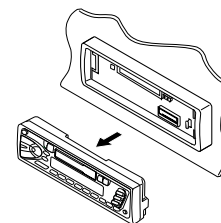
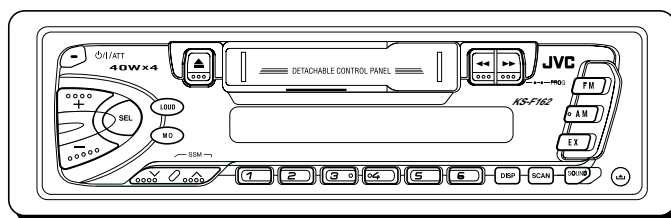


JVC

SERVICE MANUAL

CASSETTE RECEIVER

KS-F162



Area Suffix

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

Contents

Safety precaution	1-2
Disassembly method	1-3
Adjustment method	1-12
Description of major ICs	1-16

Disassembly method

■ Detaching the front panel unit

(See Fig.1)

Push the Release button in the direction of arrow to detach the front panel unit.



Fig. 1

■ Removing the front chassis

(See Fig. 2 and 3)

Disengage the four tabs (a) in the right and left sides of unit and pull the front chassis forward to remove it.

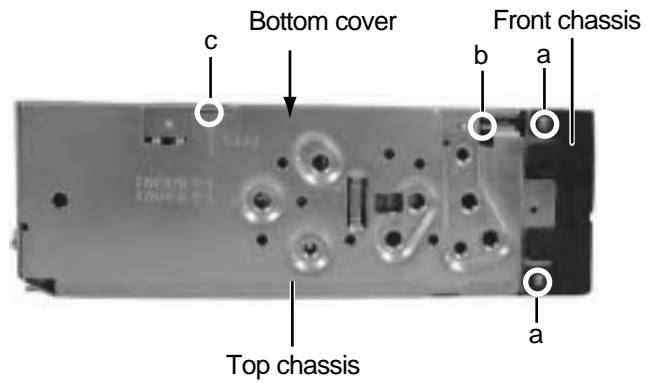


Fig. 2

■ Removing the bottom cover

(See Fig. 2 to 4)

1. Remove the front chassis.
2. Turn the unit up side down.
3. Insert the screwdriver to the four engagements (b, c, d, f).
4. Turn the screwdriver and remove the bottom cover.



Fig. 3

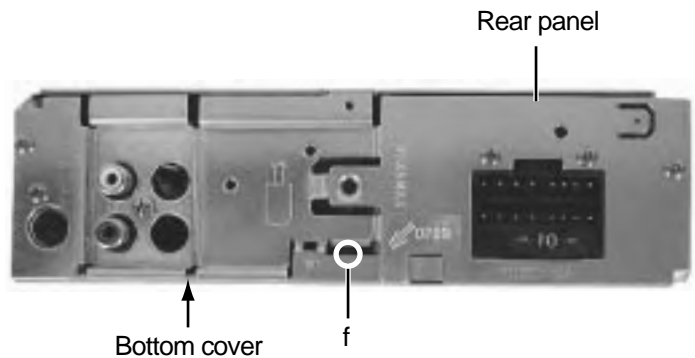


Fig. 4

■ **Removing the heat sink (See Fig. 5)**

1. Removing the front chassis.
2. Removing the bottom cover.
3. Remove the three screws (1 and 1`) retaining the heat sink.

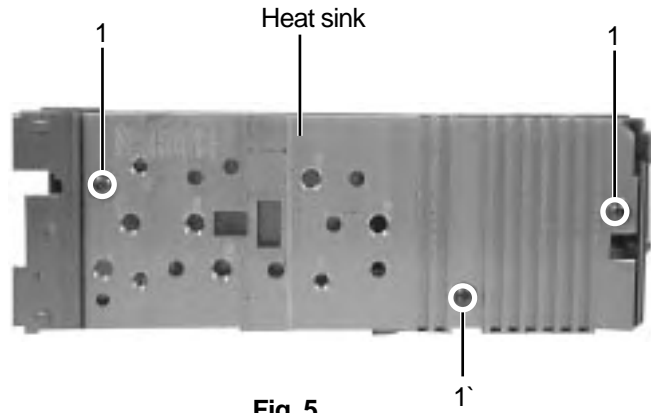


Fig. 5

■ **Removing the main board assembly**

(See Fig. 5 to 7)

1. Removing the front chassis.
2. Removing the bottom cover.
3. Removing the heat sink.
 (Attach the heat sink with a screw (1`) on operating checks.)
4. Remove the two screws (2) retaining the main board assembly.
5. Remove the two screws (3) retaining the rear panel .
6. Separate the main board assembly and cassette mechanism assembly.
7. Take out the main board assembly.

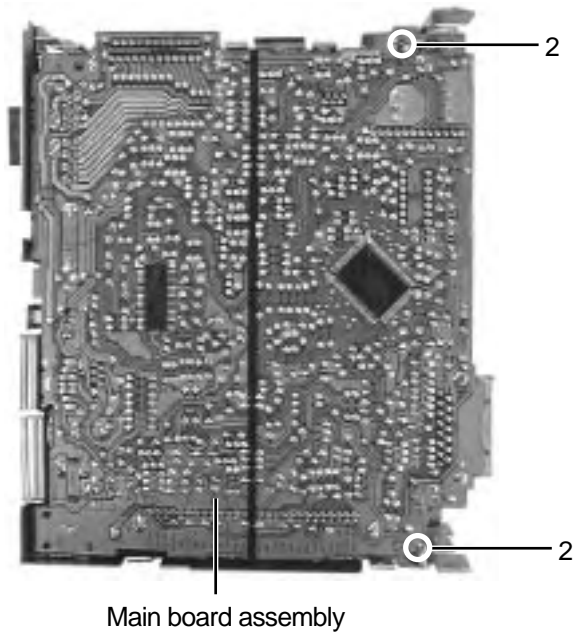


Fig. 6

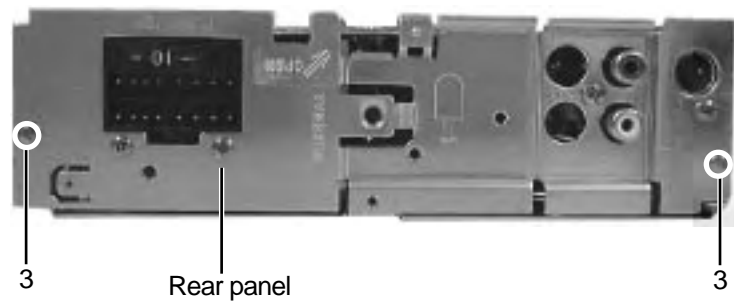


Fig. 7

■Removing the cassette mechanism assembly

(See Fig. 8)

1. Removing the front chassis.
2. Removing the bottom cover.
3. Removing the heat sink.
4. Removing the main board assembly.
5. Remove the four screws (4) retaining the cassette mechanism.
6. Separate the top chassis and cassette mechanism.

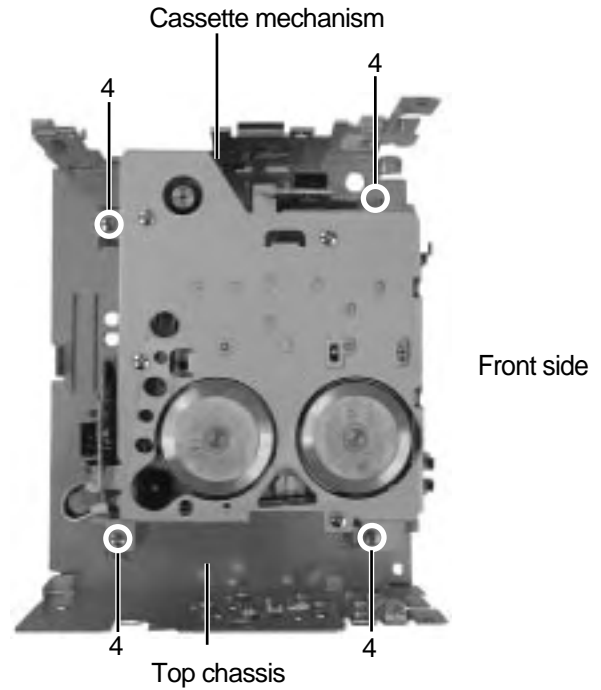


Fig. 8

■Removing the operation switch board

(See Fig. 9 to 11)

1. Detaching the front panel unit.
2. Turn the front panel back side down.
3. Remove the four screws (5) retaining the front cover.
4. Open the front cover gradually by disengaging the three engagements (g) while pushing the top of the front cover in the arrow "A" direction, then disengage the three engagements (h) on the both sides.
5. Place the front panel unit front side down.
6. Disengage the three engagements (i) on the bottom to separate the front cover from the front panel.

(Be careful not to lose the button springs.)

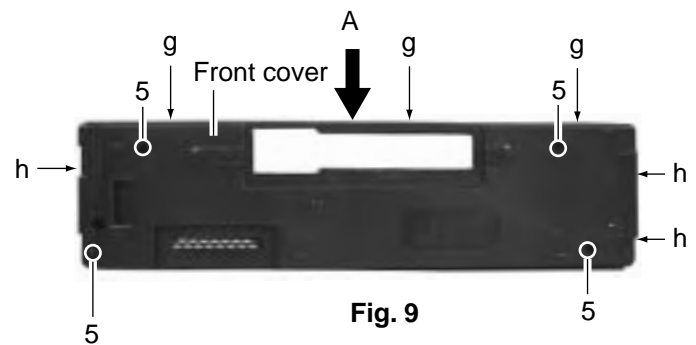


Fig. 9

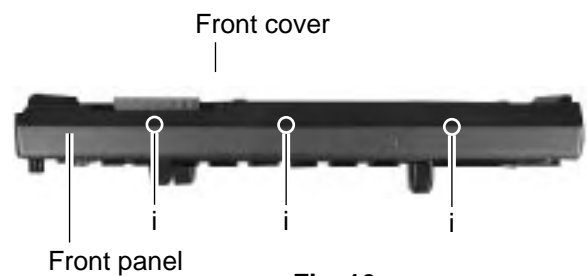


Fig. 10

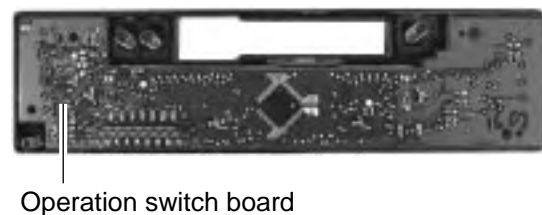


Fig. 11

■ Removing the head amplifier board

(See Fig. 12)

1. Removing the front chassis.
2. Removing the bottom cover.
3. Removing the heat sink.
4. Removing the main board assembly.
5. Removing the cassette mechanism.
6. Remove the screw (6) retaining the head amplifier board.
7. Shift the two inter rocking sections (j) securing the head amplifier board in the direction shown by the arrow "B" to remove the printed circuit board.
8. From the connector CJ901 on the head amplifier board from connector wire out going to the head relay board.

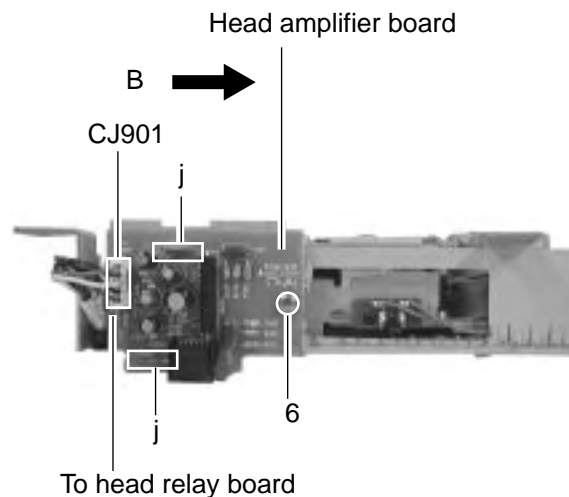


Fig. 12

■ Removing the chassis assembly

(See Fig. 13 and 14)

1. Removing the front chassis.
2. Removing the bottom cover.
3. Removing the heat sink.
4. Removing the main board assembly.
5. Removing the cassette mechanism.
6. Removing the head amplifier board.
7. Turn the left side to cassette mechanism.
8. Remove the screw (7) retaining the relay board.
9. Shift the one inter rocking sections (k) securing the relay board in the direction shown by the arrow "C" to remove the printed circuit board.
10. Turn the back side down, remove the four screws (8) retaining the chassis assembly.

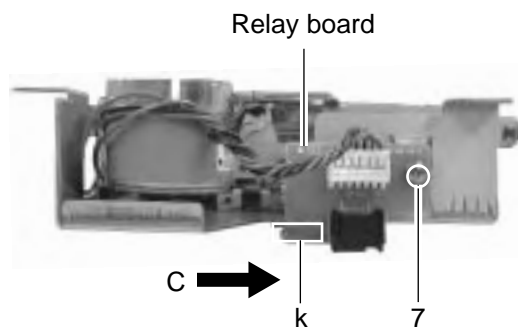


Fig. 13

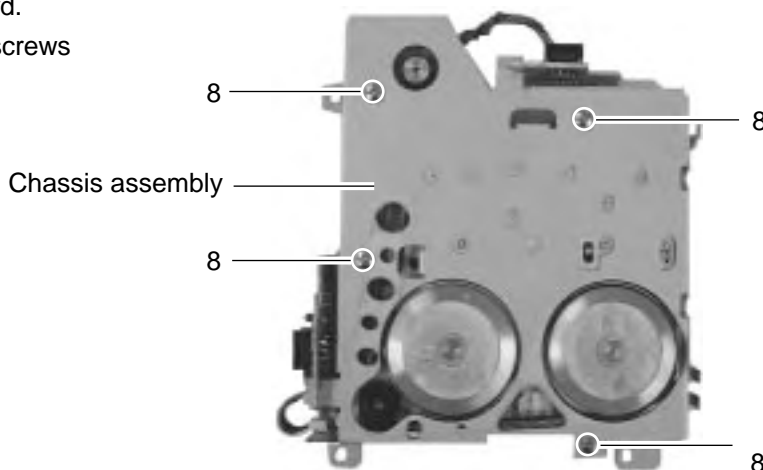


Fig. 14

<Cassette mechanism assembly>

- Prior to performing the following procedures, remove the head amplifier board, the relay board and the mechanism bracket.

■ Removing the direction switch board (See Fig.1)

1. Unsolder the three wires **a** on the direction switch board.
2. Remove the one screw **A** attaching the direction switch board.

■ Removing the FF / REW lever assembly (See Fig.1)

1. Remove the screw **B** attaching the FF / REW lever assembly on the back of the cassette mechanism assembly.
2. Remove the screw **C** on the upper side of the FF / REW lever assembly.
3. Lift and pull forward the FF / REW lever assembly to disengage the joints **b**, **c**, **d** and **e**.

■ Reattaching the FF / REW lever assembly (See Fig.1)

1. Reattach the FF / REW lever assembly to the joint **c** on the back of the chassis.
2. Reattach the pinch-roller shaft **e**, the change lever **d** and the return link **e** to the chassis.

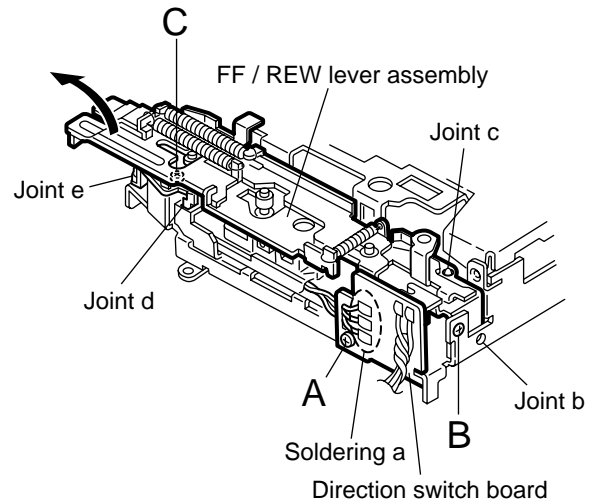


Fig.1

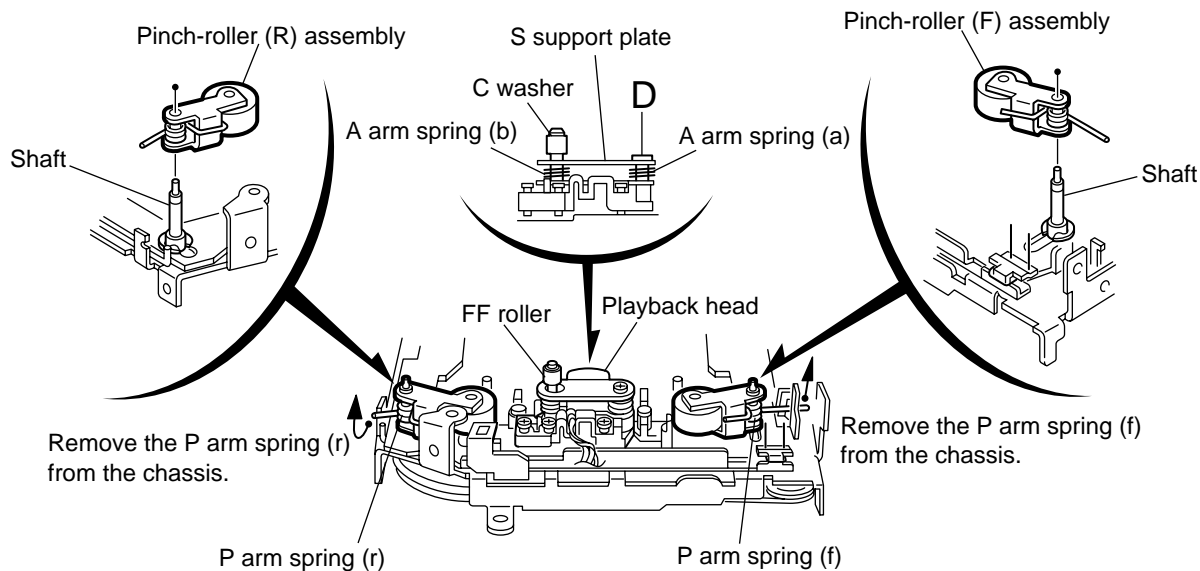


Fig.2

■ Removing the playback head (See Fig.2)

- Prior to performing the following procedure, remove the direction switch board and the FF / REW lever assembly.

