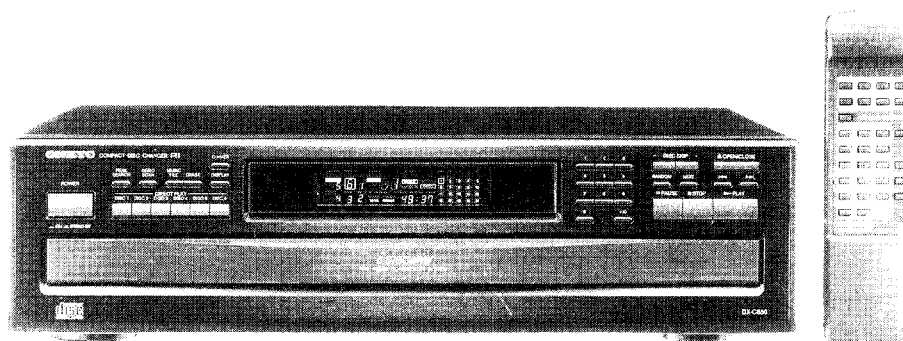


ONKYO® SERVICE MANUAL

COMPACT DISC PLAYER MODEL DX-C530



Black model only

MD	120V AC, 60Hz
MP	230V AC, 50Hz
MW	120/220V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ 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.

SPECIFICATIONS

Compact Disc Automatic Changer Model DX-C530

Signal readout system:	Optical non-contact
Reading rotation:	About 500 - 200 r.p.m. (constant linear velocity)
Linear velocity:	1.2 - 1.4 m/s
Error correction system:	Cross Interleave Reed-Solomon code
D/A converter:	1 bit PWM/ACCUPULSE
Sampling frequency:	352.8 kHz (8 times oversampling)
Number of channels:	2 (stereo)
Frequency response:	2Hz - 20kHz
Total harmonic distortion:	0.004% (at 1kHz)
Dynamic range:	96dB
Signal to noise ratio:	96dB
Channel separation:	90dB (at 1kHz)
Wow and Flutter:	Below threshold of measurability
Output level:	2 volts r.m.s.
Power consumption:	14 watts
Power supply rating:	European and Australian models: AC 230V, 50Hz USA and Canadian models: AC 120V, 60Hz Worldwide model: AC 120V and 220-230V, 60/50Hz
Dimensions (W × H × D):	455 × 120 × 424 mm (17-15/16" × 4-3/4" × 16-11/16")
Weight:	7.5kg (16.5 lbs)

ONKYO®
AUDIO COMPONENTS

Specifications and external appearance are subject to change without notice because of product improvements.

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SERVICE PROCEDURES

1. Safety-check out

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Connect the insulating-resistance tester between the plug of power supply cord and chassis.

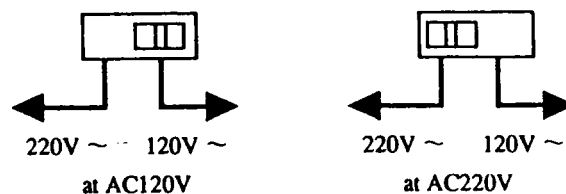
Specifications: More than 10Mohm at 500V.

2. Voltage Selector (Back panel)

Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in user's area before turning the power switch on.

Voltage is changed by sliding the groove in the switch with a screw driver to the right or left.

Confirm that the switch has been moved all the way to the right or left before turning the power switch on.



CAUTION ON REPLACEMENT OF OPTICAL PICK UP

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. (The following precautions are included in the service parts.)

PRECAUTIONS

1. Ground for the work-desk.

Place a conductive sheet such as a sheet of copper (with impedance lower than $10M\Omega$) on the work-desk and place the set on the conductive sheet so that the chassis.

2. Grounding for the test equipment and tools.

Test equipments and toolings should be grounded in order that their ground level is the same the ground of the power source.

3. Grounding for the human body.

Be sure to put on a wrist-strap for grounding whose other end is grounded.

Be particularly careful when the workers wear synthetic fiber clothes, or air is dry.

4. Select a soldering iron that permits no leakage and have the tip of the iron well-grounded.

5. Do not check the laser diode terminals with the probe of a circuit tester or oscilloscope.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

