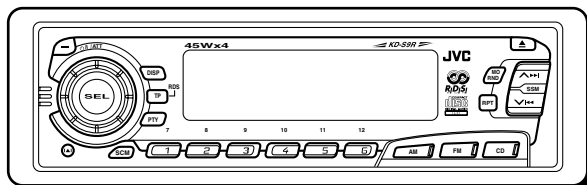
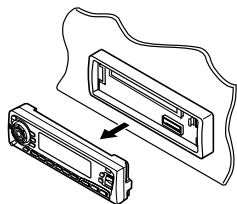


# JVC

# SERVICE MANUAL

## CD RECEIVER

# KD-S9R




**Area Suffix**  
E --- Continental Europe

### Contents

Safety precaution .....	1-2
Preventing static electricity .....	1-3
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## Safety precaution

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

 **CAUTION** Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.

# Preventing static electricity

## 1. Grounding to prevent damage by static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

## 2. About the earth processing for the destruction prevention by static electricity

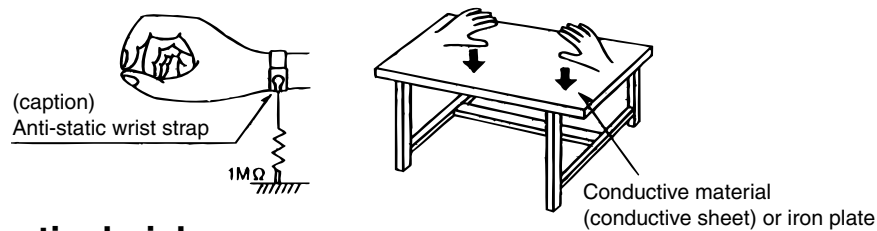
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as CD players. Be careful to use proper grounding in the area where repairs are being performed.

### 2-1 Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

### 2-2 Ground yourself

Use an anti-static wrist strap to release any static electricity built up in your body.



## 3. Handling the optical pickup

1. In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)
2. Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

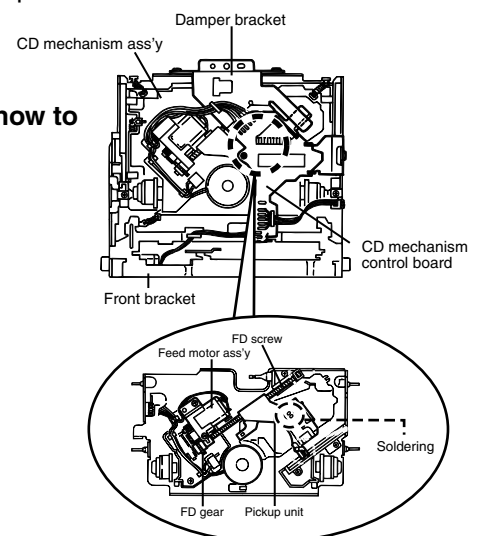
## 4. Handling the traverse unit (optical pickup)

1. Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.
2. Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.
3. Handle the flexible cable carefully as it may break when subjected to strong force.
4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it

## Attention when traverse unit is decomposed

**\*Please refer to "Disassembly method" in the text for pick-up and how to detach the substrate.**

1. Solder is put up before the card wire is removed from connector on the CD substrate as shown in Figure.  
(When the wire is removed without putting up solder, the CD pick-up assembly might destroy.)
2. Please remove solder after connecting the card wire with when you install picking up in the substrate.



## Disassembly method

### ■ Removing the front panel unit (See Fig. 1, 2)

1. Press the Eject button to open the front panel unit
2. Push and open the right and left open/close shaft arms outward to remove the shaft.
3. Remove the front panel unit from the same side as the shaft was removed.



Fig 1

### ■ Removing the front chassis assembly (See Fig. 3, 4)

1. Remove the front panel unit.
2. Remove the two screws **A** attaching the front chassis assembly.
3. Remove the four ribs **a** attaching the front chassis assembly to the chassis.

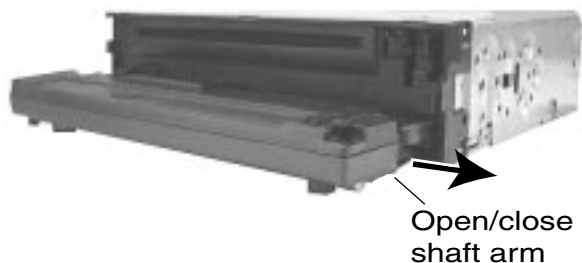


Fig 2

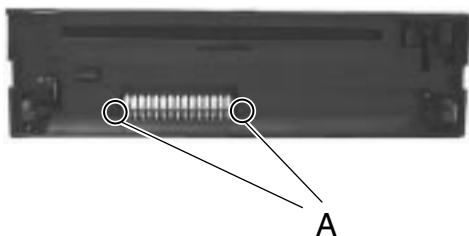


Fig 3

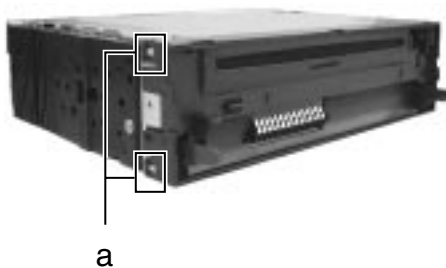


Fig 4



### ■ Removing the bottom cover assembly (See Fig. 5)

Turn the unit upside down, then insert and turn to **b** the screwdriver to remove the bottom cover.

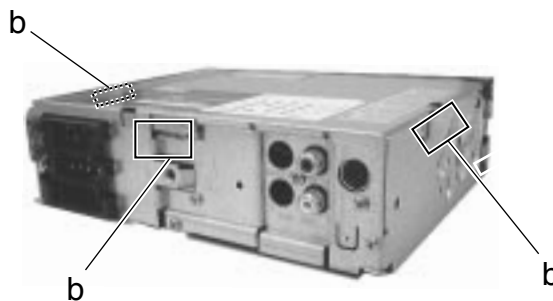


Fig 5

**■ Removing the main board(wiht rear panel)  
(See Fig. 6, Fig. 7)**

- 1.Remove three screws **E** retaining the rear panel to the chassis
- 2.Remove one screw **C** retaining the IC to the heat sink.
- 3.Remove two screws **D** retaining the main board.
- 4.Lift up the main board to remove it.
- 5.Remove two screws **B** to remove the heat sink.

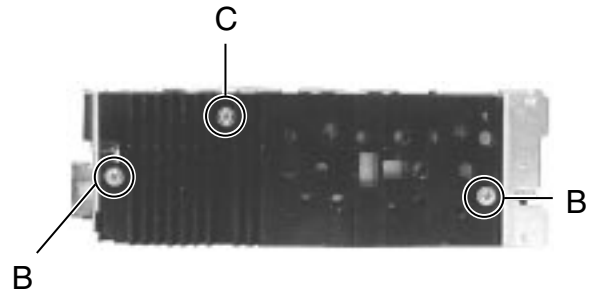


Fig 6

**■ Removing the rear bracket (See Fig. 7)**

- 1.Remove one screw **I** to remove the IC bracket.
- 2.Remove one screw **F** to remove the line-out jack.
- 3.Remove one screw **G** to remove the antenna jack.

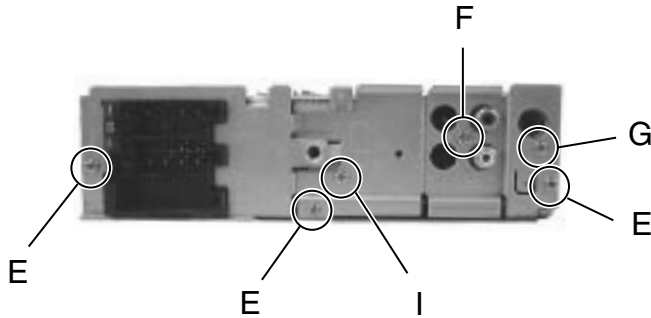


Fig 7-2

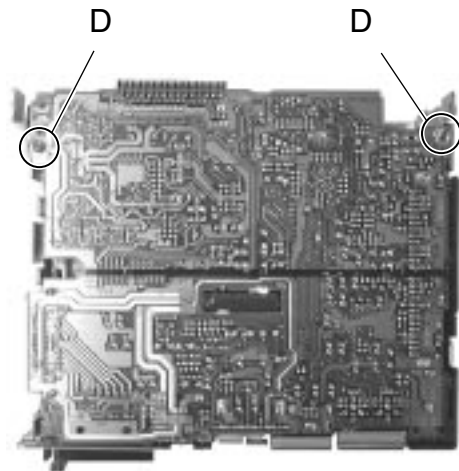


Fig 7-1

**■ CD mechanism assembly (See Fig. 8)**

Remove three mechanism mounting screws **J** retaining the top cover.

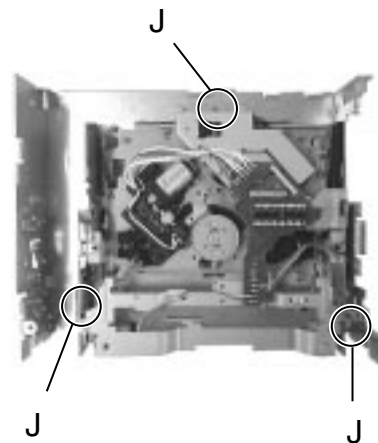


Fig 8

**■ Front panel unit (See Fig.9)**

Remove five screws **K** retaining the rear cover.

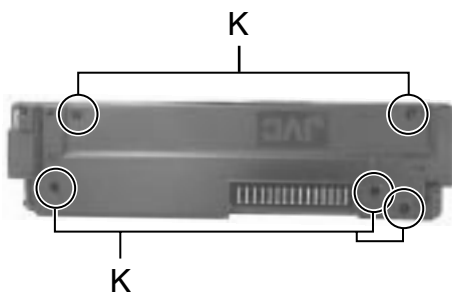


Fig 9

■ **Removing the CD mechanism control board (See Fig.1 and 2)**

Unsolder the part f and g on the CD mechanism control board.

Remove the stator fixing the CD mechanism control board and the damper bracket (To remove the stator smoothly, pick up the center part).

Remove the screw F attaching the CD mechanism control board.

Remove the CD mechanism control board in the direction of the arrow while releasing it from the two damper bracket slots i and the front bracket slot j.

Disconnect the flexible wire from connector on the pickup unit.

**ATTENTION:** Turn the FD gear in the direction of the arrow to move the entire pickup unit to the appropriate position where the flexible wire of the CD mechanism unit can be disconnected easily (Refer to Fig.2).

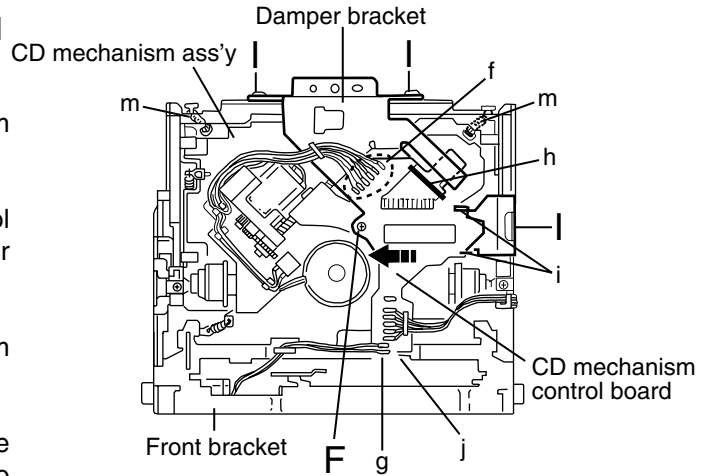


Fig.1

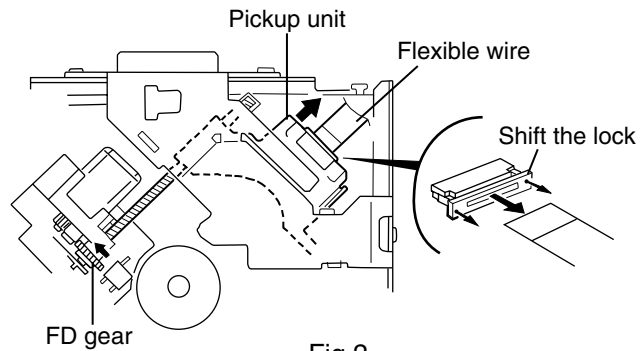


Fig.2

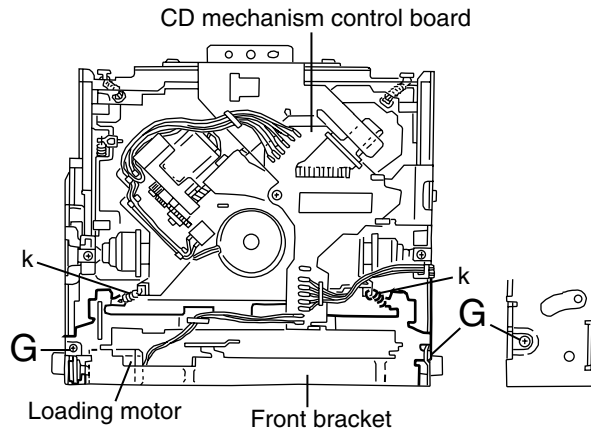


Fig.3

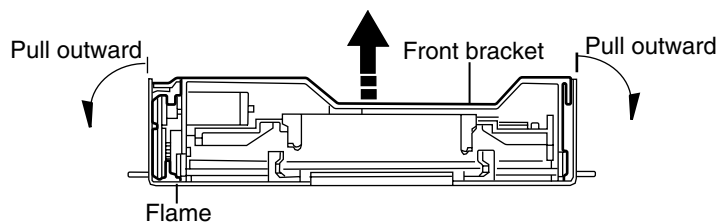


Fig.4

**■ Removing the loading motor**

(See Fig.3 to 5)

\* Prior to performing the following procedure, remove the CD mechanism control board.

1. Remove the two springs k attaching the CD mechanism ass'y and the front bracket.
2. Remove the two screws G and the front bracket while pulling the flame outward.
3. Remove the belt and the screw H from the loading motor.

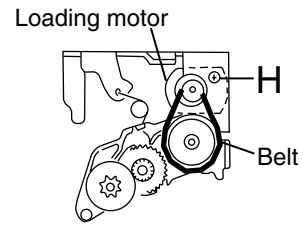


Fig.5

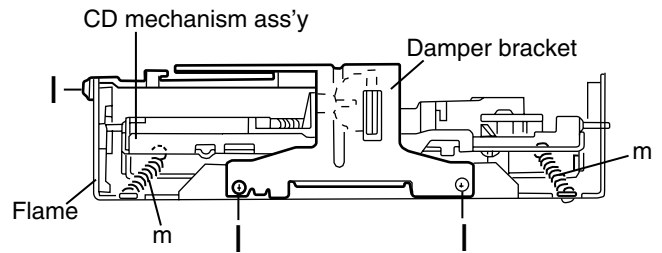


Fig.6

**■ Removing the CD mechanism ass'y**

(See Fig.1, 6 to 9)

\* Prior to performing the following procedure, remove the CD mechanism control PWB and the front bracket (loading motor).

