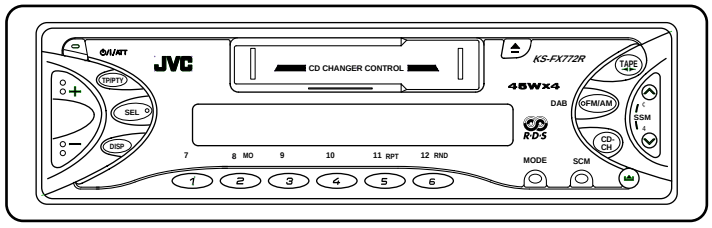
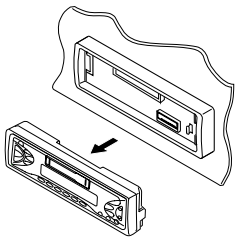
JVC

SERVICE MANUAL

CASSETTE RECEIVER

KS-FX772R





R·D·S

Area Suffix

E --- Continental Europe

Contents

No.49694
Mar. 2002

Disassembly method

<Main body>

■Removing the front panel assembly (See Fig.1)

1. Press the eject button in the lower right part of the front panel. Remove the front panel assembly from the body.

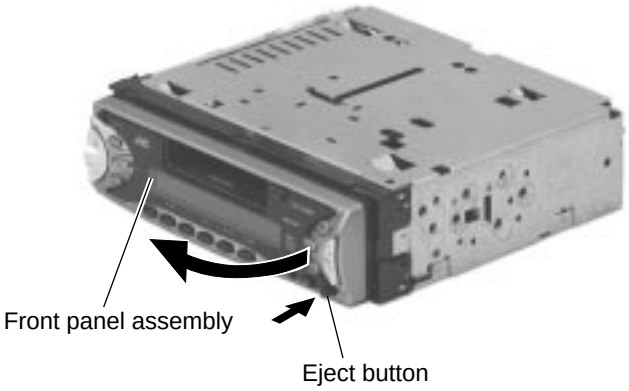


Fig.1

■Removing the front chassis assembly (See Fig.2 , 3)

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

1. Release the four joints **a** on both sides of the front chassis assembly and remove the front chassis assembly toward the front.

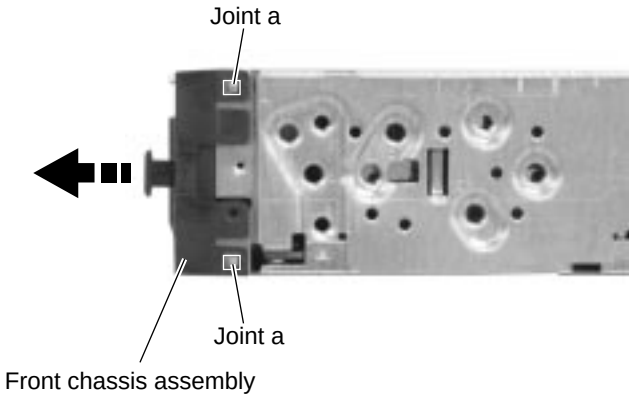


Fig.2

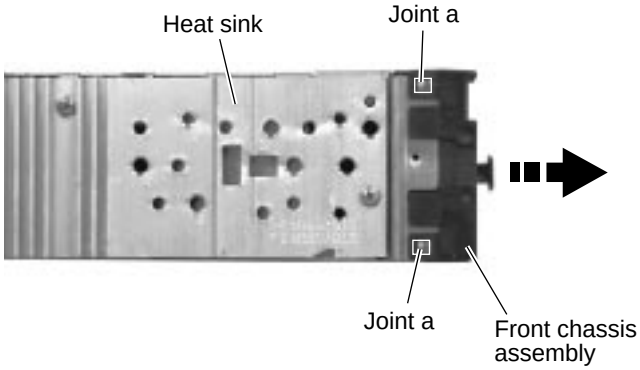


Fig.3

■ Removing the heat sink (See Fig.4)

1. Remove the three screws **A** on the left side of the body.

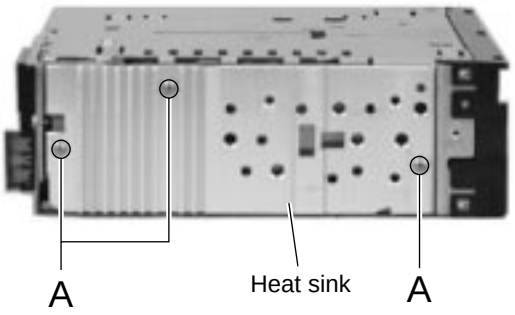


Fig.4

■ Removing the bottom cover (See Fig.5 , 6)

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

1. Turn over the body and unjoint the five joints **b** with the bottom cover and the body using a screwdriver.

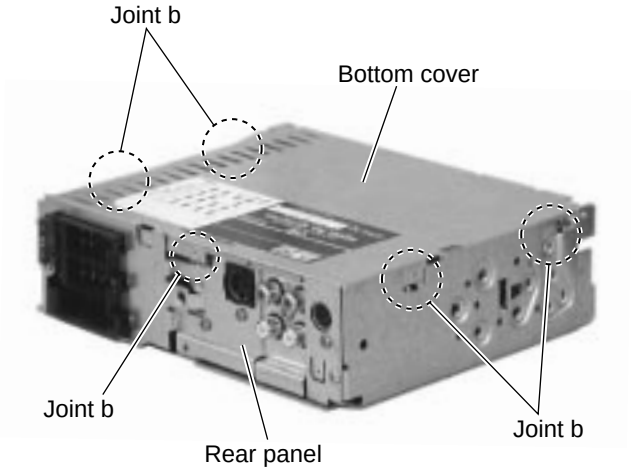


Fig.5

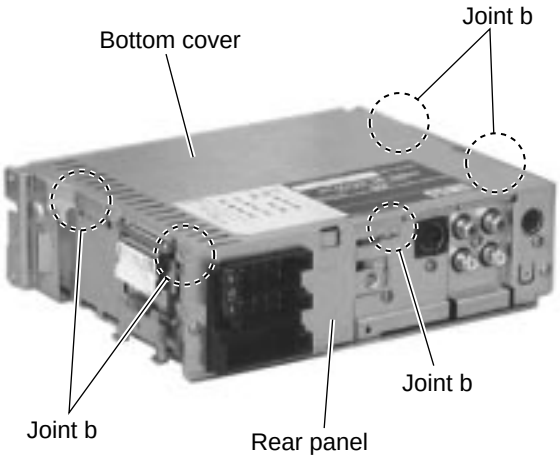


Fig.6

■ Removing the main board

(See Fig.7 , 8)

・ Prior to performing the following procedure, remove the front panel assembly, the front chassis assembly, the heat sink and the bottom cover.

1. Remove the screw **B**, the three screws **C** and the two screws **D** attaching the rear bracket on the back of the body. Remove the rear panel.

2. Remove the two screws **E** attaching the main board on the bottom of the body. Disconnect connector CN701 on the main board in the direction of the arrow.

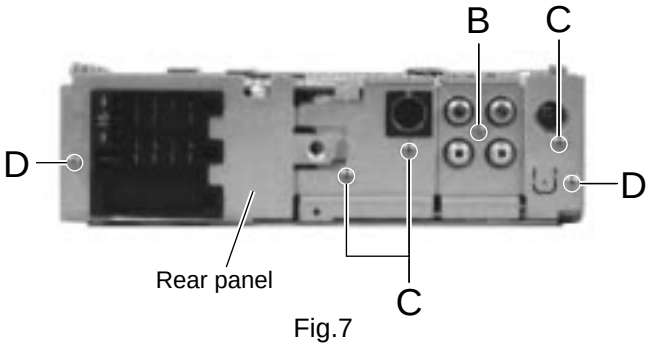


Fig.7

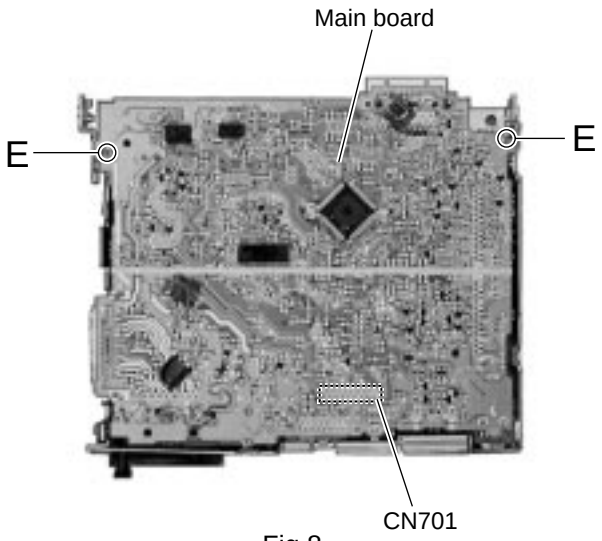


Fig.8

■ Removing the cassette mechanism section

(See Fig.9)

・ Prior to performing the following procedure, remove the front panel assembly, the front chassis assembly, the heat sink, the bottom cover and the main board.

1. Remove the four screws **F** attaching the cassette mechanism section on the back of the top chassis.

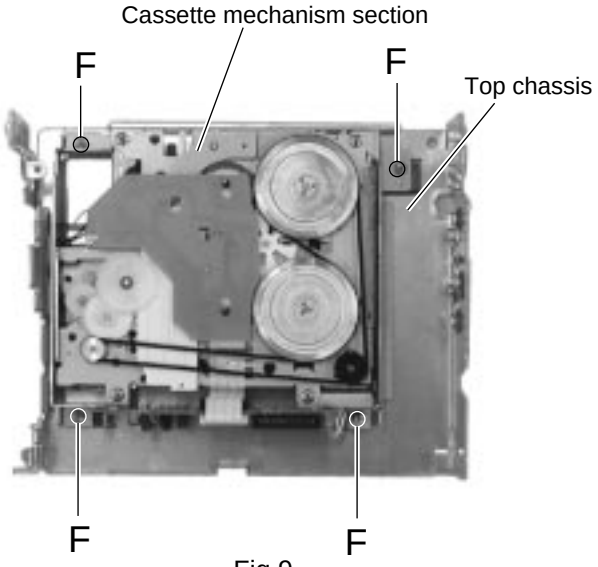


Fig.9

■ Removing the control switch board (See Fig.10 ~ 12)

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

1. Remove the four screws **G** attaching the rear cover on the back of the front panel assembly.

2. Unjoint the eleven joints **c** with the front panel and the rear cover.

3. Remove the control switch board on the back of the front panel.

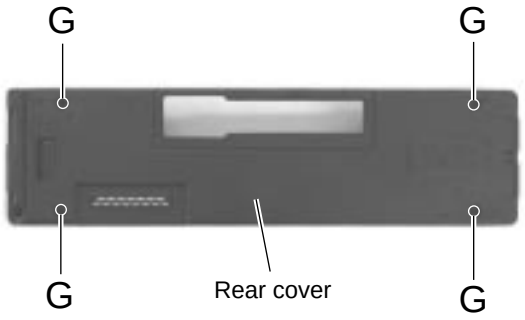


Fig.10

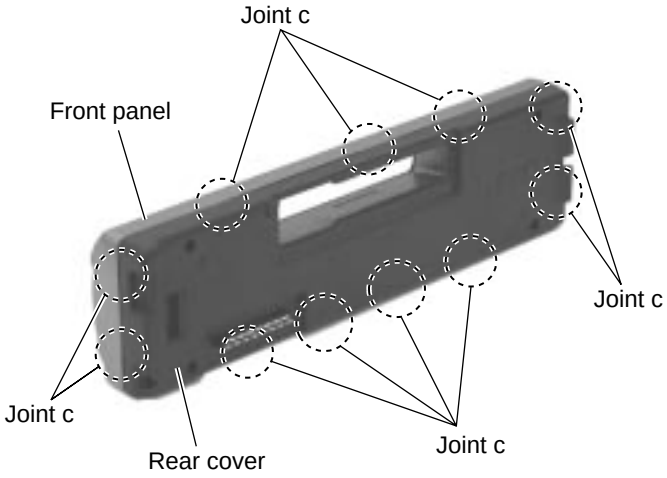


Fig.11

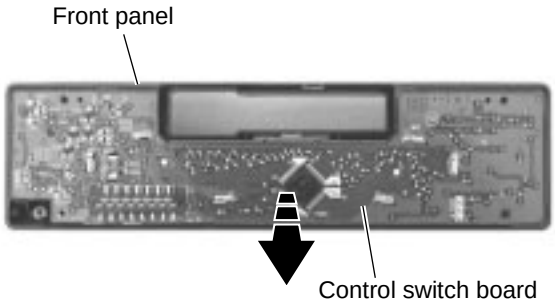


Fig.12

REFERENCE: Prior to performing the following procedures, turn the mode gear on the bottom of the body until the respective part comes to the EJECT position (Refer to Fig.1).

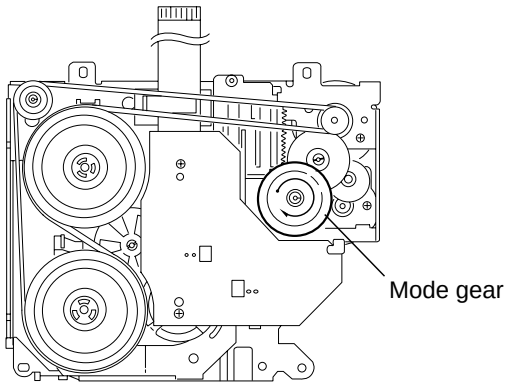


Fig.1

■ Removing the cassette guide (See Fig.2)

1. Turn the mode gear to set to RVS play or subsequent mode.

2. Remove the cassette guide from the main chassis while releasing each two joint tabs **a** in the direction of the arrow.

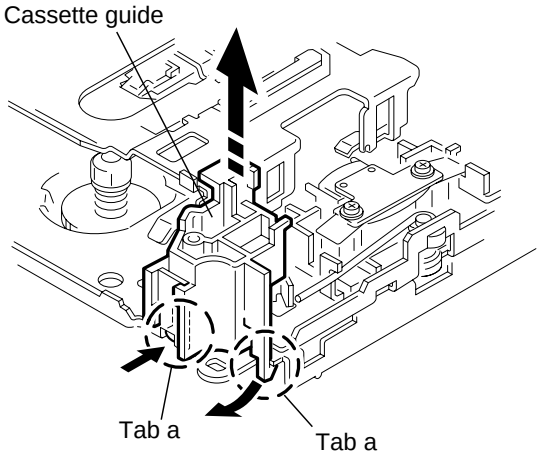


Fig.2

■ Removing the load arm (See Fig.3)

1. Remove the E-washer attaching the load arm.

2. Move the load arm in the direction of the arrow and release the joint **b** on the cassette catch.

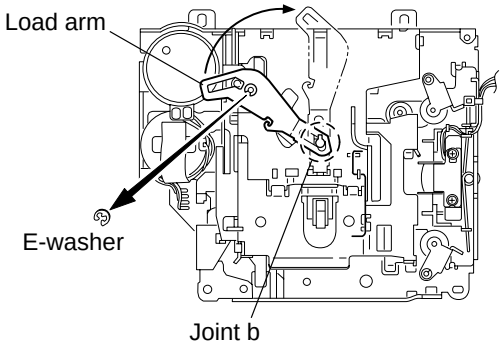


Fig.3

■ Removing the cassette hanger assembly / cassette holder (See Fig.4 to 7)

1. Check the mode is set to EJECT. Push down the front part of the cassette holder and move in the direction of the arrow to release the joint **c**.

