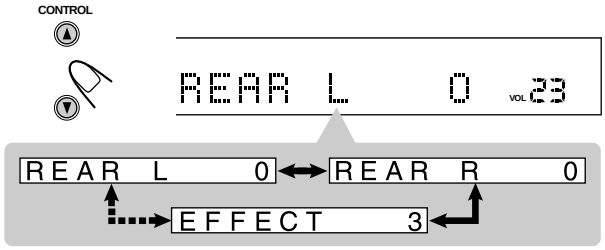
The DSP indicator lights up on the display.



3 Press ADJUST.

The CONTROL buttons now work for sound adjustments.

4 Press CONTROL ▼ (or ▲) repeatedly until one of the following indications (with the current setting)* appears.

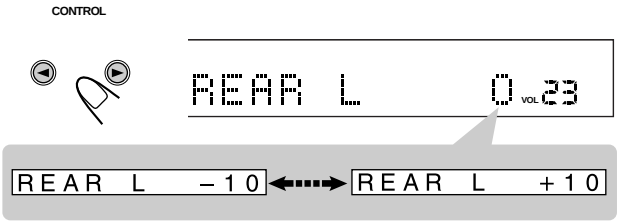


REAR L	: To adjust the left rear speaker output level (from –10 to +10).
REAR R	: To adjust the right rear speaker output level (from –10 to +10).
EFFECT	: To adjust the DSP effect level. As the number increases, the effect becomes stronger (normally set it to "EFFECT 3").

* "0" is the initial setting for the speaker output levels, and "EFFECT 3" is for the DSP effect level.
If you have already changed the setting, another setting will be shown.

5 Press CONTROL ► (or ◄) to make an adjustment.

- When adjusting the speaker output levels, make adjustments so that the sound level of the selected speaker is set at the same level as that of the front speakers.



Ex.: When adjusting the left rear speaker output level

6 Repeat steps 4 and 5 to make other adjustments.

To cancel DAP Mode

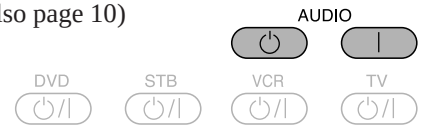
Press DSP MODE repeatedly so that "STEREO" appears on the display. The DSP indicator goes off.

Mastering Remote Operations

You can use the remote control to operate not only this unit but also other JVC products.
- Refer also to the manuals supplied for the other products.
  – This remote control can operate a VCR whose remote control code is set to A code.
- To operate the other products, aim the remote control directly at the remote sensor on the target product.

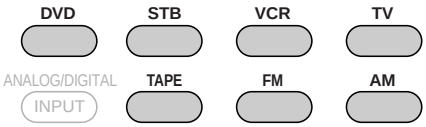
■ Operating this unit

❑ Turning on the Power — POWER buttons
(see also page 10)



AUDIO ⏻	: Turn off this unit.
AUDIO |	: Turn on this unit.

❑ Selecting the source — Source selecting buttons (see also page 10)



DVD	: Select the DVD player.
STB	: Select STB.
VCR	: Select the VCR.
TV	: Select the TV.
TAPE	: Select the cassette recorder.
FM	: Select the FM band.
AM	: Select the AM band.

These buttons also change the functions of the 10 keys, and make them work to operate the target source components. (See the next page.)

❑ Adjusting the volume — VOLUME buttons
(see also page 10)

Adjust the volume level.

❑ Activating the TV Direct — TV DIRECT button (see also page 11)

Activate the TV Direct.

❑ Turning off the sound temporarily — MUTING button (see also page 12)

Turn on or off the sound output.

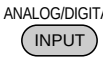
❑ Turning off the unit automatically — SLEEP button (see also page 12)

Set the shut-off time until the unit turns off automatically.

❑ Changing the Display Brightness — DIMMER button (see also page 12)

Dim or brighten the display illuminations.

❑ Selecting analogue or digital input — ANALOG/DIGITAL INPUT button
(see also page 13)



Select either analogue input or digital input for the digital source.

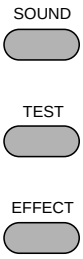
❑ Creating realistic sound fields — SURROUND ON/OFF and DSP MODE buttons
(see also pages 32 – 36)

SURROUND ON/OFF	: Turn on or off Surround mode.
DSP MODE	: Select the DSP modes (Theatre Surround and DAP modes). Each time you press the button, the DSP modes change.

❑ Reinforcing the Bass — BASS BOOST button
(see also pages 21)

Turn on or off Bass Boost.

