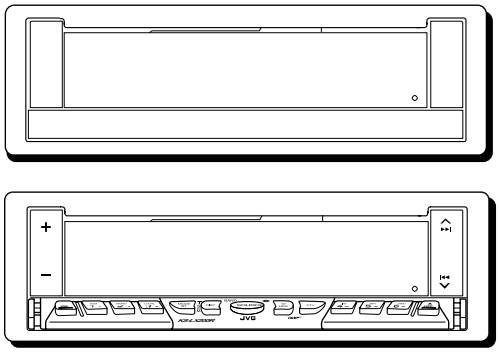
JVC

SERVICE MANUAL

CASSETTE RECEIVER

KS-LX200R



Area Suffix

E ----- Continental Europe
EX -------- Central Europe

RDS EON

BBE II

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No.49573
Oct. 2000

Safety precaution

⚠ ***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.**

Disassembly method

■ Removing the top chassis

(See Fig.1 to 5)

1. Remove the two screws **A** attaching the bottom cover to the top chassis on the bottom of the body.
2. Remove the two screws **B** attaching the top chassis on both sides of the body.
3. Remove the screw **C** and the three screws **D** attaching the heat sink on the left side of the body.
4. Remove the two screws **E** and the screw **F** on the back of the body.
5. Remove the two screws **G** on the upper side of the body.
6. Move the top chassis upward and disconnect the cassette mechanism connector from the main board connector by pulling it. Remove the top chassis from the body.

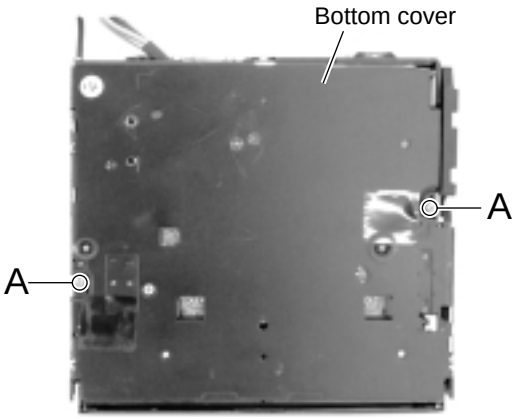


Fig.1

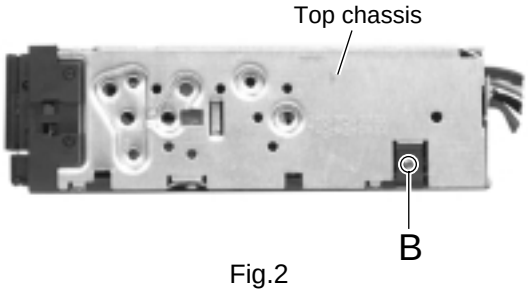


Fig.2

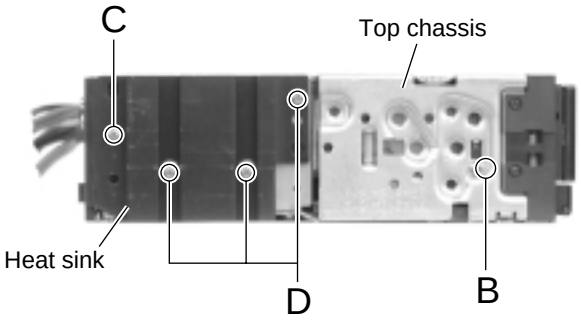


Fig.3

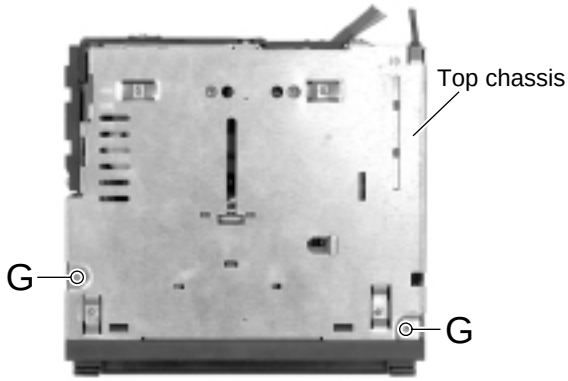


Fig.5

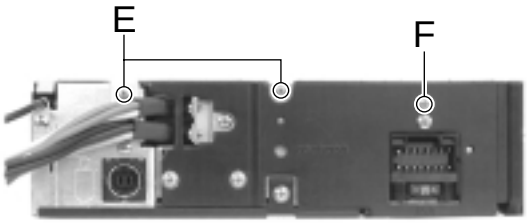


Fig.4

■ Removing the main board assembly (See Fig.6 to 8)

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

1. Remove the screw **S** attaching the bracket (L).
2. Disconnect the flexible harness from connector CN701, the card wire from CN702 on the main board and the harness from CN503 and CN504 respectively.
3. Remove the three screws **H** attaching the main board assembly to the bottom cover on the upper side of the body.
4. Remove the screw **I** attaching the rear panel and the bottom cover on the back of the body. Move the main board in the direction of the arrow and release the two joints **a**. (At this point, the main board can be removed with the rear panel and the rear heat sink.)
5. Remove the screw **J** and the two screws **K** attaching the rear heat sink on the back of the body.
6. Remove the two screws **L** and the screw **M** attaching the rear panel. Now, the main board assembly will be removed.

ATTENTION: When reassembling, correctly engage the switch S561 and S562 on the main board with the part **e** of the operation assembly (Refer to Fig.7, 18 and 19).

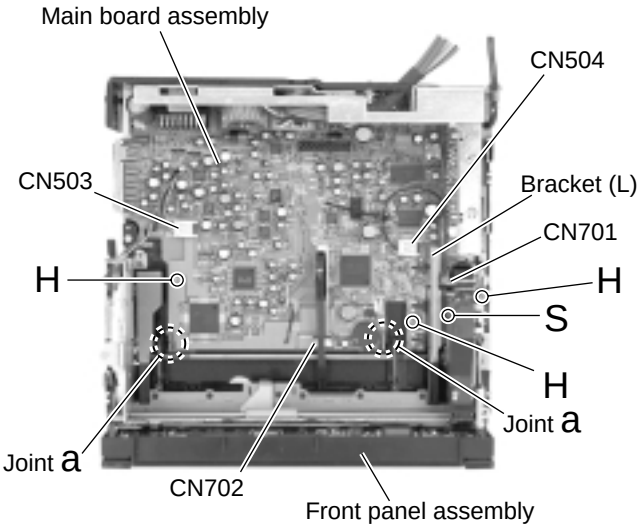


Fig.6

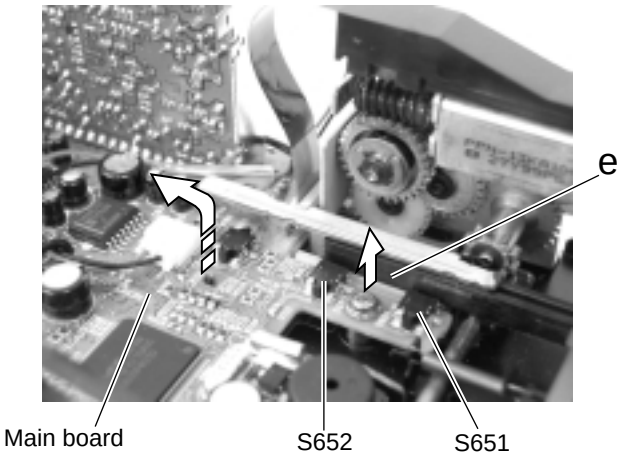


Fig.7

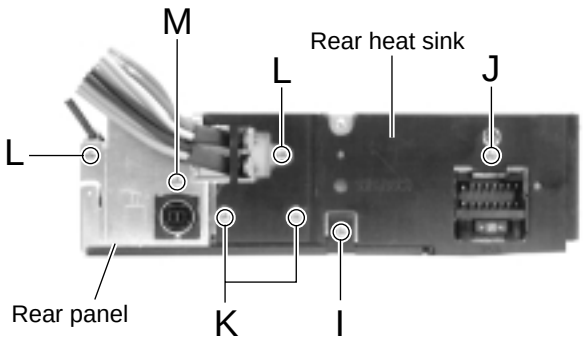


Fig.8

■ Removing the front panel assembly (See Fig.9 to 11)

・ Prior to performing the following procedure, remove the top chassis assembly.

1. Disconnect the flexible harness from connector CN701 on the main board assembly.

2. Remove the four screws **N** attaching the front panel assembly on both sides of the body. Remove the front panel toward the front.

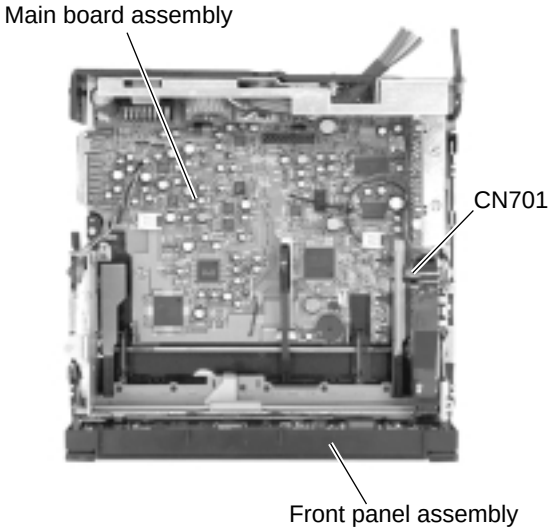


Fig.9

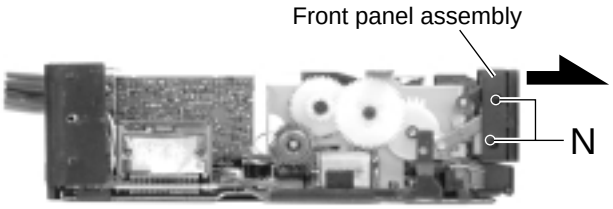


Fig.11

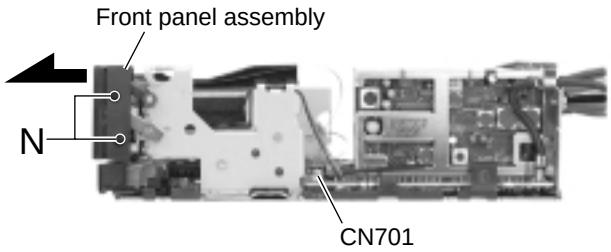


Fig.10

■ Removing the Front Board (See Fig.12)

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

1. Remove the four screws **O** attaching the front board on the back of the front panel assembly and release the eight joints **b**.

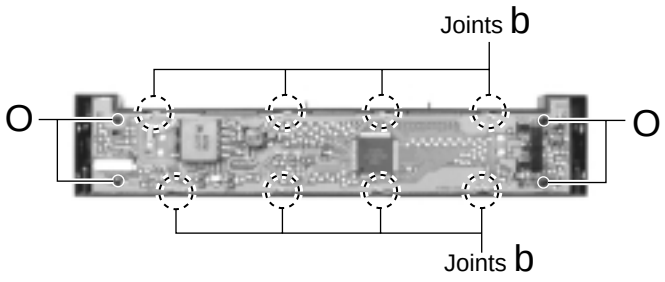


Fig.12

■ Removing the lifter unit (See Fig.13)

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

1. Disconnect the harness from connector CN503 and CN504 on the main board.

2. Remove the four screws **P** and detach the lifter unit from the bottom cover.

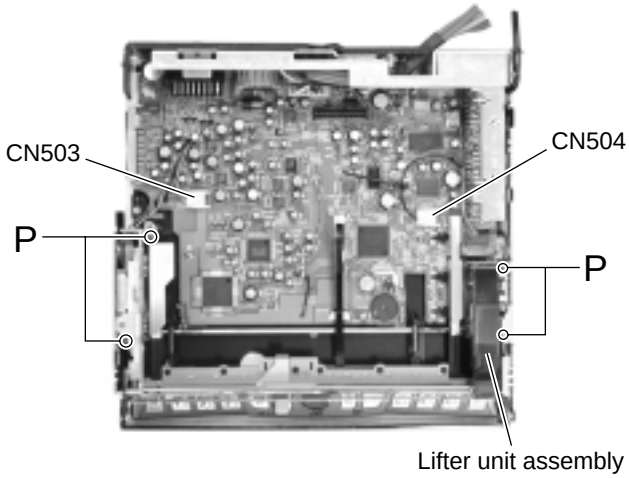


Fig.13

■ Removing the feed motor (L) (See Fig.14)

・ Prior to performing the following procedure, remove the lifter unit.

1. Remove the washer attaching the clutch assembly and detach the clutch assembly from the shaft of the lifter unit.

2. Remove the two screws **Q** attaching the feed motor (L).

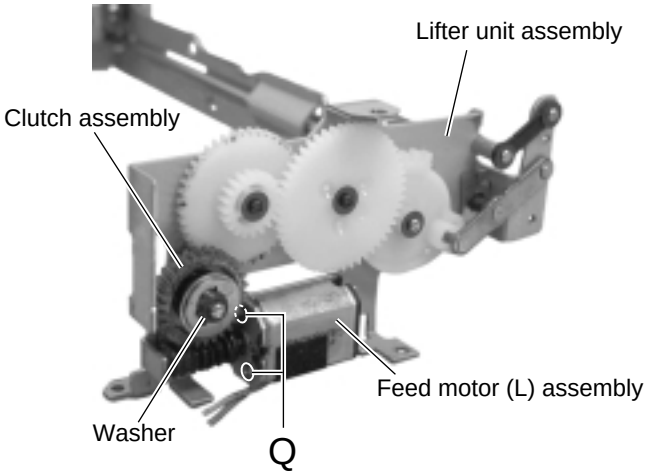


Fig.14

■ Removing the feed motor (R) (See Fig.15)

・ Prior to performing the following procedure, remove the lifter unit.

1. Remove the washer attaching the clutch assembly and detach the clutch assembly from the shaft of the lifter unit.

2. Remove the two screws **R** attaching the feed motor (R).

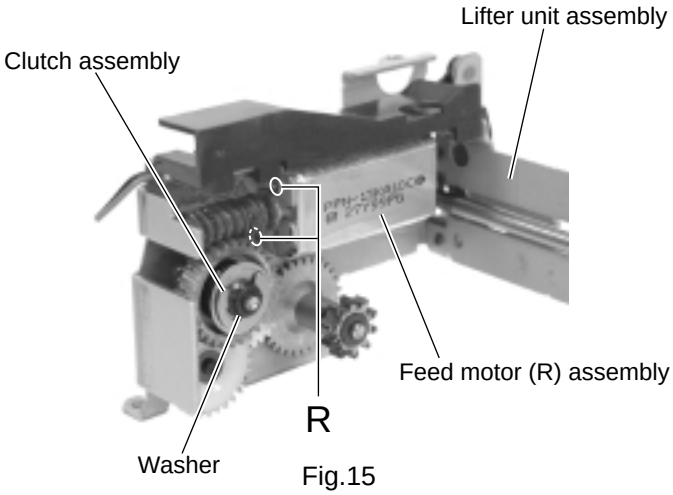


Fig.15

■ Removing the operation assembly (See Fig.16 to 19)

- Prior to performing the following procedure, remove the top chassis assembly, the front panel assembly and the lifer unit.

1. Remove the three screws **S** attaching the right and left brackets which fix gears on both sides of the operation assembly.

2. Remove the springs 5 and 6 from the operation assembly.

3. Disconnect the card wire from connector CN702 on the main board and remove the operation assembly.

ATTENTION:	When reassembling, correctly engage the switch S561 and S562 on the main board and the right gear with the part **c** of the operation assembly.

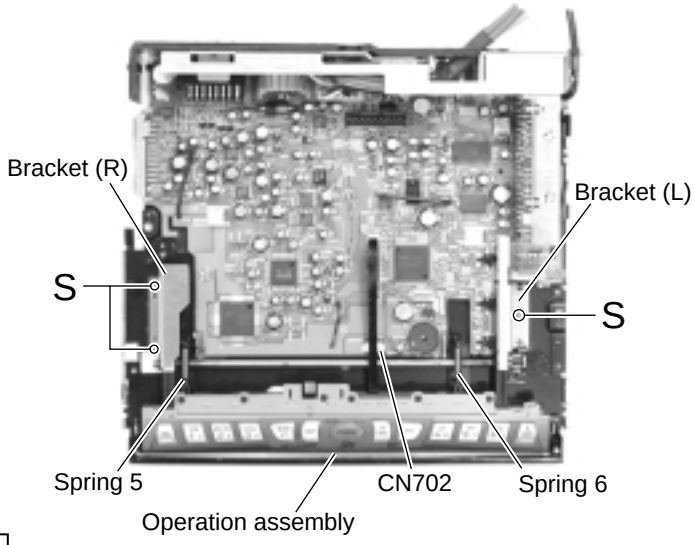


Fig.16

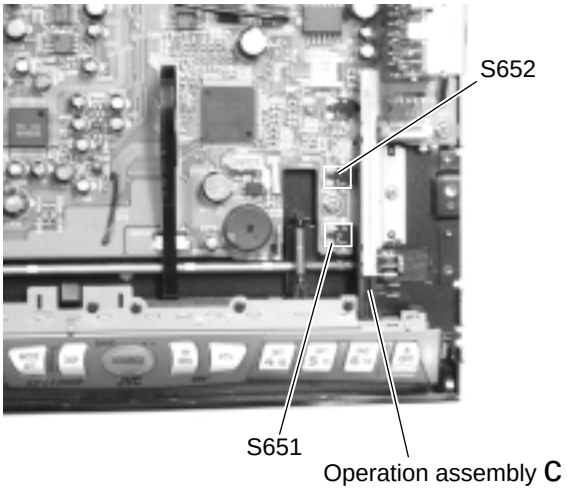


Fig.17

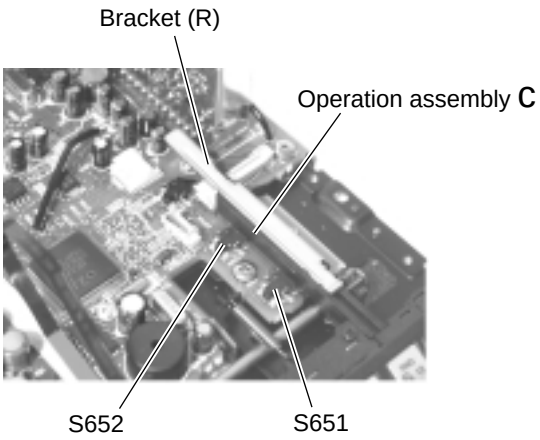


Fig.19

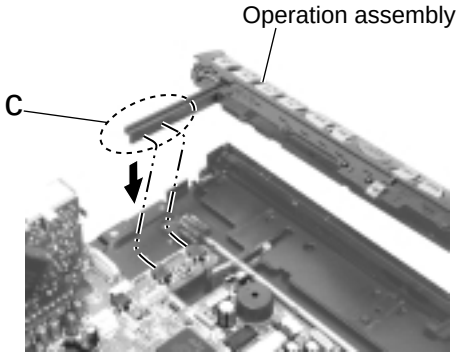


Fig.18

■ Removing the operation switch board (See Fig.20 and 21)

・ Prior to performing the following procedure, remove the operation assembly.

1. Remove the six screws **T** attaching the button panel on the operation assembly.

2. Pull out the operation switch board from inside of the button panel.

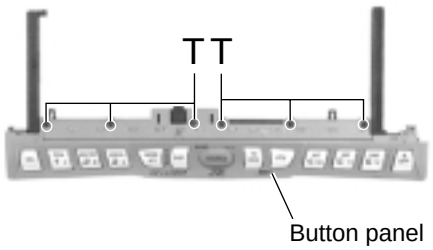


Fig.20

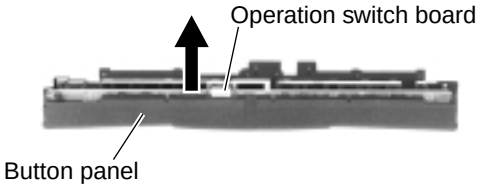


Fig.21

■ Removing the cassette mechanism assembly (See Fig.22)

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

1. Remove the four screws **U** and the cassette mechanism assembly from the top chassis.

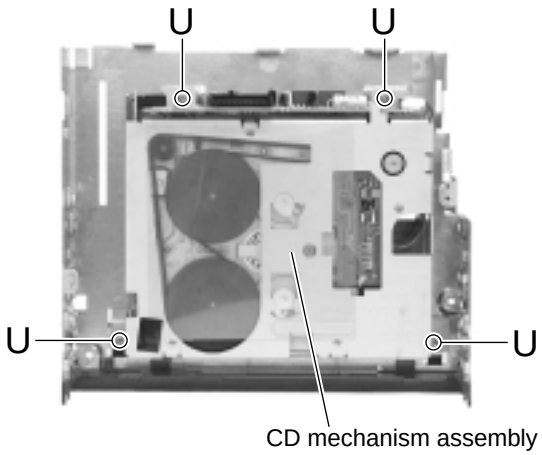


Fig.22

Disassembly method

<Cassette mechanism assembly>

■Removing the head amplifier board (See Fig.1)

1. Disconnect the wire from connector CP401 on the head amplifier board.
2. Remove the screw **A**.
3. Remove the head amplifier board in the direction of the arrow to unhook two joints **a**.
4. Disconnect connector CP402 on the head amplifier board from the connector board.

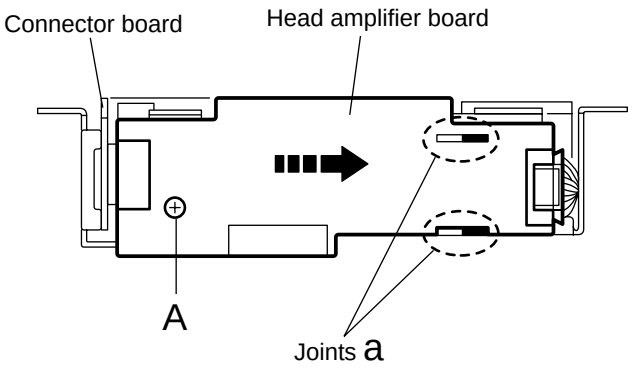


Fig.1

■Removing the mechanism bracket (See Fig.2)

・ Prior to performing the following procedure, remove the head amplifier board.

1. Remove the four screws **B** on the underside of the cassette mechanism assembly.

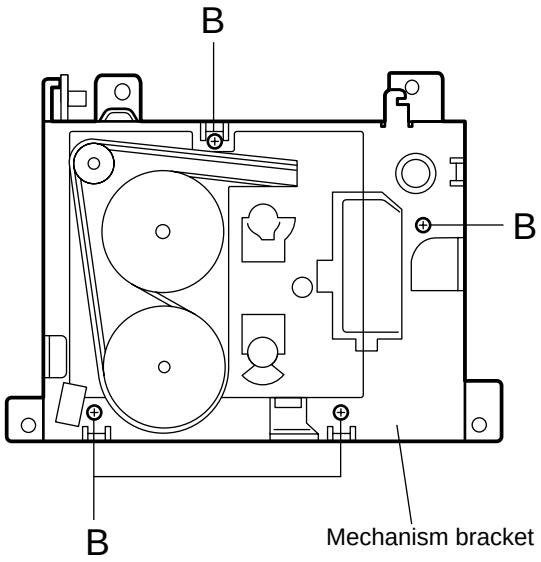


Fig.2

<Cassette mechanism>

・ Prior to performing the following procedure, remove the head amplifier board and the mechanism bracket.

■Removing the connector board (See Fig.3)

1. Unsolder soldering **b** and **c** on the connector board.
2. Remove the three screws **C**.
3. Remove the connector board in the direction of the arrow to unhook joint **d**.

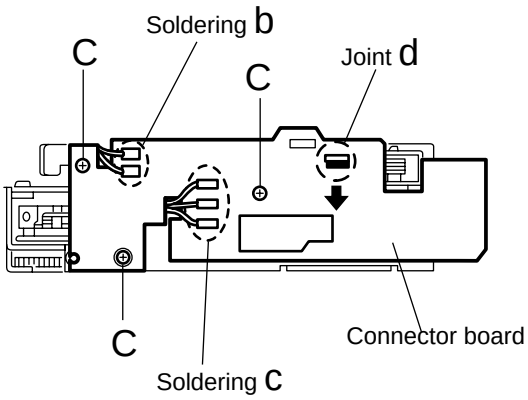


Fig.3

■Removing the load arm assembly (See Fig.4)

・Prior to performing the following procedure, remove the connector board.

1. Remove the slit washer **e** retaining the load arm assembly.
2. Remove the spring **g** in the load arm assembly marked joint **f**.
3. Draw out the load arm assembly from the shaft and rotate in the direction of the arrow to remove it from the cach.

ATTENTION: The spring **g** comes off as the load arm assembly is drawn out from the shaft.

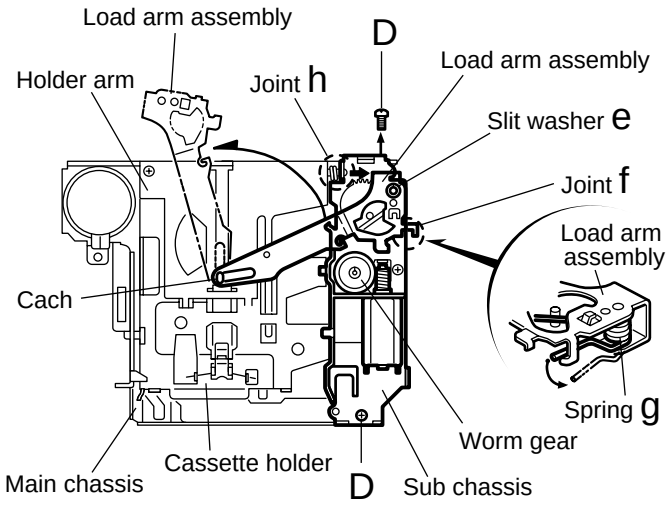


Fig.4

■Removing the sub chassis (See Fig.4)

・Prior to performing the following procedure, remove the connector board and the load arm assembly.

1. Remove the two screws **D** attaching the sub chassis.
2. Draw out the sub chassis from the holder arm shaft in the direction of the arrow (marked joint **h**). Remove the sub chassis from the main chassis upwards.

■Removing the cassette holder / holder arm (See Fig.5)

・Prior to performing the following procedure, remove the connector board and the load arm assembly.

1. Remove the screw **E** attaching the cassette holder / holder arm.
2. Draw out the holder arm shaft from the sub chassis in the direction of the arrow (marked joint **h**).
3. Disengage two joints **i** and remove the cassette holder / holder arm.

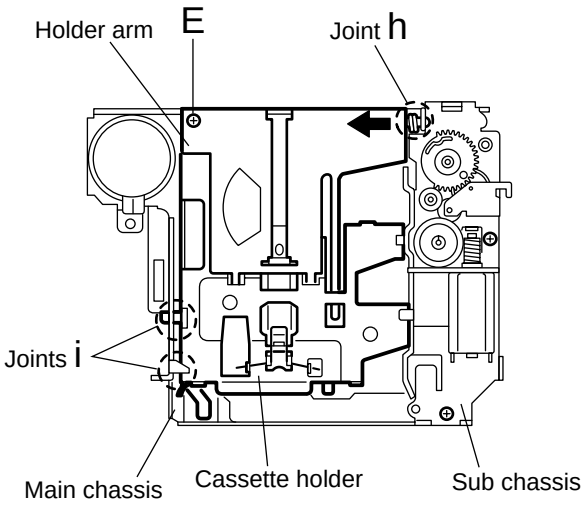


Fig.5

■Removing the sub motor

(See Fig.4 and 6)

・ Prior to performing the following procedure, remove the connector board and the load arm assembly.

1. Remove the slit washer **j** and the worm gear.
2. Remove the two screws **F**.

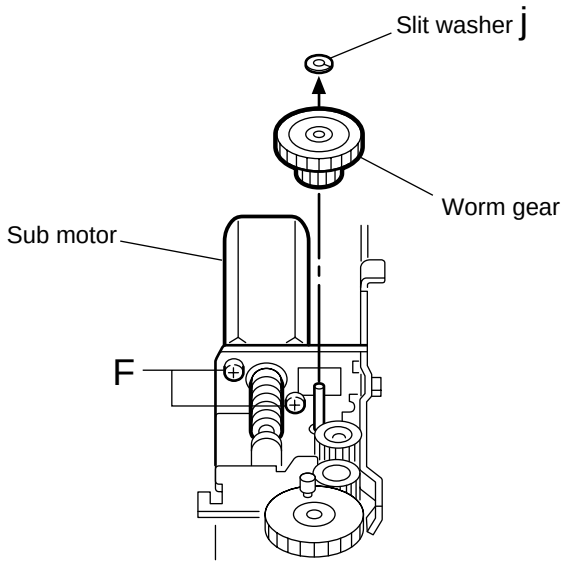


Fig.6

■Removing the play head / pinch roller assembly (twin set) (See Fig.7)

・ Prior to performing the following procedure, remove the connector board, the load arm assembly and the sub chassis.

1. Remove the spring **K** retaining the play head assembly and pull out the play head assembly.
2. Remove the two screws **G**.
3. Remove the two slit washers **l** attaching the pinch roller assembly (twin set). Pull out each pinch roller assembly.

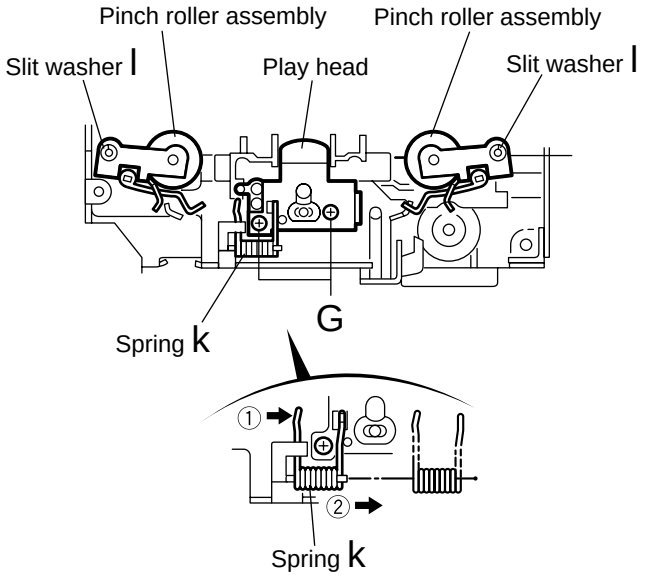


Fig.7

■Removing the reel disc assembly (twin set) (See Fig.8 to 10)

・Prior to performing the following procedure, remove the connector board, the load arm assembly, the sub chassis and the cassette holder / holder arm.

1. Remove the two slit washers **m** while pushing down the reel driver on the two reel disc assemblies.
2. Pull out the two screws **l** from the shaft with the reel driver and the spring respectively.

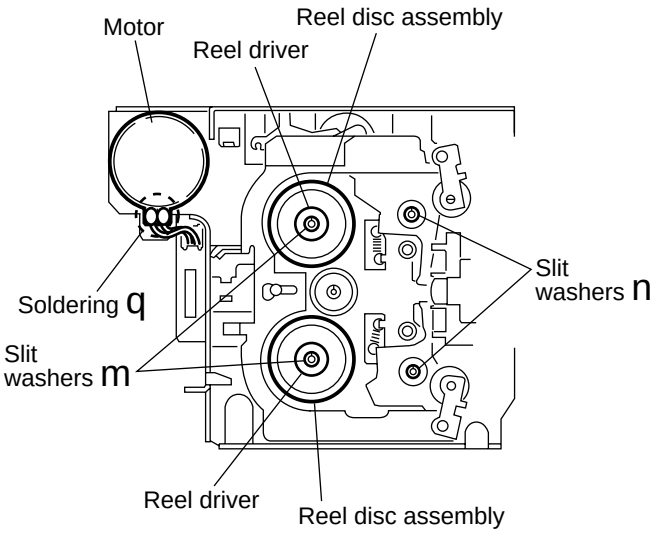


Fig.8

■Removing the flywheel assembly (F) and (R) (See Fig.8 and 11)

・Prior to performing the following procedure, remove the connector board, the load arm assembly, the sub chassis and the cassette holder / holder arm.

1. Remove the belt from the underside of the mechanism assembly.
2. Remove the two slit washers on the upper side of the mechanism assembly.
3. Pull out the flywheel assembly (F) and (R) from underside of the mechanism assembly.

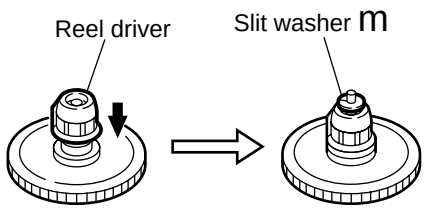


Fig.9

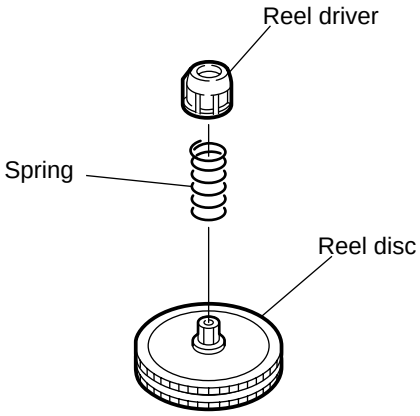


Fig.10

■Removing the reel disc board (See Fig.11)

1. From the underside of the mechanism assembly, unsolder soldering **o** on the reel disc board.
2. Unbend the joint hook **p** retaining the reel disc board.
3. Remove the screw **H**.

■Removing the motor (See Fig.8and 11)

1. Unsolder soldering **q** on the motor.
2. Remove the belt from the underside of the mechanism assembly.
3. Remove the two screws **l** from the underside of the mechanism assembly.

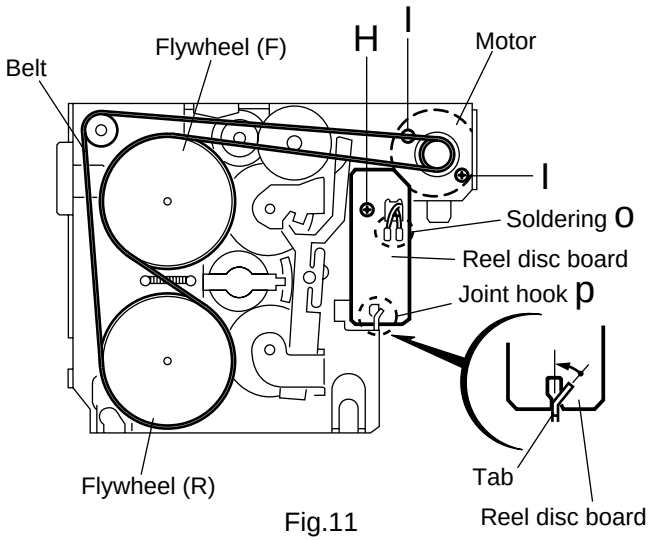


Fig.11

Adjustment method

■ Test Instruments reqired for adjustment

1.Digital osclloscope(100MHz)

2.Frequency Counter meter

3.Electric voltmeter

4.Wow & flutter meter

5.Test Tapes

VT724 ---------- for DOLBY level measurement

VT739 --------- For playback frequency measurement

VT712 ----For wow flutter & tape speed measurement

VT703 ---------- For head azimuth measurement

6.Torque gauge ---------- Cassette type for CTG-N (mechanism adjustment)

■ Measuring conditions(Amplifier section)

Power supply voltage ---------- DC14.4V(10.5~16V)

Load impedance ---------- 4Ω (2Speakers connection)

Line out ---------- 20kΩ

■ Standard volume position

Balance and Bass,Treble volume .Fader :Center(Indication"0")

Loudness,Dolby NR,Sound,Cruise:Off

Volume position is about 2V at speaker output with following conditions.Playback the test tape VT721.

AM mode	999kHz/62dB,INT/400Hz,30% modulation signal on receiving.
FM mono mode	97.9MHz/66dB,INT/400Hz,22.5kHz deviation pilot off mono.
FM stereo mode	1kHz,67.5kHz dev. pilot7.5kHz dev.
Output level	0dB(1μV,50 Ω/open terminal).

■ Tuner section

BAND STEP

FM : 100kHz (Seek), 50kHz (Manual)

AM : 9kHz step

■ Preset Memory Initialization

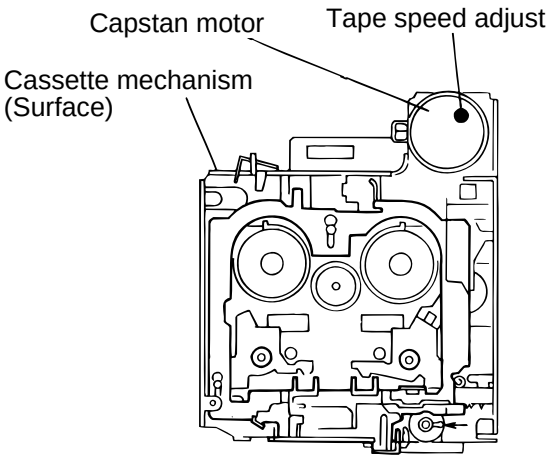
Band	Preset Memory					
	M1	M2	M3	M4	M5	M6
FM(MHz)	87.5	89.9	97.9	105.9	108.0	87.5
AM(kHz)	153	216	603	999	1404	1620

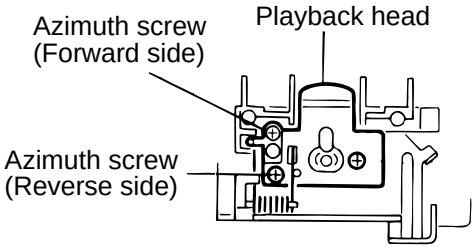
DUMMY LOAD

Exclusive dummy load should be used for AM and FM dummy load,there is a loss of 6dB between SSG output and antenna input. The loss of 6dB need not be considered since direct reading of figures are applied in this working standard.

■ Arrangement of Adjusting

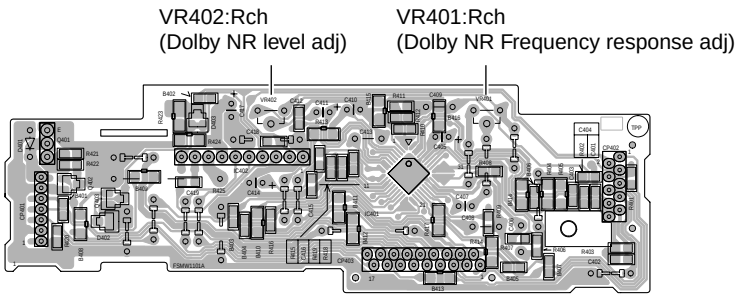
Cassette Mechanism Section





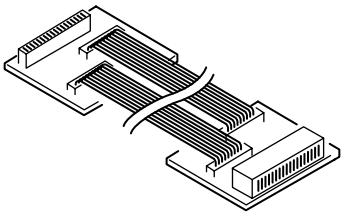
■ Arrangment of adjusting

Head amplifier board section (Reverse side)



■ Information for using a Car Stereo service jig (for adjustment and checking)

- We are advancing efforts to make our extension cords comman for all Car Stereo products. Please use this type of extension cord as follows.
- As a U -shape type top cover is employed,this type of extension cord needed to check operation of the mechanism assembly after disassembly.
- Extension cords



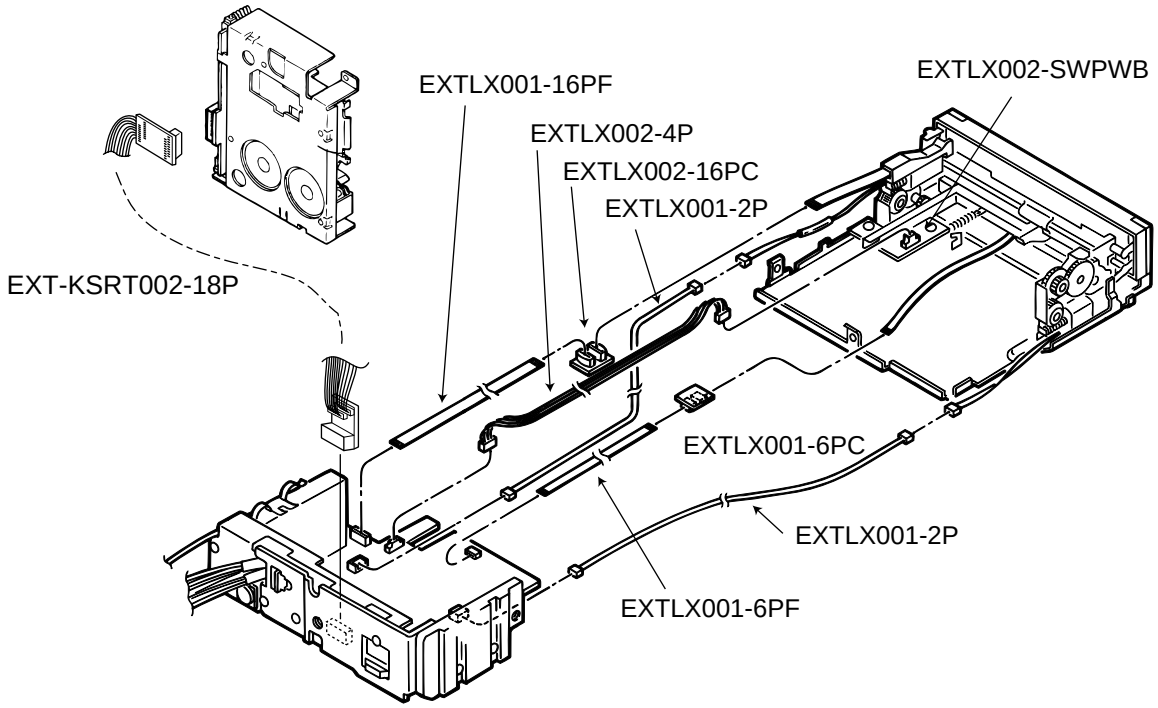
EXT-KSRT002-18P(18 pin extension cord)

For connection between mechanism assembly
and main board assembly.
Check for mechanism-driving section such as moter ,etc.