2. Move the rear part of the cassette hanger assembly in the direction of the arrow to release it from the two joint bosses **d**.

3. Release the holder stabilizer spring from the hooks **e** and **f**, then pull out from the cassette hanger assembly.

4. Bring up the rear side of the cassette hanger assembly to release the joint **g** and **h**.

5. Pull out the cassette catch from the cassette hanger assembly.

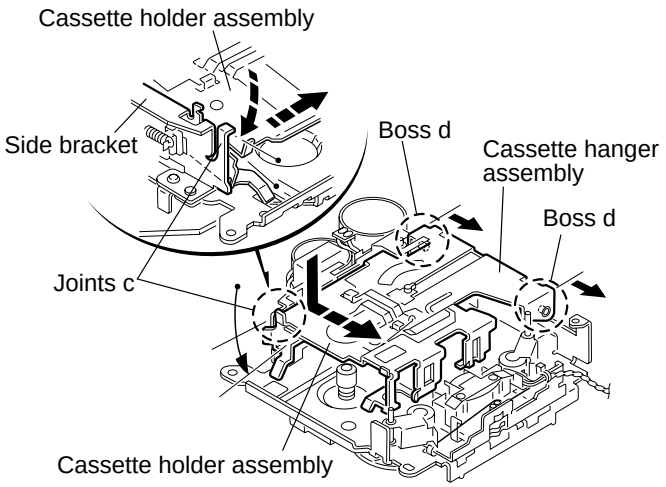


Fig.4

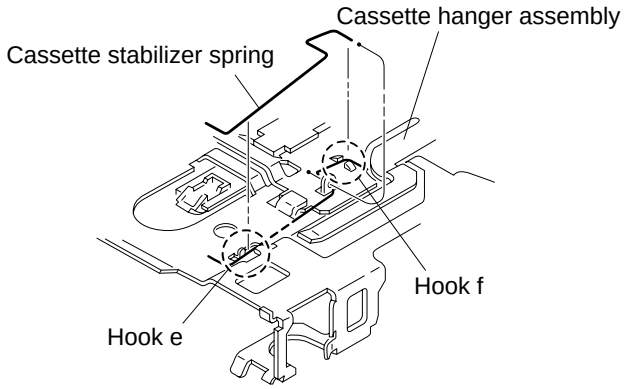


Fig.5

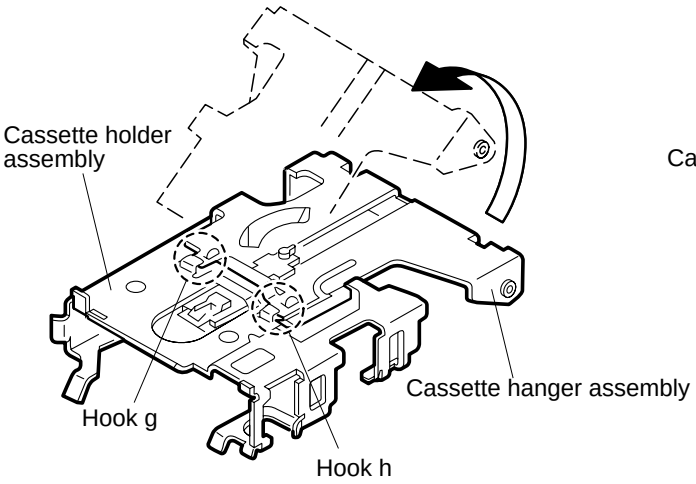


Fig.6

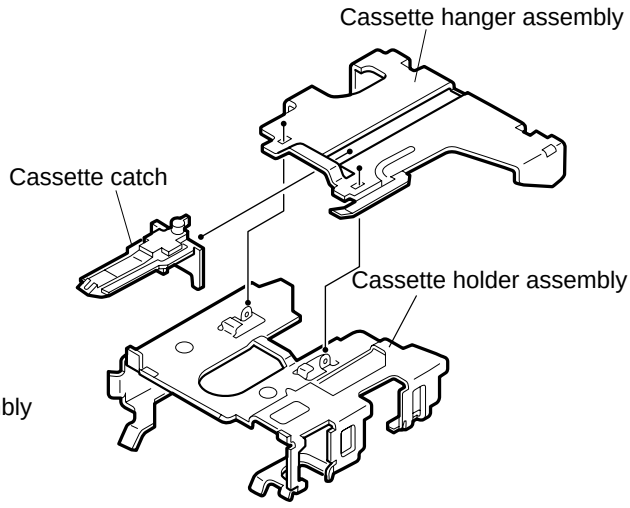


Fig.7

■Removing the side bracket assembly (See Fig.8 to 10)

1. Remove the screw **A** attaching the side bracket assembly.

2. Detach the front side of the side bracket assembly upward and pull out forward to release the joint **i** and **j** in the rear.

CAUTION: When reassembling, make sure that the boss **k** of the main chassis is set in the notch of the load rack under the side bracket assembly. Do not reattach the load rack on the boss **k**.

CAUTION: After reattaching the side bracket assembly, confirm operation.

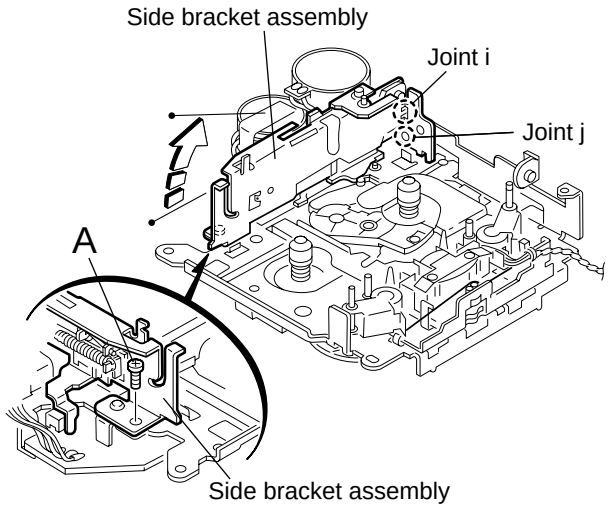


Fig.8

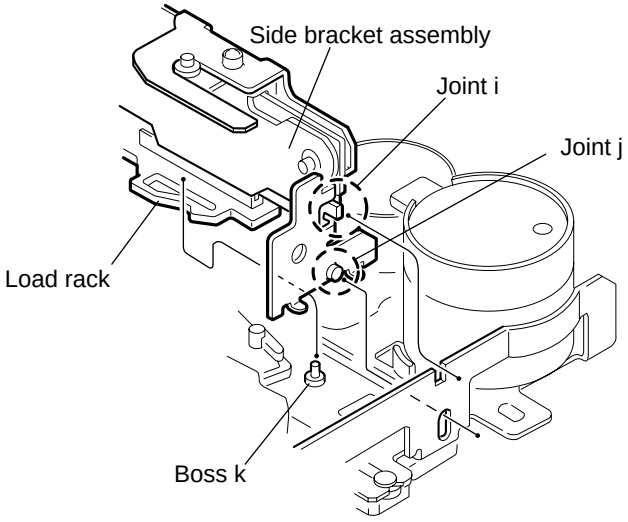


Fig.9

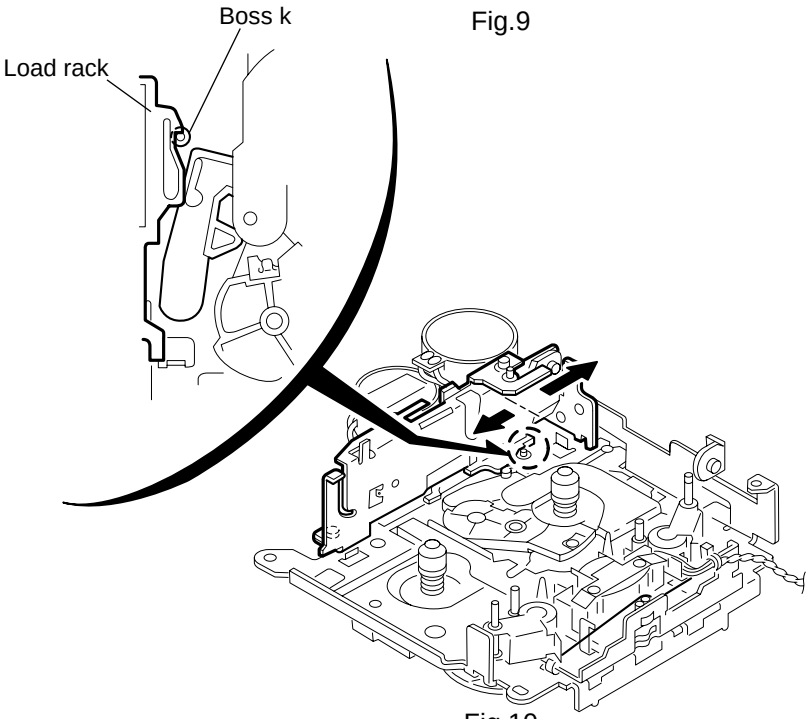


Fig.10

■ Removing the pinch arm (F) assembly (See Fig.11 and 12)

1. Remove the polywasher and pull out the pinch arm (F) assembly.

2. Remove the compulsion spring.

■ Removing the pinch arm (R) assembly (See Fig.11 and 13)

1. Remove the polywasher and pull out the pinch arm (R) assembly.

■ Removing the slide chassis assembly (See Fig.14 and 15)

REFERENCE: It is not necessary to remove the head and the tape guide.

1. Move the slide chassis assembly in the direction of the arrow to release the two joints **l** and remove from the main chassis.

2. Remove the rack link.

CAUTION: When reassembling, first reattach the rack link, and next fit the boss **m** and hook **n** of the slide chassis assembly to the hole of the main chassis, and engage the two joints **l**.

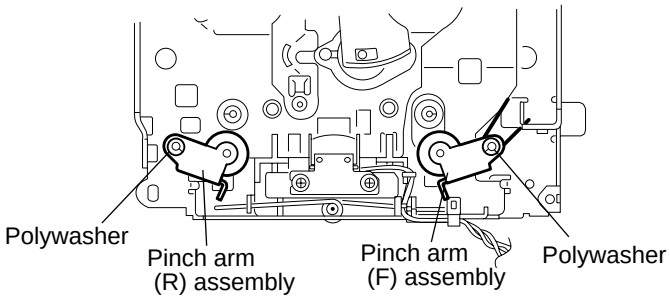


Fig.11

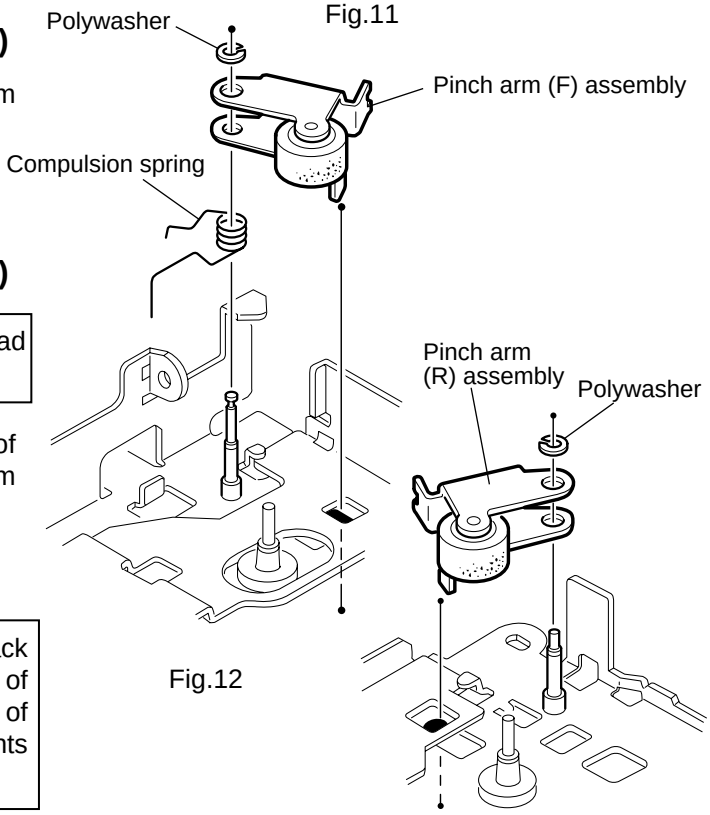


Fig.12

Fig.13

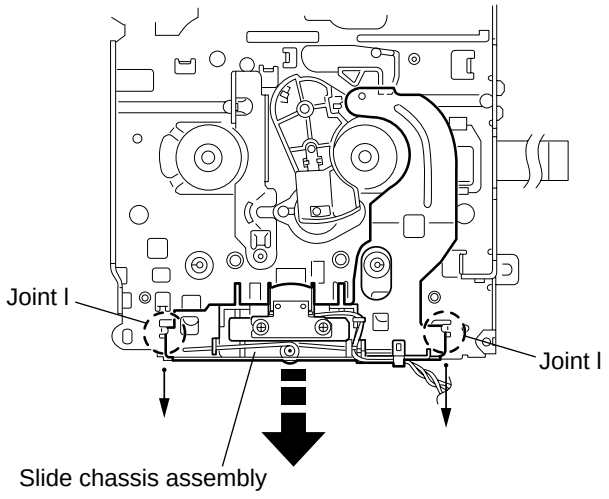


Fig.14

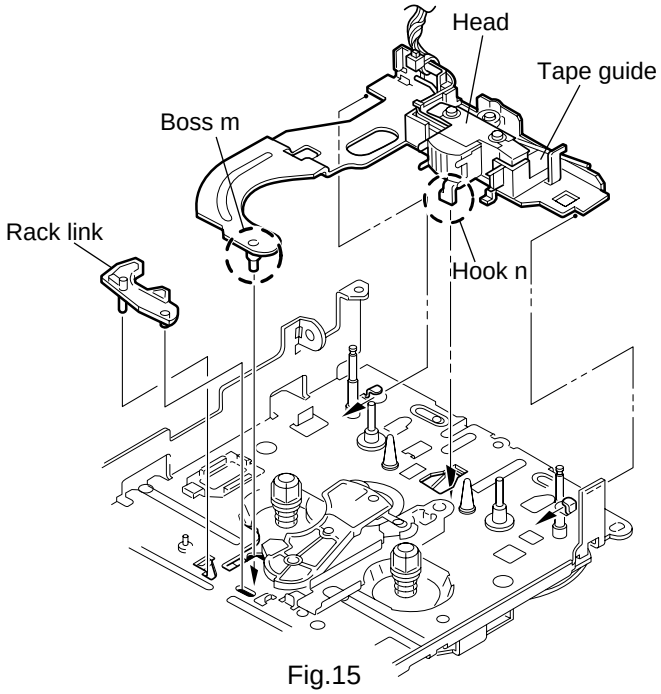


Fig.15

■ Removing the head / tape guide (See Fig.16 and 17)

REFERENCE: It is not necessary to remove the slide chassis assembly.

