

COMPACT DISC PLAYER
DP-1080/2080
 SERVICE MANUAL

KENWOOD

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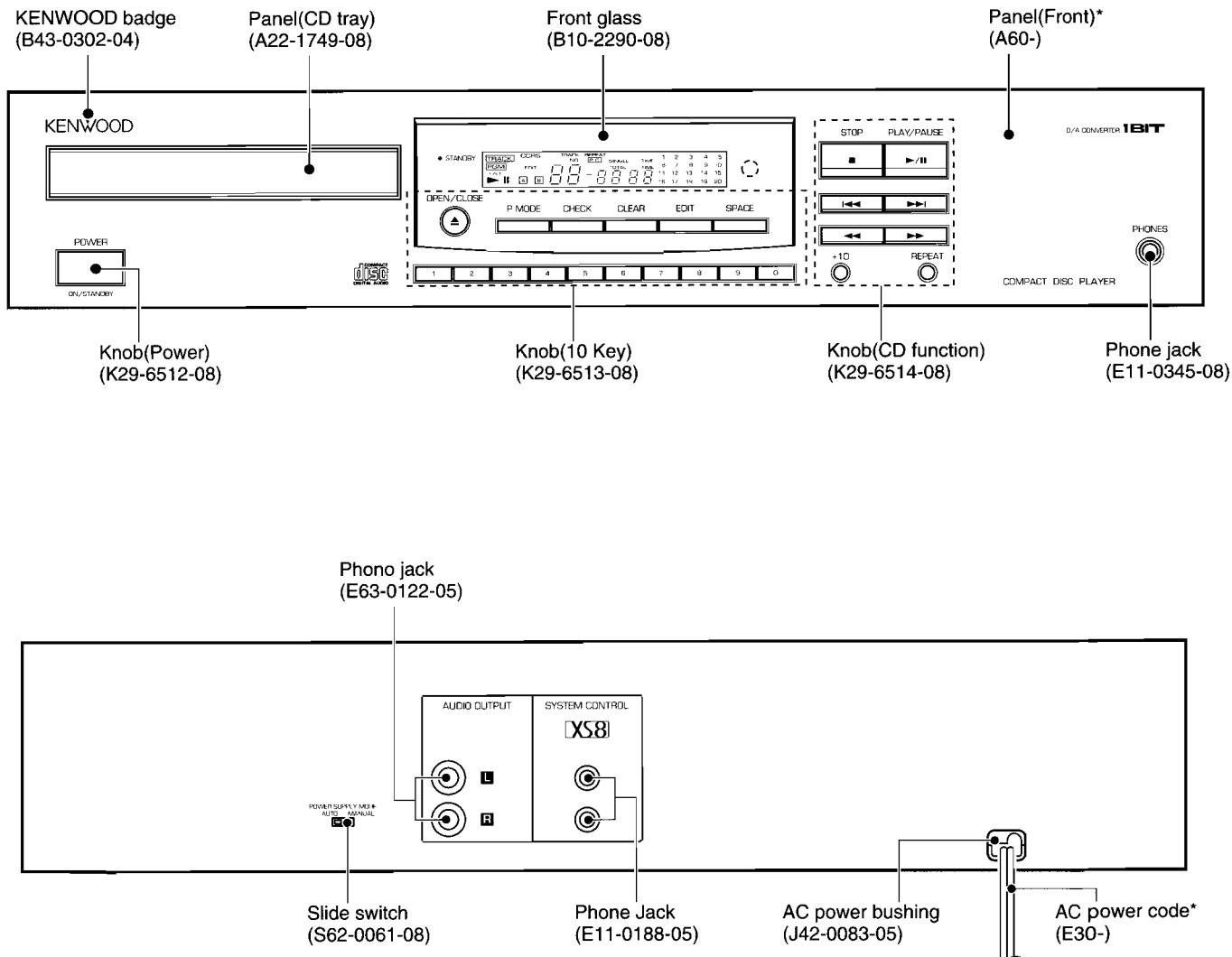


Illustration is DP-2080.

* Refer to parts list on page 19.

⚠ In compliance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

KENWOOD-Corp. certifies this equipment conforms to DHHS Regulations No. 21 CFR 1040. 10, Chapter 1, Subchapter J.

DANGER : Laser radiation when open and interlock defeated. AVOID DIRECT EXPOSURE TO BEAM.

DP-1080/2080

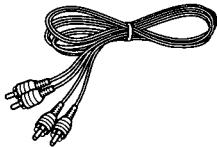
CONTENTS / ACCESSORIES / CAUTIONS

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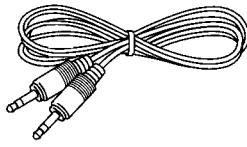
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Accessories

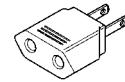
Audio cord(2)
(E30-0505-05)



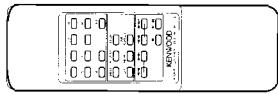
System control cord(1)
(E30-2733-05)



AC plug adaptor(1)
(E03-0115-08)

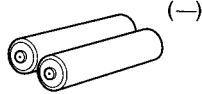


Remote control unit.....(1)
(A70-1108-08 :DP-2080 only)



Battery cover (A09-0377-08)

Batteries(2)

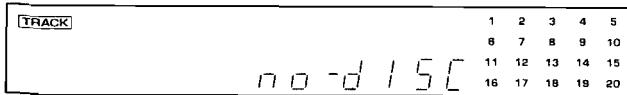


Cautions

Note related to transportation and movement

Before transporting or moving this unit, carry out the following operations.

1. Turn the power ON but do not load a disc.
2. Wait a few seconds and verify that the display shown appears.
Wait further a few seconds.
3. Turn the power OFF.



Beware of condensation

When water vapor comes into contact with the surface of cold material, water drops are produced. If condensation occurs, correct operation may not be possible, or the unit may not function correctly. This is not a malfunction, however, and the unit should be dried. (To do this, turn the POWER switch ON and leave the unit for several hours.)

Be especially careful in the following conditions:

- When the unit is brought from a cold place to a warm place, and there is a large temperature difference.
- When a heater starts operating.
- When the unit is brought from an air-conditioned place to a place of high temperature with high humidity.
- When there is a large difference between the internal temperature of the unit and the ambient temperature, or in conditions where condensation occurs easily.

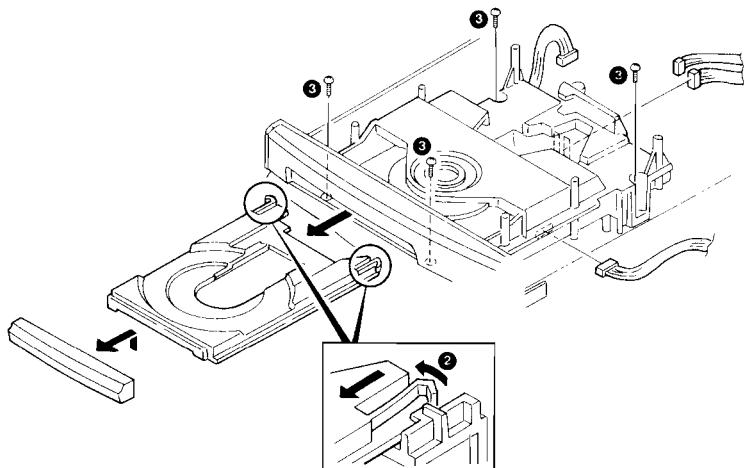
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DISASSEMBLY FOR REPAIR

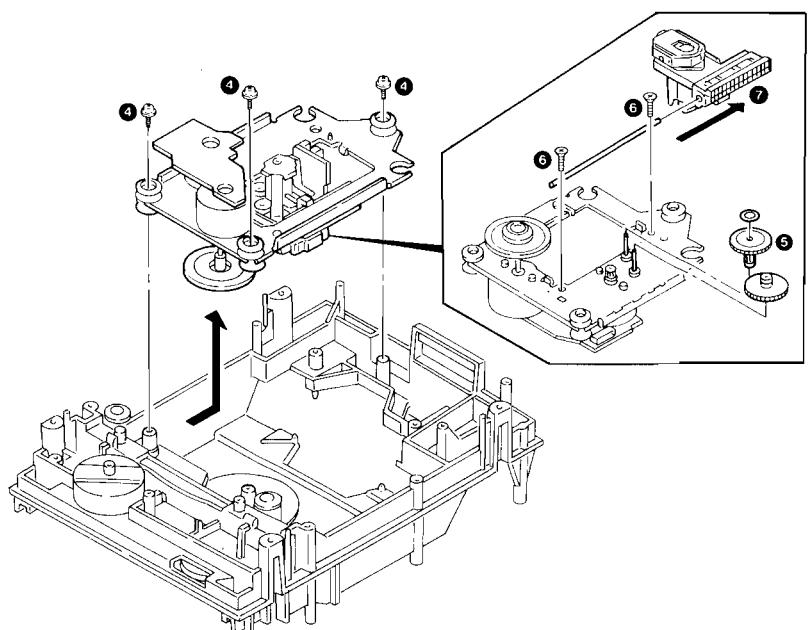
CD mechanism section

1. How to remove pick-up

- * Remove the metallic cabinet before disassembling.
- 1. Press the OPEN/CLOSE key, then open the tray and remove the tray panel.
- 2. Remove the tray stopper (2) from the mechanism, then remove the tray.
- 3. Remove the 4 screws (3), then remove the CD mechanism.