1. Remove the three screws I and the damper bracket.
2. Raise the both sides fix arms and move the fix plates in the direction of the arrow to place the four shafts I as shown in Fig.8 and 9.
3. Remove the CD mechanism ass'y and the two springs m attaching the flame.
4. Remove the two screws J and both sides rear damper brackets from the dampers. Detach the CD mechanism ass'y from the left side to the right side.

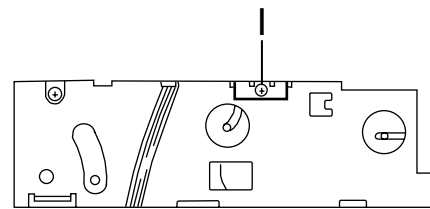


Fig.7

**ATTENTION:** The CD mechanism ass'y can be removed if only the rear damper bracket on the left side is removed.

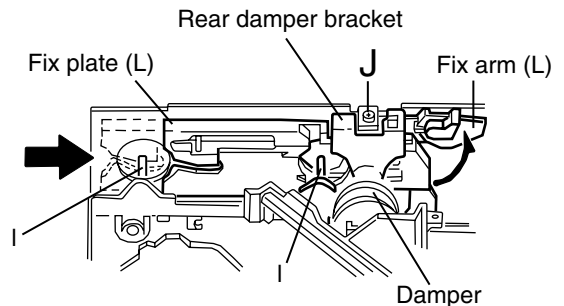


Fig.8

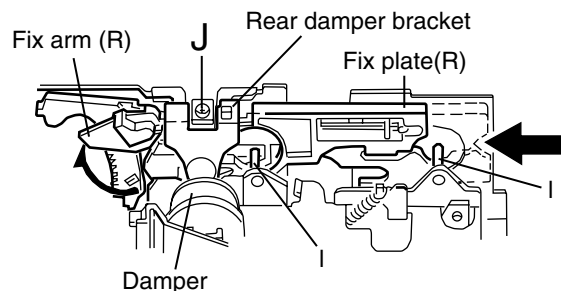


Fig.9

**■ Removing the feed motor ass'y**  
(See Fig.10)

\* Prior to performing the following procedure, remove the CD mechanism control board, the front bracket (loading motor) and the CD mechanism ass'y.

1. Remove the two screws K and the feed motor ass'y.

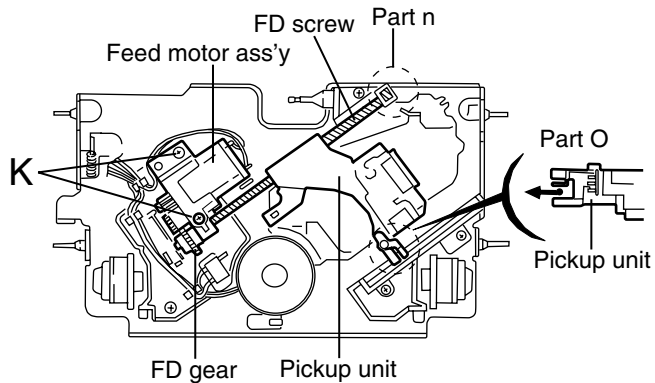


Fig.10

**■ Removing the pickup unit**  
(See Fig.10 and 11)

\* \*Prior to performing the following procedure, remove the CD mechanism control board, the front bracket (loading motor), the CD mechanism ass'y and the feed motor ass'y.

1. Detach the FD gear part of the pickup unit upward. Then remove the pickup unit while pulling out the part n of the FD screw.

ATTENTION: When reattaching the pickup unit, reattach the part o of the pickup unit, then the part n of the FD screw.

2. Remove the screw L attaching the nut push spring plate and the pickup mount nut from the pickup unit. Pull out the FD screw.

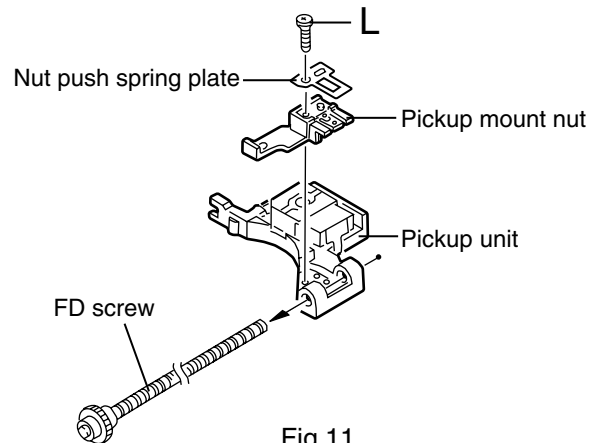


Fig.11

**■ Removing the spindle motor**  
(See Fig.12 and 13)

\* Prior to performing the following procedure, remove the CD mechanism control board, the front bracket (loading motor), the CD mechanism ass'y and the feed motor ass'y.

1. Turn up the CD mechanism ass'y and remove the two springs p on both sides of the clamber arms. Open the clamber arm upward.
2. Turn the turn table, and remove the two screws M and the spindle motor.

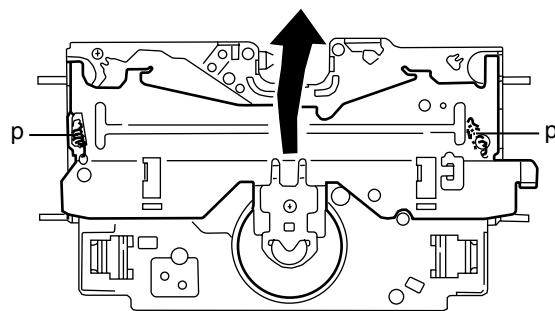


Fig.12

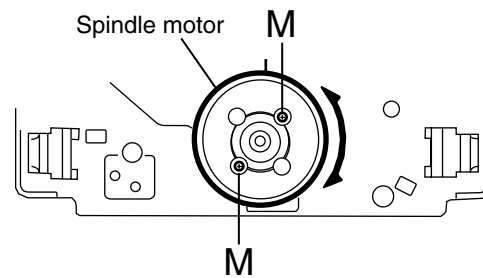


Fig.13



## Adjustment method

### ■ Test instruments required for adjustment

1. Digital oscilloscope(100MHz)
2. AM Standard signal generator
3. FM Standard signal generator
4. Stereo modulator
5. Electric voltmeter
6. Digital tester
7. Tracking offset meter
8. Test Disc JVC:CTS-1000
9. Extension cable for check  
EXTGS004-26P x 1

### ■ Standard volume position

Balance and Bass & Treble volume: Indication "0"  
Loudness: OFF  
BBE : OFF  
Frequency Band

### ■ FM 87.5MHz ~ 108.0MHz

MW 522kHz ~ 1620 kHz  
LW 144kHz ~ 279kHz

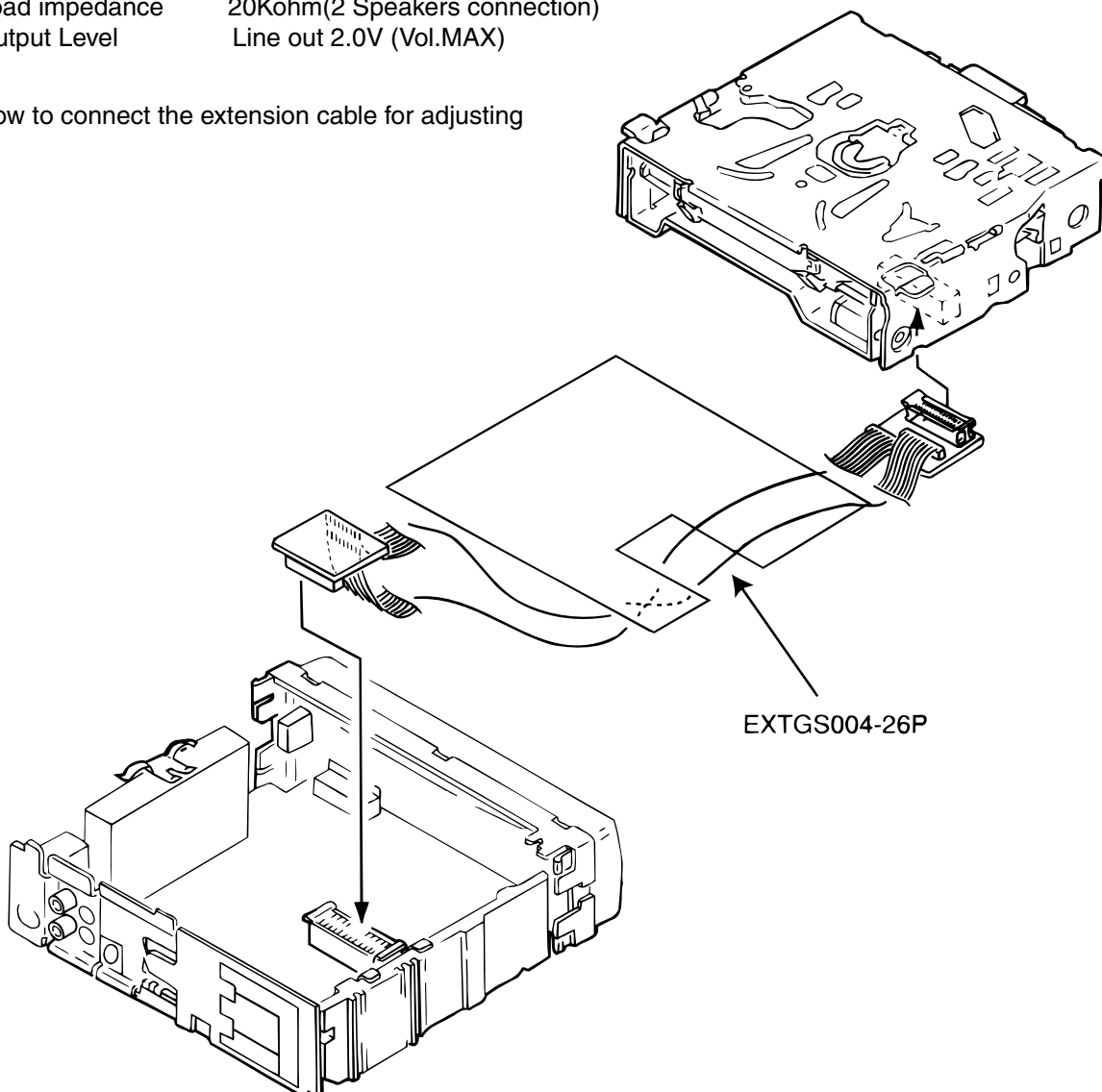
### ■ Dummy load

Exclusive dummy load should be used for AM, and FM, For 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.

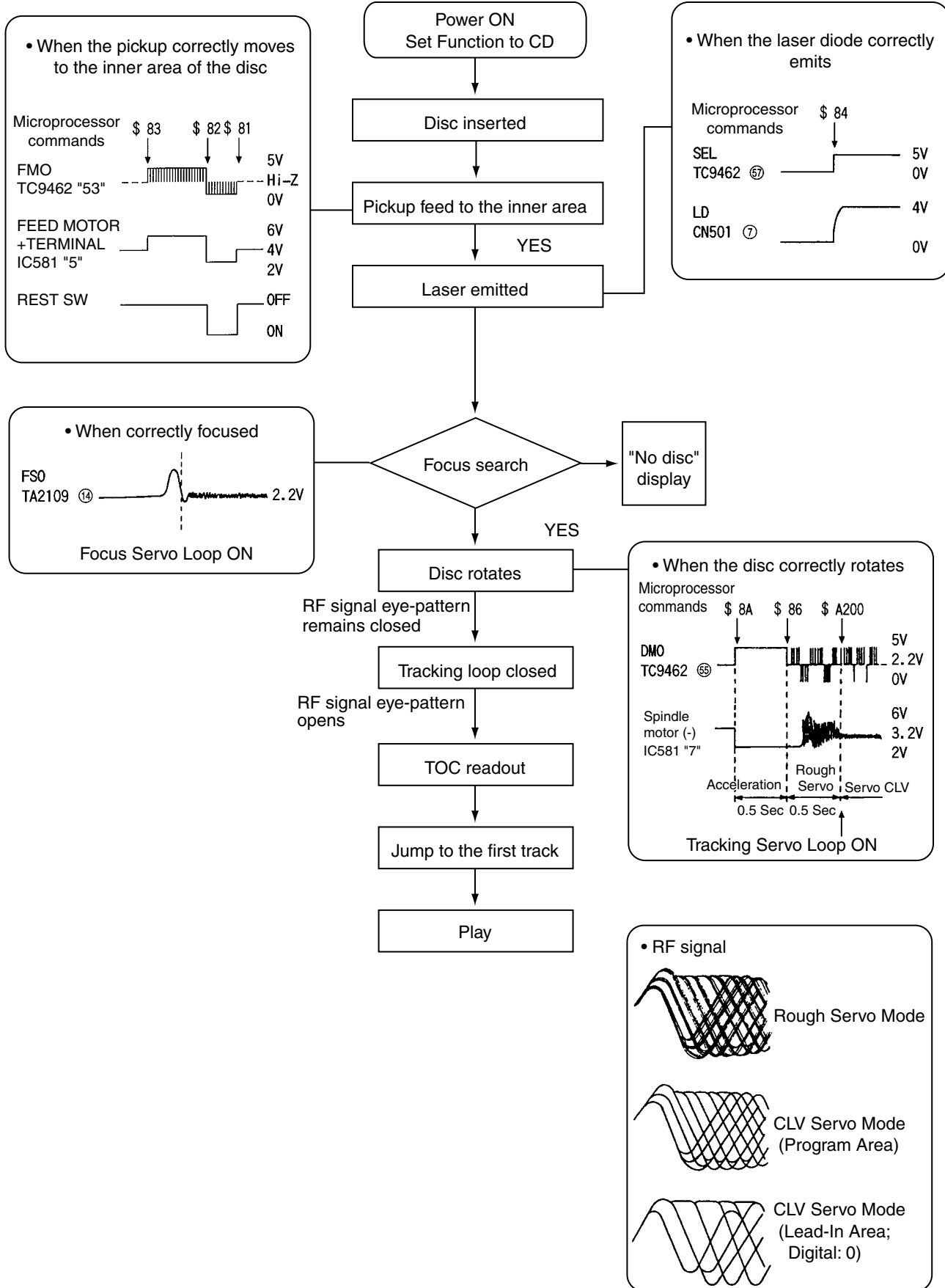
### ■ Standard measuring conditions

Power supply voltage DC14.4V(10.5~16V)  
Load impedance 20Kohm(2 Speakers connection)  
Output Level Line out 2.0V (Vol.MAX)