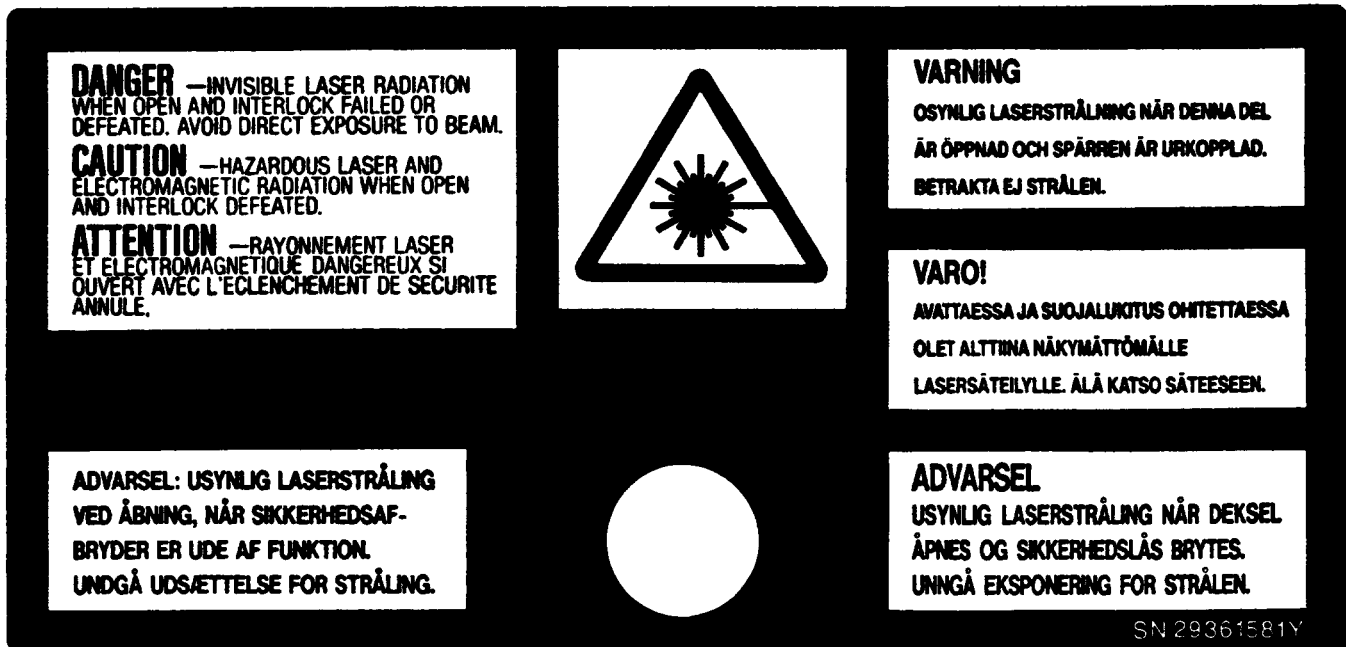
Laser Diode Properties

- Material: GaAlAs
- Wavelength: 760~800nm
- Emission Duration: continuous
- Laser output: max. 0.5mW*

*This output is the value measured at a distance about 1.8mm from the objective lens surface on the Optical Pick-up Block.

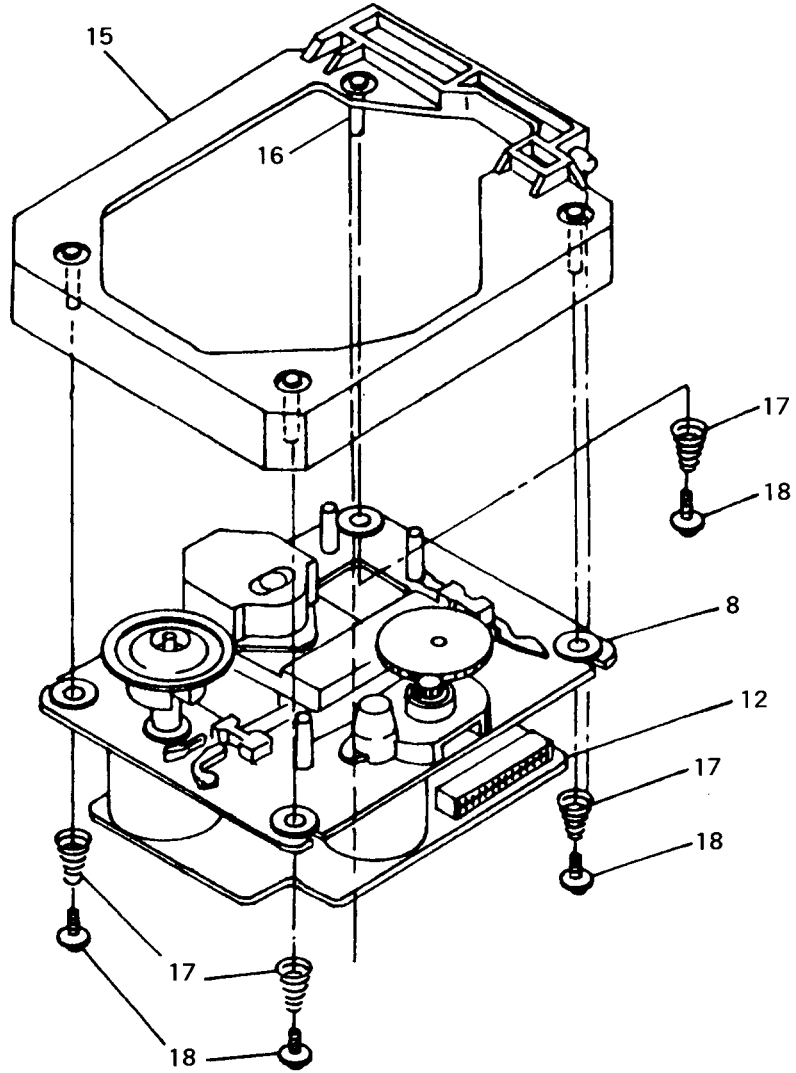
LASER WARNING LABEL

These labels are located on the mechanism.



"CLASS 1 LASER
PRODUCT"

