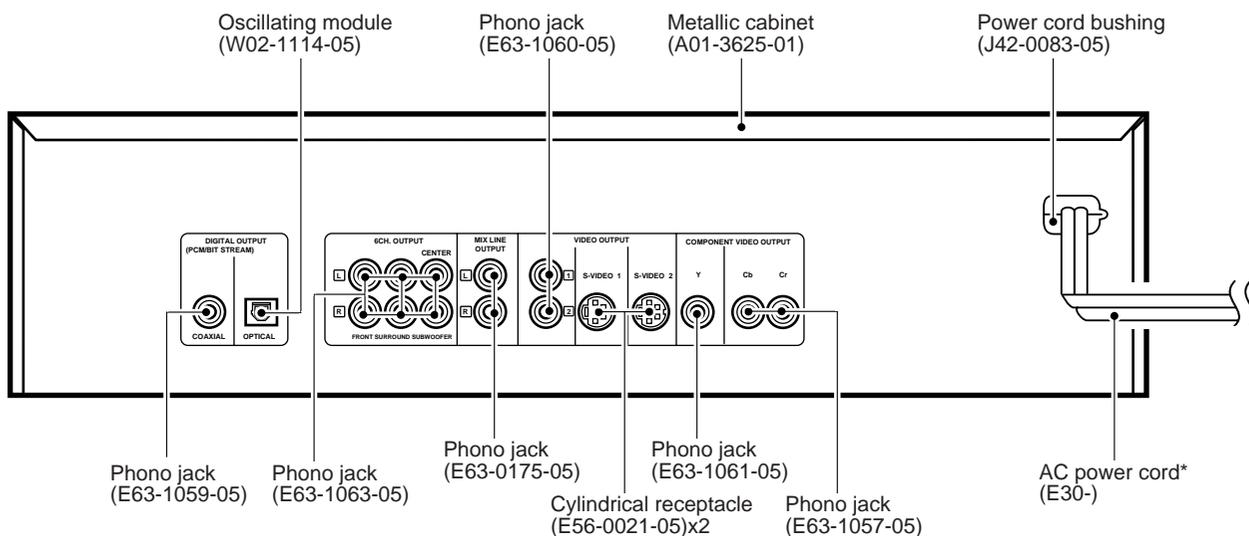
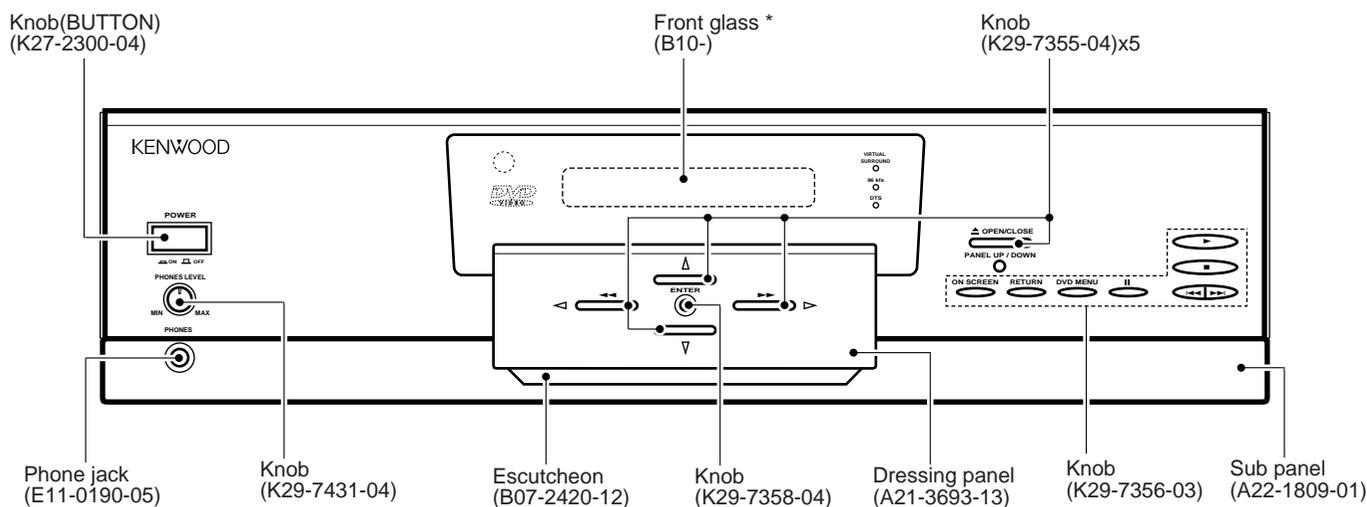


# DV-203/2070 DVF-5010/9010/K7010 SERVICE MANUAL



Illust. is DVF-9010.

\* Refer to parts list on page 52.

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

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

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

**Caution :** No connection of ground line if disassemble the unit. Please connect the ground line on rear panel, PCBs, Chassis and some others.

**NOTE :** Please replace the mechanism PCB (W02-266x-05) with new one, if it is malfunction.

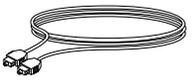
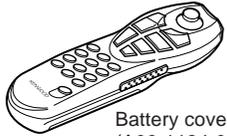
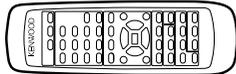
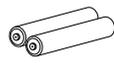
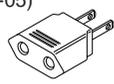


## CONTENTS / ACCESSORIES

### Contents

CONTENTS / ACCESSORIES .....	2	PARTS DESCRIPTIONS .....	27
CONTROLS .....	3	PC BOARD .....	28
DISASSEMBLY FOR REPAIR .....	6	SCHEMATIC DIAGRAM .....	33
BLOCK DIAGRAM .....	11	EXPLODED VIEW .....	49
CIRCUIT DESCRIPTION .....	13	PARTS LIST .....	52
ADJUSTMENT .....	24	SPECIFICATIONS .....	67
WIRING DIAGRAM .....	26		

### Accessories

<p>Audio cord (Red, White) ..... (3) (E30-0505-05)</p> 	<p>S-VIDEO cord ..... (1) (E30-2725-05)</p> 	<p>Video cord (Yellow) ..... (1) (E30-1427-05)</p> 	<p>Optical fiber cable ..... (1) (B19-1529-05)</p> 
<p>Remote control unit ..... (1) (A70-1227-05) : DV-2070/DVF-9010</p>  <p>Battery cover (A09-1124-08)</p>	<p>Remote control unit ..... (1) (A70-1229-05) : DVF-K7010 (A70-1230-05) : DV-203/DVF-5010</p>  <p>Battery cover (A09-1105-05)</p>	<p>Batteries (R6/AA) ..... (2)</p> 	<p>AC plug adaptor ..... (1) (E03-0115-05)</p>  <p>Use to adapt the plug on the power cord to the shape of the wall outlet. (Accessory only for regions where use is necessary.)</p>

### 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 disc.
2. Wait a few seconds and verify that the display shown appears.
3. Set the **POWER** key to **OFF**.

NO DISC

#### Beware of condensation

When the difference between the internal temperature of the unit and external atmosphere is large, dew (mist) may be produced on the internal parts of the unit. In such a case, turn the unit **ON** and leave it for a few hours until the condensation has dried up.

#### Be especially careful in the following conditions:

When the unit is brought into a place where there is a large difference in temperature between the previous location, when the humidity of the listening room is high, etc.

### 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.

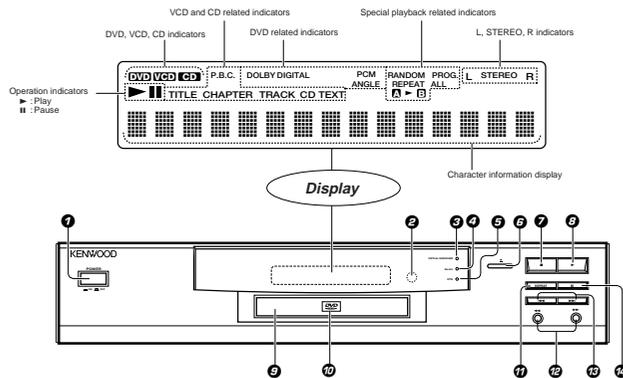
While holding the **■** key, press and hold the **■** key until **"INITIAL OK!"** appears.

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

## CONTROLS

### Control and Indication

#### Display / Main unit (DVF-5010)

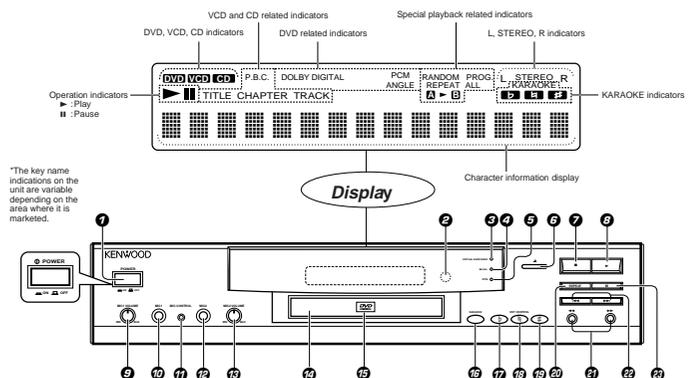


- 1 POWER key
- 2 Remote control sensor
- 3 VIRTUAL SURROUND indicator  
Lights during playback of an AC-3 5.1-channel disc by setting virtual surround.
- 4 96 kfs indicator  
Lights during playback of a DVD LPCM disc with 96 kfs sampling frequency.
- 5 DTS indicator  
Lights during playback of a DVD DTS disc.
- 6 Open/close (Δ) key
- 7 Stop (■) key
- 8 Play (▶) key
- 9 Tray panel
- 10 DVD badge
- 11 REPEAT key
- 12 Manual search (◀▶) keys
- 13 Skip down (◀◀) / up (▶▶) keys
- 14 Pause (⏸) key

#### Standby mode of the unit

While the POWER key is set to ON, this unit can be put to the standby mode using the graphical remote control unit provided with a KENWOOD AUDIO VIDEO SURROUND RECEIVER. When the STANDBY indicator of this unit is lit, a small amount of current flows in it to back up the internal memory. This status is referred to as the standby mode.

#### Display / Main unit (DVF-K7010)

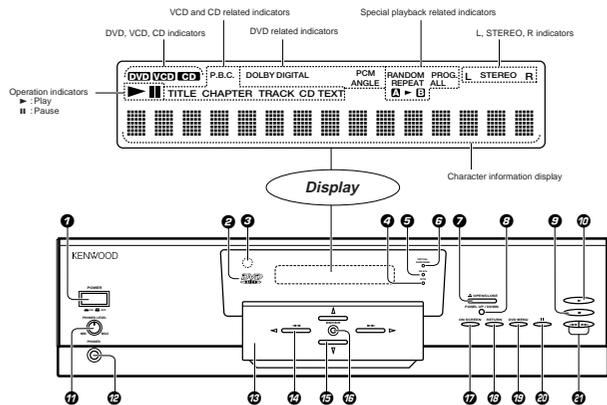


- 1 POWER (⊙ POWER) key
- 2 Remote control sensor
- 3 VIRTUAL SURROUND indicator  
Lights during playback of an AC-3 5.1-channel disc by setting virtual surround.
- 4 96 kfs indicator  
Lights during playback of a DVD LPCM disc with 96 kfs sampling frequency.
- 5 DTS indicator  
Lights during playback of a DVD DTS disc.
- 6 Open/close (Δ) key
- 7 Stop (■) key
- 8 Play (▶) key
- 9 MIC 1 VOLUME control
- 10 MIC 1 jack
- 11 MIC 2 jack
- 12 MIC 2 VOLUME control
- 13 Tray panel
- 14 DVD badge
- 15 KARAOKE key
- 16 Flat (b) key
- 17 Natural (h) key
- 18 Sharp (♯) key
- 19 REPEAT key
- 20 Manual search (◀▶) keys
- 21 Skip down (◀◀) / up (▶▶) keys
- 22 Pause (⏸) key
- 23 KARAOKE indicators

#### Standby mode of the unit

While the POWER key is set to ON, this unit can be put to the standby mode using the graphical remote control unit provided with a KENWOOD AUDIO VIDEO SURROUND RECEIVER. When the STANDBY indicator of this unit is lit, a small amount of current flows in it to back up the internal memory. This status is referred to as the standby mode.

#### Display / Main unit (DVF-9010)



- 1 POWER key
- 2 DVD indicator  
Lights when a DVD disc is loaded.
- 3 Remote control sensor
- 4 DTS indicator  
Lights during playback of a DTS-encoded DVD disc.
- 5 96 kfs indicator  
Lights during playback of a DVD LPCM disc with 96 kfs sampling frequency.
- 6 VIRTUAL SURROUND indicator  
Lights during playback of an AC-3 5.1-channel disc by setting virtual surround.
- 7 OPEN/CLOSE (Δ) key
- 8 PANEL UP/DOWN key
- 9 Stop (■) key
- 10 Play (▶) key
- 11 PHONES LEVEL control
- 12 PHONES jack
- 13 Tray panel
- 14 Manual search (◀▶) keys
- 15 Cursor (⏪, ⏩, ⏴, ⏵) keys
- 16 ENTER key
- 17 ON SCREEN key
- 18 RETURN key
- 19 DVD MENU key
- 20 Pause (⏸) key
- 21 Skip down (◀◀) / up (▶▶) keys

#### Standby mode of the unit

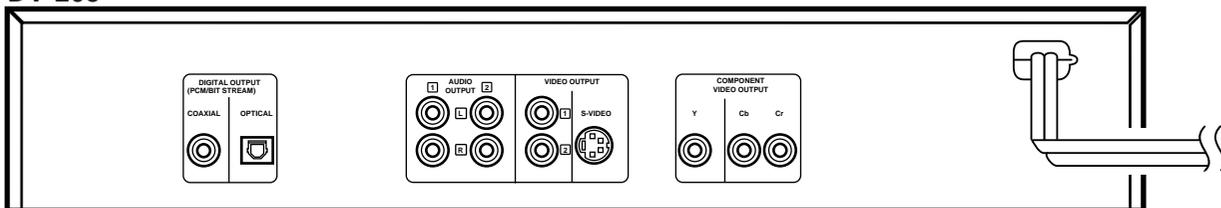
While the POWER key is set to ON, this unit can be put to the standby mode using the graphical remote control unit provided with a KENWOOD AUDIO VIDEO SURROUND RECEIVER. When the STANDBY indicator of this unit is lit, a small amount of current flows in it to back up the internal memory. This status is referred to as the standby mode.

# DV-203/2070/DVF-5010/9010/K7010

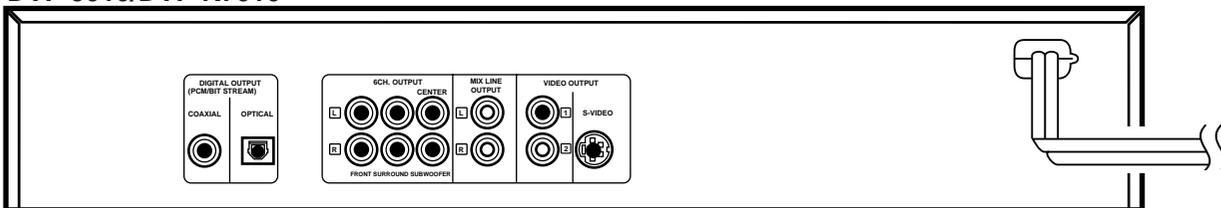
## CONTROLS

### REAR PANEL

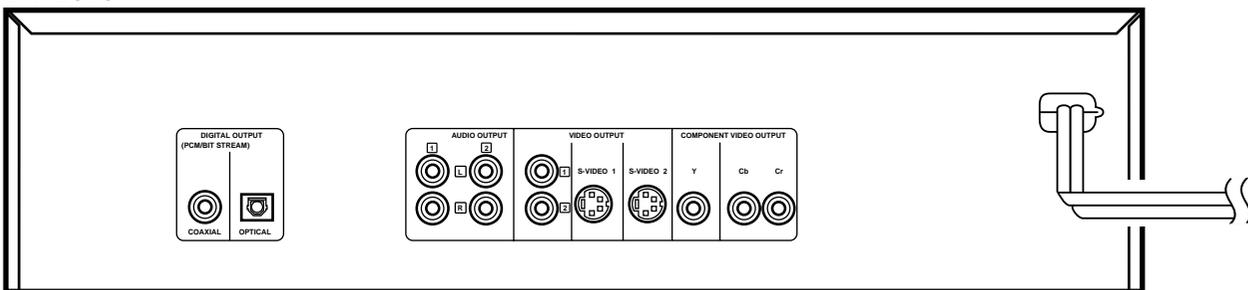
DV-203



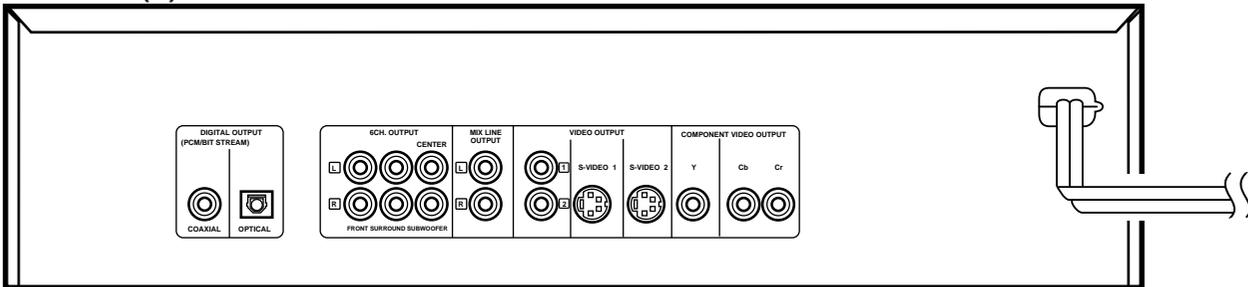
DVF-5010/DVF-K7010



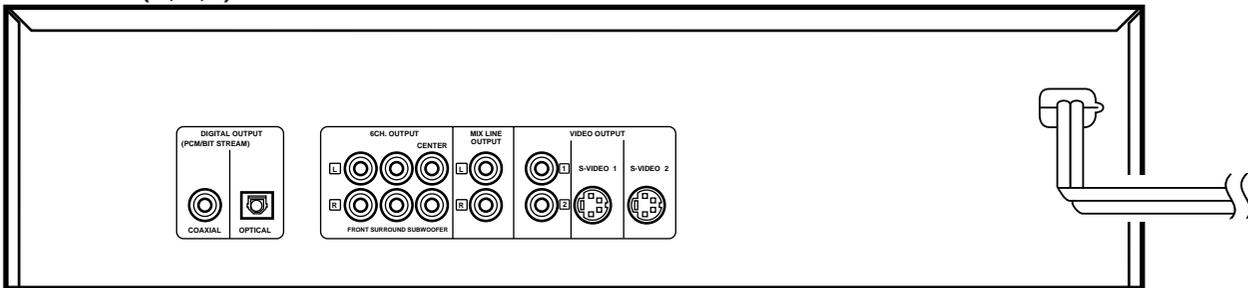
DV-2070



DVF-9010 (Y)



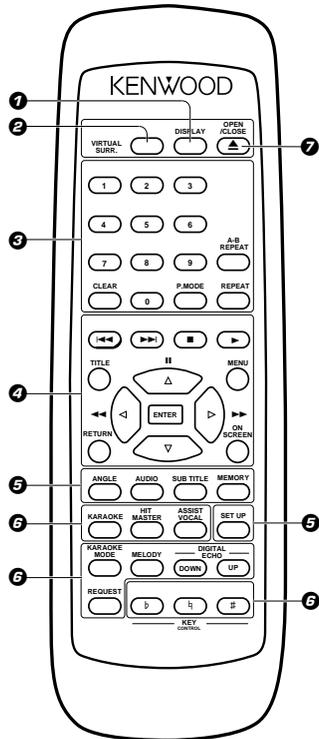
DVF-9010 (E,M,T)



## 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.

Use care to store the remote control unit in a safe place so as not to lose it.



Model: RC-D0505  
Infrared ray system

- 1 DISPLAY key
- 2 VIRTUAL SURR. key
- 3 CD, VCD and DVD related control keys  
Numeric (0 to 9) keys  
CLEAR key  
P.MODE key  
A-B REPEAT key  
REPEAT key
- 4 CD, VCD and DVD related control keys  
Skip down (◀◀) and Skip up (▶▶) keys  
Stop (■) key  
Play (▶) key  
Cursor (△, ▽, ◀, ▶) keys  
ENTER key  
Pause (⏸) key  
Forward and reverse search (◀◀, ▶▶) keys  
TITLE key  
MENU key  
RETURN key  
ON SCREEN key
- 5 TV monitor related control keys  
ANGLE key  
AUDIO key  
SUB TITLE key  
MEMORY key
- 6 Karaoke-related control keys  
KARAOKE key  
HIT MASTER key  
ASSIST VOCAL key  
KARAOKE MODE key  
MELODY key  
DIGITAL ECHO (DOWN/UP) keys  
REQUEST key  
Flat (♭) key  
Natural (♮) key  
Sharp (♯) key
- 7 OPEN/CLOSE (▲) key

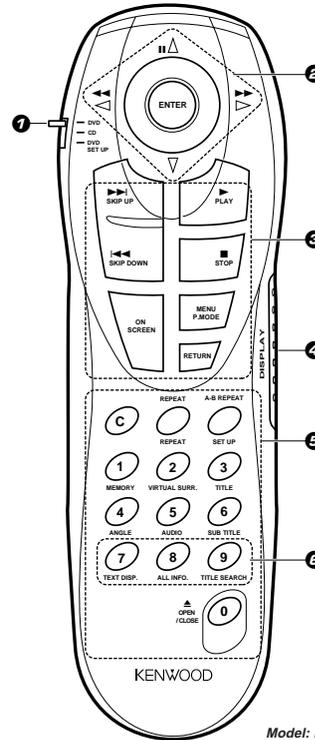
## Remote control unit

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.

Use care to store the remote control unit in a safe place so as not to lose it.

\* The proper positioning of the mode switch (DVD, CD, DVD SET UP) is variable depending on the control and play modes.  
Set the mode switch according to the desired control and play modes.

Information inside ( ) below indicates the mode switch setting position to implement the function in question.



Model: RC-D0705  
Infrared ray system

- 1 Remote control mode switch  
DVD  
CD  
DVD SET UP
- 2 Joystick/ENTER/Pause/forward search/reverse search keys  
(DVD, CD, DVD SET UP)  
Joystick (△, ▽, ◀, ▶) keys  
ENTER key  
Pause (⏸) key  
Forward and reverse search (◀◀, ▶▶) keys
- 3 CD, VCD and DVD related control keys  
SKIP DOWN (◀◀) and SKIP UP (▶▶) keys  
(DVD, CD, DVD SET UP)  
ON SCREEN key (DVD, CD, DVD SET UP)  
PLAY (▶) key (DVD, CD, DVD SET UP)  
STOP (■) key (DVD, CD, DVD SET UP)  
MENU key (DVD, DVD SET UP)/P.MODE key (CD)  
RETURN key (DVD, CD, DVD SET UP)
- 4 DISPLAY key (DVD, CD, DVD SET UP)
- 5 TV monitor related control keys  
Numeric (0 to 9) keys (CD)  
C (Clear) key (DVD, CD, DVD SET UP)  
REPEAT key (DVD, CD, DVD SET UP)  
A-B REPEAT key (CD)  
SET UP key (DVD SET UP)  
MEMORY key (DVD)  
VIRTUAL SURR. key (DVD)  
TITLE key (DVD)  
ANGLE key (DVD)  
AUDIO key (DVD)  
SUB TITLE key (DVD)  
OPEN/CLOSE (▲) key (DVD)
- 6 CD-TEXT related control keys  
TEXT DISP. key (DVD)  
ALL INFO. key (DVD)  
TITLE SEARCH key (DVD)

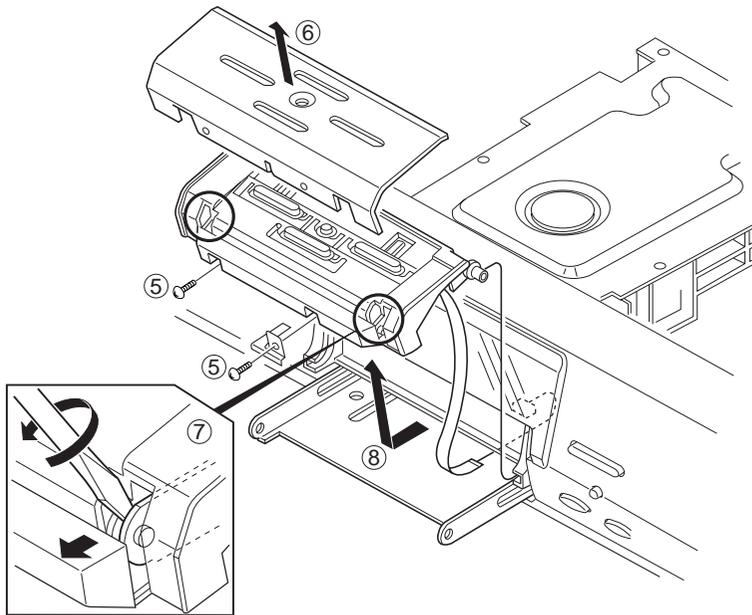
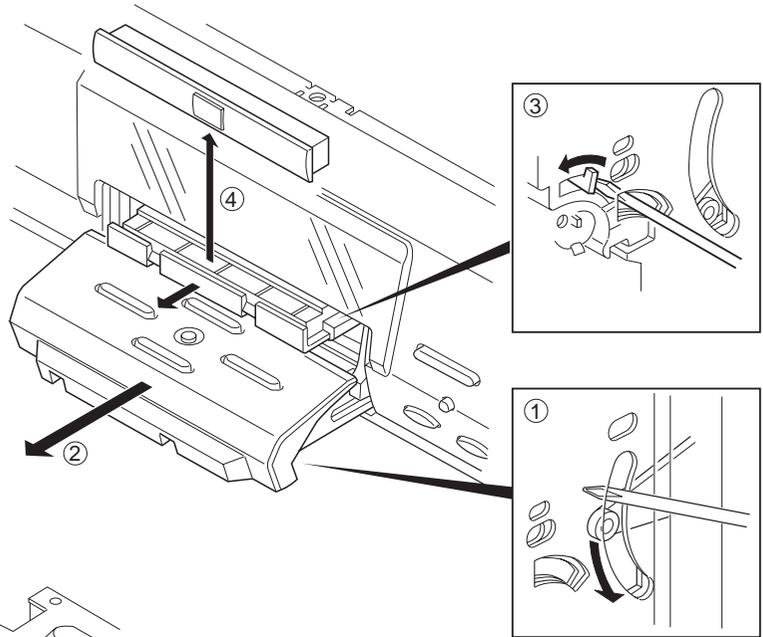
CONTROLS

DV-203/2070/DVF-5010/9010/K7010

## DISASSEMBLY FOR REPAIR (DV-2070, DVF-9010)

### 1. How to open the door panel and the tray if not comes out.

- (1) See the bottom of a set, then move the arm of the door mechanism by a screw driver (①) and pull out the door panel (②).
- (2) Move the rotary cam of the DVD mechanism by a screw driver (③), then pull out the tray and remove the tray panel (④).

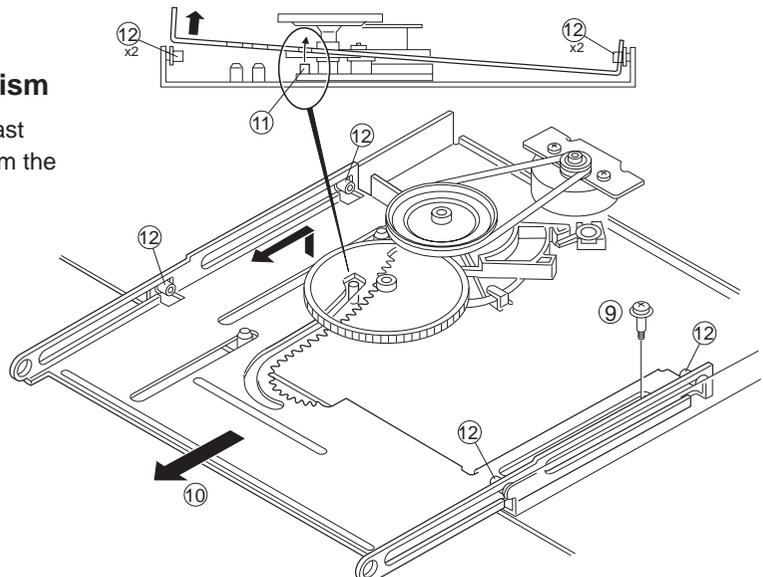


### 2. How to remove the door panel.

- (1) Remove 2 screws (⑤), then remove the door panel (⑥).
- (2) Remove 2 bosses (⑦), then remove the door escutcheon (⑧).

### 3. How to remove the moving door mechanism

1. Remove the 1 screw (⑨), Then pull the slider (⑩) till last
2. While raise the slider of left side, remove the slider from the bosses (⑪,⑫)

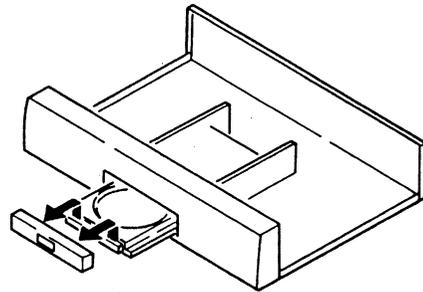
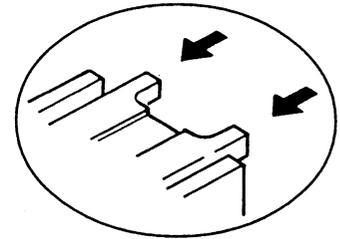
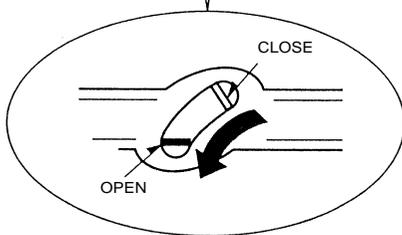
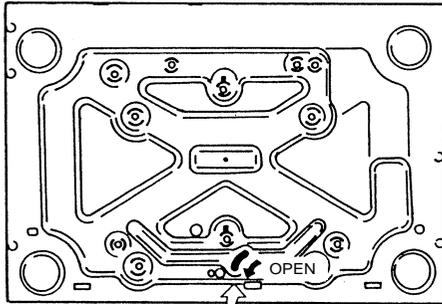
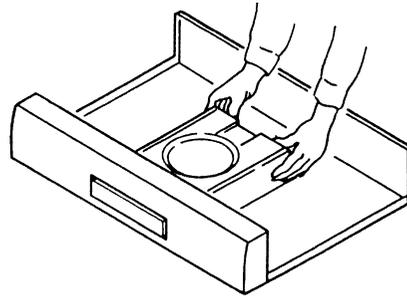


## DISASSEMBLY FOR REPAIR

### How to Disassemble mechanism.

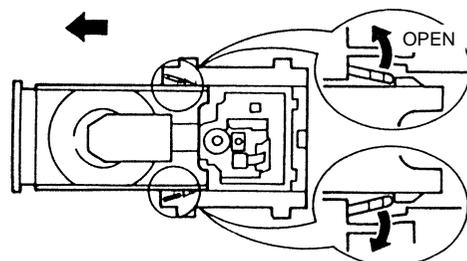
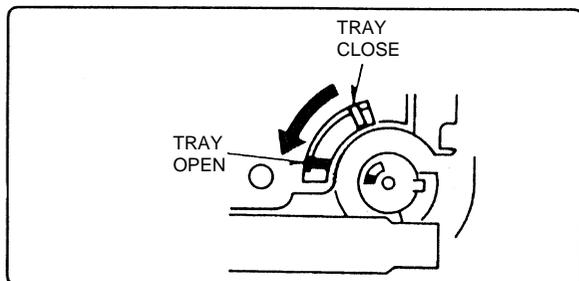
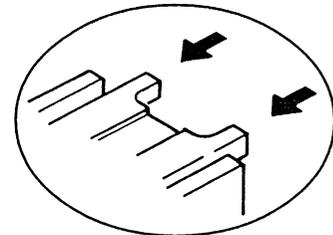
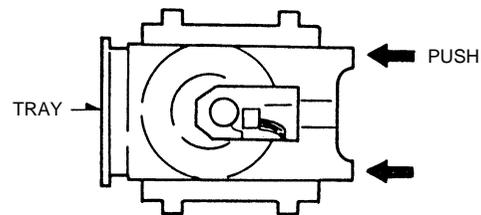
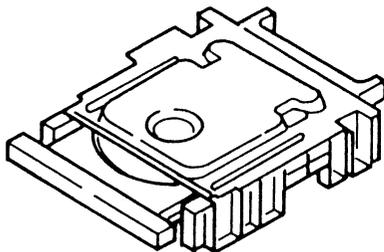
#### 1. The disc is not coming out by pressing the open button.

