

SHARP SERVICE MANUAL

No. 00ZFO4400USME



Illustration: FO-4400

FACSIMILE

MODEL FO-4400

MODEL	SELECTION CODE	DESTINATION
FO-4400	U	U.S.A./Canada

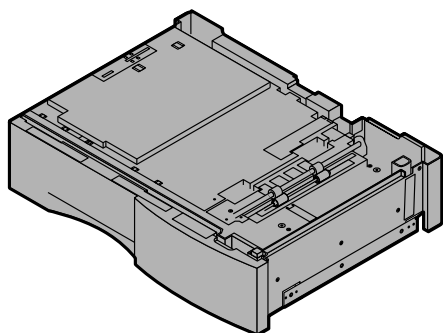


Illustration: FO-CS1

OPTION: PAPER CASSETTE

MODEL FO-CS1

OPTION

Toner cartridge:	FO-50ND
Drum cartridge:	FO-47DR
Option memory:	FO-8MK
Verification stamp:	FO-45VS
Paper cassette:	FO-CS1

CAUTION

This laser printer is a class 1 laser product that complies with 21CFR 1040.10 and 1040.11 of the CDRH or IEC60825-1 standard. This means that this machine does not produce a hazardous laser radiation. The use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This laser radiation is not a danger to the skin, but when an exact focusing of the laser beam is achieved on the eyes retina, there is danger of spot damage to the retina.

The following cautions must be observed to avoid exposure of the laser beam to your eyes at the time of servicing.

- 1) When a problem in the laser optical unit has occurred, the whole optical unit must be exchanged as a unit, not an individual part.
- 2) Do not look into the machine with the main switch turned on after removing the toner/developer unit and drum cartridge.
- 3) Do not look into the laser beam exposure slit of the laser optical unit with the connector connected when removing and installing the optical system.
- 4) The cover of Laser Printer Unit contains the safety interlock switch.

Do not defeat the safety interlock by inserting wedges or other items into the switch slot.

Laser Wave Length : 770-795 nm

Laser Pulse Times : 51.3 ns

Laser Output Power : 5 mW

Parts marked with "△" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

- CAUTION FOR BATTERY REPLACEMENT
- PRECAUTIONS FOR USING LEAD-FREE SOLDER

CHAPTER 1. GENERAL DESCRIPTION

[1] Specifications	1-1
[2] Life of consumable	1-1
[3] Operation panel	1-2
[4] Transmittable documents	1-3
[5] Installation	1-4
[6] Quick reference guide	1-11

CHAPTER 2. ADJUSTMENTS

[1] Adjustments	2-1
[2] Diagnostics and service soft switches	2-2
[3] Troubleshooting	2-35
[4] Error code table	2-36
[5] Overseas communication mode	2-38
[6] Administrator mode in the personal book function	2-38

CHAPTER 3. MECHANICAL DESCRIPTION

[1] Mechanical description	3-1
[2] Printer description	3-2
[3] Disassembly and assembly procedures	3-9
[4] How to install the verification stamp (FO-45VS)	3-33

CHAPTER 4. DIAGRAMS

[1] Block diagram	4-1
[2] Wiring diagram	4-2
[3] Point-to-point diagram and connector signal name	4-3

CHAPTER 5. CIRCUIT DESCRIPTION

[1] Circuit description	5-1
[2] Circuit description of control PWB	5-1
[3] Circuit description of CIS unit	5-15
[4] Circuit description of LIU PWB	5-16
[5] Circuit description of operation panel PWB	5-18
[6] Circuit description of power supply PWB	5-19

CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

[1] Control PWB circuit	6-1
[2] LIU PWB circuit	6-18
[3] Printer PWB circuit	6-21
[4] Power supply PWB circuit	6-25
[5] Operation panel PWB circuit	6-27
[6] 2nd paper cassette PWB circuit (FO-CS1)	6-31

CHAPTER 7. OPERATION FLOWCHART

[1] G3 protocol	7-1
[2] Super G3 protocol	7-2
[3] Power on sequence	7-3

CHAPTER 8. OTHERS

[1] Service Tools	8-1
[2] Rewriting version up the FLASH ROM	8-2

PARTS GUIDE

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type
recommended by the equipment manufacturer.

Discard used batteries according to manufacturer's instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.

Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrektter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

PRECAUTIONS FOR USING LEAD-FREE SOLDER**① Employing lead-free solder**

The **Power supply PWB** of this model employs lead-free solder. This is indicated by the "LF" symbol printed on the PWB and in the service manual.

The suffix letter indicates the alloy type of the solder.

Example:

LFa
Sn-Ag-Cu

Indicates lead-free solder of tin, silver and copper.

② Using lead-free solder

When repairing a PWB with the "LF" symbol, only lead-free solder should be used. (Using normal tin/lead alloy solder may result in cold soldered joints and damage to printed patterns.)

As the melting point of lead-free solder is approximately 40°C higher than tin/lead alloy solder, it is recommended that a dedicated bit is used, and that the iron temperature is adjusted accordingly.

③ Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is higher and has poorer wettability (flow), to prevent damage to the land of the PWB, extreme care should be taken not to leave the bit in contact with the PWB for an extended period of time. Remove the bit as soon as a good flow is achieved.

The high content of tin in lead free solder will cause premature corrosion of the bit.

To reduce wear on the bit, reduce the temperature or turn off the iron when it is not required.

Leaving different types of solder on the bit will cause contamination of the different alloys, which will alter their characteristics, making good soldering more difficult.

It will be necessary to clean and replace bits more often when using lead-free solder. To reduce bit wear, care should be taken to clean the bit thoroughly after each use.

CHAPTER 1. GENERAL DESCRIPTION

[1] Specifications

• GENERAL

Automatic dialing:	Conventional Auto Dialing: Rapid Key Dialing: 59 numbers Speed Dialing: 75 numbers Personal Auto Dial Books: 10 books (59 Rapid Keys, 16 Speed Dial numbers per book)	Halftone (grayscale):	64 levels
Memory size* :	2 MB (approx. 124 pages) Optional memory: FO-8MK (8 MB; approx. 500 pages)	Applicable telephone line:	Public switched telephone network
Modem speed:	33,600 bps (max.) with automatic fallback to lower speeds	Compatibility:	ITU-T (CCITT) G3 mode, Super G3 mode
Transmission time* :	Approx. 3 seconds	Printing resolution:	Horizontal: 406 lines/inch (16 lines/mm) Vertical: 391 lines/inch (15.4 lines/mm)
Toner cartridge yield: (continuous printing, 4% page coverage, letter paper)	Initial starter cartridge (included with fax machine): Approx. 3000 pages Replacement cartridge (FO-50ND): Approx. 6000 pages	Input document size:	Automatic feeding: Width: 5.8 to 10.1" (148 to 256mm) Length: 5.0 to 14.3" (128 to 364 mm) Manual feeding: Width: 5.8 to 11.0" (148 to 279 mm) Length: 5.0 to 19.0" (128 to 483 mm) 8.2" (208 mm) max.
Drum cartridge yield:	Initial starter cartridge (included with fax machine): 20,000 pages (avg.) Replacement cartridge (FO-47DR): 20,000 pages (avg.)	Effective scanning width:	8.2" (208 mm) max.
Resolution:	Horizontal: 203 pixels/inch (8 dots/mm) Vertical: Standard: 98 lines/inch (3.85 lines/mm) Fine/Halftone: 196 lines/inch (7.7 lines/mm) Super fine: 391 lines/inch (15.4 lines/mm)	Effective printing width:	8.0" (203 mm) max.
Automatic document feeder:	Letter paper (20 lb): Max. 50 pages Legal paper: Max. 20 pages (Note: 11" x 17" paper must be loaded one page at a time.)	Reception modes:	Auto/Manual
Paper capacity:	250 sheets (20 lb) (500-sheet cassette available as option)	Instascan speed:	1.3 sec/page (letter paper; scan time only, excludes document feeding time)
Compression scheme:	MMR, MR, MH, Sharp (H2)	Full Dual Access:	Yes
		Copy function:	Single/Multi/Sort (99 copies/page)
		Power requirements:	120 V AC, 60 Hz
		Operating temperature:	50 - 86°F (10 - 30°C)
		Humidity:	20 to 85 % RH
		Power consumption:	Stand-by: 9 W Maximum: 760 W
		Dimensions:	Width: 21.5" (546 mm) Depth: 16.2" (412 mm) Height: 13.6" (346 mm) (Not including paper tray or attachments)
		Weight:	Approx. 31.3 lbs. (14.2 kg) (Not including supplies paper tray or attachments)

* Based on ITU-T Test Chart #1 at standard resolution, excluding time for protocol signals (i.e., ITU-T phase C time only).

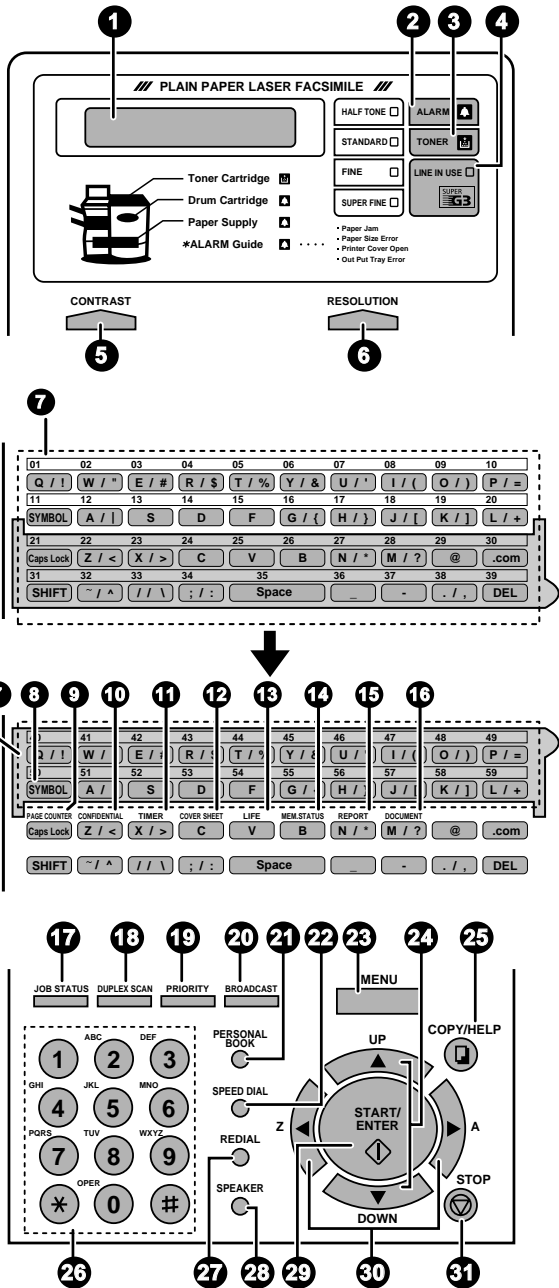
<IMPORTANT PLEASE READ FIRST>

To avoid problems with supplies, please don't use supplies from other units. Please use new supplies, when supply changes are required.

[2] Life of consumable

Section	Part	Estimated Life	Replaced by
Toner cartridge	Replacement cartridge (FO-50ND)	6,000 prints (at Letter/4% chart)	User
Drum cartridge	Replacement cartridge (FO-47DR)	20,000 prints (at Letter/4% chart)	User
Paper feed	Transfer roller (Refer to the P/G No. 10-8) (0KW4127410302)	50,000 prints	Service Engineer
Fuser	Fusing unit (Refer to the P/G No. 9-14) (0KW4127035501)	50,000 prints	Service Engineer
Paper transport	Paper transfer roller (Refer to the P/G No. 8-6) (0KW4127300101)	Cleaning as needed	_____
Unit	FO-4400	5 years or 75,000 prints of early either	_____

[3] Operation panel

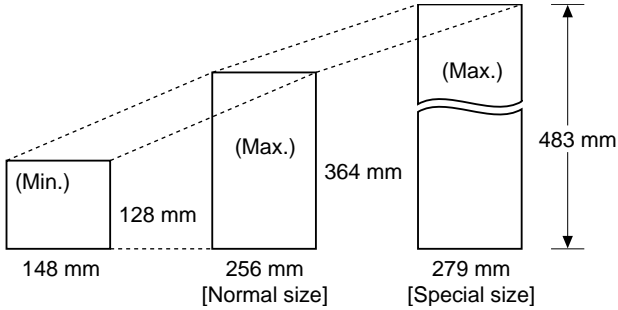


- 1 Display**
This displays messages and prompts to help you operate the machine.
- 2 ALARM indicator**
This blinks when one of the paper sources is empty or the drum cartridge is near the end of its life (printing is still possible). This lights steadily when the drum cartridge has reached the end of its life, all paper sources are empty, the print compartment cover is open, or a paper jam has occurred (printing is not possible). A message will appear in the display to indicate the problem.
- 3 TONER indicator**
This blinks when the toner cartridge nears empty, and lights steadily when the toner cartridge needs replacement.
- 4 LINE IN USE light**
This lights when the fax machine is using the telephone line.
- 5 CONTRAST key**
Press this key to adjust the contrast before sending or copying a document.
- 6 RESOLUTION key**
Press this key to adjust the resolution before sending or copying a document. An indicator will light next to the selected setting (HALFTONE, STANDARD, FINE or SUPER FINE).
- 7 Rapid Dial Keys**
Press one of these keys to dial a fax number automatically. (Note that you must attach the Rapid Key labels.) When navigating through the display menu, a Rapid Key can also be pressed in place of the numeric keys to enter a two-digit number (for example, you can press Rapid Key 01 to enter the number "01").
- 8 SYMBOL key**
When entering a name, press this key to enter the symbol on a letter key (the character to the right of the slash). Press the key again to turn off symbol entry mode.
- 9 PAGE COUNTER key**
Press this key to include a slash and the total number of pages after each page number on the pages of a transmitted document.
- 10 CONFIDENTIAL key**
Press this key to send or print out a confidential document.
- 11 TIMER key**
Press this key to set an operation to be performed automatically at a later time.
- 12 COVER SHEET key**
Press this key to include a cover sheet when sending a fax.
- 13 LIFE key**
Press this key, followed by **1**, to check the total number of pages printed by the fax machine.
- 14 MEM. STATUS key**
Press this key to check the status of fax transmission jobs, copy jobs, and fax receptions. This key can also be used to cancel a job.
- 15 REPORT key**
Press this key to print out a report on the most recently completed transmission or reception.
- 16 DOCUMENT key**
Press this key to transmit a document directly from the feeder without reading it into memory.
- 17 JOB STATUS key**
Two types of information appear in the display: prompts related to operations you are performing, and information about how the fax machine is using the telephone line (transmitting, receiving, etc.). Press this key to change between the two types of information.
- 18 DUPLEX SCAN key**
Press this key to transmit or copy a two-sided document.
- 19 PRIORITY key**
Press this key when you need to transmit a document ahead of other documents waiting in memory for transmission.
- 20 BROADCAST key**
Press this key to send a fax to a group of receiving fax machines.
- 21 PERSONAL BOOK**
Press this key to use or store an auto-dial number in a personal book. If the book has a passcode, enter the passcode; otherwise, select the book with **←** or **→** and press **START/ENTER**.
- 22 SPEED DIAL key**
Press this key to dial a Speed Dial number.
- 23 MENU key**
Press this key to select special functions and settings.
- 24 UP and DOWN arrow keys**
Volume setting: Press these keys to change the speaker volume when the **SPEAKER** key has been pressed, or the ringer volume at any other time.
- 25 COPY/HELP key**
When a document is in the feeder, press this key to make a copy of a document. At any other time, press this key to print out the Help List, a quick reference guide to the operation of your fax machine.
- 26 Dial keypad (numeric keys)**
Use these keys to dial and program fax numbers.
- 27 REDIAL key**
Press this key to automatically redial the last number dialed.
- 28 SPEAKER key**
Press this key when transmitting a document by Normal Dialing to listen to the line and verify the response of the receiving fax machine.
- 29 START/ENTER key**
Press this key to begin fax transmission when using Speed Dialing, Direct Keypad Dialing, or Normal Dialing. This key is also used to select settings and complete entries when storing names and numbers.
- 30 Left and right arrow keys**
Auto-dial numbers: Press these keys to search for an auto-dial number when sending a fax.
MENU key settings: Press these keys after pressing the **MENU** key to scroll through the **MENU** key settings.
- 31 STOP key**
Press this key to cancel an operation before it is completed.

[4] Transmittable documents

1. Document Sizes

Normal size	width	5.8" – 10.1" (148 – 256 mm)
	length	5.0" – 14.3" (128 – 364 mm)



* With special sizes, only one sheet can be fed into the machine at a time. Insert next page into feeder as current page is being scanned.

2. Paper Thickness & Weight

	Indication	Product specifications	
		Lower Limit	Upper Limit
Weight indication	Japanese indication Size 4 × 6	45kg paper	70kg paper
	Metric system indication	52g/m ²	80g/m ²
	American indication LB system indication	14 LB	20 LB
Thickness indication	Metric system indication	0.06mm	0.1mm
	Inch system indication	0.0024"	0.0035"
Document size	Document size Range	(148mm × 128mm) ~ W letter (279mm × 483mm)	
		A4 (210mm × 297mm)	
		Letter (216mm × 279mm)	
Number of ADF sheets	Document size Weight	B6 ~ Letter/A4 size	50 sheets
		B4 size/Legal	20 sheets
		W letter size	1 sheet
		90 kg (104g/m ²) or more 135 kg (157g/m ²) or less	1 sheet
Paper quality	Kind	Paper of fine quality/bond paper/ Kent paper	

3. Document Types

- Normal paper
Documents handwritten in pencil (No. 2 lead or softer), fountain pen, ball point pen, or felt-tipped pen can be transmitted.
Documents of normal contrast duplicated by a copying machine can also be transmitted.
- Diazo copy (blueprint)
Diazo copy documents of a normal contrast may be transmitted.
- Carbon copy
A carbon copy may be transmitted if its contrast is normal.

4. Cautions on Transmitting Documents

- Documents written in yellow, greenish yellow, or light blue ink cannot be transmitted.
- Ink, glue, and correcting fluid on documents must be dry before the documents can be transmitted.
- All clips, staples and pins must be removed from documents before transmission.
- Patched (taped) documents should be copied first on a copier and then the copies used for transmission.
- All documents should be fanned before insertion into the feeder to prevent possible double feeds.

5. Automatic Document Feeder Capacity

Number of pages that can be placed into the feeder at anytime is as follows:

Normal size: max. 50 sheets (14 lbs - 20 lbs)

Special size: single sheet only (manual feed)

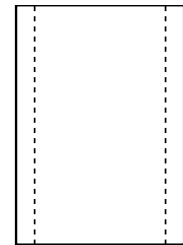
- NOTES:
- If you need to send or copy more 50 pages, place the additional pages and carefully in the feeder just before the last page is scanned. Do not try to force them in, as this may cause double-feeding or jamming.
 - If your document consists of several large or thick pages which must be loaded one at a time, insert each page into the feeder as the previous page is being scanned. Insert gently to prevent doublefeeding.

6. Readable Width & Length

The readable width and length of a document are slightly smaller than the actual document size.

Note that characters or graphics outside the effective document scanning range will not be read.

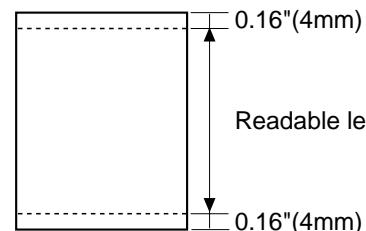
- **Readable width**
8.2" (208 mm) max.



Readable width

- **Readable length**

This is the length of the document sent minus 0.16" (4 mm) from the top and bottom edges.



[5] Installation

1. Site selection

Take the following points into consideration when selecting a site for this model.

ENVIRONMENT

- The machine must be installed on a level surface.
- Keep the machine away from air conditioners, heaters, direct sunlight, and dust.
- Provide easy access to the front, back, and sides of the machine. In particular, keep the area in front of the machine clear, or the original document may jam as it comes out after scanning.
- The temperature should be between 50° and 86°F (10° and 30°C).
- The humidity should be between 30% and 85% (without condensation).

ELECTRICITY

AC 120 V, 60 Hz, grounded (3-prong) AC outlet is required.

Caution!

- Connection to a power source other than that specified will cause damage to the equipment and is not covered under the warranty.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install a surge protector for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.

TELEPHONE JACK

A standard RC11C telephone jack must be located near the machine. This is the telephone jack commonly used in most homes and offices.

- Plugging the fax machine into a jack which is not an RC11C jack may result in damage to the machine or your telephone system. If you do not know what kind of jack you have, or need to have one installed, contact the telephone company.

If the machine is moved from a cold to a warm place...

If the machine is moved from a cold to a warm place, it is possible that the reading glass may fog up, preventing proper scanning of documents for transmission. To remove the fog, turn on the power and wait approximately 2 hours before using the machine.

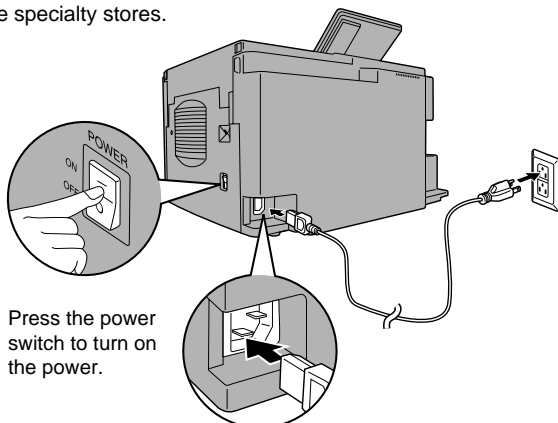
2. Assembly and connections

① Connecting the power cord

Connect the female end of the power cord to the fax machine as shown. Insert the male end into a 120 V, 60 Hz, grounded (3-prong) AC outlet.

Important!: The fax machine requires its own dedicated power outlet. The power outlet must not be shared with any other devices. In particular, do not use an extension cord to connect multiple devices to the outlet.

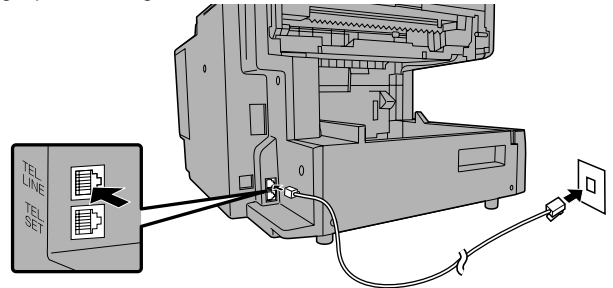
Note: If your area experiences a high incidence of lightning or power surges, we recommend that you install surge protectors for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.



② Connecting the telephone line cord

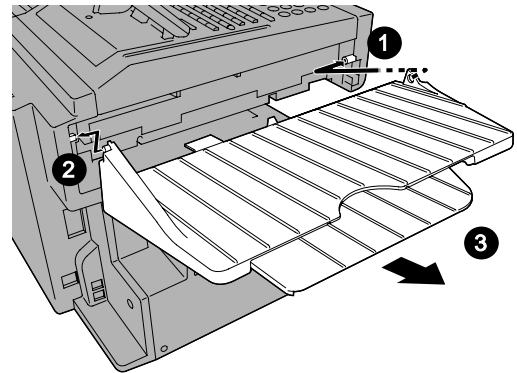
Insert one end of the line cord into the jack on the back of the machine marked **TEL. LINE**. Insert the other end into a standard (RJ11C) single-line wall telephone jack.

Note: The fax machine is set for touch-tone dialing. If you are on a pulse dial (rotary) line, you must set the fax machine for pulse dialing by changing Option Setting 22.



③ Attaching the ADF exit tray

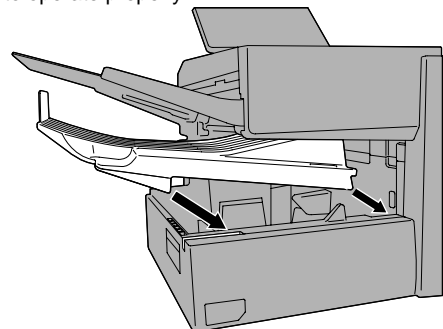
Insert the protrusion on the right side of the machine into the hole in the right side of the ADF exit tray ①, then bend the tray slightly and insert so that the protrusion on the left side of the machine goes into the hole on the left side of the ADF exit tray ②. Pull out the tray extension ③.



④ Attaching the received document tray

Slide the received document tray into the machine as shown. When it stops, lift the end slightly and push in so that the tray locks into place.

Important!: The received document tray must be attached for the fax machine to operate properly.



⑤ Verification Stamp option (FO-45VS)

Note: This feature is available as an option. Consult your dealer if you wish to use this feature.

When transmitting a document, you can have the fax machine stamp each document page as it is scanned. After scanning, you can check to see if all document have been stamped to verify that no double feeds occurred. (A double feed occurs when two pages are fed through the scanner at once, which means that one of the pages is not scanned.)

To use this function, have your dealer install the Verification Stamp option, and then set Option Setting 29 to ON.

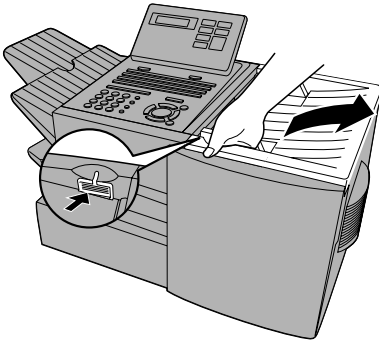
3. Installing the printer cartridges (Toner cartridge: FO-50ND) (Drum cartridge: FO-47DR)

Follow the steps below to install or replace the toner and drum cartridges.

- The initial starter toner cartridge included with the fax machine can print approximately 3000 letter-size pages (4% coverage of each page; continuous printing).
- The replacement toner cartridge (FO-50ND) can print approximately 6000 letter-size pages.
- The drum cartridge (FO-47DR) can print approximately 20,000 letter-size pages.

① Press the cover release to open the print compartment cover.

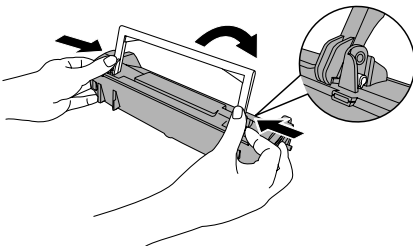
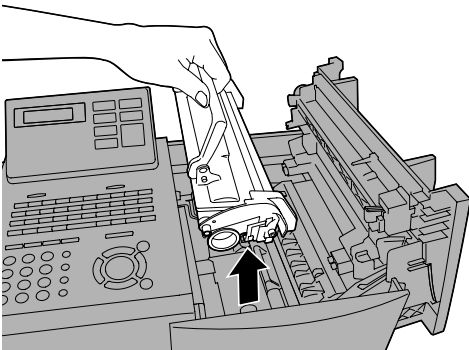
- **Caution!** The fusing unit inside the print compartment becomes very hot during operation. Be careful not to touch the inside of the compartment.



② If you are replacing the toner cartridge, remove the old cartridge and dispose of it according to local regulations.

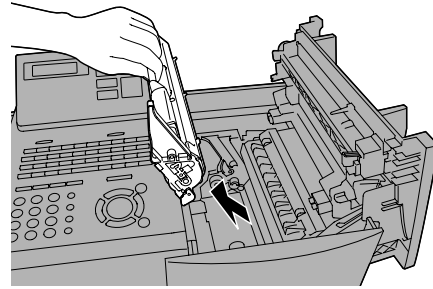
Go directly to STEP 6 if you are only replacing the toner cartridge and not the drum cartridge.

- If you are replacing the drum cartridge but not the toner cartridge, remove the toner cartridge and place it on a sheet of paper.



To make the cartridge more compact for disposal, press the buttons on the ends of the handle and fold the handle down.

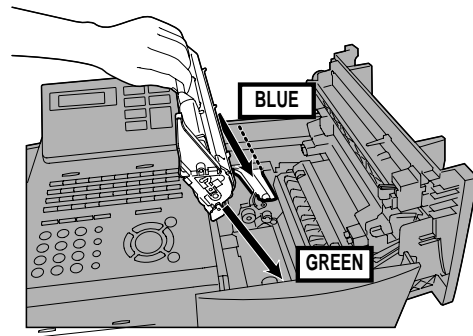
③ If you are replacing the drum cartridge, remove the old cartridge and dispose of it according to local regulations.



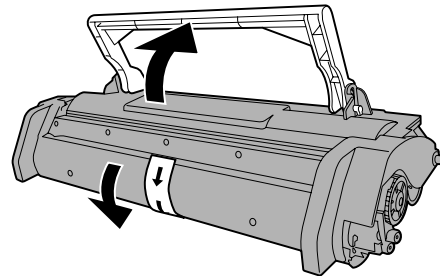
④ Remove the new drum cartridge from its packaging. Insert the drum cartridge into the print compartment.

- **Caution!** Excessive exposure to light will damage the drum cartridge. Install the cartridge promptly after removing it from its packaging.

- Make sure the drum cartridge is inserted in as far as it will go.

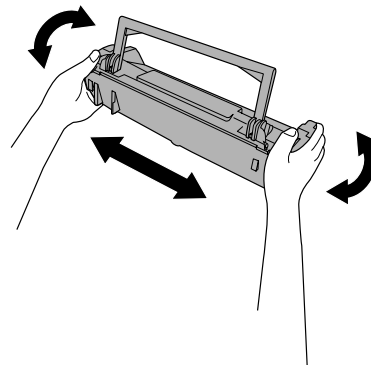


⑤ If you are installing a new toner cartridge, remove the new toner cartridge from its packaging. Remove the tape from the cartridge and then open the cartridge handle so that it stands straight up.



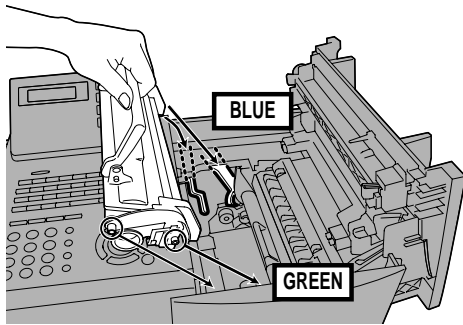
⑥ Shake as indicated by the arrows to distribute the toner evenly within the cartridge.

- If the toner is still lumpy after shaking, the gears in the cartridge may make a noticeable sound when the print compartment cover is closed after installing the cartridge. This is normal and does not indicate a problem.

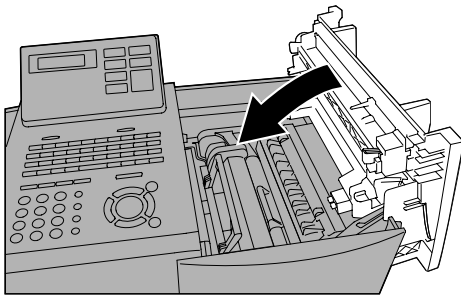


⑦ Hold the toner cartridge by the handle and insert it into the print compartment.

- Make sure the toner cartridge clicks into place.
- The handle can be left standing up.



⑧ Close the print compartment cover.



⑨ Reset the drum counter by pressing **LIFE** (flip up the Rapid Key overlay), **3**, and **START/ENTER**.

- **Note:** The toner counter automatically resets each time you replace the toner cartridge. There is normally no need to reset the toner counter manually. Should you find it necessary to manually reset the toner counter, press **LIFE** (flip up the Rapid Key overlay), **2**, and **START/ENTER**.

Note: The print compartment cover may become noticeably warm if a large number of pages are successively printed. This is normal and does not indicate a problem in the machine.

⑩ When to replace the toner cartridge

When the toner cartridge nears empty (about 100 pages can still be printed), the toner cartridge indicator on the operation panel will blink. When the toner cartridge is empty, the toner cartridge indicator will light steadily and REPLACE TONER will appear in the display. Printing will no longer be possible. Use the following replacement toner cartridge.

Sharp FO-50ND toner cartridge

Hint:

When the toner cartridge nears empty, try taking it out of the machine and shaking it. This may increase the number of pages that can be printed before the toner runs out.

⑪ When to replace the drum cartridge

When the drum cartridge nears the end of its life, the ALARM indicator on the operation panel will blink and DRUM LIFE REACHED will appear in the display. (this message appears when approximately 1000 pages can still be printed). Use the following replacement drum cartridge.

Sharp FO-47DR drum cartridge

4. Loading printing paper

You can load up to 250 sheets of letter or legal paper (max. 20 lbs.) in the paper tray.

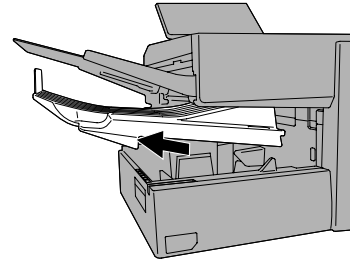
- A paper cassette is available as an option. Up to 500 sheets of letter or legal paper can be loaded in the paper cassette. To have the cassette installed, consult your dealer.

Important: Do not use the back side of paper that has already been printed on.

Note: If you need to add paper to the tray or cassette while paper still remains, remove the remaining paper and combine it into a single stack with the new paper.

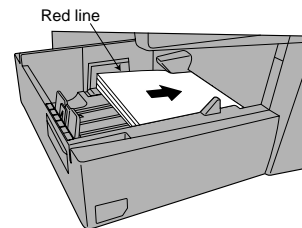
Loading paper in the paper tray

① Remove the received document tray.

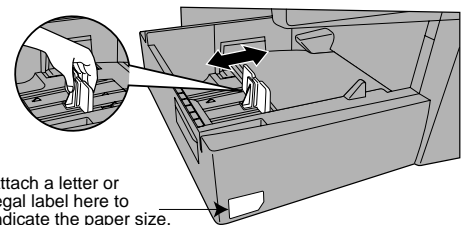


② Insert a stack of paper into the tray, print side up.

- **Important!** The stack of paper must not be higher than the red line on the paper tray.

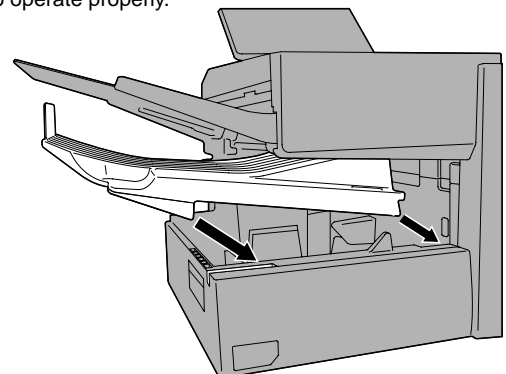


③ Squeeze the paper guide and move it to match the length of the paper you are loading.



④ Replace the received document tray.

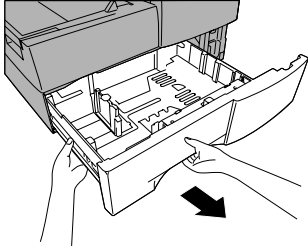
- The received document tray must be attached for the fax machine to operate properly.



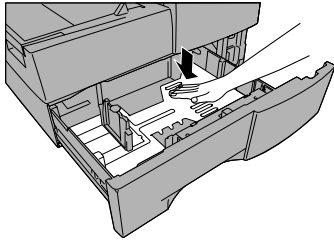
Loading paper in the paper cassette (if installed FO-CS1)

Note: To use A4 paper in the paper cassette, you must have a service technician adjust the cassette.

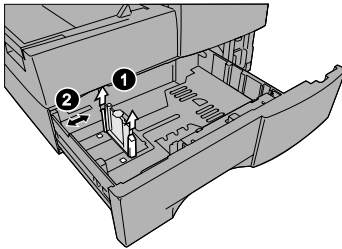
- ① Grasp the hand-hold on the cassette and pull the cassette out until it stops.



- ② Push the pressure plate down until it locks into position.

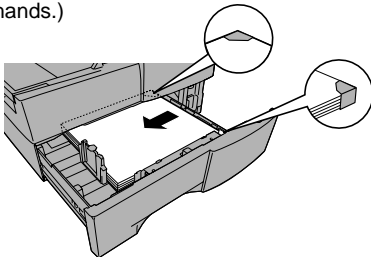


- ③ Squeeze the paper guide and pull up to move it to the appropriate holes for the length of the paper. Push the guide down into the holes.

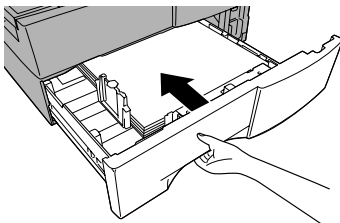


- ④ Place a stack of paper in the cassette, print side up.

- Make sure the stack of paper is not higher than the two tabs on the paper guide and the two metal tabs. If it is, remove some of the paper.
- If you find it difficult to load the paper, remove the cassette from the machine. (Pull the cassette out as far as it will go, grasp the left side of the cassette with your left hand, and then lift it up and out with both hands.)




- ⑤ Push the cassette back into the machine, making sure it clicks into place.



5. Clearing paper jams

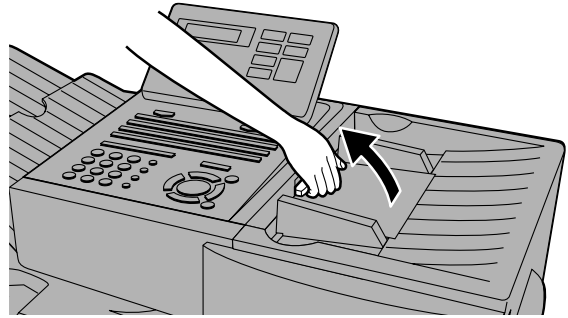
Clearing a jammed document

If the original document doesn't feed properly during transmission or copying, or REMOVE ORIGINAL(S) appears in the display, first try pressing . If the document doesn't feed out, open the operation panel and remove it.

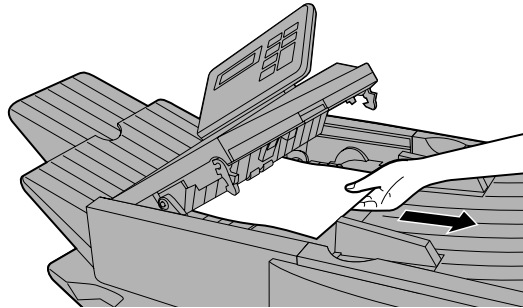
Important: Do not try to remove a document without opening the operation panel. This may damage the feeder mechanism.

- ① Open the operation panel.

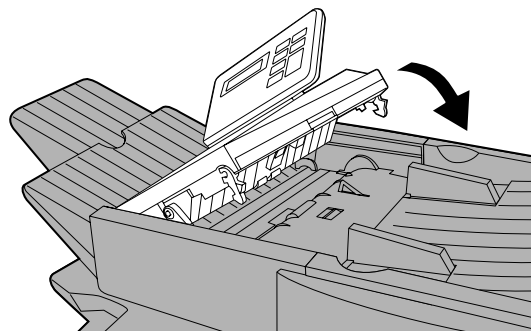
- Squeeze the release marked **PANEL RELEASE** and pull up.



- ② Remove the document.



- ③ Close the operation panel, making sure it clicks into place.

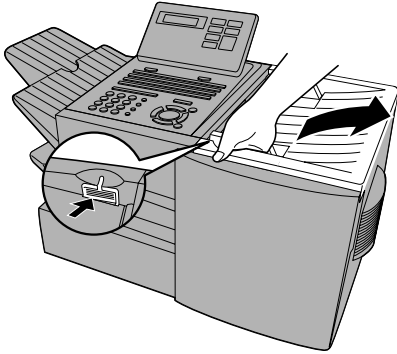


Clearing a jammed printing paper

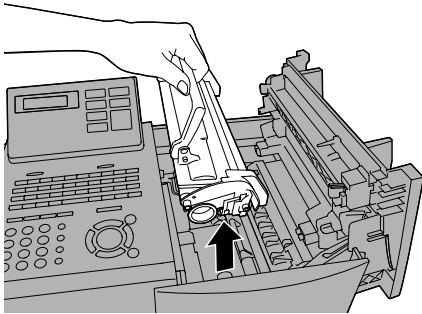
If the printing paper jams, PAPER JAM will appear in the display. Follow the steps below to clear the jam.

① Press the green release and open the print compartment cover.

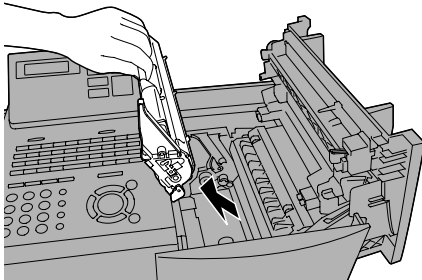
- **Caution!** The fusing unit inside the print compartment becomes very hot during operation. Be careful not to touch the inside of the compartment.



② Remove the toner cartridge and place it on a sheet of paper.

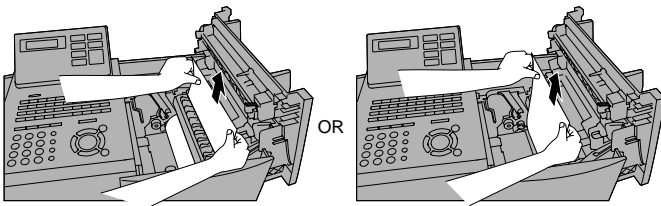


③ Remove the drum cartridge.



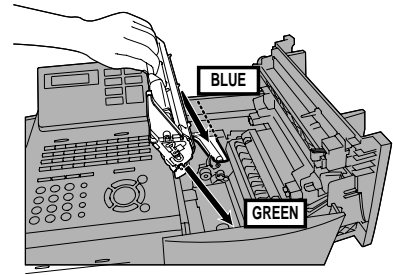
④ Remove the jammed paper.

- Make sure no torn pieces of paper remain in the print compartment and rollers.

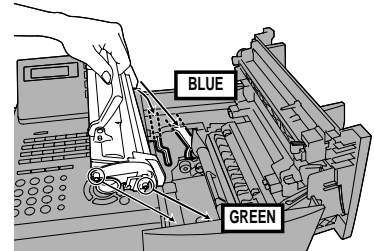


⑤ Replace the drum cartridge.

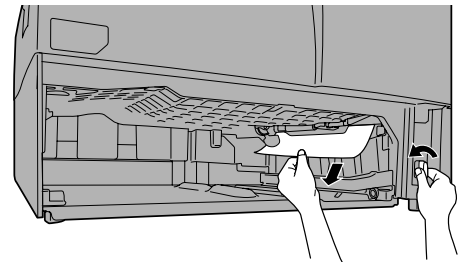
- Make sure the drum cartridge is inserted in as far as it will go.



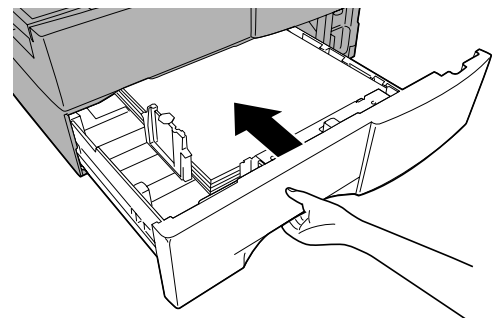
⑥ Replace the toner cartridge and then close the print compartment cover.



⑦ If you have a paper cassette and the display still indicates that paper is jammed, pull out the cassette and remove the jammed paper.



⑧ Replace the paper cassette.

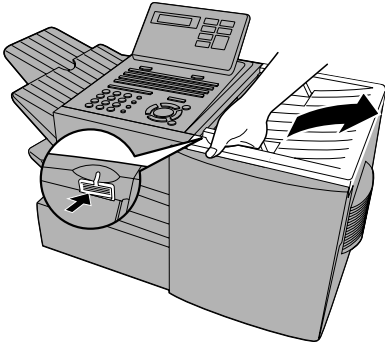


6. Installing the paper cassette (FO-CS1)

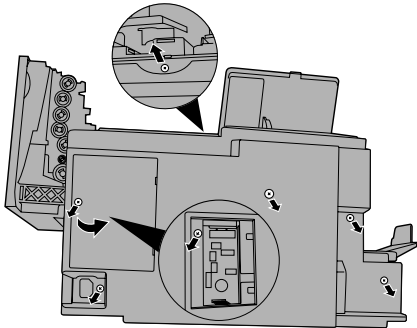
Installing the second paper cassette

Important: Be sure to turn off the power and unplug the power cord before proceeding.

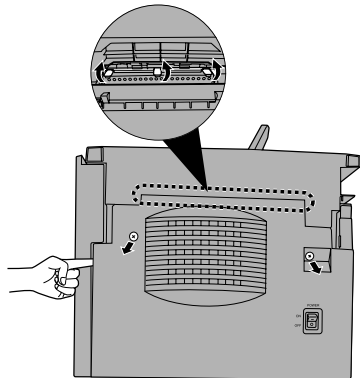
- ① Press the cover release to open the print compartment cover.



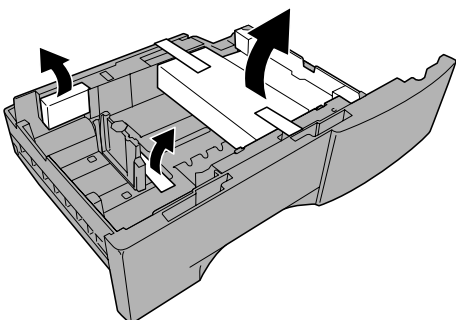
- ② Remove 6 screws from the rear cover. Remove the small cover on the left side of the rear cover, and then remove the screw underneath. Remove the rear cover.



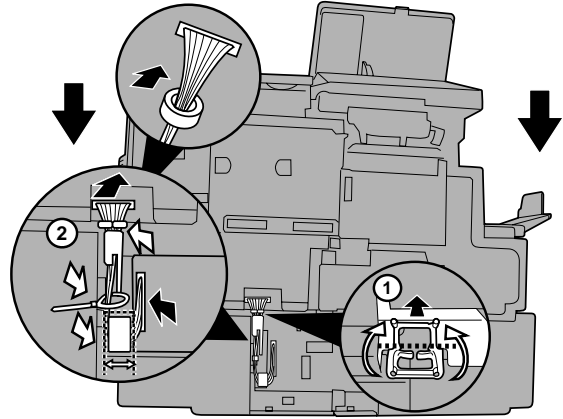
- ③ Remove 2 screws from the right cover of the machine. From inside the print compartment, push the 3 tabs indicated in the blowup out. (Note: The blowup shows the inside of the print compartment.) Insert your left index finger in between the cover and the machine as shown, and then close the print compartment cover. With your index finger still inserted, grasp both sides of the cover and pull it off.



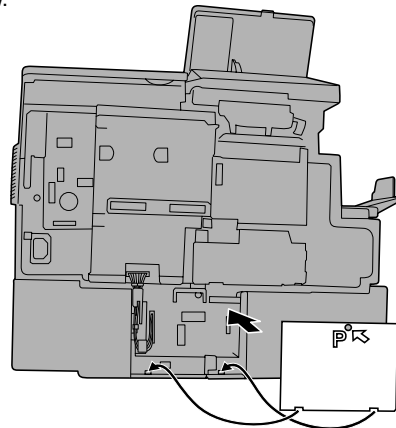
- ④ Remove the packing material and tape from the paper cassette.



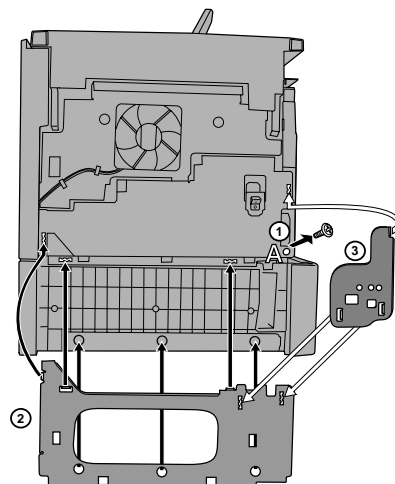
- ⑤ Place the machine on top of the cassette.
1. Insert the cable guide into the cut-out in the edge of the metal plate, and then fold it in half and hook the top and bottom edges together.
 2. Insert the 15pin cable through the ferrite core, and then connect the cable to the connectors on the machine and the cassette as shown. Position the ferrite core in the gap between the bottom left-hand corner of the circuit board and the side of the compartment. Insert the cable into the cable guide, and then insert the remainder of the cable into the slot in the cassette below the cable guide. Tie the wires with the band.



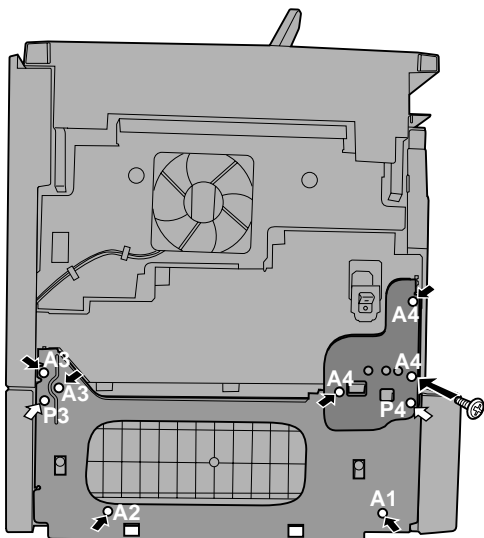
- ⑥ Replace the small cover over the circuit board and secure it with a 10 mm screw.



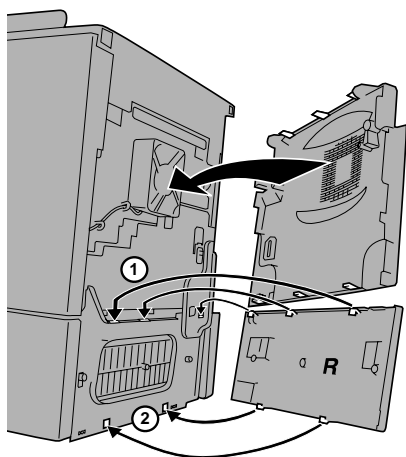
- ⑦ Attach the support plates to the right side of the machine.
1. Remove the indicated screw. (In Step 8 below, replace it in the same hole.)
 2. Mount the large plate, making sure that the guides fit into the holes as shown.
 3. Mount the small plate, making sure that the guides fit into the holes as shown.



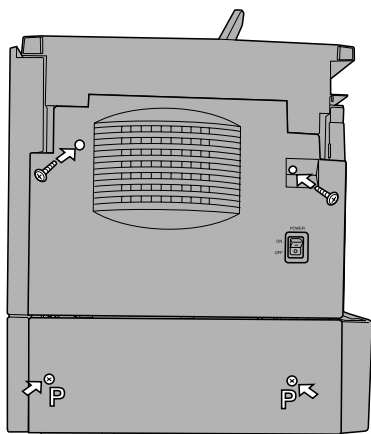
- ⑧ Secure the plates with screws as shown. Use 6 mm screws for the holes marked with "A", and 10 mm screws for the holds marked with "P". Secure the screws in the order indicated by the numbers.



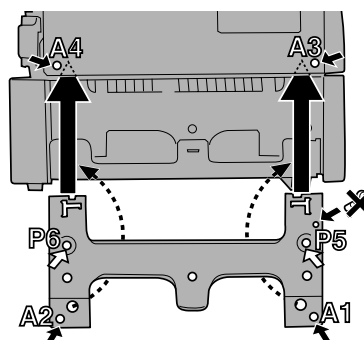
- ⑨ Replace the right side cover on the machine, inserting the tabs into the holes. Attach the longer cassette cover to the right side of the cassette, inserting the tabs into the holes (first top, then bottom).



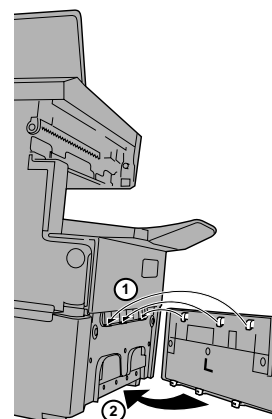
- ⑩ Replace the screws in the side cover on the machine. Secure the cassette cover with two 10 mm screws.



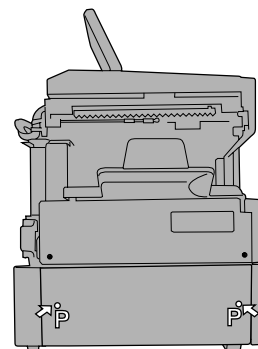
- ⑪ Attach the support plate to the left side of the machine, inserting the top edges of the plate under the machine housing. Make sure that the guides fit into the holes as shown. Secure the plate with screws as shown. Use 6 mm screws for the holes marked with "A", and 10 mm screws for the holes marked with "P". Secure the screws in the order indicated by the numbers. (Note that the top hole on the right does not require a screw.)



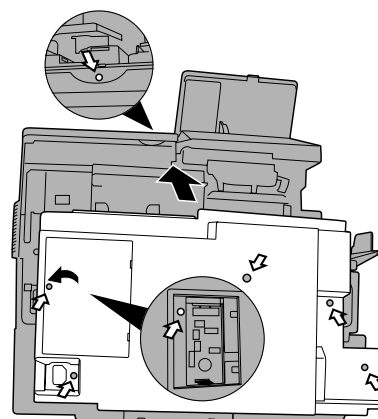
- ⑫ Attach the shorter cassette cover to the left side of the cassette, inserting the tabs into the holes (first top, then bottom).



- ⑬ Secure the cassette cover with two 10 mm screws.



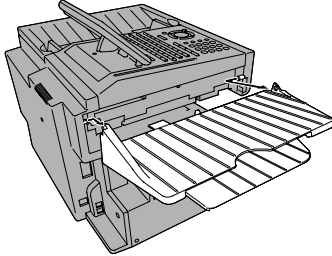
- ⑭ Replace the rear cover (replace the screw under the small cover on the left side of the rear cover first, and then replace the small cover).



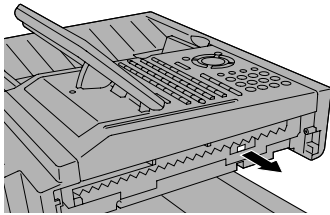
7. Replacing the Verification Stamp (FO-45VS)

If you are using the Verification Stamp function, you will need to replace the ink cartridge in the stamp unit when it runs out of ink (when the stamped mark on original documents becomes faint). A new ink cartridge can be obtained from your dealer.

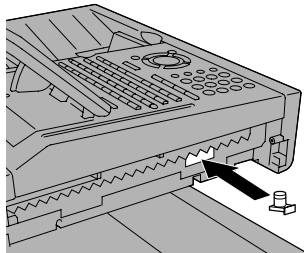
- ① Remove the ADF exit tray.



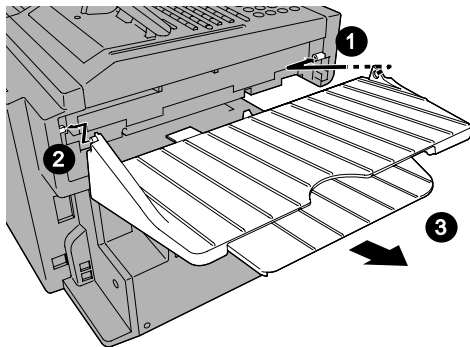
- ② Press down on the protruding tab of the green ink cartridge and pull the cartridge out with your fingers.



- ③ Insert the new ink cartridge into the machine (make sure that the tab is facing out).



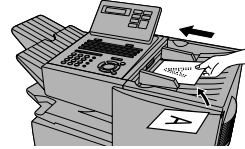
- ④ Replace the ADF exit tray.



[6] Quick reference guide

SENDING FAXES

Place your document (up to 50 letter-size pages) face down in the document feeder.



(Note: For Normal Dialing and Direct Keypad Dialing, you can also load the document after dialing the number.)

Press **RESOLUTION** or **CONTRAST** if needed.

Normal Dialing

1. Lift extension phone or press **SPEAKER**.
2. Dial the fax number (if using an extension phone, dial on the extension phone keypad).
3. Wait for the reception tone (if a person answers, ask them to press their Start key).
4. Press **START/ENTER**.

Rapid Key Dialing

1. Press the desired Rapid Key.

Speed Dialing

1. Press **SPEED DIAL** and enter the desired Speed Dial number (press **START/ENTER** if you entered a 1-digit number).
2. Press **START/ENTER**.

Direct Keypad Dialing

1. Dial the fax number.
2. Press **START/ENTER**.

BROADCASTING

1. Load the document and press **BROADCAST**.
2. Dial destination numbers:
Press a Rapid Key.
Press a Group Key.
Press **SPEED DIAL** and enter a Speed Dial number (press **START/ENTER** to complete entry if only one digit is entered).
Enter a full number and press **START/ENTER**.
3. When finished, press **START/ENTER**.
4. Press **RESOLUTION** or **CONTRAST** if needed.
5. Press **START/ENTER**.

STORING AUTO DIAL NUMBERS

1. Press **MENU**, **3**, **0**, **1**.
2. Press **1** to store a number.
(Press **2** to clear a number.)
3. To store a Rapid Key number, press the desired Rapid Key.
To store a Speed Dial number, press **SPEED DIAL** and enter a number from 1 to 75 (press **START/ENTER** if you entered a 1-digit number).
(If clearing a number, select it as explained above and then perform Step 7 and 9.)
4. Enter the full fax number.
5. Press **START/ENTER**.
6. Enter a name by pressing the letter keys.
7. Press **START/ENTER**.
8. Press **1** if this is a Chain Dial number.
Press **2** if this is a regular number.
9. Press **STOP** repeatedly to exit.

CHAPTER 2. ADJUSTMENTS

[1] Adjustments

General

Since the following adjustments and settings are provided for this model, make adjustments and/or setup as necessary.

1. Adjustments

Adjustments of output voltage (FACTORY ONLY)

1. Install the power supply unit in the machine.
2. Set the recording paper and document.
3. When the document is loaded, power is supplied to the output lines.
Confirm that outputs are within the limits below.

Output voltage settings

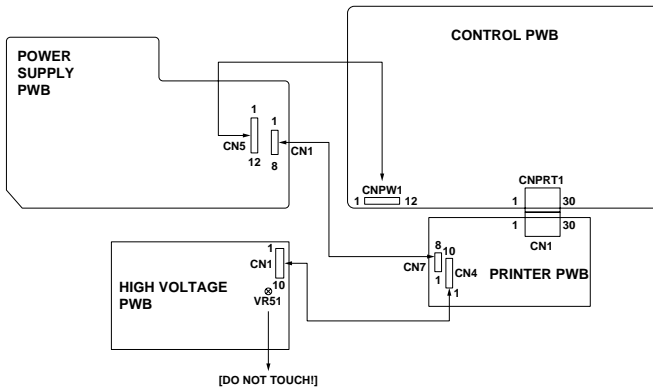


Fig. 1

Output	Voltage limits	Note
+5V MAIN	4.947V~5.25V	CN5 7pin ↔ 8pin
+24V SUB	23.04V~24.96V	CN5 1pin ↔ 2pin

Connector No. Pin No.	CN4	CN1
1	11	+5V
2	10	CH LREM
3	9	T VR
4	8	T MON V
5	7	T MON I
6	6	B VR
7	5	V REM
8	4	C MON
9	3	MG
10	2	+24V

Connector No. Pin No.	CN5	CNPW1
1	+24V SUB	
2	MG	
3	MG	
4	MG	
5	+24V MAIN	
6	+24V MAIN	
7	+5V MAIN	
8	DG	
9	DG	
10	DG	
11	+5V MAIN	
12	+5V MAIN	

Connector No. Pin No.	CN1	CN7
1	+24V MAIN	
2	MG	
3	DG	
4	DG	
5	+5V MAIN	
6	+5V MAIN	
7	HEATER ON	
8	H-RELAY OFF	

2. IC protectors replacement

ICPs (IC Protectors) are installed to protect the CIS unit, panel PWB unit, TX motor drive circuit and verification stamp drive circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:

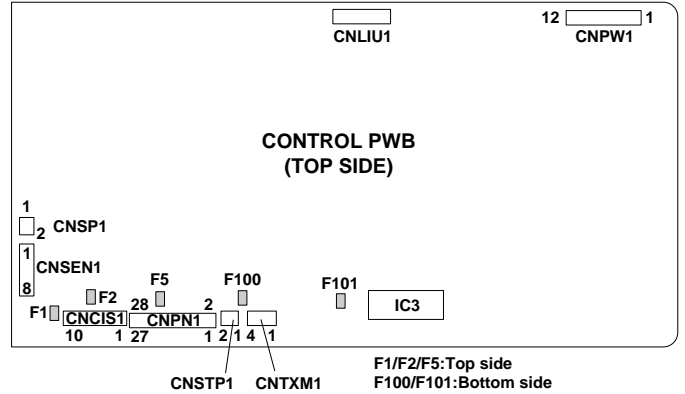


Fig. 2

- (1) F1 (ICP-S0.5) F2 (ICP-S1.0) is installed in order to protect IC's from an overcurrent generated in the CIS unit. If F1 or F2 are open, replace it with a new one.
- (2) F5 (ICP-S1.0) is installed in order to protect IC's from an overcurrent generated in the panel PWB unit. If F5 is open, replace it with a new one.
- (3) F100 (ICP-S1.0) is installed in order to protect IC's from an overcurrent generated in the verification stamp drive circuit. If F100 is open, replace it with a new one.
- (4) F101 (ICP-S1.8) is installed in order to protect IC's from an overcurrent generated in the TX motor drive circuit. If F101 is open, replace it with a new one.

In addition to the replacement of F1, F2, F5, F100 and F101, the factor causing F1, F2, F5, F100 and F101 to open must also be repaired. If not, F1, F2, F5, F100 and F101 will open again.

Replacement parts

- ICP-S0.5 (Sharp code: VHViCPS05//1)
- ICP-S1.0 (Sharp code: VHViCPS10//1)
- ICP-S1.8 (Sharp code: VHViCPS18//1)

3. Settings

(1) Dial mode selector

OPTION SETTING: DIAL MODE (Soft Switch No. SW2 DATA No. 1)

Use this to set the fax machine to the type of telephone line you are on.

- The factory setting is "TONE".

(step 1) Select "OPTIONAL SETTING".

KEY: (4)

DISPLAY: 4:OPTIONAL SETTING
ENTER # (01-36, ▶, ◀)

(step 2) Select "DIAL MODE".

KEY: (2) (2)

DISPLAY: 22: DIAL MODE
1=TONE, 2=PULSE

(step 3) Select, using "1" or "2".

KEY: (1)

DISPLAY: TONE SELECTED

KEY: (2)

DISPLAY: PULSE SELECTED

(step 4) End, using the "STOP" key.

KEY:

[2] Diagnostics and service soft switches

1. Operating procedure

Two kinds of diagnoses are supported.

1-1. Fax diagnosis

This diagnosis is concerned with the main body of fax which is used for production and service support.

Entering the diagnostic mode

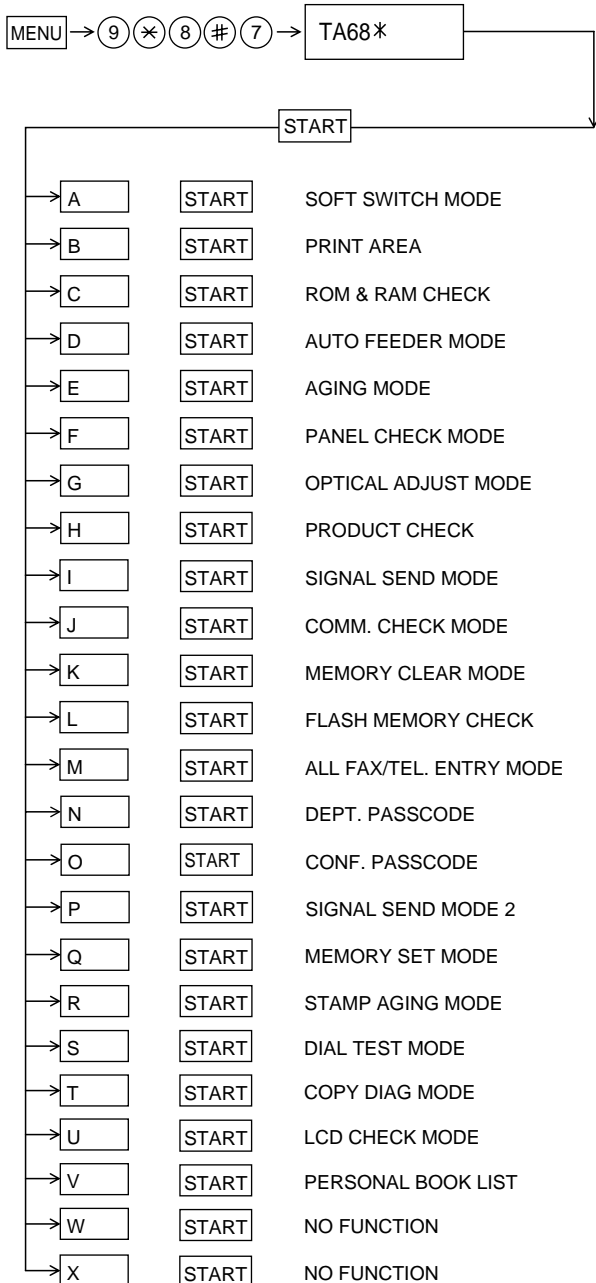
Press **MENU** → **9** → ***** → **8** → **#** → **7**, and the following display will appear.

MAIN: TA68*

Then press the **START** key. Select the desired item with the ***** key and the **#** key or select with the rapid key.

Enter the mode with the **START** key.

(Diag. specifications)



1-2. Print diagnosis

This diagnosis is concerned with the print which is used for production and service support.

Entering the diagnostic mode

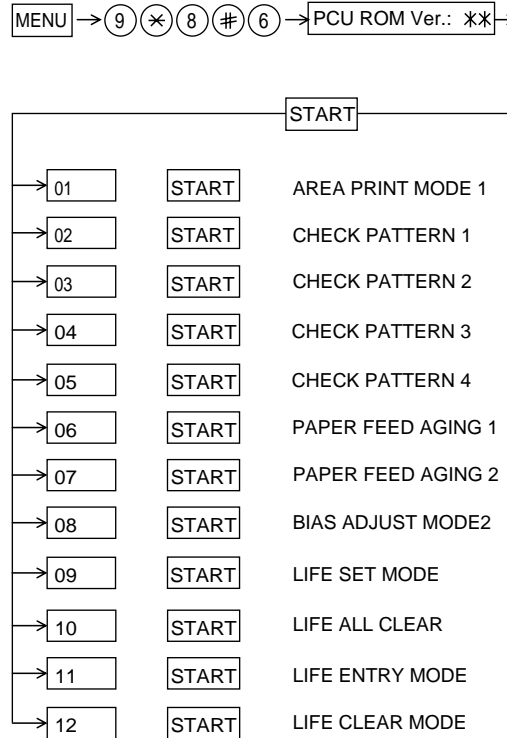
Press **MENU** → **9** → ***** → **8** → **#** → **6**, and the following display will appear.

PCU ROM VER.: **

Then press the **START** key. Select the desired item with ***** the key and the **#** key or select with the rapid key.

Enter the mode with the **START** key.

(Diag. specifications)



Memory clear when power is turned on

Pressing the **START** and **STOP** keys, turn on the main power, and the following message will be displayed.

MEMORY CLEAR ?
1 = ALL , 2 = IMAGE , 3 = NO

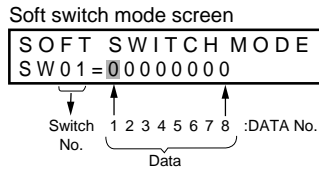
- 1 = All the data will be deleted including initially registered data.
- 2 = Delete the image file to be used in transmission. This will delete all the data related to communication such as reserved transmission or intercepting. However, the data initially registered will not be deleted.
- 3 = Memory will not be cleared and the machine enters stand-by mode.

2. Diagnostic items description

2-1. Fax diagnosis

A) Soft switch mode

In this mode, the soft switch are set and the soft switch list is printed.



① Switch number selection

- Press START key for setting of the next soft switch. If the soft switch number is the final, pressing START key will exit the soft switch mode.
- Enter two digits of a soft switch number to set the switch number. If a switch number of nonexistent soft switch is entered, key error buzzer sounds to reject the input.



② Data number selection

The cursor position shows the data to be set.

Pressing # key or → key moves the cursor to the right. If, however, the cursor is on data number 8, pressing # key or → key shifts the cursor to data number 1 of the next switch number. If the switch number is the final, pressing # key or → key will exit the soft switch mode.

Pressing × key or ← key moves the cursor to the left. If, however, the cursor is on data number 1, pressing × key or ← key shifts the cursor to data number 1 of the former switch number. If the switch number is 1, pressing × key or ← key will not move the cursor and the error buzzer will sound.

③ Data setting method

Press the MENU key, and the data at the position of the cursor will be reversed to 0 when it is 1, or to 1 when it is 0. (If the soft switch can be changed at the bit (Refer to ⑥.), the error buzzer will sound with the process not received.)

④ Outputting method of soft switch list

In the soft switch mode, press the REPORT key, and the soft switch list will be output.

If the recording paper runs out or is clogged, the key error buzzer will sound with the process not received.

⑤ Storage of data

In the following case, the data of the soft switches set will be stored.

- It is shifted to set the next soft switch by pressing the START switch.
- It is shifted to set the next soft switch with the [#] key.
- It is shifted to set the last soft switch with the [×] key.
- It is shifted to set another soft switch by inputting two digits as the switch number. (When 2 digits are completely input.)
- Output of the soft switch list is started.

⑥ Inhibition of data change

(This is also applicable for the optional setting.)

In the following case, it is inhibited to change the data with the key error buzzer.

- Switching ON/OFF of ECM during the use of image memory.
- OFF to ON of telephone billing function which is using the image memory is used (Note: In the existing set, the telephone billing code function is specified from OFF to ON when the timer system communication (including the batch communication) is set.) Here, the memory is usable when the telephone billing code function is on. It can be set from ON to OFF while the memory is used. However, if setting is practically changed even once, it can not be returned from OFF to ON.

- OFF to ON of department control function during use of image memory.
(Note: In the existing set, the department control function is set from OFF to ON when the timer communication (including the batch sending) or the memory hold is set.)
- ON to OFF of continuous serial polling function when the continuous serial polling is started.
(Note: In the existing set, "ON to OFF of the continuous serial polling function when the continuous serial polling is registered" has been applied, but the conditions are now moderated. However, registration is impossible to the program of the new continuous serial polling when the continuous serial polling function is OFF.)
- In addition, change of all soft switches during communication

B) Print area

According to the size of the specified sheet, the effective printing area is printed.

C) ROM & RAM check

This is an item to check if the loaded memory device acts normally.

- The memory devices shown in the following table are checked.
- In case that an error occurs in the device check, the alarm buzzer shown in the table sounds.

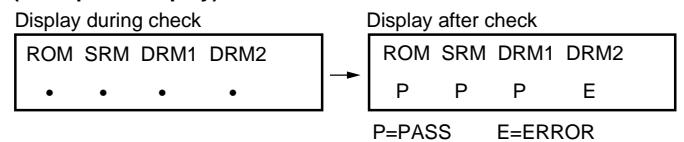
Check device and alarm buzzer

No.	Device checked	Number of buzzer sound	Remarks
1	ROM (PROGRAM FLASH)	<Short sound> 1 time	<Short sound>:
2	SRAM	<Short sounds> 2 times	0.5 sec.ON / 0.5 sec.OFF
3	Main D-RAM1 (*1)	<Short sounds> 3 times	<Long sounds>:
4		D-RAM2 (*2)	<Short sounds> 4 times
5	—	—	

*1: Work memory (SDRAM 8MB)

*2: Page memory (SDRAM 8MB)

(Example of display) In case that DRAM2 is erroneous.



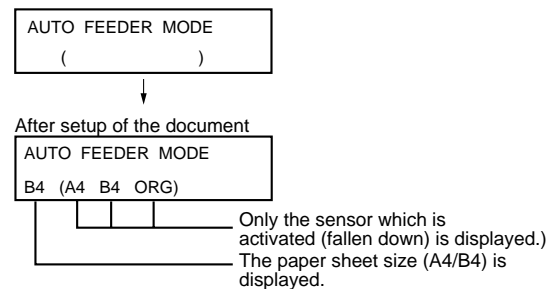
After the check is complete, the result is outputted.

D) Auto feeder mode

By executing the document insertion and discharge, the automatic feeding function can be checked. And the document sensor can be checked as well.

① Set the document

Before pressing the "START" key, only the document sensor check is carried out. And as the document sensor is ON, the document size (A4/B4) and the sensor information (A4/B4/ORG) are displayed.



- ② The automatic feeding starts by pressing the "START" key. This mode ends when the document ends, and the result is printed.

E) Aging mode

This is a mode to execute the copying action and the check pattern printing action once every 60 minutes and continue the action until 10 sheets are outputted in total.

- ① The printing action on the 1st sheet starts by pressing down the "START" key and entering the mode. When document is set at the time of the mode start-up the copy action is carried out, and when the document is not set the "check pattern 1" of the print dialog is printed.
- ② The number of printouts is displayed after printing.

F) Panel check mode

This is to check that each key acts normally and this is displayed on the LCD according to the key input. And during execution, the document reading lamp is ON. After inspection start, the LEDs light on sequentially. At the mode end with the "STOP" key, all of them go OFF. As to the test result, it is printed out after the mode end.

When the "NUMERIC" key is pressed during the panel check execution, sending of the DTMF signal corresponding to the key starts, and when another key is pressed sending of the DTMF signal stops.

- After inputting all the keys, input the "STOP" key at last, and then the result is displayed.

a) In case that all the keys are pressed.

PANEL CHECK MODE
ALL KEY OK !!

- After the mode end, the test result is printed.

b) In case that there is a key that is not pressed.

PANEL CHECK MODE
KEY ERROR !!

- At the time of NG, the keys that are not pressed are displayed sequentially, and it becomes the mode to input the key again.
- With the "STOP" key, the re-check is complete.
- After the mode end, the test result is printed.

G) Optical adjust mode

The optical system is adjusted.

- By pressing down the "START" key, the document reading lamp "100%: ON" is turned ON.

H) Product check

This is a dialog used in the production process and a mode to execute a specific mode in the series of the flow.

After the mode end, the rest result as to the checked items is printed.

- After moving to the mode, the following actions are sequentially executed.

- ① Memory clear (Same as Diagnosis K)
- ② Panel check (Same as Diagnosis F)
- ③ ROM & RAM test check (Same as the Diagnosis C)
- ④ Test result print
 - Memory clear printing
 - Panel check result printing
 - ROM & RAM test result printing
- ⑤ Print area (The specification of each item is the same as the specification of the simple mode.)

I) Signal send mode

After shift to the mode, press the START key, and the signals will be transmitted in the following sequence.

It can be used to check the modem and so on.

- [1] No signals
- [2] 4800BPS (V. 27ter)
- [3] 14400BPS (V. 33)
- [4] 12000BPS (V. 33)
- [5] 14400BPS (V. 17)
- [6] 12000BPS (V. 17)
- [7] 9600BPS (V. 17)
- [8] 7200BPS (V. 17)
- [9] 9600BPS (V. 29)
- [10] 7200BPS (V. 29)
- [11] 4800BPS (V. 29ter)
- [12] 2400BPS (V. 29ter)
- [13] 300BPS (FLAG)
- [14] 2100Hz (CED)
- [15] 1100Hz (CNG)

J) Comm. check mode

- ① Turn on the Line Monitor. (SW7 No.7, SW37 No.7)
- ② Turn off the Cover Sheet Function. (SW2 No.6, SW32 No.6)
- ③ Set Line Equivalence at 0 km. (SW8 No.1/No.2, SW38 No.1/No.2)

After the check, it is necessary to be sure to return the aforementioned soft switches into the initial state.
(Clear the memory with the diagnosis.)

K) Memory clear mode

Clear the back-up memory to initialize the soft switches.

The Flash Memory will be initialized. Then, the initialized list be output.

- ① Memory clear is executed.
- ② The result that says initialized is printed.

NOTE: The life system counter is not cleared.

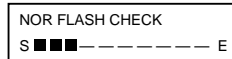
L) Flash Memory check

This is a mode to check that the flash memory acts normally. The flash memories shown in the following table are checked.

No.	Flash memory	Number of buzzer sound	Remarks
1	NOR-Flash (Standard)	<Long sound> 1 time	<Short sound>:
2	NAND-Flash (Standard)	<Long sounds> 2 times	0.5 sec.ON / 0.5 sec.OFF
3	NAND-Flash (Option)	<Long sounds> 3 times	<Long sounds>:
4	—	—	1.0 sec.ON / 0.5 sec.OFF
5	—	—	

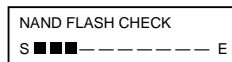
- NAND-Flash (optional) is valid only when the optional memory is mounted.

① The NOR flash memory test is executed.



② The concerned alarm buzzer sounds only when the error occurs.

③ The NAND flash memory test is executed.



④ The concerned alarm buzzer sounds only when the error occurs.

⑤ The result is printed.

NOTE:

- During operation of this diagnosis, dual operation is not possible at all.
- If this is excessively repeated, it will shorten the life of the flash memory.

M) All FAX/TEL. entry mode

This is a function to copy the FAX and TEL numbers registered in the one-touch dialing (RAPID) key [01] to the all one-touch dialing (RAPID) key and the all abbreviated number (SPEED DIAL) to simplify the FAX and TEL number registration at the time of aging.

① Copy the Fax and Tel numbers (including agency) registered in the one-touch dialing (RAPID) key [01] to all one-touch dialing (RAPID) key.

② Copy the FAX and TEL numbers registered in the one-touch dialing (RAPID) key [01] to the all abbreviated number (SPEED DIAL).

③ In case the chain dial is not set in the one-touch dialing (RAPID) key [01], register the one-touch dialing (dialing) keys [02] – [59] and all abbreviated number (SPEED DIAL) to the group number [01]. In case that the chain dial is set, do not create a group, but cancel only the chain dial setting of the one-touch dialing (RAPID) key [01]. (All except for the one-touch dialing (RAPID) key [01], chain dial is kept set.)

④ Enter all registered one-touch send (RAPID) keys and speed dial numbers (SPEED DIAL) on the personal books [01] - [10].

Following this, set the password registration and the password setting to ON, and set the TTI setting to OFF.

The call-receiver names and book names are specified as follows:

Rapid	R XX	XX	: Rapid key send
SPEED DIAL	S XXX	XXX	: Speed dial number
Personal book	BOOK XX	XX	: Book number

(The letters after 16th letter of the call-receiver's name registered in the one-touch dialing [01] are cut off.)

NOTE: Before entering this mode, FAX and TEL numbers must be registered in the one-touch dialing (RAPID) key [01].

(In case that they are not registered, or a program or a group is registered, it is not executed.)

N) Dept. passcode

The department passcode list is printed.

O) Conf. passcode

The confidential passcode list is printed.

Differing from printing of one box alone soon after registration, the confidential passcodes of all boxes are printed.

P) Signal send mode 2

The signals concerned with V.34 & V.8 are checked.

After this mode is activated, press the START key, and the signals will be sent in the following sequence.

It can be used to check the modem.

[1] No signal

[2] 33600BPS (V. 34)

[3] 31200BPS (V. 34)

[4] 28800BPS (V. 34)

[5] 26400BPS (V. 34)

[6] 24000BPS (V. 34)

[7] 21600BPS (V. 34)

[8] 19200BPS (V. 34)

[9] 16800BPS (V. 34)

[10] 14400BPS (V. 34)

[11] 12000BPS (V. 34)

[12] 9600BPS (V. 34)

[13] 7200BPS (V. 34)

[14] 4800BPS (V. 34)

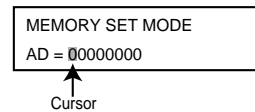
[15] 2400BPS (V. 34)

[16] 0 - 300BPS (V. 34)

[17] ANSam

Q) Memory set mode

The set and dump list of the memory content is output.



- The address (8 digits (P)) generally including the bank information is input, and the data of 2 digits is continuously input. Inputting is done in the hexadecimal mode. The ten-key is used for 0 through 9, and the alphabetic keys A (RAPID 01 through 06) are used for A through F.



- During data inputting, the address can be moved forward and backward one byte by one byte with ">>" and "#". (The address prior to the address 0 is looped as the maximum address.)

- The Validity of the address is not checked. Accordingly, writing/ reading operations are possible in the address of the memory not assigned, the address of ROM and so on. (However, as practical, writing is not done, and the data content runs short each reading.)

Though writing is possible in the flash memory, a little time is required.

It is also necessary to take care that the life of the flash memory is excessively shortened if much data is written in the flash memory. Since it may run away depending the written content, take minute care for the writing address.

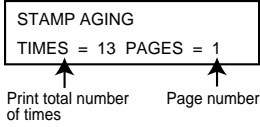
- When the REPORT key is input, the memory dump list is produced from the displayed address (here, it is limited at the 16-byte boundary address (address with end 0) which does not exceed the specified address and is just in front.). The dump list is output to a maximum of 99 pages. If any data of one page can be repeatedly developed and printed, the list is sufficient. But it is not desired that the content of plural pages are developed in the memory once and are then printed. If the STOP key is pressed, it will pass to the diagnosis after the page which is now being printed is completed printed. If the address exceeds the maximum address, it will return to the address 0 and printing will be continued.

R) Stamp aging mode

This is a mode to execute the continuous drive aging of the Verification stamp.

- ① Set the document and press down the "START" key and the continuous drive of the Verification stamp starts.
- ② Send the document at the interval of 10 mm and stamp the Verification stamp continuously. The total number of times of Verification stamp printing after entering this mode is displayed on the display.

• Displayed screen during execution



- ③ By pressing down the "STOP" key during the action, or when no more document is left, the continuous drive of the Verification stamp stops.

NOTE:

- In case that the document is not set, this cannot be executed.
- The normal action aging that one Verification stamp is pressed on one sheet of document is executed in the normal copying.

S) Dial test mode

The mode is used to inspect whether dialing is accurate in two kinds of dial modes. All data which can be dialed in this mode are automatically called up in both PB mode and DP mode.

[In case that 2 line optional is not mounted.]

- ① Turn on CML, and dial the following in the PB mode.
1, 2, 3, 4, 5, 6, 7, 8, 9, ✕, 0, #
- ② Dial the following in the DP mode.
1, 5, 9, 0

- ③ After dialing, turn off CML.

NOTE:

This mode uses the ordinary auto dial. (Accordingly, the signal sending time and minimum pause are all the same as ordinary. The measurement result in this mode is completely all the same as in the ordinary dial mode.)

T) Copy diag mode

This mode is for automatic mode selection of copy to reduce the time for treatment at the time of production.

- ① Set 2 sheets of document. (No problem if there are 2 sheets or more.)
- ② 3 sheet continuous copy: 1st sheet in the FINE AUTO
2nd sheet and after that are copied in the H-TONE DARK.

NOTE:

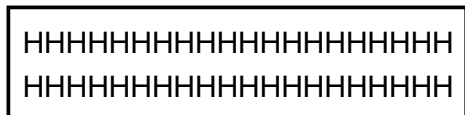
Input of the image quality and the darkness keys is invalid in this mode.

U) LCD check mode

This is an item to check that the LCD acts normally.

[In case of a 2 lines LCD]

Display "H" to all the digits. (20 letters x 2 lines)



V) Personal book list

The PASSCODE of the personal book 00 to 10 are output.

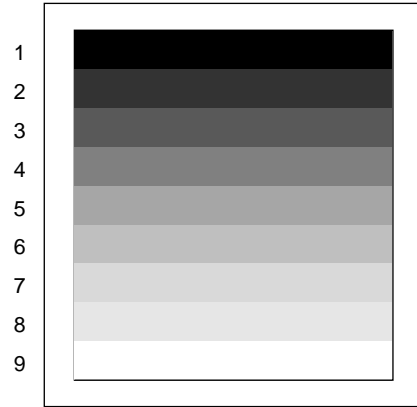
W) No function

X) No function

2-2. Print diagnosis

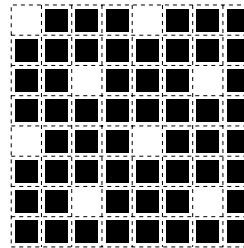
Rapid key 01: Area print mode 1

The effective printing area frame is printed in the specified sheet size.



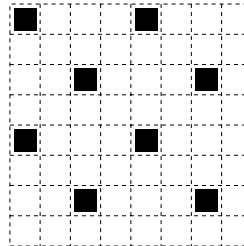
The data pattern used here are as follows and 1 data 30 mm is printed.

1. [Full black pattern]
2. [Intermediate tone 2 pattern]



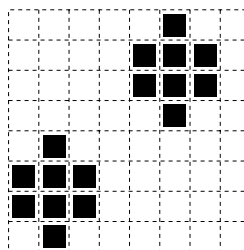
The left pattern is repeated.

3. [Intermediate tone 1 pattern]



The left pattern is repeated.

4. [Mesh point pattern]



The left pattern is repeated.

5. [Longitudinal strip 2 pattern]
Black 2 dot and white 2 dot are repeated in line.
6. [Lateral strip 2 pattern]
Black 2 line and white 2 line are repeated.
7. [Longitudinal strip 1 pattern]
Black 1 dot and white 1 dot are repeated in line.
8. [Lateral strip 1 pattern]
Black 1 line and white 1 line are repeated.
9. [Full White pattern]

Rapid key 02: Check pattern 1

The lateral stripe 2 pattern is printed on one sheet. (Black 2 line and white 2 line are repeated.)

Rapid key 03: Check pattern 2

The lateral stripe 2 pattern is printed on multiple pages. Press the STOP key to end the printing.

Rapid key 04: Check pattern 3

The intermediate tone 1 is printed on one sheet.

Rapid key 05: Check pattern 4

In this mode, 1 sheet is printed as to the square frame pattern for the skew measurement.

Rapid key 06: Paper feed aging 1

The mode is used for aging related to the printing. In this mode, the following modes are provided.

- ① Blank paper aging mode (ALL WHITE AGING)
- ② Whole black print aging mode (ALL BLACK AGING)
- ③ 5% printing aging mode (5% AGING)
- ④ 4% printing aging mode (4% AGING)
- ⑤ Outer frame check pattern
- ⑥ 4% check pattern

After selecting the paper-pass aging mode in the print diagnosis mode, input the number of each mode above with the ten-key, and the mode will be executed. The detailed specifications of each mode are described as follows. Here, the operation in each mode is stopped only when the STOP key is pressed by the operator or a printing-impossible error occurs.

- Blank paper aging mode
In the mode, printing is continued in the whole white (white paper) printing pattern until the STOP key is pressed by the operator. (In the printing area)
- Whole black printing aging mode
In the mode, printing is continued in the whole black (whole black) printing pattern until the STOP key is pressed by the operator. (In the printing area)
- 5% aging mode
In this mode, the 5% print pattern is repeatedly printed until the [STOP] key is pressed by the operator.
- Outer frame pattern aging mode
In this mode, the outer frame check pattern is repeatedly printed until the [STOP] key is pressed by the operator. For the outer frame, only the frame showing the printing area is printed.
- 4% chart aging mode
In this mode, the 4% chart is repeatedly printed until the [STOP] key is pressed by the operator.

Rapid key 07: Paper feed aging 2

This is a mode that is used for aging related to printing, and there are following modes. And also as to the print interval 5 sec. – 12 hour can be set.

- ① Blank paper aging mode (ALL WHITE AGING)
- ② Whole black print aging mode (ALL BLACK AGING)
- ③ 5% printing aging mode (5% AGING)
- ④ 4% printing aging mode (4% AGING)
- ⑤ Outer frame check pattern aging mode
- ⑥ 4% check pattern aging mode

After entering this mode and selecting the paper feeding aging mode, each mode is executed by inputting the number of the above each mode with the numeric number keys and then inputting the print interval with the numeric number keys. Refer to the paper feeding aging mode 1 for each mode. Each mode stops the action only when the STOP key is pressed by an operator or when an error for print impossible occurs.

Rapid key 08: Bias adjust mode

The mode is used to adjust the printing density of the printed image. The image printing density is adjustable in seven steps of 1 to 7.

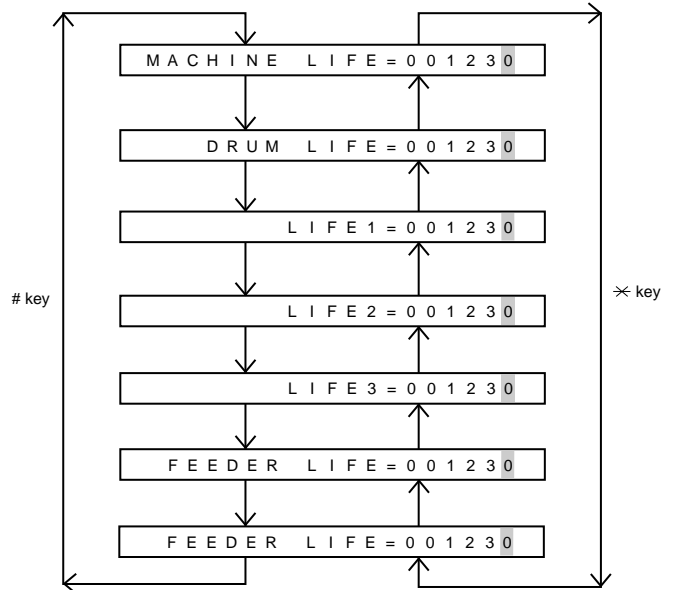
For details, refer to the following table. (For selection, use the keys 1 through 7.)

Image printing density	Thin ← → Thick						
	1	2	3	4	5	6	7
Default value				⊙			

Rapid key 09: Life set mode

The mode is used to set the life counter of the printer and the counter of the auto feeder at desired values. For setting, proceed with the following procedure.

- ① When the life counter setting mode is selected, the following will be displayed.



The cursor blinks at the top data. Five counters can be selected with the '#' and 'x' keys.

- ② In the state ①, input a desired setting number of 6 digits with the ten-key.
- ③ After input of 6 digits, shift to another counter with the '#' and 'x' keys as necessary. When all necessary counters are completely input, press the START key.
- ④ "STORED" will be displayed with the set values stored into the memory. For checking, retry this mode.

NOTE: The counter shows the operational state of the printer (how many sheets have been printed since start of use?). The ordinary memory does not reset the counter. Accordingly, it is necessary to reset this counter in addition to the ordinary memory clear if the content in the memory on the control PWB is broken because of PWB repair, etc. (In the production stage, it is necessary to execute this in the last process.)

Rapid key 10: Life all clear

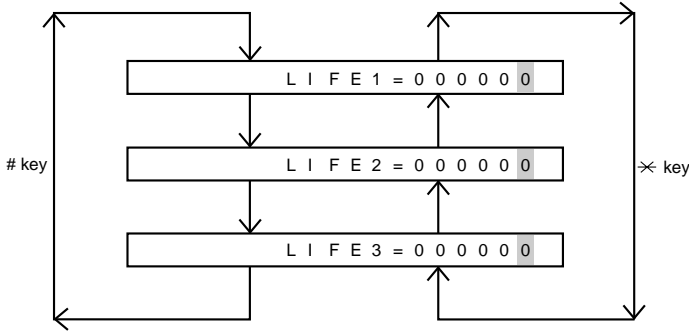
The mode is used to clear the life counter of the printer of the counter of the auto feeder.

NOTE: The counter shows the operational state of the printer (how many sheets have been printed since start of use?). The ordinary memory does not reset the counter. Accordingly, it is necessary to reset this counter in addition to the ordinary memory clear if the content in the memory on the control PWB is broken because of PWB repair, etc. (In the production stage, it is necessary to execute this in the last process.)

Rapid key 11: Life entry mode
(For Serviceman temporary counter)

The mode is used to set a desired value for the judgment value (alarm judgment counter value) of the general purpose life counters 1 through 3 of the printer. If the life of a consumable part (developer, imprinter, etc) is set, the model which has the error display and RMS function will inform RMS when the counter reaches the set value. For setting, proceed with the following procedure.

- ① When the life counter setting mode is selected, the following will be displayed.



The cursor blinks at the top data.

Three counters can be selected with the "#" and "≠" keys.

