

JVC[®]

SERVICE MANUAL

HD CAMERA RECORDER

GY-HD100U/GY-HD100E GY-HD101E



GY-HD101E is added only the DV input function to GY-HD100E.

Mini DV
HDV

Note

- Lead free solder used in the board (material : Sn, Ag, In, Bi, melting point : 227 Centigrade)

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the \triangle symbol and shaded (■) parts are critical for safety.

Replace only with specified part numbers.

Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:

- 1) Wires covered with PVC tubing
- 2) Double insulated wires
- 3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:

- | | | |
|--------------------|--------------------------------------|------------|
| 1) Insulation Tape | 3) Spacers | 5) Barrier |
| 2) PVC tubing | 4) Insulation sheets for transistors | |

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

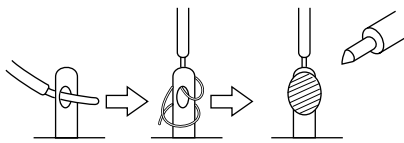


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

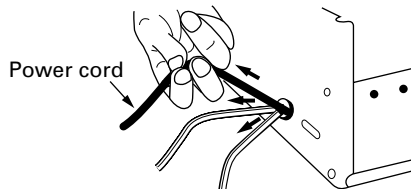


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector

In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

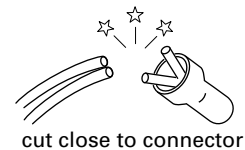
1) **Connector part number** : E03830-001

2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.

3) **Replacement procedure**

(1) Remove the old connector by cutting the wires at a point close to the connector.

Important : Do not reuse a connector (discard it).



cut close to connector

Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

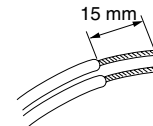


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

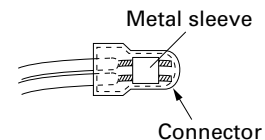


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

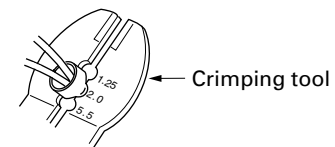


Fig.6

(5) Check the four points noted in Fig.7.

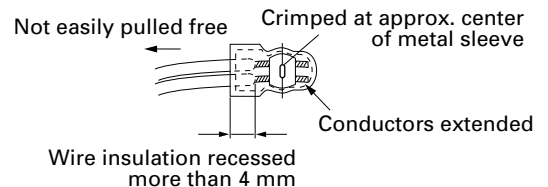


Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

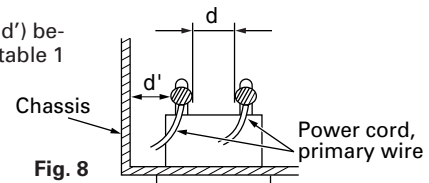
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

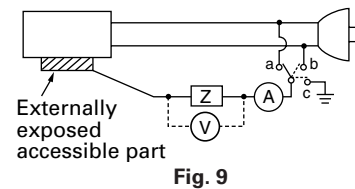


4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method : (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

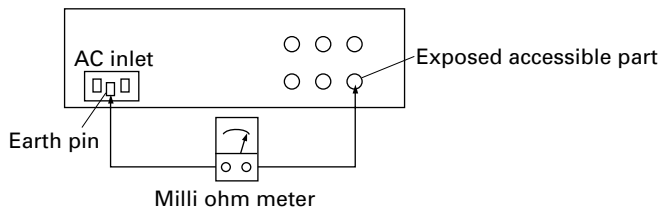


5. Grounding (Class I model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	$Z \leq 0.1 \text{ ohm}$
Europe & Australia	$Z \leq 0.5 \text{ ohm}$

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	$R \geq 1 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3 \text{ mm}$
100 to 240 V			AC 1.5 kV 1 minute	$d, d' \geq 4 \text{ mm}$
110 to 130 V	USA & Canada	-	AC 900 V 1 minute	$d, d' \geq 3.2 \text{ mm}$
110 to 130 V 200 to 240 V	Europe & Australia	$R \geq 10 \text{ M}\Omega/500 \text{ V DC}$	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	$d \geq 4 \text{ mm}$ $d' \geq 8 \text{ mm}$ (Power cord) $d' \geq 6 \text{ mm}$ (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	$1 \text{ k}\Omega$	$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada	$0.15 \mu\text{F}$ and $1.5 \text{ k}\Omega$	$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	$2 \text{ k}\Omega$	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
		$50 \text{ k}\Omega$	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SECTION 1

SERVICE CAUTIONS AND DISASSEMBLY

1.1 HOW TO REMOVE THE COSMETIC PARTS

1.1.1 Left side cover

(1) Remove the two screws ①, slide the cassette cover downward and pull out to remove.



Fig. 1.1.1 (1)

Note :

When attaching the cassette cover, make sure to insert the hook of the cassette cover to the correct position of the cassette housing.

(2) Remove the two screws ②.

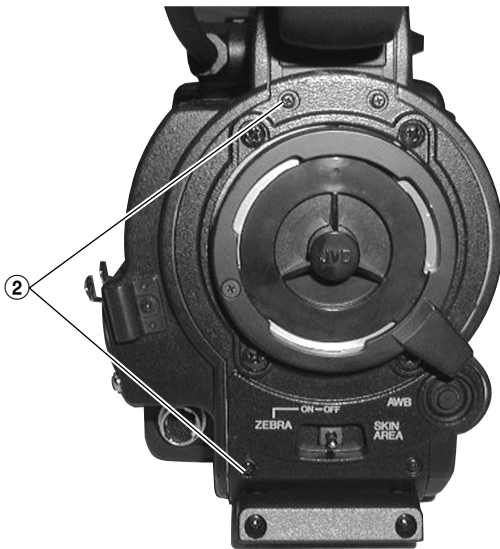


Fig. 1.1.1 (2)

(3) Remove the two screws ③ and open the left side cover.

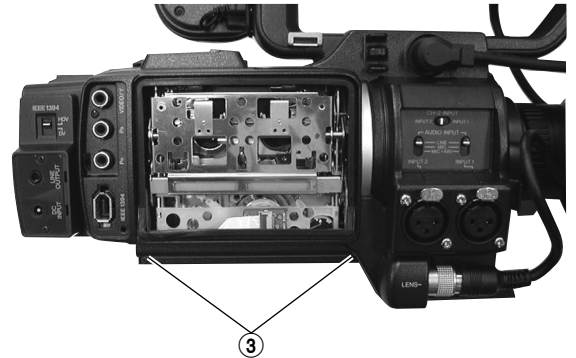


Fig. 1.1.1 (3)

(4) Disconnect the cables CN13 and CN43.

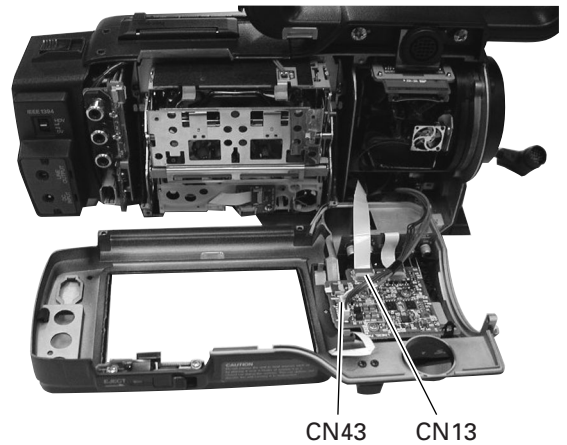


Fig. 1.1.1 (4)

1.1.2 Right side cover

(1) Remove the five screws ④ and open the right side cover.

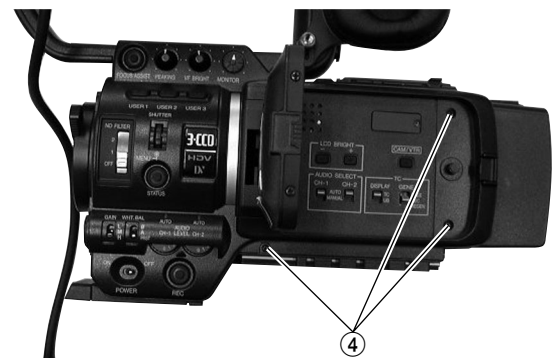


Fig. 1.1.2 (1)

1.2 HOW TO REMOVE THE OPTICAL BLOCK ASSEMBLY

CAUTION

When removing/mounting the optical block assembly in the camera, take care not to damage cables, also the positioning of the wire assembly is important. A malfunction may occur if a wire is somehow caught up.

- (1) Remove left side cover and the right side cover. (see section 1.1.1 and 1.1.2)
- (2) Remove the two screws ① and remove the FAN motor.

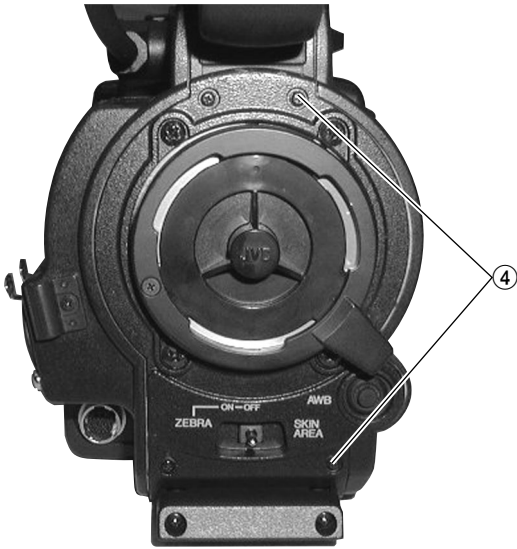


Fig. 1.1.2 (2)

- (2) Disconnect the cables CN14, CN24 and CN43 on AUDIO board, CN10 and CN52 on STA board, CN52 on SWP board.

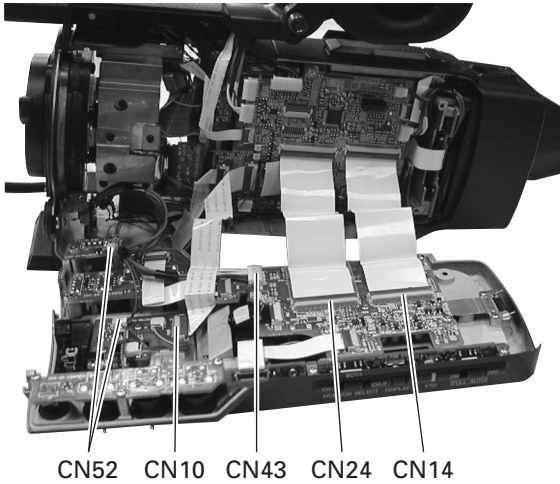


Fig. 1.1.2 (3)

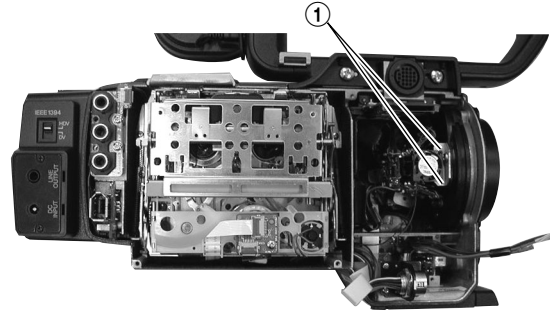


Fig. 1.2 (1)

- (3) Remove the two screws ② and remove the SD board.
- (4) Disconnect the cables CN26, CN27 and CN28.

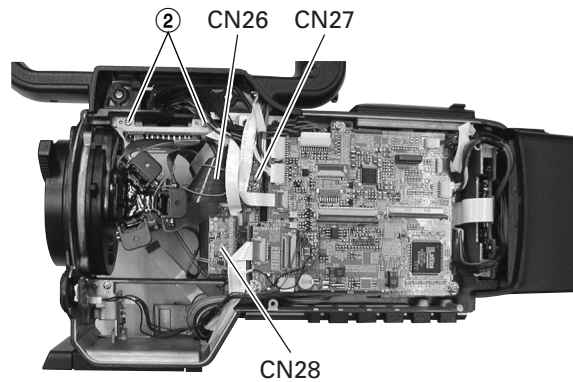


Fig. 1.2 (2)

- (5) Remove the five screws ③ and ④, then remove the optical block assembly carefully not to damage boards and cables.

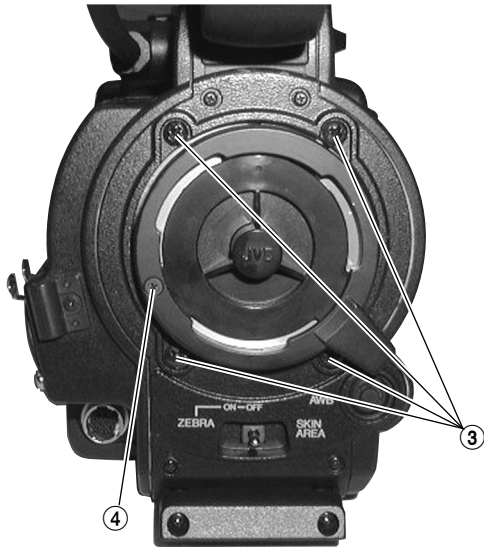


Fig. 1.2 (3)

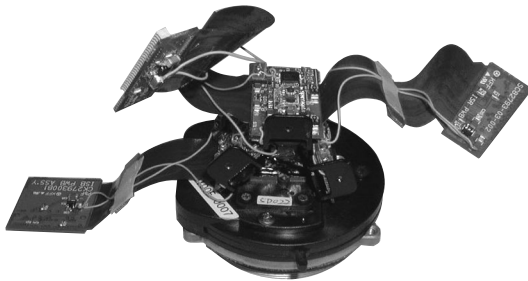


Fig. 1.2 (4)

Note :

- The CCDs are bonded precisely to the prism. In case of trouble with a CCD, it is not possible to replace an individual CCD, but the entire optical block assembly should be replaced.
- The optical block assembly supplied as a service part.
- When replacing the optical block, attach the original FAN and FNC board to the new optical block because those are not included on the optical block assembly.

1.3 HOW TO REMOVE VCR UNIT

1.3.1 Mechanism unit

- (1) Remove the left side cover. (see section 1.1.1)
 (2) Remove the four screws ①.

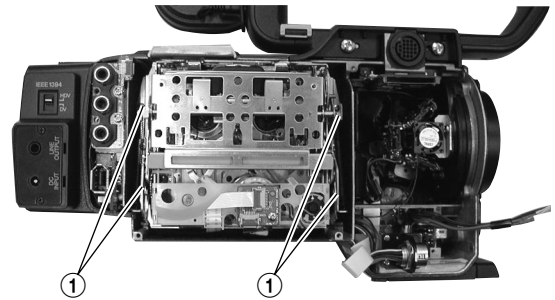


Fig. 1.3.1(1)

- (3) Lift up the mechanism unit gently and disconnect the cables CN75, CN16 and CN17.

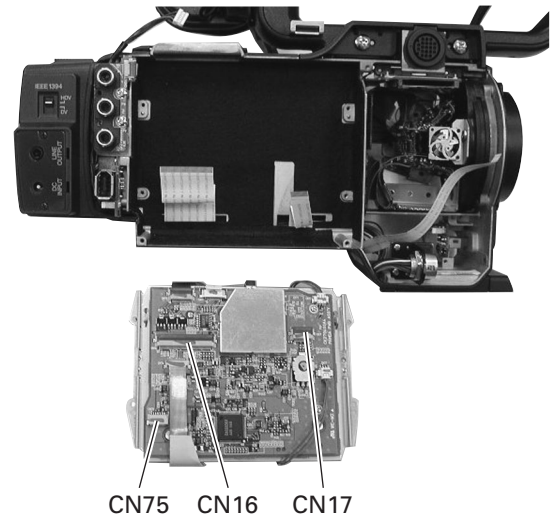


Fig. 1.3.1(2)

1.3.2 Cassette housing

- (1) Remove the mechanism unit. (see section 1.3.1)
- (2) Remove CN1 and release the motor wire. Release the lock sideways and remove the tape guard

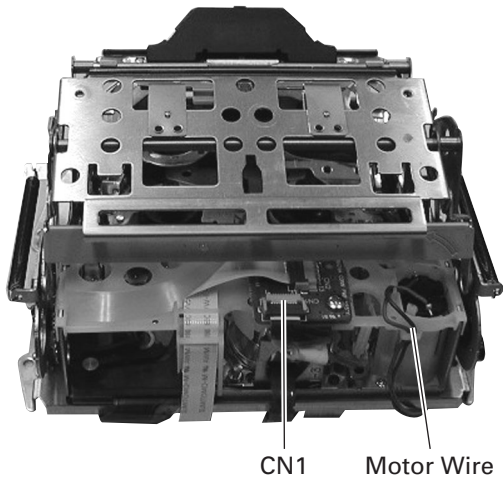


Fig. 1.3.2(1)

- (4) Slide the outer unit to rear direction and lift up slightly. Pull out to side direction to release the outer unit. Perform same manner other side.

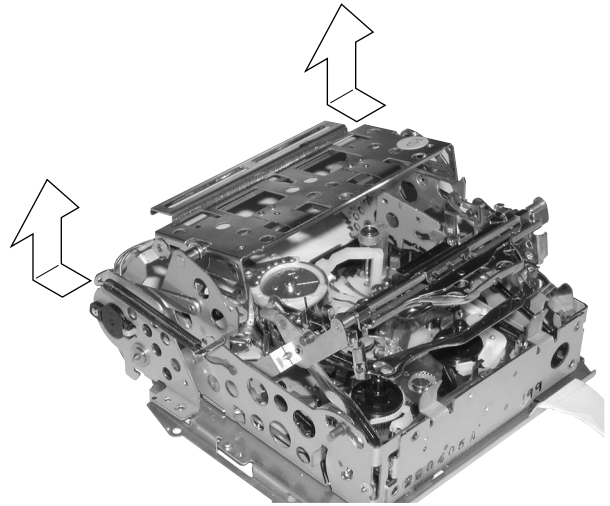


Fig. 1.3.2(3)

- (3) Pop up the cassette housing by sliding release lever and remove the two screws ②.

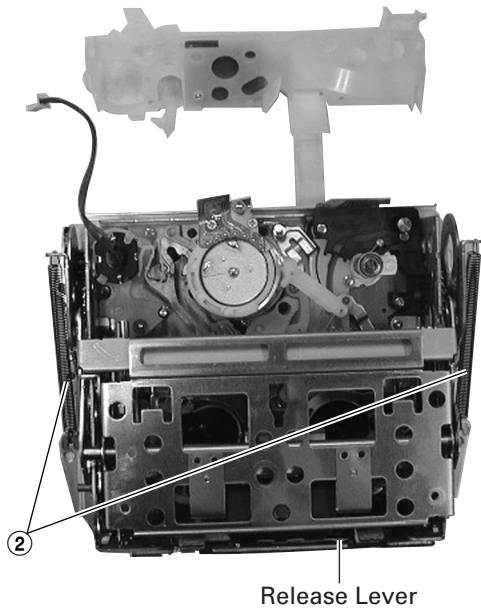


Fig. 1.3.2(2)

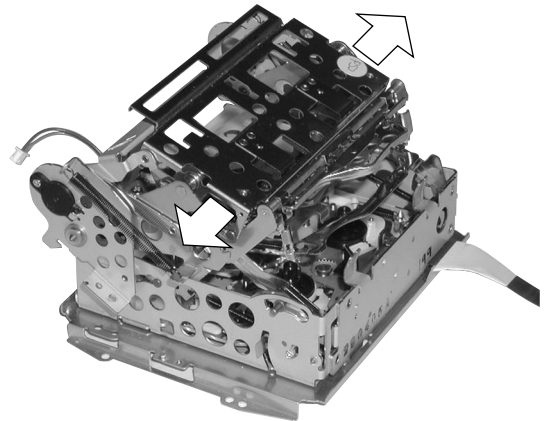


Fig. 1.3.2(4)

- (5) Slide the cassette housing to the position of fig.1.3.2(5) and hold the cassette housing slightly to inside direction to release it.

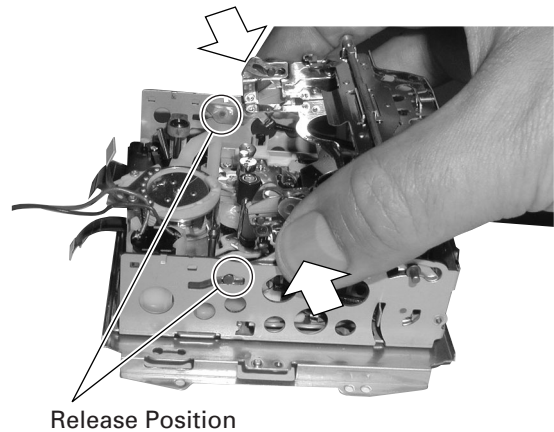


Fig. 1.3.2(5)

(6) Release bosses of the cassette housing from the mechanism unit.

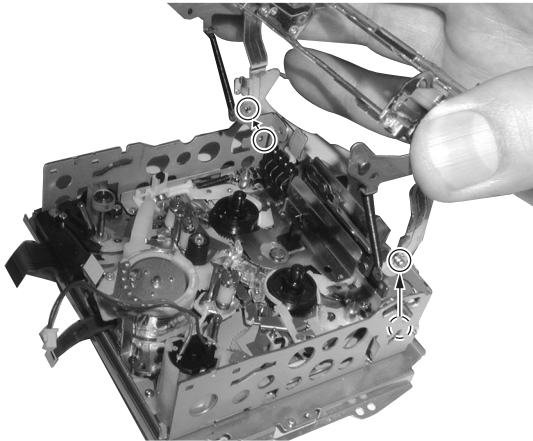


Fig. 1.3.2(6)



Fig. 1.4.1(2)

1.4 HOW TO REMOVE THE MAJOR BOARDS

1.4.1 Audio board

- (1) Remove right side cover. (see section 1.1.2)
- (2) Disconnect cables CN44, CN45 and CN62.
- (3) Remove six screws ① and ②.

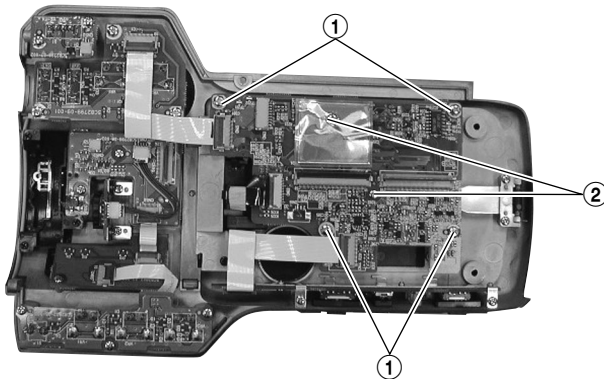


Fig. 1.4.1(1)

Note :

CN62 may be slightly hard to connect FPC cable. Make sure to insert the cable to correct position.

1.4.2 LCD monitor

- (1) Remove Audio board. (see section 1.4.1)
- (2) Remove two screws ③.

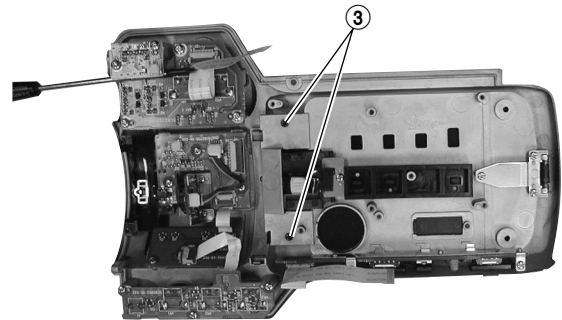


Fig. 1.4.2(1)

- (3) Remove the hinge cover and remove two screws ④.

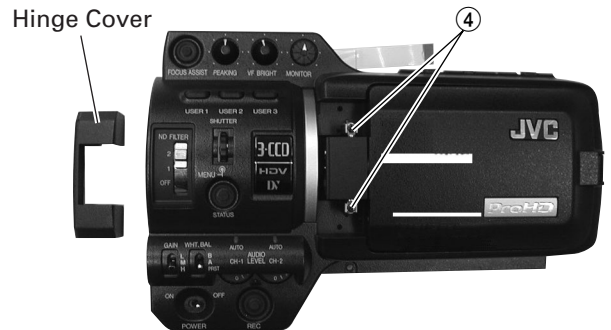


Fig. 1.4.2(2)

1.4.3 MIF board

- (1) Remove the right side cover. (see section 1.1.2)
- (2) Remove four screws ⑤.
- (3) Remove the cables CN4, CN9, CN11, CN12, CN13, CN22, CN23, 34 and CN48, then lift up MIF board to release B to B connector between MIF board and MAIN board.

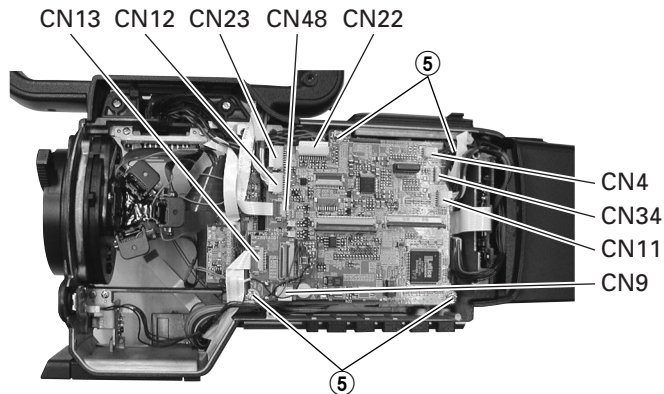


Fig. 1.4.3

1.4.4 MAIN board

- (1) Remove MIF board. (see section 1.4.3)
- (2) Remove six screws ⑥ and ⑦.
- (3) Remove the cables CN3, CN16, CN17, CN18, CN19, CN26, CN27, CN28, CN29 and CN30.

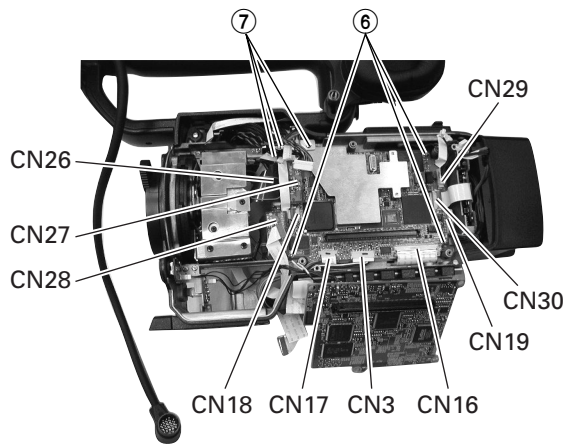


Fig. 1.4.4(1)

- (4) Slide the MAIN board downward and pull out. Do not bend the Heat Pipe.

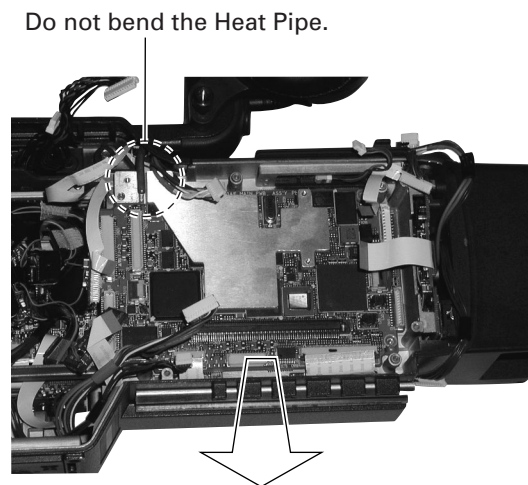


Fig. 1.4.4(2)

- (5) Remove the two screws ⑧. Remove the heat sink carefully because it is being fitted sticky.

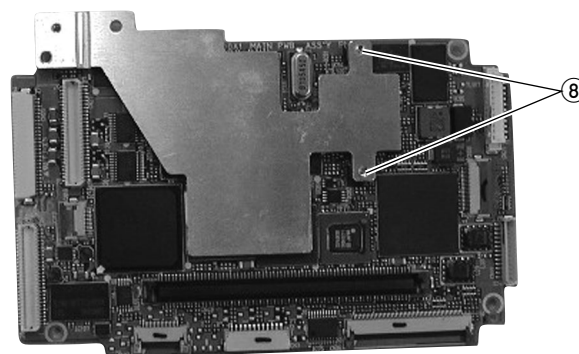


Fig. 1.4.4(3)

1.4.5 HANDLE assembly

- (1) Remove left side cover and right side cover. (see section 1.1.1 and 1.1.2)
- (2) Remove two screws ⑨.

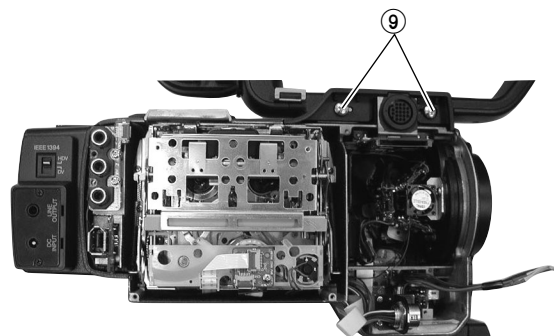


Fig. 1.4.5(1)

- (3) Remove the cables CN12 and CN48. Remove the two screws ⑩ and lift up the handle assembly.

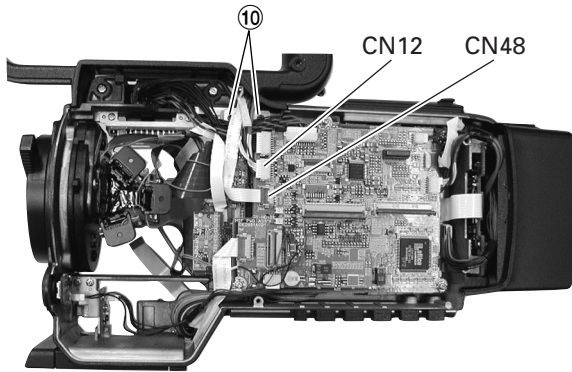


Fig. 1.4.5(2)

Note :

When connecting the LED connector on EAR board, ensure the polarity that the red wire should be connected longer pin of LED.

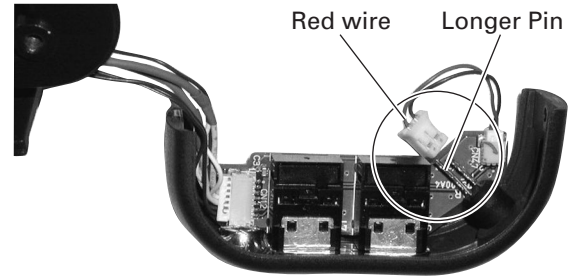


Fig. 1.4.5(5)

- (4) Remove three screws ⑪.

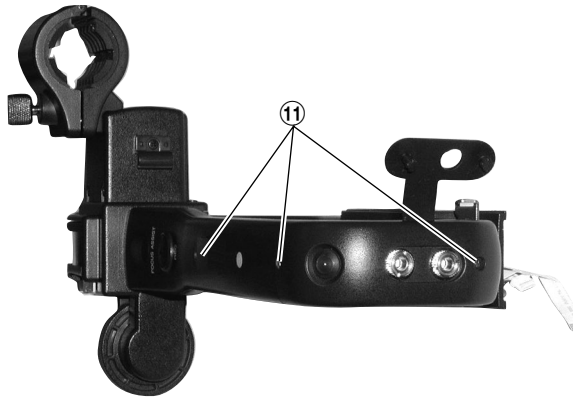


Fig. 1.4.5(3)

Note :

When removing the Heat Sink Ass'y, bend the Heat Pipe slightly like Fig. 1.4.5(6). Return the bend after attaching the Heat Sink Ass'y. Do not bend the other portion of Heat Pipe.

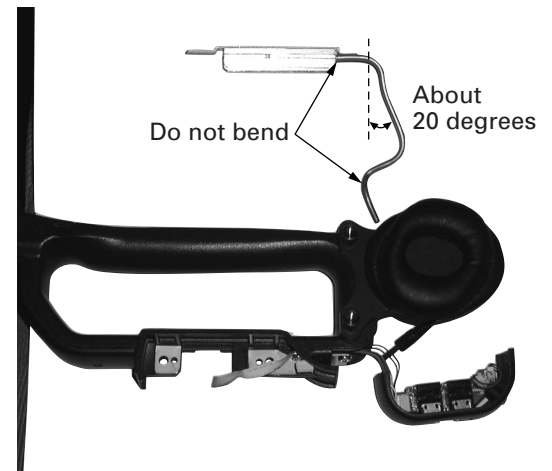


Fig. 1.4.5(6)

- (5) Remove the handle cover R and handle cover T.

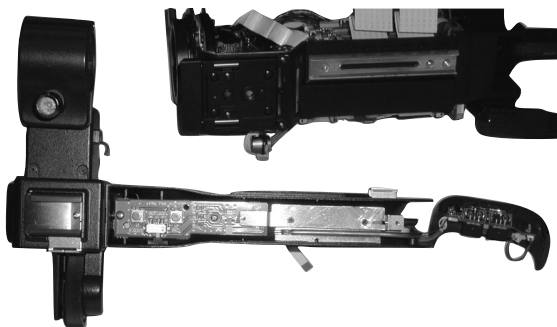


Fig. 1.4.5(4)

1.4.6 PS board

(1) Remove the four screws ⑫.

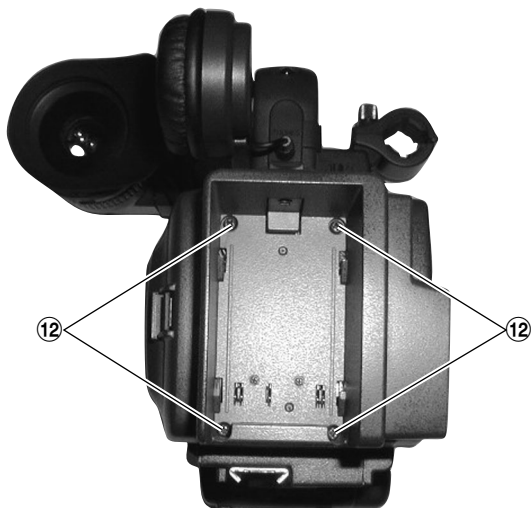


Fig. 1.4.6(1)

(2) Remove the four screws ⑬ and ⑭. Disconnect the cables CN1, 29, CN30, CN53 and CN75.

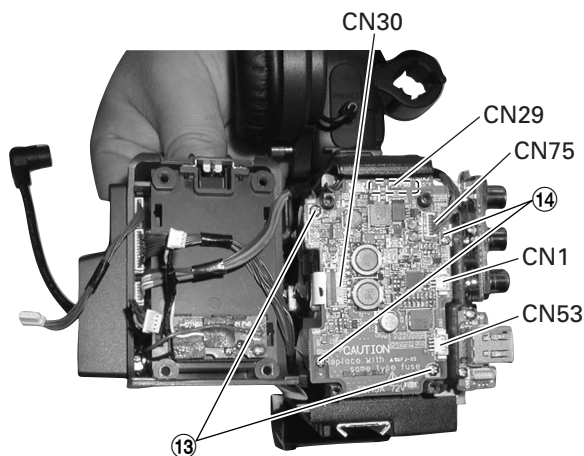


Fig. 1.4.6(2)

Note :

When replacing the fuse F1, ensure to replace with same type fuse. (refer to the parts list)

1.5 SERVICE MENUS

1.5.1 Modes required in servicing

(1) While holding down the specified button(s) (FOCUS ASSIST, USER 3), press and hold the STATUS button for more than 1 second in order to display the first-level menu of the service menu hierarchy. The items in the first-level menu vary according to which specified button is being held at the moment the STATUS button is pressed. (Characters are displayed on LCD monitor screen or View finder.)

Item	Displayed Content	When power up		
		—	Holding DISPLAY button	Holding DISPLAY button
		Activation Method		
		FOCUS ASSIST	USER 3	FOCUS ASSIST + USER 3
CAMERA1 MENU	Camera setting, blemish detect	○	○	○
CAMERA2 MENU	Error correct ON/OFF	—	○	○
CAMERA3 MENU	AW data reset menu	—	—	○
VTR1 MENU	Repeat, FF/REW speed setting	○	○	○
VTR2 MENU	Long pause, shutdown setting	—	○	○
VTR3 MENU	Reserved, BATT, Info.	—	—	○
DIP SW	DIP SW MENU	—	○	○
HOUR METER	Hour Meter indication	—	○	○
ERROR HISTORY	Error History	—	○	○
OTHERS	MENU SAVE etc.	—	○	○
VERSION	CPU Version indication	○	—	—

Table 1-5-1 Service Menu First Tier List

1.5.2 Operation in the first-level of the service menu

- (1) While holding down the specified button(s) (FOCUS ASSIST or USER 3), press and hold the STATUS button for more than 1 second.
- (2) The first-level of the service menu is displayed.
- (3) Rotate the SHUTTER dial to move the cursor (▷) on to the item to be modified.
- (4) Push into the SHUTTER dial to direct the item on which the cursor (▷) is located.
 - Pressing the STATUS button returns to the MENU display.
 - Can not open the service MENU while recording.

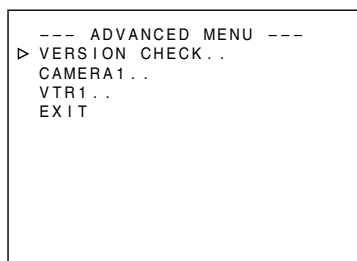


Fig. 1-5-2 (1)

While holding down the FOCUS ASSIST button, press and hold STATUS button for more than 1 second, this MENU screen is shown on the monitor. (Refer to Fig. 1-5-2(1))

```

--- SERVICE MENU ---
▷ CAMERA1 . .
CAMERA2 . .
VTR1 . .
VTR2 . .
DIP SW . .
HOUR METER
ERROR HISTORY . .
OTHERS . .
EXIT

```

Fig. 1-5-2 (2)

At first, while holding down the DISPLAY button, turn ON the power switch, and then, while holding down the USER 3 button, press and hold STATUS button for more than 1 second, this MENU screen is shown on the monitor. (Refer to Fig. 1-5-2(2))

```

--- FACTORY MENU ---
▷ CAMERA1 . .
CAMERA2 . .
CAMERA3 . .
VTR1 . .
VTR2 . .
VTR3 . .
DIP SW . .
HOUR METER
ERROR HISTORY . .
OTHERS . .
EXIT

```

Fig. 1-5-2 (3)

At first, while holding down the DISPLAY button, turn ON the power switch, and then, While holding down the FOCUS ASSIST and USER 3 button, press and hold STATUS button for more than 1 second, this MENU screen is shown on the monitor. (Refer to Fig. 1-5-2(3))

1.5.3 CAMERA 1 menu

- (1) In a service menu, place the cursor (▷) on "CAMERA 1" and push the SHUTTER dial to display the CAMERA1 menu.

```

--- CAMERA1 ---
▷ LCD L/R REVERSE OFF
FAS AUDIO AUTO
ALC MODE ALC+EEI
EEI MAX 1/240
IRIS ENF AUTO ON
PIXEL COMPEN DET CANCEL
PAGE BACK

```

Fig. 1-5-3 (1)

- (2) Rotate the SHUTTER dial to move the cursor (▷) on the mode to be adjusted.
- (3) Push the SHUTTER dial so that the parameter blinks.
- (4) Rotate the SHUTTER dial to vary the parameter.
- (5) After completing the parameter setting, push the SHUTTER dial to stop the blinking of the parameter and store the setting in memory.
- (6) After completing the setting, move the cursor (▷) to "PAGE BACK" and push the SHUTTER dial to return to the display at the higher hierarchy level.

Item	Parameter	
LCD L/R REVERSE	OFF	When the face of LCD screen is turned toward the camera subject, does not invert the left and right of the LCD display. (normal image)
	ON	When the face of LCD screen is turned toward the camera subject, inverts the left and right of the LCD display. (mirror image)
FAS AUDIO	AUTO	When selected FAS mode, audio recording Level will be automatically set to AUTO mode.
	SW SET	When selected FAS mode, audio recording level will be depending on switch setting.
ALC MODE	ALC + EEI	When selected ALC mode including FAS mode, EEI function will be activated.
	ONLY ALC	When selected ALC mode including FAS mode, EEI function will not be activated.
EEI MAX	U MODEL	1/240 Maximum shutter speed is set to 1/240 second.
		1/480 Maximum shutter speed is set to 1/480 second.
		1/960 Maximum shutter speed is set to 1/960 second.
	E MODEL	1/200 Maximum shutter speed is set to 1/200 second.
		1/400 Maximum shutter speed is set to 1/400 second.
		1/800 Maximum shutter speed is set to 1/800 second.
IRIS ENF. AUTO	OFF	When selected FULL AUTO mode, IRIS mode will be depend on IRIS MODE switch of the lens.
	ON	When selected FULL AUTO mode, Auto Iris mode will be activated even Manual Iris mode is selected.
PIXEL COMPEN DET	CANCEL	Does not execute blemish detection.
	EXECUTE	Execute blemish detection.

(□ indicates the factory setting.)

Table 1-5-3 (1)

White blemish detection

Open the User MENU, select "VIDEO FORMAT", "REC", set to "HDV-HD24P" and push the SHUTTER dial. Select "FRAME RATE", set to "24" and push the SHUTTER dial. Select "EXECUTE", push the SHUTTER dial, then GY-HD100 is automatically rebooted.

```

--- VIDEO FORMAT ---
FRAME RATE 24
EXECUTE
▷ REC HDV-HD24P
EXECUTE
ASPECT ---
PB OUTPUT 720P
PB TAPE DVCAM
OUTPUT TERMINAL COMPOSITE
SET UP 0.0%
PAGE BACK

```

Fig. 1-5-3 (2)

Open the Service MENU, select "CAMERA1", "PIXEL COMPEN DET", "EXECUTE" and push the SHUTTER dial, then CCD white blemish detect operation start automatically. At this time, the lens is closed and the camera is in the SLOW SHUTTER mode.

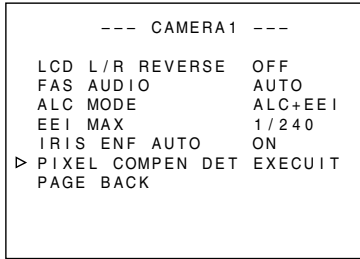


Fig. 1-5-3 (3)

After completing white blemish detection, return "REC" and "FRAME RATE" setting to original one's.

When the white blemish detection completes, the result data is stored in the memory of CPU, end message is shown as below, then please turn off.

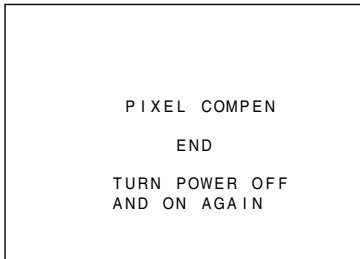


Fig. 1-5-3 (4)

If any errors occurs during the detection operation, an error message is displayed, and return to MENU display.

Message	Error details	Treatment
LENS NOT CLOSED?	The lens does not close for detection.	No result is stored in the EEPROM.
COUNT OVER	The number exceeds the specified count.	Only the specified count of data is stored in the EEPROM.

Table 1-5-3 (2)

■ Details on correctable white blemish

Up to 127 errors with composite video levels of 50mV or more can be corrected. No limitation of errors per line within 127 however, the maximum consecutive errors are 4 and the correction results may be inferior to the case of single error correction.

Oblique noise may be observed on the screen during white blemish detection. This is due to the principles of error correction and is not a malfunction.

White blemish can be detected in the following area.

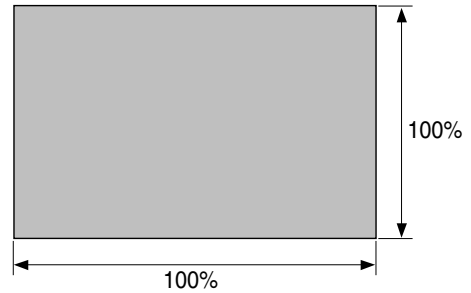


Fig. 1-5-3 (5)

1.5.4 CAMERA 2 menu

(1) In a service menu, place the cursor on "CAMERA 2" and push the SHUTTER dial to display the CAMERA2 menu.

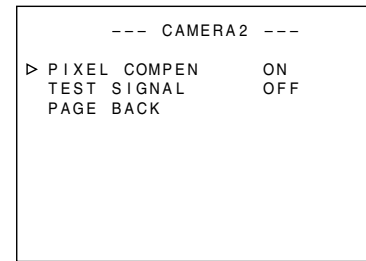


Fig. 1-5-4

Operation ways are almost same as CAMERA 1 MENU, so please refer it.

Item	Parameter
PIXEL COMPEN *1	OFF Does not correct the detected white blemish.
	<input checked="" type="checkbox"/> ON Corrects the detected white blemish.
	CHECK Light up the pixels which are the detected white blemish.

(indicates the factory setting.)

Table 1-5-4

*1: This mode is automatically set to ON when the power is turned on.

The OFF mode is enabled only after it is set to OFF at this screen until the power is turned off.

1.5.5 CAMERA 3 menu

In a service menu, place the cursor on "CAMERA 3" and push the SHUTTER dial to display the CAMERA3 menu.

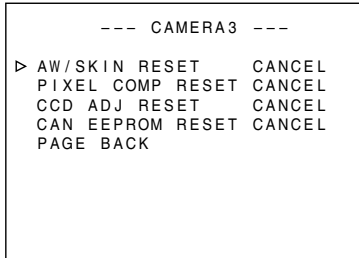


Fig. 1-5-5

Operation ways are almost same as CAMERA 1 MENU, so please refer it.

Item	Parameter	
AW/SKIN RESET	<input type="checkbox"/> CANCEL	Does not reset the auto white data and the skin detect data.
	<input type="checkbox"/> EXECUTE	Resets the auto white data and the skin detect data.
PIXEL COMP RESET	<input type="checkbox"/> CANCEL	Does not reset the detected white blemish data.
	<input type="checkbox"/> EXECUTE	Resets the detected white blemish data.
CCD ADJ RESET	<input type="checkbox"/> CANCEL	Does not reset the CCD adjustment data.
	<input type="checkbox"/> EXECUTE	Resets the CCD adjustment data.
CAM EEPROM RESET	<input type="checkbox"/> CANCEL	Does not reset the EEPROM data for CAMERA CPU.
	<input type="checkbox"/> EXECUTE	Resets the EEPROM data for CAMERA CPU.

(indicates the factory setting.)

Table 1-5-5

1.5.6 VTR 1 menu

In a service menu, place the cursor on "VTR 1" and push the SHUTTER dial to display the VTR 1 menu.

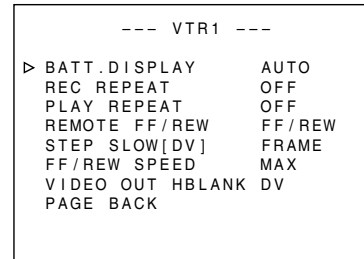


Fig. 1-5-6

Operation ways are almost same as CAMERA 1 MENU, so please refer it.

Item	Parameter	
BATT. DISPLAY	<input type="checkbox"/> OFF	Does not indicate the Battery information.
	<input type="checkbox"/> AUTO	Show the Battery information as Battery Info of VTR3 MENU.
REC REPEAT	<input type="checkbox"/> OFF	Disable repeat recording
	2	Perform repeat recording 2 times.
	5	Perform repeat recording 5 times.
	12	Perform repeat recording 12 times.
	ON	Enable full repeat recording.
PLAY REPEAT	<input type="checkbox"/> OFF	Disable repeat playback.
	ON	Enable repeat playback.
REMOTE FF/REW	<input type="checkbox"/> FF/REW	When FF/REW command is received from REMOTE, it runs as FF/REW mode.
	SEARCH	When FF/REW command is received from REMOTE, it runs as search FWD/REV mode.
STEP SLOW [DV]	FIELD	
	<input type="checkbox"/> FRAME	
FF/REW SPEED	X5	Maximum FF/REW speed is limited up to x5.
	X7.5	Maximum FF/REW speed is limited up to x7.5.
	X10	Maximum FF/REW speed is limited up to x10.
	<input type="checkbox"/> MAX	*1No limitation
VIDEO OUT HBLANK	DV	Horizontal effective pixels are 720.
	<input type="checkbox"/> STANDARD	Horizontal effective pixels are 710 at 60/30 frame rate and 702 at 50/25 frame rate.

(indicates the factory setting.)

Table 1-5-6

*1: Maximum speed is x20 at VTR mode, but no function at CAM mode.

1.5.7 VTR 2 menu

In a service menu, place the cursor on "VTR 2" and push the SHUTTER dial to display the VTR 2 menu.

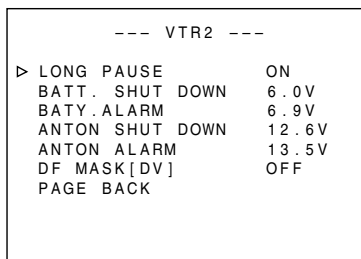


Fig. 1-5-7

Operation ways are almost same as CAMERA 1 MENU, so please refer it.

Item	Parameter
LONG PAUSE	OFF Disable the long pause function.
	<input type="checkbox"/> ON Enable the long pause function.
BATT. SHUTDOWN *1	<input type="checkbox"/> 6.8V Setting of the battery voltage when shutdown should occur. (Setting in 0.1V steps between 6.3V and 7.5V.)
BATT. ALARM *1	<input type="checkbox"/> 6.9V Setting of the battery voltage when battery alarm is indicated. (Setting in 0.1 V steps between 6.3V and 8.0V.)
ANTON SHUT DOWN	<input type="checkbox"/> 12.0V Setting of the ANTON battery voltage when shutdown should occur. (Setting in 0.1V steps between 10.5V and 13.6V.)
ANTON ALARM	<input type="checkbox"/> 13.5V Setting of the ANTON battery voltage when battery alarm is indicated. (Setting in 0.1 V steps between 10.5V and 13.6V.)
DV DF MASK *2	<input type="checkbox"/> OFF "1" is recorded as per format.
	ON "0" is always recorded.

(indicates the factory setting.)

Table 1-5-7

*1 : When operating by DC input, then "SHUT DOWN" will be set to 6.0V, and "ALARM" will be set to 6.9V automatically, and these setting will not relate to menu setting.

*2 : FRAME RATE 50/25 only

1.5.8 VTR 3 menu

In a service menu, place the cursor on "VTR 3" and push the SHUTTER dial to display the VTR 3 menu.

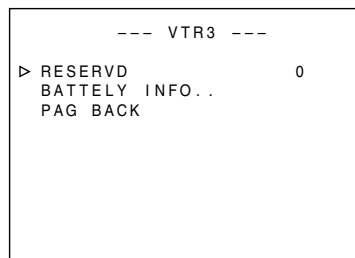


Fig. 1-5-8 (1)

Changing of setting is prohibited.

Item	Parameter
RESERVED	<input type="checkbox"/> 0 Normal setting
BATTERY INFO	Refer to next page.

(indicates the factory setting.)

Table 1-5-8 (1)

■ BATTERY INFO Display

Display method

Move the cursor to the "BATTERY INFO.." in "VTR3" screen and press SHUTTER dial. BATTERY INFO screen (right figure) will be displayed.

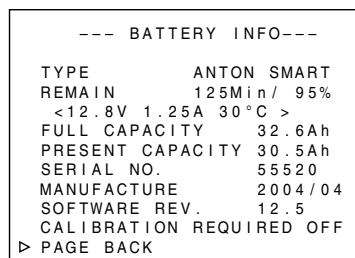


Fig.1-5-8 (2) BATTERY INFO
(When the Anton/Bauer Smart Battery is detected)

Item		Descriptions
TYPE	ANTON SMART	When ANTON/BAUER SMART BATTERY is connected
	AFG	When BATTERY with I/F of AFG (AnalogFuelGauge) is connected
	OTHERS	When other BATTERY is connected
	NO DETECT	When no BATTERY is connected
REMAIN	Minute	Remaining battery lasting time [min] calculated based on current power consumption
	%	Current remaining capacity [%] corresponding to total battery capacity
	Voltage	Output voltage of battery
	Current	Output current of battery
	Temperature	Temperature of battery
FULL CAPACITY		Capacity [Ah] when the BATTERY is fully charged
PRESENT CAPACITY		Current BATTERY capacity [Ah]
SERIAL NO.		Manufactured serial number
MANUFACTURE		Manufactured date
SOFTWARE REV.		Software revision number
CALIBRATION		OFF Calibration not required
REQUIRED		ON Calibration required

Table 1-5-8 (2)

1.5.9 DIP SW menu

(1) In a service menu, place the cursor on "DIP SW " and push the SHUTTER dial to display the DIP SW menu.

```

--- DIP SW [1 / 6] ---
DIPSW ALL RESET  CANCEL
▷ NEXT PAGE
PAGE BACK

```

Fig. 1-5-9 (1)

```

--- DIP SW [2 / 6] ---
DIPSW 0          0
▷ DIPSW 1         OFF
DIPSW 2         OFF
DIPSW 3         OFF
DIPSW 4         OFF
DIPSW 5         OFF
DIPSW 6         OFF
DIPSW 7         OFF
NEXT PAGE
PAGE BACK

```

Fig. 1-5-9 (2)

```

--- DIP SW [3 / 6] ---
DIPSW 8          OFF
▷ DIPSW 9         OFF
DIPSW 10         OFF
DIPSW 11         OFF
DIPSW 12         OFF
DIPSW 13         OFF
DIPSW 14         OFF
DIPSW 15         OFF
NEXT PAGE
PAGE BACK

```

Fig. 1-5-9 (3)

```

--- DIP SW [4 / 6] ---
DIPSW 16         OFF
▷ DIPSW 17         OFF
DIPSW 18         OFF
DIPSW 19         OFF
DIPSW 20         OFF
DIPSW 21         OFF
DIPSW 22         OFF
DIPSW 23         OFF
NEXT PAGE
PAGE BACK

```

Fig. 1-5-9 (4)

```

--- DIP SW [5 / 6] ---
DIPSW 24         OFF
▷ DIPSW 25         OFF
DIPSW 26         OFF
DIPSW 27         OFF
DIPSW 28         OFF
DIPSW 29         OFF
DIPSW 30         OFF
DIPSW 31         OFF
NEXT PAGE
PAGE BACK

```

Fig. 1-5-9 (5)

```

---DIP SW [6 / 6] ---
DIPSW 32         0
▷ DIPSW 33         0
DIPSW 34         0
DIPSW 35         OFF
DIPSW 36         OFF
DIPSW 37         OFF
DIPSW 38         OFF
DIPSW 39         OFF
PAGE BACK

```

Fig. 1-5-9 (6)

Operation ways are almost same as CAMERA 1 menu, so please refer it.

All DIP Switch settings which are shown below should not be changed except for repair or maintenance. And do not forget to return original position after repair.

Item	Parameter	Factory setting
--- DIP SW 1/6 ---		
DIP SW ALL RESET	CANCEL Cancel to reset all DIPSW settings. EXECUTE Execute to reset all DIPSW settings.	CANCEL
--- DIP SW 2/6 ---		
DIP SW 0	1 : Displays error rate monitor and CPU port information	0
DIP SW 1	ON : Disable warning message display	OFF
DIP SW 2	Change prohibited	OFF
DIP SW 3	ON : Disable DEW warning	OFF
DIP SW 4	Change prohibited	OFF
DIP SW 5	Change prohibited	OFF
DIP SW 6	Change prohibited	OFF
DIP SW 7	Change prohibited	OFF
--- DIP SW 3/6 ---		
DIP SW 8	Change prohibited	OFF
DIP SW 9	Change prohibited	OFF
DIP SW 10	ON : Displays error rate solely for audio block on the error rate monitor screen	OFF
DIP SW 11	Change prohibited	OFF
DIP SW 12	Change prohibited	OFF
DIP SW 13	Change prohibited	OFF
DIP SW 14	Change prohibited	OFF
DIP SW 15	Change prohibited	OFF
--- DIP SW 4/6 ---		
DIP SW 16	Change prohibited	OFF
DIP SW 17	Change prohibited	OFF
DIP SW 18	Change prohibited	OFF
DIP SW 19	Change prohibited	OFF
DIP SW 20	Change prohibited	OFF
DIP SW 21	Change prohibited	OFF
DIP SW 22	Change prohibited	OFF
DIP SW 23	Change prohibited	OFF
--- DIP SW 5/6 ---		
DIP SW 24	Change prohibited	OFF
DIP SW 25	Change prohibited	OFF
DIP SW 26	Change prohibited	OFF
DIP SW 27	Change prohibited	OFF
DIP SW 28	Change prohibited	OFF
DIP SW 29	Change prohibited	OFF
DIP SW 30	Change prohibited	OFF
DIP SW 31	Change prohibited	OFF

--- DIP SW 6/6 ---		
DIP SW 32	Change prohibited	0
DIP SW 33	Change prohibited	0
DIP SW 34	Change prohibited	0
DIP SW 35	Change prohibited	OFF
DIP SW 36	Change prohibited	OFF
DIP SW 37	Change prohibited	OFF
DIP SW 38	Change prohibited	OFF
DIP SW 39	Change prohibited	OFF

Table 1-5-9

ERROR RATE MONITOR screen

By setting "DIP SW 0" to "1", error rate and each CPU port information display screen will appear on the LCD monitor, View finder and monitor.

The values which are pointed by arrow are the error rate value. Error rate of CH-1 shown in upper row, and CH-2 shown in lower row, and these value are indicated total AUDIO/VIDEO error rate.

When the error rate increase, the warning message "HEAD CLEANING REQUIRED" is displayed. And this message is indicate when the error rate value is over 4,500 (one-channel AUDIO/VIDEO total) for 7 seconds consecutively.

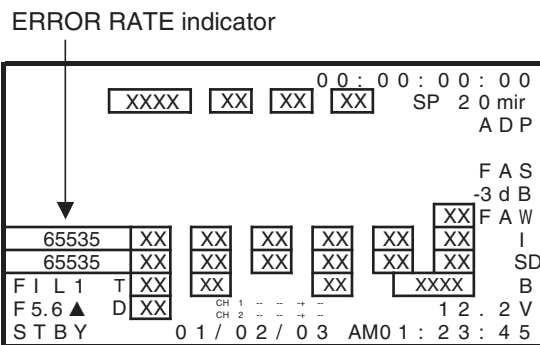


Fig. 1-5-9 (7)

1.5.10 HOUR METER

In a service menu, place the cursor on "HOUR METER " and push the SHUTTER dial to display the HOUR METER menu.

```

--- HOUR METER[1/2] ---
▷ DRUM          CLEAR
TOTAL DRUM     000000H
FAN            000000H
POWER         000000H
CAPSTAN       000000H
SEACH         000H00M
FF/REW        000H00M
NEXT PAGE
PAGE BACK
    
```

Fig. 1-5-10 (1)

```

--- HOUR METER[2/2] ---
▷ LOADING      0000000
EJECT         0000000
FWD/REV       0000000
CLEANING TAPE 0000000
PAGE BACK
    
```

Fig. 1-5-10 (2)

Operation ways are almost same as CAMERA 1 menu, so please refer it.

Item	Parameter
DRUM	000000 Displays the drum hour meter(maintenance for drum)
	CLEAR Resets the drum hour meter.
TOTAL DRUM	000000 Displays the total hour meter.
	CLEAR Resets the total drum hour meter. (This does not work unless the special setting)
FAN	000000 Displays the fan hour meter.
	CLEAR Resets the fan hour meter.
POWER	000000 Displays the power hour meter.
	CLEAR Resets the power hour meter.
CAPSTAN	000000 Displays the capstan hour meter.
	CLEAR Resets the capstan hour meter.
SEARCH	000000 Displays the search hour meter.
	CLEAR Resets the search hour meter.
FF/REV	000000 Displays the FF/REW hour meter.
	CLEAR Resets the FF/REW hour meter.
LOADING	000000 Displays the loading count.
	CLEAR Resets the loading count.
EJECT	000000 Displays the eject count.
	CLEAR Resets the eject count.
FWD/REV	000000 Displays the forward/reverse switching count.
	CLEAR Resets the forward/reverse switching count.
CLEANING TAPE	000000 Displays the cleaning tape working count.
	CLEAR Resets the cleaning tape working count.

Table 1-5-10

1.5.11 ERROR HISTORY

In a service menu, place the cursor on "ERROR HISTORY " and push the SHUTTER dial to display the ERROR HISTORY menu.

```

--- ERROR HISTORY ---
▷ (HISTORY-1) 7101
  CAP MOTOR FAILURE
(HISTORY-2) 7101
  CAP MOTOR FAILURE
(HISTORY-3) 7101
  CAP MOTOR FAILURE
(HISTORY-4) 7101
  CAP MOTOR FAILURE
CLEAR CANCEL
PAGE BACK
    
```

Fig. 1-5-11

- (1) Rotate the SHUTTER dial to move the cursor onto the item to show details.
- (2) Push the SHUTTER dial so that the details of ERROR HISTORY is shown.
- (3) Rotate the SHUTTER dial to move cursor onto the "CLEAR", push the SHUTTER dial, then ERROR HISTORY will be deleted.

Note :

ERROR HISTORY was stored from "HISTORY-1" box to "HISTORY-4" box. Latest error was stored "HISTORY-4" box, and if there will be occur another error then latest error history will be rewrite on "HISTORY-4". From "HISTORY-1" to "HISTORY-3" will not rewrite, except to "CLEAR" operation.

1.5.12 Detail indication of ERROR HISTORY

In a ERROR HISTORY display, place a cursor onto the item and push SHUTTER dial, then detail display (MECHANISM INFO) picture will be shown.

MECHANISM INFO has 2 pages.

```

--- MECHANISM INFO 1/2---
P.TM 000000H
SYS MODE:PLAY(01.00)
MSD MODE:PLAY(01.00)
-->STOP(00.00)
LAST KEY:PLAY(01.00)
TAPE REM[0000]
DEW [00] TEMP[00]
DIAMETER TU[00]SP[00]
NEXT PAGE
▷ PAGE BACK
    
```

Fig. 1-5-12 (1)

```

--- MECHANISM INFO 2/2---
M.POSI BRK2FAST>BRK2FAST
H.POSI INIT >CASS IN
CAP[OFF FWD]REL[OFF FWD]
TU [ON] SP[OFF] DRM[OFF]
DRV[00]CAPV[00] RELV[00]
MCV[00]REL I[00]
BGN[OFF]END[ON] CAS[OFF]
STD[OFF] HW[OFF] HW2[OFF]
SPL[OFF]THIN[ON]
▷ PAGE BACK
    
```

Fig. 1-5-12 (2)

Item	Content	Displayed Content
P.TM	POWER HOUR METER	Power hour meter is displayed.
SYS MODE	SYS CON CPU mode when error occurred PLAY (03, 00) 	SFF/SREW parameter is speed display. (Refer to Table 1-9-11 (2) Speed parameter) Parameters of other modes are irrelevant.
MSD MODE	MSD CPU mode and target mode when error occurred PLAY (01, 00) 	EJECT (01) : Eject STOP (02) : Stop PLAY (03) : Play REC (13) : Rec STL (04) : Still RECP (14) : Rec Pause FF (05) : FF DVRC (15) : DV Rec REW (06) : Rew DVRP (16) : DV Rec Pause SFF (07) : Search Fwd POFF (1A) : Power Off SREW (08) : Search Rev NDEF (1F) : During initial operation SFF/SREW parameter is speed display (See Table 1-9-11 (2))
LAST KEY	Final Key code when error occurred PLAY (E7, 01) 	Other parameters are 01: ON, 00: OFF REC (E0) : Rec SFF (EB) : Search Fwd RECP (E1) : Rec Pause SREW (EC) : Search Rev DVRC (E2) : DV Rec Pause STOP (F0) : Stop ADUB (E5) : Audio Dub EJECT (F1) : Eject ADBP (E6) : Audio Dub Pause HWUP (F2) : Housing Up PLAY (E7) : Play HWDN (F3) : Housing Down STL (E8) : Still POFF (F4) : Power Off FF (E9) : FF DVRC (F5) : DV Rec REW (EA) : Rew PON (FA) : Power on
TAPE REM	TAPE REMAIN	Displays tape remaining in minutes ([FFFF] : not detected)
DEW	DEW sensor A/D intake value	DEW display at over [48]
TEMP	Temperature sensor A/D intake value The value "49" [5°C] is threshold of detecting low temperature. The value "DC" [60°C] is the threshold of displaying "OVER HEATING" message.	Temperature is displayed in hexadecimal value. -10°C ➔ [22] 20°C ➔ [7C] 50°C ➔ [CC] - 5°C ➔ [2D] 25°C ➔ [8C] 55°C ➔ [D4] 0°C ➔ [3A] 30°C ➔ [9C] 60°C ➔ [DC] 5°C ➔ [49] 35°C ➔ [AA] "OVER HEATING" message 10°C ➔ [59] 40°C ➔ [B7] 65°C ➔ [E1] 15°C ➔ [6A] 45°C ➔ [C2] 70°C ➔ [E6]
DIAMETER	Displays wound tape diameter (Take-up, Supply)	[00]—[FF] : 0mm-82mm (Diameter) ([00] is non-detected)
M. POSI	Mechanism position and target mechanism position	[2EJ], [EJ], [EJ2CAIN], [CAIN], [CAIN2HLD], [HLD], [HLD2REV], [REV], [REV2FWD], [FWD], [FWD2STP], [STP], [STP2], [CLNOFF], [INIT]
CAP	Capstan status	[ON] : Rotate [FWD/REV]: Direction display [OFF] : Stop
REL	Reel status	[ON] : Rotate [FWD/REV]: Direction display [OFF] : Stop
DRM	Drum status	[ON] : Rotate [OFF] : Stop
DIR	Direction of tape running (Direction of target)	[FWD/REV]: Direction display
DRV	Drum control voltage	[00-FF] : 0—3V
CAPV	Capstan control voltage	[00-FF] : 0—3V
RELV	Reel control torque value	[00-FF] : 0—3A

Item	Content	Displayed Content
MCV/SPD	Loading/cassette housing control voltage (when error code 4xxx and error code 3xxx is displayed.)	[00-FF] : 0—8V (Displays mode motor control voltage during error code 3xxx) (Displays cassette motor control voltage during error code 4xxx)
	Tape speed (When the code excepting error code 4xxx and error code 3xxx is displayed.)	[00-FA] : 0—25X (FF is displayed when the speed is faster than this.) “Tape speed” is a function to convert the hexadecimal value into a decimal value, and no speed parameter of the tape. (ex. FAh = 250 → The speed is 25.0X.)
RELI	Reel current (Cassette housing motor current only during housing-related warning)	[00-FF] : 0—1.2A
BGN	Begin sensor	[ON] : Leader tape detected [OFF] : Magnetic tape detected
END	End sensor	[ON] : Trailer tape detected [OFF] : Magnetic tape detected
CAS	Cassette SW status	[ON] : No cassette [OFF] : Cassette detected
THIN	Thin tape detection	[ON] : THIN [OFF] : NORMAL

Table 1-5-12 (1) MECHANISM INFO content

Parameter	Speed
BD	+ 8.5
A9	+ 5.5
91	+ 2.5
80	+ 1
81	- 1.5
91	- 2.5
A9	- 4.5
BD	- 6.5

Table 1.5.12 (2) HDV Speed parameter

Parameter	Speed	Parameter	Speed
00	x 0	82	x 1.08
1F	x 0.03	83	x 1.11
40	x 0.10	84	x 1.12
53	x 0.20	85	x 1.16
61	x 0.30	91	x 2.00
6D	x 0.50	A9	x 5.00
7A	x 0.80	BD	x 9.00
7B	x 0.84	C0	x 10.0
7D	x 0.90		
7F	x 0.96		
80	x 1.00		
81	x 1.04		

Table 1-5-12 (3) DV Speed parameter

Error code	Display	Content of occurrence	Method of detection	Detected signal
0201	CONDENSATION ON DRUM	DEW detected	If DEW sensor detects condensation	IC71 (MSD) –detects voltage of pin E16
3200	LOADING FAILURE	Does not load	If mechanism position does not move in loading direction within 5 seconds	IC71 (MSD) –detects output of pin F14, rotary encoder
3300	UNLOADING FAILURE	Does not unload	If mechanism position does not move in unloading direction within 5 seconds	IC71 (MSD) –detects output of pin F14, rotary encoder
	No display	Does not intake	If intake is not completed within 5 seconds (Ejects without warning)	IC71 (MSD) –pin M9, CASSETTE SW is not detected within 5 seconds
4100	CASSETTE EJECT FAILURE	Does not eject	If eject is not completed within 5 seconds	IC71 (MSD) –pin P9, HOUSING SW is not detected within 5 seconds
5605	DEFECTIVE TAPE	Tape abnormality during intake	If begin or end side sensor is ON after intake	IC71 (MSD) –pin E15, START sensor and pin E14, END sensor are both detected
5606	DEFECTIVE TAPE	Tape tear during unloading	If reel FG is excessive during unloading	IC71 (MSD) –pin R14, TU REEL FG is detected
5607	DEFECTIVE TAPE	Tape tear during loading	If reel FG is insufficient during loading	IC71 (MSD) –pin R14, TU REEL FG is detected
5608	DEFECTIVE TAPE	Tape tear on the loading side	If only supply side reel does not rotate during FWD/REV	IC71 (MSD) –pin R13, SUP REEL FG is not detected
5609	DEFECTIVE TAPE	Tape tear during slack takeup	If tape slack takeup is not completed within 10 seconds	IC71 (MSD) –pin R14, TU REEL FG and pin R13, SUP REEL FG are both detected
5702	TAPE END DET. ERROR	End sensor abnormality	If trailer tape sending is not completed within 3 seconds	IC71 (MSD) –pin E14, END sensor is detected for over 3 seconds
5802	TAPE BEGIN DET. ERROR	Begin sensor abnormality	If leader tape sending is not completed within 3 seconds	IC71 (MSD) –pin E15, START sensor is detected for over 3 seconds
7001	DRUM MOTOR FAILURE	Drum motor does not rotate	If drum motor does not rotate for over 4 seconds	IC71 (MSD) –pin T14, DRUM FG is not detected for over 4 seconds
7101	CAP MOTOR FAILURE	Capstan motor does not rotate	If capstan motor does not rotate for over 2 seconds	IC71 (MSD) –pin T13, CAP FG is not detected for over 2 seconds
7202	SUPPLY REEL FAILURE	SUP reel does not rotate	If SUP reel does not rotate for over 3 seconds	IC71 (MSD) –pin R13, SUP REEL FG is not detected for over 3 seconds
7203	SUPPLY REEL FAILURE	SUP side tape slack	If only SUP reel does not rotate during REV	IC71 (MSD) –pin R13, SUP REEL FG is not detected
7302	TAKE UP REEL FAILURE	TU reel does not rotate	If TU reel does not rotate for over 3 seconds	IC71 (MSD) –pin R14, TU REEL FG is not detected for over 3 seconds
7303	TAKE UP REEL FAILURE	TU side tape slack	If only TU reel does not rotate during FWD	IC71 (MSD) –pin R14, TU REEL FG is not detected
7305	TAKE UP REEL FAILURE	Tape slack during unloading	If TU reel FG is insufficient during unloading	IC71 (MSD) –pin R14, TU REEL sensor is detected

Table 1-5-12 (4) Error Code Contents

1.5.13 OTHERS menu

In a service menu, place the cursor on "OTHERS" and push the SHUTTER dial to display the OTHERS menu.

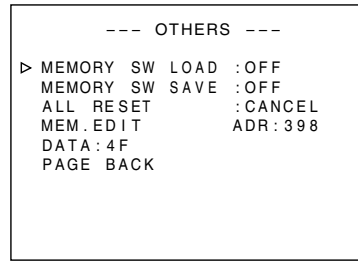


Fig. 1-5-13

Operation ways are almost same as CAMERA1 MENU, so please refer it.

Item	Parameter
MEMORY SW LOAD	<input type="checkbox"/> OFF Standard setting
	START Menu SW information is loaded from a store area.
MEMORY SW SAVE	<input type="checkbox"/> OFF Standard setting
	START Menu SW information is saved to a store area.
ALL RESET	<input type="checkbox"/> CANCEL Standard setting
	EXECUTE Resets all EEPROM data to default settings except adjustment data, hour meter data, and IEEE1394 ID data. Default settings at time of shipment differ by market region. I: for Japan, U: for USA, E: for EU, EC: for China
MEM.EDIT	Contents of the EEPROM can be edited directly ADR: Address (0x000-0x7DF) display DATA: Display of data embedded in address shown by ADR Operation procedure 1. Rotate the SHUTTER dial to move the cursor to MEM.EDIT. 2. Push the SHUTTER dial to blink the "ADR" parameter. 3. Then rotate the SHUTTER dial to adjust the specified value. 4. Next, push the SHUTTER dial to blink the DATA parameter. 5. Rotate the SHUTTER dial to adjust the specified value. 6. Finally, push the SHUTTER dial to store the data. (NOTE) Data that is crucial for the system is stored in the EEPROM, and making unadvised changes to it can cause the unit to stop operating correctly. Please do not use anything other than the IEEE1394 ID setting.

(is default setting when shipped from factory)

Table 1-5-13 OTHERS Menu Setting Items List

1.5.14 CPU version menu

Displays version of SYSCON CPU, Camera CPU, VTR CPU, ENC CPU, PACKAGE, FPGA2, FPGA3 and FPGA4.

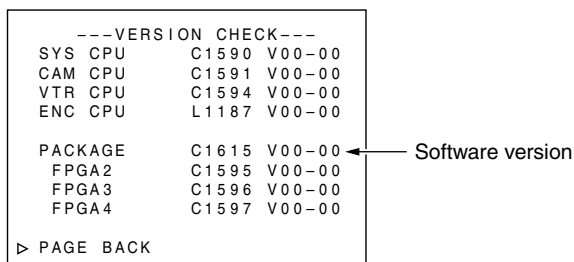


Fig. 1-5-14 CPU Version

1.5.15 EEP-ROM

(1) EEP-ROM and maintenance data

GY-HD100 is equipped with three EEP-ROMs for the purpose of data maintenance, and their contents are as per the following list. When the circuit board or EEP-ROM is replaced, there will be no data in the EEP-ROM. When the unit is powered up, and the SYSCON CPU recognizes that there is no data in the EEP-ROM, it automatically writes initial data into the EEP-ROM to initialize it. The memory data shown in Table 1-5-15 will all be reset back to default settings, so it will be necessary to perform necessary adjustments and settings again.

EEP-ROM	Board name	Memory data content
IC70	MAIN board (MSD CPU)	<ul style="list-style-type: none"> Adjusted data (DVC section) IEEE1394 ID data HOURLY METER data
IC57	MAIN board (Camera CPU)	<ul style="list-style-type: none"> Blemish data
IC61	MIF board (SYSCON CPU)	<ul style="list-style-type: none"> Adjusted data (Camera section) User menu and Service menu settings data ERROR HISTORY

Table 1-5-15 EEP-ROM Memory Data Content

(2) IEEE1394 ID setting method

IEEE1394 equipped units have an ID, as defined by the IEEE1394 standard, stored in the internal EEP-ROM (IC 70). At the time of production, the ID numbers allotted to each individual unit are written into the unit's memory, and a sticker bearing the ID is affixed inside the unit. When the EEP-ROM or MAIN circuit board is replaced, the ID needs to be set again.

Procedure for setting IEEE1394 ID

The ID is an 8 digit, hexadecimal code, with 1 high-end Byte being the model code, and 3 low-end Bytes being unique to the unit. The model code is automatically initialized, so only the lower 3 Bytes of unique code need to be set manually. Go from Service Menu → OTHERS Menu → MEM. EDIT (Memory Edit) to select the address in the ID data section and make the setting directly. The 3 low-end Byte address is as follows. Make the setting while confirming the ID printed on the label (GY-HD100U/E ID: 4Fxxxxxx, GY-HD101E ID: 4Exxxxxx) pasted on the inside of the GY-HD100 (See Fig. 1-5-15).

IEEE1394 ID data : 4F xx xx xx (Indicates on the label of GY-HD100 inside.)
 ↓ ↓ ↓
 MEMORY Address number "391" "392" "393" (Each 1 Byte ID data are stored for every one Memory Address number.)

Setting procedure

- (1) Rotate the SHUTTER dial to move the cursor to MEM. EDIT.
- (2) Push the SHUTTER dial to make the ADR parameter blink.
- (3) Select ADR parameter "391".
- (4) Push the SHUTTER dial to make the DATA parameter blink.
- (5) Rotate the SHUTTER dial to set the ID data for ADR = "391".
- (6) Push the SHUTTER dial to confirm the DATA parameter.
- (7) In the same manner, select ADR parameter "392" and "393" to set the ID data.

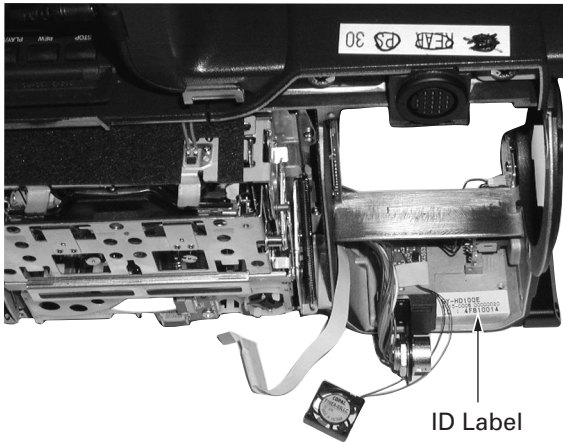


Fig. 1-5-15 ID Label Attachment Position

1.6 HOW TO UPDATE FIRMWARE

Note :

- When replacing MIF board or MAIN board, firmware update is essential.
- Do not turn the power off during the update, otherwise CPU may be destroyed and replacement of CPU or board will be required.
- Under the battery operation firmware update can not be allowed, use the AC adapter.
- When update is failed audio AUTO LED's are flashing alternately. In this case try again after removing SD memory card.
- Remove the IEEE1394 cable, otherwise it may cause some troubles on GY-HD100.
- Do not format the SD memory card by PC.
The SD memory card formatted by PC will not work correctly due to wrong formatting. In this case format the SD memory card on GY-HD100.
You can also format the SD memory card using the general digital still camera equipped SD memory card slot, or formatting software supplied from SD memory card manufacturer such as Pnasonic.

1.6.1 Preparation (Copy firmware to SD memory card)

Note: 32MB - 512 MB of Panasonic SD memory card is recommended.

- (1) Download the update file from JS-NET and unzip it to a PC.
- (2) Insert the SD memory card to the PC and confirm that no file is in the SD memory card. If there are some files, delete them.
- (3) Copy the unzipped update file(s) to the SD memory card.

1.6.2 Update procedure

- (1) Eject and take out the cassette if loaded, and close the cassette cover.
- (2) While pressing USER2 and USER3 buttons, turn on the power. Both HDV and DV LED will turn on a light.
- (3) Insert the SD memory card to the card slot of GY-HD100.
- (4) Rotate the SHUTTER dial, move the cursor to UPGRADE and press SHUTTER dial.
- (5) Rotate the SHUTTER dial, select EXECUTE and press SHUTTER dial.
- (6) Rotate the SHUTTER dial, move the cursor to CONTINUE? and press SHUTTER dial.
- (7) Rotate the SHUTTER dial, select EXECUTE and press SHUTTER dial.

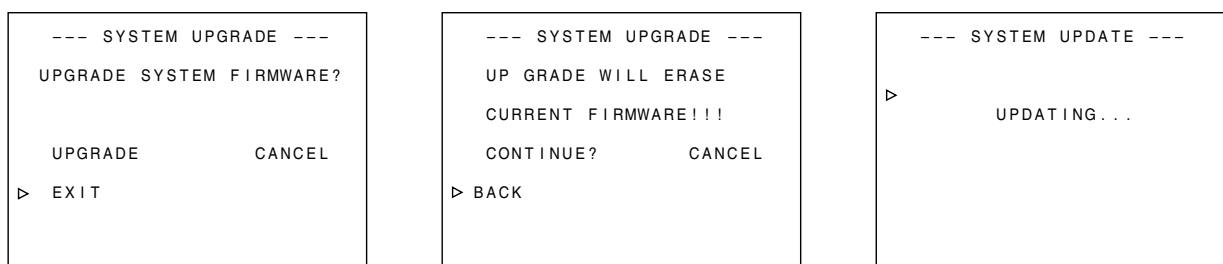


Fig.1.6.2 SYSTEM UPDATE Menu Screen

- (8) When update is completed, audio AUTO LED's of AUDIO CH-1 and CH-2 are blinking slowly. It will take about seven minutes to complete.
- (9) Remove the SD memory card, then GY-HD100 will reboot automatically.
- (10) Turn off the power and turn on again.
- (11) Enter the Service Menu to check CPU VERSION.

SECTION 2 MECHANICAL ADJUSTMENTS

2.1 BEFORE ADJUSTMENTS

2.1.1 Precautions

- 1) Be sure to apply a screw securing torque when attaching a part.
The securing torque should be 0.04 N-m (0.4 kgf-cm) unless otherwise specified.
- 2) Always unplug the power cord of the set before attaching, removing or soldering a part.
- 3) When unplugging a connector, do not pull the wire but grasp the connector body.
- 4) Do not make an adjustment or rotate a potentiometer blindly while the source of trouble is not identified.
- 5) Before adjusting electrical circuitry, be sure to wait for more than 10 minutes after turning the power on.

2.1.2 Measuring instruments required for adjustments

Instrument	Condition
Oscilloscope	Calibrated instrument with measuring bandwidth of 100 MHz or more.

Table 2-1-1

2.1.3 Equipment required for adjustments

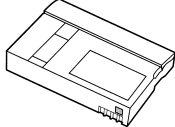
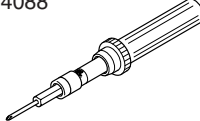
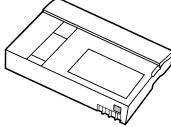
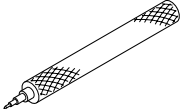
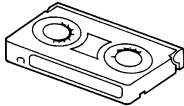
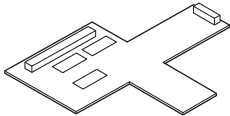
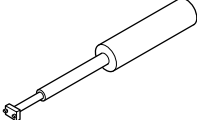
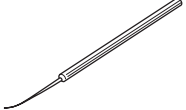
<p>1 Alignment tape</p> <p>MC-1 (NTSC) MC-2 (PAL)</p> 	<p>5 Torque screwdriver</p> <p>YTU94088</p> 
<p>2 DV tape</p> <p>For use in self-recording/playback. (M-DV 63PRO BU)</p> 	<p>6 Slit washer attaching tool</p> <p>YTU94121A</p> 
<p>3 Cassette torque meter</p> <p>YTU94150A (or YTU94151A)</p> 	<p>7 Connector board (REWRITE PWB)</p> <p>CK453800C</p> 
<p>4 Guide screwdriver</p> <p>YTU94085</p> 	<p>8 Chip IC replacement tool</p> <p>PTS40844-2</p> 

Table 2-1-2

2.2 BASICS OF MECHANISM DISASSAMBLY/ASSEMBLY

2.2.1 Assembly mode

The disassembly and assembly of the mechanism can be done in the ASSEMBLY mode (see Table 2-2-1).

The ASSEMBLY mode is provided in the intermediate position between C-IN and Harf LOAD. As the C-IN (Cassette IN) mode is usually set when a cassette tape is ejected, the ASSEMBLY mode should be entered after entering the C-IN mode.

There are 2 ways to set to ASSEMBLY mode as shown below:

- 1) Apply DC 3 V to the motor.
- 2) Remove the motor from the bracket (Gear cover) and turn the wheel gear 2 using screwdriver.

As shown in Fig. 2-2-1, the ASSEMBLY mode position refers to where the hole position of 7 cm component matches the hole position of the main deck.

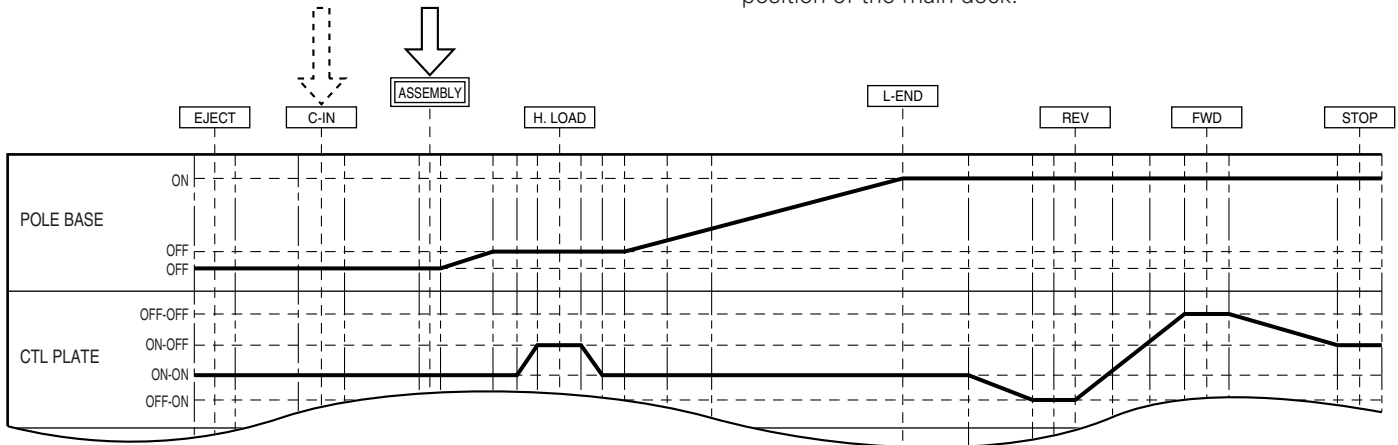


Table 2-2-1

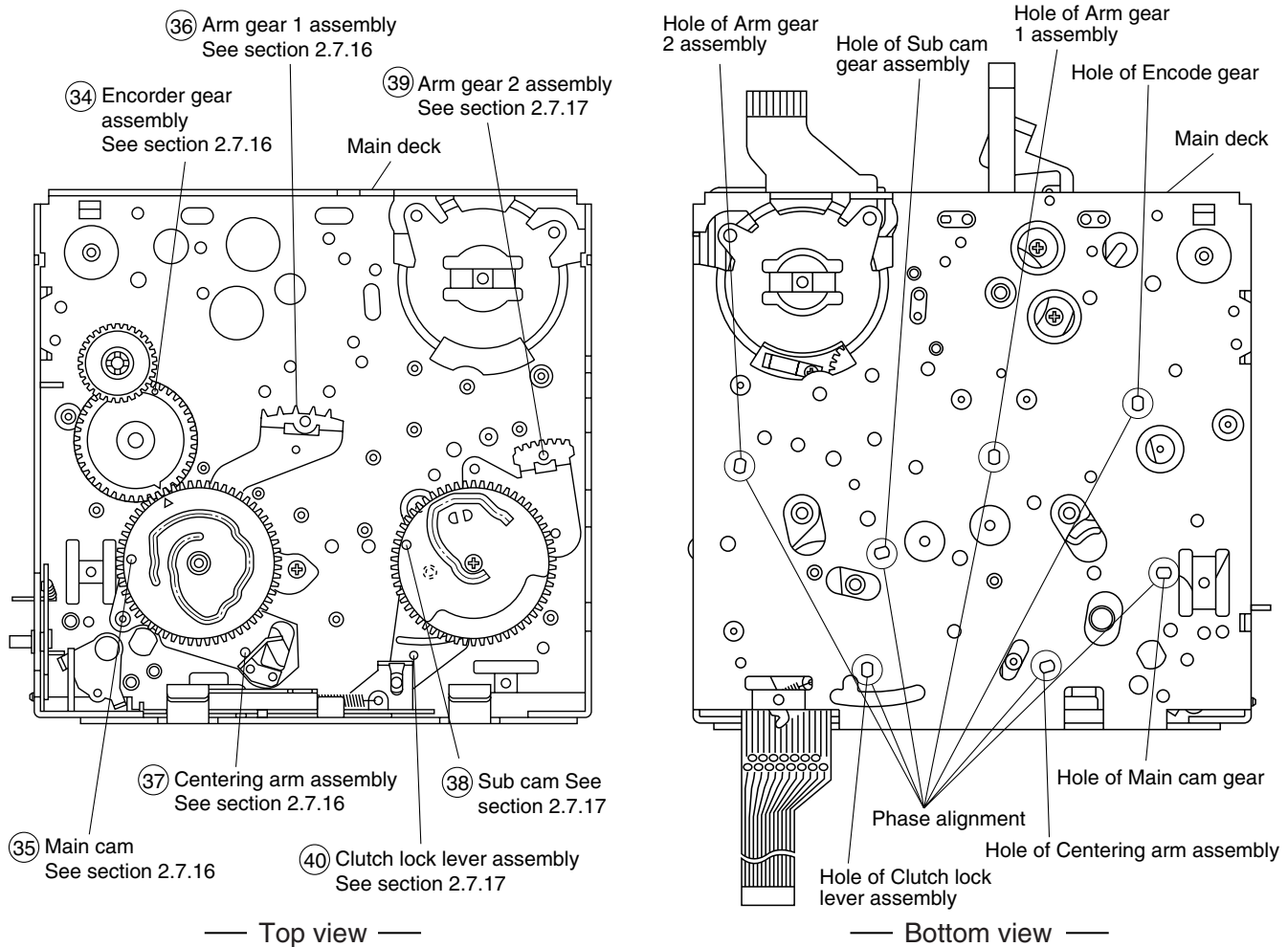


Fig. 2-2-1

2.3 MECHANISM TIMING CHART

See following table (Table 2-3-1).

