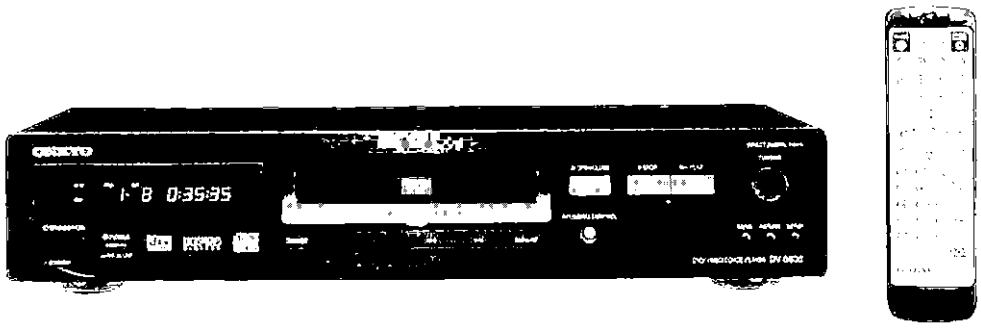
Ref. No3655
062000

ONKYO® SERVICE MANUAL

DVD PLAYER

DV-S535



Black,Silver and Golden models

BMDD	120V AC, 60Hz
BMUP,SMUP	230V AC, 50Hz
BMUT,GMUT BMUR,GMUR BMUS,GMUS	100-240V, AC 50 / 60Hz

SAFETY-RELATED COMPONENT WARNING!!

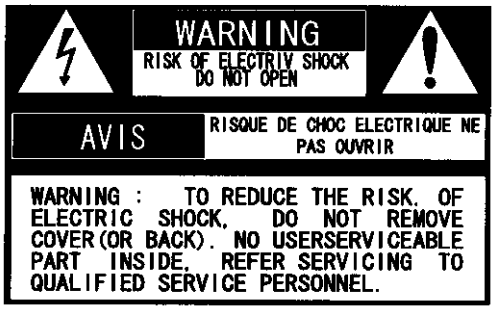
COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
AUDIO COMPONENTS

TABLE OF CONTENTS

OPERATING INSTRUCTIONS
SAFETY PRECAUTIONS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

CAUTION : TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION : POUR EVITER LES CHOCS ELECTRIQUE, INTRODUIRE LA LAME LA PLUS LARGE DA LA FICHE DANS LA BORNE CORRESPONDANTE DA LA PRISE ET POUSSER JUSQU' AU FOND.

PRECAUTIONS

Replacing the fuses

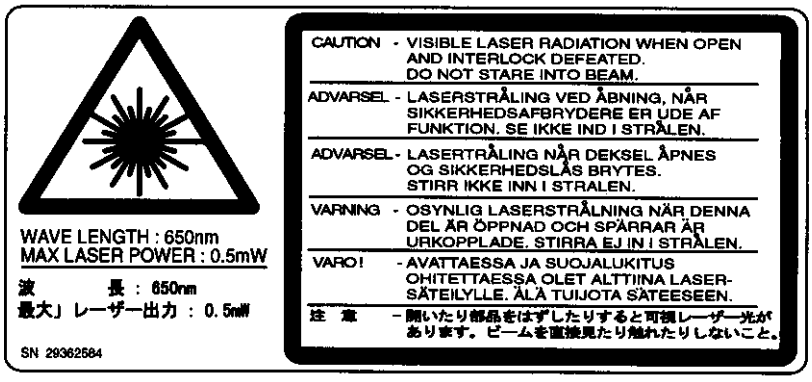
For continued protection against risk fire, replace only with same type and same rating fuse.

CIRCUIT No.	PART No.	DESCRIPTION
F901	252071	1.25A-SE-EAWK Fuse <MUP, MUT, MUR, MUS>
	252146 or	1.25A-TSC or
	252157	1.25A-UL/T-237, Fuse <MDD>

This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utlise est a rapide. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce darnier est indique la qu le present symbol est appose.

LASER BEAM CAUTION LABEL



When the power supply is being turned on, you may not remove this laser cautions label, radiation of a laser may be received.
Pickup Head consists of a laser diode that is very susceptible to external static electricity. Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity. And also, the LSI and IC are same as above.

SPECIFICATION

■ DVD Player

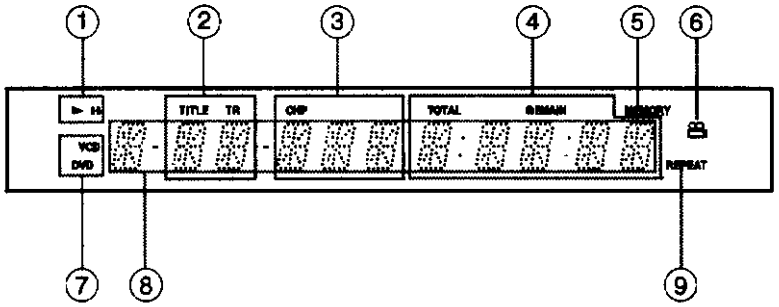
Power supply	USA and Canadian models: AC 120 V, 60 Hz
	Other models: AC 100–240 V, 50/60 Hz
Power consumption	USA and Canadian models: 21 W
	Other models: 19 W
Weight	3.8 kg, 8.4 lbs.
External dimensions	435 × 91 × 300 mm (W/H/D), 17 1/8" × 3 9/16" × 11 13/16" (W/H/D)
Signal system	USA and Canadian models: Standard NTSC
	Other models: PAL/3.58 NTSC
Regional restriction code	USA and Canadian area : 1
	Australasian area : 4
	South-east Asian area : 3
	PRC : 6
Laser	Semiconductor laser, wavelength 650 nm
Frequency range (digital audio)	DVD linear sound: 48 kHz sampling 4 Hz to 22 kHz 96 kHz sampling 4 Hz to 44 kHz
	Audio CD: 4 Hz to 20 kHz
Signal-to-noise ratio (digital audio)	More than 100 dB
Audio dynamic range (digital audio)	More than 96 dB
Harmonic distortion (digital audio)	Less than 0.01 %
Wow and flutter	Below measurable level (less than ±0.001 % (W.PEAK))
Operating conditions	Temperature: 5°C to 35°C (41°F to 95°F), Operation status: Horizontal

■ Outputs

Component video output	(Y) 1.0 V (p-p), 75 Ω, pin jack × 1 (Excluding European model) (P_B)/(P_R) 0.7 V (p-p), 75 Ω, pin jack × 1
Video output (SCART)	1.0 V (p-p), 75 Ω, SCART socket × 1 (European model only)
Video output (pin jack)	1.0 V (p-p), 75 Ω, negative sync., pin jack × 1
S video output	(Y) 1.0 V (p-p), 75 Ω, negative sync., Mini DIN 4-pin × 1 (C) 0.286 V (p-p), 75 Ω
Audio output (SCART)	2.0 V (rms), 470 Ω, socket × 1 (European model only)
Audio output (OPTICAL)	–22.5 dBm × 1
Audio output (COAXIAL)	0.5 V (p-p), 75 Ω, pin jack × 1
Audio output (ANALOG DIRECT)	2.0 V (rms), 470 Ω, pin jack (L, R) × 1
Audio output (ACOUSTIC CONTROL)	2.0 V (rms), 470 Ω, pin jack (L, R) × 1 (Excluding European model)
Audio output (MONO DIRECT)	2.0 V (rms), 470 Ω, pin jack × 1 (Excluding European model)

Specifications and features are subject to change without notice.

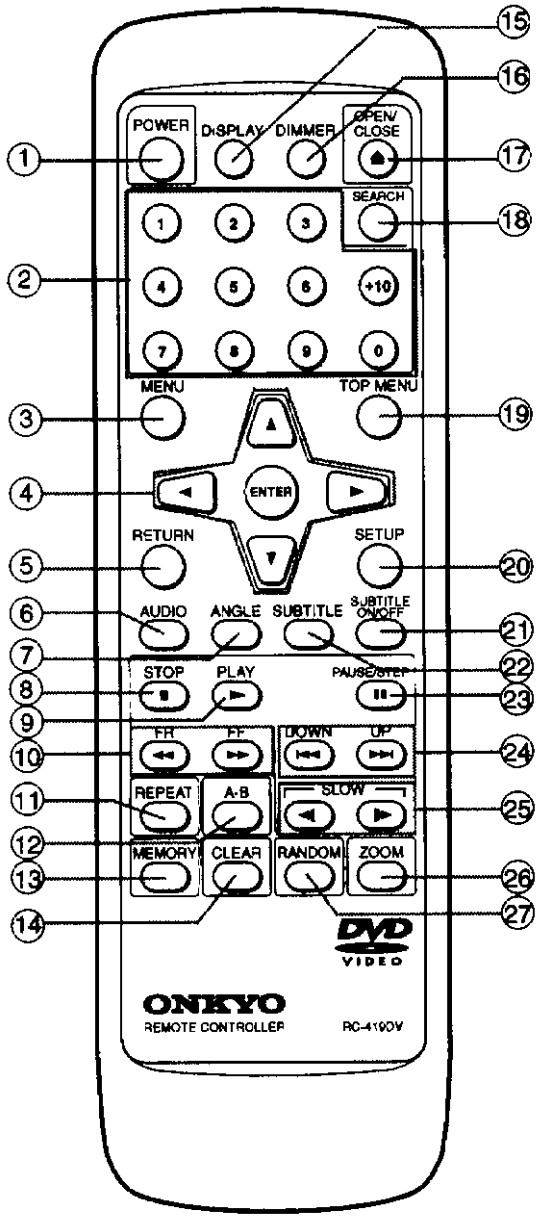
Display



① Operating status indicator
② Title/track number indicator
③ Chapter number indicator
④ Total playing time / remaining time / elapsed time indicators
⑤ MEMORY indicator
⑥ Angle icon indicator
⑦ Inserted disc indicator
⑧ Multifunctional indicator (e.g.operating status and error messages)
⑨ REPEAT indicator

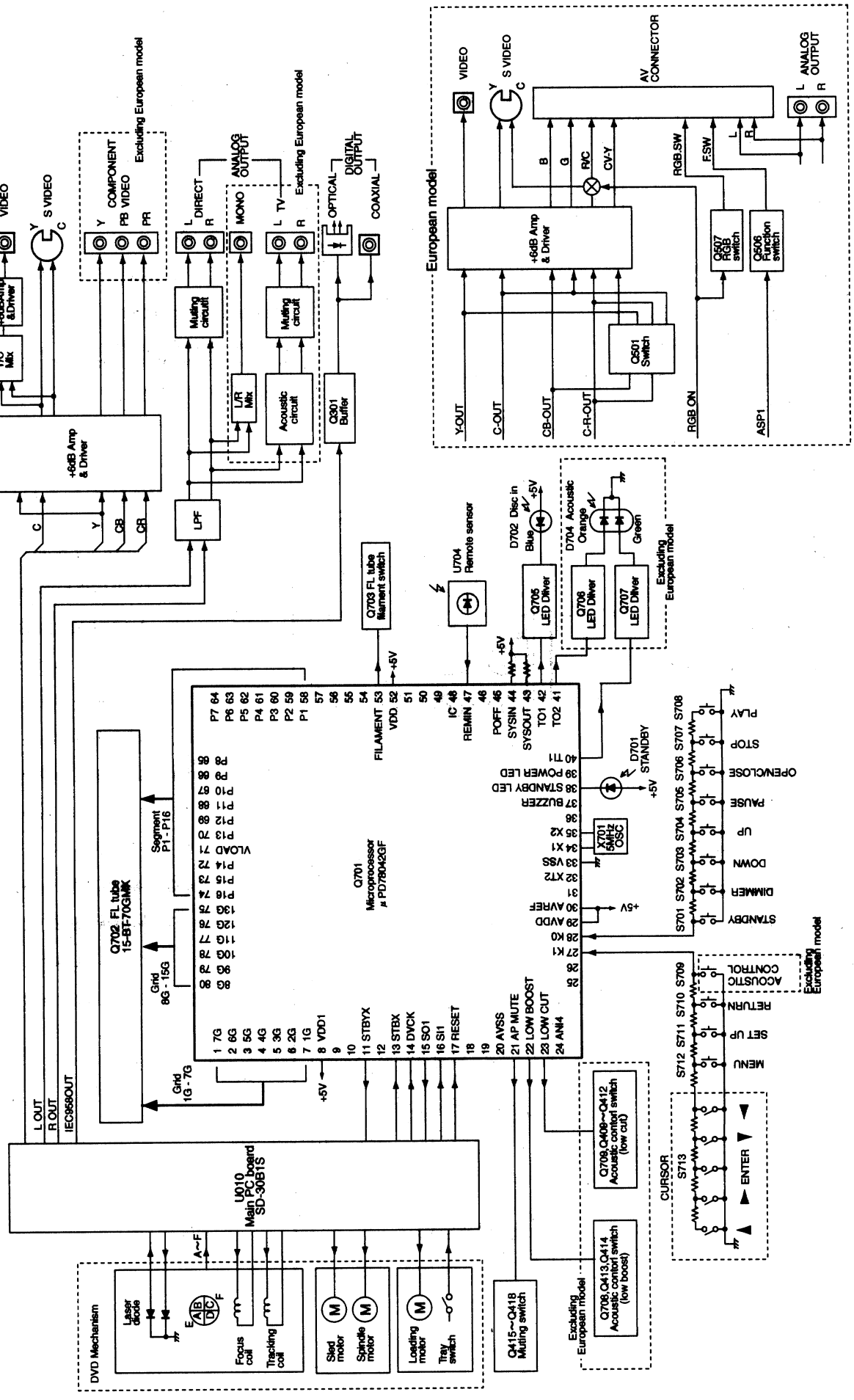
Remote controller (RC-419DV)