1. Remove the screw **D** attaching the playback head.
2. Remove the **C** washer and pull out the FF roller.
3. Remove the **S** support plate, the **A** arm spring (a) and (b), the playback head.

ATTENTION: The **A** arm spring (a) differs from the **A** arm spring (b).

■ Removing the pinch-roller (R) and (F) assembly (See Fig.2)

- Prior to performing the following procedure, remove the direction switch board and the FF / REW lever assembly.

1. Remove the **P** arm spring (f) in the pinch-roller (F) assembly from the chassis.
2. Remove the **P** arm spring (r) in the pinch-roller (R) assembly from the chassis.
3. Draw out the pinch roller (F) and (R) assembly from the shaft.

ATTENTION: The **P** arm spring (f) differs from the **P** arm spring (r).

ATTENTION: The pinch roller (F) assembly differs from the pinch roller (R) assembly.

■ Removing the cassette hanger / cassette holder (See Fig.3)

• Prior to performing the following procedure, remove the FF / REW lever assembly.

1. From the rear of the unit, bend the two tabs **f** outwards and disengage the two joints **g** in the direction of the arrow.
2. Push the eject lever and remove the cassette holder from the playback head. Disengage the two joints **h** of the cassette hanger / cassette holder and the eject lever in the direction of the arrow.
3. Lift the cassette hanger / cassette holder and disengage the joint **i** of the return link and the eject lever.

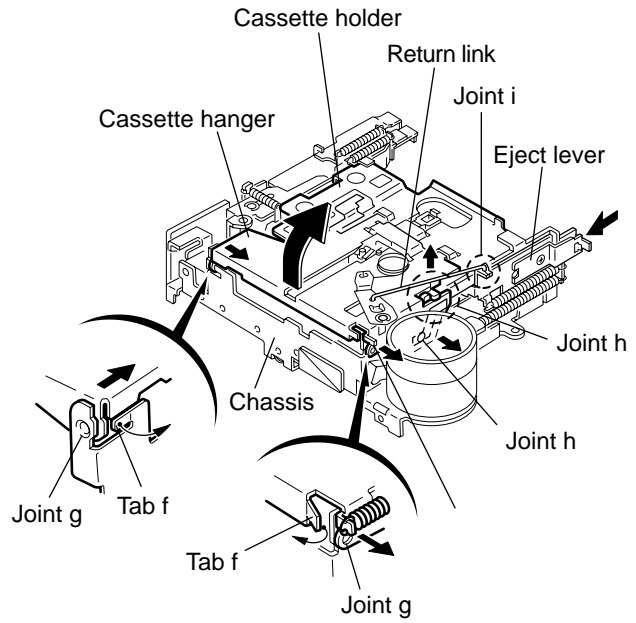


Fig.3

■ Removing the reel disc assembly (See Fig.4)

• Prior to performing the following procedure, remove the FF / REW lever assembly and the cassette hanger / cassette holder.

1. Remove the C washer and pull out reel disc assembly.

ATTENTION: Replace with a new C washer when reattaching.

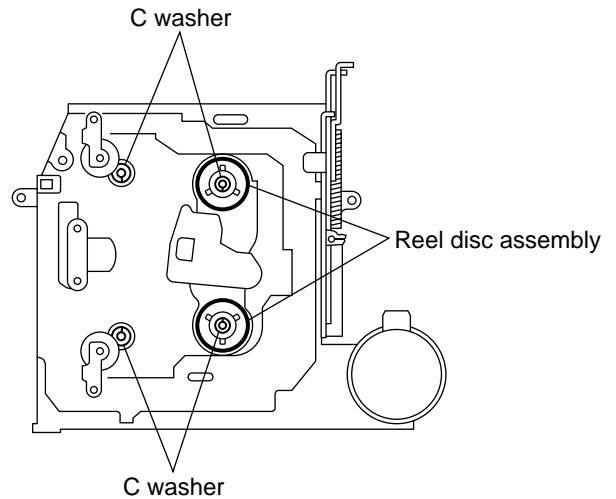


Fig.4

■ Removing the motor assembly (See Fig.5)

1. Unsolder the two wires **j** on the motor assembly.

ATTENTION: To replace the sub-belt, remove the main belt and the sub-belt from the motor pulley. Then remove the three screws **E** and one screw **F**. Replace with a new sub-belt while lifting the reel base assembly slightly.

2. Turn over the cassette mechanism assembly and remove the main belt and the sub-belt from the motor pulley.

ATTENTION: The main belt can now be removed.

3. Remove the two screws **G** attaching the motor assembly.

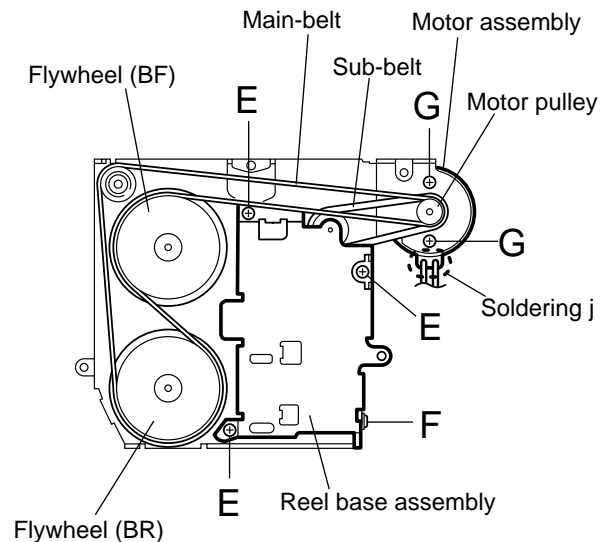


Fig.5

■ **Removing the Flywheel (BF) and (BR) assembly (See Fig.4 and 5)**

• Prior to performing the following procedure, remove the cassette hanger / cassette holder.

1. From the upper side of the cassette mechanism assembly, remove the C washer from each shaft of the flywheel (BF) and (BR).
2. Turn over the cassette mechanism assembly and remove the main belt. Pull out the flywheel (BF) and (BR) downward respectively.

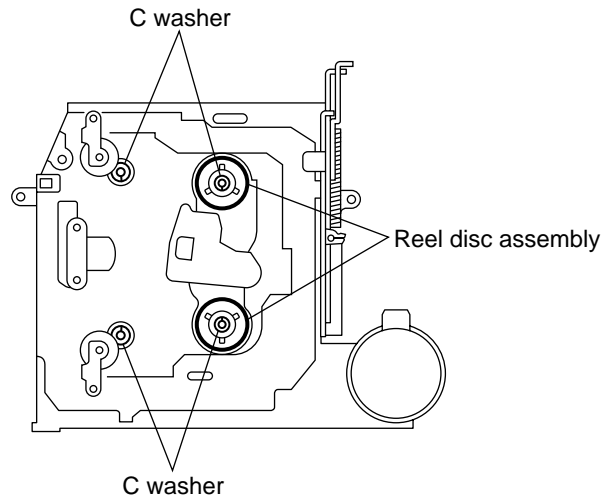


Fig.4

■ **Removing the reel base assembly (See Fig.5 and 6)**

1. Raise the part k of the reel base assembly slightly and remove the selector link (B) on the front side of the cassette mechanism assembly by turning it as shown in Fig.10.
2. Remove the three screws E and the one screw F on the underside of the cassette mechanism assembly.

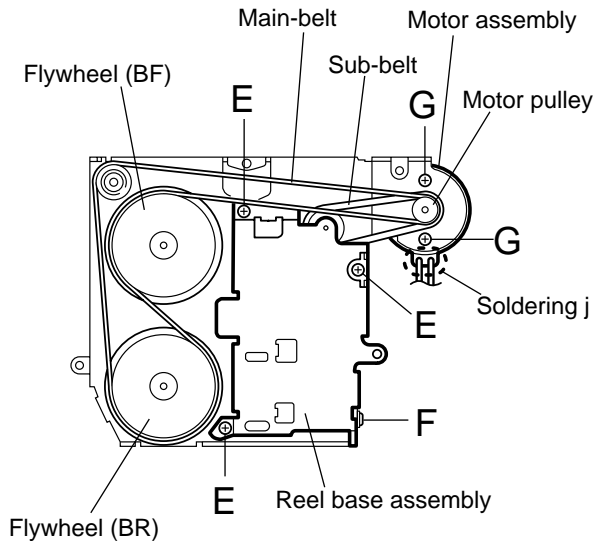


Fig.5

ATTENTION: The reel base assembly is not repairable. Handle with care.

Inside of the reel base assembly

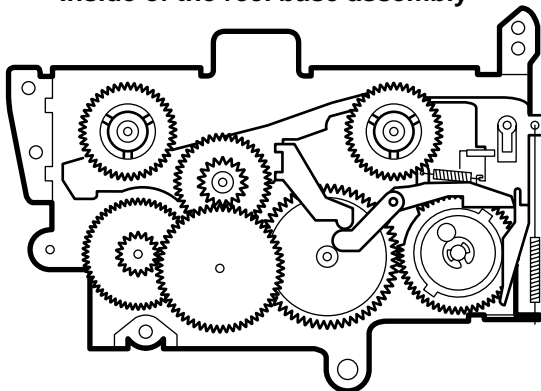


Fig.7

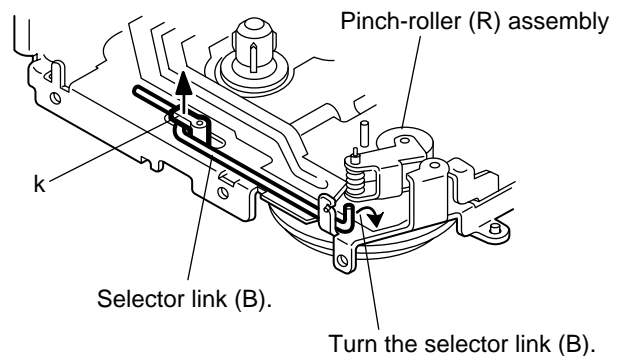


Fig.6

■ Removing the mute switch board

(See Fig.8)

1. Unsolder the two wires **I** on the mute switch board on the back of the cassette mechanism assembly.
2. Remove the screw **H** attaching the mute switch board.

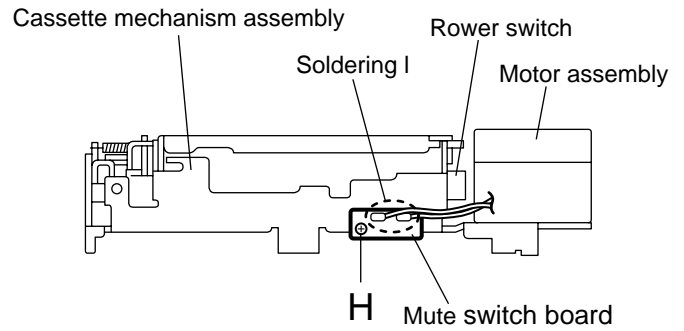


Fig.8

■ Removing the power switch (See Fig.9)

- Prior to performing the following procedure, remove the motor assembly.

1. Unsolder the two wires **m** on the power switch on the side of the cassette mechanism assembly.
2. Remove the screw **I** attaching the power switch.

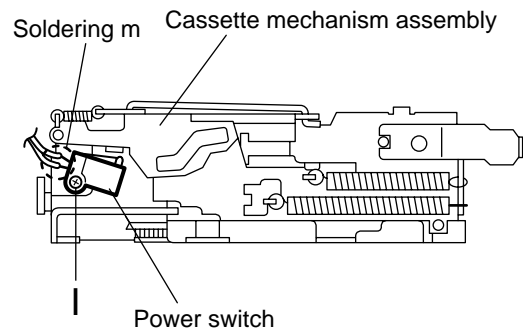


Fig.9

Adjustment method

■ Test instruments required for adjustment

1. Digital oscilloscope(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)

■ 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.pilot 7.5kHz dev
- Output level 0dB(1 μ V,50 Ω /open terminal)

■ Measuring conditions(Amplifier section)

- Power supply voltage..... DC14.4V(11V - 16V allowance)
- Load impedance..... 4 Ω (4 Ω to 8 Ω allowance)
- Line out level/Impedance.....1.0V/20k Ω load (250 nWb/m)

■ Frequency band

Band	FM: 87.5 MHz to 108.0 MHz
	MW: 522kHz to 1602 kHz
	LW: 144kHz to 279kHz

■Information for using a car audio service jig

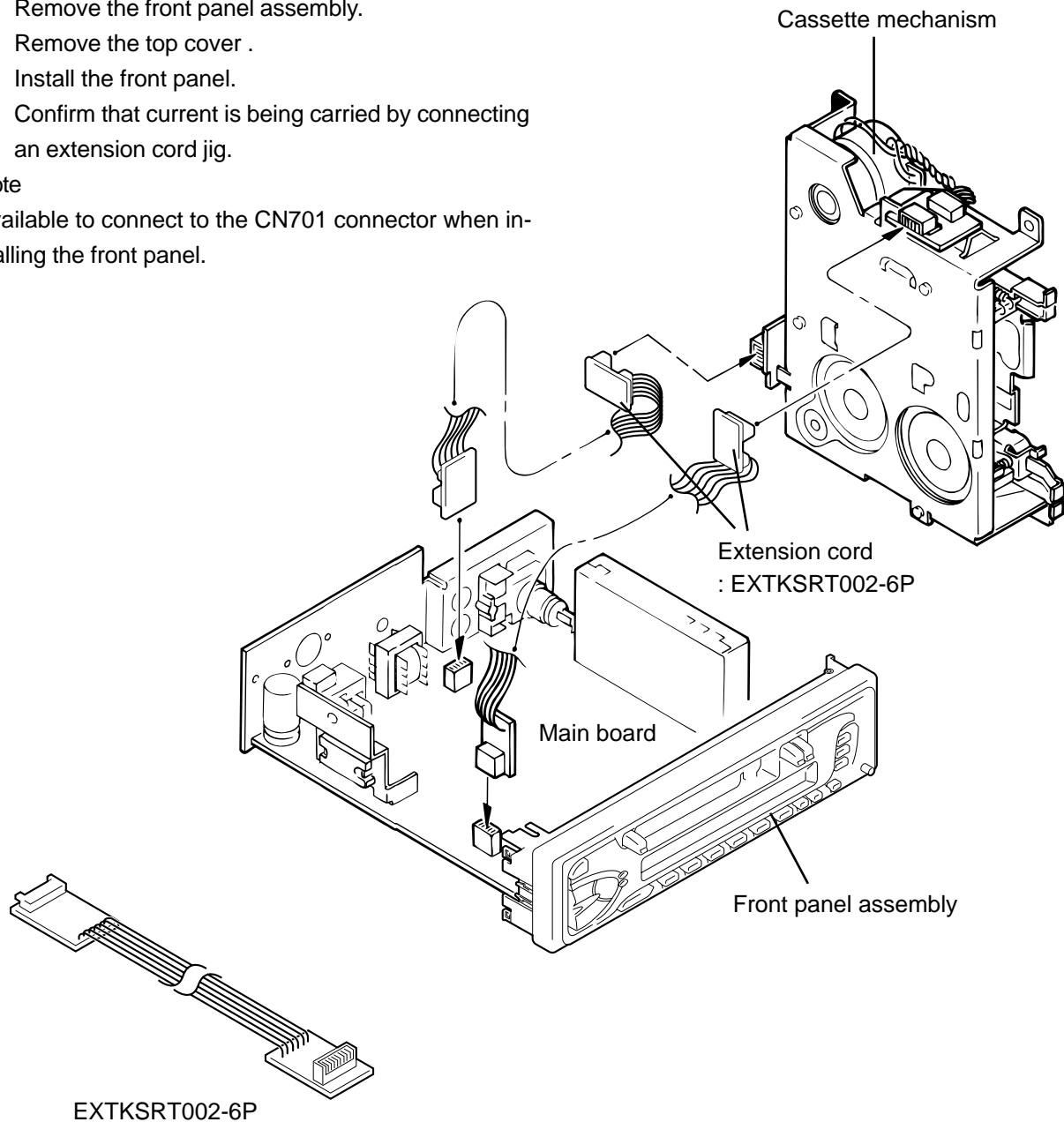
1. For 1995 and 1996 , we're advancing efforts to make our extension cords common for all car audio products.
Please use this type of extension cord as follows.
2. As a U-shape type top cover is employed, this type of extension cord is needed to check operation of the mechanism assembly after disassembly.
3. Extension cord : EXTKSRT002-6P (6 pin extension cord) For connection between mechanism assembly and main board assembly.
Check for mechanism driving section such as motor ,etc..