1. Remove the case and DVD disc in the unit.
2. Insert the small screw driver into the hole on the bottom chassis.
3. Travel the rotary cam to the tray open position.
4. Travel the tray to open position by hand.
5. Remove the dress panel.



#### 2. The Loading Tray

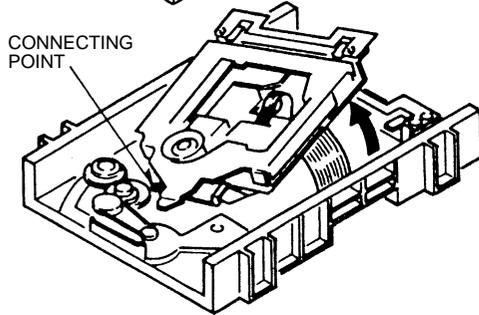
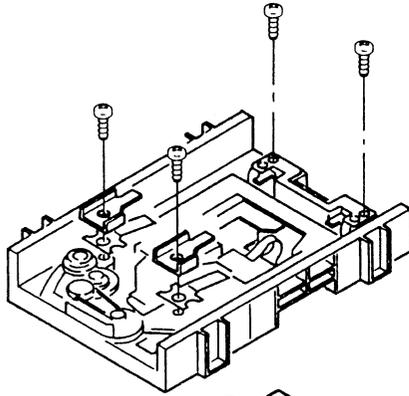
1. Travel the rotary cam to the tray open position.
2. Travel the tray to open position by hand.
3. Open the hooks of the tray holder and pull out it.



## DISASSEMBLY FOR REPAIR

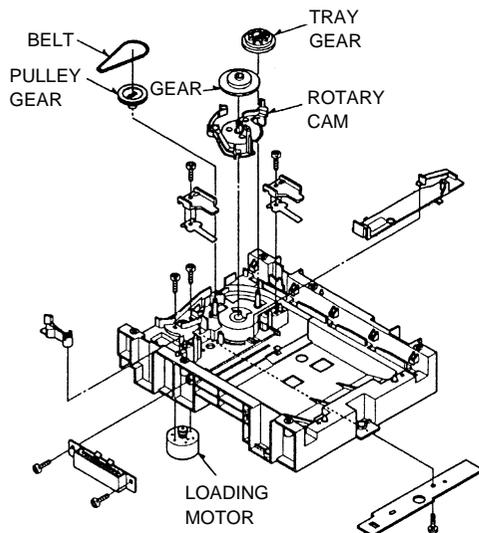
### 3. Traverse Unit

1. Remove the screws fixing the plate spring, the chassis stopper and the spring.
2. Lift the back of the traverse unit and remove it.



### 4. Loading Mechanism Parts

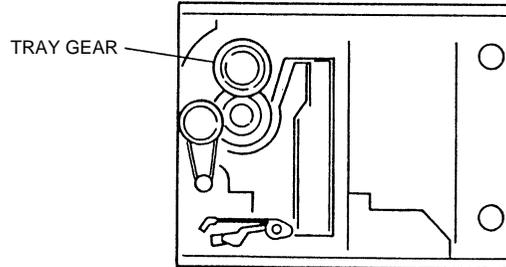
1. The loading parts are available without disassembly. Refer to the followings.



### How to Assemble

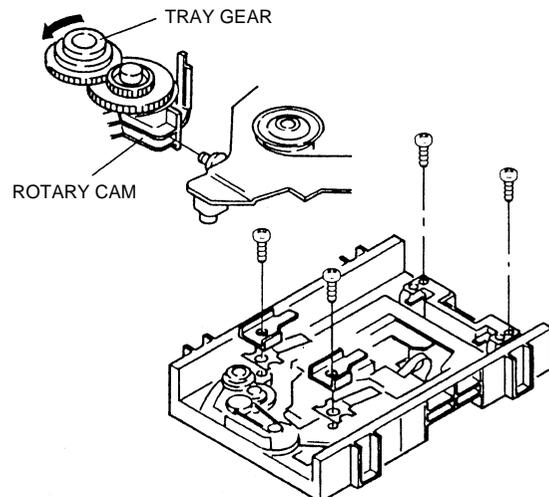
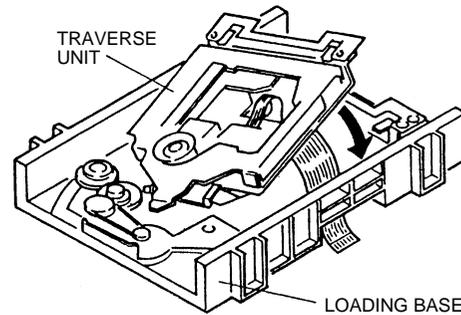
#### 1. Loading Mechanism

This mechanism has no order for assembling the loading parts.



#### 2. Traverse Unit

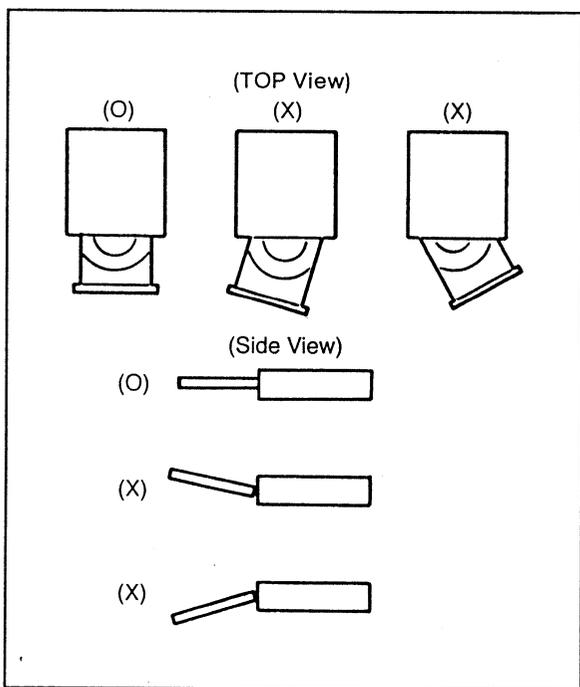
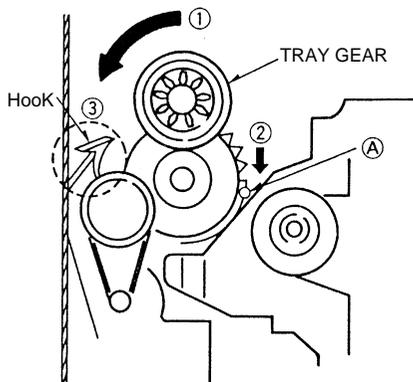
1. Pass the flexible cable from the inside of the loading base to the outside of that.
2. Insert the top of the traverse unit to the groove of the rotary cam and fix it with screws.



## DISASSEMBLY FOR REPAIR

### 3. Loading Tray

1. Turn the tray gear to move the traverse unit at the bottom position counterclockwise.
2. Push the (A) of the rotary cam to the arrow direction.
3. Check the hook to be locked.
4. Load the tray to the loading base straightly.



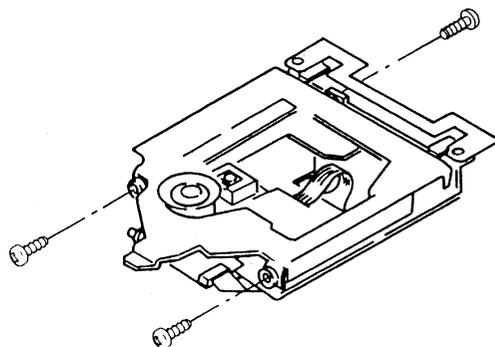
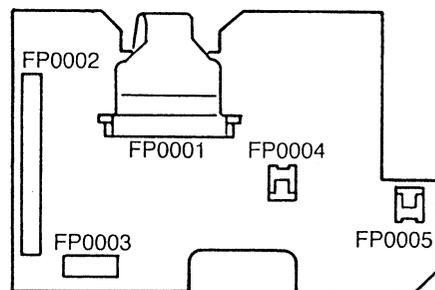
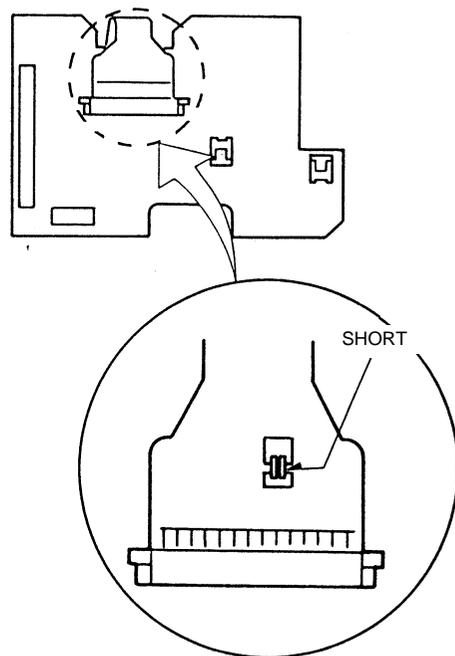
### 4. Clamper

1. Mount the clamper plate before assembling the loading base to the unit.

### How to Replace

#### 1. Preparation

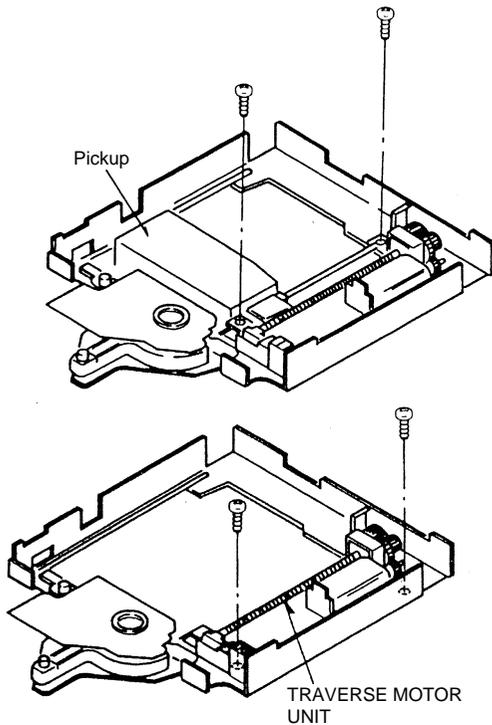
1. Short the pickup short lands for protecting the damage of the statics.
2. Remove all of the flexible cables on the connection pcb.
3. Remove screws to divide the traverse unit



## DISASSEMBLY FOR REPAIR

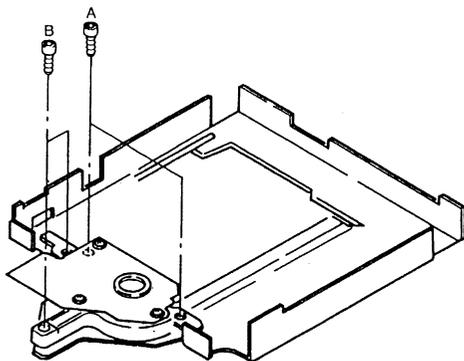
### 2. Laser Pickup

1. Remove the screws fixing the pickup.
2. Remove the screws fixing the traverse motor.



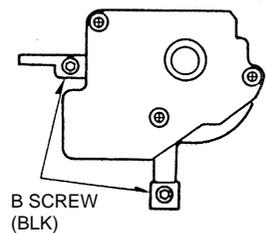
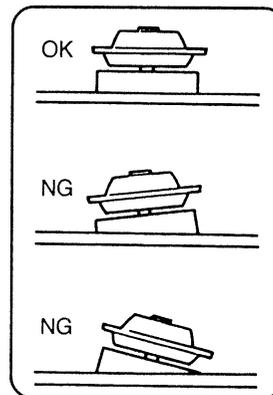
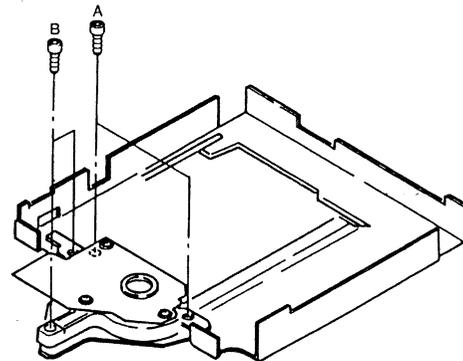
### 3. Disc Motor

1. Remove the A screw and the B screw in the order.
- Note: No need to remove the laser pickup when disc motor replace procedure.



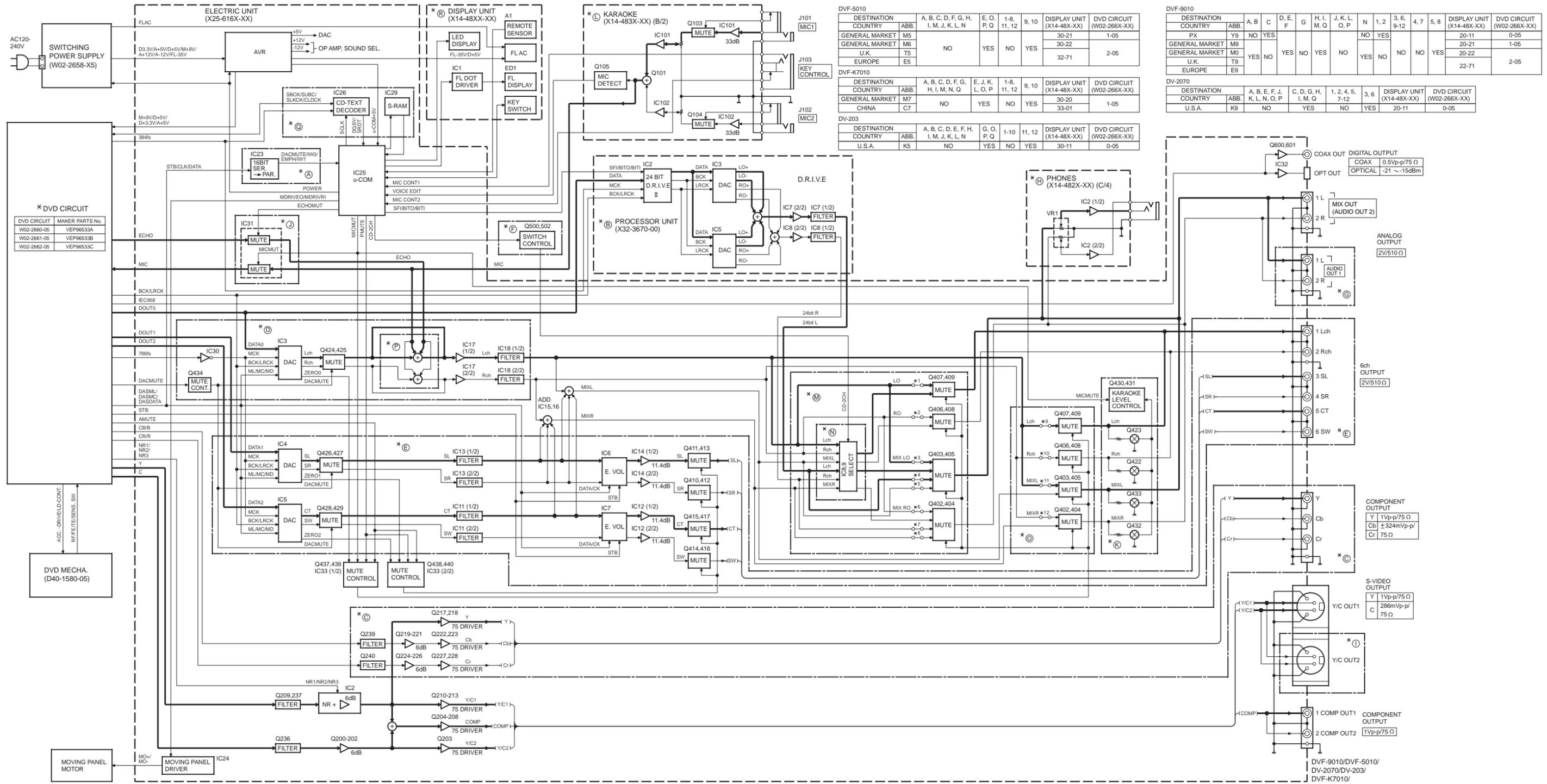
### 4. Assemble

1. Assemble the traverse unit and the pickup in the reverse order of disassembly.
2. Fix the A screw and the B adjusting screw when the disc motor unit mount.
3. Fix the B screw so that the disc motor unit is at a level with the traverse unit.



4. After assembled the pickup, the traverse motor unit or the disc motor, adjust "TANGENTIAL" and "TILT" of the adjustment.  
(Need not adjust this adjustment to exchange the traverse unit.)

BLOCK DIAGRAM



DVF-5010

DESTINATION COUNTRY	ABB.	A, B, C, D, F, G, H, I, M, J, K, L, N	E, O, P, Q	1-8, 11, 12	9, 10	DISPLAY UNIT (X14-48X-XX)	DVD CIRCUIT (W02-266X-XX)
GENERAL MARKET	M5					30-21	1-05
GENERAL MARKET	M6					30-22	
U.K.	T5	NO	YES	NO	YES		2-05
EUROPE	E5					32-71	

DVF-9010

DESTINATION COUNTRY	ABB.	A, B, C	D, E, F	G	H, I, M, Q	J, K, L, O, P	N	1, 2	3, 6, 9-12	4, 7	5, 8	DISPLAY UNIT (X14-48X-XX)	DVD CIRCUIT (W02-266X-XX)
GENERAL MARKET	M9	NO	YES				NO	YES				20-11	0-05
GENERAL MARKET	M0						YES	NO				20-21	1-05
U.K.	T9	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	20-22	
EUROPE	E9											22-71	2-05

DVF-K7010

DESTINATION COUNTRY	ABB.	A, B, C, D, F, G, H, I, M, J, K, L, N	E, J, K, L, O, P	1-8, 11, 12	9, 10	DISPLAY UNIT (X14-48X-XX)	DVD CIRCUIT (W02-266X-XX)
GENERAL MARKET	M7					30-20	1-05
CHINA	C7	NO	YES	NO	YES	33-01	

DV-203

DESTINATION COUNTRY	ABB.	A, B, C, D, E, F, H, I, M, J, K, L, N	G, O, P, Q	1-10	11, 12	DISPLAY UNIT (X14-48X-XX)	DVD CIRCUIT (W02-266X-XX)
GENERAL MARKET	M7					30-20	1-05
U.S.A.	K5	NO	YES	NO	YES	30-11	0-05

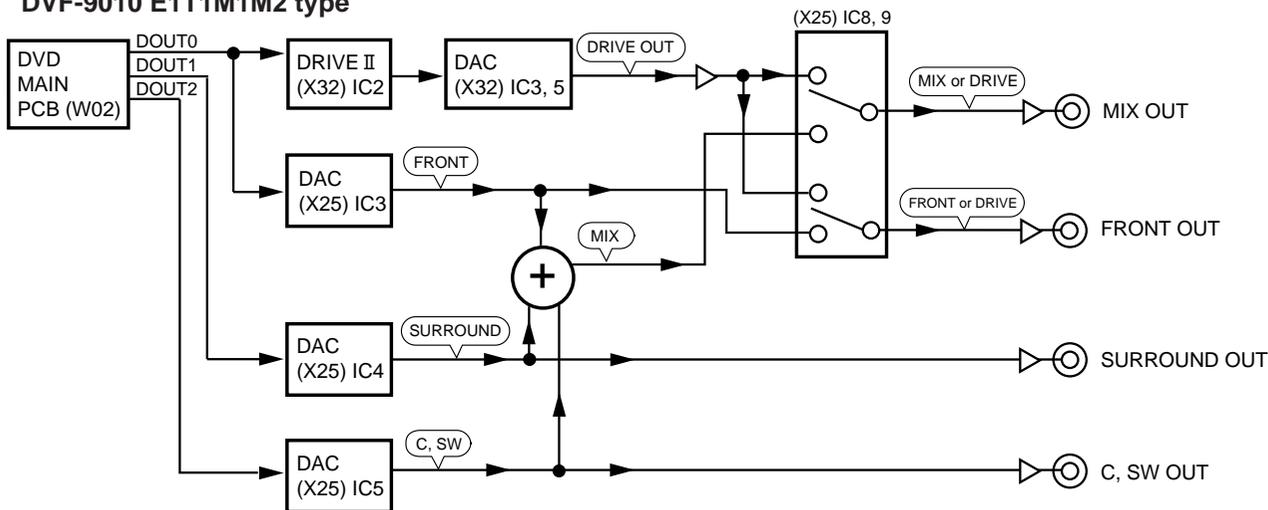
DV-2070

DESTINATION COUNTRY	ABB.	A, B, E, F, J, K, L, N, O, P	C, D, G, H, I, M, Q	1, 2, 4, 5, 7-12	3, 6	DISPLAY UNIT (X14-48X-XX)	DVD CIRCUIT (W02-266X-XX)
GENERAL MARKET	M9					20-11	0-05
U.S.A.	K9	NO	YES	NO	YES	20-11	0-05

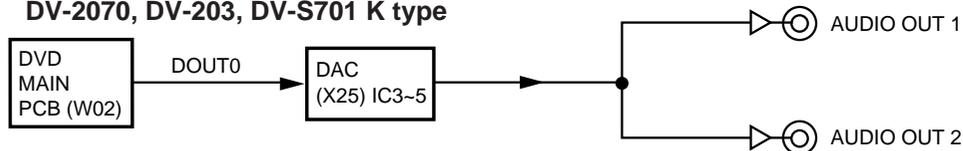
## CIRCUIT DESCRIPTION

### 1. Audio circuit for model and destination

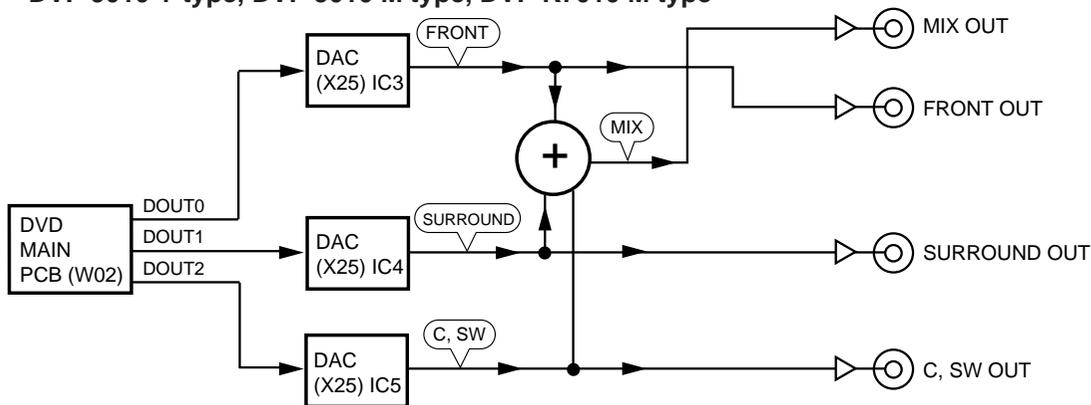
#### DVF-9010 E1T1M1M2 type



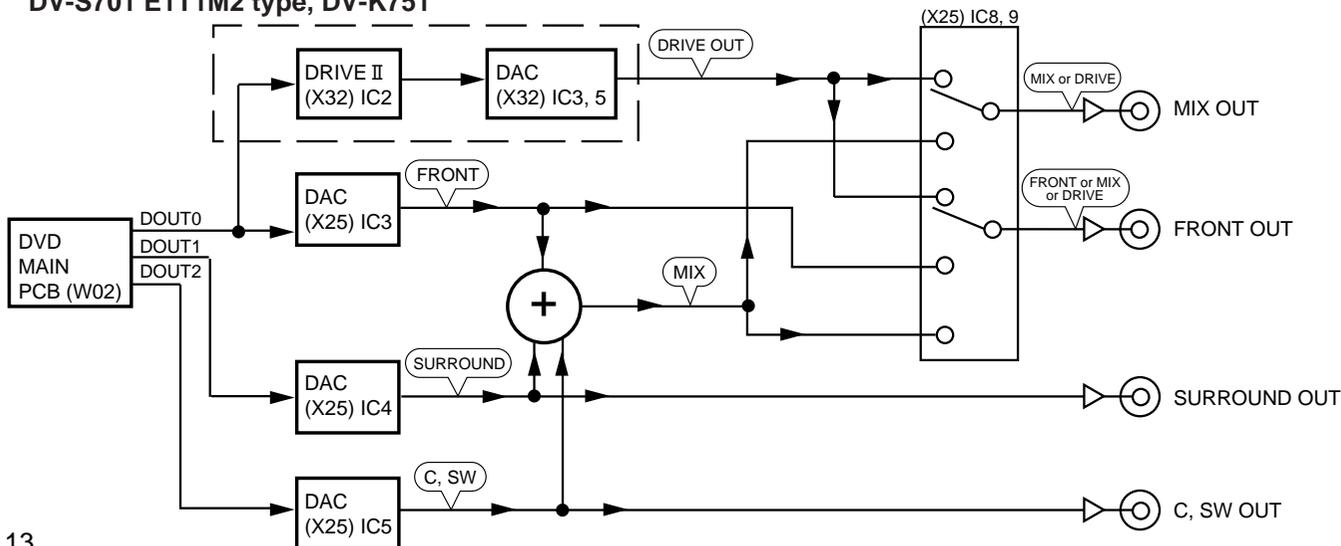
#### DV-2070, DV-203, DV-S701 K type



#### DVF-9010 Y type, DVF-5010 M type, DVF-K7010 M type



#### DV-S701 E1T1M2 type, DV-K751

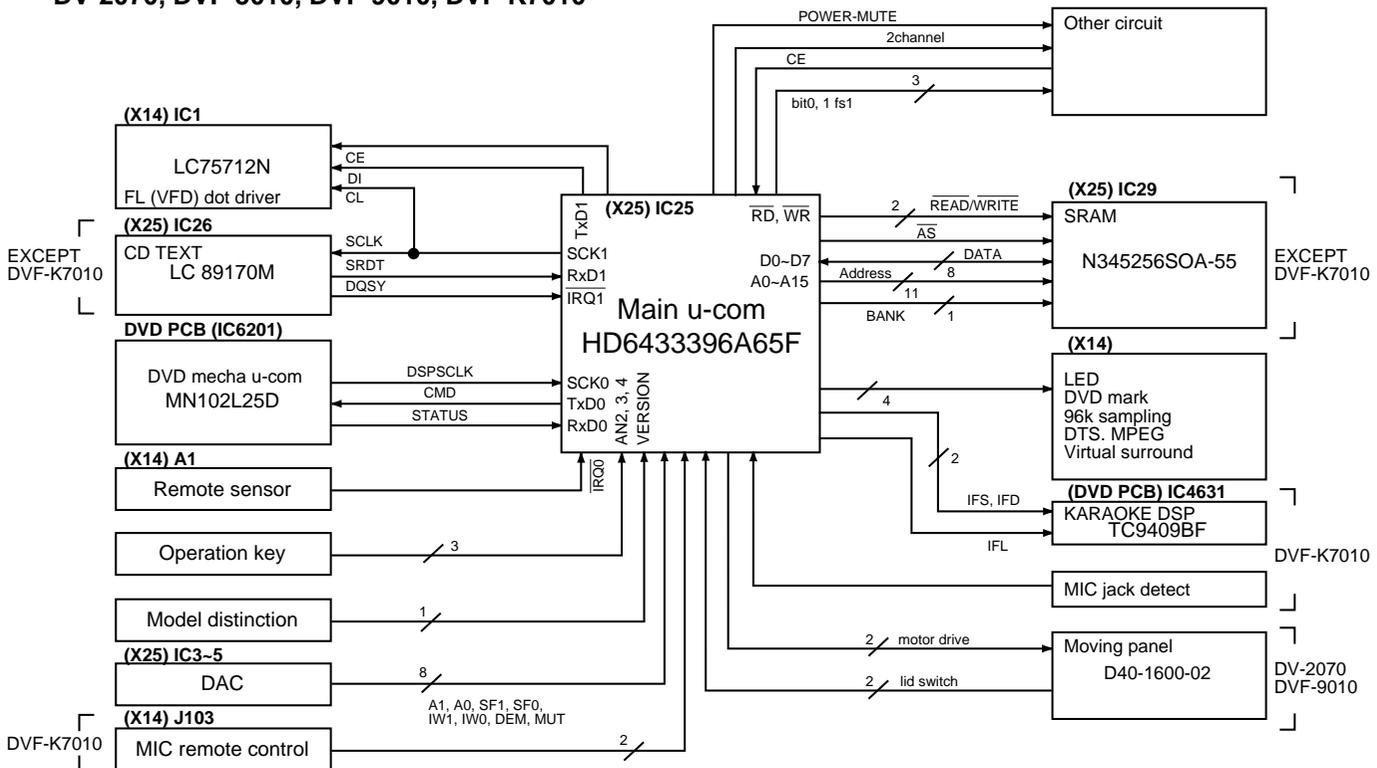


## CIRCUIT DESCRIPTION

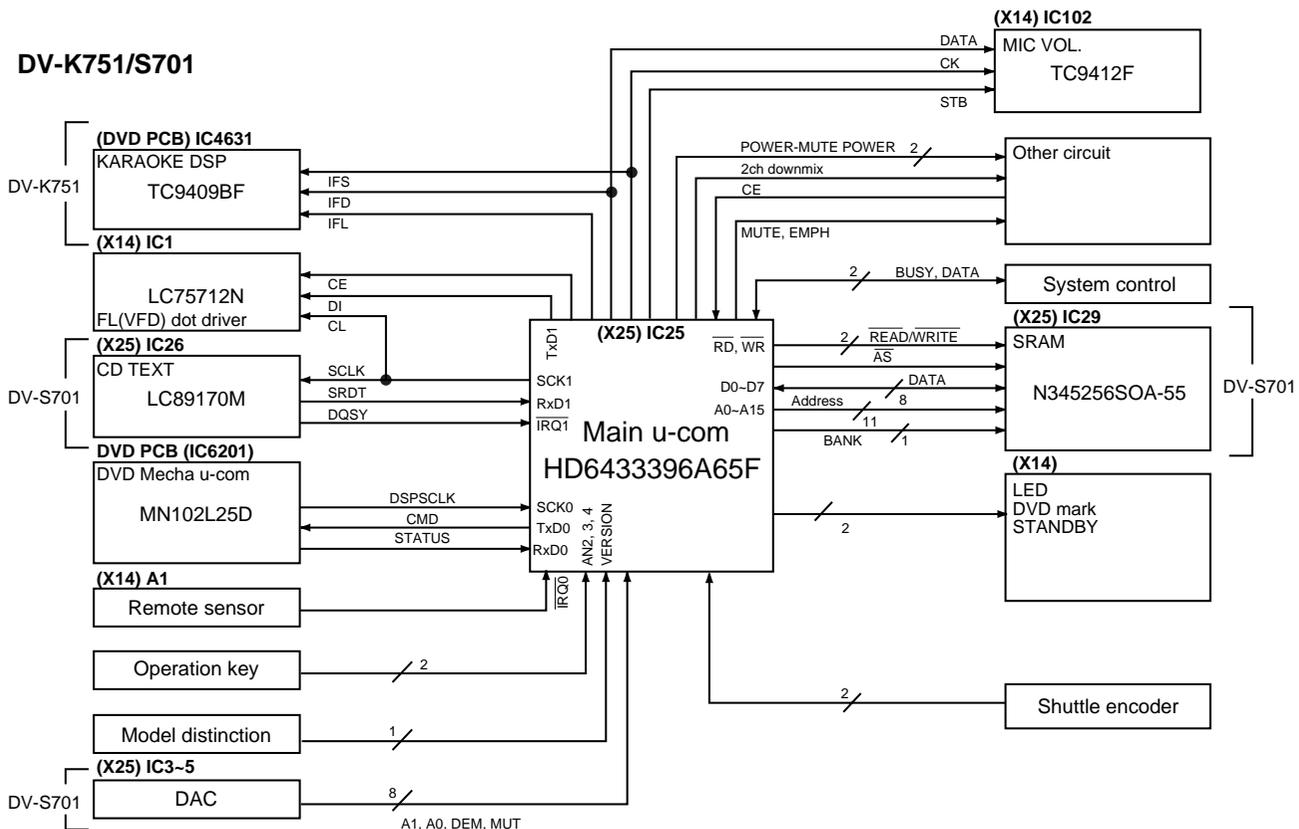
### 2. Main microprocessor : HD6433396A65F (X25: IC25)