① POWER button
② Number buttons
③ MENU button
④ ▲/▼/◀/▶ ENTER buttons
⑤ RETURN button
⑥ AUDIO button
⑦ ANGLE button
⑧ ■ (STOP) button
⑨ ▶ (PLAY) button
⑩ ◀◀ (FR)/▶▶ (FF) buttons
⑪ REPEAT button
⑫ A-B button
⑬ MEMORY button
⑭ CLEAR button



⑮ DISPLAY button
⑯ DIMMER button
⑰ ▲ (OPEN/CLOSE) button
⑱ SEARCH button
⑲ TOP MENU button
⑳ SETUP button
㉑ SUBTITLE ON/OFF button
㉒ SUBTITLE button
㉓ ❚❚ (PAUSE/STEP) button
㉔ ⏮ (DOWN)/⏭ (UP) buttons
㉕ ◀❚/❚▶ (SLOW) buttons
㉖ ZOOM button
㉗ RANDOM button

MICROPROCESSOR CONNECTION DIAGRAM

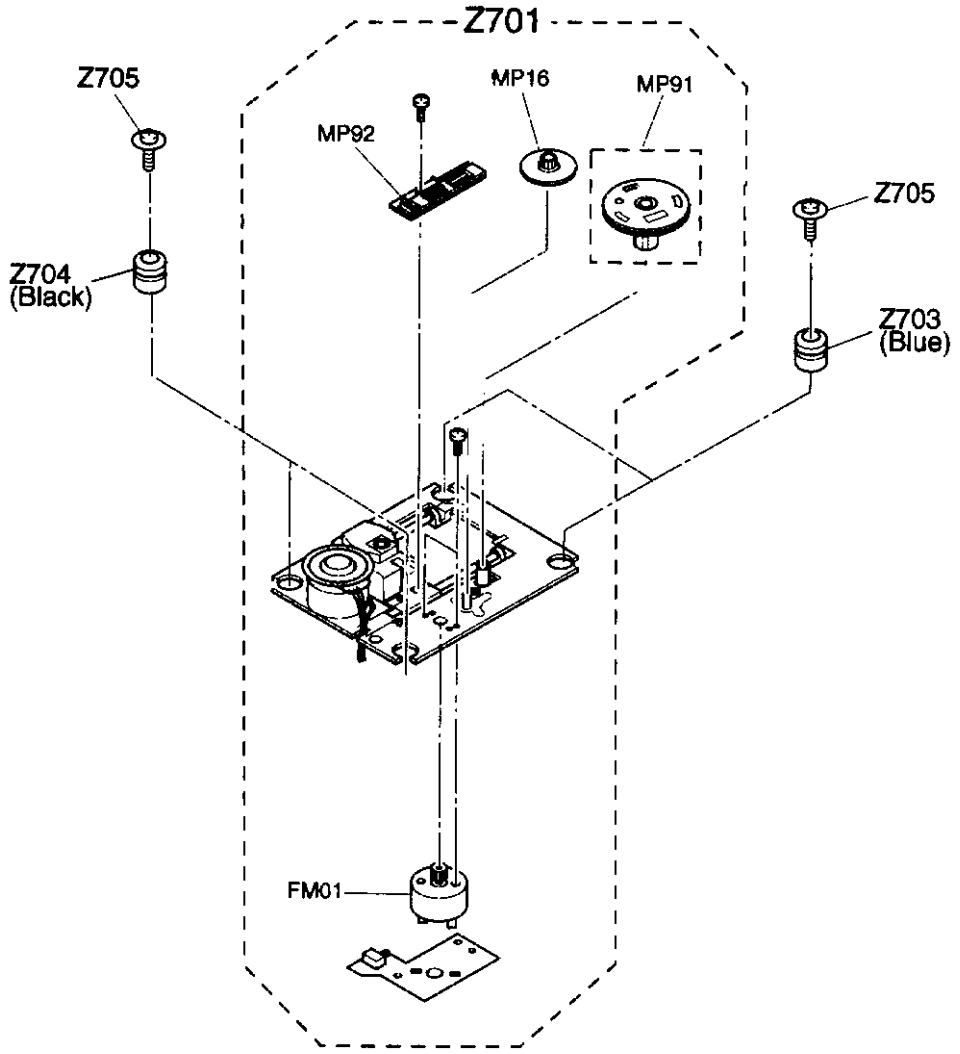


MICROPROCESSOR TERMINAL DESCRIPTION

NO.	Function	I/O	Description	NO.	Function	I/O	Description
1	7G	O	Grid output terminals for FL tube.	41	~TO2	O	Output terminal for Acoustic control LED(green).
2	6G	O		42	TO1	O	Output terminal for Disc in LED.
3	5G	O		43	~SYSOUT		Not used.
4	4G	O		44	SYSIN		Not used.
5	3G	O		45	POFF		Not used. (GND)
6	2G	O		46	P01		Not used. (GND)
7	1G	O		47	~REMIN	I	Signal input terminal from remote sensor.
8	VDD1	I	Power supply terminal.(+5V)	48	IC		Internal connected terminal.(GND)
9			Not used. (GND)	49			Not used. (GND)
10			Not used. (GND)	50			Not used. (GND)
11	STBYX	O	Strobe signal output terminal.	51			Not used. (GND)
12		I	Not used. (GND)	52	VDD		Power supply terminal.(+5V)
13	STBX	I	Strobe signal input terminal for mechanism microprocessor..	53	~FILAMENT	O	Output terminal for filament control.
14	DVCK	I	Clock input terminal for mechanism microprocessor..	54			Not used. (+5V).
15	SO1	O	Data output terminal for mechanism microprocessor..	55			Not used. (+5V).
16	SI1	I	Data input terminal for mechanism microprocessor..	56			Not used. (+5V).
17	RESET	I	System reset input terminal.	57			Not used. (+5V).
18			Not used. (GND)	58	P1	O	Segment output terminals for FL tube.
19			Not used. (GND)	59	P2	O	
20	AVSS	I	Ground terminal for A/D converter.	60	P3	O	
21	ANI7	O	Muting control output terminal.	61	P4	O	
22	ANI6	O	Output terminal for Acoustic control.	62	P5	O	
23	ANI5	O	Output terminal for Acoustic control.	63	P6	O	
24	ANI4		Not used. (GND)	64	P7	O	
25	ANI3		Not used. (GND)	65	P8	O	
26	ANI2		Not used. (GND)	66	P9	O	
27	K1	I	Operation key connection terminals.	67	P10	O	
28	K0	I	Operation key connection terminals.	68	P11	O	
29	AVDD	I	Power supply terminal.(+5V)	69	P12	O	
30	AVREF	I	Reference voltage terminal.(+5V)	70	P13	O	
31		I	Not used. (GND)	71	VLOAD	I	Power supply terminal for FL tube.
32	XT2		Sub system clock output terminal. Not used.	72	P14	O	Segment output terminals for FL tube.
33	VSS	I	Power supply terminal.(GND)	73	P15	O	
34	X1	I	Ceramic oscillator connection terminals.	74	P16	O	
35	X2	O	Ceramic oscillator connection terminals.	75	13G	O	Grid output terminals for FL tube.
36			Not used. (GND)	76	12G	O	
37	BUZZER		Not used. (GND)	77	11G	O	
38	~STANDBY LED	O	Output terminal for standby LED control.	78	10G	O	
39	~POWER LED		Not used. (GND)	79	9G	O	
40	~TI1	O	Output terminal for Acoustic control LED(orange).	80	8G	O	

MECHANISM EXPLODED VIEW

Z701 Traverse mechanism

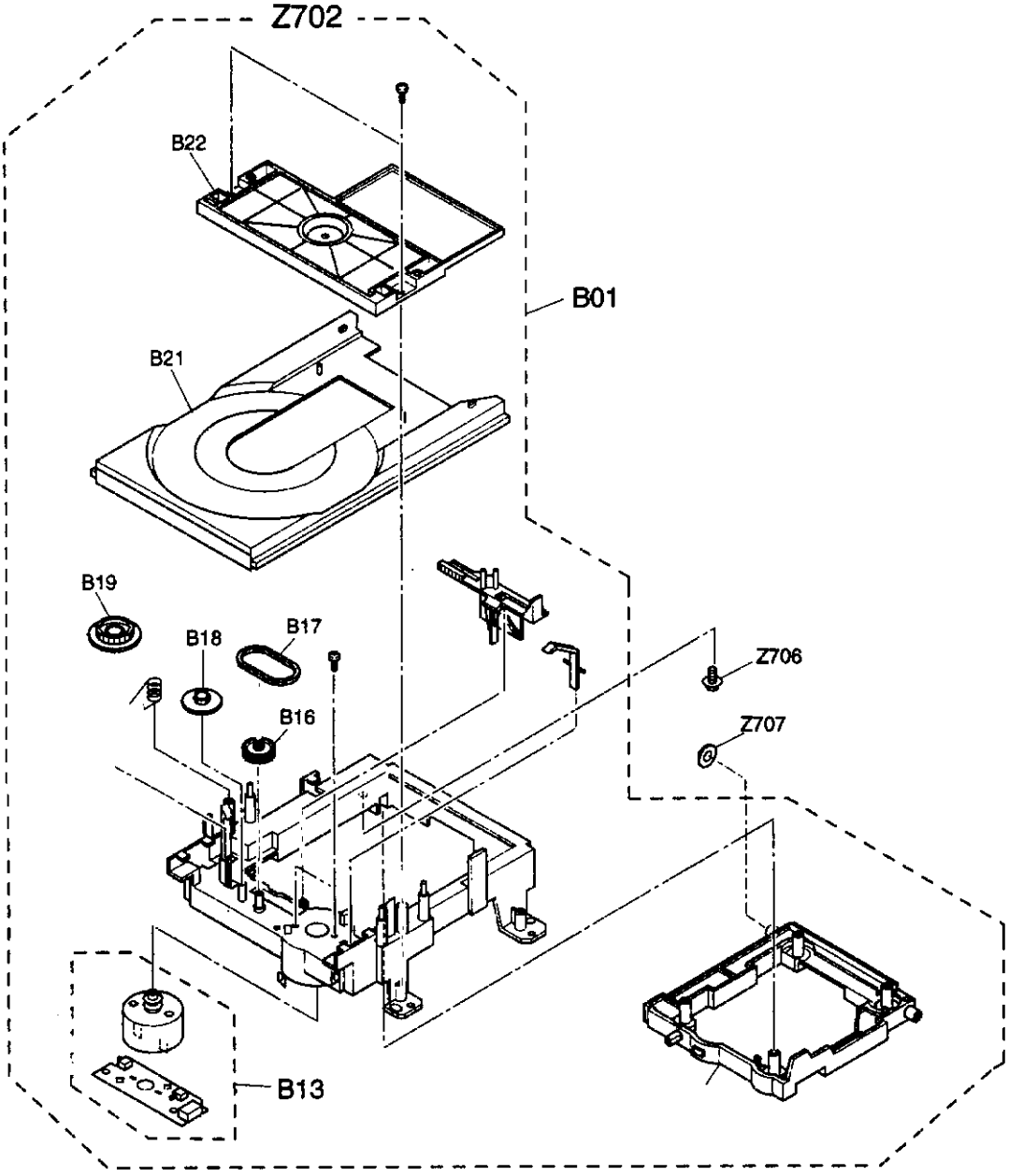


PARTS LIST

REF No.	PART No.	DESCRIPTION
MP91	79070419	Gear ass'y kit B
MP92	79070420	Gear ass'y rack
FM01	79070421	Motor ass'y feed
MP16	79070422	Gear A
Z701	24801003-2	SD-2109K3-ZSS, DVD Mechanism
Z703	24818038A	Insulator, (A)
Z704	24818039A	Insulator, (B)
Z705	801589	Special screw, (A)

