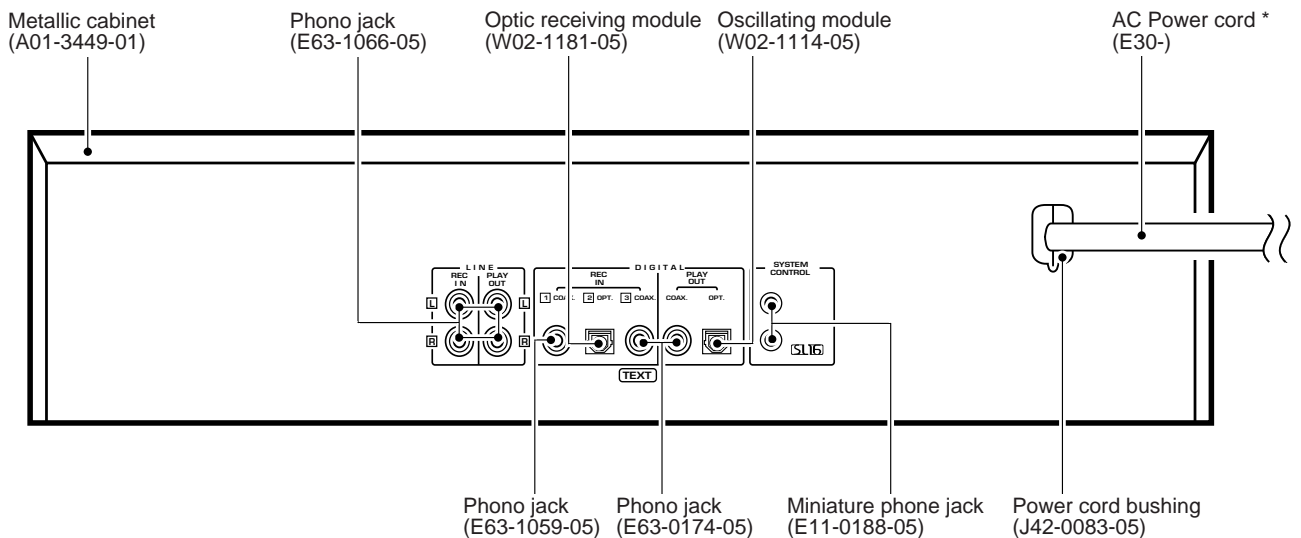
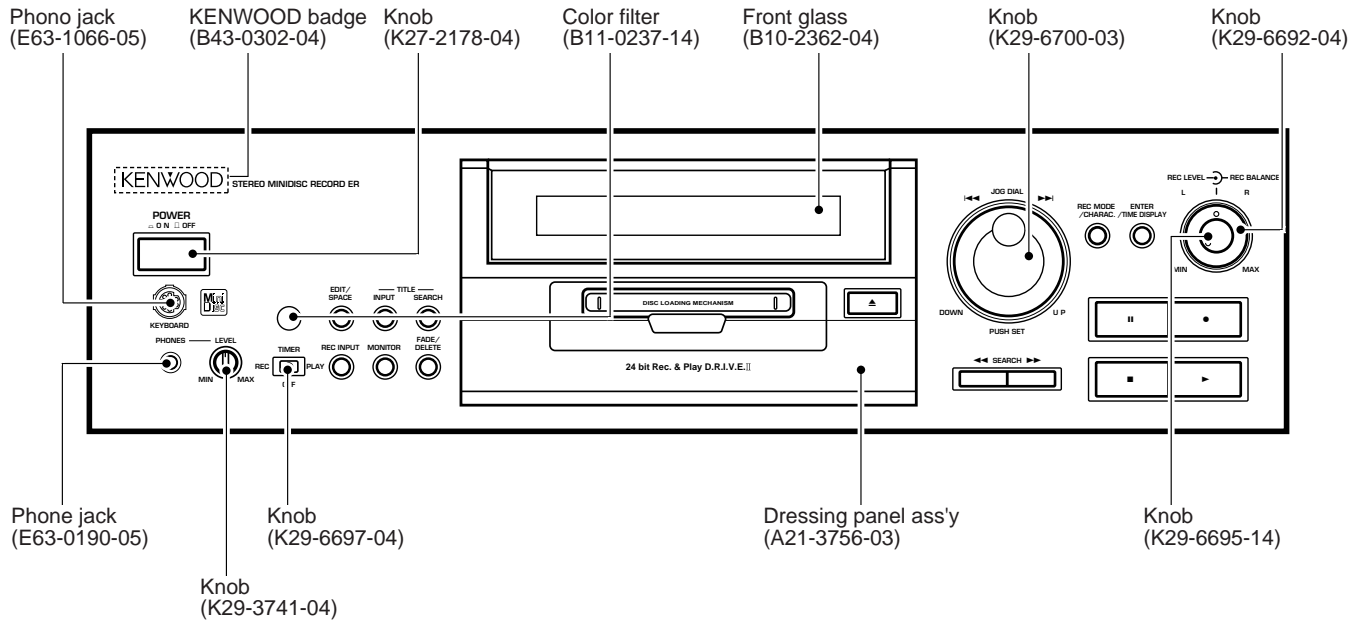


# DMF-9020/9020(S) MD-2070 SERVICE MANUAL



**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.**



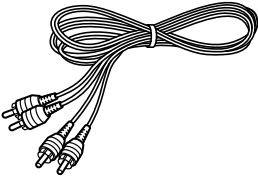
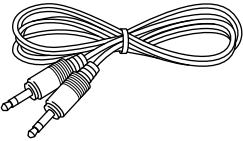

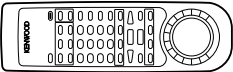
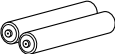
# DMF-9020/9020(S)/MD-2070

## CONTENTS/ACCESSORIES/CAUTIONS

### CONTENTS

CONTENTS/ACCESSORIES/CAUTIONS.....	2	SCHEMATIC DIAGRAM .....	13
CONTROLS .....	3	EXPLODED VIEW .....	27
BLOCK DIAGRAM .....	5	PARTS LIST .....	29
CIRCUIT DESCRIPTION .....	6	SPECIFICATIONS .....	Back cover
PC BOARD .....	9		

### 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)  Battery cover (A09-1106-08)	Batteries (2) 	

### 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.

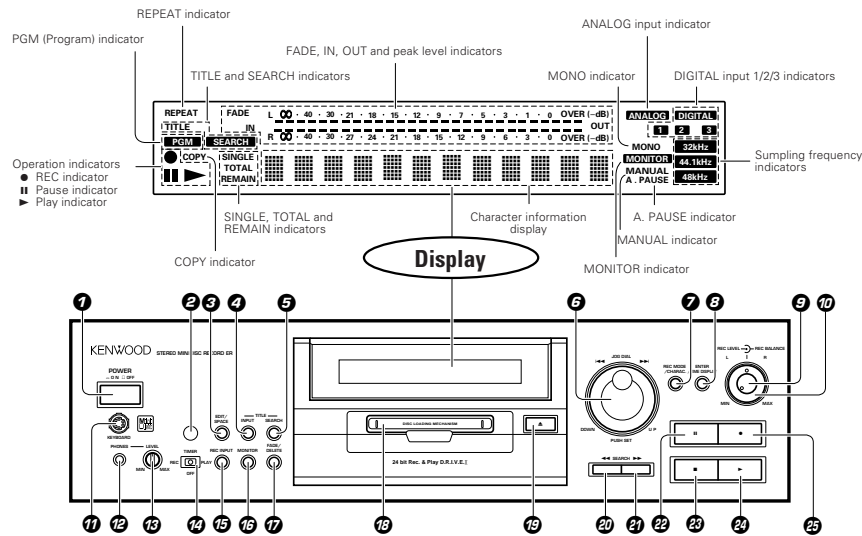
#### **Caution on condensation**

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

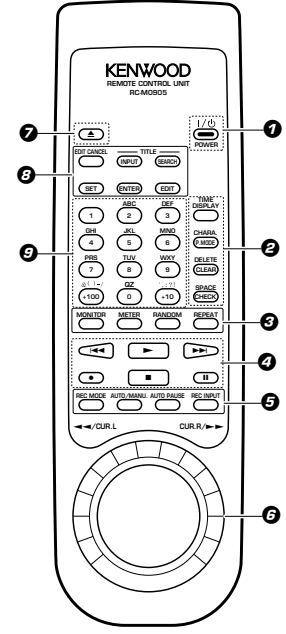


## Description of main unit keys

- 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.



Model: RC-M0905  
Infrared ray system

**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

**5 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.

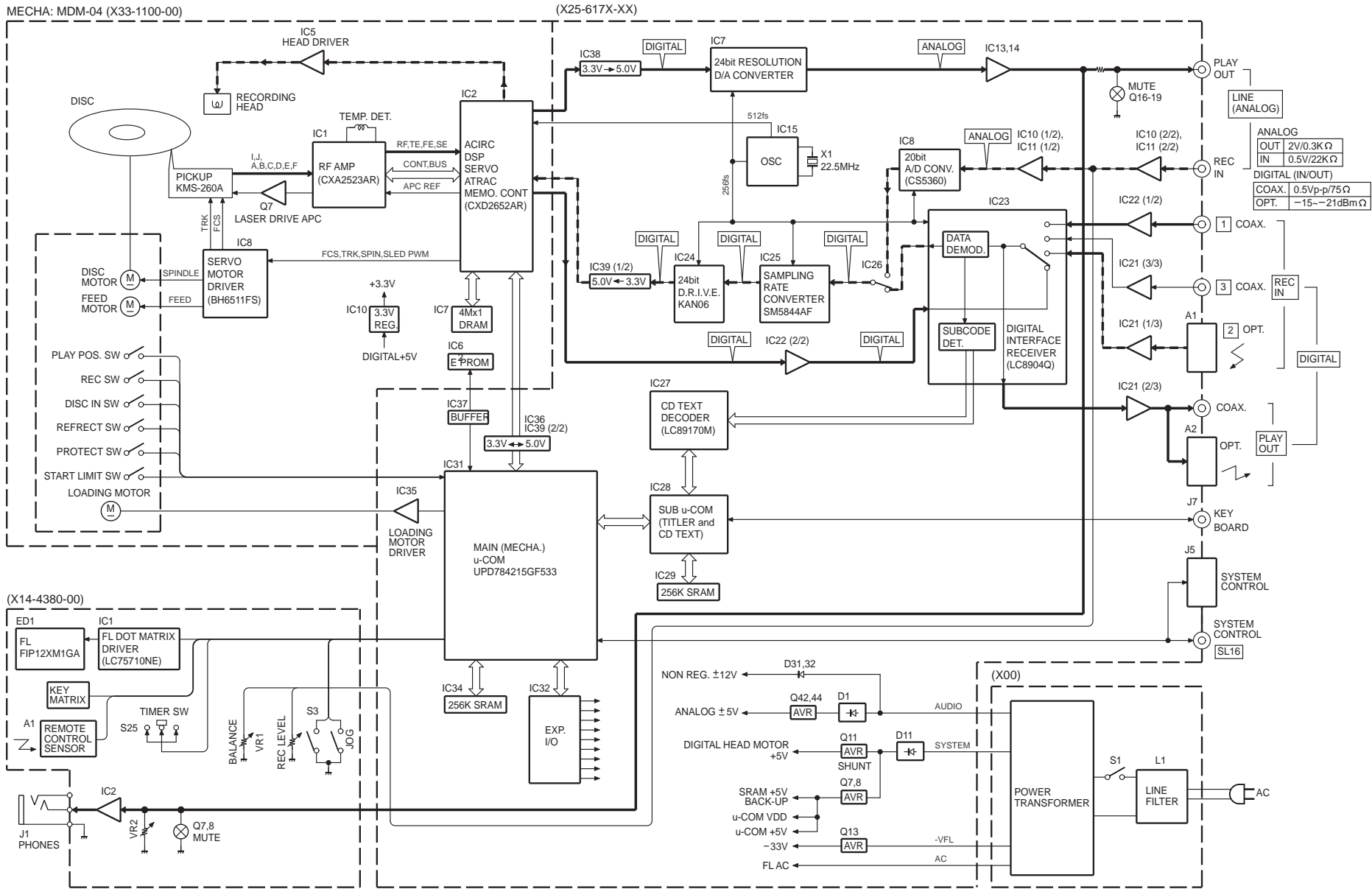
**6 CURSOR / ◀▶ shuttle CURSOR**  
: During title input, rotate to move the cursor.  
◀▶ : Use this during playback for forward and reverse search.

**7 EJECT (▲) key**

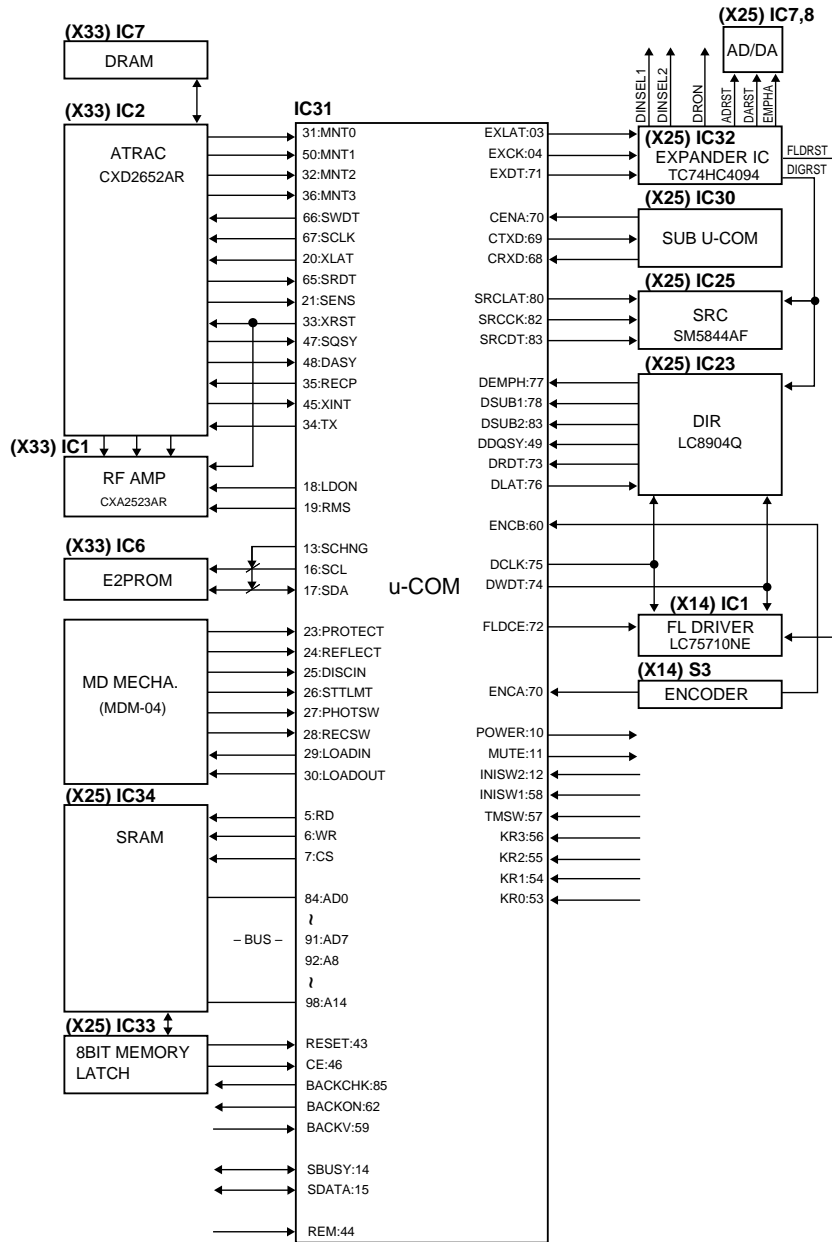
**8 Editing mode keys**  
**EDIT CANCEL key**  
: Press to cancel the editing operation.  
**TITLE INPUT key**  
: Press to switch the title input mode ON/OFF.  
**TITLE SEARCH key**  
: Press to switch the title search mode ON/OFF.  
: During title editing, press to switch the title change input mode 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.