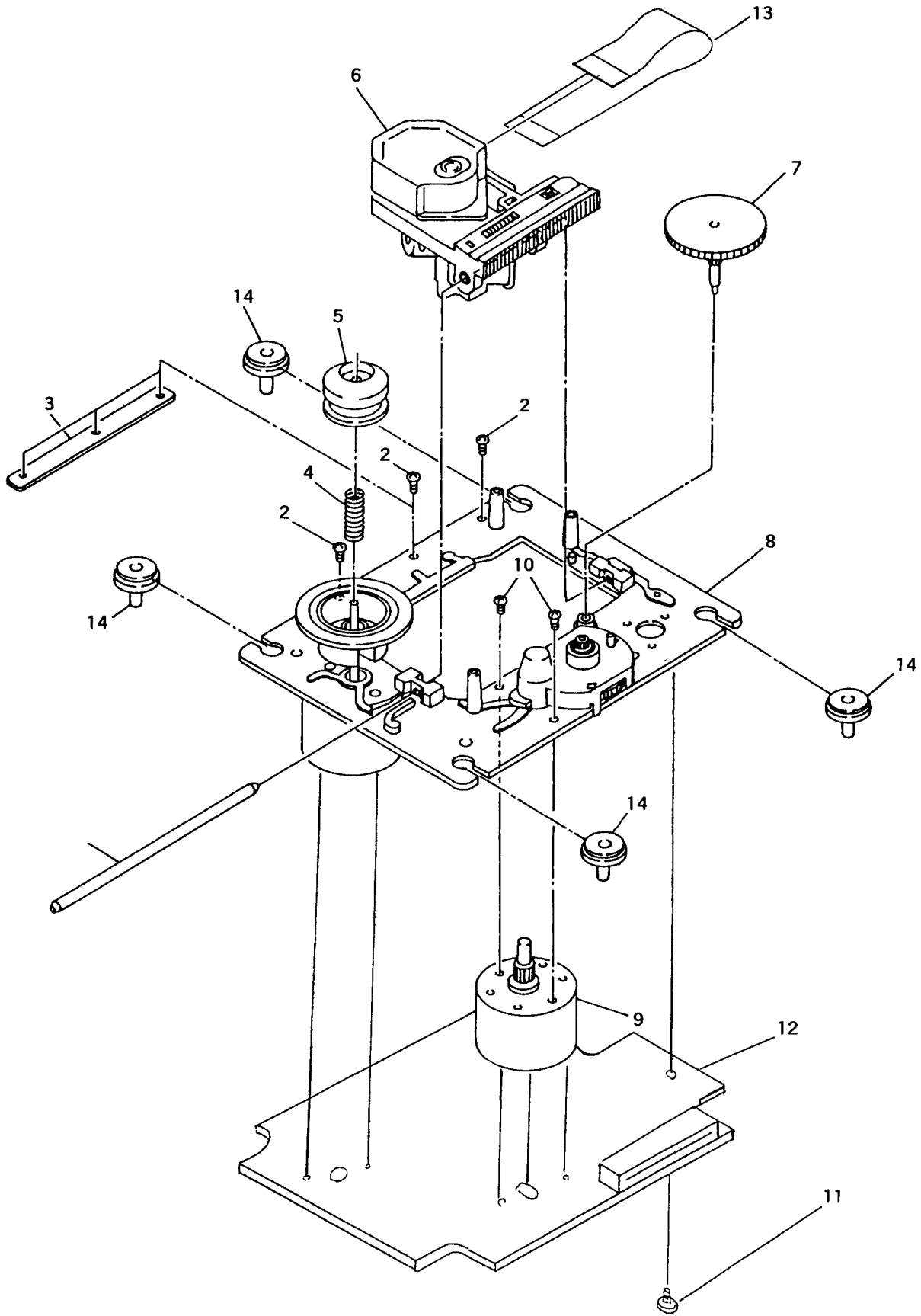
MECHANISM-EXPLODED VIEW



PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	24828006	Sled shaft
2	24840068	2 x 5, Self-tapping screw
3	24822015A	Reinforcement plate
4	24820024	Spring
5	24824003	Centering
6	24110011	Pick-up
7	24810023	Wheel
8	24802014	Chassis ass'y
9	24804012	Sled motor ass'y
10	82112003	2P+3FN, Pan head screw
11	24840099	2 x 6, Self-tapping screw
12	24840075A	AR-AS-1A, RF/Servo pc board ass'y
13	24840074	Flexible cable
14	24818012	Insulator (FLT)
15	24802016	Chassis (SUB)
16	24828012	Shaft (FLT)
17	24820026	Spring (FLT)
18	24609072Y	Screw (FLT)

PICK-UP DRIVE UNIT KSK-1320A



PRINTED CIRCUIT BOARD - PARTS LIST

MAIN CIRCUIT PC BOARD (NAAR-5612)

