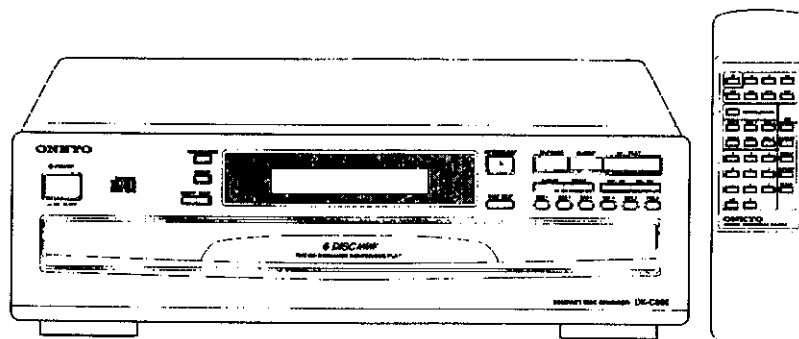


ONKYO® SERVICE MANUAL**COMPACT DISC CHANGER
MODEL DX-C380****Black and Silver models**

BMD	120V AC, 60Hz
BMPP/BMPA/SMPP	230V AC, 50Hz

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.

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SPECIFICATIONS

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-Rolomon code
D/A converter:	1 bit PWM/ACCUPULSE
Sampling frequency:	352.8 kHz (8 times oversampling)
Number of channel:	2 (stereo)
Frequency response:	5 Hz - 20kHz
Total harmonic distortion:	0.005% (at 1kHz)
Dynamic range:	96 dB
Signal to noise ratio:	92 dB
Channel separation:	92 dB (at 1kHz)
Wow and Flutter:	Below threshold of measurability
Output level:	2 volts r.m.s.
Power consumption:	10 watts
Power supply :	120V, 60Hz 230V, 50Hz
Dimensions (W x H x D):	435 x 131 x 433 mm (17-1/8" x 5-3/16" x 17-1/16")
Weight:	6.9 kg (15.2 lbs.)

Specifications and features are subject to change without notice.

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.

Initialize the set.

Roulette stops when the POWER button is pushed while pushing the button of DISC6 with DISC1 gripped.

Note:

CD mechanism might be damaged to the movement (transportation) without gripping DISC.

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 10MΩ) 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 SERVICE

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: GaAS/GaAlAs

Wavelength: 760 ~ 800nm

Emission Duration: continuous

Laser output: max. 0.5mW*

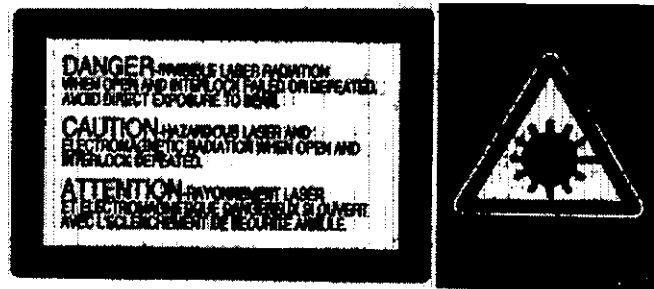
*This output is the value measured at a distance about 1.8mm from the objective lens surface on the Optical Pick-up Block.

LASER WARNING LABEL

These labels are located on the mechanism.

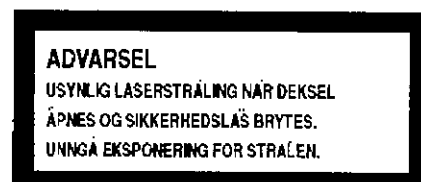
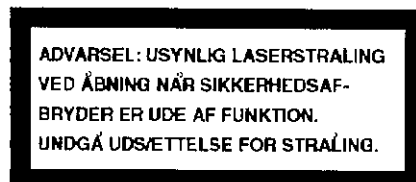
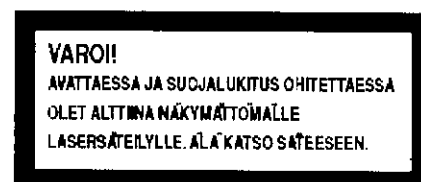
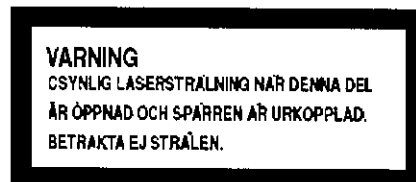
1. Warning label

This label is located on the chassis.



2. Class 1 label

This label is located on the rear panel.



