

DMF-9020/9020(S)

MD-2070

SERVICE MANUAL

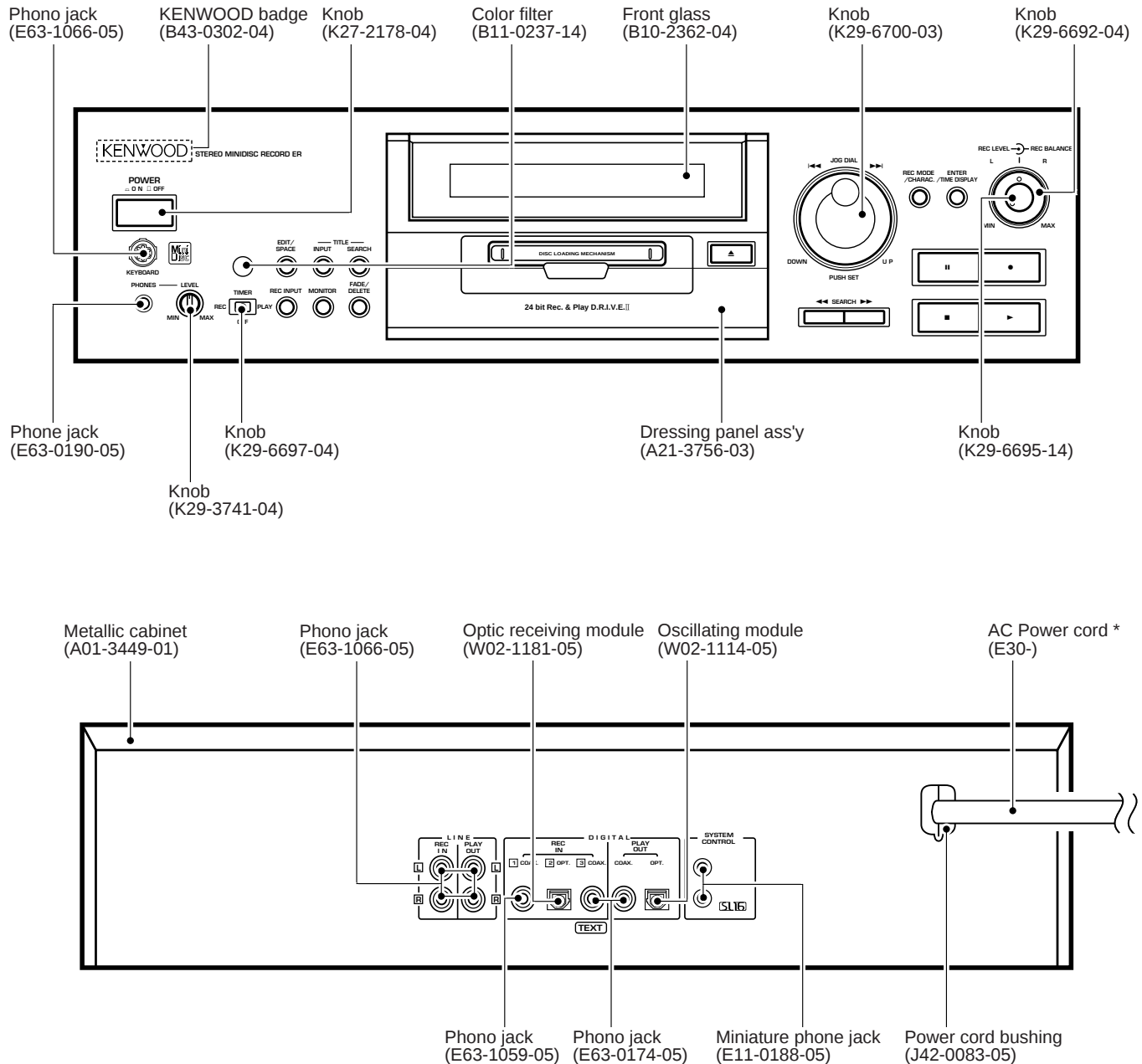


Illustration is DMF-9020.
Refer to parts list on page 29.

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 Regulation No.21 CFR 1040.10, Chapter 1, Subchapter J.

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

DMF-9020/9020(S)/MD-2070

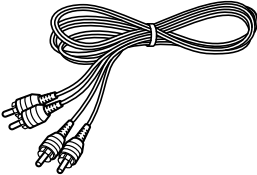
CONTENTS/ACCESSORIES/CAUTIONS

CONTENTS

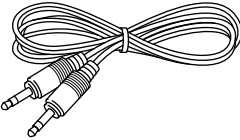
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Accessories

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



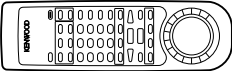
System control cord (1)
(E30-2733-05)



Optical fiber cable (1)
(B19-1529-05)



Remote control unit (1)
RC-M0905
(A70-1255-05)



Batteries (2)



Battery cover (A09-1106-08)

Cautions

Note related to transportation and movement

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

1. Set the **POWER** key to **ON** without loading a Mini Disc.
 - Check that no disc is present in the unit.
2. Wait a few seconds and verify that the display shown appears.
3. Set the **POWER** key to **OFF**.

NO DISC

Operation to reset

The microprocessor may fall into malfunction (impossibility to operate erroneous display, etc.) when the power cord is unplugged while power is ON or due to an external factor. In this case, execute the following procedure to reset the microprocessor and return it to normal condition.

With the *POWER* key left to ON, unplug the power cord from the power outlet then, while holding the eject (▲) key depressed, plug the power cord again.

- Please note that resetting the microprocessor clears the contents stored in, it returns the microprocessor to the condition when it left the factory.

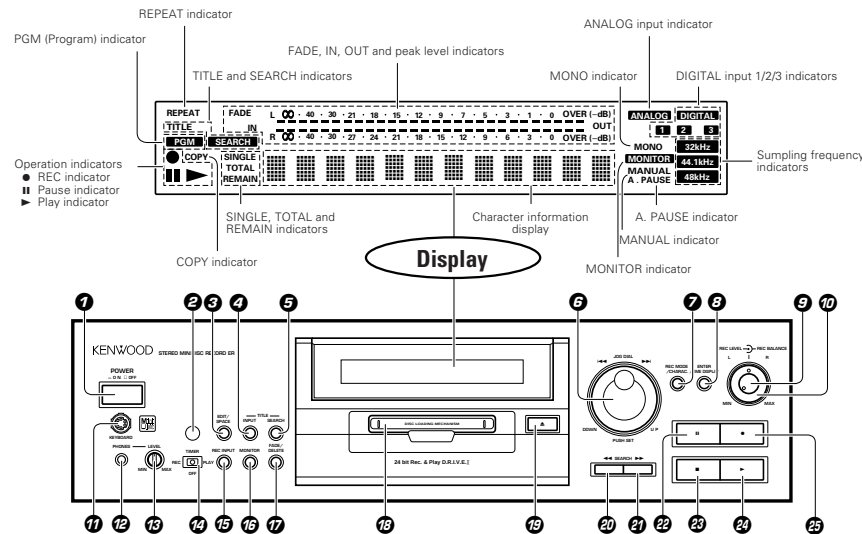
Caution on condensation

Condensation (of dew) may occur inside the unit when there is a great difference in temperature between this unit and the outside. This unit may not function properly if condensation occurs. In this case, leave the unit for a few hours with the power left ON, and restart the operation after the condensation has dried up.

Be specially cautious against condensation in a following circumstance:

When this unit is carried from a place to another across a large difference in temperature, when the humidity in the room where this unit is installed increases, etc.

Display / Main unit



Description of main unit keys

- 1 POWER key**
: Press to turn the unit ON and OFF.
: The unit may enter the standby mode when the **POWER** key is pressed to turn it ON. This is because the unit holds the memory that it has been put to the standby mode by the remote control unit in the last operation.
- 2 Remote control sensor**
- 3 EDIT/SPACE key**
EDIT
: Press to switch the editing mode ON/OFF.
SPACE
: Press to insert a blank space character during the title input operation.
- 4 TITLE INPUT key**
: Press to switch the title input mode ON/OFF.
- 5 TITLE SEARCH key**
: Press to switch the title search mode ON/OFF.
: During title editing, press to switch the title change input mode between the "overwrite mode" and "insert mode".
- 6 JOG DIAL**
Skip down (◀◀)/ Skip up (▶▶) knob
: During playback, rotate to skip tracks.
: Before starting recording in record mode, rotate to select the recording setting adjustment mode.
: During title search, rotate to select a track number.
: During title input, rotate to select a track number or a character.
: During editing, rotate to select the editing mode or a track number.
PUSH SET knob
: For use in setting the editing result and input title in memory.
: When pressed in the recording pause mode, the MEMORY REC function is set and recording starts from the sound approximately 6 seconds before the current sound.
- 7 REC MODE/CHARAC. (Character) key**
REC MODE
: Press to switch the recording setting adjustment modes (record modes) ON/OFF.
CHARAC.
: Press to select a character group during the title input operation.
- 8 ENTER/TIME DISPLAY key**
ENTER
: For use in executing the editing and title input operations.
TIME DISPLAY
: Press to switch the time and title display.
- 9 REC LEVEL knob**
: Rotate to adjust the analog recording level.
- 10 REC BALANCE knob**
: Rotate to adjust the analog recording balance.
- 11 Keyboard connector**
: Connect an IBM PC compatible keyboard (optional) here.
- 12 PHONES jack**
: Connect stereo headphones (optional) here.
- 13 PHONES LEVEL knob**
: Rotate to adjust the volume of the headphones.
- 14 TIMER switch**
: This switch is used in timer playback and timer recording.
- 15 REC INPUT key**
: Press to switch the recording input line between digital (optical/coaxial), analog and monaural.
- 16 MONITOR key**
: Press to monitor the sound being input from the source while the unit is in stop mode.
- 17 FADE/DELETE key**
FADE
: Press to switch the fade mode ON/OFF.
DELETE
: During title editing, press to delete a character. During track editing, press to delete a track.
- 18 Mini Disc insertion slot**
: When a Mini Disc is inserted while the unit is in the standby mode, it is turned ON automatically.
- 19 Eject (▲) key**
: Press to eject the Mini Disc.
- 20 Manual search down (◀◀) key**
: This key also functions as the fast reverse key during playback.
: During an editing mode, press to move the title input cursor or to scroll the track title display to the left.
- 21 Manual search up (▶▶) key**
: This key also functions as the fast forward key during playback.
: During an editing mode, press to move the title input cursor or to scroll the track title display to the right.
- 22 Pause (⏸) key**
: Press to let playback or recording pause temporarily.
- 23 Stop (■) key**
: Press to stop playback or recording.
- 24 Play (▶) key**
: Press to start playback.
- 25 Record (●) key**
: Press to start recording.
In stop mode
: When the ● key is pressed while a recordable disc is present in the unit, it enters record-pause mode.
(It enters record-pause mode at the position immediately after the last existing track.)
In record-pause mode
: When the ● key is pressed, the SOUND SYNCHRO REC standby mode is set.
: In the SOUND SYNCHRO REC standby mode, the set functions in the same way as in the normal recording pause mode.

Remote control unit

The remote control unit incorporates the basic operation keys as well as a variety of applied operation keys so that it can be used in a wide range of purposes.

The keys on the remote control unit with the same names as on the main unit have the same function as the keys on the main unit.

1 ON/STANDBY key

: Press to turn the unit between ON and STANDBY (I/O) modes.

2 Character editing keys

TIME DISPLAY key

: Press to switch the time and title display.

CHARA. (Character)/ P.MODE (Play Mode) key

CHARA.

: Press to select a character group during the title input operation.

P.MODE

: Press to initiate the program mode.

DELETE / CLEAR key

DELETE

: During title input, press to delete a character.

CLEAR

: During editing, press to clear a selected track number.

: In program mode, press to clear the program.

SPACE / CHECK key

SPACE

: During title input, press to insert a blank space character.

CHECK

: In program mode, press to check the program contents.

3 MONITOR key

: Press to monitor the sound being input from the source while the unit is in stop mode.

METER key

: Press to switch the level meter display contents.

RANDOM key

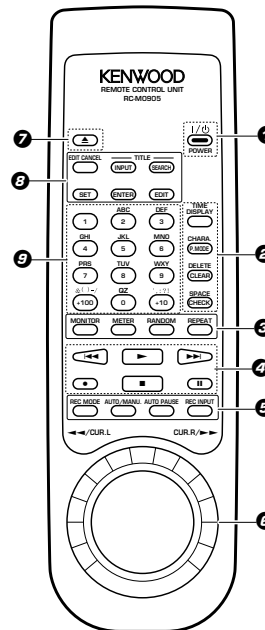
: Press to initiate the random play mode.

REPEAT key

: Press to switch the repeat modes for repeat playback.

4 Basic operation keys

- ▶ : Play key
- ◀◀, ▶▶ : Skip down/up keys
- : Record key
- : Stop key
- || : Pause key



Model: RC-M0905
Infrared ray system

5 CURSOR / ◀◀, ▶▶ shuttle CURSOR

: During title input, rotate to move the cursor.

: Use this during playback for forward and reverse search.

6 EJECT (▲) key

7 Editing mode keys

EDIT CANCEL key

: Press to cancel the editing operation.

TITLE INPUT key

: Press to switch the title input mode ON/OFF.

TITLE SEARCH key

: Press to switch the title search mode ON/OFF.

: During title editing, press to switch the title change input mode between the "overwrite mode" and "insert mode".

SET key

: This key is used in the title assignment or editing operations.

: When pressed in the recording pause mode, the MEMORY REC function is set and recording starts from the sound approximately 6 seconds before the current sound.

ENTER key

: Press to execute editing or enter the input title in memory.

EDIT key

: Press to switch the editing mode ON/OFF.

8 Numeric keys

0-9

: Press when selecting a track number directly.

+10

: Press when selecting a track number 10 or more.

+100

: Press when selecting a track number 100 or more.

: These keys are also used to select a character or symbol during title editing.

9 Recording-related keys

REC MODE key

: Press to switch the recording setting adjustment modes ON/OFF.

AUTO/MANU. key

: Selects whether the track numbers are to be marked automatically during recording (AUTO) or to be marked manually after it (MANUAL).

AUTO PAUSE key

: When this key is pressed, the pause mode is initiated automatically at the point where the track number changes during playback.

: When pressed in the recording or recording standby mode, the AUTO REC PAUSE mode is turned on.

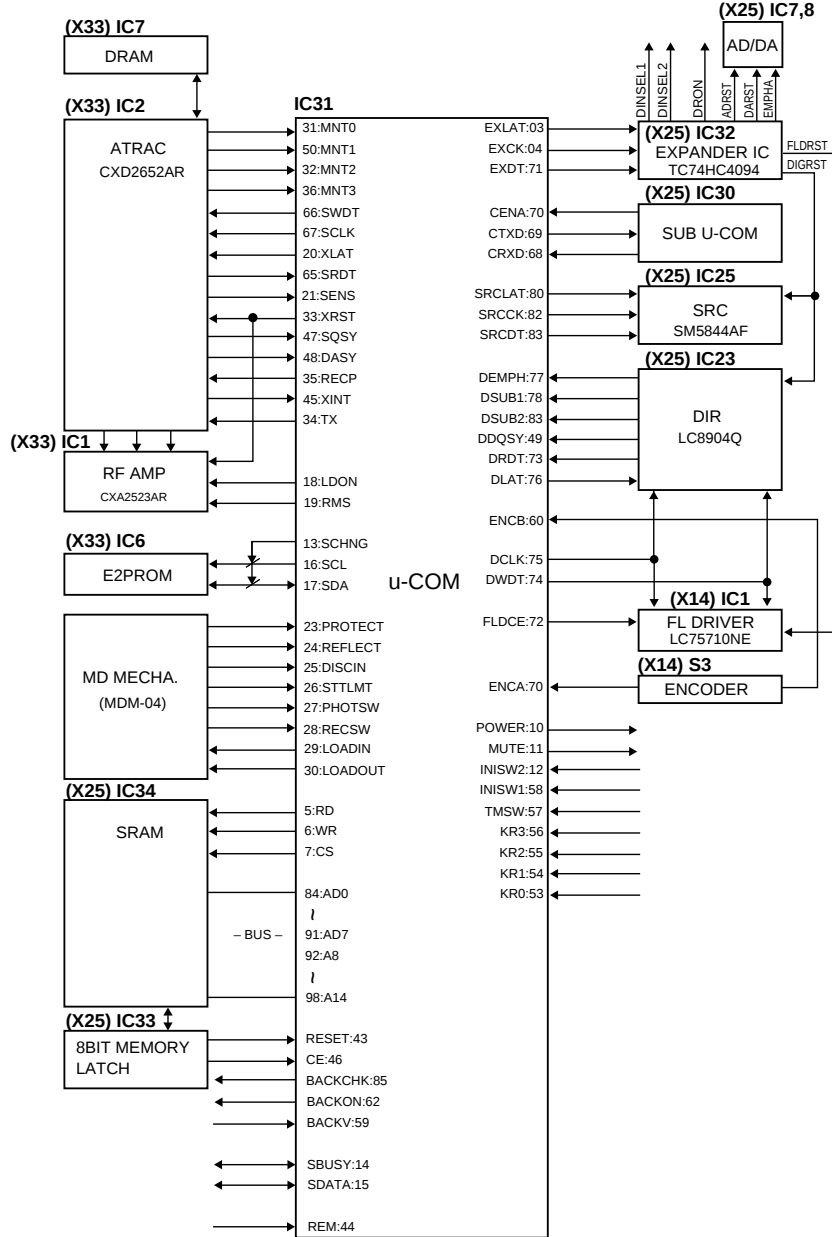
REC INPUT key

: Press to switch the recording input line between digital (optical/coaxial), analog and monaural.