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
		ICS			CRYSTAL, CERA LOCK
Q201	22240487Y or 22240487AY	CXD2500AQ or CXD2500BQ	X301	3010159	AT-38-169, CRYSTAL
Q202	22240239 or 22240239Y	TA7291S or TA7291S	X701	3010229Y	EFOEC4004A4, CERA LOCK
Q203	22240771Y	BA6191			CAPACITORS
Q301	22240726	SM5872CN	C201	374721524Y	ECQ-B50V, 152J, TF C
Q401-Q404	22240191	NJM4565D-D	C202	374724734Y	ECQ-V50V, 473J, TF C
Q701	22240987Y or 22240958	MPD78043AGF or MPD78P044GF-530	C203	354721019Y	CE04W6.3V, 100M, ELECT C
Q951	22240534Y	LA5601	C205	374721034Y	ECQ-B50V, 103J, TF C
Q801	22240991 or 22240991Y or 22240198 or 22240198Y or 22240754 or 22240754Y or 22240755 or 22240755Y	LH5168-10L or LH5168-10L or LC3664NL-12 or LC3664NL-12 or LC3664AL-12 or LC3664AL-12 or LC3664RL-12 or LC3664RL-12	C206	354781099Y	CE04W50V, 0.1M, ELECT C
Q802-Q804	222745745HITY	HD74HC574P	C207-C210	354744709Y	CE04W16V, 47M, ELECT C
Q960	252114	ICP-N25-1.0A <T,A>	C303,C305,C307	354722219TY	CE04W6.3V, 220M, ELECT C
		TRANSISTORS	C308	374721044TY	ECQ-V50V, 104J, TF C
Q405-Q408	2211706 or 2211706Y or 2211705 or 2211705Y or 2214281Y	2SD655-F or 2SD655-F or 2SD655-E or 2SD655-E or 2SD2144S-U	C309	354722219TY	CE04W6.3V, 220M, ELECT C
Q702	221281Y	DTC114YS	C310	374721044TY	ECQ-V50V, 104J, TF C
Q703,Q704	2212600Y	DTA124ES	C407,C408	374721034TY	ECQ-B50V, 103J, TF C
Q901	2211503 or 2211503Y or 2211504 or 2211504Y	2SA950-O or 2SA950-O or 2SA950-Y or 2SA950-Y	C409,C410	374721824TY	ECQ-B50V, 182J, TF C
Q952	2211706 or 2211706Y or 2211705 or 2211705Y	2SD655-F or 2SD655-F or 2SD655-E or 2SD655-E	C413,C414	374721824TY	ECQ-B50V, 182J, TF C
Q953	2202706Y	2SD2394-F	C415,C416	374724724TY	ECQ-B50V, 472J, TF C
Q957	2211255Y	2SC1815-GR	C419,C420	354781009TY	CE04W50V, 10M, ELECT C
		DIODES	C431-C434	354744709TY	CE04W16V, 47M, ELECT C
D201	223205 or 223205Y or 223163Y or 223222Y	1SS270A or 1SS270A or 1SS133 or WG713A	C439,C440	354744719TY	CE04W16V, 470M, ELECT C
D202	224450562Y	MTZ5.6B, Zener	C701	354721019TY	CE04W6.3V, 100M, ELECT C
D701	223205 or 223205Y or 223163Y or 223222Y	1SS270A or 1SS270A or 1SS133 or WG713A	C703	354762209TY	CE04W35V, 22M, ELECT C
D702	224450562Y	MTZ5.6B, Zener	C707	374721024TY	ECQ-B50V, 102J, TF C
D703,D952	223205 or 223205Y or 223163Y or 223222Y	1SS270A or 1SS270A or 1SS133 or WG713A	C708,C709	374722734TY	ECQ-V50V, 273J, TF C
D704	224450562Y	MTZ5.6B, Zener	C714	354780109TY	CE04W50V, 1M, ELECT C
D906	224452204Y	MTZ22D, Zener	C903,C904	354764709TY	CE04W35V, 47M, ELECT C
D951	224450753Y	MTZ7.5C, Zener	C924,C925	374721044TY	ECQ-V50V, 104J, TF C
D801	223191	SD101	C953	354742219TY	CE04W16V, 220M, ELECT C
			C954,C956	374722244TY	ECQ-V50V, 224J, TF C
			C955	354724719TY	CE04W6.3V, 470M, ELECT C
			C957	354780109TY	CE04W50V, 1M, ELECT C
			C958	354721029TY	CE04W6.3V, 1000M, ELECT C
			C960	374721044TY	ECQ-V50V, 104J, TF C
			C961	374722734TY	ECQ-V50V, 273J, TF C
			C962	354722219TY	CE04W6.3V, 220M, ELECT C
			C963,C964,C803	354744709TY	CE04W16V, 47M, ELECT C
			C966	354781009TY	CE04W50V, 10M, ELECT C
			C967	354742219TY	CE04W16V, 220M, ELECT C
			C801	3000058 or 3000058Y or 3000073	5.5V, 1F, FYD C or 5.5V, 1F, FYD C or 5.5V, 1F, FYD C
					RESISTOR
			R903	452530224FY	RNU1/2WCJ, 2.2, METAL R
					SOCKETS
			P101A	25050895Y or 25050937Y or 25051335Y	NSCT-31P690 or NSCT-31P724 or NSCT-31P1124
			P702A	25051342Y or 25051229Y or 25050944Y	NSCT-38P1131 or NSCT-38P1019 or NSCT-38P731
					JACK
			P401	25045408	NPJ-2PDBL233, JACK
			P701	25045330	NPJ-2PDBL184, JACK
					WIRE HOLDER
			JL901A	25051116	NSCT-12P903

CIRCUIT NO.	PART NO.	DESCRIPTION
	OTHERS	
E301	27190751	HOLDER
P910	27141059Y	E PLATE
E102	27190884AY	HOLDER(FL)
P901A	25055676Y	NPLG-2P632, PLUG
DISPLAY CIRCUIT PC BOARD (NADIS-5613)		
CIRCUIT NO.	PART NO.	DESCRIPTION
Q705	FL TUBE 212110Y	9-BT-109GK
Q706	REMOTE SENSOR 24130010Y	HC-312
D707	DIODE 224450512Y	MTZ5.1B, Zener
C710	CAPACITOR 355721019TY	CE04W6.3V, 100M, ELECT C
S703,S704,S705,S708, S709,S710,S713,S714, S715,S718,S719,S720, S723,S724,S725,S728, S729,S730 S733,S738 S735	SWITCHES 25035652TY 25035652TY 25035548Y	NPS-111-S604, PUSH SW NPS-111-S604, PUSH SW NPS-111-S510, PUSH SW
P703A	SOCKETS 25051342Y or 25051229Y or 25050944Y	NSCT-38P1131 or NSCT-38P1019 or NSCT-38P731
JL701A JL702A	WIRE HOLDERS 25051107 25051109	NSCT-3P894 NSCT-5P896

POWER SUPPLY PC BOARD (NAPS-5615)

CIRCUIT NO.	PART NO.	DESCRIPTION
D901-D905	DIODE 22380032Y	1SR139-100
L901	CHOKE COIL 231222Y	NCH-3454
C902 C906 C907 C909 C922	CAPACITORS 354784709TY △ 393344727S △ 393142227S 3500077Y 374722734TY	CE04W50V, 47M, ELECT C CE04W16V, 4700M, VX C CE04W16V, 2200M, FM C DE7150F, 472M, IS C ECQ-V50V, 273J, TF C
JL901B	WIRE HOLDER 25051116	NSCT-12P903
S901	SWITCH △ 25065437Y	NSS-22157P <W>