- 4. Remove the 3 screws (4), then remove the pick-up ass'y.
- 5. Remove the two gears (5), then remove the 2 screws (6).
- 6. Remove the pick-up (7) from the rod.

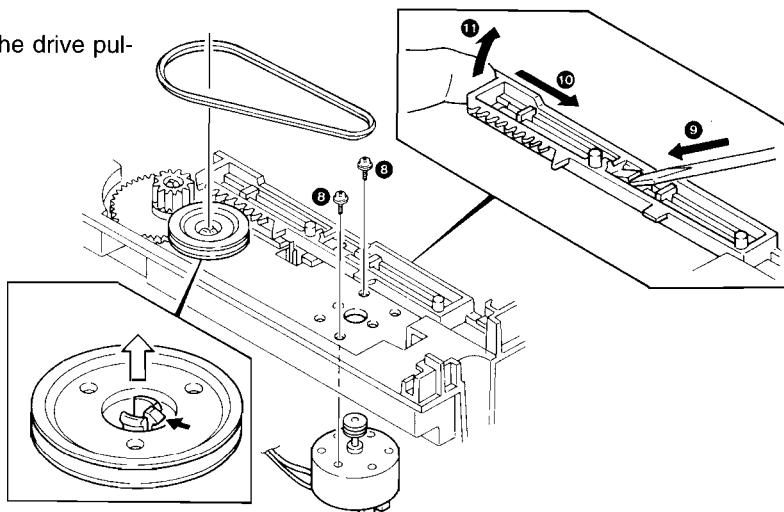


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DISASSEMBLY FOR REPAIR

2. How to remove loading motor and gear.

1. Remove the drive belt, then remove the 2 screws (❸), and remove the loading motor.
2. While pulling the hooker (❹) of the rack gear by the screw driver push the rack gear fully rightwards (❽), then remove the rack gear (❻).
3. Push the hooker of the drive pulley, then remove the drive pulley and tray gear.

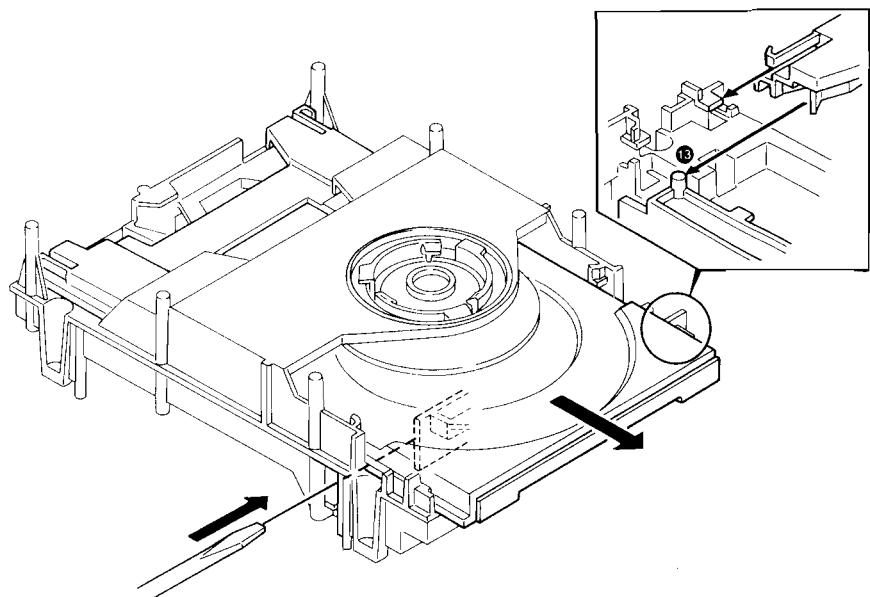


3. How to mount tray

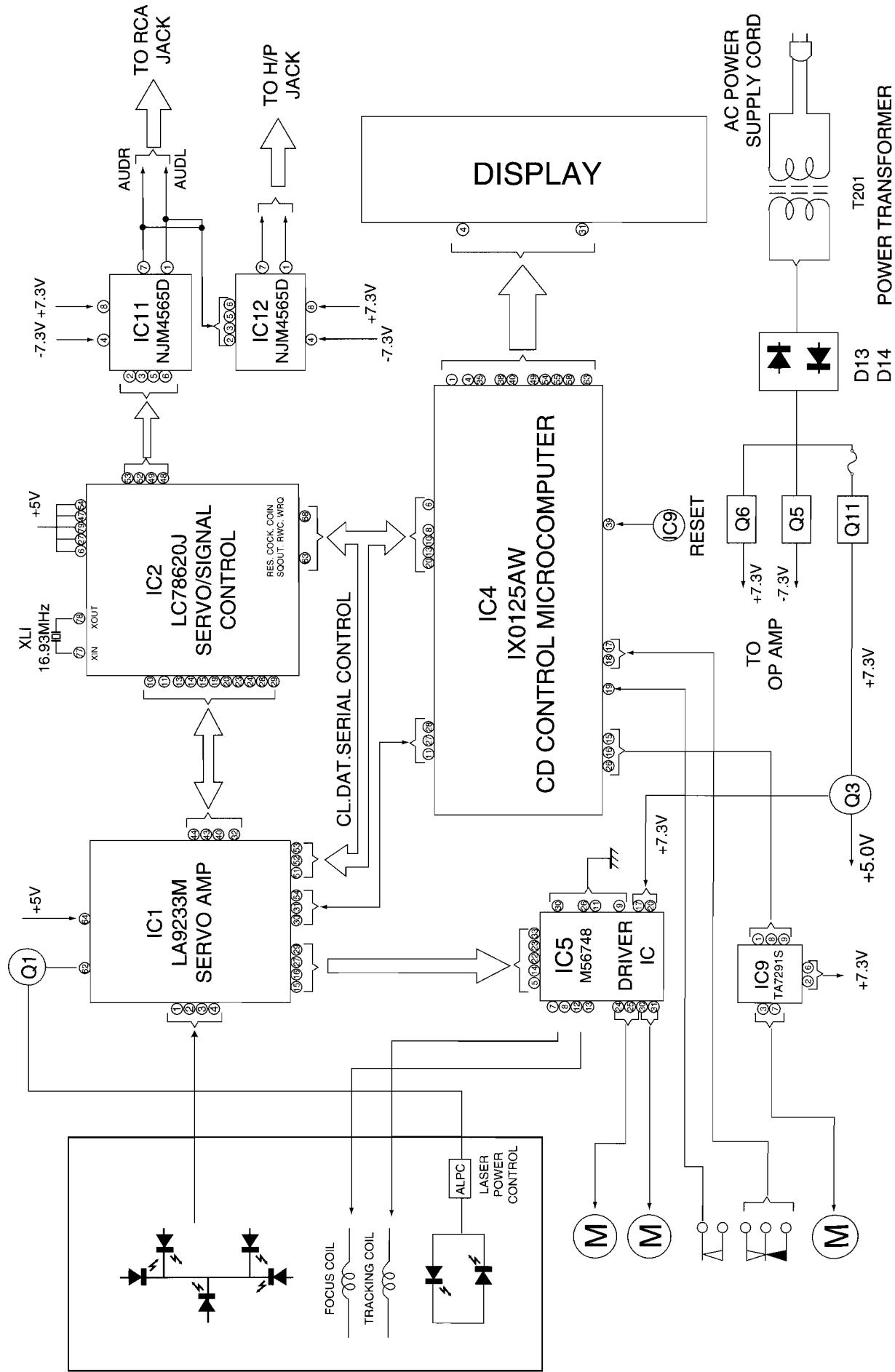
1. Set the tray-back-groove to the boss of rack gear (❷).

4. How to open tray when tray not come out.

1. Insert the screw driver to left side hole of mechanism ass'y.
2. While pushing the rack gear fully right wards, then the tray pull.