### ■ How to connect the extension cable for adjusting

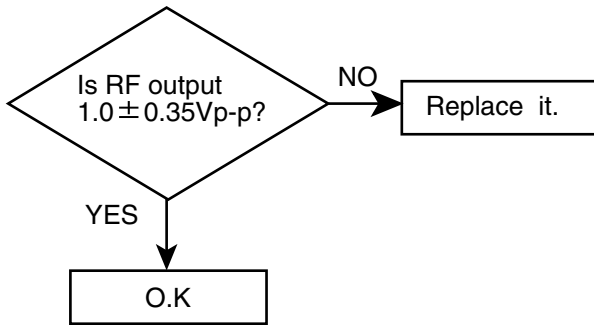


# Flow of functional operation until TOC read



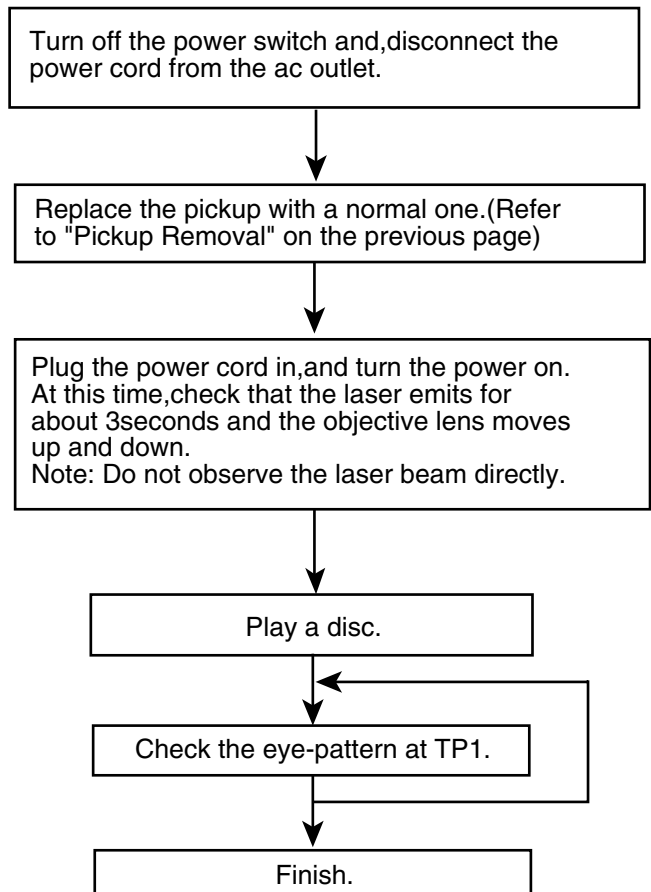
# Maintenance of laser pickup

- (1) Cleaning the pick up lens  
Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.
- (2) Life of the laser diode  
When the life of the laser diode has expired, the following symptoms will appear.
  - (1) The level of RF output (EFM output:amplitude of eye pattern) will be low.



- (3) Semi-fixed resistor on the APC PC board  
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.  
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.  
If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

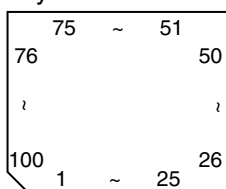
## Replacement of laser pickup



# Description of major ICs

## ■UPD784215AGC126(IC701):DSP controller

### 1. Terminal layout

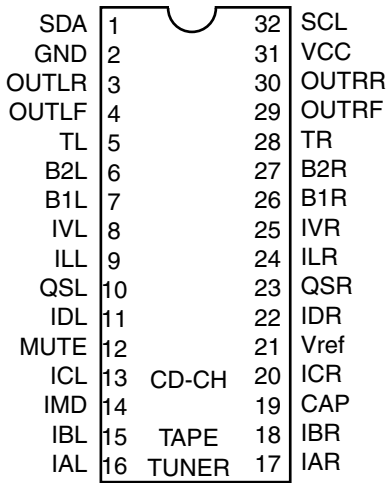


### 2. Pin function

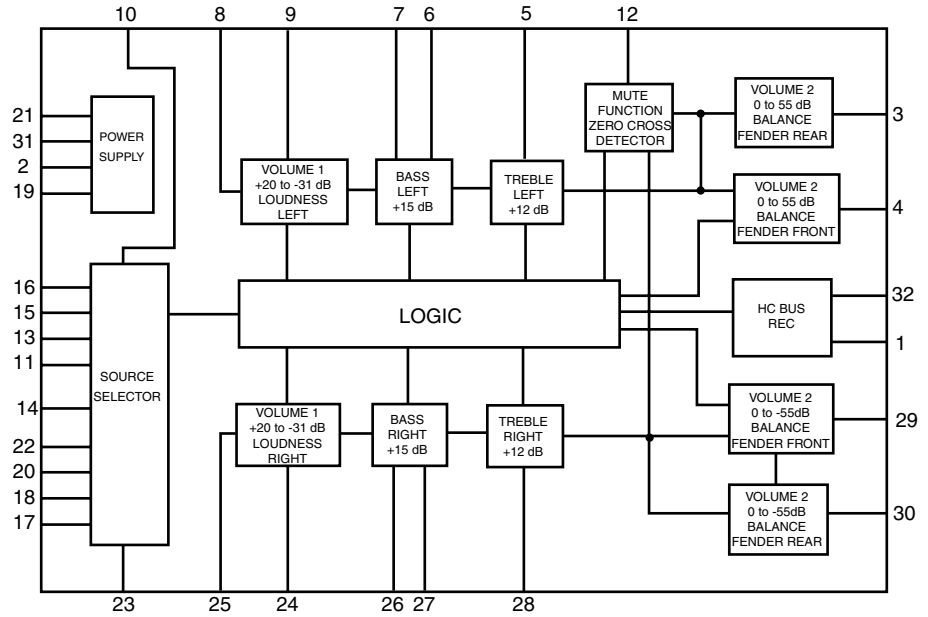
Pin No.	Symbol	I/O	Function
1~8		-	Unused terminal
9	VDD	-	Power supply terminal
10	X2	O	Crystal oscillation terminal 6.14MHz (main clock)
11	X1	I	Crystal oscillation terminal 6.14MHz (main clock)
12	VSS	-	Connects to ground
13	XT2	-	Unused terminal
14	XT1	-	Unused terminal
15	RESET	I	Reset signal input
16	AUTODATA	I	DSP general-purpose port output interrupt
17	LOCK	I	DSP general-purpose port output interrupt
18	DIGITAL0	I	DSP general-purpose port output interrupt
19	FORMAT	I	DSP general-purpose port output interrupt
20	CHANNEL	I	DSP general-purpose port output interrupt
21	ERR	I	DSP general-purpose port output interrupt
22	RSTDET	I	DSP general-purpose port output interrupt
23	AVDD	-	Power supply terminal
24	AVREF0	-	Connects to ground
25~32		-	Connects to ground
33	AVSS	-	Connects to ground
34,35		-	Unused terminal
36		-	Power supply terminal
37,38	RX,TX	-	Unused terminal
39		-	Unused terminal
40	DSPCOM	I	Communication port with IC401
41	DSPSTS	O	Status communication port to IC401
42	DSPCLK	I	Clock input from IC401
43	DSPRDY	I	Ready signal input from IC401
44		-	Unused terminal
45,46	MIDIO_IN/OUT	I/O	DSP-microcomputer I/F
47	MICK	O	Clock signal to IC631
48	MICS	O	Chip selection to IC631
49	MILP	O	DSP-microcomputer I/F
50	MIACK	O	DSP-microcomputer I/F
51,52		-	Unused terminal
53	DSPRST	O	Output of reset signal of DSP
54~63		-	Unused terminal
64,65	CDTI/CDTO	I/O	CODEC-microcomputer I/F
66	CCLK	O	Clock signal to IC601
67	CS	O	Chip selection to IC601
68	XTS	O	OSC selection
69,70		-	Unused terminal
71	PD	O	Reset signal output
72	GND	-	Connects to ground
73~80		-	Unused terminal
81	VDD	-	Power supply terminal
82	3D-ON	-	Unused terminal
83	3D-ON	O	Switches at the output destination of the surround channel
84	ANA/T-TONE	O	Test tone control
85	REF-MIX	O	Control at output destination of LFE channel
86		-	Unused terminal
87	D.MUTE	O	MUTE of digital out terminal
88	S.MUTE	O	Audio signal MUTE
89		-	Unused terminal
90~93	ASW1~4	O	Digital input selection
94	TEST	-	Test terminal
95~100		-	Unused terminal

**TEA6320T-X (IC161) : E.volume**

1.Pin layout



2.Block diagram

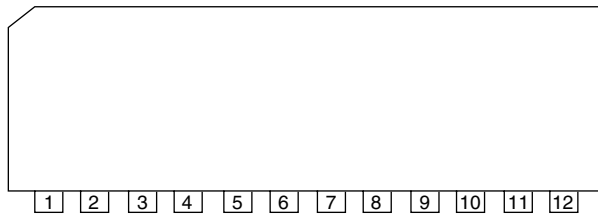


3.Pin functions

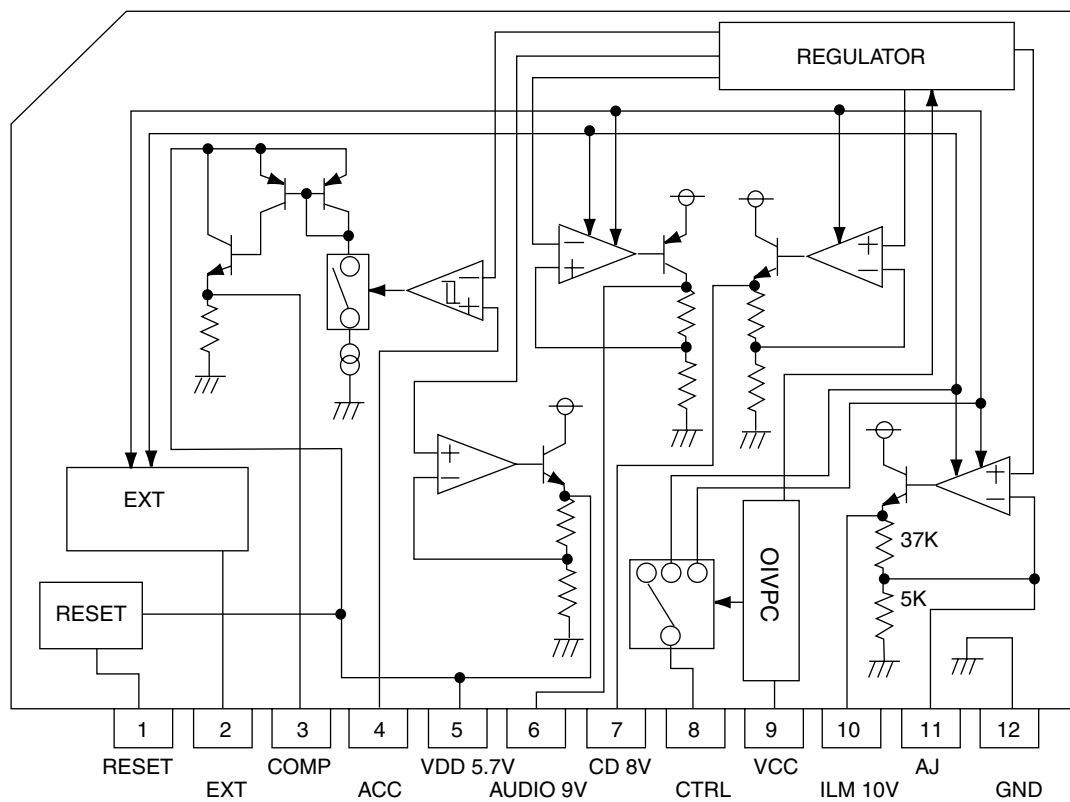
Pin No.	Symbol	I/O	Functions	Pin No.	Symbol	I/O	Functions
1	SDA	I/O	Serial data input/output.	17	IAR	I	Input A right source.
2	GND	-	Ground.	18	IBR	I	Input B right source.
3	OUTLR	O	output left rear.	19	CAP	-	Electronic filtering for supply.
4	OUTLF	O	output left front.	20	ICR	I	Input C right source.
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.

