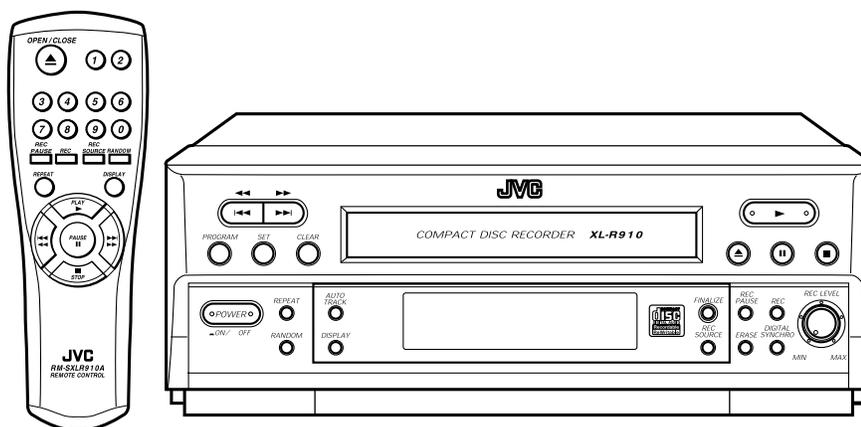


# JVC

# SERVICE MANUAL

## COMPACT DISC RECORDER

# XL-R910SL



### Area Suffix

J ----- U.S.A.  
 C ----- Canada  
 B ----- U.K.  
 E -- Continental Europe  
 EN --- Northern Europe

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## Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by ( $\triangle$ ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
5. Leakage current check (Electrical shock hazard testing)  
After reassembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

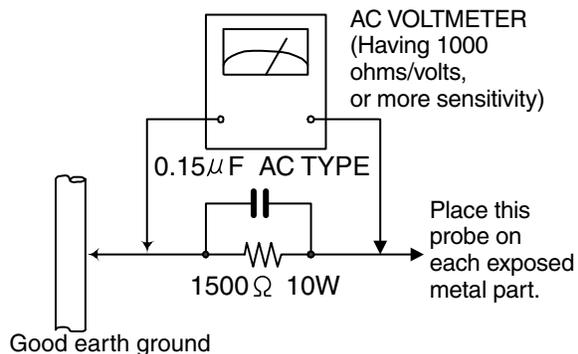
- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.)

- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 $\Omega$  10W resistor paralleled by a 0.15 $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured Any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5



## Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

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

# Disassembly method

## <Main body>

### ■ Removing the metal cover (See Fig.1)

- 1.Remove the three screws **A** attaching the metal cover on the back of the body.
- 2.Remove the four screws **B** attaching the metal cover on both sides of the body.
- 3.Remove the metal cover from the body by lifting the rear part of the cover.

ATTENTION : Do not break the front panel tab fitted to the metal cover.

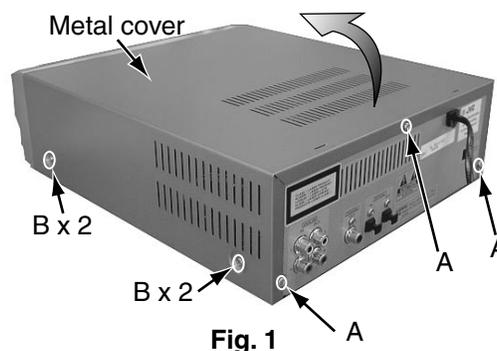


Fig. 1

### ■ Removing the front panel assembly (See Fig.2~5)

\* Prior to performing the following procedure, remove the metal cover.

- 1.Remove the three screws **C** attaching the front panel assembly on the bottom of the body and both sides of the body.
- 2.Disconnect the card wire from connector CN601 on the servo control board.
- 3.Disconnect the 4pin wire from connector CN502 on the servo control board.
- 4.Disconnect the 3pin wire and 8pin wire from connector ACW1 and RCW2 on the main board.

Please remove a tie band if necessary.  
Please fix the wire again with a tie band when assembling.

- 5.Release the two joints **a** on the lower part of the sides using a screwdriver, and remove the front panel assembly toward the front.