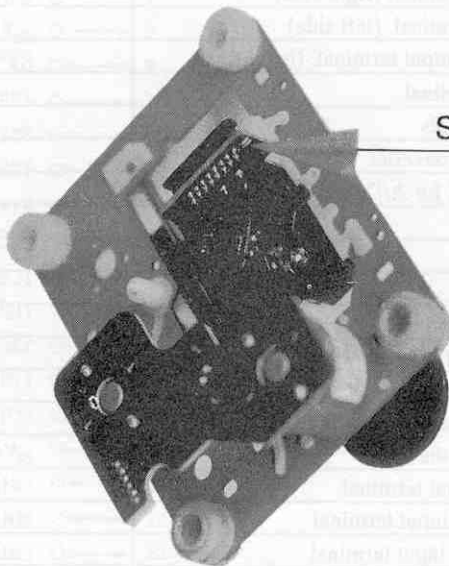
Only 230V model

CAUTION ON REPLACEMENT 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.

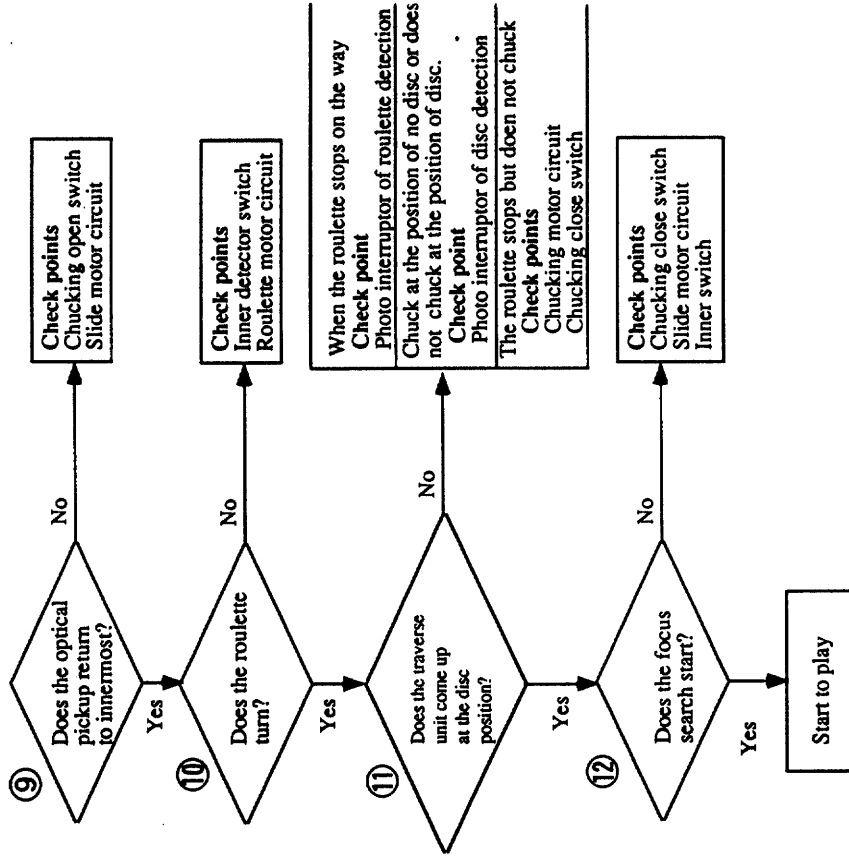
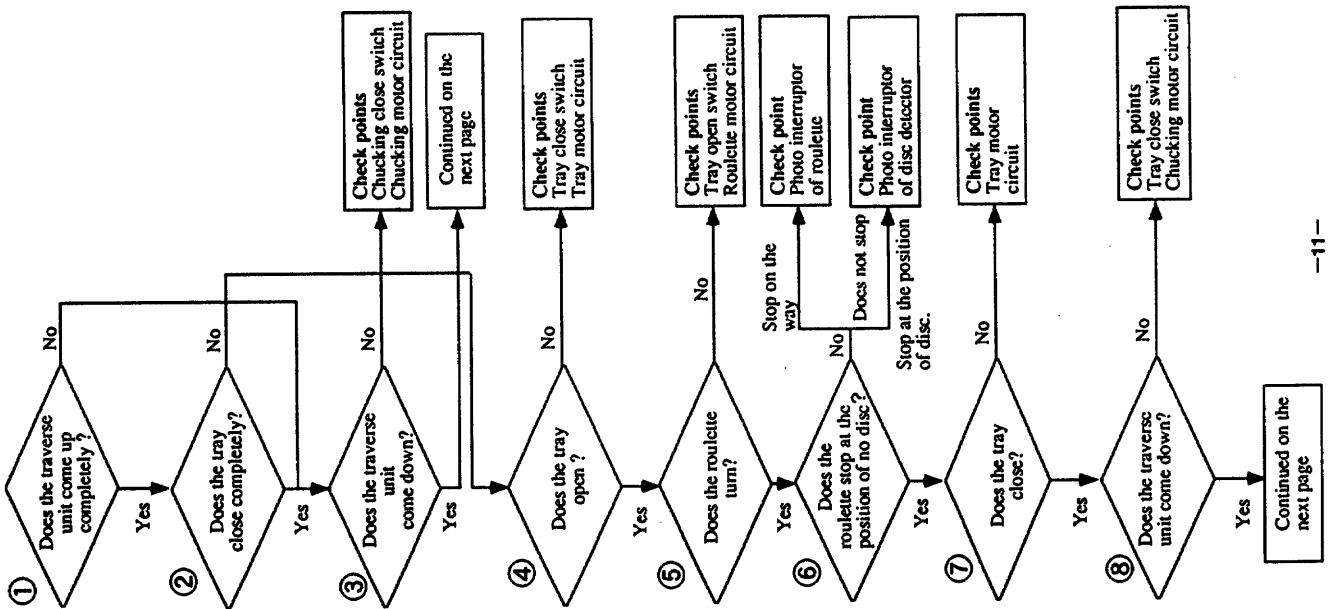
During repair, carefully take the following precautions.