■Disassembly method

1. Remove the bottom cover.
2. Remove the front panel assembly.
3. Remove the top cover .
4. Install the front panel.
5. Confirm that current is being carried by connecting an extension cord jig.

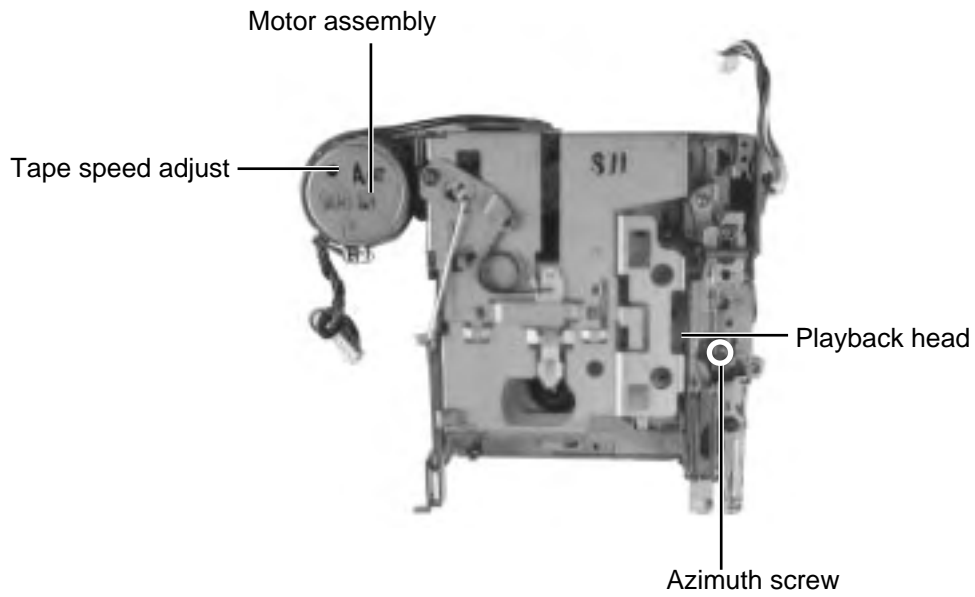
Note

Available to connect to the CN701 connector when installing the front panel.

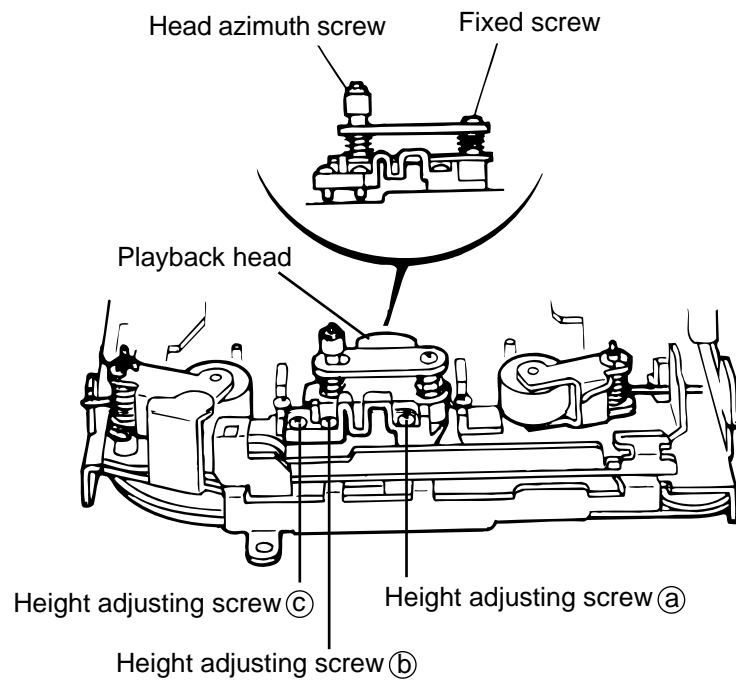


■ Arrangement of adjusting & test points

Cassette mechanism
(Surface)



Head section view



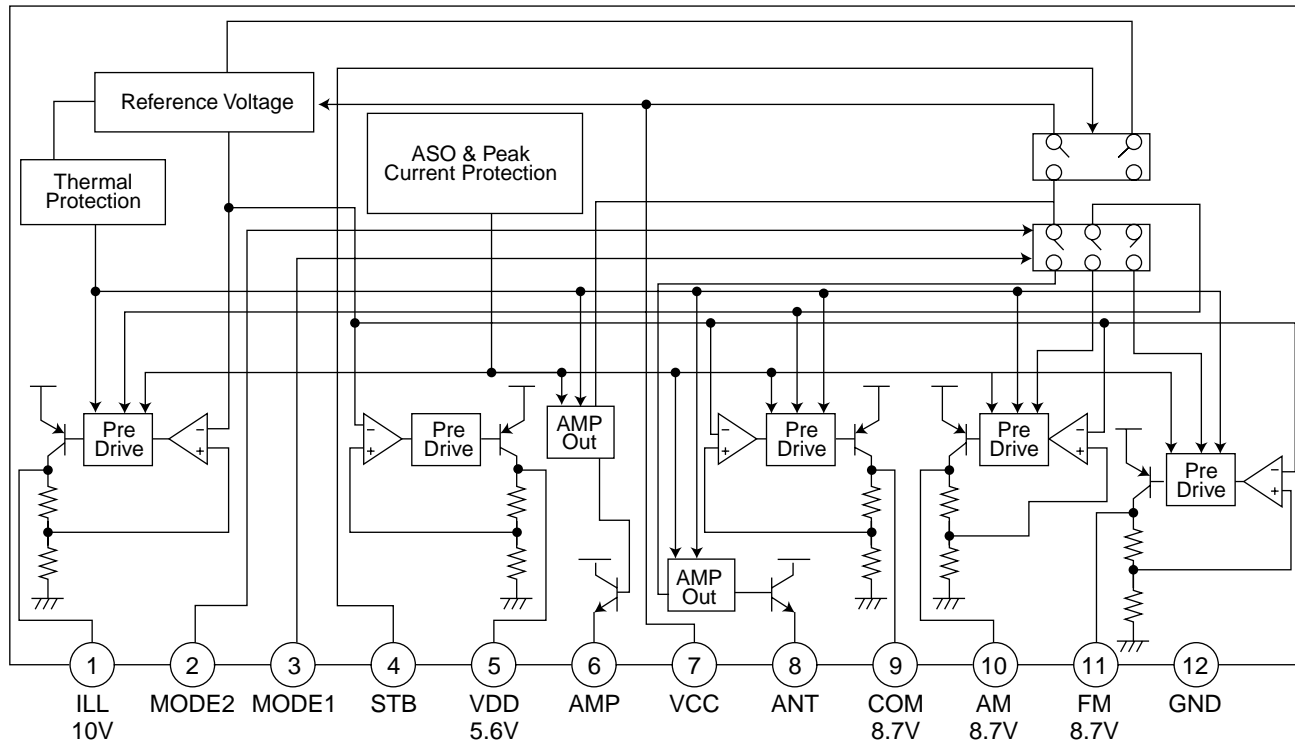
■ Mechanism adjustment section

Item	Adjusting & Confirmation Methods	Adjust	Std. Value
<p>1.Head azimuth</p>	<p>"Head Height Adjustment" Note 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.</p> <ol style="list-style-type: none"> 1.Load the mirror tape (SCC-1659). 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 the azimuth screw (b) so that line "B" of the mirror tape runs in the center between Lch and Rch in the forward play mode. <p>"Head Azimuth Adjustment" 1.Load the test tape (VT724: 1kHz) and play it back in the reverse play mode. set the Rch output level to maximum. 2.Load the test tape (VT703: 10kHz) and play it back in the forward play mode. Adjust the Rch and Lch output levels to maximum, 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 maximum, 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 Lch and Rch, REV Lch and Rch. 5.When the test tape (VT721 : 315Hz) is played back, the level difference between channels should be within 1.5dB.</p>	<p>The head is at low position during FWD.</p> <p>The head is at height position during REV.</p> <p>Head azimuth screw, Fixed screw, screw (c), screw (a), screw (b)</p> <p>0° Phase 45°</p>	
<p>2. Tape Speed and Wow & Flutter</p>	<ol style="list-style-type: none"> 1.Check to see if the reading of the frequency counter & Wow flutter meter is within 2940-3090 Hz(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. 	<p>Built-in volume resistor</p>	<p>Tape Speed 2940-3090Hz Wow&Flutter Less than 0.35% (JIS RMS)</p>
<p>3.Playback Frequency response</p>	<ol style="list-style-type: none"> 1.Play the test tape (VT724 : 1kHz) back and set the volume position at 2V. 2.Play the test tape (VT739)back and confirm 0 ± 3dB at 1kHz/ 8kHz and -4+2dB at 1kHz/125Hz. 3.When 8kHz is out of specification, it will be necessary to readjust the azimuth. 		<p>Speaker out 1kHz/8kHz : 0dB } 3dB, 125Hz/1kHz : -4dB+2dB,</p>

Description of major ICs

■ AN80T05LF (IC781) : Regulator

1. Terminal layout & Block diagram

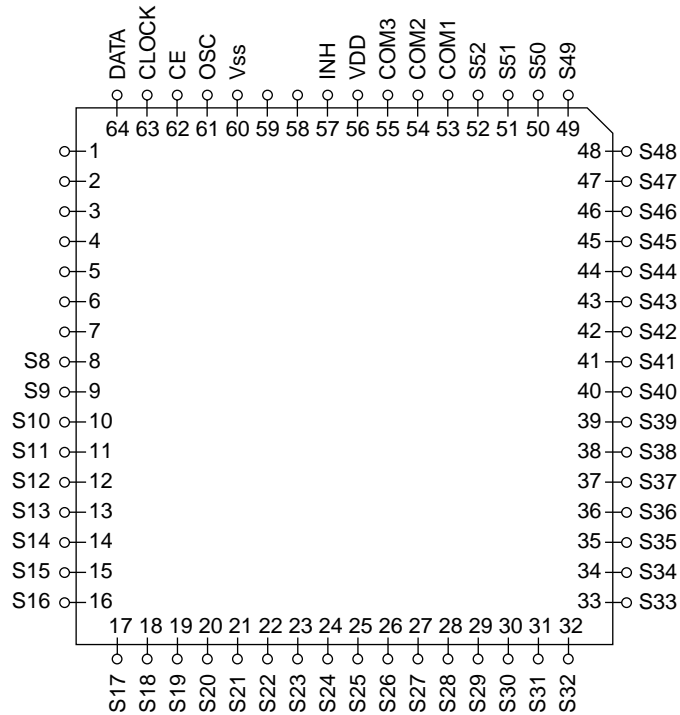


2. Pin function

Pin No.	Symbol	Function
1	NC	Non connect
2	TUNER	When 5V is input, becomes AM. and the antenna output is turned on.
3	FM/AM	When 5V is input, becomes AM. and the output of FM is switched.
4	POWER CNT	When 5V is input, outputs to ILL, COM, and AMP. It is 0V usually.
5	5V	5.6V power supply.
6	VSW 14VOUT	Power supply supply to remote amplifier
7	MEMORY	Back up. connects with ACC with it.
8	NC	Non connect
9	9V	8.7V power supply.
10	AM	The power supply of 8.7V to AM.
11	FM	The power supply of 8.7V to FM.
12	GND	Ground

■ LC75823W (IC651) : LCD driver

1. Pin Layout & Symbol

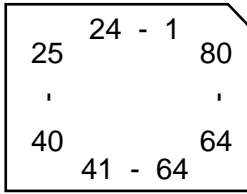


2. Pin Function

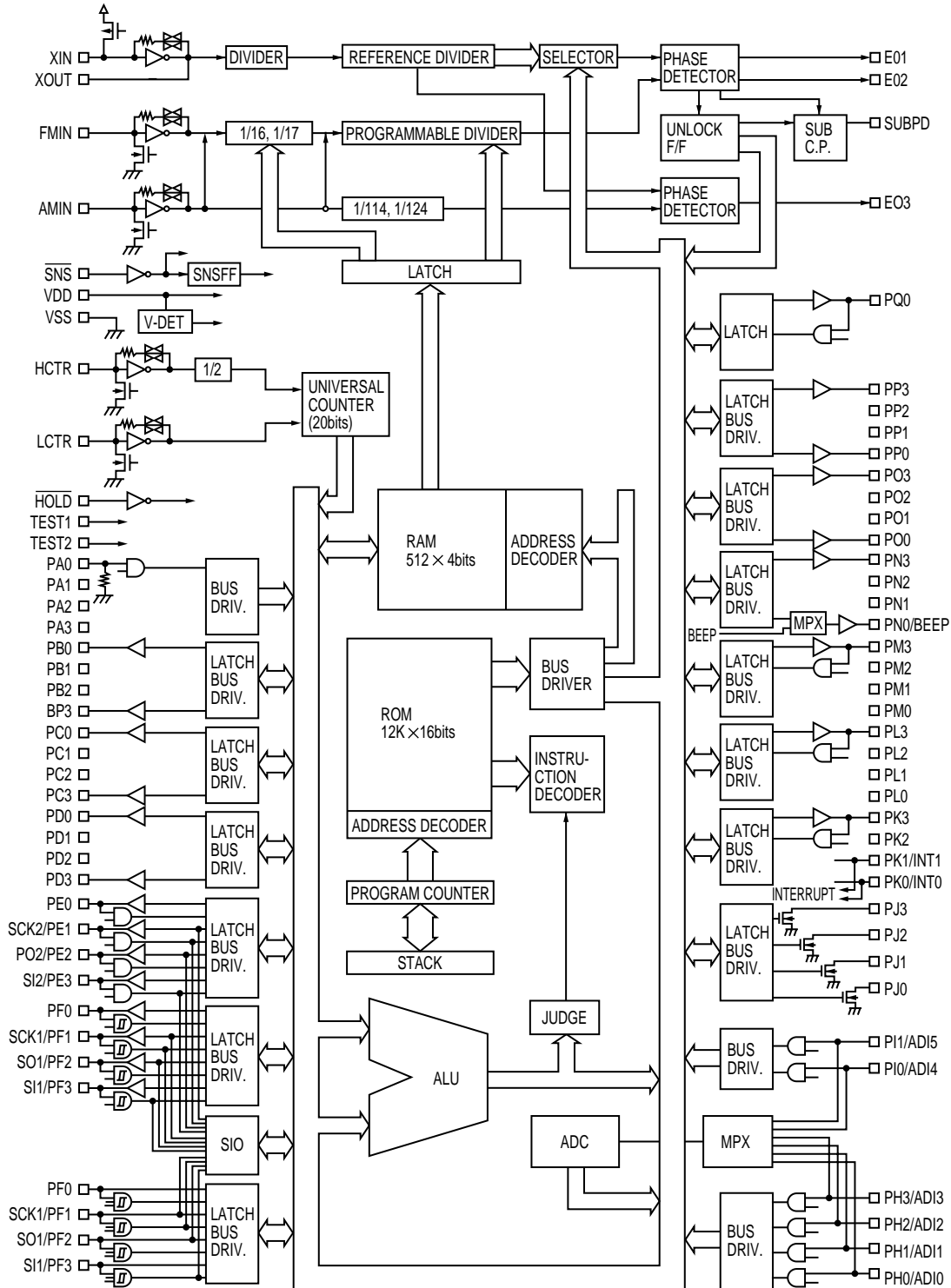
Pin No.	Symbol	I/O	Function
1 to 7		--	Non connect
8 to 52	S8 to S52	O	Common driver output pins. The frame frequency is given by : $t_0 = (f_{osc}/384)Hz$.
53 to 55	S53 to S55	--	Power supply connection. Provide a voltage of between 4.5 and 6.0V.
57	\overline{INH}	I	Display turning off input pin. $\overline{INT} = "L"$ (Vss) ----- off (S1 to S52, COM1 to COM3="L" $\overline{INT} = "H"$ (VDD)----- on Serial data can be transferred in display off mode.
58,59			Non connect
60	Vss	--	Power supply connection. Connect to GND.
61	OSC	I/O	Oscillator connection. An oscillator circuit is formed by connecting an external resistor and capacitor at this pin.
62	CE		Serial data interface connection CE : Chip enable
63	CLOCK	I	to the controller. CL : Sync clock
64	DATA		DI : Transfer data