MECHANISM EXPLODED VIEW

Z702 Tray loading mechanism



PARTS LIST

REF No.	PART No.	DESCRIPTION
B01	70300469	Mechanism ass'y
B13	70300470	Loading motor ass'y
B16	70333502B	Pulley, gear
B17	70342118	Belt, drive
B18	70333503C	Gear, connector
B19	70333504D	Gear, loading
B21	70366189D	Table, disc
B22	70300471	Clamper ass'y
Z702	24801007	DVD Mechanism
Z706	801590	Special screw, (B)
Z707	24834041	Washer, (C)

1. REPLACEMENT OF MECHANICAL PARTS

1-1. Top Cover

1. Remove the top cover.

1-2. Clamper ass'y

<Removal>

1. Remove two screws (1).
2. Release two claws and remove the clamper ass'y (2).

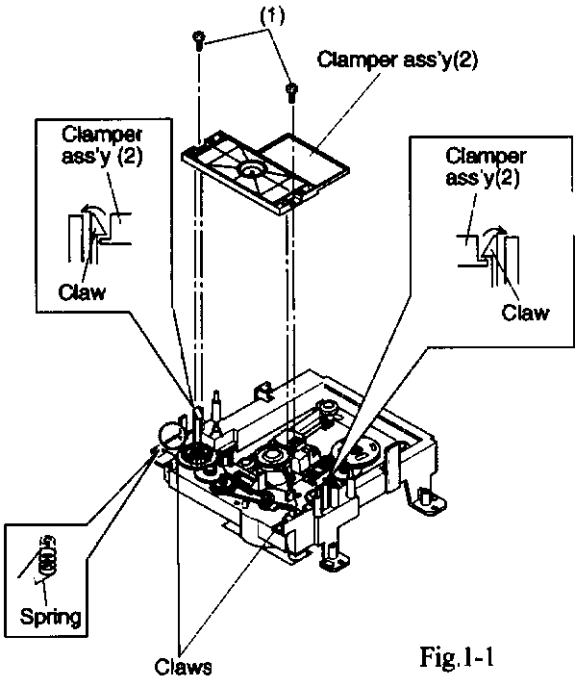


Fig.1-1

<Mounting>

3. The spring for tray side pressure is inserted into the portion "A".
4. By refererring to Fig 1-2, insert the spring normally and mount the clamper ass'y.

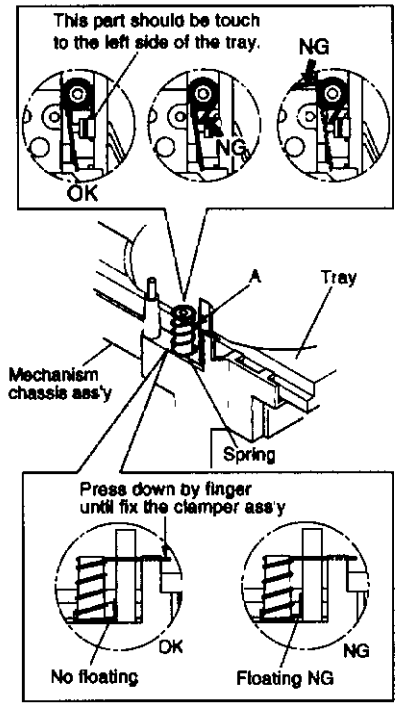


Fig.1-2

1-3. Tray Eject

1. Slide the slider(2) of the mechanism chassis assembly (1) with a screwdriver, etc. in the arrow direction, so that the tray(3) is ejected.

Note:

Take care not to damage the pickup and other parts.

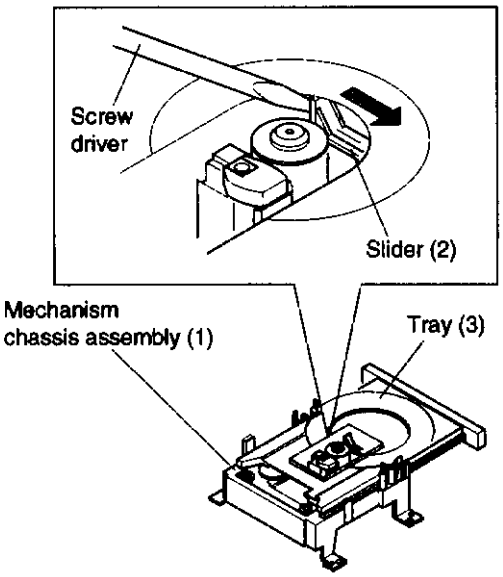


Fig.1-3

1-4. Tray Panel Removal

1. Eject the tray(3).
2. Twist the tray panel(4) a little in the arrow A direction with the tray(3) hole by hand to release two claws and lift up tray panel(4) in the arrow B direction, then the tray panel(4) is removed.

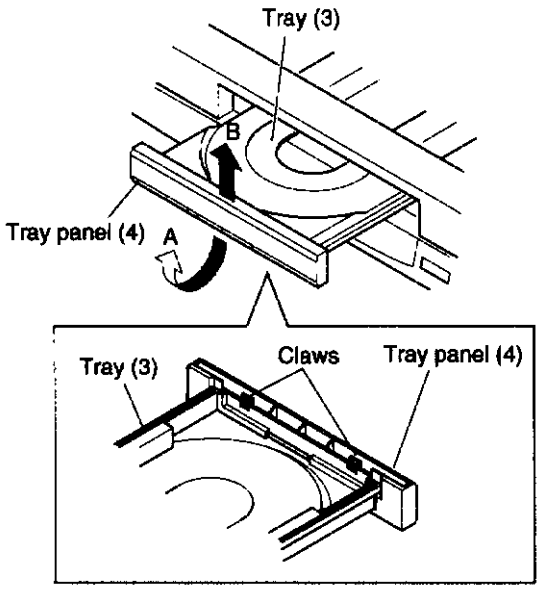


Fig.1-4

Note:
Insert the tray(3) with the front side of the pickup mechanism assembly descended. (The slider position to the left side.)

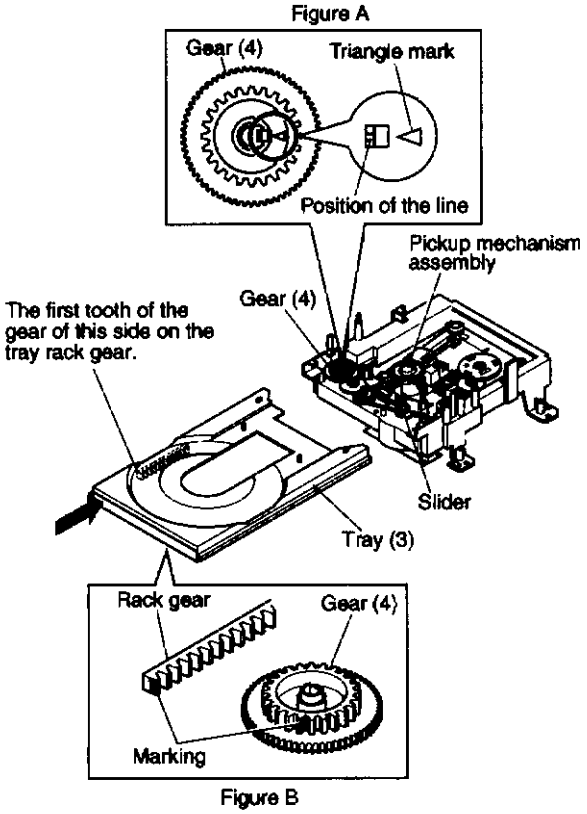


Fig.1-5

Mechanism Parts

2-1. Loading Belt

1. Remove the gear(1) by releasing the claw.
2. Remove the gear(2).
3. Remove the pulley(3) and the loading belt(4).
4. Replace the loading belt(4) with a new one.
5. When mounting, perform the reverse order of the removal.

Note:
When mounting the loading belt(4), twisting and attaching of a grease, etc. not allowed.

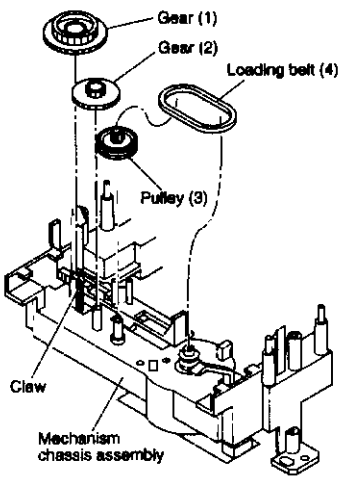


Fig.2-1

2-2. Loading Motor

1. Remove the loading belt.
2. Remove two screw(1) and two claws. Then remove the loading motor(2)(with the loading motor PC board(3) attached).
3. Desolder the terminal section of the loading motor(2)
4. Replace the loading motor(2) with a new one.
5. When mounting, perform the reverse order of the removal.

Note:
When replacing the loading motor, meet the polarity phase of the terminals.

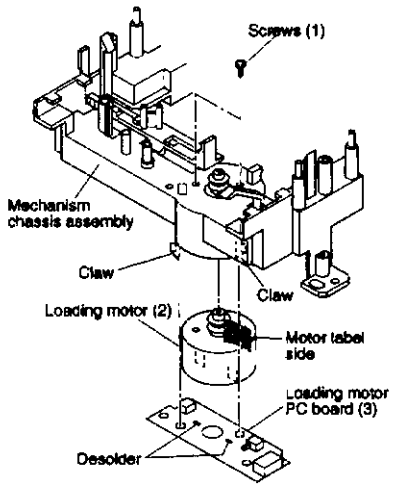


Fig.2-2

2-3. Sub Chassis (with a pickup mechanism)

1. Turn the mechanism chassis assembly (1) upside down.
2. Remove one screw (2) and release the boss "A" from the claw. Then remove the sub chassis (3) (with the pickup mechanism) by sliding in the arrow direction.
3. when mounting, perform the reverse order of the removal.

Note:

- When mounting the sub chassis (3) (with the pickup mechanism), first, insert the boss "C" along the groove of the cam slider up/down cam (4) and next, the boss "B" and "A".

- The boss "A" and "B" may be used with washer. (one washer is used to prevent from the thrust rattling. In some cases, no washer is used.) When the washer is used, be sure to assemble as it was without losing.

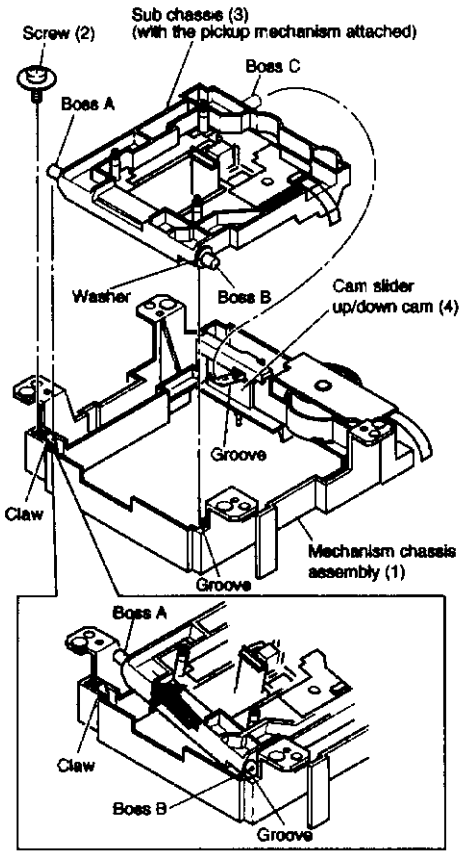


Fig.2-3

2-4. Pickup Mechanism Assembly

<Removal>

1. Remove four screws (1) and then remove the pickup mechanism assembly (3).

<Mounting>

1. Replace the pickup mechanism assembly (3) with a new one.
2. when mounting perform the reverse order of the removal.

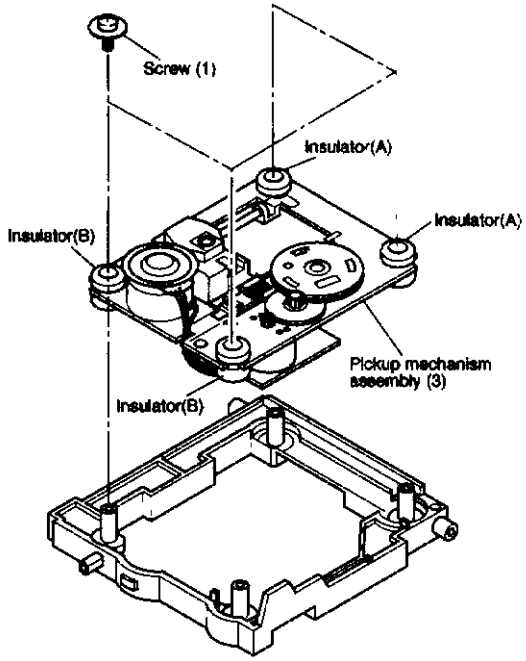


Fig.2-4-1

Note:

- The damper's color differs when used for the front side and the rear.
- When mounting the pickup mechanism assembly (3) with the screws (1), push the pickup mechanism assembly (3) downward being caught and tighten the screws (1) after placing the damper bent.