BLOCK DIAGRAM



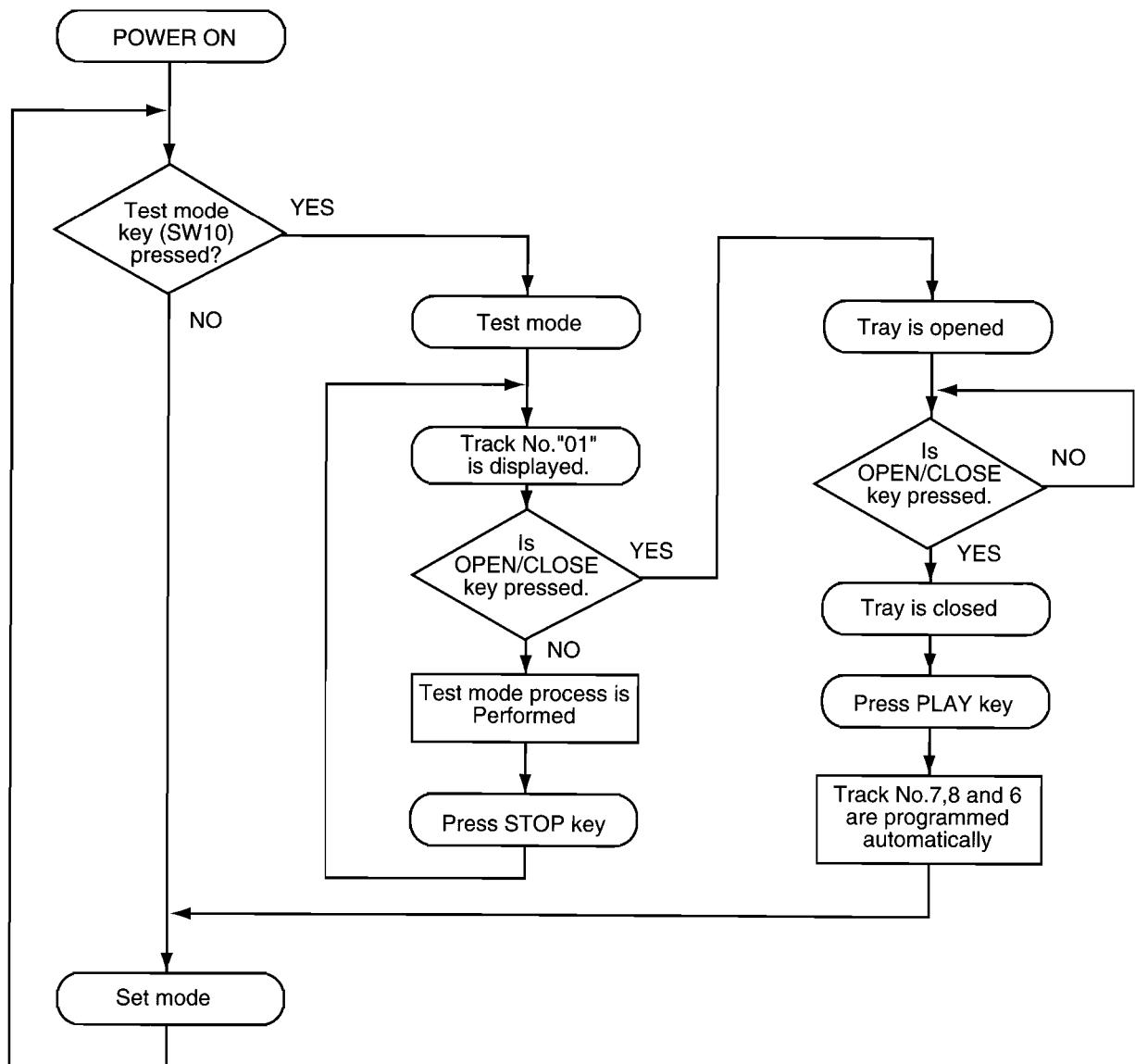
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CIRCUIT DESCRIPTION

1. Test mode

1-1. Setting the test mode

The microprocessor built in the unit can be put to TEST MODE by just pressing the TEST MODE switch (SW10, on PCB) when set to power on.



CIRCUIT DESCRIPTION

2. Microprocessor : IX0125(IC4)

2-1. Pin function

No.	Pin name	I/O	Function
1~4	g, f, b, a	O	Fluorescent indicator segment.
5	16/8 bit	—	+5V
6	CQCK	O	DSP IC CQCK terminal.
7	COIN	O	DSP IC COIN terminal.
8	SQ OUT	I	DSP IC SQ OUT terminal.
9	RMC	—	GND
10	WRQ	I	DSP IC WRQ terminal.
11	DRF	I	LA9233M DRF terminal.
12	PWP CK	I	Power supply mode state check signal.
13	RWC	O	DSP IC RWC terminal.
14	MUT	—	No connected.
15	LOADING CLOSE	O	Tray close signal output.
16	LOADING OPEN	O	Tray open signal output.
17	OPEN SW	I	Tray open detection signal input.
18	CLOSE SW	I	Tray close detection signal input.
19	PU-IN SW	I	Pick up limit signal input.
20	RES	O	DSP IC reset signal output.
21	BUSY	I/O	System control signal (BUSY).
22	SDATA	I/O	System control signal (DATA).
23	HS	O	High speed control.
24	PWR ON/OFF	—	No connected.
25	LASER ON/OFF	O	Laser ON/OFF control signal output.
26	TRY L/H	I	Feed motor ON/OFF signal input.
27	SLD +	O	Feed motor control signal output.
28	SLD-	O	Feed motor control signal output.
29	PPO	—	No connected.
30	X1	I	Oscillator signal input.
31	X2	O	Oscillator signal output.
32	Vss	—	GND
33	XT1	—	GND
34	XT2	—	No connected.
35~38	P50~P53	I	Key input signal.
39	RESET	I	Reset signal input.
40~49	G10~G1	O	Fluorescent indicator tube grid signal output.
50~53		—	No connected.
54, 55	k, j	O	Fluorescent indicator segment.
56	Vload	—	FL pull down resistor power supply (-30V).
57	Vpre	—	FL driver circuit power supply (-6V).
58~63	i, l, h, d, e, c	O	Fluorescent indicator segment.
64	Vdd	—	Power supply (+5V).

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CIRCUIT DESCRIPTION

2-2. Key and functions valid in test mode

No.	Input key	Function	Track No. display																																				
1	PLAY	(1) Focusing servoON (2) Tracking servo.....ON (3) Feed servo.....ON	TRACK NO. 05 ↓ Displayed for a few seconds after completion (1). (2) and (3).																																				
2	CHECK or Number "0" key	(1) Focusing servoON (2) Tracking servo.....OFF (3) Feed servo.....OFF	↓ Disc Track No. 1 is displayed. TRACK NO. 03																																				
3	CLEAR	(1) Focusing servoON (2) Tracking servo.....ON (3) Feed servo.....OFF	TRACK NO. 04																																				
4	STOP	(1) Focusing servoOFF (2) Tracking servo.....OFF (3) Feed servo.....OFF	TRACK NO. 01																																				
5	►►	In the STOP mode. moves the pickup slightly toward the outer position of disc. When feed servo is ON, sets the track gain to "H".	—																																				
6	◀◀	In the STOP mode. moves the pickup slightly toward the inner position of disc. When feed servo is ON, sets the track gain to "L".	—																																				
7	UP ►►	Turns all FL display lamps ON.	TRACK NO. 88																																				
8	DOWN ▶◀	Turns all FL display lamps OFF. "TRACK NO." is lighted.	TRACK NO. 88																																				
9	+10	Playback Track No. 1 under High-speed mode (If not open tray, SPACE key function is available.)	—																																				
10	SPACE	Set playback mode to High-speed or Normal.	—																																				
11	P.MODE	Track No. 7,8 and 6 (High-speed) are programmed and playback from Track No. 7. The test mode is canceled.	—																																				
12	OPEN/CLOSE	When the tray is opened then closed. Track No. 7,8 and 6 are programmed and set in STOP mode. The test mode is canceled.	TRACK NO. 01																																				
13	Numeric key (1~9)	Jumps tracks as shown below. <table border="1"> <tr> <td>Key</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr> <td>Number of tracks</td><td>1</td><td>4</td><td>128</td><td>512</td><td>1000</td></tr> <tr> <td>Direction</td><td colspan="5">Outer</td></tr> <tr> <td>Key</td><td>6</td><td>7</td><td>8</td><td>9</td><td></td></tr> <tr> <td>Number of tracks</td><td>1</td><td>4</td><td>128</td><td>512</td><td></td></tr> <tr> <td>Direction</td><td colspan="5">Inner</td></tr> </table>	Key	1	2	3	4	5	Number of tracks	1	4	128	512	1000	Direction	Outer					Key	6	7	8	9		Number of tracks	1	4	128	512		Direction	Inner					—
Key	1	2	3	4	5																																		
Number of tracks	1	4	128	512	1000																																		
Direction	Outer																																						
Key	6	7	8	9																																			
Number of tracks	1	4	128	512																																			
Direction	Inner																																						
14	REPEAT	(1) TrayOpened (2) Laser.....ON The REPEAT function is canceled when the tray is closed by pressing the tray. "REPEAT" figures is lighted.	TRACK NO. 02																																				

REPEAT mode : Press "REPEAT" key → Press "OPEN/CLOSE" key → Press "REPEAT" key...

ADJUSTMENT

CD section

Since this CD system incorporates the following automatic adjustment function, when the pickup is replaced, it is not necessary to readjust it.

Since this CD unit does not need adjustment, the combination of PWB and laser pickup unit is not restricted.