■ LC72362N-9920 (IC701): System controller

1. Terminal Layout



2. Block diagram



3.Description

LC72362N-9920

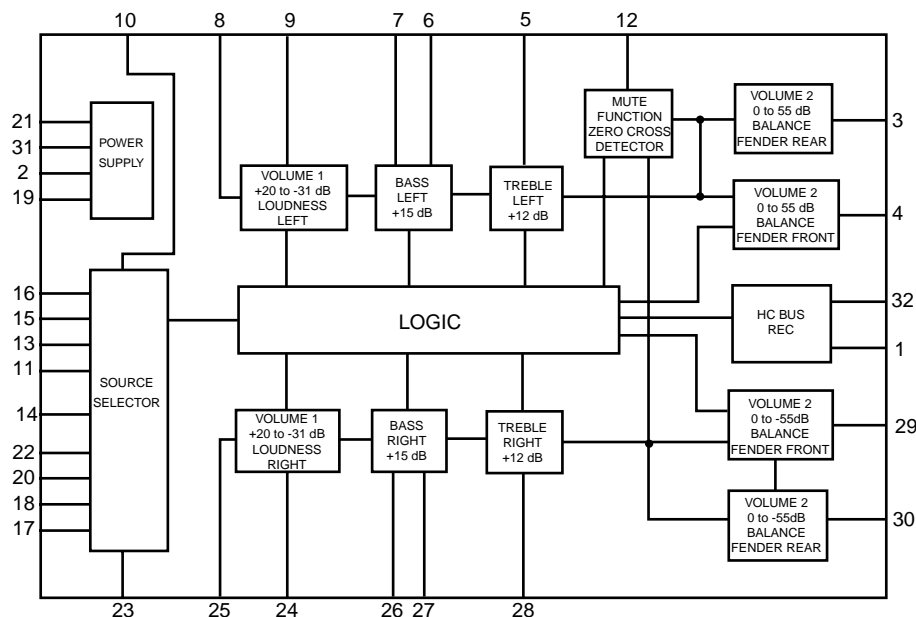
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XIN	I	Crystal oscillator	41	NC	-	Non connect
2	GND	-	To GND	42	NC	-	Non connect
3	J BUS SI	I	Bus serial data input from CP751	43	NC	-	Non connect
4	J BUS SO	O	Bus serial data output to CP751	44	BEEP	-	Non connect
5	J BUS SCK	O	Bus serial clock output to CP751	45	NC	-	Non connect
6	J BUSI/O SEL	O	BUS I/O switch signal output	46	NC	-	Non connect
7	NC	-	Non connect	47	NC	-	Non connect
8	LCD SO	O	Serial data output to IC651	48	TAPE IN	I	H:RADIO L:TAPE
9	LCD SCK	O	Serial clock output to IC651	49	F/R SENSE	I	FORWARD/REVERSE switch detector
10	LCD CE	O	Chip enable output to IC651	50	TAPE MUTE	I	DIR.FF/REW MUTE
11	NC	-	Non connect	51	SD/ST	I	Station detector and ST input
12	E.VOL SO	O	Serial data output	52	NC	-	Non connect
13	E.VOL SCK	O	Serial clock output	53	DETACH	I	Detection of Front Panel
14	NC	-	Non connect	54	NC	-	Non connect
15	TUNER ILLUM	-	Non connect	55	J BUS INT	I	BUS interruption signal detection communication
16	TAPE ILLUM	-	Non connect	56	REMOCON	-	To GND
17	CD ILLUM	-	Non connect	57	FM/AM	I	Change over the FM/AM Input
18	DIMMER OUT	-	Non connect	58	DOLBY	-	Non connect
19	NC	-	Non connect	59	NC	-	Non connect
20	NC	-	Non connect	60	MUTE	-	The mute time is controlled by the connected capacitor when changing over the FM/AM
21	NC	-	Non connect				
22	NC	-	Non connect				
23	NC	-	Non connect				
24	NC	-	Non connect	61	MEMORY DET	I	Memorydetector input
25	KS1	-	Non connect	62	LEVEL METER	I	———
26	KS0	O	Initializing output port	63	SMETER	I	Signal meter input
27	K3	I	Initializing input port	64	KEY 2	I	Mementary key input
28	K2	I	Initializing input port	65	KEY1	I	Mementary key input
29	K1	-	Non connect	66	KEY0	I	Mementary key input
30	K0	I	Initializing input port	67	ACCDET	I	ACC DET
31	Vdd	-	Power supply	68	SENS	-	To GND
32	TEST	I	Test input	69	NC	I	Non connect
33	NC	-	Non connect	70	FM/AM IF COUNT	-	AM/FM Frequency detection
				71	NC	-	Non connect
34	SEEK/STOP	O	Output the "If signal request"	72	NC	-	Non connect
				73	Vdd	I	Power supply
				74	AM OSC	I	Input the local oscillator signal of AM
35	MONO	O	Monaural and stereo change over output	75	FM OSC	-	Input the local oscillator signal of FM
				76	Vss	-	Power supply
36	RADIO/TAPE	-	Non connect	77	NC	O	Non connect
37	BEEP LEVEL	-	Non connect	78	ED	-	PLL Error signal output
38	POWER CNT	O	Power control output	79	TEST 1	O	To GND
39	Acc	-	Power supply	80	XOUT		Crystal oscillator
40	NC	-	Non connect				

TEA6320T-X (IC931) : E.volume

1.Pin layout

SDA	1	32	SCL
GND	2	31	VCC
OUTLR	3	30	OUTRR
OUTLF	4	29	OUTRF
TL	5	28	TR
B2L	6	27	B2R
B1L	7	26	B1R
IVL	8	25	IVR
ILL	9	24	ILR
QSL	10	23	QSR
IDL	11	22	IDR
MUTE	12	21	Vref
ICL	13	20	ICR
IMD	14	19	CAP
IBL	15	18	IBR
IAL	16	17	IAR
			CD-CH
			TUNER

2.Block diagram

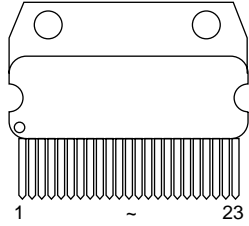


3.Pin functions

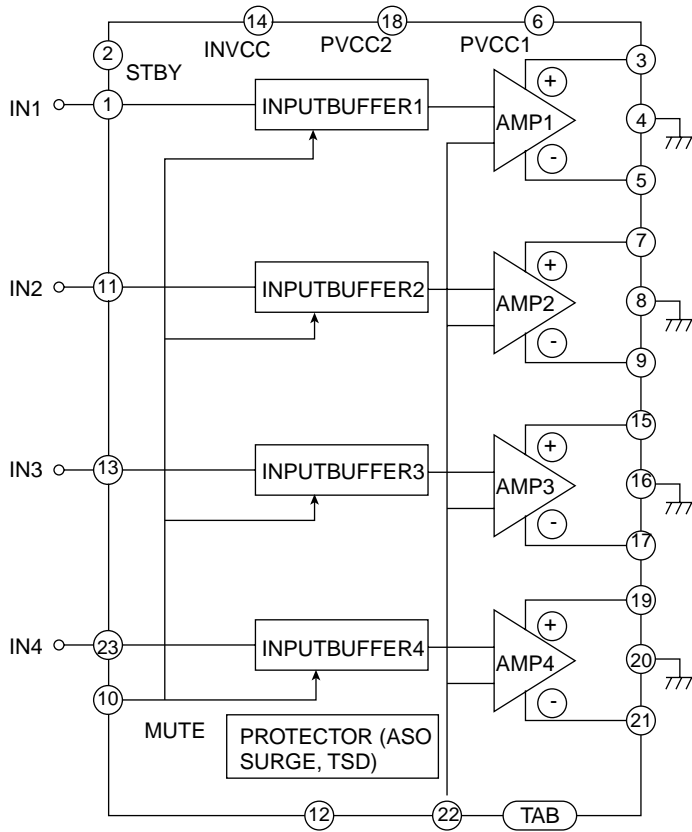
Pin No.	Symbol	I/O	Functions	Pin No.	Symbol	I/O	Functions
1	SDA	I/O	Serial data input/output.	17	IAR	I	Input A right source.
2	GND	-	Ground.	18	IBR	I	Input B right source.
3	OUTLR	O	output left rear.	19	CAP	-	Electronic filtering for supply.
4	OUTLF	O	output left front.	20	ICR	I	Input C right source.
5	TL	I	Treble control capacitor left channel or input from an external equalizer.	21	Vref	-	Reference voltage (0.5Vcc)
6	B2L	-	Bass control capacitor left channel or output to an external equalizer.	22	IDR	-	Not used
7	B1L	-	Bass control capacitor left channel.	23	QSR	O	Output source selector right channel.
8	IVL	I	Input volume 1. left control part.	24	ILR	I	Input loudness right channel.
9	ILL	I	Input loudness. left control part.	25	IVR	I	Input volume 1. right control part.
10	QSL	O	Output source selector. left channel.	26	B1R	-	Bass control capacitor right channel
11	IDL	-	Not used	27	B2R	O	Bass control capacitor right channel or output to an external equalizer.
12	MUTE	-	Not used	28	TR	I	Treble control capacitor right channel or input from an external equalizer.
13	ICL	I	Input C left source.	29	OUTRF	O	Output right front.
14	IMO	-	Not used	30	OUTRR	O	Output right rear.
15	IBL	I	Input B left source.	31	Vcc	-	Supply voltage.
16	IAL	I	Input A left source.	32	SCL	I	Serial clock input.

■ HA13158A (IC981) : Power amp

1. Pin layout

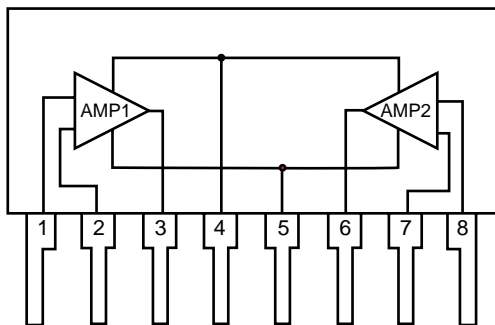


2. Block diagram



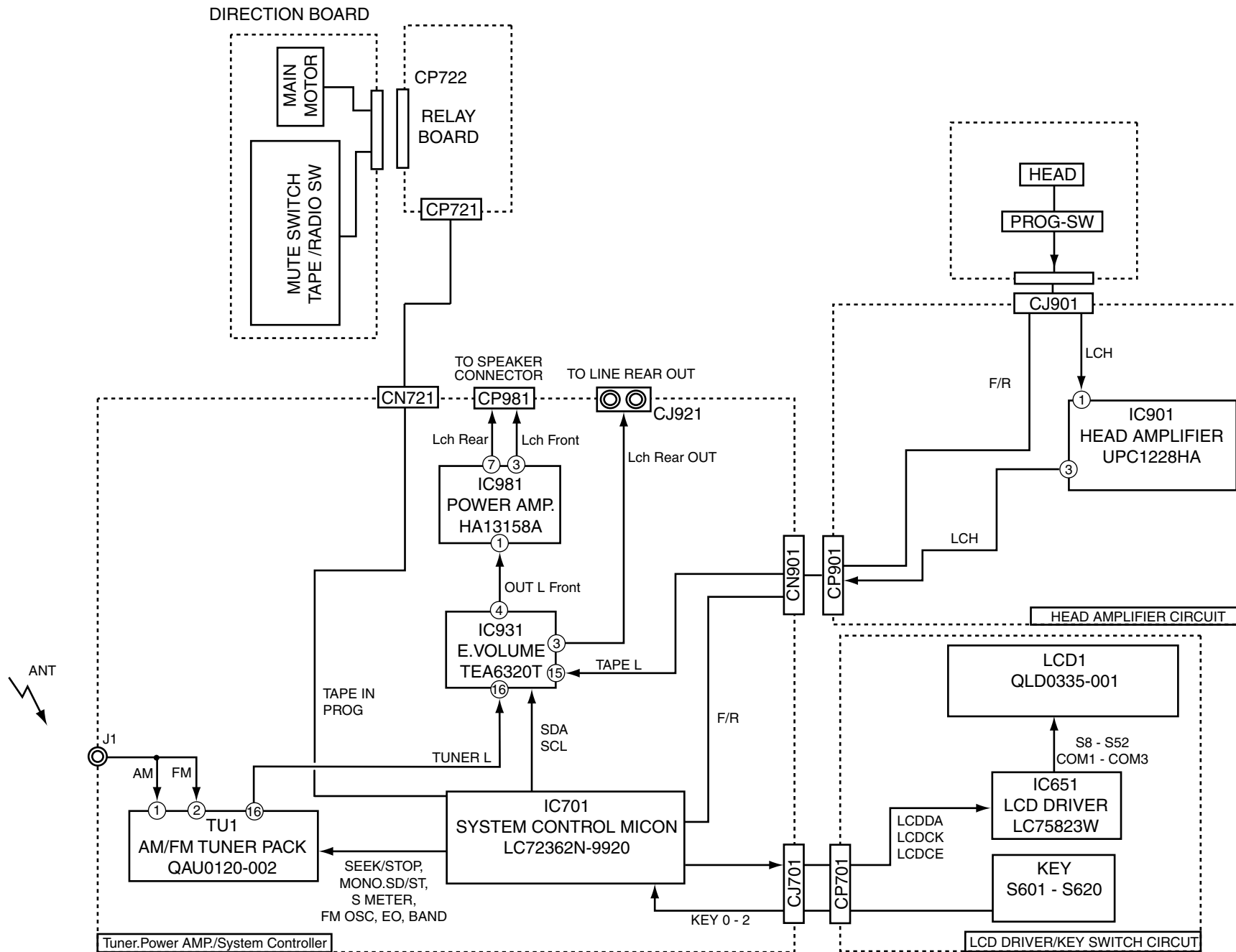
■ UPC1228HA(IC901):Head amp

1. Terminal layout & Block diagram



2. Pin function

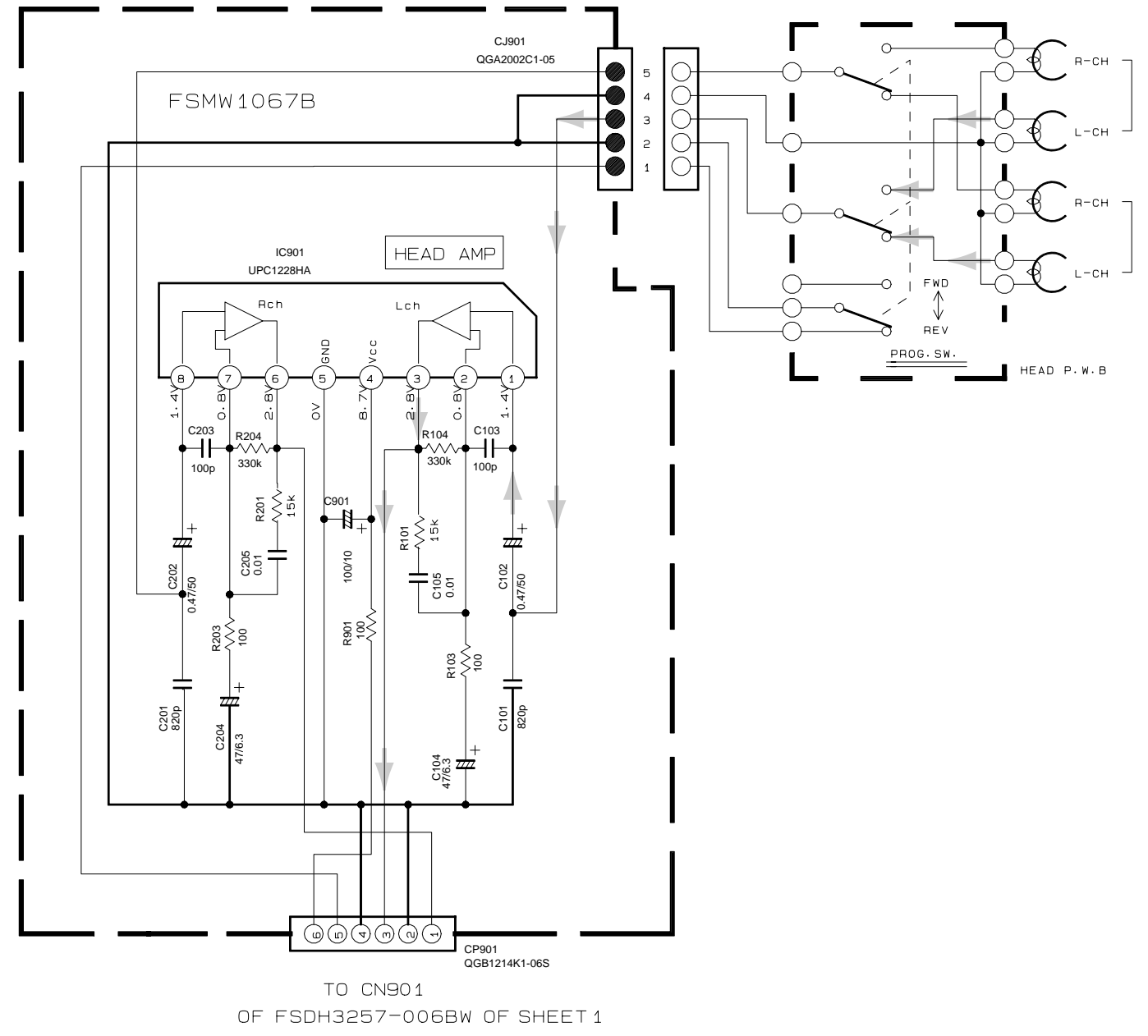
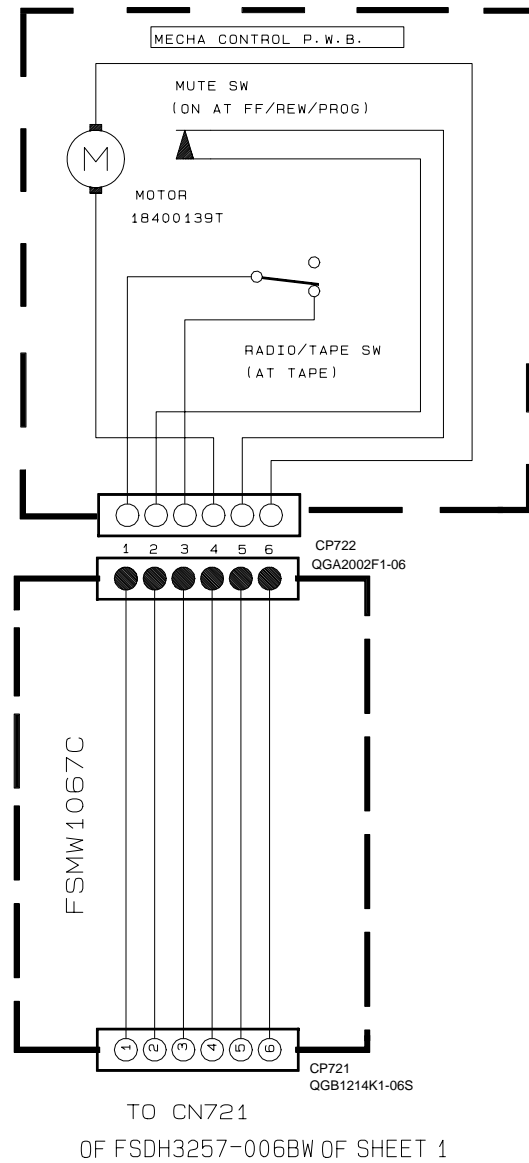
Pin No.	Electrical connection
1	Input 1
2	Negative feed back 1
3	Output 1
4	Power supply; +Vcc
5	Ground
6	Output 2
7	Negative feed back 2
8	Input 2



