Ref. No.3600

ONKYO® SERVICE MANUAL

DVD PLAYER

MODEL DV-S501

UD	120V AC, 60Hz
UWT	120-240V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

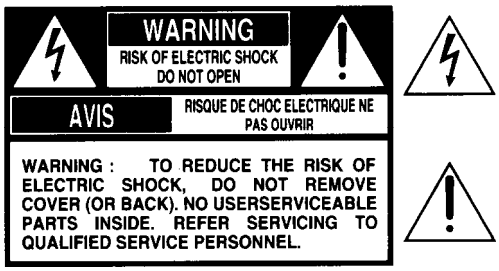
COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

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

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) instructions 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 DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU' AU FOND.**

CAUTION: This Digital Video Disc Player employs a Laser System.
To ensure proper use of this product, please read this owner's manual carefully and retain for future reference. Should the unit require maintenance, contact an authorized service location - see service procedure.

Use of controls, adjustments or the performance of procedures other than those specified may result herein hazardous radiation exposure.

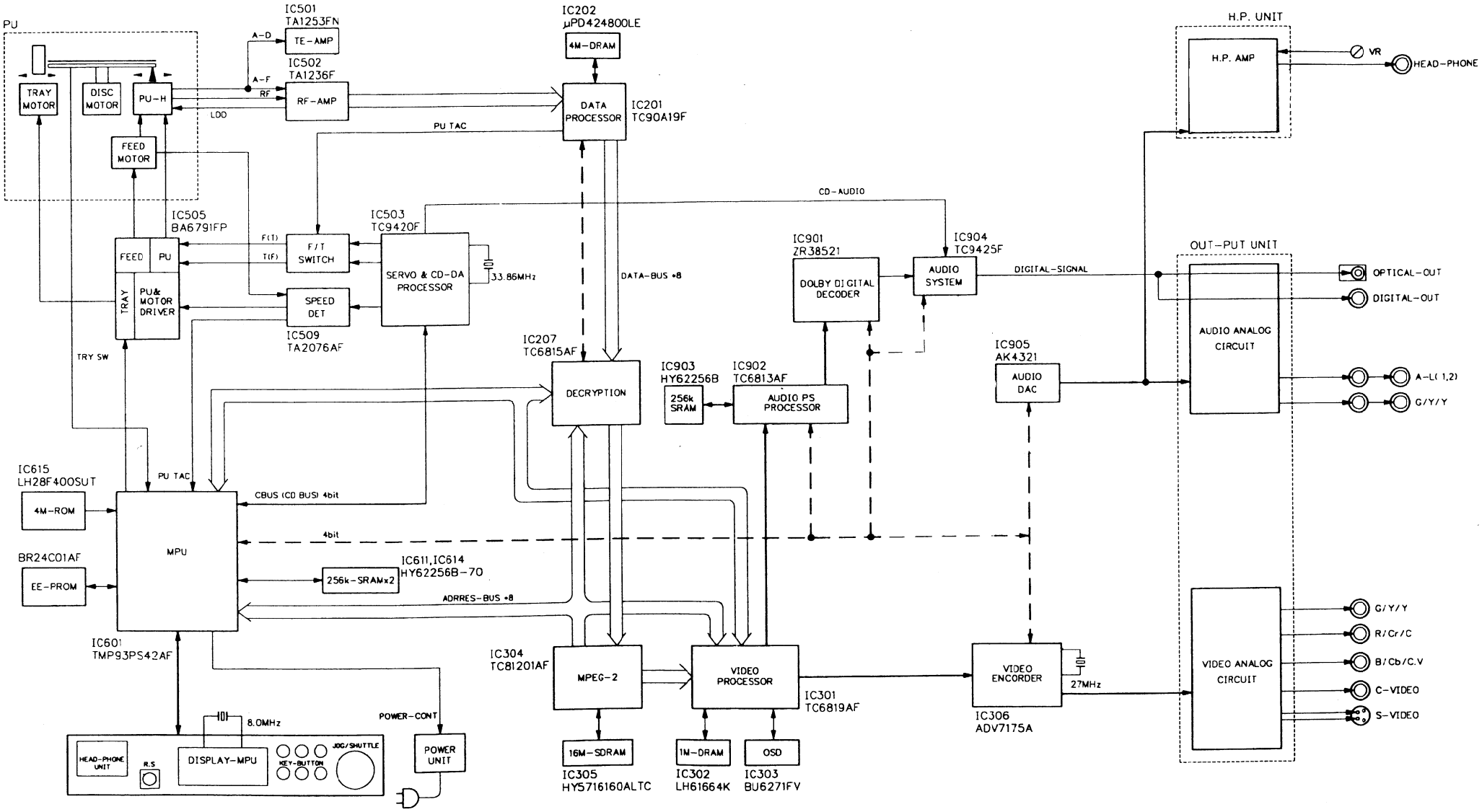
To prevent direct exposure to laser beam, do not try to open the enclosure.
Visible laser radiation when open and interlocks defeated.
DO NOT STARE INTO BEAM.

PREPARATION OF SERVICING

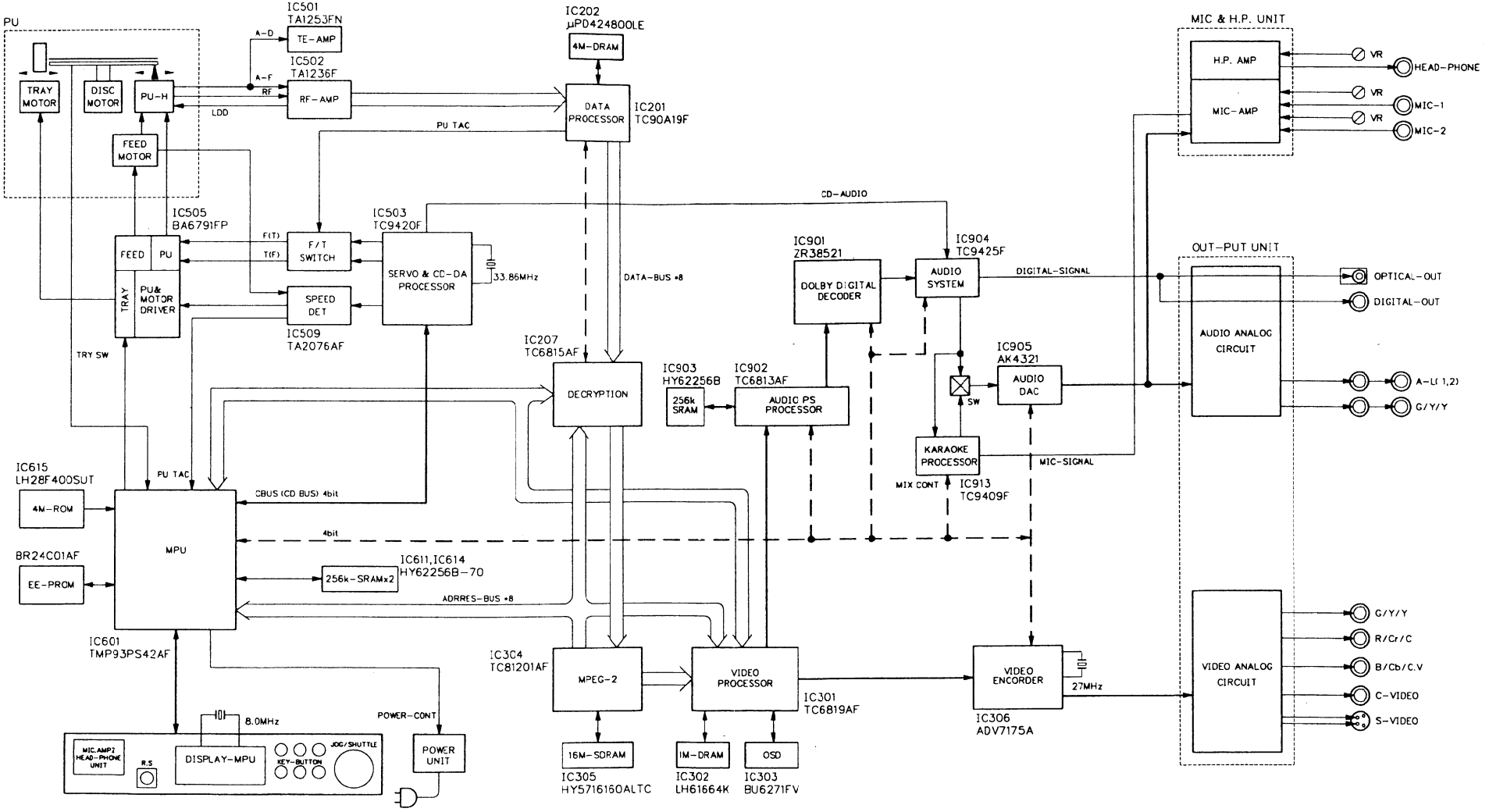
Pickup Head consists of a laser diode that is very susceptible to external static electricity.

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.

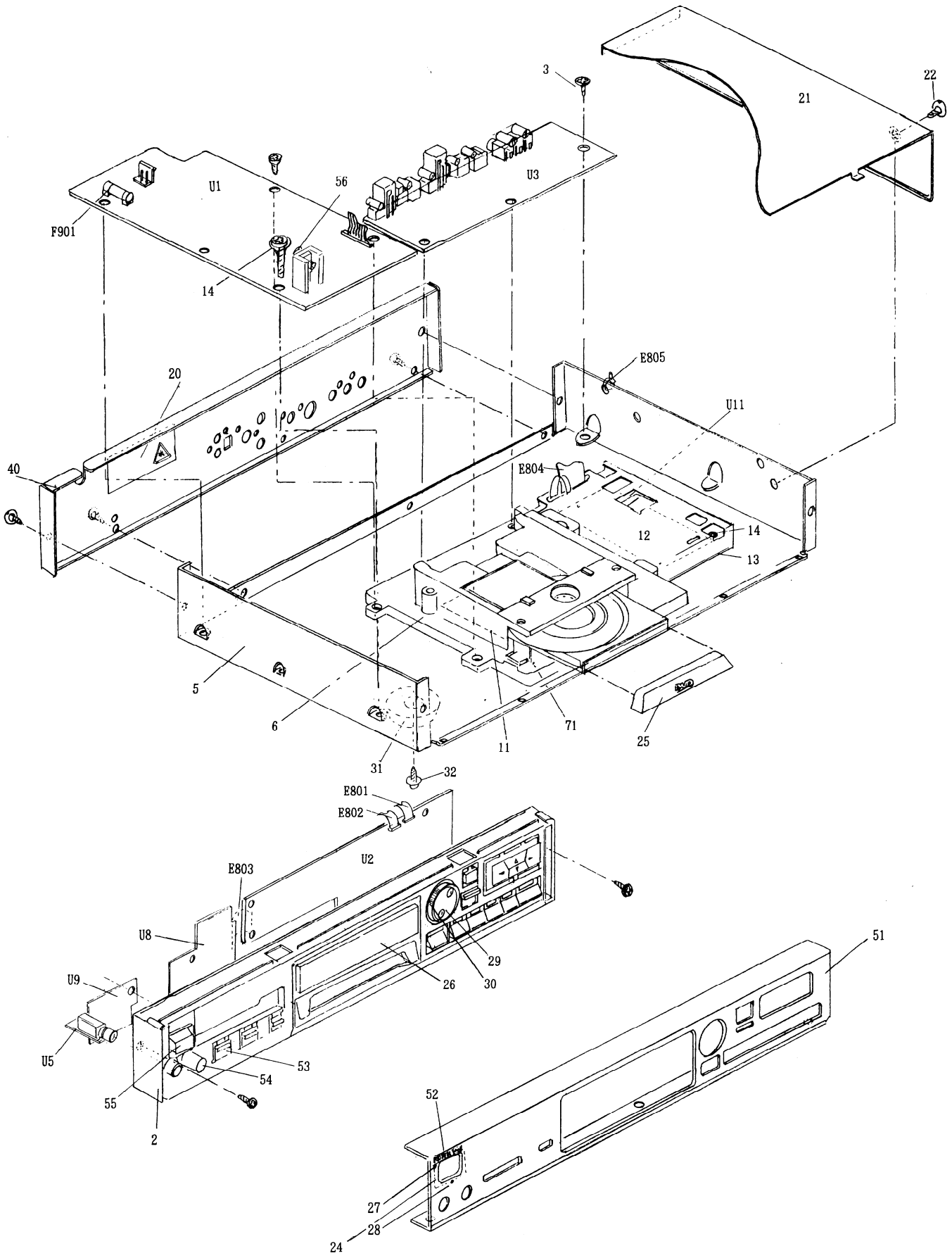
BLOCK DIAGRAM (UD)



