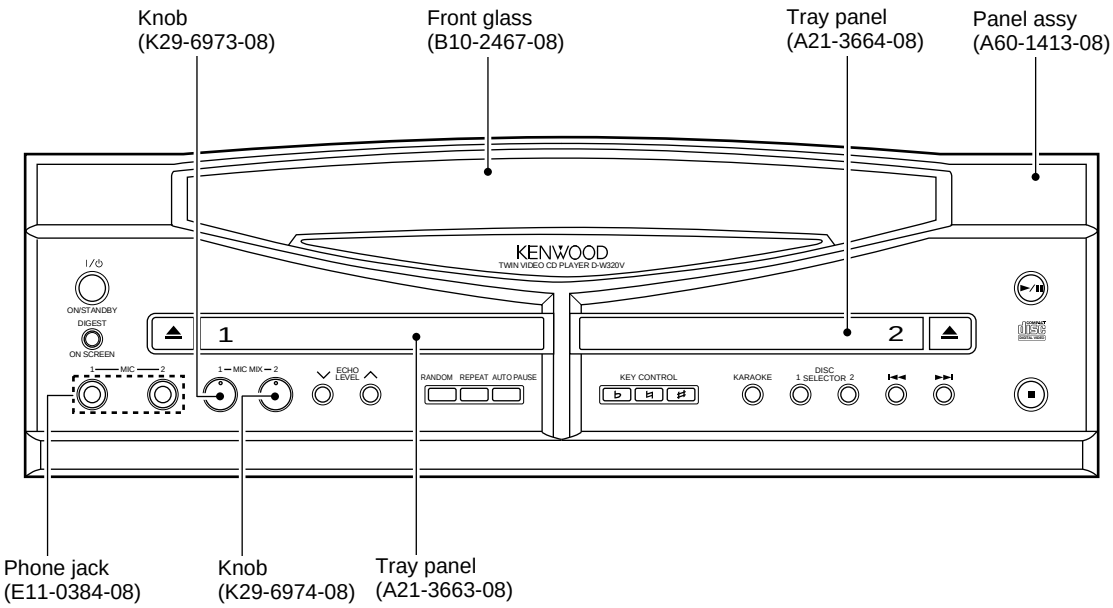
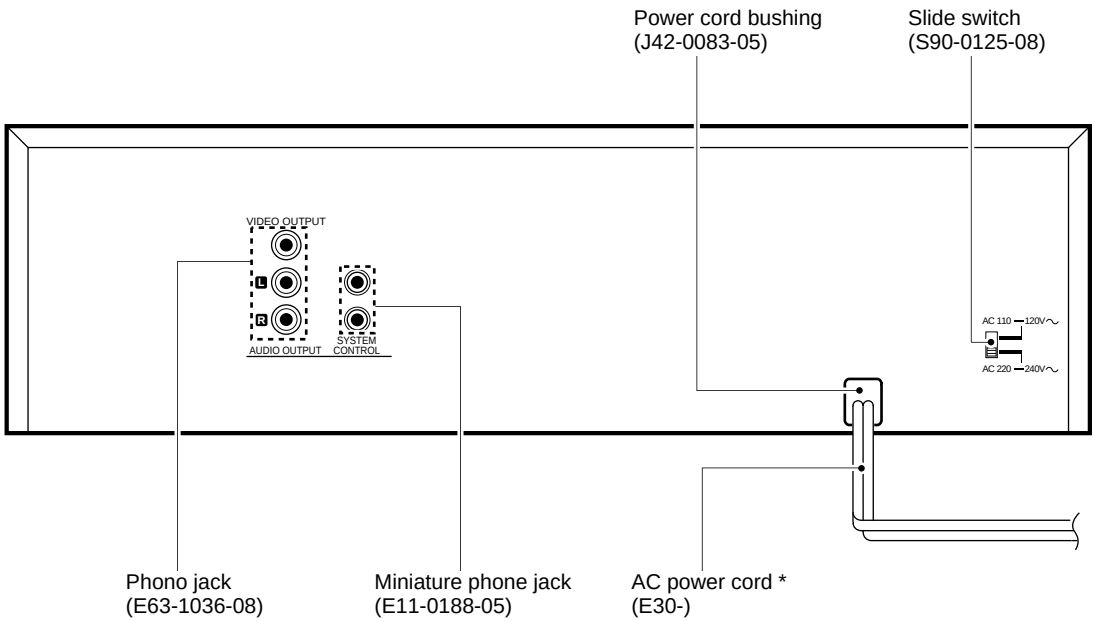
TWIN VIDEO CD PLAYER

D-W320V

SERVICE MANUAL

KENWOOD





*** Refer to parts list on page 24.**

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

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

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

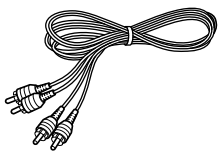
CONTENTS / ACCESSORIES

CONTENTS

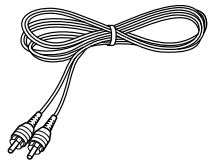
CONTENTS 2
DISASSEMBLY FOR REPAIR.....3
CIRCUIT DESCRIPTION.....4
ADJUSTMENT.....10
PC BOARD 11
SCHEMATIC DIAGRAM 15
EXPLODED VIEW 22
PARTS LIST.....24
SPECIFICATIONS .....Back cover

Accessories

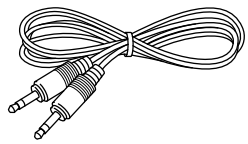
Audio cord.....(1)
(E30-0505-05)



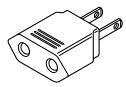
Video cord.....(1)
(E30-1427-05)



System control cord ....(2)
(E30-2733-05)



AC plug adapter..... (1)
(E03-0115-05)



Use to adapt the plug on the power cord to the shape of the wall outlet.
(Accessory only for regions where use is necessary.)

DISASSEMBLY FOR REPAIR

1. HOW TO REMOVE THE TRAYS.

1. Push the on / standby key.
2. Push the open / close key (DISC 1).
3. Remove the left tray panel.
4. Push the open / close key (DISC 2).
5. Remove the right tray panel.
6. Push the open / close key (DISC 2).
7. Turn the AC power off.
8. Remove 5 screws (①) and front panel.
9. Turn the tray drive gear to clockwise (②) to remove right tray.
10. Remove the hook (③) and then pull out the right tray.
11. Turn the tray drive gear to counterclockwise (④). (Pickup down (⑤) → CD mecha moves (⑥) → Pickup up → Left tray comes out (7))
12. Remove the hook (same as 3) and then pull out the left tray.

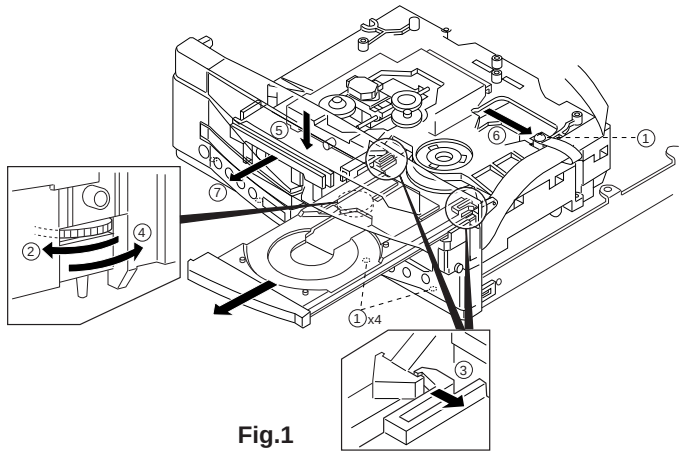


Fig.1

2. HOW TO REMOVE THE CD MECHANISM HOLDER

1. Remove 3 screws (①).
2. Remove the clamper guide to arrow mark (②).
3. To down the CD mechanism holder, set the slider to arrow mark (④) by turning the tray drive gear (⑤).
4. Remove the CD mechanism holder to arrow mark (③).

3. HOW TO MOUNT THE CD MECHANISM HOLDER

1. Set the slider to arrow mark (④) by turning the tray drive gear (⑤).
2. Inset the CD mechanism holder into the hole of slider (⑥).

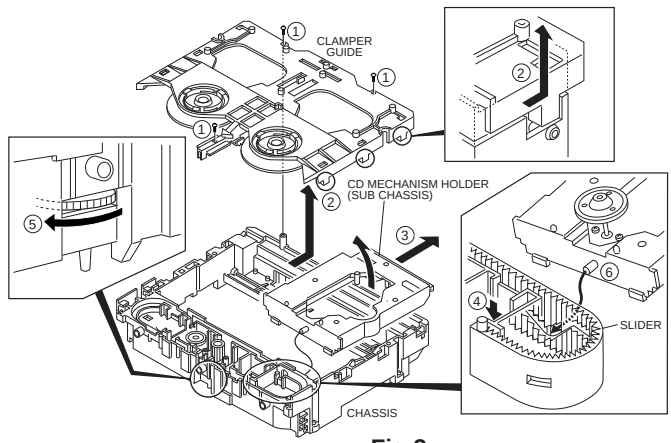


Fig.2

4. HOW TO MOUNT THE TRAYS.

1. Mount the clamper guide (①).
2. Fix 3 screws (②).
3. Set the slider to arrow mark (Ⓐ, Ⓑ) by turning the tray drive gear.
4. Insert the tray (Ⓐ) to guide (Ⓑ) on slider (③).
5. Turning the tray drive gear to clockwise (④) set the slider to arrow mark (Ⓒ).
6. Insert the tray (Ⓑ) to guide (Ⓒ) on slider (⑤).

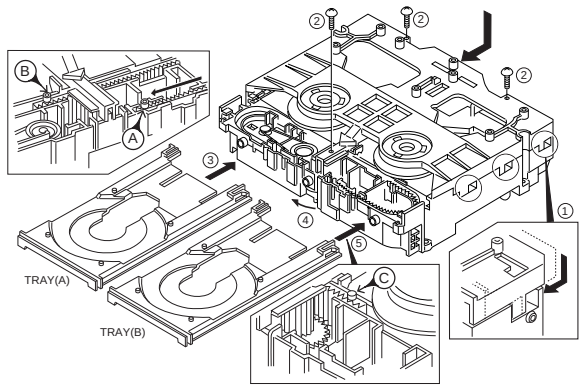


Fig.3

5. HOW TO REPLACE THE PICKUP

1. Remove 4 screws (①) and turn over the CD mechanism assy.

★ Short the short-land of the pickup before the following procedures (②)

2. Remove 3 connectors (③) and 3 screws (④).
3. Remove the disc motor ass'y (⑤).
4. Remove washer and gear (⑥).
5. Remove 2 screws (⑦) and rod (⑧).
6. Remove the pickup ass'y (⑨).