#### 2-1 Block diagram

##### DV-2070, DVF-5010, DVF-9010, DVF-K7010



##### DV-K751/S701



## CIRCUIT DESCRIPTION

## 2-2 Pin description

Pin No.	Pin Name	I/O	Description
1	/RES	I	Input port of the microprocessor reset
2,3	X/ETAL	I/O	Port of ceramic oscillator
4,5	MD1/0	I	Operation mode0(fixed H) and 1(fixed L)
6	/NMI	-	No use
7	/STBY	-	No use
8	VCC	-	Power supply(+5V)
9	DSPCLK	I	Input port of the clock signal from the mechanism microprocessor
10	STATUS	I	Input port from the mechanism microprocessor reset
11	CMD	O	Output port to the mechanism microprocessor reset
12	VSS	-	GND
13,14	-	-	No use
15	/AS	O	Access mode of extra-address
16	/WR	O	Read mode of extra-address
17	/RD	O	Write mode of extra-address
18	REMOCON	O	Input port of remote control signal
19	DQSY	I	Input port of read signal from CD-TEXT IC
20	/2 CHANNEL	O	2 channel H : except 2CH, L : 2CH
	/CD	O	CD H : except CD, L : CD
21	BIT 0	O	Bit 0 H : 16 or 20bit, L : 24bits
	SYNCHRO BUSY	I/O	Synchro busy signal
22	SDATA	I/O	Synchro data signal
23	PANEL OPEN	O	Moving panel motor driver 0
	IFS	O	Karaoke DSP serial clock output
	CK	O	KARAOKE DSP/MIC volume IC clock output
24	PANEL CLOSE	O	Moving panel motor driver 1
	IFD	O	Karaoke DSP serial data output
	DATA	O	KARAOKE DSP/MIC volume IC data output
25	MUTE	O	DAC mute H : on, L : off
	IFL	O	Karaoke DSP serial latch output
26	FS1	O	Sampling frequency(FS)1 H : 44.1 or 48kHz, L : 96kHz
	MIC-MUTE	O	Mic mute H : off, L : on
27	POWER	O	Power supply control port H : standby, L : power on
28	BIT 1	O	Bit 1 H : 16bit, L : 20 or 24bits
	ECHO-MUTE	O	Echo mute H : off, L : on
29	AVCC	-	Standard voltage for A/D
30	PANEL CLOSE SW	I	Moving panel close switch L : on
	MIC REMOTE 1	I	Mic remote control 1
31	PANEL OPEN SW	I	Moving panel open switch L : on
	MIC REMOTE 0	I	Mic remote control 0
32,33	KEY0,1	I	Key input port 0,1
34	KEY2	I	Key input port 2
35	VERSION	I	Model selector
36,37	-	-	No use
38	AVSS	-	GND for A/D
39	LED 96kHz	O	96kHz sampling indicator H : on, L : off
40	LED DTS/MPEG	O	DTS/MPEG indicator H : on, L : off
	2CH DOWN MIX	O	2 channel down mix H : on, L : off
41	LED DVD	O	DVD indicator H : on, L : off
42	LED VIRTUAL SURR	O	Virtual Surround indicator H : on, L : off
	LED STANDBY	O	LED standby H : on, L : off
43	BB-A1	I	DAC data register address A1
44	BB-A0	I	DAC data register address A0
	STB	O	Mic volume IC latch output
45	BB-IW1	I	DAC data bit IW1
	SHUTTLE SW1	I	Shuttle switch 1
46	BB-IW0	I	DAC data bit IW0
	SHUTTLE SW0	I	Shuttle switch 0
47	VCC	-	Power supply
48	BB-SF1	I	DAC sampling rate(SF1)
	VOICE-DET	I	Voice defect H : voice, L : non-voice

## CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	Description
49	BB-MUT	I	DAC soft mute
	MIC-IN	I	Mic input control port H : in, L : out
50	BB-SF0	I	DAC sampling rate(SF0)
51	BB-DEM	I	DAC data deemphasis
52	CE	I	Chip enable H : Power supply on L : off
53-55	A10-8	O	Access address of SRAM
56	VSS	-	GND
57-64	A7-0	O	Access address of SRAM
65-72	D0-7	I/O	Access data of SRAM
73	VSS	-	GND
74	BANK A	O	Bank selector A
75	P-MUTE	O	Power mute H : off, L : on
76	EMPH	O	Deemphasis H : on, L : off
77	CE	O	FL driver IC serial control latch
78	DI	O	FL driver IC serial data
79	SRDT	I	Data for CD-TEXT
80	CL	O	FL driver IC serial clock
	SCLK	O	Serial clock for CD-TEXT/VFD

### 2-3 Port table

Pin No.	Pin Name	I/O	DVF-9010	DV-2070	DVF-K7010	DV-5010	DV-203	DV-S701	DV-K751
1	/RES	I	○	○	○	○	○	○	○
2	XTAL	I/O	○	○	○	○	○	○	○
3	EXTAL	I/O	○	○	○	○	○	○	○
4	MD1	I	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
5	MD0	I	LOW	LOW	LOW	LOW	LOW	LOW	LOW
6	/NM1	-	○	○	○	○	○	○	○
7	/STBY	-	○	○	○	○	○	○	○
8	VCC	-							
9	DSPCLK	I	○	○	○	○	○	○	○
10	STATUS	I	○	○	○	○	○	○	○
11	CMD	O	○	○	○	○	○	○	○
12	VSS	-							
13,14	-	-							
15	/AS	O	○		○	○	○	○	
16	/WR	O	○		○	○	○	○	
17	/RD	O	○		○	○	○	○	
18	REMOCON	I	○	○	○	○	○	○	○
19	DQSY	I	○	○		○	○	○	
20	CD	O						○	
	2CHANNEL	O	○						
21	SYNCHRO BUSY	I/O						○	○
	BIT 0	O	○						
22	SYNCHRO DATA	I/O						○	○
23	PANEL OPEN	O	○	○					
	IFS	O			○				▲
	CK	O							▲
24	PANEL CLOSE	O	○	○					
	IFD	O			○				▲
	DATA	O							▲
25	MUTE	O	○					○	
	IFL	O			○				○

## CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	DVF-9010	DV-2070	DVF-K7010	DV-5010	DV-203	DV-S701	DV-K751
26	FS1	O	○						
	MIC-MUTE	O			○				○
27	POWER	O	○	○	○	○	○		
28	BIT 1	O	○						
	ECHO-MUTE	O			○				○
29	AVCC	-							
30	MIC REMOTE 1	I			○				
	PANEL CLOSE SW	I	○	○					
31	MIC REMOTE 0	I			○				
	PANEL OPEN SW	I	○	○					
32,33	KEY0,1	I	○	○	○	○	○	○	○
34	KEY 2	I	○	○	○				
35	VERSION	I	○	○	○	○	○	○	○
36,37	-	-							
38	AVSS	-							
39	LED 96KHZ	O	○	○	○	○	○		
40	LED DTS/MPEG	O	○	○	○	○	○		
	2CH DOWN MIX	O						○	○
41	LED DVD	O	○	○				○	○
42	LED VIRTUAL SURR	O	○	○	○	○	○		
	LED STANDBY	O						○	○
43	BB-A1	I	○					○	
44	BB-A0	I	○					○	
	STB	O							○
45	SHUTTLE SW 1	I						○	○
	BB-IW1	I	○						
46	SHUTTLE SW 0	I						○	○
	BB-IW0	I	○						
47	VCC	-							
48	VOICE-DET	I			○				○
	BB-SF1	I	○						
49	MIC-IN	I			○				○
	BB-MUT	I	○					○	
50	BB-SF0	I	○						
51	BB-DEM	I	○					○	
52	CE	I	○	○	○	○	○	○	○
53-64	ADDRESS 0-10	O	○	○		○	○	○	
65-72	DATA 0-7	I/O	○	○		○	○	○	
73	VSS	-							
74	BANK A	O	○	○		○	○	○	
75	POWER MUTE	O	○	○	○	○	○	○	○
76	EMPH	O	○					○	
77	CE	O	○	○	○	○	○	○	○
78	DI	O	○	○	○	○	○	○	○
79	SRDT	I	○	○		○	○	○	○
80	CL	O	▲	▲	○	▲	▲	▲	▲
	SCLK	O	▲	▲		▲	▲	▲	▲

○=use, ▲=common use

## CIRCUIT DESCRIPTION

### 3. Voltage matrix

PORT#32				PORT#33			PORT#34		PORT#35
VOLTAGE	DVF-9010/ VD-2070	DVF-K7010	DVF-5010/ VD-203	DVF-9010/ VD-2070	DVF-K7010	DVF-5010/ VD-203	DVF-9010/ VD-2070	DVF-K7010	MODEL NAME
<b>5 V</b>									
	-	-	-	-	-	-	-	-	DV-K751
<b>4.58 V</b>									
	◀(LEFT)	-	-	-	REPEAT	REPEAT	-	-	DVF-9010
<b>3.75 V</b>									
	▲(UP)	-	-	RETURN	▯(STILL/PAUSE)	▯(STILL/PAUSE)	-	-	DV-2070
<b>2.92 V</b>									
	ENTER	-	-	MENU	◀◀(BWD SKIP)	◀◀(BWD SKIP)	▶▶(FWD SKIP)	KARAOKE	DVF-K7010
<b>2.08 V</b>									
	▼(DOWN)	OPEN/CLOSE	OPEN/CLOSE	▯(STILL/PAUSE)	▶▶(FWD SKIP)	▶▶(FWD SKIP)	◀◀(BWD SKIP)	b (FLAT)	DVF5010
<b>1.25 V</b>									
	▶(RIGHT)	▶(PLAY)	▶(PLAY)	PANEL UP/DOWN	◀◀ (FB)	◀◀ (FB)	■(STOP)	h (NATURAL;)	DV-203
<b>0.42 V</b>									
	ON SCREEN	■(STOP)	■(STOP)	OPEN/CLOSE	▶▶ (FF)	▶▶ (FF)	▶(PLAY)	#(SHARP)	DV-S701
<b>0 V</b>									

### 4. MIC PORT

MIC CONTROL		PORT#31		
		5 V	4 V	0 V
PORT#30	5 V	OFF	-	#
	4 V	-	OFF	-
	0 V	b	-	LESSON RETURN

### 5. Setup and initial items

items	Disc language	Ratings	Menu language	On-screen message	FL display	TV aspect	Digital audio output	Speaker setting	Other setting
Contents	Audio: Original Subtitle: Automatic Menu: English	8(No limit)	English	On	Bright	4:3	LPCM(DVD): Off Dolby digital: Bitstream MPEG: PCM/DTS: On	Front: On(small) Center: On(small) Rear: On(small) Subwoofer: On Delay time: 0ms Channel balance: 0dB	Still mode: Automatic Audio during search: On TV mode(4:3): Pan&scan D.range compression: On
DVF-9010	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DV-2070	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
DVF-K7010	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DVF-5010	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DV-203	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
DV-S701	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> /×(K)	<input type="radio"/>
DV-K751	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## CIRCUIT DESCRIPTION

### 6. DAC : AD1855 (X32: IC3, 4)

#### 6-1 Pin description

Pin No.	Pin Name	I/O	Descriptions
1	DGND	I	Digital GND.
2	MCLK	I	Master clock input. Connect to an external clock source at either 256,384 or 512Fs.
3	CLATCH	I	Latch input for control data. This input is rising edge sensitive.
4	CCLK	I	Control clock input for control data. Control input data must be valid on the rising edge of CCLK. CCLK may be continuous or gated.
5	CDATA	I	Serial control input, MSB first, containing 16 bits of unsigned data per channel. Used for specifying channel specific attenuation and mute.
6	384/256	I	Select the master clock mode as either 384 times the intended sampling frequency(HI) or 256 times the intended sampling frequency(LO). The state of this input should be hardwired to logic HI or logic LO or may be changed while the AD1855 is in power down/reset. It must not be changed while the AD1855 is operational.
7	X2MCLK	I	Select internal clock doubler(LO) or internal clock =MCLK(HI).
8	ZEROR	O	Right channel zero flag output. This port goes HI when left channel has no signal input for more than 1024 LR clock cycles.
9	DEEMP	I	Deemphasis. Digital deemphasis is enabled when this input signal is HI. This is used to impose a 50/15 ms response characteristic on the output audio spectrum at an assumed 44.1kHz sample rate.
10	48/96	I	Selects 48kHz(LO) or 96kHz sampling frequency control.
11	AGND	I	Analog GND
12	OUTR+	O	Right channel positive line level analog output
13	OUTR-	O	Right channel negative line level analog output
14	FILTER	O	Voltage reference filter capacitor connection. Bypass and decouple the voltage reference with parallel 10uF and 0.1uF capacitor to the AGND.
15	AGND	I	Analog GND
16	OUTL-	O	Left channel negative line level analog output
17	OUTL+	O	Left channel positive line level analog output
18	AVDD	I	Analog power supply. Connect to the analog +5V supply.
19	FILTB	-	Filter capacitor connection, connect 10uF capacitor to AGND.
20	IDPM1	I	Input serial data port mode control one. With IDPM0, defines 1 of 4 serial modes.
21	IDPM0	I	Input serial data port mode control zero. With IDPM1, defines 1 of 4 serial modes.
22	ZEROL	O	Left channel zero flag output. This port goes HI when right channel has no signal input for more than 1024 LR clock cycles.
23	MUTE	I	Mute. Assert HI to mute both stereo analog outputs. Dessert LO for normal operation.
24	PD/RST	I	Power down/reset. The AD1855 is placed in a low power consumption mode when this port is held LO. The AD1855 is reset on the rising edge of this signal. The serial control port registers are reset to the default values. Connect HI for normal operation.
25	LRCLK	I	Left/right clock input for input data. Must run continuously.
26	BCLK	I	Bit clock input for input data. Need not run continuously; may be gated or used in a burst fashion.
27	DSDAT	I	Serial input, MSB first, containing two channels of 16/18/20/24 bits of twos compliment data per channel.
28	DVDD	I	Digital power supply. Connect to the digital +5V supply.

#### 6-2 SERIAL DATA INPUT MODE

IDPM1 (PIN20)	IDPM0 (PIN21)	Serial data input format
0	0	Right-Justified (16 bits only)
0	1	I2S Compatible
1	0	Left-Justified
1	1	DSP

## CIRCUIT DESCRIPTION

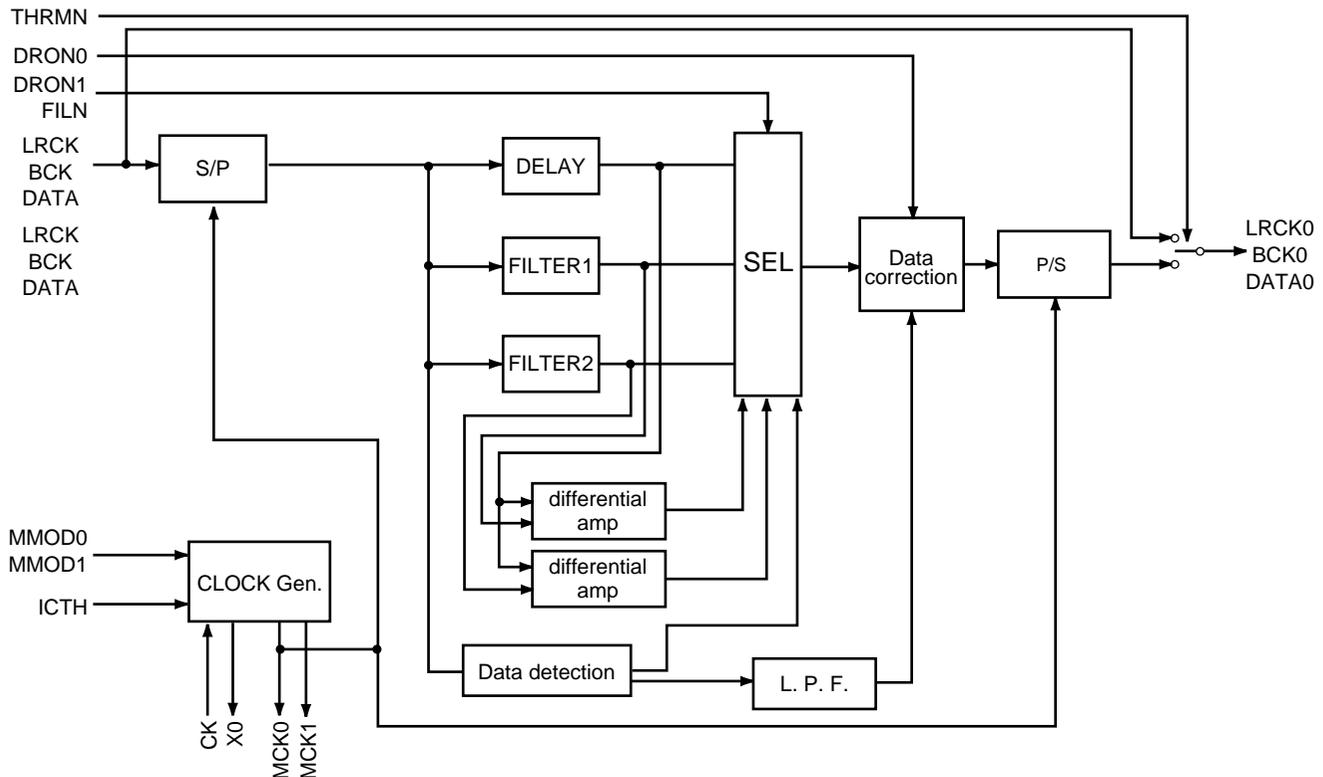
### 7. DSP/D.R.I.V.E. II : KAN06 (X32 : IC2)

#### 7-1 Pin description

Pin No.	Pin Name	I/O	Descriptions
1	MUTE	I	Mute(H:on)
2	BCK	I	BCK input port
3	DATA	I	Data input port
4	LRCK	I	LRCK input port
5	RST	I	Reset input port(L:reset)
6	VSS	-	GND
7	IBF	I	Input format setting(1)
8	IIS	I	Input format setting(2)
9	IUD	I	Inverted input port of LRCK
10	IW0	I	Input data period setting(1)
11	IW1	I	Input data period setting(2)
12	VSS	-	GND
13-16	NCON3-0	O	Test port
17	VDD	-	Power supply port
18	DR0N0	I	ROM compensation on/off
19	DR0N1	I	Filter compensation on/off
20	NT	I	Connect H level
21	RND0	I	Open
22	RND1	I	Open
23	OBF	I	Output format setting(1)

Pin No.	Pin Name	I/O	Descriptions
24	OIS	I	Output format setting(2)
25	OLRRL	I	Output change port
26	OOD	I	Edge setting of LRCK0
27	FILN	I	Connect H level
28	VSS	-	GND
29	LRCKO	O	LRCK output port
30	DATAO	O	DATA output port
31	BCKO	O	BCK output port
32	DRVW	I	Connect H level
33	THRMN	I	Through mode
34	ICTH	I	Phase setting of internal oscillation
35	VDD	-	Power supply port
36	CK	I	Master clock input port
37	X0	O	Crystal output port
38	VSS	-	GND
39	VDD	-	Power supply port
40,41	MCK0,1	O	Master clock output port
42	VSS	-	GND
43,44	MMOD0,1	I	Master clock frequency setting

#### 7-2 Block diagram



## CIRCUIT DESCRIPTION

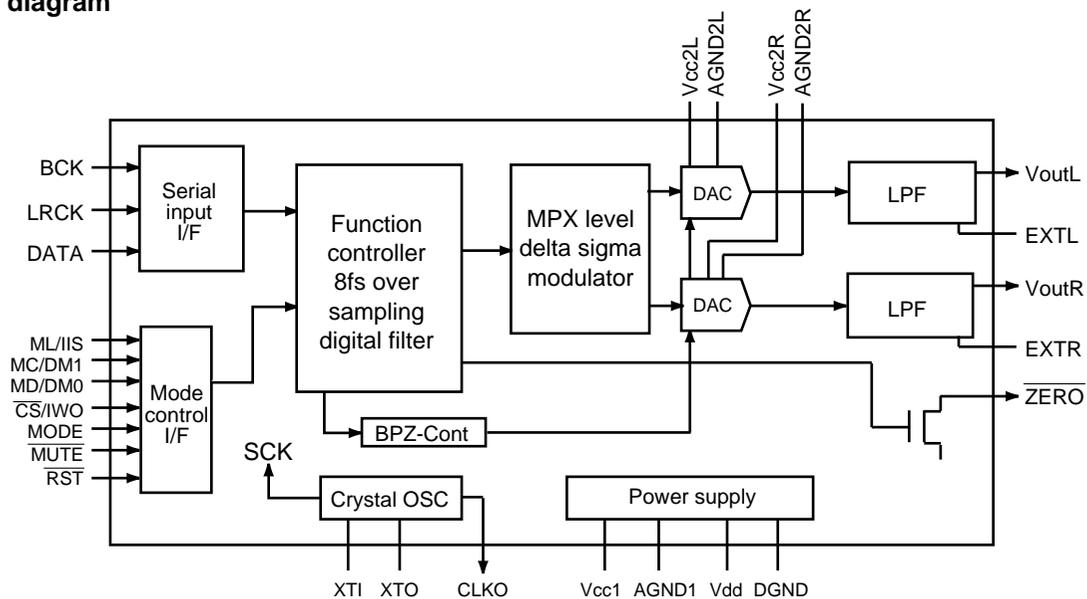
### 8. DAC : PCM1716E (X25 : IC3~5)

#### 8-1 Pin description

Pin No.	Pin Name	I/O	Descriptions
1	LRCK	I	LRCK clock input port
2	DATA	I	Data input port
3	BCK	I	Bit clock input port of data
4	CLKO	O	System clock buffer output port
5	XTI	I	Clock input port
6	XTO	O	Crystal connection port
7	DGND	-	Digital GND
8	VDD	-	Digital power supply(+5V)
9	VCC2R	-	Analog power supply(+5V)
10	AGND2R	-	Analog GND
11	EXTR	O	R-ch, analog output
12	NC	-	No connection
13	VOUTR	O	R-ch, analog output port
14	AGND1	-	Analog GND
15	VCC1	-	Analog power supply(+5V)
16	VOUTL	O	L-ch, analog output port

Pin No.	Pin Name	I/O	Descriptions
17	NC	-	No connection
18	EXTL	O	L-ch, analog output
19	AGND2L	-	Analog GND
20	VCC2L	-	Analog power supply(+5V)
21	/ZERO	O	Zero data flag
22	/RST	I	Reset port
23	/CS/IWO	I	Chip select/input format select
24	MODE	I	Mode control selector (H:soft,L:hard)
25	/MUTE	I	Mute control
26	MD/DM0	I	Mode control data/deemphasis selector
27	MC/DM1	I	Mode control BCK/deemphasis selector
28	ML/IIS	I	Mode control latch/input format selector

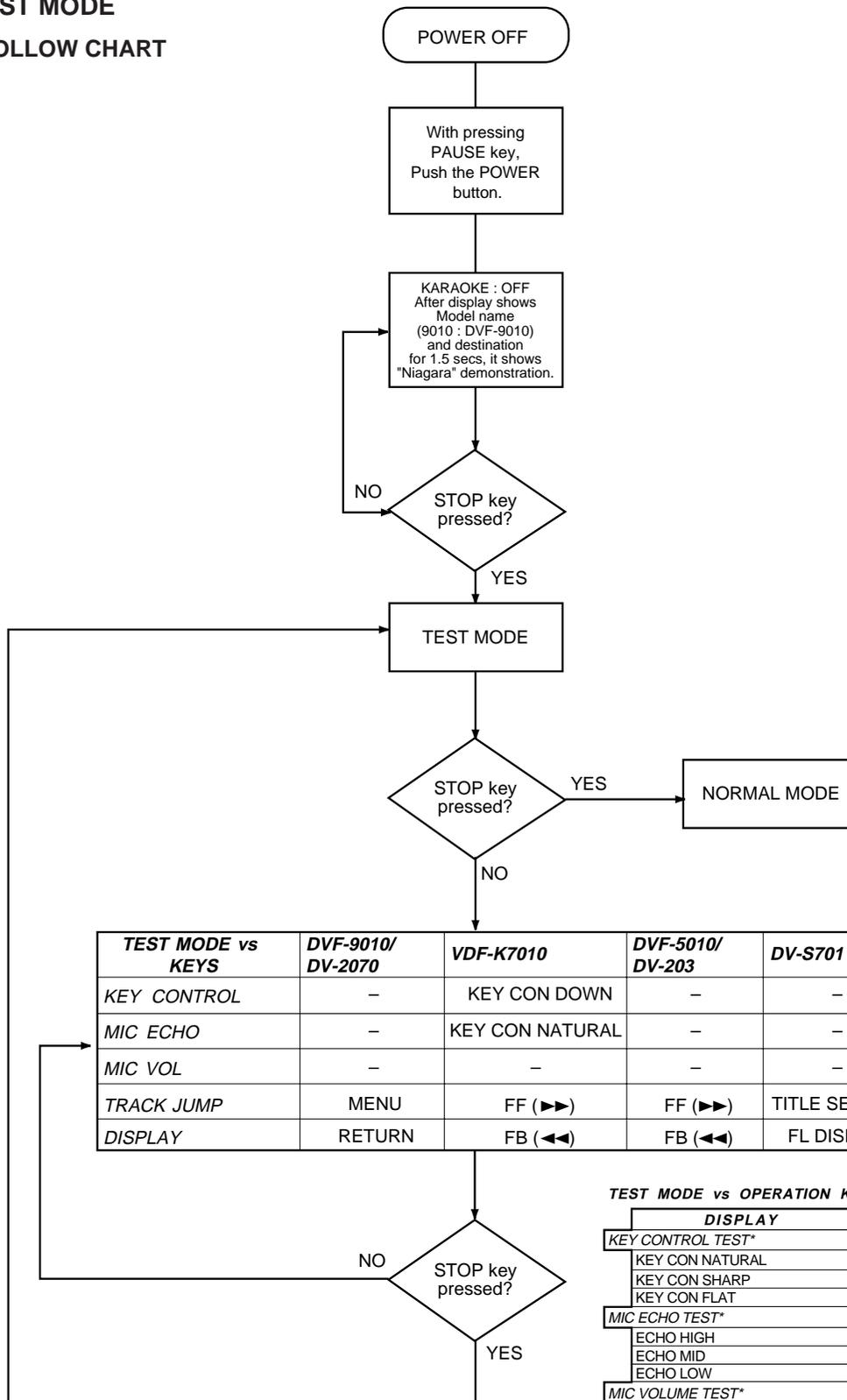
#### 8-2 Block diagram



## CIRCUIT DESCRIPTION

### 9. TEST MODE

#### 9-1 FOLLOW CHART



TEST MODE vs KEYS	DVF-9010/ DV-2070	VDF-K7010	DVF-5010/ DV-203	DV-S701	DV-K751
KEY CONTROL	-	KEY CON DOWN	-	-	MIC1 UP
MIC ECHO	-	KEY CON NATURAL	-	-	MIC2 UP
MIC VOL	-	-	-	-	MIC1 DOWN
TRACK JUMP	MENU	FF (▶▶)	FF (▶▶)	TITLE SEARCH	MIC2 DOWN
DISPLAY	RETURN	FB (◀◀)	FB (◀◀)	FL DISPLAY	FL DISPLAY

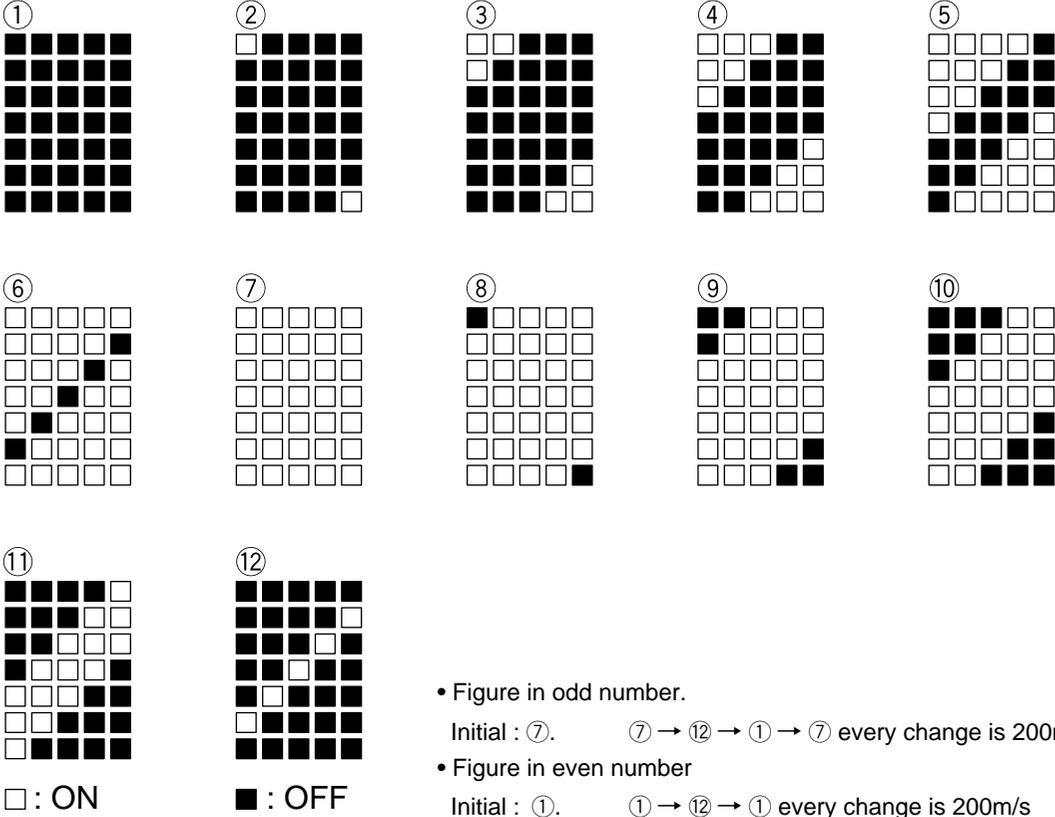
#### TEST MODE vs OPERATION KEY

DISPLAY	Descriptions
<b>KEY CONTROL TEST*</b>	
KEY CON NATURAL	0 cent(level 0)
KEY CON SHARP	600 cent(level 6)
KEY CON FLAT	-600 cent(level-6)
<b>MIC ECHO TEST*</b>	
ECHO HIGH	ECHO VALUE 15
ECHO MID	ECHO VALUE 8
ECHO LOW	ECHO VALUE 0
<b>MIC VOLUME TEST*</b>	
MIC HIGH	ATTENUATION :0dB
MIC MID	ATTENUATION :-6dB
MIC LOW	ATTENUATION :MAXIMUM
<b>TRACK JUMP TEST</b>	
JUMP TO THE 41 TRACK IF PLAYBACK THE 1ST TRACK. JUMP TO THE 1ST TRACK IF NOT PLAYBACK THE 1ST TRACK. DISPLAY SHOWS "TEST MODE" AFTER TACK JUMP.	

\* FWD OR BWD KEYS IS AVAILABLE FOR DISPLAY CHANGE IN EVRY TEST .

# CIRCUIT DESCRIPTION

## 9-2 NIAGARA Display



- Figure in odd number.  
Initial : ⑦.      ⑦ → ⑫ → ① → ⑦ every change is 200m/s
- Figure in even number  
Initial : ①.      ① → ⑫ → ① every change is 200m/s

## ADJUSTMENT

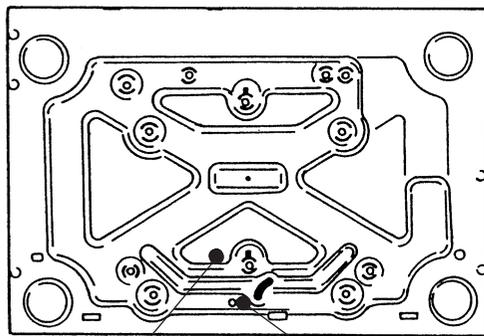
### MECHANISM ADJUSTMENT PROCEDURE

No.	ITEM	INPUT SETTING	OUTPUT SETTING	PLAYER SETTING	ALIGNMENT POINT	ALIGN FOR	FIG.
< 1 >	TANGENTIAL	DV DISC	Connect an oscilloscope to TL5206 and chassis GND (DVD main unit : W02-266x-xx)	STILL	Tangential nut	Minimum DC level and flat wave.	(a)
< 2 >	TILT				Tilt nut		

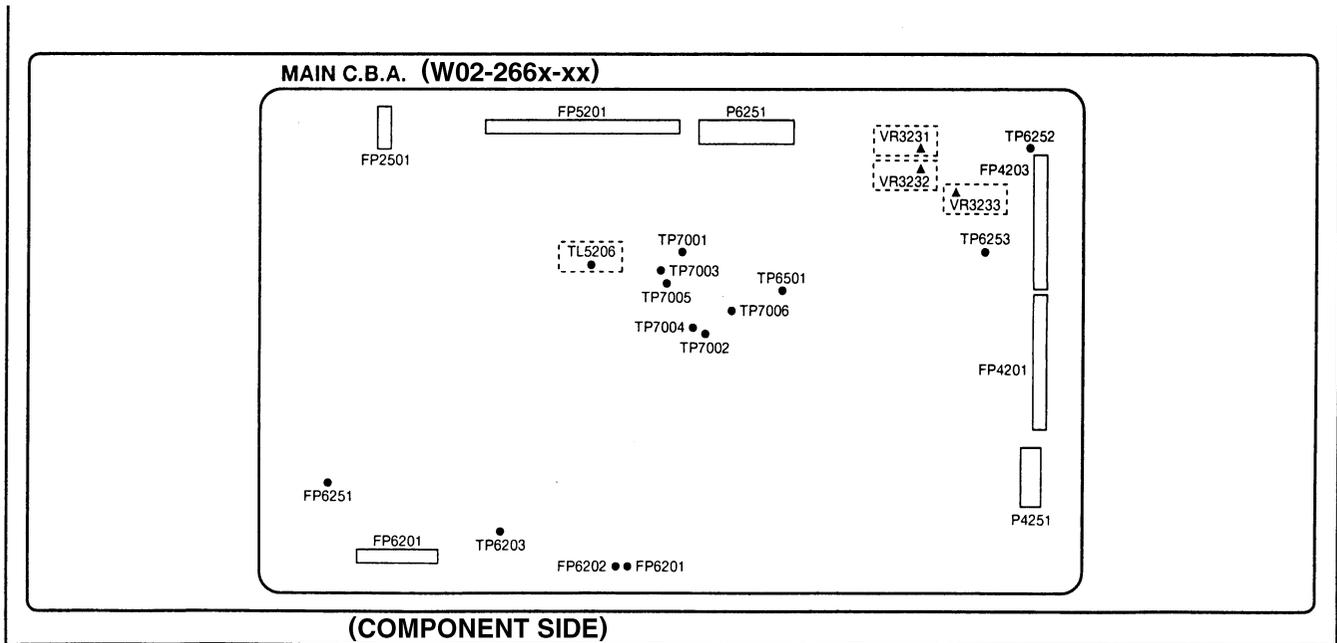
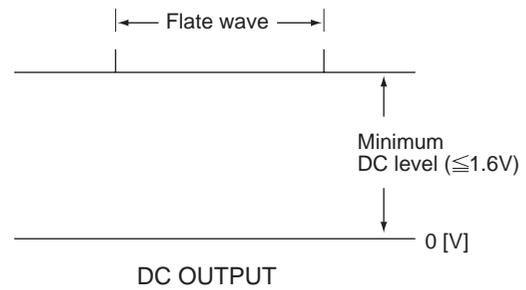
**Note :** Adjust to repeat No. < 1 > and < 2 > about 2~3 times by a hexagon driver on the bottom chassis of set (DV-2070, DVF-9010 : DVD MECHA.), then complete No. < 2 >.