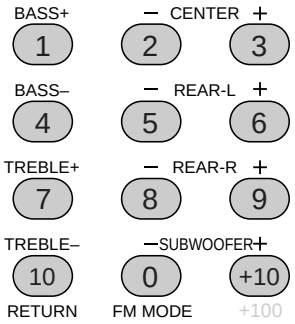
❑ Adjusting the sound — SOUND, TEST, EFFECT buttons (see also pages 32 – 36)



SOUND	: Change the functions of 10 keys, and make them work for sound adjustments.
TEST	: Turn on or off the test tone output.
EFFECT	: Change the DSP effect level.

❑ Adjusting the sound and operating tuner — 10 keys

■ After pressing **SOUND**, you can use the 10 keys for sound adjustments. (see also pages 32 – 36)



BASS +/–	: Adjust the bass sounds.
TREBLE +/–	: Adjust the treble sounds.
CENTER +/–	: Adjust the center speaker output level.
REAR•L +/–	: Adjust the left rear speaker output level.
REAR•R +/–	: Adjust the right rear speaker output level.
SUBWOOFER +/–	: Adjust the subwoofer level.

■ After pressing **FM** or **AM**, you can use the 10 keys for tuner operations.

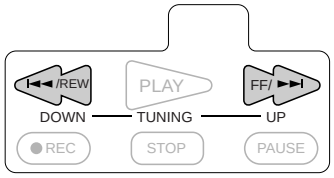
1 – 10, +10	: Select a preset channel.
FM MODE (0)	: Change FM MODE.

Example: Selecting preset FM/AM channel numbers using the 10 keys
- For number 5, press 5.
- For number 15, press +10, then 5.
- For number 30, press +10, +10, then 10.

❑ Tuning in stations Manually — TUNING UP and TUNING DOWN buttons

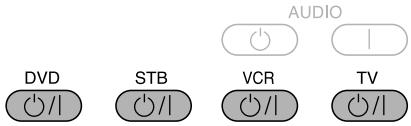
(see also page 23)

After pressing **FM** or **AM**, you can change the frequencies by pressing (and holding) the buttons.



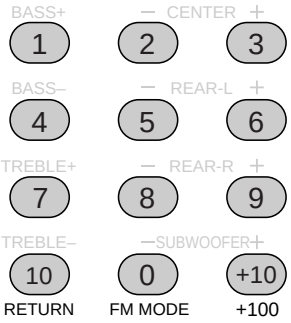
■ Operating other JVC's products

❑ Turning on the Power — POWER buttons



DVD ⏻/I	: Turn on or off a DVD player.
STB ⏻/I	: Turn on or off an STB.
VCR ⏻/I	: Turn on or off a VCR.
TV ⏻/I	: Turn on or off a TV.

❑ Selecting the channels and operating tuner — 10 keys



■ After pressing **TV** (source selecting button), you can use the 10 keys for selecting a channel on the TV.

1 – 9, 0, +10 (+100)	: Select a channel.
RETURN (10)	: Function as the RETURN button.

■ After pressing **VCR** (source selecting button) or **VCR CONTROL**, you can use the 10 keys for VCR operations.

VCR
CONTROL

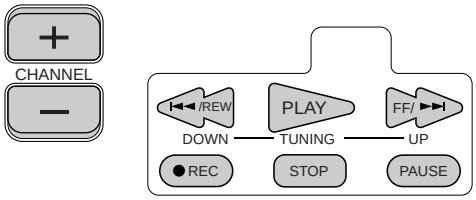
If you use VCR CONTROL, you can change the functions of 10 keys for VCR operations without changing the current source.

1 – 9, 0	: Select a channel on the VCR.

■ After pressing **STB**, you can use the 10 keys for STB operations.

1 – 9, 0	: Select a channel.

❑ Operating other JVC products — Audio/video operation buttons



■ After pressing **DVD** (source selecting button), you can use the following buttons for DVD operations.

PLAY	: Start playback.
STOP	: Stop playback.
PAUSE	: Pause playback. To release it, press **PLAY**.
►►I	: Skip to the beginning of the next track.
I◄◄	: Return to the beginning of the current (or previous) track.

■ After pressing **TV** (source selecting button), you can use the following buttons for changing the channels on the TV.

CHANNEL +/–	: Change channel numbers.

■ After pressing **VCR** (source selecting button), you can use the following buttons for VCR operations.