Standard schematic diagrams

■ Head amplifier circuit

5
4
3
2
1

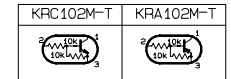


➔ Tape PB/Main signal

Receiver & System control section

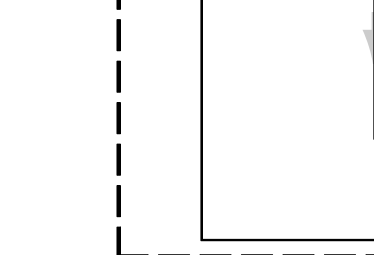
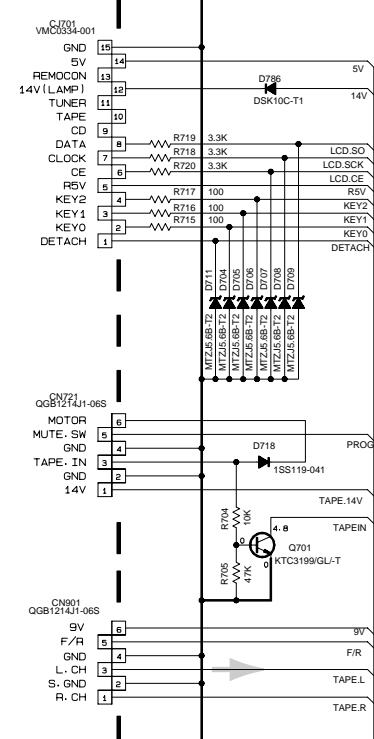
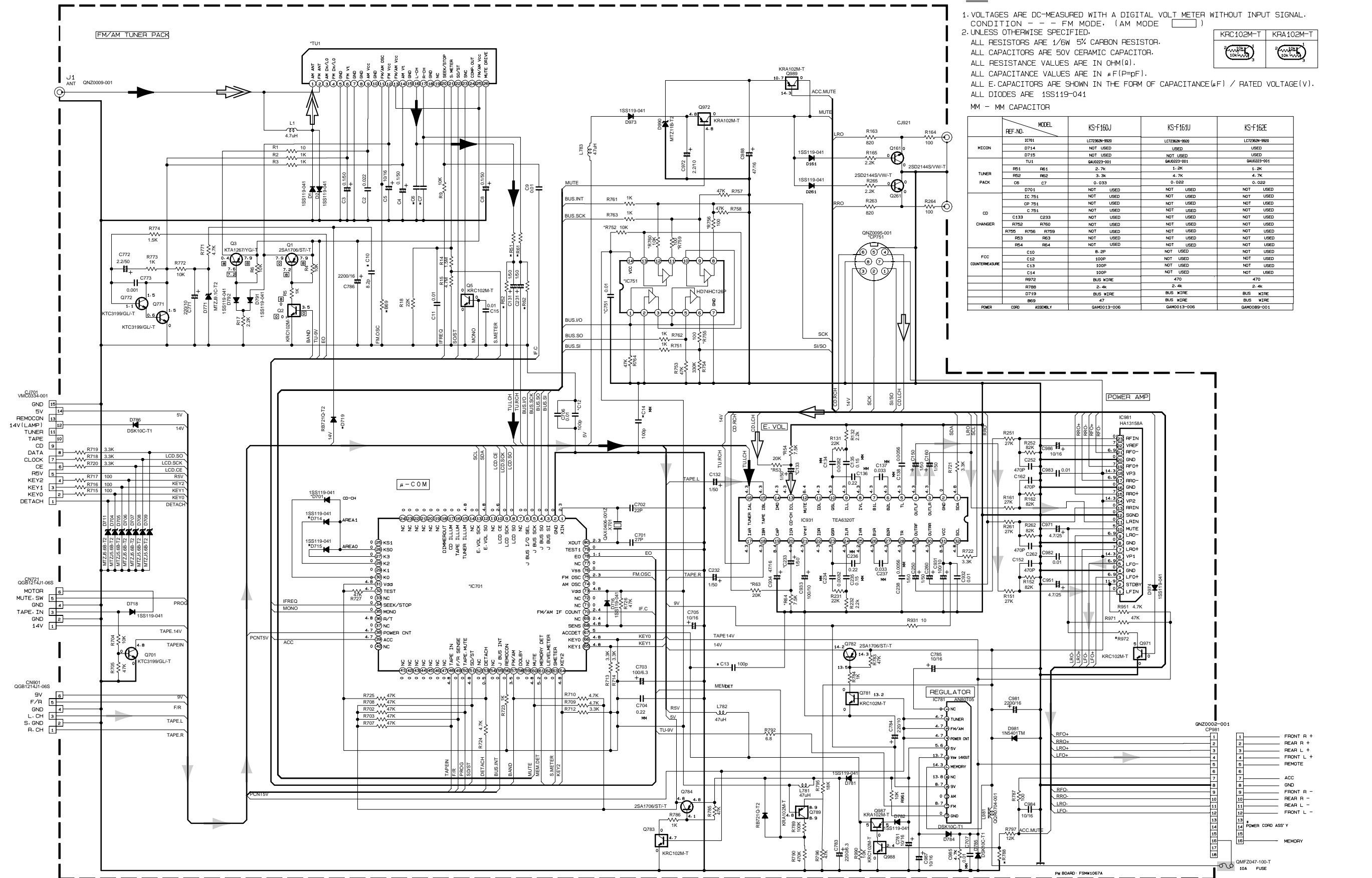
NOTES

- 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION - - - FM MODE. (AM MODE)
- 2. UNLESS OTHERWISE SPECIFIED:



ALL RESISTORS ARE 1/8W 5% CARBON RESISTOR.
 ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
 ALL RESISTANCE VALUES ARE IN OHM(Ω).
 ALL CAPACITANCE VALUES ARE IN μF(P=μF).
 ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF) / RATED VOLTAGE(V).
 ALL DIODES ARE 1SS119-041
 MM - MM CAPACITOR

REF. NO.	MODEL	KS-F160J	KS-F161U	KS-F162E
MICRON	IC701	LC7236N-980	LC7236N-980	LC7236N-980
	D714	NOT USED	USED	USED
	D715	NOT USED	NOT USED	USED
	TU1	GAU023-001	GAU023-001	GAU023-001
TUNER PACK	R51 R61	2.7K	1.8K	1.2K
	R52 R62	3.3K	4.7K	4.7K
	C6	0.033	0.022	0.033
	D701	NOT USED	NOT USED	NOT USED
	IC 751	NOT USED	NOT USED	NOT USED
	CP 751	NOT USED	NOT USED	NOT USED
	C 751	NOT USED	NOT USED	NOT USED
CHANGER	C133 C233	NOT USED	NOT USED	NOT USED
	R752 R760	NOT USED	NOT USED	NOT USED
	R759 R766 R769	NOT USED	NOT USED	NOT USED
	R63 R63	NOT USED	NOT USED	NOT USED
	R54 R64	NOT USED	NOT USED	NOT USED
FCC COUNTERMEASURE	C10	8.2P	NOT USED	NOT USED
	C12	100P	NOT USED	NOT USED
	C13	100P	NOT USED	NOT USED
	C14	100P	NOT USED	NOT USED
	R672	BUS WIRE	470	470
	R786	2.4K	2.4K	2.4K
	D719	BUS WIRE	BUS WIRE	BUS WIRE
	B69	47	BUS WIRE	BUS WIRE
POWER	CP90	ASSEMBLY	GAU013-006	GAU013-006

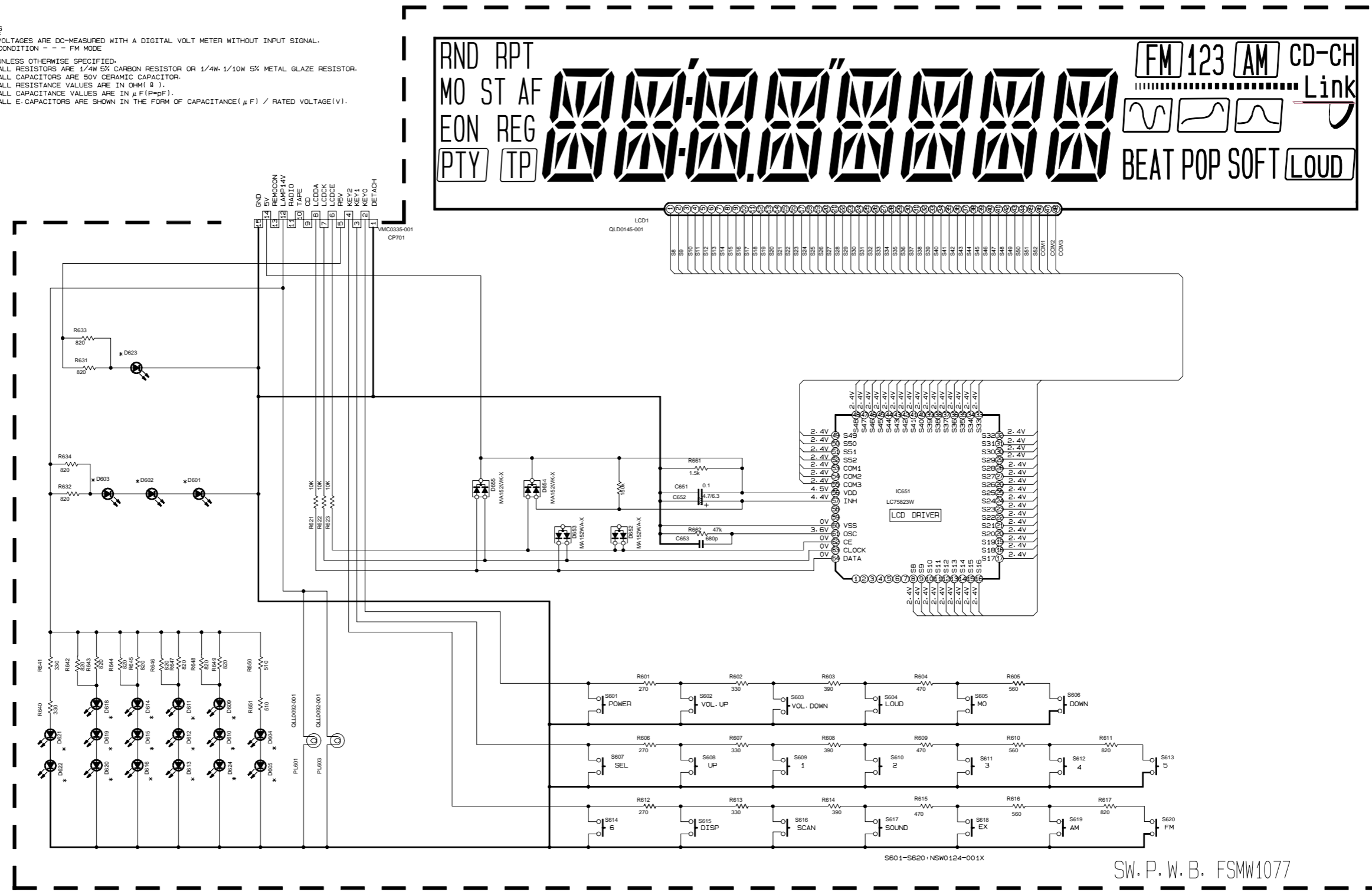


FM radio signal
 CD signal
 Tape PB/Main signal
 Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

■ LCD driver & Operation switch section

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
CONDITION --- FM MODE
2. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4W 5% CARBON RESISTOR OR 1/4W 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).



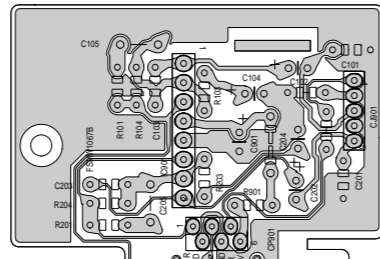
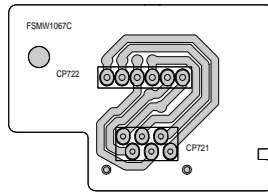
MODEL	KS-F160J	KS-F161U	KS-F162E
REF. NO.			
D601 - D622/D624	SM-310V1/AV-X	LNJ3036681/1-3/X	LNJ3036681/1-3/X
D613	LNJ3036681/1-3/X	LNJ3036681/1-3/X	LNJ3036681/1-3/X
D623	SM-310L1/AV-X	SM-310L1/AV-X	SM-310L1/AV-X

SW.P.W.B. FSMW1077

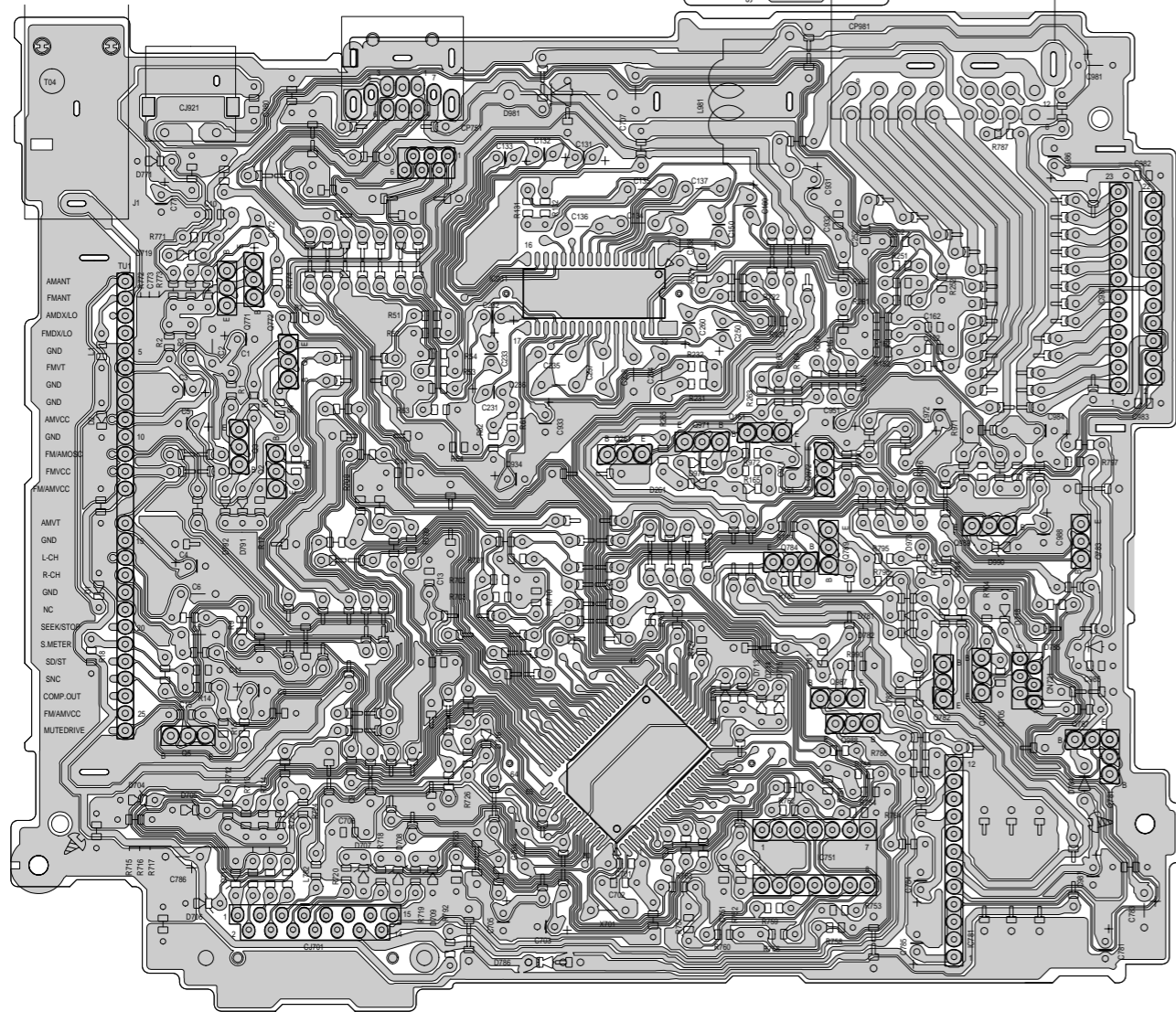
Printed circuit boards

■ Main board

5



4



3

2

1

A

B

C

2-6

D

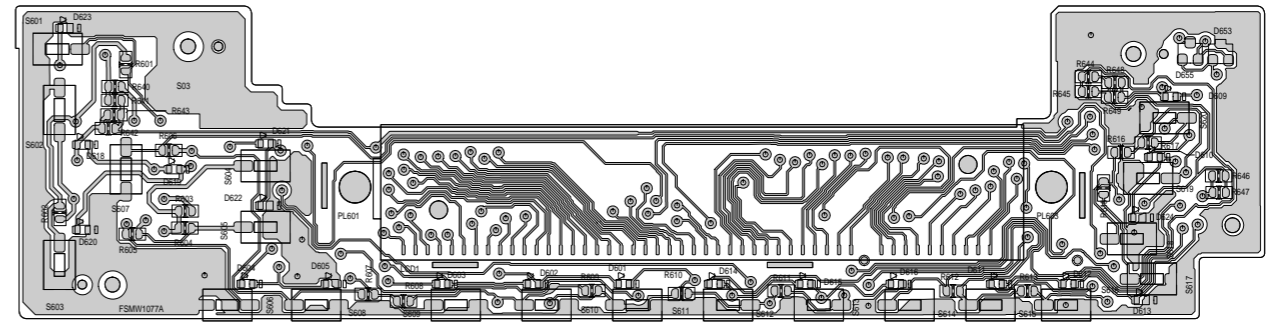
E

F

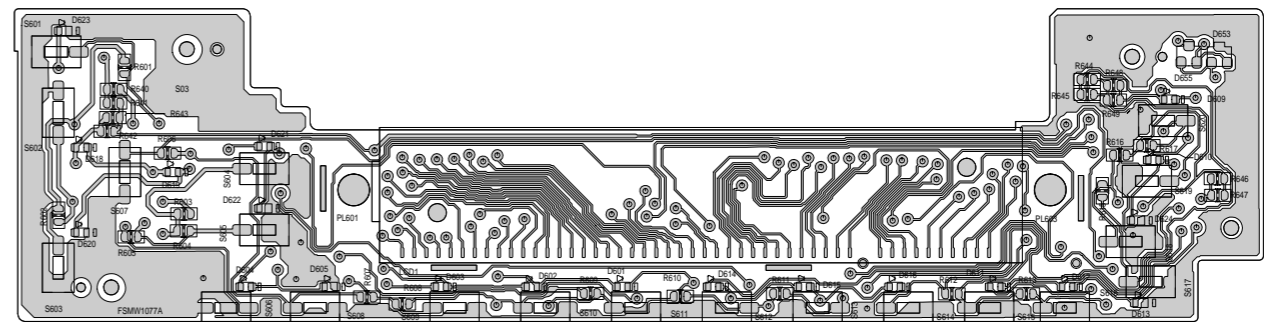
G

H

■ Front board(Forward side)