: After complete adjustment, confirm to play MD, CD and Video CD disc the correct.

(a)

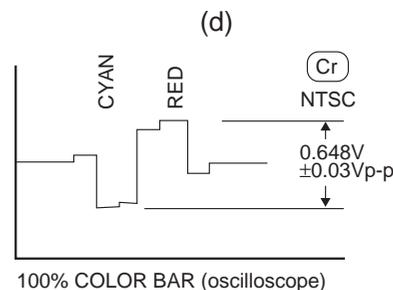
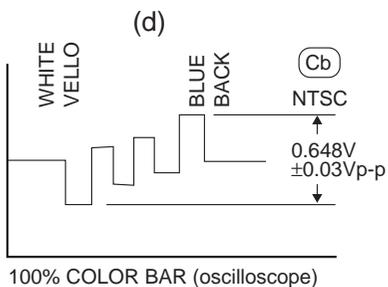
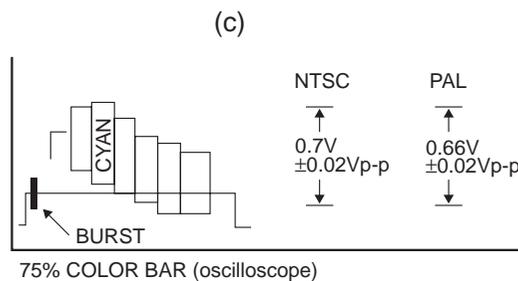
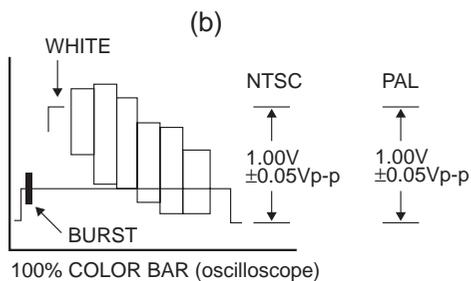


Tangential adjust FRONT Tilt adjust  
(Bottom view)

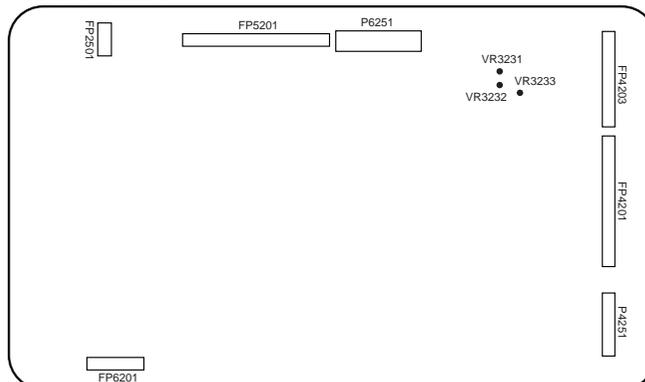


## ADJUSTMENT

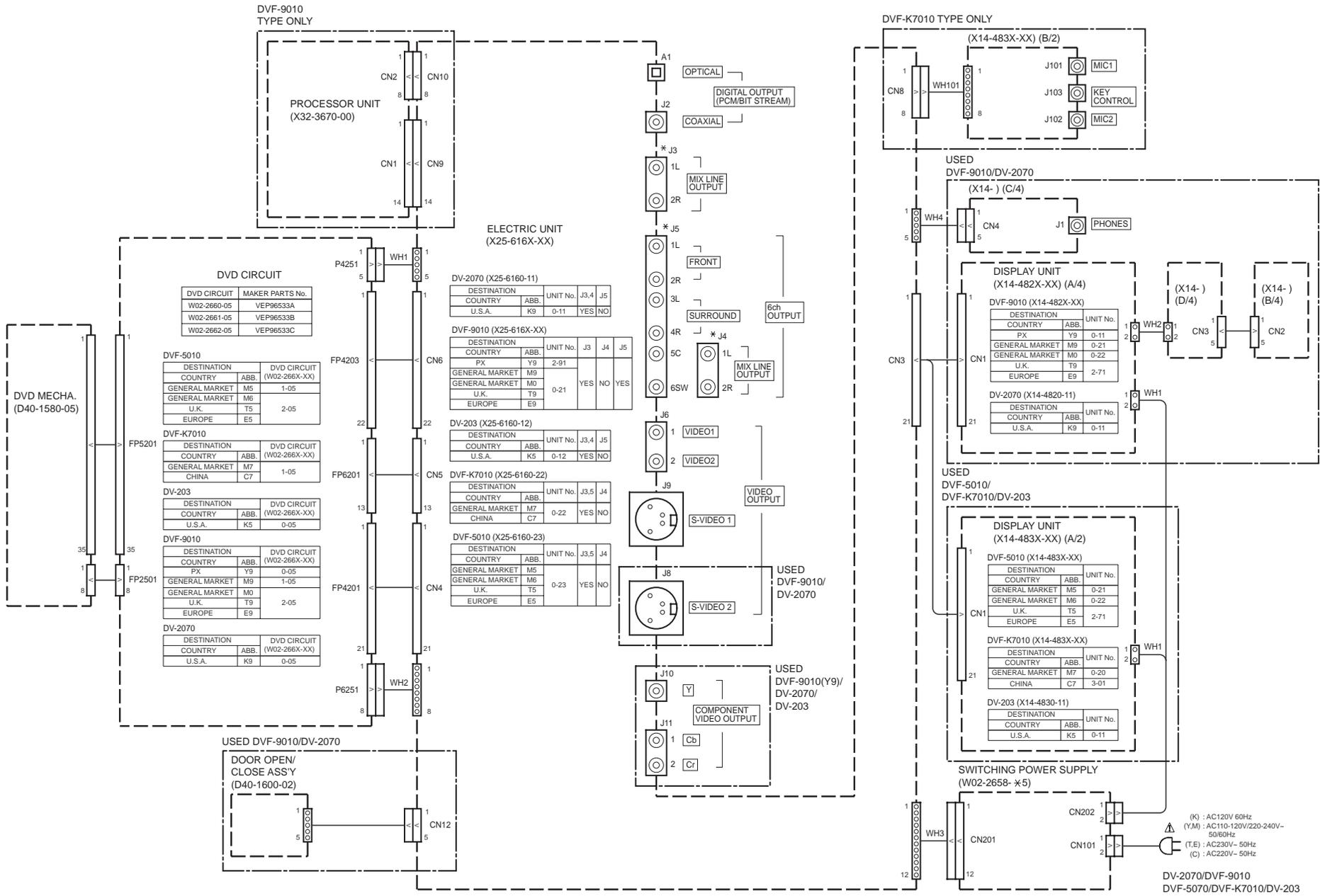
No.	ITEM	INPUT SETTING	OUTPUT SETTING	DVD SETTING	ALIGNMENT POINT	ALING FOR	FIG.
DVD DISC : 100% and 75% color bar OUTPUT : Video output (composite or component / RCA PIN)							
NTSC							
1	VIDEO LEVEL(Y)	DISC 100%COLOR BAR	Connect the TV monitor and the oscilloscope	STILL	VR3232 (MAIN CBA)	(WHITE) 1.00V ±0.05Vp-p	(b)
2	VIDEO LEVEL(C)	DISC 75%COLOR BAR	Connect the TV monitor and the oscilloscope	STILL	VR3233 (MAIN CBA)	(CYAN) 0.7V ±0.02Vp-p	(c)
3	VIDEO LEVEL (Cb) (Cr)	DISC 100%COLOR BAR	Connect the TV monitor and the oscilloscope	STILL	VR3231 (MAIN CBA)	(Cb) (Cr) 0.648V ±0.03Vp-p	(d)
PAL							
1	VIDEO LEVEL(Y)	DISC 100%COLOR BAR	Connect the TV monitor and the oscilloscope	STILL	VR3232 (MAIN CBA)	(WHITE) 1.00V ±0.05Vp-p	(b)
2	VIDEO LEVEL(C)	DISC 75%COLOR BAR	Connect the TV monitor and the oscilloscope	STILL	VR3233 (MAIN CBA)	(CYAN) 0.66V ±0.02Vp-p	(c)



### MAIN C.B.A



WIRING DIAGRAM

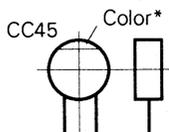


## PARTS DESCRIPTIONS

### CAPACITORS

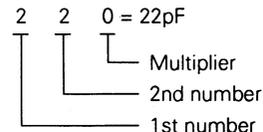
CC 45 TH 1H 220 J  
 1 2 3 4 5 6

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



#### Capacitor value

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



#### Temperature coefficient

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

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

Example : CC45TH = -470 ± 60ppm/°C

#### Tolerance (More than 10pF)

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

#### (Less than 10pF)

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

#### Voltage rating

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

#### Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J  
 1 2 3 4 5 6 7

(Chip) (CH, RH, UJ, SL)

(EX) C K 7 3 F F 1 H 0 0 0 Z  
 1 2 3 4 5 6 7

(Chip) (B, F)

Refer to the table above.

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

#### Dimension (Chip capacitors)

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

## RESISTORS

#### Chip resistor (Carbon)

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

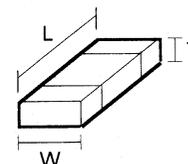
(Chip) (B,F)

#### Carbon resistor (Normal type)

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

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Rating wattage
- 6 = Value
- 7 = Tolerance

#### Dimension



#### Dimension (Chip resistor)

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

#### Rating wattage

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

# PC BOARD (Component side view)

1

2

3

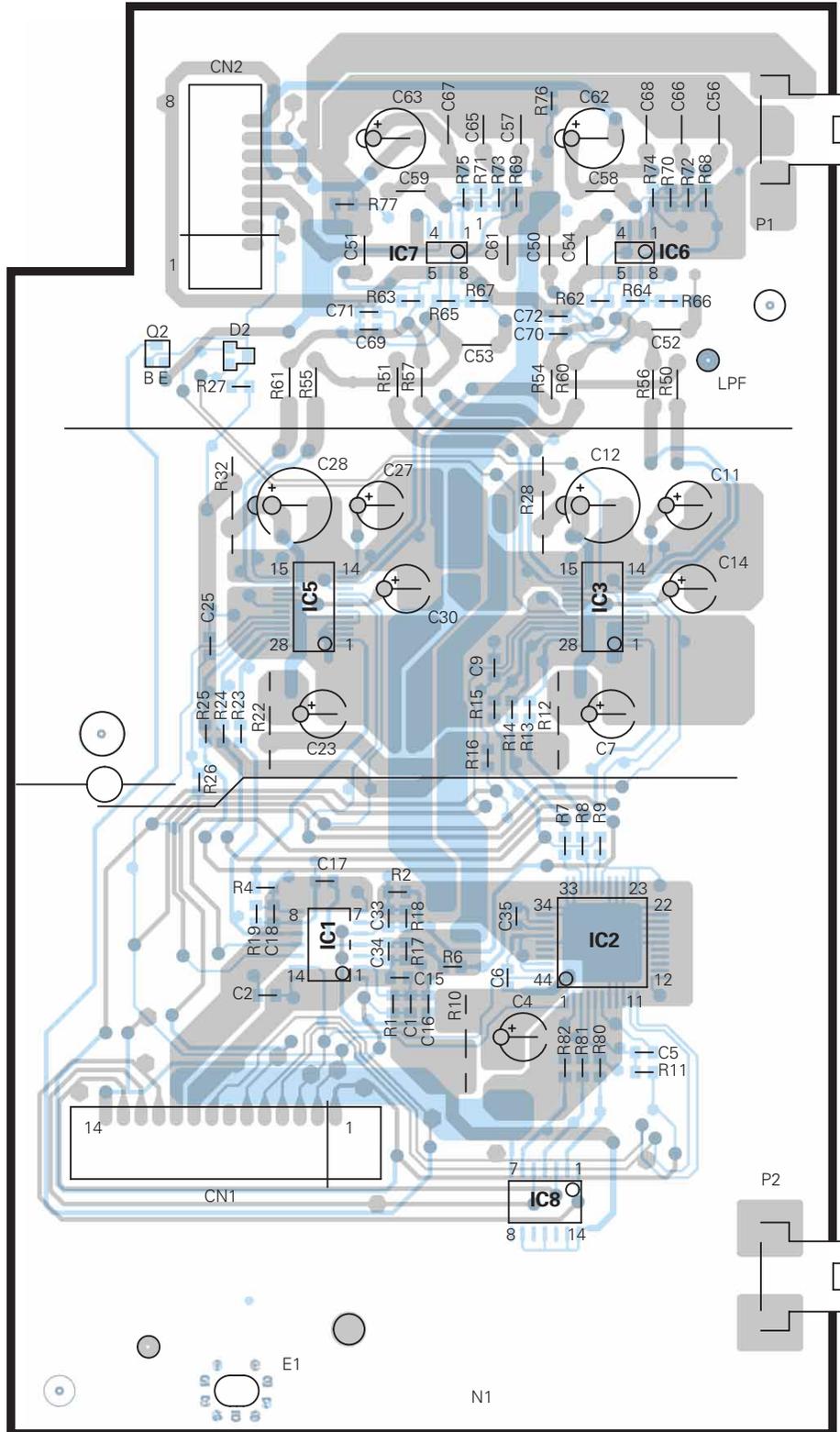
4

5

6

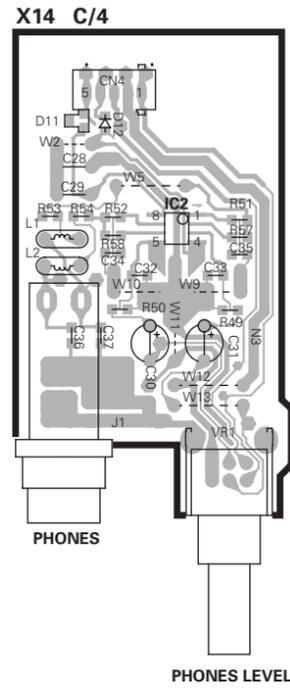
7

## PROCESSOR UNIT X32-3670-00 (70-1240-12)

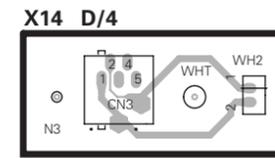
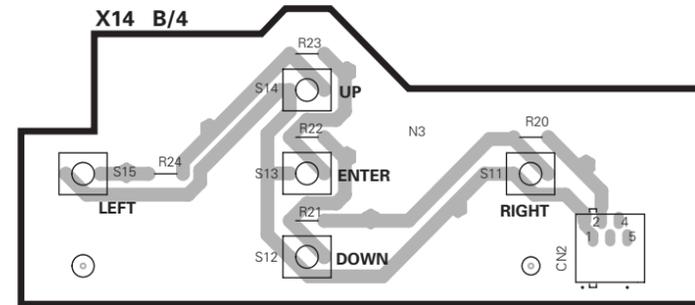
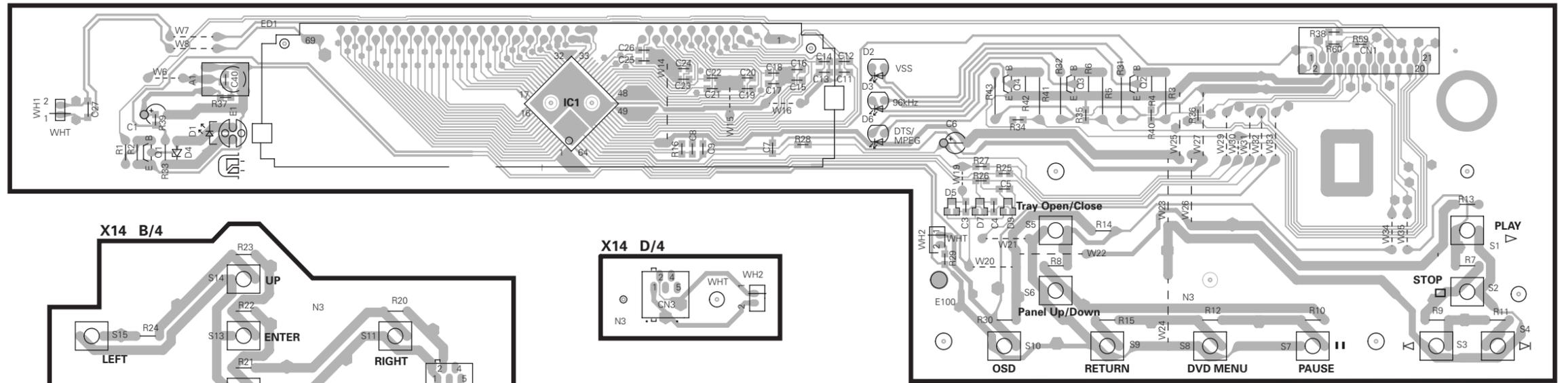


Refer to the schematic diagram for the value of resistors and capacitors.

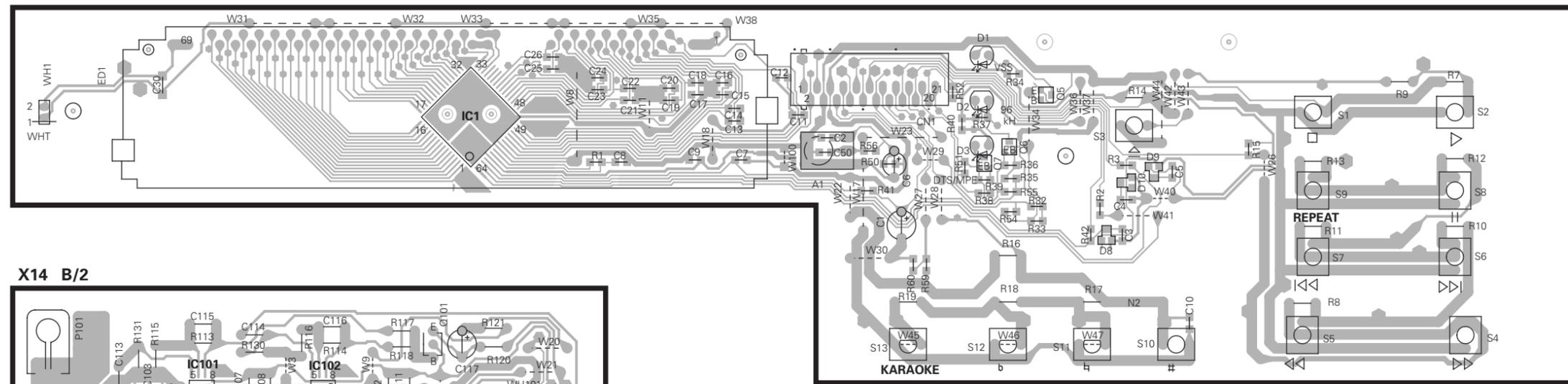
# PC BOARD (Component side view)



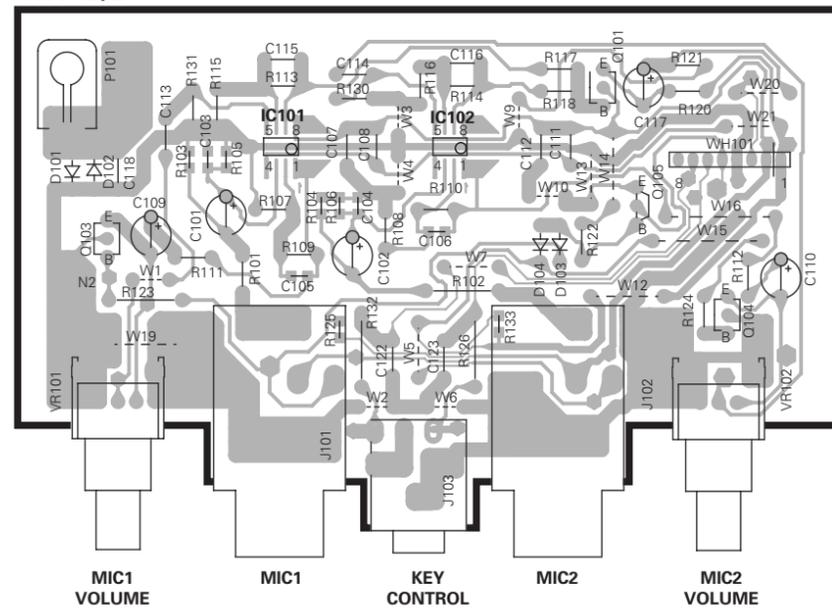
**DISPLAY UNIT**  
X14-4820-00 A/4 (J70-1236-11)



X14-4830-20 A/2 (J70-1237-11)

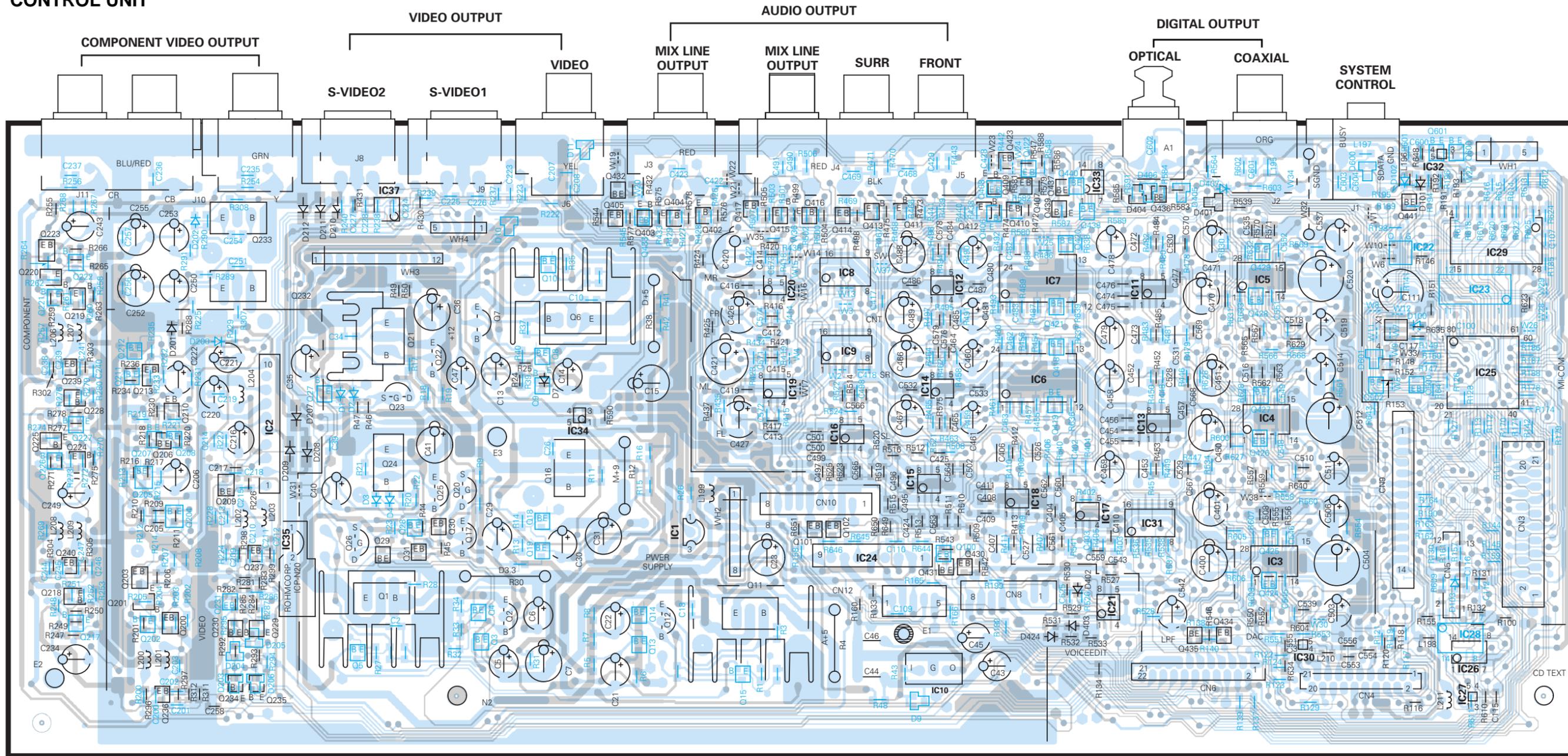


**X14 B/2**

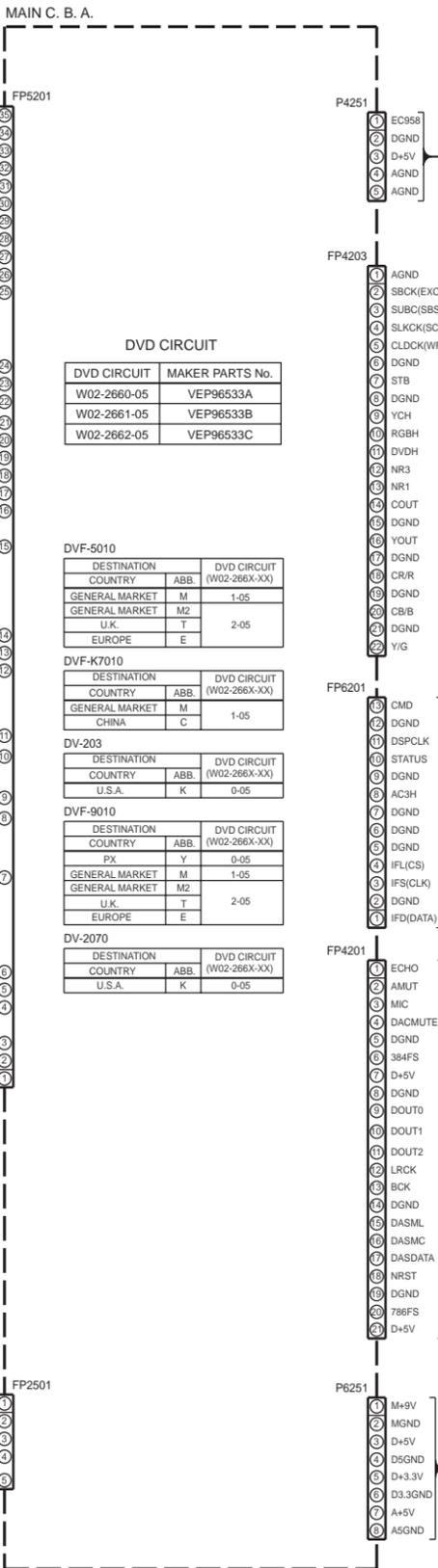
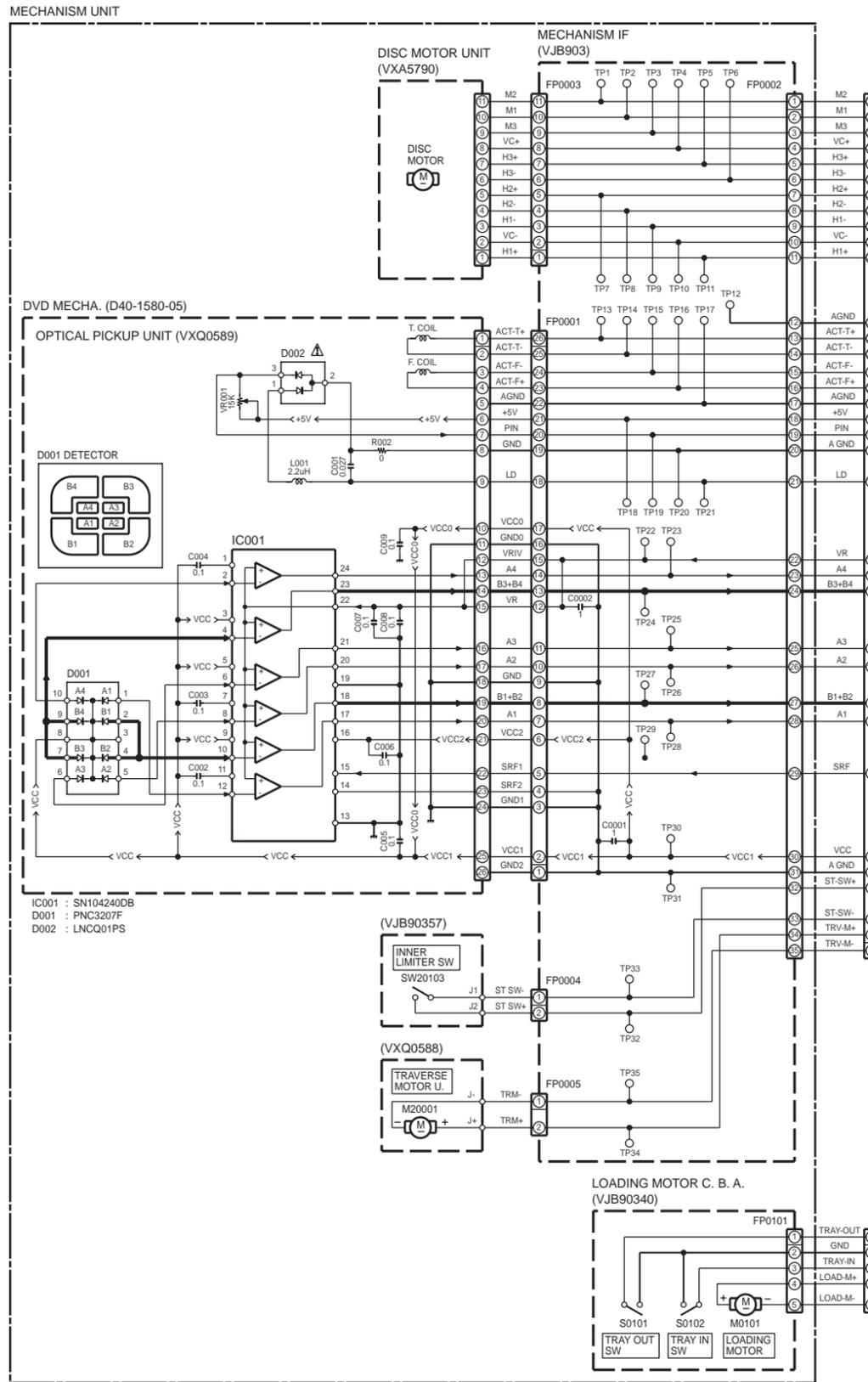