DISPLAY CIRCUIT PC BOARD (NADIS-5614)

CIRCUIT NO.	PART NO.	DESCRIPTION
S701,S702,S706,S707, S711,S712,S716,S717, S721,S722,S726,S727	SWITCHES 25035652TY	NPS-111-S604, PUSH SW
JL701B	WIRE HOLDER 25051107	NSCT-3P894
SWITCH PC BOARD (NASW-5616)		
CIRCUIT NO.	PART NO.	DESCRIPTION
JL702B	WIRE HOLDER 25051109	NSCT-5P896
S751	SWITCH △ 25035481Y	NPS-122-L443, PUSH SW

INTERFACE PC BOARD (NAETC-5618)

CIRCUIT NO.	PART NO.	DESCRIPTION
P702B,P703B	SOCKETS 25051304Y or 25051225Y or 25050978Y	NSCT-38P1093 or NSCT-38P1015 or NSCT-38P765

<D> : 120V model only
 <P> : 230V model only
 <W> : Worldwide model only
 <A> : Australian model only
 <T> : Taiwanese model only

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

CHASSIS EXPLODED VIEW PARTS LIST

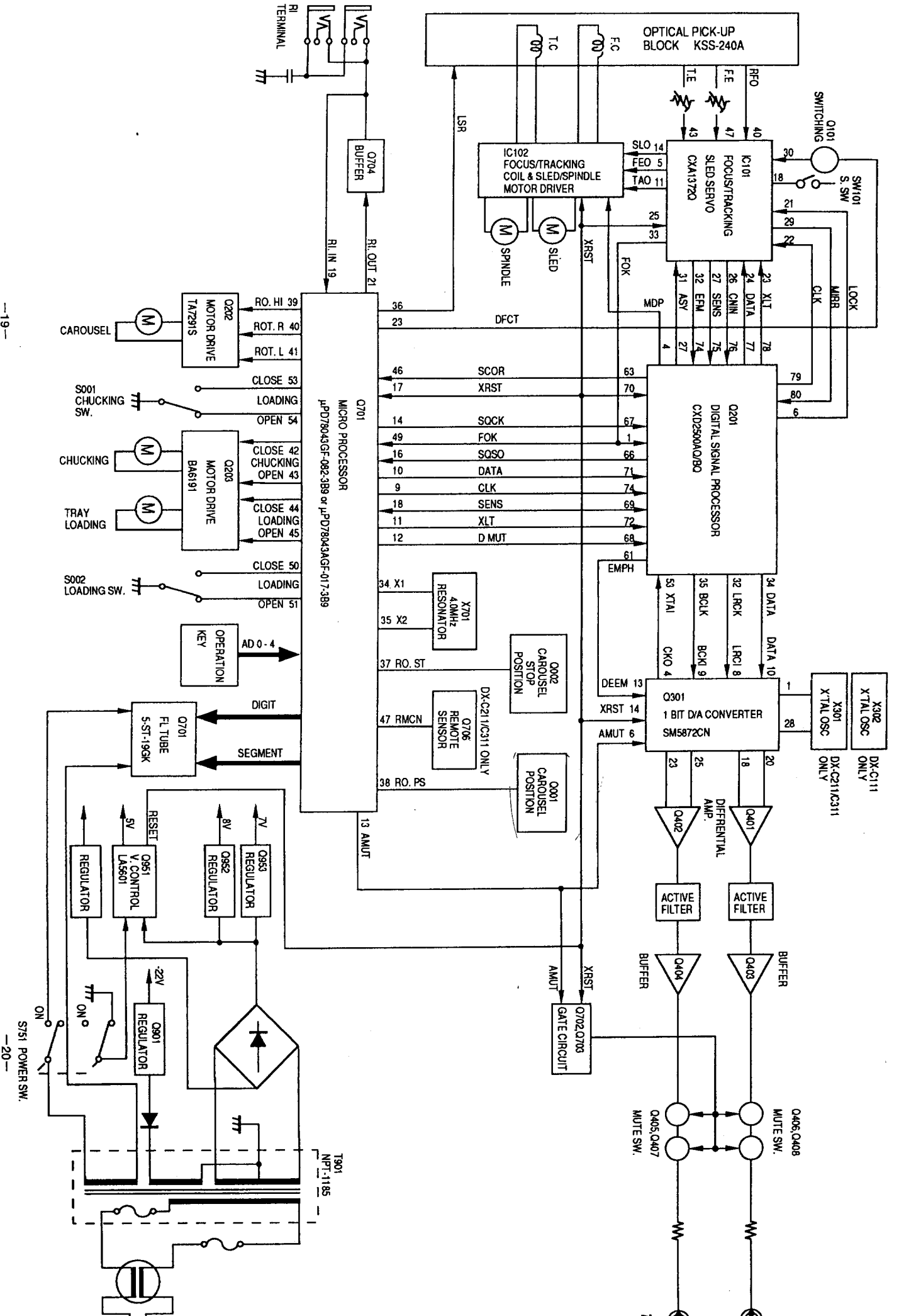
REF NO.	PART NO.	DESCRIPTION
A1	27110898Y	FRONT BRACKET
A2	838130088Y	3TTB+8B, SCREW
A3	28191728Y	CLEAR PLATE
A4	28324140Y	KNOB (POW)
A6	27100282AY	CHASSIS
A7	831430100Y	3TTW+10P(BC), SCREW
A9	27130763Y	BRACKET (PC)
A10	29361581Y	LABEL (ALL)
A12	27175292-1Y	LEG AS
A13	838130088Y	3TTB+8B, SCREW
A16	△ 27300750	CORD BUSHING
A18	838430107Y	3TTB+10S(BC), SCREW
A19	838130088Y	3TTB+8B, SCREW
A51	27122150Y	REAR PANEL <D>
	27122151Y	REAR PANEL <P (except T,A)>
	27122152AY	REAR PANEL <W>
	27122189Y	REAR PANEL <T,A>
A52	838130088Y	3TTB+8B, SCREW
A301	28184629-1Y	TOP COVER
A302	838430088Y	3TTB+8B(BC), SCREW
A303	28141235Y	t 15×30×15, CUSHION
A501	27211762Y	FRONT PANEL
A502	28135199Y	BADGE
A503	8910301	CS RING
A504	838130088Y	3TTB+8B, SCREW
A506	28125248-6Y	END CAP (L)
A507	28125249-6Y	END CAP (R)
A509	28148332Y	DOOR
P951	△ 253192HITY	AS-UC-6#18, AC CORD <D>
	△ 253193HITY	AS-CEE, AC CORD <P,W>
	△ 253197HIT	AS-SAA, AC CORD <A>
T901	△ 2300992Y	NPT-1200D, POWER TRANSFORMER <D>
	△ 2300993Y	NPT-1200P, POWER TRANSFORMER <P>
	△ 2300994Y	NPT-1200DG, POWER TRANSFORMER <W>
U1	1H286512-1Y	NAAR-5612-1, MAIN CIRCUIT PC BOARD
U2	1H286513-1Y	NADIS-5613-1, DISPLAY CIRCUIT PC BOARD AS
U3	1H286514-1Y	NADIS-5614-1, DISPLAY CIRCUIT PC BOARD AS
U4	1H286515-1Y	NAPS-5615-1, POWER SUPPLY PC BOARD AS
U5	1H286516-1Y	NASW-5616-1, SWITCH PC BOARD AS
U6	1H286517-1Y	NAETC-5617-1, POWER SWITCH PC BOARD AS
U7	1H286518-1Y	NAETC-5618-1, INTERFACE PC BOARD AS
E801	2046381512Y or	NCFC6-381512, FFC or
	2047381512Y	NCFC7-381512, FFC
E802	2046381512Y or	NCFC6-381512, FFC or
	2047381512Y	NCFC7-381512, FFC
Z2	2046312522Y	NCFC6-312522, FFC