CHANNEL +/–	: Change channel numbers on the VCR.
PLAY	: Start playback.
STOP	: Stop playback.
PAUSE	: Pause playback. To release it, press **PLAY**.
FF	: Fast-wind a tape.
REW	: Rewind a tape.
● REC	: • Press this button with the **PLAY** button to start recording pressed and hold. • Press this button with the **PAUSE** button to enter recording pause.

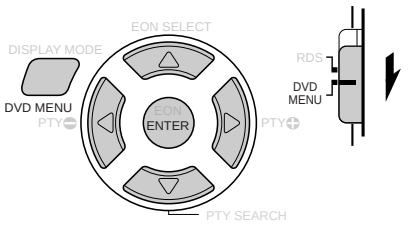
■ After pressing **STB** (source selecting button), you can use the following buttons for STB operations.

CHANNEL +/–	: Change channel numbers on the STB.

■ These buttons works only for TVs.

TV/VIDEO	: Change the input mode (Video input and TV tuner) on the TV.
TV VOL +/–	: Adjust the volume on the TV.

❑ Operating DVD menu for JVC DVD player



■ After setting **RDS/DVD MENU selector** to **"DVD MENU,"** you can use the buttons illustrated above for DVD menu operations.

DVD MENU	: Display or erase the menu screen.
△ / ▽ / ◁ / ▷	: Select an item on the menu screen.
ENTER	: Enter a selected item.

■ Operating other Manufacturers' Equipment

By changing the transmittable signals, you can use the remote control supplied for this unit to operate other manufacturers' equipment.

- Refer also to the manuals supplied for the other products.
- To operate these components with the remote control, first you need to set the manufacturer's code each for DVD player, STB, VCR, and TV.
- After replacing batteries of the remote control, set the manufactures' codes again.

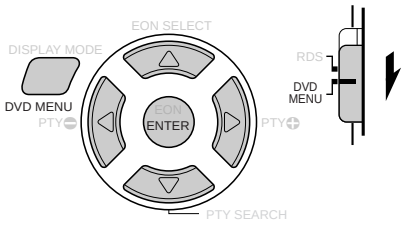
❑ To change the transmittable signals for operating a DVD player

1. **Press and hold DVD ⏻/I.**
2. **Press DVD.**
3. **Enter manufacturer's code using buttons 1–9, and 0.**
4. **Release DVD ⏻/I.**

Now, you can perform the following operations on the DVD player.

DVD ⏻/I	: Turn on or off the DVD player.
PLAY	: Start playback.
STOP	: Stop playback.
PAUSE	: Pause playback. To release it, press **PLAY**.
⏭	: Skip to the beginning of the next track.
⏮	: Return to the beginning of the current (or previous) track.

After pressing DVD MENU when setting RDS/DVD MENU selector to "DVD MENU, " 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.

5. **Try to operate your DVD player by pressing DVD ⏻/I.**
   When your DVD player turns on or off, you have entered the correct code.

Manufacturers' codes for DVD player

Manufacturer	Codes
JVC	01
PANASONIC	02
PHILIPS	07
PIONEER	03
SONY	05
TOSHIBA	04
YAMAHA	06

❑ To change the transmittable signals for operating an STB

1. **Press and hold STB ⏻/I.**
2. **Press STB.**
3. **Enter manufacturer's code using buttons 1–9, and 0.**
4. **Release STB ⏻/I.**

Now, you can perform the following operations on the STB.

STB ⏻/I	: Turn on or off the STB.
CHANNEL +/–	: Change the channels.
1 – 10, 0, +10 (+100)	: Select the channels.

Note:

Refer to the manual supplied with your STB.

5. **Try to operate your STB by pressing STB ⏻/I.**
   When your STB turns on or off, you have entered the correct code.

If there are more than one code listed for your brand of STB, try each one until the correct one is entered.

Manufacturers' codes for STB

Manufacturer	Codes
JVC	01, 02
AMSTRAD	03 – 06, 33
BT	01
CANAL STELLITE	22
CANAL +	22
D – BOX	26
ECHOSTAR	19 – 21, 23
FINLUX	11
FORCE	30
GALAXIS	29
GRUNDIG	07, 08
HIRSCHMANN	07, 19, 39
ITT NOKIA	11
JERROLD	16
KATHREIN	13, 14, 36
LUXOR	11
MASCOM	34
MASPRO	13
NOKIA	26, 28, 35
PACE	10, 27, 33
PANASONIC	15
PHILIPS	09, 25
RFT	12
SABA	37
SAGEM	24, 31
SALORA	11
SELECTOR	31
SKYMASTER	12, 38
THOMSON	37
TPS	24
TRIAX	32
VIDEOWAY	17, 18
WISI	07

Manufacturers' codes are subject to change without notice. If they are changed, this remote control cannot operate the equipment.