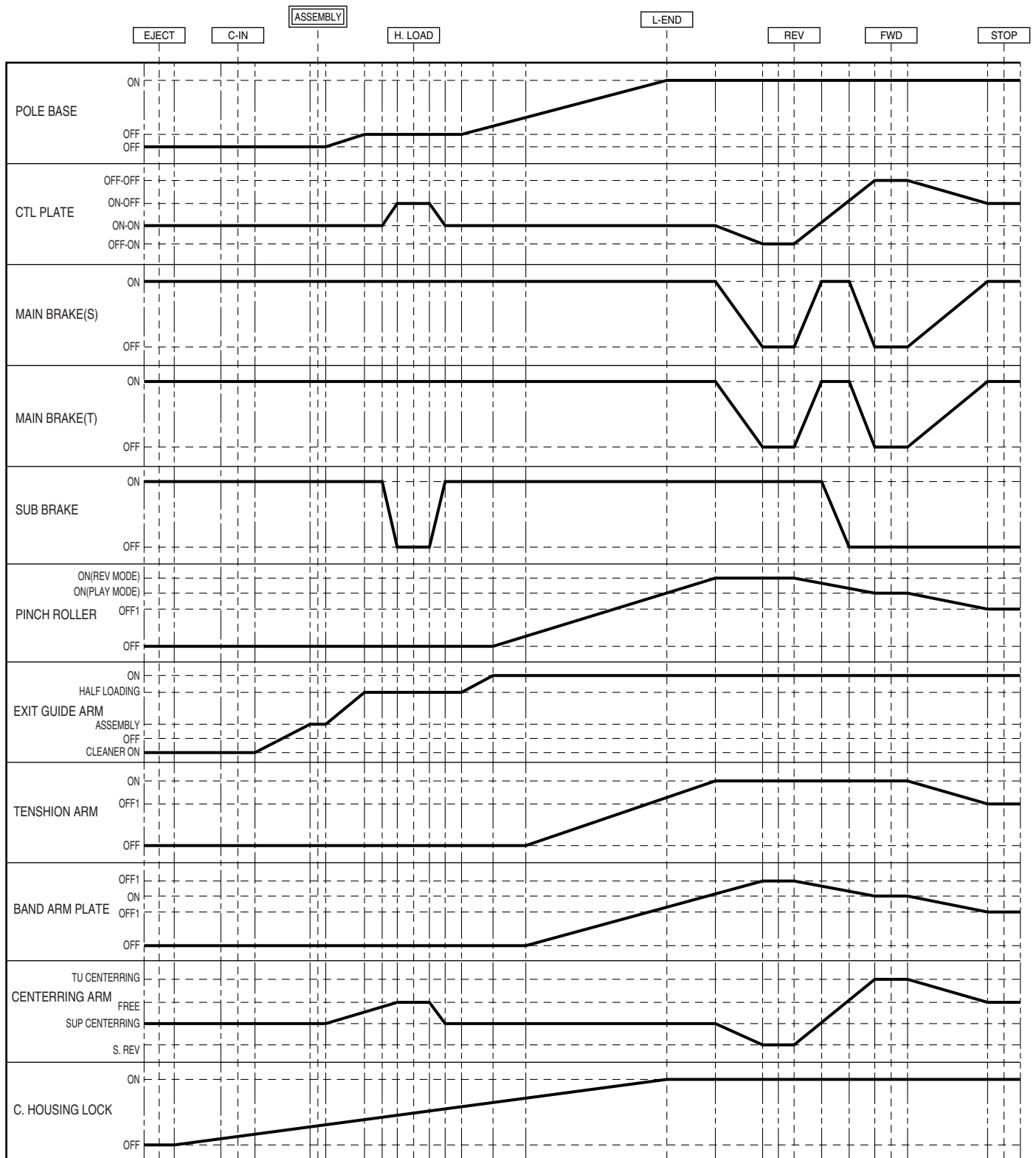


Table 2-3-1

2.4 MAINTENANCE AND INSPECTION OF MAJOR PARTS

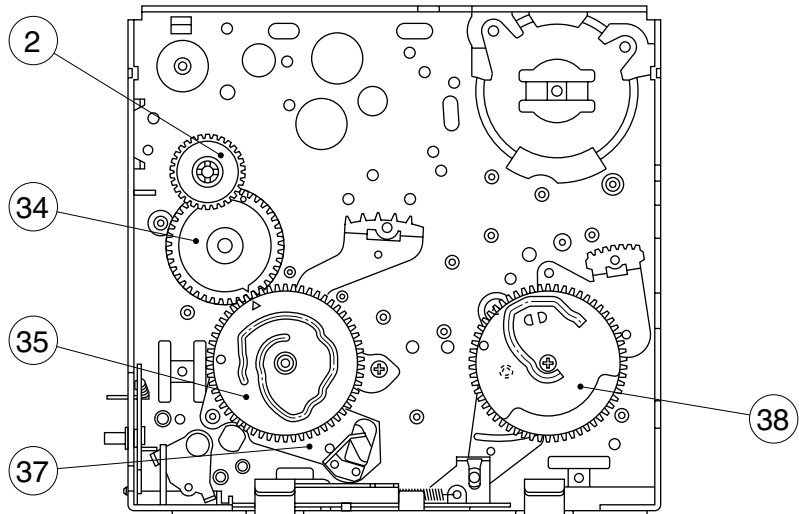
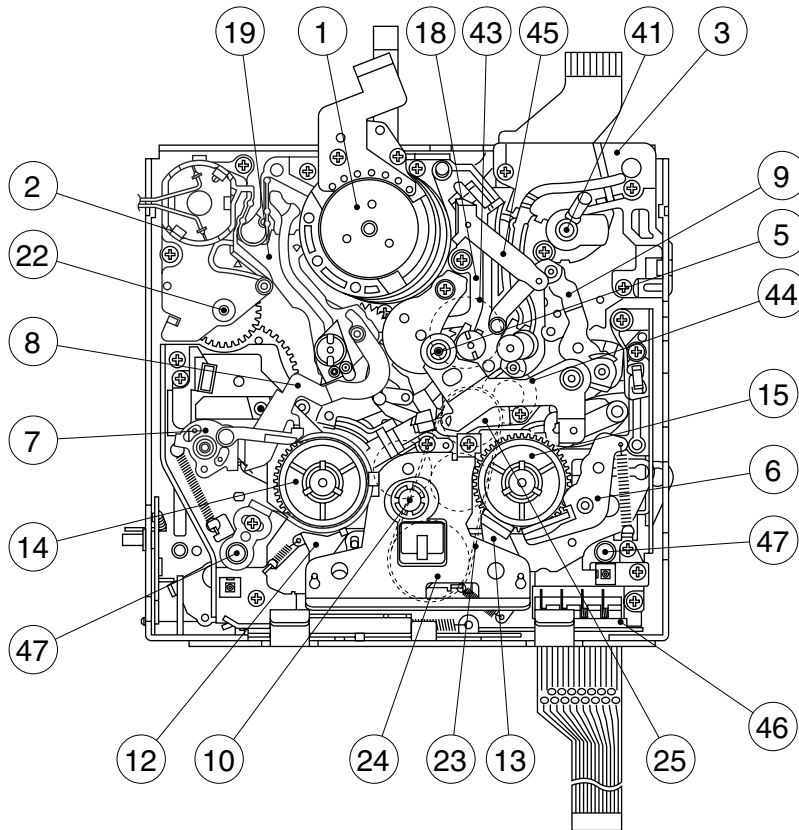
Periodical inspection and maintenance are requisite to maintain the initial performance and reliability of the product. Table 2-4-1 (Maintenance & Inspection List) has been compiled assuming standard operating conditions, and the specifications in the table are greatly variable depending on the actual operating environment and conditions. Remember that, if the maintenance and inspection are not enforced properly, the operating hours of

the product will not only reduce considerably but other unfavorable influences may produce.

Rubber parts may deform or degrade after long period of storage even if they are not used in this period.

The service life of the drum is variable depending on the tape used and operating environment.

2.4.1 Layout of major parts



2.4.2 Maintenance and inspection list

- 1) The 6000 H maintenance consists of a replacement of the entire mechanism assembly.
- 2) When mounting the capstan motor on the main deck, control of the verticality is required. Therefore, when the capstan motor reaches the end of its service life, the entire mechanism assembly should be replaced.

	Part Name	Symbol No.	Operating Hours (DRUM Hour Meter)												Ref.
			500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	
1	Tape transport parts		★	★	★	★	★	★	★	★	★	★	★	★	—
2	② Gear cover assembly	M 8 46	★	○★	★	●	★	○★	★	●	★	○★	★		2.7.14
3	⑧ Tension arm assembly	M 8 40	★	○★	★	●	★	○★	★	●	★	○★	★		2.7.8
4	⑱ Guide rail (S) assembly	M 8 22	★	○★	★	●	★	○★	★	●	★	○★	★		2.7.12
5	⑱ Guide rail (T) assembly	M 8 23	★	○★	★	●	★	○★	★	●	★	○★	★		2.7.12
6	③ Middle catcher assembly	M 8 24	★	○★	★	●	★	○★	★	●	★	○★	★		2.7.5
7	④① Capstan shaft	M 8 4	★	★	★	★	★	★	★	★	★	★	★		—
8	⑤ Pinch roller arm assembly	M 8 44	★	○★	★	●	★	○★	★	●	★	○★	★		2.7.3
9	⑨ Exit guide arm assembly	M 8 43	★	○★	★	●	★	○★	★	●	★	○★	★		2.7.4
10	① Drum assembly	M 8 50	○★	○★	★	●	★	○★	○★	●	★	○★	○★		2.7.2
11	④① Capstan motor	M 8 4						○	○	○	○	○	○	●	—
12	②⑤ Reel drive pulley assembly	M 8 33		○△		●△		○△		●△		○△			2.7.15
13	④⑨ R.drive gear 1	M 8 47		○△		●△		○△		●△		○△			2.7.15
14	④④ R.drive gear 2	M 8 48		○△		●△		○△		●△		○△			2.7.15
15	②④ Center gear assembly	M 8 34		○△		●△		○△		●△		○△			2.7.14
16	②③ Timing belt	M 8 11		○		●		○		●		○			2.7.14
18	⑥ Sub-brake assembly	M 8 36		○		●		○		●		○			2.7.10
19	⑫ Main brake (S) assembly	M 8 38		○		○		○		○		○			2.7.10
20	⑬ Main brake (T) assembly	M 8 37		○		●		○		●		○			2.7.10
21	⑭⑮ Reel disk assemblies	M 8 39		○		●△		○		●△		○			2.7.11
22	⑦ Band arm plate assembly	M 8 41		○		●		○		●		○			2.7.8
23	⑩ Swing arm assembly	M 8 42		○		●		○		●		○			2.7.7
24	②② Wheel gear-2	M 8 3		○		●		○		●		○			2.7.2
25	③④ Encoder gear	M 8 21		○		●		○		●		○			2.7.18
26	③⑦ Centering arm assembly	M 8 26		○		●		○		●		○			2.7.18
27	③⑤ Min cam	M 8 8		○		●		○		●		○			2.7.18
28	③⑧ Sub cam	M 8 9		○		●		○		●		○			2.7.19
29	④⑤ Cleaner arm assembly	M 8 43	○	●	○	●	○	●	○	●	○	●	○		2.7.4
30	④⑦ Cassette guide pin (Sub deck)	M 8 35	★	★	★	★	★	★	★	★	★	★	★		—
31	④⑥ MIC contact (Sub deck)	M 8 35	★	★	★	★	★	★	★	★	★	★	★		—
32	Mechanism assembly (including cassette housing assembly)	M 8 1												●	—
33	FAN motor	M 2 43												●	—

★: Clean with ethanol. ○: Check and replace if required. ●: Replace. △: Oil the shaft.
After replacing a part, apply lubricant to the required points.

Table 2-4-1

2.4.3 Cleaning

The mechanism incorporates a video head cleaner that is effective for the removal of magnetic dust, etc. However, tape lubricant adhering to the head surface produces a spacing loss, it is recommended to polish the heads using a head cleaning tape. When the video heads become soiled an increase in the error rate results. Eventually, when the error rate increase is too much to be corrected by the error correction circuit, block noise will be observed in the picture.

1) Cleaning the video heads

Use the DVC cleaning cassette for cleaning the video heads. Always be sure to use the cleaning cassette, Part No. M-DV12CLAUX.

The video heads should be cleaned periodically. Moreover, care should be taken about the operating environment as the tape running time standard varies accordingly. Please refer to "Precautions for Use of Head Cleaning Tape" in the instructions.

Caution

- **As the DVC cleaning tape has a much higher lapping effect than VHS cleaning tapes, frequent use of the DVC cleaning tape will reduce the head service life. Do not play the DVC cleaning tape for more than 10 seconds per run or for more than 4 times per cleaning session.**
- **The cleaning tape can be used effectively for up to about 4 passes. It cannot improve the cleaning effect even if it is run for more than 4 times.**

2) Cleaning the upper/lower drums

Use a cleaning cloth or high-quality paper sheet to clean the upper drum. Moisten the cloth or paper sheet with a small amount of ethyl alcohol, apply it lightly against the upper drum while turning it by hand.

After this operation, wipe it with a dry cloth or paper sheet without alcohol. Be sure to play the cleaning tape to its end. The lower drum tends to gather magnetic dust, etc. in its lead section, and linearity cannot be achieved if this becomes excessively dirty. The tape inlet and outlet areas are contaminated particularly easily, causing trouble such as drop-out in FM signal reproduction, block noise on one side of a monitored picture, absence of audio output or incapability of time code readout. To clean the lead section, use a toothpick and rub lightly along the lead section. Be careful not to scratch the video head when this is done.

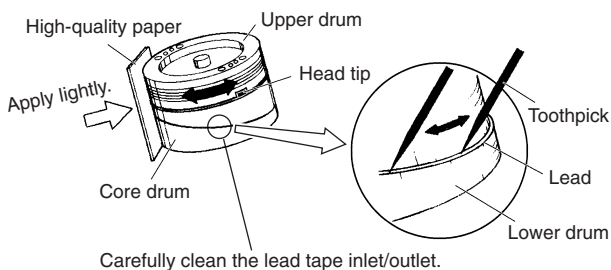


Fig. 2-4-1

3) Cleaning the tape transport system

Moisten the tip of a cotton swab with alcohol and use it to clean the tape transport parts. Take special care of the TU/SUP guide roller flanges and the rear sides of the inclined poles, as these are the parts that most frequently collect magnetic dust.

Caution

Do not wipe the capstan shafts using alcohol. Otherwise, the oil in the bearings may be diluted by the alcohol and become attached to the tape.

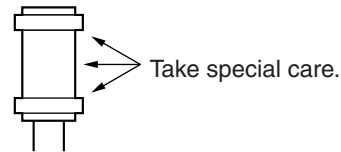


Fig. 2-4-2 Guide Roller

2.4.4 Oiling and greasing

Table 2-4-2 shows the oil and greases used with the set.

Classification	Name	Part No.
Oil	Cosmo Hydro HV100	YTU94027
Grease	Maltemp SH-P	KYODO-SH-P
	Hanal	RX-410R

Table 2-4-2

- 1) Oiling should be performed periodically. Oil the shafts by referring to the maintenance table.
- 2) After replacing a part, grease the required points. For the parts to be greased see the exploded diagram in chapter 5, "DISASSEMBLY DRAWINGS AND PARTS LIST".
- 3) As Hanal separates over time, be sure to mix it (shake) well before use.
- 4) Take care not to leave grease or oil on the tape transport parts which come into contact with the tape or on the brake pads.
- 5) Take care not to apply too much oil or grease. The standard oiling quantity is one drop and the standard greasing quantity is the quantity with which the grease does not overflow.

2.5 PERIODICAL MAINTENANCE

Perform maintenance at the correct times in accordance with the maintenance table.

Fig. 2-5-1 shows the flow chart of periodical maintenance procedures at different operating hours.

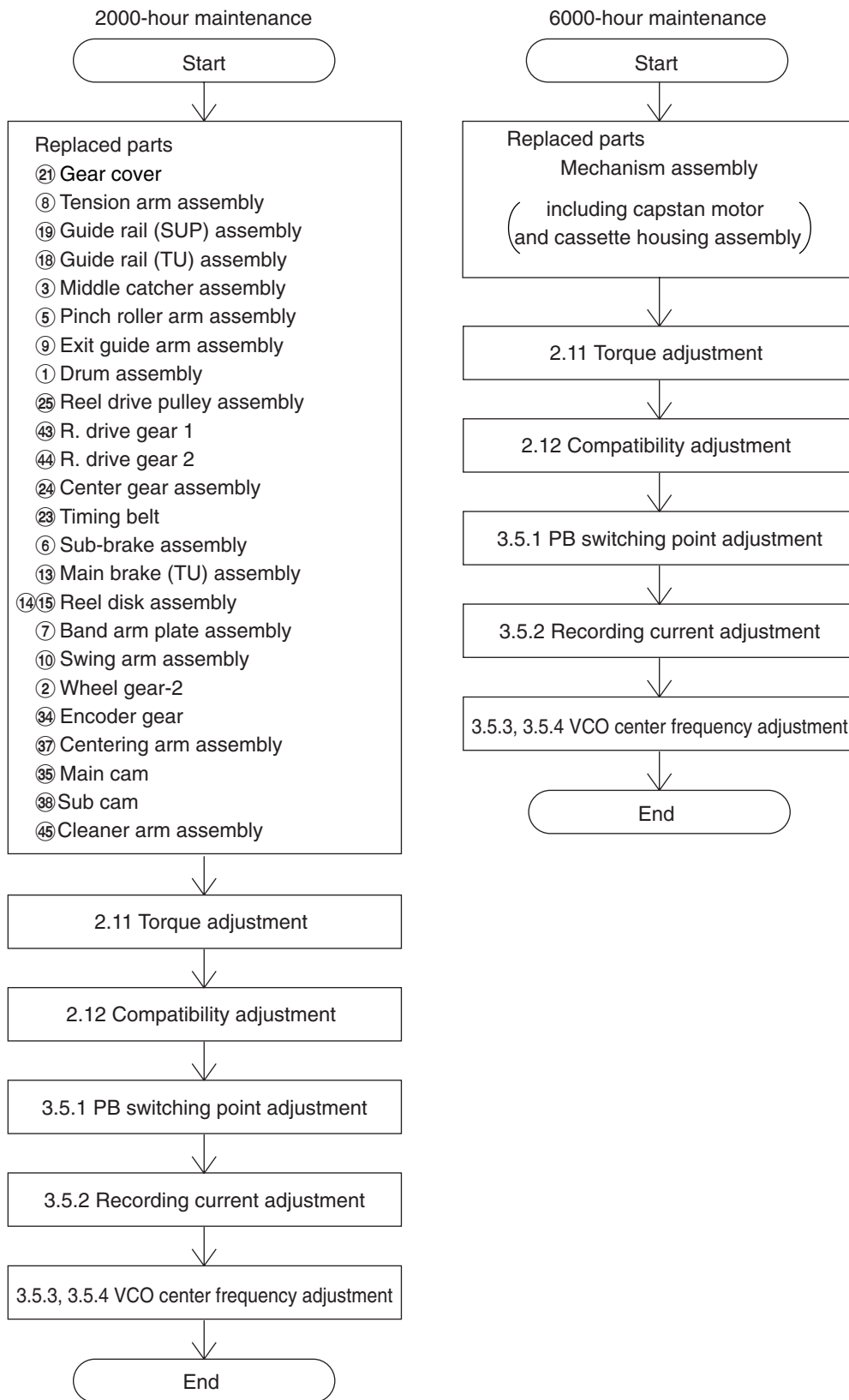


Fig. 2-5-1

2.6 DISASSEMBLY/ASSEMBLY OF MECHANISM ASSEMBLY

2.6.1 Assembly/disassembly

The following table shows the mechanism assembly/disassembly procedures.






- ① : Names of the disassembled/assembled parts.
- ② : Items of disassembly.
- ③ : Parts to be removed for disassembly, such as screws, washers and springs, and points.

Symbol	Name or Point
S	Screw
W	Washer
P	Spring
*	Connector, lock (L), soldering (SD), shield, etc.

2.6.2 Screws and washers used in mechanism assembly disassembly/assembly

Table 2-6-1 shows the symbols, designs, part numbers and colors of the screws and washers used with the Mechanism assembly.

When disassembling or assembling the Mechanism assembly, be sure to attach the correct screws and washers by referring to the following table.

Symbol	Design	Part No.	Color
(S1)		QYSDSP2005Z	Gold
(S2)		YQ43893	Silver
(S3)		YQ43893-7	Black
(S4)		QYSPSF2006Z	Gold
(S5)		LL40426-001A	Silver




Symbol	Design	Part No.	Color
W1		YQ44246	Red
W2		YQ44246-3	Black
W3		YQ43933-2	Black

Fig. 2-6-1

	Part Name	Item No.	Points	Remark
1	Ⓐ Cassette housing assembly, Ⓑ Main deck assembly	1	2(S1), 2(L1)	
2	① Drum assembly	2	3(S2)	
3	② Motor bracket (Gear cover) assembly	2	2(S2)	
4	③ Middle catcher assembly	5	3(S2)	

↑
①
↑
②
↑
③

2.6.3 Mechanism assembly disassembly procedure table

No.	Part Name	Item No.	Points	Remark
1	Ⓐ Cassette housing assembly	1	2 (S5), 2 (L1)	
2	① Drum assembly	2	3 (S2)	
3	② Motor bracket (Gear cover) assembly	2	2 (S2)	
4	③ Middle catcher assembly	5	3 (S2)	
5	④ Reel cover assembly	6	(S2), 2 (L6)	
6	⑤ Pinch roller arm assembly	3	(W1), (L7)	
7	⑥ Sub-brake assembly	10	(P1), (W1), (L8)	
8	⑦ Band arm plate assembly	8	(S3), (L9), (P2), (W2)	
9	⑧ Tension arm assembly	8	(P3)	
10	⑨ Exit guide arm assembly	4	(W1)	
11	⑩ Swing arm assembly	7	–	Position alignment
12	⑪ Sub-deck assembly	9	5 (S2)	Position alignment
13	⑫ Main brake (SUP) assembly	10	(P4), (L10)	
14	⑬ Main brake (TU) assembly	10	(P5), (L11)	
15	⑭ Reel disk assembly (SUP)	11	–	
16	⑮ Reel disk assembly (TU)	11	–	
17	⑯ Prism	7	(S2)	
18	⑰ Control plate	11	2 (L12)	
19	⑱ Guide rail (TU) assembly	12	4 (S2)	Position alignment
20	⑲ Guide rail (SUP) assembly	12	(S2), 2 (L13)	Position alignment
21	⑳ Wheel gear 2	13	–	
22	㉑ Timing belt	13	–	
23	㉒ Center gear assembly	13	–	
24	㉓ Reel drive pulley assembly	14	(W1)	
25	㉔ Tension control arm assembly	15	(L15)	Position alignment
26	㉕ Brake control arm assembly	15	(W1), (L16)	Position alignment
27	㉖ Charge arm assembly	15	(L17)	Position alignment
28	㉗ Encoder gear	16	–	Phase alignment
29	㉘ Main cam	16	(W1)	Phase alignment
30	㉙ Arm gear 1 assembly	16	Collar	Position alignment
31	㉚ Centering arm assembly	16	–	Position alignment
32	㉛ Sub cam	17	(S2)	Phase alignment
33	㉜ Arm gear 2 assembly	17	–	Position alignment
34	㉝ Clutch lock lever (C.P.D arm) assembly	17	(L19)	Position alignment
35	㉞ Capstan motor	–	–	Change with mechanism assembly
36	㉟ Drum base deck	–	3 (S2)	
37	㊱ R.drive gear 1	14	(W1)	
38	㊲ R.drive gear 2	14	(W1)	
39	㊳ Cleaner (Exit guide) arm assembly	4	(W1)	

Table 2-6-2

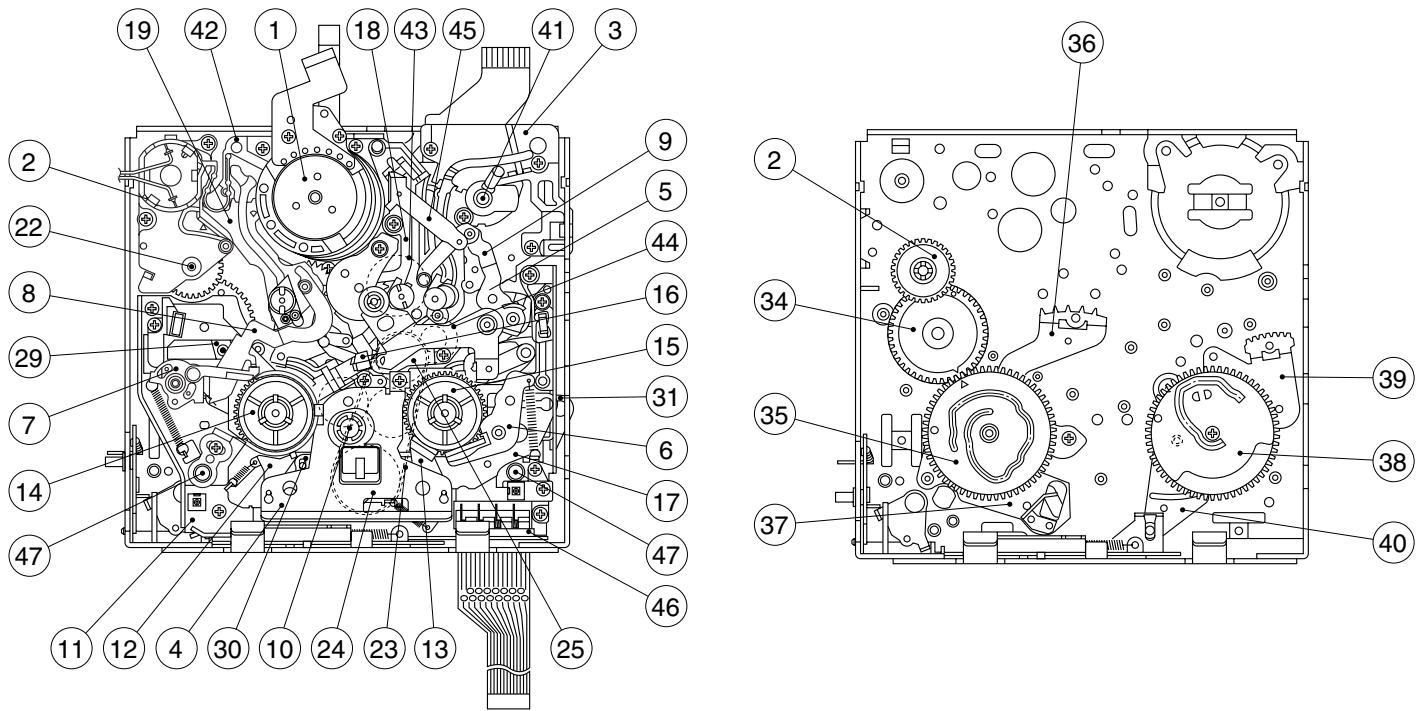


Fig. 2-6-1

2.6.4 Mechanism disassembly/assembly procedure chart

<How to read the chart>

- The following chart shows the disassembly/assembly procedures by dividing them into blocks A to I.
- To remove the tension arm sub-assembly which is located in block D; start disassembly from block A. The tension arm sub-assembly can be removed as the fourth operation after the removals of the cassette housing assembly (block A) → reel cover assembly (block B) → band arm plate assembly (block C).
- The parts enclosed in thick frames are the maintenance parts listed in the maintenance table.
- For details on the disassembly/assembly, see section 2.7, "Replacement of Major Parts".

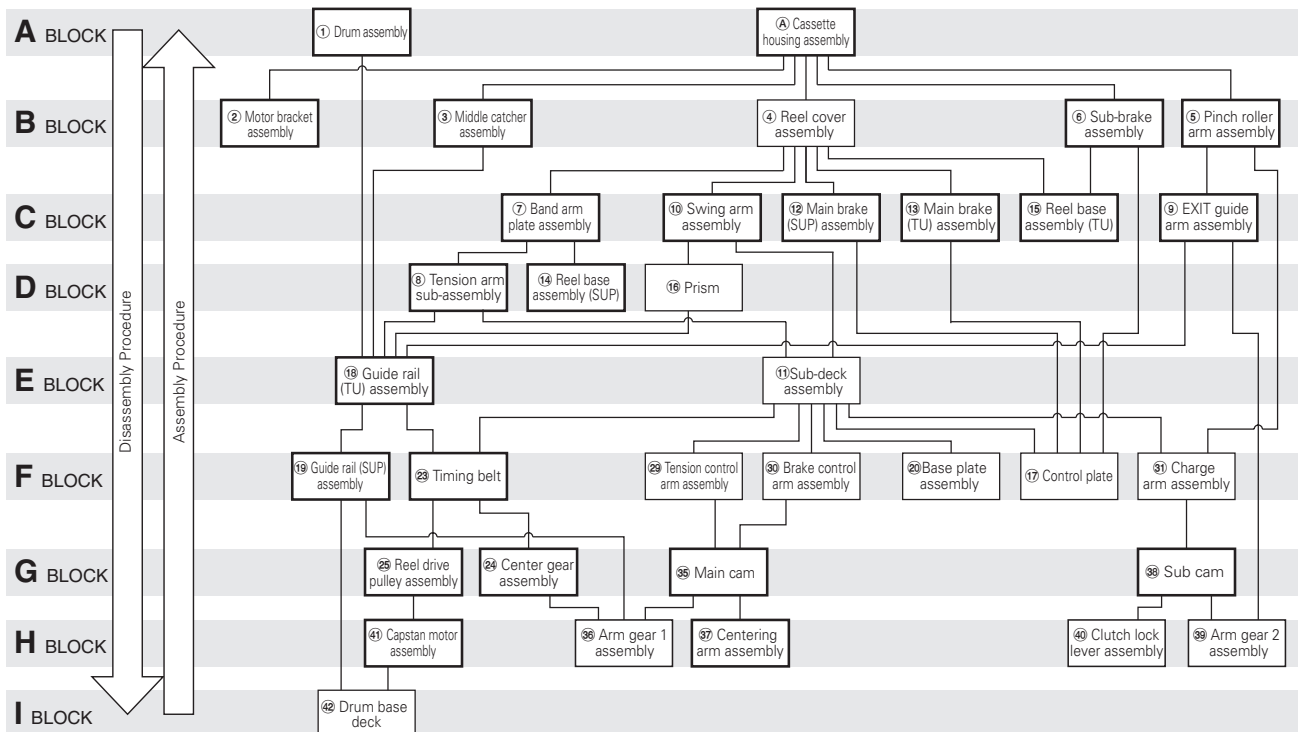
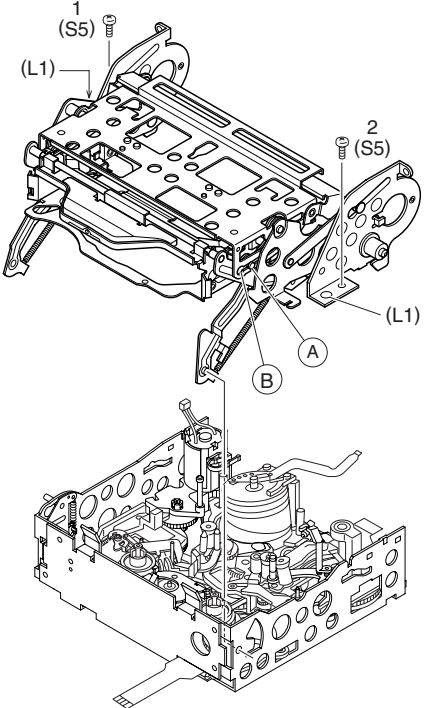
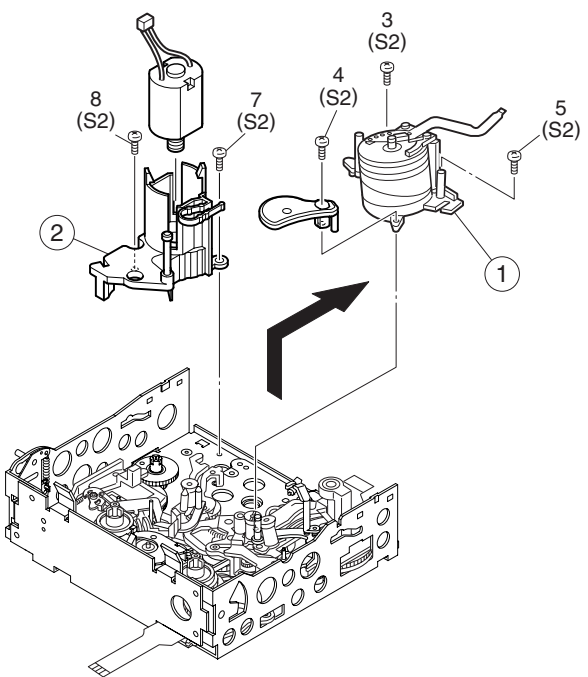


Fig. 2-6-2

No.	Item	Reference picture/drawing	Procedure
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2.7 REPLACEMENT OF MAJOR PARTS

- Make sure that the mechanism is in the ASSEMBLY mode before proceeding to disassembly or assembly. (See section 2.1, "Assembly Mode".)
- Screws must always be tightened using a torque screwdriver and at the specified torque.

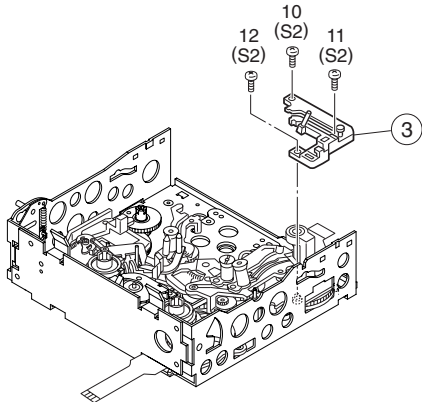
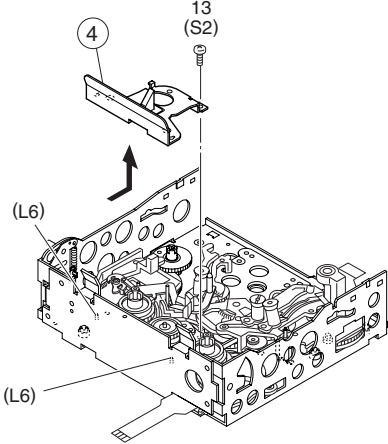
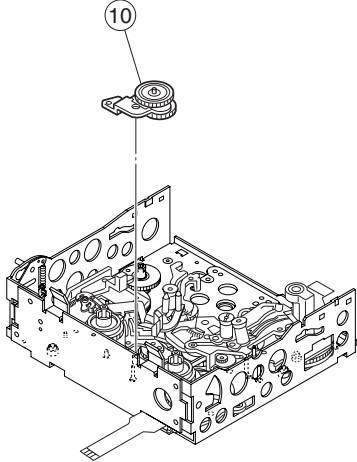
1	<p>Ⓐ Cassette housing assembly</p>	 <p style="text-align: center;">Fig. 2-7-1</p>	<p><Removal></p> <p>① Cassette housing assembly See the 1.3.2 Cassette housing on the page 1-4.</p> <p>② Outer unit assembly 1) Align the boss Ⓐ that pulls out the cassette housing to the round hole Ⓑ of Outer unit assembly, and then remove it.</p> <p><Attaching> 1) Reverse the removal procedure.</p>
2	<p>① Drum assembly, ② Motor bracket (Gear cover) assembly</p>	 <p style="text-align: center;">Fig. 2-7-2</p>	<p><Removal></p> <p>① Drum assembly 1) Remove the 3 screws (S2) and take out the assembly.</p> <p>② Motor bracket (Gear cover) assembly 1) Remove the 2 screws and take out the motor bracket assembly. 2) After removing the lock of the motor bracket, the motor can be removed by lifting the motor upward.</p> <p><Attaching> 1) Reverse the removal procedure</p> <p>NOTE</p> <ul style="list-style-type: none"> · When mounting the motor, make sure that the claw of the motor bracket is properly locked. If the claw is not properly locked, change the direction for mounting the motor.

No.	Item	Reference picture/drawing	Procedure
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3	<p>⑤ Pinch roller arm assembly</p>	<p style="text-align: center;">Fig. 2-7-3</p>	<p><Removal> 1) Remove the washer (W1) and pull out the assembly.</p> <p><Attaching> 1) Fit the pinch roller arm assembly (A) into the boss (L7) of the charge arm assembly. 2) Attach the washer (W1).</p>
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4	<p>⑨ Exit guide arm assembly ④⑤ Cleaner arm assembly</p>	<p style="text-align: center;">Fig. 2-7-4</p>	<p><Removal> 1) Remove the washer (W1) and pull out the assembly.</p> <p><Attaching> 1) Reverse the removal procedure.</p>
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No.	Item	Reference picture/drawing	Procedure
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5	③ Middle catcher assembly	 <p style="text-align: center;">Fig. 2-7-5</p>	<p><Removal></p> <p>1) Remove the 3 screws (S2) and remove the assembly.</p> <p><Attaching></p> <p>1) Reverse the removal procedure.</p>
6	④ Reel cover assembly	 <p style="text-align: center;">Fig. 2-7-6</p>	<p><Removal></p> <p>1) Remove the screw (S2). 2) Slide the assembly toward the drum and lift the assembly up to remove it.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NOTE</p> <ul style="list-style-type: none"> · After having removed the reel cover, take care because the parts located below the reel cover tend to slip out easily. </div> <p><Attaching></p> <p>1) Insert the reel cover into (L6) and attach by reversing the removal procedure.</p>
7	⑩ Swing arm assembly	 <p style="text-align: center;">Fig. 2-7-7</p>	<p><Removal></p> <p>1) Pull the assembly upward.</p> <p><Attaching></p> <p>1) Reverse the removal procedure.</p>

No.	Item	Reference picture/drawing	Procedure
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8 ⑦ Band arm plate assembly, ⑧ Tension arm assembly

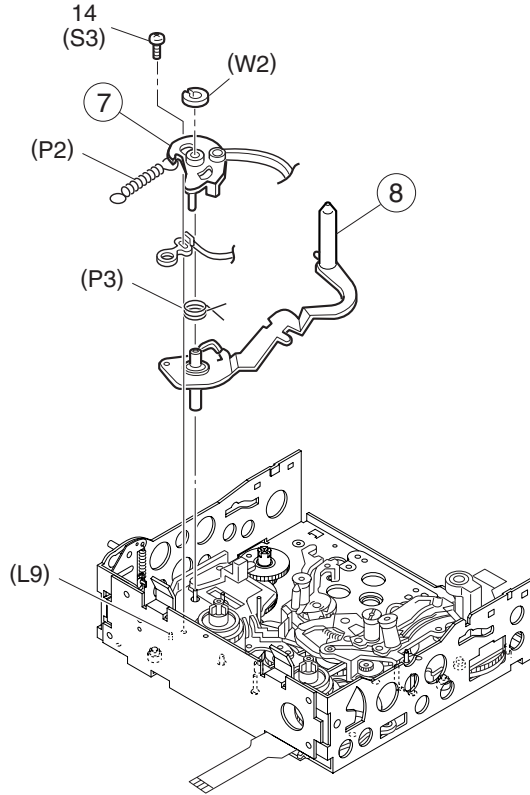


Fig. 2-7-8(a)

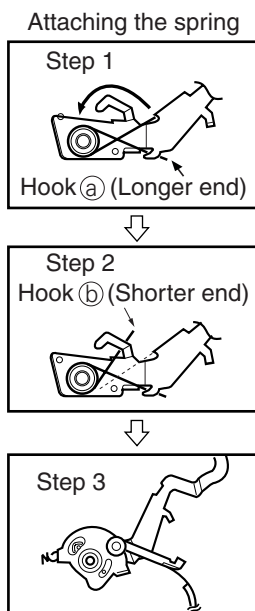


Fig. 2-7-8(b)

The spring (P3) should be attached only to the tension arm assembly ⑧. It should not contact the band arm plate assembly ⑦.

<Removal>

- 1) Remove the washer (W2).
- 2) Remove the screw (S3).
- 3) Remove the spring (P2).
- 4) Remove the band arm plate assembly and tension arm assembly.

NOTE

Be careful not to lose the spring (P3).

<Attaching>

- 1) Attach the spring (P3) to the tension arm assembly. Engage the longer end of spring to hook (a) and the shorter end to hook (b) as shown in Fig. 2-7-8(b).
- 2) Attach the tension arm sub-assembly.
- 3) Attach the band arm plate assembly.
- 4) Clamp with the screw (S3) and washer (W2).
- 5) Attach the spring (P2) to (L9).

NOTE

After attaching, ensure that the band arm assembly can rotate in the direction of the arrow as shown in Fig. 2-7-8(c).

Attach so that the section (A) comes on the outer side of the tension arm assembly ⑧.

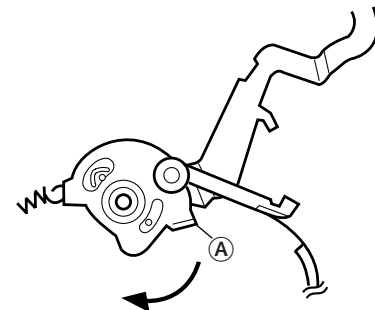


Fig. 2-7-8(c)

- 6) After attaching, adjust the tension.

No.	Item	Reference picture/drawing	Procedure
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8 <Tension arm assembly position adjustment>

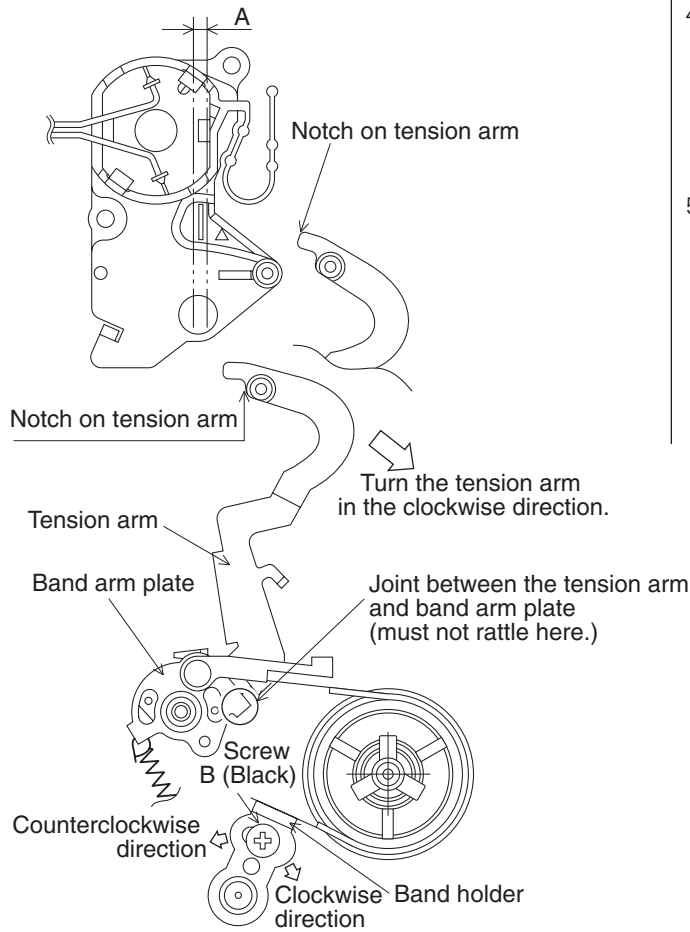


Fig. 2-7-8(d)

- 1) Without loading a tape, set the mechanism mode to PLAY mode.
To switch the mode, rotate wheel gear 2 while the motor bracket assembly is disengaged (see 2.2, "Mechanism Modes").
- 2) Rotate the tension arm slightly clockwise to eliminate production of rattle with the band arm plate.
- 3) Ensure that the notch on the tension arm is located within area A. (See Fig. 2-7-8(e).)
- 4) If the tension arm is not located in area A, loosen screw B (black) lightly and fine-adjust the position of the band arm plate assembly. Turn the screw counterclockwise to move the tension arm extremity toward the right or clockwise to move it toward the left.
- 5) After the adjustment, clamp the band holder by tightening screw B (black) (with a securing torque of 5.88 Nm, or 0.6 kgf-cm). Then adjust the tension arm position again.

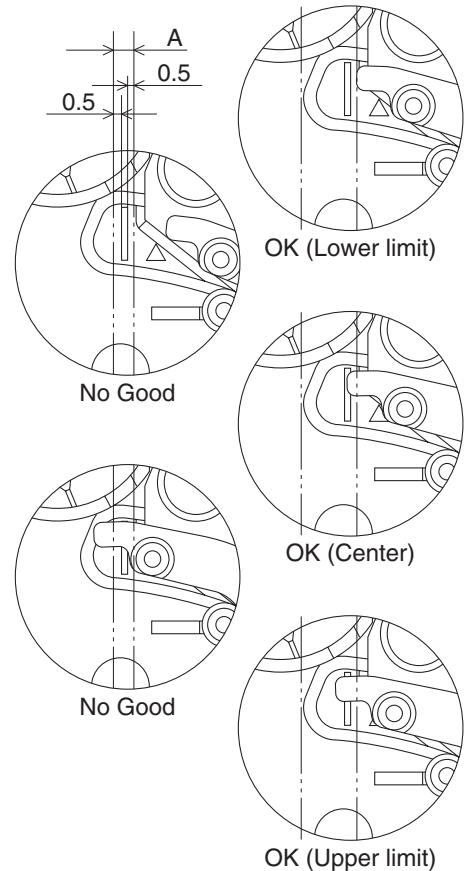
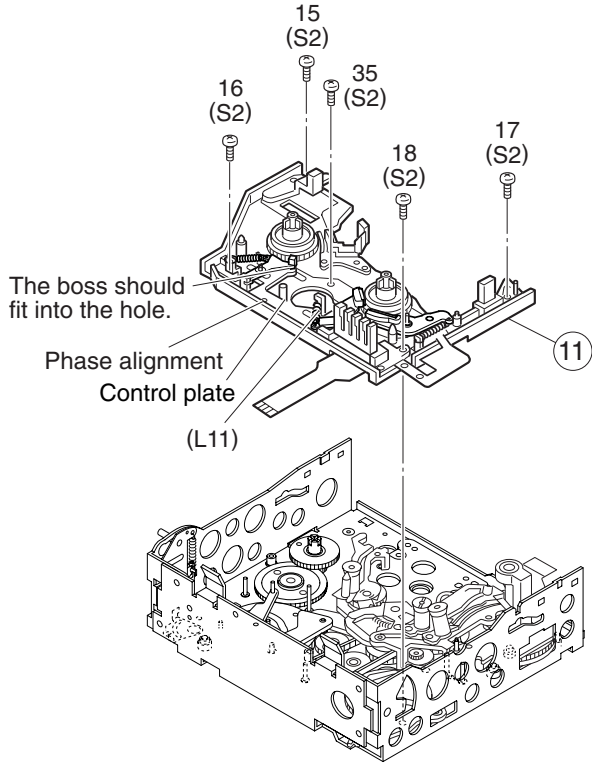
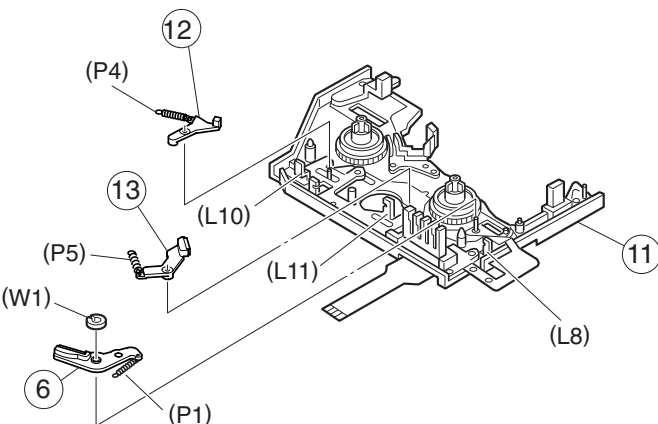


Fig. 2-7-8(e)

No.	Item	Reference picture/drawing	Procedure
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9	11 Sub-deck assembly	 <p>The boss should fit into the hole.</p> <p>Phase alignment Control plate (L11)</p> <p>Fig. 2-7-9</p>	<p><Removal></p> <p>1) Remove the 5 screws (S2) and pull out the assembly.</p> <p><Attaching></p> <p>1) While sliding the control plate toward the left, attach the sub-deck assembly.</p> <p>NOTE</p> <ul style="list-style-type: none"> · Attach by aligning the phase holes of the main deck assembly and control plate. <p>2) Clamp with 5 screws (S2).</p>
---	-----------------------------	--	--

10	12 Main brake (SUP) assembly, 13 Main brake (TU) assembly, 6 Sub-brake assembly	 <p>Fig. 2-7-10</p>	<p><Removal></p> <p>Main brake (SUP) (TU) assembly</p> <p>1) Remove the spring by disengaging its ends from the hooks (L10) and (L11).</p> <p>Sub-brake assembly</p> <p>1) Remove the washer (W1).</p> <p>2) Remove the spring by disengaging it from the hook (L8).</p> <p><Attaching></p> <p>1) Reverse the removal procedure.</p>
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No.	Item	Reference picture/drawing	Procedure
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11 ⑭ Reel disk (SUP) assembly, ⑮ Reel disk (TU) assembly, ⑰ Control plate, ⑯ Prism

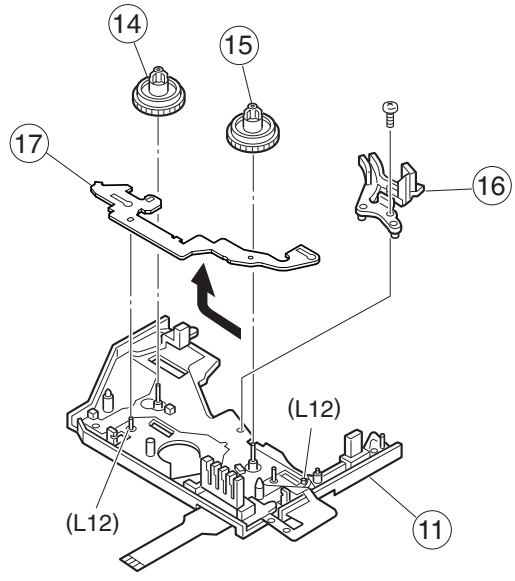


Fig. 2-7-11

<Removal>
 1) Pull up each assembly to remove it. The control plate can be removed by sliding it toward the left as shown by the arrow.
 2) Remove the screw (S2) to remove the prism.

<Attaching>
 1) Reverse the removal procedure.

12 ⑱ Guide rail (TU) assembly, ⑲ Guide rail (SUP) assembly

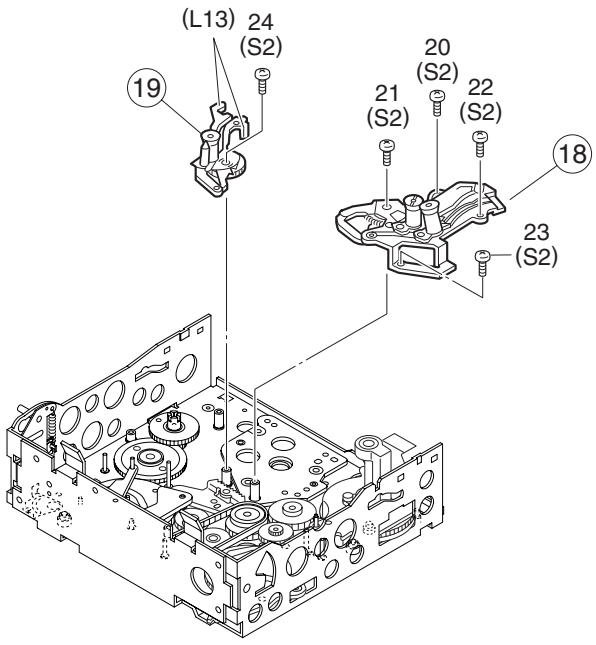


Fig. 2-7-12(a)

<Removal>
Guide rail (TU) assembly:
 1) Remove the 4 screws (S2) and remove the assembly.
Guide rail (SUP) assembly:
 1) Remove the screw (S2) and remove the assembly.

<Attaching>
 1) Return the guide pole fully to the unloading position, and attach the assemblies by reversing the removal procedures. When attaching, place the alignment markings of the two gears so that they face each other. (See Fig. 2-7-12(b).)

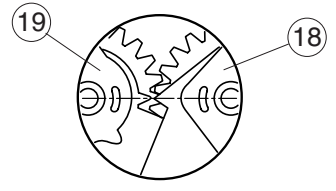
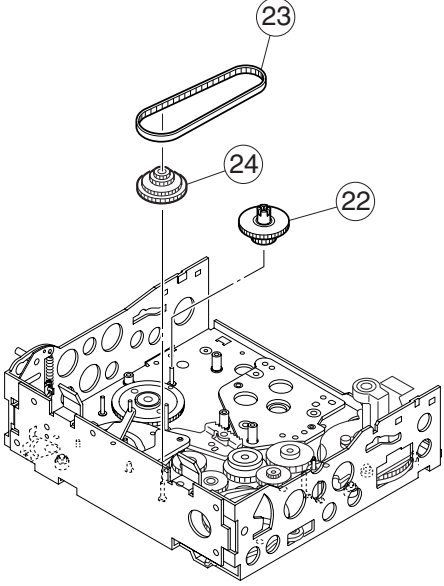
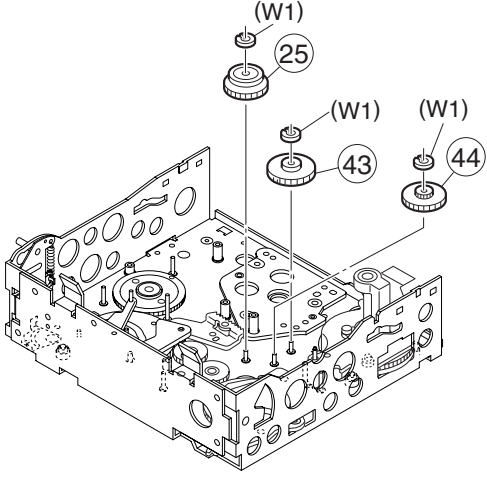


Fig. 2-7-12(b)

No.	Item	Reference picture/drawing	Procedure
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13	<p>Ⓒ Wheel gear 2, Ⓓ Timing belt, Ⓔ Center gear assembly</p>	 <p style="text-align: center;">Fig. 2-7-13</p>	<p><Removal> 1) Each parts can be removed by simply pulling them out.</p> <p><Attaching> 1) Reverse the removal procedure.</p>
----	--	---	--

14	<p>Ⓕ Reel drive pulley assembly, Ⓖ R. drive gear 1, Ⓖ R. drive gear 2</p>	 <p style="text-align: center;">Fig. 2-7-14</p>	<p><Removal> 1) Remove the washer (W1) and take out the assembly.</p> <p><Attaching> 1) Reverse the removal procedure.</p>
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No.	Item	Reference picture/drawing	Procedure
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15 ②⑨ Tension control arm assembly, ③⑩ Brake control arm assembly, ③① Charge arm assembly

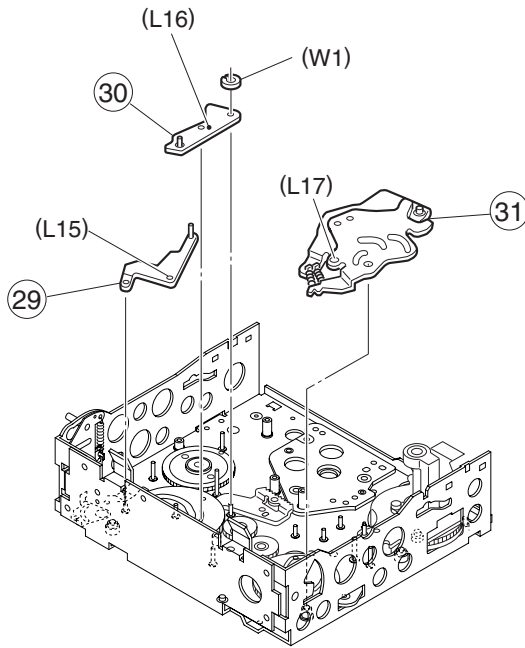
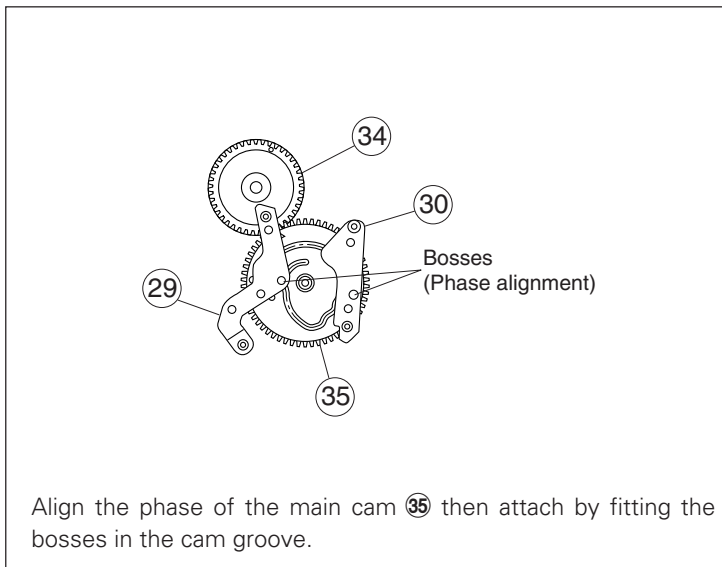


Fig. 2-7-15(a)

<Removal>
1) The brake control assembly can be removed after removing the washer (W1).

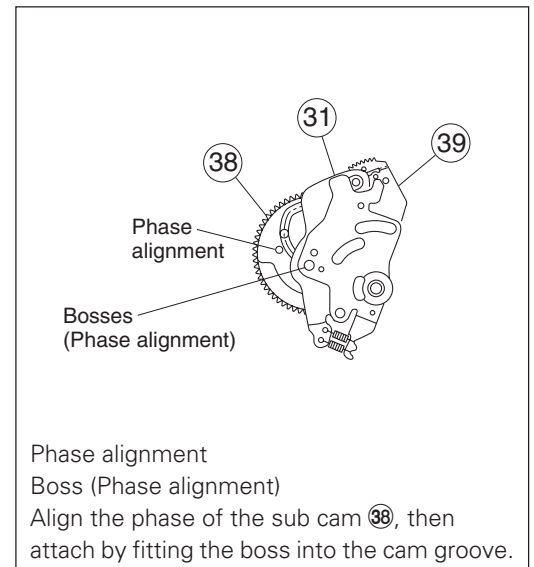
<Attaching>
1) Align the phases of the main cam and sub cam, then attach by reversing the removal procedure. Refer to Fig. 2-7-15(b) and Fig. 2-7-15(c).



Align the phase of the main cam ③⑤ then attach by fitting the bosses in the cam groove.

Fig. 2-7-15(b)

Attaching Tension Control Arm Assembly ②⑨ and Brake Control Arm Assembly ③⑩



Phase alignment
Boss (Phase alignment)
Align the phase of the sub cam ③⑧, then attach by fitting the boss into the cam groove.

Fig. 2-7-15(c) Attaching the Charge Arm Assembly ③①

No.	Item	Reference picture/drawing	Procedure
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16 ③④ Encoder gear, ③⑤ Main cam, ③⑥ Arm gear 1 assembly, ③⑦ Centering arm assembly

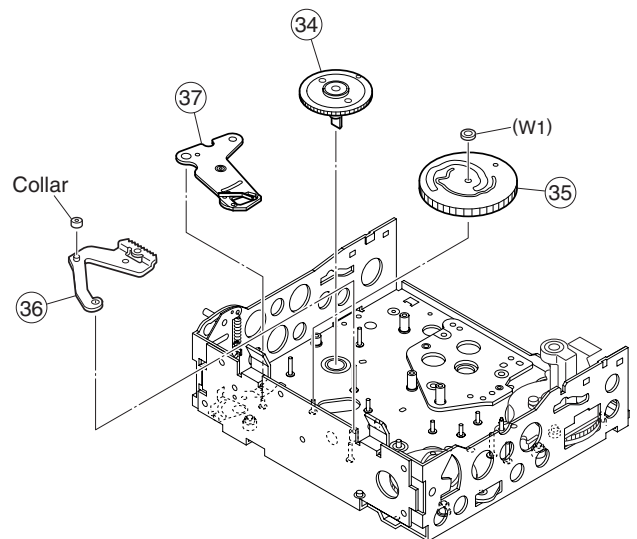


Fig. 2-7-16(a)

<Removal>

1) The main cam can be removed by removing the washer (W1). As the cam gear is engaged at the rear of the main deck assembly while the phase is aligned, deviate the phase in the direction of the arrow before removal. (See Fig. 2-7-16(b).)

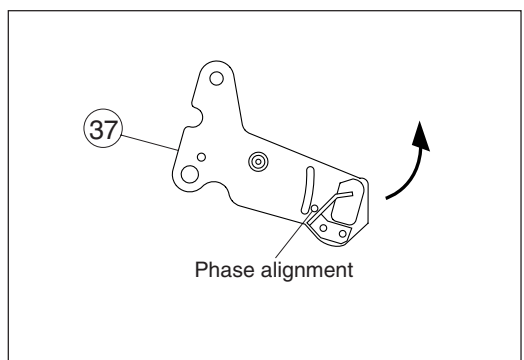


Fig. 2-7-16(b) Removing the Centering Arm Assembly ③⑦

<Attaching>

1) Align the phase by referring to Figs. 2-7-16(c) and 2-7-16(d), then attach the ass'ies reverse the removal procedure.

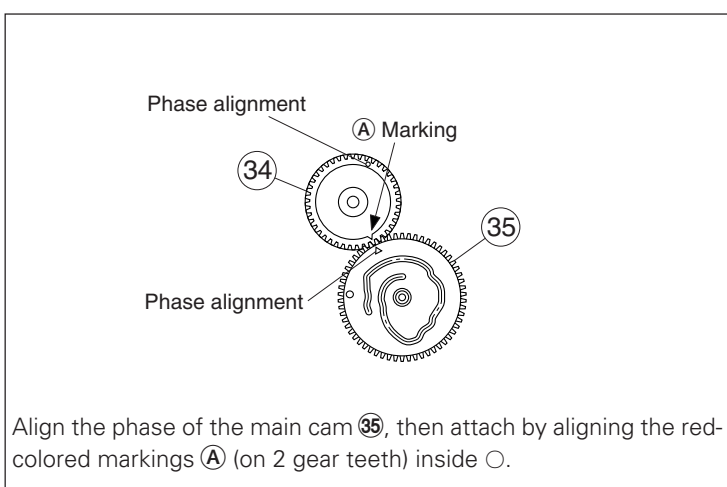


Fig. 2-7-16(c) Attaching the Rotary Encoder Assembly ③④

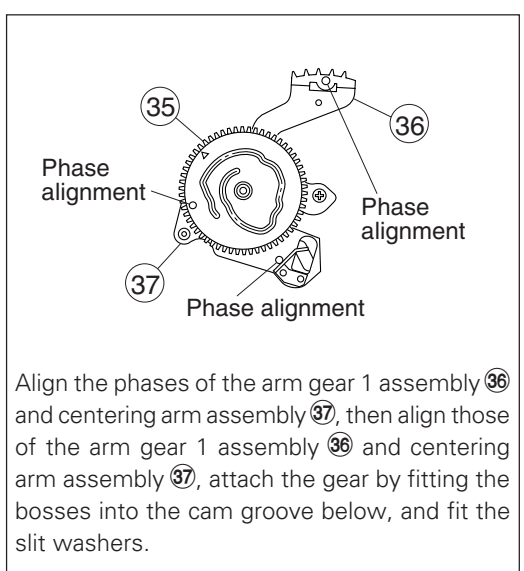


Fig. 2-7-16(d) Attaching the Main Cam ③⑤

No.	Item	Reference picture/drawing	Procedure
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17 ③⑧ Sub cam ③⑨ Arm gear 2 assembly, ④⑩ Clutch lock lever assembly

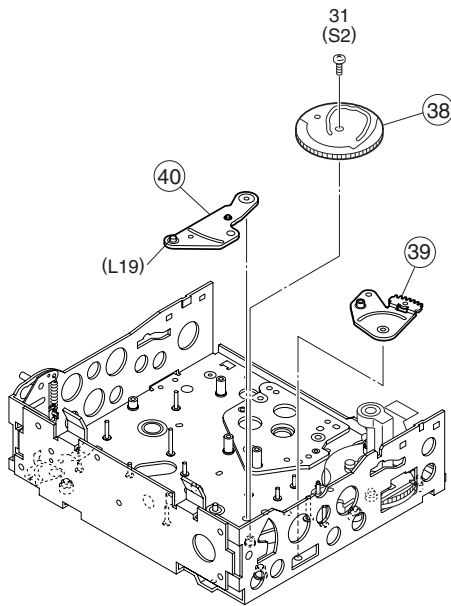


Fig. 2-7-17(a)

<Removal>

1) Remove the screw (S2) and take out the sub cam .
As L19 is engaged at the rear of the main deck assembly while the phase is aligned, deviate the phase in the direction of the arrow before removal. 20. This checking should be done after completing the switching point adjustment.

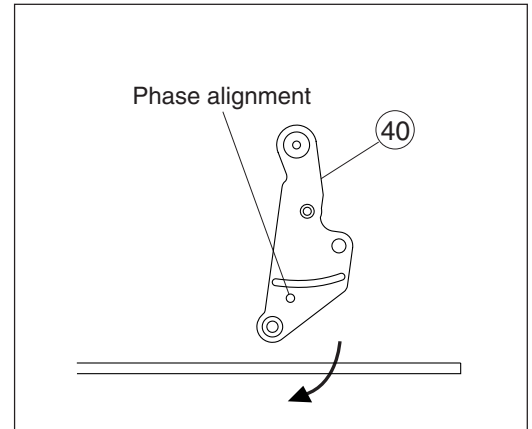
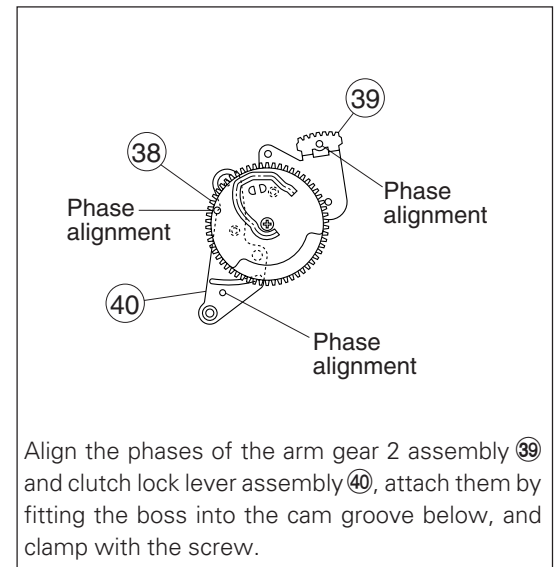


Fig. 2-7-17(b) Removing the Clutch Lock Lever Assembly ④⑩

<Attaching>

1) Align the phase correctly by referring to Fig. 2-7-17(c), then attach by reversing the removal procedure.



Align the phases of the arm gear 2 assembly ③⑨ and clutch lock lever assembly ④⑩, attach them by fitting the boss into the cam groove below, and clamp with the screw.

Fig. 2-7-17(c) Attaching the Sub Cam ③⑧

2.8 CONFIRMATION AND ADJUSTMENT OF MECHANISM PHASES

See Fig. 2-8-1.

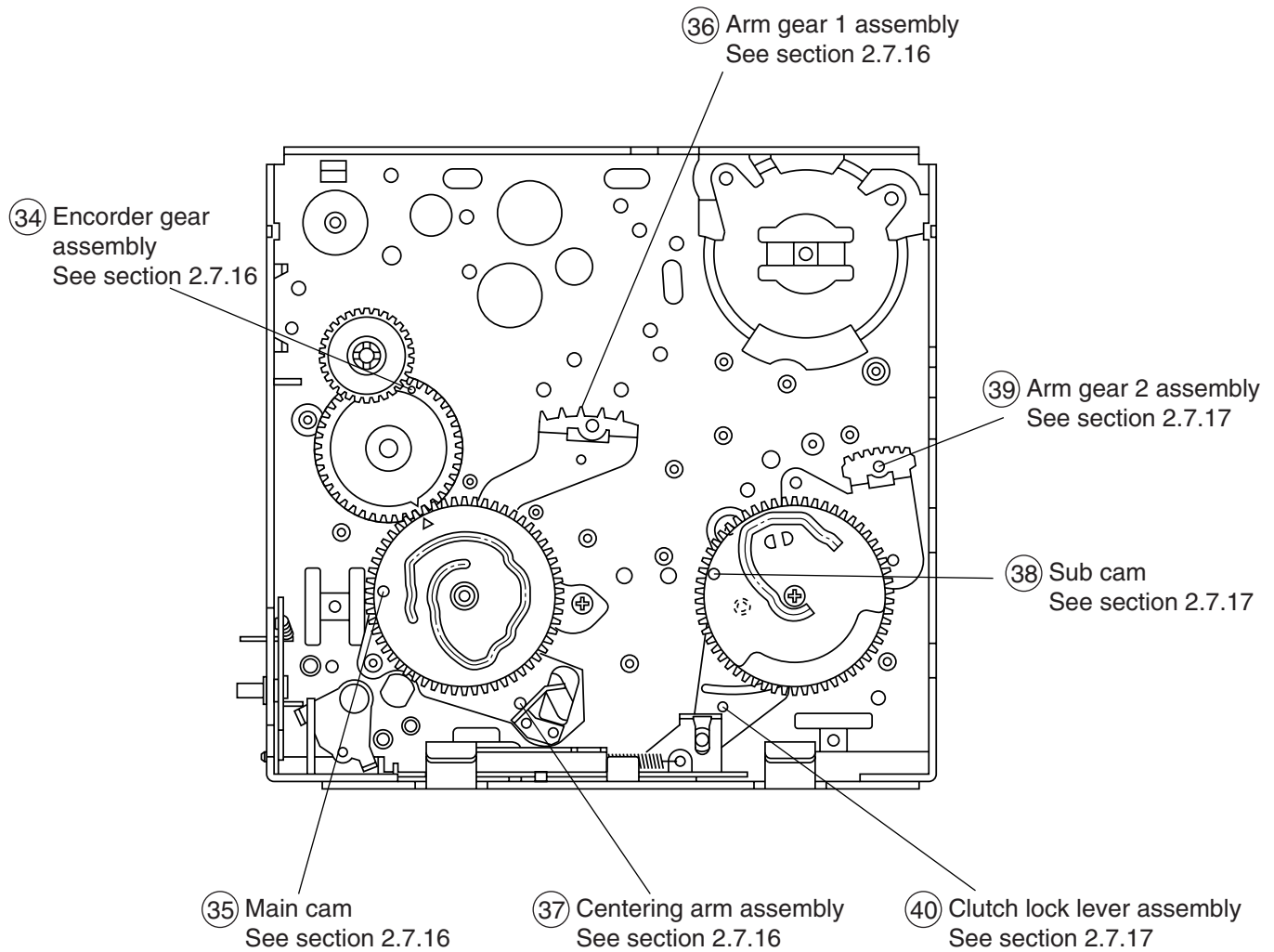


Fig. 2-8-1

2.9 DISASSEMBLY PROCEDURE LIST

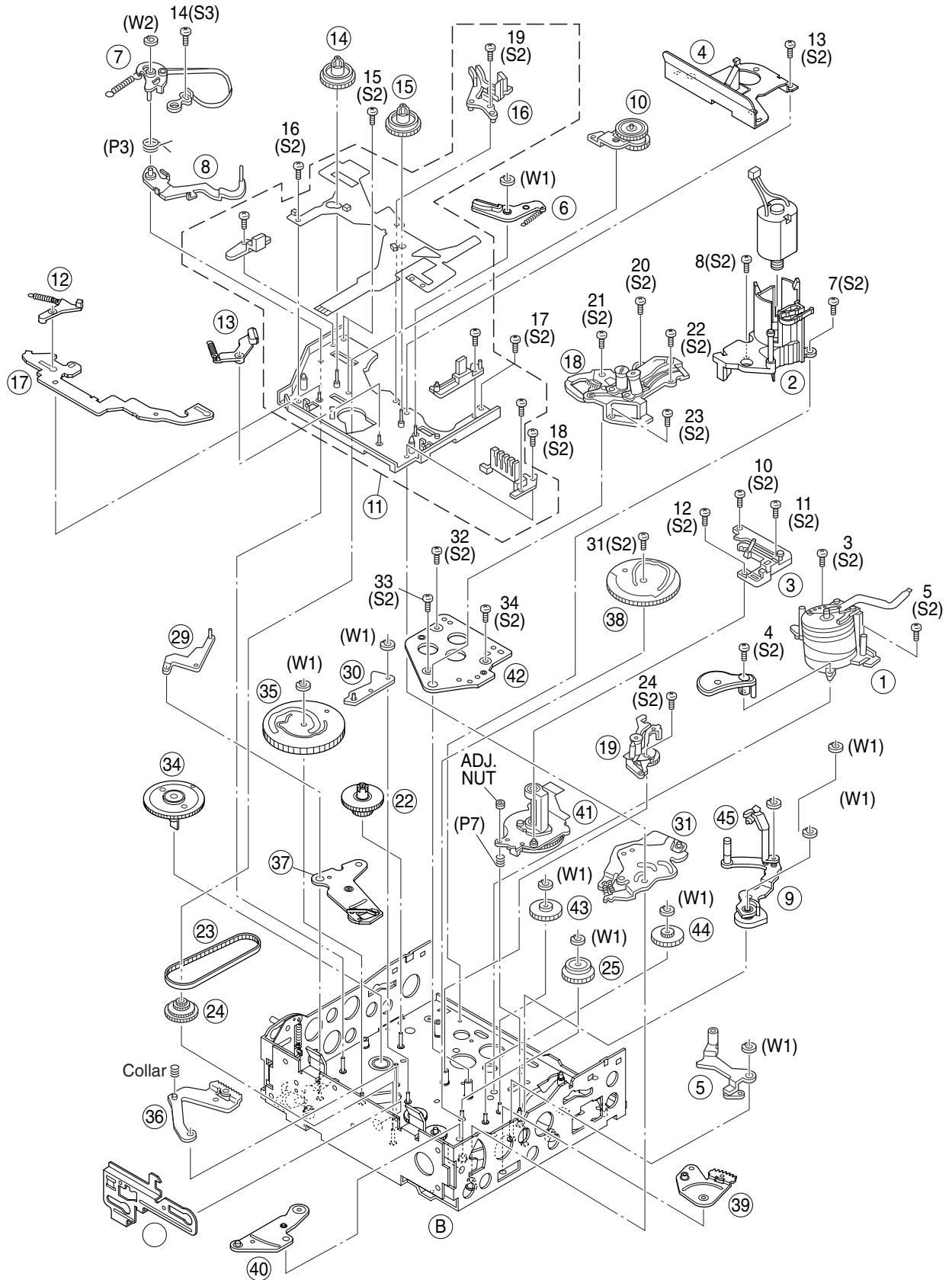


Fig. 2-9-1

Note) For the grease and oil application points, see section 5.6, "MECHANISM ASSEMBLY PARTS LIST M 6"

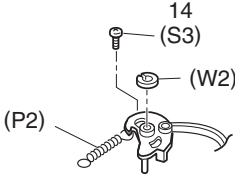
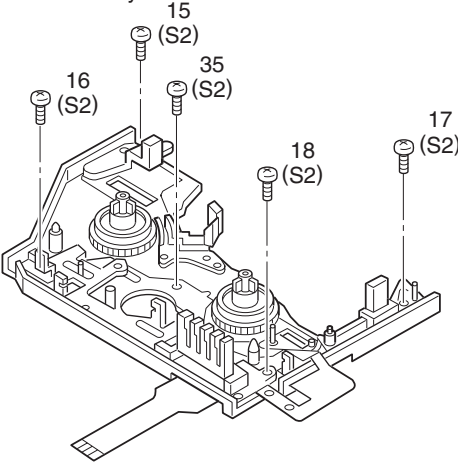
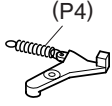
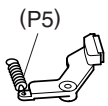
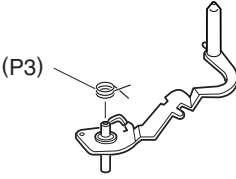


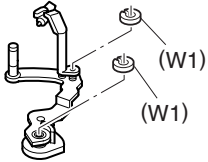

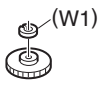
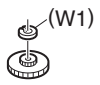
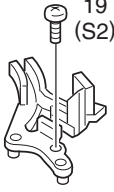

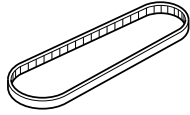

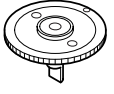


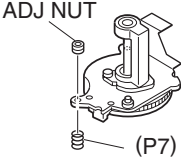
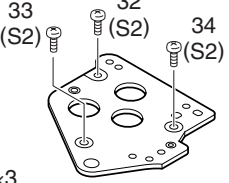
2.10 MECHANISM DISASSEMBLY/ASSEMBLY SHEET

Screw Management																		
Drawing No.	A		1		2		3		4		7		11					
No.	1	2	3	4	5	7	8	10	11	12	13	14	15	16	17	18	35	
Table	S5	S5	S2	S2	S2	S2	S2	S2	S2	S2	S2	S3	S2	S2	S2	S2	S2	
Application																		
Ref. No.	No.1		No.2				No.5				No.8		No.9					

<p>A Cassette housing assembly</p> <p>1 (S5) 2 (S5)</p> <p>S37x2</p>		<p>1 Drum assembly</p> <p>3 (S2) 4 (S2) 5 (S2)</p> <p>S2x3</p>		<p>4 Reel cover assembly</p> <p>13 (S2)</p> <p>S2,L6x2</p>			
<p>2 Motor bracket assembly</p> <p>7 (S2) 8 (S2)</p> <p>S2x4</p>		<p>5 Pinch roller arm assembly</p> <p>(W1)</p> <p>W1,7</p>		<p>3 Middle catcher assembly</p> <p>10 (S2) 11 (S2) 12 (S2)</p> <p>S2x3</p>		<p>6 Sub-brake assembly</p> <p>(W1) (P1)</p> <p>P1,W1,L8</p>	
<p>17 Control plate</p> <p>L12x2</p>		<p>18 Guide rail (TU) assembly</p> <p>20 (S2) 21 (S2) 22 (S2) 23 (S2)</p> <p>S2x4</p>		<p>19 Guide rail (SUP) assembly</p> <p>(L13) 24 (S2)</p> <p>S2,L13x2</p>			
<p>24 Center gear assembly</p> <p>W1</p>	<p>25 Reel drive pulley assembly</p> <p>(W1)</p> <p>W1</p>			<p>29 Tension control arm assembly</p> <p>(L15)</p>	<p>30 Brake control arm assembly</p> <p>(L16) (W1)</p> <p>W1,L16</p>		
<p>35 Main cam</p> <p>(W1)</p> <p>W1</p>	<p>36 Arm gear 1 assembly</p> <p>Collar</p> <p>Collar</p>	<p>37 Centering arm assembly</p>	<p>38 Sub cam</p> <p>31 (S2)</p> <p>S2</p>				

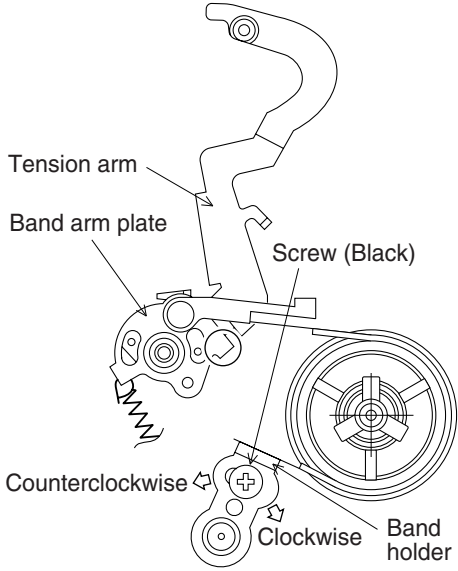
Screw Management									
16	18				19	38	42		
19	20	21	22	23	24	31	32	33	34
S2	S2	S2	S2	S2	S2	S2	S2	S2	S2
No.11	No.12				No.17		-		

The slit washers cannot be reused once they have been removed.

<p>⑦ Band arm plate assembly</p>  <p>S3,P2,L9,W2</p>	<p>⑪ Sub-deck assembly</p>  <p>S2x5</p>			<p>⑫ Main brake (SUP) assembly</p>  <p>P4,L10</p>	<p>⑬ Main brake (TU) assembly</p>  <p>P5,L11</p>
<p>⑧ Tension arm assembly</p>  <p>P3</p>		<p>⑭ Reel base assembly (SUP)</p> 	<p>⑮ Reel base assembly (TU)</p> 		
<p>⑨ Exit guide arm assembly ④⑤ Cleaner arm assembly</p>  <p>W1</p>	<p>⑩ Swing arm assembly</p> 	<p>④③ R. drive gear 1</p>  <p>(W1)</p>	<p>④④ R. drive gear 2</p>  <p>(W1)</p>	<p>⑯ Prism</p>  <p>S2</p>	
		<p>⑳ Wheel gear</p> 		<p>㉑ Timing belt</p> 	
<p>⑳ Charge arm assembly</p>  <p>L17</p>			<p>㉒ Encoder gear</p> 		
<p>㉓ Arm gear 2 assembly</p> 	<p>④① Clutch lock lever assembly (C.P.D arm assembly)</p>  <p>L19</p>	<p>④② Capstan motor</p>  <p>ADJ NUT,P7</p>	<p>④② Drum base deck</p>  <p>S2x3</p>		

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⊕) Adjustment level (☆)	Adjustment procedure
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2.11 TORQUE ADJUSTMENTS

1	SUP backup torque adjustment	• Cassette torque meter	Play	◎ Supply side indication of cassette torque meter ☆ $3.9^{+1.47}_{-0.39} \times 10^{-4} \text{N}\cdot\text{m}$ ($4.0^{+1.5}_{-0.4} \text{gf}\cdot\text{cm}$)	<p>(1) Insert the cassette torque meter and enter play mode.</p> <p>(2) The supply backup torque should be as specified. (If it fluctuates, read the center value.)</p> <p>(3) If it is out of specification, eject the tape, remove the cassette housing, loosen the screw (black) slightly and fine-adjust the band holder. Slightly turn the band holder as follows.</p> <ul style="list-style-type: none"> · To increase torque: Counterclockwise · To decrease torque: Clockwise. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>NOTE The screw securing torque should be 0.0588 N-m (0.6 kgf-cm).</p> </div> <p>4) Check the supply backup torque again and repeat the above steps until it becomes as specified.</p>
					
2	Take-up wind torque adjustment	Cassette torque meter YTU94150A	PLAY, Adjustment menu No. 110	◎ Take-up side reading of cassette torque meter ☆ $4.9^{+4.90}_{-1.96} \times 10^{-4} \text{N}\cdot\text{m}$ ($5.0^{+5.0}_{-2.0} \text{gf}\cdot\text{cm}$)	<p>1) Select adjustment menu [119. FWD TORQUE]. (For the adjustment menu, see 3.3, "Adjustment menu".)</p> <p>2) Insert the torque cassette meter YTU94150A and press the [PLAY] button.</p> <p>3) Adjust the TU wind torque so that it is within the specified range.</p> <ul style="list-style-type: none"> · Press [JOG] dial to enter the adjustment mode. · To increase the torque → Rotate [JOG] dial to the clockwise. · To decrease the torque → Rotate [JOG] dial to the counter-clockwise. <p>4) After adjustment, press [JOG] dial to store the adjustment data.</p>

2.12 COMPATIBILITY ADJUSTMENT

2.12.1 Compatibility adjustment flow chart

Fig. 2-12-1 shows the flow chart of compatibility adjustment.

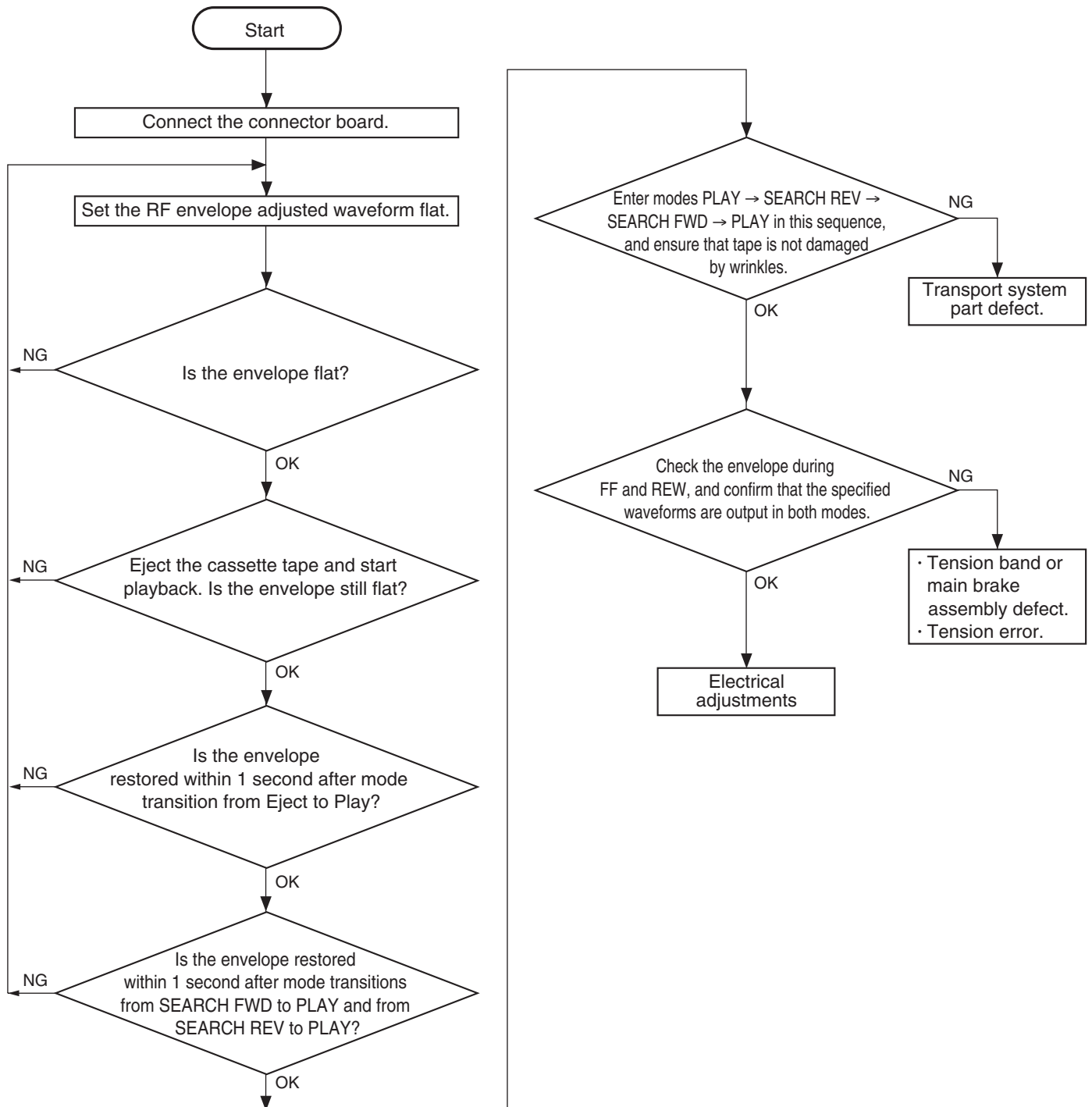


Fig. 2-12-1

2.12.2 Tape transport restriction

The unit uses only the SUP guide roller and TU guide roller to restrict the tape transport. The tape is free (no restriction) from other parts.

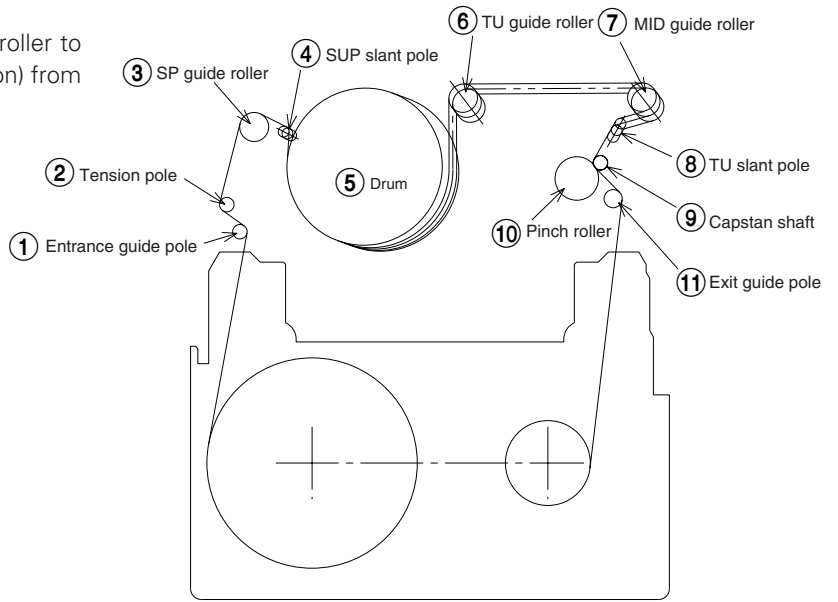


Fig. 2-12-2

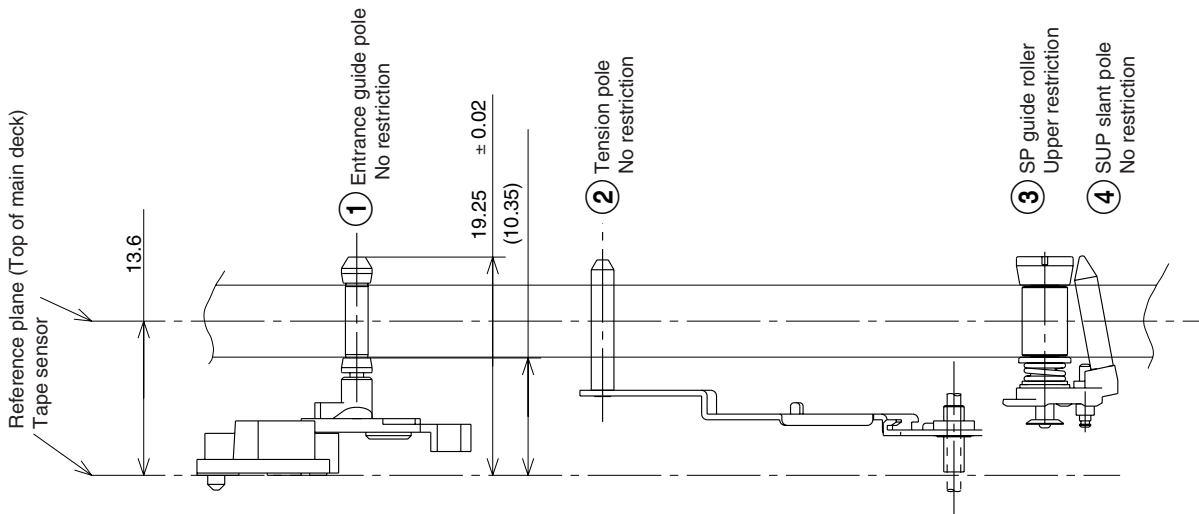


Fig. 2-12-3 Tape Restriction on Supply Side

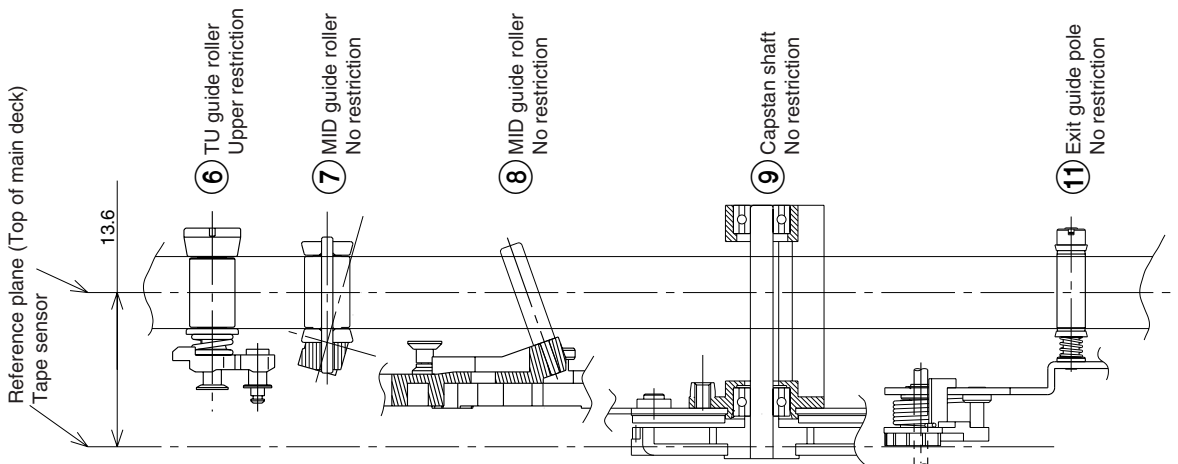
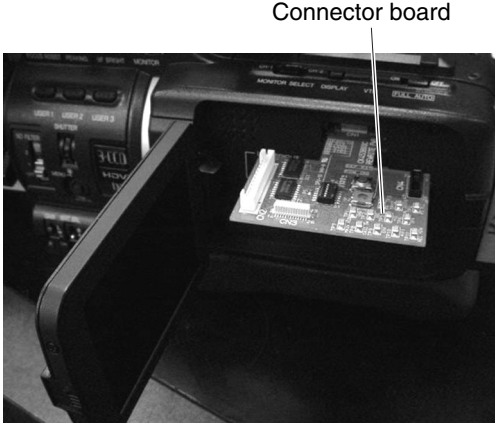
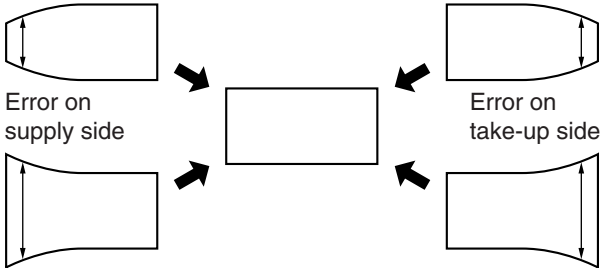


Fig. 2-12-4 Tape Restriction on Take-up Side

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (⊙) Adjustment parts (↑) Adjustment level (☆)	Adjustment procedure
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2.12.3 Compatibility adjustment

1	Preparation				<p>(1) Mount a connector board to the CN23 on the A/L/S board by inserting it in the slot that is provided to accommodate it. This may be achieved without removing the R. side cover. (See Fig. 2-12-6.)</p> <p>NOTE</p> <ul style="list-style-type: none"> Make sure the component surface of the connector board is upside. <p>NOTE</p> <ul style="list-style-type: none"> Be sure to clean the tape transport parts and play a cleaning tape before proceeding to the compatibility adjustment.
 <p>Fig. 2-12-5 How to mount a connector board</p>					
2	RF envelope adjustment	<ul style="list-style-type: none"> Oscilloscope, alignment tape MC-1(NTSC) MC-2(PAL) Color bar portion 	Play	<ul style="list-style-type: none"> ⊙ TP9 ENV OUT [connector board] ⊙ TP5 HID [connector board] ↑ Supply guide roller ↑ Take-up guide roller ☆ Make the waveforms flat. The drop level should be less than 3 dB with both SUP and TU levels. ☆ Flatness variation should be less than 2 dB. 	<p>(1) Play alignment tape color bar portion.</p> <p>(2) Observe the measuring points and adjust the supply guide roller and take-up guide roller so that the RF waveform is flat.</p> <p>(3) Set the mode to EJECT, then set to the PLAY mode and ensure that the RF waveform is flat.</p>
 <p>Fig. 2-12-6</p>					

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (⊙) Adjustment parts (Ⓜ) Adjustment level (☆)	Adjustment procedure
3	Waveform rise check	<ul style="list-style-type: none"> Oscilloscope, alignment tape MC-1(NTSC) MC-2(PAL) Color bar portion 	Eject → Play Search FWD → Play Search REV → Play	⊙ TP9 ENV OUT [Rewrite board] ⊙ TP5 HID [Rewrite board] ☆ The envelope waveform should be restored within 1 sec.	(1) Switch the mode from Eject → Play and ensure that the envelope waveform is restored in less than 1 sec. (2) Switch the mode from Search FWD → Play and from Search REV → Play, and ensure that the envelope is restored in less than 1 sec. in both cases. (3) If the waveform does not restore in the specified period, fine-adjust the supply/take-up guide rollers as far as the envelope waveform specification is met, then restart checking from the above procedure 1 again.
4	Damage check	<ul style="list-style-type: none"> Self-recorded/played tape 60ME 	Play ↓ Search REV ↓ Search FWD ↓ Play	⊙ TP9 ENV OUT [Rewrite board] ⊙ TP5 HID [Rewrite board] ☆ The tape should not be damaged by wrinkle.	(1) Transport the self-recorded/played tape from the beginning by changing modes in order of Play → Search REV → Search FWD → Play, and ensure that wrinkles due to strong restriction by the guide rollers and guide pole are not produced on tape. (2) Perform the same check at the section near the end of tape. (3) Make sure that no tape damage occurs when a tape is being loaded, unloaded or ejected.
5	Envelope check during FF/REW	<ul style="list-style-type: none"> Oscilloscope, alignment tape MC-1(NTSC) MC-2(PAL) Color bar portion 	FF REW	⊙ TP9 ENV OUT [Rewrite board] ⊙ TP5 HID [Rewrite board] ☆ A > 55μsec. ☆ B ≥ T/3	(1) Insert the alignment tape and enter Stop mode. (2) Enter FF mode. (3) Ensure that the envelope output is present at 55 μs before the HID switching timing. (4) Check the take-up side of the envelope to see that the MAX output duration is more than 1/3 the HID duration. This checking should be done after completing the switching point adjustment. (5) Enter REW mode and check the same items as (3) and (4) above. (6) If the envelope is out of specification, check the tension band and main brake assembly and replace as required. Confirm the playback switching point.