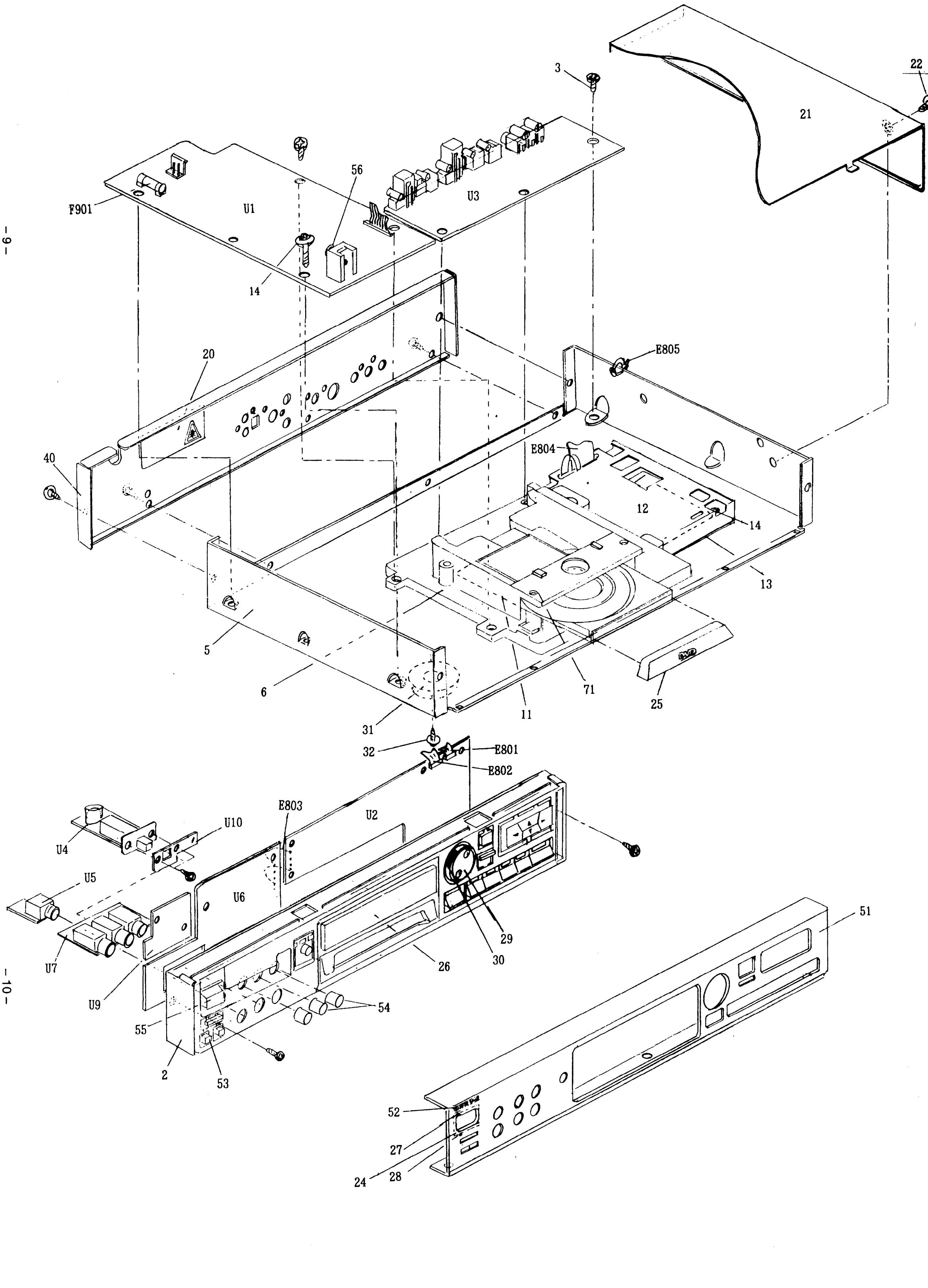
BLOCK DIAGRAM (WT)



EXPLODED VIEW (UD),(120V-240V,AC)



EXPLODED VIEW (WT)



PARTS LIST

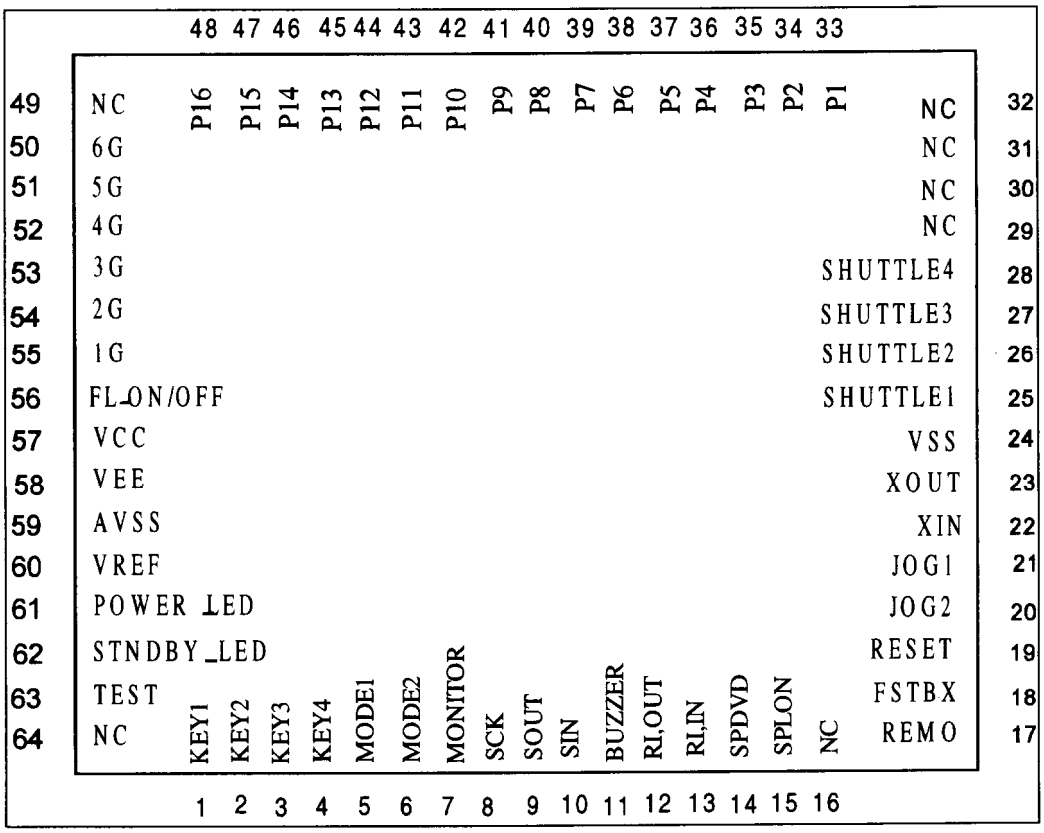
REF. NO.	PART NO.	DESCRIPTION
2	27111071A	Front bracket <B>
	27111072A	Front bracket <G>
3	838130088	3TTB+8B, Self-tapping screw
5	27100363	Chassis
6	27191047A	Holder M
9	27300750	Bushing, cord
11	27191049	Holder PC
12	27225138	Shield case U
13	27225139	Shield case B
14	831130168	3TTW+16B, Self-tapping screw
20	29362285	Label
21	28184697Z	Top cover <B>
	28184696Z	Top cover <G>
22	838430088	3TTB+8B(BC), Self-tapping screw <B>
	838230088	3TTB+8B(Ni), Self-tapping screw
24	27267993	Guide, Power <B>
	27267994	Guide, Power <G>
25	28148399	Door <B>
	28148400	Door <G>
26	28191829	Clear plate <B>
	28191830	Clear plate <G>
27	28198778	Facet
28	28198846	Facet 3
29	28325353A	Knob, Jog <B>
	28325601	Knob, Jog <G>
30	28325352A	Knob S <B>
	28325600	Knob S <G>
31	27175311A	Leg
32	831430088	3TTW+8B(BC), Self-tapping screw
40	27122468	Rear panel <D>
	27122469	Rear panel <T>
	27122470	Rear panel <WX>
51	27212005	Front panel <D/WX>
	27212006A	Front panel <T>
	27212007A	Front panel <G>
52	28135244	Badge <B>
	28135245	Badge <G>
53	28325598	Knob 3 <D/WX>
	28325596	Knob 2 <T>
	28325597	Knob 2 <G>
54	28325452	Knob, Mic. <B>
	28325495	Knob, Mic. <G>
55	28325497A	Knob, power <B>
	28325499A	Knob, power <G>
56	838430107	3TTB+10S(BC), Self-tapping screw
71	24801001	SD-2100K1-ZX, DVD mechanism ass'y

REF. NO.	PART NO.	DESCRIPTION
E801	2045101512	NCFC5-101512, Flat cable
E802	2045102512	NCFC5-102512, Flat cable
E803	2045131012	NCFC5-131012, Flat cable
E804	2045251012	NCFC5-251012, Flat cable
E805	260208	Wire tie
F901	252146	1.25A-TSC, Primary fuse <D>
	252071	1.25A-SE-EAWK, Primary fuse <T/WX>
P950	253192HIT	AS-UC-6#18(SPT-2), Power supply cord <D>
	253193HIT	AS-CEE, Power supply cord <T/WX>
U1	1H386546-1A	NAPS-6346-1A, Power supply circuit pc board ass'y <D>
	1H386546-1B	NAPS-6346-1B, Power supply circuit pc board ass'y <T>
	1H386546-1C	NAPS-6346-1C, Power supply circuit pc board ass'y <WX>
U2	1H386547-1A	NADIS-6347-1A, Display circuit pc board ass'y <D>
	1H386547-1B	NADIS-6347-1B, Display circuit pc board ass'y <T>
	1H386547-1C	NADIS-6347-1C, Display circuit pc board ass'y <WX>
U3	1H386548-1A	NAAF-6348-1A, pc board ass'y <D>
	1H386548-1B	NAAF-6348-1B, pc board ass'y <T>
	1H386548-1C	NAAF-6348-1C, pc board ass'y <WX>
U4	1H386549-1B	NASW-6349-1B, switch pc board ass'y<T>
U5	1H386550-1A	NAAF-6350-1A, pc board ass'y <D>
	1H386550-1C	NAAF-6350-1C, pc board ass'y <WX>
U6	1H386551-1B	NAAF-6351-1B, pc board ass'y <T>
U7	1H386552-1B	NAAF-6352-1B, pc board ass'y <T>
U8	1H386553-1A	NAAF-6353-1A, pc board ass'y <D>
	1H386553-1C	NAAF-6353-1C, pc board ass'y <WX>
U9	1H386554-1A	NAAF-6354-1A, pc board ass'y <D>
	1H386554-1B	NAAF-6354-1B, pc board ass'y <T>
	1H386554-1C	NAAF-6354-1C, pc board ass'y <WX>
U10	1H386555-1B	NAAF-6355-1B, pc board ass'y <T>
U11	24150002	SD-3100K1-ZN, Main circuit pc board ass'y <D/WX>
	24150001	SD-3100K2-ZP, Main circuit pc board ass'y <T>