❑ To change the transmittable signals for operating an VCR

1. **Press and hold VCR ⏻/I.**
2. **Press VCR.**
3. **Enter manufacturer's code using buttons 1–9, and 0.**
4. **Release VCR ⏻/I.**

Now, you can perform the following operations on the VCR.

VCR ⏻/I	: Turn on or off the VCR.
CHANNEL +/–	: Change the channels.
1 – 10, 0, +10 (+100)	: Select the channels.
PLAY	: Start playback.
STOP	: Stop playback.
PAUSE	: Pause playback. To release it, press **PLAY**.
FF	: Fast-wind a tape.
REW	: Rewind a tape.
● REC	: • Press this button with the **PLAY** button to start recording pressed and hold. • Press this button with the **PAUSE** button to enter recording pause.

Note:

Refer to the manual supplied with your VCR.

5. **Try to operate your VCR by pressing VCR ⏻/I.**
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.

Manufacturers' codes for VCR

Manufacturer	Codes
JVC	01
AIWA	02, 20
BELL+HOWELL	03, 16
BLAUPUNKT	04
CGM	03, 05, 16
DAEWOO	34
DIGTAL	05
FISHER	03, 16
G.E.	06
GRUNDIG	07
HITACHI	08, 09
LOEWE	05, 10, 11
MAGNAVOX	04, 05
MITSUBISHI	12 – 15
NOKIA	16
NORDMENDE	17 – 19, 31
ORION	20
PANASONIC	21
PHILIPS	05, 22
PHONOLA	05
SABA	17 – 19, 23, 31
SAMSUNG	24, 25
SANYO	03, 16
SHARP	26, 27
SIEMENS	07
SONY	28 – 30, 35
TELEFUNKEN	17 – 19, 31, 32
TOSHIBA	33

❑ To change the transmittable signals for operating a TV

1. **Press and hold TV ⏻/I.**
2. **Press TV.**
3. **Enter manufacturer's code using buttons 1–9, and 0.**
4. **Release TV ⏻/I.**

Now, you can perform the following operations on the TV.

TV ⏻/I	: Turn on or off the TV.
TV VOL +/–	: Adjust the volume.
TV/VIDEO	: Set the input mode (either TV or VIDEO)
CHANNEL +/–	: Change the channels.
1 – 9, 0, +10 (+100)	: Select the channels.
RETURN (10)	: Function as the RETURN button.

Note:

Refer to the manual supplied with your TV.

5. **Try to operate your TV by pressing TV ⏻/I.**
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.

Manufacturers' codes for TV

Manufacturer	Codes
JVC	01
AKAI	02, 05
BLAUPUNKT	03
DAEWOO	10, 31, 32
FENNER	04, 31, 32
FISHER	05
GRUNDIG	06
HITACHI	07, 08
INNO-HIT	09
IRRADIO	02, 05
MAGNAVOX	10
MITSUBISHI	11, 33
MIVER	03
NOKIA	12, 34
NORDMENDE	13, 14, 18, 26 – 28
OKANO	09
ORION	15
PANASONIC	16, 17
PHILIPS	10
SABA	13, 14, 18, 26 – 28
SAMSUNG	10, 19, 32
SANYO	05
SCHNEIDER	02, 05
SHARP	20
SONY	21 – 25
TELEFUNKEN	13, 14, 18, 26 – 28
THOMSON	13, 14, 18, 26 – 28, 30
TOSHIBA	29