**9 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.

## BLOCK DIAGRAM



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	STTLMT	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	I	Key return (KR0-KR3)
57	TMSW	I	Timer switch input 0.0V QEE 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
- ※ AUTOMANUAL = 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**

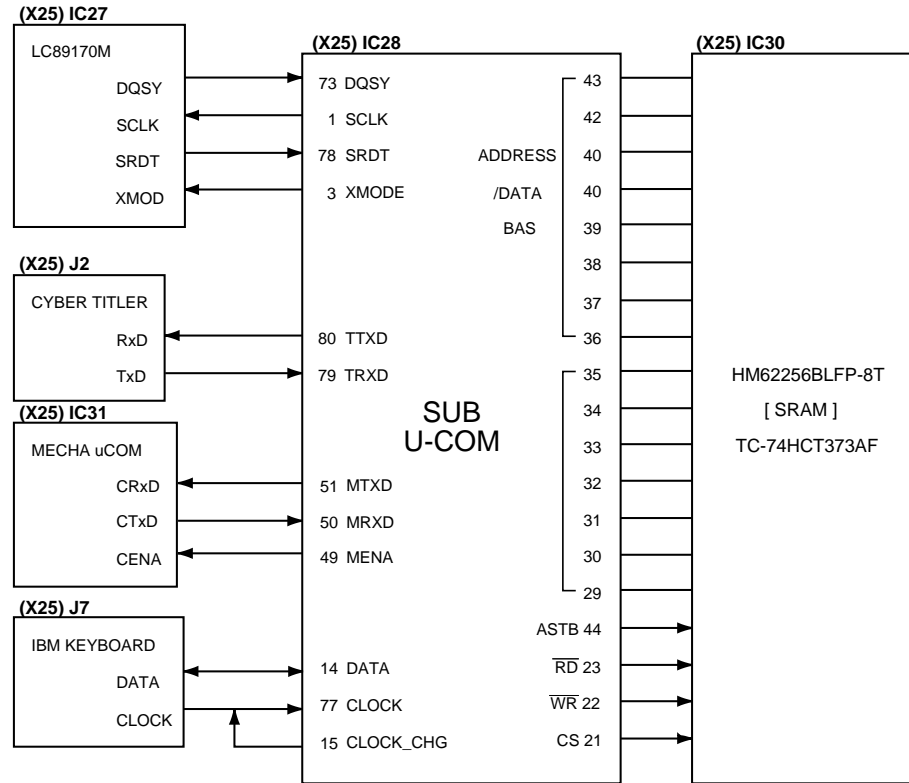
Model	INISW 58	INISW 12
DMF-9020	3.5 (V)	HIGH
MD-2070		

**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**



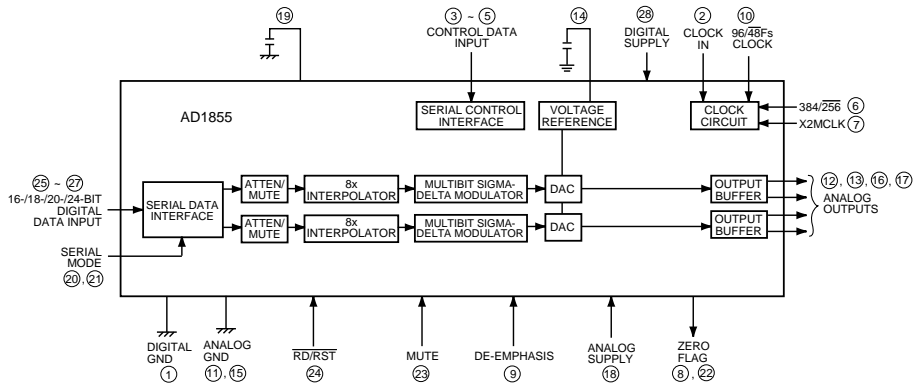
**2-2 Pin description**

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
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
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 SW 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

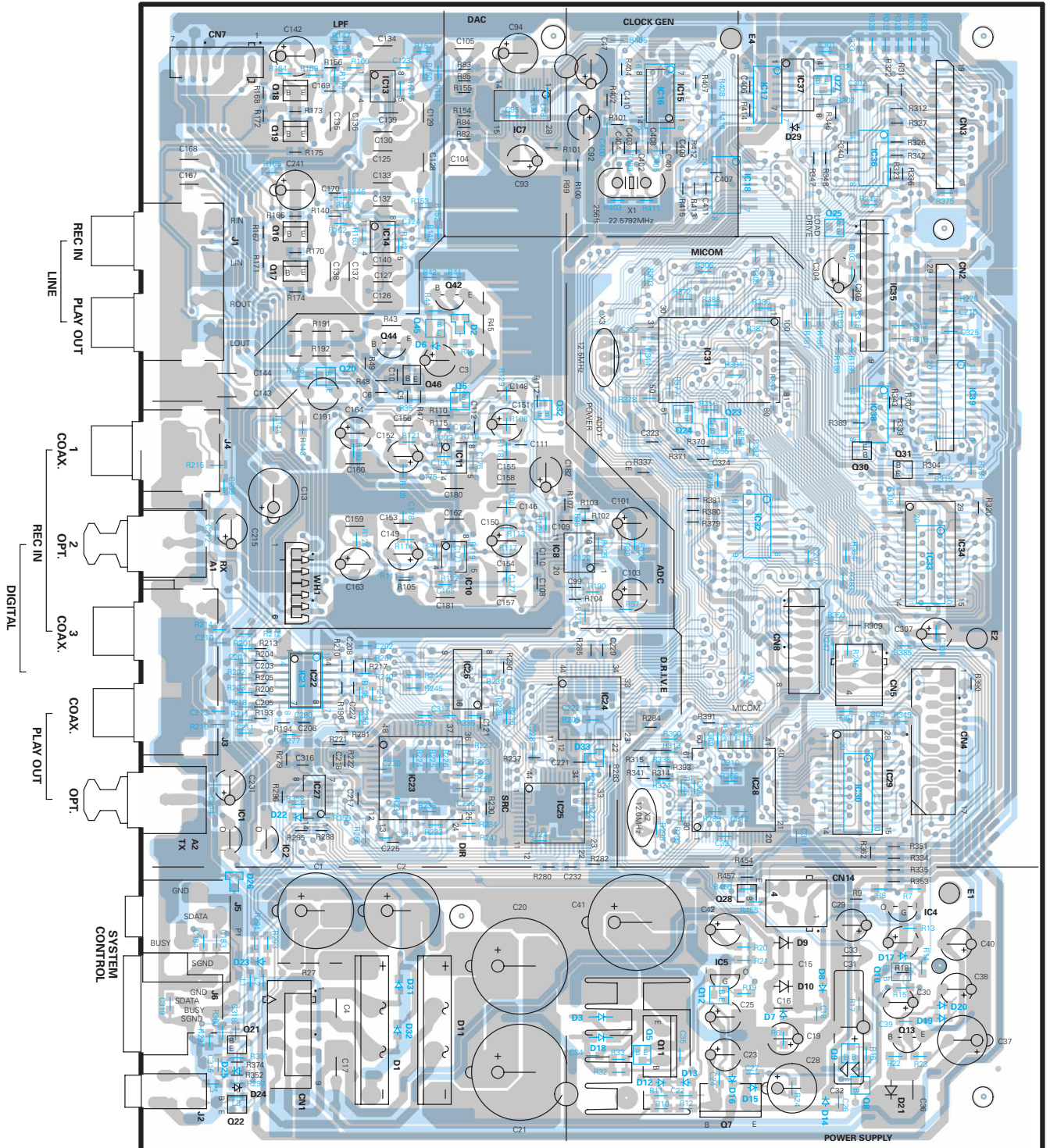
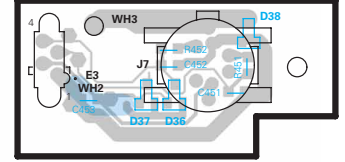
Refer to 1050MD/DM-5090/MD-9090 service manual (B51-5387-00), if you see this test mode.



# PC BOARD (Component side view)

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

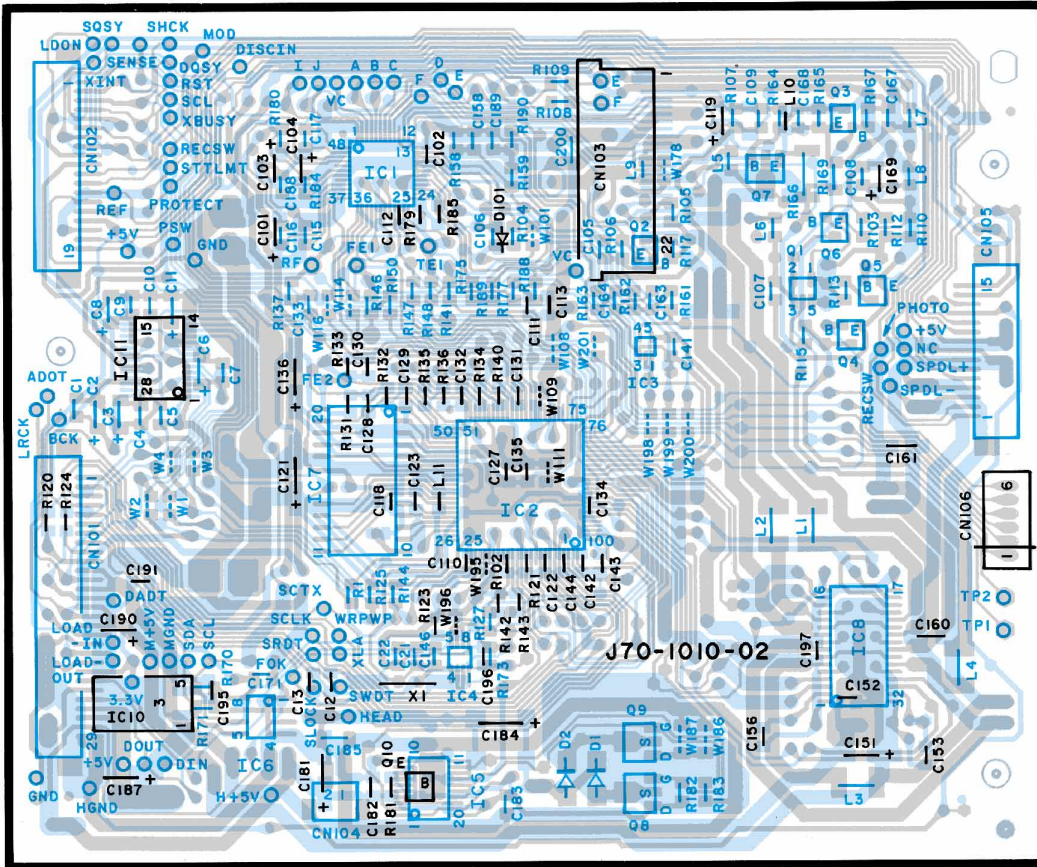
X25 B/2



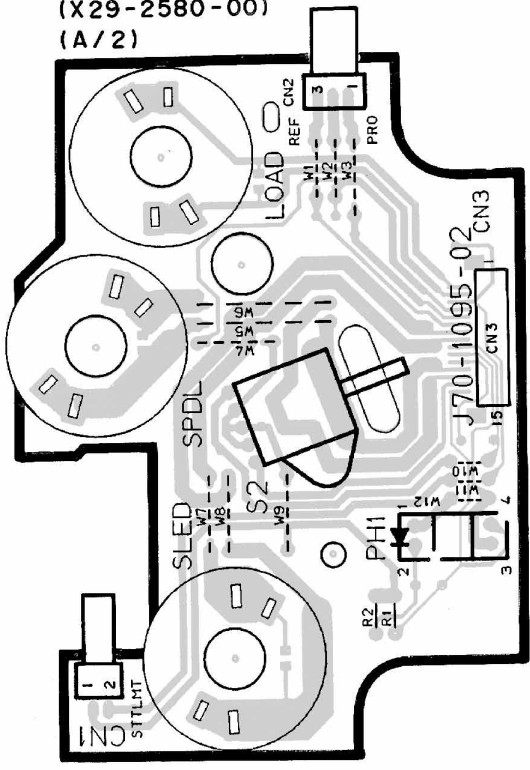
Refer to the schematic diagram for the value of resistors and capacitors.