Q701: MICROPROCESSOR TERMINAL FUNCTION

PIN No.	PORT NAME	I/O	DESCRIPTION
1	KEY1	I	
2	KEY2	I	Key input terminal
3	KEY3	I	
4	KEY4	I	
5	MODE1	I	L:Effective the ONKYO-remote control
6	MODE2	I	GND (Select the version)
7	MONITOR	O	Monitor terminal
8	SCK	I	Serial clock input port
9	SOUT	O	Serial data output port
10	SIN	I	Serial data input port
11	BUZZER	O	Output port for buzzer
12	RI.OUT	O	Output port for system(output)
13	RI.IN	I	Output port for system(input)
14	SPDVD	O	Control port for KARAOKE processor
15	SPLON	O	Control port for KARAOKE processor
16	-		Not use
17	REMO	I	Remote control input port
18	FSTBX	I	Serial data transmit input port
19	RESET	I	Reset signal input
20	JOG2	I	JOG plus input
21	JOG1	I	
22	ZIN	I	Clock circuit (input)
23	XOUT	O	Clock circuit (output)
24	VSS		Ground
25	SHUTTLE1	I	Shuttle input
26	SHUTTLE2	I	
27	SHUTTLE3	I	
28	SHUTTLE4	I	
29	-		Not use
30	-		
31	-		
32	-		

PIN No.	PORT NAME	I/O	DESCRIPTION
33	P1	O	
34	P2	O	
35	P3	O	
36	P4	O	Output port for fluorescent tube (segment)
37	P5	O	
38	P6	O	
39	P7	O	
40	P8	O	
41	P9	O	
42	P10	O	
43	P11	O	
44	P12	O	
45	P13	O	
46	P14	O	
47	P15	O	
48	P16	O	
49	-		Not use
50	6G	O	
51	5G	O	
52	4G	O	Output port for fluorescent tube (grid)
53	3G	O	
54	2G	O	
55	1G	O	
56	FL_ON/OFF	O	Fluorescent tube control port (heater)
57	VCC		Power supply
58	VEE		Power supply for fluorescent tube
59	AVSS		Groung for A/D converter
60	VREF		Regulated power supply for A/D converter
61	POWER_LED	O	Control terminal of power LED
62	STANDBY_LED	O	Control terminal of standby LED
63	TEST		(+5V)
64	-		Not use



PARTS LIST

* <D>:USA, <T>:ASIA, <WT>:PX Version

REF. No.	PART No.	DESCRIPTION		REF. No.	PART No.	DESCRIPTION	
U1	1H386546-1A	NAPS-6346-1A, Power supply circuit pc board ass'y <D>	N	Q907	24120044	ON3131-R (PHOTO CPL)	
	1H386546-1B	NAPS-6346-1B, Power supply circuit pc board ass'y <T>	N		**TRANSISTOR**		
	1H386546-1C	NAPS-6346-1C, Power supply circuit pc board ass'y <WX>	N	Q403-Q406	2211706 or 2211705	2SD655-F or 2SD655-E	
U2	1H386547-1A	NADIS-6347-1A, Display circuit pc board ass'y <D>	N	Q407, Q710, Q711	2213570 or 221281 or 2214930	RN1207 or DTC114YS or UN4214	
	1H386547-1B	NADIS-6347-1B, Display circuit pc board ass'y <T>	N	Q408, Q704	2212600	DTA124ES	
	1H386547-1C	NADIS-6347-1C, Display circuit pc board ass'y <WX>	N	Q702	2211504 or 2211503	2SA950-Y or 2SA950-O	
U3	1H386548-1A	NAAF-6348-1A, pc board ass'y <D>	N	Q703	212189	6-BT-289GK (FL TUBE)	N
	1H386548-1B	NAAF-6348-1B, pc board ass'y <T>	N	Q705	24130011	PIC-12043TE2 (REMTE SENS)	
	1H386548-1C	NAAF-6348-1C, pc board ass'y <WX>	N	Q706	3010309	PKM13EPY-4002 (P1EZ0)	N
U4	1H386549-1B	NASW-6349-1B, switch pc board ass'y<T>	N	Q712-Q713	2212794	2SD1468-R<D><WX>	
U5	1H386550-1A	NAAF-6350-1A, pc board ass'y <D>	N	Q715	2213570 or 221281 or 2214930	RN1207 or DTC114YS or UN4214<D><WX>	
	1H386550-1C	NAAF-6350-1C, pc board ass'y <WX>	N	Q716	2212600	DTA124ES<D><WX>	
U6	1H386551-1B	NAAF-6351-1B, pc board ass'y <T>	N	Q801, Q802	2212794	2SD1468-R<T>	
U7	1H386552-1B	NAAF-6352-1B, pc board ass'y <T>	N	Q804	2213570 or 221281 or 2214930	RN1207 or DTC114YS or UN4214<T>	
U8	1H386553-1A	NAAF-6353-1A, pc board ass'y <D>	N	Q805	2212600	DTA124ES<T>	
	1H386553-1C	NAAF-6353-1C, pc board ass'y<WX>	N	Q906	2211504 or 2211503	2SA950-Y or 2SA950-O	
U9	1H386554-1A	NAAF-6354-1A, pc board ass'y <D>	N	Q910	2201285	2SD882-Q	
	1H386554-1B	NAAF-6354-1B, pc board ass'y <T>	N	Q911	2201275	2SB772-Q	
	1H386554-1C	NAAF-6354-1C, pc board ass'y <WX>	N	Q912	2213284 or 2211183 or 2214281	2SC1740S-R or 2SC1740-R or 2SD2144S-U	
U10	1H386555-1B	NAAF-6355-1B, pc board ass'y <T>	N	Q913	2213354 or 2211455 or 2213074	2SA933S-R or 2SA1015-GR or 2SA933-R	
U11	24150002	SD-3100K1-ZN, Main circuit pc board ass'y <D/WX>	N	Q914	2213570 or 221281 or 2214930	RN1207 or DTC114YS or UN4214	
	24150001	SD-3100K2-ZP, Main circuit pc board ass'y <T>	N	Q915, Q916	2211945 or 2212305	2SK246-GR or 2SK381-E	
	Ics				**DIODE**		
Q204	22241228R9 or 22241228R2	TC74HC4053FP or TC74HC4053FP	N	D201, D202, D701	223205 or 223163	1SS270A or 1SS133	
Q301	222755	74HCU04P (TC74HCU04P)		D702	224470562	MTZJ5.6B	
Q302	24120038	GP1F32T (PHOTO CPL)		D703, D704	225364	SEL4914D	N
Q401	22240191	NJM4565D-D		D901-D904	22380287F	EM2A	N
Q601	22241234	BA3313L<T>		D905	22380291	EG01C	N
Q602	222654	NJM4556D<T>		D906-D908, D913	22380294	AG01Z	N
Q701	22241227R3 or 22241252R3	M38123M4-127FP or M38127ECFP (DV-S501)	N	D909	22380295F	RN2Z	N
Q714	222654	NJM4556D<D><WX>		D910, D911	22380296F	RK46	N
Q217-Q219	2213354 or 2211455 or 2213074	2SA933S-R or 2SA1015-GR or 2SA933-R		D912	22380297	EU01	N
Q201, Q202, Q203	2213354 or 2211455 or 2213074	2SA933S-R or 2SA1015-GR or 2SA933-R		D917	22380300	RU2YX	N
Q205-Q216	2213284 or 2211183 or 2214281	2SC1740S-R or 2SC1740-R or 2SD2144S-U		D923	224472204	MTZJ22D	
Q803	222956	NJM2068D-D<T>		D924	224470332	MTZJ3.3B	
Q901	22241229	STR-F6653	N	D930, D931, D932, D934	22380260 or 22380032 or 22380035	RL1N4003 or 1SR139-100 or GP104003E	
Q901A	27160412	RAD-111	N	D935, D936	224470753	MTZJ7.5C	
Q905	22241233	SE005N	N		**CAPACITOR**		
Q902	22241230	SI3090C	N	C202, C203, C205	354744709	47μF, 16V, Elect.	
Q903	22241231	SI3050C	N	C207, C208, C209, C302, C303, C211, C212, C214	354724719	100μF, 6.3V, Elect.	
Q904	22241232	SI3033C	N	C305-CC308	345022204	CC45SL50V-220J	
Q901B, Q902B, Q903B, Q904B	838430107	3TTB+10S (BC)		C309, C950, C951	374721044	0.1μF±5%, 50V, Plastic	
Q902A, Q903A, Q904A	27160145-1	RAD-51 (RADIATOR)		C401, C402	374722224	2200pF±5%, 50V, Plastic	

PARTS LIST

REF. No.	PART No.	DESCRIPTION	
C403, C404	345023314	CC45SL50V-331J	
C405, C406	374724724	4700pF ± 5%, 50V, Plastic	
C407, C408, C411, C412, C701, C702	354782209	22 μF, 50V, Elect.	
C415, C703	354724719	100 μF, 6.3V, Elect.	
C415 or	393724717	470 μF, 6.3V, Elect.	
C416	374721024	1000pF ± 5%, 50V, Plastic	N
C420, C421, C937, C954, C955, C958, C959	354741019	100 μF, 16V, Elect.	
C601, C602	374723334	0.033 μF ± 5%, 50V, Plastic<T>	
C603, C604, C605	354741009	10 μF, 16V, Elect. <T>	
C606, C607	354744709	47 μF, 16V, Elect<T>.	
C720-C721	354744709	47 μF, 16V, Elect. <D>	
C725-C726, C801, C802	354782209	22 μF, 50V, Elect. <D>	
C803, C804	374721034	0.01 μF ± 5%, 50V, Plastic<T>	
C805, C806	354744709	47 μF, 16V, Elect. <T>	
C807-C809	354782209	22 μF, 50V, Elect. <T>	
C901-C904, C916	3500077	4700pF ± 20%, 50V, Plastic	
C910	3937E1017S	100 μF, 400V, Elect.	N
C911	3000115	DE1005SL-221J2K	N
C912	3000114	QXJ2J-103K-TPT	N
C913	354764709	47 μF, 35V, Elect.	
C914	345024714	CC45SL50V-471J	
C915	335321025	CK45B50V-102K	
C920	3937510275	1000 μF, 25V, Elect.	N
C921, C922, C931	393744717	470 μF, 16V, Elect.	N
C923, C924, C932-C934, C938, C926, C927, C930, C936	354782209	22 μF, 50V, Elect.	
C925, C928	3937410275	1000 μF, 16V, Elect.	N
C929	374722244	0.22 μF ± 5%, 50V, Plastic	
C935	335622230	CK45F50V-223Z	
C952, C953	3547610295	1000 μF, 35V, Elect.	
C956, C957	374721034	0.01 μF ± 5%, 50V, Plastic	
C961	374722244	0.22 μF ± 5%, 50V, Plastic	
C990	3500191	DE7150F-103M<T>	
C991A	27301216	SB1925A<T>	
	RESISTOR		
R764	5132436	N14RGL20KA17Z<D><WX>	N
R800	5132436	N14RGL20KA17Z<T>	N
R801, R802	5121437	N11RHL50KA17Z<T>	N
R901	4000076	MPC74-5WK-0.22	
R902	411516844	R1/2J-680K	N
R903	441726834NF	68kΩ ± 5%, 2W, Metal	
R904	441721044NF	100kΩ ± 5%, 2W, Metal	
R905	453530224	2.2Ω ± 5%, 1/2W, Metal	
R906	443522724	2.7kΩ ± 5%, 1/2W, Metal	
R907	451735194F	0.51Ω ± 5%, 2W, Metal	N
R908	443526814	680Ω ± 5%, 1/2W, Metal	
R909	443523324	3.3kΩ ± 5%, 1/2W, Metal	
R912	443522214	220Ω ± 5%, 1/2W, Metal	
R913	443521024	1kΩ ± 5%, 1/2W, Metal	
R919	443522234	22kΩ ± 5%, 1/2W, Metal	
	SWITCH		
S701-S712, S716	25035652	NPS-111-S604	
S713	25035652	NPS-111-S604<WX>	
S714, S715	25035652	NPS-111-S604<D><WX>	
S717	25065514	SRGPHJ-A-2-1 (Jogshuttle)	
S801-S803	25035652	NPS-111-S604<T>	
S991	25035636	NPS-111-L590P<T>	
	HOLDER		
E101	25136346A	NCPS-6346	N
E102	25136347	NCD1S-6347	N
E103	25136348	NCAF-6348	N
E104	25136354	NCAF-6354	N