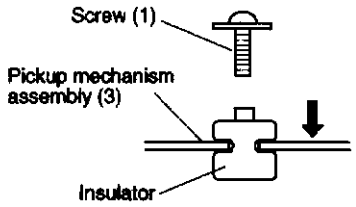


Fig.2-4-2

2-5. Gear B Assembly, Gear A and Rack Gear Assembly

<Removal>

1. Release one claw and remove the gear B assembly (1).
2. Remove the gear A (2).
3. Remove one screw (3) and remove the rack gear assembly (4).

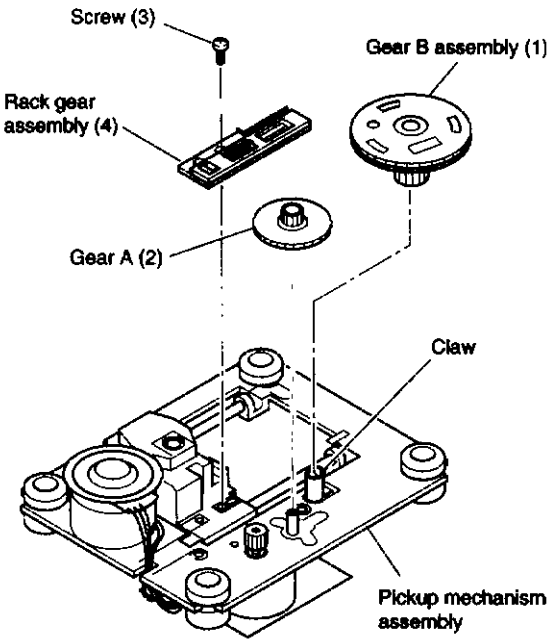


Fig.2-5-1

<Mounting>

1. When mounting, perform the reverse order of the removal.
2. Mount the gear B assembly (1) by pushing the pickup head (5) to the disc motor side (arrow A direction) and shifting the upper gear of the rack gear assembly (4) in the arrow B direction.
3. Fit the positioning holes on the upper gear and lower gear of the gear B assembly (1) and mount on the pickup mechanism assembly with the phase matched.
   At this time, note that the phase of the gear B assembly (1) and the gear A (2) show's the status in the Fig. 2-5-3.

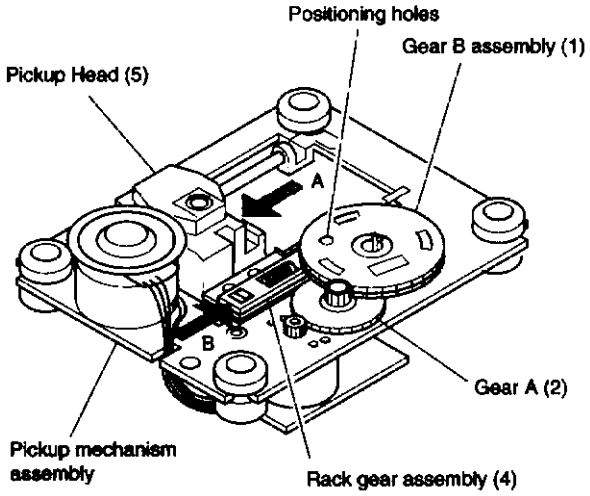


Fig.2-5-2

Note:

- Mount the gear B assembly (1) and the gear A (2) with their gear teeth placed more than on tooth at least inside the shaded portion.

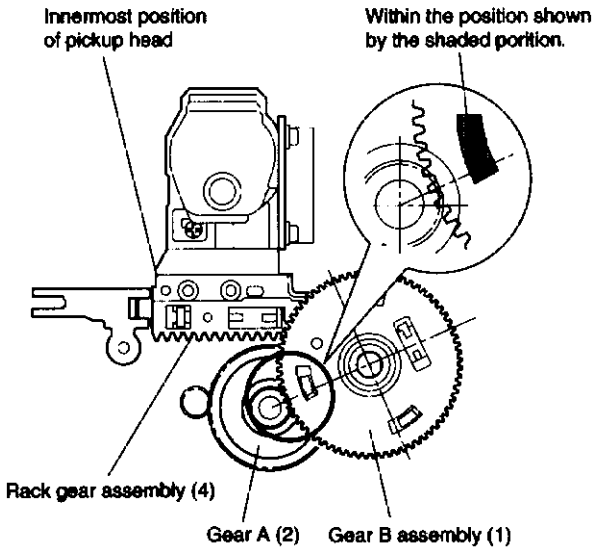


Fig.2-5-3

2-6. Feed Motor

<Removal>

1. Remove the gear B assembly (1) and the gear A (2).
2. Remove two screws (1) and remove the feed motor (2) (with the feed motor PC board (3) attached.)
3. Desolder the terminals of the feed motor (2) and remove the feed motor PC board (3).

<Mounting>

1. Tighten the feed motor (2) on the pickup mechanism assembly with two screws (1).
2. Insert the feed motor PC board (3) with the positioning pin on the chassis matched and solder the terminals.
3. Perform the reverse order of the removal.

Note:

- After mounting, put the lead wires through the notch of the pickup mechanism assembly.
- When replacing the loading motor, meet the polarity phase of the terminals.

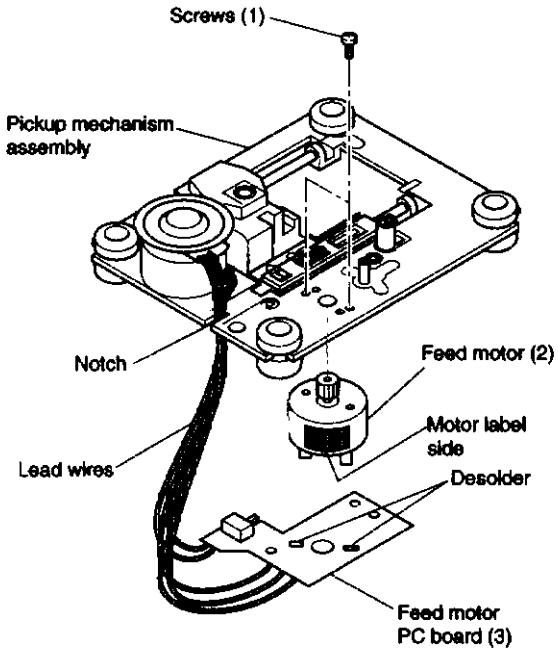


Fig.2-6

HANDLING OF OPTICAL PICKUP

The laser diode in the optical pickup block is so sensitive to static electricity , surge current and etc. that the components are liable to be broken down or its reliability remarkably deteriorated. During repair , carefully take the following precautions.

1. Work according the undermentioned procedure when remove the DVD mechanism from the main body of the set.
   1-1. LD short terminal on the pickup PC board is shorted with solder. (Fig-1)
   1-2. Flexible flat cable connected with the DVD mechanism is removed.
   1-3. The DVD mechanism is removed from the main body of the set.
2. DVD mechanism according to a reverse procedure at the installation.
3. Short circuited first of LD short land when the main PC board(SD-30B1SS) is removed from the main body of the set with solder.

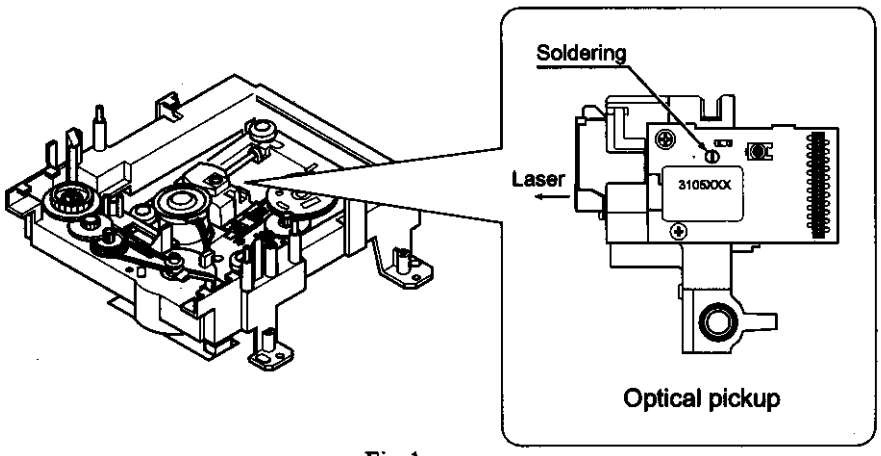


Fig.1

HANDLING OF MAIN PC BOARD

1. Work according the undermentioned procedure when remove the main PC board from the main body of the set.
   1-1. LD short land on the pickup PC board is shorted with solder. (Fig-1)
   1-2. Flexible flat cable and the socket connected are removed.
   1-3. Four machine screws are removed.
2. Main PC board according to a reverse procedure at the installation.

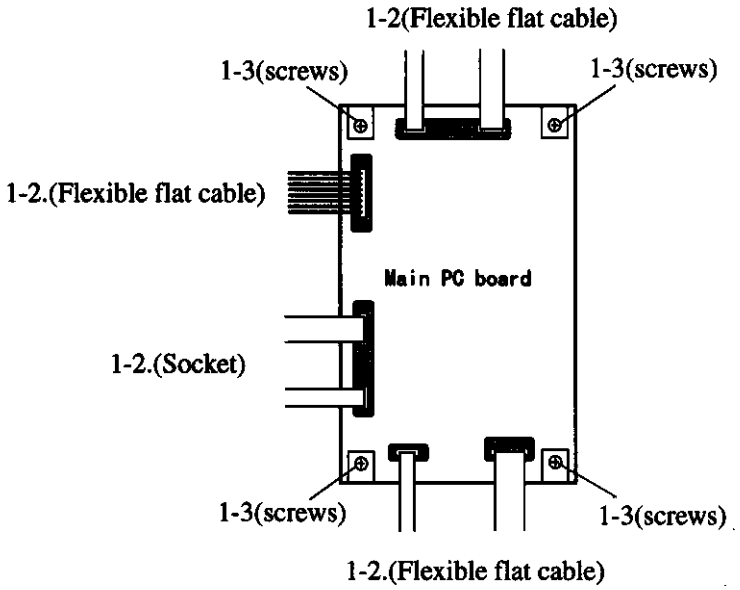
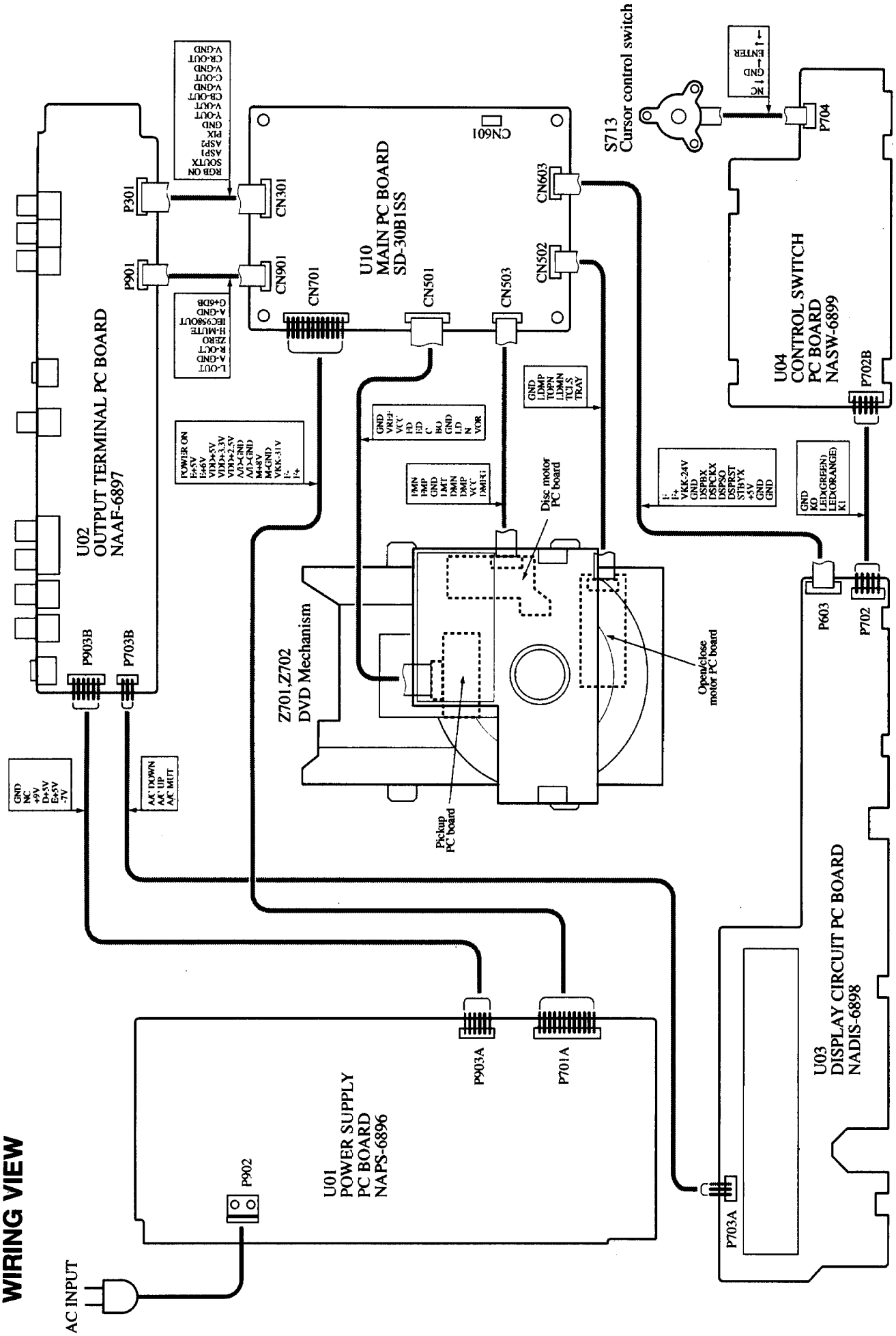