1. Remove the band attaching the wire to the head.
2. Remove the two screws **B**, the head and the head support spring.
3. Remove the pinch arm spring from the tape guide.
4. Remove the tape guide and the pinch spring arm.

CAUTION: When reattaching the pinch arm spring, set both end of it to the pinch spring arm (remarked **o**).

CAUTION: When reattaching the head, set the wires into the groove of the tape guide (Fig.16).

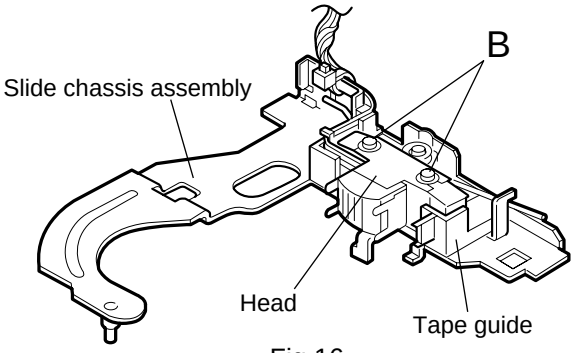


Fig.16

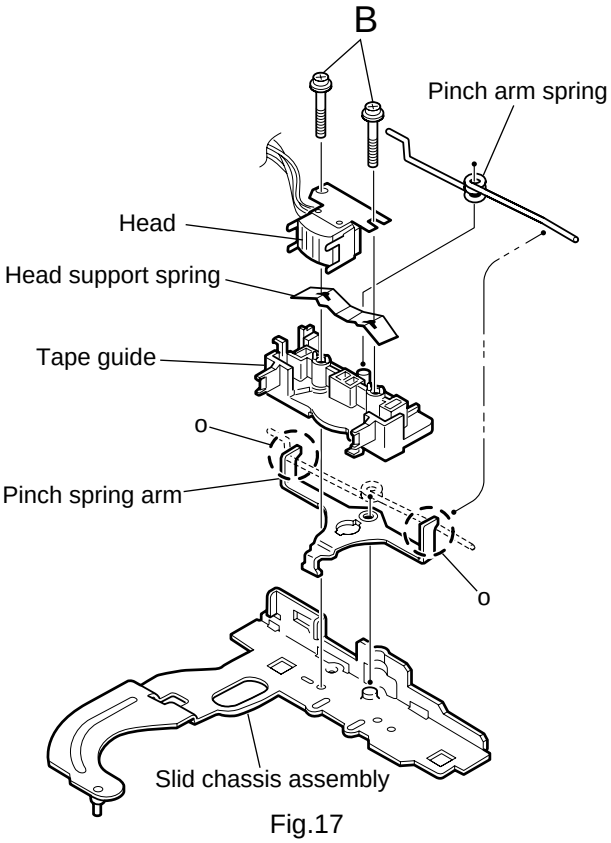


Fig.17

■ Removing the flywheel assembly (F) & (R) (See Fig.18 and 19)

REFERENCE: It is not necessary to remove the slide chassis assembly.

1. Remove the belt at the bottom.
2. Remove the two polywashers on the upper side.
3. Pull out each flywheel assembly downward.

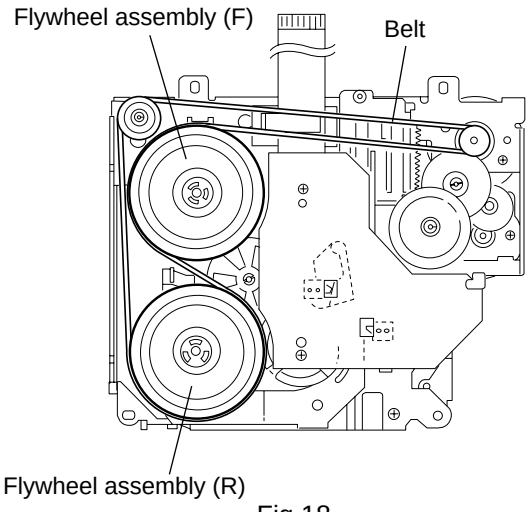


Fig.18

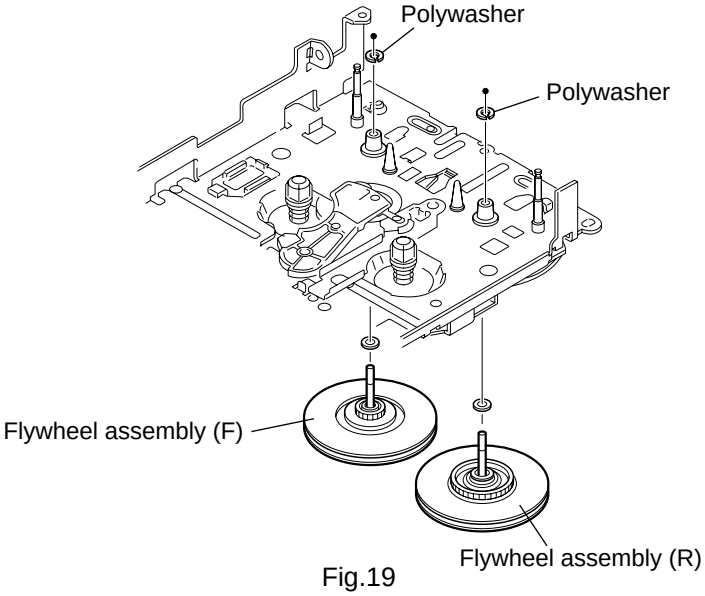


Fig.19

■ Disassembling the flywheel assembly (F) (See Fig.20 and 21)

1. Push and turn counterclockwise the spring holder (F) to release the three joints **p** on the bottom of the flywheel.
2. The spring holder (F), the TU spring and the friction gear play come off.
3. Remove the polywasher and felt.

■ Disassembling the flywheel assembly (R) (See Fig.20 and 22)

1. Push and turn clockwise the spring holder (R) to release the three joints **q** on the bottom of the flywheel.
2. The spring holder (R), the FF spring and the friction gear FF come off.
3. Remove the polywasher and the felt.

■ Removing the reel board (See Fig.23 and 24)

1. Remove the two screws **C** attaching the reel board.
2. Move the reel board in the direction of the arrow to release the joint **r**.
3. Unsolder the wires if necessary.

CAUTION: When reattaching, confirm operation of the MODE switch and the ST-BY switch.

The mode position between EJECT and ST-BY is optimum for reattaching.

Connect the card wire extending from the reel board to the FFC pad before reattaching the reel board.

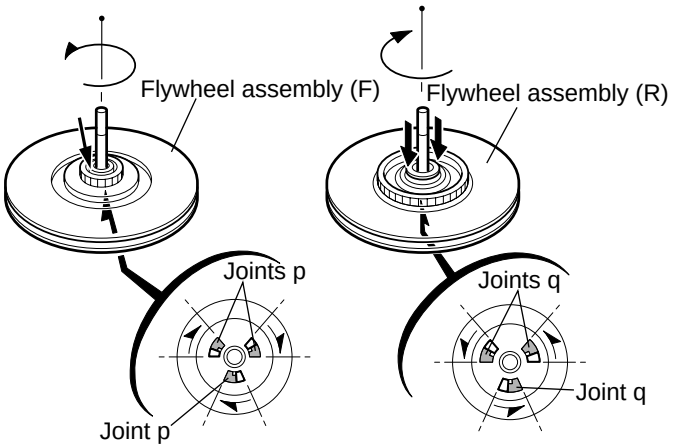


Fig.20

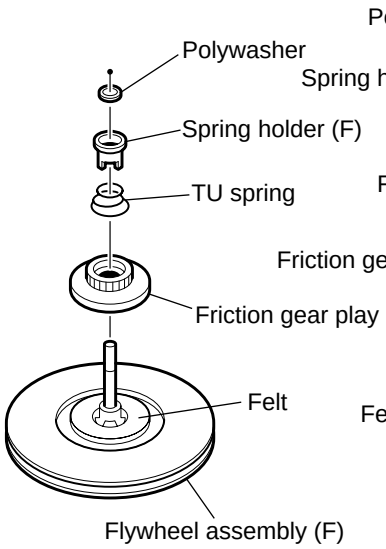


Fig.21

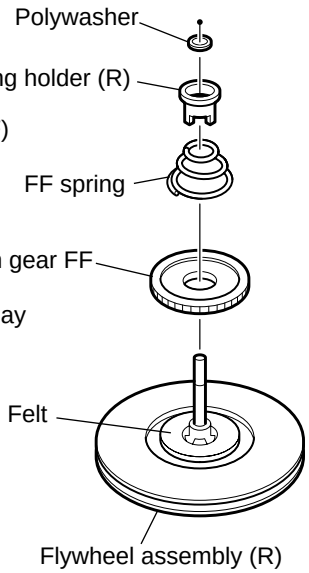


Fig.22

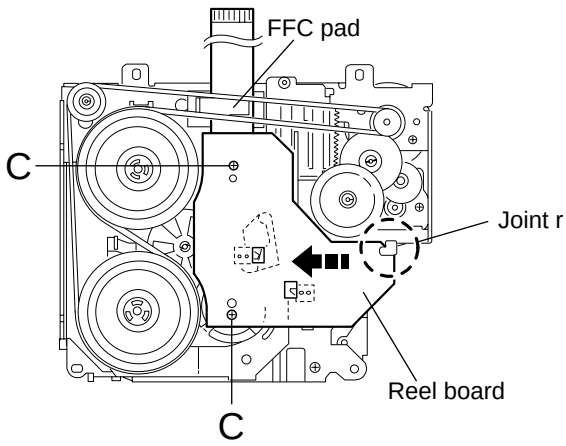


Fig.23

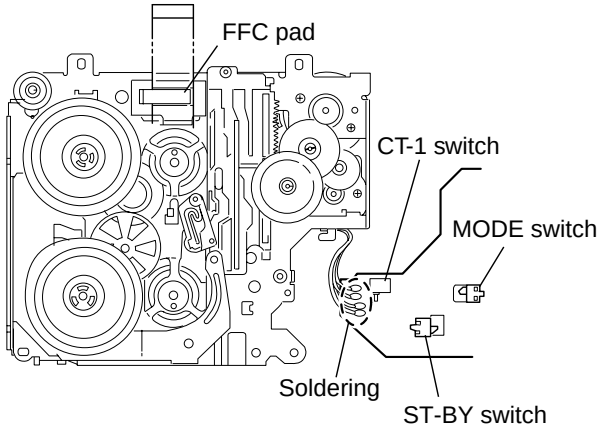


Fig.24

■Removing the gear base arm / gear base link assembly (See Fig.25 to 27)

1. Move the gear base arm in the direction of the arrow.

2. Insert a slotted screwdriver to the gear base spring under the gear base arm, and release the gear base arm upward from the boss on the gear base assembly.

3. Remove the gear base arm from the main chassis while releasing the two joints **s**.

4. Move the gear base link assemby in the direction of the arrow to release the two joints **t**.

REFERENCE: When reattaching the gear base arm, make sure that the boss on the gear base assembly is inside the gear base spring.

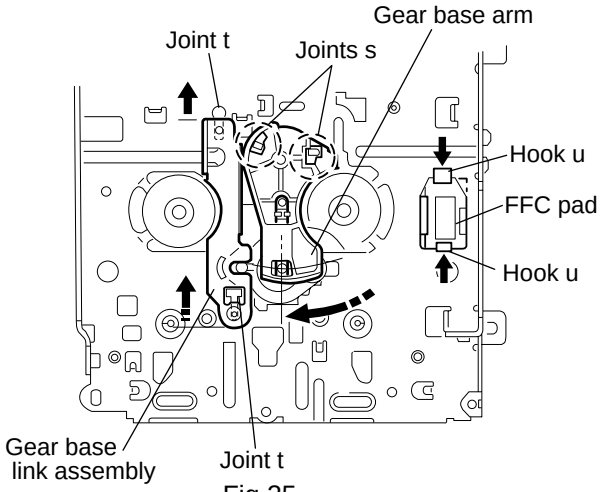


Fig.25

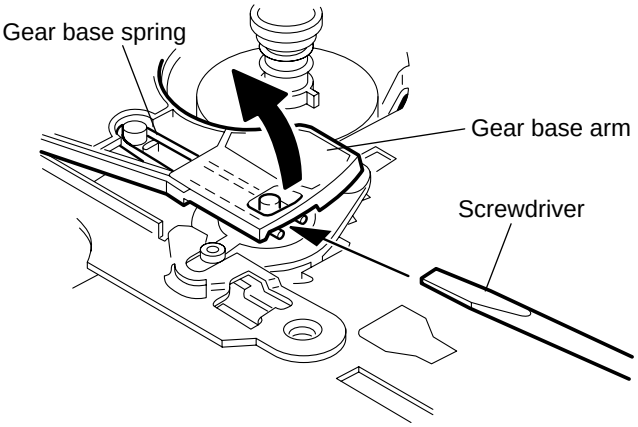


Fig.26

■Removing the FFC pad (See Fig.27 and 29)

1. Push each joint hook **u** of the FFC pad and remove toward the bottom.

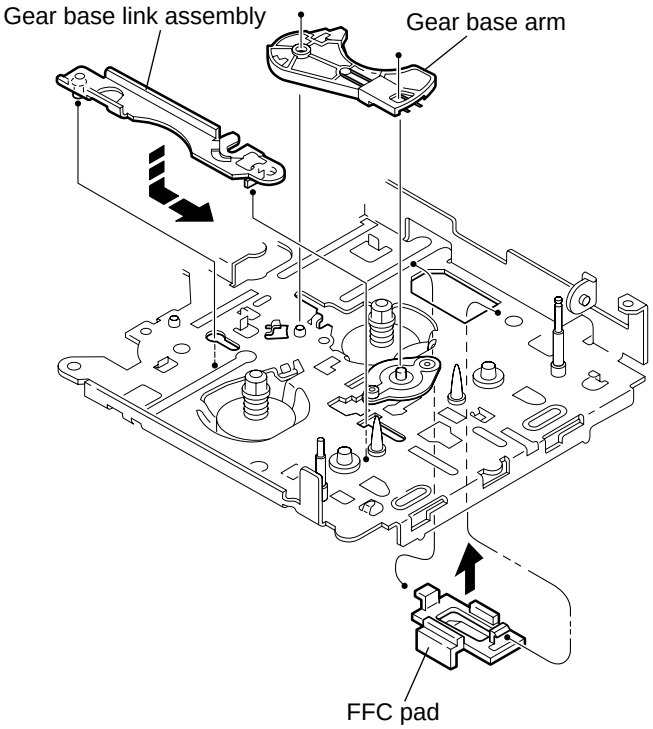


Fig.27

■ Removing the mode gear (See Fig.28 and 31)

1. Remove the polywasher on the bottom and pull out the mode gear.

■ Removing the mode switch actuator (See Fig.28, 29 and 31)

1. Pull out the mode switch actuator at the bottom.

REFERENCE: When reattaching the mode switch actuator to the main chassis, make sure to set on the shaft and insert **v** into the slot **w**.