REF. No.	PART No.	DESCRIPTION	
E105	25136350	NCAF-6350<D>	N
E106	25136353	NCAF-6353<D>	N
E107	25136349	NCSW-6349<T>	N
E108	25136351	NCAF-6351<T>	N
E109	25136352	NCAF-6352<T>	N
E110	25136355	NCAF-6355<T>	N
E201, E203	27190540-1	HOLDER (CLAMP)	
E202, E901	25065425	NEGITANSI M3	
E701	27191048A	(FL)	N
E805	260208	Wire tie	
F901A, F901B	25050065	⚠YSH403T Fuse holder	
	COIL		
L201, L202, L904-L606	231253K100	NCH-1490	N
L901	231280	NCH-3561	N
L902	231222	NCH-3454	
L903	230906	BL02RN2-R62	
	JACK/TERMINAL		
P201	25045546	NPJ-3PDRE367	N
P202	25051750	NSCT-4P1537	
P203	25045547	NPJ-1PDYE368	N
P210A	25051949	NSCT-25P1736	N
P301	25045548	NPJ-1PDOR369	N
P310	25045330 or 25045481	NPJ-2PDBL184 or NPJ-2PDBL299	
P401	25045371	NPJ-2PDWR214	
P410A	25055149	NPLG-5P133	
P410B	2002391060	NSAS-10P0664	N
P601, P602	25045545	YKB26-5814<T>	N
P603	25045443 or 25045561	YKB26-5803 or YKB26-5807<T>	N
P610	27190608-1	(CLAMP) UA-0 V0<T>	
P701	25045441 or 25045560	YKB26-5801 or YKB26-5805 <D><WX>	N
P710A	25052122R2	NSCT-13P2020	N
P710B	25051895	NSCT-13P1682<D><WX><T>	N
P711A	25055153	NPLG-9P137<T>	
P711B	2002391815	NSAS-18P0666<T>	N
P712, P713	25051892	NSCT-10P1679	N
P714A, P714B, P714B, P714C	25051089	NSCT-5P876	
P715A, P715A	25051107	NSCT-3P894<D>	
P715B, P715B	25050267	NSCT-3P95<D>	
P910A	25055147	NPLG-3P131	
P910B	2002390615	NSAS-6P0588	N
P911	2002392830	NSAS-28P0663	N
P950A	25055675	NPLG-2P631	
	TRANSFORMER		
T901	2301342	⚠NPT-1341	N
T902	2301343	⚠NPT-1342D (120V/60Hz)	N
	CERA LOCK		
X701	3010190	CST8.00MTW	
	FUSE		
F901	252146	⚠1.25A-TSC, Primary fuse <D>	
	252071	⚠1.25A-SE-EAWK, fuse <T/WX>	
	AC CORD		
P950	253192HIT	⚠AS-UC-6#18 (SPT-2), Power cord <D>	
P950	253193HIT	⚠AS-CEE, Power supply cord <T/WX>	
	OTHER		
E910	29361580	T1.25AL250V<T><WX>	
E910	29362309	1.25A/125V<D>	N
Z201-Z204	3030040	H286LAIS-15674 LC Block	N
E801	2045101512	NCFC5-101512, Flat cable	
E802	2045102512	NCFC5-102512, Flat cable	
E803	2045131012	NCFC5-131012, Flat cable	
E804	2045251012	NCFC5-251012, Flat cable	

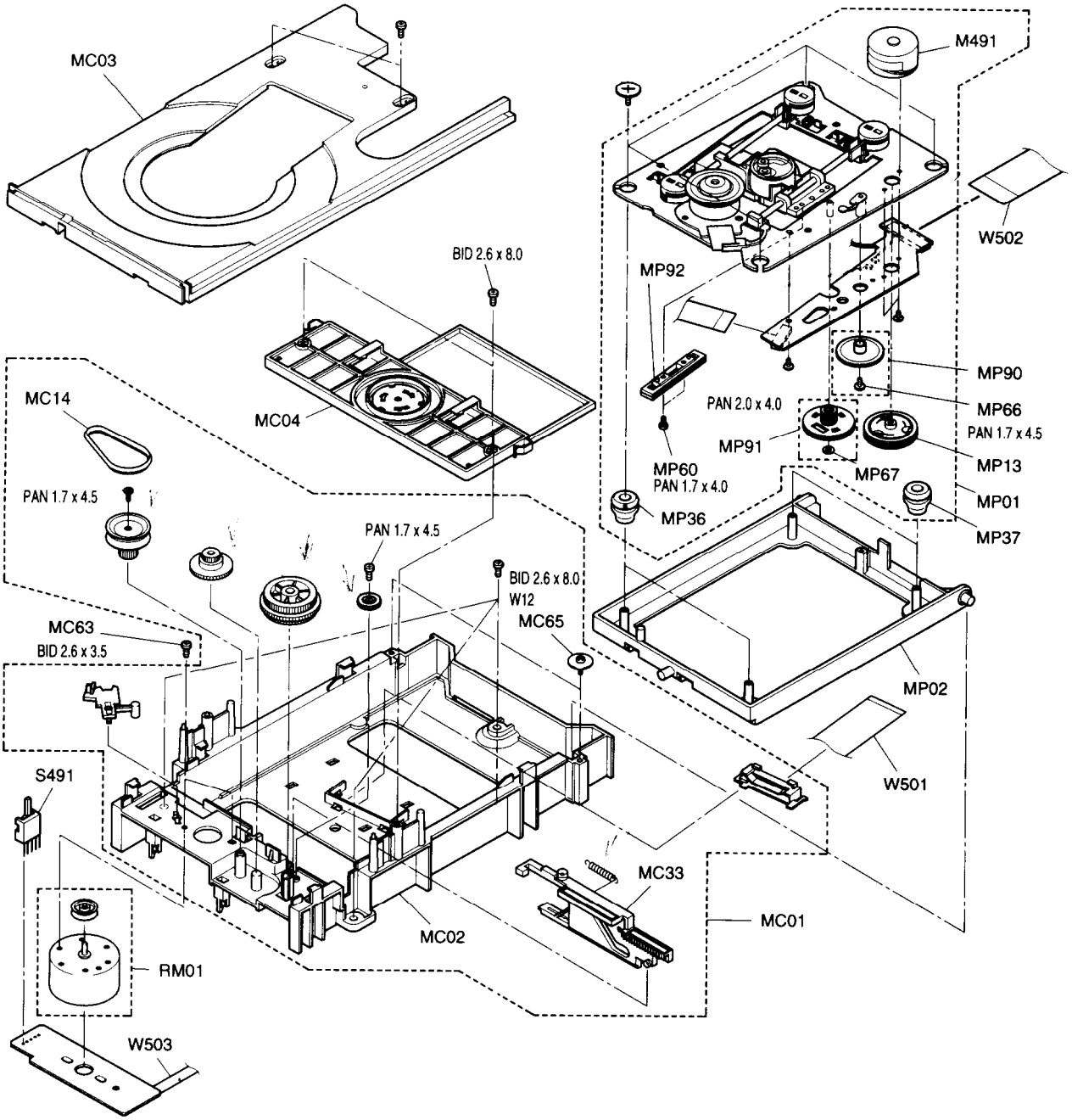
DVD MECHA. CONTROL PC BOARD PARTSLIST (UD)

REF.No	PART No	DESCRIPTION	REMARK
	24150001	**COMPLETE PCB ASSY**	**SD-3100K2-ZP**
IC504,IC511,IC512,IC516,IC608,IC909,IC920	79040006	IC	TC7S04F
IC607	79040007	IC	TC7S08F
IC309,IC520,IC910,IC916,IC917	79040008	IC	TC7S32F
IC519,IC521	79040009	IC	TC7S86F
IC307,IC522	79040011	IC	TC7W04F
IC523,IC906	79040013	IC	TC7W74F
IC517	79040014	IC	TA75S01F
IC509	79040016	IC	TA2076AF
IC502	79040017	IC	TA1236F
IC501	79040018	IC	TA1253FN
IC201	79040020	IC	TC90A19F
IC503	79040021	IC	TC9420F
IC904	79040022	IC	TC9425F
IC606	79040027	IC	TC74HC32AF
IC506	79040029	IC	TC74HC4053AF
IC604,IC609	79040030	IC	TC74AC573F
IC505	79040036	IC	BA6791FP
IC507	79040039	IC	NJM3403AMC
IC510	79040040	IC	BA6844AFP
IC602	79040041	IC	PST591-DMT
IC901	79040043	IC	ZR38521
IC905	79040047	IC	AK4321
IC518	79040050	IC	NJM2107F
IC304	79040052	IC	TC81201AF
IC913	79040053	IC	TC9409BF-001
IC902	79040056	IC	TC6813AF(Z)
IC908,IC912,IC914	79040057	IC	TC74HC257AF
IC911	79040059	IC	TC74HC393AF
IC306	79040060	IC	ADV7175AKS
IC202	79040061	IC	UPD424800LE-70
IC611,IC614,IC903	79040062	IC	HY62256ALJ-70-TR
IC305	79040063	IC	HY57V16160ATC-10 or MB811171622A-100FN
IC615	79040064	IC	LH28F400SUT-NF8
IC203	79040066	IC	UPC29L33T
IC915	79040068	IC	BA17805FP-E2
IC613	79040070	IC	S-24C01AFJ-TB
IC302	79040071	IC	LH61664AK-60
IC508	79040072	IC	TC7S66F(TE85L)
IC907,IC918,IC919	79040073	IC	TC4W53F
IC207	79040080	IC	TC6815AF(Z)
IC303	79040084	IC	BU6291FV
IC301	79040086	IC	TC6341AF(Z)
IC601	79040099	IC	TMP93CS42AF-9404
Q601	79050001	TRANSISTOR,CHIP	RN2402
Q505	79050009	TRANSISTOR,CHIP	RN1401
Q502	79050010	TRANSISTOR,CHIP	RN1411
Q504	79050014	TRANSISTOR,CHIP	HN1C03F
Q503,Q506	79050015	TRANSISTOR,CHIP	HN1B01F
Q501	79050019	TRANSISTOR,CHIP	2SA1182
Q301,Q302	79050022	TRANSISTOR,CHIP	HN1A01F-Y(TE85L)
D501,D503	79060018	DIODE	1SS193(TE85L)
X301	79080013	OSCILLATOR	SMD49-27MHZ
X501	79080014	OSCILLATOR	SMD49-33.86MHZ
X601	79080015	OSCILLATOR	CSACV20.00MX040
W501	79080020	CABLE,FLEXIBLE	FFC-21P-L292
W502	79080021	CABLE,FLEXIBLE	FFC-19P-L185
W301	79080022	CABLE,FLEXIBLE	FFC-25P-1.0MM

DVD MECHA. CONTROL PC BOARD PARTSLIST (WT)

REF.No	PART No	DESCRIPTION	REMARK
	24150002	**COMPLETE PCB ASSY**	**SD-3100K1-ZN**
IC504,IC511,IC512,IC516,IC608,IC909,IC920	79040006	IC	TC7S04F
IC607	79040007	IC	TC7S08F
IC309,IC520,IC910,IC916,IC917	79040008	IC	TC7S32F
IC519,IC521	79040009	IC	TC7S86F
IC307,IC522	79040011	IC	TC7W04F
IC523,IC906	79040013	IC	TC7W74F
IC517	79040014	IC	TA75S01F
IC509	79040016	IC	TA2076AF
IC502	79040017	IC	TA1236F
IC501	79040018	IC	TA1253FN
IC201	79040020	IC	TC90A19F
IC503	79040021	IC	TC9420F
IC904	79040022	IC	TC9425F
IC606	79040027	IC	TC74HC32AF
IC506	79040029	IC	TC74HC4053AF
IC604,IC609	79040030	IC	TC74AC573F
IC505	79040036	IC	BA6791FP
IC507	79040039	IC	NJM3403AMC
IC510	79040040	IC	BA6844AFP
IC602	79040041	IC	PST591-DMT
IC901	79040043	IC	ZR38521
IC905	79040047	IC	AK4321
IC518	79040050	IC	NJM2107F
IC304	79040052	IC	TC81201AF
IC902	79040056	IC	TC6813AF(Z)
IC908,IC912	79040057	IC	TC74HC257AF
IC911	79040059	IC	TC74HC393AF
IC306	79040060	IC	ADV7175AKS
IC202	79040061	IC	UPD424800LE-70
IC611,IC614,IC903	79040062	IC	HY62256ALJ-70-TR
IC305	79040063	IC	HY57V16160ATC-10
IC615	79040064	IC	LH28F400SUT-NF8
IC203	79040066	IC	UPC29L33T
IC915	79040068	IC	BA17805FP-E2
IC613	79040070	IC	S-24C01AFJ-TB
IC302	79040071	IC	LH61664AK-60
IC508	79040072	IC	TC7S66F(TE85L)
IC907,IC918,IC919	79040073	IC	TC4W53F
IC303	79040078	IC	BU6272FV-E2
IC207	79040080	IC	TC6815AF(Z)
IC301	79040086	IC	TC6341AF(Z)
IC601	79040099	IC	TMP93CS42AF-9404
Q601	79050001	TRANSISTOR,CHIP	RN2402
Q505	79050009	TRANSISTOR,CHIP	RN1401
Q502	79050010	TRANSISTOR,CHIP	RN1411
Q504	79050014	TRANSISTOR,CHIP	HN1C03F
Q503,Q506	79050015	TRANSISTOR,CHIP	HN1B01F
Q501	79050019	TRANSISTOR,CHIP	2SA1182
Q301,Q302	79050022	TRANSISTOR,CHIP	HN1A01F-Y(TE85L)
D501,D503	79060018	DIODE	1SS193(TE85L)
X301	79080013	OSCILLATOR	SMD49-27MHZ
X501	79080014	OSCILLATOR	SMD49-33.86MHZ
X601	79080015	OSCILLATOR	CSACV20.00MX040
W301	79080022	CABLE,FLEXIBLE	FFC-25P-1.0MM