- Disassembly method. (Refer to mthod to remove main parts)

1.Remove the bottom cover.
2.Remove the front panel assembly.
3.Remove the top cover. (Remove the screws at each side of heat sink and rear panel)
4.Install the front panel (whose assembly was removed in step 2) to the main unit.
5.Confirm that current is being is carried by connecting an extension cord jig.

- Connection diagram

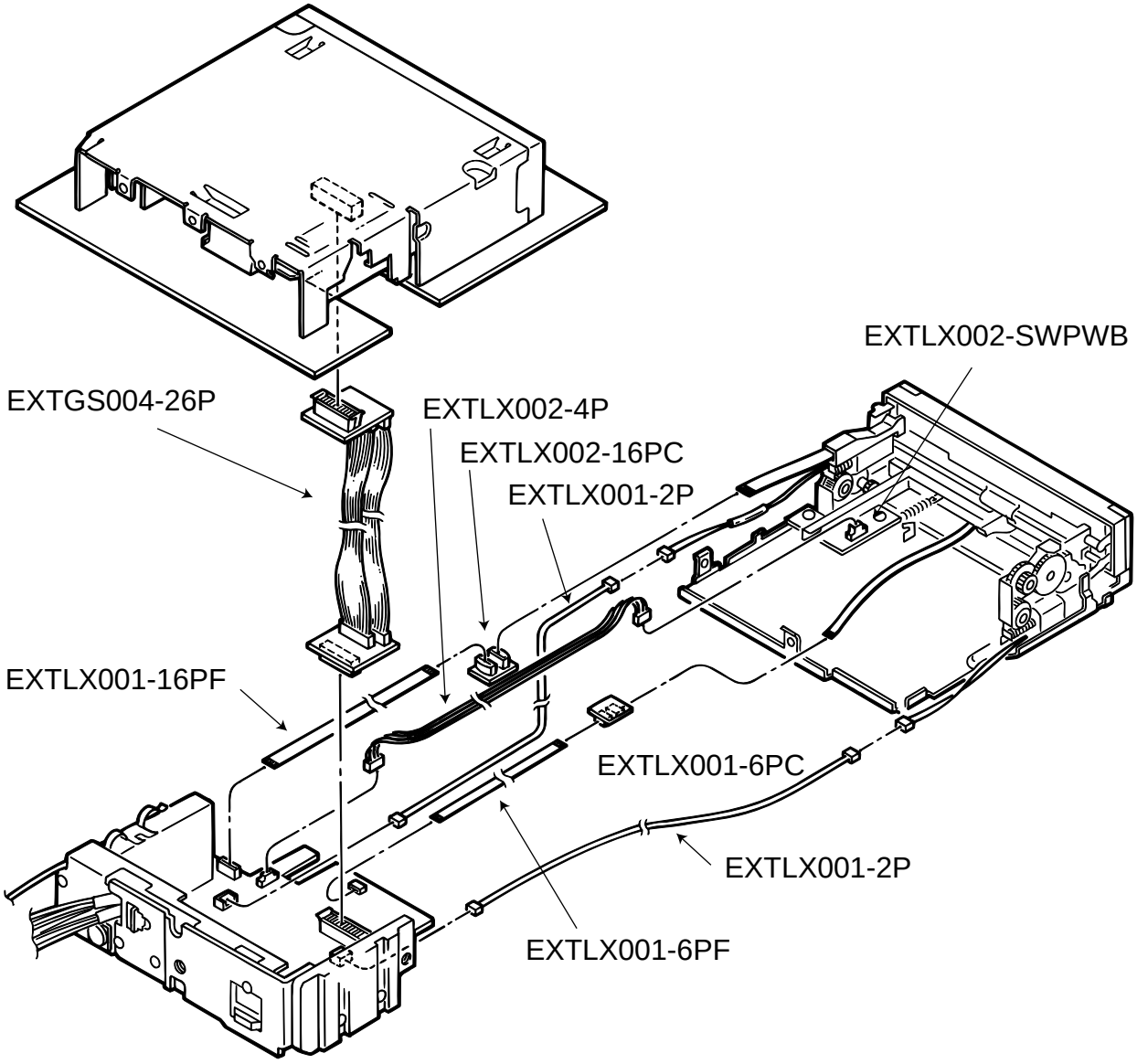


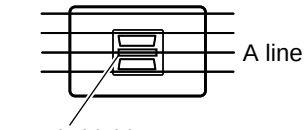
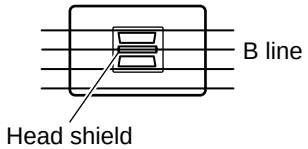
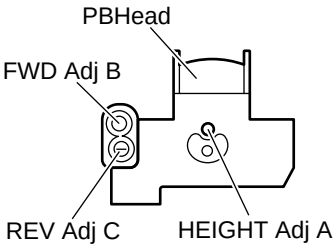
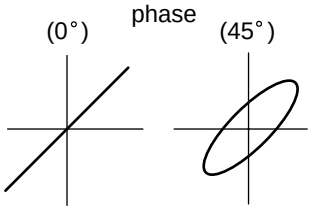
■ Extension cord list

EXTLX002-JIG : Kit including the following 8 extension parts.

No.	Parts number	Quantity	Description
1	EXTLX001-2P	2	2Pin, 30cm extension cord
2	EXTLX001-6PF	1	6Pin, 30cm flat wire
3	EXTLX001-6PC	1	6Pin x 2, interlocking connector
4	EXTLX002-16PF	1	16Pin flat wire
5	EXTLX002-16PC	1	16Pin, interlocking connector
6	EXTLX002-SWPWB	1	3 switch PWB
7	EXTLX002-4P	1	4Pin, 30cm extension cord

Besides the above kit, we offer the conventional extension cord for CASSETTE mechanism which are not essential to operation check or service.
The mechanism should be directly connected to the board using the extension wire.
EXT-KSRT002-18P



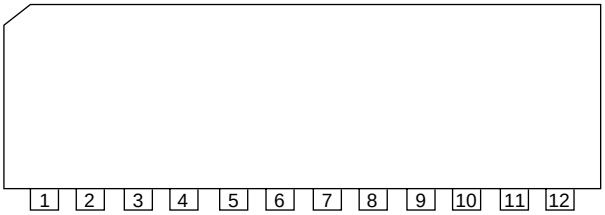
Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
1. Head azimuth adjustment	Test tape: SCC-1659 VT703(10kHz)	◆ Head height adjustment ※ Adjust the azimuth directly. When you adjust the height using a mirror tape, remove the cassette housing from the mechanism chassis. After installing the cassette housing, perform the azimuth adjustment. 1. Load the SCC-1659 mirror tape. Adjust with height adjustment screw A and azimuth adjustment screw B so that line A of the mirror tape runs in the center between Lch and Rch in the reverse play mode. 2. After switching from REV to FWD then to REV, check that the head position set in procedure 1 is not changed. (If the position has shifted, adjust again and check.) 3. Adjust with azimuth adjustment screw B so that line B of the mirror tape runs in the center between Lch and Rch in the forward play mode. ◆ Head azimuth adjustment 1. Load VTT724 (VT724) (1kHz) and play it back in the reverse play mode. Set the Rch output level to max. 2. Load VTT703 (VT703) (10kHz) and play it back in the forward play mode. Adjust the Rch and Lch output levels to max, with azimuth adjustment screw B. In this case, the phase difference should be within 45°. 3. Engage the reverse mode and adjust the output level to max, with azimuth adjustment screw C. (The phase difference should be 45° or more.) 4. When switching between forward and reverse modes, the difference between channels should be within 3dB. (Between FWD L and R, REV L and R.) 5. When VTT721 (VT721) (315Hz) is played back, the level difference between channels should be within 1.5dB.	 Head shield The head is at low position during.  Head shield The head is at High position during REV. Output level: Maximum   	
2. Tape speed and wow flutter confirmation	Test tape: VTT712 (3kHz)	1. Check to see if the reading of the F, counter / wow flutter meter is within 3015～3045(FWD / REV), and less than 0.35% (JIS RMS). 2. In case of out of specification, adjust the motor with a built-in volume resistor.	Tape speed: 3015 ～3045Hz Wow flutter: less than 0.35%	Built-in volume resistor
3. Play back frequency response confiramation	Test tape: VTT724 (1kHz) VTT739 (63Hz / 1kHz / 10kHz)	1. Play test tape VTT724, and set the volume position at 2V. 2. Play test tape VTT739 and confirm. 1kHz / 10kHz: -1 ± 3dB, 1kHz / 63Hz: 0 ± 3dB, 3. When 10kHz is out of specification, it will be necessary to read adjust the azimuth.	Speaker out 1kHz / 63Hz : 0± 3db 1kHz / 10kHz : -1± 3db	

The tuner section is of an adjustment-freedesign. In case the tuner is in trouble, replace the tuner pack.

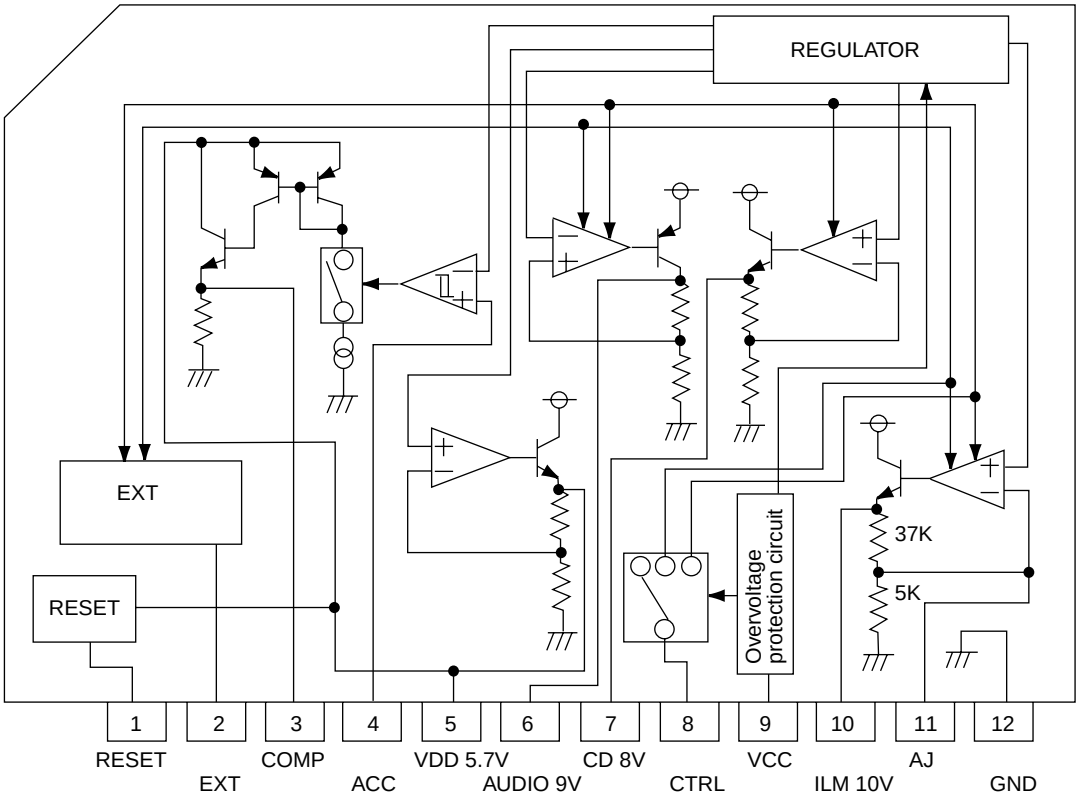
Description of major ICs

■ BA4905-V3 (IC961) : Regulator

1.Pin layout



2.Block diagram

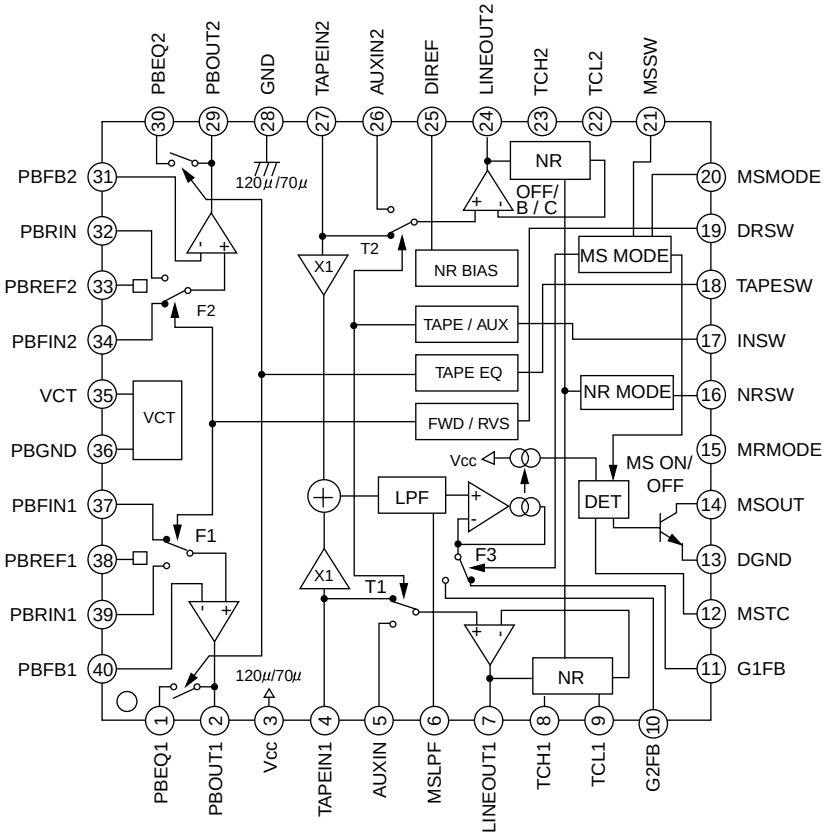


3.Pin function

Pin no.	Symbol	Function
1	RESET	If VDD voltage becomes 4V or less.RESET output becomes low level.
2	EXT output	This output voltage is approximately 0.5V lower than VCC. and max output current is 300mA.
3	COMP output	A voltage supply for ACC block. This output voltage is approximately 0.7V lower than VDD'S. The max output current is 100mA.
4	ACC	Control of the COMP output by inputting voltage.
5	VDD output	This output voltage is 5.7V, and max output current is 100mA. This voltage supply is for microcomputer. Whenever back up voltage supply is connected, the output keeps on running.
6	AUDIO output	This output voltage is 9.0v, and max output current is 500mA. This voltage supply for AUDIO.
7	CD output	This output voltage is 8.0V, and max output current is 1A. This voltage supply for CD.
8	CTRL	Output selector of CD. AUDIO, ILM and EXT.
9	VCC	To be connected with the BACK UP of car.
10	ILM output	This output voltage is 10V, and max output current is 500mA. Output voltage is adjustable.
11	AJ	Putting a resistance between ILM and AJ or between AJ and GND makes ILM output voltage adjustable.
12	GND	Ground.

■ CXA2510AQ (IC401) : Head AMP / Dolby

1. Pin layout & Block diagram

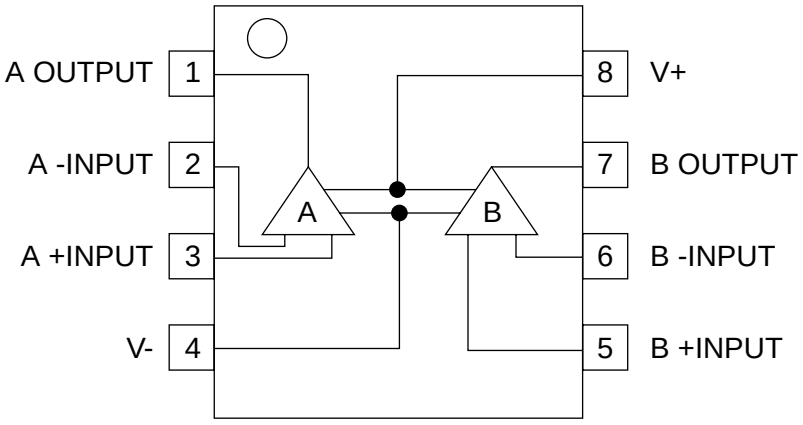


2. Pin functions

Pin No.	Symbol	I/O	Functions
1	PBEQ1	O	Resistance for selecting the equalizer amplifier time constant.
2	PBOUT1	O	Playback equalizer amplifier out put.
3	Vcc	-	Power supply
4	TAPEIN1	I	TAPE input.
5	AUXIN1	I	External input.
6	MSLPF	-	Cut-off frequency adjustment of the music sensor LPF.
7	LINEOUT1	O	Line out.
8	TCH1	-	Time constant for the HLS.
9	NC	-	Non connection.
10	G2FB	-	Music signal interval detection level setting.
11	G1FB		
12	MSTC		Time constant for detecting the music signal interval.
13	DGND	-	Logic ground (Connect to GND)
14	MSUOT	O	Music sensor output.
15	NC	I	Non connection.

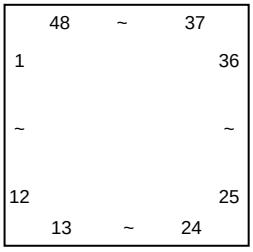
Pin No.	Symbol	I/O	Functions
16	NRSW	I	Dolby NR control L:NR OFF H:NR ON
17	INSW	I	Line amplifier input select control L:TAPE IN H:AUX IN
18	METAL	I	Playback equalizer amplifier control L:120us H:70us
19	DRSW	I	Head select control L:FORWARD H:REVERSE
20	FF/REW	I	Music sensor mode control Low(open):G1 High:G2
21	MSSW	I	Music sensor control Low(open):MS on High:MS OFF
22	NC	-	Non connection
23	TCH2	-	Time constant for the HLS
24	LINEOUT2	O	Line output
25	DIREF	-	Resistance for setting the reference current (Connects 20(18)KΩ between DIREF pin and GND for the standard setting.)
26	NC	-	Non connection.
27	TAPEIN2	I	TAPE input.
28	GND	-	To ground.
29	PBOUT2	O	Playback equalizer amplifier output.
30	PBEQ2	O	Resistance for selecting the playback equalizer amplifier time constant
31	PBFB2	I	Playback equalizer amplifier feedback.
32	NC	-	Non connection.
33	PBREF2	O	Playback equalizer amplifier reference (Vcc/2 output)
34	PBFIN2	I	Playback equalizer amplifier input (FORWARD head connected)
35	VCT	O	Center (Vcc/2 output)
36	PBGND	-	Playback equalizer amplifier ground (Connect to ground)
37	PBFIN1	I	Playback equalizer amplifier input (FORWARD head connected)
38	PBREF1	O	Playback equalizer amplifier reference (Vcc/2 output)
39	NC	-	Non connection.
40	PBFB1	I	Playback equalizer amplifier feedback.

■ NJM4565M-W (IC951,IC171,IC323) : Ope amp.

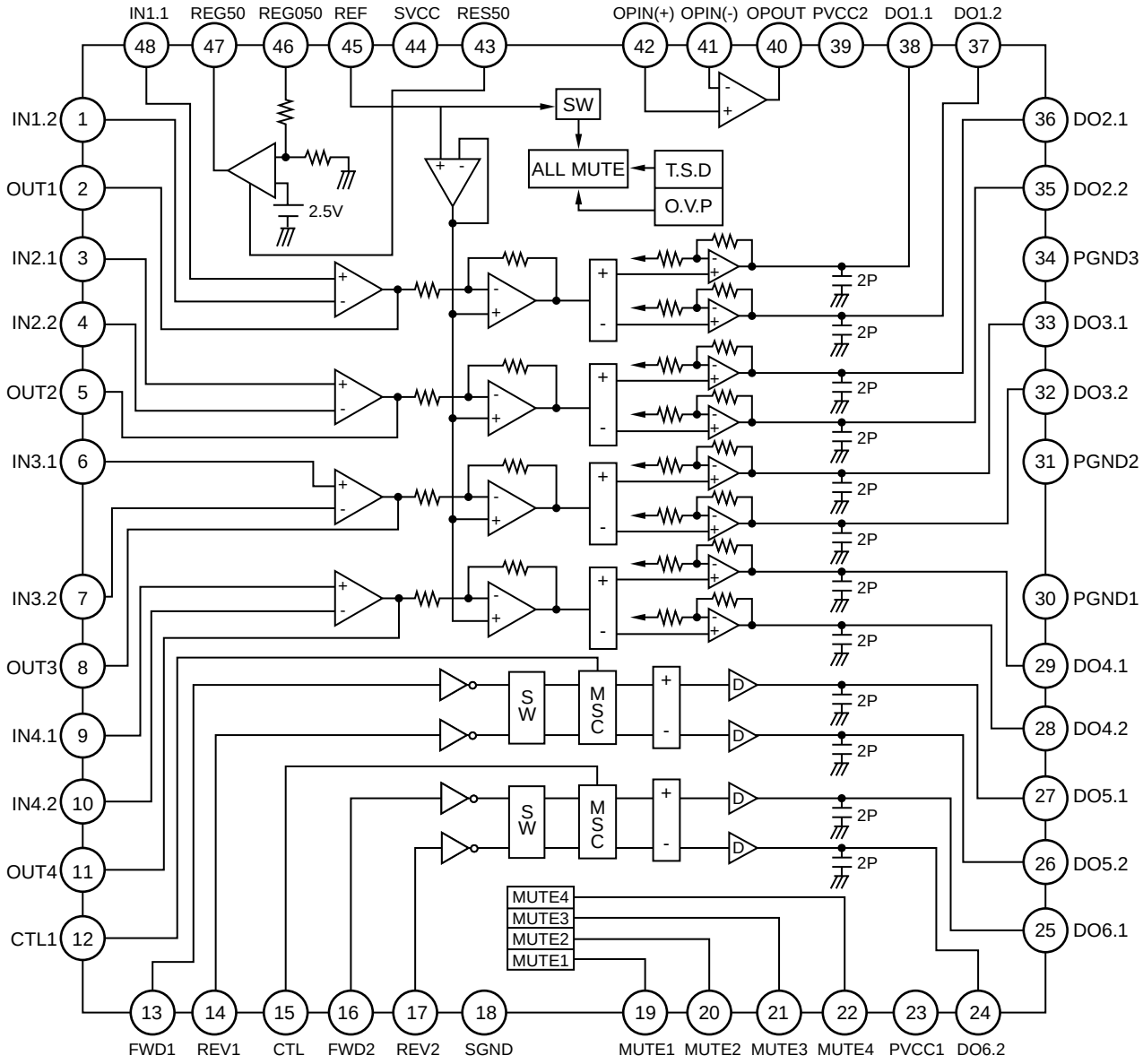


■ KA3031 (IC831) : Motor driver

1. Pin layout



2. Block diagram

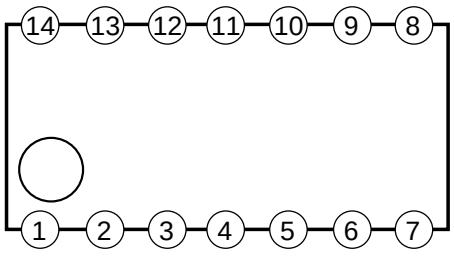


3. Pin function

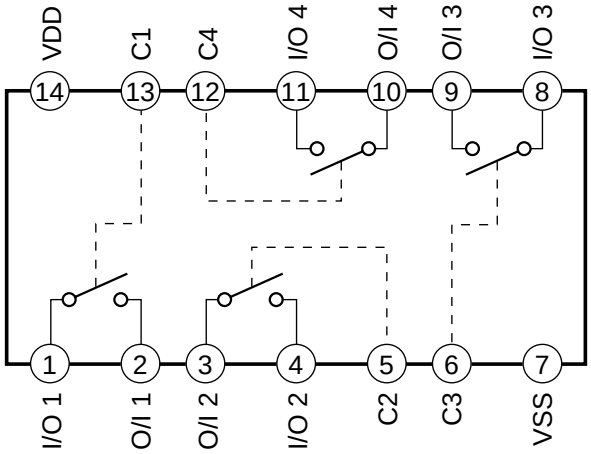
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	IN1.2	I	CH 1 op-amp input (-)	25	DO6.1	O	CH 6 drive outout
2	OUT1	O	CH 1 op-amp output	26	DO5.2	O	CH 5 drive output
3	IN2.1	I	CH 2 op-amp input (+)	27	DO5.1	O	CH 5 drive output
4	IN2.2	I	CH 2 op-amp input (-)	28	SO4.2	O	CH 4 drive output
5	OUT2	O	CH 2 op-amp output	29	DO4.1	O	CH 4 drive output
6	IN3.1	I	CH 3 op-amp input (+)	30	PGND		Power ground
7	IN3.2	I	CH 3 op-amp input (-)	31	PGND	-	Power ground
8	OUT3	O	CH 3 op-amp output	32	DO3.2	O	CH 3 drive output
9	IN4.1	I	CH 4 op-amp input(+)	33	DO3.1	O	CH 3 drive output
10	IN4.2	I	CH 4 op-amp input (-)	34	PGND		Power ground
11	OUT4	O	CH 4 op-amp output	35	DO2.2	O	CH 2 drive output
12	CTL1	I	CH 5 motor speed control	36	SO2.1	O	CH 2 drive output
13	FWD1	I	CH 5 forward input	37	SO1.2	O	CH 1 drive output
14	REW1	I	CH 5 reverse input	38	DO1.1	O	CH 1 drive output
15	CTL2	I	CH 6 motor speed control	39	PVCC2	-	Power supply voltage (For CH 1, CH 2, CH 3, CH 4)
16	FED2	I	CH 6 torward input	40	OPOUT	O	Opamp output
17	REW2	I	CH 6 reverse input	41	OPIN(-)	I	Opamp input (-)
18	SGND	-	Signal ground	42	OPIN(+)	I	Opamp input (+)
19	MUTE1	I	CH 1 mute	43	RES50	I	Regulator 5V reset
20	MUTE2	I	CH 2 mute	44	SVCC	-	Signal supply voltage
21	MUTE3	I	CH 3 mute	45	REF	I	Bias voltage input
22	MUTE4	I	CH 4 mute	46	REG050	O	regulator 5V output
23	PVCC1	-	Power supply voltage (For CH 5, CH 6)	47	REG50	O	Regulator output
24	DO6.2	O	CH 6 drive output	48	IN1.1	I	CH 1 opamp onput (+)

■ BU4066BCF-X (IC322) : Switch

1.Pin l ayout

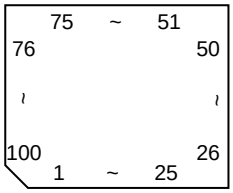


2.Block diagram



■ UPD784215AGC113 (IC701) : UNIT CPU

1.Pin layout



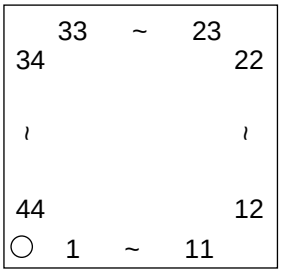
2.Pin function

Pin No.	Symbol	I/O	Function
1	FF/REW	O	Output for input signal level switching for MS.
2	DOLBY	O	Dolby on "H" output.
3	MS-OUT	O	MS output.
4	F/R	I	Fwd, REV direction switch signal input.
5	HOLD	-	Non connect
6	TRAYCNT	O	Tray light control signal output.
7	DIMMER-OUT	O	Dimmer signal output.
8	LCD-POWER	-	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	RESET	I	System reset signal input.
16	SW1	I	Cassette mechanism detect switch.
17	BUS-IN	I	J-BUS signal cut in input.
18	PS2	I	Power save 2.
19	CURUISE	I	CRUISE signal input.
20	RDS-SCK	I	RDS selial clock input.
21	RDS-DA	I	RDS data input.
22	REMOCON	I	Remove control signal input.
23	AVDD	-	Power supply terminal.
24	AVREF0	-	Connect to GND.
25	NC	-	Connect to GND.
26	NC	-	Connect to GND.
27	KEY0	I	Key control 0 input.
28	KEY1	I	Key control 1 input.
29	KEY2	I	Key control 2 input.
30	LEVEL	I	Level meter signal input.
31	SQ	I	S.quality level input.
32	S.METER	I	S.meter level input.
33	AVSS	-	Connect to GND.
34	W-VOL	O	Woofer volume signal output.
35	DOT CONT	O	Dot contrast signal input.
36	AVREF	-	Power supply terminal.
37	BUS-SI	I/O	J-BUS data I/O terminal.
38	BUS-SO	O	J-BUS data output.
39	BUS-SCK	I/O	J-BUS serial clock signal I/O.
40	STAGE2	I	Initial setting.
41	LCD-DA	O	Data output for LCD driver.
42	LCD-CL	O	Clock otput for LCD driver.
43	LCD-LEI	O	Chip enable 1 output for LCD driver.
44	BUZZER	O	BUZZER control signal output.
45	E2PR-DA-I	I	Data input terminal from EEPROM.
46	E2PR-DA-O	O	Data output terminal from EEPROM.
47	E2PR-CLK	I/O	Data input terminal from EEPROM.
48	BUS-I/O	I/O	J-BUS I/O signal terminal.
49	TM0	O	Tray motor negative signal output.
50	TM1	O	Tray motor positive signal output.

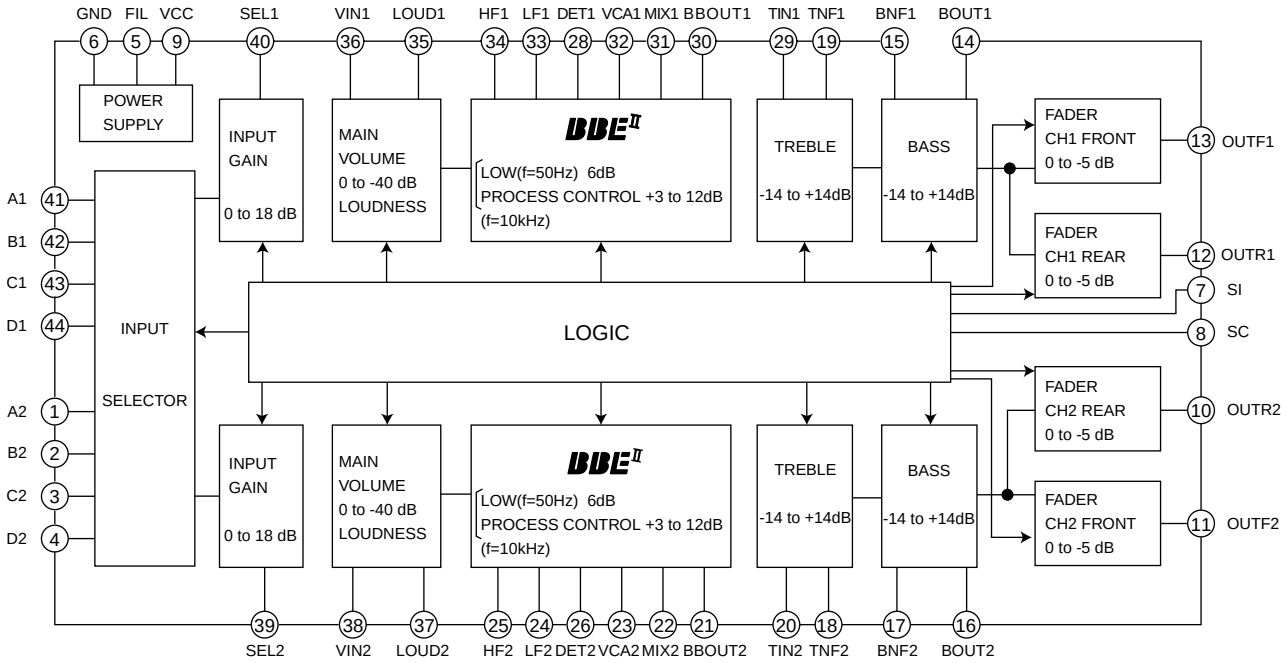
Pin No.	Symbol	I/O	Function
51	DM0	O	Door motor negative signal output.
52	DM1	O	Door motor positive signal output.
53	ST	I	Stereo signal input.
54	LOCAL	-	Non connect.
55	MONO	O	Manual ON/OFF select signal output.
56	CA-SW1	I	DOOR/TRAY open/close detect switch signal input.
57	CA-SW2	I	DOOR/TRAY open/close detect switch signal input.
58	CA-SW3	I	DOOR/TRAY open/close detect switch signal input.
59	CA-SW4	I	DOOR/TRAY open/close detect switch signal input.
60	CA-SW5	I	DOOR/TRAY open/close detect switch signal input.
61	VCR-CONT	-	Non connect.
62	AFCK	O	AF check output.
63	SEEK/STOP	O	AUTO SEEK/STOP select signal output.
64	SD	I	Station detector input.
65	FM/AM	O	FM/AM select signal output.
66	PLL-CE	O	Chip enable signal output.
67	PLL-DA	O	Data output.
68	PLL-CK	O	Clock signal output.
69	BAND IN	I	AM detect signal input.
70	TEL-MUTE	I	Telephone.
71	AMP KILL	-	Non connect.
72	VSS	-	Connect to GND
73	DIMMER-IN	I	DIMMER signal input.
74	DSI	I	Power save 1.
75	POWER	O	Power ON/OFF select signal output.
76	CD-ON	-	Non connect.
77	MUTE	O	Mute signal output.
78	W-LPF1	O	Woofer LPF 1 signal output.
79	W-LPF2	O	Woofer LPF 2 signal output.
80	W-MUTE	O	Woofer mute signal output.
81	VDD	-	Power supply.
82	VOL-DA	O	Data output.
83	VOL-CLK	O	Clock signal output.
84	CF-SEL	I	CF select signal input.
85	NC	-	Non connect.
86	LCD RST	O	LCD reset signal output.
87	LCD-CE2	O	Chip enable 2 output.
88	DMK	O	Motor speed control signal output.
89	TMK	O	Tray motor control signal output.
90	STAGE1	I	Initial setting.
91	MOTOR	O	Mecha Motor signal output.
92	MODE	I	Mecha mode position detection input.
93	STANDBY	I	Standby position derection input.
94	TEST	I	Test terminal
95	TAPE-IN	O	Cassette in detection input.
96	SUBMO-	O	Sub motor clock direction drive output.
97	SUBMO+		Sub motor clock opposite direction drive output.
98	TAPE-END	I	Tape end detection input.
99	KICK	O	Kick output.
100	VOICE IN	I	Voice control signal input.