1. When replacing the optical pickup, first short the LD terminals and remove the connector. Also, when attaching the new optical pickup, after attaching the connector, unsolder the LD terminals.
2. Do not touch the optical pickup object lens with the hands.



Short pattern for LD protection.

TROUBLE SHOOTING



ERROR MESSAGE DISPLAYED IN HEAT-RUNNING MODE

Heat-running Mode : Power ON as pushing DOWN button together.

Operation :

1. DISC 1 chucking and TOC Reading (Pick-up Home position is displayed.)
2. Accessing of the Outermost Track
3. Tray Open
4. Tray Close
5. DISC 1 Playing / Stop and Chucking Down
6. Roulette Turning 7/6 Turns clockwise

Then,

1. DISC 2 chucking and TOC Reading (Pick-up Home position is displayed.)
2. Accessing of the Outermost Track
3. Tray Open
4. Tray Close
5. DISC 2 Playing / Stop and Chucking Down
6. Roulette Turning 5/6 Turns counter-clockwise

Then,

Continued as the above.

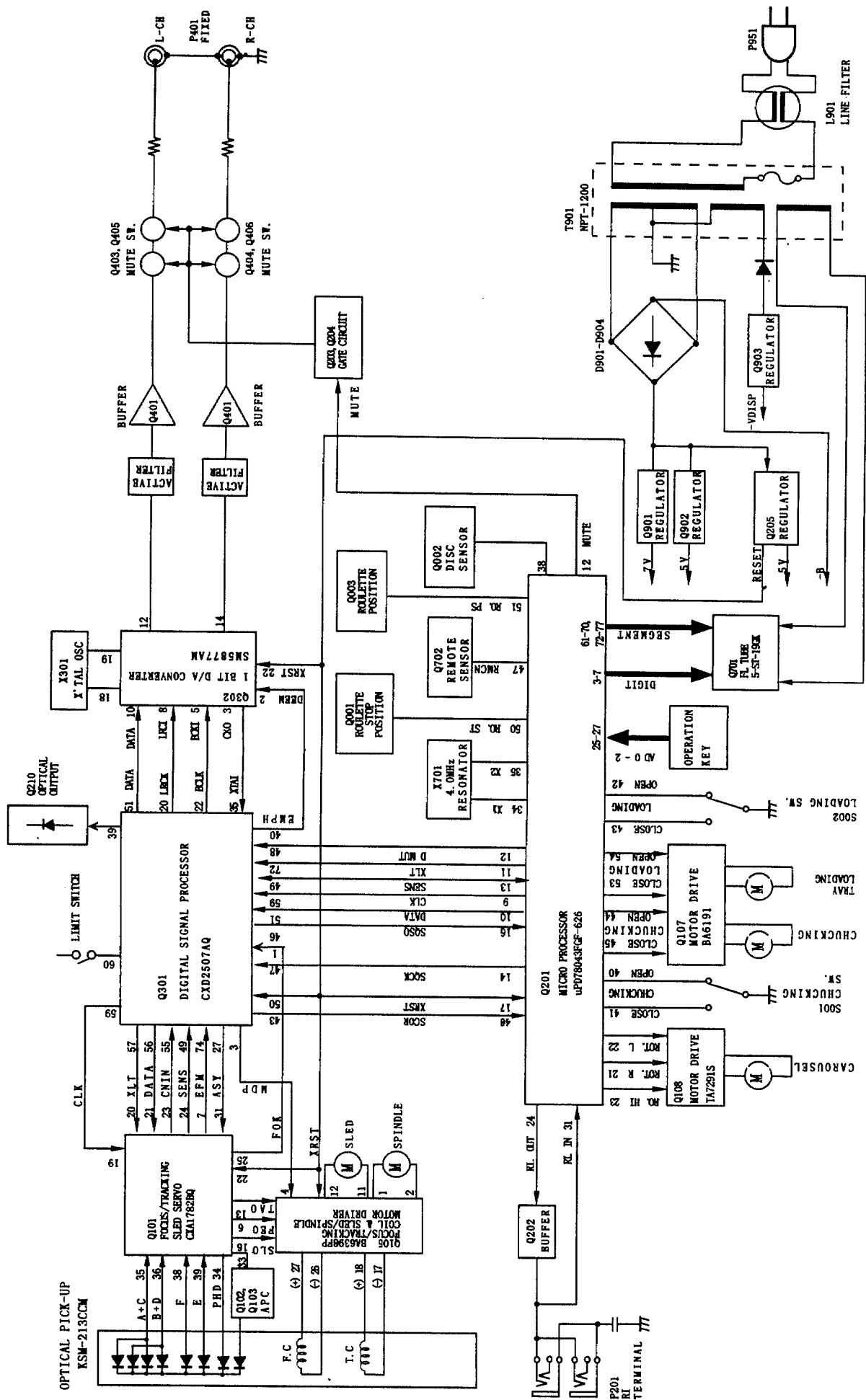
In these operation Error Message is shown in the display if any error occurs in the mechanism or the servo control. And then you can find the failure point almost exactly in this mode before you repair rejected units.

1. nf : FOCUS NG : FOCUS SERVO ON missed (Failure in Laser or RF circuit)
2. ng : GFS NG : TIMEOUT for Non-GFS (Synchronous Signal Detection) (Failure in RF Demodulator or CLV)
3. Ld : TOC Reading NG : TIME OUT Before TOC Reading completion (All SERVO Circuit)
4. Ac : ACCESS NG : TIME OUT before ACCESS completion (All SERVO Circuit)
5. co : CH OPEN NG : Non-CHUCKING Open
6. cc : CH CLOSE NG : Non-CHUCKING Close
7. rL : ROT LEFT NG : Non CCW Turning of Roulette or Non-Detection of CCW Turning of Roulette
8. rr : ROT RIGHT NG : Non CW Turning of Roulette or Non-Detection of CW Turning of Roulette
9. OP : TRAY OPEN NG : Non TRAY Open
10. CL : TRAY CLOSE NG : Non TRAY Close
11. PU : PICK UP RETURN NG : PICK-UP Non Return to the inner most.

There are two Errors in the normal operation as follows.

1. Er : INITIALIZE ERROR : Error occurred in Mechanism when it is initialized. (Error points are displayed in Heat-running Mode.)
2. rn : RAM NG : RAM for File is not initialized.