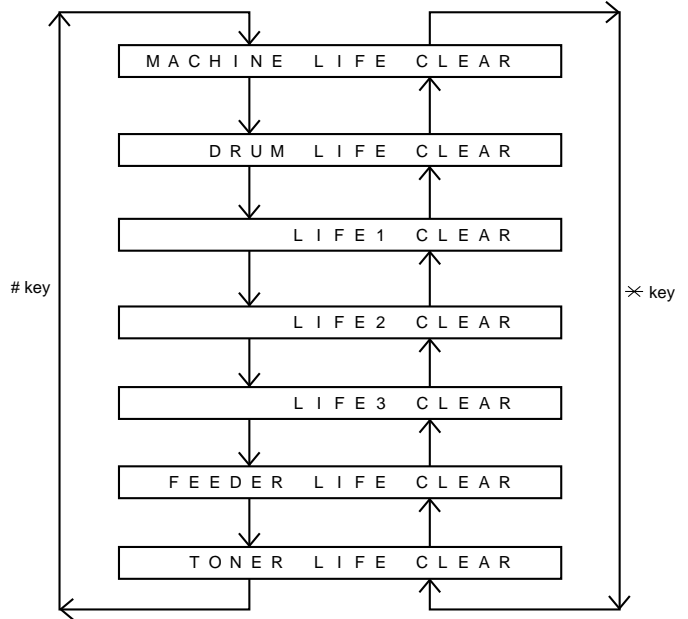
- ② In the state ①, input a desired setting number of 6 digits with the ten-key.
- ③ After input of 6 digits, shift to another counter with the "#" and "≠" keys as necessary. When all necessary counters are completely input, press the START key.
- ④ "STORED" will be displayed with the set values stored into the memory. For checking, retry this mode.

NOTE: The counter shows the operational state of the printer (how many sheets have been printed since start of use?). The ordinary memory does not reset the counter. Accordingly, it is necessary to reset this counter in addition to the ordinary memory clear if the content in the memory on the control PWB is broken because of PWB repair, etc. (In the production stage, it is necessary to execute this in the last process.)

Rapid key 12: Life clear mode

The mode is used to respectively clear the life counter of the printer and the counter of the auto feeder. For setting, proceed with the following procedure.

- ① When the life counter clearing mode is selected, the following will be displayed.



Seven counters can be selected with the "#" and "≠" keys.

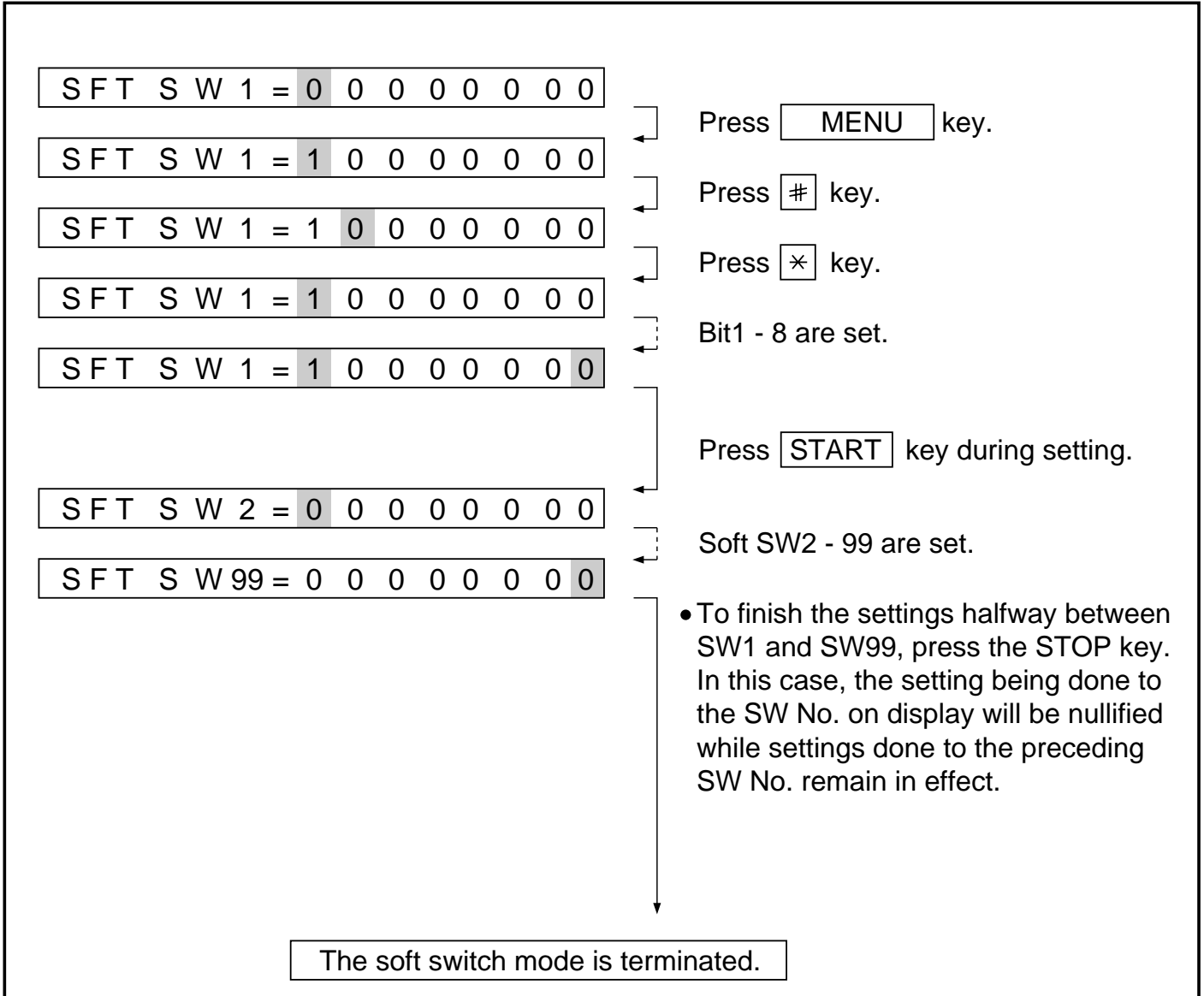
- ② In the state ①, input the DEL key, and the counter will be respectively cleared.
- ③ "CLEARED" is displayed and clearing is complete. After ending one clear, move to another counter to clear with the "#" key, "≠" key, if necessary. After clearing the necessary counter press down the "STOP" key.

NOTE: The counter shows the operational state of the printer (how many sheets have been printed since start of use?). The ordinary memory does not reset the counter. Accordingly, it is necessary to reset this counter in addition to the ordinary memory clear if the content in the memory on the control PWB is broken because of PWB repair, etc. (In the production stage, it is necessary to execute this in the last process.)

3. How to make soft switch setting

To enter the soft switch mode, make the following key entries in sequence.

Press MENU 9 * 8 # 7 START A START



4. Soft switch description

• Soft switch

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks	
			1		0					
SW1	1	Recall interval	Binary input 8 4 2 1					0	OPTION Set to 1~15	
	2		No. = 1 2 3 4 (Data No.)					1		
	3		EX 0 1 0 1					0		
	4		eg. Recall interval is set to 5 min.					1		
	5	Recall times	Binary input 8 4 2 1					0	OPTION Set to 0~14	
	6		No. = 5 6 7 8 (Data No.)					0		
	7		EX 0 0 1 0					1		
	8		eg. Recall times is set to 2 times.					0		
SW2	1	Dial mode	PULSE		TONE			0		
	2	Receive mode	AUTO		MANUAL			1		
	3	ECM mode	Off		On			0	OPTION	
	4	Reserved						0		
	5	Polling security	On		Off			1	OPTION	
	6	Auto cover sheet	No		Yes			1	OPTION	
	7	JUNK-FAX function in manual reception	Yes		No			0		
	8	JUNK-FAX function	Yes		No			0	OPTION	
SW3	1	Number of rings for auto-receive (0: No ring receive)	Binary input 8 4 2 1					0	OPTION Set to 0~9	
	2		No. = 1 2 3 4 (Data No.)					0		
	3		EX 0 0 0 1					0		
	4		eg. Number of rings for auto receive is set to 1 time.					1		
	5	Switch to auto-receive from manual receive (0: No switch)	Binary input 8 4 2 1					0	OPTION Set to 0~9	
	6		No. = 5 6 7 8 (Data No.)					0		
	7		EX 0 0 0 0					0		
	8		eg. Switch to auto receive is set to disable.					0		
SW4	1	Communication results printout	Printed at error only	Printed at error/timer/memory only	Printed at transmission mode only	Not printed	Printed every time	0	OPTION	
			No. 1	0	0	0	1			1
			No. 2	0	0	1	0			1
	2							0		
	3							1		
	4	Image addition function to the communication result table (for memory transmission only)	On		Off			1	OPTION	
	5	Reserved						0		
	6	TEL billing code function	On		Off			0	OPTION	
7	Billing code position	Before		After			1	OPTION		
8	Multi-TTI feature	On		Off			0	OPTION		
SW5	1	Time display format	24 hours		12 hours-AM/PM			0		
	2	Date display format	Month-Day-Year		Day-Month-Year			1		
	3	Header print	Off		On			0		
	4	Footer print	On		Off			0		
	5	Reserved						0		
	6	Substitute reception	Off		On			0		
	7	Substitute reception conditions	Reception disable without TSI		Reception enable without TSI			0		
	8	CSI transmission	Off		On			0		

SW NO.	DATA NO.	ITEM	Switch setting and function								Initial setting	Remarks		
			1				0							
SW6	1	JBIG (Joint Bi-level Image Group)	On				Off				0			
	2	JBIG (Joint Bi-level Image Group) option	On				Off				0			
	3	MMR	On				Off				1			
	4	MR	On				Off				1			
		Modem speed		V.33		V.17		V. 29	V. 27ter					
	5		14400	12000	14400	12000	9600	7200	9600	7200	4800	2400	1	
	6	No. 5	0	0	1	1	1	1	0	0	0	0	0	
	7	No. 6	1	1	0	0	0	0	0	0	0	0	0	
	No. 7	0	1	0	1	0	1	0	1	1	0	0		
	No. 8	0	0	0	0	1	1	1	1	0	0	0		
SW7	1	Reception speed fixed					NO	V. 17- 14400bps	V. 29- 9600bps	V. 27ter- 4800bps			When 14400bps MODEM used, setting to 14400bps is ignored.	
	2		No. 1	0	1	0	1	0						
			No. 2	0	1	1	0							
	3	DIS receive acknowledge during G3 transmission	Twice				Once in NSF reception, twice in DIS reception					0	Effective to international comm.	
	4	Non-modulated carrier in V.29 transmission mode	On				Off					0		
	5	CNG send when manual TX	On				Off					1		
	6	Protocol monitor	On				Off					0		
	7	Line monitor	On				Off					0		
	8	Reserved										0		
SW8	1	Compromised equalizer					0Km	1.8Km	3.6Km	7.2Km			Valid when transmitting	
	2		No. 1	0	0	1	1	0						
			No. 2	0	1	0	1							
	3	H2 mode	No				Yes					0		
		Signal transmission level	Binary input 16 8 4 2 1 No. = 4 5 6 7 8 (Data No.) EX 0 1 1 0 1 (For U.S.A.) EX 0 1 0 0 0 (For Canada) eg. Signal transmission level is set to -10dBm								For U.S.A	For Canada		
	4										0	0		
	5										1	1		
	6										1	0		
	7									0	0			
	8									1	0			
SW9	1	CED tone signal interval					75ms	500ms	750ms	1000ms				
	2		No. 1	0	0	1	1	0						
			No. 2	0	1	0	1							
	3	Equalizer freeze	On				Off					0		
	4	Equalizer freeze conditions	All				7200bps					0		
	5	CED detection time	500ms				1000ms					0		
		Alarm buzzer					3sec	1sec	No BEEP	No BEEP				
	6						0	0	1	1		0		
	No. 5					0	1	0	1		0			
	No. 6					0	1	0	1		0			
8	Action when RTN received	Handle to error				Handle to no error					0			

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting		Remarks
			1		0					
SW10	1	Memory retransmission times	Binary input 8 4 2 1					1	OPTION	
	2		No. = 1 2 3 4 (Data No.)							
	3		EX 1 0 1 0							
	4		eg. Retransmission time set to 10 times.							
	5	Memory retransmission interval	Binary input 8 4 2 1					0	OPTION	
	6		No. = 5 6 7 8 (Data No.)							
	7		EX 0 0 1 0							
	8									
SW11	1	V.34 mode transmission speed	Sending speed = 2400 (bps) x (N+1)					1		
	2		Example :							
	3		2400 (bps) x 12 = 28800 (bps)							
	4		2400 (bps) is set for N=0. 33600 (bps) is set for N=14.							
	5	V.34 mode receiving speed	Receiving speed = 2400 (bps) x (N+1)					1		
	6		Example :							
	7		2400 (bps) x 12 = 28800 (bps)							
	8		2400 (bps) is set for N=0. 33600 (bps) is set for N=14.							
SW12	1	V.34 mode function in case of manual communication	On		Off			1		
	2	V.34 mode function	On		Off					
	3	V.34 control channel communication speed	2400bps		1200bps			0		
	4	EOL detection timer			13sec	25sec	5sec			5sec
	5		No. 4	0	0	1	1	0		
	6	Processing of DIS reception after DIS transmission			Command retransmitting	A line is cut	Apply to T.30	T.30+α	0	
	7		No. 6	0	0	1	1			
	7		No. 7	0	1	0	1			
8	The change to DB from DP by ∞	Yes		No			0			
SW13	1	DTMF output level (High)	Binary input 16 8 4 2 1					For U.S.A.	For Canada	
	2		No. = 1 2 3 4 5 (Data No.) n x 0.5dBm							
	3		EX 0 1 1 0 0 (For U.S.A.)							
	4		EX 0 1 0 0 0 (For Canada)							
	5		eg. Signal transmission level is set to -10dBm							
	6	Reserved						0		
	7	Reserved						0		
	8	Reserved						0		
SW14	1	DTMF output level (Low)	Binary input 16 8 4 2 1					For U.S.A.	For Canada	
	2		No. = 1 2 3 4 5 (Data No.) n x 0.5dBm							
	3		EX 1 0 0 0 0 (For U.S.A.)							
	4		EX 0 1 1 0 0 (For Canada)							
	5		eg. Signal transmission level is set to -10dBm							
	6	Reserved						0		
	7	Reserved						0		
	8	Reserved						0		

SW NO.	DATA NO.	ITEM	Switch setting and function								Initial setting	Remarks	
			1				0						
SW15	1	Reserved									0		
	2	Reserved									0		
	3	Reserved									0		
	4	Reserved									0		
	5	CI Signal OFF detect enable time	(ms)	200	300	350	400	500	700	1200			
	6		No. 5	0	0	0	0	0	0	0	0		
	7		No. 6	0	0	0	0	1	1	1	1	1	
	8		No. 7	0	0	1	1	0	0	1	1	0	
		No. 8	0	1	0	1	0	1	0	1	1		
SW16	1	Reserved									0		
	2	Reserved									0		
	3	Reserved									0		
	4	Reserved									0		
	5	Distinctive ringing		OFF	STD	RING1	RING2	RING3	RING4	RING5			
	6		No. 5	0	0	1	0	1	0	1	0		
	7		No. 6	0	0	0	1	1	0	0	0	0	
	8		No. 7	0	0	0	0	0	1	1	0	0	
		No. 8	0	1	0	0	0	0	0	0	0		
SW17	1	Reserved									0		
	2	Reserved									0		
	3	Reserved									0		
	4	Reserved									0		
	5	Reserved									0		
	6	Reserved									0		
	7	Reserved									0		
	8	Reserved									1		
SW18	1	Reserved									1		
	2	Reserved									0		
	3	Reserved									0		
	4	Reserved									0		
	5	Reserved									1		
	6	Reserved									1		
	7	Reserved									0		
	8	Reserved									0		
SW19	1	Reserved									1		
	2	Reserved									0		
	3	Reserved									0		
	4	Reserved									0		
	5	Reserved									1		
	6	Reserved									0		
	7	Reserved									0		
	8	Reserved									0		
SW20	1	Reserved									0		
	2	Reserved									0		
	3	Reserved									0		
	4	Reserved									0		
	5	Reserved									0		
	6	Reserved									0		
	7	Reserved									0		
	8	Reserved									0		

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks	
			1		0					
SW21	1	Reserved						0		
	2	Reserved						0		
	3	Reserved						0		
	4	Busy tone detection frequency		520-640Hz	300-600Hz	380-500Hz	Reserve	Reserve		
			No. 4	0	0	0	0	1	0	
			No. 5	0	0	1	1	0	0	
	6		No. 6	0	1	0	1	0	0	
	7	Reserved							0	
8	Reserved							0		
SW22	1	Reserved						0		
	2	Reserved						0		
	3	Reserved						0		
	4	Reserved						0		
	5	Reserved						0		
	6	Reserved						0		
	7	Reserved						0		
	8	Reserved						0		
SW23	1	Reserved						0		
	2	Reserved						1		
	3	Reserved						0		
	4	Reserved						1		
	5	Reserved						0		
	6	Reserved						0		
	7	Reserved						1		
	8	Reserved						0		
SW24	1	Reserved						0		
	2	Reserved						1		
	3	Reserved						0		
	4	Reserved						0		
	5	Reserved						1		
	6	Reserved						1		
	7	Reserved						0		
	8	Reserved						0		
SW25	1	Reserved						0		
	2	Reserved						0		
	3	Reserved						0		
	4	Reserved						1		
	5	Reserved						0		
	6	Reserved						0		
	7	Reserved						0		
	8	Reserved						0		
SW26	1	Reserved						0		
	2	Reserved						0		
	3	Reserved						1		
	4	Reserved						1		
	5	Reserved						0		
	6	Reserved						0		
	7	Reserved						1		
	8	Reserved						0		
SW27	1	Reserved						0		
	2	Reserved						1		
	3	Reserved						0		
	4	Reserved						0		
	5	Reserved						0		
	6	Reserved						0		
	7	Reserved						0		
	8	Reserved						0		

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting		Remarks
			1	0			
SW28	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			1		
	4	Reserved			1		
	5	Reserved			1		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW29	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			1		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW30	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
					For U.S.A.	For Canada	
	4	Reserved			0	0	
	5	Reserved			1	1	
	6	Reserved			1	0	
	7	Reserved			0	0	
8	Reserved			1	0		
SW31	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW32	1	Reserved			1		
	2	Reserved			0		
	3	Reserved			1		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			1		
	8	Reserved			0		
SW33	1	Reserved			1		
	2	Reserved			1		
	3	Reserved			1		
	4	Reserved			0		
	5	Reserved			1		
	6	Reserved			1		
	7	Reserved			1		
	8	Reserved			0		

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting		Remarks
			1	0	U.S.A.	Canada	
SW34	1	Reserved			1		
	2	Reserved			1		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW35					For U.S.A.	For Canada	
	1	Reserved			0	0	
	2	Reserved			1	1	
	3	Reserved			1	0	
	4	Reserved			0	0	
	5	Reserved			0	0	
	6	Reserved			0	0	
	7	Reserved			0	0	
SW36					For U.S.A.	For Canada	
	1	Reserved			1	0	
	2	Reserved			0	1	
	3	Reserved			0	1	
	4	Reserved			0	0	
	5	Reserved			0	0	
	6	Reserved			0	0	
	7	Reserved			0	0	
SW37	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			1		
	7	Reserved			0		
	8	Reserved			1		
SW38	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW39	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			1		

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW40	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW41	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW42	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW43	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW44	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW45	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW46	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW47	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW48	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW49	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW50	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW51	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW52	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW53	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW54	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW55	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW56	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW57	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks
			1		0				
SW58	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW59	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW60	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW61	1	F.A.S.T. (RMS) mode	On		Off			0	
	2	Reserved						0	
	3	Verification stamp	Yes		No			0	
	4	Day light saving	No		Yes			1	
	5	Key buzzer volume		Off	High	Low	Low	1	
	6		No. 5	0	0	1	1		
	7		No. 6	0	1	0	1		
	7	Reserved						0	
8	Reserved						0		
SW62	1	Speaker volume		High	High	Middle	Low	1	
	2		No. 1	0	0	1	1		
	3		No. 2	0	1	0	1		
	3	Reserved						1	
	4	Reserved						0	
	5	Ringer volume		Off	High	Middle	Low	1	
	6		No. 5	0	0	1	1		
	7		No. 6	0	1	0	1		
7	Reserved						0		
8	Reserved						0		
SW63	1	Reserved						0	
	2	Reserved						1	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						1	
	6	Reserved						0	
	7	Reserved						1	
	8	Reserved						0	

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting		Remarks		
			1		0							
SW64	1	Header registration	On		Off			0				
	2	Reserved						0				
	3	Continuous serial polling	On		Off			0				
	4	Time interval for continuous serial polling			0 min.	30 min.	60 min.	120 min.			OPTION When SW64 -No.3 is on, option setting can be set up	
			No. 4	0	0	1	1	0				
			No. 5	0	1	0	1	0				
	6	Reserved						0				
	7	Reserved						0				
8	Quick on line function	Yes		No			1					
SW65	1 2	Cassette selection			Manual	Auto-1	Auto-2	Auto-1			OPTION	
			No. 1	0	0	1	1	0				
			No. 2	0	1	0	1	1				
	3 4 5	The 1st priority cassette			None	Tray	1st Cass.	2nd Cass.	Tray			OPTION It is effective only when No.31-1/2 are set up of manual
			No. 3	0	0	0	0	Other	0			
			No. 4	0	0	1	1	Combination	1			
	6 7 8	The 2nd priority cassette			None	Tray	1st Cass.	2nd Cass.	Tray			OPTION It is effective only when No.31-1/2 are set up of manual
			No. 6	0	0	0	0	Other	0			
			No. 7	0	0	1	1	Combination	1			
	8				None	Tray	1st Cass.	2nd Cass.	Tray			OPTION It is effective only when No.31-1/2 are set up of manual
			No. 8	0	1	0	1	Combination	1			
			No. 8	0	1	0	1	Combination	1			
SW66	1 2 3	The 3rd priority cassette			None	Tray	1st Cass.	2nd Cass.	Tray			OPTION It is effective only when No.31-1/2 are set up of manual
			No. 1	0	0	0	0	Other	0			
			No. 2	0	0	1	1	Combination	0			
			No. 3	0	1	0	1	Combination	1			
	4 5	Cassette selection of separate page			None	Tray	1st Cass.	2nd Cass.			OPTION	
			No. 4	0	0	1	1	0				
			No. 5	0	1	0	1	1				
	6	Reserved						0				
	7	Reserved						0				
	8	Reserved						0				
SW67	1 2	Power save mode			OFF		ON				OPTION	
			No.1	0	0		0		0			
			No.2	0	0		1		0			
	3 4 5	Density adjustment of print bias	Binary input		4	2	1					set to 1~7. set to 0, is equal to 4 (100)
			No. =		3	4	5 (Data No.)	1: faint 6: deep				
			EX		1	0	0					
	6 7	Drum life detection			No Detection	Over only	Near and Over	Near and Over				
			No. 6	0	0	1	1	1				
No. 7			0	1	0	1	1					
8	Reserved						0					
SW68	1 2	Distinctive ring pattern			U.S.A.	Canada	Australia	Hong Kong	For U.S.A.	For Canada		
			No. 1	0	0	1	1	0	0			
			No. 2	0	1	0	1	0	1			
	3	Reserved						0				
	4	Reserved						1				
	5	Reserved						0				
	6	Reserved						0				
	7	Reserved						1				
8	Reserved						0					

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks
			1		0				
SW69	1	Reserved						1	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						1	
	5	Reserved						0	
	6	Reserved						1	
	7	Reserved						1	
	8	Reserved						0	
SW70	1	Reserved						1	
	2	Reserved						0	
	3	Reserved						1	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						1	
SW71	1	The default resolution for copying		Standard	Fine	S-Fine	U-Fine	0	OPTION
	2		No. 1	0	0	1	1		
	3	Reserved						0	
	4	Reserved						1	
	5	Reserved						0	
	6	Picture quality priority mode		Standard	Fine	S-Fine	U-Fine	0	OPTION
	7		No. 6	0	0	1	1		
	8	Reserved						0	
SW72	1	Reserved						1	
	2	Reserved						0	
	3	Reserved						1	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW73	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
6	Data reduction (Except notation: Setting prohibition)		AUTO	100%	Set up to 100% except the notation		0	The number in () is applicable for the footer print on. Auto is equivalent to 100%.	
7		No. 6	0	1					
8		No. 7	0	0					
8		No. 8	0	0			0		
SW74	1	Automatic printing of activity report	Yes (When memory full)		No (First data is cleared when memory full)			0	OPTION
	2	Print out of total time and total number of pages on activity report	Off		On			0	
	3	Reserved						0	
	4	Department function	On		Off			0	
	5	Department ID digit	Binary input 8 4 2 1					0	OPTION set to 3~9
	6		No. = 5 6 7 8 (Data No.)					1	
	7		EX 0 1 0 0					0	
	8		eg. Department ID is set to 4 digits					0	

SW NO.	DATA NO.	ITEM	Switch setting and function				Initial setting	Remarks						
			1		0									
SW75	1	Copy protect switch	On		Off		0							
	2	Cut-off mode (when copy mode)	Continue		Cut-off		0	OPTION						
	3	Scanning ratio in memory input	1 : 1		Reduce		0	Memory scanning						
	4	Overseas communication mode selection function	Yes		No		0							
	5	Reserved					0							
	6	Reduce ratio when copy mode (Except notation: Setting prohibition)		AUTO	100%		Set up to 100% except the notation	1 0 0						
	7		No. 6	0	1									
	8		No. 7	0	0									
SW76	1	Reserved					0							
	2	Reserved					0							
	3	Density adjustment (when Fine/STD mode)		Normal	Faint	Deep	Deep (when Dark mode)	0						
	4		No. 3	0	0	1	1							
	5	Density adjustment (when Half-tone mode)		Normal	Faint	Deep	Deep (when Dark mode)	0						
	6		No. 5	0	0	1	1							
	7	MTF correction in half-tone mode	On		Off		1							
	8	MTF intensity in half-tone mode	Strong		Weak		0							
SW77	1	Cassette define LTR/A4: Tray	A4		LTR		0							
	2	Cassette define LTR/A4: Upper	A4		LTR		0	When W cassette						
	3	Cassette define LTR/A4: Lower	A4		LTR		0	Ignore when W cassette						
	4	Reserved					1							
	5	Reserved					1							
	6	Reserved					0							
	7	Reserved					0							
	8	Reserved					0							
SW78	1	Reserved					1							
	2	Reserved					0							
	3	Reserved					0							
	4	Reserved					0							
	5	Reserved					0							
	6	Reserved					0							
	7	Reserved					0							
	8	Reserved					0							
SW79	1	Secure billing code	Yes		No		0							
	2	Pause with SHIFT key	Yes		No		0	Only when special billing code is given.						
	3	Reserved					0							
	4	Z key pause time (250ms unit)	Binary input				16	8	4	2	1	0 0 0 0 0 0 0 0	Only when the special billing code is given. The ordinary pause is not affected.	
	5		No. =				4	5	6	7	8			(Data No.)
	6		EX				0	0	0	0	0			
	7		eg. Pause time 250ms											
	8	Time=(n+1) x 250ms												
SW80	1	Separate feature	On		Off		0							
	2	Reserved					0							
	3	Reserved					0							
	4	Reserved					0							
	5	Addition of header (Sender information)	On		Off		1							
	6	DTMF sending by the panel test	On		Off		0							
	7	Power save mode	Real time		Timer		1							
	8	Reserved					0							

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW81	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			1	
	8	Reserved			1	
SW82	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW83	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			1	
SW84	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW85	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW86	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW87	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW88	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW89	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			1	
SW90	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			1	
SW91	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW92	1	Reserved			0	
	2	Reserved			1	
	3	Waiting time after dialing	90sec	The specification of each country is followed	0	
	4	Show receiver's name	Yes (Show)	No (Hide)	1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW93	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting		Remarks
			1	0			
SW94	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW95	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			1		
	6	Reserved			1		
	7	Reserved			0		
	8	Reserved			1		
SW96	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW97	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW98	1	Reserved			0		
	2	Reserved			0		
	3	Reserved			0		
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
	7	Reserved			0		
	8	Reserved			0		
SW99	1	Reserved			0		
					For U.S.A.	For Canada	
	2	Reserved			1	0	
					For U.S.A.	For Canada	
	3	Reserved			1	0	
	4	Reserved			0		
	5	Reserved			0		
	6	Reserved			0		
7	Reserved			1			
8	Reserved			1			

• Soft switch function description

SW1 No. 1 ~ No. 4 Recall interval

Choice is made for a recall interval for speed and rapid dial numbers. Use a binary number to program this. If set to 0 accidentally, 1 will be assumed.

SW1 No. 5 ~ No. 8 Recall times

Choice is made as to how many recall times should be made. Use a binary number to program this.

SW2 No. 1 Dial mode

Switch the type according to the telephone circuit connected to the facsimile.

0: PULSE DIAL

1: TONE DIAL

SW2 No. 2 Receive mode

Auto/manual receiving mode is set.

SW2 No. 3 ECM mode

Used to determine ECM mode function.

SW2 No. 4 Reserved

Set to "0".

SW2 No. 5 Polling security

This switch is employed to enable or disable the polling operation using the ID code verification function, in order to prevent unauthorized polling operation.

SW2 No. 6 Auto cover sheet

When "1" (=YES) is selected, the cover sheet is automatically sent after transmission of the original to notify the receiver of the number of original sheets transmitted.

SW2 No. 7 JUNK-FAX function in manual reception

It is set whether JUNK-FAX is functioned in the manual receiving mode or not.

SW2 No. 8 JUNK-FAX function

This function is used to receive data from a specific remote machine (station registered in entry mode). It is the function that refused a reception in the case that TSI of remote machine matched with fax number of the station registered.

0: No

1: Yes

SW3 No. 1 ~ No. 4 Number of rings for auto-receive

(0: No ring receive)

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from one to nine rings using a binary number. If the soft switch was set to 1, a direct connection is made to the facsimile. If it was set to 0 accidentally, receive ring is set to 1. If it was above 9, receive rings are set to 9.

SW3 No. 5 ~ No. 8 Switch to auto-receive from manual receive

(0: No switch)

This setting allows machine to switch from manual to Auto Receive mode. Setting this number to 0 forces machine to stay in Manual receive mode. Entering the binary number 0 forces the machine to remain in the manual answer mode. If a number between 1 and 9 is entered, the machine will go into the answer mode after the given number of rings. However, it can be used as an ordinary telephone if the handset is taken off the hook before this programmed number is finished. If entry of a number above 9 by accident, it will be set to 9. In this case, it must be corrected to the proper number.

SW4 No. 1 ~ No. 3 Communication results printout

It is possible to obtain communication results after each transaction. Normally, the switch is set (No. 1: 0, No. 2: 0, No. 3: 1) so that the communication result is produced only a communication error is encountered. If No. 1 was set to 1, No. 2 was set to 1 and No. 3 was set to 0, the communication result will be produced every time a communication is done, even if the communication was successful.

If No. 1 was set to 0, No. 2 to 1 and No. 3 to 0, the communication result will be produced every transmission.

Setting No. 1 to 1 No. 2 to 0 and No. 3 to 0 will disable this function. No transaction report will be printed.

If No. 1 was set to 0, No. 2 to 0 and No. 3 to 0, the communication result is produced only after a timer and memory transmission or when a communication error is encountered.

SW4 No. 4 Image addition function to the communication result table (for memory transmission only)

Used to set addition of sending image to the communication result table.

SW4 No. 5 Reserved

Set to "0".

SW4 No. 6 TEL billing code function

When set to "1", the TEL billing code function is enabled.

SW4 No. 7 Billing code position

When set to "1", the billing code is delivered before dialing the remote number. When set to "0", the billing code is delivered after dialing.

SW4 No. 8 Multi-TTI feature

When this switch is set to "1", Multi TTI function is enabled.

SW5 No. 1 Time display format

When this switch is set to "0", time is displayed in 12-hour system.

When set to "1", 24-hour system.

SW5 No. 2 Date display format

Used to select date display/print formats.

0: DAY-Month-Year

1: Month-DAY-Year

SW5 No. 3 Header print

When it is set at 0, sender's name, sending page number and so on are automatically printed in the recording paper on the receiving side during transmission. Thus, the sender can be known on the receiving side.

0: Applied.

1: Not applied.

SW5 No. 4 Footer print

When set to "1", the date of reception, the sender machine No., and the page No. are automatically recorded at the end of reception.

SW5 No. 5 Reserved

Set to "0".

SW5 No. 6 Substitute reception

Selection of substitute reception in the case of recording paper ex-hausted or paper jam. If set to "NO", auto receive is disabled even when the receive memory is ready to receive.

Substitute reception is not performed even during receive operation.

SW5 No. 7 Substitute reception conditions

Selection of substitute reception according to existence of TEL number from transmitting side. Initial setting allows substitute reception without CSI. If set to "no", the receiver cannot receive any documents

SW5 No. 8 CSI transmission

CSI signal contains the sender's phone number registered in the machine. If this switch is set to "1", no sender's name will be printed at the receiving side.

SW6 No. 1 JBIG (Joint Bi-level Image Group)

An image compression encoding method recommended by ITU-T. It realizes 2-second transmission when the power is turned on.

SW6 No. 2 JBIG (Joint Bi-level Image Group) option

An optional function for JBIG.

SW6 No. 3 MMR

MMR (Modified MR) selects presence of the compression function.

SW6 No. 4 MR

MR (Modified READ) selects presence of the compression function.

SW6 No. 5 ~ No. 8 Modem speed

Used to determine the initial modem speed. The default is 14400BPS(V.17). It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for the fallback procedure.

SW7 No. 1, No. 2 Reception speed fixed

The transferable speed of modem in the receiving mode is set.

SW7 No. 3 DIS receive acknowledge during G3 transmission

Used to make a choice of whether reception of NSF (DIS) is acknowledged after receiving two NSFs (DISs) or receiving one NSF (two DISs).

It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW7 No. 4 Non-modulated carrier in V.29 transmission mode

Though transmission of a non-modulated carrier is not required for transmission by the V29 modem according to the CCITT Recommendation, it may be permitted to send a non-modulated carrier before the image signal to avoid an echo suppression problem. It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW7 No. 5 CNG send when manual TX

CNG signal sending ON/OFF in case of manual transmission is set.

SW7 No. 6 Protocol monitor

Normally set to "0". If set to "1", communication can be checked, in case of troubles, without using a G3 tester or other tools.

When communication FSK data transmission or reception is made, the data is taken into buffer. When communication is finished, the data analyzed and printed out. When data is received with the line monitor (SW7-No. 7) set to "1" the reception level is also printed out.

SW7 No. 7 Line monitor

Normally set to "0". If set to "1", the transmission speed and the reception level are displayed on the LCD. Used for line tests.

SW7 No. 8 Reserved

Set to "0".

SW8 No. 1, No. 2 Compromised equalizer

The specific line equalizer is inserted.

No. 1	No. 2	
0	0	The line equalizer built in the modem is turned off.
0	1	Line equalizer corresponding to 1.8 km
1	0	Line equalizer corresponding to 3.6 km
0	1	Line equalizer corresponding to 7.2 km

SW8 No. 3 H2 mode

Used to determine H2 mode (15sec transmission mode). When set to OFF, H2 mode is inhibited even though the transmitting machine has H2 mode.

SW8 No. 4 ~ No. 8 Signal transmission level

Used to control the signal transmission level in the range of -0dB to -31dB.

SW9 No. 1, No. 2 CED tone signal interval

For international communication, the 2100Hz CED tone may act as an echo suppresser switch, causing a communication problem. Though this soft switch is normally set to "0", it should be set to "1" so as to change the time between CED tone and DIS signal from 75ms to 500ms to eliminate the communication problem caused by echo.

SW9 No. 3 Equalizer freeze

This switch is used to perform reception operation by fixing the equalizer control of modem for the line which is always in an unfavorable state and picture cannot be received. Usually, the control is executed according to the state of line where the equalizer setting is changed always.

SW9 No. 4 Equalizer freeze conditions

Setting which specifies SW9 No.3 control only in condition of 7200bps modem speed.

SW9 No. 5 CED detection time

The detection time of the CED signal from the called side in the auto calling mode is set.

SW9 No. 6, No. 7 Alarm buzzer

The length of the buzzer for normal end of operation is set.

SW9 No. 8 Action when RTN received

The operation is set when the RTN signal is received in the G3 transmission mode.

SW10 No. 1 ~ No. 4 Memory retransmission times

The number of memory retransmissions is set.

SW10 No. 5 ~ No. 8 Memory retransmission interval

The interval between memory retransmissions is set.

SW11 No. 1 ~ No. 4 V.34 mode transmission speed

Used to determine the initial modem speed when communication method is V.34 transmission mode.

SW11 No. 5 ~ No. 8 V.34 mode receiving speed

Used to determine the initial modem speed when communication method is V.34 reception mode.

SW12 No. 1 V.34 mode function in case of manual communication

Used to select whether the V.34 mode is made valid when automatically transmitting/receiving.

SW12 No. 2 V.34 mode function

Used to select the V.34 mode for communication when set to "1", communication method is V.34 mode..

SW12 No. 3 V.34 control channel communication speed

Used to select the control channel communication speed for V.34 mode.

SW12 No. 4, No. 5 EOL detection timer

Used to make a choice of whether to use the 25-second or 13-second timer for detection of End of line This is effective to override communication failures with some facsimile models that have longer End of line detection.

SW12 No. 6, No. 7 Processing of DIS reception after DIS transmission

When receiving , operation in case of DIS reception after DIS transmission is selected. Retransmitting command: To retransmit DIS in disregard of DIS reception.

Breaking circuit: To break circuit instantly. (Abnormal finish)

T. 30: To operate in accordance with T.30.

T. 30+α: To operate in accordance with T.30+α. (To operate differently according to cases.)

SW12 No. 8 The change to DB from DP by \times

When setting to 1, the mode is changed by pressing the \times key from the pulse dial mode to the tone dial mode.

SW13 No. 1 ~ No. 5 DTMF output level (High)

To set the level to output high group DTMF signals. -15 to 0 dBm (0.5 dBm unit)

SW13 No. 6 ~ No. 8 Reserved

Set to "0".

SW14 No. 1 ~ No. 5 DTMF output level (Low)

To set the level to output low group DTMF signals. -15 to 0 dBm (0.5 dBm unit)

SW14 No. 6 ~ No. 8 Reserved

Set to "0".

SW15 No. 1 ~ No. 4 Reserved

Set to "0".

SW15 No. 5 ~ No. 8 CI signal OFF detect enable time

Used to set the continuous detection time during OFF period of CI signal.

SW16 No. 1 ~ No. 4 Reserved

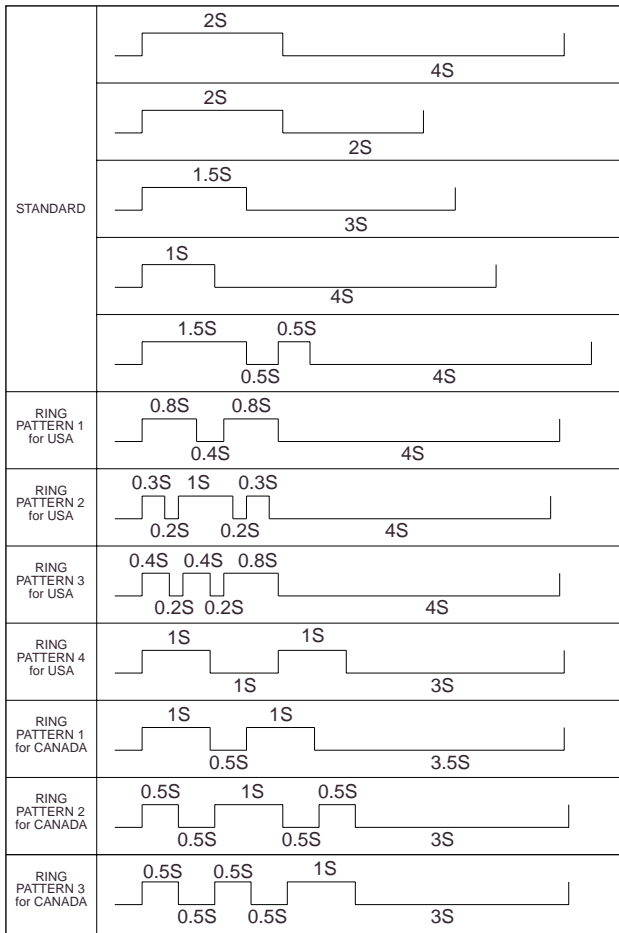
Set to "0".

SW16 No. 5 ~ No. 8 Distinctive ringing

When the ringing setting is turned off, all of the CI signal are received. When any of the standard, and ring patterns 1 through 3 is selected for the ringing setting, only the selected CI signal is received.

CI signal patterns

The CI signal patterns consists of the standard pattern, and ring patterns 1 through 7. The standard pattern is the conventional one.



SW17 No. 1 ~ No. 7 Reserved

Set to "0".

SW17 No. 8 Reserved

Set to "1".

SW18 No. 1 Reserved

Set to "1".

SW18 No. 2 ~ No. 4 Reserved

Set to "0".

SW18 No. 5, No. 6 Reserved

Set to "1".

SW18 No. 7, No. 8 Reserved

Set to "0".

SW19 No. 1 Reserved

Set to "1".

SW19 No. 2 ~ No. 4 Reserved

Set to "0".

SW19 No. 5 Reserved

Set to "1".

SW19 No. 6 ~ No. 8 Reserved

Set to "0".

SW20 No. 1 ~ No. 8 Reserved

Set to "0".

SW21 No. 1 ~ No. 3 Reserved

Set to "0".

SW21 No. 4 ~ No. 6 Busy tone detection frequency

To select frequency range of signals to be detected as Busy Tone.

SW21 No. 7, No. 8 Reserved

Set to "0".

SW22 No. 1 ~ No. 8 Reserved

Set to "0".

SW23 No. 1 Reserved

Set to "0".

SW23 No. 2 Reserved

Set to "1".

SW23 No. 3 Reserved

Set to "0".

SW23 No. 4 Reserved

Set to "1".

SW23 No. 5, No. 6 Reserved

Set to "0".

SW23 No. 7 Reserved

Set to "1".

SW23 No. 8 Reserved

Set to "0".

SW24 No. 1 Reserved

Set to "0".

SW24 No. 2 Reserved

Set to "1".

SW24 No. 3, No. 4 Reserved

Set to "0".

SW24 No. 5, No. 6 Reserved

Set to "1".

SW24 No. 7, No. 8 Reserved

Set to "0".

SW25 No. 1 ~ No. 3 Reserved

Set to "0".

SW25 No. 4 Reserved

Set to "1".

SW25 No. 5 ~ No. 8 Reserved

Set to "0".

SW26 No. 1, No. 2 Reserved

Set to "0".

SW26 No. 3, No. 4 Reserved

Set to "1".

SW26 No. 5, No. 6 Reserved

Set to "0".

SW26 No. 7 Reserved

Set to "1".

SW26 No. 8 Reserved

Set to "0".

SW27 No. 1 Reserved

Set to "0".

SW27 No. 2 Reserved

Set to "1".

SW27 No. 3 ~ No. 8 Reserved

Set to "0".

SW28 No. 1, No. 2 Reserved

Set to "0".

SW28 No. 3 ~ No. 5 Reserved

Set to "1".

SW28 No. 6 ~ No. 8 Reserved

Set to "0".

SW29 No. 1 ~ No. 4 Reserved

Set to "0".

SW29 No. 5 Reserved

Set to "1".

SW29 No. 6 ~ No. 8 Reserved

Set to "0".

FO-4400U
FO-CS1

SW30 No. 1 ~ No. 4 Reserved

Set to "0".

SW30 No. 5 Reserved (For U.S.A.)

Set to "1".

SW30 No. 6 Reserved (For U.S.A.)

Set to "1".

SW30 No. 6 Reserved (For Canada)

Set to "0".

SW30 No. 7 Reserved

Set to "0".

SW30 No. 8 Reserved (For U.S.A.)

Set to "1".

SW30 No. 8 Reserved (For Canada)

Set to "0".

SW31 No. 1 ~ No. 8 Reserved

Set to "0".

SW32 No. 1 Reserved

Set to "1".

SW32 No. 2 Reserved

Set to "0".

SW32 No. 3 Reserved

Set to "1".

SW32 No. 4 ~ No. 6 Reserved

Set to "0".

SW32 No. 7 Reserved

Set to "1".

SW32 No. 8 Reserved

Set to "0".

SW33 No. 1 ~ No. 3 Reserved

Set to "1".

SW33 No. 4 Reserved

Set to "0".

SW33 No. 5 ~ No. 7 Reserved

Set to "1".

SW33 No. 8 Reserved

Set to "0".

SW34 No. 1, No. 2 Reserved

Set to "1".

SW34 No. 3 ~ No. 8 Reserved

Set to "0".

SW35 No. 1 Reserved

Set to "0".

SW35 No. 2 Reserved

Set to "1".

SW35 No. 3 Reserved (For U.S.A.)

Set to "1".

SW35 No. 3 Reserved (For Canada)

Set to "0".

SW35 No. 4 ~ No. 8 Reserved

Set to "0".

SW36 No. 1 Reserved (For U.S.A.)

Set to "1".

SW36 No. 1 Reserved (For Canada)

Set to "0".

SW36 No. 2 Reserved (For U.S.A.)

Set to "0".

SW36 No. 2 Reserved (For Canada)

Set to "1".

SW36 No. 3 Reserved (For U.S.A.)

Set to "0".

SW36 No. 3 Reserved (For Canada)

Set to "1".

SW36 No. 4 ~ No. 8 Reserved

Set to "0".

SW37 No. 1 ~ No. 5 Reserved

Set to "0".

SW37 No. 6 Reserved

Set to "1".

SW37 No. 7 Reserved

Set to "0".

SW37 No. 8 Reserved

Set to "1".

SW37 No. 5 ~ No. 8 CI signal off detect enable time

Used to set the continuous detection time during OFF period of CI signal. Normally set to 700ms, where the short ring (500ms: OFF period) cannot be detected. Therefore, selection of 350ms is allowed.

SW38 No. 1 ~ No. 8 Reserved

Set to "0".

SW39 No. 1 ~ No. 7 Reserved

Set to "0".

SW39 No. 8 Reserved

Set to "1".

SW40 No. 1 Reserved

Set to "1".

SW40 No. 2 ~ No. 4 Reserved

Set to "0".

SW40 No. 5, No. 6 Reserved

Set to "1".

SW40 No. 7, No. 8 Reserved

Set to "0".

SW41 No. 1 Reserved

Set to "1".

SW41 No. 2 ~ No. 4 Reserved

Set to "0".

SW41 No. 5 Reserved

Set to "1".

SW41 No. 6 ~ No. 8 Reserved

Set to "0".

SW42 No. 1 ~ No. 8 Reserved

Set to "0".

SW43 No. 1 ~ No. 8 Reserved

Set to "0".

SW44 No. 1 ~ No. 8 Reserved

Set to "0".

SW45 No. 1 ~ No. 8 Reserved

Set to "0".

SW46 No. 1 ~ No. 8 Reserved

Set to "0".

SW47 No. 1 ~ No. 8 Reserved

Set to "0".

SW48 No. 1 ~ No. 8 Reserved

Set to "0".

SW49 No. 1 ~ No. 8 Reserved

Set to "0".

SW50 No. 1 ~ No. 8 Reserved

Set to "0".

SW51 No. 1 ~ No. 8 Reserved

Set to "0".

SW52 No. 1 ~ No. 8 Reserved
Set to "0".

SW53 No. 1 ~ No. 8 Reserved
Set to "0".

SW54 No. 1 ~ No. 8 Reserved
Set to "0".

SW55 No. 1 ~ No. 8 Reserved
Set to "0".

SW56 No. 1 ~ No. 8 Reserved
Set to "0".

SW57 No. 1 ~ No. 8 Reserved
Set to "0".

SW58 No. 1 ~ No. 8 Reserved
Set to "0".

SW59 No. 1 ~ No. 8 Reserved
Set to "0".

SW60 No. 1 ~ No. 8 Reserved
Set to "0".

SW61 No. 1 F.A.S.T. (RMS) mode
Used to determine a function of remote maintenance system (F.A.S.T.).

SW61 No. 2 Reserved
Set to "0".

SW61 No. 3 Verification stamp
End stamp:
It is set whether the red round mark is stamped at the bottom margin of the document of every page in the memory input mode and document sending mode or not.

SW61 No. 4 Day light saving
The day light saving function ON/OFF is set.

SW61 No. 5, No. 6 Key buzzer volume
Key buzzer volume:
The sound volume of key inputting buzzer and other buzzers is set.

SW61 No. 7, No. 8 Reserved
Set to "0".

SW62 No. 1, No. 2 Speaker volume
Speaker volume:
The sound volume of the speaker in the on-hook mode is set.

SW62 No. 3 Reserved
Set to "1".

SW62 No. 4 Reserved
Set to "0".

SW62 No. 5, No. 6 Ringer volume
Ringer volume:
The calling sound volume of CI signal receiving is set.

SW62 No. 7, No. 8 Reserved
Set to "0".

SW63 No. 1 Reserved
Set to "0".

SW63 No. 2 Reserved
Set to "1".

SW63 No. 3, No. 4 Reserved
Set to "0".

SW63 No. 5 Reserved
Set to "1".

SW63 No. 6 Reserved
Set to "0".

SW63 No. 7 Reserved
Set to "1".

SW63 No. 8 Reserved
Set to "0".

SW64 No. 1 Header registration
When setting this switch to "1", registering senders is protected.

SW64 No. 2 Reserved
Set to "0".

SW64 No. 3 Continuous serial polling
Turns ON/OFF the continuous polling function.

SW64 No. 4, No. 5 Time interval for continuous serial polling
Used to set the interval time for continuous serial polling. Normally set to no interval (0 minute).

SW64 No. 6, No. 7 Reserved
Set to "0".

SW64 No. 8 Quick on line function
It is selected whether auto dial call is activated in the memory input mode when one document is completely read or when all pages are completely read.

SW65 No. 1, No. 2 Cassette selection
To set selective modes for detail paper cassettes of the printer.

00:	Manual	To select detail paper in the first priority cassette in accordance with setting by SW65 3-8 and SW65 1-3. If the detail paper in the first priority cassette runs short, the second priority cassette will be used.
01:	Automatic 1	To automatically select detail paper with optimum size among the first to third priority cassettes in accordance with setting by SW65 3-8 and SW65 1-3. The optimum paper is selected by every page. If all the cassettes have the same size paper, paper will be selected according to the cassette priority.
10:	Automatic 2	To automatically select detail paper with optimum size among the first to third priority cassettes in accordance with setting by SW65 3-8 and SW65 1-3. At the start of printing, the optimum paper is adopted only for the first page. Thereafter the same cassette selected for the first page will be used from the second page and after. If all the cassettes have the same size paper, paper will be selected according to the cassette priority.
11:	Except the above	01: the same setting as in the case of Automatic 1

SW65 No. 3 ~ No. 5 The 1st priority cassette
To select the first priority cassette.

001:	1st paper feeder (MP-TRAY)
010:	2nd paper feeder
011:	3rd paper feeder
Except the above	Printing started from the possible paper feeder

SW65 No. 6 ~ No. 8 The 2nd priority cassette
To select the second priority cassette.

000:	Not used (To set in case of using only paper feeder that has been set in the first priority cassette)
001:	1st paper feeder (MP-TRAY)
010:	2nd paper feeder
011:	3rd paper feeder
Except the above	Not used

SW66 No. 1 ~ No. 3 The 3rd priority cassette

To select the third priority cassette.

000:	Not used (To set in case of using only paper feeder that has been set in the first /second priority cassette)
001:	1st paper feeder (MP-TRAY)
010:	2nd paper feeder
011:	3rd paper feeder
Except the above	Not used

SW66 No. 4, No. 5 Cassette selection of separate page

The supply origin of a separate page is set.

SW66 No. 6 ~ No. 8 Reserved

Set to "0".

SW67 No.1, No. 2 Power save mode

The heater mode of a printer is set.

SW67 No. 3 ~ No. 5 Density adjustment of print bias

The density of printing is set.

It can be also set in the print diagnosis mode.

SW67 No. 6, No. 7 Drum life detection

The detection mode of Drum life is set.

SW67 No. 8 Reserved

Set to "0".

SW68 No. 1, No. 2 Distinctive ring pattern

The distinctive ring patten is set for country.

SW68 No. 3 Reserved

Set to "0".

SW68 No. 4 Reserved

Set to "1".

SW68 No. 5, No. 6 Reserved

Set to "0".

SW68 No. 7 Reserved

Set to "1".

SW68 No. 8 Reserved

Set to "0".

SW69 No. 1 Reserved

Set to "1".

SW69 No. 2, No. 3 Reserved

Set to "0".

SW69 No. 4 Reserved

Set to "1".

SW69 No. 5 Reserved

Set to "0".

SW69 No. 6, No. 7 Reserved

Set to "1".

SW69 No. 8 Reserved

Set to "0".

SW70 No. 1 Reserved

Set to "1".

SW70 No. 2 Reserved

Set to "0".

SW70 No. 3 Reserved

Set to "1".

SW70 No. 4 ~ No. 7 Reserved

Set to "0".

SW70 No. 8 Reserved

Set to "1".

SW71 No. 1, No. 2 The default resolution for copying

In case of copying without pressing the RESOLUTION key, resolution will be super fine.

SW71 No. 3 Reserved

Set to "0".

SW71 No. 4 Reserved

Set to "1".

SW71 No. 5 Reserved

Set to "0".

SW71 No. 6, No. 7 Picture quality priority mode

Used to set the transmission mode which is automatically selected when the MODE key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the MODE key is manually set to another mode.

SW71 No. 8 Reserved

Set to "0".

SW72 No. 1 Reserved

Set to "1".

SW72 No. 2 Reserved

Set to "0".

SW72 No. 3 Reserved

Set to "1".

SW72 No. 4 ~ No. 8 Reserved

Set to "0".

SW73 No. 1 ~ No. 5 Reserved

Set to "0".

SW73 No. 6 ~ No. 8 Data reduction

Reduction ratio of receiving is set .

It can be changed even in the optional mode.

To set printing reduction rate of received images.

000:	Automatic
100:	100%
Except the above	100%

SW74 No. 1 Automatic printing of activity report

This soft switch is used to select; whether or not to produce the activity report when the memory is full (about 50 items). An activity report can be produced when the following key entry command is made.

"FUNC", "2", "#", "START"

After producing the activity report, all the data in the memory will be cleared.

When the switch function is set to "0" (NO), the data in memory will be deleted from the oldest as it reaches the maximum memory capacity (approx. 50 items).

SW74 No. 2 Print out of total time and total number of pages on activity report

Used to make a choice of whether the total communication time and pages are recorded in the activity report.

SW74 No. 3 Reserved

Set to "0".

SW74 No. 4 Department function

This model has the department audit feature, it has to be set to 1 to utilize this feature.

SW74 No. 5 ~ No. 8 Department ID digit

Used to set the department ID digit number .

When set to "D", the number is "4" .

SW75 No. 1 Copy protect switch

When this switch is set to "1", copy is for bidden.

SW75 No. 2 Cut-off mode (when copy mode)

When in copy, if the scanned data is out of the range of recording, the operator has one of the choices below using the switch.

0: Continue: Data is printed onto the next page with the last 20mm also printed at the beginning of the next page.

1: Cut off: Data scanned out of the limit is cut off (a page is printed.)

SW75 No. 3 Scanning ratio in memory input

In the case of memory transmission, etc., only letter size (A4) documents can be stored in the memory. To input B4 documents into the memory, therefore, the B4 documents must be reduced to letter size (A4) or the both ends of the B4 documents will be cut off to input the center letter-size (A4) portion. This switch provides the selection.

0: Reduced to A4 size and inputted.

1: Both ends are cut off and the center portion (A4 size) is inputted.

SW75 No. 4 Overseas communication mode selection function

When this switch is set to "1", the communication is Super G3 mode can be turned off by pressing the "SPACE" key before sending operation, for the transmission set after that (including polling).

SW75 No. 5 Reserved

Set to "0".

SW75 No. 6 ~ No. 8 Reduce ratio when copy mode

Reduction ratio of copying is set .

It can changed even in the optional mode.

SW76 No. 1, No. 2 Reserved

Set to "0".

SW76 No. 3, No. 4 Density adjustment (when Fine/STD mode)

This is used for density adjustment in fine/standard mode. Adjust the density according to that of frequently used original.

Set to "Dark" for darker reading (either in the auto or the dark mode) of light original. Set to "Light" for lighter reading (either in the auto or the dark mode) of dark original.

Set to "Dark only in dark mode" for darker reading only in the dark mode.

SW76 No. 5, No. 6 Density adjustment (when half-tone mode)

This is used for density adjustment in the half tone. Setting procedures are the same as SW46 No. 3 and No. 4.

SW76 No. 7 MTF correction in half-tone mode

In the half tone mode, image area is separated from character area and processed separately to eliminate unclear character transmission. This switch is used to change the criteria of judgement of separation. When "Strong" (= 1) is selected, more area is judged as character area, providing clearer characters.

On the contrary, however, edges of image area may be emphasized.

It is advisable to restrict the use of this function only when clear characters must be transmitted, and to use the function of "Weak" (= 0) for general cases.

SW76 No. 8 MTF intensity in half-tone mode

This allows selection of MTF correction (dimness correction) in the half tone mode. When "NO" (= 1) is selected, the whole image becomes soft and mild, On the contrary, however, mildness of characters will be reduced. Normally set to "NO" (= 1).

SW77 No. 1 Cassette define LTR / A4:Tray

A4 cassette can be used .

Set "0" or "1" for all of three bits.

Do not change the setting during printing.

SW77 No. 2 Cassette define LTR / A4:Upper

A4 cassette can be used .

Set "0" or "1" for all of three bits.

Do not change the setting during printing.

SW77 No. 3 Cassette define LTR / A4:Lower

A4 cassette can be used .

Set "0" or "1" for all of three bits.

Do not change the setting during printing.

SW77 No. 4, No. 5 Reserved

Set to "1".

SW77 No. 6 ~ No. 8 Reserved

Set to "0".

SW78 No. 1 Reserved

Set to "1".

SW78 No. 2 ~ No. 8 Reserved

Set to "0".

SW79 No. 1 Secure billing code

When the tel. billing code function is ON, the operation of secure billing code is enabled .

SW79 No. 2 Pause with SHIFT key

The SHIFT key pause time is set.

SW79 No. 3 Reserved

Set to "0".

SW79 No. 4 ~ No. 8 Z key pause time (250ms unit)

The Z key pause time is set.

SW80 No. 1 Separate feature

The separate mode ON/OFF is set.

SW80 No. 2 ~ No. 4 Reserved

Set to "0".

SW80 No. 5 Addition of header (Sender information)

ON/OFF of addition of header (sender information) to various list is set.

SW80 No. 6 DTMF sending by the panel test

When ten keys are pressed in the Panel Test Mode of the diagnosis, the corresponding DTMF signals are output.

SW80 No. 7 Power save mode

To switch power save mode system either to real time or to timer.

SW80 No. 8 Reserved

Set to "0".

SW81 No. 1 Reserved

Set to "1".

SW81 No. 2 Reserved

Set to "0".

SW81 No. 3 ~ No. 8 Reserved

Set to "1".

SW82 No. 1 Reserved

Set to "0".

SW82 No. 2 Reserved

Set to "1".

SW82 No. 3 Reserved

Set to "0".

SW82 No. 4 Reserved

Set to "1".

SW82 No. 5 ~ No. 8 Reserved

Set to "0".

SW83 No. 1 ~ No. 5 Reserved

Set to "0".

SW83 No. 6 Reserved

Set to "1".

SW83 No. 7 Reserved

Set to "0".

SW83 No. 8 Reserved

Set to "1".

SW84 No. 1 ~ No. 8 Reserved

Set to "0".

SW85 No. 1 ~ No. 4 Reserved

Set to "0".

SW85 No. 5 Reserved

Set to "1".

SW85 No. 6 Reserved

Set to "0".

SW85 No. 7 Reserved

Set to "1".

SW85 No. 8 Reserved

Set to "0".

SW86 No. 1 ~ No. 8 Reserved

Set to "0".

SW87 No. 1 ~ No. 8 Reserved

Set to "0".

FO-4400U
FO-CS1

SW88 No. 1 ~ No. 8 Reserved

Set to "0".

SW89 No. 1 ~ No. 7 Reserved

Set to "0".

SW89 No. 8 Reserved

Set to "1".

SW90 No. 1, No.2 Reserved

Set to "0".

SW90 No. 3 Reserved

Set to "1".

SW90 No. 4, No. 5 Reserved

Set to "0".

SW90 No. 6 Reserved

Set to "1".

SW90 No. 7 Reserved

Set to "0".

SW90 No. 8 Reserved

Set to "1".

SW91 No. 1 ~ No. 8 Reserved

Set to "0".

SW92 No. 1 Reserved

Set to "0".

SW92 No. 2 Reserved

Set to "1".

SW92 No. 3 Waiting time after dialing

The set up of the call time of the auto dial.

90 sec. or depends on each country's specifications.

SW92 No. 4 Show receiver's name

This switch is used to note the receiver's name on the transaction report and activity report. When this switch is set to "0", the receiver's dial number is printed on the report.

SW92 No. 5 ~ No. 8 Reserved

Set to "0".

SW93 No. 1 ~ No. 8 Reserved

Set to "0".

SW94 No. 1 ~ No. 8 Reserved

Set to "0".

SW95 No. 1 ~ No. 4 Reserved

Set to "0".

SW95 No. 5, No. 6 Reserved

Set to "1".

SW95 No. 7 Reserved

Set to "0".

SW95 No. 8 Reserved

Set to "1".

SW96 No. 1 ~ No. 8 Reserved

Set to "0".

SW97 No. 1 ~ No. 8 Reserved

Set to "0".

SW98 No. 1 ~ No. 8 Reserved

Set to "0".

SW99 No. 1 Reserved

Set to "0".

SW99 No. 2, No. 3 Reserved (For U.S.A.)

Set to "1".

SW99 No. 2, No. 3 Reserved (For Canada)

Set to "0".

SW99 No. 4 ~ No. 6 Reserved

Set to "0".

SW99 No. 7, No. 8 Reserved

Set to "1".

[3] Troubleshooting

1. Fax troubleshooting

Refer to the following actions to troubleshoot any of the problems mentioned in 1-4.

- [1] A communication error occurs.
- [2] Image distortion produced.
- [3] Unable to do overseas communication.
- [4] Communication speed slow due to FALLBACK.
 - Increase the transmission level SOFT SWITCH 8-4, 5, 6, 7, 8
May be used in case [1] [2] [3].
 - Decrease the transmission level SOFT SWITCH 8-4, 5, 6, 7, 8
May be used in case [3].

- Apply line equalization SOFT SWITCH 8-1, 2
May be used in all cases.
- Slow down the transmission speed SOFT SWITCH 6-5, 6, 7, 8
May be used in case [2] [3].
- Replace the LIU PWB.
May be used in all cases.
- Replace the control PWB.
May be used in all cases.

* If transmission problems still exist on the machine, use the following format and check the related matters.

TO: _____ ATT: _____ Ref.No.: _____
 CC: _____ ATT: _____ Date: _____
 FM: _____ Dept: _____
 _____ Sign: _____

**** Facsimile communication problem ****		Ref.No.: _____																					
From: Mr. _____ Fax Tel No.: _____		Date: _____																					
Our customer	Name _____	Tel No. _____																					
	Address _____	Fax No. _____																					
	Contact person _____	Model name _____																					
Other party	Name _____	Tel No. _____																					
	Address _____	Fax No. _____																					
	Contact person _____	Model name _____																					
Problem mode	Line: Domestic / international _____	Mode: G3 _____																					
	Reception / Transmission _____	Phase: A. B. C. D. _____																					
	Automatic reception / Manual reception _____ Automatic dialing / Manual dialing / Others _____																						
Frequency: _____ %		ROM version: _____																					
Confirmation item			Please mark problem with an X																				
			No problem is: 0																				
			<table border="1" style="border-collapse: collapse; width: 100%;"> <tr> <td style="width: 5%;">A1</td><td style="width: 5%;">A2</td><td style="width: 5%;">B1</td><td style="width: 5%;">B2</td><td style="width: 5%;">C1</td><td style="width: 5%;">C2</td><td style="width: 5%;">D1</td><td style="width: 5%;">D2</td><td style="width: 5%;">E1</td><td style="width: 5%;">E2</td> </tr> <tr> <td style="text-align: center;">-</td><td style="text-align: center;">-</td><td style="text-align: center;">-</td><td style="text-align: center;">-</td><td style="text-align: center;">-</td><td style="text-align: center;">-</td><td style="text-align: center;">-</td><td style="text-align: center;">-</td><td style="text-align: center;">-</td><td style="text-align: center;">-</td> </tr> </table>	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	-	-	-	-	-	-	-	-	-	-
	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2													
-	-	-	-	-	-	-	-	-	-														
		Transmission level setting is () dB at our customer																					
		Transmission level () dBm Reception level () dBm By level meter at B1 and B2																					
Comment																							
Countermeasure																							
**** Please attach the G3 data and activity report on problem. ****																							

[4] Error code table

1. Communication error code table

G3 Transmission

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSF, DIS	Cannot recognize DCS signal by echo etc. Cannot recognize NSS signal (FIF code etc)
2	CFR	Disconnects line during reception (carrier missing etc)
3	FTT	Disconnects line by fallback
4	MCF	Disconnects line during reception of multi page Cannot recognize NSS, DCS signal in the case of mode change
5	PIP or PIN	The line is hung up without replying to telephone request from the receiving party.
6	RTN or RTP	Cannot recognize NSS, DCS signal after transmit RTN or RTP signal.
7	No signal or DCN	No response on receiver side or DCN signal received* (transmitter side)
8	–	Owing to error in some page the error could not be corrected although the specified number of error retransmission was attempted.
11	–	Error occurred after or while reception by the remote (receiving) machine was revealed to be impossible.
12	–	Error occurred just after fallback.
13	–	Error occurred after a response to retransmission end command was received.

G3 Reception

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSS, DCS	Cannot recognize CFR or FTT signal Disconnects line during transmission (line error)
2	NSC, DTC	Cannot recognize NSS signal (FIF code etc)
3	EOP	Cannot recognize MCF, PIP, PIN, RTN, RTP signal
4	EOM	Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of mode change
5	MPS	The line is hung up without replying to communication request.
6	PR1-Q	Cannot recognize PIP, PIN signal in the case of TALK request
7	No signal or DCN	No response in transmitter (cannot recognize DIS signal) or DCN signal received* (receiver side)
8	–	Error occurred upon completion of reception of all pages.
9	–	Error occurred when mode was changed or Transmission/Reception switching was performed.
10	–	Error occurred during partial page or physical page reception.
11	–	Error occurred after or during inquiry from the remote (transmitting) machine as to whether reception is possible or not.
12	–	Error occurred during or just after fallback.
13	–	Error occurred after the retransmission end command was received.
14	–	Error occurred after the voice communication command was received.

Super G3 mode

Error Code	Transmission Errors	Reception Errors
E-16	Same as E-0	Same as E-0
E-17	Same as E-1	Same as E-1
E-18	Same as E-2	Same as E-2
E-19	-	Same as E-8
E-20	Same as E-4	Same as E-9
E-21	-	Same as E-10
E-22	-	-
E-23	Same as E-7	Same as E-7
E-24	Same as E-8	-
E-25	Same as E-11	Same as E-11
E-26	Same as E-12	Same as E-12
E-27	Same as E-13	Same as E-13
E-28	-	Same as E-14
E-29	Error occurred during handshaking for super G3 mode	
E-30		
E-31		

<Reference> Details of E-29 ~ 31

E-29	Handshaking error in V.8 negotiation procedure
E-30	Handshaking error in V.34 line probing procedure
E-31	Handshaking error in V.34 HDX training procedure

2. Service call error message

Message	Description
REMOVE ORIGINAL (S)	Document is stuck at the auto-feeder.
NO PAPER (TRAY)	No recording paper on the tray.
NO PAPER (UPPER)	No recording paper in the upper cassette.
NO PAPER (LOWER)	No recording paper in the lower cassette.
NO PAPER (BOTH CASS.)	No recording paper in either cassette.
NO PAPER (TRAY, UPPER)	No recording paper in the tray nor in the upper cassette.
NO PAPER (TRAY, LOWER)	No recording paper in the tray nor in the lower cassette.
NO PAPER	No recording paper anywhere.
SIZE ERROR	The size of the recording paper is wrong.
LASER ERROR	The laser unit abnormal.
POLYGON ERROR	The polygon motor abnormal.
FAN MOTOR ERROR	The fan motor abnormal.
CHECK UPPER CASSETTE	The upper cassette is not set properly.
CHECK LOWER CASSETTE	The lower cassette is not set properly.
CHECK BOTH CASSETTES	Neither cassette is set properly.
TONER EMPTY	There is no toner left.
PCU COMM. ERROR	No data communication between the PCU and the control PWB.
RX DOCUMENT TRAY OFF	The document-receiving tray is not set properly.
HIGH VOLTAGE ERROR	Abnormality with the high-voltage portion.
HEATER LOW ERROR	Heater temperature is too low.
HEATER HIGH ERROR	Heater temperature is too high.
WARMING UP ERROR	Warming up is not done properly.
CHECK COVER OR DRUM	Printer cover may be open, or the drum cartridge may not be set properly.
DRUM LIFE OVER	Drum life is over.
PAPER JAM	Recording paper is stuck inside.

[5] Overseas communication mode

(1) Function

The Super G3 (V.34) mode is susceptible to influence of line. It is better to use the G3 (V.17) mode for communication in specific line conditions. This function is provided to support this status.

(2) Memory retransmission

In case of memory transmission the retransmission is performed in the following conditions.

No.	Conditions	Operation
1	When a communication error occurred in communication in the Super G3 mode due to page 1 MCF reception failure.	The retransmission of this communication is performed after setting Super G3 to OFF (in V.17 mode).
2	When a communication error occurred in communication in the Super G3 mode after reception of page 1 MCF.	The retransmission of this communication is performed without setting Super G3 to OFF (in V.34 mode).
3	When a communication error occurred in retransmission.	Retransmission is performed again according to 1 and 2 above.
4	When a communication error occurred in sequential system communication.	Retransmission is performed according to 1 and 2 above for each station.

(3) Original transmission

Since retransmission is not provided for the original transmission, recovery by the method 1 is impossible. Accordingly, for the original transmission set Super G3 to OFF, and apply V.17 mode.

(4) Super G3 function setting to OFF by operator

A function to set Super G3 function to OFF is provided for operator in addition to the functions described in items (2) and (3) above. However, this function is invalid in the default mode.

It is made valid only when requested by using the soft switch.

SW75 No.4 = 0: Operation invalid (Default) 1: Operation valid

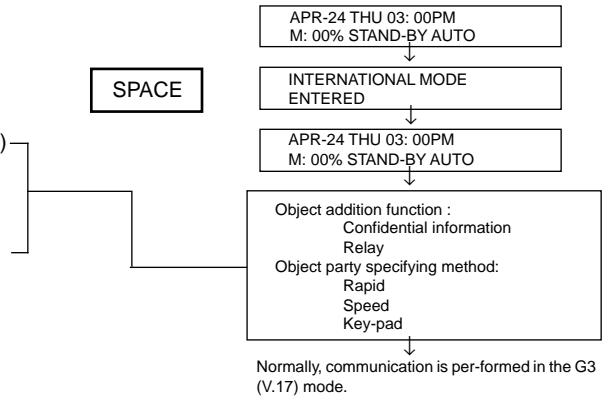
(4)-1 Setting method

① Before communication operation, lift the key overlay and press the SPACE key to set the communication to OFF in the Super G3 mode.

② Perform the transmission/polling operation.

The operations which are taken as objects are the following.

- * Instantaneous single station auto-dial transmission (original/memory)
- * Time-specified single station transmission
- * Program instantaneous single station transmission
- * Program time-specified single station transmission
- * Time-specified single station polling
- * Program instantaneous single station polling
- * Program time-specified single station polling
- * Manual transmission (original/memory)
- * Batch transmission



(4)-2 Canceling method (this setting is not canceled while one of the following operations is not performed)

① After setting operation (pressing the SPACE key) press the STOP key on the WAIT screen.

② After setting operation (pressing the SPACE key) hold for one minute.

In case of operation ① and ② the display shown right will appear for 2 seconds.

③ Perform the communication operation (all the communication operations).

④ Start up again the machine (turn on power).

INTERNATIONAL MODE
CANCELED

(4)-3 Others

① The operation to set Super G3 to OFF is valid only for one communication which is per-formed successively.

[6] Administrator mode in the personal book function

In the personal book function, 30 books from 01 to 30 may be set. It is also possible to set the administrator as a special book.

- (a) Setting : Same as the normal personal book, except for the book number to be specified as "00".
- (b) Switching to the administrator mode : Press the "PERSONAL BOOK" key and enter the "passcode of the book00" in the stand-by mode.
- (c) Cancellation of the administrator mode : Press the "STOP" key and enter "1" in the stand-by mode.
- (d) Function in the administrator mode : When the following list is output, the information of all books is read out.
 - 1) TELEPHONE NUMBER LIST
 - 2) RELAY GROUP LIST
 - 3) PROGRAM/GROUP LIST
 - 4) TIMER LIST
 - 5) MEMORY STATUS REPORT

"PERSONAL BOOK LIST" may be output in item 16 of the "MENU + 2 : LISTMODE".

CHAPTER 3. MECHANICAL DESCRIPTION

[1] Mechanical description

1. Facsimile block

1-1. Document feed block and diagram

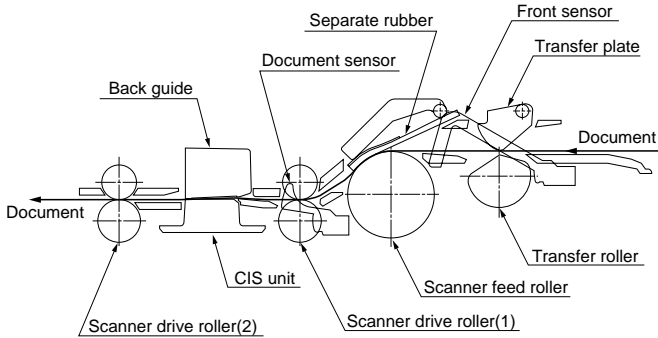


Fig. 1

2. Document feed operation

- 1) As shown in Fig.1, the document set in the hopper (the front sensor is on) is fed with the let out roller and paper feed roller which rotate together with the pulse motor.
- 2) When a specified number of pulses are received from the document sensor after the document lead edge is sensed, scanning will be started.
- 3) When a specified number of pulses are received from the document sensor after the document rear edge is sensed, scanning will be ended to discharge the document to the tray.
- 4) If the front sensor is on (the document is set up in the hopper), the next document is supplied and fed nearly when the last document is completely read and discharged. If the front sensor is off (no document is set up in the hopper), the drive will be stopped when the document is discharged to the tray.

3. Hopper mechanism

3-1. General view

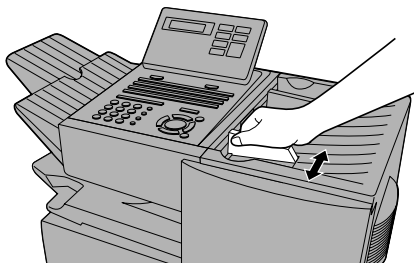


Fig. 2

The hopper is used to align documents with the document guides adjusted to the paper width.

NOTE: Adjust the document guides before and after inserting the document.

3-2. Automatic document feed

- 1) The structure with secure paper feed of the transfer roller and secure separation of the separation rubber plate system is employed. The transfer roller is semicircular as to be rotated only when the paper feed roller is driven with the 2-step paper feed clutch mechanism. Moreover, the separation is securely done by running the paper feed and transfer rollers more slowly than the feed roller.

- 2) Document separation system:
Friction + speed reduction ratio + roller backlash separation system

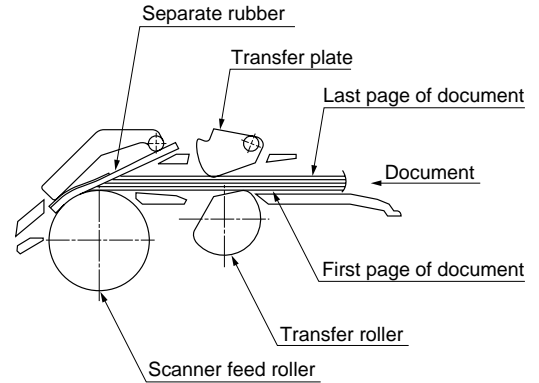


Fig. 3

3-3. Loading the documents

- 1) Make sure that the documents are of suitable size and thickness, and free from creases, folds, curls, wet glue, wet ink, clips, staples and pins.
- 2) Place documents face down in the hopper.
 - Adjust the document guides to the document width.
 - Align the top edge of documents and gently place them into the hopper. The first page under the stack will be taken up by the feed roller to get ready for transmission.

NOTE: 1) Curled edge of documents, if any, must be straighten out.

- 2) Do not load the documents of different sizes and/or thicknesses together.

3-4. Documents applicable for automatic feed

		Product specifications	
		Lower Limit	Upper Limit
Weight indication	Japanese indication Size 4 × 6	45kg paper	70kg paper
	Metric system indication	52g/m ²	80g/m ²
	American indication LB system indication	14 LB	20 LB
Thickness indication	Metric system indication	0.06mm	0.1mm
	Inch system indication	0.0024"	0.0035"
Document size	Document size	(148mm × 128mm) ~	
	Range	W letter (279.4mm × 432mm)	
		A4 (210mm × 297mm) Letter (216mm × 279mm)	
Number of ADF sheets	Document size	B6 ~ Letter/A4 size	50 sheets
	Weight	B4 size/Legal	20 sheets
		W letter size	1 sheet
		90 kg (104g/m ²) or more 135 kg (157g/m ²) or less	1 sheet
Paper quality	Kind	Paper of fine quality/bond paper/ Kent paper	

NOTE: Double-side coated documents and documents on facsimile recording paper should be inserted manually.

Documents corresponding to a paper weight heavier than 90kg and lighter than 135kg are acceptable for manual feed.

Documents heavier than 135kg in terms of the paper weight must be duplicated on a copier to make it operative in the facsimile.

[2] Printer description

1. COMPONENTS LAYOUT

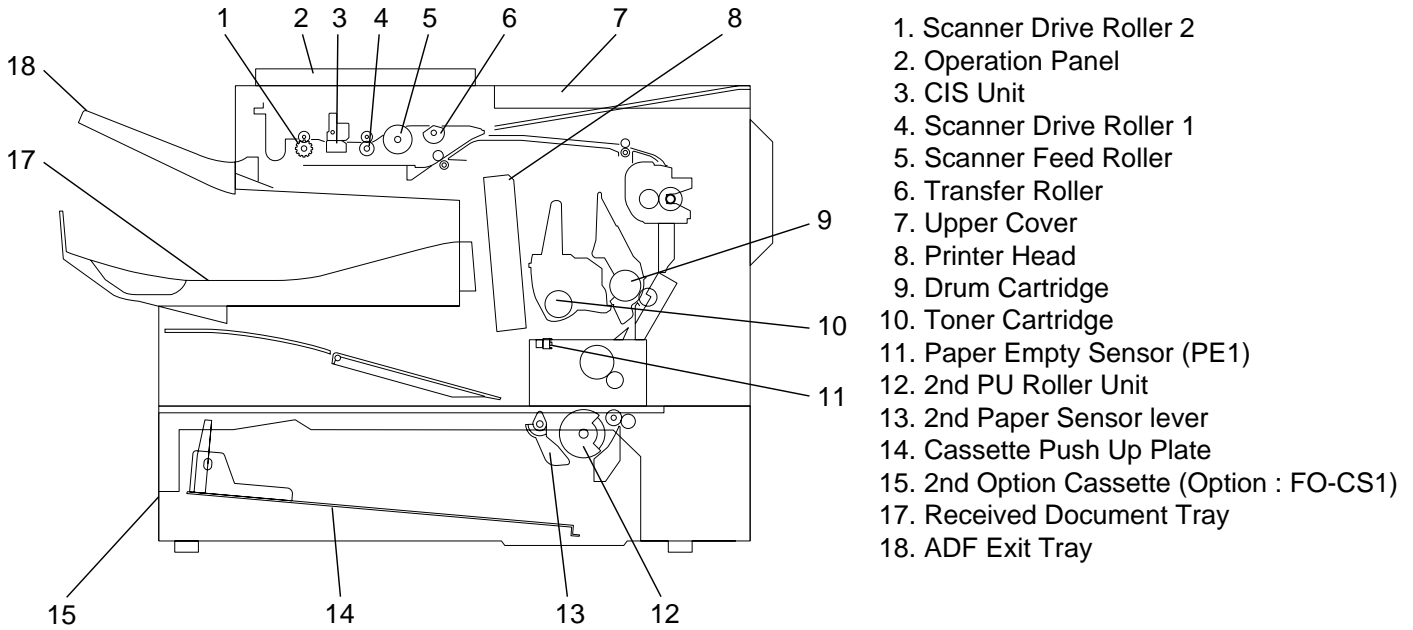


Fig. 1

2. DRIVE SECTION

2-1. Overview

The main motor (M1) transmits the drive to the rollers of the printer and the 2nd paper cassette unit via each gear as shown below.

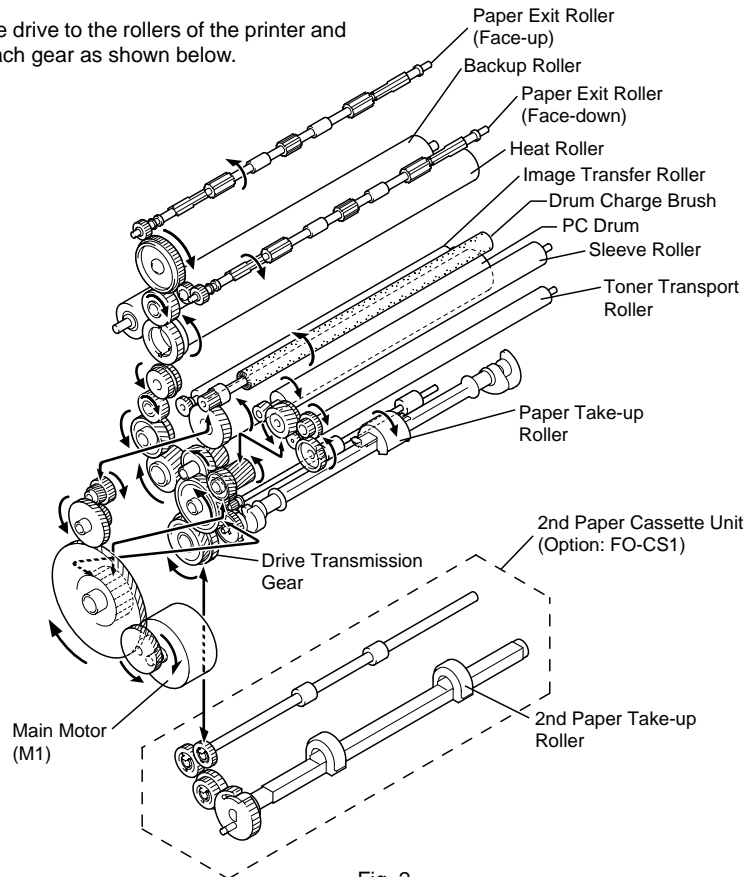


Fig. 2

3. PRINTER ENGINE ELECTRICAL COMPONENTS LAYOUT

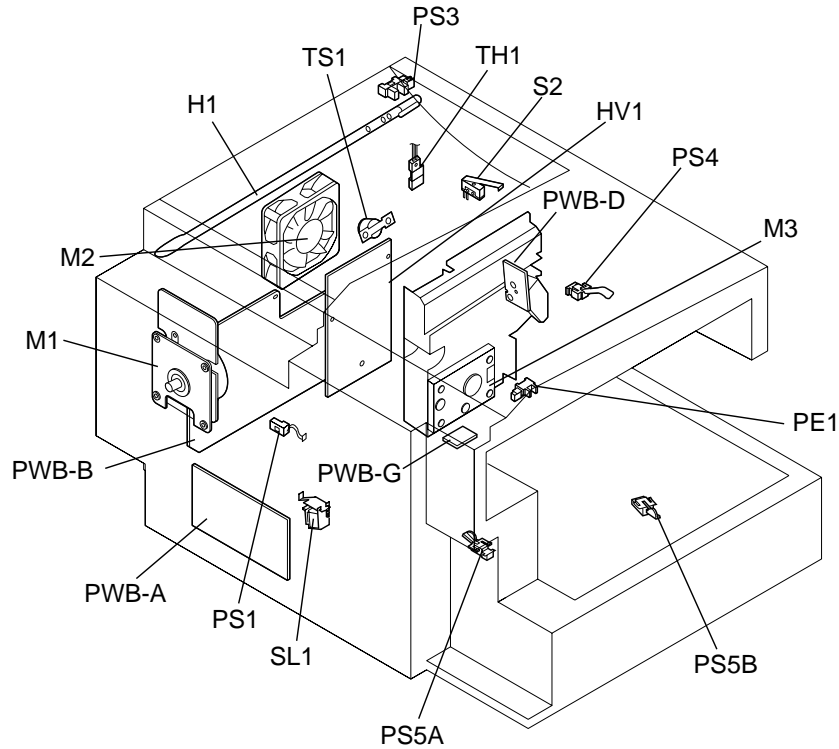


Fig. 3

4. ELECTRICAL PARTS IDENTIFICATION

Symbol	Name	Function
PWB-A	Printer PWB unit	Communicates with the control PWB and controls all printer operation.
PWB-B	Power Supply PWB unit	Converts the power voltage from AC voltage into DC voltage and supplies that to H1.
PWB-D	Laser Diode Drive PWB unit (Inside of the Print Head Unit)	Detects the start point of printing via the laser diodes and SOS sensor, and illuminates the PC Drum with the laser beam according to the image signals.
PWB-G	Toner Empty PWB unit	Toner quantity is read by the analog signal. (Use of LED)
M1	Main Motor	Provides the drive source for the printer.
M3	Polygon Motor (Inside of the Print Head Unit)	A regular heptagon mirror is installed, and rotates at high speed and makes the laser scan in scanning direction.
M2	Cooling Fan Motor	Exhausts heat from the body.
H1	Heater Lamp	A halogen lamp that supplies heat to the Fusing Rollers. (600 W)
HV1	High Voltage PWB unit	Supplies power to the following sections: - Drum Charge Brush: Charged voltage - Developing Sleeve Roller: Developing bias voltage - Developing Toner Regulation Plate: Developing blade voltage - Developing Toner Collecting Plate: Developing Lower Seal voltage - Image Transfer Roller: Image transfer voltage
PE1	Paper Empty Sensor	Detects that a sheet of paper is taken up. The signal is L when paper is detected.
PS1	Paper Take-Up Sensor	Detects that a sheet of paper is taken up. The signal is H when paper is detected.
PS3	Paper Exit Sensor	Detects when the paper is fed out. The signal is H when the paper is detected.
PS4	Paper Out Sensor	Paper out detection signal. The signal L when the paper is detected.
PS5A	Received Document Tray Sensor	The signal is L when there is a tray cover.
PS5B	Paper Size Sensor	Detects the size of the paper. Letter: signal H, Legal: signal L.
S2	Interlock Switch	Detects the opening or closing of the Top Cover. Cuts output voltage (except 5 VDC) when the Top Cover is open.
SL1	Paper Take-Up Solenoid	Transmits the drive of the Main Motor to the Paper Take-up Roller.
TH1	Thermistor	Detects the temperature of the Heat Roller, measures the temperature on the surface of the Heat Roller and sends to the Heater control circuit.
TS1	Thermostat	Cuts power to the Heater Lamp (H1) when overheating (215°C) is detected at the Fusing Section.

5. PAPER PATH

Paper can be fed into the printer from the Multi Purpose Tray (250 sheets) or from the Manual Feed Port (1 sheet).

Installing the 2nd Paper Cassette Unit (FO-CS1) (500sheets) adds another feeding method.

The paper fed by the Paper Take-Up Roller is transported to the Image Transfer Roller, Fusing Roller and then Paper Exit Roller. After this, the paper is fed out onto the Print Tray.

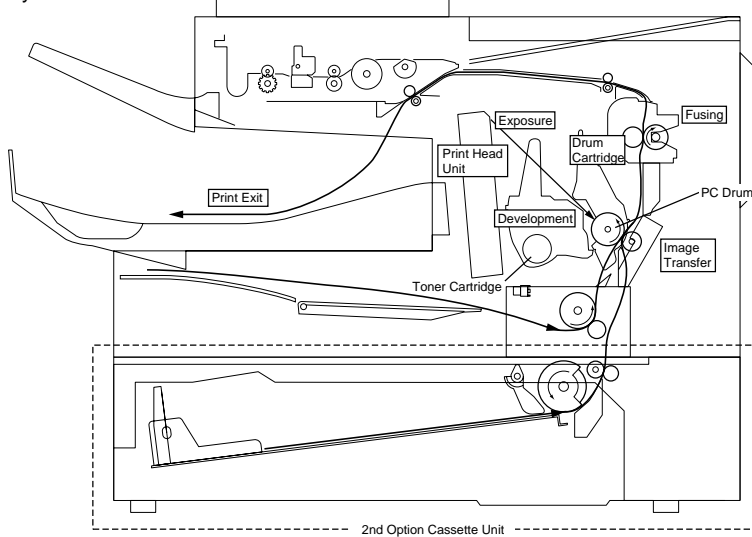


Fig. 4

6. PAPER TAKE-UP SECTION

6-1. Multi-Purpose Tray

When the Paper Take-Up Solenoid (SL1) is energized, the drive of the Main Motor (M1) is transmitted to the Paper Take-Up Roller via the Paper Take-Up Gear (one-way clutch) to turn the Paper Take-Up Roller one revolution. At the same time, the Depressing Cam turns and lifts the Paper Lifting Plate, and the first (top) sheet of paper on the tray is fed to the printer. The Fixed Separating Pad is used for the paper separation system. It prevents the second and subsequent sheets of paper from being fed together with the top sheet. The actual length of the paper is detected using the period of time through which the Paper Take-up Sensor (PS1) remains energized (or through which the paper moves past the sensor) and it is determined whether the actual length matches the paper length specified by the controller.

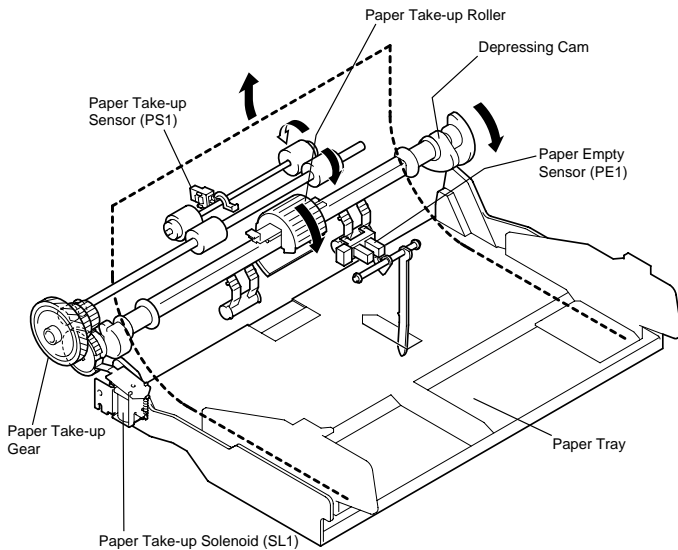


Fig. 5

7. DRUM CHARGE

The PC Drum is charged with static electricity before laser exposure. The Drum Charge Brush and the Pre-charge Film are used for the charging method.

The Drum Charge Brush and Pre-charge Film charging generate little ozone in the printer. Because the charge is directly applied to the PC Drum, the PC Drum can be charged by low voltage. In addition, the charge applied to the PC Drum is stable and even.

The Pre-charge Film supplies the charge to the PC Drum before being charged by the Drum Charge Brush to improve the charging efficiency. The Drum Charge Brush is turned by the drive of the Main Motor (M1) via a gear.

The electric potential on the surface of the charged PC Drum is approximately -800 V.

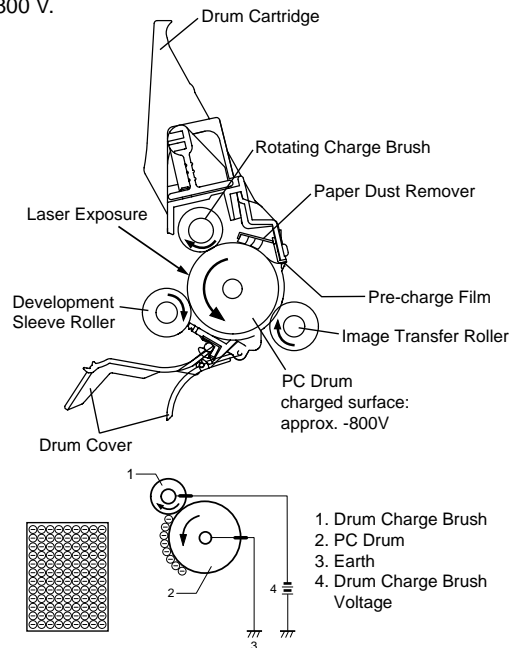


Fig. 6

8. LASER EXPOSURE

Laser exposure is the process of creating an invisible static charge image on the PC Drum by the laser beam emitted from the Print Head Unit. This process is controlled as follows in order to appropriately time image printing.