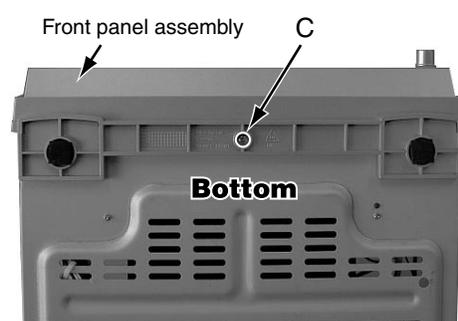


Fig. 2

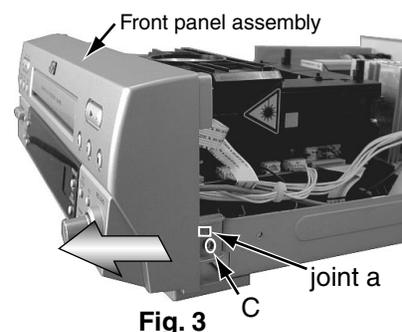


Fig. 3

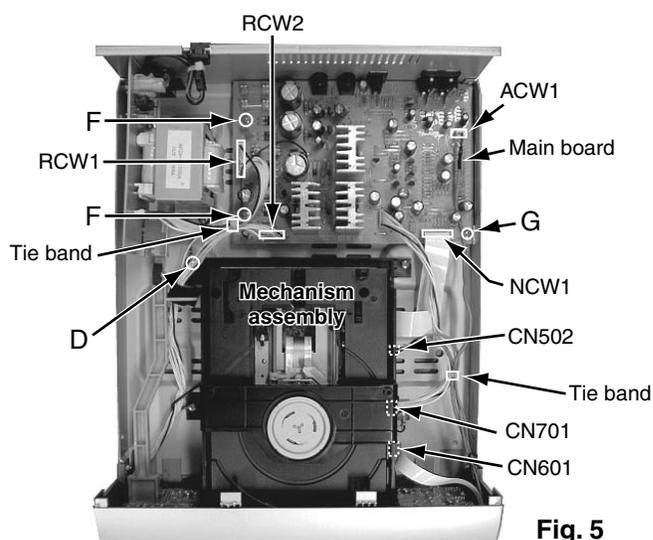


Fig. 5

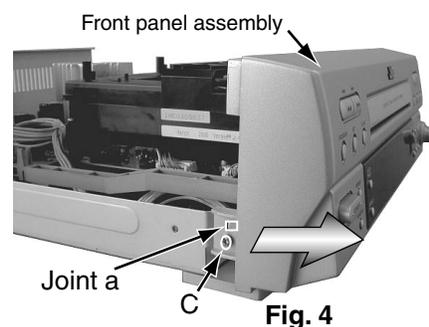


Fig. 4

### ■ Removing the power button arm (See Fig.6)

\* Prior to performing the following procedure, remove the metal cover and front panel assembly.

The power button arm is lifted up while holding the power switch(orange color part) and removes.

### ■ Removing the mechanism assembly (See Fig.6)

\* Prior to performing the following procedure, remove the metal cover and front panel assembly.

1. Disconnect the card wire from connector CN501 on the servo control board.

2. Disconnect the 6pin wire from connector CN701 on the servo control board.

3. Remove the four screws **D** attaching the mechanism assembly.

\*Please fix two earth wires together when you install the mechanism assembly.

### ■ Removing the main board (See Fig.5,7)

\* Prior to performing the following procedure, remove the metal cover.

1. Remove the four screws **E** attaching the each terminal on the rear panel.

2. Disconnect the 9pin,8pin and 3pin wire from connector RCW1,RCW2 and ACW1 on the main board.

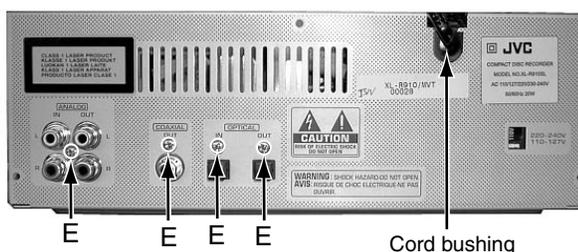
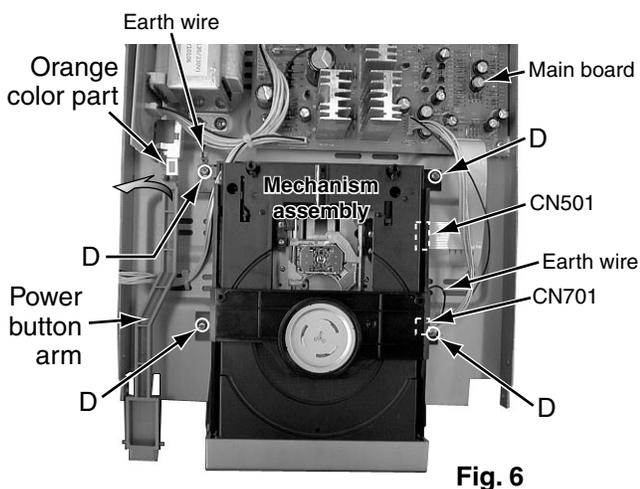
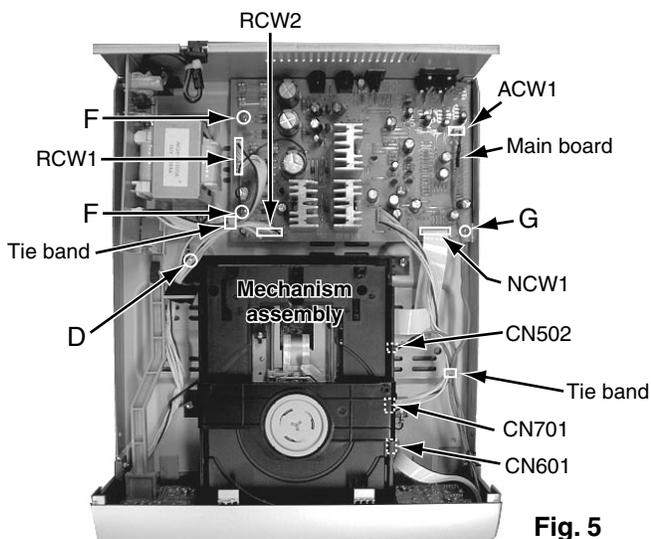
3. Disconnect the card wire from connector NCW1 on the main board.