■ BD3860K (IC911) : E. volume

1. Pin layout



2. Block diagram

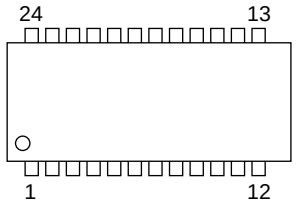


3. Pin function

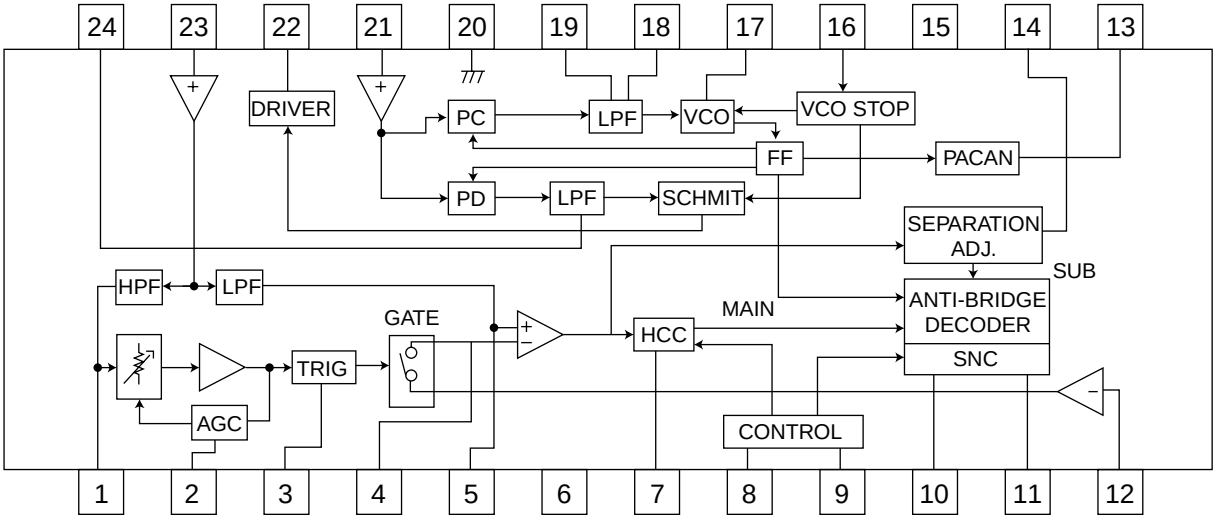
Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	A2	CH2 input terminal A	23	VCA2	CH2 high frequency VCA output terminal
2	B2	CH2 input terminal B	24	LF2	CH2 low frequency filter setting terminal
3	C2	CH2 input terminal C	25	HF2	CH2 high frequency filter setting terminal
4	D2	CH2 input terminal D	26	DET2	CH2 high frequency attack release time setting
5	FIL	1/2 VCC terminal	27	NC	Non connect
6	GND	Ground terminal	28	DET1	CH1 high frequency attack release time setting
7	SI	Serial data input terminal	29	TIN1	CH1 treble input terminal
8	SC	Serial clock input terminal	30	BBOUT1	CH1 BBE II signal output terminal
9	VCC	Power supply	31	MIX1	CH1 output mix amp. negative input terminal
10	OUTR2	CH2 rear output terminal	32	VCA1	CH1 high frequency VCA output terminal
11	OUTF2	CH2 front output terminal	33	LF1	CH1 low frequency filter setting terminal
12	OUTR1	CH1 rear output terminal	34	HF1	CH1 high frequency filter setting terminal
13	OUTF1	CH1 front output terminal	35	LOUD1	CH1 loudness filter setting terminal
14	BOUT1	CH1 bus filter setting terminal	36	VIN1	CH1 main volume input terminal
15	BNF1	CH1 bus filter setting terminal	37	LOUD2	CH2 loudness filter setting terminal
16	BOUT2	CH2 bus filter setting terminal	38	VIN2	CH2 main volume input terminal
17	BNF2	CH2 bus filter setting terminal	39	SEL2	CH2 input gain output terminal
18	TNF2	CH2 treble filter setting terminal	40	SEL1	CH1 input gain output terminal
19	TNF1	CH1 treble setting terminal	41	A1	CH1 input terminal A
20	TIN2	CH2 treble input terminal	42	B1	CH1 input terminal B
21	BBOUT2	CH2 BBE II signal output terminal	43	C1	CH1 input terminal C
22	MIX2	CH2 output mix amp negative input terminal	44	D1	CH1 input terminal D

■ LA3460M-X (IC31) : FM noise canceller & Stereo MPX demodulator

1. Pin layout



2. Block diagram

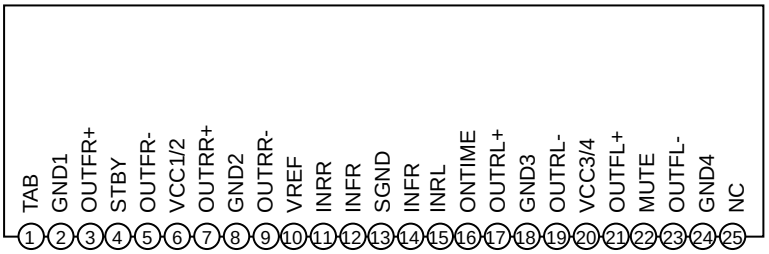


3. Pin function

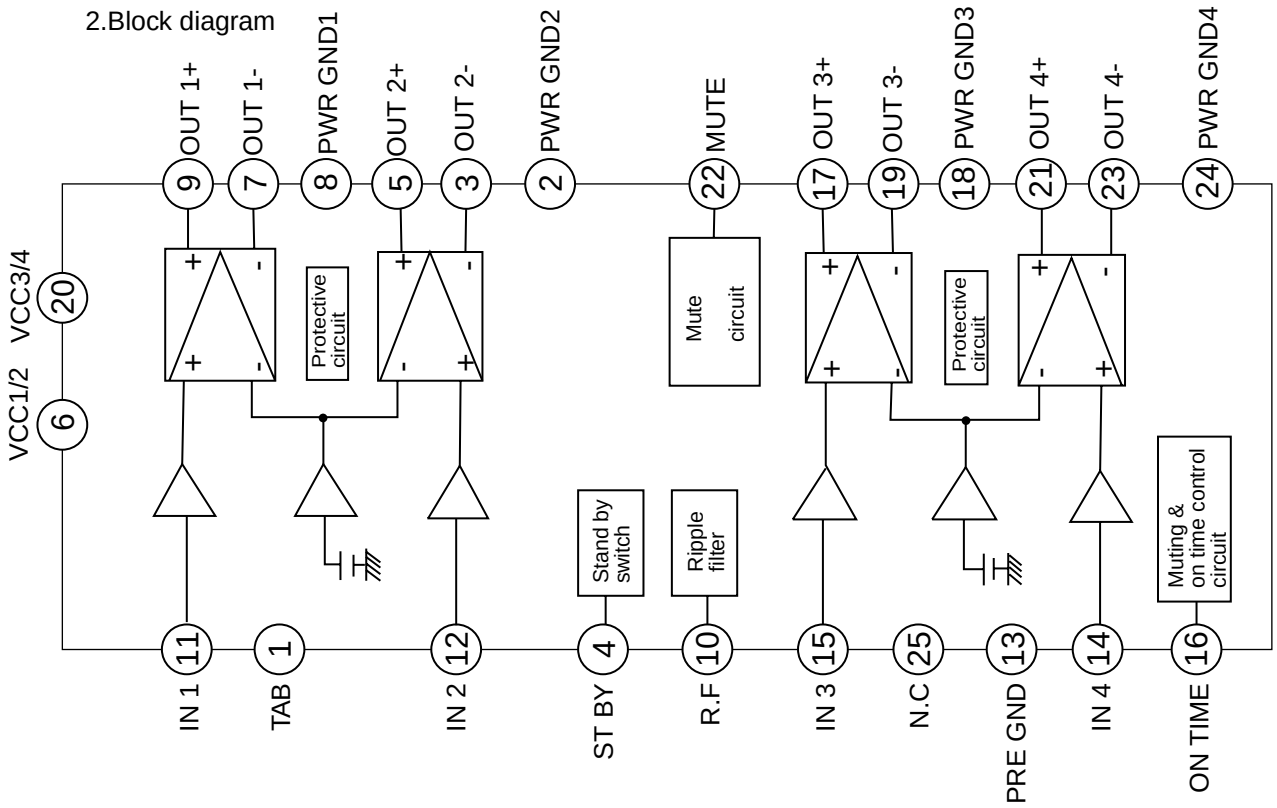
Pin No.	Function	Description
1	Noise sense	Noise sensitivity adjustment
2	Noise AGC	
3	Gate time	
4	Signal hold	
5	Pilot output	
6	Vcc	Vcc=+8.0V
7	Capacitor for HCC	High pass filter
8	SNC control	Stereo noise controlled voltage
9	HCC control	High cut controlled voltage
10	Lch output	
11	Rch output	
12	Pican input	pilot cancel signal input
13	Pican output	pilot cancel signal outpt
14	Separation ADJ	
15	NC	
16	NC	
17	456kHz OSC	Ceramic resonator
18	Phase comp LPF (+)	Phase comparator low pass filter
19	Phase comp LPF (-)	Phase comparator low pass filter
20	GND	
21	PLL input	Phase locked loop signal input
22	Stereo indicator	Active low
23	Composite input	Composite signal input
24	Pilot det LPF	

■ LA4743B (IC941) :Power amp

1.Terminal layout



2.Block diagram

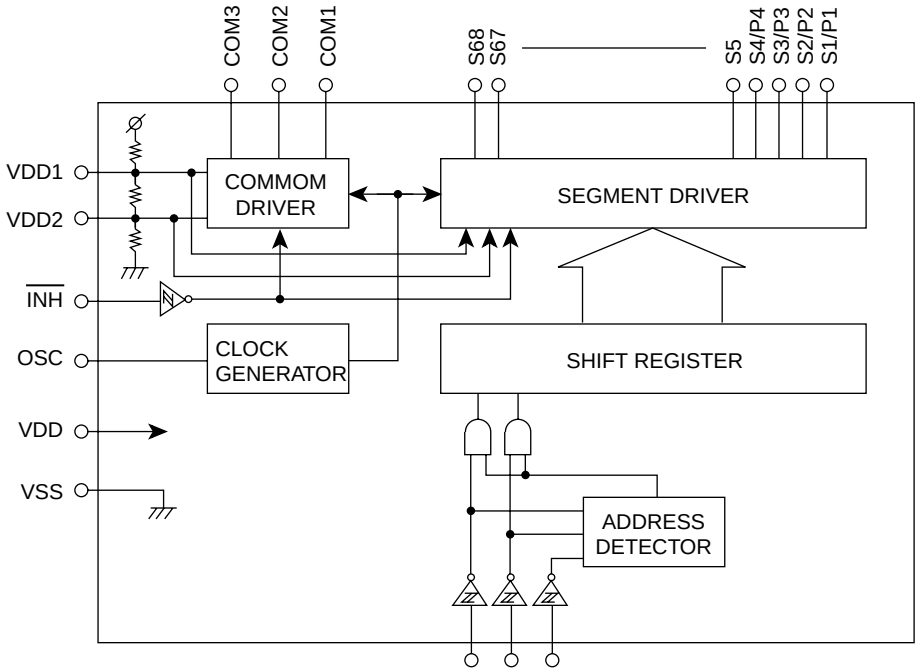


3.Pin function

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	TAB	Header of IC	14	LFIN	Front Lch input
2	GND1	Power GND	15	LRIN	Rear Lch input
3	RFO-	Output (-) for front Rch	16	ONTIME	Power on time control
4	STBY	Stand by input	17	LRO+	Output (+) for rear Lch
5	RFO+	Output (+) for front Rch	18	GND3	Power GND
6	VCC1/2	Power input	19	LRO-	Output (-) for rear Lch
7	RRO-	Output (-) for rear Rch	20	VCC3/4	Power input
8	GND2	Power GND	21	LFO+	Output (+) for front
9	RRO+	Output (+) for rear Rch	22	MUTE	Muting control input
10	R.F	Ripple filter	23	LFO-	Output (-) for front
11	RRIN	Rear Rch input	24	GND4	Power GND
12	RFIN	Front Rch input	25	NC	Non connection
13	SGND	Signal GND			

■ LC75873NW (IC601) : LCD driver

1.Block diagram

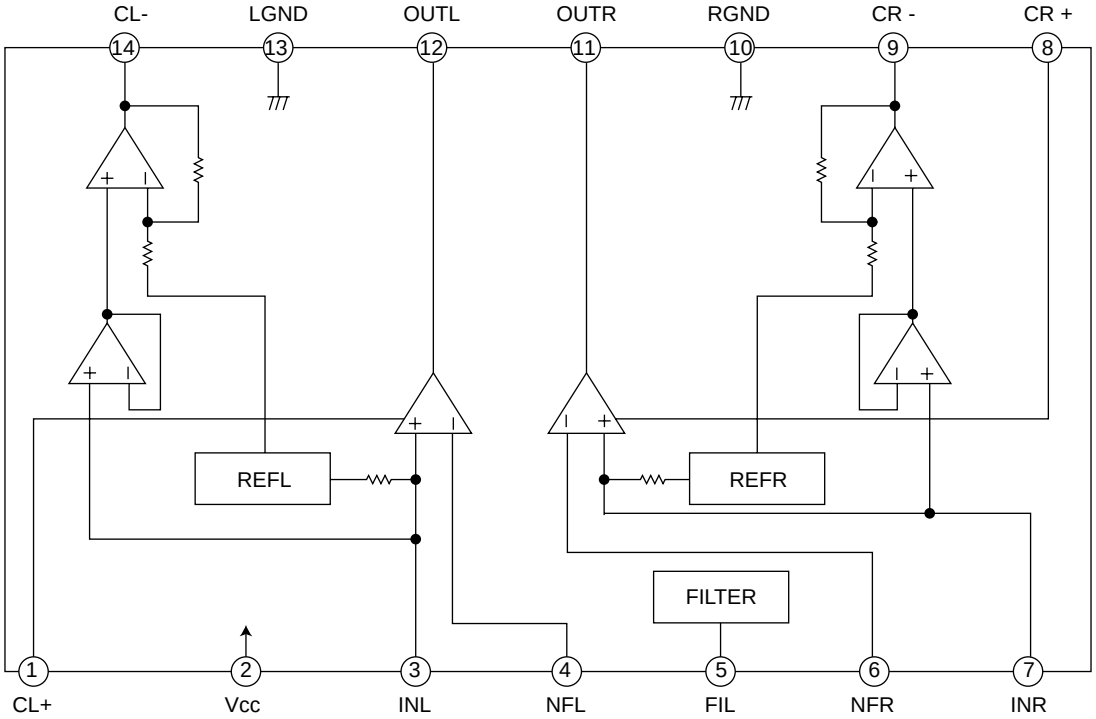


2.Pin functions

Pin No.	Symbol	I/O	Description
1~66	S3~S68	O	Segment Output.
67~69	COM1~3	O	Common Driver Output.
70	VDD	-	Power Supply Connection.
71	VDD1	I	Used for applying the LCD drive 2/3 bias voltage externally. Must be connected to VDD2 when a 1/2 bias drive scheme in used.
72	VDD2	I	Used for applying the LCD drive 1/3 bias voltage externally. Must be connected to VDD1 when a 1/2 bias drive scheme in used.
73	VSS	-	Power supply connection.
74	OSC	I/O	Oscillator connection. An oscillator circuit is formed by connecting an external resistor and capacitor to this pin.
75	INH	I	Display off control input.
76	$\overline{CE}$	I	Chip enable input.
77	CLOCK	I	Synchronization clock input.
78	DI	I	Serial data input.
79	S1	O	Signal output.
80	S2	O	Signal output.

■ BA3220FV-X (IC301) : Driver

1. Pin layout & Block diagram

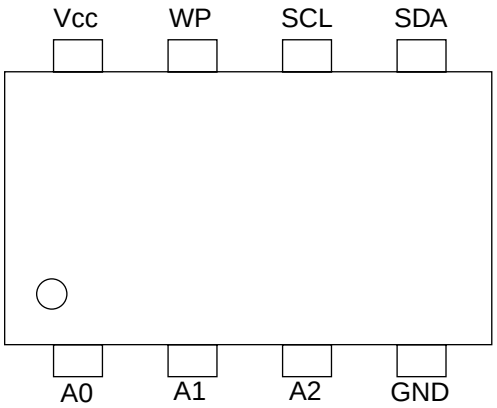


2. Pin function

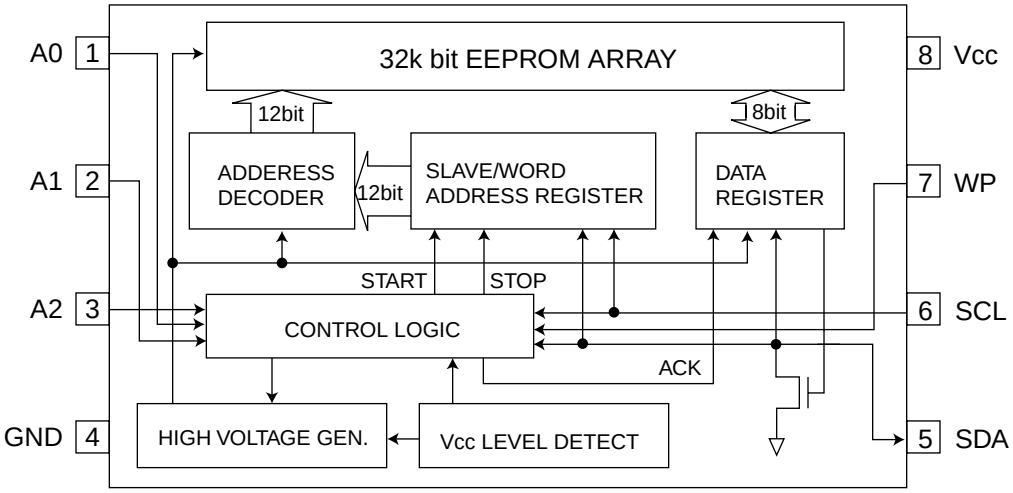
Pin No.	Symbol	Function
1	CL+	Powe supply terminal for amp.
2	Vcc	power supply terminal.
3	INL	input terminal.
4	NFL	Negative feedback terminal.
5	FIL	Filter terminal.
6	NFR	Negative feedback terminal.
7	INR	Input terminal
8	CR+	Power supply terminal for amp.
9	CR-	Output terminal of internal amp.
10	RGND	Rch GND terminal.
11	OUTR	Rch output terminal.
12	OUTL	Lch output terminal.
13	LGND	Lch GND terminal.
14	CL-	Output terminal of internal amp.

■ BR24C32F-X (IC703) : EEPROM

1. Pin layout



2. Block diagram

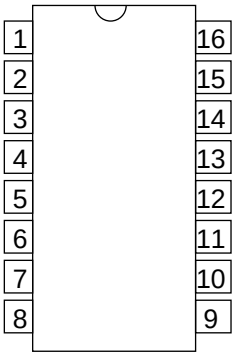


3. Pin function

Pin No.	I/O	Functions
Vcc	-	Power supply
GND	-	Ground (0V)
AO,A1,A2	IN	Slave address set
SCL	IN	Serial clock input
SDA	I/O	Slave and word address/Serial data output
WP	IN	Write protect input

■ SAA6579T-X (IC51) : RDS demodulator

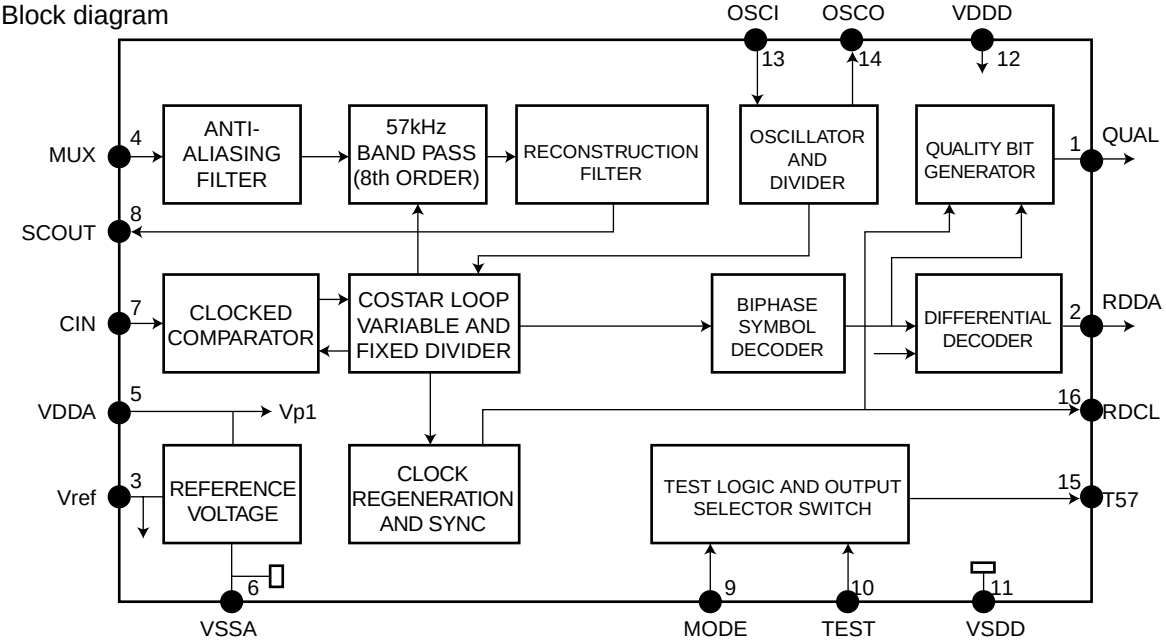
1. Pin layout



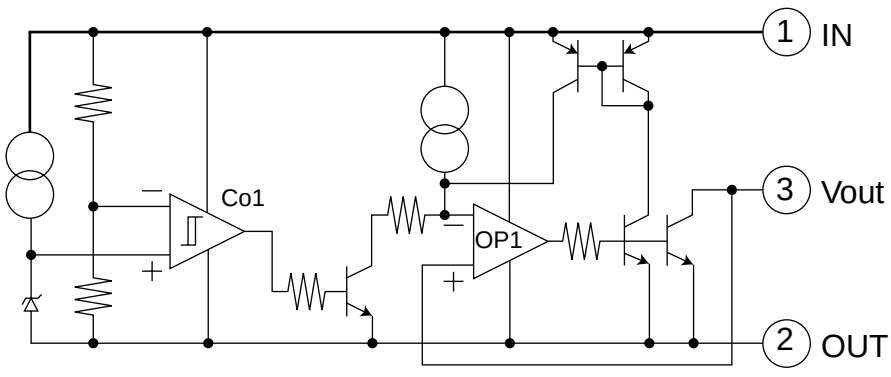
2. Pin function

Pin No.	Symbol	Function
1	QUAL	Quality indication output
2	RDDA	RDS data output
3	Vref	Reference voltage output (0.5VDDA)
4	MUX	Multiplex signal input
5	VDDA	+5V supply voltage for analog part
6	VSSA	Ground for analog part (0V)
7	CIN	Sub carrier input to comparator
8	SCOUT	Sub carrier output of reconstruction filter
9	MODE	Oscillator mode / test control input
10	TEST	Test enable input
11	VSSD	Ground for digital part (0V)
12	VDDD	+5V supply voltage for digital part
13	OSCI	Oscillator input
14	OSCO	Oscillator output
15	T57	57kHz clock signal output
16	RDCL	RDS clock output

3. Block diagram

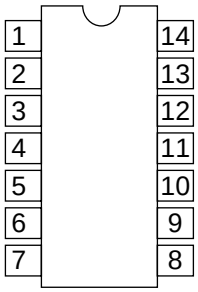


■ IC-PST600M/G/-W (IC702) : System reset



■HD74HC126FP-X (IC771) : Buffer

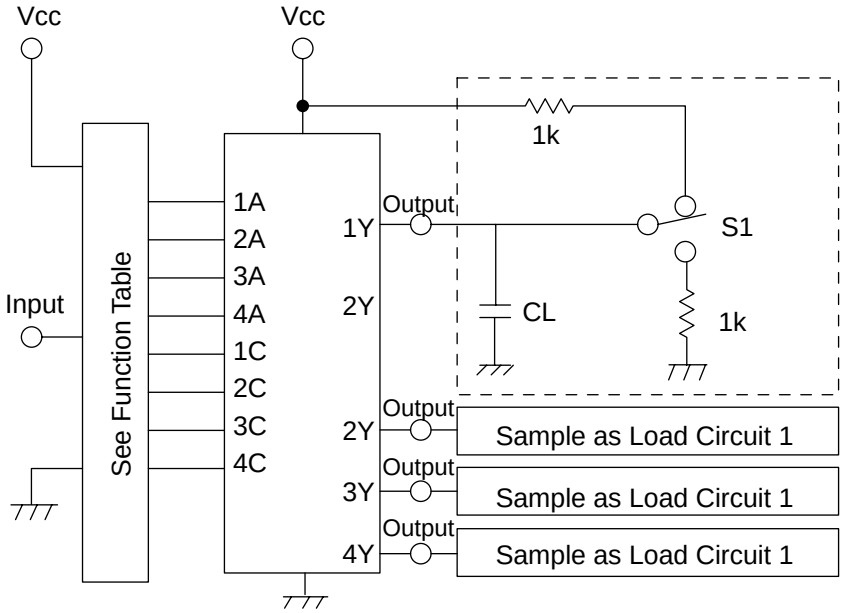
1. Pin layout



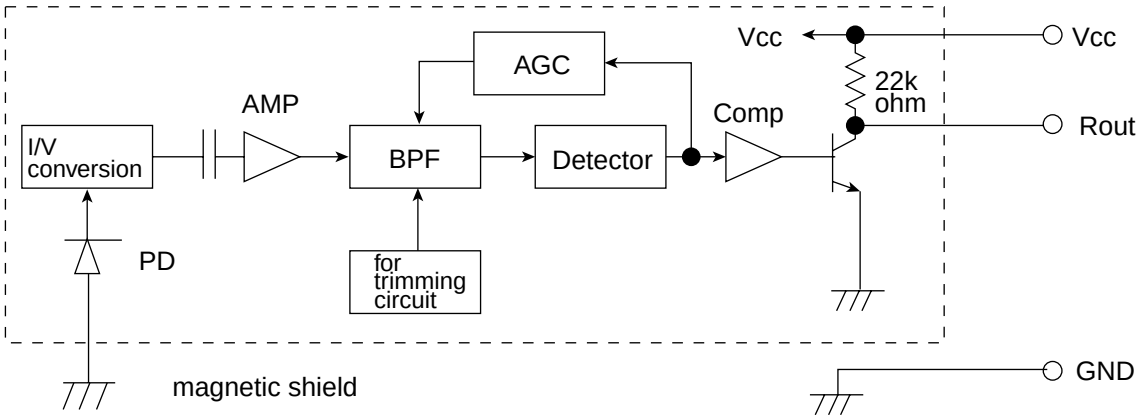
2. Pin function

Inputs		Outputs
C	A	Y
L	X	Z
H	L	H
H	H	L

3. Block diagram

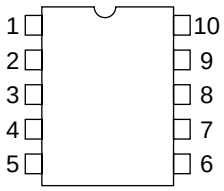


■ RPM6938-SV4 (IC602) : Remote control receiver

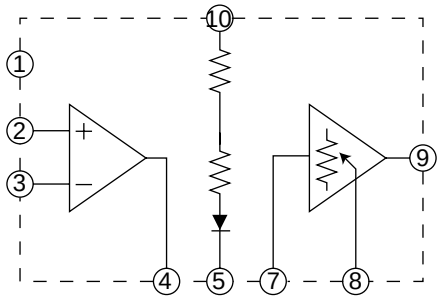


■ M5282FP-XE (IC321) : E. volume

1. Pin layout



2. Block diagram

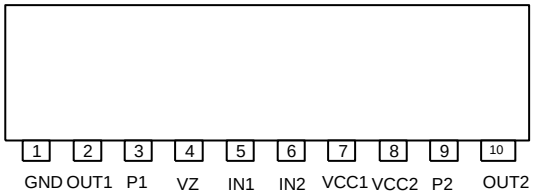


3. Pin function

Pin No.	Symbol	Function
1	Vcc/2	Vcc/2 output for microphone amp.
2	Amp+IN	Microphone amp. positive input terminal.
3	Amp-IN	Microphone amp. negative input terminal.
4	Amp OUT	Microphone amp. output terminal.
5	GND	Ground.
6	NC	Non connection.
7	VCA IN	VCA input terminal.
8	Vc	VCA control terminal.
9	VCA OUT	VCA output terminal.
10	Vcc	Power supply.

■ LB1641 (IC402) : DC Motor driver

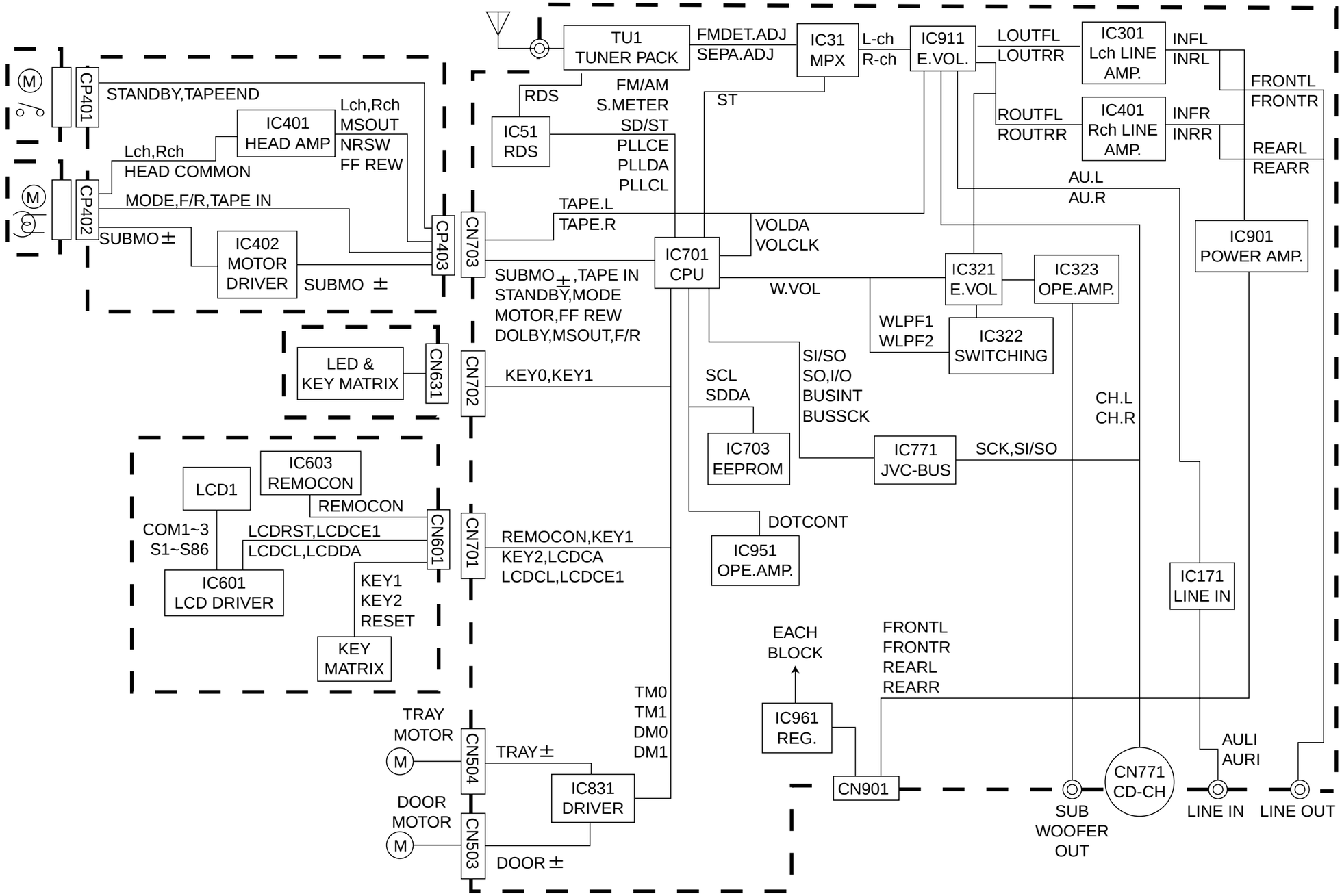
1. Pin layout



2. Pin function

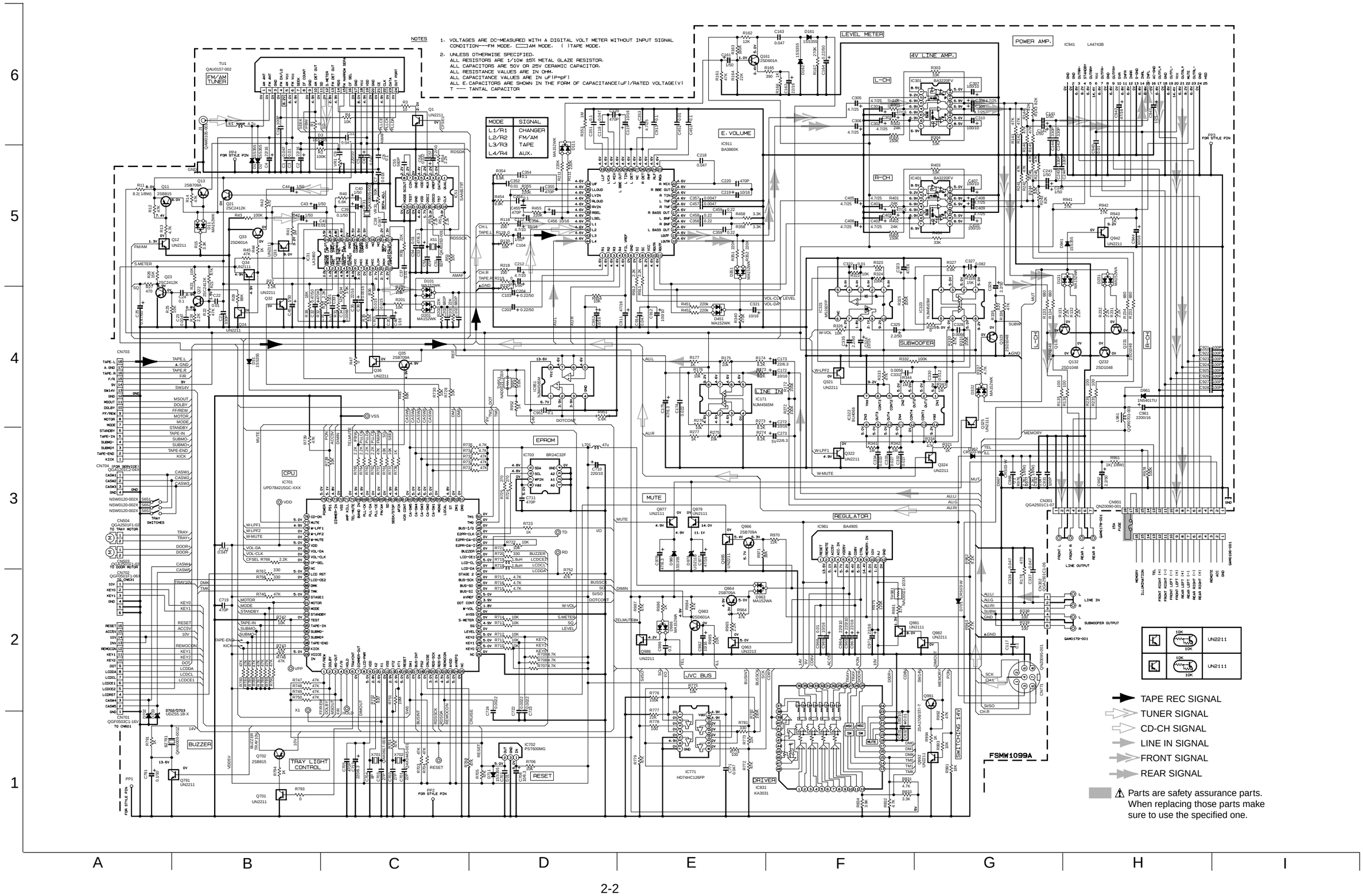
Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

Block diagram

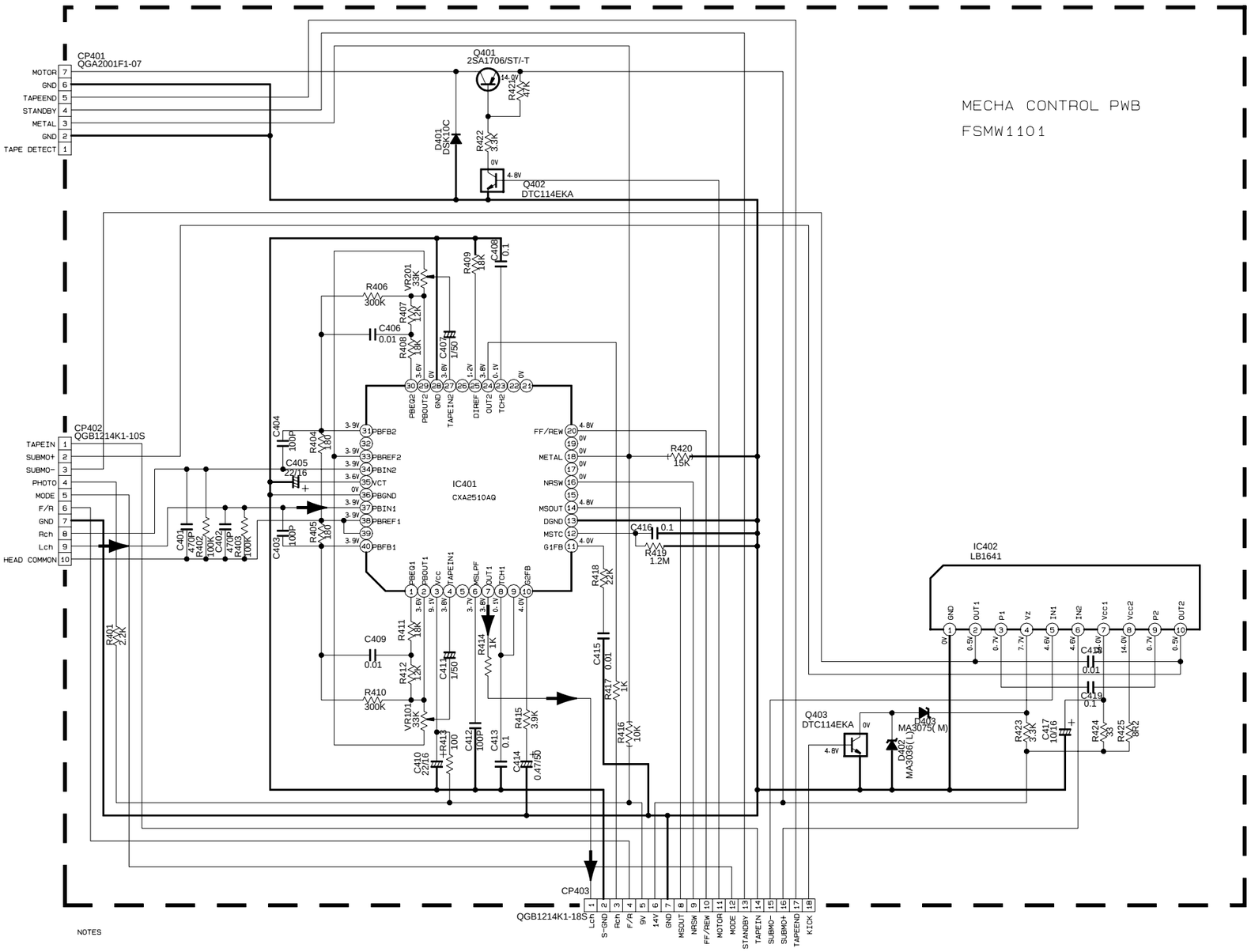


Standard schematic diagrams

■ Main amp. section



■ Mecha. control section



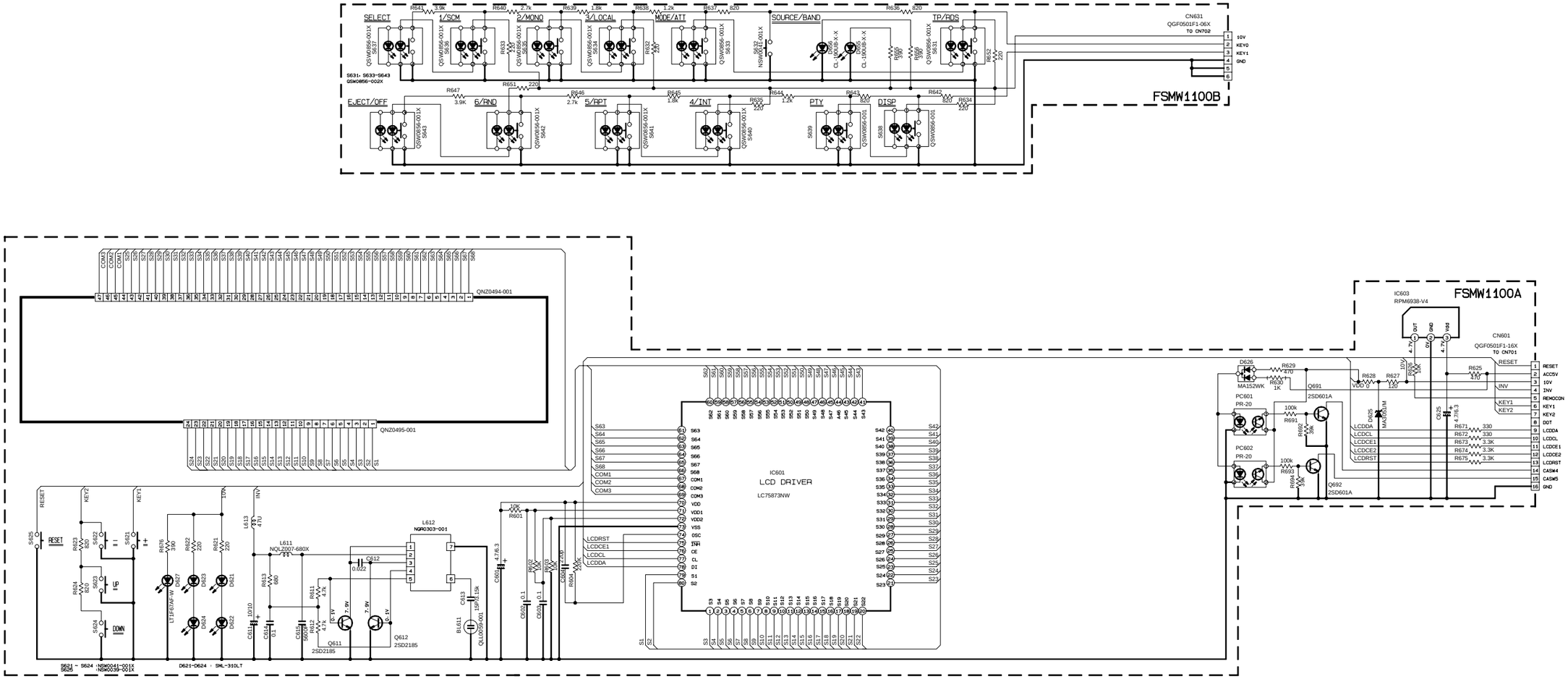
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
   CONDITION----TAPE MODE.
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/4W ±5% OR 1/10W ±5% METAL GLAZE RESISTOR.
   ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE(V)

