

CD RECEIVER

KDC-4022

KDC-422

KDC-6023

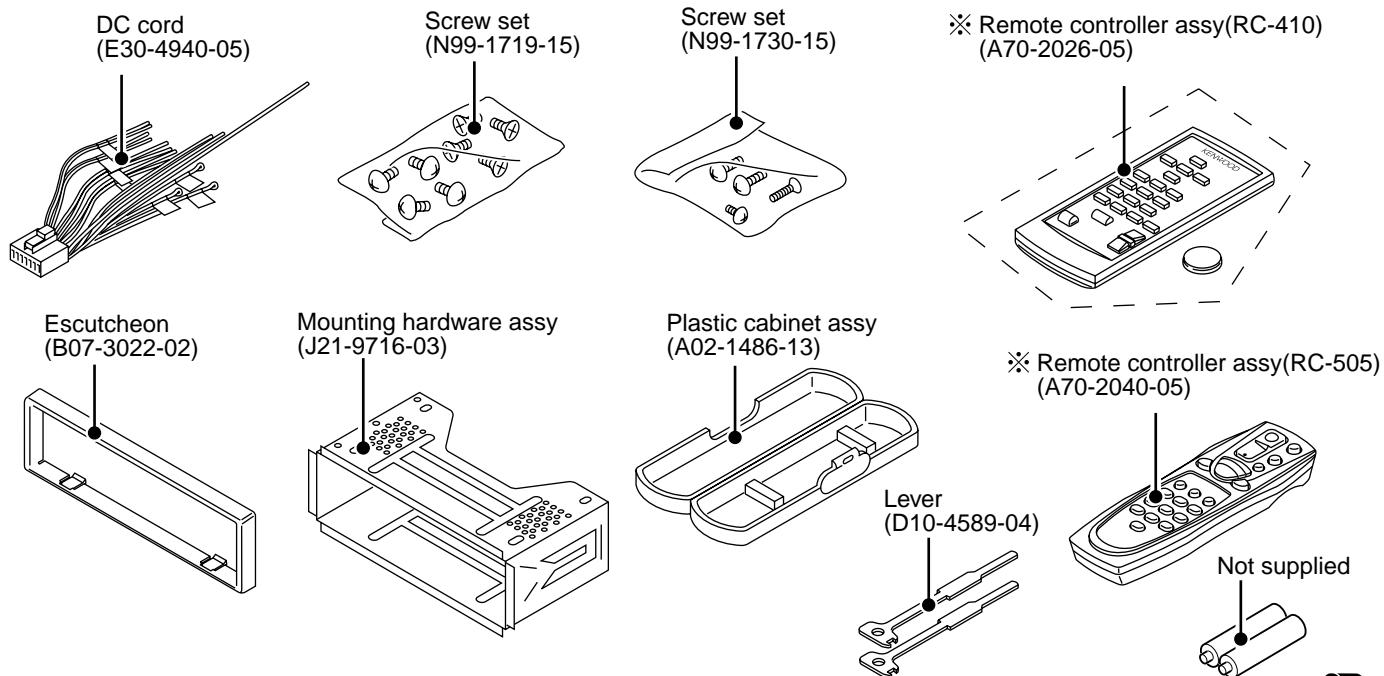
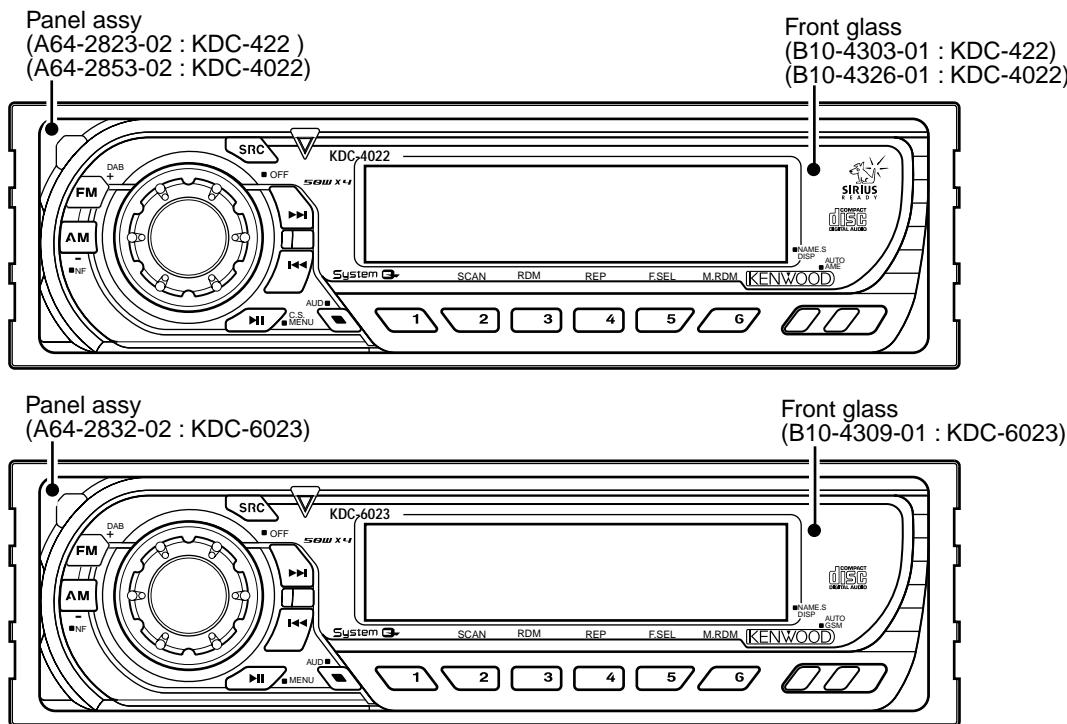
SERVICE MANUAL

KENWOOD

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B53-0023-00 (N) 1724

- CD MECHANISM OPERATION DESCRIPTION is not in this service manual.
Please refer to service manual for X92-4450-0X (B51-7889-00).

CD mechanism extension cord (24PIN) : W05-0934-00

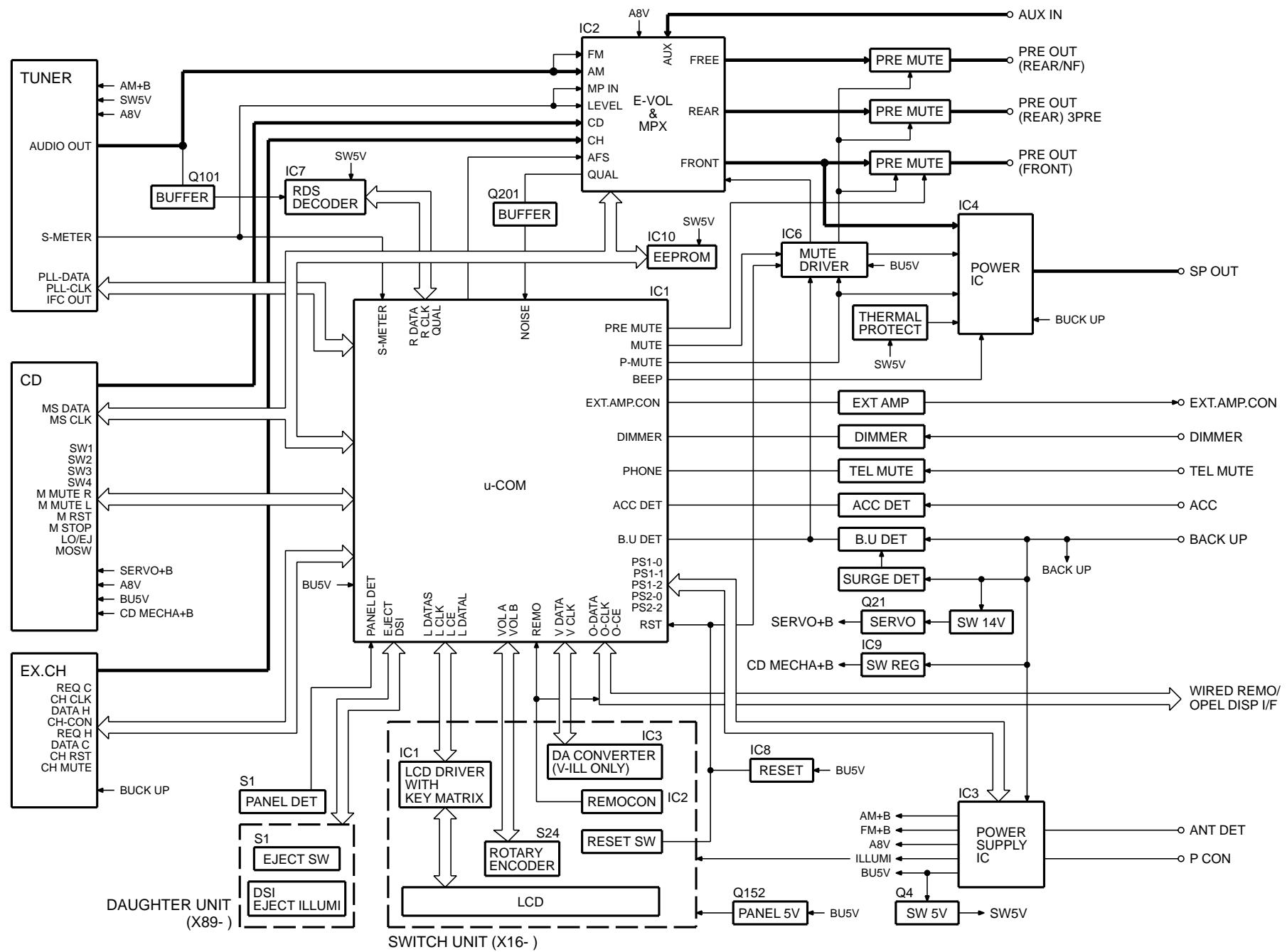


※ Depends on model. Refer to the parts list.



KDC-4022/422/6023

BLOCK DIAGRAM



KDC-4022/422/6023

COMPONENTS DESCRIPTION

● CD PLAYER UNIT (X32-5400-00)

Ref.No.	Component Name	Application/Functions	Operation/Condition/Compatibility
IC1	AN22002AA	RF amplifier adapted for CD-RW	Generation of RF signal based on the signals from the APC circuit and pickup, and generation of servo error (focusing error and tracking error) signals. Detection of dropout, anti-shock, track crossing and off-track conditions, included gain control function during CD-RW.
IC2	MN6627771KP	CD signal processor built-in MI-COM	Focusing, tracking, sled and spindle servo processing. Automatic adjustment (focusing, tracking, gain, offset and balance) operations. Digital signal processing (DSP, PLL, sub-codes, CIRC error correction, audio data Interpolation) operations, and Microcomputer function.
IC3	BA5824FP	4CH BTL driver	Focusing coil, tracking coil, spindle motor and sled motor driver, disc loading and eject operation.
IC4	NJM4580M1	Low pass filter	2nd low pass filter for audio signals.
Q1	MCH6101	APC	LD power control.
Q2	2SA1362(Y)	D.5V SW	When P ON signal goes "L", Q2 is ON.
Q3	DTC124EUA	Q4 SW	When P ON signal goes "L" (SW+5V AVR is ON), Q3 is ON.
Q4	DTA143XUA	A.8V SW	When P ON signal goes "L" (Q3 is ON), Q4 is ON.
Q5	2SC4081	Current driver	Current driver.
Q6	2SA1576A	Current driver	Current driver.
D1	DAN202U	Protection diode	Laser diode protection.
D2	MA8051-L	Zener diode	DAC AVR/LPF reference voltage (A.5V).
D3	DA204U	Current driver	Current driver.