Note : When mounting the pickup, in the reverse order of disassembly. Unsolder the short land after connecting the connectors.

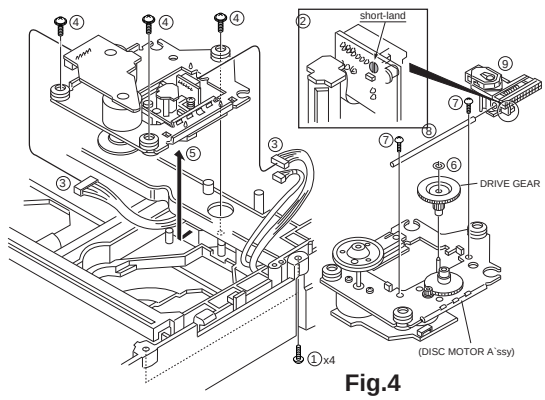


Fig.4

CIRCUIT DESCRIPTION

1. System u-COM IC701 (MN1872423 KEN)

Pin description.

PIN NO.	TERMINAL NAME	I/O	FUNCTION	ACT
1~7	7~1G	O	FL grid drive	–
8	VDD	–	VDD +5V	–
9	P/N I	O	PAL/NTSC INPUT H : PAL	H
10	P/N O	I	PAL/NTSC OUTPUT H : PAL	H
11	M/A	O	PAL/NTSC MANUAL/AUTO SELECT H : MANUAL	H
12	POWER	O	POWER ON / OFF H : ON	H
13	C-BUSY	O	VIDEO CD DATA STATUS H : BUSY	H
14	CLOCK	I	VIDEO CD DATA CLOCK	H/L
15	C-DATA	–	DATA SIGNAL to MPEG BOARD	H/L
16	M-DATA	–	DATA SIGNAL from MPEG BOARD	H/L
17	$\overline{\text{RESET}}$	–	HARD RESET	L
18	TR+	–	TRAY MOTOR CONTROL H : OPEN	H
19	TR-	–	TRAY MOTOR CONTROL H : CLOSE	H
20, 21	AVSS	–	GND	–
22	$\overline{\text{PU IN}}$	–	PICK UP LOCATION L : INSIDE	L
23	$\overline{\text{UP SW}}$	–	MECHA POSITION L : DISC1 & UP	L
24	TRSW2	–	DISC2 TRAY SW L : CLOSE H : OPEN	–
24, 25	TRSW2, 1	I	DISC2 TRAY SW L : CLOSE H : OPEN	A/D
26~28	KEY3~1	I	KEY INPUT	A/D
29	AVDD	–	AVDD +5V	–
30	AVREF	–	AVREF +5V	–
31, 32	XT1, 2	–	NC	–
33	VSS	–	GND	–
34	X1	–	X-TAL IN 4.19 MHz	–
35	X2	–	X-TAL OUT 4.19 MHz	–
36	WRQ	I	WRITE REQUEST	H
37	COIN	O	COMMAND DATA TO CD DSP	H/L
38	IFL	O	KARAOKE IC DATA	H/L
39	IFS	O	KARAOKE IC CLOCK	H/L
40	IFD	O	KARAOKE IC LATCH	H
41	CQCK	O	CLOCK TO CD DSP	H/L
42	SQOUT	I	SQ DATA FROM CD DSP	H/L
43	RWC	O	READ/WRITE CONTROL	H
44	M-BUSY	O	MAIN MICOM STATUS H : BUSY	H
45	SBUSY	I/O	SYSTEM CONTROL DATA	H/L
46	SDATA	I/O	SYSTEM CONTROL STATUS	H
47	$\overline{\text{REMOCON}}$	I	REMOCON INPUT	L
48	VPP	–	GND	–
49	SP CONT	O	TRAY MOTOR SPEED CONTROL H : HIGH SPEED	H
50	SL-	O	SLED MOTOR REVERSE	H
51	SL+	O	SLED MOTOR FORWARD	H
52	VDD	–	VDD +5V	–
53	FLAT	O	KEY CON LED NATURAL H : ON	H
54	SHARP	O	KEY CON LED SHARP H : ON	H
55	MATURAL	O	KEY CON LED FLAT : H : ON	H
56	C-RESET	O	CD DSP, MPEG BOARD, MPEG MICOM RESET	H
57	$\overline{\text{M-MUTE}}$	O	MIC MUTE L : ON	L
58	$\overline{\text{S-MUTE}}$	O	SYSTEM MUTE L : ON	L
59	NC	O	NOT USED	L
60	DRF	I	CD FOCUS OK SIG. H : OK	H
61~70	P16~7	O	FL SEGMENT DRIVE	–
71	VLOAD	–	VLOAD - 32V	–
72~77	P6~P1	O	FL SEGMENT DRIVE	–
78~80	10~8G	O	FL GRID DRIVE	–

CIRCUIT DESCRIPTION

2. KARAOKE IC/DAC IC 201 (TC9409 BF)

Pin description

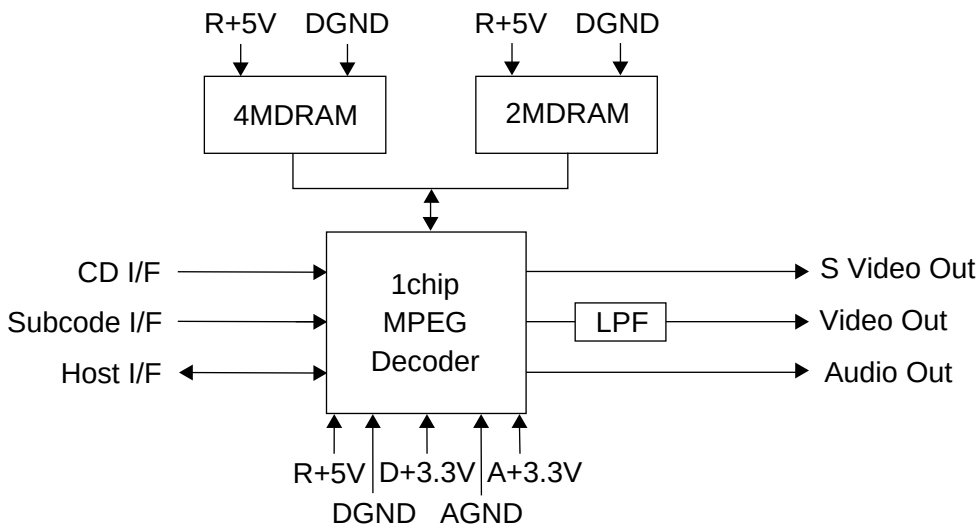
Pin No.	Terminal Name	I/O	Function
1	VDA1	–	ADC power supply
2	MICI	I	LPF input for Mic input
3	LPFO1	O	LPF output for Mic input
4	VRA1	–	ADC reference voltage
5	AIL	I	Line input (Lch)
6	LPFO2	O	Not used
7	VRA2	–	ADC reference voltage
8	AIR	I	Line input (Rch)
9	LPFO3	O	Not used
10	GNDA1	–	ADC ground
11	LI	I	Lch analog add input
12	LZ	O	Not used
13	GNDA2	–	DAC ground
14	AOL	O	DAC output (Lch)
15	VR2	–	DAC reference voltage
16	AOR	O	DAC out put (Rch)
17	VDA2	–	DAC power SUPPLY
18	RZ	O	Not used
19	RI	I	Rch analog add input
20	VDX	–	X-TAL power supply
21	XI	I	X-TAL in (16.9344 MHz)
22	XO	O	X-TAL out
23	GNDX	–	Ground
24, 25	VDD1, CKS	–	Digital power supply
26	MCK2	O	Not used
27	MCK1	O	Clock output
28~30	SDO/BCKO/LRCKO	–	Not used
31	SDI	I	Digital audio data input
32	BCKI	–	Bit clock input
33	LRCKI	–	Channel clock input
34	GNDD	–	Digital ground
35	$\overline{\text{RESET}}$	I	Reset
36	IFD	I	U-com I/F data input
37	IFS	I	U-com I/F data shift clock input
38	IFL	I	U-com I/F latch pulse input
39	EMP	I	DE-emphasis setting (H = DE-emphasis filter on)
40	EXTO	O	Not used
41~43	$\overline{\text{TEST}}$/VDD2/VDL	–	Digital power supply
44	GNDL	–	Digital ground for DRAM

CIRCUIT DESCRIPTUON

3. Connection terminal (CN P401) specification for MPEG board

No	Terminal	I/O	Specification
1	A+3.3V	–	+3.3V power supply for analog video
2	CVOUT	O	Composite video output
3, 4	N/C	O	Not used
5.6	VGND	–	Analog video ground
7	R+5V	–	Digital +5V power supply
8, 9	D+3.3V	–	Digital +3.3V power supply
10, 11	DGND	–	Digital ground
12	CD CLK	I	Audio external frequency clock (384 FS)
13	EMPH	O	Audio emphasis output (High Active)
14	DILRCK	O	Audio left right clock
15	HRDY	–	Host data ready
16	DISCK	O	Audio bit clock
17	DIDATA	O	Audio data serial bus
18	HINT	O	Host interrupt
19	N/C	O	Not used
20	VRST	I	Hardware reset (Low Active)
21	HCK	I	Host clock
22	HDIO	I/O	Host serial data bus
23	CDSCK	I	CD bit clock
24	CDDATA	I	CD data input
25	CDLRCK	I	CD left right clock input
26	IPFLG	I	CD data error flag (C2P0)
27	HSEL	I	Host address / data select
28~30	DATA/SFSY/SBSY	I	Not used

4. MPEG board block diagram



CIRCUIT DESCRIPTION

5. Input / Output port

5-1 A / D input port key table
Pin No. : IC701(MN 1872423KEN)

A/D VOLTAGE		0 V	0.65 V	1.23 V
PIN No.	PIN NAME			
26	ANI2	TRAY1 O/C	TRAY2 O/C	ON/STANDBY
27	ANI1	KARAOKE	SHARP	NATURAL
28	ANI0	FF	REV	–

A/D VOLTAGE		1.9 V	2.45 V	3.10 V	3.64 V
PIN No.	PIN NAME				
26	ANI2	PLAY	STOP	DIGEST	
27	ANI1	FLAT	AUTO PAUSE	ECHO UP	ECHO DOWN
28	ANI0	DISC2	DISC1	REPEAT	RANDOM

5-2 Motor driver I/O condition
IC4 (TA7291S)