TF-----TF CAPACITOR

→ TAPE REC SIGNAL

■ LCD & Key control section

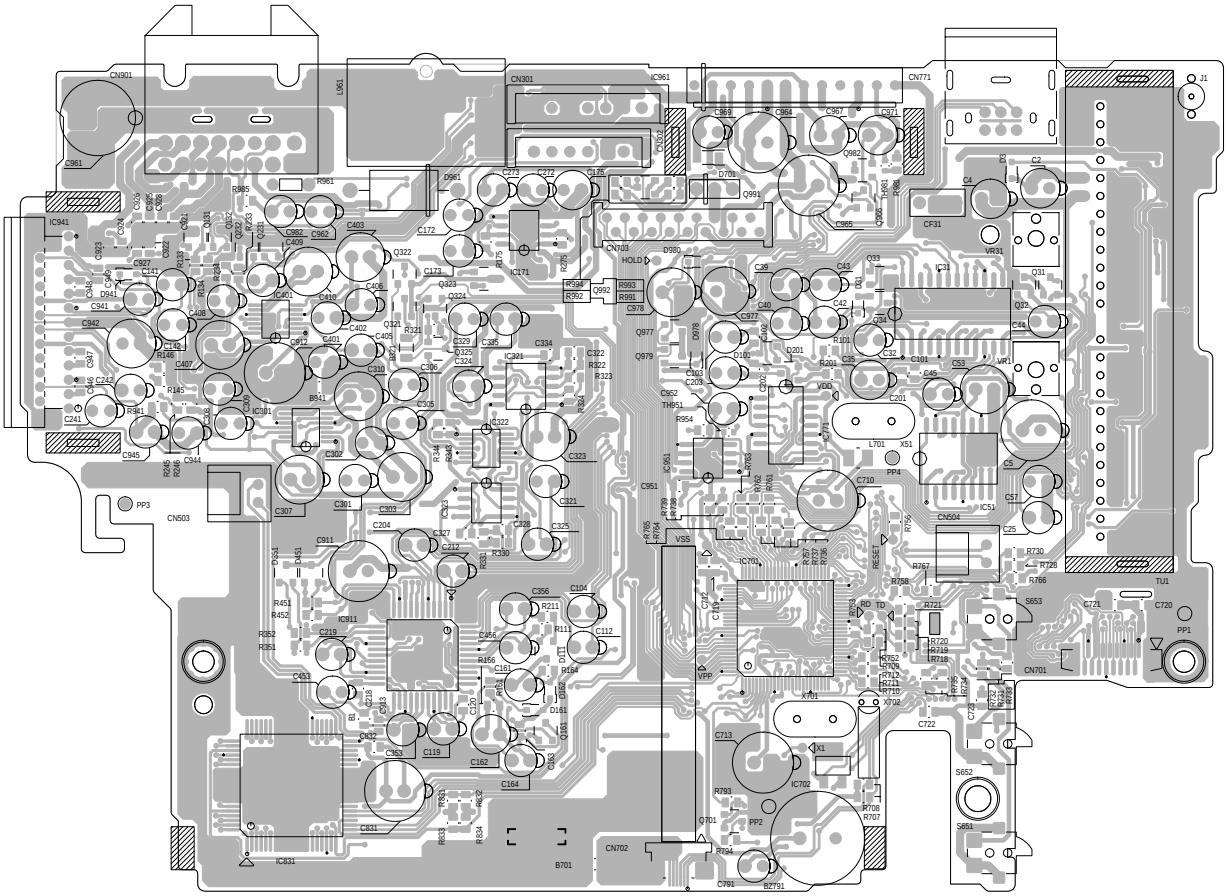


NOTES

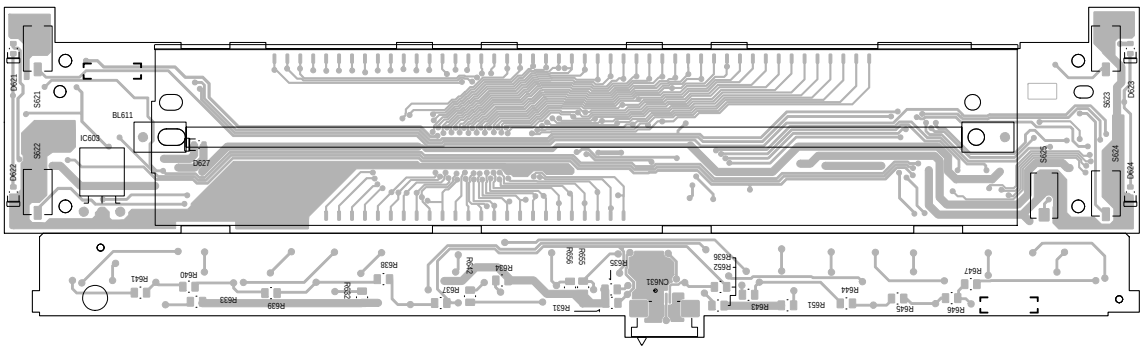
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL CONDITION --- TAPE MODE
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/10W ±5% METAL GLAZE RESISTOR.
   ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM.
   ALL CAPACITANCE VALUES ARE IN uF(P=pF)
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(uF)/RATED VOLTAGE(v)
   T --- TANTAL CAPACITOR

Printed circuit boards

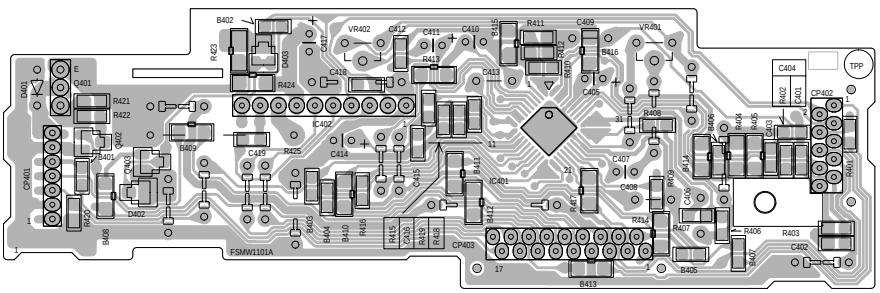
■Main board (Forward side)



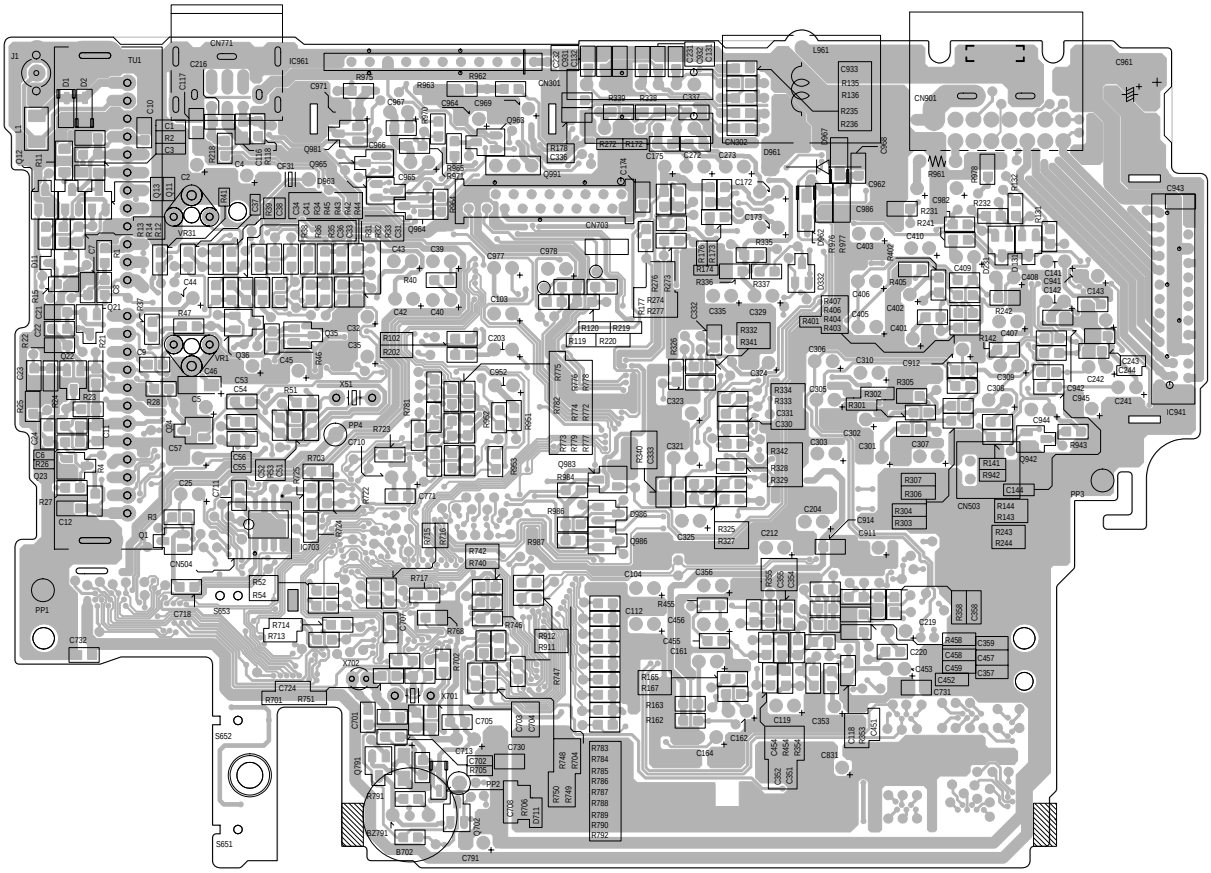
■Front board (Forward side)



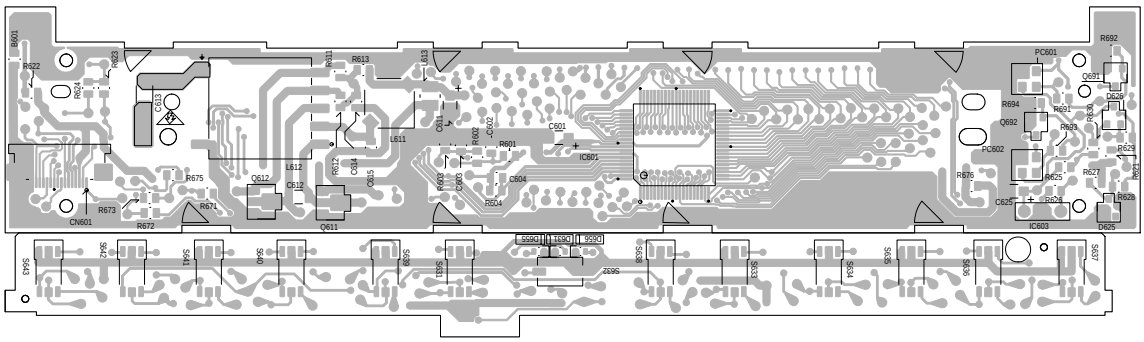
■Mecha. control board



■ Main board (Reverse side)



■ Front board (Reverse side)



PARTS LIST

[KS-LX200R]

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

Area suffix

E ---------- Continental Europe
EX ---------- Central Europe

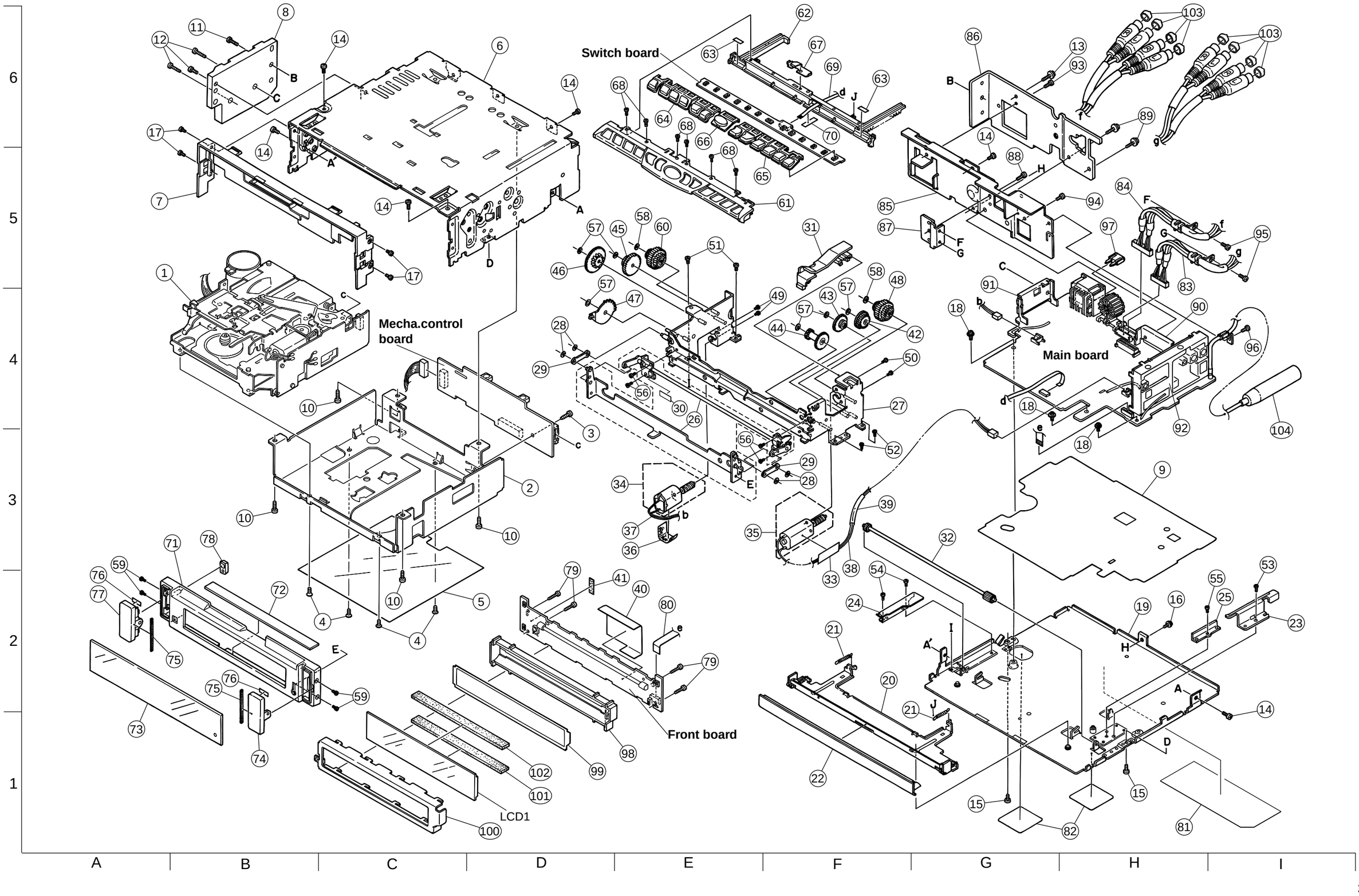
- Contents -

Exploded view of general assembly and parts list ---------- 3-3
Cassette mechanism assembly and parts list ---------- 3-6
Electrical parts list ---------- 3-9
Packing materials and accessories parts list ---------- 3-16

<<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	----------	CDS-522VJ2	1	CASSETTE MECHA	
	2	FSKM2006-001	MECHA BRACKET	1		
	3	QYSDST2604Z	SCREW	1	PCB+MECHA	
	4	FSKZ4004-002	SCREW	4	MECHA+M.BKT	
	5	FSMA4010-002	INSULATOR	1	M.BKT+SCREW	
	6	FSJC1065-001	TOP CHASSIS	1		
	7	FSJC1064-001	FRONT COVER	1		
	8	LV31602-003A	SIDE HEAT SINK	1		
	9	FSMA3007-001	INSULATOR	1		
	10	QYSDST2604Z	SCREW	4	T.CHAS+CS MECHA	
	11	QYSDSF2610Z	TAPPING SCREW	1	T.CHAS+S H.SINK	
	12	LV41200-003A	SPESIAL SCREW	3	T.CHAS+S H.SINK	
	13	LV41200-003A	SPESIAL SCREW	1	T.CHAS+REAR	
	14	QYSDST2604Z	SCREW	6	T.CHAS+B.CHAS	
	15	QYSDST2604Z	SCREW	2	T.CHAS+R.BKT	
	16	LV41200-001A	SPECIAL SCREW	1	BOTTOM CHA.+REAR BKT	
	17	QYSPSP2003M	SCREW	4	T.CHAS+F.COVER	
	18	LV41200-001A	SPECIAL SCREW	3	MAIN PWB+BOTTOM CHA.	
	19	LV31604-002A	BOTTOM ASS'Y	1		
	20	LV31605-001A	DOOR BASE ASS'Y	1		
	21	LV41452-001A	TENS SPRING BTM	2		
	22	LV31607-001A	PANEL COVER	1		
	23	LV31965-001A	BUTTON BASE BKT	1		
	24	LV41500-001A	BUTTON B.SUPORT	1		
	25	LV41545-001A	BUTTON B.GUIDE	1		
	26	FSKL3014-001A	FRONT BKT ASS'Y	1		
	27	LV20614-002A	BRACKET ASS'Y	1		
	28	WDM215025	WASHER	4		
	29	LV41503-001A	ARM 3	2		
	30	FSYH4036-015	SHEET	1		
	31	LV31777-001A	FFC GUIDE	1		
	32	LV31610-001A	ROD GEAR	1		
	33	LV40847-002A	SPACER	1	MOTOR L	
	34	QAR0029001-SA2	FEED MOTOR	1	FOR BKT MOTOR L	
	35	PPN13KA10C-SA6	FEED MOTOR	1	FOR BKT MOTOR R	
	36	LV40847-002A	SPACER	1	MOTOR R	
	37	WJM0137-001A	E-SI CARD WIRE	1	FOR MOTOR L	
	38	WJM0136-001A	E-SI CARD WIRE	1	FOR MOTOR R	
	39	QWTA20H-030	UL VINYL TUBE	1	FOR R WIRE	
	40	QE40110-001A	SHIELD CASE	1		
	41	FSYH4036-064	SPACER	1		
	42	LV41463-001A	GEAR 1	1	R SIDE	
	43	LV41464-001A	GEAR 2	1	R SIDE	
	44	LV31611-001A	GEAR 3	1	R SIDE	
	45	LV41466-001A	GEAR 4	1	L SIDE	
	46	LV41467-001A	GEAR 5	1	L SIDE	
	47	LV31612-001A	GEAR 6	1	L SIDE	
	48	LV30981-004A	CLUTCH ASS'Y	1	RIGHT SIDE	

■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	49	QYSPSPT2020Z	MINI SCREW	2	F.MOTOR+B.M. L	
	50	QYSPSPT2020Z	MINI SCREW	2	F.MOTOR+B.M. R	
	51	LV40865-001A	MINI SCREW	2	ROD BKT(L)+LO.BKT	
	52	LV40865-001A	MINI SCREW	2	ROD BKT(R)+LO.BKT	
	53	LV40865-001A	MINI SCREW	1	B.BASE BKT+BO.CHAS	
	54	LV40865-001A	MINI SCREW	2	B.B.SUPPO+BO.CHAS	
	55	LV40865-001A	MINI SCREW	1	B.B.GUIDE+BO.CHAS	
	56	LV40865-001A	MINI SCREW	4	BKT.M.L&R+C.BOTTOM	
	57	WDM215025	WASHER	6	FOR GEAR 1-6	
	58	WDM214540	WASHER	2	FOR CLUTCH ASSY	
	59	QYSPSPU1725M	SCREW	4	LO.UNIT A+DIS.PANEL	
	60	LV30981-005A	CLUTCH ASS'Y	1	LEFT SIDE	
	61	LV10317-007A	BUTTON PANEL	1	KS-LX200R	
	62	LV10318-001A	BUTTON BASE	1		
	63	LV40848-007A	SPACER(P)	2		
	64	LV20615-003A	PRESET BUTTON	1	LEFT PRESET BUTTON	
	65	LV20616-002A	PRESET BUTTON 2	1		
	66	LV31613-001A	FUNCTION BUTTON	1		
	67	LV41825-002A	PLATE SPRING	1		
	68	VKZ4777-004	MINI SCREW	6		
	69	WJT0030-001A	E-CARD WIRE	1		
	70	FSYH4036-035	SHEET	1	FOR E-CARD WIRE	
	71	FSJC1066-002	DISPLAY PANEL	1		
	72	LV32035-001A	D.P. PLATE	1		
	73	FSJD3026-001A	FINDER LENS	1		
	74	LV41469-001A	UP DOWN B.ASS'Y	1		
	75	VYSH1R5-007	SPACER	2		
	76	LV40848-009A	SPACER(P)	2		
	77	LV41471-001A	+/- BUTTON ASSY	1		
	78	LV41505-001A	REMOTE LENS	1		
	79	VKZ4777-001	MINI SCREW	4	D.PANEL+SW.PWB	
	80	WJT0031-001A	E-CARD WIRE	1		
	81	FSYN3148-105	NAME PLATE	1		
	82	LV41143-001A	SHEET	2		
	83	QAM0178-001	PIN CORD ASS'Y	1		
	84	QAM0179-001	CAR CABLE	1		
	85	LV30943-201A	REAR BRACKET	1		
	86	LV30946-005A	REAR HEAT SINK	1	BLACK ANODISED	
	87	LV40790-001A	PIN CORD BRACKET	1		
	88	QYSDST2604Z	SCREW	1		
	89	LV41200-003A	SPESIAL SCREW	2		
	90	LV40792-001A	REG.IC BRACKET	1		
	91	LV41863-001A	POWER IC BRACKET	1		
	92	VMA4652-001SS	SHIELD PLATE	1		
	93	QYSDST2606Z	SCREW	1		
	94	QYSDST2606Z	SCREW	1		
	95	QYSDST2604Z	SCREW	2		
	96	QYSDST2604Z	SCREW	1		

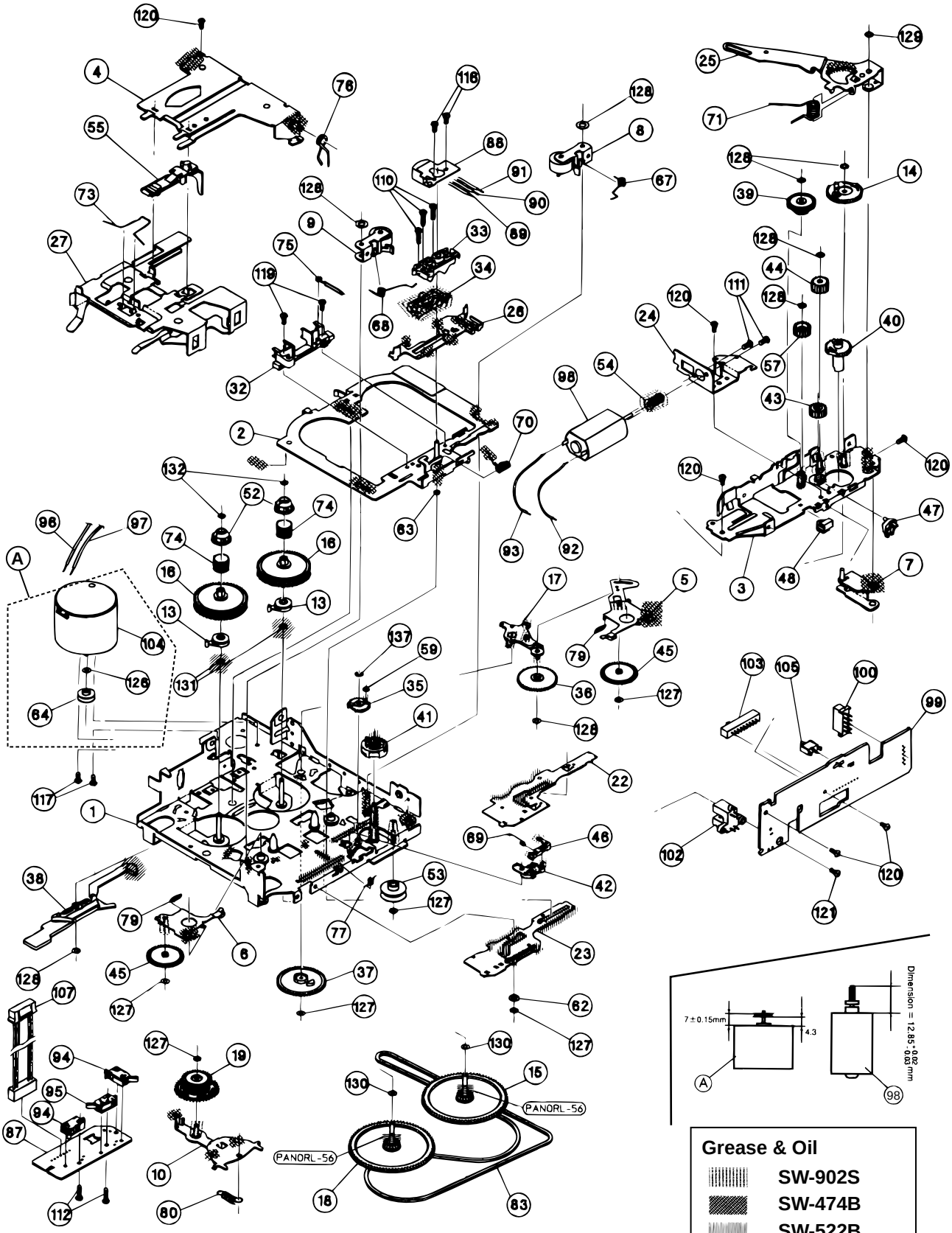
■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
⚠	97	QMFZ039-150-T	FUSE	1		
	98	FSKS3023-001	LIGHTING CASE	1		
	99	FSYH4081-002	LIGHTING SHEET	1	D105	
	100	FSYH2006-001	LCD CASE	1		
	101	QNZ0495-001	RUBBER CONNECTOR	1		
	102	QNZ0494-001	RUBBER CONNECTOR	1		
	103	VYTA500-001	PIN CAP	8		
	104	QAM0105-002	CAR CABLE	1	J1	
	LCD 1	QLD0149-001	LCD MODULE	1		

Cassette mechanism assembly and parts list

Block No. M 2 M M



Grease & Oil

- SW-902S
- SW-474B
- SW-522B
- PANORL-56
- CFD-409

MODEL:CDS522-VJ2

■ Parts list (Cassette mechanism)

Block No. M2MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A	100367057S-SA1	DC MOTOR ASS'Y	1	(NO.64.104.126)	
	1	1-0522-6001-02S	CHASSIS ASS'Y	1		
	2	1-0522-6002-02S	HEAD PLATE ASSY	1		
	3	1-0522-6003-11S	SUB CHASSIS ASY	1		
	4	X-0522-1004S	HOLDER ARM ASSY	1		
	5	X-0522-1006-02S	T.U.ARM(F)ASS'Y	1		
	6	X-0522-1007S	T.U.ARM(R)ASS'Y	1		
	7	X-0522-1010S	SET ARM ASS'Y	1		
	8	X-0522-1019S	PINCH ARM(F)ASY	1		
	9	X-0522-1020S	PINCH ARM(R)ASY	1		
	10	X-0522-1022S	FR ARM ASS'Y	1		
	13	X-0522-2008S	DETECT ARM ASSY	2		
	14	X-0522-2010S	LOAD GEAR ASS'Y	1		
	15	X-0522-2016-6S	FLYWHEEL ASY(FN	1		
	16	X-0522-2018S	REEL TABLE ASSY	2		
	17	X-0522-2020S	REDUCT.GEAR ARM	1		
	18	X-0522-2021-6S	FLYWHEEL ASY(RN	1		
	19	X-0052-2001S	F.R. GEAR ASS'Y	1		
	22	1-0522-1008S	DIR.PLATE	1		
	23	1-0522-1031S	FF/REW PLATE	1		
	24	1-0522-1027S	MOTOR BKT	1		
	25	1-0522-1013-30S	LOAD ARM	1		
	26	1-0522-1014S	SHIFT CAM LINK	1		
	27	1-0522-1017-50S	CASSETTE HOLDER	1		
	32	1-0522-2001S	TAPE GUIDE	1		
	33	1-0522-2002S	HEAD BKT	1		
	34	1-0522-2003S	HEAD SHIFT CAM	1		
	35	1-0522-2004-03S	SELECT GEAR	1		
	36	1-0522-2005S	REDUCTION GEAR	1		
	37	1-0522-2006S	DETECT GEAR	1		
	38	1-0522-2007-50S	DETECTOR	1		
	39	1-0522-2009S	WORM GEAR	1		
	40	1-0522-2011S	MODE GEAR	1		
	41	1-0522-2012S	MODE GEAR(2)	1		
	42	1-0522-2013S	GEAR LATCH	1		
	43	1-0522-2014S	IDLE GEAR(1)	1		
	44	1-0522-2015S	IDLE GEAR(2)	1		
	45	1-0522-2017S	TU GEAR	2		
	46	1-0522-2019S	RACHET	1		
	47	1-0522-2022S	SW ACTUATER	1		
	48	1-0522-2024S	PWB STAY	1		
	52	1-0052-2004S	REEL DRIVER	2		
	53	1-0052-2006S	IDLE PULLEY	1		
	54	1-0522-2023S	WORM	1		
	55	1-0052-2032S	CATCH(K)	1		
	57	1-0052-2041S	COUNTER GEAR	1		
	59	1-0522-3005S	SELECT GEAR COL	1		
	62	1-0052-3028S	H.B. ROLLER(L)	1		

■ Parts list (Cassette mechanism)

Block No. M2MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	63	1-0052-3029S	H.B. ROLLER(S)	1		
	64	----------	MOTOR PULLEY	1		
	67	1-0522-4001S	PINCH ARM(F)SPG	1		
	68	1-0522-4002S	PINCH ARM(R)SPG	1		
	69	1-0522-4003S	GEAR LATCH SPG	1		
	70	1-0522-4004S	HEAD SPRING	1		
	71	1-0522-4006S	LOAD ARM SPG	1		
	73	1-0522-4008S	CATCH SPRING	1		
	74	1-0522-4010S	REEL DRIVER SPG	2		
	75	1-0522-4011S	DASH SPRING	1		
	76	1-0522-4014S	HOLDER ARM SPG	1		
	77	1-0522-4016S	HOLD SPRING	1		
	79	1-0522-4017S	TU ARM SPRING	2		
	80	1-0522-4015S	FR ARM SPRING	1		
	83	1-0052-5022S	BELT	1		
	87	1-0522-7042S	REEL PWB	1		
	88	1-0522-7003S	2CH HEAD	1	P-7742-HG	
	89	1-0522-7004S	HEAD WIRE(A)	1		
	90	1-0522-7005S	HEAD WIRE(B)	1		
	91	1-0522-7006S	HEAD WIRE(C)	1		
	92	1-0522-7007-04S	SUB MOTOR WIRE	1	RED	
	93	1-0522-7008-04S	SUB MOTOR WIRE	1	BLACK	
	94	1-0522-7038S	LEAF SW	2	10920	
	95	1-0522-7039S	LEAF SW	1	11610	
	96	1-0522-7013S	MOTOR WIRE	1	RED	
	97	1-0522-7014S	MOTOR WIRE	1	BLACK	
	98	1-0522-7040S	SUB MOTOR	1	FF-050SK-10200	
	99	1-0522-7022-01S	HEAD PWB(JV)	1		
	100	1-0522-7024S	CONNECTOR 10P	1	TKC-F10X-K1	
	102	X-0052-7040S	PHOTO COUPLER	1		
	103	1-0036-7007-1S	SLIDE SWITCH	1	SLD-32-710S	
	104	----------	MOTOR ASS'Y	1	EG-520ED-3B	
	105	1-0056-7011S	SWITCH	1	SW-112-5	
	107	1-0052-7013S	JOINT WIRE (7P)	1		
	110	1-0522-5003S	AZIMUTH SCREW	3		
	111	1-0052-5023S	MOTOR SCREW	2	M2X2.5	
	112	1-0101-5006S	SCREW PLAIN	2	M1.7X7	
	116	1-0522-5005S	SPECIAL SCREW(2	2		
	117	2-1032-0022-C2S	MACHINE SCREW	2	M2X2.2	
	119	1-0522-5006S	SPECIAL SCREW(3	2		
	120	2-1332-0030-C1S	SCREW	6	M2X3	
	121	2-1382-0050-C2S	PLAIN	1	M2X5	
	126	----------	MYLAR WASHER	1		
	127	2-1812-0030-D2S	POLY WASHER(S)	6	1.2X3X0.25	
	128	2-1816-0032-D2S	POLY WASHER(S)	8	1.6X3.2X0.25	
	129	2-1817-5040-D8S	LMW-S	1	1.75X4X0.25	
	130	2-1816-0032-E8S	MYLAR WASHER(S)	2	1.6X3.2X0.35	
	131	2-1821-0040-D1S	POLY WASHER	2	2.1X4X0.25	
	132	1-0053-5005S	LMW-S	2	1.5X3.2X0.25	
	137	2-1711-5040-16S	E RING	1	1.5	