● ELECTRIC UNIT (X25-9800-11/12/21)

Ref.No.	Component Name	Application/Functions	Operation/Condition/Compatibility														
IC1	UPD703030GC013	System microcomputer	Control for TUNER unit, CD mechanism, volume & tone, LCD driver and external CD changer unit														
IC2	TDA7411	Electronic volume & N.C.MPX	Control for source selector, volume & tone, and FM multiplex detector.														
IC3	BA4911-V4	Power supply IC	Power supply for the units (Bu5V, Audio8V, FM+B, AM+B, P-con and ANT-con). <table border="1" style="margin-left: 20px;"> <tr> <td>SW1</td> <td>OUT</td> </tr> <tr> <td>1.5-3.0V</td> <td>Audio ON</td> </tr> <tr> <td>3.5-5.0V</td> <td>Audio, P-con ON</td> </tr> <tr> <td>7.0V-</td> <td>Audio, P-con, P-ant ON</td> </tr> <tr> <td>SW2</td> <td></td> </tr> <tr> <td>2.0-3.0V</td> <td>Illumination, FM ON</td> </tr> <tr> <td>4.0V-</td> <td>Illumination, AM ON</td> </tr> </table>	SW1	OUT	1.5-3.0V	Audio ON	3.5-5.0V	Audio, P-con ON	7.0V-	Audio, P-con, P-ant ON	SW2		2.0-3.0V	Illumination, FM ON	4.0V-	Illumination, AM ON
SW1	OUT																
1.5-3.0V	Audio ON																
3.5-5.0V	Audio, P-con ON																
7.0V-	Audio, P-con, P-ant ON																
SW2																	
2.0-3.0V	Illumination, FM ON																
4.0V-	Illumination, AM ON																
IC4	TA8273H	Audio power amp IC	Amplifier for audio signal to drive for 4channel speakers (50W maximum for each channel).														
IC6	HD74HC27FP	Muting control IC	Control for timing for mute.														
IC8	PST3436UL	Reset IC	When detection voltage goes below 3.5V or less Reset IC output changes to "L" signal.														
Q1	2SC4081	Serge detection	When backup voltage becomes more than 24V output is "L" (momentary power down) / When backup voltage becomes less than 24V output is "H".														
Q2	2SC4081	Backup detection	When BU voltage supplied output is "L" / When BU voltage not supplied or momentary power down is detected output is "H".														
Q3	2SC4081	ACC detection	When ACC voltage supplied output is "L".														
Q4	2SA1036K	SW 5V	When base voltage is "L" Q4 is ON.														
Q21	2SD2375	AVR	Servo regulator.														
Q22	UMC2N	SW	Servo SW.														
Q23	UMC2N	IC control	Power supply IC controller.														
Q31	UN5213	Dimmer control	When base voltage is "H" dimmer is ON.														

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COMPONENTS DESCRIPTION

Ref.No.	Component Name	Application/Functions	Operation/Condition/Compatibility
Q151	UN5114	DSI driver	When base voltage level is "L" DSI LED is light up / When base voltage level is "H" DSI LED turns off / When panel assy is pull off, cut off the supply to panel 5V AVR.
Q152	2SA1576A	Panel 5V SW	When panel assy attached to the unit, Q152 base goes "L" and supply to panel 5V AVR to panel assy .
Q153	UN5213	Illumination control	When Q153 base voltage to "H", illumination is light up.
Q154	2SA1577	Illumination control	When Q153 base voltage to "H", illumination is light up.
Q201	UN5216	Buffer amp	Noise buffer amp.
Q350	UN5112	Pre & NF mute SW	When base voltage to "L", drive to pre & NF mute SW(Q351,355,357).
Q351	UN5216	Pre mute SW	When base voltage to "H", muting to the pre Lch or NF Lch line.
Q352	UN5216	Pre mute SW	When base voltage to "H", muting to the pre Rch or NF Rch line.
Q354	UN5112	Pre & NF mute SW	When base voltage to "L", drive to pre & NF mute SW(Q32,356,358).
Q355	UN5216	Pre mute SW	When base voltage to "H", muting to the front Lch line.
Q356	UN5216	Pre mute SW	When base voltage to "H", muting to the front Rch line.

● SWITCH UNIT (X16-2020-10/12)

Ref.No.	Component Name	Application/Functions	Operation/Condition/Compatibility
IC1	LC75808W	LCD driver	Drive for LCD unit.
IC2	PNA4S22M	Remote control IC	Receiving for the remote control unit.
Q1	2SC4081	VLCD AVR	When base voltage level goes 7.9V Q1 is ON.
Q2	DTA114EUA	Remo. ON SW	When base voltage level goes "L" the power supply IC2 is turned "ON".
Q3	2SC4081	key illumination SW	Lights up for green key illumination when base voltage level goes "H".
Q4	2SC4081	key illumination SW	Lights up for red key illumination when base voltage level goes "H".
Q5	2SC4081	Dimmer control SW	Lights up for LCD back light when base voltage level goes "H".

MICROCOMPUTER'S TERMINAL DESCRIPTION

● IC1: ELECTRIC UNIT (X25-9800-11/12/21)

Pin No.	Name	I/O	Description/Processing Operation
1	PLL CLK	O	CLK output terminal to Front End
2	N.C	-	Open
3	PANEL DET	I	Panel assy detect terminal (Panel assy come off : L)
4	IC2 SDA	I/O	Control Data input / output terminal for electric volume, CD mechanism
5	IC2 SCL	O	Clock DATA output terminal for electric volume, CD mechanism
6	VDD	-	Power supply input terminal (BU 5V)
7	VSS	-	GND
8	FLIP-DET	I	Panel assy open detect terminal (panel close : L)
9	BEEP	O	Beep audio signal output terminal
10	REMO	I	Remote control signal input terminal
11	R QUAL	I	RDS decoder QUAL signal input terminal
12	R DATA	I	RDS decoder Data signal input terminal
13	L CE	O	CE output for LCD driver IC
14	VILL DATA	O	Variable illumination DATA out put terminal for D/A converter
15	VILL CLK	O	Valuable illumination CLK out put terminal for D/A converter
16	DSI	O	Disc guide illumination control terminal
17	DIM CON	O	Dimmer control terminal
18	TEST	-	Test terminal
19	ILL CON	O	Illumination control terminal
20	VOL A	I	Volume key input terminal
21	VOL B	I	Volume key input terminal
22	MOSW	O	CD mechanism motor IC control output terminal (Loading,eject ,brake :L)
23	LO/EJ	O	CD mechanism loading / eject control terminal
24	M STOP	O	Request signal (Mechanism is STOP) output to CD mechanism (active L)
25	M RST	O	Reset signal output to CD mechanism (active L)
26	MUTE	O	Muting signal output terminal
27	LOE/LIM SW	I	Down SW detection from CD mechanism
28	M-MUTE L	I	Request for muting signal from CD mechanism (Mute request : L)
29	M-MUTE R	I	Request for muting signal from CD mechanism (Mute request : L)
30	PANEL 5V	O	Control for Panel5V AVR
31	RESET	I	Reset terminal (Active : L)
32	XT1	I	Sub clock input terminal (32.768KHz)
33	XT2	I	Sub clock input terminal (32.768KHz)
34	REGC	-	Regulator output terminal
35	X2	I	Main clock input terminal (20MHz)
36	X1	I	Main clock input terminal (20MHz)
37	VSS	-	GND
38	VDD	-	Power supply input terminal (BU 5V)
39	NC	-	Open
40	IC2 TYPE1	I	Electric volume condition setting terminal
41	IC2 TYPE0	I	Electric volume condition setting terminal
42	TYPE2	I	Destination setting terminal
43	TYPE1	I	Destination setting terminal
44	TYPE0	I	Destination setting terminal
45	CD MECHA+B	O	AVR control for CD mechanism (For MP3 AVR ON :L)
46	SW 5V	O	Control terminal for SW5V AVR (ON : L , OFF : Hi-Z)
47	PS2-0	O	Power supply IC control terminal
48	PS2-1	O	Power supply IC control terminal
49	PS1-0	O	Power supply IC control terminal
50	PS1-1	O	Power supply IC control terminal

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MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Name	I/O	Description/Processing Operation
51	PS1-2	O	Power supply IC control terminal
52	B.U-DET	I	BU detect input terminal (BU detect : L)
53	ACC-DET	I	ACC detection input terminal (ACC detect : L)
54	DIMMER	I	Illumination detect terminal from CAR (illumination ON : L)
55	BVDD	-	Power supply input terminal (BU 5V)
56	BVSS	-	Open
57	EXT AMP CON	O	EXT. amp control terminal (Active H)
58	SVR	O	SVR control for Audio power IC
59	P-MUTE	O	Muting control for Audio power IC
60	P-STBY	O	STBY control for Audio power IC (Power IC ON : H)
61	NC	-	Open
62	PRE MUTE R	O	Rch pre mute output terminal (Active H)
63	PRE MUTE L	O	Lch pre mute output terminal (Active H)
64	TUNER	O	Noise detection (FM seek,AM search : L)
65	O-DATA	O	DATA signal output for EXT. display (Handling for OPEL display)
66	O-CLK	O	CLK signal output for EXT. display (Handling for OPEL display)
67	O-CE	O	CE signal output for EXT. display (Handling for OPEL display)
68	LX-RST	O	Reset signal output to EXT. unit
69	LX-CON	O	Control signal output to EXT. unit (ON : H , OFF : L)
70	AVCONT	O	Control for A/D reference voltage
71	AVDD	-	Power supply input terminal (BU 5V)
72	AVSS	-	Open
73	AVREF	I	A/Dereference voltage input terminal
74	PHONE	I	Mobil phone detection input terminal
75~81	NC	-	GND
82	S-METER	I	S meter detection input terminal
83	NOISE	I	FM noise detection input terminal
84	IFC-OUT	I	IFC OUT input terminal
85	LX-MUTE	I	Request signal input terminal from EXT.unit (Mute ON : L)
86	LX-REQ-M	O	Request signal output terminal to EXT.unit (Request : L)
87	R-CLK	I	RDS decoder CLK input terminal
88	LX-REQ-S	I	Request signal input terminal from EXT.unit (Request : L)
89	KEY-REQ	I	Request for communicate from LCD driver IC (KEY input : L)
90	LO.S SW	I	Loading start SW detection input terminal (Loading start : L)
91	12EJE SW	I	12cm CD disc eject SW detection input terminal (12cm disc : L)
92	EJECT	I	Eject detection terminal (KEY input : L)
93	8EJE SW	I	8cm CD disc eject SW detection input terminal (Not used)
94	LX-DATA-S	I	DATA signal input from EXT. unit
95	LX-DATA-M	O	DATA signal output to EXT. unit
96	LX-CLK	I/O	CLK signal input/output to EXT. unit
97	L DATAL	I	DATA input terminal from LCD deriver IC
98	L DATAS	O	DATA output terminal to LCD driver IC
99	L CLK	O	CLK output terminal to LCD driver IC
100	PLL DATA	I/O	Data input / out put terminal to Front-end

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TEST MODE

1. How to enter the test mode

- While holding the preset 1 key and 3 keys, reset the unit.

2. How to exit from the test mode

- Reset the unit, ACC OFF, power OFF, and come off the front panel assy for the unit.

3. Initial status in the test mode

- Sources : All OFF.
- Display : All segments were lit.
- Volume : -10 dB (displayed as 30)
- Loudness : OFF
- CRSC : OFF regardless of the presence of switching function.
- SYSTEM Q : Flat.
- Aux : ON
- Display color : white (variable color display model only)
- Beep sound : ON

4. Special display in Tuner mode

When any of the following messages is displayed in Tuner mode, the Front-end (F/E) may be bad condition.

- "TNE2P NG": The EEPROM is set to the default (unstable values) because the F/E was shipped without passing through the adjustment process, etc.
- "TNCON NG": Communication with the F/E to micro-processor is not possible.

5. Forced switching of K3I

Each press of the Preset 6 key in Tuner mode should switch K3I from AUTO → Forced Wide → Forced Middle → Forced Narrow → AUTO. The initial status is AUTO and the display shows these modes as follows.

- AUTO : FMA
- Forced Wide : FMW
- Forced Middle : FMM
- Forced Narrow : FMN

6. Test mode specifications of the CD receiver

- Forced ejection is inhibited in the reset start operation.
When the unit is reset while a CD is loaded in it, the CD is not recognized by resetting.
- Each press of the Track Up key jumps to the following track numbers:
No. 9 → No. 15 → No. 10 → No. 11 → No. 12 → No. 13 → No. 22 → No. 14 → No. 9 (The cycle restarts from here.)
- Each press of the Track Down key jumps to the previous track number to the track being played.

- When the number of total tracks of an MP3 disc is nine or less, unit playback from a track 1.
- When the media to CD-DA, unit playback from track No.28 by key operation of preset 1 key.

7. Audio-related specifications

- A short press of the Q key initiates the audio adjustment mode.
- Pressing the * key on the remote initiates the audio adjustment mode.
- Continuous holding of a remote control key is inhibited.
- Bass, Middle and Treble are adjusted in 3 steps of -8 / 0 / +8 with the Track Up/down keys (default is 0).
- Balance is adjusted in 3 steps of Left L15 / 0 / R15 Max with the Track Up/down keys (default is 0).
- Fader is adjusted in 3 steps of Rear15 / 0 / F15 Max with the Track Up/down keys (default is 0).
- HPF is adjusted in 2 steps of Through/170Hz (or 200Hz) with the Track Up/down keys (default is through).
- LPF is adjusted in 2 steps of Through/120Hz with the Track Up/down keys (default is through).
- Bass f, Bass Q, Bass EXT, Middle f, Middle Q and Treble f are not dealt with by the audio adjustment.