•Automatic adjustment item

1. Focus offset (Fig.1)
2. Tracking offset (Fig.2)
3. E/F balance (Tracking error balance) (Fig.3)
4. RF level AGC function (HF level : constant)
5. RF level automatic follow-up of the tracking gain

This automatic adjustment is performed each time a disc is changed. Therefore, each disc is played back using the optimal settings.

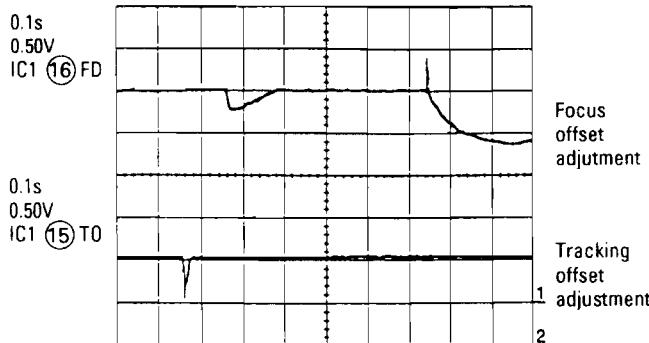


Fig.1

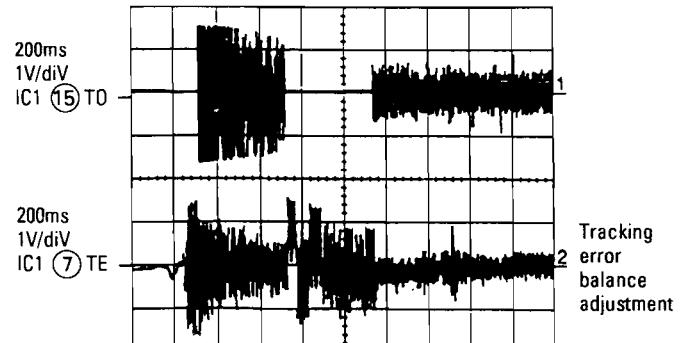


Fig.3

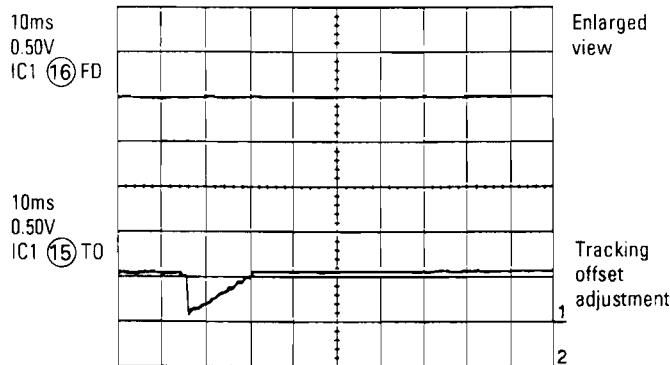


Fig.2

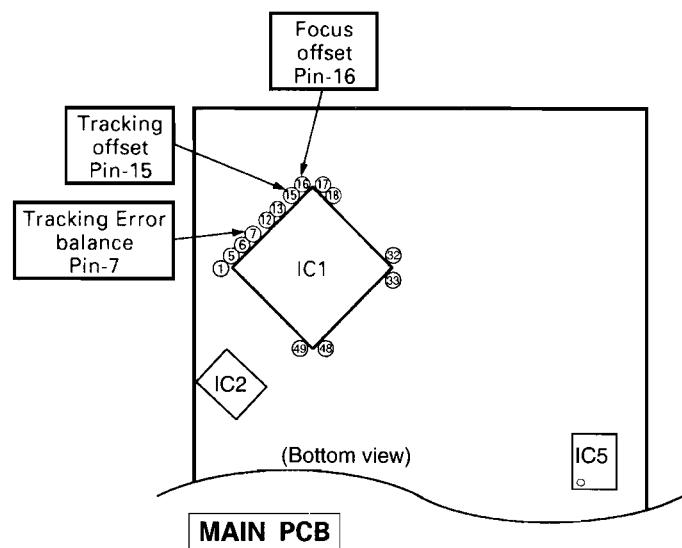


Fig.4 Checking points

PC BOARD(COMPONENT SIDE VIEW)

1

2

3

4

5

6

7

The diagram shows the layout of the QPWBTF0251AWZZ PCB. Key components and connection points are labeled:

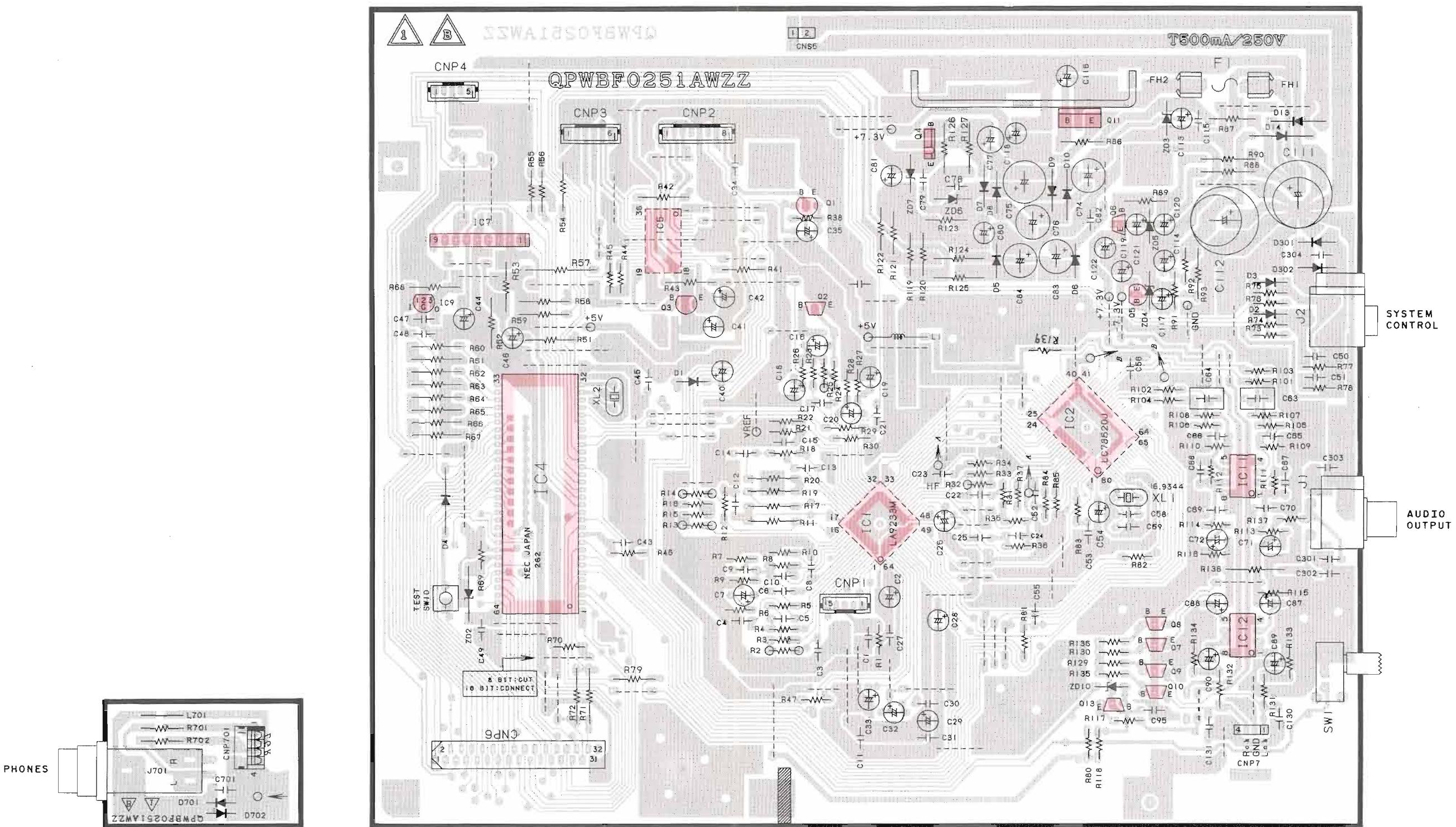
- SW201**: A switch component.
- SW201 FOR 1080/2080M ONLY**: A label indicating the function of SW201.
- K201**: A component labeled K201.
- K202**: A component labeled K202.
- FH202**: A component labeled FH202.
- FH201**: A component labeled FH201.
- T201**: A component labeled T201.
- ST WIRE FOR OTHER MODEL**: A label for a wire connection.
- QPWBTF0251AWZZ**: The model number of the PCB.
- 1080 →**: An arrow pointing right labeled 1080.
- 1020 ↗**: An arrow pointing up-right labeled 1020.
- RED BLK**: A label for a component.
- CNP C**: A label for a component.