BLOCK DIAGRAM



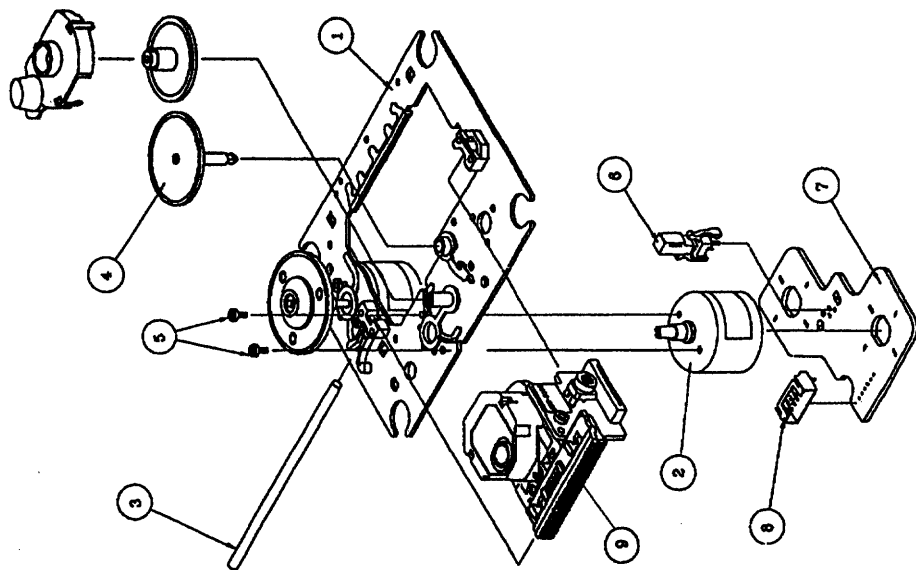
PICK-UP DRIVE UNIT

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
A1	27110990B	Front bracket 	M2	24840109B	Rail
A2	838130088	Front bracket <S>	M3	28141337	Cushion
A3	28191776A	3TTTB+8B, Self-tapping screw	M6	24830004	Yoke (CHIB)
A4	28191777A	Clear plate 	M7	24824006	Cap (CHC)
A6	28325465	Clear plate <S>	M8	24832006	Magnet (CHB)
A7	28325466	Knob (POW) 	M10	24804015	Motor, RF-500TB-14415
A8	27100327B	Knob (POW) <S>	M11	24810028	Pulley
A9	27191000	Chassis	M12	24816010A	Rubber belt (B)
A10	260208	Holder, MFS-1000	M15	24810040	Gear (Pulley)
A11	27175316B	Wire tie	M16	24810039A	Gear (Load)
A12	28141332	Cushion	M17	24810041	Gear (A)
A13	27300750	Cord bushing, #Z271	M18	24810042	Gear (B)
A14	29361957	Label (ALL2)	M20	831430088	3TTTW+8B(BC), Self-tapping screw
A15	831430088	3TTTW+8B(BC), Self-tapping screw	M23	24802024	Chassis (Sub)
A16	27300833-2	Clamp, WS-2NS	M24	24840111	Special self-tapping screw
A17	27301779	Clamp, HL-38-0	M25	24800017	CD Mechanism unit, KSM-213CCM
A18	838430107	3TTTB+10S(BC), Self-tapping screw	M26	24818013	Insulator (A)
A19	27122717	Rear panel <D>	M27	24818014	Insulator (B)
A20	27122719	Rear panel <E>	M28	204416004	Flexible flat cable, NCFCA-16004
A21	27122718	Rear panel <F>	M29	200990464	Socket AS, NASA-12F618
A22	28184680A	Top cover 	M30	24840111	Special self-tapping screw
A23	28184681A	Top cover <S>	M33	24840107D	Tray
A24	838430088	3TTTB+8B(BC) 	M34	24804021	Motor, RF-310TA-11400
A25	838930088	3TTTB+8B(UN) <S>	M35	24810066	Pulley (C)
A26	27212201	Front panel 	M36	24822018	Retainer
A27	27212202	Front panel <S>	M37	838130088	3TTTB+8B, Self-tapping screw
A28	28135244	Badge 	M38	28141340	Cushion
A29	28148365	Door 	M40	24810045A	Worm AS
A30	28148366	Door <S>	M43	24810043	Wheel gear
E1	204329005	Flexible flat cable, NCFCA-29005	M44	831430088	3TTTW+8B(BC), Self-tapping screw
E2	204307007	Flexible flat cable, NCFCA-07007	M45	24834017A	Spacer
P951	253279HIT	AC cord, AS-UC-2F18 <D>	M46	24840111	Special self-tapping screw
T901	253193HIT	AC cord, AS-SAA <PA>	M47	24816035	Rubber belt (G)
U1	2300992	Power transformer, NPT-1200D <D>	M48	24840110	Roller
U2	1H442580-5	Power transformer, NPT-1200P <PA, P>	M50	24840108A	Rollette
U3	1H442582-5	Main circuit PC board assy, NAAR-5880-5	M51	24834016	Washer (A)
U4	1H442583-5	Display circuit PC board assy, NADIS-5881-5	M52	24820033	Spring (A)
U5	1H401554-1	Power supply circuit PC board assy, NAFS-5882-5	M53	24840111	Special self-tapping screw
U6	1H401555-1	Power switch PC board assy, NASW-5883-5	M58	838130088	3TTTB+8B, Self-tapping screw
U7	1H401556-1	Position sensor PC board assy, NAEITC-5854-1	M59	838426088	2.6TTTB+8B(BC), Self-tapping screw
U8	1H401557-1	Chuckling motor PC board assy, NAEITC-5855-1			
U9	1H401558-1	Loading motor PC board assy, NAEITC-5856-1			
U10	1H401559-1	Chuckling switch PC board assy, NAEITC-5857-1			
U11	1H401558-1	Rollette in/out PC board assy, NASW-5858-1			
U12	1H401559-1	Disc sensor PC board assy, NAEITC-5859-1			