8. Menu-related specifications

- A short press of the PLAY/PAUSE key initiates the Menu mode.
- Pressing the DNPP key on the remote initiates the Menu mode.
- Continuous holding of a remote control key is inhibited.
- Contrast is adjusted press of the Track up/down key in 3 steps of 0 / 5 / 10 (default is 5).

9. Backup current measurement

When the unit is reset while ACC is OFF (i.e. by turning Backup ON), the MUTE terminal goes OFF in 2 seconds in place of 15 second. (The CD mechanism is not activated at this time.)

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TEST MODE

10. Special display when the display is all on

Pressing the Preset keys while the power is ALL OFF displays the following information.

PRESET 1	Version display (8 digits, Month/Day/Hour/Minute) (Display) SYS xxxxxxxx
PRESET 2	Serial No. display (8 digits) (Display) S. No. xxxxxxxx
PRESET 3	Short press: View power ON time. (The All OFF period is not counted.) Long press/hold: Clear power ON time. (Display) PonTim xxxx Max. 60,000 (hours)
PRESET 4	Short press: Display CD operation time. Long press/hold: Clear CD operation time (Display) CDTImex xxxx Max. 60,000 (hours)
PRESET 5	Short press: Display CD ejection count. Long press/hold: Clear CD ejection count. (Display) EjeTim xxxx Max. 60,000 (times)
PRESET 6	Short press: Display Panel open/close count. Long press/hold: Clear Panel open/close count. (Display) PnCnt xxxx Max. 60,000 (times)
FM	ROM correction version information (Display) ROM Rxxxx If not mounting ROM correction chip set display shows ROM R_

11. Change the condition of TUNER channel space selection (K/M type only)

While holding the preset 1 key and 5 keys, reset the unit.

Security-related information

1. Forced Power ON mode (All models)

Even when the security is approved, resetting the unit while holding the Q and Preset 4 keys makes it possible to turn the power ON for 30 minutes.

After 30 minutes have elapsed, it is not possible to return to the previous condition unless the unit is reset again.

2. Method of registration of the security code after EEPROM (Tuner unit assy) replacement (Code security model)

1. Enter the test mode. (See 1. How to enter the test mode)
2. Press the MENU key to enter the MENU mode.
3. Press and hold down the Track up/down key for 1 second until "Security" is displayed.
4. Enter the code using the FM/AM/TARCK up/down keys.
 - FM key: number is up
 - AM key: number is down
 - Track up key: move the cursor for right side
 - Track down key: move the cursor for left side

5. Hold down the Track up key for at least 3 seconds and the message, "RE-ENTER" appears, so once again enter the code according to Step 3 above.
6. Press and hold the Track up key for 3 seconds until "APPROVED" is displayed.
7. Exit from the test mode. (See 2. How to exit from the test mode)
(Note) All Clear is not applicable to the security code of this model.

3. Simplified method of clearing the security code (K, E Type only)

1. While the code entry is requested, press and hold the TRACK UP key for 3 seconds while holding the DISP key pressed. (This should turn "----" off.)
2. Enter "KCAR" "from the remote.
 - Press the 5 key on the remote twice, and then press the Track Up key. (This enters "K".)
 - Press the 2 key on the remote 3 times, and then press the Track Up key. (This enters "C".)
 - Press the 2 key on the remote once, and then press the Track Up key. (This enters "A".)
 - Press the 7 key on the remote twice, and then press the Track Up key. (This enters "R".)
3. The security code is cleared and the unit enters the ALL OFF mode.
4. If you commit a mistake in the code entry, the unit enters the code request mode again.

A

B

C

D

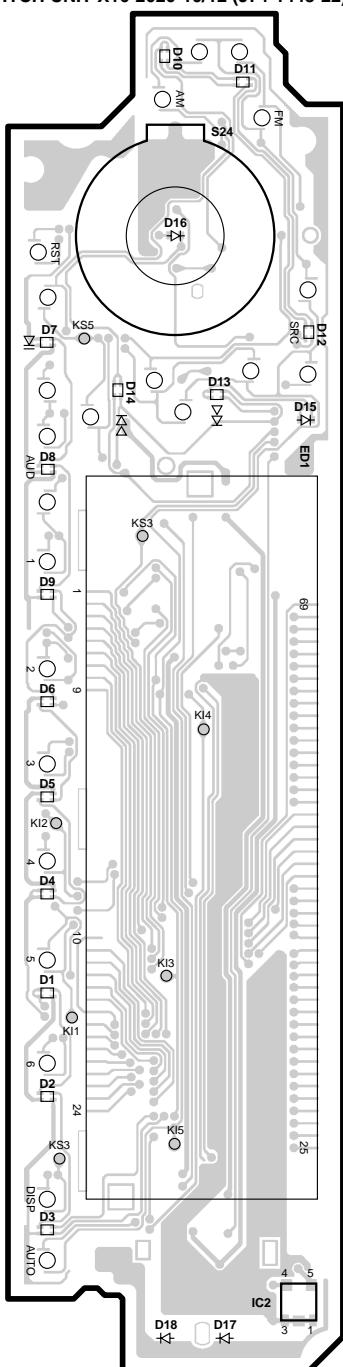
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KDC-4022/422/6023

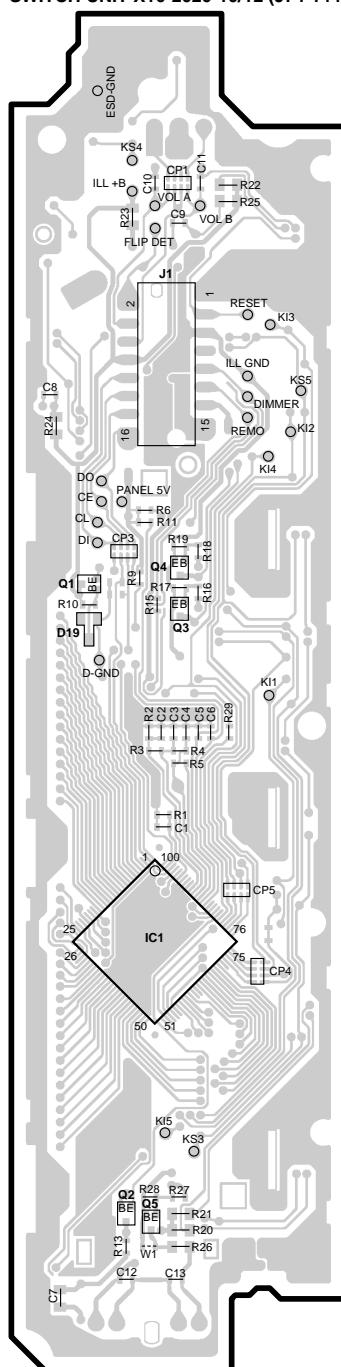
PC BOARD

(COMPONENT SIDE VIEW) (FOIL SIDE VIEW)

SWITCH UNIT X16-2020-10/12 (J74-1448-22)

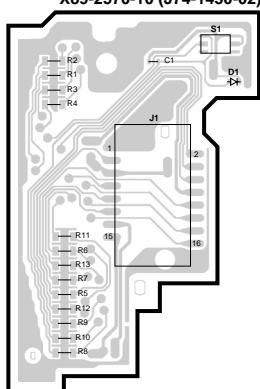
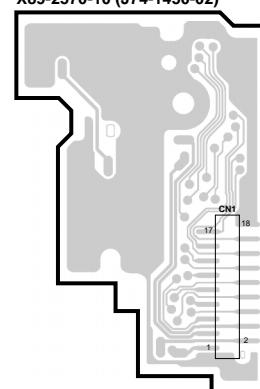


SWITCH UNIT X16-2020-10/12 (J74-1448-22)



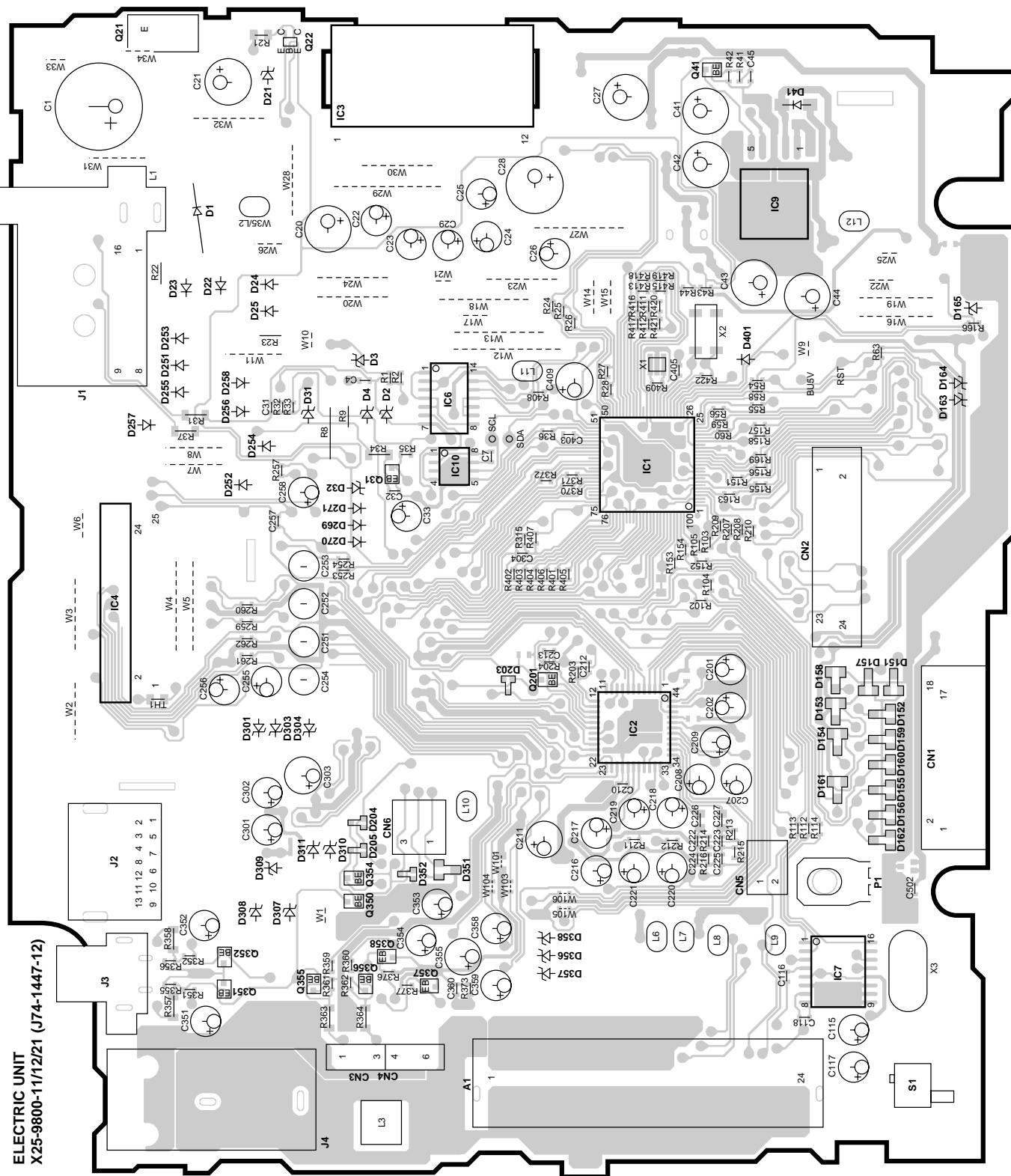
X16-2020-10/12

Ref. No	address
IC1	4C
IC2	6B
Q1	3C
Q2	5C
Q3	3C
Q4	3C
Q5	5C

DAUGHTER UNIT
X89-2570-10 (J74-1450-02)DAUGHTER UNIT
X89-2570-10 (J74-1450-02)

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

KDC-4022/422/6023 PC BOARD (COMPONENT SIDE VIEW)