# PC BOARD (Component side view)

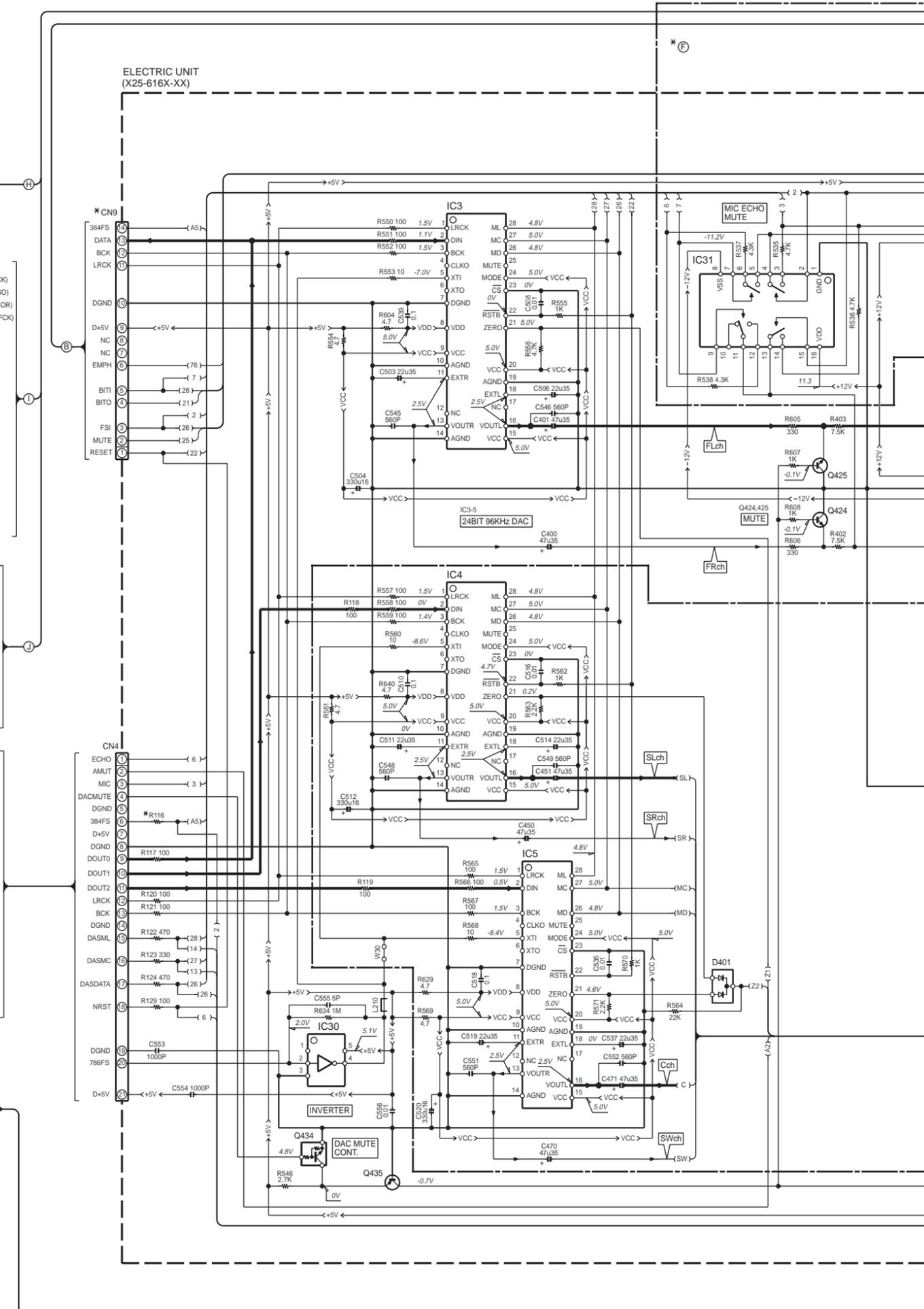
## CONTROL UNIT

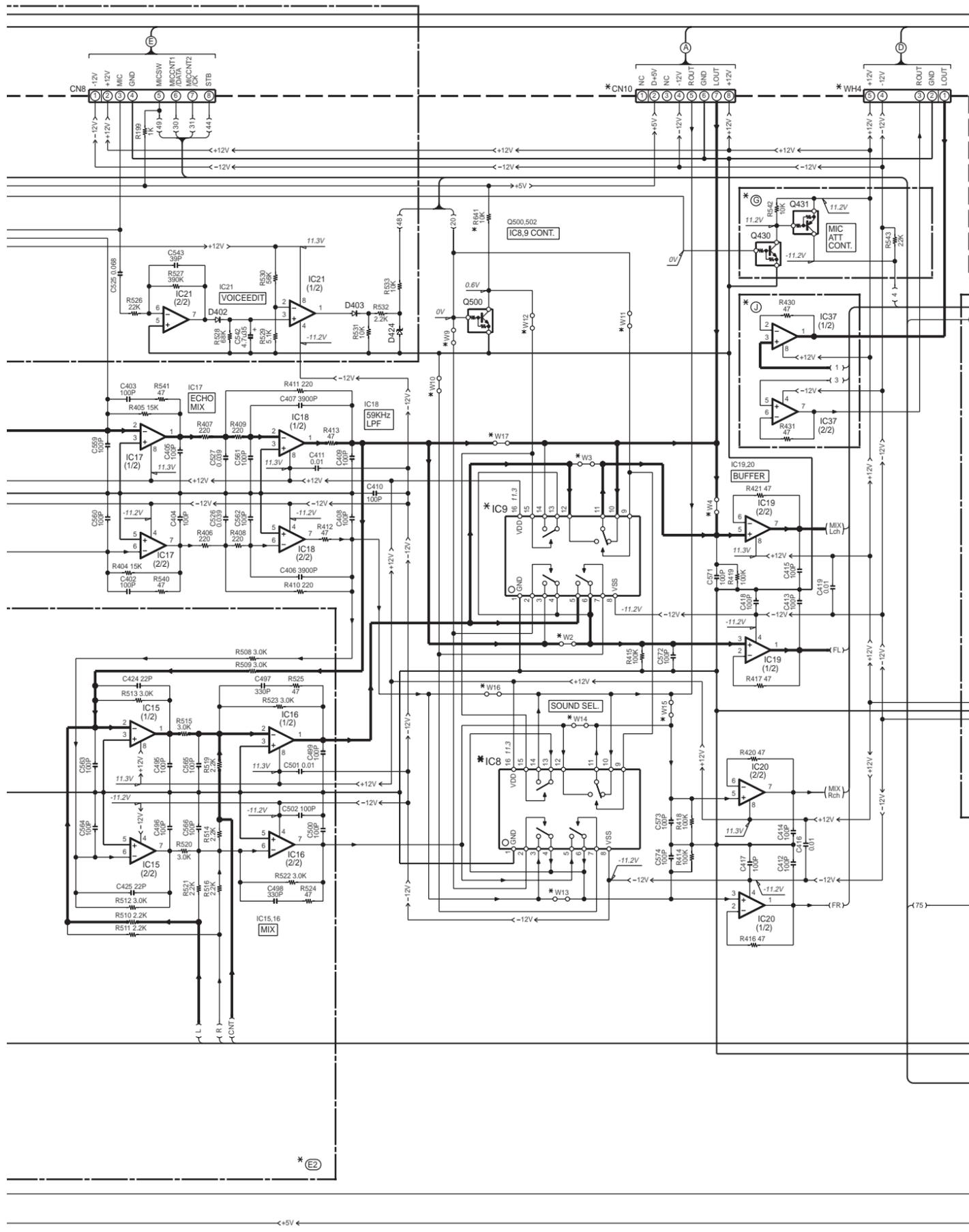


X25-6160-00 (J70-1239-11)

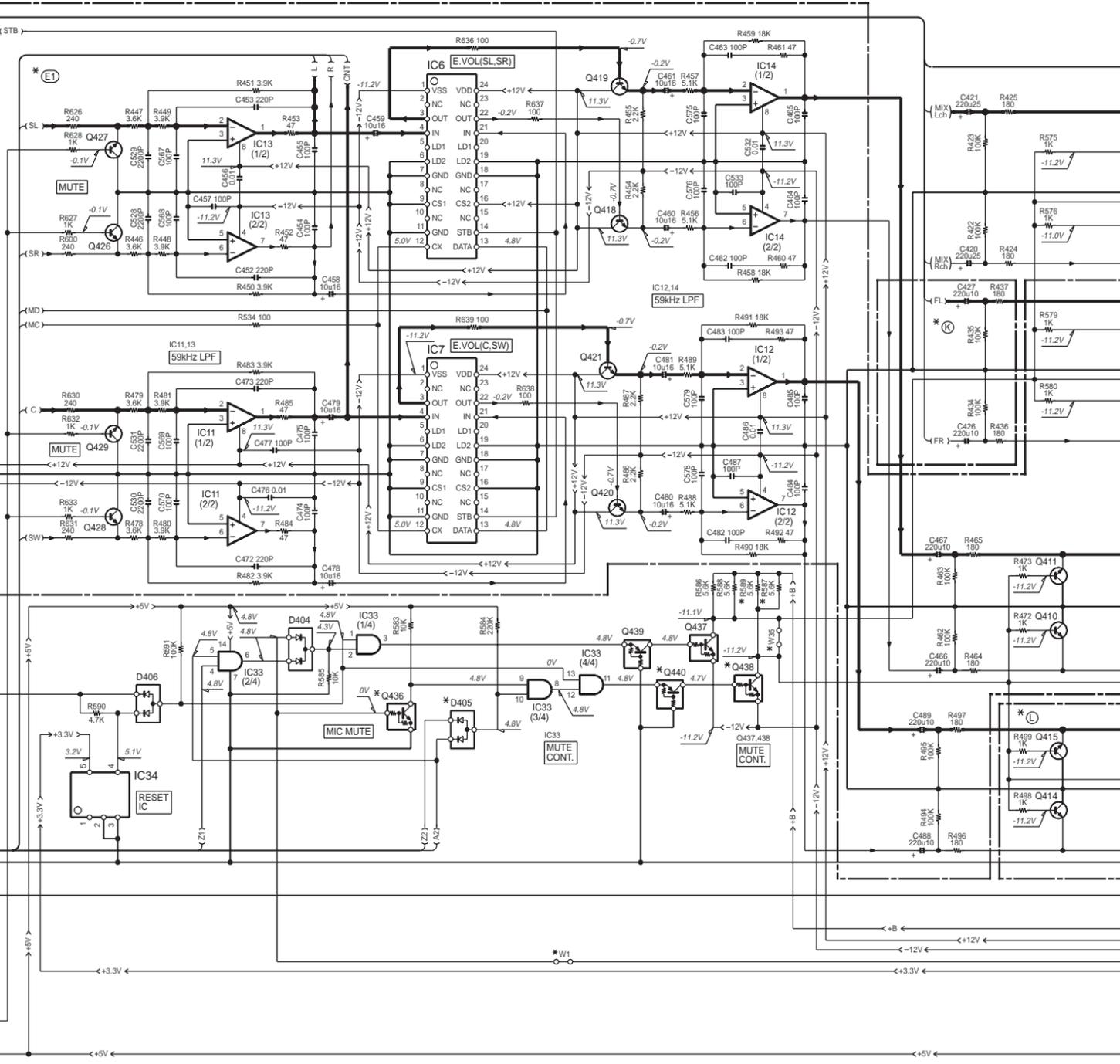


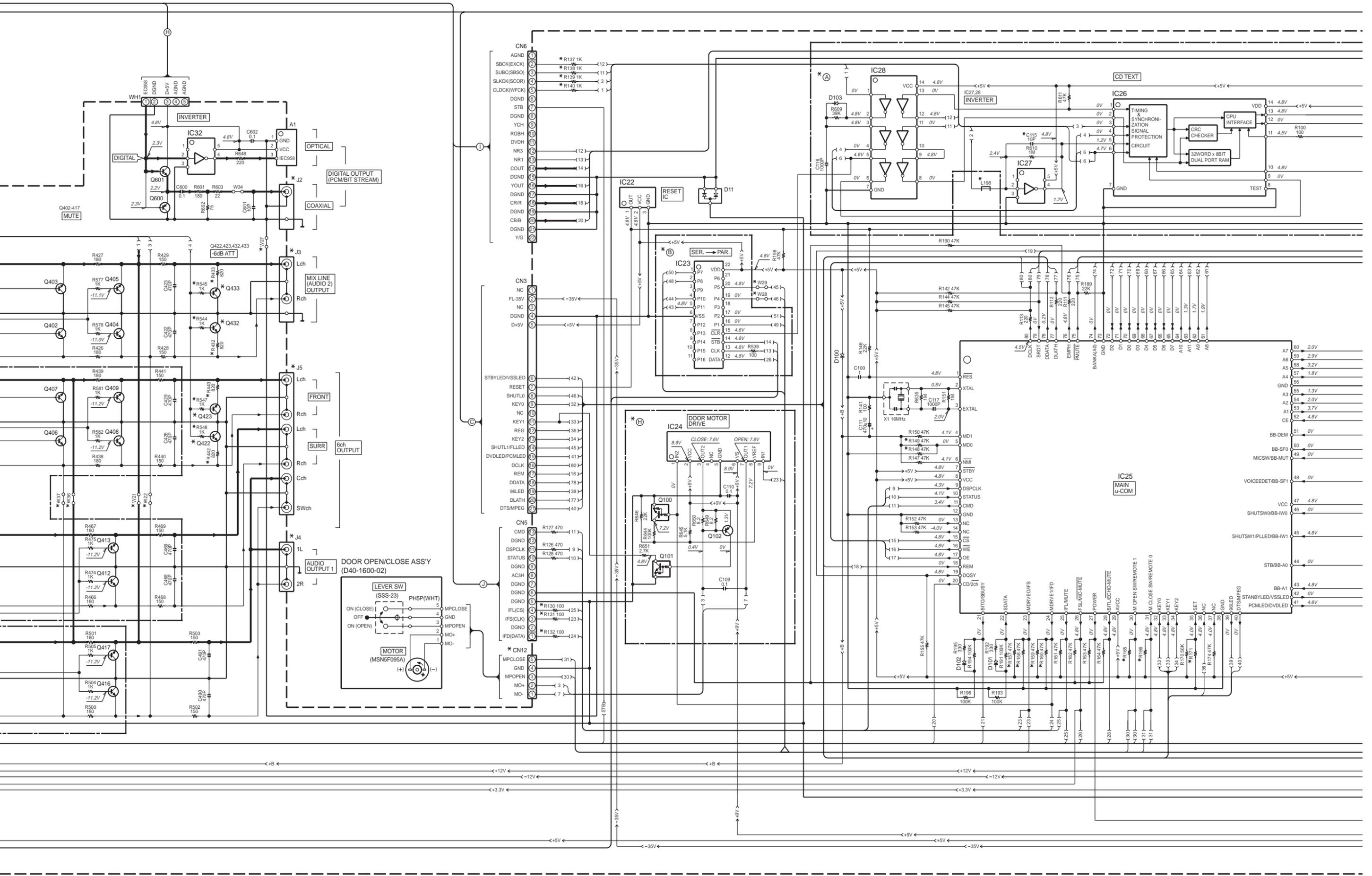
\* NOTE: Please replace the DVD circuit PCB (W02-26XX-X5) with new one, if it is malfunction.

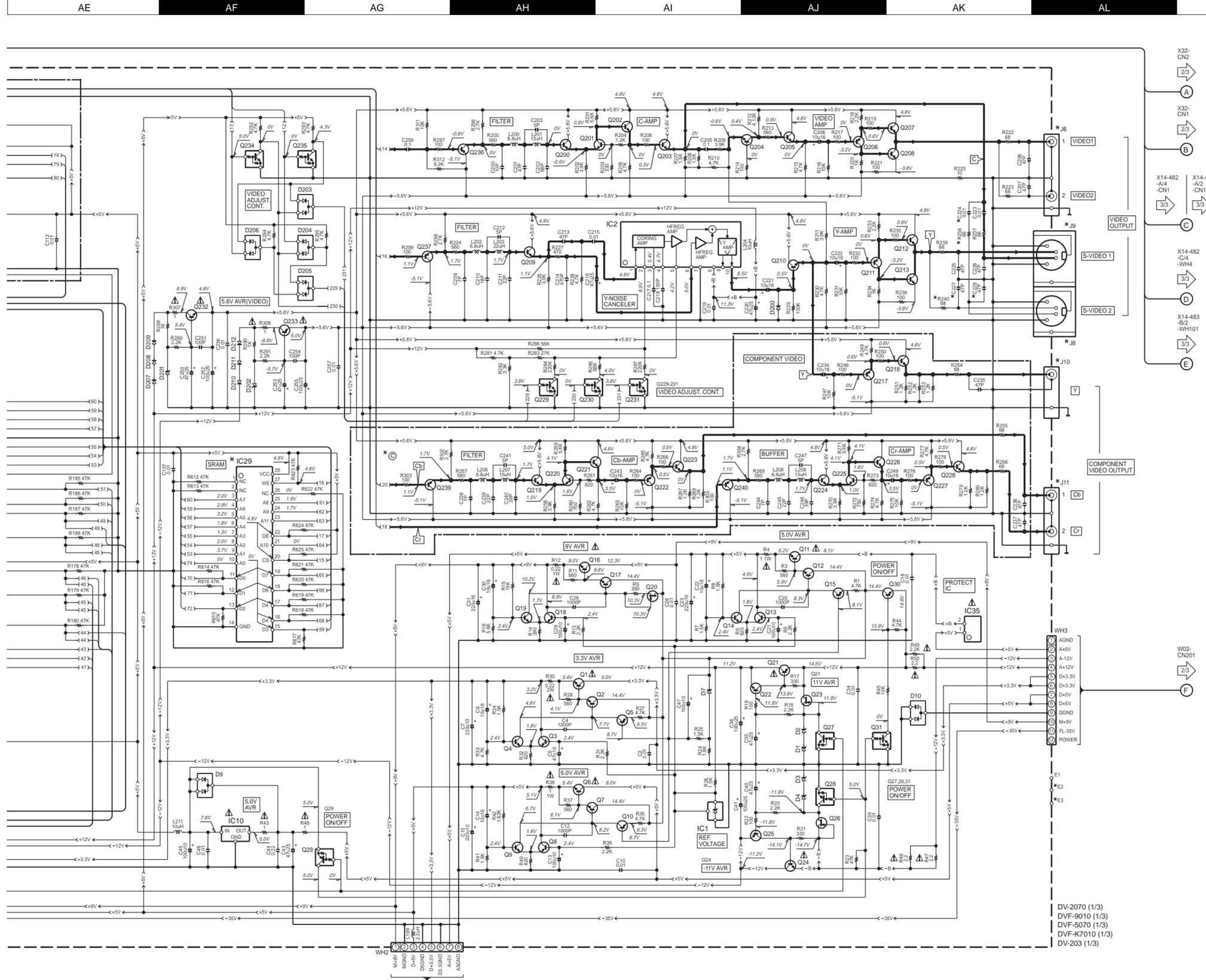




IC1 : TL431CLP	Q1,6,11,24,232	: 2SD2012	D1,3,201,202	: UD26.2B
IC2 : M51494L	Q2,7,12,22	: 2SC1845(F,E)	D2,4,424	: UD25.6B
IC3-5 : PCM1716E	Q3,4,8,9,13,14,18,19,202,203,207,210,212,213,		D7	: UD23.3B
IC6,7 : TC9212AP	218,221,223,226,228,418-421		D9,203,205,401,404	: DAN202U
IC8,9,31 : TC9214AF	Q5,10,15,30,102,206,211,217,222,227,		D10,11	: DA204U
IC10 : BA17805T or UPC7805AHF	236,237,239,240,435	: 2SA1576A(R,S)	D100-103,200,402,403	
IC11-20 : NJM4580ED		: 2SC4596(F,E)		: MA111
IC21,37 : NJM4580ED		: 2SC2458(Y,GR) or	D204,206,405,406	: DAP202U
IC22 : S-80740AL-A4		: 2SC3311A(Q,R)	D207-212	: U1BC44
IC23 : NJU13715G		: 2SK248(Y,GR)		
IC24 : TA8409S		: 2SB1375		
IC25 : HD6433396A65F		: 2SA922(F,E)		
IC26 : LC89170M				
IC27,30,32 : TC7SHU04FU		: DTC124EUA		
IC28 : TC74HC14AF		: DTA114TUA		
IC29 : N34526SOA-55				
IC33 : TC74VHC08FT		: 2SC2714(O,Y)		
IC34 : PST9128NR		: 2SC4213(B)		
IC35 : ICP-20		: 2SA1161(M5,M6)		
	Q20,23,26	: 2SA4177(L5,L6)		
	Q21,233			
	Q25			
	Q27,31,100,101,229-231,234,235,430,431,434,			
	436-440,500			
	Q28,29			
	Q200,201,204,205,209,219,220,224,225,229			
	Q402-417,422-429,432,433			
	Q600			
	Q601			







DV-2070 (X25-6160-11)		REGIONS																								
DESTINATION	UNIT No.	A	B	C	D	E	F	G	H	I	J	K	L	IC1	IC2	CN1	CN2	R116	R130-132	R148	R157	R159	R160	R161	R165	R171
COUNTRY	ABB																									
U.S.A.	K9	0-11	YES																							

DV-203 (X25-6160-12)		REGIONS																								
DESTINATION	UNIT No.	A	B	C	D	E	F	G	H	I	J	K	L	IC1	IC2	CN1	CN2	R116	R130-132	R148	R157	R159	R160	R161	R165	R171
COUNTRY	ABB																									
U.S.A.	K5	0-12	YES																							

DVF-9010 (X25-616X-XX)		REGIONS																										
DESTINATION	UNIT No.	A	B	C	D	E	F	G	H	I	J	K	L	IC1	IC2	CN1	CN2	R116	R587	R589	R130-132	R148	R157	R159	R160	R161	R165	R171
COUNTRY	ABB																											
U.S.A.	K9	0-11	YES																									

DVF-K7010 (X25-6160-22)		REGIONS																									
DESTINATION	UNIT No.	A	B	C	D	E	F	G	H	I	J	K	L	IC1	IC2	CN1	CN2	R116	R130-132	R148	R157	R159	R160	R161	R165	R171	
COUNTRY	ABB																										
U.S.A.	K5	0-12	YES																								

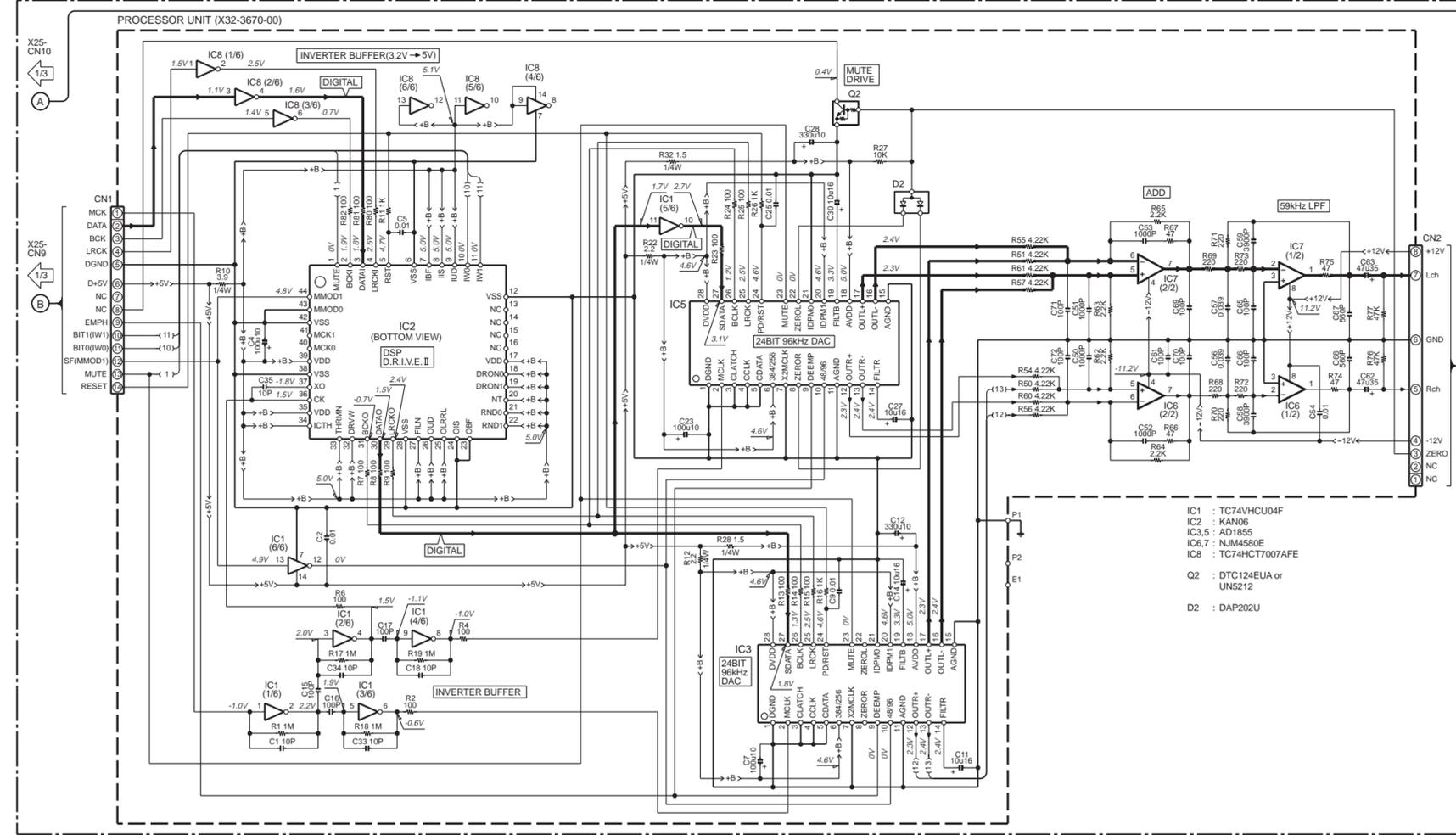
  

DVF-5010 (X25-6160-23)		REGIONS																								
DESTINATION	UNIT No.	A	B	C	D	E	F	G	H	I	J	K	L	IC1	IC2	CN1	CN2	R116	R130-132	R148	R157	R159	R160	R161	R165	R171
COUNTRY	ABB																									
U.S.A.	K5	0-12	YES																							

DV-2070 (1/3)  
DVF-9010 (1/3)  
DVF-5070 (1/3)  
DVF-K7010 (1/3)  
DV-203 (1/3)

**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.

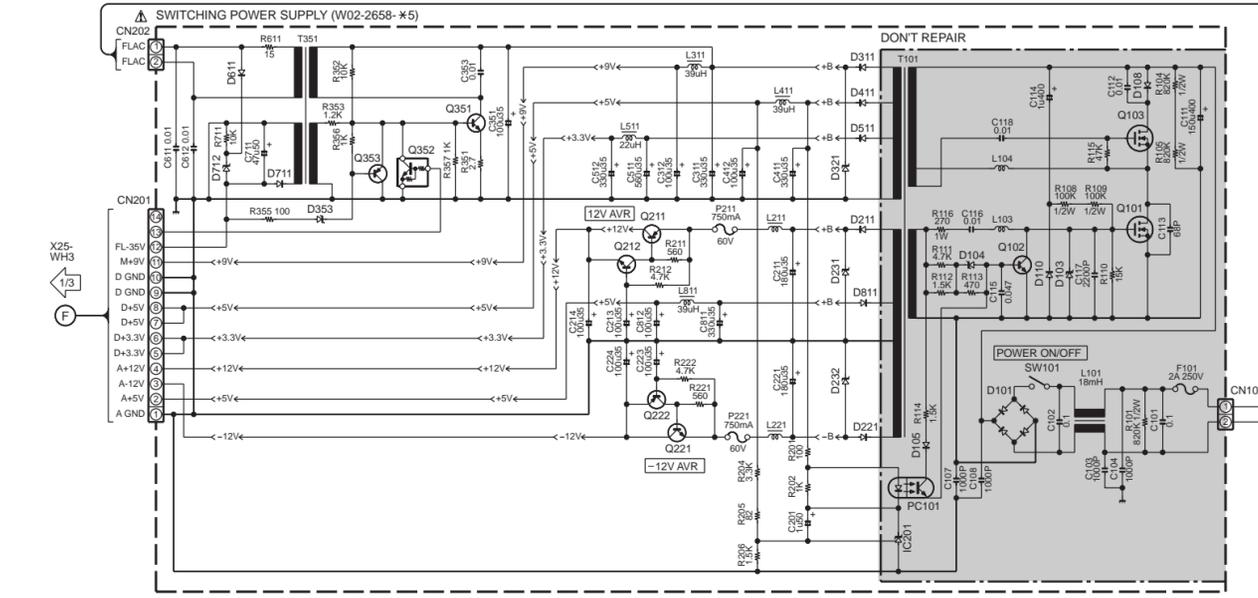
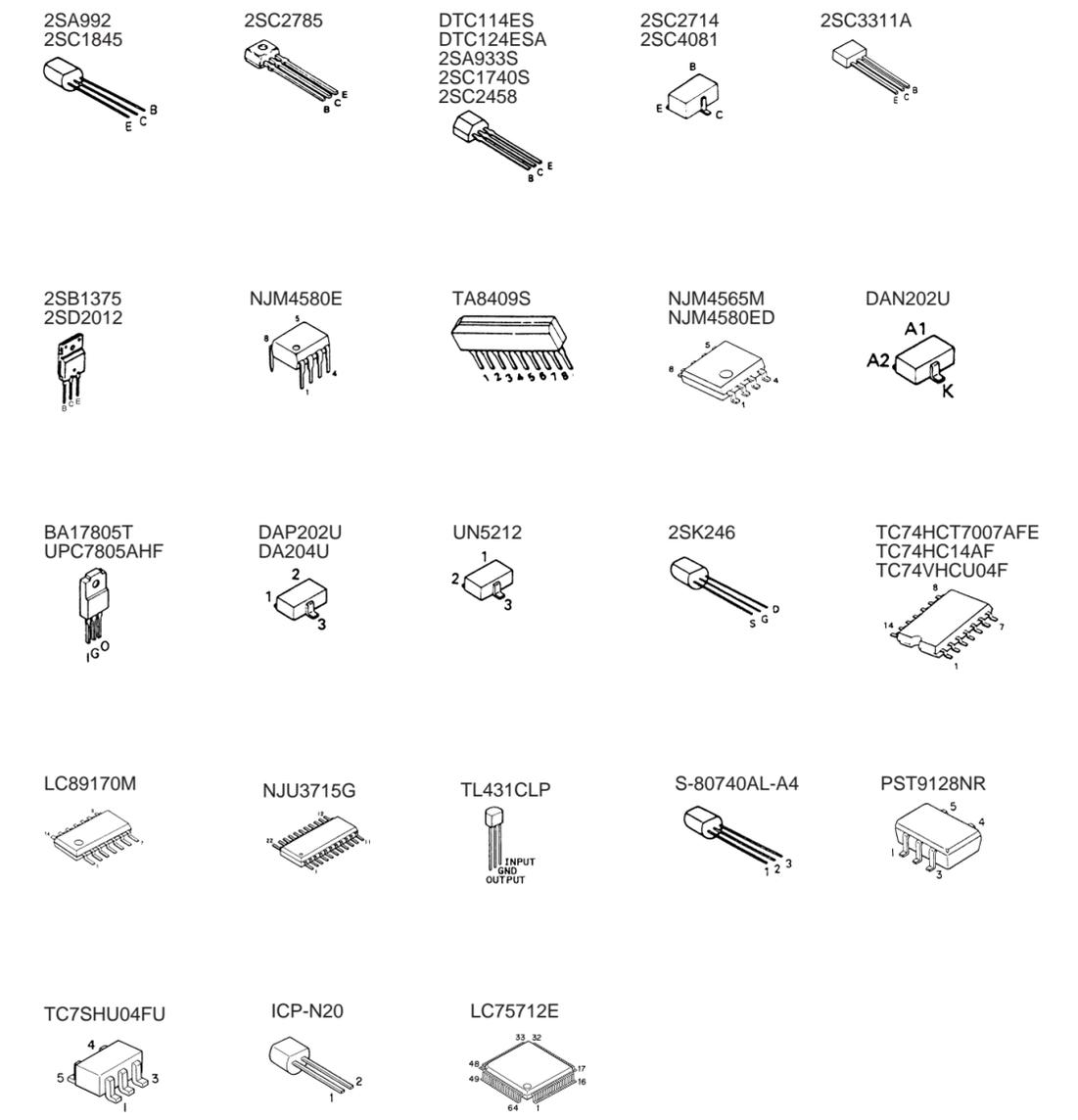
The DC voltage is an actual reading measured with a high impedance type voltmeter with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.