INPUT		OUTPUT		OPERATION
TR+ (PIN 1)	TR- (PIN9)	OUT (PIN7)	OUT2 (PIN3)	
L	L	OPEN	OPEN	STOP
H	L	H	L	TRAY1OPEN
L	H	L	H	TRAY2 OPEN
H	H	L	L	BREAK

5-3 Motor speed control
IC701(MN1872423KEN)

PIN49	H	L
SPEED	HIGH	LOW

5-4 CD changer I/O
IC701

PIN No.	PORT NAME	T. NAME	FUNCTION
24	ANI4	TRSW2	TRAY1 POSITION DETECT
25	ANI3	TRSW1	TRAY2 POSITION DETECT

5-5 TRSW A/D data
IC 701

A/D VOLTAGE	0V	2.5V	5.0V
TRSW2 (PIN24)	CLOSE	OPEN	OFF
TRSW (PIN25)	CLOSE	OPEN	OFF
SYMBOL	L	M	H

6. CD CHANGER CONTROL FUNCTION

6-1 Mechanism Control I/O Port

6-1-1 Input Port
TRSW1 and TRSW2 will detect mechanism operation mode. Refer to 5. I/O port UPSW detects tray position in tray 1 or 2 mode. L : UPSW = on, H : UPSW = off

6-1-2 Output Port
TR+, TR- and SP CONT control evry motor in the mechanism. Refer to 5. I/O port

6-2 Mechanism Control Specifications

6-2-1 Motor Operation vs Output Port

	TR+	TR-
Normal turn	H	L
Reverse turn	L	H
Stop	H	H
Brake	H	H

6-2-2 Brake Operation Specifications
Brake works before motor will change turning direction. Brake period is 500msec.

6-2-3 Initial Operation
Mechanism will fix to model 1 or 2 when turn on after hard reset mode.

1) Pickup will travel inwards
2) Mechanism will select turning direction of motor and model 1 or 2.

In power on / standby operation, mechanism will select model 1 to mode 4 so it will not have initial operation.

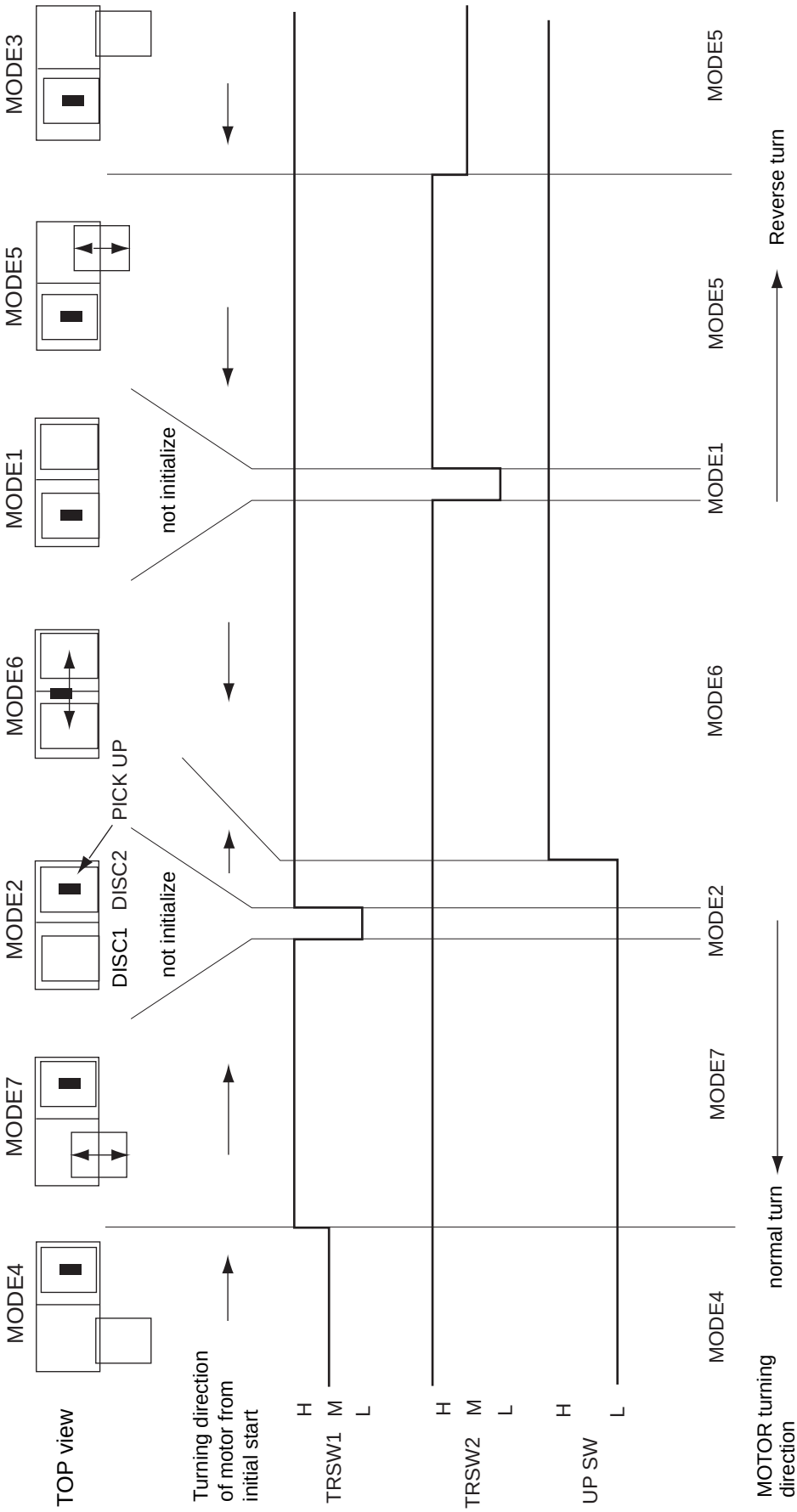
6-2-4 Mechanism error Message

detect sw	wait period	condition	error no.
PU IN	4 sec	only initial operation	4
TRSW1M TRSW2M	8 sec	in tray open mode, TRSW1 or will not have 2.5voltage (M)	1
UPSW	8 sec	in mechanism initial mode, UPSW will not sense voltage	2
TRSW1L TRSE2L	8 sec	in changing disc, TRSW1 or TRSW2 will not have Ovoltage (L)	3

Error message will erase when power is off (standby).

CIRCUIT DESCRIPTION

6-3 mechanism operation.



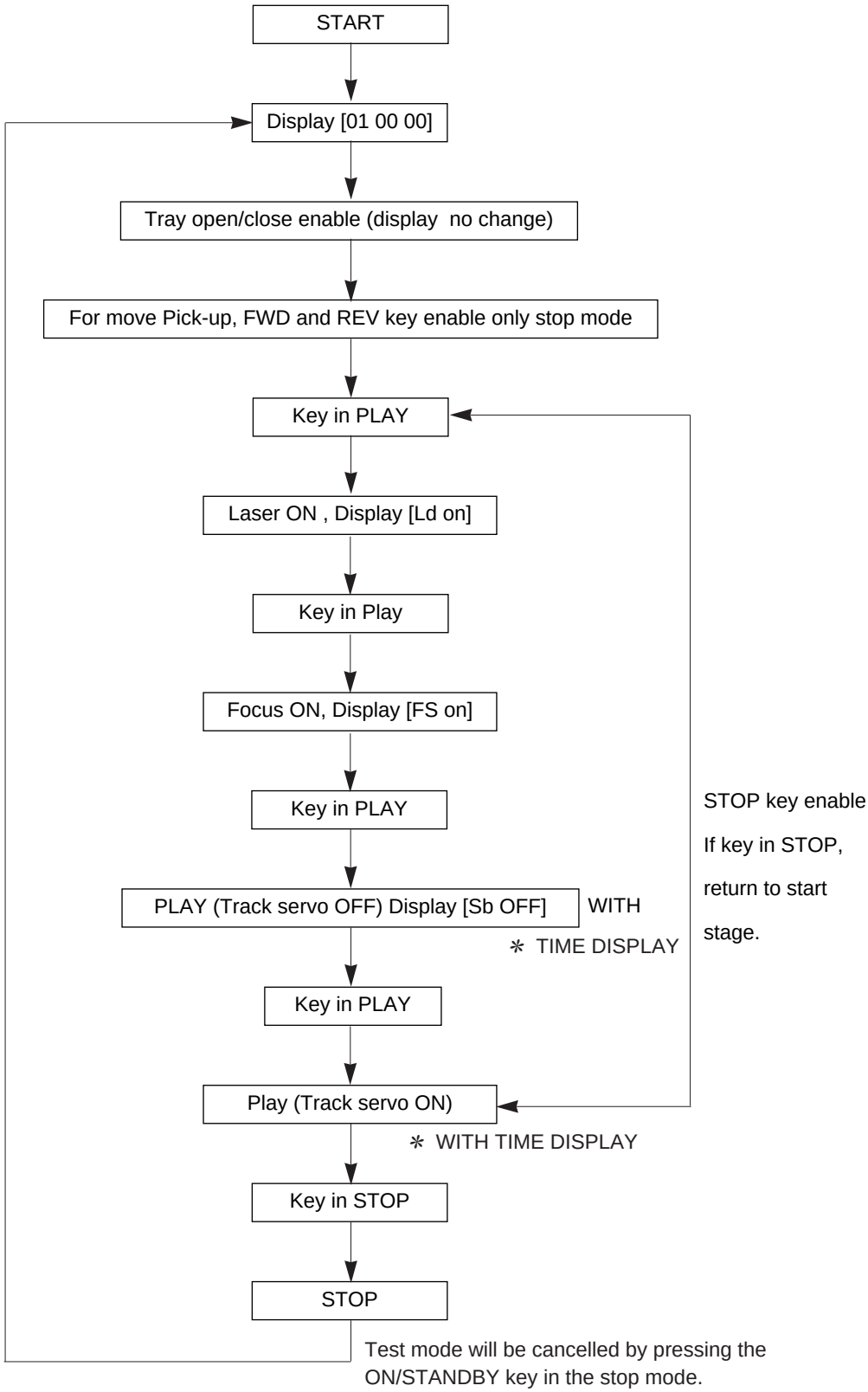
INITIAL : Initialization is finished when mechanism stops in mode 1 or 2.
In initialized mode, mechanism will be in low speed mode.