Mechanism Assembly



MECHANISM PARTS

REF.No	PART No	DESCRIPTION	REMARK
M491	79070015	MOTOR,FEED	RF-300PA
MC03	79070232	TRAY	TRAY-21
MC04	79070139	CLAMPER,ASSY	
MC14	79070140	BELT,LOAD	
MC63	79070028	SCREW	BID 2.6 x 3.5
MC65	79070064	SCREW	BID 2.6 x 8W12
MP01	79070339	MECHANISM ASSY PU	MECHA,ASSY,PU,A
MP02	79070023	SHASSIS,SUB	
MP13	79070011	GEAR,FEED,M,ASSY	With magnet
MP36	79070012	DUMPER RUBBER FRONT	
MP37	79070082	DUMPER RUBBER REAR	

REF.No	PART No	DESCRIPTION	REMARK
MP61	79070083	SCREW	PAN 1.7 x 0.5W9
MP64	79070084	SCREW	PAN 1.7 x 4.0
MP66	79070085	SCREW	PAN 1.7 x 4.5
MP67	79070086	WASHER	W-5-1.65
MP90	79070087	GEAR,A,KIT	
MP91	79070088	GEAR,B,ASSY,KIT	
MP92	79070089	GEAR,RACK,PU,ASSY	
RM01	79070162	MOTOR,LOADING,ASSY	
S491	79070163	SWITCH	SW-SSCF
W501	79080020	CABLE,FLEXIBLE	FFC-21P-L292
W502	79080021	CABLE,FLEXIBLE	FFC-19P-L185
W503	79080059	CABLE,FLEXIBLE	FFC-5P-L288
ZG27	⚠ 79070162	LABEL,PU,CAUTN	

PART REPLACEMENT AND ADJUSTMENT PROCEDURES

CAUTIONS BEFORE STARTING SERVICING

Electronic parts are susceptible to static electricity and may easily damaged, so do not forget to take a proper grounding treatment as required.

Many screws are used inside the unit. To prevent missing, dropping, etc. of the screws, always use a magnetized screwdriver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded parts and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

1. REPLACEMENT OF MECHANICAL PARTS

1-1. Cabinet Replacement

1-1-1. Top Cover

1. Remove five screws (1) and remove the top cover (2).

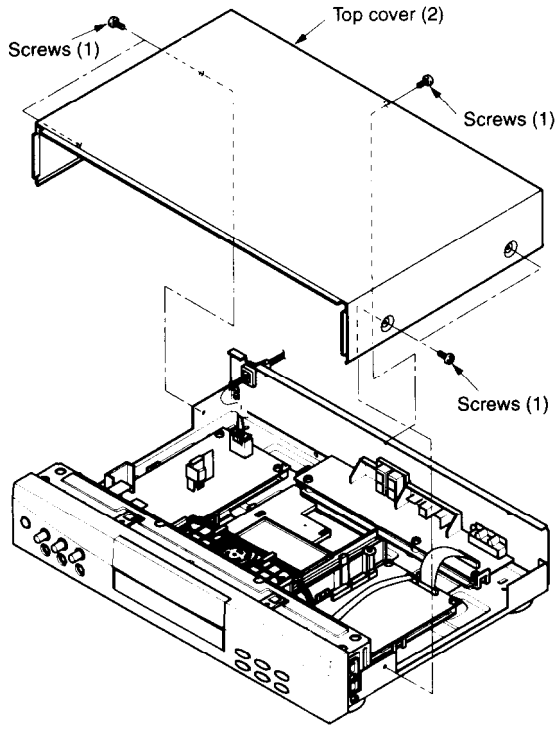


Fig. 1-1-1

1-1-2. Tray

1. Remove two screws (2) of the tray (1) .
2. Push the portion (A) in Fig. 1-1-2 using a screwdriver, etc. and release the lock of the tray (1).
3. Pull out the tray (1) after moving the tray (1) in forward direction.

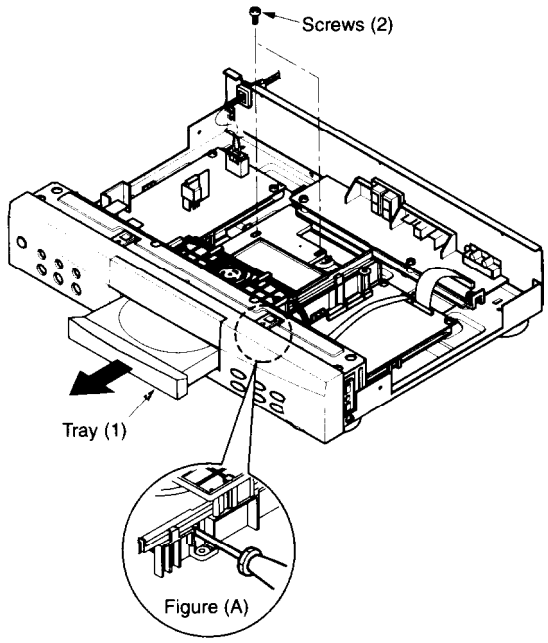


Fig. 1-1-2

1-1-3. Tray Panel

1. Insert a flat-blade screwdriver into the portion (A) between the tray (1) and the tray panel (2), to unlock the two claws, and remove the tray panel (2).
2. To mount the tray panel (2), fit the tray panel (2) into the groove on both sides until it clicks.

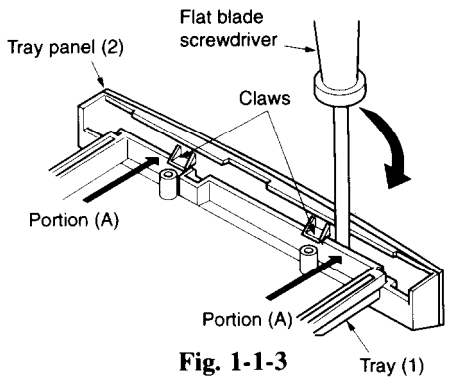


Fig. 1-1-3

1-2. PC Board Replacement

1-2-1. Main PC Board and Interface PC Board

Note:

- Before removing the main PC board, be sure to short-circuit the laser diode output land. After replacing the PC board, open the land after inserting the flexible connector (2).

1. Remove the top cover (Refer to item 1-1-1).
2. Remove the flexible connectors (2) connected to the main PC board (1) and the connector (3). (Each connector is connected to the locations (A) to (G).)
3. Remove four screws (4) , and remove the main PC board (1) and stay (5).
4. Remove two claws of the stay (5) and remove the main PC board (1).
5. When mounting, tighten four screws (4) matching each hole of the main PC board (1), stay (5) and bottom plate.

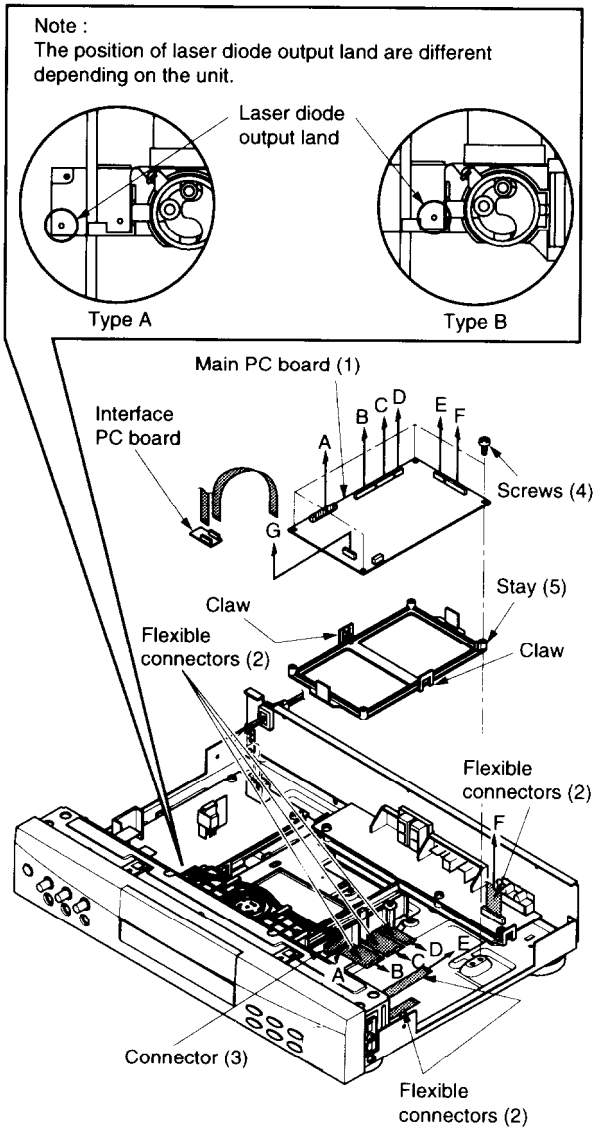


Fig. 1-2-1

1-3. Mechanism Parts Replacement

1-3-1. Mechanism Chassis Assembly

Note:

- Before removing the flexible connector and connector, be sure to short the laser diode output land. After replacing the mechanism chassis assembly, open the land after inserting the flexible connector and connector.

1. Remove the tray. (Refer to item 1-1-2.)
2. Remove three screws (1), and remove the mechanism chassis assembly (2).

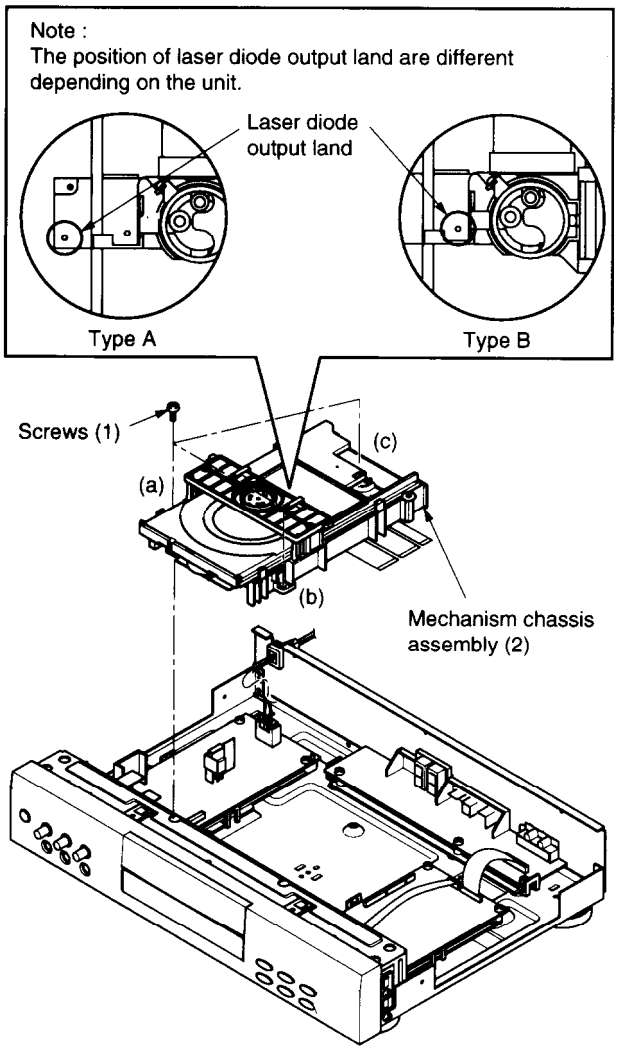


Fig. 1-3-1

Note:

- When mounting mechanism chassis assembly (2), attach the screws (1), (a) to (c) in order.