# PC BOARD (Component side view)

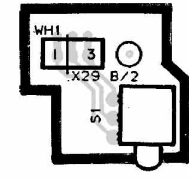
(X33-1100-00)



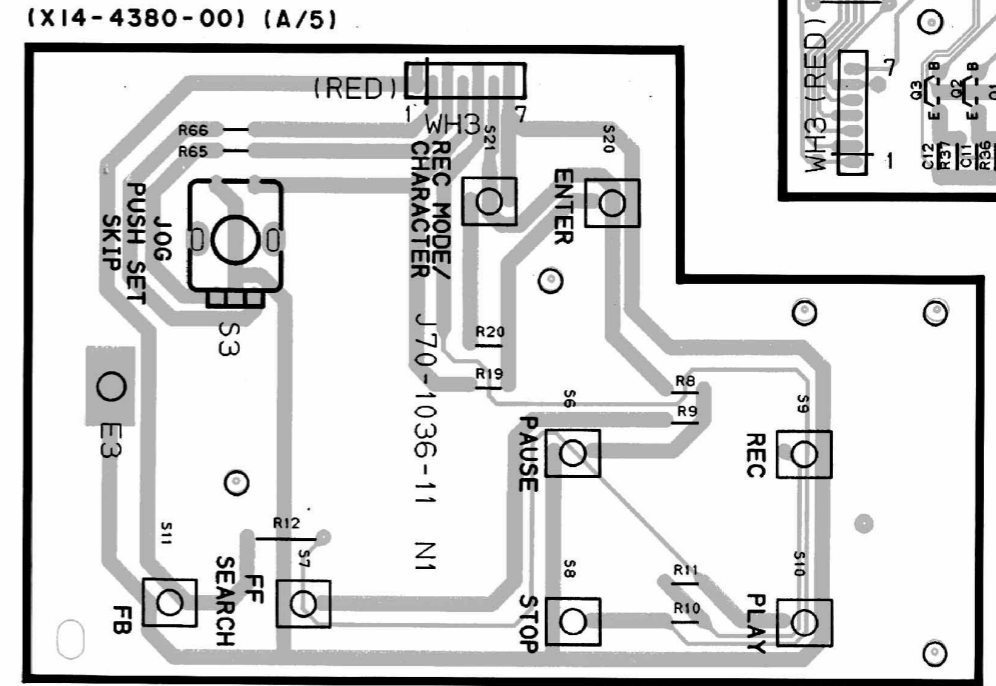
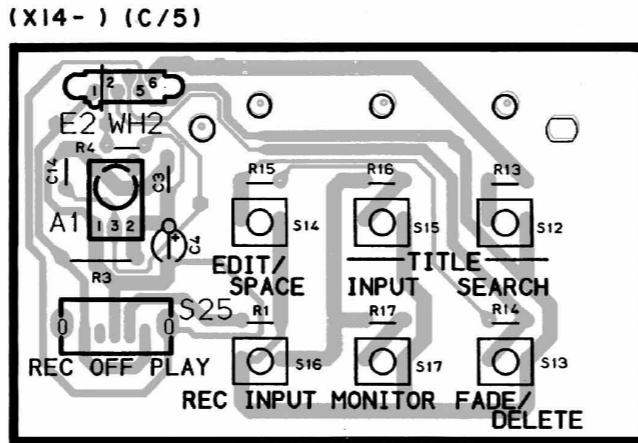
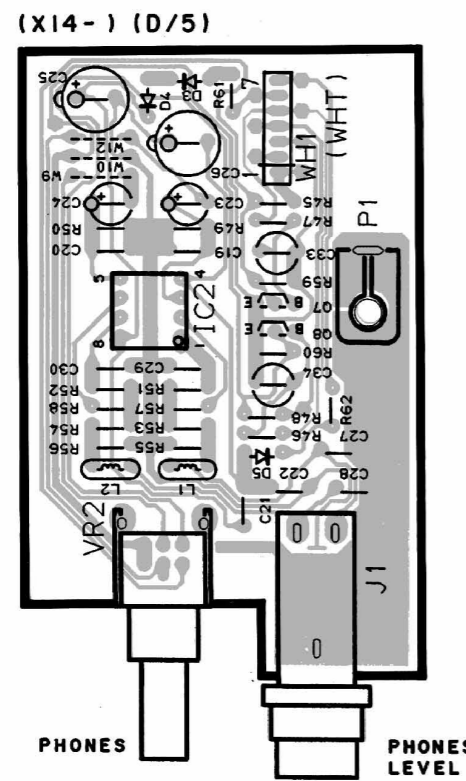
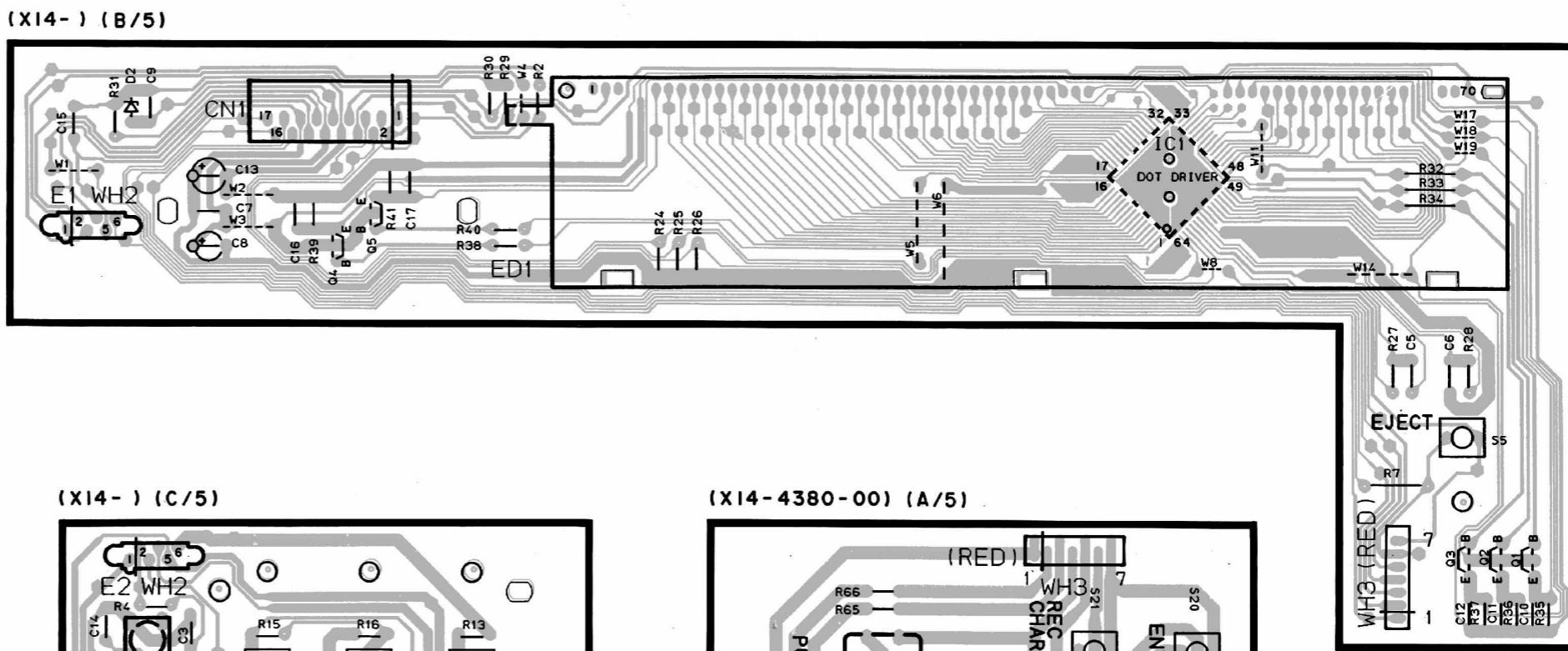
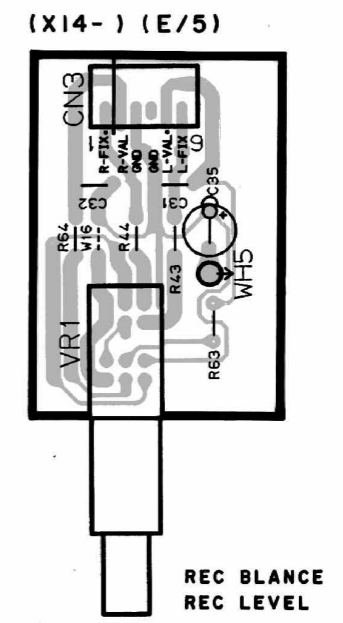
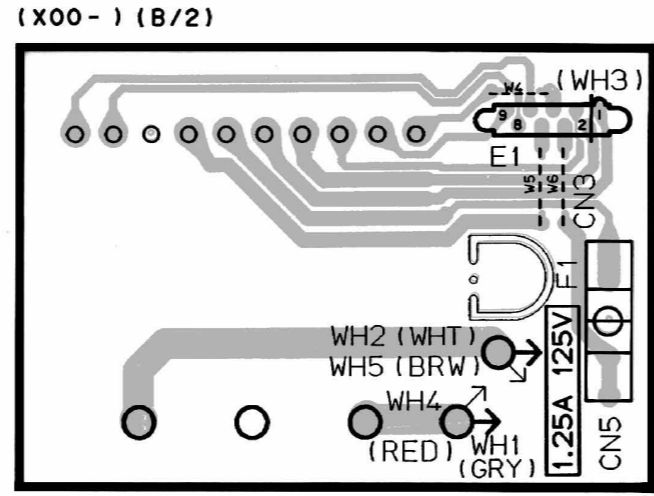
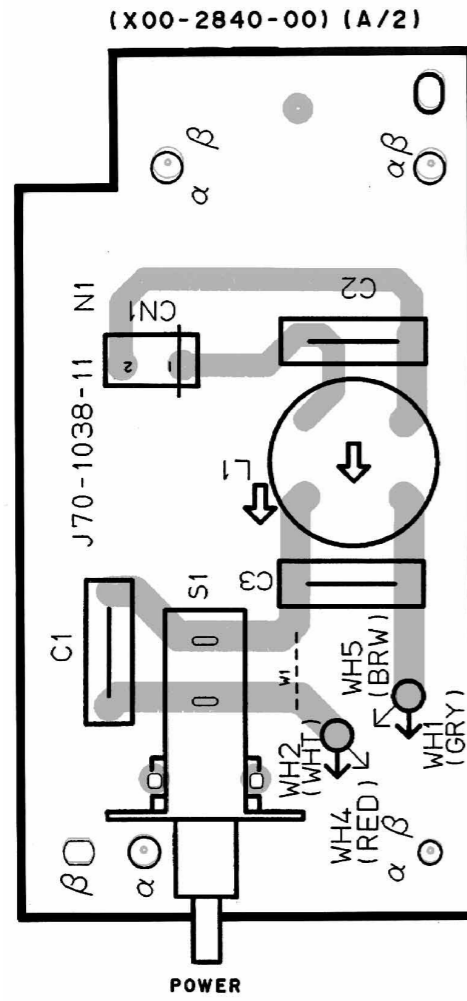
(X29-2580-00)  
(A/2)



(X29) (B/2)