CIRCUIT DESCRIPTION

7. Test mode

Setting the test mode

: While pressing the AUTO PAUSE, press the ON/STAND BY 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

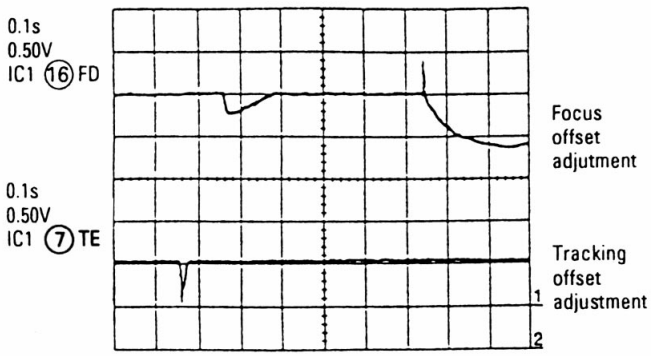


Fig.1

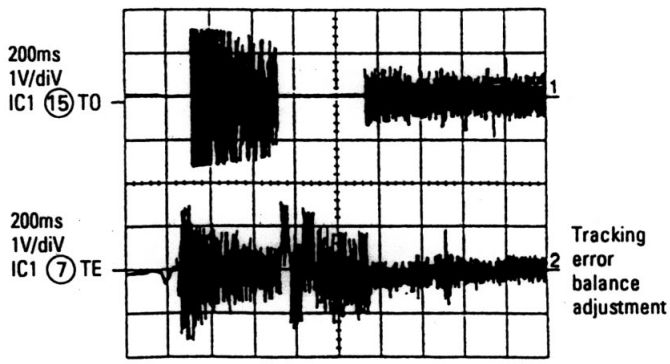


Fig.3

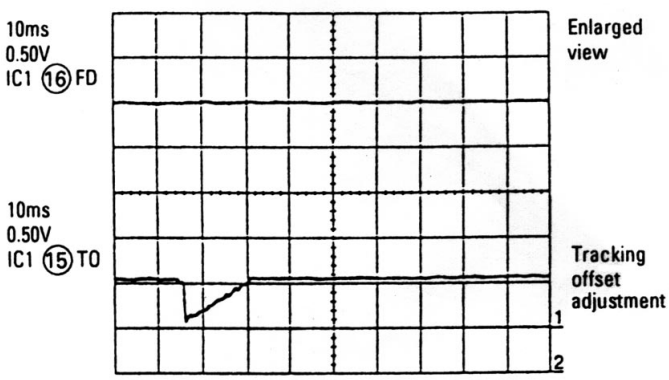


Fig.2

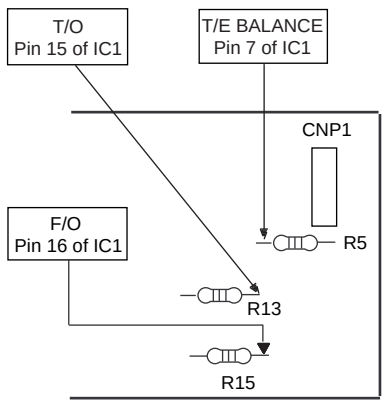
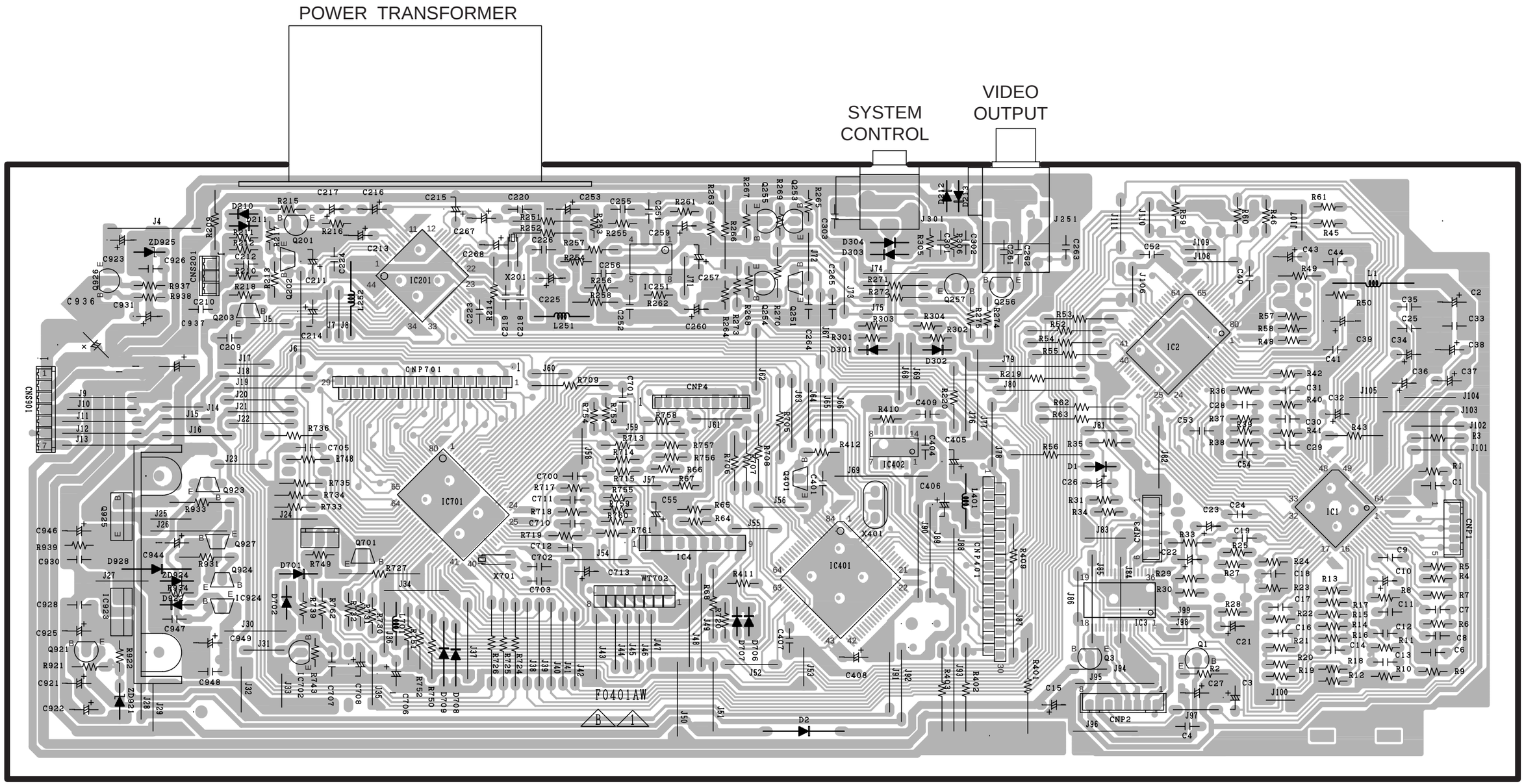


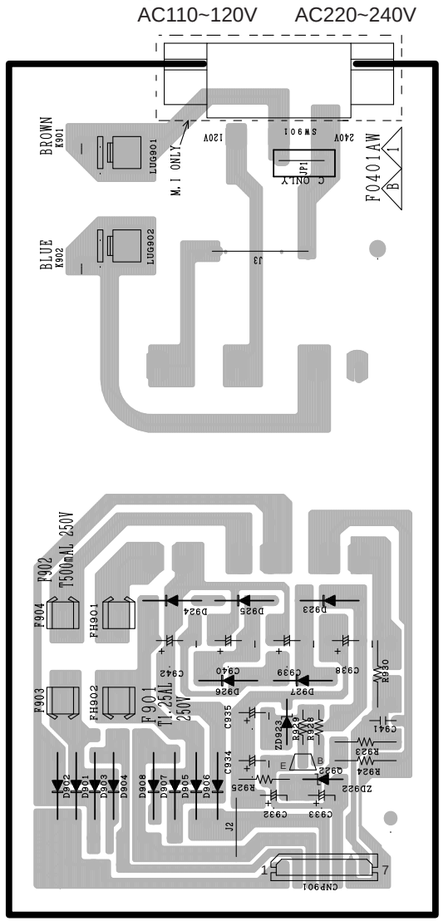
Fig .4 Checking points

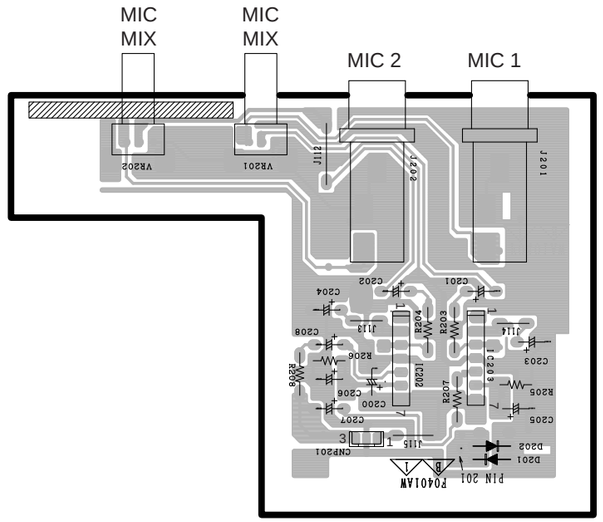
PC BOARD(Component side view)

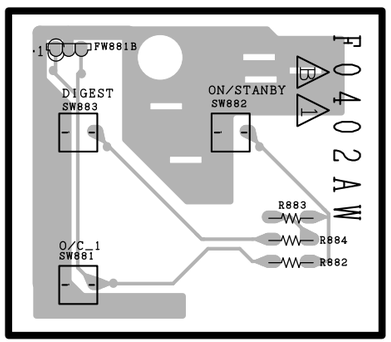


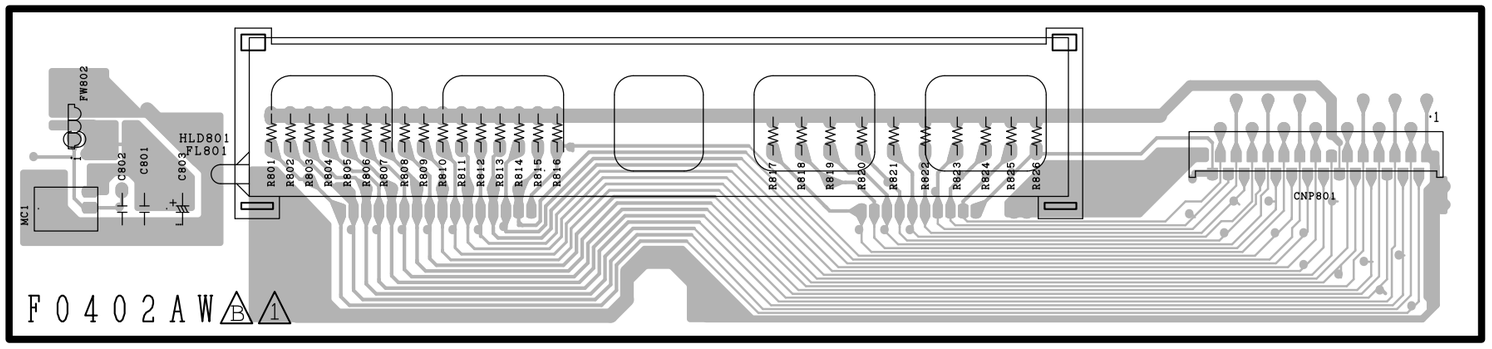
Refer to the schematic diagram for the value of resistors and capacitors.