■ BA4905-V3 (IC901) : Regulator

1. Terminal layout



2. Block diagram



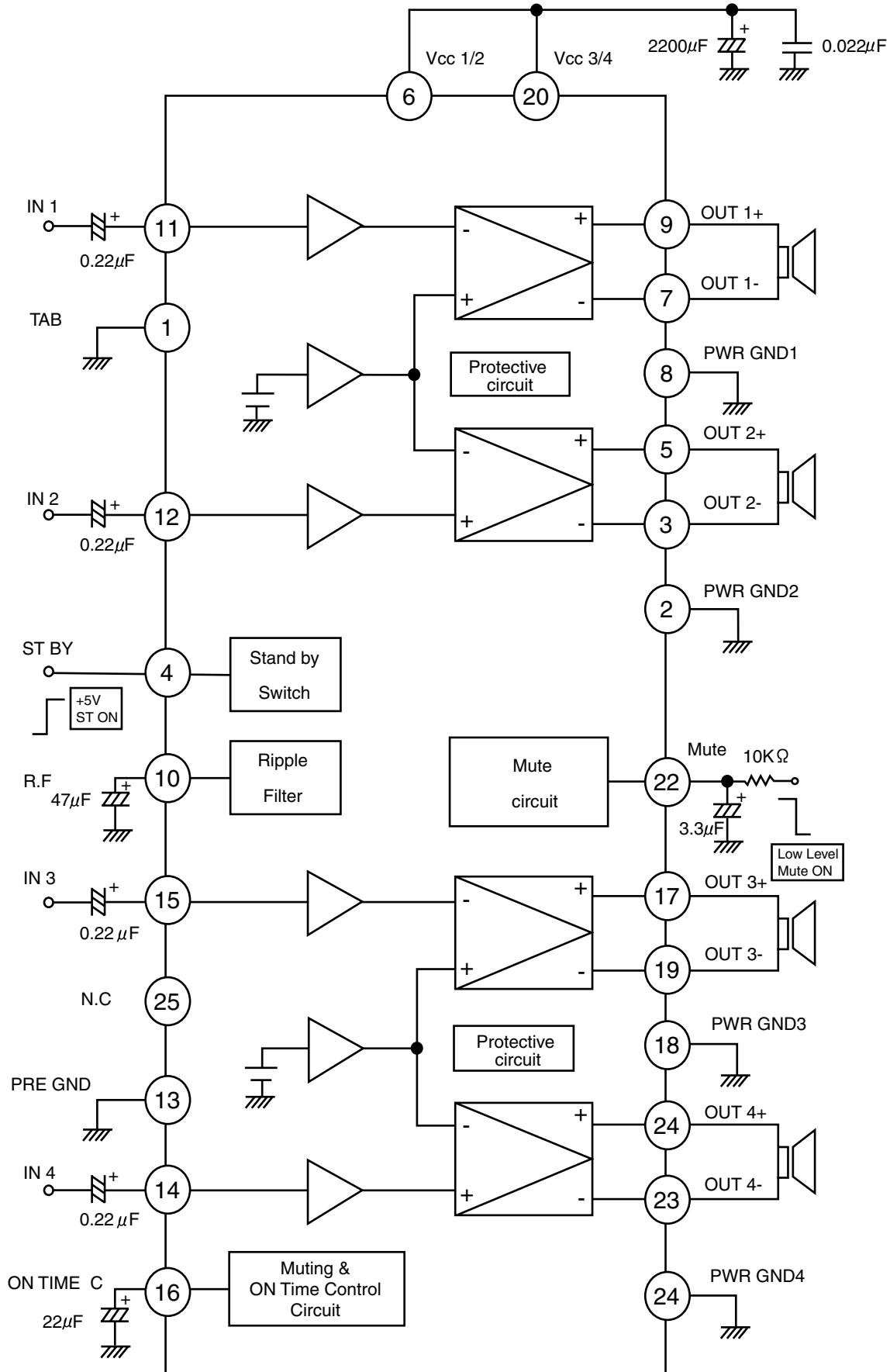
## © Explanation of terminals

BA4905-V3

1	RESET	If VDD voltage becomes 4V or less, RESET output becomes low level.
2	EXT output	This output voltage is approximately 0.5V lower than VCC, and max output current is 300mA.
2	COMP output	A voltage supply for ACC block this output voltage is approximately 0.7V lower than VDD'S. The max output current is 100mA.
4	ACC	Control of the COMP output by inputting voltage.
5	VDD output	This output voltage is 5.7V, and max output current is 100mA. This voltage supply is for microcomputer. Whenever block up voltage supply is connected. the output keeps on running.
6	AUDIO output	This output voltage is 9.0V, and max output current is 500mA. This voltage supply for AUDIO.
7	CD output	This output voltage is 8.0V, and max output current is 1A. This voltage supply for CD.
8	CTRL	Output selector of CD, AUDIO,ILM and EXT.
9	VCC	To be connected with the BACK UP of car.
10	ILM output	This output voltage is 10V, and max output current is 500mA. Output voltage is adjustable.
11	AJ	Putting a resistance between ILM and AJ or between AJ and GND makes ILM output voltage adjustable.
12	GND	Ground.

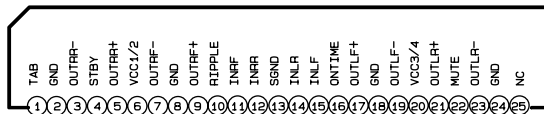
■ LA4743B(IC301):Power AMP

1.Block diagram





2. Terminal layout

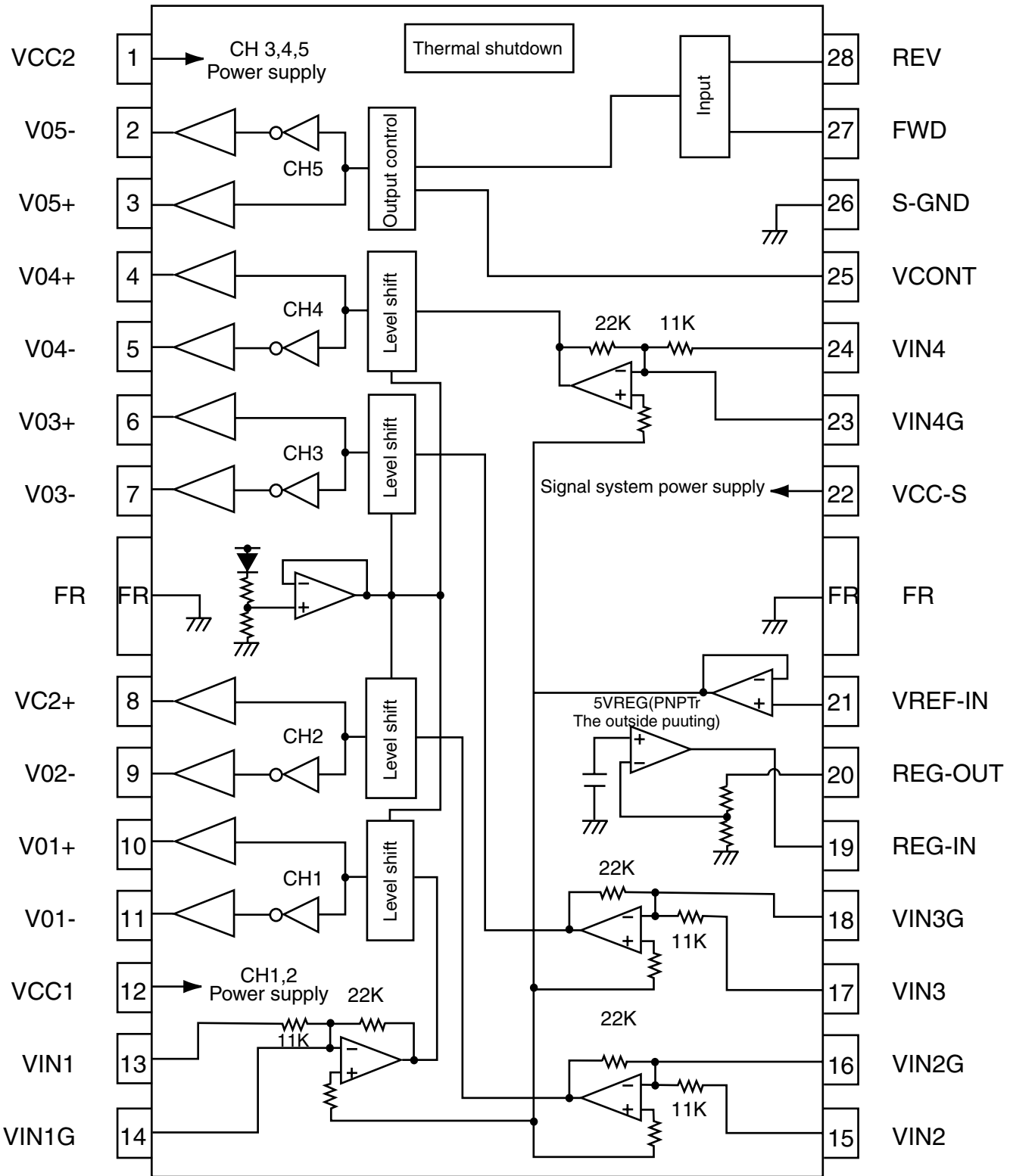


3. Pin function

Pin No.	Symbol	Function
1	TAB	Header of IC
2	GND	Power GND
3	OUTRR-	Outpur(-) for front Rch
4	STBY	Stand by input
5	OUTRR+	Output (+) for front Rch
6	VCC1/2	Power input
7	OUTRF-	Output (-) for rear Rch
8	GND	Power GND
9	OUTRF+	Output (+) for rear Rch
10	RIPPLE	Ripple filter
11	INRF	Rear Rch input
12	INRR	Front Rch input
13	SGND	Signal GND
14	INLR	Front Lch input
15	INLF	Rear Lch input
16	ONTIME	Power on time control
17	OUTLF+	Output (+) for rear Lch
18	GND	Power GND
19	OUTLF-	Output (-) for rear Lch
20	VCC3/4	Power input
21	OUTLR+	Output (+) for front
22	MUTE	Muting control input
23	OUTLR-	Output (-) for front
24	GND	Power GND
25	NC	Non connection

■ LA6567H-X(IC501):CD DRIVE

1.Pin layout & blockdiagram



## 2. Pin function

LA6567H-X(2/2)

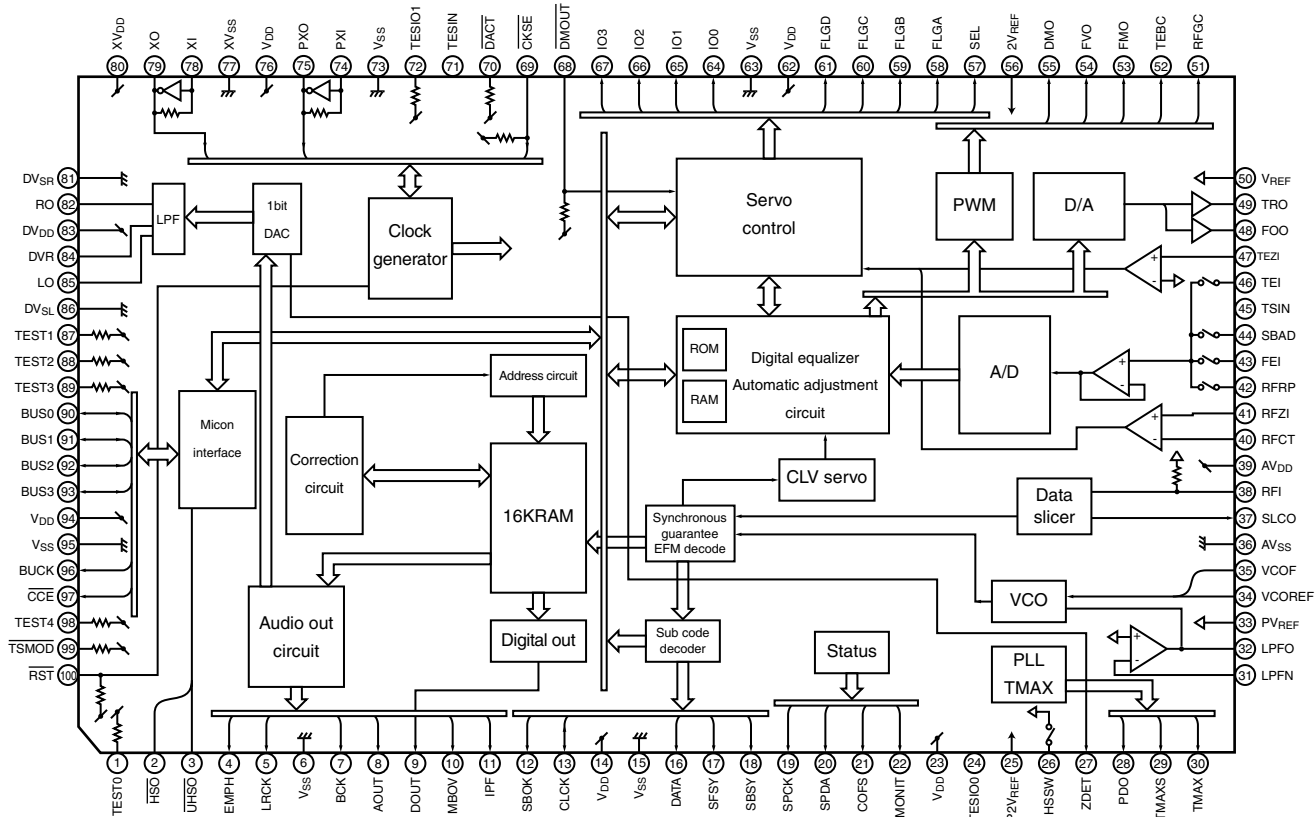
Pin no.	Symbol	Function
1	VCC2	CH3,4,5 Power supply( It is short with VCC1,VCC-S)
2	V05-	Loading output(-)
3	V05+	Loading terminal (+)
4	V04+	CH4 Output terminal(+)
5	V04-	CH4 Output terminal(-)
6	V03+	CH3 Output terminal(+)
7	V03-	CH3 Output terminal(-)
8	V02+	CH2 Output terminal(+)
9	V02-	CH2 Output terminal(-)
10	V01+	CH1 Output terminal(+)
11	V01-	CH1 Output terminal(-)
12	VCC1	CH1,2(BTL) Power supply(It is short with VCC-S,VCC2)
13	VIN1	CH1 Input terminal
14	VIN1G	CH1 Input terminal(For gain adjustment)
15	VIN2	CH2 Input terminal
16	VIN2G	CH2 Input terminal(For gain adjustment)
17	VIN3	CH3 Input terminal
18	VIN3G	CH3 Input terminal(For gain adjustment)
19	REG-IN	Regulator terminal(Outside putting PNP base)
20	REG-OUT	Regulator terminal(Outside putting PNP collector)
21	VREF-IN	Standard voltage input terminal
22	VCC-S	Signal system power supply(It is short with VCC1,VCC2)
23	VIN4G	CH4 Input terminal(For gain adjustment)
24	VIN4	CH4 Input terminal
25	VCONT	5CH(VLO) Output voltag set terminal
26	S-GND	Signal system GND
27	FWD	5CH(VLO)Signal output switch terminal(FWD),Input of logic of loading part 5CH(VLO)Signal output switch terminal(REV),
28	REV	Input of logic of loading part

\* Frame(FR)at the center bocomes system GND power.

\* Please be short-circuited on the outside and use the terminal of the power supply system and three teminals of VCC-S, VCC1,VCC2.