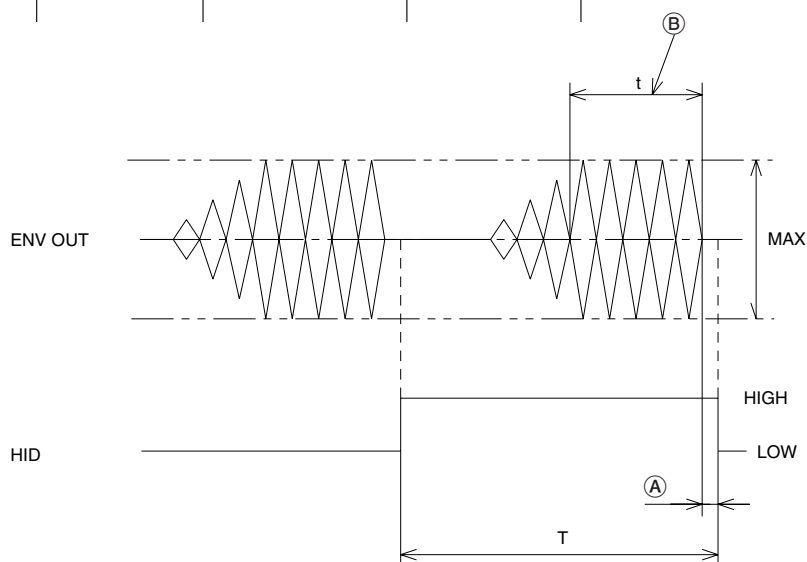


Fig. 2-12-7

SECTION 3 ELECTRICAL ADJUSTMENTS

3.1 FUNCTIONS REQUIRED FOR ADJUSTMENTS, SETUP

3.1.1 General instruments necessary for adjustment

Instrument	Condition	Instrument	Condition
Oscilloscope	Calibrated instrument with a measuring bandwidth of 100 MHz or more.	Frequency counter	Instrument calibrated for 8 digits or more. Stability of 0.1 ppm or 1×10^{-7} or better is required at 0 to 40°C.
Vectorscope	Calibrated instrument	Monitor TV	Color video monitor with a 75Ω video input.
Audio tester	Calibrated instrument		

3.1.2 Special implements required for adjustment

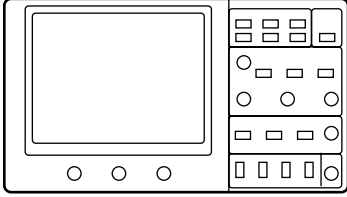
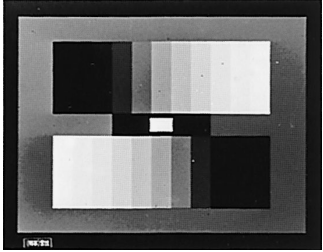

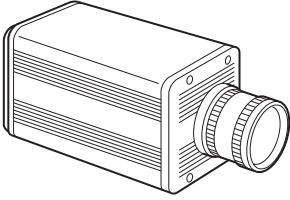
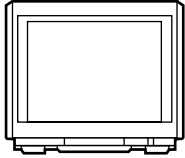
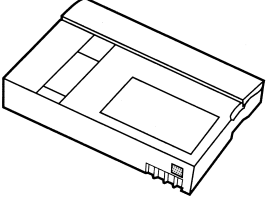
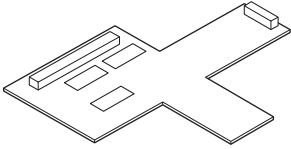
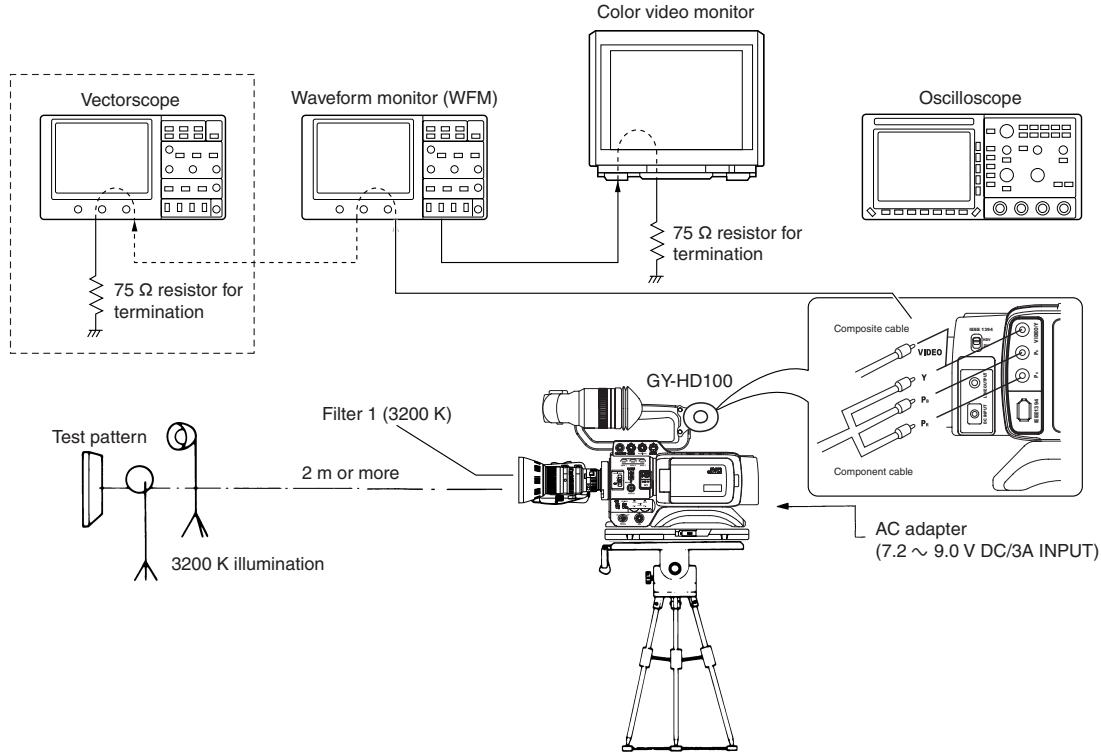
1	Waveform monitor (WFM)	2	Gray scale chart (Part No.:GS2L)	3	Tripod base Accessory (Model name : KA-551U)
					
4	Camera and lens	5	Monitor TV	6	Alignment tape MC-1 : NTSC MC-2 : PAL
					
7	REWRITE board CK453800C				
					

Fig. 3-1-1 Special implements required for adjustment

3.2 STANDARD SETUP



Adjustment items

For Camera-1 adjustment

No.	Item name	Adjustment value	Remarks
0	COUNTRY	U_E, I_EC	NTSC & PAL
1	VIDEO MODE CHANGE	NTSC, PAL	NTSC & PAL
2	27MHz CAM	0 to 255	NTSC
3	SENC SDRAM	-	NTSC & PAL
5	FPGA4 VD	0 to 7	NTSC & PAL
6	FPGA4 SDRAM	0 to 15	NTSC & PAL
10	Y LEVEL[COMPOSITE]	0 to 255	NTSC
11	C LEVEL	0 to 255	NTSC & PAL
12	Y LEVEL[COMPONENT]	0 to 255	NTSC
13	B-Y LEVEL	0 to 255	NTSC
14	R-Y LEVEL	0 to 255	NTSC
20	FPGA BLACK[B]	0 to 40	NTSC
21	FPGA BLACK[R]	0 to 40	NTSC
22	MASTER BLACK	0 to 40	NTSC
23	BLACK OFFSET[G]	0 to 63	NTSC & PAL
24	BLACK OFFSET[B]	0 to 63	NTSC & PAL
25	BLACK OFFSET[R]	0 to 63	NTSC & PAL
37	WHITE OFFSET[G]	100 to 143	NTSC & PAL
38	WHITE OFFSET[B]	100 to 143	NTSC & PAL
39	WHITE OFFSET[R]	100 to 143	NTSC & PAL
40	IN GAIN[G]	-	NTSC & PAL
41	IN GAIN[B]	-	NTSC
42	IN GAIN[R]	-	NTSC
43	FLARE[B]	0 to 40	NTSC
44	FLARE[R]	0 to 40	NTSC
45	MASTER FLARE	0 to 20	NTSC

No.	Item name	Adjustment value	Remarks
46	CORING[G]L	0 to 63	NTSC & PAL
47	CORING[G]R	0 to 63	NTSC & PAL
48	CORING[B]L	0 to 63	NTSC & PAL
49	CORING[B]R	0 to 63	NTSC & PAL
50	CORING[R]L	0 to 63	NTSC & PAL
51	CORING[R]R	0 to 63	NTSC & PAL
52	BLACK SHADING[G]L	0 to 80	NTSC & PAL
53	BLACK SHADING[G]R	0 to 80	NTSC & PAL
54	BLACK SHADING[B]L	0 to 80	NTSC & PAL
55	BLACK SHADING[B]R	0 to 80	NTSC & PAL
56	BLACK SHADING[R]L	0 to 80	NTSC & PAL
57	BLACK SHADING[R]R	0 to 80	NTSC & PAL

For AUDIO adjustment

No.	Item name	Adjustment value	Remarks
60	AUDIO LEVEL[CH1]	-	NTSC
61	AUDIO LEVEL[CH2]	-	NTSC

For LCD & VF adjustment

No.	Item name	Adjustment value	Remarks
70	SUB-BRIGHT[B]	-	NTSC
71	SUB-BRIGHT[R]	-	NTSC
72	CONTRAST	100 to 160	NTSC
73	SUB-CONTRAST[B]	10 to 120	NTSC
74	SUB-CONTRAST[R]	10 to 120	NTSC
75	GAMMA-1	0 to 80	NTSC

For LCD & VF adjustment

No.	Item name	Adjustment value	Remarks
76	GAMMA-2	0 to 80	NTSC
77	PSIG BRIGHT	40 to 120	NTSC
78	COMMON DC	27 to 107	NTSC & PAL
79	HUE	35 to 95	NTSC
80	VCO FINE	0 to 255	NTSC & PAL
81	BLACK LIMITER	0 to 63	NTSC
82	VCO COARSE	1 to 7	NTSC & PAL
83	H-POSITION	2 to 31	NTSC & PAL
84	RESOLUTION	0 to 5	NTSC & PAL
85	VF SUB-BRIGHT[B]	27 to 107	NTSC
86	VF SUB-BRIGHT[R]	27 to 107	NTSC
87	VF CONTRAST	100 to 160	NTSC
88	VF SUB-CONTRAST[B]	10 to 120	NTSC
89	VF SUB-CONTRAST[R]	10 to 120	NTSC
90	VF GAMMA-1	0 to 80	NTSC
91	VF GAMMA-2	0 to 80	NTSC
92	VF COM LEVEL	0 to 255	NTSC
93	VF COMMON DC	27 to 107	NTSC & PAL
94	VF HUE	35 to 95	NTSC
95	VF VCOL	0 to 255	NTSC & PAL
96	VF VCOH	0, 1	NTSC & PAL
97	VF H POSITION	0 to 79	NTSC & PAL
98	VF V POSITION	0 to 31	NTSC & PAL
99	VF RESOLUTION	0 to 5	NTSC & PAL

For DVC unit adjustment

No.	Item name	Adjustment value	Remarks
100	PB SW POINT	00000000 to FFFFFFFF	NTSC
101	ME REC CURRENT	0 to 255	NTSC
102	ME SP VCO	0000H to FFFFH	NTSC
103	FS PLL 48kHz	0 to 255	NTSC
104	FS PLL 44.1kHz	0 to 255	NTSC
105	FS PLL 32kHz	0 to 255	NTSC
106	27MHz VCO	0 to 255	NTSC
107	ATF GAIN	0 to 255	NTSC
108	AGC GAIN	0 to 255	NTSC
109	BGNEND SENS	0 to 255	NTSC
110	FWD TORQUE	0 to 255	NTSC

For CAMERA-2 adjustmnt

No.	Item name	Adjustment value	Remarks
200	AFE ALL RESET	CANCEL, EXECUTE	NTSC & PAL
201	H1 START[G]L	0 to 63	NTSC & PAL
202	H1 STOP[G]L	0 to 63	NTSC & PAL
203	H1 START[G]R	0 to 63	NTSC & PAL
204	H1 STOP[G]R	0 to 8	NTSC & PAL
205	RESET START[G]L	34 to 36	NTSC & PAL
206	RESET STOP[G]L	0 to 63	NTSC & PAL

For LCD & VF adjustment

No.	Item name	Adjustment value	Remarks
207	SHP PHASE[G]L	0 to 63	NTSC & PAL
208	SHD PHASE[G]L	0 to 63	NTSC & PAL
209	AD OUT PHASE[G]L	0 to 16	NTSC & PAL
210	RESET START[G]R	34 to 36	NTSC & PAL
211	RESET STOP[G]R	0 to 63	NTSC & PAL
212	SHP PHASE[G]R	0 to 63	NTSC & PAL
213	SHD PHASE[G]R	0 to 63	NTSC & PAL
214	AD OUT PHASE[G]R	0 to 63	NTSC & PAL
221	H1 START[B]L	0 to 63	NTSC & PAL
222	H1 STOP[B]L	0 to 63	NTSC & PAL
223	H1 START[B]R	0 to 63	NTSC & PAL
224	H1 STOP[B]R	0 to 8	NTSC & PAL
225	RESET START[B]L	34 to 36	NTSC & PAL
226	RESET STOP[B]L	0 to 63	NTSC & PAL
227	SHP PHASE[B]L	0 to 63	NTSC & PAL
228	SHD PHASE[B]L	0 to 63	NTSC & PAL
229	AD OUT PHASE[B]L	0 to 63	NTSC & PAL
230	RESET START[B]R	34 to 36	NTSC & PAL
231	RESET STOP[B]R	0 to 63	NTSC & PAL
232	SHP PHASE[B]R	0 to 63	NTSC & PAL
233	SHD PHASE[B]R	0 to 63	NTSC & PAL
234	AD OUT PHASE[B]R	0 to 63	NTSC & PAL
241	H1 START[R]L	0 to 63	NTSC & PAL
242	H1 STOP[R]L	0 to 63	NTSC & PAL
243	H1 START[R]R	0 to 63	NTSC & PAL
244	H1 STOP[R]R	0 to 8	NTSC & PAL
245	RESET START[R]L	34 to 36	NTSC & PAL
246	RESET STOP[R]L	0 to 63	NTSC & PAL
247	SHP PHASE[R]L	0 to 63	NTSC & PAL
248	SHD PHASE[R]L	0 to 63	NTSC & PAL
249	AD OUT PHASE[R]L	0 to 16	NTSC & PAL
250	RESET START[R]R	34 to 36	NTSC & PAL
251	RESET STOP[R]R	0 to 63	NTSC & PAL
252	SHP PHASE[R]R	0 to 63	NTSC & PAL
253	SHD PHASE[R]R	0 to 63	NTSC & PAL
254	AD OUT PHASE[R]R	0 to 63	NTSC & PAL
300	CLAMP ALL REST	CANCEL, EXECUTE	NTSC & PAL
301	CLAMP LEVEL[G]L	0 to 63	NTSC & PAL
302	CLAMP LEVEL[G]R	0 to 63	NTSC & PAL
303	CLAMP LEVEL[B]L	0 to 63	NTSC & PAL
304	CLAMP LEVEL[B]R	0 to 63	NTSC & PAL
305	CLAMP LEVEL[R]L	0 to 63	NTSC & PAL
306	CLAMP LEVEL[R]R	0 to 63	NTSC & PAL

3.3 ADJUSTMENT MENU

3.3.1 Switches and Functions Used in Adjustments

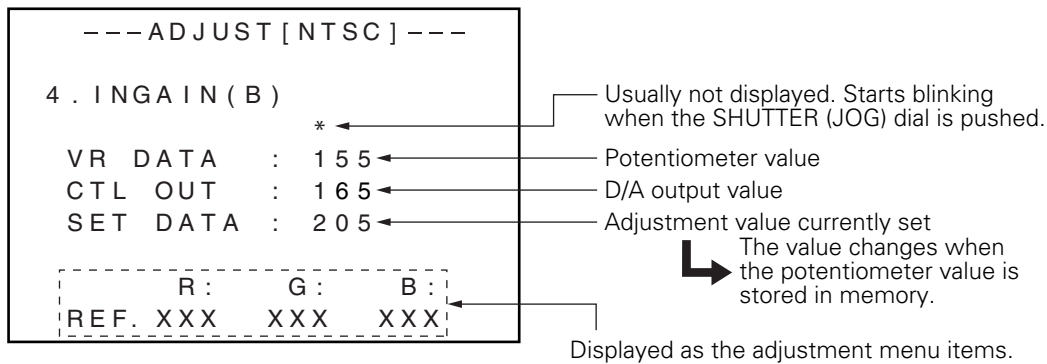
Most of the adjustment items employ microcomputer-controlled adjustments using electric potentiometers. The adjustment data is stored in EEPROM.

The switches used in the adjustments and their functions are as follows.

- **MENU** (STATUS) button : Press to start or exit from the adjustment menu.
- **USER 1** , **USER 2** : Press to select the adjustment item.
- JOG (SHUTTER) dial (rotate) : Rotate to adjust the selected item.
- JOG (SHUTTER) dial button (push in) : Press to start an adjustment and store the adjustment value in memory.

3.3.2 Procedure

- (1) Turn the power ON, while holding the **USER 1** and **USER 2** buttons
- (2) When the power is ON, press the **MENU** button to display the ADJUST MENU.
- (3) Push the **JOG** dial button so that "*" blinks, and rotate the **JOG** dial to the specified value while observing the designated TP and measuring instrument. (In this mode, **JOG** dial rotate while holding the **MENU** button, then parameter value change quickly.)
- (4) After completing the adjustment, push the **JOG** dial button to delete the "*" and store the adjustment value in memory. (If do not push the **JOG** dial button, adjustment value will not stored.)
- (5) Press the **USER 1** and **USER 2** button to select the next item to adjust.
- (6) Adjust for each item to do same procedure as above (3)(4).
- (7) After completing all adjustments, press the **MENU** button to exit the ADJUST MENU.
- (8) To return to normal operation mode, turn the power OFF and ON again. (If did not re-start camera power, camera will be still in ADJUST MODE, so if press the MENU button then ADJUST **MENU** indicate on the screen and will not indicate normal menu screen.)



On-screen adjustment menu

3.3.3 Adjustment mode

When setting to adjustment mode with the MENU setting status below, an adjustment mode that outputs PAL signal will be set.

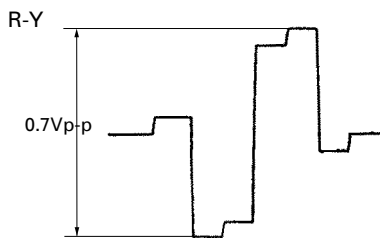
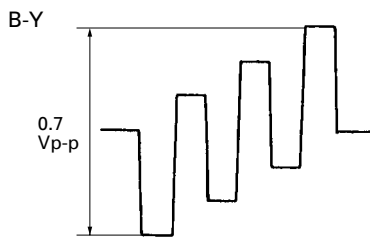
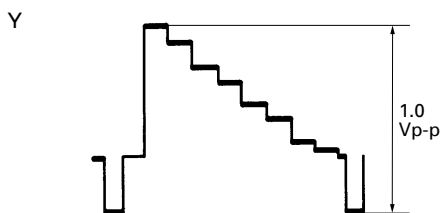
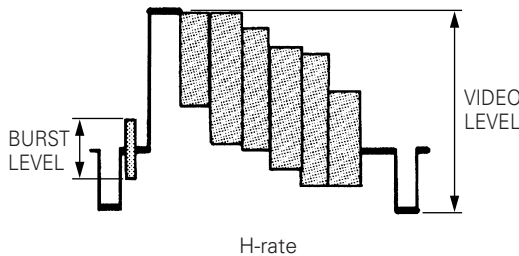
- FRAME RATE : 50/25
- REC : DV-50I

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
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3.4 CAMERA ADJUSTMENTS

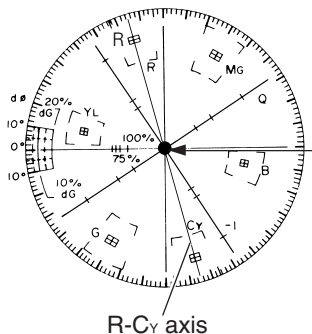
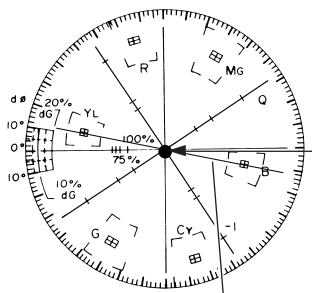
3.4.1 Camera adjustments

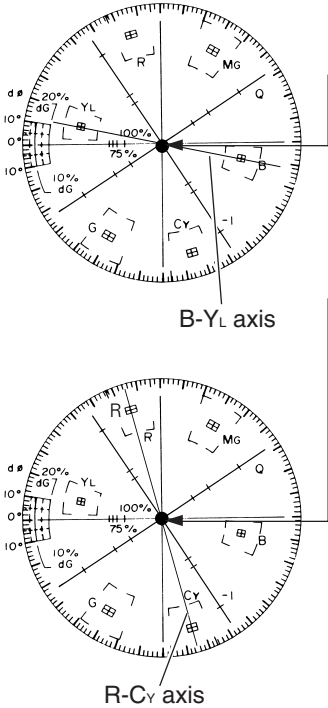
1	FH adjustment	Frequency counter	ADJUST MENU	◎ TP[FH] Rewrite board ⬆ JOG dial ☆ 27,000,000 ± 30Hz	(1) Press the USER 1/2 button to select ADJUST MENU No.2 "27MHz CAM".(Color bar signal will be output automatically) (2) Push the JOG dial button so that "*" blinks, and then rotate the JOG dial to adjust to the specified value. (3) Press the JOG dial to store the adjustment data.
2	ENCODER adjustment (COMPOSITE)	Oscilloscope	ADJUST MENU	◎ VIDEO OUT ⬆ JOG dial ☆ VIDEO level 1.000Vp-p	(1) Press the USER 1/2 button to select ADJUST MENU No.10 "Y LEVEL (COMPOSITE)". (2) Rotate the JOG dial to the specified value. (3) Press the JOG dial to store the adjustment data.
				◎ VIDEO OUT ⬆ JOG dial ☆ BURST level NTSC: 0.286 ± 0.015V PAL: 0.300 ± 0.015V	(4) Press the USER 1/2 button to select ADJUST MENU No.11 "LEVEL". (5) Rotate the JOG dial to the specified value. (6) Press the JOG dial to store the adjustment data.
3	ENCODER adjustment (COMPONENT)	Oscilloscope	ADJUST MENU	◎ Y OUT ⬆ JOG dial ☆ 1.000Vp-p	(1) Press the USER 1/2 button to select ADJUST MENU No.12 "Y LEVEL (COMPONENT)". (2) Rotate the JOG dial to the specified value. (3) Press the JOG dial to store the adjustment data.
				◎ PB OUT ⬆ JOG dial ☆ B-Y level 0.700 Vp-p	(4) Press the USER 1/2 button to select ADJUST MENU No.13 "B-Y (COMPONENT) LEVEL". (5) Rotate the JOG dial to adjust to the specified value. (6) Press the JOG dial to store the adjustment data.
				◎ PR OUT ⬆ JOG dial ☆ R-Y level 0.700 Vp-p	(7) Press the USER 1/2 button to select ADJUST MENU No.14 "R-Y LEVEL (COMPONENT)". (8) Rotate the JOG dial to adjust to the specified value. (9) Press the JOG dial to store the adjustment data.

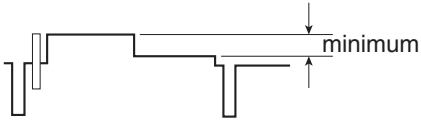


No.	Item	Measuring instruments & Input signals	Mode	Measuring point (⊙) Adjustment parts (⬇) Adjustment level (☆)	Adjustment procedure
4	BLACK adjustment	Oscilloscope	ADJUST MENU	⊙ VIDEO OUT ⬇ JOG dial ☆ Minimize the carrier leak	(1) Press the USER 1/2 button to select ADJUST MENU No.20 "FPGA BLACK (B)". (2) Rotate the JOG dial to adjust to the specified value. (3) Press the JOG dial to store the adjustment data.
				⊙ VIDEO OUT ⬇ JOG dial ☆ Minimize the carrier leak	(4) Then, Press the USER 1/2 button to select ADJUST MENU No.21 "FPGA BLACK (R)". (5) Rotate the JOG dial to adjust to the specified value. (6) Press the JOG dial to store the adjustment data.
	MASTER BLACK adjustment	Oscilloscope	ADJUST MENU	⊙ VIDEO OUT ⬇ JOG dial ☆ 0.053 ± 0.007V	(7) Then, press the USER 1/2 button to select ADJUST MENU No.22 "MASTER BLACK". (8) Rotate the JOG dial to adjust black level to the specified value. <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>NOTE: At first, set the level over than the specified value. And adjust the level of left side becomes equal to the specified value.</p> </div> (9) Press the JOG dial to store the adjustment data. (10) Check the CHROMA signal to confirm that the carrier leakage should be specified level.
5	CLAMP LEVEL adjustment	Lens cap	ADJUST MENU	⊙ LCD monitor ⬇ JOG dial ☆ [G] L Ref.: 127 or 128	(1) Press the USER 1/2 button to select ADJUST MENU No. 301 "CLAMP LEVEL[G]L". (2) Rotate the JOG dial to the specified value. (3) Press the JOG dial to store the adjustment data.
				<div style="border: 1px solid black; padding: 10px; text-align: center;"> <pre> ---ADJUST [NTSC] --- ***.CLAMP LEVEL[*]*. * VR DATA : 155 CTL OUT : 165 SET DATA : 205 R: G: B: REF. L XXX XXX XXX REF. R XXX XXX XXX </pre> </div> ⊙ LCD monitor ⬇ JOG dial ☆ [G] L Ref.: 127 or 128	(4) Press the USER 1/2 button to select ADJUST MENU No. 302 "CLAMP LEVEL[G]R". (5) Rotate the JOG dial to the specified value. (6) Press the JOG dial to store the adjustment data.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (⊙) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
				⊙ LCD monitor ⬆ JOG dial ☆ [B] L Ref.: 127 or 128 ⊙ LCD monitor ⬆ JOG dial ☆ [B] R Ref.: 127 or 128 ⊙ LCD monitor ⬆ JOG dial ☆ [R] L Ref.: 127 or 128 ⊙ LCD monitor ⬆ JOG dial ☆ [R] R Ref.: 127 or 128	(7) Press the USER 1/2 button to select ADJUST MENU No. 303 "CLAMP LEVEL[B]L". (8) Rotate the JOG dial to the specified value. (9) Press the JOG dial to store the adjustment data. (10) Press the USER 1/2 button to select ADJUST MENU No. 304 "CLAMP LEVEL[B]R". (11) Rotate the JOG dial to the specified value. (12) Press the JOG dial to store the adjustment data. (13) Press the USER 1/2 button to select ADJUST MENU No. 305 "CLAMP LEVEL[R]L". (14) Rotate the JOG dial to the specified value. (15) Press the JOG dial to store the adjustment data. (16) Press the USER 1/2 button to select ADJUST MENU No. 306 "CLAMP LEVEL[R]R". (17) Rotate the JOG dial to the specified value. (18) Press the JOG dial to store the adjustment data.
---	ADJUST [NTSC] ---	<pre> *** . CLAMP LEVEL [*] * . * VR DATA : 155 CTL OUT : 165 SET DATA : 205 R : G : B : REF. L XXX XXX XXX REF. R XXX XXX XXX </pre>			
---	ADJUST [NTSC] ---	<pre> *** . CLAMP LEVEL [*] * . * VR DATA : 155 CTL OUT : 165 SET DATA : 205 R : G : B : REF. L XXX XXX XXX REF. R XXX XXX XXX </pre>			
---	ADJUST [NTSC] ---	<pre> *** . CLAMP LEVEL [*] * . * VR DATA : 155 CTL OUT : 165 SET DATA : 205 R : G : B : REF. L XXX XXX XXX REF. R XXX XXX XXX </pre>			
6	IN GAIN adjustment	Vectorscope Gray scale chart	ADJUST MENU	⊙ LCD display ⬆ Lens Iris ☆ [G] Ref.: 370 ± 5 ⊙ VIDEO OUT ⬆ JOG dial ☆ Position the noise on the B-YL axis at the center of the Vectorscope ⊙ VIDEO OUT ⬆ JOG dial ☆ Position the noise on the R-CY axis at the center of the Vectorscope ⊙ VIDEO OUT ⬆ JOG dial ☆ Position the noise at the center of the Vectorscope carrier leak: less than 0.03V	(1) While shooting the gray scale chart, set the Lens iris so that the [G] ref. data is specified value. (2) Press the USER 1/2 button to select ADJUST MENU No. 41 "IN GAIN(B)". (3) Rotate the JOG dial to the specified value. (4) Press the JOG dial to store the adjustment data. (5) Press the USER 1/2 button to select ADJUST MENU No. 42 "IN GAIN(R)". (6) Rotate the JOG dial to the specified value. (7) Press the JOG dial to store the adjustment data. (8) Repeat the adjustment from (1) to (6) above, adjust such that the position the noise becomes center of the Vectorscope. (9) Check the carrier leak of white window portion is specified value.



No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⬇️) Adjustment level (☆)	Adjustment procedure
7	FLARE adjustment	Vectorscope Gray scale chart 	ADJUST MENU	◎ LCD display ⬇️ Lens Iris ☆ Video level: 200% ◎ VIDEO OUT ⬇️ JOG dial ☆ Position the noise on the B-YL axis at the center of the Vectorscope ◎ VIDEO OUT ⬇️ JOG dial ☆ Position the noise on the R-CY axis at the center of the Vectorscope ◎ VIDEO OUT ⬇️ JOG dial ☆ Position the noise at the center of the Vectorscope carrier leak: less than 0.03V	(1) While shooting the gray scale chart, set the Lens iris so that the [G] ref. data is 370 ± 5 . (2) Then, open the Lens iris by one step. (3) Press the USER 1/2 button to select ADJUST MENU No. 43 "FPGA FRARE(B)". (4) Rotate the JOG dial to the specified value. (5) Press the JOG dial to store the adjustment data. (6) Press the USER 1/2 button to select ADJUST MENU No. 44 "FPGA FRARE(R)". (7) Rotate the JOG dial to the specified value. (8) Press the JOG dial to store the adjustment data. (9) Repeat the adjustment from (3) to (8) above, adjust such that the position the noise becomes center of the Vectorscope. (10) Check the carrier leak of white black portion is specified value.
8	MASTER FRARE adjustment	-	ADJUST MENU	◎ LCD display ⬇️ JOG dial ☆ VR DATA: 15	(1) Press the USER 1/2 button to select ADJUST MENU No. 45 "MASTER FRARE(B)". (2) Rotate the JOG dial to the specified value. (3) Press the JOG dial to store the adjustment data.
9	COREING [G] adjustment	Oscilloscope	ADJUST MENU	◎ VIDEO OUT ⬇️ JOG dial ☆ Noise level on the left and right sides of the screen should have same.	(1) Press the USER 1/2 button to select ADJUST MENU No. 46 "COREING[G]L" or ADJUST MENU No. 47 "COREING[G]R". (2) Rotate the JOG dial to the specified value. (3) Press the JOG dial to store the adjustment data.
10	COREING [B] adjustment	Oscilloscope	ADJUST MENU	◎ VIDEO OUT ⬇️ JOG dial ☆ Noise level on the left and right sides of the screen should have same.	(1) Press the USER 1/2 button to select ADJUST MENU No. 48 "COREING[B]L" or ADJUST MENU No. 49 "COREING[B]R". (2) Rotate the JOG dial to the specified value. (3) Press the JOG dial to store the adjustment data.
11	COREING [R] adjustment	Oscilloscope	ADJUST MENU	◎ VIDEO OUT ⬇️ JOG dial ☆ Noise level on the left and right sides of the screen should have same.	(1) Press the USER 1/2 button to select ADJUST MENU No. 50 "COREING[R]L" or ADJUST MENU No. 51 "COREING[R]R". (2) Rotate the JOG dial to the specified value. (3) Press the JOG dial to store the adjustment data.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⬇️) Adjustment level (☆)	Adjustment procedure
12	BLACK L/R OFFSET adjustment	Oscilloscope	ADJUST MENU	◎ VIDEO OUT ⬇️ JOG dial ☆ The black level on the left and right side of the screen should have same level	(1) Press the USER 1/2 button to select ADJUST MENU No. 23 "BLACK OFFSET (G)". (2) Rotate the JOG dial to the specified value. (3) Press the JOG dial to store the adjustment data.
		Oscilloscope	ADJUST MENU	◎ VIDEO OUT ⬇️ JOG dial ☆ The black level on the left and right side of the screen should have same level	(4) Press the USER 1/2 button to select ADJUST MENU No. 24 "BLACK OFFSET (B)". (5) Rotate the JOG dial to the specified value. (6) Press the JOG dial to store the adjustment data.
				◎ VIDEO OUT ⬇️ JOG dial ☆ The black level on the left and right side of the screen should have same level	(7) Press the USER 1/2 button to select ADJUST MENU No. 25 "BLACK OFFSET (R)". (8) Rotate the JOG dial to the specified value. (9) Press the JOG dial to store the adjustment data.
				◎ VIDEO OUT ⬇️ JOG dial ☆ The black level on the left and right side of the screen should have same level	(10) Repeat the adjustment from (4) to (9) above, adjust such that the right and left sides of the vectorscope become equal.
13	CROSS TALK adjustment	Monitor TV Point light source (incandescent lamp of more than 40W)	ADJUST MENU	◎ VIDEO OUT ⬇️ JOG dial ☆ The level at the edge on the right screen should not be obvious.	(1) Press the USER 1/2 button to select ADJUST MENU No. 249 "AD OUTPUT PHASE (R)JL". (2) Set to a dark background and take photo such that the point light source appears on the left of the screen. (3) Rotate the JOG dial to the specified value. (4) Press the JOG dial to store the adjustment data.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
14	WHITE L/R OFFSET [G]	Oscilloscope Gray scale chart	ADJUST MENU	◎ VIDEO OUT ⬆ Lens IRIS ☆ Video level : 0.98 V (95IRE)	(1) Adjust the lens iris so that the white level on the gray scale chart is specified value.
		Oscilloscope Monitor TV	ADJUST MENU	◎ VIDEO OUT ⬆ JOG dial	(2) Press the USER 1/2 button to select ADJUST MENU No. 37 "WHITE OFFSET (G)". (3) Rotate the JOG dial to the specified value. (4) Press the JOG dial to store the adjustment data.
	LINEARITY adjustment	Oscilloscope Gray scale chart	ADJUST MENU	◎ VIDEO OUT ⬆ Lens IRIS ☆ The level difference between left and right should be maximum	(1) Press the USER 1/2 button to select ADJUST MENU No. 205 "RESET START (G)L". (2) While shooting the gray scale chart, set the Lens iris so that the video out level is specified value.
	◎ VIDEO OUT ⬆ JOG dial ☆ The step levels of left and right should be the same.			(3) Rotate the JOG dial to the specified value. (4) Press the JOG dial to store the adjustment data.	
				(5) When the adjustments of No. WHITE OFFSET and No. LINEARITY cannot be made, change the setting of ADJUST MENU No. 204 "H1 STOP (G)R" to the sequence as shown below and readjust the 2 adjustments above. Initial setting "5" → "6" → "7" → "4".	

NOTE:
When the adjustment cannot be made, change the value of ADJUST MENU No. 210 "RESET START [G]R", readjust (1) to (4) such that the level difference becomes minimum.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
15	WHITE L/R OFFSET [B]	Oscilloscope Gray scale chart	ADJUST MENU	◎ VIDEO OUT ⬆ Lens IRIS ☆ Adjust such that the 100 % white portion of the color bar and the white portion of the gray scale have same level.	(1) Adjust the lens iris so that the white level on the gray scale chart is specified value.
		Oscilloscope Monitor TV	ADJUST MENU	◎ VIDEO OUT ⬆ JOG dial ☆ Eliminate the gap of the H rate output waveform, and no line should be seen at the center of the monitor TV screen.	(2) Press the USER 1/2 button to select ADJUST MENU No. 38 "WHITE OFFSET (B)". (3) Rotate the JOG dial to the specified value. (4) Press the JOG dial to store the adjustment data.
	LINEARITY adjustment	Oscilloscope Gray scale chart	ADJUST MENU	◎ VIDEO OUT ⬆ Lens Iris ☆ The level difference between left and right should be maximum ◎ VIDEO OUT ⬆ JOG dial ☆ The step levels of left and right should be the same.	(1) Press the USER 1/2 button to select ADJUST MENU No. 225 "RESET START (B)L". (2) While shooting the gray scale chart, set the Lens iris so that the video out level is specified value. (3) Rotate the JOG dial to the specified value. (4) Press the JOG dial to store the adjustment data. NOTE: When the adjustment cannot be made, change the value of ADJUST MENU No. 230 "RESET START [B]R", readjust (1) to (4) such that the level difference becomes minimum. (5) When the adjustments of No. WHITE OFFSET and No. LINEARITY cannot be made, change the setting of ADJUST MENU No. 224 "H1 STOP (G)R" to the sequence as shown below and readjust the 2 adjustments above. Initial setting "5" → "6" → "7" → "4".

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
16	WHITE L/R OFFSET [R]	Oscilloscope Gray scale chart	ADJUST MENU	◎ VIDEO OUT ⬆ Lens IRIS ☆ Adjust such that the 100 % white portion of the color bar and the white portion of the gray scale have same level.	(1) Adjust the lens iris so that the white level on the gray scale chart is specified value.
		Oscilloscope Monitor TV	ADJUST MENU	◎ VIDEO OUT ⬆ JOG dial ☆ Eliminate the gap of the H rate output waveform, and no line should be seen at the center of the monitor TV screen.	(2) Press the USER 1/2 button to select ADJUST MENU No. 39 "WHITE OFFSET (R)". (3) Rotate the JOG dial to the specified value. (4) Press the JOG dial to store the adjustment data.
	LINEARITY adjustment	Oscilloscope Gray scale chart	ADJUST MENU	◎ VIDEO OUT ⬆ Lens Iris ☆ The level difference between left and right should be maximum	(1) Press the USER 1/2 button to select ADJUST MENU No. 245 "RESET START (R)L". (2) While shooting the gray scale chart, set the Lens iris so that the video out level is specified value. NOTE: When the adjustment cannot be made, change the value of ADJUST MENU No. 250 "RESET START [R]R", readjust (1) to (4) such that the level difference becomes minimum.
				◎ VIDEO OUT ⬆ JOG dial ☆ The step levels of left and right should be the same.	(3) Rotate the JOG dial to the specified value. (4) Press the JOG dial to store the adjustment data. (5) When the adjustments of No. WHITE OFFSET and No. LINEARITY cannot be made, change the setting of ADJUST MENU No. 244 "H1 STOP (G)R" to the sequence as shown below and readjust the 2 adjustments above. Initial setting "5" → "6" → "7" → "4".

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
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3.4.2 AUDIO adjustment

Audio adjustments are required to input the test signal from LINE input.
All switches and VR's should be set the position as below table.


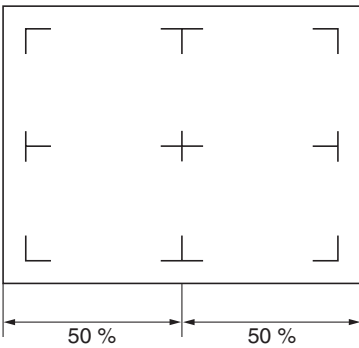
AUDIO INPUT (INPUT1/INPUT2)	: LINE	AUDIO MODE (MENU)	: 48k
CH2 INPUT	: INPUT 2	AUDIO SELECT	: MANUAL
AUDIO REF.LEVEL (MENU)	: -20dB	MONITOR SELECT	: BOTH
OUTPUT CHARACTER (MENU)	: ON	WIND CUT (MENU)	: OFF
TEST TONE (MENU)	: OFF		

1	INPUT LEVEL setting	Audio tester 1KHz/+4dBs	Camera mode	◎ LINE OUT ⬆ AUDIO LEVEL VR ☆ -8dBs	(1) Input the test signal (1KHz /+4dBs) to the LINE input, adjust the adjustment point to the specified level.
2	Audio level meter adjustment	1KHz/+4dBs	Camera mode LCD should be Spread indication ADJUST MENU No.60 : AUDIO LEVEL (CH-1) No.61 : AUDIO LEVEL (CH-2)	◎ LCD MONITOR (Audio level meter) ⬆ Auto adjustment ☆ -20dBs	(1) This adjustment item should be do after complete the INPUT LEVEL setting. (2) Press the USER 1/2 button to select ADJUST MENU No.60 "AUDIO LEVEL (CH1)". (3) Press the JOG dial to display (blink) the * mark on the adjustment screen. (4) Press the JOG dial again to clear the * mark display. (5) Press the USER1 button to select ADJUST MENU No.61 "AUDIO LEVEL (CH2). (6) Perform the adjustment using steps same as (3) and (4) above. (7) Turn off the power once and turn it on again. (8) Press the DISPLAY button to select enlarged display for the LCD level meter. (9) Check that the LCD level meter is lit to the level of -20dB.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (Ⓜ) Adjustment level (☆)	Adjustment procedure
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3.4.3 MONITOR LCD adjustment

For the MONITOR LCD adjustment, the following adjustment are required only. Other adjustment items should be default value.

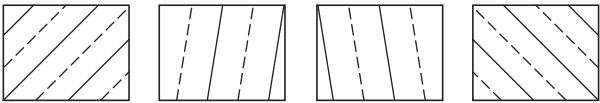
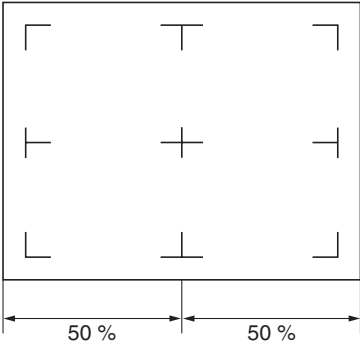
1	COMMON DC adjustment	—	ADJUST MENU	◎ MONITOR LCD Ⓜ JOG dial ☆ Minimize the flicker	(1) Press the USER 1/2 button to select ADJUST MENU No.78, "COMMON DC". (2) Set the MONITOR LCD to field invert mode, rotate the JOG dial to adjust to the specified level. (3) Press the JOG dial to store the adjustment data.
2	VCO adjustment	—	ADJUST MENU	◎ MONITOR LCD Ⓜ JOG dial ☆ Most stable point for monitor screen	(1) Press the USER 1/2 button to select ADJUST MENU No.80, "VCO FINE". (2) Rotate the JOG dial to adjust to the specified level. NOTE: If adjustment cannot be done, change ADJUST MENU No. 82 "VCO COARSE" to 3 or 5 and readjust. (3) Press the JOG dial to store the adjustment data.
				 <p style="text-align: center;">NG OK OK NG</p>	
3	H-POSITION adjustment	Gray scale chart	ADJUST MENU	◎ MONITOR LCD Ⓜ JOG dial ☆ Screen centering	(1) Press the USER 1/2 button to select ADJUST MENU No.83, "H POSITION". (2) Rotate the JOG dial to adjust the marker to horizontal center of the screen. (3) Press the JOG dial to store the adjustment data.
					

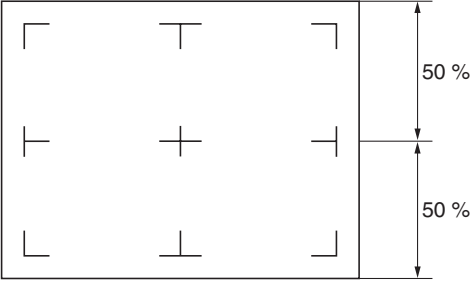
No.	Item	Measuring instruments & Input signals	Mode	Measuring point (⊙) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
4	SUB BRIGHT adjustment	Oscilloscope		⊙ LCD display ☆ Y level Should be 200 mV ~ 400 mV.	(1) Shoot the LCD Screen using other cameras. (2) Check the camera output taken from the LCD Screen using a oscilloscope. (3) Check that the minimum level is above 200 mV and the maximum level is above 400 mV.
		Vectorscope	ADJUST MENU	⊙ LCD display ⬆ JOG dial ☆ Position the noise on the B-YL axis at the center of the vectorscope.	(4) Press the USER 1/2 button to select ADJUST MENU No. 70 "SUB BRIGHT (B)". (5) Rotate the JOG dial to the specified value. (6) Press the JOG dial to store the adjustment data.
				⊙ LCD display ⬆ JOG dial ☆ Position the noise on the R-CY axis at the center of the vectorscope.	(7) Press the USER 1/2 button to select ADJUST MENU No. 71 "SUB BRIGHT (R)". (8) Rotate the JOG dial to the specified value. (9) Press the JOG dial to store the adjustment data.
				⊙ LCD display ⬆ JOG dial ☆ Position the noise at the center of the vectorscope.	(10) Repeat the adjustment from (4) to (9) above, adjust such that the right and left sides of the vectorscope become equal.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (Ⓜ) Adjustment level (☆)	Adjustment procedure
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3.4.4 VIEWFINDER adjustment

For the VIEWFINDER adjustment, the following adjustment are required only. Other adjustment items should be default value.

1	VF COMMON DC adjustment		ADJUST MENU	◎ VIEWFINDER Ⓜ JOG dial ☆ Minimize the flicker	(1) Press the USER 1/2 button to select ADJUST MENU No.93, "VF COMMON DC". (2) Rotate the JOG dial to adjust to the specified level. (3) Press the JOG dial to store the adjustment data.
2	VF VCO adjustment		ADJUST MENU	◎ VIEWFINDER Ⓜ JOG dial ☆ Most stable point for monitor screen	(1) Press the USER 1/2 button to select ADJUST MENU No.95, "VF VCO L". (2) Rotate the JOG dial to adjust to the specified level. NOTE: If adjustment cannot be done, change ADJUST MENU No. 96 "VF VCO H" to 3 or 5 and readjust. (3) Press the JOG dial to store the adjustment data.
				 <p style="text-align: center;">NG OK OK NG</p>	
3	VF H-POSITION adjustment	Gray scale chart	ADJUST MENU	◎ VIEWFINDER Ⓜ JOG dial ☆ Screen centering	(1) Press the USER 1/2 button to select ADJUST MENU No.97, "VF H POSITION". (2) Rotate the JOG dial to adjust the marker to horizontal center of the screen. (3) Press the JOG dial to store the adjustment data.
					

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
4	VF V-POSITION adjustment	Gray scale chart	ADJUST MENU	◎ VIEWFINDER ⬆ JOG dial ☆ Screen centering	(1) Press the USER 1/2 button to select ADJUST MENU No.98 "VF V POSITION". (2) Shooting the Grey scale chart and rotate the JOG dial to adjust the white part in the middle of Grayscale so that it is at the center of the screen. (3) Press the JOG dial to store the adjustment data.
					
5	VF SUB BRIGHT adjustment	Oscilloscope		◎ View Finder ⬆ VF BRIGHT level ☆ Y level The maximum level should be 500 mV.	(1) Shoot the View Finder using other cameras. (2) Check the camera output taken from the View Finder using a oscilloscope. (3) Check that the maximum level is shown around the center of V rate. (4) Adjust such that the maximum level is above 500 mV.
		Vectorscope	ADJUST MENU	◎ View Finder ⬆ JOG dial ☆ Position the noise on the B-YL axis at the center of the vectorscope.	(5) Press the USER 1/2 button to select ADJUST MENU No. 85 "VF SUB BRIGHT (B)". (6) Rotate the JOG dial to the specified value. (7) Press the JOG dial to store the adjustment data.
				◎ View Finder ⬆ JOG dial ☆ Position the noise on the R-CY axis at the center of the vectorscope.	(8) Press the USER 1/2 button to select ADJUST MENU No. 86 "VF SUB BRIGHT (R)". (9) Rotate the JOG dial to the specified value. (10) Press the JOG dial to store the adjustment data.
			◎ View Finder ⬆ JOG dial ☆ Position the noise at the center of the vectorscope.	(11) Repeat the adjustment from (5) to (10) above, adjust such that the right and left sides of the vectorscope become equal.	

3.5 DVC UNIT ADJUSTMENTS

Preparation : Connect the Rewrite board (CK453800C) to CN801 on the DBCD board. Connect it in the orientation shown in Fig. 3.4, so that the test point surface (component mounting surface) faces upward.

NOTE:
When adjusting this item, set the MODE switch to VTR.



REWRITE BOARD

Fig. 3.4 Rewrite board connection method

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (⊙) Adjustment parts (Ⓢ) Adjustment level (☆)	Adjustment procedure	
1	PB switching point adjustment	Alignment tape, NTSC : MC-1, PAL : MC-2 color bar recorded section	<ul style="list-style-type: none"> •PLAY •ADJUST MENU, 100. PB SW POINT 	⊙ TP6 (SPA) ⊙ TP9 (ENV OUT) TRIG: TP5 (HID) GND: TP1 (GND) [Rewrite board] Ⓢ Auto adjustment ☆ a, b = 126 μs sec ± 10 μs sec	<ol style="list-style-type: none"> (1) Press the EDIT USER 1/2 button to select ADJUST MENU No. 100, "PB SW POINT". (2) Play the alignment tape. Ensure that the compatibility adjustment has been performed and the FM waveform at TP9 (ENV OUT) is flat and stable. (3) Press the JOG dial to cause the * marking to blink. The PB switching point will be adjusted automatically. 	
					<ol style="list-style-type: none"> (4) Measure TP6 (SPA) by triggering TP5 (HID) and confirm that the values a and b are within the specified ranges. (5) Rotate the JOG dial to display the adjustment data in the "DATA:" field. (The DATA value should not be 00000000 or FFFFFFFF.) (6) Press the [JOG] button so that the * marking stops blinking. Now the adjustment is complete. 	
					<div style="border: 1px solid black; padding: 10px; width: fit-content;"> <pre> --- ADJUST MENU --- 100.PB SW POINT * VR DATA : ---- CTL DATA : 120 SET DATA : 120 DATA : 00000000 </pre> </div> <p>← Rotate the JOG dial to display data.</p> <p>After displaying the data, press the JOG dial to complete the adjustment.</p>	<p>NOTE: Make sure that the data value is displayed before pressing the JOG dial. If this adjustment is completed before the data value is displayed the adjustment value will not be put into the memory.</p>

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (⊙) Adjustment parts (⬆) Adjustment level (☆)	Adjustment procedure
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2 ME SP VCO
[Error rate adjustment]

Oscilloscope
Self-recording tape

- Self-REC/
PLAY
- ADJUST
MENU
No.102

- ⊙ TP2 (SBE)
[REWRITE BOARD]
- ⬆ JOG dial
- ☆ Minimum error rate,
which should be = 498
or less (per CH)

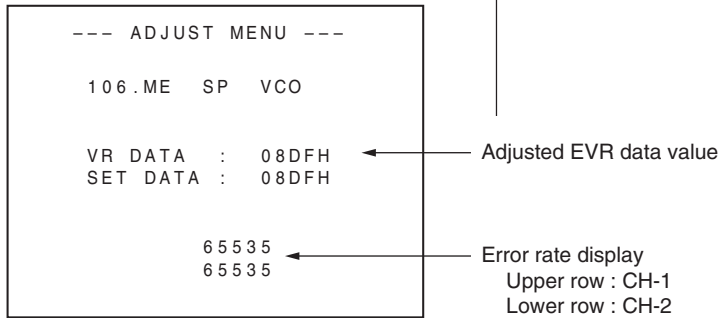


Fig. 3.5.2 (1) SP VCO Menu

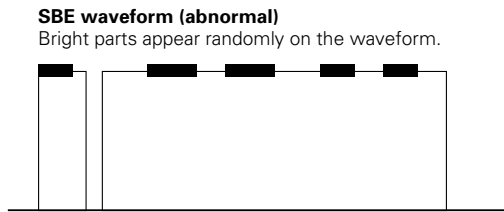


Fig. 3.5.2 (2)

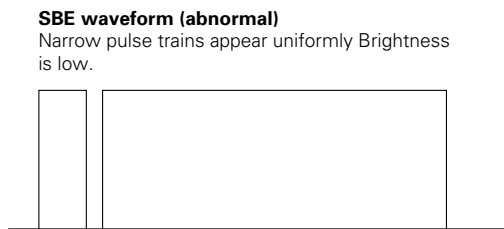


Fig. 3.5.2 (3)

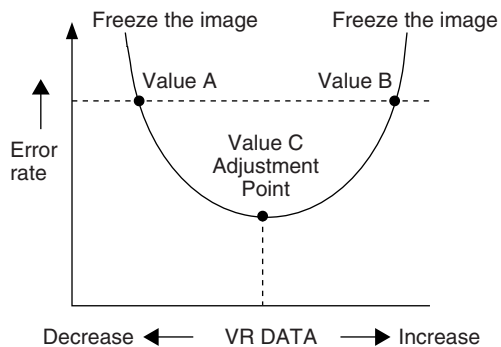


Fig. 3.5.2 (4) Concept of the adjustment

Note:

- **Be sure to use a brand-new tape for this adjustment.**
- **Be sure to clean the drum with a head cleaning tape before adjustment.**
- **The error rate should be measured with the Viterbi OFF. The Viterbi is set to OFF automatically when the adjustment mode is entered.**

- (1) Prior to the procedure below, prepare self-recording tape.
 - (2) Select "102. ME SP VCO" adjustment.
 - (3) Play back the self recording tape, and decrease the VR DATA to make the SBE waveform abnormal. (Fig. 3.5.2(2)) (Pressing the [STATUS] button simultaneously with the JOG dial varies the adjustment value by ±10 steps)
 - (4) Increase the adjustment VR DATA little by little, and define the point where the SBE waveform becomes normal as value "A". (Fig. 3.5.2(3))
 - (5) Increase the adjustment VR DATA to make the SBE waveform abnormal. (Fig. 3.5.2(2))
 - (6) Decrease the adjustment VR DATA little by little, and define the point where the SBE waveform becomes normal as "B". (Fig. 3.5.2(3))
 - (7) Calculate the intermediate value "C" between the point A and the point B, and set the value C. (Since the adjustment values are hex number, use a functional computation-capable calculator or the PC calculator provided in Accessories.)
- Setting value C=(A+B)/2**
- (8) Confirm that the error rate value is 498 or less in each channel.
 - (9) Check the tolerance of adjustment. Shift the adjustment value against the setting value by ±60h. Conform that the error rate is 3,000 or less in each channel. When the error rate is over 3,000, recheck the adjustment procedure from (4).
- (For example, when the adjustment value is "9ED", ±60h is "A4D" and "98D". So, shift the value to "A4D" and "98D", and check the tolerance of error rate adjustment.)
- (10) Return the adjustment value to the setting value C, and Press the JOG dial to store the adjustment data.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (⊙) Adjustment parts (⌚) Adjustment level (☆)	Adjustment procedure
3	FS PLL 48 kHz adjustment	No input. Frequency counter	EE ADJUST MENU,110. FS PLL 48 kHz	⊙ TP4 (FS PLL) GND: TP1 (GND) [Rewrite board] ⌚ JOG dial ☆ 12.288 MHz ± 0.1 MHz	(1) Press the USER 1/2 button to select ADJUST MENU No. 103, "FS PLL 48 kHz". (2) Adjust the frequency to the specified level. (3) Press the JOG dial to store the adjustment data.
4	FS PLL 44.1 kHzHz adjustment	No input Frequency counter	EE ADJUST MENU, 111. FS PLL 44.1 kHz	⊙ TP4 (FS PLL) GND: TP1 (GND) [Rewrite board] ⌚ JOG dial ☆ 11.2896 MHz ± 0.1 MHz	(1) Press the USER 1/2 button to select ADJUST MENU No. 104, "FS PLL 44.1 kHz". (2) Adjust the frequency to the specified level. (3) Press the JOG dial to store the adjustment data.
5	27 MHz VCO center frequency adjustment	No input. Frequency counter	EE ADJUST MENU,113. 27 MHz VCO	⊙ TP7 (MAIN VCO) GND: TP1 (GND) [Rewrite board] ⌚ JOG dial ☆ 13.5 MHz ± 0.1 MHz	(1) Press the USER 1/2 button to select ADJUST MENU No. 106, "27 MHz VCO". (2) Adjust the frequency to the specified level. (3) Press the JOG dial to store the adjustment data.

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SECTION 5

EXPLODED VIEW AND PARTS LIST

- **SAFETY PRECATION**

Parts identified by the \triangle symbol are critical for safety.
Replace only with specified parts numbers.

- **NOTE**

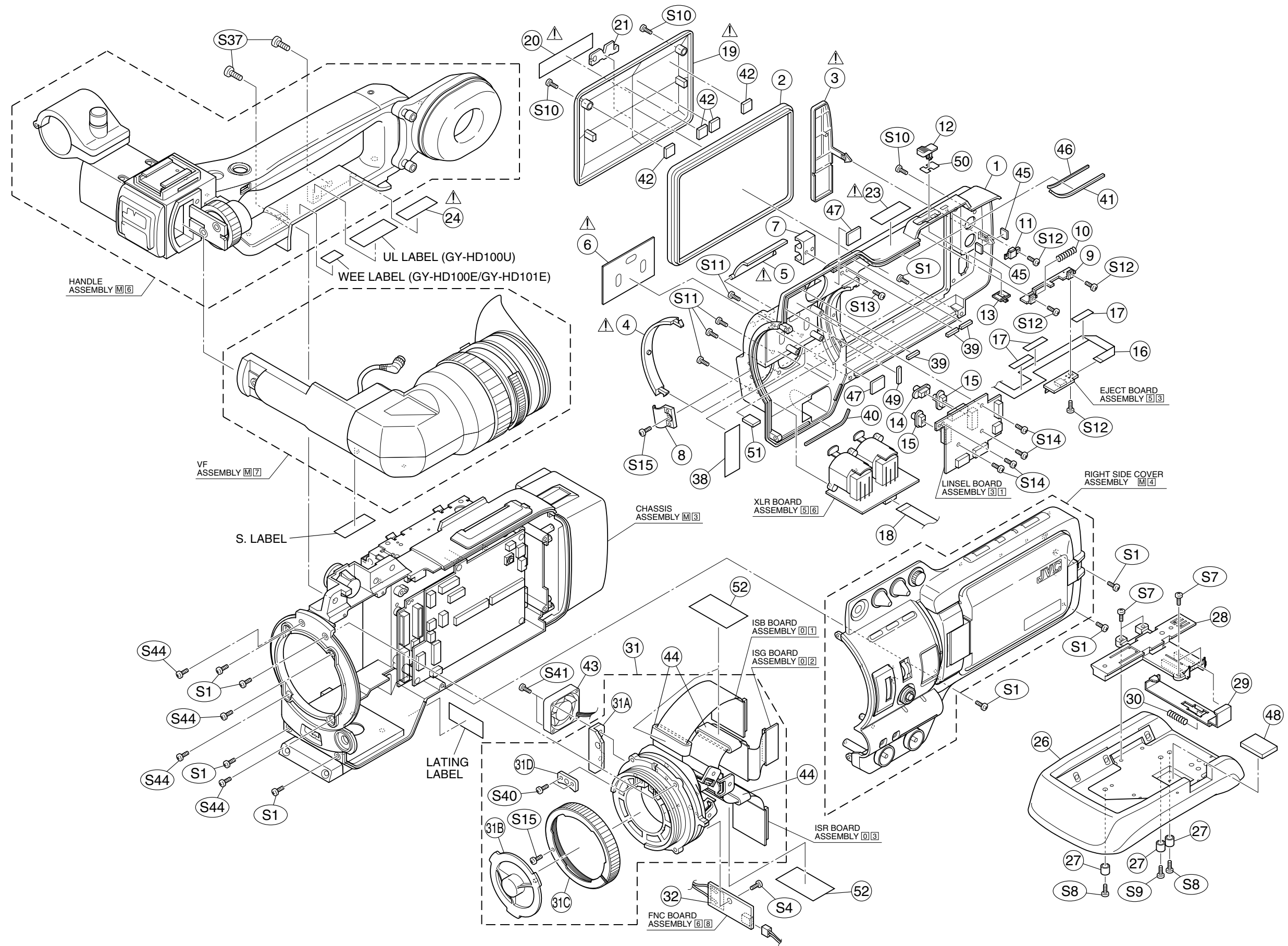
Parts not denoted by parts numbers are not supplied by JVC.

■ CABINET ASSEMBLY PARTS LIST M2

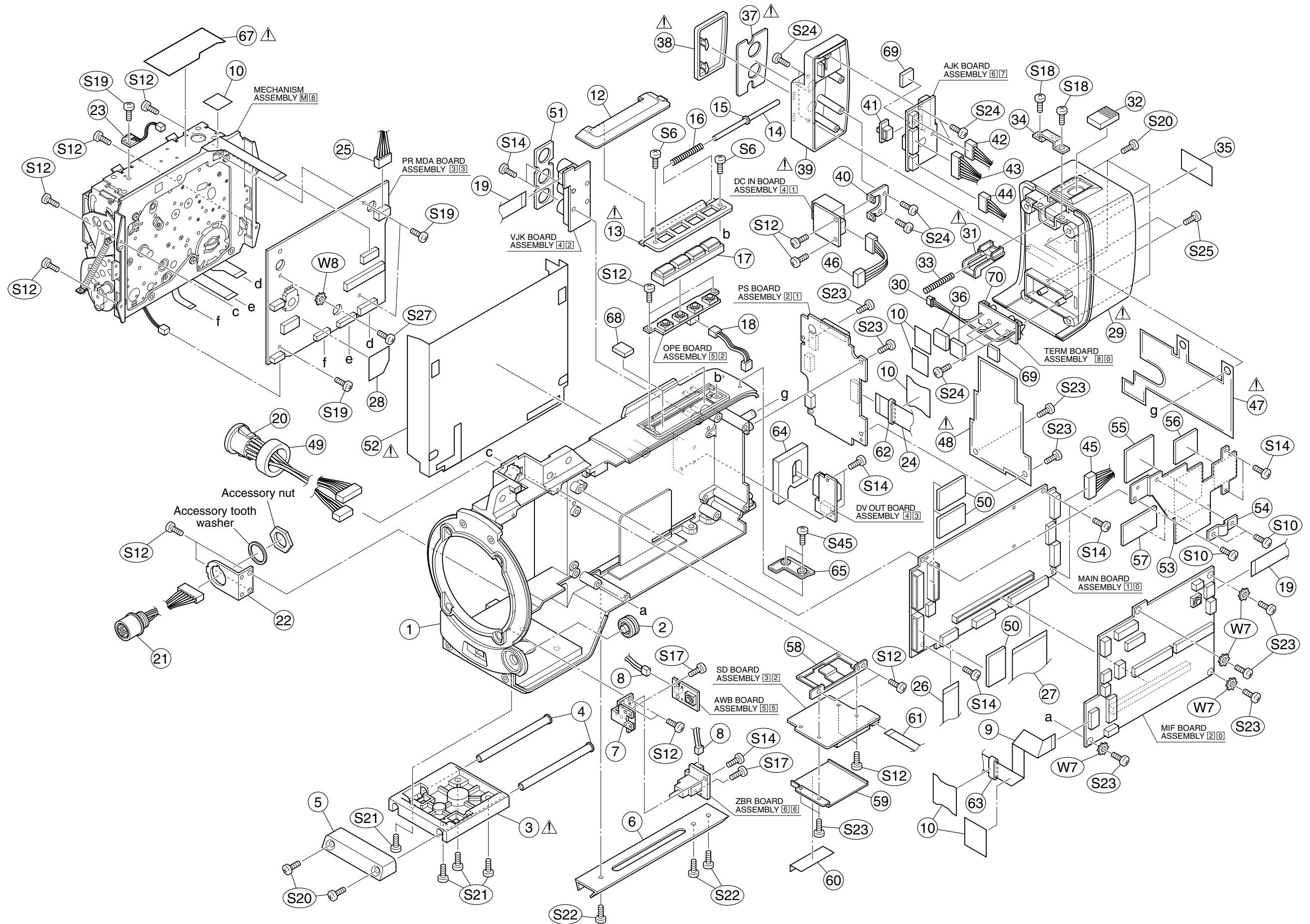
M2MM□□□□

Symbol No.	Part No.	Part Name	Description
1	LW10102-001C	LEFT SIDE COVER	
2	LW30611-001C-H	PACKING	
△	3	LW30561-001C-H	COVER(JACK)
△	4	LW30562-001A-H	COLLAR
△	5	LW30556-001B-H	COVER(SD)
△	6	LW40823-001A-H	SHEET(AUDIO)
	7	SC42550H-011	CABLE HOLDER
	8	SC46668H-001	CABLE HOLDER
	9	LW30560-001B-H	EJECT BRACKET
	10	LW40822-001B-H	SPRING
	11	LW40821-001A-H	WINDOW(EJECT)
	12	LW30558-001A-H	EJECT KNOB
	13	LW30559-002A-H	EJECT HOLDER
	14	LW40163-001A-H	SLIDE KNOB1
	15	LW40164-001A-H	SLIDE KNOB2
			x2
	16	QUQ105-0622AA-E	FFC WIRE
	17	LW40916-001A-H	A.D.C.TAPE
	18	QUQ105-1304AA-E	FFC WIRE
△	19	LW20182-001A-H	OUTER COVER
△	20	LW40820-001A-H	PLATE
			GY-HD100U/GY-HD100E
△	20	LW40820-002A-H	PLATE
	21	LW40840-001B	MARK(JVC)
△	23	SC46608-021	CAUTION LABEL
△	24	SC46171H-001	WARNING LABEL
	26	LW10107-001B	SHOULDER PAD
			GY-HD100E/GY-HD101E
	27	LW40450-001A-H	SPACER
	28	LW20180-001B-H	SLIDE BASE
	29	LW40864-001B-H	PUSH PLATE
	30	LW40865-001A-H	COMPRESS SPRING
	31	SCM1388-002A	OPTICAL ASSEMBLY
			x3
	31A	LS40581-001A-H	FAN BRACKET
	31B	LW40881-001A-H	LENS CAP
	31C	LW30605-001A	PING
	31D	SC45853-001	LENS PLATE
	32	LS40543-002A	FELT SPACER
	38	LS40598-001A	BANDAGE SHEET
	39	LS40602-001A	SHIELD CUSHION
	40	LS40583-001A	SHIELD
	41	LS40583-002A	SHIELD
	42	LS40631-001A	PAD
			x4
			x3
	43	QAR0376-001	FAN MOTOR
	44	QQR0988-002	FERITE CORE
	45	LW40595-001A	SPACER
	46	LS40583-004A	SHIELD
	47	LW40695-002A	SHIELD
			x3
			x3
			x2
	48	LS40665-001A	SHEET
	49	LS40583-003A	SHIELD
	50	LS40627-001A	SHEET (EJT KNOB)
	51	LS40592-001A	SPACER
	52	-	ZETSUEN TAPE
			HZT18-UL10-3M
	63	QQR0895-014	FERITE CORE
	S1	QYSPSPU2040MA	SCREW
	S4	QYSDSP2610MA	SCREW
	S7	QYSPSPT2080NA	SCREW
	S8	QYSDSF3008MA	SCREW
			M2x4.0
			M2.6x10
			M2x8.0
			M3x10
	S9	QYSDSP3012MA	SCREW
	S10	QYSPSPU2080MA	SCREW
	S11	QYSPSF3008NA	SCREW
	S12	QYSPSPU2040NA	SCREW
	S13	QYSPSFU2060NA	SCREW
			M3x12
			M2x8.0
			M3x8
			M2x4.0
			M2x6.0
	S14	SS411354-B2006N	SCREW
	S15	QYSPSPT2640MA	SCREW
	S37	QYSDSP4010NA	SCREW
	S40	QYSSSPT2040MA	SCREW
	S41	QYSDSP2614MA	SCREW
			M2x6
			M2.6x4.0
			M4x10
			M2x40
			M2.6x14
	S42	QYSPSPT1460MA	SCREW
	S44	QYSDSP3008MA	SCREW
			M1.4x6.0
			M3x8

5.1 CABINET ASSEMBLY M 2



5.2 CHASSIS ASSEMBLY M 3



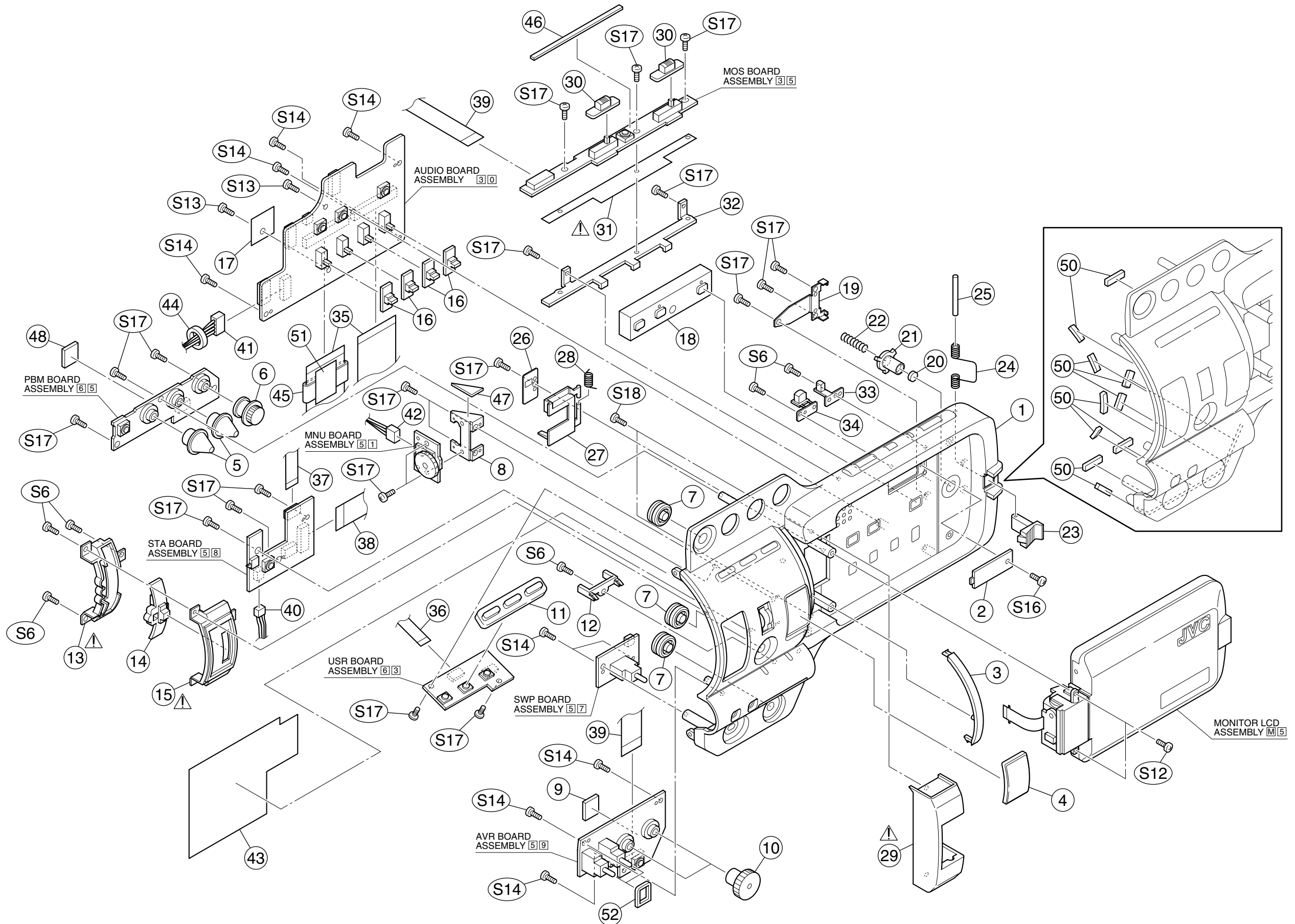
■ CHASSIS ASSEMBLY PARTS LIST M3

M4 M M □ □ □ □

Symbol No.	Part No.	Part Name	Description
△	1 LW10101-001C	CENTER FRAME	x2
	2 SC44828-002	SWITCH CAP	
	3 LW20169-001B-H	BOTTOM COVER	
	4 LW40814-001A-H	BALANCER SHAFT	
	5 LW30547-001A-H	BALANCER	
	6 LW40863-001B-H	GUIDE RAIL	FCN9 AWB/ABR-MIF LCN13 MIF-LINSEL HZT18-UL10-3M
	7 LW40886-001A-H	AWB BRACKET	
	8 WJJ0604-001A-E	CONNECTING WIRE	
	9 SCV2803-1515B	FFC WIRE	
	10 -	ZETSUEN TAPE	
△	12 LW30548-001C-H	OPERATION COVER	
	13 LW30549-001B-H	OPERATION BASE	
	14 LW40816-001A-H	SHAFT	
	15 QYREE1200X	E RING	
	16 SC46532H-001	SPRING(1)	
	17 LW30550-001A-H	OPERATION KNOB	CN34 VJK-MIF CN23 MIF CN3 MAIN
	18 WJJ0602-001A-E	CONNECTING WIRE	
	19 QUQ105-1010AA-E	FFC WIRE	
	20 QAM0754-001	CAMERA CABLE	
	21 WJJ0600-001A-E	LENS CONNECTOR	
	22 LW40815-001B-H	LENS BRACKET	CN30 PS-MAIN CN75 PRMDA-PS CN17 PRMDA-MAIN
	23 QSD0006-001	DEW SENSOR	
	24 QUQ105-2004AA-E	FFC WIRE	
	25 WJJ0603-001A-E	CONNECTING WIRE	
	26 QUQ105-1607AA-E	FFC WIRE	
△	27 QUQ105-5007AA-E	FFC WIRE	CN16 PRMDA-MAIN
	28 LW40900-001A-H	SHIELD	
	29 LW10109-001C-H	REAR COVER	
	30 WJM0444-001A-E	CONNECTING WIRE	
	31 LW30553-001A-H	BATTERY ROCK	
	32 LW30607-001A-H	EJECT KNOB	SC45456, GY-HD100U x2
	33 LW40878-001A-H	SPRING	
	34 LW40888-001B-H	SPR BRACKET	
	35 -	CAUTION LABEL	
	36 LS40543-002A	FELT SPACER	
△	37 LW40877-001B-H	REAR PANEL	
	38 LW30608-001D-H	CONECTOR COVER	
	39 LW20181-001B-H	SWITCH COVER	
	40 LW40889-001A-H	DC BRACKET	
	41 LW40891-001A-H	KNOB	
△	42 WJJ0610-001A-E	CONNECTING WIRE	CN54 AJK-MF CN19 AJK-MIF CN11-AJK-DVOUT CN29 PS-MAIN
	43 WJJ0609-001B-E	E-SI C WIRE C-C	
	44 WJJ0169-001B-E	E-SH C WIRE C-C	
	45 WJJ0601-001A-E	CONNECTING WIRE	
	47 LS30471-001A	SHIELD SHEET(R)	
△	48 LS40584-001A	SHIELD SHEET	FOR C. CABLE x3
	49 QQR0976-001	FERRITE CORE	
	50 QQR1346-001	FERRITE PLATE	
	51 LS30481-001A	SHEET (RCA)	
	52 LS20140-001A-H	INSULATOR 1	
	53 LS30466-001A-H	CONDUCT.PLATE	
	54 LS40564-001A-H	PIPE.HOLDER.2	
	55 LS40586-001A	PAD SHEET	
	56 LS40586-002A	PAD SHEET	
	57 LS40586-003A	PAD SHEET	
	58 LW40887-001A-H	SD BRACKET	
	59 LS40601-001A	SHIELD SHEET SD	
	60 LS40599-001A	BADAGE SHEET 2	
	61 QUQ105-1007AA-E	FFC WIRE	
	62 QQR0895-013	FERITE CORE	

Symbol No.	Part No.	Part Name	Description
△	64 LS40610-001A	SPACER(DV)	x2 x2
	65 LS30472-001A	REAR COVER T	
	67 LS40580-001B-H	INSULATOR 2	
	68 LS40664-001A	CUSHON (OPE)	
	69 LS40646-001A	REAR CUSHON	
	70 LY21007-001E	REAR UNIT	M2x4.0 M2x8.0 M2x40
	S6 QYSPSPT2040MA	SCREW	
	S10 QYSPSPU2080MA	SCREW	
	S12 QYSPSPU2040NA	SCREW	
	S14 SS411354-B2006N	SCREW	
	S17 QYSPSPU2030NA	SCREW	M2x30 M2x4 M2.6x6 M2.6x5
	S18 QYSPSFU2040MA	SCREW	
	S19 YQ43893	SCREW	
	S20 QYSPSP2606MA	SCREW	
	S21 QYSDSP2605MA	SCREW	
	S22 QYSSSP2606NA	SCREW	M2.6x6 M2x6 M2x6.0 M1.7x3.0
	S23 QYSPSPH2006NA	SCREW	
	S24 QYSPSFU2060MA	SCREW	
	S25 QYSPSFT1730MA	SCREW	
	S27 LY30031-003A	SCREW	
	S45 QYSDSP3004MA	SCREW	M3x4 x4
	W7 QYWBS285803NA	WASHER	
	W8 QYWBS224803NA	WASHER	

5.3 RIGHT SIDE COVER ASSEMBLY M 4

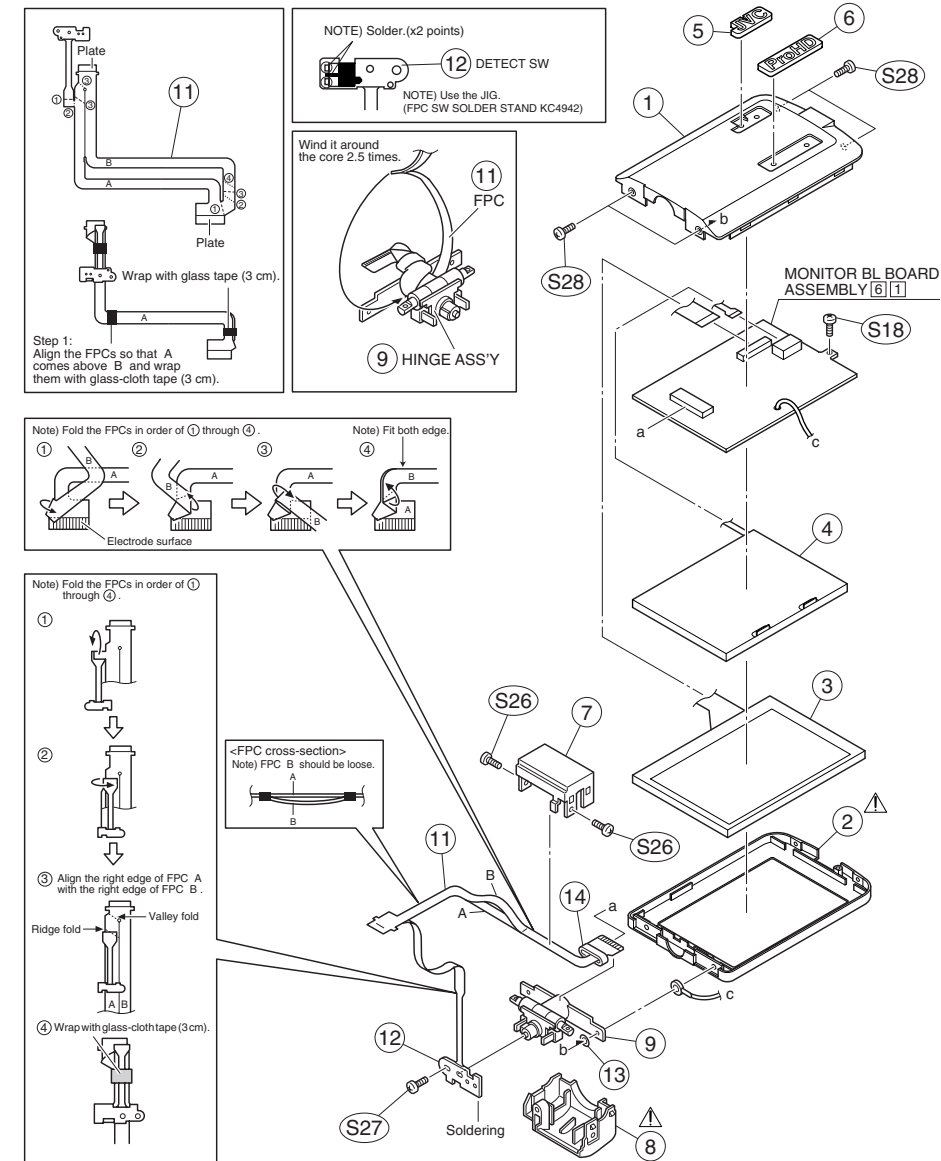


RIGHT SIDE COVER ASSEMBLY PARTS LIST M 4

M 3 M M

Symbol No.	Part No.	Part Name	Description
1	LW10103-001B	R. SIDE COVER	
2	LW40182-003A-H	COVER	
3	LW30562-001A-H	COLLAR	
4	LW30563-001A-H	LIGHT COVER	
5	LW40872-001B-H	VR KNOB	
6	LW40873-001B-H	VR KNOB	
7	SC45246H-001	KNOB	x3
8	LW40827-001A-H	SHUTTER BKT	
9	LS40543-002A	FELT SPACER	
10	LW40824-001A-H	VR.KNOB	x2
11	LW30570-001A-H	PUSH KNOB	
12	LW30573-001A-H	LED PLATE 2	
13	LW20171-001A-H	SLIDE BASE	
14	LW30567-001C-H	ND KNOB	
15	LW30568-001B-H	ND KNOB COVER	
16	SC46796H-001	SLIDE KNOB	x4
17	LS40571-001A	SHIELD SHEET	
18	LW30571-001A-H	PUSH KNOB	
19	LW30569-001A-H	LCD BRACKET	
20	LW40188-002A-H	CUSHION	
21	LW40184-001A-H	RELEASE KNOB	
22	LW40903-001A-H	COMPRESS SPRING	
23	LW40825-001B-H	LCD KNOB	
24	LW40826-001B-H	TOR.SPRING	
25	LW40884-001A-H	SHAFT	
26	LW40828-001A-H	BRACKET	
27	LW30572-001D-H	LCD BOARD COVER	
28	LW40829-001B-H	TOR.SPRING	
29	LW30564-001A-H	HINGE COVER	
30	LW30566-001A-H	SLIDE KNOB	x2
31	LW40885-001A-H	SHEET	
32	LW30603-001A-H	BORD BRACKET	
33	LW40831-001A-H	LED PLATE 1	
34	LW30565-001A-H	PUSH KNOB	
35	SCV2803-5010B	FFC WIRE	x2
36	QUQ105-10X5AA-E	FFC WIRE	CN55 USR-PBM
37	QUQ105-1103AA-E	FFC WIRE	CN50 USR-STA
38	QUQ105-2413AA-E	FFC WIRE	CN10 STA-MIF
39	QUQ105-18X7AA-E	FFC WIRE	x2
40	WJJ0608-001A-E	CONNECTING WIRE	CN52 STA-SWP
41	WJN0170-001A-E	CONNECTING WIRE	CN4 AUD-SWP
42	WJJ0607-001A-E	CONNECTING WIRE	CN51 MNU-STA
43	LS40600-001A	SHEET	
44	QQR1222-001	FERRITE CORE	FOR No.41
45	QQR0895-011	FERITE CORE	x2
46	LS40663-001A	PAD (MOS)	
47	LS40616-001A	ND SPACER	
48	LS40646-001A	REAR CUSHION	
49	LS40583-005A	SHIELD	
50	LS40602-001A	SHIELD CUSHION	x9
51	-	ZETSUEN TAPE	HZT18-UL10-3M
52	LW40383-001A-H	CUSHION	x2
S1	QYSPSPU2040MA	SCREW	M2x4.0
S6	QYSPSPT2040MA	SCREW	M2x4.0
S12	QYSPSPU2040NA	SCREW	M2x4.0
S13	QYSPSPU2030NA	SCREW	M2x3.0
S14	SS411354-B2006N	SCREW	M2x6
S16	QYSPSPT1730MA	SCREW	M1.7x3.0
S17	QYSPSPU2030NA	SCREW	M2x3.0
S18	QYSPSFU2040MA	SCREW	M2x4.0

5.4 MONITOR LCD ASSEMBLY M 5

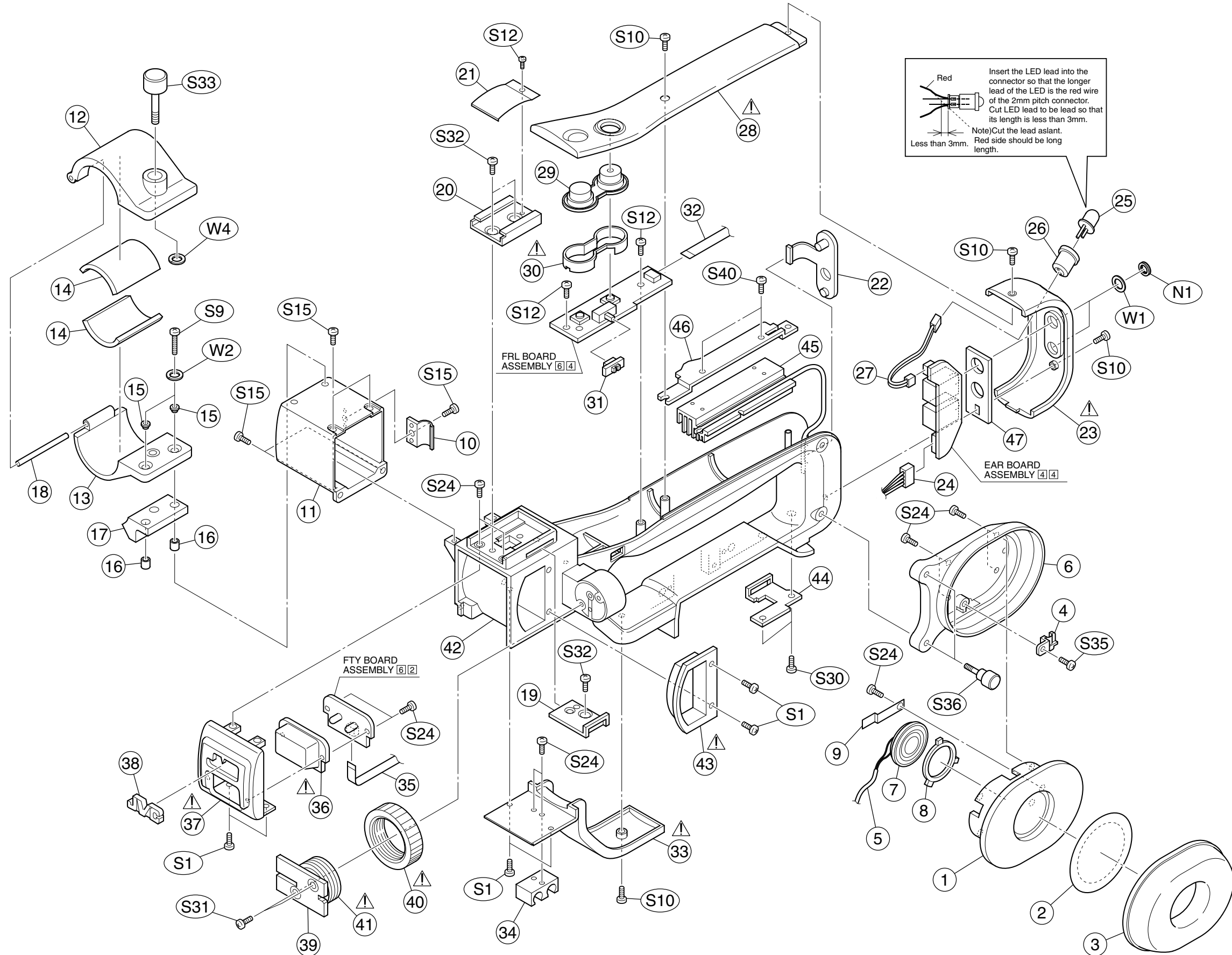


MONITOR LCD ASSEMBLY PARTS LIST M 5

M 5 M M

Symbol No.	Part No.	Part Name	Description
1	LW10104-001A	MONITOR COVER	
2	LW10105-001A-H	MONITOR CASE	
3	QLD0378-001	LCD	
4	QLL0172-001	BACK LIGHT	
5	LW40840-001B	MARK(JVC)	
6	LW40832-001A	PLATE(HD)	
7	LW20172-001A-H	HINGE COVER 1	
8	LW20074-001C-H	HINGE COVER 2	
9	LY32079-001A	HINGE ASSEMBLY	
11	QAL0222-001	FPC	
12	NSW0095-001	DETECT SWITCH	
13	LW40279-003A	RING SHEET	
14	QQR1685-001	FERRITE CORE	
S18	QYSPSFU2040MA	SCREW	M2x4.0
S26	LY30031-0A8A	SCREW	
S27	LY30031-003A	SCREW	
S28	LY30031-052A	SCREW	