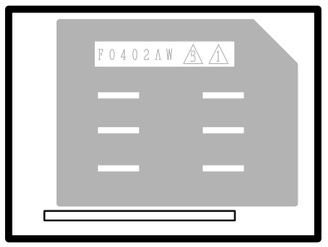
PC BOARD(Component side view)

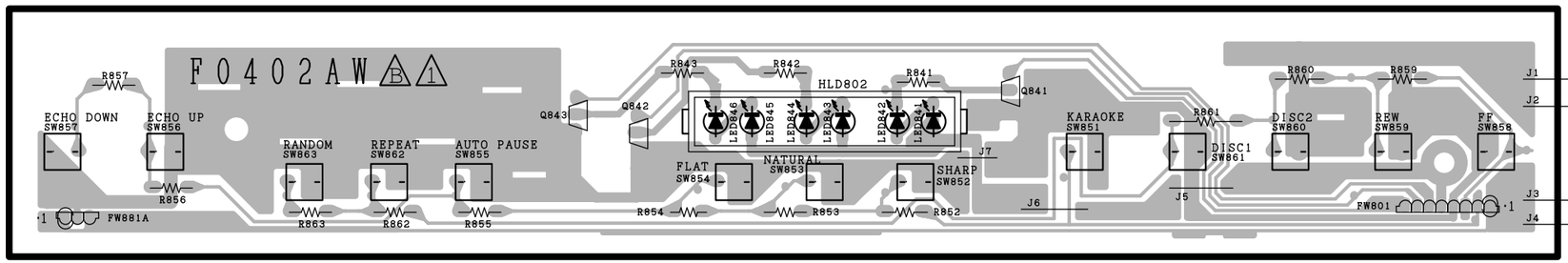


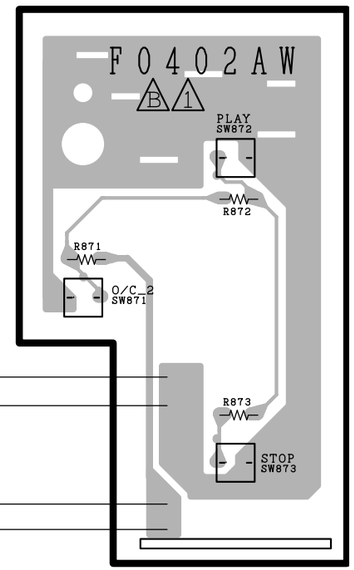












Refer to the schematic diagram for the value of resistors and capacitors.

A B C D E F G H I J

1 2 3 4 5 6 7

CD SERVO

SPACE ONLY

IC1 : LA9241M
IC2 : LC78631E
IC3 : M56748FP
IC4 : TA7291S

Q1,3 : KTA1266GR

D1 : 1SS133
D2 : RL104A

M-PEG CONTROL & DISPLAY u-COM

PICKUP UNIT

ACTUATOR

IC1 RF/SERVO

IC2 D.S.P

IC3 BTL DRIVER

IC4 LOADING MOTOR DRIVER

CK MECHA.

PICKUP LOCATION SWITCH

DH MECHA.

TRAY1(A)

TRAY1 POSITION SWITCH

TRAY2(B)

TRAY2 POSITION SWITCH

MECHA. POSITION SWITCH

M-PEG BOARD (W02-2618-05)

IC401 : MN1872423KEN
IC402 : IC74HCU04F
IC701 : IX0238
IC702 : PST994

IC401
MODULE CONTROLLER

IC701
SYSTEM u-COM

IC402

IC702
RESET

Q401

Q701
RESET

CNP701

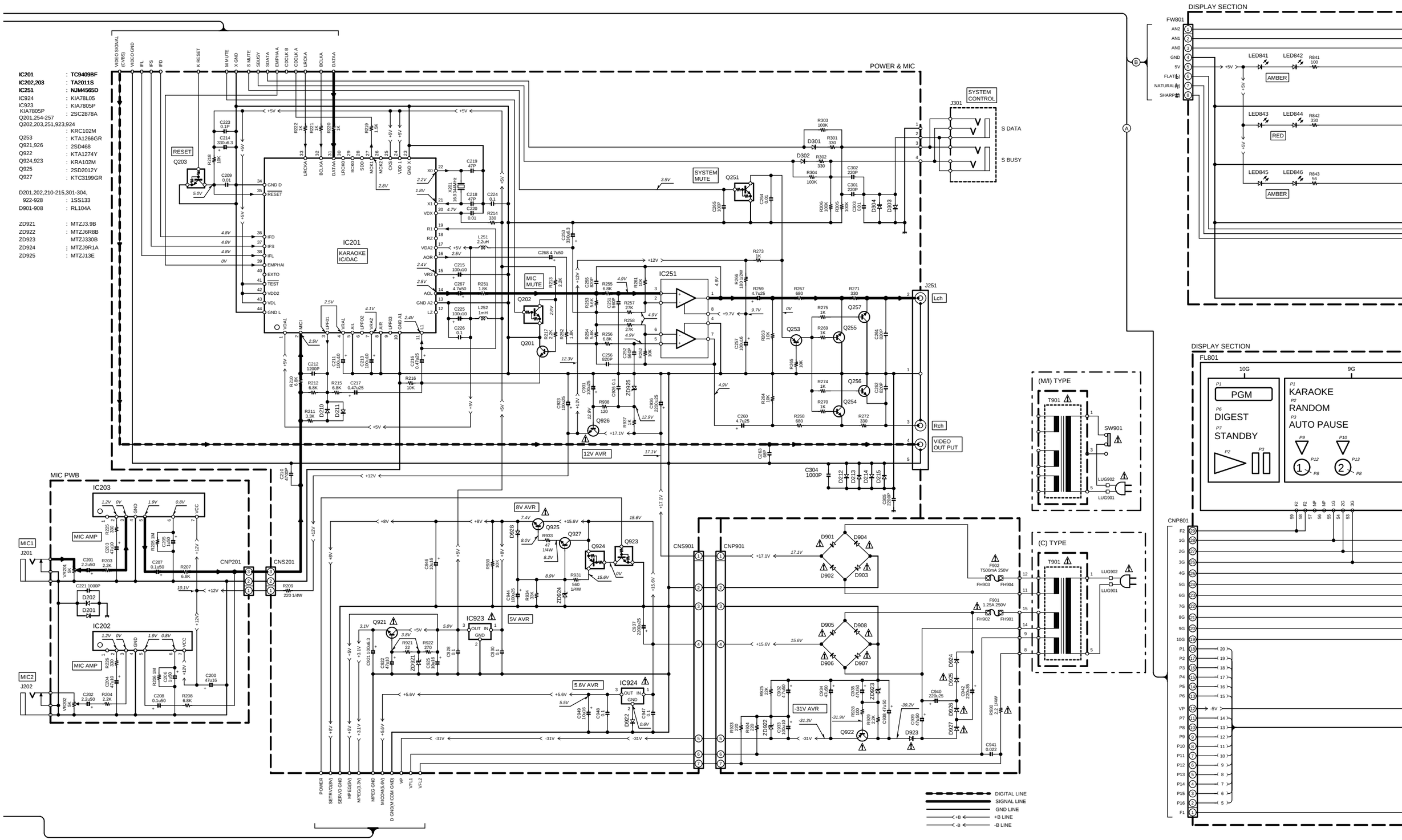
CNP702

Q401,701 : KRC102M

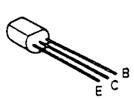
D701,702,706-709 : 1SS133

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). 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.

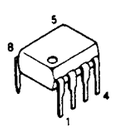
IC201	:	**TC9409BF**
IC202,203	:	**TA2011S**
IC251	:	**NJM4565D**
IC924	:	KIA78L05
IC923	:	KIA7805P
KIA7805P	:	2SC2878A
Q201,254-257		
Q202,203,251,923,924	:	KRC102M
Q253	:	KTA1266GR
Q921,926	:	2SD468
Q922	:	KTA1274Y
Q924,923	:	KRA102M
Q925	:	2SD2012Y
Q927	:	KTC3199GR
D201,202,210-215,301-304,		
922-928	:	1SS133
D901-908	:	RL104A
ZD921	:	MTZJ3.9B
ZD922	:	MTZJ6R8B
ZD923	:	MTZJ330B
ZD924	:	MTZJ9R1A
ZD925	:	MTZJ13E