K

L

M

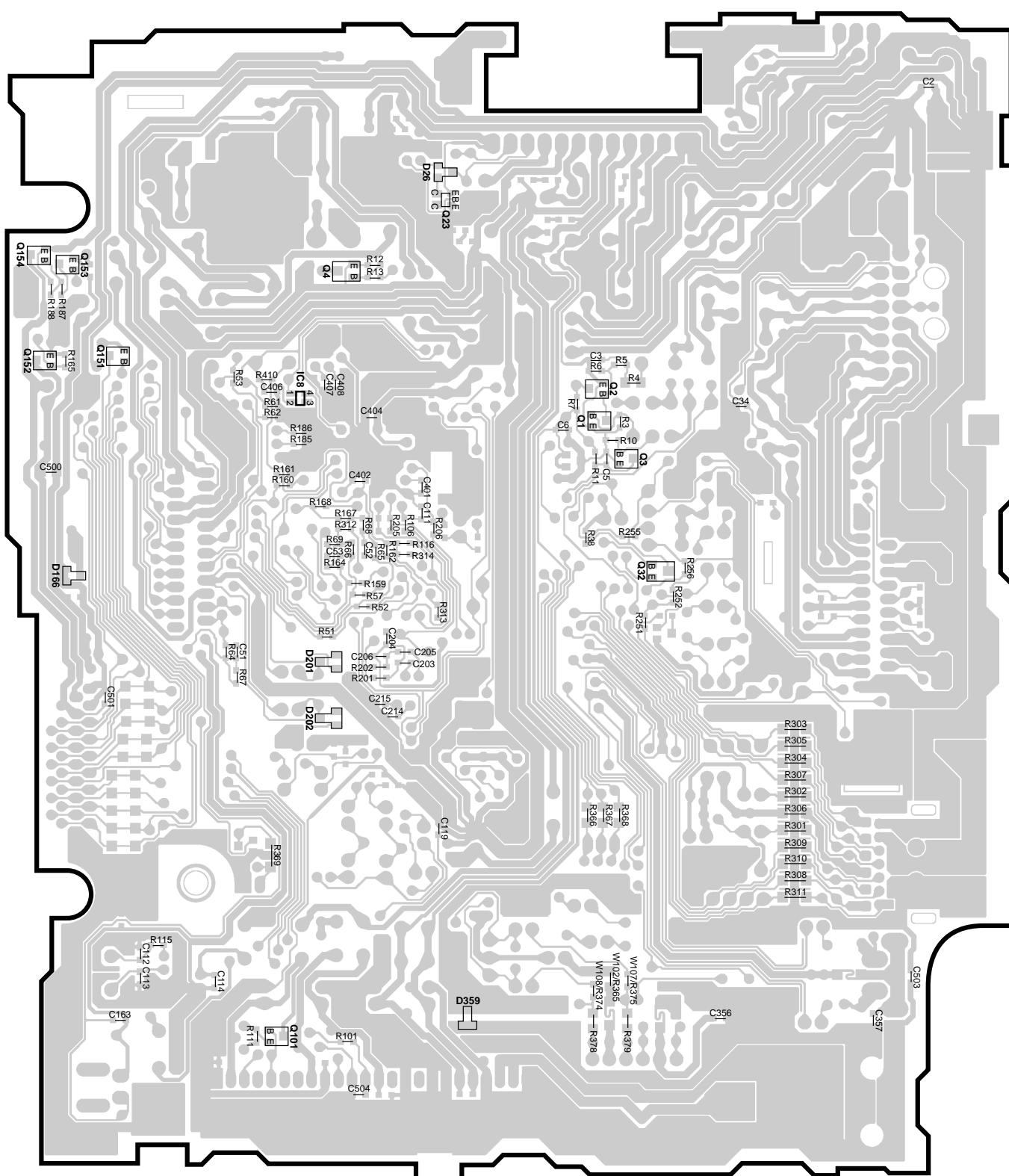
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O

KDC-4022/422/6023

PC BOARD (FOIL SIDE VIEW)

ELECTRIC UNIT
X25-9800-1/1/2/21 (J74-1447-12)



X25-9800-11/12/21

Ref. No	address	Ref. No	address
IC8	3L	Q23	2M
Q1	3M	Q151	3K
Q2	3M	Q152	3K
Q3	3M	Q153	2K
Q4	2L	Q154	2K

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

P

Q

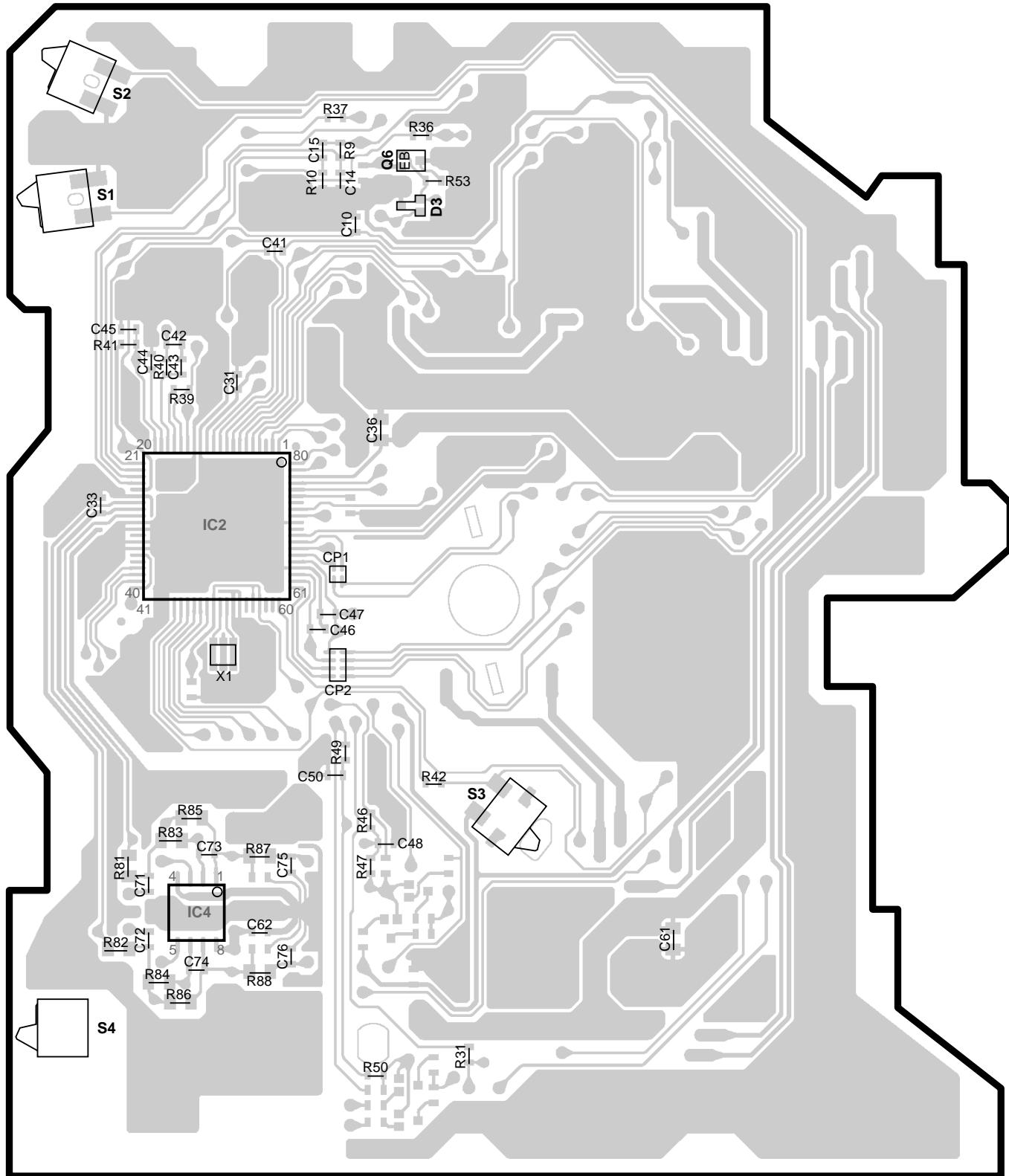
R

S

T

KDC-4022/422/6023 PC BOARD (COMPONENT SIDE VIEW)

CD PLAYER UNIT X32-5400-00 (J74-1486-12)



X32-5400-00

Ref. No	address
IC2	4Q
IC4	5Q
Q6	2R

U

V

W

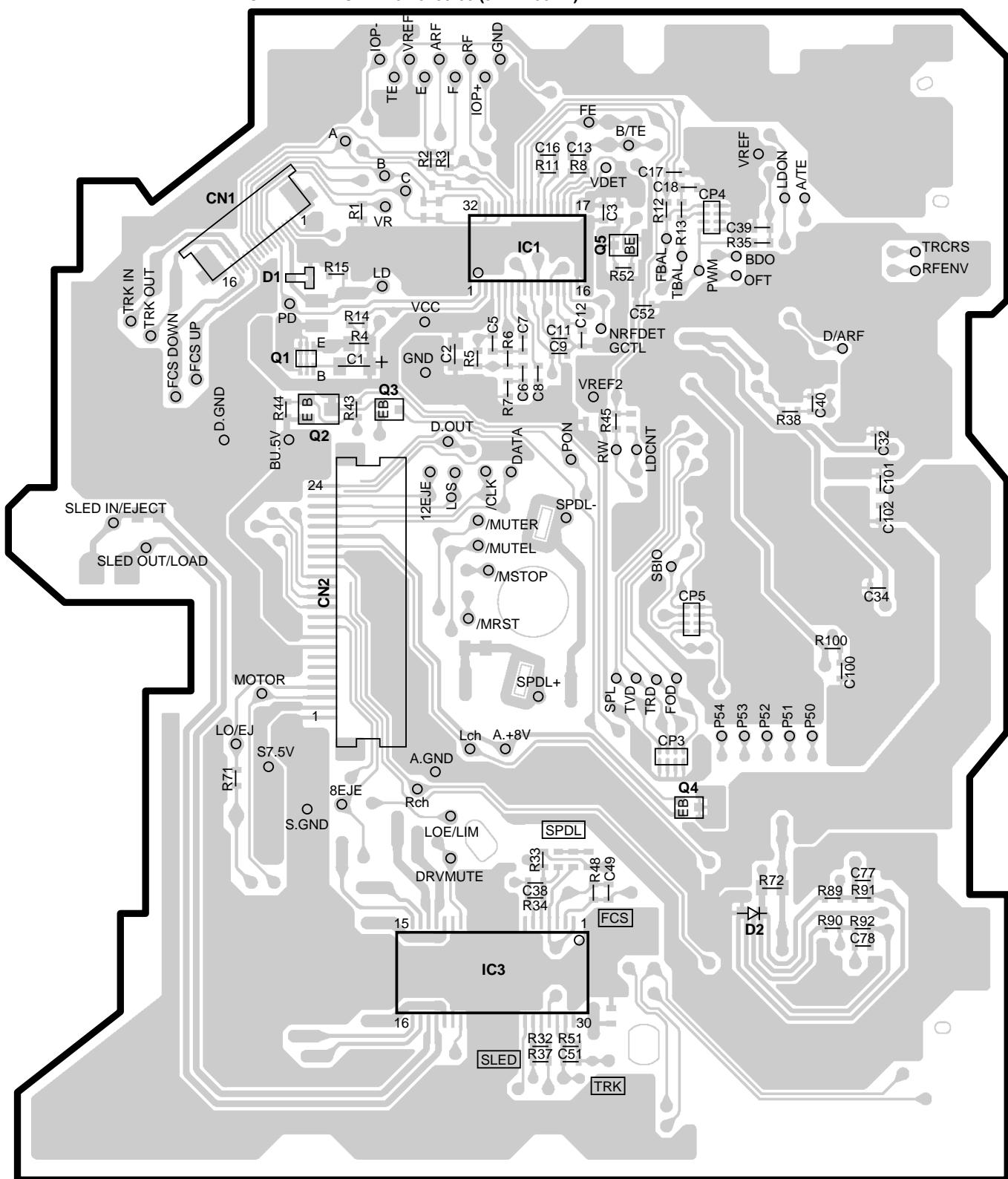
X

Y

KDC-4022/422/6023

PC BOARD (FOIL SIDE VIEW)

CD PLAYER UNIT X32-5400-00 (J74-1486-12)