Fig.2

WIRING VIEW


U02
OUTPUT TERMINAL PC BOARD
NAAF-6897
U10
MAIN PC BOARD
SD-30B1SS
U04
CONTROL SWITCH
PC BOARD
NASW-6899
S713
Cursor control switch
Z701,Z702
DVD Mechanism
Disc motor
PC board
Pickup
PC board
Open/close
motor PC board
U01
POWER SUPPLY
PC BOARD
NAPS-6896
U03
DISPLAY CIRCUIT PC BOARD
NADIS-6898
AC INPUT
P301
P901
CN301
CN901
CN701
CN501
CN503
CN603
CN502
CN601
P704
P702B
P903B
P703B
P603
P702
P902
P903A
P701A
P703A

CHASSIS EXPLODED VIEW PARTS LIST

REF NO.	PART NO.	DESCRIPTION
1	27100378A	Chassis
2	27175316B	Leg
3	28141332	Cushion, leg
4	27190266	KGLS-12RF, Holder
5	27262653	Plate ,bottom
6	27225143E	Shield case
7	27150450	Shield plate, FFC
8	29110083	Tape, CROSS-16U
9	29362584	Label, DVD
10	27300750	⚠ Bushing, cord
15	28325689	Knob, power <S>
	28325688	Knob, power <G>
	28325687	Knob, power <B>
16	27273121B	Joint, power
17	27111167A	Front bracket <S>
	27111166A	Front bracket <G>
	27111165A	Front bracket <B>
18	28191861	Clear plate <S, G>
	28191860	Clear plate <B>
20	28198907	Facet, C
21	28325771	Knob, cursor <S>
	28325770	Knob, cursor <G>
	28325769	Knob, cursor <B>
24	29110153	Tape, Cu
25	28148445	Door, tray <S>
	28148444	Door, tray <G>
	28148443	Door, tray <B>
28	27262651	Plate , DVD
29	28184779A	Top cover <S>
	28184780A	Top cover <G>
	28184778A	Top cover <B>
31	838930088	3TTB+8B(UN), self-tapping screw<S,G>
	838430088	3TTB+8B(BC), self-tapping screw<B>
33	27122730	Rear panel <D>
	27122731	Rear panel <P>
	27122732	Rear panel <SA>
	27122733	Rear panel <T>
	27122734A	Rear panel <R>
37	28325768	Knob, (AC) <D, T, SA, R>
38	27262652	Plate, (AC)<D, T, SA, R>
40	27212210	Front panel <D>
	27212211	Front panel <B> <P>
	27212212	Front panel <S> <P>
	27212213	Front panel <B> <T,SA,R>
	27212214	Front panel <G> <T,SA,R>
41	28135244Y	Badge <B>
	28135245Y	Badge <S, G>
42	28198906	Facet, S
43	27268019	Guide, (CRS) <B>
	27268020	Guide, (CRS) <G>
	27268021	Guide, (CRS) <S>

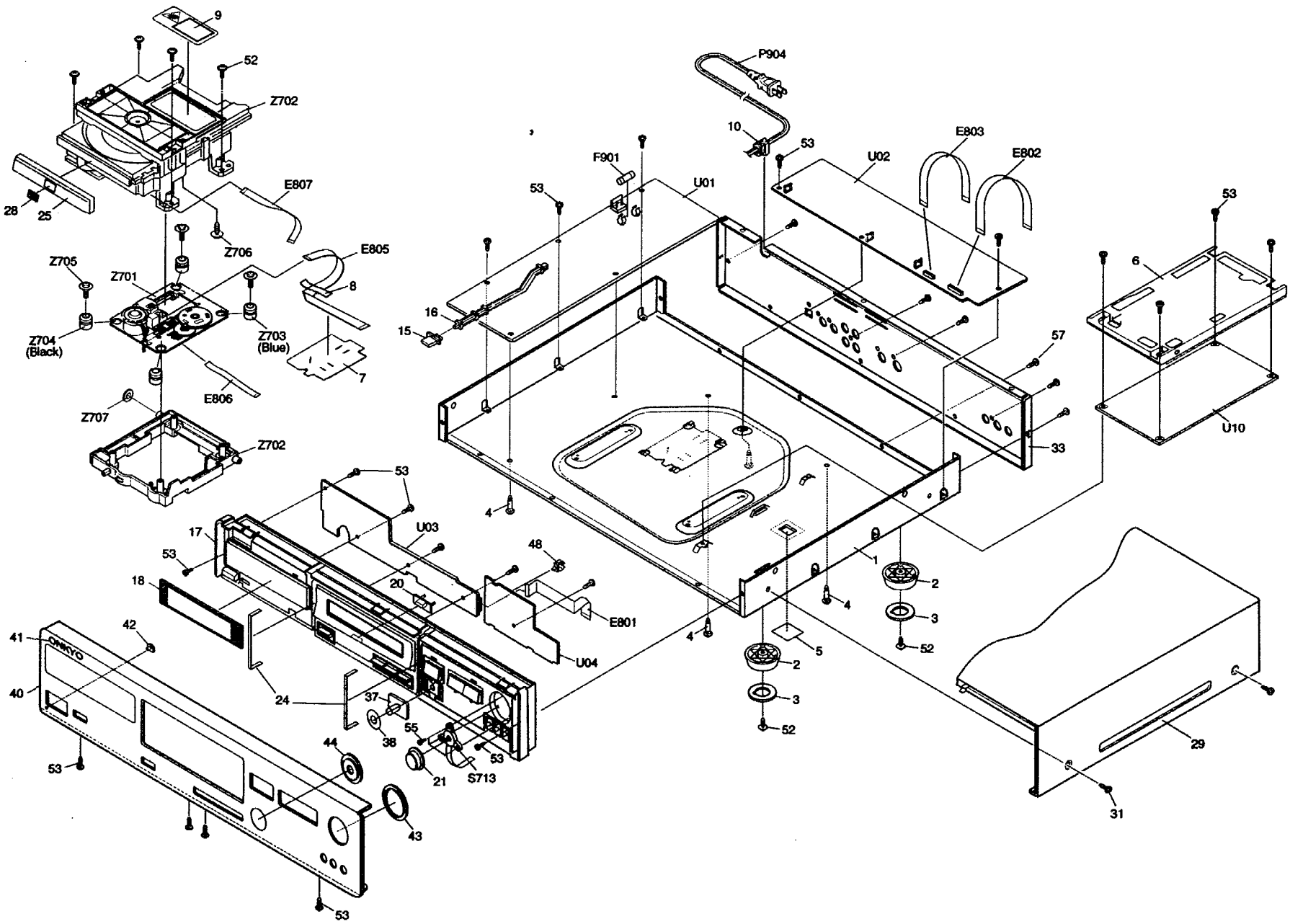
REF NO.	PART NO.	DESCRIPTION
44	27268025	Guide, (AC) <B><D, T, SA, R>
	27268026	Guide, (AC) <G><D, T, SA, R>
45	29110029	DF Tape
48	27190608-1	Holder, UA-0 V0
52	831430088	3TTW+8B(BC), self-tapping screw
53	838130088	3TTB+8B, self-tapping screw
55	838426088	2.6TTB+8B(BC), Special screw
57	838430088	3TTB+8B(BC), self-tapping screw <B>
Z701	24801003-2	SD-2109K3-ZSS, DVD Mechanism
Z702	24801007	DVD Mechanism
Z703	24818038A	Insulator, (A)
Z704	24818039A	Insulator, (B)
Z705	801589	Special screw, (A)
Z706	801590	Special screw, (B)
Z707	24834041	Washer, (C)
E801	2045131512	NCFC5-131512, Flexible flat cable
E802	2045141012	NCFC5-141012, Flexible flat cable
E803	2045081012	NCFC5-081012, Flexible flat cable
E804	260208	Wire tie
E805	2042183012	NCFC2-183012, Flexible flat cable
E806	2045081012	NCFC5-081012, Flexible flat cable
E807	2047061212	NCFC7-061212, Flexible flat cable
F901	252071	⚠ 1.25A-SE-EAWK Fuse <P, T, S, R>
	252146 or	⚠ 1.25A-TSC or
	252157	⚠ 1.25A-UL/T-237, Fuse <D>
P904	253193HIT	⚠ AS-CEE, Power supply cord <P, T, SA, R>
	253279HDK or	⚠ AS-UC-2#18 or
	253279HIT or	⚠ AS-UC-2#18 or
	253280VOL	⚠ AS-UC-2#18, Power supply cord <D>
S713	25035710	NPS-115-S673, Cursor control switch
U01	1H449596-1A	Power Supply PC board ass'y NAPS-6896-1A <D>
	1H449596-1B	Power Supply PC board ass'y NAPS-6896-1B <P>
	1H449596-1C	Power Supply PC board ass'y NAPS-6896-1C <T,SA,R>
U02	1H449597-1A	Output terminal PC board ass'y NAAF-6897-1A <D>
	1H449597-1B	Output terminal PC board ass'y NAAF-6897-1B <P>
	1H449597-1C	Output terminal PC board ass'y NAAF-6897-1C <T,SA,R>
U03	1H449598-1A	Display circuit PC board ass'y NADIS-6898-1A <D>
	1H449598-1B	Display circuit PC board ass'y NADIS-6898-1B <P>
	1H449598-1C	Display circuit PC board ass'y NADIS-6898-1C <T,SA,R>
U04	1H449599-1A	Control switch PC board ass'y NASW-6899-1A <D>
	1H449599-1B	Control switch PC board ass'y NASW-6899-1B <P>
	1H449599-1C	Control switch PC board ass'y NASW-6899-1C <T,SA,R>
U10	24150014-2	SD-30B1SS, Main PC board ass'y

NOTE : THE COMPONENTS IDENTIFIED BY THE MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