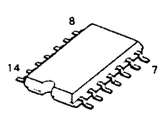
2SC2878A
2SD468



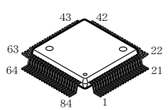
NJM4565D



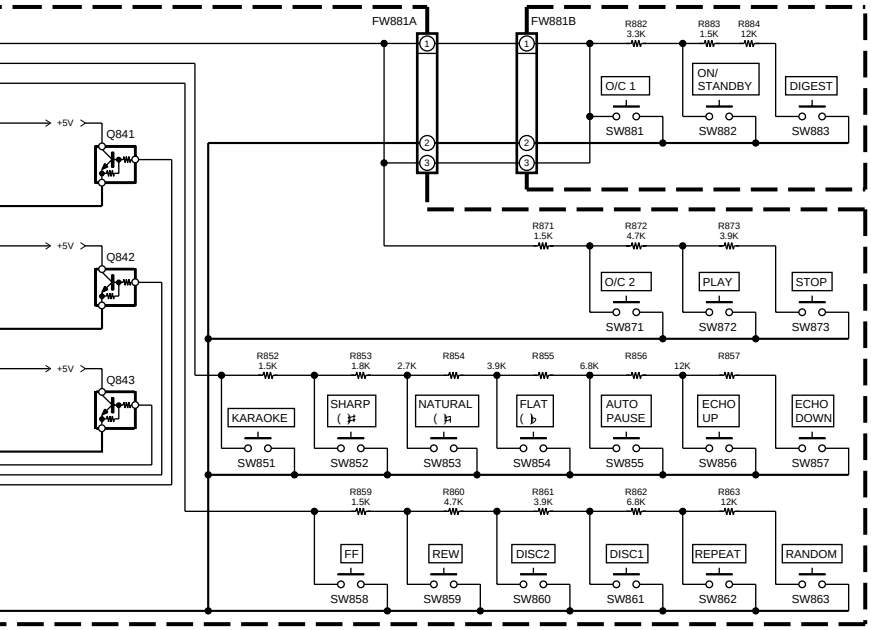
TC74HCU04F



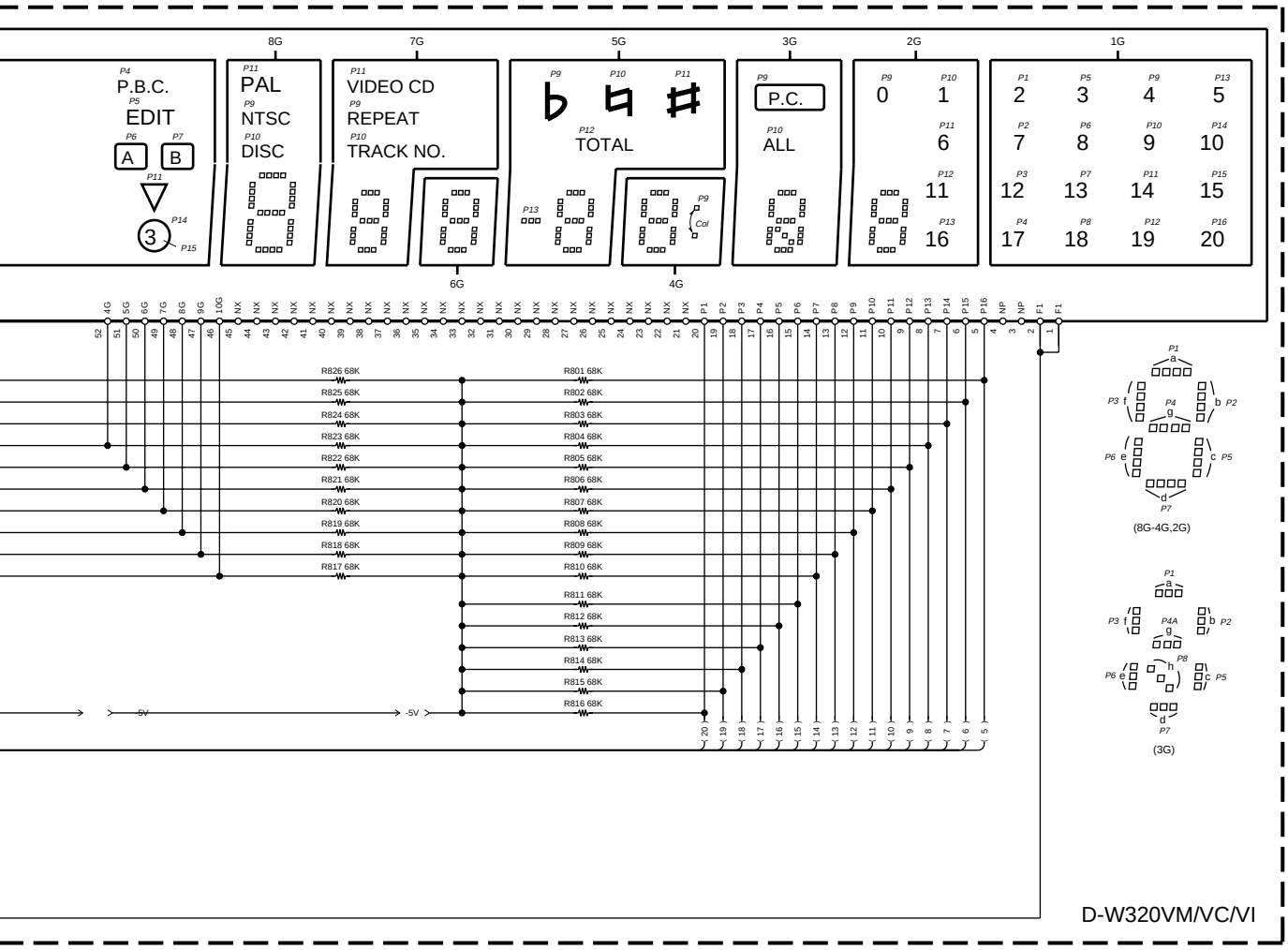
MN1872423KEN



The DC voltage is an actual reading measured with a high impedance type voltmeter. The measurement value may vary depending on the measuring instruments used or on the product. Refer to the voltage dur ing PLAY unless otherwise specified; The value shown in ( ) is the voltage measured at the moment of STOP.