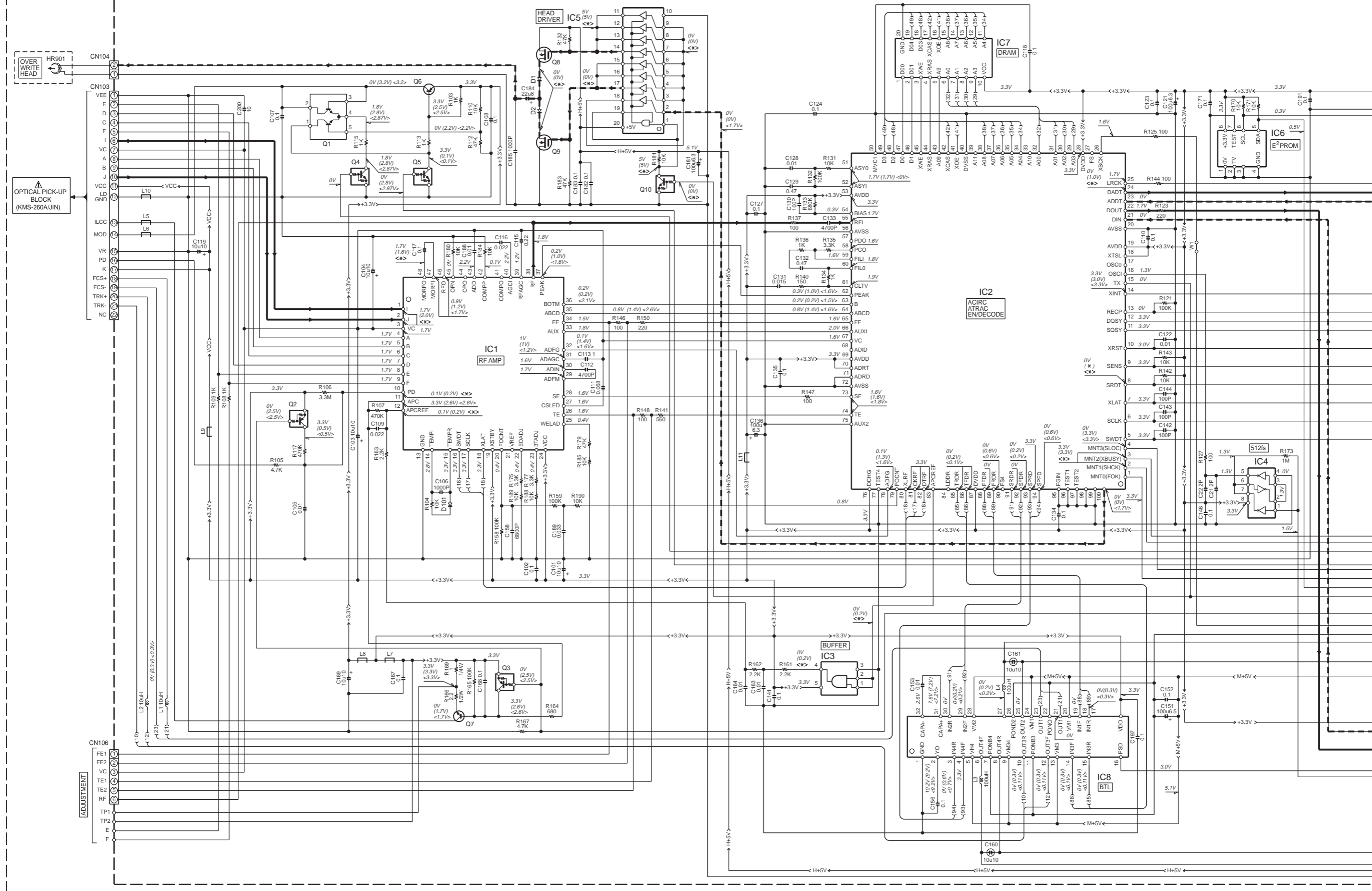


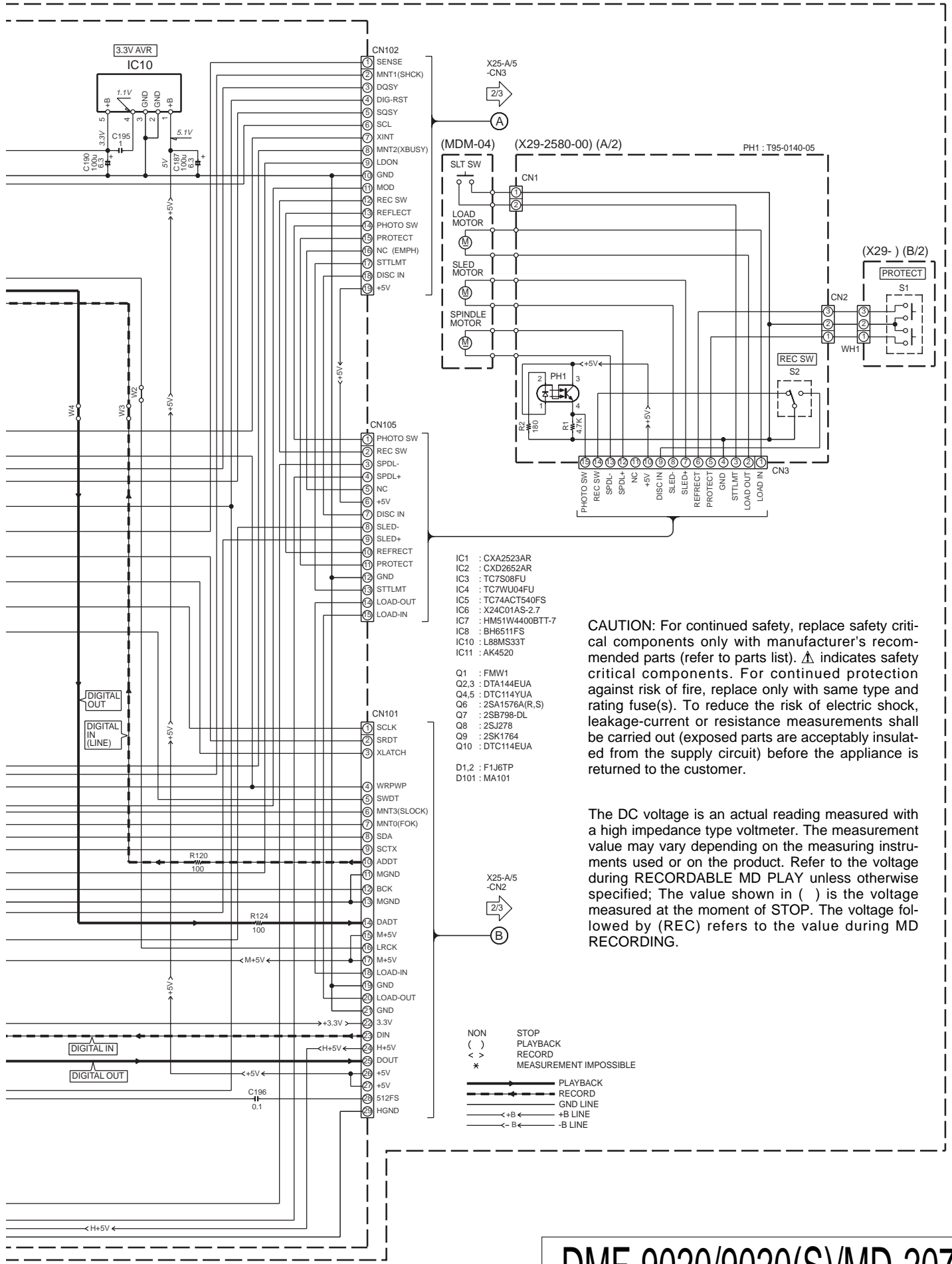
# PC BOARD(Component side view)



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

(X33-1100-00)

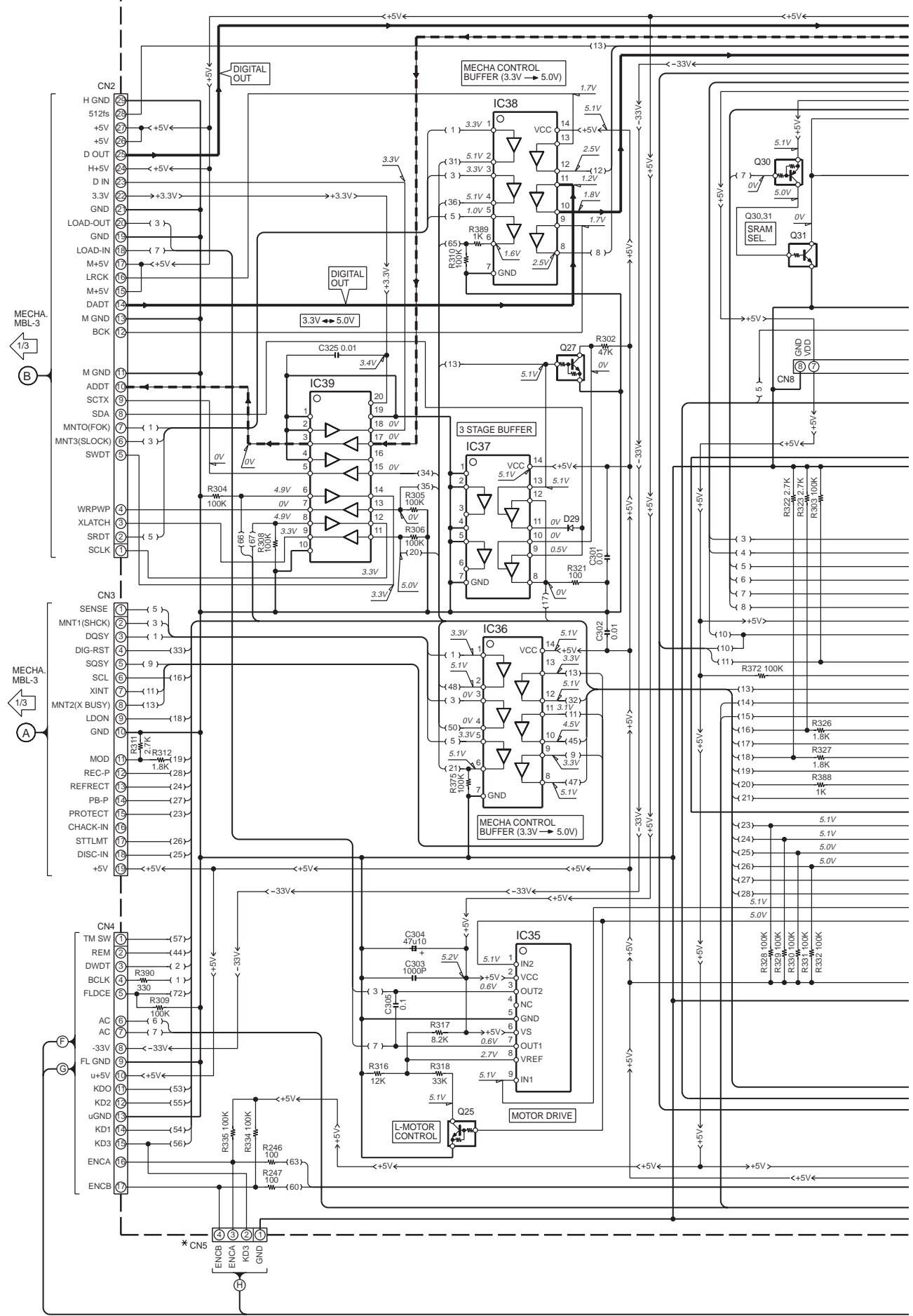




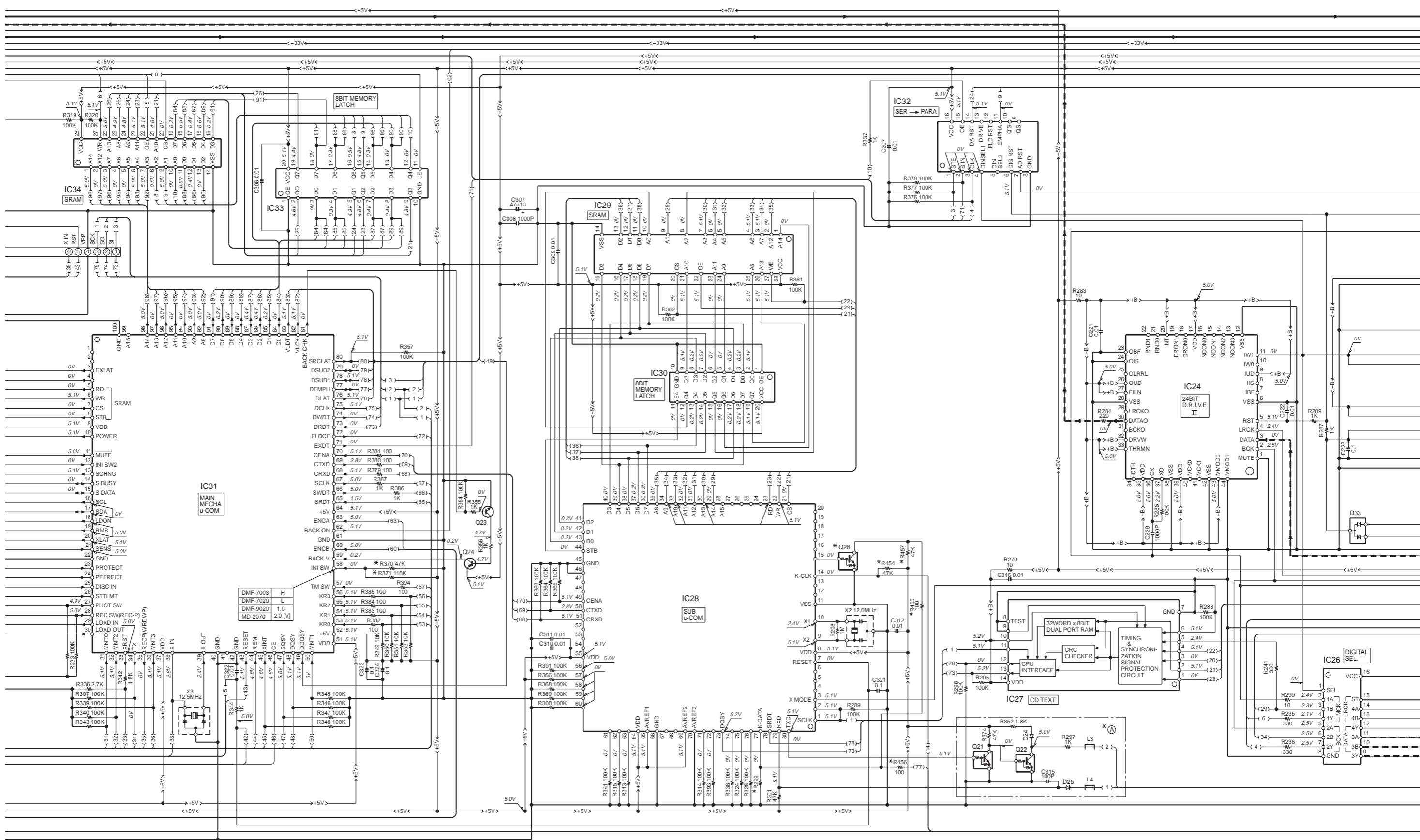
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of 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. The measurement value may vary depending on the measuring instruments used or on the product. Refer to the voltage during RECORDABLE MD PLAY unless otherwise specified; The value shown in ( ) is the voltage measured at the moment of STOP. The voltage followed by (REC) refers to the value during MD RECORDING.

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

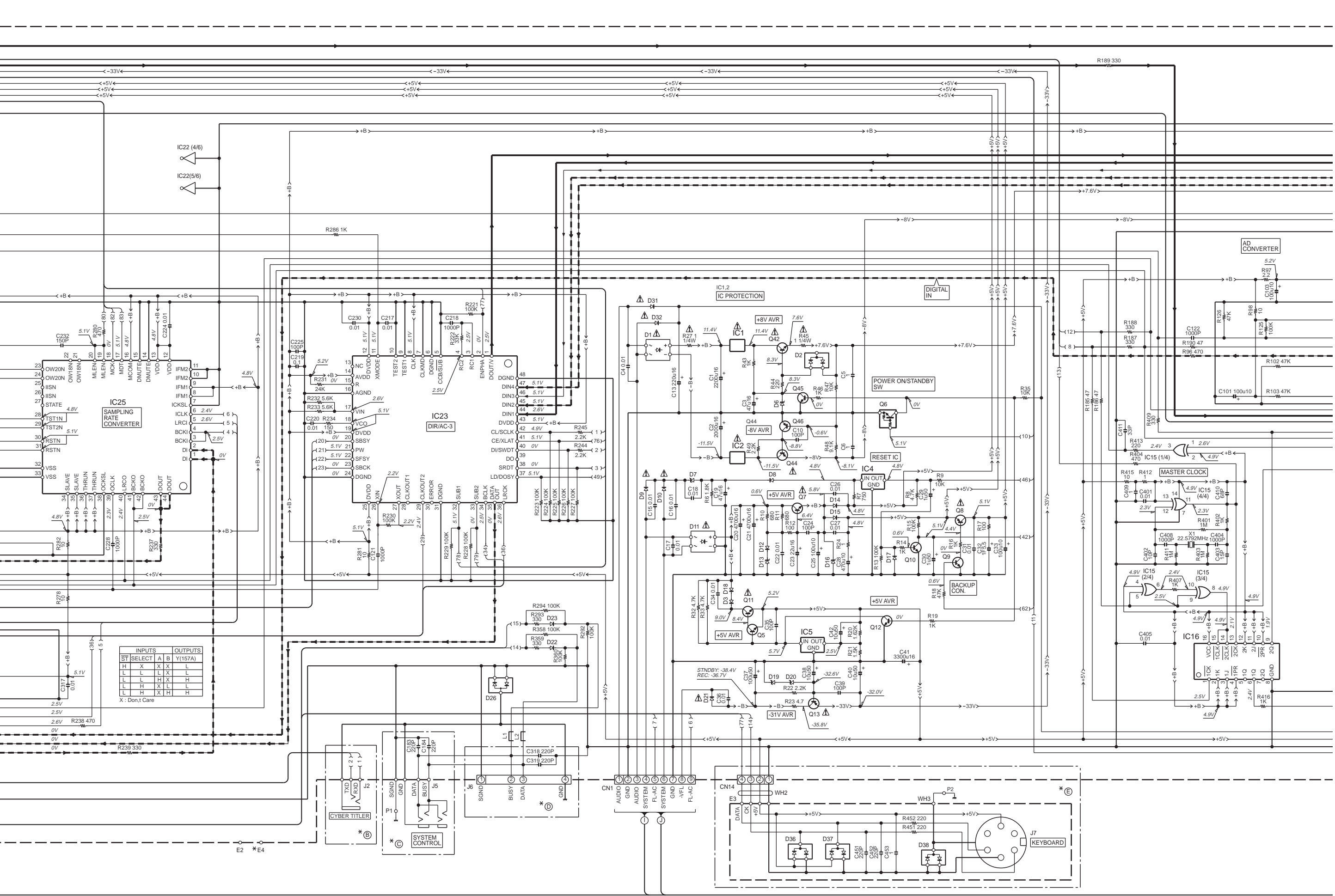


1  
2  
3  
4  
5  
6  
7



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.