This image shows the top side of a printed circuit board (PCB) for the QWPWBFO251AWZZ component. The board features several surface-mount components, including integrated circuits (ICs), resistors, capacitors, and diodes. Key labels and components include:

- Top Left:** A header labeled CNP501 with pins 1-2.
- Top Center:** A row of pushbutton switches labeled SW512 through SW522. SW519 is labeled "OPEN/CLOSE". SW520 is labeled "SW520 EDIT". SW521 is labeled "SW521 CLEAR". SW522 is labeled "SW522 REPEAT".
- Middle Left:** A row of pushbutton switches labeled SW501 through SW509. SW501 is labeled "SW501 SPACE". SW502 is labeled "SW502 MODE". SW503 is labeled "SW503 +10". SW504 is labeled "SW504 EDIT". SW505 is labeled "SW505 CHECK". SW506 is labeled "SW506 OPEN/CLOSE". SW507 is labeled "SW507 P-MODE". SW508 is labeled "SW508 EDIT". SW509 is labeled "SW509 CLEAR".
- Bottom Left:** A pushbutton switch labeled SW517 labeled "SW517 REPEAT".
- Right Side:** A large rectangular component labeled RMCE0.
- Bottom Right:** A header labeled CNP501 with pins 1-2.
- Bottom Center:** A header labeled FL501.
- Bottom Left:** A header labeled DP2080SR1 ONLY.
- Bottom Right:** Two triangular symbols labeled A and B.

Refer to the schematic diagram for the value of resistors and capacitors.

PC BOARD(COMPONENT SIDE VIEW)



1

2

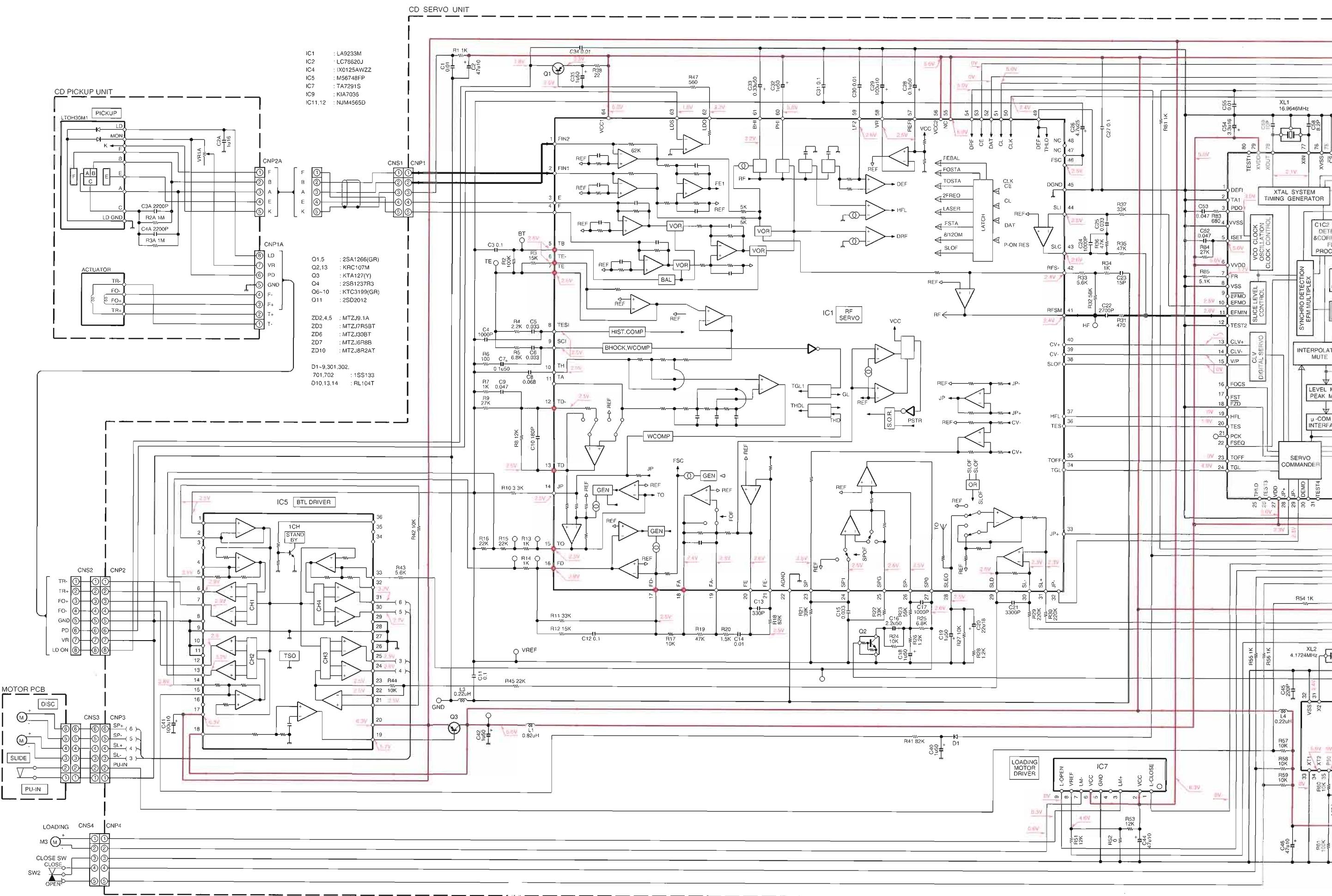
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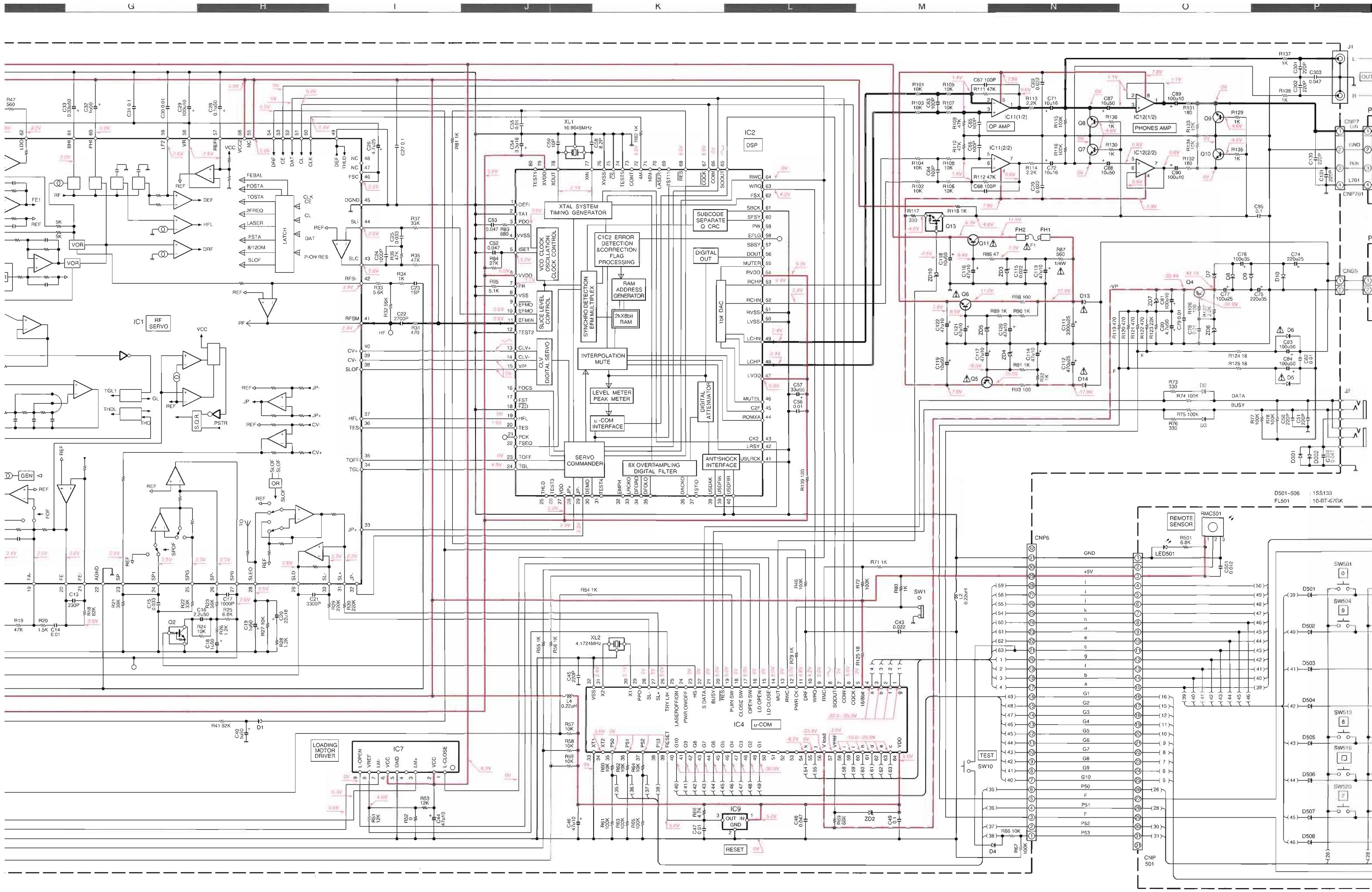
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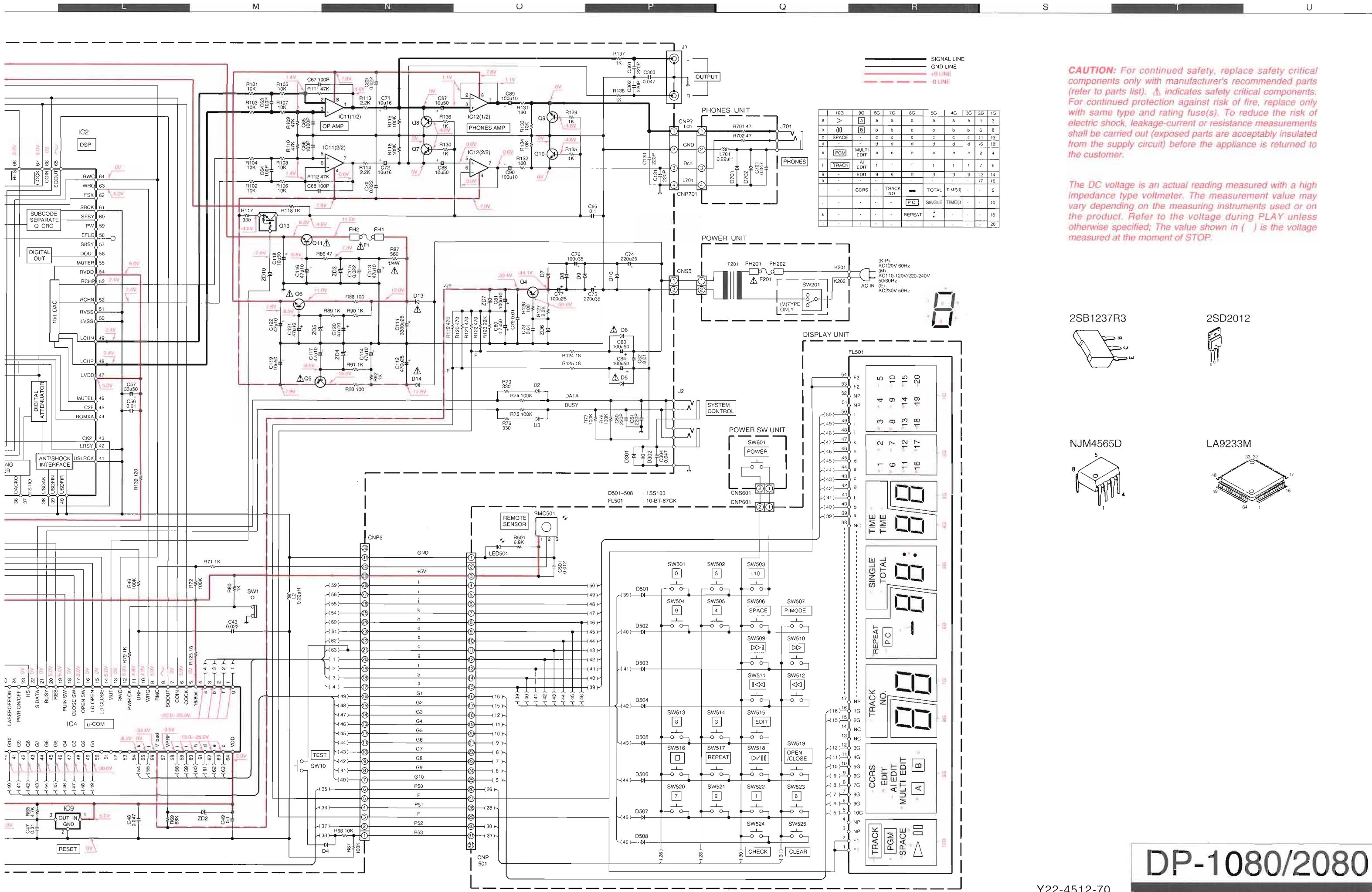
5