Q841-843 : KRC102M
LED841-846 : EL204AT4



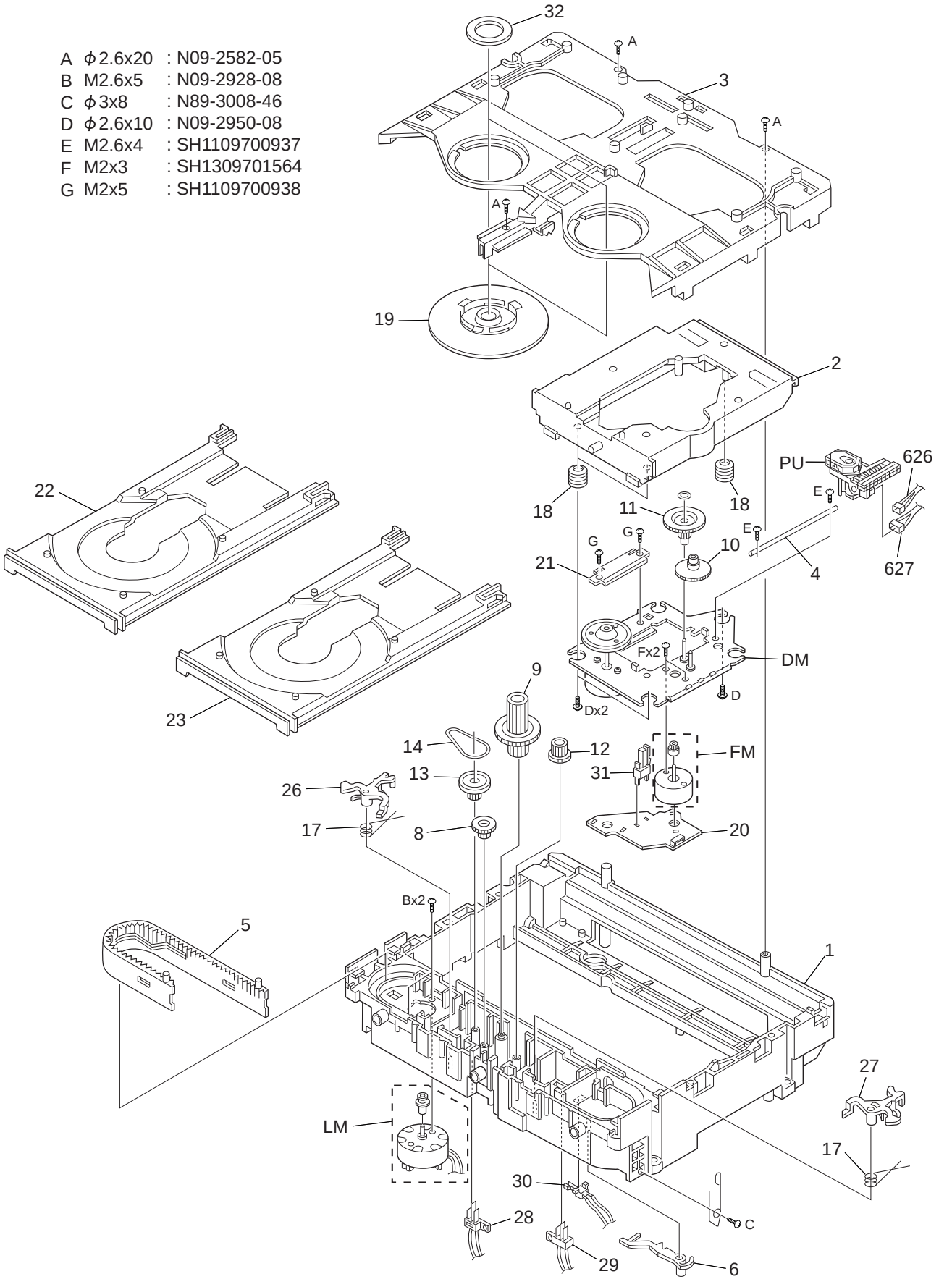
D-W320VM/VC/VI

D-W320V

KENWOOD

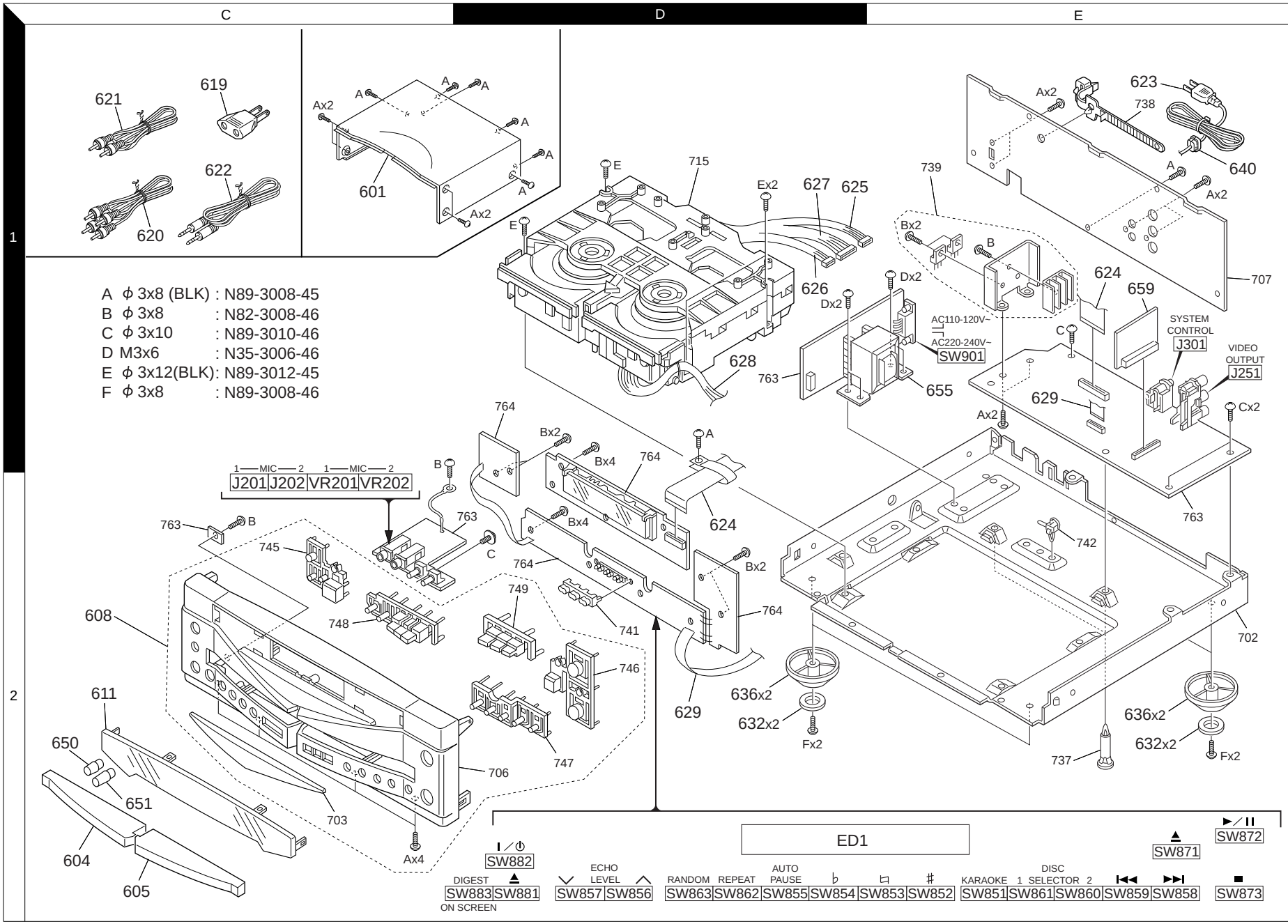
EXPLODED VIEW (MECHANISM)

A	φ2.6x20	: N09-2582-05
B	M2.6x5	: N09-2928-08
C	φ3x8	: N89-3008-46
D	φ2.6x10	: N09-2950-08
E	M2.6x4	: SH1109700937
F	M2x3	: SH1309701564
G	M2x5	: SH1109700938



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

EXPLODED VIEW (UNIT)



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

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❶

Ref. No	Address	New Parts	Parts No.	Description	Destination	Remarks
D-W320V						
601	1C		A01-3504-08	METALLIC CABINET		
604	2C	✻	A21-3663-08	TRAY PANEL(A)		
605	2C	✻	A21-3664-08	TRAY PANEL(B)		
608	2C	✻	A60-1413-08	PANEL		
611	2C	✻	B10-2467-08	FRONT GLASS		
⚠ 619	1C		E03-0115-05	AC PLUG ADAPTER		
620	1C		E30-0505-05	AUDIO CORD		
621	1C		E30-1427-05	VIDEO DORD		
622	1C		E30-2733-05	CORD WITH PLUG		
⚠ 623	1E	✻	E30-2879-08	AC POWER CORD	C	
⚠ 623	1E	✻	E30-2881-08	AC POWER CORD	MI	
624	2D,1E	✻	E35-2118-08	FLAT CABLE(29P)		
625	1D	✻	E35-2119-08	MOTOR WIRE(6P) CNS3-CNP3		
626	1D	✻	E35-2120-08	PU WIRE(5P) CNS1-CNP1		
627	1D	✻	E35-2121-08	WIRE ACTUATOR(8P) CNS2-CNP2		
628	1D	✻	E35-2122-08	DH MECHA WIRE(10P) CNS4-CNP4		
629	2D,1E	✻	E35-2123-08	FLAT CABLE(8P)		
632	2D,2E		G11-2336-08	CUSHION(FOOT)		
636	2D,2E		J02-1197-08	FOOT		
⚠ 640	1E		J42-0083-05	AC CORD BUSH		
650	2C	✻	K29-6973-08	KNOB(MIC1)		
651	2C	✻	K29-6974-08	KNOB(MIC2)		
⚠ 655	1E	✻	L07-2548-08	POWER TRANSFORMER (T901)	C	
⚠ 655	1E	✻	L07-2549-08	POWER TRANSFORMER (T901)	MI	
659	1E	✻	W02-2618-05	MPEG PCB		
-			B46-0326-03	G CARD		
-		✻	B60-3678-08	INST MANUAL(ENGLISH/SP/TAIWAN)	M	
-		✻	B60-3679-08	INST MANUAL(ENGLISH/CHINESE)	C	
-		✻	B60-3680-08	INST MANUAL(ENGLISH/TAIWAN)	I	
-		✻	F15-0285-08	COVER(KNOB)		
-		✻	F15-0286-08	COVER(KNOB)		
-			H10-7322-08	POLYSTYRENE FOAMED FIXTURE		
-			H25-1624-08	PROTECTION BAG		
-		✻	H25-1632-08	PROTECTION BAG		
-		✻	H50-2772-08	ITEM CARTON CASE	MI	
-		✻	H50-2773-08	ITEM CARTON CASE	C	
ELECTRIC PARTS						
C1			CK45FB1E103K	CERAMIC 0.010UF K		
C2			CE04KW1A470M	ELECTRO 47UF 10WV		
C3			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C4			CK45FF1H103Z	CERAMIC 0.010UF Z		
C6			CK45FB1E104K	CERAMIC 0.10UF K		
C7			CQ92FM1H333K	MYLAR 0.033UF K		
C8			CK45FB1E102K	CERAMIC 1000PF K		
C9			CQ92FM1H333K	MYLAR 0.033UF K		
C10			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C11			CK45FB1H683K	CERAMIC 0.068UF K		
C12			CQ92FM1H473K	MYLAR 0.047UF K		
C13			CK45FB1H181K	CERAMIC 180PF K		
C14			CQ92FM1H104K	MYLAR 0.10UF K		
C15			CE04KW1A101M	ELECTRO 100UF 10WV		
C16			CQ92FM1H103K	MYLAR 0.010UF K		
C17			CK45FB1H331K	CERAMIC 330PF K		
C18			CK45FB1E472K	CERAMIC 4700PF K		

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❷

Ref. No	Address	New Parts	Parts No.	Description	Destination	Remarks
C19			CQ92FM1H102K	MYLAR 1000PF K		
C21			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C22			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C23			CE04KW1A470M	ELECTRO 47UF 10WV		
C24			CQ92FM1H332J	MYLAR 3300PF J		
C25			CK45FB1E104K	CERAMIC 0.10UF K		
C26 ,27			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C28			CQ92FM1H272J	MYLAR 2700PF J		
C29			CC45CH1H270J	CERAMIC 27PF J		
C30			CQ92FM1H102K	MYLAR 1000PF K		
C31			CQ92FM1H333K	MYLAR 0.033UF K		
C32			CE04KW1E4R7M	ELECTRO 4.7UF 25WV		
C33			CK45FB1H103Z	CERAMIC 0.010UF Z		
C34			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C35			CK45FB1E103K	CERAMIC 0.010UF K		
C36			CE04KW1A101M	ELECTRO 100UF 10WV		
C37			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C38			CE04KW1HR33M	ELECTRO 0.33UF 50WV		
C39			CE04KW1A331M	ELECTRO 330UF 10WV		
C40 ,41			CK45FF1H103Z	CERAMIC 0.010UF Z		
C43			CE04KW1HR22M	ELECTRO 0.22UF 50WV		
C44			CK45FB1E473K	CERAMIC 0.047UF K		
C52			CK45FF1H103Z	CERAMIC 0.010UF Z		
C53			CK45FB1H221K	CERAMIC 220PF K		
C55			CE04KW1A101M	ELECTRO 100UF 10WV		
C200			CE04KW1C470M	ELECTRO 47UF 16WV		
C201,202			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C203,204			CE04KW1A470M	ELECTRO 47UF 10WV		
C205,206			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C207,208			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C209			CK45FB1E103K	CERAMIC 0.010UF K		
C210			CQ92FM1H472K	MYLAR 4700PF K		
C211			CE04KW1A101M	ELECTRO 100UF 10WV		
C212			CK45FB1H122K	CERAMIC 1200PF K		
C213			CE04KW1A101M	ELECTRO 100UF 10WV		
C214			CE04KW0J331M	ELECTRO 330UF 6.3WV		
C215			CE04KW1A101M	ELECTRO 100UF 10WV		
C216,217			CE04KW1ER47M	ELECTRO 0.47UF 25WV		
C218,219			CC45CH1H470J	CERAMIC 47PF J		
C220			CQ92FM1H103K	MYLAR 0.010UF K		
C221			CQ92FM1H102J	MYLAR 1000PF J		
C223,224			CK45FB1E104K	CERAMIC 0.10UF K		
C225			CE04KW1A101M	ELECTRO 100UF 10WV		
C226			CK45FB1E104K	CERAMIC 0.10UF K		
C251,252			CQ92FM1H561J	MYLAR 560PF J		
C253			CE04KW0J331M	ELECTRO 330UF 6.3WV		
C255,256			CQ92FM1H821J	MYLAR 820PF J		
C257			CE04KW1C101M	ELECTRO 100UF 16WV		
C259,260			CE04KW1E4R7M	ELECTRO 4.7UF 25WV		
C261,262			CQ92FM1H821J	MYLAR 820PF J		
C263			CC45FSL1H680J	CERAMIC 68PF J		
C264			CQ92FM1H103K	MYLAR 0.010UF K		
C265			CK45FB1H101K	CERAMIC 100PF K		
C267,268			CE04KW1H4R7M	ELECTRO 4.7UF 50WV		
C301,302			CK45FB1H221K	CERAMIC 220PF K		