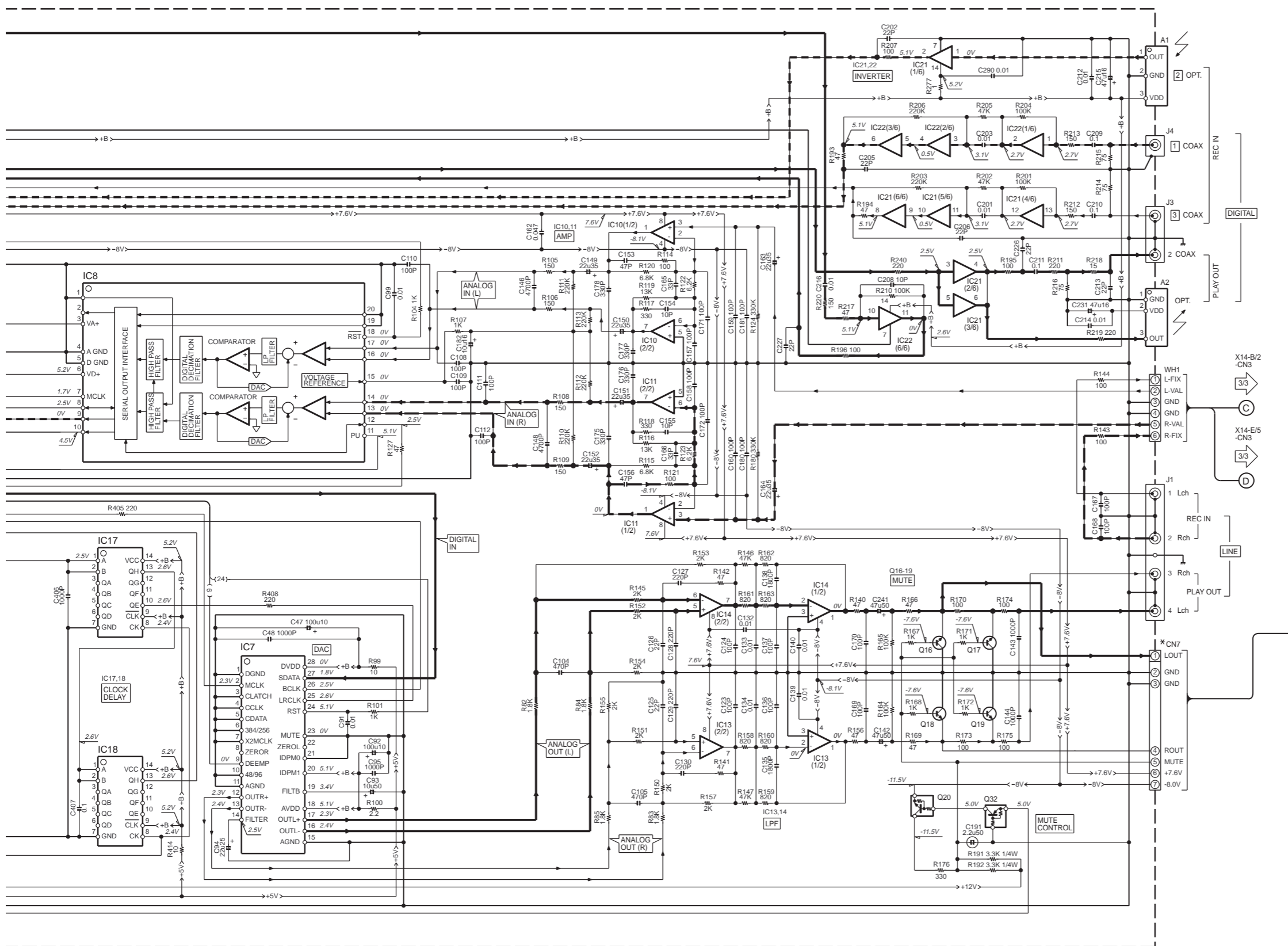
The DC voltage is an actual reading measured with a high impedance type voltmeter with no signal input. The measurement value may vary depending on the measuring instruments used or on the product.



ST	SELECT	A	B	Y(157A)
H	X	X	X	L
L	L	L	X	L
L	L	H	X	H
L	H	X	L	L
L	L	H	X	H

X : Don't Care





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 : HD74HCT126FPPEL  
 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 : UDZ8.2B  
 D7 : UDZ2.7B  
 D8,12,17,22-25,29,31,32 : MA111  
 D9,10,21 : S5688B(TPB5)  
 D13 : UDZ5.6B  
 D14,15 : MA113  
 D16 : UDZ6.2B  
 D19 : UDZ18B  
 D20 : UDZ15B  
 D36-38 : DA204K

2SA954  
 2SC2003

2SC2458

DTA144EUA  
 DTC114YUA  
 DTC143TUA  
 UN5216  
 2SC4081

2SB1370  
 2SD2061

2SC3311A

FMW1

2SB798-DL

2SB1375  
 2SD2012

DTC114EUA

TA8409S

NJM4565MD  
 NJM4580ED

TC74HC4094AF

DA204K  
 DA204U

UN5212

TC74AC86F  
 TC74HCT7007AF  
 TC74HCU04AF

LC89170M

TC7S08FU

CXA2523AR  
 LC8904Q

REC IN  
 COAX  
 DIGITAL  
 COAX  
 PLAY OUT  
 OPT.  
 VDD  
 GND  
 OUT  
 REC IN  
 Lch  
 Rch  
 PLAY OUT  
 Lch  
 Rch  
 \*CN7  
 LOUT  
 GND  
 GND  
 ROUT  
 MUTE  
 +7.6V  
 -8.0V

X14-B/2 -CN3  
 X14-E/5 -CN3  
 X14-D/5 -WH1  
 X14-A/2 -CN1  
 X14-B/5 -CN1  
 X14-B/2 -E2  
 X00-B/2 -E1  
 X00-B/2 -E1

RECORDING LINE  
 DIGITAL LINE  
 SIGNAL LINE  
 GND LINE  
 +B LINE  
 -B LINE

ICAN06

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	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	NO	YES	NO	YES
EUROPE	E1													

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	NO	YES	NO	YES
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	NO	YES	NO	YES	NO

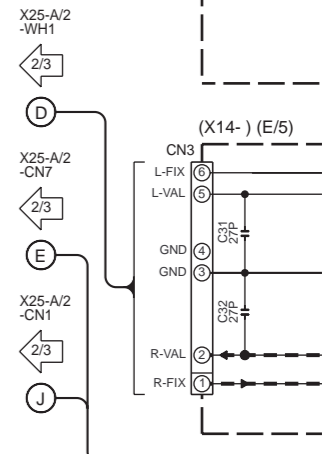
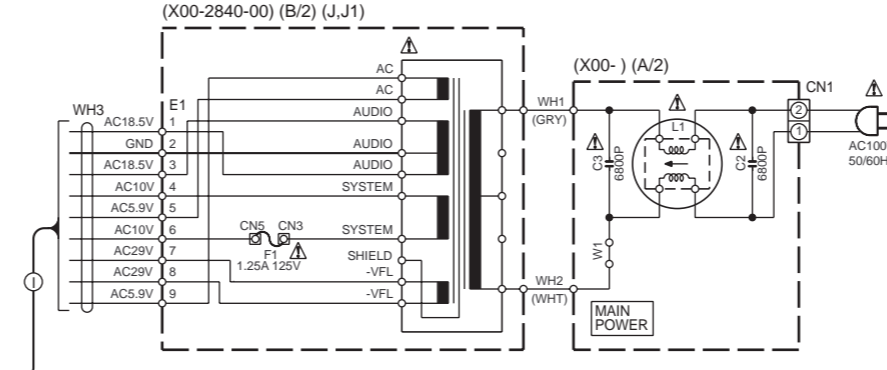
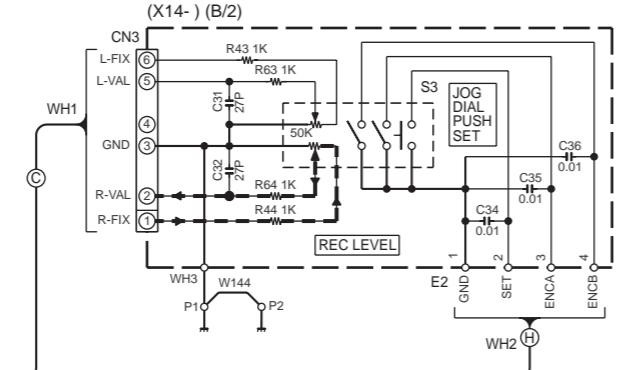
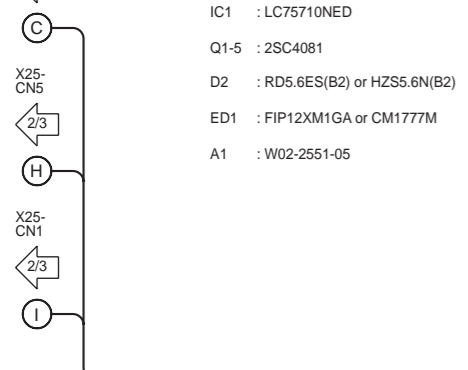
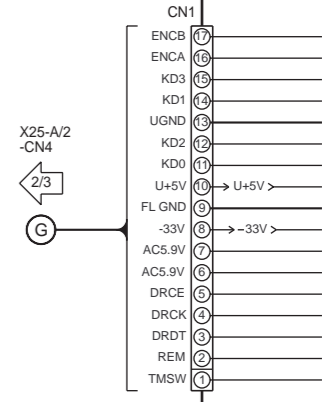
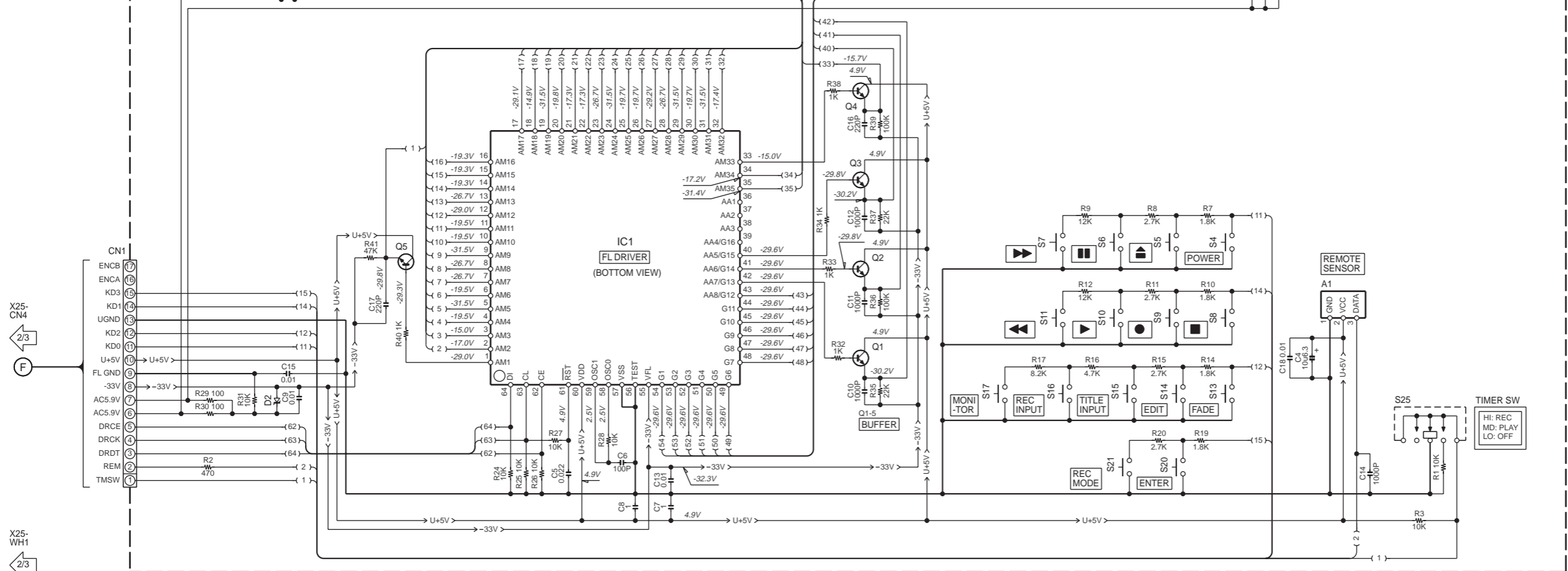
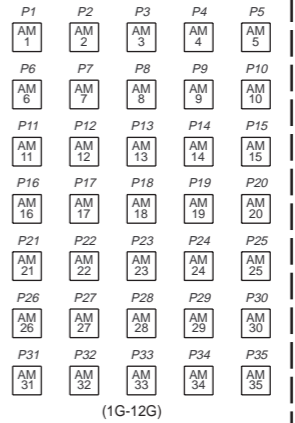
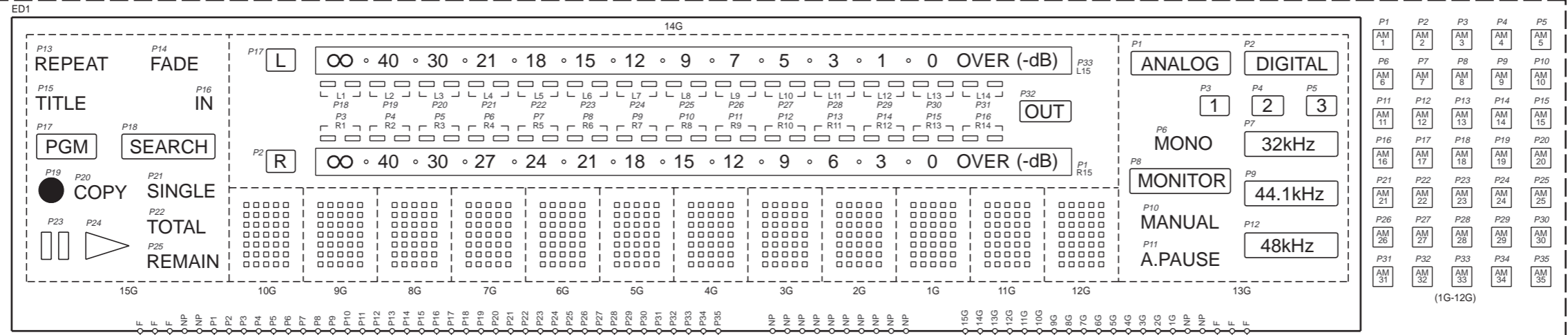
DMF-7003G (X25-6170-01)