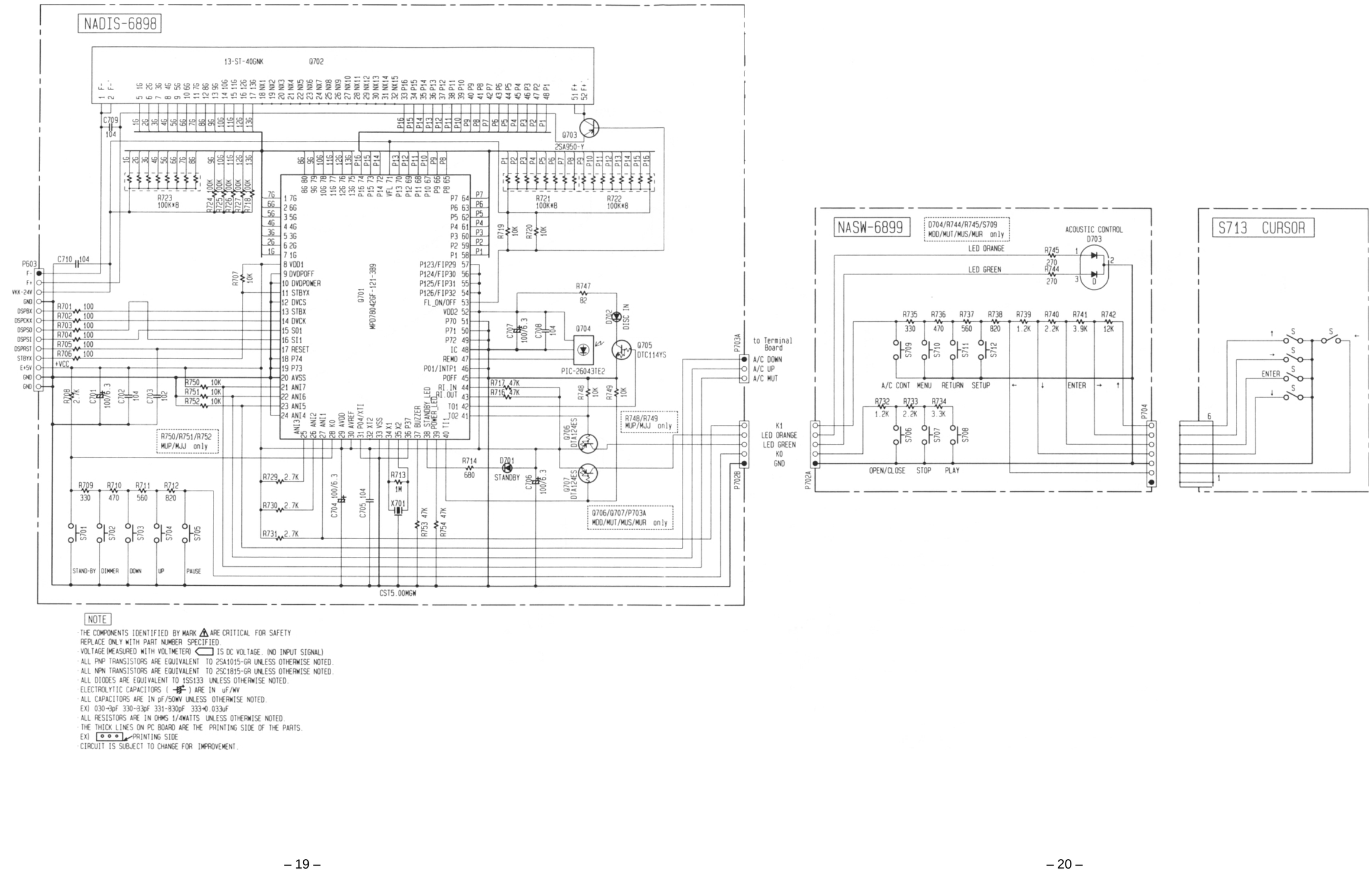
NOTE : <D> : 120V Model only
<P> : European Model only
<T> : Asian Model only
<R> : Chinese Model only
<SA> : South American Model only
<B> : Black Model only
<S> : Silver Model only
<G> : Golden Model only

CHASSIS EXPLODED VIEW

DV-S535



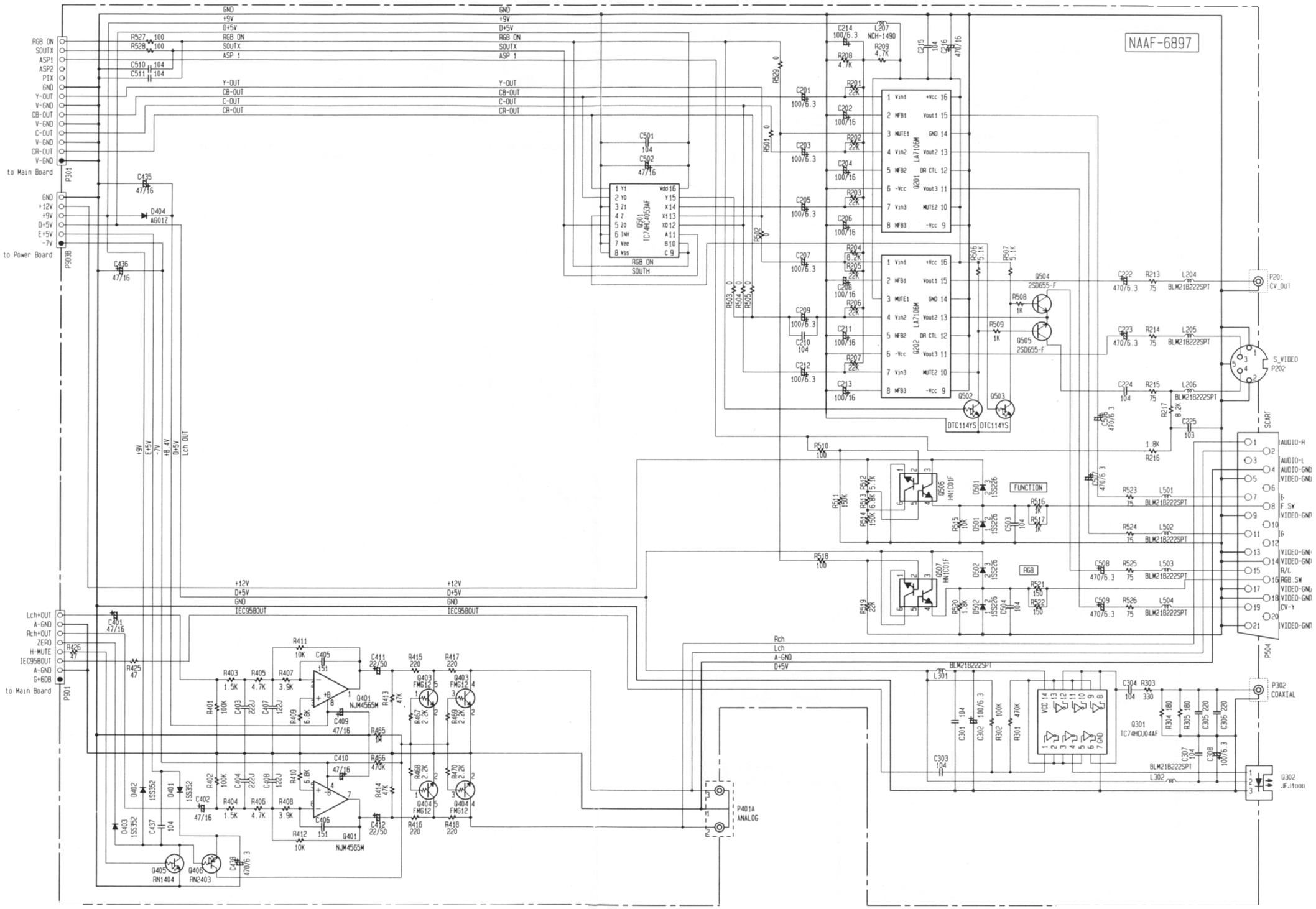
SCHEMATIC DIAGRAM



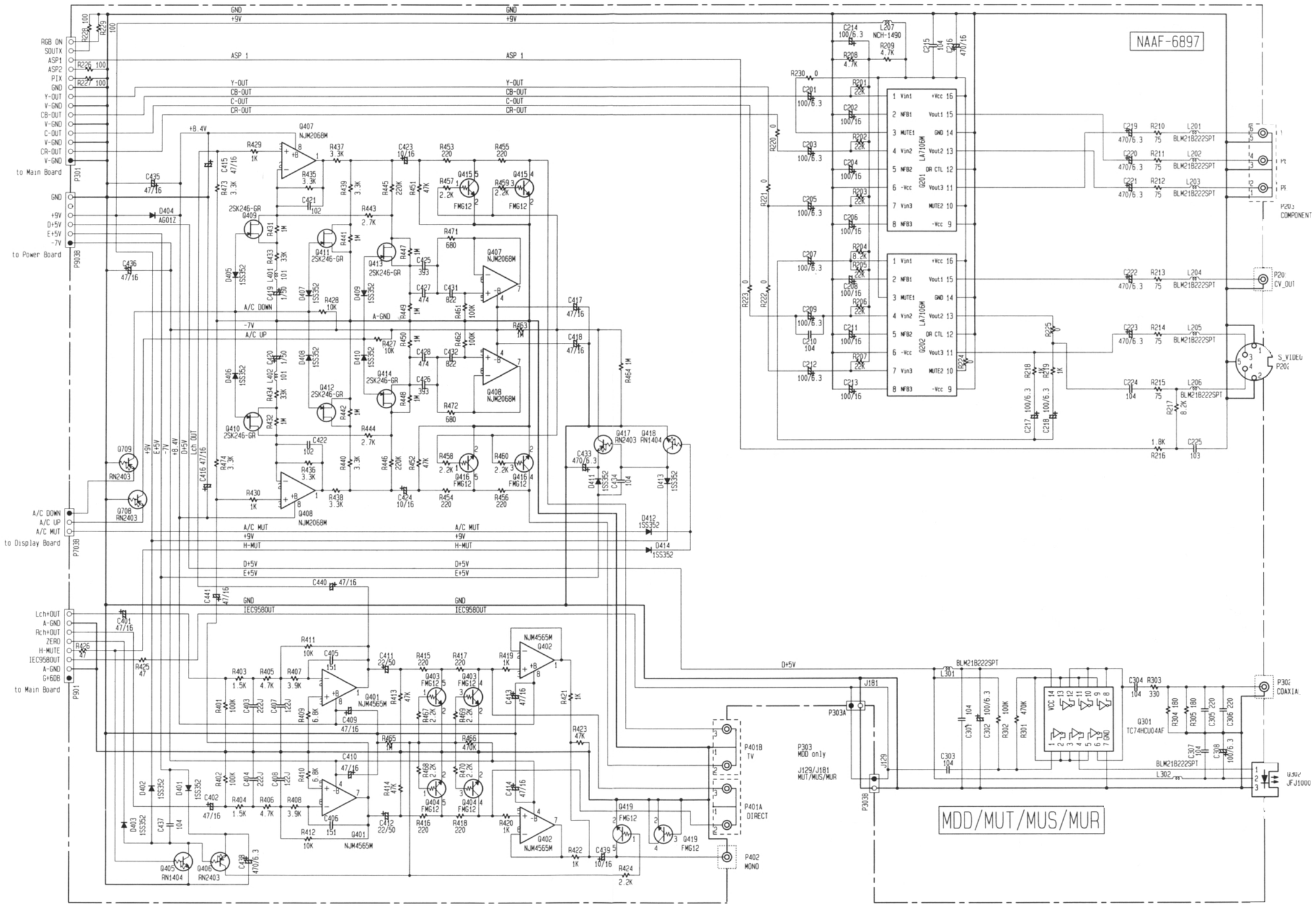
NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ⟨ ⟩ IS DC VOLTAGE. (NO INPUT SIGNAL)
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030→3pF 330→33pF 331→330pF 333→0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▭ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAM (EUROPEAN MODEL)



SCHEMATIC DIAGRAM (OTHER MODEL)



PRINTED CIRCUIT BOARD PARTS LIST

POWER SUPPLY PC BOARD (NAPS-6896-1A,1B,1C)

CIRCUIT NO.		PART NO.	DESCRIPTION
		Photo coupler	
Q902		24120044	ON3131-R
		ICs	
Q901	⚠	22241229	STR-F6653
Q903		22241233	SE005N
Q904		22241230	SI3090C
Q905		22241231	SI3050C
Q906		22241232	SI3033C
Q911		22241289R2	NJM2370U05
		Transistors	
Q907,Q909		2211503 or	2SA950-O or
		2211504	2SA950-Y
Q908,Q912		2211945	2SK246-GR
Q910		2215915R2	HN1A01F-GR
Q913		2211164 or	2SC2120-Y or
		2211163	2SC2120-O <P>
Q914		2215925R2	HN1C01F-GR <P>
		Diodes	
D901～D904	⚠	22380287F	EM2A
D906	⚠	22380291	EG01C
D907～D909		22380294	AG01Z
D910		22380295F	RN2Z
D911,D912		22380296F	RK46
D913		22380297	EU01
D914,D922,D925		22380294	AG01Z
D918		22380300F	RU2YX
D920		224493300R2	UDZ33B , Zener
D921		224490330R2	UDZ3.3B, Zener
D923		224490750R2	UDZ7.5B, Zener
D926		224491300R2	UDZ13B , Zener <P>
D927,D928		223233R1 or	1SS355 or
		223234R2	1SS352
		Transformer	
T901	⚠	2301432	NPT-1380
		Coils	
L901	⚠	231280	NCH-3561
L903～L907		231253K100	NCH-1490
		Core	
L902	⚠	230906	BL02RN2-R62
		Capacitors	
C901	⚠	3500077	DE7150F-472M <P ,T,R,SA>
	⚠	3500196S	RE275V-103M <D>
C904	⚠	3937E1017S	100 μ F, 400V , Elect.
C905	⚠	3000114	QXJ2J-103K-TPT
C907	⚠	3000115	DE1005SL-221J2K
C909,C916		354764709	47 μ F, 35V , Elect.
C911		3300053S	DE0910-1E102MKX <P ,T, R,SA>
C912		393751027	1000 μ F, 25V , Elect.
C913,C914		354741029	1000 μ F, 16V , Elect.
C915,C920,C937		354782209	22 μ F, 50V , Elect.
C917		374722244	0.22 μ F±5%, 50V , Plastic
C919,C927,C930		354744719	470 μ F, 16V , Elect.
C921～C923		354782209	22 μ F, 50V , Elect.
C925,C926		354782209	22 μ F, 50V , Elect.
C928		354724719	470 μ F, 6.3V , Elect.
C929,C931,C932		354782209	22 μ F, 50V , Elect.
C933		354742219	220 μ F, 16V , Elect.
C934		354741019	100 μ F, 16V , Elect.
C935,C941		354744709	47 μ F, 16V , Elect.
C939,C940		354751019	100 μ F, 25V , Elect. <P>
C943,C945		354782209	22 μ F, 50V , Elect. <P>
C948		354741009	10 μ F, 16V , Elect.