1. Mechanism microprocessor : uPD784215GF533 (X25: IC31)

1-1 Microprocessor periphery block diagram



1-2 Pin description

No.	Name	I/O	Description
1,2	-	O	N.C.
3	EXLAT	O	Extension port latch
4	EXCL	O	Extension port clock H; DIGITAL 1
5	RD	O	SRAM read strobe
6	WR	O	SRAM write strobe
7	CS	O	SRAM CS L; SRAM enable
8	ASTB	O	SRAM address strobe
9	Vdd	-	Power supply (Microprocessor)
10	POWER	O	Power terminal H; Power ON
11	MUTE	O	Mute control output L; Mute ON
12	INISW2	O	Destination selector H; DMF-9020,MD-2070
13	SCHNG	O	E2PROM data IN/OUT change-over H; SDA output
14	SBUSY	I/O	16 serial busy
15	SDATA	I/O	16 serial data
16	SCL	O	E2PROM clock
17	SDA	I/O	E2PROM data
18	LDON	O	Laser ON / OFF control port H; LD ON
19	RMS	O	Pick RMS H; ON
20	XLAT	O	System IC latch
21	SENS	I	System IC sens
22	Vpp	-	GND
23	PROTECT	I	Detection port of protect switch L; Protect ON
24	REFLECT	I	Detection port of reflect switch H; Low reflect
25	DISCIN	I	Detection of disc input switch L; Disc out SW ON
26	STLMT	I	Detection port of limit switch L; Start limit SW ON
27	PHOTSW	I	Detection of mechanism play position L; Photo sensor ON
28	REC SW	I	Input port of detection from REC position switch L; REC SW ON
29	LOADIN	O	Output port of loading motor control signal L; Loading OUT
30	LOADOUT	O	Output port of loading motor control signal L; Loading IN
31	MNT0	I	FOK signal from CXD2652AR (IC2) L; Focus ON
32	MNT2	I	Input port of monitor 2 from CXD2652AR (IC2)
33	XRST	O	Output port of reset signal to CXD2652AR (IC2)
34	TX	O	Output port of recording permitted signal
35	RECP	O	Laser power control to CXD2652AR (IC2)
36	MNT3	I	Input port of monitor 3 from CXD2652AR (IC2)
37	Vdd	-	Power supply (Microprocessor)
38,39	X2.1	-	Clock OUT/IN (12.5MHz)
40	Vss	-	GND
41	OPEN	O	No used
42	GND	I	No used
43	RESET	I	Microprocessor hard reset
44	REM	I	Remocon signal input terminal
45	XINT	I	Input port of interrupted status from CXD2652AR (IC2)
46	CE	I	Microprocessor chip enable H; Enable / L; disable
47	SQSY	I	Input port of sub code Q from CXD2652AR (IC2)
48	DQSY	I	U-bit of digital IN / SUB Q sync input of CD format from CXD2652AR (IC2)
49	DDQSY	I	DIR.(LC8904Q)SUB-Q thrust
50	MNT1	I	Input port of track jump detection from CXD2652AR (IC2)
51	Vdd	-	Microprocessor power supply (+5V)
52	AVref 0	-	A/D reference voltage (Connect Vdd)
53-56	KR0-KR3	-	Key return (KR0-KR3)
57	TMSW	I	Timer switch input 0.0V OFF 1.25V PLAY 3.7V REC 5.0V
58	INISW1	I	Detection selector
59	BACK	I	Back up voltage detection (Less than 2.2V : NG)
60	ENCB	I	Encoder input B
61	GND	-	GND
62	BACK ON	O	Back up charge control H; Charge ON
63	ENCA	I	Rotary encoder A
64	AVref 1	-	D/A reference voltage (+5V)
65	SRDT	I	Data for reading input from CXD2652AR (IC2)

No.	Name	I/O	Description
66	SWDT	O	Data for writing to CXD2652AR (IC2)
67	SCLK	O	Serial clock to CXD2652AR (IC2)
68,69,70	-	-	N.C.
71	EXDT	O	Extension port data
72	FLDCE	O	CE to FL driver IC(LC75710NE) H; ON
73	DRDT	I	Data for reading form DIR.(LC8904Q)
74	DWDT	O	Data for writing to DIR.(LC8904Q) ,FL driver IC(LC75710NE)
75	DCLK	O	Clock to DIR.(LC8904Q) ,FL driver IC(LC75710NE)
76	DLAT	O	Latch to DIR.(LC8904Q)
77	DEMPH	I	Emphasis form DIR.(LC8904Q) H; ON
78	DSUB1	I	SUB1 form DIR.(LC8904Q)
79	DSUB2	I	SUB2 form DIR.(LC8904Q)
80	SRCLAT	O	Latch to SRC.(SM5844AF)
80	-	O	No used / pull up
82	SRCK	O	Clock to SRC.(SM5844AF)
83	SRCDT	O	Data to SRC.(SM5844AF) H; ON
83	ADRST	O	Data to SM5844AF (IC25) ADC reset
84~91	AD0~AD7	O	SRAM address / data (AD0~AD7)
92~99	A8~A15	O	SRAM address (A8~A15)
100	Vss	-	GND

1-3 Initialization

※ POWER	= ON (DM-9090,DM-5090)
※ REC INPUT	= ANALOG
※ DIGITAL REC LEVEL	= 0 dB
※ AUTO/MANUAL	= AUTO
※ AUTO CUT	= OFF
FADE	= OFF
PLAY MODE	= TRACK
REPEAT	= OFF
TIME DISPLAY	= SINGLE(+)
LEVEL METER MODE	= NORMAL MODE
※ AUTO TNO TIME	= 2 sec
※ AUTO TNO LEVEL	= 0 (-55 dB)
※ FADE TIME	= 3sec
※ REC END WRITE	= ON
DRIVE	= ON
※ PRESET TITLE	= PRE1 : Pops PRE2 : Rock PRE3 : Classic PRE4 : Jazz PRE5 : Disco PRE6 : Best Hits PRE7 : Air Check PRE8 : No. PRE9 : Vol.

※ : Backup item

1-4 Switch control table

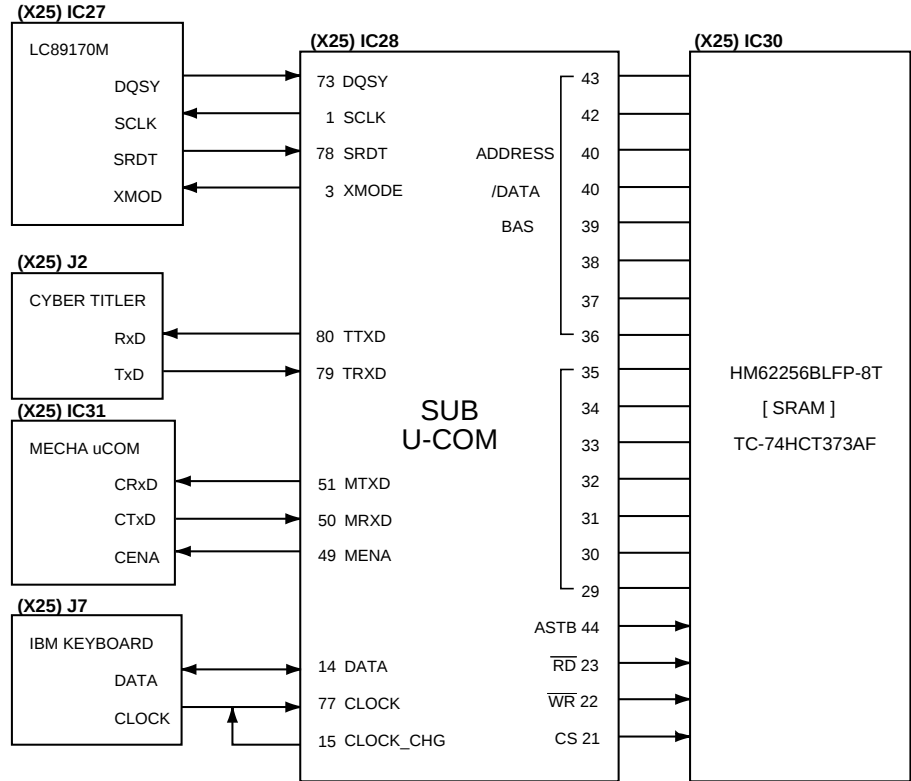
Model	INISW ⑤⑧	INISW ⑫②
DMF-9020	3.5 (V)	HIGH
MD-2070		

1-5 Key voltage matrix

	0.0V	0.8V	1.6V	2.4V	3.2V	4.0V
KR0 POWER	EJECT	PAUSE	-	FF	-	-
KR1 STOP	REC	PLAY	-	FB	TT SEARCH	-
KR2 FADE/DEL	EDIT/SPACE	TT INPUT	REC INPUT	MONITOR	-	-
KR3 SET	ENTER/TIME	REC MODE/CHR	-	-	-	-

2. Sub microprocessor : uPD784035GC836 (X25 : IC28)

2-1 Microprocessor periphery block diagram



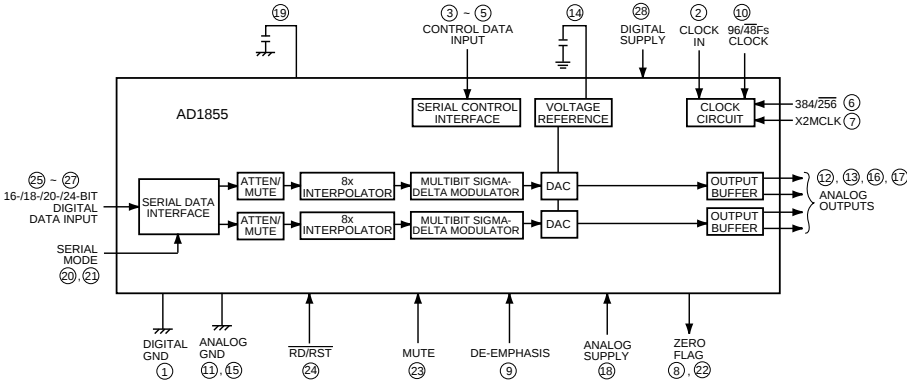
2-2 Pin description

Pin No.	Port Name	I/O	Description
1	SCLK	O	Text data read clock
2	NC	O	no use
3	XMODE	O	Text data decode LSI reset L : POWER DOWN
4-6	NC	O	no use
7	RESET	-	Microprocessor reset
8	VDD	-	Microprocessor power supply (+)
9	X2	O	Oscillation (12MHz)
10	X1	I	Oscillation (13MHz)
11	VSS	-	Microprocessor GND
12,13	NC	O	no use
14	DATA	I/O	IBM key board I/F data line
15	CLOCK_CHG	O	IBM key board I/F data output line H : CLOCK LINE LOW
16-20	NC	O	no use

Pin No.	Port Name	I/O	Description
21	CS (SRAM)	O	SRAM control. chip select H : POWER DOWN
22	WR	–	SRAM control. write strobe signal output
23	RD	–	SRAM control. read strobe signal output
24-28	NC	O	no use
29-35	A14-8	–	SRAM control. address bus
36-42	AD7-1	–	SRAM control. address/data bus
43	AD0	–	SRAM control. address/data bus L : POWER DOWN
44	ASTB	–	SRAM control. address strobe signal output
45	VSS	–	Microprocessor GND
46	TEST	–	Microprocessor TEST
47,48	NC	O	no use
49	MENA	O	Mechanism-microprocessor. enable
50	MRXD	–	Mechanism-microprocessor. data in line (UART)
51	MTXD	O	Mechanism-microprocessor. data out line (UART)
52-54	NC	O	no use
55	VDD	–	Microprocessor power supply (+)
56-61	NC	I	no use
62	CTR_JIS	I	Cyber titler. for JIS code H : JIS
63	TXT_JIS	–	CD TEXT. for JIS code H : JIS
64	AVDD	–	A/D power supply
65	AVref1	–	A/D reference voltage input port (+5V)
66	AVSS	–	A/D GND
67,68	NC	O	no use
69	AVref2	–	D/A reference voltage input port (+5V)
70	AVref3	–	A/D reference voltage input port (GND)
71,72	NC	I	no use
73	DQSY	–	Text data read permit L : ↓ interrupt
74-76	NC	I	no use
77	CLOCK	I	IBM key board I/F clock line L : ↓ interrupt
78	SRDT	I	Text data read line
79	TRXD	I	Cyber titler. data in line (UART)
80	TTXD	O	Cyber titler. data out line (UART)

3. D/A converter : AD1855 (X25 : IC7)

Block diagram (No. of ○ : pin No.)



4. Test mode of the unit

4-1 Setting of the test mode

While pressing the [REC/INPUT] key, plug the AC power cord into the AC wall outlet.

4-2 Contents of the test mode

Choose the 3 mode by TIMER switch position below.

	TIMER SW	Mode
(1)	REC	INSPECTION
(2)	PLAY	ERROR RATE
※	OFF	NONE

※ NONE means none mode.

(1) [INSPECTION] mode

- 「ENGLISH」 display (2secs)

↓

- " NIAGARA TEST " display

Dot : Niagara
Segment : All lighting

↓

- Push a key, then cancel " NIAGARA TEST "

• Function of the key

Key	Mode
REC/INPUT	※ KEY-TEST
EDIT	NIAGARA TEST
TITLE INPUT	None all lighting

※ Display [KEY 028] into the KEY-TEST mode.

Push a key, then display [KEY * * *].

(2) [ERROR RATE] mode

• Function of the key

Key	Function
PLAY	CPLAY (MID)
REC	CREC (MID)
STOP	STOP CPLAY, CREC (2time push) ERROR RATE

5. Microprocessor reset

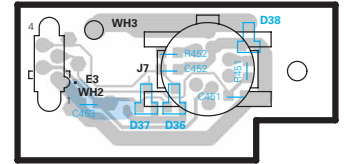
The microprocessor can be initialized while pressing the [EJECT] key, plug the AC power cord into the AC wall outlet.

6. Mechanism test mode

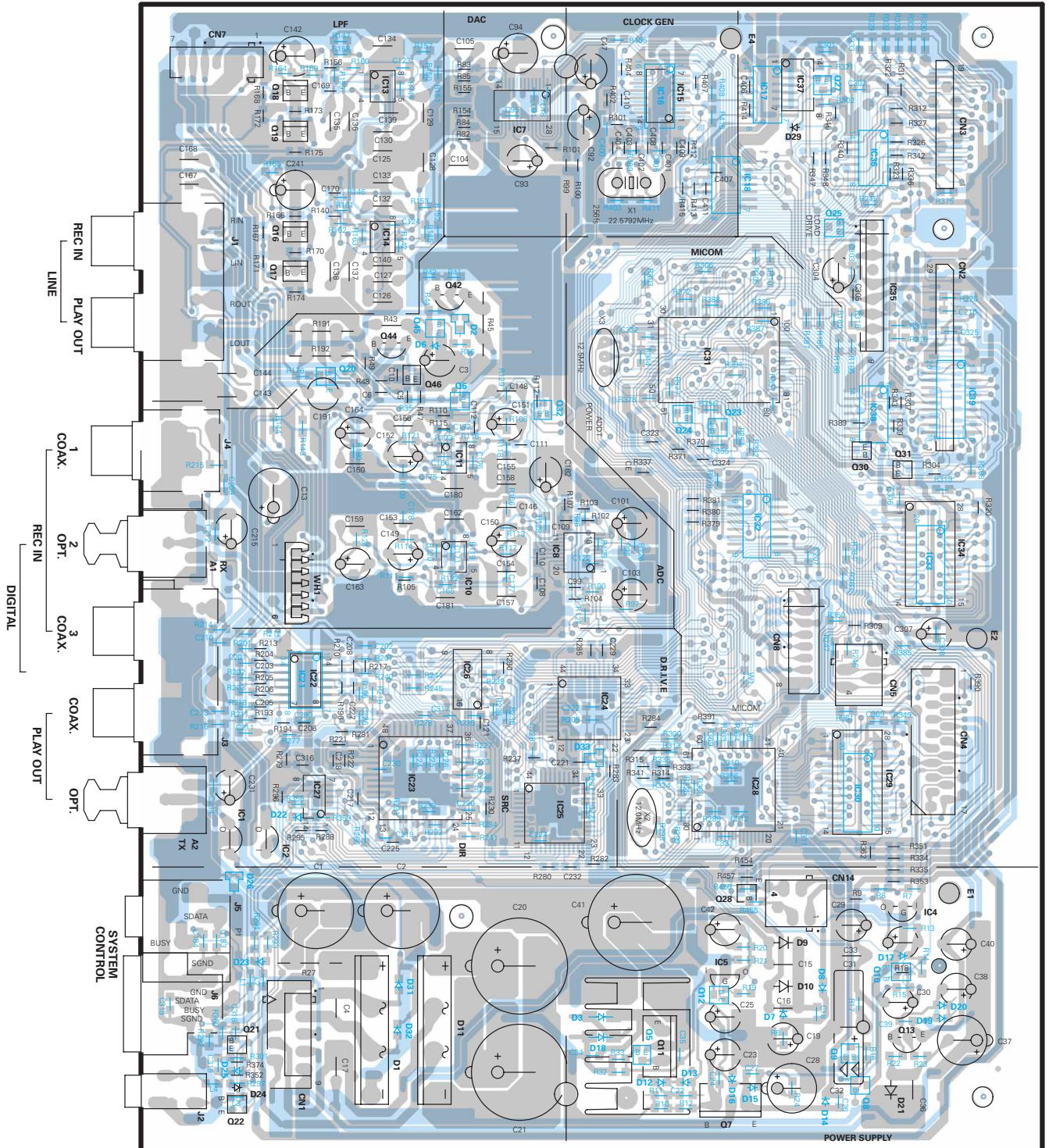
Refer to 1050MD/DM-5090/MD-9090 service manual (B51-5387-00), if you see this test mode.