4. Disconnect the 6pin wire from connector CN701 on the servo control board.

5. Remove the screw **D** attaching the earth wire.

6. Remove the two screws **F** and one screw **G** attaching the main board.

Please remove a tie band if necessary.  
Please fix the wire again with a tie band when assembling.



■ Removing the power transformer (See Fig.6~8)

\* Prior to performing the following procedure, remove the metal cover.

1. Power button arm is removed from power switch
2. Disconnect 9pin wire from connector RCW1 on the main board.
3. The code bushing is pulled out for above.
4. Remove the four screws **H** attaching the power transformer.

Please remove a tie band if necessary.  
Please fix the wire again with a tie band when assembling.

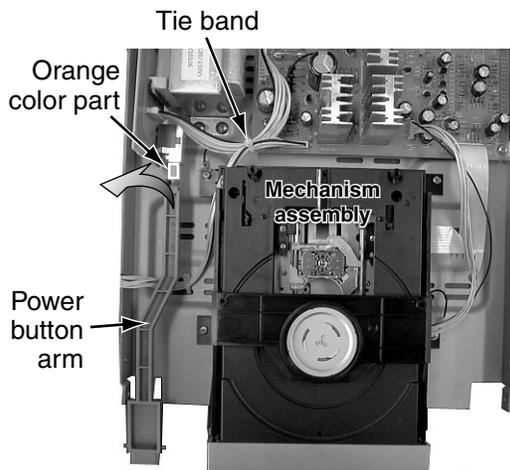


Fig. 6



Cord bushing

Fig. 7

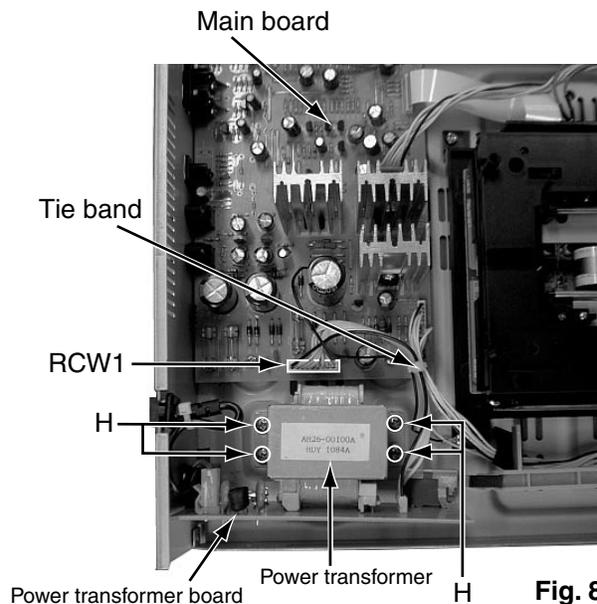
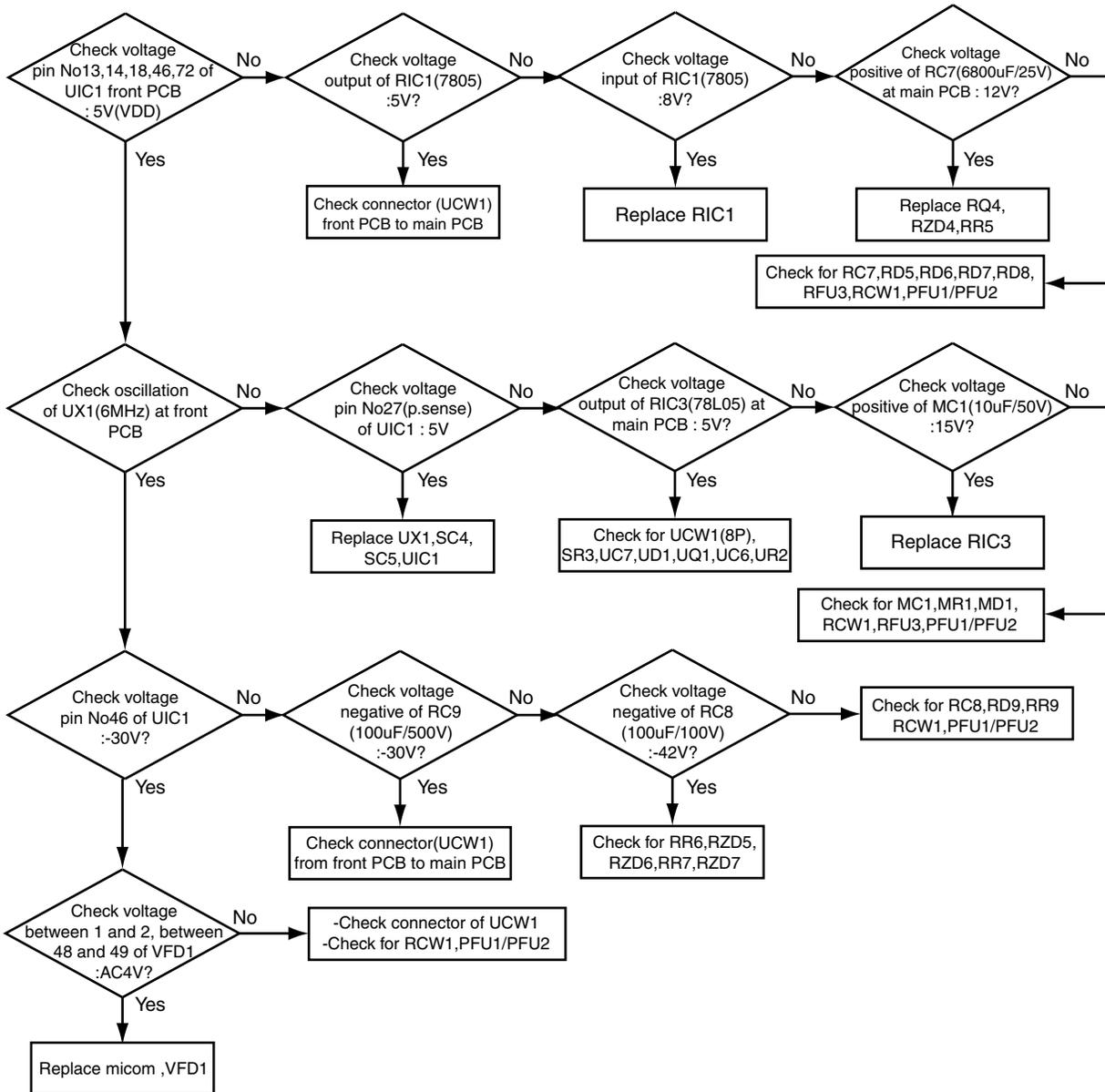