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

⚠	Item	Parts number	Parts name	Remarks	Area
	BZ791	QAN0009-001Z	BUZZER		
	C 1	NCB21EK-473X	C CAPACITOR		
	C 2	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 3	NCB21HK-103X	C CAPACITOR		
	C 4	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 5	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 6	NCB21EK-473X	C CAPACITOR		
	C 7	NCB21HK-183X	C CAPACITOR		
	C 8	NCB21HK-104X	C CAPACITOR		
	C 10	NCS21HJ-101X	C CAPACITOR		
	C 11	NCB21HK-473X	C CAPACITOR		
	C 21	NCS21HJ-331X	C CAPACITOR		
	C 22	NCB21HK-103X	C CAPACITOR		
	C 23	NCB21HK-472X	C CAPACITOR		
	C 24	NCB21EK-104X	C CAPACITOR		
	C 25	QERF1HM-474Z	E CAPACITOR	0.47MF 20% 50V	
	C 31	NCB21HK-103X	C CAPACITOR		
	C 32	QERF1HM-474Z	E CAPACITOR	0.47MF 20% 50V	
	C 33	NCB21HK-102X	C CAPACITOR		
	C 34	NCB21HK-682X	C CAPACITOR		
	C 35	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 36	NCB21HK-152X	C CAPACITOR		
	C 37	NCB21HK-103X	C CAPACITOR		
	C 38	NCB21EK-473X	C CAPACITOR		
	C 39	QERF1HM-104Z	E CAPACITOR	0.1MF 20% 50V	
	C 40	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 41	NCB21HK-103X	C CAPACITOR		
	C 42	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 43	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 44	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 45	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 46	NBE21CM-105X	E CAPACITOR		
	C 51	NDC21HJ-820X	C CAPACITOR		
	C 52	NDC21HJ-470X	C CAPACITOR		
	C 53	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V	
	C 54	NCB21HK-103X	C CAPACITOR		
	C 55	NCS21HJ-561X	C CAPACITOR		
	C 56	NCB21EK-223X	C CAPACITOR		
	C 57	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 101	NCB21HK-153X	C CAPACITOR		
	C 102	NCS21HJ-681X	C CAPACITOR		
	C 103	QERF1HM-224Z	E CAPACITOR	0.22MF 20% 50V	
	C 104	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 112	QERF1CM-475Z	E CAPACITOR	4.7MF 20% 16V	
	C 117	NCB21HK-104X	C CAPACITOR		
	C 118	NCB21HK-472X	C CAPACITOR		
	C 119	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 120	NCB21HK-471X	C CAPACITOR		
	C 121	NCB31HK-332X	C CAPACITOR		
	C 122	NCB31HK-332X	C CAPACITOR		
	C 141	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 142	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 143	NCS21HJ-331X	C CAPACITOR		
	C 144	NCS21HJ-331X	C CAPACITOR		
	C 161	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 162	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 163	NCB21EK-473X	C CAPACITOR		
	C 164	QERF1HM-224Z	E CAPACITOR	0.22MF 20% 50V	
	C 172	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 173	QERF0JM-226Z	E CAPACITOR	22MF 20% 6.3V	
	C 174	NCB21EK-223X	C CAPACITOR		
	C 175	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V	
	C 201	NCB21HK-153X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C 202	NCS21HJ-681X	C CAPACITOR		
	C 203	QERF1HM-224Z	E CAPACITOR	0.22MF 20% 50V	
	C 204	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 212	QERF1CM-475Z	E CAPACITOR	4.7MF 20% 16V	
	C 218	NCB21HK-472X	C CAPACITOR		
	C 219	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 220	NCB21HK-471X	C CAPACITOR		
	C 241	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 242	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 243	NCS21HJ-331X	C CAPACITOR		
	C 244	NCS21HJ-331X	C CAPACITOR		
	C 272	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 273	QERF0JM-226Z	E CAPACITOR	22MF 20% 6.3V	
	C 301	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 302	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 303	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 305	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 306	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 307	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 308	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 309	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 310	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 321	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 322	NCB21HK-103X	C CAPACITOR		
	C 323	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 324	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 325	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 327	NCB21EK-823X	C CAPACITOR		
	C 328	NCB21HK-682X	C CAPACITOR		
	C 329	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 330	NCB21HK-123X	C CAPACITOR		
	C 331	NCB21HK-562X	C CAPACITOR		
	C 332	NCB21HK-273X	C CAPACITOR		
	C 333	NCB21HK-273X	C CAPACITOR		
	C 334	NCB21HK-333X	C CAPACITOR		
	C 335	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 336	NCB21HK-473X	C CAPACITOR		
	C 337	NCB21HK-473X	C CAPACITOR		
	C 351	NCB21HK-104X	C CAPACITOR		
	C 352	NCB21HK-103X	C CAPACITOR		
	C 353	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 354	NCB21HK-104X	C CAPACITOR		
	C 355	NCB21HK-471X	C CAPACITOR		
	C 356	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 357	NCB21HK-472X	C CAPACITOR		
	C 358	NCB21CK-224X	C CAPACITOR		
	C 359	NCB21CK-224X	C CAPACITOR		
	C 401	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 402	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 403	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 405	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 406	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 407	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 408	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 409	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 410	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 451	NCB21HK-104X	C CAPACITOR		
	C 452	NCB21HK-103X	C CAPACITOR		
	C 454	NCB21HK-104X	C CAPACITOR		
	C 455	NCB21HK-471X	C CAPACITOR		
	C 456	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 457	NCB21HK-472X	C CAPACITOR		
	C 458	NCB21CK-224X	C CAPACITOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	C 459	NCB21CK-224X	C CAPACITOR		
	C 701	NDC21HJ-220X	C CAPACITOR		
	C 702	NDC21HJ-270X	C CAPACITOR		
	C 703	NDC21HJ-270X	C CAPACITOR		
	C 704	NDC21HJ-8R0X	C CAPACITOR		
	C 705	NCS21HJ-471X	C CAPACITOR		
	C 707	NCB21EK-103X	C CAPACITOR		
	C 708	NBE21AM-106X	E CAPACITOR		
	C 710	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 711	NCS21HJ-471X	C CAPACITOR		
	C 713	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 722	NCB21HK-222X	C CAPACITOR		
	C 723	NCB21HK-222X	C CAPACITOR		
	C 724	NCB21HK-222X	C CAPACITOR		
	C 771	NCB21EK-473X	C CAPACITOR		
	C 791	QERF1HM-104Z	E CAPACITOR	0.1MF 20% 50V	
	C 831	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 832	NCB21HK-103X	C CAPACITOR		
	C 911	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 912	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 913	NCB21EK-104X	C CAPACITOR		
	C 914	NCB21EK-473X	C CAPACITOR		
	C 921	NCS21HJ-101X	C CAPACITOR		
	C 922	NCS21HJ-101X	C CAPACITOR		
	C 923	NCS21HJ-101X	C CAPACITOR		
	C 924	NCS21HJ-101X	C CAPACITOR		
	C 925	NCS21HJ-101X	C CAPACITOR		
	C 926	NCS21HJ-101X	C CAPACITOR		
	C 927	NCS21HJ-101X	C CAPACITOR		
	C 928	NCS21HJ-101X	C CAPACITOR		
	C 931	NDC21HJ-101X	C CAPACITOR		
	C 932	NCB21EK-473X	C CAPACITOR		
	C 941	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 942	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 943	NCB21HK-103X	C CAPACITOR		
	C 944	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 946	NCB21EK-104X	C CAPACITOR		
	C 947	NCB21EK-104X	C CAPACITOR		
	C 948	NCB21EK-104X	C CAPACITOR		
	C 949	NCB21EK-104X	C CAPACITOR		
	C 961	QEZ0337-228	E CAPACITOR	2200MF	
	C 962	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 964	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 965	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 966	NCB21HK-103X	C CAPACITOR		
	C 967	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 968	NCB21EK-104X	C CAPACITOR		
	C 969	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 971	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 977	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 978	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V	
	C 982	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 986	NCB21EK-104X	C CAPACITOR		
	CF 31	QAX0605-001	CRYSTAL		
	CN301	QGA2501C1-07	7P CONNECTOR		
	CN302	QGA2501C1-06	6P CONNECTOR		
	CN503	QGA2501F1-02	CONNECTOR		
	CN504	QGA2501F1-02	CONNECTOR		
	CN701	QGF0503C1-16V	FPC CONNECTOR		
	CN702	QGF0501F1-06X	CONNECTOR		
	CN703	QGB1214J1-18S	CONNECTOR		
	CN704	QGA1201C2-04X	CONNECTOR		
	CN771	QNZ0095-001	CONNECTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	CN901	QNZ0090-001	CAR CONNECTOR		
	D 1	1SS355-X	DIODE		
	D 2	1SS355-X	DIODE		
	D 3	1SS355-X	DIODE		
	D 11	MA152WK-X	SI DIODE		
	D 31	1SS355-X	DIODE		
	D 101	MA152WK-X	SI DIODE		
	D 111	MA152WK-X	SI DIODE		
	D 131	MA152WA-X	DIODE		
	D 161	1SS355-X	DIODE		
	D 162	1SS355-X	DIODE		
	D 201	MA152WK-X	SI DIODE		
	D 231	MA152WA-X	DIODE		
	D 332	MA152WK-X	SI DIODE		
	D 351	MA152WK-X	SI DIODE		
	D 451	MA152WK-X	SI DIODE		
	D 701	CRS03-W	SB DIODE		
	D 702	UDZS5.1B-X	ZENER DIODE		
	D 703	UDZS5.1B-X	ZENER DIODE		
	D 711	1SS355-X	DIODE		
	D 941	1SS355-X	DIODE		
	D 961	1N5404-TU-15	DIODE		
	D 962	CRS03-W	SB DIODE		
	D 963	MA152WA-X	DIODE		
	D 967	CRS03-W	SB DIODE		
	D 978	UDZ11B-X	ZENER DIODE		
	D 980	1SS355-X	DIODE		
	D 986	MA152WA-X	DIODE		
	IC 31	LA3460M-X	IC		
	IC 51	SAA6579T-X	IC		
	IC171	NJM4565M-W	IC		
	IC301	BA3220FV-X	IC		
	IC321	M5282FP-XE	IC		
	IC322	BU4066BCFV-X	IC		
	IC323	NJM4565M-W	IC		
	IC401	BA3220FV-X	IC		
	IC701	UPD784215AGC113	IC		
	IC702	IC-PST600M/G/-W	IC(1197)		
	IC703	BR24C32F-X	IC(EEPROM)		
	IC771	HD74HC126FP-X	IC		
	IC831	KA3031	IC		
	IC911	BD3860K	IC		
	IC941	LA4743B	IC		
	IC951	NJM4565M-W	IC		
	IC961	BA4905-V3	IC		
	L 1	NQL334J-4R7X	INDUCTOR		
	L 701	NQL114K-470X	INDUCTOR		
	L 961	QQR0703-001	CHOKE COIL		
	PP 1	QZW0010-001	STYLE PIN		
	PP 3	QZW0010-001	STYLE PIN		
	PP 4	QZW0010-001	STYLE PIN		
	Q 1	UN2211-X	TRANSISTOR		
	Q 11	2SB815/7/-X	TRANSISTOR		
	Q 12	UN2211-X	TRANSISTOR		
	Q 13	2SB709A/R/-X	TRANSISTOR		
	Q 21	2SC2412K/R/-X	TRANSISTOR		
	Q 22	2SC2412K/R/-X	TRANSISTOR		
	Q 23	2SC2412K/R/-X	TRANSISTOR		
	Q 24	UN2211-X	TRANSISTOR		
	Q 31	UN2111-X	TRANSISTOR		
	Q 32	UN2211-X	TRANSISTOR		
	Q 33	2SD601A/R/-X	TRANSISTOR		
	Q 34	UN2111-X	TRANSISTOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	O 35	2SB709A/R/-X	TRANSISTOR		
	Q 36	UN2211-X	TRANSISTOR		
	O 131	2SD1048/6-7/-X	TRANSISTOR		
	O 132	2SD1048/6-7/-X	TRANSISTOR		
	O 161	2SD601A/R/-X	TRANSISTOR		
	O 231	2SD1048/6-7/-X	TRANSISTOR		
	O 232	2SD1048/6-7/-X	TRANSISTOR		
	O 321	UN2211-X	TRANSISTOR		
	O 322	UN2211-X	TRANSISTOR		
	O 323	2SD1048/6-7/-X	TRANSISTOR		
	O 324	UN2211-X	TRANSISTOR		
	O 325	UN2111-X	TRANSISTOR		
	O 701	UN2211-X	TRANSISTOR		
	O 702	2SB815/7/-X	TRANSISTOR		
	Q 791	UN2211-X	TRANSISTOR		
	O 942	UN2211-X	TRANSISTOR		
	Q 963	UN2213-X	TRANSISTOR		
	O 964	2SB709A/R/-X	TRANSISTOR		
	O 965	UN2211-X	TRANSISTOR		
	Q 966	2SB709A/R/-X	TRANSISTOR		
	O 977	UN2111-X	TRANSISTOR		
	Q 979	UN2111-X	TRANSISTOR		
	O 981	UN2111-X	TRANSISTOR		
	O 982	UN2211-X	TRANSISTOR		
	Q 983	2SD601A/R/-X	TRANSISTOR		
	O 986	UN2211-X	TRANSISTOR		
	O 991	2SA1706/ST/-T	TRANSISTOR		
	O 992	UN2211-X	TRANSISTOR		
	R 1	NRSA02J-0R0X	MG RESISTOR		
	R 2	NRSA02J-104X	MG RESISTOR		
	R 3	NRSA02J-100X	MG RESISTOR		
	R 4	NRSA02J-103X	MG RESISTOR		
	R 11	NRS181J-8R2X	MG RESISTOR		
	R 12	NRSA02J-473X	MG RESISTOR		
	R 13	NRSA02J-472X	MG RESISTOR		
	R 14	NRSA02J-473X	MG RESISTOR		
	R 15	NRSA02J-332X	MG RESISTOR		
	R 21	NRSA02J-473X	MG RESISTOR		
	R 22	NRSA02J-473X	MG RESISTOR		
	R 23	NRSA02J-103X	MG RESISTOR		
	R 24	NRSA02J-222X	MG RESISTOR		
	R 25	NRSA02J-103X	MG RESISTOR		
	R 26	NRSA02J-153X	MG RESISTOR		
	R 27	NRSA02J-471X	MG RESISTOR		
	R 28	NRSA02J-683X	MG RESISTOR		
	R 31	NRSA02J-123X	MG RESISTOR		
	R 32	NRSA02J-474X	MG RESISTOR		
	R 33	NRSA02J-222X	MG RESISTOR		
	R 34	NRSA02J-392X	MG RESISTOR		
	R 35	NRSA02J-333X	MG RESISTOR		
	R 36	NRSA02J-683X	MG RESISTOR		
	R 37	NRSA02J-222X	MG RESISTOR		
	R 38	NRSA02J-183X	MG RESISTOR		
	R 39	NRSA02J-223X	MG RESISTOR		
	R 40	NRSA02J-562X	MG RESISTOR		
	R 41	NRSA02J-105X	MG RESISTOR		
	R 42	NRSA02J-471X	MG RESISTOR		
	R 43	NRSA02J-104X	MG RESISTOR		
	R 44	NRSA02J-102X	MG RESISTOR		
	R 45	NRSA02J-473X	MG RESISTOR		
	R 46	NRSA02J-683X	MG RESISTOR		
	R 47	NRSA02J-0R0X	MG RESISTOR		
	R 51	NRSA02J-101X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R 52	NRSA02J-222X	MG RESISTOR		
	R 53	NRSA02J-222X	MG RESISTOR		
	R 54	NRSA02J-222X	MG RESISTOR		
	R 101	NRSA02J-103X	MG RESISTOR		
	R 102	NRSA02J-223X	MG RESISTOR		
	R 111	NRSA02J-224X	MG RESISTOR		
	R 118	NRSA02J-101X	MG RESISTOR		
	R 119	NRSA02J-102X	MG RESISTOR		
	R 120	NCB21HK-332X	C CAPACITOR		
	R 131	NRSA02J-222X	MG RESISTOR		
	R 132	NRSA02J-222X	MG RESISTOR		
	R 133	NRSA63J-681X	MG RESISTOR		
	R 134	NRSA63J-681X	MG RESISTOR		
	R 135	NRSA02J-101X	MG RESISTOR		
	R 136	NRSA02J-101X	MG RESISTOR		
	R 141	NRSA02J-473X	MG RESISTOR		
	R 142	NRSA02J-473X	MG RESISTOR		
	R 143	NRSA02J-823X	MG RESISTOR		
	R 144	NRSA02J-823X	MG RESISTOR		
	R 145	NRSA02J-473X	MG RESISTOR		
	R 146	NRSA02J-473X	MG RESISTOR		
	R 161	NRSA02J-473X	MG RESISTOR		
	R 162	NRSA02J-123X	MG RESISTOR		
	R 163	NRSA02J-184X	MG RESISTOR		
	R 164	NRSA02J-223X	MG RESISTOR		
	R 165	NRSA02J-391X	MG RESISTOR		
	R 166	NRSA02J-102X	MG RESISTOR		
	R 167	NRSA02J-274X	MG RESISTOR		
	R 172	NRSA02J-104X	MG RESISTOR		
	R 173	NRSA02J-822X	MG RESISTOR		
	R 174	NRSA02J-822X	MG RESISTOR		
	R 175	NRSA02J-103X	MG RESISTOR		
	R 176	NRSA02J-103X	MG RESISTOR		
	R 177	NRSA02J-102X	MG RESISTOR		
	R 178	NRSA02J-471X	MG RESISTOR		
	R 201	NRSA02J-103X	MG RESISTOR		
	R 202	NRSA02J-223X	MG RESISTOR		
	R 211	NRSA02J-224X	MG RESISTOR		
	R 218	NRSA02J-101X	MG RESISTOR		
	R 219	NRSA02J-102X	MG RESISTOR		
	R 220	NCB21HK-332X	C CAPACITOR		
	R 231	NRSA02J-222X	MG RESISTOR		
	R 232	NRSA02J-222X	MG RESISTOR		
	R 233	NRSA63J-681X	MG RESISTOR		
	R 234	NRSA63J-681X	MG RESISTOR		
	R 235	NRSA02J-101X	MG RESISTOR		
	R 236	NRSA02J-101X	MG RESISTOR		
	R 241	NRSA02J-473X	MG RESISTOR		
	R 242	NRSA02J-473X	MG RESISTOR		
	R 243	NRSA02J-823X	MG RESISTOR		
	R 244	NRSA02J-823X	MG RESISTOR		
	R 245	NRSA02J-473X	MG RESISTOR		
	R 246	NRSA02J-473X	MG RESISTOR		
	R 272	NRSA02J-104X	MG RESISTOR		
	R 273	NRSA02J-822X	MG RESISTOR		
	R 274	NRSA02J-822X	MG RESISTOR		
	R 275	NRSA02J-103X	MG RESISTOR		
	R 276	NRSA02J-103X	MG RESISTOR		
	R 277	NRSA02J-102X	MG RESISTOR		
	R 301	NRSA02J-243X	MG RESISTOR		
	R 302	NRSA02J-243X	MG RESISTOR		
	R 303	NRSA02J-333X	MG RESISTOR		
	R 304	NRSA02J-333X	MG RESISTOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	R 305	NRSA02J-154X	MG RESISTOR		
	R 321	NRSA02J-102X	MG RESISTOR		
	R 322	NRSA02J-103X	MG RESISTOR		
	R 323	NRSA02J-103X	MG RESISTOR		
	R 324	NRSA02J-104X	MG RESISTOR		
	R 325	NRSA02J-104X	MG RESISTOR		
	R 326	NRSA02J-103X	MG RESISTOR		
	R 327	NRSA02J-562X	MG RESISTOR		
	R 328	NRSA02J-153X	MG RESISTOR		
	R 329	NRSA02J-0R0X	MG RESISTOR		
	R 330	NRSA02J-473X	MG RESISTOR		
	R 331	NRSA02J-104X	MG RESISTOR		
	R 332	NRSA02J-104X	MG RESISTOR		
	R 333	NRSA02J-473X	MG RESISTOR		
	R 334	NRSA02J-473X	MG RESISTOR		
	R 335	NRSA02J-821X	MG RESISTOR		
	R 336	NRSA02J-473X	MG RESISTOR		
	R 337	NRSA02J-472X	MG RESISTOR		
	R 338	NRSA02J-101X	MG RESISTOR		
	R 339	NRSA02J-101X	MG RESISTOR		
	R 340	NRSA02J-474X	MG RESISTOR		
	R 341	NRSA02J-105X	MG RESISTOR		
	R 342	NRSA02J-105X	MG RESISTOR		
	R 343	NRSA02J-105X	MG RESISTOR		
	R 344	NRSA02J-105X	MG RESISTOR		
	R 351	NRSA02J-224X	MG RESISTOR		
	R 352	NRSA02J-224X	MG RESISTOR		
	R 353	NRSA02J-105X	MG RESISTOR		
	R 354	NRSA02J-682X	MG RESISTOR		
	R 355	NRSA02J-224X	MG RESISTOR		
	R 358	NRSA02J-332X	MG RESISTOR		
	R 401	NRSA02J-243X	MG RESISTOR		
	R 402	NRSA02J-243X	MG RESISTOR		
	R 403	NRSA02J-333X	MG RESISTOR		
	R 404	NRSA02J-333X	MG RESISTOR		
	R 405	NRSA02J-154X	MG RESISTOR		
	R 451	NRSA02J-224X	MG RESISTOR		
	R 452	NRSA02J-224X	MG RESISTOR		
	R 454	NRSA02J-682X	MG RESISTOR		
	R 455	NRSA02J-224X	MG RESISTOR		
	R 458	NRSA02J-332X	MG RESISTOR		
	R 701	NRSA02J-473X	MG RESISTOR		
	R 702	NRSA02J-821X	MG RESISTOR		
	R 703	NRSA02J-473X	MG RESISTOR		
	R 704	NRSA02J-473X	MG RESISTOR		
	R 705	NRSA02J-473X	MG RESISTOR		
	R 706	NRSA02J-103X	MG RESISTOR		
	R 707	NRSA02J-472X	MG RESISTOR		
	R 708	NRSA02J-472X	MG RESISTOR		
	R 709	NRSA02J-472X	MG RESISTOR		
	R 710	NRSA02J-103X	MG RESISTOR		
	R 711	NRSA02J-103X	MG RESISTOR		
	R 712	NRSA02J-103X	MG RESISTOR		
	R 713	NRSA02J-103X	MG RESISTOR		
	R 714	NRSA02J-103X	MG RESISTOR		
	R 715	NRSA02J-472X	MG RESISTOR		
	R 716	NRSA02J-472X	MG RESISTOR		
	R 717	NRSA02J-472X	MG RESISTOR		
	R 718	NQL012K-1R8X	INDUCTOR		
	R 719	NQL012K-1R8X	INDUCTOR		
	R 720	NRSA02J-331X	MG RESISTOR		
	R 721	NRSA02J-103X	MG RESISTOR		
	R 722	NRSA02J-103X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R 723	NRSA02J-102X	MG RESISTOR		
	R 724	NRSA02J-271X	MG RESISTOR		
	R 725	NRSA02J-271X	MG RESISTOR		
	R 728	NRSA02J-103X	MG RESISTOR		
	R 730	NRSA02J-103X	MG RESISTOR		
	R 731	NRSA63J-473X	MG RESISTOR		
	R 732	NRSA63J-473X	MG RESISTOR		
	R 733	NRSA63J-473X	MG RESISTOR		
	R 734	NRSA63J-472X	MG RESISTOR		
	R 735	NRSA63J-472X	MG RESISTOR		
	R 736	NRSA02J-102X	MG RESISTOR		
	R 737	NRSA02J-103X	MG RESISTOR		
	R 738	NRSA02J-103X	MG RESISTOR		
	R 739	NRSA02J-473X	MG RESISTOR		
	R 740	NRSA02J-473X	MG RESISTOR		
	R 742	NRSA02J-103X	MG RESISTOR		
	R 746	NRSA02J-473X	MG RESISTOR		
	R 747	NRSA02J-473X	MG RESISTOR		
	R 748	NRSA02J-473X	MG RESISTOR		
	R 749	NRSA02J-473X	MG RESISTOR		
	R 750	NRSA02J-473X	MG RESISTOR		
	R 751	NRSA02J-106X	MG RESISTOR		
	R 752	NRSA02J-473X	MG RESISTOR		
	R 757	NRSA02J-103X	MG RESISTOR		
	R 758	NRSA02J-331X	MG RESISTOR		
	R 761	NRSA02J-103X	MG RESISTOR		
	R 762	NRSA02J-222X	MG RESISTOR		
	R 763	NRSA02J-222X	MG RESISTOR		
	R 764	NRSA02J-222X	MG RESISTOR		
	R 765	NRSA02J-222X	MG RESISTOR		
	R 766	NRSA02J-222X	MG RESISTOR		
	R 767	NRSA02J-331X	MG RESISTOR		
	R 768	NRSA02J-473X	MG RESISTOR		
	R 772	NRSA02J-473X	MG RESISTOR		
	R 773	NRSA02J-223X	MG RESISTOR		
	R 774	NRSA02J-101X	MG RESISTOR		
	R 775	NRSA02J-103X	MG RESISTOR		
	R 776	NRSA02J-104X	MG RESISTOR		
	R 777	NRSA02J-223X	MG RESISTOR		
	R 778	NRSA02J-101X	MG RESISTOR		
	R 779	NRSA02J-473X	MG RESISTOR		
	R 781	NRSA02J-331X	MG RESISTOR		
	R 782	NRSA02J-104X	MG RESISTOR		
	R 783	NRSA02J-473X	MG RESISTOR		
	R 784	NRSA02J-473X	MG RESISTOR		
	R 785	NRSA02J-473X	MG RESISTOR		
	R 786	NRSA02J-473X	MG RESISTOR		
	R 787	NRSA02J-473X	MG RESISTOR		
	R 788	NRSA02J-473X	MG RESISTOR		
	R 789	NRSA02J-473X	MG RESISTOR		
	R 790	NRSA02J-473X	MG RESISTOR		
	R 791	NRSA02J-102X	MG RESISTOR		
	R 793	NRSA02J-0R0X	MG RESISTOR		
	R 794	NRSA02J-102X	MG RESISTOR		
	R 831	NRSA02J-472X	MG RESISTOR		
	R 832	NRSA02J-472X	MG RESISTOR		
	R 833	NRSA02J-332X	MG RESISTOR		
	R 834	NRSA02J-332X	MG RESISTOR		
	R 911	NRSA02J-222X	MG RESISTOR		
	R 912	NRSA02J-222X	MG RESISTOR		
	R 941	NRSA02J-273X	MG RESISTOR		
	R 942	NRSA02J-273X	MG RESISTOR		
	R 943	NRSA02J-102X	MG RESISTOR		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	R 954	NRSA02J-103X	MG RESISTOR		
	R 961	QRE142J-102X	C RESISTOR	1.0K 5% 1/4W	
	R 962	NRSA02J-912X	MG RESISTOR		
	R 963	NRSA02J-472X	MG RESISTOR		
	R 964	NRSA02J-473X	MG RESISTOR		
	R 965	NRSA02J-222X	MG RESISTOR		
	R 970	NRSA02J-123X	MG RESISTOR		
	R 971	NRSA02J-393X	MG RESISTOR		
	R 975	NRSA02J-124X	MG RESISTOR		
	R 976	NRS181J-222X	MG RESISTOR		
	R 977	NRS181J-222X	MG RESISTOR		
	R 978	NRSA02J-104X	MG RESISTOR		
	R 981	NRSA02J-473X	MG RESISTOR		
	R 984	NRSA02J-473X	MG RESISTOR		
	R 985	NRSA02J-103X	MG RESISTOR		
	R 986	NRSA02J-102X	MG RESISTOR		
	R 987	NRSA02J-473X	MG RESISTOR		
	R 991	NRSA02J-183X	MG RESISTOR		
	R 992	NRSA02J-473X	MG RESISTOR		
	R 993	NRSA02J-103X	MG RESISTOR		
	R 994	NRSA02J-102X	MG RESISTOR		
	S 651	NSW0120-002X	PUSH SWITCH		
	S 652	NSW0120-002X	PUSH SWITCH		
	S 653	NSW0120-002X	PUSH SWITCH		
	TH981	NAD0021-103X	THERMISTOR		
	TU 1	QAU0157-002	TUNER PACK		
	VR 31	QVP0004-503Z	SEMI.V.RESISTOR		
	X 51	QAX0263-001Z	CRYSTAL		
	X 701	QAX0617-001Z	CRYSTAL		
	X 702	QAX0401-001	CRYSTAL		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	BL611	QLL0059-001	BACK LIGHT		
	C 601	NBE20JM-475X	E CAPACITOR		
	C 602	NCB21HK-104X	C CAPACITOR		
	C 603	NCB21HK-104X	C CAPACITOR		
	C 604	NCS21HJ-221X	C CAPACITOR		
	C 611	NBE21AM-106X	E CAPACITOR		
	C 612	NFV41CG-393X	MPPS CAPACITOR		
	C 613	NCZ1011-180X	C CAPACITOR		
	C 614	NCB21EK-104X	C CAPACITOR		
	C 615	NCB21HK-562X	C CAPACITOR		
	C 625	NBE20JM-475X	E CAPACITOR		
	CN601	QGF0501F1-16X	FPC CONNECTOR		
	CN631	QGF0501F1-06X	CONNECTOR		
	D 621	SML-310LT/MN/-X	LED		
	D 622	SML-310LT/MN/-X	LED		
	D 623	SML-310LT/MN/-X	LED		
	D 624	SML-310LT/MN/-X	LED		
	D 625	MA3051/M/-X	ZENER DIODE		
	D 626	MA152WK-X	SI DIODE		
	D 627	LT1F67AF-W	LED		
	D 655	CL-190UB-X-X	LED		
	D 656	CL-190UB-X-X	LED		
	IC601	LC75873NW	IC		
	IC603	RPM6938-SV4	IC		
	L 611	NQLZ007-680X	INDUCTOR		
	L 612	NQR0372-001X	C FL TRANSF		
	L 613	NQL114K-470X	INDUCTOR		
	PC601	PR-20/B-E/-W	PHOTO REF.		
	PC602	PR-20/B-E/-W	PHOTO REF.		
	Q 611	2SD2185/R/-X	TRANSISTOR		
	Q 612	2SD2185/R/-X	TRANSISTOR		
	Q 691	2SD601A/R/-X	TRANSISTOR		
	Q 692	2SD601A/R/-X	TRANSISTOR		
	R 601	NRSA02J-103X	MG RESISTOR		
	R 602	NRSA02J-103X	MG RESISTOR		
	R 603	NRSA02J-103X	MG RESISTOR		
	R 604	NRSA02J-224X	MG RESISTOR		
	R 611	NRSA02J-472X	MG RESISTOR		
	R 612	NRSA02J-472X	MG RESISTOR		
	R 613	NRSA02J-681X	MG RESISTOR		
	R 621	NRSA02J-221X	MG RESISTOR		
	R 622	NRSA02J-221X	MG RESISTOR		
	R 623	NRSA02J-821X	MG RESISTOR		
	R 624	NRSA02J-821X	MG RESISTOR		
	R 625	NRSA02J-471X	MG RESISTOR		
	R 626	NRSA02J-103X	MG RESISTOR		
	R 627	NRSA02J-121X	MG RESISTOR		
	R 628	NRSA02J-0R0X	MG RESISTOR		
	R 629	NRSA02J-471X	MG RESISTOR		
	R 632	NRSA02J-221X	MG RESISTOR		
	R 633	NRSA02J-221X	MG RESISTOR		
	R 634	NRSA02J-221X	MG RESISTOR		
	R 635	NRSA02J-221X	MG RESISTOR		
	R 636	NRSA02J-821X	MG RESISTOR		
	R 637	NRSA02J-821X	MG RESISTOR		
	R 638	NRSA02J-122X	MG RESISTOR		
	R 639	NRSA02J-182X	MG RESISTOR		
	R 640	NRSA02J-272X	MG RESISTOR		
	R 641	NRSA02J-392X	MG RESISTOR		
	R 642	NRSA02J-821X	MG RESISTOR		
	R 643	NRSA02J-821X	MG RESISTOR		
	R 644	NRSA02J-122X	MG RESISTOR		
	R 645	NRSA02J-182X	MG RESISTOR		

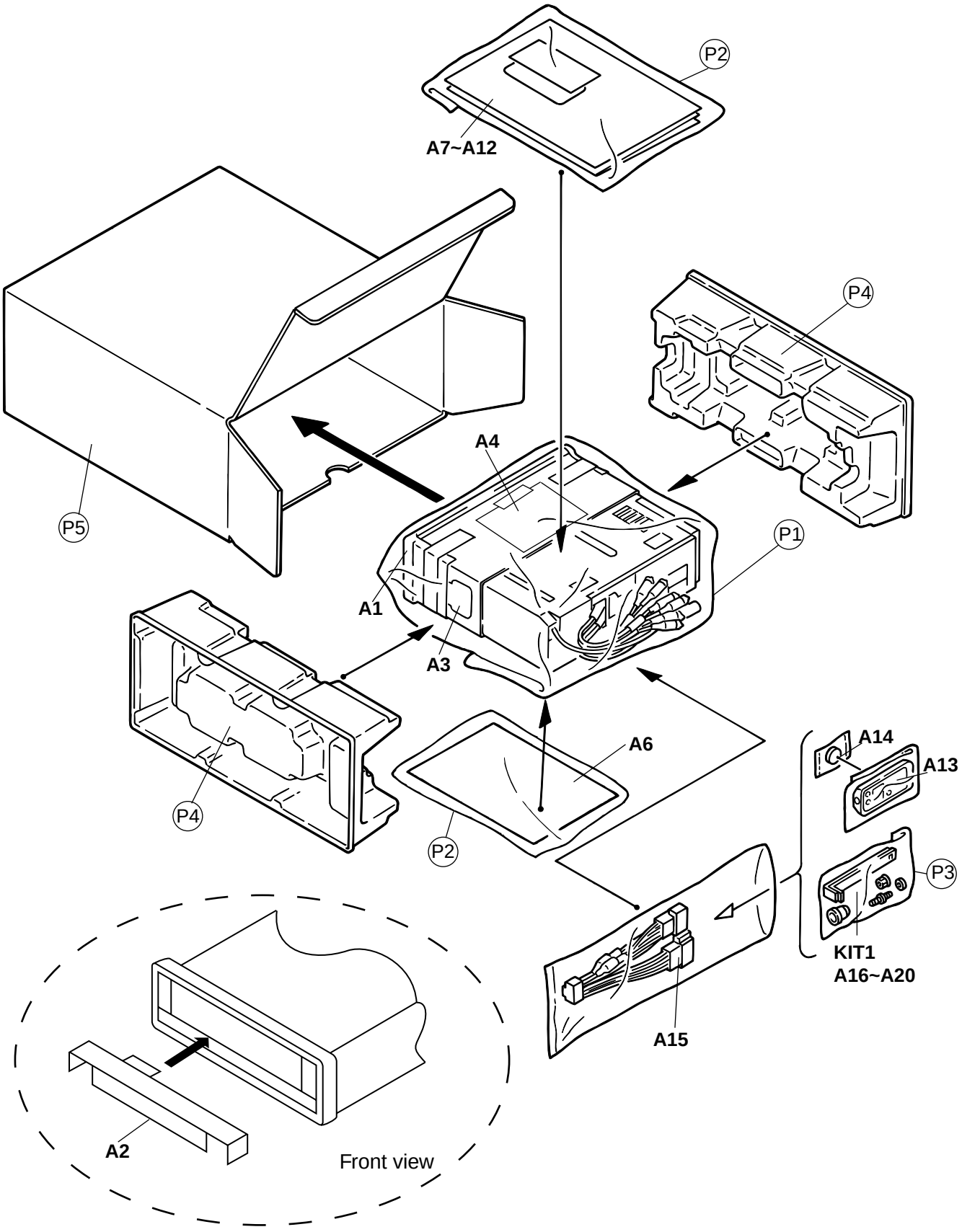
⚠	Item	Parts number	Parts name	Remarks	Area
	R 646	NRSA02J-272X	MG RESISTOR		
	R 647	NRSA02J-392X	MG RESISTOR		
	R 651	NRSA02J-221X	MG RESISTOR		
	R 652	NRSA02J-221X	MG RESISTOR		
	R 655	NRSA02J-391X	MG RESISTOR		
	R 656	NRSA02J-391X	MG RESISTOR		
	R 671	NRSA02J-331X	MG RESISTOR		
	R 672	NRSA02J-331X	MG RESISTOR		
	R 673	NRSA02J-332X	MG RESISTOR		
	R 675	NRSA02J-332X	MG RESISTOR		
	R 676	NRSA02J-391X	MG RESISTOR		
	R 691	NRSA02J-104X	MG RESISTOR		
	R 692	NRSA02J-393X	MG RESISTOR		
	R 693	NRSA02J-104X	MG RESISTOR		
	R 694	NRSA02J-393X	MG RESISTOR		
	S 621	NSW0041-001X	TACT SWITCH		
	S 622	NSW0041-001X	TACT SWITCH		
	S 623	NSW0041-001X	TACT SWITCH		
	S 624	NSW0041-001X	TACT SWITCH		
	S 625	NSW0039-001X	TACT SWITCH		
	S 631	QSW0856-002X	TACT SWITCH		
	S 632	NSW0041-001X	TACT SWITCH		
	S 633	QSW0856-002X	TACT SWITCH		
	S 634	QSW0856-002X	TACT SWITCH		
	S 635	QSW0856-002X	TACT SWITCH		
	S 636	QSW0856-002X	TACT SWITCH		
	S 637	QSW0856-002X	TACT SWITCH		
	S 638	QSW0856-002X	TACT SWITCH		
	S 639	QSW0856-002X	TACT SWITCH		
	S 640	QSW0856-002X	TACT SWITCH		
	S 641	QSW0856-002X	TACT SWITCH		
	S 642	QSW0856-002X	TACT SWITCH		
	S 643	QSW0856-002X	TACT SWITCH		

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

⚠	Item	Parts number	Parts name	Remarks	Area
	C 401	NCB21HK-122X	C CAPACITOR		
	C 402	NCB21HK-122X	C CAPACITOR		
	C 403	NDC21HJ-101X	C CAPACITOR		
	C 404	NDC21HJ-101X	C CAPACITOR		
	C 405	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 406	QFV61HJ-103Z	MF CAPACITOR	0.01MF 5% 50V	
	C 407	QEQF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 408	QFV61HJ-104Z	MF CAPACITOR	0.1MF 5% 50V	
	C 409	QFV61HJ-103Z	MF CAPACITOR	0.01MF 5% 50V	
	C 410	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 411	QEQF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 412	NDC21HJ-221X	C CAPACITOR		
	C 413	QFV61HJ-104Z	MF CAPACITOR	0.1MF 5% 50V	
	C 414	QEKJ1HM-474Z	E CAPACITOR	0.47MF 20% 50V	
	C 415	NCB21HK-103X	C CAPACITOR		
	C 416	NCB21EK-104X	C CAPACITOR		
	C 417	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 418	NCB21HK-103X	C CAPACITOR		
	C 419	NCB21EK-104X	C CAPACITOR		
	CP401	QGA2001F1-07	CONNECTOR		
	CP402	QGB1214K1-10S	CONNECTOR		
	CP403	QGB1214K1-18S	CONNECTOR		
	D 401	DSK10C-T1	DIODE		
	D 402	MA3036/L/-X	ZENER DIODE		
	D 403	MA3075/M/-X	ZENER DIODE		
	IC401	CXA2510AQ	IC		
	IC402	LB1641	IC		
	O 401	2SB1322/RS/-T	TRANSISTOR		
	O 402	DTC114EKA-X	TRANSISTOR		
	O 403	DTC144EKA-X	TRANSISTOR		
	R 401	NRSA02J-222X	MG RESISTOR		
	R 402	NRSA02J-104X	MG RESISTOR		
	R 403	NRSA02J-104X	MG RESISTOR		
	R 404	NRS181J-181X	MG RESISTOR		
	R 405	NRS181J-181X	MG RESISTOR		
	R 406	NRSA02J-304X	MG RESISTOR		
	R 407	NRSA02J-123X	MG RESISTOR		
	R 408	NRSA02J-183X	MG RESISTOR		
	R 409	NRSA02J-183X	MG RESISTOR		
	R 410	NRSA02J-304X	MG RESISTOR		
	R 411	NRSA02J-183X	MG RESISTOR		
	R 412	NRSA02J-123X	MG RESISTOR		
	R 413	NRS181J-101X	MG RESISTOR		
	R 414	NRS181J-102X	MG RESISTOR		
	R 415	NRSA02J-392X	MG RESISTOR		
	R 417	NRS181J-102X	MG RESISTOR		
	R 418	NRSA02J-223X	MG RESISTOR		
	R 419	NRSA02J-125X	MG RESISTOR		
	R 421	NRSA02J-473X	MG RESISTOR		
	R 422	NRSA02J-332X	MG RESISTOR		
	R 423	NRS181J-332X	MG RESISTOR		
	R 424	NRS181J-330X	MG RESISTOR		
	R 425	QRT036J-8R2	OMF RESISTOR	8.2 5% 1/3W	
	VR401	QVP0009-333Z	SEMI V RESISTOR		
	VR402	QVP0009-333Z	SEMI V RESISTOR		

Packing materials and accessories parts list

Block No. M 3 M M
Block No. M 4 M M



■ Parts list (Packlng)

Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	VPE3005-066	POLY BAG	1	SET	
	P 2	QPA01703505P	POLY BAG	2	INSTRUCTIONS	
	P 3	QPA00801205	POLY BAG	1	SCREW KIT	
	P 4	LV10193-201A	PAPER CUSHION	2		
	P 5	FSPE3001-198	CARTON	1		

■ Parts list (Accessories)

Block No. M4MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	FSJD1007-001	TRIM PLATE	1		
	A 2	LV41820-002A	TRANSPORT SHEET	1		
	A 3	FSKM2004-003SSF	MOUNTING SLEEVE	1		
	A 4	LV40978-001A	CAUTION SHEET	1		
	A 6	FSUN3148-311	INSTRUCTIONS	1	ENG,GER,FRE,DUT	
	A 7	FSUN3148-321	INSTRUCTIONS	1	SPA,ITA,SWE,FIN	
	A 8	FSUN3148-T211	INST.MANUAL	1	ENG,GER,FRE	
		FSUN3148-T481	INST.MANUAL	1	SWE,FIN	
		FSUN3148-T451	INST.MANUAL	1	DUT,SPA,ITA	
	A 9	LV41144-001A	LABEL(CODE)	1		
	A 10	BT-54013-1	WARRANTY CARD	1		
	A 11	VND3046-001	SERIAL TICKET	1		
	A 12	GET0037-001A	CAUTION SHEET	1		
	A 13	RM-RK31	REMOCON	1		
	A 14	QAB0014-001	BATTERY	1		
	A 15	QAM0267-001	CAR CABLE	1		
	A 16	VKZ4027-202	PLUG NUT	1		
	A 17	VKH4871-001	MOUNT BOLT	1		
	A 18	VKZ4328-001	LOCK NUT	1		
	A 19	WNS5000Z	WASHER	1		
	A 20	FSKL4010-002	HOOK	2		
	KIT 1	KDGS717K-SCREW1	SCREW PARTS KIT	1	A16-A20	

JVC

VICTOR COMPANY OF JAPAN, LIMITED
MOBILE ELECTRONICS DIVISION
PERSONAL & MOBILE NETWORK B.U. 10-1,1Chome,Ohwatari-machi,Maebashi-city,Japan

No.49573

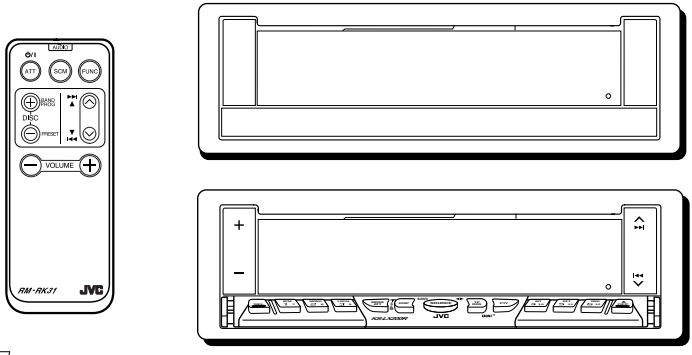
Printed in Japan
200010(O)

JVC

ENGLISH
DEUTSCH
FRANÇAIS
NEDERLANDS

CASSETTE RECEIVER
CASSETTEN-RECEIVER
RADIOCASSETTE
RADIO/CASSETTESPELER

KS-LX200R



RDS EON

BBE II

For installation and connections, refer to the separate manual.
Angaben zu Einbau und Verkabelung entnehmen Sie bitte der gesonderten Anleitung.
Pour l'installation et les raccordements, se référer au manuel séparé.
Zie de afzonderlijke handleiding voor details aangaande het installeren en verbinden van het toestel.

INSTRUCTIONS

BEDIENUNGSANLEITUNG
MANUEL D'INSTRUCTIONS
GEBRUIKSAANWIJZING

For Customer Use:
Enter below the password you have entered for your security lock.
Retain this password for future reference.

PASSWORD: ☐☐☐☐

FSUN3148-311
[E]

Thank you for purchasing a JVC product. Please read all instructions carefully before operation, to ensure your complete understanding and to obtain the best possible performance from the unit.

ENGLISH

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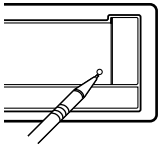
How to reset your unit



Press the reset button on the front panel using a ball-point pen or a similar tool.
This will reset the built-in microcomputer.

Note:

Your preset adjustments — such as preset channels or sound adjustments — will also be erased.

Note:

For security reasons, a numbered ID card is provided with this unit, and the same ID number is imprinted on the unit's chassis. Keep the card in a safe place, as it will help the authorities to identify your unit if stolen.

BEFORE USE

****For safety....***

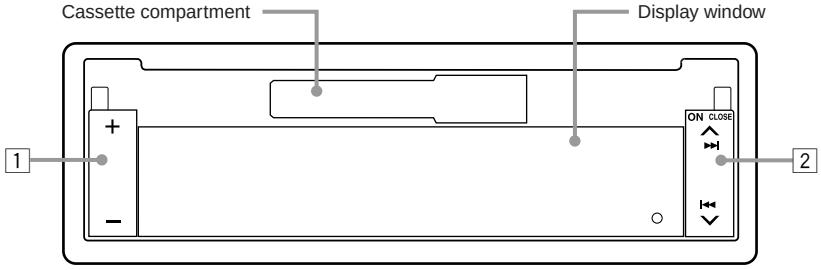
- *Do not raise the volume level too much, as this will block outside sounds, making driving dangerous.*
- *Stop the car before performing any complicated operations.*

****Temperature inside the car....***

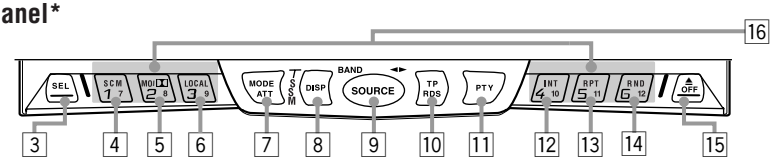
If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.

ENGLISH

Front panel



Control panel*



**The control panel slides out when you press ON/CLOSE .*

1. +/– button
2. ^ ▶▶| / |◀◀ v button
   - ^ ▶▶| / |◀◀ v *also functions as ON or CLOSE button.*
3. SEL (select) button
4. SCM (sound control memory) button
5. MO/DD (mono/Dolby) button
6. LOCAL button
7. MODE ATT (attenuator) button
   - *Also functions as SSM buttons when pressed together with the DISP button.*
8. DISP (display) button
   - *Also functions as SSM buttons when pressed together with the MODE ATT button.*
9. SOURCE button
   - *Also functions as BAND or ◀▶.*
10. TP (traffic programme)
    RDS (radio data system) button
11. PTY (programme type) button
12. INT (intro) button
13. RPT (repeat) button
14. RND (random) button
15. ⏏ (eject) OFF button
16. Number buttons

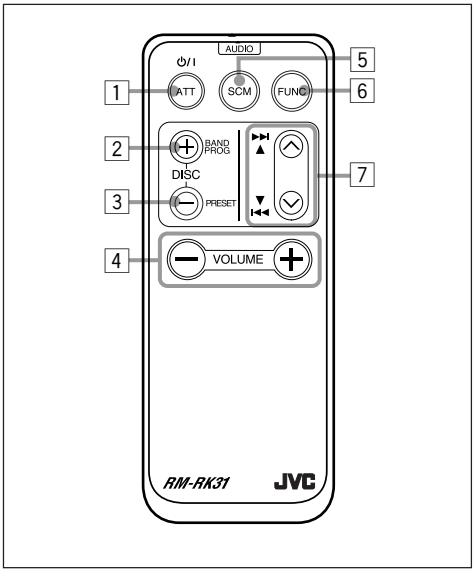
To activate the display demonstration

While holding DISP, press ^ ▶▶| until "DEMO" appears on the display.
Various functions and display illumination modes equipped with this unit will be demonstrated repeatedly in sequence. During the display demonstration, "DEMO" flashes on the display.
To turn off the display demonstration, press ^ ▶▶| again for a few seconds while holding DISP.
• The display demonstration will turn off automatically after 1 hour.

How to use the number buttons:

After pressing MODE ATT, the number buttons work as different function buttons (while "MODE" remains on the display.)
To use these buttons as number buttons after pressing MODE ATT, wait for 5 seconds without pressing any number button so that "MODE" disappears from the display.
• Pressing MODE ATT again also erases "MODE" from the display.

Remote controller



1 • Turns on the unit if pressed when the unit is turned off.
  • Turns off the unit if pressed and held until "SEE YOU" appears on the display.
  • Drops the volume level for a moment if pressed briefly.
  Press again to resume the volume.