■ Removing the direction link / direction plate (See Fig.29 to 31)

1. Remove the polywasher attaching the direction link.
2. Bring up the direction link to release the three joints **x**, **y** and **z** at a time.
3. Move the direction plate in the direction of the arrow to release the two joints **a'**.

REFERENCE: When reattaching the direction plate, engage the two joints **a'** and move in the direction of the arrow (Refer to Fig.30).

REFERENCE: When reattaching the direction link, move the direction plate in the direction of the arrow and engage the three joint **x**, **y** and **z** at a time (Refer to Fig.31).

■ Removing the mode rack assembly (See Fig.29 and 30)

1. Move the mode rack assembly in the direction of the arrow to release the two joints **b'** and the joint **c'**.

REFERENCE: When reattaching, set the two **b'** on the bottom of the mode rack assembly into the slots of the main chassis and move in the direction of the arrow (See Fig.30).

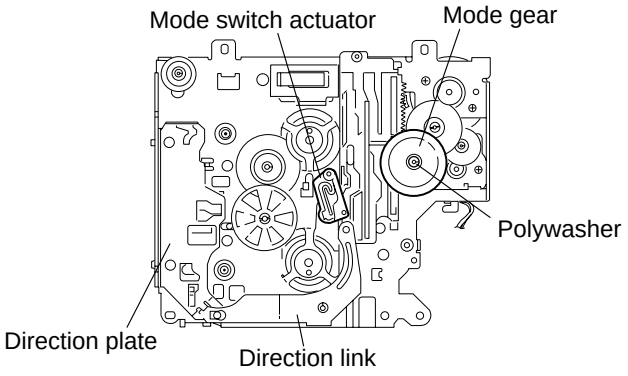


Fig.28

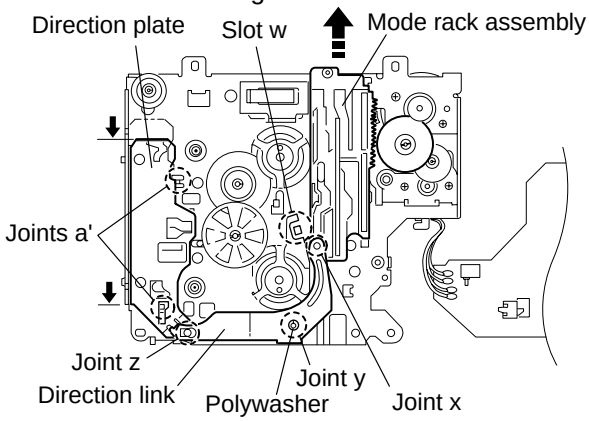


Fig.29

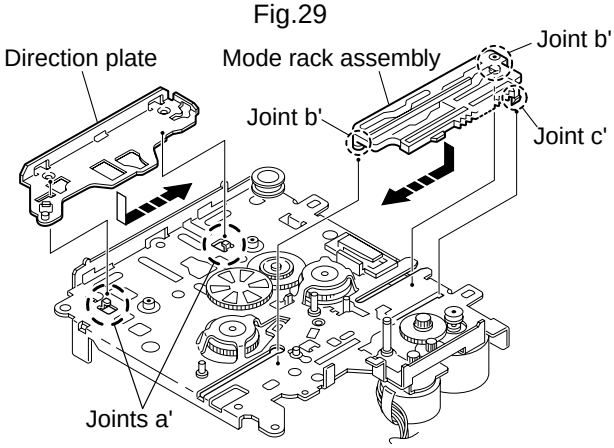


Fig.30

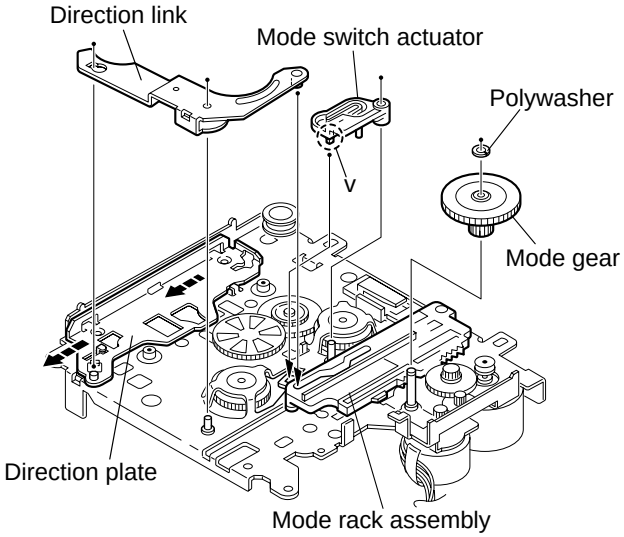


Fig.31

■Removing the gear base assembly / take up gear / reflector gear (See Fig.32 to 34)

1. Push in the pin **d'** of the gear base assembly on the upper side of the body and move the reflector gear toward the bottom, then pull out.

2. Remove the polywasher on the bottom and pull out the take up gear.

3. Move the gear base assembly in the direction of the arrow to release it from the two slots **e'** of the main chassis.

REFERENCE: The parts are damaged when removed. Please replace with new ones.

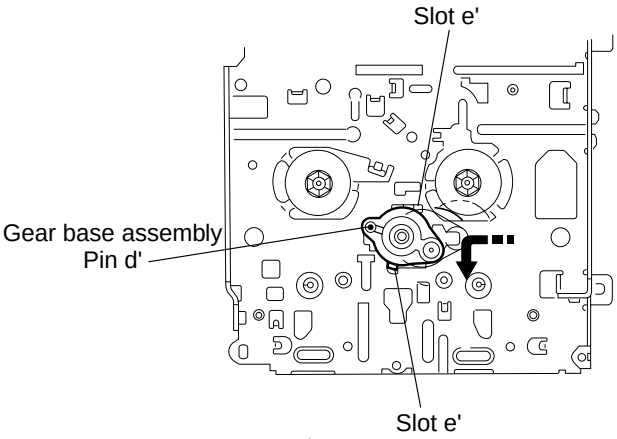


Fig.32

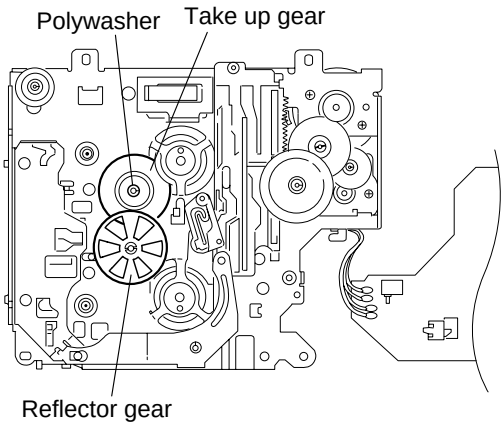


Fig.33

■Removing the reel driver / reel spindle (See Fig.34)

1. Draw out the reel driver from the shaft on the main chassis and remove the reel driver spring and the reel spindle respectively.

CAUTION: The reel driver is damaged when removed. Please replace with a new one.

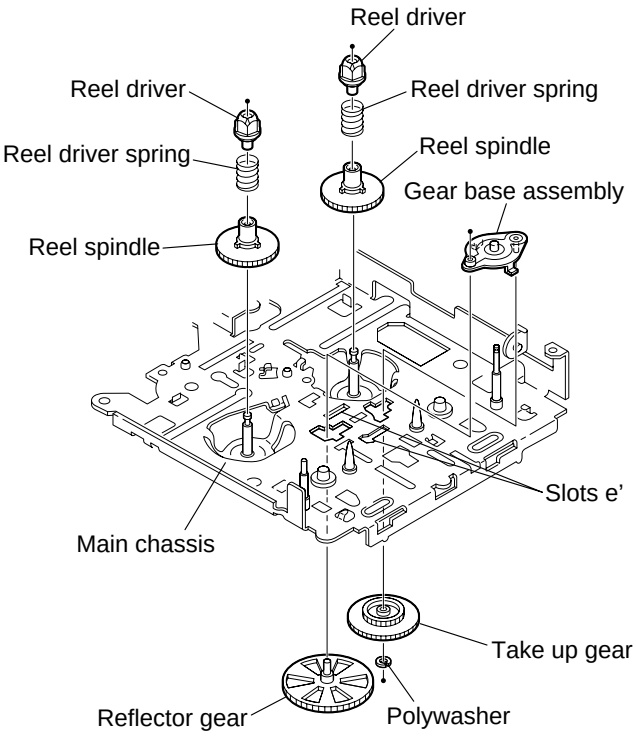


Fig.34

■ Removing the side bracket assembly (See Fig.35 to 39)

1. Remove the eject cam plate spring.
2. Push the joint **f'** through the slot to remove the load rack downward.
3. Move the eject cam limiter in the direction of the arrow to release it from the boss **g'** of the side bracket assembly and from the two joints **h'**.
4. Move the eject cam plate in the direction of the arrow to release the joint **i'**.

CAUTION: When reassembling, confirm operation of each part before reattaching the eject cam plate spring.

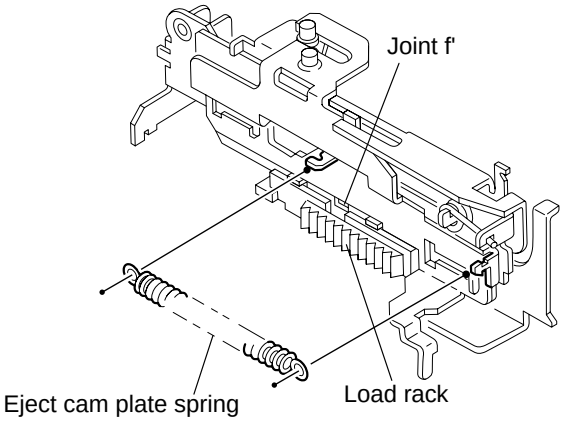


Fig.35

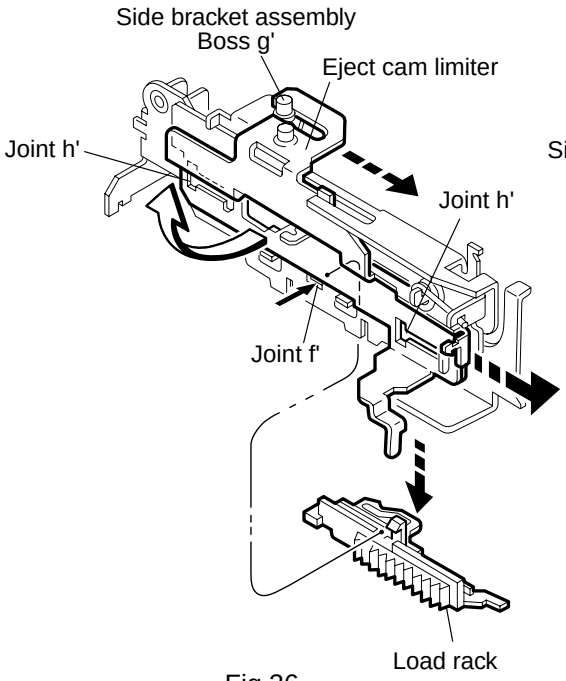


Fig.36

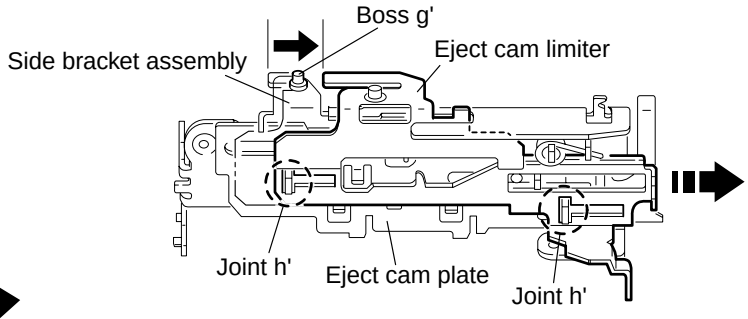


Fig.37

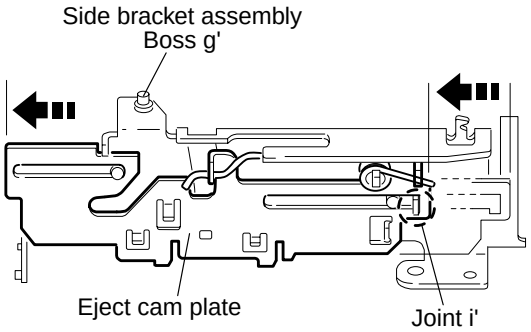


Fig.38

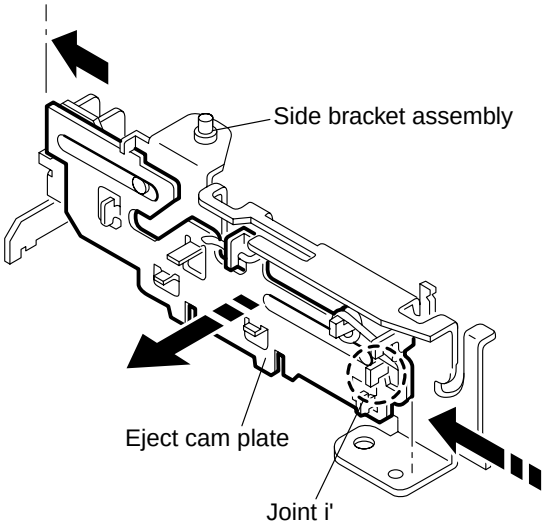


Fig.39

■Removing the main motor assembly / sub motor assembly (See Fig.40 to 42)

1. Remove the belt at the bottom.
2. Remove the polywasher and pull out the mode gear.
3. Pull out the reduction gear (B).
4. Remove the polywasher and pull out the reduction gear (A).
5. Remove the two screws **D** attaching the main motor assembly.
6. Remove the two screws **E** attaching the sub motor assembly.
7. Unsolder the wires on the reel board if necessary.

CAUTION: When reassembling, adjust the length of the wires extending from the sub motor asswmbly by attaching them to the side of the sub motor assembly with the wires extending from the main motor assembly using a spacer.