Fig. 8

# Troubleshooting

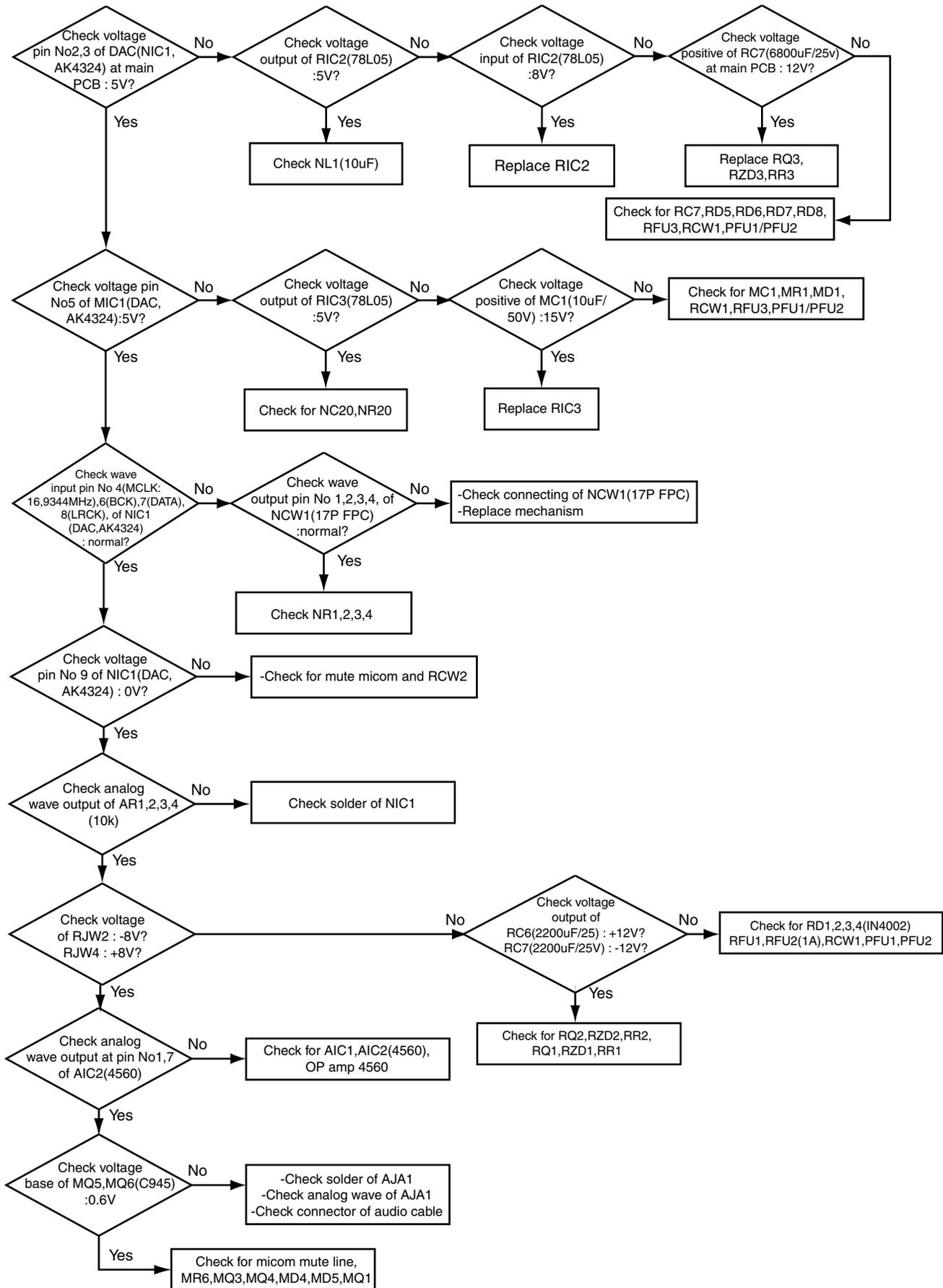
## ■ Power supply / VFD (FL display) section