PC BOARD (Component side view)

X25 B/2



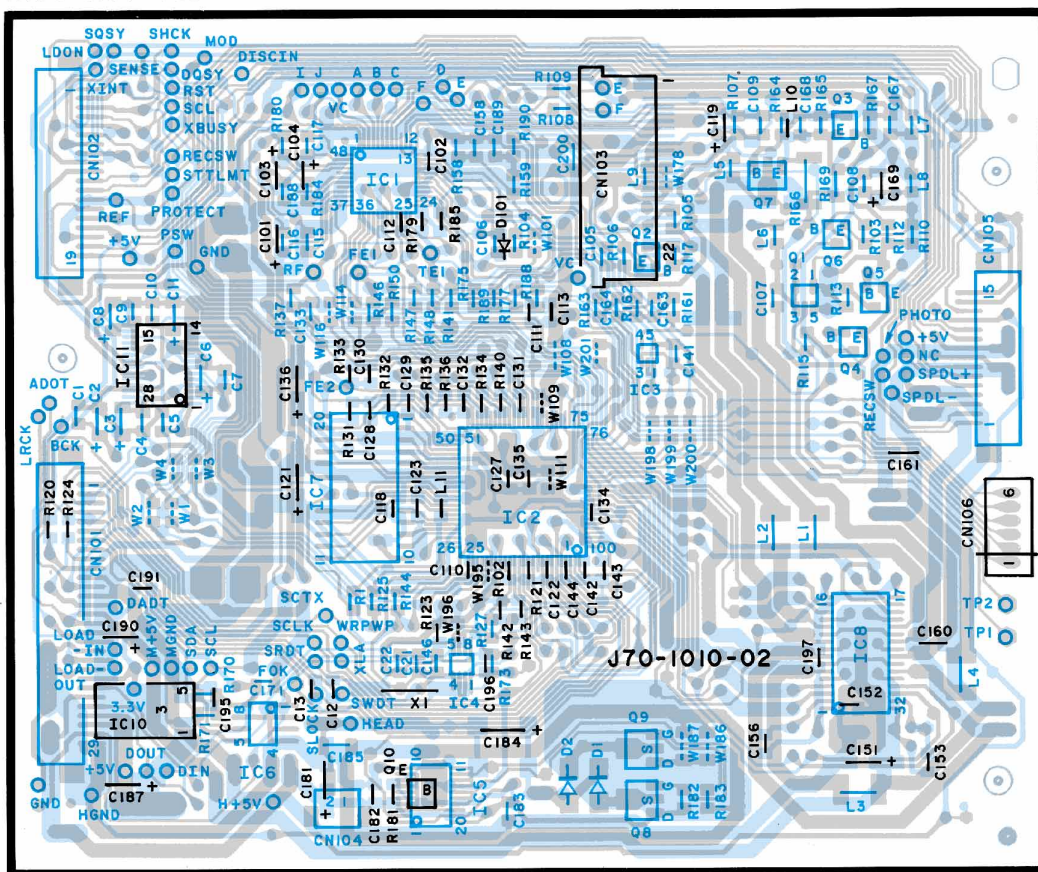
X25-6170-00 A/2 (J70-1263-21)



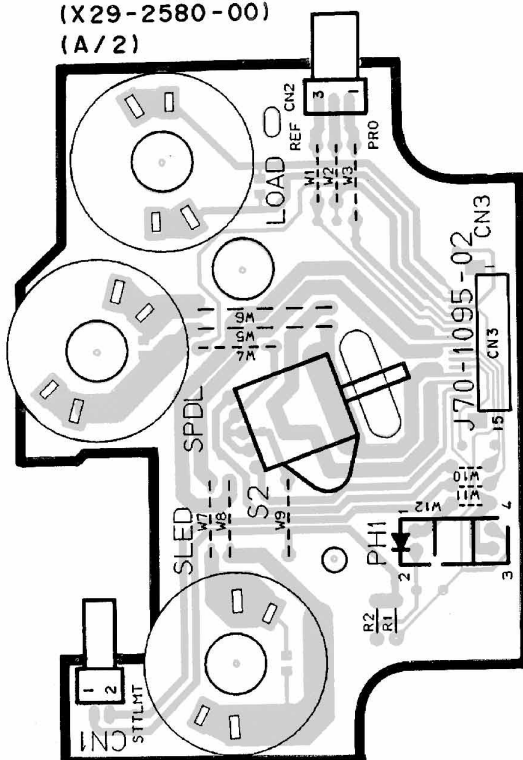
Refer to the schematic diagram for the value of resistors and capacitors.

PC BOARD (Component side view)

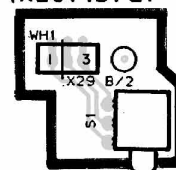
(X33-1100-00)



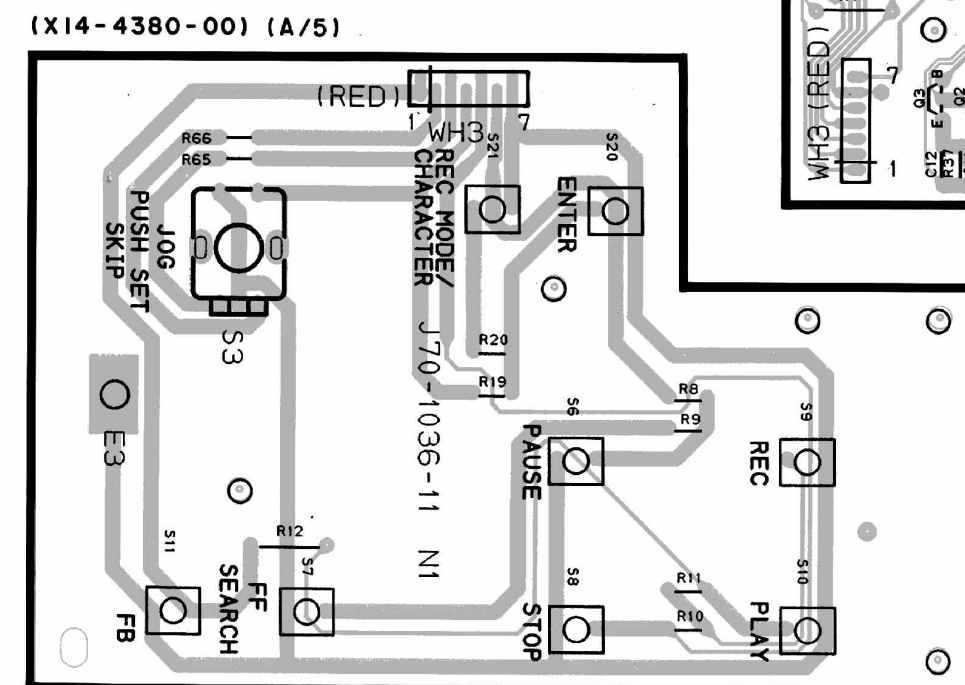
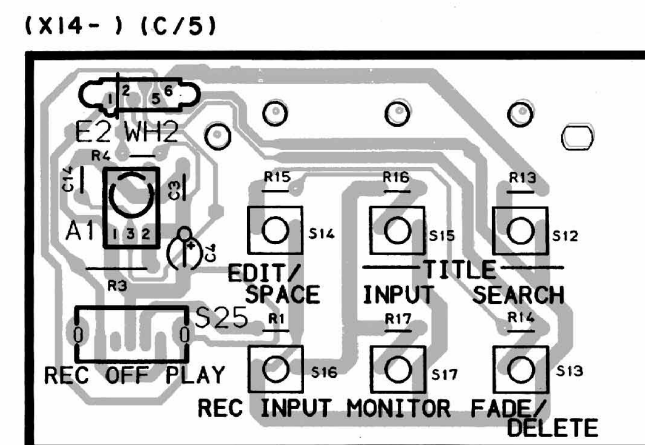
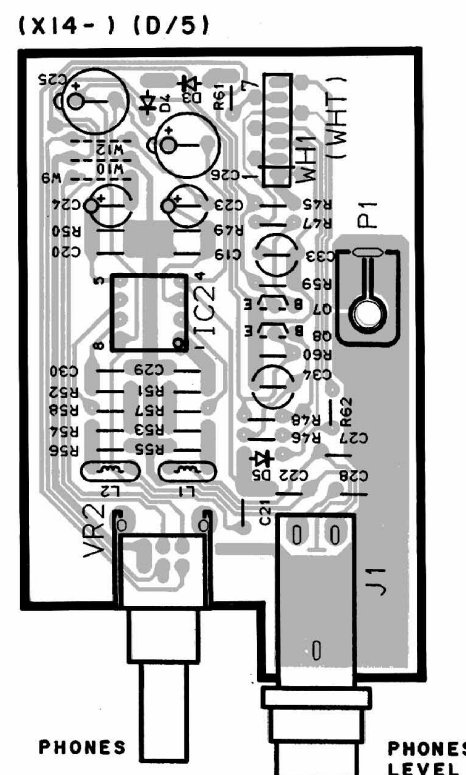
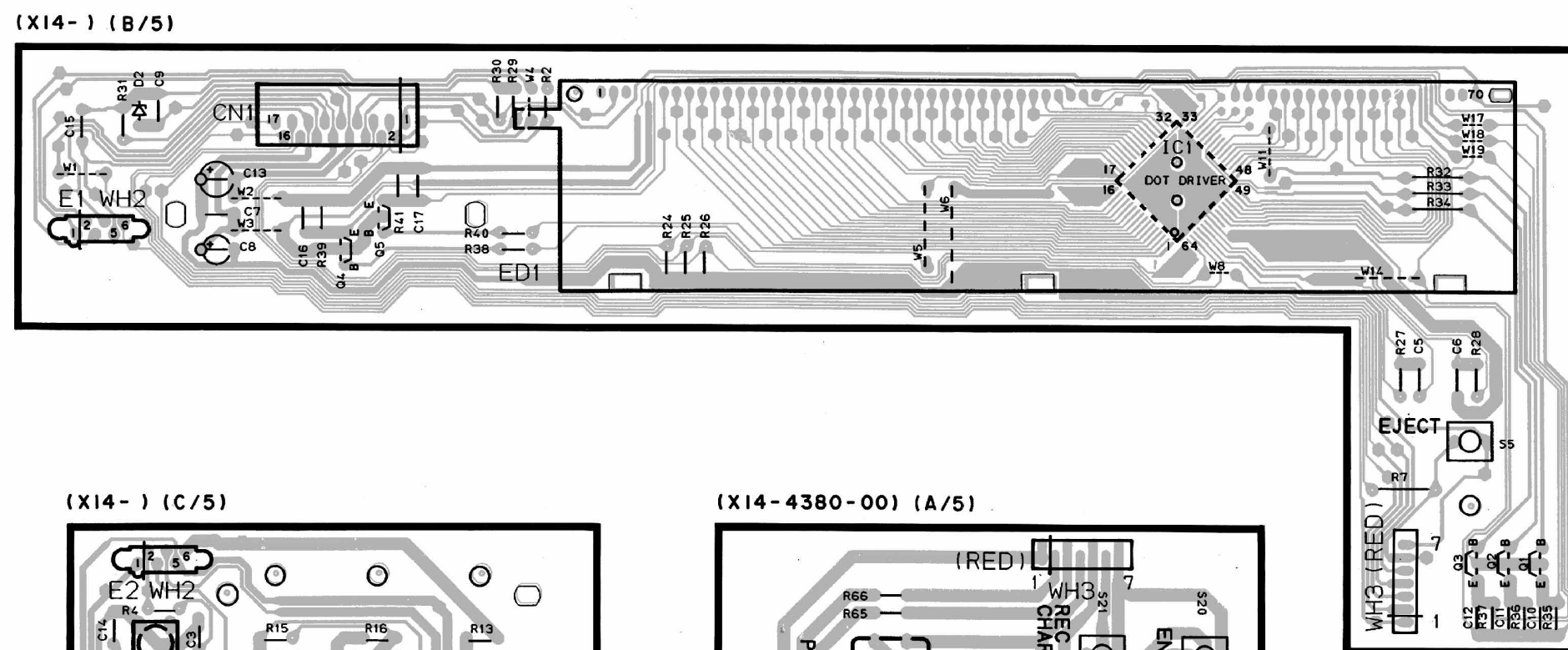
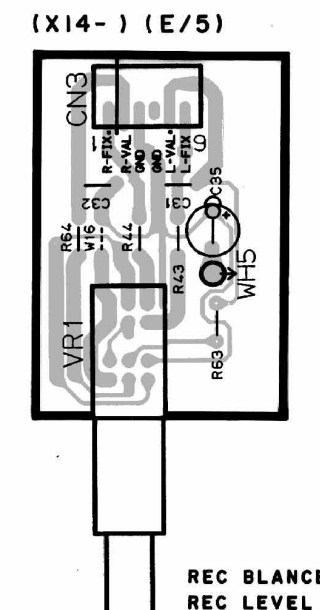
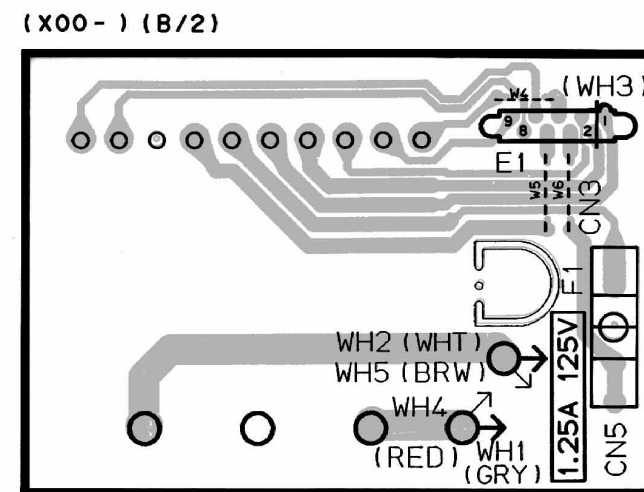
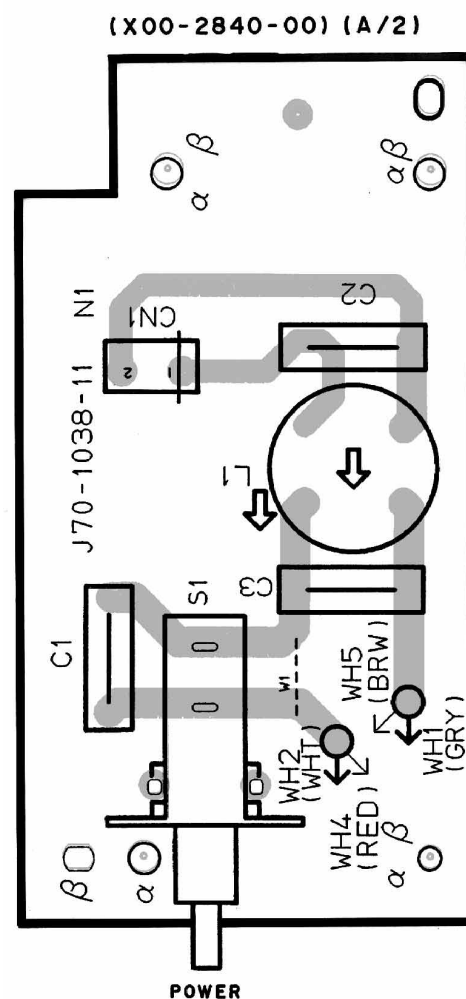
(X29-2580-00)
(A/2)