NOTE: Black model only
<S> Silver model only
<D> 120V model only
<P> 230V model only
<PA> Australian model only

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



REF. NO.	PART NO.	DESCRIPTION
1	X-2625-877-1	Motor chassis ass'y
2	X2625-769-1	Motor gear ass'y
3	2626-908-01	Sied shaft
4	24810023	Gear A
5	7621-255-15	P2x3 Pan head screw
6	24840008	Leaf switch
7	1639-678-12	Motor PC board
8	1564-722-11	6P, Connector pin
9	8848-483-05	KSS-213C, Optical pickup

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coil	
L901	231222	△ NCH-3454
	Capacitors	
C901	354744729S	4700 μ F, 16V, Elect
C902	393342227S	2200 μ F, 16V, Elect
C905	354784709	47 μ F, 50V, Elect
C906	354780229	2.2 μ F, 50V, Elect
C908, C909	354744719	470 μ F, 16V, Elect
	Sockets	
P901A	25050273	NSCT-9P101
P902A	25050269	NSCT-5P97
	Plug	
P903	25055676	NPLG-2P632

Power switch PC board (NASW-5883-5)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C950	3500191	△ DE7150F-103M , AC400V/125V , IS C
	Switch	
S901	25035636	△ NPS-111-L590P , Power

Position sensor PC board (NAETC-5854-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Photo interrupters	
Q001	24190041	SG-207
Q002	24190046	GP2S28
	Capacitors	
C001, C003	354744709	47 μ F, 16V, Elect
C002	352942206	22 μ F, 16V, Elect
	Sockets AS	
P001A	2002390605UL	NSAS-6P0597
P103	2009990447UL or 2009990594UL	NSAS-10P0596 or NSAS-10P-0807
P104	2009990446UL or 2009990593UL	NSAS-11P0595 or NSAS-11P-0806
	Sockets	
P105B	25051851 or 25050913	NSCT-7P1638 or NSCT-7P700

Chucking motor PC board (NAETC-5855-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C004	352942206S	22 μ F, 16V, Elect

Chucking switch PC board (NAETC-5857-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switch	
S001	25065491	NMS-1223

Roulette in/out PC board (NASW-5858-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switch	
S002	25065375	NMS-1219