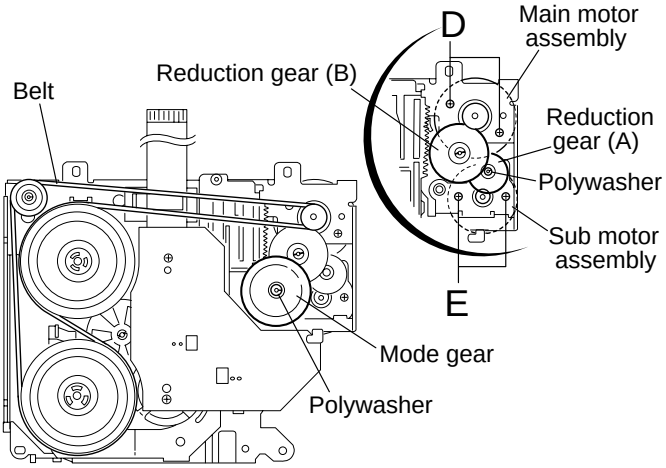


Fig.40

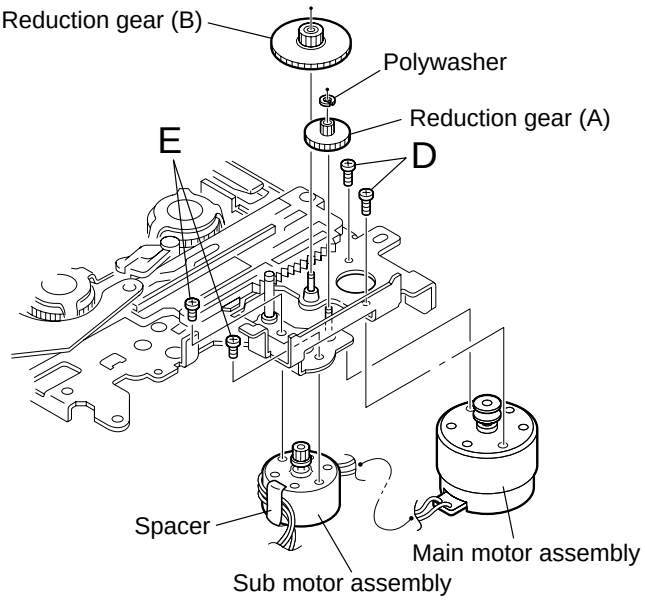


Fig.41

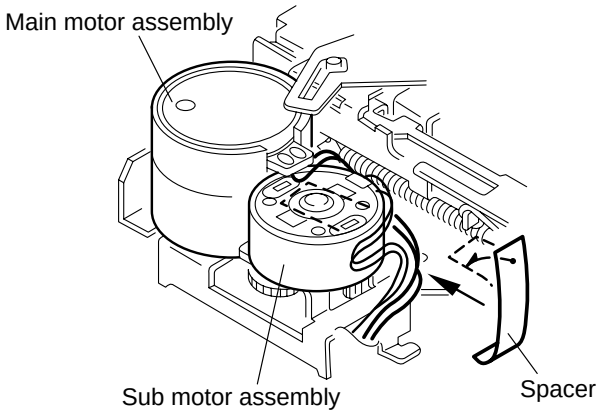


Fig.42

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)

■ Tuner area

Band range

FM : 87.5MHz to 108.0MHz

AM : (MW) 522kHz to 1620 kHz
(LW) 144kHz to 279 kHz

DUMMY LOAD

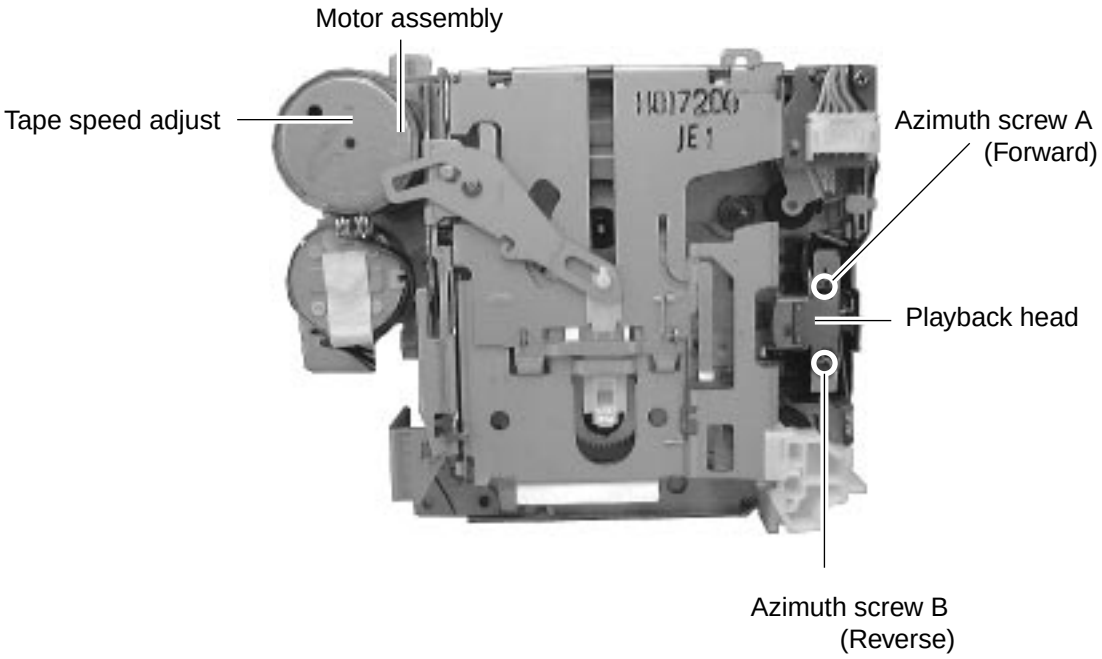
Exclusive dummy load should be used for AM and FM dummy load,there is a loss of 6dB between SSG output and antenna input. The loss of 6dB need not be considered since direct reading of figures are applied in this working standard.

■ Measuring conditions(Amplifier section)

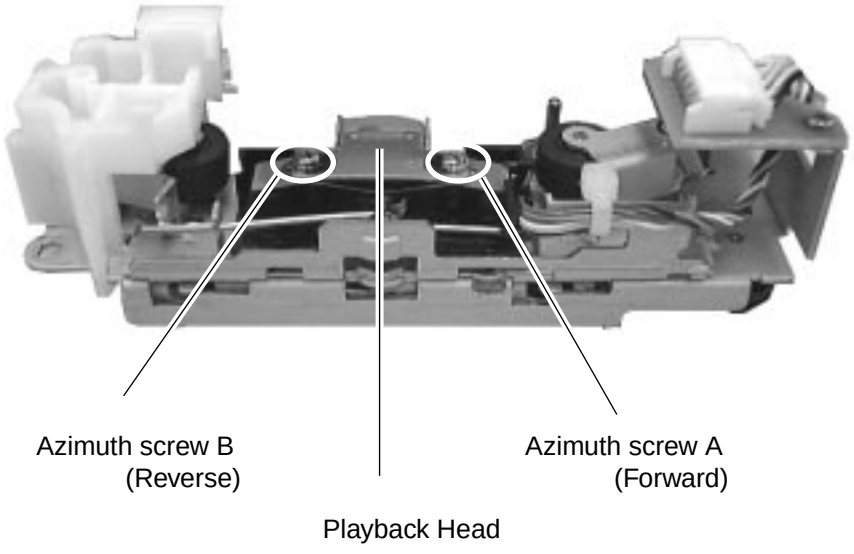
Power supply voltage --------- DC14.4V(11V to 16V allowance)
Load impedance -------- 4Ω (4Ω to 8Ω allowance)
Line out ~~level / Impedance~~ ---------- 2.0V / 20kΩ

■ Arrangement of adjusting & test points

Cassette mechanism
(Surface)

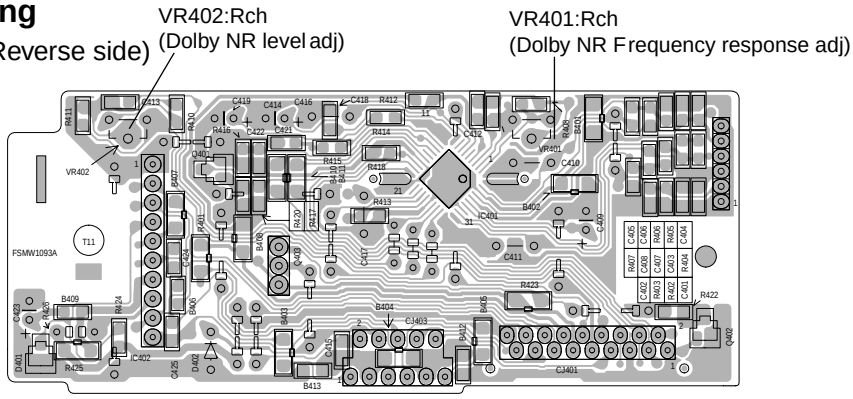


Head section view



■ Arrangment of adjusting

Head amplifier board section (Reverse side)



■Information for using a car audio service jig

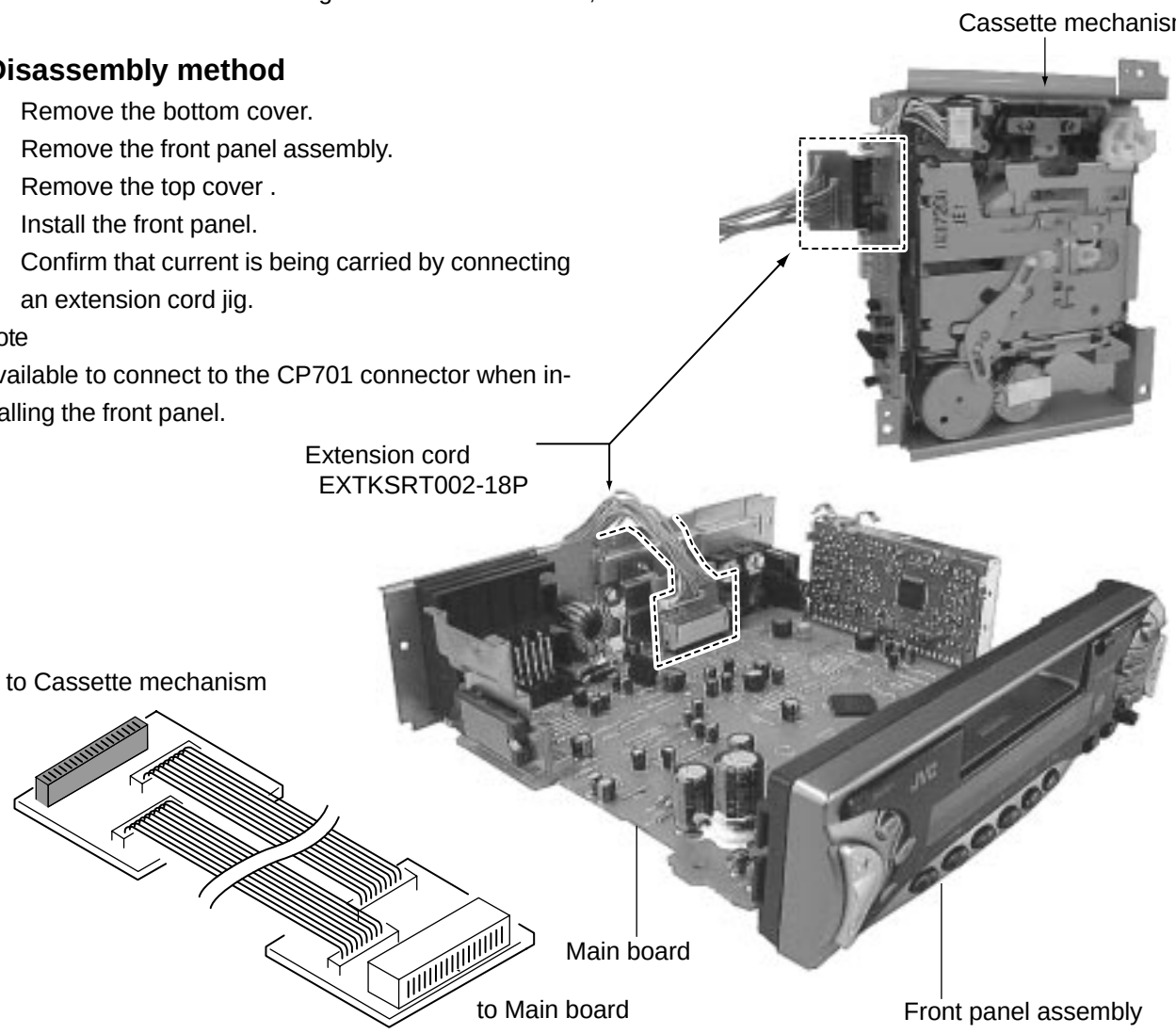
1. We're advancing efforts to make our extension cords common for all car audio products. Please use this type of extension cord as follows.
2. As a U-shape type top cover is employed, this type of extension cord is needed to check operation of the mechanism assembly after disassembly.
3. Extension cord : EXTKSRT002-18P (18 pin extension cord) For connection between mechanism assembly and main board assembly.
   Check for mechanism driving section such as motor ,etc..

■Disassembly method

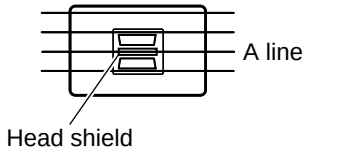
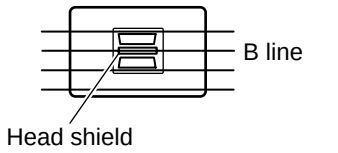
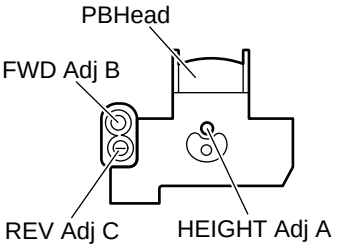
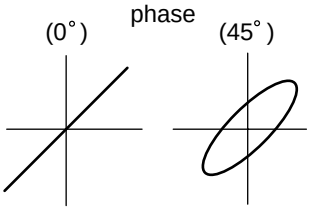
1. Remove the bottom cover.
2. Remove the front panel assembly.
3. Remove the top cover .
4. Install the front panel.
5. Confirm that current is being carried by connecting an extension cord jig.

Note

Available to connect to the CP701 connector when installing the front panel.



EXTKSRT002-18P

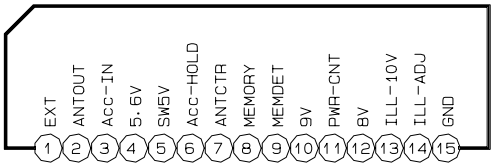
Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
1. Head azimuth adjustment	Test tape: SCC-1659 VT703(10kHz)	◆ Head height adjustment ※ Adjust the azimuth directly. When you adjust the height using a mirror tape, remove the cassette housing from the mechanism chassis. After installing 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 VT724 (1kHz) and play it back in the reverse play mode. Set the Rch output level to max. 2. Load 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 VT721 (315Hz) is played back, the level difference between channels should be within 1.5dB.	 The head is at low position during.  The head is at High position during REV. Output level: Maximum  		
2. Tape speed and wow flutter confirmation	Test tape: VT712 (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: VT724 (1kHz) VT739 (63Hz / 1kHz / 10kHz)	1. Play test tape VT724, and set the volume position at 2V. 2. Play test tape VT739 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.