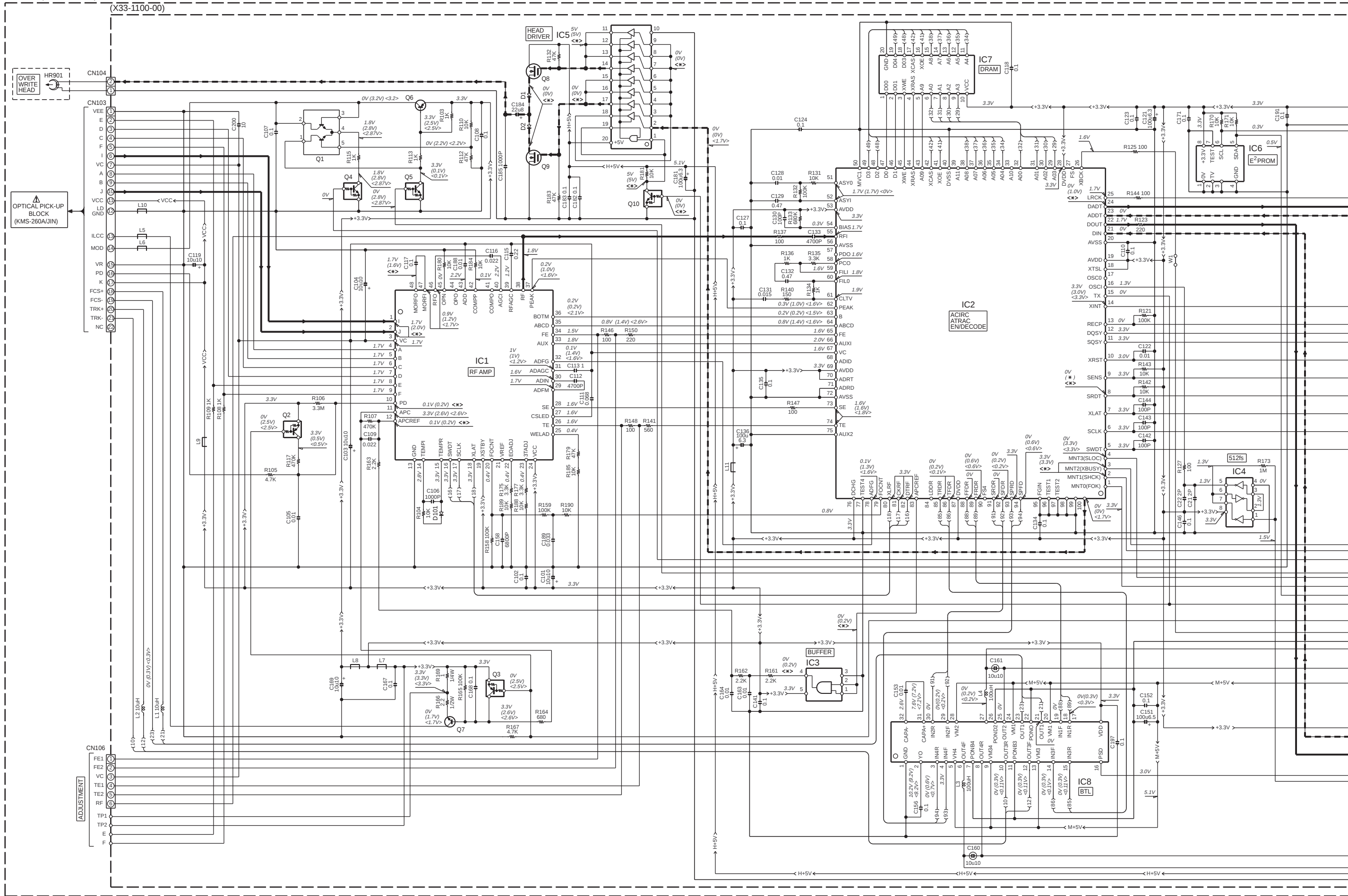


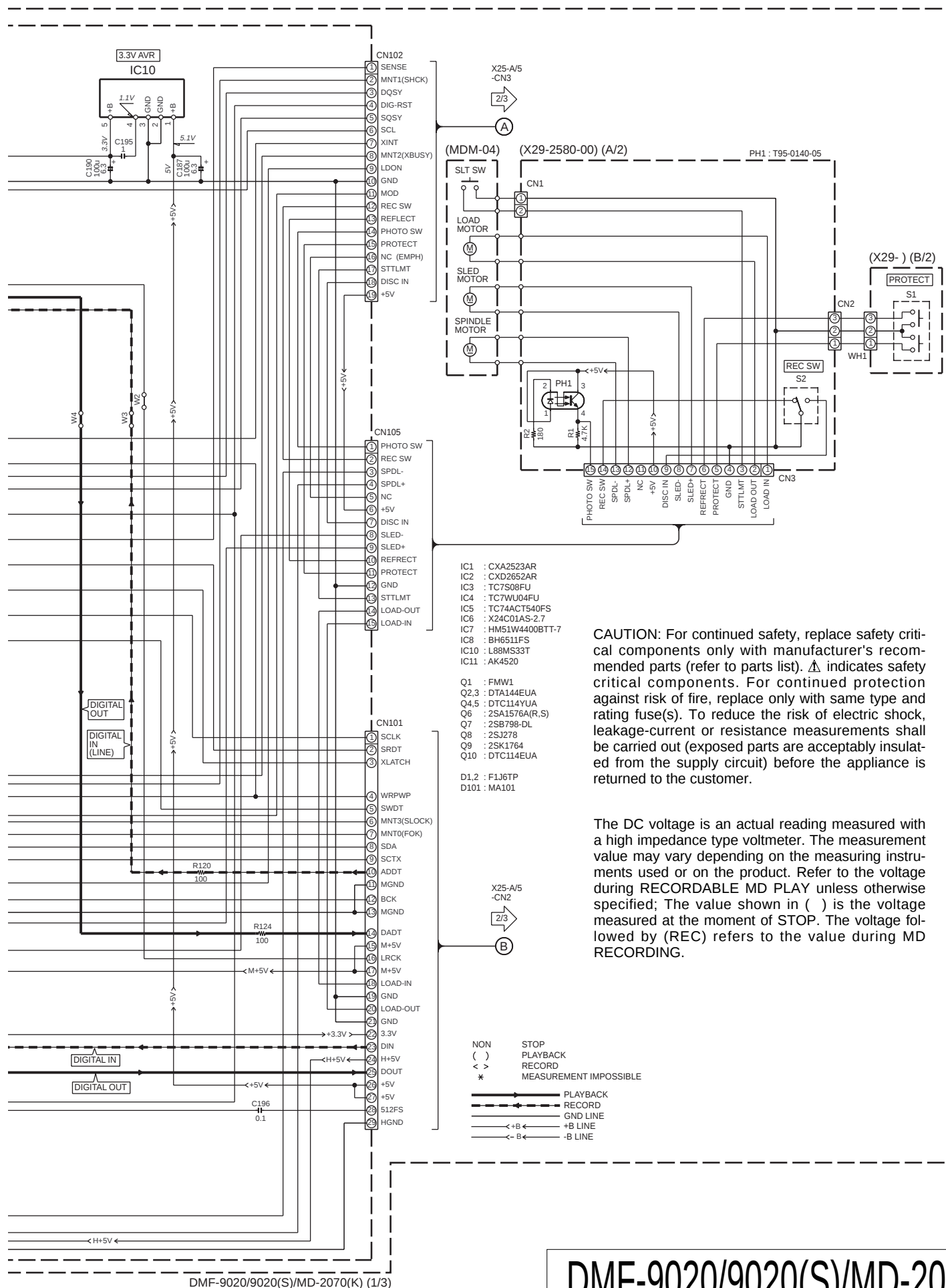
(X29) (B/2)

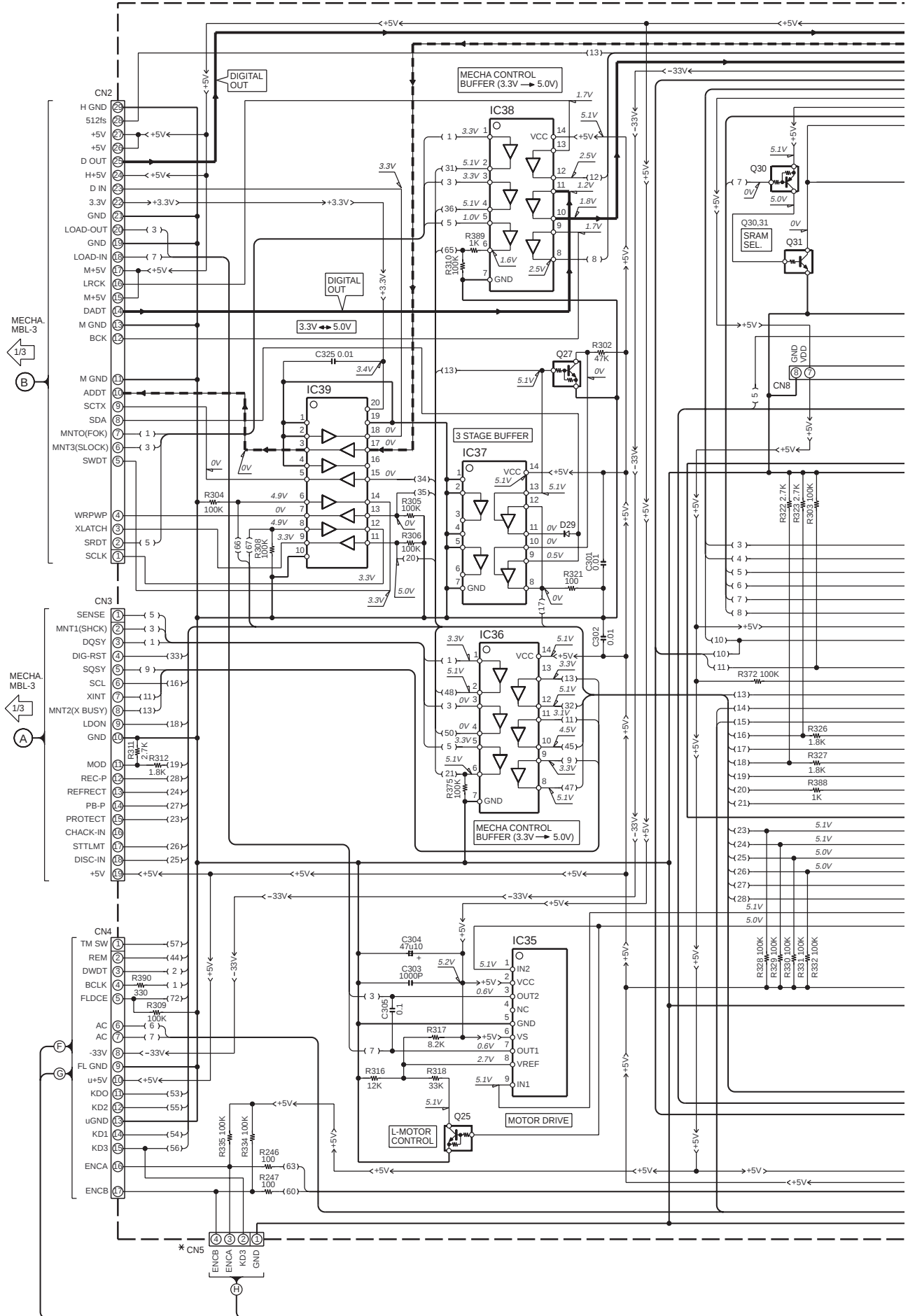


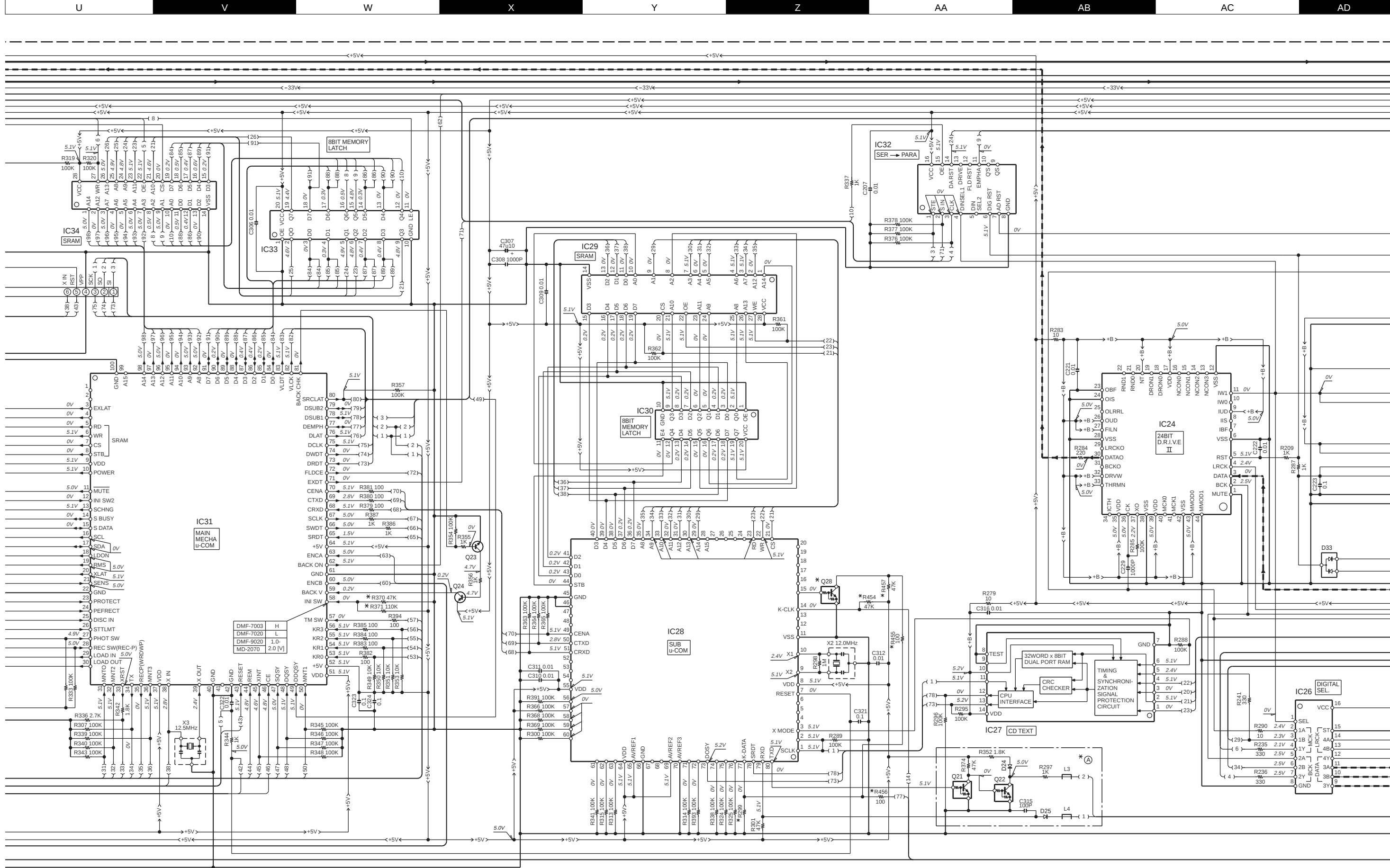
PC BOARD(Component side view)





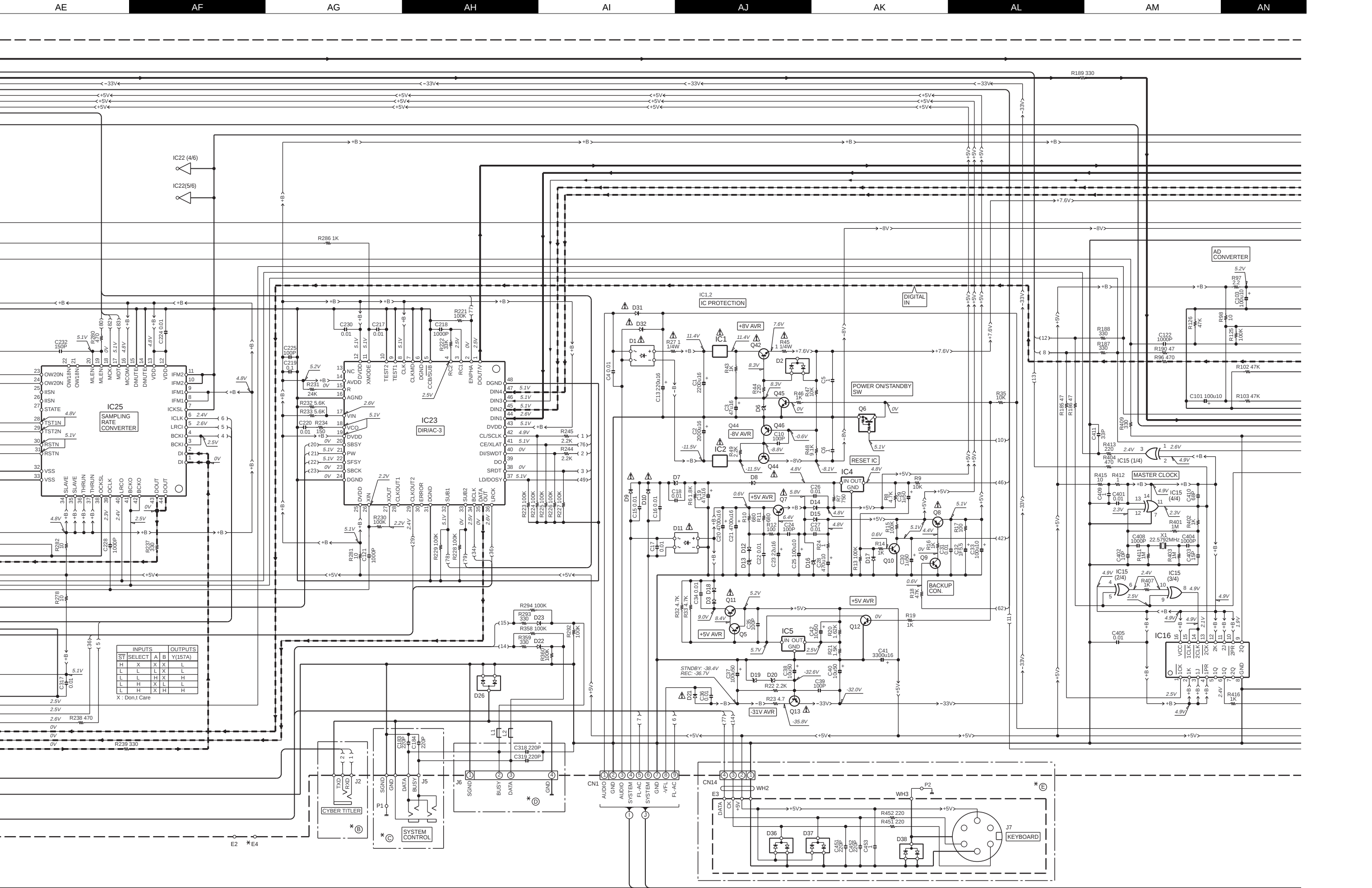


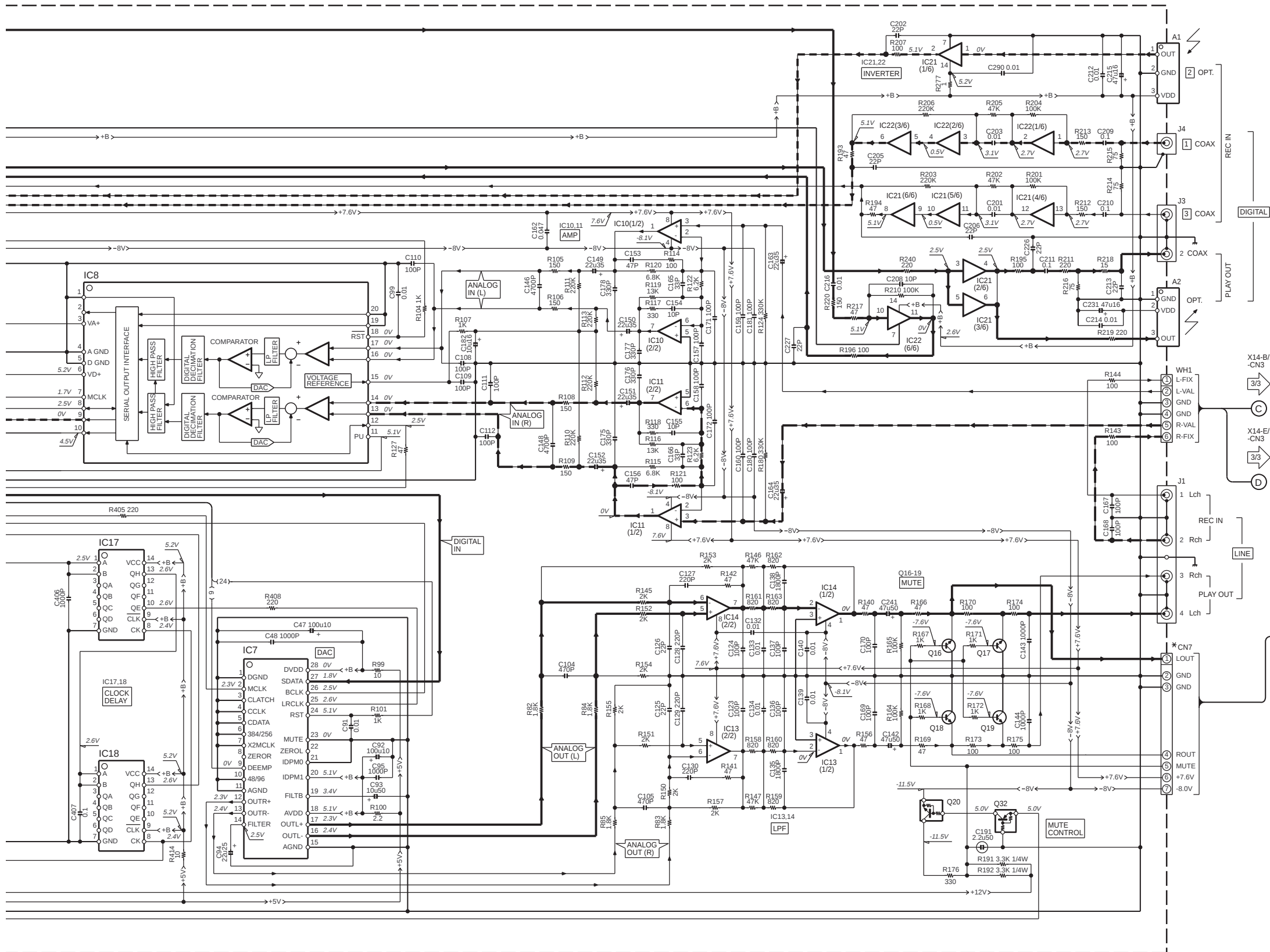
ELECTRIC UNIT
(X25-617X-XX) (A/2)



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.