In the sub-scanning direction (vertical direction)

- When the printer receives the PRINT signal, the Polygon Motor and the Main Motor rotate and the paper is fed into the printer.
- The printing in the sub-scanning direction is started when the Controller PWB sends the VIDEO signal to the Print Head a certain time after the leading edge of the paper activates the Paper Sensor (TOD signal).
- The print starting position for the 2nd line is decided by delaying the VIDEO signal sending timing.

In the scanning direction (horizontal direction)

- The SOS Sensor is installed on the Laser Diode Control PWB to unify the laser emission timing for each scan line.

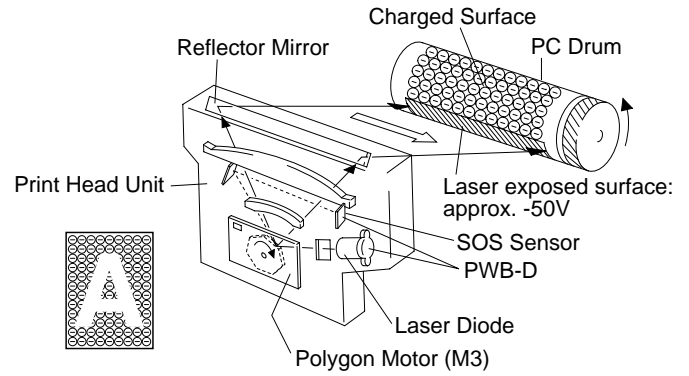


Fig. 7

9. DEVELOPMENT

9-1. Overview

Toner is applied to the invisible static image on the PC Drum and a toner image (developed image) is created on the drum surface.

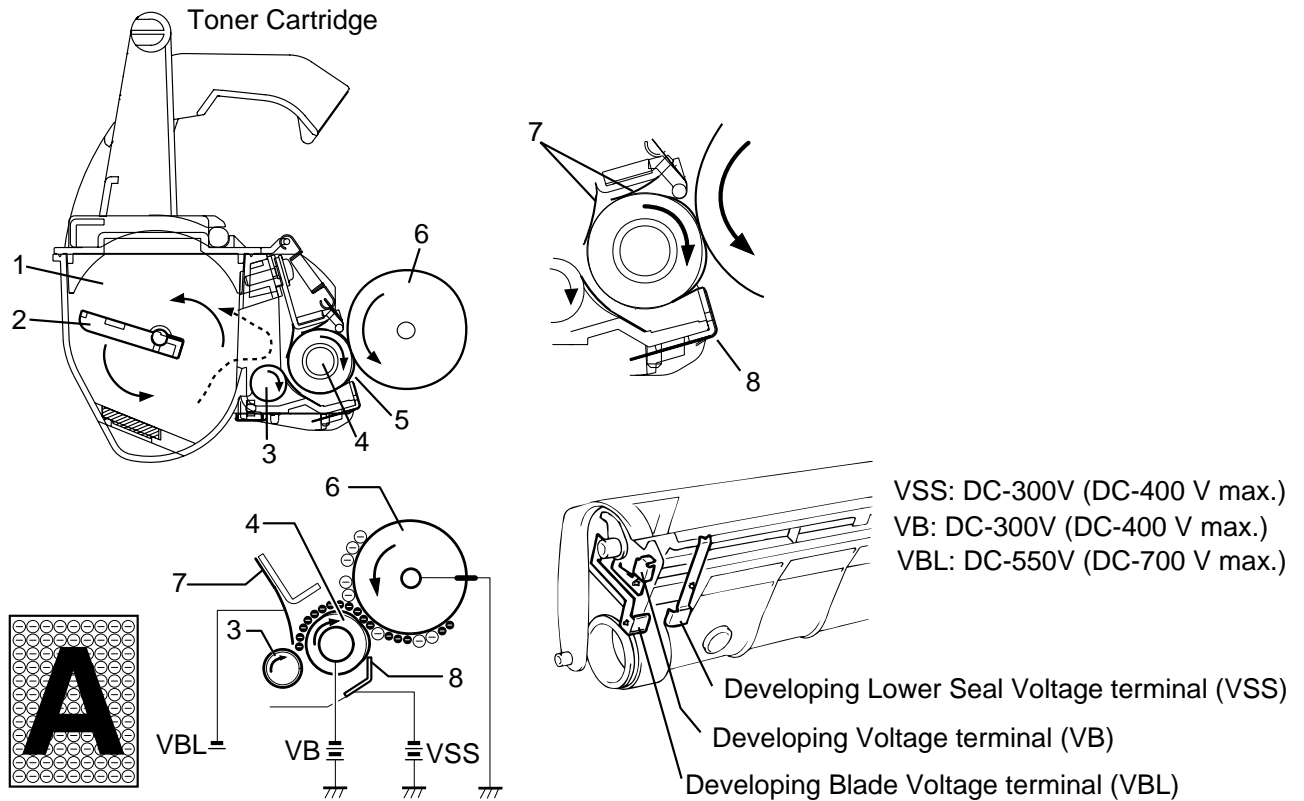


Fig. 8

No.	Part Name	Function
1	Toner Hopper	Contains toner.
2	Toner Agitating Screw	Agitates the toner in the Toner Hopper and sends the toner to the Toner Transport Roller.
3	Toner Transport Roller	Transports the toner to the Sleeve Roller.
4	Sleeve Roller	Turns the Resin Sleeve.
5	Resin Sleeve	Carries the toner to the PC Drum surface for development.
6	PC Drum	Exposed to laser to create an invisible image and rotates to carry the developed image to the paper surface.
7	Toner Blade	Spreads a thin, even coat of toner over the Resin Sleeve. The toner is negatively charged when passing between this Blade and the Resin Sleeve.
8	Bias Seal	Separates toner, which has not been attracted to the PC Drum, from the Resin Sleeve and returns it back to the Buffer Section.

10. IMAGE TRANSFER

10-1. Overview

- Image transfer is the process of transferring the toner image created on the PC Drum in the developing process to paper.
- Roller image transfer is used instead of corona image transfer as the image transfer method.
- In roller image transfer, there is little generation of ozone due to corona discharge. Also, there is no blur of toner because the paper is always pressed by the PC Drum and the Image Transfer Roller.
- When cleaning the Image Transfer Roller and before printing, reverse bias is applied.
- The residual electric potential on the paper is dissipated via a discharge needle.

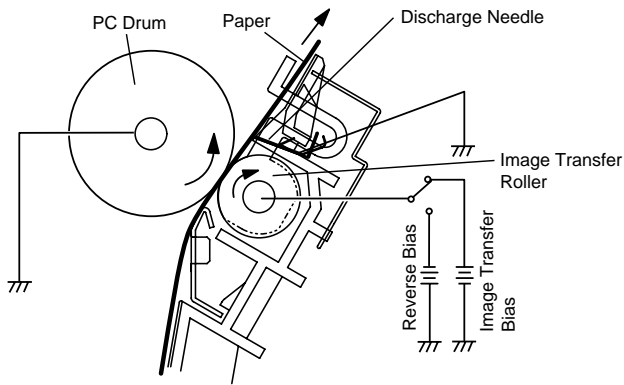
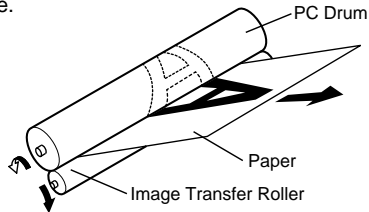


Fig. 9

11. FUSING

11-1. Overview

- The toner image transferred onto the paper is securely fixed to the paper.
- A heat roller system is used as the fusing system. The toner image is fused by the Heat Roller heated by the Heater Lamp (H1), and securely fixed by the pressure between the Heat Roller and Backup Roller.

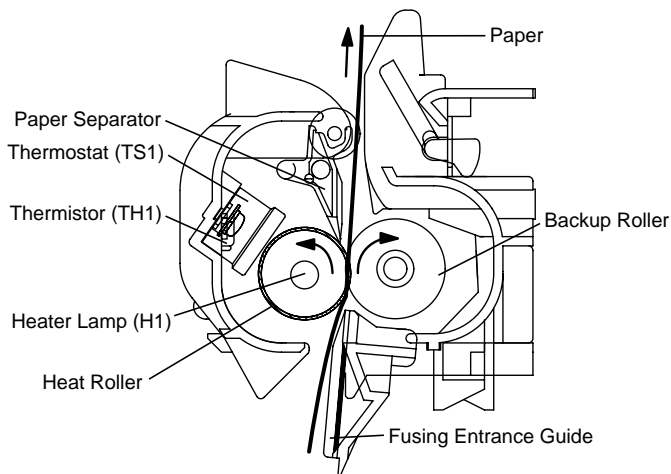


Fig. 10

11-2. Fusing Temperature Control Circuit

- The Thermistor (TH1) detects the surface temperature of the Heat Roller and inputs that analog voltage into IC4-78. Corresponding to this data, the Heater Lamp (H1) ON/OFF signal is output from IC4-55, causing the Heater Lamp (H1) to turn ON or OFF to control the fusing temperature.
- When the Heater Lamp (H1) is not turned OFF even if the Thermistor (TH1) detects a high temperature malfunction (if the surface temperature of the Heat Roller exceeds 230°C), the signal from IC4-79 changes from L to H to turn OFF the Heater Lamp (H1) forcibly.

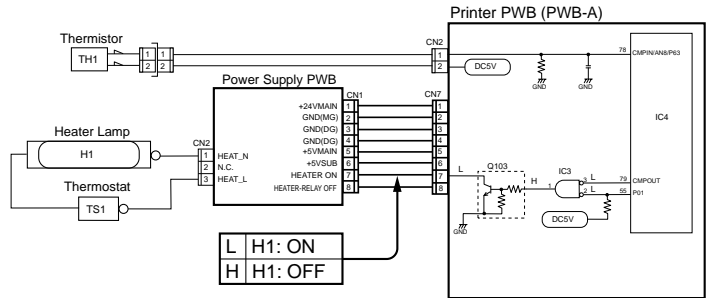


Fig. 11

(At 600 dpi)

The printer is initialized upon power supply. The Heater Lamp then turns on and the printer starts warming up. The temperature is controlled as follows.

Mode 1: The temperature is controlled to maintain 125°C during standby and 210°C during printing. If this mode continues for 300 seconds, the control will shift to mode 2.

Mode 2: The temperature of the Heat Roller falls gradually to about 190°C from about 210°C. If this mode continues for 208 seconds, the control will shift to mode 3.

Mode 3: The temperature is controlled to maintain 125°C during standby and 190°C during printing. Unless an error occurs or the control is opened, this mode is maintained.

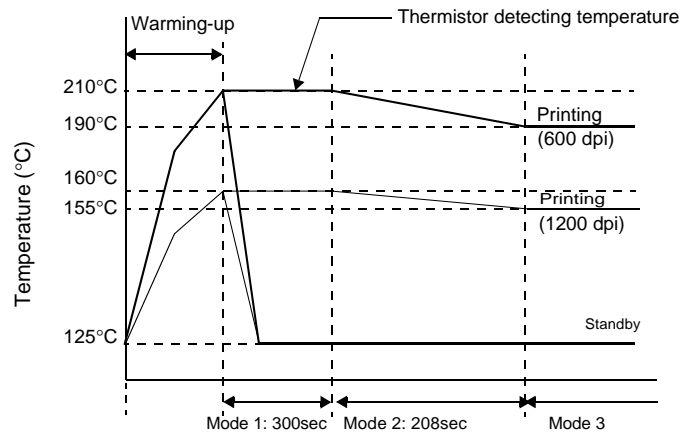


Fig. 12

	Temperature immediately after temperature control start		
The state before discontinuation of temperature control	Less than 50°C	50°C or more, less than 125°C	125°C or more,
Mode 1, warming-up	Mode 1		
Mode 2, 3 or Power OFF	Mode 1	Mode 2	Mode 3

12. PRINT SEQUENCE

Printing is carried out following communication between the engine and controller that determines the timing to be used. A general outline of the printing sequence is described below.

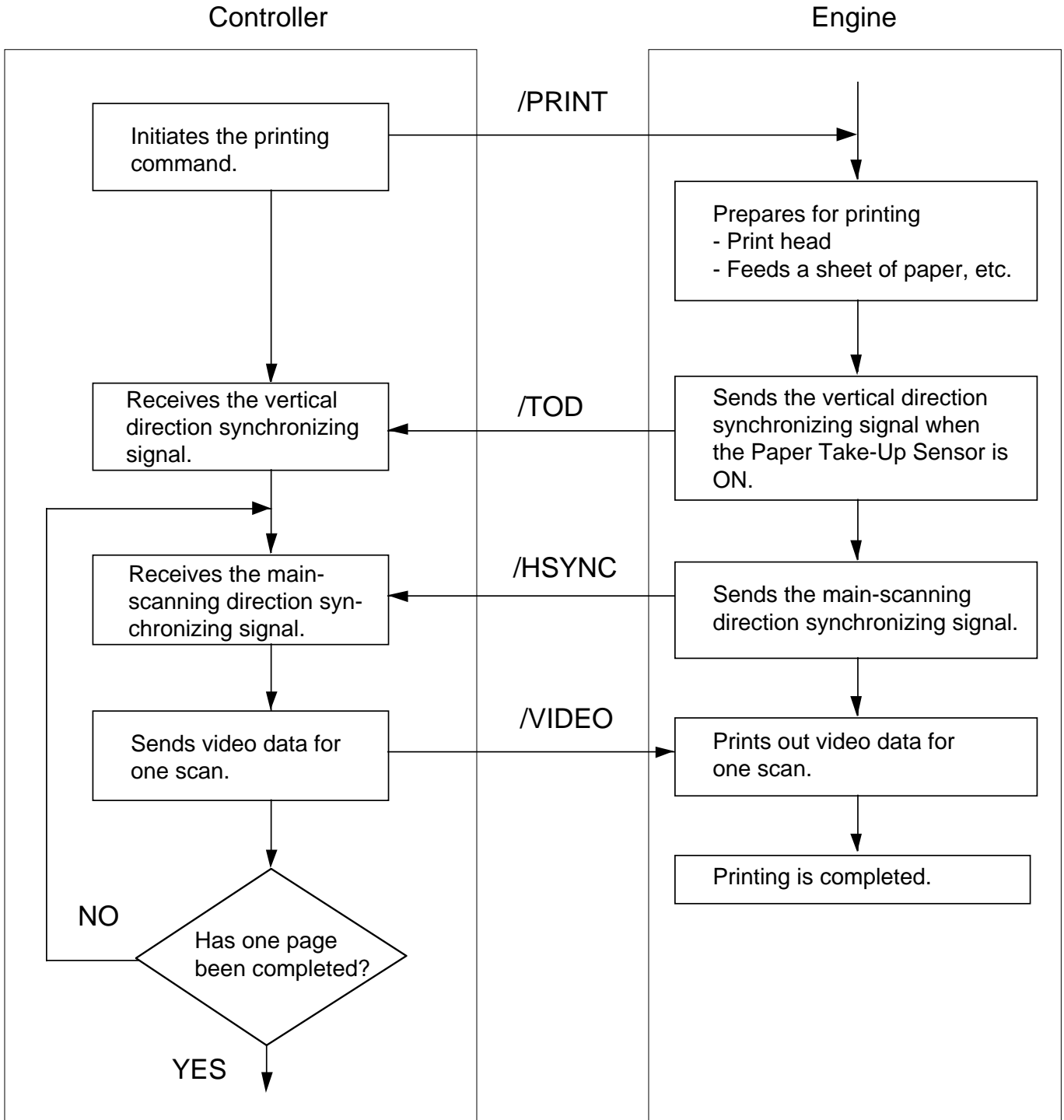


Fig. 13

13. Timing chart

13-1. Print Starting

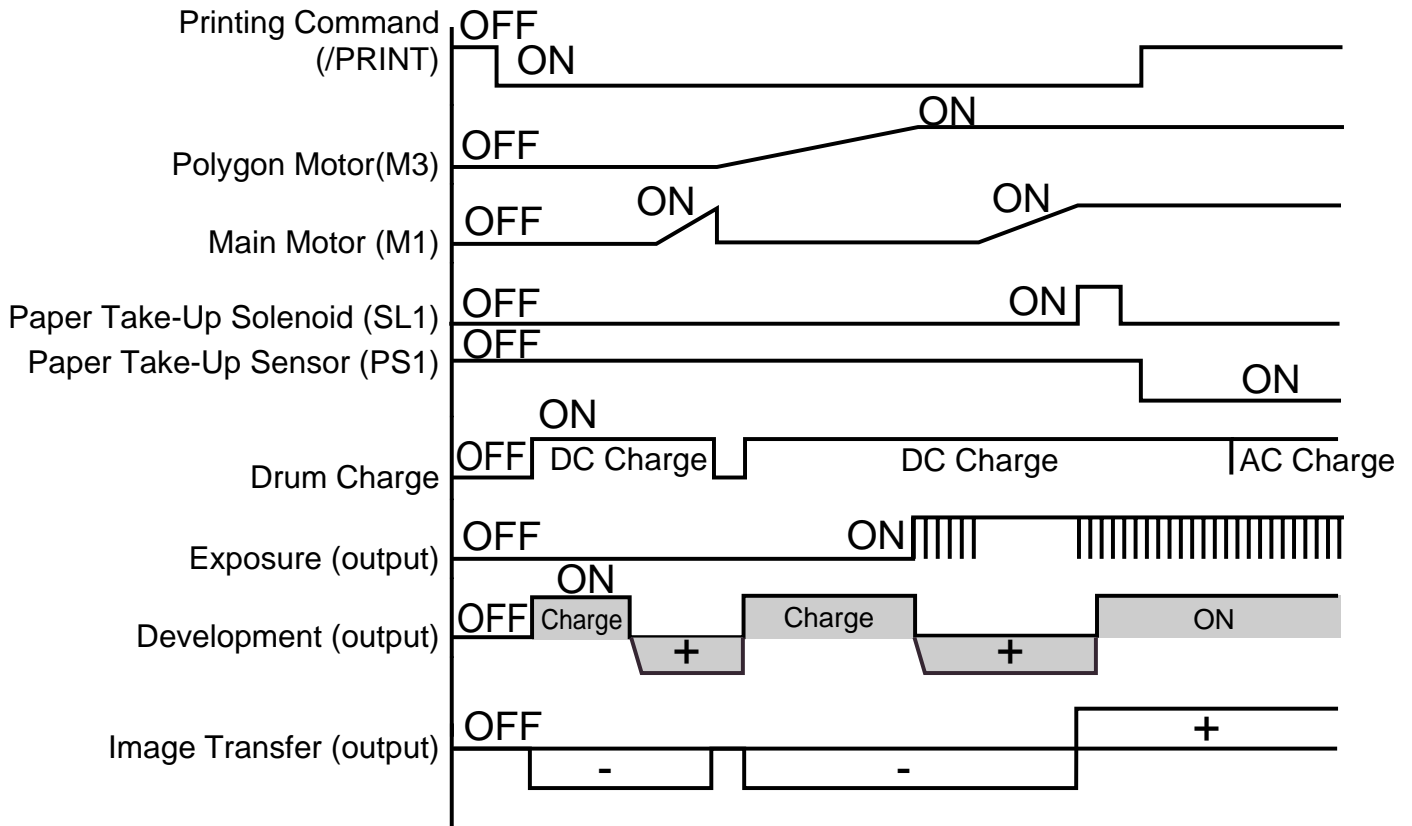


Fig. 14

13-2. Print Ending

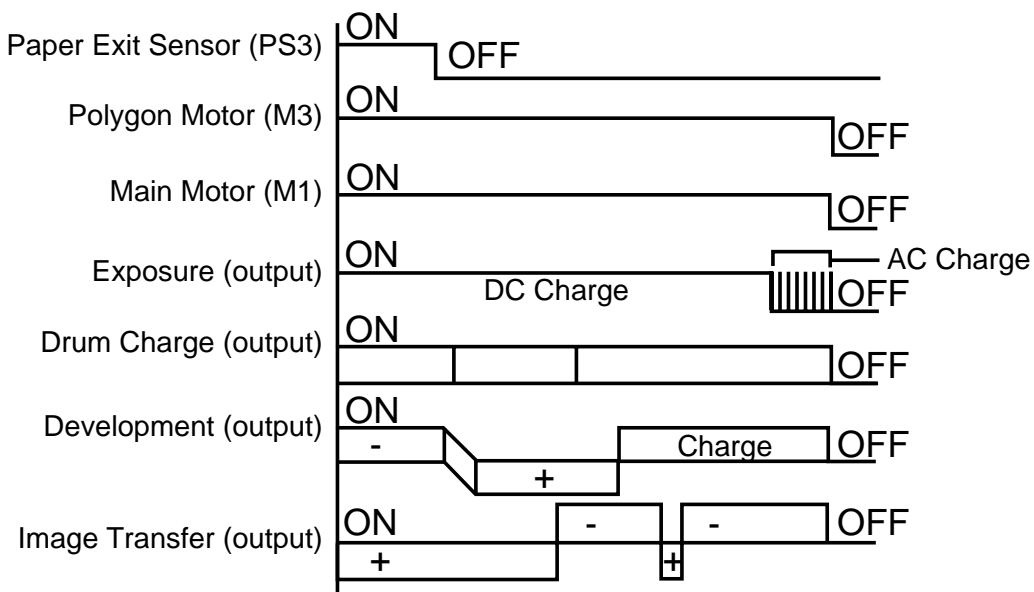


Fig. 15

[3] Disassembly and assembly procedures

- This chapter mainly describes the disassembly procedures. For the assembly procedures, reverse the disassembly procedures.
- Easy and simple disassembly/assembly procedures of some parts and units are omitted. For disassembly and assembly of such parts and units, refer to the Parts List.
- The numbers in the illustration, the parts list and the flowchart in a same section are common to each other.
- To assure reliability of the product, the disassembly and the assembly procedures should be performed carefully and deliberately.

1	Front cabinet
----------	----------------------

Parts list (Fig. 1)

No.	Part name	Q'ty
1	Main unit	1
2	Screw (3×10)	2
3	Screw (3×10)	1
4	Front cabinet	1

Fig. 1

2 Rear cabinet

Parts list (Fig. 2)

No.	Part name	Q'ty
1	Main unit	1
2	Screw (3×10)	1
3	ROM cover	1
4	Screw (3×10)	6
5	Rear cabinet	1

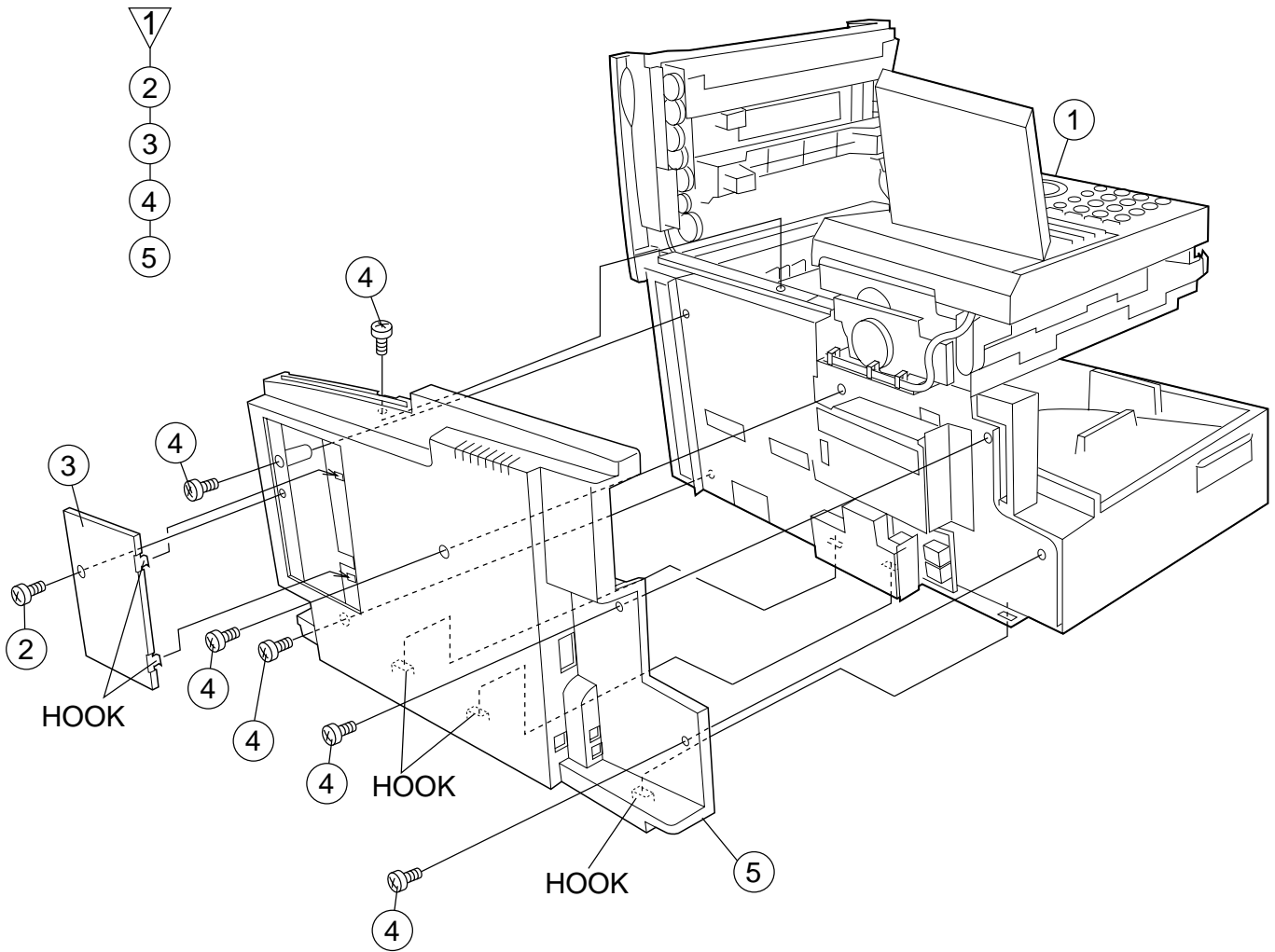


Fig. 2

3 PWB plate, Right cabinet

Parts list (Fig. 3)

No.	Part name	Q'ty
1	Main unit	1
2	Screw (3×6)	6
3	PWB plate	1
4	Screw (3×10)	2
5	Right cabinet	1

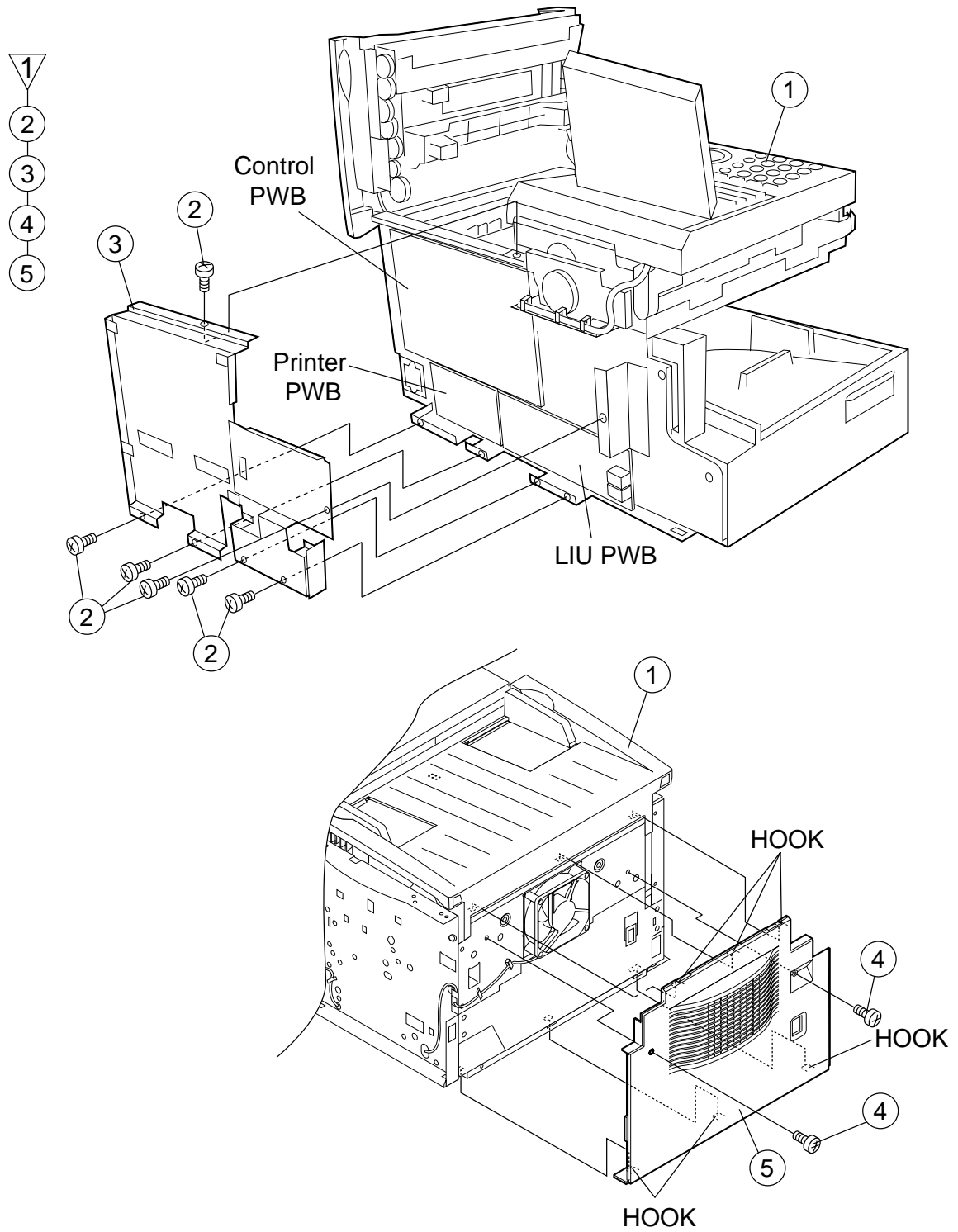


Fig. 3

4 PWB unit

Parts list (Fig. 4)

No.	Part name	Q'ty
1	Main unit	1
2	Screw (3×6)	7
3	Screw (3×10)	1
4	Connector	20
5	LIU PWB unit	1
6	Control PWB unit	1
7	Printer PWB unit	1

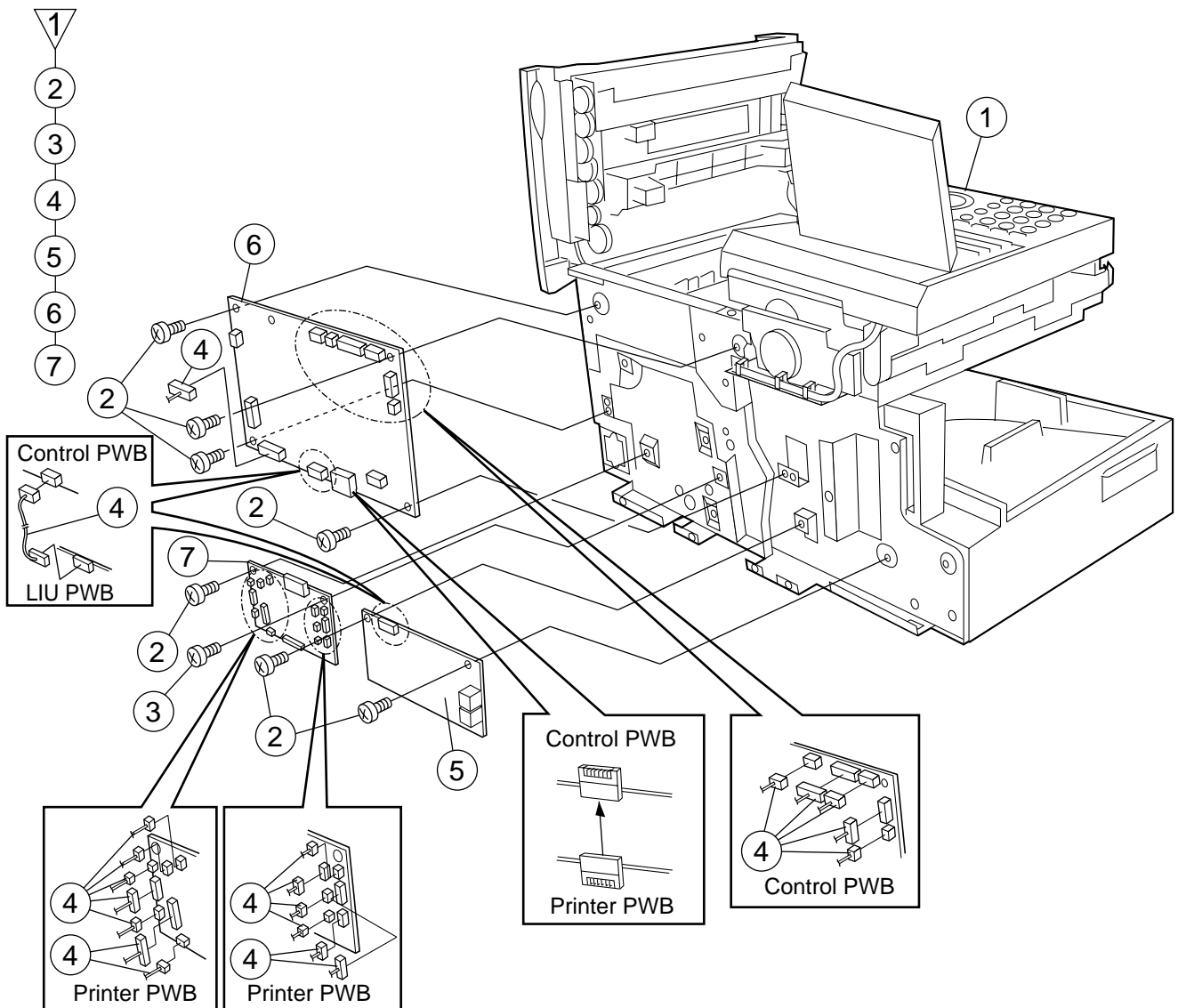


Fig. 4

5 Operation panel unit, Upper cover unit

Parts list (Fig. 5)

No.	Part name	Q'ty
1	Main unit	1
2	Screw (3×10)	1
3	Screw (3×6)	6
4	Operation panel unit	1
5	Screw (3×8)	1
6	Upper cover unit	1

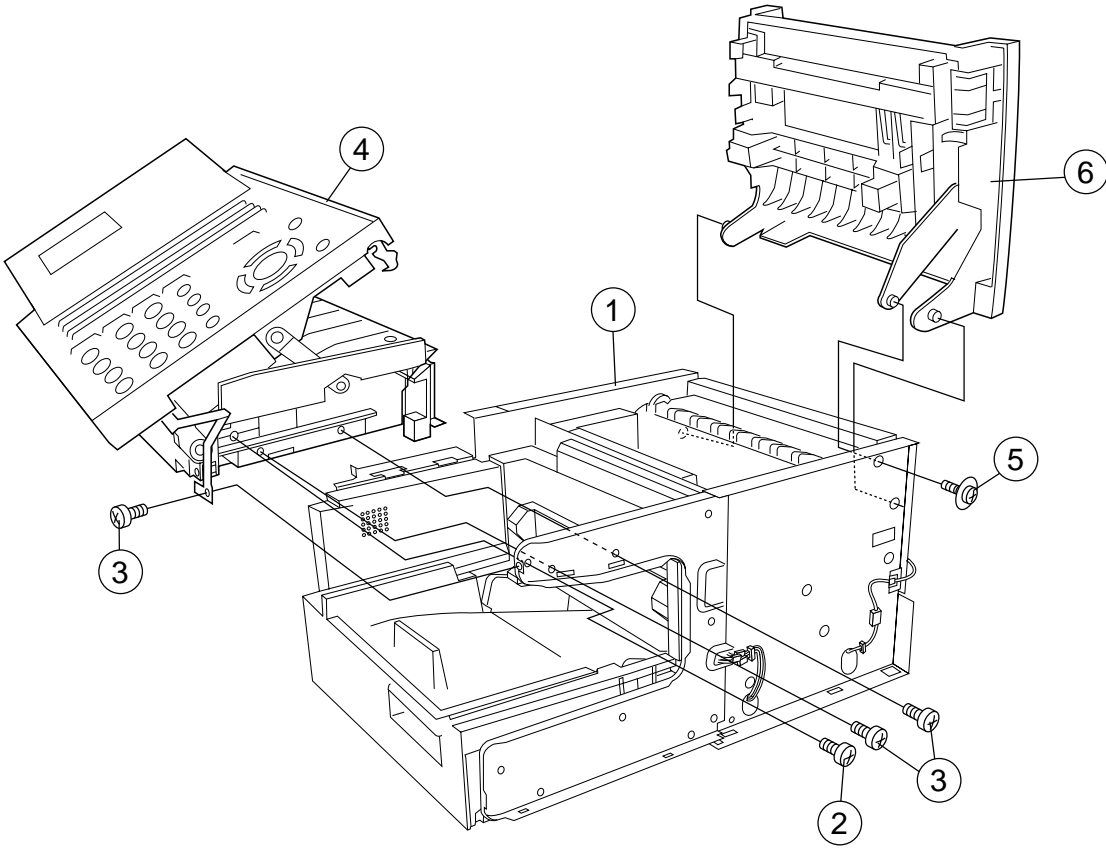
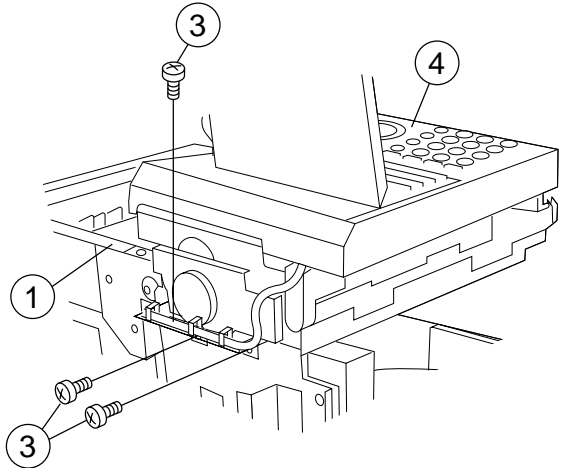
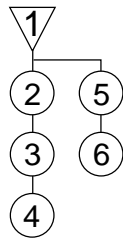


Fig. 5

6 Front left frame, Paper feed tray

Parts list (Fig. 6)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Main unit	1	11	Screw (3×6)	1
2	Screw (3×6)	5	12	Paper feed tray unit	1
3	Screw (3×10)	2	13	Screw (3×10)	1
4	Screw (3×6)	1	14	Tray width guide, front	1
5	Front left frame	1	15	Screw (3×10)	1
6	Screw (3×10)	2	16	Tray width guide, rear	1
7	Speaker holder plate spring	1	17	Connector	2
8	Speaker ass'y	1	18	Sensor	2
9	Inner front cabinet	1	19	Paper feed tray	1
10	Screw (3×10)	2			

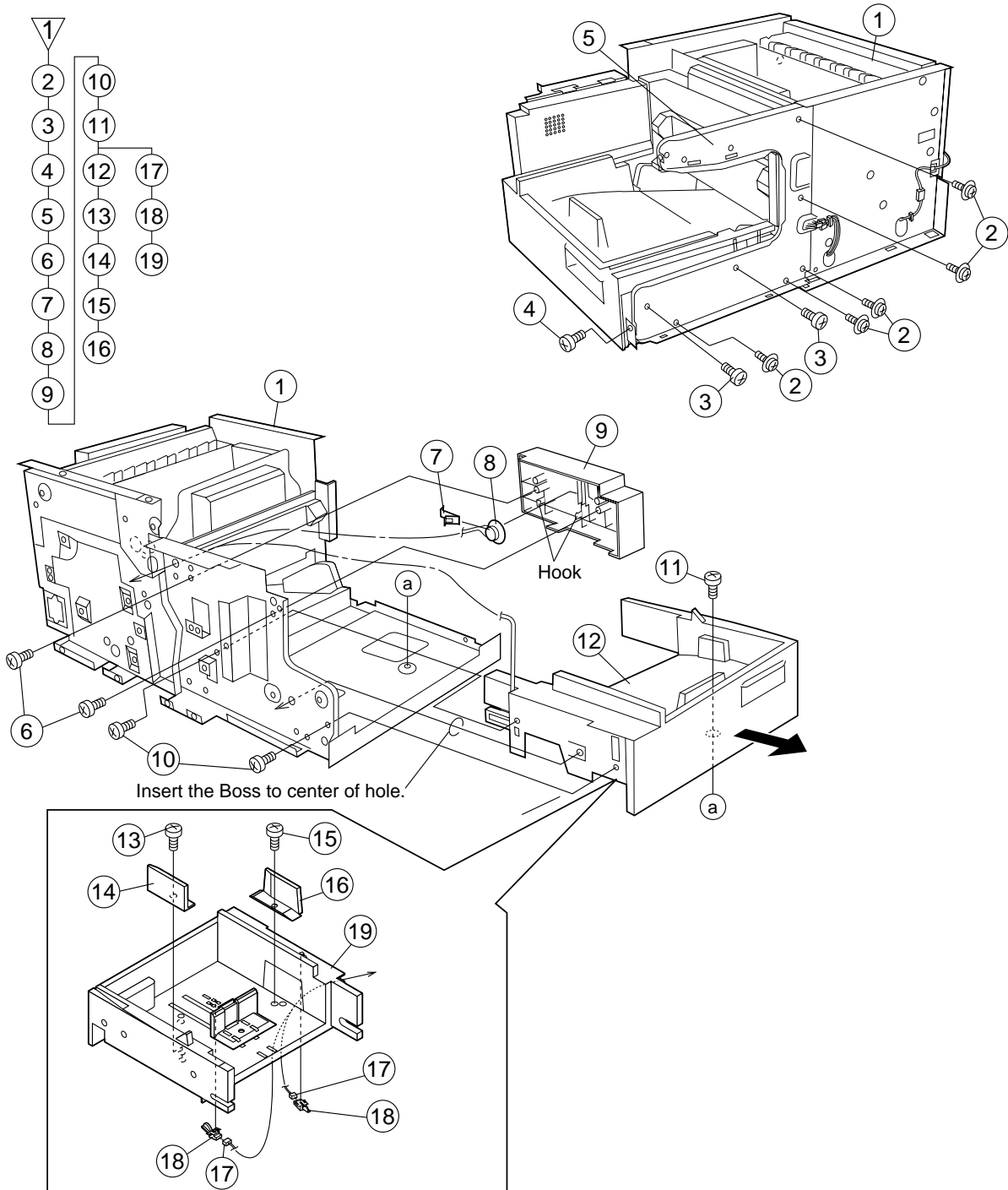


Fig. 6

7 Rear left frame, Bottom left frame

Parts list (Fig. 7)

No.	Part name	Q'ty
1	Main unit	1
2	Screw (3×6)	7
3	Rear left frame	1
4	Screw (3×6)	1
5	Bottom left frame	1

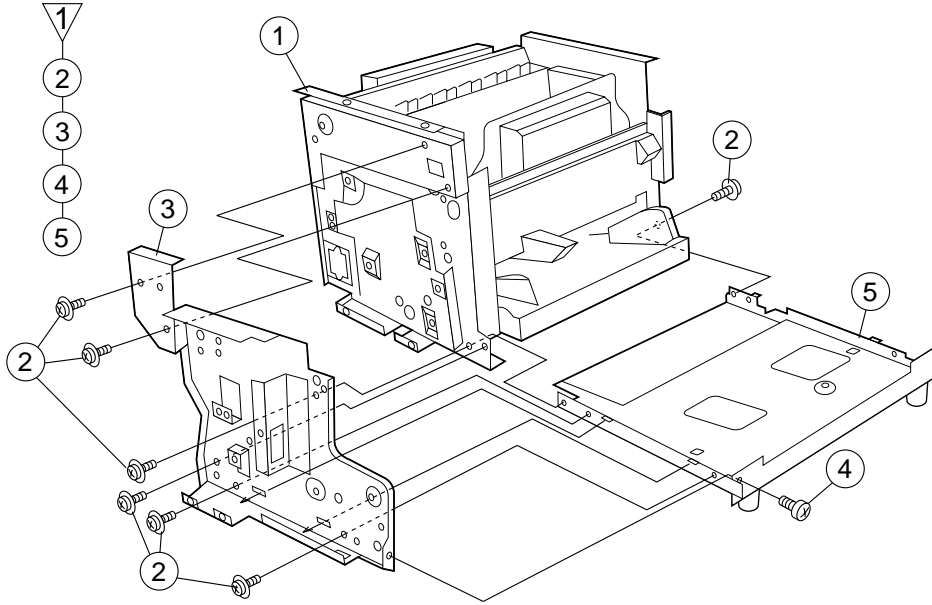


Fig. 7

8 Inner left cabinet unit

Parts list (Fig. 8)

No.	Part name	Q'ty
1	Main unit	1
2	Screw (3×8)	4
3	Inner left cabinet unit	1

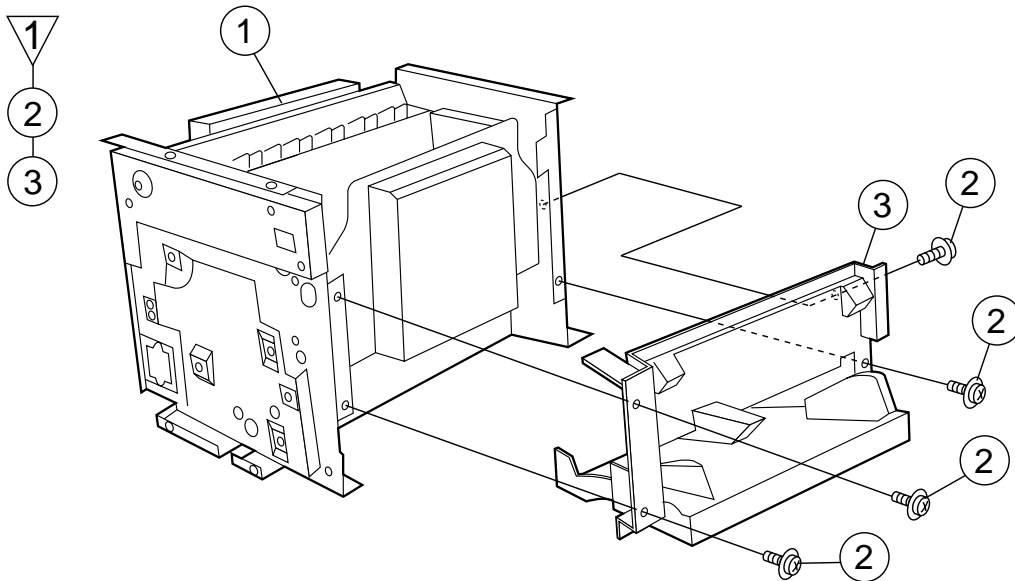


Fig. 8

9 Power supply PWB

Parts list (Fig. 9)

No.	Part name	Q'ty
1	Main unit	1
2	Screw (3×6)	4
3	Connector	4
4	Power supply PWB unit	1
5	Screw (3×6)	3
6	Screw (4×6)	1
7	Power supply PWB plate	1
8	Power supply PWB	1

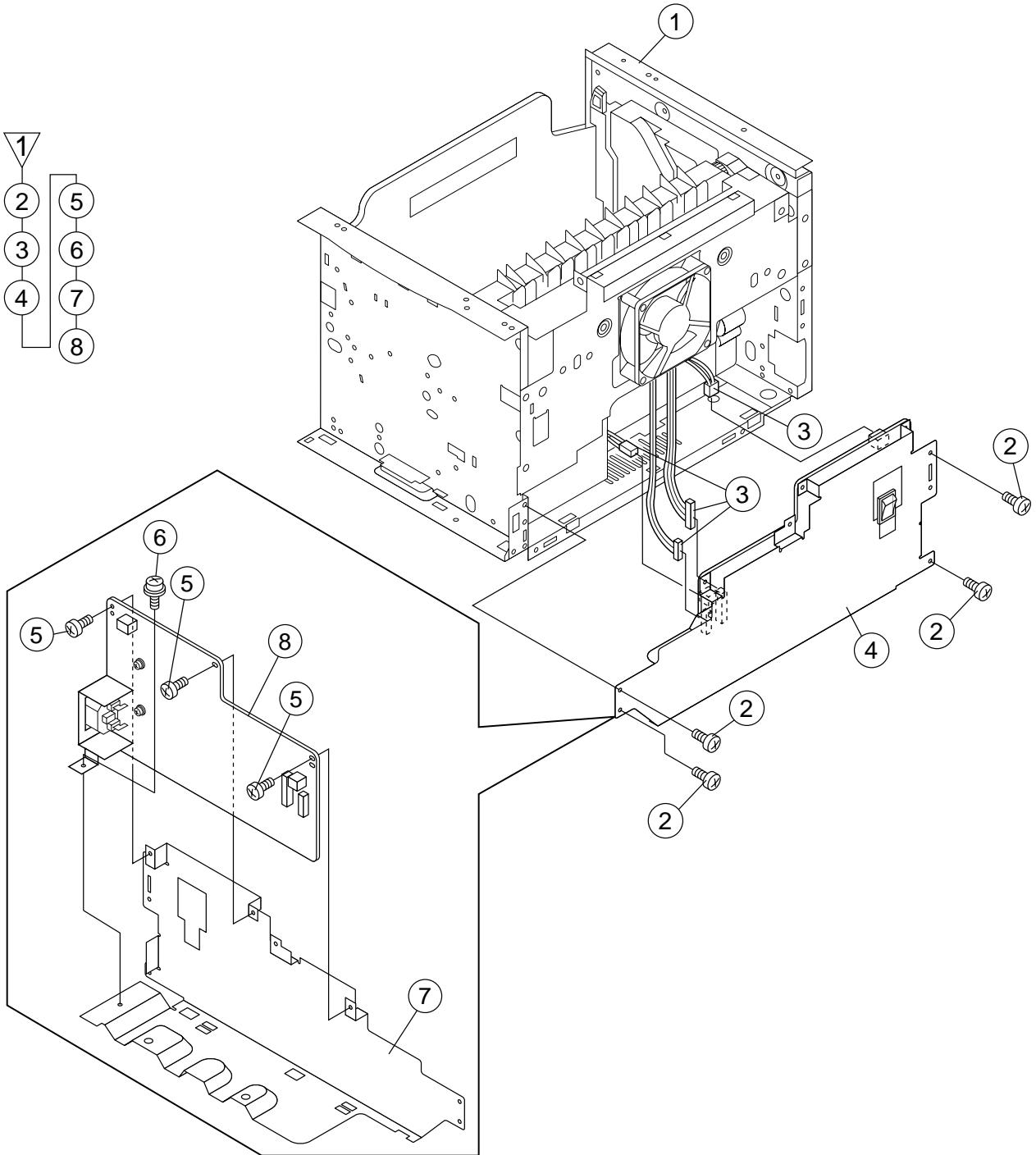


Fig. 9

10

Scanner frame unit (1/2)

Parts list (Fig. 10)

No.	Part name	Q'ty
1	Scanner frame unit	1
2	Screw (3×8)	1
3	Operation panel unit	1
4	Screw (3×10)	5
5	Screw (3×10)	2
6	Document guide upper	1
7	Stopper	1
8	Left upper cabinet	1

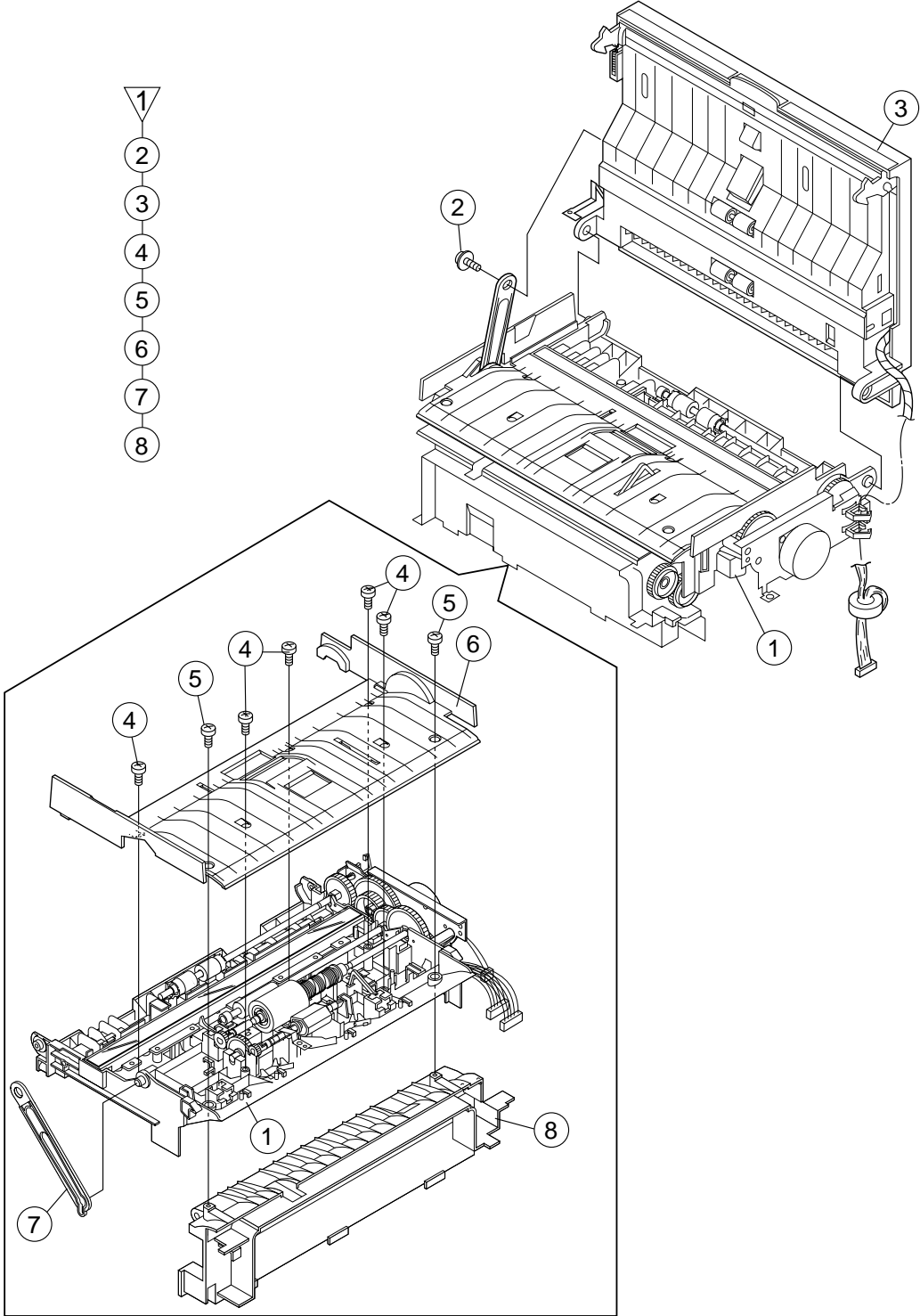


Fig. 10

11 Scanner frame unit (2/2)

Parts list (Fig. 11)

No.	Part name	Q'ty	No.	Part name	Q'ty	No.	Part name	Q'ty
1	Scanner frame unit	1	15	Scanner feed shaft 2	1	29	Screw (3×6)	1
2	Transfer bearing	2	16	Screw (3×10)	1	30	Screw (3×10)	1
3	Feed gear (49z)	2	17	Stopper spring	1	31	SD2 earth spring	1
4	DR bearing	2	18	Transfer idler gear	1	32	Verification stamp (FO-45VS)	1
5	Scanner drive roller 2	1	19	Screw (3×10)	3	33	Document sensor switch	1
6	Scanner drive roller 1	1	20	Drive unit	1	34	Transfer sensor switch	1
7	Scanner bearing 1	2	21	Transfer roller	1	35	Front sensor switch	1
8	Feed gear (73z)	1	22	ADF transfer gear	1	36	Document sensor cable	1
9	Bearing	1	23	CIS unit	1	37	Pinch roller spring	2
10	Scanner feed shaft 1	1	24	CIS cable	1	38	PO pinch roller	2
11	Scanner feed clutch	1	25	Core	1	39	Screw (3×10)	2
12	Scanner feed roller	1	26	CIS spring	2	40	Scanner support plate	1
13	E type ring (5mm)	1	27	Screw (3×6)	1	41	Paper earth brush	1
14	ADF feed gear	1	28	FD1 earth spring	1	42	Screw (3×10)	2
						43	Anti curl piece	2

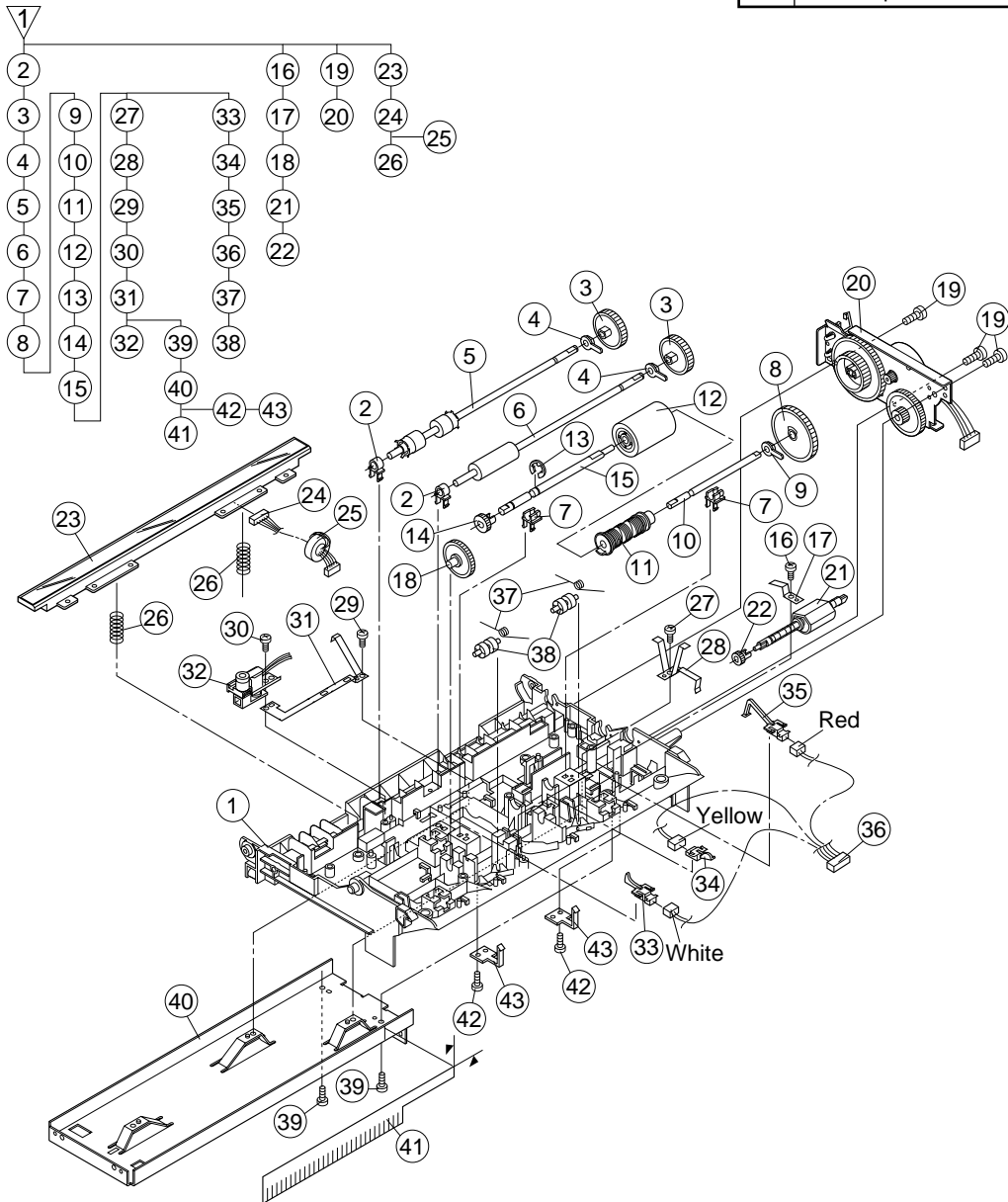


Fig. 11

12

**Document guide upper unit,
Operation panel unit**

Parts list (Fig. 12)

No.	Part name	Q'ty	No.	Part name	Q'ty	No.	Part name	Q'ty
1	Operation panel unit	1	14	Separate gum	1	27	Screw (2x8)	9
2	Screw (3x10)	3	15	Separate sheet	1	28	Switch cover plate	1
3	Document guide upper unit	1	16	Transfer plate piece	1	29	Panel cable	1
4	Release lever	1	17	Input pressure spring	1	30	Operation panel PWB unit	1
5	Release lever spring	1	18	Back sheet	1	31	Contrast key	1
6	Screw (3x10)	2	19	Paper brush	1	32	Resolution key	1
7	Document upper plate	1	20	Back guide	1	33	Direct key	1
8	Brush earth spring	1	21	Back bracket	1	34	10 key	1
9	Separate spring	1	22	Document guide upper	1	35	Start key	1
10	Pinch roller spring 2	4	23	Screw (3x10)	1	36	Menu key	1
11	Pinch roller shaft	2	24	LCD support plate	1	37	Copy key	1
12	Pinch roller	4	25	Flat cable	2	38	Stop key	1
13	Separate plate	1	26	LCD panel unit	1	39	Page plate	1
						40	Operation panel case	1

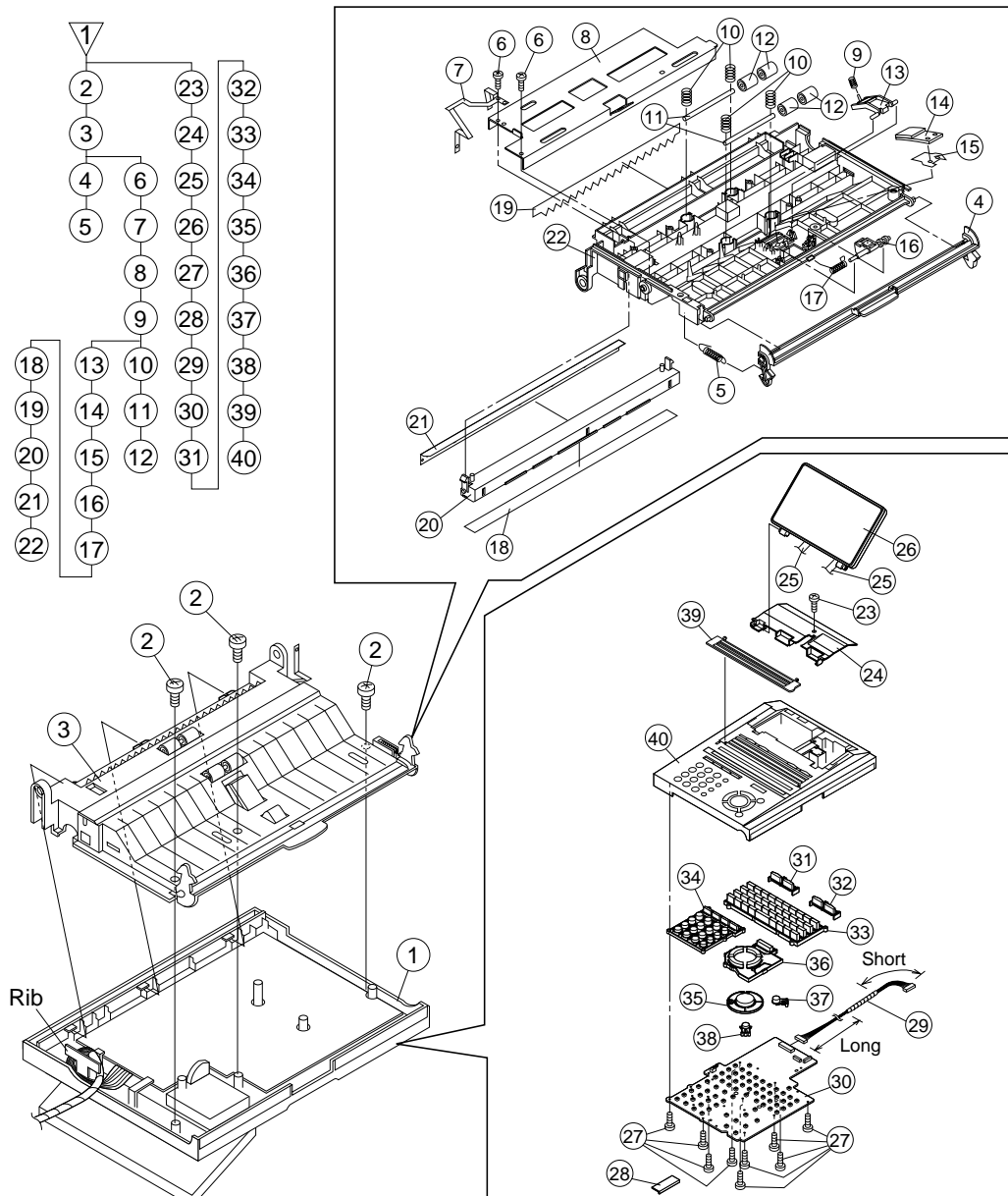


Fig. 12

13 Upper cover

Parts list (Fig. 13)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Screw (3×10)	5	13	Upper cover gear plate spring	1
2	Screw (3×8)	2	14	Drum cartridge press spring	2
3	Upper cover lock spring	1	15	Paper exit guide, under	1
4	Upper cover lock nail	1	16	Paper exit guide, upper	1
5	Drum cartridge detect lever spring	1	17	Pinch roller ass'y	2
6	Drum cartridge detect lever	1	18	Screw (3×8)	1
7	Shutter lever	1	19	Pinion gear	1
8	Idler gear (32z)	5	20	Hopper spring	1
9	Upper cover roller	1	21	Upper cover lock button	1
10	Idler gear 2 (17Z)	1	22	Hopper guide, left	1
11	Idler gear 1 (50Z)	1	23	Hopper guide, right	1
12	Upper cover gear plate	1	24	Upper cover	1

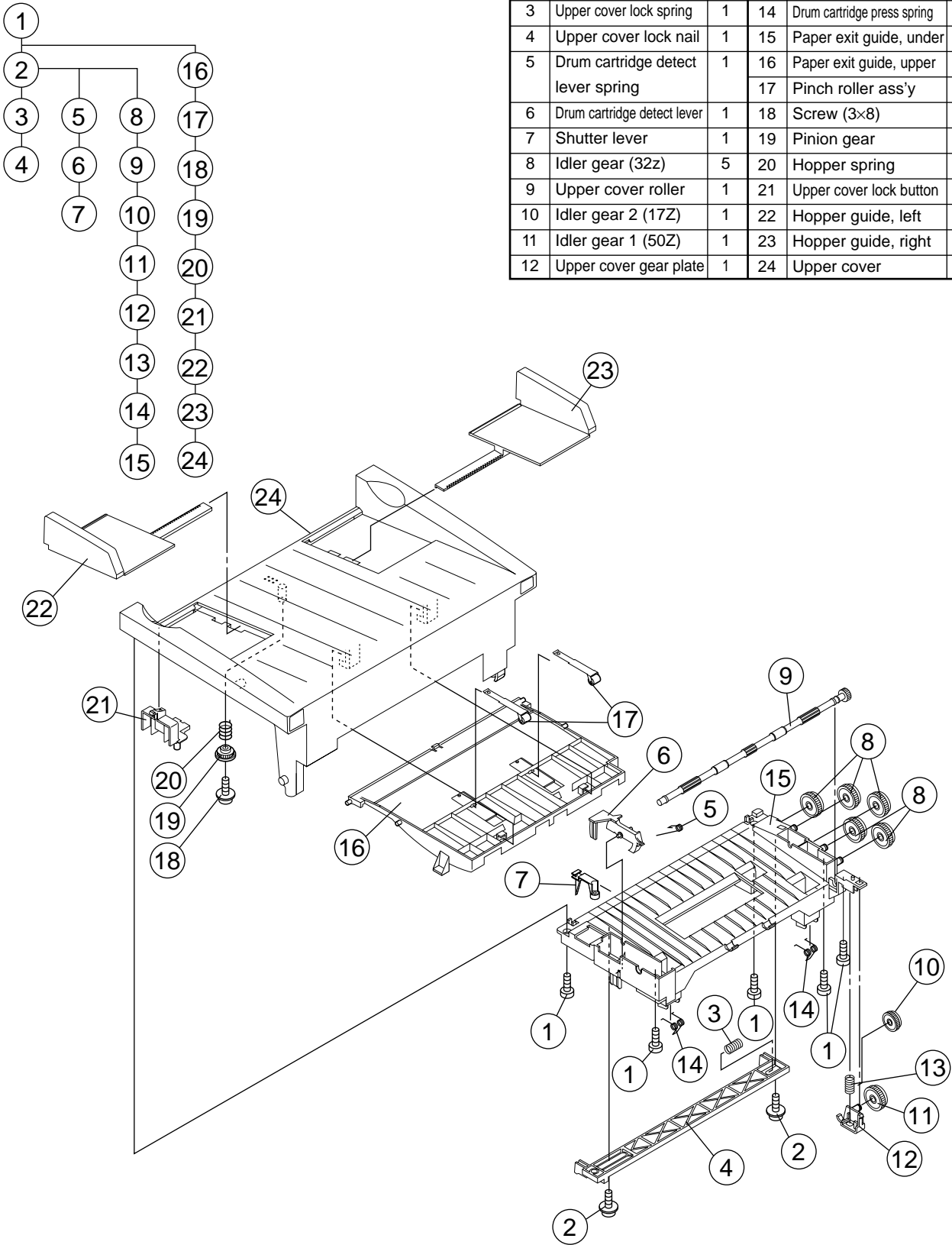


Fig. 13

14 Wire treatment

Parts list (Fig. 14)

No.	Part name	Q'ty
1	Band (100mm)	4
2	Core (F2125)	1
3	Core (F2124)	2
4	Band	1
5	Screw (3x10)	1

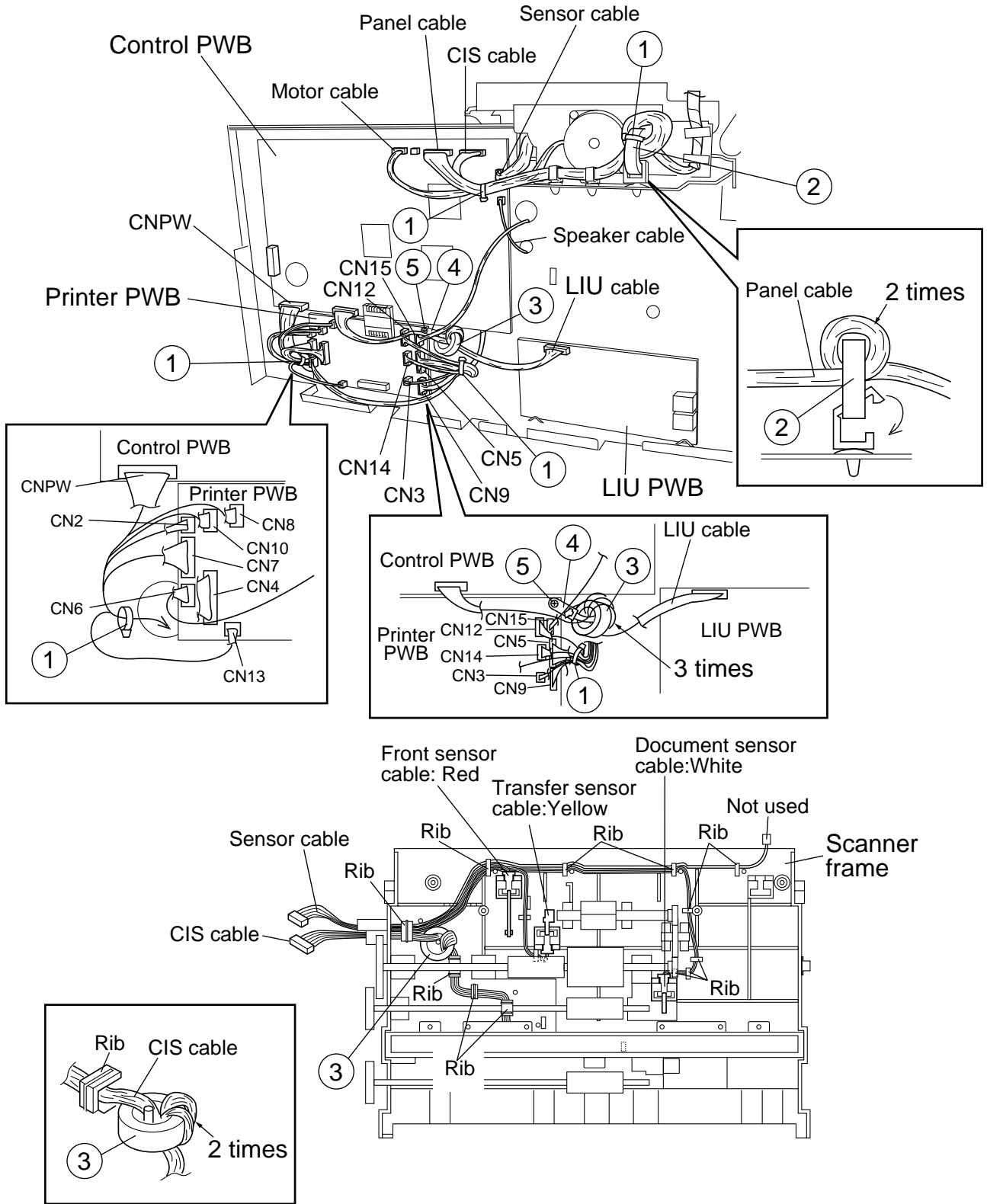
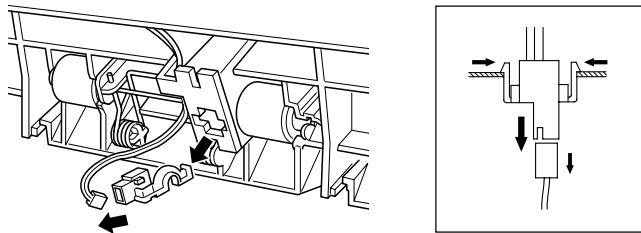
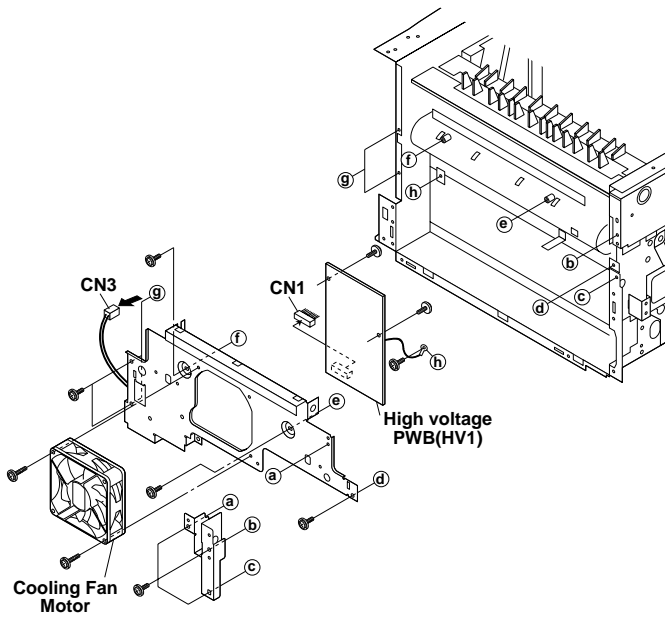


Fig. 14

15 High voltage PWB unit (HV1)

1. Remove the Cooling Fan Motor.(2 screws)
2. Remove the 2 covers. (9 screws)
3. Remove the 2 connectors.
4. Remove the High Voltage PWB.(2 screws)

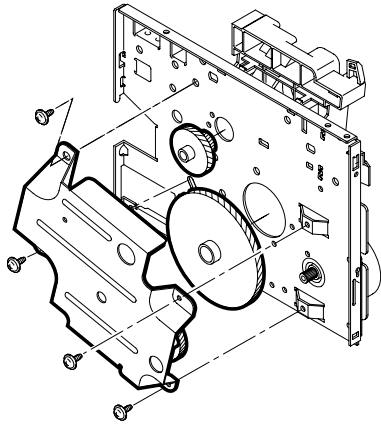


1. Remove the Paper Take-up Sensor (PS1). (1 connector)

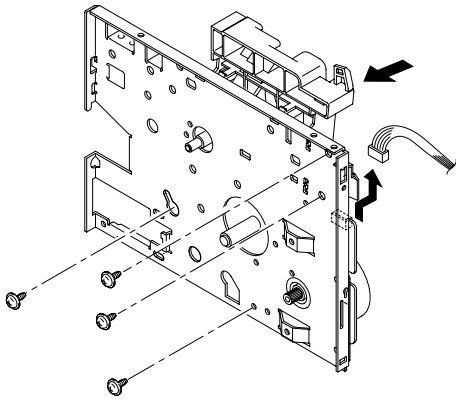
Fig. 15

16

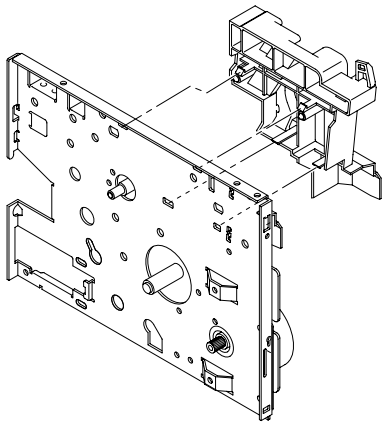
Main motor (M1)



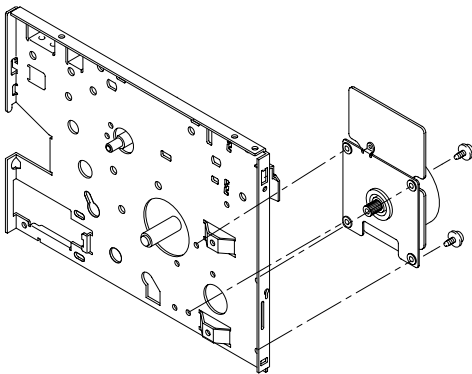
1. Remove the gear plate.(4 screws)
2. Remove 2 gears.



3. Remove the left side plate. (4 screws and 1 connector)



5. Remove the cartridge positioning plate. (Tabs at 4 places)



6. Remove the Main Motor Unit (M1). (4 screws)

Fig. 16

17 Paper take-up roller

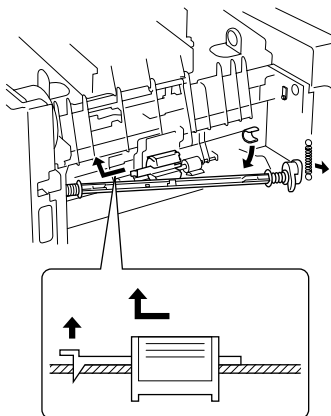


Fig. 17

1. Place the printer with its backside down.
2. Unhook the spring and remove the right-hand side of the Paper Take-up Roller shaft from its bushing.
3. Remove the Paper Take-up Roller.

18 Print head unit (PH)

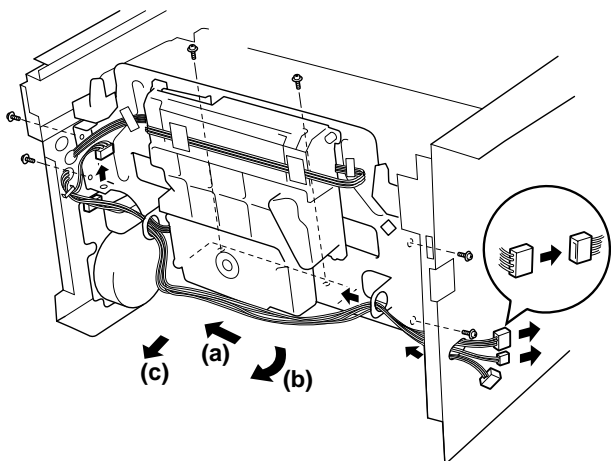


Fig. 18

1. Unplug the connector from the Main Motor Unit and remove the harness from the cord holder.
2. Unplug the connectors from the cord holder.
3. Remove the Print Head Unit (PH). (6 screws)

19 Paper empty sensor (PE1)

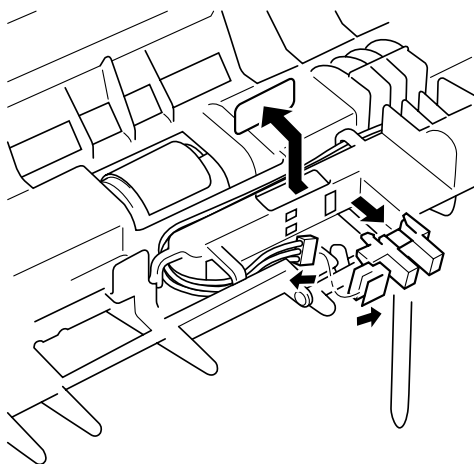
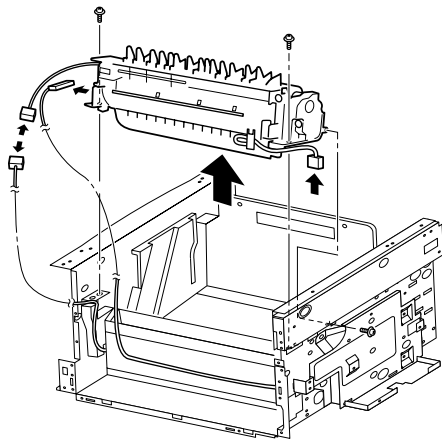


Fig. 19

1. Remove the sensor fixing bracket and remove the Paper Empty Sensor. (1 connector)

20

Fusing unit (1/2)

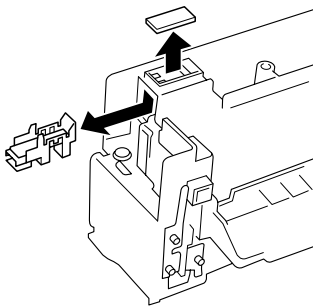


1. Remove the Fusing unit. (3 screws, 3 connectors)

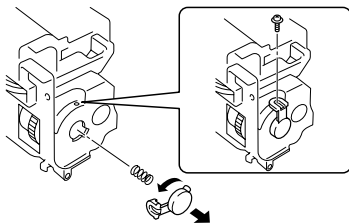
NOTE:

- The Fusing Unit is to be replaced as a unit at about every 50,000 printed pages.

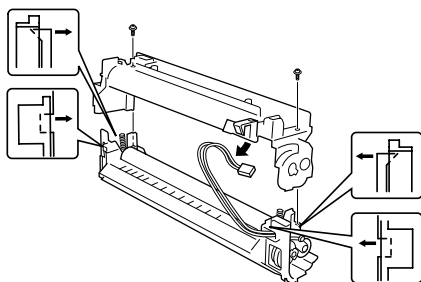
*: Use the following procedure when a part comprising the Fusing Unit is to be replaced individually to correct an image problem or the defective part.



2. Remove the sensor fixing bracket and the Paper Exit Sensor (PS3).

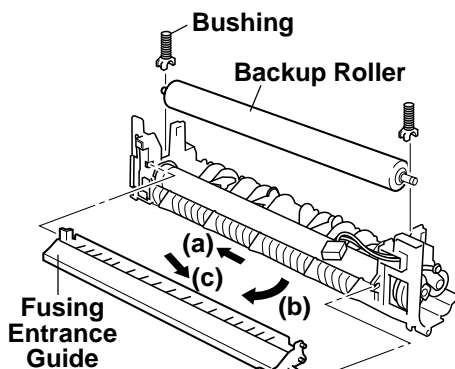


3. Remove the Heater Lamp holding cover. (1 screw and 1 spring)



4. Remove the 2 mounting screws.

5. Pressing the right and left tabs (at 2 places), separate the upper half of the Fusing Unit from the lower half.



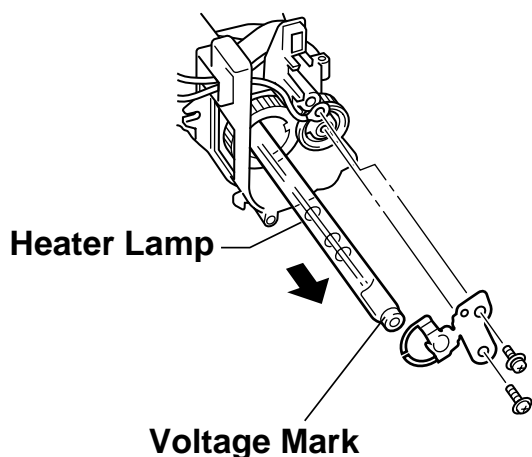
6. Remove the bushings and the Backup Roller.

7. Remove the Fusing Entrance Guide.

- (a) Push the Fusing Entrance Guide to the left.
- (b) Pull out the right end of the Fusing Entrance Guide.
- (c) Pull out the left end of the Fusing Entrance Guide.

Fig. 20

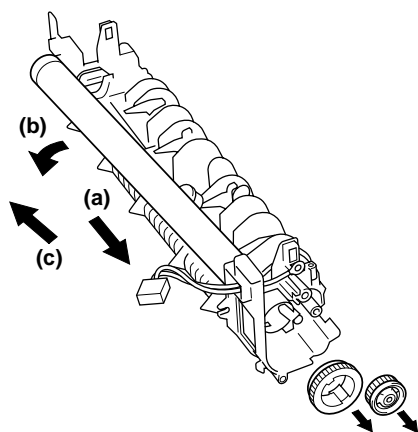
21 Fusing unit (2/2)



8. Remove the lamp holder. (2 screws)
9. Pull out the Heater Lamp (H1).

NOTE:

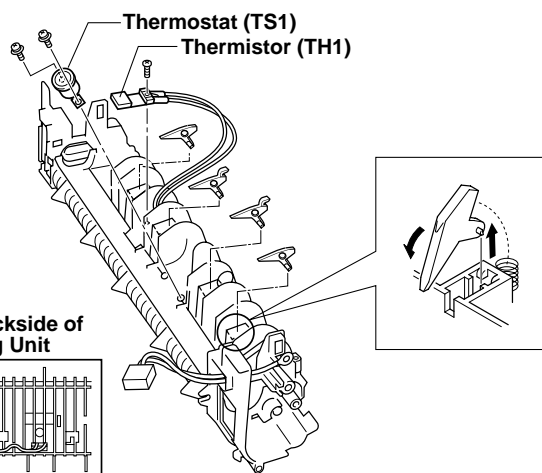
- Use care not to touch the lamp surface with bare hands.
- Position the voltage mark on the gear side when re-installing the lamp.



10. Remove the drive gear from the Heat Roller.
11. Slide the Heat Roller to the right (a), swing out the left end (b), and then slide the roller in the direction of (c) and pull it out.

NOTE:

- To prevent the surface of the Heat Roller from being scratched by the Fusing Separators, lift the separators when removing and reinstalling the roller. Use utmost care not to damage the surface of the roller.



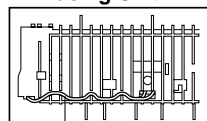
12. Remove the Fusing Paper Separators. (At 4 places)
13. Remove the Thermistor (TH1). (1 screw)

NOTE:

- Route the harness as shown in Fig. A when reinstalling the Thermistor (TH1).