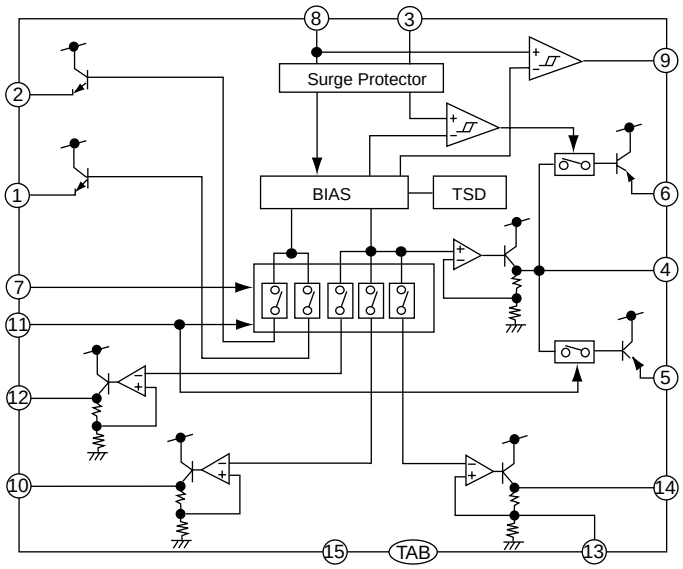
Description of major ICs

■ HA13164A(IC901):Regulator

1.Terminal layout



2.Block diagram



UNIT R:Ω
C:F

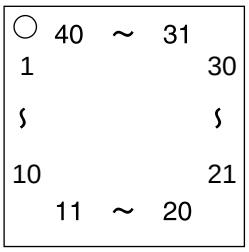
note1) TAB (header of IC)
connected to GND

3.Pin function

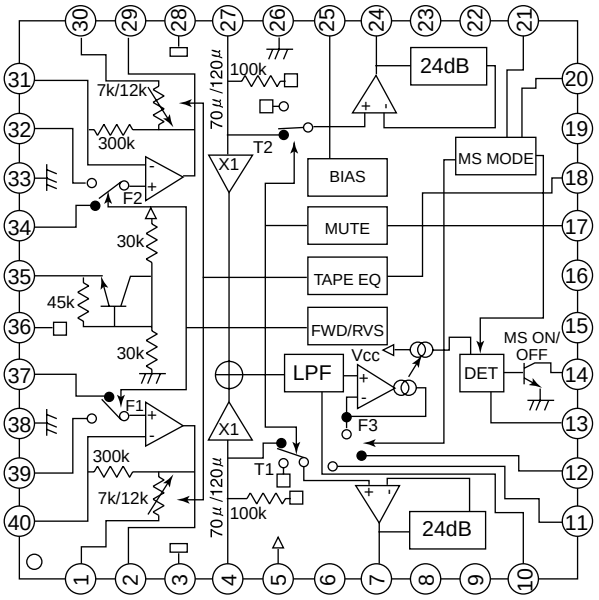
Pin No.	Symbol	Function
1	EXT	Output voltage is VCC-1 V when M or H level applied to CTRL pin.
2	ANTOUT	Output voltage is VCC-1 V when M or H level to CTRL pin and H level to ANT-CTRL.
3	ACC-IN	Connected to ACC.
4	5.6V	Regular 5.6V.
5	SW5V	Output voltage is 5V when M or H level applied to CTRL pin.
6	ACC-HOL	Output for ACC detector.
7	ANTCTP	L:ANT output OFF , H:ANT output ON
8	MEMORY	Connected to VCC.
9	MEMDET	Low battery detect.
10	9V	Output voltage is 9V when M or H level applied to CTRL pin.
11	PWR-CNI	L:BIAS OFF, M:BIAS ON, H:CD ON
12	8V	Output voltage is 8V when H level applied to CTRL pin.
13	ILL 10V	Adjustment pin for ILM output voltage.
14	IILL-ADJ	Output voltage is 10V when M or H level applied to CTRL pin.
15	GND	Connected to GND.

■ CXA2559Q(IC401):Playback equalizer amplifier with music sensor

1.Pin layout



2.Blockdiagram

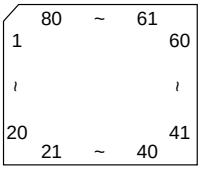


3.Pin function

Pin No.	Symbol	I/O	Function
1	PBTC1	-	Terminal of capacity of reproduction equalizer reproduction
2	PBOUT1	O	Equalizer output terminal
3	OUTREF1	O	Output standard terminal
4	TAPEIN1	I	Tape input terminal
5	Vcc	-	Power supply terminal
6	NC	-	Non connection
7	LINEOUT1	O	Line-out output terminal
8	TCH1	-	Time constant for the HLS
9	NC	-	Non connected
10	MSLPF	-	Detection LPF terminal between tunes
11	G2FB	-	Detection level set terminal between tunes
12	G1FB	-	Detection level set terminal between tunes
13	MSTC	-	Time constant connection terminal for the detection between tunes
14	MSOUT	O	Detection output terminal between tunes
15	NC	-	Non connected
16	NRSW	I	Dolby NR control
17	MUTE	I	Mute function control terminal
18	METAL	I	Reproduction equalizer control terminal
19	DIRECTION	I	Head change control terminal
20	FF/REW	I	Detection mode control terminal between tunes
21	MSSW	I	Detection function control terminal between tunes
22	NC	-	Non connected
23	TCH2	-	Time constant for the HLS
24	OUT2	O	Line-out output terminal
25	DIREF	-	Resistance connection terminal for standard current setting
26	GND	-	Earth terminal
27	TAPEIN2	I	Tape input terminal
28	OUTREF2	O	Output standard terminal
29	PBOUT2	O	Reproduction equalizer output terminal
30	PBTC2	-	Terminal of capacity of reproduction equalizer
31	PBFB2	I	Reproduction equalizer return terminal
32	PBRIN2	I	Reproduction equalizer input terminal
33	PBGND	-	Reproduction equalizer system earth terminal
34	PBFIN2	I	Reproduction equalizer input terminal
35	VCT	O	Middle point terminal
36	PBREF	O	Reproduction equalizer standard terminal
37	PBFIN1	I	Reproduction equalizer input terminal
38	PBGND	-	Reproduction equalizer system earth terminal
39	PBRIN1	I	Reproduction equalizer input terminal
40	PBFB1	I	Reproduction equalizer return terminal

■ UPD178018AGC625(IC701) : Main system control CPU

1. Pin layout



2. Pin function

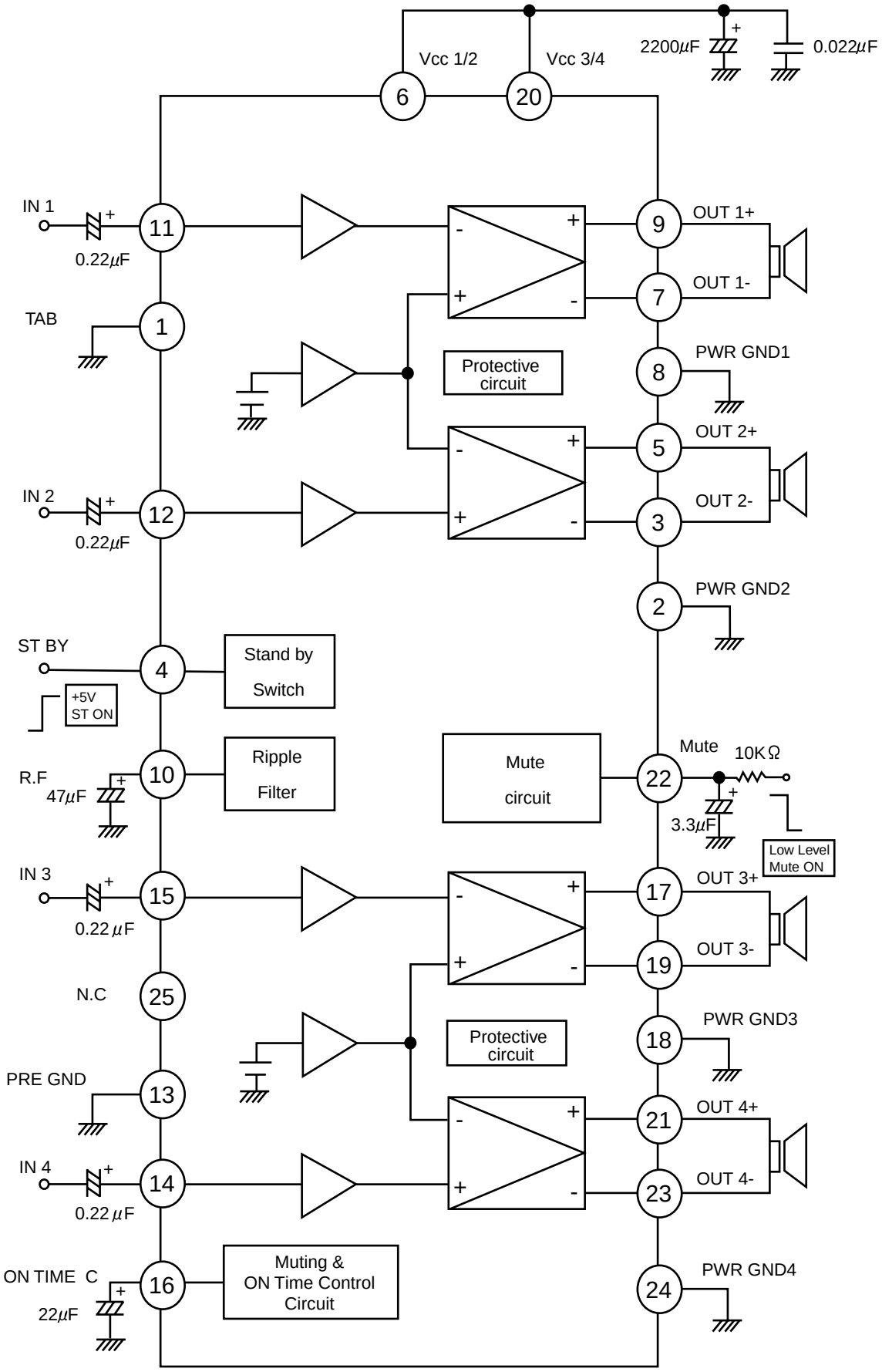
Pin No.	Port Name	I/O	Descriptions
1	KEY 0	I	Key input 0
2	KEY 1	I	Key input 1
3	KEY 2	I	Key input 2
4	LEVEL	I	Level meter input
5	SM	I	S.meter level input
6	SQ	I	S.Quality level input
7	LCDCE	O	CE output to LCD driver
8	LCDDA	O	Data output to LCD driver
9	LCDSCK	O	Clock output to LCD driver
10	BUSI/O	I	I/O selector output for J-BUS, H : OUT, L: INPUT
11	OPEN	I	Door open detect input
12	BUSSI	I	J-BUS Data input
13	BUSSO	O	J-BUS Data output
14	BUSSCK	I/O	J-BUS Clock in/output
15	NC	-	Non connect
16	NC	-	Non connect
17	NC	-	Non connect
18	NC	-	Non connect
19	INLOCK	-	Non connect
20	NC	-	Non connect
21	GNDPORT	-	Port GND
22	VDDPORT	-	Port Vdd
23	NC	O	Non connect
24	AFCK	O	AF check output, L: AF check
25	MONO	O	Monaural on /off selecting output, H:mono on
26	FM/AM	O	FM/AM switching output L : FM H : AM
27	SEEK/STOP	O	Auto seek /stop selecting output, H: Seek, L:Stop
28	NC	I	Pulse signal input port for Cruise control
29	IFC	I	FM/AM midle frequency counter input
30	VDDPLL	-	PLL Vdd
31	FMOSC	I	FM/AM limited generator frequency input
32	NC	-	None connect
33	GNDPLL	-	PLL GND
34	AMEO	O	AM error out output
35	FMEO	O	FM error out output
36	IC	-	GND
37	SD/ST	I	Station detector, Stereo signal input, H:Find Station, L:Stereo
38	STAGE0	I	Pull up
39	NC	-	Non connect
40	MOTOR	O	Main motor output

UPD178018AGC625(2/2)

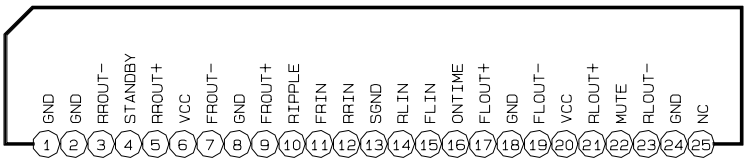
Pin No.	Port Name	I/O	Descriptions
41	FF/REW	I	Output for input signal level switching for MS L : FF,REW H : PLAY
42	F/R	O	FWD,REV running direction switch signal input
43	DOLBY	O	Dolby on "H" output
44	MSIN	I	MS input
45	I2CSCK	O	I2C information clock output
46	I2CDAO	O	I2C information data output
47	I2CDAI	I	I2C information clock input
48	REEL	O	Switch for detecting tape end position
49	SUBMO1	I	Sub motor clock direction input
50	SUBMO2	O	Sub motor clock opposite detection drive output
51	MODE	O	Mechanism mode position detection input
52	TAPEIN	O	Cassette in detection input H : cassette in L : cassette out
53	STANDBY	I	Standby position detection input H : eject side L : operation side
54	NC	-	Non connect
55	NC	-	Non connect
56	NC	-	Non connect
57	NC	-	Non connect
58	NC	-	Non connect
59	NC	-	Non connect
60	MUTE	O	Mute output , L : mute on
61	PCNT	O	Power ON /OFF switching output , H : power on
62	TELMUTE	I	Telephone mute signal detection input
63	NC	-	Non connect
64	NC	O	Non connect
65	LEDB	O	LED color control
66	LEDR	O	LED color control
67	ACCDET	I	Power save 1 Working togethe ACC Power save : L
68	POWER	O	Power save 2, Working together Back up by H input, stop mode
69	RDSSCK	I	Clock input for RDS
70	RDSDA	I	RDS data input
71	REMOCON	I	Remocom input
72	DETACH	I	Detach signal input H : Power save
73	J-BUSINT	I	Cut-in input for J-BUS signal
74	REGCPU	-	Regulator for CPU power supply, Connect the GND with0.1 μF.
75	GND	-	Ground
76	X2	-	Connecting the crystal oscillator for system clock
77	X1	I	Connecting the crystal oscillator for system clock
78	REGOSC	-	Regulator for oscillator circuit.Connect the GND with 0.1μF.
79	VDD	-	Vdd
80	RESET	-	Pull up