CIRCUIT NO.		PART NO.	DESCRIPTION
		Resistors	
R901	⚠	4000076	0.22 Ω ±5%, 5W , Metal plate
R903	⚠	441726834NF	68k Ω ±5%, 2W , Metal
R904	⚠	441721044NF	100k Ω ±5%, 2W , Metal
R905		443522704	27 Ω ±5%, 1/2W , Metal
R906		443522724	2.7k Ω ±5%, 1/2W , Metal
R907		443522234	22k Ω ±5%, 1/2W , Metal
R908		443526814	680 Ω ±5%, 1/2W , Metal
R909		443523324	3.3k Ω ±5%, 1/2W , Metal
R910		4500163	0.47 Ω ±5%, 1/4W , Metal <D, T, R, SA>
R911	⚠	451735194	0.51 Ω ±5%, 2W , Metal
R912		443521024	1k Ω ±5%, 1/2W , Metal
R913		443522204	22 Ω ±5%, 1/2W , Metal
R924		443522214	220 Ω ±5%, 1/2W , Metal
		Sockets	
P701A		2002A392640-1	NSAS-26P0800-1
P903A		2002A391220	NSAS-12P0846
		Plug	
P902	⚠	25055675	NPLG-2P631
		Heat sinks	
Q901A		27160412	RAD-111
Q904A～Q906A		27160145-1	RAD-51
		Push switche	
S901	⚠	25035702	NPS-121-L665P , Power switch
		Fuse holder	
F901	⚠	25050065	YSH403T
		Fuse label	
E903		29361580	T1.25AL250V <P , T, R, SA>
		29362309	1.25A/125V <D>

OUTPUT TERMINAL PC BOARD (NAAF-6897-1A,1B,1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Photo coupler	
Q302	24120076	JFJ1000 , Optical output
	ICs	
Q201,Q202	22241465R2	LA7106MFP
Q301	222740046R2	74HCU04F
Q401	22241383R2	NJM4565M-D
Q402	22241383R2	NJM4565M-D <D , T, R, SA>
Q407,Q408	22240051R2	NJM2068M <D , T, R, SA>
Q501	22241228R2 or	TC74HC4053FP or
	22241228R9	TC74HC4053FP <P>
	Transistors	
Q403,Q404	2215940R2	FMG12
Q405	2214490R2	RN1404
Q406,Q417	2214540R2	RN2403
Q409～Q414	2211945	2SK246-GR <D , T, R, SA>
Q415,Q416,Q419	2215940R2	FMG12 <D , T, R, SA>
Q418	2214490R2	RN1404 <D , T, R, SA>
Q502,Q503	221281or	DTC114YS or
	2216050	KRC107M <P>
Q504,Q505	2211705 or	2SD655-E or
	2211706	2SD655-F <P>
Q506,Q507	2215925R2	HN1C01F-GR <P>
Q708,Q709	2214540R2	RN2403 <D , T, R, SA>
	Diodes	
D401～D403	223233R1 or	1SS355 or
	223234R2	1SS352
D404	22380294	AG01Z
D405～D414	223233R1 or	1SS355 or
	223234R2	1SS352 <D , T, R, SA>
D501,D502	223266R2	1SS226 <P>

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L201-L203	230921R2	BLM21B222SPT <D ,T,R,SA>
L204-L206	230921R2	BLM21B222SPT
L207	231253K100	NCH-1490
L301,L302	230921R2	BLM21B222SPT
L401,L402	231253K101	NCH-1502 <D ,T,R,SA>
L501-L504	230921R2	BLM21B222SPT <P>
	Capacitors	
C201,C203	354721019	100 μ F, 6.3V, Elect.
C202,C204	354741019	100 μ F, 16V, Elect.
C205,C207	354721019	100 μ F, 6.3V, Elect.
C206,C208	354741019	100 μ F, 16V, Elect.
C209,C212,C214	354721019	100 μ F, 6.3V, Elect.
C211,C213	354741019	100 μ F, 16V, Elect.
C216	354744719	470 μ F, 16V, Elect.
C217,C218	354721019	100 μ F, 6.3V, Elect. <D,T, R,SA>
C219-C221	354724719	470 μ F, 6.3V, Elect. <D,T, R,SA>
C222,C223	354724719	470 μ F, 6.3V, Elect.
C302,C308	354721019	100 μ F, 6.3V, Elect.
C401,C402	354744709	47 μ F, 16V, Elect.
C403,C404	374722224	2200pF±5% , 50V , Plastic
C407,C408	374721224	1200pF±5% , 50V , Plastic
C409,C410	354744709	47 μ F, 16V, Elect.
C411,C412	354782209	22 μ F, 50V, Elect.
C413-C418	354744709	47 μ F, 16V, Elect. <D,T, R,SA>
C419,C420	354780109	1 μ F, 50V , Elect. <D,T, R,SA>
C423,C424 ,C439	354741009	10 μ F, 16V, Elect. <D,T, R,SA>
C425,C428	374723934	0.039 μ F±5%, 50V , Plastic. <D,T, R,SA>
C431,C432	374728224	8200pF±5% , 50V , Plastic. <D,T,R,SA>
C433	354724719	470 μ F, 6.3V, Elect. <D,T,R,SA>
C435,C436	354744709	47 μ F, 16V, Elect.
C438	354724719	470 μ F, 6.3V, Elect.
C440,C441	354744709	47 μ F, 16V, Elect. <D,T,R,SA>
C502	354744709	47 μ F, 16V, Elect. <P>
C506-C509	354724719	470 μ F, 6.3V, Elect. <P>
	Sockets	
P202	25051750	NSCT-4P1537 , S Video
P301	25051938	NSCT-14P1725
P303	2009990562	NSAS-4P0755 <D>
P504	25052279	NSCT-21P2176 , AV connector <P>
P901	25051932	NSCT-8P1719
	Terminals	
P201	25045547	NPJ-1PDYE368
P203	25045590	NPJ-3PDB401 ,<D,T,R,SA>
P302	25045548	NPJ-1PDOR369 , Coaxial output
P401	25045594	NPJ-4PDWR405 <D ,T,R,SA>
P401A	25045371	NPJ-2PDWR214 <P>
P402	25045626	NPJ-1PDB433 , Mono output <D ,T,R,SA>
	Plugs	
P703B	25055147	NPLG-3P131 <D ,T,R,SA>
P903B	25055150	NPLG-6P134
	Holders	
E201,E203 ,E205	27190608-1	UA-0 V0 , Holder

DISPLAY PC BOARD (NADIS-6898-1A,1B,1C)

	FL tube	
Q702	212201	13-ST-40GNK
	Remote Sensor	
Q704	241330	PIC-26043TE2
	IC	
Q701	22241497R3	MPD78042GF-121-3B9
	Transistors	
Q703	2211504 or	2SA950-Y or
	2211503	2SA950-O
Q705	221281 or	DTC114YS or
	2216050	KRC107M
Q706,Q707	2212600 or	DTA124ES or
	2215780	KRA103M <D ,T,R,SA>

CIRCUIT NO.	PART NO.	DESCRIPTION
	LEDs	
D701	225370	SLR-342VRTB7
D702	225376	SEL6E10C
	Oscillator	
X701	3010242	CST5.00MGW
	Capacitors	
C701,C704	355721019	100 μ F, 6.3V, Elect.
C706,C707	355721019	100 μ F, 6.3V, Elect.
	Sockets	
P603	25051895 or	NSCT-13P1682 or
	25052350	NSCT-13P2247
P702A	2006391010UL	NSAS-10P0158
P703A	2002390630	NSAS-6P0317 <D,T,R,SA>
	Push switches	
S701～S705	25035699	NPS-111-S662
	FL Holder	
Q702A	27191085	

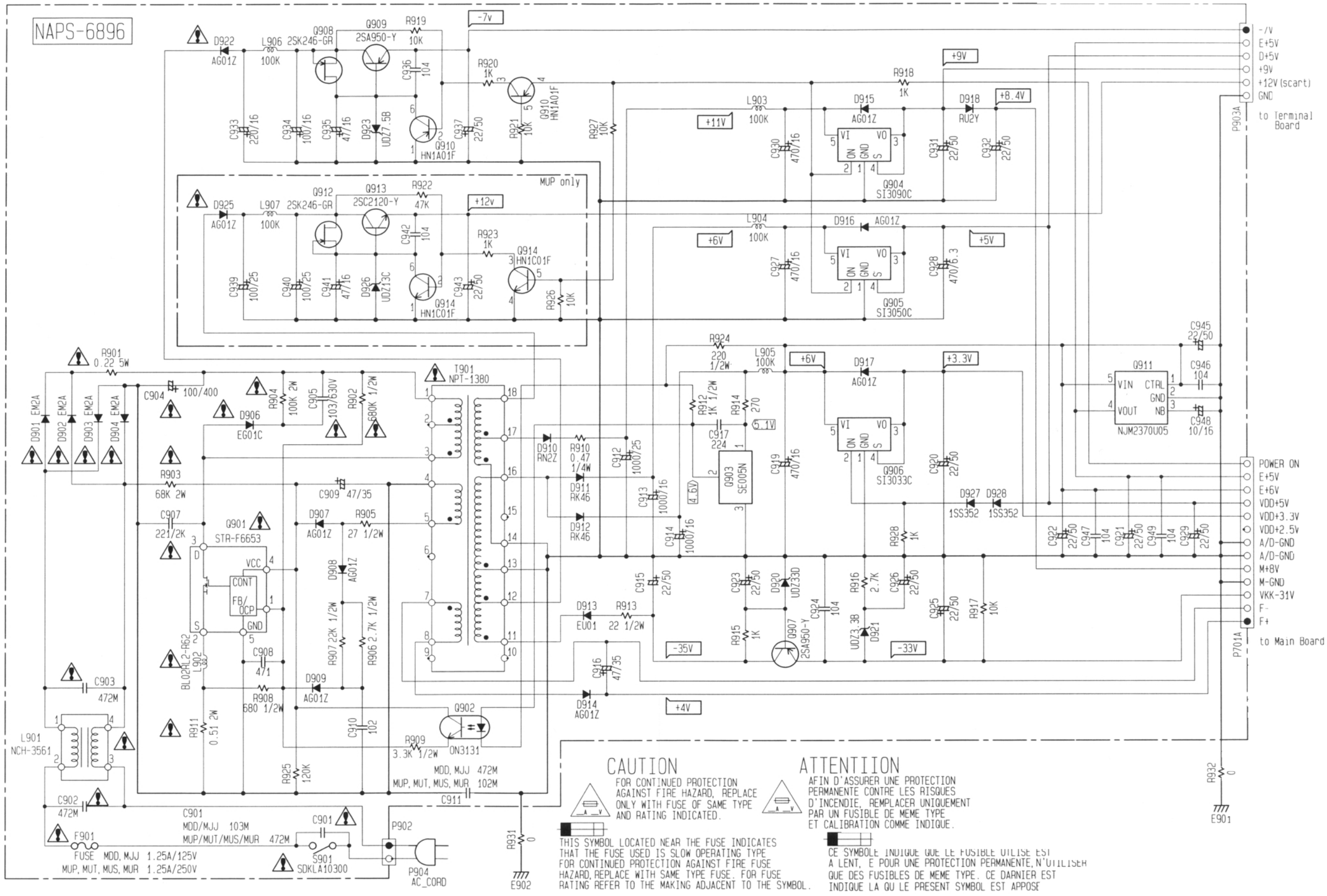
CONTROL SWITCH PC BOARD (NASW-6899-1A,1B,1C)