14. Remove the Thermostat (TS1). (2 screws)

Fig. A Backside of Fusing Unit



Harness

Fig. 21

22

Paper cassette (FO-CS1)

Parts list (Fig. 22)

No.	Part name	Q'ty
1	Paper cassette ass'y	1
2	Screw (3×10)	3
3	Screw (3×10)	4
4	Screw (3×6)	1
5	Screw (3×12)	1
6	Bottom plate	1

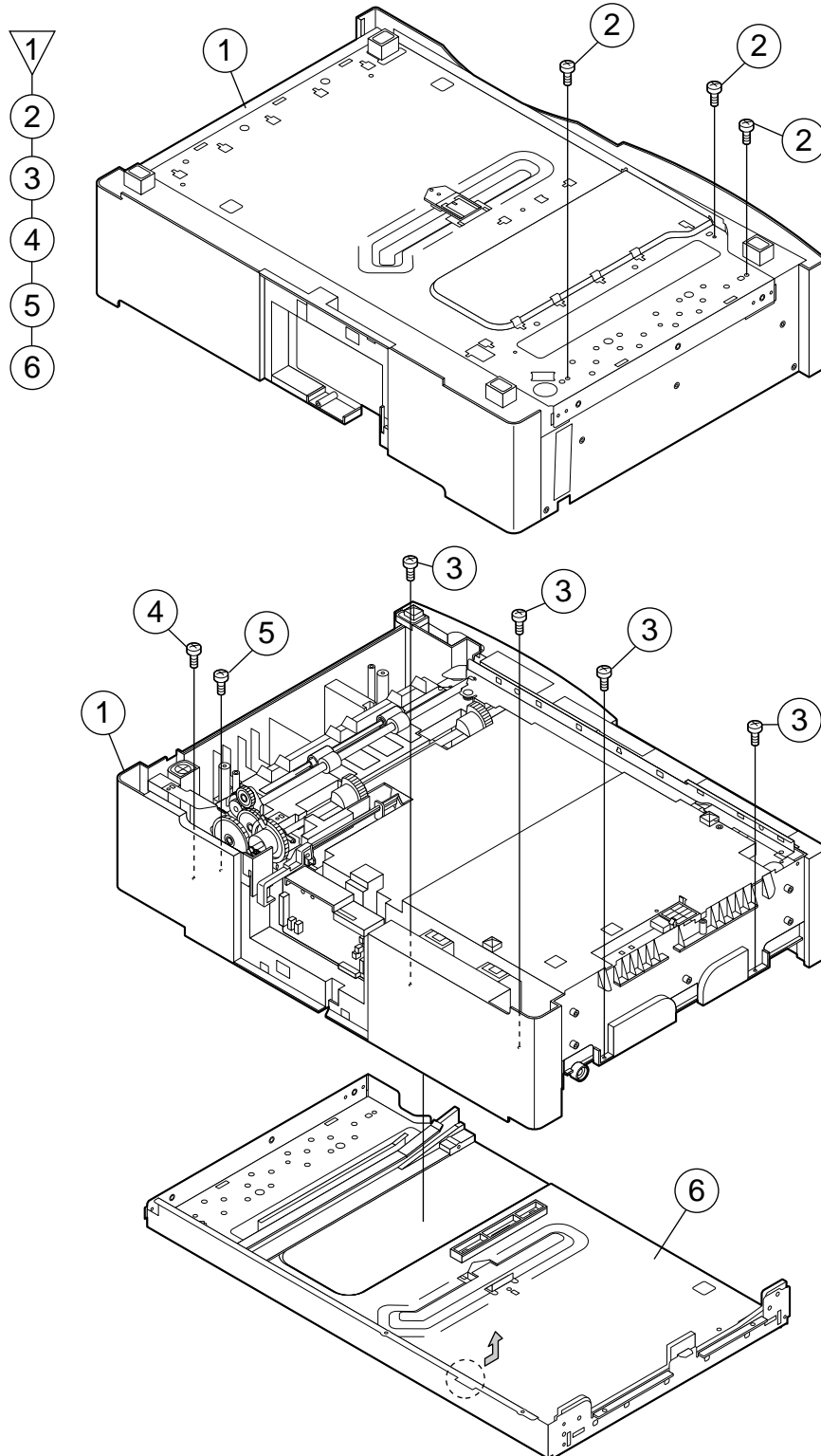


Fig. 22

23

**Cassette case unit,
Option cassette PWB unit (FO-CS1)**

Parts list (Fig. 23)

No.	Part name	Q'ty
1	Cassette cabinet unit	1
2	Cassette case unit	1
3	Paper sensor lever	1
4	Sensor guide plate	1
5	Connector	4
6	Screw (3×10)	2
7	Cassette PWB unit	1

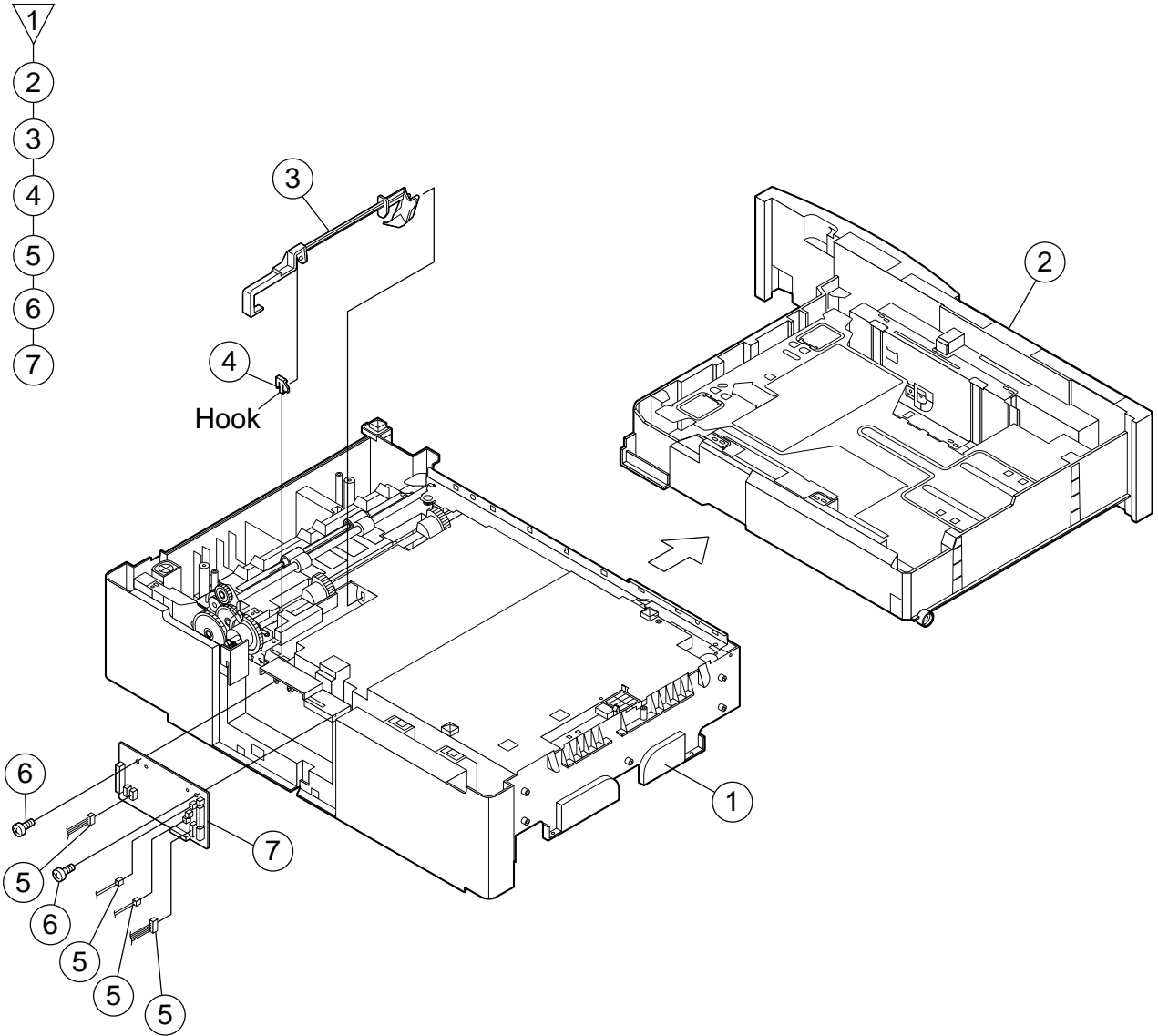


Fig. 23

24 Drive system unit (FO-CS1)

Parts list (Fig. 24)

No.	Part name	Q'ty
1	Cassette cabinet unit	1
2	Screw (3×8)	1
3	Screw (3×10)	1
4	Screw (3×10)	1
5	Front support bracket	1
6	Screw (3×10)	3
7	Clutch spring	1
8	Paper feed clutch gear	1
9	PU roller bearing	1
10	PU roller unit/Cassette up roller shaft	1
11	Drive roller	1
12	Drive roller bearing	1
13	Drive system unit	1
14	Cassette size sensor	1
15	Screw (3×8)	2
16	Paper size sensor	1

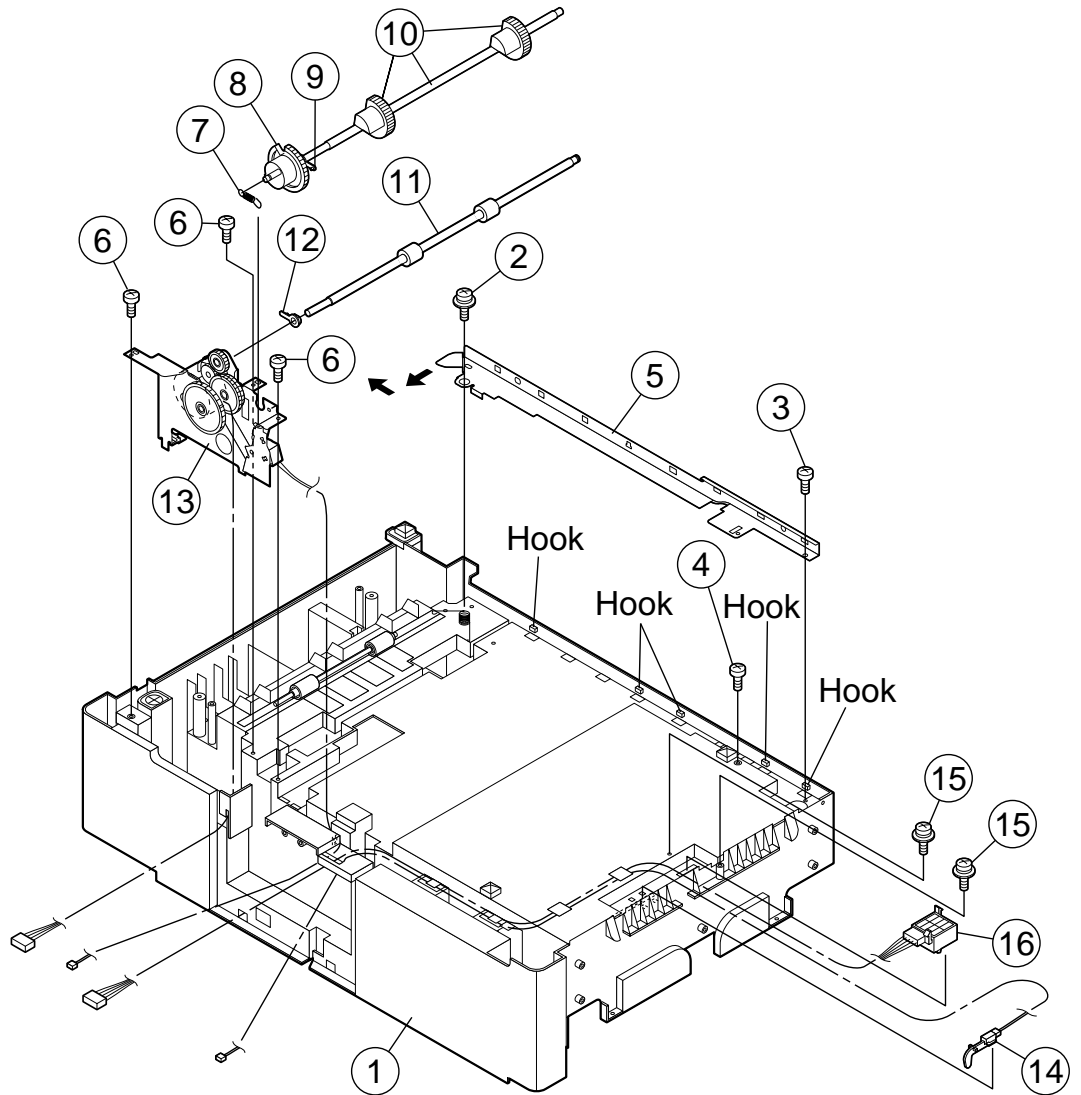
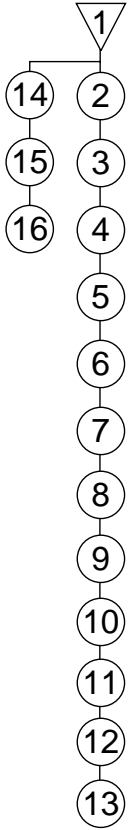


Fig. 24

25

Cassette cabinet (FO-CS1)

Parts list (Fig. 25)

No.	Part name	Q'ty
1	Cassette cabinet unit	1
2	Screw (3×10)	2
3	Cassette paper guide	1
4	Idler gear	1
5	Earth spring	1
6	Lever joint 1	1
7	Pinch roller	2
8	Pinch roller shaft	1
9	Pinch roller spring	2
10	Release lever spring	1
11	Lever joint 2	1
12	Release lever/Gear plate	1
13	Release shaft	1
14	Cassette cabinet	1

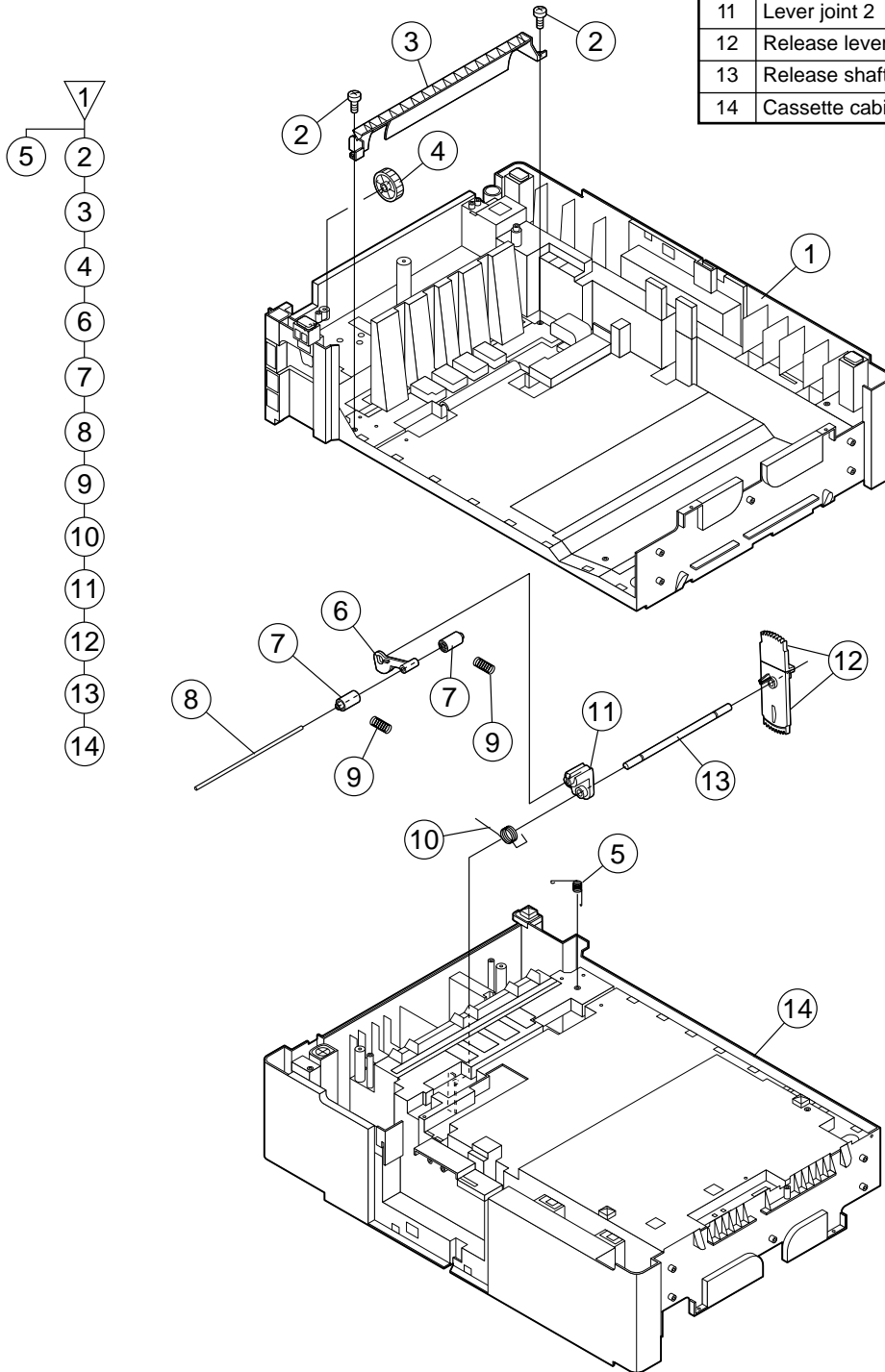


Fig. 25

26

Cassette case (1/2) (FO-CS1)

Parts list (Fig. 26)

No.	Part name	Q'ty
1	Cassette case unit	1
2	Screw (3×10)	2
3	Cassette push up plate holder	2
4	Screw (3×10)	2
5	Cassette back guide plate	1
6	Cassette back guide	1
7	Cassette push up plate	1
8	Cassette push up plate spring	2
9	Screw (Special)	2
10	Slide roller	2
11	Screw (3×10)	2
12	Lock down spring 2	1
13	Lock down piece 2	1
14	Lock down holder	1
15	Screw (3×8)	1
16	Lock down spring	1
17	Lock down piece 1	1

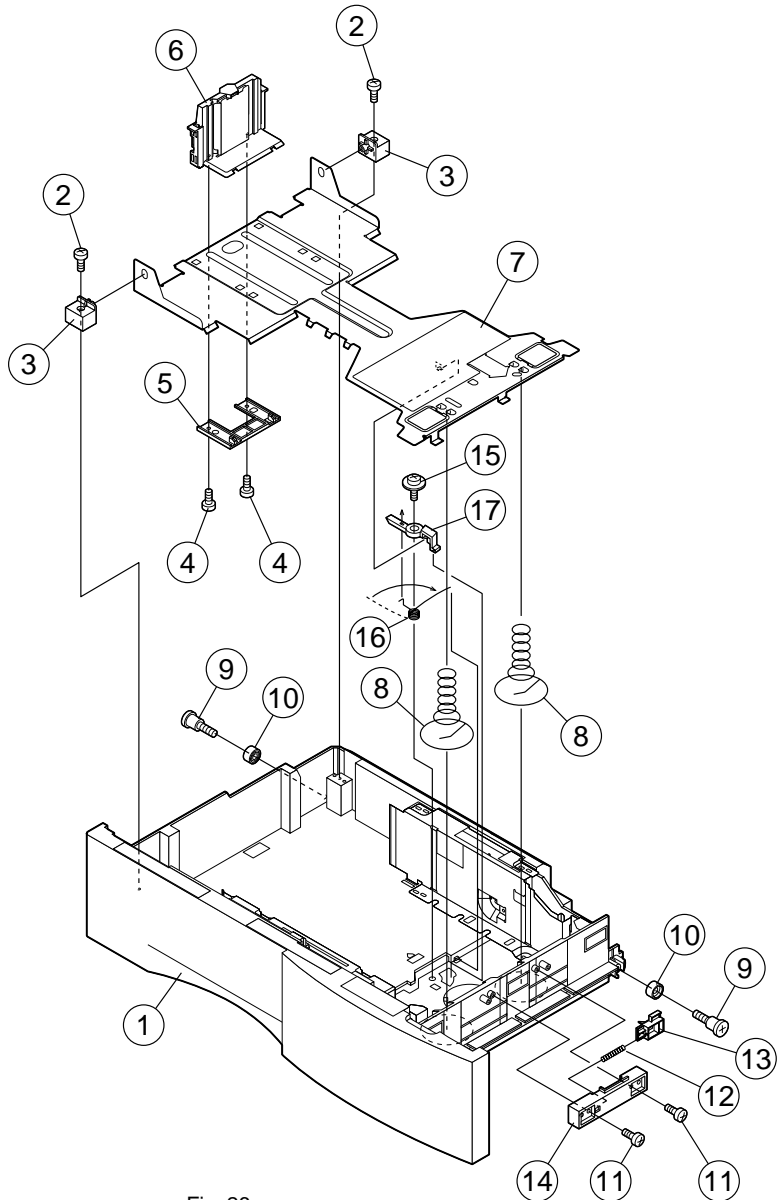
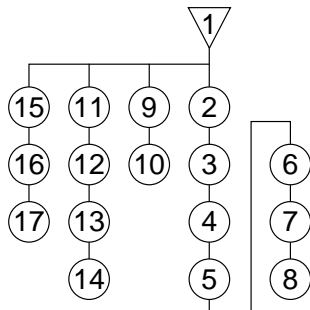


Fig. 26

27

Cassette case (2/2) (FO-CS1)

Parts list (Fig. 27)

No.	Part name	Q'ty
1	Cassette case unit	1
2	Screw (3×10)	4
3	Cassette width guide/separate nail, front	1
4	Screw (3×10)	4
5	Cassette width guide/separate nail, rear	1

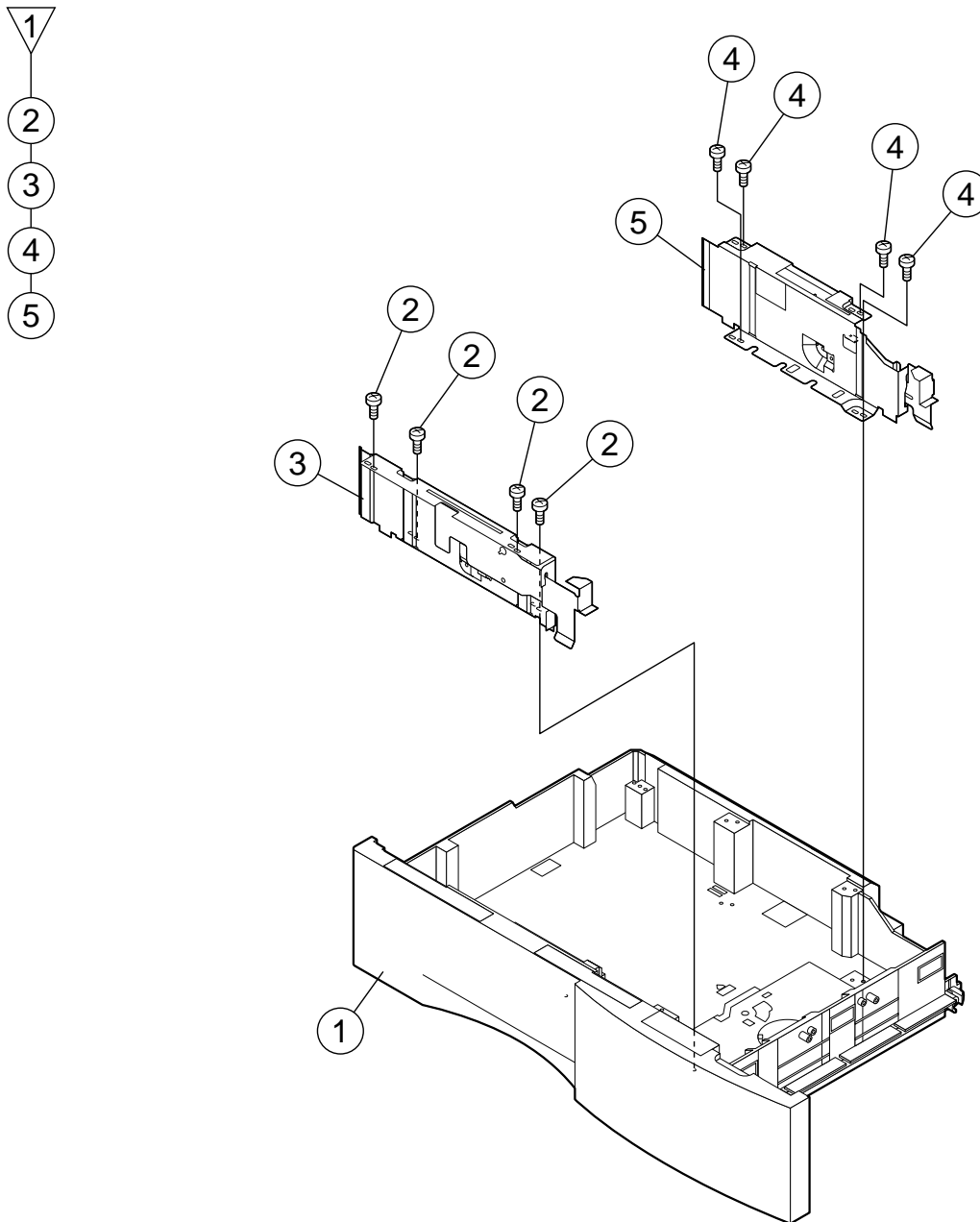
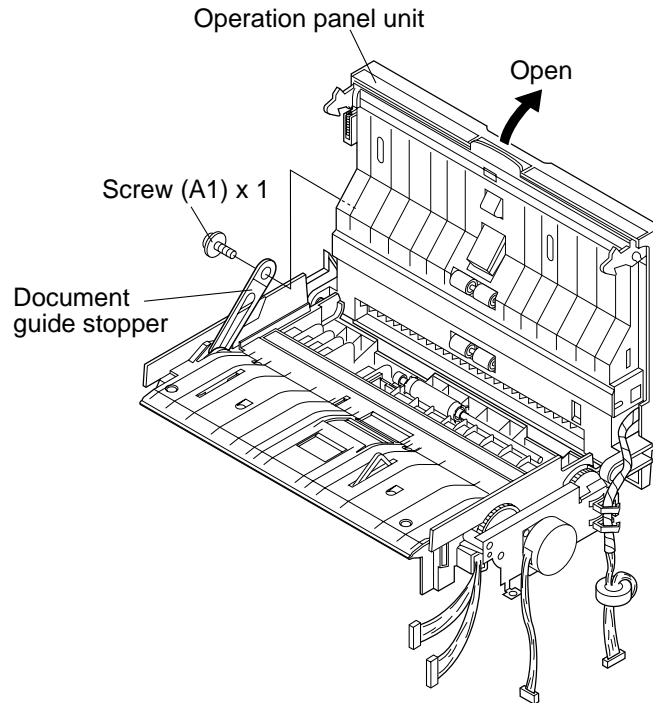


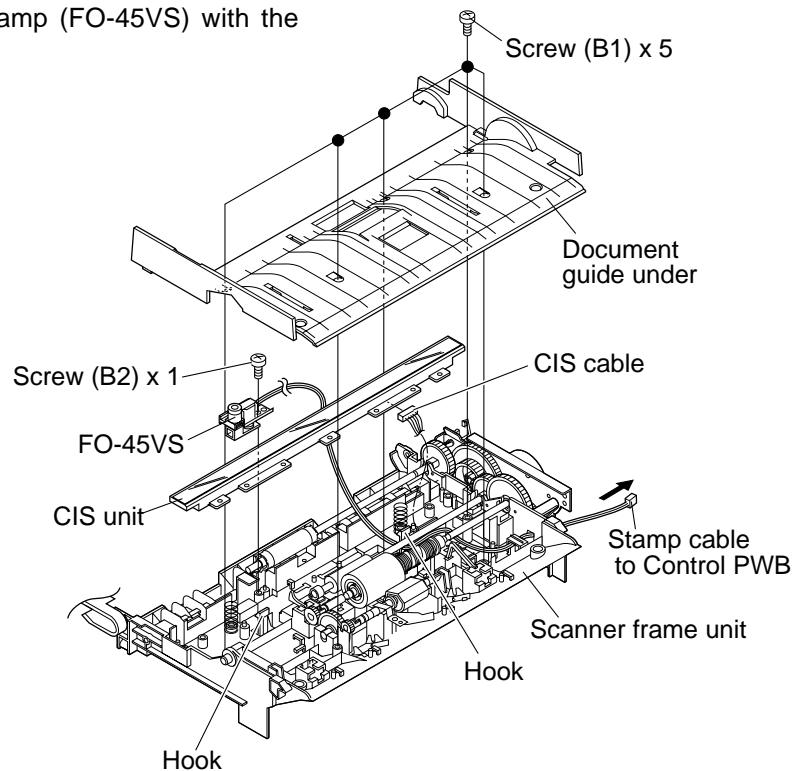
Fig. 27

[4] How to install the verification stamp (FO-45VS)

1. Open the operation panel unit.
2. Remove the screw (A1) x 1 pc. and open the operation panel more widely.



3. Remove the screws (B1) x 5 pcs., to remove document guide under.
4. Remove CIS unit
Carefully bend 2 hooks and remove CIS cable.
5. Install the verification stamp (FO-45VS) with the screw (B2) x 1pc.



6. Wire treatment

Stamp cable must be passed through six ribs as shown in fig.1.

Connect the stamp cable to CNSTP (2 pin) of control PWB

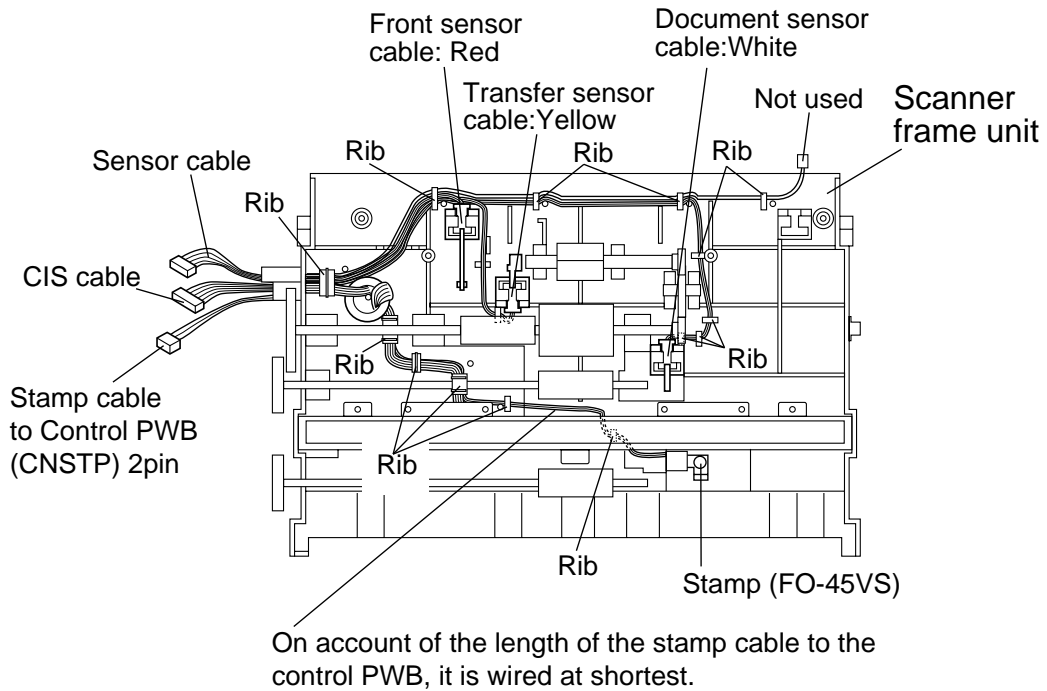


Fig. 1

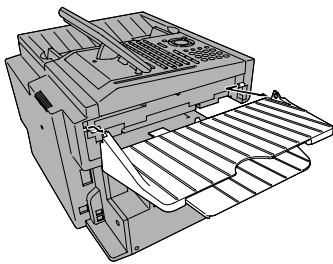
7. Soft switch setting

When you install the verification stamp (FO-45VS), set the soft SW 27. No. 3 initial setting to "1".

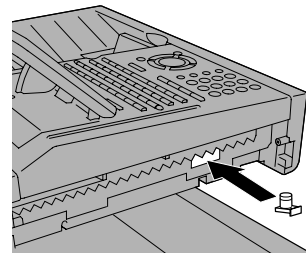
8. Replacing the verification stamp

If you are using the Verification Stamp function, you will need to replace the ink cartridge in the stamp unit when it runs out of ink (when the stamped mark on original documents becomes faint). A new ink cartridge can be obtained from your dealer.

① Remove the original document OUT tray.

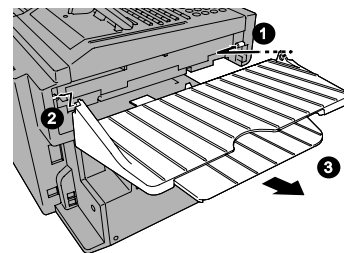
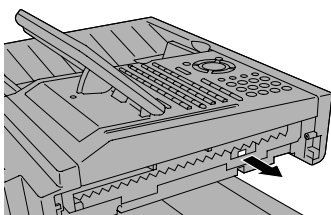


③ Insert the new ink cartridge into the machine (make sure that the tab is facing out).



④ Replace the original document OUT tray.

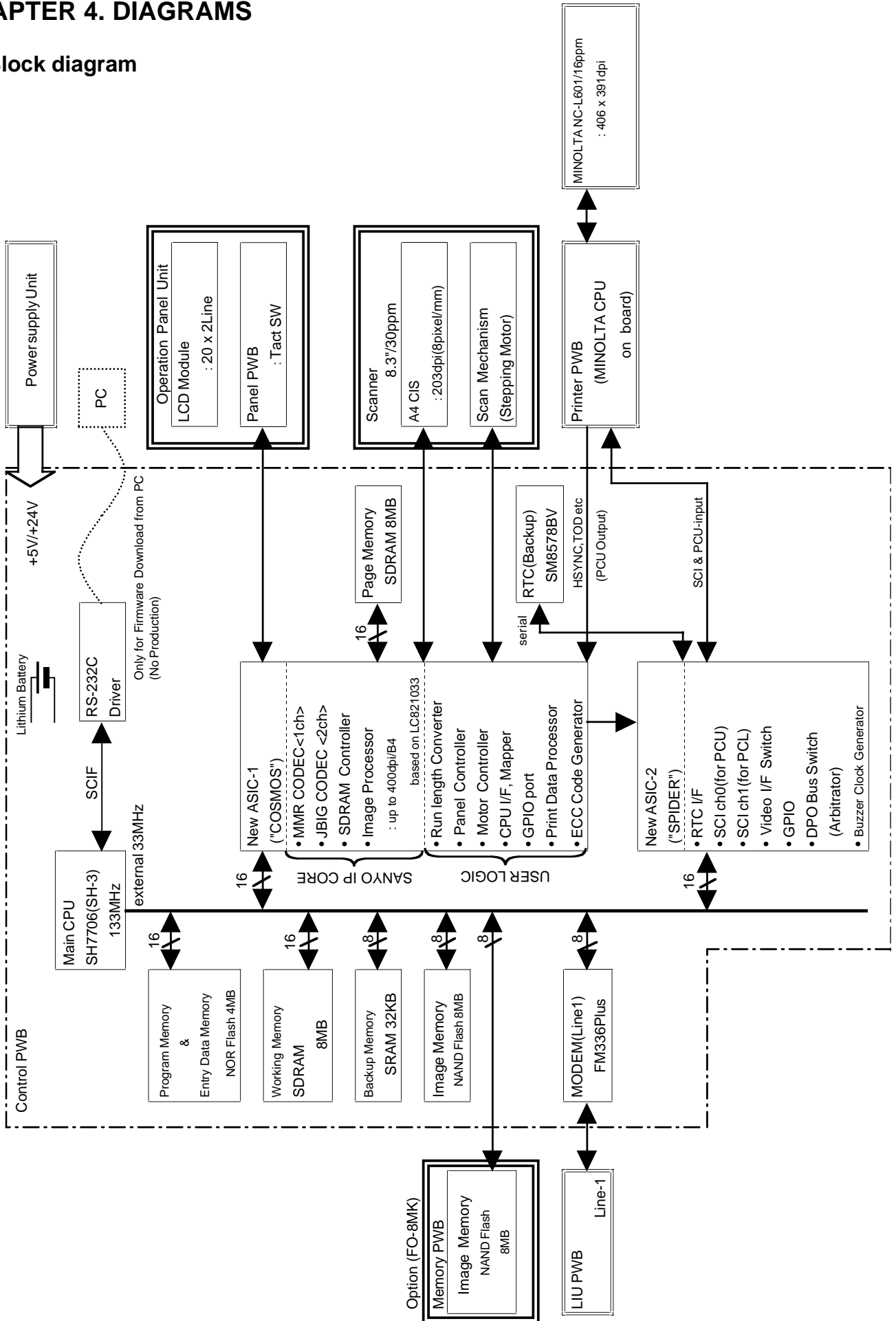
② Press down on the protruding tab of the green ink cartridge and pull the cartridge out with your fingers.



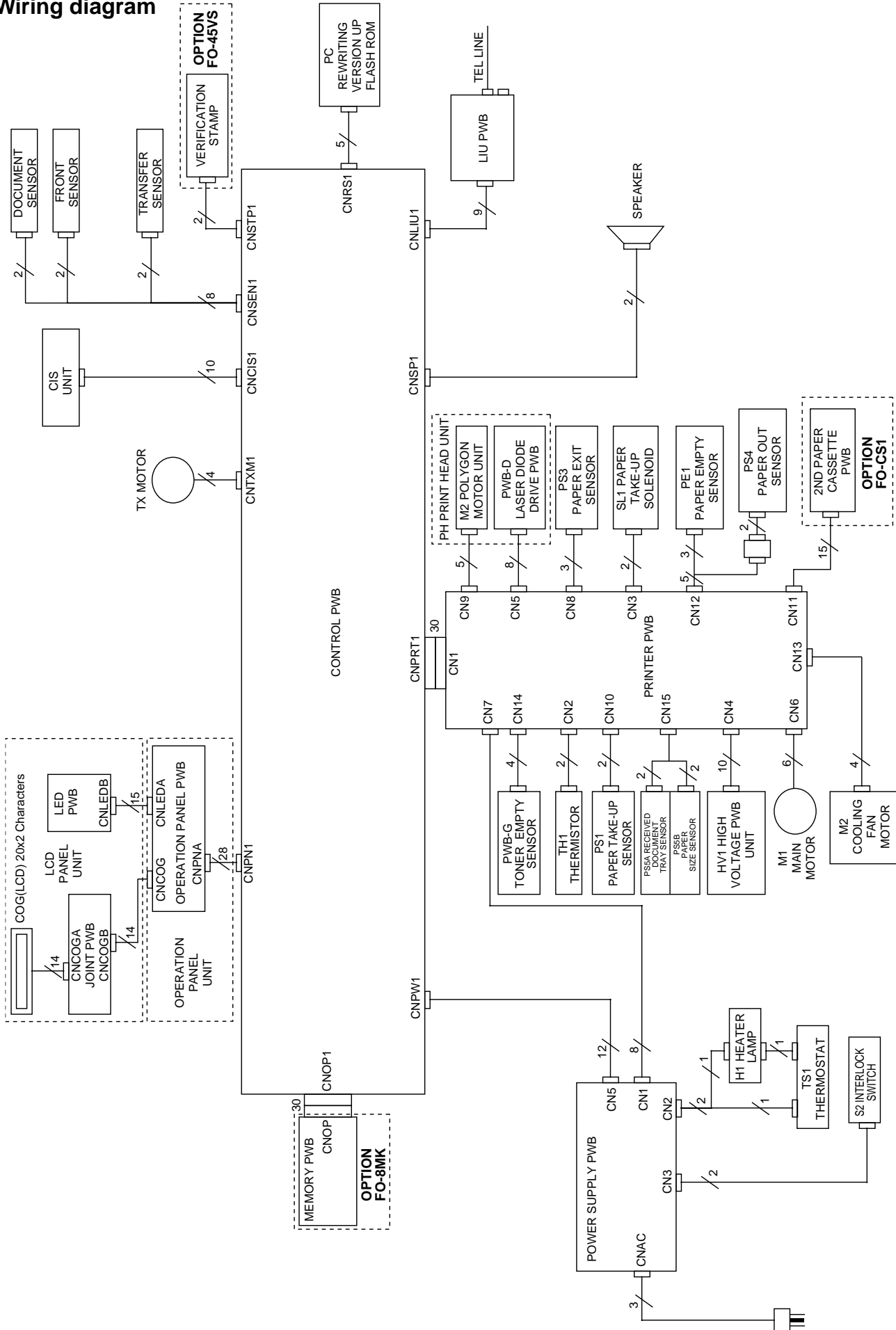
Stamp (Ink cartridge) only (20 pieces)
Parts code : **UINK-2009SC01**

CHAPTER 4. DIAGRAMS

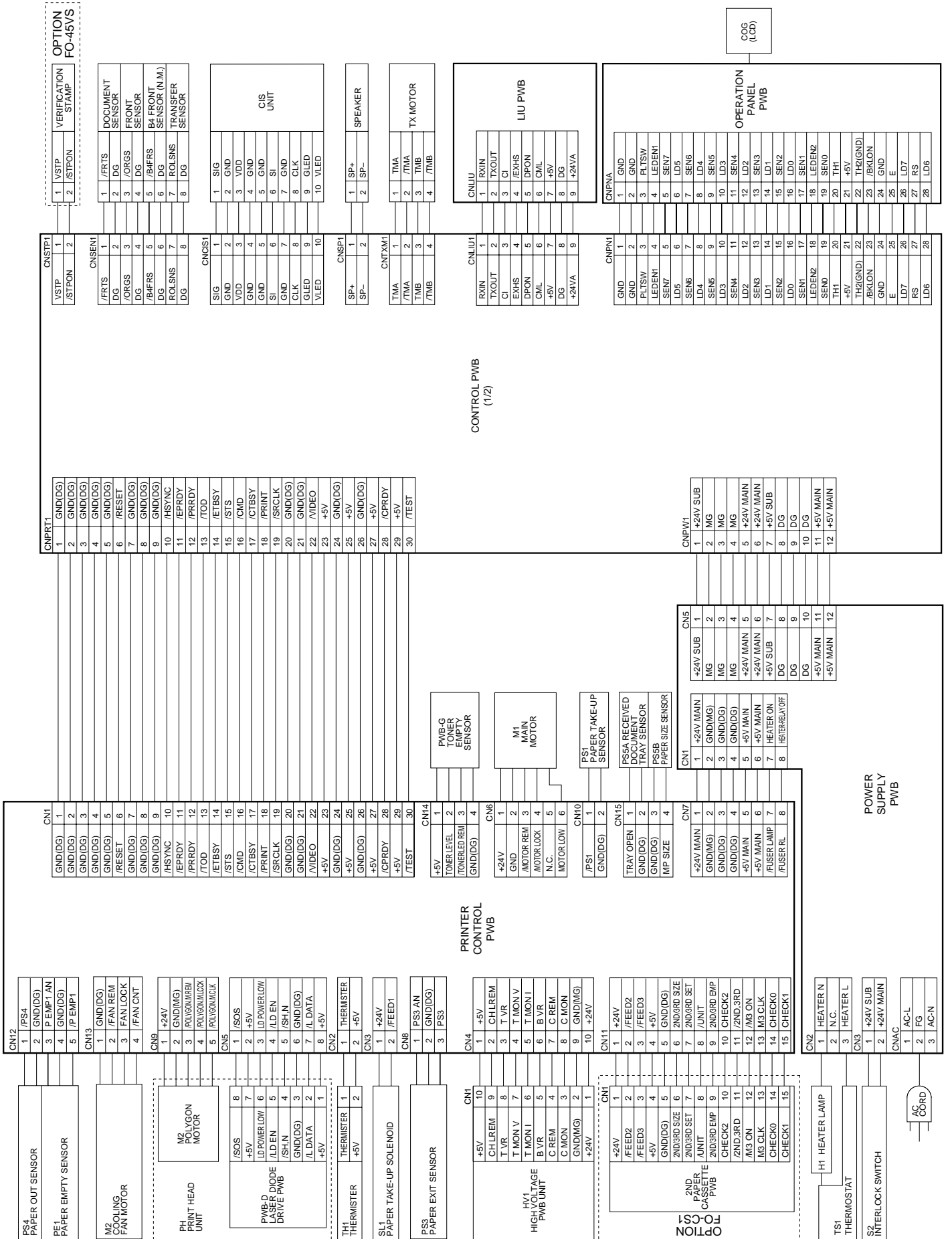
[1] Block diagram



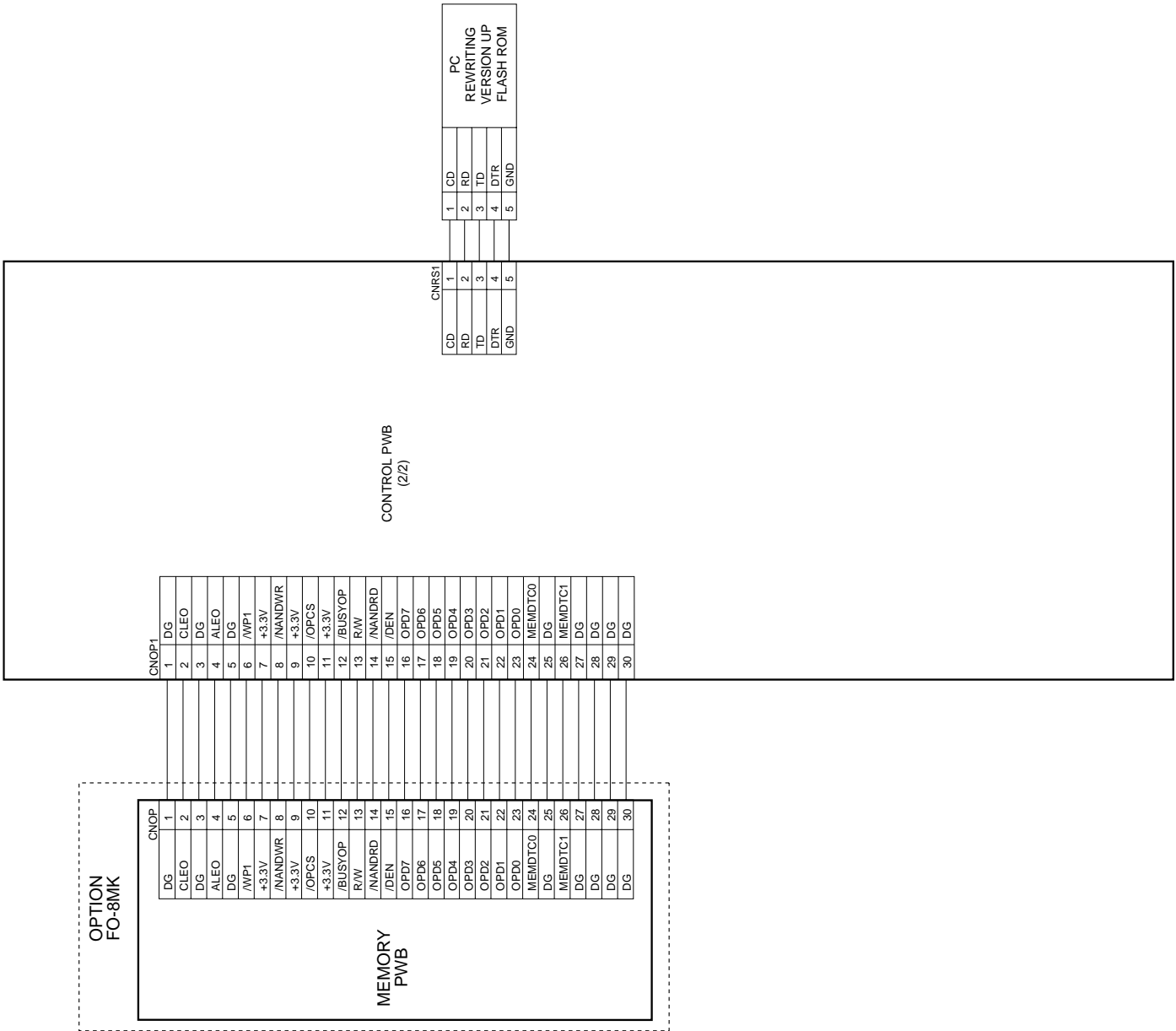
[2] Wiring diagram



[3] Point- to-point diagram and connector signal name (1)



Point- to-point diagram and connector signal name (2)



CHAPTER 5. CIRCUIT DESCRIPTION

[1] Circuit description

1. General description

In this machine, the facsimile control block except the printer control is mainly composed of the units shown in Fig. 1.

2. PWB configuration

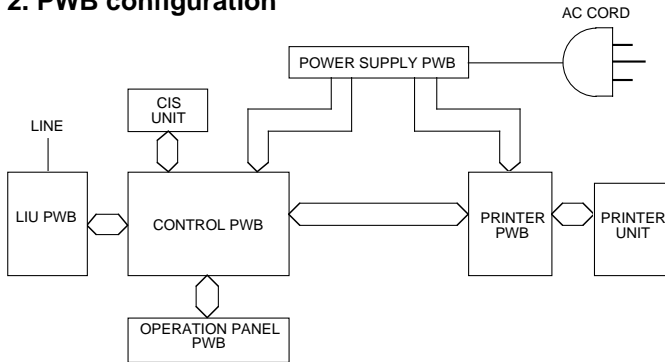


Fig. 1

1) Control PWB

The control PWB controls all the other operations except the printing operation of the printer.

2) CIS unit

CIS UNIT converts the image of the sending or copying draft into the photoelectric signals and transmits the signals to the control PWB.

3) LIU PWB

The LIU PWB controls the I/F telephone function of the circuit with the control signals from the control PWB.

4) Operation panel PWB

The operation panel PWB detects the key input, turns on and off LED and displays LCD according to the control signals from the control PWB.

5) Power supply PWB

DC voltages (+5V, +24V) are produced from AC120V, and are supplied to the printer unit and control PWB unit.

[2] Circuit description of control PWB

1. General description

The control PWB is composed of the following blocks.

- (1) Main control block
- (2) Backup memory block
- (3) Modem block
- (4) Scanner control block
- (5) Speaker amplifier
- (6) Page memory block
- (7) Drive block

2. Description of each block

(1) Main control block

This block consists of 32 bit RISC microcomputer HD6417706F133 (main component), flash ROM, 64 Mbit SDRAM, Main ASIC, Sub ASIC, etc. Each device is controlled either by the microcomputer directly or via Main ASIC.

1) HD6417706F133 (IC24): pin-176, QFP (main CPU)

This is a microcomputer with a core of 32 bit RISC (Reduced Instructions Set Computer) CPU, which periphery functions are integrated into. This device is equipped with the following function. The clock inputs 33.1776 MHz from outside and operates at 4-times frequency (approx. 133 MHz) internally.

Feature

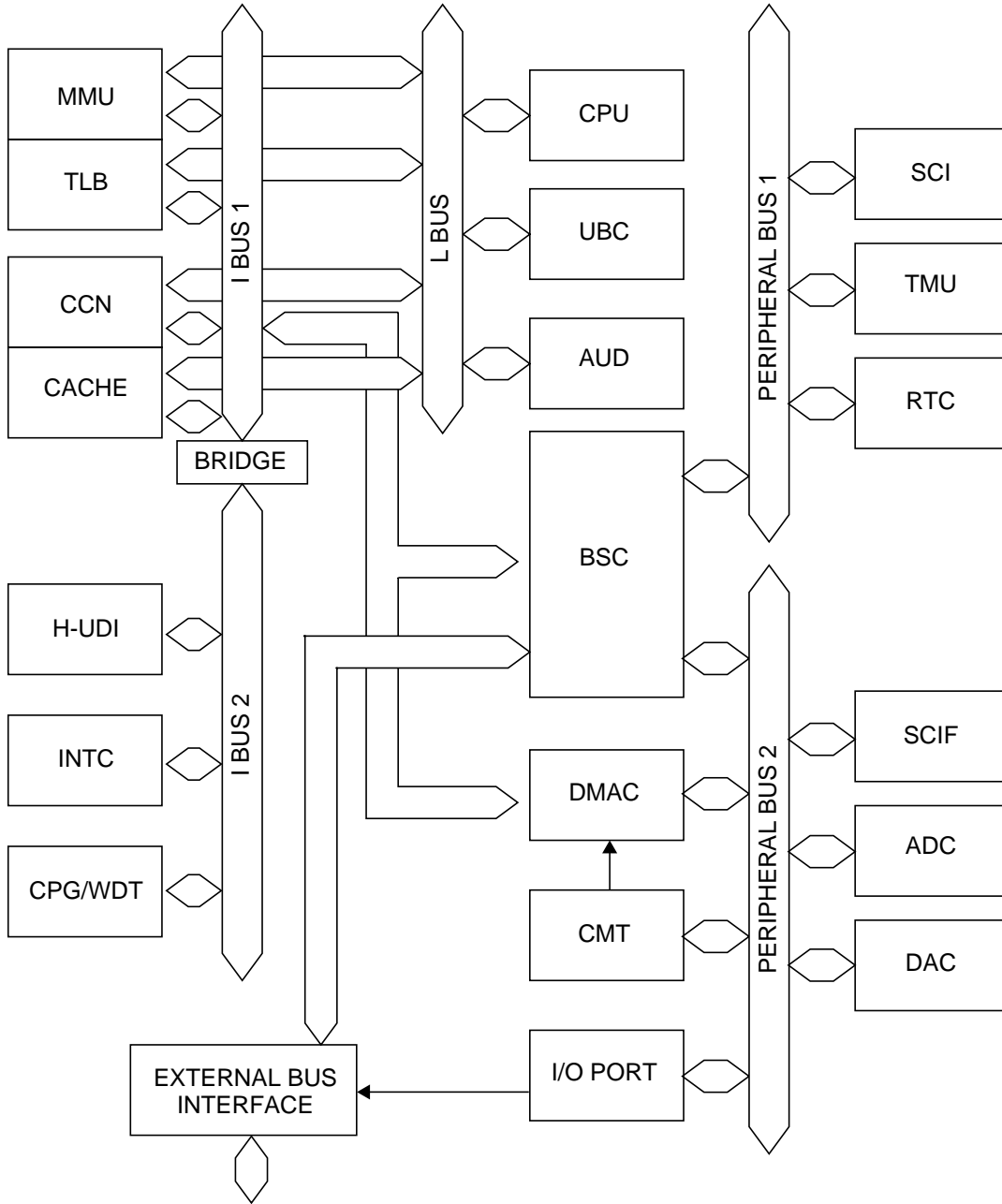
- Original Hitachi SuperH architecture
- Object code level compatible with SH-1, SH-2 and SH-3
- 32-bit RISC-type instruction set
 - Instruction length: 16-bit fixed length
 - Improved code efficiency
 - Load-store architecture
 - Delayed branch instructions
 - Instruction set oriented for C language
- Five-stage pipeline
- Instruction execution time: one instruction/cycle for basic instructions
- General-register: Sixteen 32-bit general registers
- Control-register: Eight 32-bit control registers
- System-register: Four 32-bit system registers
- 32-bit internal data bus
- Logical address space: 4 Gbytes
- Space identifier ASID: 8 bits, 256 logical address space
- Abundant Peripheral Functions
 - Memory Management Unit (MMU)
 - User Break Controller (UBC)
 - Bus state Controller (BSC)
 - Direct Memory Access Controller (DMAC)
 - Clock Pulse Generator (CPG)
 - Watchdog Timer (WDT)
 - Timer Unit (TMU)
 - Realtime Clock (RTC)
 - Serial Communication Interface (SCI)
 - Smartcard Interface
 - Serial Communication Interface with FIFO (SCIF)
 - 10-bit A/D converter (ADC)
 - 8-bit D/A converter (DAC)
 - Hitachi User Debugging Interface (H-UDI)
 - Advanced User Debugger (AUD)

2) LH28F320BFHE-PBTLZA (IC12): pin-48, TSOP (32 Mbit FLASH MEMORY)

This is a flash memory writing program and is also used for the registration data, such as telephone directory. 32 Mbit area is divided into 2 for every 16 Mbit; the lower-order and higher-order address sides are used for the program and for the registration data, respectively.

3) W986416DH or MT48LC4M16A2TG (IC25): pin-54, TSOP (64 Mbit SDRAM)

The program stored in the flash memory (IC12) mentioned in the above item 2) is downloaded to this SDRAM and used as a program execution memory. It is also used as various work memories and communication buffers. The devices manufactured by 2 enterprises are acknowledged. (Former model No.: manufactured by WINBOND, later model No.: manufactured by MICRON)



Legend:

- | | | | |
|----------|--------------------------------------|--------|--|
| ADC: | A/D converter | DMAC: | Direct memory access controller |
| AUD: | Advanced user debugger | H-UDI: | Hitachi user-debugging interface |
| BSC: | Bus state controller | INTC: | Interrupt controller |
| CACHE: | Cache memory | MMU: | Memory management unit |
| CCN: | Cache memory controller | RTC: | Realtime clock |
| CMT: | Compare match timer | SCI: | Serial communication interface (with smart card interface) |
| CPG/WDT: | Clock pulse generator/watchdog timer | SCIF: | Serial communication interface (with FIFO) |
| CPU: | Central processing unit | TLB: | Address translation buffer |
| DAC: | D/A converter | TMU: | Timer unit |
| | | UBC: | User break controller |

Fig. 2 HD6417706F133 BLOCK DIAGRAM

HD6417706F133 (IC24) Terminal description (1/2)

PIN	I/O	Name	Function	PIN	I/O	Name	Function
1	—	Vcc-RTC*1	RTC power supply (1.9 V)	52	O	A5	Address bus
2	O	XTAL2	On-chip RTC crystal oscillator pin	53	O	A6	Address bus
3	I	EXTAL2	On-chip RTC crystal oscillator pin	54	O	A7	Address bus
4	—	Vss-RTC*1	RTC power supply (0 V)	55	O	A8	Address bus
5	I/O	D31/PTB[7]	Data bus/input/output port B	56	O	A9	Address bus
6	I/O	D30/PTB[6]	Data bus/input/output port B	57	O	A10	Address bus
7	I/O	D29/PTB[5]	Data bus/input/output port B	58	O	A11	Address bus
8	I/O	D28/PTB[4]	Data bus/input/output port B	59	O	A12	Address bus
9	I/O	D27/PTB[3]	Data bus/input/output port B	60	O	A13	Address bus
10	I/O	D26/PTB[2]	Data bus/input/output port B	61	—	VssQ	Input/output power supply (0 V)
11	—	VssQ	Input/output power supply (0 V)	62	O	A14	Address bus
12	I/O	D25/PTB[1]	Data bus/input/output port B	63	—	VccQ	Input/output power supply (3.3 V)
13	—	VccQ	Input/output power supply (3.3 V)	64	O	A15	Address bus
14	I/O	D24/PTB[0]	Data bus/input/output port B	65	O	A16	Address bus
15	I/O	D23/PTA[7]	Data bus/input/output port A	66	O	A17	Address bus
16	I/O	D22/PTA[6]	Data bus/input/output port A	67	O	A18	Address bus
17	I/O	D21/PTA[5]	Data bus/input/output port A	68	O	A19	Address bus
18	I/O	D20/PTA[4]	Data bus/input/output port A	69	O	A20	Address bus
19	—	Vss	Internal power supply (0 V)	70	O	A21	Address bus
20	I/O	D19/PTA[3]	Data bus/input/output port A	71	—	Vss	Internal power supply (0 V)
21	—	Vcc	Internal power supply (1.9 V)	72	O	A22	Address bus
22	I/O	D18/PTA[2]	Data bus/input/output port A	73	—	Vcc	Internal power supply (1.9 V)
23	I/O	D17/PTA[1]	Data bus/input/output port A	74	O	A23	Address bus
24	I/O	D16/PTA[0]	Data bus/input/output port A	75	O	A24	Address bus
25	—	VssQ	Input/output power supply (0 V)	76	O	A25	Address bus
26	I/O	D15	Data bus	77	O/ I/O	BS-/PTC[0]	Bus cycle start signal/ input/output port C
27	—	VccQ	Input/output power supply (3.3 V)	78	O	RD-	Read strobe
28	I/O	D14	Data bus	79	O	WE-/DQMLL-	D7-D0 select signal/ DQM (SDRAM)
29	I/O	D13	Data bus	80	O	WE1-/DQMULU-/WE-	D15-D8 select signal/DQM (SDRAM)/write strobe (PCMCIA)
30	I/O	D12	Data bus	81	O/O/O/I/O	WE2-/DQMUL-/ICIORD/PTC[1]	D23-D16 select signal/DQM (SDRAM)/PCMCIA input/output read/ input/output port C
31	I/O	D11	Data bus	82	O/O/O/I/O	WE2-/DQMUU-/ICIOWR/PTC[2]	D31-D24 select signal/DQM (SDRAM)/PCMCIA input/output write/ input/output port C
32	I/O	D10	Data bus				
33	I/O	D9	Data bus				
34	I/O	D8	Data bus	83	O	RD/WR-	Read/write
35	I/O	D7	Data bus	84	—	VssQ	Input/output power supply (0 V)
36	I/O	D6	Data bus	85	O	CS0-	Chip select
37	—	VssQ	Input/output power supply (0 V)	86	—	VccQ	Input/output power supply (3.3 V)
38	I/O	D5	Data bus	87	O/ I/O	CS2-/PTC[3]	Chip select 2/input/output port C
39	—	VccQ	Input/output power supply (3.3 V)	88	O/ I/O	CS3-/PTC[4]	Chip select 3/input/output port C
40	I/O	D4	Data bus	89	O/ I/O	CS4-/PTC[5]	Chip select 4/input/output port C
41	I/O	D3	Data bus	90	O/O/I/O	CS5-/CE1A/PTC[6]	Chip select 5/CE1 (area 5 PCMCIA)/input/output port C
42	I/O	D2	Data bus	91	O/O/I/O	CS6-/CE1B/PTC[7]	Chip select 6/CE1 (area 6 PCMCIA)/input/output port C
43	I/O	D1	Data bus	92	O/ I/O	CE2A-/PTD[6]	Area 5 PCMCIA CE2/ input/output port D
44	I/O	D0	Data bus	93	—	VssQ	Input/output power supply (0 V)
45	O	A0	Address bus	94	O/ I/O	CE2B-/PTD[7]	Area 6 PCMCIA CE2/ input/output port D
46	O	A1	Address bus	95	—	VccQ	Input/output power supply (3.3 V)
47	O	A2	Address bus	96	O/ I/O	RASL-/PTD[0]	Lower 32 Mbytes address RAS(SDRAM)/input output port D
48	O	A3	Address bus	97	O/ I/O	RASU-/PTD[1]	Upper 32 Mbytes address RAS(SDRAM)/input output port D
49	—	VssQ	Input/output power supply (0 V)	98	O/ I/O	CASL-/PTD[2]	Lower 32 Mbytes address CAS(SDRAM)/input output port D
50	O	A4	Address bus	99	O/ I/O	CASU-/PTD[3]	Upper 32 Mbytes address CAS(SDRAM)/input output port D
51	—	VccQ	Input/output power supply (3.3 V)	100	O/ I/O	CKE/PTD[4]	CK enable(SDRAM)/input/output port D

HD6417706F133 (IC24) Terminal description (2/2)

PIN	I/O	Name	Function	PIN	I/O	Name	Function
101	I/O	IOIS16-/PTD[5]	IOIS16(PCMCIA)/input port D	139	—	VccQ	Input/output power supply (3.3 V)
102	O	BACK-	Bus acknowledge	140	O	TxD0/SCPT[0]	SCI transmit data 0/SC port
103	I	BREQ-	Bus request	141	I/O	SCK0/SCPT[1]	SCI clock 0/SC port
104	i	WAIT-	Hardware wait request	142	O	TxD2/SCPT[2]	SCIF transmit data 2/SC port
105	O/I/O	DACK0/PTE[0]	DMA acknowledge 0/input/output port E	143	I/O	SCK2/SCPT[3]	SCIF clock 2/SC port
106	O/I/O	DACK1/PTE[1]	DMA acknowledge 1/input/output port E	144	O/I/O	RTS2-/SCPT[4]	SCIF transmit request 2/SC port
107	O/I/O	DRAK0/PTE[2]	DMA request acknowledge/input/output port E	145	I	RxD0/SCPT[0]	SCI receive data 0/SC port
108	O/I/O	DRAK1/PTE[3]	DMA request acknowledge/input/output port E	146	I	RxD2/SCPT[2]	SCIF receive data 2/SC port
109	I/O	AUDATA[0]/PTF[0]	AUD data/ input/output port F	147	I	CTS2-/IRQ5/SCPT[5]	SCIF transmit clear/external interruption request/SC port
110	I/O	AUDATA[1]/PTF[1]	AUD data/ input/output port F	148	—	Vss	Internal power supply (0 V)
111	I/O	AUDATA[2]/PTF[2]	AUD data/ input/output port F	149	I	RESETM-	Manual reset request
112	I/O	AUDATA[3]/PTF[3]	AUD data/ input/output port F	150	—	Vcc	Internal power supply (1.9 V)
113	O/I/O	AUDSYNC-/PTF[4]	AUD synchronous/ input/output port F	151	I/I/O	IRQ0/IRL0-/PTH[0]	External interrupt request/input/output port H
114	I	TDI/PTG[0]	Data input(H-UDI)/input port G	152	I/I/O	IRQ1/IRL1-/PTH[1]	External interrupt request/input/output port H
115	—	Vss	Internal power supply (0 V)	153	I/I/O	IRQ2/IRL2-/PTH[2]	External interrupt request/input/output port H
116	I	TCK/PTG[1]	Clock(H-UDI)/input port G	154	I/I/O	IRQ3/IRL3-/PTH[3]	External interrupt request/input/output port H
117	—	Vcc	Internal power supply (1.9 V)	155	I/O	IRQ4/PTH[4]	External interrupt request/input/output port H
118	I	TMS/PTG[2]	Mode select(H-UDI)/input port G	156	—	VssQ	Input/output power supply (0 V)
119	I	TRST-/PTG[3]	Reset(H-UDI)/input port G	157	I	NMI	Nonmaskable interrupt request
120	O/I/O	TDO/PTF[5]	Data output(H-UDI)/input/output port F	158	—	VccQ	Input/output power supply (3.3 V)
121	O/I/O	ASEBRKAK-/PTF[6]	ASE break acknowledge(H-UDI)/input/output port F	159	I	AUDCK/PTG[4]	AUD clock/input port G
122	I	ASEMD0-*3	ASE mode(H-UDI)	160	I/O	DREQ0-/PTH[5]	DMA request/input/output port H
123	—	Vcc-PLL1*2	PLL1 power supply (1.9 V)	161	I/O	DREQ1-/PTH[6]	DMA request/input/output port H
124	—	CAP1	PLL1 external capacitance pin	162	I	ADTRG-/PTG[5]	Analog trigger/input port G
125	—	Vss-PLL1*2	PLL1 power supply (0 V)	163	I	MD0	Clock mode setting
126	—	Vss-PLL2*2	PLL2 power supply (0 V)	164	I	MD2	Clock mode setting
127	—	CAP2	PLL2 external capacitance pin	165	I	RESETP-	Power-on reset request
128	—	Vcc-PLL2*2	PLL2 power supply (1.9 V)	166	I	CA	Chip activate/hardware standby request
129	I	MD1	Clock mode setting	167	I	MD3	Area 0 bus width setting
130	—	Vss	Internal power supply (0 V)	168	I	MD4	Area 0 bus width setting
131	O	XTAL	Clock oscillator pin	169	I	MD5	Endian setting
132	I	EXTAL	External clock/crystal oscillator pin	170	—	AVss	Analog power supply (0 V)
133	O/I/O	STATUS0/PTE[4]	Processor status/input/output port E	171	I	AN[0]/PTJ[0]	A/D converter input/input port J
134	O/I/O	STATUS1/PTE[5]	Processor status/input/output port E	172	I	AN[1]/PTJ[1]	A/D converter input/input port J
135	I/O	TCLK/PTE[6]	TMU or RTC clock input/output/input/output port E	173	I/O/I	AN2[2]/DA[1]/PTJ[2]	A/D converter input/ D/A converter output/ input port J
136	O/I/O	IRQOUT-/PTE[7]	Interrupt request notification/output/input/output port E	174	I/O/I	AN3[3]/DA[0]/PTJ[3]	A/D converter input/ D/A converter output/ input port J
137	—	VssQ	Input/output power supply (0 V)	175	—	AVcc	Analog power supply (3.3 V)
138	I/O	CKIO	System clock input/output	176	—	AVss	Analog power supply (0 V)

Notes: *1 Must be connected to the power supply even when the RTC is not used.

*2 Must be connected to the power supply even when the on-chip PLL circuits are not used.(EXcept in hardware standby mode.)

*3 Must be high level when the user system is used independently without using the emulator or H-UDI.

1. Except in hardware standby mode, all Vcc/Vss pins must be connected to the system power supply. (Supply power constantly.) In hardware standby mode, power must be supplied at least to Vcc-RTC and Vss-RTC. If power is not supplied to Vcc and Vss pins other than Vcc-RTC and Vss-RTC, hold the CA pin low.

2. A1, A2, A3, A7, A12, B1, C4, C7, D1, D2, D4, D7, D14, D15, E1, E2, E3, E4, F14, F17, G17, H14, H15, K14, P14, R10, T13, T15, T16, U11, U15, and U16 must be connected to Vss.

4) LC272D0BT-WA6 (IC6): pin-216, QFP (MAIN ASIC)

The device is the embed-array, which has the following functions.

① CPU interface

The block has the following functions.

That is, mapping executed in memory areas CS0 and CS4, that are generated by main CPU (SH-3), and then wait control and access control to the peripheral devices.

② NOR type flash memory interface

The block has control the protections to each block of a NOR flash memory. The NOR flash memory is used as two provided blocks; programming memory block and the entry and history data block.

③ NAND type flash memory interface

The block has the following functions. That is, access control to flash memory (standard setting memory and optional setting memory), and generates ECC code at accessing NAND flash memory.

④ DMA request control

The block has the following functions. That is, generate the two internal DMA requests; read request from FIFO buffer for encodes and write request from FIFO buffer for decodes. And set each request to the DMA request channels, ch0 and ch1 by setting register.

⑤ Interrupt request control

The block has the following functions. That is, encode interrupt request signal code by each generated interrupt priority level. And then at the each interrupt, set priority level, mask and clear interrupt factor.

⑥ CIS control and image processing

The block has the following functions. That is control the CIS and A/D converts the scanning image data from analogue to digital, and executes the converted image data processing.

⑦ Print image processing and output printing data

The block has the following functions. That is, converts the image data for printing into 400dpi, and applies smoothing processing. And then, output the printing data, according to /HSYNC signal from PCU.

⑧ CODEC

The block has the following functions. The One, the encoding from the image data (bit map data) in the page memory to the code data (MMR/MH) in the system memory. The other, the decoding from the code data (MMR/MH) in system memory to the image data (bit map data) in the page memory.

⑨ Page memory (SDRAM) interface

SDRAM is used as Page memory. The block has the controller of SDRAM and the arbiter of the accesses to SDRAM.

⑩ Scanner motor control

The block has the following function. That is, controls the PWM current control type stepping motor driver that uses a bipolar drive scheme.

⑪ Panel/LCD control

The block has I/O port for key sense and LCD control.

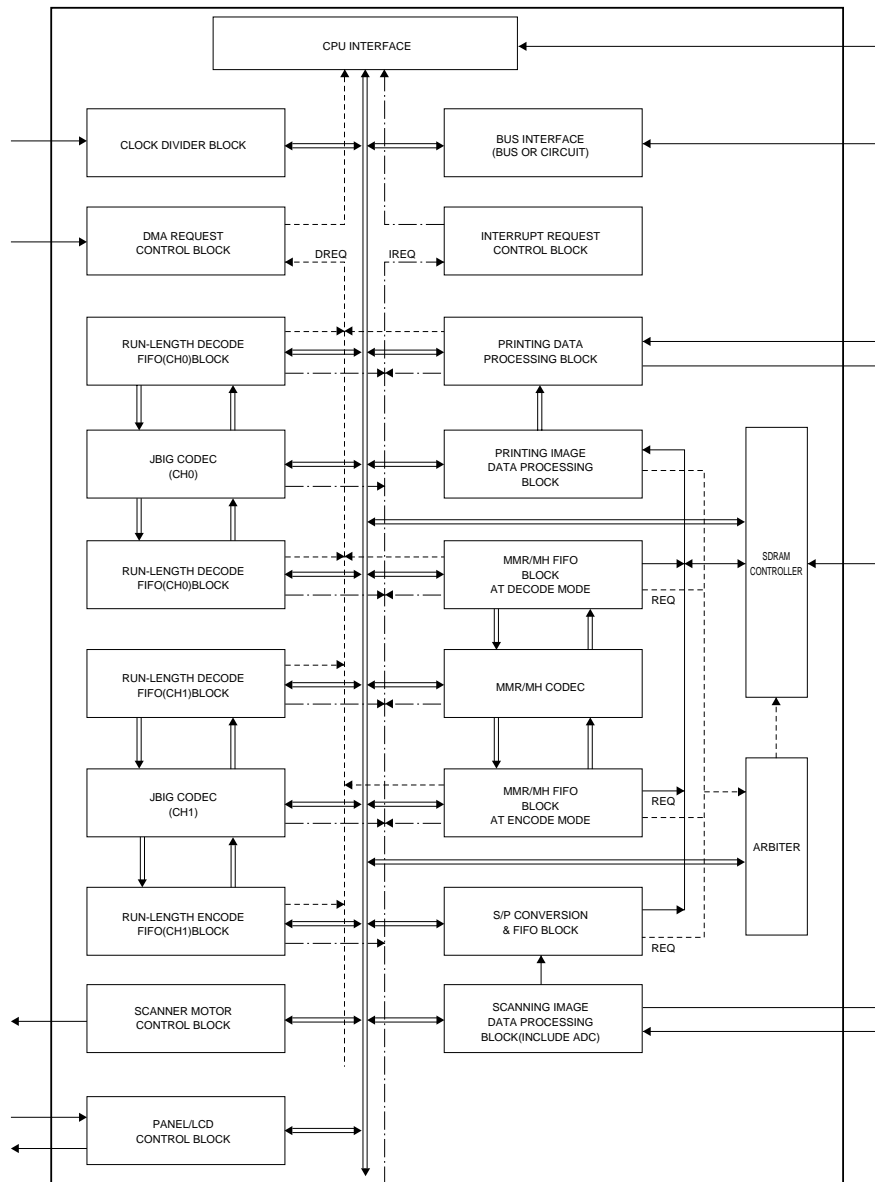


Fig. 3 LC272D0BT-WA6 BLOCK DIAGRAM

LC272D0BT-WA6 (IC6) Terminal description (1/2)

PIN	I/O	Name	Function	PIN	I/O	Name	Function
1	P	VSS	Ground	55	P	VSS	Ground
2	B	D7	Data bus	56	O	XNICACK	Acknowledge signal for NIC
3	B	D6	Data bus	57	I	XNICINT	Interrupt request from NIC board
4	B	D5	Data bus	58	O	XNICCS	Chip select (NIC Board)
5	B	D4	Data bus	59	O	XJBG1	Reserved
6	B	D3	Data bus	60	O	XJBG0	Reserved
7	B	D2	Data bus	61	B	MAD0	Data bus of page memory
8	B	D1	Data bus	62	B	MAD1	Data bus of page memory
9	B	D0	Data bus	63	P	VDD	Power supply
10	I	XCS0	Chip select (Erea 0)	64	P	VSS	Ground
11	I	XCS4	Chip select (Erea 4)	65	B	MAD2	Data bus of page memory
12	O	XDACK0	DMA acknowledge (Ch0)	66	B	MAD3	Data bus of page memory
13	O	XDACK1	DMA acknowledge (Ch1)	67	B	MAD4	Data bus of page memory
14	O	XDRAK0	DMA request acknowledge (Ch0)	68	B	MAD5	Data bus of page memory
15	O	XDRAK1	DMA request acknowledge (Ch1)	69	B	MAD6	Data bus of page memory
16	I	XDREQ0	DMA request (Ch0)	70	B	MAD7	Data bus of page memory
17	I	XDREQ1	DMA request (Ch1)	71	B	MAD8	Data bus of page memory
18	P	VDD	Power supply	72	P	VDD	Power supply
19	P	VSS	Ground	73	P	VSS	Ground
20	O	XFLCS	Chip select (Flash memory)	74	B	MAD9	Data bus of page memory
21	I	XFLSHINTA	Interrupt request of flash memory	75	B	MAD10	Data bus of page memory
22	I	XFLSHINTB	Interrupt request of flash memory	76	B	MAD11	Data bus of page memory
23	O	XINT0	Interrupt request signal	77	B	MAD12	Data bus of page memory
24	O	XINT1	Interrupt request signal	78	B	MAD13	Data bus of page memory
25	O	XINT2	Interrupt request signal	79	B	MAD14	Data bus of page memory
26	O	XINT3	Interrupt request signal	80	B	MAD15	Data bus of page memory
27	O	XPGMCS	Chip select (Program memory)	81	P	VDD	Power supply
28	O	XWROUT	Write strobe signal	82	P	VSS	Ground
29	O	XRDOU	Read strobe signal	83	O	SDCLK	Clock of page memory
30	O	XWAIT	Wait request signal	84	O	DQMUL	Data mask of page memory
31	I	XBUSYDP	Busy signal of Dual port RAM	85	O	CKE	CK enable of page memory
32	I	XMDMINT1	Interrupt request from modem chip 1	86	O	CASB	CAS of page memory
33	I	XMDMINT0	Interrupt request from modem chip 0	87	O	RASB	RAS of page memory
34	O	XMDMCS1	Chip select (Modem Chip 1)	88	O	DWEB	Write strobe of page memory
35	O	XMDMCS0	Chip select (Modem Chip 0)	89	O	XCSDRM0	Chip select of page memory
36	P	VDD	Power supply	90	P	VDD	Power supply
37	P	VSS	Ground	91	P	VSS	Ground
38	I	XINPRT	Print block clock in	92	O	MA0	Address bus of page memory
39	O	XOUTPRT	Print block clock out	93	O	MA1	Address bus of page memory
40	P	VSS	Ground	94	O	MA2	Address bus of page memory
41	I	TODB	Top of data	95	O	MA3	Address bus of page memory
42	I	HSYNC	Synchronous signal of horizontal anxious	96	O	MA4	Address bus of page memory
43	O	PDATA	Print data	97	O	MA5	Address bus of page memory
44	I	XJBGINT1	Reserved	98	O	MA6	Address bus of page memory
45	I	XJBGINT0	Reserved	99	P	VDD	Power supply
46	I	XSGAINT	Interrupt request from modem chip 0	100	P	VSS	Ground
47	I	XSBGA	Chip select (Sub Gate array)	101	O	MA7	Address bus of page memory
48	I	JBGDREQ00	Reserved	102	O	MA8	Address bus of page memory
49	I	JBGDREQ01	Reserved	103	O	MA9	Address bus of page memory
50	I	JBGDREQ10	Reserved	104	O	MA10	Address bus of page memory
51	I	JBGDREQ11	Reserved	105	O	MA11	Address bus of page memory
52	O	XJBGACK1	Reserved	106	O	MA12	Address bus of page memory
53	O	XJBGACK0	Reserved	107	O	MA13	Address bus of page memory
54	P	VDD	Power supply	108	P	VDD	Power supply

LC272D0BT-WA6 (IC6) Terminal description (2/2)

PIN	I/O	Name	Function	PIN	I/O	Name	Function
109	P	VSS	Ground	163	P	VSS	Ground
110	I	TEST0	Test pin 0	164	O	TXAI1	Current control 1 (Phase A)
111	I	TEST1	Test pin 1	165	O	TXAI0	Current control 0 (Phase A)
112	I	XINSC	Image block Clock in	166	O	CRNT0	Current change signal 0
113	O	XOUTSC	Image block Clock out	167	O	CRNT1	Current change signal 1
114	P	VSS	Ground	168	O	XLBE	Low byte(D7-D0) enable signal
115	O	TOUT	Test pin	169	I	XRESET	System Reset Signal
116	O	LININT	Monitor for line interval signal	170	O	XMANRES	Manual Reset Signal
117	O	SAMP	Monitor for sampling point	171	O	XNANDOPCS	Chip select (Optional memory)
118	O	SH	Line shift clock (CIS)	172	O	XNANDSTDCS	Chip select (Standard memory)
119	O	CLK1	Transfer clock (CIS)	173	O	XNANDRD	Read signal (Nand flash)
120	P	AVDD	Power supply (Analogue)	174	O	XNANDWR	Write signal (Nand flash)
121	P	AVSS	Analogue Ground	175	O	XWP0	Write protect (Standard)
122	I	ADREFL	Low reference voltage (ADC)	176	O	XWP1	Write protect (Optional)
123	I	TEMP	Temperature detect	177	O	ALEO	Address latch enable (Flash memory)
124	I	AVO	Video signal for scanning	178	O	CLEO	Command latch enable (Flash memory)
125	O	ATAPH	High reference voltage (ADC)	179	I	SHCK	CPU Outer bus Clock
126	P	AVDD	Power supply (Analogue)	180	P	VDD	Power supply
127	P	AVSS	Analogue Ground	181	P	VSS	Ground
128	P	VDD	Power supply	182	I	RXW	Read/Write signal
129	P	VSS	Ground	183	I	XBS	Bus cycle start signal
130	O	PLTSW	Plate SW detect	184	I	A25	Address bus bit25
131	O	BKLN	Back light on/off control	185	I	A24	Address bus bit24
132	I	SEN7	Key sense signal	186	I	A23	Address bus bit23
133	I	SEN6	Key sense signal	187	I	A22	Address bus bit22
134	I	SEN5	Key sense signal	188	I	A21	Address bus bit21
135	I	SEN4	Key sense signal	189	I	A20	Address bus bit20
136	I	SEN3	Key sense signal	190	I	A13	Address bus bit13
137	I	SEN2	Key sense signal	191	I	A12	Address bus bit12
138	I	SEN1	Key sense signal	192	I	A11	Address bus bit11
139	I	SEN0	Key sense signal	193	I	A10	Address bus bit10
140	B	LD15	LED	194	I	A9	Address bus bit9
141	B	LD14	LED	195	I	A8	Address bus bit8
142	B	LD13	LCD drive signal	196	I	A7	Address bus bit7
143	B	LD12	LCD drive signal	197	I	A6	Address bus bit6
144	P	VDD	Power supply	198	P	VDD	Power supply
145	P	VSS	Ground	199	P	VSS	Ground
146	B	LD11	Reserved	200	I	A5	Address bus bit5
147	B	LD10	Reserved	201	I	A4	Address bus bit4
148	B	LD9	Reserved	202	I	A3	Address bus bit3
149	B	LD8	Reserved	203	I	A2	Address bus bit2
150	B	LD7	LCD drive	204	I	A1	Address bus bit1
151	B	LD6	LCD drive	205	I	A0	Address bus bit0
152	B	LD5	LED/LCD drive	206	B	XWE0	D7-D0 select signal
153	B	LD4	LED/LCD drive	207	B	XOPDEN	Bus buffer enable control
154	B	LD3	Key matrix select/LED/LCD drive	208	B	D15	Data bus bit15
155	B	LD2	Key matrix select/LED/LCD drive	209	B	D14	Data bus bit14
156	B	LD1	Key matrix select/LED/LCD drive	210	B	D13	Data bus bit13
157	B	LD0	Key matrix select/LED/LCD drive	211	B	D12	Data bus bit12
158	O	TXB	Current direction (Phase B)	212	B	D11	Data bus bit11
159	O	TXBI1	Current control 1 (Phase B)	213	B	D10	Data bus bit10
160	O	TXBI0	Current control 0 (Phase B)	214	B	D9	Data bus bit9
161	O	TXA	Current direction (Phase A)	215	B	D8	Data bus bit8
162	P	VDD	Power supply	216	P	VDD	Power supply

5) LC24199B-WJ0-E (IC21): pin-216, QFP (SUB ASIC)

The device is the gate-array, which has the following functions.

① PCU (Print Control Unit) interface

The block has the serial communication to PCU, and using this circuitry, controls/detects PCU.

② I/O port

The block has the following functions; LIU interface, Speaker control and sensor detect, which are controlled with software.

③ Generator of buzzer's frequency

The block has the generated buzzer's frequency by the software.

④ RTC (Real Time Clock) LSI control

Using serial communication to RTC, the device set and read the time.

⑤ Verification stamp control

The software control on/off of the verification stamp. And the control block has hardware timer instead of the continuous stamp-on status.

⑥ Original sensor detect

The software detects the original sensor. And then the control block has the generated interrupt circuitry by detecting the sensor signal risen/fallen.

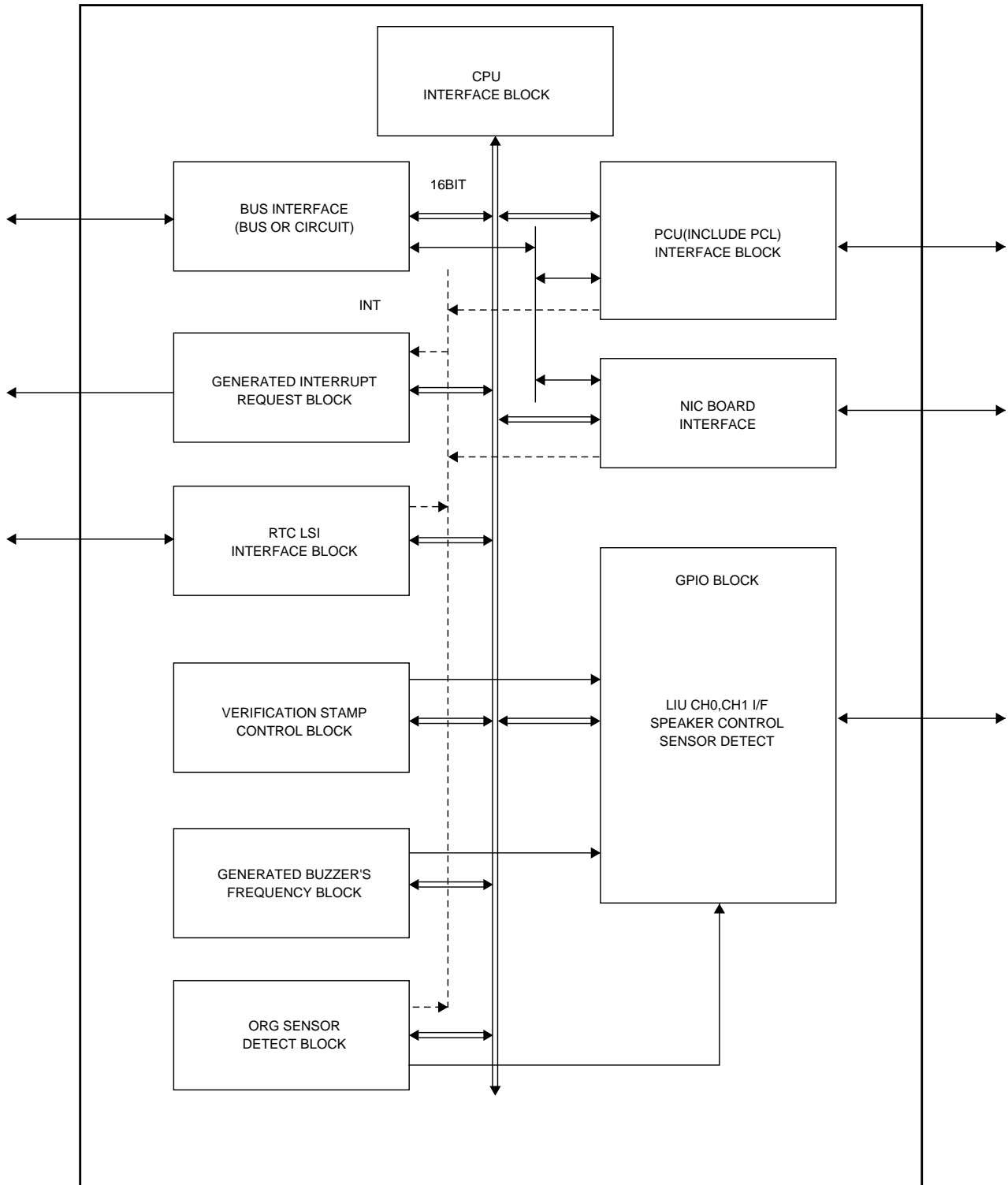


Fig. 4 LC24199B-WJ0-E BLOCK DIAGRAM

LC24199B-WJ0-E (IC21) Terminal description (1/2)

PIN	I/O	Name	Function	PIN	I/O	Name	Function
1	P	VSS	Ground	55	P	VSS	Ground
2	—	N.C	Not connect	56	—	N.C	Not connect
3	I	XCI1	CI detect signal	57	B	DPOPCL10	GPO bus for PCL board
4	O	ERLY0	Reserved for 200V	58	B	DPOPCL11	GPO bus for PCL board
5	O	GAINC0	Reserved for 200V	59	B	DPOPCL12	GPO bus for PCL board
6	O	DPMUTE0	Reserved for 200V	60	B	DPOPCL13	GPO bus for PCL board
7	O	CML0	CML relay control signal	61	B	DPOPCL14	GPO bus for PCL board
8	O	TXMUTE0	Mute control for TX signal	62	B	DPOPCL15	GPO bus for PCL board
9	O	DPON0	Active choke control	63	I	DPAPCL0	Address bus for NIC board (PCL)
10	I	XEXHS0	Hook detect signal for external telephone	64	I	DPAPCL1	Address bus for NIC board (PCL)
11	I	XCI0	CI detect signal	65	I	DPAPCL2	Address bus for NIC board (PCL)
12	I	PDATAM	Print data form main	66	I	DPAPCL3	Address bus for NIC board (PCL)
13	O	CTBSYB	Controller status busy	67	I	DPAPCL4	Address bus for NIC board (PCL)
14	O	CPRDYB	Controller power ready	68	I	DPAPCL5	Address bus for NIC board (PCL)
15	I	ETBSYB	Engine status busy	69	I	DPAPCL6	Address bus for NIC board (PCL)
16	P	VDD	Power supply	70	P	VDD	Power supply
17	P	VSS	Ground	71	P	VSS	Ground
18	I	PRRDYB	Printer ready	72	I	DPAPCL7	Address bus for NIC board (PCL)
19	I	EPRDYB	Engine power ready	73	I	DPAPCL8	Address bus for NIC board (PCL)
20	O	PDATA	Video data of printer	74	I	DPAPCL9	Address bus for NIC board (PCL)
21	O	PCURESB	PCU reset signal	75	I	DPAPCL10	Address bus for NIC board (PCL)
22	O	PCLK	Serial communication clock	76	I	DPAPCL11	Address bus for NIC board (PCL)
23	I	PSTS	Status data from PCU	77	I	DPAPCL12	Address bus for NIC board (PCL)
24	O	PCMD	Command data to PCU	78	I	DPAPCL13	Address bus for NIC board (PCL)
25	I	CTBSYPCLB	Controller status busy in PCL mode	79	I	DPAPCL14	Address bus for NIC board (PCL)
26	I	CPRDYPCLB	Controller power ready in PCL mode	80	I	DPAPCL15	Address bus for NIC board (PCL)
27	O	ETBSYPCLB	Engine status busy in PCL mode	81	I	DPAPCL16	Address bus for NIC board (PCL)
28	O	PRRDYPCLB	Printer ready in PCL mode	82	I	XCSNICP	Chip select signal
29	O	EPRDYPCLB	Engine power ready in PCL mode	83	B	DPONIC0	DPO bus for NIC board
30	I	PDATAINPCL	Video data from PCL	84	B	DPONIC1	DPO bus for NIC board
31	O	PCLRESB	PCL reset signal	85	B	DPONIC2	DPO bus for NIC board
32	O	XNICACKP	Acknowledge signal for NIC in PCL mode	86	B	DPONIC3	DPO bus for NIC board
33	I	RXWP	READ/WRITE signal from PCL	87	B	DPONIC4	DPO bus for NIC board
34	P	VDD	Power supply	88	P	VDD	Power supply
35	P	VSS	Ground	89	P	VSS	Ground
36	I	PCLKPCL	Serial communication clock in PCL mode	90	B	DPONIC5	DPO bus for NIC board
37	O	PSTSPCL	Status data from PCU in PCL mode	91	B	DPONIC6	DPO bus for NIC board
38	I	PCMDPCL	Command data to PCL in PCL mode	92	B	DPONIC7	DPO bus for NIC board
39	O	PACK	Printing acknowledge signal	93	B	DPONIC8	DPO bus for NIC board
40	I	PREQ	Printing request signal	94	B	DPONIC9	DPO bus for NIC board
41	B	DPOPCL0	GPO bus for PCL board	95	B	DPONIC10	DPO bus for NIC board
42	B	DPOPCL1	GPO bus for PCL board	96	B	DPONIC11	DPO bus for NIC board
43	B	DPOPCL2	GPO bus for PCL board	97	B	DPONIC12	DPO Bus for NIC Board(*2)
44	B	DPOPCL3	GPO bus for PCL board	98	B	DPONIC13	DPO Bus for NIC Board(*2)
45	B	DPOPCL4	GPO bus for PCL board	99	B	DPONIC14	DPO Bus for NIC Board(*2)
46	B	DPOPCL5	GPO bus for PCL board	100	B	DPONIC15	DPO Bus for NIC Board(*2)
47	B	DPOPCL6	GPO bus for PCL board	101	O	NICRESB	Reset for NIC
48	B	DPOPCL7	GPO bus for PCL board	102	O	RXWNIC	R/W signal for NIC
49	B	DPOPCL8	GPO bus for PCL board	103	O	XNICACKH	XACK to HOST
50	B	DPOPCL9	GPO bus for PCL board	104	O	XCSNIC	Chip Select Signal for NIC
51	—	N.C	Not connect	105	—	N.C	Not connect
52	P	VDD	Power supply	106	P	VDD	Power supply

LC24199B-WJ0-E (IC21) Terminal description (2/2)

PIN	I/O	Name	Function	PIN	I/O	Name	Function
105	P	VSS	Ground	157	P	VSS	Ground
106	I	SDDCT	SD DICT in	158	I	A3	Address bus
107	I	DPANIC0	Address bus for NIC board	159	I	A2	Address bus
108	I	DPANIC1	Address bus for NIC board	160	I	A1	Address bus
109	O	DPANIC2	Address bus for NIC board	161	I	A0	Address bus
110	P	DPANIC3	Address bus for NIC board	162	I	XWE	Write strobe signal from COSMOS
111	O	DPANIC4	Address bus for NIC board	163	I	RXW	Read/Write Signal
112	O	DPANIC5	Address bus for NIC board	164	I	XRD	Read strobe signal from COSMOS
113	O	DPANIC6	Address bus for NIC board	165	B	D15	Data bus
114	O	DPANIC7	Address bus for NIC board	166	B	D14	Data bus
115	O	DPANIC8	Address bus for NIC board	167	B	D13	Data bus
116	P	DPANIC9	Address bus for NIC board	168	B	D12	Data bus
117	P	DPANIC10	Address bus for NIC board	169	B	D11	Data bus
118	I	DPANIC11	Address bus for NIC board	170	B	D10	Data bus
119	I	DPANIC12	Address bus for NIC board	171	B	D9	Data bus
120	I	VDD	Power supply	172	P	VDD	Power supply
121	O	VSS	Ground	173	P	VSS	Ground
122	—	N.C	Not connect	174	B	D8	Data bus
123	P	DPANIC13	Address bus for NIC board	175	B	D7	Data bus
124	P	DPANIC14	Address bus for NIC board	176	B	D6	Data bus
125	P	DPANIC15	Address bus for NIC board	177	B	D5	Data bus
126	O	DPANIC16	Address bus for NIC board	178	B	D4	Data bus
127	O	XCSNICIN	Chip select of NIC in FAX mode	179	B	D3	Data bus
128	I	GPIO4	PWSAVE: Powr save control for PS-unit	180	B	D2	Data bus
129	I	GPIO5	LEDON: Light ON/OFF for LED in CIS	181	B	D1	Data bus
130	I	GPIO6	VPPCN: VPP control of nor flash memory	182	B	D0	Data bus
131	I	GPIO7	XWP: Write protect for nor flash memory	183	—	N.C	Not connect
132	I	XNICACK	Acknowledge signal for NIC	184	O	INTR	Interrupt request signal
133	I	XROLSNS	Roller position sensor	185	I	XRESET	Reset signal
134	I	XORGSNS	Document sensor	186	I	TEST	Test pin
135	I	XFRSNS	Front sensor	187	O	RTCCE	Chip select (RTC)
136	B	XB4FRS	B4 width sensor	188	O	RTCK	Serial communication clock (RTC)
137	B	PLNGON	Plunger control signal	189	B	RTCDT	Serial communication data (RTC)
138	B	VDD	Power supply	190	P	VDD	Power supply
139	B	VSS	Ground	191	P	VSS	Ground
140	P	SHCLK	External bus Clock(33.3MHz)	192	O	XMDMRST1	Reset signal for modem chip 1
141	P	XCS	Chip select signal	193	O	XMDMRST0	Reset signal for modem chip 0
142	B	A16	Address bus	194	O	BZCONT	Change control of sound source
143	B	A15	Address bus	195	O	SPMUTE	Speaker mute control signal
144	B	A14	Address bus	196	O	VOLC	Speaker volume control signal
145	B	A13	Address bus	197	O	VOLB	Speaker volume control signal
146	B	A12	Address bus	198	O	VOLA	Speaker volume control signal
147	B	A11	Address bus	199	O	BZOUT	Buzzer signal
148	B	A10	Address bus	200	O	GAINC1	Reserved for 200V
149	B	A9	Address bus	201	O	ERLY1	Reserved for 200V
150	B	A8	Address bus	202	O	DPMUTE1	Reserved for 200V
151	B	A7	Address bus	203	O	CML1	CML relay control signal
152	B	A6	Address bus	204	O	TXMUTE1	Mute control for TX signal
153	B	A5	Address bus	205	O	DPON1	Active choke control
154	O	A4	Address bus	206	O	MONSEL	Monitor select/DC character measured
155	—	N.C	Not connect	207	—	N.C	Not connect
156	P	VDD	Power supply	208	P	VDD	Power supply

6) SM8578BV (IC22): pin-8, SOP (Real time clock IC)

It is oscillated with the quartz oscillator of 32.768 kHz, and the clock and calendar functions are provided.