5.5 HANDLE ASSEMBLY M 6



■ HANDLE ASSEMBLY PARTS LIST M 6

M 6 M M □ □ □ □

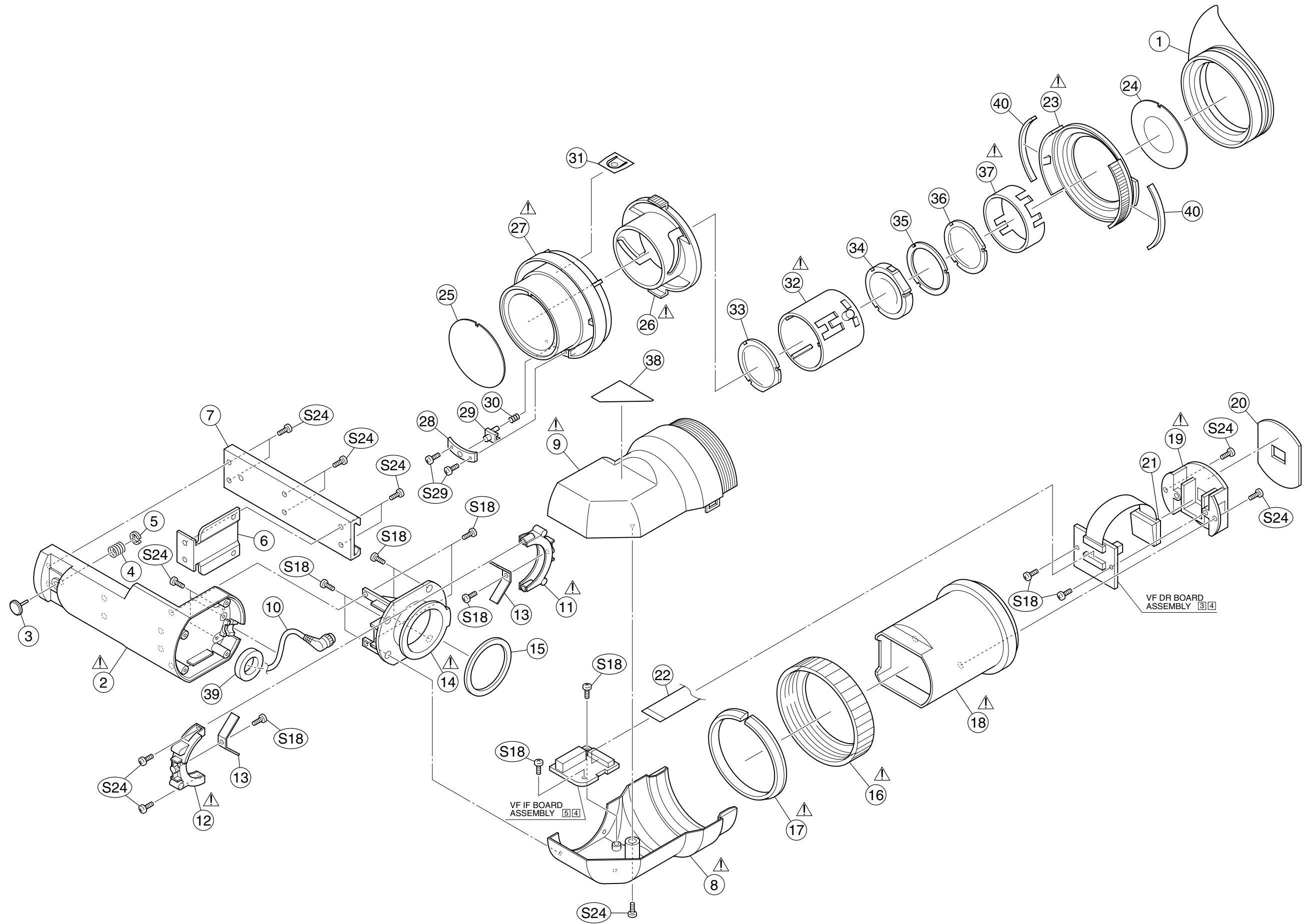
Symbol No.	Part No.	Part Name	Description
1	LW30595-001A-H	PAD HOLDER	
2	LW40901-001A-H	DP SHEET	
3	LW30596-001A-H	PAD	
4	LW40867-001A-H	WIRE GUIDE	
5	QAM0802-001	PLUG CORD	
6	LW20179-001A	CHEEK PAD	
7	QAS0063-003	SPEAKER	
8	LW40410-001A-H	SHEET	
9	LW40216-001B-H	SP BRACKET	
10	SC46668H-001	CABLE HOLDER	
11	LW20177-001A	HANDLE COVER	FOR MIC HOLDER
12	LW30578-001A-H	HOLDER COVER	FOR MIC HOLDER
13	LW30577-001B-H	HOLDER BASE	FOR MIC HOLDER
14	LW40843-001A-H	CUSHION	x2
15	LW40924-001A-H	MH CUSHION	x2
16	LW40890-002A	SPACER	x2
17	LW40842-001A-H	CUSHION	
18	QYPRE2014	SPRING PIN	
19	LW40838-001C-H	BRACKET (F)	
20	LW40833-001A-H	SHOE	
△	21 LW40834-001B-H	SHOE SPRING	
	22 LW30575-001B-H	E.H. COVER	
	23 LW20175-001A-H	HANDLE COVER(R)	
	24 WJN0168-001B-E	WIRE	CN12 EAR-MIC
	25 SLR-56VR3F	L.E.D.	
△	26 SM3512	L.E.D. MOUNTOR	
	27 WJJ0605-001A-E	CONNECTING WIRE	
△	28 LW20173-001C-H	HANDLE COVER(T)	CN47 EAR-LED
	29 LW40837-001B-H	HANDLE BUTTON	
△	30 LW40836-001B-H	BUTTON GUIDE	
△	31 LW40835-001A-H	SLIDE KNOB	
	32 QUQ105-1022AA-E	FFC WIRE	CN48FRL-CN8MIF
	33 LW20176-001A-H	HANDLE COVER(B)	
	34 SC42550H-011	C.HOLDER	
	35 QUQ105-1022AA-E	FFC WIRE	CN8 FTY-FRL
△	36 LW30574-001A-H	TALLY CAP (F)	
△	37 LW20174-001A-H	HANDLE COVER(F)	
	38 LW40840-001B	MARK(JVC)	
	39 LW30590-001A-H	SLIDE BASE	
△	40 LW40852-001A-H	SLIDE LOCK RING	
△	41 LW40893-001A-H	SLIDE SCREW	
	42 LW10106-001C	HANDLE	
△	43 LW30576-001A-H	V.F. GUIDE	
	44 LW40839-001C-H	BRACKET (R)	
	45 LS30467-001B-H	HEAT SINK ASSEMBLY	
	46 LS30465-001B-H	SINK HOLDER.1	
	47 LS40566-001A	CU SHEET	
	S1 QYSPSPU2040MA	SCREW	M2x4.0 x6
	S9 QYSDSP3012MA	SCREW	M3x12 x2
	S10 QYSPSPU2080MA	SCREW	M2x8.0 x4
	S12 QYSPSPU2040NA	SCREW	M2x40 x3
	S15 QYSPSPT2640MA	SCREW	M2.6x4.0 x5
	S24 QYSPSFU2060MA	SCREW	M2x6.0 x11
	S30 QYSDSP3004NA	SCREW	M3x4.0 x2
	S31 QYSSSP3018MA	SCREW	M3x18 x2
	S32 QYSSSP3005MA	SCREW	M3x5 x3
	S33 LW40841-001B-H	SCREW	FOR MIC HOLDER
	S35 QYSPSPT2040NA	SCREW	M2x4.0
	S36 LW40866-001A-H	SCREW	x2
	S40 QYSSSPT2040MA	SCREW	M2x4.0 x2
	W1 LW40896-001A	E.H. WASHER	x2
	W2 QYWSS327005NA	WASHER	x2
	W4 LW40683-001A-H	C WASHER	
	N1 LW40895-001A	E.H. NUT	x2

VF ASSEMBLY PARTS LIST M 7

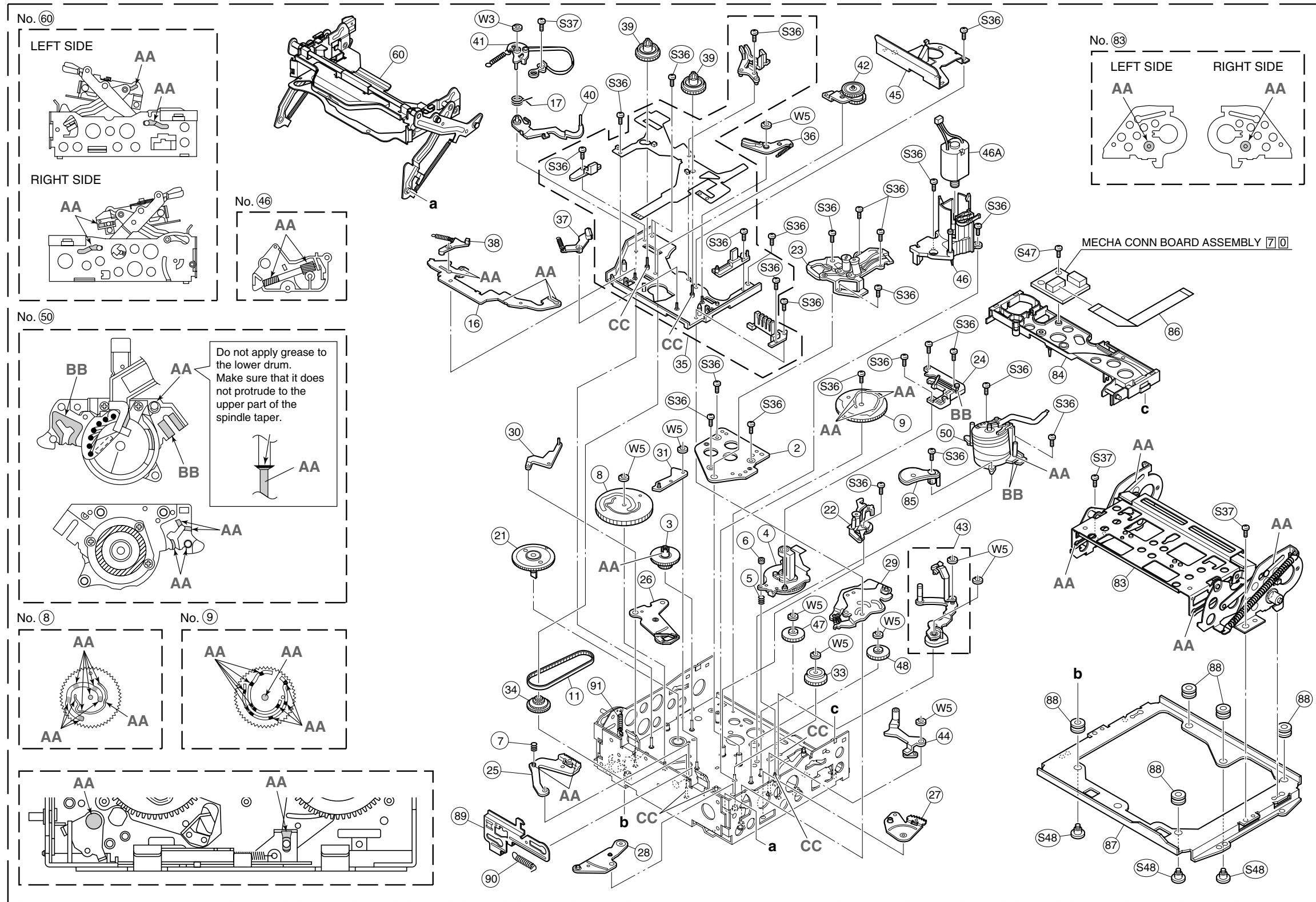
M 7 M M

Symbol No.	Part No.	Part Name	Description	
△	1	LW30579-001C-H	EYE CAP	
	2	LW20178-001B-H	SHOE COVER	
	3	LW40853-001A-H	LOCK PIN	
	4	LW40858-001A-H	COIL SPRING	
	5	QYREE1500X	E RING	
△	6	LW40860-001A-H	NUT PLATE	
	7	LW30589-001A-H	SLIDE SHOE	
	8	LW30588-001B-H	VF COVER B	
	9	LW30587-001B-H	VF COVER T	
10	QAM0753-001	CAMERA CABLE	CN65 VF IF	
△	11	LW30592-001B-H	CLUTCH A	
△	12	LW30593-001A-H	CLUTCH B	
13	LW40862-001A-H	CLITCH SPRING	x2	
△	14	LW30591-001A-H		CLUTCH BASE
15	LW40861-001B-H	CLUTCH RING		
△	16	LW40850-001A-H	LOCK RING	
△	17	LW40851-001A-H	SPACER	
△	18	LW30585-001C-H	SLIDE COVER	
△	19	LW30586-001B-H	LCD HOLDER	
20	LW40894-001A-H	LCD PLATE		
△	21	QLD0368-001	LCD	
	22	QUQ105-2017AA-E	FFC WIRE	
	23	LW30580-001B-H	FRONT COVER	
	24	LW40854-001B-H	COVER SHEET	
	25	LW40849-001B	FILTER(PL)	
△	26	LW30584-001A-H	CAM RING	
△	27	LW30583-001C-H	VF HOLDER	
28	LW40855-001A-H	PLATE		
29	LW40856-001A-H	KNOB		
30	LW40859-001B-H	COIL SPRING		
△	31	LW40857-001A-H	SPRING PLATE	
	32	LW30581-001C-H	LENS HOLDER	
	33	LW40848-001B	VF LENS 3	
	34	LW40847-001B	VF LENS 2	
	35	LW40931-001A-H	LENS SPACER	
△	36	LW40846-001B	VF LENS 1	
	37	LW30582-001B-H	LENS HOLDERCAP	
	38	SC46425-001	LABEL	
	39	QQR1222-001	FERRITE CORE	
	40	LS40665-002A	SHEET (SP)	FOR No.10 x2
S18	QYSPSFU2040MA	SCREW	M2x4.0	
S24	QYSPSFU2060MA	SCREW	M2x6.0	
S29	QYSPSFT2040MA	SCREW	M2x4.0	

5.6 VF ASSEMBLY M7



5.7 MECHANISM ASSEMBLY **M 8**



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Grease	RX-410R	BB
Oil	YTU94027	CC

- NOTES:**
- This section indicates that the grease and oil are to be applied on locations marked with AA, BB and CC. During checking and servicing, check if grease has been applied on the locations marked with AA, BB and oil on the locations marked with CC.
 - Apply also grease and oil on some locations in the main cam gear and the cam groove at the rear side of the sub cam gear.

MECHANISM ASSEMBLY PARTS LIST M 8

M 8 M M

Symbol No.	Part No.	Part Name	Description
1	LL30438-001A	MECHA UNIT	
2	LL20124-001A	DRUM BASE DECK	
3	LL40465-001A	WHEEL GEAR2	
4	QAR0012-002	CAPSTAN MOTOR	
5	LY30002-003A	COMPRESS SPRING	
6	LY41390-001B	ADJUST NUT	
7	LY40224-001A	COLLAR	
8	LL10093-001A	MAIN CAM	
9	LL20126-001A	SUB CAM	
11	PRD45310	TIMING BELT	
16	LL20127-001A	CONTROL PLATE	
17	LY41243-001A	TORSION SPRING	
21	LL30400-001A	ENCODER GEAR	
22	PRD31521B-04	GUIDE RAIL(S) ASSEMBLY	
23	LY20097-004A	G.RAIL(T) ASSEMBLY	
24	LY30345-001A	M.CATCHER ASSEMBLY	
25	LY40223-001A	ARM GEAR 1 ASSEMBLY	
26	LL40464-001A	CENTERING ARM ASSEMBLY	
27	LL40466-001A	ARM GEAR 2 ASSEMBLY	
28	LL40468-001A	C.P.D.ARM ASSEMBLY	
29	LY30347-001A	CHARGE ARM ASSEMBLY	
30	LY40236-001A	T.CTL ARM ASSEMBLY	
31	LL40473-001A	B.CTL.ARM ASSEMBLY	
33	PRD31445A	PULLEY GEAR ASSEMBLY	
34	LY40239-003A	CENT. GEAR ASSEMBLY	
35	PRD31443C	SUB DECK ASSEMBLY	
36	LL40479-001B	SUB BRAKE ASSEMBLY	
37	LL40482-001A	M.BRAKE(T) ASSEMBLY	
38	LL40484-001A	M.BRAKE(S) ASSEMBLY	
39	LY40255-003A	REEL DISK ASSEMBLY	x2
40	LY41245-001B	TENSION ARM SUB ASSEMBLY	
41	LY41246-003B	B.ARM PLATE SUB ASSEMBLY	
42	LY30370-002D	SWING ARM ASSEMBLY	
43	LY30380-003A	EXIT G.ARM ASSEMBLY	
44	LY30374-001B	P.R.ARM ASSEMBLY	
45	LL40486-001A	REEL COVER ASSEMBLY	
46	LL30409-001A	GEAR COVER ASSEMBLY	
46A	LL40489-001A	MOTOR ASSEMBLY	INC. No.46
47	PRD45311	R.DRIVE GEAR 1	
48	PRD45312	R.DRIVE GEAR 2	
50	YDV2100B	DRUM FINAL ASSEMBLY	
60	LL20129-001A	C.HOUSING ASSEMBLY	
83	LL20134-001A	OUTER UNIT ASSEMBLY	
84	LL20128-001A	TAPE GUARD	
85	LL30410-001A	TU TAPE GUARD	
86	QUQ105-13X7AA-E	FFC WIRE	
87	LL20125-001A	MECHA BRACKET	
88	LY42796-001A	BUSH	x5
89	LL30398-001A	MAIN LOCK PLATE	
90	LL40463-001A	TENSION SPRING	FOR No.89
91	LL40516-001A	TENSION SPRING	
S36	YQ43893	SCREW	M1.4x2
S37	LL40426-001A	SCREW	M1.4x2
S43	QYSDSP2003ZA	SCREW	M2x3
S46	QYSPSPU1430MA	SCREW	M1.4x30
S47	QYSDSG2004NA	SCREW	M2x4
S48	LY30032-002A	SCREW	
W3	PRD45316	SLIT WASHER	
W5	YQ44246	SLIT WASHER	

SECTION 6

ELECTRICAL PARTS LIST

SAFETY PRECAUTION:

Parts identified by the \triangle symbol are critical for safety. Replace only with specified parts numbers. For maximum reliability and performance, all other replacement parts should be identical to those specified.

NOTE:

- Parts not denoted by parts numbers are not supplied by JVC.
- Abbreviations in this list are as follows:

RESISTORS

In the "Description" column:

- All resistance values are in ohms (Ω).
- k expresses kilo-ohm (1 000 ohms, $k\Omega$).
- M expresses mega-ohm (10^6 ohms, $M\Omega$).

In the "Parts Name" column:

- CAR.RESISTOR : Carbon Resistor
- C.M.F.RESISTOR : Constant Metalized Film Resistor
- COMP.RESISTOR: Composition Resistor
- FUSI.RESISTOR : Fusible Resistor
- M.F.RESISTOR : Metal Film Resistor
- M.G.RESISTOR : Metal Graze Resistor
- M.P.RESISTOR : Metal Plate Resistor
- O.M.F.RESISTOR : Oxide Metalized Film Resistor
- TRIM.RESISTOR : Trimerer Resistor
- U.F.RESISTOR : Non-inflammable Resistor
- VAL.RESISTOR : Valiable Resistor
- W.W.RESISTOR : Wire Wound Resistor

CAPACITORS

In the "Description" column:

- All capacitance values are in microfarad (μF) unless otherwise indicated.
- p expresses picofarad (10^{-12} farad, pF).

In the "Parts Name" column:

- CER.CAPACITOR : Ceramic Capacitor
- E.CAPACITOR : Electrolytic Capacitor
- FILM CAPACITOR : Film Capacitor
- M.F.CAPACITOR : Metalized Film Capacitor
- MICA CAPACITOR : Mica Capacitor
- MPP CAPACITOR : Metalized PolyPropylene Capacitor
- MPPS CAPACITOR : Metalized PolyPhenylene Sulfied film Capacitor
- M.M.CAPACITOR : Metalized Mylar Capacitor
- MYLAR CAPACITOR : Mylar Capacitor
- N.P.CAPACITOR : Non-Poler electrolytic Capacitor
- P.P.CAPACITOR : PolyPropylene Capacitor
- PPS CAPACITOR : PolyPhenylene Sulfied film Capacitor
- P.S.CAPACITOR : PolyStyrene Capacitor
- TAN.CAPACITOR : Tantal Capacitor
- TRIM.CAPACITOR : Trimer Capacitor
- VAL.CAPACITOR : Valiable Capacitor

Note: In the "Description" column of the parts list, (U) means the parts for the GY-HD100U while (E) is for the GY-HD100E.

Symbol No.	Part No.	Part Name	Description
IC1	SCV1585-064	I.C.(M)	JVC (U)
	SCV1585-067	I.C.(M)	JVC (E)

← for GY-HD100U
 ← for GY-HD100E

6.1 ISB BOARD ASSEMBLY PARTS LIST 0 1

CK279300A1

0 1 □ □ □ □ □ □ □ □

Symbol No.	Part No.	Part Name	Description	
IC2	AD9949AKCPZ-W	I.C.(M)	ANALOG DEVICES	
IC3	AD9949AKCPZ-W	I.C.(M)	ANALOG DEVICES	
IC4	MM3142JN-X	I.C.(M)	MITSUMI	
IC5	SN74LVC3G34U-X	I.C.(M)	TEXAS	
IC6	SN74LVC3G34U-X	I.C.(M)	TEXAS	
IC7	TC7SZ08FU-X	I.C.(M)	TOSHIBA	
IC8	TC7SZ08FU-X	I.C.(M)	TOSHIBA	
IC10	MM1573DN-X	I.C.(M)	MITSUMI	
Q1	2SC5095/O-X	TRANSISTOR	TOSHIBA	
Q2	2SC4250-X	TRANSISTOR	TOSHIBA	
Q3	2SC5095/O-X	TRANSISTOR	TOSHIBA	
Q4	2SC4250-X	TRANSISTOR	TOSHIBA	
R2	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R3	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R4	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R5	NRSA6AD-472W	M.G.RESISTOR	4.7k	1/16W
R7	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R8	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R9	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R10	NRSA6AD-472W	M.G.RESISTOR	4.7k	1/16W
R11	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R12	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R21	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R23	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R24	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R25	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R26	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R27	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R29	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R30	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R31	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R32	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R33	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R34	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R35	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R36	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R37	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R38	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R39	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R40	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R41	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R42	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R43	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R44	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R45	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R51	NQR0559-009X	C.FERRITE BEADS	5W	
R52	NQR0559-009X	C.FERRITE BEADS	5W	
R55	NQR0559-009X	C.FERRITE BEADS	5W	
R56	NQR0559-009X	C.FERRITE BEADS	5W	
R57	NQR0559-009X	C.FERRITE BEADS	5W	
R58	NQR0559-009X	C.FERRITE BEADS	5W	
R59	NQR0559-009X	C.FERRITE BEADS	5W	
R65	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
C1	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C2	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C3	NBS41AM-476X	TAN.CAPACITOR	47	10V
C4	NCB11AK-106X	CER.CAPACITOR	10	10V
C5	NCB31EK-473X	CER.CAPACITOR	0.047	25V
C6	NCB31EK-104X	CER.CAPACITOR	0.1	25V
C7	NCB31EK-473X	CER.CAPACITOR	0.047	25V
C8	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C10	NCB31EK-473X	CER.CAPACITOR	0.047	25V
C12	NCB31EK-473X	CER.CAPACITOR	0.047	25V
C13	NBS40JM-686X	TAN.CAPACITOR	68	6.3V
C14	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C15	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C16	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C17	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C18	NCBA1AK-104W	CER.CAPACITOR	0.1	10V

Symbol No.	Part No.	Part Name	Description	
C19	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C20	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C21	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C22	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C23	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C24	NBS40JM-686X	TAN.CAPACITOR	68	6.3V
C25	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C26	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C27	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C28	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C29	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C30	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C31	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C32	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C33	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C34	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C37	NCB11AK-106X	CER.CAPACITOR	10	10V
C38	NCB11AK-106X	CER.CAPACITOR	10	10V
C39	NCB11AK-106X	CER.CAPACITOR	10	10V
C40	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C41	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C42	NBS40JM-686X	TAN.CAPACITOR	68	6.3V
C43	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C44	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C46	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C47	NCB11AK-106X	CER.CAPACITOR	10	10V
C48	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C50	NCB11AK-106X	CER.CAPACITOR	10	10V
C51	NCB11AK-106X	CER.CAPACITOR	10	10V
C52	NBZ0032-476X	TAN.CAPACITOR	47	
LC1	NQR0598-001X	LC FILTER		
LC2	NQR0598-001X	LC FILTER		
LC3	NQR0598-001X	LC FILTER		
LC4	NQR0598-001X	LC FILTER		
LC5	NQR0598-001X	LC FILTER		
LC6	NQR0598-001X	LC FILTER		
J1	QUBD70-X1A1A1-E	SIN TWIST WIRE		
CN26	QGB0801L1-54X	CONNECTOR	54PIN	

6.2 ISG BOARD ASSEMBLY PARTS LIST 0 2

CK279300A2

0 2

0 2 (ISG)

Symbol No.	Part No.	Part Name	Description
IC2	AD9949AKCPZ-W	I.C.(M)	ANALOG DEVICES
IC3	AD9949AKCPZ-W	I.C.(M)	ANALOG DEVICES
IC4	MM3142JN-X	I.C.(M)	MITSUMI
IC5	SN74LVC3G34U-X	I.C.(M)	TEXAS
IC6	SN74LVC3G34U-X	I.C.(M)	TEXAS
IC7	TC7SZ08FU-X	I.C.(M)	TOSHIBA
IC8	TC7SZ08FU-X	I.C.(M)	TOSHIBA
IC10	MM1573DN-X	I.C.(M)	MITSUMI
Q1	2SC5095/O/-X	TRANSISTOR	TOSHIBA
Q2	2SC4250-X	TRANSISTOR	TOSHIBA
Q3	2SC5095/O/-X	TRANSISTOR	TOSHIBA
Q4	2SC4250-X	TRANSISTOR	TOSHIBA
R2	NRSA6AD-103W	M.G.RESISTOR	10k 1/16W
R3	NRSA6AD-103W	M.G.RESISTOR	10k 1/16W
R4	NRSA6AD-332W	M.G.RESISTOR	3.3k 1/16W
R5	NRSA6AD-472W	M.G.RESISTOR	4.7k 1/16W
R7	NRSA6AD-103W	M.G.RESISTOR	10k 1/16W
R8	NRSA6AD-103W	M.G.RESISTOR	10k 1/16W
R9	NRSA6AD-332W	M.G.RESISTOR	3.3k 1/16W
R10	NRSA6AD-472W	M.G.RESISTOR	4.7k 1/16W
R11	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R12	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R21	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R23	NRSA6AD-220W	M.G.RESISTOR	22 1/16W
R24	NRSA6AD-220W	M.G.RESISTOR	22 1/16W
R25	NRSA6AD-220W	M.G.RESISTOR	22 1/16W
R26	NRSA6AD-220W	M.G.RESISTOR	22 1/16W
R27	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R29	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R30	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R31	NRSA6AD-220W	M.G.RESISTOR	22 1/16W
R32	NRSA6AD-220W	M.G.RESISTOR	22 1/16W
R33	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R34	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R35	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R36	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R37	NRSA6AD-102W	M.G.RESISTOR	1k 1/16W
R38	NRSA6AD-102W	M.G.RESISTOR	1k 1/16W
R39	NRSA6AD-102W	M.G.RESISTOR	1k 1/16W
R40	NRSA6AD-102W	M.G.RESISTOR	1k 1/16W
R41	NRSA6AD-102W	M.G.RESISTOR	1k 1/16W
R42	NRSA6AD-102W	M.G.RESISTOR	1k 1/16W
R43	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R44	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R45	NRSA6AD-103W	M.G.RESISTOR	10k 1/16W
R51	NQR0559-009X	C.FERRITE BEADS	5W
R52	NQR0559-009X	C.FERRITE BEADS	5W
R55	NQR0559-009X	C.FERRITE BEADS	5W
R56	NQR0559-009X	C.FERRITE BEADS	5W
R57	NQR0559-009X	C.FERRITE BEADS	5W
R58	NQR0559-009X	C.FERRITE BEADS	5W
R59	NQR0559-009X	C.FERRITE BEADS	5W
R65	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
C1	NCJ11EK-106X-R	CER.CAPACITOR	10 25V
C2	NCJ11EK-106X-R	CER.CAPACITOR	10 25V
C3	NBS41AM-476X	TAN.CAPACITOR	47 10V
C4	NCB11AK-106X	CER.CAPACITOR	10 10V
C5	NCB31EK-473X	CER.CAPACITOR	0.047 25V
C6	NCB31EK-104X	CER.CAPACITOR	0.1 25V
C7	NCB31EK-473X	CER.CAPACITOR	0.047 25V
C8	NCB31HK-222X	CER.CAPACITOR	2200p 50V
C10	NCB31EK-473X	CER.CAPACITOR	0.047 25V
C12	NCB31EK-473X	CER.CAPACITOR	0.047 25V
C13	NBS40JM-686X	TAN.CAPACITOR	68 6.3V
C14	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C15	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C16	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C17	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C18	NCBA1AK-104W	CER.CAPACITOR	0.1 10V

Symbol No.	Part No.	Part Name	Description
C19	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C20	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C21	NCB30JK-105X	CER.CAPACITOR	1 6.3V
C22	NCB30JK-105X	CER.CAPACITOR	1 6.3V
C23	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C24	NBS40JM-686X	TAN.CAPACITOR	68 6.3V
C25	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C26	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C27	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C28	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C29	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C30	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C31	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C32	NCB30JK-105X	CER.CAPACITOR	1 6.3V
C33	NCB30JK-105X	CER.CAPACITOR	1 6.3V
C34	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C37	NCB11AK-106X	CER.CAPACITOR	10 10V
C38	NCB11AK-106X	CER.CAPACITOR	10 10V
C39	NCB11AK-106X	CER.CAPACITOR	10 10V
C40	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C41	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C42	NBS40JM-686X	TAN.CAPACITOR	68 6.3V
C43	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C44	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C46	NCB30JK-105X	CER.CAPACITOR	1 6.3V
C47	NCB11AK-106X	CER.CAPACITOR	10 10V
C48	NCBA1AK-104W	CER.CAPACITOR	0.1 10V
C50	NCB11AK-106X	CER.CAPACITOR	10 10V
C51	NCB11AK-106X	CER.CAPACITOR	10 10V
C52	NBZ0032-476X	TAN.CAPACITOR	47
LC1	NQR0598-001X	LC FILTER	
LC2	NQR0598-001X	LC FILTER	
LC3	NQR0598-001X	LC FILTER	
LC4	NQR0598-001X	LC FILTER	
LC5	NQR0598-001X	LC FILTER	
LC6	NQR0598-001X	LC FILTER	
J1	QUBD70-X1A1A1-E	SIN TWIST WIRE	
CN27	QGB0801L1-54X	CONNECTOR	54PIN

6.3 ISR BOARD ASSEMBLY PARTS LIST 0 3

CK279300A3

0 3 □ □ □ □ □ □ □ □

Symbol No.	Part No.	Part Name	Description	
IC2	AD9949AKCPZ-W	I.C.(M)	ANALOG DEVICES	
IC3	AD9949AKCPZ-W	I.C.(M)	ANALOG DEVICES	
IC4	MM3142JN-X	I.C.(M)	MITSUMI	
IC5	SN74LVC3G34U-X	I.C.(M)	TEXAS	
IC6	SN74LVC3G34U-X	I.C.(M)	TEXAS	
IC7	TC7SZ08FU-X	I.C.(M)	TOSHIBA	
IC8	TC7SZ08FU-X	I.C.(M)	TOSHIBA	
IC10	MM1573DN-X	I.C.(M)	MITSUMI	
Q1	2SC5095/O-X	TRANSISTOR	TOSHIBA	
Q2	2SC4250-X	TRANSISTOR	TOSHIBA	
Q3	2SC5095/O-X	TRANSISTOR	TOSHIBA	
Q4	2SC4250-X	TRANSISTOR	TOSHIBA	
R2	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R3	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R4	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R5	NRSA6AD-472W	M.G.RESISTOR	4.7k	1/16W
R7	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R8	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R9	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R10	NRSA6AD-472W	M.G.RESISTOR	4.7k	1/16W
R11	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R12	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R21	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R23	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R24	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R25	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R26	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R27	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R29	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R30	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R31	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R32	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R33	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R34	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R35	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R36	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R37	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R38	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R39	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R40	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R41	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R42	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R43	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R44	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R45	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R51	NQR0559-009X	C.FERRITE BEADS	5W	
R52	NQR0559-009X	C.FERRITE BEADS	5W	
R55	NQR0559-009X	C.FERRITE BEADS	5W	
R56	NQR0559-009X	C.FERRITE BEADS	5W	
R57	NQR0559-009X	C.FERRITE BEADS	5W	
R58	NQR0559-009X	C.FERRITE BEADS	5W	
R59	NQR0559-009X	C.FERRITE BEADS	5W	
R65	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
C1	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C2	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C3	NBS41AM-476X	TAN.CAPACITOR	47	10V
C4	NCB11AK-106X	CER.CAPACITOR	10	10V
C5	NCB31EK-473X	CER.CAPACITOR	0.047	25V
C6	NCB31EK-104X	CER.CAPACITOR	0.1	25V
C7	NCB31EK-473X	CER.CAPACITOR	0.047	25V
C8	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C10	NCB31EK-473X	CER.CAPACITOR	0.047	25V
C12	NCB31EK-473X	CER.CAPACITOR	0.047	25V
C13	NBS40JM-686X	TAN.CAPACITOR	68	6.3V
C14	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C15	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C16	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C17	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C18	NCBA1AK-104W	CER.CAPACITOR	0.1	10V

Symbol No.	Part No.	Part Name	Description	
C19	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C20	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C21	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C22	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C23	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C24	NBS40JM-686X	TAN.CAPACITOR	68	6.3V
C25	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C26	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C27	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C28	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C29	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C30	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C31	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C32	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C33	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C34	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C37	NCB11AK-106X	CER.CAPACITOR	10	10V
C38	NCB11AK-106X	CER.CAPACITOR	10	10V
C39	NCB11AK-106X	CER.CAPACITOR	10	10V
C40	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C41	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C42	NBS40JM-686X	TAN.CAPACITOR	68	6.3V
C43	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C44	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C46	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C47	NCB11AK-106X	CER.CAPACITOR	10	10V
C48	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C50	NCB11AK-106X	CER.CAPACITOR	10	10V
C51	NCB11AK-106X	CER.CAPACITOR	10	10V
C52	NB20032-476X	TAN.CAPACITOR	47	
LC1	NQR0598-001X	LC FILTER		
LC2	NQR0598-001X	LC FILTER		
LC3	NQR0598-001X	LC FILTER		
LC4	NQR0598-001X	LC FILTER		
LC5	NQR0598-001X	LC FILTER		
LC6	NQR0598-001X	LC FILTER		
J1	QUBD70-X1A1A1-E	SIN TWIST WIRE		
CN28	QGB0801L1-54X	CONNECTOR	54PIN	

6.4 MAIN BOARD ASSEMBLY PARTS LIST 1 0

CK280000A1

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1 0 [MAIN]

Symbol No.	Part No.	Part Name	Description
IC1	JCY0210	I.C.(M)	JVC
IC2	SC192IML-X	I.C.(M)	SEMTECH
IC3	BU3095-0CFV-X	I.C.(M)	ROHM
IC4	BU3095-0CFV-X	I.C.(M)	ROHM
IC5	JCP8076-2	I.C.(M)	JVC
IC6	LMH6654MF-N-X	I.C.(M)	NATIONAL SEMICO
IC7	LMH6654MF-N-X	I.C.(M)	NATIONAL SEMICO
IC8	LMH6654MF-N-X	I.C.(M)	NATIONAL SEMICO
IC14	TA75S01F-X	I.C.(M)	TOSHIBA
IC15	LM4040CIM3-2.5X	I.C.(M)	NATIONAL SEMICO
IC22	SN74AHC2G53T-X	I.C.(M)	TEXAS
IC23	SN74AHC2G53T-X	I.C.(M)	TEXAS
IC24	SN74AHC2G53T-X	I.C.(M)	TEXAS
IC25	SC192IML-X	I.C.(M)	TEXAS
IC27	TC74VHC161FT-X	I.C.(M)	TOSHIBA
IC28	TC7SH04FU-X	I.C.(M)	TOSHIBA
IC29	MK3720DLF-X	I.C.(M)	INTEGRATED CIRC
IC30	TC7SH04FU-X	I.C.(M)	TOSHIBA
IC31	TC7SH04FU-X	I.C.(M)	TOSHIBA
IC32	TC7SZ08FU-X	I.C.(M)	TOSHIBA
IC34	TC7SZ08FU-X	I.C.(M)	TOSHIBA
IC35	TC7WZ74FU-X	I.C.(M)	TOSHIBA
IC36	TC7SZ08FU-X	I.C.(M)	TOSHIBA
IC38	TC7SH04FU-X	I.C.(M)	TOSHIBA
IC39	TC7SH04FU-X	I.C.(M)	TOSHIBA
IC40	TC7SH04FU-X	I.C.(M)	TOSHIBA
IC41	ICS570BLF-X	I.C.(M)	ICS
IC42	TC7SZ08FU-X	I.C.(M)	TOSHIBA
IC43	ICS660GILF-X	I.C.(M)	ICS
IC45	TC7SH04FU-X	I.C.(M)	TOSHIBA
IC46	XC3S20004FG676C	I.C.(M)	PLSC1595
IC47	K4S643233H-HN75	I.C.(M)	SAMSUNG
IC48	UPD6467GR533A-X	I.C.(M)	NEC
IC49	UPD6467GR533A-X	I.C.(M)	NEC
IC50	XC3S10004FG320C	I.C.(M)	PLSC1596
IC51	ADV7123KSTZ50	I.C.(M)	ANALOG DEVICES
IC52	ADV7123KSTZ50	I.C.(M)	ANALOG DEVICES
IC53	K4S643233H-HN75	I.C.(M)	SAMSUNG
IC54	PLSC1591	I.C.(M)	HD64F2368VTE34V
IC55	NJM2904V-X	I.C.(M)	JRC
IC56	TC7W34FU-X	I.C.(M)	TOSHIBA
IC57	M95320-WVMN6P-X	I.C.(M)	MITSUBISHI
IC70	M95320-WVMN6P-X	I.C.(M)	MITSUBISHI
IC71	PLSC1594	I.C.(M)	MN103SF66R
IC72	TC7W14FU-X	I.C.(M)	TOSHIBA
IC73	MM1572KN-X	I.C.(M)	MITSUMI
IC74	MM1571JN-X	I.C.(M)	MITSUMI
IC75	M62366GP-D-X	I.C.(M)	MITSUBISHI
IC76	JCY0136-X	I.C.(M)	JVC
IC77	TLC29331PW-X	I.C.(M)	TEXAS
IC78	TC7W53FU-X	I.C.(M)	TOSHIBA
IC79	JCY0152-2	I.C.(M)	JVC
IC81	TC7S202FU-X	I.C.(M)	TOSHIBA
IC82	TC7WH241FU-X	I.C.(M)	TOSHIBA
IC84	K4S641633H-BN75	I.C.(M)	SAMSUNG
IC86	JCY0173	I.C.(M)	JVC
IC88	MN5774	I.C.(M)	MATSUSHITA
IC89	TSB41AB2PAP	I.C.(M)	TEXAS
IC90	SN74AHC1G08K-X	I.C.(M)	TEXAS
IC91	PLSL1187	I.C.(M)	NLC0459APB
IC92	BU2288FV-X	I.C.(M)	ROHM
IC93	DS1232AASE60TTE	I.C.(M)	NATIONAL SEMICO
IC94	SA16D70BFI02A02	I.C.(M)	FUJITSU
IC95	DS1232AASE60TTE	I.C.(M)	NATIONAL SEMICO
IC102	CXD3400N-X	I.C.(M)	SONY
IC103	CXD3400N-X	I.C.(M)	SONY
IC104	CXD3400N-X	I.C.(M)	SONY
IC105	SC192IML-X	I.C.(M)	SEMTECH
IC106	XC3S10004FG320C	I.C.(M)	PLSC1597
IC107	K4S643233H-HN75	I.C.(M)	SAMSUNG
IC108	AK4363VF-X	I.C.(M)	ASAHI KASEI
IC110	LTC3411EDD-X	I.C.(M)	LINEAR
IC111	SC192IML-X	I.C.(M)	SEMTECH

Symbol No.	Part No.	Part Name	Description
IC112	SC192IML-X	I.C.(M)	SEMTECH
IC113	LTC3414EFE-X	I.C.(M)	LINEAR
IC114	TC7SH04FU-X	I.C.(M)	TOSHIBA
IC115	MM1571JN-X	I.C.(M)	MITSUMI
Q1	DTC124EUA-X	TRANSISTOR	ROHM
Q2	DTA124EUA-X	TRANSISTOR	ROHM
Q3	DTC124EUA-X	TRANSISTOR	ROHM
Q4	DTA124EUA-X	TRANSISTOR	ROHM
Q5	DTC124EUA-X	TRANSISTOR	ROHM
Q6	DTA124EUA-X	TRANSISTOR	ROHM
Q7	DTC124EUA-X	TRANSISTOR	ROHM
Q8	DTC124EUA-X	TRANSISTOR	ROHM
Q25	DTA114EUA-X	TRANSISTOR	ROHM
Q26	UMC3N-W	TRANSISTOR	ROHM
Q27	UMC3N-W	TRANSISTOR	ROHM
Q28	DTC143EUA-X	TRANSISTOR	ROHM
Q37	DTC124EUA-X	TRANSISTOR	ROHM
Q38	RSQ035P03-W	TRANSISTOR	ROHM
Q39	RTQ035N03-W	TRANSISTOR	MITSUBISHI
Q100	2SC4626J/BC/-X	TRANSISTOR	MATSUSHITA
D1	1SS357-X	DIODE	TOSHIBA
D21	DAN202U-X	DIODE	ROHM
D22	DAN202U-X	DIODE	ROHM
D23	EC2C01C-TR-X	VARI CAP DIODE	SANYO
D24	EC2C01C-TR-X	VARI CAP DIODE	SANYO
D25	EC2C01C-TR-X	VARI CAP DIODE	SANYO
D48	MA142A-X	DIODE	MATSUSHITA
D49	MA142A-X	DIODE	MATSUSHITA
D50	MA142A-X	DIODE	MATSUSHITA
D51	MA142A-X	DIODE	MATSUSHITA
D100	MA8091/L/-X	ZENER DIODE	MATSUSHITA
R15	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R27	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R28	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R34	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R49	NRSA6AD-124W	M.G.RESISTOR	120k 1/16W
R50	NRSA6AD-123W	M.G.RESISTOR	12k 1/16W
R51	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R52	NRSA6AD-394W	M.G.RESISTOR	390k 1/16W
R53	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R55	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R83	NRSA6AD-272W	M.G.RESISTOR	2.7k 1/16W
R85	NRSA6AD-272W	M.G.RESISTOR	2.7k 1/16W
R89	NRSA6AJ-0R0W	M.G.RESISTOR	0 1/16W
R91	NRSA6AD-153W	M.G.RESISTOR	15k 1/16W
R92	NRSA6AD-103W	M.G.RESISTOR	10k 1/16W
R99	NRSA6AD-473W	M.G.RESISTOR	47k 1/16W
R100	NRSA6AD-473W	M.G.RESISTOR	47k 1/16W
R101	NRSA6AD-473W	M.G.RESISTOR	47k 1/16W
R102	NRSA6AD-473W	M.G.RESISTOR	47k 1/16W
R103	NRSA63J-150X	M.G.RESISTOR	15 1/16W
R105	NRSA6AD-272W	M.G.RESISTOR	2.7k 1/16W
R108	NRSA6AD-821W	M.G.RESISTOR	820 1/16W
R109	NRSA6AD-220W	M.G.RESISTOR	22 1/16W
R110	NRSA6AD-680W	M.G.RESISTOR	68 1/16W
R111	NRSA63D-392X	M.G.RESISTOR	3.9k 1/16W
R112	NRSA63D-473X	M.G.RESISTOR	47k 1/16W
R113	NRSA63D-112X	M.G.RESISTOR	1.1k 1/16W
R114	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R115	NRSA63D-392X	M.G.RESISTOR	3.9k 1/16W
R116	NRSA63D-473X	M.G.RESISTOR	47k 1/16W
R117	NRSA63D-112X	M.G.RESISTOR	1.1k 1/16W
R118	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R119	NRSA63D-182X	M.G.RESISTOR	1.8k 1/16W
R120	NRSA63D-183X	M.G.RESISTOR	18k 1/16W
R121	NRSA63D-112X	M.G.RESISTOR	1.1k 1/16W
R122	NRSA63D-821X	M.G.RESISTOR	820 1/16W
R123	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R124	NRSA63D-102X	M.G.RESISTOR	1k 1/16W

Symbol No.	Part No.	Part Name	Description	
R336	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R337	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R338	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R339	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R340	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R342	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R344	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R346	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R347	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R349	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R350	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R353	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R354	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R355	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R356	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R357	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R359	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R360	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R361	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R362	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R363	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R364	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R365	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R366	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R367	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R514	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R532	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R536	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R537	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R539	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R567	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R568	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R569	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R570	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R571	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R572	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R573	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R574	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R575	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R576	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R577	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R578	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R579	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R580	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R581	NRSA6AD-390W	M.G.RESISTOR	39	1/16W
R582	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R583	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R584	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R585	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R587	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R589	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R590	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R593	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R594	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R595	NRSA6AD-273W	M.G.RESISTOR	27k	1/16W
R596	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R597	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R598	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R599	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R600	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R601	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R602	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R603	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R604	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R605	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R606	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R607	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R608	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R609	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R610	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R611	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R612	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
R613	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W

Symbol No.	Part No.	Part Name	Description	
R614	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R615	NRSA6AD-222W	M.G.RESISTOR	2.2k	1/16W
R616	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R617	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R618	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R619	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R620	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R621	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R622	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R623	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R624	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R625	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R626	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R627	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R628	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R629	NRSA6AD-221W	M.G.RESISTOR	220	1/16W
R630	NRSA6AD-182W	M.G.RESISTOR	1.8k	1/16W
R631	NRSA6AD-471W	M.G.RESISTOR	470	1/16W
R632	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R634	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R635	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R636	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R642	NRSA6AD-122W	M.G.RESISTOR	1.2k	1/16W
R644	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R645	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R646	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R648	NRSA6AD-151W	M.G.RESISTOR	150	1/16W
R649	NRSA6AD-302W	M.G.RESISTOR	3k	1/16W
R650	NRSA6AD-151W	M.G.RESISTOR	150	1/16W
R651	NRSA6AD-302W	M.G.RESISTOR	3k	1/16W
R652	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R653	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R654	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R655	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R656	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R659	NRSA6AD-562W	M.G.RESISTOR	5.6k	1/16W
R661	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R662	NRSA6AD-222W	M.G.RESISTOR	2.2k	1/16W
R663	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R664	NRSA6AD-224W	M.G.RESISTOR	220k	1/16W
R665	NRSA6AD-222W	M.G.RESISTOR	2.2k	1/16W
R667	NRSA6AD-242W	M.G.RESISTOR	2.4k	1/16W
R668	NRSA6AD-392W	M.G.RESISTOR	3.9k	1/16W
R669	NRSA6AD-392W	M.G.RESISTOR	3.9k	1/16W
R670	NRSA6AD-560W	M.G.RESISTOR	56	1/16W
R671	NRSA6AD-560W	M.G.RESISTOR	56	1/16W
R672	NRSA6AD-333W	M.G.RESISTOR	33k	1/16W
R673	NRSA6AD-560W	M.G.RESISTOR	56	1/16W
R674	NRSA6AD-560W	M.G.RESISTOR	56	1/16W
R675	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R679	NRSA6AD-512W	M.G.RESISTOR	5.1k	1/16W
R680	NRSA6AJ-105W	M.G.RESISTOR	1M	1/16W
R681	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R683	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R684	NRSA6AD-681W	M.G.RESISTOR	680	1/16W
R686	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R687	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R688	NRSA6AD-471W	M.G.RESISTOR	470	1/16W
R689	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R691	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R693	NRSA6AD-224W	M.G.RESISTOR	220k	1/16W
R695	NRSA6AD-222W	M.G.RESISTOR	2.2k	1/16W
R696	NRSA6AD-224W	M.G.RESISTOR	220k	1/16W
R698	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R711	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R712	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R750	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R751	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R752	NRSA6AD-470W	M.G.RESISTOR	47	1/16W
R754	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R755	NRSA6AD-470W	M.G.RESISTOR	47	1/16W
R757	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R758	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W

Symbol No.	Part No.	Part Name	Description	
R760	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R761	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R767	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R770	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R771	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R772	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R785	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R786	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R787	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R788	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R790	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R791	NRSA6AJ-105W	M.G.RESISTOR	1M	1/16W
R792	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R793	NRSA6AD-394W	M.G.RESISTOR	390k	1/16W
R794	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R796	NRSA6AD-562W	M.G.RESISTOR	5.6k	1/16W
R797	NRSA6AD-751W	M.G.RESISTOR	750	1/16W
R798	NRSA6AD-560W	M.G.RESISTOR	56	1/16W
R799	NRSA6AD-560W	M.G.RESISTOR	56	1/16W
R800	NRSA6AD-560W	M.G.RESISTOR	56	1/16W
R801	NRSA6AD-560W	M.G.RESISTOR	56	1/16W
R802	NRSA6AD-512W	M.G.RESISTOR	5.1k	1/16W
R803	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R804	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R805	NRSA6AD-470W	M.G.RESISTOR	47	1/16W
R806	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R807	NRSA6AD-470W	M.G.RESISTOR	47	1/16W
R808	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R809	NRSA6AD-470W	M.G.RESISTOR	47	1/16W
R810	NRSA6AD-470W	M.G.RESISTOR	47	1/16W
R811	NRSA6AD-470W	M.G.RESISTOR	47	1/16W
R816	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R818	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R819	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R821	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R822	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R823	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R824	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R825	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R826	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R828	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R829	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R830	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R831	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R834	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R840	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R841	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R842	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R843	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R844	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R845	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R846	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R847	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R848	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R849	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R850	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R851	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R852	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R853	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R854	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R855	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R856	NRSA6AD-330W	M.G.RESISTOR	33	1/16W
R857	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R858	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R859	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R860	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R861	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R862	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R863	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R867	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R868	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R869	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W

Symbol No.	Part No.	Part Name	Description	
R870	NRSA6AD-472W	M.G.RESISTOR	4.7k	1/16W
R871	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R872	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R873	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R874	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R876	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R878	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R879	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R880	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R882	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R883	NRSA6AJ-5R6W	M.G.RESISTOR	5.6	1/16W
R885	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R887	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R889	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R890	NRSA6AJ-5R6W	M.G.RESISTOR	5.6	1/16W
R891	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R892	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R893	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R894	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R896	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R912	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R913	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R914	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R915	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R920	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R923	NRSA6AD-471W	M.G.RESISTOR	470	1/16W
R928	NRSA6AD-101W	M.G.RESISTOR	100	1/16W
R930	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R931	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R934	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R935	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R937	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R938	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R939	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R940	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R941	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R943	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R945	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R946	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R947	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R1034	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R1037	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R1038	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R1039	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R1040	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R1041	NRSA6AD-123W	M.G.RESISTOR	12k	1/16W
R1042	NRSA6AD-393W	M.G.RESISTOR	39k	1/16W
R1043	NRSA6AD-334W	M.G.RESISTOR	330k	1/16W
R1045	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1046	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1047	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R1048	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1049	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1050	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R1051	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R1052	NRSA6AD-102W	M.G.RESISTOR	1k	1/16W
R1053	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1054	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1055	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1056	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1057	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1058	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1059	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1060	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1061	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1062	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1063	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1064	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1065	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1066	NRSA6AJ-3R9W	M.G.RESISTOR	3.9	1/16W
R1067	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1070	NRSA6AD-512W	M.G.RESISTOR	5.1k	1/16W
R1071	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W

Symbol No.	Part No.	Part Name	Description	
R1072	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R1076	NRSA6AD-154W	M.G.RESISTOR	150k	1/16W
R1077	NRSA6AD-123W	M.G.RESISTOR	12k	1/16W
R1078	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1079	NRSA6AD-123W	M.G.RESISTOR	12k	1/16W
R1080	NRSA6AD-334W	M.G.RESISTOR	330k	1/16W
R1081	NRSA6AD-474W	M.G.RESISTOR	470k	1/16W
R1082	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1083	NRSA6AD-334W	M.G.RESISTOR	330k	1/16W
R1084	NRSA6AD-224W	M.G.RESISTOR	220k	1/16W
R1085	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1086	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1087	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1089	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1090	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1092	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1095	NRSA6AD-104W	M.G.RESISTOR	100k	1/16W
R1096	NRSA6AD-123W	M.G.RESISTOR	12k	1/16W
R1097	NRSA6AD-472W	M.G.RESISTOR	4.7k	1/16W
R1098	NRSA6AD-304W	M.G.RESISTOR	300k	1/16W
R1099	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1101	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1104	NRSA6AD-334W	M.G.RESISTOR	330k	1/16W
R1105	NRSA6AD-224W	M.G.RESISTOR	220k	1/16W
R1106	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R1107	NRSA6AD-304W	M.G.RESISTOR	300k	1/16W
R1108	NRSA6AD-203W	M.G.RESISTOR	20k	1/16W
R1109	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1110	NRSA6AJ-225W	M.G.RESISTOR	2.2M	1/16W
R1111	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1116	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R1117	NRSA6AD-622W	M.G.RESISTOR	6.2k	1/16W
R1118	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1119	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1120	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1121	NRSA6AD-473W	M.G.RESISTOR	47k	1/16W
R1122	NRSA6AD-272W	M.G.RESISTOR	2.7k	1/16W
R1126	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R1127	NRSA6AD-103W	M.G.RESISTOR	10k	1/16W
R1128	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1129	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1130	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1131	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1132	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1133	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1134	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1135	NRSA6AD-220W	M.G.RESISTOR	22	1/16W
R1136	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1137	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1138	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1139	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1140	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1141	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1142	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1143	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1144	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1145	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R1146	NRSA6AJ-0R0W	M.G.RESISTOR	0	1/16W
R2100	NRSA6AD-392W	M.G.RESISTOR	3.9k	1/16W
R2101	NRSA6AD-332W	M.G.RESISTOR	3.3k	1/16W
RA61	NRZ0015-101X	RESISTOR ARRAY	100	
RA62	NRZ0015-101X	RESISTOR ARRAY	100	
RA65	NRZ0015-102X	RESISTOR ARRAY	1k	
RA68	NRZ0015-103X	RESISTOR ARRAY	10k	
RA69	NRZ0015-103X	RESISTOR ARRAY	10k	
RA79	NRZ0015-473X	RESISTOR ARRAY	47k	
RA80	NRZ0015-473X	RESISTOR ARRAY	47k	
C1	NCB11AK-106X	CER.CAPACITOR	10	10V
C3	NCB11AK-106X	CER.CAPACITOR	10	10V
C4	NRSA63J-473X	M.G.RESISTOR	47k	1/16W

Symbol No.	Part No.	Part Name	Description	
C5	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C6	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C7	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C8	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C9	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C10	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C11	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C12	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C13	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C14	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C15	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C16	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C17	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C18	NDCA1HJ-471W	CER.CAPACITOR	470p	50V
C19	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C20	NDCA1HJ-470W	CER.CAPACITOR	47p	50V
C21	NCB11AK-106X	CER.CAPACITOR	10	10V
C22	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C23	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C24	NCB11AK-106X	CER.CAPACITOR	10	10V
C27	NCB11AK-106X	CER.CAPACITOR	10	10V
C28	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C29	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C30	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C31	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C32	NCB11AK-106X	CER.CAPACITOR	10	10V
C33	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C34	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C35	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C36	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C39	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C40	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C47	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C48	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C49	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C50	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C51	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C52	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C57	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C59	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C60	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C61	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C62	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C63	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C64	NCB11AK-106X	CER.CAPACITOR	10	10V
C65	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C66	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C67	NDC31HJ-5R0X	CER.CAPACITOR	5p	50V
C68	NDC31HJ-5R0X	CER.CAPACITOR	5p	50V
C69	NDC31HJ-5R0X	CER.CAPACITOR	5p	50V
C70	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C71	NDCA1HJ-330W	CER.CAPACITOR	33p	50V
C72	NDCA1HJ-330W	CER.CAPACITOR	33p	50V
C73	NDCA1HJ-330W	CER.CAPACITOR	33p	50V
C75	NDCA1HJ-560W	CER.CAPACITOR	56p	50V
C76	NDCA1HJ-560W	CER.CAPACITOR	56p	50V
C77	NDCA1HJ-560W	CER.CAPACITOR	56p	50V
C78	NDCA1HJ-470W	CER.CAPACITOR	47p	50V
C79	NDCA1HJ-470W	CER.CAPACITOR	47p	50V
C80	NDCA1HJ-470W	CER.CAPACITOR	47p	50V
C83	NDCA1EJ-270W	CER.CAPACITOR	27p	25V
C84	NDCA1EJ-270W	CER.CAPACITOR	27p	25V
C85	NDCA1EJ-270W	CER.CAPACITOR	27p	25V
C86	NDCA1EJ-271W	CER.CAPACITOR	270p	25V
C87	NDCA1EJ-271W	CER.CAPACITOR	270p	25V
C88	NDCA1EJ-271W	CER.CAPACITOR	270p	25V
C89	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C90	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C91	NCB11AK-106X	CER.CAPACITOR	10	10V
C92	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C93	NCB11AK-106X	CER.CAPACITOR	10	10V
C94	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C107	NDCA1HJ-471W	CER.CAPACITOR	470p	50V

Symbol No.	Part No.	Part Name	Description	
C327	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C328	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C329	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C330	NCB11AK-106X	CER.CAPACITOR	10	10V
C331	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C332	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C333	NCB11AK-106X	CER.CAPACITOR	10	10V
C334	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C335	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C336	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C337	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C338	NDCA1HJ-151W	CER.CAPACITOR	150p	50V
C339	NCB30JK-225X	CER.CAPACITOR	2.2	6.3V
C340	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C341	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C342	NCBA1AK-473W	CER.CAPACITOR	0.047	10V
C343	NCB30JK-225X	CER.CAPACITOR	2.2	6.3V
C344	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C345	NCB11AK-106X	CER.CAPACITOR	10	10V
C346	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C347	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C348	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C349	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C350	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C351	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C352	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C353	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C354	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C355	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C356	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C357	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C358	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C359	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C360	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C361	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C363	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C365	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C366	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C367	NDCA1HJ-390W	CER.CAPACITOR	39p	50V
C368	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C369	NDCA1HJ-102W	CER.CAPACITOR	1000p	50V
C370	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C371	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C372	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C373	NCB11CK-475X	CER.CAPACITOR	4.7	16V
C374	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C375	NDCA1EJ-271W	CER.CAPACITOR	270p	25V
C376	NDCA1HJ-6R0W	CER.CAPACITOR	6p	50V
C377	NDCA1HJ-6R0W	CER.CAPACITOR	6p	50V
C378	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C379	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C380	NCBA1HK-222W	CER.CAPACITOR	2200p	50V
C381	NCBA1AK-473W	CER.CAPACITOR	0.047	10V
C383	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C384	NDCA1HJ-390W	CER.CAPACITOR	39p	50V
C385	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C386	NDCA1HJ-470W	CER.CAPACITOR	47p	50V
C388	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C389	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C395	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C396	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C397	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C398	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C399	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C400	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C401	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C402	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C403	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C404	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C405	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C406	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C407	NDCA1HJ-101W	CER.CAPACITOR	100p	50V
C408	NCBA1AK-104W	CER.CAPACITOR	0.1	10V

Symbol No.	Part No.	Part Name	Description	
C409	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C414	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C416	NCB11AK-106X	CER.CAPACITOR	10	10V
C418	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C419	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C421	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C422	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C423	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C428	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C429	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C430	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C431	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C432	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C433	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C434	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C435	NDCA1EJ-271W	CER.CAPACITOR	270p	25V
C437	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C438	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C439	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C440	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C441	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C442	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C443	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C444	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C445	NCB11AK-106X	CER.CAPACITOR	10	10V
C446	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C447	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C448	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C449	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C450	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C451	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C452	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C453	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C454	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C455	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C457	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C461	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C462	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C463	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C469	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C472	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C473	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C476	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C477	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C486	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C488	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C490	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C491	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C542	NCB11EK-105X	CER.CAPACITOR	1	25V
C543	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C544	NCB11EK-105X	CER.CAPACITOR	1	25V
C545	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C546	NCB11EK-105X	CER.CAPACITOR	1	25V
C547	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C548	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C549	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C550	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C551	NCBA1EK-682W	CER.CAPACITOR	6800p	25V
C552	NCBA1EK-682W	CER.CAPACITOR	6800p	25V
C553	NCBA1EK-682W	CER.CAPACITOR	6800p	25V
C554	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C555	NCB11AK-106X	CER.CAPACITOR	10	10V
C556	NCB11AK-106X	CER.CAPACITOR	10	10V
C557	NDCA1HJ-471W	CER.CAPACITOR	470p	50V
C558	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C559	NDCA1HJ-470W	CER.CAPACITOR	47p	50V
C560	NCB11AK-106X	CER.CAPACITOR	10	10V
C561	NCB11AK-106X	CER.CAPACITOR	10	10V
C565	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C566	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C567	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C568	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C569	NCBA1AK-104W	CER.CAPACITOR	0.1	10V

Symbol No.	Part No.	Part Name	Description	
C570	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C571	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C572	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C573	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C574	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C575	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C576	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C577	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C578	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C579	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C580	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C581	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C582	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C583	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C584	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C585	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C586	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C587	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C588	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C589	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C590	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C591	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C592	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C593	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C594	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C595	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C596	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C597	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C598	NCB31AK-224X	CER.CAPACITOR	0.22	10V
C605	NDCA1HJ-471W	CER.CAPACITOR	470p	50V
C606	NDCA1HJ-471W	CER.CAPACITOR	470p	50V
C607	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C608	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C609	NDCA1HJ-470W	CER.CAPACITOR	47p	50V
C610	NCB11AK-106X	CER.CAPACITOR	10	10V
C612	NBS40JM-686X	TAN.CAPACITOR	68	6.3V
C613	NCB11AK-106X	CER.CAPACITOR	10	10V
C614	NCB11AK-106X	CER.CAPACITOR	10	10V
C617	NDCA1HJ-471W	CER.CAPACITOR	470p	50V
C618	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C620	NDCA1HJ-470W	CER.CAPACITOR	47p	50V
C621	NCB11AK-106X	CER.CAPACITOR	10	10V
C622	NCB11AK-106X	CER.CAPACITOR	10	10V
C624	NDCA1HJ-100W	CER.CAPACITOR	10p	50V
C625	NDCA1HJ-100W	CER.CAPACITOR	10p	50V
C626	NDCA1HJ-471W	CER.CAPACITOR	470p	50V
C627	NCBA1HK-102W	CER.CAPACITOR	1000p	50V
C628	NCB11AK-106X	CER.CAPACITOR	10	10V
C629	NBJM0JM-157X	TAN.CAPACITOR	150	6.3V
C630	NBSH0JM-337X	TAN.CAPACITOR	330	6.3V
C632	NCBA1AK-104W	CER.CAPACITOR	0.1	10V
C633	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C634	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
C635	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C2000	NCBA1CK-103W	CER.CAPACITOR	0.01	16V
L1	NQL89EN-6R8X	COIL	6.8uH	
L3	NQL904J-1R0X	COIL	1uH	
L4	NQL904J-1R0X	COIL	1uH	
L5	NQL904J-1R0X	COIL	1uH	
L6	NQL904J-1R0X	COIL	1uH	
L7	NQL904J-1R0X	COIL	1uH	
L8	NQL904J-1R0X	COIL	1uH	
L9	NQL904J-1R0X	COIL	1uH	
L10	NQL904J-1R0X	COIL	1uH	
L11	NQL904J-1R0X	COIL	1uH	
L15	NQL89EN-6R8X	COIL	6.8uH	
L27	NQL044K-100X	COIL	10uH	
L28	NQL904J-2R2X	COIL	2.2uH	
L29	NQR0276-002X	COIL	0mH	
L30	NQL904J-120X	COIL	12uH	
L31	NQL904J-100X	COIL	10uH	

Symbol No.	Part No.	Part Name	Description
L33	NQR0276-002X	COIL	0mH
L35	NQL085J-2R2X	COIL	2.2uH
L36	NQL085J-2R2X	COIL	2.2uH
L40	NQL89EN-6R8X	COIL	6.8uH
L42	NQL89EN-2R4X	COIL	2.4uH
L43	NQL89EN-6R8X	COIL	6.8uH
L44	NQL89EN-6R8X	COIL	6.8uH
L45	NQLC2EM-3R3X	COIL	3.3uH
L46	NQL044K-100X	COIL	10uH
L47	NQL044K-100X	COIL	10uH
X1	NAX0608-001X	CRYSTAL	13.5MHz
X2	NAX0723-001X	CRYSTAL	8.5MHz
X6	NAX0348-001X	CRYSTAL	27MHz
X8	NAX0206-001X	CRYSTAL	24.567MHz
X9	NAX0485-001X	CRYSTAL	27.000MHz
CN3	QGA1002F1-12X	CONNECTOR	12PIN
CN16	QGF0508F2-50X	CONNECTOR	50PIN
CN17	QGF0508F2-16X	CONNECTOR	16PIN
CN18	QGF0508F1-10X	CONNECTOR	10PIN
CN19	QGA1002C1-13X	CONNECTOR	13PIN
CN26	QGB0801K1-54X	CONNECTOR	54PIN
CN27	QGB0801M2-54X	CONNECTOR	54PIN
CN28	QGB0801M2-54X	CONNECTOR	54PIN
CN29	QGA1201C2-11X	CONNECTOR	11PIN
CN30	QGF0534F1-20X	CONNECTOR	20PIN
CN49	QGB0805L4-E0	CONNECTOR	140PIN
CN50	NNZ0138-001X	CONNECTOR	
CN52	NNZ0133-001X	CONNECTOR	
CN53	NNZ0133-001X	CONNECTOR	
CN54	NNZ0138-001X	CONNECTOR	
K1	NQR0200-005X	FERRITE BEADS	
K2	NQR0200-005X	FERRITE BEADS	
K6	NQR0265-001X	FERRITE BEADS	
K21	NQR0265-001X	FERRITE BEADS	
K23	NQR0413-002X	FERRITE BEADS	
K24	NQR0413-002X	FERRITE BEADS	
K25	NQR0200-005X	FERRITE BEADS	
K26	NQR0200-005X	FERRITE BEADS	
K27	NQR0200-005X	FERRITE BEADS	
K28	NQR0200-005X	FERRITE BEADS	
K29	NQR0200-005X	FERRITE BEADS	
K30	NQR0200-005X	FERRITE BEADS	
K31	NQR0200-005X	FERRITE BEADS	
K32	NQR0200-005X	FERRITE BEADS	
K33	NQR0200-005X	FERRITE BEADS	
K34	NQR0200-004X	FERRITE BEADS	
K35	NQR0200-004X	FERRITE BEADS	
K36	NQR0200-004X	FERRITE BEADS	
K37	NQR0200-004X	FERRITE BEADS	
K38	NQR0200-004X	FERRITE BEADS	
K39	NQR0200-005X	FERRITE BEADS	
K40	NQR0200-005X	FERRITE BEADS	
K41	NQR0200-005X	FERRITE BEADS	
K42	NQR0200-004X	FERRITE BEADS	
K45	NQR0200-005X	FERRITE BEADS	
K46	NQR0200-005X	FERRITE BEADS	
K47	NQR0200-005X	FERRITE BEADS	
K48	NQR0200-005X	FERRITE BEADS	
K49	NQR0200-005X	FERRITE BEADS	
K50	NQR0200-005X	FERRITE BEADS	
K51	NQR0200-005X	FERRITE BEADS	
K52	NQR0200-005X	FERRITE BEADS	
K53	NQR0200-005X	FERRITE BEADS	
K54	NQR0200-005X	FERRITE BEADS	
K55	NQR0200-005X	FERRITE BEADS	
K56	NQR0200-005X	FERRITE BEADS	
K57	NQR0448-001X	FERRITE BEADS	
K59	NQR0265-001X	FERRITE BEADS	
K60	NQR0265-001X	FERRITE BEADS	

6.5 MIF BOARD ASSEMBLY PARTS LIST 2 0

CK2801A0B1 (GY-HD100U)

CK2801B0B1 (GY-HD100E)

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2 0 [MIF]

Symbol No.	Part No.	Part Name	Description
IC58	PLSC1590	I.C.(M)	HD64F2368VTE34V
IC59	TC7W34FU-X	I.C.(M)	TOSHIBA
IC60	TC7W74FU-X	I.C.(M)	TOSHIBA
IC61	M95320-WMN6P-X	I.C.(M)	MITSUBISHI
IC62	MM1573AN-X	I.C.(M)	MITSUMI
IC63	RS5C314-X	I.C.(M)	RICOH
IC64	R3112N261A-X	I.C.(M)	RICOH
IC65	LC4064V75T100C1	I.C.(M)	LATTICE
IC66	LC4128V75T100C2	I.C.(M)	LATTICE
IC67	SN74AHC1G14DC-X	I.C.(M)	TEXAS
IC68	SN74AHC1G14DC-X	I.C.(M)	TEXAS
IC96	XC2C2567VQG100C	I.C.(M)	XILINX
IC97	S29AL016D70TF11	I.C.(M)	SPANSION
IC98	TC7W34FU-X	I.C.(M)	TOSHIBA
IC99	CXM3004R	I.C.(M)	SONY
IC100	AK5357VT-X	I.C.(M)	ASAHI KASEI
IC101	AK4384VT-X	I.C.(M)	ASAHI KASEI
IC109	NJM78L12UA-X	I.C.(M)	JRC
Q1	DTC124EUA-X	TRANSISTOR	ROHM
Q2	DTC124EUA-X	TRANSISTOR	ROHM
Q11	DTA124EUA-X	TRANSISTOR	ROHM
Q12	DTC124EUA-X	TRANSISTOR	ROHM
Q13	DTA124EUA-X	TRANSISTOR	ROHM
Q14	SSM3K15FS-X	TRANSISTOR	TOSHIBA
Q16	DTC124EUA-X	TRANSISTOR	ROHM
Q17	DTC124EUA-X	TRANSISTOR	ROHM
Q20	DTC124EUA-X	TRANSISTOR	ROHM
Q21	2SC4626J/BC/-X	TRANSISTOR	MATSUSHITA
Q22	DTA124EUA-X	TRANSISTOR	ROHM
Q24	DTC124EUA-X	TRANSISTOR	ROHM
Q29	DTC124EUA-X	TRANSISTOR	ROHM
Q30	DTC124EUA-X	TRANSISTOR	ROHM
Q31	2SA1790J/BC/-X	TRANSISTOR	MATSUSHITA
Q32	DTC124EUA-X	TRANSISTOR	ROHM
Q33	2SC4626J/BC/-X	TRANSISTOR	MATSUSHITA
Q34	2SA1790J/BC/-X	TRANSISTOR	MATSUSHITA
Q35	2SC4626J/BC/-X	TRANSISTOR	MATSUSHITA
Q36	2SA1790J/BC/-X	TRANSISTOR	MATSUSHITA
Q37	DTC124EUA-X	TRANSISTOR	ROHM
Q500	DTC124EUA-X	TRANSISTOR	ROHM
Q913	DTA124EUA-X	TRANSISTOR	ROHM
Q914	DTA124EUA-X	TRANSISTOR	ROHM
D1	SML-020MVT-W	L.E.D.	ROHM
D18	HZM3.9NB2-X	ZENER DIODE	HITACHI
D19	MA741WK-X	DIODE	MATSUSHITA
D20	MA741WK-X	DIODE	MATSUSHITA
D36	SML-020MVT-W	L.E.D.	ROHM
D46	HZM3.0NB1-X	ZENER DIODE	HITACHI
D47	HZM3.9NB2-X	ZENER DIODE	HITACHI
R4	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R5	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R6	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R7	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R8	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R369	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R370	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R371	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R372	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R373	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R375	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R377	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R378	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R379	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R381	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R382	NRSA63J-683X	M.G.RESISTOR	68k 1/16W
R383	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R384	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R385	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R387	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W

Symbol No.	Part No.	Part Name	Description
R388	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R389	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R390	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R392	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R393	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R395	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R396	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R397	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R399	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R400	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R401	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R402	NRSA63J-333X	M.G.RESISTOR	33k 1/16W
R403	NRSA63J-683X	M.G.RESISTOR	68k 1/16W
R404	NRSA63J-752X	M.G.RESISTOR	7.5k 1/16W
R405	NRSA63J-123X	M.G.RESISTOR	12k 1/16W
R406	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R408	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R409	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R411	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R413	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R414	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R415	NRSA63J-105X	M.G.RESISTOR	1M 1/16W
R416	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R417	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R418	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R419	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R420	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R421	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R422	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R423	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R424	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R425	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R426	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R427	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R428	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R430	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R431	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R432	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R433	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R434	NRSA63J-471X	M.G.RESISTOR	470 1/16W
R435	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R436	NRSA63J-471X	M.G.RESISTOR	470 1/16W
R437	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R438	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R439	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R440	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R441	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R442	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R443	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R444	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R445	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R446	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R448	NRSA63J-473X	M.G.RESISTOR	47k 1/16W (E)
R449	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W (U)
R450	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R452	NRSA63J-473X	M.G.RESISTOR	47k 1/16W (U)
R453	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W (E)
R456	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R457	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R458	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R460	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R462	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R464	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R465	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R466	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R469	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R470	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R471	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R472	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R473	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R474	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R475	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R476	NRSA63J-473X	M.G.RESISTOR	47k 1/16W

Symbol No.	Part No.	Part Name	Description	
R1138	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R1139	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R2000	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2001	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2002	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R2003	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R2011	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2012	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2013	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2014	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2016	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2020	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2024	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2025	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2026	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2029	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2030	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2031	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2032	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
RA33	NRZ0015-473X	M.G.RESISTOR	47k	
RA34	NRZ0015-473X	M.G.RESISTOR	47k	
RA35	NRZ0015-473X	M.G.RESISTOR	47k	
RA39	NRZ0015-473X	M.G.RESISTOR	47k	
RA40	NRZ0015-473X	M.G.RESISTOR	47k	
RA41	NRZ0015-473X	M.G.RESISTOR	47k	
RA42	NRZ0015-473X	M.G.RESISTOR	47k	
RA43	NRZ0015-473X	M.G.RESISTOR	47k	
RA46	NRZ0015-473X	M.G.RESISTOR	47k	
RA47	NRZ0015-473X	M.G.RESISTOR	47k	
RA48	NRZ0015-473X	M.G.RESISTOR	47k	
RA49	NRZ0015-473X	M.G.RESISTOR	47k	
RA50	NRZ0015-473X	M.G.RESISTOR	47k	
RA51	NRZ0015-473X	M.G.RESISTOR	47k	
RA52	NRZ0015-473X	M.G.RESISTOR	47k	
RA53	NRZ0015-473X	M.G.RESISTOR	47k	
RA54	NRZ0015-473X	M.G.RESISTOR	47k	
RA55	NRZ0015-473X	M.G.RESISTOR	47k	
RA56	NRZ0015-473X	M.G.RESISTOR	47k	
RA57	NRZ0015-473X	M.G.RESISTOR	47k	
RA58	NRZ0015-473X	M.G.RESISTOR	47k	
RA59	NRZ0015-473X	M.G.RESISTOR	47k	
RA60	NRZ0015-473X	M.G.RESISTOR	47k	
C1	NCB11AK-106X	CER.CAPACITOR	10	10V
C200	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C201	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C259	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C262	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C263	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C264	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C265	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C266	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C267	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C268	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C269	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C270	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C271	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C272	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C273	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C274	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C275	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C276	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C277	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C278	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C279	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C281	NCB11CK-105X	CER.CAPACITOR	1	16V
C282	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C283	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C284	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C285	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C286	NDC31HJ-120X	CER.CAPACITOR	12p	50V

Symbol No.	Part No.	Part Name	Description	
C287	NCB31HK-682X	CER.CAPACITOR	6800p	50V
C288	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C289	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C290	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C291	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C292	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C293	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C294	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C296	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C297	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C298	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C299	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C300	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C301	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C303	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C304	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C492	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C493	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C494	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C495	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C496	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C497	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C498	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C499	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C500	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C501	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C502	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C503	NCB11AK-106X	CER.CAPACITOR	10	10V
C504	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C505	NCB11AK-106X	CER.CAPACITOR	10	10V
C506	NCB11AK-106X	CER.CAPACITOR	10	10V
C507	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C508	NCB11AK-106X	CER.CAPACITOR	10	10V
C509	NCB11AK-225X	CER.CAPACITOR	2.2	10V
C510	NCB31HK-682X	CER.CAPACITOR	6800p	50V
C511	NCB11CK-105X	CER.CAPACITOR	1	16V
C512	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C513	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C514	NCB11AK-106X	CER.CAPACITOR	10	10V
C515	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C516	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C517	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C518	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C519	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C520	NCB11CK-105X	CER.CAPACITOR	1	16V
C521	NCB11CK-105X	CER.CAPACITOR	1	16V
C522	NCB11CK-105X	CER.CAPACITOR	1	16V
C523	NCB11CK-105X	CER.CAPACITOR	1	16V
C524	NCB11CK-105X	CER.CAPACITOR	1	16V
C525	NCB11CK-475X	CER.CAPACITOR	4.7	16V
C526	NCB11CK-105X	CER.CAPACITOR	1	16V
C527	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C528	NCB11CK-105X	CER.CAPACITOR	1	16V
C529	NCB11CK-105X	CER.CAPACITOR	1	16V
C530	NCB11CK-105X	CER.CAPACITOR	1	16V
C531	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C532	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C533	NCB11AK-106X	CER.CAPACITOR	10	10V
C534	NCJ10JM-476X-A	CER.CAPACITOR	47	6.3V
C535	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C536	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C537	NCB11AK-106X	CER.CAPACITOR	10	10V
C538	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C539	NCB11AK-225X	CER.CAPACITOR	2.2	10V
C540	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C541	NCB30JK-474X	CER.CAPACITOR	0.47	6.3V
C600	NBSHOJM-337X	TAN.CAPACITOR	330	6.3V
C601	NCB11EK-105X	CER.CAPACITOR	1	25V
C602	NBSHOJM-337X	TAN.CAPACITOR	330	6.3V
C603	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C801	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C987	NCB31CK-104X	CER.CAPACITOR	0.1	16V

Symbol No.	Part No.	Part Name	Description
C988	NCB31CK-104X	CER.CAPACITOR	0.1 16V
L37	NQLA3GK-101X	COIL	100uH
L38	NQLA3GK-101X	COIL	100uH
L39	NQL904J-680X	COIL	68uH
L40	NQL904J-220X	COIL	22uH
X3	NAX0723-001X	CRYSTAL	8.5MHz
X4	NAX0564-001X	CRYSTAL	32.768kHz
CN4	QGA1002F1-03X	CONNECTOR	3PIN
CN7	QGB0502L1-40X	CONNECTOR	40PIN
CN9	QGA1002F1-05X	CONNECTOR	5PIN
CN10	QGF0508F1-24X	CONNECTOR	24PIN
CN11	QGA1002F1-06X	CONNECTOR	6PIN
CN12	QGA1002F1-07X	CONNECTOR	7PIN
CN13	QGF0508F1-15X	CONNECTOR	15PIN
CN14	QGF0508F1-50X	CONNECTOR	50PIN
CN21	QGF0534F1-20X	CONNECTOR	20PIN (U)
	QGF0508F1-20X	CONNECTOR	20PIN (E)
CN22	QGA1002F1-12X	CONNECTOR	12PIN
CN23	QGA1002F1-08X	CONNECTOR	8PIN
CN24	QGF0508F1-50X	CONNECTOR	50PIN
CN34	QGF0508F1-10X	CONNECTOR	10PIN
CN48	QGF0508F1-10X	CONNECTOR	10PIN
CN49	QGB0805M5-E0	CONNECTOR	140PIN
CN51	NNZ0133-001X	CONNECTOR	
CN52	NNZ0133-001X	CONNECTOR	
CN90	QGA1002F1-02X	CONNECTOR	
BT1	QAB0020-001	LI BATTERY	
K13	NQR0269-004X	FERRITE BEADS	
K15	NQR0269-004X	FERRITE BEADS	
K16	NQR0269-004X	FERRITE BEADS	
K20	NQR0351-002X	FERRITE BEADS	
K21	NQR0265-003X	FERRITE BEADS	
K22	NQR0265-003X	FERRITE BEADS	
K23	NQR0265-001X	FERRITE BEADS	
K24	NQR0265-001X	FERRITE BEADS	
K25	NQR0265-001X	FERRITE BEADS	
K26	NQR0265-001X	FERRITE BEADS	
K27	NQR0265-001X	FERRITE BEADS	

Symbol No.	Part No.	Part Name	Description
IC58	PLSC1590	I.C.(M)	HD64F2368VTE34V
IC59	TC7W34FU-X	I.C.(M)	TOSHIBA
IC60	TC7W74FU-X	I.C.(M)	TOSHIBA
IC61	M95320-WMN6P-X	I.C.(M)	MITSUBISHI
IC62	MM1573AN-X	I.C.(M)	MITSUMI
IC63	RS5C314-X	I.C.(M)	RICOH
IC64	R3112N261A-X	I.C.(M)	RICOH
IC65	LC4064V75T100C1	I.C.(M)	LATTICE
IC66	LC4128V75T100C2	I.C.(M)	LATTICE
IC67	SN74AHC1G14DC-X	I.C.(M)	TEXAS
IC68	SN74AHC1G14DC-X	I.C.(M)	TEXAS
IC96	XC2C2567VQG100C	I.C.(M)	XILINX
IC97	S29AL016D70TF11	I.C.(M)	SPANSION
IC98	TC7W34FU-X	I.C.(M)	TOSHIBA
IC99	CXM3004R	I.C.(M)	SONY
IC100	AK5357VT-X	I.C.(M)	ASAHI KASEI
IC101	AK4384VT-X	I.C.(M)	ASAHI KASEI
IC109	NJM78L12UA-X	I.C.(M)	JRC
Q1	DTC124EUA-X	TRANSISTOR	ROHM
Q2	DTC124EUA-X	TRANSISTOR	ROHM
Q11	DTA124EUA-X	TRANSISTOR	ROHM
Q12	DTC124EUA-X	TRANSISTOR	ROHM
Q13	DTA124EUA-X	TRANSISTOR	ROHM
Q14	SSM3K15FS-X	TRANSISTOR	TOSHIBA
Q16	DTC124EUA-X	TRANSISTOR	ROHM
Q17	DTC124EUA-X	TRANSISTOR	ROHM
Q20	DTC124EUA-X	TRANSISTOR	ROHM
Q21	2SC4626J/BC-X	TRANSISTOR	MATSUSHITA
Q22	DTA124EUA-X	TRANSISTOR	ROHM
Q24	DTC124EUA-X	TRANSISTOR	ROHM
Q29	DTC124EUA-X	TRANSISTOR	ROHM
Q30	DTC124EUA-X	TRANSISTOR	ROHM
Q31	2SA1790J/BC-X	TRANSISTOR	MATSUSHITA
Q32	DTC124EUA-X	TRANSISTOR	ROHM
Q33	2SC4626J/BC-X	TRANSISTOR	MATSUSHITA
Q34	2SA1790J/BC-X	TRANSISTOR	MATSUSHITA
Q35	2SC4626J/BC-X	TRANSISTOR	MATSUSHITA
Q36	2SA1790J/BC-X	TRANSISTOR	MATSUSHITA
Q37	DTC124EUA-X	TRANSISTOR	ROHM
Q500	DTC124EUA-X	TRANSISTOR	ROHM
Q913	DTA124EUA-X	TRANSISTOR	ROHM
Q914	DTA124EUA-X	TRANSISTOR	ROHM
D1	SML-020MVT-W	L.E.D.	ROHM
D18	HZM3.9NB2-X	ZENER DIODE	HITACHI
D19	MA741WK-X	DIODE	MATSUSHITA
D20	MA741WK-X	DIODE	MATSUSHITA
D36	SML-020MVT-W	L.E.D.	ROHM
D46	HZM3.0NB1-X	ZENER DIODE	HITACHI
D47	HZM3.9NB2-X	ZENER DIODE	HITACHI
R4	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R5	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R6	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R7	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R8	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R369	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R370	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R371	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R372	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R373	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R375	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R377	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R378	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R379	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R381	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R382	NRSA63J-683X	M.G.RESISTOR	68k 1/16W
R383	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R384	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R385	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R387	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W

Symbol No.	Part No.	Part Name	Description	
R952	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R953	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R954	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R955	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R956	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R957	NRSA63J-331X	M.G.RESISTOR	330	1/16W
R958	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R959	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R960	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R961	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R963	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R965	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R966	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R967	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R971	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R972	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R973	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R974	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R975	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R976	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R977	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R981	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R982	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R983	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R984	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R985	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R986	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R987	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R988	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R989	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R990	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R991	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R992	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R993	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R994	NRSA63J-100X	M.G.RESISTOR	10	1/16W
R995	NRSA63J-100X	M.G.RESISTOR	10	1/16W
R996	NRSA63J-100X	M.G.RESISTOR	10	1/16W
R997	NRSA63J-100X	M.G.RESISTOR	10	1/16W
R998	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R999	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R1000	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R1001	NRSA63J-100X	M.G.RESISTOR	10	1/16W
R1002	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R1003	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R1005	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1006	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1007	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1008	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1010	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R1015	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R1016	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R1017	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R1018	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R1019	NRSA63J-510X	M.G.RESISTOR	51	1/16W
R1020	NRSA63J-510X	M.G.RESISTOR	51	1/16W
R1021	NRSA63J-510X	M.G.RESISTOR	51	1/16W
R1022	NRSA63J-510X	M.G.RESISTOR	51	1/16W
R1023	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1024	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1025	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1026	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1027	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1028	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1029	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1030	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R1117	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R1134	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R1135	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R1136	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R1137	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R1138	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R1139	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R2000	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W

Symbol No.	Part No.	Part Name	Description	
R2001	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2002	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R2003	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R2011	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2012	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2013	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2014	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2016	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2020	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2024	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2025	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2026	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R2029	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2030	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2031	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R2032	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
RA33	NRZ0015-473X	M.G.RESISTOR	47k	
RA34	NRZ0015-473X	M.G.RESISTOR	47k	
RA35	NRZ0015-473X	M.G.RESISTOR	47k	
RA39	NRZ0015-473X	M.G.RESISTOR	47k	
RA40	NRZ0015-473X	M.G.RESISTOR	47k	
RA41	NRZ0015-473X	M.G.RESISTOR	47k	
RA42	NRZ0015-473X	M.G.RESISTOR	47k	
RA43	NRZ0015-473X	M.G.RESISTOR	47k	
RA46	NRZ0015-473X	M.G.RESISTOR	47k	
RA47	NRZ0015-473X	M.G.RESISTOR	47k	
RA48	NRZ0015-473X	M.G.RESISTOR	47k	
RA49	NRZ0015-473X	M.G.RESISTOR	47k	
RA50	NRZ0015-473X	M.G.RESISTOR	47k	
RA51	NRZ0015-473X	M.G.RESISTOR	47k	
RA52	NRZ0015-473X	M.G.RESISTOR	47k	
RA53	NRZ0015-473X	M.G.RESISTOR	47k	
RA54	NRZ0015-473X	M.G.RESISTOR	47k	
RA55	NRZ0015-473X	M.G.RESISTOR	47k	
RA56	NRZ0015-473X	M.G.RESISTOR	47k	
RA57	NRZ0015-473X	M.G.RESISTOR	47k	
RA58	NRZ0015-473X	M.G.RESISTOR	47k	
RA59	NRZ0015-473X	M.G.RESISTOR	47k	
RA60	NRZ0015-473X	M.G.RESISTOR	47k	
C1	NCB11AK-106X	CER.CAPACITOR	10	10V
C200	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C201	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C259	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C262	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C263	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C264	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C265	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C266	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C267	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C268	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C269	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C270	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C271	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C272	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C273	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C274	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C275	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C276	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C277	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C278	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C279	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C281	NCB11CK-105X	CER.CAPACITOR	1	16V
C282	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C283	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C284	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C285	NCB30JK-105X	CER.CAPACITOR	1	6.3V
C286	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C287	NCB31HK-682X	CER.CAPACITOR	6800p	50V
C288	NCB31CK-104X	CER.CAPACITOR	0.1	16V

Symbol No.	Part No.	Part Name	Description
C289	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C290	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C291	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C292	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C293	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C294	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C296	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C297	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C298	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C299	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C300	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C301	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C303	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C304	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C492	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C493	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C494	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C495	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C496	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C497	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C498	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C499	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C500	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C501	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C502	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C503	NCB11AK-106X	CER.CAPACITOR	10 10V
C504	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C505	NCB11AK-106X	CER.CAPACITOR	10 10V
C506	NCB11AK-106X	CER.CAPACITOR	10 10V
C507	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C508	NCB11AK-106X	CER.CAPACITOR	10 10V
C509	NCB11AK-225X	CER.CAPACITOR	2.2 10V
C510	NCB31HK-682X	CER.CAPACITOR	6800p 50V
C511	NCB11CK-105X	CER.CAPACITOR	1 16V
C512	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C513	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C514	NCB11AK-106X	CER.CAPACITOR	10 10V
C515	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C516	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C517	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C518	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C519	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C520	NCB11CK-105X	CER.CAPACITOR	1 16V
C521	NCB11CK-105X	CER.CAPACITOR	1 16V
C522	NCB11CK-105X	CER.CAPACITOR	1 16V
C523	NCB11CK-105X	CER.CAPACITOR	1 16V
C524	NCB11CK-105X	CER.CAPACITOR	1 16V
C525	NCB11CK-475X	CER.CAPACITOR	4.7 16V
C526	NCB11CK-105X	CER.CAPACITOR	1 16V
C527	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C528	NCB11CK-105X	CER.CAPACITOR	1 16V
C529	NCB11CK-105X	CER.CAPACITOR	1 16V
C530	NCB11CK-105X	CER.CAPACITOR	1 16V
C531	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C532	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C533	NCB11AK-106X	CER.CAPACITOR	10 10V
C534	NCJ10JM-476X-A	CER.CAPACITOR	47 6.3V
C535	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C536	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C537	NCB11AK-106X	CER.CAPACITOR	10 10V
C538	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C539	NCB11AK-225X	CER.CAPACITOR	2.2 10V
C540	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C541	NCB30JK-474X	CER.CAPACITOR	0.47 6.3V
C600	NBSH0JM-337X	TAN.CAPACITOR	330 6.3V
C601	NCB11EK-105X	CER.CAPACITOR	1 25V
C602	NBSH0JM-337X	TAN.CAPACITOR	330 6.3V
C603	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C801	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C987	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C988	NCB31CK-104X	CER.CAPACITOR	0.1 16V