2 • Functions as the BAND button while listening to the FM broadcast (or the DAB tuner).
  Each time you press the button, the band changes.
  • Functions as the DISC + button while listening to the CD changer.
  Each time you press the button, the disc number increases, and the selected disc starts playing.
  • Functions as the PROG button while listening to a tape.
  Each time you press the button, the tape direction changes alternately.

3 • Functions as the PRESET button while listening to the radio (or the DAB tuner.)
  Each time you press the button, the preset station (or service) number increases, and the selected station (or service) is tuned in.
  • Functions as the DISC – button while listening to the CD changer.
  Each time you press the button, the disc number decreases, and the selected disc starts playing.

4 Functions the same as the +/– button on the main unit.

NOTE: *This button does not function for the preferred setting mode adjustment.*

5 Selects the sound mode.
  Each time you press the button, the mode changes.

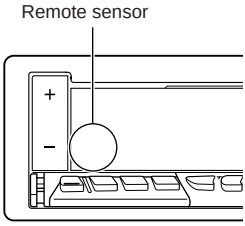
6 Selects the source.
  Each time you press the button, the source changes.

7 • Searches stations while listening to the radio.
  • Selects services while listening to the DAB tuner if pressed briefly.
  • Searches ensembles while listening to the DAB tuner if pressed for more than 1 second.
  • Functions as the fast forward/rewind buttons or multi music scan buttons while listening to a tape.
  • Fast-forwards or reverses the track if pressed and held while listening to a CD.
  • Skips to the beginning of the next tracks or goes back to the beginning of the current (or previous tracks) if pressed briefly while listening to a CD.

Preparing the remote controller

Before using the remote controller:

- Aim the remote controller directly at the remote sensor on the main unit. Make sure there is no obstacle in between.



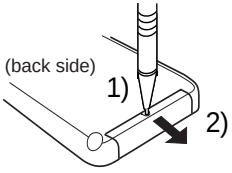
- Do not expose the remote sensor to strong light (direct sunlight or artificial lighting).

Installing the battery

When the controllable range or effectiveness of the remote controller decreases, replace the battery.

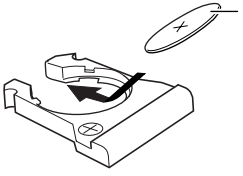
1. Remove the battery holder.

1) Push out the battery holder in the direction indicated by the arrow using a ball-point pen or a similar tool.
2) Remove the battery holder.



2. Place the battery.

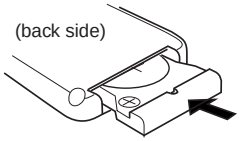
Slide the battery into the holder with the + side facing upwards so that the battery is fixed in the holder.



Lithium coin battery (product number: CR2025)

3. Return the battery holder.

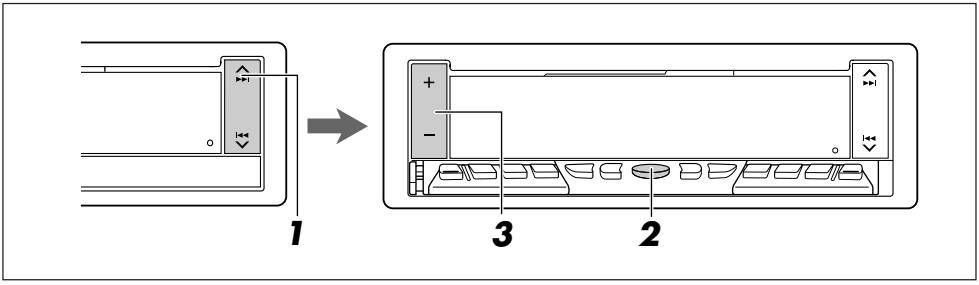
Insert again the battery holder pushing it until you hear a clicking sound.



WARNING:

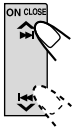
- *Store the batteries in a place which children cannot reach.*
  If a child accidentally swallows the batteries, immediately consult a doctor.
- *Do not recharge, short, disassemble or heat the batteries or dispose of in a fire.*
  Doing any of these things may cause the batteries to give off heat, crack or start a fire.
- *Do not leave the batteries with other metallic materials.*
  Doing this may cause the batteries to give off heat, crack or start a fire.
- *When throwing away or saving batteries, wrap in tape and insulate; otherwise, it may cause the batteries to give off heat, crack or start a fire.*
- *Do not poke the batteries with tweezers or similar tools.*
  Doing this may cause the batteries to give off heat, crack or start a fire.

ENGLISH



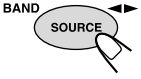
Turning on the power

1 Turn on the power.



The display illuminates and the control panel comes out.

2 Select the source.



Each time you press the button, the source changes as follows:

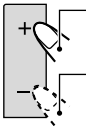
→ FM → DAB tuner** → Tape*
→ CD changer** → External component
→ AM → (back to the beginning)

* *If a cassette is not in the cassette compartment, you cannot select tape as the source to play.*

** *Without connecting the CD changer and/or the DAB tuner, you cannot select it as the source to play.*

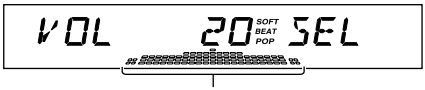
To operate the tuner (FM or AM), see pages 7 – 14.
To operate the tape, see pages 15 – 17.
To operate the CD changer, see pages 27 – 28.
To operate the external component connected to the LINE IN plugs, see page 29.
To operate the DAB tuner, see pages 30 – 33.

3 Adjust the volume.



Press + to increase the volume.

Press – to decrease the volume.



Volume level meter

4 Adjust the sound as you want (see page 18.)

To drop the volume in a moment

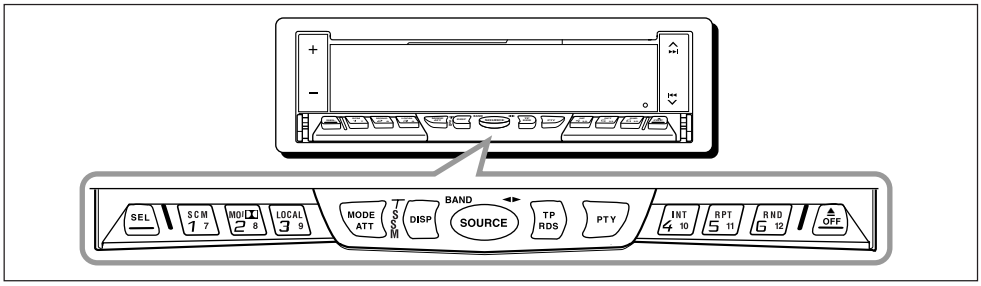
Press MODE ATT for more than 1 second while listening to any source. "ATT" starts flashing on the display, and the volume level will drop in a moment. To resume the previous volume level, press the button for more than 1 second again.

To turn off the power

Press and hold ⏏ OFF until "SEE YOU" appears on the display.

Note:

When you use this unit for the first time, set the built-in clock correctly, see page 21.

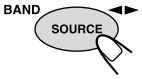


Listening to the radio

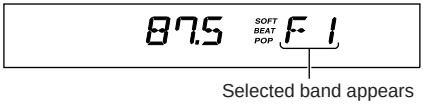
You can use either automatic searching or manual searching to tune into a particular station.

Searching a station automatically: Auto search

1 Select the band (FM1–3, AM).



- Press and hold SOURCE (BAND) repeatedly to select the FM band (FM1, FM2 or FM3.)

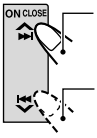


Selected band appears

Note:

This receiver has three FM bands (FM1, FM2, FM3). You can use any one of them to listen to an FM broadcast.

2 Start searching a station.



Press ∧ ►►I to search stations of higher frequencies.

Press I◄◄ ∨ to search stations of lower frequencies.

When a station is received, searching stops.

To stop searching before a station is received, press the same button you have pressed for searching.

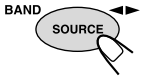
To tune in FM stations only with strong signals

1 Press MODE ATT.
"MODE" appears on the display, and the number buttons can work as different function buttons.

2 Press LOCAL, while "MODE" is still on the display, so that the LOCAL indicator lights up on the display.
This function works only while searching FM stations, including SSM preset (see page 8).
Each time you press the button, the LOCAL indicator lights up and goes off alternately.

Searching a station manually: Manual search

1 Select the band (FM1–3, AM).

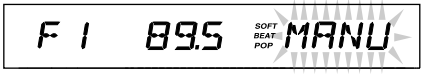


- Press and hold SOURCE (BAND) repeatedly to select the FM band (FM1, FM2 or FM3.)

Note:

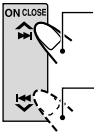
This receiver has three FM bands (FM1, FM2, FM3). You can use any one of them to listen to an FM broadcast.

2 Press and hold ∧ ►►I or I◄◄ ∨ until "MANU" (manual) starts flashing on the display.



CONTINUED ON THE NEXT PAGE

3 Tune into a station you want while "MANU" is flashing.



Press ∧ ►►| to tune into stations of higher frequencies.

Press |◄◄ ∨ to tune into stations of lower frequencies.

- If you release your finger from the button, the manual mode will automatically turn off after 5 seconds.
- If you hold down the button, the frequency keeps changing (in 50 kHz intervals for FM and 9 kHz intervals for AM – MW/LW) until you release the button.

When an FM stereo broadcast is hard to receive:

1 Press MODE ATT while listening to an FM stereo broadcast (the STEREO indicator lights up while receiving an FM stereo broadcast).

2 Press MO/◧◨, while "MODE" is still on the display, so that the MONO indicator lights up on the display.
The sound you hear becomes monaural but the reception will be improved (the STEREO indicator goes off).
Each time you press the button, the MONO indicator lights up and goes off alternately.

Storing stations in memory

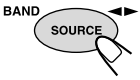
You can use one of the following two methods to store broadcasting stations in memory.

- Automatic preset of FM stations: SSM (Strong-station Sequential Memory)
- Manual preset of both FM and AM stations

FM station automatic preset: SSM

You can preset 6 local FM stations in each FM band (FM1, FM2 and FM3.)

1 Select the FM band (FM1–3) you want to store FM stations into.



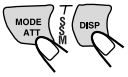
1 Press SOURCE (BAND) to select FM as the source.

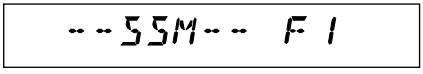
2 If necessary, press and hold SOURCE (BAND) repeatedly to select the FM band (FM1, FM2 or FM3.)

Each time you press and hold the button, the FM band changes as follows:

FM1 → FM2 → FM3

2 Press and hold both buttons for more than 2 seconds.





"SSM" appears, then disappears when automatic preset is over.

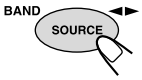
Local FM stations with the strongest signals are searched and stored automatically in the band number you have selected (FM1, FM2 or FM3.) These stations are preset in the number buttons — No.1 (lowest frequency) to No.6 (highest frequency.) When automatic preset is over, the station stored in number button 1 will be automatically tuned in.

Manual preset

You can preset up to 6 stations in each band (FM1, FM2, FM3 and AM) manually.

Ex: Storing an FM station of 88.3 MHz into the preset number 1 of the FM1 band

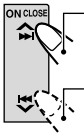
1 Select the band (FM1).



1 Press SOURCE (BAND) to select FM as the source.

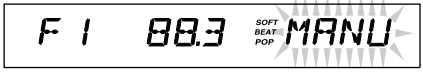
2 Press and hold SOURCE (BAND) repeatedly to select the FM1 band.

2 Tune into a station of 88.3 MHz.

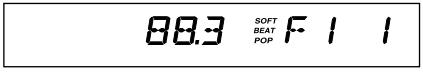


Press ∧ ▶▶| to tune into stations of higher frequencies.

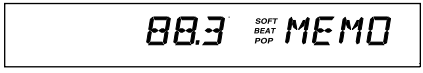
Press |◀◀ ∨ to tune into stations of lower frequencies.



3 Press and hold the number button (in this example, 1) for more than 2 seconds.



Band/preset number and "MEMO" flash alternately for a while.



4 Repeat the above procedure to store other stations into other preset numbers.

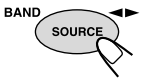
Notes:

- *A previously preset station is erased when a new station is stored in the same preset number.*
- *Preset stations are erased when the power supply to the memory circuit is interrupted (for example, during battery replacement). If this occurs, preset the stations again.*

Tuning into a preset station

You can easily tune into a preset station.
Remember that you must store stations first. If you have not stored them yet, see "Storing stations in memory" on page 8.

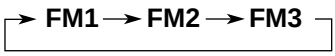
1 Select the band (FM1–3, AM).



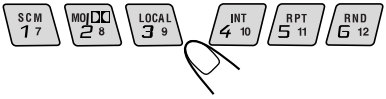
1 Press SOURCE (BAND) to select FM or AM as the source.

2 If necessary, press and hold SOURCE (BAND) repeatedly to select the FM band number (FM1, FM2 or FM3.)

Each time you press and hold the button, the FM band changes as follows:



2 Select the number (1 – 6) for the preset station you want.



If the sound quality decreases and the stereo effect is lost while listening to an FM station

In some areas, adjacent stations may interfere with each other. If this interference occurs, this unit can automatically reduce this interference noise (the initial setting when shipped from the factory). However, in this case, the sound quality will be degraded and the stereo effect will be also lost.

If you do not want to degrade the sound quality and to lose the stereo effect, rather than to eliminate the interference noise, see "To change the FM tuner selectivity – FILTER" on page 24.

What you can do with RDS EON

RDS (Radio Data System) allows FM stations to send an additional signal along with their regular programme signals. For example, the stations send their station names, as well as information about what type of programme they broadcast, such as sports or music, etc.
Another advantage of RDS function is called “EON (Enhanced Other Networks).” The EON indicator lights up while receiving an FM station with the EON data. By using the EON data sent from a station, you can tune into a different station of a different network broadcasting your favorite programme or traffic announcement while listening to another programme or to another source such as tape.

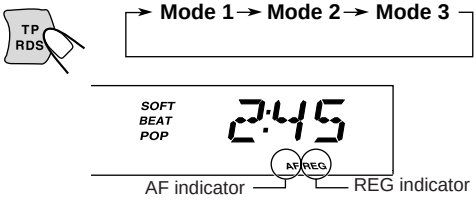
By receiving the RDS data, this unit can do the following:

- Tracing the same programme automatically (Network-Tracking Reception)
- Standby Reception of TA (Traffic Announcement) or your favorite programme
- PTY (Programme Type) search
- Programme search
- And some other functions

Tracing the same programme automatically (Network-Tracking Reception)

When driving in an area where FM reception is not good, the tuner built in this unit automatically tunes into another RDS station, broadcasting the same programme with stronger signals. So, you can continue to listen to the same programme in its finest reception, no matter where you drive. (See the illustration on the next page.)
Two types of the RDS data are used to make Network-Tracking Reception work correctly — PI (Programme Identification) and AF (Alternative Frequency.)
Without receiving these data correctly from the RDS station you are listening to, Network-Tracking Reception will not operate.

To use Network-Tracking Reception, press and hold TP RDS (Traffic Programme/Radio Data System) for more than 1 second. Each time you press and hold the button, Network-Tracking Reception modes change as follows:



Mode 1
The AF indicator lights up but the REG indicator does not.
Network-Tracking Reception is activated with Regionalization set to “off.”
Switches to another station within the same network when the receiving signals from the current station become weak.

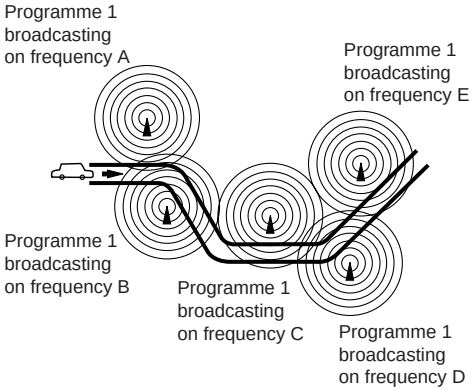
- *In this mode, the programme may differ from the one currently received.*

Mode 2
Both the AF indicator and the REG indicator light up.
Network-Tracking Reception is activated with Regionalization set to “on.”
Switches to another station, within the same network, broadcasting the same programme when the receiving signals from the current station become weak.

Mode 3
Neither the AF indicator nor the REG indicator lights up.
Network-Tracking Reception is deactivated.

Note:
If a DAB tuner is connected and Alternative Reception (for DAB services) is activated, Network-Tracking Reception is also activated automatically. On the other hand, Network-Tracking Reception cannot be deactivated without deactivating Alternative Reception. *(See page 33.)*

The same programme can be received on different frequencies.



Using Standby Reception

Standby Reception allows the unit to switch temporarily to your favorite programme (PTY: Programme Type) and Traffic Announcement (TA) from the current source (another FM station, tape and other connected components.)

- *Standby Reception will not work if you are listening to an AM station.*

TA Standby Reception

When you press TP RDS while listening to an FM station, the TP indicator is lit during reception of a TP (Traffic Programme) station and the TA standby mode is engaged.

- *When the station being received is not a TP station, the TP indicator flashes. Press ∧ ►►I or I◄◄ ∨ to engage the TA standby mode. "SEARCH" appears on the display, and TP station search starts. When a TP station is tuned in, the TP indicator is lit.*

■ If you are listening to a tape or other connected components and wish to listen to a TP station, press TP RDS to enter the TA standby mode. (The TP indicator lights up.)

If a traffic programme starts broadcasting while the TA standby mode is active, "TRAFFIC" appears and the playback source changes to the FM band. The volume increases to the preset TA volume level (see page 14) and the traffic programme can be heard.

To deactivate the TA standby mode, press TP RDS again.

PTY Standby Reception

When you press PTY while listening to an FM station, the PTY indicator is lit during reception of a PTY station and the PTY standby mode is engaged. The selected PTY name stored on page 12 flashes for 5 seconds.

- *When the station being received is not a PTY station, the PTY indicator flashes. Press ∧ ►►I or I◄◄ ∨ to engage the PTY standby mode. "SEARCH" appears on the display, and PTY station search starts. When a PTY station is tuned in, the PTY indicator is lit.*

■ If you are listening to a tape or other connected components and wish to listen to a selected PTY broadcast, press PTY to enter the PTY standby mode. (The PTY indicator lights up.)

If the selected PTY programme starts broadcasting while the PTY standby mode is active, the selected PTY name appears and the playback source changes to the FM band. The selected PTY programme can then be heard.

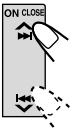
To deactivate the PTY standby mode, press PTY again.

Selecting your favorite programme for PTY Standby Reception

You can select your favorite programme for PTY Standby Reception to store in memory.
When shipped from the factory, “NEWS” is stored as the programme type for PTY Standby Reception.

1 **Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.**
(PSM: see page 22.)

2 **Select “PTY STBY” (standby) if not shown on the display.**



3 **Select one of twenty-nine PTY codes.**

Selected code name appears on the display and is stored into memory.

Each time you press the button, the PTY codes change as follows:

PTY codes

NEWS ⇄ AFFAIRS ⇄ INFO ⇄ SPORT ⇄ EDUCATE ⇄ DRAMA ⇄ CULTURE ⇄ SCIENCE ⇄ VARIED ⇄ POP M ⇄ ROCK M ⇄ EASY M ⇄ LIGHT M ⇄ CLASSICS ⇄ OTHER M ⇄ WEATHER ⇄ FINANCE ⇄ CHILDREN ⇄ SOCIAL ⇄ RELIGION ⇄ PHONE IN ⇄ TRAVEL ⇄ LEISURE ⇄ JAZZ ⇄ COUNTRY ⇄ NATION M ⇄ OLDIES ⇄ FOLK M ⇄ DOCUMENT ⇄ (back to the beginning)

For details, see page 35.

4 **Press SEL (select) to finish the setting.**

Searching your favorite programme

You can search one of your 6 favorite programme types stored in memory.
When shipped from the factory, the following 6 programme types have been stored in the number buttons (1 to 6.)
To store your favorite programme types, see below.
To search your favorite programme type, see page 13.

1	2	3
POP M	ROCK M	EASY M

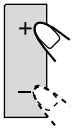
4	5	6
CLASSICS	AFFAIRS	VARIED

To store your favorite programme types

1 **Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.**
(PSM: see page 22.)

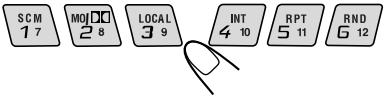
2 **Select “PTY SRCH” (search) if not shown on the display.**

3 **Select one of twenty-nine PTY codes. (See left column.)**



Selected code name appears on the display.
- If the code already stored in memory is selected, it will flash on the display.

4 **Press and hold the number button for more than 2 seconds to store the PTY code selected into the preset number you want.**



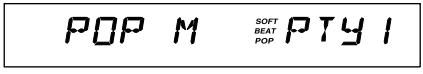
PTY preset number appears, and selected code name and “MEMORY” alternate on the display.

5 **Press SEL (select) to finish the setting.**

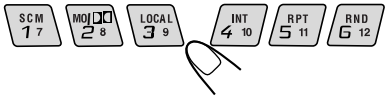
To search your favorite programme type

1 **Press and hold PTY (programme type) for more than 1 second while listening to an FM station.**

The last selected PTY code and preset number appear.



2 **Select one of the PTY codes stored in preset number buttons (1 to 6.)**



PTY search for your favorite programme starts after 5 seconds.

- If there is a station broadcasting a programme of the same PTY code you selected, that station is tuned in.
- If there is no station broadcasting a programme of the same PTY code you selected, the station will not change.

Note:

In some areas, the PTY search will not work correctly.

Other convenient RDS functions and adjustments

Automatic selection of the station when using the number buttons

Usually when you press the number button, the preset station is tuned in.
However, when the preset station is an RDS station, something different will happen. If the signals from that preset station are not sufficient for good reception, this unit, using the AF data, tunes in another frequency broadcasting the same programme as the original preset station is broadcasting.

In case no other station is tuned in, you can also search all receivable frequencies for the same programme (Programme search).

To activate programme search, follow the procedure below.

- Programme search takes a while.
- See also “Changing the general settings (PSM)” on page 21.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
2 Press ∧ ►►I or I◄◄ ∨ to select “P(Programme)-SEARCH.”
3 Press + to select “SRCH ON.”
Now programme search is activated.

To cancel programme search, repeat the same procedure and select “SRCH OFF” in step 3 by pressing –.

Changing the display mode while listening to an FM station

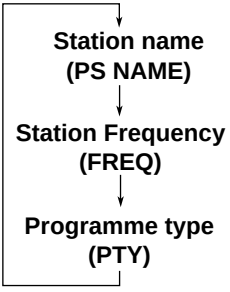
You can change the initial indication on the display to either station name (PS NAME) or to station frequency (FREQ), while listening to an FM RDS station.

- See also "Changing the general settings (PSM)" on page 21.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
2 Press ∧ ►►I or I◄◄ ∨ to select "TU DISP" (tuner display).
3 Press + or – to set to the desired indication ("PS NAME" or "FREQ").

Note:

By pressing DISP, you can also change the display while listening to an FM RDS station.
Each time you press the button, the following information appears on the display:



- *Then, the display goes back to the original indication in several seconds.*

Setting the TA volume level

You can preset the volume level for TA Standby Reception. When a traffic programme is received, the volume level automatically changes to the preset level.

- See also "Changing the general settings (PSM)" on page 21.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
2 Press ∧ ►►I or I◄◄ ∨ to select "TA VOL."
3 Press + or – to set to the desired volume.
You can set it from "VOL 00" to "VOL 50."

Automatic clock adjustment

When shipped from the factory, the clock built in this unit is set to be readjusted automatically using the CT (Clock Time) data in the RDS signal.
If you do not want to use automatic clock adjustment, follow the procedure below.

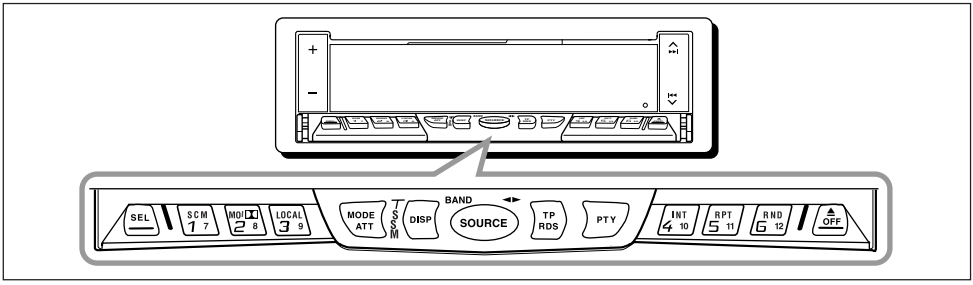
- See also "Changing the general settings (PSM)" on page 21.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
2 Press ∧ ►►I or I◄◄ ∨ to select "AUTO ADJ."
3 Press – to select "ADJ OFF."
Now automatic clock adjustment is canceled.

To reactivate clock adjustment, repeat the same procedure and select "ADJ ON" in step 3 by pressing +.

Note:

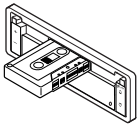
It takes about 2 minutes to adjust the time using the CT data. So, you should not change the station for more than 2 minutes continuously; otherwise, the clock time will not be adjusted.



Listening to a tape

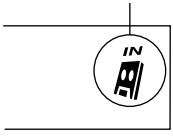
1 Open the cassette compartment.

2 Insert a cassette into the cassette compartment.



The unit draws the cassette, and tape play starts automatically after the display panel moves up.

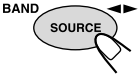
"Cassette in" indicator appears.



Notes:

- *When a cassette is already in the cassette compartment, select tape as the source by pressing SOURCE (◄►) to start tape play.*
- *When one side of the tape reaches its end during play, the other side of the tape automatically starts playing. (Auto Reverse)*

3 Select the tape direction.



Each time you press and hold SOURCE (◄►), the tape direction changes alternately forward (FWD PLAY) and reverse (REV PLAY).

To stop play and eject the cassette

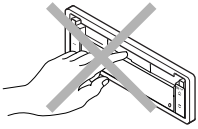
Press ▲ OFF briefly.
Tape play stops and the cassette automatically ejects from the cassette compartment. The source changes to the previously selected one.
If you change the source, the tape play also stops (without ejecting the cassette this time).

- You can eject the cassette while the ignition key is turned off by pressing ^ ►►| or |◄◄ v .

To close the display panel, press ^ ►►| or |◄◄ v .

- Turning on or off the ignition key does not close the display panel. To close it, press ^ ►►| or |◄◄ v .

CAUTION



NEVER insert your finger between the display panel and the unit, as it may get caught in the unit.

To fast-forward and rewind a tape

Press ^ ►►| for more than 1 second to fast-forward the tape.
When the tape reaches its end, the tape is reversed and playback starts from the beginning of the other side.

Press |◄◄ v for more than 1 second to rewind the tape.
When the tape reaches its end, playback of the same side starts.

To stop fast forward and rewind at any position on the tape, press and hold SOURCE (◄►). Tape play starts from that position on the tape.

Note:

When the tape reaches its end while fast-forwarding, the tape direction will be changed automatically.

To play back tapes recorded with the Dolby B NR

1 Press MODE ATT.
"MODE" appears on the display.

Within 5 seconds

2 Press MO/DOLBY while "MODE" is still on the display so that the DOLBY indicator lights up, and "DOLBY B" appears on the display for several seconds.

To cancel the Dolby B NR, repeat the above procedure again so that the DOLBY indicator goes off.

* Dolby noise reduction is manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DOLBY are trademarks of Dolby Laboratories Licensing Corporation.

Prohibiting tape ejection

You can prohibit tape ejection and can "lock" a tape in the cassette compartment.
Press and hold SOURCE (◄►) and ▲ OFF for more than 2 seconds. "NO EJECT" flashes on the display for about 5 seconds, and the tape is "locked."

To cancel the prohibition and "unlock" the tape, press and hold SOURCE (◄►) and ▲ OFF for more than 2 seconds again. "EJECT OK" flashes for about 5 seconds, and this time the tape is "unlocked."

Note:

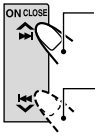
If you press ▲ OFF while tape ejection is prohibited, the display panel moves down, but the tape cannot be ejected. ("NO EJECT" appears on the display.)
To move up the display panel, press ∧ ►►I or I◄◄ ∨.

Finding the beginning of a tune

Multi Music Scan allows you to automatically start playback from the beginning of a specified tune. You can specify up to 9 tunes ahead of or before the current tune.

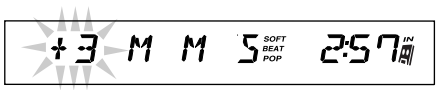
During playback

Specify how many tunes ahead of or before the current tune the one you want is located.



Press ∧ ►►I to locate a tune ahead of the current tune on the tape.

Press I◄◄ ∨ to locate a tune before the current tune on the tape.



Each time you press the buttons, the number changes up to ±9.
When the beginning of the specified tune is located, playback starts automatically.

Notes:

- *While locating a specified tune:*
  - *– If the tape is rewound to its beginning, playback starts from the beginning of that side.*
  - *– If the tape is fast-forwarded to the end, it is reversed and played from the beginning of the other side.*
- *In the following cases, the Multi Music Scan function may not operate correctly:*
  - *– Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions between tunes.*
  - *– Tapes with short non-recorded sections.*
  - *– Tapes with high level of noise or humming between tunes.*
  - *– The Dolby NR setting does not match. For example, if Dolby B NR is on and the tape was recorded with no Dolby NR.*

Other convenient tape functions

Skipping the blank portions on the tape

You can skip blank portions between the tunes (Blank Skip).
When this function is on, the unit skips blank portions of 15 seconds or more, fast-forwards to the next tune, then starts playing it.

• See also "Changing the general settings (PSM)" on page 21.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (PSM: see page 22.)

2 Press ∧ ►►I or I◄◄ ∨ to select "B. SKIP" (blank skip).

3 Press + to select "ON."

Now Blank Skip is activated.

4 Press SEL (select) to finish the setting.

To cancel Blank Skip, repeat the same procedure and select "OFF" in step 3 by pressing –.

Playing the current tune repeatedly

You can play the current tune repeatedly (Repeat Play).

1 Press MODE ATT while playing a tape.

"MODE" appears on the display.

2 Press RPT while "MODE" is still on the display so that the RPT indicator lights up on the display.

Each time you briefly press the button, Repeat Play turns on and off alternately.

Lights up when Repeat Play is turned on.

Note:

- *In the following cases, Blank Skip and Repeat Play may not operate correctly:*
  - *Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions during tunes.*
  - *Tapes with short non-recorded sections.*
  - *Tapes with high level noise or humming between tunes.*
  - *The Dolby NR setting does not match. For example, if Dolby B NR is on and the tape was recorded with no Dolby NR.*

ENGLISH

Adjusting the sound

You can adjust the sound characteristics to your preference.

1 Select the item you want to adjust.

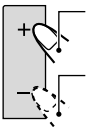
Each time you press the button, the adjustable items change as follows:

BAS (bass) → TRE (treble) → FAD (fader) → BAL (balance) → BBE → WOOFER → VOL (volume) → BAS

Indication	To do:	Range
BAS	Adjust the bass.	–06 (min.) | +06 (max.)
TRE	Adjust the treble.	–06 (min.) | +06 (max.)
FAD*	Adjust the front and rear speaker balance.	R06 (Rear only) | F06 (Front only)
BAL	Adjust the left and right speaker balance.	L06 (Left only) | R06 (Right only)
BBE	See “What is BBE^{II}?” on the next page.	OFF, 1, 2, 3
WOOFER	Adjust the subwoofer output level.	0 (min.) | 8 (max.)
VOL	Adjust the volume.	00 (min.) | 50 (max.)

* *If you are using a two-speaker system, set the fader level to “00.”*

2 Adjust the level.



Press + to increase the level.

Press – to decrease the level.

Equalization pattern changes as you adjust the bass or treble.

Note:

Normally +/– button works as the volume control. So you do not have to select “VOL” to adjust the volume level.

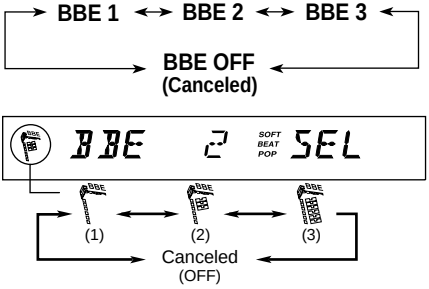
What is BBE^{II}?

The BBE^{II}* function restores the brilliance and clarity of the original live sound in recording, broadcasts, etc.

When a speaker reproduces sound, it introduces frequency-dependent phase shifting, causing high-frequency sounds to take longer to reach the ear than low frequency sounds. The BBE^{II} function adjusts the phase relationship between the low, mid and high frequencies by adding a progressively longer delay time to the low and mid frequencies, so that all frequencies reach the listener's ears at the proper time.

In addition, the BBE^{II} function boosts low and high frequencies, which loudspeakers tend to be less efficient in reproducing, through dynamic, program-driven augmentation. When combined with the phase compensation feature, the resulting sound has a clearer, more finely detailed "live" presence.

Each time you press + or – in step 2 on the previous page, the BBE^{II} function changes as follows:



As the number gets higher, the BBE^{II} function becomes stronger.

When shipped from the factory, the BBE^{II} function is set to "2."

To cancel the BBE^{II} function, select "OFF."

*** Under license from BBE Sound, Inc.**
BBE^{II} is a trademark of BBE Sound, Inc.

Using the Sound Control Memory

You can select and store a preset sound adjustment suitable for each playback source
(Advanced SCM.)

Once you select a sound mode, it is stored in memory. It will be recalled every time you select the same source and will be shown on the display. A sound mode can be stored for each of the following sources — FM1, FM2, FM3, AM, tape and external components.

- If you do not want to store the sound mode separately for each playback source, but want to use the same sound mode for all the sources, see "To cancel Advanced SCM LINK – SCM LINK" on page 23.

1 Press MODE ATT.

The number buttons can work as different function buttons.

Within 5 seconds

2 Select the sound mode you want.

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

BEAT → SOFT → POP → SCM OFF

- If "SCM LINK" is set to "LINK ON" (see page 23), the selected sound mode can be stored in memory for the current source, and the effect applies to the current source.
- If "SCM LINK" is set to "LINK OFF," the selected sound mode effect applies to any source.

CONTINUED ON THE NEXT PAGE

Indication	For:	Preset values		
		Bass	Treble	BBE^{II}
BEAT	Rock or disco music	+02	00	2
SOFT	Quiet background music	+01	–03	OFF
POP	Light music	+04	+01	OFF
SCM OFF	(Flat sound)	00	00	2

Notes:

- *You can adjust each sound mode to your preference, and store it in memory.*
  If you want to adjust and store your original sound mode, see "Storing your own sound adjustments" below.
- *To adjust the bass and treble reinforcement levels or to turn on/off the BBE^{II} function temporarily, see pages 18 and 19. (Your adjustments will be canceled if another source is selected.)*

Storing your own sound adjustments

You can adjust the sound modes (BEAT, SOFT, POP) to your preference and store your own adjustments in memory.

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

1 Press MODE ATT.

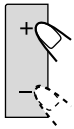
The number buttons can work as different function buttons.

2 Select the sound mode you want.

For details, see page 19.

3 Select the item you want to adjust (BAS, TRE, or BBE^{II}).

4 Adjust the selected item.



5 Repeat steps 3 and 4 to adjust the other items.

6 Press and hold SCM until the sound mode you have selected flashes on the display.

Your adjustment made for the selected sound mode is stored in memory.

7 Repeat the same procedure to adjust other sound modes.

To reset to the factory settings

Repeat the same procedure and reassign the preset values listed in the table on the left column.

Setting the clock

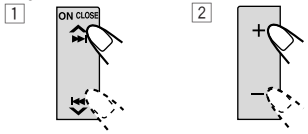
You can also set the clock system either 24 hours or 12 hours.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (See page 22.)

2 Set the hour.

1 Select “CLOCK H” if not shown on the display.

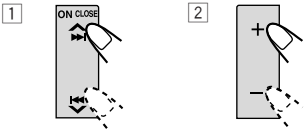
2 Adjust the hour.



3 Set the minute.

1 Select “CLOCK M.”

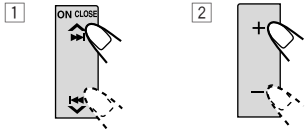
2 Adjust the minute.



4 Set the clock system.

1 Select “24H/12H.”

2 Select “24HOUR” or “12HOUR.”



5 Press SEL (select) to finish the setting.

To check the current clock time while the unit is turned off, press + or –.
The power turns on, the clock time is shown for 5 seconds, then the power turns off.

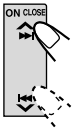
Changing the general settings (PSM)

You can change the items listed on the next page by using the PSM (Preferred Setting Mode) control.

Basic Procedure

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display. (See page 22.)

2 Select the PSM item you want to adjust. (See page 22.)



3 Adjust the PSM item selected above.

4 Repeat steps 2 and 3 to adjust the other PSM items if necessary.

5 Press SEL (select) to finish the setting.

Preferred Setting Mode (PSM) items

1 Hold.	2 Select.	3 –	3 + Set.	Factory-preset settings	See page
CLOCK H	Hour adjustment	Back	Advance	0:00	21
CLOCK M	Minute adjustment	Back	Advance		
SCM LINK	Sound control memory linkage	LINK OFF	LINK ON	LINK ON	19, 23
24H/12H	24/12-hour time display	12HOUR	24HOUR	24HOUR	21
AUTO ADJ	Automatic clock setting	ADJ OFF	ADJ ON	ADJ ON	14
CLOCK	Clock display	OFF	ON	ON	23
TU DISP	Tuner display	FREQ	PS NAME	PS NAME	14
PTY STBY	PTY standby	29 programme types (see pages 12 and 35.)		NEWS	12
PTY SRCH	PTY search			(See page 12.)	12
TA VOL	Traffic announcement volume	VOL 00 – VOL 50		VOL 20	14
P-SEARCH	Programme search	SRCH OFF	SRCH ON	SRCH OFF	13
DAB AF*	Alternative frequency search	AF OFF	AF ON	AF ON	33
LEVEL	Level display	AUDIO 1 ↔ AUDIO 2 ↕ OFF		AUDIO 2	23
DIMMER	Dimmer mode	AUTO ↔ OFF ↕ ON		AUTO	23
TEL	Telephone muting	MUTING 1 ↔ MUTING 2 ↕ OFF		OFF	23
BEEP	Key-touch tone	BEEP OFF	BEEP ON	BEEP ON	24
B.SKIP	Blank skip	OFF	ON	OFF	17
CUTOFF F	Subwoofer cutoff frequency	LOW ↔ MID ↕ HIGH		MID	29
LINE ADJ	Line input level adjustment	L.ADJ 00 – 05		L.ADJ 00	24
PANEL	Flat panel	FLAT OFF	FLAT ON	FLAT OFF	24
FILTER	Intermediate frequency filter	WIDE	AUTO	AUTO	24

** Displayed only when the DAB tuner is connected.*

- Press SEL (select) to finish the setting.

To cancel Advanced SCM – SCM LINK

You can cancel the Advanced SCM (Sound Control Memory), and unlink the sound modes and the playback sources.
When shipped from the factory, a different sound mode can be stored in memory for each source so that you can change the sound modes simply by changing the sources.

- LINK ON: Advanced SCM (different sound modes for different sources)
- LINK OFF: Conventional SCM (one sound mode for all sources)

To set the clock display – CLOCK

You can set the clock to be shown on the display when the unit is turned on. When shipped from the factory, the clock is set to be shown on the display.

- ON: Clock display is turned on.
- OFF: Clock display is turned off. When "OFF" is selected, the current source name appears instead of the clock display (except when "EXT–LINE IN" is selected as the source).

To select the level meter – LEVEL

You can select the level display according to your preference. When shipped from the factory, "AUDIO 2" is selected.

- AUDIO 1: Level meter illuminates from outside to center.
- AUDIO 2: Alternates level meter (moves from bottom to top) and illumination display.
- OFF: Erases the audio level indicator.

To select the dimmer mode – DIMMER

When you turn on the car head lights, the display automatically dims (Auto Dimmer.)
When shipped from the factory, Auto Dimmer mode is activated.

- AUTO: Activates Auto Dimmer.
- OFF: Cancels Auto Dimmer.
- ON: Always dims the display.

Note on Auto Dimmer:

Auto Dimmer equipped with this unit may not work correctly on some vehicles, particularly on those having a control dial for dimming.
In this case, set the dimmer mode to "ON" or "OFF."

To select the telephone muting – TEL

This mode is used when a cellular phone system is connected. Depending on the phone system used, select either "MUTING 1" or "MUTING 2," whichever mutes the sounds from this unit. When shipped from the factory, this mode is deactivated.