- IC1 : TCT4VHCU04F
- IC2 : K4N06
- IC3,5 : AD1855
- IC4,7 : NJM4580E
- IC8 : TCT4HC17007AFE
- Q2 : DTC124EUA or UN5212
- D2 : DAP202U

X14-482  
-A/-  
-WH1

X14-483  
-A2  
-WH1



- Q211 : 2SB1566
- Q212 : 2SC1740S
- Q221,351 : 2SD2395
- Q222,353 : 2SA933S
- Q352 : DTC114ES
- D101 : S1WBA60
- D103 : RD18FB2
- D104 : MTZJ2.0B
- D105,611 : 1SS270A
- D108,110 : D1N60
- D211,221 : 11EQS10
- D231 : MTZJ5.6C
- D232 : MTZJ3.0C
- D311 : S2L20U
- D321 : MTZJ15B
- D353 : MTZJ39B
- D411,811 : 21DQ06
- D511 : D3SAM
- D611 : 1SS270A
- D711 : 10ELS2
- D712 : MTZJ12A
- PC101 : TLP721F

(K) : AC120V 60Hz  
(Y.M) : AC110-120V/220-240V-50/60Hz  
(E) : AC230V-50Hz  
(C) : AC220V-50Hz

- DV-2070 (2/3)
- DVF-9010 (2/3)
- DVF-5070 (2/3)
- DVF-K7010 (2/3)
- DV-203 (2/3)

**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 with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.

DV-203/2070/DVF-5010/9010/K7010

Y22-7820-00

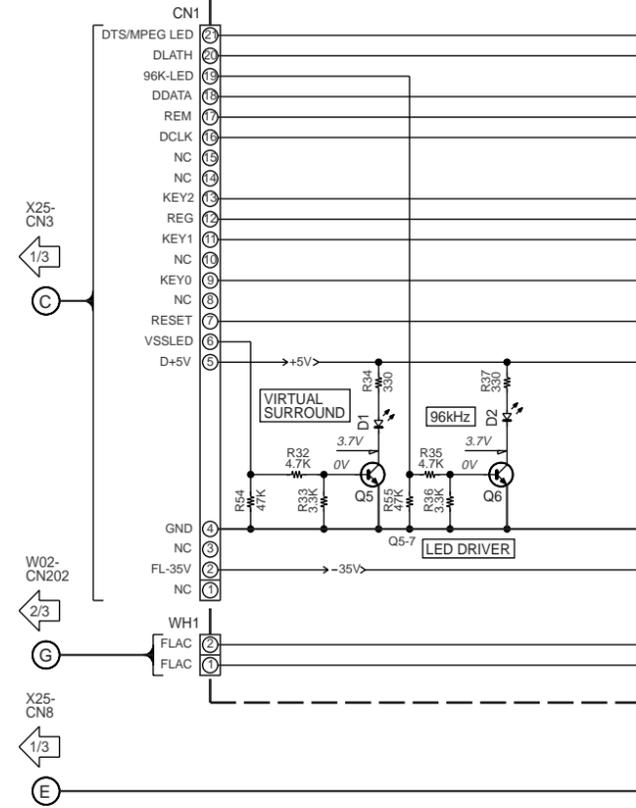
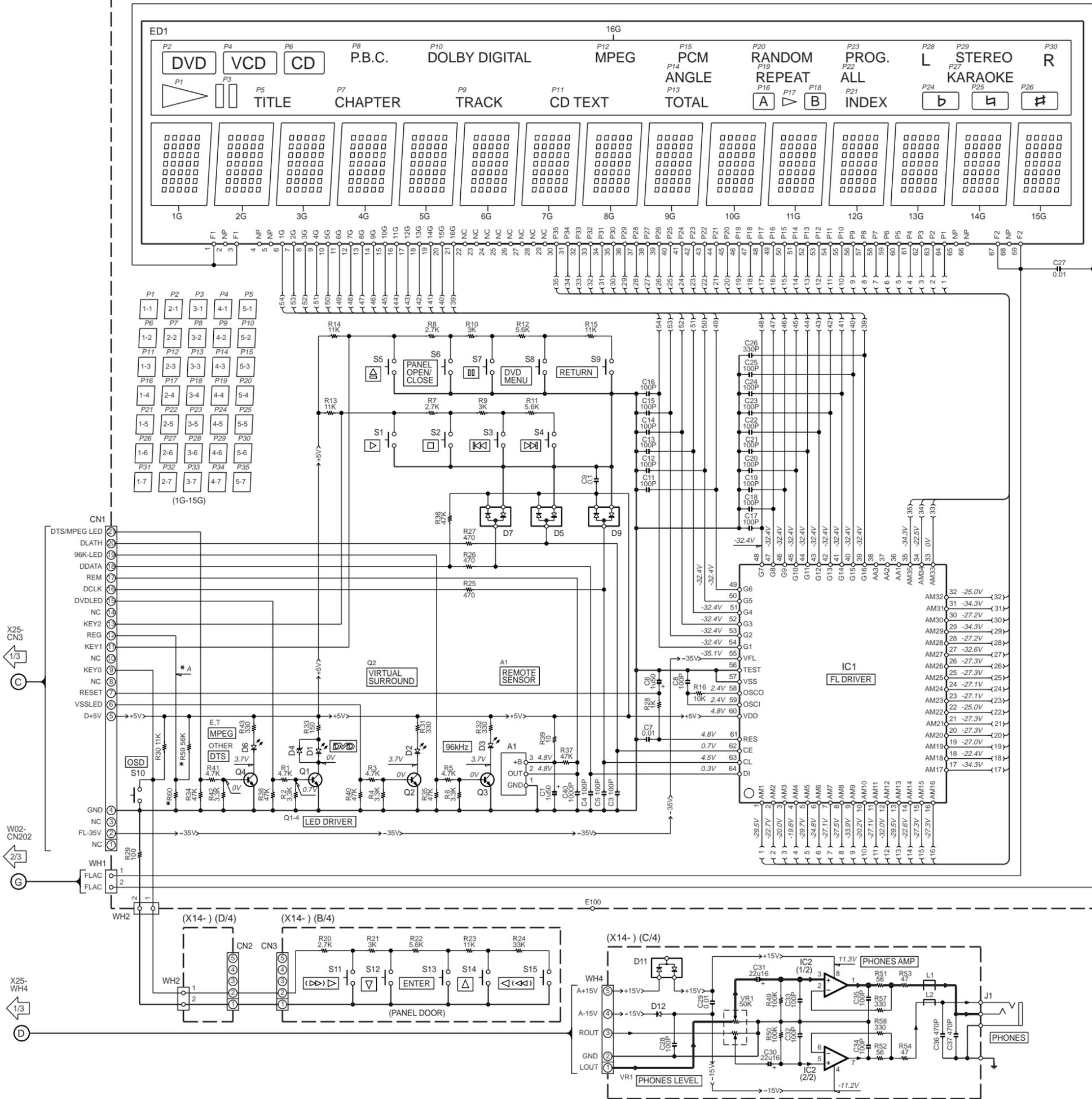
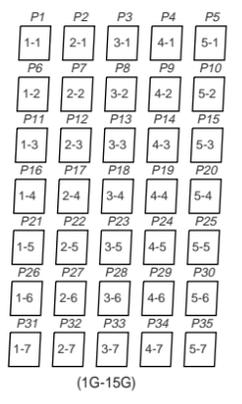
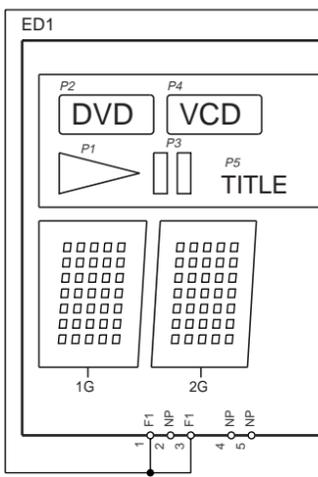
KENWOOD

DVF-9010 (X14-482X-XX)						
DESTINATION	COUNTRY	ABB.	UNIT No.	R59	R60	A
PX	Y		0-11	YES	100K	+3.2V
GENERAL MARKET	M		0-21	NO	27K	+1.62V
GENERAL MARKET	M2		0-22	NO		0V
U.K.	T				56K	
EUROPE	E		2-71	YES		+2.5V

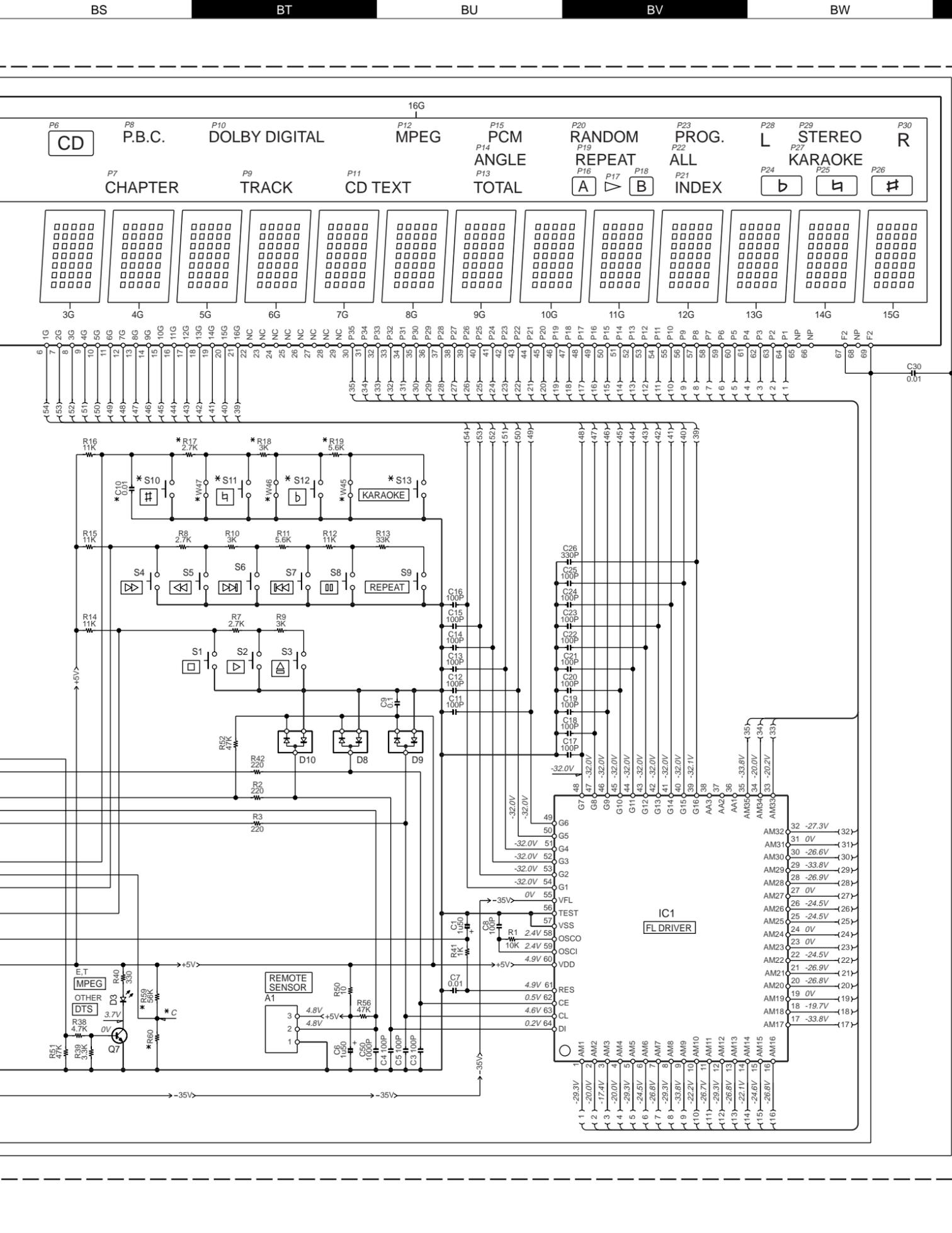
  

DV-2070 (X14-4820-11)						
DESTINATION	COUNTRY	ABB.	UNIT No.	R59	R60	A
U.S.A.	K		0-11	YES	100K	+3.2V

- IC1 : LC75712E
- IC2 : NJM4580E
- Q1-4 : 2SC1740S(Q,R) or 2SC2785(F,E)
- D1 : B30-2526-05
- D2,3,6 : B30-2430-05
- D4 : RD5.6ES(B2) or HZS5.6N(B2)
- D5,7,9 : DA204U
- D11 : DAP204U
- D12 : MA111
- ED1 : 16-ST-20GK
- A1 : W02-2571-05



1  
2  
3  
4  
5  
6  
7



DVF-5010 (X14-483X-XX)

DESTINATION	COUNTRY	ABB.	UNIT No.	R17-19	R59	R60	S10-13	C10	W45-47	C
GENERAL MARKET	M		0-21		YES	27K			NO	+1.62V
GENERAL MARKET	M2		0-22	NO	NO		NO	NO	NO	0V
U.K.	T				YES	56K				+2.5V
EUROPE	E		2-71							

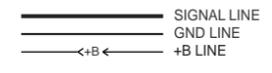
DVF-K7010 (X14-483X-XX)

DESTINATION	COUNTRY	ABB.	UNIT No.	R17-19	R59	R60	S10-13	C10	W45-47	C
GENERAL MARKET	M		0-20	YES	YES	27K	YES	NO	NO	+1.62V
CHINA	C		3-01			12K				+0.88V

DV-203 (X14-4830-11)

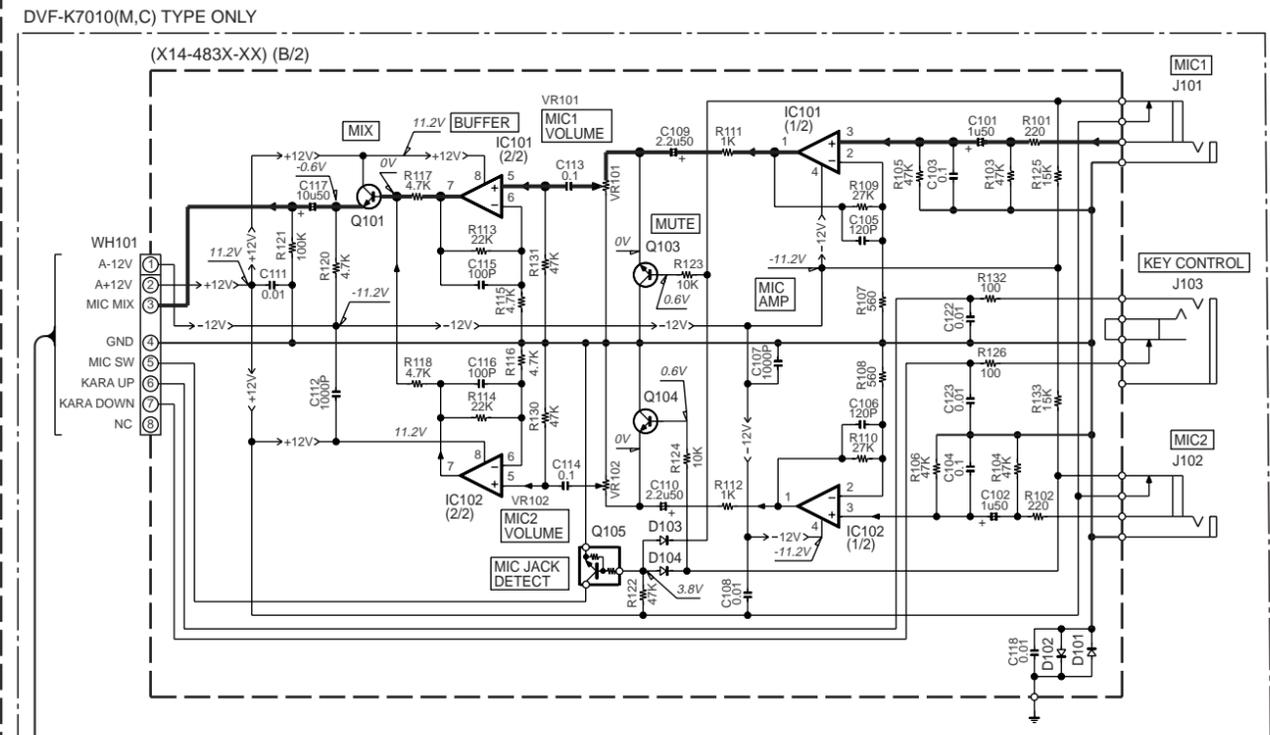
DESTINATION	COUNTRY	ABB.	UNIT No.	R17-19	R59	R60	S10-13	C10	W45-47	C
U.S.A.	K		0-11	NO	YES	100K	NO	YES	YES	+3.2V

- IC1 : LC75712E
- IC101,102 : NJM4580ED
- Q5-7 : 2SC4081(R,S)
- Q101,103,104 : 2SC1740S(Q,R) or 2SC2785(F,E)
- Q105 : DTC124ESA
- D1-3 : B30-2430-05
- D8-10 : DA204U
- D101-104 : 1SS133 or HSS104
- ED1 : 16-ST-20GK
- A1 : W02-2571-05



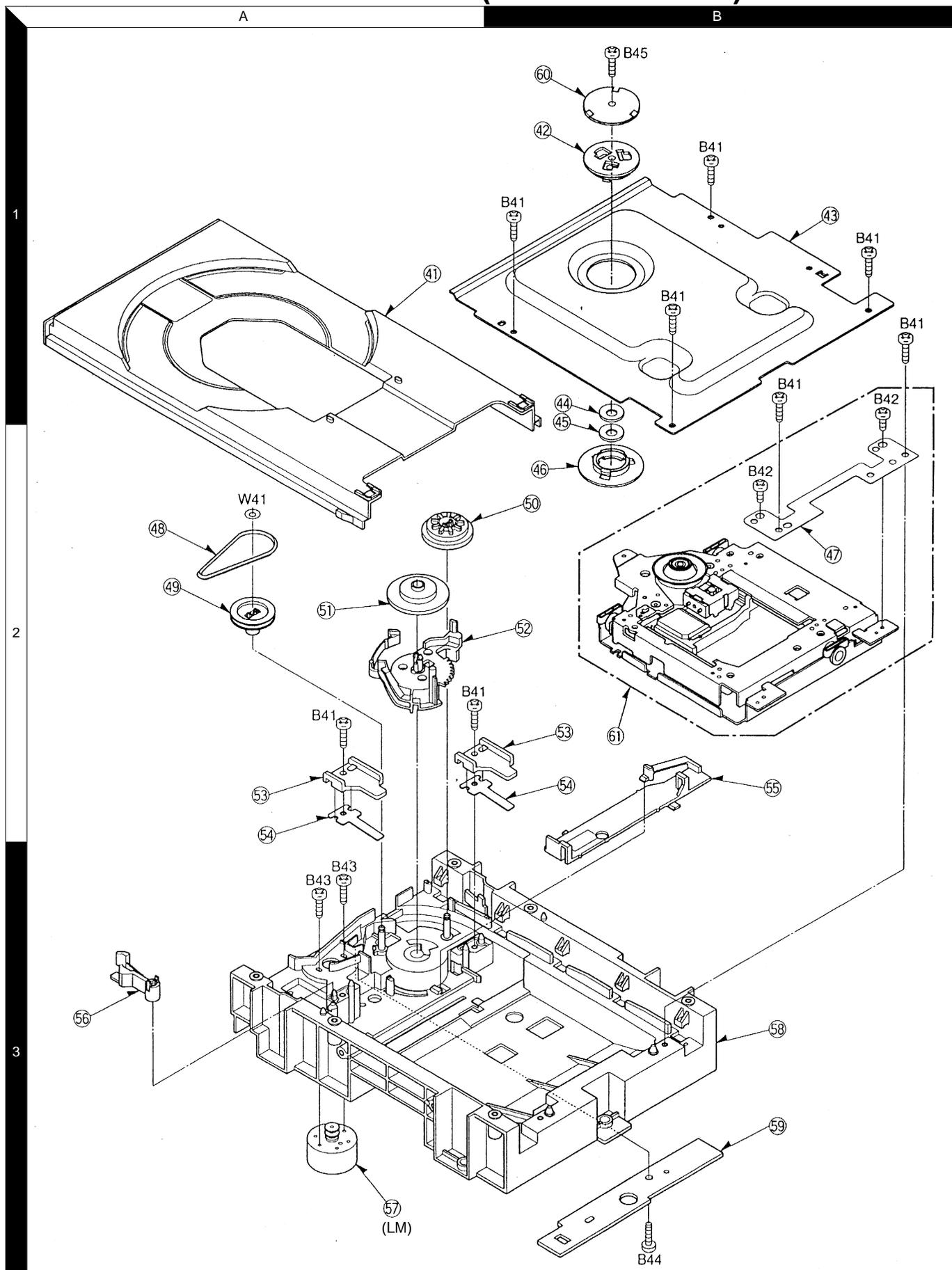
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric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

The DC voltage is an actual reading measured with a high impedance type voltmeter with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.



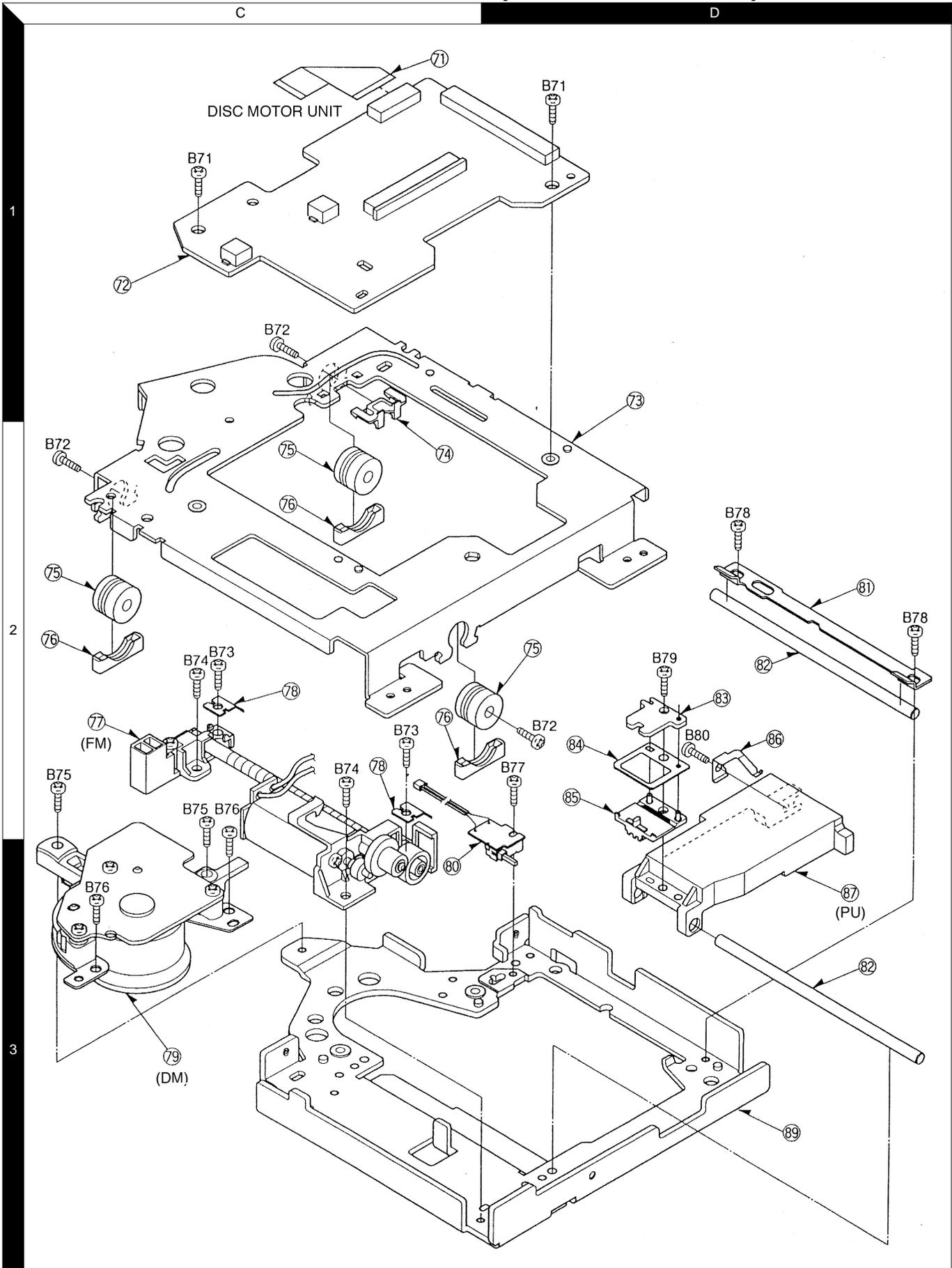
- DV-2070 (3/3)
- DVF-9010 (3/3)
- DVF-5010 (3/3)
- DVF-K7010 (3/3)
- DV-203 (3/3)

EXPLODED VIEW (MECHANISM : 1)



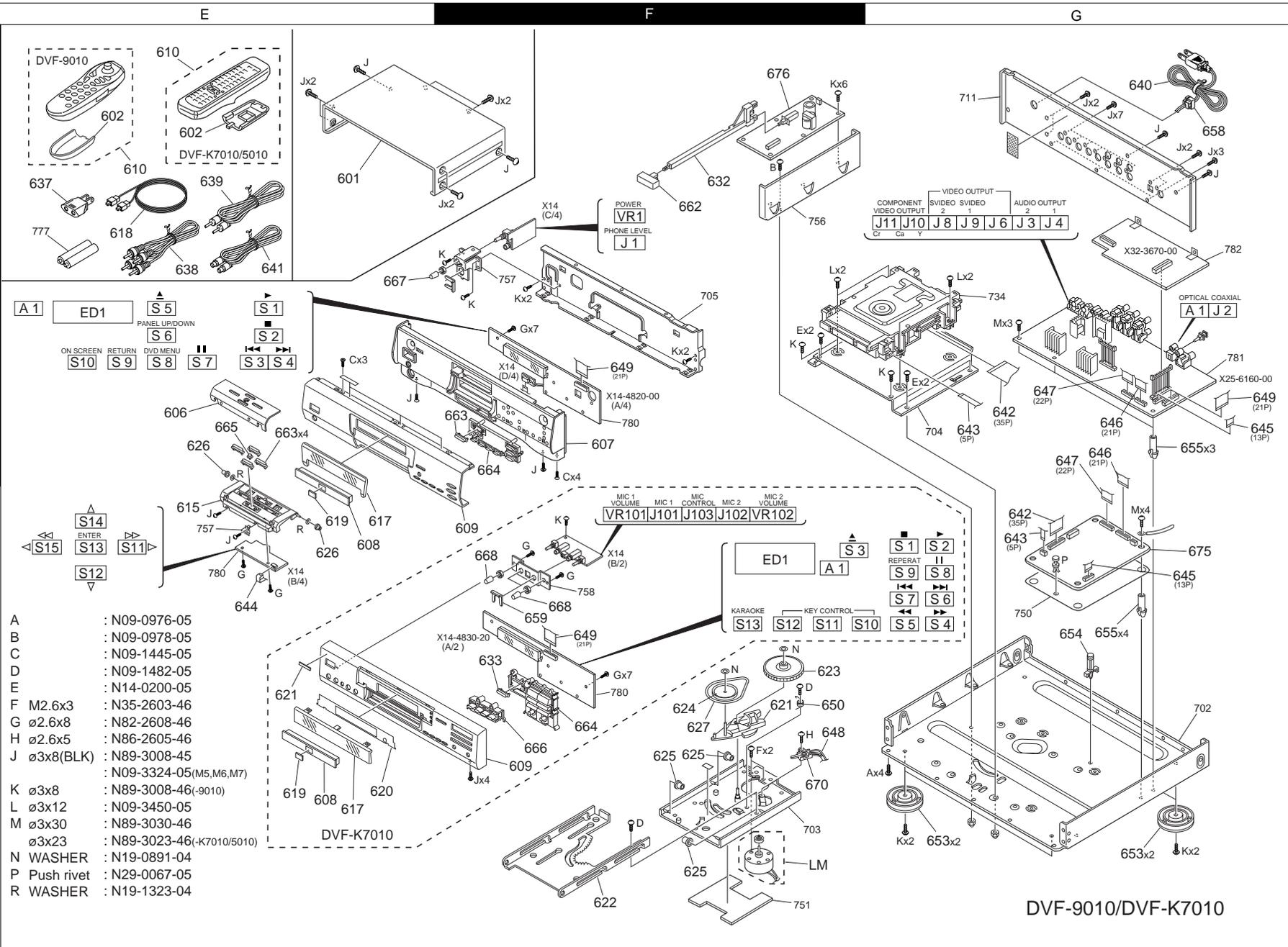
Parts with exploded view numbers larger than 700 are not supplied.

## EXPLODED VIEW (MECHANISM : 2)



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

EXPLODED VIEW (UNIT)



- A : N09-0976-05
- B : N09-0978-05
- C : N09-1445-05
- D : N09-1482-05
- E : N14-0200-05
- F M2.6x3 : N35-2603-46
- G  $\phi$ 2.6x8 : N82-2608-46
- H  $\phi$ 2.6x5 : N86-2605-46
- J  $\phi$ 3x8(BLK) : N89-3008-45
- K  $\phi$ 3x8 : N09-3324-05(M5,M6,M7)
- L  $\phi$ 3x12 : N09-3450-05
- M  $\phi$ 3x30 : N89-3030-46
- N WASHER : N89-3023-46(-K7010/5010)
- P Push rivet : N19-0891-04
- R WASHER : N19-1323-04

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①

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
<b>DV-2070/DVF-9010</b>						
601	1E	*	A01-3625-01	METALLIC CABINET		
602	1E	*	A09-1124-08	BATTERY COVER		
606	1E	*	A21-3693-13	DRESSING PANEL		
607	1F	*	A22-1809-01	SUB PANEL		
608	2E	*	A29-1017-03	PANEL TRAY		
609	2F	*	A60-1474-02	PANEL FRONT	M9	
609	2F	*	A60-1544-02	PANEL FRONT	K9	
609	2F	*	A60-1547-02	PANEL FRONT	Y9	
609	2F	*	A60-1548-02	PANEL FRONT	MOT9E9	
610	1E	*	A70-1227-05	REMOTE CONTROL ASSY(RC-D0705)		
615	2E	*	B07-2420-12	ESCUTCHEON		
617	2E	*	B10-3404-13	FRONT GLASS	K9Y9M9	
617	2E	*	B10-3427-13	FRONT GLASS	MOT9E9	
618	1E	*	B19-1529-05	OPTICAL FIBER		
619	2E	*	B43-0309-04	BADGE		
-			B46-0197-00	QUESTIONNAIRE CARD	K9	
-			B46-0310-03	WARRANTY CARD	T9E9	
-			B46-0319-00	QUESTIONNAIRE CARD	T9	
-			B46-0328-03	WARRANTY CARD	K9Y9	
-			B46-0336-03	WARRANTY CARD	K9	
-			B58-0945-03	CAUTION CARD	T9	
-			B59-1104-00	SERVICE DIRECTORY	Y9	
-		*	B60-3924-00	INSTRUCTION MANUAL(EN)	K9	
-		*	B60-3925-00	INSTRUCTION MANUAL(FR)	K9	
-		*	B60-3926-00	INSTRUCTION MANUAL(EN)	Y9	
-		*	B60-3927-00	INSTRUCTION MANUAL(EN)	M9	
-		*	B60-3928-00	INSTRUCTION MANUAL(EN)	MOT9E9	
-		*	B60-3929-00	INSTRUCTION MANUAL(FR)	E9	
-		*	B60-3930-00	INSTRUCTION MANUAL(GE)	E9	
-		*	B60-3931-00	INSTRUCTION MANUAL(NE)	E9	
-		*	B60-3932-00	INSTRUCTION MANUAL(IT)	E9	
-		*	B60-4035-00	INSTRUCTION MANUAL(ES)	E9	
-		*	B60-4036-00	INSTRUCTION MANUAL(TC)	M9	
621	2F		D10-3715-04	ARM ASSY		
622	2F	*	D10-3809-01	SLIDER		
623	2F	*	D13-1807-04	GEAR		
624	2F	*	D13-1881-03	GEAR		
625	2F	*	D14-0385-14	ROLLER		
626	1E,2E	*	D14-0395-04	ROLLER		
627	2F	*	D16-0715-03	BELT		
632	1F	*	D21-1897-03	EXTENSION SHAFT		
Δ 637	1E		E03-0115-05	AC PLUG ADAPTER	M9	
638	1E		E30-0505-05	AUDIO CORD		
639	1E		E30-1427-05	AUDIO CORD (VIDEO)		
Δ 640	1G		E30-2592-15	AC POWER CORD	M9E9	
Δ 640	1G		E30-2605-05	AC POWER CORD	Y9	
Δ 640	1G		E30-2650-05	AC POWER CORD	K9	
Δ 640	1G		E30-2717-05	AC POWER CORD	M0	
Δ 640	1G		E30-2721-05	AC POWER CORD	T9	
641	1E		E30-2725-05	CORD WITH PLUG (S-VIDEO)		
642	1G,2G		E35-2051-05	FLAT CABLE 35P		
643	1G,2G		E35-2054-05	FLAT CABLE 5P		
644	2E	*	E35-2178-05	FLAT CABLE		