The DC voltage is an actual reading measured with a high impedance type voltmeter with no signal input. The measurement value may vary depending on the measuring instruments used or on the product.





DMF-7020 (X25-6170-00)

DESTINATION	COUNTRY	ABB.	UNIT No.	A	B	C	D	E	R299	R370, 371, 454-457	CN5	CN7	E4	Q28
JAPAN	J2		0-00	YES				NO	YES	NO	NO	YES	NO	NO

MD-2070 (X25-6172-71)

DESTINATION	COUNTRY	ABB.	UNIT No.	A	B	C	D	E	R299	R370, 371, 454-457	CN5	CN7	E4	Q28
U.S.A.	K1		2-71	NO		YES		NO	YES	NO	NO	YES	NO	YES
CANADA	P1													

DMF-9020 (X25-6172-71)

DESTINATION	COUNTRY	ABB.	UNIT No.	A	B	C	D	E	R299	R370, 371, 454-457	CN5	CN7	E4	Q28
U.K.	T1		2-71	NO		YES		NO	YES	NO	YES	NO	YES	NO

DMF-9020(S) (X25-6172-71)

DESTINATION	COUNTRY	ABB.	UNIT No.	A	B	C	D	E	R299	R370, 371, 454-457	CN5	CN7	E4	Q28
U.K.	T2		2-71	NO		YES		NO	YES	NO	YES	NO	YES	NO
EUROPE	E2													

DMF-7003 (X25-6170-01)

DESTINATION	COUNTRY	ABB.	UNIT No.	A	B	C	D	E	R299	R370, 371, 454-457	CN5	CN7	E4	Q28
JAPAN	J		0-01	YES		NO		YES	NO	YES	NO	YES	NO	NO

DMF-7003G (X25-6170-01)

DESTINATION	COUNTRY	ABB.	UNIT No.	A	B	C	D	E	R299	R370, 371, 454-457	CN5	CN7	E4	Q28
JAPAN	J1		0-01	YES		NO		YES	NO	YES	NO	YES	NO	NO

MD-2070(K,P) (2/3)
DMF-9020/9020(S) (T,E) (2/3)
DMF-7020/7003/7003G(J) (2/3)

IC1,2 : ICP-N10
IC4 : PST993D-T
IC5 : LM431AIZ
IC7 : AD1855
IC8 : CS5360
IC10,11 : NJM4580ED
IC13,14 : NJM4565M
IC15 : TC74AC86F
IC16 : TC74AC112F
IC17,18 : TC74HC164AF
IC21,22 : TC74HCU04AF
IC23 : LC8904Q
IC24 : KAN06
IC25 : SM5844AF
IC26 : TC74HC157AF
IC27 : LC89170M
IC28 : uPD784035GC836
IC29,34 : W24258S-70LE
IC30,33 : TC74HC373AF
IC31 : UPD784215GF533
IC32 : TC74HC4094AF
IC35 : TA8409S
IC36,38 : TC74HCT7007AF
IC37 : HD74HCT126FPEL
IC39 : TC74VHC244F

Q5,9,10,12,23,45 : 2SC4081(R,S)
Q6,20-22,25,27,28 : UN5212 or DTC124EUA
Q7 : 2SD2061(E,F) or 2SD2012
Q8,24,46 : 2SA1576A(R,S)
Q11 : 2SB1370(E,F) or 2SB1375
Q13,44 : 2SA954(L,K)
Q16-19 : 2SD1450(S,T)
Q30,32 : UN5112 or DTA124EUA
Q31 : UN5216 or DTC143TUA
Q42 : 2SC2003(L,K)
D1,11 : D3SBA20F03
D2,26,33 : DA204U
D3,18 : U1BC44
D6 : UD28.2B
D7 : UD22.7B
D8,12,17,22-25,29,31,32 : MA111
D9,10,21 : S5688B(TPB5)
D13 : UD25.6B
D14,15 : MA113
D16 : UD26.2B
D19 : UD218B
D20 : UD215B
D36-38 : DA204K

2SA954
2SC2003

DTA144EUA
DTC114YUA
DTC143TUA
UN5216
2SC4081

2SC3311A

2SB798-DL

DTC114EUA

NJM4565MD
NJM4580ED

DA204K
DA204U

LC89170M

2SC2458

2SB1370
2SD2061

FMW1

2SB1375
2SD2012

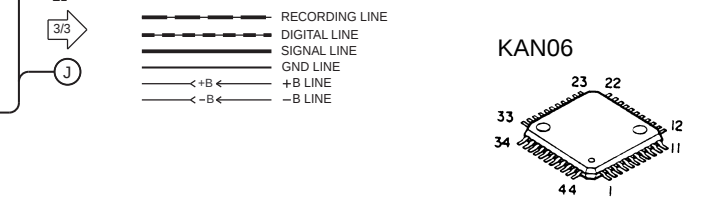
TA8409S

TC74HC4094AF

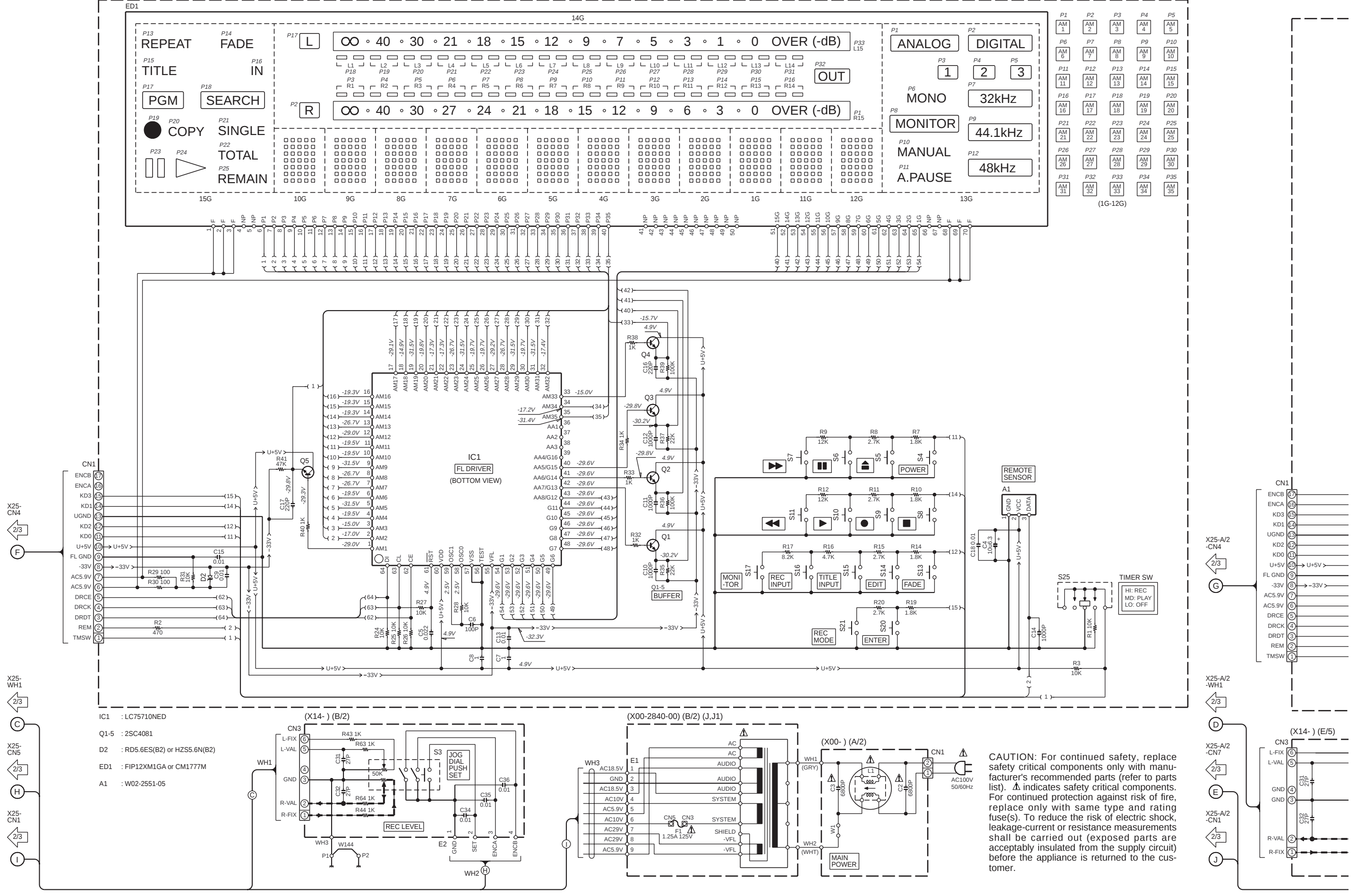
TC74AC86F
TC74HCT7007AF
TC74HCU04AF

CXA2523AR
LC8904Q

ICAN06

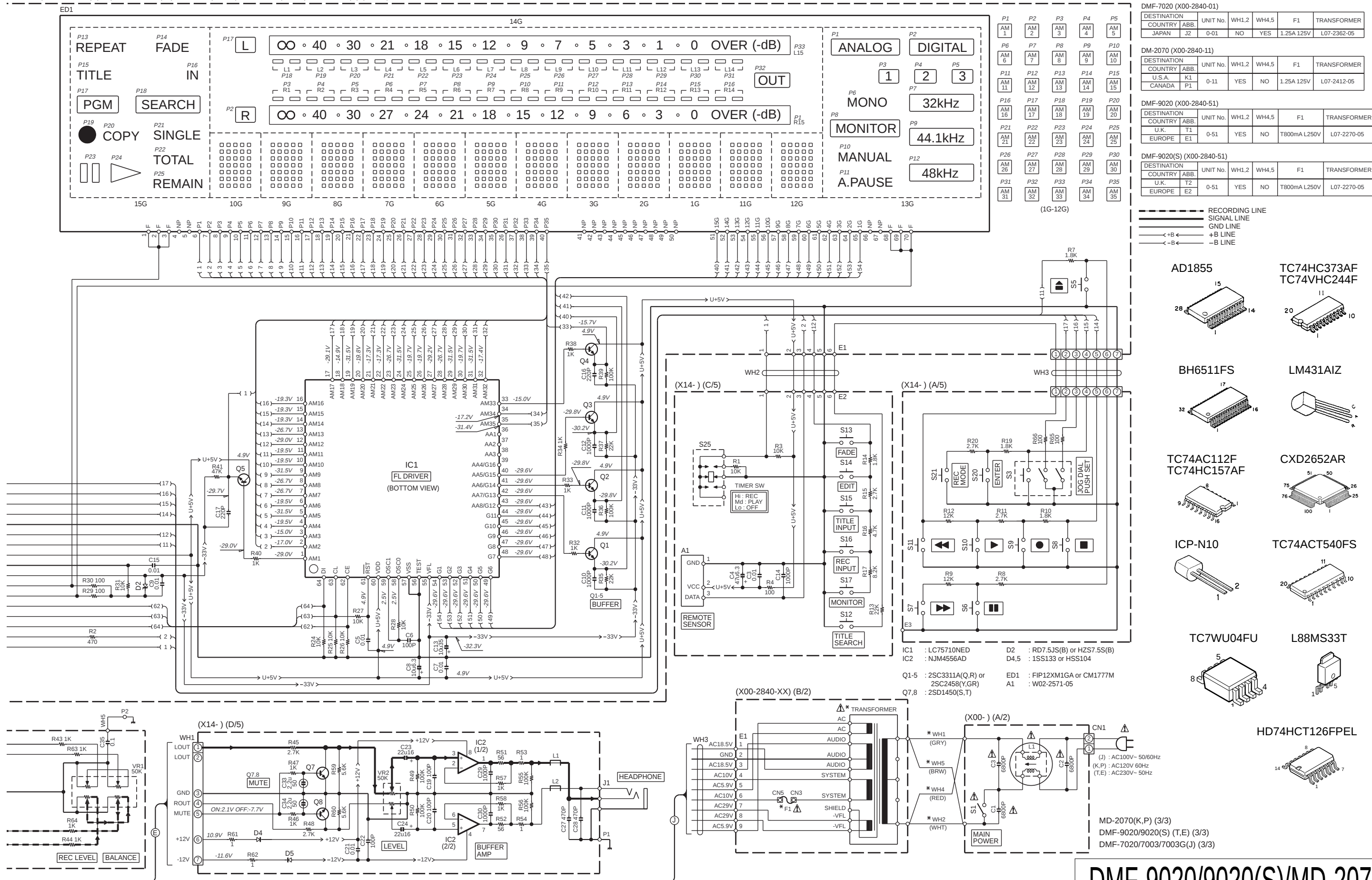


DISPLAY UNIT
(X14-4420-00) (A/2) : DMF-7003(J)/DMF-7003G(J1)



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

DISPLAY UNIT
(X14-4380-00) (B/5) : DMF-7020(J2)/MD-2070(K1,P1)/DMF-9020(T1,E1)/DMF-9020(S) (T2,E2)



The DC voltage is an actual reading measured with a high impedance type voltmeter with no signal input. The measurement value may vary depending on the measuring instruments used or on the product.