1-3-2. Loading Motor and Detection Switch

<Removal>

1. Peel off the tape (2) fixing the flexible connector (1).
2. Desolder the loading motor terminal.
3. Loosen three molded claws (3), and remove the loading motor PC board (4) (Refer to Fig. 1-3-2).
4. Desolder, and remove the detection switch (5).
5. Remove the loading belt (6) (Refer to item Fig. 1-3-3).
6. Remove two screws (7), and remove the loading motor (8).

<Mounting>

1. Align the positioning hole of a new loading motor (8) to the hole into which the chassis positioning boss is inserted, and fix the motor with two screws (7). (Refer to Fig. 1-3-3.)
2. Perform the reverse steps of removal described above for mounting.

Notes:

- When mounting the loading motor PC board (4), insert the end of the detection switch (5) into the notch of the kick lever. (Refer to Fig. 1-3-2.)
- When mounting the loading belt (6), take care not to twist the belt or touch grease.
- Be sure to open the molded claws (3) manually when mounting the loading motor PC board (4).

  When the loading motor PC board (4) is pushed in directly without opening the molded claws (3), the molded claws (3) may be destroyed.

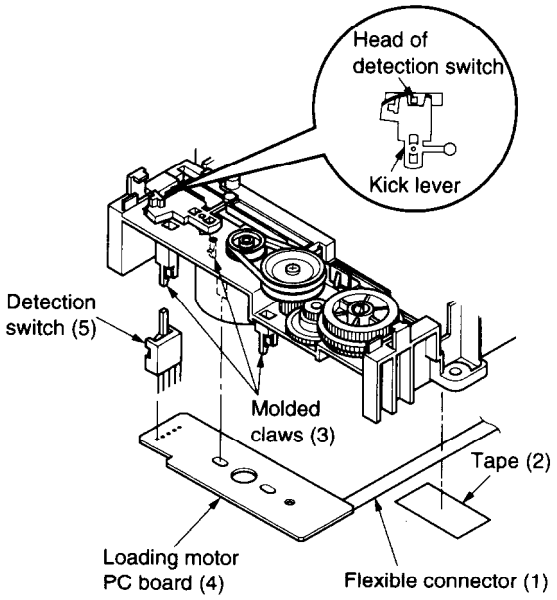


Fig. 1-3-2

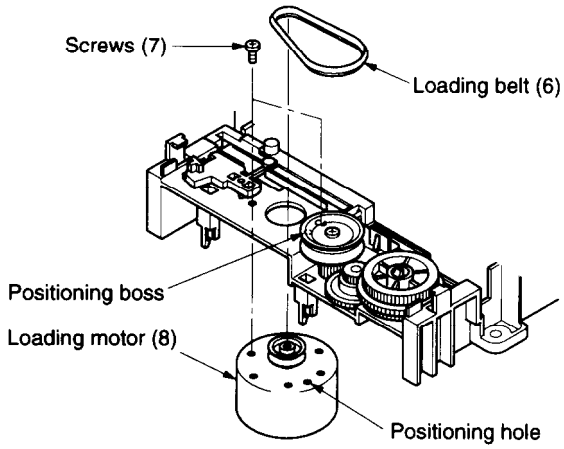


Fig. 1-3-3

1-3-3. Pickup Mechanism Assembly

<Removal>

1. Remove two screws (1), and remove the clamper stay (2).
2. Remove the 21-pin flexible connector (3). (This is not locked, and can be removed simply by pulling.)
3. Remove two screws (4), and remove the sub chassis (5) (with the pickup mechanism assembly).
4. Remove four screws (6), and remove the pickup mechanism assembly (7).
5. Remove the 19-pin flexible connector (8).

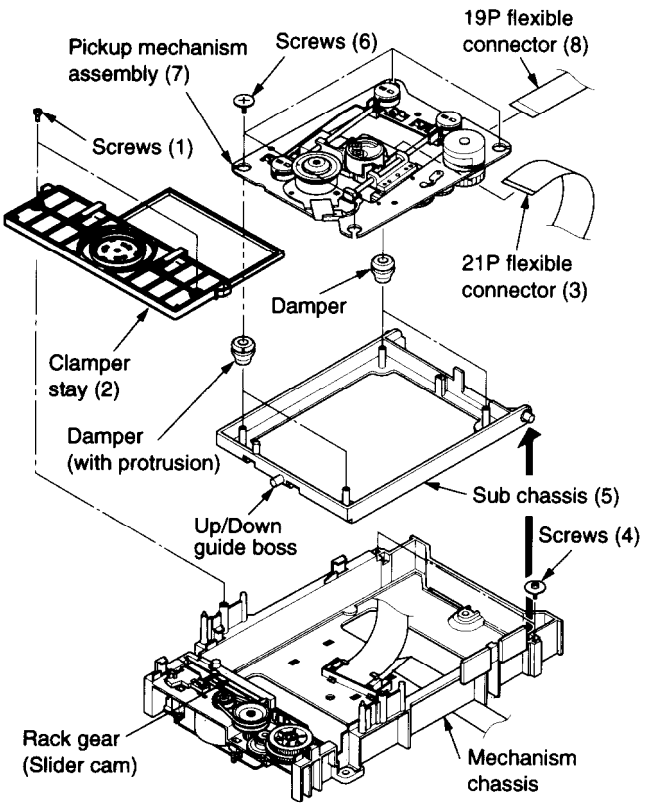
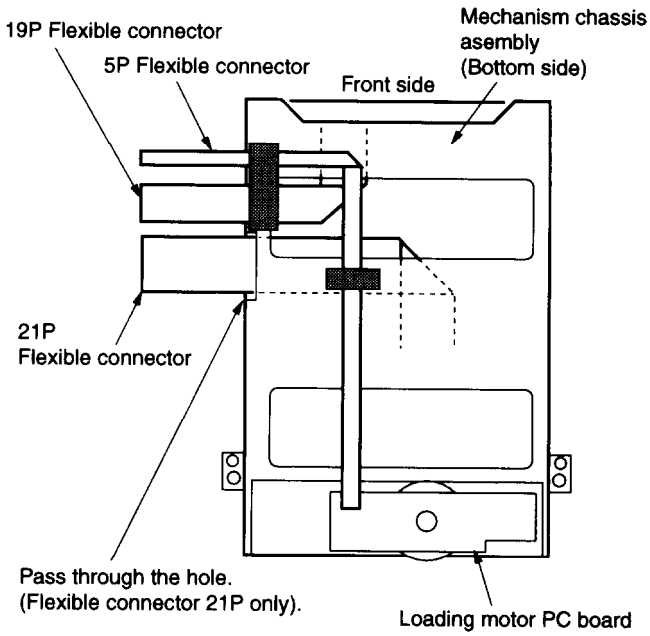


Fig. 1-3-4

<Wiring of the flexible connector>

It is necessary to bend the flexible wire of the mechanism chassis when wiring. When bending the flexible wire, perform the procedure referring Fig. 1-3-5.



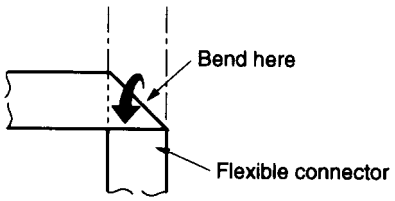


Fig. 1-3-5

<Removal of connector with the flexible connector lock>

Pull the connector slider in the direction of the arrow with your fingers. The connector is unlocked, and the 19-pin flexible connector (8) can be removed.

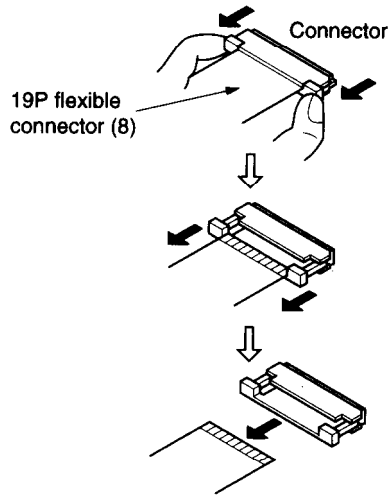


Fig. 1-3-6

<Mounting>

1. Replace the pickup mechanism assembly (7).
2. Face the correct side of the 19-pin flexible connector (8) up and connect it to a new pickup mechanism assembly (7). (Face the metallic side of the pickup mechanism assembly (7) up viewing it from the rear side, insert it into the connector, and lock it by sliding the connector in the direction of the arrow.)

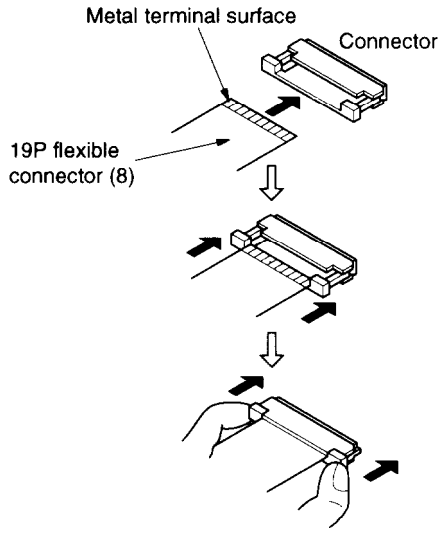


Fig. 1-3-7

3. Perform the reverse steps of removal described on previous page for mounting.

Note:

- When fixing the pickup mechanism assembly (7) with four screws (6), take care not to catch the damper. Push the mechanism assembly (7) down and loosen the damper, and tighten the screws (6).

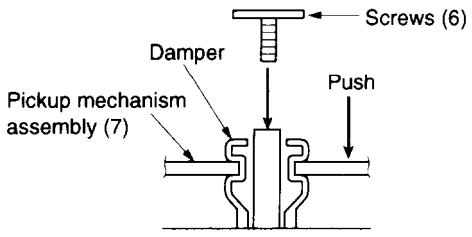


Fig. 1-3-8

- Use the damper with a protrusion (2 locations) in the disc motor, and use a damper without a protrusion on the rear side.

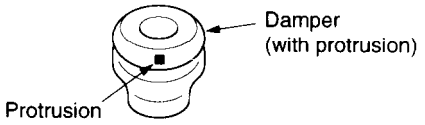


Fig. 1-3-9

- When mounting the sub chassis (5) (with the pickup mechanism assembly), insert the Up/Down guide boss into the cam slider Up/Down cam.

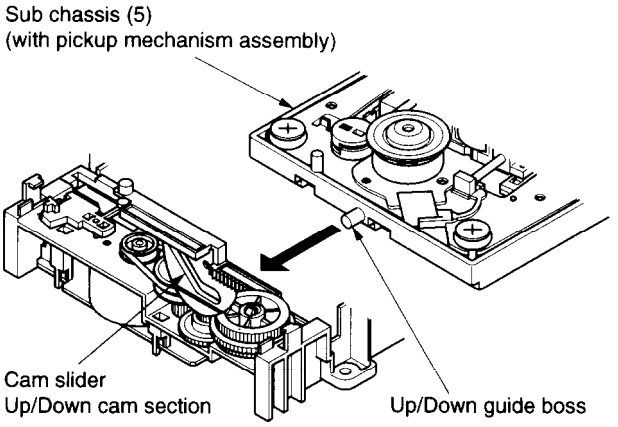


Fig. 1-3-10

1-3-4. Gear B Assembly, Gear A, Feed Motor Gear Assembly and Rack Gear Assembly

<Removal>

1. Remove the pickup mechanism assembly (Refer to item 1-3-3).
2. Remove the polyslider washer (1), and remove the gear B assembly (2). (Refer to Fig. 1-3-10.)
3. Remove one screw (3), and remove the gear A (4).