<D> : 120V model only
 <P> : 230V model only
 <W> : Worldwide model only
 <A> : Australian model only
 <T> : Taiwanese model only

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

CHANGER MECHANISM PARTS LIST (NCD-57S-C)

CIRCUIT NO.	PART NO.	DESCRIPTION
M1	24840095AY	RAIL
M2	24826006Y	HOLDER (GUIDE)
M3	24836006AY	CUSHION (TRAY)
M4	24836016Y	CUSHION (LOCK)
M5	24814003Y	ARM (B)
M6	24830004Y	YOKE (CHB)
M7	24824004	CAP (CHB)
M8	24832006Y	MAGNET (CHB)
M9	24836007Y	CUSHION (A2)
M10	24840096Y	ROULETTE
M11	24840097AY	RG-208086, TRAY
M12	24840098Y	ROLLER
M13	24802016Y	CHASSIS (SUB)
M18	24804015Y	RF-500TB-14415, MOTOR
M19	24810028Y	PULLEY
M33	24609071AY	SCREW
M21	24816009Y	RBR BELT (A)
M22	24816010AY	RBR BELT (B)
M23	24816011Y	RBR BELT (D)
M24	24810029Y	GEAR (A)
M25	24810030Y	GEAR (B)
M26	24810031Y	GEAR (D)
M27	24810026Y	CAM GEAR (A)
M28	24810027Y	CAM GEAR (B)
M29	24834014Y	WASHER
M30	24828007Y	SHAFT
M31	24820025Y	SPRING
M32	24822017Y	BRACKET (PH)
M33	24800011BY	KSK-1320A, CDP MECHA
M34	24802017AY	CHASSIS AS
M40	831430100Y	3TTW+10P(BC), SCREW
M41	833430080Y	3TTP+8P(BC), SCREW
M42	82112606Y	2.6P+6FN, SCREW
M43	8930401Y or 8930401SY	ES-4S, RING(E) or ES-4S, RING(E)
M44	8930201Y or 8930201SY	ES-2S, RING(E) or ES-2S, RING(E)
M45	8930301Y or 8930301SY	ES-3S, RING(E) or ES-3S, RING(E)
M46	1H242542-1Y	ETC-AS
M47	1H242543-1Y	ETC-AS
M48	1H242544-1Y	SW-AS
M49	1H242545-1Y	SW-AS
M50	2046220822Y	NCFC6-220822, FFC
M51	24609073Y	SCREW
M53	260208Y	WIRE TIE

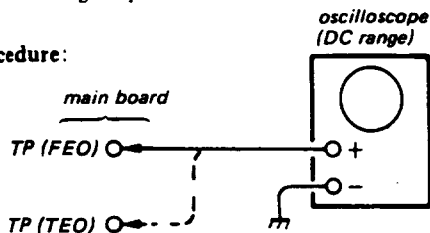


The following is a simple adjustment method.