■ Front board(Reverse side)

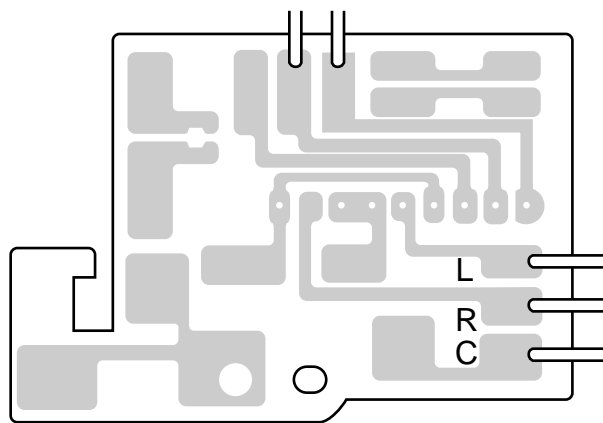


■Cassette mechanism boards

Mute Board



Direction switch board



5

4

3

2

1

A

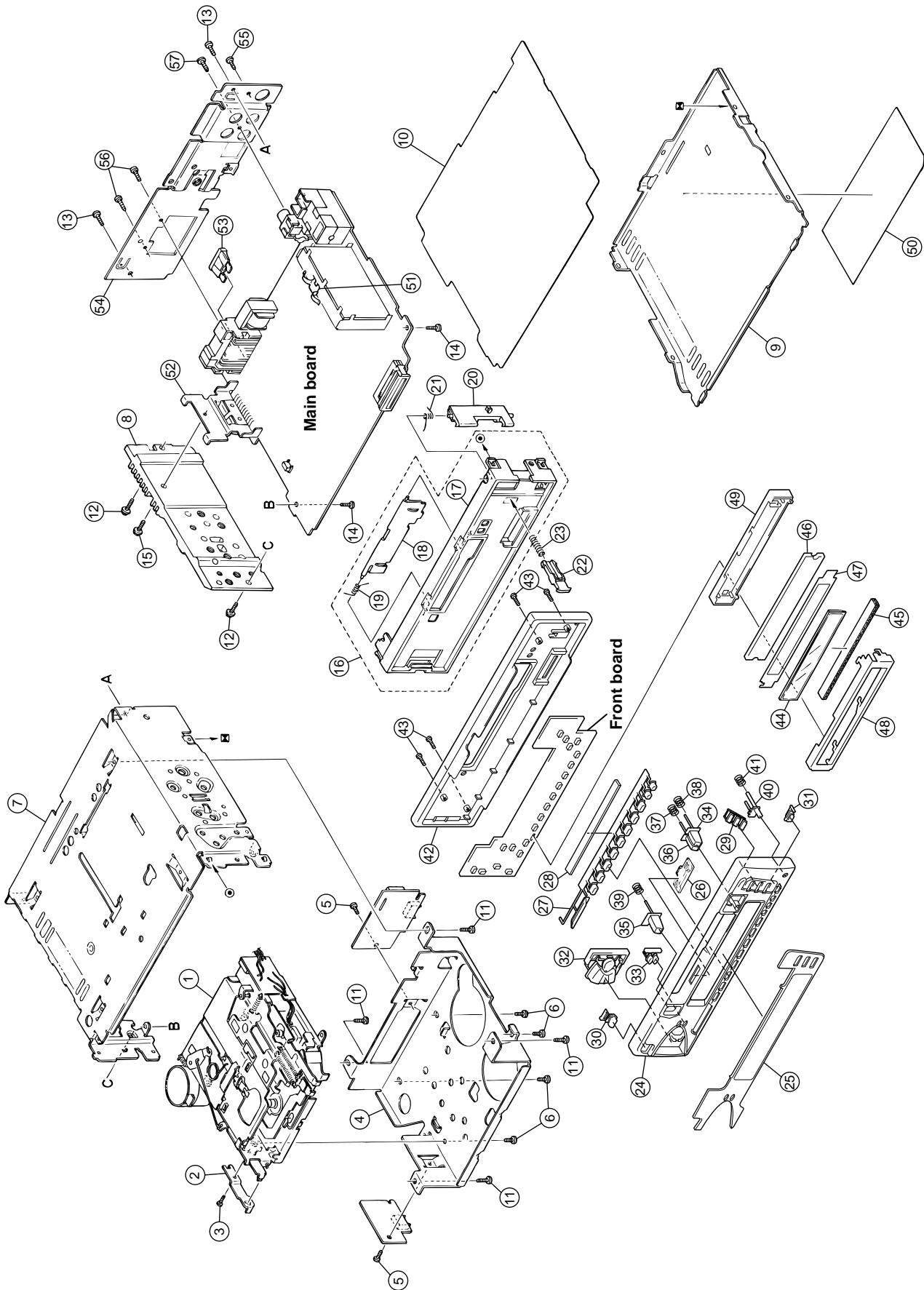
B

C

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	-----	CASSETTE MECHA	1	CDS-363SJ1	
	2	VKL7821-001	EJECT LEVER	1		
	3	QYSPSPT2625Z	MINI SCREW	1		
	4	FSKM2005-002	MECHA BRACKET	1		
	5	QYSDST2605Z	SCREW	2	PCB+MECHA	
	6	QYSDSP2604Z	SCREW	4	MECHA+M.BKT	
	7	FSJC1029-302	TOP CHASSIS	1		
	8	FSMH3001-201	SIDE PANEL	1		
	9	FSKM3011-002	BOTTOM COVER	1		
	10	FSMA3004-203	INSULATOR	1		
	11	QYSDST2605Z	SCREW	4	CHASSIS+MECHA B	
	12	FSKZ4005-001	SCREW	2	CHASSIS+SIDE PA	
	13	QYSDST2604Z	SCREW	2	CHASSIS+REAR BK	
	14	QYSDST2606Z	SCREW	2	CHASSIS+MAIN PW	
	15	FSKZ4005-001	SCREW	1	SIDE PANEL+IC B	
	16	ZCKSF150J-FB	FRONT CHASSIS ASSY	1	17,18,19	
	17	FSJC1055-001	FRONT CHASSIS	1		
	18	FSJC4003-029	CASSETTE LID	1		
	19	VKW4947-002	DOOR SPRING	1		
	20	FSKS3010-001	LOCK LEVER	1		
	21	FSKW4005-003	TORSION SPRING	1		
	22	FSXP3026-002	RLS KNOB	1		
	23	FSKW3002-004	COMP.SPRING	1		
	24	FSJC1053-006	FRONT PANEL	1		
	25	FSJD3022-00L	FINDER ASSY	1		
	26	FSJK3014-001	LIGHT LENS	1		
	27	FSXP2035-109	PRESET BUTTON	1	1-6,DISP,SCAN	
	28	FSYH4036-031	SHEET	1	PRESET BTN	
	29	FSXP2034-038	D.FUNC BUTTON	1	FM/AM/EX	
	30	FSXP3053-002	POWER BUTTON	1		
	31	FSXP4005-026	BBE BUTTON	1		
	32	FSXP2044-001	COMBO BUTTON	1		
	33	FSXP3068-003	PUSH BUTTON	1	LOUD,MO	
	34	FSXP3066-001	FF BUTTON	1		
	35	FSXP3065-001	EJECT BUTTON	1		
	36	FSXP3067-001	REW BUTTON	1		
	37	FSKW3002-003	COMP. SPRING	1	FOR REW BUTTON	
	38	FSKW3002-003	COMP. SPRING	1	FOR FF BUTTON	
	39	FSKW3002-003	COMP. SPRING	1	FOR EJECT BUTTO	
	40	FSXP3055-001	DETACH BUTTON	1		
	41	FSKW3002-012	COMP. SPRING	1	FOR DETACH BUTT	
	42	FSJC1054-001	REAR COVER	1		
	43	VKZ4777-001	MINI SCREW	4	F.PANEL+REAR CO	
	44	QLD0145-001	LCD MODULE	1		
	45	QNZ0439-001	RUBBER CONNE	1		
	46	FSJK3034-001	LCD LENS	1		
	47	FSYH4076-001	LIGHT SHEET	1		
	48	FSYH3022-002	LCD CASE	1		

■ Parts list (General assembly)

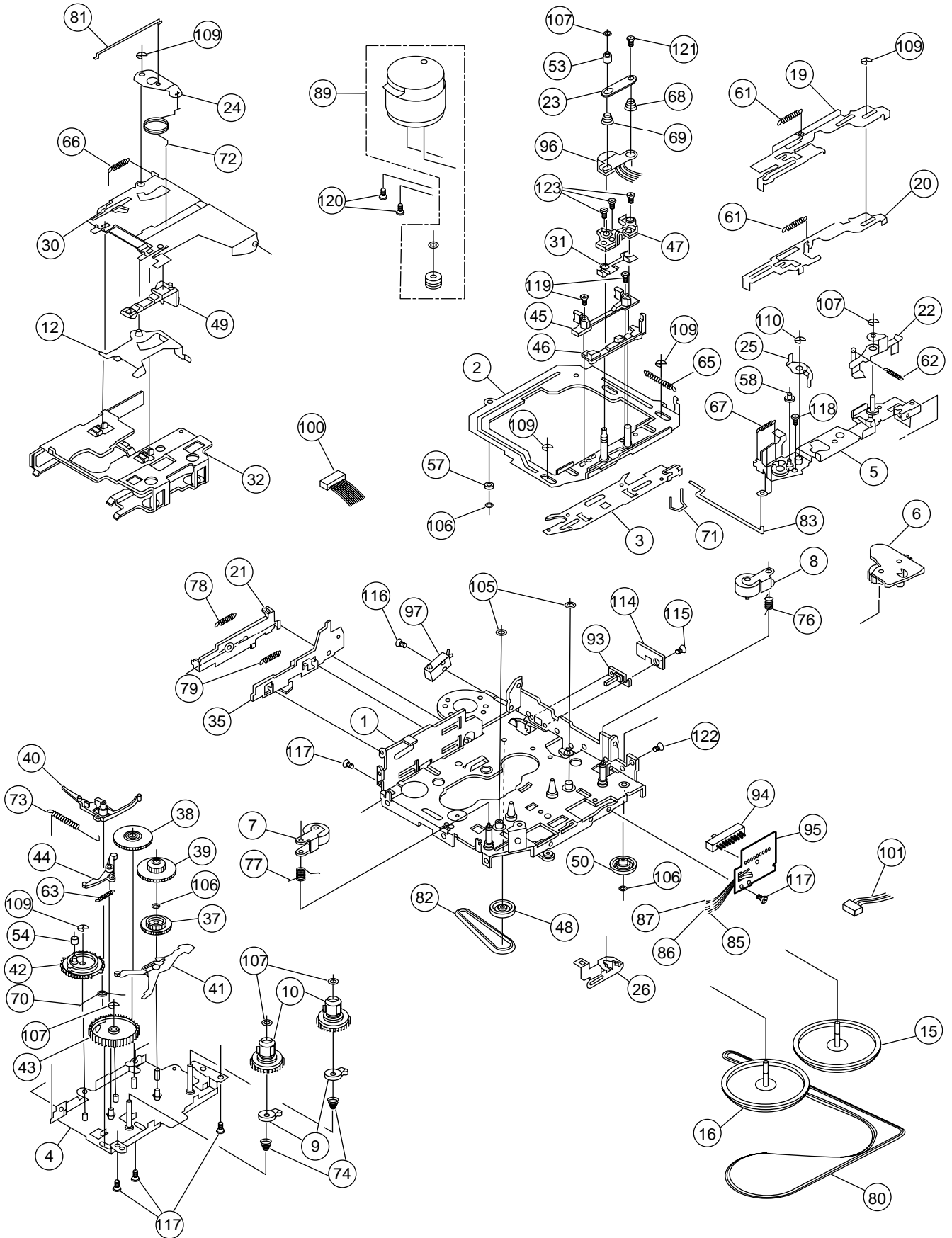
Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	49	FSKS3021-001	LENS CASE	1		
	50	GE30332-002A	NAME PLATE	1		
	51	VMA4652-001SS	EARTH PLATE	1		
	52	FSKL4018-00B	IC BRACKET	1		
△	53	QMFZ047-100-T	FUSE	1		
	54	FSKM3010-013	REAR BRACKET	1		
	55	QYSDST2606Z	SCREW	1	REAR BKT+ANT JA	
	56	QYSDST2606Z	SCREW	2	REAR BKT+15P CN	
	57	QYSDSF3006Z	SCREW	1	REAR BKT+PIN JA	

Cassette mechanism assembly and parts list

CDS-363SJ1

Block No. M P M M



■ Parts list (Cassette mechanism)

Block No. MPMM

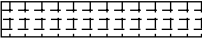
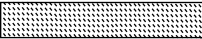

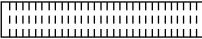

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	X-0363-1001S	MAIN CHASSIS ASSY	1		
	2	X-0363-1002S	HEAD PLATE ASSY	1		
	3	X-0363-1004S	FR CONV ARM (A)	1		
	4	X-0363-6001S	REEL BASE ASSY	1		
	5	X-0363-6007S	LEVER BRKT ASSY	1		
	6	X-0363-6003S	TU GEAR ARM ASSY	1		
	7	X-0363-6004S	PINCH ARM(R) ASSY	1		
	8	X-0363-6005S	PINCH ARM(F) ASSY	1		
	9	X-0363-6006S	DETECTOR CAM ASSY	2		
	10	X-0363-2005S	REEL SPINDLE ASSY	2		
	12	X-0363-1019S	EJ.CAM LOCK ASSY	1		
	15	1-0363-6010S	FLYWHEEL ASSY F	1		
	16	1-0363-6011S	FLYWHEEL ASSY R	1		
	19	1-0036-1065S	FF LEVER(JVC)	1		
	20	1-0036-1066S	REW LEVER(JVC)	1		
	21	1-0036-1007S	EJECT LEVER	1		
	22	1-0036-1013S	LOCK ARM	1		
	23	1-0036-1015S	SPG SUPPORT PLT	1		
	24	1-0036-1018S	CENTER PLATE	1		
	25	1-0036-1023S	CHANGE LEVER(B)	1		
	26	1-0036-1026S	FR ARM(B)	1		
	30	1-0138-1002S	CASSETTE HANGER	1		
	31	1-0138-1006S	ADJUSTER SHIN(X	1		
	32	1-0138-1010S	CASSETTE HOLDER	1		
	35	1-0363-1003S	EJECT CAM	1		
	37	1-0036-2001S	IDLE GEAR	1		
	38	1-0036-2003S	REDUCT.GEAR(B)	1		
	39	1-0036-2004S	REDUCT.GEAR(A)	1		
	40	1-0036-2007-5S	RATCHET	1		
	41	1-0036-2009S	SENSOR ARM	1		
	42	1-0036-2010S	SELECTOR GEAR	1		
	43	1-0036-2014S	DETECTOR GEAR	1		
	44	1-0038-2014S	GEAR LOCK ARM	1		
	45	1-0038-2018S	TAPE GUIDE	1		
	46	1-0363-2006S	ADJUSTER LINK(B	1		
	47	1-0138-2005-3S	ADJUSTER ARM(B)	1		
	48	1-0036-2005S	PULLEY GEAR	1		
	49	1-0032-2007S	TAPE HOOKER	1		
	50	1-0058-2021-5S	IDLER PULLEY(A)	1		
	53	1-0363-3018S	FF ROLLER	1		
	54	1-0036-3018S	COLLER	1		
	57	1-0363-3007S	HP ROLLER(A)	1		
	58	1-0363-3011S	PROGRAM ROLLER	1		
	61	1-0036-4001S	FF/REW LEVER SP	2		
	62	1-0036-4002S	LOCK LEVER SPG	1		
	63	1-0036-4003S	GEAR LOCK ARM S	1		
	65	1-0036-4006S	HEAD PLATE SPG	1		
	66	1-0036-4007S	EJ.CAM LOCK SPG	1		