	LED	
D703	225377	SML19416W <D,T,R,SA>
	Plug	
P702B	25055369	NPLG-5P352
	Sockets	
P704	25051889 or	NSCT-7P1676 or
	25052344	NSCT-7P2241
	Push switches	
S706～S708	25035699	NPS-111-S662
S709	25035699	NPS-111-S662 <D,T,R,SA>
S710～S712	25035699	NPS-111-S662

NOTE : THE COMPONENTS IDENTIFIED BY THE MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

NOTE : <D> : 120V Model only
<P> : European Model only
<T> : Asian Model only
<R> : Chinese Model only
<SA> : South American Model only

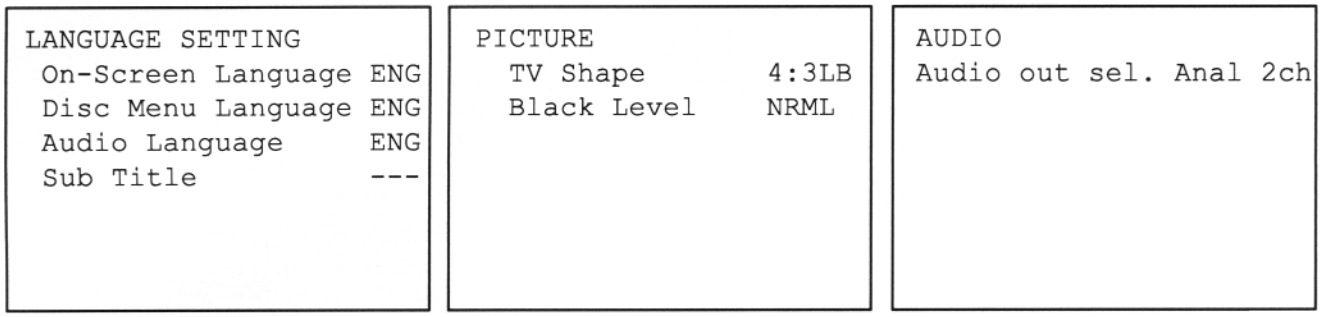
SCHEMATIC DIAGRAM



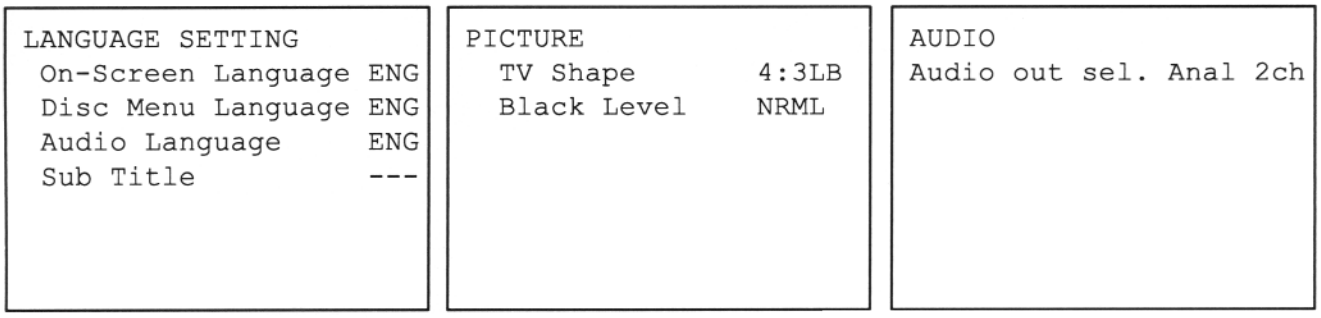
Factory setting confirmation

"SETUP" as follows each setting of the screen is confirmed.

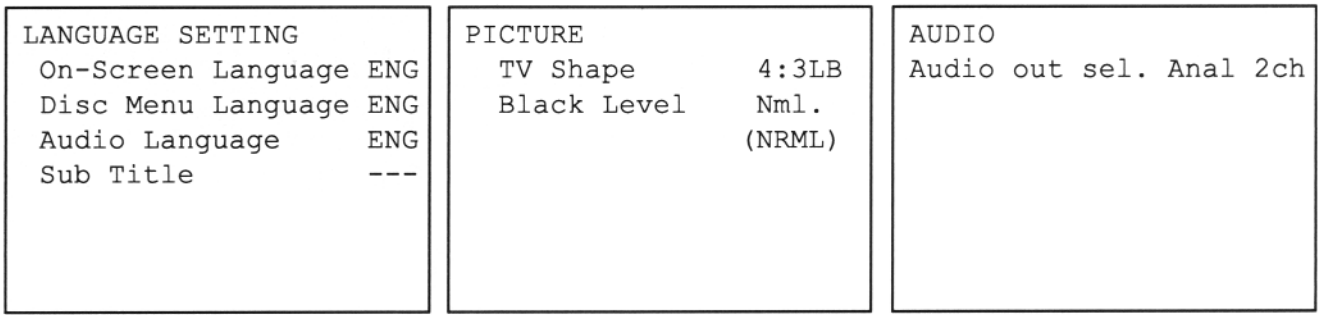
MDD1N



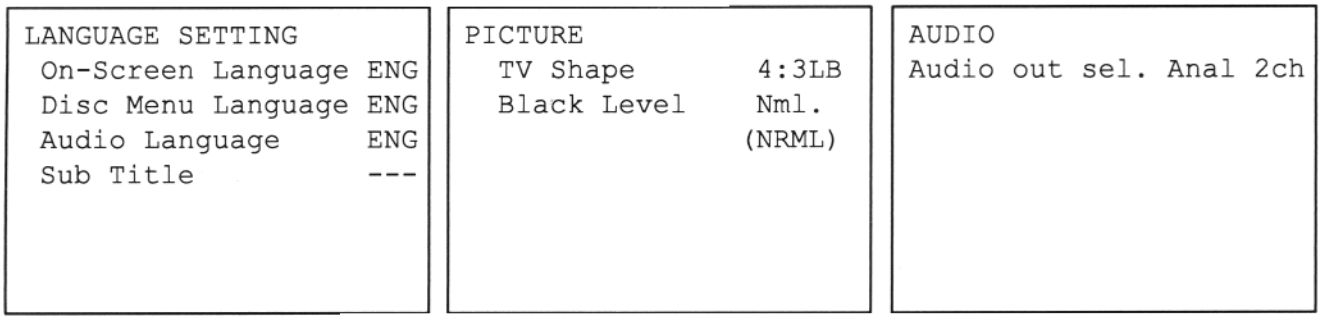
MUT3P



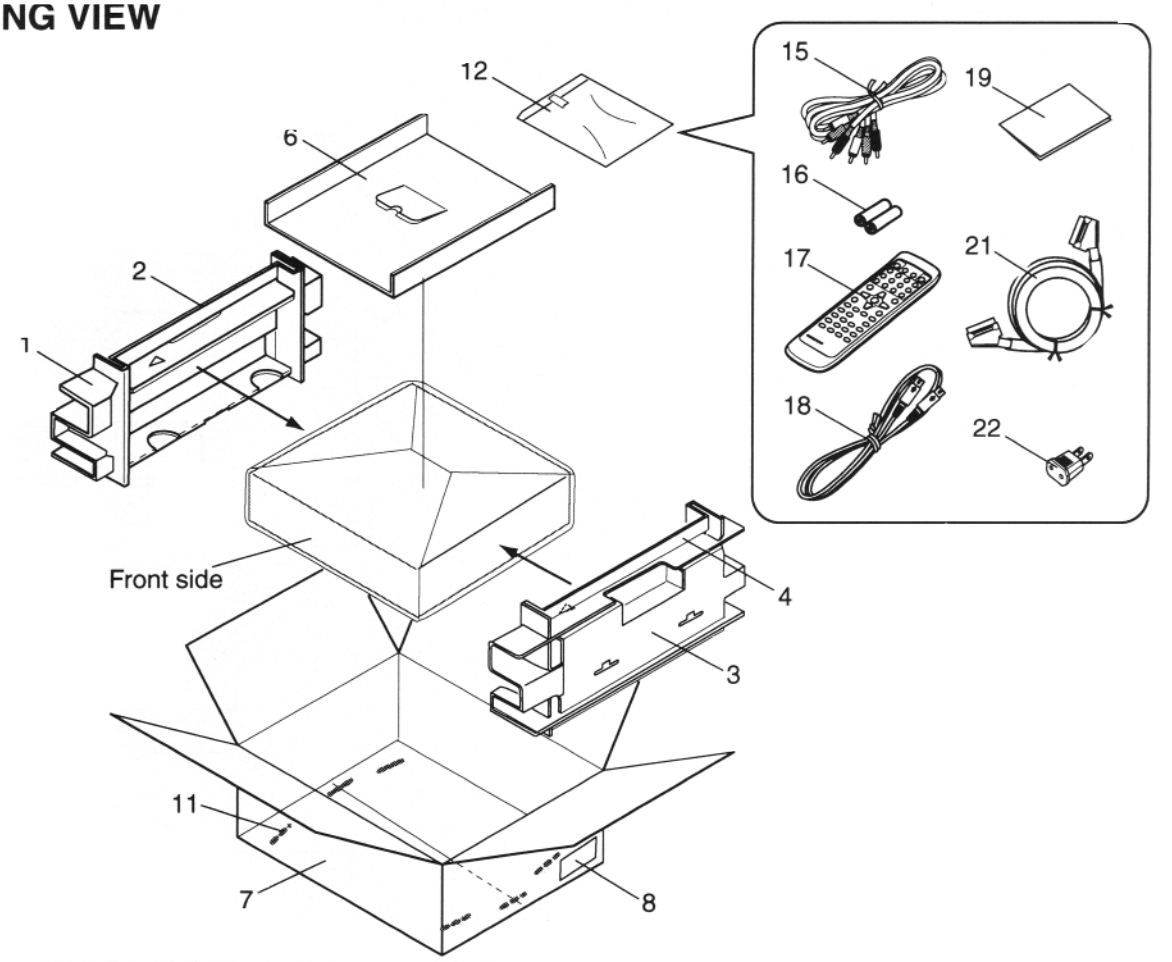
MUP2P



MUS4P



PACKING VIEW



PACKING PARTS LIST

REF NO.	PART NO.	DESCRIPTION
1	29091928B	Pad, LA
2	29091929B	Pad, LB
3	29091930B	Pad, RA
4	29091931B	Pad, RB
5	29095847	Sheet
6	29095875A	Sheet
7	29053584	Carton box <D>
	29053585	Carton box <B><P>
	29053586	Carton box <B><T>
	29053587	Carton box <B><SA>
	29053588	Carton box <B><R>
	29053589	Carton box <S><P>
	29053590	Carton box <G><SA>
	29053591	Carton box <G><R>
	29053592	Carton box <G><T>
8	29362635	Label UPC <D>
	29362632	Label EAN <B>
	29362633	Label EAN <S>
	29362634	Label EAN <G>
10	29110071	PP tape W50 No.371
11	282301	Staple
12	29100097-1A	350*250, Styrene bag
13	261504	Paper tape, W30

REF NO.	PART NO.	DESCRIPTION
15	2010359 or	RCA-3P(YWR) or
	2010359TAIDA or	RCA-3P(YWR) or
	2010379	RCA-3P(YWR), Audio cable
16	3010054	UM-3, Battery
17	24140419	RC-419DV, Remote controller
18	2010360 or	TPX3000, S video cable or
	2010380	S video cable <D,T,SA,R>
19	29342908	Instruction manual E(MDD) <D,T,SA,R>
	29342909	Instruction manual E(MUP) <P>
	29342911	Instruction manual U2FS <P>
	29342912	Instruction manual U2GS <P>
	29342913	Instruction manual U2SW1 <P>
	29342914	Instruction manual T <1, K>
	29342915	Instruction manual U2FS <SA>
20	29365083	Warranty card <D>
21	2010368	YAF11-0697, RGB video cable <P>
22	25055911	CV-K-2, Conversion plug <T,SA,R>

NOTE : <D> : 120V Model only
<P> : European Model only
<T> : Asian Model only
<R> : Chinese Model only
<SA> : South American Model only
<B> : Black Model only
<S> : Silver Model only
<G> : Golden Model only

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NS008 PN 0M3655 Printed in Japan