■LA4743K(IC301):Power AMP

1.Block diagram



2.Terminal layout



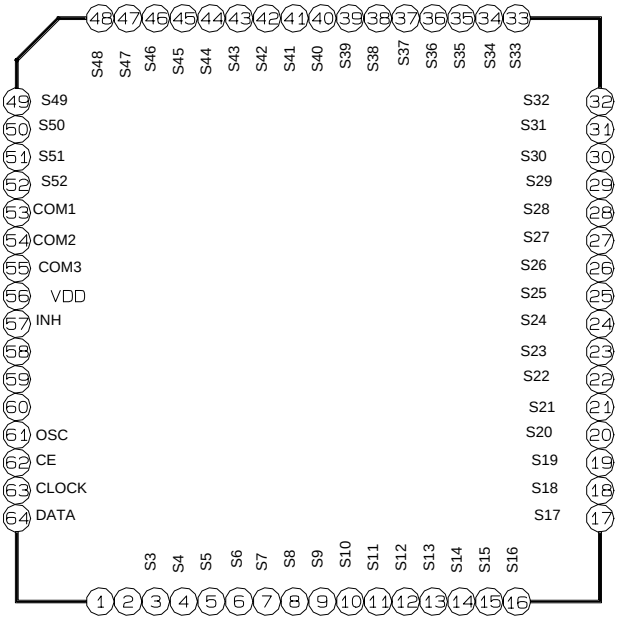
3.Pin function

LA4743K

Pin No.	Symbol	Function
1	GND	Header of IC
2	GND	Power GND
3	RROUT-	Outpur(-) for front Rch
4	STANDBY	Stand by input
5	RROUT+	Output (+) for front Rch
6	VCC	Power input
7	FROUT-	Output (-) for rear Rch
8	GND	Power GND
9	FROUT+	Output (+) for rear Rch
10	RIPPLE	Ripple filter
11	FRIN	Rear Rch input
12	RRIN	Front Rch input
13	SGND	Signal GND
14	RLIN	Rear Lch input
15	FLIN	Front Lch input
16	ONTIME	Power on time control
17	FLOUT+	Output (+) for rear Lch
18	GND	Power GND
19	FLOUT-	Output (-) for rear Lch
20	VCC	Power input
21	RLOUT+	Output (+) for front Lch
22	MUTE	Muting control input
23	RLOUT-	Output (-) for front Lch
24	GND	Power GND
25	NC	No connection

■ LC75823W (IC651) : LCD driver

1. Pin Layout & Symbol

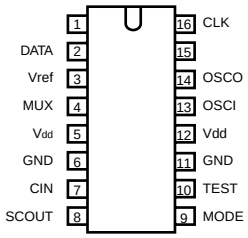


2. Pin Function

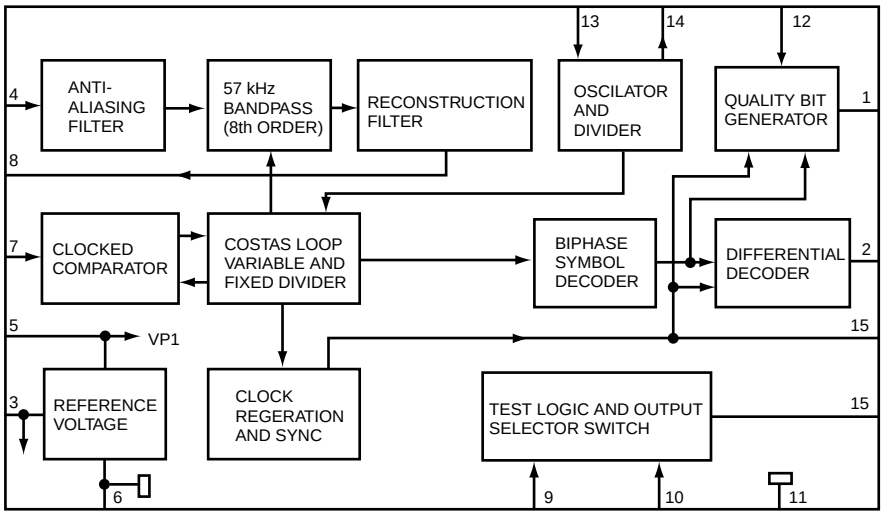
Pin No.	Symbol	I/O	Function
1 to 2	NC	--	Non connected
3 to 52	S1 to S52	O	Segment output pins used to display data transferred by serial data input.
53 to 55	COM1 to COM3	O	Common driver output pins. The frame frequency is given by : t0=(fosc/384)Hz.
56	VDD	--	Power supply connection. Provide a voltage of between 4.5 and 6.0V.
57	$\overline{\text{INH}}$	I	Display turning off input pin. $\overline{\text{INT}}$="L" (Vss) ----- off (S1 to S52, COM1 to COM3="L" $\overline{\text{INT}}$="H" (VDD)----- on Serial data can be transferred in display off mode.
58~60	NC	--	Non connected
61	OSC	I/O	Oscillator connection. An oscillator circuit is formed by connecting an external resistor and capacitor at this pin.
62 63 64	CE CLOCK DATA	I	Serial data interface connection to the controller. CE : Chip enable CLOCK : Sync clock DATA : Transfer data

■ SAA6579T-X(IC71):RDS

1.Pin layout



2.Block diagram

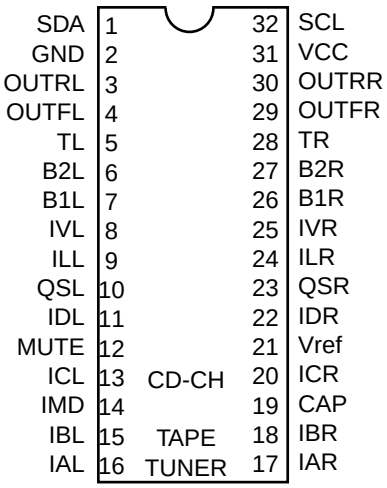


3.Pin function

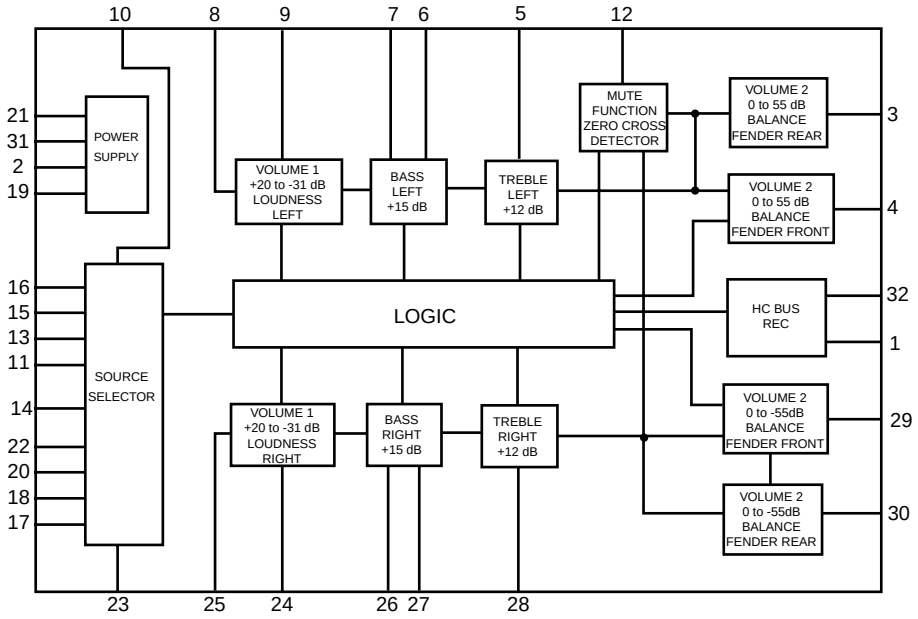
Pin No.	Symbol	Description
1		Non connected
2	DATA	RDS data output
3	Vref	Reference voltage output (0.5VDDA)
4	MUX	Multiolex signal input
5	Vdd	+5V supply voltage for analog part
6	GND	Ground for analog part (0V)
7	CIN	Subcarrier input to comparator
8	SCOUT	Subcarrier output of reconstruction filter
9	MODE	Oscllator mode / test control input
10	TEST	Test enable input
11	GND	Ground for digital part (0V)
12	Vdd	+5V supply voltage for digital part
13	OSCI	Oscillator input
14	OSCO	Oscillator output
15		Non connected
16	CLK	RDS clock output

■ TEA6320T-X (IC161) : E.volume

1.Pin layout



2.Block diagram

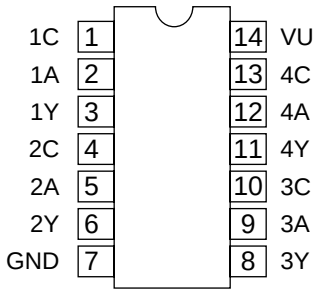


3.Pin functions

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	OUTRL	O	output left rear.	19	CAP	-	Electronic filtering for supply.
4	OUTFL	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	OUTFR	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.

■ HD74HC126FP-X (IC801) : Buffer

1.Terminal layout

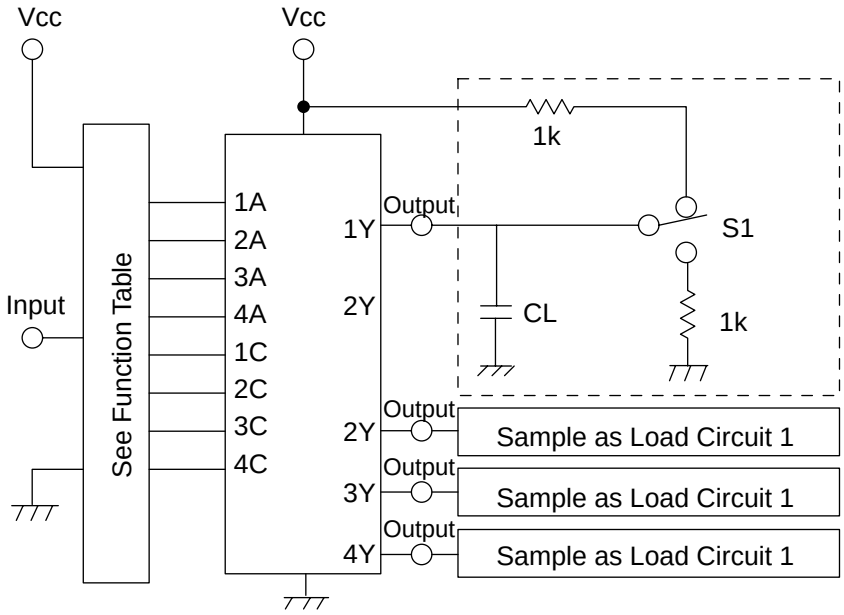


3.Pin function

Input		Output
C	A	Y
L	X	Z
H	L	H
H	H	L

Note) H:High level
L:Low level
X:Irrelevant
Z:Off(High-impedance)
State a 3-state input

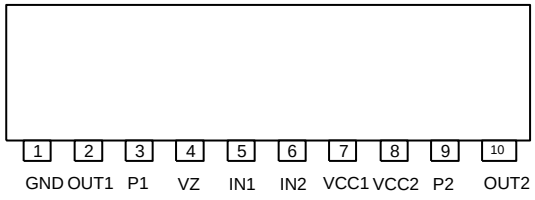
2.Block diagram



Note) CL includes probe and jig capacitance

■ LB1641 (IC402) : DC motor driver

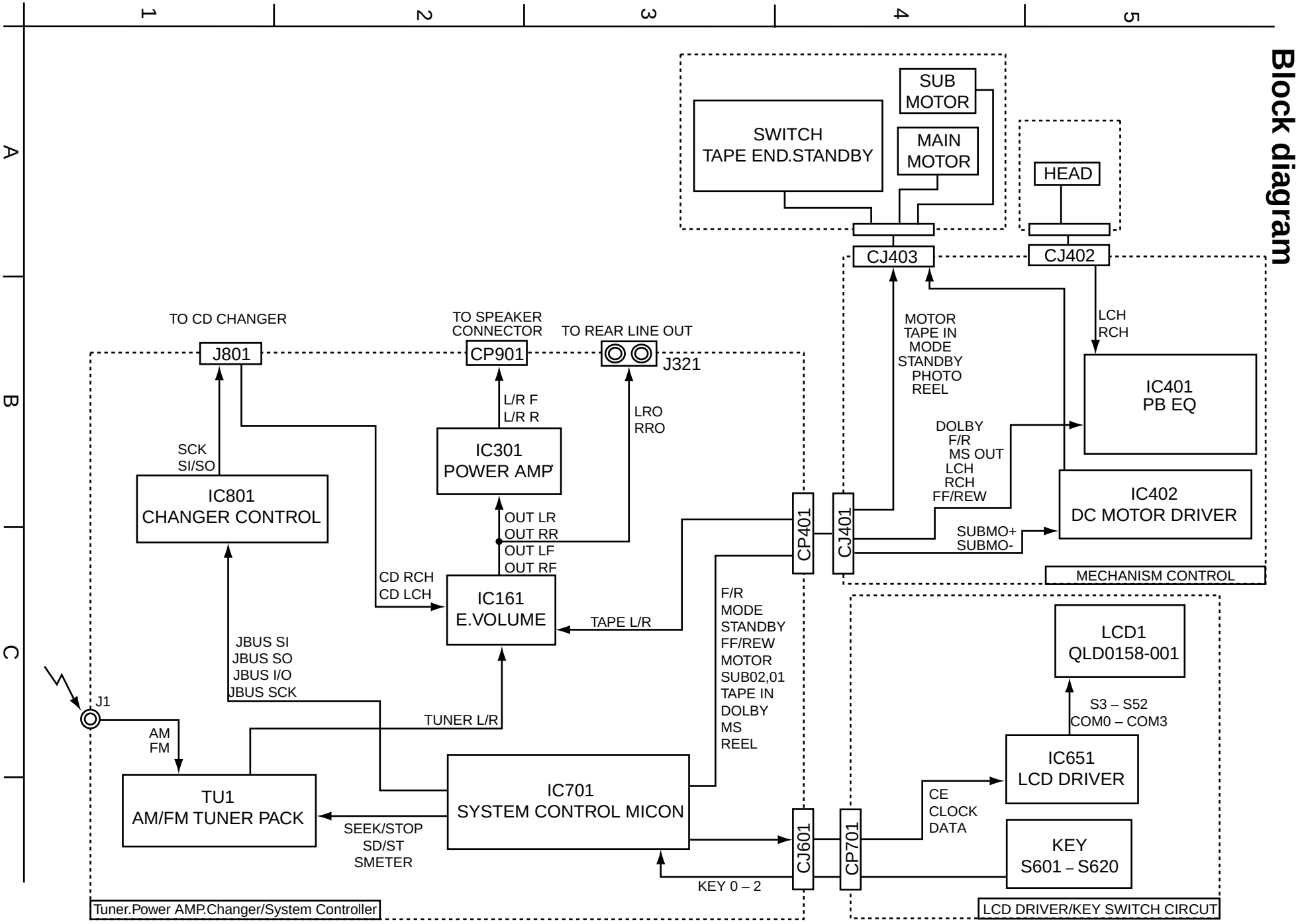
1. Pin layout



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

■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 1/10W OR 1/4W ±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)
   MM --- M.M. CAPACITOR
   N ---- N.F. CAPACITOR