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❸

Ref. No	Address	New Parts	Parts No.	Description		Destination	Remarks
C303			CK45FF1H103Z	CERAMIC	0.010UF Z		
C304			CQ92FM1H102J	MYLAR	1000PF J		
C305			CK45FB1H221K	CERAMIC	220PF K		
C401			CK45FF1H103Z	CERAMIC	0.010UF Z		
C404			CK45FB1E103K	CERAMIC	0.010UF K		
C405,406			CE04KW0J101M	ELECTRO	100UF 6.3WV		
C407			CK45FB1E103K	CERAMIC	0.010UF K		
C408			CE04KW1C100M	ELECTRO	10UF 16WV		
C410-412			CK45FB1E103K	CERAMIC	0.010UF K		
C700			CK45FB1H151K	CERAMIC	150PF K		
C701			CK45FB1E103K	CERAMIC	0.010UF K		
C702,703			CC45CH1H470J	CERAMIC	47PF J		
C705			CQ92FM1H223K	MYLAR	0.022UF K		
C706			CE04KW1A471M	ELECTRO	470UF 10WV		
C707			CQ92FM1H223K	MYLAR	0.022UF K		
C708			CE04KW1A470M	ELECTRO	47UF 10WV		
C710,711			CK45FB1H151K	CERAMIC	150PF K		
C712			CK45FF1H103Z	CERAMIC	0.010UF Z		
C713			CE04KW1C100M	ELECTRO	10UF 16WV		
C921			CE04KW0J101M	ELECTRO	100UF 6.3WV		
C922			CE04KW1A470M	ELECTRO	47UF 10WV		
C923			CE04KW1E101M	ELECTRO	100UF 25WV		
C925			CE04KW1C100M	ELECTRO	10UF 16WV		
C926			CQ92FM1H104K	MYLAR	0.10UF K		
C928			CQ92FM1H104K	MYLAR	0.10UF K		
C930			CQ92FM1H104K	MYLAR	0.10UF K		
C931			CE04KW1E101M	ELECTRO	100UF 25WV		
C932			CE04KW1H4R7M	ELECTRO	4.7UF 50WV		
C933			CE04KW1A101M	ELECTRO	100UF 10WV		
C934,935			CE04KW1H470M	ELECTRO	47UF 50WV		
C936,937			CE04KW1E222M	ELECTRO	2200UF 25WV		
C938,939			CE04KW1H470M	ELECTRO	47UF 50WV		
C940			CE04KW1E221M	ELECTRO	220UF 25WV		
C941			CQ92FM1H223K	MYLAR	0.022UF K		
C942			CE04KW1V221M	ELECTRO	220UF 35WV		
C944			CE04KW1E101M	ELECTRO	100UF 25WV		
C946			CE04KW1C100M	ELECTRO	10UF 16WV		
C947,948			CQ92FM1H104K	MYLAR	0.10UF K		
C949			CE04KW1C100M	ELECTRO	10UF 16WV		
CNP1		✻	E40-8245-08	PIN ASSY			
CNP2		✻	E40-8247-08	PIN ASSY			
CNP3		✻	E40-8246-08	PIN ASSY			
CNP4		✻	E40-8244-08	PIN ASSY			
CNP401		✻	E40-8248-08	M PEG MODULE			
CNP701		✻	E40-8249-08	FLAT CABLE CONNECTOR			
CNP801		✻	E40-8243-08	FLAT CABLE CONNECTOR			
FW801		✻	E35-2123-08	FLAT CABLE			
J201,202		✻	E11-0384-08	PHONE JACK(MIC)			
J251		✻	E63-1036-08	PHONO JCCK(VIDEO)			
J301			E11-0188-05	MINIATURE PHONE JACK(SYS CTRL)			
⚠ F901			F06-1222-05	FUSE(T1.25A 250V)			
⚠ F902			F05-5016-05	FUSE(T0.5A 250V)			
FH901-904			J19-5865-08	FUSE HOLDER			
FL801		✻	B30-2530-08	INDICATOR TUBE			

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❹

Ref. No	Address	New Parts	Parts No.	Description				Destination	Remarks
L1		✻	L90-0314-08	COIL					
L251		✻	L90-0312-08	COIL					
L252		✻	L90-0311-08	COIL					
L401		✻	L90-0313-08	COIL					
L701		✻	L90-0312-08	COIL					
LED841		✻	B30-2529-08	LED					
LED842		✻	B30-2529-08	LED					
LED843		✻	B30-2528-08	LED					
LED844		✻	B30-2528-08	LED					
LED845		✻	B30-2529-08	LED					
LED846		✻	B30-2529-08	LED					
X201		✻	L77-2231-08	CRYSTAL RESONATOR					
X401		✻	L77-2229-08	CRYSTAL RESONATOR					
X701		✻	L77-2230-08	CRYSTAL RESONATOR					
R266			RD14BB2H181J	RD	180	J	1/2W		
R923,924			RD14BB2H221J	RD	220	J	1/2W		
⚠ R930			RD14BB2E2R2J	RD	2.2	J	1/4W		
VR201,202		✻	R39-0018-08	VARIABLE RESISTOR					
SW851-863		✻	S70-0058-08	TACT SWITCH					
SW871-873		✻	S70-0058-08	TACT SWITCH					
SW881-883		✻	S70-0058-08	TACT SWITCH					
⚠ SW901			S90-0125-08	SLIDE SWITCH				MI	
D1			1SS133	DIODE					
D2			RL104A	DIODE					
D201,202			1SS133	DIODE					
D210-215			1SS133	DIODE					
D301-304			1SS133	DIODE					
D701,702			1SS133	DIODE					
D706-709			1SS133	DIODE					
⚠ D901-908			RL104A	DIODE					
⚠ D922-928			1SS133	DIODE					
IC1		✻	LA9241M	IC					
IC2		✻	LC78631E	IC					
IC3			M56748FP	IC					
IC4			TA7291S	IC(BRIDGE DRIVER)					
IC201		✻	TC9409BF	IC					
IC202,203		✻	TA2011S	IC					
IC251			NJM4565D	IC(OP AMP X2)					
IC401			MN1872423KEN	IC(U-CON)					
IC402			TC74HCU04F	IC(HEX INVERTER)					
IC701		✻	IX0238	IC					
IC702		✻	PST994F	IC					
⚠ IC923		✻	KIA7805P	IC					
⚠ IC924		✻	KIA78L05	IC					
Q1			KTA1266GR	TRANSISTOR					
Q3			KTA1266GR	TRANSISTOR					
Q201			2SC2878A	TRANSISTOR					
Q202,203			KRC102M	TRANSISTOR					
Q251			KRC102M	TRANSISTOR					
Q253			KTA1266GR	TRANSISTOR					
Q254-257			2SC2878A	TRANSISTOR					
Q401			KRC102M	TRANSISTOR					
Q701			KRC102M	TRANSISTOR					
Q841-843			KRC102M	TRANSISTOR					
⚠ Q921			2SD468	TRANSISTOR					

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D-W320V

PARTS LIST

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	Ref. No	Address	New Parts	Parts No.	Description	Destination	Remarks
⚠	Q922		✻	KTA1274Y	TRANSISTOR		
	Q923,924			KRC102M	TRANSISTOR		
⚠	Q925		✻	2SD2012Y	TRANSISTOR		
⚠	Q926			2SD468	TRANSISTOR		
	Q927			KTC3199GR	TRANSISTOR		
	ZD921			MTZJ3.9B	ZENER DIODE		
	ZD922			MTZJ6R8B	ZENER DIODE		
	ZD923			MTZJ33B	ZENER DIODE		
	ZD924			MTZJ9R1A	ZENER DIODE		
	ZD925			MTZJ13B	ZENER DIODE		
				MECHANISM ASSY (D40-1587-08)			
	1	3B	✻	A15-0095-08	CHASSIS		
	2	1B	✻	A15-0097-08	SUB CHASSIS(CD MECHA HOLDER)		
	3	1B	✻	A15-0096-08	FRAME(CLAMPER GUIDE)		
	4	2B	✻	J90-0862-08	ROD(GUIDE)		
	5	3A	✻	D16-0721-08	SLIDER		
	6	3B	✻	D10-3803-08	LEVER		
	8	2A	✻	D13-1873-08	GEAR(IDLER)		
	9	2B	✻	D13-1874-08	GEAR(TRAY DRIVE)		
	10	2B	✻	D13-1869-08	GEAR(MIDDLE)		
	11	2B	✻	D13-1870-08	GEAR(DRIVE)		
	12	2B	✻	D13-1875-08	GEAR		
	13	2A	✻	D15-0411-08	PULLEY		
	14	2A	✻	D16-0720-08	BELT		
	17	2A,3B	✻	G01-4054-08	SPRING		
	18	2B	✻	J02-1411-08	INSULATOR		
	19	1A	✻	J11-0832-08	CLAMPER		
	20	2B	✻	W02-2651-08	PCB(MECHA)		
	21	2B	✻	J90-0861-08	GUIDE(RAIL)		
	26	2A	✻	D10-3801-08	LEVER SWITCH(A)		
	27	3B	✻	D10-3802-08	LEVER SWITCH(B)		
	28	3B		S74-0080-08	LEAF SWITCH		
	29	3B		S74-0080-08	LEAF SWITCH		
	30	3B	✻	S74-0083-08	LEAF SWITCH		
	31	2B	✻	S68-0063-08	LEAF SWITCH		
	32	1B	✻	T99-0609-08	MAGNET		
	AA			N09-2582-05	SCREW		
	AB			N09-2928-08	SCREW		
	AC			N89-3008-46	SCREW		
	AD			N09-2950-08	SCREW		
	AE			SH1109700937	SCREW		
	AF			SH1309701564	SCREW		
	AG			SH1109700938	SCREW		
	DM	2B	✻	T42-0911-08	DISC MOTOR ASSY(SPIN)		
	FM	2B	✻	T42-0912-08	FEED MOTOR ASSY(SLIDE)		
	LM	3A	✻	T42-0914-08	MOTOR ASSY(TRAY)		
	PU	2B	✻	T25-0075-08	PICKUP ASSY		

L : Scandinavia **K :** USA **P :** Canada **R :** Mexico **I :** Malaysia
Y : PX(Far East, Hawaii) **T :** Europe **E :** Europe **G :** Germany **C :** China
Y : AAFES(Europe) **X :** Australia **M :** Other Areas

⚠ indicates safety critical components.

SPECIFICATION

[Format]

System .....Video CD player system
Laser .....Semiconductor laser

[D/A convertors]

D/A conversion .....1 Bit
Oversampling .....8 fs (352.8 kHz)

[Audio]

Frequency response .....10 Hz~20 kHz, ±1.0 dB
Signal to noise ratio.....More than 92 d B
Dynamic range .....More than 90 dB
Total harmonic distortion+noise
.....Less than 0.005% (at 1 kHz)
Wow flutter ..... Unmeasurable limit
Output level/impedance
Fixed.....1.2 V/1.1 KΩ
Video output format ..... PAL/NTSC
Video output level.....1 Vp-p(75 Ω)

[General]

Power consumption .....20 W
Dimensions .....W: 400 mm (15-3/4")
H : 141 mm (5-9/16")
D : 379 mm (14-15/16")
Weight (Net).....4.9 kg (10.8 lb)

Notes
1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. Sufficient performance may not be exhibited at extremely cold locations (where water freezes.).

Note:
Component and circuit are subject to modification to insure best operation under differing local conditions. This manual is based on Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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