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②

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
645	1G,2G	*	E35-2179-05	FLAT CABLE 13P		
646	1G	*	E35-2180-05	FLAT CABLE 21P,100		
647	1G,2G	*	E35-2181-05	FLAT CABLE 22P		
648	2F	*	E35-2195-05	WIRING HARNESS		
649	1F,1G	*	E35-2213-05	FLAT CABLE 21P,390		
650	2F	*	G01-4107-05	TORSION SPRING		
-		*	H10-7498-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-7499-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H20-0568-04	PROTECTION COVER	M9M0	
-		*	H25-0232-04	PROTECTION BAG (235X350X0.03)	K9Y9M9	
-		*	H25-0232-04	PROTECTION BAG (235X350X0.03)	M0E9	
-		*	H25-0651-04	PROTECTION BAG (0232)	T9	
-		*	H25-0661-04	PROTECTION BAG	E9	
-		*	H25-0661-04	PROTECTION BAG	K9Y9T9	
-		*	H50-3018-14	ITEM CARTON CASE	T9E9	
-		*	H50-3018-14	ITEM CARTON CASE	Y9M9M0	
-		*	H50-3019-14	ITEM CARTON CASE	K9	
653	2G	*	J02-1426-05	FOOT		
654	2G	*	J19-2808-05	HOLDER		
655	1G,2G	*	J19-3703-14	UNIT HOLDER		
Δ 658	1G	*	J42-0083-05	POWER CORD BUSHING		
-		*	J61-0307-05	WIRE BAND		
662	1F	*	K27-2300-04	KNOB (BUTTON)		
663	1E,1F	*	K29-7355-04	KNOB		
664	1F	*	K29-7356-03	KNOB		
665	1E	*	K29-7358-04	KNOB		
667	1E	*	K29-7431-04	KNOB		
670	2F	*	S64-0026-05	LEVER SWITCH		
LM	2F	*	T42-0922-04	MOTOR ASSY		
675	2G	*	W02-2658-05	CIRCUIT MODULE(DVD PCB)		
676	1F	*	W02-2660-05	POWER SUPPLY (VEP96533A)	K9Y9	
676	1F	*	W02-2661-05	POWER SUPPLY (VEP96533B)	M9	
Δ 676	1F	*	W02-2662-05	POWER SUPPLY (VEP96533C)	MOT9E9	
<b>DV-203/DVF-5010/DVF-K7010</b>						
601	1E	*	A01-3627-01	METALLIC CABINET	C7	
601	1E	*	A01-3627-01	METALLIC CABINET	K5T5E5	
601	1E	*	A01-3652-01	METALLIC CABINET	M5M6M7	
602	1E	*	A09-1105-05	BATTERY COVER		
608	1E	*	A29-1018-03	PANEL TRAY	T5E5C7	
608	1E	*	A29-1027-03	PANEL TRAY	K5	
608	1E	*	A29-1029-03	PANEL TRAY	M5M6M7	
609	2F	*	A60-1478-01	PANEL FRONT	C7	
609	2F	*	A60-1479-01	PANEL FRONT	T5E5	
609	2F	*	A60-1480-01	PANEL FRONT	K5	
609	2F	*	A60-1549-01	PANEL FRONT	M7	
609	2F	*	A60-1550-01	PANEL FRONT	M5	
609	2F	*	A60-1551-01	PANEL FRONT	M6	
610	1E	*	A70-1229-05	REMOTE CONTROL ASSY(RC-D0505)	C7M7	
610	1E	*	A70-1230-05	REMOTE CONTROL ASSY(RC-D0305)	K5T5E5	
610	1E	*	A70-1230-05	REMOTE CONTROL ASSY(RC-D0305)	M5M6	

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PARTS LIST

DV-203/2070/DVF-5010/9010/K7010

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③

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617	2E	*	B10-3408-03	FRONT GLASS	K5M5	
617	2E	*	B10-3410-03	FRONT GLASS	M6T5E5	
618	1E	*	B19-1529-05	OPTICAL FIBER		
619	2E	*	B43-0309-04	BADGE		
620	2E	*	B11-0368-03	COLOR FILTER		
621	2E		B43-0302-04	KENWOOD BADGE		
-			B46-0096-53	WARRANTY CARD	M6	
-			B46-0197-00	QUESTIONNAIRE CARD	K5	
-			B46-0310-03	WARRANTY CARD	T5E5	
-			B46-0319-00	QUESTIONNAIRE CARD	T5	
-			B46-0326-03	WARRANTY CARD	C7	
-			B46-0328-03	WARRANTY CARD	K5	
-			B46-0336-03	WARRANTY CARD	K5	
-			B58-0945-03	CAUTION CARD	T5	
-			B58-1599-03	CAUTION CARD	C7	
-		*	B60-3955-00	INSTRUCTION MANUAL(EN,6CH)	C7M7	
-		*	B60-3956-00	INSTRUCTION MANUAL(SC)	C7	
-		*	B60-3957-00	INSTRUCTION MANUAL(TC)	M7	
-		*	B60-3958-00	INSTRUCTION MANUAL(EN,2CH)	K5	
-		*	B60-3959-00	INSTRUCTION MANUAL(FR,2CH)	K5	
-		*	B60-3960-00	INSTRUCTION MANUAL(EN,6CH)	M5	
-		*	B60-3961-00	INSTRUCTION MANUAL(EN,6CH)	M6T5E5	
-		*	B60-3962-00	INSTRUCTION MANUAL(FR,6CH)	E5	
-		*	B60-3963-00	INSTRUCTION MANUAL(GE)	E5	
-		*	B60-3964-00	INSTRUCTION MANUAL(NE)	E5	
-		*	B60-3965-00	INSTRUCTION MANUAL(IT)	E5	
-		*	B60-3966-00	INSTRUCTION MANUAL(ES)	E5	
-		*	B60-3967-00	INSTRUCTION MANUAL(TC)	M5	
632	1F	*	D21-1898-03	EXTENSION SHAFT		
Δ 637	1E		E03-0115-05	AC PLUG ADAPTER	M5M7	
638	1E		E30-0505-05	AUDIO CORD		
639	1E		E30-1427-05	AUDIO CORD		
Δ 640	1G		E30-2592-15	AC POWER CORD	M5E5M7	
Δ 640	1G		E30-2650-05	AC POWER CORD	K5	
Δ 640	1G		E30-2717-05	AC POWER CORD	M6	
Δ 640	1G		E30-2721-05	AC POWER CORD	T5	
Δ 640	1G		E30-2867-05	AC POWER CORD	C7	
642	1G,2G		E35-2051-05	FLAT CABLE 35P		
643	1G,2G		E35-2054-05	FLAT CABLE 5P		
645	1G,2G		E35-2179-05	FLAT CABLE 13P		
646	1G		E35-2180-05	FLAT CABLE 21P,100		
647	1G		E35-2181-05	FLAT CABLE 22P		
649	1F,1G		E35-2213-05	FLAT CABLE 21P,390		
-		*	H10-7502-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-7503-02	POLYSTYRENE FOAMED FIXTURE		
-			H20-0568-04	PROTECTION COVER		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	M5	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	E5	
-			H25-0651-04	PROTECTION BAG (0232)	T5	
-			H25-0661-04	PROTECTION BAG	E5	
-			H25-0661-04	PROTECTION BAG	K5M6T5	
-		*	H50-3062-04	ITEM CARTON CASE	M7	
-		*	H50-3063-04	ITEM CARTON CASE	C7	

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④

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-		*	H50-3064-04	ITEM CARTON CASE	E5	
-		*	H50-3064-04	ITEM CARTON CASE	M5M6T5	
-		*	H50-3065-04	ITEM CARTON CASE	K5	
653	2G		J02-1024-05	FOOT	T5E5	
653	2G	*	J02-1409-05	FOOT (D=46,H=14.5,T)	K5M5M6	
654	2G		J19-2808-05	HOLDER	C7M7	
655	1G,2G		J19-3722-14	UNIT HOLDER		
658	1G		J42-0083-05	POWER CORD BUSHING		
659	2F		J21-3326-05	JACK MOUNTING HARDWARE	C7M7	
-			J61-0307-05	WIRE BAND		
662	1F	*	K27-2297-04	KNOB (BUTTON)	T5E5C7	
662	1F	*	K27-2299-04	KNOB (BUTTON)	K5	
662	1F	*	K27-2313-04	KNOB (BUTTON)	M5M6M7	
663	2F	*	K29-7360-04	KNOB		
664	2F	*	K29-7361-02	KNOB	T5E5C7	
664	2F	*	K29-7426-02	KNOB	K5	
664	2F	*	K29-7433-02	KNOB	M5M6M7	
666	2F	*	K29-7369-04	KNOB	C7	
666	2F	*	K29-7434-04	KNOB	M7	
668	2F		K29-4440-04	KNOB	C7	
668	2F	*	K29-7432-04	KNOB	M7	
675	2G		W02-2658-05	CIRCUIT MODULE (DVD PCB)		
Δ 676	1F		W02-2660-05	POWER SUPPLY (VEP96533A)	K5	
Δ 676	1F		W02-2661-05	POWER SUPPLY (VEP96533B)	M5C7M7	
Δ 676	1F		W02-2662-05	POWER SUPPLY (VEP96533C)	M6T5E5	
<b>DISPLAY (X14-4820-11) DV-2070/DVF-9010</b>						
D1			B30-2526-05	LED(BLUE)		
D2 ,3			B30-2430-05	LED(RED)		
D6			B30-2430-05	LED(RED)		
C1			C90-3253-05	ELECTRO 1.0UF 50WV		
C3 -5			CC73FSL1H101J	CHIP C 100PF J		
C6			C90-3253-05	ELECTRO 1.0UF 50WV		
C7			CK73FB1H103K	CHIP C 0.010UF K		
C8			CC73FSL1H101J	CHIP C 100PF J		
C9			CK73FB1C104K	CHIP C 0.10UF K		
C11 -25			CC73FSL1H101J	CHIP C 100PF J		
C26			CC73FSL1H331J	CHIP C 330PF J		
C27			CK73EB1H103K	CHIP C 0.010UF K		
C28			CC45FSL1H101J	CERAMIC 100PF J		
C29			CK45FF1H103Z	CERAMIC 0.010UF Z		
C30 ,31			C90-3226-05	ELECTRO 22UF 16WV		
C32 -35			CC73FSL1H101J	CHIP C 100PF J		
C36 ,37			CC73FSL1H471J	CHIP C 470PF J		
C40			CC73FSL1H102J	CHIP C 1000PF J		
CN1			E40-4946-05	FLAT CABLE CONNECTOR		
CN2 ,3			E40-4930-05	FLAT CABLE CONNECTOR		
CN4			E40-3249-05	PIN ASSY		
J1			E11-0190-05	PHONE JACK (3P)		
E100			J11-0808-05	WIRE CLAMPER		
L1 ,2			L92-0044-05	FERRITE CORE		

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PARTS LIST

DV-203/2070/DVF-5010/9010/K7010

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5

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
R16			RK73FB2A103J	CHIP R 10K J 1/10W		
R25 -27			RK73FB2A471J	CHIP R 470 J 1/10W		
R28			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R29			RK73FB2A101J	CHIP R 100 J 1/10W		
R34 -38			RK73FB2A473J	CHIP R 47K J 1/10W		
R39			RK73FB2A100J	CHIP R 10 J 1/10W		
R40			RK73FB2A473J	CHIP R 47K J 1/10W		
R49 ,50			RK73FB2A104J	CHIP R 100K J 1/10W		
R51 ,52			RK73FB2A560J	CHIP R 56 J 1/10W		
R53 ,54			RK73FB2A470J	CHIP R 47 J 1/10W		
R57 ,58			RK73FB2A331J	CHIP R 330 J 1/10W		
R59			RK73FB2A563J	CHIP R 56K J 1/10W	K9Y9M9	
R59			RK73FB2A563J	CHIP R 56K J 1/10W	T9E9	
R60			RK73FB2A104J	CHIP R 100K J 1/10W	K9Y9	
R60			RK73FB2A273J	CHIP R 27K J 1/10W	M9	
R60			RK73FB2A563J	CHIP R 56K J 1/10W	T9E9M0	
VR1			R10-4049-05	POTENTIOMETER		
S1 -15			S70-0031-05	TACT SWITCH		
D4			HZS5.6N(B2)	ZENER DIODE		
D4			RD5.6ES(B2)	ZENER DIODE		
D5			DA204U	DIODE		
D7			DA204U	DIODE		
D9			DA204U	DIODE		
D11			DA204U	DIODE		
D12			MA111	DIODE		
ED1			16-ST-20GK	INDICATOR TUBE		
IC1			LC75712E	MOS-IC		
IC2			NJM4580E	ANALOGUE IC		
Q1 -4			2SC1740S(Q,R)	TRANSISTOR		
Q1 -4			2SC2785(F,E)	TRANSISTOR		
A1			W02-2571-05	OPTIC RECEIVING MODULE		
<b>DISPLAY (X14-4830-11) DV-203/DVF-5010/DVF-K7010</b>						
D1 -3			B30-2430-05	LED(RED)		
C1			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C3 -5			CC73FCH1H101J	CHIP C 100PF J		
C6			C90-3253-05	ELECTRO 1.0UF 50WV		
C7			CK73FB1H103K	CHIP C 0.010UF K		
C8			CC73FCH1H101J	CHIP C 100PF J		
C9			CK73FB1C104K	CHIP C 0.10UF K		
C10			CK73FB1H103K	CHIP C 0.010UF K		
C11 -25			CC73FCH1H101J	CHIP C 100PF J	K5	
C26			CC73FCH1H331J	CHIP C 330PF J		
C30			CK73EB1H103K	CHIP C 0.010UF K		
C50			CC73FCH1H102J	CHIP C 1000PF J		
C101,102			CE04KW1H010M	ELECTRO 1.0UF 50WV	C7M7	
C103,104			CK73FB1C104K	CHIP C 0.10UF K	C7M7	
C105,106			CC73FSL1H121J	CHIP C 120PF J	C7M7	
C107			CK45FB1H102K	CERAMIC 1000PF K	C7M7	
C108			CK45FF1H103Z	CERAMIC 0.010UF Z	C7M7	
C109,110			CE04KW1H2R2M	ELECTRO 2.2UF 50WV	C7M7	
C111			CK45FF1H103Z	CERAMIC 0.010UF Z	C7M7	
C112			CK45FB1H102K	CERAMIC 1000PF K	C7M7	

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6

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C113,114			CQ93FMG1H104J	MYLAR 0.10UF J	C7M7	
C115,116			CC45FSL1H101J	CERAMIC 100PF J	C7M7	
C117			CE04KW1H100M	ELECTRO 10UF 50WV	C7M7	
C118			CK45FF1H103Z	CERAMIC 0.010UF Z	C7M7	
C122,123			CK45FF1H103Z	CERAMIC 0.010UF Z	C7M7	
CN1			E40-4946-05	FLAT CABLE CONNECTOR		
J101,102			E11-0224-05	PHONE JACK (4P)	C7M7	
J103			E11-0218-05	MINIATURE PHONE JACK	C7M7	
R1			RK73FB2A103J	CHIP R 10K J 1/10W		
R2 ,3			RK73FB2A221J	CHIP R 220 J 1/10W		
R15			RK73FB2A113J	CHIP R 11K J 1/10W		
R32			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R33			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R34			RK73FB2A331J	CHIP R 330 J 1/10W		
R35			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R36			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R37			RK73FB2A331J	CHIP R 330 J 1/10W		
R38			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R39			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R40			RK73FB2A331J	CHIP R 330 J 1/10W		
R41			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R42			RK73FB2A221J	CHIP R 220 J 1/10W		
R50			RK73FB2A100J	CHIP R 10 J 1/10W		
R51 ,52			RK73FB2A473J	CHIP R 47K J 1/10W		
R54 -56			RK73FB2A473J	CHIP R 47K J 1/10W		
R59			RK73FB2A563J	CHIP R 56K J 1/10W	K5M5M7	
R59			RK73FB2A563J	CHIP R 56K J 1/10W	T5E5C7	
R60			RK73FB2A104J	CHIP R 100K J 1/10W	K5	
R60			RK73FB2A123J	CHIP R 12K J 1/10W	C7	
R60			RK73FB2A273J	CHIP R 27K J 1/10W	M5M7	
R60			RK73FB2A563J	CHIP R 56K J 1/10W	M6T5E5	
R103-106			RK73FB2A473J	CHIP R 47K J 1/10W	C7M7	
R125			RK73FB2A153J	CHIP R 15K J 1/10W	C7M7	
R133			RK73FB2A153J	CHIP R 15K J 1/10W	C7M7	
VR101,102			R05-3021-05	POTENTIOMETER(10K)	C7M7	
W100			R92-0679-05	CHIP R 0 OHM		
S1 -9			S70-0031-05	TACT SWITCH		
S10 -13			S70-0031-05	TACT SWITCH	C7M7	
D8 -10			DA204U	DIODE		
D101-104			HSS104	DIODE	C7M7	
D101-104			1SS133	DIODE	C7M7	
ED1			16-ST-20GK	INDICATOR TUBE		
IC1			LC75712E	MOS-IC		
IC101,102			NJM4580ED	ANALOGUE IC	C7M7	
Q5 -7			2SC4081(R,S)	TRANSISTOR		
Q101			2SC1740S(Q,R)	TRANSISTOR	C7M7	
Q101			2SC2785(F,E)	TRANSISTOR	C7M7	
Q103,104			2SC1740S(Q,R)	TRANSISTOR	C7M7	
Q103,104			2SC2785(F,E)	TRANSISTOR	C7M7	
Q105			DTC124ESA	DIGITAL TRANSISTOR	C7M7	
A1			W02-2571-05	OPTIC RECEIVING MODULE		

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13

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J6		*	E63-1060-05	PHONO JACK	T9E9K9	
J8 ,9		*	E56-0021-05	CYLINDRICAL RECEPTACLE	T9E9K9	
J8 ,9		*	E56-0021-05	CYLINDRICAL RECEPTACLE	Y9M9M0	
J9		*	E56-0014-05	CYLINDRICAL RECEPTACLE	M6K5C7	
J9		*	E56-0014-05	CYLINDRICAL RECEPTACLE	M7	
J9		*	E56-0014-05	CYLINDRICAL RECEPTACLE	T5E5M5	
J10		*	E63-1061-05	PHONO JACK	K9Y9	
J10		*	E63-1062-05	PHONO JACK	K5	
J11		*	E63-1057-05	PHONO JACK	K9Y9	
J11		*	E63-1058-05	PHONO JACK	K5	
E1			J11-0809-05	WIRE CLAMPER		
E2			J11-0809-05	WIRE CLAMPER	C7M7	
E3			J11-0809-05	WIRE CLAMPER	T9E9K9	
E3			J11-0809-05	WIRE CLAMPER	Y9M9M0	
L198			L92-0075-05	CHIP FERRITE	K5T5E5	
L198			L92-0075-05	CHIP FERRITE	M5M6	
L198			L92-0131-05	FERRITE CORE	E9T9K9	
L198			L92-0131-05	FERRITE CORE	Y9M9M0	
L199			L40-2291-58	SMALL FIXED INDUCTOR(2.2UH,K)		
L200			L40-6891-58	SMALL FIXED INDUCTOR(6.8UH,K)		
L201			L40-1501-58	SMALL FIXED INDUCTOR(15UH,K)		
L202			L40-6891-58	SMALL FIXED INDUCTOR(6.8UH,K)		
L203			L40-2201-58	SMALL FIXED INDUCTOR(22UH,K)		
L204			L40-1001-58	SMALL FIXED INDUCTOR(10UH,K)		
L206			L40-6891-58	SMALL FIXED INDUCTOR(6.8UH,K)	K5K9Y9	
L207			L40-1501-58	SMALL FIXED INDUCTOR(15UH,K)	K5K9Y9	
L208			L40-6891-58	SMALL FIXED INDUCTOR(6.8UH,K)	K5K9Y9	
L209			L40-1501-58	SMALL FIXED INDUCTOR(15UH,K)	K5K9Y9	
L210			L92-0131-05	FERRITE CORE		
L211			L40-1001-58	SMALL FIXED INDUCTOR(10UH,K)		
X1			L78-0678-05	RESONATOR (16MHZ)		
R1			RK73FB2A472J	CHIP R	4.7K	J 1/10W
R3			RK73FB2A561J	CHIP R	560	J 1/10W
R4		*	RS14KB3A1R0JTE	FL-PROOF RS	1	J 1W
R5			RK73FB2A222J	CHIP R	2.2K	J 1/10W
R6			RK73FB2A821J	CHIP R	820	J 1/10W
R7 ,8			R92-1860-05	METAL GLAZE	1.50K	F 1/10W
R9			RK73FB2A391J	CHIP R	390	J 1/10W
R11			RK73FB2A561J	CHIP R	560	J 1/10W
R12			RS14KB3AR22J	FL-PROOF RS	0.22	J 1W
R13			RK73FB2A222J	CHIP R	2.2K	J 1/10W
R14			RK73FB2A391J	CHIP R	390	J 1/10W
R15		*	R92-1880-05	METAL GLAZE	15K	F 1/10W
R16		*	R92-1881-05	METAL GLAZE	5.6K	F 1/10W
R17			RK73FB2A331J	CHIP R	330	J 1/10W
R18			RK73FB2A222J	CHIP R	2.2K	J 1/10W
R19			RK73FB2A101J	CHIP R	100	J 1/10W
R20			RK73FB2A222J	CHIP R	2.2K	J 1/10W
R21			RK73FB2A331J	CHIP R	330	J 1/10W
R22			RK73FB2A101J	CHIP R	100	J 1/10W
R23			RK73FB2A473J	CHIP R	47K	J 1/10W
R24			RK73FB2A182J	CHIP R	1.8K	J 1/10W
R25 ,26			RK73FB2A152J	CHIP R	1.5K	J 1/10W
R27			RK73FB2A472J	CHIP R	4.7K	J 1/10W

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14

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
R28			RK73FB2A561J	CHIP R	560	J 1/10W
R30			RS14KB3DR22J	FL-PROOF RS	0.22	J 2W
R31			RK73FB2A222J	CHIP R	2.2K	J 1/10W
R32			RK73FB2A821J	CHIP R	820	J 1/10W
R33			R92-1762-05	METAL GLAZE	4.7K	F 1/10W
R34			R92-1860-05	METAL GLAZE	1.50K	F 1/10W
R35			RK73FB2A472J	CHIP R	4.7K	J 1/10W
R37			RK73FB2A561J	CHIP R	560	J 1/10W
R38		*	RS14KB3A1R0JTE	FL-PROOF RS	1	J 1W
R39			RK73FB2A222J	CHIP R	2.2K	J 1/10W
R40			RK73FB2A821J	CHIP R	820	J 1/10W
R41			R92-1860-05	METAL GLAZE	1.50K	F 1/10W
R42			R92-1861-05	METAL GLAZE	1.62K	F 1/10W
R43			RK73FB2A1R0J	CHIP R	1	J 1/10W
R44			RK73FB2A472J	CHIP R	4.7K	J 1/10W
R45			RK73FB2A103J	CHIP R	10K	J 1/10W
R46 ,47			RK73FB2A2R2J	CHIP R	2.2	J 1/10W
R48			RK73FB2A1R0J	CHIP R	1	J 1/10W
R49 ,50			RK73FB2A2R2J	CHIP R	2.2	J 1/10W
R100			RK73FB2A101J	CHIP R	100	J 1/10W
R100			RK73FB2A101J	CHIP R	100	J 1/10W
R100			RK73FB2A101J	CHIP R	100	J 1/10W
R100			RK73FB2A101J	CHIP R	100	J 1/10W
R111-113			RK73FB2A221J	CHIP R	220	J 1/10W
R116			RK73FB2A471J	CHIP R	470	J 1/10W
R116			RK73FB2A471J	CHIP R	470	J 1/10W
R117			RK73FB2A101J	CHIP R	100	J 1/10W
R118, 119			RK73FB2A101J	CHIP R	100	J 1/10W
R118, 119			RK73FB2A101J	CHIP R	100	J 1/10W
R118, 119			RK73FB2A101J	CHIP R	100	J 1/10W
R120, 121			RK73FB2A101J	CHIP R	100	J 1/10W
R122			RK73FB2A471J	CHIP R	470	J 1/10W
R123			RK73FB2A331J	CHIP R	330	J 1/10W
R124			RK73FB2A471J	CHIP R	470	J 1/10W
R126-128			RK73FB2A471J	CHIP R	470	J 1/10W
R129			RK73FB2A101J	CHIP R	100	J 1/10W
R130-132			RK73FB2A473J	CHIP R	47K	J 1/10W
R137-140			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R137-140			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R137-140			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R137-140			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R141			RK73FB2A101J	CHIP R	100	J 1/10W
R142			RK73FB2A473J	CHIP R	47K	J 1/10W
R144, 145			RK73FB2A473J	CHIP R	47K	J 1/10W
R146			RK73FB2A223J	CHIP R	22K	J 1/10W
R147			RK73FB2A473J	CHIP R	47K	J 1/10W
R148			RK73FB2A473J	CHIP R	47K	J 1/10W
R148			RK73FB2A473J	CHIP R	47K	J 1/10W
R148			RK73FB2A473J	CHIP R	47K	J 1/10W
R149			RK73FB2A473J	CHIP R	47K	J 1/10W
R150			RK73FB2A473J	CHIP R	47K	J 1/10W
R151			RK73FB2A105J	CHIP R	1.0M	J 1/10W
R152, 153			RK73FB2A473J	CHIP R	47K	J 1/10W

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DV-203/2070/DVF-5010/9010/K7010

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15

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
R155			RK73FB2A473J	CHIP R 47K J 1/10W		
R157			RK73FB2A473J	CHIP R 47K J 1/10W	C7M7	
R157			RK73FB2A473J	CHIP R 47K J 1/10W	E5M5M6	
R157			RK73FB2A473J	CHIP R 47K J 1/10W	T5K5	
R158			RK73FB2A473J	CHIP R 47K J 1/10W	E9K0Y9	
R158			RK73FB2A473J	CHIP R 47K J 1/10W	M9M0T9	
R159			RK73FB2A473J	CHIP R 47K J 1/10W	M6K5C7	
R159			RK73FB2A473J	CHIP R 47K J 1/10W	M7	
R159			RK73FB2A473J	CHIP R 47K J 1/10W	T5E5M5	
R160			RK73FB2A473J	CHIP R 47K J 1/10W	E9K9Y9	
R160			RK73FB2A473J	CHIP R 47K J 1/10W	M9M0T9	
R161-164			RK73FB2A473J	CHIP R 47K J 1/10W		
R165,166			RK73FB2A332J	CHIP R 3.3K J 1/10W	C7M7	
R165,166			RK73FB2A473J	CHIP R 47K J 1/10W	E9T9K9	
R165,166			RK73FB2A473J	CHIP R 47K J 1/10W	M6K5	
R165,166			RK73FB2A473J	CHIP R 47K J 1/10W	T5E5M5	
R165,166			RK73FB2A473J	CHIP R 47K J 1/10W	Y9M9M0	
R170			RK73FB2A563J	CHIP R 56K J 1/10W		
R171			RK73FB2A104J	CHIP R 100K J 1/10W	K9	
R171			RK73FB2A123J	CHIP R 12K J 1/10W	K5	
R171			RK73FB2A273J	CHIP R 27K J 1/10W	E5	
R171			RK73FB2A273J	CHIP R 27K J 1/10W	M5M6T5	
R171			RK73FB2A274J	CHIP R 270K J 1/10W	T9E9	
R171			RK73FB2A274J	CHIP R 270K J 1/10W	Y9M9M0	
R171			RK73FB2A563J	CHIP R 56K J 1/10W	C7M7	
R174			RK73FB2A473J	CHIP R 47K J 1/10W		
R178-180			RK73FB2A473J	CHIP R 47K J 1/10W		
R185-188			RK73FB2A473J	CHIP R 47K J 1/10W		
R189			RK73FB2A223J	CHIP R 22K J 1/10W		
R190			RK73FB2A473J	CHIP R 47K J 1/10W		
R191			RK73FB2A104J	CHIP R 100K J 1/10W		
R192			RK73FB2A331J	CHIP R 330 J 1/10W		
R193,194			RK73FB2A104J	CHIP R 100K J 1/10W		
R195			RK73FB2A331J	CHIP R 330 J 1/10W		
R196			RK73FB2A104J	CHIP R 100K J 1/10W		
R198			RK73FB2A473J	CHIP R 47K J 1/10W		
R199			RK73FB2A102J	CHIP R 1.0K J 1/10W	C7M7	
R200			RK73FB2A561J	CHIP R 560 J 1/10W		
R201			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R202			RK73FB2A392J	CHIP R 3.9K J 1/10W		
R203			RK73FB2A331J	CHIP R 330 J 1/10W		
R204			RK73FB2A122J	CHIP R 1.2K J 1/10W		
R205			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R206			RK73FB2A101J	CHIP R 100 J 1/10W		
R207,208			RK73FB2A152J	CHIP R 1.5K J 1/10W		
R209			RK73FB2A392J	CHIP R 3.9K J 1/10W		
R210			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R211			RK73FB2A392J	CHIP R 3.9K J 1/10W		
R212		*	R92-1915-05	METAL GLAZE 4.12K F 1/10W		
R213			RK73FB2A561J	CHIP R 560 J 1/10W		
R214			RK73FB2A101J	CHIP R 100 J 1/10W		
R215			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R216			RK73FB2A103J	CHIP R 10K J 1/10W		
R217			RK73FB2A101J	CHIP R 100 J 1/10W		
R218			RK73FB2A222J	CHIP R 2.2K J 1/10W		

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16

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
R219			RK73FB2A101J	CHIP R 100 J 1/10W		
R220			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R221			RK73FB2A101J	CHIP R 100 J 1/10W		
R222,223			RK73FB2A680J	CHIP R 68 J 1/10W		
R224			RK73FB2A561J	CHIP R 560 J 1/10W		
R225			RK73FB2A100J	CHIP R 10 J 1/10W		
R226			RK73FB2A392J	CHIP R 3.9K J 1/10W		
R227			RK73FB2A471J	CHIP R 470 J 1/10W		
R228			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R229			RK73FB2A104J	CHIP R 100K J 1/10W		
R230			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R231			RK73FB2A103J	CHIP R 10K J 1/10W		
R232			RK73FB2A101J	CHIP R 100 J 1/10W		
R233			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R234			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R235,236			RK73FB2A101J	CHIP R 100 J 1/10W		
R237			RK73FB2A680J	CHIP R 68 J 1/10W		
R238			RK73FB2A680J	CHIP R 68 J 1/10W	T9E9K9	
R238			RK73FB2A680J	CHIP R 68 J 1/10W	Y9M9M0	
R239			RK73FB2A680J	CHIP R 68 J 1/10W		
R240			RK73FB2A680J	CHIP R 68 J 1/10W	T9E9K9	
R240			RK73FB2A680J	CHIP R 68 J 1/10W	Y9M9M0	
R247			RK73FB2A103J	CHIP R 10K J 1/10W	K5K9Y9	
R248			RK73FB2A101J	CHIP R 100 J 1/10W	K5K9Y9	
R249			RK73FB2A472J	CHIP R 4.7K J 1/10W	K5K9Y9	
R250			RK73FB2A101J	CHIP R 100 J 1/10W	K5K9Y9	
R251-253			RK73FB2A122J	CHIP R 1.2K J 1/10W	K5K9Y9	
R254-256			RK73FB2A680J	CHIP R 68 J 1/10W	K5K9Y9	
R257			RK73FB2A561J	CHIP R 560 J 1/10W	K5K9Y9	
R258			RK73FB2A392J	CHIP R 3.9K J 1/10W	K5K9Y9	
R259			RK73FB2A562J	CHIP R 5.6K J 1/10W	K5K9Y9	
R260			RK73FB2A751J	CHIP R 750 J 1/10W	K5K9Y9	
R261			RK73FB2A821J	CHIP R 820 J 1/10W	K5K9Y9	
R262			RK73FB2A472J	CHIP R 4.7K J 1/10W	K5K9Y9	
R263			RK73FB2A103J	CHIP R 10K J 1/10W	K5K9Y9	
R264			RK73FB2A101J	CHIP R 100 J 1/10W	K5K9Y9	
R265			RK73FB2A472J	CHIP R 4.7K J 1/10W	K5K9Y9	
R266			RK73FB2A101J	CHIP R 100 J 1/10W	K5K9Y9	
R267,268			RK73FB2A122J	CHIP R 1.2K J 1/10W	K5K9Y9	
R269			RK73FB2A561J	CHIP R 560 J 1/10W	K5K9Y9	
R270			RK73FB2A392J	CHIP R 3.9K J 1/10W	K5K9Y9	
R271			RK73FB2A562J	CHIP R 5.6K J 1/10W	K5K9Y9	
R272			RK73FB2A751J	CHIP R 750 J 1/10W	K5K9Y9	
R273			RK73FB2A821J	CHIP R 820 J 1/10W	K5K9Y9	
R274			RK73FB2A472J	CHIP R 4.7K J 1/10W	K5K9Y9	
R275			RK73FB2A103J	CHIP R 10K J 1/10W	K5K9Y9	
R276			RK73FB2A101J	CHIP R 100 J 1/10W	K5K9Y9	
R277			RK73FB2A472J	CHIP R 4.7K J 1/10W	K5K9Y9	
R278			RK73FB2A101J	CHIP R 100 J 1/10W	K5K9Y9	
R279,280			RK73FB2A122J	CHIP R 1.2K J 1/10W	K5K9Y9	
R281			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R282			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R283			RK73FB2A273J	CHIP R 27K J 1/10W		
R284			RK73FB2A224J	CHIP R 220K J 1/10W		
R285			RK73FB2A683J	CHIP R 68K J 1/10W		