**TC9462F(IC541):**

1.Pin layout & Block Diagram



2.Pin function

PIN No.	SYMBOL	I/O	FUNCTIONAL DESCRIPTION	REMARKS															
1	TEST0	I	Test mode terminal. Normally, Keep at open.	With pull-up resistor.															
2	HSO	O	Playback speed mode flag output terminal.	-															
			<table border="1"> <thead> <tr> <th>UHSO</th> <th>HSO</th> <th>PLAYBACK SPEED</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>H</td> <td>Normal</td> </tr> <tr> <td>H</td> <td>L</td> <td>2 times</td> </tr> <tr> <td>L</td> <td>H</td> <td>4 times</td> </tr> <tr> <td>L</td> <td>L</td> <td>--</td> </tr> </tbody> </table>		UHSO	HSO	PLAYBACK SPEED	H	H	Normal	H	L	2 times	L	H	4 times	L	L	--
			UHSO		HSO	PLAYBACK SPEED													
			H		H	Normal													
H	L	2 times																	
L	H	4 times																	
L	L	--																	
3	UHSO	O																	
4	EMPH	O	Subcode Q data emphasis flag output terminal. Emphasis ON at "H" level and OFF at "L" level. The output polarity can invert by command.	--															
5	LRCK	O	Channel clock output terminal. (44.1kHz) L-ch at "L" level and R-ch at "H" level. the output polarity can invert by command.	--															
6	VSS	--	Digital GND terminal.	--															
7	BCK	O	Bit clock output terminal. (1.4122MHz)	--															
8	AOUT	O	Audio data output terminal.	--															
9	DOUT	O	Digital data output terminal.	--															
10	MBOV	O	Buffer memory over signal output terminal. Over at "H" level.	--															
11	IPF	O	Correction flag output terminal. At "H" level, AOUT output is made to correction impossibility by C2 correction processing.	--															
12	SBOK	O	Subcode Q data CRCC check adjusting result output terminal. The adjusting result is OK at "H" level.	--															
13	CLCK	I/O	Subcode P~W data reabout clock input/output terminal. This terminal can select by command bit.	--															
14	VDD	--	Digital power supply voltage terminal.	--															
15	VSS	--	Digital GND terminal.	--															
16	DATA	O	Subcode P~W data output terminal.	--															
17	SFSY	O	Play-back frame sync signal output terminal.	--															
18	SBSY	O	Subcode block sync signal output terminal.	--															
19	SPCK	O	Processor status signal reabout clock output terminal.	--															
20	SADA	O	Processor status signal output terminal.	--															
21	COFS	O	Correction frame clock output terminal. (7.35kHz)	--															
22	MONIT	O	Internal signal (DSP internal flag and PLL clock) output terminal. Selected by command. This terminal output the text data with serial by command.	--															
23	VDD	--	Digital power supply voltage terminal.	--															
24	TESIO0	I	Test input/output terminal. Normally, keep at "L" level. The terminal that inputted the clock for read of text data by command.	--															
25	P2VREF	--	PLL double reference voltage supply terminal.	--															

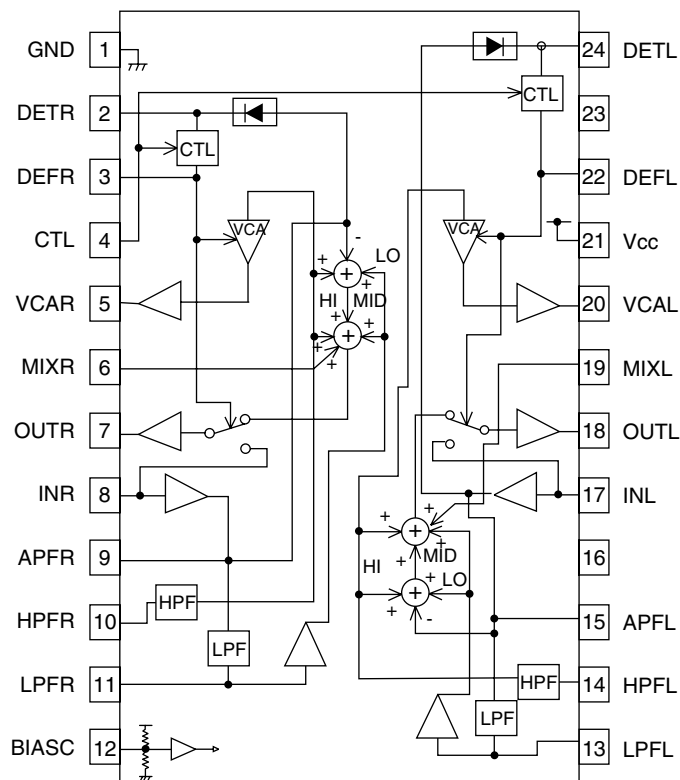
## 2.Pin Function (2/2)

TC9462F

Pin No.	Symbol	I/O	Function
40	RFCT	I	RFRP signal center level input terminal
41	RFZI	I	RFRP zero cross input terminal
42	RFRP	I	RF ripple signal input terminal
43	FEI	I	Focus error signal input terminal
44	SBAD	I	Sub-beam adder signal input terminal
45	TSIN	I	Test input terminal Normally, keep at "vref" level
46	TEI	I	Tracking error signal input terminal. Take in at tracking servo ON.
47	TEZI	I	Tracking error zero cross input terminal
48	FOO	O	Focus servo equalizer output terminal
49	TRO	O	Tracking servo equalizer output terminal
50	VREF	-	Analog reference voltage supply terminal
51	RFGC	O	RF amplitude adjustment control signal output terminal
52	TEBC	O	Tracking balance control signal output terminal
53	FMO	O	Feed equalizer output terminal
54	FVO	O	Speed error signal or feed search equalizer output terminal
55	DMO	O	Disk equalizer output terminal (PWM carrier=88.2kHz for DSP, Synchronize to PXO)
56	2VREF	-	Analog double reference voltage supply terminal
57	SEL	O	APC circuit ON/OFF indication signal output terminal
58~61	FLGA~D	O	External flag output terminal for internal signal
62	VDD	-	Digital power supply voltage terminal
63	VSS	-	Digital GND terminal
64~67	IO0~3	I/O	General I/O terminal
68	DMOUT	I	This terminal control IO0~IO3 terminal
69	CKSE	I	Normally, keep at open
70	DACT	I	DAC test mode terminal. Normally, keep at open
71	TESIN	I	Test input terminal, Normally, keep at "L" level
72	TESIO1	I	Test input/output terminal. Normally, keep at "L" level
73	VSS	-	Digital GND terminal
74	PXI	I	Crystal oscillator connecting input terminal for DSP
75	PXO	O	Crystal oscillator connecting output terminal for DSP
76	VDD	-	Digital power supply voltage terminal
77	XVSS	-	Oscillator GND terminal for system clock
78	XI	I	Crystal oscillator connecting input terminal for system clock
79	XO	O	Crystal oscillator connecting output terminal for system clock
80	XVDD	-	Oscillator power supply voltage terminal for system clock
81	DVSR	-	Analog GND terminal for DA converter (Rch)
82	RO	O	R channel data forward output terminal
83	DVDD	-	Analog supply voltage terminal for DA converter
84	DVR	-	Reference voltage terminal for DA converter
85	LO	O	L channel data forward output terminal
86	DVSL	-	Analog GND terminal for DA converter (Lch)
87~89	TEST1~3	I	Test mode terminal . Normal keep at open
90~93	BUS0~3	I/O	Micon interface data input/output terminal
94	VDD	-	Digital power supply voltage terminal
95	VSS	-	Digital GND terminal
96	BUCK	I	Micon interface clock input terminal
97	CCE	I	Command and data sending/receiving chip enable signal input terminal
98	TEST4	I	Test mode terminal. Normal, keep at open
99	TSMOD	I	Local test mode selection terminal
100	RST	I	Reset signal input terminal. Reset at "L" level

**BA3880FS-X(IC181) : BBE**

1. Pin layout & Block Diagram

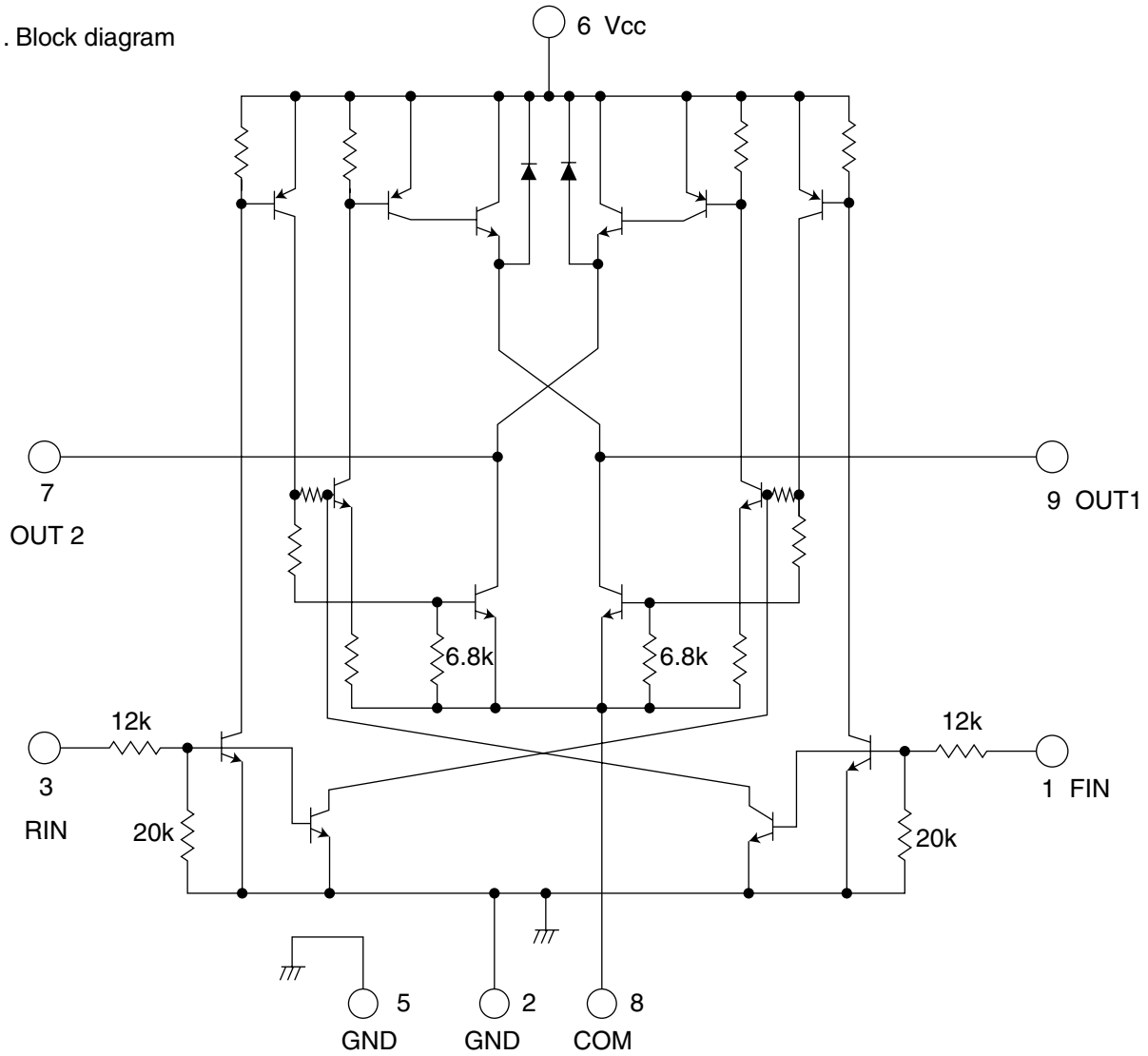


2. Pin Functions

Pin No.	Symbole	Function	Pin No.	Symbole	Function
1	GND	Grounding terminal	13	LPFL	LPF output terminal
2	DETR	Peak level detector output for treble VCA control	14	HPFL	HPF output terminal
3	DEFR	Control signal time constant terminal	15	APFL	Input inversion amplifier output terminal
4	CTL	Control signal input terminal	16		Non connector
5	VCAR	Treble CA output terminal	17	INL	Signal input terminal
6	MXIR	Output MIX amplifier summing terminal	18	OUTL	Signal output terminal
7	OUTR	Signal output terminal	19	MIXL	Output MIX amplifier summing terminal
8	INR	Signal input terminal	20	VCAL	Treble CA output terminal
9	APFR	Input inversion amplifier output terminal	21	VCC	Power supply terminal
10	HPFR	HPF output terminal	22	DEFL	Control signal time constant terminal
11	LPFR	LPF output terminal	23		Non connector
12	BIAS	Reference voltage output terminal (1/2 Vcc)	24	DETL	Peak level detector output for treble VCA control