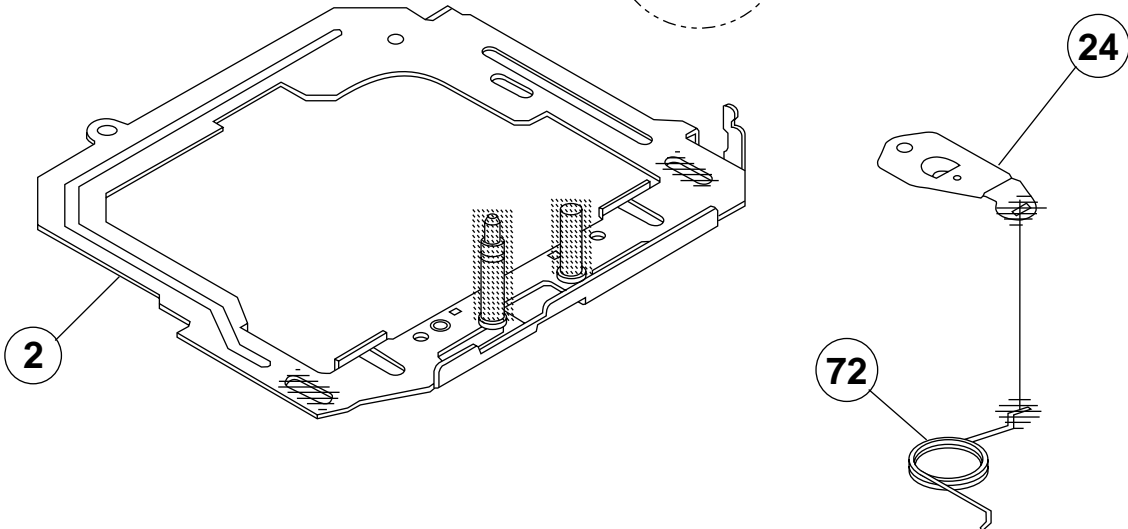
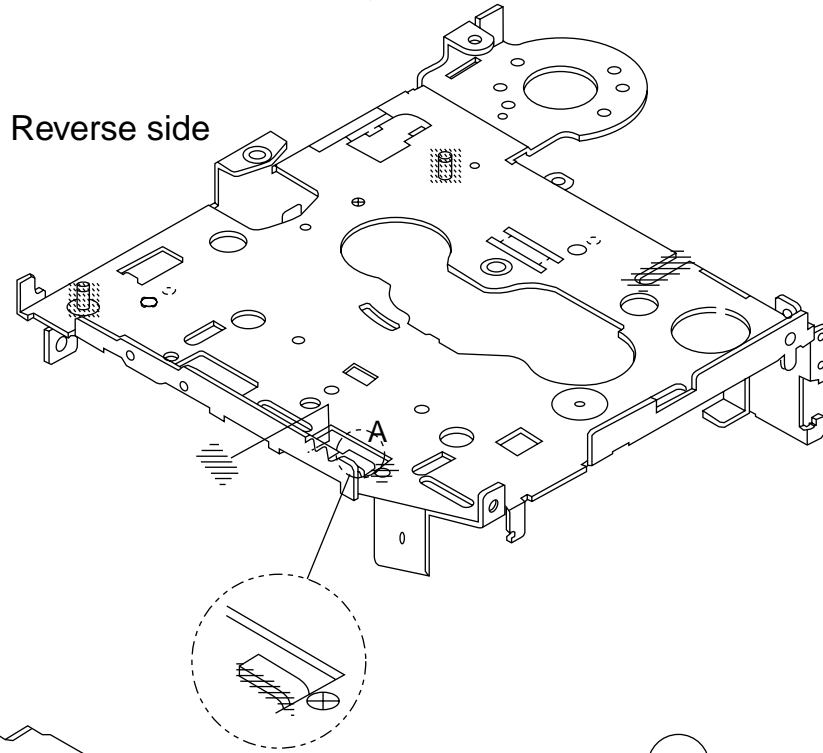
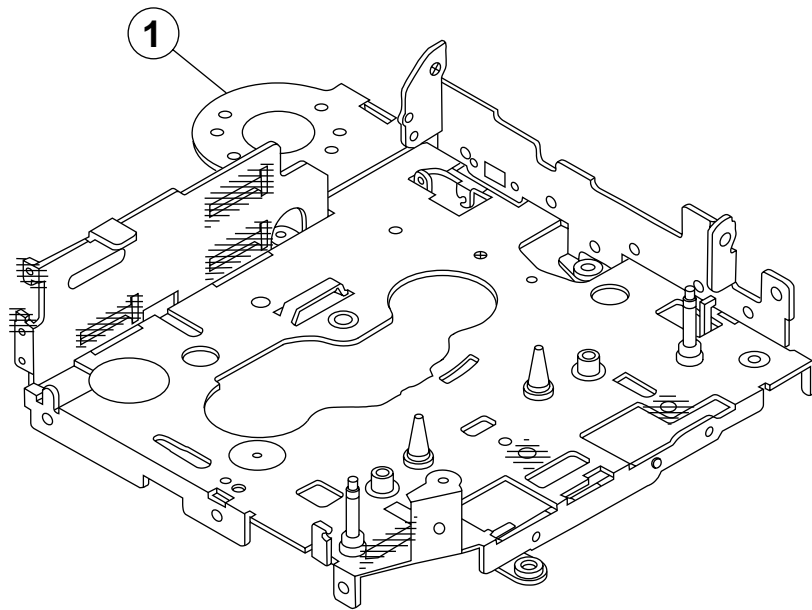
Parts list (Cassette mechanism)

Block No. MPMM

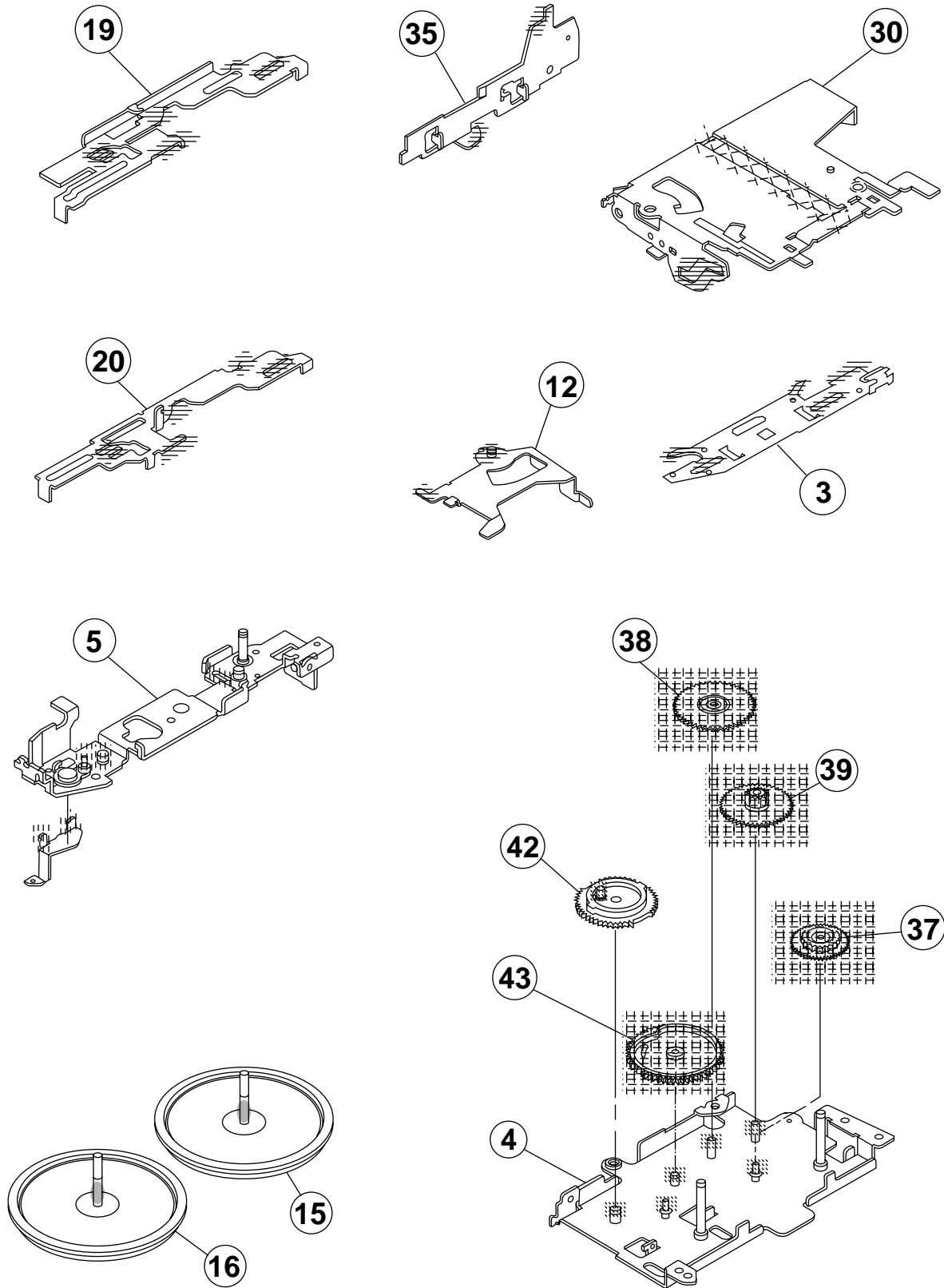
A	Item	Parts number	Parts name	Q'ty	Description	Area
	67	1-0036-4008S	PROGRAM ARM SPG	1		
	68	1-0036-4010S	ADJUST ARM SP(A)	1		
	69	1-0036-4011S	ADJUST ARM SP(B)	1		
	70	1-0036-4015S	DASH SPG	1		
	71	1-0036-4017S	CHANGING ARM SP	1		
	72	1-0036-4023S	CENTER PLT SP(B)	1		
	73	1-0038-4014S	RATCHET SPG	1		
	74	1-0138-4001S	BACK TENSION SP	2		
	76	1-0363-4003S	PINCH ARM SPG F	1		
	77	1-0363-4004S	PINCH ARM SPG R	1		
	78	1-0363-4005S	EJECT LEVER SPG	1		
	79	1-0036-4005S	EJECT CAM SPG	1		
	80	1-0036-5020S	MAIN BELT(AL)	1		
	81	1-0363-5007S	RETURN LINK	1		
	82	1-0036-5001S	SUB BELT	1		
	83	1-0363-5003S	SELECTOR LINK B	1		
	85	1-0036-7002S	WIRE(A)	1		
	86	1-0036-7003S	WIRE(B)	1		
	87	1-0036-7073S	WIRE(AL)	1		
	89	X-0363-7006S	MOTOR ASSY	1		
	93	1-0363-7001S	MUTE SW	1		
	94	1-0363-7002S	SLIDE SW	1		
	95	1-0363-7008S	SLIDE SW PWB	1		
	96	1-0036-7016S	HEAD	1		
	97	1-0363-7005S	POWER SW	1		
	100	1-0036-7089S	6P WIRE ASY(JVC	1		
	101	1-0036-7088S	5P WIRE ASY(JVC	1		
	105	2-1816-0032-E8S	MYLAR WASHER(S)	2		
	106	2-1812-0030-D2S	POLY WASHER(S)	3		
	107	1-0036-5024S	PSW(REEL)	5		
	109	2-1712-0050-16S	E RING	5		
	110	2-1712-5060-16S	E RING	1		
	114	1-0363-7015S	MUTE SW PWB	1		
	115	2-1331-7040-C2S	SCREW S	1		
	116	2-1331-7060-C2S	SCREW S	1		
	117	2-1382-0030-C2S	SCREW B	5		
	118	2-1332-0040-C1S	SCREW S	1		
	119	2-1032-0070-C2S	SCREW	2		
	120	2-1032-0025-C2S	SCREW	2		
	121	2-1012-0040-C2S	SCREW	1		
	122	2-1012-0030-F2S	SCREW	1		
	123	1-0138-5002S	AZIMUTH SCREW	3		

Grease point 1/2

Grease	
	FL-942
	SW-902
	SW-522B
	FG-84M
	C68



Grease point 2/2



■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 2	QDX11EK-223Z	C CAPACITOR				C 971	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 3	QEKJ1HM-104Z	E CAPACITOR	.10MF 20% 50V			C 972	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 4	QEKJ1HM-104Z	E CAPACITOR	.10MF 20% 50V			C 980	QCBB1HK-271Y	C CAPACITOR	270PF 10% 50V	
	C 5	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V			C 981	QEZ0518-228	E CAPACITOR	2200MF	
	C 6	QDX11EK-223Z	C CAPACITOR				C 982	QDYB1CM-103Y	C CAPACITOR		
	C 7	QDX11EK-223Z	C CAPACITOR				C 983	QDYB1CM-103Y	C CAPACITOR		
	C 8	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V			C 984	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 9	QDYB1CM-103Y	C CAPACITOR				C 985	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	C 11	QDYB1CM-103Y	C CAPACITOR				C 986	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 15	QDYB1CM-103Y	C CAPACITOR				C 987	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 101	QDGB1HK-821Y	C CAPACITOR				C 988	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 102	QEKJ1HM-474Z	E CAPACITOR	.47MF 20% 50V			CJ701	VMC0334-001	CONNECTOR	TO FRONT PANEL	
	C 103	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V			CJ901	QGA2002C1-05	CONNECTOR		
	C 104	QEKJ0JM-476Z	E CAPACITOR	47MF 20% 6.3V			CJ921	QNN0183-001	PIN JACK		
	C 105	QFV61HJ-103Z	MF CAPACITOR	.010MF 5% 50V			CN721	QGB1214J1-06S	CONNECTOR	TO MECHA	
	C 131	QEKJ1HM-105Z	E CAPACITOR	1.0MF 20% 50V			CN901	QGB1214J1-06S	CONNECTOR	TO MECHA	
	C 132	QEKJ1HM-105Z	E CAPACITOR	1.0MF 20% 50V			CP721	QGB1214K1-06S	CONNECTOR		
	C 134	QFLK1HJ-822Z	M CAPACITOR	8200PF 5% 50V			CP722	QGA2002F1-06	CONNECTOR		
	C 135	QFV61HJ-154Z	MF CAPACITOR	.15MF 5% 50V			CP901	QGB1214K1-06S	CONNECTOR		
	C 136	QFV61HJ-224Z	MF CAPACITOR	.22MF 5% 50V			CP981	QNZ0002-001	CONN.TERMINAL		
	C 137	QFV61HJ-333Z	MF CAPACITOR	.033MF 5% 50V			D 1	1SS119-041	SI DIODE		
	C 138	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V			D 2	1SS119-041	SI DIODE		
	C 150	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			D 161	1SS119-041	SI DIODE	REAR	
	C 152	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V			D 261	1SS119-041	SI DIODE	REAR	
	C 160	QEKJ1HM-105Z	E CAPACITOR	1.0MF 20% 50V			D 704	MTZJ5.6B-T2	ZENER DIODE		
	C 162	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V			D 705	MTZJ5.6B-T2	ZENER DIODE		
	C 201	QDGB1HK-821Y	C CAPACITOR				D 706	MTZJ5.6B-T2	ZENER DIODE		
	C 202	QERF1HM-474Z	E CAPACITOR	.47MF 20% 50V			D 707	MTZJ5.6B-T2	ZENER DIODE		
	C 203	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V			D 708	MTZJ5.6B-T2	ZENER DIODE		
	C 204	QEKJ0JM-476Z	E CAPACITOR	47MF 20% 6.3V			D 709	MTZJ5.6B-T2	ZENER DIODE		
	C 205	QFV61HJ-103Z	MF CAPACITOR	.010MF 5% 50V			D 711	MTZJ5.6B-T2	ZENER DIODE		
	C 231	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			D 714	1SS119-041	SI DIODE		
	C 232	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			D 715	1SS119-041	SI DIODE		
	C 234	QFLK1HJ-822Z	M CAPACITOR	8200PF 5% 50V			D 716	1SS119-041	SI DIODE		
	C 235	QFV61HJ-154Z	MF CAPACITOR	.15MF 5% 50V			D 718	1SS119-041	SI DIODE		
	C 236	QFV61HJ-224Z	MF CAPACITOR	.22MF 5% 50V			D 719	QUY150-050Y	BUS WIRE		
	C 237	QFV61HJ-333Z	MF CAPACITOR	.033MF 5% 50V			D 771	MTZJ9.1C-T2	Z DIODE		
	C 238	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V			D 781	1SS119-041	SI DIODE		
	C 250	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			D 782	1SS119-041	SI DIODE		
	C 252	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V			D 784	DSK10C-T1	DIODE		
	C 260	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			D 785	DSK10C-T1	DIODE		
	C 262	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V			D 786	DSK10C-T1	DIODE		
	C 701	QDUB1HJ-270Y	C CAPACITOR				D 791	1SS119-041	SI DIODE		
	C 702	QDCB1HJ-220Y	C CAPACITOR				D 792	1SS119-041	SI DIODE		
	C 703	QERF0JM-107Z	E CAPACITOR	100MF 20% 6.3V			D 973	1SS119-041	SI DIODE		
	C 704	QFV61HJ-224Z	MF CAPACITOR	.22MF 5% 50V			D 974	1SS119-041	SI DIODE		
	C 705	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V			D 981	1N5401-TM	DIODE		
	C 706	QDYB1CM-103Y	C CAPACITOR				D 990	MTZJ11B-T2	ZENER DIODE		
	C 707	QFV61HJ-103Z	MF CAPACITOR	.010MF 5% 50V			IC701	LC72362N-9920	IC		
	C 771	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V			IC781	AN80T05LF	IC	REGULATOR	
	C 772	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			IC901	UPC1228HA	IC		
	C 773	QDGB1HK-102Y	C CAPACITOR				IC931	TEA6320T-X	IC		
	C 781	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V			IC981	HA13158A	IC		
	C 783	QETN0JM-228Z	E CAPACITOR	2200MF 20% 6.3V			J 1	QNZ0009-001	ANTENNA JACK		
	C 784	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V			L 1	QQL231K-4R7Y	INDUCTOR		
	C 785	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V			L 781	QQL231K-470Y	INDUCTOR		
	C 786	QETM1AM-228	E CAPACITOR	2200MF 20% 10V			L 782	QQL231K-470Y	INDUCTOR		
	C 901	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V			L 783	QQL231K-470Y	INDUCTOR		
	C 931	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V			L 981	QQR0704-001	CHOKE COIL		
	C 932	QDYB1CM-103Y	C CAPACITOR				Q 1	2SA1706/ST-T	TRANSISTOR		
	C 933	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V			Q 2	KRC102M-T	D.TRANSISTOR		
	C 934	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V			Q 3	KTA1267/YG/-T	TRANSISTOR		
	C 951	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V			Q 5	KRC102M-T	D.TRANSISTOR		