When trouble is found in the power supply and the FL display.



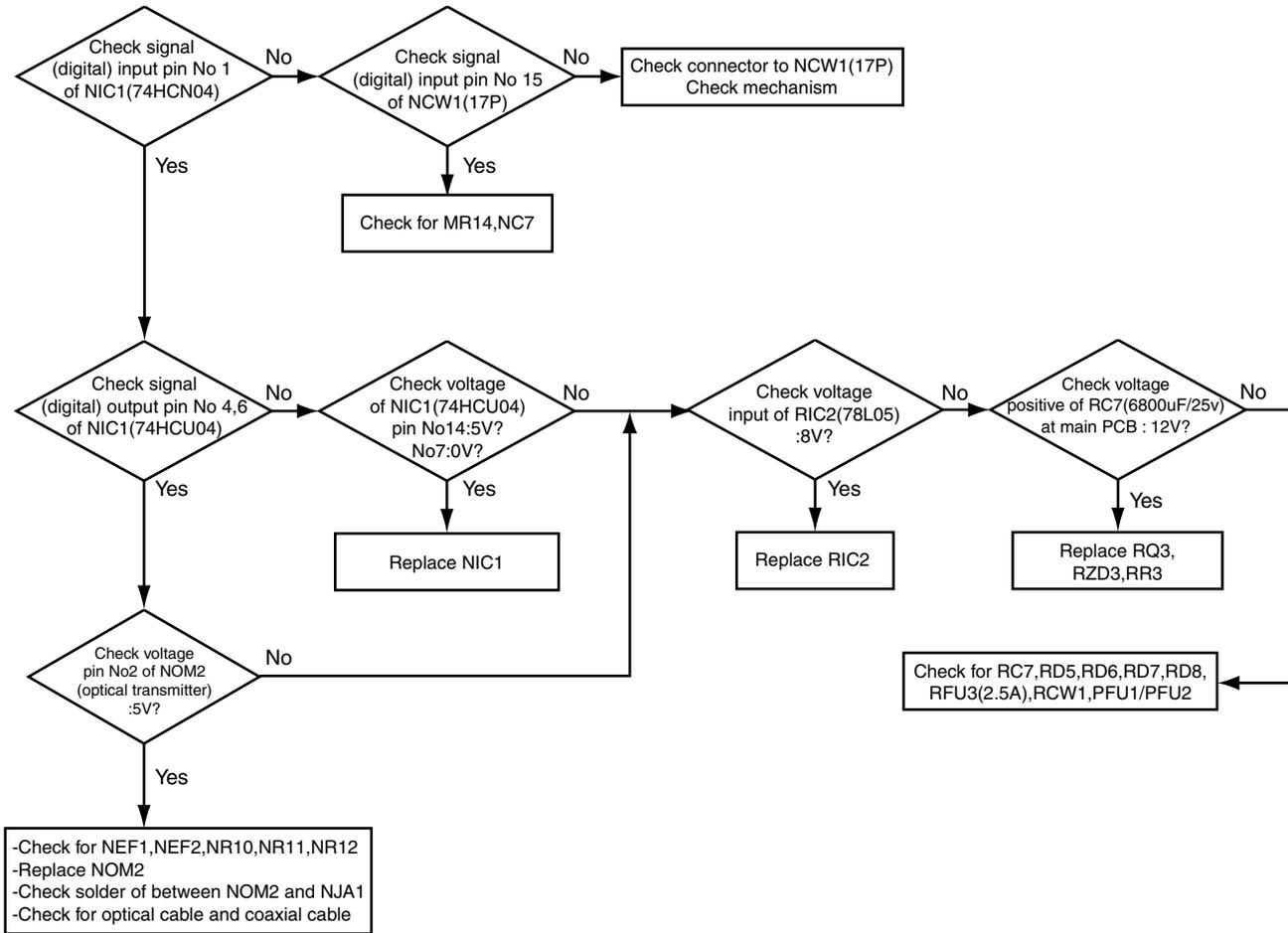
### ■ Analog output (play mode)

When trouble is found in the analog signal output.