■ BA6218 (IC591) : Motor driver

1. Block diagram

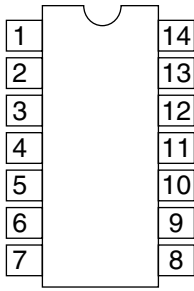


2. Function truth table

3Pin (IN)	1Pin (IN)	7Pin (OUT)	9Pin (OUT)
H	L	H	H
L	H	H	L
H	H	L	L
L	L	OPEN	OPEN

■ HD74HC126FP-X (IC801) : Buffer

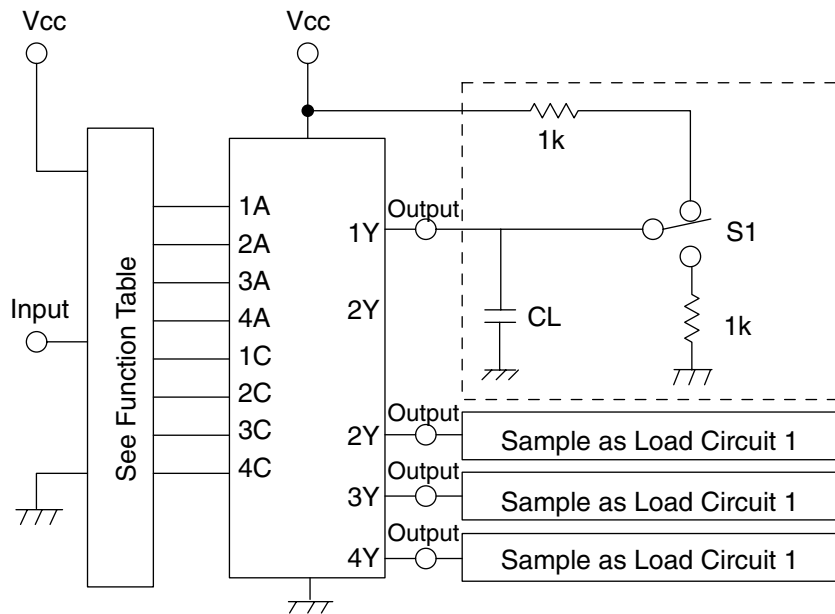
1. Terminal layout



3. Pin function

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

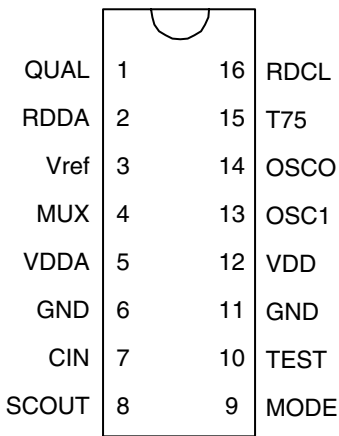
2. Block diagram





■ SAA6579T-X(IC71):RDS Detector

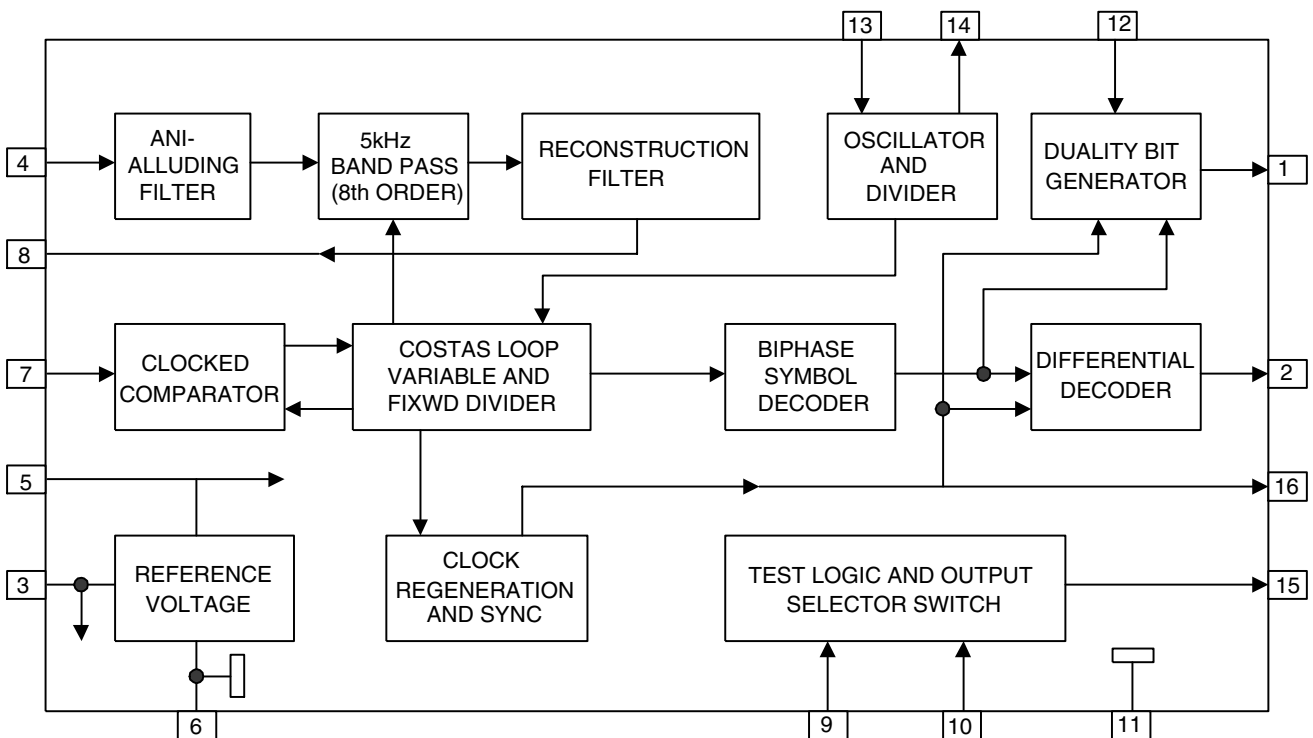
1.Terminal Layout



2.Pin Function

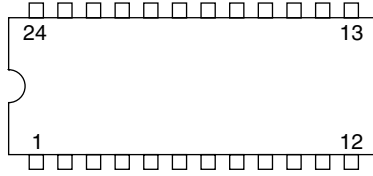
Pin No.	Symbol	I/O	Function
1	QUAL	-	Non connect
2	RDDA	O	RDS data output
3	Vref	O	Reference voltage output
4	MUX	I	Multiplex signal input
5	VDDA	-	+5V Supply voltage for analog
6	GND	-	Ground for analog part (0V)
7	CIN	I	Sub carrier output of reconstruction filter
8	SCOUT	O	Ground for digital part (0V)
9	MODE	-	Ground for digital part (0V)
10	TEST	-	Ground for digital part (0V)
11	GND	-	Ground for digital part (0V)
12	VDD	-	+5V supply voltage for digital part
13	OSC1	I	Oscillator input
14	OSC0	O	Oscillator output
15	T75	-	Non connect
16	RDCL	O	RDS clock output

3.Block Diagram

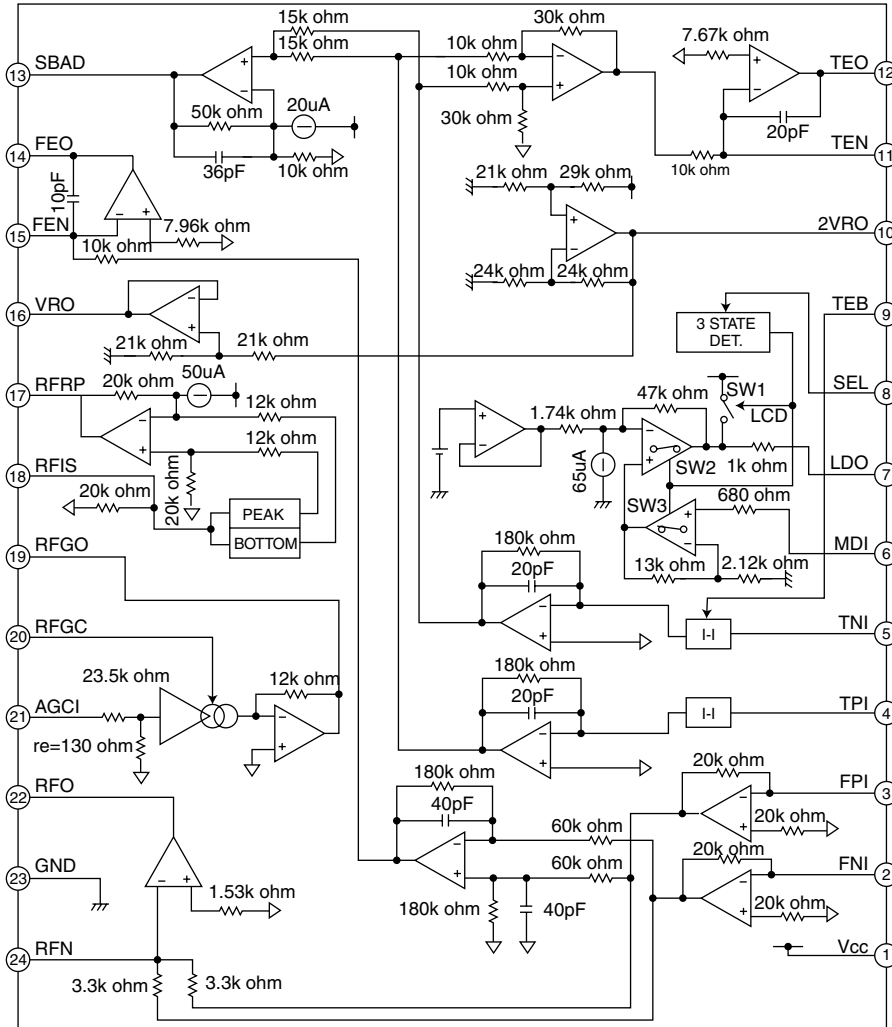


■ TA2109F-X (IC521) : RF amp.

1. Pin layout



2. Block diagram

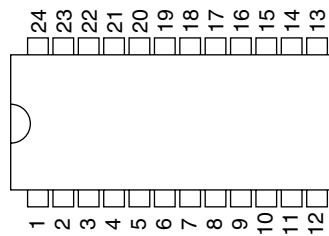


3. Pin function

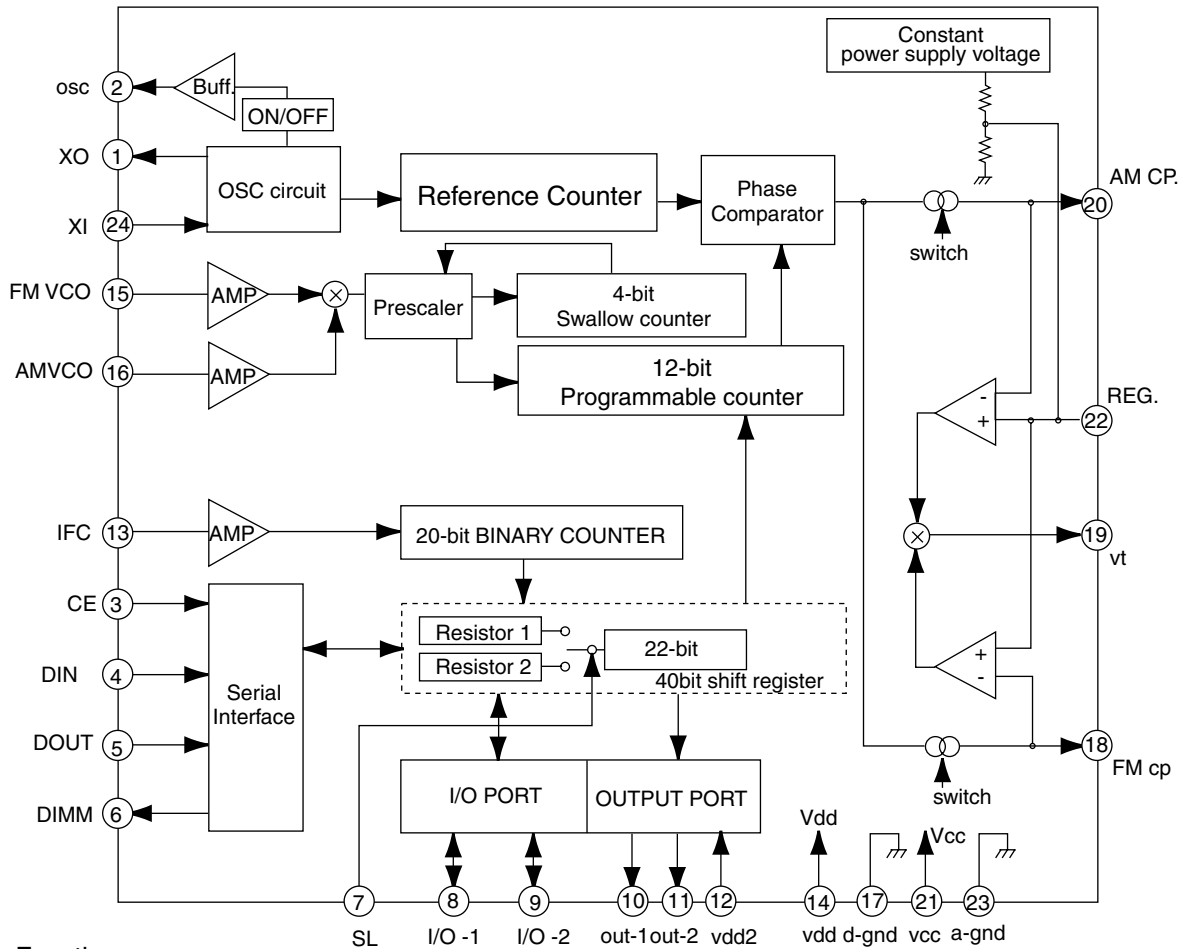
Pin No.	Symbol	I/O	Pin function	Pin No.	Symbol	I/O	Pin function
1	Vcc	-	Power supply input terminal	13	SBAD	O	Sub beam adder signal output terminal
2	FNI	I	Main beam I-V amp input terminal	14	FEO	O	Focus error signal output terminal
3	FPI	I	Main beam I-V amp input terminal	15	FEN	I	FE amp negative input terminal
4	TPI	I	Sub beam I-v input terminal	16	VRO	O	Reference voltage (VREF) output terminal
5	TNI	I	Sub beam I-V input terminal	17	RFRP	O	Track count signal output terminal
6	MDI	I	Monitor photo diode amp input terminal	18	RFIS	I	RFRP detect circuit input terminal
7	LDO	O	Laser diode amp output terminal	19	RFGO	O	RF gain signal output terminal
8	SEL	I	Laser diode control signal input terminal	20	RFGC	I	RF amplitude adj. control signal input terminal
9	TEB	I	T. error balance adj. signal input terminal	21	AGCI	I	RF signal amplitude adj. amp input terminal
10	2VRO	O	Reference voltage output terminal	22	RFO	O	RF signal output terminal
11	TEN	I	TE amp negative input terminal	23	GND	-	Ground terminal
12	TEO	O	TE error signal output terminal	24	RFN	I	RF amp negative input terminal

**■TB2118F-X (IC31) : PLL**

1. Terminal Layout



2. Block diagram

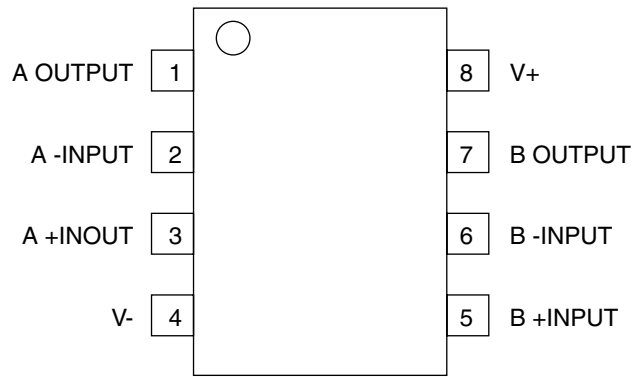


3. Pin Function

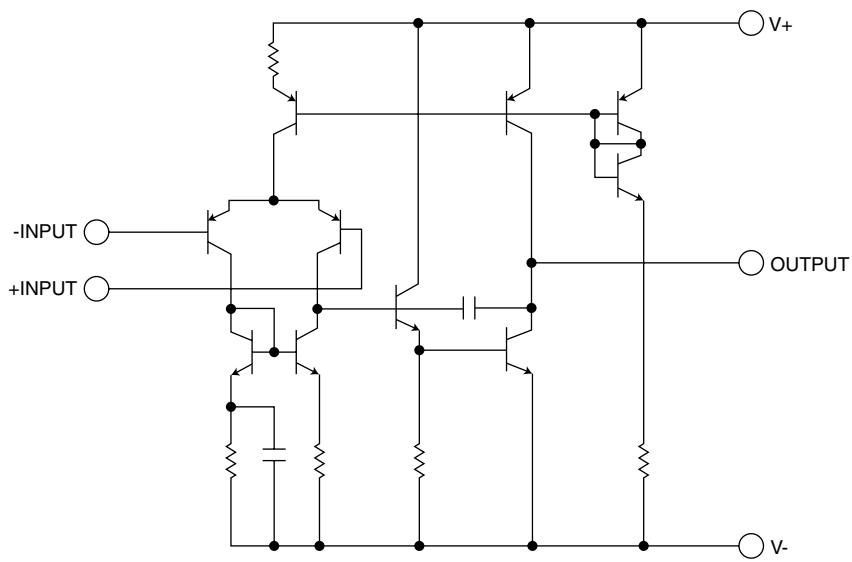
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XOUT	O	Crystal oscillator pin	13	IFC	I	IF signal input
2	OSC	-	Non connect	14	VDD	-	Power pins for digital block
3	CE	I	Chip enable input	15	FMIN	I	FM band local signal input
4	DI	I	Serial data input	16	AMIN	I	AM band local signal input
5	CK	I	Clock input	17	DGND	-	Connect to GND (for digital circuit)
6	DOUT	O	Serial data output	18	FMCP	O	Charge pump output for FM
7	SR	O	Register control pin	19	VT	-	Tuning voltage biased to 2.5V.
8	I/O1	I/O	I/O ports	20	AMCP	O	Charge pump output for AM
9	I/O2	I/O	I/O ports	21	VCC	-	Power pins for analog block
10	OUT1	-	Non connect	22	RF	I	Ripple filter connecting pin
11	OUT2	-	Non connect	23	AGND	-	Connect to GND (for analog circuit)
12	VDD2	-	Single power supply for REF. frequency block	24	XIN	I	Crystal oscillator pin