X32-5400-00

Ref. No	address	Ref. No	address
IC1	2W	Q4	5X
IC3	6W	Q5	2W
Q1	3V		
Q2	3V		
Q3	3V		

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

A

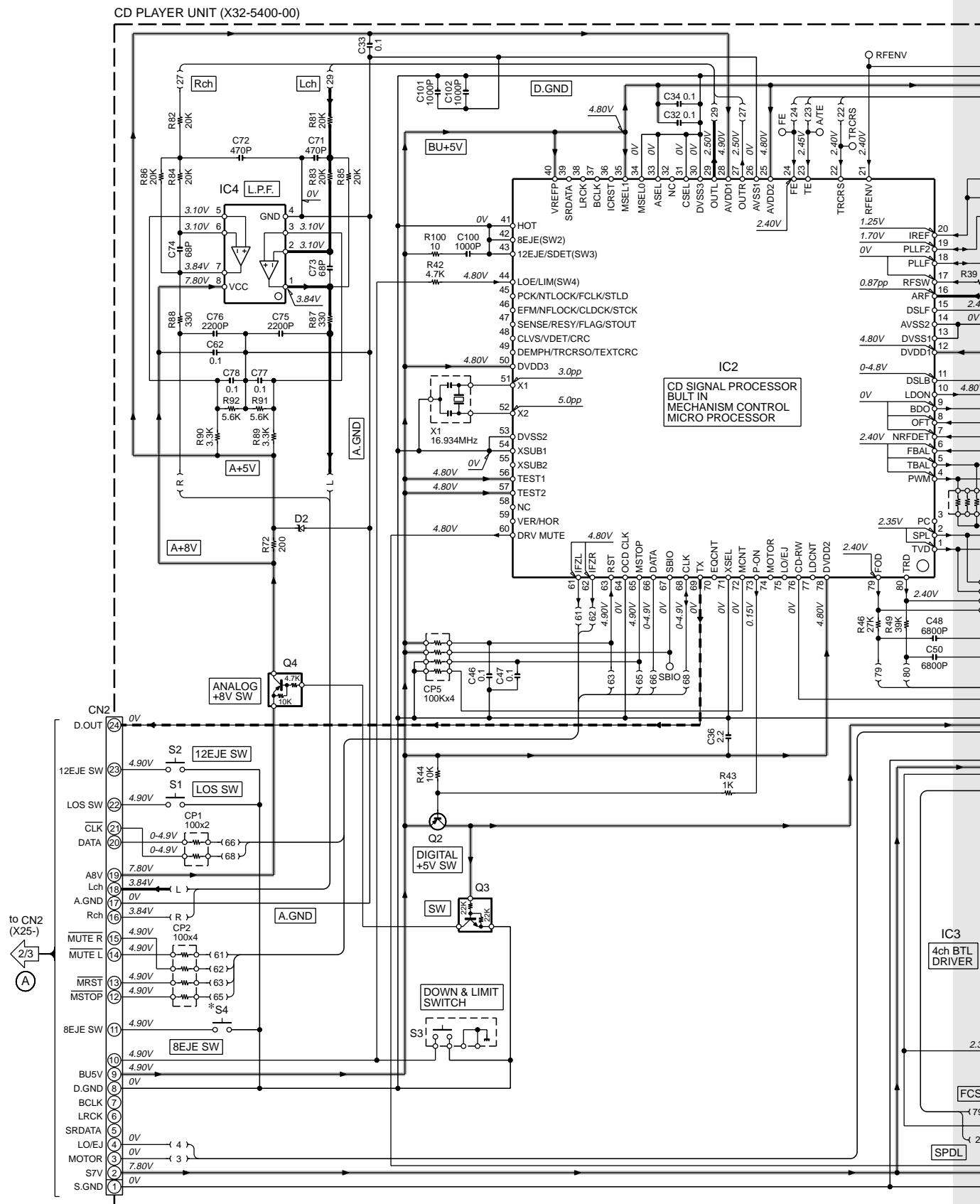
B

C

D

E

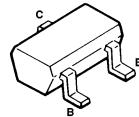
KDC-4022/422/6023



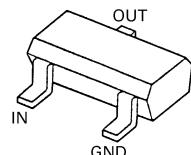
DTC143TUA
UN5114
UN5213
UN5216
2SA1036K
2SA1362
2SA1576A



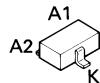
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DTC124EUA
DTC144EUA



DAN202U



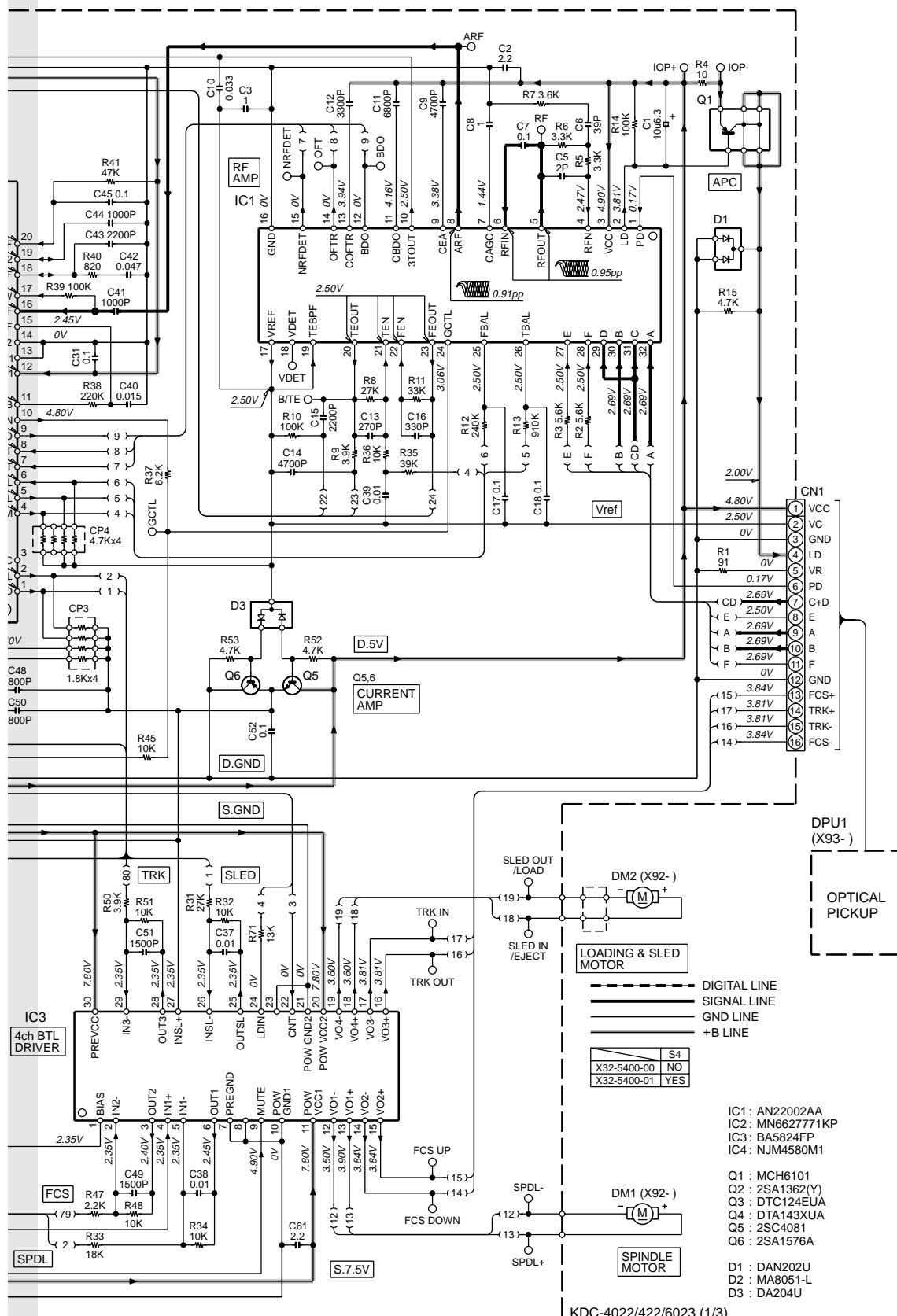
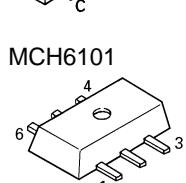
DAP202U
DA204K
DA204U
DTA114YUA