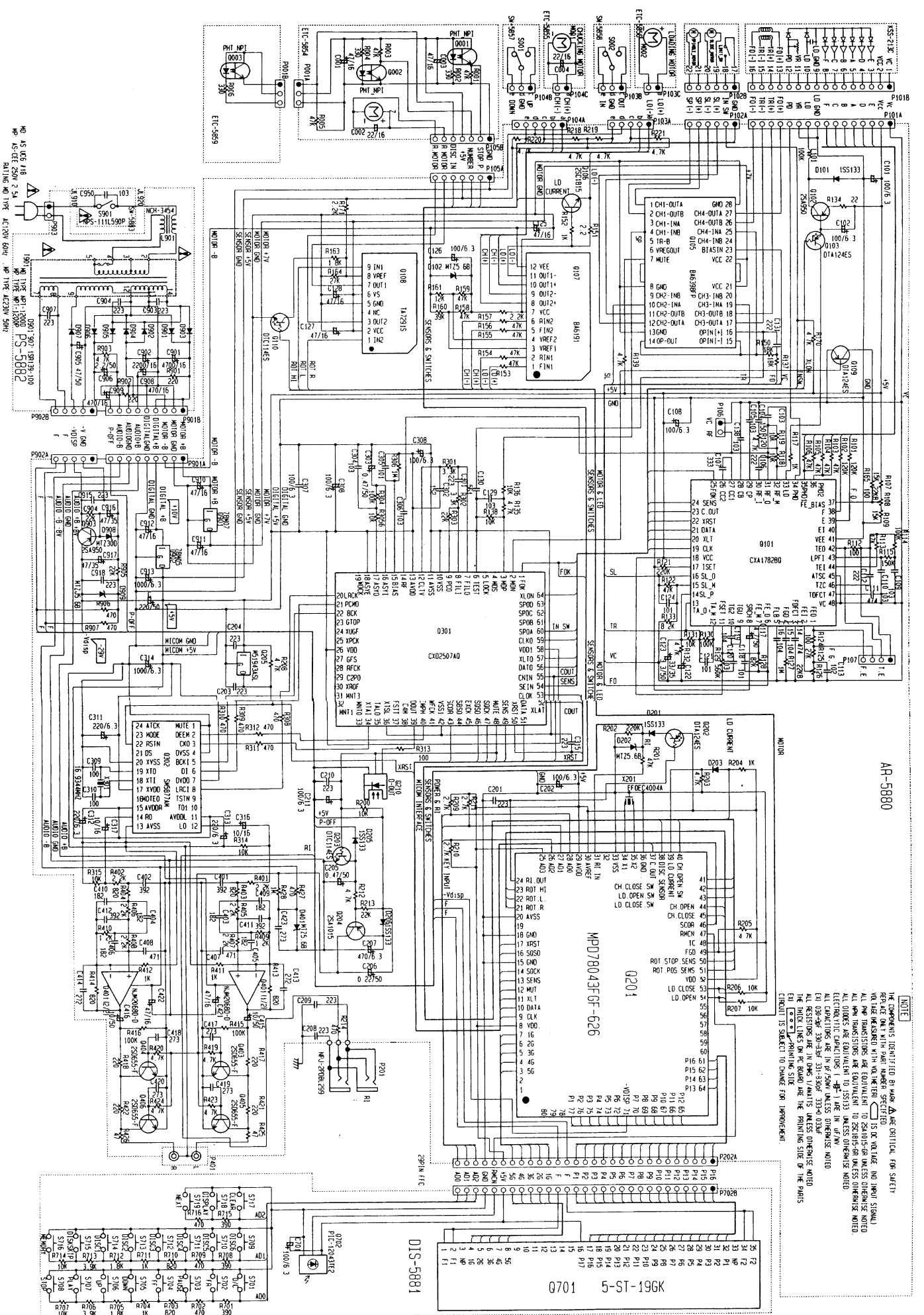
Disc sensor PC board (NAETC-5859-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Photo interrupter	
Q003	24190041	SG-207
	Plug	
P001B	25055367	NPLG-3P350

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

SCHEMATIC DIAGRAM

A | B | C | D | E | F | G



AR-5980

MPD78043GF-626

DIS-5881

0701 5-ST-196K

ADJUSTMENT PROCEDURES

Instruments required

Dual trace oscilloscope, AF oscillator, Test disc (SONY YEDS-18) and AC voltmeter.

1. Focus offset adjustment

Turn R108 and R126 to the mechanical center.