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	NO	YES	NO	YES	NO

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

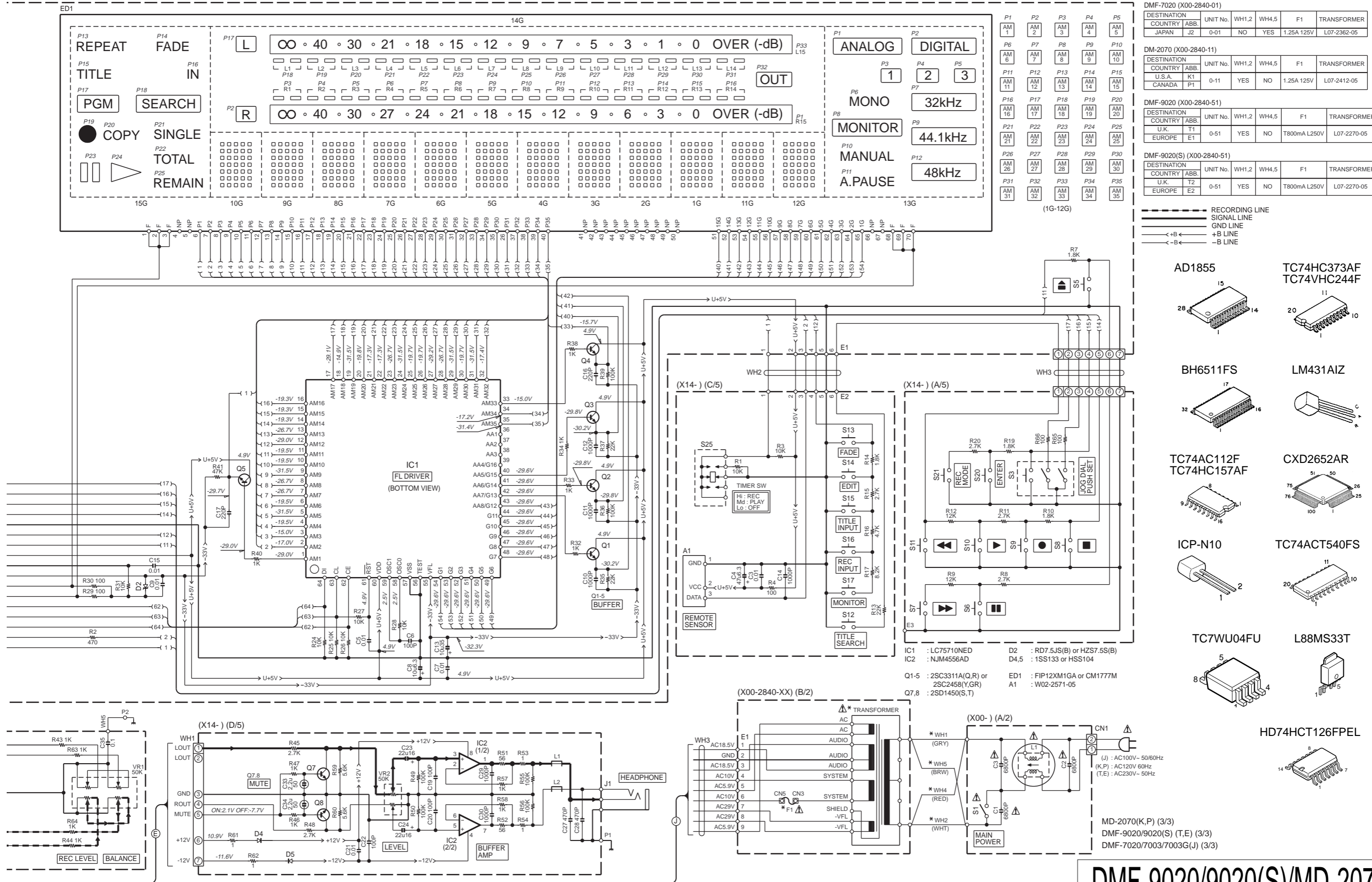
# DMF-9020/9020(S)/MD-2070

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).  $\Delta$  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)



DMF-7020 (X00-2840-01)							
DESTINATION	COUNTRY	ABB.	UNIT No.	WH1,2	WH4,5	F1	TRANSFORMER
JAPAN	J2		0-01	NO	YES	1.25A 125V	L07-2362-05

DM-2070 (X00-2840-11)							
DESTINATION	COUNTRY	ABB.	UNIT No.	WH1,2	WH4,5	F1	TRANSFORMER
U.S.A.	K1		0-11	YES	NO	1.25A 125V	L07-2412-05
CANADA	P1						

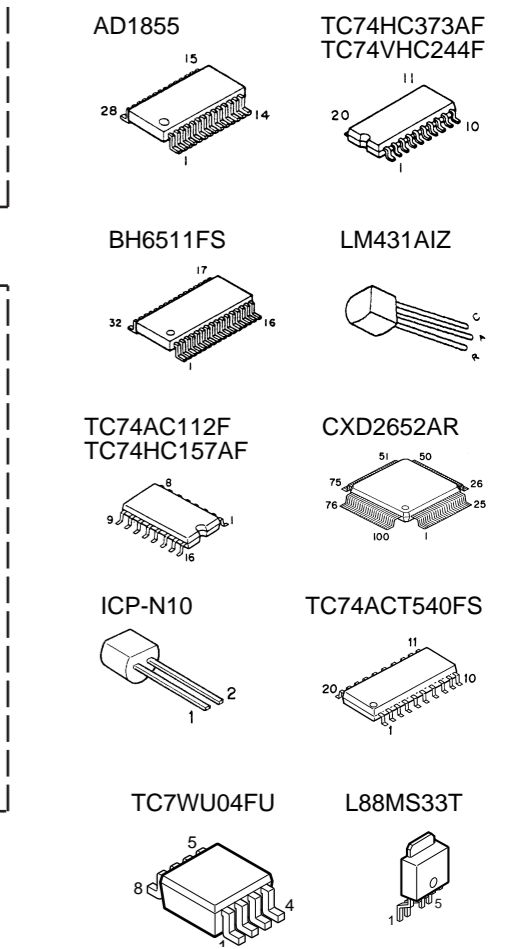
  

DMF-9020 (X00-2840-51)							
DESTINATION	COUNTRY	ABB.	UNIT No.	WH1,2	WH4,5	F1	TRANSFORMER
U.K.	T1		0-51	YES	NO	T800mA L250V	L07-2270-05
EUROPE	E1						

DMF-9020(S) (X00-2840-51)							
DESTINATION	COUNTRY	ABB.	UNIT No.	WH1,2	WH4,5	F1	TRANSFORMER
U.K.	T2		0-51	YES	NO	T800mA L250V	L07-2270-05
EUROPE	E2						

--- RECORDING LINE  
--- SIGNAL LINE  
--- GND LINE  
--- +B LINE  
--- -B LINE



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.

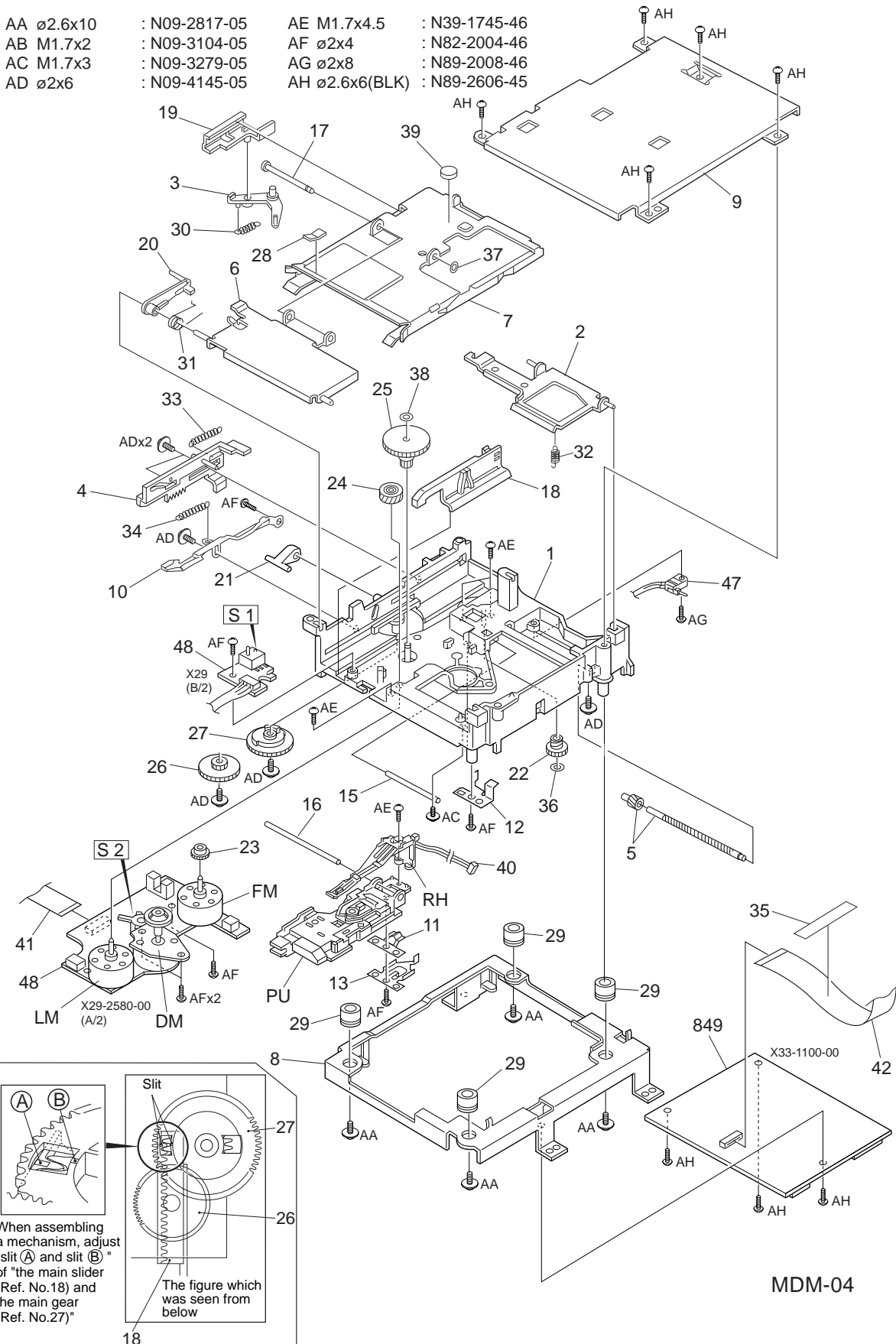
Y22-7880-11

KENWOOD

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

## EXPLODED VIEW (MECHANISM)

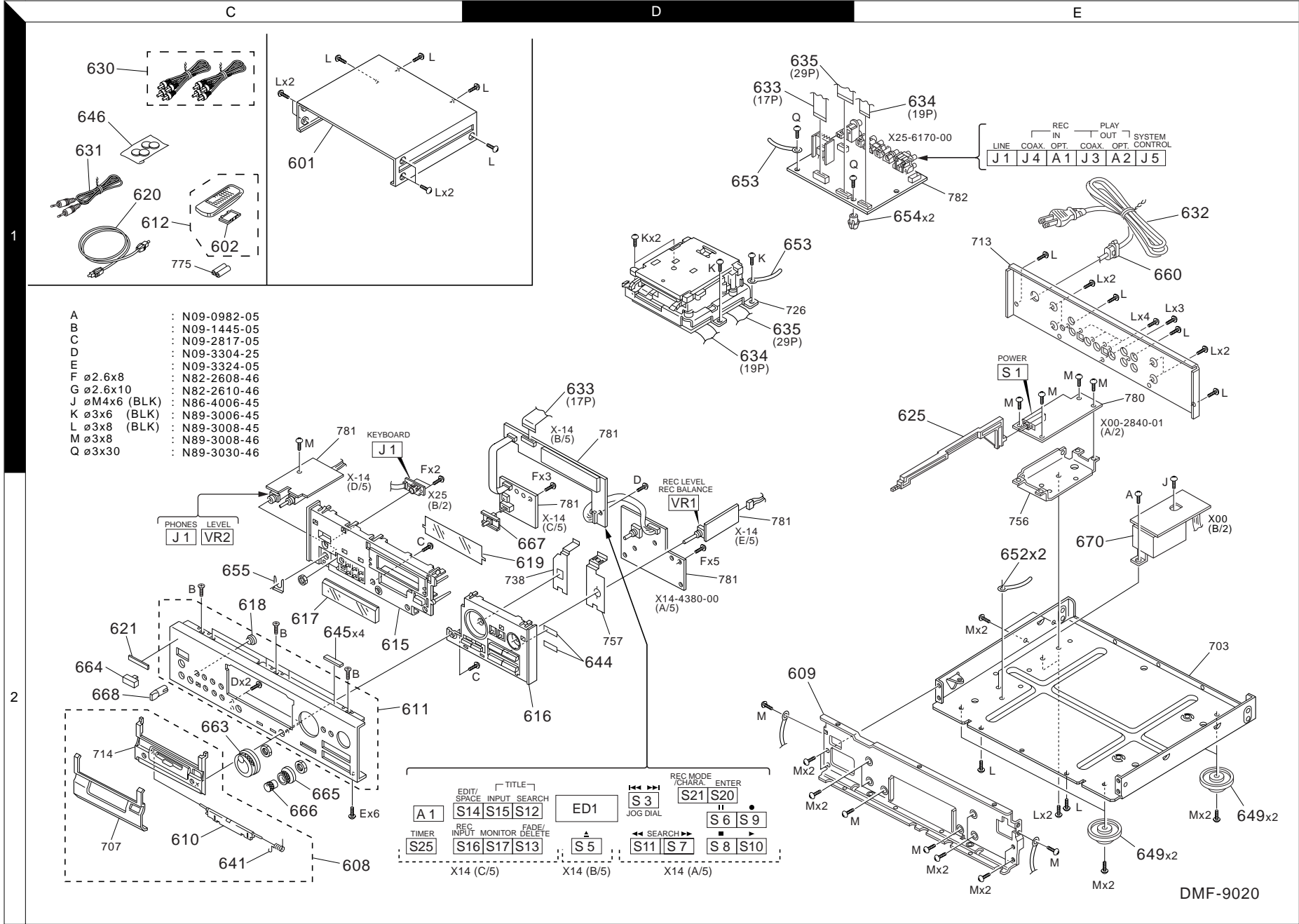
- |                         |               |                              |               |
|-------------------------|---------------|------------------------------|---------------|
| AA $\phi 2.6 \times 10$ | : N09-2817-05 | AE M1.7x4.5                  | : N39-1745-46 |
| AB M1.7x2              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



When assembling a mechanism, adjust "slit A and slit B" of "the main slider (Ref. No.18) and the main gear (Ref. No.27)"

The figure which was seen from below

MDM-04



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

\* New Parts

Parts without **Parts No.** are not supplied.  
Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.  
Teile ohne **Parts No.** werden nicht geliefert.