■ NJM2100M-WE (IC861) : Cruise

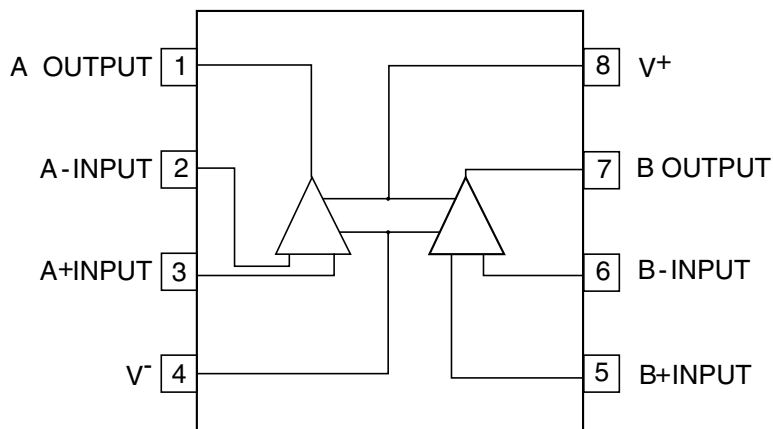
1. Pin layout



2. Block diagram

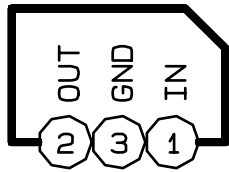


■ NJM4565M-WE (IC581,IC171) : Ope. amp

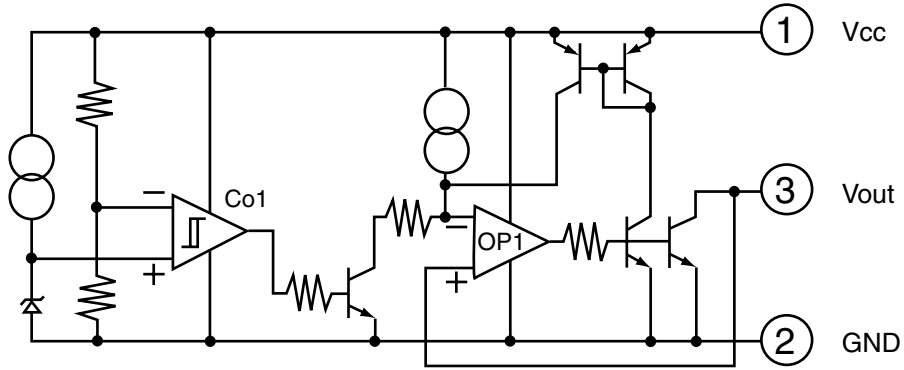


■ IC-PST600M/G/-W1197(IC702):Reset

1.Terminal layout

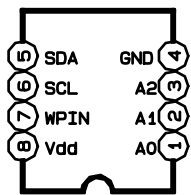


2.Block diagram

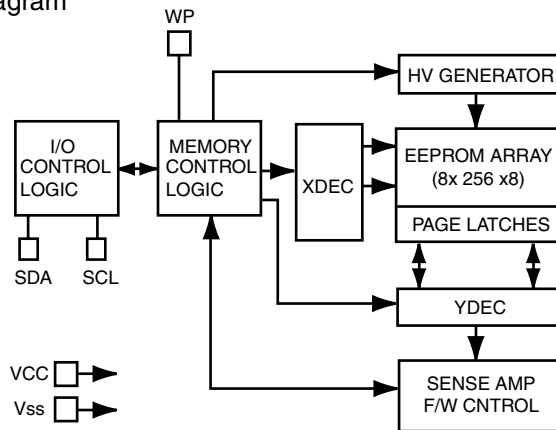


■ M24C16-WMN6-X(IC771):EPROM

1.Terminal layout



2.Block diagram



3.Pin function

Pin No.	Symbol	Function
1 ~ 3	A0 ~ A2	No internal connection
4	GND	+2.5V to 5.5V Power supply
5	SDA	Write protect input
6	SCL	Serial clock
7	WPIN	Serial address / data I/O
8	Vdd	Ground

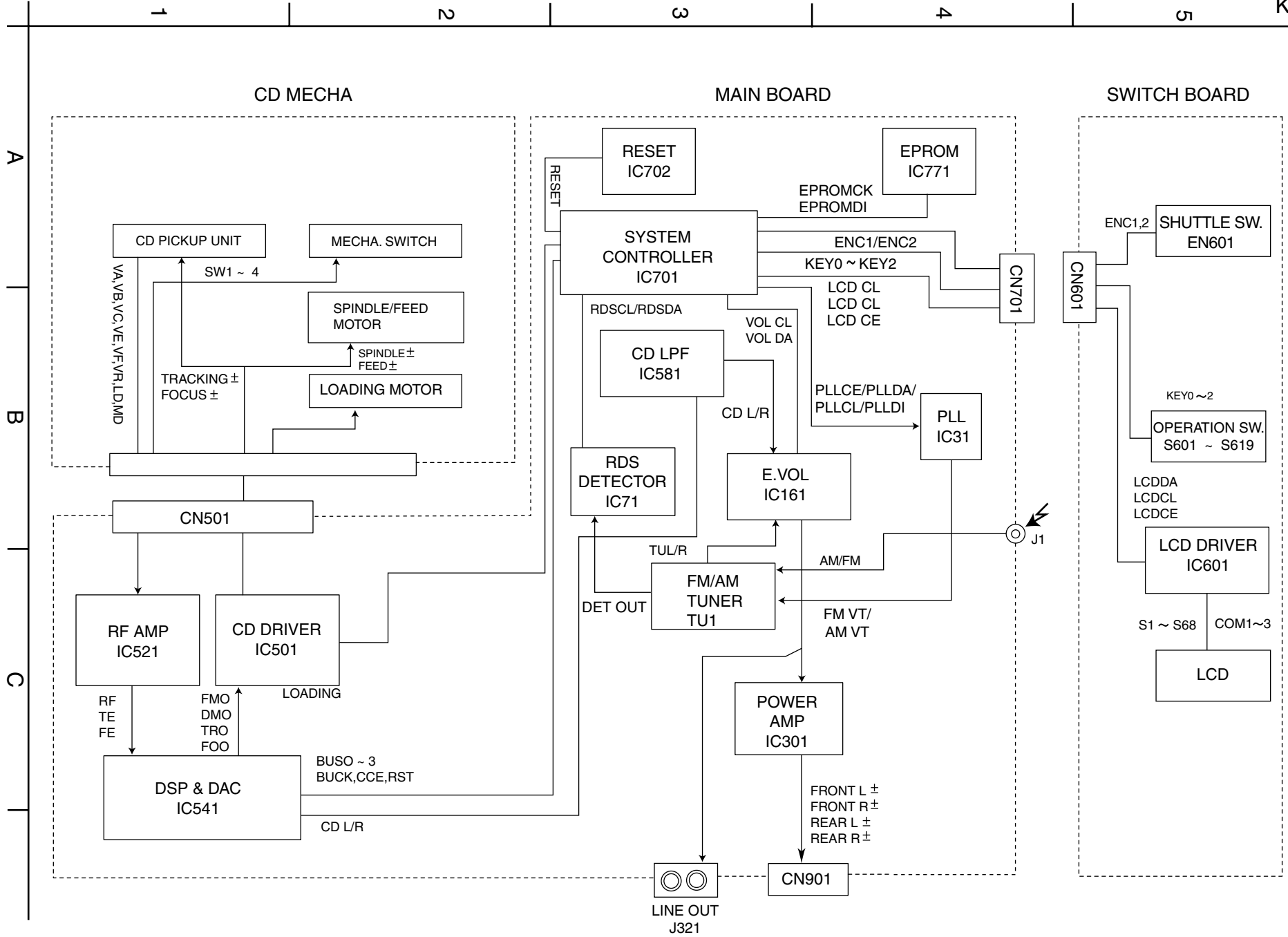
**JVC**

VICTOR COMPANY OF JAPAN, LIMITED

MOBILE ELECTRONICS DIVISION

PERSONAL & MOBILE NETWORK BUSINESS UNIT. 10-1,1Chome,Ohwatari-machi,Maebashi-city,Japan

Block diagram



**< MEMO >**



# Standard schematic diagrams

## Main amp.section

- NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL CONDITION—FM MODE. □ AM MODE. ( ) CD MODE.
  2. UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE 1/10W ±5% METAL GLAZE RESISTOR. ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR. ALL RESISTANCE VALUES ARE IN OHM. ALL CAPACITANCE VALUES ARE IN UF(PF) UNLESS OTHERWISE SPECIFIED. ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(UF)/RATED VOLTAGE(V) TF --- T. F. CAPACITOR
  3. COMPONENTS IN ( ) INDICATE NOT USE.

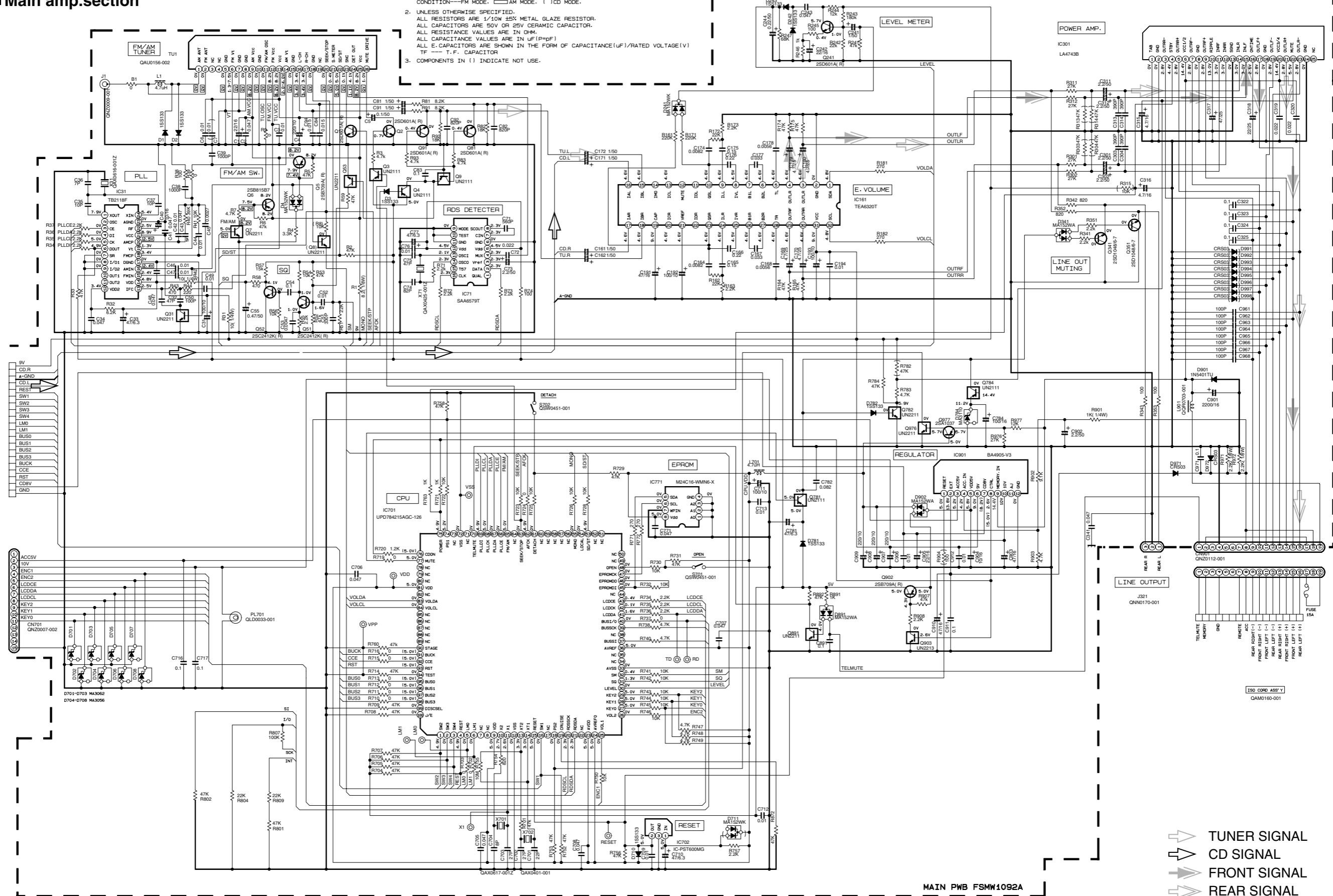
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4