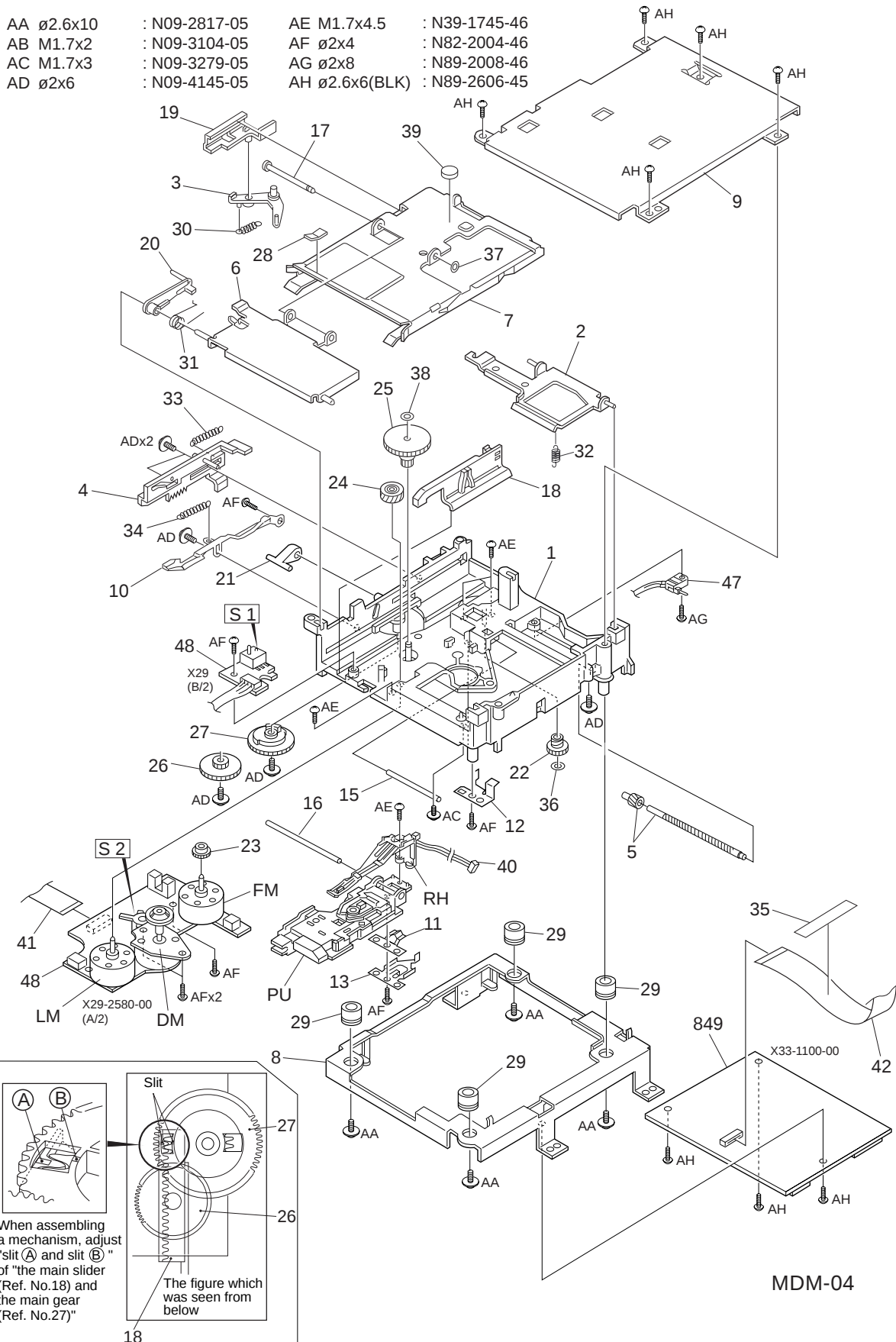
Y22-7880-11

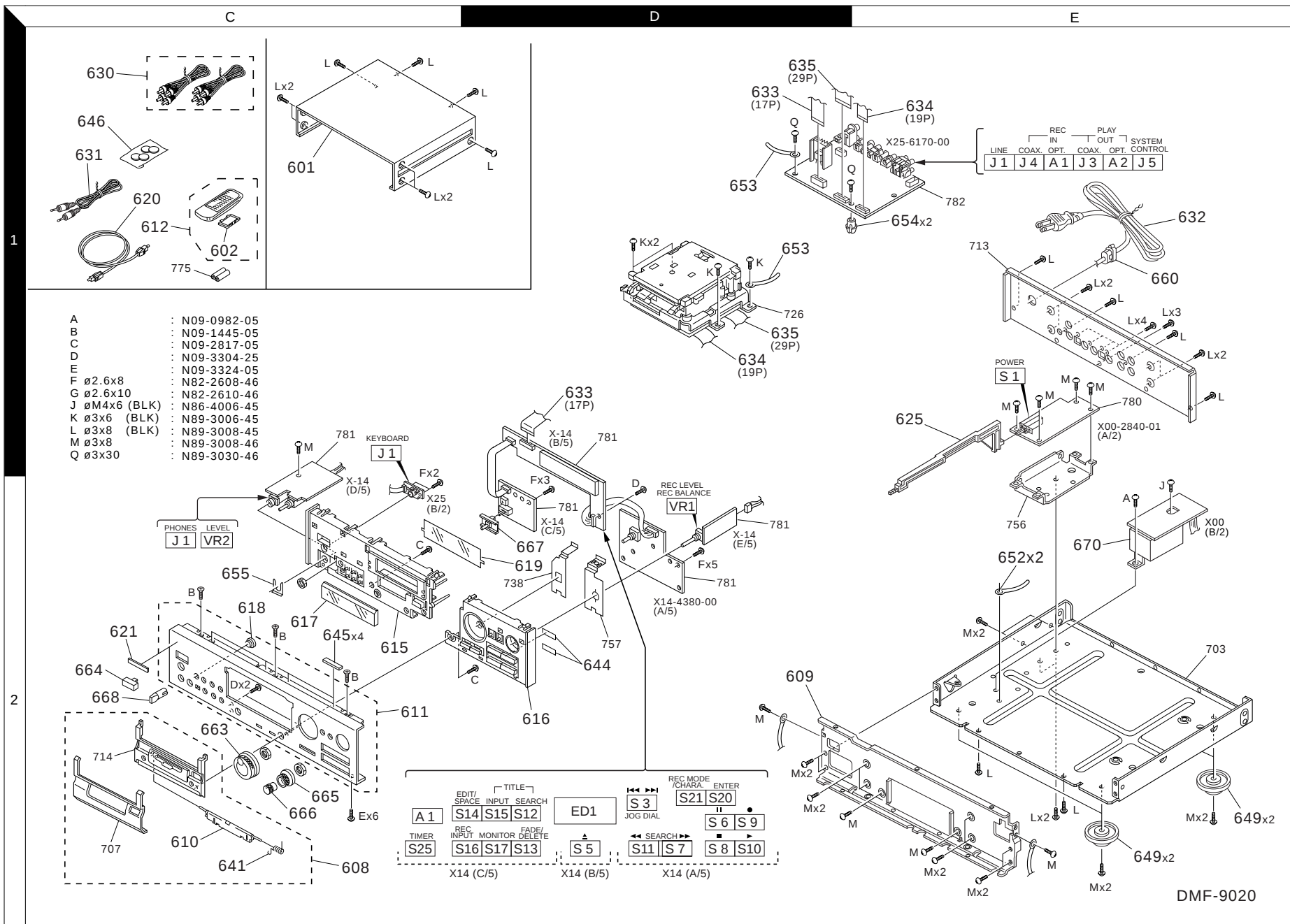
DMF-9020/9020(S)/MD-2070

KENWOOD

EXPLODED VIEW (MECHANISM)

AA $\varnothing 2.6 \times 10$	: N09-2817-05	AE M1.7x4.5	: N39-1745-46
AB M1.7x2	: N09-3104-05	AF $\varnothing 2 \times 4$	: N82-2004-46
AC M1.7x3	: N09-3279-05	AG $\varnothing 2 \times 8$	: N89-2008-46
AD $\varnothing 2 \times 6$	: N09-4145-05	AH $\varnothing 2.6 \times 6$ (BLK)	: N89-2606-45





* New Parts

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1

Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
DMF-9020 / 9020(S) / MD-2070						
601	1C	*	A01-3449-01	METALLIC CABINET	T1E1	
601	1C		A01-3625-01	METALLIC CABINET	E2	
601	1C		A01-3625-01	METALLIC CABINET	K1P1T2	
602	1C		A09-1106-08	BATTERY COVER		
608	2C	*	A21-3742-03	DRESSING PANEL ASSY	K1P1	
608	2C	*	A21-3744-03	DRESSING PANEL ASSY	T2E2	
608	2C	*	A21-3756-03	DRESSING PANEL ASSY	T1E1	
609	2D		A22-1766-32	SUB PANEL		
610	2C		A29-0868-24	PANEL	T1E1	
610	2C	*	A29-1039-04	PANEL	E2	
610	2C	*	A29-1039-04	PANEL	K1P1T2	
611	2C	*	A60-1522-02	PANEL ASSY	K1P1	
611	2C	*	A60-1524-02	PANEL ASSY	T1E1	
611	2C	*	A60-1568-02	PANEL ASSY	T2E2	
612	1C	*	A70-1255-05	REMOTE CONTROLLER ASSY		
615	2C	*	B07-2348-31	ESCUTCHEON	T1E1	
615	2C	*	B07-2449-01	ESCUTCHEON	E2	
615	2C	*	B07-2449-01	ESCUTCHEON	K1P1T2	
616	2D		B07-2361-22	ESCUTCHEON ASSY	T1E1	
616	2D	*	B07-2450-02	ESCUTCHEON ASSY	E2	
616	2D	*	B07-2450-02	ESCUTCHEON ASSY	K1P1T2	
617	2C		B10-2362-04	FRONT GLASS		
618	2C		B11-0237-14	COLOR FILTER		
619	2D		B11-0356-04	COLOR FILTER		
620	1C		B19-1529-05	OPTICAL FIBER		
621	2C		B43-0302-04	KENWOOD BADGE		
-			B46-0310-03	WARRANTY CARD	E2	
-			B46-0310-03	WARRANTY CARD	T1E1T2	
-			B46-0328-03	WARRANTY CARD	K1	
-			B46-0336-03	WARRANTY CARD	P1	
-			B58-0945-03	CAUTION CARD	T1T2	
-		*	B60-4101-00	INSTRUCTION MANUAL(EN)	K1P1T1	
-		*	B60-4101-00	INSTRUCTION MANUAL(EN)	T2	
-		*	B60-4102-00	INSTRUCTION MANUAL(FR)	P1E1E2	
-		*	B60-4103-00	INSTRUCTION MANUAL(GE)	E1E2	
-		*	B60-4104-00	INSTRUCTION MANUAL(NE)	E1E2	
-		*	B60-4105-00	INSTRUCTION MANUAL(IT)	E1E2	
-		*	B60-4106-00	INSTRUCTION MANUAL(ES)	E1E2	
625	1E		D21-1891-03	EXTENSION SHAFT		
630	1C		E30-0505-05	AUDIO CORD		
631	1C		E30-2733-05	CORD WITH PLUG		
632	1E		E30-2592-15	AC POWER CORD	E1E2	
632	1E		E30-2721-05	AC POWER CORD	T1T2	
632	1E		E30-2882-05	AC POWER CORD	K1P1	
633	1D		E31-7804-05	WIRING HARNESS 17P		
634	1D, 1E		E35-1890-05	FLAT CABLE 19P		
635	1D		E35-1960-05	FLAT CABLE 29P		
641	2C		G01-4044-14	TORSION COIL SPRING		
644	2D		G10-0464-04	NON-WOVEN FABRIC		
645	2C		G11-0155-14	SOFT TAPE (40X9X2)		
646	1C		G16-0910-04	SHEET	K1P1	
-			G10-0458-04	NON-WOVEN FABRIC		

L : Scandinavia

K : USA

P : Canada

R : Mexico

C : China

I : Malaysia

Y : PX(Far East, Hawaii)

T : Europe

E : Europe

G : Germany

V : China(Shanghai)

Y : AAFES(Europe)

X : Australia

Q : Russia

H : Korea

M : Other Areas

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2

Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
-		*	H10-7546-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-7547-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H11-0088-04	POLYSTYRENE FOAMED BOARD		
-		*	H12-2457-04	PACKING FIXTURE		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	E2	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	K1P1E1	
-			H25-0368-04	PROTECTION BAG		
-			H25-0651-04	PROTECTION BAG	T1T2	
-		*	H50-3109-04	ITEM CARTON CASE	T1E1	
-		*	H50-3110-04	ITEM CARTON CASE	T2E2	
-		*	H50-3111-04	ITEM CARTON CASE	K1P1	
649	2E	*	J02-1442-05	FOOT	T1E1	
649	2E	*	J02-1443-05	FOOT	E2	
649	2E	*	J02-1443-05	FOOT	K1P1T2	
652	2C		J19-0306-05	LEAD HOLDER		
653	1D		J19-2808-05	HOLDER		
654	1E		J19-3703-14	UNIT HOLDER		
655	2C		J21-3326-05	JACK MOUNTING HARDWARE		
Δ 660	1E		J42-0083-05	POWER CORD BUSHING		
-			J30-0470-04	SPACER		
-			J61-0307-05	WIRE BAND		
663	2C		K29-6700-03	KNOB	JOG	T1E1
663	2C	*	K29-7485-03	KNOB	JOG	E2
663	2C	*	K29-7485-03	KNOB	JOG	K1P1T2
664	2C	*	K27-2178-04	KNOB (BUTTON)		T1E1
664	2C		K29-7418-04	KNOB	POWER	E2
664	2C		K29-7418-04	KNOB	POWER	K1P1T2
665	2C		K29-6692-04	KNOB	REC BAL	T1E1
665	2C	*	K29-7483-04	KNOB	REC BAL	E2
665	2C	*	K29-7483-04	KNOB	REC BAL	K1P1T2
666	2C	*	K29-6695-14	KNOB	REC LEVEL	T1E1
666	2C	*	K29-7484-04	KNOB	REC LEVEL	E2
666	2C	*	K29-7484-04	KNOB	REC LEVEL	K1P1T2
667	2D		K29-6697-04	KNOB	TIMER	
668	2C		K29-3741-04	KNOB	PHONES	T1E1
668	2C	*	K29-7486-04	KNOB	PHONES	E2
668	2C	*	K29-7486-04	KNOB	PHONES	K1P1T2
Δ 670	2E		L07-2270-05	POWER TRANSFORMER		E2
Δ 670	2E		L07-2270-05	POWER TRANSFORMER		T1E1T2
Δ 670	2E		L07-2412-05	POWER TRANSFORMER		K1P1
-			L92-0039-05	FERRITE CORE		
POWER SUPPLY (X00-2840-11)						
Δ C1~3			C91-1488-05	MF 6800PF 250VAC		
Δ CN1			E40-4245-05	PIN ASSY		
Δ F1			F05-8013-05	FUSE (SEMKO) (250V T800MAL)	E2	
Δ F1			F05-8013-05	FUSE (SEMKO) (250V T800MAL)	T1E1T2	
Δ F1			F50-0068-05	FUSE(5X20)	K1P1	
CN3			J13-0075-05	FUSE CLIP		
CN5			J13-0075-05	FUSE CLIP		
Δ L1			L79-0733-05	LINE FILTER		

L : Scandinavia

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Y : AAFES(Europe)

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H : Korea

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PARTS LIST

DMF-9020/9020(S)/MD-2070

* New Parts
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3

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
S1			S40-1153-05	PUSH SWITCH		
DISPLAY (X14-4380-00)						
C3 C4 C5 C6 C7			CK45FF1H103Z C90-3212-05 CK45FF1H103Z CC45FSL1H101J CK45FF1H103Z	CERAMIC 0.010UF Z ELECTRO 47UF 6.3WV CERAMIC 0.010UF Z CERAMIC 100PF J CERAMIC 0.010UF Z		
C8 C9 C10~12 C13 C14			C90-3209-05 CK45FF1H103Z CK45FB1H102K C90-3244-05 CK45FB1H102K	ELECTRO 10UF 6.3WV CERAMIC 0.010UF Z CERAMIC 1000PF K ELECTRO 10UF 35WV CERAMIC 1000PF K		
C15 C16, 17 C19, 20 C21 C22			CK45FF1H103Z CC45FSL1H221J CC45FSL1H101J CQ93FMG1H103J CC45FSL1H101J	CERAMIC 0.010UF Z CERAMIC 220PF J CERAMIC 100PF J MYLAR 0.010UF J CERAMIC 100PF J		
C23, 24 C27, 28 C29, 30 C31, 32 C33, 34			CE04KW1C220M CK45FB1H471K CK45FB1H102K CC45FSL1H270J CE04HW1HR22M	ELECTRO 22UF 16WV CERAMIC 470PF K CERAMIC 1000PF K CERAMIC 27PF J NP-ELEC 0.22UF 50WV		
C35			CF92FV1H104J	MF-C 0.10UF J		
CN1 CN3 J1			E40-4942-05 E40-3264-05 E11-0190-05	FLAT CABLE CONNECTOR PIN ASSY PHONE JACK (3P)		
E3			J11-0809-05	WIRE CLAMPER		
L1, 2			L92-0044-05	FERRITE CORE		
VR1 VR2			R31-0089-05 R10-4043-05	VARIABLE RESISTOR POTENTIOMETER(50K)		
S5~17 S20, 21 S25			S70-0031-05 S70-0031-05 S62-0060-05	TACT SWITCH TACT SWITCH SLIDE SWITCH		
S3			T99-0593-05	ROTARY ENCODER		
D2 D2 D4, 5 D4, 5 ED1			HZS7.5S(B) RD7.5JS(B) HSS104 1SS133 CM1777M	ZENER DIODE ZENER DIODE DIODE DIODE INDICATOR TUBE		
ED1 IC1 IC2 Q1~5 Q1~5 Q7, 8 A1		*	FIP12XM1GA LC75710NED NJM4556AD 2SC2458(Y,GR) 2SC3311A(Q,R) 2SD1450(S,T) W02-2571-05	INDICATOR TUBE MOS-IC ANALOGUE IC TRANSISTOR TRANSISTOR TRANSISTOR OPTIC RECEIVING MODULE		
ELECTRIC (X25-6172-71)						
C1, 2 C3			CE04KW1C222M CE04KW1C470M	ELECTRO 2200UF 16WV ELECTRO 47UF 16WV		

L : Scandinavia K : USA P : Canada R : Mexico C : China I : Malaysia
Y : PX(Far East, Hawaii) T : Europe E : Europe G : Germany V : China(Shanghai)
Y : AAFES(Europe) X : Australia Q : Russia H : Korea M : Other Areas ▲ indicates safety critical components.