- Simple Adjustment -

Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure:



1. Keep the set horizontal.
(If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Insert disc (YEDS-18) and press ▷PLAY button.
3. Connect oscilloscope to RF/ Servo board TP (FE).
4. Adjust RV102 so that the waveform is as shown in the figure below. (focus gain adjustment)

5. Connect oscilloscope to RF/ Servo board TP (TE).
6. Adjust RV101 so that the waveform is as shown in the figure below. (tracking gain adjustment)

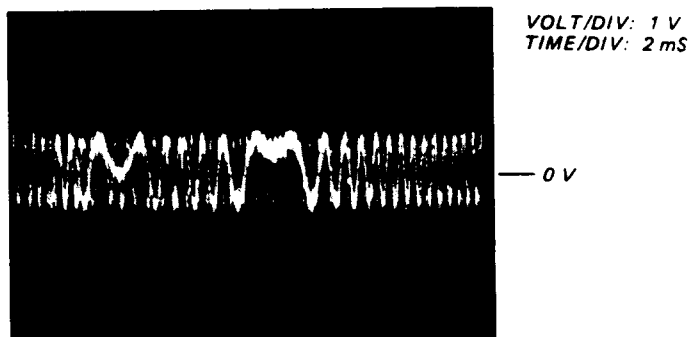


● Incorrect Examples (fundamental wave appears)

low tracking gain

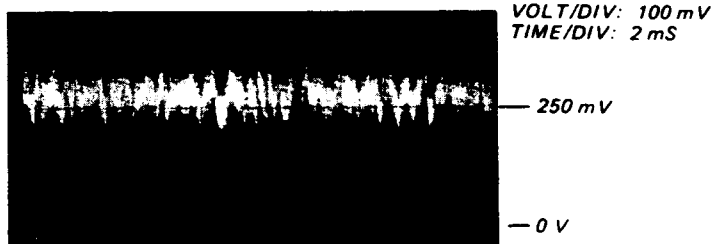


*high tracking gain
(higher fundamental wave than for low gain)*

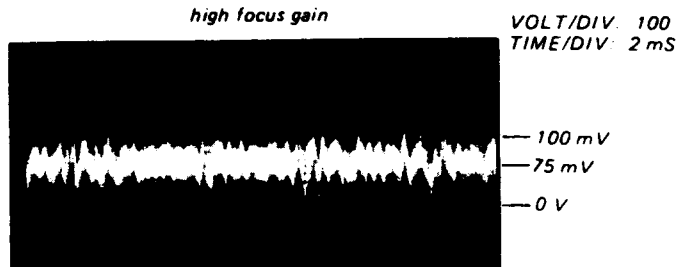


● Incorrect Examples (DC level changes more than on adjusted waveform)