Even if the power supply of the main body is turned off, it is backed up with lithium battery (BAT1).

This device executes the clock-synchronous type serial communication with the Sub ASIC, and CPU can know the time and date through the Sub ASIC.

(2) Backup memory block

This block consists of flash memory for the image memory and 256 Kbit SRAM backed up with a battery.

The image memory has a standard capacity of 2 Mbytes, and it is possible to extend the memory to 10 Mbytes in total by installing the option memory FO-8MK to the connector CNOP1.

1) TC58V64BFT (IC27) ... pin-44, TSOP (64 Mbit NAND EEPROM)

This is non-volatile memory whose contents are not deleted even when the power is turned off. 2 Mbytes are available as an area for storing the encoded data of the copies or transmitted/received images.

It is controlled via the above-mentioned MAIN ASIC (IC6).

2) BS62LV256SC-70 (IC19) ... pin-28, SOP (256 Kbit SRAM)

Operation information before shutting off the power supply, user setting content and soft switch content are stored. Even if the power supply of the main body is turned off, it is backed up with a lithium battery (BAT1).

(3) Modem block

The block is mainly composed of the G3 FAX modem FM336PLus (IC30), and is provided with the following modem function.

1) G3 FAX modem

The modem satisfies the requirements specified in ITU-T recommendations V.34 half-duplex, V.17, V.33, V.29, V.27 ter, V.21, and meets the binary signaling requirements of V.8 and T.30 with Annex F.

Internal HDLC support eliminates the need for an external serial input/output (SIO) device in the DTE for products incorporating error detection and T.30 protocol. The modem can perform HDLC framing per T.30 at all data speeds. CRC generation/checking along with zero insertion/deletion enhances SDLC/HDLC frame operations. Two FSK (V.21 Ch. 1 and V.21 Ch. 2) flag pattern detectors facilitate FSK detection during high-speed reception. The modem features a programmable DTMF transmitter/receiver and three programmable tone detectors.

2) Features

- 2-wire half-duplex fax modem modes with send and receive data rates up to 33.6 kbps.
 - V.34 half-duplex, V.17, V.33, V.29, V.27 ter, and V.21 Channel 2
 - Short train option in V.17 and V.27 ter
- 2-wire duplex data modem modes
 - V.21, V.23 (75 bps TX/1200 bps RX or 1200 bps TX/75 bps RX)
- PSTN session starting
 - V.8 and V.8 bis signaling
- HDLC support at all speeds
 - Flag generation, 0-bit stuffing, ITU-T CRC-16 or CRC-32 calculation and generation
 - Flag detection, 0-bit stuffing, ITU-T CRC-16 or CRC-32 check sum error detection
 - FSK flag pattern detection during high-speed receiving
- Tone modes and features
 - Programmable single or dual tone generation
 - DTMF receiver
 - Tone detection with three programmable tone detectors
- Serial and parallel synchronous data
- Automatic Rate Adaptation (ARA) in V.34 half-duplex
- Auto-dial and auto-answer control
- TTL and CMOS compatible DTE interface
 - ITU-T V.24 (EIA/TIA-232-E) (data/control)
 - Microprocessor bus (data/configuration/control)
- Receive dynamic range:
 - 0 dBm to -43 dBm for V.17, V.33, V.29, V.27 ter and V.21
 - -9 dBm to -43 dBm for V.34 half-duplex
- Caller ID Demodulation
- Single tone detection in Data Mode
- ADPCM Voice Mode (Conexant Proprietary)
- Programmable RSLD turn-on and turn-off thresholds
- Programmable transmit level: 0 to -15 dBm
- Adjustable speaker output to monitor received signal
- DMA support for interrupt lines
- Two 16-byte FIFO data buffers for burst data transfer with extension up to 255 bytes
- Diagnostic capability
- V.21 Channel 1 Flag detect and V.21 Channel 2 Flag detect
- +3.3 V operation with +5 V tolerant inputs
- +5 V analog signal interface
- 100-pin PQFP package
- Typical power consumption
 - Normal mode:
 - VDD1 = 250 mW (+3.3 V for DSP); VDD = 35 mW (+5 V for IA)
 - Sleep mode:
 - VDD1 = 20 mW (+3.3 V for DSP); VDD = 0.1 mW (+5 V for IA)

3) Configurations, Signaling Rates, and Data Rates

Configuration	Modulation	Carrier Frequency (Hz) ± 0.01 %	Data Rate (bps) ± 0.01 %	Symbol Rate (Symbols/Sec.)	Bits/Symbol-Data	Bits/Symbol-TCM	Constellation Points
V.90 PCM	PCM	—	56000 R/V.34 rates T (Note 4)	8000	Dynamic	—	—
V. 34 33600 TCM ³	TCM	Note 2	33600	3429 only	Note 2	Note 2	Note 2
V. 34 31200 TCM ³	TCM	Note 2	31200	3200 min	Note 2	Note 2	Note 2
V. 34 28800 TCM ³	TCM	Note 2	28800	3000 min	Note 2	Note 2	Note 2
V. 34 26400 TCM ³	TCM	Note 2	26400	2800 min	Note 2	Note 2	Note 2
V. 34 24000 TCM ³	TCM	Note 2	24000	2800 min	Note 2	Note 2	Note 2
V. 34 21600 TCM ³	TCM	Note 2	21600	2400 min	Note 2	Note 2	Note 2
V. 34 19200 TCM ³	TCM	Note 2	19200	Note 2	Note 2	Note 2	Note 2
V. 34 16800 TCM ³	TCM	Note 2	16800	Note 2	Note 2	Note 2	Note 2
V. 34 14400 TCM ³	TCM	Note 2	14400	Note 2	Note 2	Note 2	Note 2
V. 34 12000 TCM ³	TCM	Note 2	12000	Note 2	Note 2	Note 2	Note 2
V. 34 9600 TCM ³	TCM	Note 2	9600	Note 2	Note 2	Note 2	Note 2
V. 34 7200 TCM ³	TCM	Note 2	7200	Note 2	Note 2	Note 2	Note 2
V. 34 4800 TCM ³	TCM	Note 2	4800	Note 2	Note 2	Note 2	Note 2
V. 34 2400 TCM ³	TCM	Note 2	2400	2400 only	Note 2	Note 2	Note 2
V. 32 bis 14400 TCM	TCM	1800	14400	2400	6	1	128
V. 32 bis 12000 TCM	TCM	1800	12000	2400	5	1	64
V. 32 bis 9600 TCM	TCM	1800	9600	2400	4	1	32
V. 32 bis 7200 TCM	TCM	1800	7200	2400	3	1	16
V. 32 bis 4800	QAM	1800	4800	2400	2	0	4
V. 32 9600 TCM	TCM	1800	9600	2400	4	1	32
V. 32 9600	QAM	1800	9600	2400	4	0	16
V. 32 4800	QAM	1800	4800	2400	2	0	4
V. 22 bis 2400	QAM	1200/2400	2400	600	4	0	16
V. 22 bis 1200	DPSK	1200/2400	1200	600	2	0	4
V. 22 1200	DPSK	1200/2400	1200	600	2	0	4
V. 22 600	DPSK	1200/2400	600	600	1	0	4
V. 23 1200/75	FSK	1700/420	1200/75	1200	1	0	—
V. 21	FSK	1080/1750	Up to 300	300	1	0	—
Bell 208 4800	DPSK	1800	4800	1600	3	0	8
Bell 212A	DPSK	1200/2400	1200	600	2	0	4
Bell 103	FSK	1170/2125	Up to 300	300	1	0	—
V. 17 14400 TCM/V.33	TCM	1800	14400	2400	6	1	128
V. 17 12000 TCM/V.33	TCM	1800	12000	2400	5	1	64
V. 17 9600 TCM	TCM	1800	9600	2400	4	1	32
V. 17 7200 TCM	TCM	1800	7200	2400	3	1	16
V. 29 9600	QAM	1700	9600	2400	4	0	16
V. 29 7200	QAM	1700	7200	2400	3	0	8
V. 29 4800	QAM	1700	4800	2400	2	0	4
V. 27 4800	DPSK	1800	4800	1600	3	0	8
V. 27 2400	DPSK	1800	2400	1200	2	0	4
V. 21 Channel 2	FSK	1750	300	300	1	0	—

Notes:

1. Modulation legend: TCM: Trellis-Coded Modulation QAM: Quadrature Amplitude Modulation PCM: Pulse Coded Modulation
FSK: Frequency Shift Keying DPSK: Differential Phase Shift Keying

2. Adaptive; established during handshake:

Symbol Rate (Baud)	V. 34 Low Carrier Frequency (Hz)	V. 34 High Carrier Frequency (Hz)
2400	1600	1800
2800	1680	1867
3000	1800	2000
3200	1829	1920
3429	1959	1959

3. For both duplex and half-duplex modes.
4. Maximum data rate.

FM336Plus (IC30) Terminal description

PIN	I/O	Name	Interface	PIN	I/O	Name	Interface
1	—	RESERVED	NC	51	—	RESERVED	NC
2	IA	RS2	HOST Interface	52	GND	VSUB	—
3	IA	RS3	HOST Interface	53	GND	VSS	—
4	IA	RS4	HOST Interface	54	—	NC	NC
5	IA	/CS	OHOST Interface	55	—	NC	NC
6	IA	/WR	HOST Interface	56	MI	SLEEP	Modem Interconnect
7	IA	/RD	HOST Interface	57	PWR	VDD1	—
8	OA	/RDCLK	DTE Serial Interface	58	—	NC	NC
9	OA	/RLSD	DTE Serial Interface	59	—	RESERVED	NC
10	OA	TDCLK	DTE Serial Interface	60	—	RESERVED	NC
11	IA	TXD	DTE Serial Interface	61	MI	SR1IO	Modem Interconnect
12	OA	/CTS	DTE Serial Interface	62	PWR	VCORE	—
13	PWR	VDD1	—	63	PWR	VDD1	—
14	—	RESERVED	NC	64	IA	XTCLK	DTE Serial Interface
15	—	RESERVED	NC	65	GND	VSS	—
16	GND	VSS	—	66	—	RESERVED	NC
17	—	NC	NC	67	OA	RXD	DTE Serial Interface
18	IA	/RESET	Modem Interconnect	68	IA	/DTR	DTE Serial Interface
19	OA	SR4OUT	Modem Interconnect	69	PWR	VDD1	—
20	—	NC	NC	70	MI	IA SLEEP	Modem Interconnect
21	IA	SR4IN	Modem Interconnect	71	PWR	VGG	—
22	OA	CLK OUT	Modem Interconnect	72	OA	YCLK	Overhead Signal
23	OA	EYESYNC	Diagnostic Signal	73	OA	XCLK	Overhead Signal
24	OA	EYECLK	Diagnostic Signal	74	OA	EYEXY	Diagnostic Signal
25	GND	MAVSS	—	75	OA	/DSR	DTE Serial Interface
26	PWR	MAVDD	—	76	OA	/RI	Telephone Line Interface
27	O(DF)	SPKR	Telephone Line Interface	77	IA	RINGD	Telephone Line Interface
28	O(DD)	TXA2	Telephone Line Interface	78	IA	/RTS	DTE Serial Interface
29	O(DD)	TXA1	Telephone Line Interface	79	OA	IRQ	HOST Interface
30	MI	VREF	Modem Interconnect	80	GND	VSS	—
31	MI	VC	Modem Interconnect	81	MI	GP00	Modem Interconnect
32	I(DA)	RIN	Telephone Line Interface	82	—	RESERVED	NC
33	AGND	MAVSS	—	83	—	RESERVED	NC
34	IA	/POR	Modem Interconnect	84	PWR	VDD1	—
35	—	RESERVED	NC	85	I	XTALI/CLKIN	Overhead Signal
36	—	RESERVED	NC	86	O	XTALO	Overhead Signal
37	O(DD)	/TALK	Telephone Line Interface	87	IA/OB	D0	HOST Interface
38	PWR	VDD	—	88	IA/OB	D1	HOST Interface
39	—	RESERVED	NC	89	IA/OB	D2	HOST Interface
40	—	RESERVED	NC	90	IA/OB	D3	HOST Interface
41	—	NC	NC	91	IA/OB	D4	HOST Interface
42	IA	M CNTRL SIN	Modem Interconnect	92	PWR	VDD1	—
43	IA	M CLKIN	Modem Interconnect	93	IA/OB	D5	HOST Interface
44	IA	M TXSIN	Modem Interconnect	94	IA/OB	D6	HOST Interface
45	IA	M SCK	Modem Interconnect	95	IA/OB	D7	HOST Interface
46	IA	M RXOUT	Modem Interconnect	96	IA/OB	RS0	HOST Interface
47	IA	M STROBE	Modem Interconnect	97	IA/OB	RS1	HOST Interface
48	—	RESERVED	NC	98	PWR	PLL VDD	—
49	O(DD)	OH	Telephone Line Interface	99	GND	VSS	—
50	PWR	VDD	—	100	GND	PLL GND	—

Notes:

- I/O types: MI: Modem interconnect IA, IB: Digital input O(DD), O(DF): Analog input
I(DA): Analog input OA, OB: Digital output
- NC= No external connection required. RESERVED= No external connection allowed.
- Interface Legend:
HOST= Modem Control Unit (Host)
DET= Data Terminal Equipment

(4) Scanner control block

1) Image signal process block

The CIS is driven by MAIN ASIC (IC6), and the output video signal from the CIS is input into IC6 through the amplifying circuit. The ADC and buffer are provided in IC6, and the digital image processing is performed.

2) Mechanical control block

The mechanical control block is mainly composed of MAIN ASIC to control the following.

(a) Scanner motor control

The revolution speed and timing of the scanner motor are controlled to output the control signals to the motor driver (IC3).

(b) Verification stamp and LED lamp control

On/off of the end verification and LED lamp of CIS is controlled with the software.

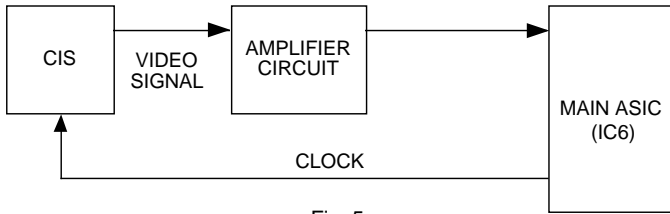


Fig. 5

(5) Speaker amplifier

The speaker amplifier monitors the line under the on-hook mode, outputs the buzzer sound generated by SUB ASIC, ringer sound, DTMF generated from the modem, and line sound.

(6) Page memory block

W986416DH or MT48LC4M16A2TG (IC5): pin-54, TSOP (64 Mbit SDRAM)

The page memory block is composed of one SDRAM of 64 Mbits, being commonly used as the image memory. The memory is divided into the page memory for the scanner and the page memory for printing. This memory is controlled by the MAIN ASIC directly.

The page memory for scanner is composed of the partial area of IC5. The image data of approx. one page (except in the super fine mode) of the draft read with the scanner can be stored. They are stored until they are contracted by CODEC function in MAIN ASIC.

The page memory for printing is composed of the remaining areas of IC5 and can store approx. one page of the image data decoded by CODEC function in MAIN ASIC. The data are stored until they are transferred to Printer PWB with the SUB ASIC and printed.

(7) Driver block

Sending motor driver (IC3: LB1845) ---- 28-pin DIP

This IC driver at the sending motor at the constant current with the bipolar, chopper system.

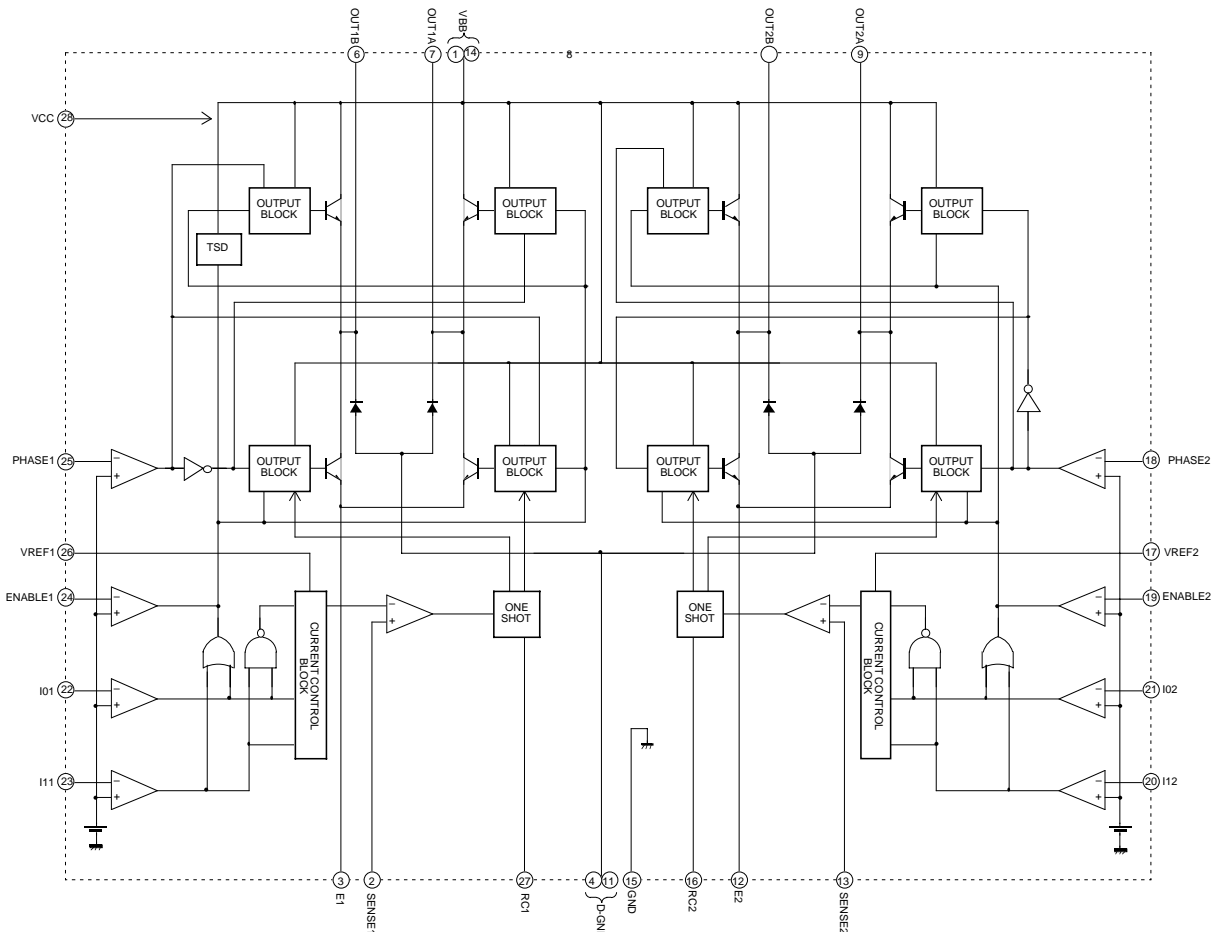


Fig. 6

I0	I1	Output Current
L	L	$V_{ref} / (10 \times R_E) = I_{OUT}$
H	L	$V_{ref} / (15 \times R_E) = I_{OUT} \times 2/3$
L	H	$V_{ref} / (30 \times R_E) = I_{OUT} \times 1/3$
H	H	0

Note: When ENABLE = H or I0 = I1 = H, the output is in OFF state.

[Truth Table]

ENABLE	PHASE	OUTA	OUTB
L	H	H	L
L	L	L	H
H	-	OFF	OFF

LB1845 (IC3) Terminal description

Pin name	Pin No.	Pin Description
VBB	1, 14	Output stage power-supply voltage
SENSE1 SENSE2	2 13	Set current detection pins. Connect these pins, fed back through noise filters, to E1, and E2.
E1 E2	3 12	Current control pins by connecting between this pin and GND.
DGND	4,11	Internal diode anode connection
OUT1B OUT1A OUT2B OUT2A	6 7 8 9	Output pins
GND	15	Ground
RC1 RC2	27 16	Used to set the output off time for the switched output signals. The fixed off times are set by the capacitors and resistors connected to these pins. $t_{off} \approx CR$
Vref1 Vref2	26 17	Output current settings The output current is determined by the voltage (in the range 1.5 to 7.5V) input to these pins.
PHASE1 PHASE2	25 18	Output phase switching inputs. [H] input : OUT A = high, OUT B = low [L] input : OUT A = low, OUT B = high
ENABLE1 ENABLE2	24 19	Output on/off settings [H] input : output OFF [L] input : output ON
I01, I11 I02, I12	22, 23 21, 20	Digital inputs that set the output current The output currents can be set to 1/3, 2/3, or full by setting these pins to appropriate combinations of high and low levels.
VCC	28	Logic block power supply.

[3] Circuit description of CIS unit

1. CIS

CIS is an image sensor which puts the original paper in close contact with the full-size sensor for scanning, being a monochromatic type with the pixel number of 1,728 dots and the main scanning density of 8 dots/mm.

It is composed of sensor, rod lens, LED light source, control circuit and so on, and the reading line and focus are previously adjusted as the unit.

Due to the full-size sensor, the focus distance is so short that the set is changed from the light weight type to the compact type.

2. Waveforms

The following clock is supplied from LC272DOBT-WA6 via 74HCT244 on the control board, and AO is output.

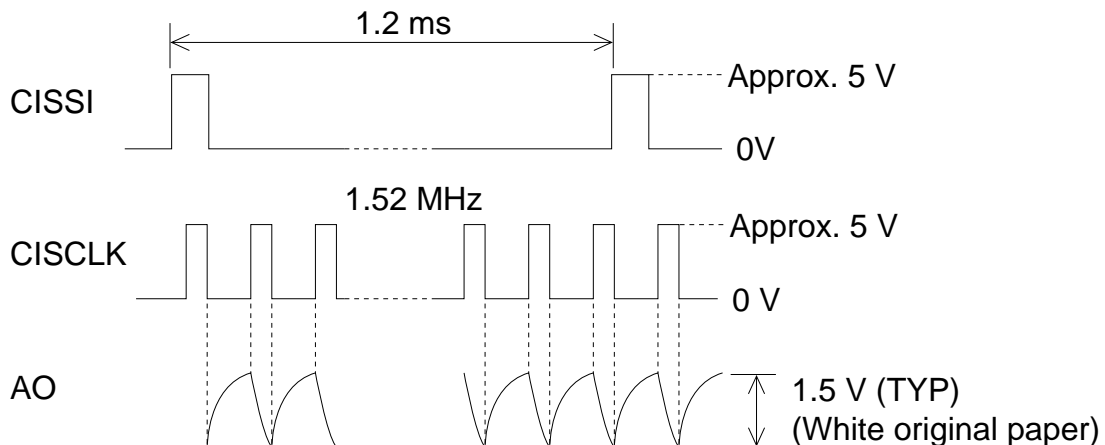


Fig. 7

[4] Circuit description of LIU PWB

(1) LIU block operational description

1) Block diagram

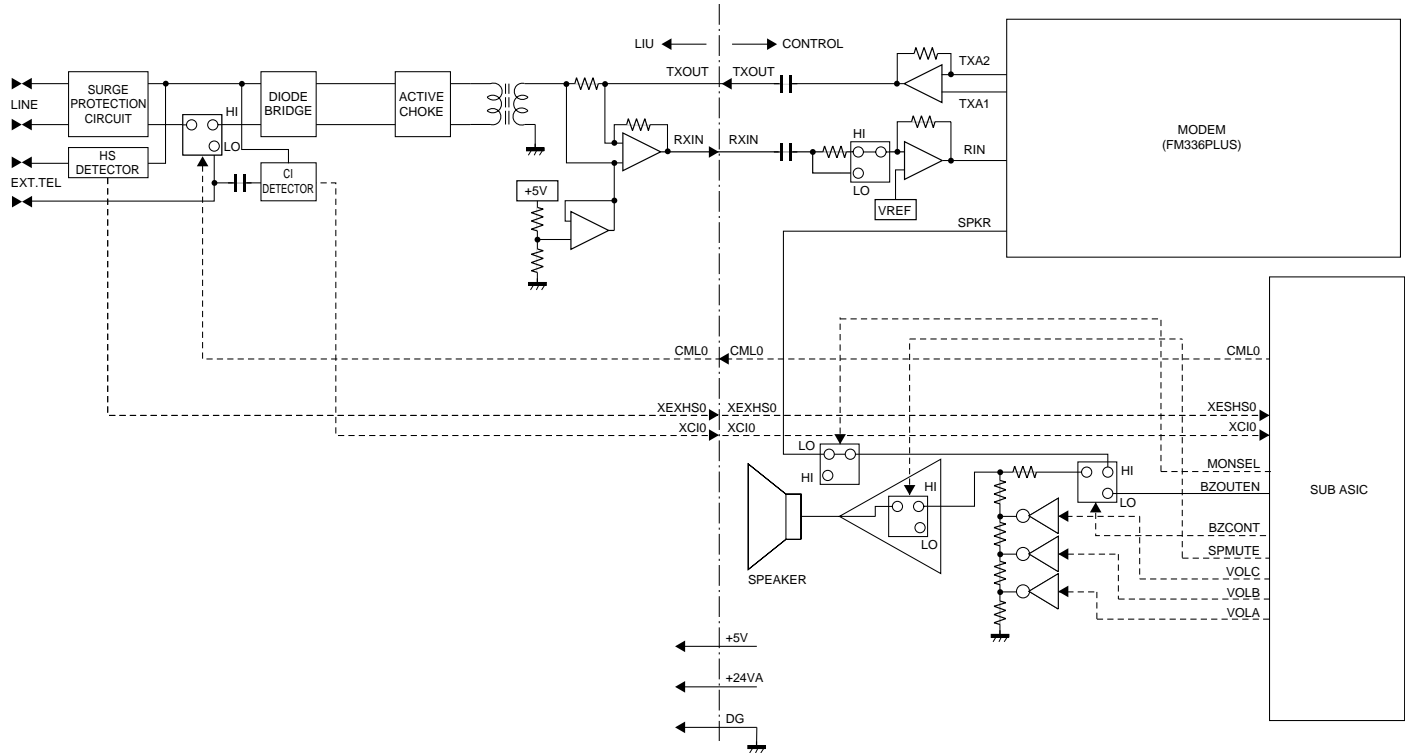


Fig. 8

2) Circuit description

The LIU PWB is composed of the following 9 blocks.

1. Surge protection circuit
2. On-hook status detection circuit
3. Dial pulse generation circuit
4. CML relay
5. Matching transformer
6. Hybrid circuit
7. Signal selection
8. CI detection circuit
9. Power supply and bias circuit

3) Block description

1. Surge Protection circuit

This circuit protects the circuit from the surge voltage occurring on the telephone line.

- The AR1 protect the circuit from the 390V or higher line surge voltages.
- The AR2 and AR3 protect the circuit from the 500V or higher vertical surge voltages.
- The ZD6 and ZD7 control the voltage generated on the secondary side of matching transformer to 2V.

2. On-hook status detection circuit

The on-hook status detection circuit detects the Status of the push speaker key, and the status of the hook of a telephone externally connected.

- External telephone hook status detection circuit (XEXHS0)

This circuit comprises the photo-coupler PC3, resistors R13 and R12, Zener diodes ZD1 and ZD2.

When an external telephone is connected and enters the on-hook mode, the LED of photo-coupler PC3 emits light and the light receiving element turns on. The status signal XEXHS0 is input to the pin10 of (SUB ASIC) (IC21: Control PWB).

XEXHS0 LOW : EXT. TEL OFF-HOOK

XEXHS0 HIGH: EXT. TEL ON-HOOK

3. Dial pulse generation circuit

The pulse dial generation circuit comprises CML.

CML ON: Make

CML OFF: Break

4. CML relay

The CML relay switches over connection to the matching transformer T1 while the FAX is being used.

5. Matching transformer

The matching transformer performs electrical insulation from the telephone line and impedance matching for transmitting the FAX signal.

6. Hybrid circuit

The hybrid circuit performs 2-wire-to-4-wire conversion using the IC of operational amplifier, transmits the voice transmission signal to the line, and feeds back the voice signal to the voice reception circuit as the side tone.

7. Signal selection

The following signals are used to control the transmission line of FAX signal. For details, refer to the signal selector matrix table.

[Control signals from output port]

Signal Name	Description																												
CML0	<u>Line connecting relay and DP generating relay</u> H: Line make L: Line brake																												
SP MUTE	<u>Speaker tone mute control signal</u> H: Muting (Power down mode) L: Muting cancel (Normal operation)																												
VOL A VOL B VOL C	<u>Speaker volume control signal.</u> VRSEL1 VRSEL2 matrix <table border="1"> <thead> <tr> <th></th> <th>VOL A</th> <th>VOL B</th> <th>VOL C</th> <th>RING/ Receiving</th> <th>Buzzer</th> <th>DTMF</th> </tr> </thead> <tbody> <tr> <td></td> <td>L</td> <td>L</td> <td>L</td> <td>High</td> <td>-</td> <td>High</td> </tr> <tr> <td></td> <td>H</td> <td>L</td> <td>L</td> <td>Middle</td> <td>High</td> <td>Middle</td> </tr> <tr> <td></td> <td>L</td> <td>L</td> <td>H</td> <td>Low</td> <td>Low</td> <td>Low</td> </tr> </tbody> </table> (the circuit is located in the control PWB.)		VOL A	VOL B	VOL C	RING/ Receiving	Buzzer	DTMF		L	L	L	High	-	High		H	L	L	Middle	High	Middle		L	L	H	Low	Low	Low
	VOL A	VOL B	VOL C	RING/ Receiving	Buzzer	DTMF																							
	L	L	L	High	-	High																							
	H	L	L	Middle	High	Middle																							
	L	L	H	Low	Low	Low																							
BZCONT	<u>Speaker output signal switching</u> L: Buzzer signal output H: When monitoring line signal (the circuit is located in the control PWB.)																												

[Signals for status recognition according to input signals]

Signal Name	Function
XCI0	Incoming call (CI) detection signal
XEXHS0	H: The handset or external telephone is in the on-hook state. L: The handset or external telephone in the off-hook state.

[Other signals]

Signal Name	Function
TXOUT	Transmission (DTMF) analog signal output from modem
RXIN	Reception (DTMF, others) analog signal input into modem

NO	Signal Name(CNLIU)	NO	Signal Name(CNLIU)
1	RXIN	6	CML
2	TXOUT	7	+5V
3	CI	8	DG
4	EXHS	9	+24VA
5	DPON (N.C.)		

8. CI detection circuit

The CI detection circuit detects the CI signals of 15.3 Hz to 68 Hz. A CI signal, which is provided to the photo-coupler PC1 through the C1 (0.82 uF), R6 (22K), and ZD3 and R5 (13K) when the ring signal is inputted from the telephone line.

9. Power supply and bias circuits

The voltages of +5V and +24VA are supplied from the control PWB unit.

(Example: Fax signal send)

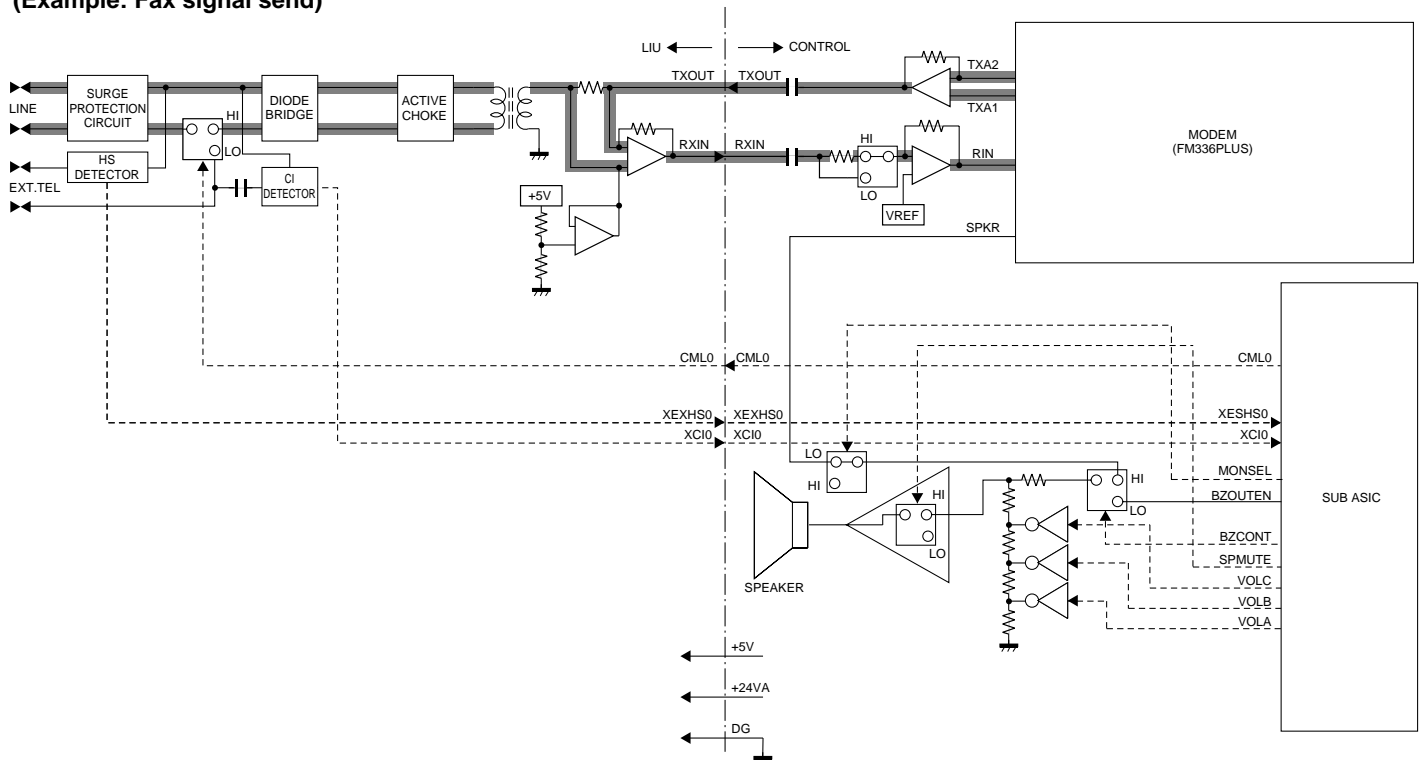


Fig. 9

[5] Circuit description of operation panel PWB

1. Operational description

1) Operation panel PWB

The operation panel PWB includes the ten key scan circuit and the LED lighting circuit. The LS145 is controlled through LD0~LD3 (4 bits) and ten key detection is performed. The HC174 is controlled through LD0~LD5 (6 bits) to provide LED lighting information.

2) COG(LCD) (LMG2025-TPR)

The COG uses the one-chip LCD driver IC to display 20 digits x 2 lines. The LCD display density is controlled with an external resistor.

2. Block diagram

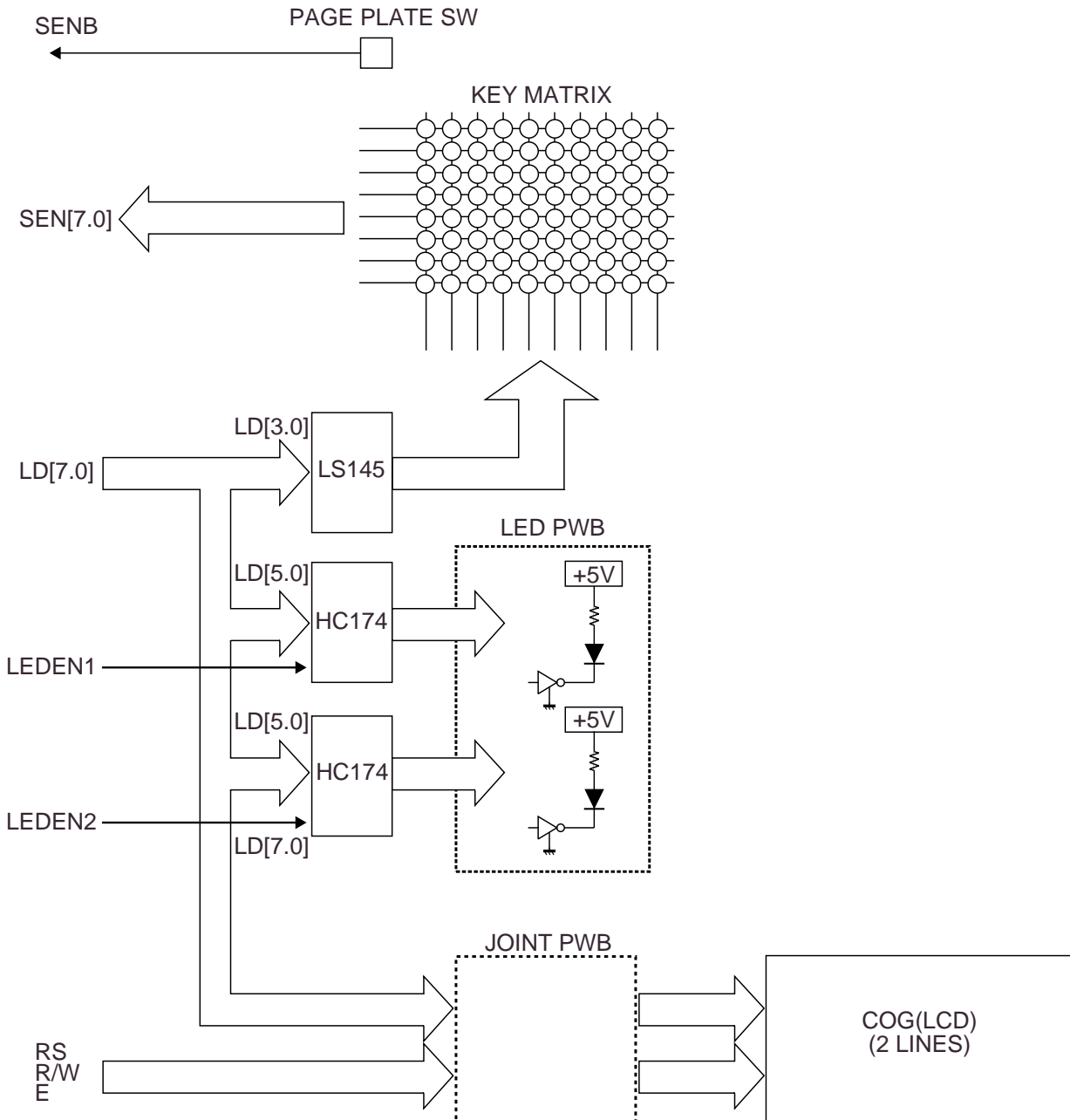


Fig. 10

[6] Circuit description of power supply PWB

This unit supply input AC 120 V/60 Hz, +24 V, +5 V as block diagram shows. (See Fig. 11)

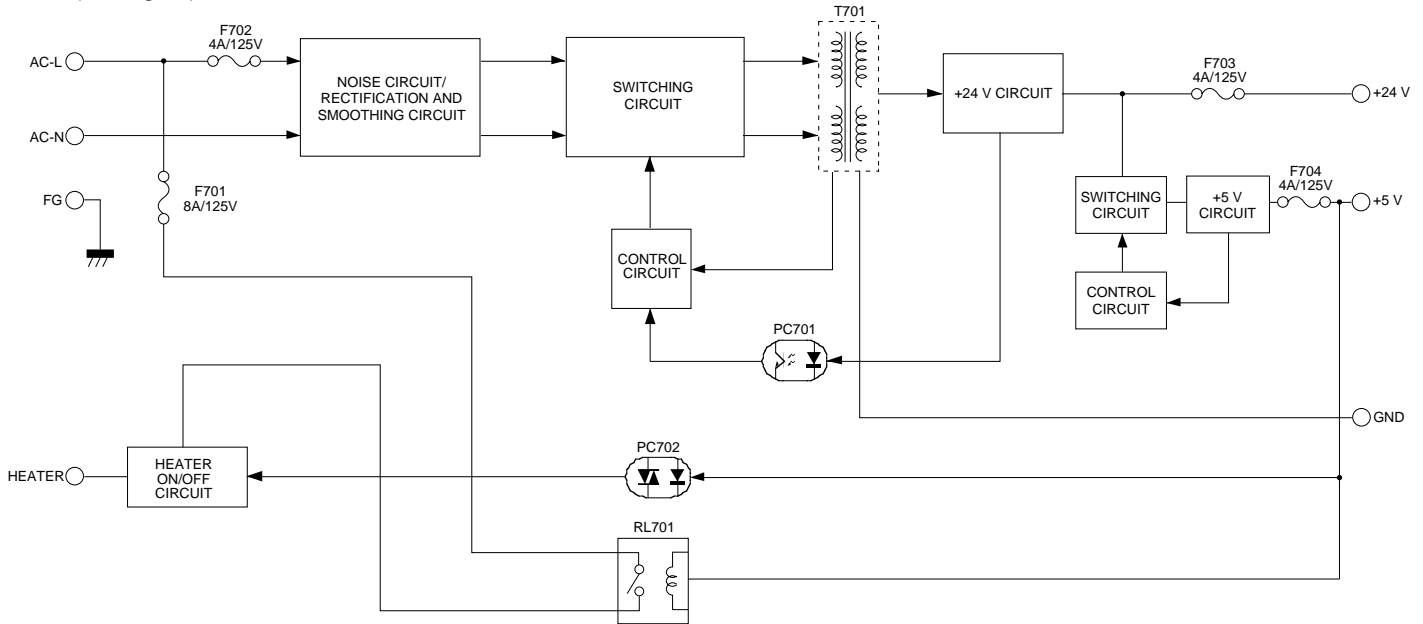


Fig. 11

1. Noise/Rectification and smoothing circuit

Filter part reduces the outgoing noise that generated in the Power Supply unit, and prevents the invasion of the noise from outside. The excessive surge such as the thunder is prevented by Varistor X701.

Rectification and Smoothing circuit is supply DC voltage to switching part by AC input rectify by Diode D701, D702, D703, D704 and smoothing Capacitor C706.

2. Switching circuit

This circuit is adopt Ringing Choke Converter system that self-excited. This system supplies power as follows;

AC voltage that supplied by Rectifying and smoothing part is change high-frequency pulse by NO/OFF repeat of MOS FET Q701. And while Q701 ON, accumulate energy in primary winding of transformer T701. And while OFF, eject energy to secondary winding.

Control of constant voltage is carry out by as follows;

Feedback put on control circuit through photo coupler from +24 V Output. Over Current Protection Circuit detect spread of ON period by Output Load is heavy, and extend OFF period by control circuit. And turn down energy that accumulating in primary winding.

Over Current Protection is make secondary side of output voltage +24 V's rising over voltage condition by conducting Zener Diode D711 that between +24 V output and GND. Then protection is carrying out by Over Current Protection Circuit of Control Circuit working.

3. +24 V circuit

+24 V Circuit is supplied by Transformer T701 Output Rectification and Smoothing by Diode D710, Capacitor C715.

4. +5 V circuit

+5 V Output is carry out stabilization by step-down Chopper Circuit that inputted above +24 V. When MOS FET Q705 ON, this system supply load energy through L705, and when OFF, accumulated energy in L705 Rectification to load by D715. Control of constant voltage is carry out by detect +5 V output by Shunt Regulator and put on Feedback.

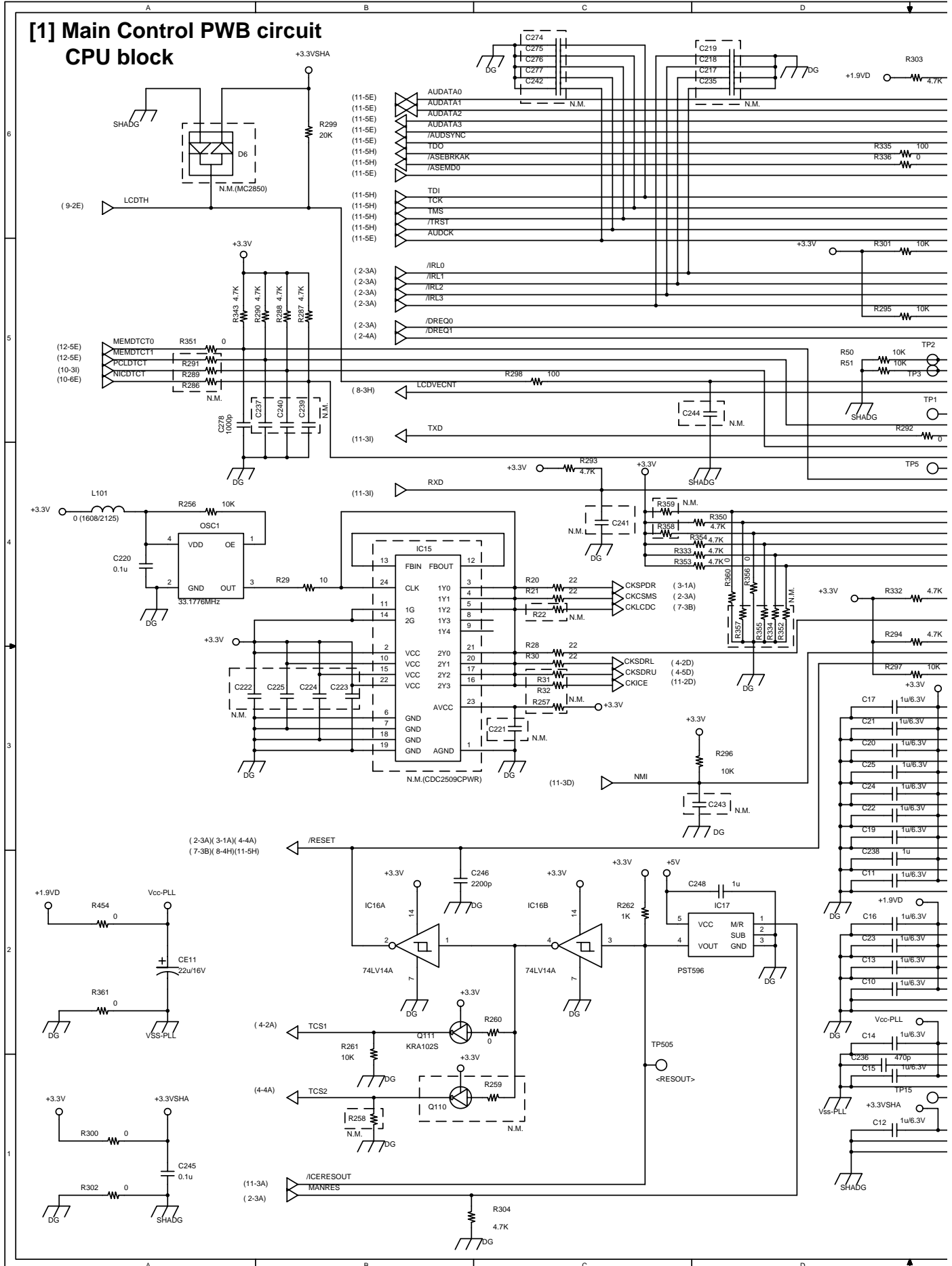
5. HEATER ON signal

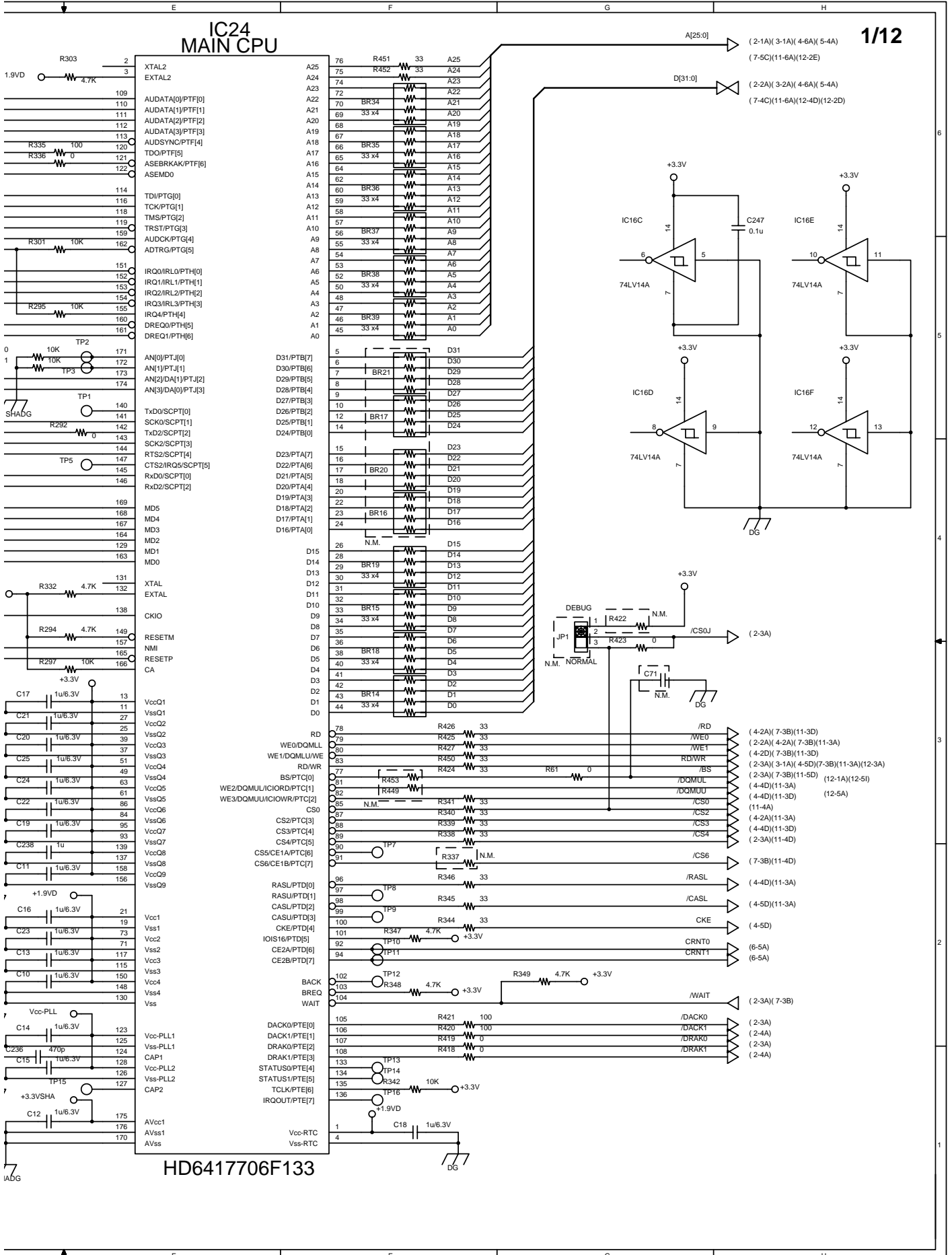
HEATER ON/OFF is carry out by send a signal through Trigger TR701 of Photo Triac Coupler PC702 by (High/Low).

6. HEATER-RELAY OFF signal

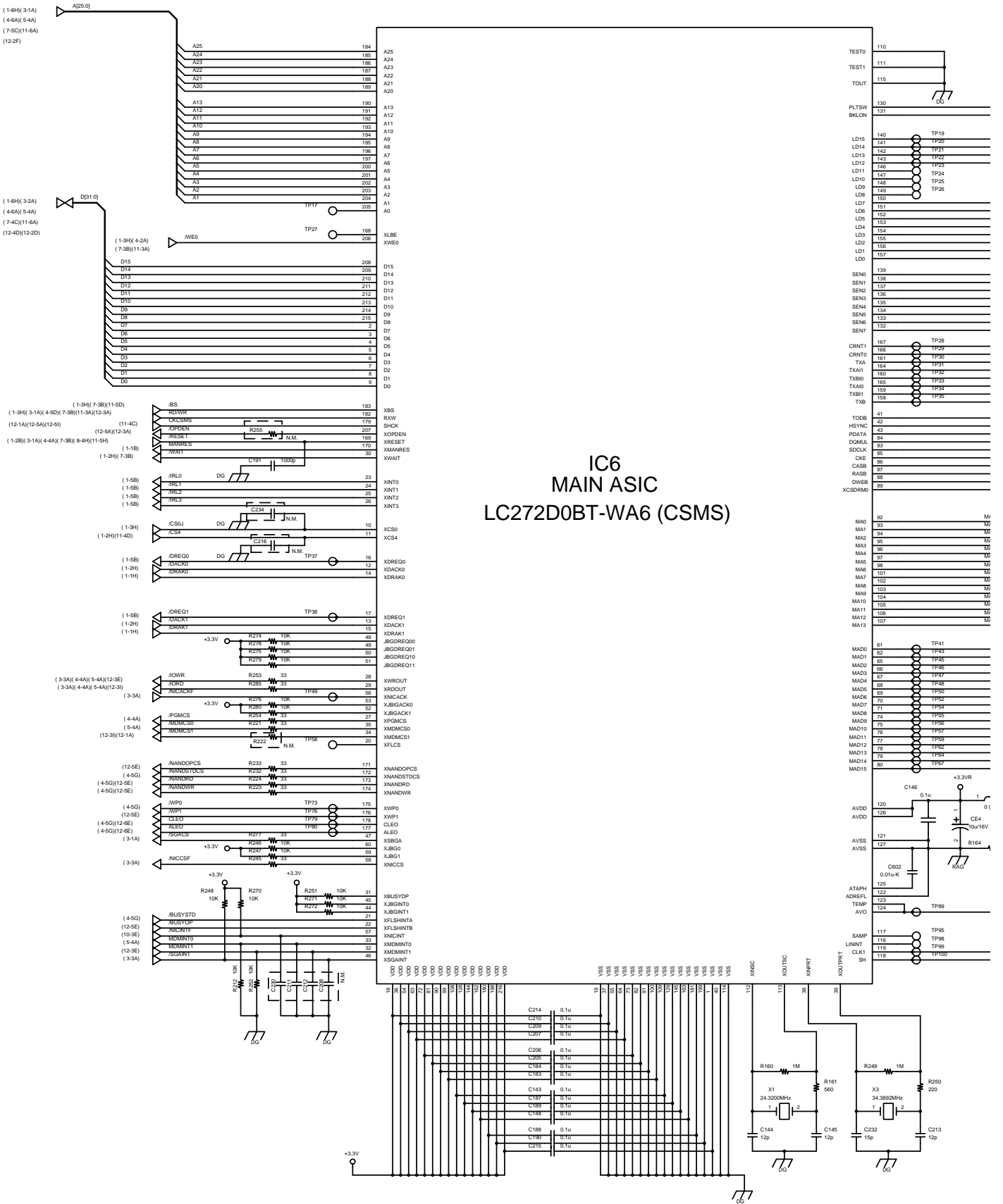
ON/OFF of Relay RL701 is carry out by (High/Low). But when HEATER-RELAY OFF Signal change High to Low, Thyristor SR701 keep ON condition. So RL701 keep OFF condition till Power Supply re-inter.

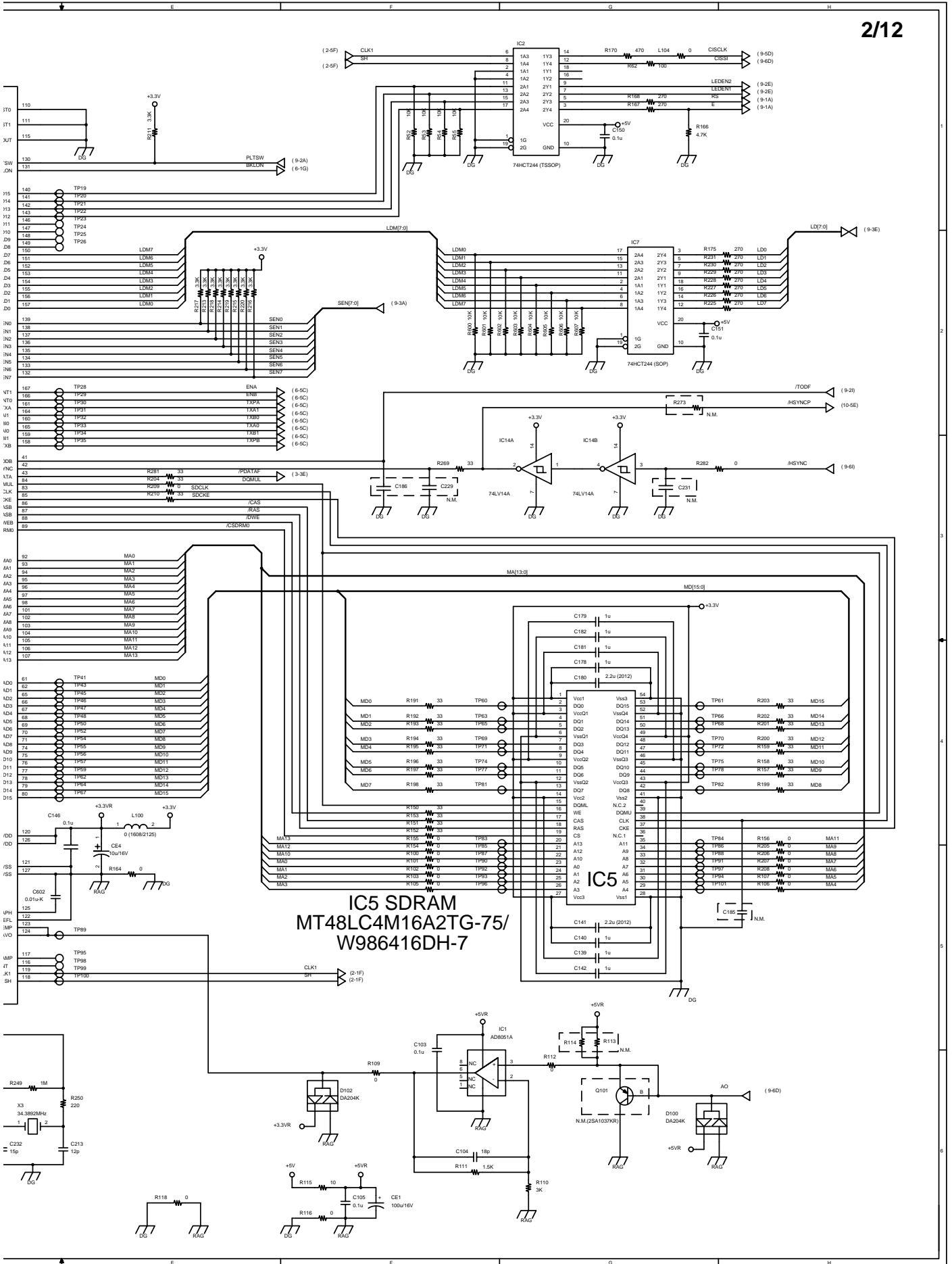
CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

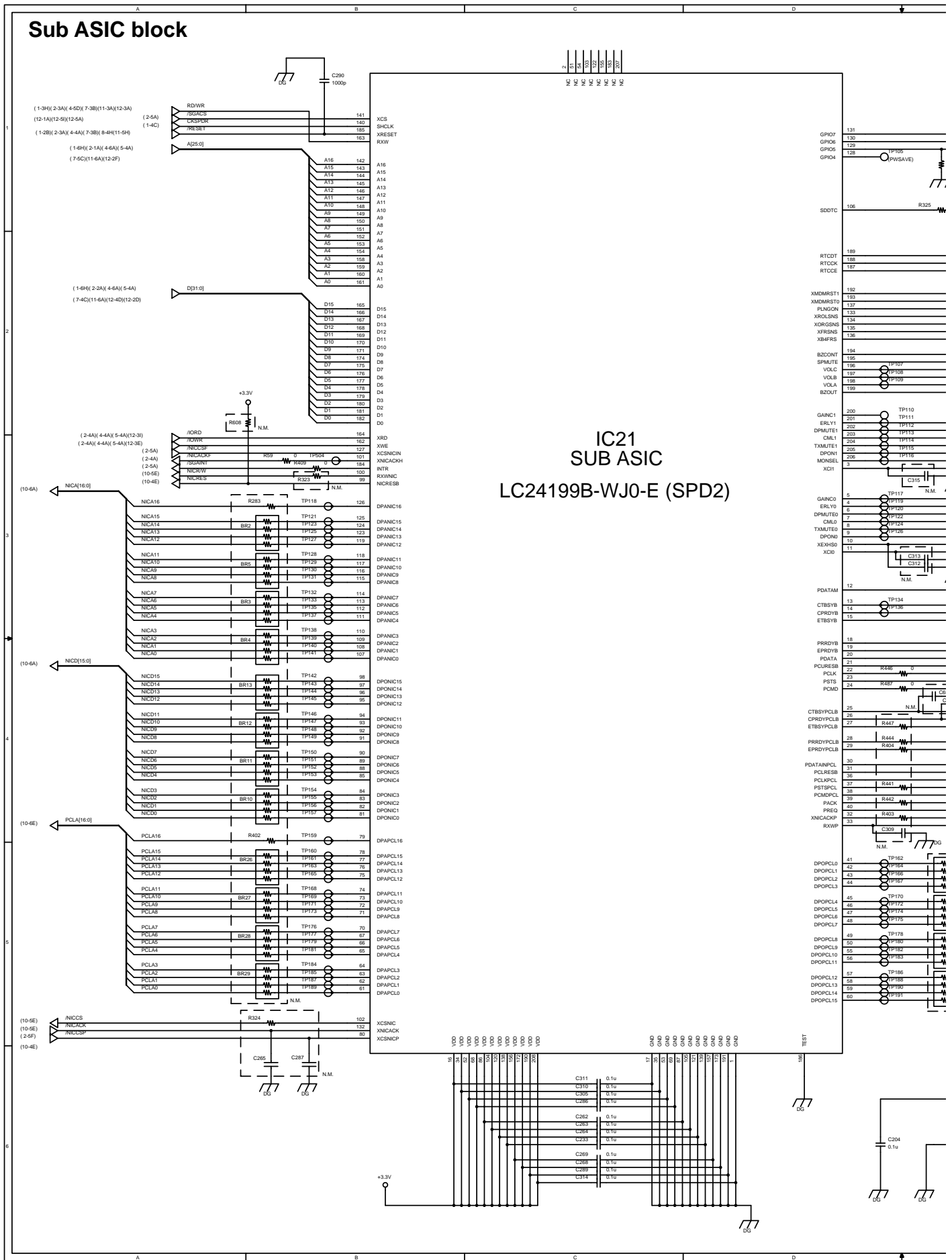


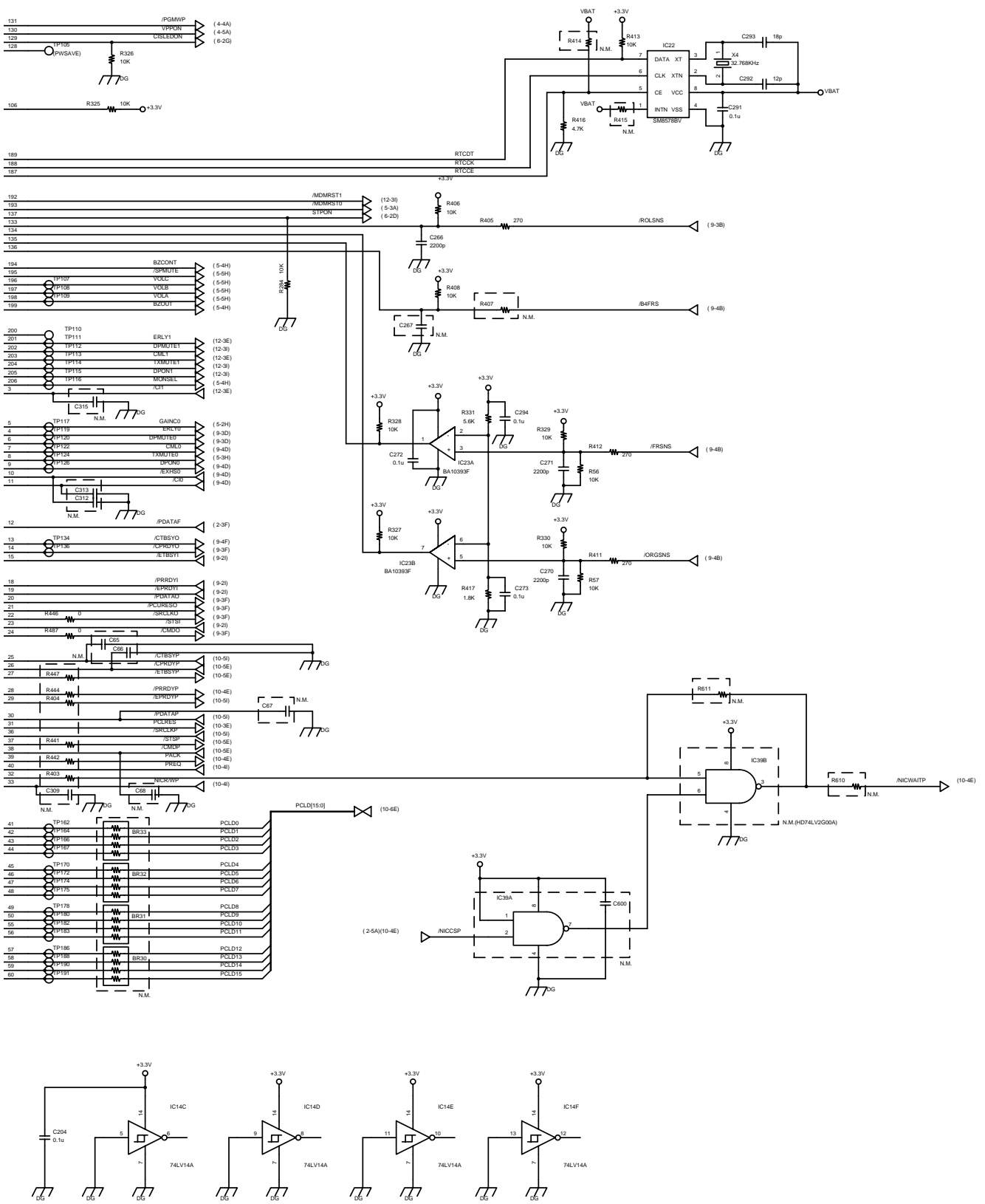


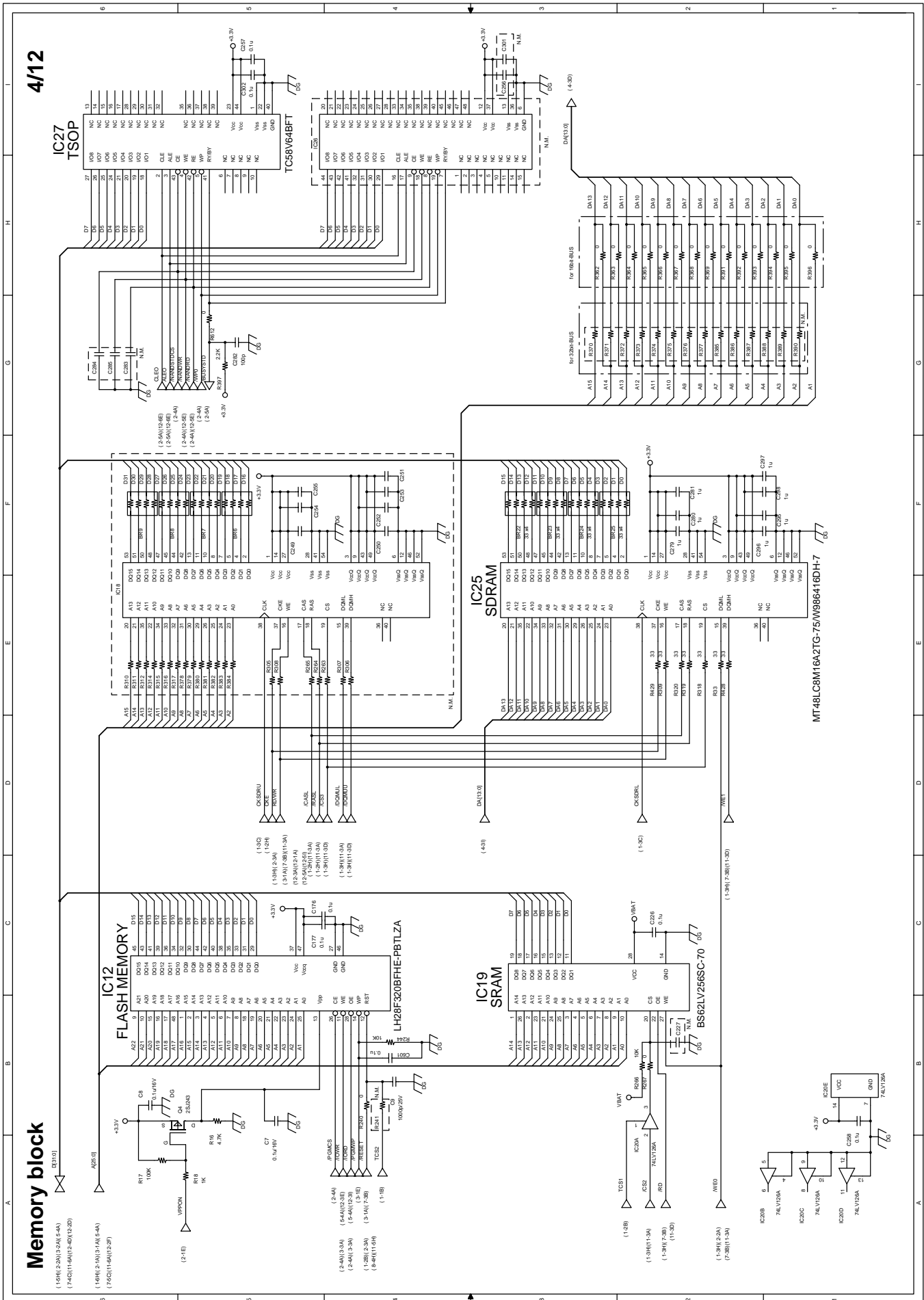
Main ASIC block

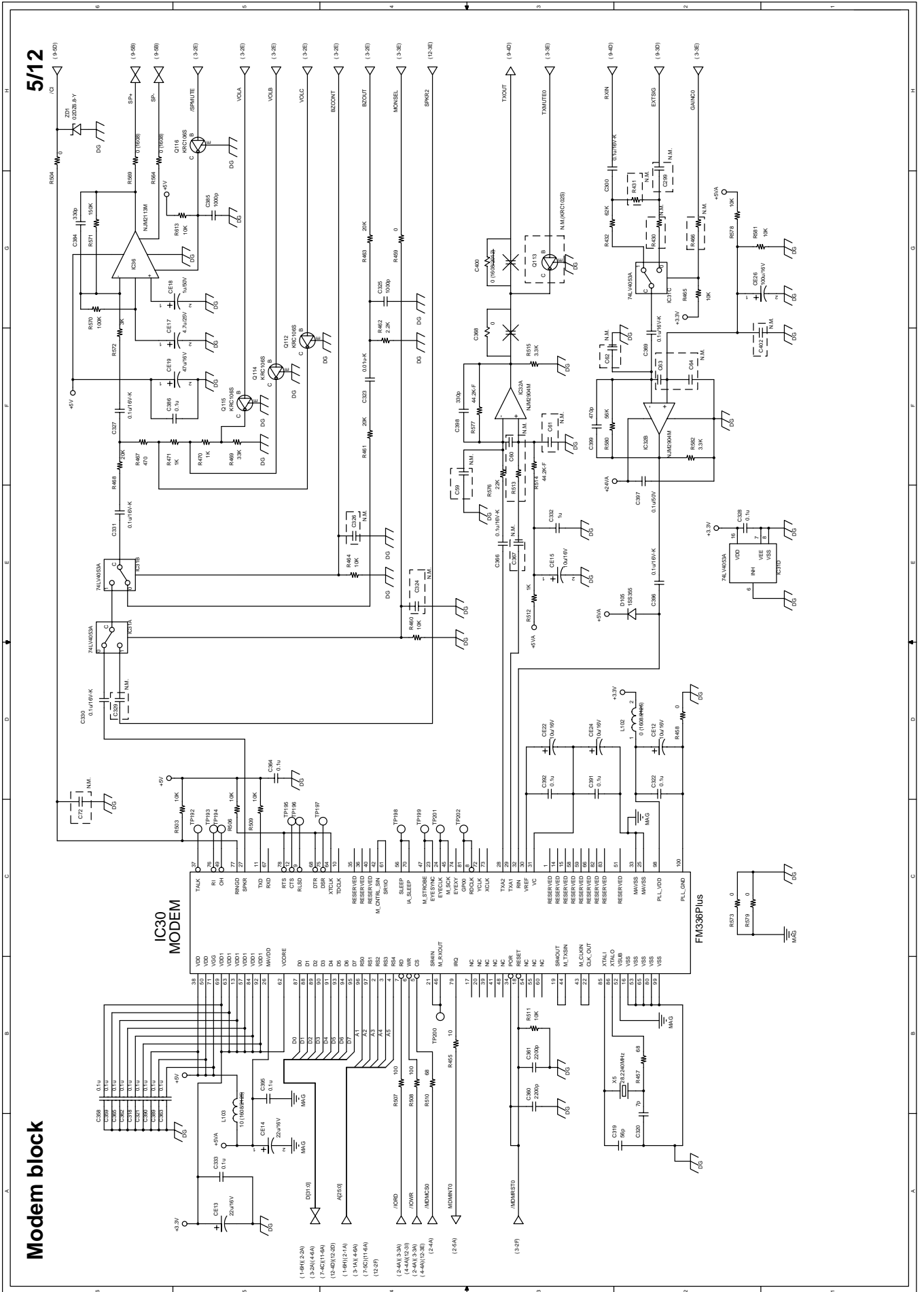












5/12

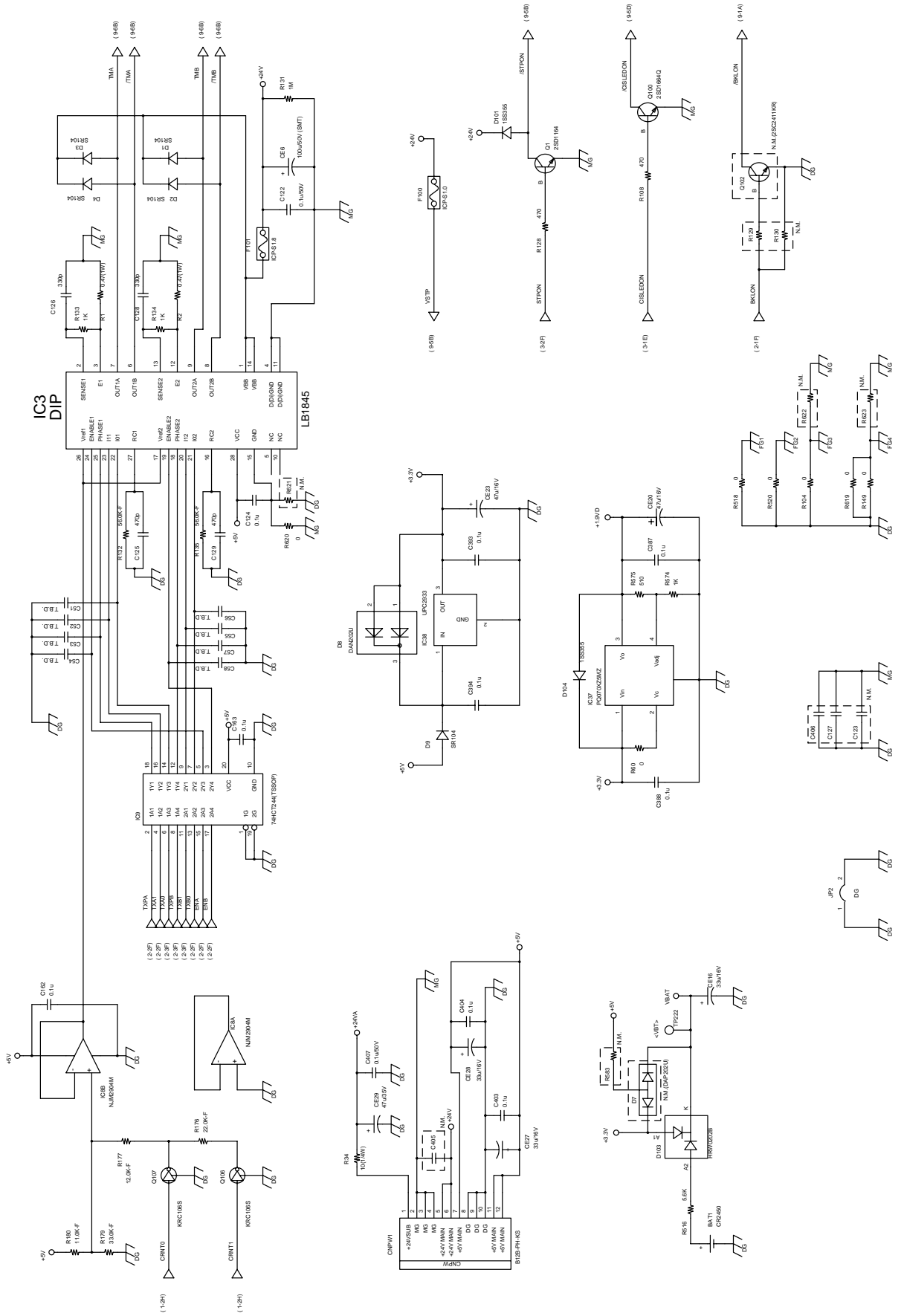
Modem block

IC30 MODEM

FM336Plus

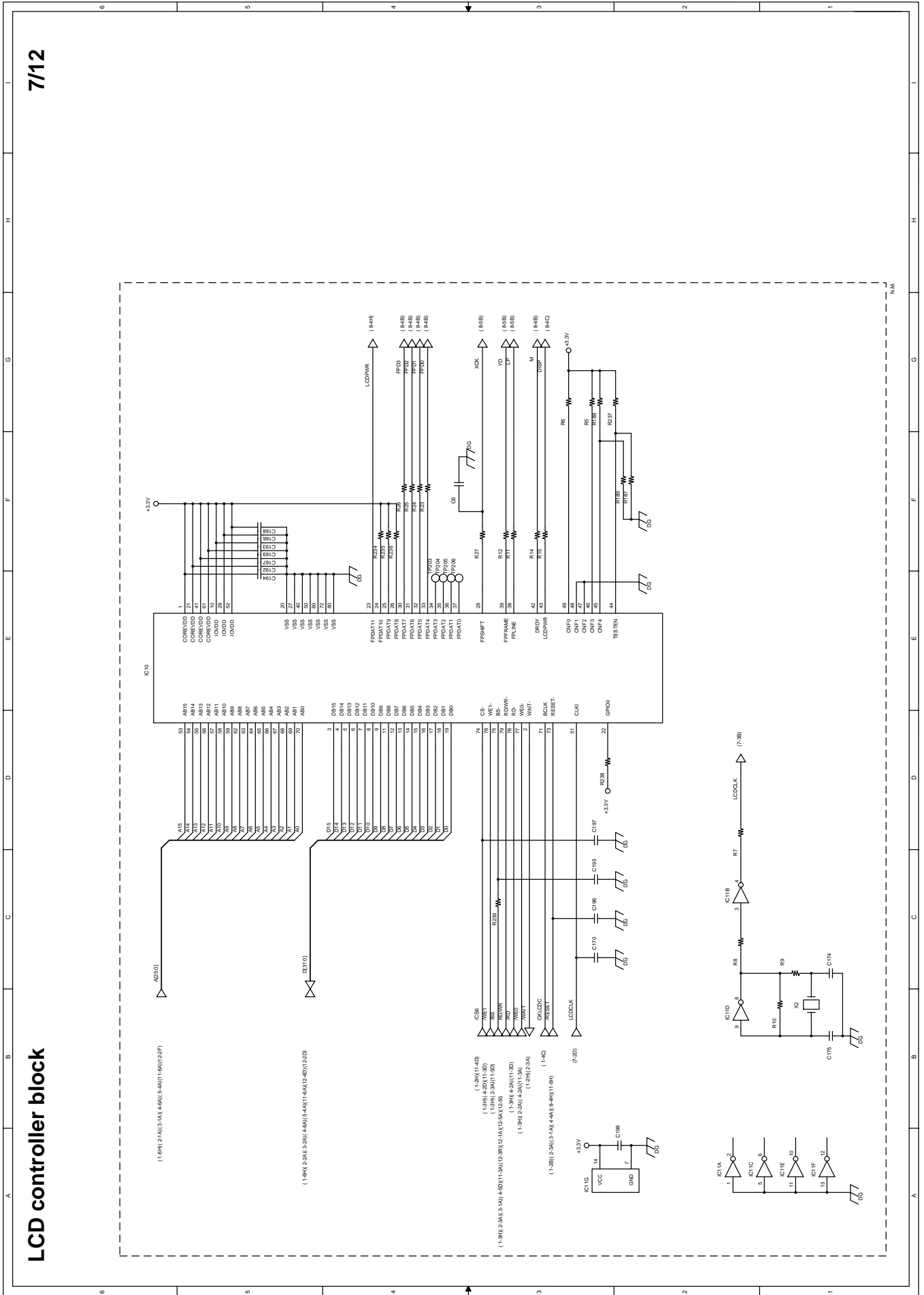
Driver & Power supply block

6/12



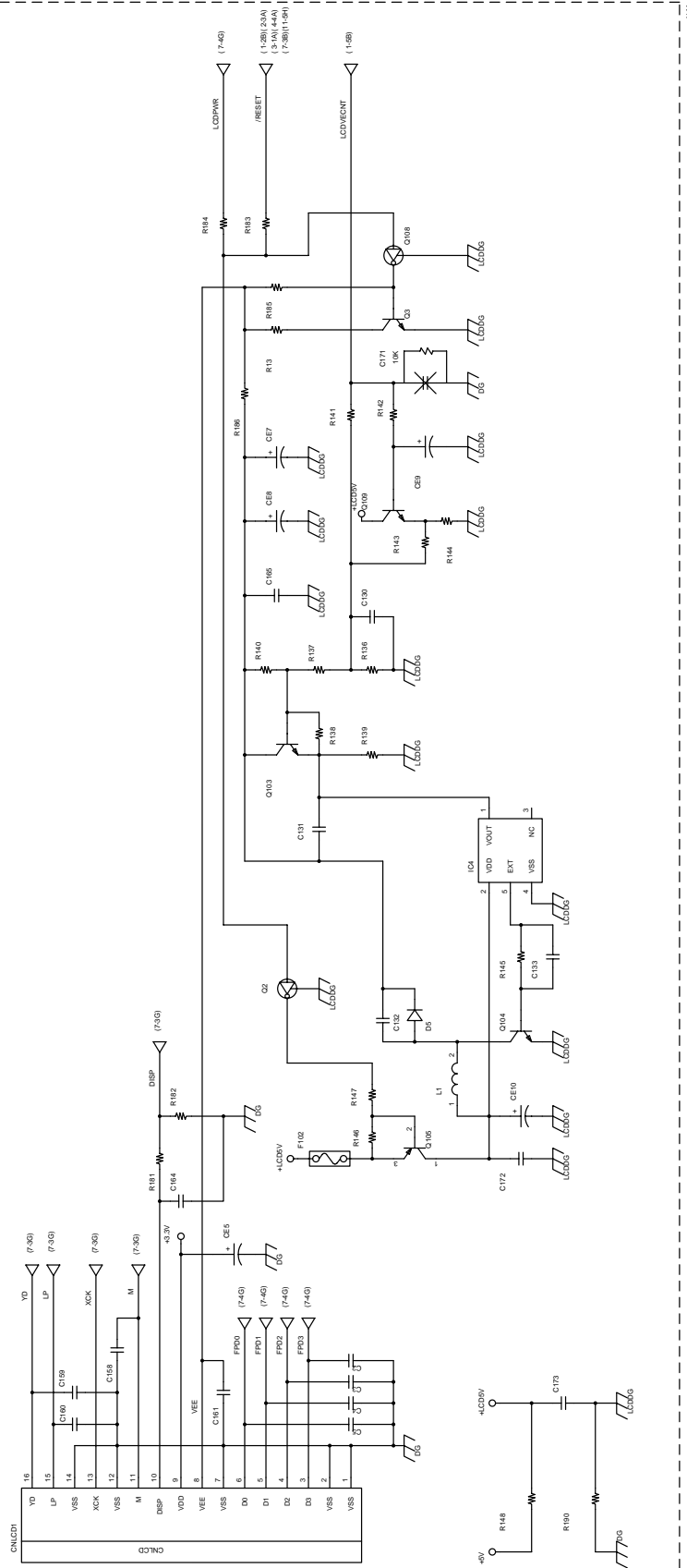
LCD controller block

7/12



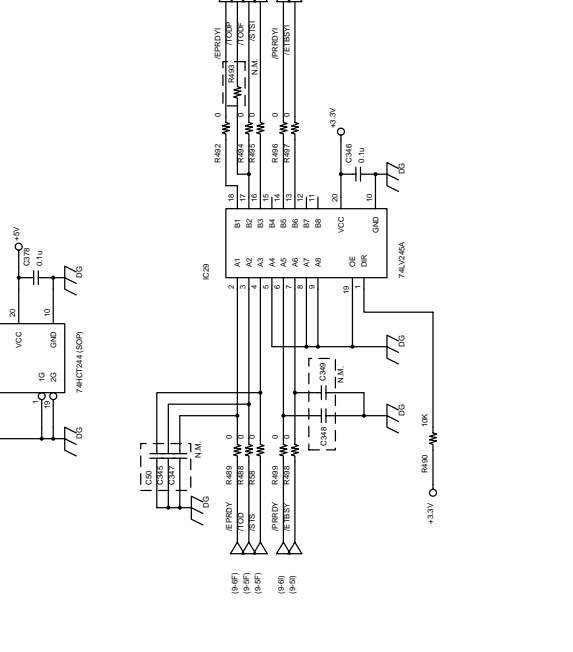
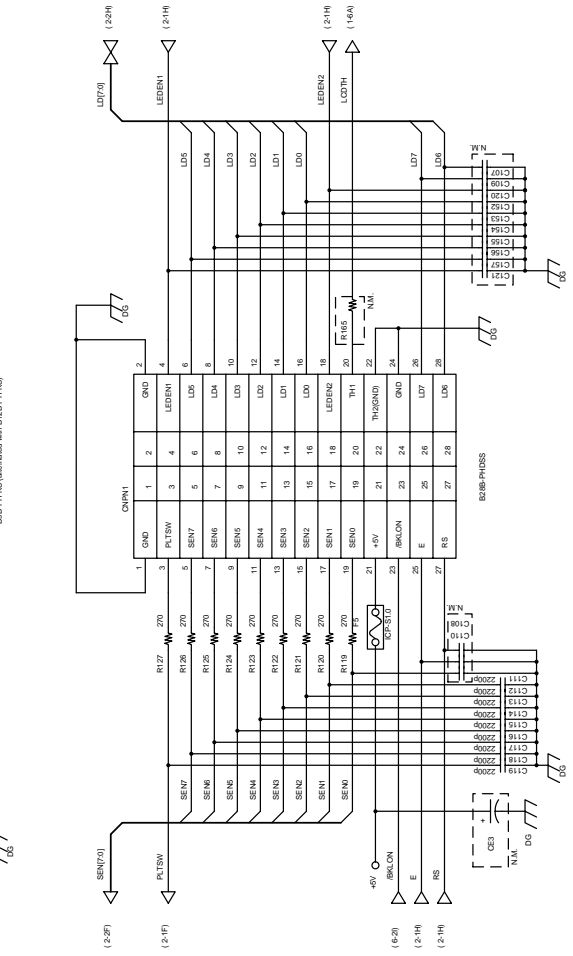
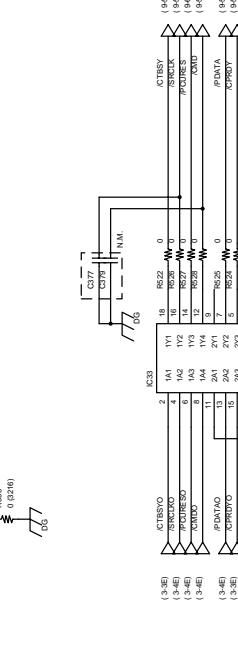
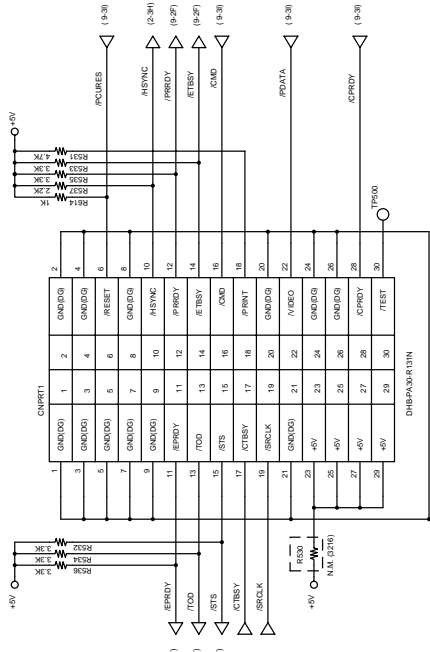
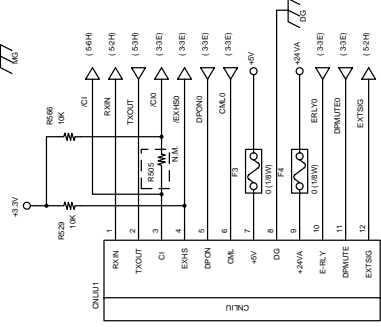
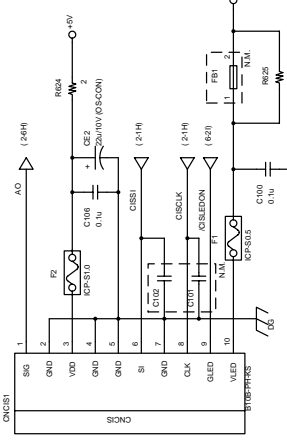
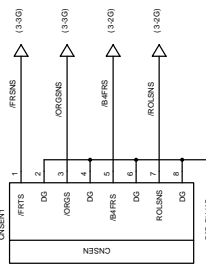
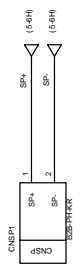
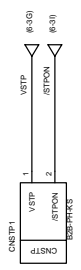
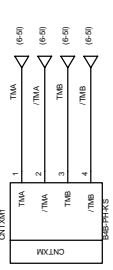
LCD power control block