- MUTING 1: Select this if this setting can mute the sounds.
- MUTING 2: Select this if this setting can mute the sounds.
- OFF: Cancels the telephone muting.

To turn on/off the key-touch tone – BEEP

You can deactivate the key-touch tone if you do not want it to beep each time you press a button. When shipped from the factory, the key-touch tone is activated.

- BEEP ON: Activates the key-touch tone.
- BEEP OFF: Deactivates the key-touch tone.

To adjust the line input level – LINE ADJ

Adjust the line input level properly when an external component is connected to the LINE IN plugs. When shipped from the factory, the line input level is set at level "00".

If the input level of the connected component is not high enough, increase the input level properly. Without adjusting the line input level, you may be surprised at a loud sound when you change from the external component to another source.

To make the front panel look flat (hiding the control panel) – PANEL

When operating the receiver using the remote control, you can hide the control panel to make the front panel look flat. When shipped from the factory, "FLAT OFF" is selected.

- FLAT ON: The control panel will not come out when you turn on the unit.
  To use the control panel, press ⏮ ⌄ so that the control panel comes out. If no operation is done for about 10 seconds, it automatically goes back into the receiver.
- FLAT OFF: You can use the control panel normally.

To change the FM tuner selectivity – FILTER

In some areas, adjacent stations may interfere with each other. If this interference occurs, noise may be heard. This unit has been preset to automatically reduce this interference noise ("AUTO") when shipped from the factory.

- AUTO: When this type of interference occurs, this unit automatically increases the tuner selectivity so that interference noise will be reduced. (But the stereo effect will be also lost.)
- WIDE: Subject to the interference from adjacent stations, but the sound quality will not be degraded and the stereo effect will not be lost.

Using the security lock

You can prohibit the unauthorized use of this unit by the others.
To use the security lock, you need to set the password first. Once you set the password, the unit will ask you to enter the password when you turn on the unit for the first time after re-installation (or after recovering the car battery exhaustion.)

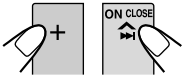
CAUTION: Be careful not to forget the password you have entered; otherwise, you cannot use this unit. Keep the password in your mind and more importantly on paper or some other materials. You can write down your password in the spaces provided on the cover page.

Registering the password

You have to use 4 characters for your password. You can use the following characters: Capital letters (A – Z) and numerals (0 –9).

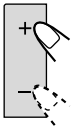
Note:
When "FLAT ON" is selected, you cannot register password. In this case, select "FLAT OFF" (see page 24) before following the procedure below.

1 Press and hold both buttons for more than 2 seconds.

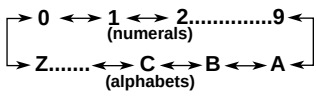


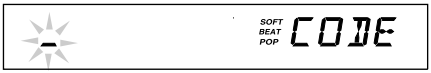
The unit enters password entry mode.

2 Select a character.

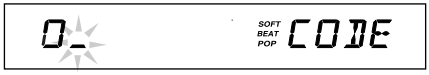


Each time you press the button, character changes as follows:





3 Move the character entry position to the next.



4 Repeat steps 2 and 3 until you enter all 4 characters.

5 Press SEL (select) to finish the setting.

The password flashes on the display for a while, then the unit returns to the normal operation mode.

How to Use the Provided CODE Sticker

Attach the provided CODE sticker in a conspicuous position on your car to notify would-be unauthorized users that the security lock function is provided for this unit and, therefore, will foil their efforts.

When Security Lock works?

Once you register the password, " ⁂ ⁂ ⁂ ⁂ " appears on the display, and the unit will ask you to enter the password in the following cases:

- When you turn on the unit for the first time after re-installing the unit.
- When you turn on the unit for the first time after replacing the car battery.

To use this unit, you must enter the correct password by following the procedure below.

1 Press + or – to enter a character.

2 Press ^ ►►| or |◄◄ v to move the character entry position.

3 Repeat steps 1 and 2 to enter the entire password (4 letters) correctly, then press SEL (select).
- If you enter the correct password, the security lock is canceled and you can use the unit normally.
- In the following cases, the security lock is not canceled ("ERROR" appears on the display) then the unit turns off. (The unit will never turn on unless you press the reset button on the front panel. See page 2.)
  – If you enter an incorrect password then press SEL (select).
  – If you cannot finish entering the correct password within 30 seconds.

If you enter an incorrect character while entering the password

Press |◄◄ v to move back the character entry position over the incorrect character, then press + or – to select the correct character.

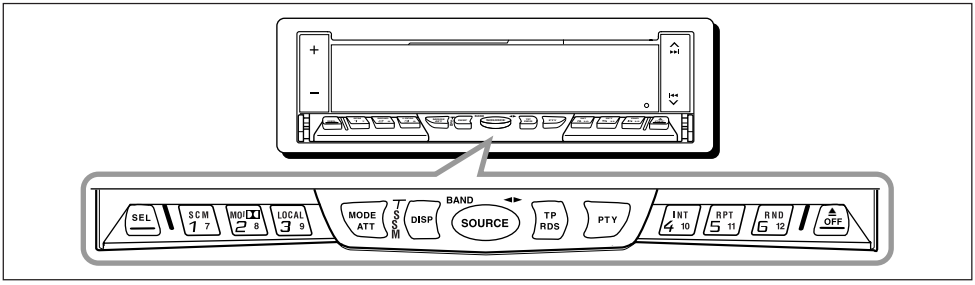
To change the password

If you want to change the password after you have registered it, follow the procedure below.

1 Press + and ^ ►►| at the same time for more than 2 seconds.
" ⁂ ⁂ ⁂ ⁂ " appears on the display.

2 Enter the current password correctly, then press SEL (select).
The unit enters password entry mode.

3 Enter a new password as you want, then press SEL (select).
The password flashes on the display for a while, then the unit returns to the normal operation mode.
- See page 25 for details on how to enter the password.



We recommend that you use one of the CH-X series with your unit.
If you have another CD automatic changer, consult your JVC IN-CAR ENTERTAINMENT dealer for connections.

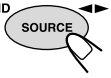
- *For example, if your CD automatic changer is one of the KD-MK series, you need a cord (KS-U15K) for connecting it to this unit.*

Before operating your CD automatic changer:

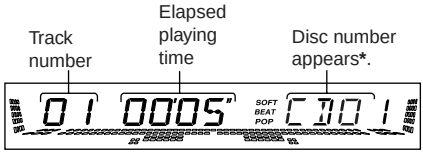
- Refer also to the Instructions supplied with your CD changer.
- If no discs are in the magazine of the CD changer or the discs are inserted upside down, “NO DISC” will appear on the display. If this happens, remove the magazine and set the discs correctly.
- If “RESET 1” - “RESET 8” appears on the display, something is wrong with the connection between this unit and the CD changer. If this happens, check the connection, connect the connecting cord(s) firmly if necessary, then press the reset button of the CD changer.

Playing CDs

Select the CD automatic changer (CD-CH).

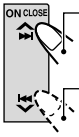


Each time you press the button, the source changes as described on page 6.
Playback starts from the first track of the first disc.
All tracks of all discs are played back.



* *When “CLOCK” is set to “ON” (see page 23), the clock time appears.*

To fast-forward or reverse the track



Press and hold ∧ ►►I, while playing a CD, to fast-forward the track.

Press and hold I◄◄ ∨, while playing a CD, to reverse the track.

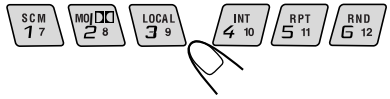
To go to the next track or the previous tracks

Press ∧ ►►I briefly, while playing a CD, to go ahead to the beginning of the next track. Each time you press the button consecutively, the beginning of the next track is located and played back.

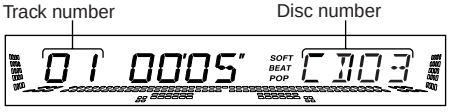
Press I◄◄ ∨ briefly, while playing a CD, to go back to the beginning of the current track. Each time you press the button consecutively, the beginning of the previous tracks is located and played back.

To go to a particular disc directly

Press the number button corresponding to the disc number to start its playback (while the CD changer is playing.)



- To select a disc number from 1 – 6:
  Press 1 (7) – 6 (12) briefly.
- To select a disc number from 7 – 12:
  Press and hold 1 (7) – 6 (12) for more than 1 second.



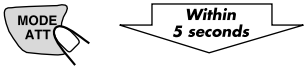
Ex. When disc number 3 is selected

Selecting CD playback modes

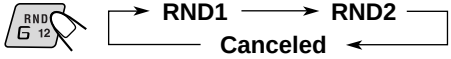
- There is a time limit in doing the following procedure. If the setting is cancelled before you finish, start from step 1 again.

To play back tracks at random (Random Play)

1 Press MODE ATT while playing a CD.
"MODE" appears on the display.



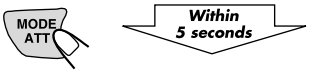
2 Press RND (random), while "MODE" is still on the display, so that the RND indicator lights up on the display.
Each time you press the button, CD random play mode changes as follows:



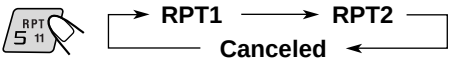
Mode	RND Indicator	Plays at random
RND1 (random1)	Lights	All tracks of the current disc, then the tracks of the next disc, and so on.
RND2 (random2)	Flashes	All tracks of all discs inserted in the magazine.

To play back tracks repeatedly (Repeat Play)

1 Press MODE ATT while playing a CD.
"MODE" appears on the display.



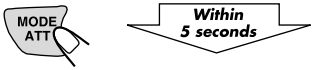
2 Press RPT (repeat), while "MODE" is still on the display, so that the RPT indicator lights up on the display.
Each time you press the button, CD repeat play mode changes as follows:



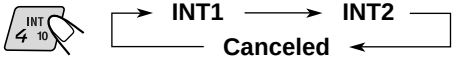
Mode	RPT Indicator	Plays repeatedly
RPT1 (repeat1)	Lights	The current track (or specified track).
RPT2 (repeat2)	Flashes	All tracks of the current disc (or specified disc).

To play back only intros (Intro Scan)

1 Press MODE ATT while playing a CD.
"MODE" appears on the display.



2 Press INT (intro), while "MODE" is still on the display.
Each time you press the button, CD intro scan mode changes as follows:

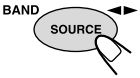


Mode	Indication	Plays the beginnings (15 seconds)
INT1 (intro1)	Track number flashes	Of all tracks on all inserted discs.
INT2 (intro2)	Disc number flashes (when it is shown on the display)	Of the first track on each inserted disc.

Playing an external component

When connecting an external component to the LINE IN plugs on the rear, you can select the component as the sound source.

1 Select the external component (EXT–LINE IN).



Each time you press the button, the source changes as described on page 6.

2 Operate the external component.

Note:

For the external component connection, see the Installation/Connection Manual (separate volume.)

Using a subwoofer

By connecting a subwoofer to the SUBWOOFER OUT plugs on the rear, you can enjoy enhanced bass sounds and a more realistic theater atmosphere in your car.

- Refer also to the instructions supplied with your subwoofer.

When a subwoofer is connected to this unit, select an appropriate cutoff frequency level for your subwoofer. When shipped from the factory, the subwoofer cutoff frequency is set to “MID”.

To set the subwoofer cutoff frequency, follow the procedure below.

- See also “Changing the general settings (PSM)” on page 21.

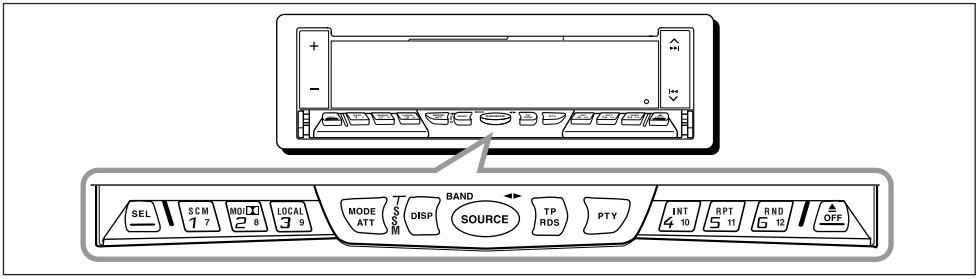
- LOW: Frequencies higher than 50 Hz are cut off to the subwoofer.
- MID: Frequencies higher than 80 Hz are cut off to the subwoofer.
- HIGH: Frequencies higher than 120 Hz are cut off to the subwoofer.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.
2 Press ∧ ►►I or I◄◄ ∨ repeatedly until “CUTOFF F” (frequency) appears on the display.
3 Press + or – to select the desired cutoff frequency.
4 Press SEL (select) again to finish the setting.

To adjust the subwoofer output volume, see “Adjusting the sound” on page 18.

DAB TUNER OPERATIONS

ENGLISH



We recommend that you use DAB (Digital Audio Broadcasting) tuner KT-DB1500 with your unit.
If you have another DAB tuner, consult your JVC IN-CAR ENTERTAINMENT dealer.

- Refer also to the Instructions supplied with your DAB tuner.

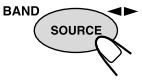
What is DAB system?

DAB is one of the digital radio broadcasting systems available today. It can deliver CD quality sound without any annoying interference and signal distortion. Furthermore, it can carry text, pictures and data.
In contrast to FM broadcast, where each programme is transmitted on its own frequency, DAB combines several programmes (called "services") to form one "ensemble."
With the DAB tuner connected with this unit, you can enjoy these DAB services.

Tuning into an ensemble and one of the services

A typical ensemble has 6 or more programmes (services) broadcast at the same time. After tuning into an ensemble, you can select a service you want to listen to.

1 Select the DAB tuner (DAB1–3).

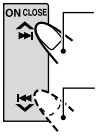


- Press and hold SOURCE (BAND) repeatedly to select the DAB band number (DAB1, DAB2 or DAB3.)

Note:

This receiver has three DAB bands (DAB1, DAB2, DAB3.) You can use any of them to tune into an ensemble.

2 Start searching an ensemble.



Press ∧ ►►I to search ensembles of higher frequencies.

Press I◄◄ ∨ to search ensembles of lower frequencies.

When an ensemble is received, searching stops.

To stop searching before an ensemble is received, press the same button you have pressed for searching.

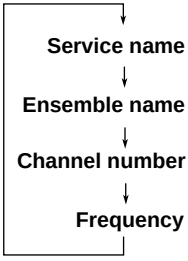
3 Select a service you want to listen to.

1 Press MODE ATT.
"MODE" appears on the display.

2 Press ∧ ►►I or I◄◄ ∨ to select a service you want, while "MODE" is still on the display.

To change the display information while tuning into an ensemble

Normally service name is shown on the display.
If you want to check the ensemble name or its frequency, press DISP.
Each time you press the button, the following information appears for a while on the display.



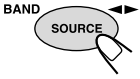
To tune in a particular ensemble without searching:

1 Press SOURCE (BAND) to select DAB tuner as the source.
2 Press and hold ∧ ►►I or I◄◄ ∨ for more than 1 second.
3 Press ∧ ►►I or I◄◄ ∨ repeatedly until the ensemble you want is reached.
- If you hold down the button, the frequency keeps changing until you release the button.

Storing DAB services in memory

You can preset up to 6 DAB services in each DAB band (DAB1, DAB2 and DAB3) manually.

1 Select the DAB tuner (DAB1–3).

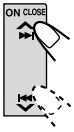


1 Press SOURCE (BAND) to select DAB tuner as the source.

2 If necessary, press and hold SOURCE (BAND) repeatedly to select the DAB band number (DAB1, DAB2 or DAB3.)

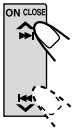
Each time you press and hold the button, the DAB band changes as follows:

2 Tune into an ensemble you want.



3 Select a service of the ensemble you want.

1 Press MODE ATT.
"MODE" appears on the display.

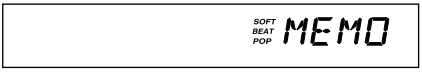


2 Press ∧ ►►I or I◄◄ ∨ to select a service you want, while "MODE" is still on the display.

CONTINUED ON THE NEXT PAGE

4 **Press and hold the number button (in this example, 1) you want to store the selected service into for more than 2 seconds.**

Band/preset number and "MEMO" flash alternately for a while.



5 **Repeat the above procedure to store other DAB services into other preset numbers.**

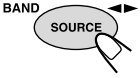
Notes:

- *A previously preset DAB service is erased when a new DAB service is stored in the same preset number.*
- *Preset DAB services are erased when the power supply to the memory circuit is interrupted (for example, during battery replacement). If this occurs, preset the DAB services again.*

Tuning into a preset DAB service

You can easily tune into a preset DAB service. Remember that you must store services first. If you have not stored them yet, see page 31.

1 **Select the DAB tuner (DAB1–3).**

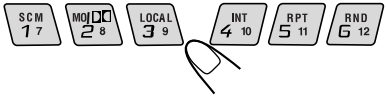


1 Press SOURCE (BAND) to select DAB tuner as the source.

2 If necessary, press and hold SOURCE (BAND) repeatedly to select the DAB band number (DAB1, DAB2 or DAB3.)

Each time you press and hold the button, the DAB band changes as follows:

2 **Select the number (1 – 6) for the preset DAB service you want.**



What you can do more with DAB

Tracing the same program automatically (Alternative Reception)

You can keep listening to the same program

- **While receiving a DAB service:**
  When driving in an area where a service cannot be received, this unit automatically tunes in another ensemble or FM RDS station, broadcasting the same program.
- **While receiving an FM RDS station:**
  When driving in an area where a DAB service is broadcasting the same program as the FM RDS station is broadcasting, this unit automatically tunes into the DAB service.

Note:

When reception switches between DAB and FM, the listening volume level may increase or decrease inconveniently. This change in the volume level results from unequal audio injection levels at broadcaster site, but not from the malfunction of this unit.

To use Alternative Reception

When shipped from the factory, Alternative Reception is activated.

1 Press and hold SEL (select) for more than 2 seconds so that one of the PSM items appears on the display.

2 Press ^ ►►I or I◄◄ v to select “DAB AF” (alternative frequency).

3 Press + or – to select the desired mode.

- AF ON: Traces the program among DAB services and FM RDS stations — Alternative Reception. The AF indicator lights up on the display (see page 10.)
- AF OFF: Deactivates Alternative Reception

Note:

When Alternative Reception (for DAB services) is activated, Network-Tracking Reception (for RDS stations: see page 10) is also activated automatically. On the other hand, Network-Tracking Reception cannot be deactivated without deactivating Alternative Reception.

4 Press SEL (select) again to finish the setting.

TROUBLESHOOTING

What appears to be trouble is not always serious. Check the following points before calling a service center.

Symptoms	Causes	Remedies
• A cassette tape cannot be inserted.	You have tried to insert a cassette in the wrong way.	Insert the cassette with the exposed tape facing right.
• A cassette tape cannot be ejected.	Cassette ejection is prohibited.	Press and hold ⏏ OFF for more than two seconds while pressing SOURCE (◄►).
• Cassette tapes become hot.	This is not a malfunction.	———
• Tape sound is at very low level and sound quality is degraded.	The tape head is dirty.	Clean it with a head cleaning tape.
• Sound is sometimes interrupted.	Connections are not good.	Check the cords and connections.
• Sound cannot be heard from the speakers.	The volume is turned to the minimum level.	Adjust it to the optimum level.
	Connections are incorrect.	Check the cords and connections.
• SSM (Strong-station Sequential Memory) automatic preset does not work.	Signals are too weak.	Store stations manually.
• Static noise while listening to the radio.	The antenna is not connected firmly.	Connect the antenna firmly.
• “NO DISC” appears on the display.	No CD is in the magazine.	Insert CDs into the magazine.
	CDs are inserted incorrectly.	Insert them correctly.
• “NO MAG” appears on the display.	No magazine is loaded in the CD changer.	Insert the magazine.
• “RESET 8” appears on the display.	This unit is not connected to a CD changer correctly.	Connect this unit and the CD changer correctly and press the reset button of the CD changer.

Symptoms	Causes	Remedies
• "RESET 1" - "RESET 7" appears on the display.	———	Press the reset button of the CD changer.
• This unit does not work at all. • The CD changer does not work at all.	The built-in microcomputer may function incorrectly due to noise, etc.	Press the reset button on the front panel. (The clock setting and preset stations stored in memory are erased.) (See page 2.)
• "✱ ✱ ✱ ✱" appears on the display.	Security lock is in use.	Enter the password. (See page 25.)

PTY codes

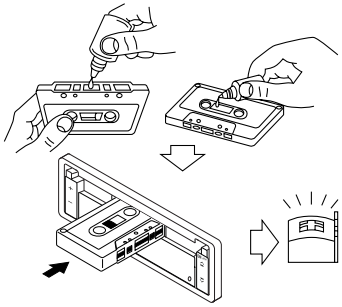
NEWS:	News
AFFAIRS:	Topical programmes expanding on current news or affairs
INFO:	Programmes which impart advice on a wide variety of topics
SPORT:	Sport events
EDUCATE:	Educational programmes
DRAMA:	Radio plays
CULTURE:	Programmes on national or regional culture
SCIENCE:	Programmes on natural science and technology
VARIED:	Other programmes like comedies or ceremonies
POP M:	Pop music
ROCK M:	Rock music
EASY M:	Easy-listening music
LIGHT M:	Light music
CLASSICS:	Classical music
OTHER M:	Other music
WEATHER:	Weather information
FINANCE:	Reports on commerce, trading, the Stock Market, etc.
CHILDREN:	Entertainment programmes for children
SOCIAL:	Programmes on social activities
RELIGION:	Programmes dealing with any aspect of belief or faith, or the nature of existence or ethics
PHONE IN:	Programmes where people can express their views either by phone or in a public forum
TRAVEL:	Programmes about travel destinations, package tours, and travel ideas and opportunities
LEISURE:	Programmes concerned with recreational activities such as gardening, cooking, fishing, etc.
JAZZ:	Jazz music
COUNTRY:	Country music
NATION M:	Current popular music from another nation or region, in that country's language
OLDIES:	Classic pop music
FOLK M:	Folk music
DOCUMENT:	Programmes dealing with factual matters, presented in an investigative style

MAINTENANCE

ENGLISH

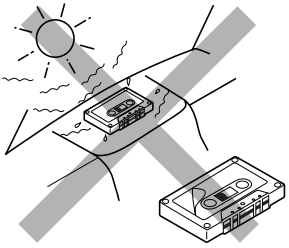
This unit requires very little attention, but you will be able to extend the life of the unit if you follow the instructions below.

To clean the heads



- Clean the heads after every 10 hours of use using a wet-type head cleaning tape (available at an audio store.)
  When the head becomes dirty, you may realize the following symptoms:
  – Sound quality is reduced.
  – Sound level decreases.
  – Sound drops out.
- Do not play dirty or dusty tapes.
- Do not touch the highly-polished head with any metallic or magnetic tools.

To keep the tape clean



- Always store the tapes to their storage cases after use.
- Do not store tapes in the following places:
  – Subject to direct sunlight
  – With high humidity
  – At extremely hot temperatures

CAUTION:

- *Do not play the tapes with peeling labels; otherwise, they can damage the unit.*
- *Tighten tapes to remove slack since loose tape may become entangled with the mechanism.*
- *Do not leave a cassette in the cassette compartment after use, as the tape may become slack.*

The function below is also provided to ensure the longer life of this unit.

Ignition key-off release/Ignition key-on play

- Turning off the ignition key with a cassette in the compartment automatically releases the tape from the unit's tapehead.
- Turning on the ignition key with a cassette in the compartment starts playback automatically if you turned off the ignition during tape play.

AUDIO AMPLIFIER SECTION

Maximum Power Output:
- Front: 45 W per channel
- Rear: 45 W per channel

Continuous Power Output (RMS):
- Front: 17 W per channel into 4 Ω, 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
- Rear: 17 W per channel into 4 Ω, 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.

Load Impedance: 4 Ω (4 Ω to 8 Ω allowance)
Tone Control Range:
- Bass: ±10 dB at 100 Hz
- Treble: ±10 dB at 10 kHz

Frequency Response: 40 Hz to 20 000 Hz
Signal-to-Noise Ratio: 70 dB
Line-In Level/Impedance:
- 1.5 V/20 kΩ load

Line-Out Level/Impedance:
- 4.0 V/20 kΩ load (full scale)

Output Impedance: 1 kΩ

TUNER SECTION

Frequency Range:
- FM: 87.5 MHz to 108.0 MHz
- AM: (MW) 522 kHz to 1 620 kHz
  (LW) 144 kHz to 279 kHz

[FM Tuner]
Usable Sensitivity: 11.3 dBf (1.0 μV/75 Ω)
50 dB Quieting Sensitivity:
- 16.3 dBf (1.8 μV/75 Ω)

Alternate Channel Selectivity (400 kHz):
- 65 dB

Frequency Response: 40 Hz to 15 000 Hz
Stereo Separation: 30 dB
Capture Ratio: 1.5 dB

[MW Tuner]
Sensitivity: 20 μV
Selectivity: 35 dB

[LW Tuner]
Sensitivity: 50 μV

CASSETTE DECK SECTION

Wow & Flutter: 0.11% (WRMS)
Fast-Wind Time: 100 sec. (C-60)
Frequency Response (Dolby NR-OFF):
- 30 Hz to 16 000 Hz (Normal tape)

Signal-to-Noise Ratio: (Normal tape)
- (Dolby NR-ON): 65 dB
- (Dolby NR-OFF): 56 dB

Stereo Separation: 40 dB

GENERAL

Power Requirement:
- Operating Voltage: DC 14.4 V (11 V to16 V allowance)

Grounding System: Negative ground
Allowable Operating Temperature: 0°C to +40°C
Dimensions (W × H × D):
- Installation Size: 182 mm × 52 mm × 160 mm
- Panel Size: 188 mm × 58 mm × 8 mm
- Mass: 1.7 kg (excluding accessories)

Design and specifications subject to change without notice.

Having TROUBLE with operation?

Please reset your unit

Refer to page of How to reset your unit

Haben Sie PROBLEME mit dem Betrieb?

Bitte setzen Sie Ihr Gerät zurück

Siehe Seite Zurücksetzen des Geräts

Vous avez des PROBLÈMES de fonctionnement?

Réinitialisez votre appareil

Référez-vous à la page intitulée Comment réinitialiser votre appareil

Hebt u PROBLEMEN met de bediening?

Stel het apparaat terug

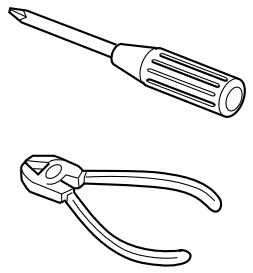
Zie de pagina met de paragraaf Het apparaat terugstellen

JVC

VICTOR COMPANY OF JAPAN, LIMITED

KS-LX200R

Installation/Connection Manual
Einbau/Anschlußanleitung
Manuel d'installation/raccordement



FSUN3148-T211
[E]

0800MNMMDWJES
EN, GE, FR

ENGLISH

• This unit is designed to operate on 12 volts DC, NEGATIVE ground electrical systems.

INSTALLATION (IN-DASH MOUNTING)

• The following illustration shows a typical installation. However, you should make adjustments corresponding to your specific car. If you have any questions or require information regarding installation kits, consult your JVC IN-CAR ENTERTAINMENT dealer or a company supplying kits.

1 Remove the trim plate.

2 Remove the sleeve after disengaging the sleeve locks.

① Stand the unit.

Note: When you stand the unit, be careful not to damage the fuse on the rear.

② Insert the 2 handles between the unit and the sleeve, as illustrated, to disengage the sleeve locks.

③ Remove the sleeve.

Note: Be sure to keep the handles for future use after installing the unit.

3 Attach the trim plate.

4 Install the sleeve into the dashboard.

* After the sleeve is correctly installed into the dashboard, bend the appropriate tabs to hold the sleeve firmly in place, as illustrated.

5 Fix the mounting bolt to the rear of the unit's body and place the rubber cushion over the end of the bolt.

6 Do the required electrical connections.

7 Slide the unit into the sleeve until it is locked by pressing the four corners of the trim plate.

Note: Do not press the panel (shaded in the illustration); otherwise, the panel may become unable to open or close.

DEUTSCH

• Dieses Gerät ist für einen Betrieb in elektrischen Anlagen mit 12 V Gleichstrom und (–) Erdung ausgelegt.

EINBAU (IM ARMATURENBRETT)

• Die folgende Abbildung zeigt einen typischen Einbau. Dennoch müssen Sie entsprechend Ihrem jeweiligen Auto Anpassungen vornehmen. Bei irgendwelchen Fragen oder wenn Sie Informationen hinsichtlich des Einbausatzes brauchen, wenden Sie sich an ihren JVC Autoradiohändler oder ein Unternehmen das diese Einbausätze vertreibt.

1 Den Frontrahmen herausnehmen.

2 Die Schutzhülle nach dem Entriegeln der Halterungensperren abnehmen.

① Das Gerät aufstellen.

Hinweis: Beim Aufstellen des Geräts darauf achten, daß die Sicherung auf der Rückseite nicht beschädigt wird.

② Die 2 Griffe zwischen dem Gerät und der Halterung wie abgebildet einstecken und die Halterungensperren entriegeln.

③ Die Halterung entfernen.

Hinweis: Sicherstellen, daß die Griffe für künftigen Gebrauch nach dem Einbau des Geräts aufbewahrt werden.

3 Befestigen Sie die Frontrahmen.

4 Die Halterung im Armaturenbrett einbauen.

* Nach dem korrekten Einbau der Halterung im Armaturenbrett, die entsprechenden Riegel umknicken, um die Halterung an ihrem Platz zu sichern, siehe Abbildung.

5 Die Befestigungsschraube an der Rückseite des Gerätekörpers befestigen und das Ende der Schraube mit einem Gummipuffer abdecken.

6 Nehmen Sie die erforderlichen elektrischen Anschlüsse vor.

7 Schieben Sie das Gerät in die Halterung. Das Gerät wird verriegelt, indem Sie auf die vier Ecken des Frontrahmen drücken.

Hinweis: Drücken Sie nicht auf die Blende (die in der Abbildung dunkelgetönt dargestellt ist); anderenfalls läßt sich die Blende weder öffnen noch schließen.

FRANÇAIS

• *Cet appareil est conçu pour fonctionner sur des sources de courant continu de 12 volts à masse NEGATIVE.*

INSTALLATION (MONTAGE DANS LE TABLEAU DE BORD)

• *L'illustration suivante est un exemple d'installation typique. Cependant, vous devez faire les ajustements correspondant à votre voiture particulière. Si vous avez des questions ou avez besoin d'information sur des kits d'installation, consulter votre revendeur d'autoradios JVC ou une compagnie d'approvisionnement.*

1 *Retirer la plaque d'assemblage.*

2 *Libérer les verrous du manchon et retirer le manchon.*

① *Poser l'appareil à la verticale.*

Remarque: *Lorsque vous mettez l'appareil à la verticale, faire attention de ne pas endommager le fusible situé sur l'arrière.*

② *Insérer les 2 poignées entre l'appareil et le manchon comme indiqué pour désengagé les verrous de manchon.*

③ *Retirer le manchon.*

Remarque: *S'assurer de garder les poignées pour une utilisation ultérieur, après l'installation de l'appareil.*

3 *Fixez la plaque d'assemblage.*

4 *Installer le manchon dans le tableau de bord.*

* *Après installation correcte du manchon dans le tableau de bord, plier les bonnes pattes pour maintenir fermement le manchon en place, comme montré.*

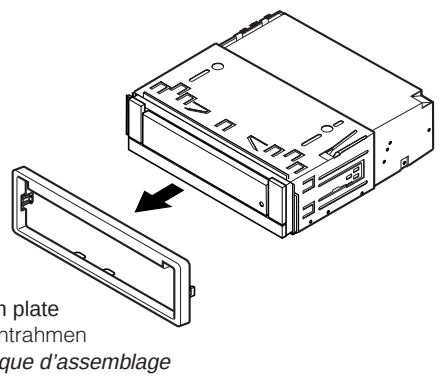
5 *Monter le boulon de montage sur l'arrière du corps de l'appareil puis passer l'amortisseur en caoutchouc sur l'extrémité du boulon.*

6 *Réalisez les connexions électriques.*

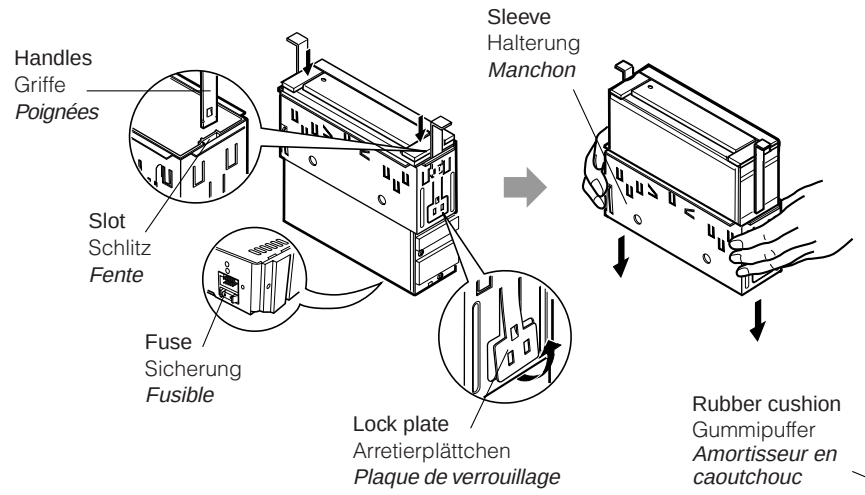
7 *Faites glisser l'appareil dans le manchon jusqu'à ce qu'il soit verrouillé en appuyant sur les quatre coins de la plaque d'assemblage.*

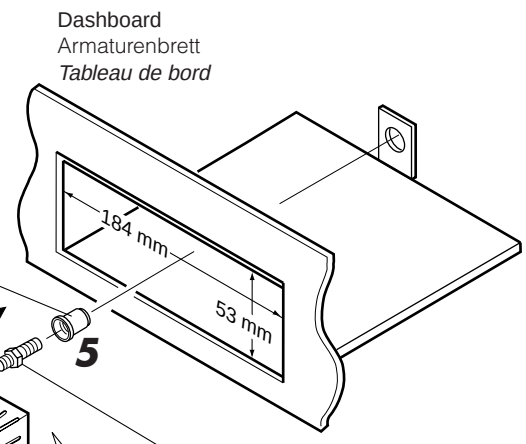
Remarque: *N'appuyez pas sur le panneau (ombré sur l'illustration); sinon le panneau risquerait de ne pas pouvoir s'ouvrir ou se fermer.*

1

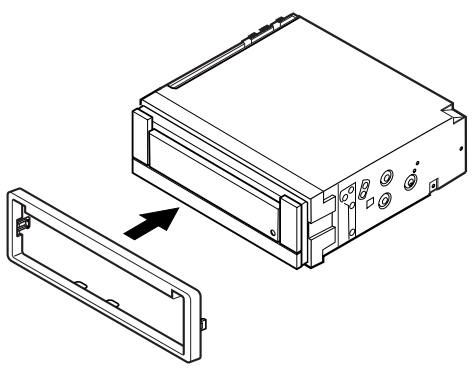


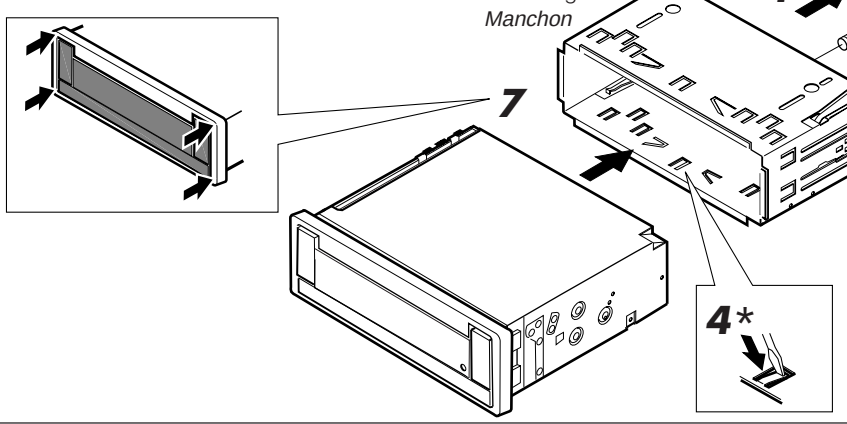
2





3



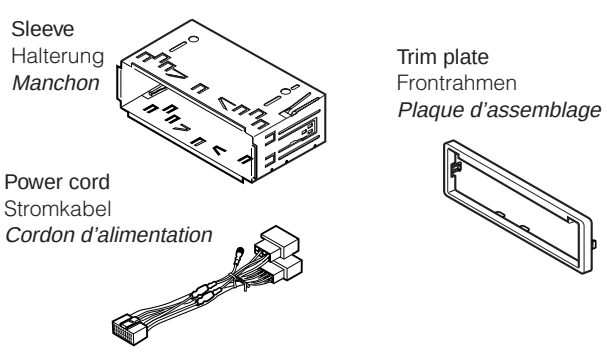


6

See "ELECTRICAL CONNECTIONS."
Siehe „ELEKTRISCHE ANSCHLÜSSE".
Référez-vous à "RACCORDEMENTS ELECTRIQUES".

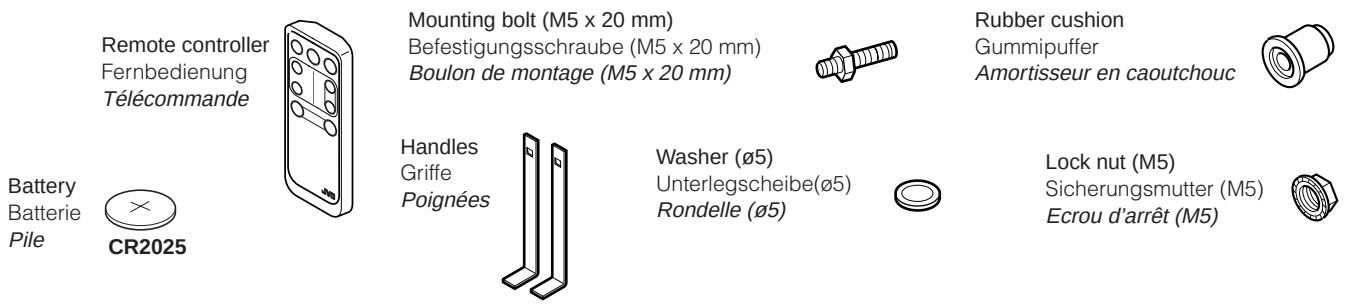
Parts list for installation and connection

The following parts are provided with this unit.
After checking them, please set them correctly.



Teileliste für den Einbau und Anschluß

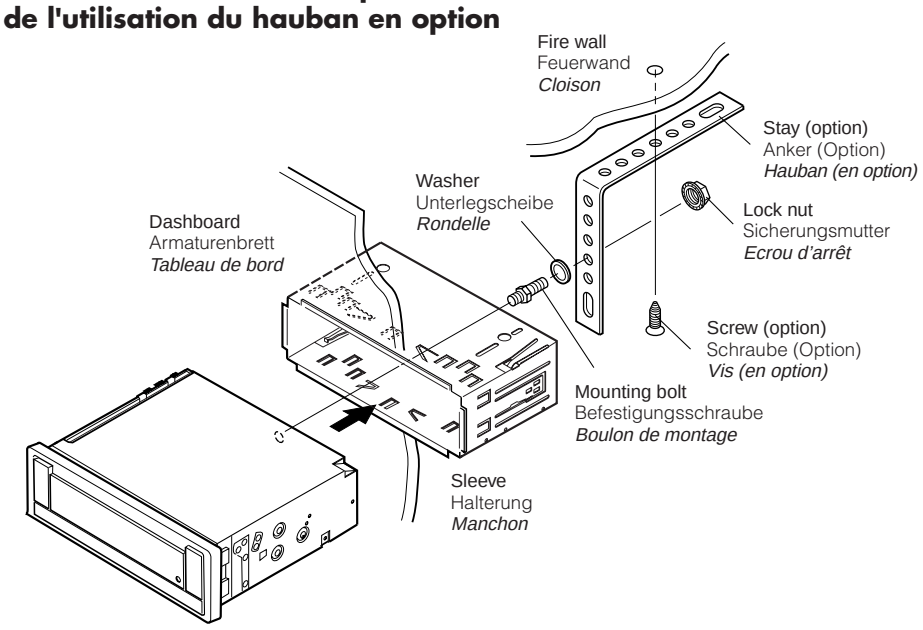
Die folgenden Teile werden zusammen mit diesem Gerät geliefert.
Nach ihrer Überprüfung, die Teile richtig einsetzen.