Load the test disc YEDS-18 on the tray and play the track 2.

Connect the oscilloscope to terminal P106.

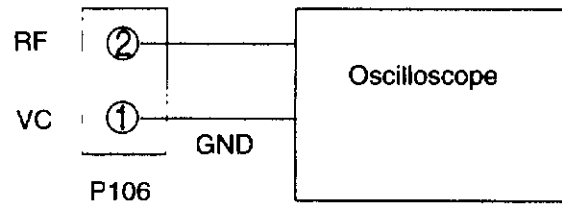
Adjust R108 until the waveform on the oscilloscope becomes maximum.

After adjustment, disconnect the oscilloscope.



Photo 1

0.2V/div
0.2 μ s/div



2. Focus gain adjustment

Set the output of AF oscillator to 1kHz, 2 Vp-p.

Play the track 2 of test disc.

Connect the oscilloscope and the AF oscillator as shown below.

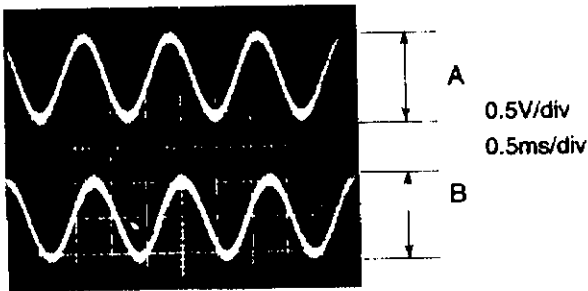
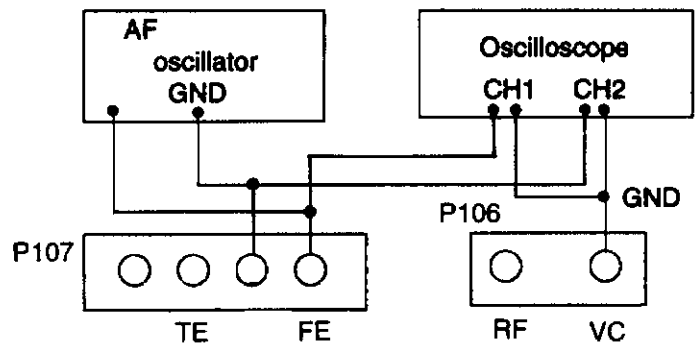