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4

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C4 C5, 6 C10 C13 C15~17			CK45FF1H103Z CK73FF1C105Z CC73FSL1H101J CE04KW1C221M CK45FF1H103Z	CERAMIC 0.010UF Z CHIP C 1.0UF Z CHIP C 100PF J ELECTRO 220UF 16WV CERAMIC 0.010UF Z		
C18 C19 C20, 21 C22 C23			CK73FB1H103K CE04KW1C470M CE04KW1C472M CK73FB1H103K CE04KW1C220M	CHIP C 0.010UF K ELECTRO 47UF 16WV ELECTRO 4700UF 16WV CHIP C 0.010UF K ELECTRO 22UF 16WV		
C24 C25 C26, 27 C28 C29, 30			CC73FSL1H101J CE04KW1A101M CK73FB1H103K CE04KW1A471M CE04KW1H010M	CHIP C 100PF J ELECTRO 100UF 10WV CHIP C 0.010UF K ELECTRO 470UF 10WV ELECTRO 1.0UF 50WV		
C31 C32 C33 C34 C35			CK45FF1H103Z C90-3542-05 CE04KW1A101M CK73FB1H103K CC73FSL1H101J	CERAMIC 0.010UF Z SUPER-C 1.0F 5.5WV ELECTRO 100UF 10WV CHIP C 0.010UF K CHIP C 100PF J		
C36 C37 C38 C39 C40			CK45FF1H103Z CE04KW1H101M CE04KW1H100M CC73FSL1H101J CE04KW1H100M	CERAMIC 0.010UF Z ELECTRO 100UF 50WV ELECTRO 10UF 50WV CHIP C 100PF J ELECTRO 10UF 50WV		
C41 C42 C47 C48 C91			CE04KW1C332M CE04KW1H100M CE04KW1A101M CC73FSL1H102J CK73FB1H103K	ELECTRO 3300UF 16WV ELECTRO 10UF 50WV ELECTRO 100UF 10WV CHIP C 1000PF J CHIP C 0.010UF K		
C92 C93 C94 C95 C99		*	CE04KW1A101M CE04KW1H100M C90-3840-05 CC73FSL1H102J CK73FB1H103K	ELECTRO 100UF 10WV ELECTRO 10UF 50WV ELECTRO 22UF 25WV CHIP C 1000PF J CHIP C 0.010UF K		
C101 C103 C104, 105 C108~112 C121, 122			CE04KW1A101M CE04KW1A101M CQ93FMG1H471J CC73FSL1H101J CC73FSL1H102J	ELECTRO 100UF 10WV ELECTRO 100UF 10WV MYLAR 470PF J CHIP C 100PF J CHIP C 1000PF J		
C123, 124 C125, 126 C127~130 C132 C133, 134			CC73FSL1H101J CC45FSL1H220J CC45FSL1H221J CK45FF1H103Z CQ93FMG1H103J	CHIP C 100PF J CERAMIC 22PF J CERAMIC 220PF J CERAMIC 0.010UF Z MYLAR 0.010UF J		
C135 C136, 137 C138 C139, 140 C142			CQ93FMG1H182J CC45FSL1H101J CQ93FMG1H182J CK45FF1H103Z CE04KW1H470M	MYLAR 1800PF J CERAMIC 100PF J MYLAR 1800PF J CERAMIC 0.010UF Z ELECTRO 47UF 50WV		
C143, 144 C146 C148 C149~152 C153			CQ93FMG1H102J CQ93FMG1H472J CQ93FMG1H472J CE04KW1V220M CC45FSL1H470J	MYLAR 1000PF J MYLAR 4700PF J MYLAR 4700PF J ELECTRO 22UF 35WV CERAMIC 47PF J		

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C154, 155 C156 C157~160 C162 C163, 164			CC45FSL1H100D CC45FSL1H470J CC45FSL1H101J CQ93FMG1H473J CE04KW1V220M	CERAMIC 10PF D CERAMIC 47PF J CERAMIC 100PF J MYLAR 0.047UF J ELECTRO 22UF 35WV		
C165, 166 C167, 168 C169~172 C175~178 C180, 181			CC73FSL1H330J CC45FSL1H101J CC73FSL1H101J CC73FSL1H331J CC45FSL1H101J	CHIP C 33PF J CERAMIC 100PF J CHIP C 100PF J CHIP C 330PF J CERAMIC 100PF J		
C182 C183, 184 C191 C201 C202			CE04KW1C100M CC73FSL1H221J CE04HW1H2R2M CK73FB1H103K CC73FSL1H220J	ELECTRO 10UF 16WV CHIP C 220PF J NP-ELEC 2.2UF 50WV CHIP C 0.010UF K CHIP C 22PF J		
C203 C205, 206 C207 C208 C209~211			CK73FB1H103K CC73FSL1H220J CK73FB1H103K CC73FSL1H100J CK73FF1E104Z	CHIP C 0.010UF K CHIP C 22PF J CHIP C 0.010UF K CHIP C 10PF J CHIP C 0.10UF Z		
C212 C213 C214 C215 C216, 217			CK73FB1H103K CC73FSL1H220J CK73FB1H103K CE04KW1C470M CK73FB1H103K	CHIP C 0.010UF K CHIP C 22PF J CHIP C 0.010UF K ELECTRO 47UF 16WV CHIP C 0.010UF K		
C218 C219 C220~222 C223 C224			CK73FB1H102K CK73FF1E104Z CK73FB1H103K CK73FF1E104Z CK73FB1H103K	CHIP C 1000PF K CHIP C 0.10UF Z CHIP C 0.010UF K CHIP C 0.10UF Z CHIP C 0.010UF K		
C225 C226, 227 C228, 229 C230 C231			CC73FSL1H101J CC73FSL1H220J CK73FB1H102K CK73FB1H103K CE04KW1C470M	CHIP C 100PF J CHIP C 22PF J CHIP C 1000PF K CHIP C 0.010UF K ELECTRO 47UF 16WV		
C232 C241 C290 C301, 302 C303			CC73FSL1H151J CE04KW1H470M CK73FB1H103K CK73FB1H103K CK73FB1H102K	CHIP C 150PF J ELECTRO 47UF 50WV CHIP C 0.010UF K CHIP C 0.010UF K CHIP C 1000PF K		
C304 C305 C306 C307 C308			CE04KW1A470M CK73FF1E104Z CK73FB1H103K CE04KW1A470M CK73FB1H102K	ELECTRO 47UF 10WV CHIP C 0.10UF Z CHIP C 0.010UF K ELECTRO 47UF 10WV CHIP C 1000PF K		
C309~312 C316, 317 C321 C322 C323, 324			CK73FB1H103K CK73FB1H103K CK73FF1E104Z CK73FB1H103K CK73FF1E104Z	CHIP C 0.010UF K CHIP C 0.010UF K CHIP C 0.10UF Z CHIP C 0.010UF K CHIP C 0.10UF Z		
C325 C401 C402 C403 C404			CK73FB1H103K CK73FB1H103K CC73FCH1H100D CC73FCH1H150J CK73FB1H102K	CHIP C 0.010UF K CHIP C 0.010UF K CHIP C 10PF D CHIP C 15PF J CHIP C 1000PF K		

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C405 C406 C407 C408 C409			CK73FB1H103K CK73FB1H102K CK73FF1E104Z CK73FB1H102K CK73FF1C105Z	CHIP C 0.010UF K CHIP C 1000PF K CHIP C 0.10UF Z CHIP C 1000PF K CHIP C 1.0UF Z		
C410 C411 C451, 452 C453			CC73FCH1H680J CC73FCH1H330J CC73FSL1H221J CK73FF1C105Z	CHIP C 68PF J CHIP C 33PF J CHIP C 220PF J CHIP C 1.0UF Z		
CN1 CN2 CN3 CN4 CN7		*	E40-4807-05 E40-8310-05 E40-8311-05 E40-4904-05 E40-3251-05	PIN ASSY FLAT CABLE CONNECTOR FLAT CABLE CONNECTOR FLAT CABLE CONNECTOR PIN ASSY		
CN14 J1 J3 J4 J5		*	E40-4294-05 E63-1066-05 E63-0174-05 E63-1059-05 E11-0188-05	FLAT CABLE CONNECTOR PHONO JACK PHONO JACK PHONO JACK MINIATURE PHONE JACK(2P)		
J7		*	E56-0022-05	CYLINDRICAL RECEPTACLE		
L1, 2 X1 X2 X3			L92-0131-05 L77-1124-05 L78-0277-05 L78-0615-05	FERRITE CORE CRYSTAL RESONATOR RESONATOR (12.000M) RESONATOR (12.5MHZ)		
R6 R7 R8 R9 R10, 11			RK73FB2A182J RK73FB2A751J RK73FB2A472J RK73FB2A103J RK73FB2A681J	CHIP R 1.8K J 1/10W CHIP R 750 J 1/10W CHIP R 4.7K J 1/10W CHIP R 10K J 1/10W CHIP R 680 J 1/10W		
R12 R13 R14 R15 R16			RK73FB2A101J RK73FB2A104J RK73FB2A102J RK73FB2A104J RK73FB2A102J	CHIP R 100 J 1/10W CHIP R 100K J 1/10W CHIP R 1.0K J 1/10W CHIP R 100K J 1/10W CHIP R 1.0K J 1/10W		
R17 R18 R19 R20 R21			RK73FB2A101J RK73FB2A473J RK73FB2A102J R92-1861-05 R92-1860-05	CHIP R 100 J 1/10W CHIP R 47K J 1/10W CHIP R 1.0K J 1/10W CHIP R 1.62K F 1/8W CHIP R 1.50K F 1/8W		
R22 R23 R24 R27 R32, 33	Δ		RK73FB2A222J RK73FB2A4R7J RK73FB2A1R0J RD14NB2E1R0J RK73FB2A472J	CHIP R 2.2K J 1/10W CHIP R 4.7 J 1/10W CHIP R 1 J 1/10W RD 1 J 1/4W CHIP R 4.7K J 1/10W		
R35 R44 R45 R46 R47	Δ		RK73FB2A103J RK73FB2A221J RD14NB2E1R0J RK73FB2A102J RK73FB2A103J	CHIP R 10K J 1/10W CHIP R 220 J 1/10W RD 1 J 1/4W CHIP R 1.0K J 1/10W CHIP R 10K J 1/10W		
R48 R49 R82~85 R96 R97			RK73FB2A912J RK73FB2A222J RK73FB2A182J RK73FB2A471J RK73FB2A2R2J	CHIP R 9.1K J 1/10W CHIP R 2.2K J 1/10W CHIP R 1.8K J 1/10W CHIP R 470 J 1/10W CHIP R 2.2 J 1/10W		

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R98, 99			RK73FB2A100J	CHIP R 10 J 1/10W		
R100			RK73FB2A2R2J	CHIP R 2.2 J 1/10W		
R101			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R102, 103			RK73FB2A473J	CHIP R 47K J 1/10W		
R104			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R105, 106			RK73FB2A151J	CHIP R 150 J 1/10W		
R107			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R108, 109			RK73FB2A151J	CHIP R 150 J 1/10W		
R110~113			RK73FB2A224J	CHIP R 220K J 1/10W		
R114			RK73FB2A101J	CHIP R 100 J 1/10W		
R115			RK73FB2A682J	CHIP R 6.8K J 1/10W		
R116		*	RN73FH2A133D	CHIP R 13K D 1/10W		
R117, 118			RK73FB2A331J	CHIP R 330 J 1/10W		
R119		*	RN73FH2A133D	CHIP R 13K D 1/10W		
R120			RK73FB2A682J	CHIP R 6.8K J 1/10W		
R121			RK73FB2A101J	CHIP R 100 J 1/10W		
R122, 123			RK73FB2A622J	CHIP R 6.2K J 1/10W		
R124			RK73FB2A334J	CHIP R 330K J 1/10W		
R125			RK73FB2A104J	CHIP R 100K J 1/10W		
R126			RK73FB2A473J	CHIP R 47K J 1/10W		
R127			RK73FB2A470J	CHIP R 47 J 1/10W		
R140~142			RK73FB2A470J	CHIP R 47 J 1/10W		
R143, 144			RK73FB2A101J	CHIP R 100 J 1/10W		
R145			RK73FB2A202J	CHIP R 2.0K J 1/10W		
R146, 147			RK73FB2A473J	CHIP R 47K J 1/10W		
R150~155			RK73FB2A202J	CHIP R 2.0K J 1/10W		
R156			RK73FB2A470J	CHIP R 47 J 1/10W		
R157			RK73FB2A202J	CHIP R 2.0K J 1/10W		
R158~163			RK73FB2A821J	CHIP R 820 J 1/10W		
R164, 165			RK73FB2A104J	CHIP R 100K J 1/10W		
R166			RK73FB2A470J	CHIP R 47 J 1/10W		
R167, 168			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R169			RK73FB2A470J	CHIP R 47 J 1/10W		
R170			RK73FB2A101J	CHIP R 100 J 1/10W		
R171, 172			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R173~175			RK73FB2A101J	CHIP R 100 J 1/10W		
R176			RK73FB2A331J	CHIP R 330 J 1/10W		
R180			RK73FB2A334J	CHIP R 330K J 1/10W		
R185, 186			RK73FB2A470J	CHIP R 47 J 1/10W		
R187~189			RK73FB2A331J	CHIP R 330 J 1/10W		
R190			RK73FB2A470J	CHIP R 47 J 1/10W		
R191, 192			RD14NB2E332J	RD 3.3K J 1/4W		
R193, 194			RK73FB2A470J	CHIP R 47 J 1/10W		
R195, 196			RK73FB2A101J	CHIP R 100 J 1/10W		
R201			RK73FB2A104J	CHIP R 100K J 1/10W		
R202			RK73FB2A473J	CHIP R 47K J 1/10W		
R203			RK73FB2A224J	CHIP R 220K J 1/10W		
R204			RK73FB2A104J	CHIP R 100K J 1/10W		
R205			RK73FB2A473J	CHIP R 47K J 1/10W		
R206			RK73FB2A224J	CHIP R 220K J 1/10W		
R207			RK73FB2A101J	CHIP R 100 J 1/10W		
R209			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R210			RK73FB2A104J	CHIP R 100K J 1/10W		
R211			RK73FB2A221J	CHIP R 220 J 1/10W		
R212, 213			RK73FB2A151J	CHIP R 150 J 1/10W		

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R214~216			RK73FB2A750J	CHIP R 75 J 1/10W		
R217			RK73FB2A470J	CHIP R 47 J 1/10W		
R218			RK73FB2A150J	CHIP R 15 J 1/10W		
R219			RK73FB2A221J	CHIP R 220 J 1/10W		
R220			RK73FB2A151J	CHIP R 150 J 1/10W		
R221			RK73FB2A104J	CHIP R 100K J 1/10W		
R222			RK73FB2A333J	CHIP R 33K J 1/10W		
R223~230			RK73FB2A104J	CHIP R 100K J 1/10W		
R231			RK73FB2A243J	CHIP R 24K J 1/10W		
R232, 233			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R234			RK73FB2A151J	CHIP R 150 J 1/10W		
R235~237			RK73FB2A331J	CHIP R 330 J 1/10W		
R238			RK73FB2A471J	CHIP R 470 J 1/10W		
R239			RK73FB2A331J	CHIP R 330 J 1/10W		
R240			RK73FB2A221J	CHIP R 220 J 1/10W		
R241			RK73FB2A331J	CHIP R 330 J 1/10W		
R244, 245			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R246, 247			RK73FB2A101J	CHIP R 100 J 1/10W		
R277			RK73FB2A1R0J	CHIP R 1 J 1/10W		
R278, 279			RK73FB2A100J	CHIP R 10 J 1/10W		
R280			RK73FB2A471J	CHIP R 470 J 1/10W		
R281~283			RK73FB2A100J	CHIP R 10 J 1/10W		
R284			RK73FB2A221J	CHIP R 220 J 1/10W		
R285			RK73FB2A104J	CHIP R 100K J 1/10W		
R286, 287			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R288, 289			RK73FB2A104J	CHIP R 100K J 1/10W		
R290			RK73FB2A100J	CHIP R 10 J 1/10W		
R292			RK73FB2A104J	CHIP R 100K J 1/10W		
R293			RK73FB2A331J	CHIP R 330 J 1/10W		
R294~296			RK73FB2A104J	CHIP R 100K J 1/10W		
R298			RK73FB2A105J	CHIP R 1.0M J 1/10W		
R300			RK73FB2A104J	CHIP R 100K J 1/10W		
R301, 302			RK73FB2A473J	CHIP R 47K J 1/10W		
R303~310			RK73FB2A104J	CHIP R 100K J 1/10W		
R311			RK73FB2A272J	CHIP R 2.7K J 1/10W		
R312			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R313~315			RK73FB2A104J	CHIP R 100K J 1/10W		
R316			RK73FB2A123J	CHIP R 12K J 1/10W		
R317			RK73FB2A822J	CHIP R 8.2K J 1/10W		
R318			RK73FB2A333J	CHIP R 33K J 1/10W		
R319~321			RK73FB2A104J	CHIP R 100K J 1/10W		
R322, 323			RK73FB2A272J	CHIP R 2.7K J 1/10W		
R324, 325			RK73FB2A104J	CHIP R 100K J 1/10W		
R326, 327			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R328~335			RK73FB2A104J	CHIP R 100K J 1/10W		
R336			RK73FB2A272J	CHIP R 2.7K J 1/10W		
R337			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R338~341			RK73FB2A104J	CHIP R 100K J 1/10W		
R342			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R343			RK73FB2A104J	CHIP R 100K J 1/10W		
R344			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R345~348			RK73FB2A104J	CHIP R 100K J 1/10W		
R349~351			RK73FB2A103J	CHIP R 10K J 1/10W		
R353			RK73FB2A103J	CHIP R 10K J 1/10W		
R354			RK73FB2A104J	CHIP R 100K J 1/10W		

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R355, 356 R357, 358 R359 R360-366 R368, 369			RK73FB2A102J RK73FB2A104J RK73FB2A331J RK73FB2A104J RK73FB2A104J	CHIP R CHIP R CHIP R CHIP R CHIP R	1.0K 100K 330 100K 100K	J J J J J	1/10W 1/10W 1/10W 1/10W 1/10W		
R370 R371 R372 R375-378 R379-385			RK73FB2A473J RK73FB2A114J RK73FB2A104J RK73FB2A104J RK73FB2A101J	CHIP R CHIP R CHIP R CHIP R CHIP R	47K 110K 100K 100K 100	J J J J J	1/10W 1/10W 1/10W 1/10W 1/10W		
R386-389 R390 R391 R393 R394			RK73FB2A102J RK73FB2A331J RK73FB2A104J RK73FB2A104J RK73FB2A101J	CHIP R CHIP R CHIP R CHIP R CHIP R	1.0K 330 100K 100K 100	J J J J J	1/10W 1/10W 1/10W 1/10W 1/10W		
R401 R402 R403 R404 R405			RK73FB2A105J RK73FB2A102J RK73FB2A105J RK73FB2A471J RK73FB2A221J	CHIP R CHIP R CHIP R CHIP R CHIP R	1.0M 1.0K 1.0M 470 220	J J J J J	1/10W 1/10W 1/10W 1/10W 1/10W		
R407 R408 R409 R411 R412			RK73FB2A102J RK73FB2A221J RK73FB2A331J RK73FB2A105J RK73FB2A1R0J	CHIP R CHIP R CHIP R CHIP R CHIP R	1.0K 220 330 1.0M 1	J J J J J	1/10W 1/10W 1/10W 1/10W 1/10W		
R413 R414, 415 R416 R451, 452 R454			RK73FB2A221J RK73FB2A100J RK73FB2A102J RK73FB2A221J RK73FB2A473J	CHIP R CHIP R CHIP R CHIP R CHIP R	220 10 1.0K 220 47K	J J J J J	1/10W 1/10W 1/10W 1/10W 1/10W		
R455, 456 R457			RK73FB2A101J RK73FB2A473J	CHIP R CHIP R	100 47K	J J	1/10W 1/10W		
D1 D2 D3 D6 D7			D3SBA20F03 DA204U U1BC44 UDZ8.2B UDZ2.7B	DIODE DIODE DIODE ZENER DIODE ZENER DIODE					
D8 D9, 10 D11 D12 D13			MA111 S5688B(TPB5) D3SBA20F03 MA111 UDZ5.6B	DIODE DIODE DIODE DIODE ZENER DIODE					
D14, 15 D16 D17 D18 D19			MA113 UDZ6.2B MA111 U1BC44 UDZ18B	DIODE ZENER DIODE DIODE DIODE ZENER DIODE					
D20 D21 D22, 23 D26 D29			UDZ15B S5688B(TPB5) MA111 DA204U MA111	ZENER DIODE DIODE DIODE DIODE DIODE					
D31, 32 D33			MA111 DA204U	DIODE DIODE					