6

7







DP-1080/2080

KENWOOD

Y22-4512-70

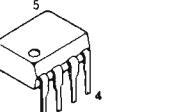
2SB1237R3



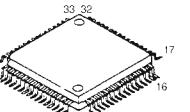
2SD2012



NJM4565D

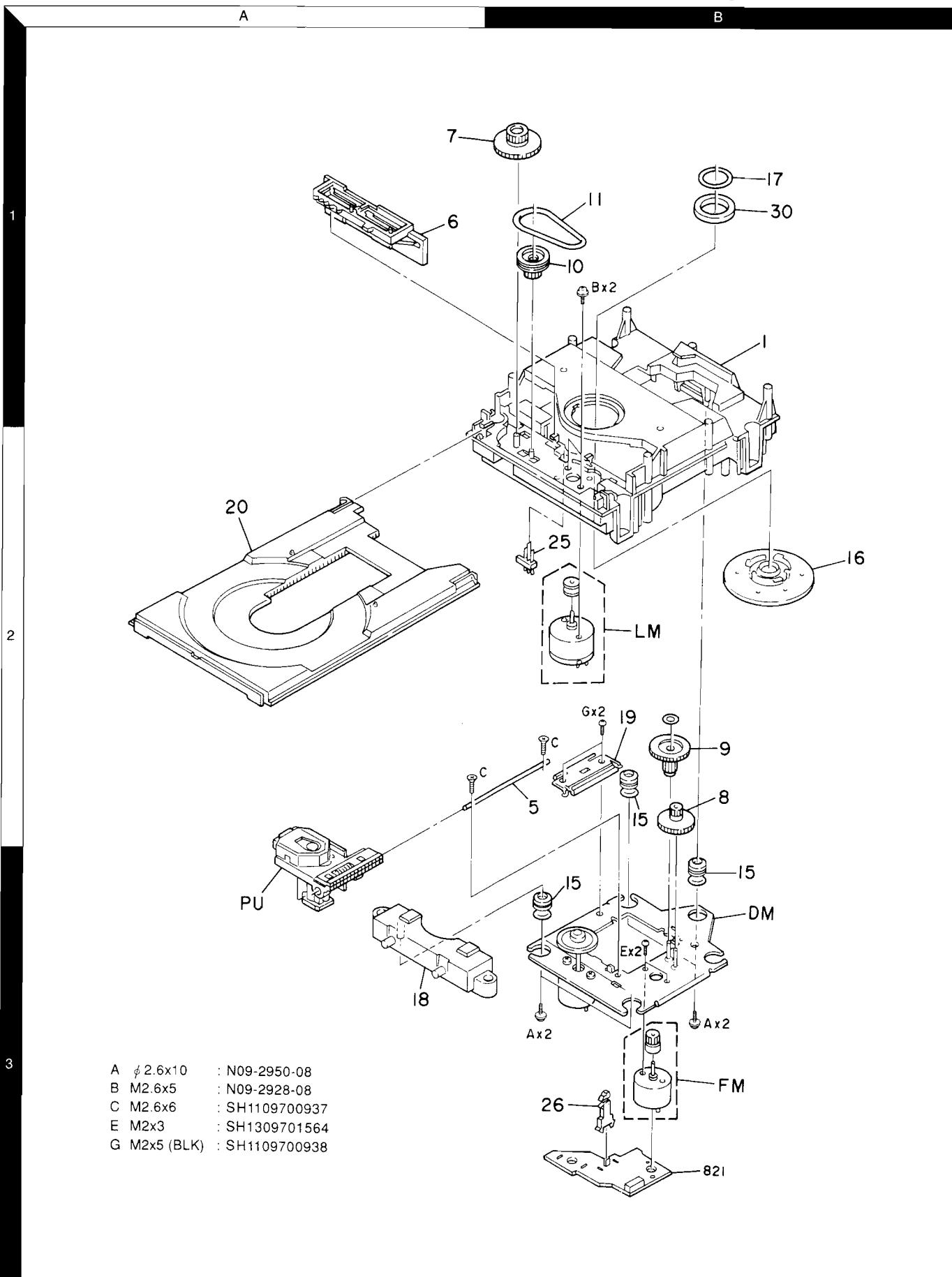


LA9233M

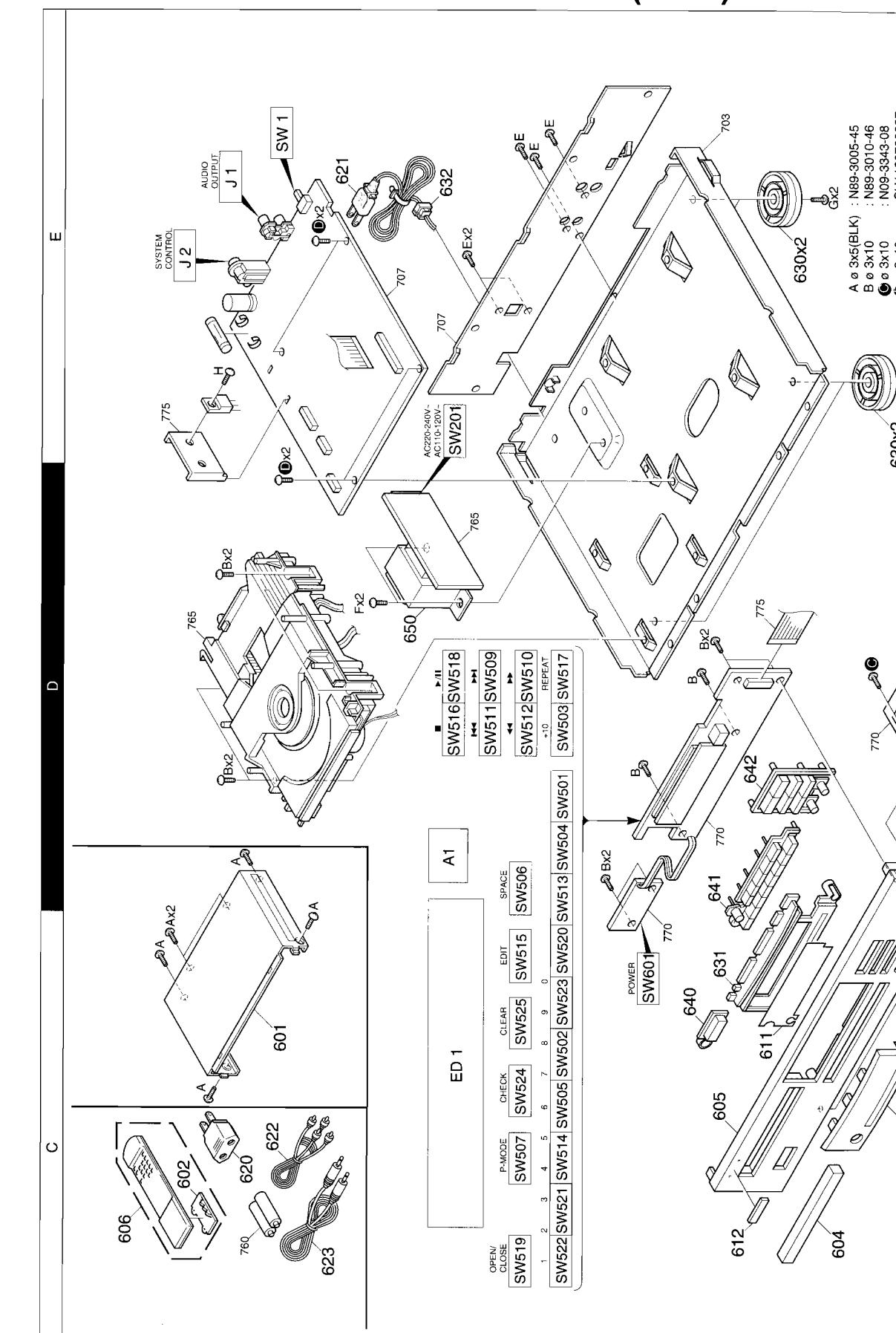


DP-1080/2080(M)

EXPLODED VIEW (MECHANISM)

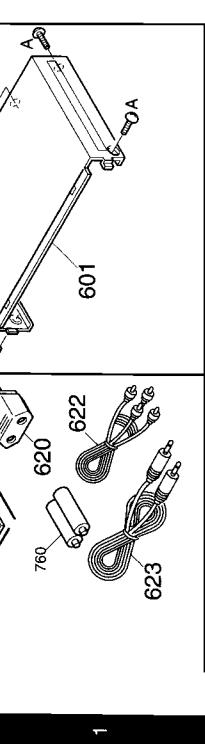


Parts with the exploded numbers larger than 700 are not supplied.



Parts with the exploded numbers larger than 700 are not supplied.

EXPLODED VIEW (UNIT)



ED 1			
	OPEN CLOSE	P-MODE SW507	CHECK SW524
	SW519	SW525	SW515 SW506
1	1C	* A01-3379-08	
601	1C	* A05-0377-08	
602	2C	* A22-1745-08	
604	2C	* A60-1027-08	
605	2C	* A60-1028-08	
605	1C	* A70-1108-08	
606	1C	* B10-0340-08	
610	2C	* B10-2290-08	
611	2C	* B43-0302-04	
612	-	* B60-2687-08	
-	-	* B60-2688-08	
-	-	* B60-2689-08	
-	-	* B60-2690-08	
-	-	* B60-2691-08	
-	-	* E03-0115-05	
-	-	* E30-0275-05	
-	-	* E30-0505-05	
-	-	* E30-2733-05	
-	-	* H25-1582-08	
-	-	* H25-1594-08	
-	-	* H50-1902-08	
-	-	* H50-1903-08	
-	-	* H50-1904-08	
-	-	* J02-1171-08	
-	-	* J19-5754-05	
-	-	J42-0083-05	
-	-	K29-0512-08	
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-	-	K29-0530-08	
-	-	K29-0531-08	
-	-	K29-0532-08	
-	-	K29-0533-08	
-	-	K29-0534-08	
-	-	K29-0535-08	
-	-	K29-0536-08	
-	-	K29-0537-08	
-	-	K29-0538-08	
-	-	K29-0539-08	
-	-	K29-0540-08	
-	-	K29-0541-08	
-	-	K29-0542-08	
-	-	K29-0543-08	
-	-	K29-0544-08	
-	-	K29-0545-08	
-	-	K29-0546-08	
-	-	K29-0547-08	
-	-	K29-0548-08	
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-	-	K29-0550-08	
-	-	K29-0551-08	
-	-	K29-0552-08	
-	-	K29-0553-08	
-	-	K29-0554-08	
-	-	K29-0555-08	
-	-	K29-0556-08	
-	-	K29-0557-08	
-	-	K29-0558-08	
-	-	K29-0559-08	
-	-	K29-0560-08	
-	-	K29-0561-08	
-	-	K29-0562-08	
-	-	K29-0563-08	
-	-	K29-0564-08	
-	-	K29-0565-08	
-	-	K29-0566-08	
-	-	K29-0567-08	
-	-	K29-0568-08	
-	-	K29-0569-08	
-	-	K29-0570-08	
-	-	K29-0571-08	
-	-	K29-0572-08	
-	-	K29-0573-08	
-	-	K29-0574-08	
-	-	K29-0575-08	
-	-	K29-0576-08	
-	-	K29-0577-08	
-	-	K29-0578-08	
-	-	K29-0579-08	
-	-	K29-0580-08	
-	-	K29-0581-08	
-	-	K29-0582-08	
-	-	K29-0583-08	
-	-	K29-0584-08	
-	-	K29-0585-08	
-	-	K29-0586-08	
-	-	K29-0587-08	
-	-	K29-0588-08	
-	-	K29-0589-08	
-	-	K29-0590-08	
-	-	K29-0591-08	
-	-	K29-0592-08	
-	-	K29-0593-08	
-	-	K29-0594-08	
-	-	K29-0595-08	
-	-	K29-0596-08	
-	-	K29-0597-08	
-	-	K29-0598-08	
-	-	K29-0599-08	
-	-	K29-0500-08	
-	-	K29-0501-08	
-			