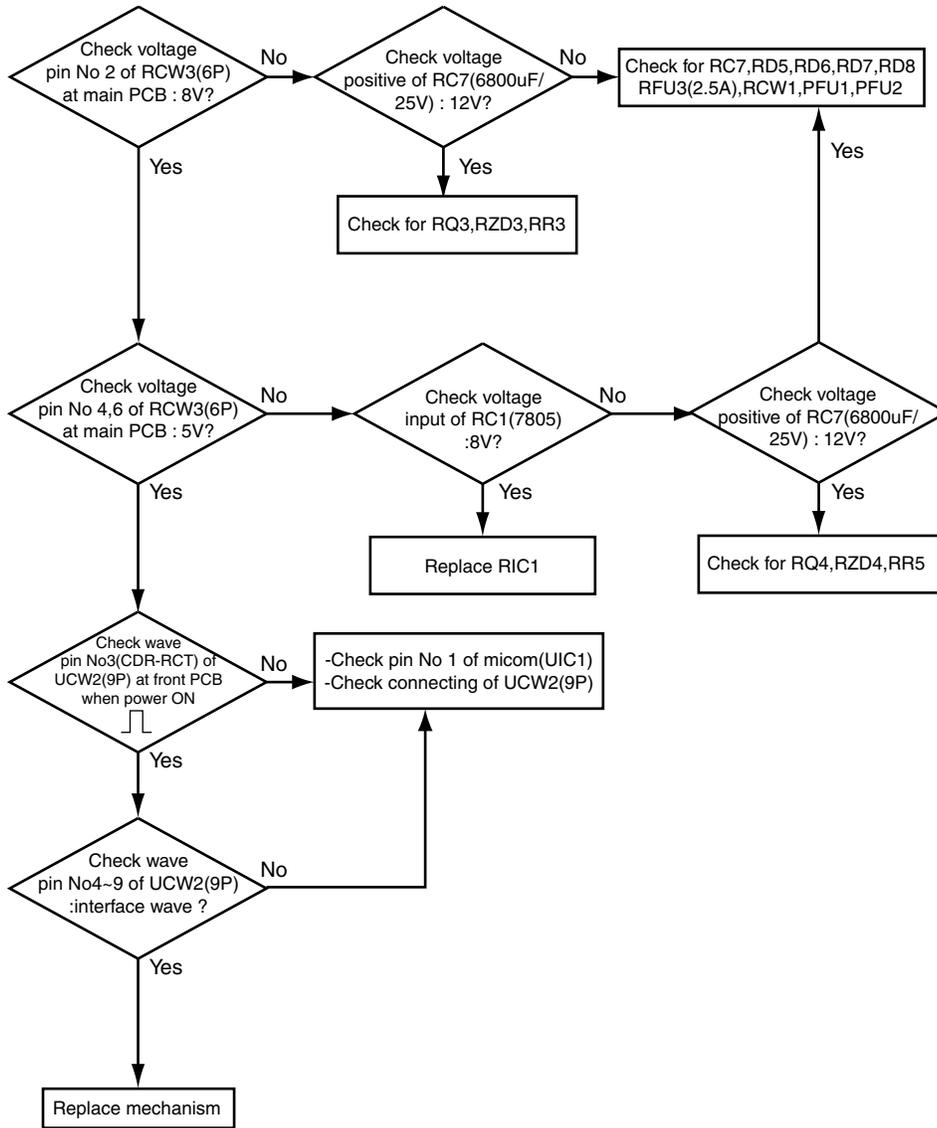
## ■ Digital output

When trouble is found in the optical output and coaxial output.