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PARTS LIST

DV-203/2070/DVF-5010/9010/K7010









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25

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
IC26			LC89170M	MOS-IC	M9M0Y9	
IC26			LC89170M	MOS-IC	T9E9K9	
IC27			TC7SHU04FU	MOS-IC	K5T5E5	
IC27			TC7SHU04FU	MOS-IC	M5M6	
IC27			TC7SHU04FU	MOS-IC	T9E9K9	
IC27			TC7SHU04FU	MOS-IC	Y9M9M0	
IC28			TC74HC14AF	IC(SCHMIDT INVERTER)	K5T5E5	
IC28			TC74HC14AF	IC(SCHMIDT INVERTER)	M5M6	
IC28			TC74HC14AF	IC(SCHMIDT INVERTER)	T9E9K9	
IC28			TC74HC14AF	IC(SCHMIDT INVERTER)	Y9M9M0	
IC29			N345256SOA-55	MEMORY IC	K5T5E5	
IC29			N345256SOA-55	MEMORY IC	M5M6	
IC29			N345256SOA-55	MEMORY IC	T9E9K9	
IC29			N345256SOA-55	MEMORY IC	Y9M9M0	
IC30			TC7SHU04FU	MOS-IC		
IC31		*	TC9214AF	MOS-IC	C7M7	
IC32			TC7SHU04FU	MOS-IC		
IC33		*	TC74VHC08FT	MOS-IC		
IC34			PST9128NR	ANALOGUE IC		
IC35			ICP-N20	ANALOGUE IC		
IC37			NJM4565M	IC(OP AMP X2)	T9E9K9	
IC37			NJM4565M	IC(OP AMP X2)	Y9M9M0	
Q1			2SD2012	TRANSISTOR		
Q2			2SC1845(F,E)	TRANSISTOR		
Q3 ,4			2SC4081(R,S)	TRANSISTOR		
Q5			2SA1576A(R,S)	TRANSISTOR		
Q6			2SD2012	TRANSISTOR		
Q7			2SC1845(F,E)	TRANSISTOR		
Q8 ,9			2SC4081(R,S)	TRANSISTOR		
Q10			2SA1576A(R,S)	TRANSISTOR		
Q11			2SD2012	TRANSISTOR		
Q12			2SC1845(F,E)	TRANSISTOR		
Q13 ,14			2SC4081(R,S)	TRANSISTOR		
Q15			2SA1576A(R,S)	TRANSISTOR		
Q16			2SC4596(E,F)	TRANSISTOR		
Q17			2SC2458(Y,GR)	TRANSISTOR		
Q17			2SC3311A(Q,R)	TRANSISTOR		
Q18 ,19			2SC4081(R,S)	TRANSISTOR		
Q20			2SK246(Y,GR)	FET		
Q21			2SB1375	TRANSISTOR		
Q22			2SC1845(F,E)	TRANSISTOR		
Q23			2SK246(Y,GR)	FET		
Q24			2SD2012	TRANSISTOR		
Q25			2SA992(F,E)	TRANSISTOR		
Q26			2SK246(Y,GR)	FET		
Q27			DTC124EUA	DIGITAL TRANSISTOR		
Q28 ,29			DTA114TUA	DIGITAL TRANSISTOR		
Q30			2SA1576A(R,S)	TRANSISTOR		
Q31			DTC124EUA	DIGITAL TRANSISTOR		
Q100,101			DTC124EUA	DIGITAL TRANSISTOR	T9E9K9	
Q100,101			DTC124EUA	DIGITAL TRANSISTOR	Y9M9M0	
Q102			2SA1576A(R,S)	TRANSISTOR	T9E9K9	
Q102			2SA1576A(R,S)	TRANSISTOR	Y9M9M0	
Q200,201			2SC2714(O,Y)	FET		
Q202,203			2SC4081(R,S)	TRANSISTOR		

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26

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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
Q204,205			2SC2714(O,Y)	FET		
Q206			2SA1576A(R,S)	TRANSISTOR		
Q207,208			2SC4081(R,S)	TRANSISTOR		
Q209			2SC2714(O,Y)	FET		
Q210			2SC4081(R,S)	TRANSISTOR		
Q211			2SA1576A(R,S)	TRANSISTOR		
Q212,213			2SC4081(R,S)	TRANSISTOR		K5K9Y9
Q217			2SA1576A(R,S)	TRANSISTOR		K5K9Y9
Q218			2SC4081(R,S)	TRANSISTOR		K5K9Y9
Q219,220			2SC2714(O,Y)	FET		K5K9Y9
Q221			2SC4081(R,S)	TRANSISTOR		K5K9Y9
Q222			2SA1576A(R,S)	TRANSISTOR		K5K9Y9
Q223			2SC4081(R,S)	TRANSISTOR		K5K9Y9
Q224,225			2SC2714(O,Y)	FET		K5K9Y9
Q226			2SC4081(R,S)	TRANSISTOR		K5K9Y9
Q227			2SA1576A(R,S)	TRANSISTOR		K5K9Y9
Q228			2SC4081(R,S)	TRANSISTOR		K5K9Y9
Q229-231			DTC124EUA	DIGITAL TRANSISTOR		
Q232			2SD2012	TRANSISTOR		
Q233			2SB1375	TRANSISTOR		
Q234,235			DTC124EUA	DIGITAL TRANSISTOR		
Q236,237			2SA1576A(R,S)	TRANSISTOR		K5K9Y9
Q239,240			2SA1576A(R,S)	TRANSISTOR		
Q402-405			2SC4213(B)	TRANSISTOR		
Q406-417			2SC4213(B)	TRANSISTOR		E5C7M7
Q406-417			2SC4213(B)	TRANSISTOR		M5M6T5
Q406-417			2SC4213(B)	TRANSISTOR		T9E9
Q406-417			2SC4213(B)	TRANSISTOR		Y9M9M0
Q414-417			2SC4213(B)	TRANSISTOR		K9
Q418-421			2SC4081(R,S)	TRANSISTOR		E5C7M7
Q418-421			2SC4081(R,S)	TRANSISTOR		M5M6T5
Q418-421			2SC4081(R,S)	TRANSISTOR		T9E9
Q418-421			2SC4081(R,S)	TRANSISTOR		Y9M9M0
Q422,423			2SC4213(B)	TRANSISTOR		C7M7
Q424,425			2SC4213(B)	TRANSISTOR		
Q426-429			2SC4213(B)	TRANSISTOR		E5C7M7
Q426-429			2SC4213(B)	TRANSISTOR		M5M6T5
Q426-429			2SC4213(B)	TRANSISTOR		T9E9
Q426-429			2SC4213(B)	TRANSISTOR		Y9M9M0
Q430			DTC124EUA	DIGITAL TRANSISTOR		C7M7
Q431			DTA124EUA	DIGITAL TRANSISTOR		C7M7
Q432,433			2SC4213(B)	TRANSISTOR		
Q434			DTC124EUA	DIGITAL TRANSISTOR		
Q435			2SA1576A(R,S)	TRANSISTOR		
Q436			DTC124EUA	DIGITAL TRANSISTOR		E5C7M7
Q436			DTC124EUA	DIGITAL TRANSISTOR		M5M6T5
Q436			DTC124EUA	DIGITAL TRANSISTOR		T9E9
Q436			DTC124EUA	DIGITAL TRANSISTOR		Y9M9M0
Q437			DTC124EUA	DIGITAL TRANSISTOR		K5K9
Q438			DTC124EUA	DIGITAL TRANSISTOR		E5C7M7
Q438			DTC124EUA	DIGITAL TRANSISTOR		M5M6T5
Q438			DTC124EUA	DIGITAL TRANSISTOR		T9E9
Q438			DTC124EUA	DIGITAL TRANSISTOR		Y9M9M0
Q439			DTA124EUA	DIGITAL TRANSISTOR		
Q440			DTA124EUA	DIGITAL TRANSISTOR		E5C7M7

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27

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Q440			DTA124EUA	DIGITAL TRANSISTOR	M5M6T5	
Q440			DTA124EUA	DIGITAL TRANSISTOR	T9E9	
Q440			DTA124EUA	DIGITAL TRANSISTOR	Y9M9M0	
Q500			DTC124EUA	DIGITAL TRANSISTOR		
Q600			2SA1611(M5,M6)	TRANSISTOR		
Q601			2SC4177(L5,L6)	TRANSISTOR		
A1			W02-1114-05	OSCILLATING MODULE	T9E9K9	
A1			W02-1114-05	OSCILLATING MODULE	Y9M9M0	
<b>PROCESSOR (X32-3670-00) DVF-9010</b>						
C1			CC73FSL1H100D	CHIP C	10PF	D
C2			CK73FB1H103K	CHIP C	0.010UF	K
C4			CE04KW1A101M	ELECTRO	100UF	10WV
C5			CK73FB1H103K	CHIP C	0.010UF	K
C7			CE04KW1A101M	ELECTRO	100UF	10WV
C9			CK73FB1H103K	CHIP C	0.010UF	K
C11			CE04KW1C100M	ELECTRO	10UF	16WV
C12			CE04KW1A331M	ELECTRO	330UF	10WV
C14		*	C90-3816-05	ELECTRO	10UF	35WV
C15 -17			CC73FSL1H101J	CHIP C	100PF	J
C18			CC73FSL1H100D	CHIP C	10PF	D
C23			CE04KW1A101M	ELECTRO	100UF	10WV
C25			CK73FB1H103K	CHIP C	0.010UF	K
C27			CE04KW1C100M	ELECTRO	10UF	16WV
C28			CE04KW1A331M	ELECTRO	330UF	10WV
C30		*	C90-3816-05	ELECTRO	10UF	35WV
C33 -35			CC73FSL1H100D	CHIP C	10PF	D
C50 -53			CQ93FMG1H102J	MYLAR	1000PF	J
C54			CQ93FMG1H103J	MYLAR	0.010UF	J
C56 ,57			CQ93FMG1H393J	MYLAR	0.039UF	J
C58 ,59			CQ93FMG1H392J	MYLAR	3900PF	J
C61			CC45FSL1H101J	CERAMIC	100PF	J
C62 ,63			CE04KW1V470M	ELECTRO	47UF	35WV
C65 ,66			CC45FSL1H101J	CERAMIC	100PF	J
C67 ,68			CC45FSL1H561J	CERAMIC	560PF	J
C69 -72			CC73FSL1H101J	CHIP C	100PF	J
CN1			E40-4740-05	SOCKET FOR PIN ASSY		
CN2			E40-4743-05	SOCKET FOR PIN ASSY		
E1			J11-0809-05	WIRE CLAMPER		
R1			RK73FB2A105J	CHIP R	1.0M	J 1/10W
R2			RK73FB2A101J	CHIP R	100	J 1/10W
R4			RK73FB2A101J	CHIP R	100	J 1/10W
R6 -9			RK73FB2A101J	CHIP R	100	J 1/10W
R10			RD14NB2E3R9J	RD	3.9	J 1/4W
R11			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R12			RD14NB2E2R2J	RD	2.2	J 1/4W
R13 -15			RK73FB2A101J	CHIP R	100	J 1/10W
R16			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R17 -19			RK73FB2A105J	CHIP R	1.0M	J 1/10W
R22			RD14NB2E2R2J	RD	2.2	J 1/4W
R23 -25			RK73FB2A101J	CHIP R	100	J 1/10W
R26			RK73FB2A102J	CHIP R	1.0K	J 1/10W
R27			RK73FB2A103J	CHIP R	10K	J 1/10W

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28

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R28			RD14NB2E1R5J	RD	1.5	J 1/4W
R32			RD14NB2E1R5J	RD	1.5	J 1/4W
R50 ,51			RN14BK2C4221F	RN	4.22K	F 1/6W
R54 -57			RN14BK2C4221F	RN	4.22K	F 1/6W
R60 ,61			RN14BK2C4221F	RN	4.22K	F 1/6W
R62 -65			RK73FB2A222J	CHIP R	2.2K	J 1/10W
R66 ,67			RK73FB2A470J	CHIP R	47	J 1/10W
R68 -73			RK73FB2A221J	CHIP R	220	J 1/10W
R74 ,75			RK73FB2A470J	CHIP R	47	J 1/10W
R76 ,77			RK73FB2A473J	CHIP R	47K	J 1/10W
R80 -82			RK73FB2A101J	CHIP R	100	J 1/10W
D2			DAP202U	DIODE		
IC1			TC74VHC04F	MOS-IC		
IC2			KAN06	MOS-IC		
IC3			AD1855	MOS-IC		
IC5			AD1855	MOS-IC		
IC6 ,7			NJM4580E	ANALOGUE IC		
IC8			TC74HCT7007AFE	MOS-IC		
Q2			DTC124EUA	DIGITAL TRANSISTOR		
Q2			UN5212	DIGITAL TRANSISTOR		
<b>POWERSUPPLY (W02-2660-05/W02-2661-05/W02-2662-05)</b>						
C201			CE04KW1H010M	ELECTRO	1.0UF	50WV
C211		*	C90-3817-08	ELECTRO	180UF	35WV
C213,214			CE04KW1V331M	ELECTRO	330UF	35WV
C221		*	C90-3817-08	ELECTRO	180UF	35WV
C223,224			CE04KW1V331M	ELECTRO	330UF	35WV
C311		*	C90-3819-08	ELECTRO	330UF	35WV
C312			CE04KW1V331M	ELECTRO	330UF	35WV
C351			CE04KW1V101M	ELECTRO	100UF	35WV
C352,353		*	C91-1586-08	FILE	0.01UF	J
C411		*	C90-3819-08	ELECTRO	330UF	35WV
C412		*	C90-3818-08	ELECTRO	100UF	35WV
C511		*	C90-3820-08	ELECTRO	560UF	35WV
C512			CE04KW1V331M	ELECTRO	330UF	35WV
C611,612		*	C91-1586-08	FILE	0.01UF	J
C711			CE04KW1H470M	ELECTRO	47UF	50WV
C811			CE04KW1V331M	ELECTRO	330UF	35WV
C812		*	C90-3818-08	ELECTRO	100UF	35WV
CN201			E40-3256-05	PIN ASSY		
CN202			E40-3246-05	PIN ASSY		
$\Delta$ F101		*	F05-0144-08	FUSE		
L311		*	L33-0582-08	CHOKE COIL		
L411		*	L33-0582-08	CHOKE COIL		
L511		*	L33-0583-08	CHOKE COIL		
L811		*	L33-0582-08	CHOKE COIL		
T351		*	L19-0090-08	CONVERTER TRANSFORMER		
P211		*	R92-1888-08	METAL PLATE		
P221		*	R92-1888-08	METAL PLATE		
R201		*	R92-1889-08	RD	100	J 1/4W
R202		*	R92-1890-08	RD	1K	J 1/4W
R204		*	R92-1891-08	RN	3.3K	F 1/6W
R205		*	R92-1892-08	RN	82	F 1/6W

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29

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R206		*	R92-1893-08	RN 1.5K F 1/6W		
R211		*	R92-1894-08	RD 560 J 1/4W		
R212,222		*	R92-1895-08	RD 4.7K J 1/4W		
R221		*	R92-1894-08	RD 560 J 1/4W		
R351		*	R92-1896-08	RD 2.7 J 1/4W		
R352		*	R92-1897-08	RD 10K J 1/4W		
R353		*	R92-1898-08	RD 1.2K J 1/4W		
R355		*	R92-1889-08	RD 100 J 1/4W		
R356,357		*	R92-1890-08	RD 1K J 1/4W		
R611		*	R92-1899-08	RD 15 J 1/4W		
R711		*	R92-1897-08	RD 10K J 1/4W		
Δ SW101		*	S68-0122-08	PUSH SWITCH POWER		
D211			11EQS10	DIODE		
D221			11EQS10	DIODE		
D231		*	MTZJ5.6C	ZENER DIODE		
D232			MTZJ30C	ZENER DIODE		
D311			S2L20U	DIODE		
D321			MTZJ15B	ZENER DIODE		
D353		*	MTZJ39B	ZENER DIODE		
D411		*	21DQ06	DIODE		
D511			D3S4M	DIODE		
D611			1SS270A	DIODE		
D711			10ELS2	DIODE		
D712		*	MTZJ12A	ZENER DIODE		
D811		*	21DQ06	DIODE		
Q211		*	2SB1566	TRANSISTOR		
Q212		*	2SC1740S	TRANSISTOR		
Q221		*	2SD2395	TRANSISTOR		
Q222		*	2SA933S	TRANSISTOR		
Q351		*	2SD2395	TRANSISTOR		
Q352			DTC114ES	TRANSISTOR		
Q353			2SA933S	TRANSISTOR		

**DVD MECHANISM (D40-1580-05)**

41	1A		J99-0806-08	TRAY		
42	1B		J19-5924-08	CLAMPER HOLDER		
43	1B		A11-1142-08	CLAMPER PLATE		
44	1B		T50-1080-08	CLAMPER REAR YOKE		
45	1B		T99-0610-08	MAGNET		
46	2B		J11-0834-08	CLAMPER		
47	2B		G02-1655-08	SPRING		
48	2A		D16-0722-08	BELT		
49	2A		D13-1876-08	PULLEY GEAR		
50	2B		D13-1877-08	TRAY GEAR		
51	2A		D13-1878-08	TURNING GEAR		
52	2B		D12-0159-08	ROTARY CAM		
53	2A,2B		D32-0355-08	CHASSIS STOPPER		
54	2A,2B		G02-1656-08	CHASSIS HOLDER		
55	2B		D10-3805-08	SLIDER		
56	3A		D10-3806-08	SWITCH LEVER		
57	3A		T42-0915-08	LOADING MOTOR UNIT		
58	3B		A10-3430-08	LOADING BASE		
59	3B		J70-1226-08	LOADING MOTOR PCB		
60	1B		N19-1457-08	CLAMPER WEIGHT		

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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**

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

30

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
61	2B		D40-1595-08	TRAVERSE UNIT		
71	1C		E35-2160-08	PIN CABLE, 11P		
72	1C		J70-1227-08	REPEATER PCB		
73	1D		A10-3431-08	D-CHASSIS UNIT		
74	2C		J19-5925-08	CLAMPER		
75	2C,2D		J02-1413-08	DAMPER		
76	2C		J19-5926-08	DAMPER HOLDER		
77	2C		T42-0916-08	TRAVERSE MOTOR UNIT,FEED		
78	2C		J21-6618-08	MAIN SHAFT HOLDER		
79	3C		T42-0917-08	DISC MOTOR UNIT		
80	3C		J26-0082-08	CHIP SWITCH UNIT		
81	2D		J21-6619-08	SUB SHAFT HOLDER		
82	2D,3D		D10-3807-08	GUIDE SHAFT		
83	2D		J21-6620-08	NUT STOPPER		
84	2D		G02-1657-08	NUT STOP SPRING		
85	2D		D13-1879-08	SCREW NUT		
86	2D		G02-1658-08	PICKUP STOP SPRING		
87	3D		T25-0077-08	PICKUP		
89	3D		A11-1143-08	H-CHASSIS		
B41	1B		N80-2608-46	SCREW		
B42	1B		N09-3455-08	SCREW		
B43	3A		N09-3456-08	SCREW		
B44	3B		N80-2608-46	SCREW		
B45	1B		N88-2606-46	SCREW		
B71	1C		N86-2605-08	SCREW		
B72	1C		N09-3457-08	SCREW		
B73	2C		N09-3458-08	SCREW		
B74	2C		N09-3459-08	SCREW		
B75	2C		N95-2610-45	SCREW		
B76	2C		N09-3460-08	SCREW		
B77	2D		N09-3461-08	SCREW		
B78	2D		N30-2003-46	SCREW		
B79	2D		N39-1745-46	SCREW		
B80	2D		N09-3462-08	SCREW		
W41	2A		N19-0891-04	CUT WASHER		
FP20001			E40-8270-08	FLAT CABLE CONNECTOR,26P		
FP20002			E40-8271-08	FLAT CABLE CONNECTOR,35P		
FP20003			E40-8272-08	FLAT CABLE CONNECTOR,11P		
FP20004,5			E40-8269-08	PIN ASSY,2P		
C0002			CK73FF1C105Z	CHIP C 1.0UF Z		

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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
DV-203	-	-	-	-	-	-	-	-	-
DV-2070	-	-	-	-	-	-	-	-	-
DVF-5010	-	-	-	-	T5	E5	-	-	-
DVF-K7010	-	-	-	C7	-	-	-	-	-
DVF-9010	-	-	-	-	T9	E9	-	-	-
MODEL	ABB.	Mexico	PX/AAFES	Russia	Scandinavia	Shanghai	USA	Other area	Other area(M2)
DV-203	-	-	-	-	-	-	K5	-	-
DV-2070	-	-	-	-	-	-	K9	-	-
DVF-5010	-	-	-	-	-	-	-	M5	M6
DVF-K7010	-	-	-	-	-	-	-	M7	-
DVF-9010	-	-	Y9	-	-	-	-	M9	M0

# SPECIFICATIONS

## DV-203

### [Type]

System ..... DVD video player system  
Signal read system ..... Semiconductor laser

### [D/A Conversion Section]

D/A conversion ..... 24 Bit  
Oversampling ..... 8 fs (Sampling frequency; 44.1, 48 kHz)  
4 fs (Sampling frequency; 96 kHz)

### [Audio section]

Frequency response  
Sampling frequency; 44.1 kHz (CD only) ..... 2 Hz ~ 20 kHz  
Sampling frequency; 48 kHz ..... 2 Hz ~ 22 kHz  
Sampling frequency; 96 kHz ..... 2 Hz ~ 44 kHz  
Signal to noise ratio (CD only) ..... More than 110 dB  
Dynamic range (CD only) ..... More than 97 dB  
Total harmonic distortion (CD only)  
..... Less than 0.003 % (1 kHz)  
Channel separation (CD only)  
..... More than 90 dB (1 kHz, MIX LINE OUTPUT)  
Wow and flutter (CD only)  
..... Below measurable limit ( $\pm 0.001$  % W. PEAK)  
Analog output level/impedance  
2ch ..... 2 V<sub>rms</sub> / 510  $\Omega$   
Digital output level/impedance  
COAXIAL ..... 0.5 V<sub>p-p</sub> / 75  $\Omega$   
OPTICAL ..... -21 dBm ~ -15 dBm (Wave length 660 nm)

### [Video Section]

Video output format ..... NTSC  
Video compression  
VCD ..... MPEG-1  
DVD ..... MPEG-2  
Composite video output level  
..... 1 V<sub>p-p</sub> (75  $\Omega$  load, sync. negative)  
S-video output level  
(Y-signal) ..... 1 V<sub>p-p</sub> (75  $\Omega$  load, sync. negative)  
(C-signal)  
NTSC ..... 0.286 V<sub>p-p</sub> (75  $\Omega$ )  
Component video output level  
Y-signal ..... 1 V<sub>p-p</sub> (75  $\Omega$  load, sync. negative)  
Cb-signal .....  $\pm 0.324$  V<sub>p-p</sub> (75  $\Omega$ ) (FCC 100% Color Bar)  
Cr-signal .....  $\pm 0.324$  V<sub>p-p</sub> (75  $\Omega$ ) (FCC 100% Color Bar)  
Horizontal resolution ..... More than 500 lines  
Video signal to noise ratio ..... More than 65 dB

### [General]

Power consumption ..... 35 W  
Dimensions ..... W:440 mm (17-5/16")  
H: 93 mm (3-11/16")  
D: 390 mm (15-3/8")  
Weight (net) ..... 4.5 kg (9.9 lb)

## DVF-5010

### [Type]

System ..... DVD video player system  
Signal read system ..... Semiconductor laser

### [D/A Conversion Section]

D/A conversion ..... 24 Bit  
Oversampling ..... 8 fs (Sampling frequency; 44.1, 48 kHz)  
4 fs (Sampling frequency; 96 kHz)

### [Audio section]

Frequency response  
Sampling frequency; 44.1 kHz (CD only) ..... 2 Hz ~ 20 kHz  
Sampling frequency; 48 kHz ..... 2 Hz ~ 22 kHz  
Sampling frequency; 96 kHz ..... 2 Hz ~ 44 kHz  
Signal to noise ratio (CD only) ..... More than 110 dB  
Dynamic range (CD only) ..... More than 97 dB  
Total harmonic distortion (CD only)  
..... Less than 0.003 % (1 kHz)  
Channel separation (CD only)  
..... More than 90 dB (1 kHz, MIX LINE OUTPUT)  
Wow and flutter (CD only)  
..... Below measurable limit ( $\pm 0.001$  % W. PEAK)  
Analog output level/impedance  
2ch ..... 2 V<sub>rms</sub> / 510  $\Omega$   
5.1ch ..... 2 V<sub>rms</sub> / 510  $\Omega$  (compression off: max 5.6 V)  
Digital output level/impedance  
COAXIAL ..... 0.5 V<sub>p-p</sub> / 75  $\Omega$   
OPTICAL ..... -21 dBm ~ -15 dBm (Wave length 660 nm)

### [Video Section]

Video output format ..... NTSC/PAL  
Video compression  
VCD ..... MPEG-1  
DVD ..... MPEG-2  
Composite video output level  
..... 1 V<sub>p-p</sub> (75  $\Omega$  load, sync. negative)  
S-video output level  
(Y-signal) ..... 1 V<sub>p-p</sub> (75  $\Omega$  load, sync. negative)  
(C-signal)  
NTSC ..... 0.286 V<sub>p-p</sub> (75  $\Omega$ )  
PAL ..... 0.300 V<sub>p-p</sub> (75  $\Omega$ )  
Horizontal resolution ..... More than 500 lines  
Video signal to noise ratio ..... More than 65 dB

### [General]

Power consumption ..... 35 W  
Dimensions ..... W:440 mm (17-5/16")  
H: 93 mm (3-11/16")  
D: 390 mm (15-3/8")  
Weight (net) ..... 4.5 kg (9.9 lb)

## SPECIFICATIONS

### DV-2070

#### [Type]

System ..... DVD video player system  
Signal read system ..... Semiconductor laser

#### [D/A Conversion Section]

D/A conversion ..... 24 Bit  
Oversampling ..... 8 fs (Sampling frequency; 44.1, 48 kHz)  
4 fs (Sampling frequency; 96 kHz)

#### [Audio section]

Frequency response  
Sampling frequency; 44.1 kHz (CD only) ..... 2 Hz ~ 20 kHz  
Sampling frequency; 48 kHz ..... 2 Hz ~ 22 kHz  
Sampling frequency; 96 kHz ..... 2 Hz ~ 44 kHz  
Signal to noise ratio (CD only) ..... More than 113 dB  
Dynamic range (CD only) ..... More than 97 dB  
Total harmonic distortion (CD only)  
..... Less than 0.003 % (1 kHz)  
Channel separation (CD only)  
..... More than 90 dB (1 kHz, MIX LINE OUTPUT)  
Wow and flutter (CD only)  
..... Below measurable limit ( $\pm 0.001$  % W. PEAK)  
Analog output level/impedance  
2ch .....  $2 V_{rms} / 510 \Omega$   
Digital output level/impedance  
COAXIAL ..... 0.5 Vp-p / 75  $\Omega$   
OPTICAL ..... -21 dBm ~ -15 dBm (Wave length 660 nm)  
Headphone output ..... 20 mW / 32  $\Omega$  load (Phones level MAX)

#### [Video Section]

Video output format ..... NTSC  
Video compression  
VCD ..... MPEG-1  
DVD ..... MPEG-2  
Composite video output level  
..... 1 Vp-p (75  $\Omega$  load, sync. negative)  
S-video output level  
(Y-signal) ..... 1 Vp-p (75  $\Omega$  load, sync. negative)  
(C-signal)  
NTSC ..... 0.286 Vp-p (75  $\Omega$ )  
Component video output level  
Y-signal ..... 1 Vp-p (75  $\Omega$  load, sync. negative)  
C<sub>B</sub>-signal .....  $\pm 0.324$  Vp-p (75  $\Omega$ ) (FCC 100% Color Bar)  
C<sub>R</sub>-signal .....  $\pm 0.324$  Vp-p (75  $\Omega$ ) (FCC 100% Color Bar)  
Horizontal resolution ..... More than 500 lines  
Video signal to noise ratio ..... More than 65 dB

#### [General]

Power consumption ..... 35 W  
Dimensions ..... W:440 mm (17-5/16")  
H: 128 mm (5-1/16")  
D: 384 mm (15-1/8")  
Weight (net) ..... 6.1 kg (13.4 lb)

### DVF-9010

#### [Type]

System ..... DVD video player system  
Signal read system ..... Semiconductor laser

#### [D/A Conversion Section]

D/A conversion ..... 24 Bit  
Oversampling ..... 8 fs (Sampling frequency; 44.1, 48 kHz)  
4 fs (Sampling frequency; 96 kHz)

#### [Audio section]

Frequency response  
Sampling frequency; 44.1 kHz (CD only) ..... 2 Hz ~ 20 kHz  
Sampling frequency; 48 kHz ..... 2 Hz ~ 22 kHz  
Sampling frequency; 96 kHz ..... 2 Hz ~ 44 kHz  
Signal to noise ratio (CD only) ..... More than 115 dB  
Dynamic range (CD only) ..... More than 100 dB  
Total harmonic distortion (CD only)  
..... Less than 0.002 % (1 kHz)  
Channel separation (CD only)  
..... More than 95 dB (1 kHz, MIX LINE OUTPUT)  
Wow and flutter (CD only)  
..... Below measurable limit ( $\pm 0.001$  % W. PEAK)  
Analog output level/impedance  
2ch .....  $2 V_{rms} / 510 \Omega$   
5.1ch .....  $2 V_{rms} / 510 \Omega$  (compression off:max 5.6 V)  
Digital output level/impedance  
COAXIAL ..... 0.5 Vp-p / 75  $\Omega$   
OPTICAL ..... -21 dBm ~ -15 dBm (Wave length 660 nm)  
Headphone output ..... 20 mW / 32  $\Omega$  load (Phones level MAX)

#### [Video Section]

Video output format ..... NTSC/PAL  
Video compression  
VCD ..... MPEG-1  
DVD ..... MPEG-2  
Composite video output level  
..... 1 Vp-p (75  $\Omega$  load, sync. negative)  
S-video output level  
(Y-signal) ..... 1 Vp-p (75  $\Omega$  load, sync. negative)  
(C-signal)  
NTSC ..... 0.286 Vp-p (75  $\Omega$ )  
PAL ..... 0.300 Vp-p (75  $\Omega$ )  
Horizontal resolution ..... More than 500 lines  
Video signal to noise ratio ..... More than 65 dB

#### [General]

Power consumption ..... 35 W  
Dimensions ..... W:440 mm (17-5/16")  
H: 128 mm (5-1/16")  
D: 384 mm (15-1/8")  
Weight (net) ..... 6.1 kg (13.4 lb)

## SPECIFICATIONS

### DVF-K7010

#### [Type]

System.....DVD video player system  
Signal read system.....Semiconductor laser

#### [D/A Conversion Section]

D/A conversion..... 24 Bit  
Oversampling ..... 8 fs (Sampling frequency; 44.1, 48 kHz)  
4 fs (Sampling frequency; 96 kHz)

#### [Audio section]

Frequency response  
Sampling frequency; 44.1 kHz (CD only) ..... 4 Hz ~ 20 kHz  
Sampling frequency; 48 kHz ..... 4 Hz ~ 22 kHz  
Sampling frequency; 96 kHz ..... 4 Hz ~ 44 kHz  
Signal to noise ratio (CD only) ..... More than 110 dB  
Dynamic range (CD only) ..... More than 97 dB  
Total harmonic distortion (CD only)  
..... Less than 0.003 % (1 kHz)  
Channel separation (CD only)  
..... More than 90 dB (1 kHz, MIX LINE OUTPUT)  
Wow and flutter (CD only)  
..... Below measurable limit ( $\pm 0.001$  % W. PEAK)  
Analog output level/impedance  
2ch..... 2 V<sub>rms</sub> / 510  $\Omega$  (mic on: 1.2 V / 315  $\Omega$ )  
5.1ch..... 2 V<sub>rms</sub> / 510  $\Omega$  (compression off: max 5.6 V)  
Digital output level/impedance  
COAXIAL..... 0.5 Vp-p / 75  $\Omega$   
OPTICAL..... -21 dBm ~ -15 dBm (Wave length 660 nm)  
Microphone Input sensitivity/impedance  
..... 6 mV / 24 k $\Omega$  (MIC 1, 2)

#### [Video Section]

Video output format ..... NTSC/PAL  
Video compression  
VCD ..... MPEG-1  
DVD ..... MPEG-2  
Composite video output level  
..... 1 Vp-p (75  $\Omega$  load, sync. negative)  
S-video output level  
(Y-signal) ..... 1 Vp-p (75  $\Omega$  load, sync. negative)  
(C-signal)  
NTSC ..... 0.286 Vp-p (75  $\Omega$ )  
PAL ..... 0.300 Vp-p (75  $\Omega$ )  
Horizontal resolution ..... More than 500 lines  
Video signal to noise ratio ..... More than 65 dB

#### [General]

Power consumption ..... 35 W  
Dimensions ..... W: 440 mm (17-5/16")  
H: 93 mm (3-11/16")  
D: 390 mm (15-3/8")  
Weight (net) ..... 4.5 kg (9.9 lb)



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

- Sufficient performance may not be exhibited at extremely cold locations (Where water freezes).

**Note:**

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

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