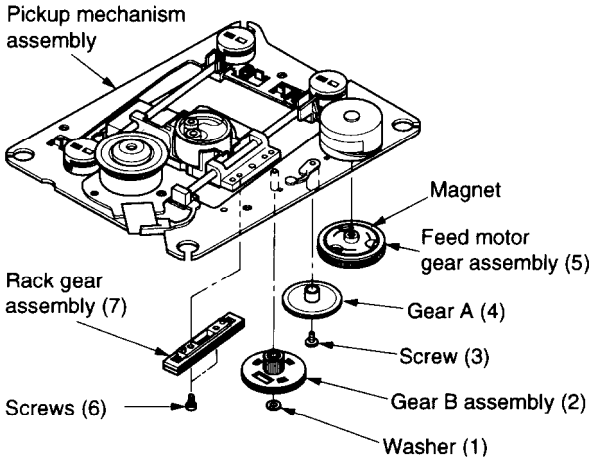


Fig. 1-3-11

4. Remove the feed motor gear assembly (5) using screwdriver, etc. with care taken not to break the magnet. (Refer to Fig. 1-3-12.)

Note:

- Apply lightly the screwdriver, etc. end to the gear shaft and push upward, and pull out the feed motor gear assembly (5).

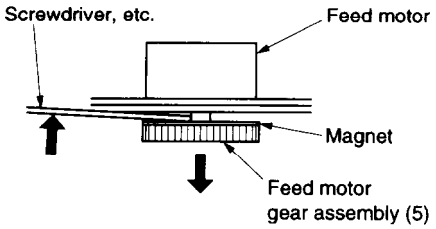


Fig. 1-3-12

5. Remove two screws (6), and remove the rack gear assembly (7). (Refer to Fig. 1-3-13.)

<Mounting>

1. Perform the reverse steps of removal described on previous page for mounting.
2. Push the pickup head (8) to the disc motor side (direction of the arrow (A)), and push and slide the upper gear of the rack gear assembly (6) (direction of the arrow (B)).
3. Align the positioning holes of the upper and lower gears of the gear B assembly (2), insert them into the gears of the gear A (4) and the rack gear assembly (7), and fix them with the washer (1).

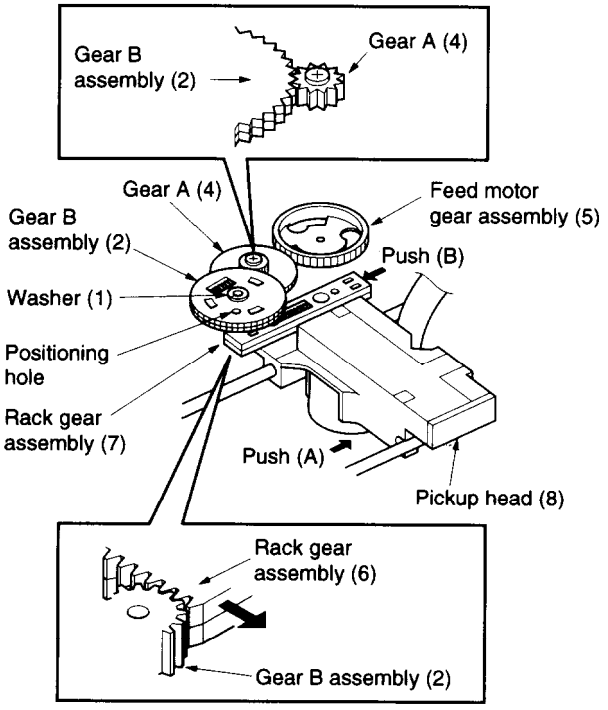


Fig. 1-3-13

Notes:

- Push the feed motor gear assembly (5) to fit it in position.
- Fit the feed motor gear assembly (5) at the height where the clearance is 0.5 ± 0.1 mm between the feed motor gear assembly and the hall element on the feed motor PC board.
- When replacing the hall element, be sure to fit the hall element to the pattern surface of the feed motor PC board.

  Then, solder the hall element on the feed motor PC board without leaving any clearance.

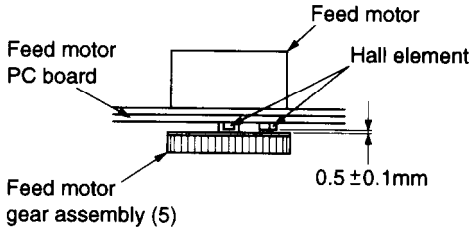


Fig. 1-3-14

1-3-5. Feed Motor

<Removal>

1. Remove the gear B assembly, the gear A and the feed motor gear assembly (Refer to item 1-2-4).
2. Remove two screws (1), and remove the feed motor (2). (Refer to Fig. 1-3-15.)
3. Desolder the feed motor lead (4) from the feed motor PC board (3).

<Mounting>

1. Solder the lead wire (4) of a new feed motor (2) to the feed motor PC board. (Pay attention to the lead wire color.)
2. Fix the feed motor (2) with two screws (1) with attention paid to the motor angle. (The motor side end of the lead wire (4) is to be aligned to the positioning concave on the pickup mechanism assembly.)
3. Fix the feed motor lead wire (4) with a cotton tape. Use a new cotton tape.

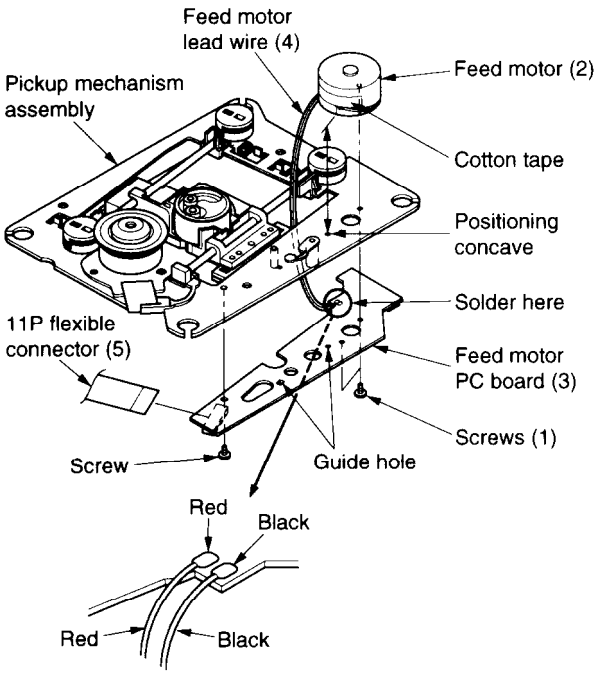
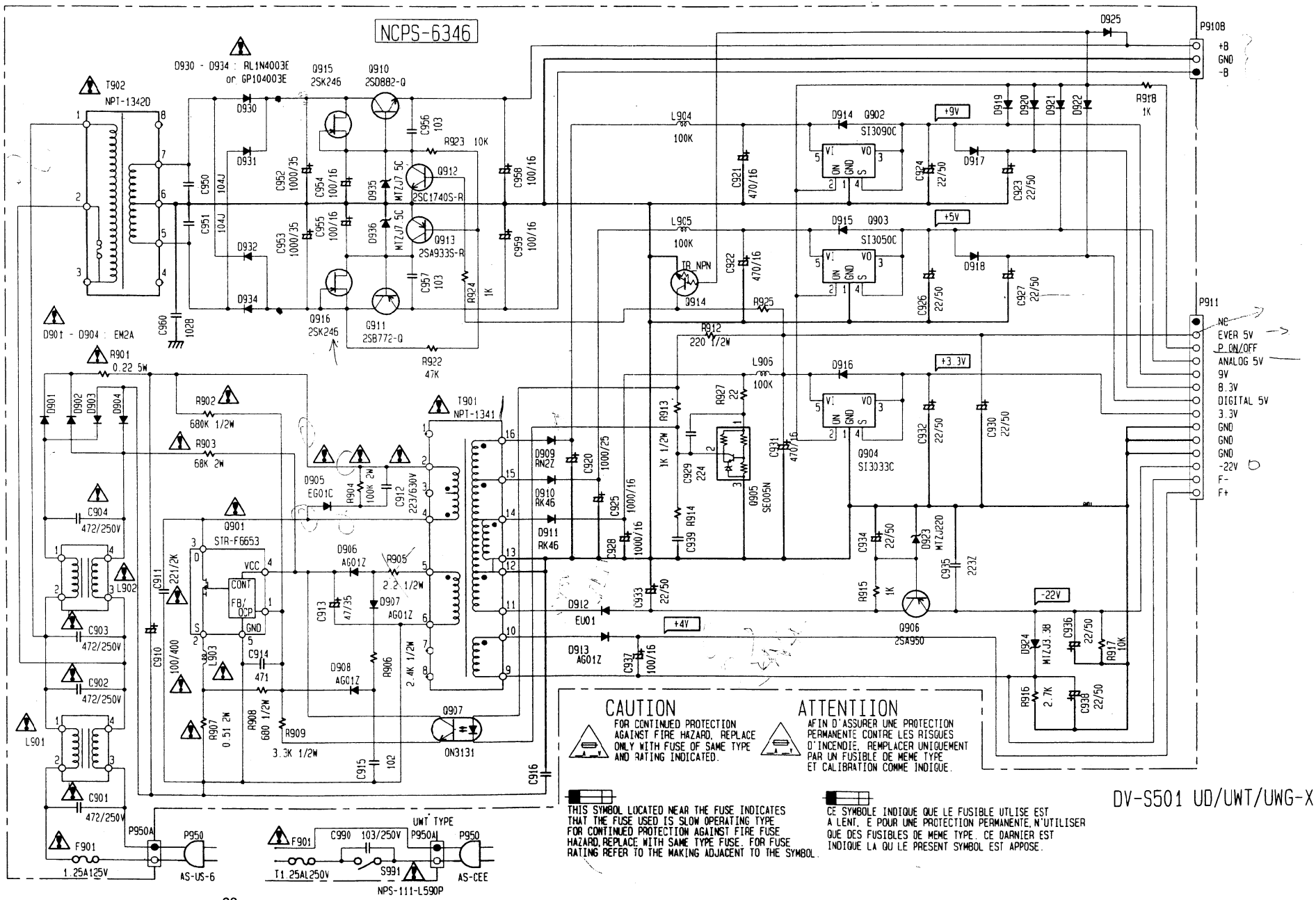
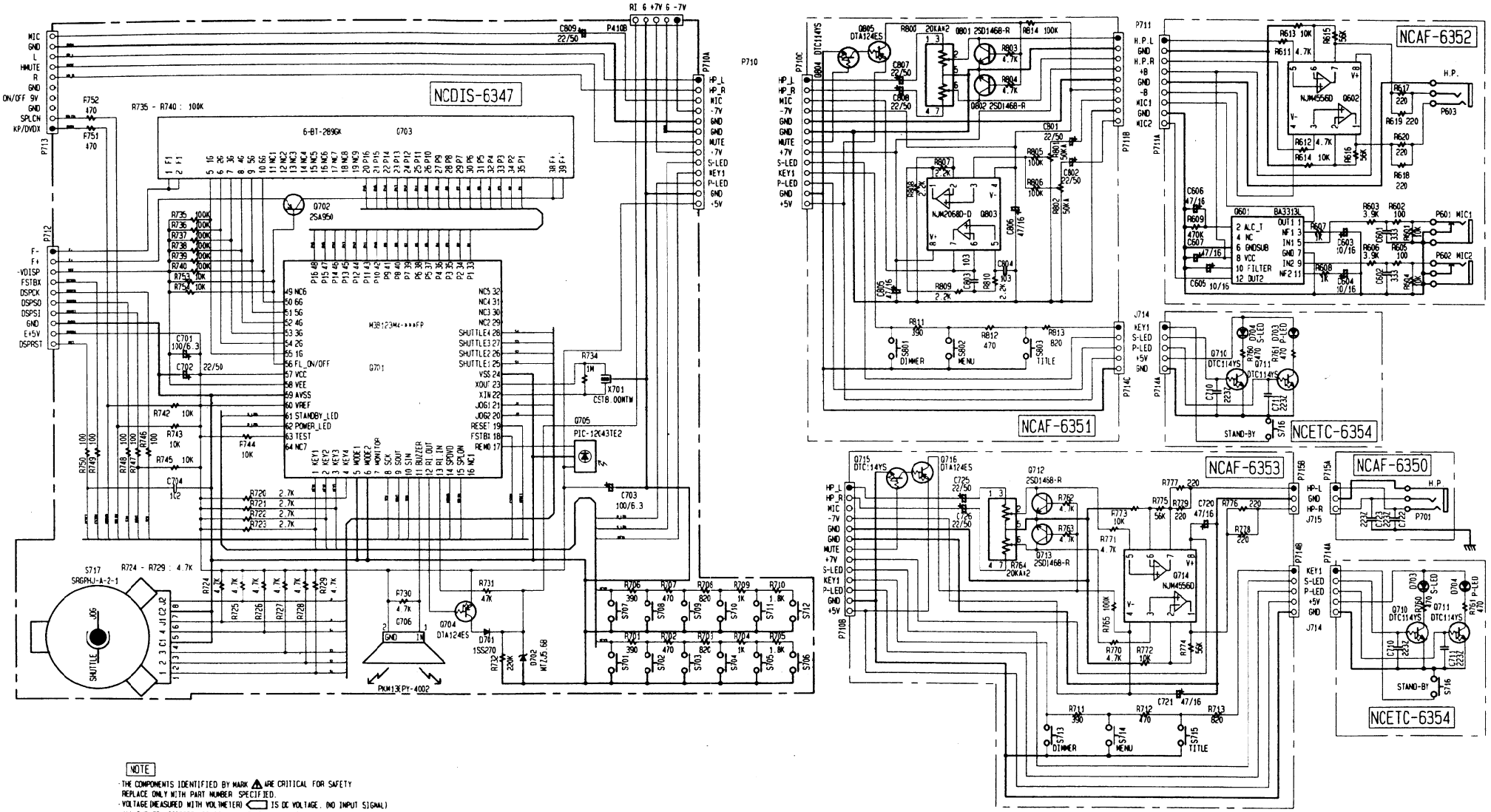