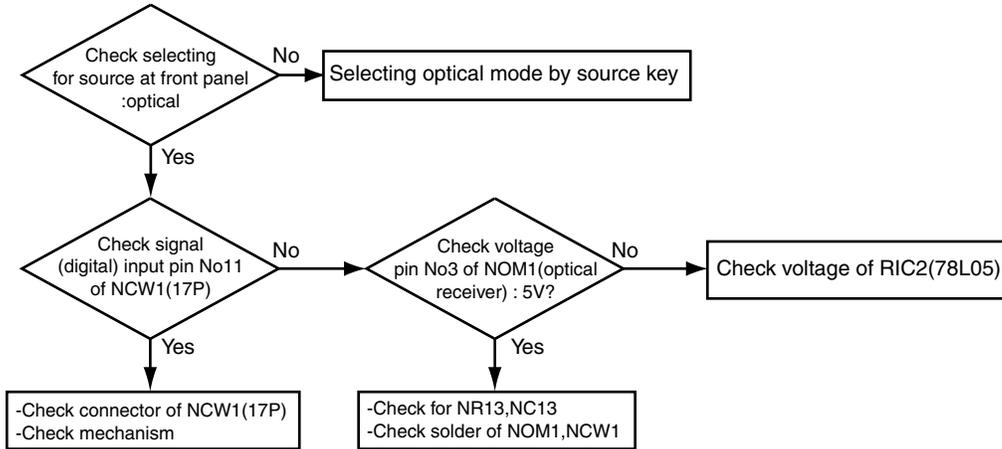
### ■ Mechanism operation

When trouble is found in the mechanism operating. (rotation,play,tray open/close,lead)



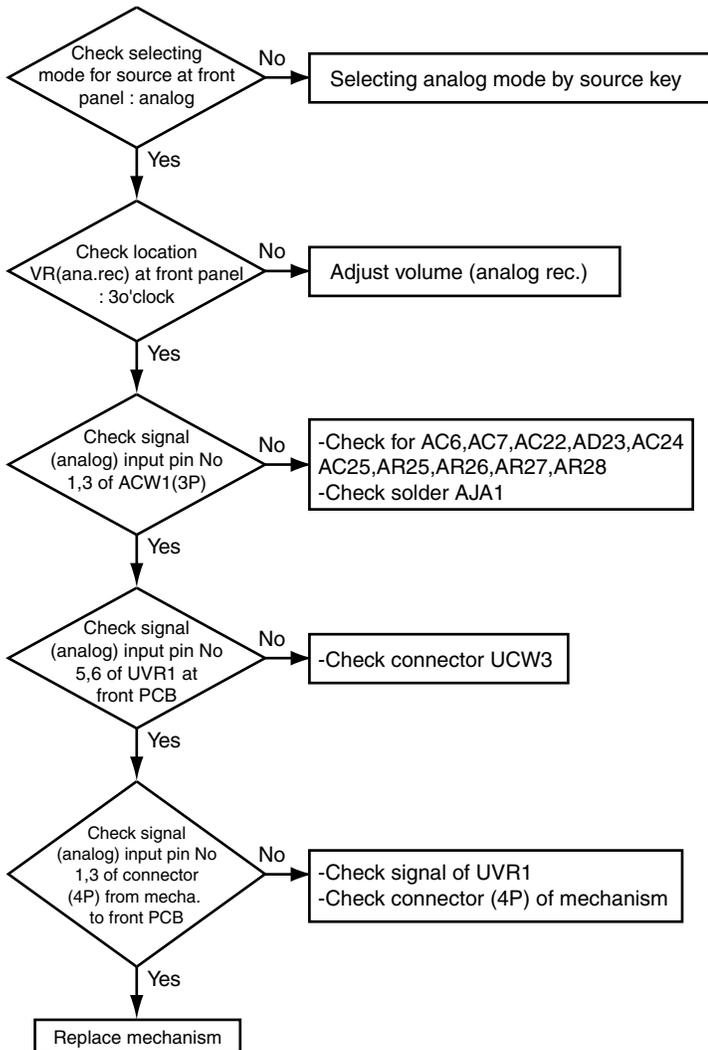
### ■ Digital recording (CD-R/CD-RW Disc, Unfinalize condition)

When trouble is found in the digital recording (optical recording).



### ■ Analog recording (CD-R/CD-RW Disc, Unfinalize condition)

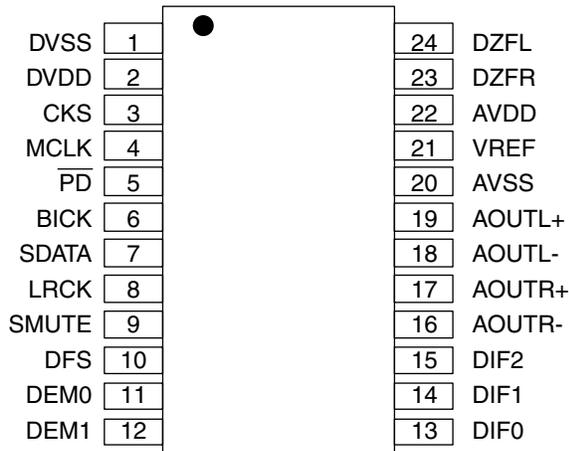
When trouble is found in the analog recording.