CONDITION---FM

DTC114EKA UNR9211 | DTA114EKA UNR9111

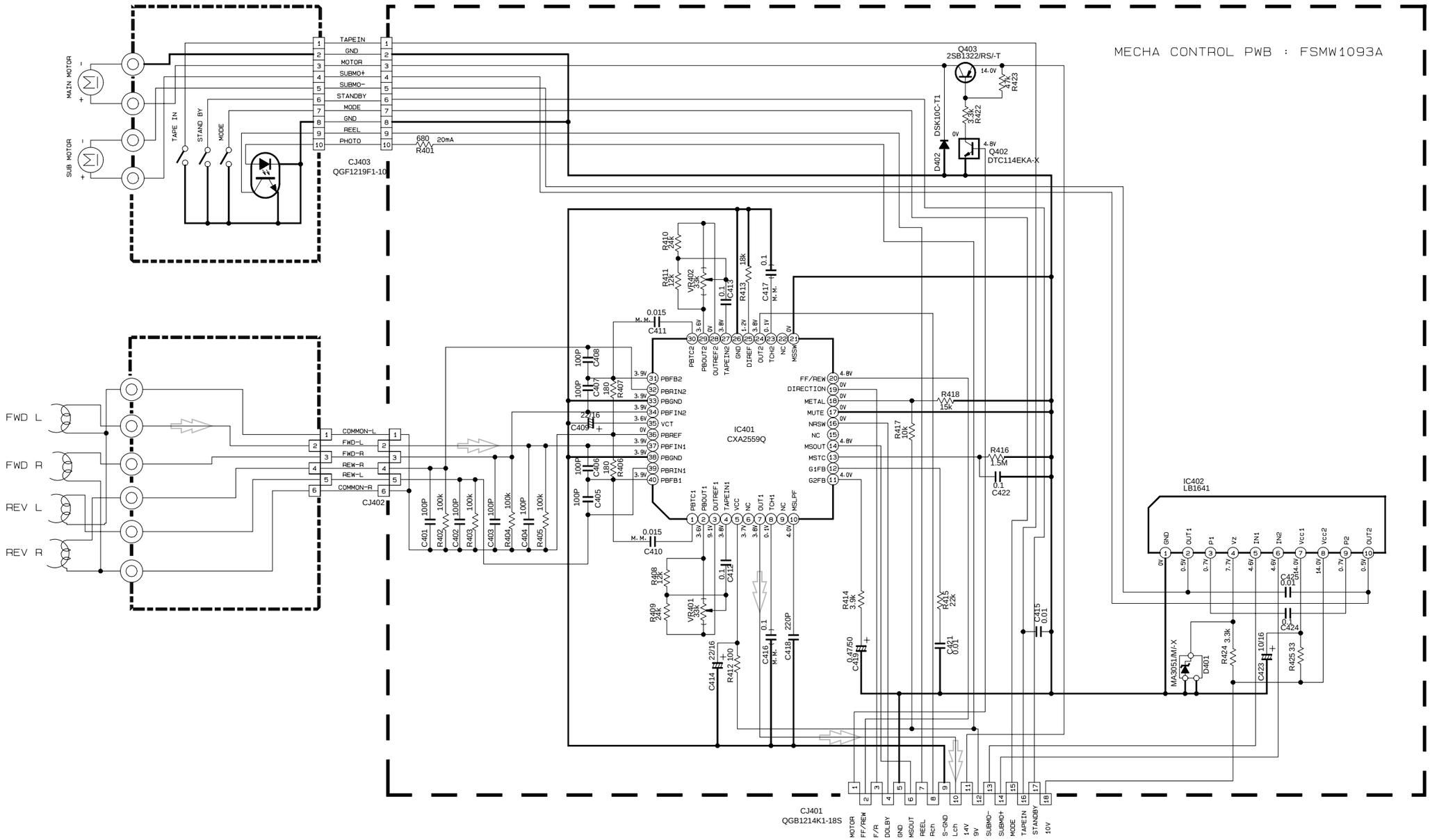
FM/AM TUNER · FM LPF · AM LPF · FM/AM SW. · RDS DETECTOR · SQ · JVC BUS · CD-CH · E. VOLUME · CPU · MEM. DETECT · LEVEL METER · MUTING · REGULATOR · REMOTE PROTECTION · TEL. MUTE · LINE OUTPUT · POWER AMP

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

Tuner signal
Cassette signal
Front signal
Rear signa
CD signal

MAIN PWB : GEB10024A

■Mecha control circuit section



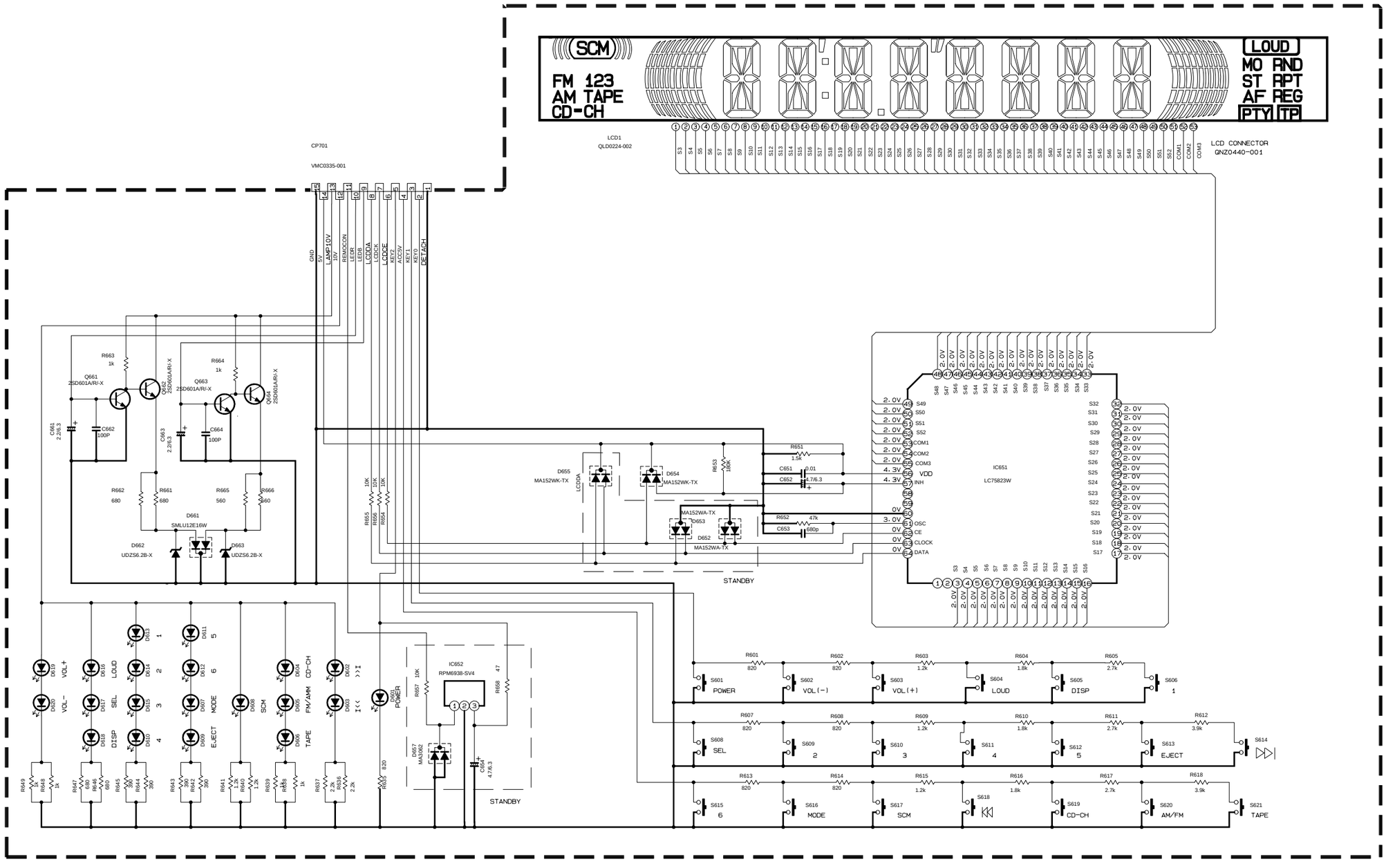
NOTES

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 ≠F(P=pF).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(≠F)/RATED VOLTAGE(V)
   M.M. -- M.M. CAPACITOR

■ 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).

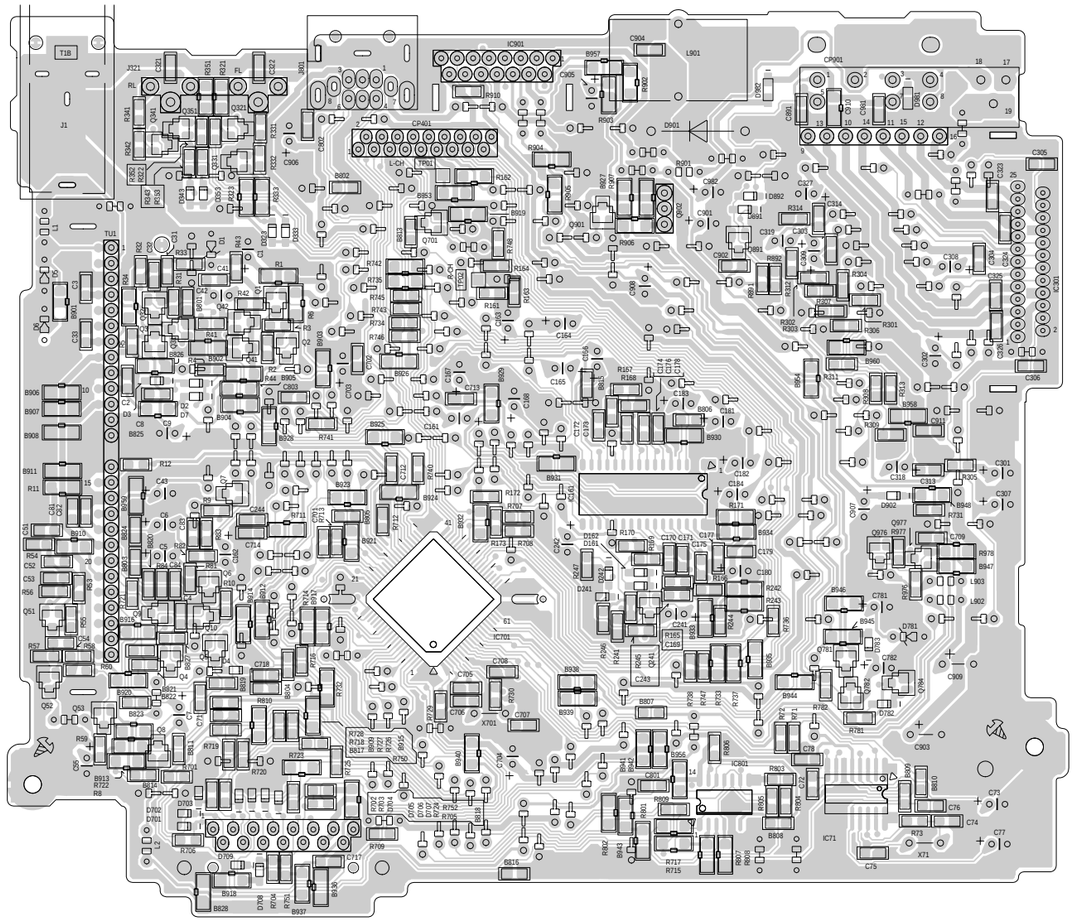


D601 SML-310LT/MN/-X
D602-D620 SML-310VT/JK/-X
EXCEPT: D608 LT1F67AF-W

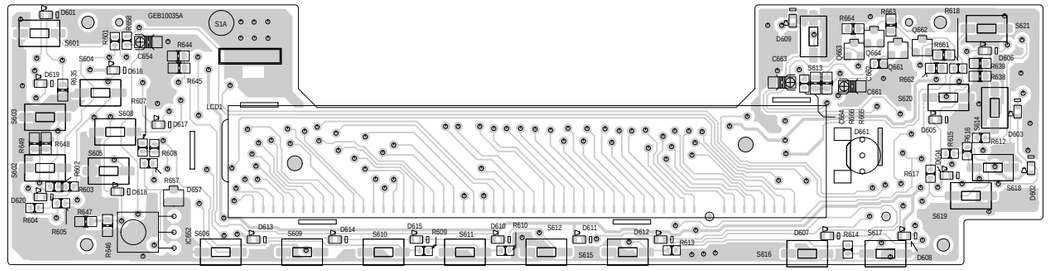
SW. P. W. B. GEB10035A

Printed circuit boards

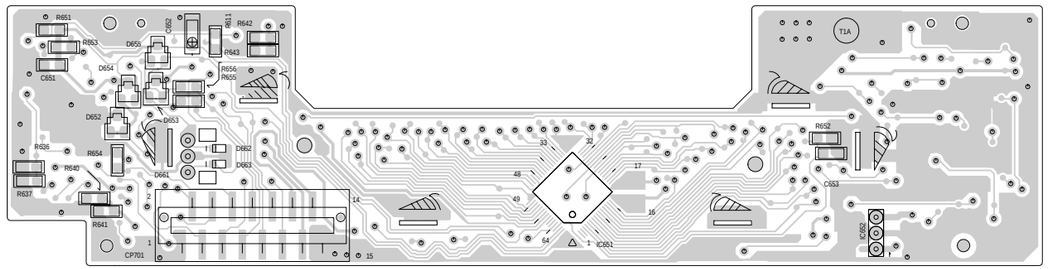
■ Main board



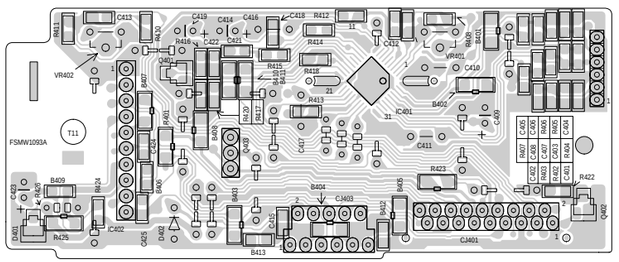
■ Front board(Forward side)



■ Front board(Reverse side)



■ Head amp board(Reverse side)



■ Cam switch board (Reverse side)