MA142WA
MA142WK
UN5212



RD6.8M
MCH6101

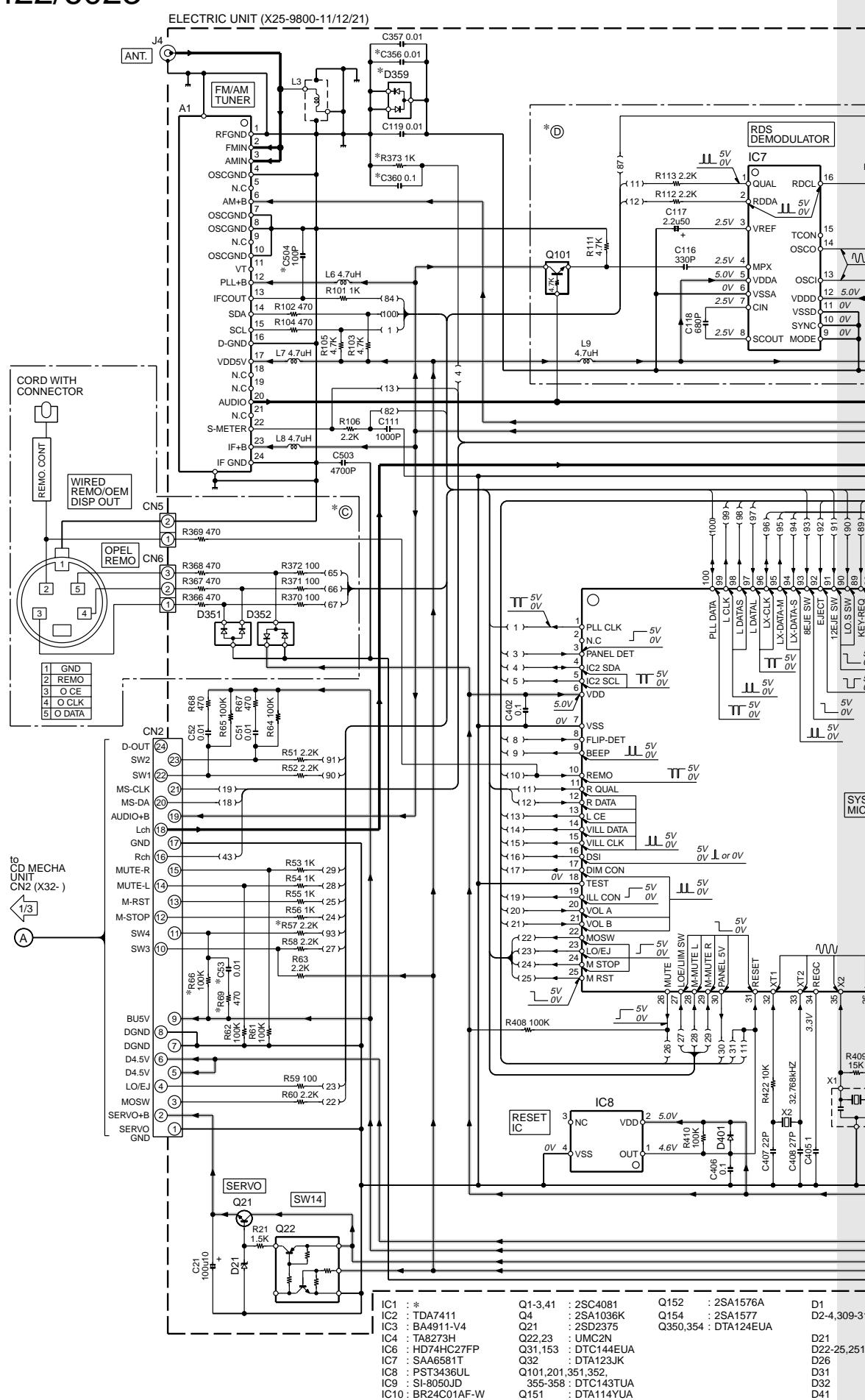


IC1 : AN22002AA
IC2 : MN6627771KP
IC3 : BA5824FP
IC4 : NJM4580M1

Q1 : MCH6101
Q2 : 2SA1362(Y)
Q3 : DTC124EUA
Q4 : DTA143XUA
Q5 : 2SC4081
Q6 : 2SA1576A

D1 : DAN202U
D2 : MA8051-L
D3 : DA204U

KDC-4022/422/6023



P

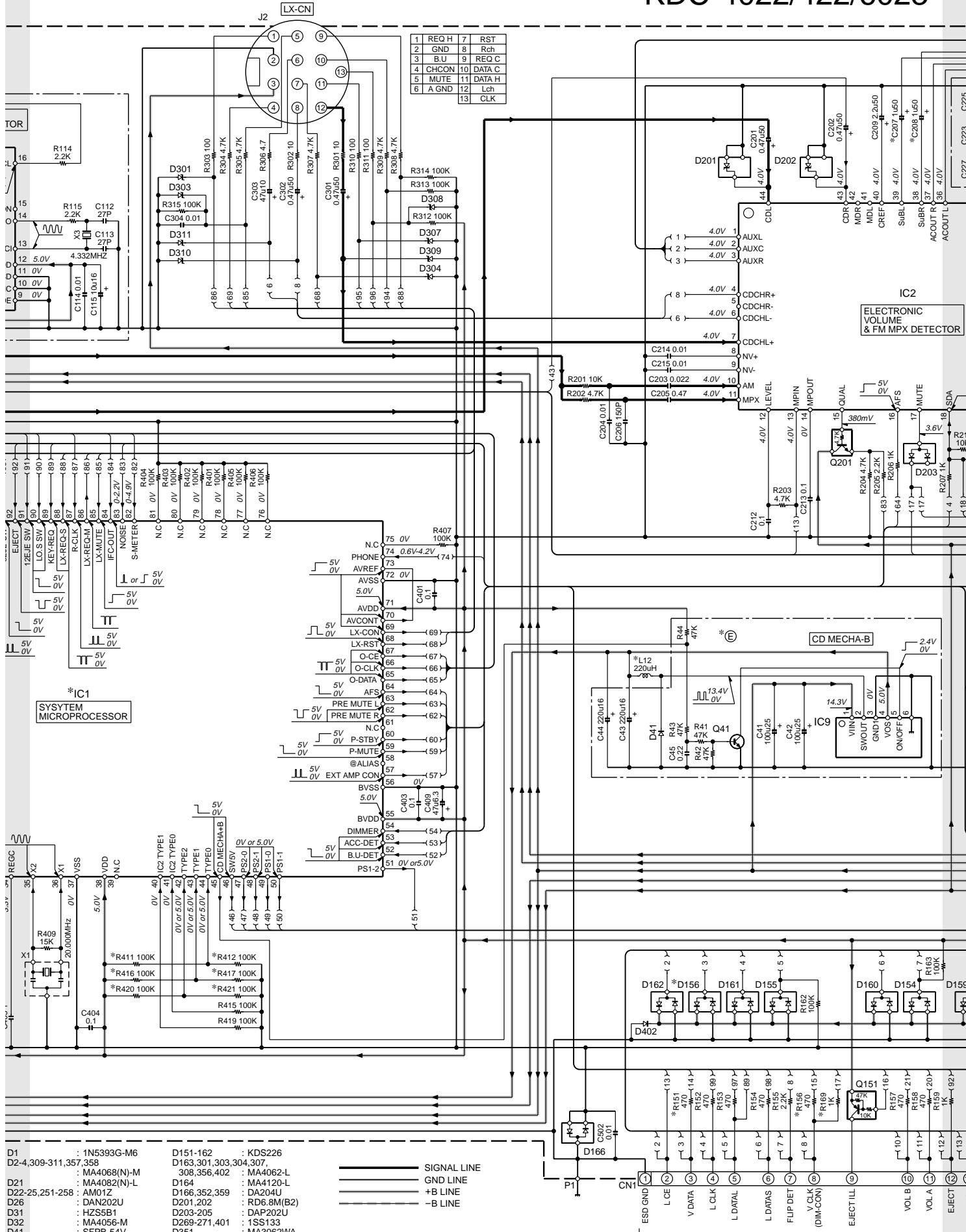
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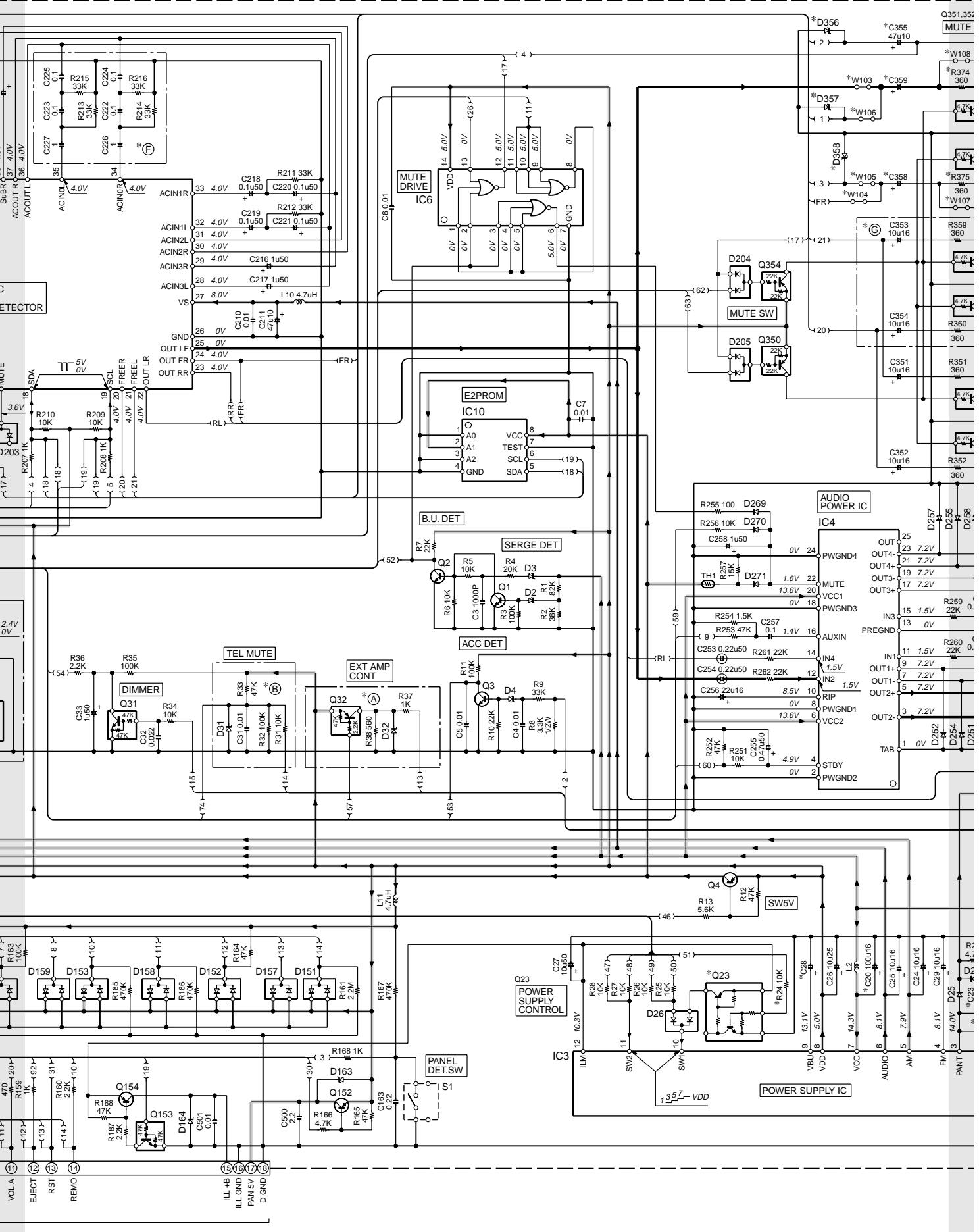
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KDC-4022/422/6023



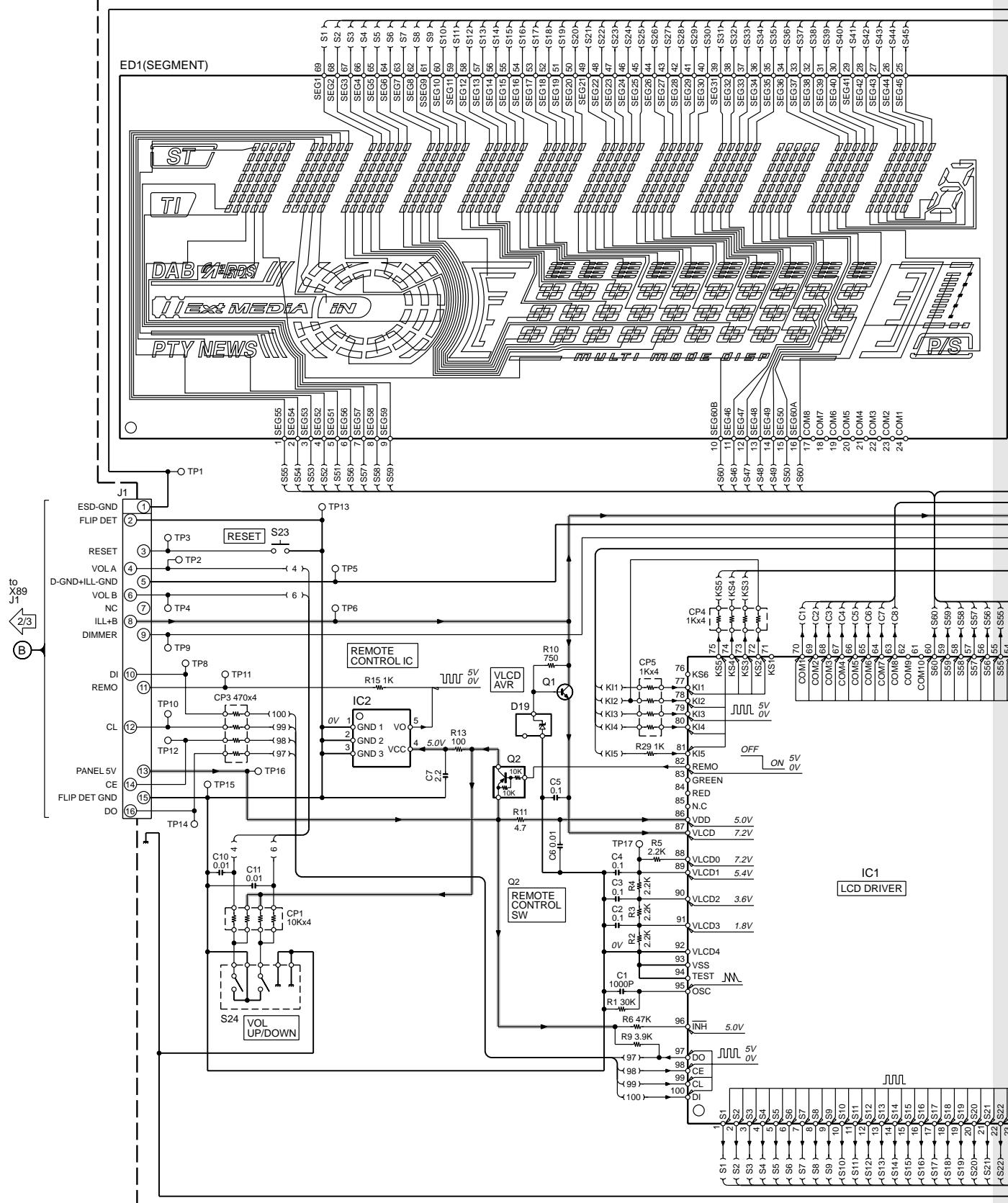
KDC-4022/422/6023



1

SWITCH UNIT (X16-2020-10/12)

2



3

4

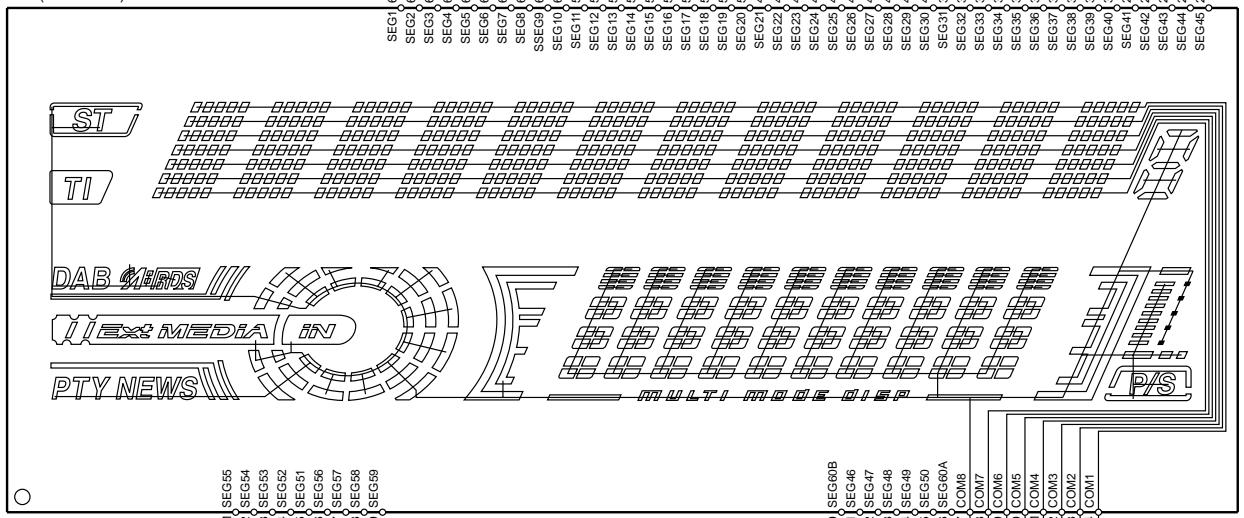
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7