8/12



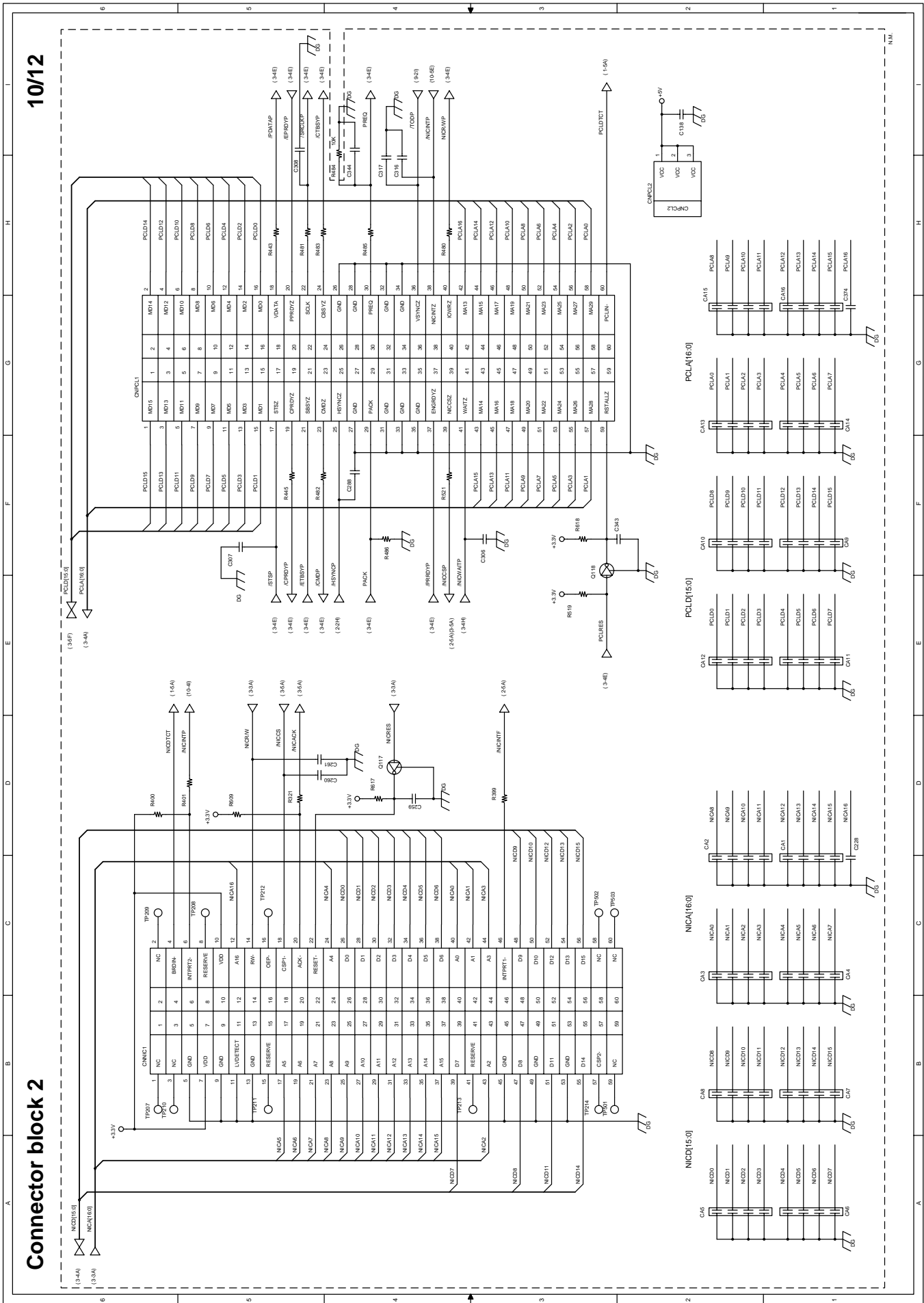
Connector block 1

9/12



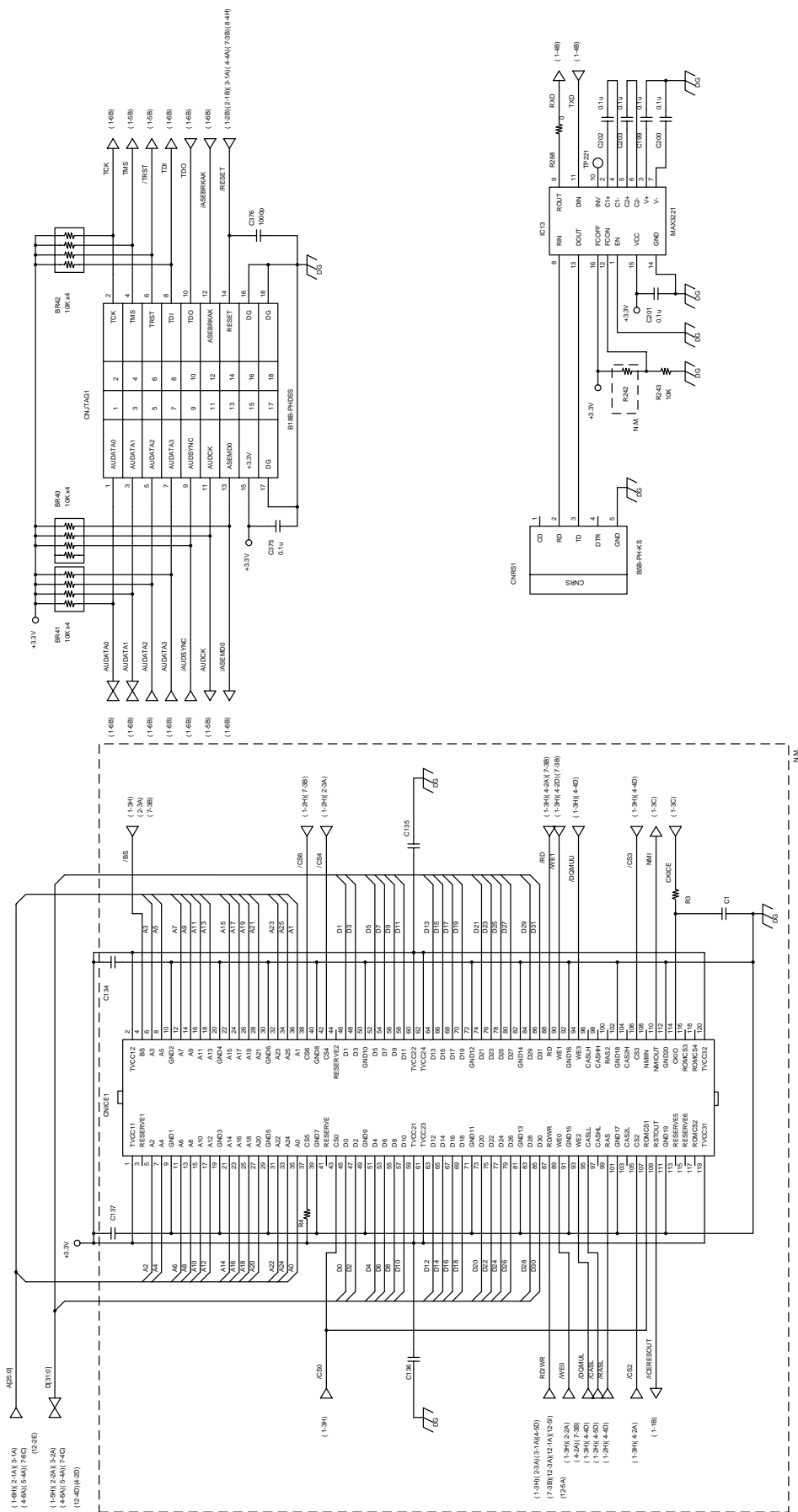
Connector block 2

10/12

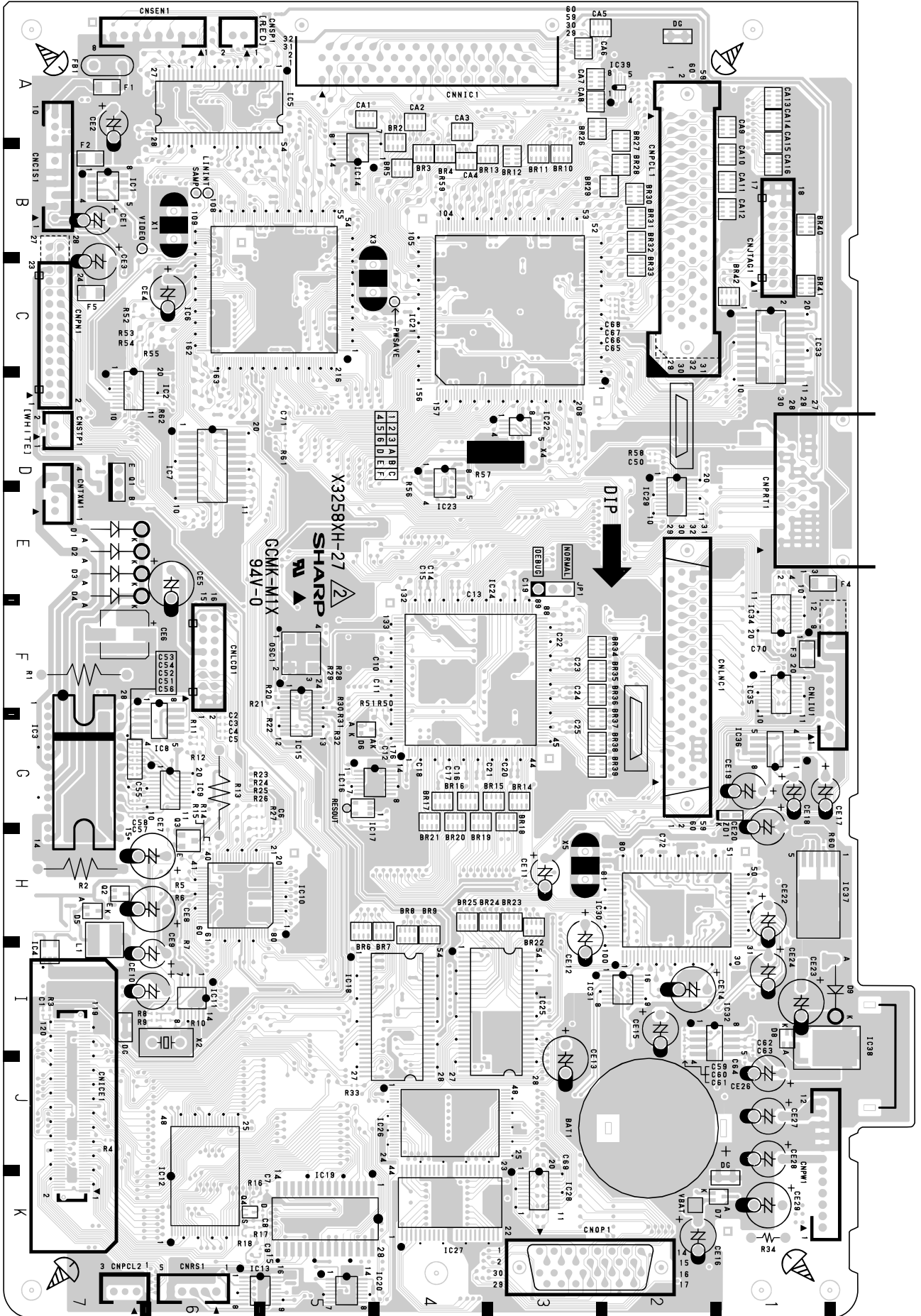


Connector block 3

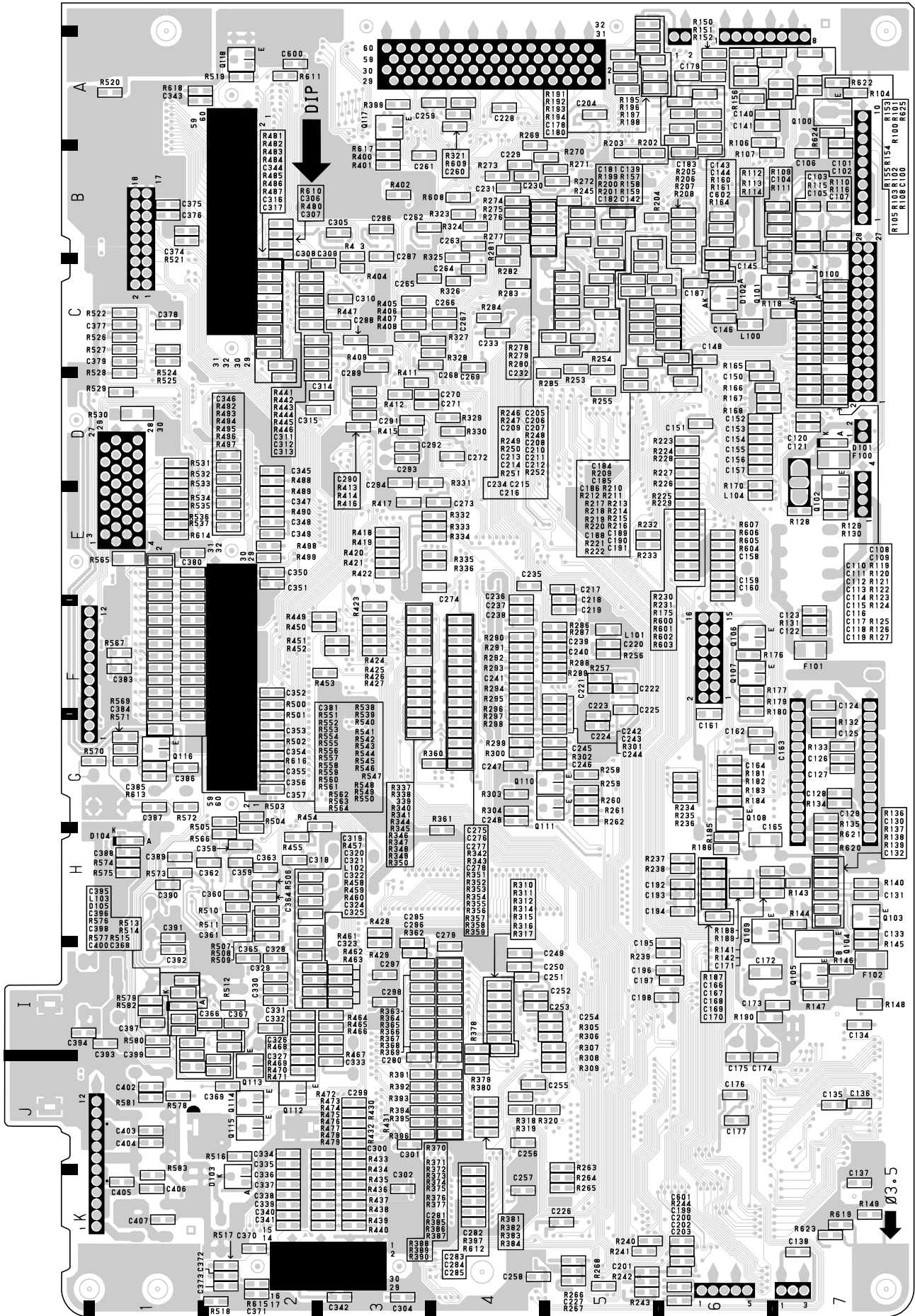
11/12

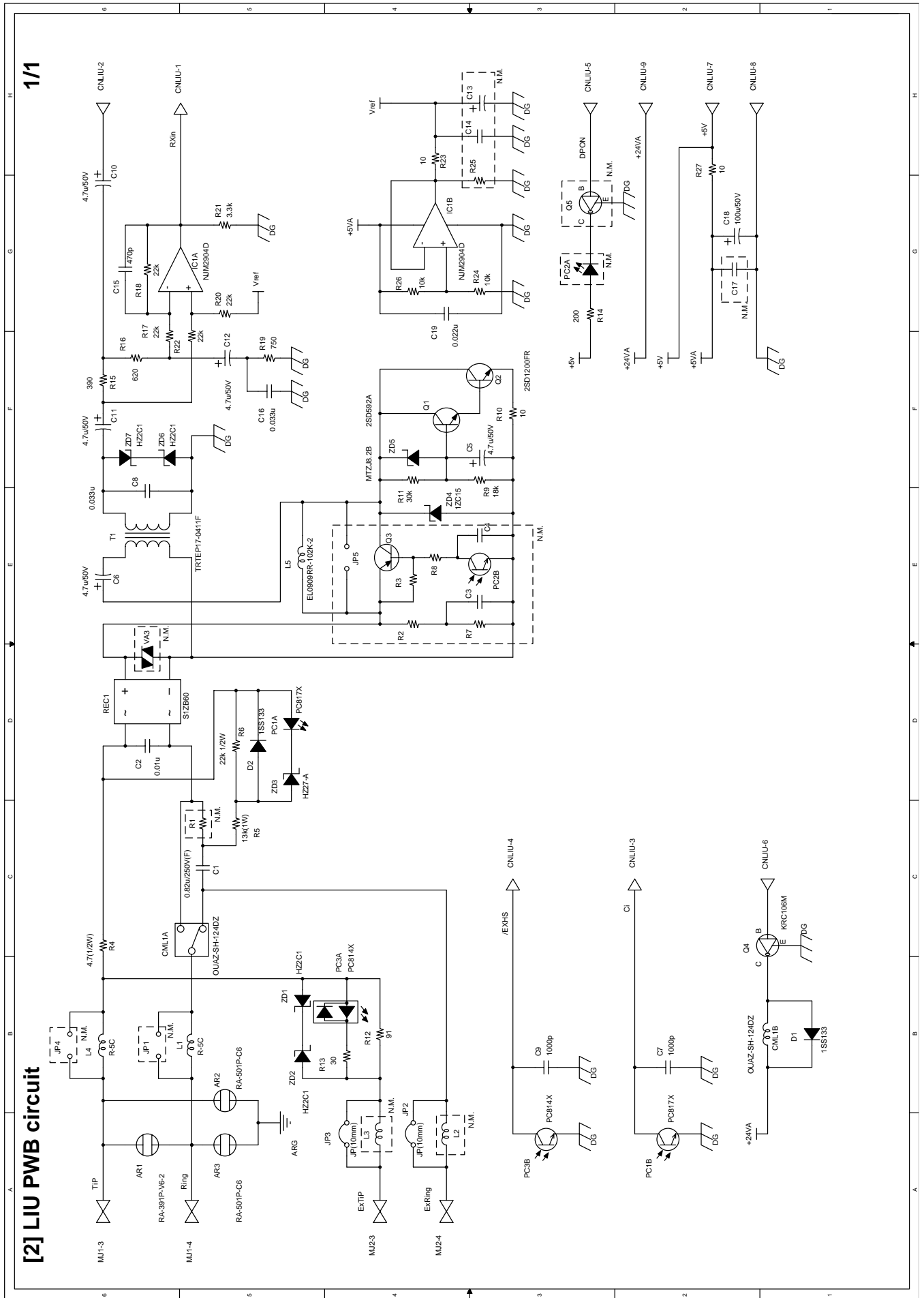


Control PWB parts layout (Top side)

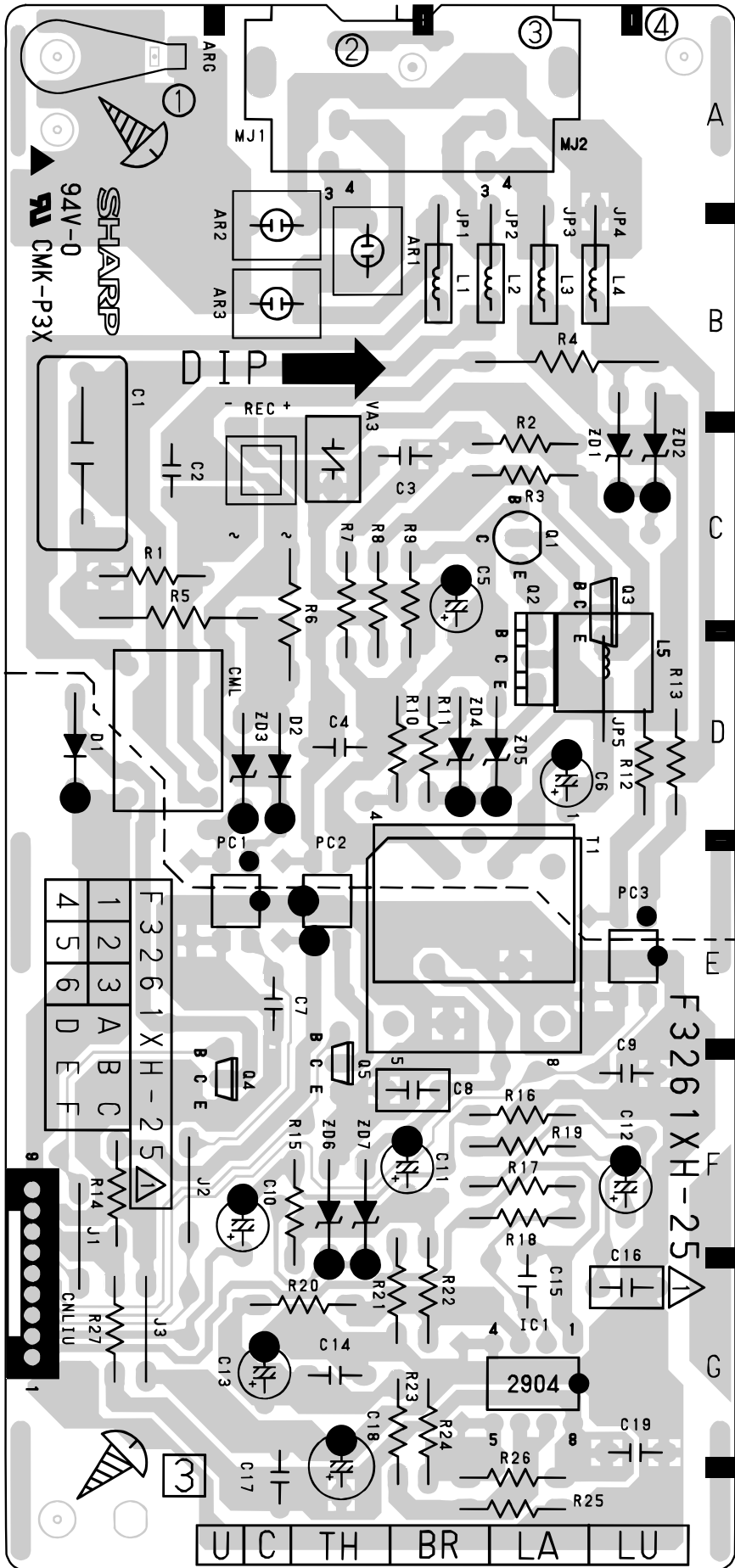


Control PWB parts layout (Bottom side)

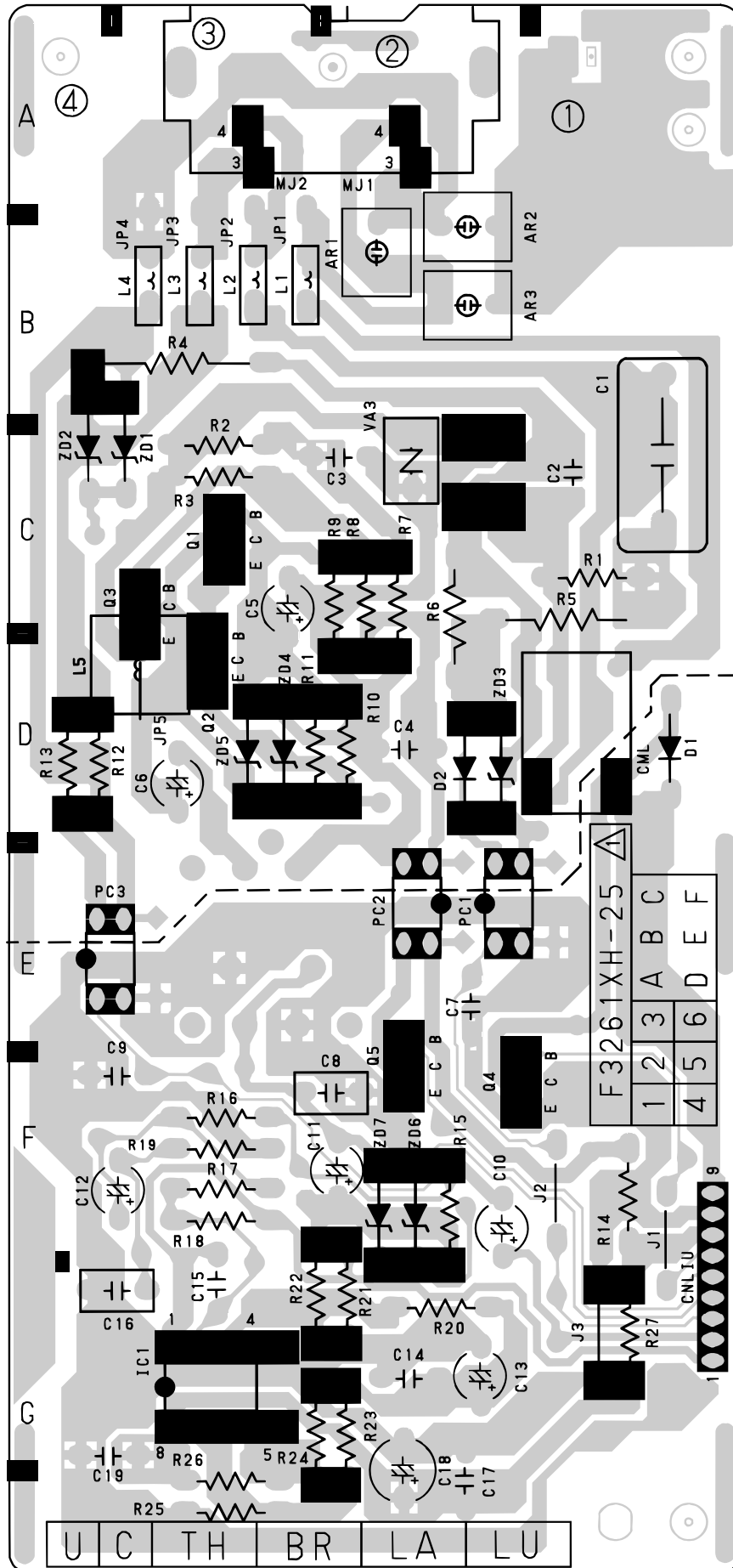




LIU PWB parts layout (Top side)

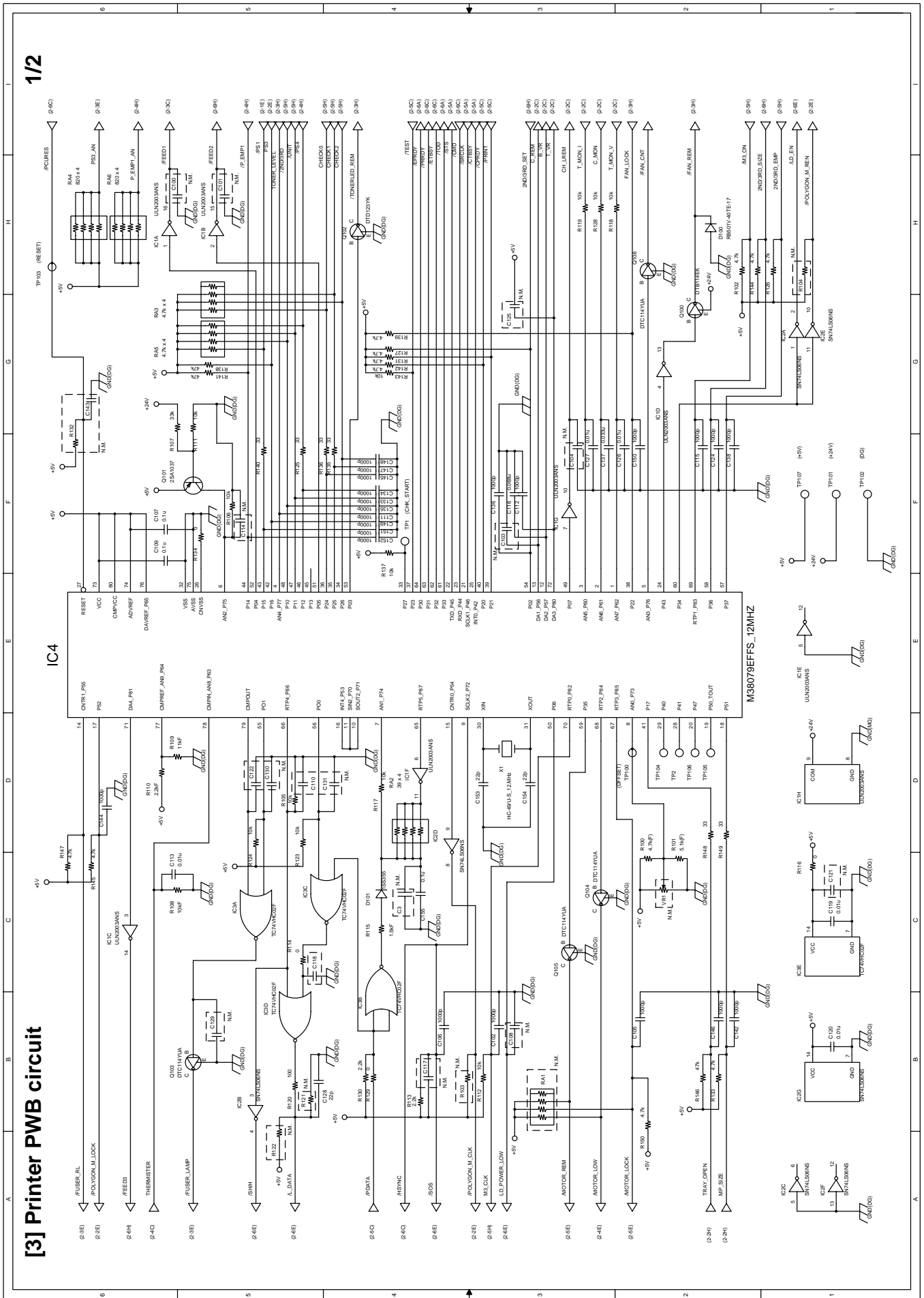


LIU PWB parts layout (Bottom side)



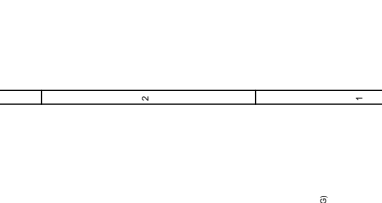
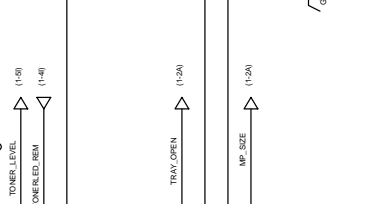
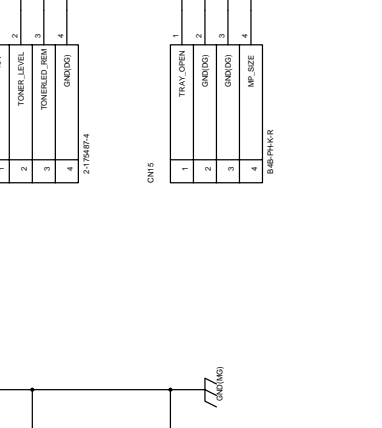
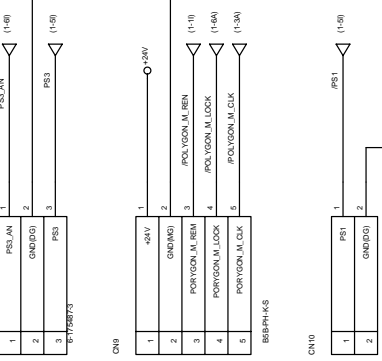
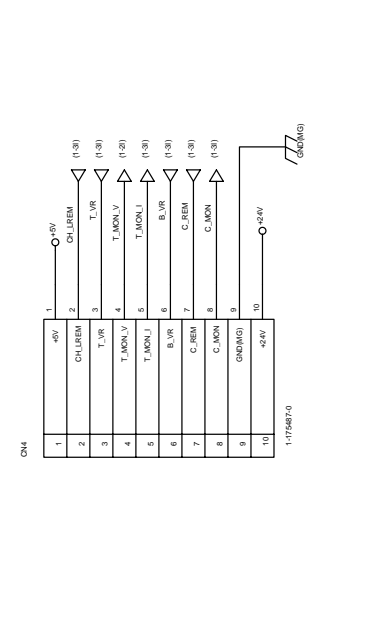
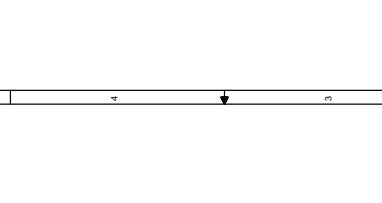
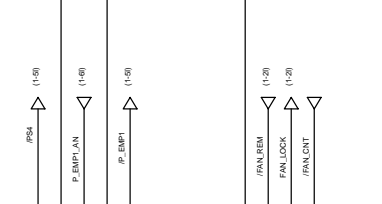
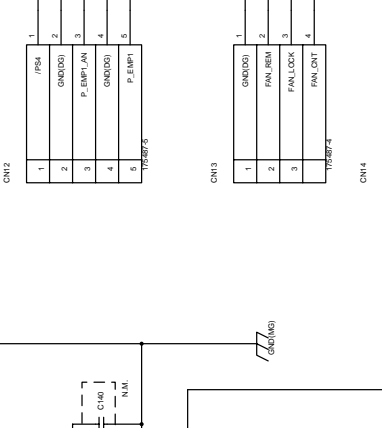
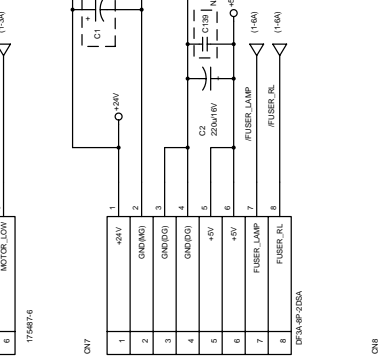
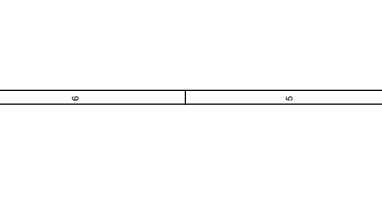
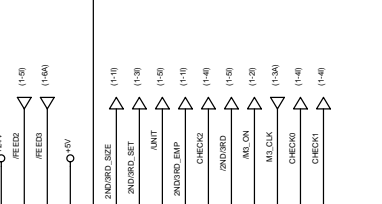
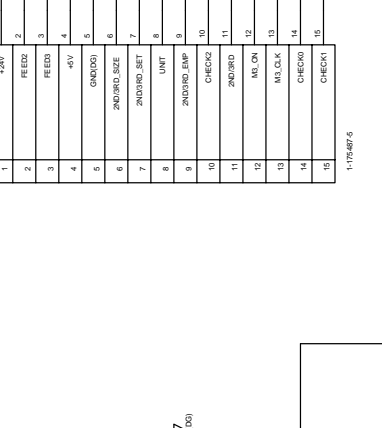
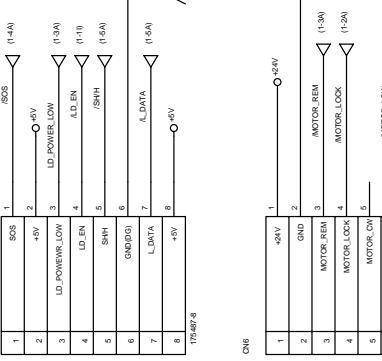
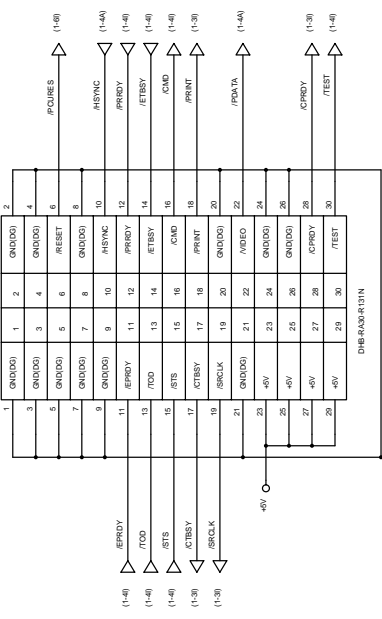
[3] Printer PWB circuit

1/2

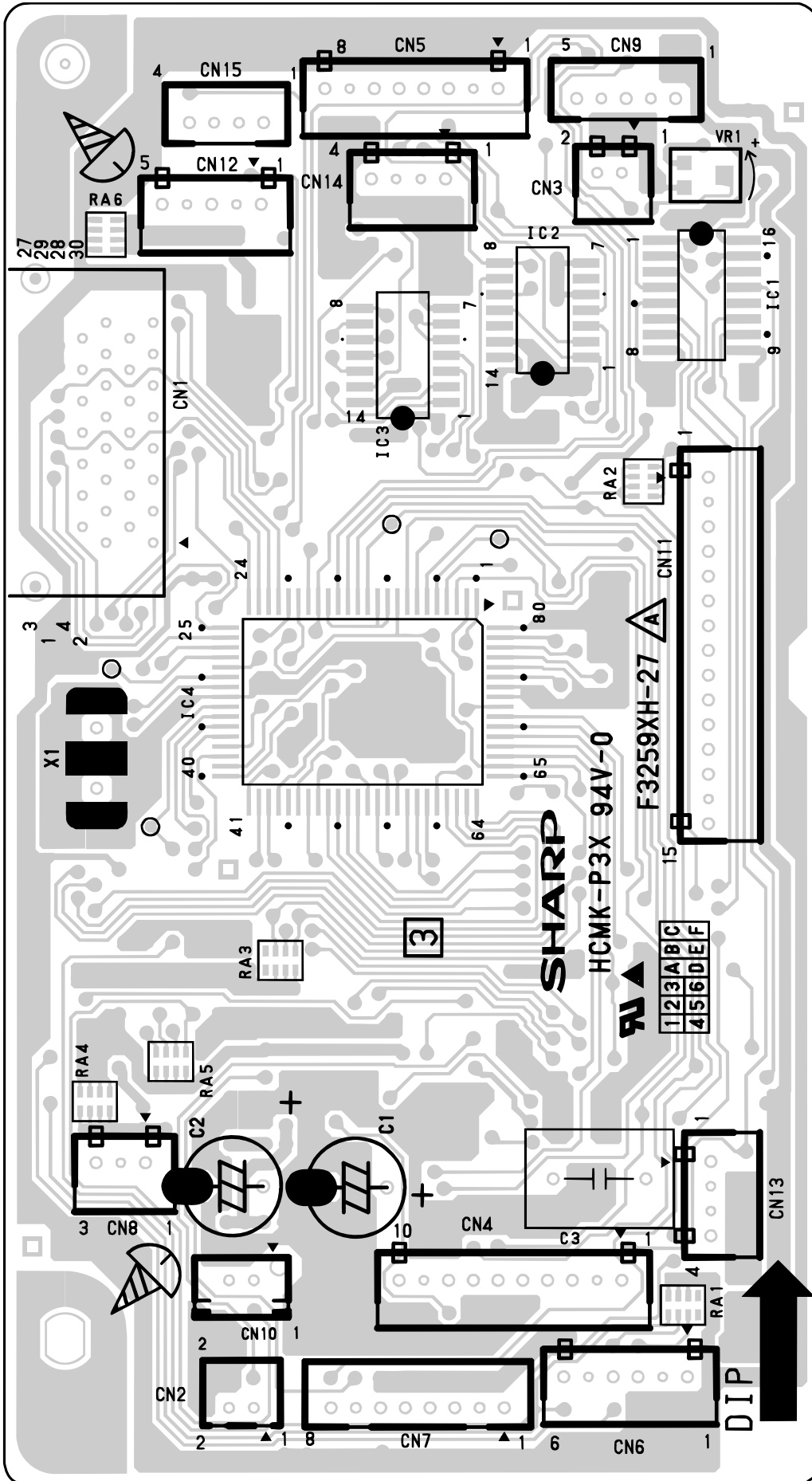


Printer PWB₁ circuit

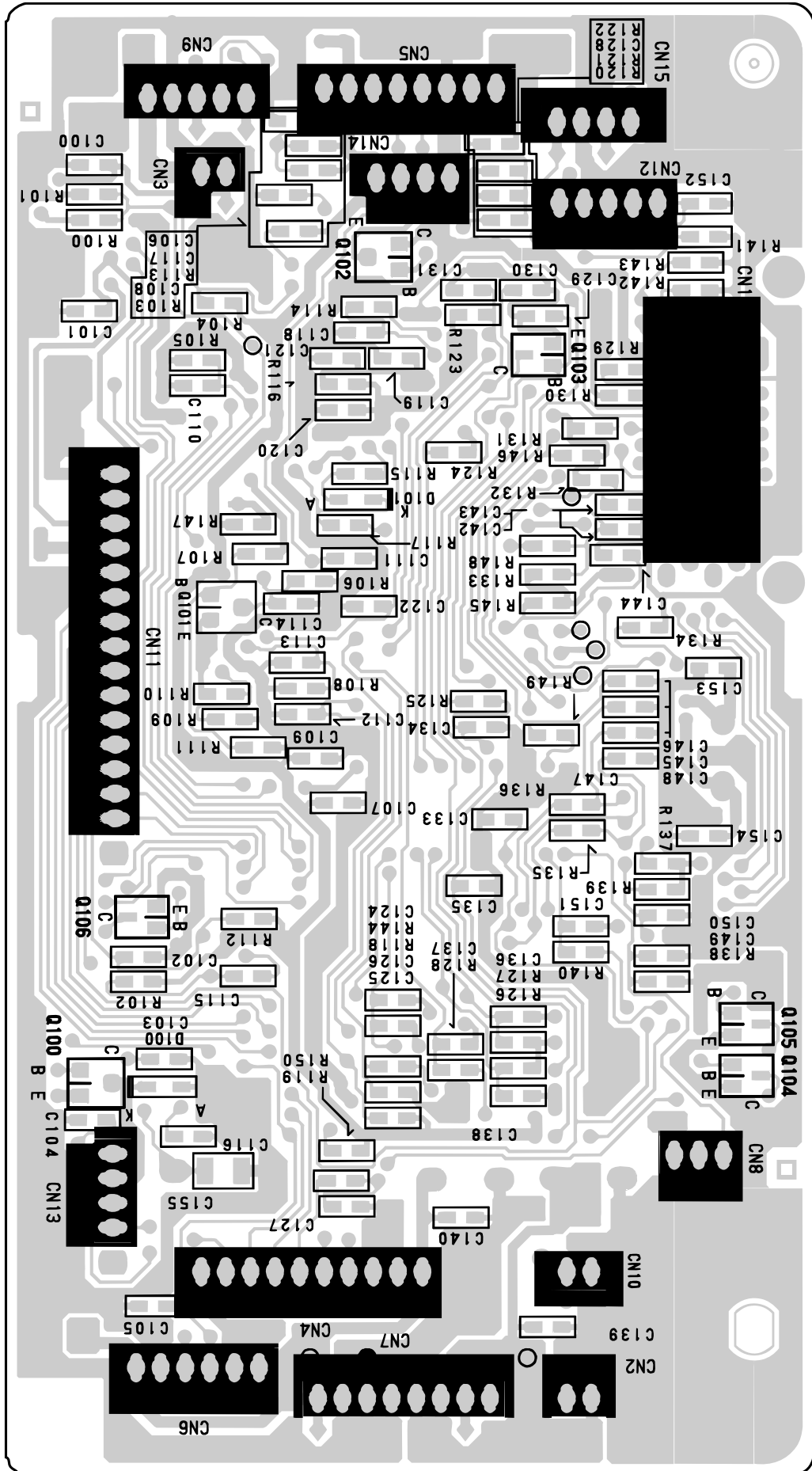
2/2



Printer PWB parts layout (Top side)

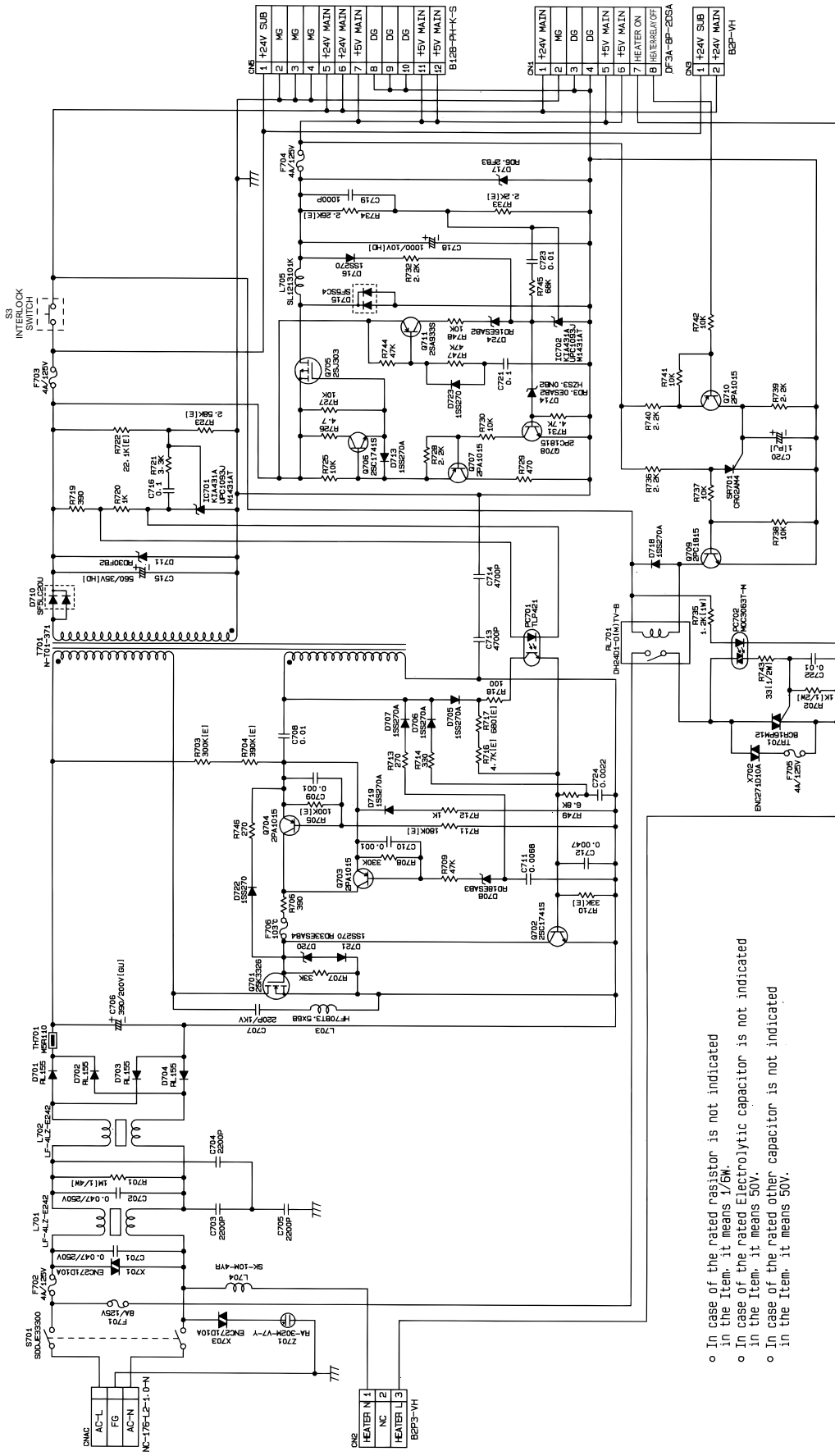


Printer PWB parts layout (Bottom side)



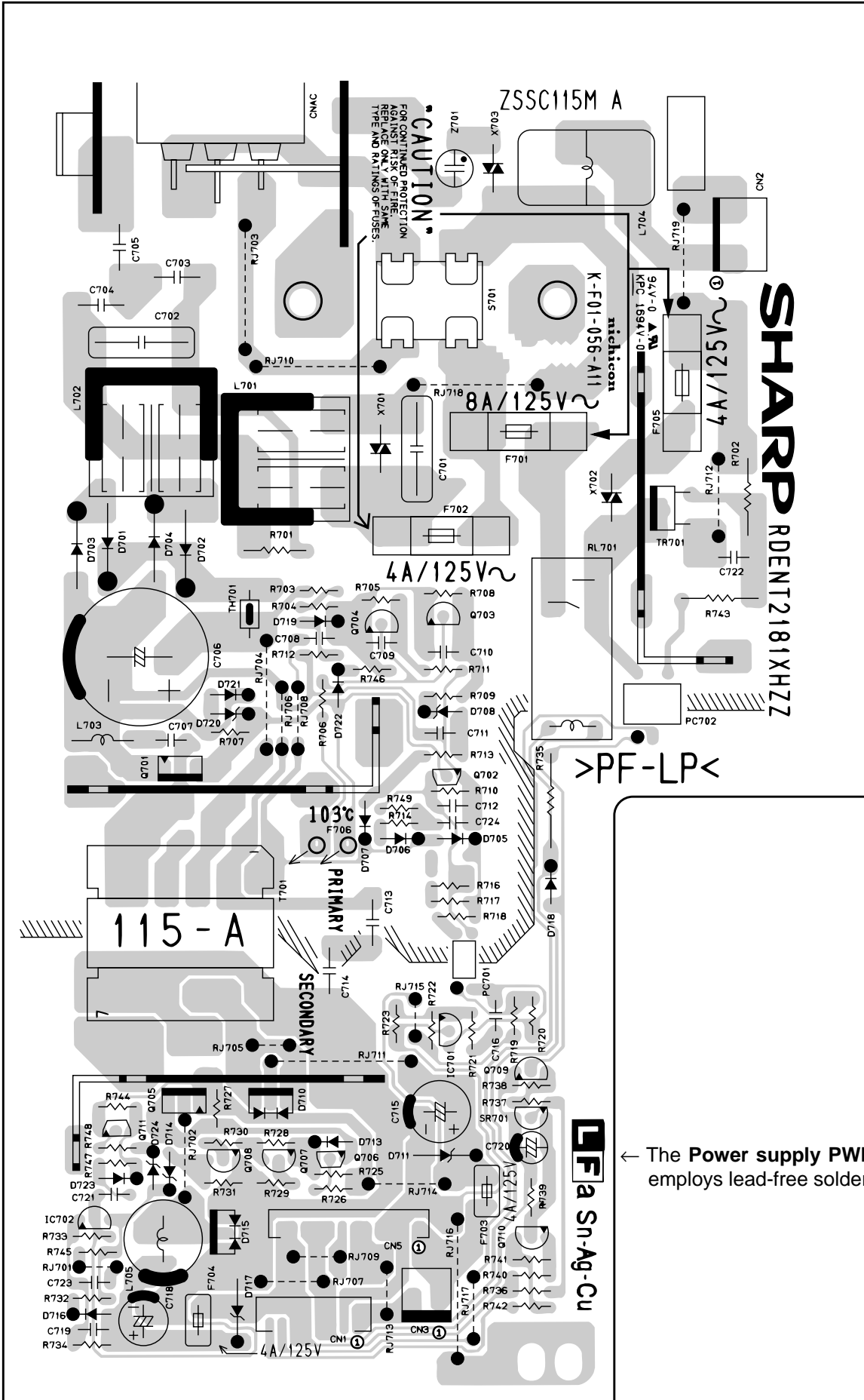
[4] Power Supply PWB circuit

1/1



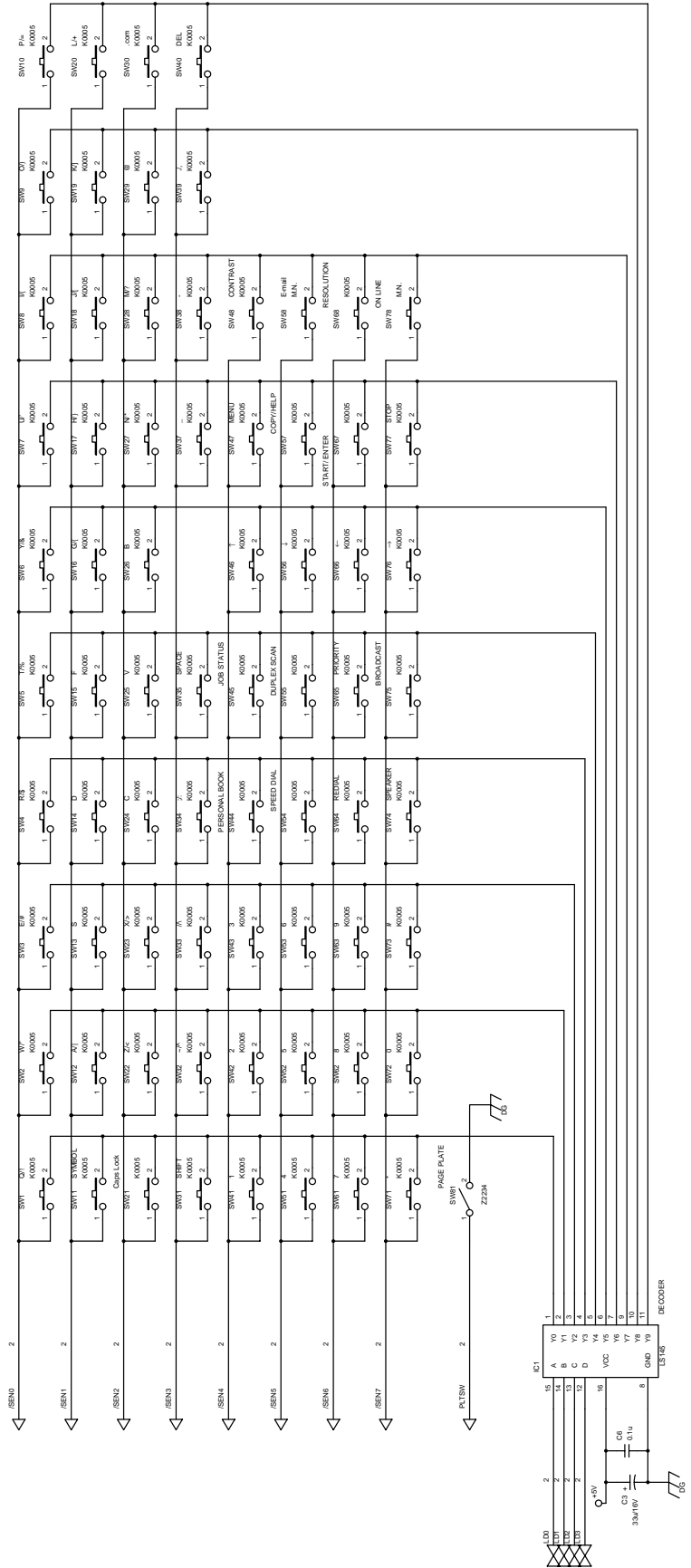
- o In case of the rated resistor is not indicated in the Item, it means 1/5W.
- o In case of the rated Electrolytic capacitor is not indicated in the Item, it means 50V.
- o In case of the rated other capacitor is not indicated in the Item, it means 50V.

Power Supply PWB parts layout



← The Power supply PWB of this model employs lead-free solder.

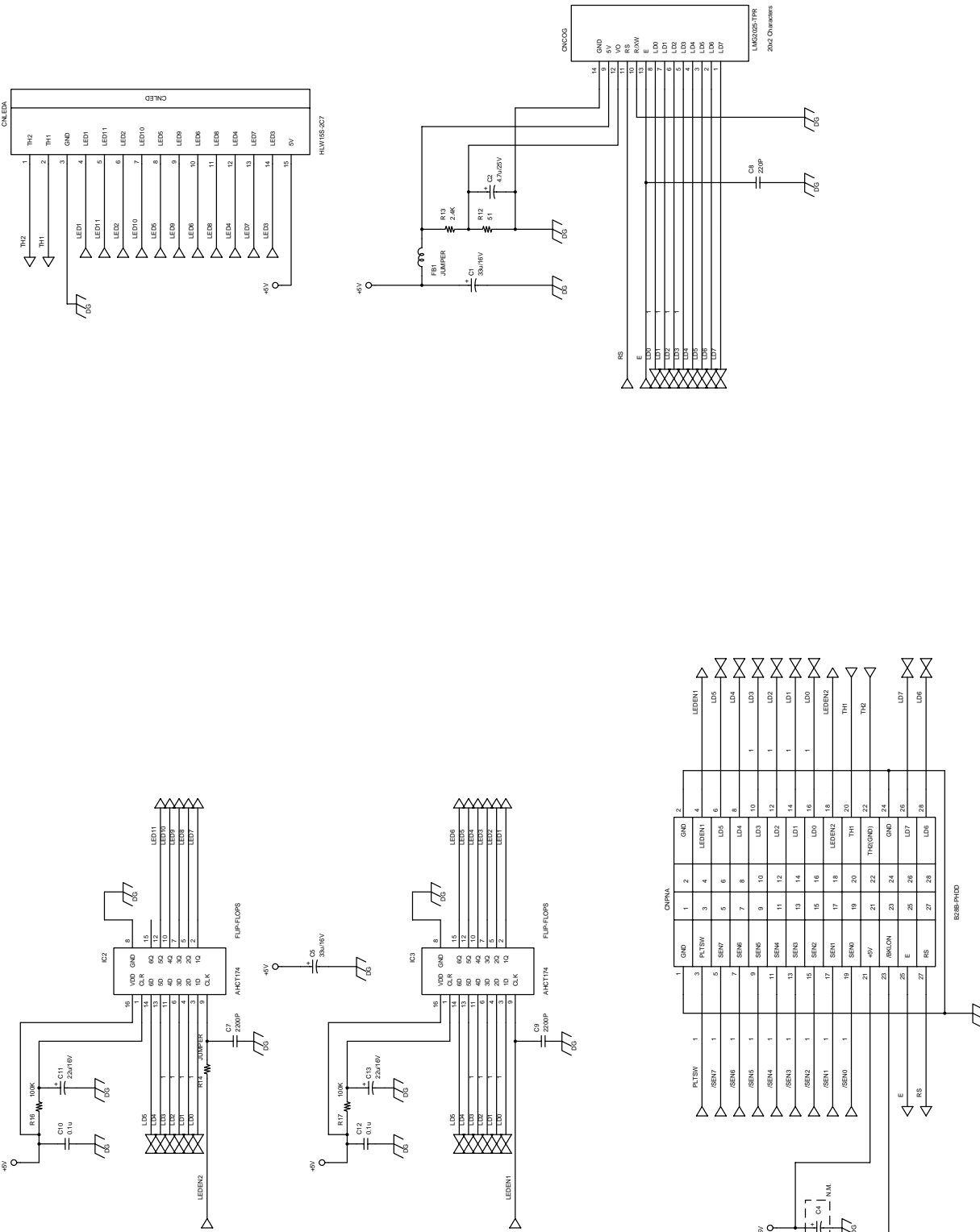
[5] Operation Panel PWB circuit



Note: Since the parts of this PWB cannot be supplied, change it as a unit.

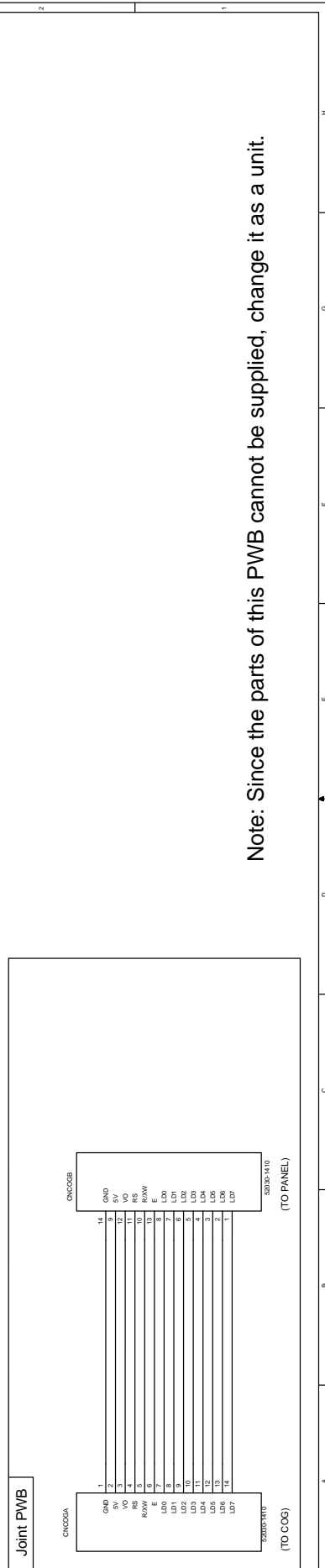
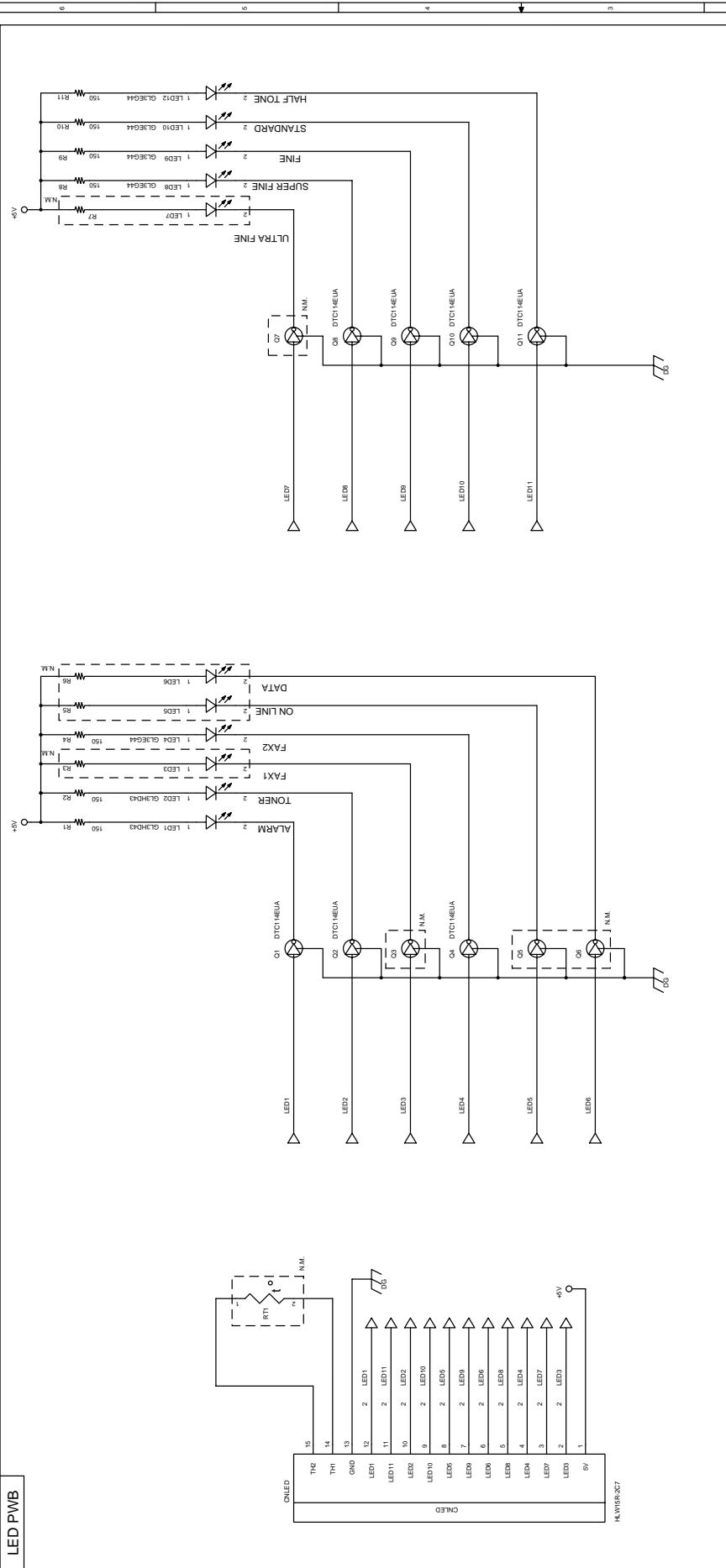
Operation Panel PWB circuit

2/3



Note: Since the parts of this PWB cannot be supplied, change it as a unit.

Operation Panel PWB circuit

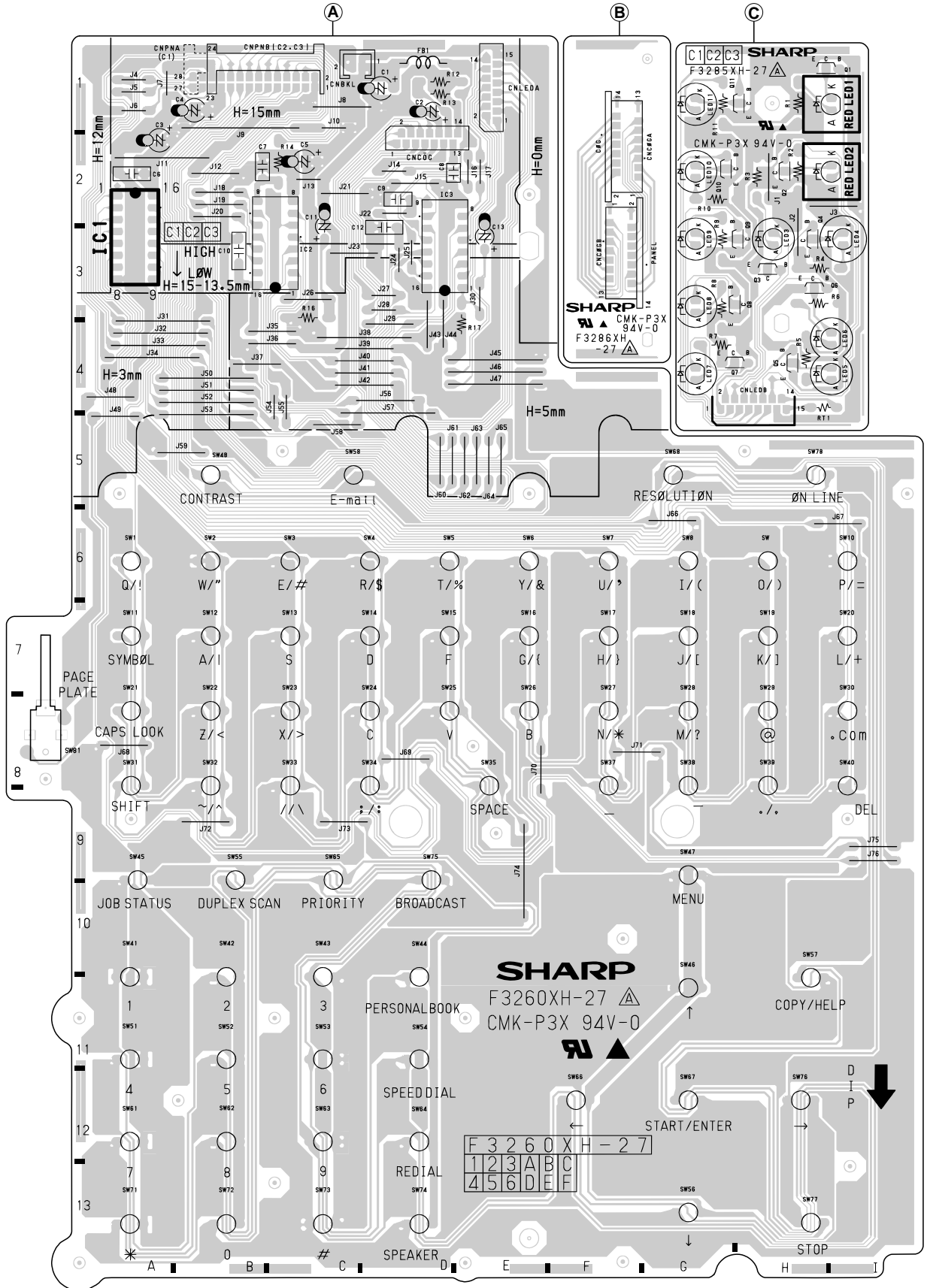


Note: Since the parts of this PWB cannot be supplied, change it as a unit.

Operation panel PWB parts layout

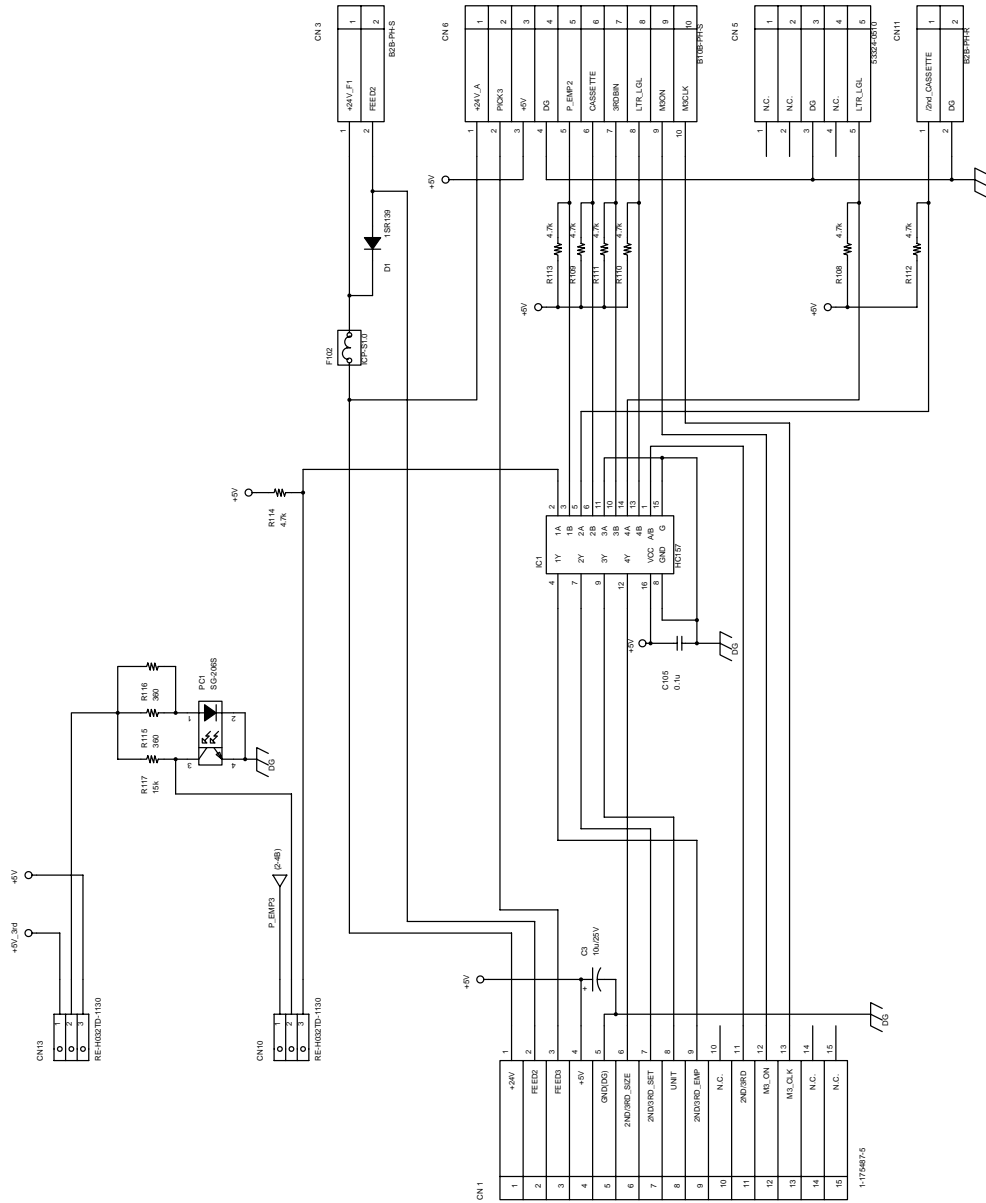
Note: Since the parts of this PWB cannot be supplied, change it as a unit.

No.	DESCRIPTION	PARTS CODE
(A)	Panel PWB unit	DCEKP425CXHP1
(B)	Joint PWB unit	DCEKP425CHXL1
(C)	LED PWB unit	DCEKP425CXHI1



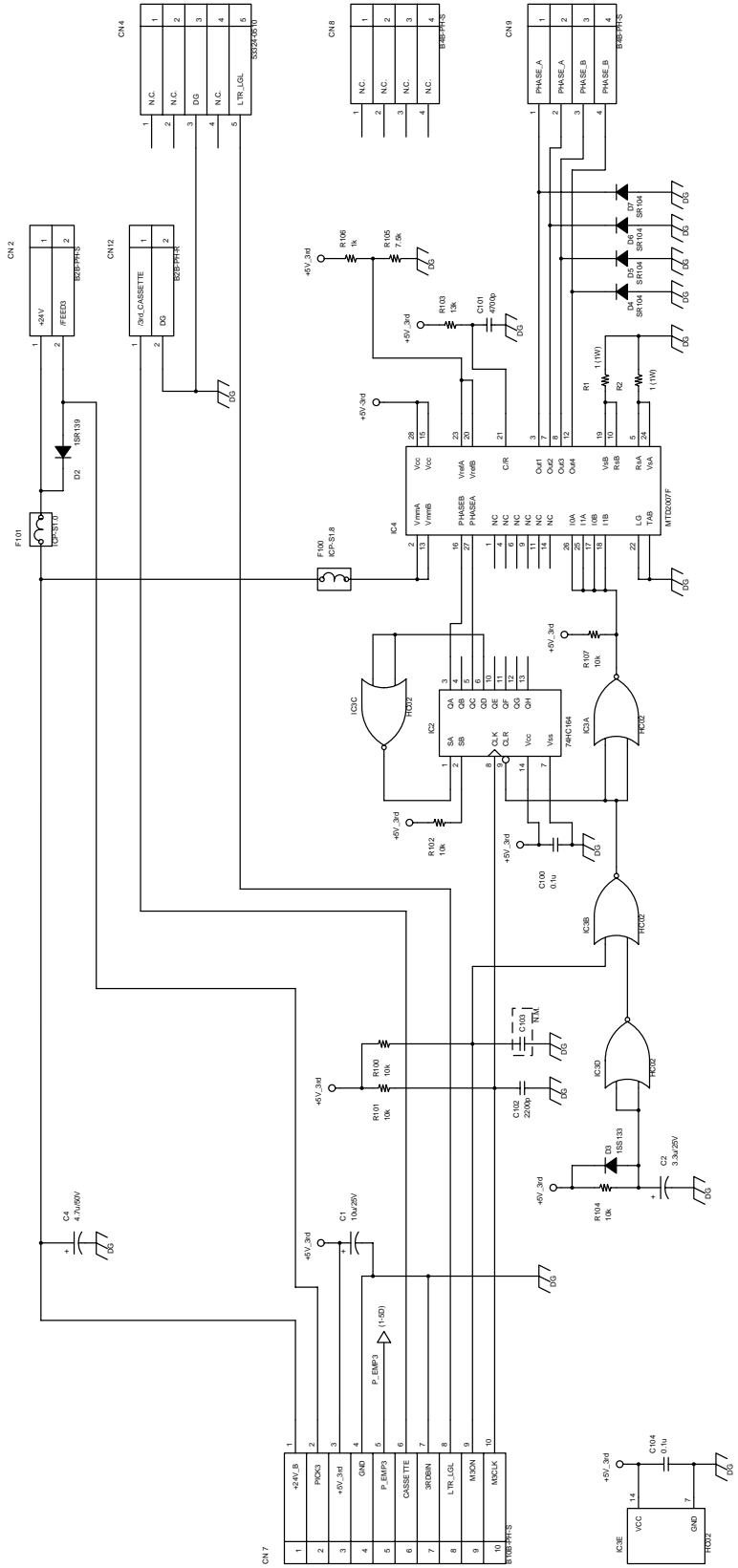
[6] 2nd paper cassette PWB circuit (FO-CS1)

1/2

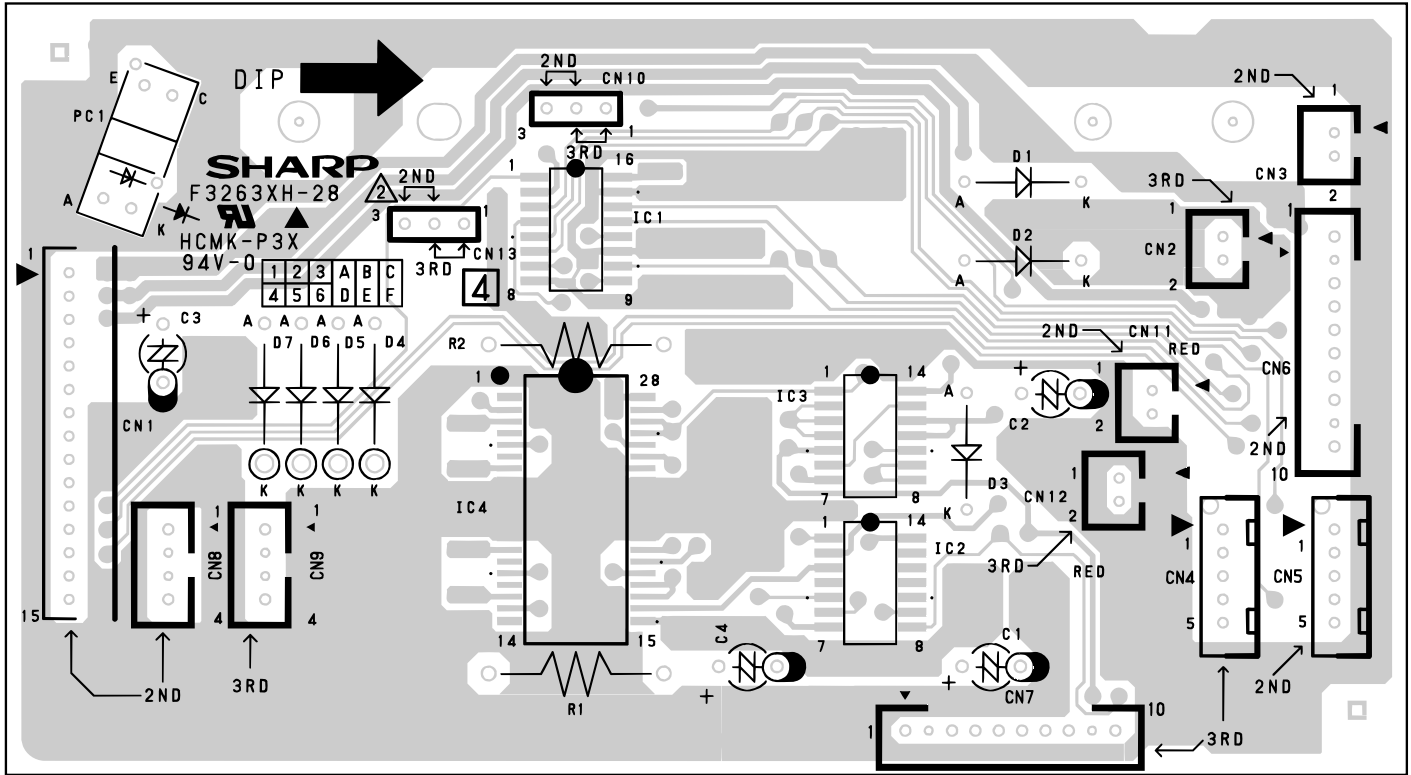


2/2

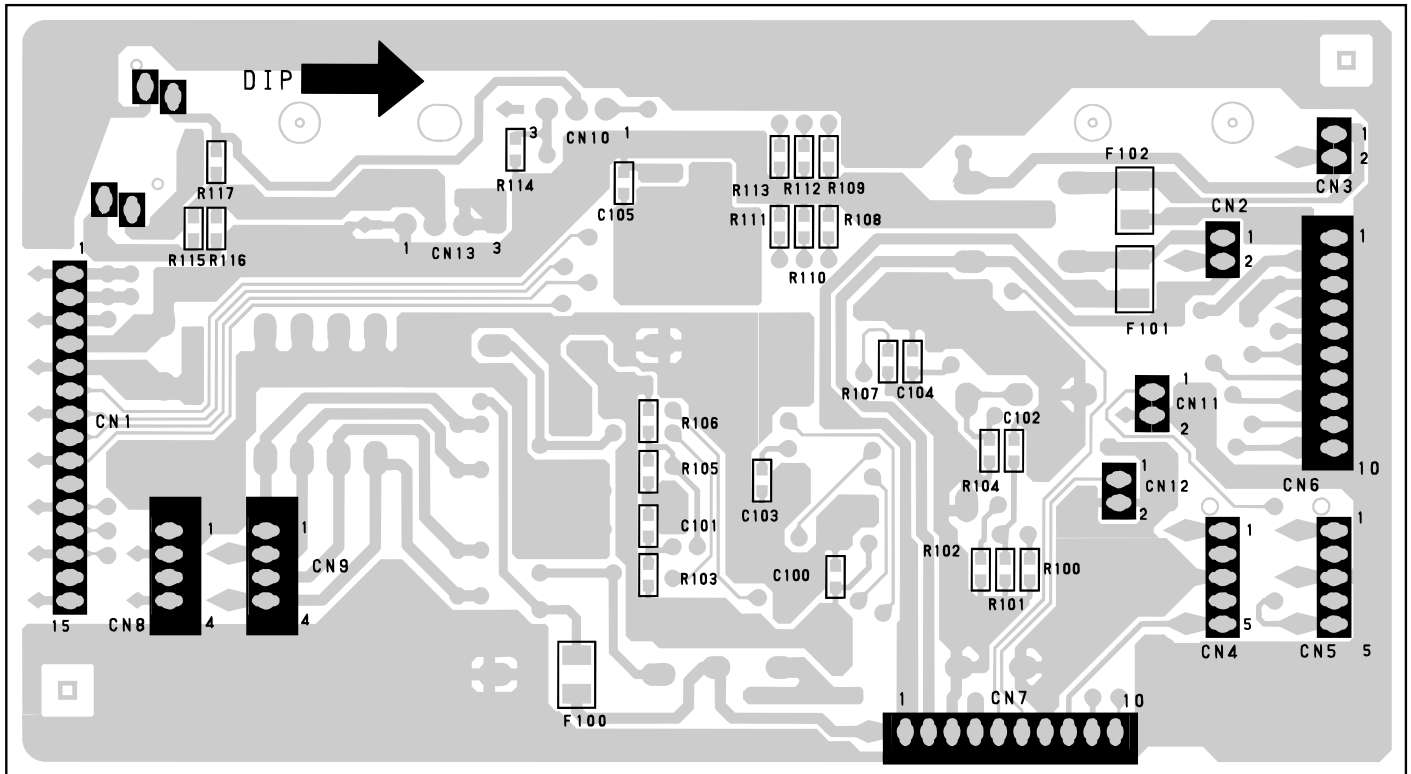
2nd paper cassette PWB circuit (FO-CS1)



2nd paper cassette PWB parts layout (Top side) (FO-CS1)



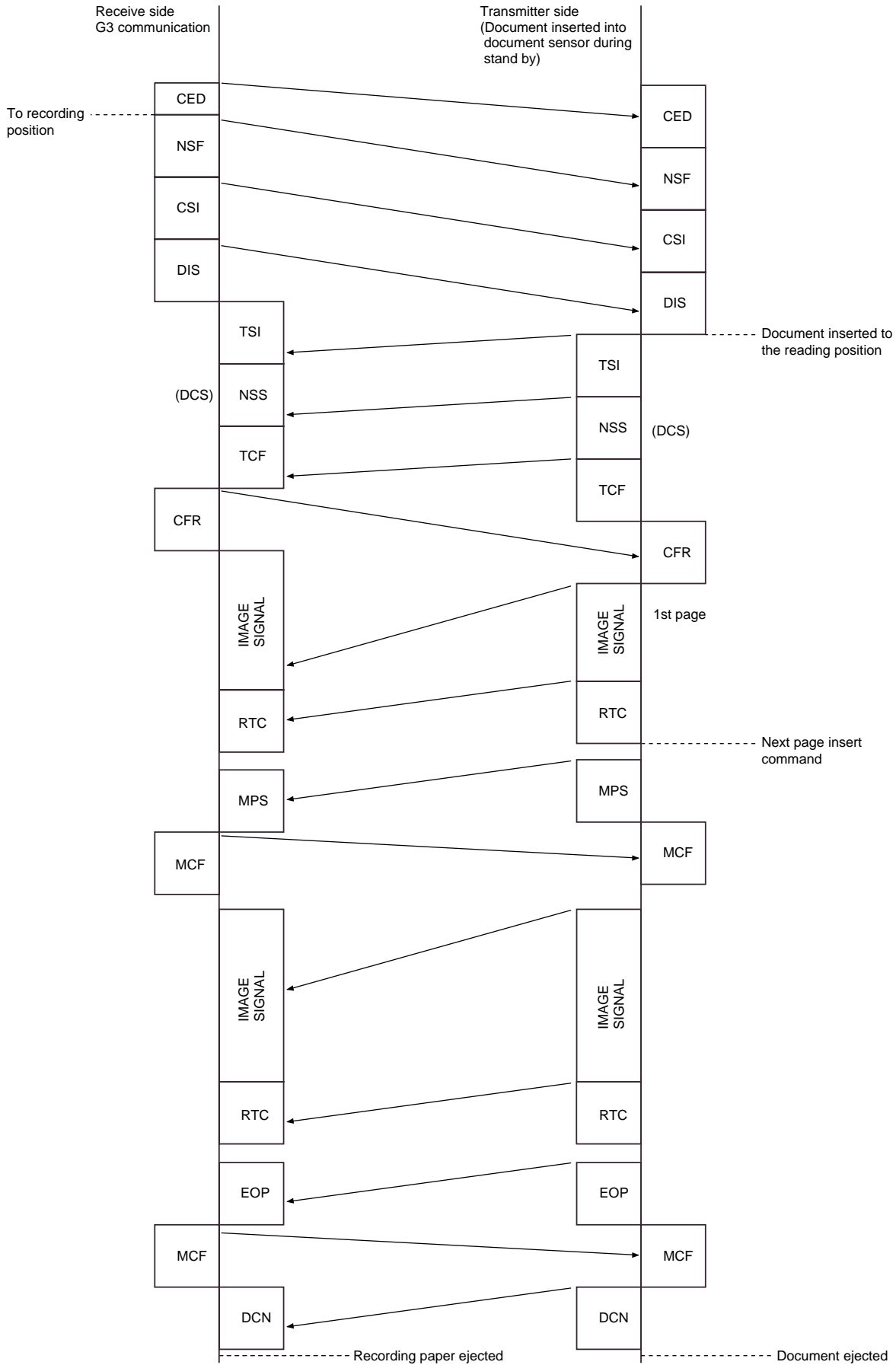
2nd paper cassette PWB parts layout (Bottom side) (FO-CS1)



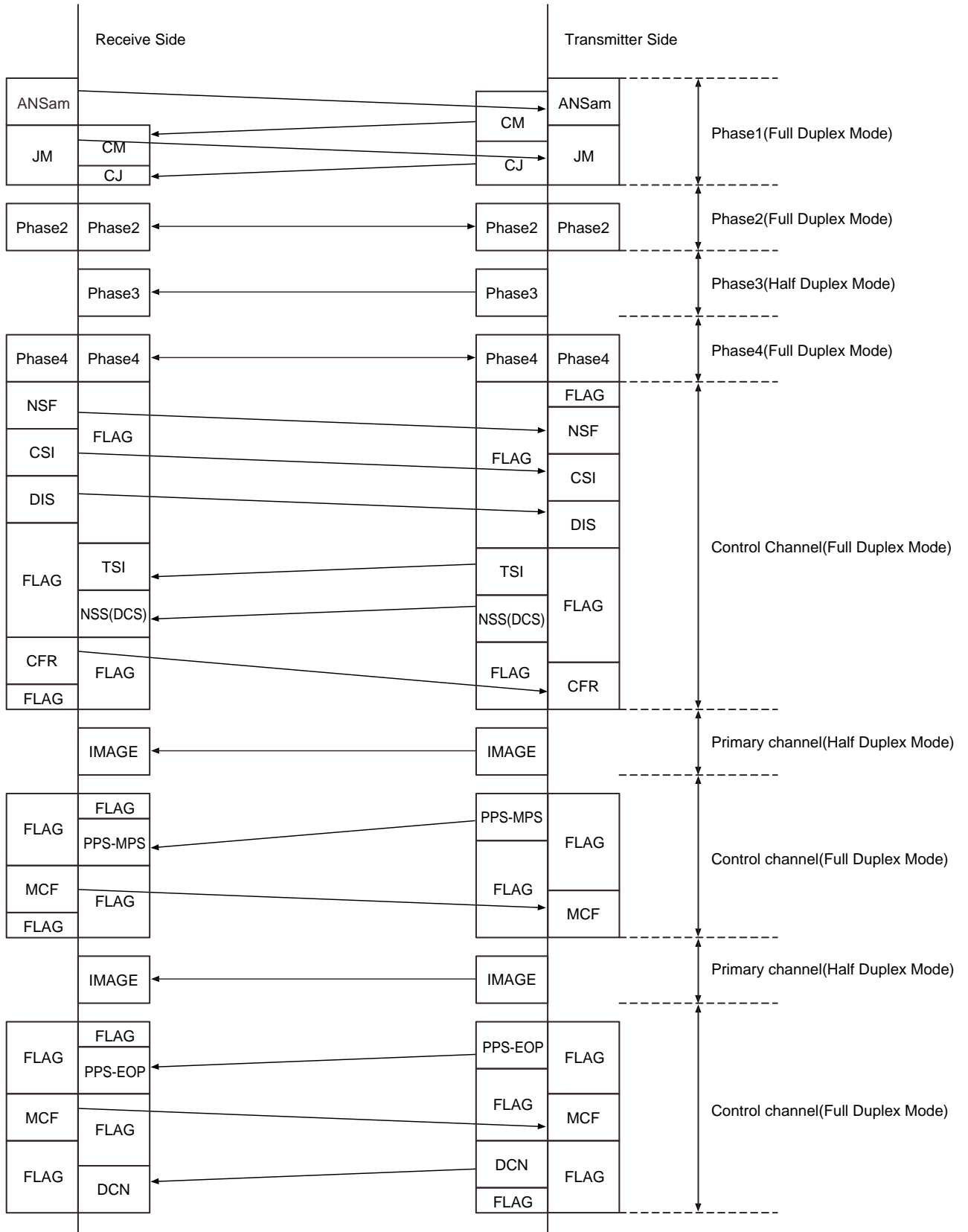
M E M O

CHAPTER 7. OPERATION FLOWCHART

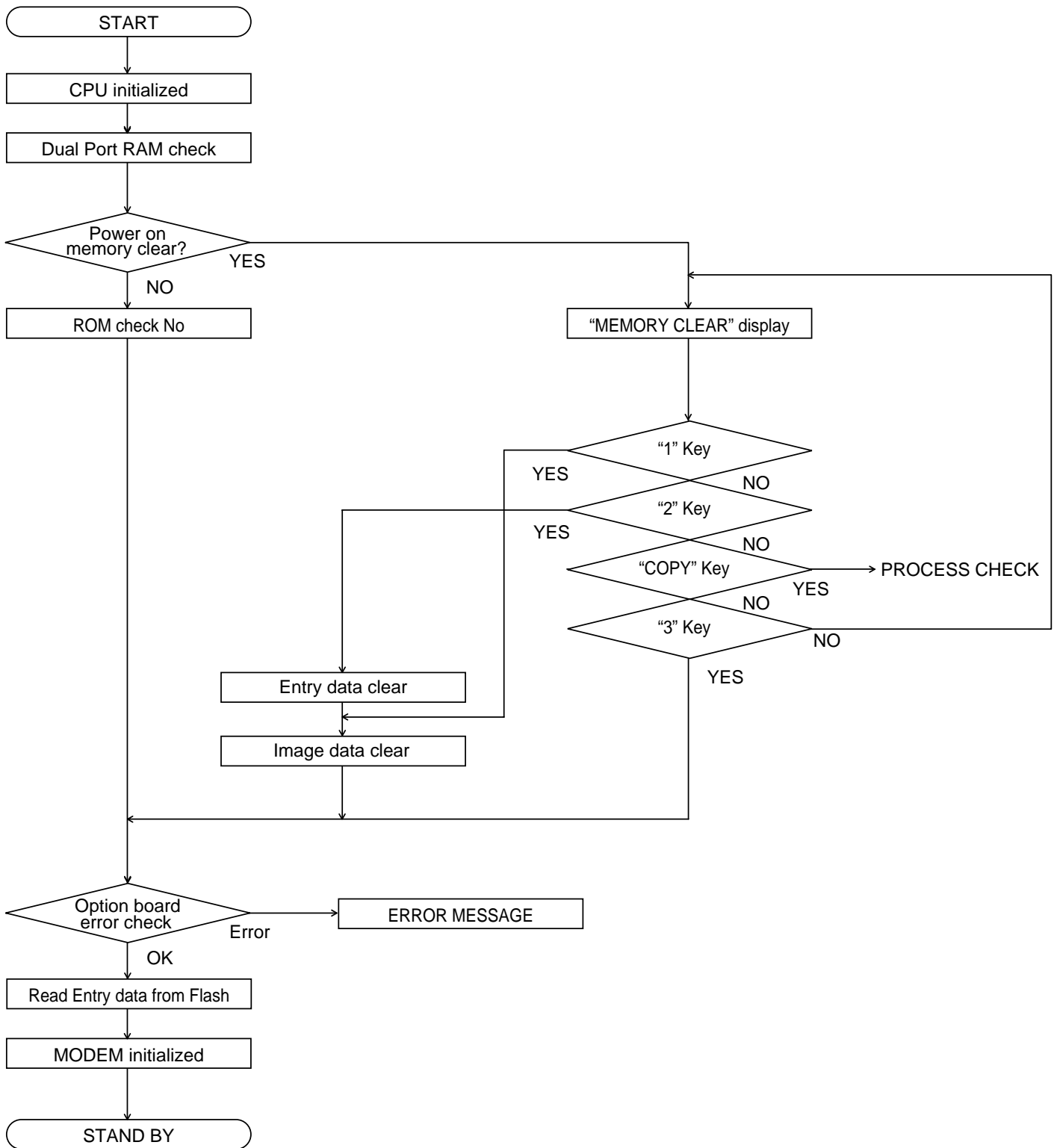
[1] G3 Protocol



[2] Super G3 Protocol



[3] Power On Sequence



CHAPTER 8. OTHERS

[1] Service Tools

1.CONNECTION

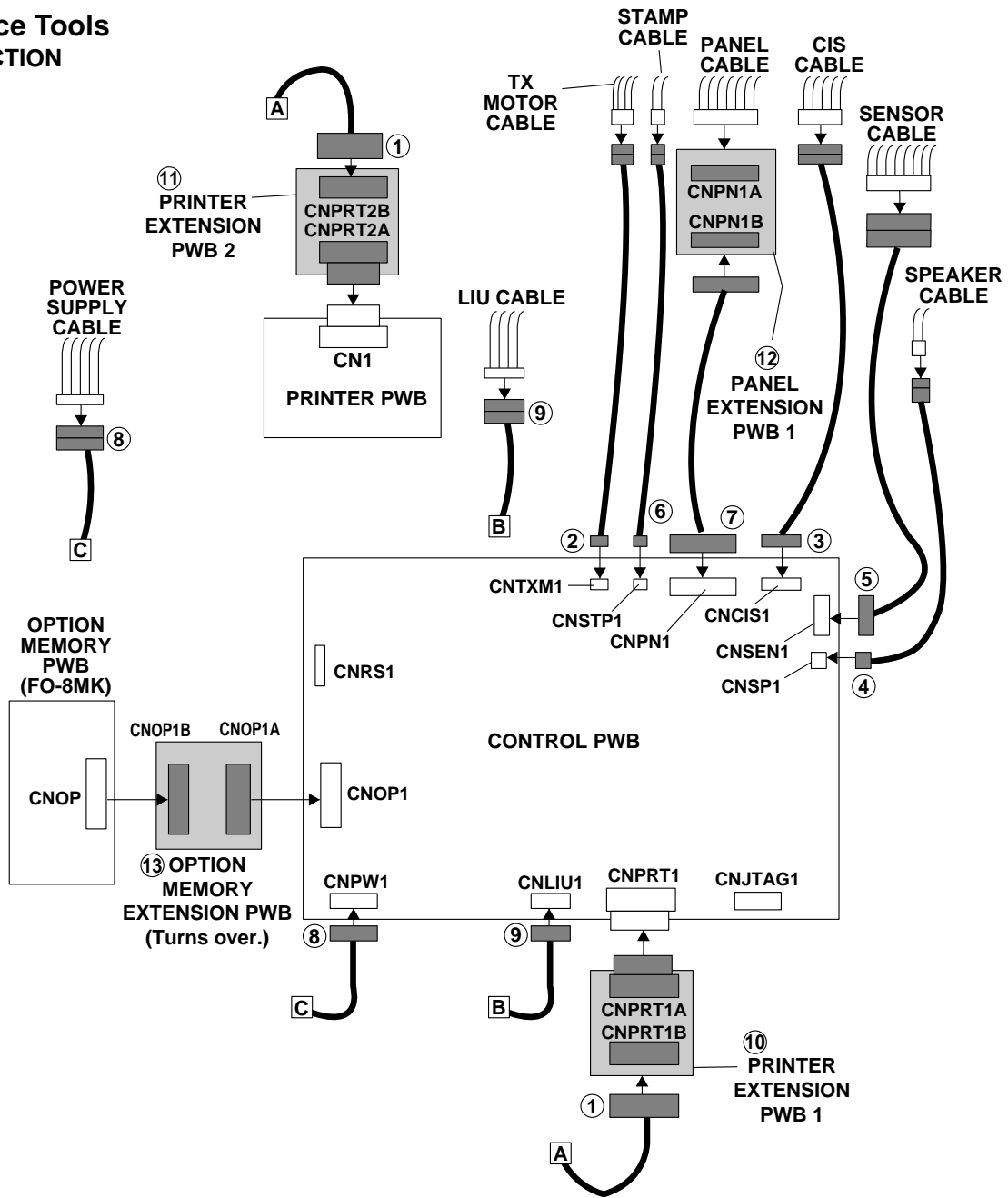


Fig. 1

2. Extension list

NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	QCNW-4559SCZZ	PRINTER EXTENSION PWB CABLE	1	FX
2	QCNWN313BSCZZ	TX MOTOR EXTENSION CABLE	1	AM
3	QCNWN314BSCZZ	CIS EXTENSION CABLE	1	AT
4	QCNWN315BSCZZ	SPEAKER EXTENSION CABLE	1	AH
5	QCNWN316BSCZZ	SENSOR EXTENSION CABLE	1	AR
6	QCNWN317BSCZZ	STAMP EXTENSION CABLE	1	AH
7	QCNWN261BXHZZ	PANEL EXTENSION CABLE	1	BC
8	QCNWN318SCHZZ	POWER SUPPLY EXTENSION CABLE	1	AU
9	QCNWN319BSCZZ	LIU EXTENSION CABLE	1	AS
10	DUNT-459CSC01	PRINTER EXTENSION PWB 1	1	CH
11	DUNT-459CSC02	PRINTER EXTENSION PWB 2	1	CH
12	DUNT-459CSC04	PANEL EXTENSION PWB 1	1	CH
13	DUNT-459CSC03	OPTION MEMORY EXTENSION PWB	1	CH

[2] Rewriting version up the FLASH ROM

1. Outline

FO-4400 is connected with PC in a serial cable, and Firmware of FO-4400 is downloaded.