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Δ D36-38 IC1, 2 IC4 IC5 IC7			DA204K ICP-N10 PST993D-T LM431AIZ AD1855	DIODE ANALOGUE IC ANALOGUE IC ANALOGUE IC MOS-IC		
IC8 IC10, 11 IC13, 14 IC15 IC16		*	CS5360 NJM4580ED NJM4565MD TC74AC86F TC74AC112F	MOS-IC ANALOGUE IC IC(OP AMP X2) MOS-IC MOS-IC		
IC17, 18 IC21, 22 IC23 IC24 IC25			TC74HC164AF TC74HCU04AF LC8904Q KAN06 SM5844AF	IC(SHIFT REGISTER) IC(HEX INVERTER SMD) MOS-IC MOS-IC MOS-IC		
IC26 IC27 IC28 IC29 IC30		*	TC74HC157AF LC89170M UPD784035GC836 W24258S-70LE TC74HC373AF	MOS-IC MOS-IC MI-COM IC MEMORY IC IC(8 bit LATCH)		
IC31 IC32 IC33 IC34 IC35		*	UPD784215GF533 TC74HC4094AF TC74HC373AF W24258S-70LE TA8409S	MI-COM IC MOS-IC IC(8 bit LATCH) MEMORY IC MOS-IC		
IC36 IC37 IC38 IC39 Q5			TC74HCT7007AF HD74HCT126FPEL TC74HCT7007AF TC74VHC244F 2SC4081(R,S)	IC(HEX BUFFER) MOS-IC IC(HEX BUFFER) MOS-IC TRANSISTOR		
Q6 Q6 Q7 Q8			DTC124EUA UN5212 2SD2012 2SD2061(E,F) 2SA1576A(R,S)	DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q9, 10 Δ Q11 Δ Q11 Q12 Δ Q13			2SC4081(R,S) 2SB1370(E,F) 2SB1375 2SC4081(R,S) 2SA954(L,K)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q16-19 Q20 Q20 Q23 Q24			2SD1450(S,T) DTC124EUA UN5212 2SC4081(R,S) 2SA1576A(R,S)	TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR		
Q25 Q25 Q27, 28 Q27, 28 Q30			DTC124EUA UN5212 DTC124EUA UN5212 DTA124EUA	DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR		
Q30 Q31 Q31 Q32 Q32			UN5112 DTC143TUA UN5216 DTA124EUA UN5112	DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR		

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I : Malaysia

Δ indicates safety critical components.

PARTS LIST

DMF-9020/9020(S)/MD-2070

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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
Q42 Q44 Q45 Q46			2SC2003(L,K) 2SA954(L,K) 2SC4081(R,S) 2SA1576A(R,S)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
A1 A2			W02-1181-05 W02-1114-05	OPTIC RECEIVING MODULE OSCILLATING MODULE		
MD MECHANISM PCB (X29-2580-00)						
CN1 CN2 CN3			E40-3260-05 E40-3261-05 E40-8076-05	PIN ASSY PIN ASSY FLAT CABLE CONNECTOR		
S1 S2			S68-0074-05 S64-0028-05	PUSH SWITCH LEVER SWITCH		
PH1			T95-0140-05	PHOTO INTERRUPTER		
MD PCB (X33-1100-00)						
C21, 22 C101 C102 C103, 104 C105			CC73FCH1H020C C92-0628-05 CK73FB1E104K C92-0628-05 CK73FB1H103K	CHIP C CHIP-TAN CHIP C CHIP-TAN CHIP C	2.0PF 10UF 0.10UF 10UF 0.010UF	C 10WV K 10WV K
C106 C107, 108 C109 C110 C111			CC73FCH1H102J CK73FF1E104Z CK73FB1H223K CK73FB1E104K CK73FB1H683K	CHIP C CHIP C CHIP C CHIP C CHIP C	1000PF 0.10UF 0.022UF 0.10UF 0.068UF	J Z K K K
C112 C113 C115 C116 C117, 118			CK73FB1H472K CK73FF1C105Z CK73FB1C224K CK73FB1H223K CK73FB1E104K	CHIP C CHIP C CHIP C CHIP C CHIP C	4700PF 1.0UF 0.22UF 0.022UF 0.10UF	K Z K K K
C119 C121 C122 C123 C127			C92-0628-05 C92-0048-05 CK73FB1H103K CK73FF1E104Z CK73FF1E104Z	CHIP-TAN ELECTRO CHIP C CHIP C CHIP C	10UF 100UF 0.010UF 0.10UF 0.10UF	10WV 6.3WV K Z Z
C128 C129 C130 C131 C132			CK73FB1H103K CK73FB1C474K CC73FSL1H101J CK73FB1H153K CK73FB1C474K	CHIP C CHIP C CHIP C CHIP C CHIP C	0.010UF 0.47UF 100PF 0.015UF 0.47UF	K K J K K
C133 C134, 135 C136 C141 C142~144			CK73FB1H472K CK73FF1E104Z C92-0048-05 CK73FF1E104Z CC73FSL1H101J	CHIP C CHIP C ELECTRO CHIP C CHIP C	4700PF 0.10UF 100UF 0.10UF 100PF	K Z 6.3WV Z J
C146 C151 C152 C153 C156			CK73FF1E104Z C92-0048-05 CK73FF1E104Z CK73FB1H103K CK73FF1E104Z	CHIP C ELECTRO CHIP C CHIP C CHIP C	0.10UF 100UF 0.10UF 0.010UF 0.10UF	Z 6.3WV Z K Z
C158 C160, 161 C163, 164 C167, 168			CK73FB1H682K C92-0167-05 CK73FB1H103K CK73FF1E104Z	CHIP C CHIP-ELE CHIP C CHIP C	6800PF 10UF 0.010UF 0.10UF	K 10WV K Z

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PARTS LIST

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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C169 C171 C181 C182, 183 C184			C92-0628-05 CK73FF1E104Z C92-0048-05 CK73FF1E104Z C92-0149-05	CHIP-TAN CHIP C ELECTRO CHIP C CHIP-ELE	10UF 0.10UF 100UF 0.10UF 22UF	10WV Z 6.3WV Z 8WV
C185 C187 C188 C189 C190			C93-0031-05 C92-0048-05 CK73FB1H103K CK73FB1H333K C92-0048-05	CHIP-C ELECTRO CHIP C CHIP C ELECTRO	1000P 100UF 0.010UF 0.033UF 100UF	500V 6.3WV K K 6.3WV
C191 C195 C196, 197 C200			CK73FF1E104Z CK73FF1C105Z CK73FF1E104Z C93-0032-05	CHIP C CHIP C CHIP C CHIP C	0.10UF 1.0UF 0.10UF 10UF	Z Z Z 10WV
CN101 CN102 CN103 CN104 CN105			E40-8074-05 E40-8075-05 E40-8077-05 E40-8078-05 E40-8076-05	FLAT CABLE CONNECTOR (29P) FLAT CABLE CONNECTOR (19P) FLAT CABLE CONNECTOR (22P) PIN ASSY (2P) FLAT CABLE CONNECTOR (15P)		
L1, 2 L3, 4 L5~11			L33-0545-05 L33-0369-05 L79-1216-05	CHOKE COIL CHOKE COIL LINE FILTER	(10UH) (100UH)	
R103 R104 R105 R106 R107			RK73FB2A102J RK73FB2A103J RK73FB2A472J RK73FB2A335J RK73FB2A474J	CHIP R CHIP R CHIP R CHIP R CHIP R	1.0K 10K 4.7K 3.3M 470K	J 1/10W J 1/10W J 1/10W J 1/10W J 1/10W
R108, 109 R110 R112 R113 R115			RK73FB2A102J RK73FB2A103J RK73FB2A473J RK73FB2A102J RK73FB2A102J	CHIP R CHIP R CHIP R CHIP R CHIP R	1.0K 10K 47K 1.0K 1.0K	J 1/10W J 1/10W J 1/10W J 1/10W J 1/10W
R117 R120 R121 R123 R124, 125			RK73FB2A474J RK73FB2A101J RK73FB2A104J RK73FB2A221J RK73FB2A101J	CHIP R CHIP R CHIP R CHIP R CHIP R	470K 100 100K 220 100	J 1/10W J 1/10W J 1/10W J 1/10W J 1/10W
R127 R131 R132 R133 R134			RK73FB2A101J RK73FB2A103J RK73FB2A104J RK73FB2A684J RK73FB2A102J	CHIP R CHIP R CHIP R CHIP R CHIP R	100 10K 100K 680K 1.0K	J 1/10W J 1/10W J 1/10W J 1/10W J 1/10W
R135 R136 R137 R140 R141			RK73FB2A332J RK73FB2A102J RK73FB2A101J RK73FB2A151J RK73FB2A561J	CHIP R CHIP R CHIP R CHIP R CHIP R	3.3K 1.0K 100 150 560	J 1/10W J 1/10W J 1/10W J 1/10W J 1/10W
R142, 143 R144 R146~148 R150 R158, 159			RK73FB2A103J RK73FB2A101J RK73FB2A101J RK73FB2A221J RK73FB2A104J	CHIP R CHIP R CHIP R CHIP R CHIP R	10K 100 100 220 100K	J 1/10W J 1/10W J 1/10W J 1/10W J 1/10W
R161~163 R164			RK73FB2A222J RK73FB2A681J	CHIP R CHIP R	2.2K 680	J 1/10W J 1/10W

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R165 R166 R167 R169 R170, 171			RK73FB2A104J R92-1854-05 RK73FB2A472J R92-1853-05 RK73FB2A103J	CHIP R 100K J 1/10W RN 2.2 K 1/2W CHIP R 4.7K J 1/10W CHIP-RN 1 1/4W CHIP R 10K J 1/10W		
R173 R175 R177 R179 R180, 181			RK73FB2A105J RK73FB2A332J RK73FB2A332J RK73FB2A473J RK73FB2A103J	CHIP R 1.0M J 1/10W CHIP R 3.3K J 1/10W CHIP R 3.3K J 1/10W CHIP R 47K J 1/10W CHIP R 10K J 1/10W		
R182, 183 R184, 185 R188-190 W1-4 W101			RK73FB2A473J RK73FB2A103J RK73FB2A103J R92-0670-05 R92-0670-05	CHIP R 47K J 1/10W CHIP R 10K J 1/10W CHIP R 10K J 1/10W CHIP R 0 OHM CHIP R 0 OHM		
W108 W109 W111 W114 W116			R92-0679-05 R92-0670-05 R92-0670-05 R92-0670-05 R92-0670-05	CHIP R 0 OHM CHIP R 0 OHM CHIP R 0 OHM CHIP R 0 OHM CHIP R 0 OHM		
W178 W186, 187 W195, 196 W198-201			R92-0670-05 R92-0679-05 R92-0670-05 R92-0670-05	CHIP R 0 OHM CHIP R 0 OHM CHIP R 0 OHM CHIP R 0 OHM		
D1, 2 D101 IC1 IC2 IC3			F1J6TP MA111 CXA2523AR CXD2652AR TC7S08FU	DIODE DIODE ANALOGUE IC MOS-IC MOS-IC		
IC4 IC5 IC6 IC7 IC8			TC7WU04FU TC74ACT540FS X24C01AS-2.7 HM51W4400BTT-7 BH6511FS	MOS-IC MOS-IC MEMORY IC MEMORY IC ANALOGUE IC		
IC10 Q1 Q2, 3 Q4, 5 Q6			L88MS33T FMW1 DTA144EUA DTC114YUA 2SA1576A(R,S)	ANALOGUE IC TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR		
Q7 Q8 Q9 Q10			2SB798-DL 2SJ278 2SK1764 DTC114EUA	TRANSISTOR FET FET DIGITAL TRANSISTOR		

MD MECHANISM (D40-1533-05) : MDM-04

1	2B	A10-3329-08	CHASSIS ASSY		
2	1B	D10-3690-08	LEVER ASSY		
3	1A	D10-3698-08	ARM ASSY		
4	2A	D10-3759-08	SLIDER ASSY (HD)		
5	2B	D13-1784-08	GEAR ASSY (T)		
6	1A	J11-0824-08	CLAMPER ASSY		
7	1B	J19-5766-08	HOLDER ASSY		
8	3A	A11-1113-08	SUB SHASSIS (FRAME)		
9	1B	A11-1116-08	SUB SHASSIS (TOP)		
10	2A	D10-3742-08	LEVER (DOOR)		

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11 12 13 15 16	3A 2B 3A 2A 2A		D13-1792-08 G02-1616-08 G02-1618-08 D10-3685-08 D10-3694-08	RACK (GEAR) FLAT SPRING (THRUST) FLAT SPRING (SUB) SHAFT (SUB) SHAFT (MAIN)		
17 18 19 20 21	1A 2B 1A 1A 2A		D21-1859-08 D10-3686-08 D10-3687-08 D10-3689-08 D10-3692-08	SHAFT (JOINT) SLIDER (MAIN) SLIDER (LD) ARM (CLAMP) ARM (CHANGE)		
22 23 24 25 26	2B 2A 2A 1A 2A		D13-1786-08 D13-1787-08 D13-1788-08 D13-1789-08 D13-1790-08	GEAR (WORM) GEAR (MOTOR-T) GEAR (MOTOR-L) GEAR (INTERMEDIATE LA) GEAR (INTERMEDIATE LB)		
27 28 29 30 31	2A 1A 3A, 3B 1A 1A		D13-1791-08 G13-0560-08 J02-1178-08 G01-3964-08 G01-3965-08	GEAR (MAIN) CUSHION INSULATOR EXTENSION SP TORSION SP		
32 33 34 35 36	2B 1A 2A 3B 2B		G01-3966-08 G01-3967-08 G01-4014-08 G10-0146-04 N19-1101-04	EXTENSION SP EXTENSION SP (S/HD) EXTENSION SP (DOOR) NON-WOVEN-FABRIC POLY WS 1.2*3.0*0.5CUT		
37 38 39 40 41	1B 1A 1A 2B 3A		N19-1105-04 N19-0366-04 G16-0877-04 E35-1715-08 E35-1780-08	POLY WS 1.6*3.5*0.5CUT POLY WS 2.1*4.0*0.5CUT SHEET (TRAY) WIRING HARNESS FLAT CABLE		
42 47 48 DM FM	3B 2B 2A, 3A 3A 3A		J80-0012-08 S33-1022-05 J26-0052-08 T42-0871-08 T42-0880-05	FPC PUSH SWITCH SPPB12 PCB ASSY (X29-2580-00) MOTOR ASSY DC MOTOR		
LM PU RH	3A 3A 3A		T42-0881-05 T25-0060-05 T30-0013-05	DC MOTOR OPTICAL PICKUP HEAD RECORD HEAD		

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HOW TO READ THE PARTS LIST
ABBREVIATION OF MODEL AND MASS PRODUCTION'S DESTINATIONS

MODEL	ABB.	Australia	Canada	China	England	Europe	Germany	Korea	Malaysia
DMF-9020		-	-	-	T1	E1	-	-	-
DMF-9020(S)		-	-	-	T2	E2	-	-	-
MD-2070		-	P1	-	-	-	-	-	-
MODEL	ABB.	Mexico	PX/AAFES	Russia	Scandinavia	Shanghai	USA	Other area	-
DMF-9020		-	-	-	-	-	-	-	-
DMF-9020(S)		-	-	-	-	-	-	-	-
MD-2070		-	-	-	-	-	K1	-	-

PARTS LIST

DMF-9020/9020(S)/MD-2070

DMF-9020/9020(S)/MD-2070

SPECIFICATIONS

[Format]

System	Minidisc digital audio system
Laser	Semiconductor laser
Recording method	Field modulation overwrite method
Audio compression	ATRAC (Adaptive TRansform Acoustic Coding)
Playing rotation	Approx. 400 rpm ~ 900 rpm (CLV)

[D/A conversion]

D/A conversion	1 Bit (24 bit type)
Oversampling	8 fs (352.8 kHz)

[A/D converter]

A/D converter	4 th order sigma-delta conversion+ D.R.I.V.E. conversion
Sampling frequency	44.1 kHz

[Digital audio performance]

Frequency rresponce (playback mode)	8 Hz ~ 20 kHz (± 1 dB)
Signal to noise ratio (playback mode)	More than 112 dB
Dynamic range (playback mode)	More than 96 dB
Total harmonic distortion (1 kHz, playback mode)	Less than 0.004 %
Wow & flutter	Less than unmeasurable limit
Analog input sensitivity / input impedance	500 mV / 22 kΩ
Analog output level / output impedance	2.0 V / Less than 300 Ω
Headphone output	50 mW/32 Ω load (Phones level MAX)
Digital input	
Coxaial	0.5 Vp-p / 75 Ω
Optical(Wave length 660 nm)	- 15 dBm ~ - 21 dBm
Digital output	
Coxaial	0.5 Vp-p / 75 Ω
Optical(Wave length 660 nm)	- 15 dBm ~ - 21 dBm

[General]

Power consumption	20 W
Dimensions	W : 440 mm (17 - 5 / 16") H : 125 mm (4 - 15 / 16") D : 373 mm (14 - 11 / 16")
Weight (Net)	5.4 kg (11.9 lb)



1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

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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