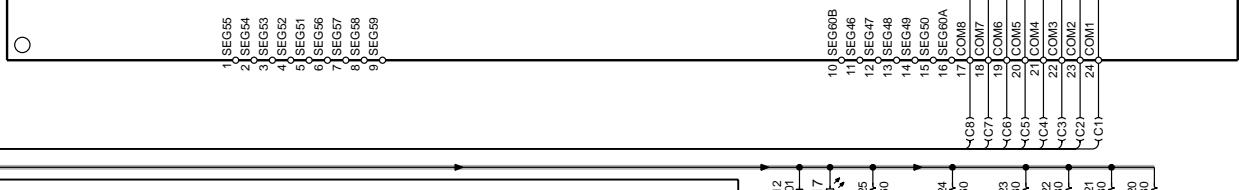
KDC-4022/422/6023

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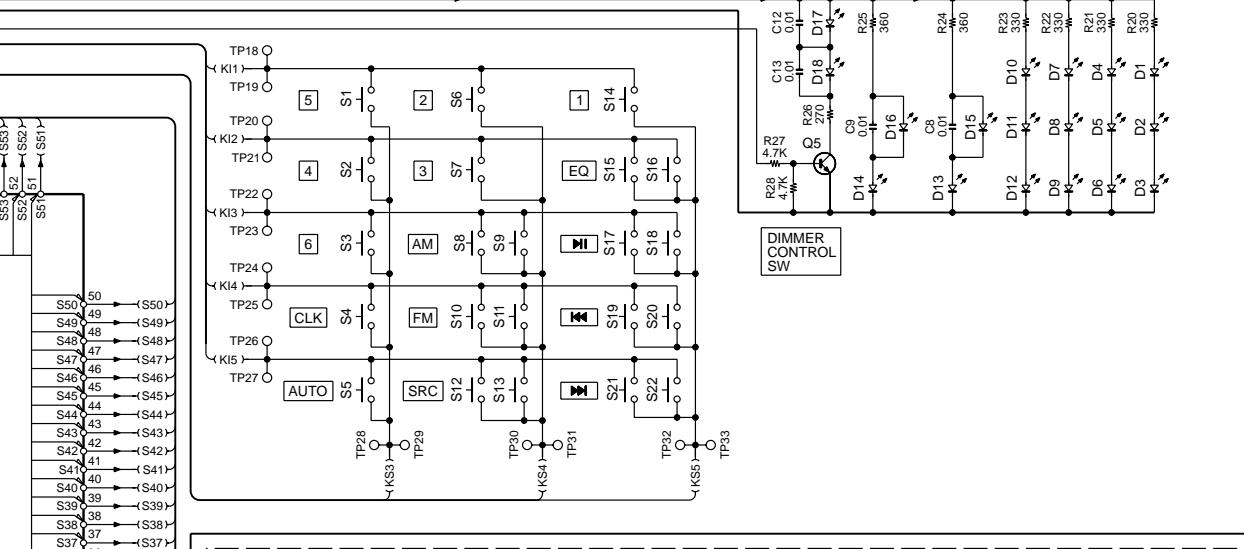
ED1(COMMON)



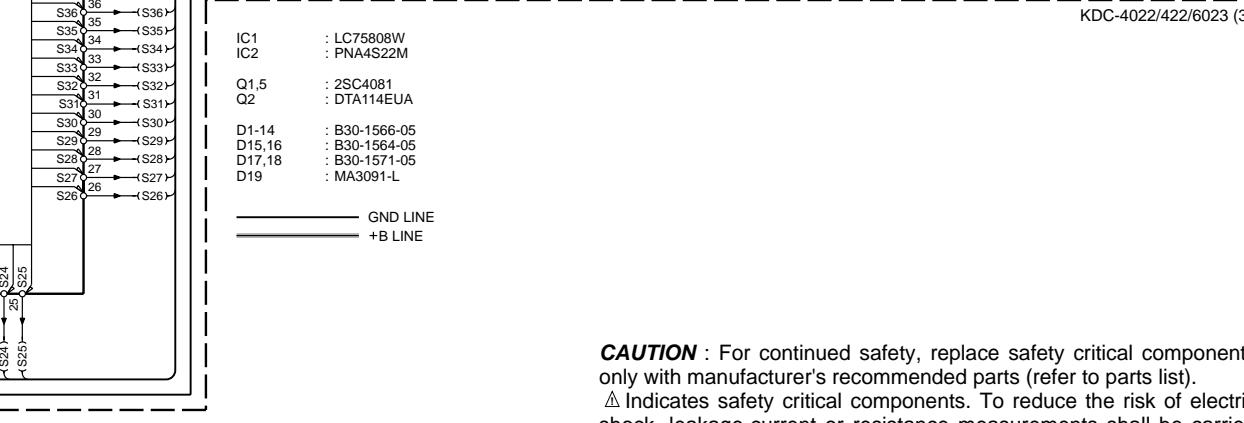
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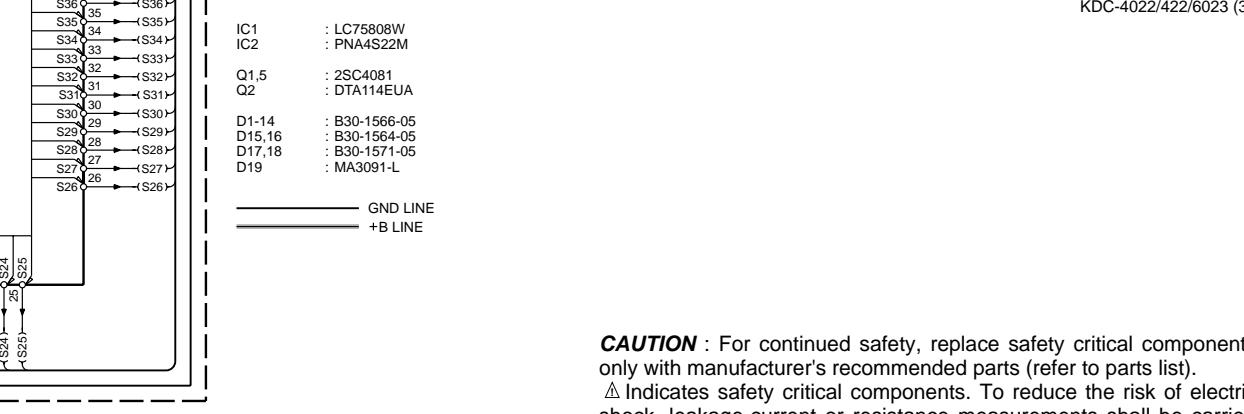
3



4



5



6

CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

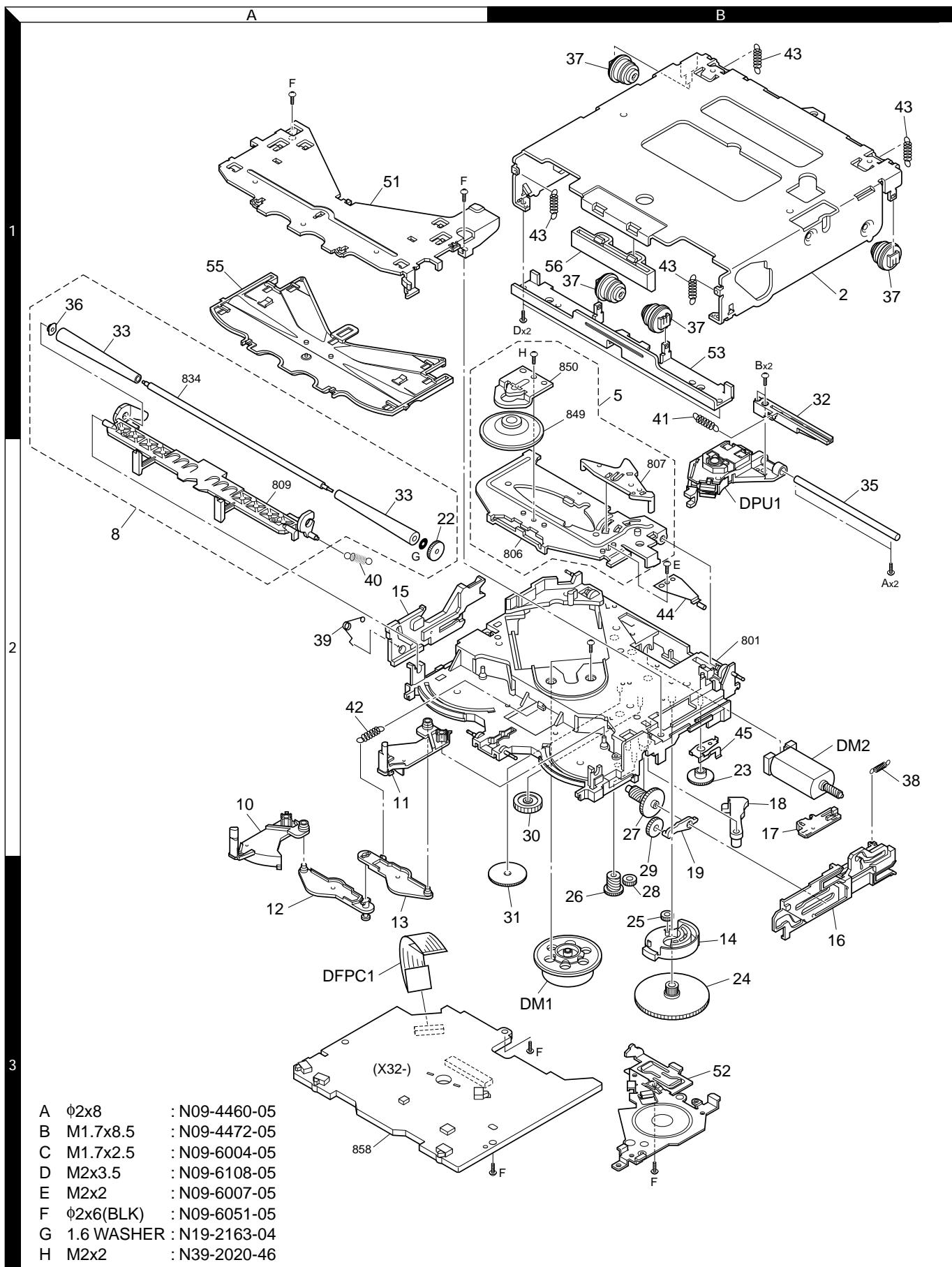
▲ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

• DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

7

KDC-4022/422/6023

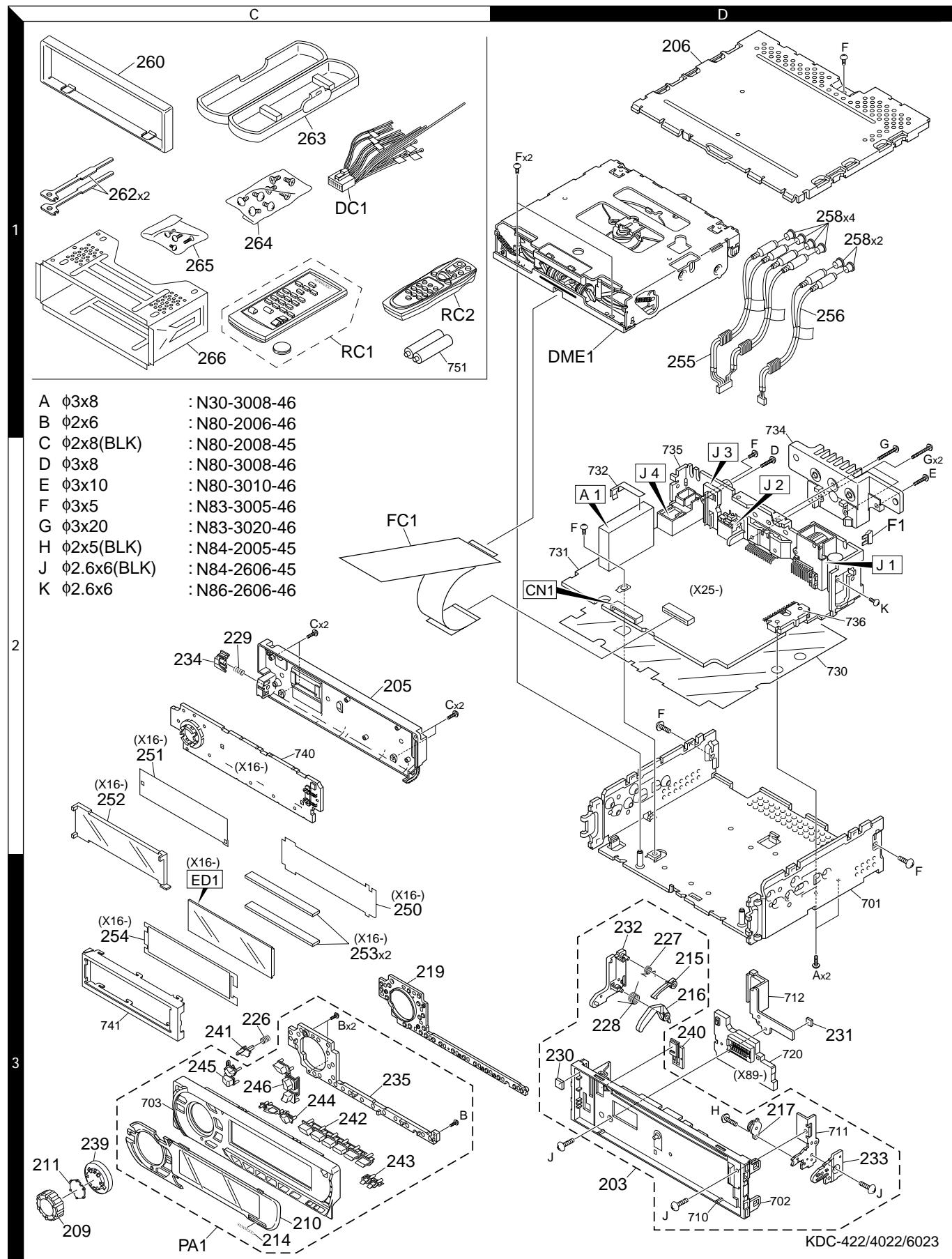
EXPLODED VIEW (MECHANISM)



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

KDC-4022/422/6023

EXPLODED VIEW (UNIT)



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

KDC-4022/422/6023

PARTS LIST

* New Parts

Parts without **Parts No.** are not supplied.

Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.

Teile ohne **Parts No.** werden nicht geliefert.

Ref. No.	Add	New	Parts No.	Description	Destinat	Ref. No.	Add	New	Parts No.	Description	Destinat
KDC-4022/422/6023											
203	3D	*	A22-2982-02	SUB PANEL ASSY		239	3C	*	K23-1072-13	KNOB (VOL)	
205	2C		A46-1778-01	REAR COVER		240	3D	*	K24-4000-03	KNOB (EJECT)	
206	1D	*	A52-0829-02	TOP PLATE		241	3C	*	K24-4002-04	KNOB (DOOR)	
263	1C		A02-1486-13	PLASTIC CABINET ASSY		242	3C	*	K25-1521-03	KNOB (1-6)	
PA1	3C	*	A64-2823-02	PANEL ASSY	K3	243	3C	*	K25-1522-04	KNOB (DISP)	
PA1	3C	*	A64-2832-02	PANEL ASSY	M	244	3C	*	K25-1523-03	KNOB (PLAY,STOP)	
PA1	3C	*	A64-2853-02	PANEL ASSY	K4	245	3C	*	K25-1524-03	KNOB (FM,AM)	
RC1	1C		A70-2026-05	REMOTE CONTROLLER ASSY(RC-410)	M	246	3C	*	K25-1525-03	KNOB (SRC,SKIP)	
RC2	1C	*	A70-2040-05	REMOTE CONTROLLER ASSY(RC-505)	K3K4	264	1C		N99-1719-05	SCREW SET	
-			B46-0100-50	WARRANTY CARD	K3K4	265	1C	*	N99-1730-15	SCREW SET	
-			B46-0606-04	ID CARD	M	A	3D		N30-3008-46	PAN HEAD MACHINE SCREW	
-			B46-0612-14	ID CARD	M	B	3C		N80-2006-46	PAN HEAD TAPPIE SCREW	
-			B46-0653-03	USER CARD	K3K4	C	2C		N80-2008-45	PAN HEAD TAPPIE SCREW	
-		*	B64-2516-00	INST. MANUAL (ENG,FRE,SPA)	K3K4	F	2D		N83-3005-46	PAN HEAD TAPPIE SCREW	
-		*	B64-2517-00	INST. MANUAL (ENG,T-CHI)	M	H	3D		N84-2005-45	PAN HEAD TAPPIE SCREW	
-		*	B64-2518-00	INST. MANUAL (ARABIC)	M	J	3D		N84-2606-45	PAN HEAD TAPPIE SCREW	
209	3C	*	B09-0529-03	CAP	M	-		*	X16-2020-10	SWITCH UNIT	M
210	3C	*	B10-4303-01	FRONT GLASS	K3	-		*	X16-2020-12	SWITCH UNIT	K3K4
210	3C	*	B10-4309-01	FRONT GLASS	M	-		*	X25-9800-11	ELECTRIC UNIT	K3
210	3C	*	B10-4326-01	FRONT GLASS	K4	-		*	X25-9800-12	ELECTRIC UNIT	K4
211	3C	*	B19-2200-04	LIGHTING BOARD		-		*	X25-9800-21	ELECTRIC UNIT	M
214	3C	*	B43-1284-04	BADGE		DME1	1D	*	X89-2570-10	DAUGHTER UNIT	
260	1C		B07-3022-02	ESCUOTHEON				*	X92-4660-00	MECHANISM ASSY (DXM-6060W)	
SWITCH UNIT (X16-2020-10/12)											
215	3D		D10-4730-03	LEVER		250	3C	*	B11-1396-04	OPTICAL DIFFUSER	
216	3D		D10-4731-03	LEVER		251	2C	*	B11-1397-04	REFLECTION SHEET	
217	3D		D39-0255-05	DAMPER		252	2C	*	B19-2199-03	LIGHTING BOARD	
262	1C		D10-4589-04	LEVER		D1 -14			B30-1566-05	LED(1608,RED)	K3K4
219	3C	*	E29-1927-02	CONDUCTIVE RUBBER		D1 -14			B30-1605-05	LED(2COLOR PG/RED)	M
255	1D	*	E30-6228-05	CORD WITH PINPLUG	M	D15 ,16			B30-1564-05	LED(1608,BLUE)	
256	1D	*	E30-6229-05	CORD WITH PINPLUG	K3K4	D17 ,18			B30-1571-05	LED(WHITE)	
DC1	1C		E30-4940-05	DC CORD		ED1			B38-1103-05	LIQUID CRYSTAL	
FC1	2C		E39-0438-05	FLAT CABLE (24PIN)		C1			CK73GB1H102K	CHIP C 1000PF K	
258	1D		F29-0626-04	INSULATING COVER		C2 -5			CK73GB1C104K	CHIP C 0.10UF K	
F1	2D		F52-0006-05	FUSE(MINI BLADE TYPE : 10A)		C6			CK73GB1H103K	CHIP C 0.010UF K	
226	3C		G01-3129-04	COMPRESSION SPRING		C7			CK73FB1A225K	CHIP C 2.2UF K	
227	3D	*	G01-3171-04	TORSION COIL SPRING		C8 -13			CK73GB1H103K	CHIP C 0.010UF K	
228	3D	*	G01-3172-04	TORSION COIL SPRING		253	3C		E29-1925-04	CONDUCTIVE RUBBER	
229	2C	*	G01-3173-04	COMPRESSION SPRING		J1			E59-0829-05	RECTANGULAR PLUG	
230	3D	*	G13-1267-04	CUSHION		254	3C	*	F09-1823-04	SHEET	
231	3D	*	G13-1268-04	CUSHION		CP1			R90-0714-05	MULTI-COMP 10K X4	
-			H10-4856-12	POLYSTYRENE FOAMED FIXTURE		CP3			R90-1016-05	MULTI-COMP 470 X4	
-			H25-0329-04	PROTECTION BAG (280X450X0.03)		R1			RK73GB2A303J	CHIP R 30K J 1/10W	
-			H25-0337-04	PROTECTION BAG (180X300X0.03)		R2 -5			RK73GB2A222J	CHIP R 2.2K J 1/10W	
-		*	H54-2777-03	ITEM CARTON CASE	K3	R6			RK73GB2A473J	CHIP R 47K J 1/10W	
-		*	H54-2778-03	ITEM CARTON CASE	K4	R9			RK73GB2A392J	CHIP R 3.9K J 1/10W	
-		*	H54-2785-03	ITEM CARTON CASE	M	R10			RK73GB2A751J	CHIP R 750 J 1/10W	
-						R11			RK73GB2A4R7J	CHIP R 4.7 J 1/10W	
232	3D	*	J19-5203-03	HOLDER		R13			RK73GB2A101J	CHIP R 100 J 1/10W	
233	3D	*	J19-5204-03	HOLDER		R15			RK73GB2A102J	CHIP R 1.0K J 1/10W	
234	2C	*	J19-5205-03	HOLDER		R16 -19			RK73GB2A222J	CHIP R 2.2K J 1/10W M	
235	3C	*	J19-5206-02	HOLDER		R20 -23			RK73FB2B331J	CHIP R 330 J 1/8W	
266	1C		J21-9716-03	MOUNTING HARDWARE ASSY							

K3: KDC-422

K4: KDC-4022

M: KDC-6023

△ indicates safety critical components.

KDC-4022/422/6023

SPECIFICATIONS

	KDC-422/4022 (K type)	KDC-6023 (M type)
FM tuner section		
Frequency range (Frequency step)	87.9MHz~107.9MHz (200kHz) -	87.9MHz~107.9MHz (200kHz) 87.5MHz~108.0MHz (50kHz)
Channel space selection	50kHz/100kHz	50kHz/100kHz
Usable sensitivity (S/N 30dB)	9.3dBf (0.8μV/75Ω)	9.3dBf (0.8μV/75Ω)
Quieting sensitivity (S/N 50dB)	15.2dBf (1.6μV/75Ω)	15.2dBf (1.6μV/75Ω)
Frequency response ($\pm 3.0\text{dB}$)	30Hz~15kHz	30Hz~15kHz
S/N (MONO)	70dB	70dB
Selectivity	$\geq 80\text{dB} (\pm 400\text{kHz})$	$\geq 80\text{dB} (\pm 400\text{kHz})$
Stereo separation (1kHz)	40dB (1kHz)	40dB
AM tuner section		
Frequency range (Frequency step)	530kHz~1700kHz (10kHz) -	530kHz~1700kHz (10kHz) 531kHz~1611kHz (9kHz)
Channel space selection	9kHz/10kHz	9kHz/10kHz
Usable sensitivity (S/N 20dB)	28dBμ (25μV)	28dBμ (25μV)
CD section		
Laser diode	GaAlAs ($\lambda=780\text{nm}$)	GaAlAs ($\lambda=780\text{nm}$)
Digital filter (D/A)	8 Times Over Sampling	8 Times Over Sampling
D/A converter	1 Bit	1 Bit
Spindle speed	500rpm~200rpm (CLV)	500rpm~200rpm (CLV)
Wow & Flutter	Below measurable limit	Below measurable limit
Frequency response	10Hz~20kHz ($\pm 1\text{dB}$)	10Hz~20kHz ($\pm 1\text{dB}$)
T.H.D.	0.01% (1kHz)	0.01% (1kHz)
S/N (1kHz)	105dB	105dB
Dynamic range	93dB	93dB
Channel separation	96dB	96dB
Audio section		
Preout level/Load	2.0V/10kΩ (CD-CH)	2.0V/10kΩ (CD-CH)
Preout impedance	$\leq 600\Omega$	$\leq 600\Omega$
Maximum power	50Wx4	50Wx4
Full bandwidth power	22Wx4 (at less than 1%THD)	22Wx4 (at less than 1%THD)
TONE section		
Bass	100Hz $\pm 10\text{dB}$	100Hz $\pm 10\text{dB}$
Middle	1kHz $\pm 10\text{dB}$	1kHz $\pm 10\text{dB}$
Treble	10kHz $\pm 10\text{dB}$	10kHz $\pm 10\text{dB}$
General		
Operating voltage	14.4V (11V~16V allowable)	14.4V (11V~16V allowable)
Current consumption	10A	10A
Installation size (WxHxD)	182x53x155 (mm) 7 -3/16 x 2-1/16 x 6-1/10(inch)	182x53x155 (mm) 7 -3/16 x 2-1/16 x 6-1/10(inch)
Weight	1.20kg (2.64lbs)	1.20kg (2.64lbs)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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