Symbol No.	Part No.	Part Name	Description
L37	NQLA3GK-101X	COIL	100uH
L38	NQLA3GK-101X	COIL	100uH
L39	NQL904J-680X	COIL	68uH
L40	NQL904J-220X	COIL	22uH
X3	NAX0723-001X	CRYSTAL	8.5MHz
X4	NAX0564-001X	CRYSTAL	32.768kHz
CN4	QGA1002F1-03X	CONNECTOR	3PIN
CN7	QGB0502L1-40X	CONNECTOR	40PIN
CN9	QGA1002F1-05X	CONNECTOR	5PIN
CN10	QGF0508F1-24X	CONNECTOR	24PIN
CN11	QGA1002F1-06X	CONNECTOR	6PIN
CN12	QGA1002F1-07X	CONNECTOR	7PIN
CN13	QGF0508F1-15X	CONNECTOR	15PIN
CN14	QGF0508F1-50X	CONNECTOR	50PIN
CN21	QGF0508F1-20X	CONNECTOR	20PIN
CN22	QGA1002F1-12X	CONNECTOR	12PIN
CN23	QGA1002F1-08X	CONNECTOR	8PIN
CN24	QGF0508F1-50X	CONNECTOR	50PIN
CN34	QGF0508F1-10X	CONNECTOR	10PIN
CN48	QGF0508F1-10X	CONNECTOR	10PIN
CN49	QGB0805M5-E0	CONNECTOR	140PIN
CN51	NNZ0133-001X	CONNECTOR	
CN52	NNZ0133-001X	CONNECTOR	
CN90	QGA1002F1-02X	CONNECTOR	
BT1	QAB0020-001	LI BATTERY	
K13	NQR0269-004X	FERRITE BEADS	
K15	NQR0269-004X	FERRITE BEADS	
K16	NQR0269-004X	FERRITE BEADS	
K20	NQR0351-002X	FERRITE BEADS	
K21	NQR0265-003X	FERRITE BEADS	
K22	NQR0265-003X	FERRITE BEADS	
K23	NQR0265-001X	FERRITE BEADS	
K24	NQR0265-001X	FERRITE BEADS	
K25	NQR0265-001X	FERRITE BEADS	
K26	NQR0265-001X	FERRITE BEADS	
K27	NQR0265-001X	FERRITE BEADS	

6.7 PS BOARD ASSEMBLY PARTS LIST 2 1

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Symbol No.	Part No.	Part Name	Description
IC1	TA75S393F-W	I.C.(M)	TOSHIBA
IC2	MM1573DN-X	I.C.(M)	MITSUMI
IC3	TC74HC4538AFT-X	I.C.(M)	TOSHIBA
IC4	TC7S00F-X	I.C.(M)	TOSHIBA
IC5	LTC3728LXCUH-X	I.C.(M)	LINEAR
IC6	BD9730KV-X	I.C.(M)	ROHM
IC7	TK72100CSC-X	I.C.(M)	TOKO DENSHI
IC8	TA75S01F-W	I.C.(M)	TOSHIBA
Q1	FDS6575-X	TRANSISTOR	FAIR CHILD
Q2	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q3	DTC144EUA-X	TRANSISTOR	ROHM
Q4	2SA1576A/QRS/-X	TRANSISTOR	ROHM
Q5	DTC144EUA-X	TRANSISTOR	ROHM
Q6	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q7	2SA1576A/QRS/-X	TRANSISTOR	ROHM
Q8	DTC144EUA-X	TRANSISTOR	ROHM
Q10	DTC144EUA-X	TRANSISTOR	ROHM
Q11	SP8K1-X	TRANSISTOR	ROHM
Q12	SP8K1-X	TRANSISTOR	ROHM
Q13	RTQ035N03-W	TRANSISTOR	MITSUBISHI
Q14	RSQ035P03-W	TRANSISTOR	ROHM
Q15	RSQ035P03-W	TRANSISTOR	ROHM
Q16	RSQ035P03-W	TRANSISTOR	ROHM
Q17	RSQ035P03-W	TRANSISTOR	ROHM
Q18	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q19	2SB1189/PQR/-W	TRANSISTOR	ROHM
Q20	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q21	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q22	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q23	SP8K4-X	TRANSISTOR	ROHM
Q25	DTC144EUA-X	TRANSISTOR	ROHM
Q26	2SA1576A/QRS/-X	TRANSISTOR	ROHM
D1	RB051L-40-X	SB.DIODE	ROHM
D2	RB051L-40-X	SB.DIODE	ROHM
D3	HZU3CLL-X	ZENER DIODE	HITACHI
D4	HZM18NB2-X	ZENER DIODE	HITACHI
D5	MA8110/MJ-X	ZENER DIODE	MATSUSHITA
D6	1SS355-X	DIODE	ROHM
D7	1SS357-X	DIODE	TOSHIBA
D8	1SS357-X	DIODE	TOSHIBA
D9	RB160M-30-X	SB DIODE	ROHM
D10	MA736-X	DIODE	MATSUSHITA
D11	RB160M-30-X	SB DIODE	ROHM
D12	1SS306-W	DIODE	TOSHIBA
D13	RB160M-30-X	SB DIODE	ROHM
D14	RB160M-30-X	SB DIODE	ROHM
D15	RB160M-30-X	SB DIODE	ROHM
D16	RB160M-30-X	SB DIODE	ROHM
D17	RB160M-30-X	SB DIODE	ROHM
D18	RB160M-30-X	SB DIODE	ROHM
D19	RB160M-30-X	SB DIODE	ROHM
D20	1SS355-X	DIODE	ROHM
D21	1SS355-X	DIODE	ROHM
R1	NRSA63J-182X	M.G.RESISTOR	1.8k 1/16W
R2	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R3	NRSA63D-304X	M.G.RESISTOR	300k 1/16W
R4	NRSA63D-474X	M.G.RESISTOR	470k 1/16W
R5	NRSA63D-105X	M.G.RESISTOR	1M 1/16W
R6	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R7	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R8	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R9	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R10	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R11	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R12	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R13	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R14	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R16	NRSA63D-474X	M.G.RESISTOR	470k 1/16W
R17	NRSA63J-473X	M.G.RESISTOR	47k 1/16W

Symbol No.	Part No.	Part Name	Description
R18	NRSA63D-474X	M.G.RESISTOR	470k 1/16W
R19	NRSA63D-473X	M.G.RESISTOR	47k 1/16W
R20	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R21	NRSA63D-473X	M.G.RESISTOR	47k 1/16W
R22	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R23	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R24	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R25	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R26	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R27	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R28	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R29	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R30	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R31	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R32	NRSA63D-912X	M.G.RESISTOR	9.1k 1/16W
R33	NRSA63D-563X	M.G.RESISTOR	56k 1/16W
R34	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R35	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R37	NRZ0070-R033X	CHIP RESISTOR	R03k
R38	NRZ0070-R033X	CHIP RESISTOR	R03k
R39	NRZ0070-R022X	M.G.RESISTOR	R0.2k
R40	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R41	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R42	NRSA63D-154X	M.G.RESISTOR	150k 1/16W
R43	NRSA63D-683X	M.G.RESISTOR	68k 1/16W
R44	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R45	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R46	NRSA63J-562X	M.G.RESISTOR	5.6k 1/16W
R47	NRSA63D-202X	M.G.RESISTOR	2k 1/16W
R48	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R49	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R50	NRSA63D-274X	M.G.RESISTOR	270k 1/16W
R51	NRSA63D-473X	M.G.RESISTOR	47k 1/16W
R52	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R53	NRSA63D-124X	M.G.RESISTOR	120k 1/16W
R54	NRSA63J-222X	M.G.RESISTOR	2.2k 1/16W
R55	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R56	NRSA63D-682X	M.G.RESISTOR	6.8k 1/16W
R57	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R58	NRSA63D-122X	M.G.RESISTOR	1.2k 1/16W
R59	NRSA63J-222X	M.G.RESISTOR	2.2k 1/16W
R60	NRSA63D-123X	M.G.RESISTOR	12k 1/16W
R61	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R62	NRSA63D-152X	M.G.RESISTOR	1.5k 1/16W
R63	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R64	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R65	NRSA63D-394X	M.G.RESISTOR	390k 1/16W
R66	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R67	NRSA63D-184X	M.G.RESISTOR	180k 1/16W
R68	NRSA63D-154X	M.G.RESISTOR	150k 1/16W
R69	NRSA63D-683X	M.G.RESISTOR	68k 1/16W
R70	NRSA63D-204X	M.G.RESISTOR	200k 1/16W
R71	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R72	NRSA63D-122X	M.G.RESISTOR	1.2k 1/16W
R73	NRSA63J-562X	M.G.RESISTOR	5.6k 1/16W
R74	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R75	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R76	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R78	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R79	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R80	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R81	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R82	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R83	NRSA63J-562X	M.G.RESISTOR	5.6k 1/16W
R84	NRSA63D-473X	M.G.RESISTOR	47k 1/16W
R85	NRSA63D-154X	M.G.RESISTOR	150k 1/16W
R86	NRSA63D-393X	M.G.RESISTOR	39k 1/16W
R87	NRSA63D-563X	M.G.RESISTOR	56k 1/16W
R88	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R89	NRSA63J-274X	M.G.RESISTOR	270k 1/16W
R90	NRSA63D-202X	M.G.RESISTOR	2k 1/16W
R91	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R92	NRSA63J-123X	M.G.RESISTOR	12k 1/16W

Symbol No.	Part No.	Part Name	Description	
R93	NRSA63J-334X	M.G.RESISTOR	330k	1/16W
R94	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R95	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R96	NRSA63J-271X	M.G.RESISTOR	270	1/16W
R98	NRSA63J-681X	M.G.RESISTOR	680	1/16W
R99	NRSA63D-683X	M.G.RESISTOR	68k	1/16W
R100	NRSA63D-204X	M.G.RESISTOR	200k	1/16W
R101	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R102	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R103	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R104	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R105	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R107	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R108	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R109	NRSA63J-334X	M.G.RESISTOR	330k	1/16W
R110	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R111	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
C1	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C2	NCB31AK-105X	CER.CAPACITOR	1	10V
C3	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C4	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C5	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C6	NCB31AK-105X	CER.CAPACITOR	1	10V
C8	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C9	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C10	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C11	NCB31AK-154X	CER.CAPACITOR	0.15	10V
C12	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C13	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C14	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C15	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C16	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C17	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C18	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C19	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C20	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C22	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C23	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C24	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C25	NCB11AK-475X	CER.CAPACITOR	4.7	10V
C26	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C27	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C28	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C29	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C31	NBZ0010-396X	TAN.CAPACITOR	39	6.3V
C32	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C33	NBS40JM-686X	TAN.CAPACITOR	68	6.3V
C34	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C35	NBJG0JM-107X	TAN.CAPACITOR	100	6.3V
C36	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C37	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C38	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C39	NDC31HJ-391X	CER.CAPACITOR	390p	50V
C40	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C41	NDC31HJ-391X	CER.CAPACITOR	390p	50V
C42	NDC31HG-331X	CER.CAPACITOR	330p	50V
C43	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C44	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C45	NBE21CM-475X	TAN.CAPACITOR	4.7	16V
C46	NBE21AM-106X	TAN.CAPACITOR	10	10V
C47	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C48	NDC31HJ-680X	CER.CAPACITOR	68p	50V
C49	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C50	NDC31HJ-5R0X	CER.CAPACITOR	5p	50V
C51	NCB11EK-105X	CER.CAPACITOR	1	25V
C52	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C53	NCB11EK-105X	CER.CAPACITOR	1	25V
C54	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C55	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C56	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C57	NCB11EK-105X	CER.CAPACITOR	1	25V

Symbol No.	Part No.	Part Name	Description	
C58	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C59	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C60	NCB31AK-105X	CER.CAPACITOR	1	10V
C61	NCB11EK-105X	CER.CAPACITOR	1	25V
C62	NCB41HK-105X	CER.CAPACITOR	1	50V
C63	NCB41HK-105X	CER.CAPACITOR	1	50V
C64	NCB11HK-224X	CER.CAPACITOR	0.22	50V
C65	NCB11HK-224X	CER.CAPACITOR	0.22	50V
C66	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C67	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C68	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C69	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C70	NCJ11EK-106X-R	CER.CAPACITOR	10	25V
C71	NCB11EK-105X	CER.CAPACITOR	1	25V
C72	NCB11AK-475X	CER.CAPACITOR	4.7	10V
C73	NCB11EK-105X	CER.CAPACITOR	1	25V
C74	NCB11AK-475X	CER.CAPACITOR	4.7	10V
C75	NRSA63J-0R0X	M.G.RESISTOR	0p	
C76	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C77	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C78	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C79	NCB31AK-105X	CER.CAPACITOR	1	10V
C80	NCB31AK-105X	CER.CAPACITOR	1	10V
C81	NCB31CK-104X	CER.CAPACITOR	0.1	16V
L1	NQLC2EM-1R0X	COIL	1uH	
L2	NQLC2EM-3R3X	COIL	3.3uH	
L3	NQL52EM-6R8X	COIL	6.8uH	
L4	NQL89EM-100X	COIL	10uH	
L5	NQL89EM-220X	COIL	22uH	
L6	NQL114K-220X	COIL	22uH	
L7	NQL114K-220X	COIL	22uH	
L8	NQL89EM-100X	COIL	10uH	
L9	NQL89EM-100X	COIL	10uH	
L11	NQL114K-220X	COIL	22uH	
△TH1	NAD0039-002X	THERMISTOR		
△TH2	NAD0039-001X	THERMISTOR		
△F1	NMFZ020-3R15X-S	FUSE	3.15A	
CN1	QGA1201C2-03X	CONNECTOR	3PIN	
CN29	QGA1201F2-11X	CONNECTOR	11PIN	
CN30	QGF0534F1-20X	CONNECTOR	20PIN	
CN53	QGA1201C2-04X	CONNECTOR	4PIN	
CN75	QGA1002C1-07X	CONNECTOR	7PIN	
T1	NQR0580-001X	D/D CON TRANS		
T2	NQR0581-001X	D/D CON TRANS		
K1	NQR0351-001X	FERRITE BEADS		
K2	NQR0351-001X	FERRITE BEADS		
K3	NQR0448-001X	FERRITE BEADS		
K4	NQR0448-001X	FERRITE BEADS		
K5	NQR0448-001X	FERRITE BEADS		
K6	NQR0448-001X	FERRITE BEADS		
K7	NQR0448-001X	FERRITE BEADS		
K8	NQR0448-001X	FERRITE BEADS		
K9	NQR0448-001X	FERRITE BEADS		
K10	NQR0448-001X	FERRITE BEADS		
K11	NQR0448-001X	FERRITE BEADS		
K12	NQR0448-001X	FERRITE BEADS		
K13	NQR0448-001X	FERRITE BEADS		
K14	NQR0448-001X	FERRITE BEADS		
K15	NQR0265-003X	FERRITE BEADS		
K16	NQR0448-001X	FERRITE BEADS		
K17	NQR0265-003X	FERRITE BEADS		
VA1	NAF0008-171X	VARIATOR		

6.8 AUDIO BOARD ASSEMBLY PARTS LIST 3 0

CK279400A1

3 0

Symbol No.	Part No.	Part Name	Description
IC201	BA3314F-X	I.C.(M)	ROHM
IC202	BA3314F-X	I.C.(M)	ROHM
IC203	TC4053BFT-X	I.C.(M)	TOSHIBA
IC204	NJM2068V-X	I.C.(M)	JRC
IC205	TC4053BFT-X	I.C.(M)	TOSHIBA
IC206	NJM2068V-X	I.C.(M)	JRC
IC207	NJM2068V-X	I.C.(M)	JRC
IC208	NJM2068V-X	I.C.(M)	JRC
IC209	BA6138F-X	I.C.(M)	ROHM
IC210	TC4W53FU-X	I.C.(M)	TOSHIBA
IC211	NJM2777V-X	I.C.(M)	JRC
IC212	NJM78L05UA-X	I.C.(M)	JRC
Q201	DTC144EUA-X	TRANSISTOR	ROHM
Q202	DTC144EUA-X	TRANSISTOR	ROHM
Q203	DTC144EUA-X	TRANSISTOR	ROHM
Q204	DTC144EUA-X	TRANSISTOR	ROHM
Q205	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q206	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q207	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q208	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q209	DTC144EUA-X	TRANSISTOR	ROHM
Q210	DTC144EUA-X	TRANSISTOR	ROHM
Q211	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q212	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q213	DTC144EUA-X	TRANSISTOR	ROHM
Q214	DTC144EUA-X	TRANSISTOR	ROHM
Q215	2SA1790J/BC/-X	TRANSISTOR	MATSUSHITA
Q216	DTA114EUA-X	TRANSISTOR	ROHM
Q217	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q218	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q219	DTA114EUA-X	TRANSISTOR	ROHM
D205	MA143A-X	DIODE	MATSUSHITA
D206	MA142WK-X	DIODE	MATSUSHITA
D209	MA142WK-X	DIODE	MATSUSHITA
R201	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R202	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R203	NRSA63J-392X	M.G.RESISTOR	3.9k 1/16W
R204	NRSA63J-392X	M.G.RESISTOR	3.9k 1/16W
R205	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R206	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R207	NRSA63J-562X	M.G.RESISTOR	5.6k 1/16W
R208	NRSA63J-562X	M.G.RESISTOR	5.6k 1/16W
R211	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R212	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R213	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R214	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R215	NRSA63J-105X	M.G.RESISTOR	1M 1/16W
R216	NRSA63J-105X	M.G.RESISTOR	1M 1/16W
R217	NRSA63J-153X	M.G.RESISTOR	15k 1/16W
R218	NRSA63J-153X	M.G.RESISTOR	15k 1/16W
R219	NRSA63J-152X	M.G.RESISTOR	1.5k 1/16W
R220	NRSA63J-152X	M.G.RESISTOR	1.5k 1/16W
R221	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R222	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R223	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R224	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R225	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R226	NRSA63J-113X	M.G.RESISTOR	11k 1/16W
R227	NRSA63J-113X	M.G.RESISTOR	11k 1/16W
R228	NRSA63J-913X	M.G.RESISTOR	91k 1/16W
R229	NRSA63J-913X	M.G.RESISTOR	91k 1/16W
R230	NRSA63J-912X	M.G.RESISTOR	9.1k 1/16W
R231	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R232	NRSA63J-510X	M.G.RESISTOR	51 1/16W
R233	NRSA63J-510X	M.G.RESISTOR	51 1/16W
R234	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R235	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R236	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R237	NRSA63J-224X	M.G.RESISTOR	220k 1/16W

Symbol No.	Part No.	Part Name	Description
R238	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R242	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R243	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R244	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R245	NRSA63J-182X	M.G.RESISTOR	1.8k 1/16W
R246	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R247	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R248	NRSA63J-182X	M.G.RESISTOR	1.8k 1/16W
R249	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R250	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R251	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R252	NRSA63J-822X	M.G.RESISTOR	8.2k 1/16W
R253	NRSA63J-822X	M.G.RESISTOR	8.2k 1/16W
R254	NRSA63J-123X	M.G.RESISTOR	12k 1/16W
R255	NRSA63J-123X	M.G.RESISTOR	12k 1/16W
R256	NRSA63J-123X	M.G.RESISTOR	12k 1/16W
R257	NRSA63J-123X	M.G.RESISTOR	12k 1/16W
R258	NRSA63J-152X	M.G.RESISTOR	1.5k 1/16W
R259	NRSA63J-152X	M.G.RESISTOR	1.5k 1/16W
R260	NRSA63J-242X	M.G.RESISTOR	2.4k 1/16W
R261	NRSA63J-242X	M.G.RESISTOR	2.4k 1/16W
R262	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R263	NRSA63J-272X	M.G.RESISTOR	2.7k 1/16W
R264	NRSA63J-272X	M.G.RESISTOR	2.7k 1/16W
R265	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R266	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R267	NRSA63J-562X	M.G.RESISTOR	5.6k 1/16W
R268	NRSA63J-562X	M.G.RESISTOR	5.6k 1/16W
R269	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R270	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R271	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R272	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R273	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R274	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R275	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R276	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R277	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R278	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R279	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R280	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R281	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R282	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R283	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R284	NRSA63J-154X	M.G.RESISTOR	150k 1/16W
R285	NRSA63J-154X	M.G.RESISTOR	150k 1/16W
R286	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R287	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R288	NRSA63J-222X	M.G.RESISTOR	2.2k 1/16W
R289	NRSA63J-222X	M.G.RESISTOR	2.2k 1/16W
R290	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R291	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R292	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R293	NRSA63J-152X	M.G.RESISTOR	1.5k 1/16W
R294	NRSA63J-152X	M.G.RESISTOR	1.5k 1/16W
R295	NRSA63J-153X	M.G.RESISTOR	15k 1/16W
R296	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R297	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R298	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R299	NRSA63J-153X	M.G.RESISTOR	15k 1/16W
R300	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R301	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R302	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R303	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R304	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R305	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R306	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R307	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R308	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R309	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R310	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R312	NRSA63J-100X	M.G.RESISTOR	10 1/16W
R313	NRSA63J-100X	M.G.RESISTOR	10 1/16W
R314	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W

Symbol No.	Part No.	Part Name	Description	
R315	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R322	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R323	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R324	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R326	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R327	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R328	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R329	NRSA63J-563X	M.G.RESISTOR	56k	1/16W
R330	NRSA63J-563X	M.G.RESISTOR	56k	1/16W
R331	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R333	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R334	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R335	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R336	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R337	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R338	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
C203	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C204	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C205	NCB41CM-106X	CER.CAPACITOR	10	16V
C206	NCB41CM-106X	CER.CAPACITOR	10	16V
C207	NCB41CM-106X	CER.CAPACITOR	10	16V
C208	NCB41CM-106X	CER.CAPACITOR	10	16V
C209	NCB11CK-105X	CER.CAPACITOR	1	16V
C210	NCB11CK-105X	CER.CAPACITOR	1	16V
C211	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C212	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C213	NEHM1CM-106X	E.CAPACITOR	10	16V
C214	NEHM1CM-106X	E.CAPACITOR	10	16V
C216	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C217	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C218	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C219	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C220	NCB11CK-224X	CER.CAPACITOR	0.22	16V
C221	NCB11CK-224X	CER.CAPACITOR	0.22	16V
C222	NEHM0JM-476X	E.CAPACITOR	47	6.3V
C223	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C224	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C225	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C226	NEHM1HM-474X	E.CAPACITOR	0.47	50V
C227	NEHM1HM-474X	E.CAPACITOR	0.47	50V
C228	NEHM1CM-106X	E.CAPACITOR	10	16V
C229	NEHM1CM-106X	E.CAPACITOR	10	16V
C230	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C231	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C232	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C233	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C234	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C235	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C236	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C237	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C238	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C239	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C240	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C241	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C242	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C243	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C244	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C245	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C246	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C247	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C248	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C249	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C250	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C251	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C252	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C253	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C254	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C255	NEHM1HM-474X	E.CAPACITOR	0.47	50V
C256	NEHM1HM-474X	E.CAPACITOR	0.47	50V
C257	NEHM1CM-106X	E.CAPACITOR	10	16V
C258	NEHM1CM-106X	E.CAPACITOR	10	16V

Symbol No.	Part No.	Part Name	Description	
C259	NEHM1CM-106X	E.CAPACITOR	10	16V
C260	NEHM1CM-106X	E.CAPACITOR	10	16V
C261	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C262	NCB11CK-475X	CER.CAPACITOR	4.7	16V
C263	NCB11CK-475X	CER.CAPACITOR	4.7	16V
C264	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C265	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C266	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C269	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C270	NCB11CK-105X	CER.CAPACITOR	1	16V
C271	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C272	NCB11CK-105X	CER.CAPACITOR	1	16V
C273	NCB11CK-105X	CER.CAPACITOR	1	16V
C274	NCB11CK-105X	CER.CAPACITOR	1	16V
C275	NCB11CK-105X	CER.CAPACITOR	1	16V
C276	NCB11CK-105X	CER.CAPACITOR	1	16V
C277	NCB11CK-105X	CER.CAPACITOR	1	16V
C278	NEHM0JM-226X	E.CAPACITOR	22	6.3V
C279	NCB11CK-105X	CER.CAPACITOR	1	16V
C280	NEHM1CM-106X	E.CAPACITOR	10	16V
C281	NEHM1CM-106X	E.CAPACITOR	10	16V
C282	NEHM1CM-476X	E.CAPACITOR	47	16V
C283	NEHM1CM-476X	E.CAPACITOR	47	16V
C284	NEHM1CM-106X	E.CAPACITOR	10	16V
C286	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C287	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C288	NEHM1CM-226X	E.CAPACITOR	22	16V
C289	NEHM1CM-226X	E.CAPACITOR	22	16V
C290	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C291	NCB41CM-106X	CER.CAPACITOR	10	16V
C292	NEHM1CM-106X	E.CAPACITOR	10	16V
C293	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C294	NCB20JK-475X	CER.CAPACITOR	4.7	6.3V
C295	NCB20JK-475X	CER.CAPACITOR	4.7	6.3V
L201	NQL904J-100X	COIL	10uH	
L202	NQL904J-100X	COIL	10uH	
L203	NQL904J-100X	COIL	10uH	
S201	NSW0180-001X	DETECT SWITCH	LCD ON/OFF	
S202	NSW0070-001X	SLIDE SWITCH	A.SELECT CH1	
S203	NSW0070-001X	SLIDE SWITCH	A.SELECT CH2	
S204	NSW0070-001X	SLIDE SWITCH	DISPLAY	
S205	NSW0070-002X	SLIDE SWITCH	GENE.	
S206	NSW0010-001X	SWITCH	LCD BRIGHT -	
S207	NSW0010-001X	SWITCH	LCD BRIGHT +	
S208	NSW0010-001X	SWITCH	CAM/VTR	
CN14	QGF0508F1-50X	CONNECTOR	50PIN	
CN24	QGF0508F1-50X	CONNECTOR	50PIN	
CN43	QGA1002F1-09X	CONNECTOR	9PIN	
CN44	QGF0534F1-18X	CONNECTOR	18PIN	
CN45	QGF0534F1-18X	CONNECTOR	18PIN	
CN62	QGF0305F1-33X	CONNECTOR	3PIN	
K201	NQR0413-002X	FERRITE CORE		

6.9 LINSEL BOARD ASSEMBLY PARTS LIST 3 1

CK279400A2

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Symbol No.	Part No.	Part Name	Description
IC1	TC4053BFT-X	I.C.(M)	TOSHIBA
IC2	TC4053BFT-X	I.C.(M)	TOSHIBA
IC3	NJM2068V-X	I.C.(M)	JRC
IC4	NJM2068V-X	I.C.(M)	JRC
IC5	NJM2068V-X	I.C.(M)	JRC
IC6	TC4052BFT/N/-X	I.C.(M)	TOSHIBA
IC7	TC4052BFT/N/-X	I.C.(M)	TOSHIBA
IC8	NJM2068V-X	I.C.(M)	JRC
IC9	TC4052BFT/N/-X	I.C.(M)	TOSHIBA
IC10	TC4052BFT/N/-X	I.C.(M)	TOSHIBA
Q1	DTC144EUA-X	TRANSISTOR	ROHM
Q2	DTC144EUA-X	TRANSISTOR	ROHM
Q3	DTC144EUA-X	TRANSISTOR	ROHM
Q4	DTC144EUA-X	TRANSISTOR	ROHM
Q5	DTC144EUA-X	TRANSISTOR	ROHM
Q6	DTC144EUA-X	TRANSISTOR	ROHM
Q7	DTC144EUA-X	TRANSISTOR	ROHM
Q8	DTC144EUA-X	TRANSISTOR	ROHM
Q9	2SK1062-X	FET	TOSHIBA
Q10	2SK1062-X	FET	TOSHIBA
Q11	DTC124EUA-X	TRANSISTOR	ROHM
Q12	DTC124EUA-X	TRANSISTOR	ROHM
Q13	DTC124EUA-X	TRANSISTOR	ROHM
Q14	DTC124EUA-X	TRANSISTOR	ROHM
Q15	DTC124EUA-X	TRANSISTOR	ROHM
Q16	2SC3326/AB/-X	TRANSISTOR	TOSHIBA
Q17	2SB1463J/S/-X	TRANSISTOR	MATSUSHITA
Q18	2SB1463J/S/-X	TRANSISTOR	MATSUSHITA
Q19	2SD2240J/R/-X	TRANSISTOR	MATSUSHITA
Q20	DTA114EUA-X	TRANSISTOR	ROHM
D1	MA143A-X	DIODE	MATSUSHITA
D2	MA143A-X	DIODE	MATSUSHITA
D3	MA143A-X	DIODE	MATSUSHITA
D4	MA143A-X	DIODE	MATSUSHITA
R1	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R2	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R3	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R4	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R5	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R6	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R7	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R8	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R9	NRSA63D-113X	M.G.RESISTOR	11k 1/16W
R10	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R11	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R12	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R13	NRSA63D-113X	M.G.RESISTOR	11k 1/16W
R14	NRSA63D-113X	M.G.RESISTOR	11k 1/16W
R15	NRSA63D-113X	M.G.RESISTOR	11k 1/16W
R16	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R17	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R18	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R19	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R20	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R21	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R22	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R23	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R24	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R25	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R26	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R27	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R28	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R29	NRSA63J-331X	M.G.RESISTOR	330 1/16W
R30	NRSA63J-331X	M.G.RESISTOR	330 1/16W
R31	NRSA63J-221X	M.G.RESISTOR	220 1/16W
R32	NRSA63J-221X	M.G.RESISTOR	220 1/16W
R33	NRSA63J-221X	M.G.RESISTOR	220 1/16W
R34	NRSA63J-221X	M.G.RESISTOR	220 1/16W
R35	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R36	NRSA63J-104X	M.G.RESISTOR	100k 1/16W

Symbol No.	Part No.	Part Name	Description
R37	NRSA63J-274X	M.G.RESISTOR	270k 1/16W
R38	NRSA63J-274X	M.G.RESISTOR	270k 1/16W
R39	NRSA63J-274X	M.G.RESISTOR	270k 1/16W
R40	NRSA63J-274X	M.G.RESISTOR	270k 1/16W
R41	NRSA63J-274X	M.G.RESISTOR	270k 1/16W
R42	NRSA63J-274X	M.G.RESISTOR	270k 1/16W
R43	NRSA63D-682X	M.G.RESISTOR	6.8k 1/16W
R44	NRSA63D-682X	M.G.RESISTOR	6.8k 1/16W
R45	NRSA63D-682X	M.G.RESISTOR	6.8k 1/16W
R46	NRSA63D-682X	M.G.RESISTOR	6.8k 1/16W
R47	NRSA63D-243X	M.G.RESISTOR	24k 1/16W
R48	NRSA63D-243X	M.G.RESISTOR	24k 1/16W
R49	NRSA63D-243X	M.G.RESISTOR	24k 1/16W
R50	NRSA63D-243X	M.G.RESISTOR	24k 1/16W
R51	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R52	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R53	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R54	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R55	NRSA63D-361X	M.G.RESISTOR	360 1/16W
R56	NRSA63D-361X	M.G.RESISTOR	360 1/16W
R57	NRSA63D-361X	M.G.RESISTOR	360 1/16W
R58	NRSA63D-361X	M.G.RESISTOR	360 1/16W
R59	NRSA63J-272X	M.G.RESISTOR	2.7k 1/16W
R60	NRSA63J-272X	M.G.RESISTOR	2.7k 1/16W
R61	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R62	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R63	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R64	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R65	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R66	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R67	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R68	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R69	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R70	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R71	NRSA63J-432X	M.G.RESISTOR	4.3k 1/16W
R72	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R73	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R74	NRSA63J-224X	M.G.RESISTOR	220k 1/16W
R75	NRSA63J-105X	M.G.RESISTOR	1M 1/16W
R76	NRSA63J-105X	M.G.RESISTOR	1M 1/16W
R77	NRSA63J-912X	M.G.RESISTOR	9.1k 1/16W
R78	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R79	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R80	NRSA63J-153X	M.G.RESISTOR	15k 1/16W
R81	NRSA63J-153X	M.G.RESISTOR	15k 1/16W
R82	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R83	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R84	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R85	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R86	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
C1	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C2	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C3	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C5	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C6	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C7	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C8	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C9	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C10	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C12	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C13	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C14	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C15	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C16	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C17	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C18	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C19	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C20	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C21	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C22	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C23	NCB31CK-104X	CER.CAPACITOR	0.1 16V

6.10 SD BOARD ASSEMBLY PARTS LIST

CK279400A3

Symbol No.	Part No.	Part Name	Description
C24	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C25	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C26	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C27	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C28	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C29	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C30	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C31	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C32	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C33	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C34	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C35	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C36	NFVC1CJ-104X	FILM CAPACITOR	0.1 16V
C37	NFVC1CJ-104X	FILM CAPACITOR	0.1 16V
C38	NFVC1CJ-104X	FILM CAPACITOR	0.1 16V
C39	NFVC1CJ-104X	FILM CAPACITOR	0.1 16V
C40	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C41	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C42	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C43	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C44	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C45	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C46	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C47	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C48	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C49	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C50	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C51	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C52	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C53	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C54	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C55	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C56	NCB41CM-106X	CER.CAPACITOR	10 16V
C57	NCB41CM-106X	CER.CAPACITOR	10 16V
C58	NCB41CM-106X	CER.CAPACITOR	10 16V
C59	NCB41CM-106X	CER.CAPACITOR	10 16V
C60	NCB11HK-223X	CER.CAPACITOR	0.022 50V
C61	NCB11HK-223X	CER.CAPACITOR	0.022 50V
C62	NCB11HK-223X	CER.CAPACITOR	0.022 50V
C63	NCB31HK-222X	CER.CAPACITOR	2200p 50V
C64	NCB31HK-222X	CER.CAPACITOR	2200p 50V
C65	NCB41CM-106X	CER.CAPACITOR	10 16V
C66	NCB41CM-106X	CER.CAPACITOR	10 16V
C67	NELA1JM-475X	E.CAPACITOR	4.7 63V
L1	NQL904J-100X	COIL	10uH
L2	NQL904J-100X	COIL	10uH
S1	NSW0070-002X	SLIDE SWITCH	AUDIO INPUT 1
S2	NSW0070-002X	SLIDE SWITCH	AUDIO INPUT 2
S3	NSW0070-001X	SLIDE SWITCH	CH2 INPUT
CN13	QGF0508F1-15X	CONNECTOR	15PIN
CN41	QGF0534F1-13X	CONNECTOR	13PIN
CN42	QGF0508F1-06X	CONNECTOR	6PIN
CN43	QGA1002C1-09X	CONNECTOR	9PIN

Symbol No.	Part No.	Part Name	Description
Q1	DTA124EUA-X	TRANSISTOR	ROHM
Q2	DTA124EUA-X	TRANSISTOR	ROHM
R1	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R2	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R3	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R4	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R5	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R6	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R7	NRSA63J-223X	M.G.RESISTOR	22k 1/16W
R8	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R9	NRSA63J-220X	M.G.RESISTOR	22 1/16W
R10	NRSA63J-220X	M.G.RESISTOR	22 1/16W
R11	NRSA63J-220X	M.G.RESISTOR	22 1/16W
R12	NRSA63J-220X	M.G.RESISTOR	22 1/16W
C1	NCF31EZ-104X	CER.CAPACITOR	0.1 25V
C9	NBE21AM-106X	TAN.CAPACITOR	10 10V
J10	NNZ0135-001X	SD CARD CONNECTOR	
CN18	QGF0508F1-10X	CONNECTOR	10PIN
K1	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W

6.11 PRMDA BOARD ASSEMBLY PARTS LIST

CK279400A4

Symbol No.	Part No.	Part Name	Description
IC1	MM1572FN-X	I.C.(M)	MITSUMI
IC2	NJU7222U30-X	I.C.(M)	JRC
IC3	JCY0132	I.C.(M)	JVC
IC4	TC7SH00FU-X	I.C.(M)	TOSHIBA
IC6	BA6865KV	I.C.(M)	ROHM
Q4	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q41	2SB1302/ST/-X	TRANSISTOR	SANYO
Q42	2SB1302/ST/-X	TRANSISTOR	SANYO
Q43	2SB1302/ST/-X	TRANSISTOR	SANYO
Q101	2SC3735/4-5/A-X	TRANSISTOR	NEC
Q103	2SC3735/4-5/A-X	TRANSISTOR	NEC
Q104	2SC3735/4-5/A-X	TRANSISTOR	NEC
QA41	BA6254FS-X	TRANSIST.ARRAY	
D41	DAP222-X	DIODE	ROHM
R1	NRSA63J-393X	M.G.RESISTOR	39k 1/16W
R2	NRSA63J-203X	M.G.RESISTOR	20k 1/16W
R3	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R4	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R5	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R6	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R7	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R11	NRSA63J-105X	M.G.RESISTOR	1M 1/16W

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Symbol No.	Part No.	Part Name	Description	
R12	NRSA63J-124X	M.G.RESISTOR	120k	1/16W
R13	NRSA63J-681X	M.G.RESISTOR	680	1/16W
R14	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R15	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R16	NRSA63J-511X	M.G.RESISTOR	510	1/16W
R17	NRSA63J-511X	M.G.RESISTOR	510	1/16W
R18	NRSA63J-511X	M.G.RESISTOR	510	1/16W
R19	NRSA63J-511X	M.G.RESISTOR	510	1/16W
R20	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R31	NRSA63J-474X	M.G.RESISTOR	470k	1/16W
R32	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R33	NRSA63J-154X	M.G.RESISTOR	150k	1/16W
R34	NRSA63J-274X	M.G.RESISTOR	270k	1/16W
R37	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R38	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R39	NRSA63J-272X	M.G.RESISTOR	2.7k	1/16W
R42	NRS12BK-R68W	M.G.RESISTOR	0.68	1/2W
R43	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R44	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R45	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R46	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R47	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R48	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R50	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R51	NRSA63J-1R0X	M.G.RESISTOR	1	1/16W
R52	NRSA63J-1R0X	M.G.RESISTOR	1	1/16W
R53	NRSA63J-1R0X	M.G.RESISTOR	1	1/16W
R54	NRSA63J-1R0X	M.G.RESISTOR	1	1/16W
R62	NRSA63J-153X	M.G.RESISTOR	15k	1/16W
R101	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R102	NRSA63J-153X	M.G.RESISTOR	15k	1/16W
R103	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R104	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R105	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R106	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R107	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R108	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R113	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R114	NRSA63D-750X	M.G.RESISTOR	75	1/16W
R115	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R118	NRSA63J-560X	M.G.RESISTOR	56	1/16W
R125	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R126	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R127	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R128	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R129	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R130	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R131	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R132	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R133	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R141	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R142	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R143	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R144	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R145	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R146	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R147	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R151	NRSA63J-241X	M.G.RESISTOR	240	1/16W
R152	NRSA63J-241X	M.G.RESISTOR	240	1/16W
R153	NRSA63J-241X	M.G.RESISTOR	240	1/16W
R154	NRSA63J-241X	M.G.RESISTOR	240	1/16W
R161	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R162	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R173	NRSA63D-560X	M.G.RESISTOR	56	1/16W
R174	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R203	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R204	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
VR1	NVQ0006-B14X	VAL.RESISTOR	B10k	MODE SENS
C1	NCB31CK-104X	CER.CAPACITOR	0.1	16V

Symbol No.	Part No.	Part Name	Description	
C2	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C3	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C4	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C14	NBE21AM-106X	TAN.CAPACITOR	10	10V
C15	NBE41CM-106X	TAN.CAPACITOR	10	16V
C16	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C17	NCB31HK-152X	CER.CAPACITOR	1500p	50V
C18	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C19	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C20	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C21	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C22	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C23	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C24	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C31	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C32	NBE41CM-226X	TAN.CAPACITOR	22	16V
C33	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C34	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C35	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C36	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C37	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C39	NCB11CK-105X	CER.CAPACITOR	1	16V
C40	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C41	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C42	NCB31AK-224X	CER.CAPACITOR	0.22	10V
C43	NCB31AK-224X	CER.CAPACITOR	0.22	10V
C44	NCB31AK-224X	CER.CAPACITOR	0.22	10V
C45	NBE41EM-475X	TAN.CAPACITOR	4.7	25V
C46	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C47	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C48	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C49	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C50	NBE41CM-226X	TAN.CAPACITOR	22	16V
C51	NDC31HJ-102X	CER.CAPACITOR	1000p	50V
C52	NCB11CK-105X	CER.CAPACITOR	1	16V
C53	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C54	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C101	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C102	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C103	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C108	NDC31HJ-560X	CER.CAPACITOR	56p	50V
C109	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C110	NBE41CM-106X	TAN.CAPACITOR	10	16V
C111	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C112	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C131	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C132	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C133	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C134	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C135	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C136	NBE41CM-106X	TAN.CAPACITOR	10	16V
C137	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C138	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C140	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C141	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C142	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C143	NDC31HJ-102X	CER.CAPACITOR	1000p	50V
C145	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C146	NCB11CK-475X	CER.CAPACITOR	4.7	16V
C147	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C148	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C149	NCB11CK-475X	CER.CAPACITOR	4.7	16V
C161	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C162	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C163	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C164	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C165	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C166	NBE41CM-106X	TAN.CAPACITOR	10	16V
C167	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C168	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C171	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C172	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C174	NCB31CK-104X	CER.CAPACITOR	0.1	16V

6.12 VF DR BOARD ASSEMBLY PARTS LIST 3 4

CK279400A5

3 4

Symbol No.	Part No.	Part Name	Description
C175	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C176	NBE21AM-106X	TAN.CAPACITOR	10 10V
C177	NBE21AM-106X	TAN.CAPACITOR	10 10V
C178	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C179	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C201	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C202	NBE41CM-106X	TAN.CAPACITOR	10 16V
C203	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C204	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C205	NBE41CM-106X	TAN.CAPACITOR	10 16V
C206	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C207	NBE21AM-106X	TAN.CAPACITOR	10 10V
C208	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C209	NBE21AM-106X	TAN.CAPACITOR	10 10V
C210	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C211	NBE41CM-106X	TAN.CAPACITOR	10 16V
C212	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C213	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C214	NBE41CM-106X	TAN.CAPACITOR	10 16V
C215	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C216	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C217	NBE21AM-106X	TAN.CAPACITOR	10 10V
C218	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C219	NBE21AM-106X	TAN.CAPACITOR	10 10V
C220	NCB31CK-104X	CER.CAPACITOR	0.1 16V
L50	NQLA3GK-100X	COIL	10uH
L101	NQL904J-R47X	COIL	0.47uH
L102	NQL904J-R47X	COIL	0.47uH
L103	NQLA3GK-100X	COIL	10uH
L131	NQLA3GK-100X	COIL	10uH
L161	NQLA3GK-100X	COIL	10uH
L171	NQLA3GK-100X	COIL	10uH
L172	NQLA3GK-100X	COIL	10uH
L201	NQLA3GK-100X	COIL	10uH
L202	NQLA3GK-100X	COIL	10uH
LC201	NQR0436-001X	LC FILTER	
TH1	NAD0002-223X	THERMISTOR	22k
S1	NSW0255-001X	LEVER SWITCH	HOUSING SWITCH
CN1	NNZ0071-001X	CONNECTOR	
CN2	NNZ0071-001X	CONNECTOR	
CN3	NNZ0071-001X	CONNECTOR	
CN16	QGF0508F1-50X	CONNECTOR	50PIN
CN17	QGF0508F1-16X	CONNECTOR	16PIN
CN70	QGF0508F1-18X	CONNECTOR	18PIN
CN71	QGF0503F4-13X	CONNECTOR	13PIN
CN72	QGA1201F2-02X	CONNECTOR	2PIN
CN73	QGF0503F3-08X	CONNECTOR	8PIN
CN74	QGF0508F2-15X	CONNECTOR	15PIN
CN75	QGA1002F1-07X	CONNECTOR	7PIN
CN77	QGA1201F2-02X	CONNECTOR	2PIN
CN102	NNZ0133-001X	CONNECTOR	
CN104	NNZ0133-001X	CONNECTOR	
TP201	NNZ0009-001X	TEST POINT	PRA+3V
TP202	NNZ0009-001X	TEST POINT	PRD+3V
TP203	NNZ0009-001X	TEST POINT	+2.5V
K50	NQR0200-005X	COIL	
K171	NQR0265-001X	FERAITE BEADS	
K201	NQR0200-005X	COIL	

Symbol No.	Part No.	Part Name	Description
IC1	CXM3005TQ	I.C.(M)	SONY
IC2	TK11100CSC-X	I.C.(M)	TOKO DENSHI
Q1	2SD601A/QR-/X	TRANSISTOR	MATSUSHITA
Q2	2SD601A/QR-/X	TRANSISTOR	MATSUSHITA
Q3	DTA124EUA-X	TRANSISTOR	ROHM
Q4	DTC124EUA-X	TRANSISTOR	ROHM
D1	HZM5.6NB2-X	ZENER DIODE	HITACHI
R1	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R8	NRSA63D-433X	M.G.RESISTOR	43k 1/16W
R9	NRSA63D-433X	M.G.RESISTOR	43k 1/16W
R10	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R11	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R12	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R13	NRSA63J-100X	M.G.RESISTOR	10 1/16W
R14	NRSA63J-100X	M.G.RESISTOR	10 1/16W
R15	NRSA63J-100X	M.G.RESISTOR	10 1/16W
R17	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R18	NRSA63J-683X	M.G.RESISTOR	68k 1/16W
R19	NRSA63J-394X	M.G.RESISTOR	390k 1/16W
R20	NRSA63J-680X	M.G.RESISTOR	68 1/16W
R21	NRSA63J-561X	M.G.RESISTOR	560 1/16W
R23	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R51	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
C1	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C2	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C3	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C4	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C5	NCB11AK-106X	CER.CAPACITOR	10 10V
C6	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C7	NCB11AK-106X	CER.CAPACITOR	10 10V
C8	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C9	NCB10JM-335X	CER.CAPACITOR	3.3 6.3V
C10	NCB31HK-682X	CER.CAPACITOR	6800p 50V
C11	NCB11AK-106X	CER.CAPACITOR	10 10V
C12	NCB11CK-105X	CER.CAPACITOR	1 16V
C13	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C14	NCB30JK-225X	CER.CAPACITOR	2.2 6.3V
C15	NCB30JK-225X	CER.CAPACITOR	2.2 6.3V
C16	NCB30JK-225X	CER.CAPACITOR	2.2 6.3V
C17	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C18	NCB11AK-106X	CER.CAPACITOR	10 10V
C19	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C20	NCB11AK-106X	CER.CAPACITOR	10 10V
C21	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C22	NCB11CK-105X	CER.CAPACITOR	1 16V
C23	NCB11CK-105X	CER.CAPACITOR	1 16V
C24	NDC31HJ-101X	CER.CAPACITOR	100p 50V
C25	NCB11CK-105X	CER.CAPACITOR	1 16V
C26	NCB31HK-102X	CER.CAPACITOR	1000p 50V
C27	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C28	NCB31CK-104X	CER.CAPACITOR	0.1 16V
L1	NQLA3GK-101X	COIL	100uH
L2	NQLA3GK-101X	COIL	100uH
L3	NQLA3GK-101X	COIL	100uH
L4	NQLA3GK-101X	COIL	100uH
L5	NQLA3GK-101X	COIL	100uH
CN60	QGF0517F1-20X	CONNECTOR	20PIN
CN61	QGF0508F2-20X	CONNECTOR	20PIN
CN66	QGA1002F1-02X	CONNECTOR	2PIN
TP1	NNZ0009-001X	TEST POINT	LCD_G
TP2	NNZ0009-001X	TEST POINT	LCD_R
TP3	NNZ0009-001X	TEST POINT	LCD_B
TP4	NNZ0009-001X	TEST POINT	COM OUT

3 4 [VF DR]

Symbol No.	Part No.	Part Name	Description
TP5	NNZ0009-001X	TEST POINT	GND
K1	NQR0265-003X	FERRITE BEADS	
K2	NQR0265-003X	FERRITE BEADS	
K3	NQR0265-003X	FERRITE BEADS	
K4	NQR0265-003X	FERRITE BEADS	
K5	NQR0265-003X	FERRITE BEADS	
K6	NQR0265-003X	FERRITE BEADS	

6.15 VJK BOARD ASSEMBLY PARTS LIST 4 2

CK279800A2

4 2

Symbol No.	Part No.	Part Name	Description
R1	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R2	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R3	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R4	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R5	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
J2	QNN0722-001	PIN JACK	Y/VID,Pb,Pr OUT
CN34	QGF0508F1-10X	CONNECTOR	10PIN

6.13 MOS BOARD ASSEMBLY PARTS LIST 3 5

CK279400A6

3 5

Symbol No.	Part No.	Part Name	Description
Q1	DTC124EUA-X	TRANSISTOR	ROHM
Q2	DTC124EUA-X	TRANSISTOR	ROHM
D1	SML-020MVT-W	L.E.D.	ROHM
R1	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R2	NRSA63D-101X	M.G.RESISTOR	100 1/16W
C1	NCB31CK-104X	CER.CAPACITOR	0.1 16V
S1	NSW0010-001X	SWITCH	DISPLAY
S2	NSW0070-001X	SLIDE SWITCH	FULL AUTO
S3	NSW0070-002X	SLIDE SWITCH	MONITOR SELECT
CN44	QGF0534F1-18X	CONNECTOR	18PIN

6.16 DV OUT BOARD ASSEMBLY PARTS LIST 4 3

CK279800A3

4 3

Symbol No.	Part No.	Part Name	Description
R1	NRSA63J-105X	M.G.RESISTOR	1M 1/16W
R2	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R3	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R4	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R5	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
C1	NCZ1009-472X	CER.CAPACITOR	4700p
J1	QNZ0789-001	MODU CONNECTOR	IEEE1394
CN54	QGA1002C1-06X	CONNECTOR	6PIN

6.14 DC IN BOARD ASSEMBLY PARTS LIST 4 1

CK279800A1

4 1

Symbol No.	Part No.	Part Name	Description
D1	HZM18NB2-X	ZENER DIODE	HITACHI
J5	QNA0010-001	DC JACK	DC INPUT
CN53	WJK0207-002A-E	CONNECTOR	4PIN
CN54	QUB210-07A2MP-E	CONNECTOR	15PIN
CN55	QUB212-09A2MP-E	CONNECTOR	15PIN

6.17 EAR BOARD ASSEMBLY PARTS LIST 4 4

CK279800A4

4 4

Symbol No.	Part No.	Part Name	Description
R1	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R2	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R3	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R4	NRSA63D-470X	M.G.RESISTOR	47 1/16W
C1	NDC31HJ-181X	CER.CAPACITOR	180p 50V
C2	NDC31HJ-181X	CER.CAPACITOR	180p 50V
C3	NDC31HJ-181X	CER.CAPACITOR	180p 50V
C4	NDC31HJ-181X	CER.CAPACITOR	180p 50V
J6	QNS0261-001	3.5 JACK	EAR PHONE
J7	QNS0261-001	3.5 JACK	EAR PHONE
CN12	QGA1002F1-07X	CONNECTOR	7PIN
CN47	QGA1002F1-02X	CONNECTOR	2PIN
K1	NQR0200-004X	FILTER(CHIP)	
K2	NQR0200-004X	FILTER(CHIP)	

6.18 MNU BOARD ASSEMBLY PARTS LIST 5 1

CK279900A1

5 1

Symbol No.	Part No.	Part Name	Description
JS1	QSW0603-001	ROTARY SWITCH	SHUTTER
CN51	QGA1002C1-04X	CONNECTOR	4PIN

6.19 OPE BOARD ASSEMBLY PARTS LIST 5 2

CK279900A2

5 2

Symbol No.	Part No.	Part Name	Description
R1	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R2	NRSA63D-122X	M.G.RESISTOR	1.2k 1/16W
R3	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
S1	NSW0010-001X	SWITCH	REW
S2	NSW0010-001X	SWITCH	STOP
S3	NSW0010-001X	SWITCH	FF
S4	NSW0010-001X	SWITCH	PLAY/STILL
CN4	QGA1002F1-03X	CONNECTOR	3PIN

6.21 VF IF BOARD ASSEMBLY PARTS LIST 5 4

CK279900A4

5 4

Symbol No.	Part No.	Part Name	Description
D1	NNCD6.2D-A-X	Z DIODE	NEC
D2	NNCD6.2D-A-X	Z DIODE	NEC
D3	NNCD6.2D-A-X	Z DIODE	NEC
D4	NNCD6.2D-A-X	Z DIODE	NEC
D5	NNCD6.2D-A-X	Z DIODE	NEC
D6	NNCD6.2D-A-X	Z DIODE	NEC
R1	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R2	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R3	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R10	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R51	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R52	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R53	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
C51	NCB11AK-106X	CER.CAPACITOR	10 10V
C52	NCB11AK-106X	CER.CAPACITOR	10 10V
C53	NCB11AK-106X	CER.CAPACITOR	10 10V
CN60	QGF0517F1-20X	CONNECTOR	20PIN
CN65	QGA1206C2-20X	CONNECTOR	20PIN
TP1	NNZ0009-001X	TEST POINT	G IN
TP2	NNZ0009-001X	TEST POINT	R IN
TP3	NNZ0009-001X	TEST POINT	B IN
TP4	NNZ0009-001X	TEST POINT	GND

6.20 EJT BOARD ASSEMBLY PARTS LIST 5 3

CK279900A3

5 3

Symbol No.	Part No.	Part Name	Description
Q1	DTC124EUA-X	TRANSISTOR	ROHM
D1	SML-210MT/MN-X	L.E.D.	ROHM
R1	NRSA63J-471X	M.G.RESISTOR	470 1/16W
S1	NSW0233-001X	PUSH SWITCH	EJECT
CN42	QGF0508F1-06X	CONNECTOR	6PIN

6.22 AWB BOARD ASSEMBLY PARTS LIST 5 5

CK279900A5

5 5

Symbol No.	Part No.	Part Name	Description
S1	NSW0010-001X	SWITCH	AWB
CN9	QGA1002C1-02X	CONNECTOR	2PIN

6.23 XLR BOARD ASSEMBLY PARTS LIST 5 6

CK279900A6

5 6

Symbol No.	Part No.	Part Name	Description	
R1	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R2	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R3	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R4	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R5	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R6	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R7	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R8	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R9	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W
R10	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W
R11	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W
R12	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W
R13	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R14	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R15	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R16	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
C1	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C2	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C3	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C4	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C5	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C6	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C7	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C8	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C9	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C10	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C11	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C12	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C13	NELA1JM-475X	E.CAPACITOR	4.7	63V
C14	NELA1JM-475X	E.CAPACITOR	4.7	63V
C15	NELA1JM-475X	E.CAPACITOR	4.7	63V
C16	NELA1JM-475X	E.CAPACITOR	4.7	63V
L1	NQL124J-101X	COIL	100uH	
L2	NQL124J-101X	COIL	100uH	
L3	NQL124J-101X	COIL	100uH	
L4	NQL124J-101X	COIL	100uH	
J8	QNZ0013-001	CONNECTOR	AUDIO INPUT 1	
J9	QNZ0013-001	CONNECTOR	AUDIO INPUT 2	
CN1	NNZ0137-001X	CONNECTOR		
CN2	NNZ0137-001X	CONNECTOR		
CN41	QGF0534F1-13X	CONNECTOR	13PIN	
K1	NQR0200-004X	FILTER(CHIP)		
K2	NQR0200-004X	FILTER(CHIP)		
K3	NQR0200-004X	FILTER(CHIP)		
K4	NQR0200-004X	FILTER(CHIP)		

6.24 SWP BOARD ASSEMBLY PARTS LIST 5 7

CK279900A7

5 7

Symbol No.	Part No.	Part Name	Description
D1	HZM36NB-W	ZENER DIODE	HITACHI
S1	QSW0048-001	TOGGLE SWITCH	POWER
CN52	QGA1002F1-02X	CONNECTOR	2PIN

6.25 STA BOARD ASSEMBLY PARTS LIST 5 8

CK279900A8

5 8

Symbol No.	Part No.	Part Name	Description	
Q1	DTC124EUA-X	TRANSISTOR	ROHM	
Q2	DTC124EUA-X	TRANSISTOR	ROHM	
D1	SML011BBT/PQR-X	L.E.D.	ROHM	
D2	SML-011DT/LMN-X	L.E.D.	ROHM	
R1	NRSA63D-681X	M.G.RESISTOR	680	1/16W
R2	NRSA63D-681X	M.G.RESISTOR	680	1/16W
R3	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R4	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
S1	NSW0010-001X	SWITCH	STATUS	
S2	NSW0233-001X	PUSH SWITCH	ND FILTER	
S3	NSW0233-001X	PUSH SWITCH	ND FILTER	
CN10	QGF0508F1-24X	CONNECTOR	24PIN	
CN50	QGF0534F1-11X	CONNECTOR	11PIN	
CN51	QGA1002F1-04X	CONNECTOR	4PIN	
CN52	QGA1002F1-02X	CONNECTOR	2PIN	

6.26 AVR BOARD ASSEMBLY PARTS LIST 5 9

CK279900A9

5 9

Symbol No.	Part No.	Part Name	Description	
Q1	DTC124EUA-X	TRANSISTOR	ROHM	
Q2	DTC124EUA-X	TRANSISTOR	ROHM	
D1	SML-020MVT-W	L.E.D.	ROHM	
D2	SML-020MVT-W	L.E.D.	ROHM	
D3	HZM12NB2-X	ZENER DIODE	HITACHI	
D4	HZM12NB2-X	ZENER DIODE	HITACHI	
D5	HZM12NB2-X	ZENER DIODE	HITACHI	
D6	HZM12NB2-X	ZENER DIODE	HITACHI	
R1	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R2	NRSA63D-391X	M.G.RESISTOR	390	1/16W
R3	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R4	NRSA63D-391X	M.G.RESISTOR	390	1/16W
R5	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R6	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R7	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R8	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
VR1	QVQ0336-A14	VAL.RESISTOR	A10k	A.LEVEL 1
VR2	QVQ0336-A14	VAL.RESISTOR	A10k	A.LEVEL 2
C1	NCB31CK-104X	CER.CAPACITOR	0.1	16V
S1	QSW0049-001	TOGGLE SWITCH	WHITE	BALANCE
S2	QSW0052-001	TOGGLE SWITCH	GAIN	
S3	NSW0010-001X	SWITCH	REC	
CN45	QGF0534F1-18X	CONNECTOR	18PIN	

6.27 MON BL BOARD ASSEMBLY PARTS LIST 6 1

CK280200A1

6 1

Symbol No.	Part No.	Part Name	Description	
IC901	TK11880F-W	I.C.(M)	TOKO	DENSHI
D901	RB160M-30-X	SB DIODE	ROHM	
R902	NRSA63J-680X	M.G.RESISTOR	68	1/16W
R904	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R906	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R907	NRSA63J-680X	M.G.RESISTOR	68	1/16W
R914	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R919	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R920	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R922	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
C901	NCB11AK-225X	CER.CAPACITOR	2.2	10V
C902	NCB11CK-105X	CER.CAPACITOR	1	16V
C903	NCB11HK-224X	CER.CAPACITOR	0.22	50V
C904	NCB11HK-224X	CER.CAPACITOR	0.22	50V
C909	NCB11AK-225X	CER.CAPACITOR	2.2	10V
C951	NCB11HK-224X	CER.CAPACITOR	0.22	50V
C952	NCB11HK-224X	CER.CAPACITOR	0.22	50V
C953	NCB11HK-224X	CER.CAPACITOR	0.22	50V
L901	NQL89EM-220X	COIL	22uH	
CN62	QGF0506F2-32X	CONNECTOR	32PIN	
CN63	QGF1004F2-06X	CONNECTOR	6PIN	
CN64	QGF0517F1-24X	CONNECTOR	24PIN	
CN901	NNZ0137-001X	CONNECTOR		

6.28 FTY BOARD ASSEMBLY PARTS LIST 6 2

CK280200A2

6 2

Symbol No.	Part No.	Part Name	Description	
D1	SML-012UT/RST-X	L.E.D.	ROHM	
D2	SML-012UT/RST-X	L.E.D.	ROHM	
D3	SML-012UT/RST-X	L.E.D.	ROHM	
R3	NRSA63D-471X	M.G.RESISTOR	470	1/16W
R4	NRSA63D-271X	M.G.RESISTOR	270	1/16W
R5	NRSA63D-681X	M.G.RESISTOR	680	1/16W
R6	NRSA63D-681X	M.G.RESISTOR	680	1/16W
CN8	QGF0508F1-06X	CONNECTOR	6PIN	

6.29 USR BOARD ASSEMBLY PARTS LIST 6 3

CK280200A3

6 3

Symbol No.	Part No.	Part Name	Description	
S1	NSW0010-001X	SWITCH	USER1	
S2	NSW0010-001X	SWITCH	USER2	
S3	NSW0010-001X	SWITCH	USER3	
CN50	QGF0508F1-11X	CONNECTOR	11PIN	
CN55	QGF0508F1-10X	CONNECTOR	10PIN	

6.30 FRL BOARD ASSEMBLY PARTS LIST 6 4

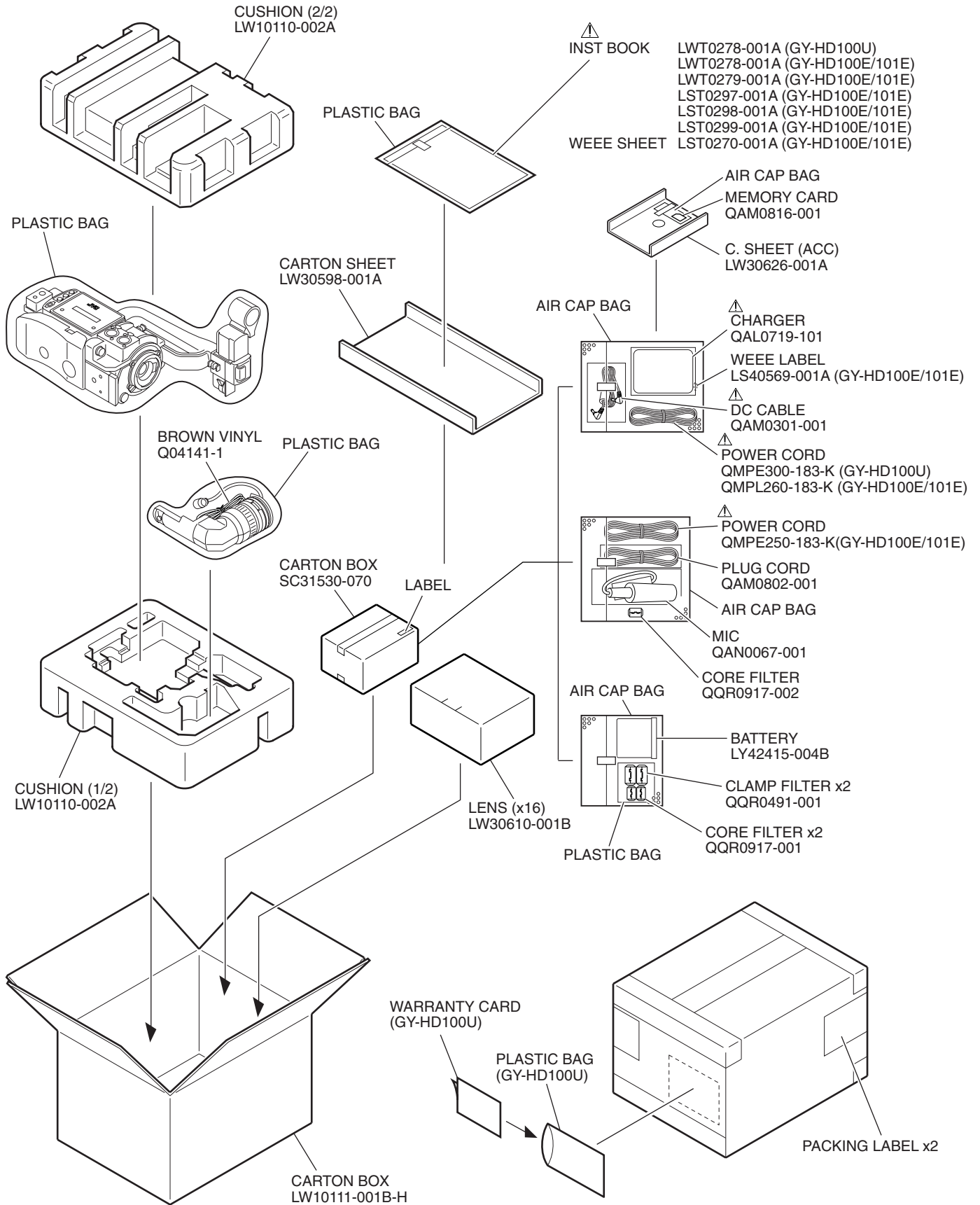
CK280200A4

6 4

Symbol No.	Part No.	Part Name	Description	
S1	NSW0010-001X	SWITCH	FOCUS	ASSIST
S2	NSW0010-001X	SWITCH	REC	
S3	NSW0256-001X	SLIDE SWITCH	REC	LOCK
CN8	QGF0508F1-06X	CONNECTOR	6PIN	
CN48	QGF0508F1-10X	CONNECTOR	10PIN	

SECTION 7 PACKING

7.1 PACKING ASSEMBLY M 1



SECTION 4 CHARTS AND DIAGRAMS

■ SCHEMATIC DIAGRAM NOTES

• Schematic safety precaution

△ Parts are safety related parts.
When replacing them, be sure to use the specified parts.

• Unit of value

- Unless otherwise specified
- 1) Resistance is in Ω (1/6 W)
 - 2) Capacitance is in μF
 - 3) Inductance is in μH

• Expression of wiring

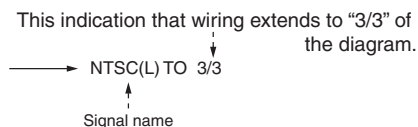
As the following circuit diagram is divided to print on some sheets, such an indication as the following is found in the case the wiring extends over two or more divided sections.

1) Circuit diagram divided into two or more sections:

Board	Board Name	Number of divided sections
1 0	MAIN	1/18 to 18/18
2 0	MIF	1/7 to 7/7
3 0	AUDIO	1/2 to 2/2
3 3	PR MDA	1/3 to 3/3

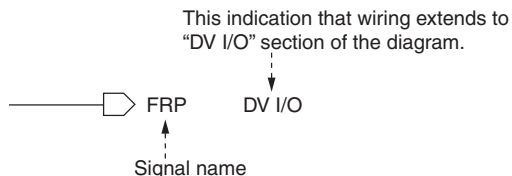
2) Indication of wiring which extends to another section:
(Example)

A)



In the above case, the end of the wiring is connected to the "NTSC(L)" on the 3rd section of the diagram.

B)



In the above case, the end of the wiring is connected to the "FRP" on the "DV I/O" section of the diagram.

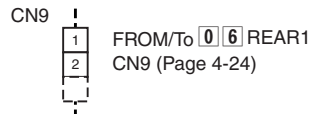
C)



In the above case, the end of the wiring is connected to the "PIX_RST" on "E" (X-axis) and "8" (Y-axis) position scale in page "3" of the diagram.

• Wiring of connector

(Example)



In the above example, CN9 is connected with CN9 on **0 6** REAR1 board.

• Signal flow on the diagram

The following allow marks indicate the specified signal paths respectively.

- ➡ : Recording or EE signal path
- ⇨ : Playback signal path
- ⇨ : Recording and Playback signal path

• Others

In regard of a board assembly whose circuit is composed of multilayered board patterns such 4- or 6-layered patterns, board patterns of the power supply lines and grounding lines are omitted in this section.

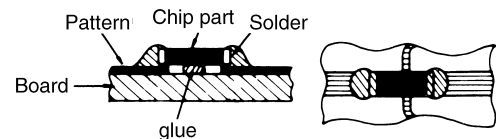
Note: For detail of each electrical part, refer to Section 6 "ELECTRICAL PARTS LIST" by its symbol number.

■ REPLACING SURFACE MOUNT "CHIP" COMPONENTS

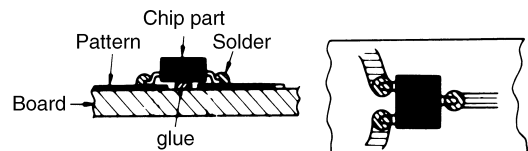
- Some resistors, shorting jumpers (0 resistance), ceramic capacitors, transistors, and diodes are chip parts. These chip parts cannot be reused after they are once removed.
- Chip resistors used in some circuits are of high precision type having little error in resistance. To demonstrate the full capacity of this set, place an order for proper parts referring to the diagrams and parts lists in the section 5.
- Soldering cautions:
 - 1) Do not apply heat for more than 3 seconds.
 - 2) Avoid using a rubbing stroke when soldering.
 - 3) Discard removed chips; do not reuse them.
 - 4) Supplementary cementing is not required.
 - 5) Use care not to scratch or otherwise damage the chips.

(1) Soldered condition of chip parts

- Resistors, capacitors, etc.

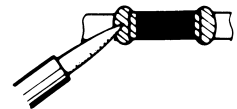


- Transistors, diodes, etc.

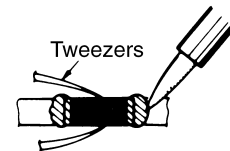


(2) Removing of chip parts

- Resistors, capacitors, etc.
 - i) Melt solder at a side.



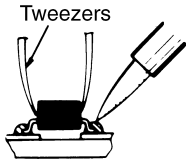
- ii) Holding the chip with tweezers, melt solder at the other side.



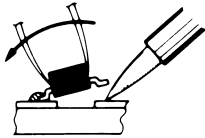
- iii) Take off the chip in twisting and sliding motion.



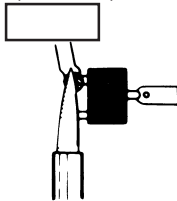
- Transistors, diodes, etc.
 - Melt solder at the side of single lead.



- Lift the unsoldered side upwards.



- Simultaneously melt solder at two leads of the other side and pull up the chip.

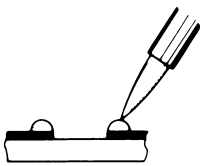


(3) Preheating and soldering of chip parts

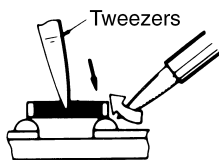
Except transistors, make sure to preheat all chip parts, capacitors in particular, with a hot wind of 150°C approx. (of a hair dryer, etc.) for 2 minutes just before soldering, and immediately solder by a soldering iron of approx. 30 W.

(4) Attaching of chip parts

- Heap up a proper amount of solder beforehand.

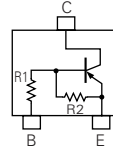
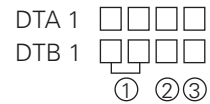
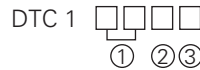


- Holding down a new chip by tweezers, solder it to the board by a soldering iron to melt solder from its lower part to the upper part (in the direction shown by a big arrow).

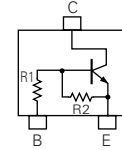


■ CHIP PARTS PIN ARRANGEMENT

[1] Digital transistors



(Top view)



(Top view)

- Two digits show resistance of R1 in abbreviation.

43 : 4.7 kΩ

14 : 10 kΩ

24 : 22 kΩ

44 : 47 kΩ

- Roman letter show the resistive ratio between R1 and R2 in abbreviation.

E : R2/R1 = 1/1

Y : R2/R1 = 5/1

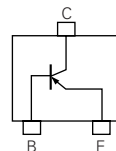
W : R2/R1 = 2/1

X : R2/R1 = 1/2

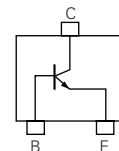
T : R2 is opened.

- Symbol the shape of resistor in abbreviation.

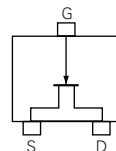
[2] Chip transistors and chip F.E.T.s



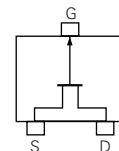
(Top view)



(Top view)

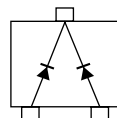


(Top view)

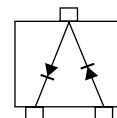


(Top view)

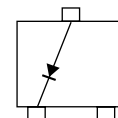
[3] Chip diodes



(Top view)



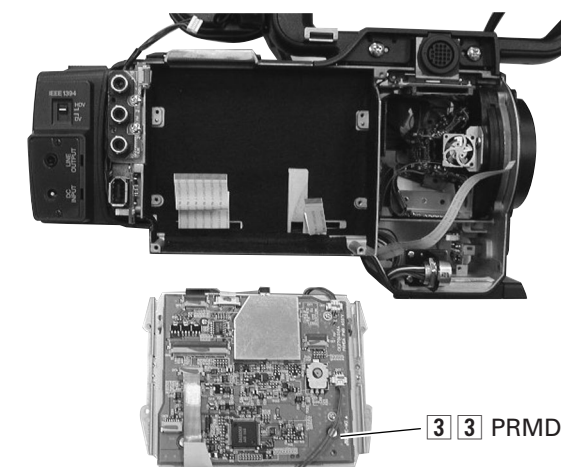
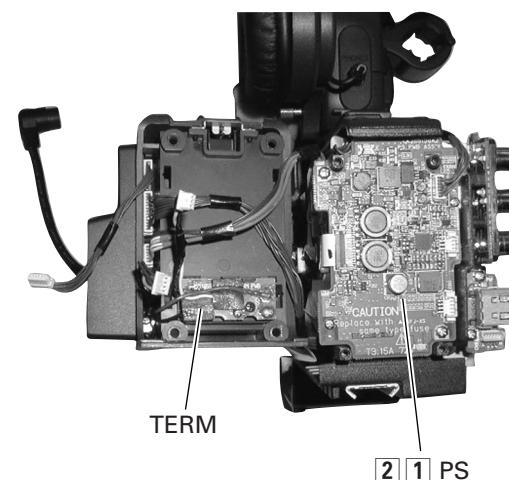
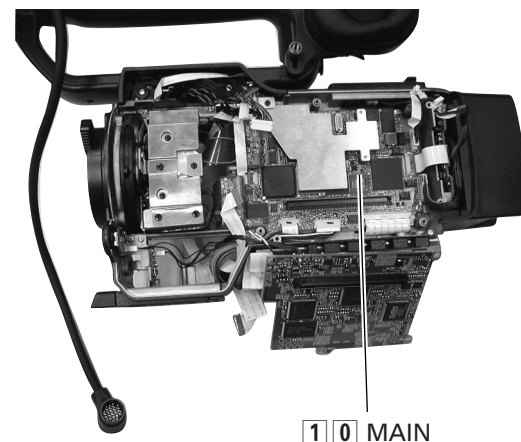
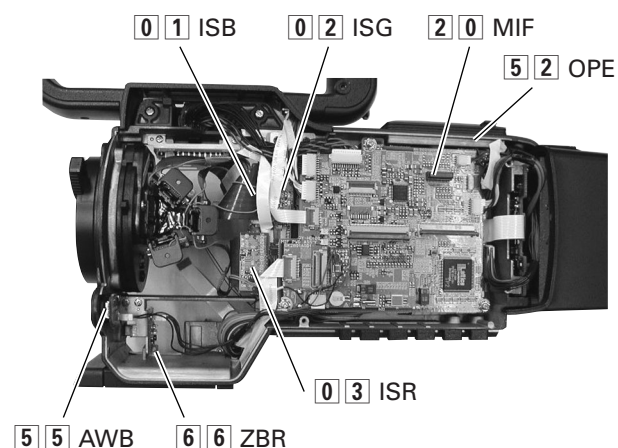
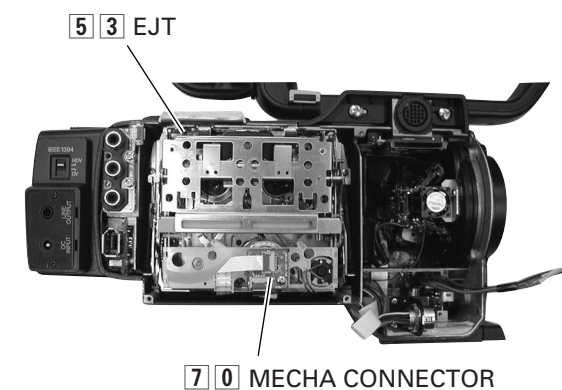
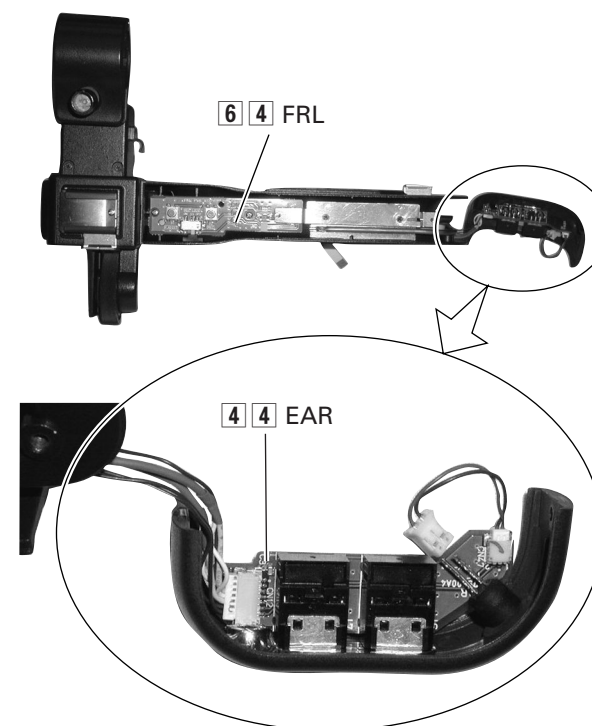
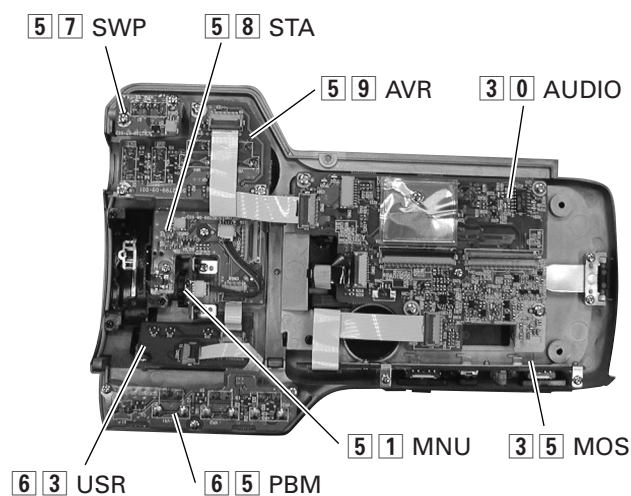
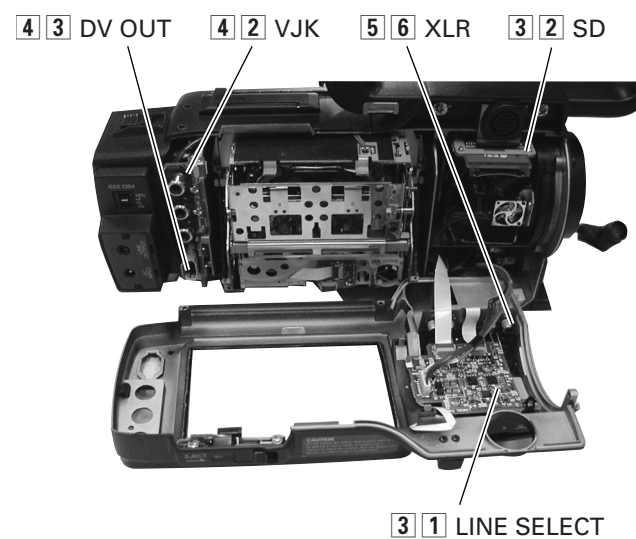
(Top view)



(Top view)

4.1 INDEX TO PAGES OF MAIN BOARDS AND CIRCUIT BOARD LOCATION

4.1.1 Circuit board location

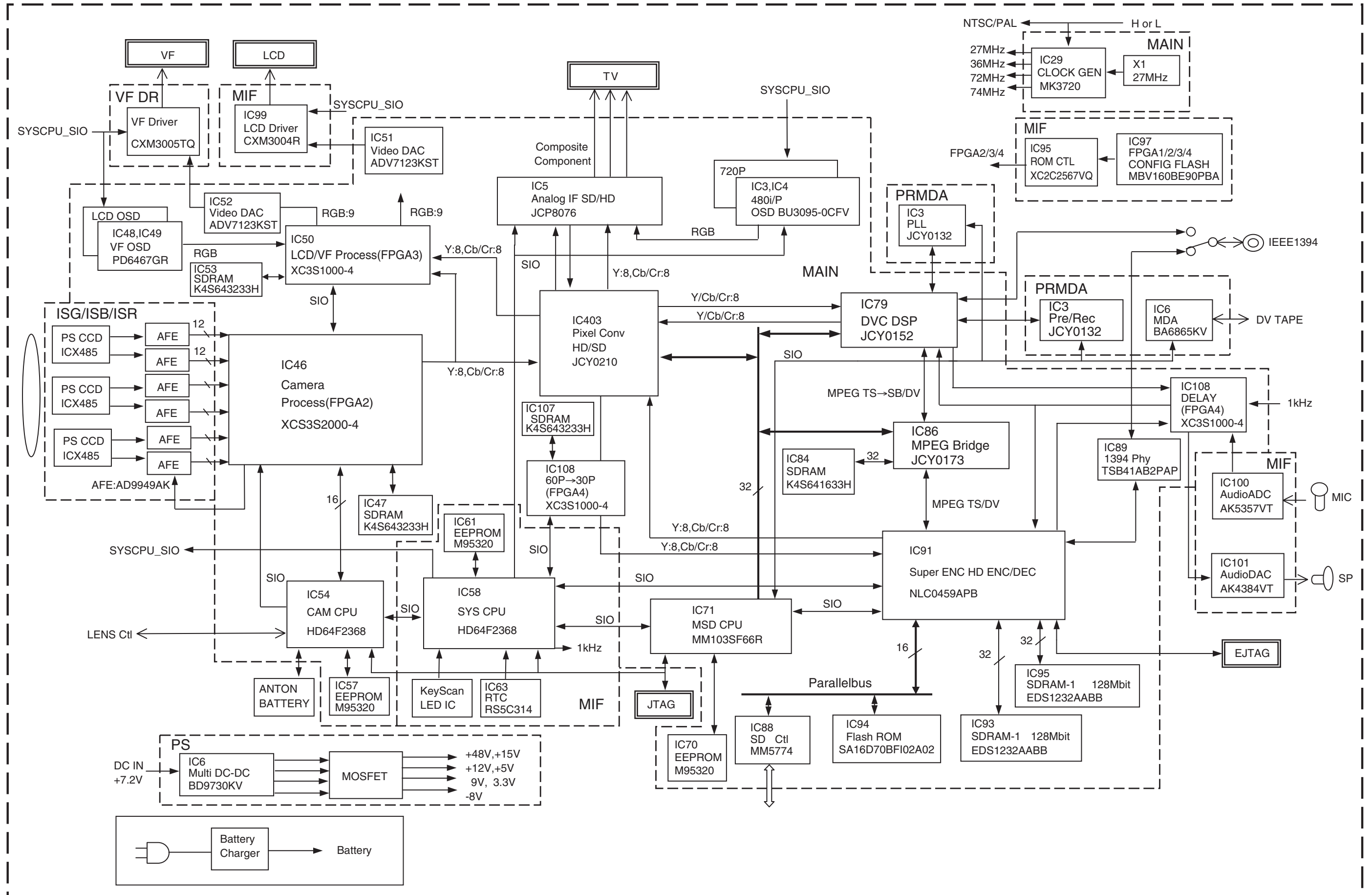


Board No.	Board Name	Page of diagram	
		Schematic diagram	Circuit board
0 1	ISB	4-8	4-10
0 2	ISG	4-7	4-10
0 3	ISR	4-9	4-10
1 0	MAIN	4-11 to 4-28	4-29
2 0	MIF	4-31 to 4-37	4-30
2 1	PS	4-38	4-30
3 0	AUDIO	4-44 to 4-45	4-43
3 1	LINE SELECT	4-46	4-47
3 2	SD	4-48	4-49
3 3	PRMDA	4-40 to 4-42	4-39
3 4	VF DR	4-56	4-55

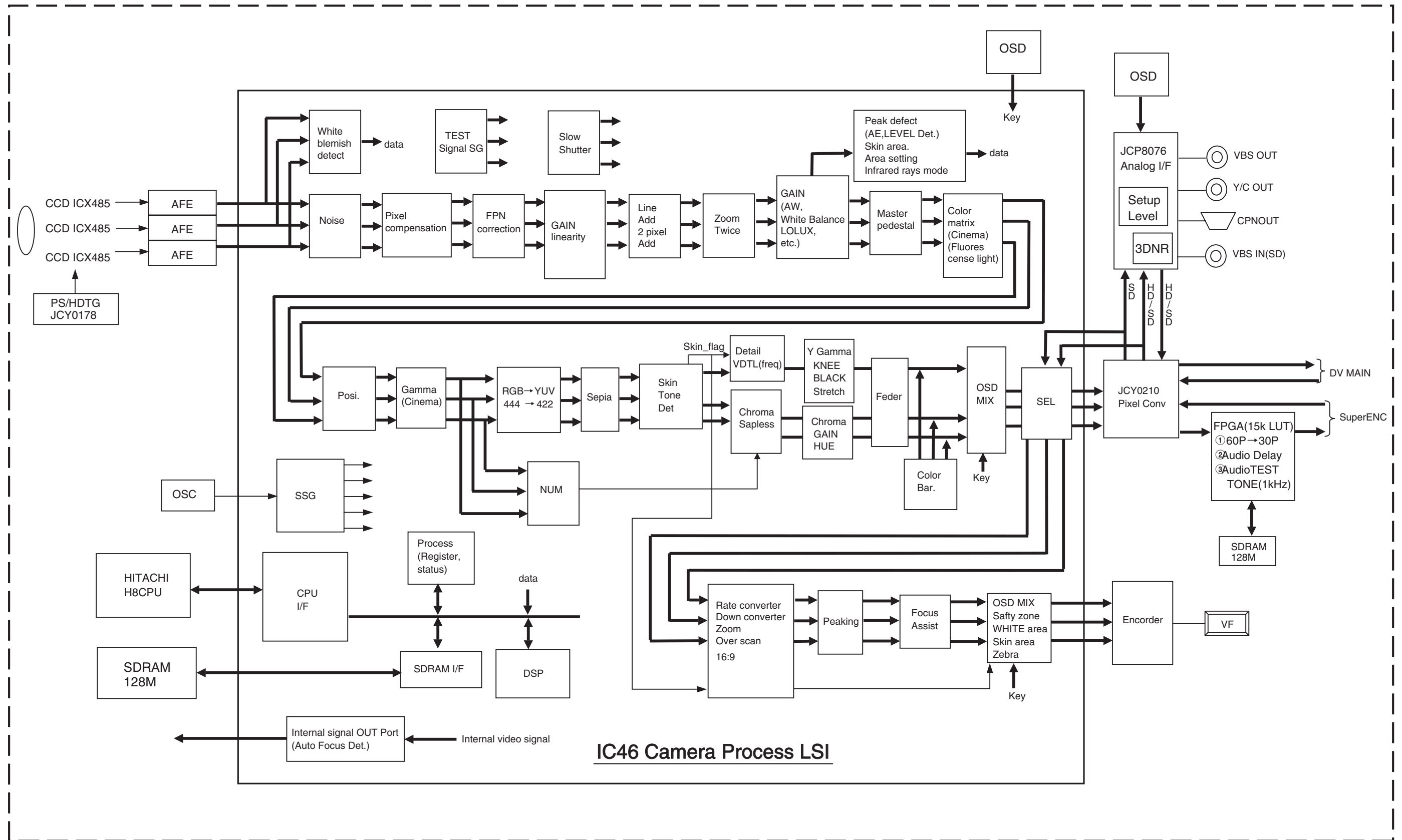
Board No.	Board Name	Page of diagram	
		Schematic diagram	Circuit board
3 5	MOS	4-48	4-49
4 1	DC IN	4-48	4-49
4 2	V JK	4-48	4-49
4 3	DV OUT	4-48	4-49
4 4	EAR	4-48	4-49
5 1	MNU	4-50	4-51
5 2	OPE	4-50	4-51
5 3	EJT	4-50	4-51
5 4	VF IF	4-54	4-55
5 5	AWB	4-50	4-51
5 6	XLR	4-50	4-51

Board No.	Board Name	Page of diagram	
		Schematic diagram	Circuit board
5 7	SWP	4-50	4-51
5 8	STA	4-50	4-51
5 9	AVR	4-50	4-51
6 1	M BL	4-57	4-58
6 2	FTY	4-52	4-53
6 3	USR	4-52	4-53
6 4	FRL	4-52	4-53
6 5	PBM	4-52	4-53
6 6	ZBR	4-52	4-53
6 7	A JACK	4-52	4-53
7 0	MECHA CONNECTOR	4-52	4-53
8 0	FNC	4-52	4-53