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 power does not comes on.	The power cord is not plugged in.	Plug the power cord into an AC outlet.
No sound from speakers.	Speaker signal cables are not connected.	Check speaker wiring and reconnect if necessary.
	An incorrect source is selected.	Select the correct source.
	Muting is activated.	Press MUTING to cancel the mute.
	An incorrect input mode (analogue or digital) is selected.	Select the correct input mode (analogue or digital).
	Connections are incorrect.	Check connections.
Sound from one speaker only.	The balance is set to one extreme.	Adjust the balance properly (see page 20).
Continuous hiss or buzzing during FM reception.	Incoming signal is too weak.	Connect an outdoor FM antenna or contact your dealer.
	The station is too far away.	Select a new station.
	An incorrect antenna is used.	Check with your dealer to be sure you have a correct antenna.
	Antennas are not connected properly.	Check connections.
Occasional cracking noise during FM reception.	Ignition noise from automobiles.	Move the antenna farther from automobile traffic.
"OVERLOAD" starts flashing on the display.	Speakers are overloaded because of high volume.	1. Press POWER on the front panel to turn off the unit. 2. Stop the playback source. 3. Turn on the unit 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 unit, then check the speaker wiring. If "OVERLOAD" does not disappear, unplug the AC power cord, then plug it back again. If speaker wiring is not short-circuited, contact your dealer.
The STANDBY lamp lights up after turning on the power, but soon the unit turns off (into standby mode).	The unit is overloaded because of a high voltage.	Press POWER on the front panel to turn off the unit. After unplugging the power cord, consult your dealer.
Remote control does not operate as you intend.	The remote control is not ready for your intended operation.	Press SOUND or source selecting buttons first, then press the button you want to use. (See pages 40 and 41.)
Remote control does not work.	There is an obstruction hiding the remote sensor on the unit.	Remove the obstruction.
	Batteries are weak.	Replace batteries.
	RDS/DVD MENU mode selector is set to the wrong position.	Set RDS/DVD MENU mode selector to the proper position.

Note:

When you use the digital coaxial connection, the sounds may be intermitted by the outside noise such as a lightning discharge but they will restore automatically. This is not a malfunction.

Specifications

Designs & specifications are subject to change without notice.

Amplifier

Output Power — At Stereo operation:

Front channels: **50 W per channel, min. RMS, Both channels driven into 8 Ω at 1kHz with no more than 0.9% total harmonic distortion. (IEC268-3/DIN)**

At Surround operation:

Front channels: 50 W per channel, min. RMS, driven into 8 Ω at 1 kHz with no more than 0.8% total harmonic distortion.

Center channel: 50 W, min. RMS, driven into 8 Ω at 1 kHz, with no more than 0.8% total harmonic distortion.

Rear channels: 50 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):	DVD, STB, VCR, TV, TAPE:		180 mV/47 kΩ
Audio Input (DIGITAL IN)* :	Coaxial:	DIGITAL 1 (DVD):	0.5 Vp-p/75 Ω
	Optical:	DIGITAL 2 (STB):	–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).		
Audio Output Level:	VCR, TV, TAPE:		180 mV
Signal-to-Noise Ratio (’66 IHF/DIN):	DVD, STB, VCR, TV, TAPE:		85 dB/62 dB
Frequency Response (8 Ω):	DVD, STB, VCR, TV, TAPE:		20 Hz to 20 kHz (±1 dB)
Tone Control:	Bass (100 Hz):	±10 dB	
	Treble (10 kHz):	±10 dB	
Bass Boost:	+6 dB ± 1 dB at 70 Hz		

Video

Video Input Sensitivity/Impedance (1 kHz):			
Composite video:	DVD, STB, VCR, TV:	1 Vp-p/75 Ω	
S-VIDEO:	DVD, STB, VCR:	(Y:luminance):	1 Vp-p/75 Ω
		(C:chrominance):	0.286 Vp-p/75 Ω
RGB:	DVD, STB, VCR:	0.7 Vp-p/75 Ω	
Video Output Level/Impedance (1 kHz):			
Composite video:	VCR, TV:	1 Vp-p/75 Ω	
S-VIDEO:	TV:	(Y:luminance):	1 Vp-p/75 Ω
		(C:chrominance):	0.286 Vp-p/75 Ω
RGB:	TV:	0.7 Vp-p/75 Ω	
Signal-to-Noise Ratio (S/N):	45 dB		
Synchronize:	Negative		

FM tuner (IHF)

Tuning Range:	87.50 MHz to 108.00 MHz	
Usable Sensitivity:	Monaural:	17.0 dBf (1.95 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:	60 dB: (±400 kHz)	
Frequency Response:	30 Hz to 15 kHz: (+0.5 dB, –3 dB)	

AM (MW/LW) tuner

Tuning Range:	MW:	522 kHz to 1 629 kHz
	LW:	144 kHz to 288 kHz
Usable Sensitivity:	Loop antenna	400 µV/m (MW)
Signal-to-Noise Ratio:		50 dB (100 mV/m)

General

Power Requirements:	AC 230V ∿, 50 Hz
Power Consumption:	110 W (at operation) 2 W (in standby mode)
Dimensions (W x H x D):	17 3/16 in. x 3 15/16 in. x 15 11/16 in. (435 mm x 100 mm x 398 mm)
Mass:	16.4 lbs (7.4 kg)

JVC

VICTOR COMPANY OF JAPAN, LIMITED