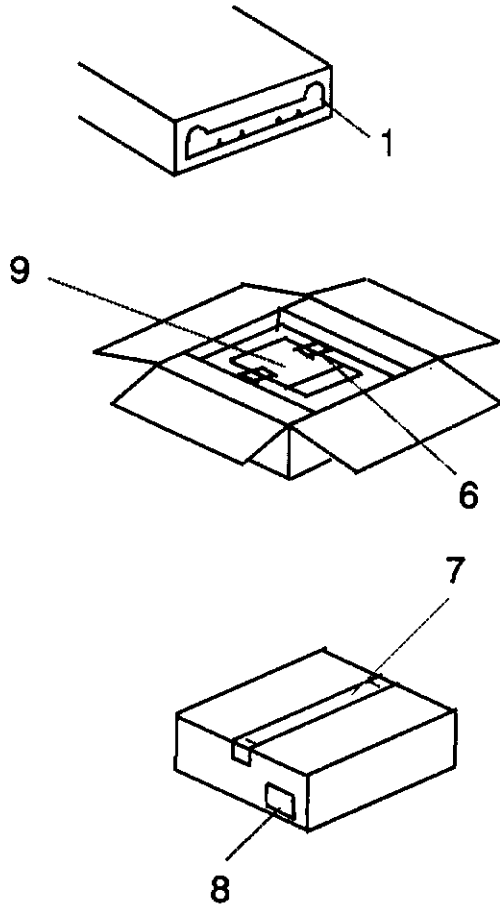
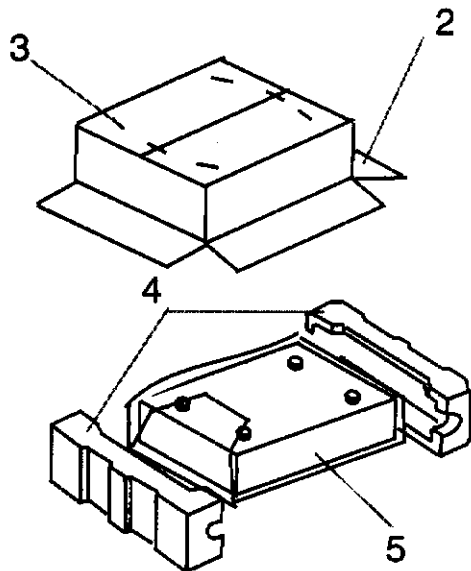
Photo 2



Adjust R126 until 1kHz components of channels 1 and 2 on oscilloscope become same level.

After adjustment, disconnect the AF oscillator and the oscilloscope.

PACKING VIEW



REF. NO.	PART NO.	DESCRIPTION
1	29095795	Sheet (Door)
2	29053575	Carton box
2	29053579	Carton box <S>
3	282321	Staple
4	29091774A	Pad ass'y
5	29100153	1020x720, Poly bag
6	261504	Paper tape
7	29110098	PP tape
8	29362614	Label, UPC <D>
8	29362618	Label, EAN <PA,P>
8	29362619	Label, EAN <S> <P>
9	Accessory bag ass'y	
	2010381 or	Audio connection cable
	2010326	
	2010200	RI cable
	24140331B	RC-331C, Remote control
	29100097-1A	350*250, Poly bag
	29342883	Instruction manual, E
	29342927	Instruction manual, U3GSWD <P>
	29342928	Instruction manual, U3FSI <P>
	29355299	Instruction sheet <D>
	29365083A	Warranty card <D>
	29365042	Warranty card <PA>
	29360840	Label sheet <D>
	3010054	Battery, UM3
	27270397	Spacer, Chassis
	29095866	Sheet, ONKYO <D>

NOTE: Black model only
 <S> Silver model only
 <D> 120V model only
 <P> 230V model only
 <PA> Australian model only

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