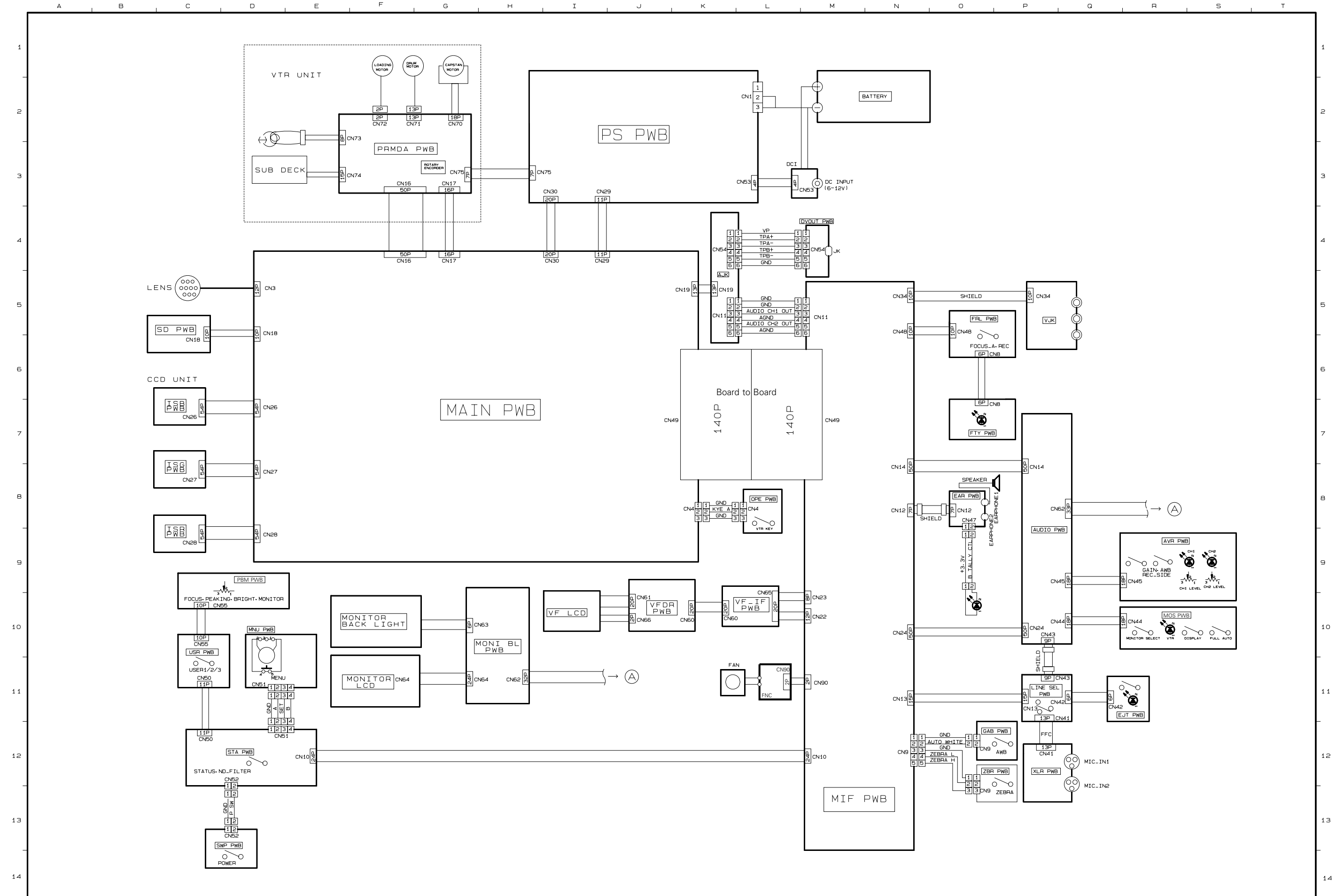
4.2 GY-HD100 BLOCK DIAGRAM



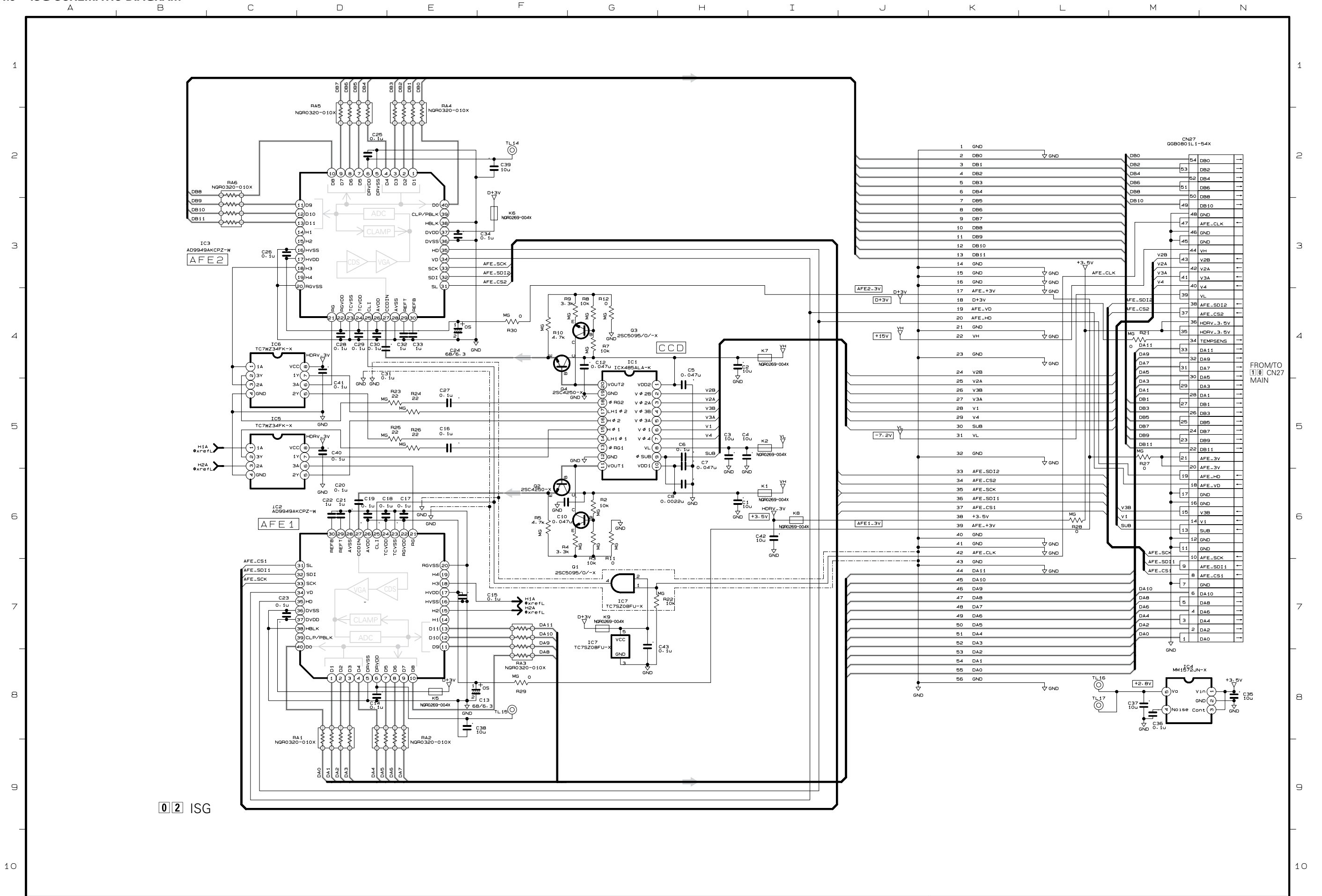
4.3 CAMERA PROCESS BLOCK DIAGRAM



4.4 OVERALL WIRING DIAGRAM

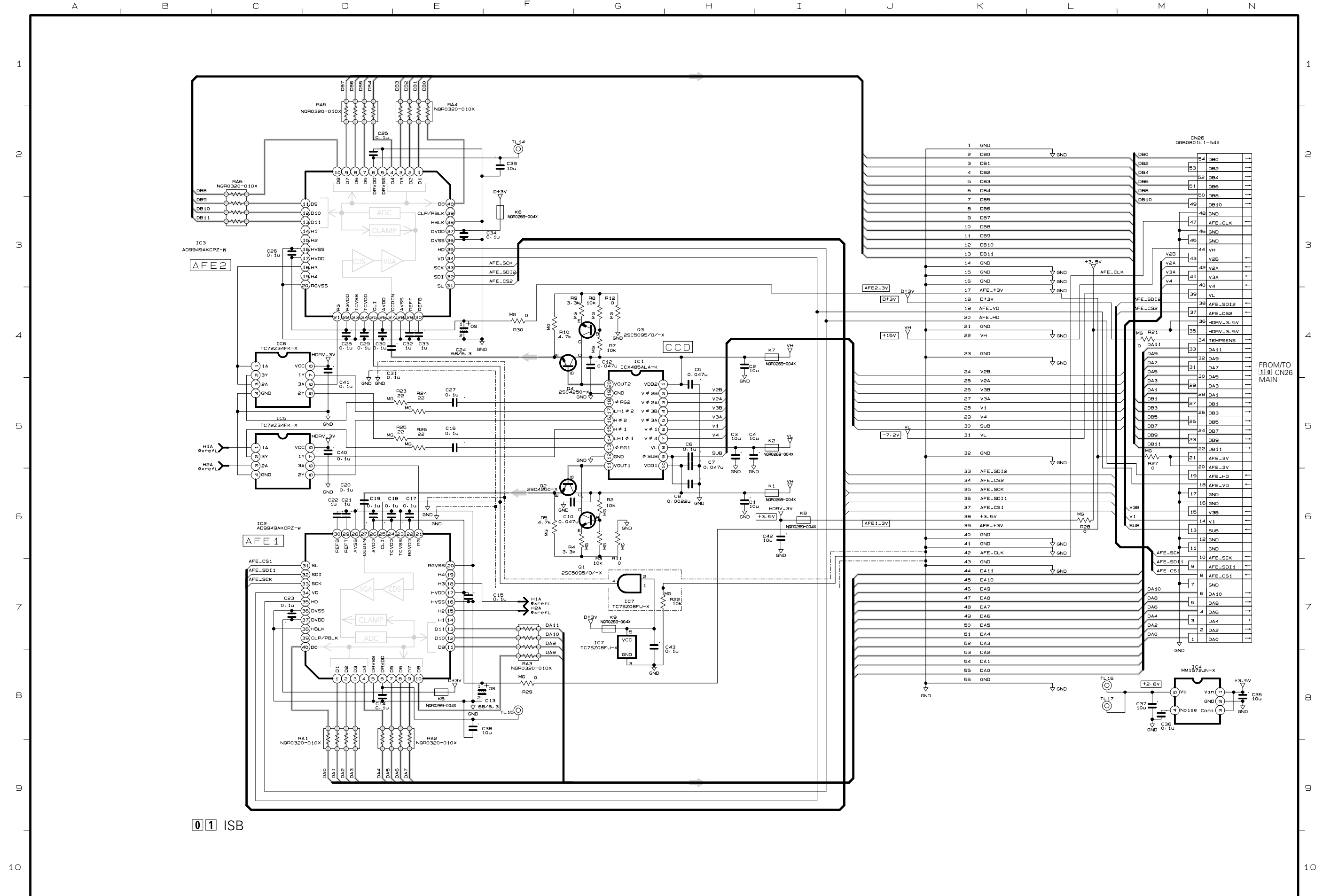


4.5 ISG SCHEMATIC DIAGRAM



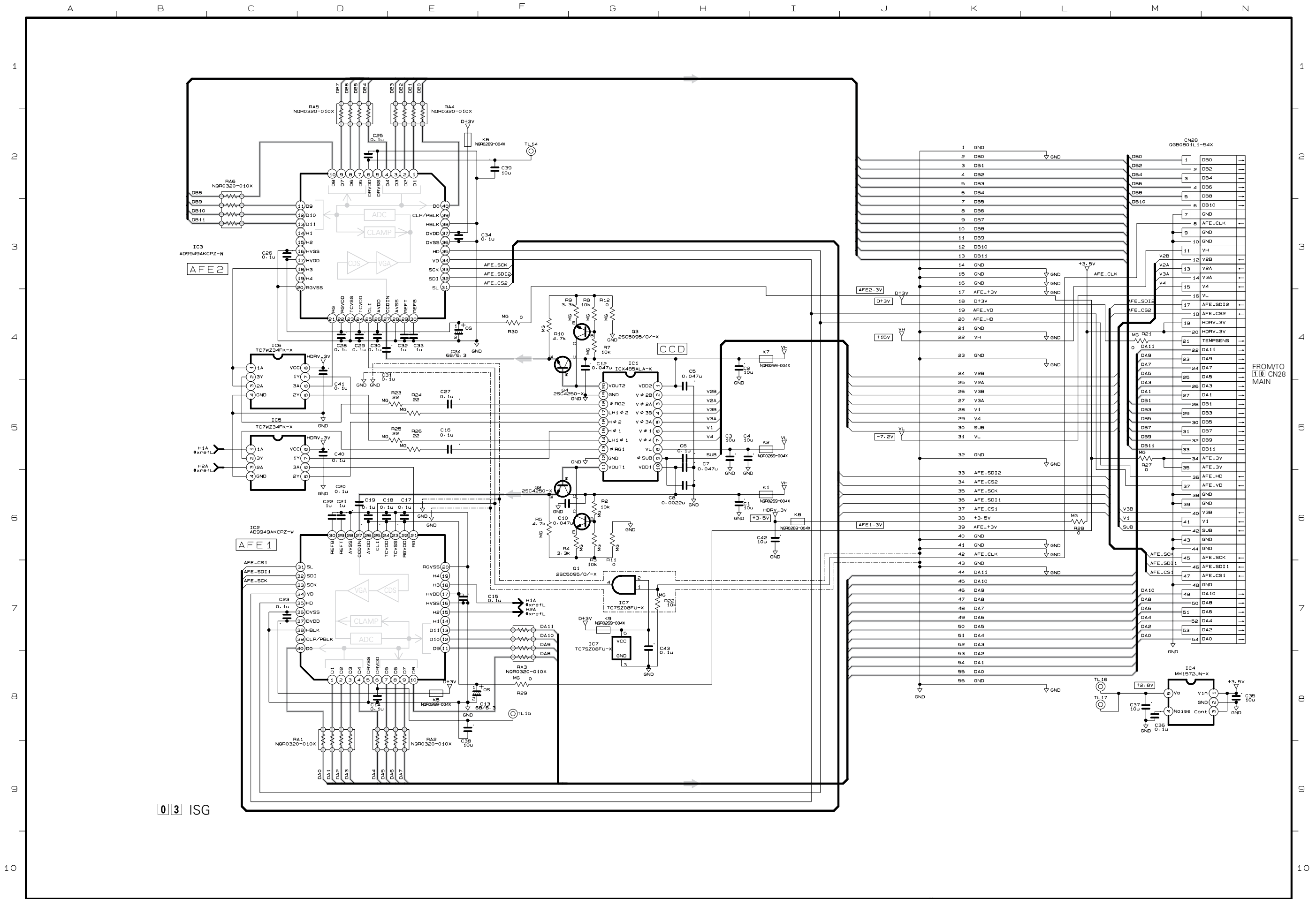
02 ISG

4.6 ISB SCHEMATIC DIAGRAM



01 ISB

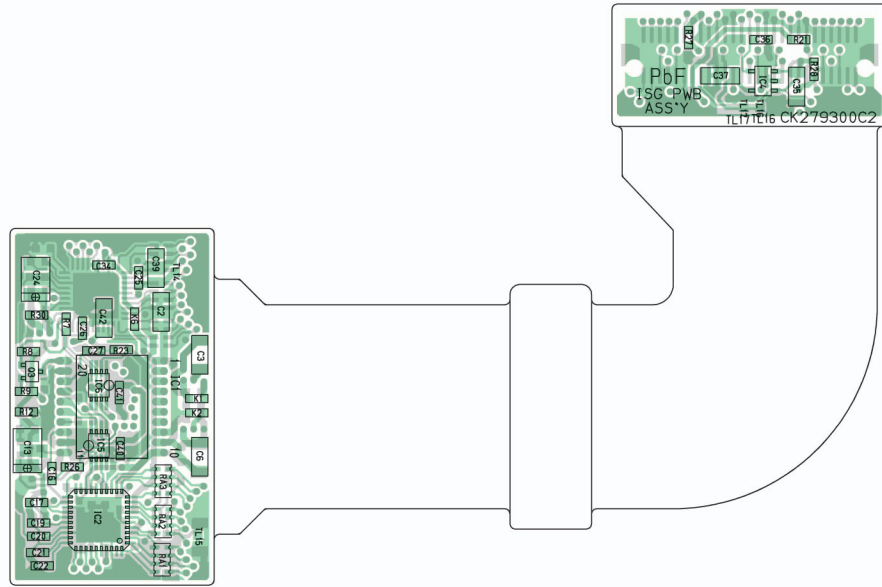
4.7 ISR SCHEMATIC DIAGRAM



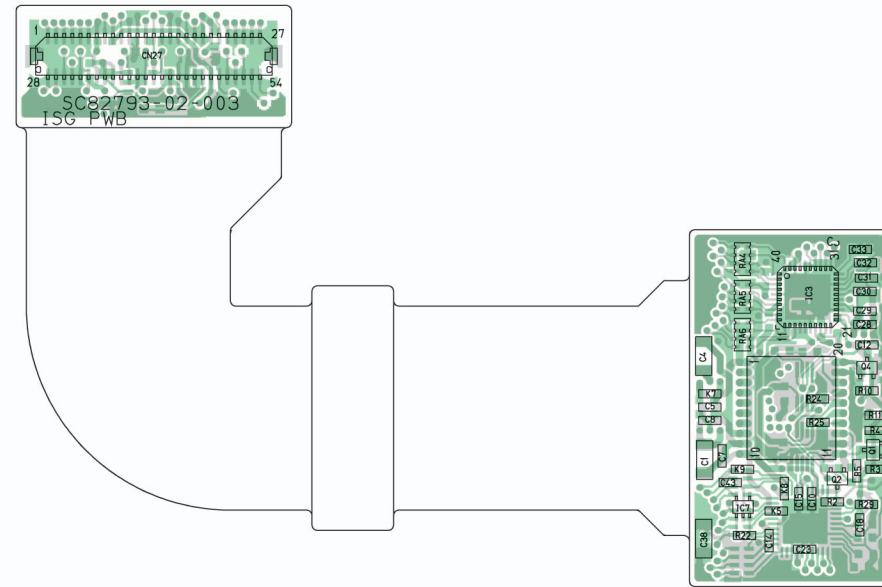
4.8 ISG, ISB, ISR CIRCUIT BOARDS

— ISG —

— SIDE A —

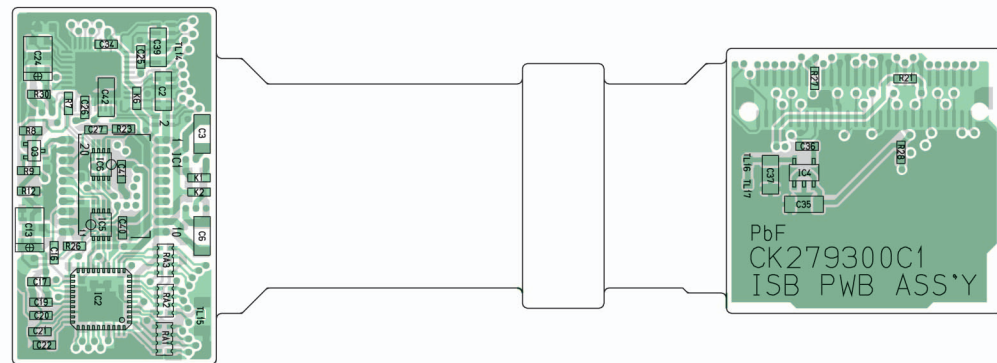


— SIDE B —

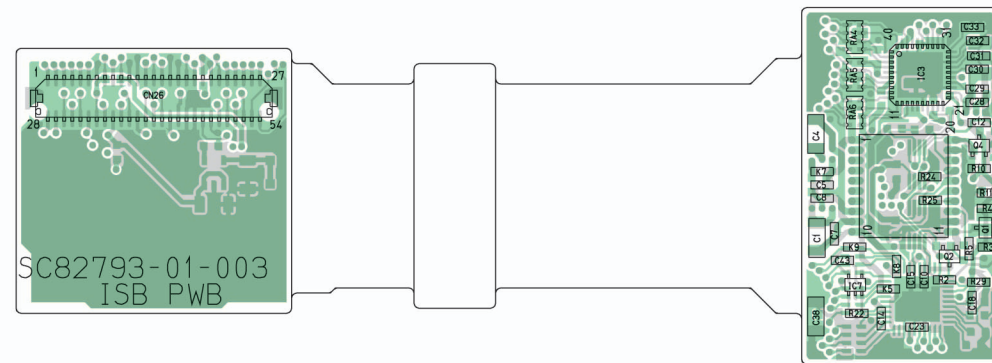


— ISB —

— SIDE A —

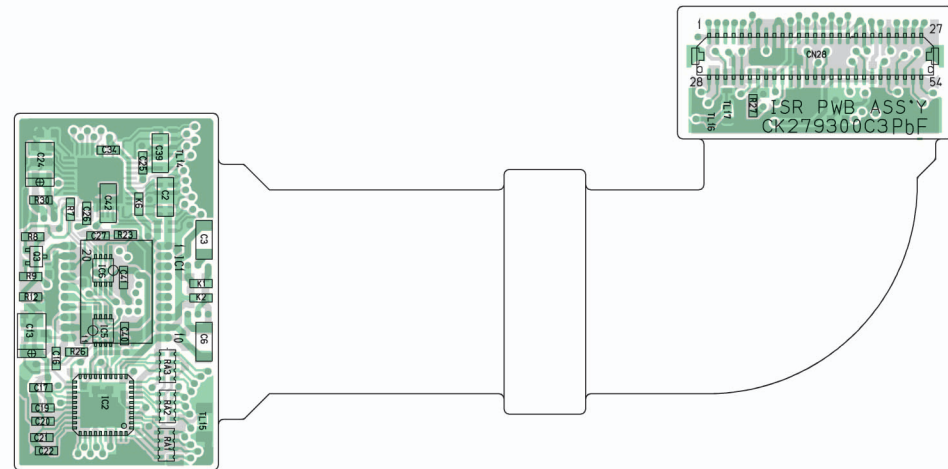


— SIDE B —

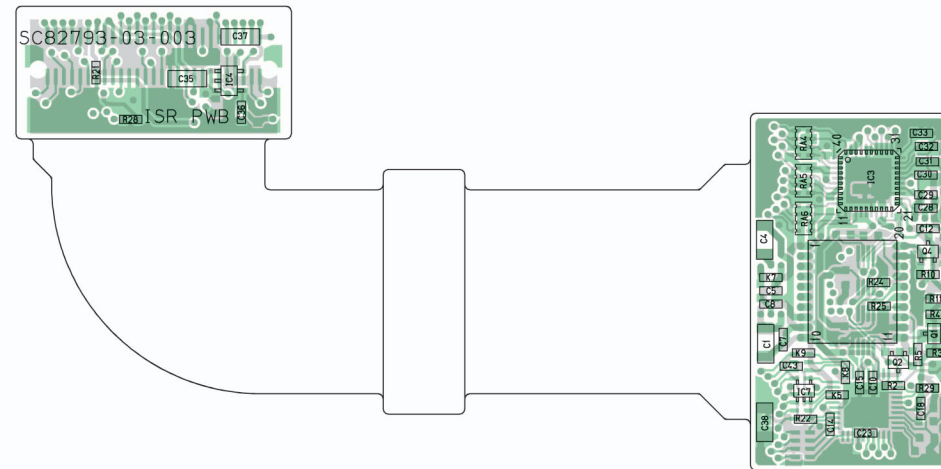


— ISR —

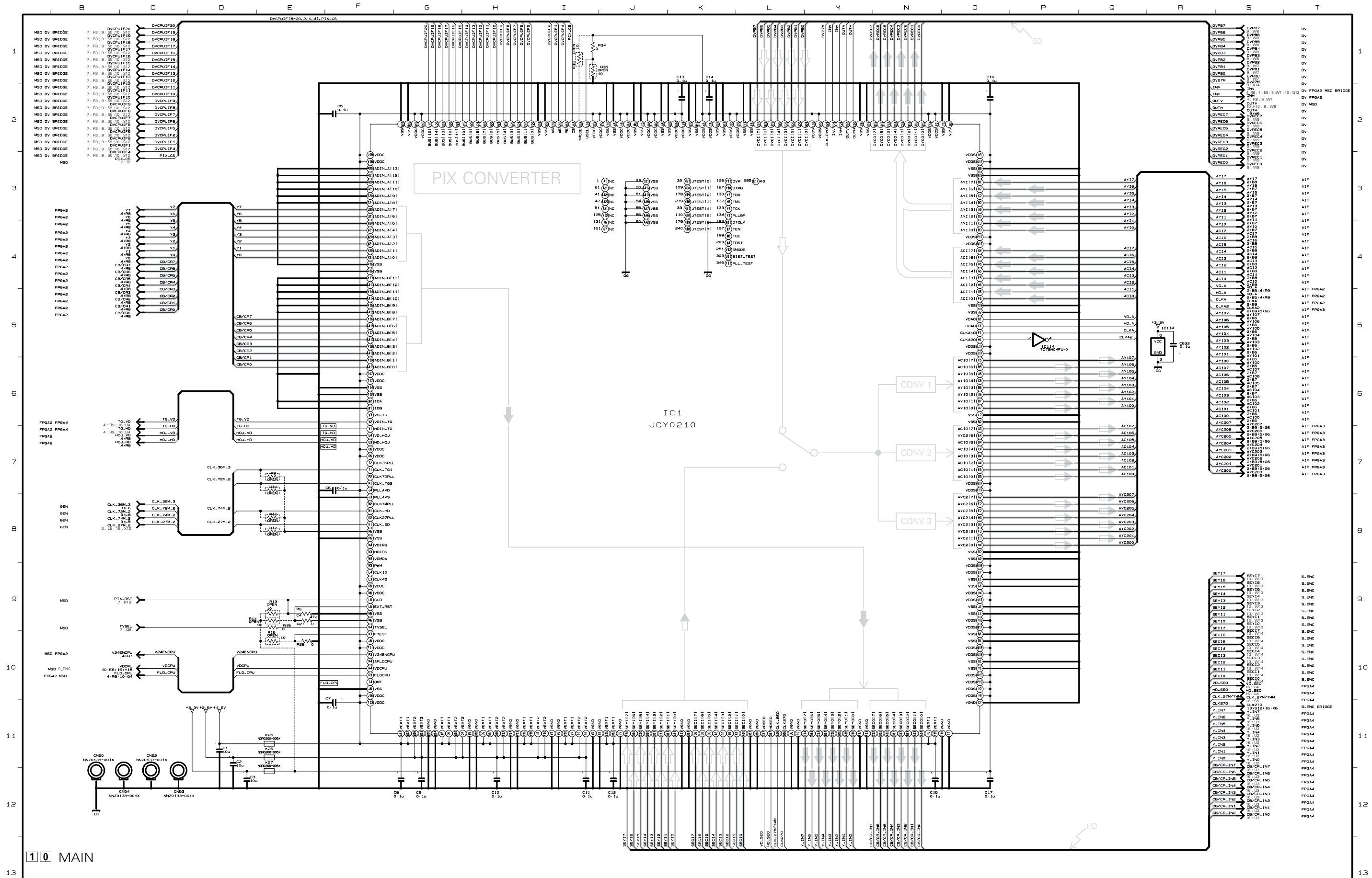
— SIDE A —

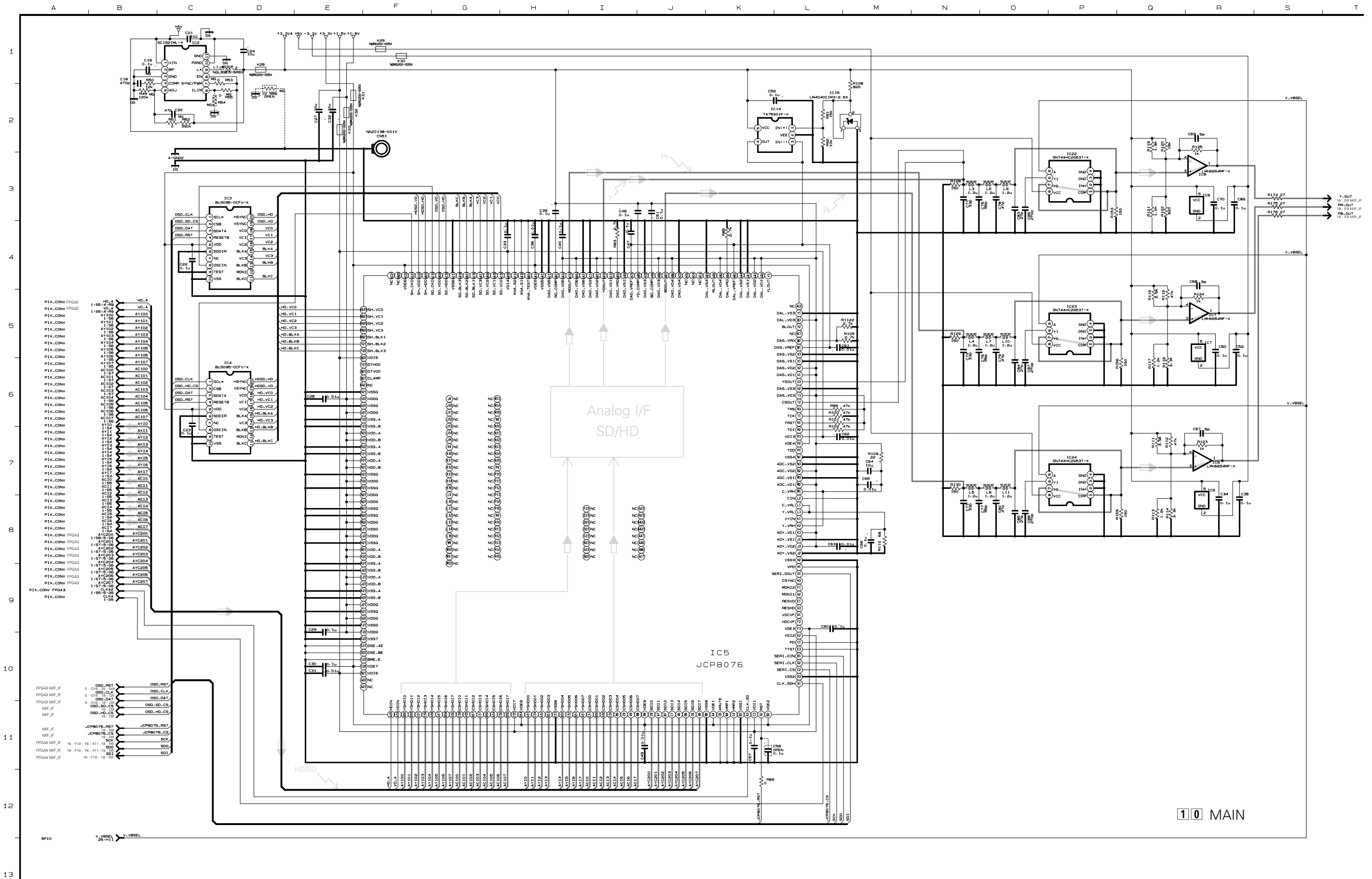


— SIDE B —

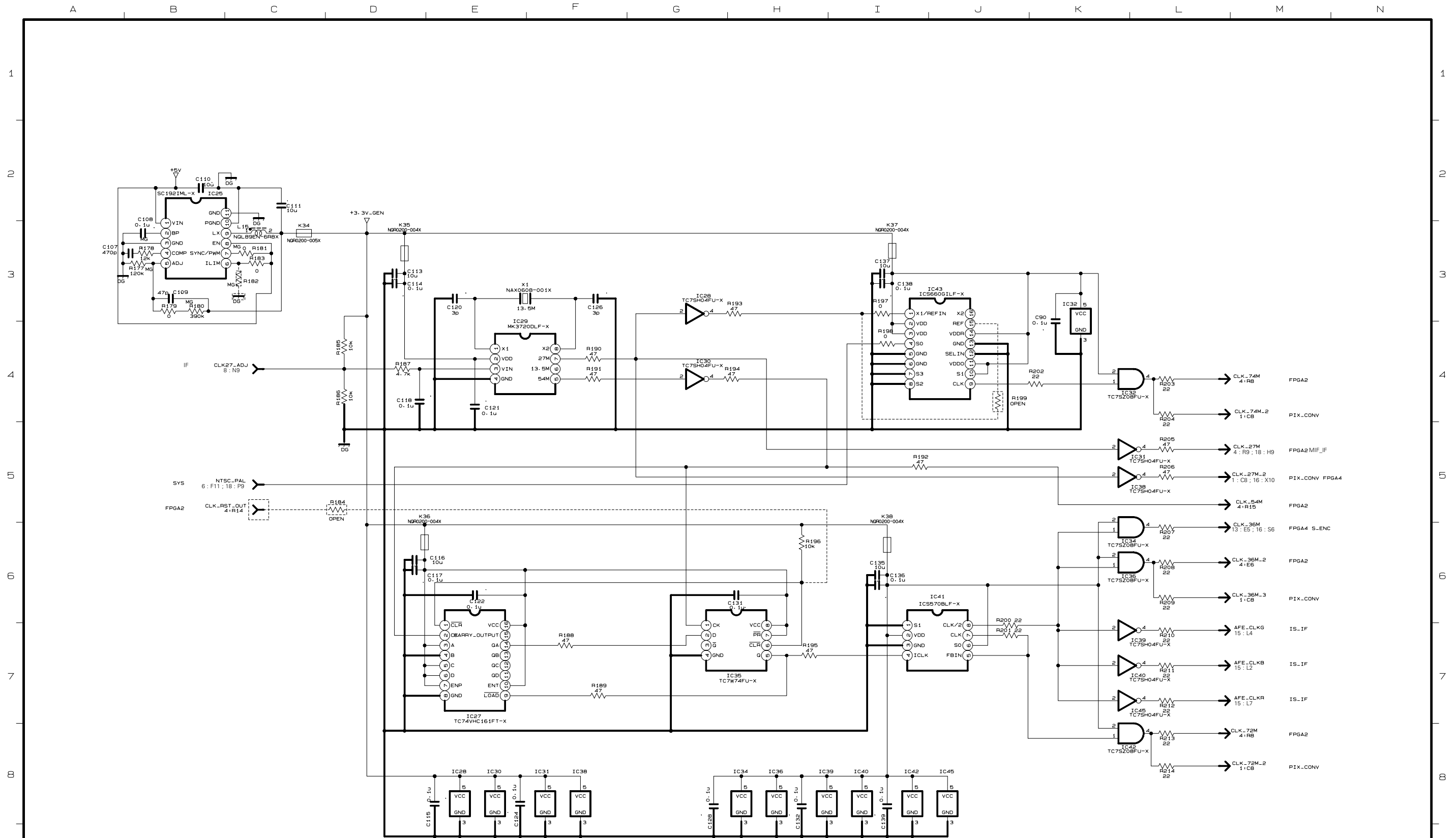


4.9 MAIN SCHEMATIC DIAGRAMS (1/18) (Pixel CONV)



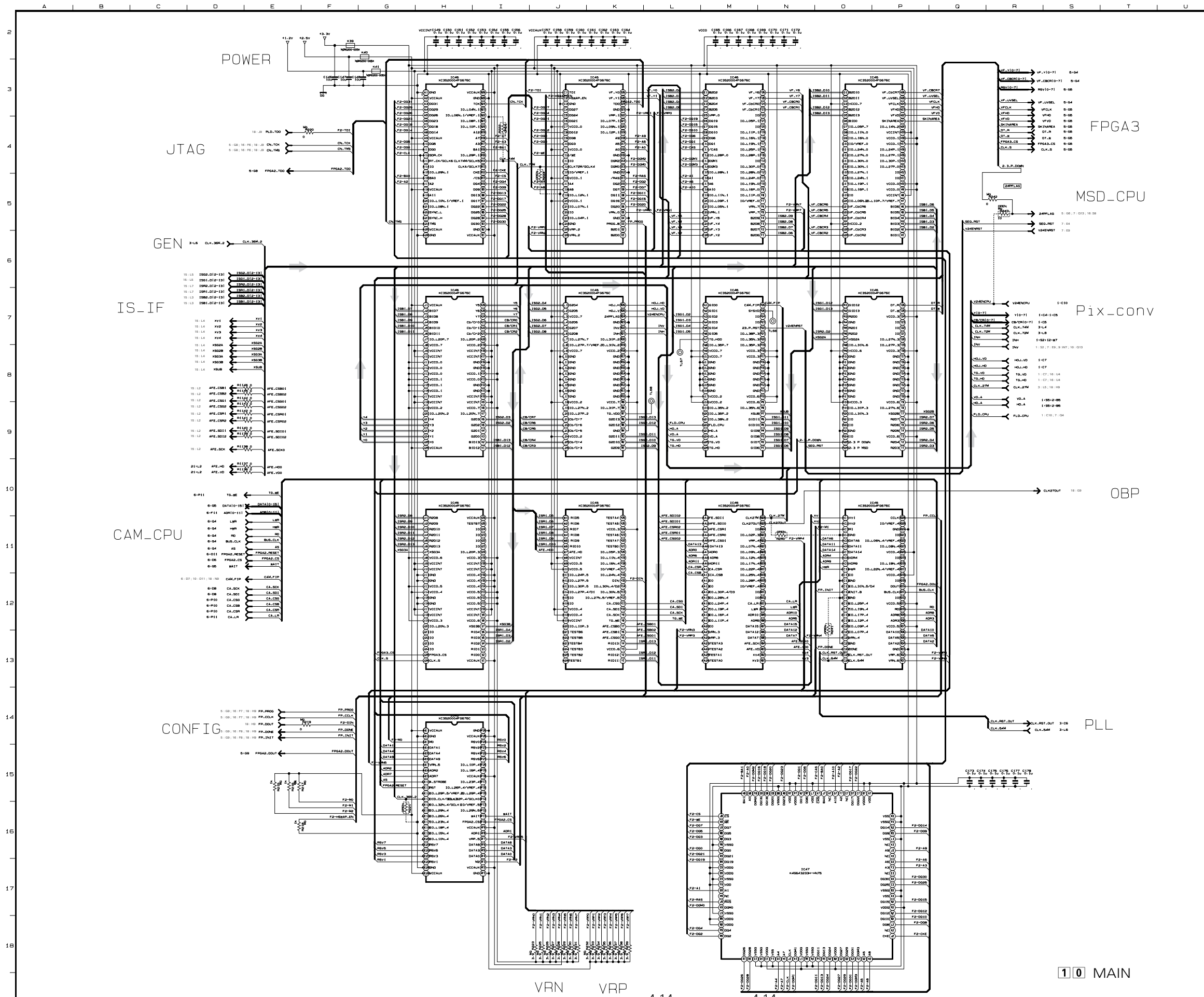


— MAIN SCHEMATIC DIAGRAMS (3/18) — (GEN)

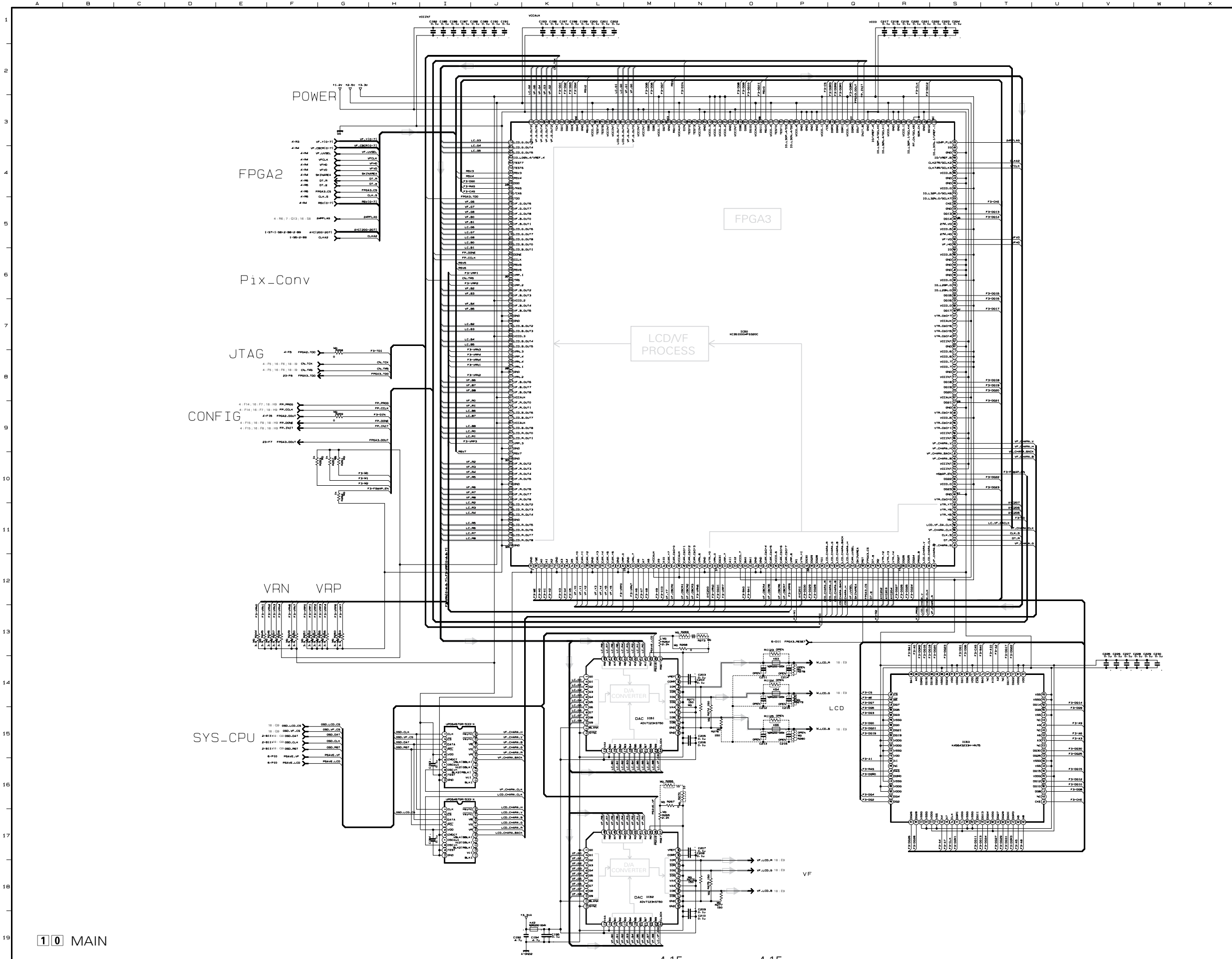


10 MAIN

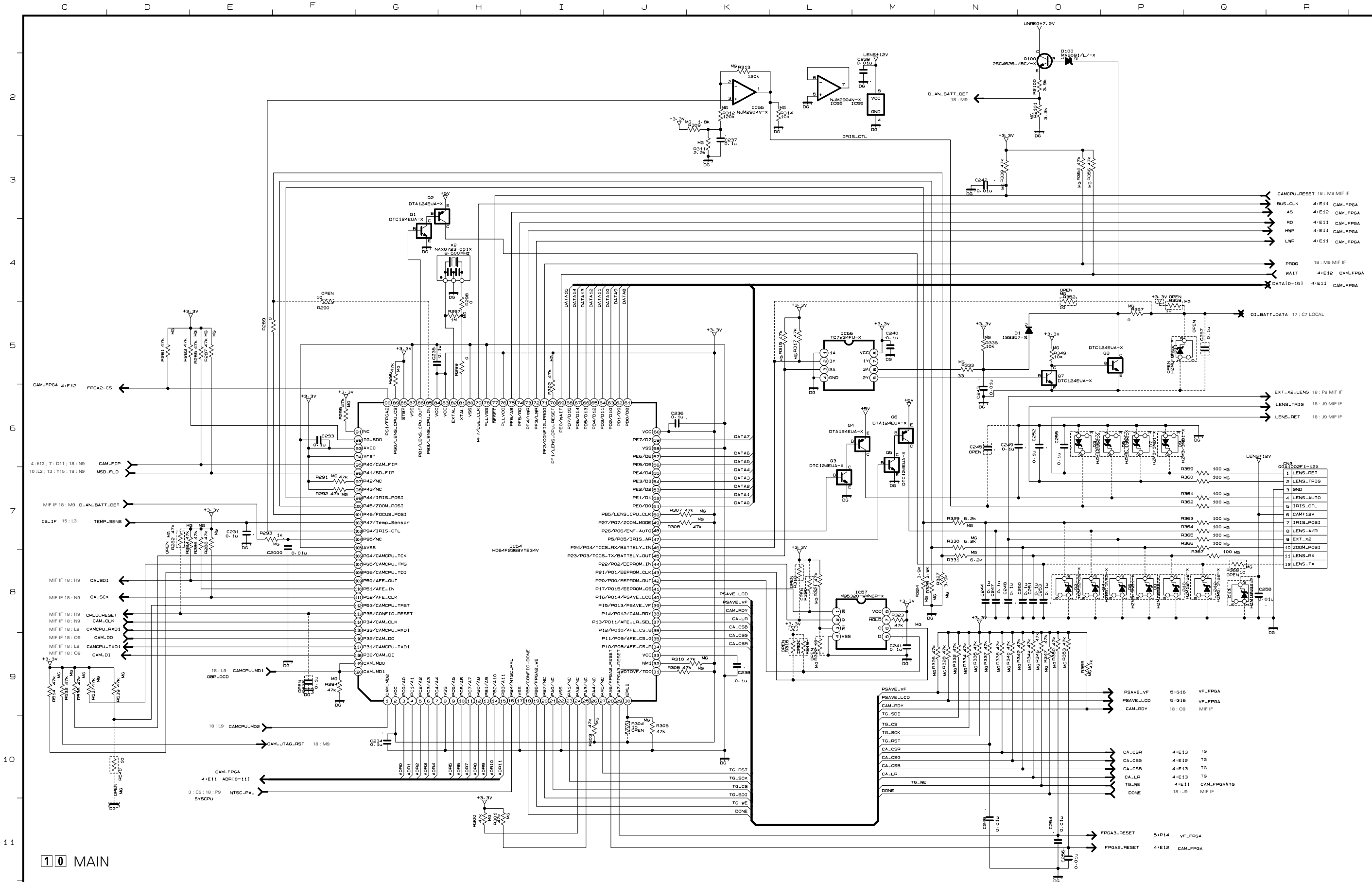
— MAIN SCHEMATIC DIAGRAMS (4/18) — (CAM FPGA-2)



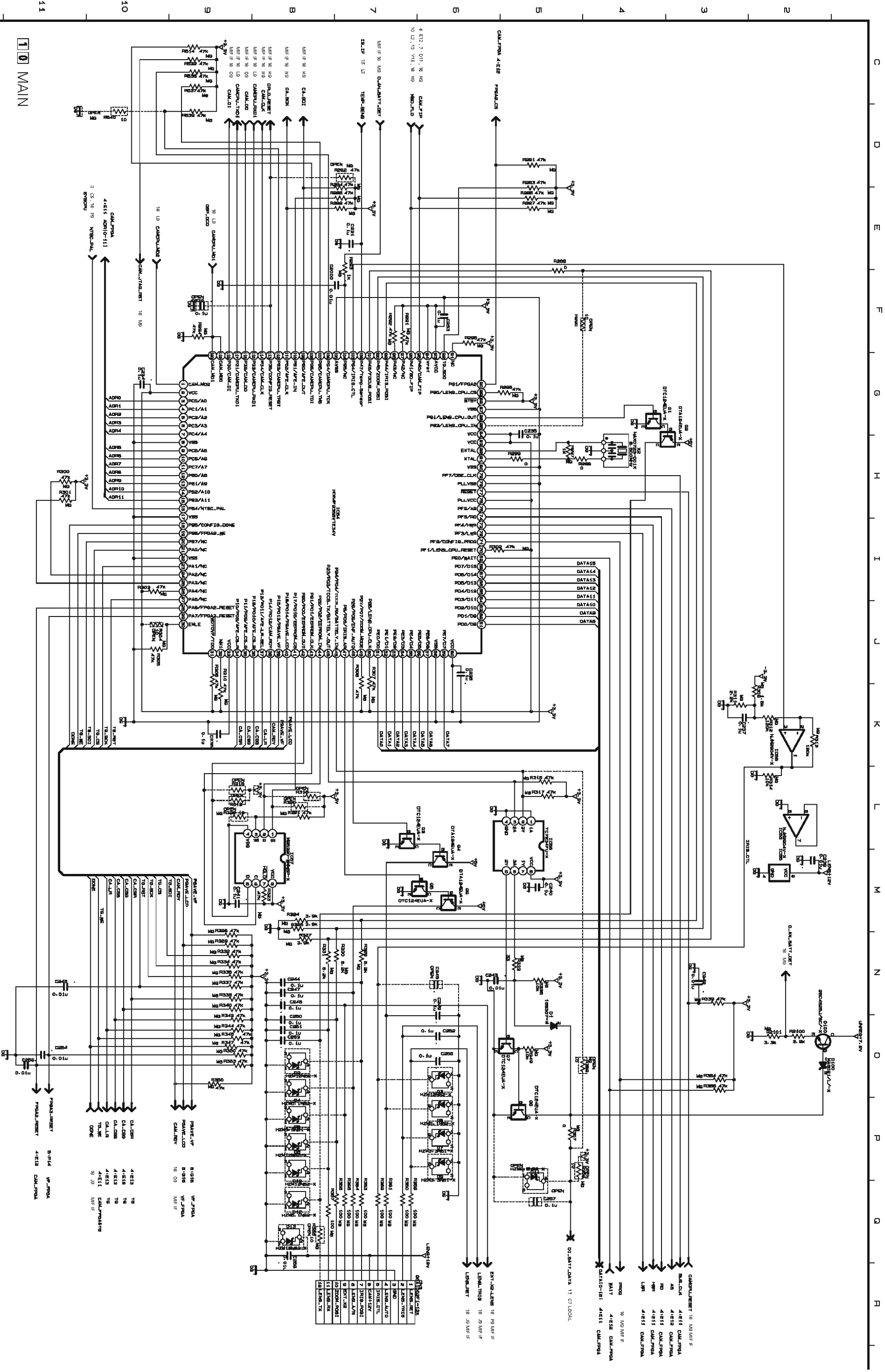
— MAIN SCHEMATIC DIAGRAMS (5/18) — (VF FPGA-3)



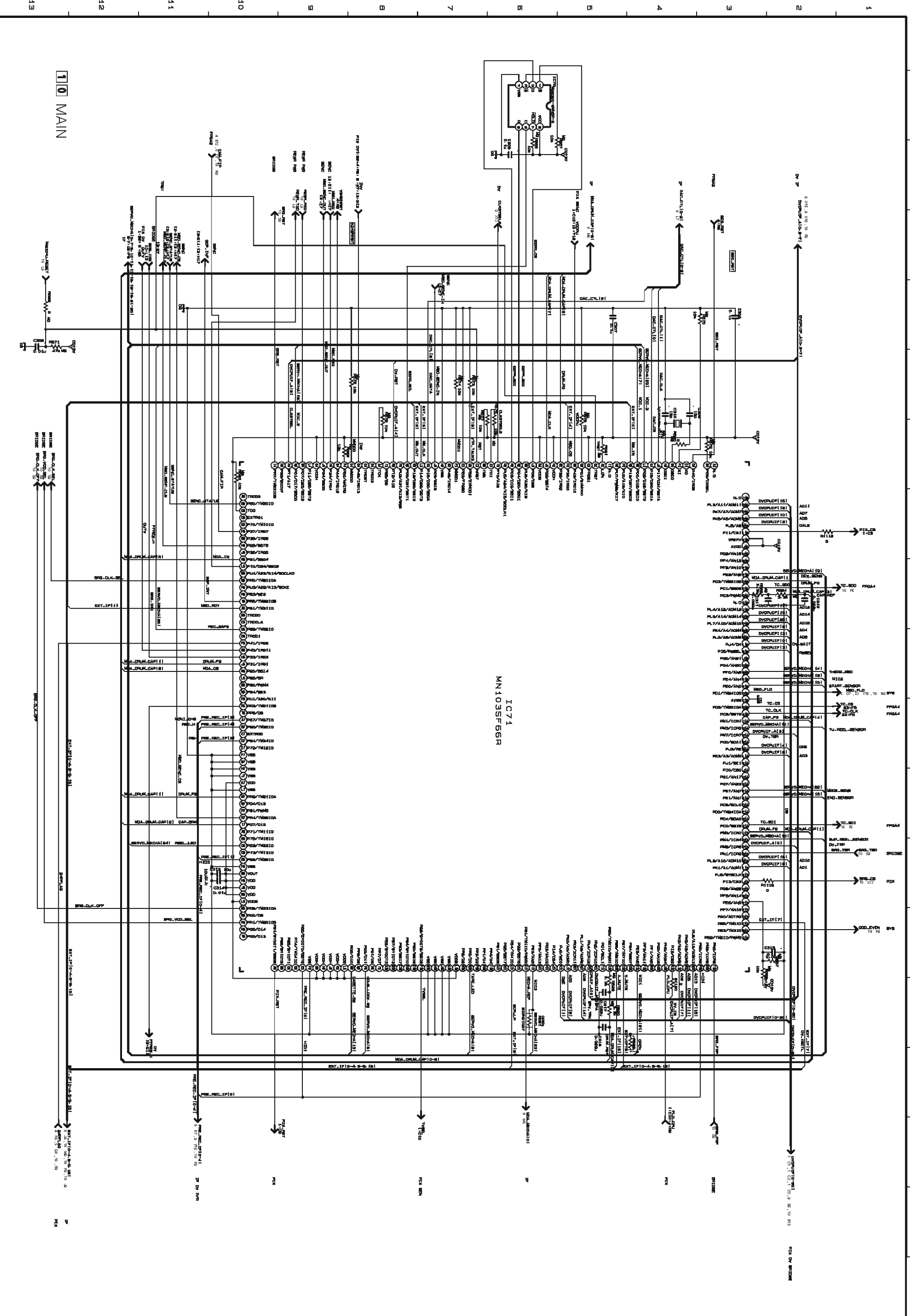
— MAIN SCHEMATIC DIAGRAMS (6/18) — (CAM CPU)



10 MAIN



10 MAIN



10 MAIN

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4-17

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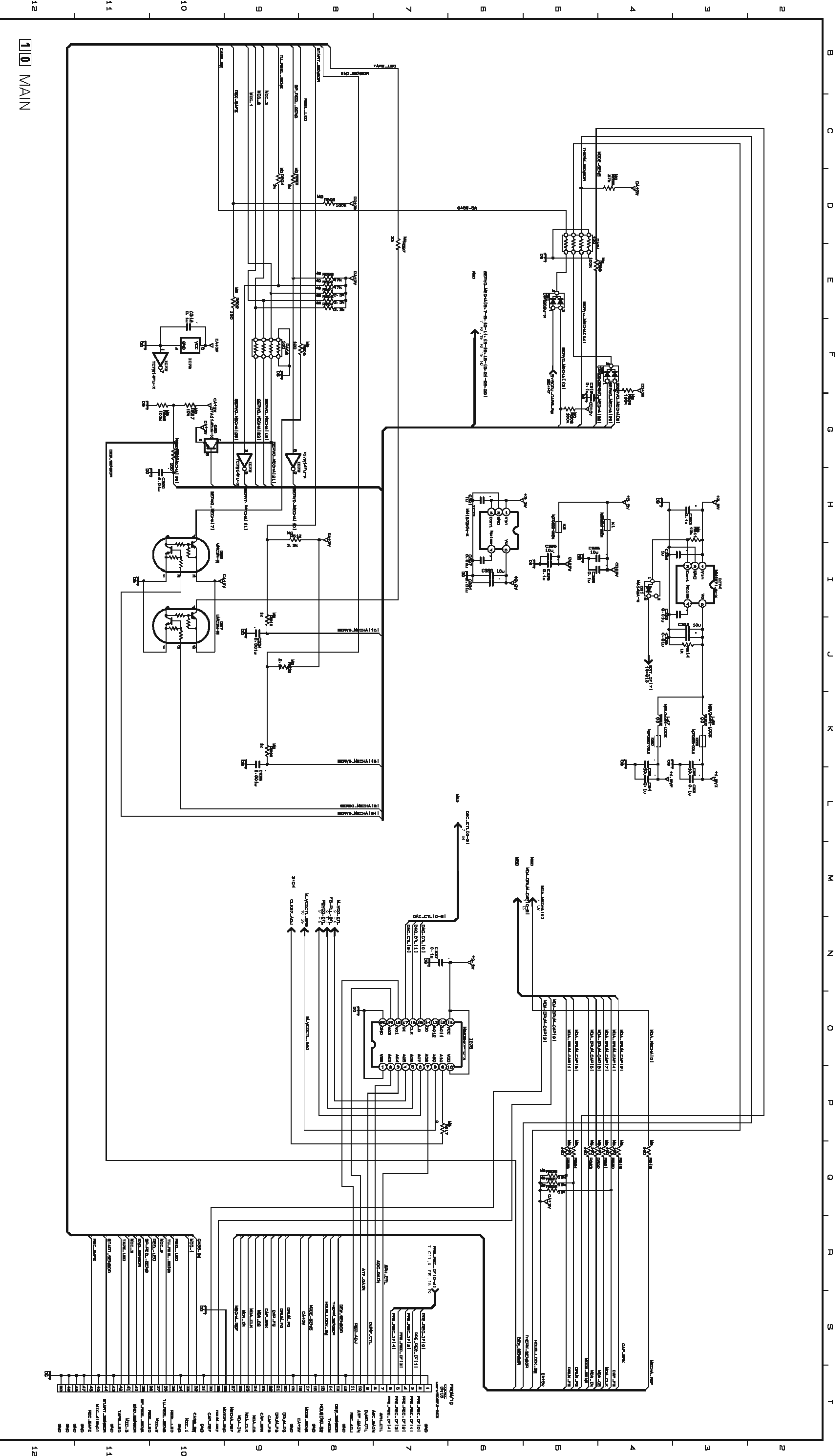
5

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10 MAIN

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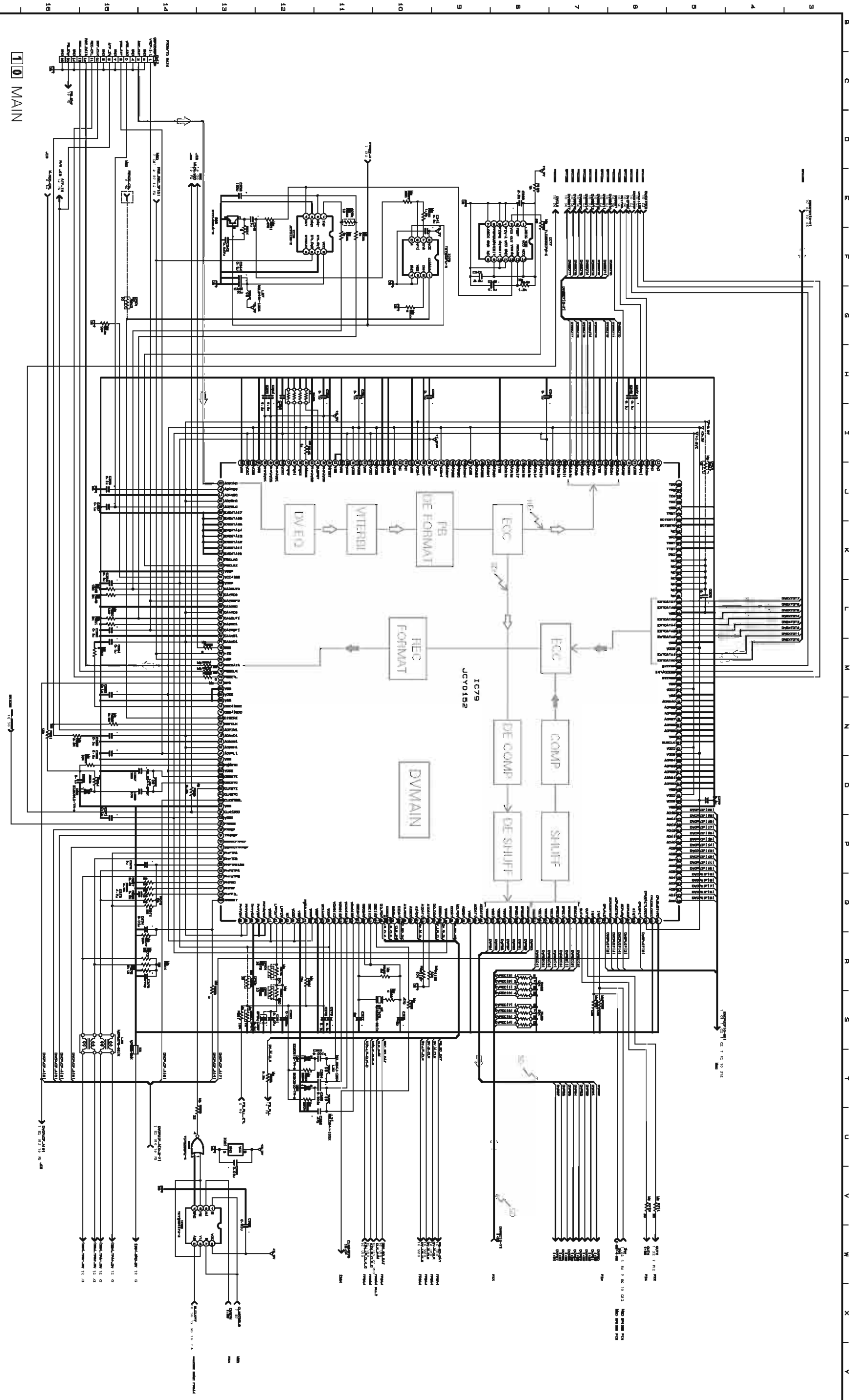
4

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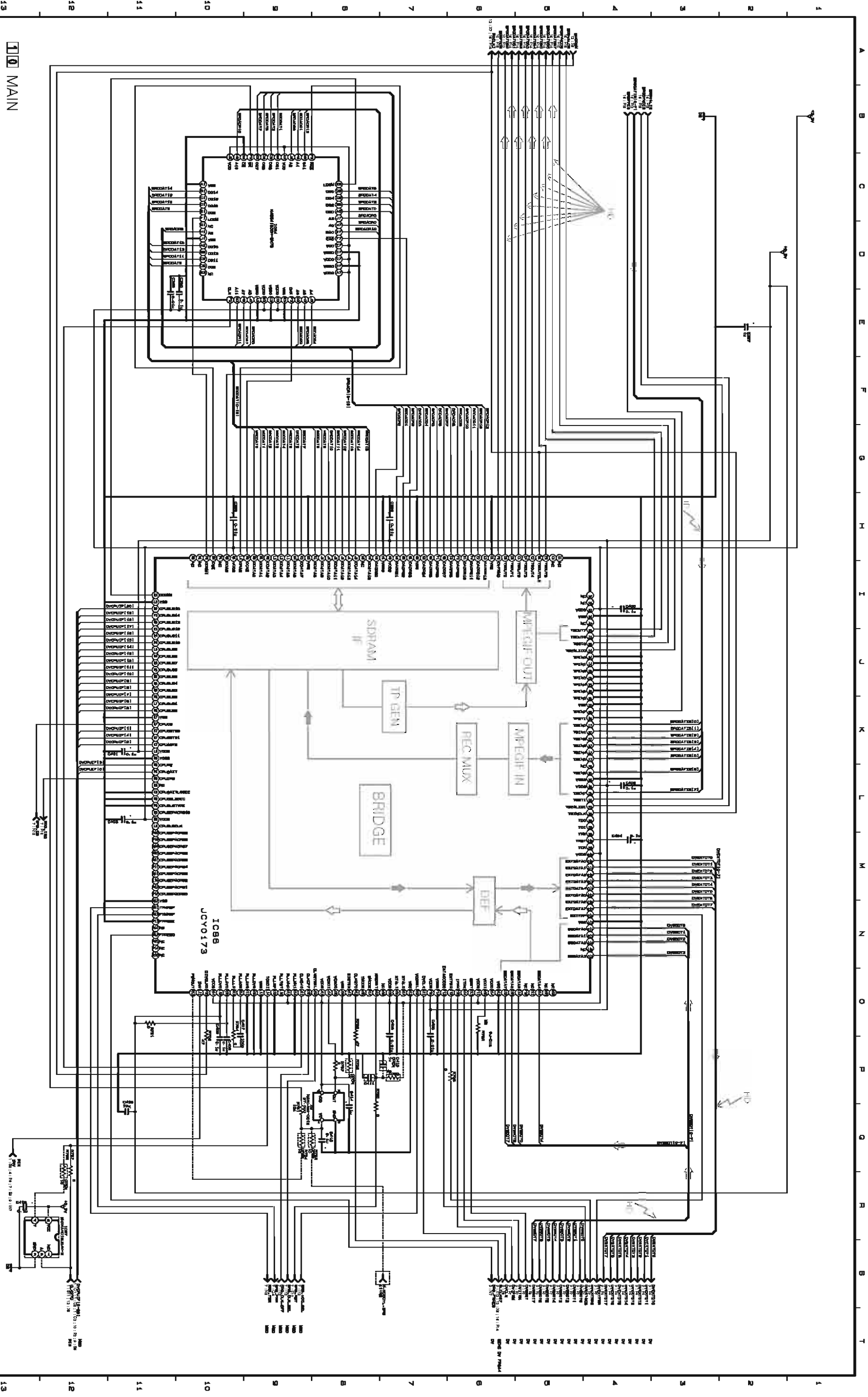
3

2

2

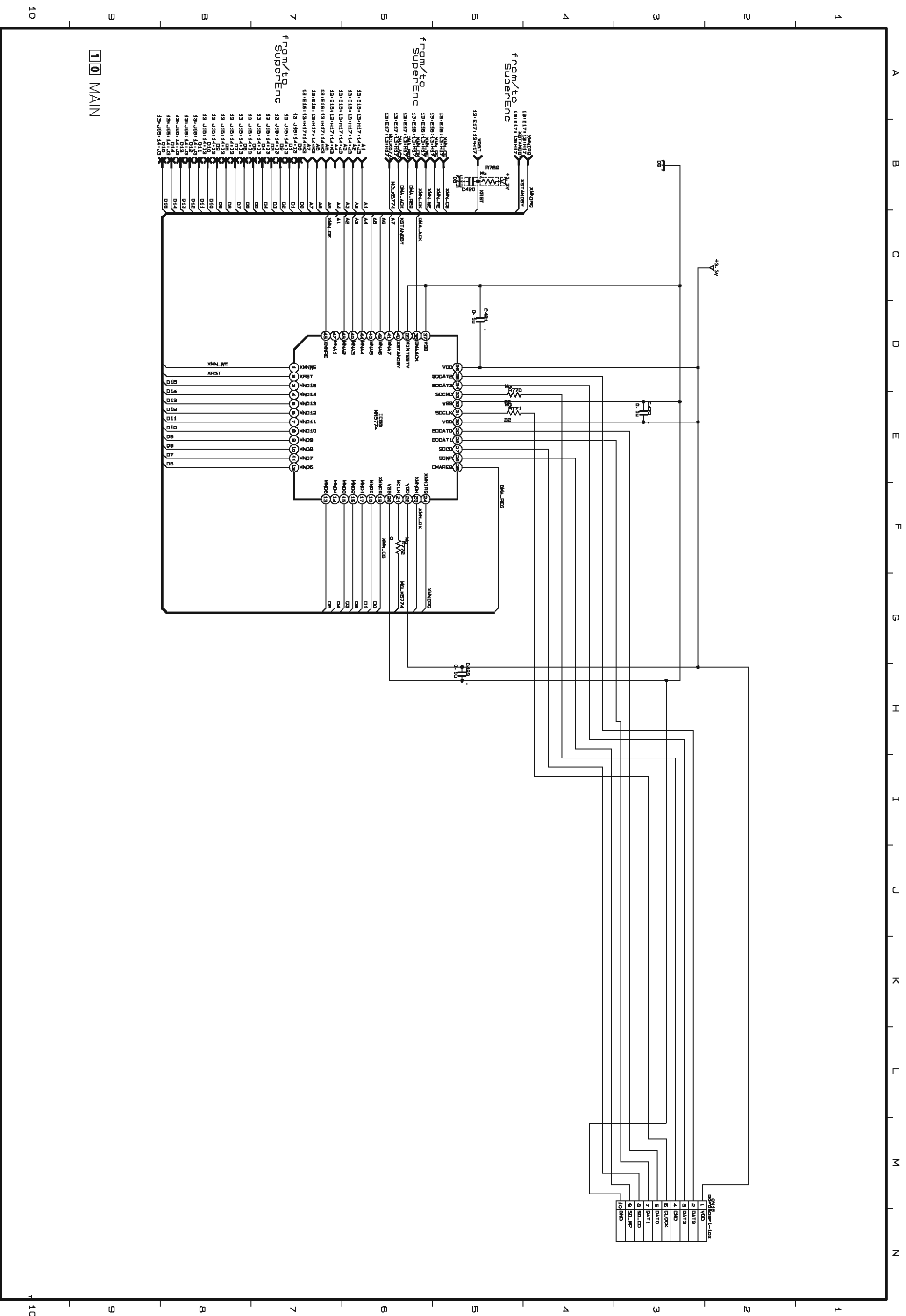


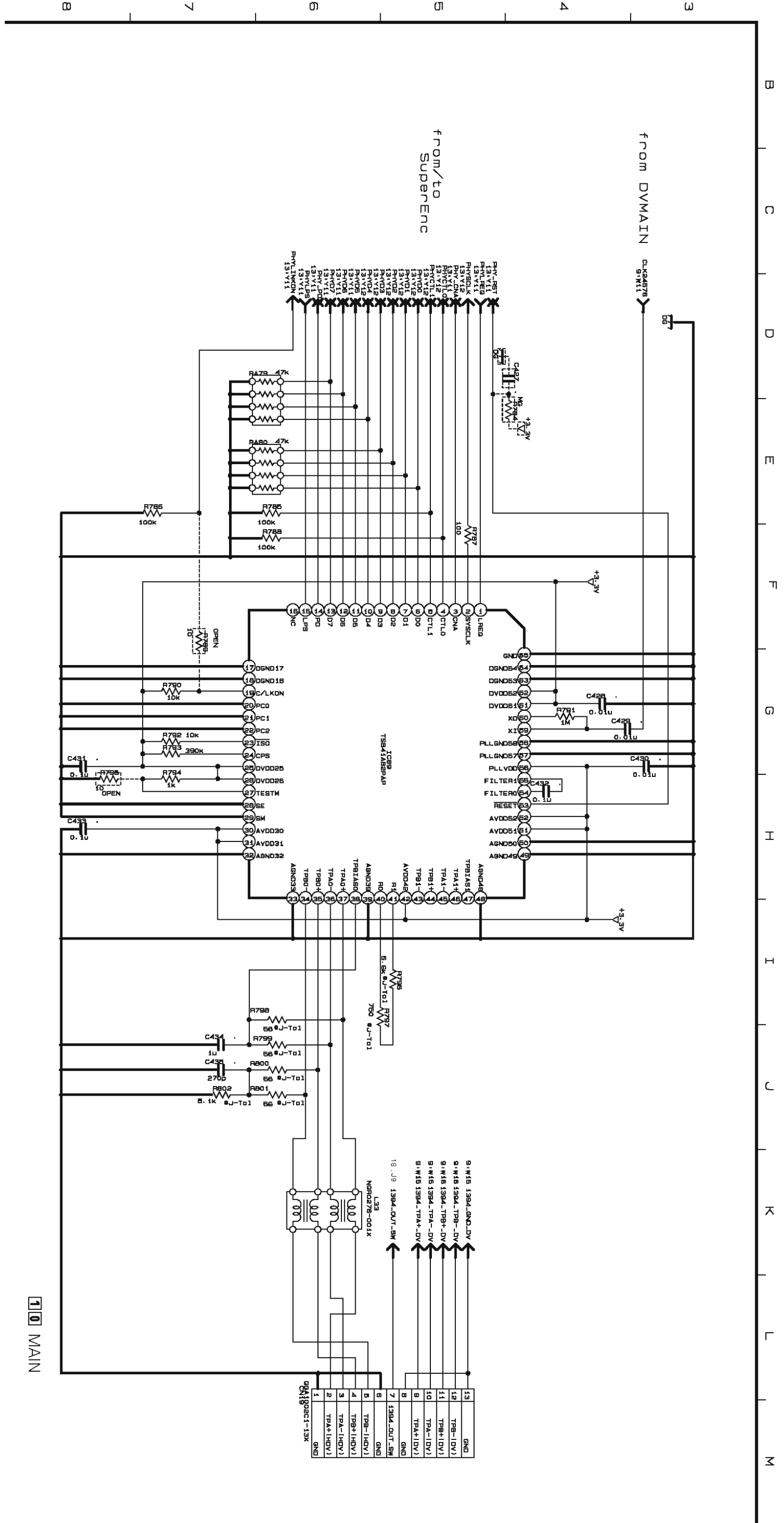
— MAIN SCHEMATIC DIAGRAMS (10/18) — (BRIDGE)



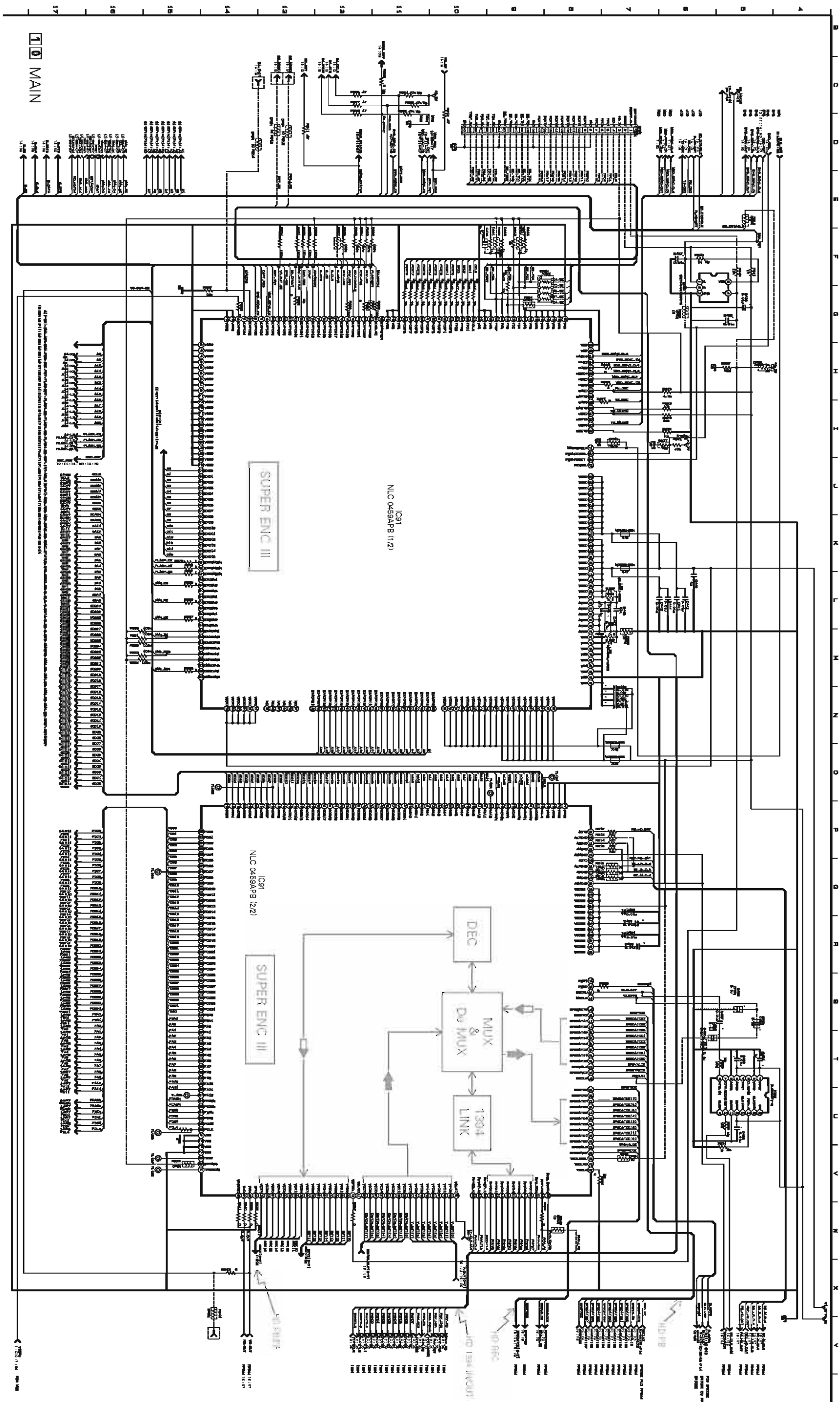
10 MAIN

- MAIN SCHEMATIC DIAGRAMS (11/18) - (SD I/F)

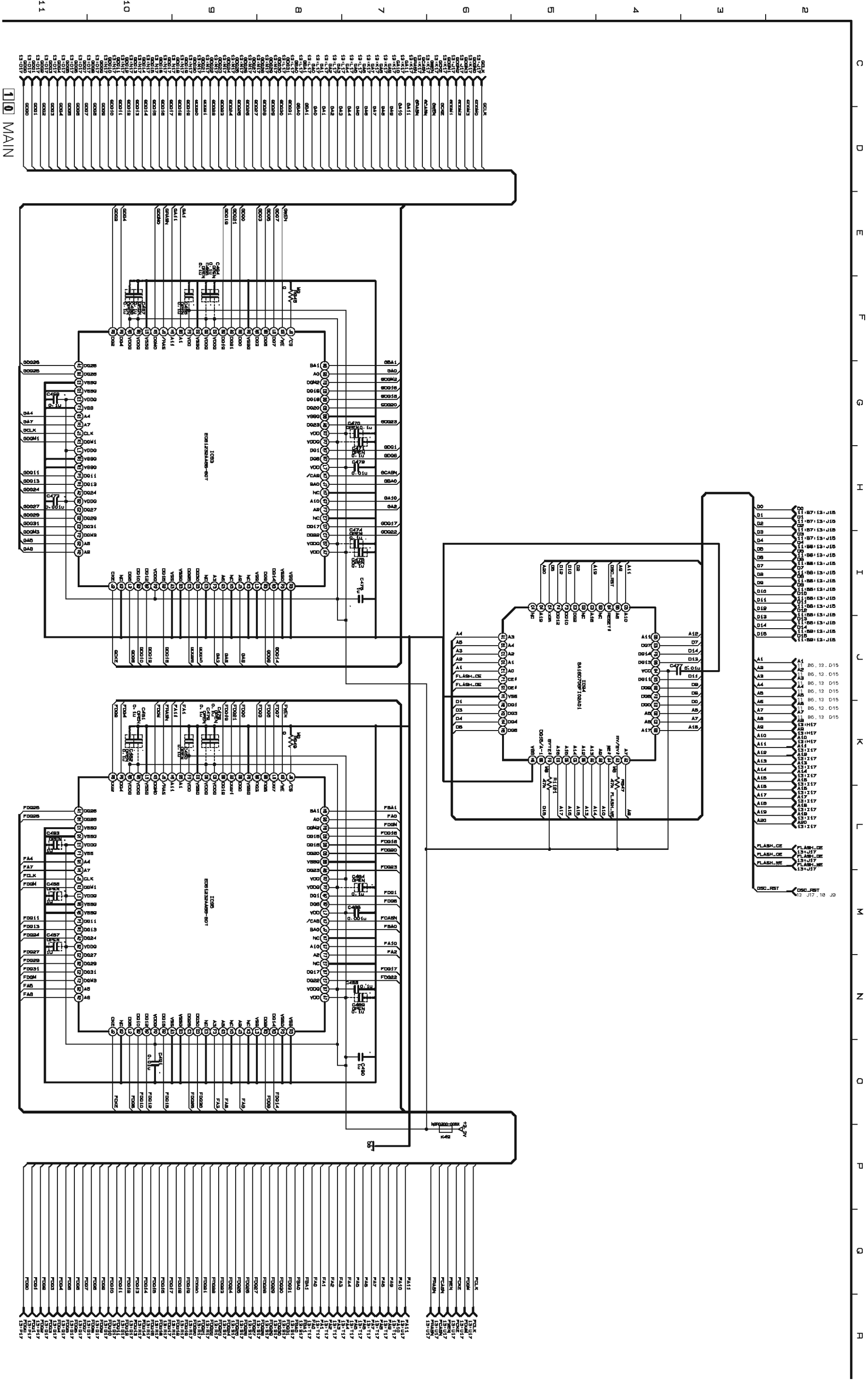


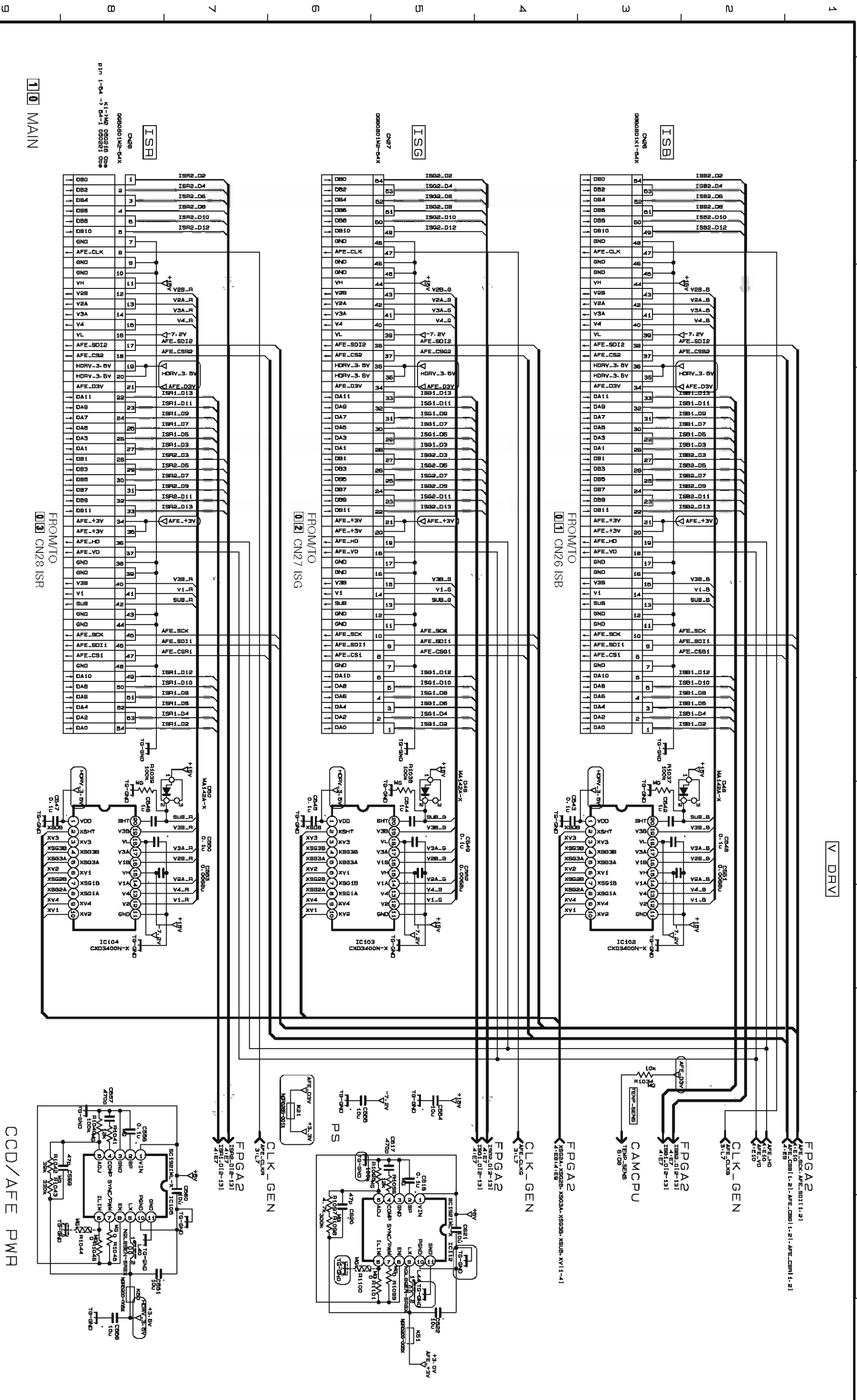


10 MAIN



— MAIN SCHEMATIC DIAGRAMS (14/18) — (SENC RAM)

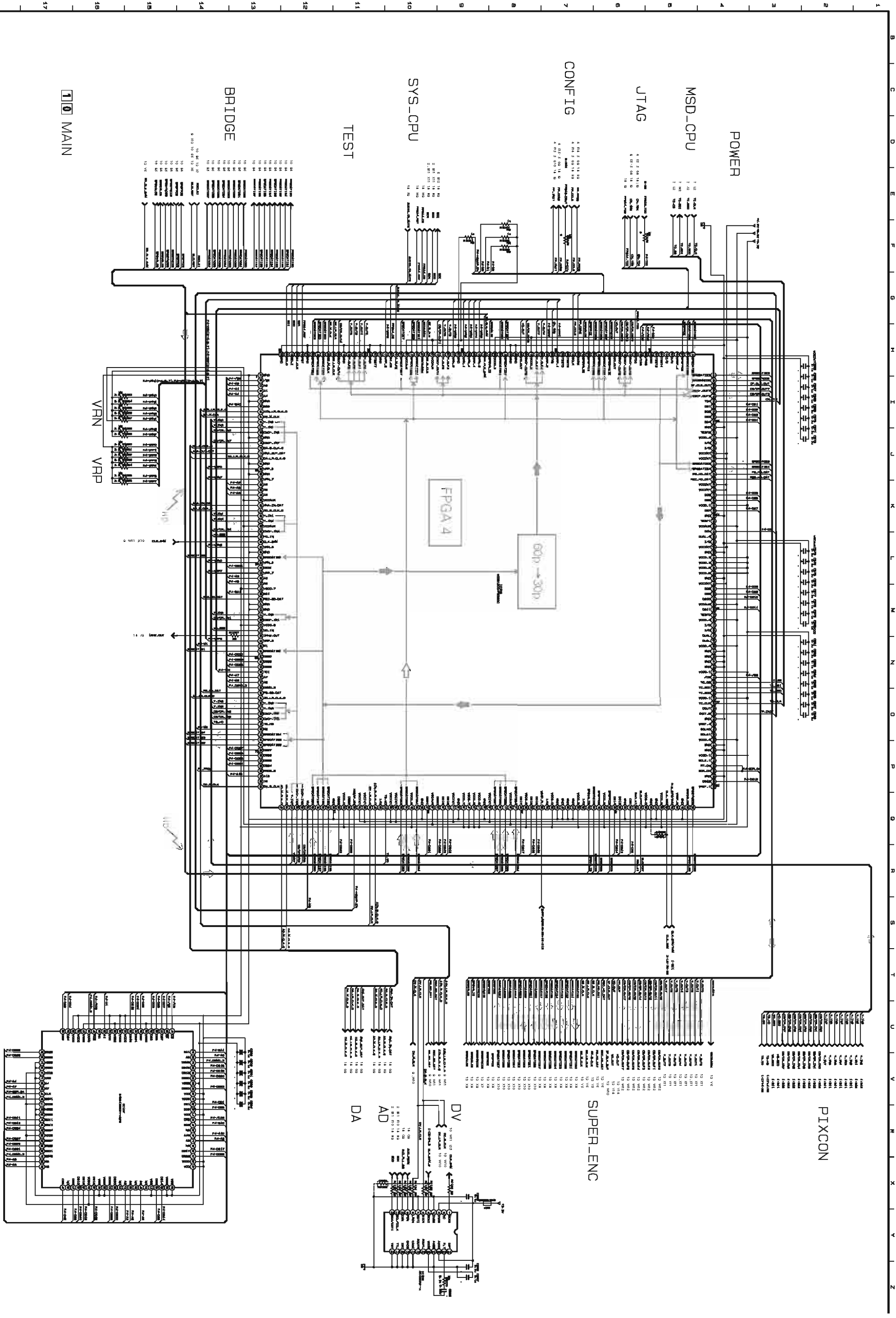




10 MAIN

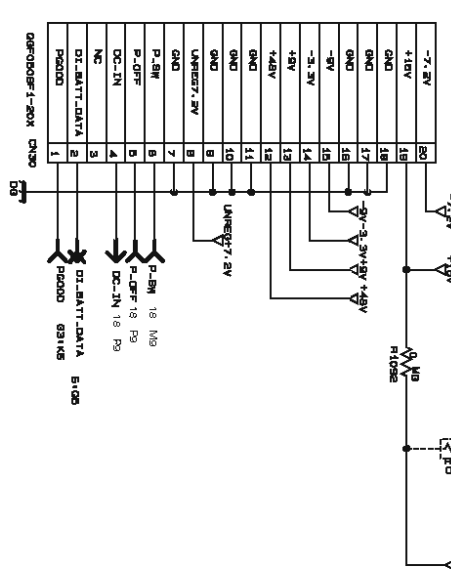
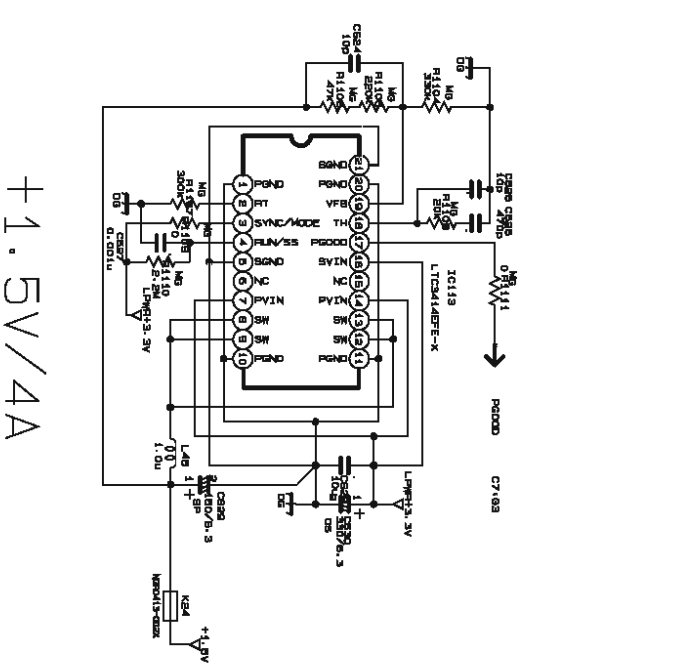
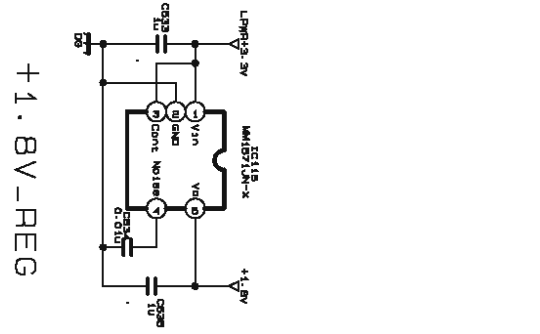
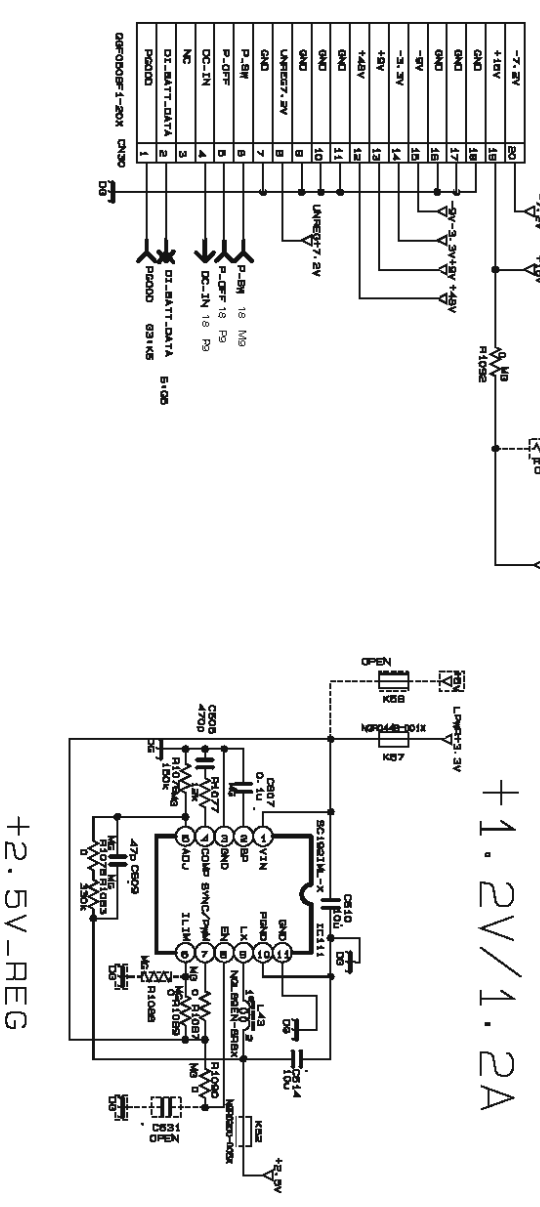
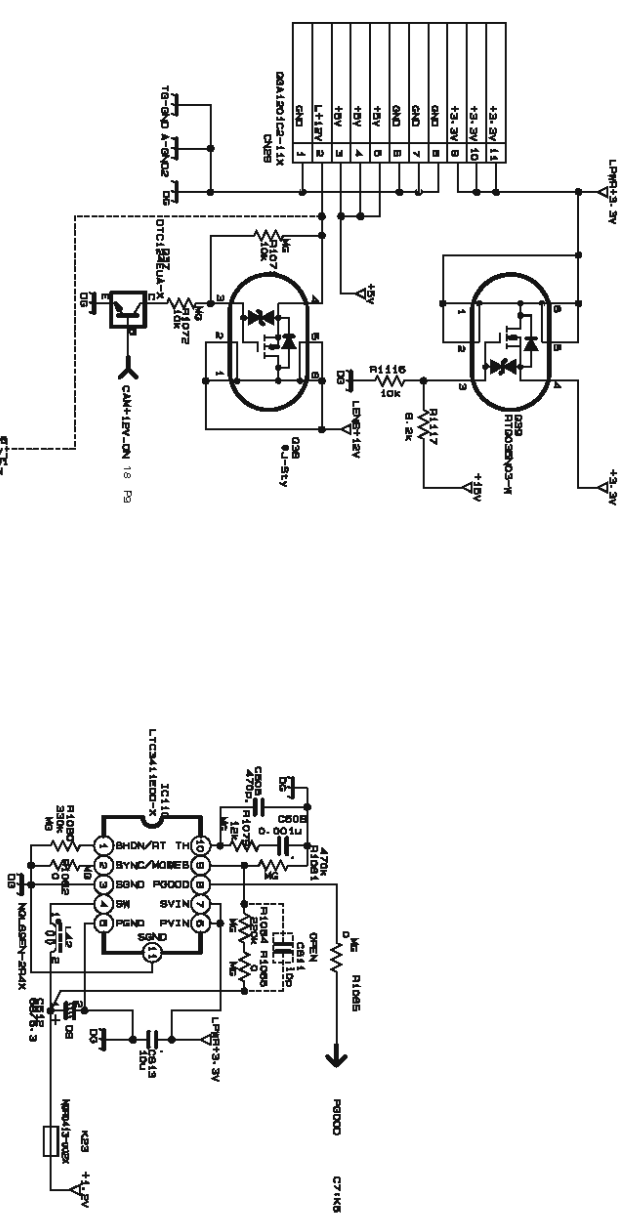
4-25