①

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
<b>DMF-9020 / 9020(S) / MD-2070</b>						
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 Δ indicates safety critical components.

\* New Parts

Parts without **Parts No.** are not supplied.  
Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.  
Teile ohne **Parts No.** werden nicht geliefert.

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	2E		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		
<b>POWER SUPPLY (X00-2840-11)</b>						
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 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 Δ indicates safety critical components.

PARTS LIST

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

\* New Parts  
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3

Table with columns: Ref. No, Add-ress, New Parts, Parts No., Description, Desti-nation, Re-marks. Includes sections for DISPLAY (X14-4380-00) and ELECTRIC (X25-6172-71).

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

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4

Table with columns: Ref. No, Add-ress, New Parts, Parts No., Description, Desti-nation, Re-marks. Lists various electronic components and their specifications.

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

PARTS LIST

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

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5

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C154, 155			CC45FSL1H100D	CERAMIC 10PF D		
C156			CC45FSL1H470J	CERAMIC 47PF J		
C157-160			CC45FSL1H101J	CERAMIC 100PF J		
C162			CO93FMG1H473J	MYLAR 0.047UF J		
C163, 164			CE04KW1V220M	ELECTRO 22UF 35WV		
C165, 166			CC73FSL1H330J	CHIP C 33PF J		
C167, 168			CC45FSL1H101J	CERAMIC 100PF J		
C169-172			CC73FSL1H101J	CHIP C 100PF J		
C175-178			CC73FSL1H331J	CHIP C 330PF J		
C180, 181			CC45FSL1H101J	CERAMIC 100PF J		
C182			CE04KW1C100M	ELECTRO 10UF 16WV		
C183, 184			CC73FSL1H221J	CHIP C 220PF J		
C191			CE04HW1H2R2M	NP-ELEC 2.2UF 50WV		
C201			CK73FB1H103K	CHIP C 0.010UF K		
C202			CC73FSL1H220J	CHIP C 22PF J		
C203			CK73FB1H103K	CHIP C 0.010UF K		
C205, 206			CC73FSL1H220J	CHIP C 22PF J		
C207			CK73FB1H103K	CHIP C 0.010UF K		
C208			CC73FSL1H100J	CHIP C 10PF J		
C209-211			CK73FF1E104Z	CHIP C 0.10UF Z		
C212			CK73FB1H103K	CHIP C 0.010UF K		
C213			CC73FSL1H220J	CHIP C 22PF J		
C214			CK73FB1H103K	CHIP C 0.010UF K		
C215			CE04KW1C470M	ELECTRO 47UF 16WV		
C216, 217			CK73FB1H103K	CHIP C 0.010UF K		
C218			CK73FB1H102K	CHIP C 1000PF K		
C219			CK73FF1E104Z	CHIP C 0.10UF Z		
C220-222			CK73FB1H103K	CHIP C 0.010UF K		
C223			CK73FF1E104Z	CHIP C 0.10UF Z		
C224			CK73FB1H103K	CHIP C 0.010UF K		
C225			CC73FSL1H101J	CHIP C 100PF J		
C226, 227			CC73FSL1H220J	CHIP C 22PF J		
C228, 229			CK73FB1H102K	CHIP C 1000PF K		
C230			CK73FB1H103K	CHIP C 0.010UF K		
C231			CE04KW1C470M	ELECTRO 47UF 16WV		
C232			CC73FSL1H151J	CHIP C 150PF J		
C241			CE04KW1H470M	ELECTRO 47UF 50WV		
C290			CK73FB1H103K	CHIP C 0.010UF K		
C301, 302			CK73FB1H103K	CHIP C 0.010UF K		
C303			CK73FB1H102K	CHIP C 1000PF K		
C304			CE04KW1A470M	ELECTRO 47UF 10WV		
C305			CK73FF1E104Z	CHIP C 0.10UF Z		
C306			CK73FB1H103K	CHIP C 0.010UF K		
C307			CE04KW1A470M	ELECTRO 47UF 10WV		
C308			CK73FB1H102K	CHIP C 1000PF K		
C309-312			CK73FB1H103K	CHIP C 0.010UF K		
C316, 317			CK73FB1H103K	CHIP C 0.010UF K		
C321			CK73FF1E104Z	CHIP C 0.10UF Z		
C322			CK73FB1H103K	CHIP C 0.010UF K		
C323, 324			CK73FF1E104Z	CHIP C 0.10UF Z		
C325			CK73FB1H103K	CHIP C 0.010UF K		
C401			CK73FB1H103K	CHIP C 0.010UF K		
C402			CC73FCH1H100D	CHIP C 10PF D		
C403			CC73FCH1H150J	CHIP C 15PF J		
C404			CK73FB1H102K	CHIP C 1000PF K		

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5

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C405			CK73FB1H103K	CHIP C 0.010UF K		
C406			CK73FB1H102K	CHIP C 1000PF K		
C407			CK73FF1E104Z	CHIP C 0.10UF Z		
C408			CK73FB1H102K	CHIP C 1000PF K		
C409			CK73FF1C105Z	CHIP C 1.0UF Z		
C410			CC73FCH1H680J	CHIP C 68PF J		
C411			CC73FCH1H330J	CHIP C 33PF J		
C451, 452			CC73FSL1H221J	CHIP C 220PF J		
C453			CK73FF1C105Z	CHIP C 1.0UF Z		
CN1			E40-4807-05	PIN ASSY		
CN2		*	E40-8310-05	FLAT CABLE CONNECTOR		
CN3		*	E40-8311-05	FLAT CABLE CONNECTOR		
CN4			E40-4904-05	FLAT CABLE CONNECTOR		
CN7			E40-3251-05	PIN ASSY		
CN14			E40-4294-05	FLAT CABLE CONNECTOR		
J1		*	E63-1066-05	PHONO JACK		
J3			E63-0174-05	PHONO JACK		
J4			E63-1059-05	PHONO JACK		
J5			E11-0188-05	MINIATURE PHONE JACK(2P)		
J7		*	E56-0022-05	CYLINDRICAL RECEPTACLE		
L1, 2			L92-0131-05	FERRITE CORE		
X1			L77-1124-05	CRYSTAL RESONATOR		
X2			L78-0277-05	RESONATOR (12.000M)		
X3			L78-0615-05	RESONATOR (12.5MHZ)		
R6			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R7			RK73FB2A751J	CHIP R 750 J 1/10W		
R8			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R9			RK73FB2A103J	CHIP R 10K J 1/10W		
R10, 11			RK73FB2A681J	CHIP R 680 J 1/10W		
R12			RK73FB2A101J	CHIP R 100 J 1/10W		
R13			RK73FB2A104J	CHIP R 100K J 1/10W		
R14			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R15			RK73FB2A104J	CHIP R 100K J 1/10W		
R16			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R17			RK73FB2A101J	CHIP R 100 J 1/10W		
R18			RK73FB2A473J	CHIP R 47K J 1/10W		
R19			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R20			R92-1861-05	CHIP R 1.62K F 1/8W		
R21			R92-1860-05	CHIP R 1.50K F 1/8W		
R22			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R23			RK73FB2A472J	CHIP R 4.7 J 1/10W		
R24			RK73FB2A1R0J	CHIP R 1 J 1/10W		
R27			RD14NB2E1R0J	RD 1 J 1/4W		
R32, 33			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R35			RK73FB2A103J	CHIP R 10K J 1/10W		
R44			RK73FB2A221J	CHIP R 220 J 1/10W		
R45			RD14NB2E1R0J	RD 1 J 1/4W		
R46			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R47			RK73FB2A103J	CHIP R 10K J 1/10W		
R48			RK73FB2A912J	CHIP R 9.1K J 1/10W		
R49			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R82-85			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R96			RK73FB2A471J	CHIP R 470 J 1/10W		
R97			RK73FB2A2R2J	CHIP R 2.2 J 1/10W		

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7

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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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8

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
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			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R357, 358			RK73FB2A104J	CHIP R 100K J 1/10W		
R359			RK73FB2A331J	CHIP R 330 J 1/10W		
R360-366			RK73FB2A104J	CHIP R 100K J 1/10W		
R368, 369			RK73FB2A104J	CHIP R 100K J 1/10W		
R370			RK73FB2A473J	CHIP R 47K J 1/10W		
R371			RK73FB2A114J	CHIP R 110K J 1/10W		
R372			RK73FB2A104J	CHIP R 100K J 1/10W		
R375-378			RK73FB2A104J	CHIP R 100K J 1/10W		
R379-385			RK73FB2A101J	CHIP R 100 J 1/10W		
R386-389			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R390			RK73FB2A331J	CHIP R 330 J 1/10W		
R391			RK73FB2A104J	CHIP R 100K J 1/10W		
R393			RK73FB2A104J	CHIP R 100K J 1/10W		
R394			RK73FB2A101J	CHIP R 100 J 1/10W		
R401			RK73FB2A105J	CHIP R 1.0M J 1/10W		
R402			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R403			RK73FB2A105J	CHIP R 1.0M J 1/10W		
R404			RK73FB2A471J	CHIP R 470 J 1/10W		
R405			RK73FB2A221J	CHIP R 220 J 1/10W		
R407			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R408			RK73FB2A221J	CHIP R 220 J 1/10W		
R409			RK73FB2A331J	CHIP R 330 J 1/10W		
R411			RK73FB2A105J	CHIP R 1.0M J 1/10W		
R412			RK73FB2A1R0J	CHIP R 1 J 1/10W		
R413			RK73FB2A221J	CHIP R 220 J 1/10W		
R414, 415			RK73FB2A100J	CHIP R 10 J 1/10W		
R416			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R451, 452			RK73FB2A221J	CHIP R 220 J 1/10W		
R454			RK73FB2A473J	CHIP R 47K J 1/10W		
R455, 456			RK73FB2A101J	CHIP R 100 J 1/10W		
R457			RK73FB2A473J	CHIP R 47K J 1/10W		
Δ D1			D3SBA20F03	DIODE		
D2			DA204U	DIODE		
D3			U1BC44	DIODE		
D6			UDZ8.2B	ZENER DIODE		
D7			UDZ2.7B	ZENER DIODE		
D8			MA111	DIODE		
Δ D9, 10			S5688B(TPB5)	DIODE		
Δ D11			D3SBA20F03	DIODE		
D12			MA111	DIODE		
D13			UDZ5.6B	ZENER DIODE		
D14, 15			MA113	DIODE		
D16			UDZ6.2B	ZENER DIODE		
D17			MA111	DIODE		
D18			U1BC44	DIODE		
D19			UDZ18B	ZENER DIODE		
D20			UDZ15B	ZENER DIODE		
Δ D21			S5688B(TPB5)	DIODE		
D22, 23			MA111	DIODE		
D26			DA204U	DIODE		
D29			MA111	DIODE		
Δ D31, 32			MA111	DIODE		
D33			DA204U	DIODE		