3

2

1



- ➔ TUNER SIGNAL
- ➔ CD SIGNAL
- ➔ FRONT SIGNAL
- ➔ REAR SIGNAL

CD servo, LCD & Key control section

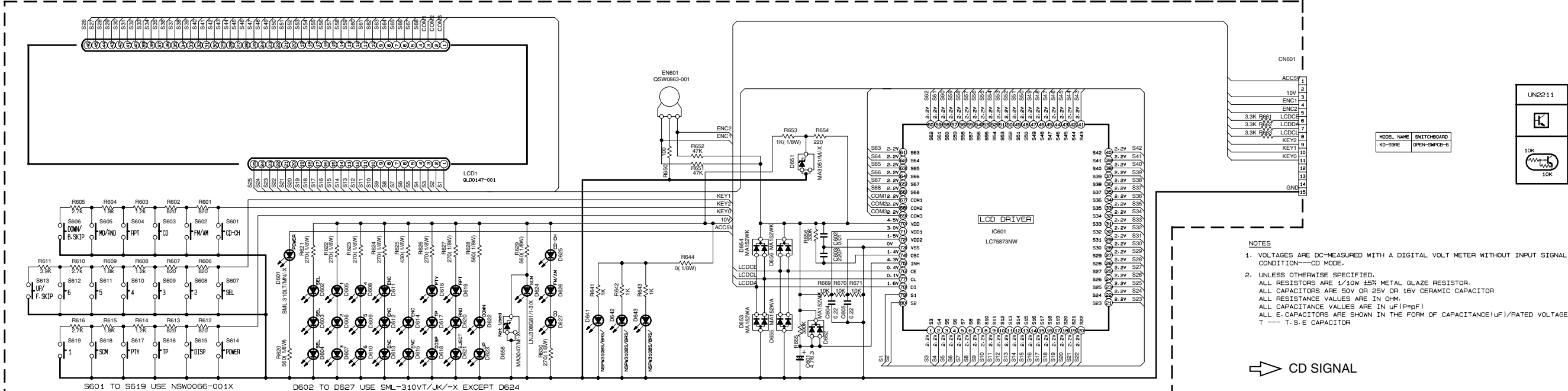
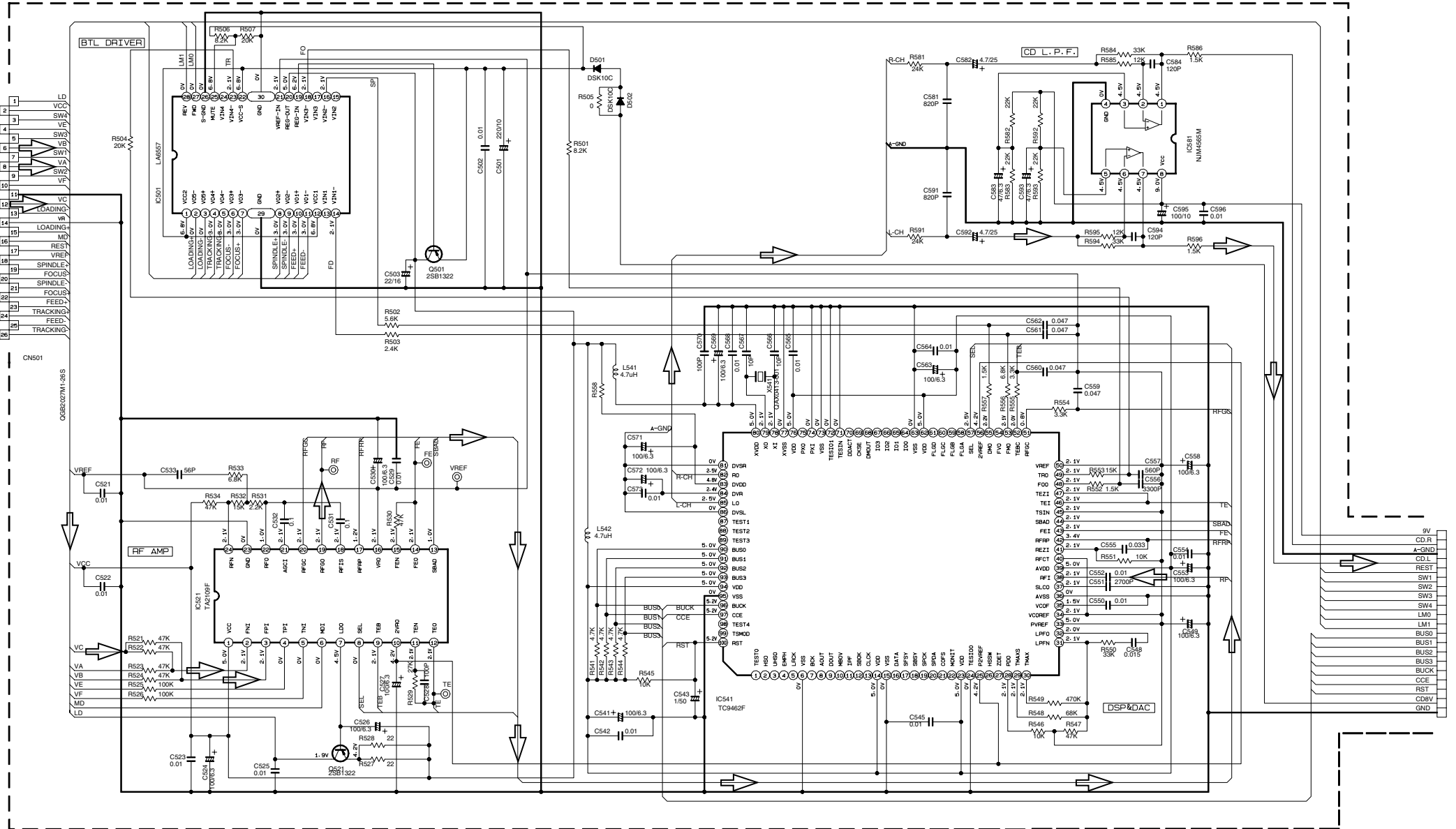
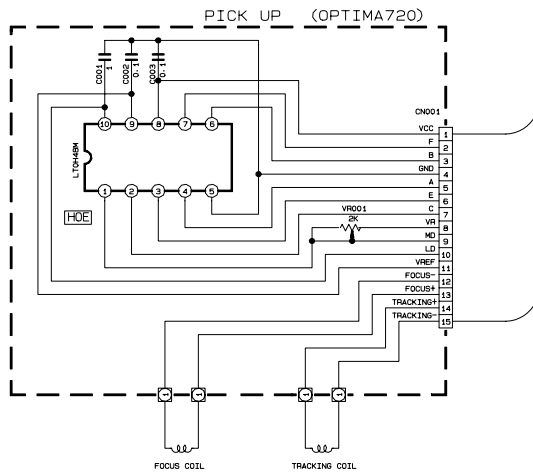
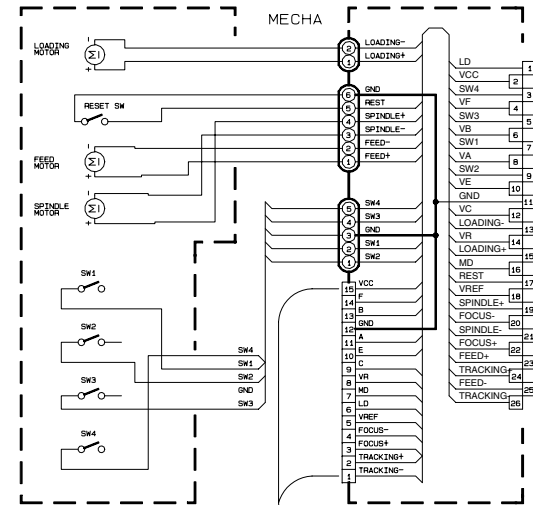
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4

3

2

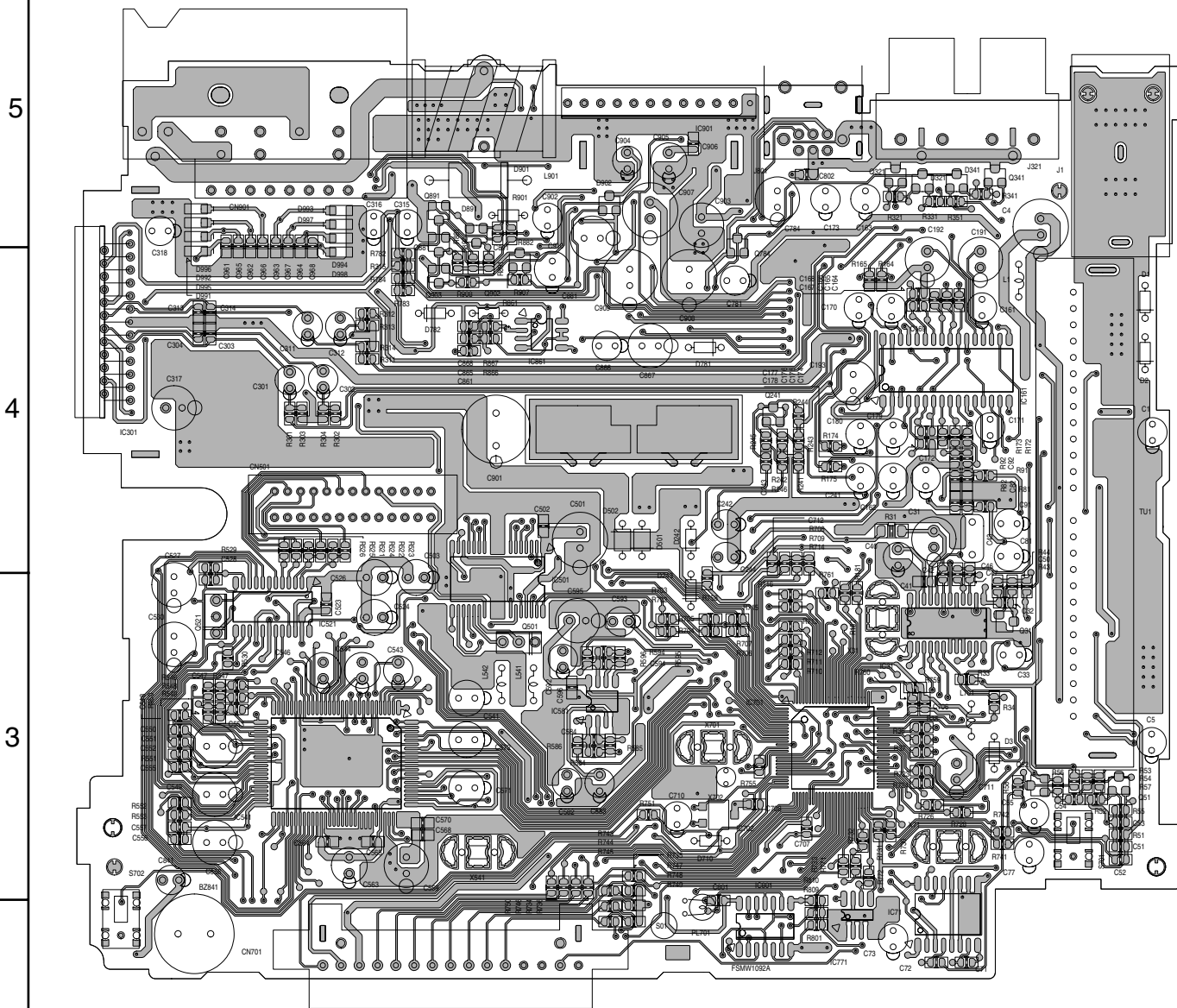
1



- NOTES
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL CONDITION—CD MODE.
  - UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE 1/10W ±5% METAL GLAZE RESISTOR. ALL CAPACITORS ARE 50V OR 25V 0.1μF CERAMIC CAPACITOR. ALL RESISTANCE VALUES ARE IN OHM. ALL CAPACITANCE VALUES ARE IN μF(P≠F). ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE(V). T = T.S.E CAPACITOR

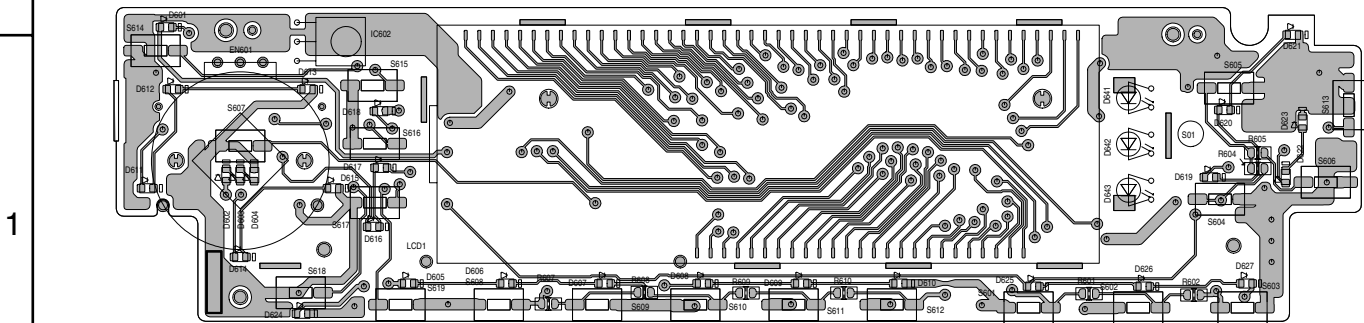
# Printed circuit boards

## ■ Main board (Forward side)



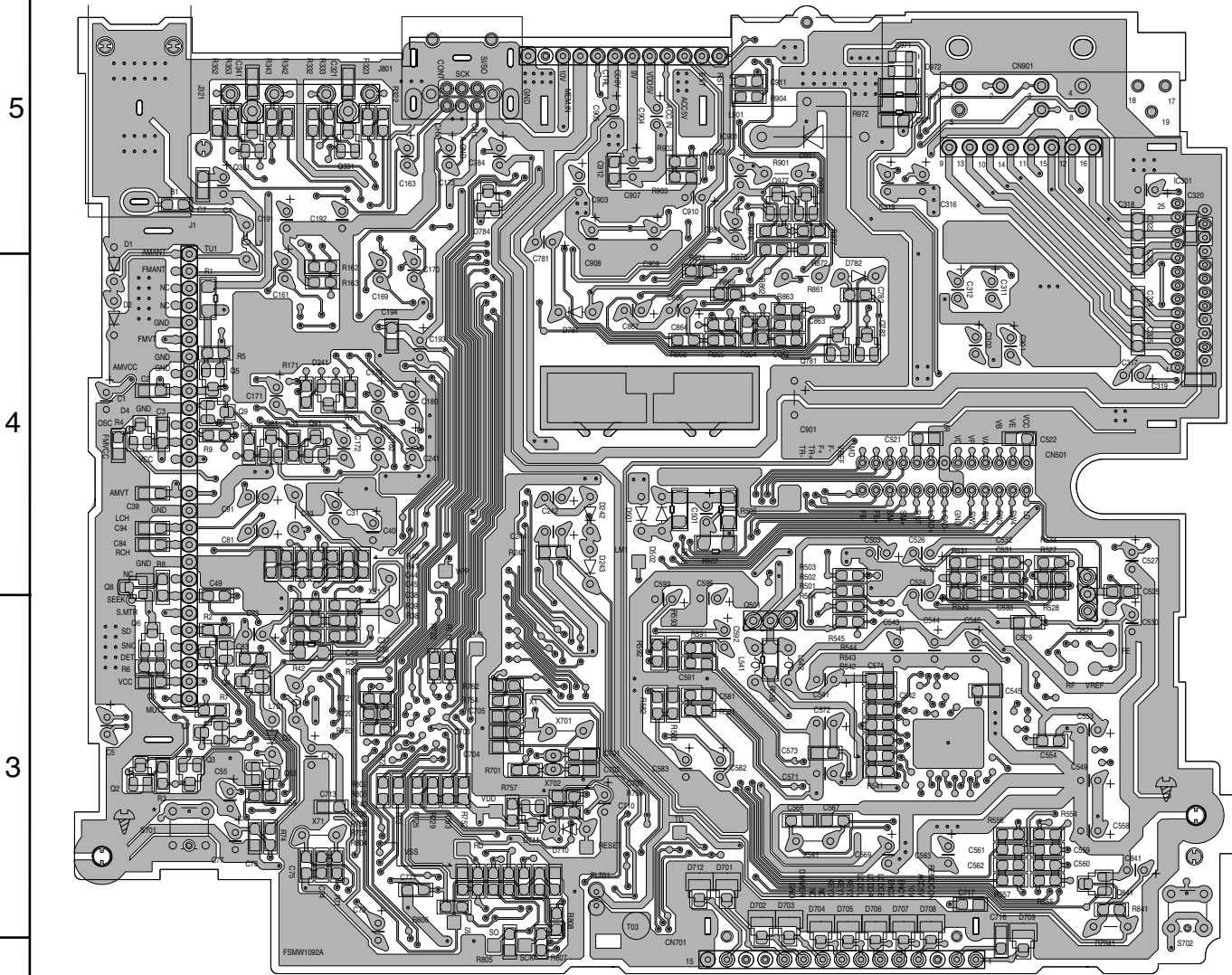
Note:KD-S9R  
/d2/c/jes/s9rpbw/1092mo

## ■ Switch board (Forward side)



Note:KD-S9R  
/d2/c/jes/s9rpbw/1081mo

■ Main board (Reverse side)



■ Switch board (Reverse side)