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Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
DP-1080/2080						
601	1C	*	A01-3379-08	METALLIC CABINET BATTERY COVER (FOR FC-P0202) PANEL PANEL PANEL		
602	1C	*	A09-0377-08	(CD TRAY) (FOR DP-2080) (FOR DP-1080)		
604	2C	*	A2-1749-08	REMOTE CONT(RC-P0202 FOR 2080)		
605	2C	*	A60-1027-08	FRONT GLASS COLOR FILTER KENWOOD BADGE		
605	2C	*	A60-1028-08	INSTRUCTION MANUAL(ENGLISH) INSTRUCTION MANUAL(G.D.I.S.F.)		
606	1C	*	A70-1108-08	INSTRUCTION MANUAL(ENG CHINA) INSTRUCTION MANUAL(ENGLISH) INSTRUCTION MANUAL(CH SY) INSTRUCTION MANUAL(TAWANESE)	T E	
610	2C	*	B10-2290-08	AC PLUG ADAPTOR AC POWER CORD AC POWER CORD	M T	
611	2C	*	B11-6340-08	AUDIO CORD SYSTEM CONTROL CODE		
612	2C	*	B43-0302-04	PROTECTION BAG PROTECTION BAG (SET)		
-	-	*	B60-2688-08	ITEM CARTON CASE ITEM CARTON CASE ITEM CARTON CASE	M	
-	-	*	B60-2690-08	POWER TRANSFORMER POWER TRANSFORMER		
-	-	*	B60-2692-08	POWER TRANSFORMER POWER TRANSFORMER		
620	1C	*	E03-0115-05	AC PLUG ADAPTOR AC POWER CORD	M T	
621	1E	*	E30-0459-08	AC POWER CORD AUDIO CORD		
622	1C	*	E30-2753-08	FOOT HOLDER (FL)		
623	1E	*	E30-5055-05	AC CORD BUSHING KNOB KNOB		
-	-	*	H25-1582-08	(POWER R) (CD FUNCTION)		
-	-	*	H25-1594-08	ITEM CARTON CASE ITEM CARTON CASE		
-	-	*	H50-1902-08	ITEM CARTON CASE ITEM CARTON CASE		
-	-	*	H50-1903-08	ITEM CARTON CASE ITEM CARTON CASE		
-	-	*	H50-1904-08	ITEM CARTON CASE ITEM CARTON CASE		
630	2C	*	J02-1171-08	FOOT HOLDER (FL)		
631	2C	*	J19-5754-08	KNOB KNOB		
632	1E	*	J42-0083-05	POWER TRANSFORMER POWER TRANSFORMER	M T	
640	2C	*	K29-6512-08	POWER TRANSFORMER POWER TRANSFORMER		
641	2D	*	K29-6513-08	POWER TRANSFORMER POWER TRANSFORMER		
642	2D	*	K29-6514-08	POWER TRANSFORMER POWER TRANSFORMER		
650	1D	*	L07-2252-08	SCREW SCREW	M T	
650	1D	*	L07-2253-08	SCREW SCREW		
C	D		N09-3343-08	(M3X10 SPECIAL) (M3X10 SPECIAL)		
ELECTRIC PARTS						
C1			CK45FB1C103K	CERAMIC	R G	
C2			CE04KW1C470K	ELECTRO	P : Canada Y : PX(Far East, Hawaii) X : AA(EST(Europe))	
C3			CK45FB1C104K	CERAMIC	T : Europe E : Europe M : Other Areas	
C4			CK45FB1E102K	CERAMIC		
C5 , 6			CK45FB1E333K	CERAMIC		
C7			CE04KW1H0R11M	ELECTRO		
C8			CK45FB1C638K	CERAMIC		
C9			CK45FSL1H473K	CERAMIC		
C10			CK45FB1C104K	CERAMIC		
C11 , 12			CC45FSL1H331J	CERAMIC		
C13						
L : Scandinavia Y : PX(Far East, Hawaii) X : AA(EST(Europe))	K : USA T : Europe M : Australia	P : Canada E : Europe M : Other Areas	R : Mexico G : Germany			

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Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
C112			CE04KW1E471M	ELECTRO		
C113			CE04KW1A470M	CERAMIC		
C114			CK45FB1E223K	ELECTRO		
C115			CE04KW1A470M	CERAMIC		
C116,117			CE04KW1H100M	ELECTRO		
C118,119			CE04KW1H100M	CERAMIC		
C120-122			CE04KW1A470M	ELECTRO		
C130	131		CK45FB1H221K	CERAMIC		
C301	302		CC45FSL1H472K	CERAMIC		
C303	304		CK45FB1E473K	CERAMIC		
C501			CK45FB1H123K	CERAMIC		
C701			CK45FB1E473K	CERAMIC		
675	2D	*	E35-1672-08	FLAT CABLE CONNECTOR (CNP6-501)		
CNP1			E40-9866-08	PIN ASSY (5P)		
CNP2			E40-9895-08	PIN ASSY (5P)		
CNP3			E40-9868-08	PIN ASSY (6P)		
CNP4			E40-9868-08	PIN ASSY (6P)		
CNP6		*	E40-3871-08	FLAT CABLE CONNECTOR		
CNP201		*	E40-8043-08	FLAT CABLE CONNECTOR		
CNP701		*	E40-8044-08	FLAT CABLE CONNECTOR		
J1		*	E40-8044-08	PHONE JACK (AUDIO OUTPUT)		
J2	J701	*	E11-0188-05	PHONE JACK (SYSTEM CONT.)		
		*	E11-0345-08	MINIATURE PHONE JACK (PHONES)		
F201			F05-1014-05	FUSE (SEMCC02.5V0.1A)	EXTC	
F201			F05-2015-05	FUSE (SEMCC02.5V0.2A)	M	
F501			F05-5016-05	FUSE (SEMCC02.5V0.5A)		
FH1,2	FH201,202		J13-0091-08	FUSE HOLDER		
			J13-0091-08	FUSE HOLDER		
L1	L2 , 4	*	L40-8281-17	COIL (0.82UH)		
L2	L2 , 4	*	L77-2196-08	COIL (0.22UH)		
L2	L2 , 4	*	L78-0664-08	CRYSTAL OSCILLATOR (16.96MHz)		
R88	R933	*	RN14BK2H101J	RN		
		*	RN14BK2H101J	RN		
		*	RN14BK2H101J	RN		
		*	S62-0061-08	SWITCH (TEST)	M	
		*	S70-0041-08	SWITCH (POWER SELECT)		
		*	S70-0041-08	SWITCH (POWER)		
		*	SS1-133T	DIODE		
		*	RL104T	DIODE		
D13	D13 , 14	*	SS1-133T	DIODE		
D301	D301 , 302	*	SS1-133T	DIODE		
D501	D501 , 508	*	SS1-133T	DIODE		
D701	D701 , 702	*	10-BT-67GK	INDICATOR TUBE		
FL501	IC1		LA9233M	IC(SERVO)		
L : Scandinavia Y : PX(Far East, Hawaii) X : AA(EST(Europe))	K : USA T : Europe M : Australia	P : Canada E : Europe M : Other Areas	R : Mexico G : Germany			

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3

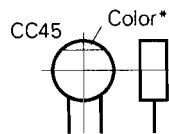
Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
C14			CK45FB1H103K	CERAMIC	0.010UF	K
C15			CK45FB1E232K	CERAMIC	0.035UF	K
C16			CE04KW1H22RM	ELECTRO	2.02UF	50mW
C17			CK45FB1H02K	CERAMIC	1.00PF	50mW
C18 , 19			CE04KW1H01M	ELECTRO	1.0UJ	
C20			CE04KW1C220M	ELECTRO	3300PF	M
C21			CK45FB1H32M	CERAMIC	2700PF	J
C22			CC45FFSL1H272M	CERAMIC	15PF	K
C23			CK45FB1E102K	CERAMIC	1000PF	K
C24			CK45FB1E33K	CERAMIC	0.035UF	K
C25			CK45FB1E477M			

PARTS DESCRIPTIONS

CAPACITORS

CC	45	TH	1H	220	J
1	2	3	4	5	6

- 1 = Type ... ceramic, electrolytic, etc.
2 = Shape ... round, square, ect.
3 = Temp. coefficient
4 = Voltage rating
5 = Value
6 = Tolerance



• Capacitor value

010 = 1pF
100 = 10pF
101 = 100pF
102 = 1000pF = 0.001μF
103 = 0.01μF

2 2 0 = 22pF
Multiplier
2nd number
1st number

• Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = -470 ± 60 ppm/°C

• Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40	+80	+100	More than 10μF - 10 ~ +50
							-20	-20	-0	Less than 4.7μF - 10 ~ +75

(Less than 10pF)

Code	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

• Voltage rating

1st word	2nd word	A	B	C	D	E	F	G	H	J	K	V
0		1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	-
1		10	12.5	16	20	25	31.5	40	50	63	80	35
2		100	125	160	200	250	315	400	500	630	800	-
3		1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	-

• Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J	Refer to the table above.
1 2 3 4 5 6 7	
(Chip) (CH, RH, UJ, SL)	
(EX) C K 7 3 F F 1 H 0 0 0 Z	
1 2 3 4 5 6 7	
(Chip) (B, F)	

Dimension (Chip capacitors)

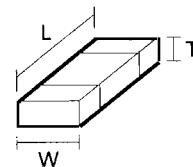
Dimension code	L	W	T
Empty	5.6 ± 0.5	5.0 ± 0.5	Less than 2.0
A	4.5 ± 0.5	3.2 ± 0.4	Less than 2.0
B	4.5 ± 0.5	2.0 ± 0.3	Less than 2.0
C	4.5 ± 0.5	1.25 ± 0.2	Less than 1.25
D	3.2 ± 0.4	2.5 ± 0.3	Less than 1.5
E	3.2 ± 0.2	1.6 ± 0.2	Less than 1.25
F	2.0 ± 0.3	1.25 ± 0.2	Less than 1.25
G	1.6 ± 0.2	0.8 ± 0.2	Less than 1.0

RESISTORS

• Chip resistor (Carbon)

(EX) R K 7 3 E B 2 B 0 0 0 J
1 2 3 4 5 6 7
(Chip) (B,F)

Dimension



• Carbon resistor (Normal type)

(EX) R D 1 4 B B 2 C 0 0 0 J
1 2 3 4 5 6 7

1 = Type 5 = Rating wattage

2 = Shape 6 = Value

3 = Dimension 7 = Tolerance

4 = Temp. coefficient

Dimension (Chip resistor)

Dimension code	L	W	T
E	3.2 ± 0.2	1.6 ± 0.2	1.0
F	2.0 ± 0.3	1.25 ± 0.2	1.0
G	1.6 ± 0.2	0.8 ± 0.2	0.5 ± 0.1

Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