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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
Δ D36-38			DA204K	DIODE		
IC1, 2			ICP-N10	ANALOGUE IC		
IC4			PST993D-T	ANALOGUE IC		
IC5			LM431AIZ	ANALOGUE IC		
IC7			AD1855	MOS-IC		
IC8		*	CS5360	MOS-IC		
IC10, 11			NJM4580ED	ANALOGUE IC		
IC13, 14			NJM4565MD	IC(OP AMP X2)		
IC15		*	TC74AC86F	MOS-IC		
IC16		*	TC74AC112F	MOS-IC		
IC17, 18			TC74HC164AF	IC(SHIFT REGISTER)		
IC21, 22			TC74HCU04AF	IC(HEX INVERTER SMD)		
IC23			LC8904Q	MOS-IC		
IC24			KAN06	MOS-IC		
IC25			SM5844AF	MOS-IC		
IC26			TC74HC157AF	MOS-IC		
IC27			LC89170M	MOS-IC		
IC28		*	UPD784035GC836	MI-COM IC		
IC29			W24258S-70LE	MEMORY IC		
IC30			TC74HC373AF	IC(8 bit LATCH)		
IC31		*	UPD784215GF533	MI-COM IC		
IC32			TC74HC4094AF	MOS-IC		
IC33			TC74HC373AF	IC(8 bit LATCH)		
IC34			W24258S-70LE	MEMORY IC		
IC35			TA8409S	MOS-IC		
IC36			TC74HCT7007AF	IC(HEX BUFFER)		
IC37			HD74HCT126FPEL	MOS-IC		
IC38			TC74HCT7007AF	IC(HEX BUFFER)		
IC39			TC74VHC244F	MOS-IC		
Q5			2SC4081(R,S)	TRANSISTOR		
Q6			DTC124EUA	DIGITAL TRANSISTOR		
Q6			UN5212	DIGITAL TRANSISTOR		
Δ Q7			2SD2012	TRANSISTOR		
Δ Q8			2SD2061(E,F)	TRANSISTOR		
			2SA1576A(R,S)	TRANSISTOR		
Q9, 10			2SC4081(R,S)	TRANSISTOR		
Δ Q11			2SB1370(E,F)	TRANSISTOR		
Δ Q11			2SB1375	TRANSISTOR		
Q12			2SC4081(R,S)	TRANSISTOR		
Δ Q13			2SA954(L,K)	TRANSISTOR		
Q16-19			2SD1450(S,T)	TRANSISTOR		
Q20			DTC124EUA	DIGITAL TRANSISTOR		
Q20			UN5212	DIGITAL TRANSISTOR		
Q23			2SC4081(R,S)	TRANSISTOR		
Q24			2SA1576A(R,S)	TRANSISTOR		
Q25			DTC124EUA	DIGITAL TRANSISTOR		
Q25			UN5212	DIGITAL TRANSISTOR		
Q27, 28			DTC124EUA	DIGITAL TRANSISTOR		
Q27, 28			UN5212	DIGITAL TRANSISTOR		
Q30			DTA124EUA	DIGITAL TRANSISTOR		
Q30			UN5112	DIGITAL TRANSISTOR		
Q31			DTC143TUA	DIGITAL TRANSISTOR		
Q31			UN5216	DIGITAL TRANSISTOR		
Q32			DTA124EUA	DIGITAL TRANSISTOR		
Q32			UN5112	DIGITAL TRANSISTOR		

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PARTS LIST

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

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11

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Q42			2SC2003(L,K)	TRANSISTOR		
Q44			2SA954(L,K)	TRANSISTOR		
Q45			2SC4081(R,S)	TRANSISTOR		
Q46			2SA1576A(R,S)	TRANSISTOR		
A1			W02-1181-05	OPTIC RECEIVING MODULE		
A2			W02-1114-05	OSCILLATING MODULE		
<b>MD MECHANISM PCB (X29-2580-00)</b>						
CN1			E40-3260-05	PIN ASSY		
CN2			E40-3261-05	PIN ASSY		
CN3			E40-8076-05	FLAT CABLE CONNECTOR		
S1			S68-0074-05	PUSH SWITCH		
S2			S64-0028-05	LEVER SWITCH		
PH1			T95-0140-05	PHOTO INTERRUPTER		
<b>MD PCB (X33-1100-00)</b>						
C21, 22			CC73FCH1H020C	CHIP C	2.0PF	C
C101			C92-0628-05	CHIP-TAN	10UF	10WV
C102			CK73FB1E104K	CHIP C	0.10UF	K
C103, 104			C92-0628-05	CHIP-TAN	10UF	10WV
C105			CK73FB1H103K	CHIP C	0.010UF	K
C106			CC73FCH1H102J	CHIP C	1000PF	J
C107, 108			CK73FF1E104Z	CHIP C	0.10UF	Z
C109			CK73FB1H223K	CHIP C	0.022UF	K
C110			CK73FB1E104K	CHIP C	0.10UF	K
C111			CK73FB1H683K	CHIP C	0.068UF	K
C112			CK73FB1H472K	CHIP C	4700PF	K
C113			CK73FF1C105Z	CHIP C	1.0UF	Z
C115			CK73FB1C224K	CHIP C	0.22UF	K
C116			CK73FB1H223K	CHIP C	0.022UF	K
C117, 118			CK73FB1E104K	CHIP C	0.10UF	K
C119			C92-0628-05	CHIP-TAN	10UF	10WV
C121			C92-0048-05	ELECTRO	100UF	6.3WV
C122			CK73FB1H103K	CHIP C	0.010UF	K
C123			CK73FF1E104Z	CHIP C	0.10UF	Z
C127			CK73FF1E104Z	CHIP C	0.10UF	Z
C128			CK73FB1H103K	CHIP C	0.010UF	K
C129			CK73FB1C474K	CHIP C	0.47UF	K
C130			CC73FSL1H101J	CHIP C	100PF	J
C131			CK73FB1H153K	CHIP C	0.015UF	K
C132			CK73FB1C474K	CHIP C	0.47UF	K
C133			CK73FB1H472K	CHIP C	4700PF	K
C134, 135			CK73FF1E104Z	CHIP C	0.10UF	Z
C136			C92-0048-05	ELECTRO	100UF	6.3WV
C141			CK73FF1E104Z	CHIP C	0.10UF	Z
C142-144			CC73FSL1H101J	CHIP C	100PF	J
C146			CK73FF1E104Z	CHIP C	0.10UF	Z
C151			C92-0048-05	ELECTRO	100UF	6.3WV
C152			CK73FF1E104Z	CHIP C	0.10UF	Z
C153			CK73FB1H103K	CHIP C	0.010UF	K
C156			CK73FF1E104Z	CHIP C	0.10UF	Z
C158			CK73FB1H682K	CHIP C	6800PF	K
C160, 161			C92-0167-05	CHIP-ELE	10UF	10WV
C163, 164			CK73FB1H103K	CHIP C	0.010UF	K
C167, 168			CK73FF1E104Z	CHIP C	0.10UF	Z

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12

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C169			C92-0628-05	CHIP-TAN	10UF	10WV
C171			CK73FF1E104Z	CHIP C	0.10UF	Z
C181			C92-0048-05	ELECTRO	100UF	6.3WV
C182, 183			CK73FF1E104Z	CHIP C	0.10UF	Z
C184			C92-0149-05	CHIP-ELE	22UF	8WV
C185			C93-0031-05	CHIP-C	1000P	500V
C187			C92-0048-05	ELECTRO	100UF	6.3WV
C188			CK73FB1H103K	CHIP C	0.010UF	K
C189			CK73FB1H333K	CHIP C	0.033UF	K
C190			C92-0048-05	ELECTRO	100UF	6.3WV
C191			CK73FF1E104Z	CHIP C	0.10UF	Z
C195			CK73FF1C105Z	CHIP C	1.0UF	Z
C196, 197			CK73FF1E104Z	CHIP C	0.10UF	Z
C200			C93-0032-05	CHIP C	10UF	10WV
CN101			E40-8074-05	FLAT CABLE CONNECTOR (29P)		
CN102			E40-8075-05	FLAT CABLE CONNECTOR (19P)		
CN103			E40-8077-05	FLAT CABLE CONNECTOR (22P)		
CN104			E40-8078-05	PIN ASSY (2P)		
CN105			E40-8076-05	FLAT CABLE CONNECTOR (15P)		
L1, 2			L33-0545-05	CHOKE COIL (10UH)		
L3, 4			L33-0369-05	CHOKE COIL (100UH)		
L5-11			L79-1216-05	LINE FILTER		
R103			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R104			RK73FB2A103J	CHIP R	10K	J 1/10W
R105			RK73FB2A472J	CHIP R	4.7K	J 1/10W
R106			RK73FB2A335J	CHIP R	3.3M	J 1/10W
R107			RK73FB2A474J	CHIP R	470K	J 1/10W
R108, 109			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R110			RK73FB2A103J	CHIP R	10K	J 1/10W
R112			RK73FB2A473J	CHIP R	47K	J 1/10W
R113			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R115			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R117			RK73FB2A474J	CHIP R	470K	J 1/10W
R120			RK73FB2A101J	CHIP R	100	J 1/10W
R121			RK73FB2A104J	CHIP R	100K	J 1/10W
R123			RK73FB2A221J	CHIP R	220	J 1/10W
R124, 125			RK73FB2A101J	CHIP R	100	J 1/10W
R127			RK73FB2A101J	CHIP R	100	J 1/10W
R131			RK73FB2A103J	CHIP R	10K	J 1/10W
R132			RK73FB2A104J	CHIP R	100K	J 1/10W
R133			RK73FB2A684J	CHIP R	680K	J 1/10W
R134			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R135			RK73FB2A332J	CHIP R	3.3K	J 1/10W
R136			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R137			RK73FB2A101J	CHIP R	100	J 1/10W
R140			RK73FB2A151J	CHIP R	150	J 1/10W
R141			RK73FB2A561J	CHIP R	560	J 1/10W
R142, 143			RK73FB2A103J	CHIP R	10K	J 1/10W
R144			RK73FB2A101J	CHIP R	100	J 1/10W
R146-148			RK73FB2A101J	CHIP R	100	J 1/10W
R150			RK73FB2A221J	CHIP R	220	J 1/10W
R158, 159			RK73FB2A104J	CHIP R	100K	J 1/10W
R161-163			RK73FB2A222J	CHIP R	2.2K	J 1/10W
R164			RK73FB2A681J	CHIP R	680	J 1/10W

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13

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
R165			RK73FB2A104J	CHIP R 100K	J	1/10W
R166			R92-1854-05	RN 2.2	K	1/2W
R167			RK73FB2A472J	CHIP R 4.7K	J	1/10W
R169			R92-1853-05	CHIP-RN 1		1/4W
R170, 171			RK73FB2A103J	CHIP R 10K	J	1/10W
R173			RK73FB2A105J	CHIP R 1.0M	J	1/10W
R175			RK73FB2A332J	CHIP R 3.3K	J	1/10W
R177			RK73FB2A332J	CHIP R 3.3K	J	1/10W
R179			RK73FB2A473J	CHIP R 47K	J	1/10W
R180, 181			RK73FB2A103J	CHIP R 10K	J	1/10W
R182, 183			RK73FB2A473J	CHIP R 47K	J	1/10W
R184, 185			RK73FB2A103J	CHIP R 10K	J	1/10W
R188-190			RK73FB2A103J	CHIP R 10K	J	1/10W
W1-4			R92-0670-05	CHIP R 0 OHM		
W101			R92-0670-05	CHIP R 0 OHM		
W108			R92-0679-05	CHIP R 0 OHM		
W109			R92-0670-05	CHIP R 0 OHM		
W111			R92-0670-05	CHIP R 0 OHM		
W114			R92-0670-05	CHIP R 0 OHM		
W116			R92-0670-05	CHIP R 0 OHM		
W178			R92-0670-05	CHIP R 0 OHM		
W186, 187			R92-0679-05	CHIP R 0 OHM		
W195, 196			R92-0670-05	CHIP R 0 OHM		
W198-201			R92-0670-05	CHIP R 0 OHM		
D1, 2			F1J6TP	DIODE		
D101			MA111	DIODE		
IC1			CXA2523AR	ANALOGUE IC		
IC2			CXD2652AR	MOS-IC		
IC3			TC7S08FU	MOS-IC		
IC4			TC7WU04FU	MOS-IC		
IC5			TC74ACT540FS	MOS-IC		
IC6			X24C01AS-2.7	MEMORY IC		
IC7			HM51W4400BTT-7	MEMORY IC		
IC8			BH6511FS	ANALOGUE IC		
IC10			L88MS33T	ANALOGUE IC		
Q1			FMW1	TRANSISTOR		
Q2, 3			DTA144EUA	DIGITAL TRANSISTOR		
Q4, 5			DTC114YUA	DIGITAL TRANSISTOR		
Q6			2SA1576A(R,S)	TRANSISTOR		
Q7			2SB798-DL	TRANSISTOR		
Q8			2SJ278	FET		
Q9			2SK1764	FET		
Q10			DTC114EUA	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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14

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11	3A		D13-1792-08	RACK (GEAR)		
12	2B		G02-1616-08	FLAT SPRING (THRUST)		
13	3A		G02-1618-08	FLAT SPRING (SUB)		
15	2A		D10-3685-08	SHAFT (SUB)		
16	2A		D10-3694-08	SHAFT (MAIN)		
17	1A		D21-1859-08	SHAFT (JOINT)		
18	2B		D10-3686-08	SLIDER (MAIN)		
19	1A		D10-3687-08	SLIDER (LD)		
20	1A		D10-3689-08	ARM (CLAMP)		
21	2A		D10-3692-08	ARM (CHANGE)		
22	2B		D13-1786-08	GEAR (WORM)		
23	2A		D13-1787-08	GEAR (MOTOR-T)		
24	2A		D13-1788-08	GEAR (MOTOR-L)		
25	1A		D13-1789-08	GEAR (INTERMEDIATE LA)		
26	2A		D13-1790-08	GEAR (INTERMEDIATE LB)		
27	2A		D13-1791-08	GEAR (MAIN)		
28	1A		G13-0560-08	CUSHION		
29	3A, 3B		J02-1178-08	INSULATOR		
30	1A		G01-3964-08	EXTENSION SP		
31	1A		G01-3965-08	TORSION SP		
32	2B		G01-3966-08	EXTENSION SP		
33	1A		G01-3967-08	EXTENSION SP (S/HD)		
34	2A		G01-4014-08	EXTENSION SP (DOOR)		
35	3B		G10-0146-04	NON-WOVEN-FABRIC		
36	2B		N19-1101-04	POLY WS 1.2*3.0*0.5CUT		
37	1B		N19-1105-04	POLY WS 1.6*3.5*0.5CUT		
38	1A		N19-0366-04	POLY WS 2.1*4.0*0.5CUT		
39	1A		G16-0877-04	SHEET (TRAY)		
40	2B		E35-1715-08	WIRING HARNESS		
41	3A		E35-1780-08	FLAT CABLE		
42	3B		J80-0012-08	FPC		
47	2B		S33-1022-05	PUSH SWITCH SPPB12		
48	2A, 3A		J26-0052-08	PCB ASSY (X29-2580-00)		
DM	3A		T42-0871-08	MOTOR ASSY		
FM	3A		T42-0880-05	DC MOTOR		
LM	3A		T42-0881-05	DC MOTOR		
PU	3A		T25-0060-05	OPTICAL PICKUP HEAD		
RH	3A		T30-0013-05	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 TTransform 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 response (playback mode) .....	8 Hz ~ 20 kHz ( $\pm 1$ 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 k $\Omega$
Analog output level / output impedance .....	2.0 V / Less than 300 $\Omega$
Headphone output .....	50 mW/32 $\Omega$ load (Phones level MAX)
Digital input	
Coxaial .....	0.5 Vp-p / 75 $\Omega$
Optical(Wave length 660 nm) .....	- 15 dBm ~ - 21 dBm
Digital output	
Coxaial .....	0.5 Vp-p / 75 $\Omega$
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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