4-25

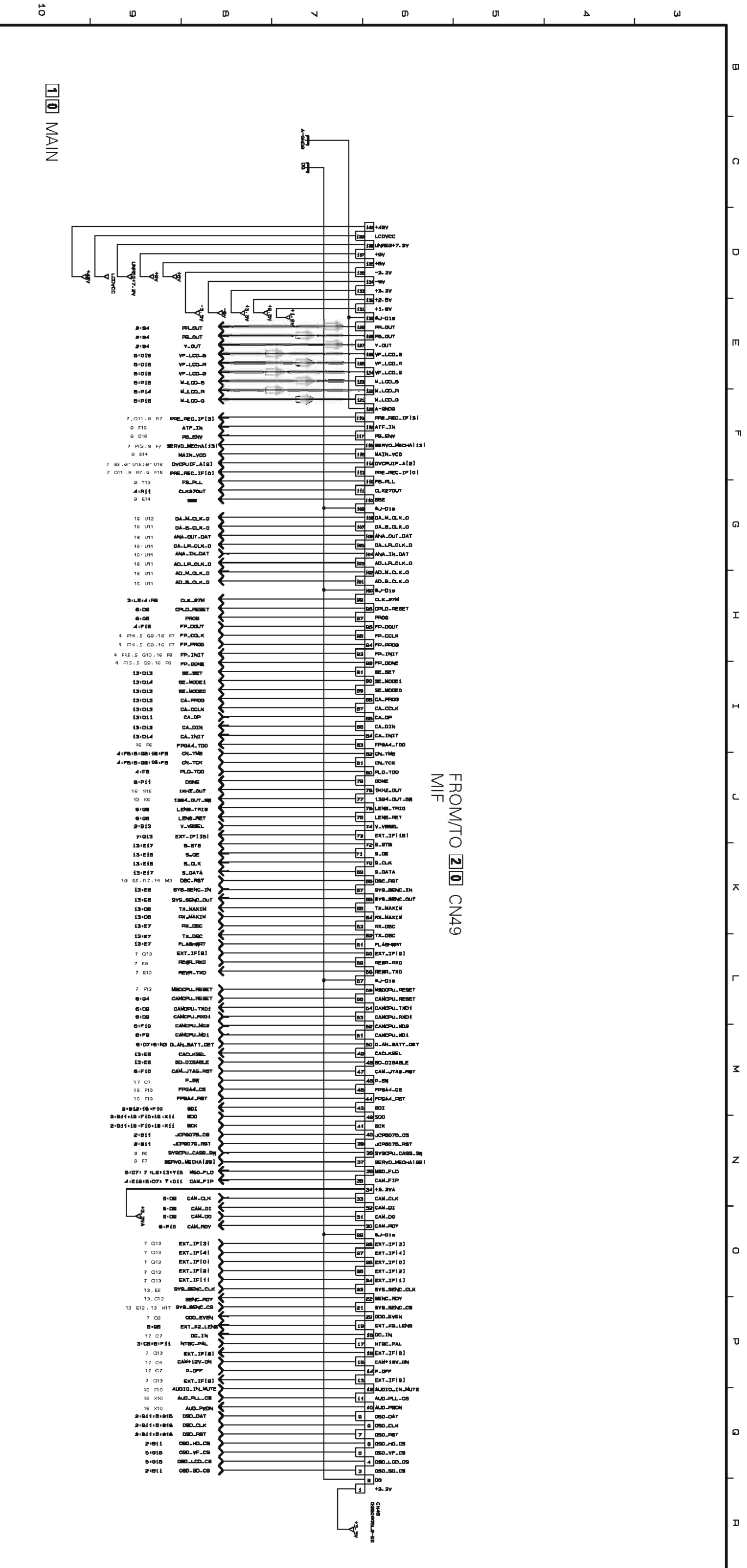


— MAIN SCHEMATIC DIAGRAMS (17/18) — (LOCAL_PWR)

A B C D E F G H I J K L M N

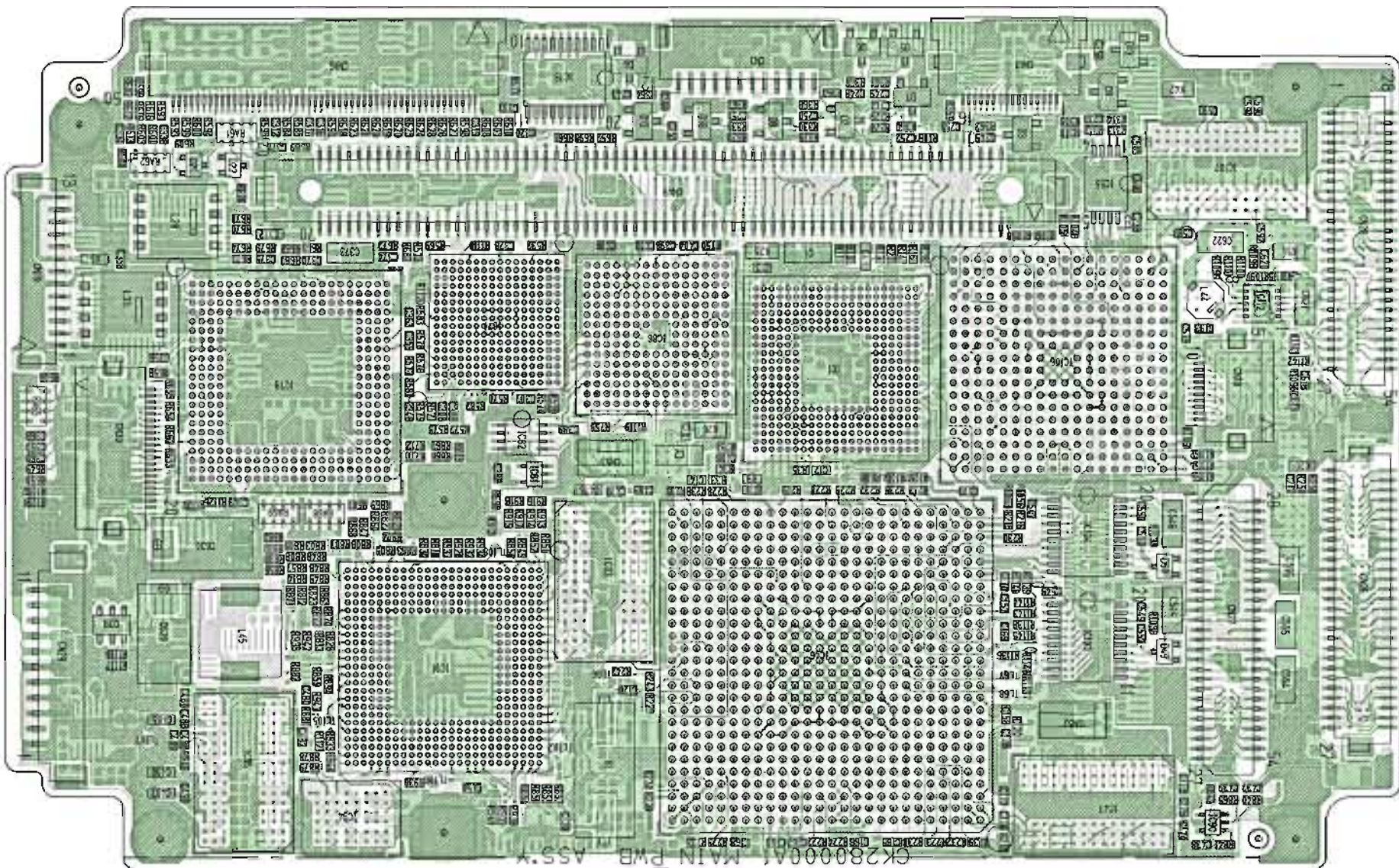


10 MAIN



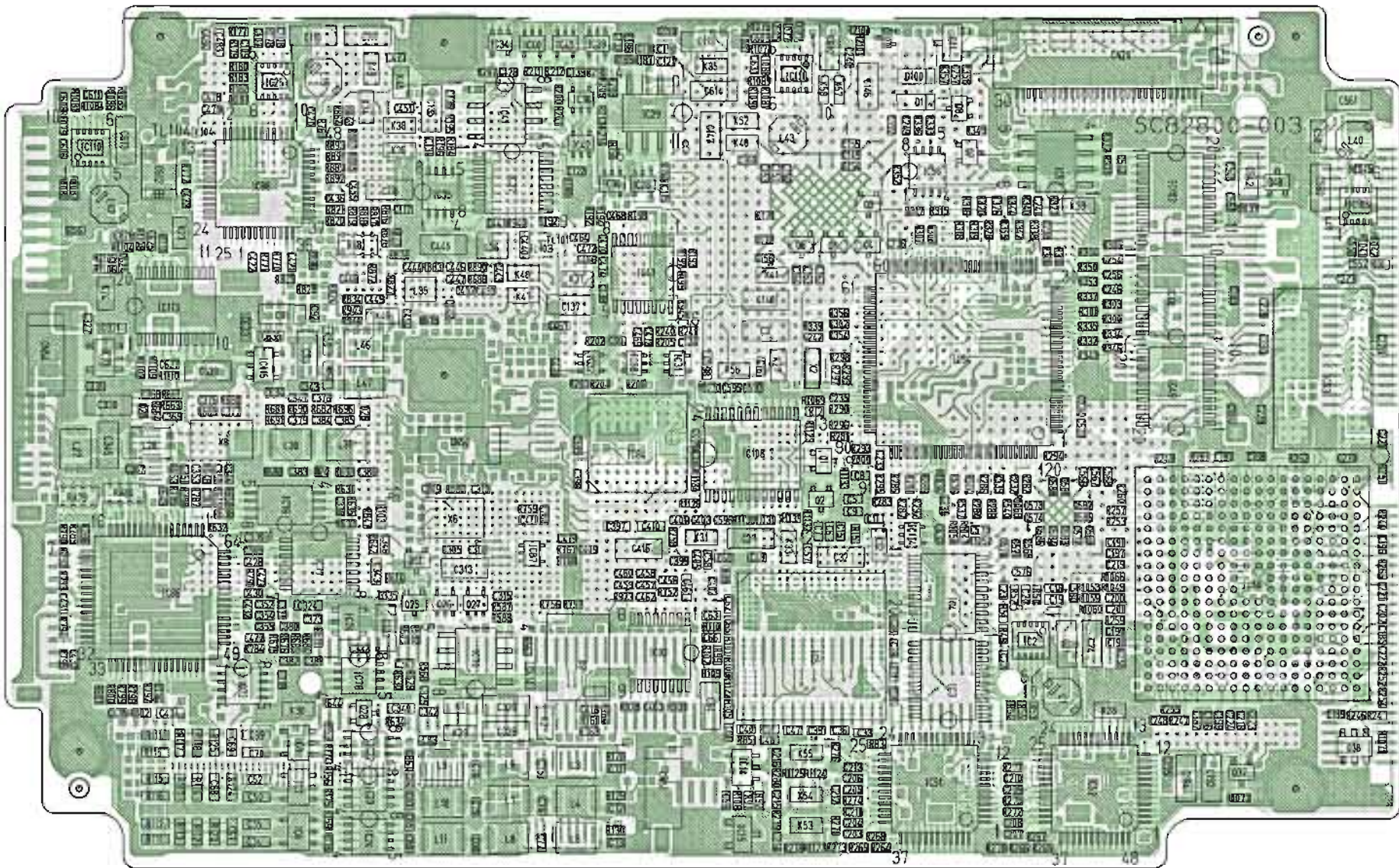
10 MAIN

- SIDE A -



4-29

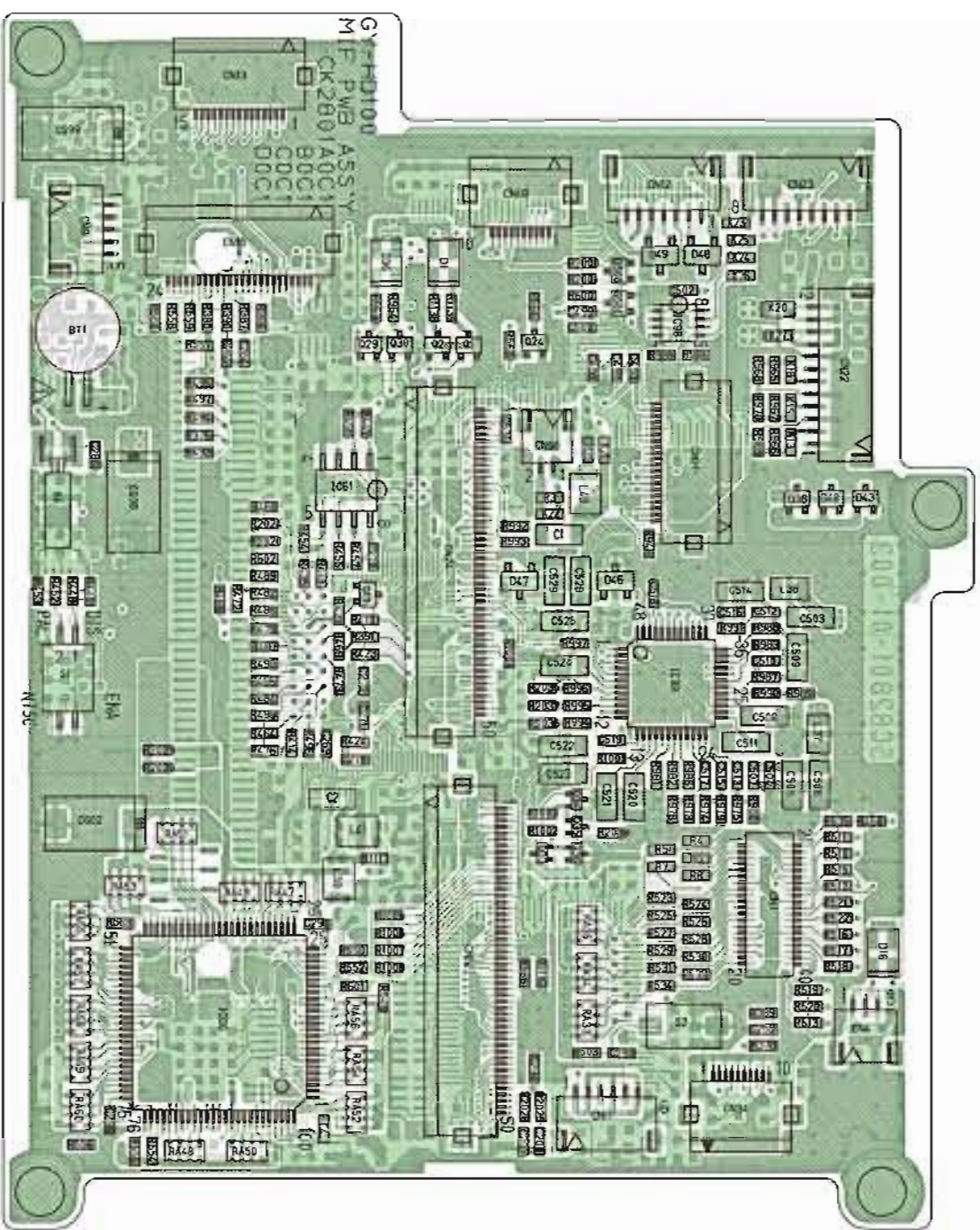
- SIDE B -



4-29

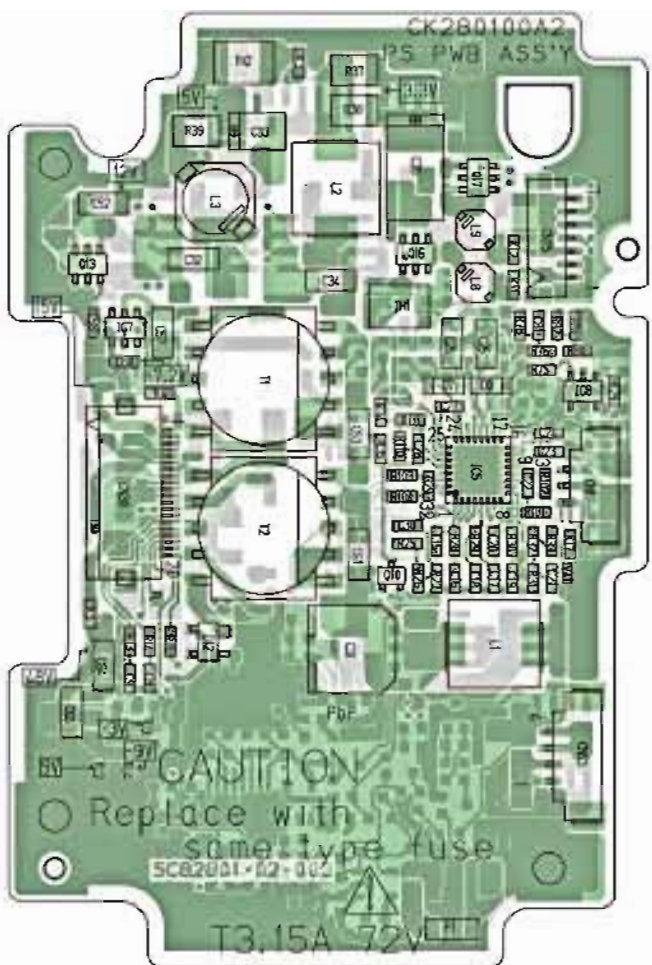
4.11 MIF & PS CIRCUIT BOARDS

— MIF —



— SIDE A —

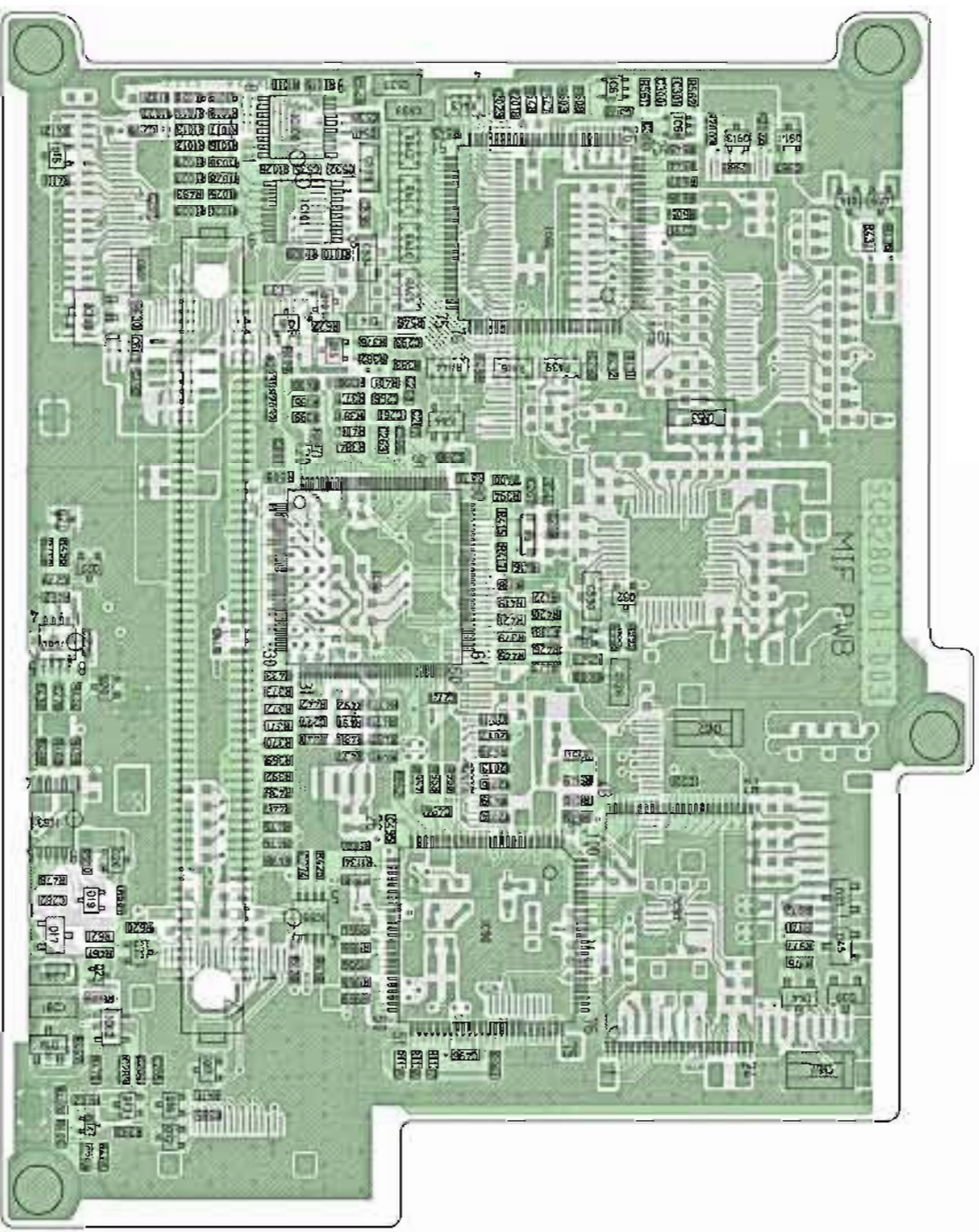
— PS —



— SIDE A —

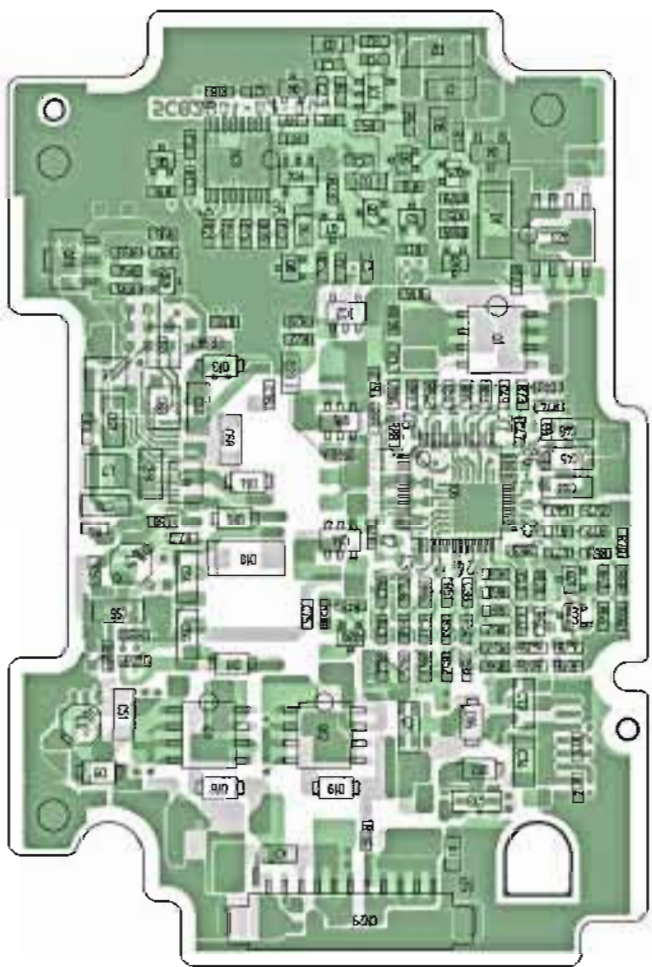
4-30

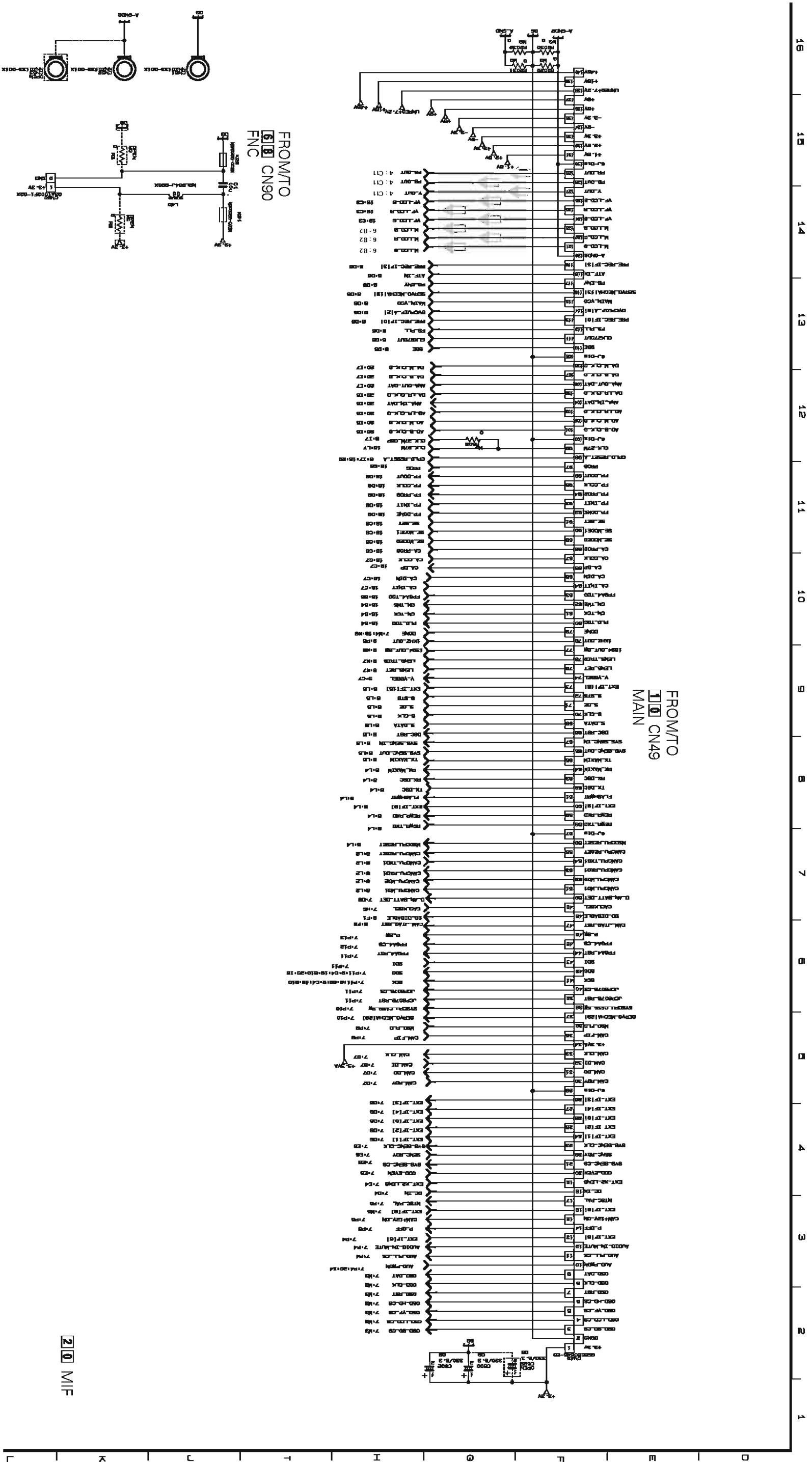
— SIDE B —

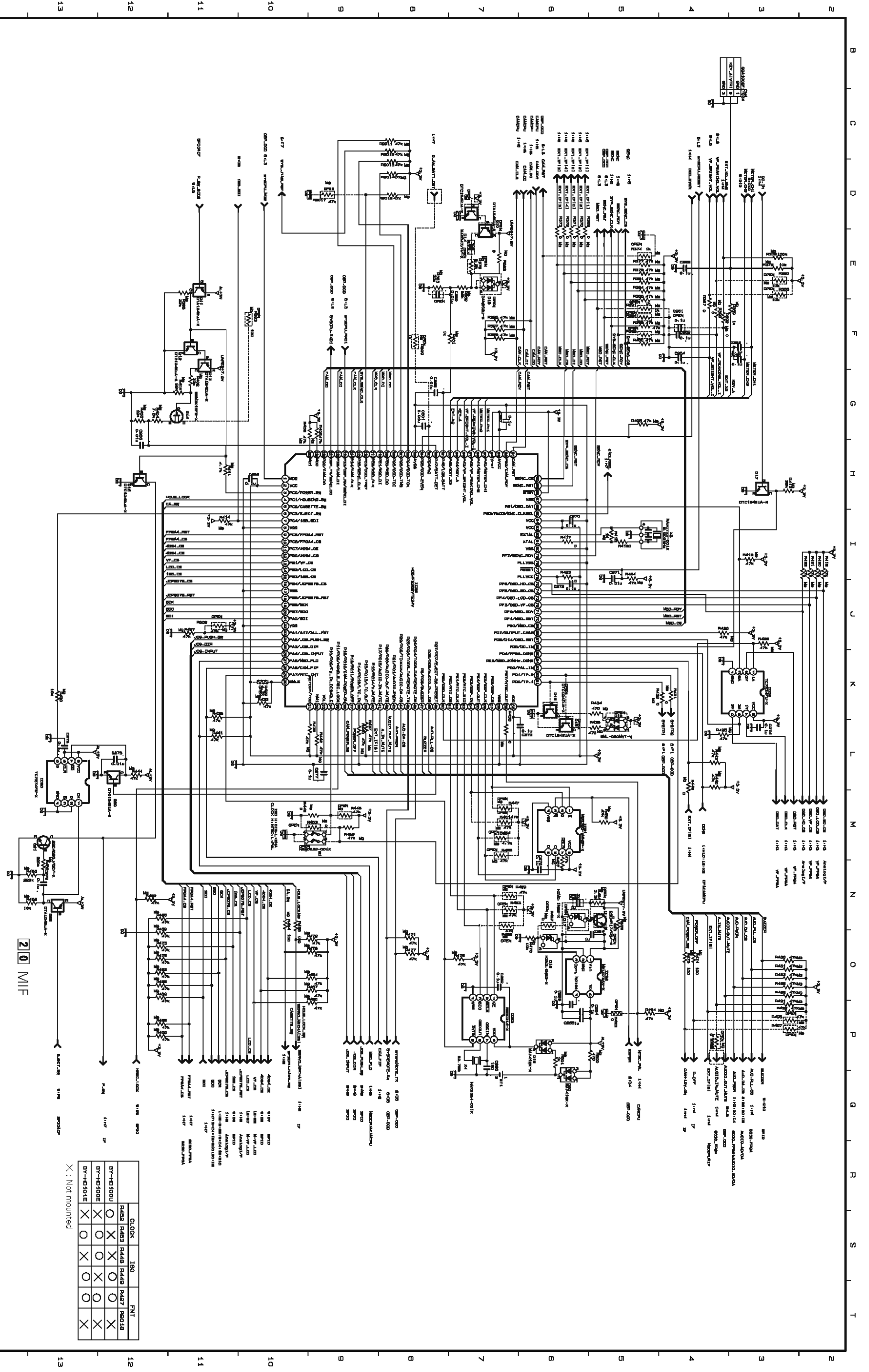


— SIDE B —

4-30



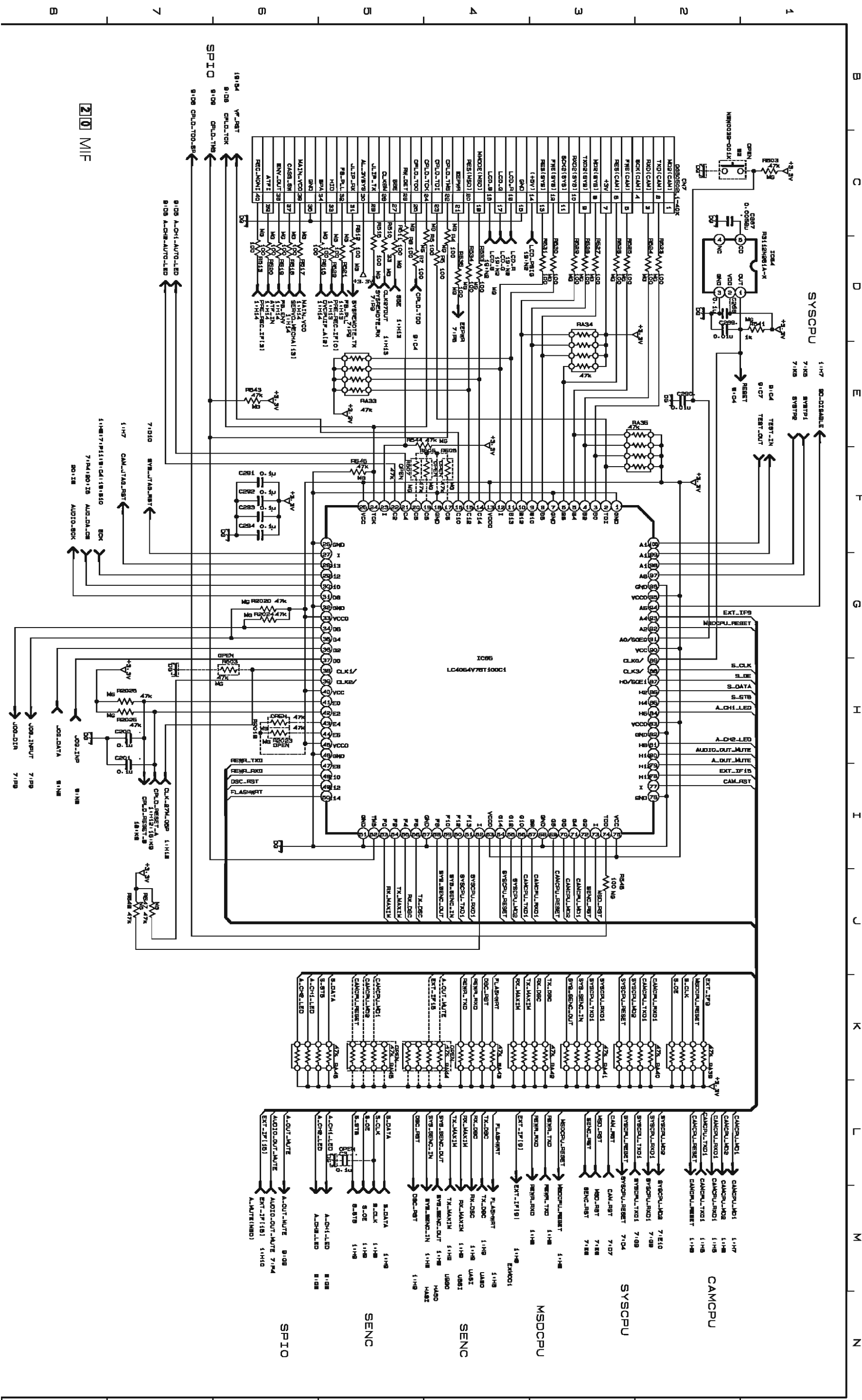


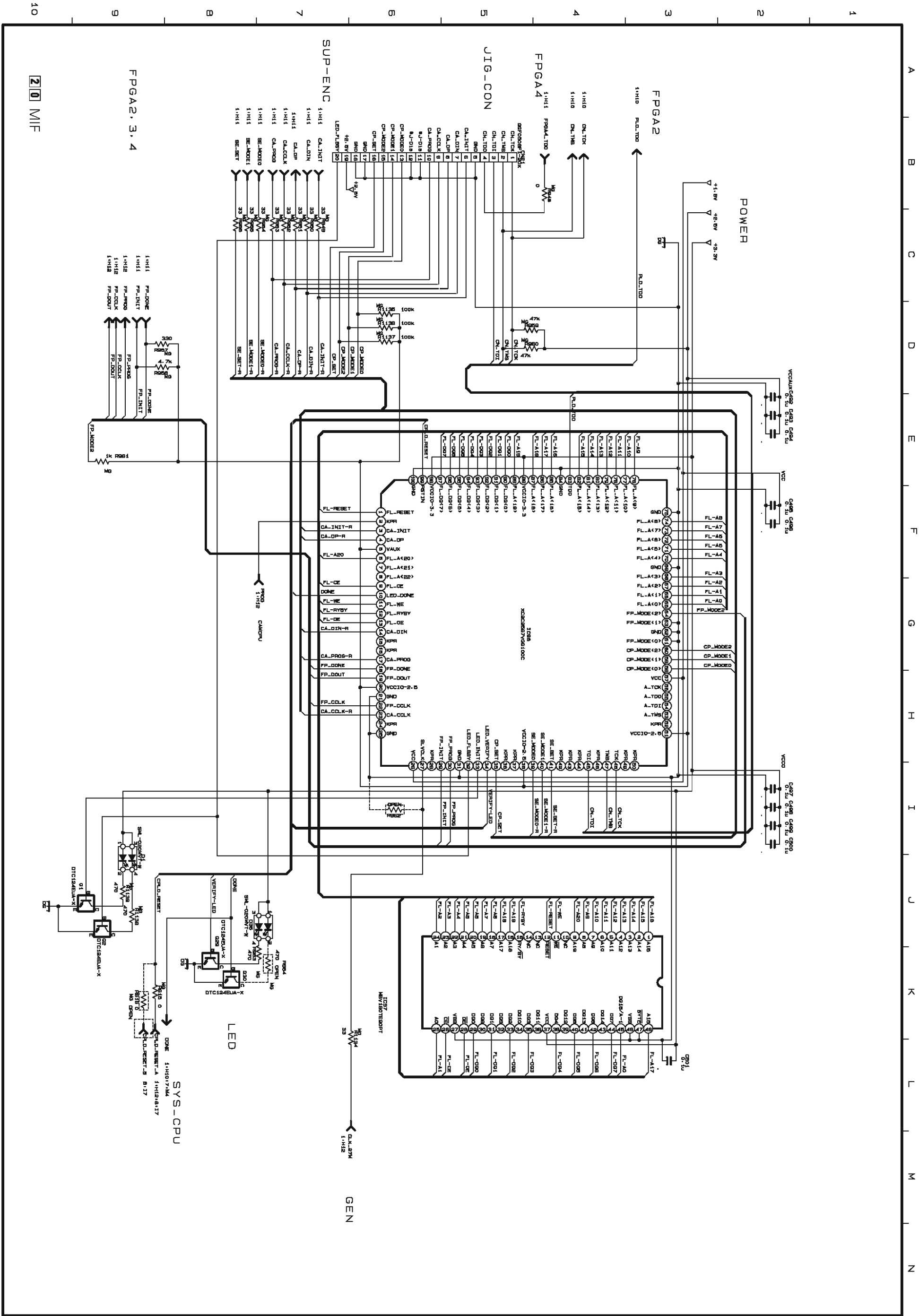


	CLOCK	180	180	180	180	FMT
BY-H3100U	○	×	○	○	○	×
BY-H3100E	×	○	○	○	○	×
BY-H3101E	×	○	○	○	○	×

X : Not mounted

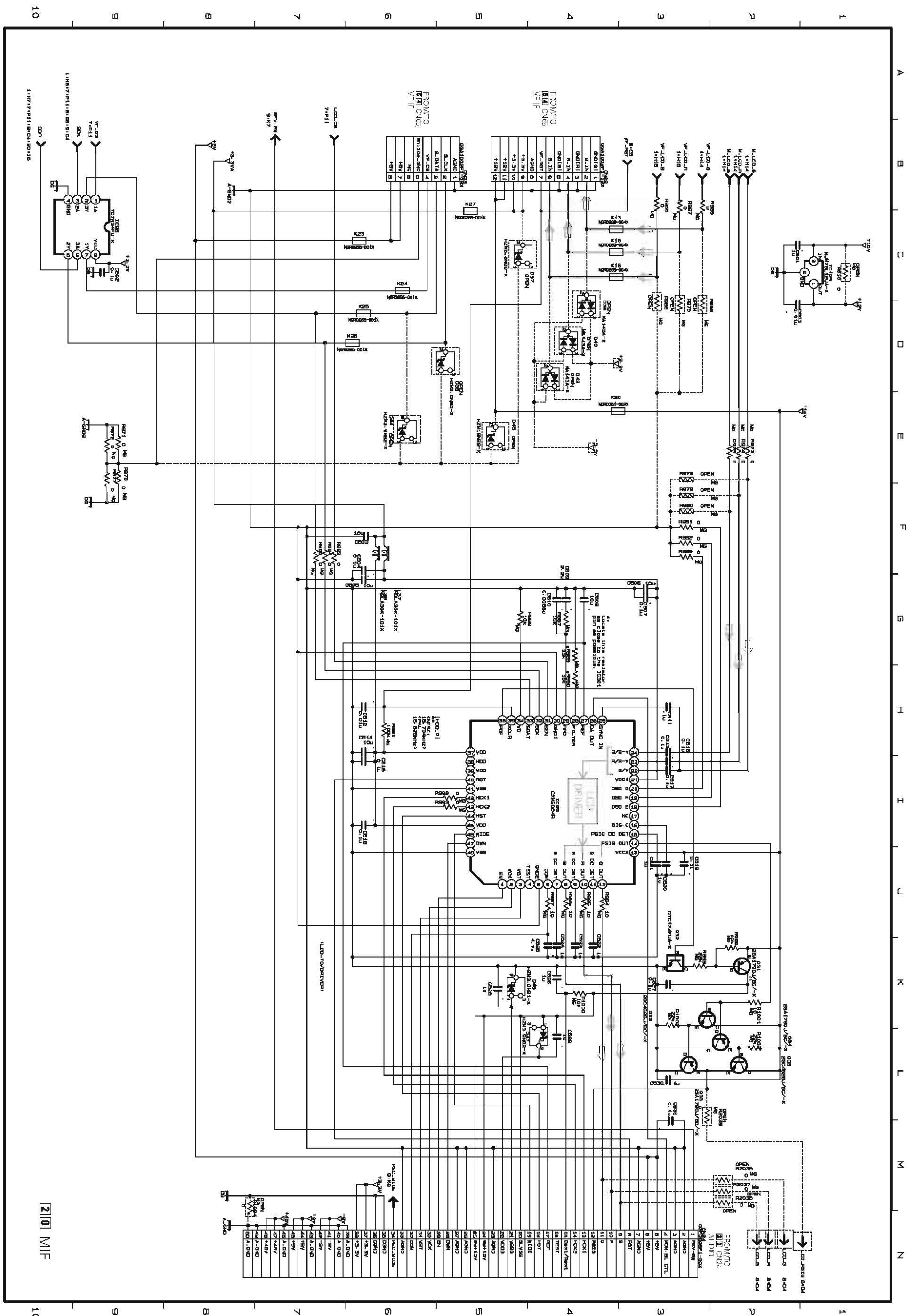
MIF SCHEMATIC DIAGRAMS (3/7) - (OBP)



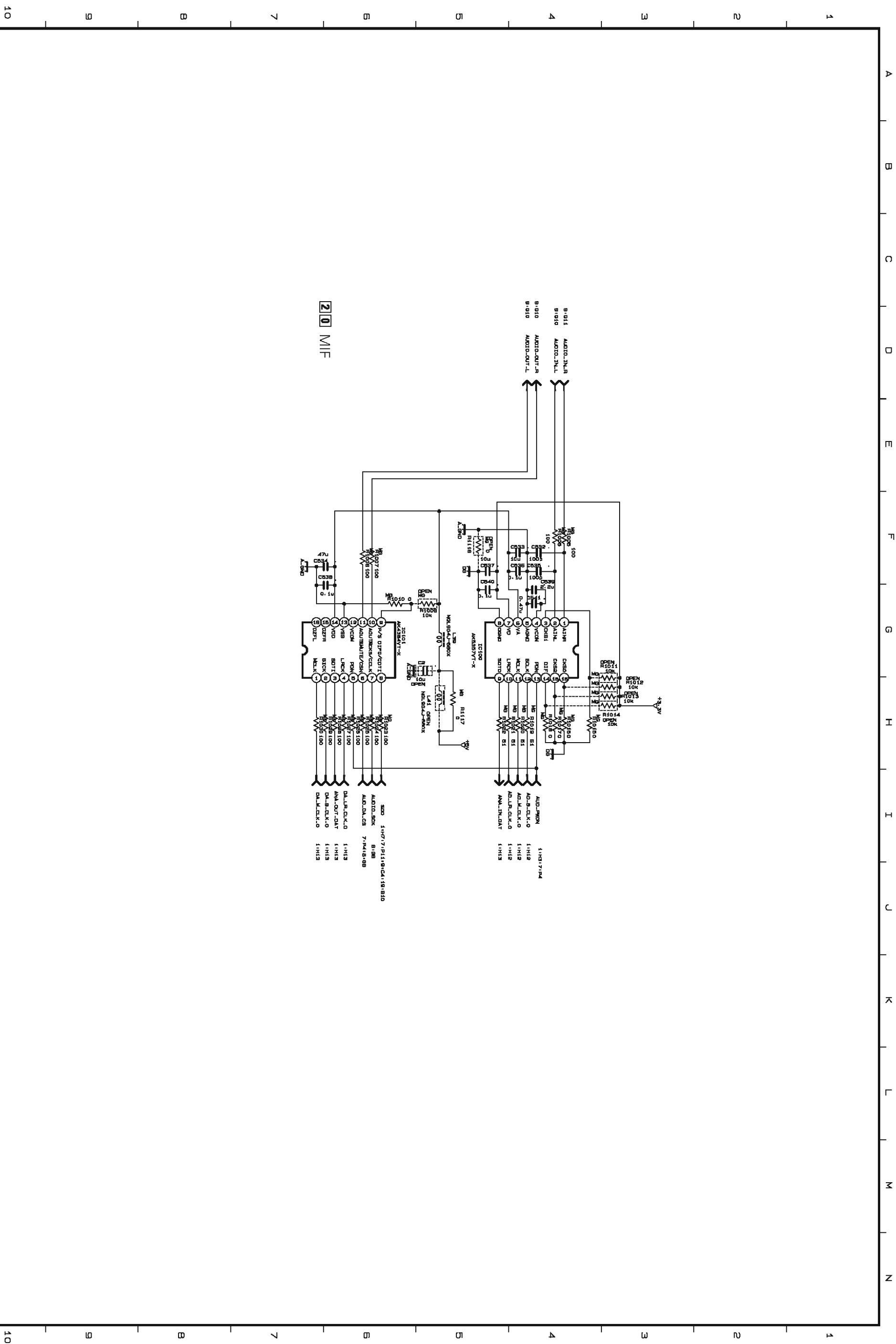
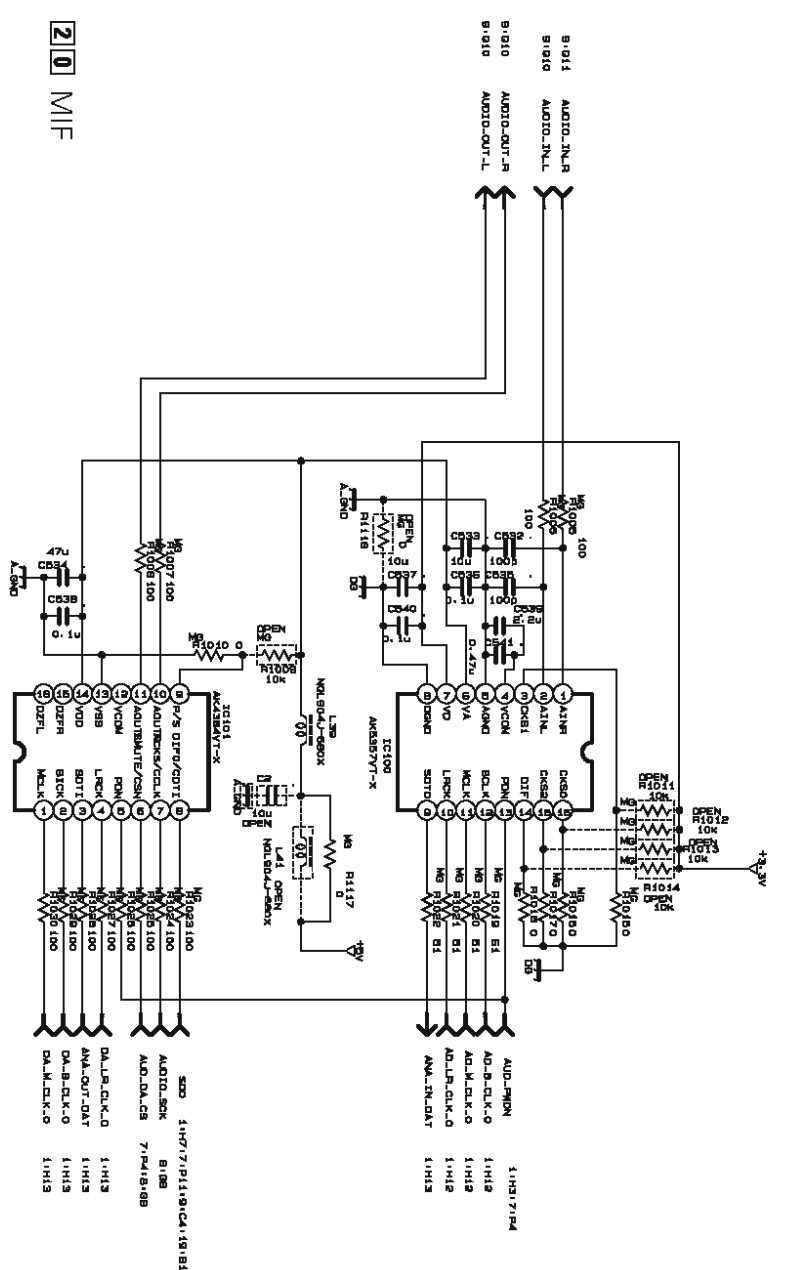


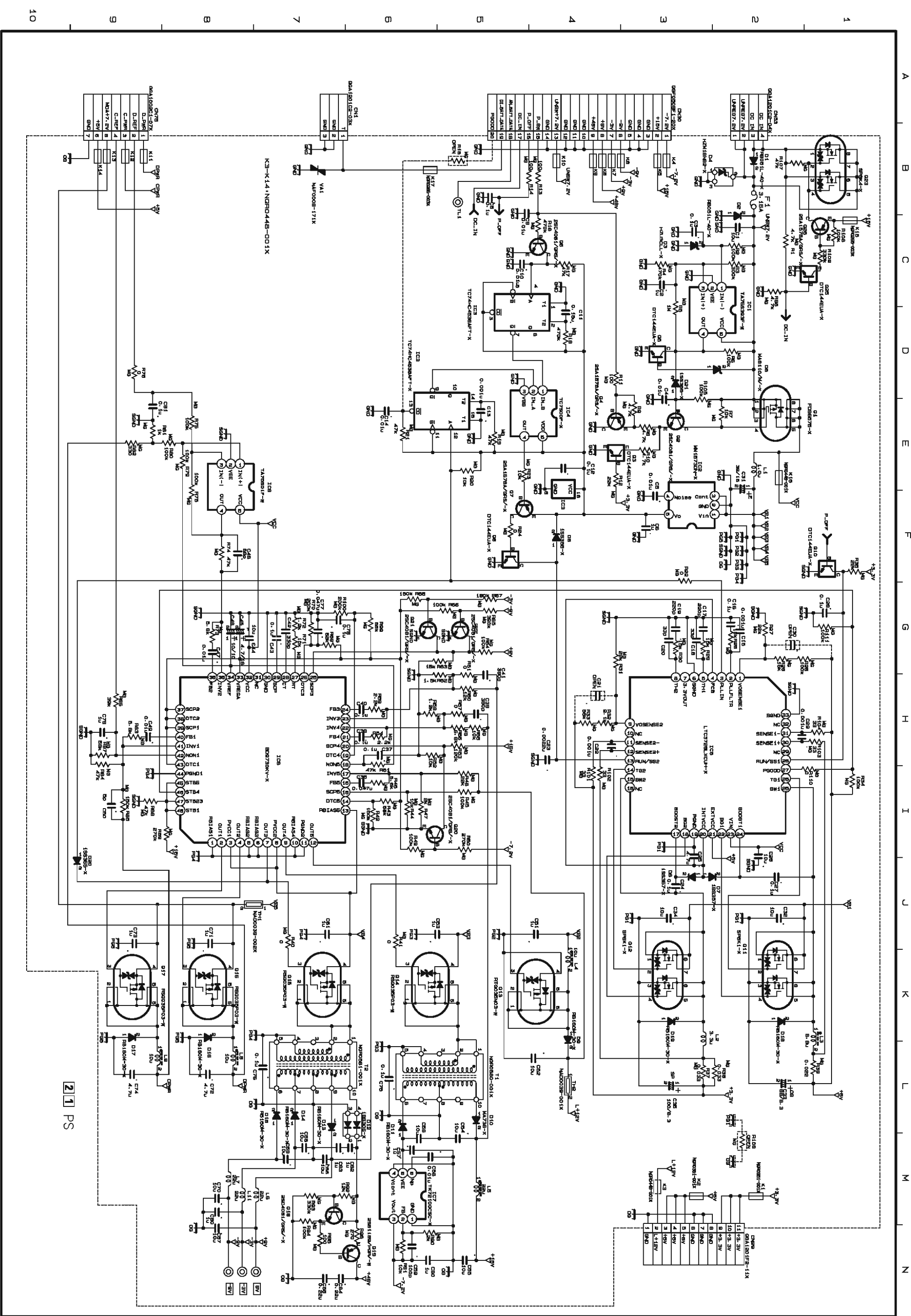
20 MIF

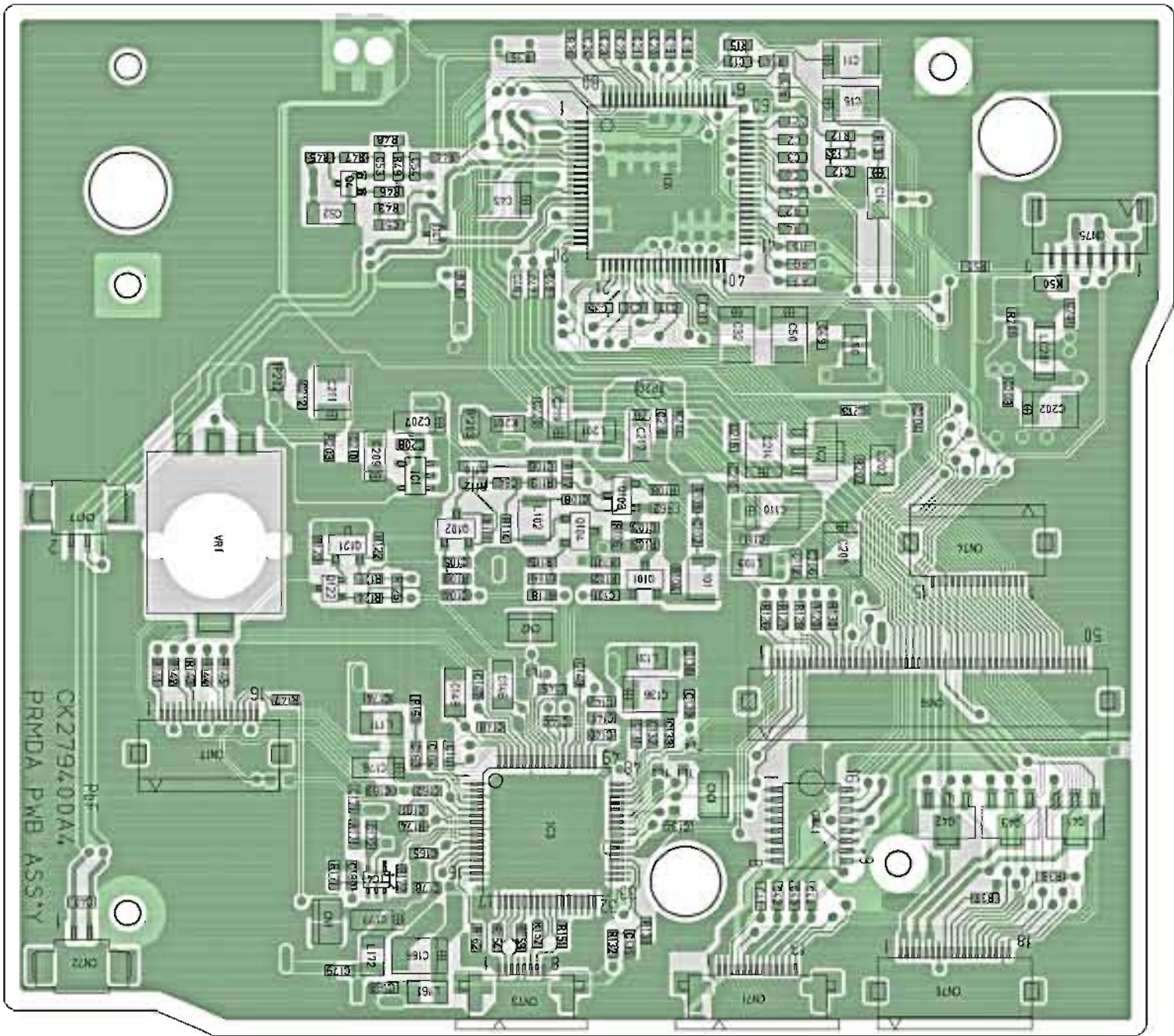
4-35 4-35



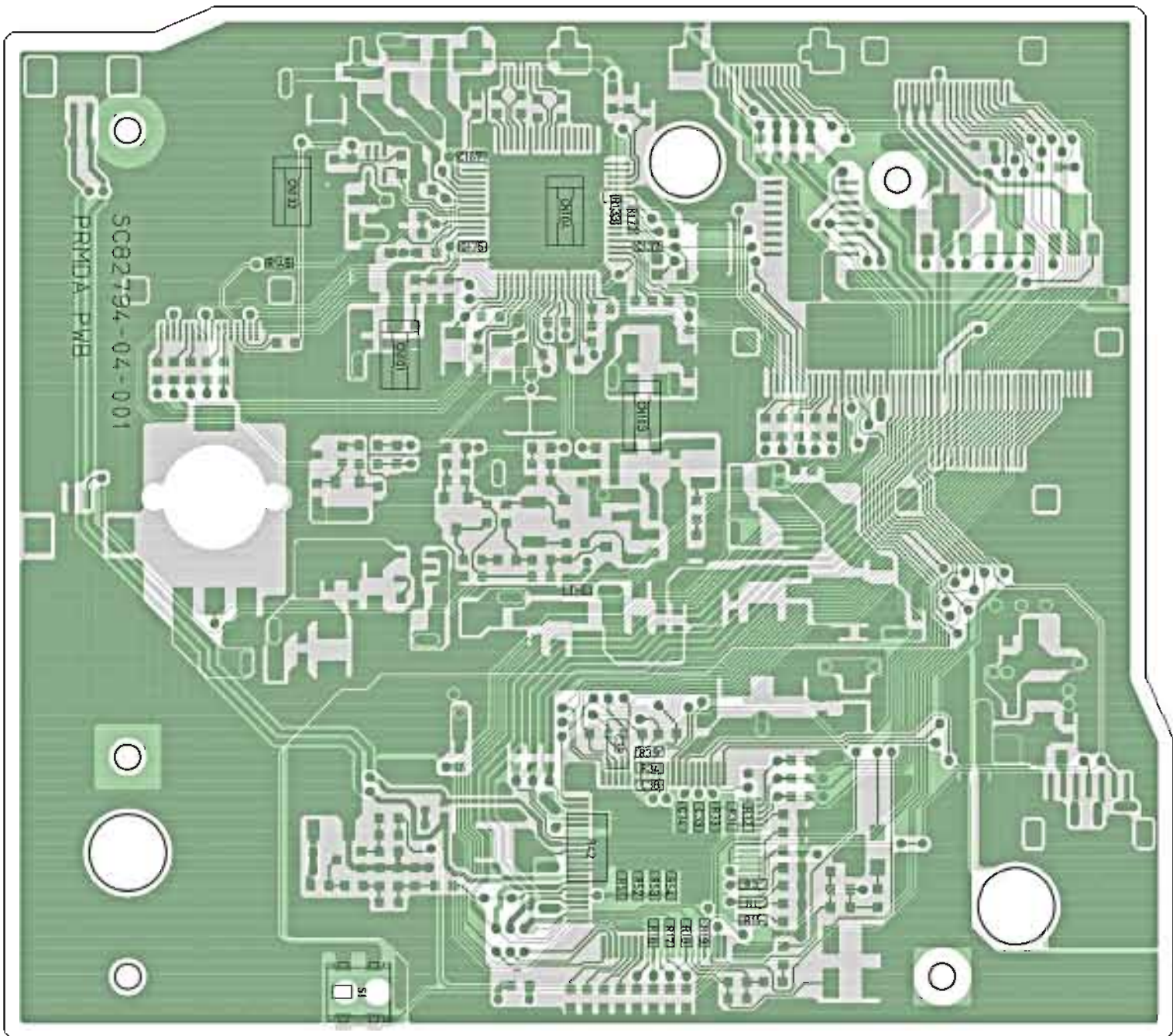
20 MIF



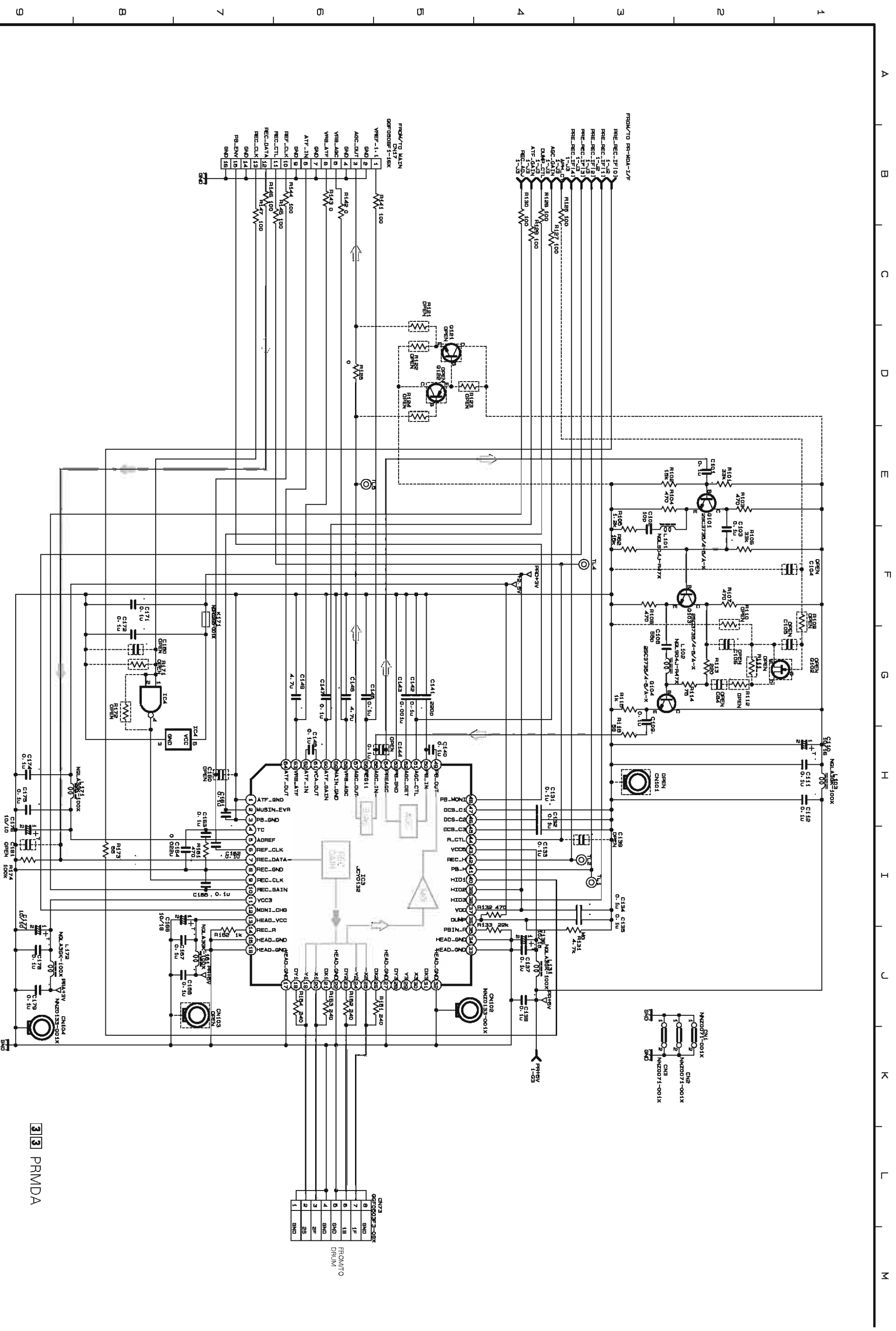




- SIDE A -

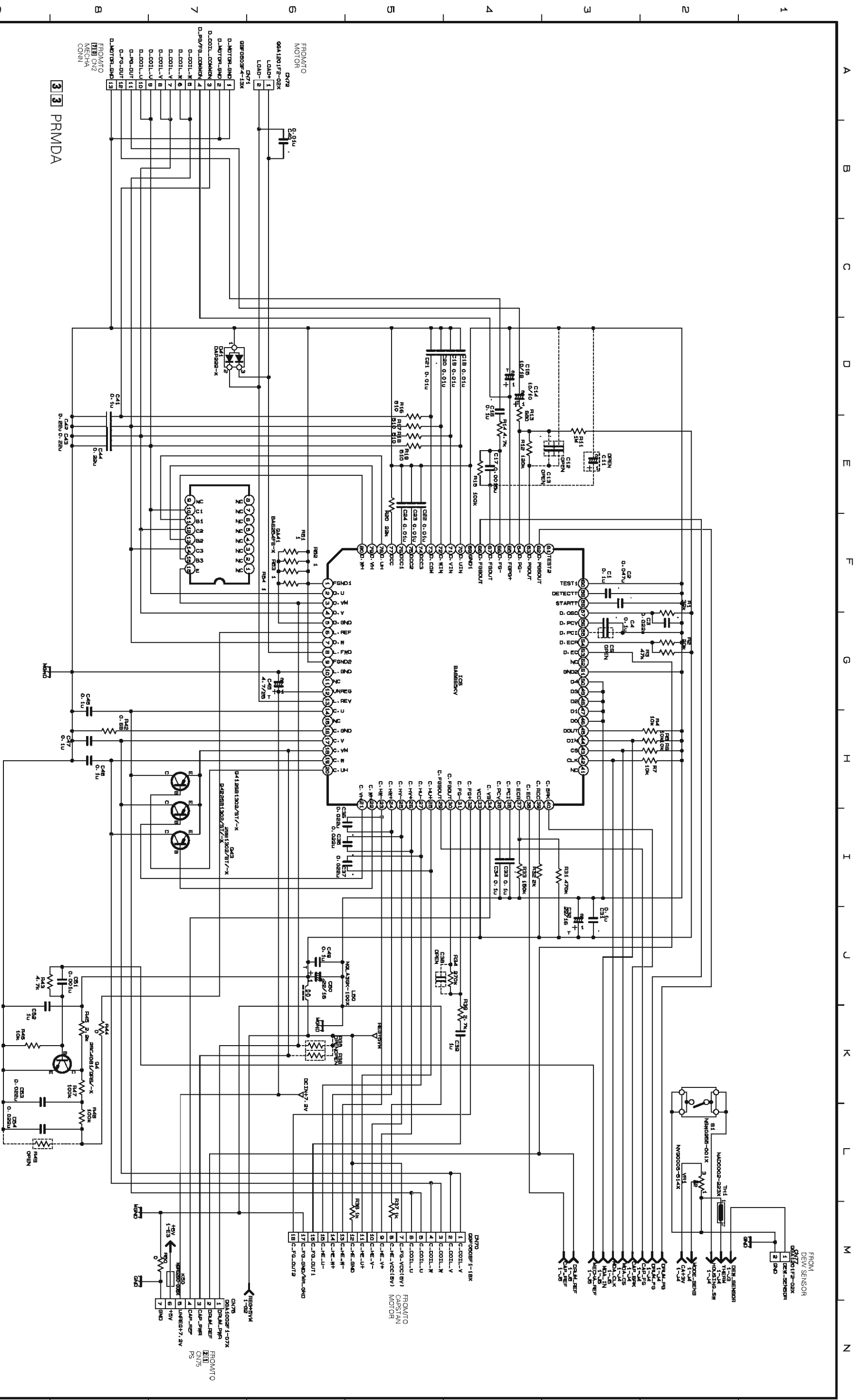


- SIDE B -



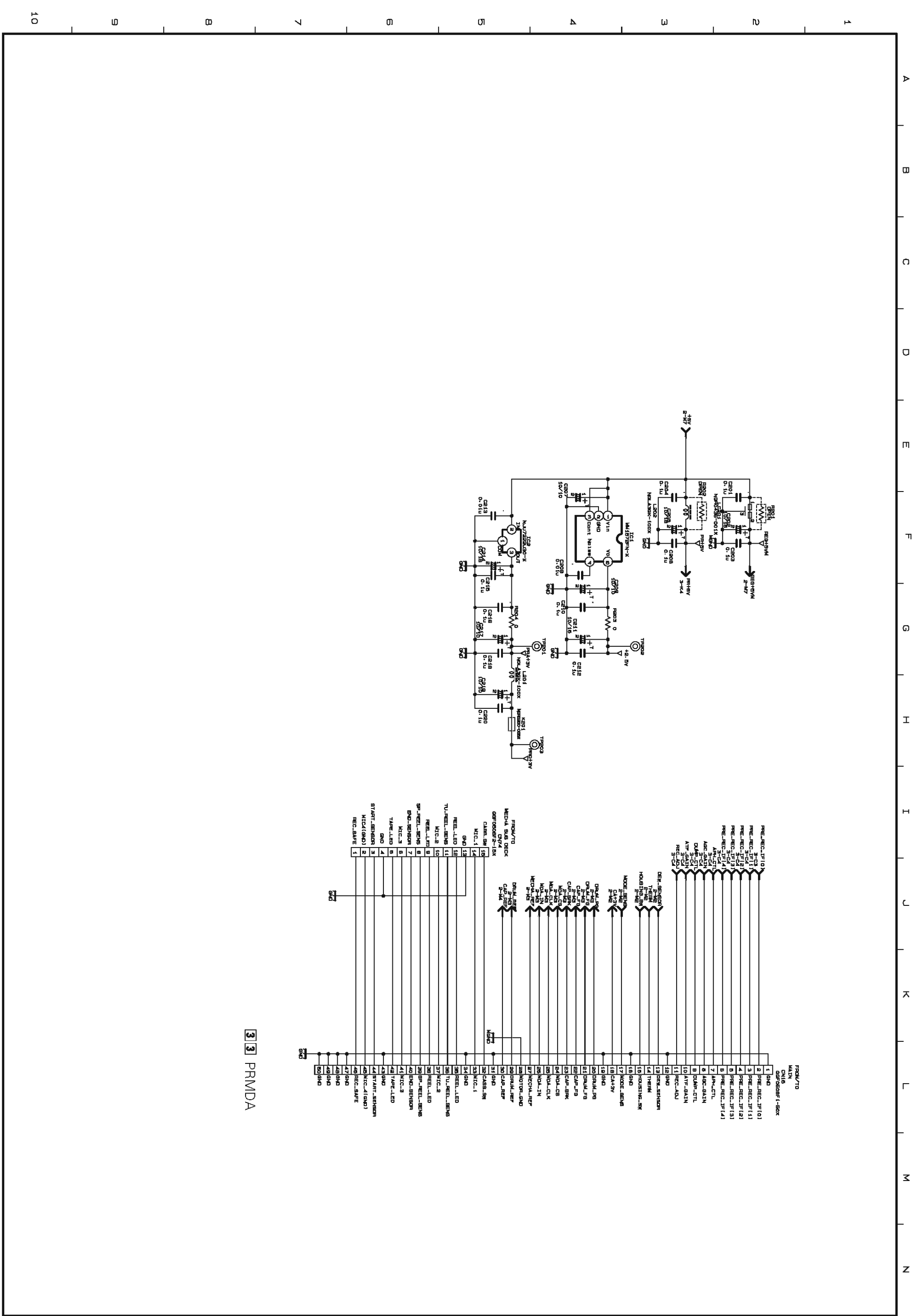
4-40 4-40

FRONT/DRAWN

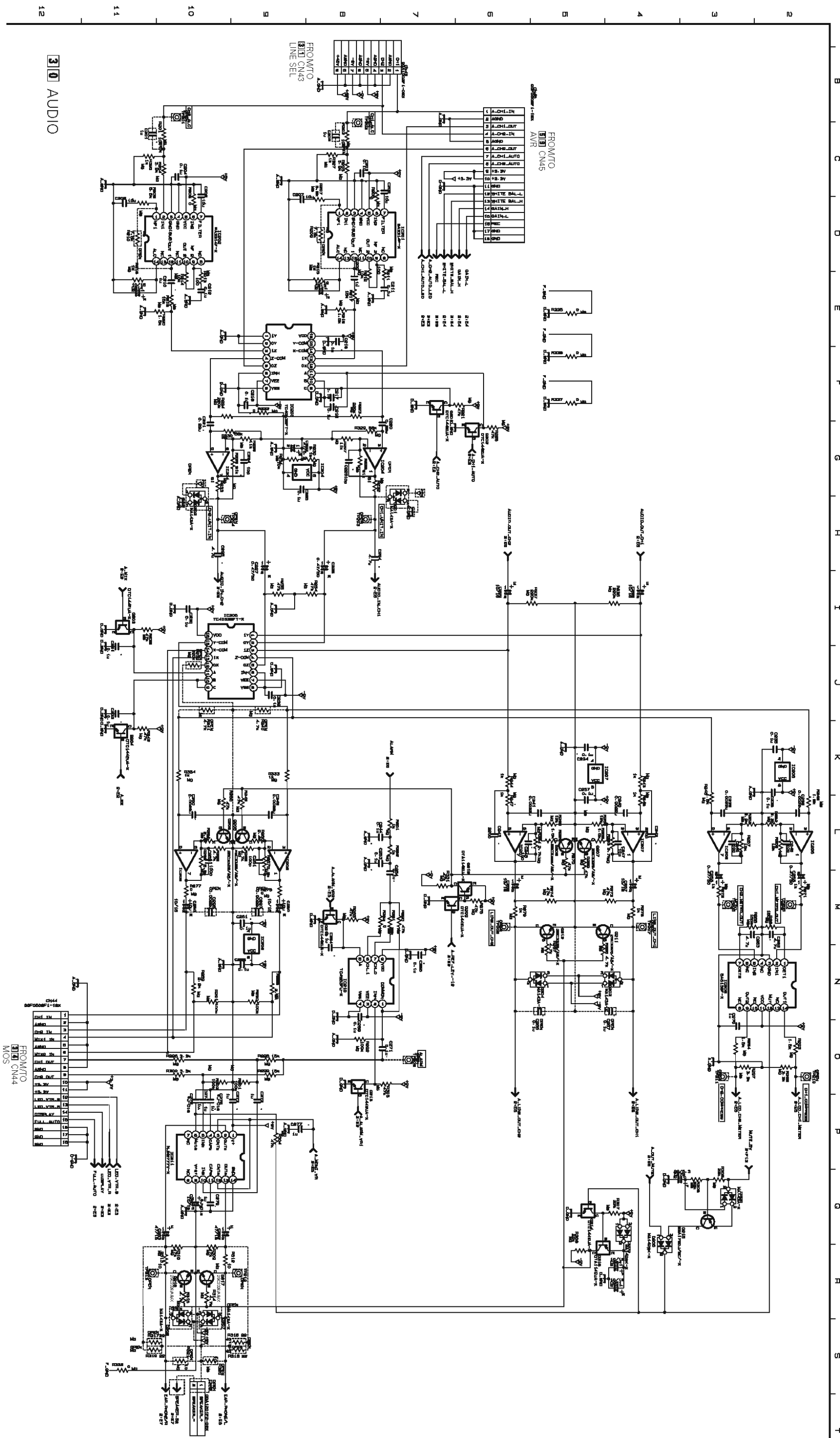


4-41

4-41



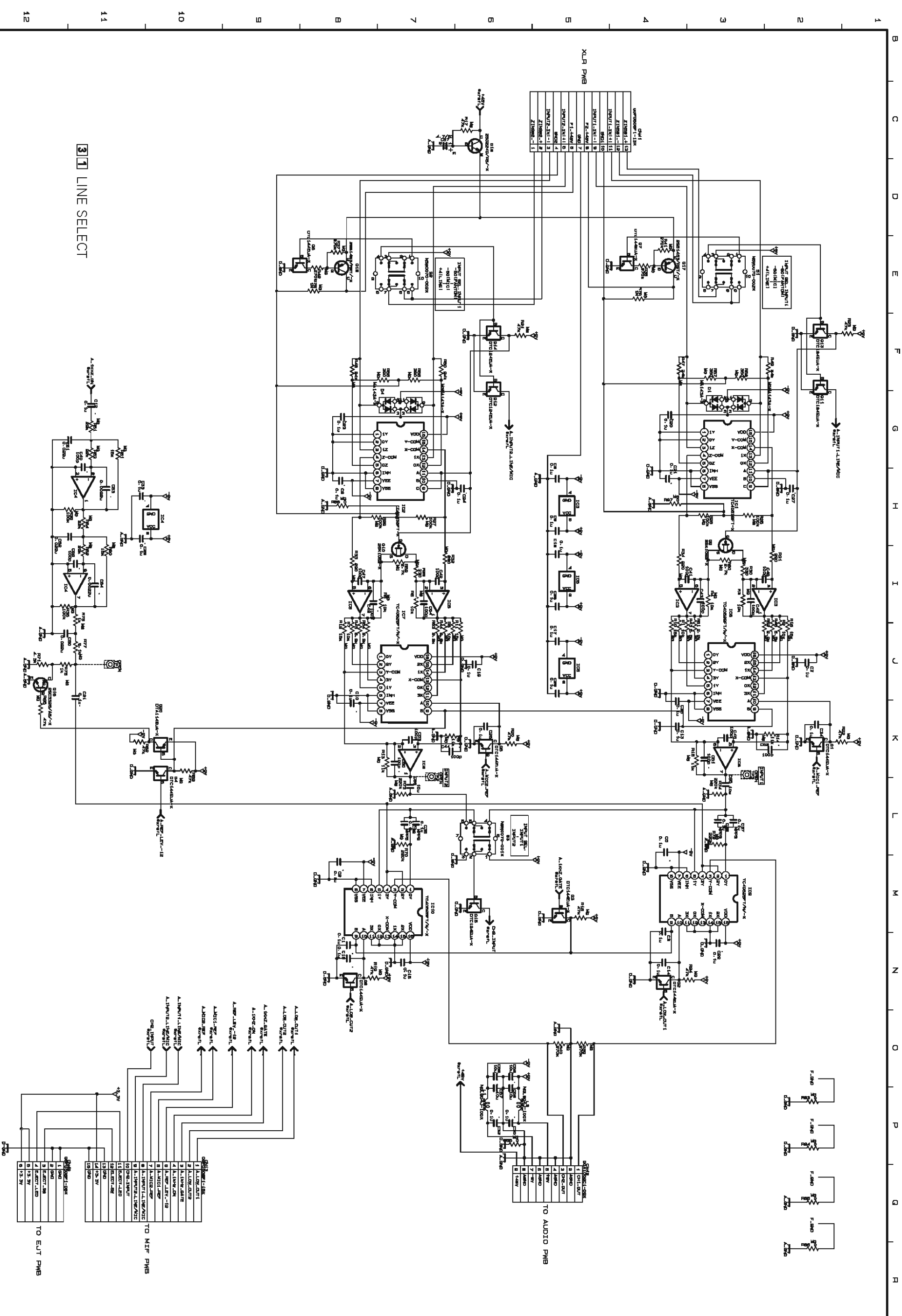
3 3 PRMDA



30 AUDIO

4-44 4-44

4.18 LINE SELECT SCHEMATIC DIAGRAM



3 1 LINE SELECT

4-46

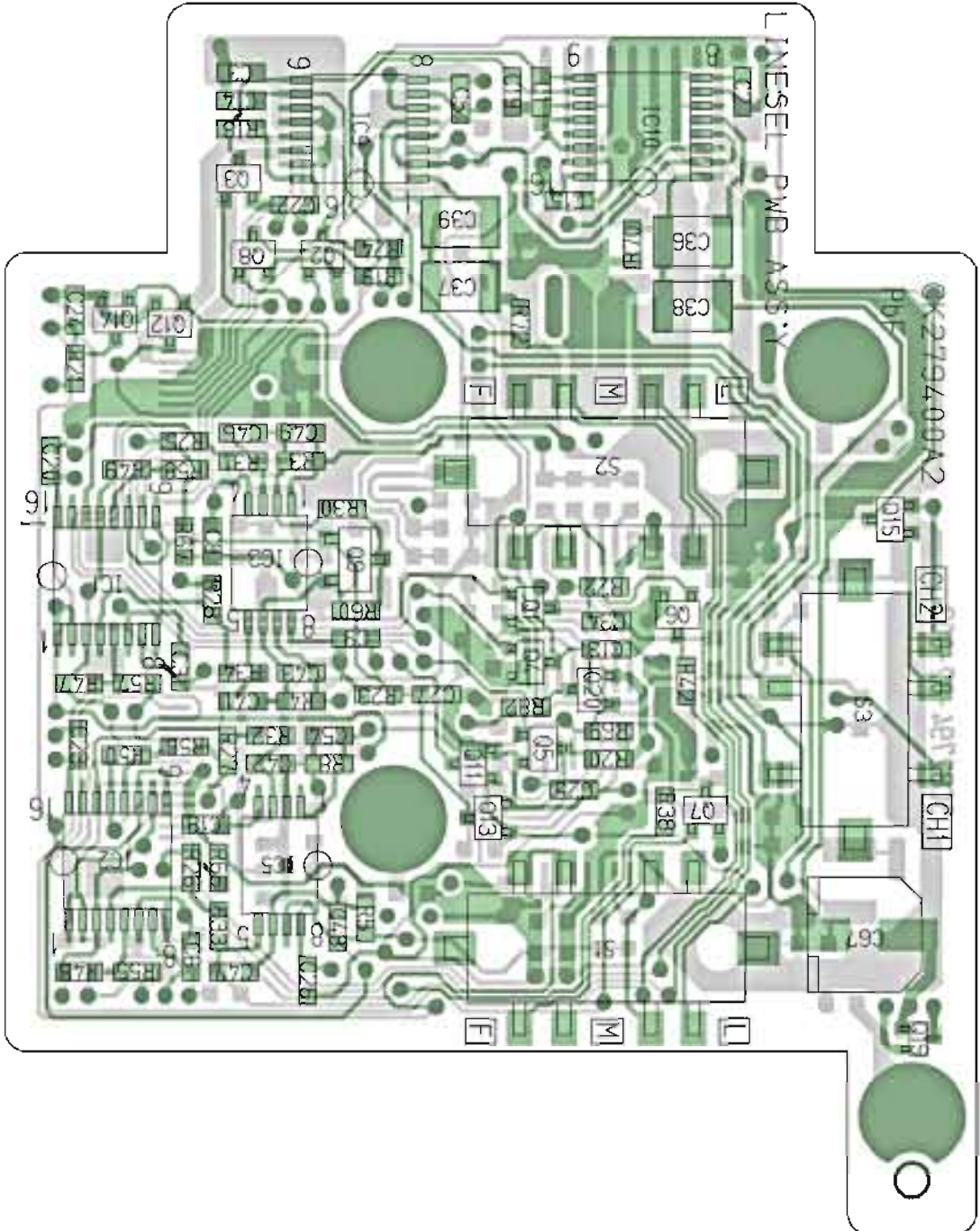
4-46

1	TO EJT PMB
2	TO EJT PMB
3	TO EJT PMB
4	TO EJT PMB
5	TO EJT PMB
6	TO EJT PMB
7	TO EJT PMB
8	TO EJT PMB
9	TO EJT PMB
10	TO EJT PMB
11	TO EJT PMB
12	TO EJT PMB

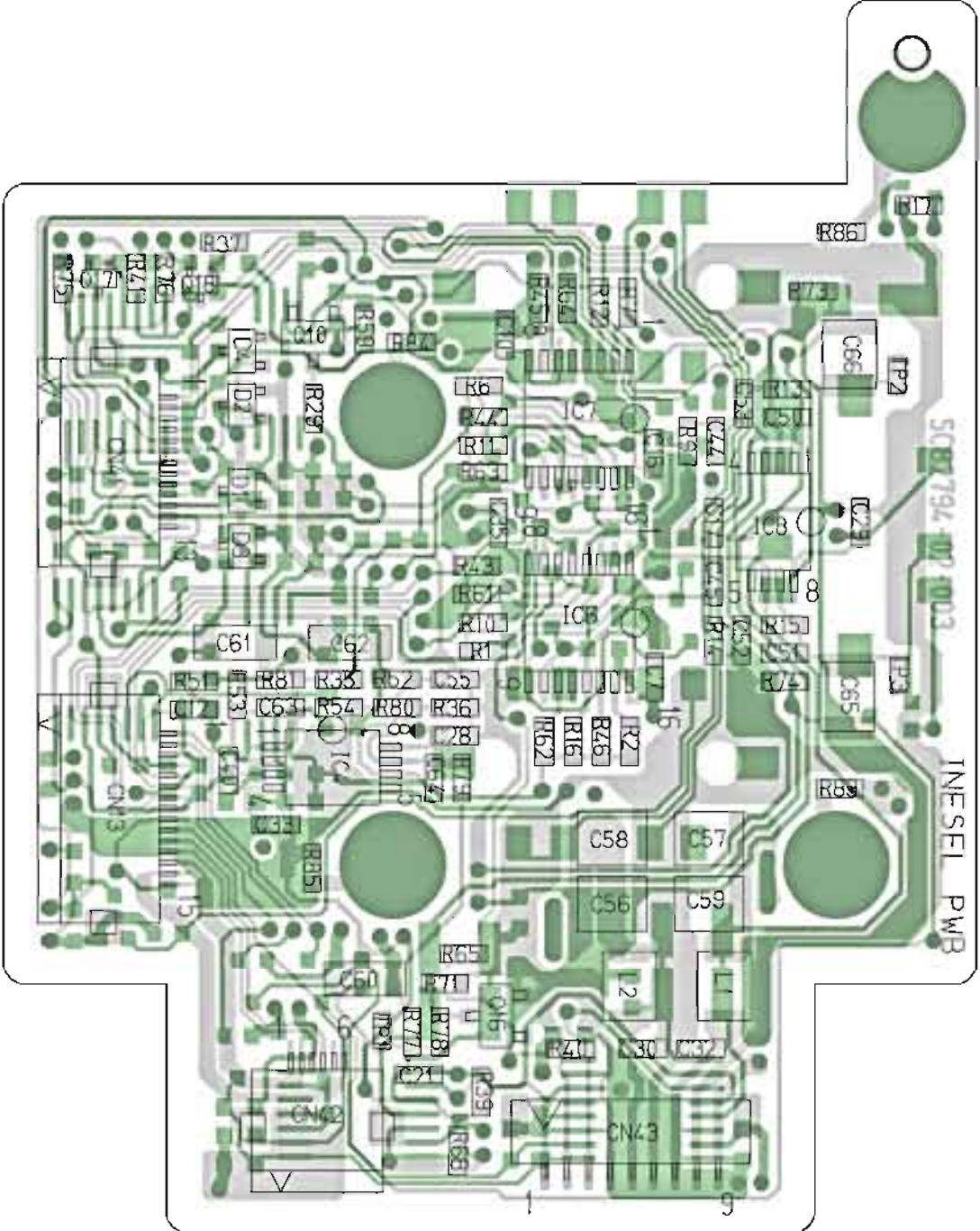
1	TO MIF PMB
2	TO MIF PMB
3	TO MIF PMB
4	TO MIF PMB
5	TO MIF PMB
6	TO MIF PMB
7	TO MIF PMB
8	TO MIF PMB
9	TO MIF PMB
10	TO MIF PMB
11	TO MIF PMB
12	TO MIF PMB

1	TO AUDIO PMB
2	TO AUDIO PMB
3	TO AUDIO PMB
4	TO AUDIO PMB
5	TO AUDIO PMB
6	TO AUDIO PMB
7	TO AUDIO PMB
8	TO AUDIO PMB
9	TO AUDIO PMB
10	TO AUDIO PMB
11	TO AUDIO PMB
12	TO AUDIO PMB