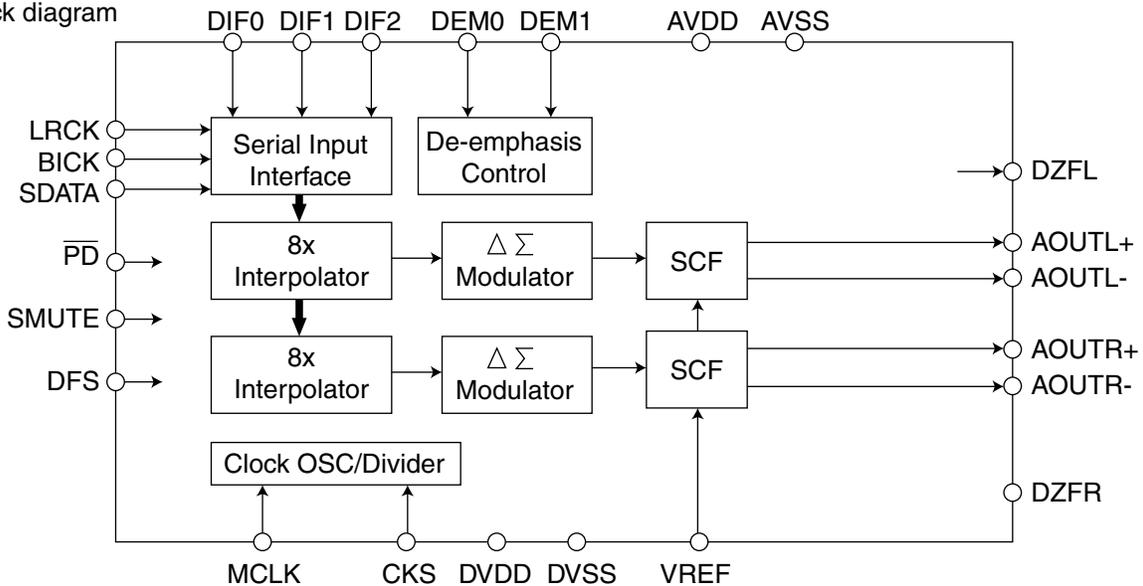
# Description of major ICs

## ■ AK4324(NIC1) : D/A Converter

### 1. Pin layout



### 2. Block diagram

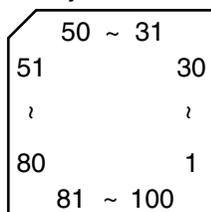


### 3. Pin function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	DVSS	-	Digital ground terminal	13	DIF0	I	Digital input format pin
2	DVDD	-	Digital power supply terminal	14	DIF1	I	Digital input format pin
3	CKS	I	Master clock select pin	15	DIF2	I	Digital input format pin
4	MCLK	I	Master clock input pin	16	AOATR-	O	Rch negative analog output
5	PD	I	Power down mode pin	17	AOATR+	O	Rch positive analog output
6	BICK	I	Audio serial data clock pin	18	AOATL-	O	Lch negative analog output
7	SDATA	I	Audio serial data input	19	AOATL+	O	Lch positive analog output
8	LRCK	I	L/R clock pin	20	AVSS	-	Analog ground terminal
9	SMUTE	I	Soft mute pin	21	VREF	I	Voltage reference input
10	DFS	I	Double speed sampling mode	22	AVDD	-	Analog power supply terminal
11	DEM0	I	De-emphasis frequency select	23	DZFR	O	Rch zero input detect pin
12	DEM1	I	De-emphasis frequency select	24	DZFL	O	Lch zero input detect pin

## ■ AH11-00018B(UIC1):System controller

### 1. Terminal layout



### 2. Pin function

Pin No.	Symbol	I/O	Description
1	XRST	O	Mechanism reset signal output
2~10		-	Non connect
11	GND	-	Connect to ground
12	RESET	I	Micom reset signal input
13	VDD	-	Power supply terminal (+5V)
14	VDD	-	Power supply terminal (+5V)
15	GND	-	Connect to ground
16	XIN	I	Oscillation input terminal (6MHz)
17	XOUT	O	Oscillation output terminal (6MHz)
18	VDD	-	Power supply terminal (+5V)
19	KEY1	I	Key matrix input terminal (AD1)
20	KEY2	I	Key matrix input terminal (AD2)
21~26	GND	-	Connect to ground
27	P.SENSE	I	Power detect input terminal
28	R-REQ	I	RW-I/F, RW-REQUEST input
29	REMOCON	I	Remote control signal input
30~41	1G~12G	O	FL Grid control signal output
42~45	P18~P15	O	FL Segment control signal output
46	VDD	-	Power supply terminal (+5V)
47	P14	O	FL Segment control signal output
48	P13	O	FL Segment control signal output
49.50		-	Non connect
51	VPP	-	VP (-30V)
52~63	P12~P1	O	FL Segment control signal output
64~71		-	Non connect
72	VDD	-	Power supply terminal (+5V)
73~88		-	Non connect
89	GND	-	Connect to ground
90	VDD	-	Power supply terminal (+5V)
91.92		-	Non connect
93	MUTE	O	Audio muting signal output
94		-	Non connect
95	SIN	O	RW-I/F, Serial data output
96	SOUT	I	RW-I/F, Serial data input
97	ACLK	I	RW-I/F, Clock input
98		-	Non connect
99	S-RDY	O	RW-I/F, SYS READY output
100	S-REQ	O	RW-I/F, SYS REQUEST output



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