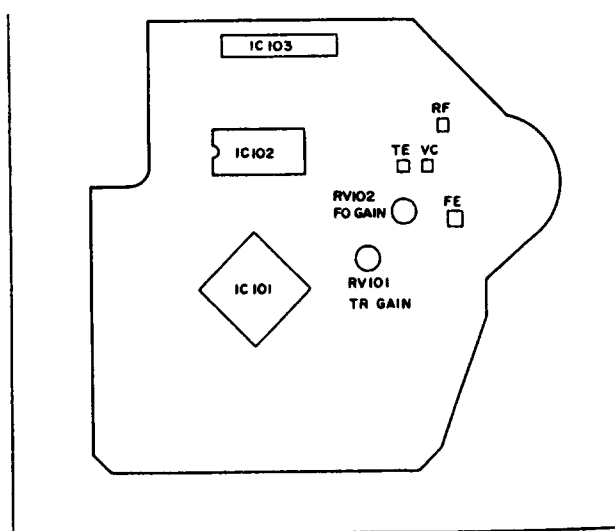
low focus gain



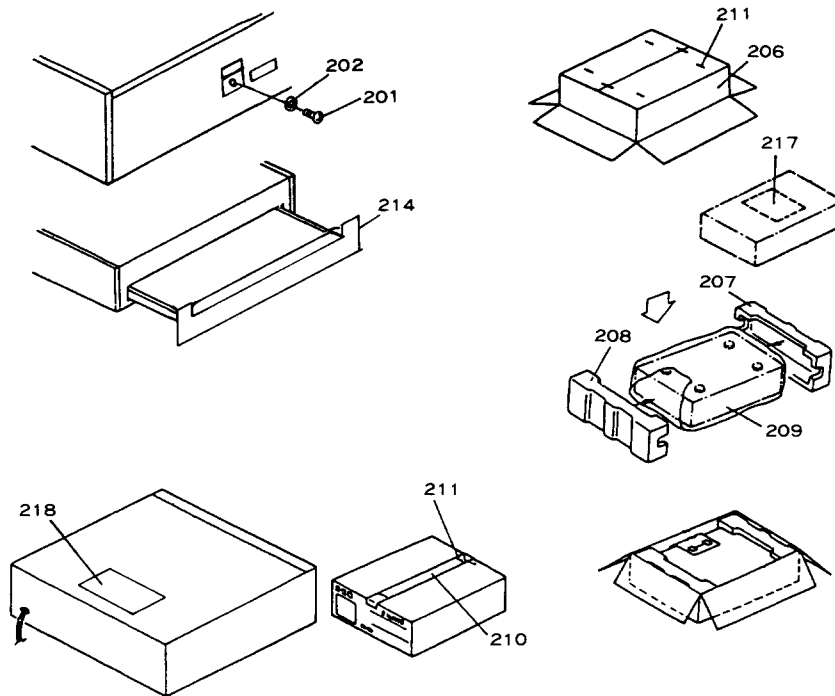
high focus gain



Adjustment Location: RF/ Servo board



PACKING VIEW



PARTS LIST

REF NO.	PART NO.	DESCRIPTION	ACCESSORY BAG AS
201	82115018Y	5P+18FN, SCREW	2010244Y or PIN CORD AS or
202	27270382Y	t 0.5×15×5.2, SPACER	2010326Y PIN CORD AS
206	29052948Y	CARTON	2010200Y or 3.5MINI PLUG, CORD AS or
207	29091713Y	PAD (L)	2010200 3.5MINI PLUG, CORD AS
208	29091714Y	PAD (R)	24140289Y RC-289C, REMOTE CONTROLLER
209	29100141AY	700×600, POLY BAG	3010165Y or UM-3, BATTERY or
210	29110071Y	PP TAPE	3010194Y UM-3, BATTERY
211	282301Y	STAPLE	21900097-1Y 350×250, POLY BAG
214	29095721Y	SHEET (DOOR)	25055040 CV PLUG <W>
217	29355207Y	INSTRUCTION SHEET	29365019B WARRANTY CARD <D>
218	29360687Y	LABEL (CLASS 1) <P,W>	29365042 WARRANTY CARD <A>
219	29361922	UPC LABEL <D>	29358002K SERVICE STATION LIST <D>
	29361786Y	LABEL <W,T,A>	29342227Y INSTRUCTIONMANUAL (E)
	29360840	LABEL (SHEET) <D>	29342229Y INSTRUCTIONMANUAL (U6) <P (except T,A)>
	29360404Y	SN SHEET	29342228Y INSTRUCTIONMANUAL (U3) <W,T>

<D> : 120V model only

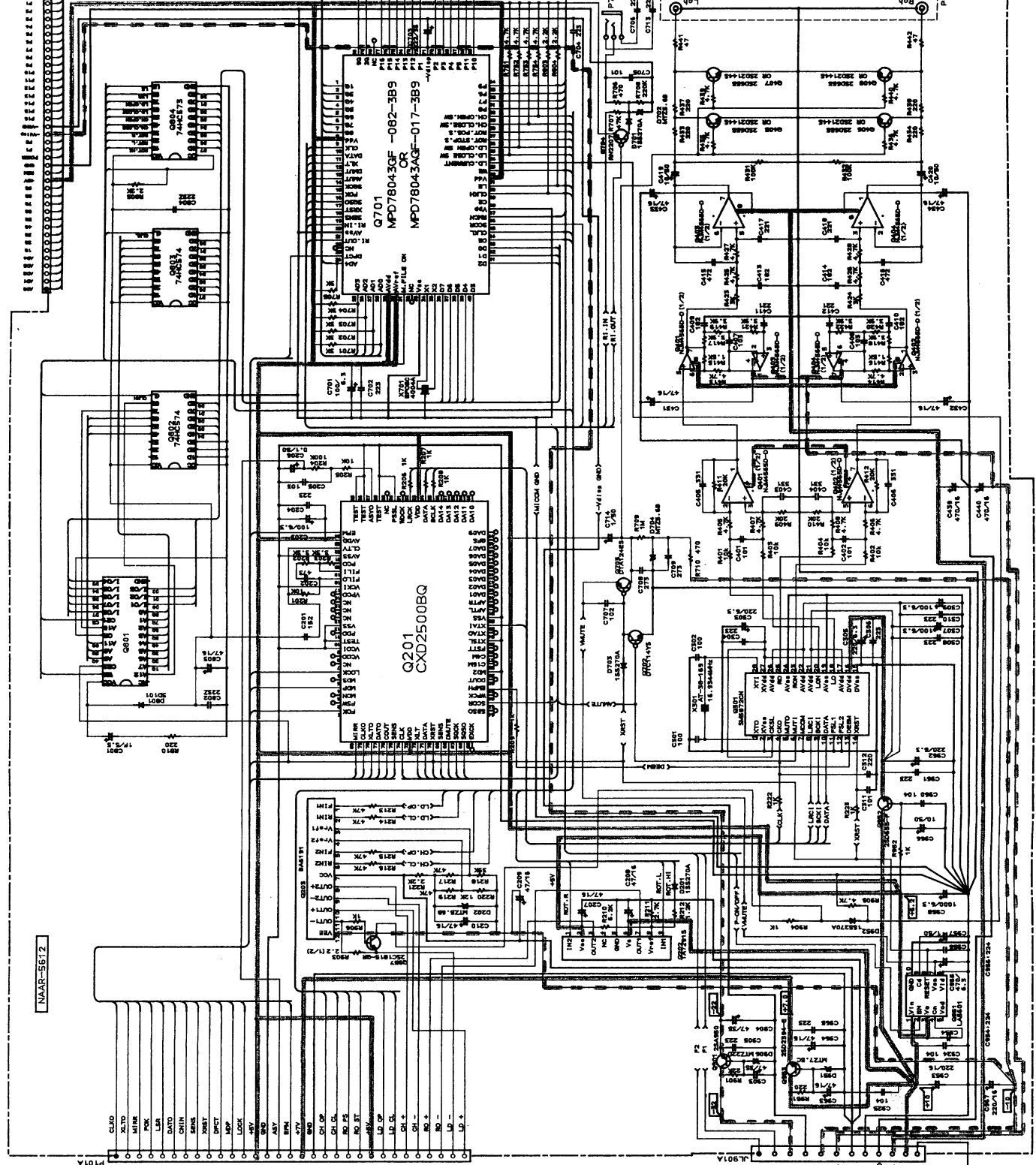
<P> : 230V model only

<W> : Worldwide model only

<A> : Australian model only

<T> : Taiwanese model only

SCHEMATIC DIAGRAM (1/2)



NAAR-5512

TYPE	RATING	TR01	PSS1
NO	AC120V/50Hz	NPT-1200D AS-CH-3 R18	
NP	AC120V/50Hz	NPT-1200P AS-CEE 250V 2.5A	
NW	AC120V/50Hz	NPT-1200D AS-CEE 250V 2.5A	