Liste des pièces pour l'installation et raccordement

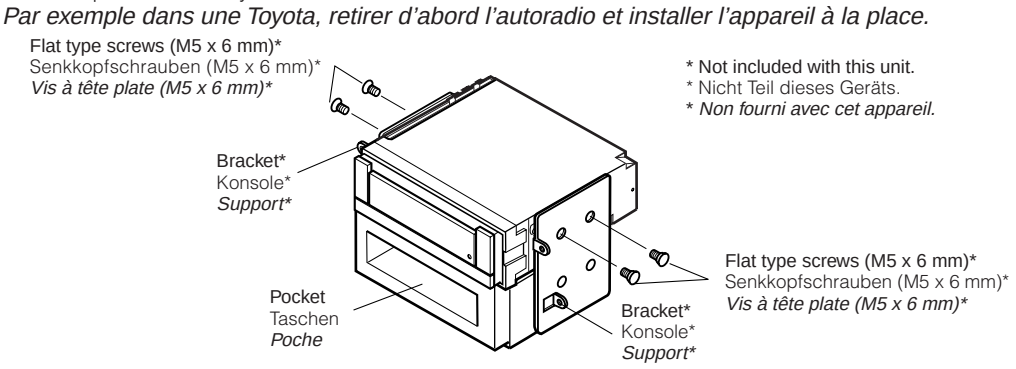
Les pièces suivantes sont fournies avec cet appareil.
Après vérification, veuillez les placer correctement.

• When using the optional stay
• Beim Verwenden der Anker-Option
• Lors de l'utilisation du hauban en option



• When installing the unit without using the sleeve
• Beim Einbau des Geräts ohne Halterung
• Lors de l'installation de l'appareil sans utiliser de manchon

In a Toyota for example, first remove the car radio and install the unit in its place.
Zum Beispiel in einem Toyota zuerst das Autoradio ausbauen und dann das Gerät an seinem Platz einbauen.
Par exemple dans une Toyota, retirer d'abord l'autoradio et installer l'appareil à la place.



Note: When installing the unit on the mounting bracket, make sure to use the 6 mm-long screws. If longer screws are used, they could damage the unit.

Hinweis: Beim Anbringen des Gerät an der Konsole sicherstellen, daß 6 mm lange Schrauben verwendet werden. Werden längere Schrauben verwendet, können sie das Gerät beschädigen.

Remarque: *Lors de l'installation de l'appareil sur le support de montage, s'assurer d'utiliser des vis d'une longueur de 6 mm. Si des vis plus longues sont utilisées, elles peuvent endommager l'appareil.*

Removing the unit

• Before removing the unit, release the rear section.

1 Remove the trim plate.

2 Insert the 2 handles into the slots, as shown. Then, while gently pulling the handles away from each other, slide out the unit. **(Be sure to keep the handles after installing it.)**

Ausbau des Geräts

• Vor dem Ausbau des Geräts den hinteren Teil freigeben.

1 Den Frontrahmen herausnehmen.

2 Die 2 Griffe in die Schlitze wie gezeigt stecken. Dann die Griffe behutsam auseinander ziehen und das Gerät herausziehen. **(Die Griffe nach dem Einbau auf jeden Fall aufbewahren.)**

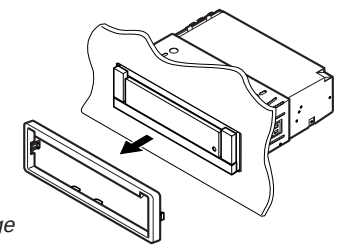
Retrait de l'appareil

• *Avant de retirer l'appareil, libérer la section arrière.*

1 *Retirer la plaque d'assemblage.*

2 *Introduire les 2 poignées dans les fentes, comme montré. Puis, tout en tirant doucement les poignées écartées, faire glisser l'appareil pour le sortir.* **(S'assurer de conserver les poignées après l'installation de l'appareil.)**

1



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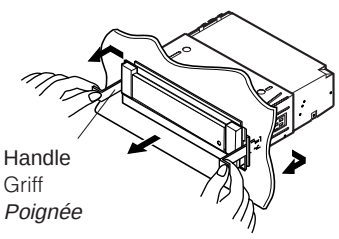
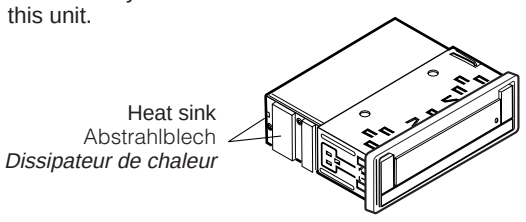


ELECTRICAL CONNECTIONS

To prevent short circuits, we recommend that you disconnect the battery's negative terminal and make all electrical connections before installing the unit. If you are not sure how to install this unit correctly, have it installed by a qualified technician.

Note:
This unit is designed to operate on **12 volts DC, NEGATIVE ground electrical systems**. If your vehicle does not have this system, a voltage inverter is required, which can be purchased at JVC IN-CAR ENTERTAINMENT dealers.

- Replace the fuse with one of the specified rating. If the fuse blows frequently, consult your JVC IN-CAR ENTERTAINMENT dealer.
- If noise is a problem...
  This unit incorporates a noise filter in the power circuit. However, with some vehicles, clicking or other unwanted noise may occur. If this happens, connect the unit's **rear ground terminal** (see connection diagram) to the car's chassis using shorter and thicker cords, such as copper braiding or gauge wire. If noise still persists, consult your JVC IN-CAR ENTERTAINMENT dealer.
- Maximum input of the speakers should be more than 45 watts at the rear and 45 watts at the front, with an impedance of **4 to 8 ohms**.
- **Be sure to ground this unit to the car's chassis.**
- The heat sink becomes very hot after use. Be careful not to touch it when removing this unit.



ELEKTRISCHE ANSCHLÜSSE

Zur Vermeidung von Kurzschlüssen empfehlen wir, daß Sie den negativen Batterieanschluß abtrennen und alle elektrischen Anschlüsse herstellen, bevor das Gerät eingebaut wird. Sind Sie sich über den richtigen Einbau des Geräts nicht sicher, lassen Sie es von einem qualifizierten Techniker einbauen.

Hinweis:
Dieses Gerät ist für einen Betrieb in **elektrischen Anlagen mit 12 V Gleichstrom und (–) Erdung** ausgelegt. Verfügt Ihr Fahrzeug nicht über diese Anlage, ist ein Spannungsinverter erforderlich, der bei JVC Autoradiohändler erworben werden kann.

- Die Sicherung mit einer der entsprechenden Nennleistung ersetzen. Brennt die Sicherung häufig durch, wenden Sie sich an ihren JVC Autoradiohändler.
- Sind Störgeräusche ein Problem...
  Dieses Gerät enthält ein Störfilter im Stromkreis. Bei manchen Fahrzeugen kann jedoch ein Klicken oder andere unerwünschte Störgeräusche auftreten. Sollte das der Fall sein, die **hintere Erdungsanschlußklemme** (siehe Schaltplan) des Geräts am Fahrwerk des Fahrzeugs anschließen, dabei kürzere und dickere Kabel wie beispielsweise Kupfergeflechtdraht oder Stahldraht verwenden. Bleibt Störgeräusch bestehen, wenden Sie sich an Ihren JVC Autoradiohändler.
- Maximale Eingangsleistung der Lautsprecher muß höher als 45 W hinten und 45 W vorne sein, mit einer Impedanz von **4 bis 8 Ohm.**
- **Sicherstellen, daß das Gerät am Fahrwerk geerdet wird.**
- Das Abstrahlblech wird nach dem Gebrauch sehr heiß. Beim Ausbau des Geräts darauf achten, das Abstrahlblech nicht zu berühren.

RACCORDEMENTS ELECTRIQUES

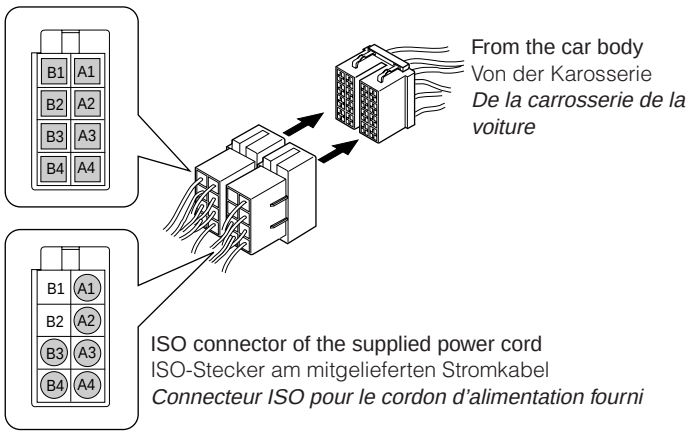
Pour éviter tout court-circuit, nous vous recommandons de débrancher la borne négative de la batterie et d'effectuer tous les raccordements électriques avant d'installer l'appareil. Si l'on n'est pas sûr de pouvoir installer correctement cet appareil, le faire installer par un technicien qualifié.

Remarque:
Cet appareil est conçu pour fonctionner sur des sources de courant continu de **12 volts à masse NEGATIVE**. *Si votre véhicule n'offre pas ce type d'alimentation, il vous faut un convertisseur de tension, que vous pouvez acheter chez un revendeur d'autoradios JVC.*

- *Remplacer le fusible par un de la valeur précisée. Si le fusible saute souvent, consulter votre revendeur d'autoradios JVC.*
- *Si le bruit est un problème...*
  Cet appareil incorpore un filtre de bruit dans le circuit d'alimentation. Cependant, avec certains véhicules, quelques claquements ou autres bruits non désirés risquent de se produire. Si cela arrive, raccorder la **borne arrière de masse** *de l'appareil au châssis de la voiture (voir le diagramme de raccordement) en utilisant des cordons les plus gros et les plus courts possibles telle qu'une barre de cuivre ou une tresse. Si le bruit persiste, consulter votre revendeur d'autoradios JVC.*
- *La puissance admissible des haut-parleurs doit être supérieure à 45 watts à l'arrière et à 45 watts l'avant, avec une impédance de* **4 à 8 ohms**.
- **S'assurer de raccorder la mise à la masse de cet appareil au châssis de la voiture.**
- *Le dissipateur de chaleur devient très chaud après usage. Faire attention de ne pas le toucher en retirant cet appareil.*

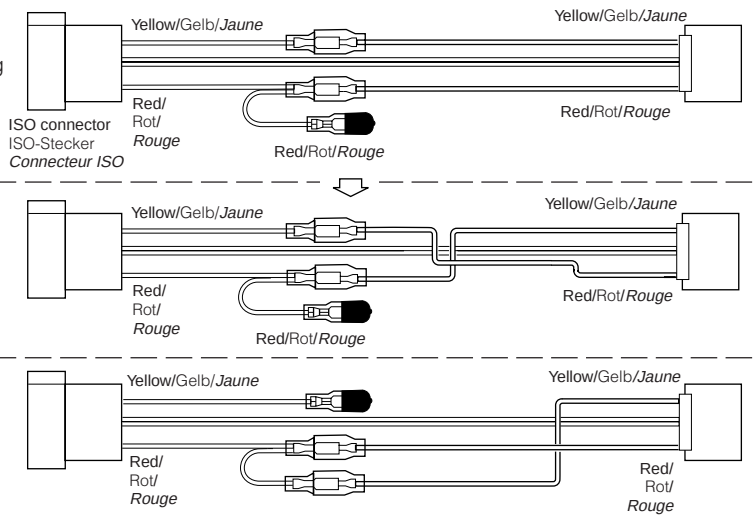
A If your car is equipped with the ISO connector
Wenn Ihr Auto mit ISO-Steckern ausgestattet ist
Si votre voiture est équippée d'un connecteur ISO

- Connect the ISO connectors as illustrated.
- Die ISO-Stecker wie abgebildet anschließen.
- *Connectez les connecteurs ISO comme montré sur l'illustration.*



For some VW/Audi or Opel (Vauxhall) automobile
Für manche VW/Audi oder Opel (Vauxhall) Fahrzeuge
Pour certaine voiture VW/Audi ou Opel (Vauxhall)

You may need to modify the wiring of the supplied power cord as illustrated.
• Contact your authorized car dealer before installing this unit.
Sie müssen evtl. die Verdrahtung des mitgelieferten Stromkabels wie abgebildet ändern.
• Wenden Sie sich an Ihre Vertragswerkstatt, bevor Sie das Gerät einbauen.
Vous aurrez peut-être besoin de modifier le câblage du cordon d'alimentation fourni comme montré sur l'illustration.
• *Contactez votre revendeur automobile autorisé avant d'installer l'appareil.*



Use modified wiring 2 if the unit does not turn on.
Geänderte Verdrahtung 2 verwenden, wenn das Gerät so nicht an geht.
Utilisez le câblage modifié 2 si l'appareil ne se met pas sous tension.

ENGLISH | DEUTSCH | FRANÇAIS

B Connections without using the ISO connectors / Anschlüsse ohne ISO-Stecker / Connexions sans l'utilisation des connecteurs ISO

Before connecting: Check the wiring in the vehicle carefully. Incorrect connection may cause serious damage to this unit.

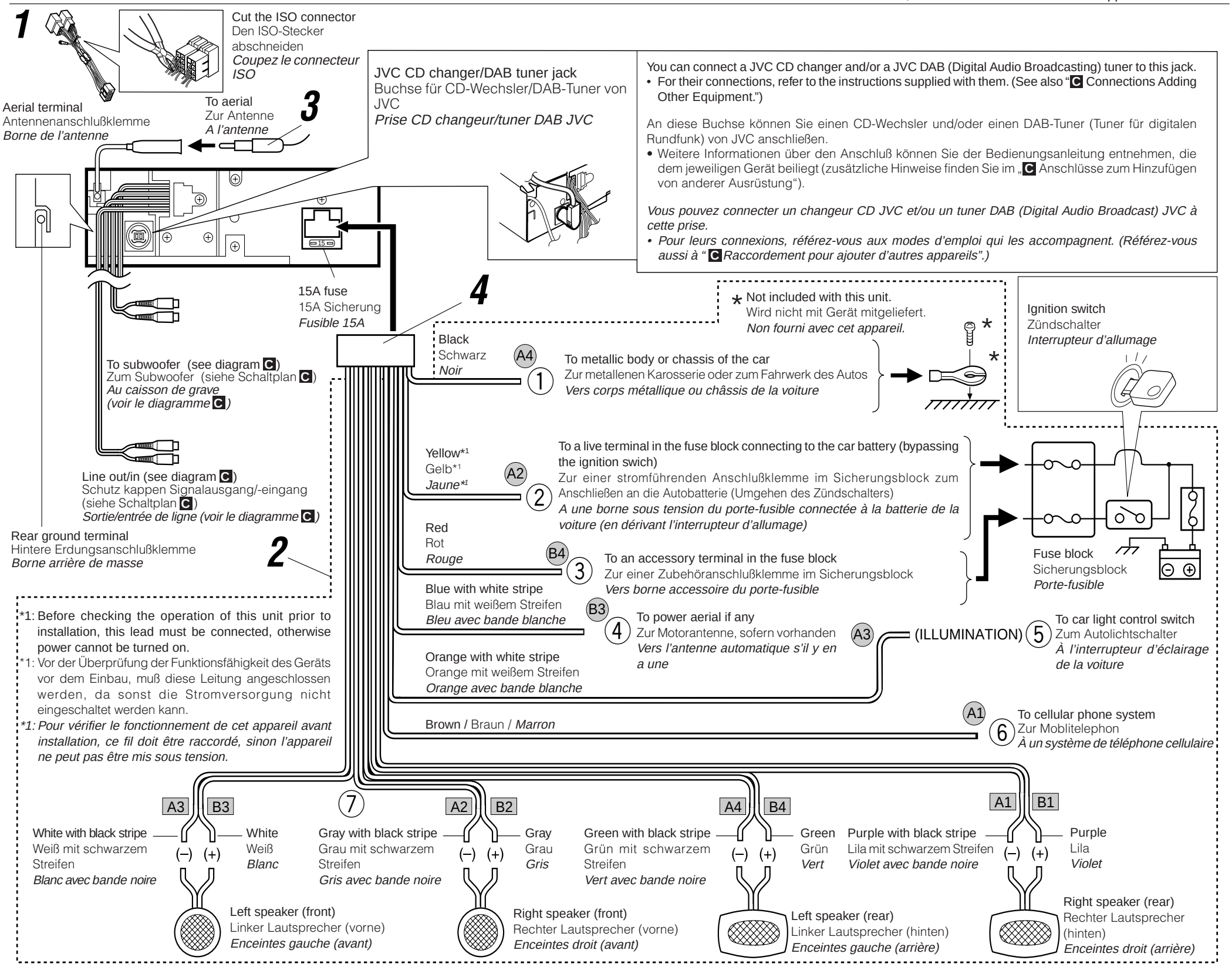
1. Cut the ISO connector.
2. Connect the colored leads of the power cord to the car battery, speakers and power aerial (if any) in the following sequence.
   ① Black: ground
   ② Yellow: to car battery (constant 12 V)
   ③ Red: to an accessory terminal
   ④ Blue with white stripe: to power aerial (200 mA max.)
   ⑤ Orange with white stripe: to car light control switch
   ⑥ Brown: to cellular phone system (For details, refer to the instructions of the cellular phone.)
   ⑦ Others: to speakers
3. Connect the aerial cord.
4. Finally connect the wiring harness to the unit.

Vor dem Anschließen: Die Verdrahtung im Fahrzeug sorgfältig überprüfen. Falsche Anschlüsse können ernsthafte Schäden am Gerät hervorrufen.

1. Den ISO-Stecker abschneiden.
2. Die farbigen Leitungen des Spannunsgversorgungskabels an der Autobatterie, den Lautsprechern und dem Motorantenne (sofern vorhanden) in folgender Reihenfolge anschließen.
   ① Schwarz: Erdung
   ② Gelb: an autobatterie (konstant 12 V)
   ③ Rot: an Zubehöranschlußklemme
   ④ Blau mit weißem Streifen: an Motorantenne (max. 200 mA)
   ⑤ Orange mit weißem Streifen: zum Autolichtschalter
   ⑥ Braun: an Mobiltelefon (Weitere informationen entnehmen Sie bitte der Bedienungsanleitung des Mobiltelefons.)
   ⑦ Andere: an Lautsprecher
3. Das Antennenkabel anschließen.
4. Die Kabelbäume am Gerät anschließen.

Avant de commencer la connexion: *vérifiez attentivement le câblage du véhicule. Une connexion incorrecte peut endommager sérieusement l'appareil.*

1. *Coupez le connecteur ISO.*
2. *Connectez les fils de couleur du cordon d'alimentation à la batterie de la voiture, aux enceintes et à l'antenne automatique (s'il y en a une) dans l'ordre suivant.*
   ① *Noir: a la masse*
   ② *Jaune: a la batterie de la voiture (12 V constant)*
   ③ *Rouge: à la prise accessoire*
   ④ *Bleu: à l'antenne automatique (200 mA max.) avec bande blanche*
   ⑤ *Orange: à l'interrupteur d'éclairage de la voiture avec bande blanche*
   ⑥ *Marron: à un système de téléphone cellulaire (Pour les détails, se référer aux instructions du téléphone cellulaire.)*
   ⑦ *Autres: aux enceintes*
3. *Connectez le cordon d'antenne.*
4. *Finalement, connectez le faisceau de fils à l'appareil.*



*1: Before checking the operation of this unit prior to installation, this lead must be connected, otherwise power cannot be turned on.
*1: Vor der Überprüfung der Funktionsfähigkeit des Geräts vor dem Einbau, muß diese Leitung angeschlossen werden, da sonst die Stromversorgung nicht eingeschaltet werden kann.
*1: *Pour vérifier le fonctionnement de cet appareil avant installation, ce fil doit être raccordé, sinon l'appareil ne peut pas être mis sous tension.*

PRECAUTIONS on power supply and speaker connections:

- **DO NOT connect the speaker leads of the power cord to the car battery; otherwise, the unit will be seriously damaged.**
- Connect the black lead (ground), yellow lead (to car battery, constant 12 V), and red lead (to an accessory terminal) correctly.
- BEFORE connecting the speaker leads of the power cord to the speakers, check the speaker wiring in your car.
  – **If the speaker wiring in your car is as illustrated in Fig. 1 and Fig. 2 below,** DO NOT connect the unit using that original speaker wiring. If you do, the unit will be seriously damaged. Redo the speaker wiring so that you can connect the unit to the speakers as illustrated in Fig. 3.
  – **If the speaker wiring in your car is as illustrated in Fig. 3,** you can connect the unit using the original speaker wiring in your car.
  – If you are not sure of the speaker wiring of your car, consult your car dealer.

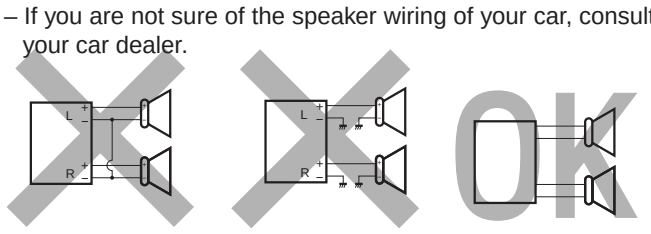


Fig. 1 Fig. 2 Fig. 3

VORSICHTSMASSREGELN beim Anschließen der Stromversorgung und Lautsprecher:

- **Die Lautsprecherleitungen des Netzkabels NICHT an der Autobatterie anschließen, da sonst das Gerät schwer beschädigt wird.**
- Die schwarze Leitung (Erdung), die gelbe Leitung (zur Autobatterie, konstant 12 V) und die rote Leitung (zur Zubehöranschlußklemme) richtig anschließen.
- VOR dem Anschließen der Lautsprecherleitungen des Spannunsgversorgungskabels an die Lautsprecher, die Lautsprecherverdrahtung in Ihrem Auto überprüfen.
  – **Ist die Lautsprecherverdrahtung wie unten in "Fig. 1" und "Fig. 2" abgebildet,** das Gerät NICHT mit der Originalverdrahtung der Lautsprecher anschließen, da sonst das Gerät schwer beschädigt wird.
  Die Lautsprecherverdrahtung erneuern, so daß Sie das Gerät an den Lautsprechern wie in "Fig. 3" abgebildet anschließen können.
  – **Ist die Lautsprecherverdrahtung in Ihrem Auto wie in "Fig. 3" abgebildet,** können Sie das Gerät mit der Originalverdrahtung der Lautsprecher in Ihrem Auto anschließen.
  – Sind Sie sich über die Lautsprecherverdrahtung in Ihrem Auto nicht sicher, wenden Sie sich an Ihren Autohändler.

PRECAUTIONS sur l'alimentation et la connexion des enceintes:

- **NE CONNECTEZ PAS les fils d'enceintes du cordon d'alimentation à la batterie; sinon, l'appareil serait sérieusement endommagé.**
- *Connectez correctement le fil noir (a la masse), le fil jaune (a la batterie de la voiture,12 V constant) et le fil rouge (à la prise accessoire).*
- *AVANT de connecter les fils d'enceintes du cordon d'alimentation aux enceintes, vérifiez le câblage des enceintes de votre voiture.*
  – **Si le câblage des enceintes de votre voiture est réalisé comme montré sur la Fig. 1 ou Fig. 2 ci-dessous,** *NE CONNECTEZ PAS l'appareil en utilisant ce câblage original d'enceintes. Si vous le faites, l'appareil sera sérieusement endommagé.*
  Recommencez le câblage des enceintes de façon que vous puissiez connecter l'appareil aux enceintes comme montré sur la Fig. 3.
  – **Si le câblage des enceintes de votre voiture est comme montré sur la Fig. 3,** *vous pouvez connecter l'appareil en utilisant ce câblage original d'enceintes pour votre voiture.*
  – *Si vous n'êtes pas sûrs du câblage d'enceintes de votre voiture, consulter le concessionnaire de votre voiture.*

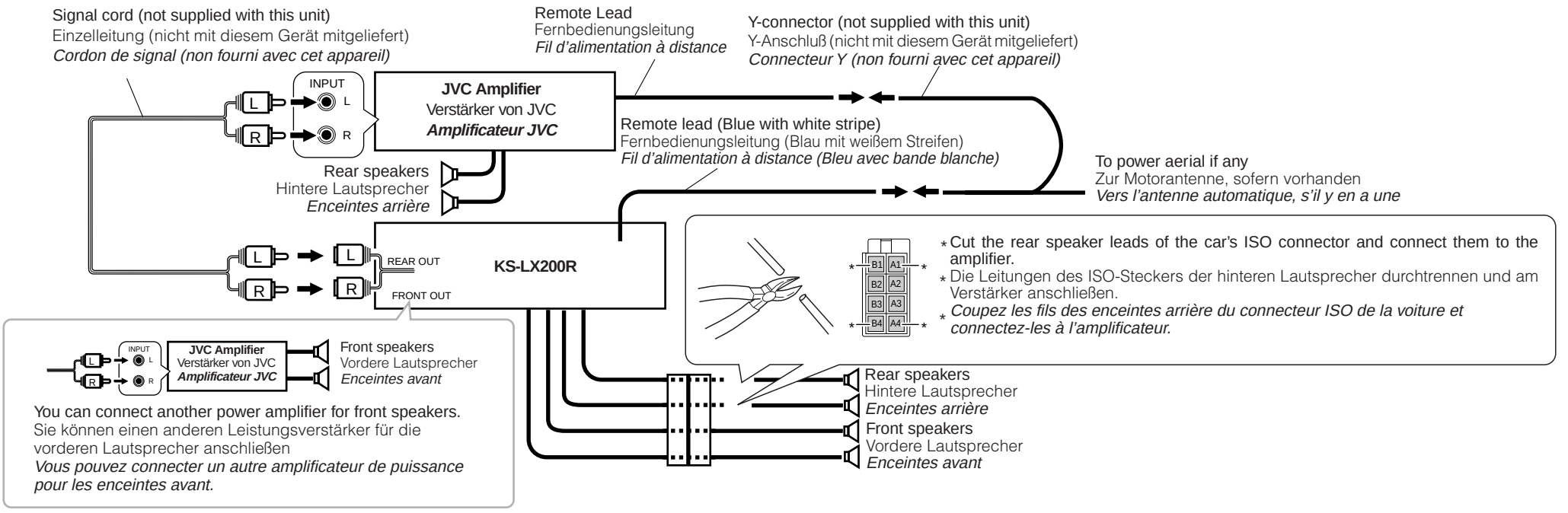
C Connections Adding Other Equipment / Anschlüsse zum Hinzufügen von anderer Ausrüstung / Raccordement pour ajouter d'autres appareils

Amplifier / Verstärker / Amplificateur

You can connect an amplifier and other equipment to upgrade your car stereo system.
- Connect the remote lead (blue with white stripe) to the remote lead of the other equipment so that it can be controlled through this unit.
- For amplifier only:
  – Connect this unit's line-out terminals to the amplifier's line-in terminals.
  – **Disconnect the speakers from this unit, connect them to the amplifier. Leave the speaker leads of this unit unused.**
  – The line output level of this unit is kept high to maintain the hi-fi sounds reproduced from this unit.
  When connecting an external amplifier to this unit, turn down the gain control on the external amplifier to obtain the best performance from this unit.
- For subwoofer only:
  – Connect this unit's SUBWOOFER OUT plugs to the amplifier's line-in jacks.
- For connecting the source equipment only:
  – Connect this unit's line-in (LINE IN) terminals to the other equipment's line-out terminals.

Sie können einen Verstärker oder ein anderes Gerät anschließen, um Ihre Autostereoanlage zu erweitern.
- Schließen Sie das Fernbedienungskabel (blau mit weißem Streifen) an das Fernbedienungskabel des anderen Geräts an, so daß es über dieses Gerät gesteuert werden kann.
- Nur für den Verstärker:
  – Die Anschlußklemmen am Ausgang dieses Gerät an den Anschlußklemmen des Eingangs des Verstärkers anschließen.
  – **Die Lautsprecher von diesem Gerät abtrennen und am Verstärker anschließen. Die Lautsprecherleitungen dieses Geräts unbenutzt lassen.**
  – Der Ausgangspegel dieses Geräts wird auf einem hohen Wert gehalten, um den Hifi-Klang zu unterstützen, den dieses Gerät reproduziert.
  Wenn Sie einen externen Verstärker an dieses Gerät anschließen, stellen Sie den Verstärkungsregler des externen Verstärkers herunter, um die bestmögliche Leistung dieses Geräts zu erzielen.
- Nur für den Subwoofer:
  – Die Stecker SUBWOOFER OUT des Geräts an die Eingangsbuchsen am Verstärker anschließen.
- Nur für den Anschluß externer Geräte:
  – Verbinden Sie die Eingangsanschlüsse (LINE IN) dieses Geräts mit den Ausgangsanschlüssen des externen Geräts.

Vous pouvez connecter un amplificateur ou autre appareil pour améliorer votre système autoradio.
- *Connectez le fil de commande à distance (bleu avec bande blanche) au fil de commande à distance de l'autre appareil de façon qu'il puisse être commandé via cet appareil.*
- *Pour l'amplificateur seulement:*
  – Raccorder les bornes de sortie ligne de cet appareil aux bornes d'entrée ligne de l'amplificateur.
  – Déconnectez les enceintes de cet appareil et connectez-les à l'amplificateur. Laissez les fils d'enceintes de cet appareil inutilisés.
  – Le niveau de sortie de ligne de cet appareil est maintenu à un niveau élevé pour maintenir une qualité Hi-Fi pour les sons reproduits par cet appareil.
  Lors de la connexion d'un amplificateur extérieur à cet appareil, *diminuez le réglage du gain sur l'amplificateur extérieur pour obtenir les meilleures performances de cet appareil.*
- *Pour le caisson de grave seulement :*
  – Connectez les fiches SUBWOOFER OUT de cet appareil aux prises d'entrée de ligne de l'amplificateur.
- *Pour la connexion de l'appareil source seulement:*
  – Connectez les prises d'entrée de ligne (LINE IN) de cet appareil aux prises de sortie de ligne de l'autre appareil.

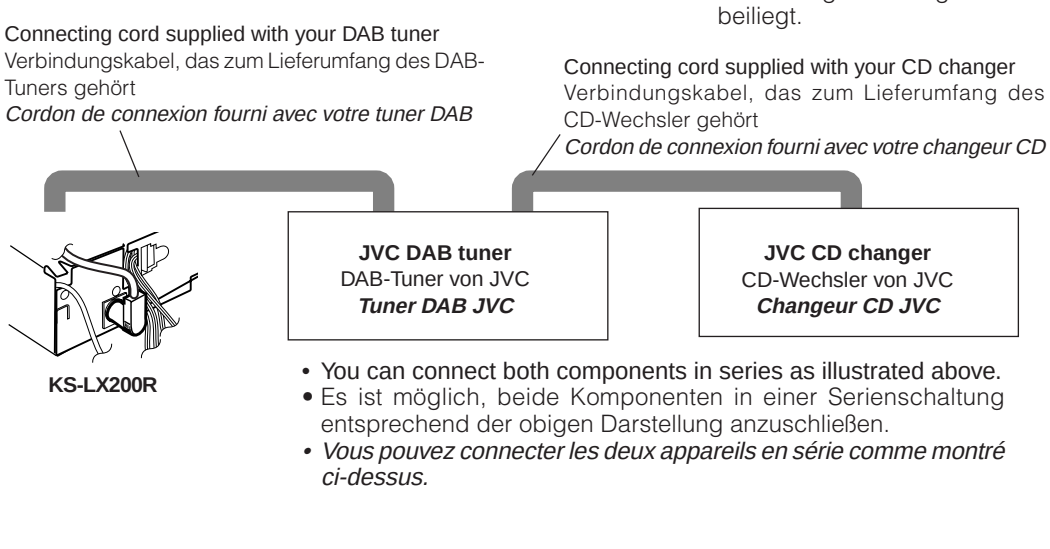


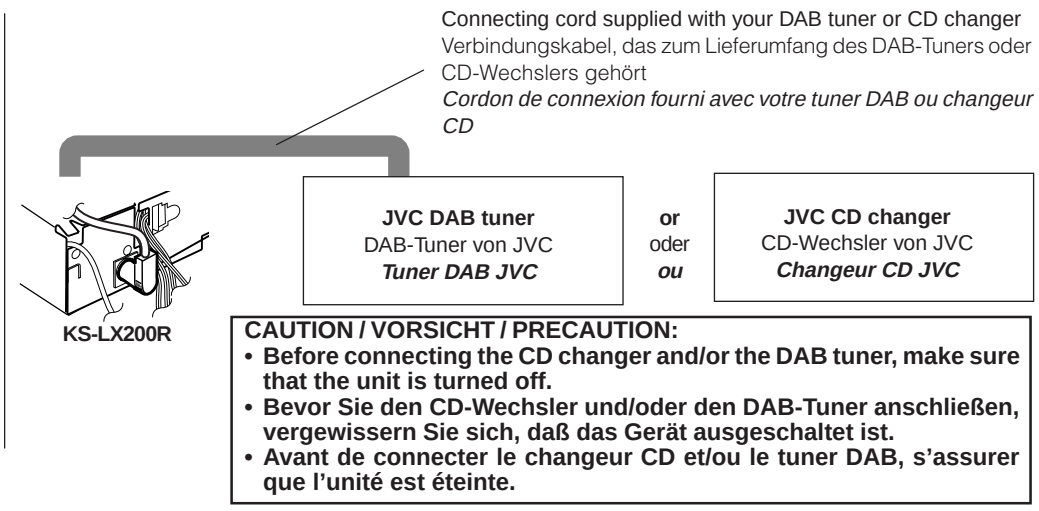
CD changer and DAB tuner / CD-Wechsler und DAB-Tuner / Changeur CD et tuner DAB

You can connect a JVC CD changer and/or a JVC DAB (Digital Audio Broadcasting) tuner.
- For their connections, refer to the instructions supplied with them.

Sie können einen CD-Wechsler und/oder einen DAB-Tuner (Tuner für digitalen Rundfunk) von JVC anschließen.
- Weitere Informationen über den Anschluß können Sie der Bedienungsanleitung entnehmen, die dem jeweiligen Gerät beiliegt.

Vous pouvez connecter un changeur CD JVC et/ou un tuner DAB (Digital Audio Broadcast) JVC.
- *Pour leurs connexions, référez-vous aux modes d'emploi qui les accompagnent.*





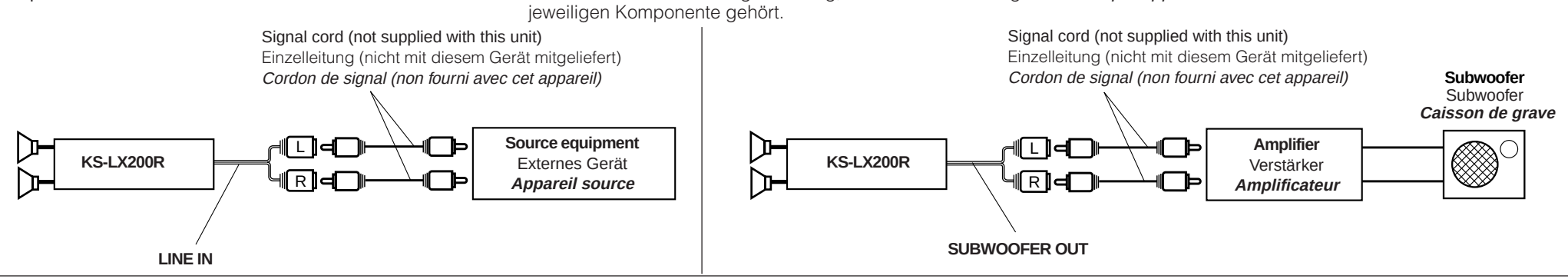
CAUTION / VORSICHT / PRECAUTION:
- **Before connecting the CD changer and/or the DAB tuner, make sure that the unit is turned off.**
- **Bevor Sie den CD-Wechsler und/oder den DAB-Tuner anschließen, vergewissern Sie sich, daß das Gerät ausgeschaltet ist.**
- **Avant de connecter le changeur CD et/ou le tuner DAB, s'assurer que l'unité est éteinte.**

Subwoofer and other source equipment / Subwoofer und andere externe Geräte/Subwoofer / Caisson de grave et autre appareil source

For their connections, refer to the instructions supplied with each component.

Informationen darüber, wie diese Geräte angeschlossen werden, finden Sie in der Bedienungsanleitung, die zum Lieferumfang der jeweiligen Komponente gehört.

Pour leur connexion, référez-vous aux instructions fournies avec chaque appareil.



TROUBLESHOOTING

- **The fuse blows.**
* Are the red and black leads connected correctly?
- **Power cannot be turned on.**
* Is the yellow lead connected?
- **No sound from the speakers.**
* Is the speaker output lead short-circuited?
- **Sound is distorted.**
* Is the speaker output lead grounded?
* Are the "–" terminals of L and R speakers grounded in common?
- **Unit becomes hot.**
* Is the speaker output lead grounded?
* Are the "–" terminals of L and R speakers grounded in common?

FEHLERSUCHE

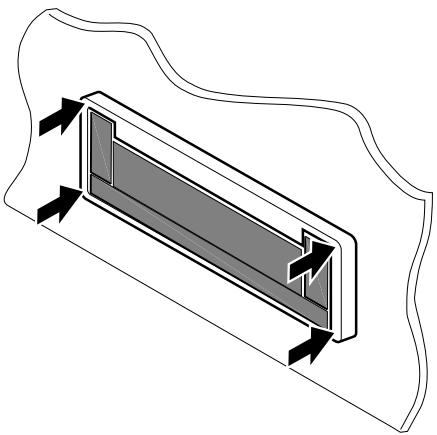
- **Die Sicherung brennt durch.**
* Sind die roten und schwarzen Leitungen richtig angeschlossen?
- **Stromversorgung kann nicht eingeschaltet werden.**
* Ist die gelbe Leitung angeschlossen?
- **Kein Ton aus den Lautsprechern.**
* Ist die Lautsprecherausgangsleitung kurzgeschlossen?
- **Ton verzerrt.**
* Ist die Lautsprecherausgangsleitung geerdet?
* Sind die (–) Anschlußklemmen der linken und rechten Lautsprecher zusammen geerdet?
- **Gerät wird heiß.**
* Ist die Lautsprecherausgangsleitung geerdet?
* Sind die (–) Anschlußklemmen der linken und rechten Lautsprecher zusammen geerdet?

EN CAS DE DIFFICULTÉS

- **Le fusible saute.**
* *Les fils rouge et noir sont-ils racordés correctement?*
- **L'appareil ne peut pas être mise sous tension.**
* *Le fil jaune est-elle raccordée?*
- **Pas de son des enceintes.**
* *Le fil de sortie d'enceinte est-il court-circuité?*
- **Le son est déformé.**
* *Le fil de sortie d'enceinte est-il à la masse?*
* *Les bornes "–" des enceintes gauche et droit sont-elles mises ensemble à la masse?*
- **L'appareil devient chaud.**
* *Le fil de sortie d'enceinte est-il à la masse?*
* *Les bornes "–" des enceintes gauche et droit sont-elles mises ensemble à la masse?*

JVC

CAUTION / ACHTUNG / ATTENTION / LET OP



ENGLISH

To install this unit, attach the trim plate to the unit first, then fit the unit into the mounting sleeve by pressing the four corners of the trim plate.
DO NOT press the panel (shaded in the illustration); otherwise the panel may become unable to open or close.

DEUTSCH

Um dieses Gerät zu installieren, bringen Sie zunächst den Zierrahmen am Gerät an. Schieben Sie anschließend das Gerät in die Schutzhülle, indem Sie auf die vier Ecken des Zierrahmens drücken.
Drücken Sie NICHT auf die Blende (die in der Abbildung dunkelgetönt dargestellt ist); anderenfalls läßt sich die Blende weder öffnen noch schließen.

FRANÇAIS

Pour installer cet appareil, fixezd'abord la plaque d'assemblage à l'appareil, puis ajustezl'appareil dans le manchon en appuyant sur les quatre coins de la plaqued'assemblage. N'APPUYEZ PAS sur le panneau (partie ombrée surl'illustration); sinon le panneau risque de ne pas pouvoir s'ouvrirou se fermer.

NEDERLANDS

Om dit apparaat te installeren, dient u eerst de sierplaat op het apparaat te bevestigen, daarna het apparaat in de behuizing te plaatsen en de vier hoeken van de sierplaat aan te drukken.
Druk NIET op het paneel (gearceerd in de illustratie aangegeven), anders loopt u het risico dat het paneel niet meer kan worden geopend of gesloten.

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