2. Preparation

PC side:

(1) Communication software (Tera Term Pro Version 2.3 (free software)) is installed.

It distributes separately. (tterm23.zip)

- tterm23.zip is decompressed to the suitable directory.
- Setup.exe is double-clicked and installed.
- Start Tera Term and set up Serial Port. Figs. 2, 3, 4)

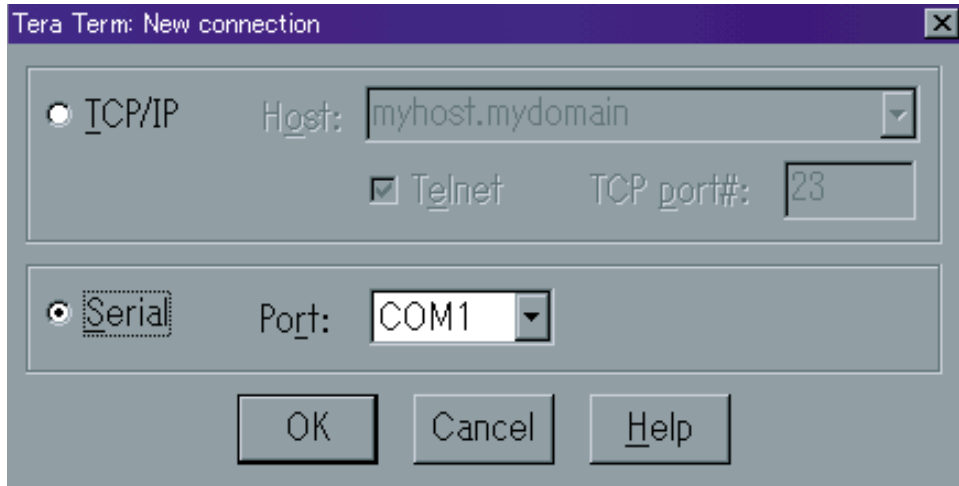


Fig. 2

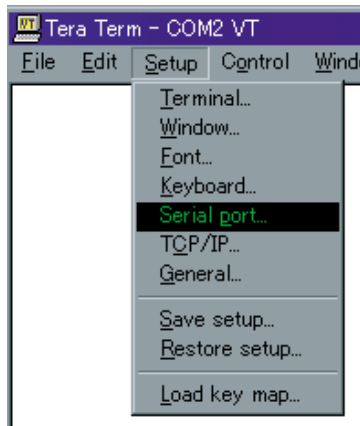


Fig. 3

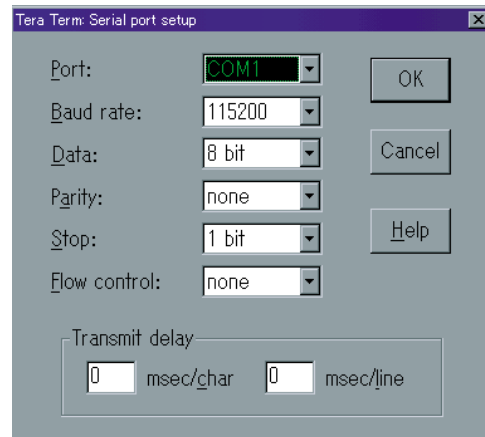


Fig. 4

Note: According to the environment of PC to be used, one of COM1 and COM2 is chosen.

(2) The file of the firmware to update is copied to a suitable directory.
(The extension of the file for update is "ver".)

FO-4400 side:

- (1) Turn off the power.
- (2) The door for option board wearing in the back of FO-4400 is opened.
- (3) The conversion cable of 9pin - 5pin is connected the white connector which has five pins.
(The connector is at the upper left of the door.)
- (4) FO-4400 is connected with PC with a serial straight cable and a conversion cable.

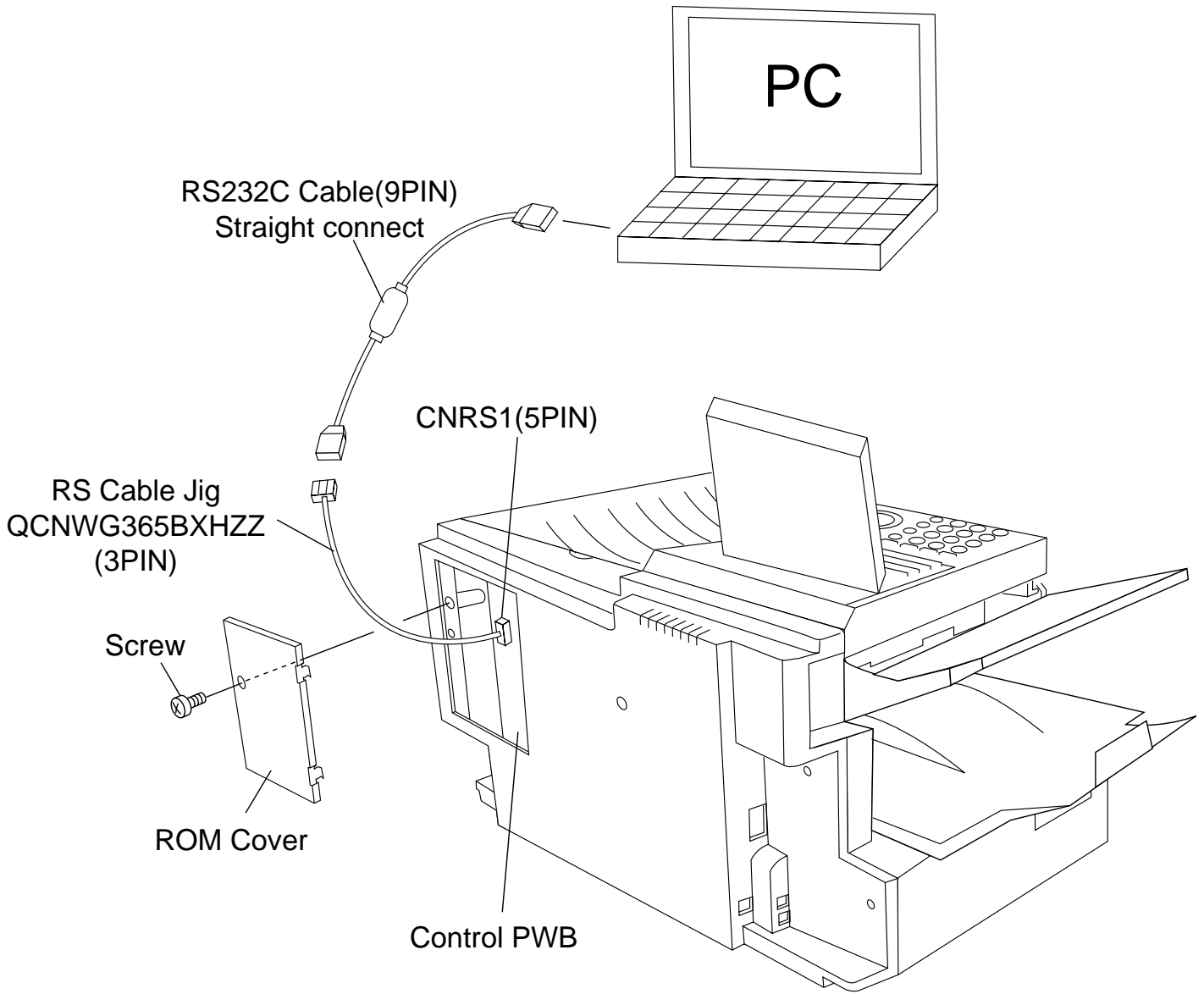


Fig. 5 Connected cable

PART CORD	PRICE RANK	NAME	REMARKS
QCNWG365BXHZZ	BH	RS cable JIG (3PIN)	Connects RS-232C cable and CNRS1(Control PWB)

3. Operating Procedure

FO-4400

(1) Turn on the power, pushing "START"+"STOP".

MEMORY CLEAR
1=ALL, 2=IMAGE, 3=NO

(2) Push "MENU".

Flash Loader

The size of a firmware file is 2.5MB.

Transmission takes about 4 minutes and 30 seconds.

(6) After transmission is completed, write in a flash memory.

Flash Loader
Writing

Note: Never turn off the power, when displayed as "Writing".

Note: When not displayed as "Writing", please turn off the power and redo from the beginning.

(7) After about 30 seconds,

OK
Reset Machine

(8) Turn off the power.

PC

(3) Start Tera Term Pro.

(4) [File]-[Send File] is chosen. (Fig.5)

(5) [Option] Binary is checked. (Fig.6)

Double-click the file to download.

A file transfer is started.

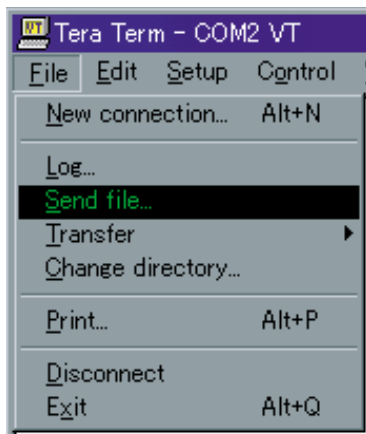


Fig. 6

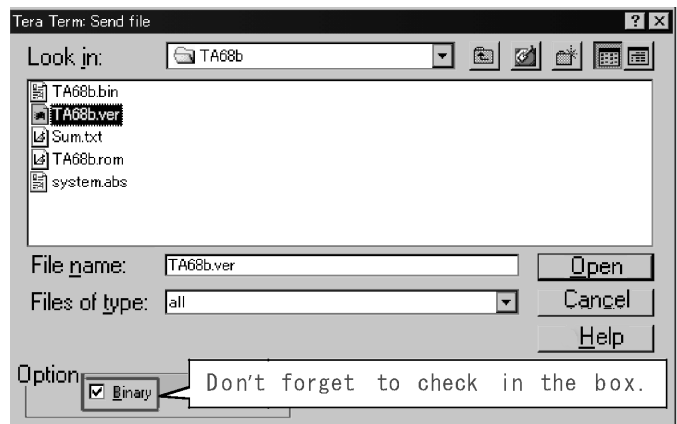


Fig. 7

SHARP PARTS GUIDE

MODEL FO-4400**MODEL FO-CS1**

MODEL	SELECTION CODE	DESTINATION
FO-4400	U	U.S.A./Canada

CONTENTS

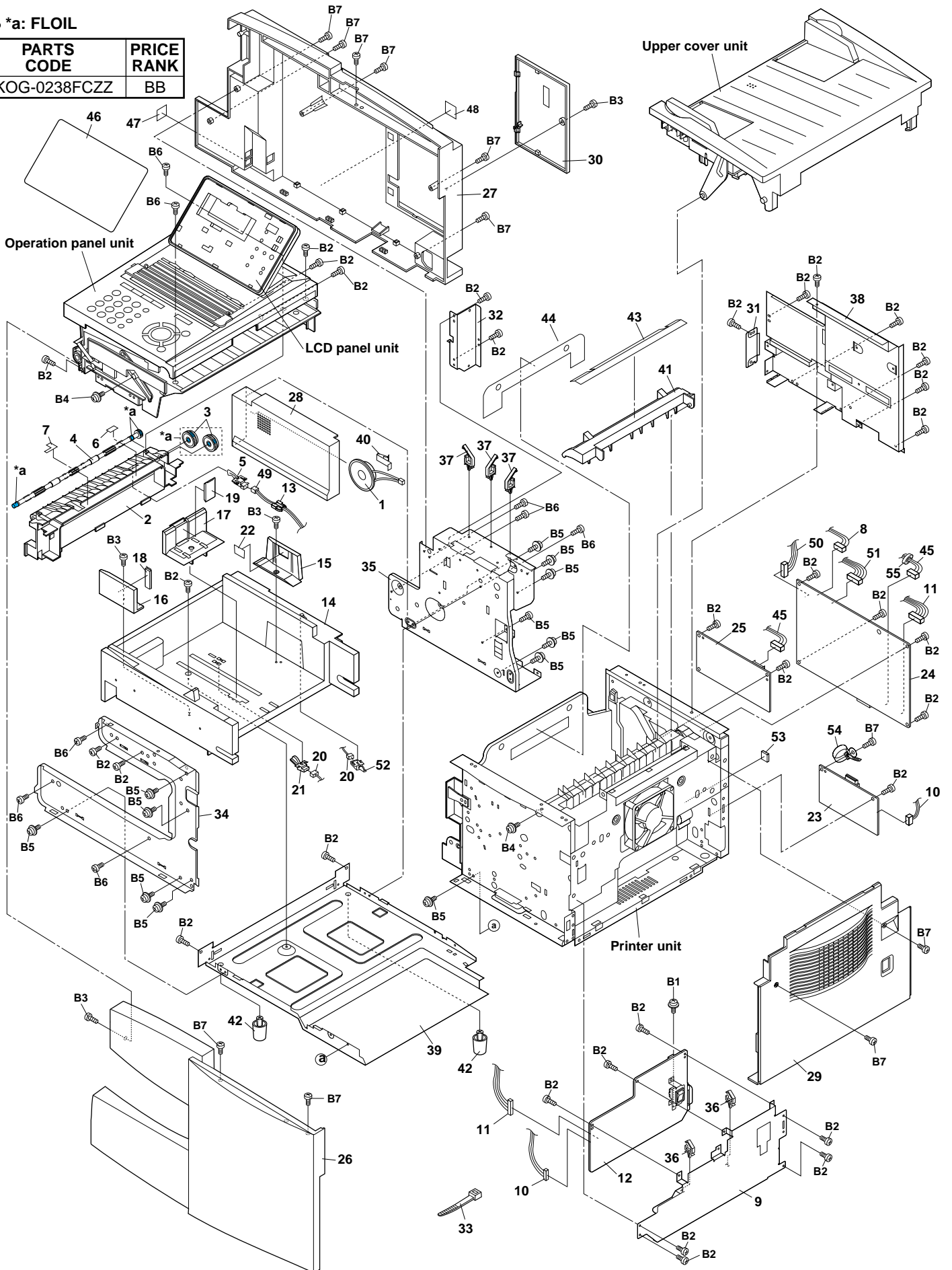
- | | |
|--|---|
| 1 Exterior, etc. (1) | 13 2nd paper cassette (2)
(FO-CS1) |
| 2 Exterior, etc. (2) | 14 Packing material & Accessories, 2nd paper cassette
(FO-CS1) |
| 3 Exterior, etc. (3) | 15 Control PWB unit |
| 4 Operation panel unit | 16 LIU PWB unit |
| 5 Document guide upper unit | 17 Printer PWB unit |
| 6 Scanner frame unit | 18 Power supply PWB unit |
| 7 Frames | 19 Operation panel PWB unit |
| 8 Paper transport section | 20 Joint PWB unit |
| 9 Fusing unit | 21 LED PWB unit |
| 10 Drive/Transfer section | 22 High voltage PWB unit |
| 11 Packing material & Accessories
(FO-4400) | 23 Toner empty PWB unit |
| 12 2nd paper cassette (1)
(FO-CS1) | 24 2nd paper cassette PWB unit
(FO-CS1) |
| | ■ Index |

Because parts marked with "△" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specified to the product specification.

[1] Exterior etc.(1)

 *a: FLOIL

PARTS CODE	PRICE RANK
UKOG-0238FCZZ	BB

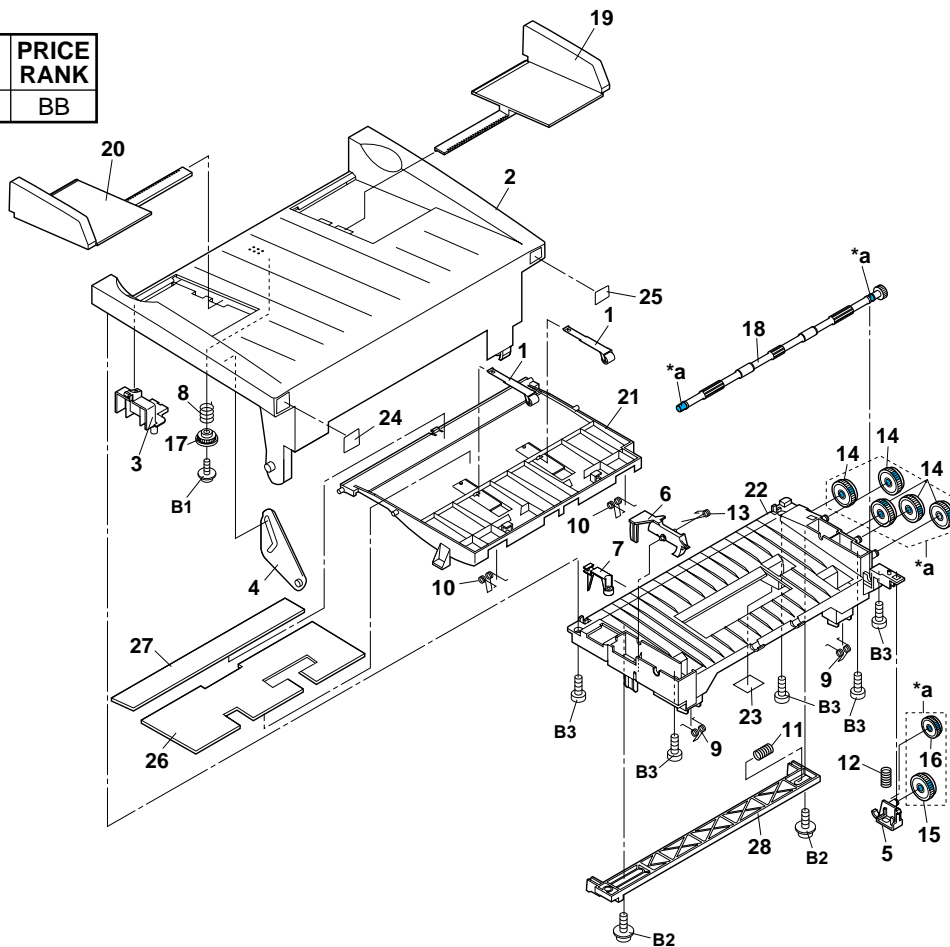


NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[1] Exterior etc.(1)						
1	CCNW-4955XH02	AL	N	C	Speaker ass'y	
2	GCABE2411XHSA	AX	N	D	Left upper cabinet	
3	NGERH2466XHZZ	AE		C	Idler gear(32Z)	
4	NROLP2420XHZZ	AM		C	Left cabinet roller	
5	QSW-M2324XHZZ	AN	N	C	Paper out sensor	
6	TLABP394EXHZZ	AE	N	D	Supply guide label 1	
7	TLABP395EXHZZ	AE	N	D	Supply guide label 2	
8	QCNW-4953XHZZ	AK		C	CIS cable	
9	LPLTM3267XHZZ	AT	N	C	Power supply PWB plate	
10	QCNWN262BXHZZ	AS	N	C	Mechanism connect power supply cable	
11	QCNWN263BXHZZ	AP	N	C	Power supply cable	
△	12	RDENT2181XHZZ	BX	N	E	Power supply PWB unit
13	QCNCW2662SC0B	AE	N	C	Joint connector	
14	LPLTP3227XHSA	BE	N	C	Paper feed tray	
15	PGIDM2636XHSA	AH	N	C	Tray width guide, rear	
16	PGIDM2637XHSA	AH	N	C	Tray width guide, front	
17	PGIDM2638XHSA	AH	N	C	Tray back guide	
18	PSPO-2001XHZZ	AD		C	Tray width sponge	
19	PSPO-2013XHZZ	AE	N	C	Tray back guide sponge	
20	QCNWN268BXHZZ	AK	N	C	Paper size sensor cable	
21	QSW-M2296XHZZ	AD		B	Paper size sensor	
22	TLABH215EXHZZ	AD	N	D	Paper limit label 1	
23	DCEKC424CXH01	BW	N	E	Printer PWB unit	
24	DCEKC982RXHZZ	CR	N	E	Control PWB unit(Within ROM)	
25	DCEKL422CXH01	BM	N	E	LIU PWB unit	
26	GCABA2404XHSA	BE	N	D	Front cabinet	
27	GCABB2405XHSA	BE	N	D	Rear cabinet	
28	GCABC2409XHSA	AS	N	D	Inner front cabinet	
29	GCABD2410XHSA	AX	N	D	Right cabinet	
30	GCOVA2408XHSC	AL	N	C	ROM cover	
31	LANGP2848XHZZ	AE	N	C	LIU-2 angle	
32	LANGT2849XHZZ	AH	N	C	NIC angle	
33	LBNDJ2006XHZZ	AA		C	Band(100mm)	
34	LFRM-2233XHZZ	AV	N	C	Front frame, left	
35	LFRM-2234XHZZ	AX	N	C	Rear frame, left	
36	LHLDW2158SCZZ	AC		C	Wire holder	
37	LHLDW2183SCZZ	AD		C	Clamp	
38	LPLTM3235XHZZ	AV	N	C	PWB plate	
39	LPLTM3236XHZZ	AZ	N	C	Bottom frame, left	
40	MSPRP3055XHFFJ	AD		C	Speaker holder plate spring	
41	PGIDM2635XHZZ	AQ	N	C	Paper press guide	
42	PLEGP2071XHZZ	AE		C	Foot	
43	PSHEZ3740XHZZ	AL	N	C	Paper press guide protect sheet	
44	PSHEZ3743XHZZ	AN	N	C	P/H protect sheet	
45	QCNWN274BXHZZ	AN	N	C	LIU cable	
46	HPNLH2422XHZZ	AT	N	D	Decoration panel	
47	PSHEZ3410XHZZ	AB		C	Jack sheet	
48	TLABS393EXHZZ	AE	N	D	FDA label	
49	QCNWN269BXHZZ	AK	N	C	PS4 sensor cable	
50	QCNW-315AXHZZ	AF		C	Sensor cable	
51	QCNWN261BXHZZ	BC	N	C	Panel cable	
52	QSW-M2296XHZZ	AD		B	Received document tray sensor	
53	PCUSS2188XHZZ	AE	N	C	PWB cushion	
54	LBNDJ2013XHZZ	AM	N	C	Band	
△	55	RCORF2124XHZZ	AE		B	Core
B1	LX-BZ2282XHZZ	AB		C	Screw(4x6)	
B2	XHBSD30P06000	AA		C	Screw(3x6)	
B3	XEBSE30P10000	AA		C	Screw(3x10)	
B4	LX-BZ2205XHZZ	AC		C	Screw(3x8)	
B5	LX-BZ2241XHZZ	AC		C	Screw(3x6)	
B6	XEBSD30P10000	AA		C	Screw(3x10)	
B7	XHBSE30P10000	AA		C	Screw(3x10)	

[2] Exterior etc.(2)

● *a: FLOIL

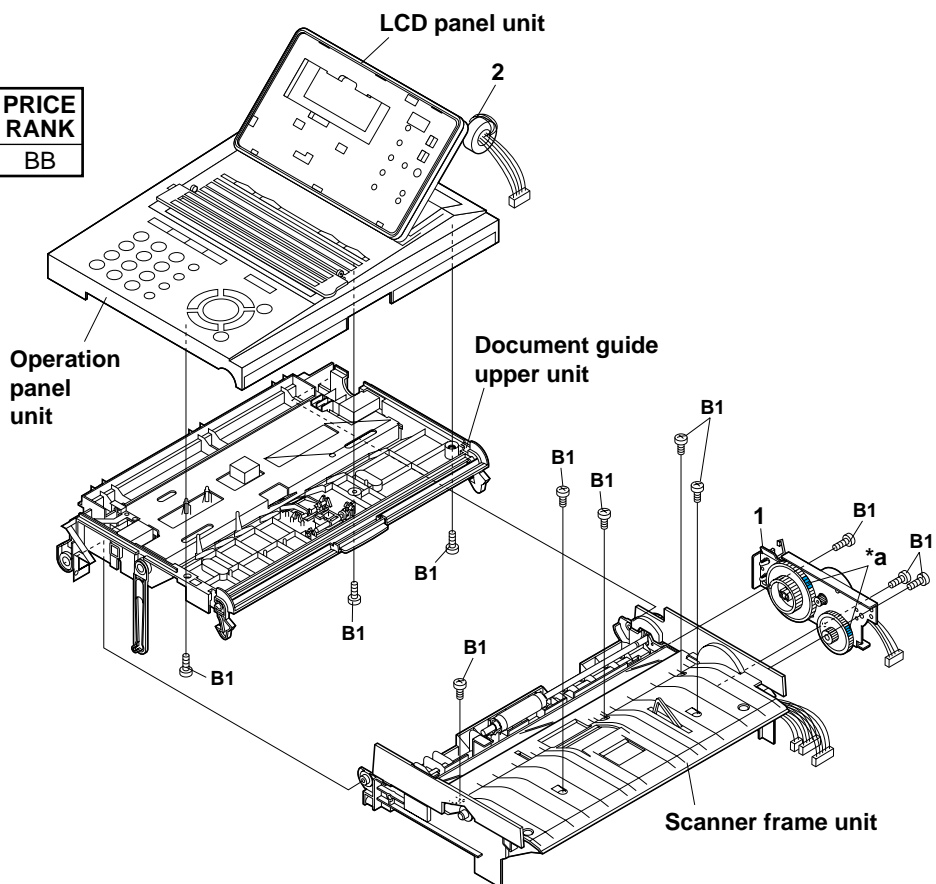
PARTS CODE	PRICE RANK
UKOG-0238FCZZ	BB



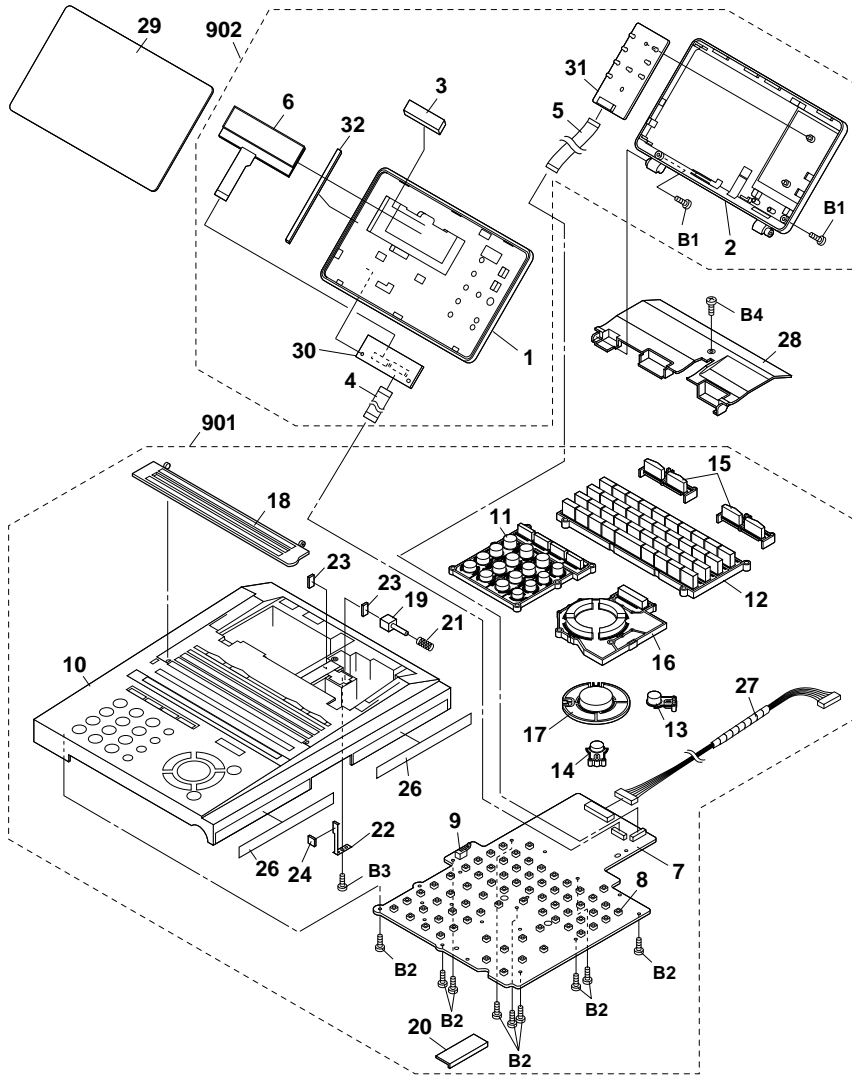
[3] Exterior etc.(3)

● *a: FLOIL

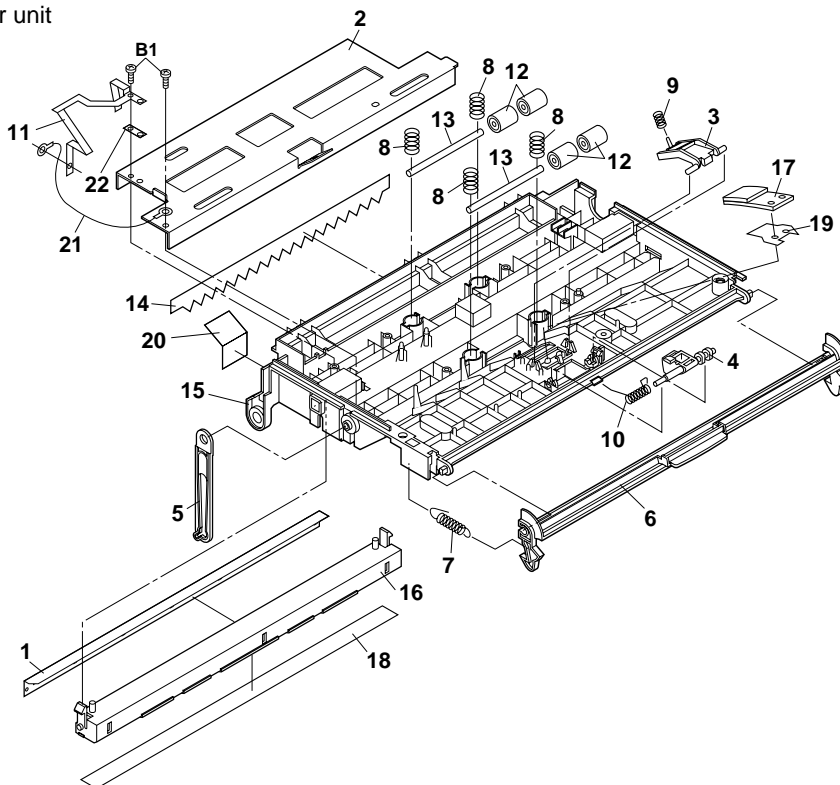
PARTS CODE	PRICE RANK
UKOG-0238FCZZ	BB



[4] Operation panel unit



[5] Document guide upper unit

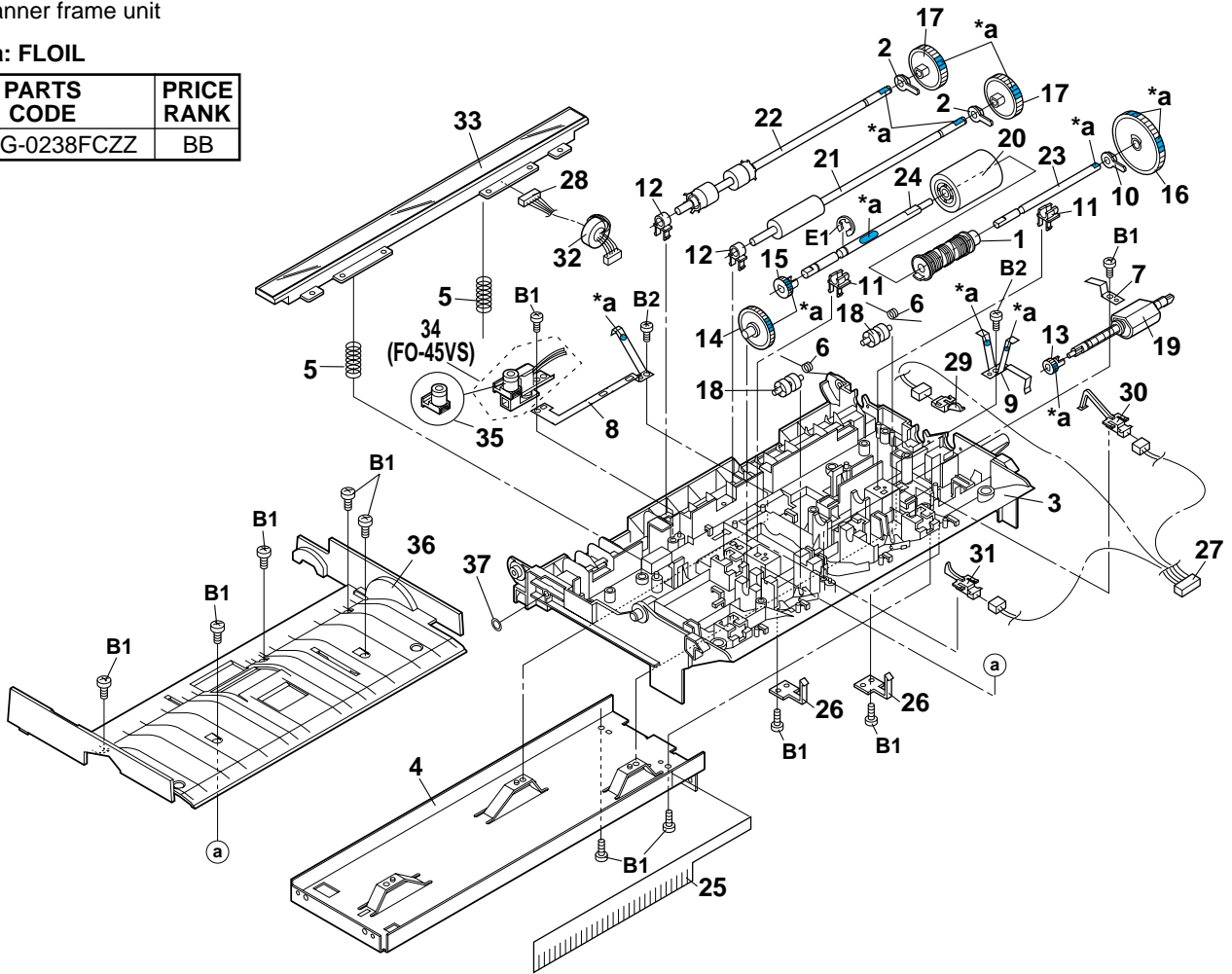


FO-4400U
FO-CS1

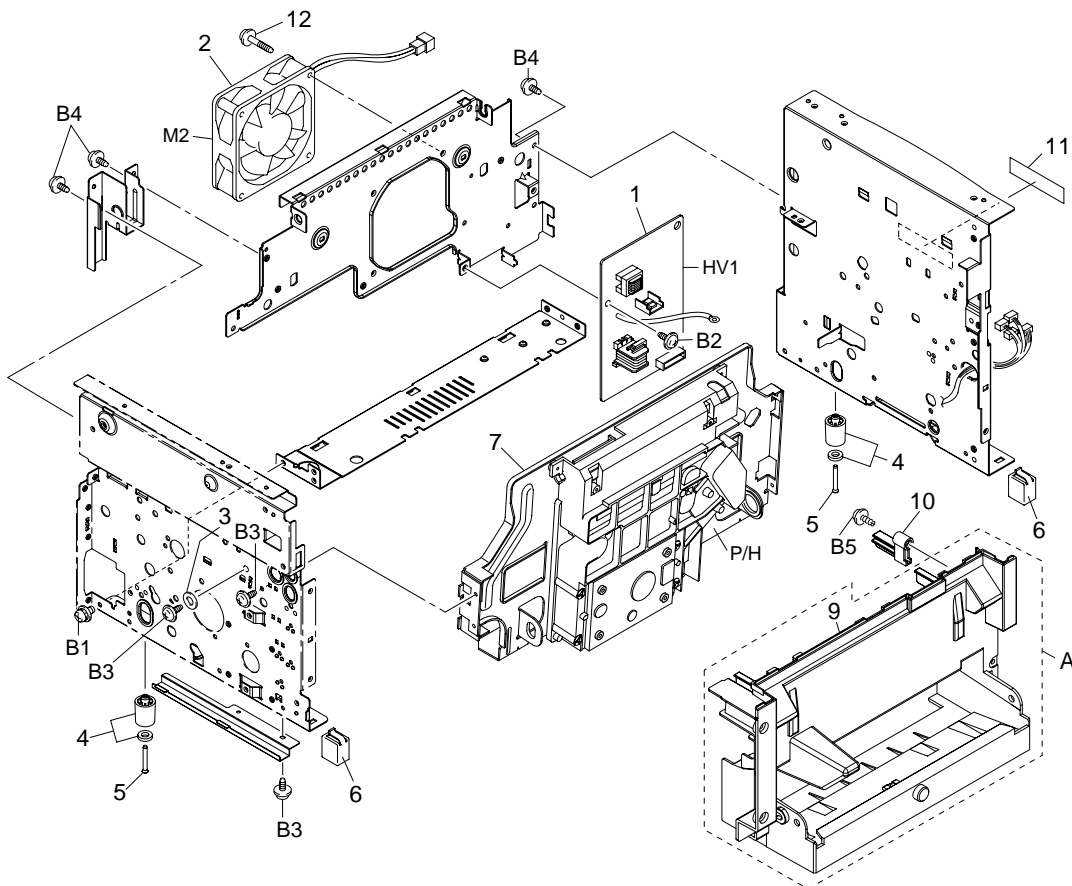
[6] Scanner frame unit

*a: FLOIL

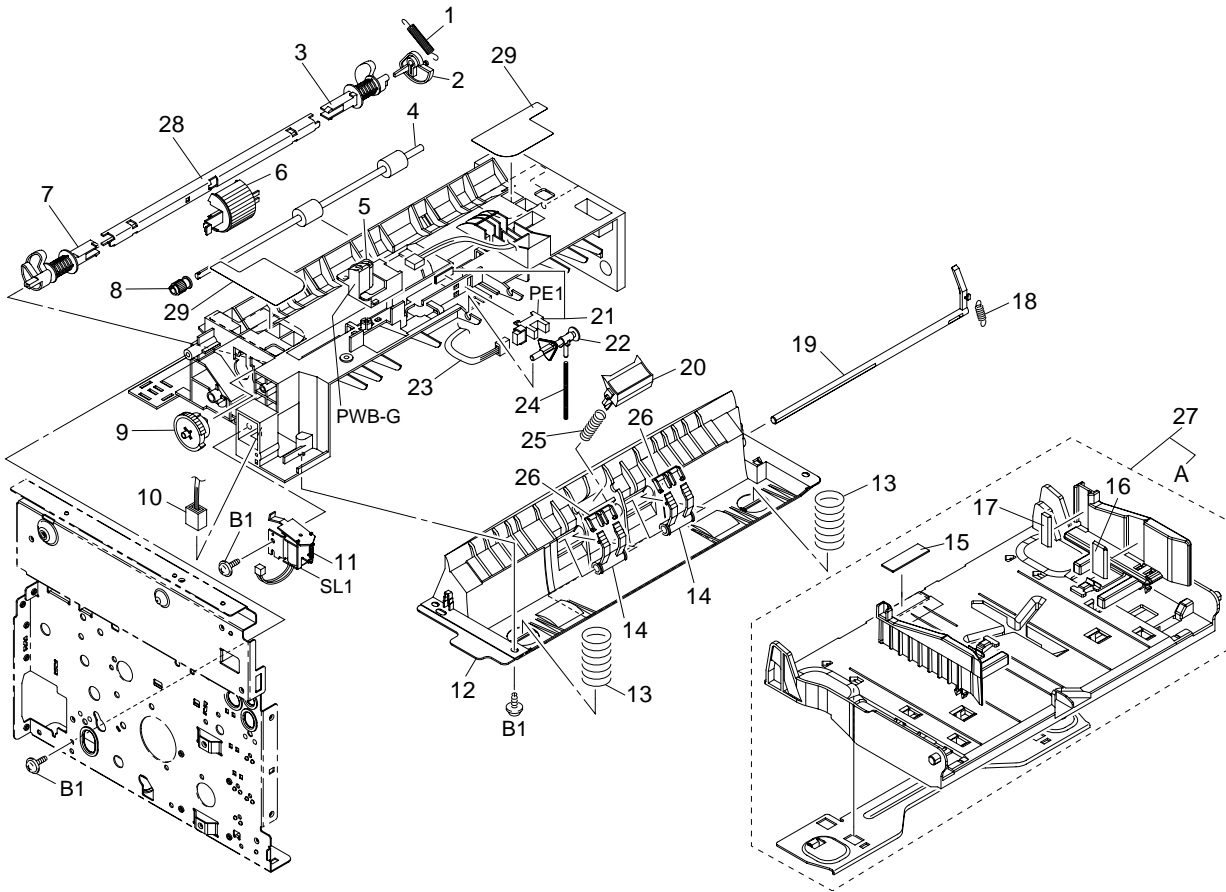
PARTS CODE	PRICE RANK
UKOG-0238FCZZ	BB



[7] Frames



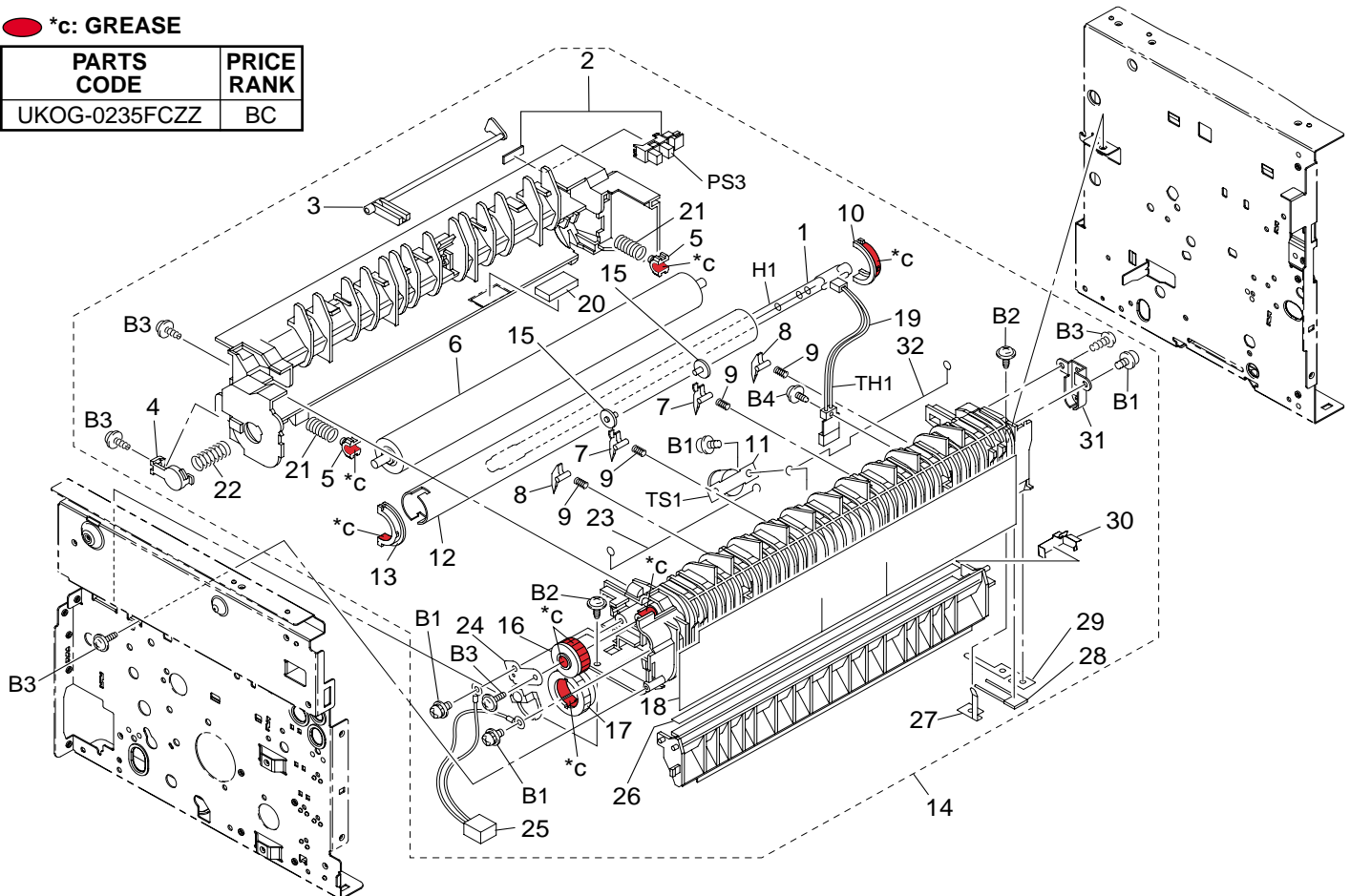
[8] Paper transport section



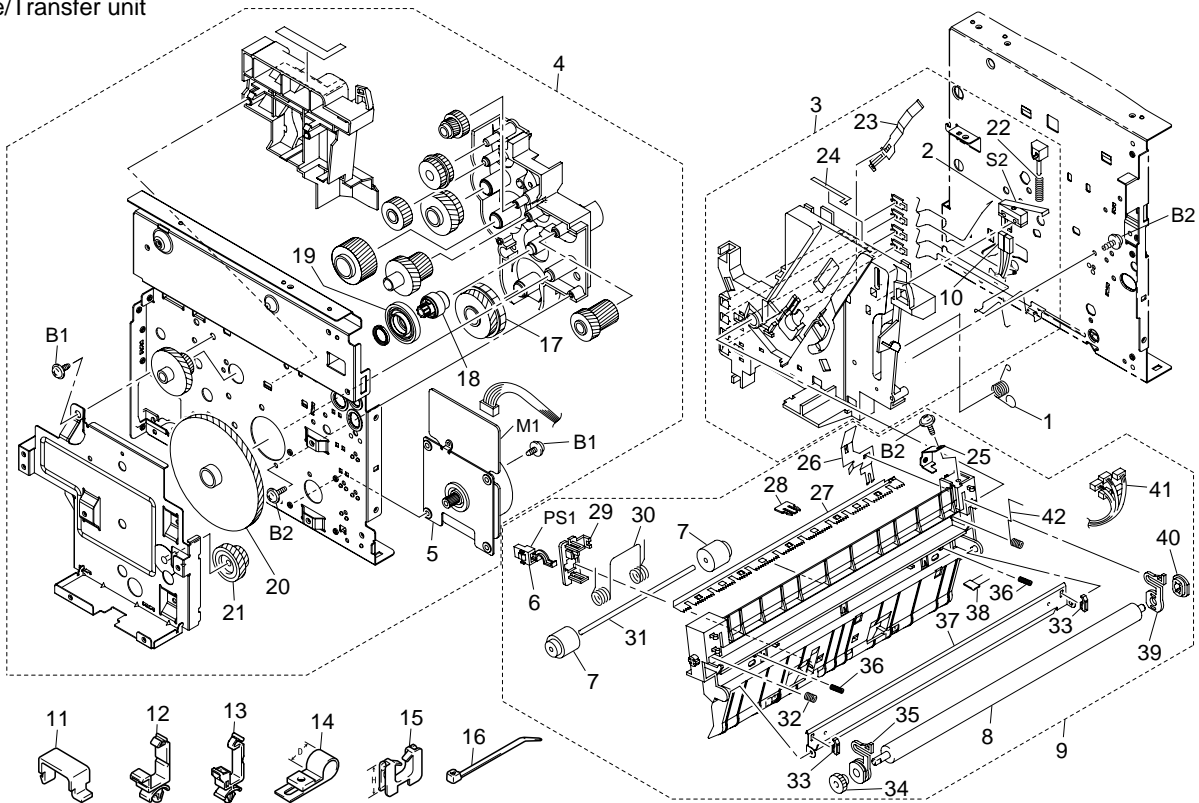
[9] Fusing unit

● *c: GREASE

PARTS CODE	PRICE RANK
UKOG-0235FCZZ	BC

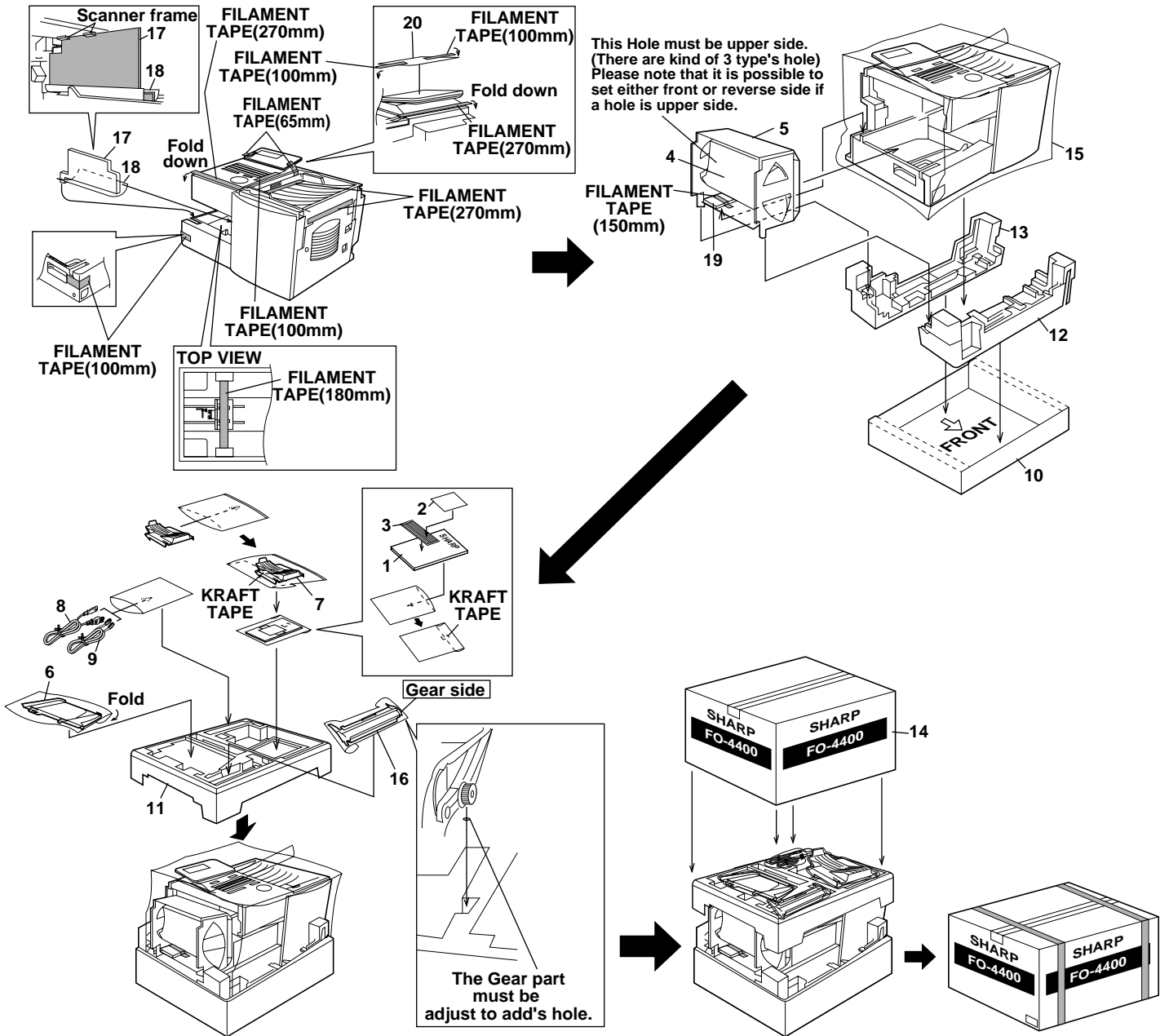


[10] Drive/Transfer unit

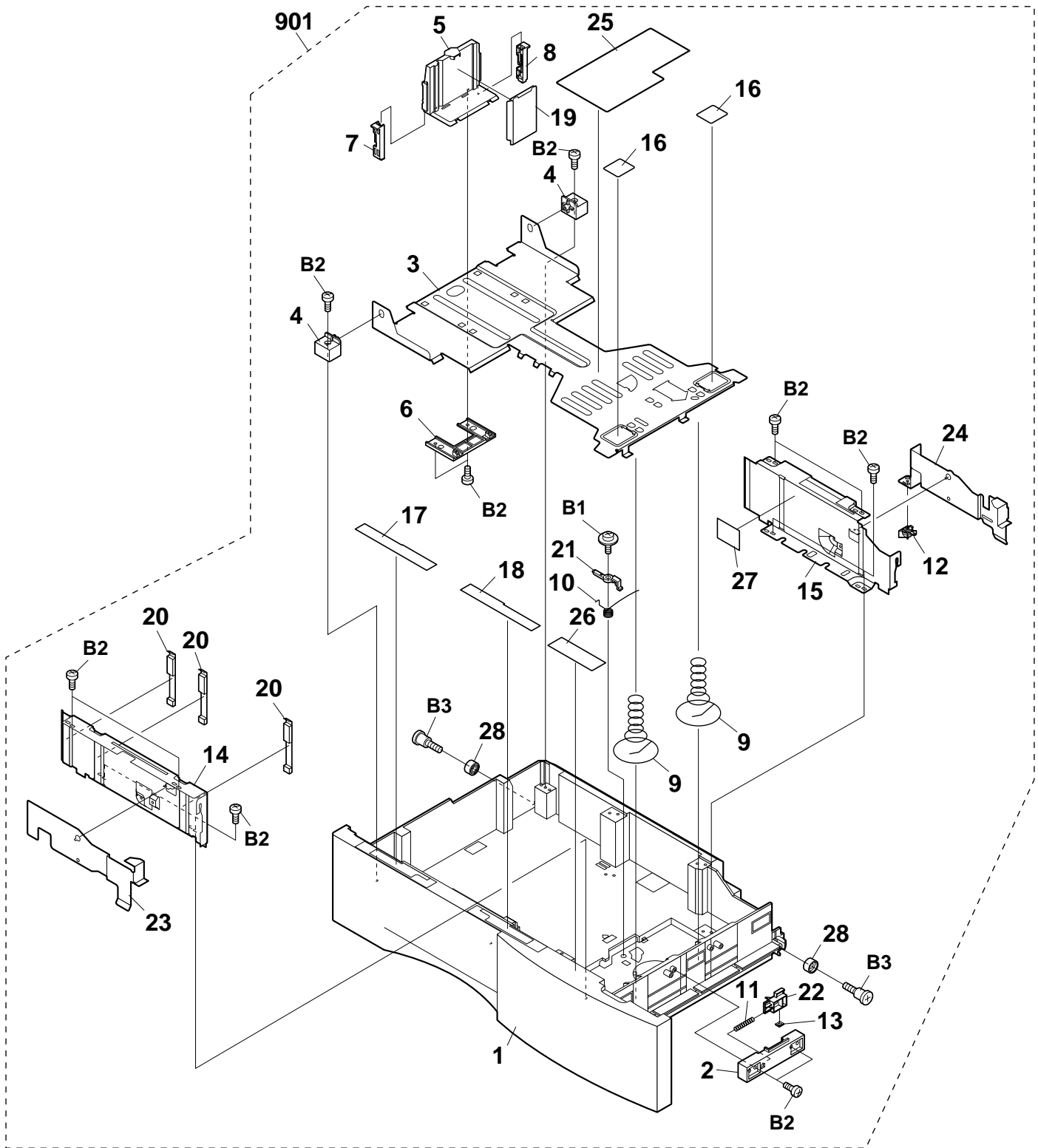


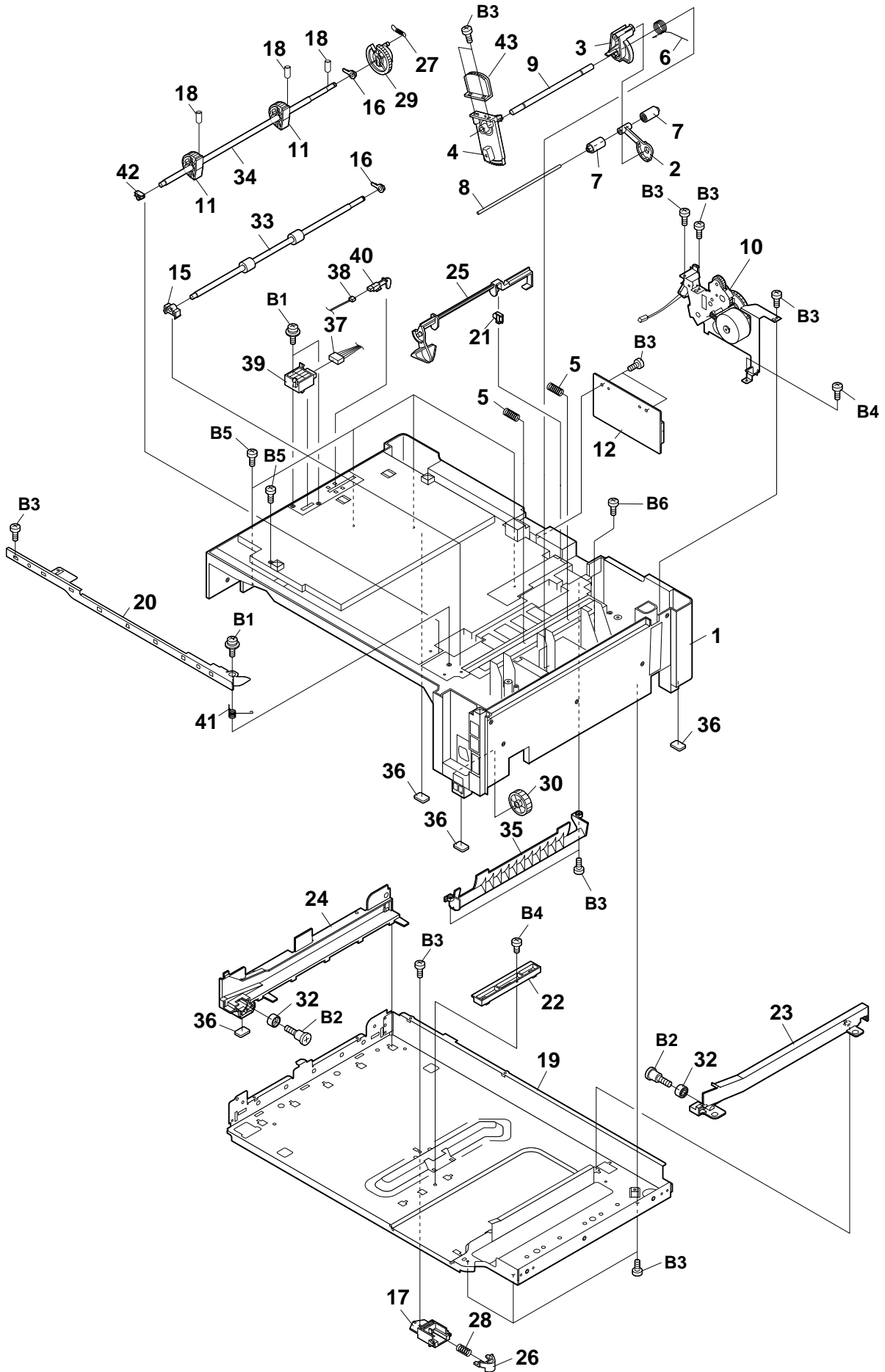
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[10] Drive/Transfer unit					
1	0KW4127201302	AC	N	C	Torsion spring
2	0KW4109630501	AN	N	C	Interlock switch [S2]
3	0KW4127048301	BC	N	E	I/C guide assy
4	0KW4127030601	BV	N	E	Drive gear assy
5	0KW9314210012	BP	N	B	Main motor [M1]
6	0KW4127630201	AN	N	C	Paper take up sensor switch [PS1]
7	0KW4127300601	AC	N	C	Roll
8	0KW4127410302	BF	N	C	Transfer roller
9	0KW4127031201	BM	N	E	Transfer unit
10	0KW4127682101	AP	N	C	Wire harness assy
11	0KW1053481202	AP	N	C	Cord clamp
12	0KW9384100051	AC	N	C	Wiring saddle
13	0KW9384110091	AC	N	C	Wiring saddle
14	0KW9384160011	AC	N	C	P-clip 10D
15	0KW9384201021	AD	N	C	Edge cover 8.5H
16	0KW4127675201	AC	N	C	Cable tie
17	0KW4127251001	AF	N	C	Gear
18	0KW4127257601	AS	N	C	Gear
19	0KW4127257501	AW	N	C	Gear
20	0KW4127251201	AS	N	C	Gear
21	0KW4127257101	AG	N	C	Gear
22	0KW4127231001	AF	N	C	Pressure spring
23	0KW4127201201	AN	N	C	Earth ground
24	0KW4127202203	AC	N	D	Label
25	0KW4127207301	AF	N	C	Contact
26	0KW4127413102	AD	N	C	Earth ground
27	0KW4127411301	AG	N	C	Neutralizing needle
28	0KW4127413701	AH	N	C	Regulating plate
29	0KW4127413601	AC	N	C	Holder
30	0KW4127301801	AC	N	C	Torsion spring
31	0KW4127303901	AF	N	C	Shaft
32	0KW4127410701	AC	N	C	Pressure spring
33	0KW4127413302	AC	N	C	Spacer
34	0KW4127411101	AD	N	C	Gear
35	0KW4127410401	AC	N	C	Bushing
36	0KW4127413501	AC	N	C	Pressure spring
37	0KW4127413201	AG	N	C	Guide plate
38	0KW9454407602	AG	N	C	Resistor
39	0KW4127410501	AC	N	C	Bushing
40	0KW4127410601	AD	N	C	Conductive member
41	0KW4127681904	AV	N	C	Wire harness ass'y
42	0KW4127410801	AC	N	C	Pressure spring
B1	0KW9735030613	AB		C	Tapping screw(3x6)
B2	0KW9739030813	AB		C	Tapping screw(3x8)

[11] Packing material & Accessories(FO-4400)

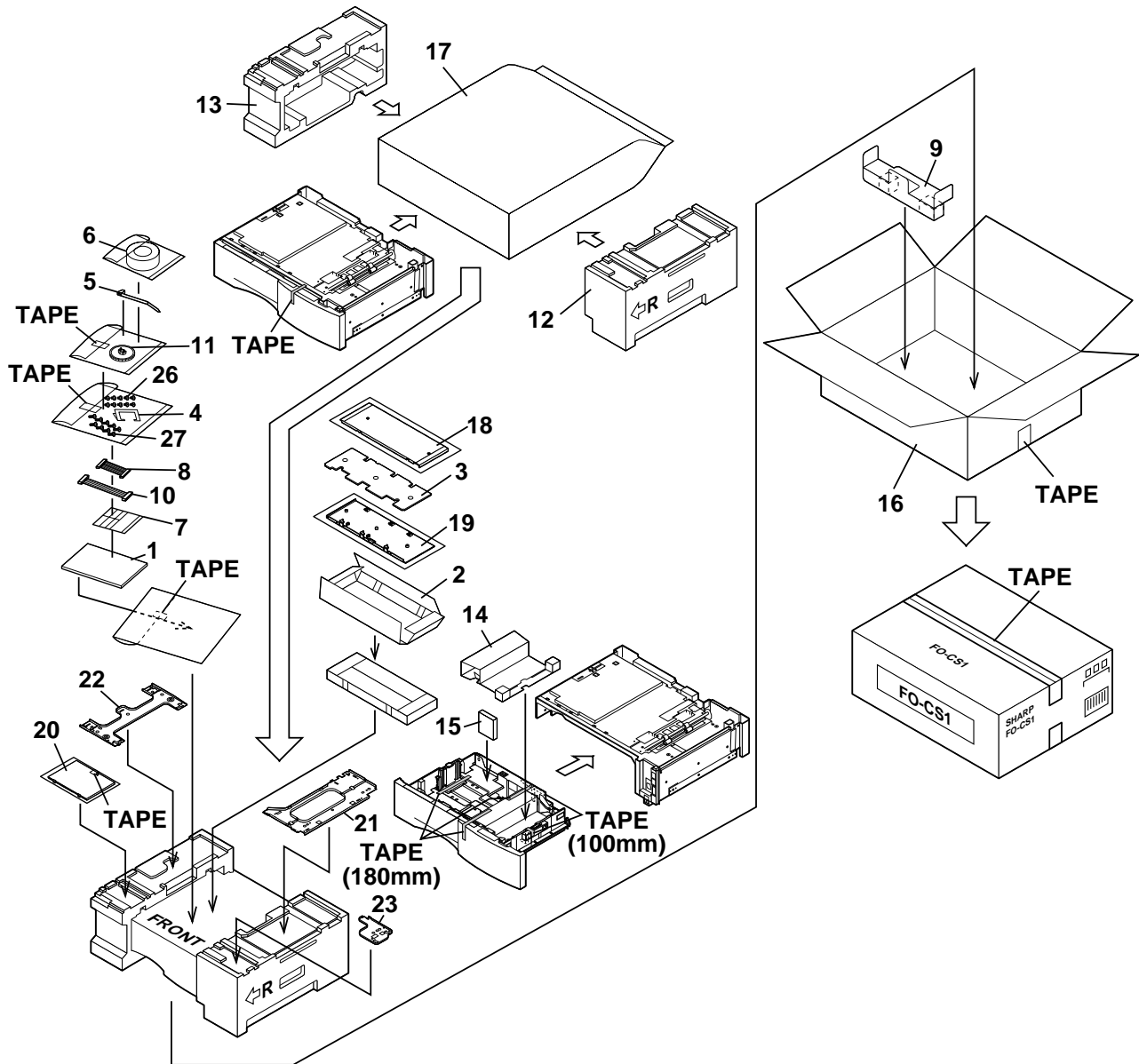


NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[11] Packing material & Accessories(FO-4400)					
1	TINSE4294XHTZ	AU	N	D	Operation manual
2	TLABP391EXHZZ	AE	N	D	Paper size labels
3	TLABZ392EXHZZ	AD	N	D	Rapid key labels
4	DUNT-428CSCZZ	CA	N	S	Toner cartridge(Initial starter cartridge)
5	SPAKA344EXHZZ	AL	N	D	Toner cartridge protection
6	CPLTP2803XHC4	AZ	N	C	ADF exit tray
7	CPLTP3009XHC5	AY	N	C	Received document tray(with label)
8	QACCD2062XHZZ	AQ		B	Power cord
9	QCNW-290ASCZZ	AE		C	Telephone line cord
10	SPAKA422DXHZZ	AS	N	D	Packing case,bottom
11	SPAKA423DXHZZ	AY	N	D	Packing add.,top
12	SPAKA424DXHZZ	AP	N	D	Packing add.,bottom,front
13	SPAKA425DXHZZ	AP	N	D	Packing add.,bottom,rear
14	SPAKC421DXHTZ	AX	N	D	Packing case,top(Made in Thailand)
	SPAKC421DSCJZ	AX	N	D	Packing case,top(Made in Japan)
15	SPAKP499DXHZZ	AL	N	D	Vinyl cover
16	DUNT-454BSCZZ	CA	N	S	Drum cartridge(Initial starter cartridge)
17	SPAKA293EXHZZ	AF	N	C	Protection sheet
18	SPAKA294EXHZZ	AE	N	C	Protection sheet
19	SPAKA343EXHZZ	AG	N	D	Toner cartridge protection sheet
20	SPAKA345EXHZZ	AD	N	D	LCD protection sheet





[14] Packing material & Accessories,2nd paper cassette(FO-CS1)