Fig. 1-3-15

SCHEMATIC DIAGRAM (POWER)



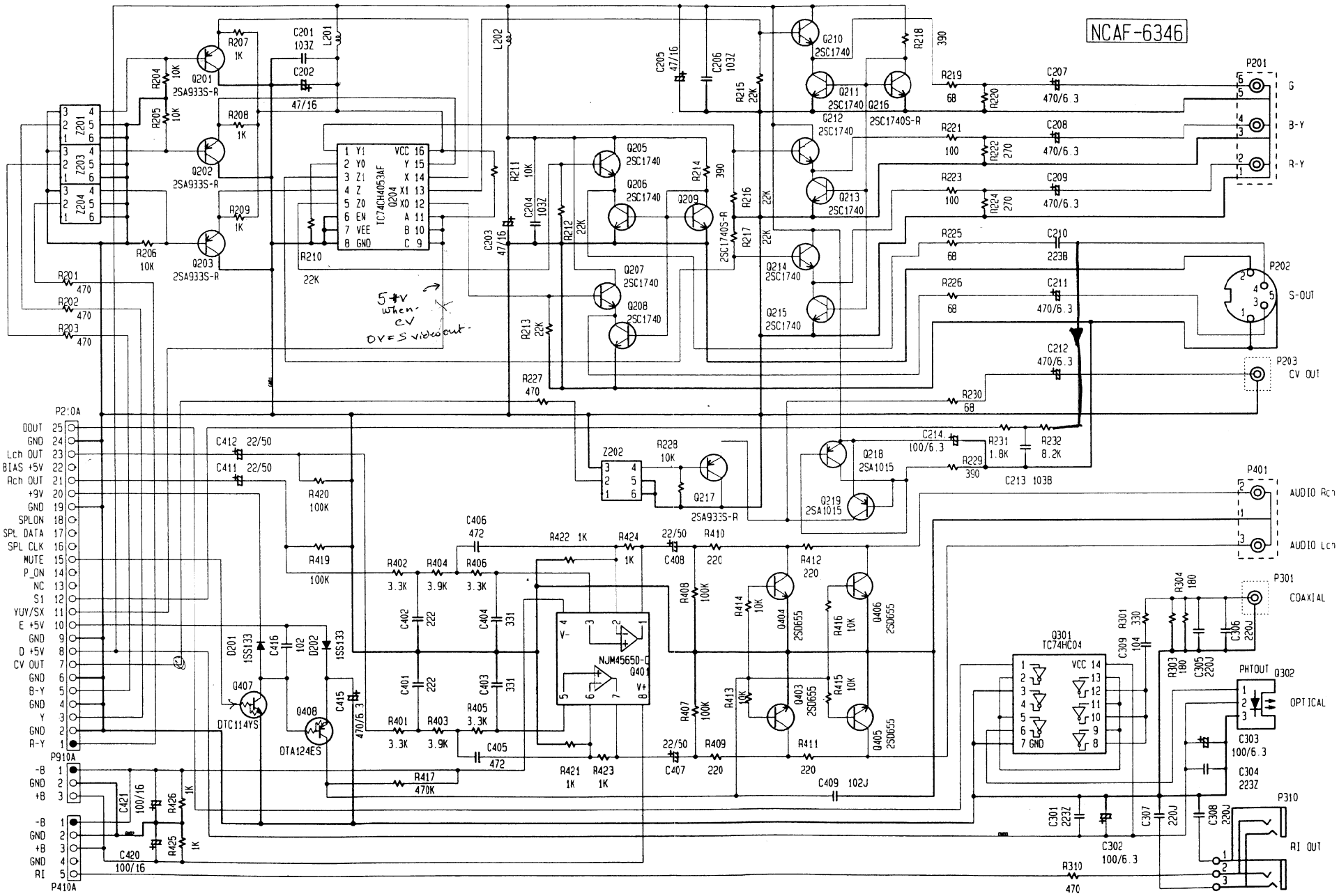
SCHEMATIC DIAGRAM (DISPLAY)



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 (TERMINAL)



SPECIFICATIONS

Outputs

Video output	1.0V (p-p), 75 ohm, negative sync.,pin jack x 1
S video output	(Y) 1.0 V (pp), 75 ohm, negative sync., Mini DIN 4-jack x 1
	(C) 0.286 V (pp), 75 ohm
Color difference output	(Y) 1.0 V (pp), 75 ohm, negative sync., pin jacks x 1
	(Cr)/(Cb) 0.7 V (pp), 75 ohm
Audio output (optical output)	Optical connector x 1
Audio output (digital output)	0.5 V (pp), 75 ohm, pin jack x 1
Audio output (analog output)	2.0 V (rms), 470 ohm, pin jacks (L,R) x 1
Headphone terminal	32 ohm (30 mW), Impedance : more than 8 ohm

DVD Player

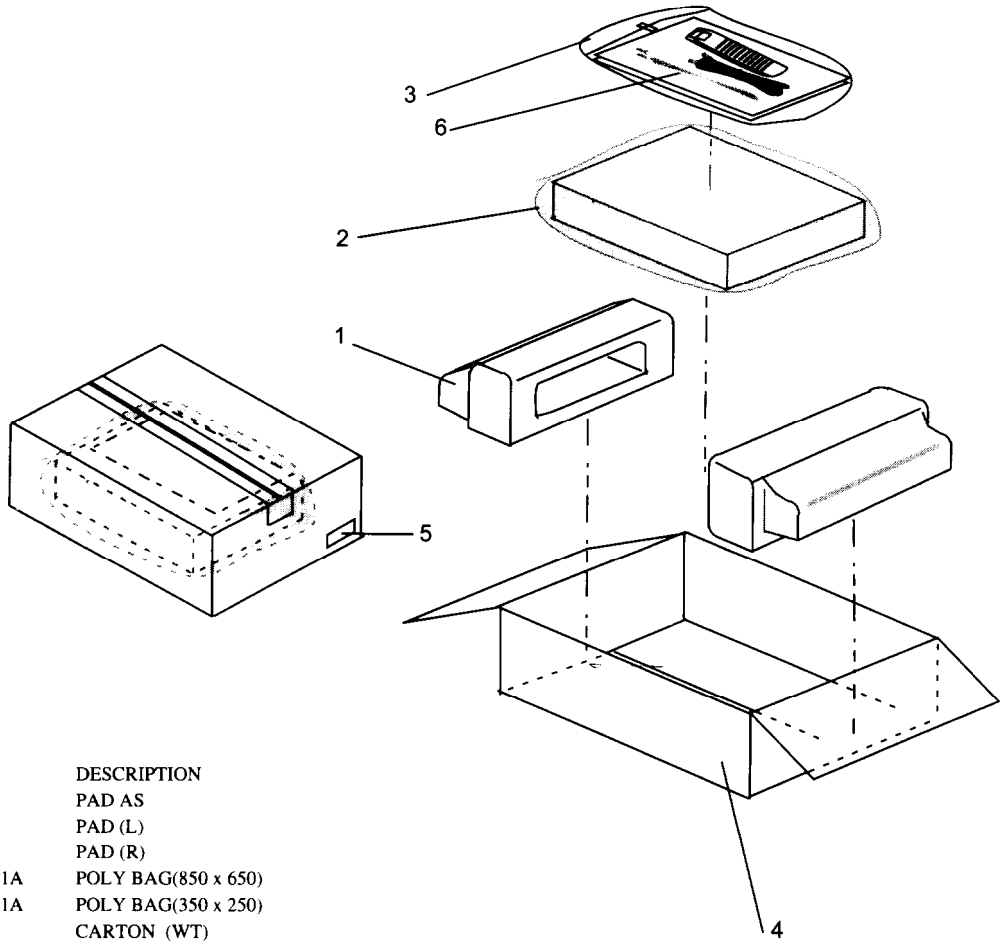
Power supply	<UD>120V AC, 60Hz <WT>120-240V,50Hz/60Hz
Power consumption	<UD>20W <WT>19VA
Weight	4.5 kg
External dimensions	435 x 121 x 306 mm(W/H/D)
Signal system	<UD>Standard NTSC <WT>PAL/3.58 NTSC
Laser	Semiconductor laser,wavelength 650nm
Frequency range(digital audio)	DVD linear sound : 48 kHz sampling 4 kHz to 22 kHz
	96 kHz sampling 4 kHz to 44 kHz
	Audio CD : 4 kHz to 20 kHz
Signal-to-noise ratio(digital audio)	More than 96 dB (EIAJ)
Audio dynamic range(digital audi	More than 96 dB (EIAJ)
Harmonic distortion(digital audio	Less than 0.006 %
Wow and flutter	Below measurable level (less than +/-0.001% (W.PEAK) (EIAJ)
Operating conditions	Temperature : 5 ℃ to 35℃, Operation status : Horizontal

Supplied Accessories

S video cable	x 1
Audio / video cable	x 1
Remote control (RC-375DV)	x 1
Batteries (AA)	x 2
RI cable	x 1

*Designs and specifications are subject to change without notice.

PACKING VIEW



	REF No	PART No	DESCRIPTION
1	A401	29091838	PAD AS
	A402	29091839	PAD (L)
	A403	29091839	PAD (R)
2	A404	29100034-1A	POLY BAG(850 x 650)
3	A407	29100097-1A	POLY BAG(350 x 250)
4	A501	29053290	CARTON (WT)
4	A501	29053288	CARTON (UD)
	A502	29362036	LABEL (EX)
5	A503	29362307	LABEL (EAN) AS
5	A503	29362306	LABEL (UPC) AS
6	A504	29365019B	WRNTY CARD
6	A505	29358002K	SS LIST (UD)
6	A901	2010359	PIN CORD AS (RCA-3P YWR)
6	A902	2010360	CORD AS
6	A903	2010200	PLUG CORD(3.5-MINI PLUG)
6	A904	3010054	BATTERY(UM-3)
6	A911	29342574	INS MANUAL <UD>
6	A912	24140375	REMO UNIT (RC-375DV) <UD>
6	A920	29342575	INS MANUAL <WT>
6	A920	29342573	INS MANUAL <UD>
6	A921	29342592	INS MANUAL <WT>
6	A922	24140376	REMO UNIT (RC-376DV) <WT>
6	A923	25055040	PLUG (CV PLUG)

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PN. 0M3600 NS806 1200 Printed in Japan