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	Q 161	2SD2144S/VW/-T	TRANSISTOR	REAR			R 713	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	Q 261	2SD2144S/VW/-T	TRANSISTOR	REAR			R 714	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	Q 701	KTC3199/GL/-T	TRANSISTOR				R 715	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	Q 771	KTC3199/GL/-T	TRANSISTOR				R 716	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	Q 772	KTC3199/GL/-T	TRANSISTOR				R 717	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	Q 781	KRC102M-T	D.TRANSISTOR				R 718	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	Q 782	2SA1706/ST/-T	TRANSISTOR				R 719	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	Q 783	KRC102M-T	D.TRANSISTOR				R 720	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	Q 784	2SA1706/ST/-T	TRANSISTOR				R 721	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	Q 789	KRA102M-T	D.TRANSISTOR				R 722	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	Q 971	KRC102M-T	D.TRANSISTOR				R 723	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	Q 972	KRA102M-T	D.TRANSISTOR				R 724	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	Q 987	KRA102M-T	D.TRANSISTOR				R 725	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	Q 988	KRC102M-T	D.TRANSISTOR				R 726	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	Q 989	KRA102M-T	D.TRANSISTOR				R 727	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 1	QRE141J-100Y	C RESISTOR	10 5% 1/4W			R 751	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 2	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W			R 753	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 3	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W			R 754	QRE141J-334Y	C RESISTOR	330K 5% 1/4W	
	R 4	QRE141J-103Y	C RESISTOR	10K 5% 1/4W			R 757	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 5	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W			R 758	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 6	QRE141J-103Y	C RESISTOR	10K 5% 1/4W			R 761	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 9	QRE141J-103Y	C RESISTOR	10K 5% 1/4W			R 762	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 14	QRE141J-155Y	C RESISTOR	1.5M 5% 1/4W			R 763	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 15	QRE141J-475Y	C RESISTOR	4.7M 5% 1/4W			R 764	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 17	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W			R 771	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 18	QRE141J-223Y	C RESISTOR	22K 5% 1/4W			R 772	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 51	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W			R 773	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 52	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W			R 774	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 61	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W			R 783	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 62	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W			R 784	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 101	QRE141J-153Y	C RESISTOR	15K 5% 1/4W			R 785	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 103	QRE141J-101Y	C RESISTOR	100 5% 1/4W			R 786	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 104	QRE141J-334Y	C RESISTOR	330K 5% 1/4W			R 787	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 131	QRE141J-223Y	C RESISTOR	22K 5% 1/4W			R 788	QRE141J-242Y	C RESISTOR	2.4K 5% 1/4W	
	R 132	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W			R 789	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 151	QRE141J-273Y	C RESISTOR	27K 5% 1/4W			R 790	QRE141J-474Y	C RESISTOR	470K 5% 1/4W	
	R 152	QRE141J-823Y	C RESISTOR	82K 5% 1/4W			R 792	QRE141J-6R8Y	C RESISTOR	6.8 5% 1/4W	
	R 161	QRE141J-273Y	C RESISTOR	27K 5% 1/4W			R 795	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 162	QRE141J-823Y	C RESISTOR	82K 5% 1/4W			R 796	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 163	QRE141J-821Y	C RESISTOR	820 5% 1/4W			R 797	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 164	QRE141J-101Y	C RESISTOR	100 5% 1/4W			R 901	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 165	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W			R 931	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 201	QRE141J-153Y	C RESISTOR	15K 5% 1/4W			R 951	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 203	QRE141J-101Y	C RESISTOR	100 5% 1/4W			R 971	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 204	QRE141J-334Y	C RESISTOR	330K 5% 1/4W			R 972	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 231	QRE141J-223Y	C RESISTOR	22K 5% 1/4W			R 990	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 232	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W			TU 1	QAU0223-001	TUNER		
	R 251	QRE141J-273Y	C RESISTOR	27K 5% 1/4W			X 701	QAX0406-001Z	CRYSTAL		
	R 252	QRE141J-823Y	C RESISTOR	82K 5% 1/4W							
	R 261	QRE141J-273Y	C RESISTOR	27K 5% 1/4W							
	R 262	QRE141J-823Y	C RESISTOR	82K 5% 1/4W							
	R 263	QRE141J-821Y	C RESISTOR	820 5% 1/4W							
	R 264	QRE141J-101Y	C RESISTOR	100 5% 1/4W							
	R 265	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W							
	R 702	QRE141J-473Y	C RESISTOR	47K 5% 1/4W							
	R 703	QRE141J-473Y	C RESISTOR	47K 5% 1/4W							
	R 704	QRE141J-103Y	C RESISTOR	10K 5% 1/4W							
	R 705	QRE141J-473Y	C RESISTOR	47K 5% 1/4W							
	R 707	QRE141J-473Y	C RESISTOR	47K 5% 1/4W							
	R 708	QRE141J-473Y	C RESISTOR	47K 5% 1/4W							
	R 709	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W							
	R 710	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W							
	R 712	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W							

■ Electrical parts list (Front board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area
	C 651	NCB21EK-104X	C CAPACITOR		
	C 652	NBE20JM-475X	TS E CAPACITOR		
	C 653	NCB21HK-681X	C CAPACITOR		
	CP701	VMC0335-001	CONNECTOR		
	D 601	LNJ308G81/1-3/X	LED		
	D 602	LNJ308G81/1-3/X	LED		
	D 603	LNJ308G81/1-3/X	LED		
	D 604	LNJ308G81/1-3/X	LED		
	D 605	LNJ308G81/1-3/X	LED		
	D 609	LNJ308G81/1-3/X	LED		
	D 610	LNJ308G81/1-3/X	LED		
	D 611	LNJ308G81/1-3/X	LED		
	D 612	LNJ308G81/1-3/X	LED		
	D 613	LNJ308G81/1-3/X	LED		
	D 614	LNJ308G81/1-3/X	LED		
	D 615	LNJ308G81/1-3/X	LED		
	D 616	LNJ308G81/1-3/X	LED		
	D 618	LNJ308G81/1-3/X	LED		
	D 619	LNJ308G81/1-3/X	LED		
	D 620	LNJ308G81/1-3/X	LED		
	D 621	LNJ308G81/1-3/X	LED		
	D 622	LNJ308G81/1-3/X	LED		
	D 623	SML-310LT/MN/-X	LED		
	D 624	LNJ308G81/1-3/X	LED		
	IC651	LC75823W	IC		
	PL601	QLL0092-001	PILOT LAMP		
	PL603	QLL0092-001	PILOT LAMP		
	R 601	NRSA02J-271X	MG RESISTOR		
	R 602	NRSA02J-331X	MG RESISTOR		
	R 603	NRSA02J-391X	MG RESISTOR		
	R 604	NRSA02J-471X	MG RESISTOR		
	R 605	NRSA02J-561X	MG RESISTOR		
	R 606	NRSA02J-271X	MG RESISTOR		
	R 607	NRSA02J-331X	MG RESISTOR		
	R 608	NRSA02J-391X	MG RESISTOR		
	R 609	NRSA02J-471X	MG RESISTOR		
	R 610	NRSA02J-561X	MG RESISTOR		
	R 611	NRSA02J-821X	MG RESISTOR		
	R 612	NRSA02J-271X	MG RESISTOR		
	R 613	NRSA02J-331X	MG RESISTOR		
	R 614	NRSA02J-391X	MG RESISTOR		
	R 615	NRSA02J-471X	MG RESISTOR		
	R 616	NRSA02J-561X	MG RESISTOR		
	R 617	NRSA02J-821X	MG RESISTOR		
	R 621	NRSA02J-103X	MG RESISTOR		
	R 622	NRSA02J-103X	MG RESISTOR		
	R 623	NRSA02J-103X	MG RESISTOR		
	R 631	NRSA02J-821X	MG RESISTOR		
	R 632	NRSA02J-821X	MG RESISTOR		
	R 633	NRSA02J-821X	MG RESISTOR		
	R 634	NRSA02J-821X	MG RESISTOR		
	R 640	NRSA02J-331X	MG RESISTOR		
	R 641	NRSA02J-331X	MG RESISTOR		
	R 642	NRSA02J-821X	MG RESISTOR		
	R 644	NRSA02J-821X	MG RESISTOR		
	R 646	NRSA02J-821X	MG RESISTOR		
	R 648	NRSA02J-821X	MG RESISTOR		
	R 650	NRSA02J-511X	MG RESISTOR		
	R 651	NRSA02J-511X	MG RESISTOR		
	R 661	NRSA02J-152X	MG RESISTOR		
	R 662	NRSA02J-473X	MG RESISTOR		
	R 663	NRSA02J-154X	MG RESISTOR		
	S 601	NSW0124-001X	TACT SWITCH		

△	Item	Parts number	Parts name	Remarks	Area
	S 602	NSW0124-001X	TACT SWITCH		
	S 603	NSW0124-001X	TACT SWITCH		
	S 604	NSW0124-001X	TACT SWITCH		
	S 605	NSW0124-001X	TACT SWITCH		
	S 606	NSW0124-001X	TACT SWITCH		
	S 607	NSW0124-001X	TACT SWITCH		
	S 608	NSW0124-001X	TACT SWITCH		
	S 609	NSW0124-001X	TACT SWITCH		
	S 610	NSW0124-001X	TACT SWITCH		
	S 611	NSW0124-001X	TACT SWITCH		
	S 612	NSW0124-001X	TACT SWITCH		
	S 613	NSW0124-001X	TACT SWITCH		
	S 614	NSW0124-001X	TACT SWITCH		
	S 615	NSW0124-001X	TACT SWITCH		
	S 616	NSW0124-001X	TACT SWITCH		
	S 617	NSW0124-001X	TACT SWITCH		
	S 618	NSW0124-001X	TACT SWITCH		
	S 619	NSW0124-001X	TACT SWITCH		
	S 620	NSW0124-001X	TACT SWITCH		

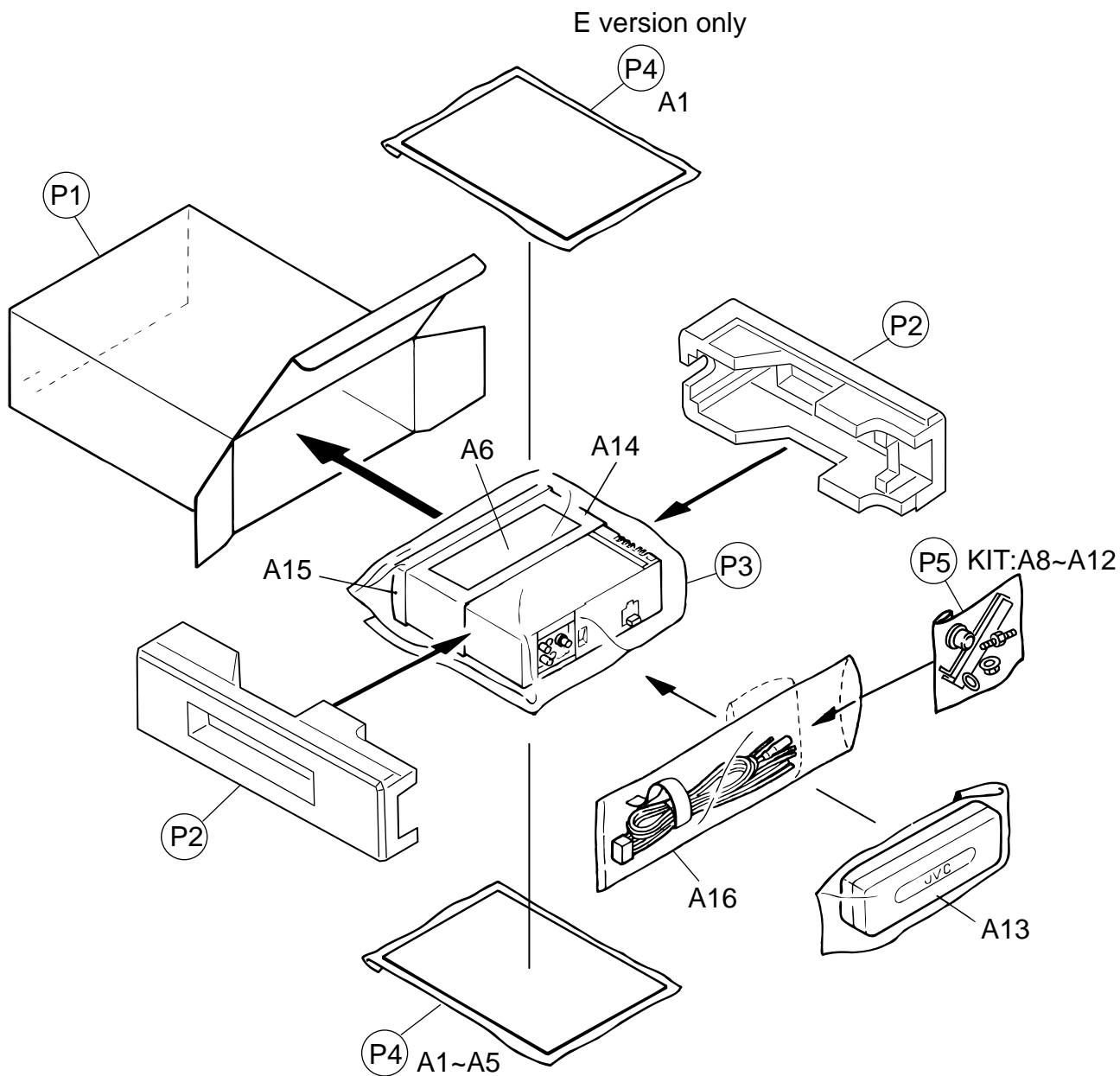
Packing materials and accessories parts list

Block No.

M	3	M	M
---	---	---	---

Block No.

M	5	M	M
---	---	---	---



■ Parts list (Packing)

Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	GE30123-054A	PACKING CASE	1		
	P 2	LV10448-001A	CUSHION	1	LEFT/RIGHT SIDE	
	P 3	QPC03004315P	POLY BAG	1		
	P 4	FSPG4002-001	POLY BAG	1	INST.BOOK	EX
		FSPG4002-001	POLY BAG	2	INST.BOOK	E
	P 5	QPA00801205	POLY BAG	1	SCREW	

■ Parts list (Accessories)

Block No. M5MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	GET0055-001A	INST.BOOK	1	ENG,GER,FRE,DUT	E,EX
	A 2	GET0055-002A	INST.BOOK	1	SPA,ITA,SWE,RUS	E
	A 3	GET0055-003A	INSTALL MANUAL	1	ENG,GER,FRE,DUT	E,EX
	A 4	GET0055-004A	INSTALL MANUAL	1	SPA,ITA,SWE,RUS	E
	A 5	BT-54013-2	W.CARD	1		
	A 6	LV40978-001A	CAUTION SHEET	1		
	A 8	VKZ4027-202	PLUG NUT	1		
	A 9	VKH4871-001SS	MOUNT BOLT	1		
	A 10	VKZ4328-001	LOCK NUT	1	FOR M5	
	A 11	WNS5000Z	WASHER	1		
	A 12	FSKL4010-002	HOOK	2		
	A 13	FSJB3002-30C	HARD CASE	1		
	A 14	FSKM2004-202	MOUNTING SLEEVE	1		
	A 15	FSJD2034-001	TRIM PLATE	1		
	A 16	QAM0089-001	16P CORD ASSY	1		
	KIT	KDGS717K-SCREW1	SCREW PARTS KIT	1	A-8A12	