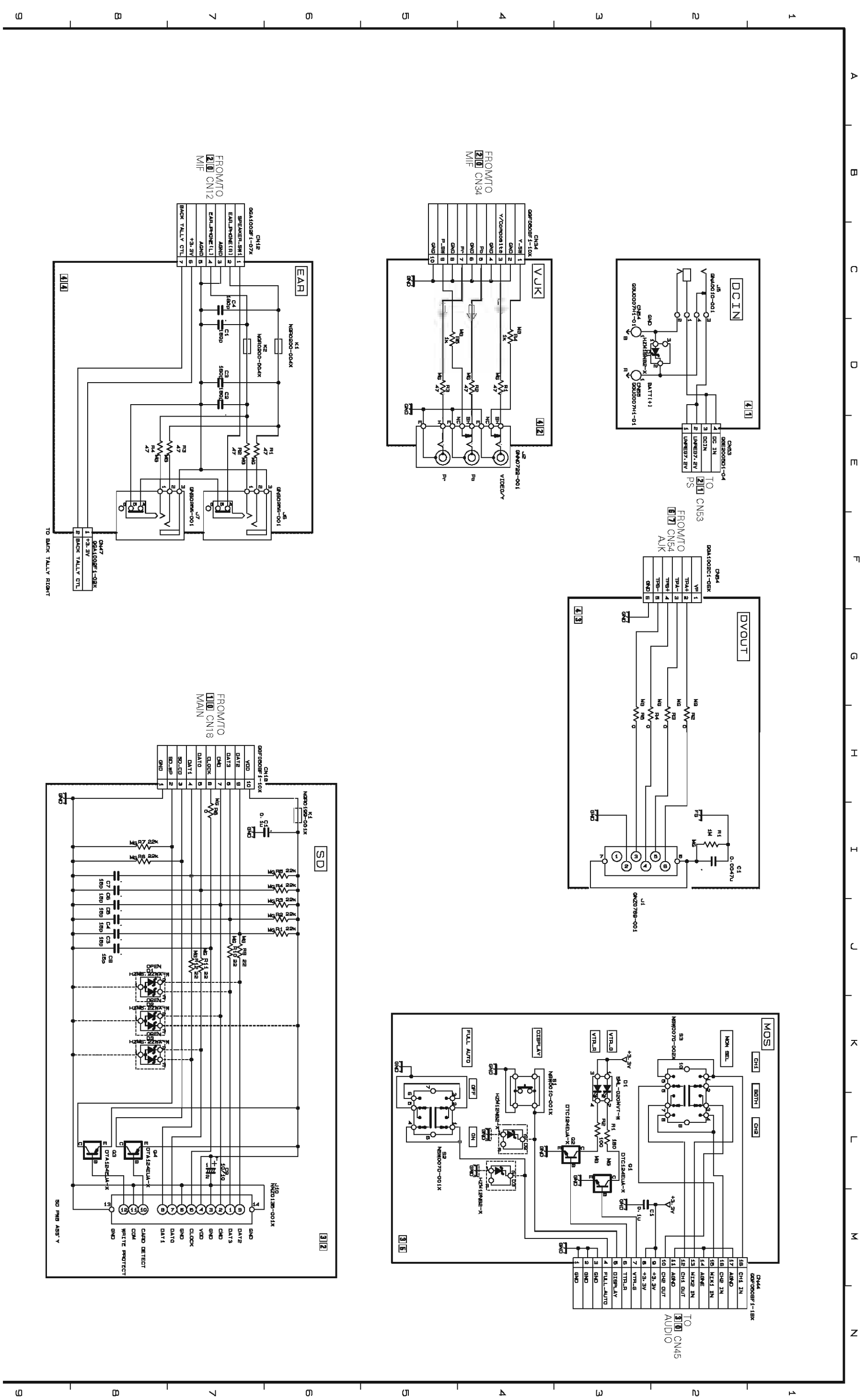
- SIDE A -



- SIDE B -

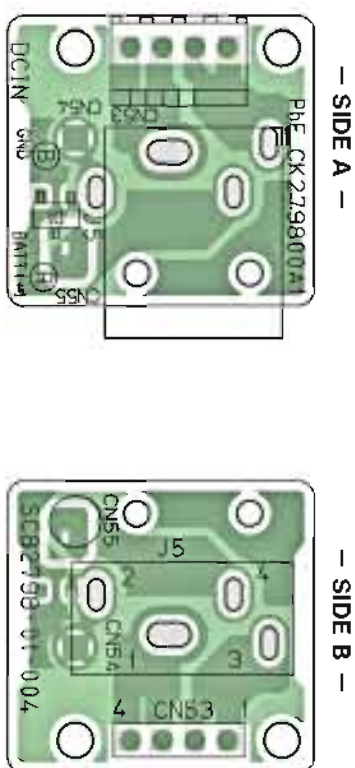


4.20 OPERATION-1 & ETC (MOS, DVOUT, V JK, EAR, DC IN & SD) SCHEMATIC DIAGRAMS

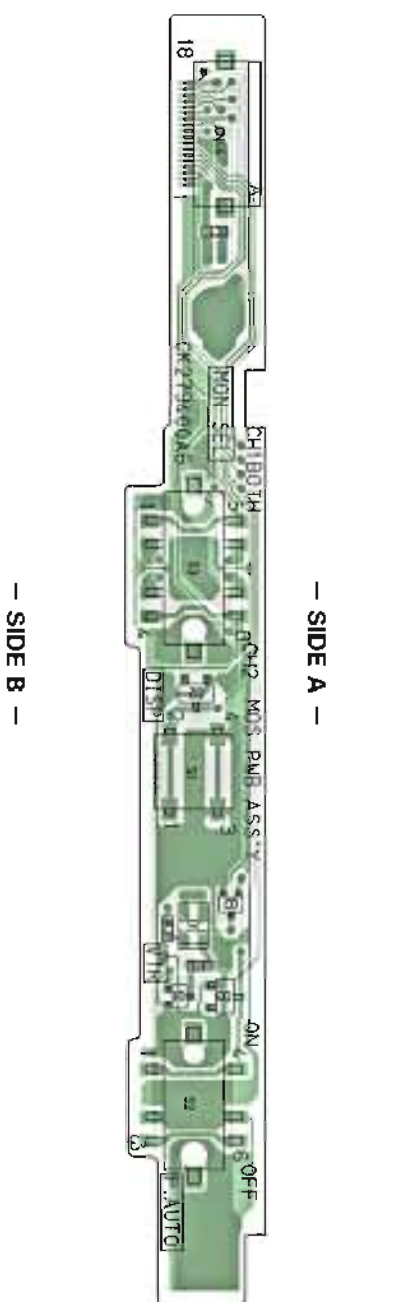


4.21 OPERATION-1 & ETC (MOS, DVOUT, V JK, EAR, DC IN & SD) CIRCUIT DIAGRAMS

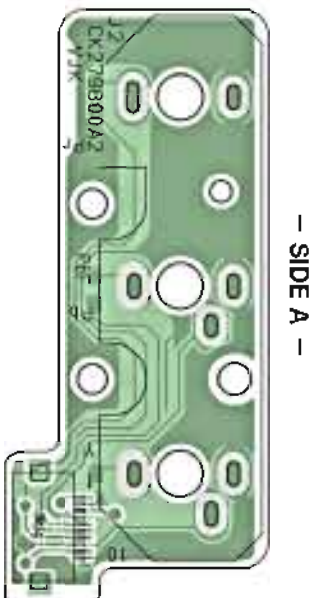
-- DC IN --



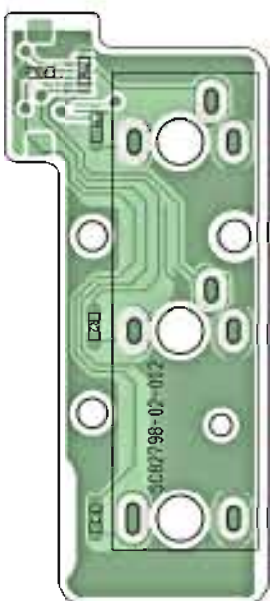
-- MOS --



-- V JK --



-- SIDE A --



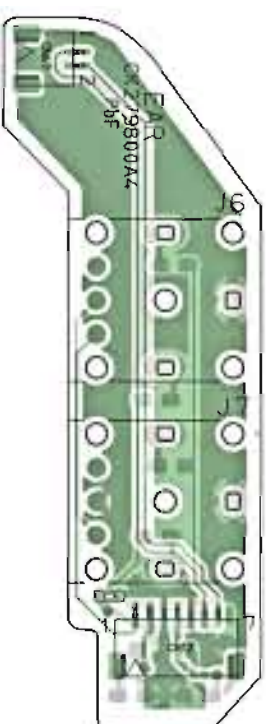
-- SIDE B --

-- SD --

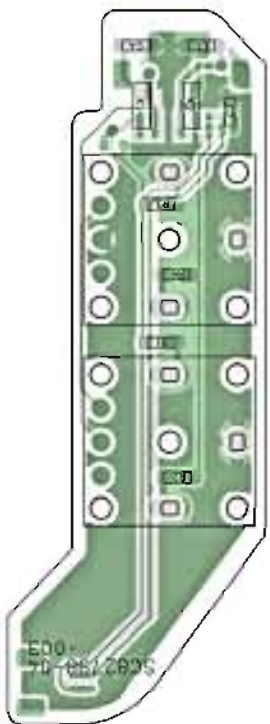


-- SIDE B --

-- EAR --



-- SIDE A --

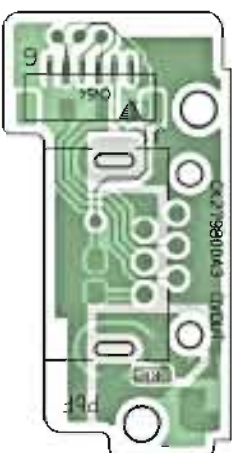


-- SIDE B --

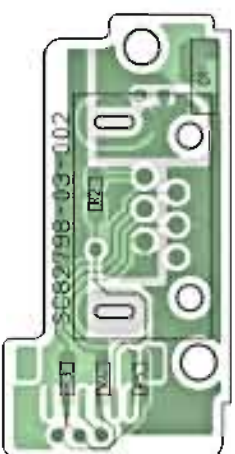
-- SIDE A --

-- SIDE B --

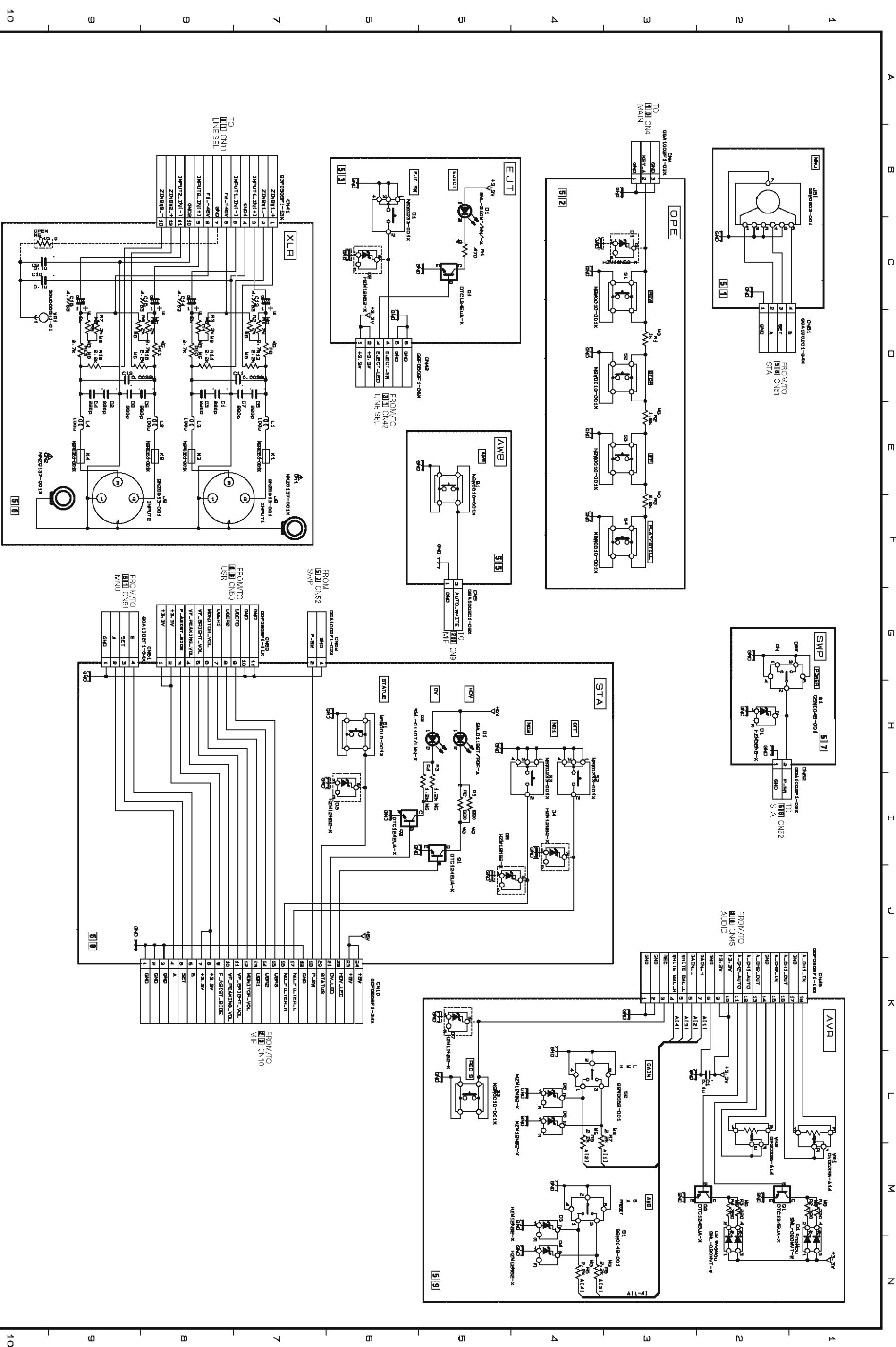
-- DV OUT --



-- SIDE A --

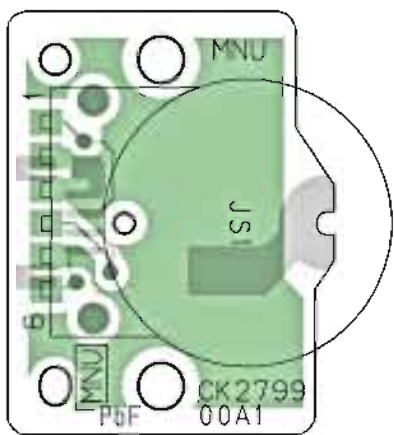


-- SIDE B --

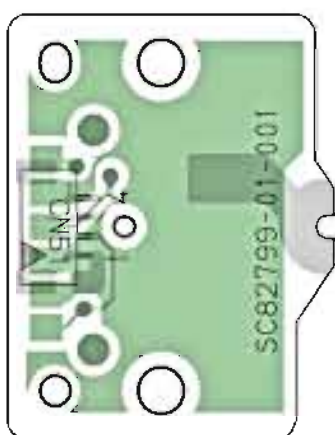


4.23 OPERATION-2 (AVR, STA, SWP, MNU, OPE, EJT, AWB & XLR) CIRCUIT BOARDS

— MNU —

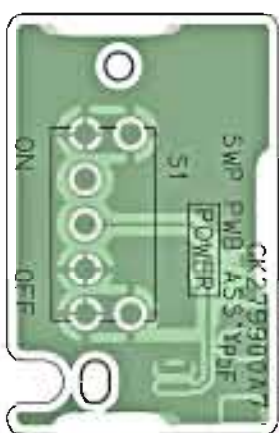


— SIDE A —

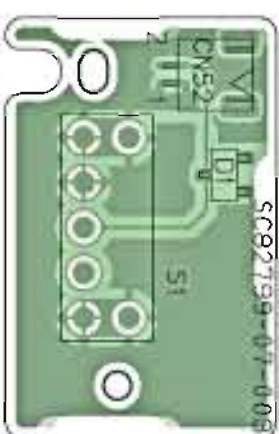


— SIDE B —

— SWP —

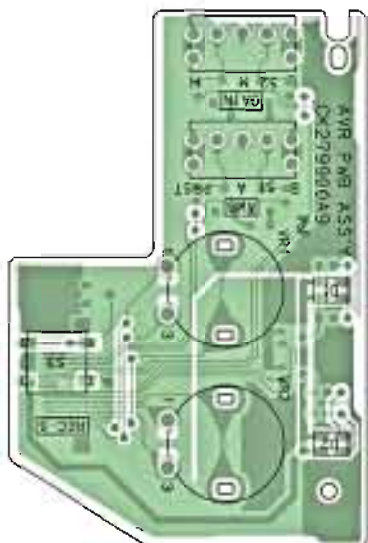


— SIDE A —

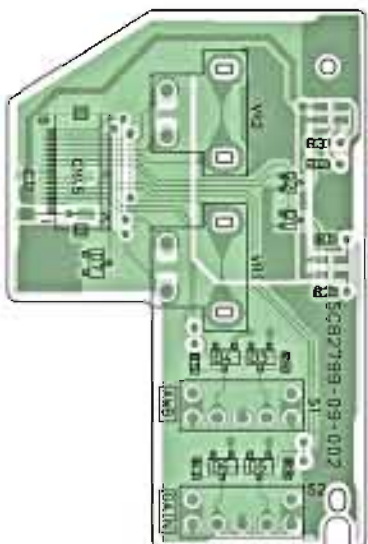


— SIDE B —

— AVR —

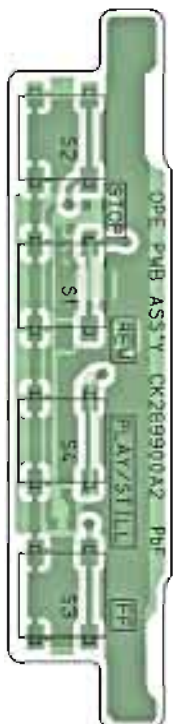


— SIDE A —

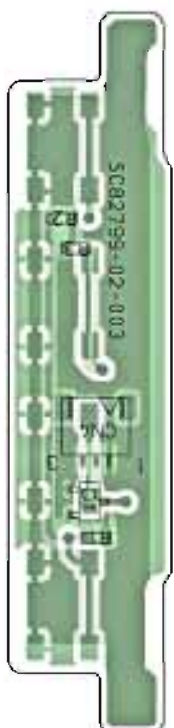


— SIDE B —

— OPE —

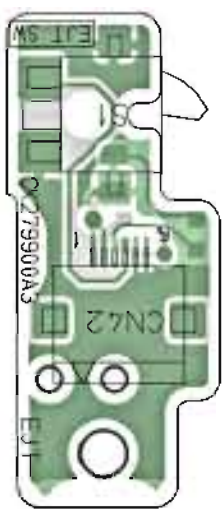


— SIDE A —

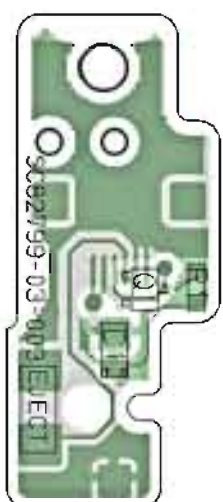


— SIDE B —

— EJT —

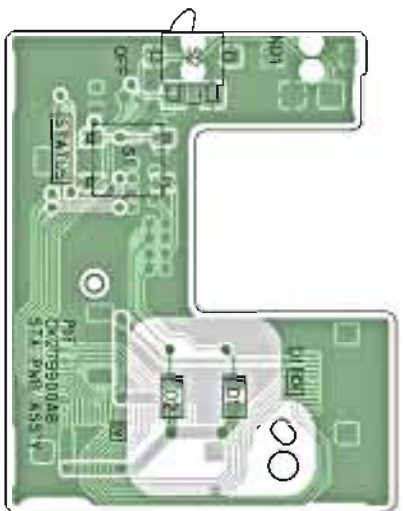


— SIDE A —

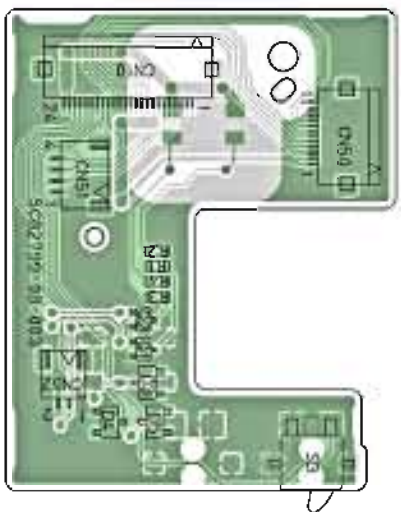


— SIDE B —

— STA —

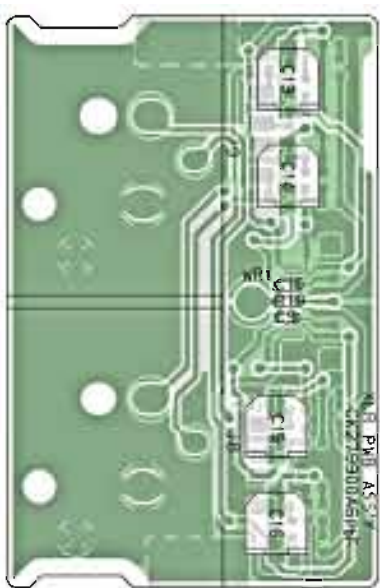


— SIDE A —

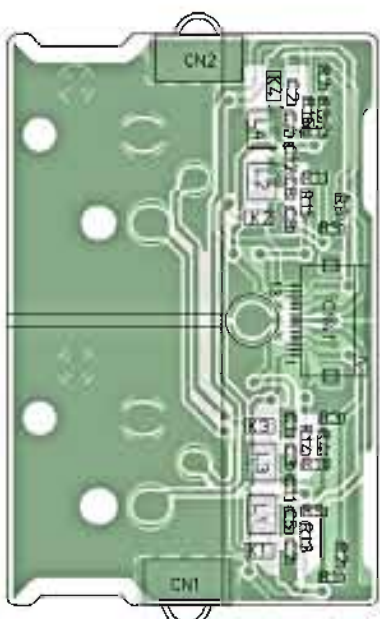


— SIDE B —

— XLR —

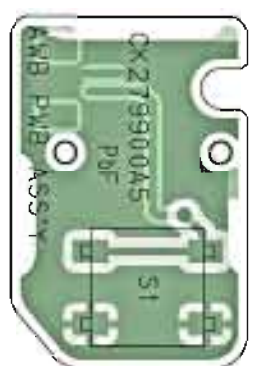


— SIDE A —

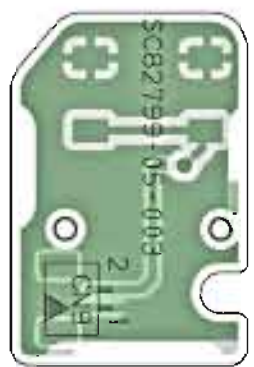


— SIDE B —

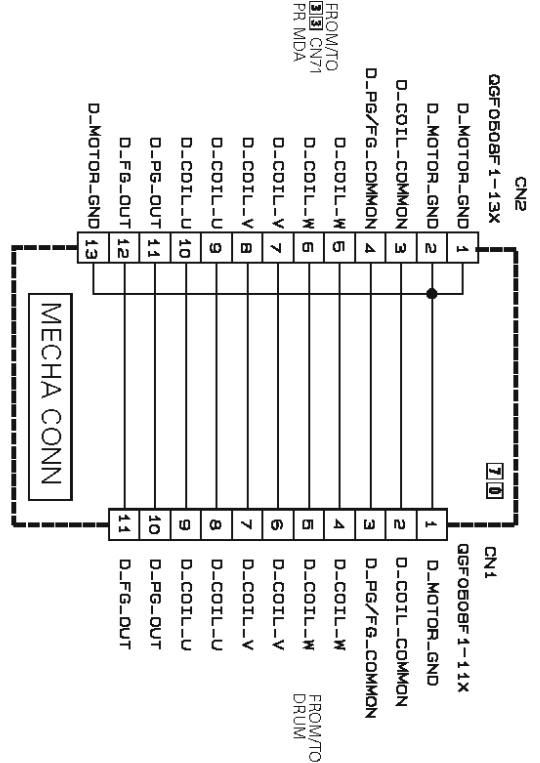
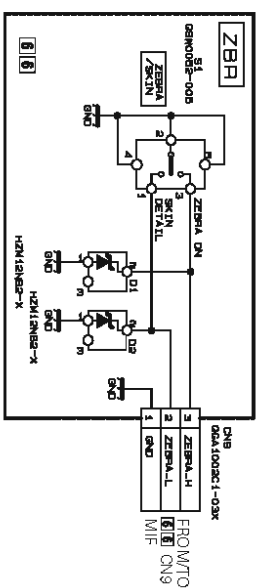
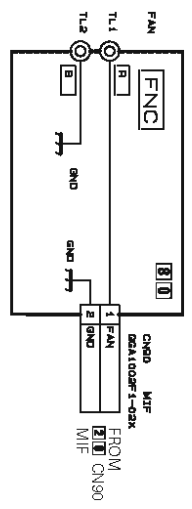
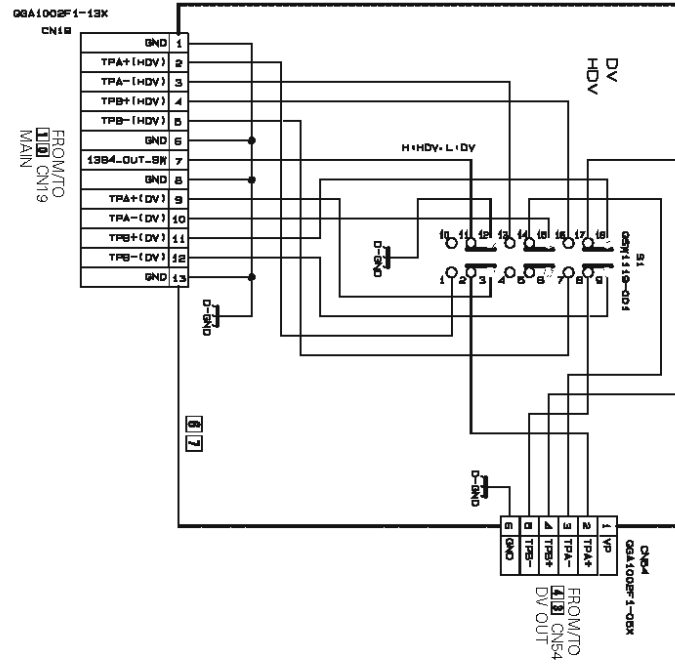
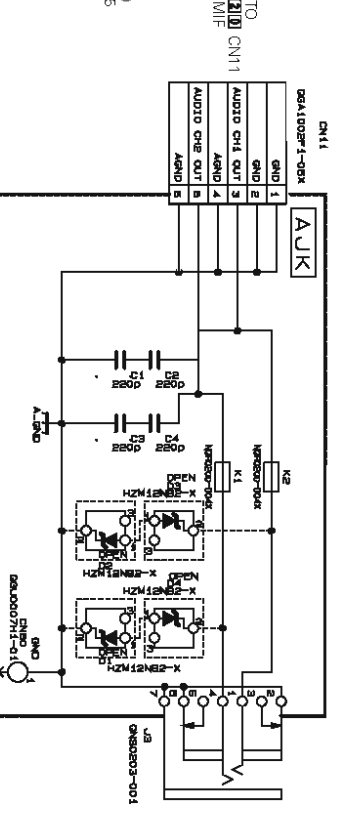
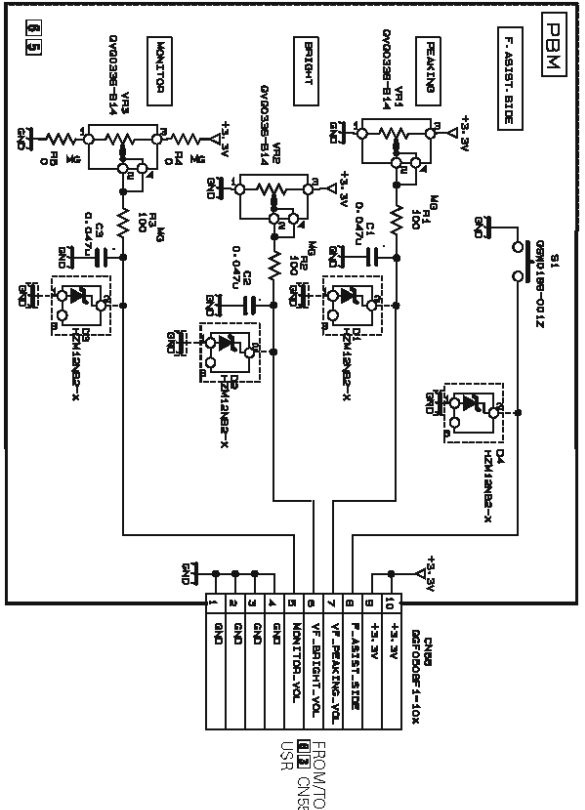
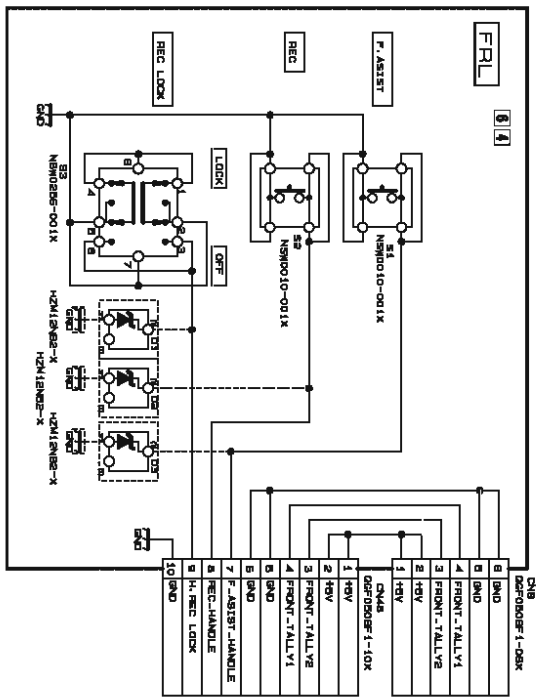
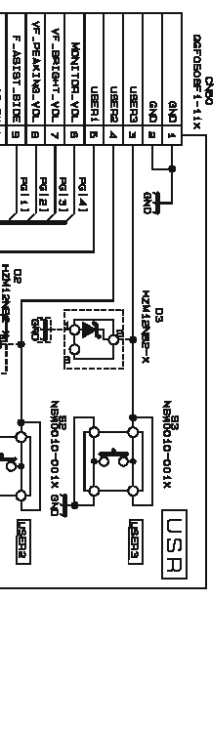
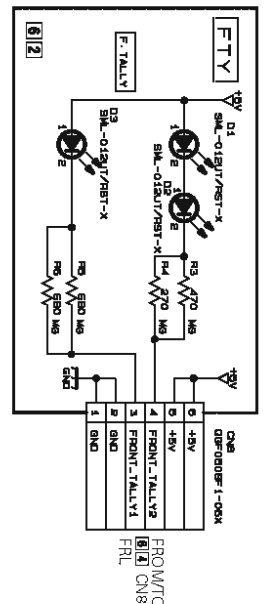
— AWB —



— SIDE A —

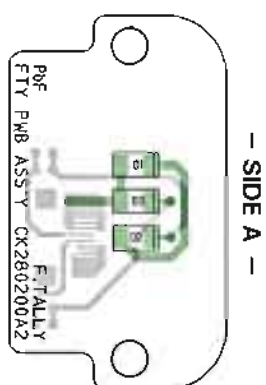


— SIDE B —

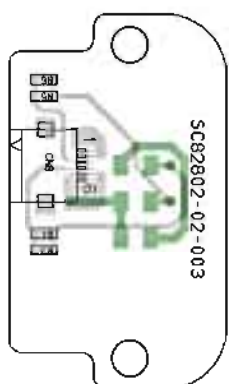


4.25 OPERATION-3 (FTY, USR, FRL, PBM, AJK, FNC & ZBR) & MECHA CONNECTOR CIRCUIT BOARDS

– FTY –

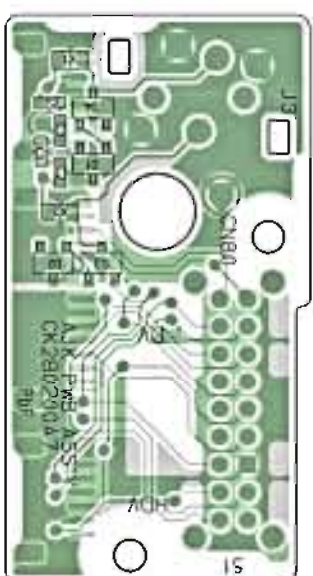


– SIDE A –

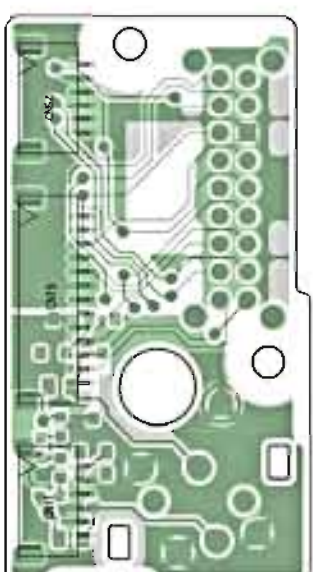


– SIDE B –

– AJK –

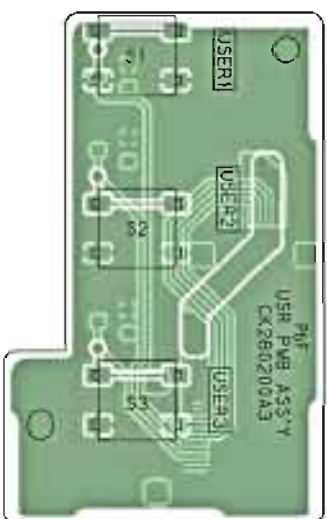


– SIDE A –

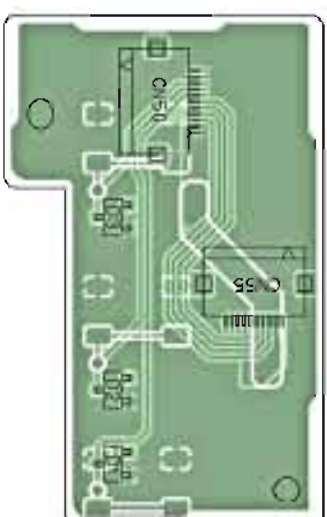


– SIDE B –

– USR –

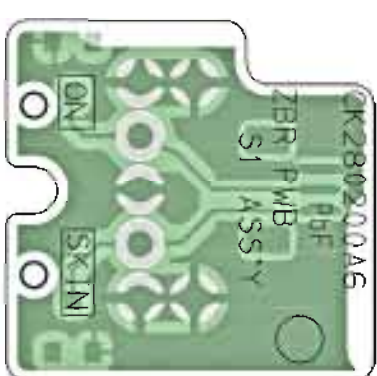


– SIDE A –

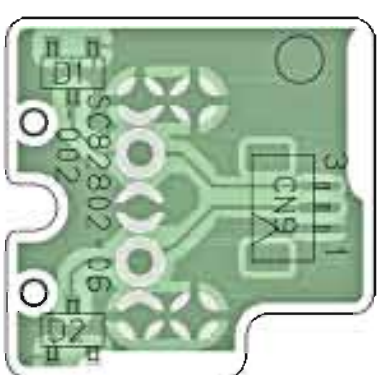


– SIDE B –

– ZBR –

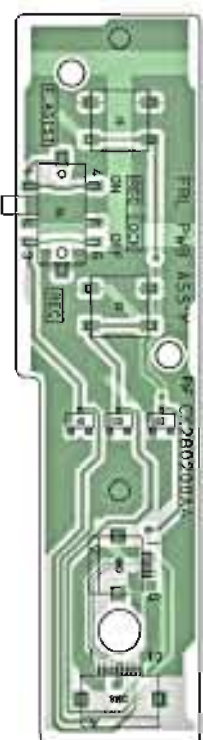


– SIDE A –

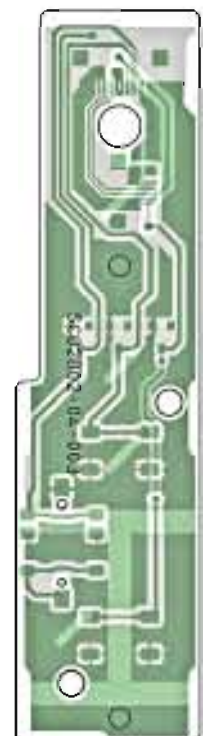


– SIDE B –

– FRL –

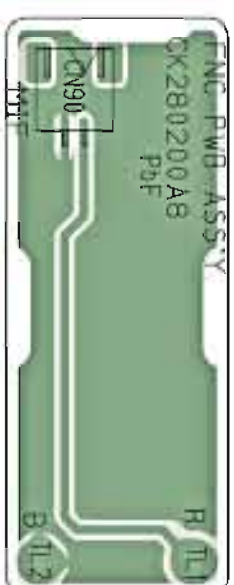


– SIDE A –



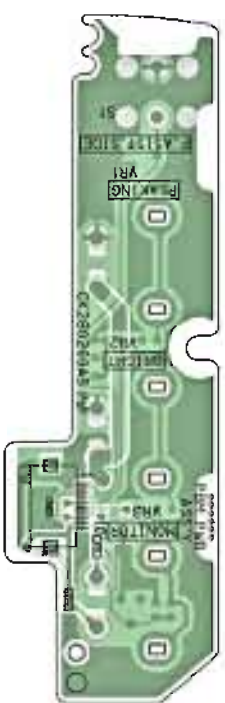
– SIDE B –

– FNC –

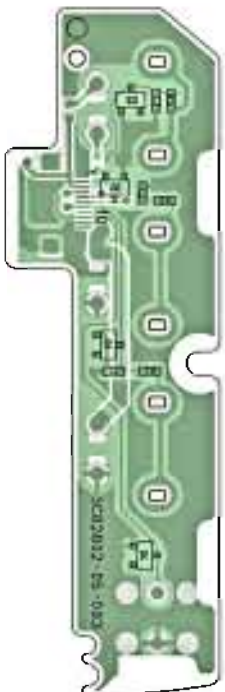


– SIDE A –

– PBM –

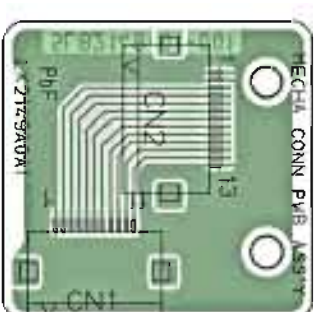


– SIDE A –



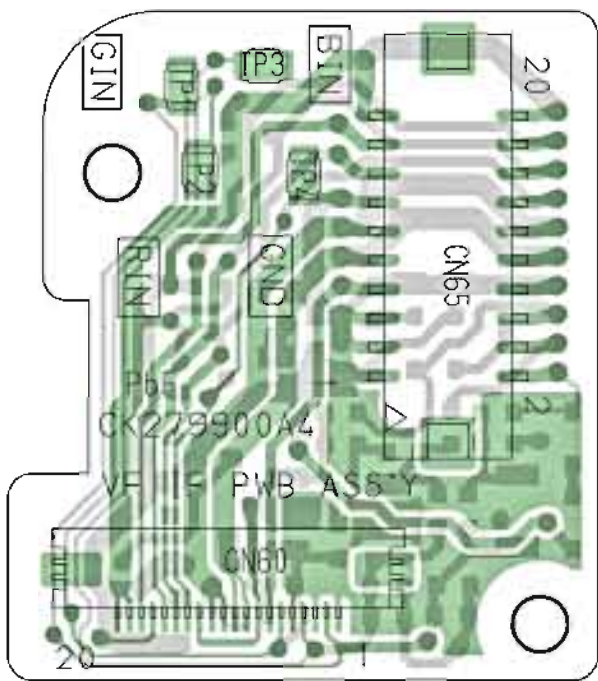
– SIDE B –

– MECHA CONN –



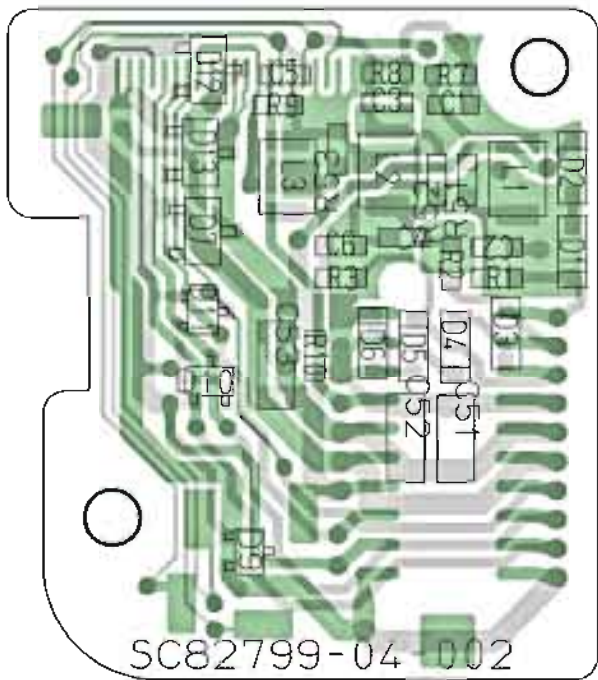
– SIDE A –

— VF-IF —

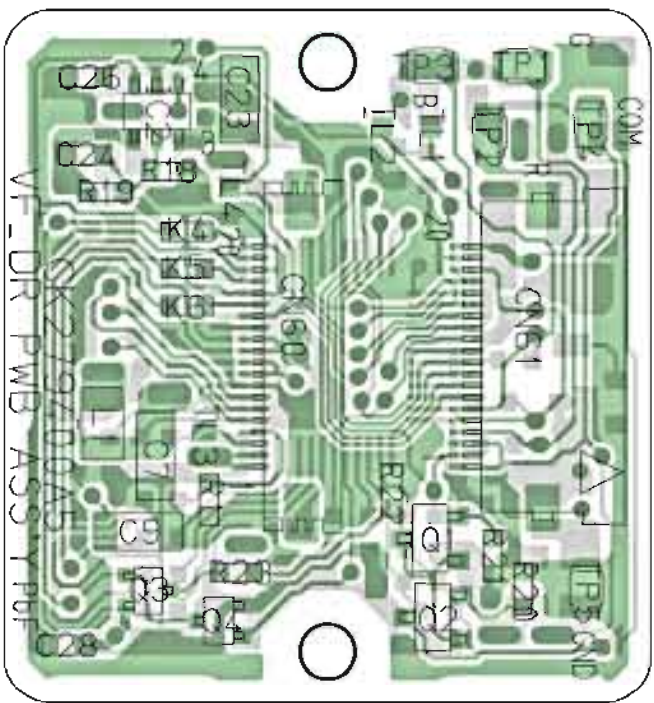


— SIDE A —

— SIDE B —

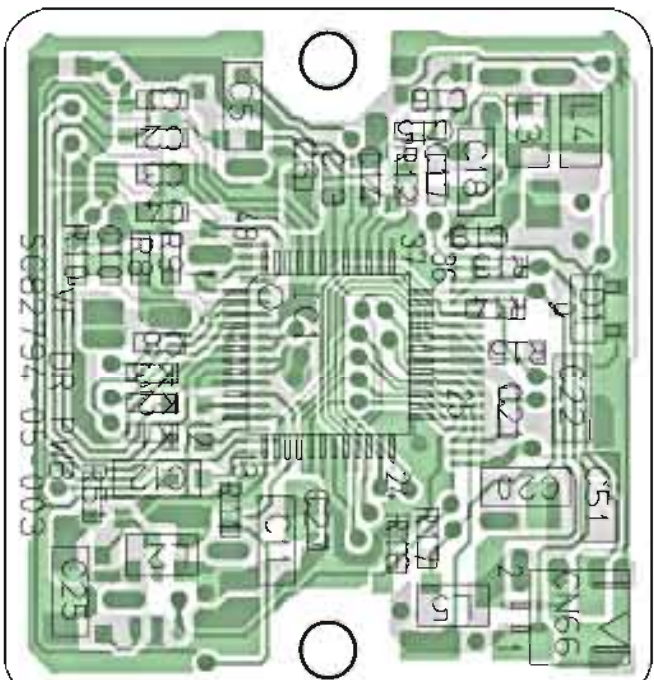


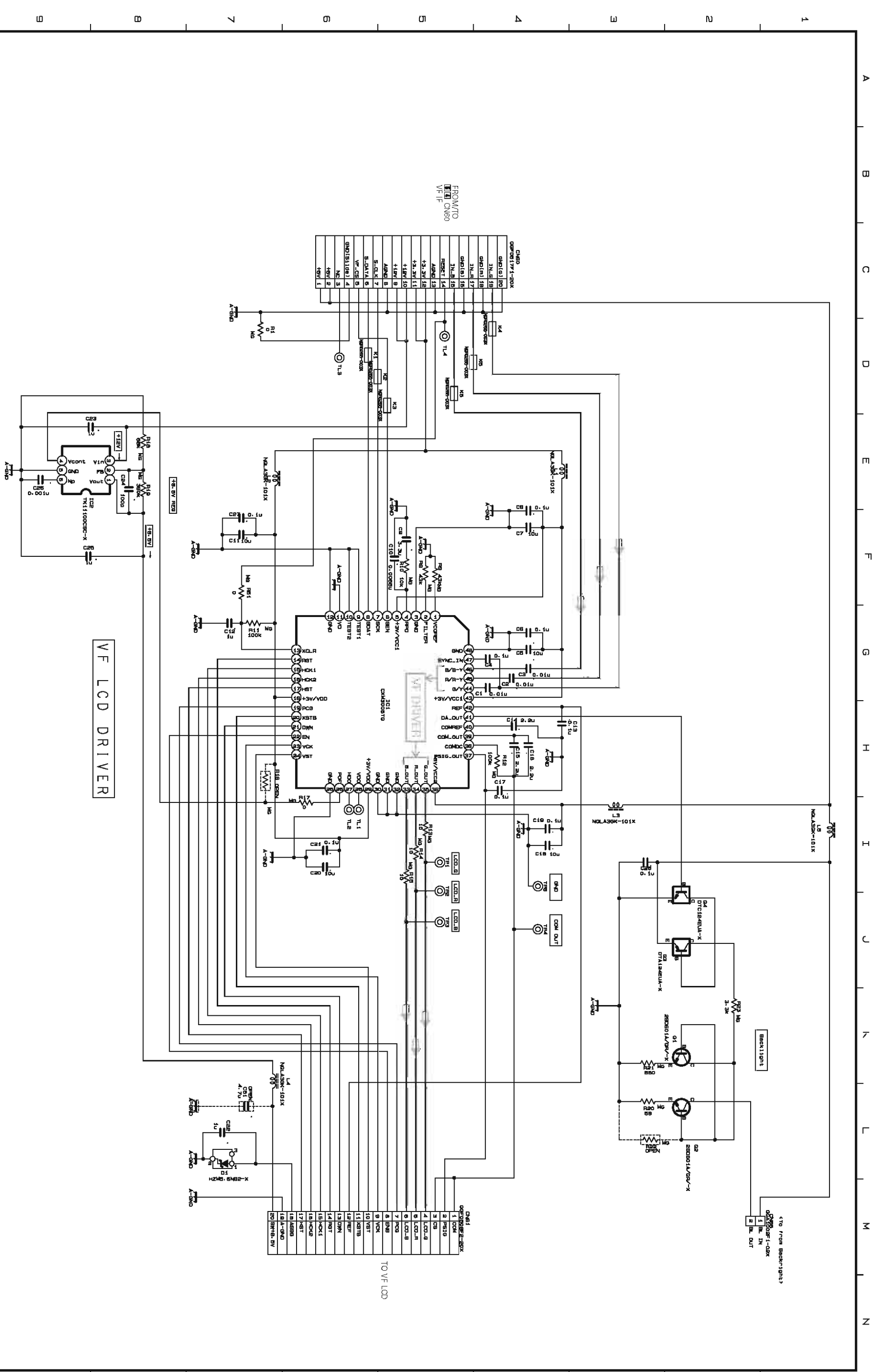
— VF-DR —



— SIDE A —

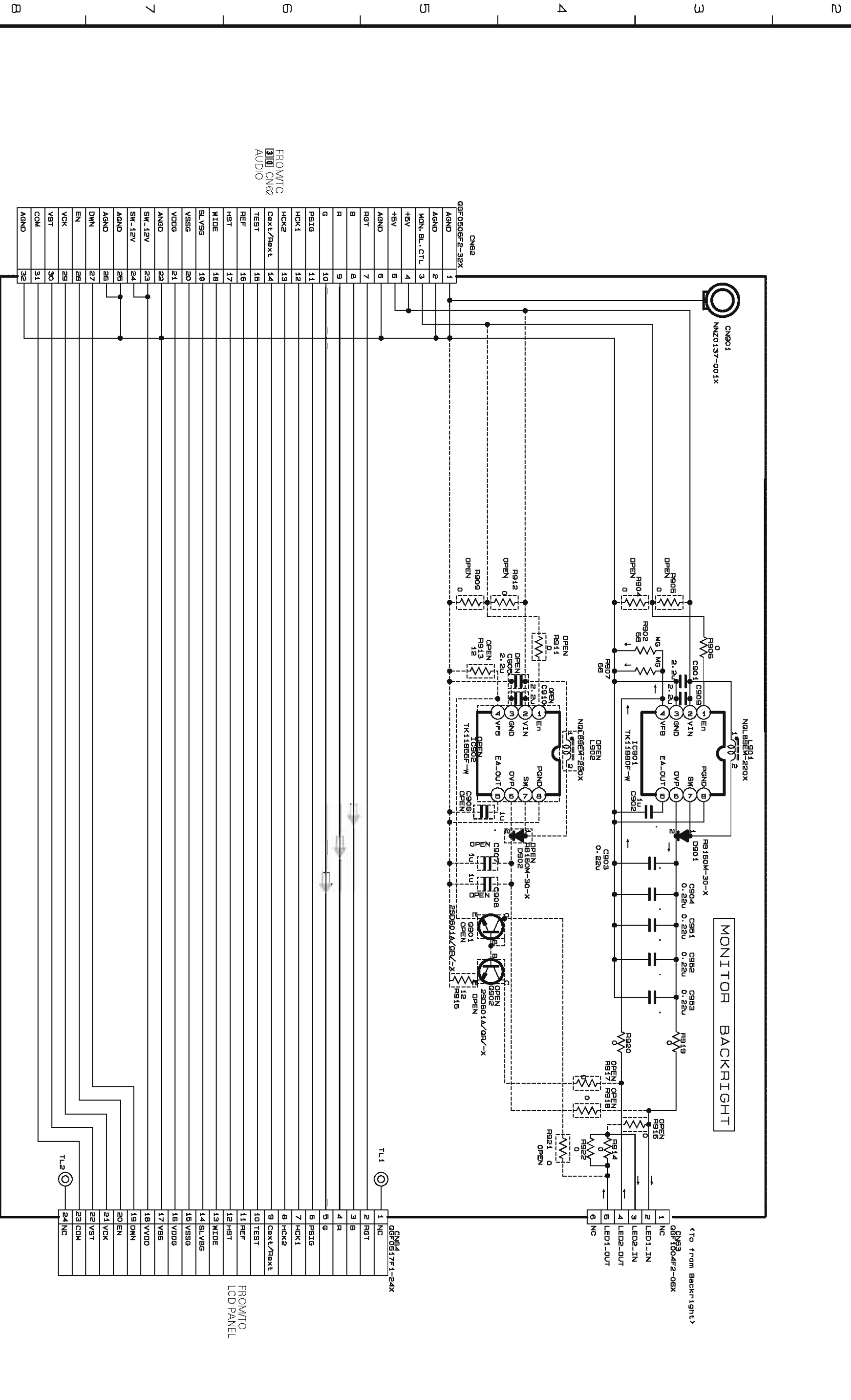
— SIDE B —





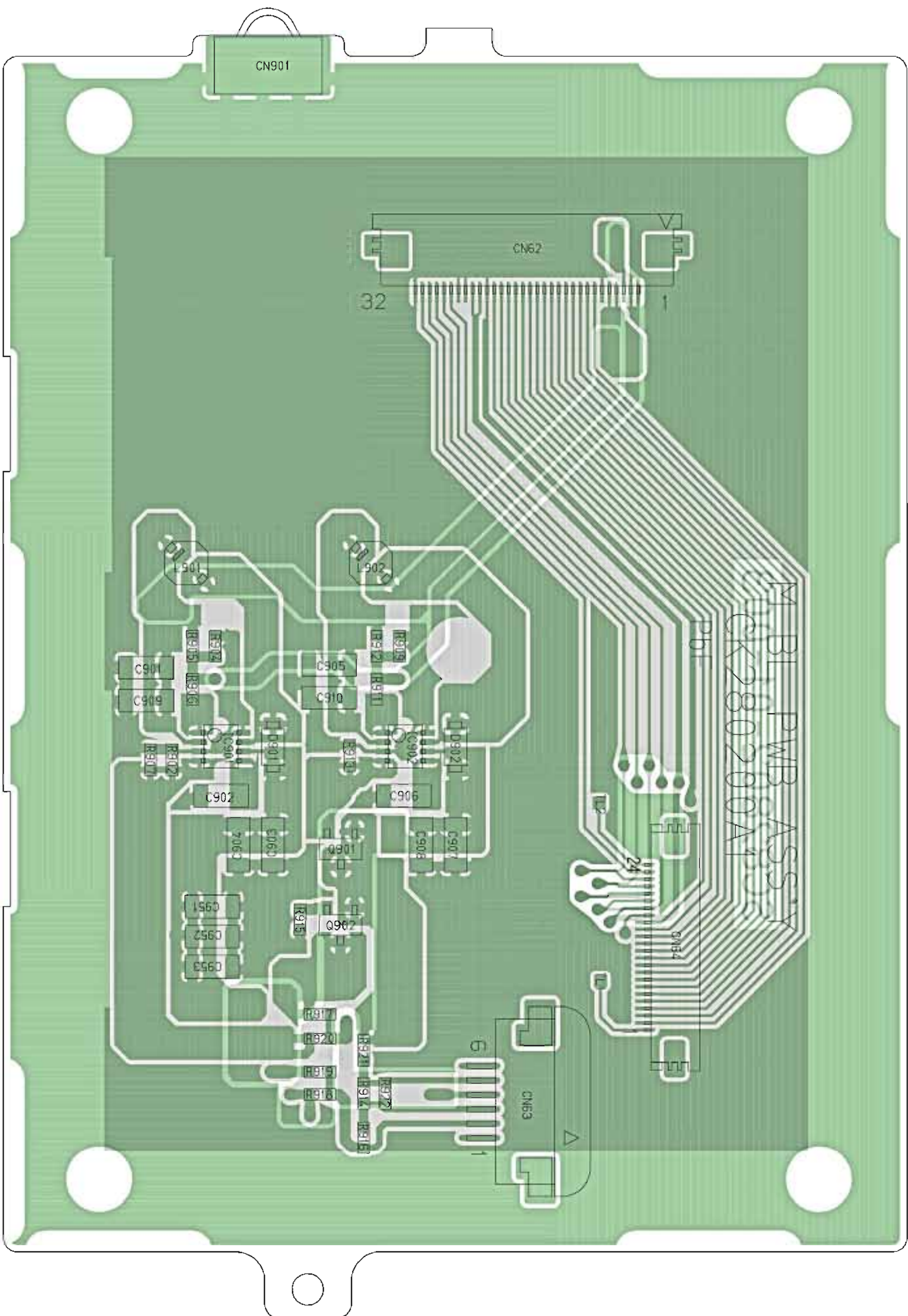
3 4 VF DR

C D E F G H I J K L



61 M BL

- SIDE A -



SECTION 8

TECHNICAL INFORMATION

8.1 HDV FORMAT

HDV format is a basic specification established jointly by Canon Inc., Sharp Corporation, Sony Corporation and Victor Company of Japan, Limited in 2003, which allows the recording and playback of HD video on DV cassette tapes.

Based on the common VCR "DV standard", the "HDV standard" is a HD VCR standard where data recording specifications of compressed HD signals in MPEG2 are newly defined. As it uses the same cassette, tape speed and track pitch as the DV standard, main mechanisms such as drum and tape running system of the HDV standard can make use of those in the DV standard, making it highly compatible with the existing DV standard products.

There are two formats in "HDV standard"; HDV1 at 720p (720 effective scan lines/progressive) recording and HDV2 at 1080i (1080 effective scan lines/interlaced) recording.

8.1.1 HDV Features

- (1) Allows recording and playback of HD video.
- (2) Uses commonly available DVC standard cassette tapes.
- (3) Realizes same recording time as DV format through MPEG-2 high compression
- (4) Uses 720p (HDV1) progressive format and 1080i (HDV2) interlaced format
- (5) Reinforces error correction ability
- (6) Allows trick-play

HDV 720p standard is used in GY-HD100 and BR-HD50. Besides HD video, HDV720P standard also supports SD video progressive recording at 480/60p, 576/50p and 720/24p that is suitable for digital cinema. It also plans to support 720/50p/60p in the future.

8.1.2 HD Image Format

GY-HD100 employs the 720/30p format of HDV. 720/30p means the effective scan line is 720 (scan line 750), frame rate is 30Hz (practically 29.97Hz) and P means progressive scan. Similarly, 1080/60i means the effective scan line is 1080 (scan line 1125), field frequency is 60Hz (actual frame rate is 29.97Hz) and i indicates interlace.

In the case of SD image, it is 480/60i (NTSC), 576/50i (PAL). In addition, the progressive images and aspect ratio 16:9 images are also used.

HD images : 720/30p, 720/25p, 1080/60i, 1080/50i and etc.

SD images : 480/60i, 576/50i, 480/60p, 576/50p and etc.

8.1.3 Progressive method

In progressive scanning method, 1 screen is displayed with 1 scanning. In interlace method, 1 screen is displayed with 2 scanning, which are odd number lines scanning and even number lines scanning. In recent years, employment of progressive method of images is proceeding. Image scanning of DVD and PC is also progressive method. In addition, the popular LCD or Plasma TV and other display devices nowadays are also in progressive mode. The interlace images have to undergo I-P conversion. There are many advantages such as the maintenance of image quality, reduction of the conversion loss, and affinity with PC by employing progressive method when collecting data.

8.1.4 Comparison of HDV format and DV format

	HDV Format		DV format (SD)
	720p (HDV1)	1080i (HDV2)	
General			
Recording Media	Same as DV format (DV/Mini DV cassette)		DV/Mini DV
Truck width	10 μ m	10 μ m	10 μ m/6.7 μ m
Truck/ Frame	Not specified		NTSC: 10 trucks /1 frame PAL: 12 trucks /1 frame
Video			
Video signal	720/30p, (720/60p) 720/25p, (720/50p) 720/24p 480/60p, 576/50p	1080/60i, 1080/50i	NTSC: 480/60i PAL: 576/50i
Number of pixels	1280 x 720 720 x 480 (480/60p) 720 x 576 (576/50p)	1440 x 1080	NTSC: 720 x 480 PAL: 720 x 576
Aspect ratio	16:9		4:3 (16:9)
Compression	MPEG-2 Video (profile & level: MP@H-14)		DCT (intra-frame)
Sampling frequency for luminance	74.25MHz/ 27MHz	55.7MHz	13.5MHz
Sampling format	4:2:0		NTSC 4:1:1 PAL 4:2:0
Quantization	8 bits (both luminance and chrominance)		
Bit rate after compression	Approx. 19Mbps	Approx. 25Mbps	Approx. 25Mbps
AUDIO			
Compression	MPEG1 Audio Layer II		Liner PCM
Sampling Frequency	48kHz		48k/ 44.1k/ 32kHz
Quantization	16 bits		16 /12bits
Bit rate after Compression	384kbps		Approx. 1.5Mbps
Audio Mode	Stereo (2 channels)		2ch / 4ch
SYSTEM			
Data Format	MPEG2 Systems		
Stream Type	Transport Stream	Packetized Elementary Stream	
Stream Interface	IEEE 1394 (MPEG2-TS)		IEEE 1394 (DV)

Table 8.1.2 Comparison of Format

8.1.5 Tape Format

HDV standard records MPEG data based on DV tape format. The recording method differs greatly for HDV1 and HDV2 in HDV standard. HDV1 records MPEG TS data in the conventional VIDEO sector. HDV2 breaks down the frame of conventional VIDEO and AUDIO sectors and takes in a large area that writes MPEG2 PES data (including GAP and a portion of SUB CODE sector).

(1) DV Format

ITI SECTOR	G A P	PCM AUDIO SECTOR	G A P	VIDEO SECTOR DV	G A P	SUB CODE	M A R
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(2) HDV HD1 Format

ITI SECTOR	G A P	PCM AUDIO SECTOR	G A P	MPEG2 TS VIDEO, AUDIO, SEARCH	G A P	SUB CODE	M A R
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(3) HDV HD2 Format

ITI SECTOR	MPEG2 PES VIDEO, AUDIO, SEARCH					SUB CODE	M A R
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Table 8.1.3 Tape Format (conceptual diagram)

8.1.6 GY-HD100 & BR-HD50 Compatible Format

The following table shows a list of compatible formats.

DV/HDV	Frame Rate	Recording Format	Remark
DV	60/30 Hz	480/60i	U-model only
	24 Hz	480/24p Normal mode (2-3-2-3 Pull Down)	GY-HD100 U-model only
		480/24p Advanced mode (2-3-3-2 Pull Down)	GY-HD100 U-model only
	50/25 Hz	576/50i	E-model only
		576/25p	GY-HD100 E-model only
HDV-SD	60/30 Hz	480/60p	GY-HD100/BR-HD50 U/E model in common
	50/25Hz	576/50p	
HDV-HD	60/30 Hz	720/30p	
	24 Hz	720/24p	
	50/25 Hz	720/25p	

Table 8.1.4 Compatible Format

8.2 RECORDING SIGNAL SYNTAX

8.2.1 720/30P

Camera signals are originally generated as 60P signals. FPGA4 (IC106) converts the camera signals from 60P to 30P. Thus alternate frames of camera signals are deleted. Converted 30P signals are inputted to S.ENC (IC91) and encoded to MPEG TS signals as 30P. GOP consists of six frames each so the minimum interval for recording/editing is 0.2 second.

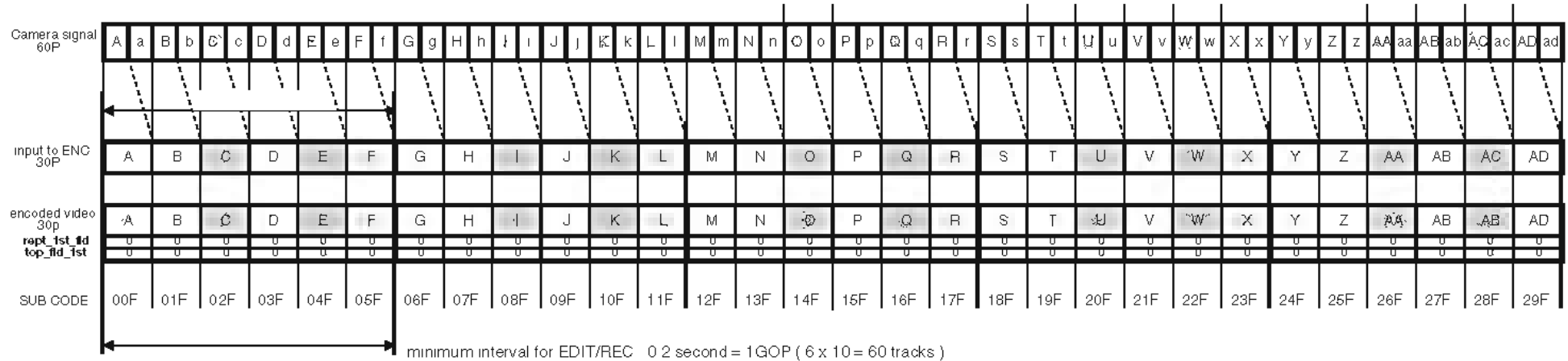


Fig. 8.2.1

8.2.2 720/24P

Camera signals are originally generated as 48P signals. FPGA4 (IC106) converts the camera signals from 48P to 24P. Thus alternate frames of camera signals are deleted. Converted 24P signals are inputted to S.ENC (IC91) and encoded to MPEG TS signals as 60P by 2-3 pull-down. First frame "A" of 24P is encoded to frame "A" and one frame "●", which is without picture data, of 60P. Second frame "B" of 24P is encoded to frame "B" and two frames "●", which are without picture data, of 60P. When playing back, each frame is displayed according to the combination of "rept_1st_flg" and "top_flg_1st" which are the number of repetition flag shown below.

- "1" and "0": displays applicable frame twice
- "1" and "1": displays applicable frame three times

GOP consists of six frames each however sub code is divided, so the minimum interval for recording/editing is required two GOP and is 0.5 second.

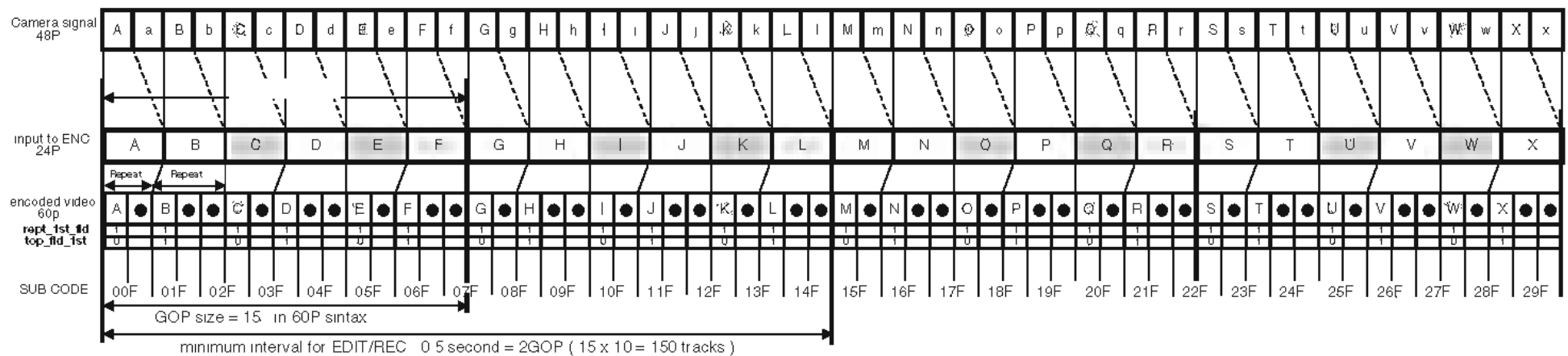


Fig. 8.2.2

8.2.3 720/25P

Camera signals are originally generated as 50P signals. FPGA4 (IC106) converts the camera signals from 50P to 25P. Thus alternate frames of camera signals are deleted. Converted 25P signals are inputted to S.ENC (IC91) and encoded to MPEG TS signals as 50P. First frame "A" of 25P is encoded to frame "A" and one frame "●", which is without picture data, of 50P. When playing back, each frame is displayed according to the combination of "rept_1st_flg" and "top_flg_1st" which are the number of repetition flag shown below.

- "1" and "0": displays applicable frame twice

GOP consists of six frames each so the minimum interval for recording/editing is 0.24 second.

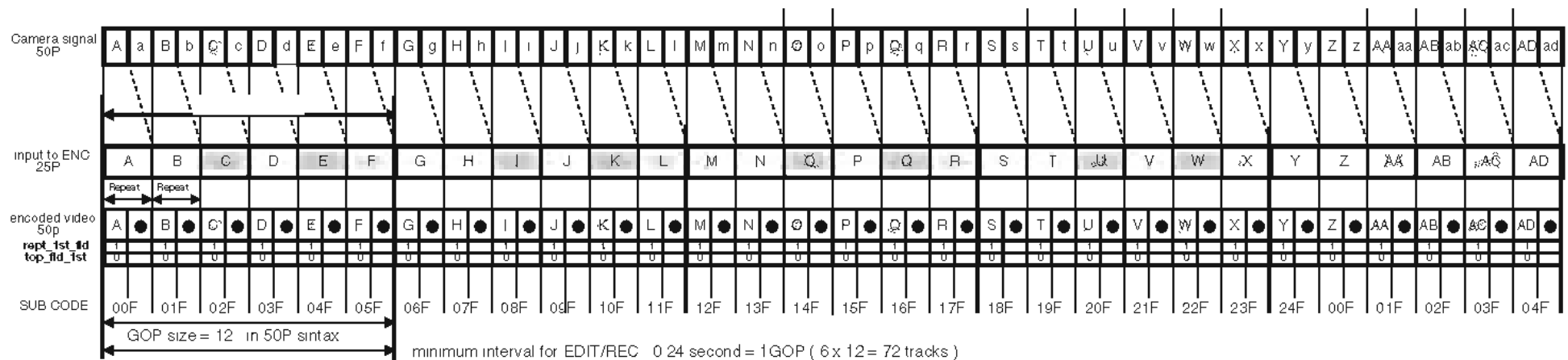


Fig. 8.2.3

8.3 VIDEO CIRCUIT

8.3.1 CCD

GY-HD100 now uses three pieces of 1/3 inch, effective pixels 1.04 million IT type CCD. The CCD's lamination utilizes with UV bonding.

(1) Specification

- Image type : Interline CCD image sensor
- Image size : 1/3 inch
- Total number of pixels : 1356 (H) x 824 (V) approx. 1.11M pixels
- Number of effective pixels : 1292 (H) x 810 (V) approx. 1.04M pixels
- Number of active pixels : 1280 (H) x 802 (V) approx. 1.02M pixels
- Chip size : 6.26mm (H) x 4.71mm (V)

(2) Pixel Reading

Although the CCD's effective pixels are 1292 x 810, the actual pixels are 1280 x 802 with 6 pixels taken away from the left and right, and 4 pixels from the top and bottom.

CCD is divided into two areas at the vertical center line. Signals are read from the center towards the left and right simultaneously. From the CCD, the left and right signals are output, after which A/D conversion is performed, then the two signals will undergo MIX by camera process IC (FPGA2). Currently for CCD, its characteristic is a high drive frequency for reading HD sized pixels at one time, and because the high-speed electrification transfer speed cannot keep up, this method caters for it

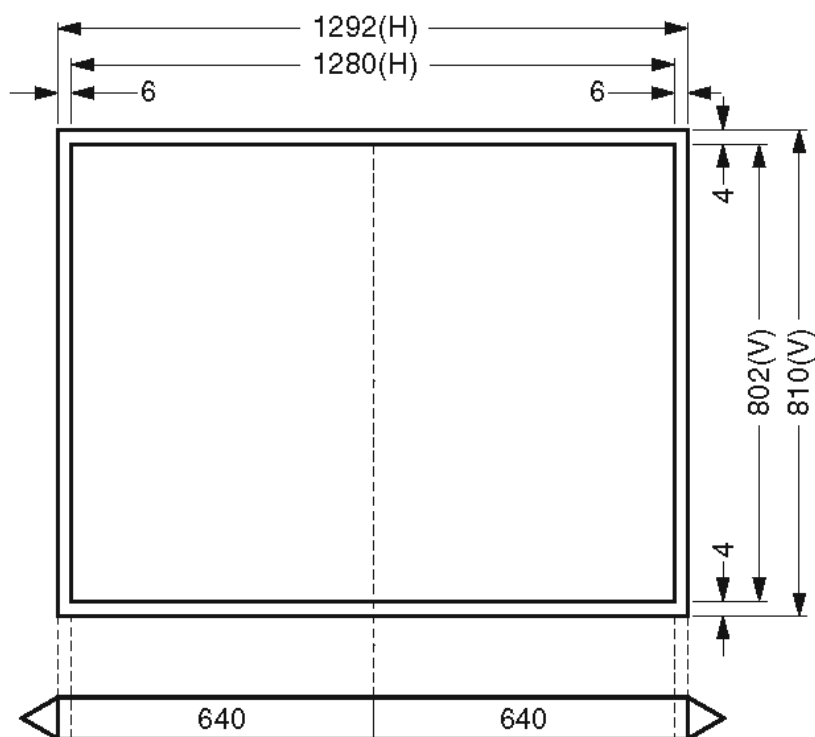


Fig. 8.3.1

8.3.2 VIDEO Signals

Fig. 8.3.3 is a block diagram of the video system.

[Recording]

- (1) The two image signals that are output from RGB CCDs (ICX485) will each be A/D converted by AFE (IC2, IC3). AFE is an abbreviation of Analog Front End, and is hereafter referred to as digital signal. Each 12-bit signal line is inserted to the MAIN board from the IS board and then input to FPGA2 (IC46), camera process LSI.
- (2) With FPGA2, white spot correction, black level correction, gamma correction, KNEE and other digital video signal processing will be carried out. After which, signals converted to digital components will be input to FPGA3 (IC60) and Pixel Converter (IC1, JCY0210).
- (3) FPGA3 (IC60) is the gate array IC for LCD/VF Process. Rate conversion, peaking processing, Focus assist, OSD (On-Screen Display) MIX, etc. will be processed, and undergo digital to analog conversion by Video DAC (IC51, IC52). After which, analog RGB signals will be output to LCD and VF. IC48, IC49 (UPD6467GR) has one for VF and another for LCD, in the character generator for onscreen display. Onscreen data is sent to FPGA3.
- (4) Pixel Conv (IC1) is an up/down converter.
When in DV mode, SD signals will be entered into DVC DSP (IC79, JCY0152) from Pixel Conv. Recorded signals will be processed with DVC DSP, then input to PRMDA board. They will undergo Amplifire by PRE/REC (IC3, JCY0132), and be recorded on DV tape. This DVC DSP (IC79, JCY0152) is the same as what is used at GY-DV5000.
When in HD mode, it will be input to FPGA4 (IC106) via 3DNR processing of Analog I/F (IC5, JCP8076).
- (5) For FPGA4, because the output from camera is 60P/50P, it is converted to 30P/25P for recording. MOTION SMOOTH (selectable with the menu) will also be carried out. This enhances the smoothness of moving images by adding discarded information with original information via 30P/25P conversion.
- (6) Signals from FPGA4 will be input to Super ENC (IC91). After MPEG encoding here, they will be output as MPEG TS signals, then input to MPEG Bridge (IC86, JCY0173). They will be input to DVC DSP after TS → DV conversion to match the DVC recorded track format. After which, like SD signals they will pass through PRMDA board's PRE/REC (IC3, JCY0132), then be recorded on DV tape.

[Playback]

- (1) Playback signals recorded on DV tape are input to DVC DSP (IC79, JCY0172), DV signal process IC, via PRE/REC (IC3, JCY0132).
- (2) When in SD mode, it will be DV decoded and then output to Pixel Conv (IC1). When in HD mode, it will be entered to Super ENC (IC91) via MPEG Bridge (IC86, JCY0173), then MPEG decode processed and output to Pixel Conv (IC1).
- (3) After being converted to the selected video format (up/down convert) by pixel converter, and after analog conversion by analog I/F (IC5, JCP8076), it will be output as Video Out. Additionally it will be output as VF/LCD by means of FPGA2 to FPGA3. IC3, IC4 (BU3095-0CFV) is an onscreen character generator for VIDEO OUT. IC3 is for SD, and IC4 for HD, to send onscreen data to analog I/F (IC5, JCP8076).

■ Keyword

3DNR	: 3-Dimensional Noise Reduction
FPGA	: Field Programmable Gate Array (Programmable)
MOTION SMOOTH	: Moving Image Filter (function to smoothen movement)
Super ENC III	: MPEG2 Encoding/Decoding Process LSI
Pixel Converter	: Up-down Converter LSI (480/60i, 576/50i, 480/60p, 576/50p, 720/60p/50p, 1080/60i/50i selection)
JTAG	: Boundary Scan Test Function (for design and development only)
EJTAG	: Real-time Debugging Function (for design and development only)

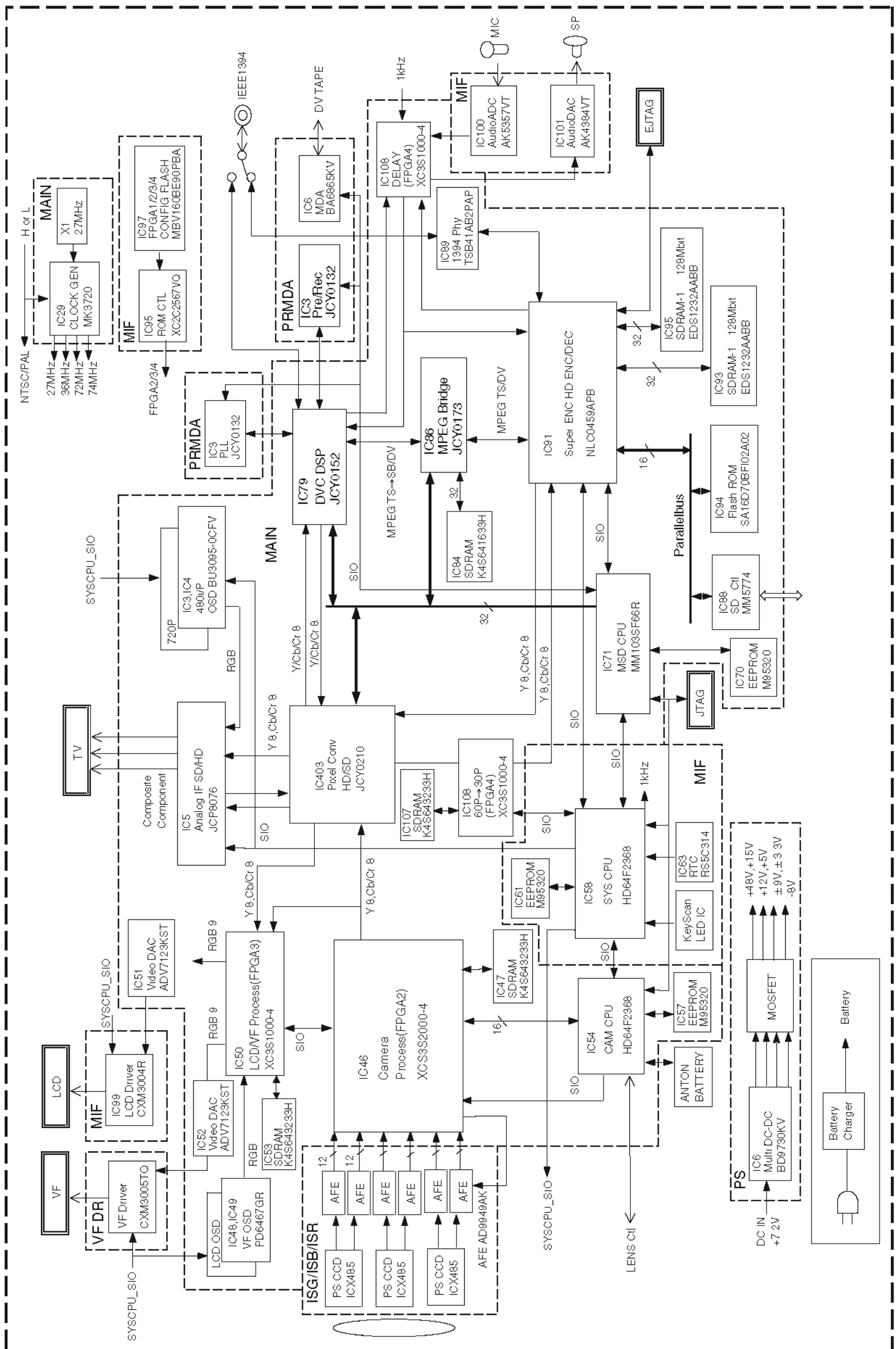


Fig. 8.3.3 VIDEO BLOCK DIAGRAM

8.3.3 AUDIO Signals

DV Format : DV Audio Standard

HDV Format : Compression Method : MPEG1 Audio Layer II

Sampling Frequency : 48kHz, No. of Bits for Quantization : 16bit

Bit Rate : 384kbps, Sound Mode : Stereo (2ch)

Fig. 8.3.4 is a block diagram of the audio system.

[Recording]

- (1) Mic input (analog signal) signals enter from AUDIO_IN1 and AUDIO_IN2 to the AUDIO board. In the case of AUTO mode, they will be input to the MIF board via ALC IC (IC201, IC202). In the case of MANUAL mode, it will be input to the MIF board via REC LEVEL VR of the AVR board.
- (2) It will be analog to digital converted (IC100, AK5357VT) by the MIF board. Digitalized audio data (ANA_IN_DAT) will be output from the MIF board, then input to FPGA4 (IC106) of the MAIN board. Data when in SD mode will be input to DVC DSP (IC79, JCY0152) as it is, and data when in HD mode will be input to Super ENC (IC91) after undergoing sampling clock conversion (64fs to 32fs conversion).
- (3) When in SD mode, its format will be converted by DV DSP (IC79, JCY0152) for recording, then recorded on DV tape as linear PCM. When in HD mode, after being compressed to MPEG1 Audio Layer II by Super ENC (IC91), it will pass through MPEG Bridge (IC86, JCY0173) and then be input to DVC DSP (IC79, JCY0152) as MPEG2 TS data. After which, it will pass through PRMDA board's PRE/REC (IC3, JCY0132), then be recorded on DV tape.

[Playback]

- (1) Playback signals will undergo AMP at PRE/REC (IC3, JCY0132) and when in SD mode, only audio data will be input by DVC DSP (IC79, JCY0152) to FPGA4 (IC106) as "PB_SD_DAT". When playing back in HD mode, MPEG2 TS data will, via MPEG Bridge (IC86, JCY0173), be input to FPGA4 (IC106) as "PB_HD_DAT" after undergoing the MPEG decoding process by Super ENC (IC91).
- (2) With FPGA4 (IC106) it will pass through the selector, then delay 1 frame and output. AUDIO data (ANA_OUT_DAT) output from FPGA4 will be input to the MIF board from the MAIN board. It will undergo digital to analog conversion at IC101 (AK4384VT), then be output to audio out and speaker.

■ Keyword

CLK_24M : AUDIO master clock when in SD mode 24.576MHz

CLK_24M : AUDIO master clock when in SD mode 24.576MHz

Fs : Sampling Frequency 44.1kHz

BCK : AUDIO Bit Clock

LRCK : AUDIO LR Clock

MCK : AUDIO Clock

DAT : AUDIO Digital Data

PLL : Phase Locked Loop

MUX/DMUX : Multiplexer/Demultiplexer

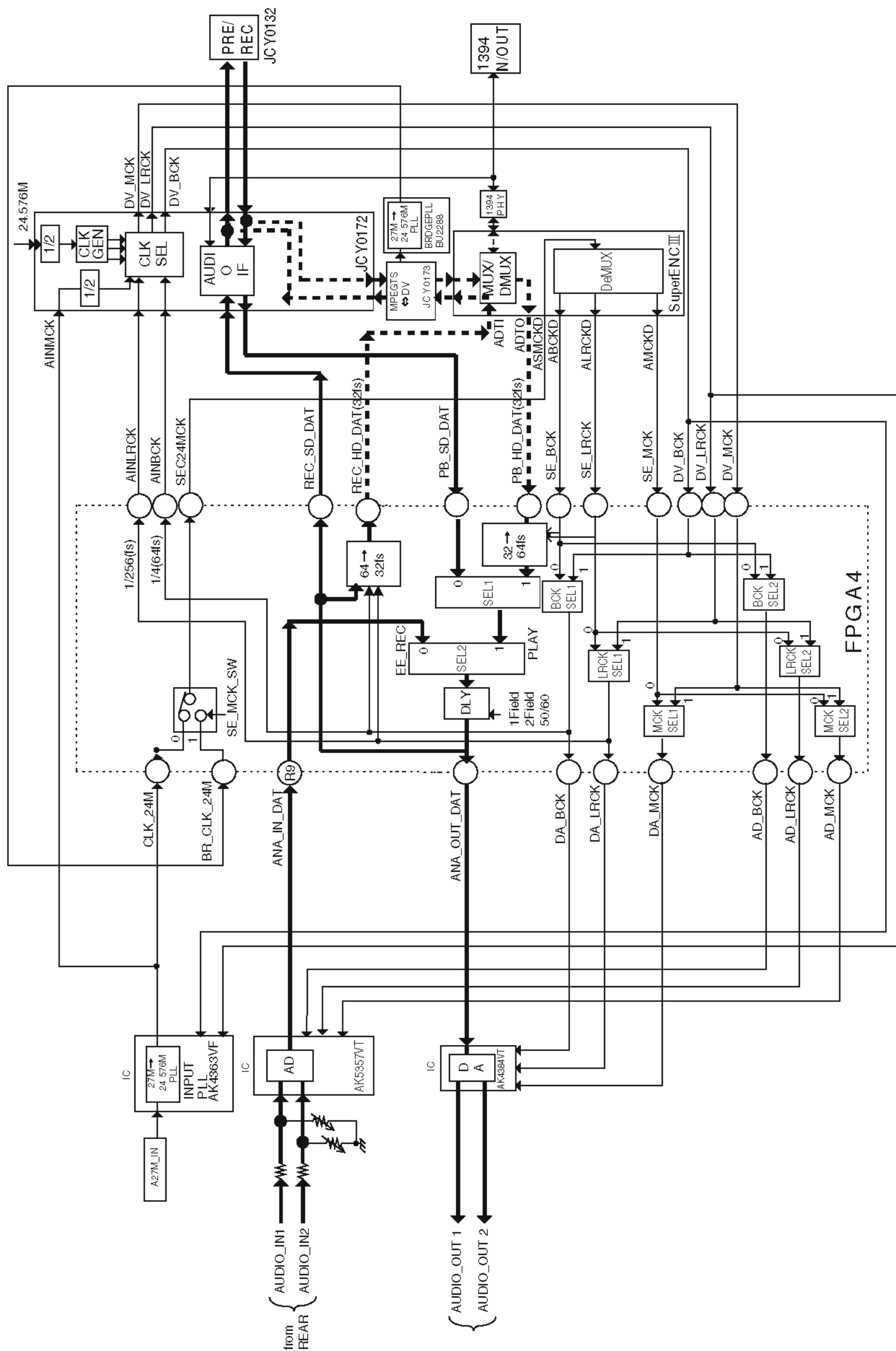


Fig. 8.3.4 AUDIO BLOCK DIAGRAM

8.3.4 SYSTEM CONTROL

Fig. 8.3.5 is a block diagram of the system control. GY-HD100 is equipped with four CPUs. It also has four programmable gate arrays (FPGA). CPU's firmware and FPGA's programs are rewritable using onboard with the SD card.

- CAMERA CPU : Control of Camera
- MSD (VTR) CPU : Control of VTR
- Super ENC CPU : Control of Encoder
- SYSCON CPU : Control of whole camcorder, Key operation and onscreen control

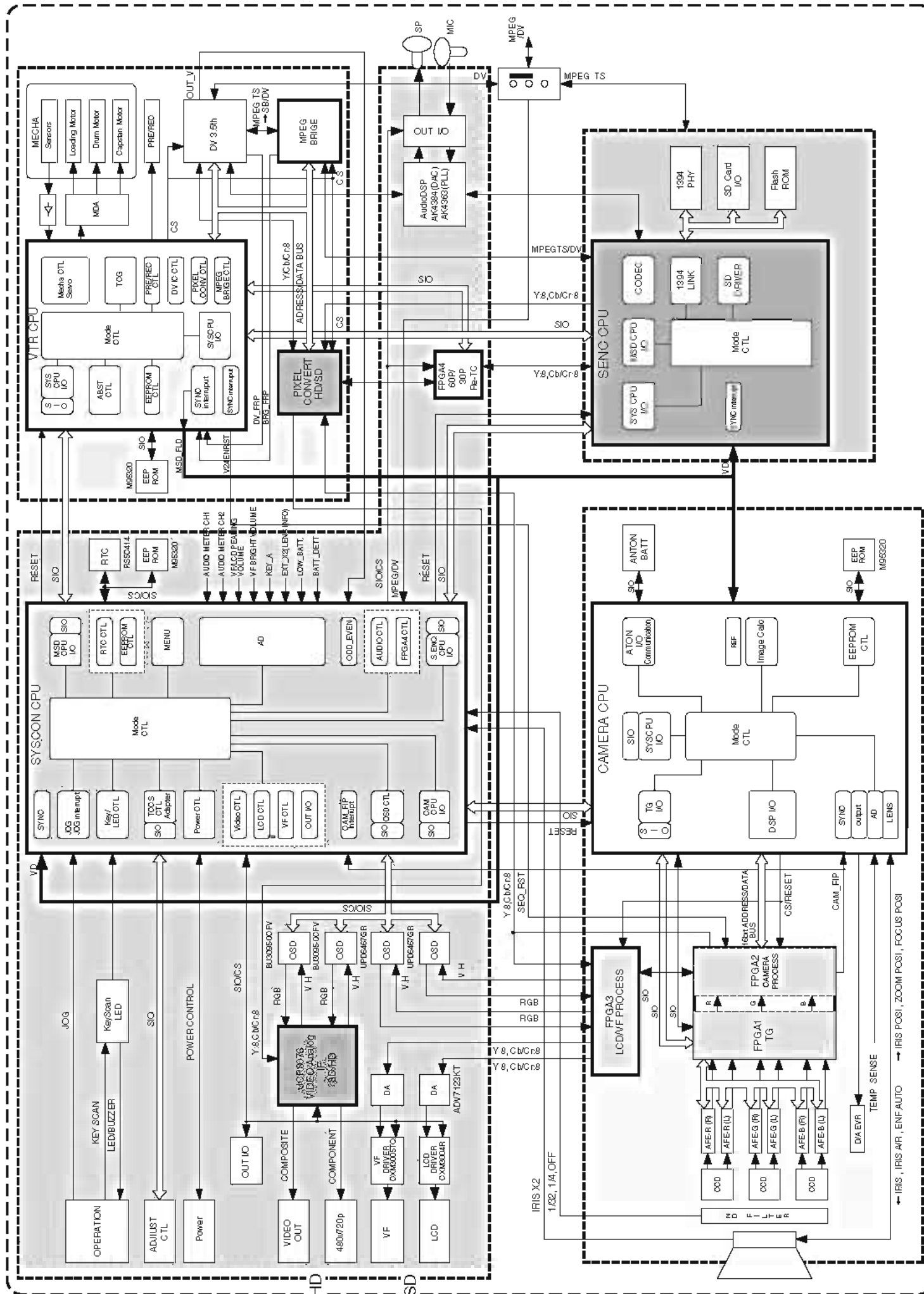


Fig. 8.3.5 SYSTEM CONTROL BLOCK DIAGRAM

8.4 GLOSSARY

1-9

1080i

HDTV format. Vertical lines 1,080 x horizontal pixels 1,920, displayed in interlace method. Aspect ratio 16:9, frame rate 29.97 Hz.

2-3 Pull Down

This is the method used for converting (pull down) movie film image (24 frame/sec) to TV signal (30 frame), which assigns 1 film frame to 2 fields, and next film frame to 3 fields in the film. In this case, 2 different fields (consecutive 2 frames) mix together to build up 1 frame in every 5 frames. There is a drawback that the picture quality will deteriorate.

480p

HDTV format. Vertical lines 480 x horizontal pixels 720, displayed in progressive method. 4:3 or 16:9, frame rate is 59.94 Hz, 29.97 Hz or 23.98 Hz

480i

Standard TV (SDTV) format, used by NTSC. Vertical lines 480 x horizontal pixels width 720, displayed in interlace method. Aspect ratio 4:3 or 16:9, frame rate 29.97 Hz.

576i

Standard TV (SDTV) format, used by PAL. Vertical lines 576 x horizontal pixels width 720, displayed in interlace method. Aspect ratio 4:3 or 16:9, frame rate 25 Hz.

720p

HDTV format. Vertical lines 720 x horizontal pixels 1280, displayed in progressive method. Aspect ratio 16:9, frame rate is 59.94 Hz, 29.97 Hz or 23.98 Hz

A-Z

Aspect ratio

The ratio of the width of video image to the height. Normally 3:4 for SDTV and 16:9 for HDTV

Bps

Abbreviation for Bits per second. Indicates the data size transferable in 1 second.

Compression

Reduce the size of digital information required for reproducing TV image or frame in mathematical method.

DVI

The interface standard for connecting PC and monitor. DVI-I supports both analog and digital connections, while DVI-D supports digital connection only.

Encoder

Compress image or audio data to prescribed stream. On the contrary, the decoder expands compressed stream to image or audio data.

GOP

Abbreviation for Group Of Picture.

This refers to the group of successive still images used for compression of MPEG. There is only one intra-frame compression image, I-picture within the group, while other frames contain only differential data, P-picture and B-picture. The number of frames in the GOP can be adjusted accordingly.

HDCP

Abbreviation for High-bandwidth Digital Content Protection. HDCP is a specification originally developed by Intel Corporation to enforce copyrights of digital entertainment content across the DVI interface, and now across the HDMI interface as well.

HDMI

Abbreviation for High-Definition Multimedia Interface. HDMI which was built on the foundation of DVI-HDCP, transmits uncompressed high definition video and multi-channel digital audio in a single cable with a maximum data transfer speed of 5Gbits/sec. HDMI systems while maintaining backward compatibility with DVI-HDCP devices.

HDMI supports uncompressed standard, enhanced and high definition video format as well as compressed audio formats such as Dolby Digital, DTS and uncompressed format such as PCM audio. In addition, it also supports the HDCP standard of digital video signals.

HDTV

Abbreviation for High-definition television.

A generic name of next generation TV that the number of scan line has been increased and the picture quality has been improved as compared to current TV. Aspect ratio 16:9, generally refers to 1080i or 720p.

Interlaced

In TV scanning method, 1 screen is displayed with 2 scanning, which are odd number lines scanning and even number lines scanning.

I-P Conversion

Convert the scanning method from Interlaced to Progressive.

MPEG-2

Abbreviation for Moving Picture Experts Group, Phase 2. Unlike previous compression methods, MPEG-2 uses an extremely efficient compression method that supports high-definition video. Based on the principle that much video data remains unchanged from one frame to the next, predictive coding is performed to eliminate redundant data.

Specifically, compression is applied between frames (based on DCT, Discrete Cosine Transform) and within frames (based on DCT) for an extremely efficient compression technique.

Pixel

The minimum unit of display color. The frame is consist of the lines and columns of pixels. The pixels and line number of each frame indicate the resolution of video image.

Progressive

In TV scanning method, 1 screen is displayed with 1 scanning.

SDI (Serial digital video interface)

A transmission standard defined by SMPTE, which is used when transmitting SD video by 270M, 360M or 540 Mbps, HD video by 1.485 Gbps with the video device connected.

SDTV (Standard definition television)

A standard precise video system, which aspect ratio is 4:3. Generally refers to 480i/576i.

STREAM

A series of encoded data of image and audio.

TS (Transport Stream)

Data stream containing supplementary data, compressed video and compressed audio.

UP/DOWN convert

DOWN convert refers to converting HD signal (720P/1080I) to SD signal, whereas UP convert refers to the reverse conversion.