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[14] Packing material & Accessories,2nd paper cassette(FO-CS1)					
1	TINSE4296XHTZ	AQ	N	D	Operation manual
2	SPAKA497DXHZZ	AG	N	D	Protection sleeve
3	SPAKA498DXHZZ	AF	N	D	Plate protection
4	LHLDW2182SCZZ	AC		C	Cable holder
5	LBNDJ2006XHZZ	AA		C	Band(100mm)
6	RCORF2124XHZZ	AE		B	Core
7	TLABP391EXHZZ	AE	N	D	Paper size labels
8	QCNWN264BXHZZ	AU	N	C	2nd cassette cable(15pin)
9	SPAKA204EXHZZ	AL	N	D	Cassette protection pad
10	QCNWN265BXHZZ	AN	N	C	3rd cassette cable(10pin)
11	NGERH2605XHZZ	AF	N	C	Reduction gear
12	SPAKA202EXHZZ	AR	N	D	Side pad,right
13	SPAKA203EXHZZ	AP	N	D	Side pad,left
14	SPAKA227EXHZZ	AL	N	D	Cassette protection A
15	SPAKA228EXHZZ	AG	N	D	Cassette protection B
16	SPAKC201EXHTZ	AW	N	D	Packing case
17	SPAKP200EXHZZ	AG	N	D	Vinyl cover
18	GCABD2416XHSA	AS	N	D	Right cabinet
19	GCABD2417XHSA	AS	N	D	Left cabinet
20	GCOVA2408XHSC	AL	N	D	PWB cover
21	LANGF2850XHZZ	AU	N	C	Joint angle,right 1
22	LANGF2851XHZZ	AQ	N	C	Joint angle,left
23	LANGF2857XHZZ	AM	N	C	Joint angle,right 2
26	XEBSE30P10000	AA		C	Screw(3x10)
27	XHBSE30P06000	AA		C	Screw(3x6)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[15] Control PWB unit						
1	UBATL2071XHZZ	AL		B	Battery(CR2450)	[BAT1]
2	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR14]
3	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR15]
4	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR18]
5	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR19]
6	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR22]
7	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR23]
8	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR24]
9	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR25]
10	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR34]
11	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR35]
12	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR36]
13	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR37]
14	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR38]
15	RR-TZ3016SCZZ	AA		C	Block resistor(33Ωx4)	[BR39]
16	RR-TZ3044SCZZ	AD	N	C	Block resistor(10KΩx4)	[BR40]
17	RR-TZ3044SCZZ	AD	N	C	Block resistor(10KΩx4)	[BR41]
18	RR-TZ3044SCZZ	AD	N	C	Block resistor(10KΩx4)	[BR42]
19	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μF)	[C7]
20	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.1μF)	[C8]
21	VCKYCZ1EB102K	AA		C	Capacitor(25WV 1000PF)	[C9]
22	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C10]
23	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C11]
24	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C12]
25	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C13]
26	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C14]
27	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C15]
28	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C16]
29	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C17]
30	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C18]
31	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C19]
32	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C20]
33	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C21]
34	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C22]
35	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C23]
36	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C24]
37	VCKYCZ0JF105Z	AC		C	Capacitor(6.3WV 1.0μF)	[C25]
38	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C100]
39	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C103]
40	VCCCCY1HH180J	AA		C	Capacitor(50WV 18PF)	[C104]
41	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C105]
42	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C106]
43	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C111]
44	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C112]
45	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C113]
46	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C114]
47	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C115]
48	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C116]
49	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C117]
50	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C118]
51	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C119]
52	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C122]
53	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C124]
54	VCCCCY1HH471J	AA		C	Capacitor(50WV 470PF)	[C125]
55	VCCCCY1HH331J	AB		C	Capacitor(50WV 330PF)	[C126]
56	VCCCCY1HH331J	AB		C	Capacitor(50WV 330PF)	[C128]
57	VCCCCY1HH471J	AA		C	Capacitor(50WV 470PF)	[C129]
58	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C139]
59	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C140]
60	VCKYTV1CF225Z	AD		C	Capacitor(16WV 2.2μF)	[C141]
61	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C142]
62	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C143]
63	VCCCCY1HH120J	AA		C	Capacitor(50WV 12PF)	[C144]
64	VCCCCY1HH120J	AA		C	Capacitor(50WV 12PF)	[C145]
65	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C146]
66	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C148]
67	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C150]
68	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C151]
69	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C162]
70	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C163]
71	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[C171]
72	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C176]
73	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C177]
74	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C178]
75	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C179]
76	VCKYTV1CF225Z	AD		C	Capacitor(16WV 2.2μF)	[C180]
77	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C181]
78	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C182]
79	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C183]
80	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C184]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[15] Control PWB unit						
81	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C187]
82	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C188]
83	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C189]
84	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C190]
85	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C191]
86	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C199]
87	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C200]
88	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C201]
89	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C202]
90	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C203]
91	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C204]
92	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C205]
93	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C206]
94	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C207]
95	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C209]
96	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C210]
97	VCCCY1HH120J	AA		C	Capacitor(50WV 12PF)	[C213]
98	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C214]
99	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C215]
100	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C220]
101	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C226]
102	VCCCY1HH150J	AB		C	Capacitor(50WV 15PF)	[C232]
103	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C233]
104	VCCCY1HH471J	AA		C	Capacitor(50WV 470PF)	[C236]
105	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C238]
106	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C245]
107	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C246]
108	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C247]
109	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C248]
110	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C257]
111	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C258]
112	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C262]
113	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C263]
114	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C264]
115	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C266]
116	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C268]
117	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C269]
118	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C270]
119	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C271]
120	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C272]
121	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C273]
122	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C278]
123	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C279]
124	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C280]
125	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C281]
126	VCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C282]
127	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C286]
128	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C289]
129	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C290]
130	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C291]
131	VCCCY1HH120J	AA		C	Capacitor(50WV 12PF)	[C292]
132	VCCCY1HH180J	AA		C	Capacitor(50WV 18PF)	[C293]
133	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C294]
134	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C295]
135	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C296]
136	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C297]
137	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C298]
138	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C300]
139	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C302]
140	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C305]
141	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C310]
142	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C311]
143	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C314]
144	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C318]
145	VCCCY1HH560J	AA		C	Capacitor(50WV 56PF)	[C319]
146	VCCCY1HH7R0D	AA		C	Capacitor(50WV 7PF)	[C320]
147	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C321]
148	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C322]
149	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C323]
150	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C325]
151	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C327]
152	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C328]
153	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C330]
154	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C331]
155	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C332]
156	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C333]
157	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C342]
158	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C346]
159	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C358]
160	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C359]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[15] Control PWB unit						
161	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C360]
162	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C361]
163	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C362]
164	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C363]
165	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C364]
166	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C365]
167	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C366]
168	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C368]
169	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C369]
170	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C372]
171	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C375]
172	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C376]
173	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C378]
174	VCCCCY1HH331J	AB		C	Capacitor(50WV 330PF)	[C384]
175	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C385]
176	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C386]
177	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C387]
178	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C388]
179	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C389]
180	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C390]
181	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C391]
182	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C392]
183	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C393]
184	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C394]
185	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C395]
186	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C396]
187	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C397]
188	VCCCCY1HH331J	AB		C	Capacitor(50WV 330PF)	[C398]
189	VCCCCY1HH471J	AA		C	Capacitor(50WV 470PF)	[C399]
190	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C400]
191	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C403]
192	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C404]
193	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C407]
194	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C601]
195	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C602]
196	VCEAEA1CW107M	AC		C	Capacitor(16WV 100μF)	[CE1]
197	RC-EZ3097XHZZ	AP	N	C	Capacitor(10WV 22μF)	[CE2]
198	VCEAEA1CW106M	AC		C	Capacitor(16WV 10μF)	[CE4]
199	RC-EZ3088XHZZ	AK	N	C	Capacitor(50WV 100μF)	[CE6]
200	VCEAEA1CW226M	AA		C	Capacitor(16WV 22μF)	[CE11]
201	VCEAEA1CW106M	AC		C	Capacitor(16WV 10μF)	[CE12]
202	VCEAEA1CW226M	AA		C	Capacitor(16WV 22μF)	[CE13]
203	VCEAEA1CW226M	AA		C	Capacitor(16WV 22μF)	[CE14]
204	VCEAEA1CW106M	AC		C	Capacitor(16WV 10μF)	[CE15]
205	VCEAEA1CW336M	AB		C	Capacitor(16WV 33μF)	[CE16]
206	VCEAEA1EW475M	AA		C	Capacitor(25WV 4.7μF)	[CE17]
207	VCEAEA1HW105M	AC		C	Capacitor(50WV 1μF)	[CE18]
208	VCEAEA1CW476M	AA		C	Capacitor(16WV 47μF)	[CE19]
209	VCEAEA1CW476M	AA		C	Capacitor(16WV 47μF)	[CE20]
210	VCEAEA1CW106M	AC		C	Capacitor(16WV 10μF)	[CE22]
211	VCEAEA1CW476M	AA		C	Capacitor(16WV 47μF)	[CE23]
212	VCEAEA1CW106M	AC		C	Capacitor(16WV 10μF)	[CE24]
213	VCEAEA1CW107M	AC		C	Capacitor(16WV 100μF)	[CE26]
214	VCEAEA1CW336M	AB		C	Capacitor(16WV 33μF)	[CE27]
215	VCEAEA1CW336M	AB		C	Capacitor(16WV 33μF)	[CE28]
216	VCEAEA1VW476M	AH		C	Capacitor(35WV 47μF)	[CE29]
217	QCNCM7014SC1J	AC		C	Connector(10pin)	[CNCS1]
218	QCNCM2482SC1H	AE		C	Connector(18pin)	[CNJTAG1]
219	QCNCM7014SC0I	AB		C	Connector(9pin)	[CNLIU1]
220	QCNCM2589SC3J	AP	N	C	Connector(30pin)	[CNOP1]
221	QCNCM2482SC2H	AG		C	Connector(28pin)	[CNPNI]
222	QCNCM2525SC3J	AH		C	Connector(30pin)	[CNPRT1]
223	QCNCM7014SC1B	AD		C	Connector(12pin)	[CNPW1]
224	QCNCM7014SC0E	AB		C	Connector(5pin)	[CNRS1]
225	QCNCM7014SC0H	AB		C	Connector(8pin)	[CNSEN1]
226	QCNCM2401SC0B	AA		C	Connector(2pin)	[CNSP1]
227	QCNCM7014SC0B	AD		C	Connector(2pin)	[CNSTP1]
228	QCNCM7014SC0D	AB		C	Connector(4pin)	[CNTXM1]
229	VHDSR104///-1	AF		B	Diode(SR104)	[D1]
230	VHDSR104///-1	AF		B	Diode(SR104)	[D2]
231	VHDSR104///-1	AF		B	Diode(SR104)	[D3]
232	VHDSR104///-1	AF		B	Diode(SR104)	[D4]
233	VHDDAN202U/-1	AB		B	Diode(DAN202U)	[D8]
234	VHDSR104///-1	AF		B	Diode(SR104)	[D9]
235	VHDDA204K/-1	AC		B	Diode(DA204K)	[D100]
236	VHD1SS355/-1	AB		B	Diode(1SS355)	[D101]
237	VHDDA204K/-1	AC		B	Diode(DA204K)	[D102]
238	VHDHRW0202B-1	AD		B	Diode(HRW0202B)	[D103]
239	VHD1SS355/-1	AB		B	Diode(1SS355)	[D104]
240	VHD1SS355/-1	AB		B	Diode(1SS355)	[D105]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[15] Control PWB unit						
241	VHVICPS05//1	AA		B	IC protector(ICP-S0.5)	[F1]
242	VHVICPS10//1	AG		B	IC protector(ICP-S1.0)	[F2]
243	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%)	[F3]
244	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%)	[F4]
245	VHVICPS10//1	AG		B	IC protector(ICP-S1.0)	[F5]
246	VHVICPS10//1	AG		B	IC protector(ICP-S1.0)	[F100]
247	VHVICPS18//1	AE		B	IC protector(ICP-S1.8)	[F101]
248	RH-IX2304XHZZ	AX	N	B	IC(AD8051A)	[IC1]
249	RH-IX2239SCZZ	AG	N	B	IC(SN74HCT244PWR)	[IC2]
250	VHILB1845//1	AY		B	IC(LB1845)	[IC3]
251	RH-IX2296XHZZ	BG	N	B	IC(W986416DH/MT48LC4M16A2TG)	[IC5]
252	RH-IX2294SCZZ	BZ	N	B	IC(LC272D0BT-WA6)	[IC6]
253	RH-IX2300XHZZ	AL	N	B	IC(SN74HCT244NSR)	[IC7]
254	VHINJM2904M-2	AG		B	IC(NJM2904M)	[IC8]
255	RH-IX2239SCZZ	AG	N	B	IC(SN74HCT244PWR)	[IC9]
256	VHIF032/TA68C	BC	N	B	IC,FLASH ROM(32MB)(Ver.:TA68C)	[IC12]
257	RH-IX2299XHZZ	BA	N	B	IC(MAX3221CPWR)	[IC13]
258	RH-IX2302XHZZ	AH	N	B	IC(SN74LV14APWR)	[IC14]
259	RH-IX2302XHZZ	AH	N	B	IC(SN74LV14APWR)	[IC16]
260	VHIPST596CMT1	AF		B	IC(PST596CMT)	[IC17]
261	RH-IX2235XHZZ	BD		B	IC(BS62LV256SC-70)	[IC19]
262	RH-IX2301XHZZ	AL	N	B	IC(SN74LV126APWR)	[IC20]
263	RH-IX2295SCZZ	BK	N	B	IC(LC24199B-WJ0-E)	[IC21]
264	VHISM8578BV-1	AK		B	IC(SM8578BV)	[IC22]
265	VHIBA10393F-1	AC		B	IC(BA10393F)	[IC23]
266	RH-IX2293XHZZ	BU	N	B	IC(HD6417706F133)	[IC24]
267	RH-IX2296XHZZ	BG	N	B	IC(W986416DH/MT48LC4M16A2TG)	[IC25]
268	RH-IX2298XHZZ	BK	N	B	IC(TC58V64BFT)	[IC27]
269	VHI74LV245APW	AG		B	IC(SN74LV245APWR)	[IC29]
270	RH-IX2292XHZZ	BV	N	B	IC(FM336Plus)	[IC30]
271	RH-IX2320XHZZ	AL	N	B	IC(SN74LV4053APW)	[IC31]
272	VHINJM2904M-2	AG		B	IC(NJM2904M)	[IC32]
273	RH-IX2300XHZZ	AL	N	B	IC(SN74HCT244NSR)	[IC33]
274	VHINJM2113M-1	AG		B	IC(NJM2113M)	[IC36]
275	RH-IX2317XHZZ	AQ	N	B	IC(PQ070XZ5MZP)	[IC37]
276	VHIUPC2933T-1	AG		B	IC(μPC2933)	[IC38]
277	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[L100]
278	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[L101]
279	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[L102]
280	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[L103]
281	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[L104]
282	RCRSC2196XHZZ	AH	N	B	Crystal(33.1776MHz)	[OSC1]
283	VS2SD1164//1	AE		B	Transistor(2SD1164)	[Q1]
284	VS2SJ243///1	AD		B	FET(2SJ243)	[Q4]
285	VS2SD1664Q/-1	AD		B	Transistor(2SD1664Q)	[Q100]
286	VSKRC106S//1	AD		B	Transistor(KRC106S)	[Q106]
287	VSKRC106S//1	AD		B	Transistor(KRC106S)	[Q107]
288	VSKRA102S//1	AD		B	Transistor(KRA102S)	[Q111]
289	VSKRC106S//1	AD		B	Transistor(KRC106S)	[Q112]
290	VSKRC106S//1	AD		B	Transistor(KRC106S)	[Q114]
291	VSKRC106S//1	AD		B	Transistor(KRC106S)	[Q115]
292	VSKRC106S//1	AD		B	Transistor(KRC106S)	[Q116]
293	VRS-HT3AAR47J	AC		C	Resistor(1W 0.47Ω ±5%)	[R1]
294	VRS-HT3AAR47J	AC		C	Resistor(1W 0.47Ω ±5%)	[R2]
295	VRS-CZ1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R16]
296	VRS-CZ1JB104J	AA		C	Resistor(1/16W 100KΩ ±5%)	[R17]
297	VRS-CZ1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R18]
298	VRS-CZ1JB220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R20]
299	VRS-CZ1JB220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R21]
300	VRS-CZ1JB220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R28]
301	VRS-CZ1JB100J	AA		C	Resistor(1/16W 10Ω ±5%)	[R29]
302	VRS-CZ1JB220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R30]
303	VRS-CZ1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R33]
304	VRD-HT2EY100J	AA		C	Resistor(1/4W 10Ω ±5%)	[R34]
305	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R50]
306	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R51]
307	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R52]
308	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R53]
309	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R54]
310	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R55]
311	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R56]
312	VRS-CZ1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R57]
313	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R58]
314	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R59]
315	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R60]
316	VRS-CZ1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R61]
317	VRS-CZ1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R62]
318	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R100]
319	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R101]
320	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R102]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[15] Control PWB unit						
321	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R103]
322	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R104]
323	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R105]
324	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R106]
325	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R107]
326	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%)	[R108]
327	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R109]
328	VRS-CY1JB302J	AA		C	Resistor(1/16W 3KΩ ±5%)	[R110]
329	VRS-CY1JB152J	AA		C	Resistor(1/16W 1.5KΩ ±5%)	[R111]
330	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R112]
331	VRS-CY1JB100J	AA		C	Resistor(1/16W 10Ω ±5%)	[R115]
332	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R116]
333	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R118]
334	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R119]
335	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R120]
336	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R121]
337	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R122]
338	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R123]
339	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R124]
340	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R125]
341	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R126]
342	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R127]
343	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%)	[R128]
344	VRS-CY1JB105J	AA		C	Resistor(1/16W 1MΩ ±5%)	[R131]
345	VRS-CY1JB563F	AC		C	Resistor(1/16W 56KΩ ±1%)	[R132]
346	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R133]
347	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R134]
348	VRS-CY1JB563F	AC		C	Resistor(1/16W 56KΩ ±1%)	[R135]
349	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R149]
350	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R150]
351	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R151]
352	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R152]
353	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R153]
354	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R154]
355	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R155]
356	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R156]
357	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R157]
358	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R158]
359	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R159]
360	VRS-CY1JB105J	AA		C	Resistor(1/16W 1MΩ ±5%)	[R160]
361	VRS-CY1JB561J	AA		C	Resistor(1/16W 560Ω ±5%)	[R161]
362	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R164]
363	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R166]
364	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R167]
365	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R168]
366	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%)	[R170]
367	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R175]
368	VRS-CY1JB223F	AC		C	Resistor(1/16W 22KΩ ±1%)	[R176]
369	VRS-CY1JB123F	AA		C	Resistor(1/16W 12KΩ ±1%)	[R177]
370	VRS-CY1JB333F	AA		C	Resistor(1/16W 33KΩ ±1%)	[R179]
371	VRS-CY1JB113F	AD	N	C	Resistor(1/16W 11KΩ ±1%)	[R180]
372	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R191]
373	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R192]
374	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R193]
375	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R194]
376	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R195]
377	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R196]
378	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R197]
379	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R198]
380	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R199]
381	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R200]
382	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R201]
383	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R202]
384	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R203]
385	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R204]
386	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R205]
387	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R206]
388	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R207]
389	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R208]
390	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R209]
391	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R210]
392	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R211]
393	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R212]
394	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R213]
395	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R214]
396	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R215]
397	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R216]
398	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R217]
399	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R218]
400	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R219]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[15] Control PWB unit						
401	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R220]
402	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R221]
403	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R223]
404	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R224]
405	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R225]
406	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R226]
407	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R227]
408	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R228]
409	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R229]
410	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R230]
411	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R231]
412	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R232]
413	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R233]
414	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R240]
415	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R243]
416	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R244]
417	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R245]
418	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R246]
419	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R247]
420	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R248]
421	VRS-CY1JB105J	AA		C	Resistor(1/16W 1MΩ ±5%)	[R249]
422	VRS-CY1JB221J	AA		C	Resistor(1/16W 220Ω ±5%)	[R250]
423	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R251]
424	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R252]
425	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R253]
426	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R254]
427	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R256]
428	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R260]
429	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R261]
430	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R262]
431	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R266]
432	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R267]
433	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R268]
434	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R269]
435	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R270]
436	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R271]
437	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R272]
438	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R274]
439	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R275]
440	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R276]
441	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R277]
442	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R278]
443	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R279]
444	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R280]
445	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R281]
446	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R282]
447	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R284]
448	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R285]
449	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R287]
450	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R288]
451	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R290]
452	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R292]
453	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R293]
454	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R294]
455	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R295]
456	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R296]
457	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R297]
458	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R298]
459	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R299]
460	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R300]
461	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R301]
462	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R302]
463	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R303]
464	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R304]
465	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R309]
466	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R318]
467	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R319]
468	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R320]
469	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R325]
470	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R326]
471	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R327]
472	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R328]
473	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R329]
474	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R330]
475	VRS-CY1JB562J	AA		C	Resistor(1/16W 5.6KΩ ±5%)	[R331]
476	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R332]
477	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R333]
478	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R335]
479	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R336]
480	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R338]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[15] Control PWB unit						
481	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R339]
482	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R340]
483	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R341]
484	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R342]
485	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R343]
486	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R344]
487	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R345]
488	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R346]
489	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R347]
490	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R348]
491	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R349]
492	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R351]
493	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R353]
494	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R354]
495	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R356]
496	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R358]
497	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R360]
498	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R361]
499	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R362]
500	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R363]
501	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R364]
502	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R365]
503	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R366]
504	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R367]
505	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R368]
506	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R369]
507	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R391]
508	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R392]
509	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R393]
510	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R394]
511	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R395]
512	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R396]
513	VRS-CY1JB222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R397]
514	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R405]
515	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R406]
516	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R408]
517	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R409]
518	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R411]
519	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R412]
520	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R413]
521	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R416]
522	VRS-CY1JB182J	AA		C	Resistor(1/16W 1.8KΩ ±5%)	[R417]
523	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R418]
524	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R419]
525	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R420]
526	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R421]
527	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R423]
528	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R424]
529	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R425]
530	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R426]
531	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R427]
532	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R428]
533	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R429]
534	VRS-CY1JB623J	AA		C	Resistor(1/16W 62KΩ ±5%)	[R432]
535	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R433]
536	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R434]
537	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R435]
538	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R436]
539	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R437]
540	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R438]
541	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R439]
542	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R440]
543	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R446]
544	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R450]
545	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R451]
546	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R452]
547	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R454]
548	VRS-CY1JB100J	AA		C	Resistor(1/16W 10Ω ±5%)	[R455]
549	VRS-CY1JB680J	AA		C	Resistor(1/16W 68Ω ±5%)	[R457]
550	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R458]
551	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R459]
552	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R460]
553	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R461]
554	VRS-CY1JB222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R462]
555	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R463]
556	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R464]
557	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R465]
558	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%)	[R467]
559	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R468]
560	VRS-CY1JB333J	AA		C	Resistor(1/16W 33KΩ ±5%)	[R469]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[15] Control PWB unit						
561	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R470]
562	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R471]
563	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R484]
564	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R487]
565	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R488]
566	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R489]
567	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R490]
568	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R492]
569	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R494]
570	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R495]
571	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R496]
572	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R497]
573	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R498]
574	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R499]
575	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R502]
576	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R503]
577	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R504]
578	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R506]
579	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R507]
580	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R508]
581	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R509]
582	VRS-CY1JB680J	AA		C	Resistor(1/16W 68Ω ±5%)	[R510]
583	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R511]
584	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R512]
585	VRSCY1JB4422F	AC		C	Resistor(1/16W 44.2KΩ ±1%)	[R514]
586	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R515]
587	VRS-CY1JB562J	AA		C	Resistor(1/16W 5.6KΩ ±5%)	[R516]
588	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R517]
589	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R518]
590	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R520]
591	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R522]
592	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R524]
593	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R525]
594	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R526]
595	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R527]
596	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R528]
597	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R529]
598	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R531]
599	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R532]
600	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R533]
601	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R534]
602	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R535]
603	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R536]
604	VRS-CY1JB222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R537]
605	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R564]
606	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%)	[R565]
607	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R566]
608	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R569]
609	VRS-CY1JB104J	AA		C	Resistor(1/16W 100KΩ ±5%)	[R570]
610	VRS-CY1JB154J	AA		C	Resistor(1/16W 150KΩ ±5%)	[R571]
611	VRS-CY1JB302J	AA		C	Resistor(1/16W 3KΩ ±5%)	[R572]
612	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R573]
613	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R574]
614	VRS-CY1JB511J	AA		C	Resistor(1/16W 510Ω ±5%)	[R575]
615	VRS-CY1JB223J	AA		C	Resistor(1/16W 22KΩ ±5%)	[R576]
616	VRSCY1JB4422F	AC		C	Resistor(1/16W 44.2KΩ ±1%)	[R577]
617	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R578]
618	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R579]
619	VRS-CY1JB563J	AA		C	Resistor(1/16W 56KΩ ±5%)	[R580]
620	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R581]
621	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R582]
622	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R600]
623	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R601]
624	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R602]
625	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R603]
626	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R604]
627	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R605]
628	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R606]
629	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R607]
630	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R612]
631	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R613]
632	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R614]
633	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R615]
634	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R619]
635	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R620]
636	VRS-CY1JB2R0J	AD	N	C	Resistor(1/16W 2.0Ω ±5%)	[R624]
637	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R625]
638	RCRSP2192XHZZ	AL	N	B	Crystal(24.3200MHz)	[X1]
639	RCRSP2195XHZZ	AL	N	B	Crystal(34.3892MHz)	[X3]
640	RCRSP0074AFZZ	AE		B	Crystal(32.768kHz)	[X4]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[15] Control PWB unit					
641	RCRSP2194XHZZ	AL	N	B	Crystal(28.2240MHz) [X5]
642	RH-EX2319XHZZ	AE	N	B	Zener diode(02DZ6.8-Y) [ZD1]
	(Unit)				
901	DCEKC982RXHZZ	CR	N	E	Control PWB unit(Within ROM)
[16] LIU PWB unit					
1	VHVRA391PV6-1	AE		B	Varistor(RA-391P-V6-2) [AR1]
2	VHVRA501PC6-1	AG		B	Varistor(RA501P-C6) [AR2]
3	VHVRA501PC6-1	AG		B	Varistor(RA501P-C6) [AR3]
4	QTANZ2042SCZZ	AB		C	Earth terminal [ARG]
5	RC-FZ3024SCZZ	AG		C	Capacitor(250WV 0.82μF) [C1]
6	VCKYPA1HB103K	AA		C	Capacitor(50WV 0.01μF) [C2]
7	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C5]
8	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C6]
9	VCKYPU1HB102K	AA		C	Capacitor(50WV 1000PF) [C7]
10	VCQYNA1HM333K	AA		C	Capacitor(50WV 0.033μF) [C8]
11	VCKYPU1HB102K	AA		C	Capacitor(50WV 1000PF) [C9]
12	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C10]
13	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C11]
14	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C12]
15	VCKYPU1HB471K	AA		C	Capacitor(50WV 470PF) [C15]
16	VCQYNA1HM333K	AA		C	Capacitor(50WV 0.033μF) [C16]
17	VCEAGA1HW107M	AA		C	Capacitor(50WV 100μF) [C18]
18	VCKYPU1HF223Z	AA		C	Capacitor(50WV 0.022μF) [C19]
19	RRLYD3435XHZZ	AP		B	Relay(A5X-24E-95) [CML1]
20	QCNCM7014SCOI	AB		C	Connector(9pin) [CNLIU]
21	VHDDSS133//-1	AA		B	Diode(1SS133) [D1]
22	VHDDSS133//-1	AA		B	Diode(1SS133) [D2]
23	VHINJM2904D-1	AG		B	IC(NJM2904D) [IC1]
24	RFILN2027XHZZ	AC		C	Coil(R-5C) [L1]
25	RFILN2027XHZZ	AC		C	Coil(R-5C) [L4]
26	RCILZ2118SCZZ	AD		C	Coil(1mH) [L5]
27	QJAKZ2046SCBB	AH		C	Jack [MJ1/2]
28	VHPPC817X4/-1	AC		B	Photo coupler(PC817X4) [PC1]
29	VHPPC814X//-1	AE		B	Photo coupler(PC814X) [PC3]
30	VS2SD592A-S-1	AK		B	Transistor(2SD592A) [Q1]
31	VS2SD1200FR-1	AE		B	Transistor(2SD1200FR) [Q2]
32	VSKRC106M//-1	AD		B	Transistor(KRC106M) [Q4]
33	VSKRC106M//-1	AD		B	Transistor(KRC106M) [Q5]
34	RR-HZ3011SCZZ	AC		C	Resistor(1/2W 4.7Ω ±5%) [R4]
35	VRS-HT3AA133J	AB		C	Resistor(1W 13KΩ ±5%) [R5]
36	VRD-HT2HY223J	AA		C	Resistor(1/2W 22KΩ ±5%) [R6]
37	VRD-HT2EY183J	AA		C	Resistor(1/4W 18KΩ ±5%) [R9]
38	VRD-HT2EY100J	AA		C	Resistor(1/4W 10Ω ±5%) [R10]
39	VRD-HT2EY303J	AA		C	Resistor(1/4W 30KΩ ±5%) [R11]
40	VRD-HT2EY910J	AA		C	Resistor(1/4W 91Ω ±5%) [R12]
41	VRD-HT2EY300J	AA		C	Resistor(1/4W 30Ω ±5%) [R13]
42	VRD-HT2EY201J	AA		C	Resistor(1/4W 200Ω ±5%) [R14]
43	VRD-HT2EY391J	AA		C	Resistor(1/4W 390Ω ±5%) [R15]
44	VRD-HT2EY621J	AA		C	Resistor(1/4W 620Ω ±5%) [R16]
45	VRD-HT2EY223J	AA		C	Resistor(1/4W 22KΩ ±5%) [R17]
46	VRD-HT2EY223J	AA		C	Resistor(1/4W 22KΩ ±5%) [R18]
47	VRD-HT2EY751J	AA		C	Resistor(1/4W 750Ω ±5%) [R19]
48	VRD-HT2EY223J	AA		C	Resistor(1/4W 22KΩ ±5%) [R20]
49	VRD-HT2EY332J	AA		C	Resistor(1/4W 3.3KΩ ±5%) [R21]
50	VRD-HT2EY223J	AA		C	Resistor(1/4W 22KΩ ±5%) [R22]
51	VRD-HT2EY100J	AA		C	Resistor(1/4W 10Ω ±5%) [R23]
52	VRD-HT2EY103J	AA		C	Resistor(1/4W 10KΩ ±5%) [R24]
53	VRD-HT2EY103J	AA		C	Resistor(1/4W 10KΩ ±5%) [R26]
54	VRD-HT2EY100J	AA		C	Resistor(1/4W 10Ω ±5%) [R27]
55	RH-DX2007SCZZ	AC		B	Diode bridge(S1ZB60) [REC1]
56	RTRNZ2163SCZZ	AH		B	Transformer(TRTEP17-0411F) [T1]
57	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1) [ZD1]
58	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1) [ZD2]
59	VHEHZ27-1///-1	AB		B	Zener diode(HZ27-1) [ZD3]
60	VHE1ZC15///-1	AC		B	Zener diode(1ZC15) [ZD4]
61	VHEMTZJ8R2B-1	AC		B	Zener diode(MTZJ8R2B) [ZD5]
62	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1) [ZD6]
63	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1) [ZD7]
	(Unit)				
901	DCEKL422CXH01	BM	N	E	LIU PWB unit
[17] Printer PWB unit					
1	VCEAGA1CW227M	AB		C	Capacitor(16WV 220μF) [C2]
2	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF) [C102]
3	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF) [C105]
4	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF) [C106]
5	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF) [C107]
6	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF) [C109]
7	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF) [C111]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[17] Printer PWB unit						
8	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C112]
9	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C113]
10	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C115]
11	VCKYCY1EB683K	AD	N	C	Capacitor(25WV 0.068μF)	[C116]
12	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C119]
13	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C120]
14	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C124]
15	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C126]
16	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C127]
17	VCCCCY1HH220J	AA		C	Capacitor(50WV 22PF)	[C128]
18	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C133]
19	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C134]
20	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C135]
21	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C136]
22	VCKYCY1EB333K	AB		C	Capacitor(25WV 0.033μF)	[C137]
23	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C138]
24	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C142]
25	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C144]
26	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C145]
27	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C146]
28	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C147]
29	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C148]
30	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C149]
31	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C150]
32	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C151]
33	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C152]
34	VCCCCY1HH220J	AA		C	Capacitor(50WV 22PF)	[C153]
35	VCCCCY1HH220J	AA		C	Capacitor(50WV 22PF)	[C154]
36	RC-FZ3039XHZZ	AB		C	Capacitor(16WV 0.1μF)	[C155]
37	QCNCW2527SC3J	AM		C	Connector(30pin)	[CN1]
38	QCNCM2484SC0B	AB		C	Connector(2pin)	[CN2]
39	QCNCM2584SC0B	AC		C	Connector(2pin)	[CN3]
40	QCNCM2584SC1J	AK	N	C	Connector(10pin)	[CN4]
41	QCNCM2584SC0H	AH	N	C	Connector(8pin)	[CN5]
42	QCNCM2584SC0F	AH	N	C	Connector(6pin)	[CN6]
43	QCNCM2484SC0H	AD		C	Connector(8pin)	[CN7]
44	QCNCM2656SC0C	AF	N	C	Connector(3pin)	[CN8]
45	QCNCM7014SC0E	AB		C	Connector(5pin)	[CN9]
46	QCNCM2498SC0B	AB		C	Connector(2pin)	[CN10]
47	QCNCM2584SC1E	AL	N	C	Connector(5pin)	[CN11]
48	QCNCM2584SC0E	AD		C	Connector(5pin)	[CN12]
49	QCNCM2584SC0D	AD		C	Connector(4pin)	[CN13]
50	QCNCM2585SC0D	AD		C	Connector(4pin)	[CN14]
51	QCNCM2401SC0D	AC		C	Connector(4pin)	[CN15]
52	RH-DX2308XHZZ	AH	N	B	Diode(RB501V-40TE-17)	[D100]
53	VHD1SS355/-1	AB		B	Diode(1SS355)	[D101]
54	VHIULN2003ADR	AF		B	IC(ULN2003ADR)	[IC1]
55	RH-IX2307XHZZ	AP	N	B	IC(SN74LS06NS)	[IC2]
56	VHI74VHC02F-1	AF		B	IC(TC74VHC02F)	[IC3]
57	RH-IX2291XHZZ	BV	N	B	IC(M38079EFPF)	[IC4]
58	VSDTB114EK/-1	AD		B	Transistor(DTB114EK)	[Q100]
59	VS2SA1037KS-1	AB		B	Transistor(2SA1037)	[Q101]
60	VSDTD123YK/-1	AC		B	Transistor(DTD123YK)	[Q102]
61	VSDTC114YU/-1	AC		B	Transistor(DTC114YUA)	[Q103]
62	VSDTC114YU/-1	AC		B	Transistor(DTC114YUA)	[Q104]
63	VSDTC114YU/-1	AC		B	Transistor(DTC114YUA)	[Q105]
64	VSDTC114YU/-1	AC		B	Transistor(DTC114YUA)	[Q106]
65	VRS-CY1JB472F	AD		C	Resistor(1/16W 4.7KΩ ±1%)	[R100]
66	VRS-CY1JB512F	AD		C	Resistor(1/16W 5.1KΩ ±1%)	[R101]
67	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R102]
68	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R105]
69	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R106]
70	VRS-CY1JB333J	AA		C	Resistor(1/16W 33KΩ ±5%)	[R107]
71	VRS-CY1JB103F	AB		C	Resistor(1/16W 10KΩ ±1%)	[R108]
72	VRS-CY1JB113F	AD		C	Resistor(1/16W 11KΩ ±1%)	[R109]
73	VRS-CY1JB222F	AB		C	Resistor(1/16W 2.2KΩ ±1%)	[R110]
74	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R111]
75	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R112]
76	VRS-CY1JB222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R113]
77	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R114]
78	VRS-CY1JB152F	AD		C	Resistor(1/16W 1.5KΩ ±1%)	[R115]
79	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R116]
80	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R117]
81	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R118]
82	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R119]
83	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R120]
84	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R123]
85	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R124]
86	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R125]
87	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R126]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[17] Printer PWB unit						
88	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R127]
89	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R128]
90	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R129]
91	VRS-CY1JB222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R130]
92	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R131]
93	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R133]
94	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R134]
95	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R135]
96	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R136]
97	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R137]
98	VRS-CY1JB473J	AA		C	Resistor(1/16W 47KΩ ±5%)	[R138]
99	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R139]
100	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R140]
101	VRS-CY1JB473J	AA		C	Resistor(1/16W 47KΩ ±5%)	[R141]
102	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R142]
103	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R143]
104	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R144]
105	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R145]
106	VRS-CY1JB473J	AA		C	Resistor(1/16W 47KΩ ±5%)	[R146]
107	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R147]
108	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R148]
109	VRS-CY1JB330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R149]
110	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R150]
111	RR-TZ3045SCZZ	AD	N	C	Block resistor(39Ωx4)	[RA2]
112	RR-TZ3019SCZZ	AA		C	Block resistor(4.7KΩx4)	[RA3]
113	RR-TZ3046SCZZ	AD	N	C	Block resistor(820Ωx4)	[RA4]
114	RR-TZ3019SCZZ	AA		C	Block resistor(4.7KΩx4)	[RA5]
115	RR-TZ3046SCZZ	AD	N	C	Block resistor(820Ωx4)	[RA6]
116	RCRSP2197XHZZ	AL	N	B	Crystal(12MHz)	[X1]
	(Unit)					
901	DCEKC424CXH01	BW	N	E	Printer PWB unit	
[18] Power supply PWB unit						
1	0AV1480000087	AD	N	C	Capacitor(250WV 0.047μF)	[C701]
2	0AV1480000087	AD	N	C	Capacitor(250WV 0.047μF)	[C702]
3	0AV1690000106	AD		C	Capacitor(2200PF)	[C703]
4	0AV1690000106	AD		C	Capacitor(2200PF)	[C704]
5	0AV1690000106	AD		C	Capacitor(2200PF)	[C705]
6	0AV1390000202	AQ	N	C	Capacitor(200WV 390μF)	[C706]
7	0AV1690000117	AC	N	C	Capacitor(1KWV 2200PF)	[C707]
8	0AV1480000088	AC	N	C	Capacitor(50WV 0.01μF)	[C708]
9	0AV1480000089	AC	N	C	Capacitor(50WV 1000PF)	[C709]
10	0AV1480000089	AC	N	C	Capacitor(50WV 1000PF)	[C710]
11	0AV1480000090	AC	N	C	Capacitor(50WV 6800PF)	[C711]
12	0AV1480000091	AC	N	C	Capacitor(50WV 4700PF)	[C712]
13	0AV1690000118	AD	N	C	Capacitor(4700PF)	[C713]
14	0AV1690000118	AD	N	C	Capacitor(4700PF)	[C714]
15	0AV1390000203	AF	N	C	Capacitor(35WV 560μF)	[C715]
16	0AV1690000088	AC		C	Capacitor(50WV 0.1μF)	[C716]
17	0AV1390000181	AE		C	Capacitor(10WV 1000μF)	[C718]
18	0AV1480000089	AC	N	C	Capacitor(50WV 1000PF)	[C719]
19	0AV1390000189	AC		C	Capacitor(50WV 1μF)	[C720]
20	0AV1690000088	AC		C	Capacitor(50WV 0.1μF)	[C721]
21	0AV1480000088	AC	N	C	Capacitor(50WV 0.01μF)	[C722]
22	0AV1480000088	AC	N	C	Capacitor(50WV 0.01μF)	[C723]
23	0AV1480000092	AC	N	C	Capacitor(50WV 2200PF)	[C724]
24	0AV5030139000	AE	N	C	Connector(8pin)	[CN1]
25	0AV5030036000	AC		C	Connector(2pin)	[CN2]
26	0AV5030088000	AD		C	Connector(2pin)	[CN3]
27	0AV5030089000	AG		C	Connector(12pin)	[CN5]
28	0AV5150006000	AH	N	C	Connector(3pin)	[CNAC]
29	0AV3060046000	AC	N	B	Diode(RL155)	[D701]
30	0AV3060046000	AC	N	B	Diode(RL155)	[D702]
31	0AV3060046000	AC	N	B	Diode(RL155)	[D703]
32	0AV3060046000	AC	N	B	Diode(RL155)	[D704]
33	0AV3050086000	AB		B	Diode(1SS270ATD)	[D705]
34	0AV3050086000	AB		B	Diode(1SS270ATD)	[D706]
35	0AV3050086000	AB		B	Diode(1SS270ATD)	[D707]
36	0AV3070133000	AC	N	B	Zener diode(RD18ESAB3)	[D708]
37	0AV3050100000	AG	N	B	Diode(SF5LC20U)	[D710]
38	0AV3070113000	AE		B	Zener diode(RD30FB2)	[D711]
39	0AV3050086000	AB		B	Diode(1SS270ATD)	[D713]
40	0AV3070126000	AC		B	Zener diode(RD3.0ESAB2)	[D714]
41	0AV3050098000	AG		B	Diode(SF5SC4)	[D715]
42	0AV3050086000	AB		B	Diode(1SS270ATD)	[D716]
43	0AV3070134000	AE	N	B	Zener diode(RD6.2FB3)	[D717]
44	0AV3050086000	AB		B	Diode(1SS270ATD)	[D718]
45	0AV3050086000	AB		B	Diode(1SS270ATD)	[D719]
46	0AV3070135000	AC	N	B	Zener diode(RD33ESAB4)	[D720]
47	0AV3050086000	AB		B	Diode(1SS270ATD)	[D721]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[18] Power supply PWB unit						
48	0AV3050086000	AB		B	Diode(1SS270ATD)	[D722]
49	0AV3050086000	AB		B	Diode(1SS270ATD)	[D723]
50	0AV3070136000	AC	N	B	Zener diode(RD16ESAB2)	[D724]
51	0AV5060096000	AF	N	A	Fuse(8A/125V)	[F701]
52	0AV5060097000	AE	N	A	Fuse(4A/125V)	[F702]
53	0AV5060067000	AF		A	Fuse(4A/125V)	[F703]
54	0AV5060067000	AF		A	Fuse(4A/125V)	[F704]
55	0AV5060097000	AE	N	A	Fuse(4A/125V)	[F705]
56	0AV5070000016	AG	N	A	Fuse(2A/250V)	[F706]
57	0AV3090082000	AD	N	B	IC(KIA431A)	[IC701]
58	0AV3090082000	AD	N	B	IC(KIA431A)	[IC702]
59	0AV4070068000	AE	N	C	Coil	[L701]
60	0AV4070068000	AE	N	C	Coil	[L702]
61	0AV4120015000	AC		C	Coil	[L703]
62	0AV4080012000	AM	N	C	Coil	[L704]
63	0AV4050028000	AF	N	C	Coil	[L705]
64	0AV3080421100	AE	N	B	Photo coupler(TLP421GR)	[PC701]
65	0AV3180000005	AL	N	B	Photo triac coupler(MOC3063T-M)	[PC702]
66	0AV3043326000	AL		B	FET(2SK3326)	[Q701]
67	0AV3021741100	AC		B	Transistor(2SC1741STP)	[Q702]
68	0AV3001015500	AC		B	Transistor(2SA1015)	[Q703]
69	0AV3001015500	AC		B	Transistor(2SA1015)	[Q704]
70	0AV3040303000	AN	N	B	FET(2SJ303)	[Q705]
71	0AV3021741100	AC		B	Transistor(2SC1741STP)	[Q706]
72	0AV3001015500	AC		B	Transistor(2SA1015)	[Q707]
73	0AV3021815500	AC		B	Transistor(2SC1815)	[Q708]
74	0AV3021815500	AC		B	Transistor(2SC1815)	[Q709]
75	0AV3001015500	AC		B	Transistor(2SA1015)	[Q710]
76	0AV3000933100	AC		B	Transistor(2SA933S-Q)	[Q711]
77	0AV2011053020	AA		C	Resistor(1/4W 1M Ω \pm 5%)	[R701]
78	0AV2011023030	AC		C	Resistor(1/2W 1K Ω \pm 5%)	[R702]
79	0AV2990092000	AC	N	C	Resistor(1/6W 300K Ω \pm 0.5%)	[R703]
80	0AV2990093000	AC	N	C	Resistor(1/6W 390K Ω \pm 0.5%)	[R704]
81	0AV2990042000	AC		C	Resistor(1/6W 100K Ω \pm 0.5%)	[R705]
82	0AV2013913010	AA		C	Resistor(1/6W 390 Ω \pm 5%)	[R706]
83	0AV2013333010	AA		C	Resistor(1/6W 33K Ω \pm 5%)	[R707]
84	0AV2013343010	AB		C	Resistor(1/6W 330K Ω \pm 5%)	[R708]
85	0AV2014733010	AA		C	Resistor(1/6W 47K Ω \pm 5%)	[R709]
86	0AV2990094000	AC	N	C	Resistor(1/6W 33K Ω \pm 0.5%)	[R710]
87	0AV2990095000	AC	N	C	Resistor(1/6W 180K Ω \pm 0.5%)	[R711]
88	0AV2014723010	AA		C	Resistor(1/6W 4.7K Ω \pm 5%)	[R712]
89	0AV2012713010	AA		C	Resistor(1/6W 270 Ω \pm 5%)	[R713]
90	0AV2013313010	AA		C	Resistor(1/6W 330 Ω \pm 5%)	[R714]
91	0AV2012733010	AA		C	Resistor(1/6W 27K Ω \pm 5%)	[R715]
92	0AV2990096000	AC	N	C	Resistor(1/6W 4.7K Ω \pm 0.5%)	[R716]
93	0AV2990039000	AC		C	Resistor(1/6W 680 Ω \pm 0.5%)	[R717]
94	0AV2011013010	AA		C	Resistor(1/6W 100 Ω \pm 5%)	[R718]
95	0AV2013913010	AA		C	Resistor(1/6W 390 Ω \pm 5%)	[R719]
96	0AV2014723010	AA		C	Resistor(1/6W 4.7K Ω \pm 5%)	[R720]
97	0AV2013323010	AA		C	Resistor(1/6W 3.3K Ω \pm 5%)	[R721]
98	0AV2990009000	AC		C	Resistor(1/6W 22.1K Ω \pm 0.5%)	[R722]
99	0AV2990097000	AC	N	C	Resistor(1/6W 2.58K Ω \pm 0.5%)	[R723]
100	0AV2011033010	AA		C	Resistor(1/6W 10K Ω \pm 5%)	[R725]
101	0AV2014703010	AA		C	Resistor(1/6W 4.7 Ω \pm 5%)	[R726]
102	0AV2011033010	AA		C	Resistor(1/6W 10K Ω \pm 5%)	[R727]
103	0AV2012223010	AA		C	Resistor(1/6W 2.2K Ω \pm 5%)	[R728]
104	0AV2014713010	AA		C	Resistor(1/6W 470 Ω \pm 5%)	[R729]
105	0AV2011033010	AA		C	Resistor(1/6W 10K Ω \pm 5%)	[R730]
106	0AV2014723010	AA		C	Resistor(1/6W 4.7K Ω \pm 5%)	[R731]
107	0AV2012223010	AA		C	Resistor(1/6W 2.2K Ω \pm 5%)	[R732]
108	0AV2990007000	AC		C	Resistor(1/6W 2.2K Ω \pm 0.5%)	[R733]
109	0AV2990046000	AC		C	Resistor(1/6W 2.26K Ω \pm 0.5%)	[R734]
110	0AV2021223040	AC	N	C	Resistor(1W 1.2K Ω \pm 5%)	[R735]
111	0AV2012223010	AA		C	Resistor(1/6W 2.2K Ω \pm 5%)	[R736]
112	0AV2011033010	AA		C	Resistor(1/6W 10K Ω \pm 5%)	[R737]
113	0AV2011033010	AA		C	Resistor(1/6W 10K Ω \pm 5%)	[R738]
114	0AV2012223010	AA		C	Resistor(1/6W 2.2K Ω \pm 5%)	[R739]
115	0AV2012223010	AA		C	Resistor(1/6W 2.2K Ω \pm 5%)	[R740]
116	0AV2011033010	AA		C	Resistor(1/6W 10K Ω \pm 5%)	[R741]
117	0AV2011033010	AA		C	Resistor(1/6W 10K Ω \pm 5%)	[R742]
118	0AV2013303030	AA		C	Resistor(1/2W 33 Ω \pm 5%)	[R743]
119	0AV2014733010	AA		C	Resistor(1/6W 47K Ω \pm 5%)	[R744]
120	0AV2016833010	AA		C	Resistor(1/6W 68K Ω \pm 5%)	[R745]
121	0AV2012713010	AA		C	Resistor(1/6W 270 Ω \pm 5%)	[R746]
122	0AV2014733010	AA		C	Resistor(1/6W 47K Ω \pm 5%)	[R747]
123	0AV2011033010	AA		C	Resistor(1/6W 10K Ω \pm 5%)	[R748]
124	0AV2016823010	AA		C	Resistor(1/6W 6.8K Ω \pm 5%)	[R749]
125	0AV5110012000	AB		C	Jumper wire(6mm)	[RJ701]
126	0AV5110006000	AA		C	Jumper wire(12.5mm)	[RJ702]
127	0AV5110004000	AA		C	Jumper wire(20mm)	[RJ703]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[18] Power supply PWB unit					
128	0AV5110011000	AB		C	Jumper wire(17.5mm) [RJ704]
129	0AV5110012000	AB		C	Jumper wire(6mm) [RJ705]
130	0AV5110001000	AA		C	Jumper wire(10mm) [RJ706]
131	0AV5110001000	AA		C	Jumper wire(10mm) [RJ707]
132	0AV5110001000	AA		C	Jumper wire(10mm) [RJ708]
133	0AV5110003000	AA		C	Jumper wire(7.5mm) [RJ709]
134	0AV5110004000	AA		C	Jumper wire(20mm) [RJ710]
135	0AV5110018000	AB	N	C	Jumper wire(22.5mm) [RJ711]
136	0AV5110006000	AA		C	Jumper wire(12.5mm) [RJ712]
137	0AV5110003000	AA		C	Jumper wire(7.5mm) [RJ713]
138	0AV5110006000	AA		C	Jumper wire(12.5mm) [RJ714]
139	0AV5110012000	AB		C	Jumper wire(6mm) [RJ715]
140	0AV5110018000	AB	N	C	Jumper wire(22.5mm) [RJ716]
141	0AV5110001000	AA		C	Jumper wire(10mm) [RJ717]
142	0AV5110004000	AA		C	Jumper wire(20mm) [RJ718]
143	0AV5110002000	AA		C	Jumper wire(15mm) [RJ719]
144	0AV5080009000	AP		B	Relay(DH1U) [RL701]
145	0AV5040012000	AM		C	Switch(SDDJE34100) [S701]
146	0AV3170001000	AE		B	Thyristor(CR02AM4) [SR701]
147	0AV4000137111	AR	N	B	Transformer(N-T01-371) [T701]
148	0AV5140023000	AE	N	B	Thermistor(M5R110T3C) [TH701]
149	0AV3160036000	AQ	N	B	Triac(BCR16PM-12LP-AA) [TR701]
150	0AV5190002000	AF		B	Varistor(ENC271D-10A) [X701]
151	0AV5190002000	AF		B	Varistor(ENC271D-10A) [X702]
152	0AV5190002000	AF		B	Varistor(ENC271D-10A) [X703]
153	0AV5190025000	AK	N	B	Arestor(RA-302M-V7-Y) [Z701]
154	0AV5050005000	AA		C	Holder
155	0AV6113121011	AH	N	C	Bracket
156	0AV6114128011	AF	N	C	Bracket
157	0AV6114128111	AF	N	C	Terminal
158	0AV6114128211	AF	N	C	Heat sink
159	0AV7414138411	AD	N	D	Label
160	0AV8117730314	AB	N	C	Screw(3x6)
161	0AV8117730414	AB		C	Screw(3x8)
	(Unit)				
901	RDENT2181XHZZ	BX	N	E	Power supply PWB unit
[19] Operation panel PWB unit					
1	QSW-K0005AWZZ	AC		C	Tact switch [SW]
2	QSW-Z2326SCZZ	AL	N	C	Paper guide switch [SW-A]
	(Unit)				
901	DCEKP425CXHP1	BD	N	E	Operation panel PWB unit
[20] Joint PWB unit					
	(Unit)				
901	DCEKP425CXHI1	AZ	N	E	Joint PWB unit
[21] LED PWB unit					
	(Unit)				
901	DCEKP425CXHL1	AZ	N	E	LED PWB unit
[22] High voltage PWB unit					
	(Unit)				
901	0KW4127620701	BN	N	E	High voltage PWB unit
[23] Toner empty PWB unit					
	(Unit)				
901	0KW4127011301	AY	N	E	Toner empty PWB unit
[24] 2nd paper cassette PWB unit(FO-CS1)					
1	VCEAGA1EW106M	AA		C	Capacitor(25WV 10μF) [C1]
2	VCEAGA1EW335M	AC		C	Capacitor(25WV 3.3μF) [C2]
3	VCEAGA1EW106M	AA		C	Capacitor(25WV 10μF) [C3]
4	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C4]
5	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF) [C100]
6	VCKYCY1HB472K	AA		C	Capacitor(50WV 4700PF) [C101]
7	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF) [C102]
8	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF) [C104]
9	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF) [C105]
10	QCNCM7014SC0B	AD		C	Connector(2pin) [CN2]
11	QCNCM7014SC0B	AD		C	Connector(2pin) [CN3]
12	QCNCM2498SC0E	AH		C	Connector(5pin) [CN4]
13	QCNCM2498SC0E	AH		C	Connector(5pin) [CN5]
14	QCNCM7014SC1J	AC		C	Connector(10pin) [CN6]
15	QCNCM7014SC1J	AC		C	Connector(10pin) [CN7]
16	QCNCM7014SC0D	AB		C	Connector(4pin) [CN8]
17	QCNCM7014SC0D	AB		C	Connector(4pin) [CN9]
18	QCNCM2661XH0C	AH	N	C	Connector(3pin) [CN10]
19	QCNCM2660XHZZ	AH	N	C	Connector(2pin) [CN10A]
20	QCNCM2401SC0B	AA		C	Connector(2pin) [CN11]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[24] 2nd paper cassette PWB unit(FO-CS1)						
21	QCNCM2401SC0B	AA		C	Connector(2pin)	[CN12]
22	QCNCM2661XH0C	AH	N	C	Connector(3pin)	[CN13]
23	QCNCM2660XHZZ	AH	N	C	Connector(2pin)	[CN13A]
24	VHD1SR139-400	AB		B	Diode(1SR139)	[D1]
25	VHD1SR139-400	AB		B	Diode(1SR139)	[D2]
26	VHDDSS133//-1	AA		B	Diode(1SS133)	[D3]
27	VHDSR104///-1	AF		B	Diode(SR104)	[D4]
28	VHDSR104///-1	AF		B	Diode(SR104)	[D5]
29	VHDSR104///-1	AF		B	Diode(SR104)	[D6]
30	VHDSR104///-1	AF		B	Diode(SR104)	[D7]
31	VHVICPS18//-1	AE		B	IC protector(ICP-S1.8)	[F100]
32	VHVICPS10//-1	AG		B	IC protector(ICP-S1.0)	[F101]
33	VHVICPS10//-1	AG		B	IC protector(ICP-S1.0)	[F102]
34	RH-IX2311XHZZ	AL	N	B	IC(HD74HC157FPEL)	[IC1]
35	RH-IX2312XHZZ	AL	N	B	IC(HD74HC164FPEL)	[IC2]
36	RH-IX2313XHZZ	AH	N	B	IC(HD74HC02FPEL)	[IC3]
37	VHIMTD2007F-1	AU		B	IC(MTD2007F)	[IC4]
38	VHPSG206S//-1	AG		C	Photo transistor(SG206S)	[PC1]
39	VRS-HT3AA1R0J	AA		C	Resistor(1W 1Ω ±5%)	[R1]
40	VRS-HT3AA1R0J	AA		C	Resistor(1W 1Ω ±5%)	[R2]
41	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R100]
42	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R101]
43	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R102]
44	VRS-CY1JB133J	AA		C	Resistor(1/16W 13KΩ ±5%)	[R103]
45	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R104]
46	VRS-CY1JB752J	AA		C	Resistor(1/16W 7.5KΩ ±5%)	[R105]
47	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R106]
48	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R107]
49	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R108]
50	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R109]
51	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R110]
52	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R111]
53	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R112]
54	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R113]
55	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R114]
56	VRS-CY1JB361J	AA		C	Resistor(1/16W 360Ω ±5%)	[R115]
57	VRS-CY1JB361J	AA		C	Resistor(1/16W 360Ω ±5%)	[R116]
58	VRS-CY1JB153J	AA		C	Resistor(1/16W 15KΩ ±5%)	[R117]
	(Unit)					
901	DCEKZ426CXH01	BK	N	E	2nd paper cassette PWB unit	

Index

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[C]				
CBSHP2079XH02	6-1	AZ	N	C
CCABA2406XH01	4-902	BP	N	E
CCASP2163XH51	4-901	BS	N	E
CCASP2164XH01	12-901	BS	N	E
CCNW-4955XH02	1-1	AL	N	C
CMOTZ2146XH01	3-1	BH	N	E
CMOTZ2180XH01	13-10	BM	N	E
CPLTP2803XHC4	11-6	AZ	N	C
CPLTP3009XHC5	11-7	AY	N	C
CROLP2320XH01	2-1	AZ	N	C
CROLR2595XH01	13-11	AQ	N	C
[D]				
DCEKC424CXH01	1-23	BW	N	E
"	17-901	BW	N	E
DCEKC982RXHZZ	1-24	CR	N	E
"	15-901	CR	N	E
DCEKL422CXH01	1-25	BM	N	E
"	16-901	BM	N	E
DCEKP425CXHI1	4-30	AZ	N	E
"	20-901	AZ	N	E
DCEKP425CXHL1	4-31	AZ	N	E
"	21-901	AZ	N	E
DCEKP425CXHP1	4-7	BD	N	E
"	19-901	BD	N	E
DCEK426CXH01	13-12	BK	N	E
"	24-901	BK	N	E
DUNT-428CSCZZ	11-4	CA	N	S
DUNT-454BSCZZ	11-16	CA	N	S
[G]				
GCABA2404XHSA	1-26	BE	N	D
GCABA2406XHBA	4-1	AQ	N	D
GCABB2405XHSA	1-27	BE	N	D
GCABB2408XHSA	4-2	AQ	N	D
GCABC2409XHSA	1-28	AS	N	D
GCABD2410XHSA	1-29	AX	N	D
GCABD2416XHSA	14-18	AS	N	D
GCABD2417XHSA	14-19	AS	N	D
GCABE2411XHSA	1-2	AX	N	D
GCABG2412XHSA	13-1	BM	N	D
GCASP2163XHSA	4-10	AZ	N	D
GCASP2164XHSA	12-1	BG	N	C
GCOVA2408XHSC	1-30	AL	N	D
"	14-20	AL	N	D
GCOVA2460XHSA	2-2	BB	N	C
GLEGG2082XHZZ	13-36	AE	N	C
[H]				
HPNLH2422XHZZ	1-46	AT	N	D
"	4-29	AT	N	D
[J]				
JBTN-2368XHSA	4-11	AN	N	C
JBTN-2369XHSA	4-12	AP	N	C
JBTN-2370XHSA	4-13	AE	N	C
JBTN-2371XHSA	4-14	AE	N	C
JBTN-2373XHSA	4-15	AF	N	C
JBTN-2374XHSA	4-16	AH	N	C
JBTN-2375XHSA	4-17	AH	N	C
JBTN-2376XHSA	2-3	AF	N	C
[L]				
LANGF2819XHZZ	5-1	AF	N	C
LANGF2850XHZZ	14-21	AU	N	C
LANGF2851XHZZ	14-22	AQ	N	C
LANGF2857XHZZ	14-23	AM	N	C
LANGP2848XHZZ	1-31	AE	N	C
LANGT2849XHZZ	1-32	AH	N	C
LBNDJ2006XHZZ	1-33	AA	N	C
"	14-5	AA	N	C
LBNDJ2013XHZZ	1-54	AM	N	C
LBSHP2109XHZZ	13-15	AF	N	C
LBSHP2113XHZA	13-16	AE	N	C
LBSHP2113XHZZ	6-2	AH	N	C
LBSHP2147XHZZ	13-42	AE	N	C
LFRM-2201XHZZ	6-3	AL	N	C
LFRM-2233XHZZ	1-34	AV	N	C
LFRM-2234XHZZ	1-35	AX	N	C
LHLDW2158SCZZ	1-36	AC	N	C
LHLDW2182SCZZ	14-4	AC	N	C
LHLDW2183SCZZ	1-37	AD	N	C
LHLDW2238XHZZ	12-2	AE	N	C
LHLDW2239XHZZ	13-17	AE	N	C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
LPINS2032XHZZ	13-18	AF	N	C
LPLTM3011XHZZ	5-2	AK	N	C
LPLTM3012XHZZ	6-4	AL	N	C
LPLTM3228XHZZ	2-4	AE	N	C
LPLTM3229XHZZ	2-5	AH	N	C
LPLTM3235XHZZ	1-38	AV	N	C
LPLTM3236XHZZ	1-39	AZ	N	C
LPLTM3237XHZZ	12-3	AZ	N	C
LPLTM3238XHZZ	13-19	BD	N	C
LPLTM3239XHZZ	13-20	AR	N	C
LPLTM3267XHZZ	1-9	AT	N	C
LPLTP2819XHZZ	5-3	AD	N	C
LPLTP2821XHZZ	5-4	AD	N	C
LPLTP3023XHZZ	13-2	AF	N	C
LPLTP3044XHZZ	13-3	AF	N	C
LPLTP3078XHZZ	13-43	AE	N	C
LPLTP3223XHSA	4-18	AH	N	C
LPLTP3224XHSA	4-28	AH	N	C
LPLTP3225XHZZ	4-19	AE	N	C
LPLTP3226XHZZ	4-20	AE	N	C
LPLTP3227XHSA	1-14	BE	N	C
LPLTP3230XHZZ	12-4	AE	N	C
LPLTP3231XHZZ	12-5	AH	N	C
LPLTP3232XHZZ	12-6	AE	N	C
LPLTP3233XHZZ	12-7	AE	N	C
LPLTP3234XHZZ	12-8	AE	N	C
LPLTP3242XHZZ	13-21	AE	N	C
LPLTP3252XHZZ	13-22	AE	N	C
LRALP2025XHZZ	13-23	AL	N	C
LRALP2026XHZZ	13-24	AL	N	C
LSTPP2052XHZZ	5-5	AD	N	C
LX-BZ2138XHZZ	2-B1	AB	N	C
LX-BZ2205XHZZ	1-B4	AC	N	C
"	2-B2	AC	N	C
"	12-B1	AC	N	C
"	13-B1	AC	N	C
LX-BZ2241XHZZ	1-B5	AC	N	C
LX-BZ2282XHZZ	1-B1	AB	N	C
LX-BZ2291XHZZ	12-B3	AE	N	C
"	13-B2	AE	N	C
[M]				
MLEVP2304XHSA	5-6	AL	N	C
MLEVP2308XHZZ	13-25	AD	N	C
MLEVP2309XHZZ	13-4	AE	N	C
MLEVP2374XHZZ	2-6	AE	N	C
MLEVP2376XHZZ	2-7	AE	N	C
MLOK-2008XHZZ	13-26	AC	N	C
MSPRC2843XHZZ	5-7	AC	N	C
MSPRC3095XHZZ	13-5	AD	N	C
MSPRC3126XHZZ	5-8	AG	N	C
MSPRC3138XHZZ	6-5	AE	N	C
MSPRC3149XHZZ	2-8	AB	N	C
MSPRC3180XHZZ	5-9	AD	N	C
MSPRC3181XHZZ	13-27	AD	N	C
MSPRC3347XHZZ	4-21	AE	N	C
MSPRC3348XHZZ	2-9	AE	N	C
MSPRC3350XHZZ	2-10	AE	N	C
MSPRC3374XHZZ	2-11	AC	N	C
MSPRC3375XHZZ	2-12	AD	N	C
MSPRC3376XHZZ	12-9	AL	N	C
MSPRC3378XHZZ	13-28	AE	N	C
MSPRD3086XHZZ	6-6	AH	N	C
MSPRD3091XHZZ	2-13	AF	N	C
MSPRD3093XHZZ	13-6	AG	N	C
MSPRD3125XHZZ	12-10	AD	N	C
MSPRD3179XHZZ	5-10	AD	N	C
MSPRD3377XHZZ	12-11	AE	N	C
MSPRD3404XHZZ	13-41	AH	N	C
MSPRP2841XHZZ	6-7	AC	N	C
MSPRP3055XHJ	1-40	AD	N	C
MSPRP3083XHZZ	5-11	AF	N	C
MSPRP3087XHZZ	6-9	AF	N	C
MSPRP3088XHZZ	6-8	AF	N	C
MSPRP3355XHZZ	4-22	AH	N	C
[N]				
NBRGP2128XHZA	6-10	AE	N	C
NBRGP2138XHZZ	6-11	AD	N	C
NBRGP2141XHZZ	6-12	AH	N	C
NGERH2319XHZZ	6-13	AD	N	C
NGERH2320XHZZ	6-14	AD	N	C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
NGERH2322XHZZ	6-15	AC	N	C
NGERH2462XHZZ	6-16	AC	N	C
NGERH2463XHZZ	6-17	AC	N	C
NGERH2466XHZZ	1-3	AE	N	C
"	2-14	AE	N	C
NGERH2469XHZZ	13-29	AC	N	C
NGERH2472XHZZ	13-30	AA	N	C
NGERH2602XHZZ	2-15	AH	N	C
NGERH2603XHZZ	2-16	AE	N	C
NGERH2605XHZZ	14-11	AF	N	C
NGERP2318XHZZ	2-17	AD	N	C
NROLP2332XHZZ	6-18	AD	N	C
NROLP2334XHZA	5-12	AC	N	C
"	13-7	AC	N	C
NROLP2420XHZZ	1-4	AM	N	C
NROLP2421XHZZ	2-18	AM	N	C
NROLP2493XHZZ	12-28	AE	N	C
"	13-32	AE	N	C
NROLR2338XHZZ	6-20	AK	N	C
NROLR2417XHZZ	6-19	AH	N	C
NROLR2418XHZZ	6-21	AL	N	C
NROLR2419XHZZ	6-22	AK	N	C
NROLR2496XHZZ	13-33	AU	N	C
NSFTZ2306XHZZ	5-13	AD	N	C
NSFTZ2307XHZZ	6-23	AK	N	C
NSFTZ2308XHZZ	6-24	AL	N	C
NSFTZ2309XHZZ	13-8	AC	N	C
NSFTZ2312XHZZ	13-9	AC	N	C
NSFTZ2365XHZZ	13-34	AS	N	C
[P]				
PBRS-2048XHZZ	6-25	AD	N	C
PBRS-2059XHZZ	5-14	AK	N	C
PCAPH2032XHZZ	12-12	AC	N	C
PCUSG2186XHZZ	12-13	AG	N	C
PCUSS2184XHZZ	4-3	AE	N	C
PCUSS2188XHZZ	1-53	AE	N	C
PGIDM2539XHZZ	5-15	AT	N	C
PGIDM2540XHZZ	5-16	AF	N	C
PGIDM2541XHSC	6-36	AP	N	C
PGIDM2544XHSC	2-19	AL	N	C
PGIDM2545XHSC	2-20	AL	N	C
PGIDM2635XHZZ	1-41	AQ	N	C
PGIDM2636XHSA	1-15	AH	N	C
PGIDM2637XHSA	1-16	AH	N	C
PGIDM2638XHSA	1-17	AH	N	C
PGIDM2639XHZZ	2-21	AX	N	C
PGIDM2640XHZZ	2-22	AY	N	C
PGIDM2641XHZZ	12-14	AY	N	C
PGIDM2642XHZZ	12-15	AY	N	C
PGIDM2643XHZZ	13-35	AL	N	C
PGUMM2162XHZZ	5-17	AF	N	C
PGUMM2201XHZZ	4-23	AF	N	C
PGUMM2202XHZZ	4-24	AE	N	C
PLEGP2071XHZZ	1-42	AE	N	C
PSHEP3768XHZZ	4-32	AF	N	C
PSHEZ3410XHZZ	1-47	AB	N	C
PSHEZ3418XHZZ	5-18	AC	N	C
PSHEZ3419XHZZ	5-19	AB	N	C
PSHEZ3455XHZZ	2-23	AF	N	C
PSHEZ3738XHZZ	5-20	AE	N	C
PSHEZ3739XHSA	4-26	AF	N	C
PSHEZ3740XHZZ	1-43	AL	N	C
PSHEZ3741XHSA	2-24	AE	N	C
PSHEZ3742XHSA	2-25	AE	N	C
PSHEZ3743XHZZ	1-44	AN	N	C
PSHEZ3745XHZZ	12-17	AH	N	C
PSHEZ3745XHZZR	12-18	AH	N	C
PSHEZ3753XHZZ	5-22	AE	N	C
PSHEZ3754XHZZ	12-16	AH	N	D
PSHEZ3764XHZZ	6-37	AB	N	C
PSPO-2001XHZZ	1-18	AD	N	C
PSPO-2008XHZZ	12-20	AE	N	C
PSPO-2013XHZZ	1-19	AE	N	C
PSPO-2014XHZZ	2-26	AL	N	C
PSPO-2015XHZZ	2-27	AH	N	C
PSPO-2016XHZZ	12-19	AH	N	C
PSTM-2015SCZZ	6-34	AX	N	E
PTME-2064XHZA	12-21	AF	N	C
PTME-2067XHZZ	6-26	AK	N	C
PTME-2073XHZZ	2-28	AH	N	C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
PTME-2074XHZZ	12-22	AE	N	C
PTME-2075XHZZ	12-23	AU	N	C
PTME-2076XHZZ	12-24	AU	N	C
[Q]				
QACCD2062XHZZ	11-8	AQ		B
QCNCM2401SC0B	15-226	AA		C
"	24-20	AA		C
"	24-21	AA		C
QCNCM2401SC0D	17-51	AC		C
QCNCM2482SC1H	15-218	AE		C
QCNCM2482SC2H	15-221	AG		C
QCNCM2484SC0B	17-38	AB		C
QCNCM2484SC0H	17-43	AD		C
QCNCM2498SC0B	17-46	AB		C
QCNCM2498SC0E	24-12	AH		C
"	24-13	AH		C
QCNCM2525SC3J	15-222	AH		C
QCNCM2584SC0B	17-39	AC		C
QCNCM2584SC0D	17-49	AD		C
QCNCM2584SC0E	17-48	AD		C
QCNCM2584SC0F	17-42	AH	N	C
QCNCM2584SC0H	17-41	AH	N	C
QCNCM2584SC1E	17-47	AL	N	C
QCNCM2584SC1J	17-40	AK	N	C
QCNCM2585SC0D	17-50	AD		C
QCNCM2589SC3J	15-220	AP	N	C
QCNCM2656SC0C	17-44	AF	N	C
QCNCM2660XHZZ	24-19	AH	N	C
"	24-23	AH	N	C
QCNCM2661XH0C	24-18	AH	N	C
"	24-22	AH	N	C
QCNCM7014SC0B	15-227	AD		C
"	24-10	AD		C
"	24-11	AD		C
QCNCM7014SC0D	15-228	AB		C
"	24-16	AB		C
"	24-17	AB		C
QCNCM7014SC0E	15-224	AB		C
"	17-45	AB		C
QCNCM7014SC0H	15-225	AB		C
QCNCM7014SC0I	15-219	AB		C
"	16-20	AB		C
QCNCM7014SC1B	15-223	AD		C
QCNCM7014SC1J	15-217	AC		C
"	24-14	AC		C
"	24-15	AC		C
QCNCW2527SC3J	17-37	AM		C
QCNCW2662SC0B	1-13	AE	N	C
QCNCW-290ASCZZ	11-9	AE		C
QCNCW-315AXHZZ	1-50	AF		C
"	6-27	AF		C
QCNCW-4953XHZZ	1-8	AK		C
"	6-28	AK		C
QCNCW-4964XHZZ	13-37	AF		C
QCNCWN261BXHZZ	1-51	BC	N	C
"	4-27	BC	N	C
QCNCWN262BXHZZ	1-10	AS	N	C
QCNCWN263BXHZZ	1-11	AP	N	C
QCNCWN264BXHZZ	14-8	AU	N	C
QCNCWN265BXHZZ	14-10	AN	N	C
QCNCWN268BXHZZ	1-20	AK	N	C
QCNCWN269BXHZZ	1-49	AK	N	C
QCNCWN270BXHZZ	5-21	AF	N	C
QCNCWN272BXHZZ	13-38	AH	N	C
QCNCWN274BXHZZ	1-45	AN	N	C
QCNCWN294BXHZZ	4-4	AH	N	C
QCNCWN295BXHZZ	4-5	AH	N	C
QJAKZ2046SCBB	16-27	AH		C
QSW-K0005AWZZ	4-8	AC		C
"	19-1	AC		C
QSW-M2219SCZZ	13-40	AD		C
QSW-M2296XHZZ	1-21	AD		B
"	1-52	AD		B
"	6-29	AD		B
QSW-M2298XHZZ	6-30	AE		C
QSW-M2323XHZZ	13-39	AQ	N	C
QSW-M2324XHZZ	1-5	AN	N	C
QSW-Z2237SCZZ	6-31	AE		B
QSW-Z2326SCZZ	4-9	AL	N	C
"	19-2	AL	N	C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
QTANZ2042SCZZ	16-4	AB		C
[R]				
RC-EZ3088XHZZ	15-199	AK	N	C
RC-EZ3097XHZZ	15-197	AP	N	C
RC-FZ3024SCZZ	16-5	AG		C
RC-FZ3039XHZZ	17-36	AB		C
RCILZ2118SCZZ	16-26	AD		C
RCORF2124XHZZ	1-55	AE		B
"	6-32	AE		B
"	14-6	AE		B
RCORF2125XHZZ	3-2	AE		B
RRCRSC2196XHZZ	15-282	AH	N	B
RRCRSP0074AFZZ	15-640	AE		B
RRCRSP2192XHZZ	15-638	AL	N	B
RRCRSP2194XHZZ	15-641	AL	N	B
RRCRSP2195XHZZ	15-639	AL	N	B
RRCRSP2197XHZZ	17-116	AL	N	B
RDENT2181XHZZ	1-12	BX	N	E
"	18-901	BX	N	E
RFILN2027XHZZ	16-24	AC		C
"	16-25	AC		C
RH-DX2007SCZZ	16-55	AC		B
RH-DX2308XHZZ	17-52	AH	N	B
RH-EX2319XHZZ	15-642	AE	N	B
RH-IX2235XHZZ	15-261	BD		B
RH-IX2239SCZZ	15-249	AG	N	B
"	15-255	AG	N	B
RH-IX2291XHZZ	17-57	BV	N	B
RH-IX2292XHZZ	15-270	BV	N	B
RH-IX2293XHZZ	15-266	BU	N	B
RH-IX2294SCZZ	15-252	BZ	N	B
RH-IX2295SCZZ	15-263	BK	N	B
RH-IX2296XHZZ	15-251	BG	N	B
"	15-267	BG	N	B
RH-IX2298XHZZ	15-268	BK	N	B
RH-IX2299XHZZ	15-257	BA	N	B
RH-IX2300XHZZ	15-253	AL	N	B
"	15-273	AL	N	B
RH-IX2301XHZZ	15-262	AL	N	B
RH-IX2302XHZZ	15-258	AH	N	B
"	15-259	AH	N	B
RH-IX2304XHZZ	15-248	AX	N	B
RH-IX2307XHZZ	17-55	AP	N	B
RH-IX2311XHZZ	24-34	AL	N	B
RH-IX2312XHZZ	24-35	AL	N	B
RH-IX2313XHZZ	24-36	AH	N	B
RH-IX2317XHZZ	15-275	AQ	N	B
RH-IX2320XHZZ	15-271	AL	N	B
RR-HZ3011SCZZ	16-34	AC		C
RR-TZ3016SCZZ	15-2	AA		C
"	15-3	AA		C
"	15-4	AA		C
"	15-5	AA		C
"	15-6	AA		C
"	15-7	AA		C
"	15-8	AA		C
"	15-9	AA		C
"	15-10	AA		C
"	15-11	AA		C
"	15-12	AA		C
"	15-13	AA		C
"	15-14	AA		C
"	15-15	AA		C
RR-TZ3019SCZZ	17-112	AA		C
"	17-114	AA		C
RR-TZ3044SCZZ	15-16	AD	N	C
"	15-17	AD	N	C
"	15-18	AD	N	C
RR-TZ3045SCZZ	17-111	AD	N	C
RR-TZ3046SCZZ	17-113	AD	N	C
"	17-115	AD	N	C
RRLYD3435XHZZ	16-19	AP		B
RTRNZ2163SCZZ	16-56	AH		B
RUNTZ2104XA4	6-33	BV	N	E
[S]				
SPAKA202EXHZZ	14-12	AR	N	D
SPAKA203EXHZZ	14-13	AP	N	D
SPAKA204EXHZZ	14-9	AL	N	D
SPAKA227EXHZZ	14-14	AL	N	D
SPAKA228EXHZZ	14-15	AG	N	D

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
SPAKA293EXHZZ	11-17	AF	N	C
SPAKA294EXHZZ	11-18	AE	N	C
SPAKA343EXHZZ	11-19	AG	N	D
SPAKA344EXHZZ	11-5	AL	N	D
SPAKA345EXHZZ	11-20	AD	N	D
SPAKA422DXHZZ	11-10	AS	N	D
SPAKA423DXHZZ	11-11	AY	N	D
SPAKA424DXHZZ	11-12	AP	N	D
SPAKA425DXHZZ	11-13	AP	N	D
SPAKA497DXHZZ	14-2	AG	N	D
SPAKA498DXHZZ	14-3	AF	N	D
SPAKC201EXHTZ	14-16	AW	N	D
SPAKC421DSCJZ	11-14	AX	N	D
SPAKC421DXHTZ	11-14	AX	N	D
SPAKP200EXHZZ	14-17	AG	N	D
SPAKP499DXHZZ	11-15	AL	N	D
[T]				
TINSE4294XHTZ	11-1	AU	N	D
TINSE4296XHTZ	14-1	AQ	N	D
TLABH215EXHZZ	1-22	AD	N	D
TLABH424EXHZZ	12-25	AS	N	D
TLABH425EXHZA	12-26	AE	N	D
TLABH426EXHZZ	12-27	AE	N	D
TLABP391EXHZZ	11-2	AE	N	D
"	14-7	AE	N	D
TLABP394EXHZZ	1-6	AE	N	D
TLABP395EXHZZ	1-7	AE	N	D
TLABS393EXHZZ	1-48	AE	N	D
TLABZ392EXHZZ	11-3	AD	N	D
[U]				
UBATL2071XHZZ	15-1	AL		B
UINK-2009SC01	6-35	BA		C
[V]				
VCCCCY1HH101J	15-126	AA		C
"	15-170	AA		C
VCCCCY1HH120J	15-63	AA		C
"	15-64	AA		C
"	15-97	AA		C
"	15-131	AA		C
VCCCCY1HH150J	15-102	AB		C
VCCCCY1HH180J	15-40	AA		C
"	15-132	AA		C
VCCCCY1HH220J	17-17	AA		C
"	17-34	AA		C
"	17-35	AA		C
VCCCCY1HH331J	15-55	AB		C
"	15-56	AB		C
"	15-174	AB		C
"	15-188	AB		C
VCCCCY1HH471J	15-54	AA		C
"	15-57	AA		C
"	15-104	AA		C
"	15-189	AA		C
VCCCCY1HH560J	15-145	AA		C
VCCCCY1HH7R0D	15-146	AA		C
VCEAEA1CW106M	15-198	AC		C
"	15-201	AC		C
"	15-204	AC		C
"	15-210	AC		C
"	15-212	AC		C
VCEAEA1CW107M	15-196	AC		C
"	15-213	AC		C
VCEAEA1CW226M	15-200	AA		C
"	15-202	AA		C
"	15-203	AA		C
VCEAEA1CW336M	15-205	AB		C
"	15-214	AB		C
"	15-215	AB		C
VCEAEA1CW476M	15-208	AA		C
"	15-209	AA		C
"	15-211	AA		C
VCEAEA1EW475M	15-206	AA		C
VCEAEA1HW105M	15-207	AC		C
VCEAEA1VW476M	15-216	AH		C
VCEAGA1CW227M	17-1	AB		C
VCEAGA1EW106M	24-1	AA		C
"	24-3	AA		C
VCEAGA1EW335M	24-2	AC		C
VCEAGA1HW107M	16-17	AA		C
VCEAGA1HW475M	16-7	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VCEAGA1HW475M	16-8	AA		C
"	16-12	AA		C
"	16-13	AA		C
"	16-14	AA		C
"	24-4	AA		C
VCKYCY1AF105Z	15-58	AC		C
"	15-59	AC		C
"	15-61	AC		C
"	15-74	AC		C
"	15-75	AC		C
"	15-77	AC		C
"	15-78	AC		C
"	15-105	AC		C
"	15-109	AC		C
"	15-123	AC		C
"	15-124	AC		C
"	15-125	AC		C
"	15-134	AC		C
"	15-135	AC		C
"	15-136	AC		C
"	15-137	AC		C
"	15-155	AC		C
VCKYCY1CB104K	15-138	AB		C
"	15-151	AB		C
"	15-153	AB		C
"	15-154	AB		C
"	15-167	AB		C
"	15-169	AB		C
"	15-186	AB		C
VCKYCY1EB333K	17-22	AB		C
VCKYCY1EB683K	17-11	AD	N	C
VCKYCY1EF104Z	15-38	AA		C
"	15-39	AA		C
"	15-41	AA		C
"	15-42	AA		C
"	15-53	AA		C
"	15-62	AA		C
"	15-65	AA		C
"	15-66	AA		C
"	15-67	AA		C
"	15-68	AA		C
"	15-69	AA		C
"	15-70	AA		C
"	15-72	AA		C
"	15-73	AA		C
"	15-79	AA		C
"	15-80	AA		C
"	15-81	AA		C
"	15-82	AA		C
"	15-83	AA		C
"	15-84	AA		C
"	15-86	AA		C
"	15-87	AA		C
"	15-88	AA		C
"	15-89	AA		C
"	15-90	AA		C
"	15-91	AA		C
"	15-92	AA		C
"	15-93	AA		C
"	15-94	AA		C
"	15-95	AA		C
"	15-96	AA		C
"	15-98	AA		C
"	15-99	AA		C
"	15-100	AA		C
"	15-101	AA		C
"	15-103	AA		C
"	15-106	AA		C
"	15-108	AA		C
"	15-110	AA		C
"	15-111	AA		C
"	15-112	AA		C
"	15-113	AA		C
"	15-114	AA		C
"	15-116	AA		C
"	15-117	AA		C
"	15-120	AA		C
"	15-121	AA		C
"	15-127	AA		C
"	15-128	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VCKYCY1EF104Z	15-130	AA		C
"	15-133	AA		C
"	15-139	AA		C
"	15-140	AA		C
"	15-141	AA		C
"	15-142	AA		C
"	15-143	AA		C
"	15-144	AA		C
"	15-147	AA		C
"	15-148	AA		C
"	15-152	AA		C
"	15-156	AA		C
"	15-157	AA		C
"	15-158	AA		C
"	15-159	AA		C
"	15-160	AA		C
"	15-163	AA		C
"	15-164	AA		C
"	15-165	AA		C
"	15-166	AA		C
"	15-171	AA		C
"	15-173	AA		C
"	15-176	AA		C
"	15-177	AA		C
"	15-178	AA		C
"	15-179	AA		C
"	15-180	AA		C
"	15-181	AA		C
"	15-182	AA		C
"	15-183	AA		C
"	15-184	AA		C
"	15-185	AA		C
"	15-191	AA		C
"	15-192	AA		C
"	15-194	AA		C
"	17-5	AA		C
"	17-6	AA		C
VCKYCY1HB102K	15-85	AA		C
"	15-122	AA		C
"	15-129	AA		C
"	15-150	AA		C
"	15-172	AA		C
"	15-175	AA		C
"	17-2	AA		C
"	17-3	AA		C
"	17-4	AA		C
"	17-7	AA		C
"	17-8	AA		C
"	17-10	AA		C
"	17-14	AA		C
"	17-18	AA		C
"	17-19	AA		C
"	17-20	AA		C
"	17-21	AA		C
"	17-23	AA		C
"	17-24	AA		C
"	17-25	AA		C
"	17-26	AA		C
"	17-27	AA		C
"	17-28	AA		C
"	17-29	AA		C
"	17-30	AA		C
"	17-31	AA		C
"	17-32	AA		C
"	17-33	AA		C
VCKYCY1HB103K	15-149	AA		C
"	15-195	AA		C
"	17-9	AA		C
"	17-12	AA		C
"	17-13	AA		C
"	17-15	AA		C
"	17-16	AA		C
VCKYCY1HB222K	15-43	AA		C
"	15-44	AA		C
"	15-45	AA		C
"	15-46	AA		C
"	15-47	AA		C
"	15-48	AA		C
"	15-49	AA		C
"	15-50	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VCKYCY1HB222K	15-51	AA		C
"	15-107	AA		C
"	15-115	AA		C
"	15-118	AA		C
"	15-119	AA		C
"	15-161	AA		C
"	15-162	AA		C
"	24-7	AA		C
VCKYCY1HB472K	24-6	AA		C
VCKYCY1HF104Z	15-52	AA		C
"	15-187	AA		C
"	15-193	AA		C
"	24-5	AA		C
"	24-8	AA		C
"	24-9	AA		C
VCKYCY20JF105Z	15-22	AC		C
"	15-23	AC		C
"	15-24	AC		C
"	15-25	AC		C
"	15-26	AC		C
"	15-27	AC		C
"	15-28	AC		C
"	15-29	AC		C
"	15-30	AC		C
"	15-31	AC		C
"	15-32	AC		C
"	15-33	AC		C
"	15-34	AC		C
"	15-35	AC		C
"	15-36	AC		C
"	15-37	AC		C
VCKYCY21CF104Z	15-19	AB		C
"	15-20	AB		C
VCKYCY21EB102K	15-21	AA		C
VCKYPA1HB103K	16-6	AA		C
VCKYPU1HB102K	16-9	AA		C
"	16-11	AA		C
VCKYPU1HB471K	16-15	AA		C
VCKYPU1HF223Z	16-18	AA		C
VCKYTV1CF225Z	15-60	AD		C
"	15-76	AD		C
VQYNA1HM333K	16-10	AA		C
"	16-16	AA		C
VHDDAN202U/-1	15-233	AB		B
VHDDA204K/-1	15-235	AC		B
"	15-237	AC		B
VHDDSS133/-1	16-21	AA		B
"	16-22	AA		B
"	24-26	AA		B
VHDHRW0202B-1	15-238	AD		B
VHDSR104///-1	15-229	AF		B
"	15-230	AF		B
"	15-231	AF		B
"	15-232	AF		B
"	15-234	AF		B
"	24-27	AF		B
"	24-28	AF		B
"	24-29	AF		B
"	24-30	AF		B
VHD1SR139-400	24-24	AB		B
"	24-25	AB		B
VHD1SS355/-1	15-236	AB		B
"	15-239	AB		B
"	15-240	AB		B
"	17-53	AB		B
VHEHZ2C1///-1	16-57	AA		B
"	16-58	AA		B
"	16-62	AA		B
"	16-63	AA		B
VHEHZ27-1/-1	16-59	AB		B
VHEMTZJ8R2B-1	16-61	AC		B
VHE1ZC15///-1	16-60	AC		B
VHIBA10393F-1	15-265	AC		B
VHIF032/TA68C	15-256	BC	N	B
VHILB1845/-1	15-250	AY		B
VHIMTD2007F-1	24-37	AU		B
VHINJM2113M-1	15-274	AG		B
VHINJM2904D-1	16-23	AG		B
VHINJM2904M-2	15-254	AG		B
"	15-272	AG		B

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VHIPST596CMT1	15-260	AF		B
VHISM8578BV-1	15-264	AK		B
VHIULN2003ADR	17-54	AF		B
VHIUPC2933T-1	15-276	AG		B
VHI74LV245APW	15-269	AG		B
VHI74VHC02F-1	17-56	AF		B
VHPPC814X/-1	16-29	AE		B
VHPPC817X4/-1	16-28	AC		B
VHPSG206S/-1	24-38	AG		C
VHVICPS05//-1	15-241	AA		B
VHVICPS10//-1	15-242	AG		B
"	15-245	AG		B
"	15-246	AG		B
"	24-32	AG		B
"	24-33	AG		B
VHVICPS18//-1	15-247	AE		B
"	24-31	AE		B
VHVRA391PV6-1	16-1	AE		B
VHVRA501PC6-1	16-2	AG		B
"	16-3	AG		B
VRD-HT2EY100J	15-304	AA		C
"	16-38	AA		C
"	16-51	AA		C
"	16-54	AA		C
VRD-HT2EY103J	16-52	AA		C
"	16-53	AA		C
VRD-HT2EY183J	16-37	AA		C
VRD-HT2EY201J	16-42	AA		C
VRD-HT2EY223J	16-45	AA		C
"	16-46	AA		C
"	16-48	AA		C
"	16-50	AA		C
VRD-HT2EY300J	16-41	AA		C
VRD-HT2EY303J	16-39	AA		C
VRD-HT2EY332J	16-49	AA		C
VRD-HT2EY391J	16-43	AA		C
VRD-HT2EY621J	16-44	AA		C
VRD-HT2EY751J	16-47	AA		C
VRD-HT2EY910J	16-40	AA		C
VRD-HT2HY223J	16-36	AA		C
VRS-CY1JB000J	15-168	AA		C
"	15-190	AA		C
"	15-277	AA		C
"	15-278	AA		C
"	15-279	AA		C
"	15-280	AA		C
"	15-281	AA		C
"	15-318	AA		C
"	15-319	AA		C
"	15-320	AA		C
"	15-321	AA		C
"	15-322	AA		C
"	15-323	AA		C
"	15-324	AA		C
"	15-325	AA		C
"	15-327	AA		C
"	15-330	AA		C
"	15-332	AA		C
"	15-333	AA		C
"	15-349	AA		C
"	15-354	AA		C
"	15-355	AA		C
"	15-356	AA		C
"	15-362	AA		C
"	15-386	AA		C
"	15-387	AA		C
"	15-388	AA		C
"	15-389	AA		C
"	15-390	AA		C
"	15-414	AA		C
"	15-428	AA		C
"	15-432	AA		C
"	15-433	AA		C
"	15-446	AA		C
"	15-452	AA		C
"	15-460	AA		C
"	15-462	AA		C
"	15-479	AA		C
"	15-492	AA		C
"	15-495	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CY1JB000J	15-497	AA		C
"	15-498	AA		C
"	15-499	AA		C
"	15-500	AA		C
"	15-501	AA		C
"	15-502	AA		C
"	15-503	AA		C
"	15-504	AA		C
"	15-505	AA		C
"	15-506	AA		C
"	15-507	AA		C
"	15-508	AA		C
"	15-509	AA		C
"	15-510	AA		C
"	15-511	AA		C
"	15-512	AA		C
"	15-517	AA		C
"	15-523	AA		C
"	15-524	AA		C
"	15-527	AA		C
"	15-535	AA		C
"	15-536	AA		C
"	15-537	AA		C
"	15-538	AA		C
"	15-539	AA		C
"	15-540	AA		C
"	15-541	AA		C
"	15-542	AA		C
"	15-543	AA		C
"	15-547	AA		C
"	15-550	AA		C
"	15-551	AA		C
"	15-564	AA		C
"	15-565	AA		C
"	15-566	AA		C
"	15-568	AA		C
"	15-569	AA		C
"	15-570	AA		C
"	15-571	AA		C
"	15-572	AA		C
"	15-573	AA		C
"	15-574	AA		C
"	15-577	AA		C
"	15-589	AA		C
"	15-590	AA		C
"	15-591	AA		C
"	15-592	AA		C
"	15-593	AA		C
"	15-594	AA		C
"	15-595	AA		C
"	15-596	AA		C
"	15-605	AA		C
"	15-608	AA		C
"	15-612	AA		C
"	15-618	AA		C
"	15-630	AA		C
"	15-633	AA		C
"	15-634	AA		C
"	15-635	AA		C
"	15-637	AA		C
"	17-77	AA		C
"	17-79	AA		C
"	17-90	AA		C
"	17-94	AA		C
VRS-CY1JB100J	15-331	AA		C
"	15-548	AA		C
VRS-CY1JB101J	15-458	AA		C
"	15-478	AA		C
"	15-525	AA		C
"	15-526	AA		C
"	15-579	AA		C
"	15-580	AA		C
"	17-83	AA		C
VRS-CY1JB102J	15-346	AA		C
"	15-347	AA		C
"	15-430	AA		C
"	15-561	AA		C
"	15-562	AA		C
"	15-584	AA		C
"	15-613	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CY1JB102J	15-632	AA		C
"	24-47	AA		C
VRS-CY1JB103F	17-71	AB		C
VRS-CY1JB103J	15-71	AA		C
"	15-393	AA		C
"	15-415	AA		C
"	15-416	AA		C
"	15-418	AA		C
"	15-419	AA		C
"	15-420	AA		C
"	15-423	AA		C
"	15-424	AA		C
"	15-427	AA		C
"	15-429	AA		C
"	15-431	AA		C
"	15-435	AA		C
"	15-436	AA		C
"	15-437	AA		C
"	15-438	AA		C
"	15-439	AA		C
"	15-440	AA		C
"	15-442	AA		C
"	15-443	AA		C
"	15-444	AA		C
"	15-447	AA		C
"	15-455	AA		C
"	15-456	AA		C
"	15-457	AA		C
"	15-461	AA		C
"	15-469	AA		C
"	15-470	AA		C
"	15-471	AA		C
"	15-472	AA		C
"	15-473	AA		C
"	15-474	AA		C
"	15-484	AA		C
"	15-515	AA		C
"	15-516	AA		C
"	15-520	AA		C
"	15-552	AA		C
"	15-556	AA		C
"	15-557	AA		C
"	15-563	AA		C
"	15-567	AA		C
"	15-575	AA		C
"	15-576	AA		C
"	15-578	AA		C
"	15-581	AA		C
"	15-583	AA		C
"	15-588	AA		C
"	15-597	AA		C
"	15-607	AA		C
"	15-617	AA		C
"	15-620	AA		C
"	15-622	AA		C
"	15-623	AA		C
"	15-624	AA		C
"	15-625	AA		C
"	15-626	AA		C
"	15-627	AA		C
"	15-628	AA		C
"	15-629	AA		C
"	15-631	AA		C
"	17-68	AA		C
"	17-69	AA		C
"	17-74	AA		C
"	17-75	AA		C
"	17-80	AA		C
"	17-81	AA		C
"	17-82	AA		C
"	17-84	AA		C
"	17-85	AA		C
"	17-89	AA		C
"	17-97	AA		C
"	17-103	AA		C
"	24-41	AA		C
"	24-42	AA		C
"	24-43	AA		C
"	24-45	AA		C
"	24-48	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CY1JB104J	15-609	AA		C
VRS-CY1JB105J	15-344	AA		C
"	15-360	AA		C
"	15-421	AA		C
VRS-CY1JB113F	15-371	AD	N	C
"	17-72	AD		C
VRS-CY1JB123F	15-369	AA		C
VRS-CY1JB133J	24-44	AA		C
VRS-CY1JB152F	17-78	AD		C
VRS-CY1JB152J	15-329	AA		C
VRS-CY1JB153J	24-58	AA		C
VRS-CY1JB154J	15-610	AA		C
VRS-CY1JB182J	15-522	AA		C
VRS-CY1JB2R0J	15-636	AD	N	C
VRS-CY1JB203J	15-459	AA		C
"	15-553	AA		C
"	15-555	AA		C
"	15-559	AA		C
VRS-CY1JB221J	15-422	AA		C
VRS-CY1JB222F	17-73	AB		C
VRS-CY1JB222J	15-513	AA		C
"	15-554	AA		C
"	15-604	AA		C
"	17-76	AA		C
"	17-91	AA		C
VRS-CY1JB223F	15-368	AC		C
VRS-CY1JB223J	15-615	AA		C
VRS-CY1JB271J	15-334	AA		C
"	15-335	AA		C
"	15-336	AA		C
"	15-337	AA		C
"	15-338	AA		C
"	15-339	AA		C
"	15-340	AA		C
"	15-341	AA		C
"	15-342	AA		C
"	15-364	AA		C
"	15-365	AA		C
"	15-367	AA		C
"	15-405	AA		C
"	15-406	AA		C
"	15-407	AA		C
"	15-408	AA		C
"	15-409	AA		C
"	15-410	AA		C
"	15-411	AA		C
"	15-514	AA		C
"	15-518	AA		C
"	15-519	AA		C
VRS-CY1JB302J	15-328	AA		C
"	15-611	AA		C
VRS-CY1JB330J	15-350	AA		C
"	15-351	AA		C
"	15-352	AA		C
"	15-353	AA		C
"	15-357	AA		C
"	15-358	AA		C
"	15-359	AA		C
"	15-372	AA		C
"	15-373	AA		C
"	15-374	AA		C
"	15-375	AA		C
"	15-376	AA		C
"	15-377	AA		C
"	15-378	AA		C
"	15-379	AA		C
"	15-380	AA		C
"	15-381	AA		C
"	15-382	AA		C
"	15-383	AA		C
"	15-384	AA		C
"	15-385	AA		C
"	15-391	AA		C
"	15-402	AA		C
"	15-403	AA		C
"	15-404	AA		C
"	15-412	AA		C
"	15-413	AA		C
"	15-417	AA		C
"	15-425	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CY1JB330J	15-426	AA		C
"	15-434	AA		C
"	15-441	AA		C
"	15-445	AA		C
"	15-448	AA		C
"	15-465	AA		C
"	15-466	AA		C
"	15-467	AA		C
"	15-468	AA		C
"	15-480	AA		C
"	15-481	AA		C
"	15-482	AA		C
"	15-483	AA		C
"	15-486	AA		C
"	15-487	AA		C
"	15-488	AA		C
"	15-528	AA		C
"	15-529	AA		C
"	15-530	AA		C
"	15-531	AA		C
"	15-532	AA		C
"	15-533	AA		C
"	15-544	AA		C
"	15-545	AA		C
"	15-546	AA		C
"	17-86	AA		C
"	17-95	AA		C
"	17-96	AA		C
"	17-100	AA		C
"	17-108	AA		C
"	17-109	AA		C
VRS-CY1JB332J	15-392	AA		C
"	15-394	AA		C
"	15-395	AA		C
"	15-396	AA		C
"	15-397	AA		C
"	15-398	AA		C
"	15-399	AA		C
"	15-400	AA		C
"	15-401	AA		C
"	15-586	AA		C
"	15-599	AA		C
"	15-600	AA		C
"	15-601	AA		C
"	15-602	AA		C
"	15-603	AA		C
"	15-621	AA		C
VRS-CY1JB333F	15-370	AA		C
VRS-CY1JB333J	15-560	AA		C
"	17-70	AA		C
VRS-CY1JB361J	24-56	AA		C
"	24-57	AA		C
VRS-CY1JB471J	15-326	AA		C
"	15-343	AA		C
"	15-366	AA		C
"	15-558	AA		C
VRS-CY1JB472F	17-65	AD		C
VRS-CY1JB472J	15-363	AA		C
"	15-449	AA		C
"	15-450	AA		C
"	15-451	AA		C
"	15-453	AA		C
"	15-454	AA		C
"	15-463	AA		C
"	15-464	AA		C
"	15-476	AA		C
"	15-477	AA		C
"	15-485	AA		C
"	15-489	AA		C
"	15-490	AA		C
"	15-491	AA		C
"	15-493	AA		C
"	15-494	AA		C
"	15-496	AA		C
"	15-521	AA		C
"	15-598	AA		C
"	17-67	AA		C
"	17-87	AA		C
"	17-88	AA		C
"	17-92	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CY1JB472J	17-93	AA		C
"	17-99	AA		C
"	17-102	AA		C
"	17-104	AA		C
"	17-105	AA		C
"	17-107	AA		C
"	17-110	AA		C
"	24-49	AA		C
"	24-50	AA		C
"	24-51	AA		C
"	24-52	AA		C
"	24-53	AA		C
"	24-54	AA		C
"	24-55	AA		C
VRS-CY1JB473J	17-98	AA		C
"	17-101	AA		C
"	17-106	AA		C
VRS-CY1JB511J	15-614	AA		C
VRS-CY1JB512F	17-66	AD		C
VRS-CY1JB51J	15-361	AA		C
VRS-CY1JB562J	15-475	AA		C
"	15-587	AA		C
VRS-CY1JB563F	15-345	AC		C
"	15-348	AC		C
VRS-CY1JB563J	15-619	AA		C
VRS-CY1JB623J	15-534	AA		C
VRS-CY1JB680J	15-549	AA		C
"	15-582	AA		C
VRS-CY1JB752J	24-46	AA		C
VRS-CZ1JB000J	15-313	AA		C
"	15-314	AA		C
"	15-315	AA		C
"	15-316	AA		C
VRS-CZ1JB100J	15-301	AA		C
VRS-CZ1JB101J	15-317	AA		C
VRS-CZ1JB102J	15-297	AA		C
VRS-CZ1JB103J	15-305	AA		C
"	15-306	AA		C
"	15-307	AA		C
"	15-308	AA		C
"	15-309	AA		C
"	15-310	AA		C
"	15-311	AA		C
"	15-312	AA		C
VRS-CZ1JB104J	15-296	AA		C
VRS-CZ1JB220J	15-298	AA		C
"	15-299	AA		C
"	15-300	AA		C
"	15-302	AA		C
VRS-CZ1JB330J	15-303	AA		C
VRS-CZ1JB472J	15-295	AA		C
VRS-HT3AA47J	15-293	AC		C
"	15-294	AC		C
VRS-HT3AA1R0J	24-39	AA		C
"	24-40	AA		C
VRS-HT3AA133J	16-35	AB		C
VRS-TP2BD000J	15-243	AA		C
"	15-244	AA		C
"	15-606	AA		C
VRSCY1JB4422F	15-585	AC		C
"	15-616	AC		C
VSDTB114EK/-1	17-58	AD		B
VSDTC114YU/-1	17-61	AC		B
"	17-62	AC		B
"	17-63	AC		B
"	17-64	AC		B
VSDTD123YK/-1	17-60	AC		B
VSKRA102S//1	15-288	AD		B
VSKRC106M//1	16-32	AD		B
"	16-33	AD		B
VSKRC106S//1	15-286	AD		B
"	15-287	AD		B
"	15-289	AD		B
"	15-290	AD		B
"	15-291	AD		B
"	15-292	AD		B
VS2SA1037KS-1	17-59	AB		B
VS2SD1164/-1	15-283	AE		B
VS2SD1200FR-1	16-31	AE		B
VS2SD1664Q/-1	15-285	AD		B

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VS2SD592A-S-1	16-30	AK		B
VS2SJ243///-1	15-284	AD		B
VVLLMG2025TPR	4-6	BA		B
[X]				
XEBSD20P08000	4-B2	AA		C
XEBSD30P10000	1-B6	AA		C
"	2-B3	AA		C
"	3-B1	AA		C
"	4-B3	AA		C
"	5-B1	AA		C
"	6-B1	AA		C
"	12-B2	AA		C
"	13-B3	AA	N	C
XEBSE26P08000	4-B1	AA		C
XEBSE30P10000	1-B3	AA		C
"	4-B4	AA		C
"	14-26	AA		C
XHBSD30P06000	1-B2	AA		C
"	6-B2	AA		C
"	13-B4	AA	N	C
XHBSD30P10000	13-B5	AA	N	C
XHBSE30P06000	14-27	AA		C
XHBSE30P10000	1-B7	AA		C
XHBSE30P12000	13-B6	AA		C
XRESJ50-06000	6-E1	AA		C
[O]				
0AV1390000181	18-17	AE		C
0AV1390000189	18-19	AC		C
0AV1390000202	18-6	AQ	N	C
0AV1390000203	18-15	AF	N	C
0AV1480000087	18-1	AD	N	C
"	18-2	AD	N	C
0AV1480000088	18-8	AC	N	C
"	18-21	AC	N	C
"	18-22	AC	N	C
0AV1480000089	18-9	AC	N	C
"	18-10	AC	N	C
"	18-18	AC	N	C
0AV1480000090	18-11	AC	N	C
0AV1480000091	18-12	AC	N	C
0AV1480000092	18-23	AC	N	C
0AV1690000088	18-16	AC		C
"	18-20	AC		C
0AV1690000106	18-3	AD		C
"	18-4	AD		C
"	18-5	AD		C
0AV1690000117	18-7	AC	N	C
0AV1690000118	18-13	AD	N	C
"	18-14	AD	N	C
0AV2011013010	18-94	AA		C
0AV2011023030	18-78	AC		C
0AV2011033010	18-100	AA		C
"	18-102	AA		C
"	18-105	AA		C
"	18-112	AA		C
"	18-113	AA		C
"	18-116	AA		C
"	18-117	AA		C
"	18-123	AA		C
0AV2011053020	18-77	AA		C
0AV2012223010	18-103	AA		C
"	18-107	AA		C
"	18-111	AA		C
"	18-114	AA		C
"	18-115	AA		C
0AV2012713010	18-89	AA		C
"	18-121	AA		C
0AV2012733010	18-91	AA		C
0AV2013303030	18-118	AA		C
0AV2013313010	18-90	AA		C
0AV2013323010	18-97	AA		C
0AV2013333010	18-83	AA		C
0AV2013343010	18-84	AB		C
0AV2013913010	18-82	AA		C
"	18-95	AA		C
0AV2014703010	18-101	AA		C
0AV2014713010	18-104	AA		C
0AV2014723010	18-88	AA		C
"	18-96	AA		C
"	18-106	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
0AV2014733010	18-85	AA		C
"	18-119	AA		C
"	18-122	AA		C
0AV2016823010	18-124	AA		C
0AV2016833010	18-120	AA		C
0AV2021223040	18-110	AC	N	C
0AV2990007000	18-108	AC		C
0AV2990009000	18-98	AC		C
0AV2990039000	18-93	AC		C
0AV2990042000	18-81	AC		C
0AV2990046000	18-109	AC		C
0AV2990092000	18-79	AC	N	C
0AV2990093000	18-80	AC	N	C
0AV2990094000	18-86	AC	N	C
0AV2990095000	18-87	AC	N	C
0AV2990096000	18-92	AC	N	C
0AV2990097000	18-99	AC	N	C
0AV3000933100	18-76	AC		B
0AV3001015500	18-68	AC		B
"	18-69	AC		B
"	18-72	AC		B
"	18-75	AC		B
0AV3021741100	18-67	AC		B
"	18-71	AC		B
0AV3021815500	18-73	AC		B
"	18-74	AC		B
0AV3040303000	18-70	AN	N	B
0AV3043326000	18-66	AL		B
0AV3050086000	18-33	AB		B
"	18-34	AB		B
"	18-35	AB		B
"	18-39	AB		B
"	18-42	AB		B
"	18-44	AB		B
"	18-45	AB		B
"	18-47	AB		B
"	18-48	AB		B
"	18-49	AB		B
0AV3050098000	18-41	AG		B
0AV3050100000	18-37	AG	N	B
0AV3060046000	18-29	AC	N	B
"	18-30	AC	N	B
"	18-31	AC	N	B
"	18-32	AC	N	B
0AV3070113000	18-38	AE		B
0AV3070126000	18-40	AC		B
0AV3070133000	18-36	AC	N	B
0AV3070134000	18-43	AE	N	B
0AV3070135000	18-46	AC	N	B
0AV3070136000	18-50	AC	N	B
0AV3080421100	18-64	AE	N	B
0AV3090082000	18-57	AD	N	B
"	18-58	AD	N	B
0AV3160036000	18-149	AQ	N	B
0AV3170001000	18-146	AE		B
0AV3180000005	18-65	AL	N	B
0AV4000137111	18-147	AR	N	B
0AV4050028000	18-63	AF	N	C
0AV4070068000	18-59	AE	N	C
"	18-60	AE	N	C
0AV4080012000	18-62	AM	N	C
0AV4120015000	18-61	AC		C
0AV5030036000	18-25	AC		C
0AV5030088000	18-26	AD		C
0AV5030089000	18-27	AG		C
0AV5030139000	18-24	AE	N	C
0AV5040012000	18-145	AM		C
0AV5050005000	18-154	AA		C
0AV5060067000	18-53	AF		A
"	18-54	AF		A
0AV5060096000	18-51	AF	N	A
0AV5060097000	18-52	AE	N	A
"	18-55	AE	N	A
0AV5070000016	18-56	AG	N	A
0AV5080009000	18-144	AP		B
0AV5110001000	18-130	AA		C
"	18-131	AA		C
"	18-132	AA		C
"	18-141	AA		C
0AV5110002000	18-143	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
0AV5110003000	18-133	AA		C
"	18-137	AA		C
0AV5110004000	18-127	AA		C
"	18-134	AA		C
"	18-142	AA		C
0AV5110006000	18-126	AA		C
"	18-136	AA		C
"	18-138	AA		C
0AV5110011000	18-128	AB		C
0AV5110012000	18-125	AB		C
"	18-129	AB		C
"	18-139	AB		C
0AV5110018000	18-135	AB	N	C
"	18-140	AB	N	C
0AV5140023000	18-148	AE	N	B
0AV5150006000	18-28	AH	N	C
0AV5190002000	18-150	AF		B
"	18-151	AF		B
"	18-152	AF		B
0AV5190025000	18-153	AK	N	B
0AV6113121011	18-155	AH	N	C
0AV6114128011	18-156	AF	N	C
0AV6114128111	18-157	AF	N	C
0AV6114128211	18-158	AF	N	C
0AV7414138411	18-159	AD	N	D
0AV8117730314	18-160	AB	N	C
0AV8117730414	18-161	AB		C
OKW0993204501	7-12	AC		C
OKW1053481202	10-11	AP	N	C
OKW1200152102	7-3	AC	N	C
OKW4109551601	9-9	AC		C
OKW4109552101	9-13	AK		C
OKW4109552702	9-27	AD	N	C
OKW4109630501	10-2	AN	N	C
OKW4109670101	9-19	AY		B
OKW4121550101	9-12	BH	N	C
OKW4122209201	7-11	AC	N	D
OKW4122234901	7-5	AC		C
OKW4122235013	7-4	AN		C
OKW4122235102	7-6	AF	N	C
OKW4122552201	9-10	AH	N	C
OKW4127011301	8-5	AY	N	E
"	23-901	AY	N	E
OKW4127030601	10-4	BV	N	E
OKW4127031201	10-9	BM	N	E
OKW4127035501	9-14	BY	N	E
OKW4127045102	8-27	BG	N	C
OKW4127048101	8-20	AU	N	C
OKW4127048301	10-3	BC	N	E
OKW4127090101	8-21	AT	N	B
"	9-2	AT	N	B
OKW4127107303	7-9	BB	N	C
OKW4127201201	10-23	AN	N	C
OKW4127201302	10-1	AC	N	C
OKW4127202203	10-24	AC	N	D
OKW4127207101	7-10	AC	N	C
OKW4127207301	10-25	AF	N	C
OKW4127231001	10-22	AF	N	C
OKW4127251001	10-17	AF	N	C
OKW4127251201	10-20	AS	N	C
OKW4127257101	10-21	AG	N	C
OKW4127257501	10-19	AW	N	C
OKW4127257601	10-18	AS	N	C
OKW4127300101	8-6	AR	N	C
OKW4127300201	8-4	AS	N	C
OKW4127300601	10-7	AC	N	C
OKW4127300701	8-3	AF	N	C
OKW4127300802	8-7	AD	N	C
OKW4127301001	8-9	AD	N	C
OKW4127301301	8-15	AC	N	C
OKW4127301401	8-8	AD	N	C
OKW4127301601	8-13	AC	N	C
OKW4127301801	10-30	AC	N	C
OKW4127301902	8-1	AD	N	C
OKW4127302202	8-14	AD	N	C
OKW4127302501	8-19	AD	N	C
OKW4127302601	8-2	AD	N	C
OKW4127302701	8-18	AC	N	C
OKW4127302901	8-28	AF	N	C
OKW4127303901	10-31	AF	N	C

SHARP

COPYRIGHT © 2002 BY SHARP CORPORATION

ALL RIGHTS RESERVED.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of the publisher.

SHARP CORPORATION
Communication Systems Group
Quality & Reliability Control Center
Higashihiroshima, Hiroshima 739-0192, Japan
Printed in U.S.A.

A0211-1100DS•IS•T